

作りましょう 0.4プリ
パラメタほうしきフォントファミリ
校とプリティプリントのソース

Tsukurimashou 0.4pre
Parametric Font Family
Proofs and pretty-printed
source code

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Proofs and pretty-printed source code for Tsukurimashou
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Part I

Resources

preintro.mp

```
1 %
2 % Early shared code for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5 % This program is free software: you can redistribute it and/or modify
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24 % along with this program. If not, see <http://www.gnu.org/licenses/>.
25 %
26 % Matthew Skala
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29 %
30
31 

---


32
```

Tsukurimashou Pre-Intro

```
33 % TSUKURIMASHOU PRE-INTRO
34
35 % When I say nonstopmode I mean nonstopmode, dammit!
36 nonstopmode;
37 def errorstopmode = nonstopmode enddef;
38
39 % load library
40 input type1.mp;
41
42 % basic brush definition
43 transform tsu_brush_xf;
44 tsu_brush_shape:=1.0;
```

```

45 tsu_brush_angle:=0;
46
47 % special brush for punctuation
48 tsu_pbrush_size:=50;
49 tsu_pbrush_shape:=1.0;
50 tsu_pbrush_angle:=0;
51 tsu_punct_size:=100;
52
53 % size the handakuten
54 handakuten_inner:=120;
55 handakuten_outer:=200;
56
57 % array for code hooks
58 numeric override[];
59
60 % general shape tweaker
61 mincho:=0;
62
63 % control appearance of corners
64 boolean sharp_corners;
65 sharp_corners:=false;
66
67 % for naming the font
68 string stylename;
69 stylename:="";
70
71 % brush option override
72 %%% addto tsu_brush_opt
73 def tsu_brush_opt(expr n,l) = nib(n)(l) enddef;
74
75 %%% addto tsu_serif.choose
76 % bo_serif type; point lp; direction lp; brush tip size
77 vardef tsu_serif.choose(expr bst,plp,dlp,l,bts,bos) =
78 enddef;
79
80 % do "modern" width alternation
81 boolean do_alteration;
82 do_alteration:=false;
83
84 % handle outline mode for Genjimon
85 boolean genji_outline;
86 genji_outline:=false;
87
88 % prepare to detect proportional spacing
89 boolean is_proportional;
90 is_proportional:=false;

```

tsukurat.mp

```
1 %  
2 % Tsukurimashou Anbiruteki  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30
```

Tsukurimashou Anbiruteki

```
31 % TSUKURIMASHOU ANBIRUTEKI  
32  
33 input preintro.mp;  
34  
35 stylename="Anbiruteki";  
36  
37 (0,4) transformed tsu_brush_xf = (4,1.5);  
38 (1,1) transformed tsu_brush_xf = (1,1.5);  
39 (4,0) transformed tsu_brush_xf = (0,1.5);  
40  
41 tsu_brush_min:=1.5;  
42 tsu_brush_max:=1.5;  
43  
44 tsu_pbrush_size:=115;  
45 tsu_punct_size:=130;  
46  
47 handakuten_outer:=260;  
48  
49 input intro.mp;
```

tsuku-bk.mp

```
1 %  
2 % Tsukurimashou Bokukko  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30
```

Tsukurimashou Bokukko

```
31 % TSUKURIMASHOU BOKUKKO  
32  
33 input preintro.mp;  
34  
35 stylename:="Bokukko";  
36  
37 mincho:=0.3;  
38  
39 (0,4) transformed tsu_brush_xf = (0.8,0.95);  
40 (1,1) transformed tsu_brush_xf = (1.02,0.80);  
41 (4,0) transformed tsu_brush_xf = (3.8,0.95);  
42  
43 tsu_brush_min:=0.80;  
44 tsu_brush_max:=0.95;  
45 tsu_brush_shape:=0.3;  
46 tsu_brush_angle:=20;  
47  
48 tsu_pbrush_size:=60;  
49 tsu_pbrush_shape:=0.3;  
50 tsu_pbrush_angle:=20;  
51  
52 def tsu_brush_opt(expr n,l) = cut(n,rel 120)(l) enddef;  
53 sharp_corners:=true;  
54  
55 genji_outline:=true;  
56 genji_hw:=0.55;  
57  
58 input intro.mp;
```

tsuku-kg.mp

```
1 %  
2 % Tsukurimashou Kaku  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30
```

Tsukurimashou Kaku

```
31 % TSUKURIMASHOU KAKU  
32  
33 input preintro.mp;  
34  
35 stylename:="Kaku";  
36  
37 (0,4) transformed tsu_brush_xf = (4,0.75);  
38 (1,1) transformed tsu_brush_xf = (1,0.62);  
39 (4,0) transformed tsu_brush_xf = (0,0.75);  
40  
41 tsu_brush_min:=0.62;  
42 tsu_brush_max:=0.75;  
43  
44 def tsu_brush_opt(expr n,l) = cut(n,rel 90)(l) enddef;  
45 sharp_corners:=true;  
46  
47 input intro.mp;
```

tsuku-mg.mp

```
1 %  
2 % Tsukurimashou Maru  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30
```

Tsukurimashou Maru

```
31 % TSUKURIMASHOU MARU  
32  
33 input preintro.mp;  
34  
35 stylename:="Maru";  
36  
37 (0,4) transformed tsu_brush_xf = (4,0.74);  
38 (1,1) transformed tsu_brush_xf = (1,0.65);  
39 (4,0) transformed tsu_brush_xf = (0,0.74);  
40  
41 tsu_brush_min:=0.65;  
42 tsu_brush_max:=0.74;  
43  
44 input intro.mp;
```


tsuku-mi.mp

```
1 %
2 % Tsukurimashou Mincho
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
```

Tsukurimashou Mincho

```
31 % TSUKURIMASHOU MINCHO
32
33 input preintro.mp;
34
35 stylename:="Mincho";
36
37 mincho:=1;
38
39 (0,4) transformed tsu_brush_xf = (0.0,1.1);
40 (1,1) transformed tsu_brush_xf = (1.2,0.35);
41 (4,0) transformed tsu_brush_xf = (4.8,1.1);
42
43 tsu_brush_min:=0.35;
44 tsu_brush_max:=1.05;
45
46 tsu_brush_shape:=0.38;
47 tsu_brush_angle:=1;
48
49 tsu_pbrush_size:=60;
50 tsu_pbrush_shape:=0.38;
51 tsu_pbrush_angle:=1;
52
53 input serif.mp;
54
55 for i=1 upto 10:
56   tsu_do_serif[i]:=true;
57 endfor;
58
59 do_alteration:=true;
60
61 genji_outline:=true;
62 genji_hw:=0.2;
63
64 input intro.mp;
```

tsukurtn.mp

```
1 %  
2 % Tsukurimashou Tenshi no Kami  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30
```

Tsukurimashou Tenshi No Kami

```
31 % TSUKURIMASHOU TENSHI NO KAMI  
32  
33 input preintro.mp;  
34  
35 stylename:="TenshinoKami";  
36  
37 (0,4) transformed tsu_brush_xf = (4,0.15);  
38 (1,1) transformed tsu_brush_xf = (1,0.15);  
39 (4,0) transformed tsu_brush_xf = (0,0.15);  
40  
41 tsu_brush_min:=0.15;  
42 tsu_brush_max:=0.15;  
43  
44 tsu_pbrush_size:=15;  
45  
46 handakuten_inner:=170;  
47  
48 input intro.mp;
```

tsukurps.mp

```
1 %
2 % Proportional spacing modifications for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 vardef tsu_rescale_half = tsu_rescale_full; enddef;
34 vardef tsu_rescale_half_lc = tsu_rescale_full; enddef;
35 vardef tsu_rescale_half_katakana = tsu_rescale_full; enddef;
36 vardef tsu_rescale_decenter = tsu_rescale_full; enddef;
37
38 is_proportional:=true;
39
40 tsu_rescale_full;
```

intro.mp

```
1 %
2 % General shared code for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 %
34 % Tsukurimashou intro - utility routines for all pages
35 %
36
37 pf_info_quad 1000;
38 pf_info_space 1000, 0, 0;
39 pf_info_familyname "Tsukurimashou" & stylename;
40 pf_info_fixedpitch true;
41 pf_info_capheight 900;
42 pf_info_xheight 585;
43 % pf_info_ascender 900;
44 % pf_info_descender 100;
45 pf_info_ascender 985;
46 pf_info_descender 265;
47
48 pair centre_pt;
49 centre_pt=(500,390);
50 latin_vcentre:=430;
51 latin_wide__baseline:=25;
52 latin_wide_top:=750;
53 wide_margin:=30;
54 narrow_margin:=40;
55
56 

---


57
58 input bcircle.mp;
59 input obstack.mp;
60
61 

---


62
63 % get rid of degeneracies
64 vardef regenerate(expr p) =
65   begingroup
66     save q;
67     path q;
68     for t=1 step 1 until length p:
69       if abs((point t of p)-(point (t-1) of p))>3:
70         if unknown q:
```

```

71     q:=subpath (t-1,t) of p;
72     elseif length(q)=1:
73         q:=(point 0 of q)..
74         controls (postcontrol 0 of q) and (precontrol 1 of q)..
75         (0.5[point 1 of q,point t-1 of p])..
76         controls (postcontrol t-1 of p) and (precontrol t of p)..
77         (point t of p);
78     else:
79         q:=(subpath (0,length(q)-1) of q)..
80         controls (postcontrol length(q)-1 of q)
81         and (precontrol length(q) of q)..
82         (0.5[point length(q) of q,point t-1 of p])..
83         controls (postcontrol t-1 of p) and (precontrol t of p)..
84         (point t of p);
85     fi;
86     fi;
87     endfor;
88     if cycle p:
89         q:=subpath (0,length(q)-1) of q..
90         controls (postcontrol length(q)-1 of q)
91         and (precontrol length(q) of q)..
92         cycle;
93     fi;
94     q
95     endgroup
96 enddef;
97
98 % like Fill, but doesn't complain about turning number
99 def dangerousFill text glist =
100 begingroup
101     save h_; path h_;
102     for g_:=glist:
103         h_:=g_ start.default; % JMN's suggestion
104         if glyph_usage div store = 1: % storing
105             glyph_stored.glyph_name[incr glyph_stored.glyph_name.num]=h_;
106         fi
107         glyph_list[incr glyph_list.num]:=round_node_values(h_ italicized);
108         update_glyph_bb(glyph_list[glyph_list.num]);
109     endfor;
110 endgroup
111 enddef;
112
113 default_nib:=fix_nib(100,100,0);
114
115 def begint Suglyph(expr name,code) =
116     message name;
117     encode(name) (code); standard_introduce(name);
118     write ("BEGINGLYPH ""&name& "" ""&decimal code) to "proof.prf";

```

```

119  beginglyph(name);
120  init_obstack;
121  enddef;
122
123  def endtsuglyph =
124    fix_hsbw((rescale_to.left*rescale_to.right),0,0);
125  endglyph;
126  if rescale_to.right=0:
127    write "ENDGLYPH -10 0" to "proof.prf";
128  else:
129    write ("ENDGLYPH 0 "&decimal (rescale_to.left*rescale_to.right))
130      to "proof.prf";
131  fi;
132  enddef;
133
134  def tsu_brush_tip_size(expr l,q) =
135    begingroup
136      numeric y,yy;
137      y:=ypart (point l of q);
138      if y<tsu_brush_min:
139        yy:=tsu_brush_min;
140      elseif y>tsu_brush_max:
141        yy:=tsu_brush_max;
142      else:
143        yy:=y;
144      fi;
145      yy
146    endgroup
147  enddef;
148
149  def tsu_brush_tip(expr l,p,q,bsi,is_start,is_end,is_alt) =
150    begingroup
151      numeric y;
152      y:=tsu_brush_tip_size(l,q);
153      if is_alt and do_alteration:
154        fix_nib(bsi*y*tsu_brush_shape,bsi*y*tsu_brush_shape,tsu_brush_angle)
155      else:
156        fix_nib(bsi*y,bsi*y*tsu_brush_shape,tsu_brush_angle)
157      fi
158    endgroup
159  enddef;
160
161  % rescaling for half/double width
162  % this is basically global because it will be shared by most glyphs in a file
163
164  path width_curve;
165
166  vardef tsu_rescale_full =

```

```

167 rescale_from.left:=wide_margin;
168 rescale_from.right:=1000-wide_margin;
169 rescale_from.top:=ypart centre_pt;
170 rescale_from.bottom:=latin_wide_baseline;
171
172 rescale_to.left:=wide_margin;
173 rescale_to.right:=1000-wide_margin;
174 rescale_to.top:=ypart centre_pt;
175 rescale_to.bottom:=latin_wide_baseline;
176
177 rescale_skew:=0;
178
179 width_curve:=(-1,1)-(2000,2000);
180 enddef;
181
182 vardef tsu_rescale_half =
183 rescale_from.left:=wide_margin;
184 rescale_from.right:=1000-wide_margin;
185 rescale_from.top:=ypart centre_pt;
186 rescale_from.bottom:=latin_wide_baseline;
187
188 rescale_to.left:=narrow_margin;
189 rescale_to.right:=500-narrow_margin;
190 rescale_to.top:=latin_vcentre;
191 rescale_to.bottom:=0;
192
193 rescale_skew:=0;
194
195 width_curve:=((-1,1)-(100,100))..(940,410)..{right}(2000,1000);
196 enddef;
197
198 vardef tsu_rescale_half_lc =
199 rescale_from.left:=wide_margin*3.5;
200 rescale_from.right:=1000-wide_margin*3.5;
201 rescale_from.top:=ypart centre_pt;
202 rescale_from.bottom:=latin_wide_baseline;
203
204 rescale_to.left:=narrow_margin;
205 rescale_to.right:=500-narrow_margin;
206 rescale_to.top:=latin_vcentre;
207 rescale_to.bottom:=0;
208
209 rescale_skew:=0;
210
211 width_curve:=((-1,1)-(100,100))..(780,410)..{right}(2000,1000);
212 enddef;
213
214 vardef tsu_rescale_half_katakana =

```

```

215 rescale_from.left:=wide_margin;
216 rescale_from.right:=1000-wide_margin;
217 rescale_from.top:=700;
218 rescale_from.bottom:=0;
219
220 rescale_to.left:=narrow_margin;
221 rescale_to.right:=500-narrow_margin;
222 rescale_to.top:=670;
223 rescale_to.bottom:=30;
224
225 rescale_skew:=8;
226
227 width_curve:=((-1,1)-(100,100))..(860,440)..{right}(2000,1000);
228 enddef;
229
230 vardef tsu_rescale_double =
231   rescale_from.left:=narrow_margin;
232   rescale_from.right:=500-narrow_margin;
233   rescale_from.top:=latin_vcentre;
234   rescale_from.bottom:=0;
235
236   rescale_to.left:=wide_margin;
237   rescale_to.right:=1000-wide_margin;
238   rescale_to.top:=ypart centre_pt;
239   rescale_to.bottom:=latin_wide_baseline;
240
241   rescale_skew:=0;
242
243   width_curve:=(-1,1)-(2000,2000);
244 enddef;
245
246 vardef tsu_rescale_decenter =
247   rescale_from.left:=300;
248   rescale_from.right:=700;
249   rescale_from.top:=ypart centre_pt;
250   rescale_from.bottom:=latin_wide_baseline;
251
252   rescale_to.left:=50;
253   rescale_to.right:=450;
254   rescale_to.top:=latin_vcentre;
255   rescale_to.bottom:=0;
256
257   rescale_skew:=0;
258
259   width_curve:=(-1,1)-(2000,2000);
260 enddef;
261
262 vardef tsu_rescale_native_narrow =

```



```

263 rescale_from.left:=narrow_margin;
264 rescale_from.right:=500-narrow_margin;
265 rescale_from.top:=latin_vcentre;
266 rescale_from.bottom:=0;
267
268 rescale_to.left:=narrow_margin;
269 rescale_to.right:=500-narrow_margin;
270 rescale_to.top:=latin_vcentre;
271 rescale_to.bottom:=0;
272
273 rescale_skew:=0;
274
275 width_curve:=(-1,1)-(2000,2000);
276 enddef;
277
278 vardef tsu_rescale_native_zero =
279   rescale_from.left:=0;
280   rescale_from.right:=0;
281   rescale_from.top:=1000;
282   rescale_from.bottom:=0;
283
284   rescale_to.left:=0;
285   rescale_to.right:=0;
286   rescale_to.top:=1000;
287   rescale_to.bottom:=0;
288
289   rescale_skew:=0;
290
291   width_curve:=(-1,1)-(2000,2000);
292 enddef;
293
294 tsu_rescale_full;
295
296 vardef tsu_rescale_xform =
297   begingroup
298     save t;
299     transform t;
300     t:=identity;
301     % check if rescaling is active
302     if (rescale_from.left<>rescale_to.left)
303     or (rescale_from.right<>rescale_to.right): begingroup
304       save i,xa,xb,lf,rf,wf,lt,rt,wt;
305       numeric i,xa,xb,lf,rf,wf,lt,rt,wt;
306       transform t;
307       % find the bounds of the paths
308       if find_stroke(0)<=0:
309         xa:=0.5[rescale_from.left,rescale_from.right];
310         xb:=0.5[rescale_from.left,rescale_from.right];

```

```

311     else:
312         xa:=infinity;
313         xb:=-infinity;
314         for i=1 upto sp-1:
315             if obstacktype[i]=otstroke:
316                 if (xpart llcorner obstackp[i])<xa:
317                     xa:=xpart llcorner obstackp[i];
318                 fi;
319                 if (xpart lrcorner obstackp[i])>xb:
320                     xb:=xpart lrcorner obstackp[i];
321                 fi;
322             fi;
323         endfor;
324     fi;
325     % compute bearings and widths
326     lf=xa-rescale_from.left;
327     rf=rescale_from.right-xb;
328     lf*rf*wf=rescale_from.right-rescale_from.left;
329     lt*rt*wt=rescale_to.right-rescale_to.left;
330     (lt,rt)=whatever[(0,0),(lf,rf)];
331     wt=ypart (width_curve intersectionpoint ((wf,infinity)-(wf,infinity)));
332     % find transformation
333     if wf>0:
334         (rescale_from.left*lf,rescale_from.bottom) transformed t=
335             (rescale_to.left*lt,rescale_to.bottom-rescale_skew);
336         (rescale_from.left*lf,rescale_from.top) transformed t=
337             (rescale_to.left*lt,rescale_to.top-rescale_skew);
338         (rescale_from.right*rf,rescale_from.bottom) transformed t=
339             (rescale_to.right*rt,rescale_to.bottom+rescale_skew);
340     else:
341         (rescale_from.left*lf,rescale_from.bottom) transformed t=
342             (rescale_to.left*lt,rescale_to.bottom);
343         (rescale_from.left*lf,rescale_from.top) transformed t=
344             (rescale_to.left*lt,rescale_to.top);
345         (rescale_from.left*lf*1,rescale_from.bottom) transformed t=
346             (rescale_to.left*lt*1,rescale_to.bottom);
347     fi;
348     endgroup; fi;
349     t
350 endgroup
351 enddef;
352
353 def tsu_render_in_circle(expr fitcircle) =
354     %
355     % find and apply rescaling xform
356     %
357     transform tsu_rescaling_xf;
358     tsu_rescaling_xf:=tsu_rescale_xform;

```

```

359 for i=1 upto sp-1:
360   if known obstackp[i]:
361     obstackp[i]:=obstackp[i] transformed tsu_rescaling_xf;
362   fi;
363   if known obstackt[i]:
364     obstackt[i]:=obstackt[i] transformed tsu_rescaling_xf;
365   fi;
366 endfor;
367 %
368 % main render
369 %
370 begingroup
371   numeric i,j,k,l,s,t,si,ngls,flati;
372   path bqi,p,q,glstk[];
373   ngls:=0;
374   flati:=1;
375   for i=1 upto sp-1: if obstacktype[i]=otstroke:
376     if unknown obstackba.boalternate[i]:
377       obstackba.boalternate[i]:=false;
378     fi;
379 % message "suffix " & str i;
380     bqi:=obstackq[i] transformed tsu_brush_xf;
381     s:=0;
382     for j=0 step 1 until (length obstackp[i])-1:
383       k:=j+1;
384 % message " j=" & decimal j & " thr " & decimal (xpart point j of bqi)
385 % & "/" & decimal (xpart point k of bqi);
386       if ((xpart point j of bqi)<1)
387         and ((xpart point k of bqi)>=1):
388 % message " START";
389         if (xpart point k of bqi)=1:
390           s:=k;
391         else:
392           s:=j*(xpart ((subpath (j,k) of bqi)
393             intersectiontimes ((1,-infinity)
394               -(1,infinity))));
395         fi;
396       fi;
397       if (((xpart point j of bqi)>=1) and ((xpart point k of bqi)<1))
398         or (k=length obstackp[i])):
399 % message " END";
400         if (xpart point k of bqi)>=1:
401           t:=k;
402         else:
403           t:=j*(xpart ((subpath (j,k) of bqi)
404             intersectiontimes ((1,-infinity)
405               -(1,infinity))));
406         fi;

```

```

407     if ((t-s)>0.02) and (obstackna.bosize[i]>0):
408         boolean is_cycle;
409         is_cycle:=((point s of obstackp[i])=(point t of obstackp[i]));
410         p:=subpath (s,t) of obstackp[i];
411         q:=subpath (s,t) of bq;
412 % message "timing..";
413         numeric ltime[];
414         ltime[0]:=s;
415 % message decimal s;
416         for l=1 step 1 until (length p)-1:
417             ltime[l]:=floor (s+l);
418 % message decimal floor (s+l);
419         endfor;
420         ltime[length p]:=t;
421 % message decimal t;
422         write ("SEGMENT "&(decimal flati)&" "&(decimal s)&" "&(decimal t))
423             to "proof.prf";
424         for lcbj=0 upto length p:
425             write ("POINT "&(decimal flati)&" "&(decimal ltime[lcbj])&" "
426                 &(decimal xpart point lcbj of p)&" "
427                 &(decimal ypart point lcbj of p)) to "proof.prf";
428         endfor;
429         flati:=flat+1;
430         if do_alteration and obstackba.boalterate[i]:
431             default_nib:=fix_nib(obstackna.bosize[i]*tsu_brush_max
432                 *tsu_brush_shape,
433                 obstackna.bosize[i]*tsu_brush_max
434                 *tsu_brush_shape,
435                 0);
436         else:
437             default_nib:=fix_nib(obstackna.bosize[i]*tsu_brush_max,
438                 obstackna.bosize[i]*tsu_brush_max
439                 *tsu_brush_shape,
440                 tsu_brush_angle);
441         fi;
442         path mytip[],glyph;
443         for l=0 step 1 until length(p):
444             mytip[l]:=tsu_brush_tip(l,p,q,obstackna.bosize[i],s<1,
445                 t>(length obstackp[i])-1,obstackba.boalterate[i]);
446         endfor;
447         pen_stroke(for l=0 step 1 until length(p):
448             if sharp_corners and known obstacknaa.botip[i][ltime[l]]:
449                 tip(obstacknaa.botip[i][ltime[l]])(l)
450             else:
451                 tsu_brush_opt(mytip[l])(l)
452             fi
453         endfor)(p)(glyph);
454         glstk[ngls]:=regenerate(glyph);

```

```

455         ngl:=ngls+1;
456         for l=0 step 1 until length(p):
457             si:=floor (ltime[l]*0.5);
458             if known obstacknaa.boserif[i][si]:
459                 tsu_serif.choose(obstacknaa.boserif[i][si],
460                     point l of p,direction l of p,l,
461                     obstackna.bosize[i],tsu_brush_tip_size(l,q));
462                 write ("SERIF "&(decimal obstacknaa.boserif[i][si])&" "&
463                     (decimal xpart point l of p)&","&
464                     (decimal ypart point l of p)) to "proof.prf";
465             fi;
466         endfor;
467     fi;
468 fi;
469 endfor;
470 elseif obstacktype[i]=otlcblob:
471     glstk[ngls]:=regenerate(obstackp[i]);
472     ngl:=ngls+1;
473 fi; endfor;
474 %
475 % handle bounding circle
476 %
477 if xpart fitcircle>0:
478     begingroup
479         save d,tmppt,pind,xpt,pts,pcnt,tmpxf;
480         pair pts[];
481         transform d;
482         pcnt:=0;
483         for j=0 upto ngl-1:
484             for i=0 step 0.1 until length glstk[j]:
485                 pts[pcnt]:=point i of glstk[j];
486                 pcnt:=pcnt+1;
487             endfor
488         endfor;
489         save lowpt; numeric lowpt;
490         lowpt:=0;
491         for i=0 upto pcnt-2:
492             for j=i+1 upto pcnt-1:
493                 if (i>=lowpt) and (j>=lowpt) and (abs(pts[i]-pts[j])<2):
494                     swap_pts(j,lowpt);
495                     lowpt:=lowpt+1;
496                 fi;
497             endfor;
498         endfor;
499         d:=bcircle.internal(lowpt,pcnt,pcnt);
500         transform tmpxf;
501         tmpxf=identity shifted (((0,0) transformed fitcircle)-
502             ((0,0) transformed d));

```

```

503     for j=0 upto ngl-1:
504         glstk[j]=glsk[j] transformed tmpxf;
505     endfor;
506     endgroup
507 fi;
508 %
509 % finally render it all
510 %
511 for i=0 upto ngl-1:
512     dangerousFill glstk[i];
513 endfor;
514 %
515 % write misc. proof file stuff
516 %
517 blobcount:=0;
518 boxcount:=0;
519 for i=1 upto sp-1:
520     if obstacktype[i]=otlcblob:
521         begingroup
522             save spt,n;
523             pair spt;
524             spt:=(0,0);
525             n:=0;
526             for j=1 upto length obstackp[i]:
527                 n:=n+1;
528                 spt:=spt+(point j of obstackp[i]);
529             endfor;
530             spt:=spt/n;
531             blobcount:=blobcount+1;
532             write ("BLOBCENTRE "&(decimal blobcount)&" "
533                 &(decimal xpart spt)&" "&(decimal ypart spt)) to "proof.prf";
534         endgroup;
535     elseif obstacktype[i]=otpbox:
536         boxcount:=boxcount+1;
537         write ("PBOX "&
538             (decimal boxcount)&" "&
539             (decimal xpart ((0,0) transformed obstackt[i]))&" "&
540             (decimal ypart ((0,0) transformed obstackt[i]))&" "&
541             (decimal xpart ((1,0) transformed obstackt[i]))&" "&
542             (decimal ypart ((1,0) transformed obstackt[i]))&" "&
543             (decimal xpart ((1,1) transformed obstackt[i]))&" "&
544             (decimal ypart ((1,1) transformed obstackt[i]))&" "&
545             (decimal xpart ((0,1) transformed obstackt[i]))&" "&
546             (decimal ypart ((0,1) transformed obstackt[i]))&" ""&
547             obstacks[i]&""") to "proof.prf";
548     if known obstackba.botoexpand[i]:
549         if obstackba.botoexpand[i]:
550             errmessage "Unexpanded PBOX: " & obstacks[i];

```

```

551     fi;
552     fi;
553     fi;
554     endfor;
555 endgroup;
556 enddef;
557
558 % the usual case - just render it without fitting into a circle
559 def tsu_render =
560     tsu_render_in_circle(identity scaled -1);
561 enddef;
562
563 transform tsu_xf.smallkana;
564
565 tsu_xf.smallkana = identity shifted (-500,0) scaled 5.5/8 shifted (500,0);
566
567 vardef tsu_xform(expr xform)(text curves) =
568     begingroup
569         save txfsp;
570         txfsp:=sp;
571         curves;
572         size_scale:=(abs(((0,0) transformed xform)
573             -((1,0) transformed xform))
574             *abs(((0,0) transformed xform)
575             -((0,1) transformed xform)))*0.16667;
576         for i=txfsp upto sp-1:
577             if known obstackp[i]:
578                 obstackp[i]:=obstackp[i] transformed xform;
579             fi;
580             if known obstackna.bosize[i]:
581                 obstackna.bosize[i]:=obstackna.bosize[i]*size_scale;
582             fi;
583             if known obstackt[i]:
584                 obstackt[i]:=obstackt[i] transformed xform;
585             fi;
586         endfor;
587     endgroup;
588 enddef;
589
590 

---


591
592 % there is some kind of bug in MetaType1 causing it to blow up when
593 % stroking a path at a certain angle of about 290 degrees. Exactly why,
594 % I don't know; the code is documented primarily in Polish and not well
595 % documented at all. The code below is a workaround to prevent it from
596 % evaluating turning angles on zero vectors; in addition to this, it is
597 % sometimes necessary to add extra points to paths to get correct-looking
598 % behaviour.

```

```

599
600 % "fixed" version
601 vardef pen_stroke_edge(expr p) =
602   save e_,e___,l_,i_,i___,myflag; path e_[\{\}\{\}],e___[\{\}\{\}];
603   l_:=length(p);
604   for i_:=0 upto l_-1:
605     e_[i_]=pen_stroke_edge_(subpath (i_,i_+1) of p,
606       local_nib_(i_),local_nib_(i_+1));
607   endfor
608   for i_:=0 upto l_ if cycle p: -1 else: -2 fi:
609     i___:=(i_+1) mod l_;
610     boolean myflag;
611     if ((direction 1 of e_[i_])=(0,0)) or ((direction 0 of e_[i___])=(0,0)):
612       myflag:=true;
613     elseif abs(turn_ang(direction 1 of e_[i_], direction 0 of e_[i___]))>1:
614       myflag:=true;
615     else:
616       myflag:=false;
617     fi;
618     if myflag:
619       save t_; (t_.a,t_.b)=e_[i_] intersectiontimes reverse e_[i___];
620       if t_.a>0:
621         e_[i_]:=subpath (0,t_.a) of e_[i_];
622         e_[i___]:=subpath (1-t_.b,1) of e_[i___];
623       elseif known local_tip_(i___):
624         e___1:=extrapolate (0,xpart local_tip_(i___)) of e_[i_];
625         e___2:=extrapolate (ypart local_tip_(i___),1) of e_[i___];
626         save t_; (t_.a,t_.b)=e___1 intersectiontimes reverse e___2;
627         if t_.a>0:
628           e_[i_]:=subpath (0,t_.a) of e___1;
629           e_[i___]:=subpath (1-t_.b,1) of e___2;
630         fi
631       fi
632     fi
633   endfor
634   for i_:=0 upto l_-1:
635     hide(i___:=(i_+1) mod l_)
636     if cycle p or (i_>0):
637       if length((point 1 of e_[i___])-(point 0 of e_[i_]))>1/4ignore_nib_limit:
638         % the constant 1/4ignore_nib_limitl plays a similar role
639         % to that of the ISNAP_TO_NODE1 variable in pf2mt1.awk
640         (point 1 of e_[i___])
641         if known local_tip_(i_): - else:
642           && pen_join(predir 1 of e_[i___],postdir 0 of e_[i_],point i_ of p,
643             local_nib_(i_)) &&
644         fi
645       fi
646     fi

```



```

647 % reconstruct le_[i_]l (possibly ignoring direction(s)):
648 (point 0 of e_[i_])
649 if is_line(e_[i_]):
650 % this circumvents \{MF\}/\{MP\} instable behaviour
651 % (the operator |...| may cause that a control point and
652 % a node coincide; note that this is feature, not a bug),
653 % and thus is advisable:
654 -
655 else:
656   if not ignore_dir(i_): {direction 0 of e_[i_]} fi ...
657   if not ignore_dir(i_+1): {direction 1 of e_[i_]} fi
658   fi
659 endfor
660 if cycle p: cycle else: (point 1 of e_[l-1]) fi
661 endif;
662
663 % figure out size of brush
664 (mbrush_width,mbrush_height)=urcorner (
665   fullcircle xscaled (tsu_brush_max*100)
666   yscaled (tsu_brush_max*tsu_brush_shape*100)
667   rotated tsu_brush_angle
668 );
669 alternate_adjust:=abs(mbrush_height-mbrush_width);
670
671 serif_size:=2;

```

frac-intro.mp

```
1 %
2 % Common code for Tsukurimashou fractions
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 transform nxf[];
34
35 frac.in.x1=200;
36 frac.in.x2=800;
37 frac.in.y1=latin_wide_baseline;
38 frac.in.y2=latin_wide_top;
39
40 frac.one.y1=0.02[frac.in.y1,frac.in.y2];
41 frac.one.y2=0.40[frac.in.y1,frac.in.y2];
42 frac.one.y3=0.51[frac.in.y1,frac.in.y2];
43 frac.one.y4=0.60[frac.in.y1,frac.in.y2];
44 frac.one.y5=0.98[frac.in.y1,frac.in.y2];
45
46 (frac.one.x1+frac.one.x2)/2=500;
47 frac.one.x2-frac.one.x1=320;
48
49 frac.two.y1=0.04[frac.in.y1,frac.in.y2];
50 frac.two.y2=0.38[frac.in.y1,frac.in.y2];
51 frac.two.y3=0.51[frac.in.y1,frac.in.y2];
52 frac.two.y4=0.62[frac.in.y1,frac.in.y2];
53 frac.two.y5=0.96[frac.in.y1,frac.in.y2];
54
55 (frac.two.x1+frac.two.x3)/2=500;
56 (frac.two.x3-frac.two.x2)=
57   (frac.two.x2-frac.two.x1);
58 frac.two.x3-frac.two.x1=600;
59
60 frac.three.y1=0.06[frac.in.y1,frac.in.y2];
61 frac.three.y2=0.36[frac.in.y1,frac.in.y2];
62 frac.three.y3=0.51[frac.in.y1,frac.in.y2];
63 frac.three.y4=0.64[frac.in.y1,frac.in.y2];
64 frac.three.y5=0.94[frac.in.y1,frac.in.y2];
65
66 (frac.three.x1+frac.three.x4)/2=500;
67 (frac.three.x4-frac.three.x3)=
68   (frac.three.x3-frac.three.x2)=
69   (frac.three.x2-frac.three.x1);
70 frac.three.x4-frac.three.x1=700;
```

```

71
72 frac.four.y1=0.08[frac.in.y1,frac.in.y2];
73 frac.four.y2=0.34[frac.in.y1,frac.in.y2];
74 frac.four.y3=0.51[frac.in.y1,frac.in.y2];
75 frac.four.y4=0.66[frac.in.y1,frac.in.y2];
76 frac.four.y5=0.92[frac.in.y1,frac.in.y2];
77
78 (frac.four.x1+frac.four.x5)/2=500;
79 (frac.four.x5-frac.four.x4)=
80 (frac.four.x4-frac.four.x3)=
81 (frac.four.x3-frac.four.x2)=
82 (frac.four.x2-frac.four.x1);
83 frac.four.x5-frac.four.x1=800;
84
85 frac.half.y1=0.10*latin_vcentre;
86 frac.half.y2=0.82*latin_vcentre;
87 frac.half.y3=latin_vcentre;
88 frac.half.y4=1.18*latin_vcentre;
89 frac.half.y5=1.90*latin_vcentre;
90
91 (frac.half.x1+frac.half.x2)/2=250;
92 frac.half.x2-frac.half.x1=330;
93
94 vardef hexdig(expr d) =
95   if d<10: decimal d else: char (d*87) fi
96 enddef;
97
98 vardef make_digit_set(expr xfm,thispage,place) =
99   numeric ccount;
100  ccount:=0;
101  forsuffices i=zero,one,two,three,four,five,six,seven,eight,nine:
102    begint Suglyph("uFF" & thispage & place & hexdig(ccount),
103      hex(place & hexdig(ccount)));
104    tsu_xform(xfm)(tsu_curve.numeral.i);
105    tsu_render;
106  endtsuglyph;
107  ccount:=ccount+1;
108  endfor;
109 enddef;

```

latin-intro.mp

```
1 %
2 % Shared code for Tsukurimashou latin
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 latin_wide_low_h:=latin_wide_baseline*mbrush_height*0.8;
34 latin_wide_high_h:=latin_wide_top-mbrush_height*0.8;
35 latin_wide_low_r:=latin_wide_baseline*mbrush_height*0.8-7;
36 latin_wide_high_r:=latin_wide_top-mbrush_height*0.8+15;
37 if sharp_corners:
38   latin_wide_low_v:=latin_wide_baseline;
39   latin_wide_high_v:=latin_wide_top;
40 else:
41   latin_wide_low_v:=latin_wide_baseline*mbrush_height*0.8;
42   latin_wide_high_v:=latin_wide_top-mbrush_height*0.8;
43 fi;
44
45 vardef vmetric(expr a) =
46   (a[latin_wide_low_h,latin_wide_high_h])
47 enddef;
48
49 latin_wide_xheight:=vmetric(0.65);
50 latin_wide_xheight_h:=latin_wide_xheight-mbrush_height*0.6;
51 latin_wide_xheight_r:=latin_wide_xheight-mbrush_height*0.6+15;
52 if sharp_corners:
53   latin_wide_xheight_v:=latin_wide_xheight;
54 else:
55   latin_wide_xheight_v:=latin_wide_xheight-mbrush_height*0.5;
56 fi;
57
58 latin_wide_desc:=vmetric(-0.35);
59 latin_wide_desc_h:=latin_wide_desc*mbrush_height*0.6;
60 latin_wide_desc_r:=latin_wide_desc*mbrush_height*0.6+10;
61 if sharp_corners:
62   latin_wide_desc_v:=latin_wide_desc;
63 else:
64   latin_wide_desc_v:=latin_wide_desc*mbrush_height*0.5;
65 fi;
66
67 latin_wide_lc_baselif:=vmetric(0.02);
68
69 transform tsu_xf.accentedcap,tsu_xf.capaccent;
70
```

```
71 xpart tsu_xf.accentedcap=1;
72 xypart tsu_xf.accentedcap=yxpart tsu_xf.accentedcap=0;
73 (500,vmetric(0)) transformed tsu_xf.accentedcap=(500,vmetric(0));
74 (500,vmetric(1)) transformed tsu_xf.accentedcap=(500,vmetric(0.85));
75
76 tsu_xf.capaccent=identity shifted (0,vmetric(0.98)-vmetric(0.8));
```

accent.mp

```
1 %
2 % Accents for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 vardef tsu_accent.acute(text curves) =
34   curves;
35   push_stroke(
36     (500*1.5*tsu_punct_size,vmetric(0.95))-
37     (500-0.5*tsu_punct_size,vmetric(0.78)),
38     (2,2)-(1.6,1.6)-(1.3,1.3));
39   replace_strokep(0)(insert_nodes(oldp)(0.5));
40   set_bosize(0,80);
41   set_botip(0,1,1);
42 enddef;
43
44 vardef tsu_accent.breve(text curves) =
45   curves;
46   push_stroke((500-1.3*tsu_punct_size,vmetric(0.95)){down}..
47     (500,vmetric(0.82))..
48     {up}(500*1.3*tsu_punct_size,vmetric(0.95)),
49     (1,1)-(1.9,1.9)-(1,1));
50 enddef;
51
52 vardef tsu_accent.caron(text curves) =
53   curves;
54   push_stroke((500-1.5*tsu_punct_size,vmetric(0.95))-
55     (500,vmetric(0.80))-
56     (500*1.5*tsu_punct_size,vmetric(0.95)),
57     (2,2)-(1.4,1.4)-(1.4,1.4));
58   set_bosize(0,80);
59   set_botip(0,1,1);
60 enddef;
61
62 vardef tsu_accent.caron_apostrophe(expr xoffs)(text curves) =
63   begingroup
64     save xright,xsp;
65     xsp:=sp;
66     tsu_xform(identity shifted (-100,0))(curves);
67     xright:=-infinity;
68     save i;
69     numeric i;
70     i:=0;
```

```

71 forever:
72   exitif find_stroke(i)<xsp;
73   if xpart lrcorner get_stroke(i)>xright:
74     xright:=xpart lrcorner get_stroke(i);
75     fi;
76     i:=i-1;
77   endfor;
78   tsu_curve.punct.make_comma((xright*xoffs*230,vmetric(0.94)),0);
79 endgroup;
80 enddef;
81
82 vardef tsu_accent.cedilla(text curves) =
83   curves;
84   push_stroke(
85     ((0,0)-(-0.3,-1.8){curl 0.7}..(2.6,-2.5)..{curl 0.2}(-2.5;3.0))
86     scaled (0.5*tsu_punct_size) shifted (500,latin_wide_low_r),
87     (1.4,1.4)-(1.4,1.4)-(1.7,1.7)-(1.3,1.3));
88   set_bosize(0,80);
89   set_botip(0,1,1);
90 enddef;
91
92 vardef tsu_accent.circumflex(text curves) =
93   curves;
94   push_stroke((500-1.5*tsu_punct_size,vmetric(0.80))-
95     (500,vmetric(0.95))-
96     (500+1.5*tsu_punct_size,vmetric(0.80)),
97     (1.6,1.6)-(2,2)-(1.6,1.6));
98   set_bosize(0,80);
99   set_botip(0,1,1);
100 enddef;
101
102 vardef tsu_accent.commabelow(text curves) =
103   curves;
104   tsu_curve.punct.make_comma((520,vmetric(-0.21)),0);
105 enddef;
106
107 vardef tsu_accent.dotabove(text curves) =
108   curves;
109   push_lcblob(fullcircle rotated 45 scaled (mbrush_width*1.72*50)
110     shifted ((500,vmetric(0.88))
111       transformed tsu_rescale_xform)
112     transformed inverse tsu_rescale_xform);
113 enddef;
114
115 vardef tsu_accent.grave(text curves) =
116   curves;
117   push_stroke((500-1.5*tsu_punct_size,vmetric(0.95))-
118     (500+0.5*tsu_punct_size,vmetric(0.78)),

```

```

119     (2,2)-(1.6,1.6)-(1.3,1.3));
120     replace_strokep(0)(insert_nodes(oldp)(0.5));
121     set_bosize(0,80);
122     set_botip(0,1,1);
123 enddef;
124
125 vardef tsu_accent.heavy_metal_umlaut(text curves) =
126     curves;
127     push_lcblob((up-left-down-right-cycle) scaled (mbrush_width*1.5*30)
128         shifted ((520-1.5*tsu_punct_size,vmetric(0.88))
129             transformed tsu_rescale_xform)
130         transformed inverse tsu_rescale_xform);
131     push_lcblob((up-left-down-right-cycle) scaled (mbrush_width*1.5*30)
132         shifted ((520+1.5*tsu_punct_size,vmetric(0.88))
133             transformed tsu_rescale_xform)
134         transformed inverse tsu_rescale_xform);
135 enddef;
136
137 vardef tsu_accent.hungarian_umlaut(text curves) =
138     curves;
139     push_stroke((500+1.7*tsu_punct_size,vmetric(0.95))-
140         (500+0.7*tsu_punct_size,vmetric(0.78)),
141         (2,2)-(1.6,1.6)-(1.3,1.3));
142     replace_strokep(0)(insert_nodes(oldp)(0.5));
143     set_bosize(0,80);
144     set_botip(0,1,1);
145
146     push_stroke((500-0.4*tsu_punct_size,vmetric(0.95))-
147         (500-1.4*tsu_punct_size,vmetric(0.78)),
148         (2,2)-(1.6,1.6)-(1.3,1.3));
149     replace_strokep(0)(insert_nodes(oldp)(0.5));
150     set_bosize(0,80);
151     set_botip(0,1,1);
152 enddef;
153
154 vardef tsu_accent.lcslash(text curves) =
155     curves;
156     push_stroke(((1,-1.3)-(1,1.3))
157         scaled ((latin_width_xheight_r-latin_width_low_r)/2)
158         shifted (xpart centre_pt,(latin_width_xheight_r+latin_width_low_r)/2),
159         (2,2)-(2,2));
160     set_bosize(0,80);
161 enddef;
162
163 vardef tsu_accent.macron(text curves) =
164     curves;
165     push_stroke((500-1.75*tsu_punct_size,vmetric(0.82))-
166         (500+1.75*tsu_punct_size,vmetric(0.82)),

```



```

167     (2,2)-(2,2));
168     set_bosize(0,80);
169 enddef;
170
171 vardef tsu_accent.ringabove(text curves) =
172     curves;
173     push_lcblob(fullcircle rotated 45 scaled (2*tsu_punct_size)
174         shifted ((500,vmetric(0.83-0.03*mincho)-10)
175             transformed tsu_rescale_xform)
176             transformed inverse tsu_rescale_xform);
177     push_lcblob(reverse fullcircle rotated 45
178         scaled (2*tsu_punct_size-100*tsu_brush_max)
179         shifted ((500,vmetric(0.83-0.03*mincho)-10)
180             transformed tsu_rescale_xform)
181             transformed inverse tsu_rescale_xform);
182 enddef;
183
184 vardef tsu_accent.tilde(text curves) =
185     curves;
186     push_stroke(
187         ((-3.5,-0.5){curl 0}..(-1.4,1)..(0,0)..(1.4,1)..{curl 0}(3.5,0.5))
188         rotated 5 xyscaled (0.7*tsu_punct_size,0.5*tsu_punct_size)
189         shifted (500,vmetric(0.85)),
190         (0.7,2.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7)-
191         (1.7,1.7)-(0.7,2.7));
192     replace_strokep(0)(insert_nodes(oldp)(0.5,3.5));
193     set_bosize(0,80);
194 enddef;
195
196 vardef tsu_accent.ucslash(text curves) =
197     curves;
198     push_stroke(((1,-1.3)-(1,1.3))
199         scaled ((latin_wide_high_r-latin_wide_low_r)/2)
200         shifted centre_pt,
201         (2,2)-(2,2));
202     set_bosize(0,80);
203 enddef;
204
205 vardef tsu_accent.umlaut(text curves) =
206     curves;
207     push_lcblob(fullcircle rotated 45 scaled (mbrush_width*1.72*50)
208         shifted ((520-1.5*tsu_punct_size,vmetric(0.88))
209             transformed tsu_rescale_xform)
210             transformed inverse tsu_rescale_xform);
211     push_lcblob(fullcircle rotated 45 scaled (mbrush_width*1.72*50)
212         shifted ((520+1.5*tsu_punct_size,vmetric(0.88))
213             transformed tsu_rescale_xform)
214             transformed inverse tsu_rescale_xform);

```

```
215 enddef;
216
217 

---


218
219 vardef tsu_accent.capital(suffix acctype)(text curves) =
220   begingroup;
221     save xsp,ysp;
222     tsu_accent.acctype(
223       tsu_xform(tsu_xf.accentedcap)(curves);xsp:=sp);
224     ysp:=sp;
225     sp:=xsp;
226     tsu_xform(tsu_xf.capaccent)(sp:=ysp);
227   endgroup;
228 enddef;
```

bcircle.mp

```
1 %
2 % Bounding circle algorithm of E. Welzl
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 % swap points in pts[] array
32 vardef swap_pts(expr a,b)=
33   pair tmppt;
34   tmppt:=pts[a];
35   pts[a]:=pts[b];
36   pts[b]:=tmppt;
37 enddef;
38
39 % compute bounding circle on up to three points
40 vardef bcircle.basis(expr rstart,rend) =
41   if rend<=rstart+1:
42     identity
43   else:
44     begingroup
45       save x,y,myt;
46       numeric x[],y[];
47       transform myt;
48       z1=pts[rstart];
49       z2=pts[rstart+1];
50       xypart myt=0;
51       yxpart myt=0;
52       if rend=rstart+2:
53         z3=(z1+z2)/2;
54         (0,0) transformed myt=(z1+z2)/2;
55         xxpart myt=yypart myt=abs(z1-z3);
56       else:
57         z3=pts[rstart+2];
58         z4=(z1+z2)/2;
59         z5=(z1+z3)/2;
60         z6=z4*whatever*((z2-z1) rotated 90);
61         z6=z5*whatever*((z3-z1) rotated 90);
62         (0,0) transformed myt=z6;
63         xxpart myt=yypart myt=abs(z1-z6);
64       fi;
65       myt
66     endgroup
67   fi
68 enddef;
69
70 % recursion to compute bounding circle.
```

```

71 % Input point sets are in pts[] array, arguments are indices into it
72 vardef bcircle.internal(expr pstart,rstart,rend) =
73   if (pstart=rstart) or (rend-rstart=3):
74     bcircle.basis(rstart,rend)
75   else:
76     beingroup
77       transform d;
78       pind:=floor ((rstart-pstart)*uniformdeviate 1)*pstart;
79       swap_pts(pstart,pind);
80       d=bcircle.internal(pstart*1,rstart,rend);
81       pair xpt;
82       xpt transformed d=pts[pstart];
83       if abs(xpt)>1:
84         swap_pts(pstart,(rstart-1));
85         d:=bcircle.internal(pstart,rstart-1,rend);
86       fi;
87       d
88     endgroup
89   fi
90 enddef;
91
92 % wrapper for bounding circle algorithm - compute bcircle of points
93 vardef bcircle.points(text txt) =
94   beingroup
95     save d,tmppt,pind,xpt,pts,pcnt;
96     pcnt:=0;
97     for myp=txt:
98       pts[pcnt]:=myp;
99       pcnt:=pcnt+1;
100    endfor;
101    bcircle.internal(0,pcnt,pcnt)
102  endgroup
103 enddef;
104
105 % wrapper for bounding circle algorithm - compute bcircle of paths
106 vardef bcircle.paths(text txt) =
107   beingroup
108     save d,tmppt,pind,xpt,pts,pcnt;
109     pcnt:=0;
110     for myp=txt:
111       for i=0 step 0.1 until length myp:
112         pts[pcnt]:=point i of myp;
113         pcnt:=pcnt+1;
114       endfor
115     endfor;
116     bcircle.internal(0,pcnt,pcnt)
117   endgroup
118 enddef;

```

bottomrad.mp

```
1 %
2 % Radicals for bottom (often special forms of other radicals)
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 vardef tsu_curve.kanji.bottomrad.four_ticks =
34   push_pbox_toexpand("kanji.bottomrad.four_ticks");
35   push_stroke((210,750)..tension 1.2..(160,250)..(100,-30),
36     (1,1)-(1.3,1.3)-(1.8,1.8));
37   push_stroke((350,700)..tension 1.2..(390,300)..(400,-50),
38     (1.1,1.1)-(1.4,1.4)-(1.9,1.9));
39   push_stroke((540,750)..tension 1.2..(610,320)..(630,-40),
40     (1.1,1.1)-(1.4,1.4)-(1.9,1.9));
41   push_stroke((740,800)..tension 1.2..(850,360)..(890,-20),
42     (1.1,1.1)-(1.4,1.4)-(1.9,1.9));
43   expand_pbox;
44 enddef;
45
46 vardef tsu_curve.kanji.bottomrad.moon =
47   push_pbox_toexpand("kanji.bottomrad.moon");
48   push_stroke((250,-20)..{up}(250,760)-(750,760),
49     (1.4,1.4)-(1.6,1.6)-(1.6,1.6));
50   build_kanji.add_jtail(0);
51   set_botip(0,1,1);
52   set_botip(0,2,1);
53   set_boserif(0,1,4);
54   set_boserif(0,2,4);
55   push_stroke((250,520)-(750,520),
56     (1.5,1.5)-(1.5,1.5));
57   push_stroke((250,270)-(750,270),
58     (1.5,1.5)-(1.5,1.5));
59   expand_pbox;
60 enddef;
```

dakuten.mp

```
1 %
2 % Dakuten and handakuten for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 vardef tsu_curve.dakuten(expr xf) =
34   push_pbox_explicit("dakuten",
35     identity shifted (-0.4,0.5) scaled 200 rotated -50 transformed xf);
36
37   push_stroke(((0,80)..(50,30)..(100,30)) transformed xf,
38     (1,1)..(1.4,1.4)..(1.8,1.8));
39   set_bosize(0,85);
40   set_boserif(0,2,4);
41
42   push_stroke(((0,80)..(50,30)..(100,30)) transformed xf,
43     (1,1)..(1.4,1.4)..(1.8,1.8));
44   set_bosize(0,85);
45   set_boserif(0,2,4);
46 enddef;
47
48 vardef tsu_curve.handakuten(expr location) =
49   push_lcblob(fullcircle scaled handakuten_outer shifted location
50     transformed inverse tsu_rescale_xform);
51   push_lcblob(reverse fullcircle scaled handakuten_inner shifted location
52     transformed inverse tsu_rescale_xform);
53 enddef;
```

enclosed.mp

```
1 %
2 % Enclosed characters for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 vardef tsu_curve.circle.single =
34   Fill fullcircle scaled (810*53*tsu_brush_max) shifted centre_pt;
35   unFill reverse fullcircle scaled (810-53*tsu_brush_max) shifted centre_pt;
36 enddef;
37
38 vardef tsu_curve.circle.double =
39   Fill fullcircle scaled (880*60*tsu_brush_max) shifted centre_pt;
40   unFill reverse fullcircle scaled (880-20*tsu_brush_max) shifted centre_pt;
41   Fill fullcircle scaled (740*40*tsu_brush_max) shifted centre_pt;
42   unFill reverse fullcircle scaled (740-40*tsu_brush_max) shifted centre_pt;
43 enddef;
44
45 vardef tsu_curve.square.single(text curves) =
46   tsu_xform(tsu_xf.sletter)(curves);
47   push_stroke(
48     (500,790)-(100,790)-(100,10)-(900,10)-(900,790)-cycle,
49     (2,2)-(2,2)-(2,2)-(2,2)-(2,2)-cycle);
50   set_bosize(0,80);
51   set_botip(0,1,1);
52   set_botip(0,2,1);
53   set_botip(0,3,1);
54   set_botip(0,4,1);
55 enddef;
56
57 

---


58
59 transform tsu_xf.circled;
60 xypart tsu_xf.circled=yypart tsu_xf.circled=0.68;
61 xypart tsu_xf.circled=yypart tsu_xf.circled=0;
62 centre_pt transformed tsu_xf.circled=centre_pt;
63
64 transform tsu_xf.cletter;
65 xypart tsu_xf.cletter=yypart tsu_xf.cletter=0.56;
66 xypart tsu_xf.cletter=yypart tsu_xf.cletter=0;
67 centre_pt transformed tsu_xf.cletter=centre_pt;
68
69 transform tsu_xf.ctwo.left;
70 xypart tsu_xf.ctwo.left=yypart tsu_xf.ctwo.left=0.48;
```

```
71 xypart tsu_xf.ctwo.left=yxpart tsu_xf.ctwo.left=0;
72 (centre_pt*290*right) transformed tsu_xf.ctwo.left=centre_pt;
73
74 transform tsu_xf.ctwo.right;
75 xxpart tsu_xf.ctwo.right=yypart tsu_xf.ctwo.right=0.48;
76 xypart tsu_xf.ctwo.right=yxpart tsu_xf.ctwo.right=0;
77 (centre_pt*310*left) transformed tsu_xf.ctwo.right=centre_pt;
78
79 transform tsu_xf.sletter;
80 xxpart tsu_xf.sletter=yypart tsu_xf.sletter=0.71;
81 xypart tsu_xf.sletter=yxpart tsu_xf.sletter=0;
82 centre_pt transformed tsu_xf.sletter=centre_pt*10*up;
83
84 

---

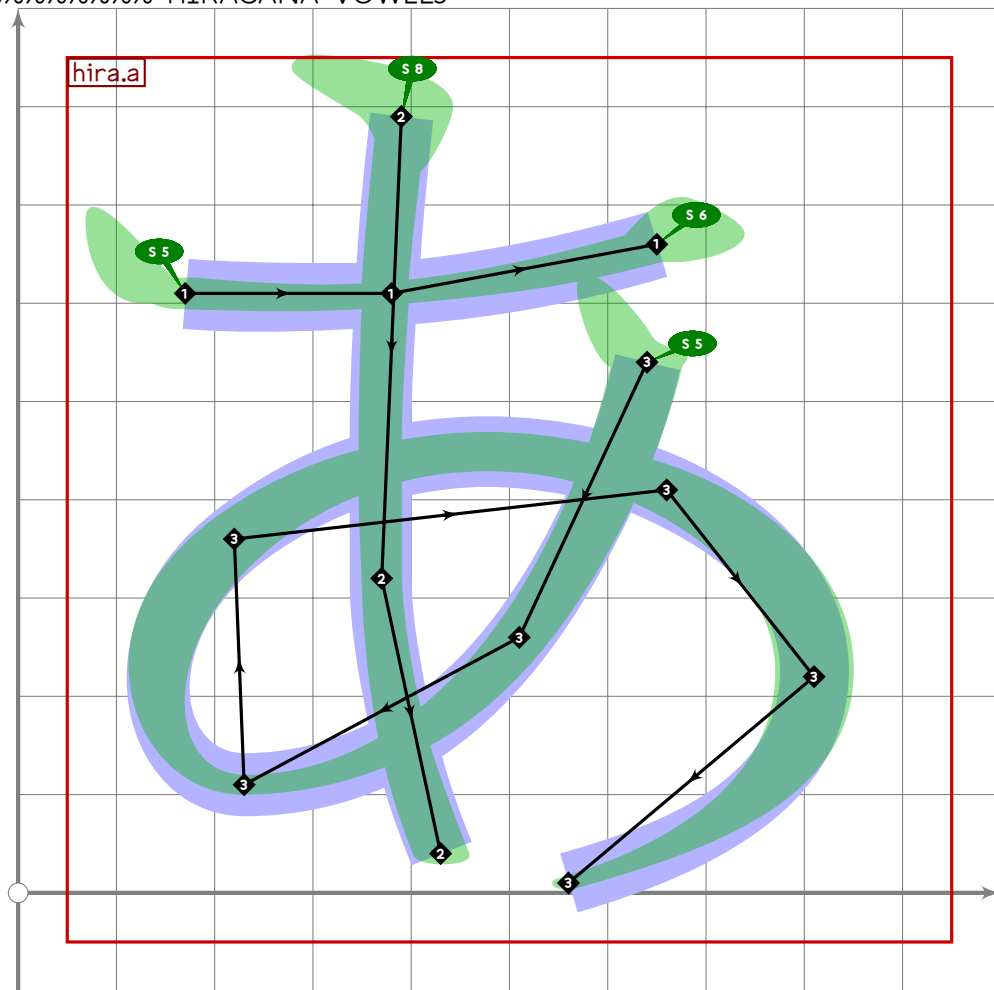

85
86 transform tsu_xf.cbound;
87 tsu_xf.cbound=identity scaled 340 shifted centre_pt;
```


hiragana.mp

```
1 %  
2 % Hiragana for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32
```

Hiragana Vowels

33 %%%%%%%%%% HIRAGANA VOWELS

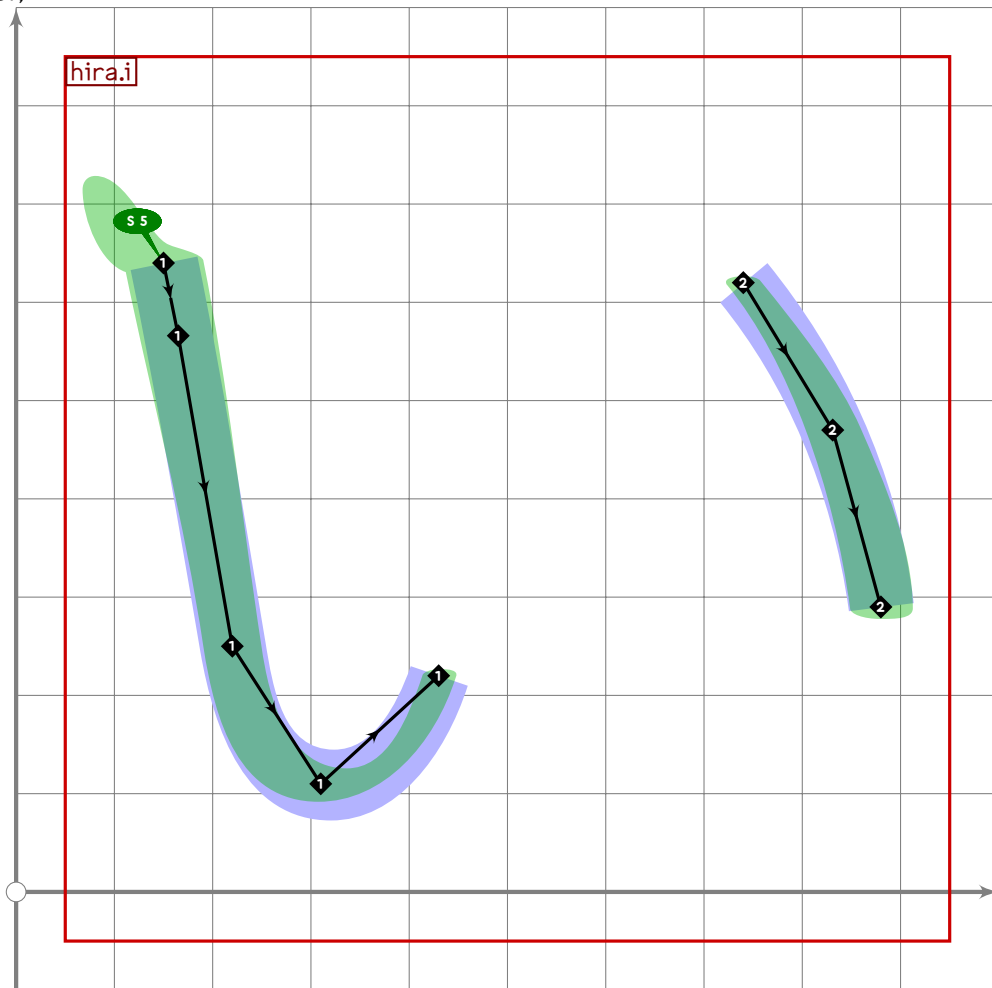


```
34  
35 vardef tsu_curve.hira.a =  
36   push_pbox_toexpand("hira.a");  
37  
38   push_stroke((170,610)..(380,610)..(650,660),  
39     (1.6,1.7)-(1.4,1.4)-(1.6,1.6));  
40   set_boserif(0,0,5);  
41   set_boserif(0,2,6);
```

```

42
43 push_stroke((390,790)..tension 1.5..(370,320)..(430,40),
44   (1.2,1.2)-(1.1,1.1)-(1.3,1.3));
45 set_boserif(0,0,8);
46
47 push_stroke((640,540)..tension 1.2..(510,260)..(230,110){left}..
48   (220,360)..(660,410)..(810,220)..{curl 0}(560,10),
49   (1.5,1.5)-(1.4,1.4)-(1.2,1.2)-
50   (1.7,1.7)-(1.8,1.8)-(1.6,1.6)-(1,1));
51 set_boserif(0,0,5);
52 expand_pbox;
53 enddef;

```



```

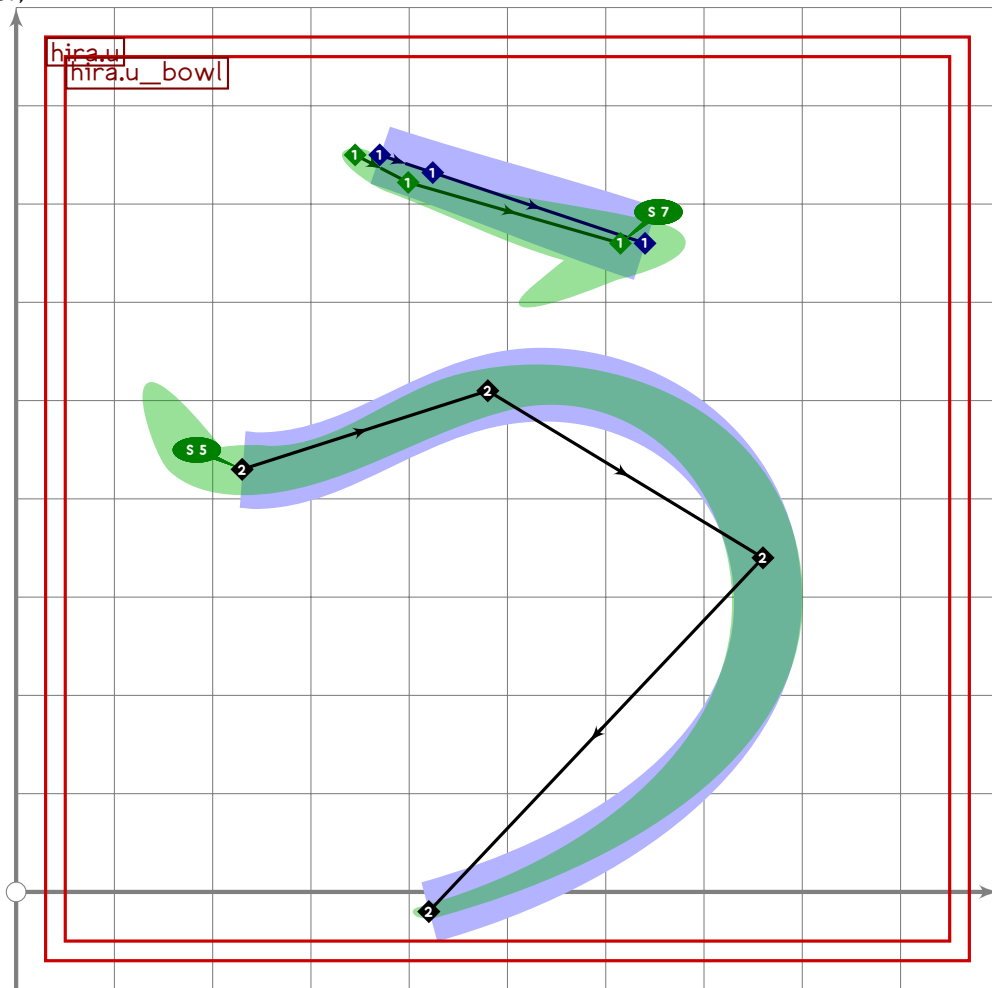
54
55 vardef tsu_curve.hira.i =
56   push_pbox_toexpand("hira.i");
57
58   push_stroke((150,640)..(165,566)..(220,250)..(310,110)..{curl 0}(430,220),
59     (1.6,1.6)..(1.6,1.6)..(1.3,1.3)..(1.8,1.8)..(1,1));
60   set_boserif(0,0,5);
61
62   push_stroke((740,620)..(831,470)..(880,290),

```

```

63 (1,1)..(1.3,1.3)..(1.4,1.4));
64 expand_pbox;
65 endif;
66
67 vardef tsu_curve.hira.u_bowl =
68 push_pbox_toexpand("hira.u_bowl");
69
70 push_stroke((230,430){dir 355}..(480,510)..(760,340)..{curl 0.1}(420,20),
71 (2.3,2.3)..(2,2)..(1.5,1.5)..(1,1));
72 set_boserif(0,0,5);
73 expand_pbox;
74 endif;

```



```

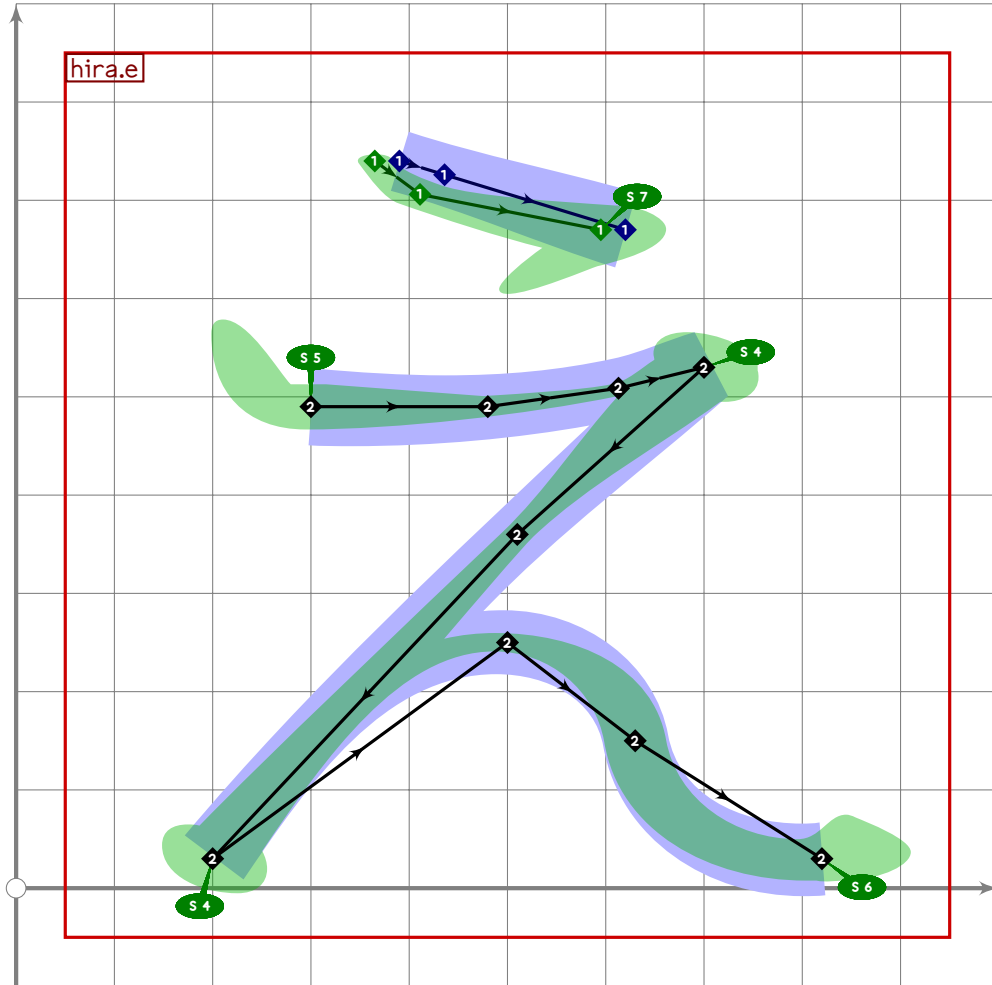
75
76 vardef tsu_curve.hira.u =
77 push_pbox_toexpand("hira.u");
78
79 push_stroke(((370,750)..(0.2[(370,750),(640,660)]*10*down*mincho)..
80 tension 2..(640,660)) shifted (25*left*mincho),
81 (1,1)..(1.4,1.4)..(2.3,2.3));
82 set_boserif(0,2,7);
83

```

```

84 tsu_curve.hira.u_bowl;
85 expand_pbox;
86 enddef;

```



```

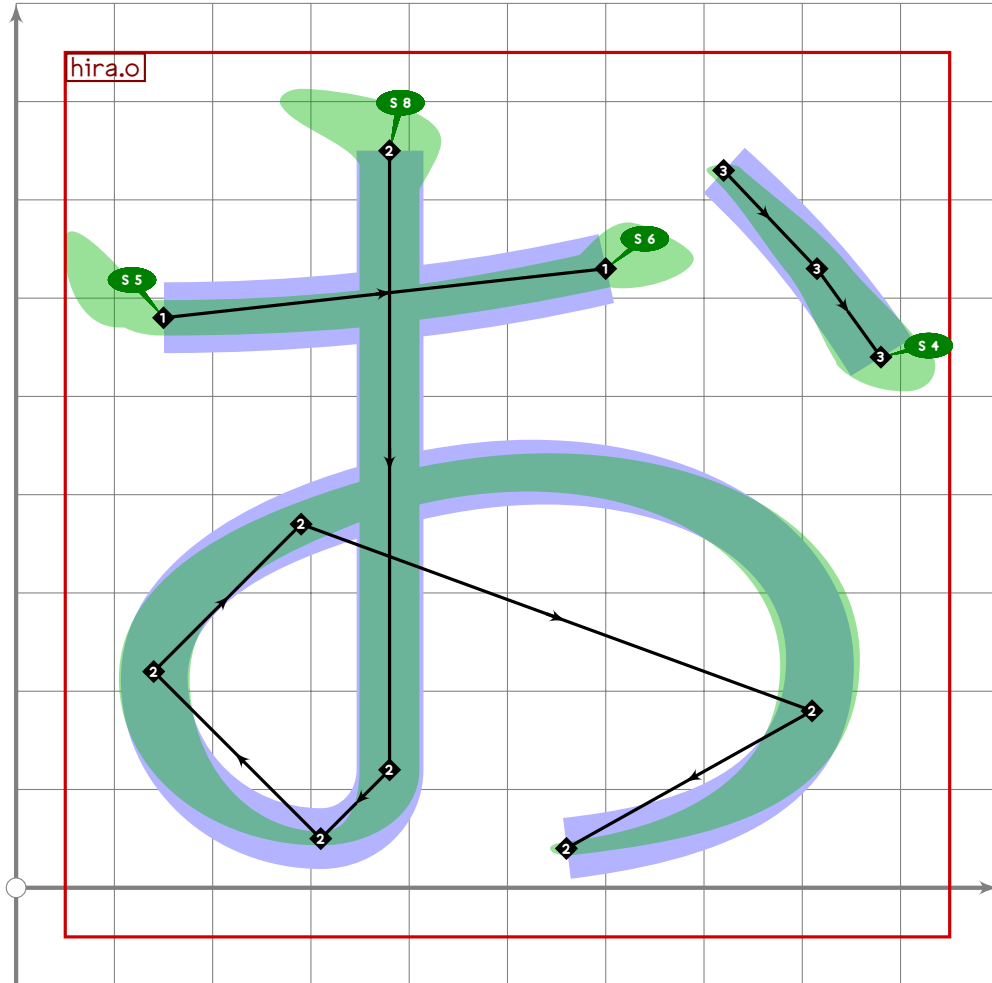
87
88 vardef tsu_curve.hira.e =
89   push_pbox_toexpand("hira.e");
90
91   push_stroke(((390,740)..(0.2[(390,740),(620,670)]+20*down*mincho)..
92     tension 2..(620,670) shifted (25*left*mincho),
93     (1,1)..(1.4,1.4)..(2.3,2.3));
94   set_boserif(0,2,7);
95
96   push_stroke((300,490)..(480,490)..{curl 1}{(700,530){curl 1}..
97     (510,360)..{curl 1}{(200,30){curl 0}..
98     (500,250)..(630,150){dir 280}{dir 5}{(820,30),
99     (2.2,2.2)-(1.3,1.3)-(1,1)-(2.01,2.01)
100     -(1,1)-(1.7,1.7)
101     -(1.2,1.2)-(1.4,1.4)-(2,2));
102   replace_strokep(0)(insert_nodes(oldp)(1.6));
103   set_botip(0,3,0);
104   set_botip(0,5,0);

```

```

105 set_boserif(0,0,5);
106 set_boserif(0,3,4);
107 set_boserif(0,5,4);
108 set_boserif(0,8,6);
109 expand_pbox;
110 enddef;

```



```

111
112 vardef tsu_curve.hira.o =
113   push_pbox_toexpand("hira.o");
114
115   push_stroke((150,580){right}..(600,630),
116     (1.8,1.8)..(1.8,1.8));
117   set_boserif(0,0,5);
118   set_boserif(0,1,6);
119
120   push_stroke((380,750)..(380,120){down}..(310,50){left}..tension 1.1..
121     (140,220)..(290,370)..(810,180)..{curl 0}(560,40),
122     (1.4,1.4)..(1.3,1.3)..(1,1)..(1.5,1.5)..(1.6,1.6)..
123     (1.6,1.6)..(1,1));
124   set_boserif(0,0,8);
125

```

```

126 push_stroke((720,730)..(815,630)..(880,540),
127   (1,1)..(1,4,1,4)..(1,8,1,8));
128 set_boserif(0,2,4);
129 expand_pbox;
130 enddef;
131

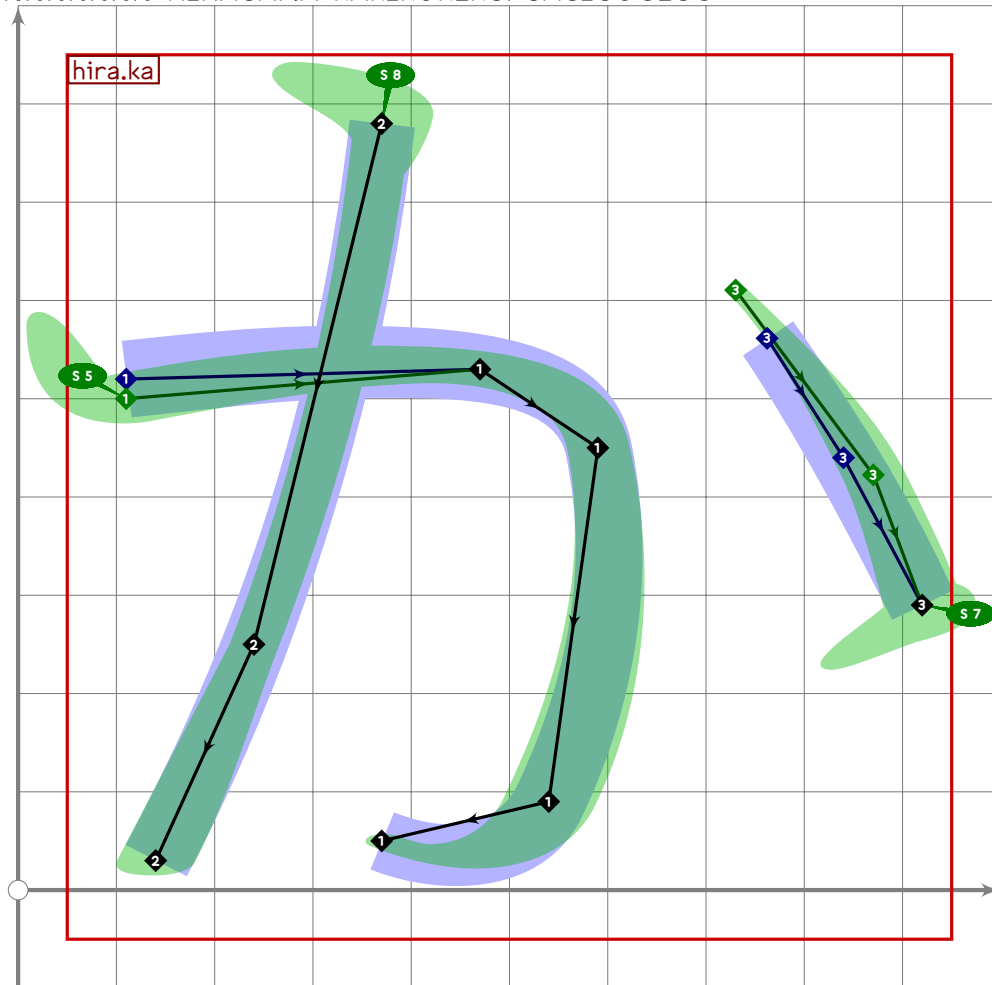
```

Hiragana Kakikukeko/Gagigugego

```

132 %%%%%%%%%% HIRAGANA KAKIKUKEKO/GAGIGUGEGO

```



```

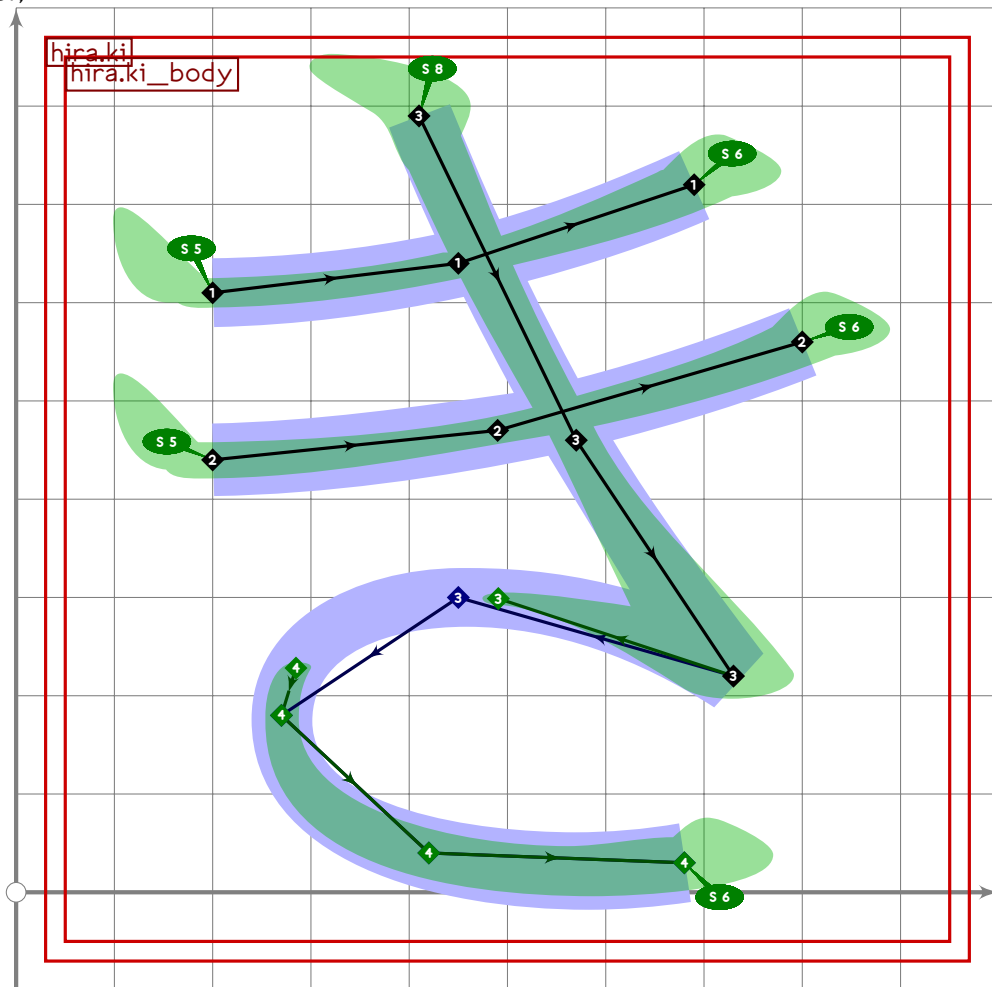
133
134 vardef tsu_curve.hira.ka =
135   push_pbox_toexpand("hira.ka");
136
137   push_stroke(((110,520)+20*mincho*down){curl 0}..(470,530)..(590,450)..
138     tension 2..(540,90)..{curl 0.3}(370,50),
139     (2,3,2,3)..(1,7,1,7)..(1,4,1,4)..(1,8,1,8)..(1,1));
140   set_boserif(0,0,5);
141
142   push_stroke((370,780)..(240,250)..(140,30),
143     (1,3,1,3)..(1,2,1,2)..(1,6,1,6));
144   set_boserif(0,0,8);

```

```

145
146 push_stroke((720,620)..((840,440)+35*mincho*(dir -30))..(920,290),
147   (0.8,0.8)..(1.4,1.4)..(1.6,1.6));
148 set_boserif(0,2,7);
149 expand_pbox;
150 enddef;
151
152 vardef tsu_curve.hira.ki_body =
153   push_pbox_toexpand("hira.ki_body");
154
155   push_stroke((410,790)..(570,460)..{curl 1}{730,220}{curl 1}..
156     (450,300)..(270,180)..(420,40)..(680,30),
157     (1.4,1.4)-(1.2,1.2)-(2.3,2)-(0.60,1)..(0.9,1)..
158     (2.1,2.1)..(2.4,2.4));
159   set_botip(0,2,0);
160   set_boserif(0,0,8);
161   set_boserif(0,6,6);
162   expand_pbox;
163 enddef;

```



```

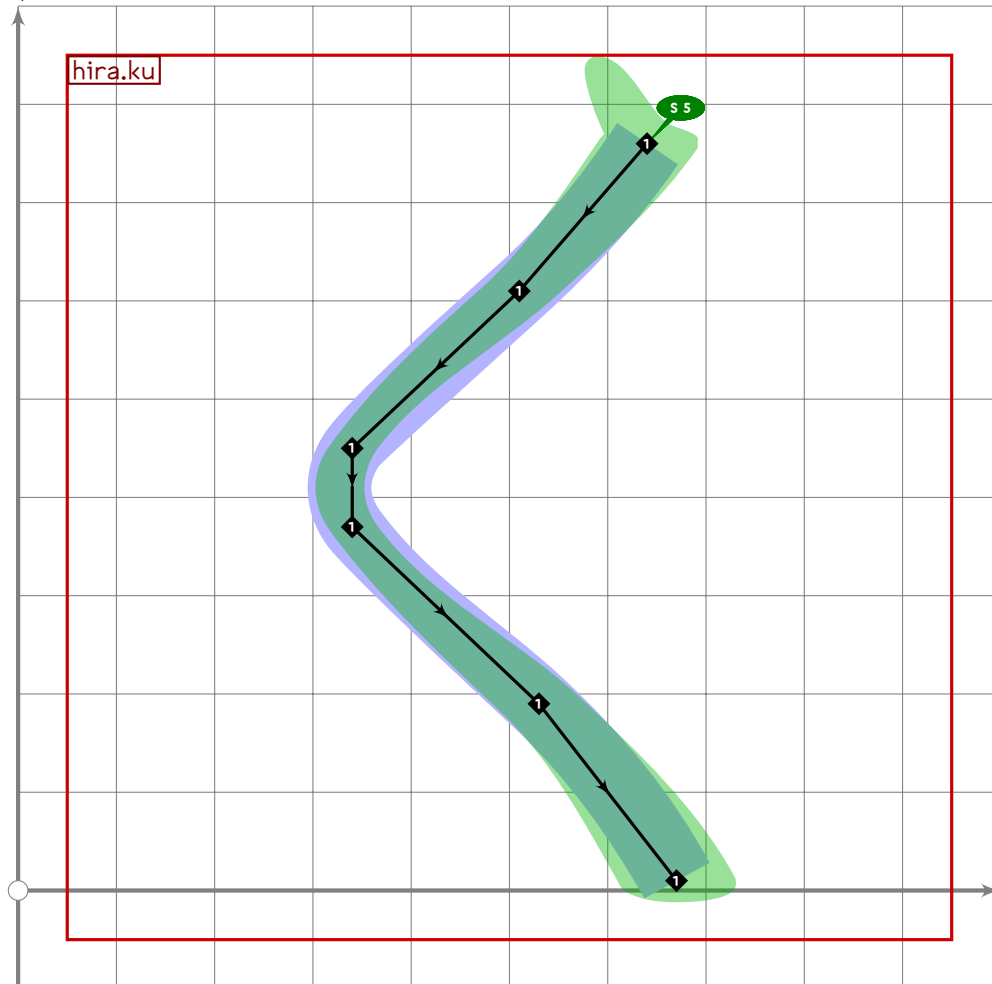
164
165 vardef tsu_curve.hira.ki =

```

```

166 push_pbox_toexpand("hira.ki");
167
168 push_stroke((200,610)..(450,640)..(690,720),
169   (1.6,1.6)-(1.4,1.4)-(1.9,1.9));
170 set_boserif(0,0,5);
171 set_boserif(0,2,6);
172
173 push_stroke((200,440)..(490,470)..(800,560),
174   (1.9,1.9)-(1.5,1.5)-(1.9,1.9));
175 set_boserif(0,0,5);
176 set_boserif(0,2,6);
177
178 tsu_curve.hira.ki_body;
179 expand_pbox;
180 enddef;

```



```

181
182 vardef tsu_curve.hira.ku =
183   push_pbox_toexpand("hira.ku");
184
185   push_stroke((640,760)..(510,610)..(340,450)..
186     tension 0.75..(340,370)..(530,190)..(670,10),

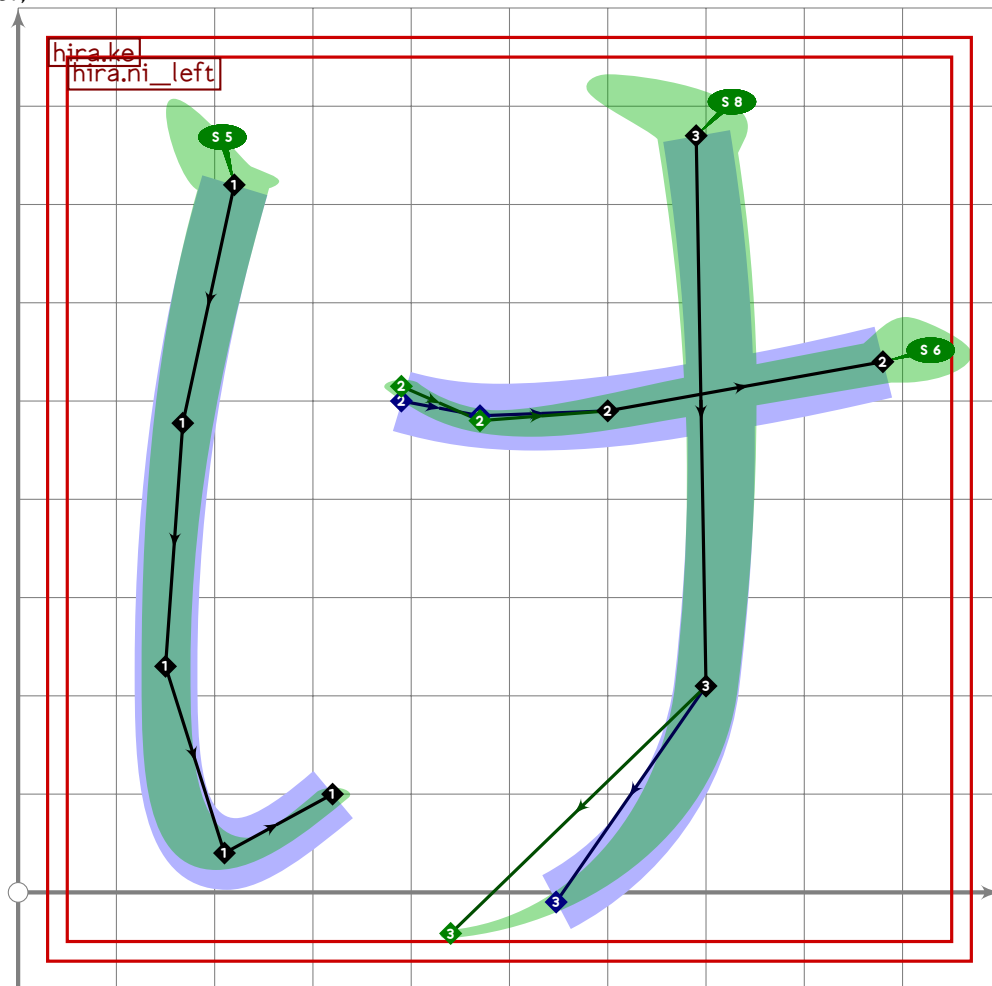
```



```

187 (1,9)..(1,6)..(1,2)..(1,2)..(1,7)..(2,2,1));
188 set_boserif(0,0,5);
189 expand_pbox;
190 enddef;

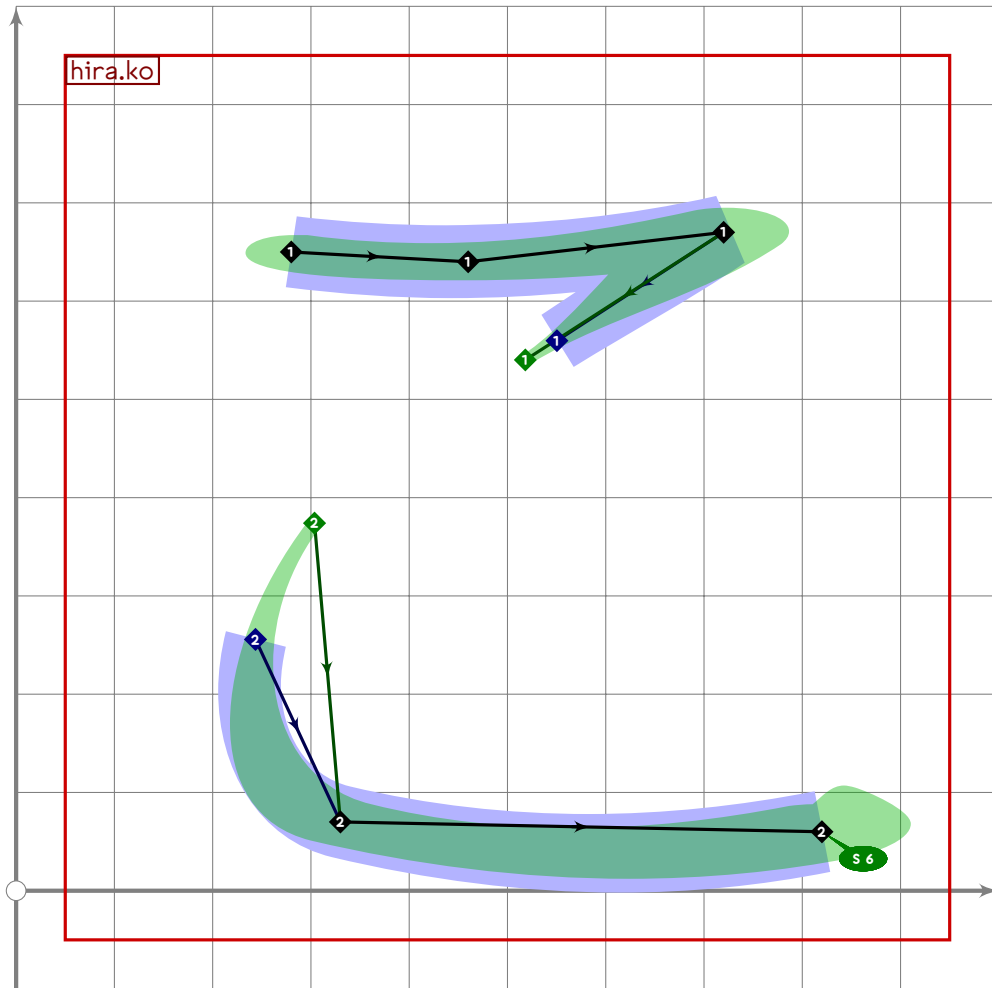
```



```

191
192 vardef tsu_curve.hira.ke =
193   push_pbox_toexpand("hira.ke");
194
195   tsu_curve.hira.ni_left;
196
197   push_stroke((390,500*15*mincho)..(470,485-5*mincho)..(600,490)..(880,540),
198     (1,1)..(1,4,1,4)..(1,8,1,8)..(2,2));
199   set_boserif(0,3,6);
200
201   push_stroke((690,770)..tension 2..(700,210)..(280,-10),
202     (1,6,1,6)-(1,4,1,4)-(0,6,0,6));
203   set_boserif(0,0,8);
204   expand_pbox;
205 enddef;

```



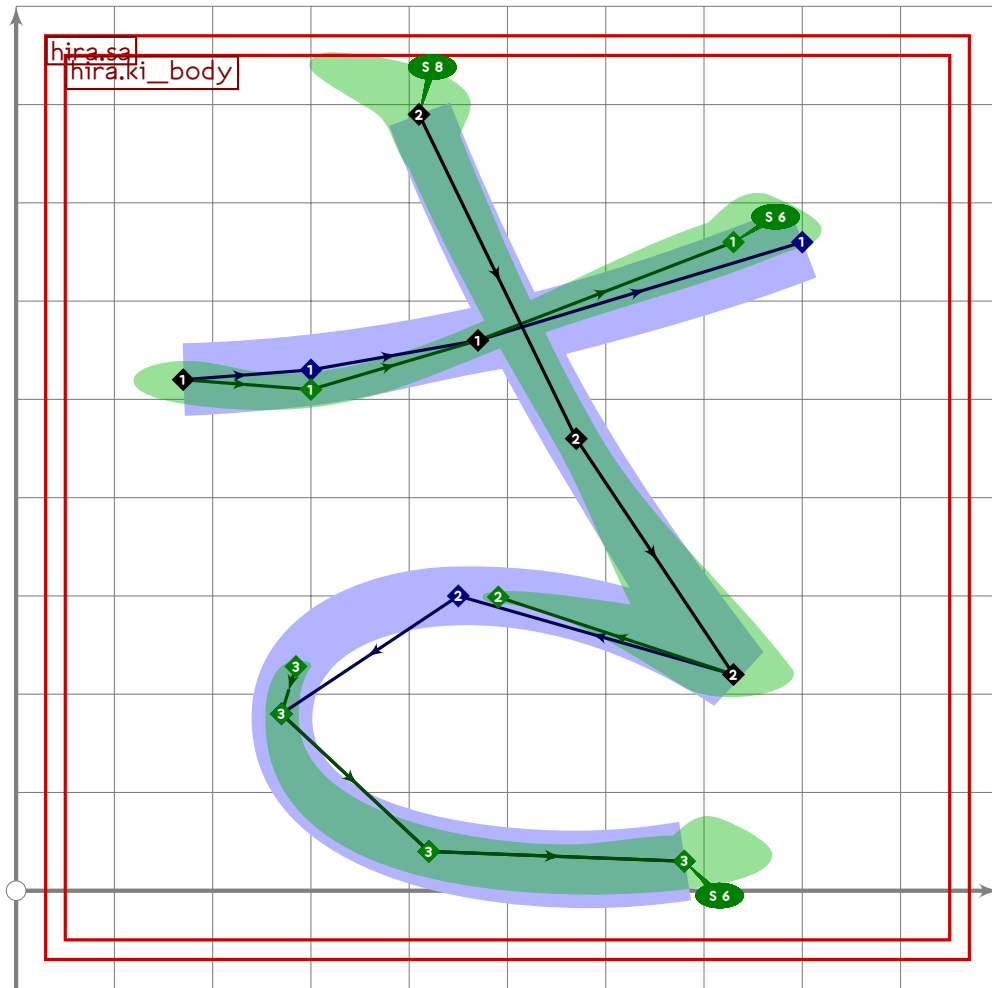
```

206
207 vardef tsu_curve.hira.ko =
208   push_pbox_toexpand("hira.ko");
209
210   push_stroke((280,650)..(460,640)..{curl 1}(720,670){curl 1}..
211     (450,500)..(330,70)..tension 2.4..(820,60),
212     (1.8,1.8)-(1.9,1.9)-(2.3,2.3)-
213     (0.35,0.25)-(2.2,1.8)..(2.8,2.4));
214   set_botip(0,2,0);
215   set_boserif(0,5,6);
216   expand_pbox;
217 enddef;
218

```

Hiragana Sashisuseso/Zajizuzezo

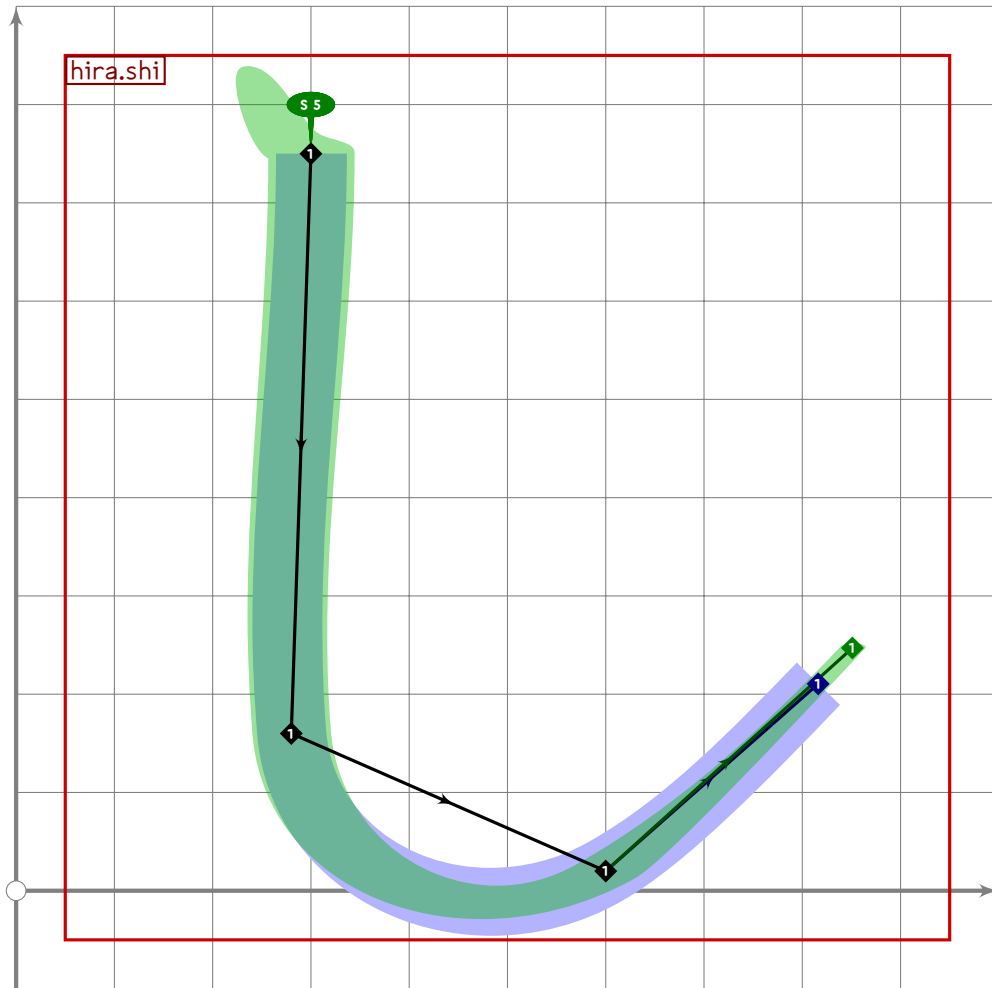
219 %%% HIRAGANA SASHISUSES0/ZAJIZUZEZO



```

220
221 vardef tsu_curve.hira.sa =
222   push_pbox_toexpand("hira.sa");
223
224   push_stroke((170,520)..(300,530-20*mincho)..(470,560)..(800-70*mincho,660),
225     (1.9,1.9)-(1.8,1.8)-(1.4,1.4)-(2.1,2.1));
226   set_boserif(0,3,6);
227
228   tsu_curve.hira.ki_body;
229   expand_pbox;
230 enddef;

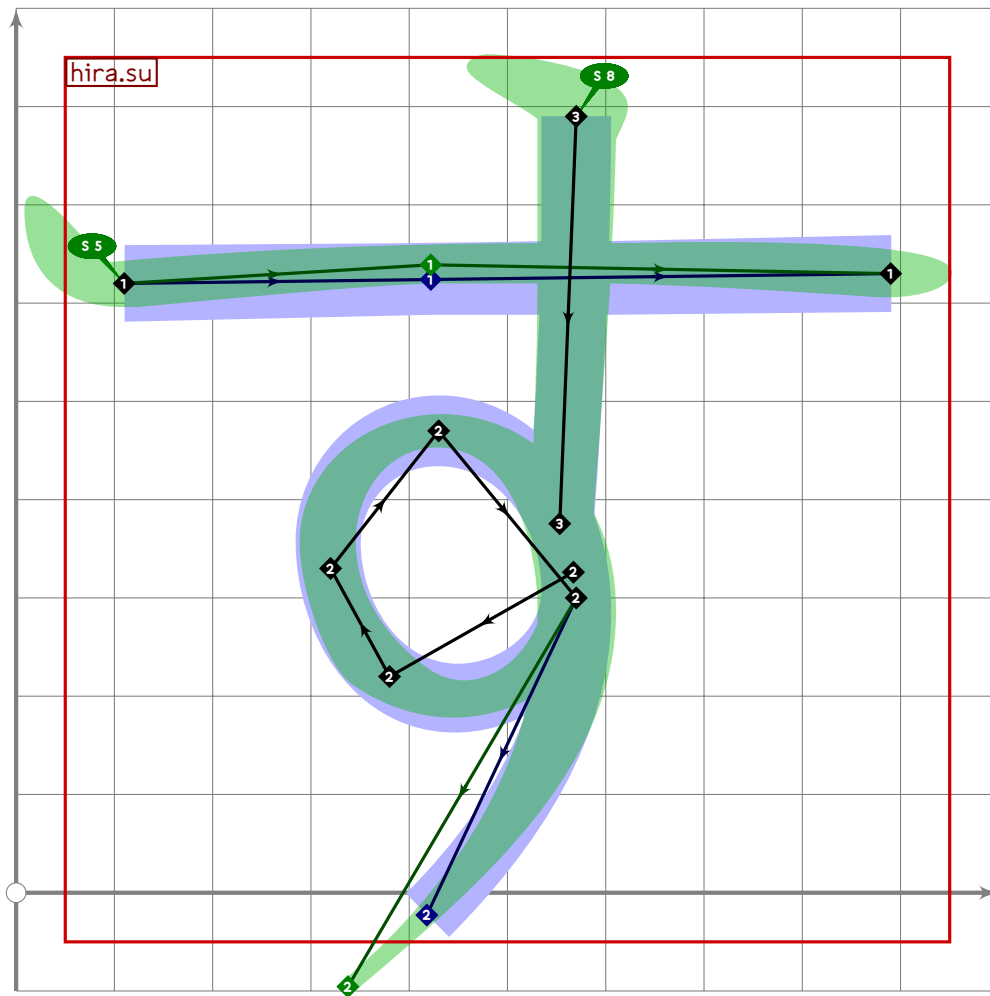
```



```

231
232 vardef tsu_curve.hira.shi =
233   push_pbox_toexpand("hira.shi");
234
235   push_stroke((300,750){down}..tension 2.5..(280,160)..
236     (600,20)..tension 1.5..{curl 0}(990,400),
237     (1.7,1.7)..(1.6,1.6)-(1.5,1.5)-(0.4,0.55));
238   set_boserif(0,0,5);
239   expand_pbox;
240 enddef;

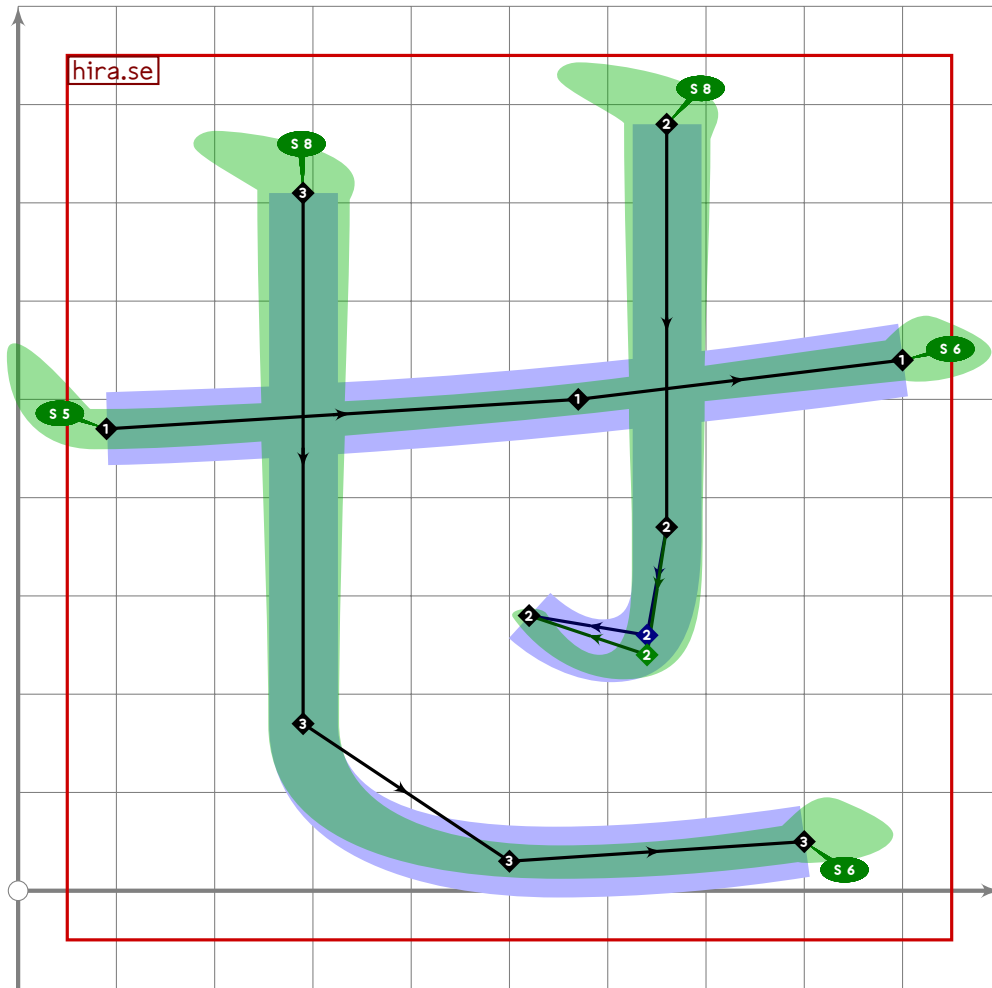
```



```

241
242 vardef tsu_curve.hira.su =
243   push_pbox_toexpand("hira.su");
244
245   push_stroke((110,620)..(0.4[(110,620),(890,630)]*15*up*mincho)..(890,630),
246     (2.2,2.2)-(1.9,1.9)-(2.2,2.2));
247   set_boserif(0,0,5);
248
249   push_stroke((320,330)..(430,470)..(570,300)..{curl 0}(270,150),
250     (1.3,1.3)-(1.7,1.7)-(1.3,1.3)-(1.7,1.7)-(1.6,1.6)-(0.7,0.7));
251   replace_strokep(0)((point 1.9 of oldp)..(380,220)..oldp);
252
253   push_stroke((570,790){down}..(point 3.7 of get_strokep(0)),
254     (1.6,1.6)..(1.4,1.4));
255   set_boserif(0,0,8);
256   expand_pbox;
257 enddef;

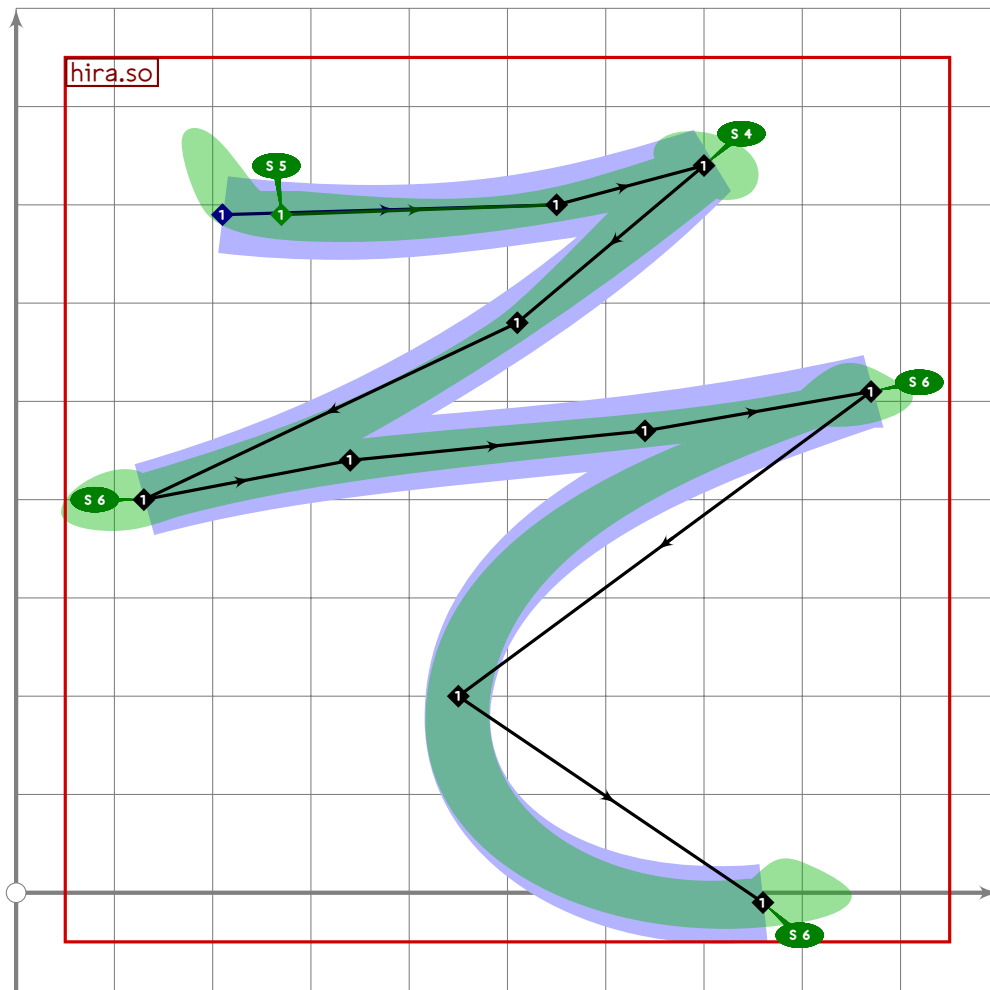
```



```

258
259 vardef tsu_curve.hira.se =
260   push_pbox_toexpand("hira.se");
261
262   push_stroke((90,470)..(570,500)..(900,540),
263     (2,2)..(1,6,1,6)..(2,2));
264   set_boserif(0,0,5);
265   set_boserif(0,2,6);
266
267   push_stroke((660,780)..(660,370){down}..(640,260-20*mincho)..
268     {curl 0.2}(520,280),
269     (1,7,1,7)..(1,5,1,5)..(1,5,1,5)..(1,1));
270   set_boserif(0,0,8);
271
272   push_stroke((290,710)..(290,170){down}..(500,30)..
273     {direction infinity of get_stroke(-1)}(800,50),
274     (1,8,1,8)..(1,5,1,5)..(1,7,1,7)..(1,8,1,8));
275   set_boserif(0,0,8);
276   set_boserif(0,3,6);
277   expand_pbox;
278 enddef;

```



```

279
280 vardef tsu_curve.hira.so =
281   push_pbox_toexpand("hira.so");
282
283   push_stroke(
284     (210+60*mincho,690)..tension 1.2..(550,700)..
285     {curl 0}{(700,740){curl 1}..
286     (510,580)..
287     {curl 1}{(130,400){curl 2}..(340,440)..(640,470)..
288     {curl 1}{(870,510){curl 0}..tension 1.2..(450,200)..{curl 0.2}{(760;10),
289     (2.3,2.3)-(1.7,1.7)-(1.8,1.8)-
290     (1.2,1.2)-
291     (2.1,2.1)-(1.9,1.9)-(1.7,1.7)-(1.5,1.5)-
292     (1.4,1.4)-(2.3,2.3));
293   set_botip(0,2,0);
294   set_botip(0,4,0);
295   set_botip(0,7,0);
296   set_boserif(0,0,5);
297   set_boserif(0,2,4);
298   set_boserif(0,4,6);
299   set_boserif(0,7,6);

```

```

300 set_boserif(0,9,6);
301 expand_pbox;
302 enddef;
303

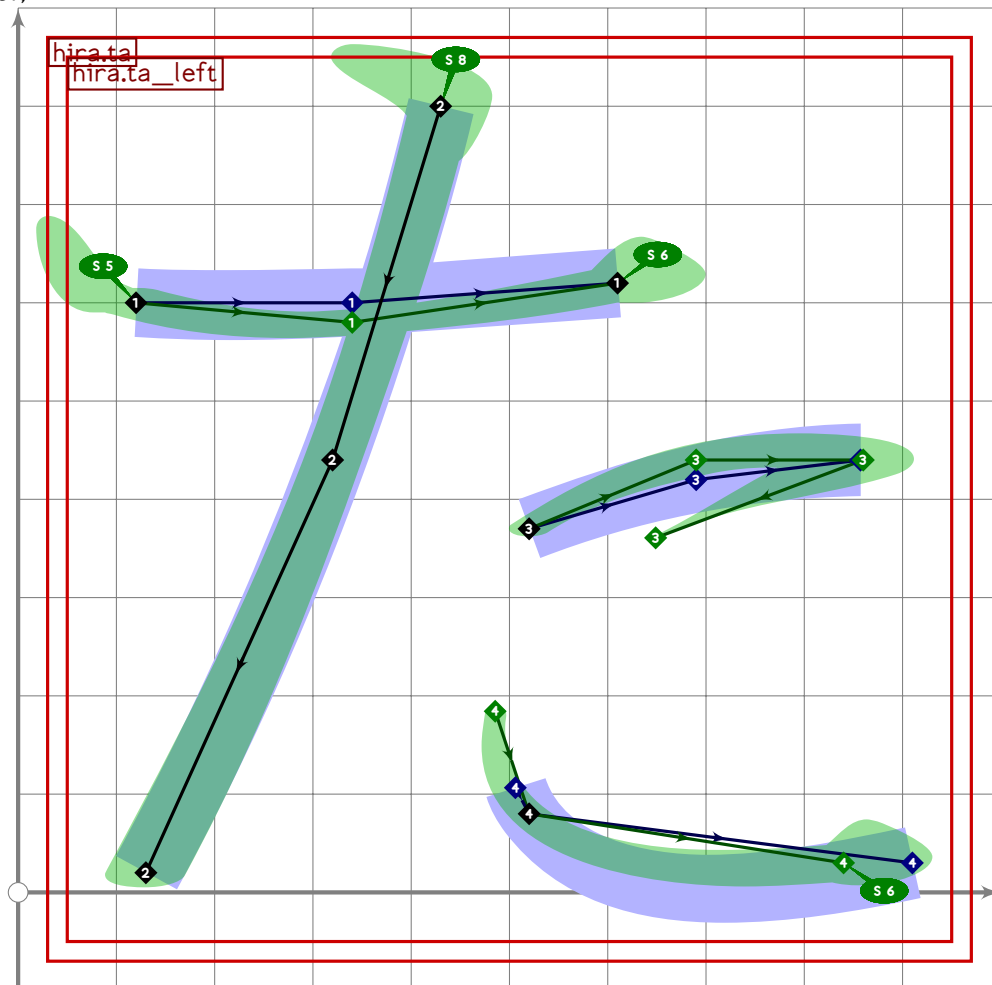
```

Hiragana Tachitsuteto/Dajizudedo

```

304 %%%%%%%%%%% HIRAGANA TACHITSUTETO/DAJIZUDEDO
305
306 vardef tsu_curve.hira.ta_left =
307   push_pbox_toexpand("hira.ta_left");
308
309   push_stroke((120,600)..(340,600-20*mincho)..tension 1.5..(610,620),
310     (1.6,1.6)..(1.5,1.5)..(1.7,1.7));
311   set_boserif(0,0,5);
312   set_boserif(0,2,6);
313
314   push_stroke((430,800)..(320,440)..(130,20),
315     (1.4,1.4)..(1.3,1.3)..(1.6,1.6));
316   set_boserif(0,0,8);
317   expand_pbox;
318 enddef;

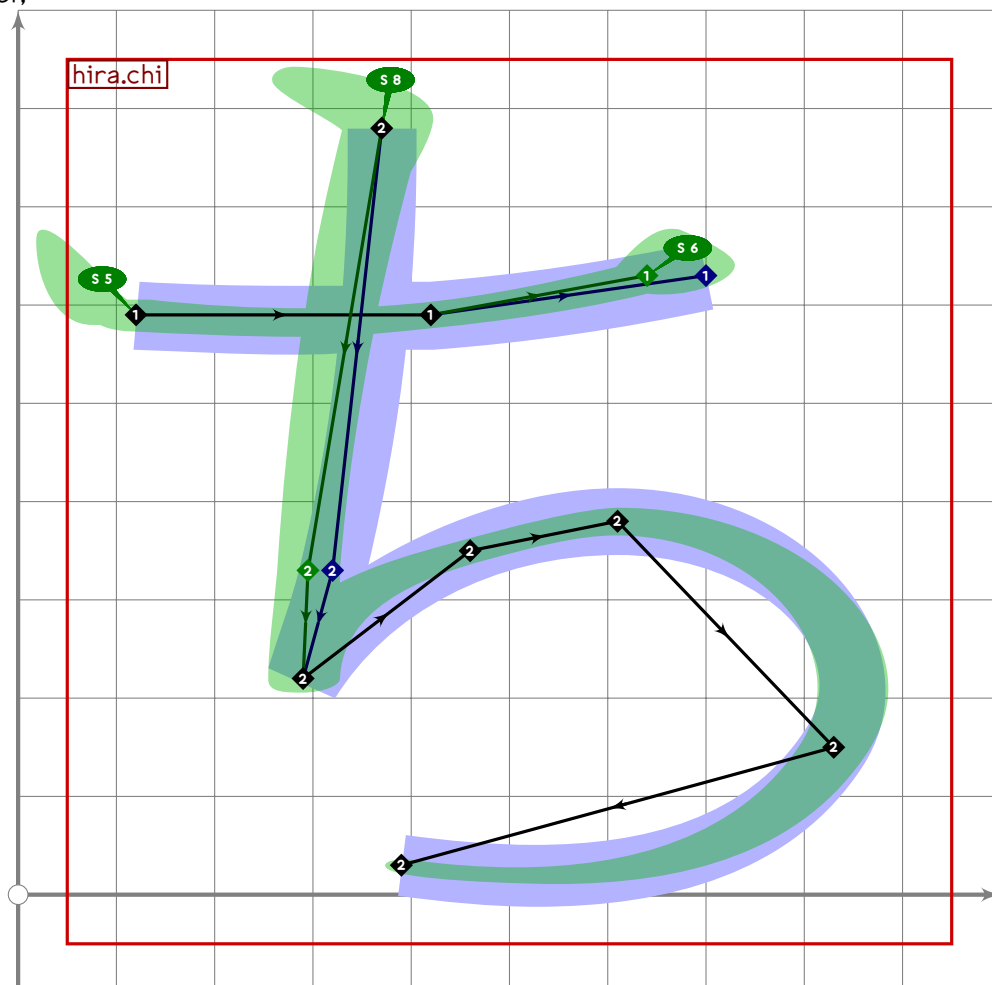
```




```

319
320 vardef tsu_curve.hira.ta =
321   push_pbox_toexpand("hira.ta");
322
323   tsu_curve.hira.ta_left;
324
325   push_stroke((520,370)..(690,420+20*mincho)..{curl 1.5}(860,440){curl 0}..
326     (610,280+60*mincho)..(520,80)..tension 1.2 and 3..
327     {curl 0.2}(910-70*mincho,30),
328     (1,1,1)-(1.6,1.6)-(2.8,0.99)-(0.45,0.35)-(1,1,1)-(1.9,1.9));
329   set_botip(0,2,0);
330   set_boserif(0,5,6);
331   expand_pbox;
332 enddef;
333
334 vardef tsu_curve.hira.chi_bottom =
335   replace_strokep(0)((oldp){direction infinity of oldp xscaled 2}..
336     (460,350)..(610,380){right}..(830,150)..
337     tension 1.4..{curl 0.3}(390,30));
338   replace_strokeq(0)((oldq)..(1.3,1.3)..(1.5,1.5)..(1.5,1.5)..(1,1));
339 enddef;

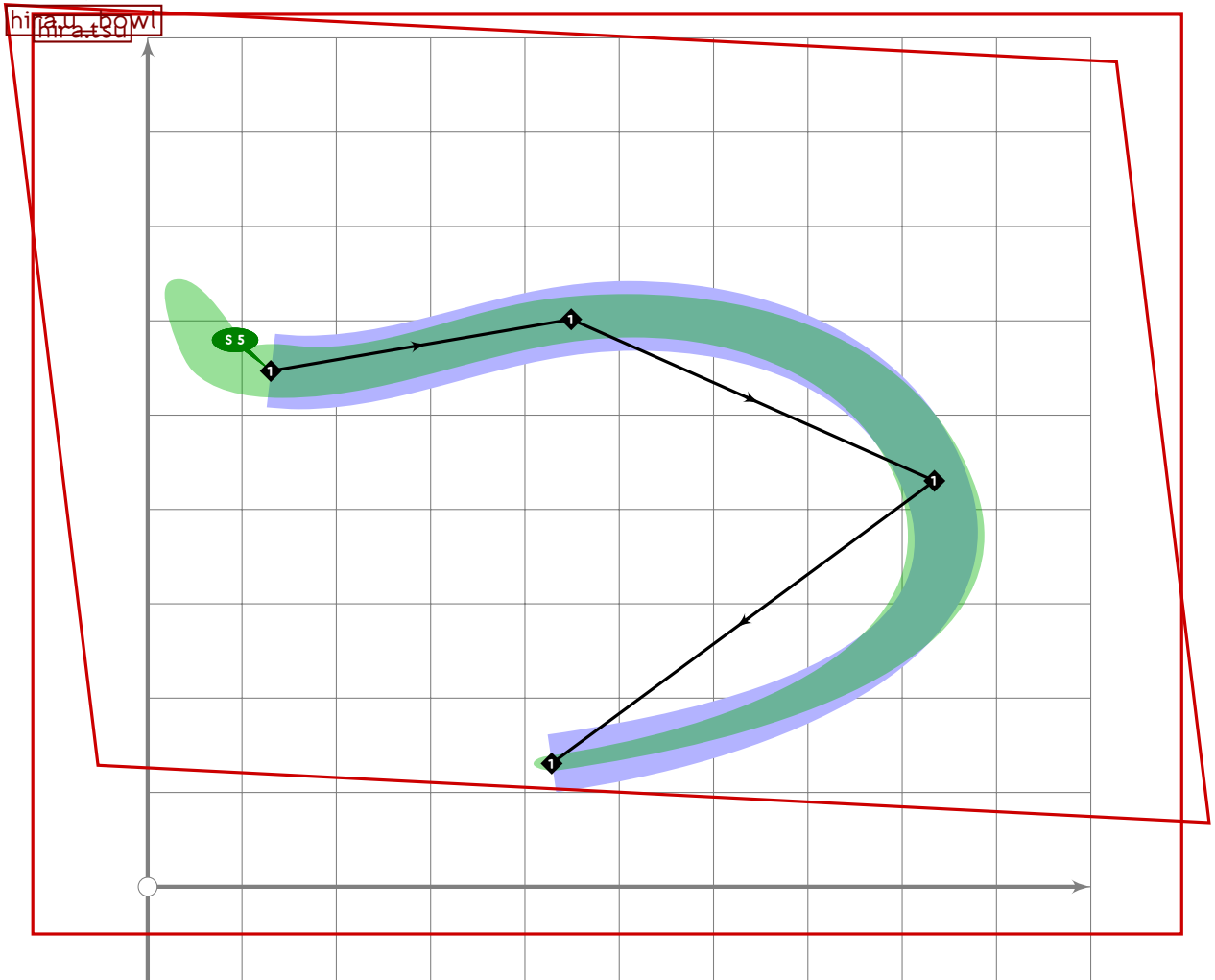
```



```

340
341 vardef tsu_curve.hira.chi =
342   push_pbox_toexpand("hira.chi");
343
344   push_stroke((120,590)..(420,590)..(700-60*mincho,630),
345     (1.7,1.7)..(1.5,1.5)..(1.6,1.6));
346   set_boserif(0,0,5);
347   set_boserif(0,2,6);
348
349   push_stroke((370,780)..(320-25*mincho,330)..(290,220),
350     (1.6,1.6)..(1.4,1.4)..(1.5,1.5));
351   tsu_curve.hira.chi_bottom;
352   set_botip(0,2,0);
353   set_boserif(0,0,8);
354   expand_pbox;
355 enddef;

```



```

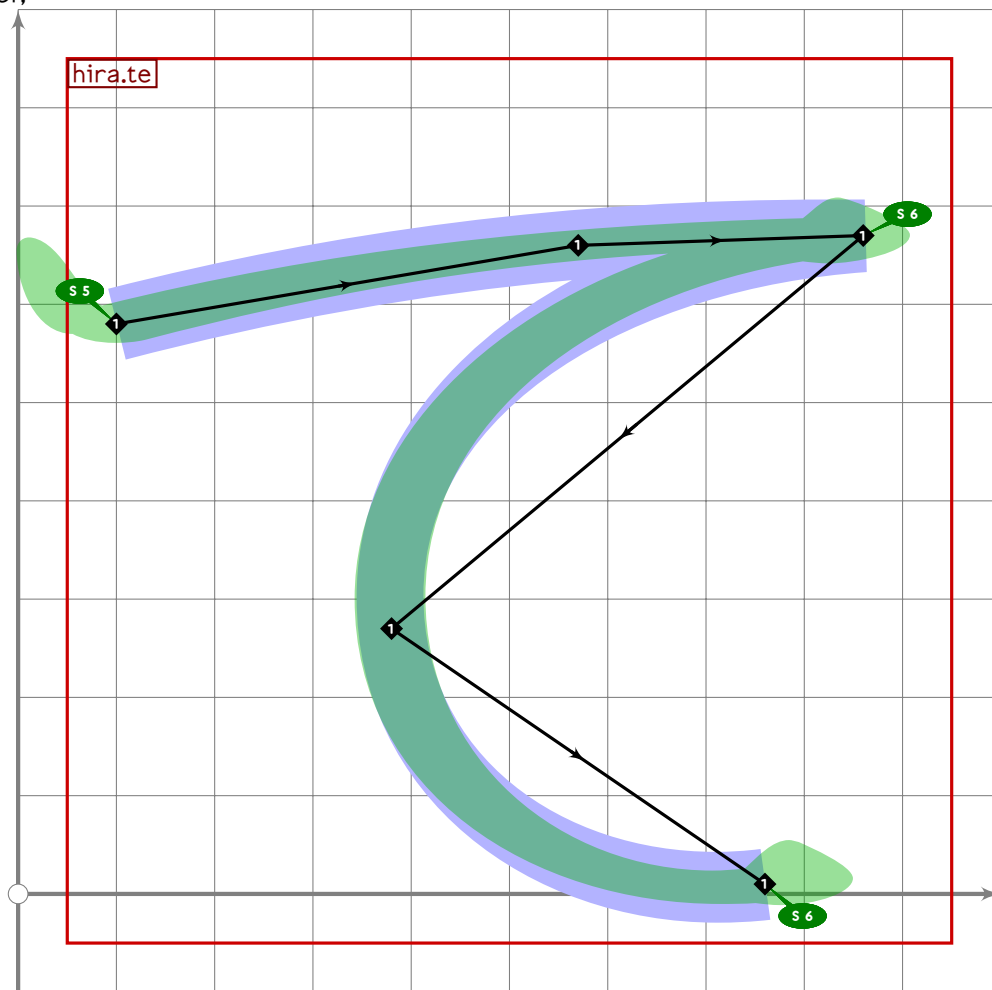
356
357 vardef tsu_curve.hira.tsu =
358   push_pbox_toexpand("hira.tsu");

```

```

359
360 begingroup
361   save xf;
362   transform xf;
363   (300,450) transformed xf=(220,560);
364   (750,350) transformed xf=(820,440);
365   (400,0) transformed xf=(400,150);
366   tsu_xform(xf)(tsu_curve.hira.u_bowl);
367   set_bosize(0)(100*10*mincho);
368 endgroup;
369 expand_pbox;
370 enddef;

```



```

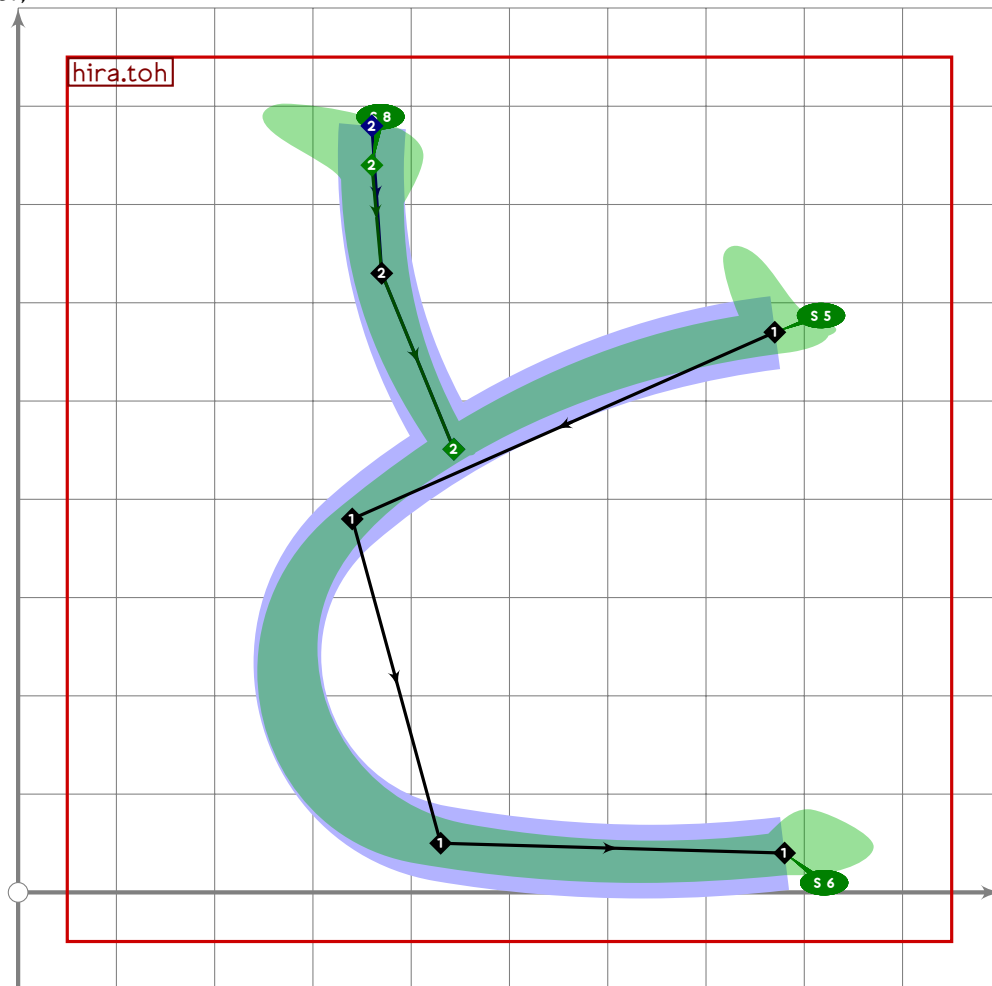
371
372 vardef tsu_curve.hira.te =
373   push_pbox_toexpand("hira.te");
374
375   push_stroke((100,580)..(570,660)..{curl 1}(860,670){curl 0.2}..
376     (380,270)..{curl 0.6}(760,10),
377     (19,19)-(1.5,1.5)-(1.8,1.8)-(1.5,1.5)-(1.8,1.8));
378   set_botip(0,2,0);
379   set_boserif(0,0,5);

```

```

380 set_boserif(0,2,6);
381 set_boserif(0,4,6);
382 expand_pbox;
383 enddef;

```



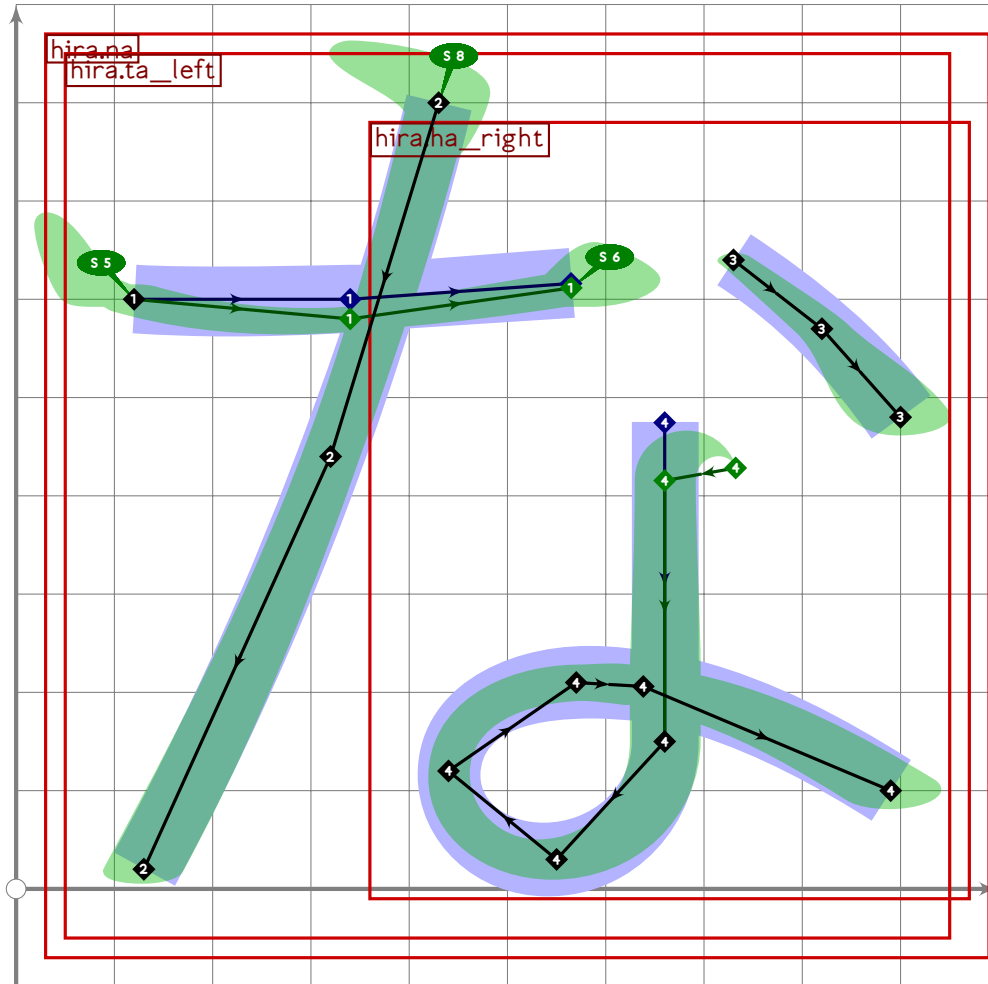
```

384
385 vardef tsu_curve.hira.toh =
386   push_pbox_toexpand("hira.toh");
387
388   push_stroke((770,570)..tension 1.7..(340,380)..(430,50)..
389     tension 2..(780,40),
390     (2,2)-(1.2,1.2)-(2.1,2.1)-(2,2));
391   set_boserif(0,0,5);
392   set_boserif(0,3,6);
393
394   push_stroke(subpath (0,1,97) of
395     ((360,780-40*mincho)..(370,630)..(point 0.7 of get_strokep(0))),
396     (1.4,1.4)-(1.3,1.3)-(1.1,1.1));
397   set_boserif(0,0,8);
398   expand_pbox;
399 enddef;
400

```

Hiragana Naninuneno

401 %%%%%%%%%% HIRAGANA NANINUNENO



```

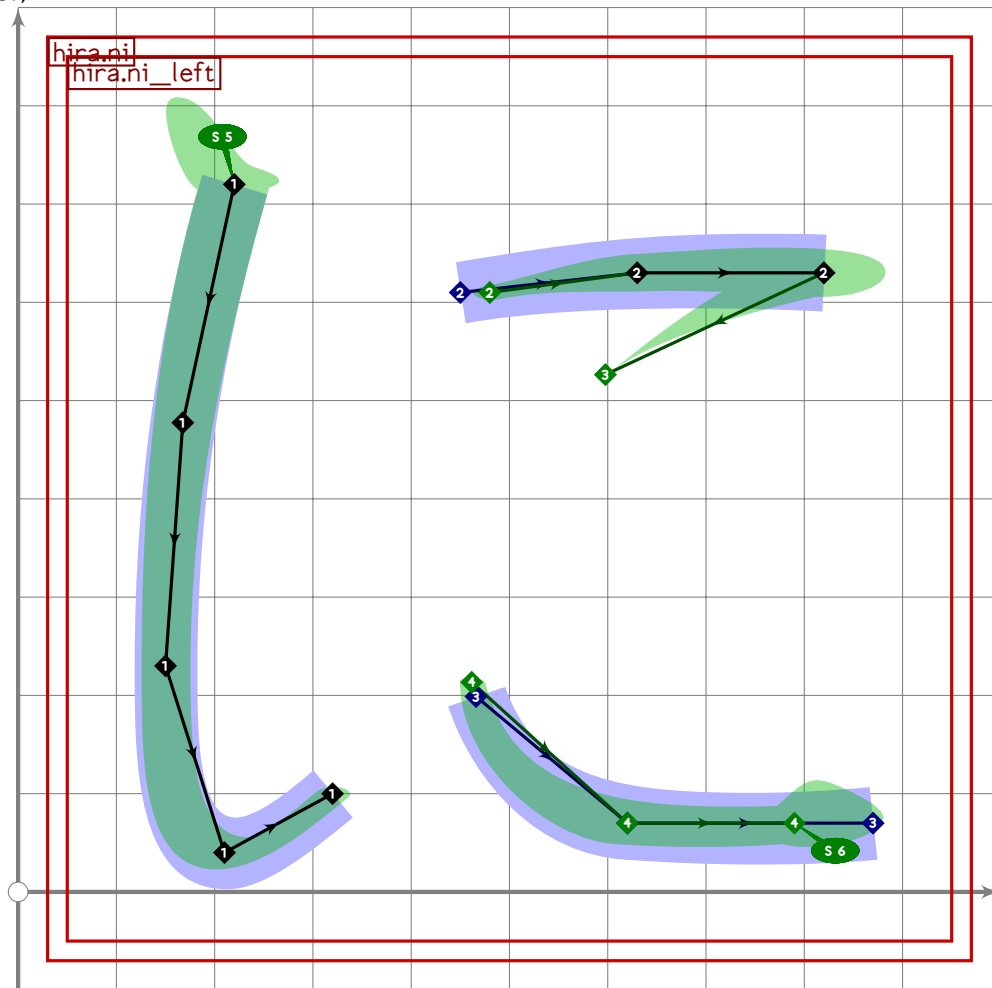
402
403 vardef tsu_curve.hira.na =
404   push_pbox_toexpand("hira.na");
405
406   tsu_curve.hira.ta_left;
407   replace_stroke(-1)(subpath (0,1,8) of oldp);
408
409   push_stroke((730,640)..(820,570)..(900,480),
410     (1,1)..(1,3,1,3)..(1,9,1,9));
411
412   tsu_curve.hira.ha_right;
413
414   replace_stroke(0)((point infinity of oldp){direction infinity of oldp}
415     ..(subpath (0,45*0.1*mincho,infinity) of oldp));
416   replace_strokeq(0)((0,-0.4)-(1,7,1)-(1.5,1,5)-(2,2)-
417     (1,1,1,1)-(1,9,1,9));
418   expand_pbox;
419 enddef;

```

```

420
421 vardef tsu_curve.hira.ni_left =
422   push_pbox_toexpand("hira.ni_left");
423
424   push_stroke((220,720)..(150,230){down}..tension 1.5..(210,40)..
425     tension 1.5..{curl 0}(320,100),
426     (1.5,1.5)..(1.2,1.2)..(1.8,1.8)..(1,1));
427   replace_strokep(0)(insert_nodes(oldp)(0.5));
428   replace_strokeq(0)(insert_nodes(oldq)(0.5));
429   set_boserif(0,0,5);
430   expand_pbox;
431 enddef;

```



```

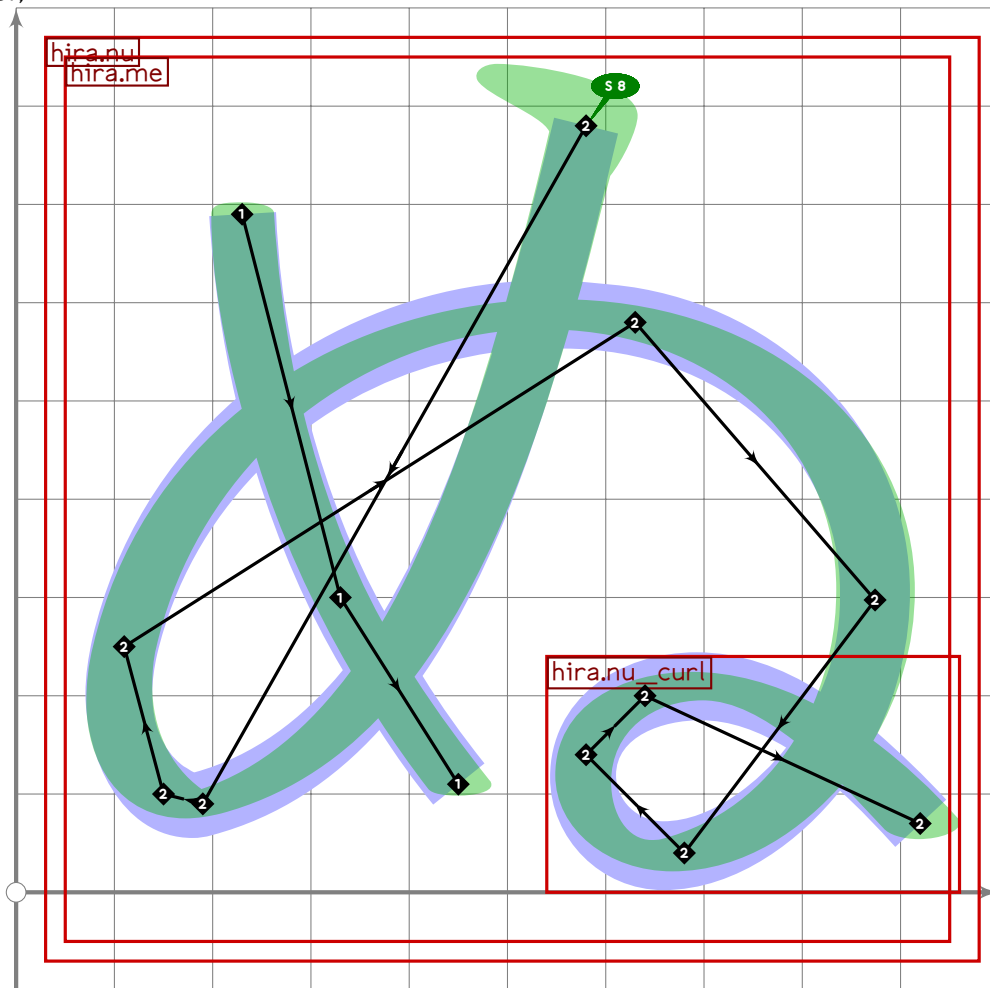
432
433 vardef tsu_curve.hira.ni =
434   push_pbox_toexpand("hira.ni");
435
436   tsu_curve.hira.ni_left;
437
438   push_stroke((450*30*mincho,610)..(630,630)..(820,630),
439     (1,1)..(1.9,1.9)..(2.2,2.2));
440

```

```

441 push_stroke((point infinity of get_stroke(0)){curl 0.6}..(530,460)..
442   (460,220)..(620,70)..tension 2..(870-80*mincho,70),
443   (3,0,7)-(0,0)-(0.8,0,9)-(2,2)-(1,9,1,9));
444 set_boserif(0,4,6);
445 expand_pbox;
446 enddef;
447
448 vardef tsu_curve.hira.nu_curl =
449   begingroup
450     push_pbox_explicit("hira.nu_curl",
451       identity xyscaled (420,240) shifted (540,0));
452     (680,40)..(580,140)..(640,200)..{curl 0}(920,70)
453   endgroup
454 enddef;

```



```

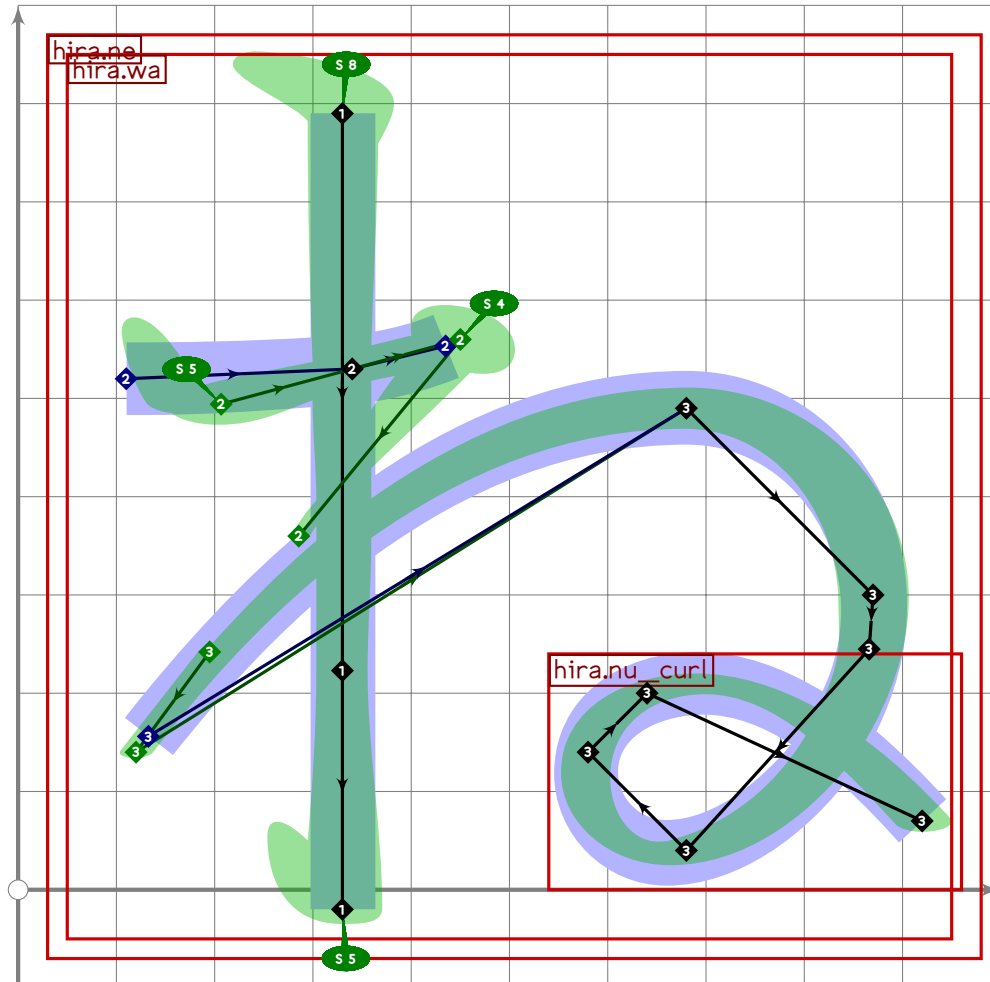
455
456 vardef tsu_curve.hira.nu =
457   push_pbox_toexpand("hira.nu");
458
459   tsu_curve.hira.me;
460
461   replace_stroke(0)((subpath (0,4,8) of oldp)..tension 1.2..

```

```

462   tsu_curve.hira.nu_curl);
463   replace_strokeq(0)((1.5,1.5)-(1.4,1.4)-(1.6,1.6)-(1.4,1.4)-
464     (1.6,1.6)-(1.6,1.6)-(1.7,1.7)-(1.3,1.3)-(1.6,1.6));
465   set_bosserif(0,0,8);
466   expand_pbox;
467 enddef;

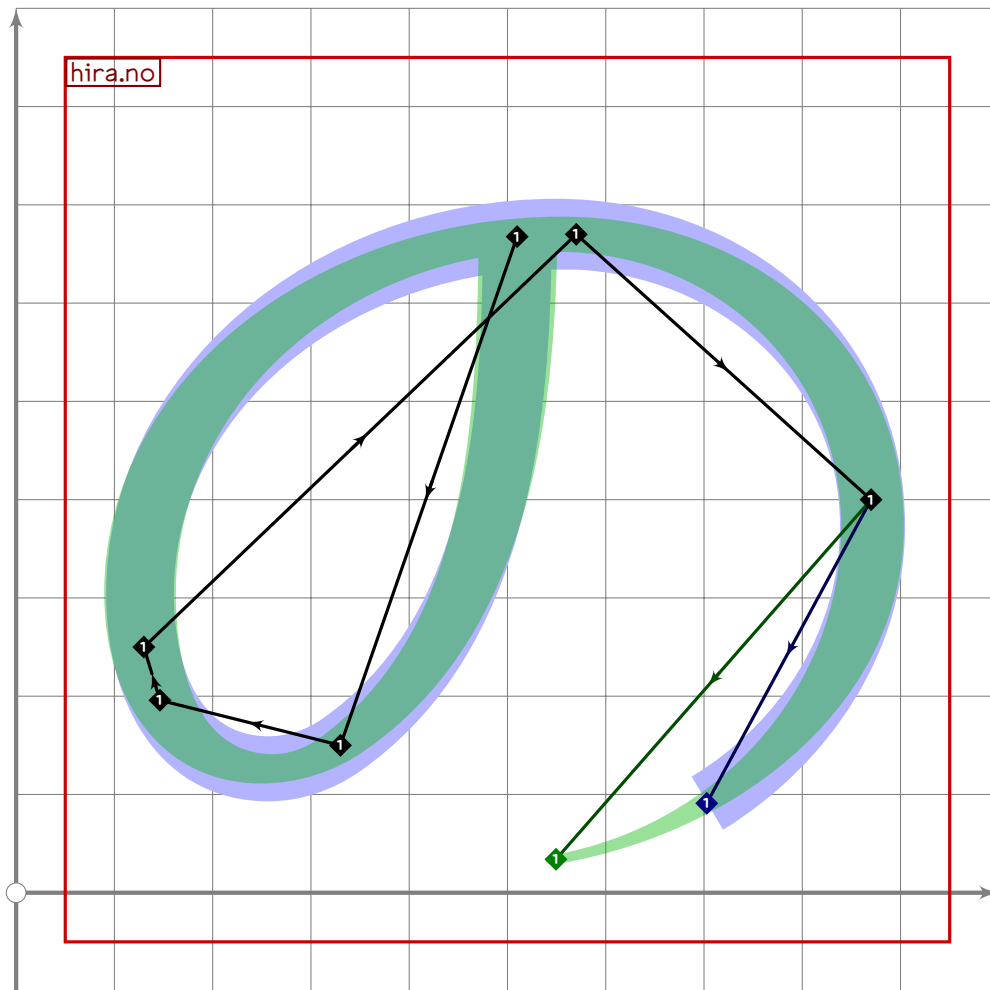
```



```

468
469 vardef tsu_curve.hira.ne =
470   push_pbox_toexpand("hira.ne");
471
472   tsu_curve.hira.wa;
473
474   replace_strokeq(0)((subpath (0,6.1) of oldp)..tension 1.2..
475     tsu_curve.hira.nu_curl);
476   replace_strokeq(0)((2,2)-(1.6,1.6)-(2.2,0.9)-(0.7,0.7)-(0.97,0.97)-
477     (2,2)-(1.5,1.5)-(1.4,1.4)-(1.4,1.4)-(1.2,1.2)-(1.3,1.3));
478   expand_pbox;
479 enddef;

```

```

480
481 vardef tsu_curve.hira.no =
482   push_pbox_toexpand("hira.no");
483
484   begingroup
485     save px,py;
486     path px,py;
487     px:=(410,30)..(130,250)..tension 11..(570,670)..(870,400)..cycle;
488     py:=(510,770){down}..{dir 215}(330,150);
489
490     px:=subpath (0.85,4) of px;
491     push_stroke(
492       (subpath (xpart (py intersectiontimes px),infinity) of py)..px,
493       (1.6,1.6)-(1.3,1.3)-(1.4,1.4)-(1.5,1.5)-(1.8,1.8)-
494       (1.4,1.4)-(0.7,0.7));
495   endgroup;
496   expand_pbox;
497 enddef;
498

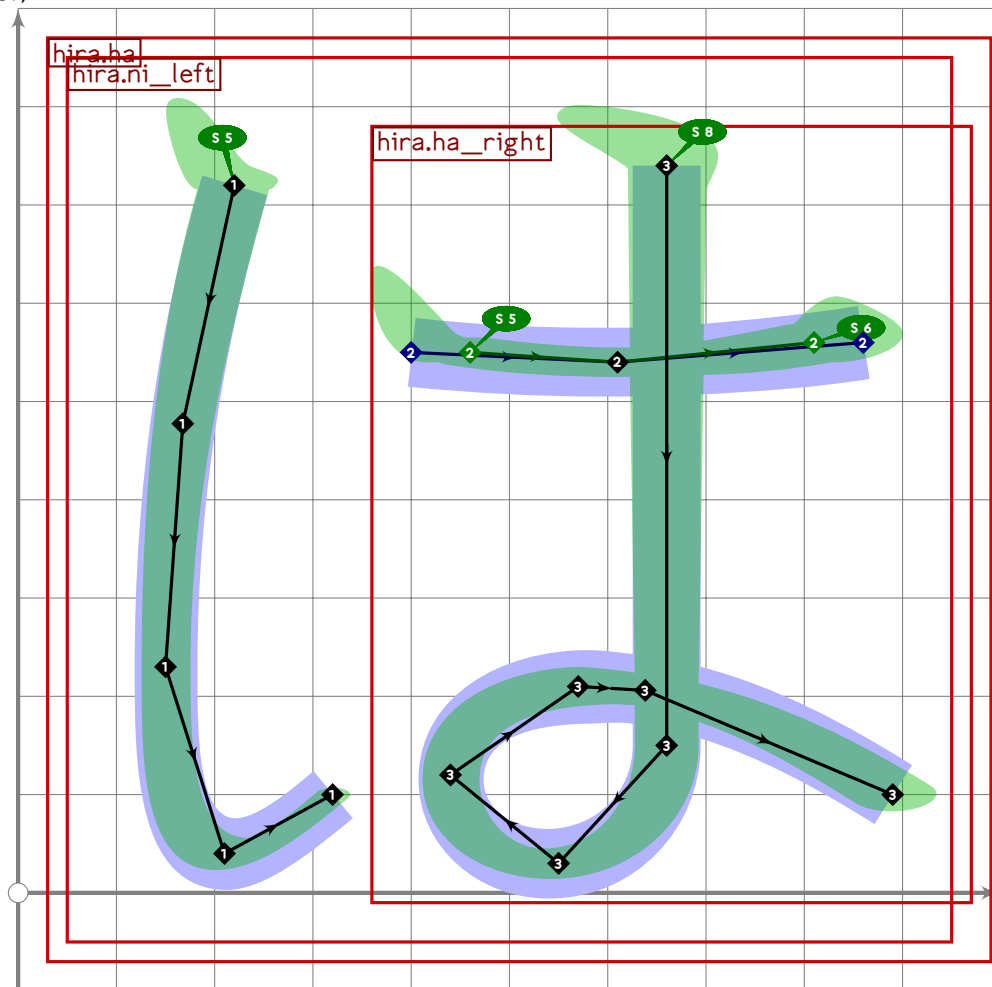
```

Hiragana Hahifuheho/Babibubebo/Papipupepo

```

499 %%%%%%%%%% HIRAGANA HAHIFUHEHO/BABIBUBEBO/PAPIPUPEPO
500
501 vardef tsu_curve.hira.ha_right =
502   push_pbox_explicit("hira.ha_right",
503     identity xyscaled (610,790) shifted (360,10));
504
505   push_stroke(insert_nodes((660,740)..(660,150){down}..(550,30)..(440,120)..
506     (570,210)..{curl 0.17}(890,100))(4.2),
507     (1.6,1.6)-(1.4,1.4)-(1.6,1.6)-(1.3,1.3)-
508     (2,2)-(1.6,1.6)-(1.7,1.7));
509 enddef;

```



```

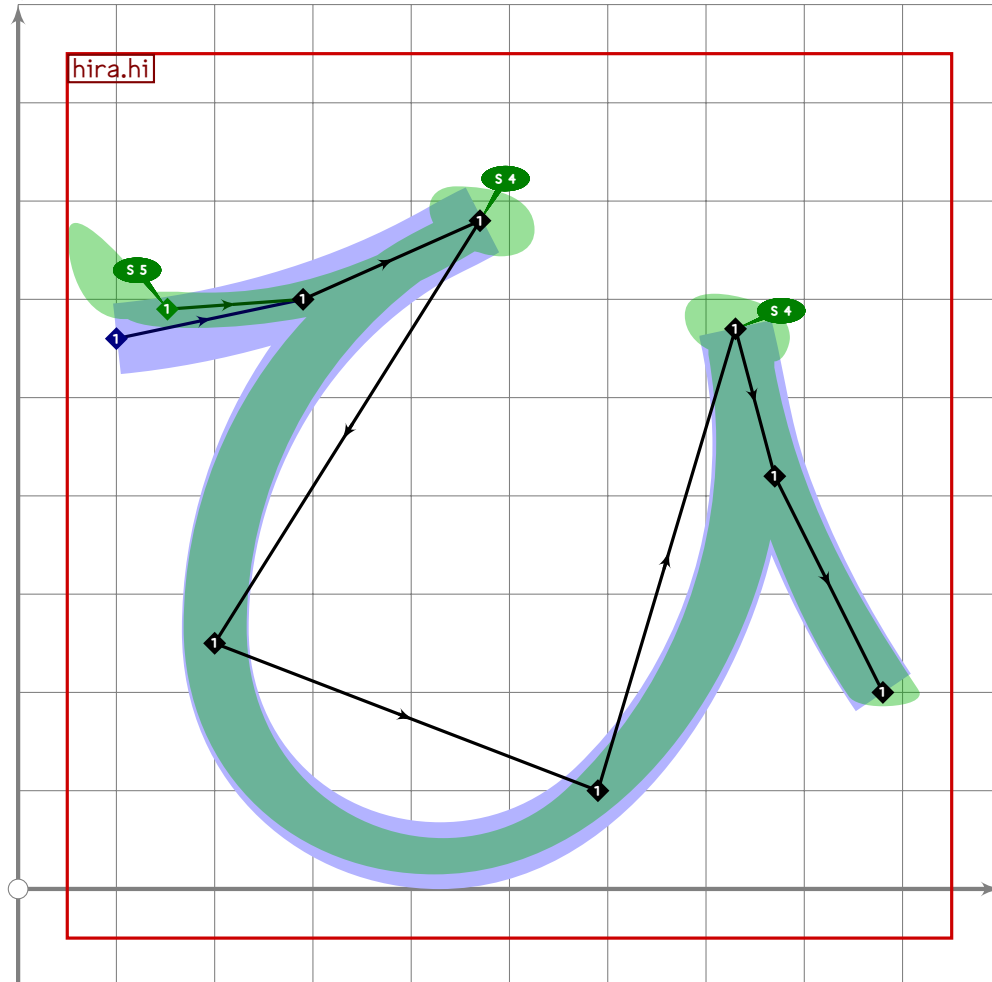
510
511 vardef tsu_curve.hira.ha =
512   push_pbox_toexpand("hira.ha");
513
514   tsu_curve.hira.ni_left;
515
516   push_stroke((400+60*mincho,550)..(610,540)..(860-50*mincho,560),
517     (1.6,1.6)..(1.6,1.6)..(2,2));

```

```

518 set_boserif(0,0,5);
519 set_boserif(0,2,6);
520
521 tsu_curve.hira.ha_right;
522 set_boserif(0,0,8);
523 expand_pbox;
524 enddef;

```



```

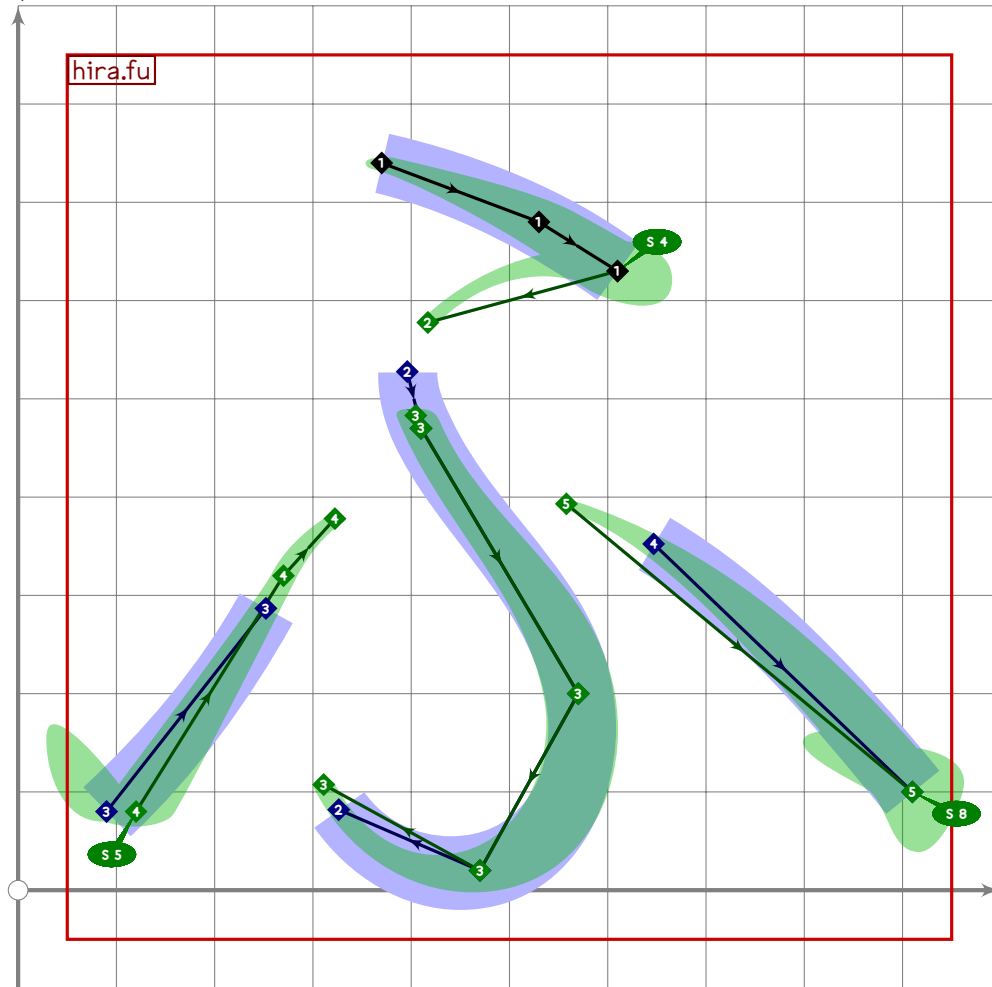
525
526 vardef tsu_curve.hira.hi =
527   push_pbox_toexpand("hira.hi");
528
529   push_stroke(((100,560)*60*mincho*dir 30)..(290,600)..
530     {curl 1}(470,680){curl 1}..
531     tension 1.3..(200,250)..(590,100)..tension 1.3..
532     {curl 1}(730,570){curl 1}..(770,420)..(880,200),
533     (1.8,1.8)-(1.7,1.7)-(1.5,1.5)-
534     (1.4,1.4)-(1.4,1.4)-(1.4,1.4)-(1.3,1.3)-(1.5,1.5));
535   set_botip(0,2,0);
536   set_botip(0,5,0);
537   set_boserif(0,0,5);
538   set_boserif(0,2,4);

```

```

539 set_boserif(0,5,4);
540 expand_pbox;
541 enddef;

```

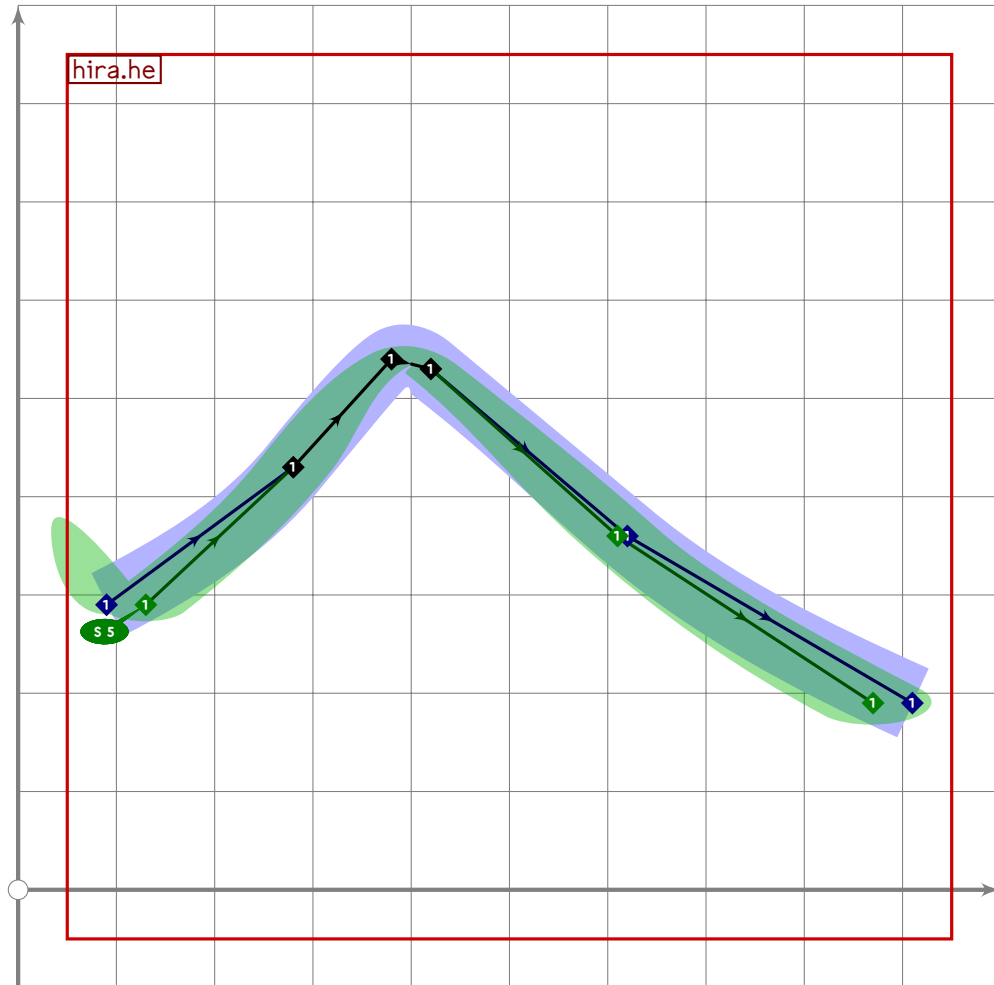


```

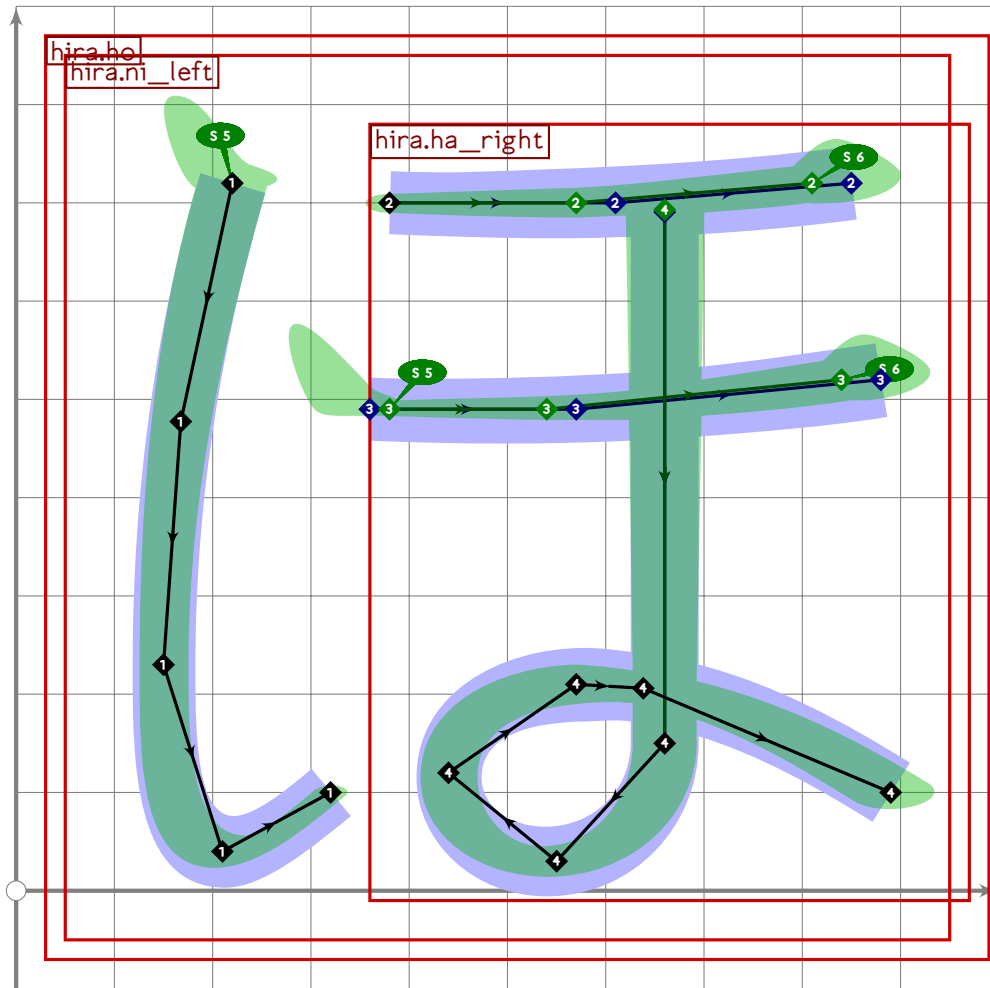
542
543 vardef tsu_curve.hira.fu =
544   push_pbox_toexpand("hira.fu");
545
546   push_stroke((370,740)..(530,680)..(610,630),
547     (1,1)-(1.7,1.7)-(1.8,1.8));
548   set_boserif(0,2,4);
549
550   push_stroke((610,630)..tension 1.4..(410,570)..(410,470)..
551     (570,200)..(470,20)..{curl 0.3}(290,270),
552     (2.6,0.79)-(0.72,0.72)-(0.85,1.35)-(1.5,1.5)-(2,2)-(0,0));
553
554   push_stroke((90*30*mincho,80)..(270,320){dir 63}(480,410)..
555     {curl 0}(910,100),
556     (1.4,1.7)-(0.9,0.9)-(0.7,0.7)-(1.6,1.6));
557   set_boserif(0,0,5);
558   set_boserif(0,3,8);
559   expand_pbox;

```

560 enddef;



```
561
562 vardef tsu_curve.hira.he =
563   push_pbox_toexpand("hira.he");
564
565   push_stroke((90+40*mincho,290){curl 0.2}..(280,430)..tension 2..(380,540)..
566     (420,530)..tension 2..(620-10*mincho,360)..{curl 0.2}(910-40*mincho,190),
567     (1.7,1.7)..(1.6,1.6)..(1.2,1.2)..(1.3,1.3)..(1.7,1.7)..(2.1,2.1));
568   set_boserif(0,0,5);
569   expand_pbox;
570 enddef;
```



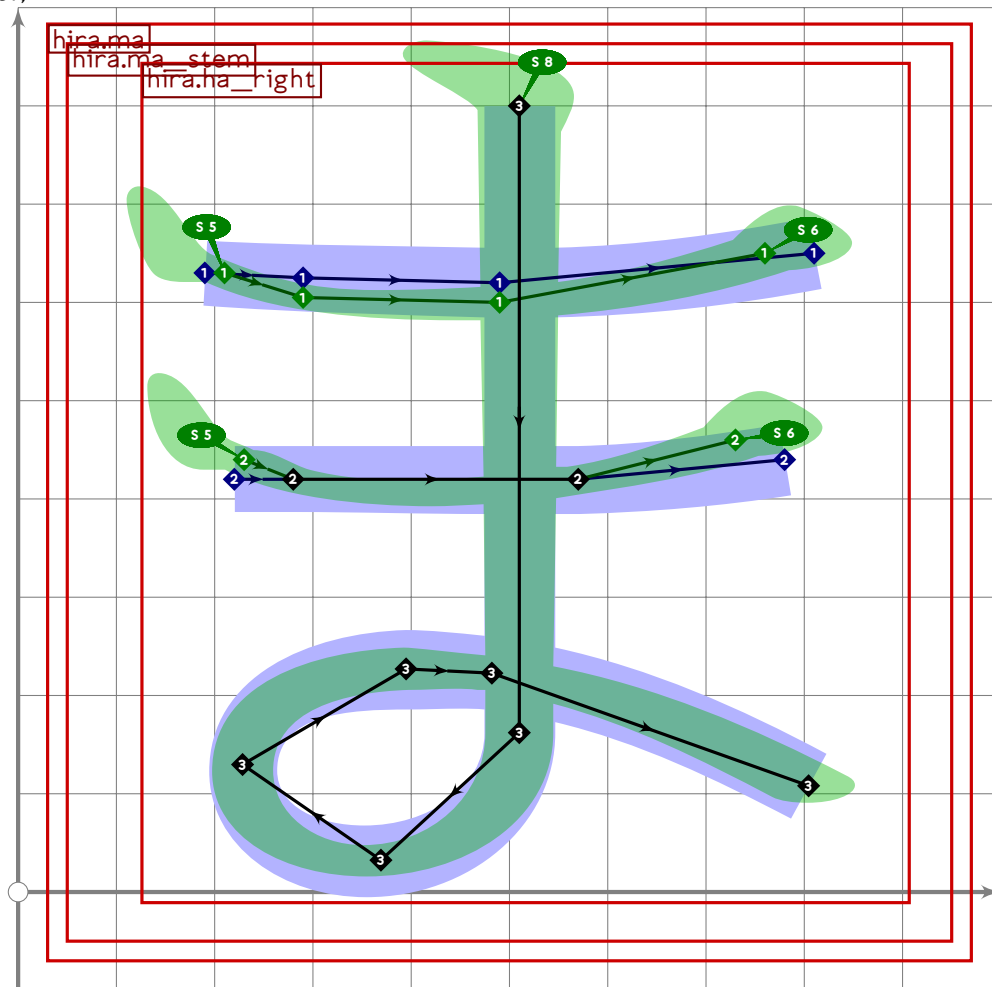
```

571
572 vardef tsu_curve.hira.ho =
573   push_pbox_toexpand("hira.ho");
574
575   tsu_curve.hira.ni_left;
576
577   push_stroke((380,700)..(610-40*mincho,700)..(850-40*mincho,720),
578     (1,2,1,2)..(1,6,1,6)..(1,9,1,9));
579   set_boserif(0,2,6);
580
581   push_stroke((360*20*mincho,490)..(570-30*mincho,490)..(880-40*mincho,520),
582     (1,2,1,2)..(1,5,1,5)..(2,2));
583   set_boserif(0,0,5);
584   set_boserif(0,2,6);
585
586   tsu_curve.hira.ha_right;
587   replace_stroke(0)(subpath
588     (xpart (oldp intersectiontimes get_stroke(-2))*0.02,infinity) of oldp);
589   expand_pbox;
590 enddef;
591

```

Hiragana Mamimumemo

```
592 %%%%%%%%%% HIRAGANA MAMIMUMEMO
593
594 vardef tsu_curve.hira.ma_stem =
595   push_pbox_toexpand("hira.ma_stem");
596
597   begingroup
598     transform xf;
599
600     (660,0) transformed xf = (510,0);
601     (660,740) transformed xf = (510,800);
602     (910,0) transformed xf = (830,0);
603
604     tsu_xform(xf)(tsu_curve.hira.ha_right);
605     set_boserif(0,0,8);
606   endgroup;
607   expand_pbox;
608 enddef;
```

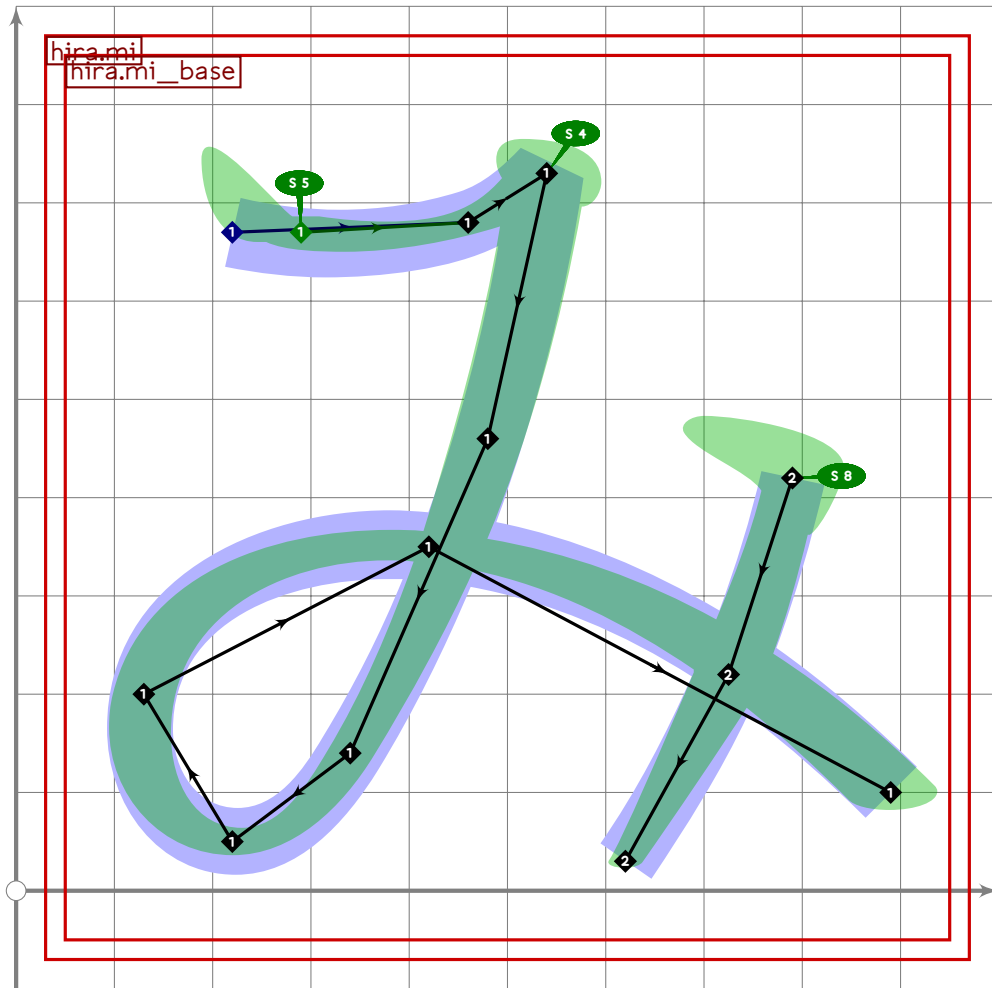


```
609
610 vardef tsu_curve.hira.ma =
```

```

611 push_pbox_toexpand("hira.ma");
612
613 push_stroke((190*20*mincho,630)..(290,625-20*mincho)..tension 1.3..
614 (490,620-20*mincho)..(810-50*mincho,650),
615 (1.3,1.3)-(1.4,1.4)-(1.7,1.7)-(1.9,1.9));
616 set_boserif(0,0,5);
617 set_boserif(0,3,6);
618
619 push_stroke((220*10*mincho,420*20*mincho)..(280,420)..tension 1.3..
620 (570,420)..(780-50*mincho,440*20*mincho),
621 (1.3,1.3)-(1.3,1.3)-(1.6,1.6)-(1.8,1.8));
622 set_boserif(0,0,5);
623 set_boserif(0,3,6);
624
625 tsu_curve.hira.ma_stem;
626 expand_pbox;
627 enddef;
628
629 vardef tsu_curve.hira.mi_base =
630 push_pbox_toexpand("hira.mi_base");
631
632 push_stroke(
633 (220*70*mincho,670)..tension 1.3..(460,680)..
634 {curl 1}(540,730){curl 1}..
635 (480,460)..(340,140)..(220,50)..(130,200)..(420,350)..
636 {curl 0.4}(890,100),
637 (1.7,1.7)-(1.3,1.3)-(1.6,1.6)-
638 (1.5,1.5)-(1.2,1.2)-(1.5,1.5)-(1.4,1.4)-(1.6,1.6)-
639 (1.8,1.8));
640 set_botip(0,2,0);
641 set_boserif(0,0,5);
642 set_boserif(0,2,4);
643 expand_pbox;
644 enddef;

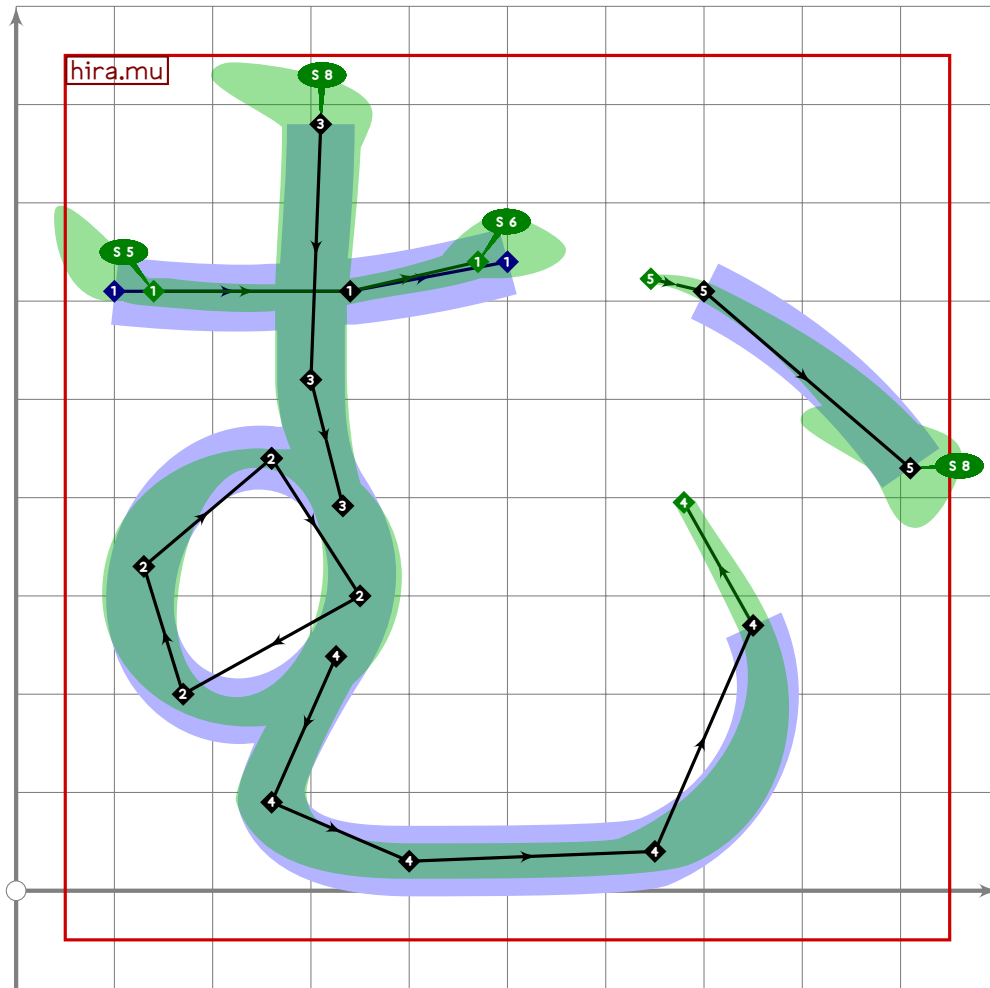
```

```

645
646 vardef tsu_curve.hira.mi =
647   push_pbox_toexpand("hira.mi");
648
649   tsu_curve.hira.mi_base;
650
651   push_stroke((790,420)..(725,220)..(620,30),
652     (1,3,1,3)-(1,5,1,5)-(1,1));
653   set_boserif(0,0,8);
654   expand_pbox;
655 enddef;

```



```

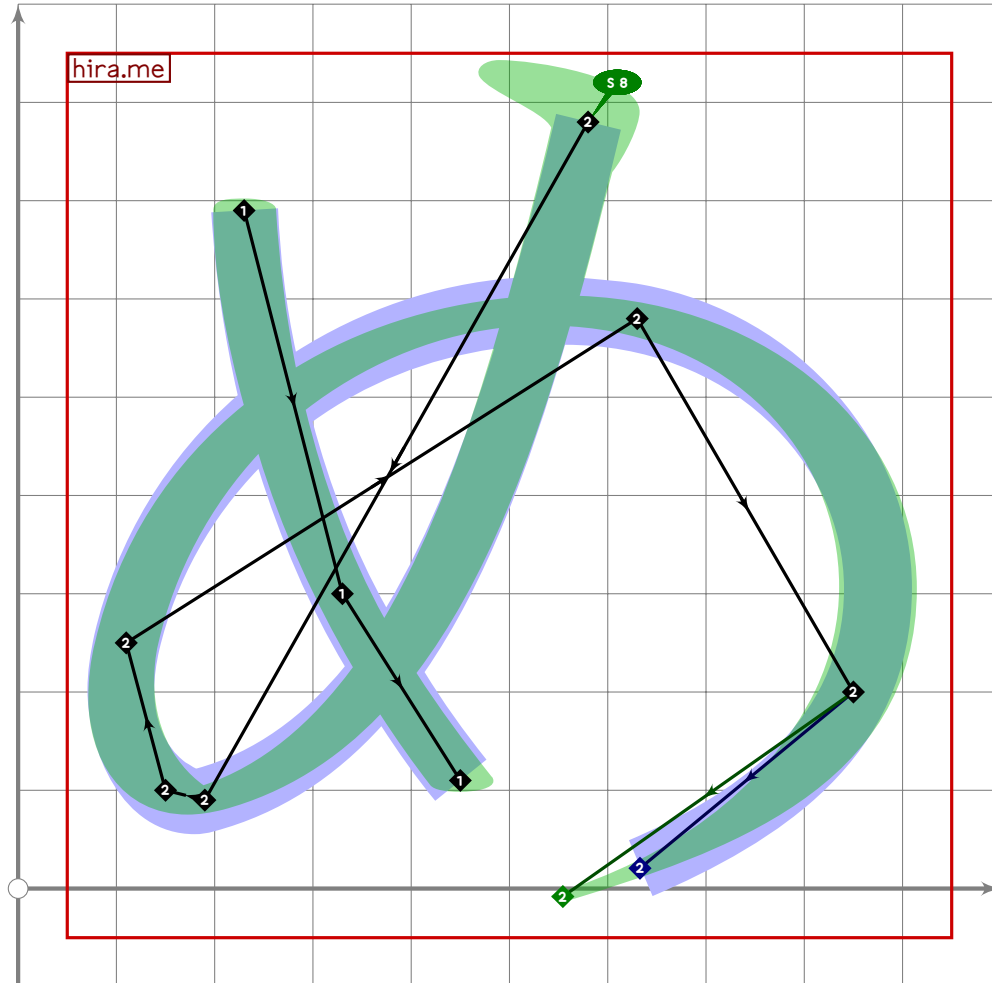
656
657 vardef tsu_curve.hira.mu =
658   push_pbox_toexpand("hira.mu");
659
660   push_stroke((100*40*mincho,610)..(340,610)..(500-30*mincho,640),
661     (1.6,1.6)-(1.4,1.4)-(1.5,1.5));
662   set_boserif(0,0,5);
663   set_boserif(0,2,6);
664
665   push_stroke((260,440)..(350,300)..(170,200)..(130,330)..cycle,
666     (1.3,1.3)..(1.6,1.6)..(1.3,1.3)..(1.6,1.6)..cycle);
667
668   push_stroke((310,780){down}..(300,520)..
669     (point 0.5 of get_stroke(0)){direction 0.5 of get_stroke(0)},
670     (1.6,1.6)-(1.5,1.5)-(1.2,1.2));
671   set_boserif(0,0,8);
672
673   push_stroke(
674     (point 1.25 of get_stroke(1)){direction 1.20 of get_stroke(1)}..
675     (260,90)..(400,30){right}..(650,40)..(750,270)..
676     tension 2..(600,590)..(700,610)..(910,430),

```

```

677 (1.4,1.4)-(1.5,1.5)-(1.8,1.8)-(1.9,1.9)-
678 (1,1)-(0.6,0.6)-(1,1)-(1.6,1.6));
679 set_boserif(0,7,8);
680 expand_pbox;
681 enddef;

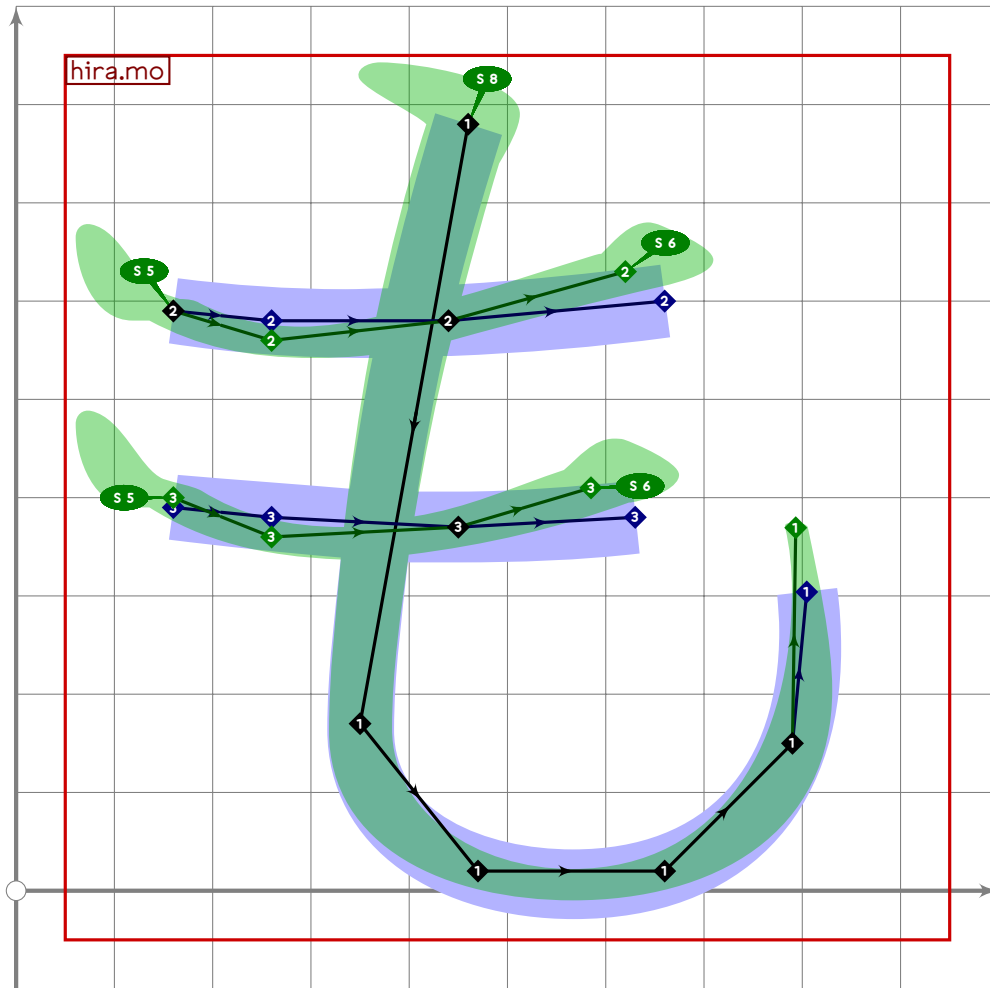
```



```

682
683 vardef tsu_curve.hira.me =
684   push_pbox_toexpand("hira.me");
685
686   push_stroke((230,690)..(330,300)..(450,110),
687     (1.4,1.4)-(1.3,1.3)-(1.4,1.4));
688
689   push_stroke((580,780){curl 0.2}..tension 2.5..(190,90)..
690     (150,100)..(110,250)..tension 1.1..(630,580)..
691     (850,200)..tension 1.1..{curl 0.2}(470,30),
692     (1.5,1.5)-(1.4,1.4)-(1.6,1.6)-(1.4,1.4)-
693     (1.6,1.6)-(1.6,1.6)-(0.65,0.65));
694   set_boserif(0,0,8);
695   expand_pbox;
696 enddef;

```



```

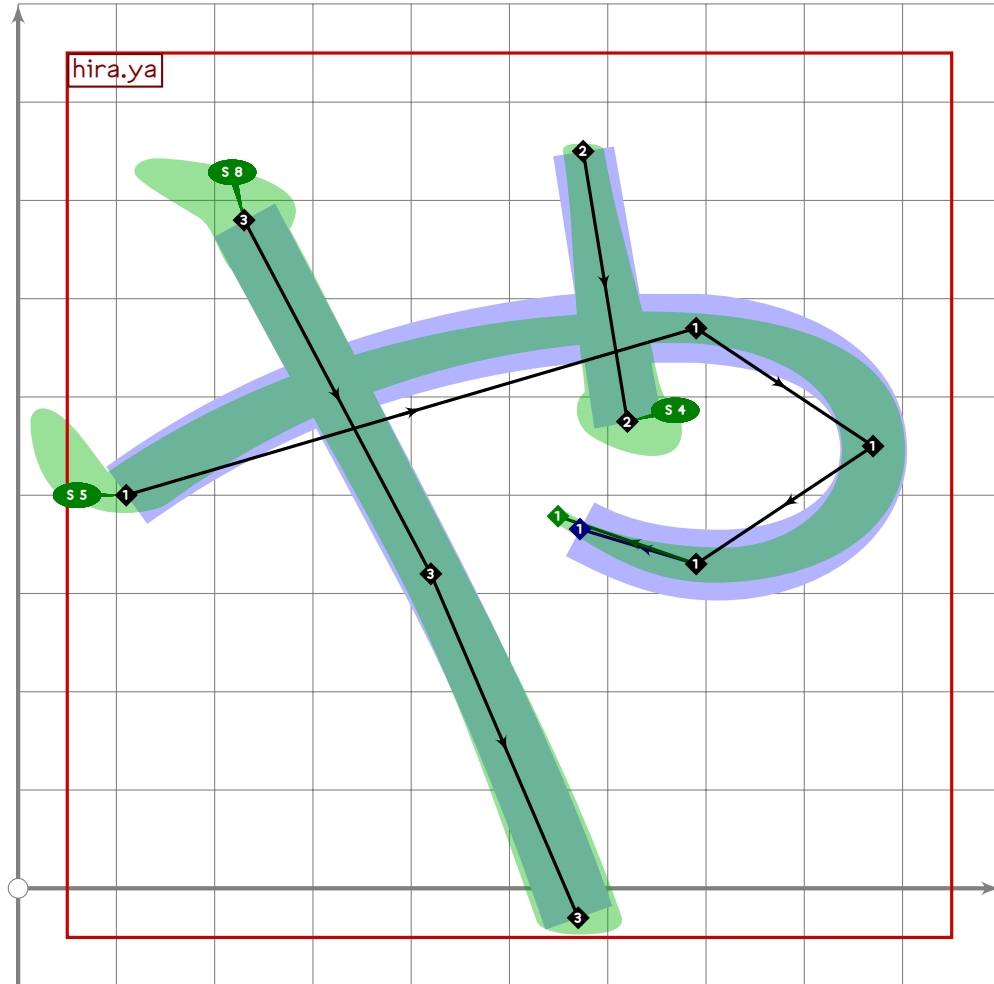
697
698 vardef tsu_curve.hira.mo =
699   push_pbox_toexpand("hira.mo");
700
701   push_stroke((460,780)..tension 3..(350,170)..(470,20)..
702     tension 1.2..(660,20)..(790,150)..{curl 0}(770,460),
703     (1.7,1.7)-(1.4,1.4)-(1.6,1.6)-(1.7,1.7)-(1.4,1.4)-(0.6,0.6));
704   set_boserif(0,0,8);
705
706   push_stroke((160,590)..(260,580-20*mincho)..(440,580)..
707     (660-40*mincho,600+30*mincho),
708     (1.4,1.4)-(1.6,1.6)-(1.8,1.8)-(2,2));
709   set_boserif(0,0,5);
710   set_boserif(0,3,6);
711
712   push_stroke((160,390+10*mincho)..(260,380-20*mincho)..(450,370)..
713     (630-45*mincho,380+30*mincho),
714     (1.4,1.4)-(1.6,1.6)-(1.8,1.8)-(2,2));
715   set_boserif(0,0,5);
716   set_boserif(0,3,6);
717   expand_pbox;

```

718 enddef;
719

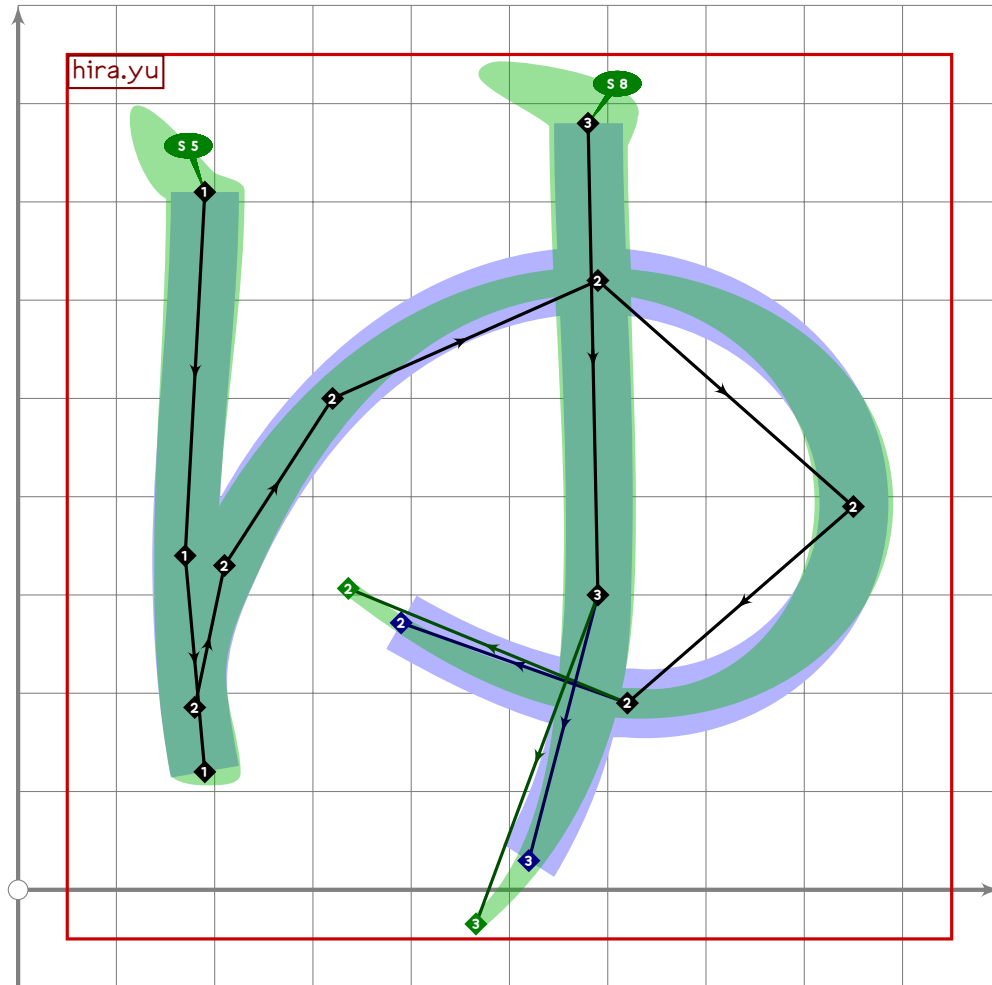
Hiragana Yayuyo

720 %%% HIRAGANA YAYUYO



```
721  
722 vardef tsu_curve.hira.ya =  
723   push_pbox_toexpand("hira.ya");  
724  
725   push_stroke((110,400)..(690,570)..(870,450)..(690,330)..(520,400),  
726     (1.8,1.8)-(1.6,1.6)-(1.4,1.4)-(1.8,1.8)-(0.6,0.6));  
727   set_boserif(0,0,5);  
728  
729   push_stroke((575,750)-(620,475),  
730     (1.1,1.1)-(1.6,1.6));  
731   set_boserif(0,1,4);  
732  
733   push_stroke((230,680)..tension 2..(420,320)..(570,-30),  
734     (1.6,1.6)-(1.4,1.4)-(1.7,1.7));  
735   set_boserif(0,0,8);  
736   expand_pbox;
```

737 enddef;



738

739 vardef tsu_curve.hira.yu =

740 push_pbox_toexpand("hira.yu");

741

742 push_stroke((190,710){down}...(170,340)..(190,120),

743 (1.6,1.6)-(1.4,1.4)-(1.5,1.5));

744 set_boserif(0,0,5);

745

746 push_stroke((point 1.7 of get_stroke(0))

747 {direction 1.7 of get_stroke(0)}...(210,330)..

748 (320,500)..(590,620)..(850,390)..(620,190)..tension 1.3..(320,320),

749 (1.4,1.4)-(1.5,1.5)-(1.4,1.4)-(1.5,1.5)-(1.6,1.6)-

750 (1.6,1.6)-(0.77,0.77));

751

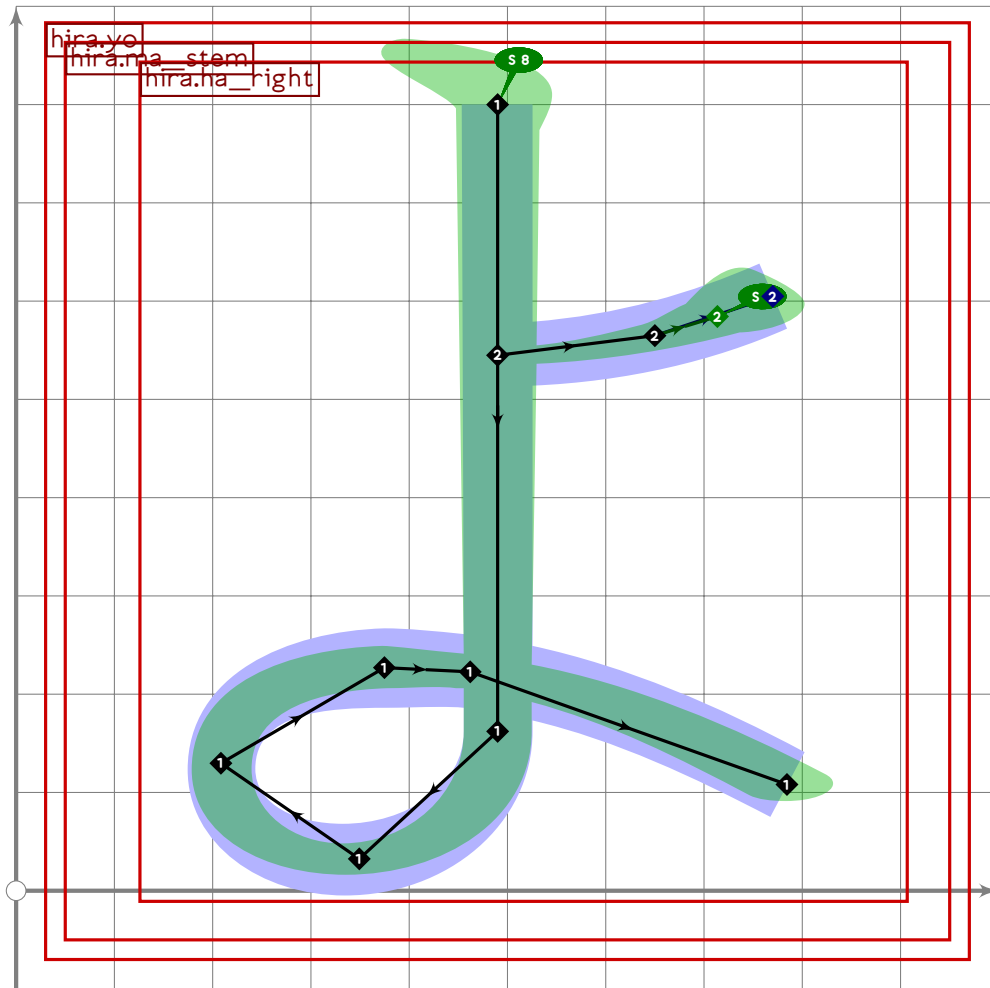
752 push_stroke((580,780){down}...(590,300)..{dir 190}(360,-85),

753 (1.6,1.6)-(1.5,1.5)-(0.6,0.6));

754 set_boserif(0,0,8);

755 expand_pbox;

756 enddef;



```

757
758 vardef tsu_curve.hira.yo =
759   push_pbox_toexpand("hira.yo");
760
761   tsu_curve.hira.ma_stem;
762
763   replace_strokep(0)(oldp shifted (-20,0));
764   z0=point 0.4 of get_strokep(0);
765
766   push_stroke(z0..(z0*(160,20))..(z0*(280,60))*60*mincho*dir 200,
767     (1.2,1.2)-(1.4,1.4)-(1.8,1.8));
768   set_boserif(0,2,6);
769   expand_pbox;
770 enddef;
771

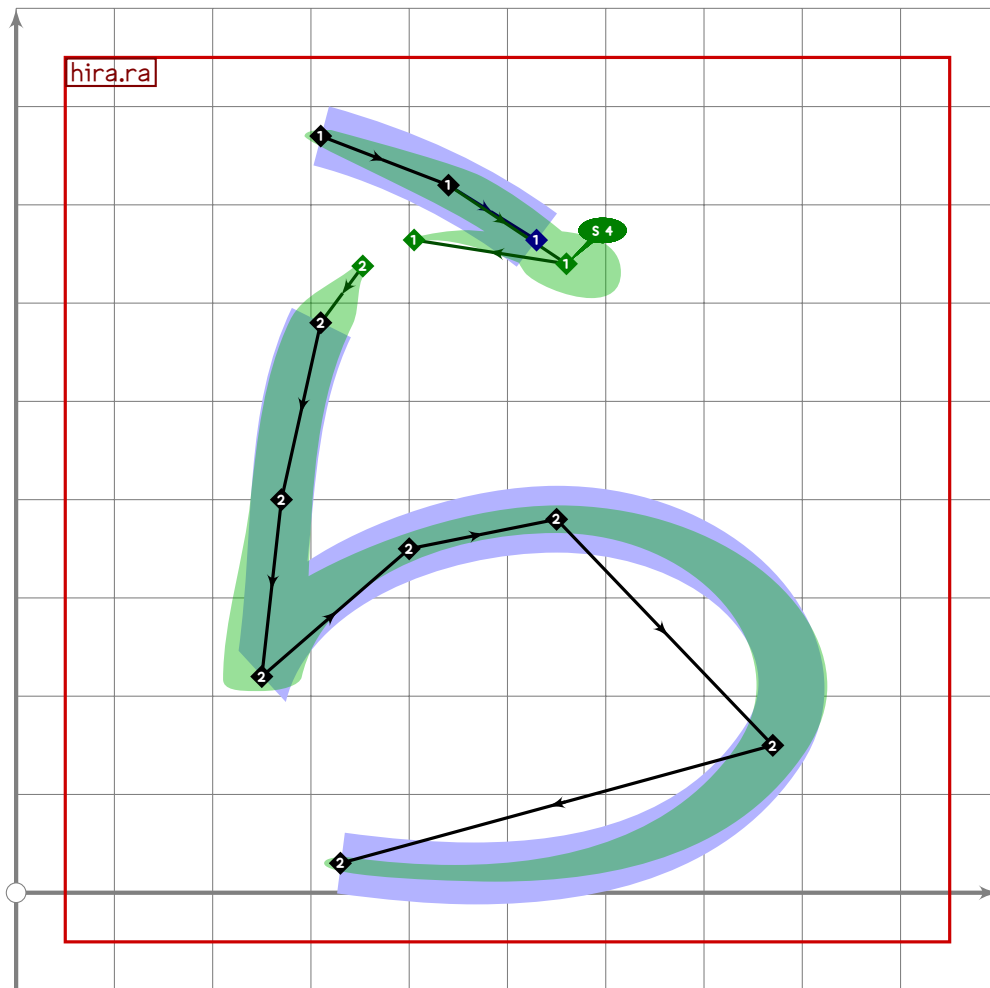
```

Hiragana Rarirurero

```

772 %%%%%%%%% HIRAGANA RARIRURERO

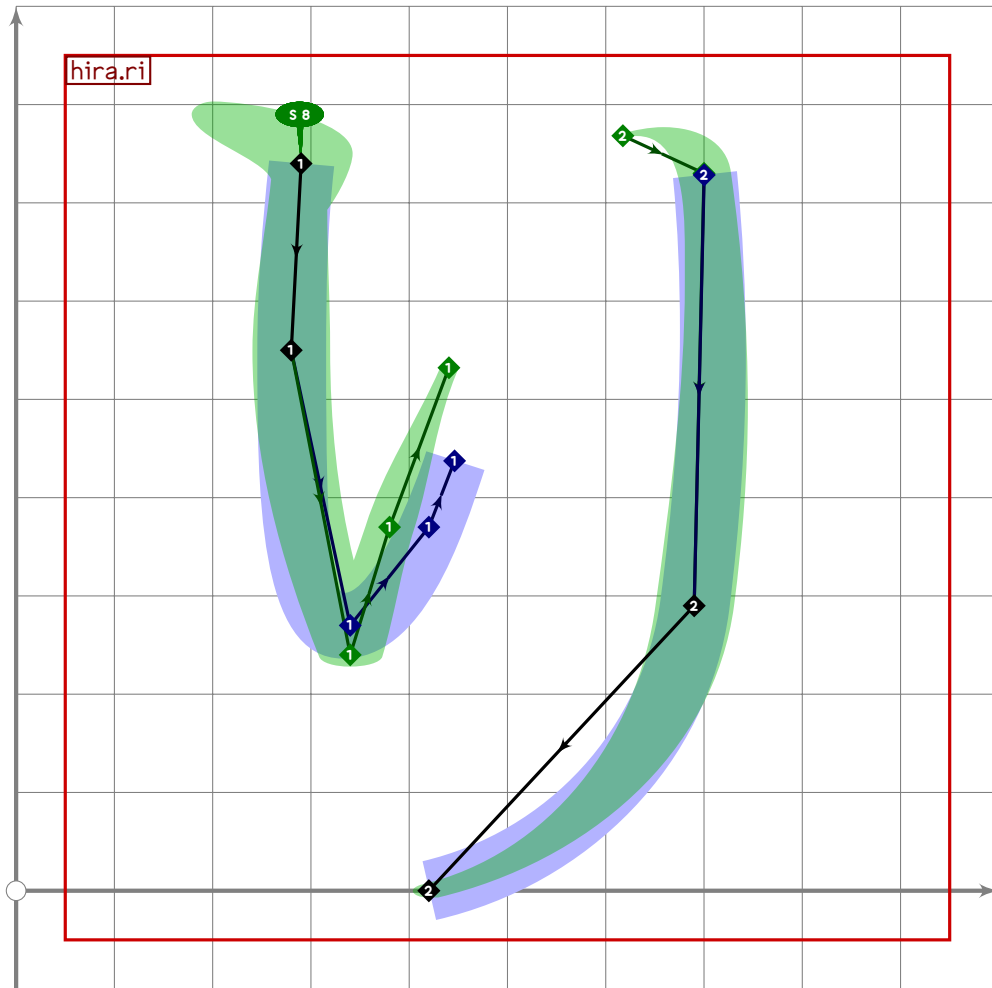
```



```

773
774 vardef tsu_curve.hira.ra =
775   push_pbox_toexpand("hira.ra");
776
777   push_stroke((370,770)..(500,720)..{curl 1}(620,640){curl 0.1}..
778     (430,650)..(370,580)..(330,400)..(310,220),
779     (1,1)-(1.6,1.6)-(2,0.78)-(0.55,0.55)-
780     (1.8,1)-(1.4,1.4)-(1.6,1.6));
781   set_boserif(0,2,4);
782
783   tsu_curve.hira.chi_bottom;
784   set_botip(0,2,0);
785
786   replace_stroke(0)(oldp shifted (-60,0));
787   expand_pbox;
788 enddef;

```

```

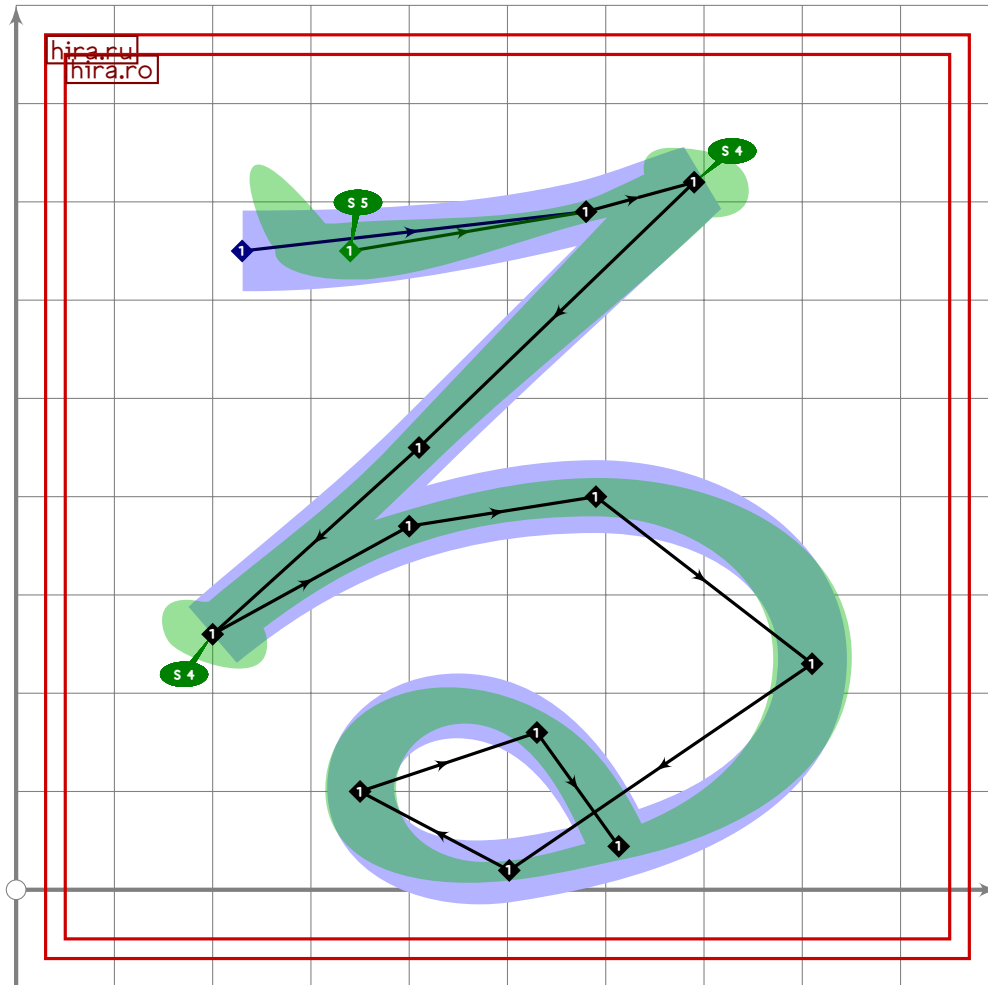
789
790 vardef tsu_curve.hira.ri =
791   push_pbox_toexpand("hira.ri");
792
793   begingroup
794     save ripx,ripy,ripz,x,y;
795     path ripx,ripy,ripz;
796     numeric x[],y[];
797     z1=(290,740);
798     z2=(280,550);
799     z3=(340,270-30*mincho);
800     z4=(420-40*mincho,370);
801     z5=(540,710);
802     z6=(700,730);
803     ripx=z1..z2{down}..tension 1.5..z3..
804       tension 1.5..z4..z5..z6..tension 5 and 1.2..
805       (690,290)..tension 0.75 and 1..{curl 0.45}(420,0);
806     ripy=z1..z2{down}..tension 1.5..{curl 1}z3{curl 1}..
807       tension 1.5..z4..z5..z6..tension 5 and 1.2..
808       (690,290)..tension 0.75 and 1..{curl 0.45}(420,0);
809     push_stroke(interpath(mincho,ripx,ripy),

```

```

810 (1.3,1.3)-(1.6,1.6)-(1.4,1.4)-(1.2,1.2)-(0.4,0.2)-
811 (1.5,0.99)-(1.6,1.6)-(1,1));
812 set_boserif(0,0,8);
813 endgroup;
814 expand_pbox;
815 enddef;

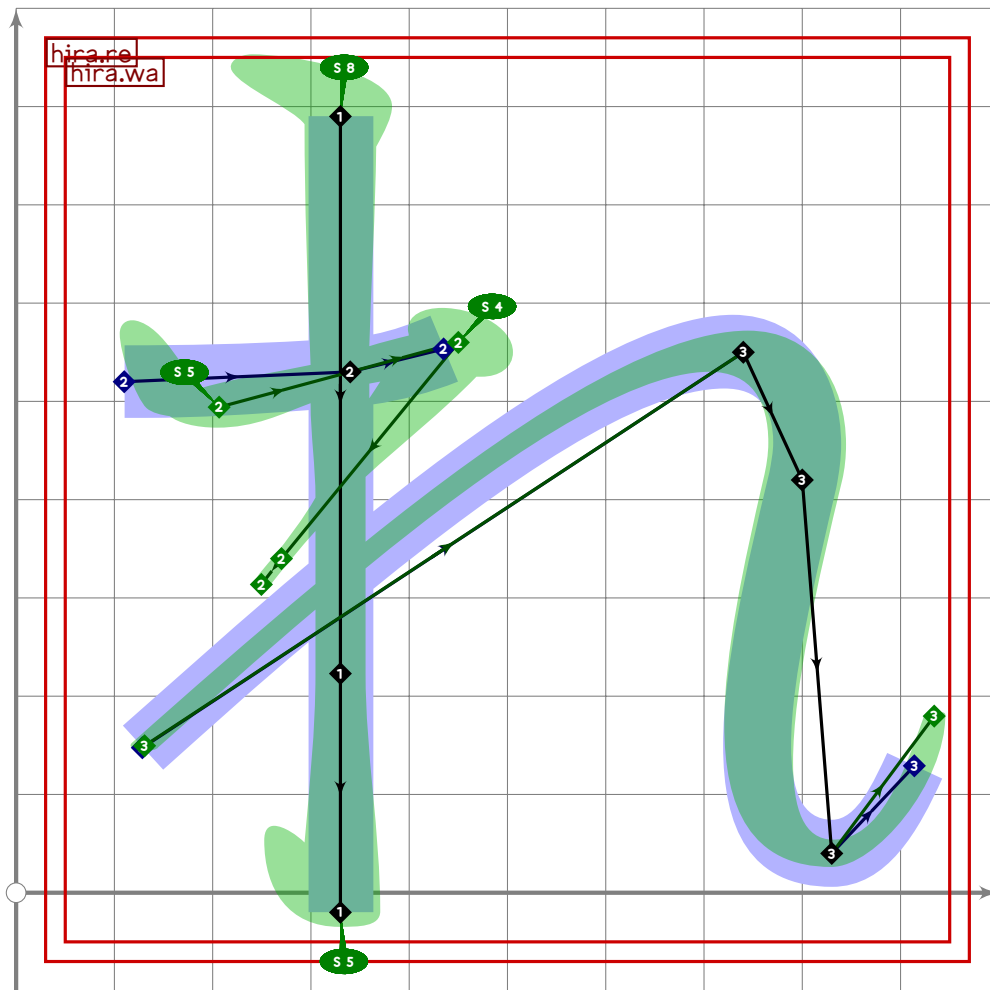
```



```

816
817 vardef tsu_curve.hira.ru =
818   push_pbox_toexpand("hira.ru");
819
820   tsu_curve.hira.ro;
821
822   replace_strokep(0)((subpath (0,7.8) of oldp)..(350,100)..(530,160)..
823     {curl 0.2}(point 7.6 of oldp));
824   replace_strokeq(0)((2.6,2.6)-(1.2,1.2)-(1.9,1.9)-
825     (1.3,1.3)-(1.6,1.6)-
826     (1.5,1.5)-(1.9,1.9)-(1.6,1.6)-
827     (1.2,1.2)-(1.5,1.5)-(1.4,1.4));
828   expand_pbox;
829 enddef;

```



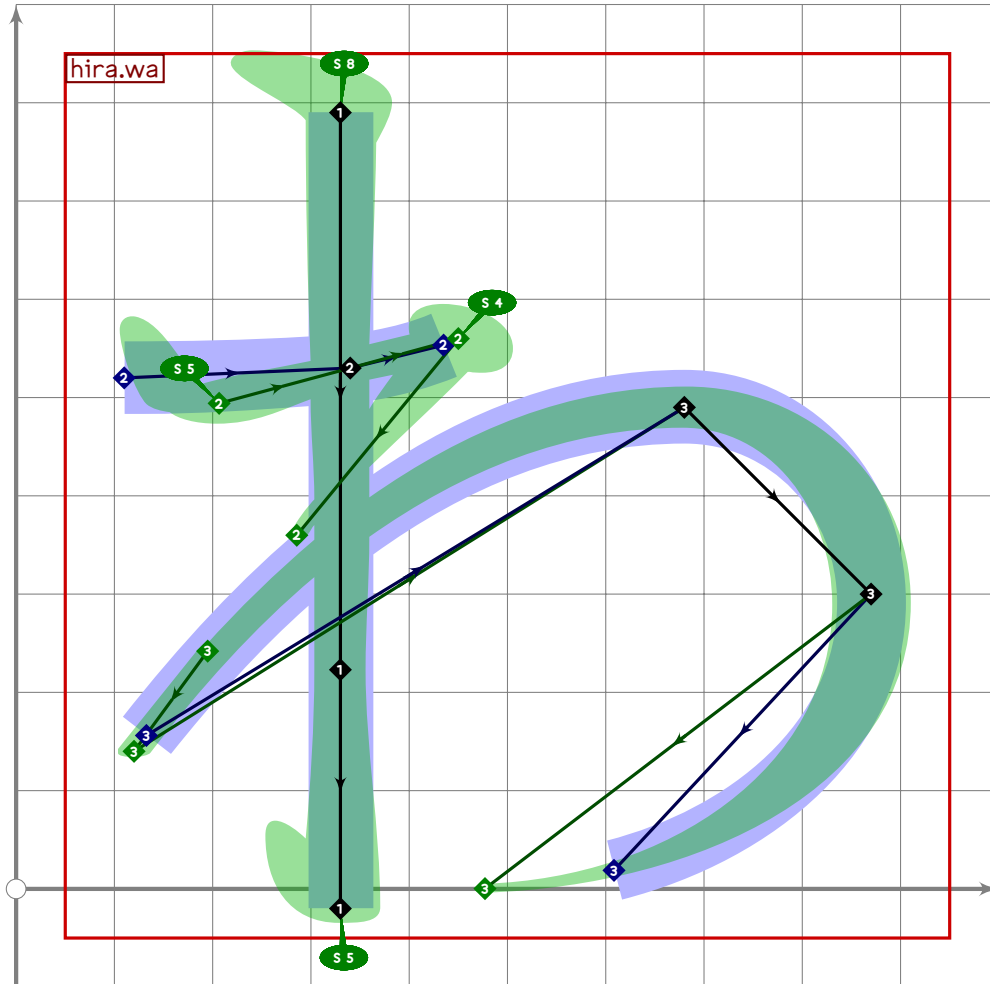
```

830
831 vardef tsu_curve.hira.re =
832   push_pbox_toexpand("hira.re");
833
834   tsu_curve.hira.wa;
835
836   replace_stroke(0)((subpath (0,4) of oldp){curl 0}{.
837     tension 2..(740,550)..(800,420)..
838     (830,40){right}{.tension 1.5..{curl 0}(960,270)});
839   replace_stroke(0)((2,2)-(1.6,1.6)-(2.7,0.9)-
840     (0.84,0.7)-(0.79,0.97)-
841     (2.1,2.1)-(1.6,1.6)-(1.5,1.5)-(0.5,0.5));
842   set_boserif(0,2,4);
843   expand_pbox;
844 enddef;

```


Hiragana Wawiwewo/N/Iteration

864 %%%%%%%%%% HIRAGANA WAWIWEWO/N/ITERATION



```

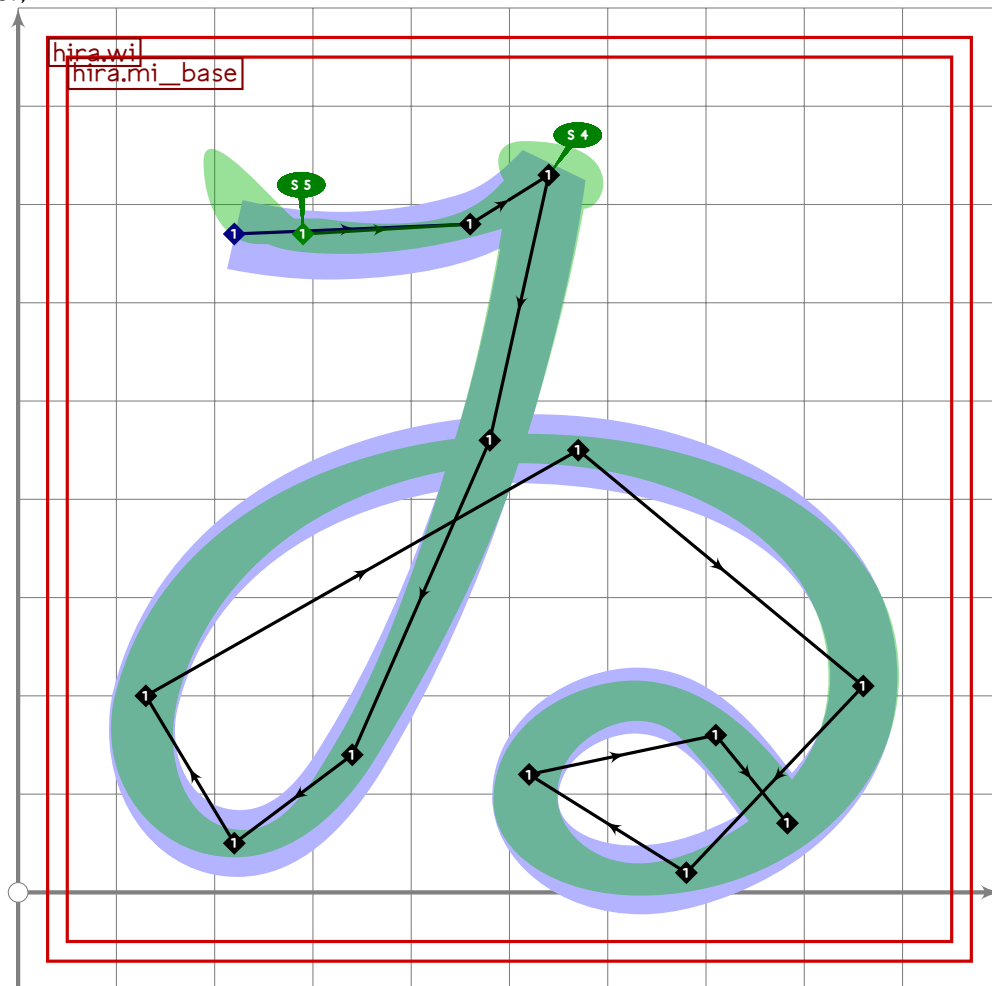
865
866 vardef tsu_curve.hira.wa =
867   push_pbox_toexpand("hira.wa");
868
869   push_stroke((330,790)-(0.7[(330,790),(330,-20)])-(330,-20),
870     (1.5,1.5)-(1.2,1.2)-(1.6,1.6));
871   set_boserif(0,0,8);
872   set_boserif(0,2,5);
873
874   push_stroke(((110,520)*100*mincho*dir -15)..tension 2..(340,530)..
875     {curl 1}(450,560){curl 1}..
876     (270,340)..{curl 1}(120,140){curl 0.2}..
877     (680,490){right}..(870,300)..{curl 0.2}(450,0),
878     (2,2)-(1.6,1.6)-(2.2,0.9)-
879     (0.7,0.7)-(0.97,0.97)-
880     (2,2)-(1.6,1.6)-(0.8,0.8));
881   set_botip(0,2,0);
882   set_botip(0,4,0);

```

```

883 set_boserif(0,0,5);
884 set_boserif(0,2,4);
885 expand_pbox;
886 enddef;

```



```

887
888 vardef tsu_curve.hira.wi =
889   push_pbox_toexpand("hira.wi");
890
891   tsu_curve.hira.mi_base;
892
893   replace_stroke(0)((subpath (0,6) of oldp)..(570,450)..(860,210)..(680,20)..
894     (520,120)..tension 1.2..(710,160));
895   replace_stroke(0)(oldp..{curl 0.3}(point 8.6 of oldp));
896
897   replace_strokeq(0)((1.7,1.7)-(1.3,1.3)-(1.6,1.6)-
898     (1.5,1.5)-(1.2,1.2)-(1.5,1.5)-(1.4,1.4)-
899     (1.6,1.6)-(1.5,1.5)-(1.7,1.7)-(1.4,1.4)-(1.5,1.5));
900   expand_pbox;
901 enddef;

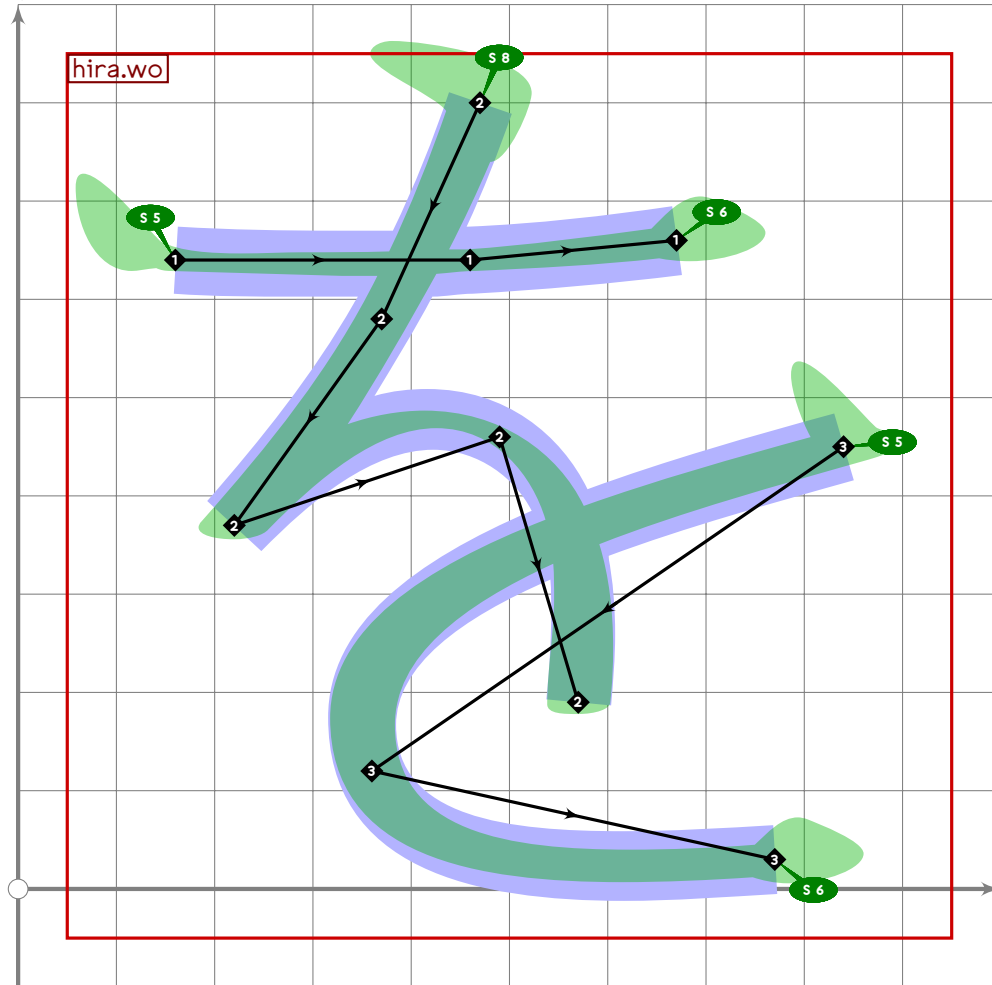
```



```

923 set_boserif(0,0,5);
924 set_boserif(0,2,4);
925 set_boserif(0,3,4);
926 set_boserif(0,13,4);
927 set_boserif(0,17,7);
928 expand_pbox;
929 enddef;

```



```

930
931 vardef tsu_curve.hira.wo =
932   push_pbox_toexpand("hira.wo");
933
934   push_stroke((160,640)..(460,640)..(670,660),
935     (1.3,1.3)-(1.4,1.4)-(1.6,1.6));
936   set_boserif(0,0,5);
937   set_boserif(0,2,6);
938
939   push_stroke((470,800)..(370,580)..{curl 1}(220,370){curl 0}..
940     (490,460)..{curl 0}(570,190),
941     (1.4,1.4)-(1.3,1.3)-(1.5,1.5)-(1.01,1.01)-(1.4,1.4));
942   set_botip(0,2,0);
943   set_boserif(0,0,8);

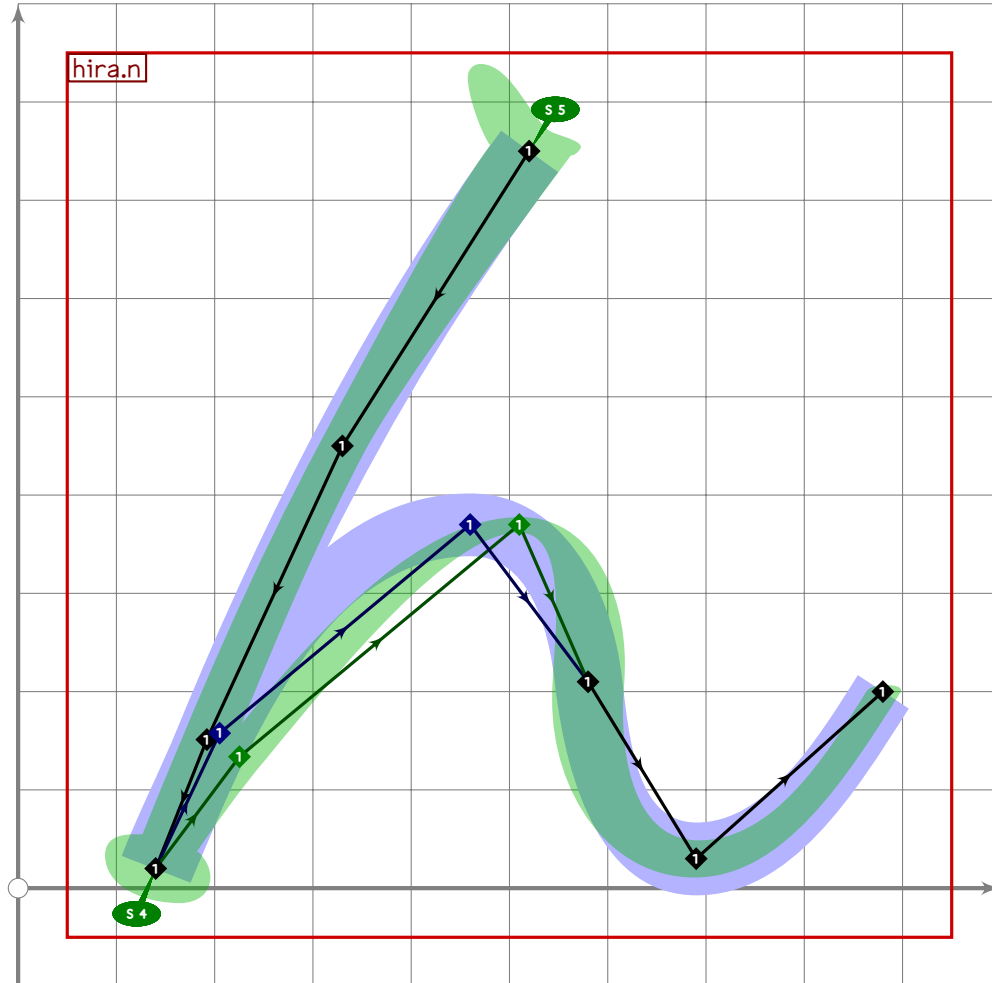
```



```

944
945 push_stroke((840,450){curl 0.017}..tension 1 and 2..(360,120)..
946   tension 2 and 1..{curl 0.03}(770,30),
947   (1.7,1.7)-(1.4,1.4)-(1.7,1.7));
948 set_boserif(0,0,5);
949 set_boserif(0,2,6);
950 expand_pbox;
951 enddef;

```



```

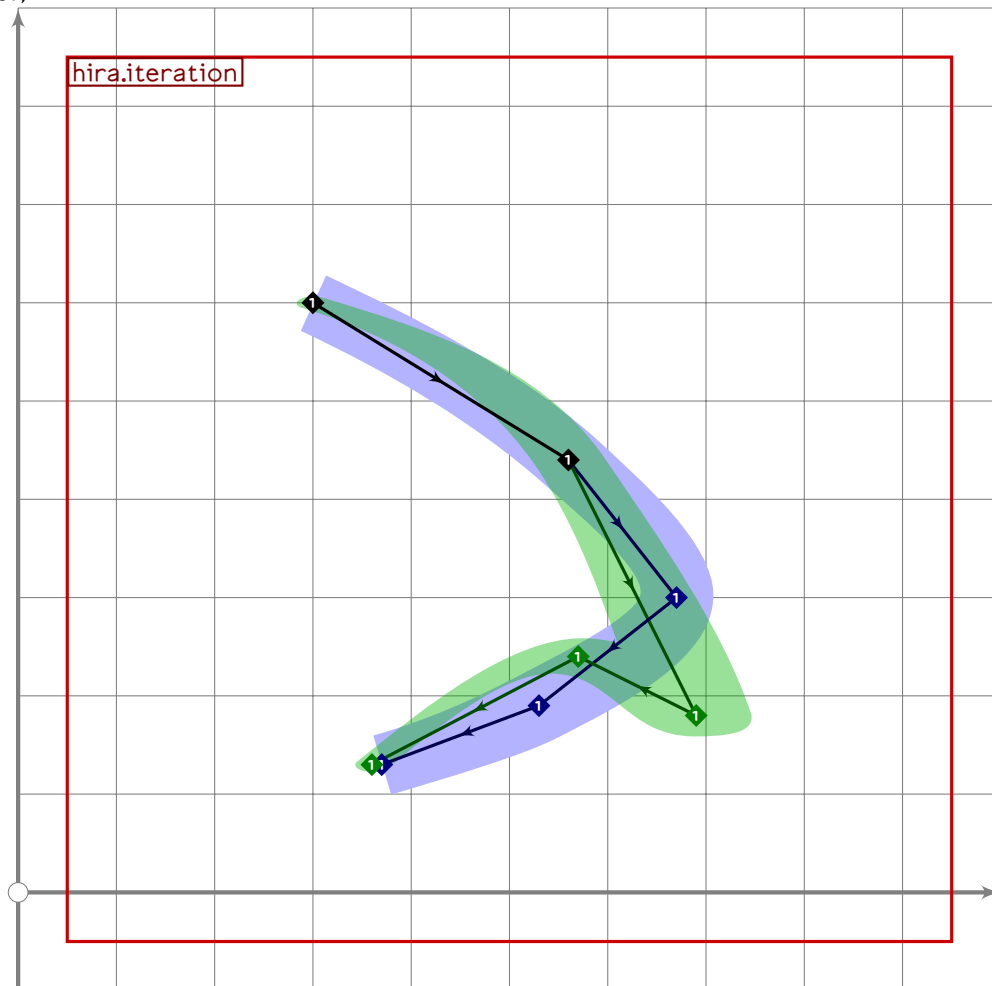
952
953 vardef tsu_curve.hira.n =
954   push_pbox_toexpand("hira.n");
955
956   push_stroke((520,750)..(330,450)..{curl 0.2}(140,20){curl 0.1}..
957     tension (1.2*0.6*mincho)..(460*50*mincho,370){right}..
958     (580,210)..(690,30){right},
959     (1.7,1.7)-(1.2,1.2)-(1.3,1.3)-
960     (1.1,1.1)-(1.5,1.5)-(1.9,1.9)-(1,1));
961   replace_stroke(0)(oldp{right}..(880,200){direction 0.5 of oldp});
962   replace_stroke(0)(insert_nodes(oldp)(1.7,2.3));
963   replace_stroke(0)(insert_nodes(oldq)(1.7,2.3));
964   set_botip(0,3,0);

```

```

965 set_boserif(0,0,5);
966 set_boserif(0,3,4);
967 expand_pbox;
968 enddef;

```



```

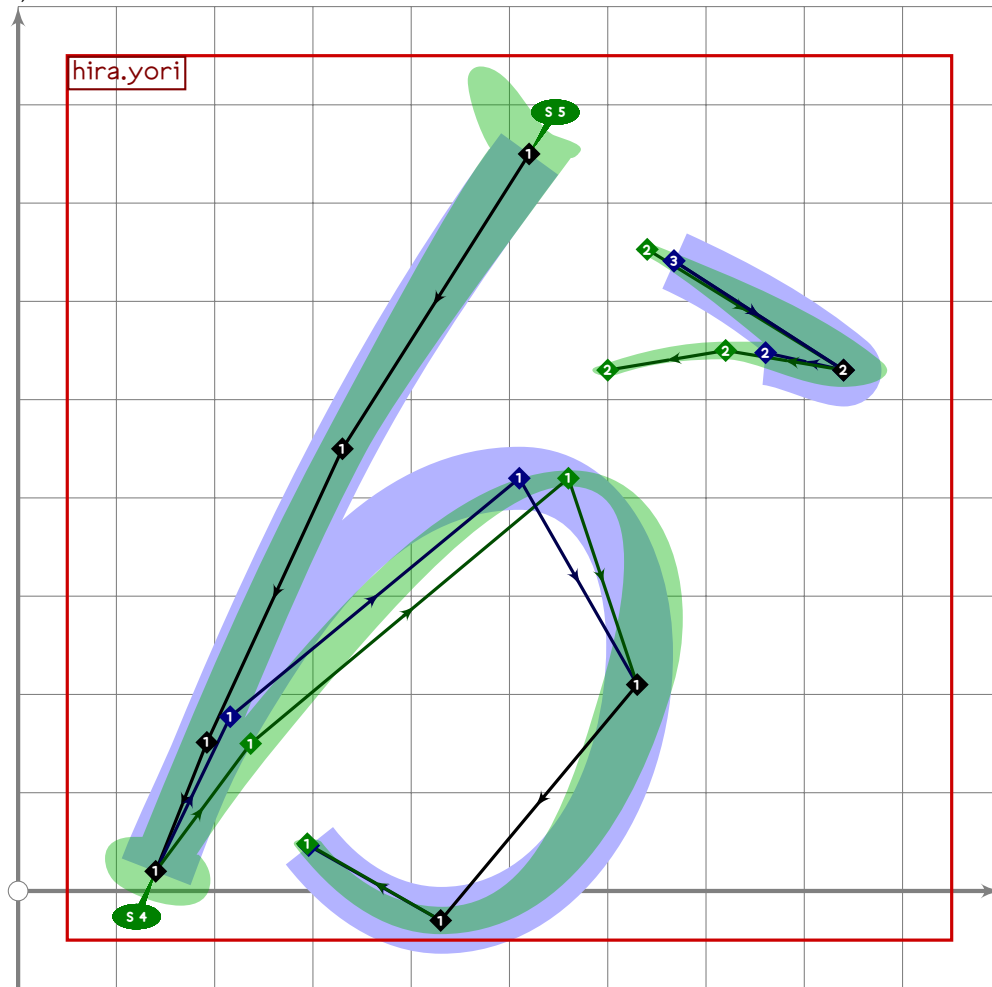
969
970 vardef tsu_curve.hira.iteration =
971   push_pbox_toexpand("hira.iteration");
972
973   push_stroke(begingroup
974     save ripx,ripy;
975     path ripx,ripy;
976     ripx:=(300,600){curl 0.2}..(560,440)..
977       tension 1.5 and 2..(670,300)..
978       tension 2 and 1.5..(530,190)..{curl 0.2}(370,130);
979     ripy:=(300,600){curl 0.2}..(560,440)..
980       tension 1.5..{curl 1}(690,180){curl 1}..
981       tension 2 and 1.5..(570,240)..tension 1.4..{curl 0}(360,130);
982     interpath(mincho,ripx,ripy)
983   endgroup,
984   (1,1)-(1.5,1.5)-(2,2)-(1.9,1.9)-(1,1));
985   set_botip(0,2,0);

```

```

986 expand_pbox;
987 endif;

```



```

988
989 vardef tsu_curve.hira.yori =
990   push_pbox_toexpand("hira.yori");
991
992   push_stroke((520,750)..(330,450)..{curl 0.2}{(140,20){curl 0.1}..
993     tension (1.2*0.6*mincho)..(510*50*mincho,420){right}..
994     (630,210)..(430,-30){left}..tension 1.3..(290,600)..
995     {curl 0.1}{(840,530){curl 1}..(720,550)..(600,530),
996     (1.7,1.7)-(1.2,1.2)-(1.3,1.3)-
997     (1.1,1.1)-
998     (1.5,1.5)-(1.5,1.5)-(-1,-0.4)-
999     (1.8,1.6)-(1.6,0.7)-(1.9,0));
1000   replace_strokep(0)(insert_nodes(oldp)(1.7,2.3));
1001   replace_strokeq(0)(insert_nodes(oldq)(1.7,2.3));
1002   set_botip(0,3,0);
1003   set_botip(0,9,0);
1004   set_boserif(0,0,5);
1005   set_boserif(0,3,4);
1006   expand_pbox;

```

1007 enddef;

iching.mp

```
1 %
2 % I Ching characters for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 iching.size:=680;
34
35 vardef make_iching_xform(expr numlines) =
36   transform iching_xform;
37   numeric x[];
38
39   x2-x1=iching.size;
40   (x1*x2)/2=500;
41
42   (-1,(numlines*1)/2) transformed iching_xform=
43     (x1,0.5[latin_wide_low_h,latin_wide_high_h]);
44   (1,(numlines*1)/2) transformed iching_xform=
45     (x2,0.5[latin_wide_low_h,latin_wide_high_h]);
46   (-1,(numlines*1)/2-2.5) transformed iching_xform=
47     (x1,latin_wide_low_h);
48 enddef;
49
50 vardef tsu_curve.iching.line(expr line,numlines,linetype) =
51   make_iching_xform(numlines);
52   if linetype=0:
53     push_stroke(((1,line)-(0.28,line)) transformed iching_xform,
54       (2,2)-(2,2));
55     push_stroke(get_strokep(0) reflectedabout (centre_pt,centre_pt*down),
56       (2,2)-(2,2));
57   else:
58     push_stroke(((1,line)-(1,line)) transformed iching_xform,
59       (2,2)-(2,2));
60   fi;
61 enddef;
62
63 % WARNING, nonstandard calling convention, simply returns a path to fill
64 vardef tsu_curve.iching.dot(expr line,numlines) =
65   begingroup;
66     make_iching_xform(numlines);
67     (fullcircle scaled (tsu_punct_size*1.10)
68       shifted (((1,line) transformed iching_xform)
69         *(1000-iching.size)*0.25*right))
70   endgroup
```

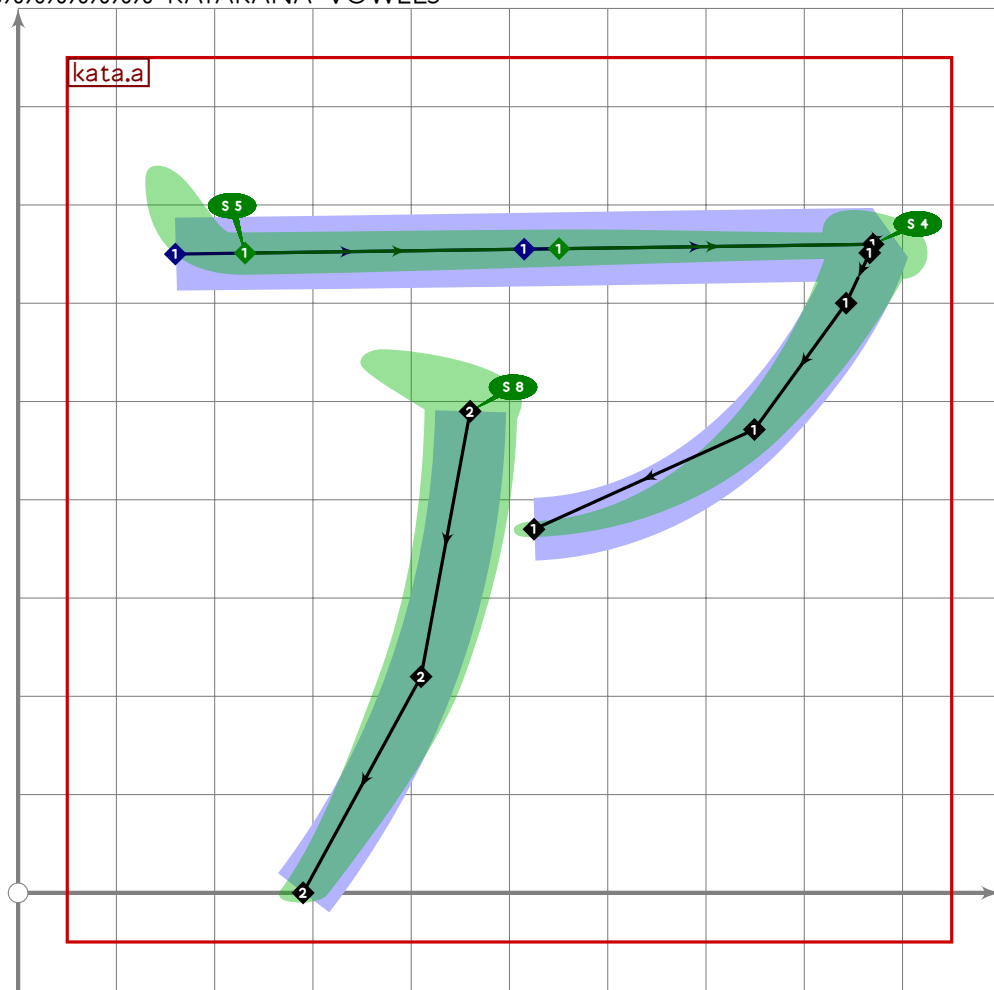
71 enddef;

katakana.mp

```
1 %  
2 % Katakana for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31  
32
```

Katakana Vowels

```
33 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%% KATAKANA VOWELS
```

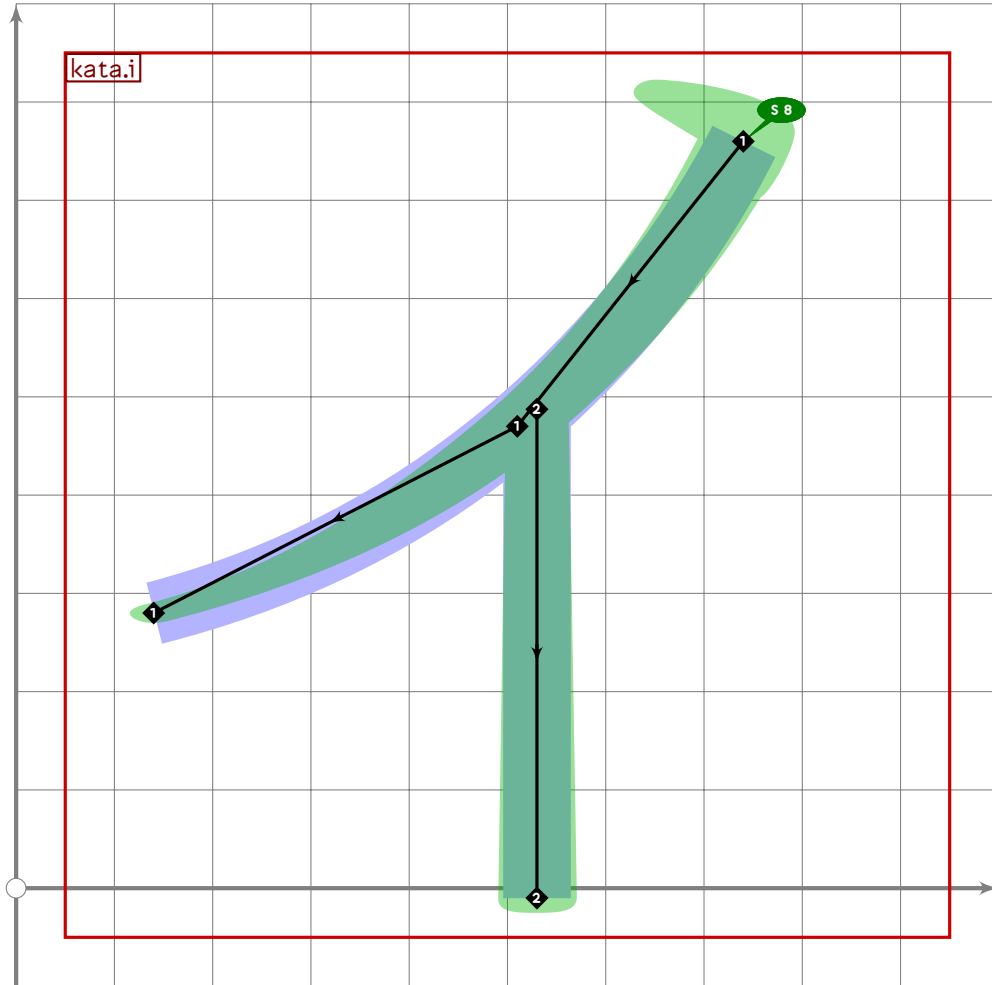


```
34  
35 vardef tsu_curve.kata.a =  
36   push_pbox_toexpand("kata.a");  
37  
38   tsu_curve.kata.fu_stroke((160,650),(870,660),(525,370));  
39  
40   push_stroke((460,490)..(410,220)..(290,0),  
41     (1.8,1.8)-(1.7,1.7)-(1.2,1.2));
```

```

42 set_boserif(0,0,8);
43 expand_pbox;
44 enddef;

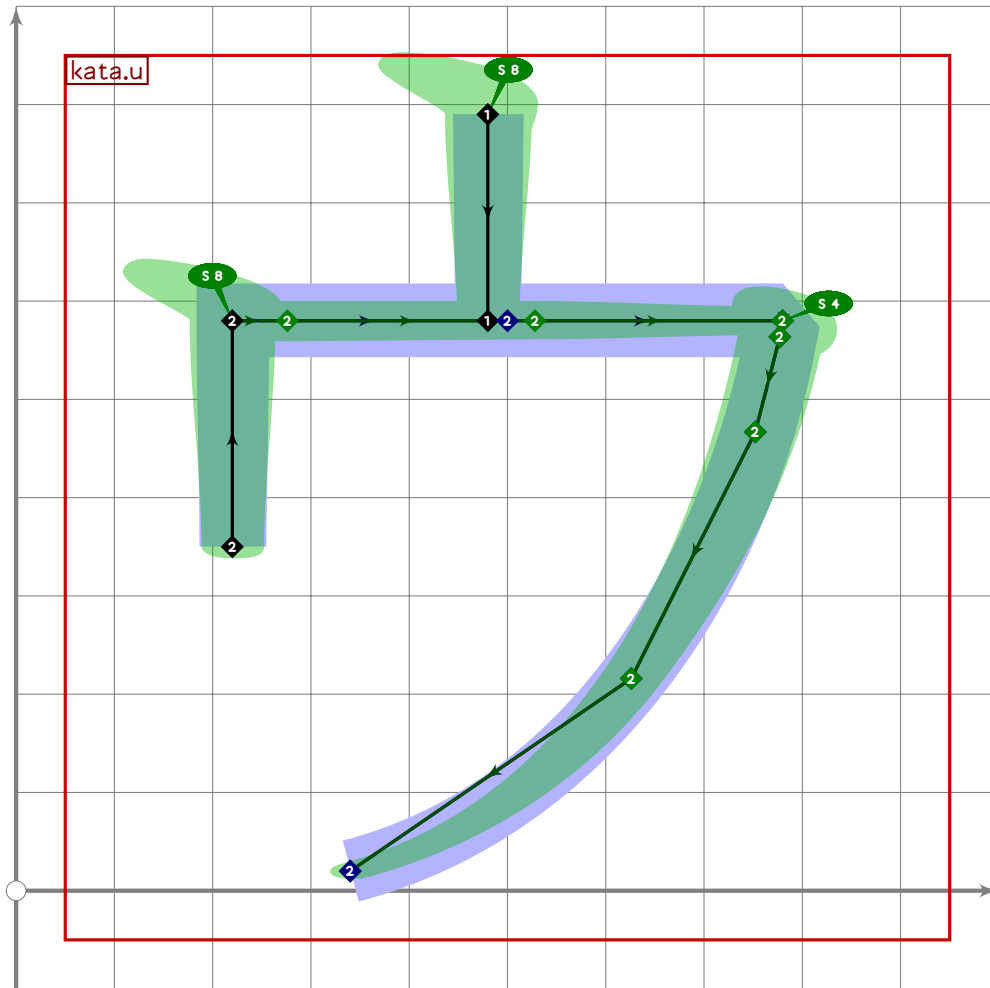
```



```

45
46 vardef tsu_curve.kata.i =
47   push_pbox_toexpand("kata.i");
48
49   push_stroke((740,760)..(510,470)..(140,280),
50     (1.8,1.8)-(1.7,1.7)-(1.2,1.2));
51   set_boserif(0,0,8);
52
53   push_stroke((get_strokep(0) intersectionpoint
54     ((530,infinity)-(530,infinity))-(530,10),
55     (1.4,1.4)-(1.6,1.6));
56   expand_pbox;
57 enddef;

```

```

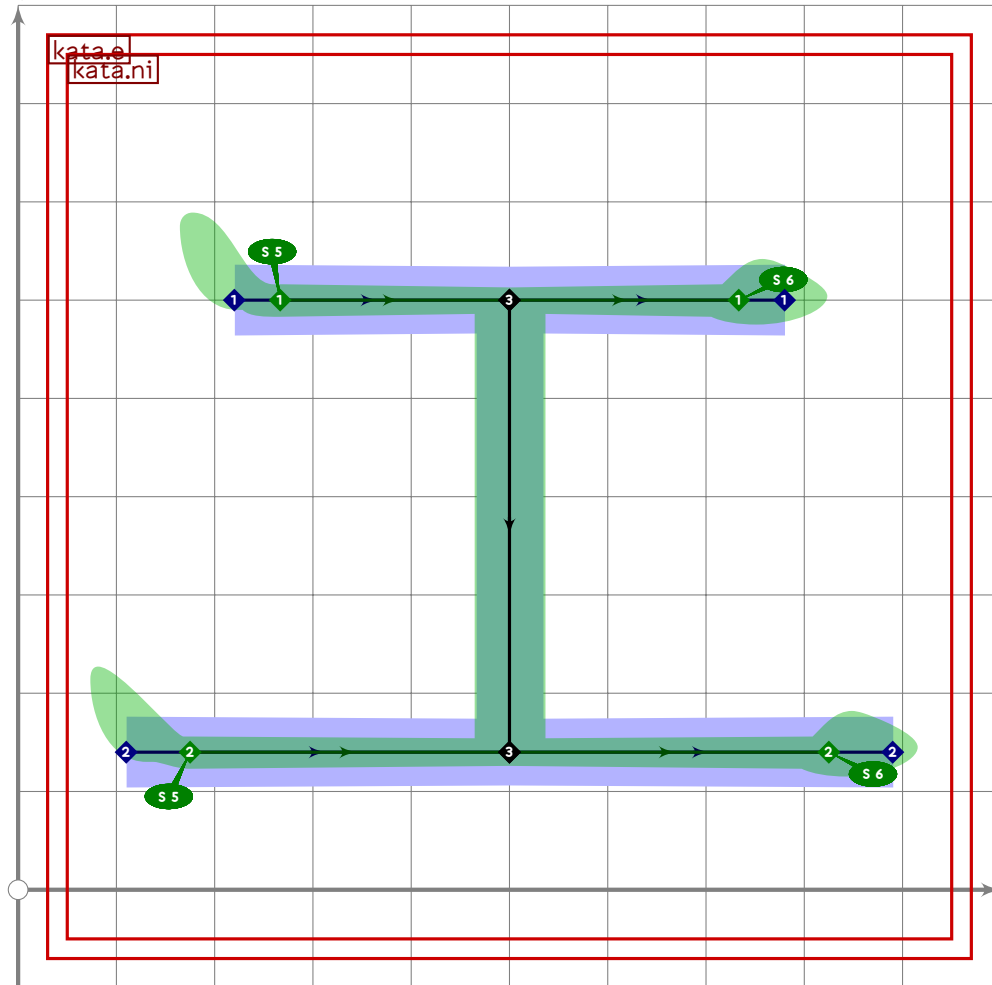
58
59 vardef tsu_curve.kata.u =
60   push_pbox_toexpand("kata.u");
61
62   push_stroke((480,790)-(480,580),
63     (1.7,1.7)-(1.4,1.4));
64   set_boserif(0,0,8);
65
66   tsu_curve.kata.fu_stroke((220,580),(780,580),(340,20));
67   if mincho>0.01:
68     replace_strokep(0)((220,350)-(220,580)-oldp);
69     replace_strokeq(0)((1.4,1.4)-(1.7,1.7)-oldq);
70     set_botip(0,2,1);
71     set_botip(0,4,0);
72     set_boserif(0,2,whatever);
73     set_boserif(0,4,4);
74   else:
75     replace_strokep(0)((220,350)-oldp);
76     replace_strokeq(0)((1.4,1.4)-oldq);
77     set_botip(0,1,1);
78     set_botip(0,3,0);

```

```

79   set_boserif(0,3,4);
80   fi;
81   set_boserif(0,0,whatever);
82   set_boserif(0,1,8);
83   expand_pbox;
84 enddef;

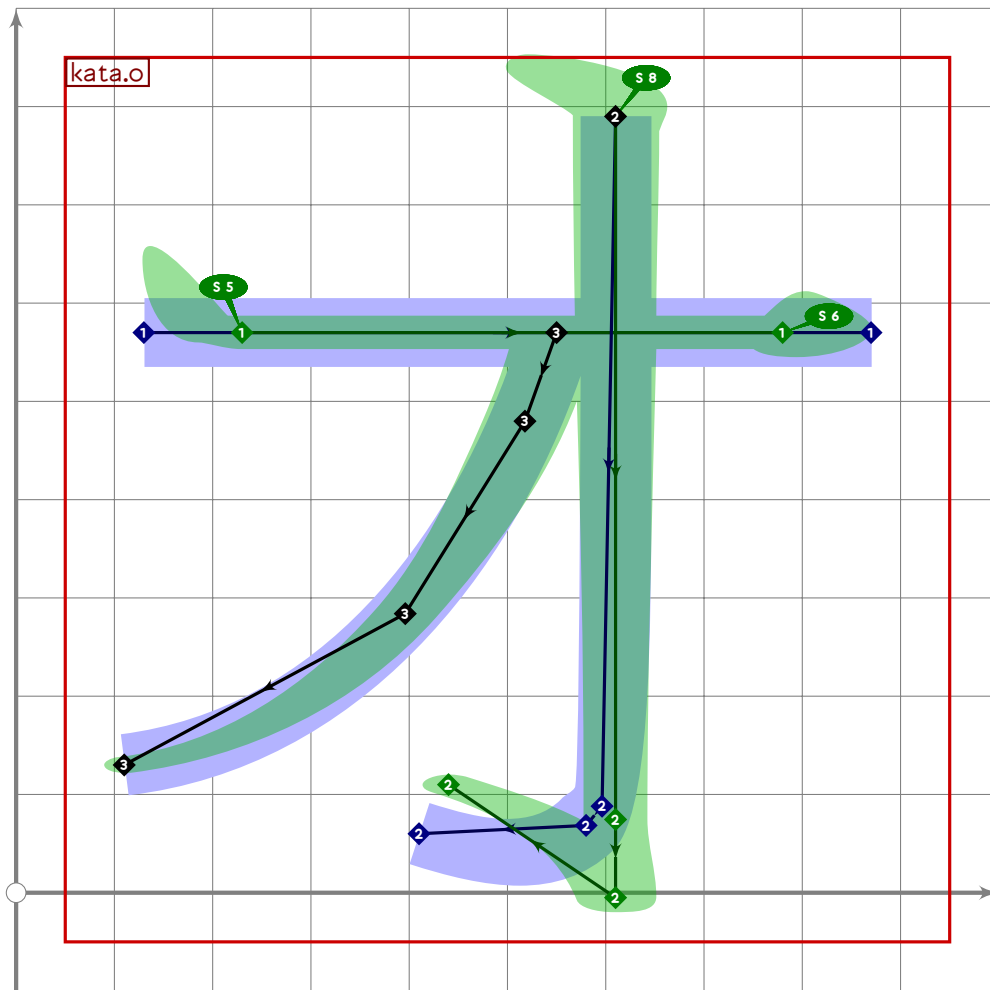
```



```

85
86 vardef tsu_curve.kata.e =
87   push_pbox_toexpand("kata.e");
88
89   tsu_curve.kata.ni;
90
91   push_stroke((point 1 of get_stroke(-1))-(point 1 of get_stroke(0)),
92     (1.5,1.5)-(1.5,1.5));
93   expand_pbox;
94 enddef;

```



```

95
96 vardef tsu_curve.kata.o =
97   push_pbox_toexpand("kata.o");
98
99   push_stroke((130*100*mincho,570)-(870-90*mincho,570),
100     (1.8,1.8)-(1.6,1.6));
101   set_boserif(0,0,5);
102   set_boserif(0,1,6);
103
104   tsu_curve.kata.ho_centre((610,790),(610,20));
105
106   tsu_curve.kata.no_stroke((550,570),(110,130));
107   expand_pbox;
108 enddef;
109

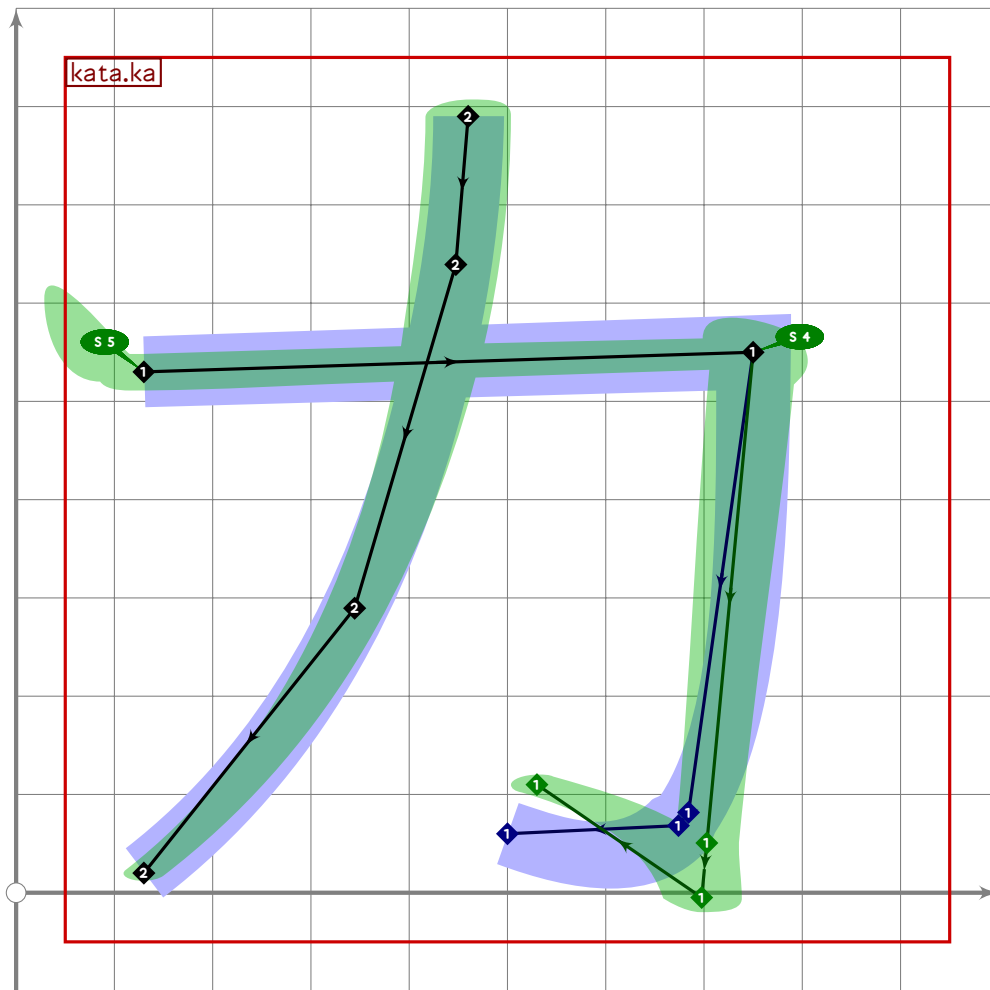
```

Katakana Kakikukeko/Gagigugego

```

110 %%% KATAKANA KAKIKUKEKO/GAGIGUGEGO

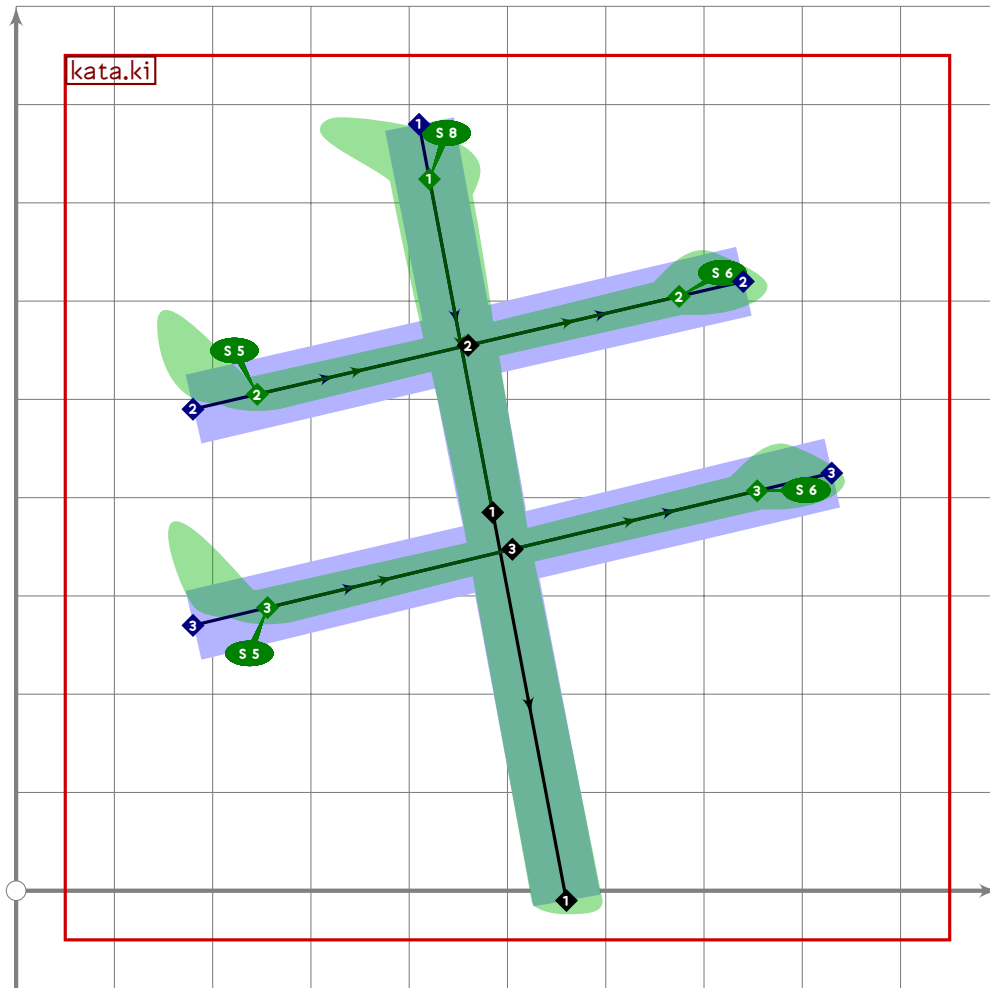
```



```

111
112 vardef tsu_curve.kata.ka =
113   push_pbox_toexpand("kata.ka");
114
115   tsu_curve.kata.ho_centre((750,550),(700,20));
116
117   replace_strokep(0)((130,530)-oldp);
118   replace_strokeq(0)((1.8,1.8)-oldq);
119   set_botip(0,1,1);
120   set_botip(0,2,whatever);
121   set_botip(0,3,0);
122   set_boserif(0,0,5);
123   set_boserif(0,1,4);
124
125   tsu_curve.kata.no_stroke((460,790),(130,20));
126   expand_pbox;
127 enddef;

```

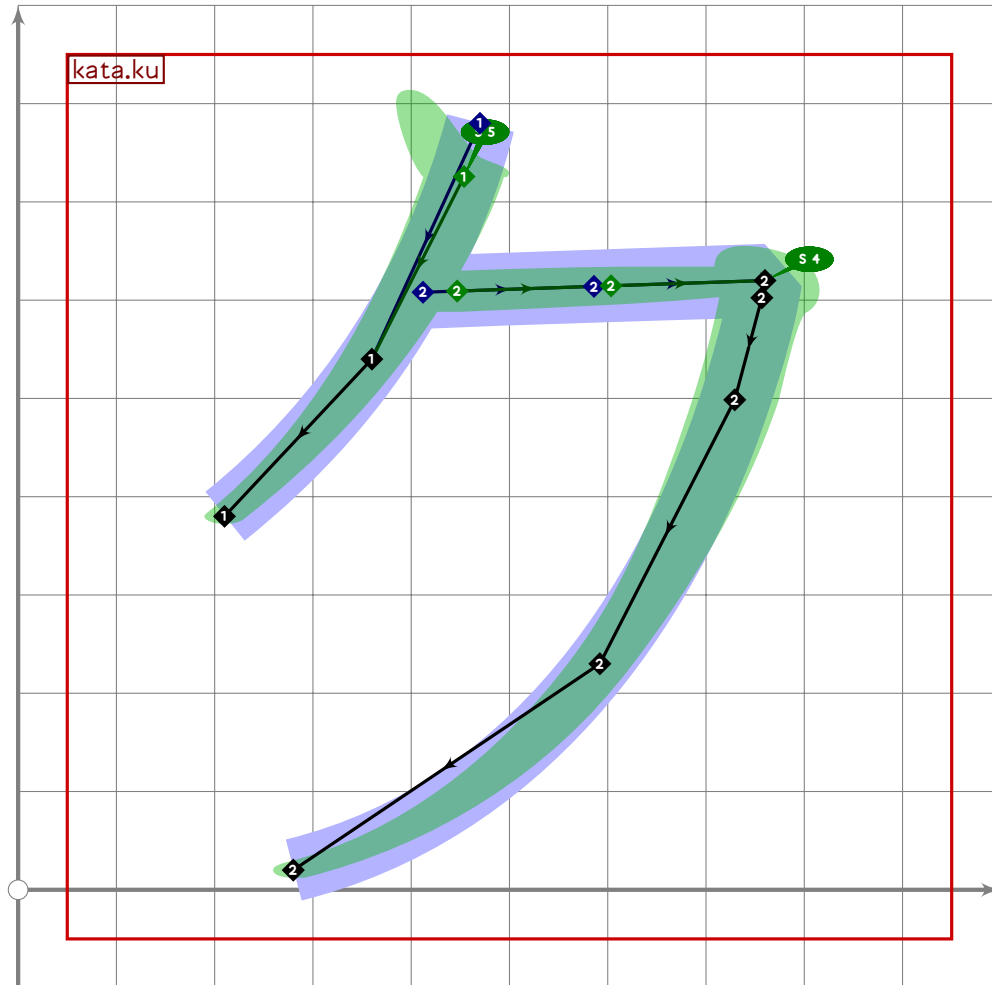


```

128
129 vardef tsu_curve.kata.ki =
130   push_pbox_toexpand("kata.ki");
131
132   push_stroke((410,780)-(560,-10),
133     (0.74,2.55)-(1.4,1.4)-(1.5,1.5));
134   replace_strokep(0)(insert_nodes(olddp)(0.5));
135   set_boserif(0,0,8);
136
137   push_stroke((180,490)-(740,620),
138     (0.6,3)-(1.6,1.6)-(0.6,3));
139   replace_strokep(0)(insert_nodes(olddp)(0.5));
140   set_boserif(0,0,5);
141   set_boserif(0,2,6);
142
143   push_stroke((180,270)-(830,425),
144     (0.6,3)-(1.6,1.6)-(0.6,3));
145   replace_strokep(0)(insert_nodes(olddp)(0.5));
146   set_boserif(0,0,5);
147   set_boserif(0,2,6);
148   expand_pbox;

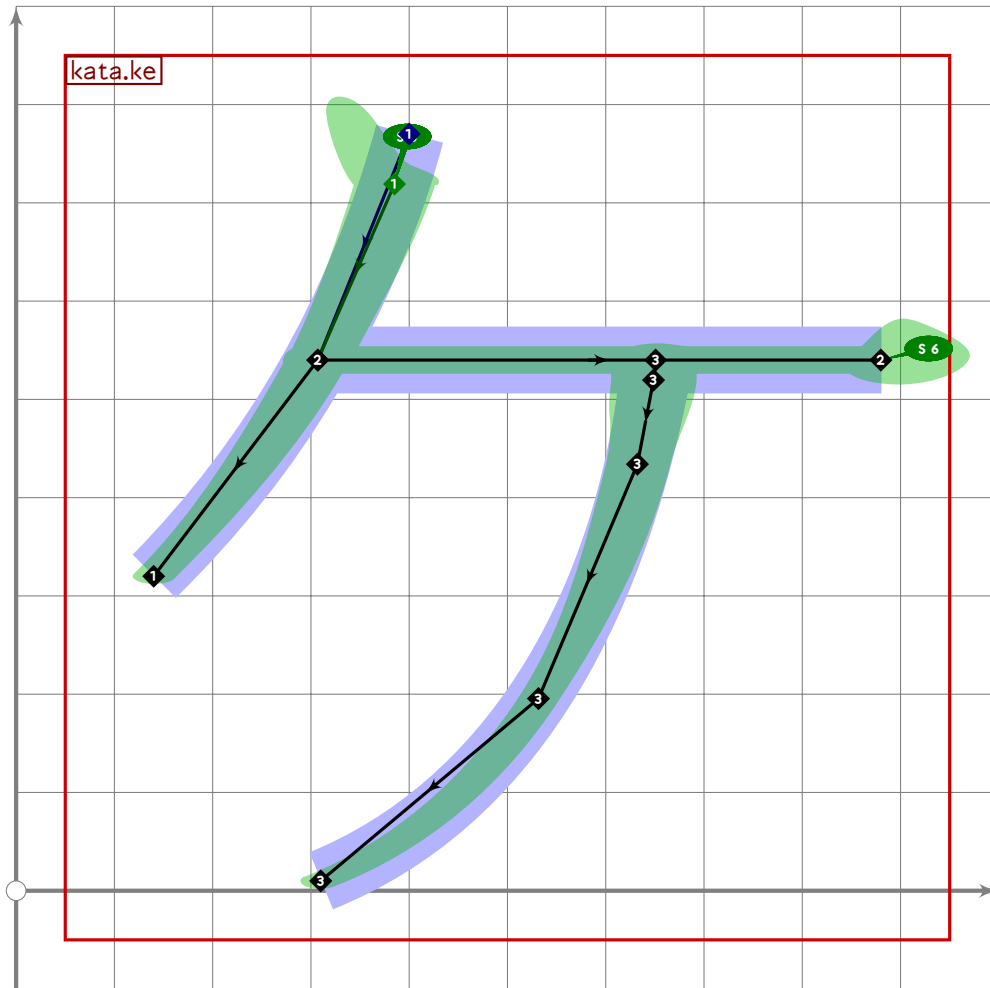
```

149 enddef;



150

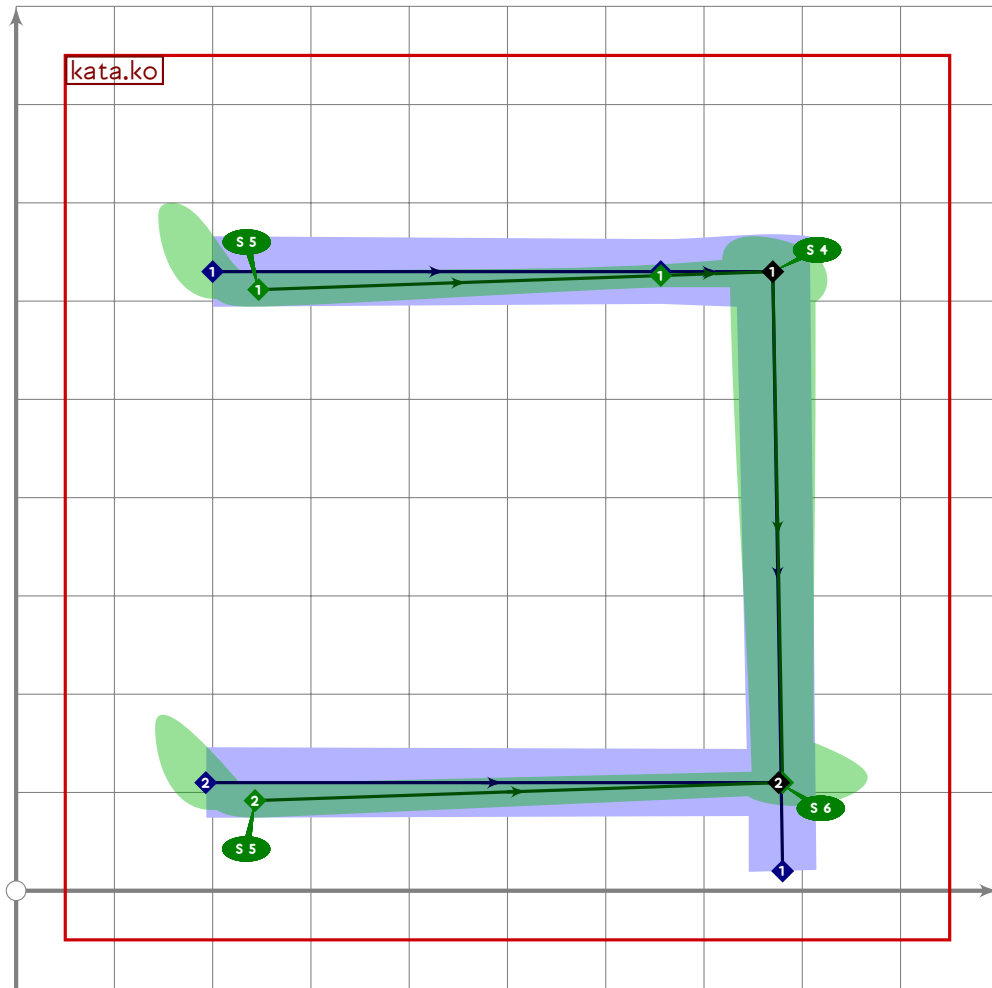
```
151 vardef tsu_curve.kata.ku =  
152   push_pbox_toexpand("kata.ku");  
153  
154   push_stroke((470,780)..(360,540)..(210,380),  
155     (0.68,2.7)-(1.4,1.4)-(1.1,1.1));  
156   set_boserif(0,0,5);  
157  
158   z1=(get_strokep(0) intersectionpoint ((0,600)-(1000,620))) *10*right;  
159   tsu_curve.kata.fu_stroke(z1,(760,620),(280,20));  
160   set_boserif(0,0,whatever);  
161   expand_pbox;  
162 enddef;
```



```

163
164 vardef tsu_curve.kata.ke =
165   push_pbox_toexpand("kata.ke");
166
167   push_stroke((400,770)..(307,540)..(140,320),
168     (0.68,2.7)-(1.4,1.4)-(1.1,1.1));
169   set_boserif(0,0,5);
170
171   z1=(get_stroke(0) intersectionpoint ((0,540)-(1000,540)));
172   push_stroke(z1-(880,540),(1.5,1.5)-(1.5,1.5)-(0.75,2.85));
173   set_boserif(0,1,6);
174
175   tsu_curve.kata.no_stroke(point 0.6 of (z1-(880,540)),(310,10));
176   replace_stroke(0)(insert_nodes(oldp)(0.2));
177   expand_pbox;
178 enddef;

```



```

179
180 vardef tsu_curve.kata.ko =
181   push_pbox_toexpand("kata.ko");
182
183   push_stroke((200,630-20*mincho)-(770,630)-(780,mincho[20,110]),
184     (0.78,2.83)-(1.3,1.3)-(1.7,1.7)-(1.4,1.4));
185   replace_stroke(0)(insert_nodes(oldp)(0.8));
186   set_botip(0,2,1);
187   set_boserif(0,0,5);
188   set_boserif(0,2,4);
189
190   push_stroke((193,110-20*mincho)-(776,110),
191     (0.78,2.83)-(1.4,1.4));
192   set_boserif(0,0,5);
193   set_boserif(0,1,6);
194   expand_pbox;
195 enddef;
196

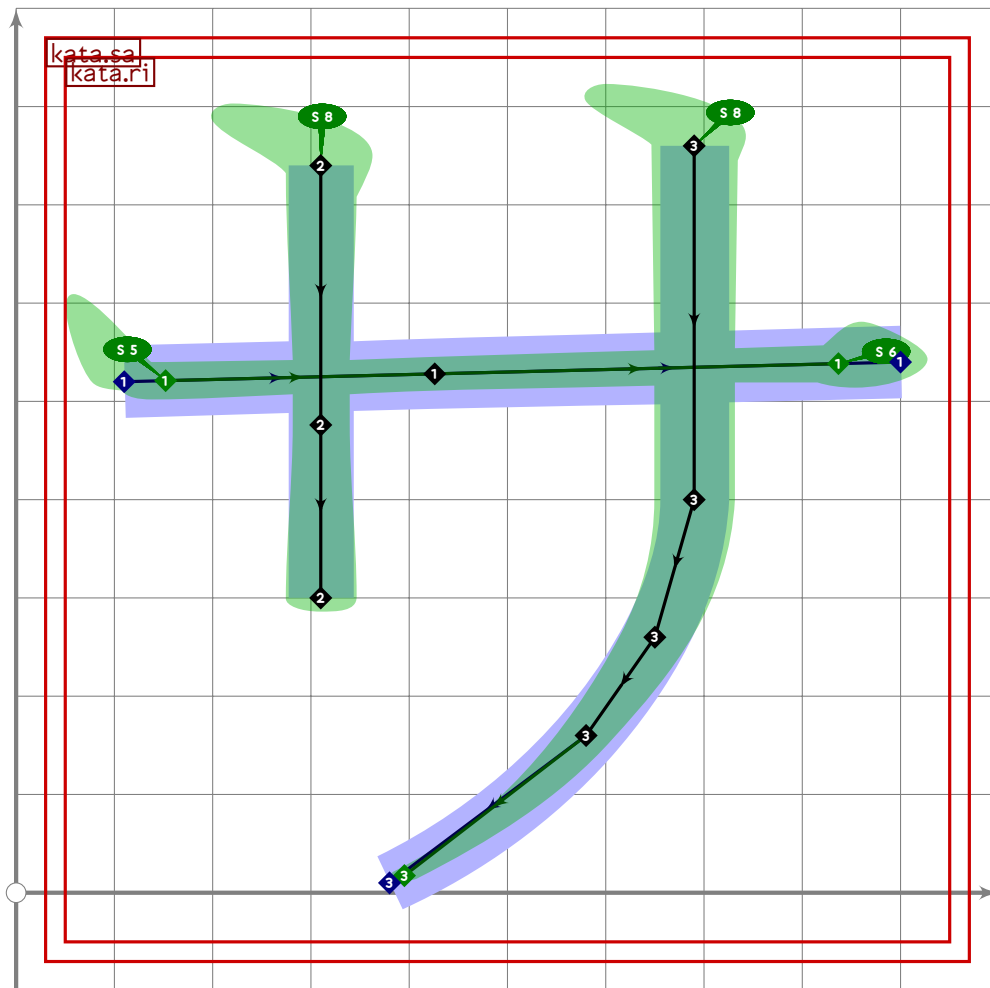
```

Katakana Sashisuseso/Zajizuzezo

```

197 %%%%%%%%% KATAKANA SASHISUSES0/ZAJIZUZEZO

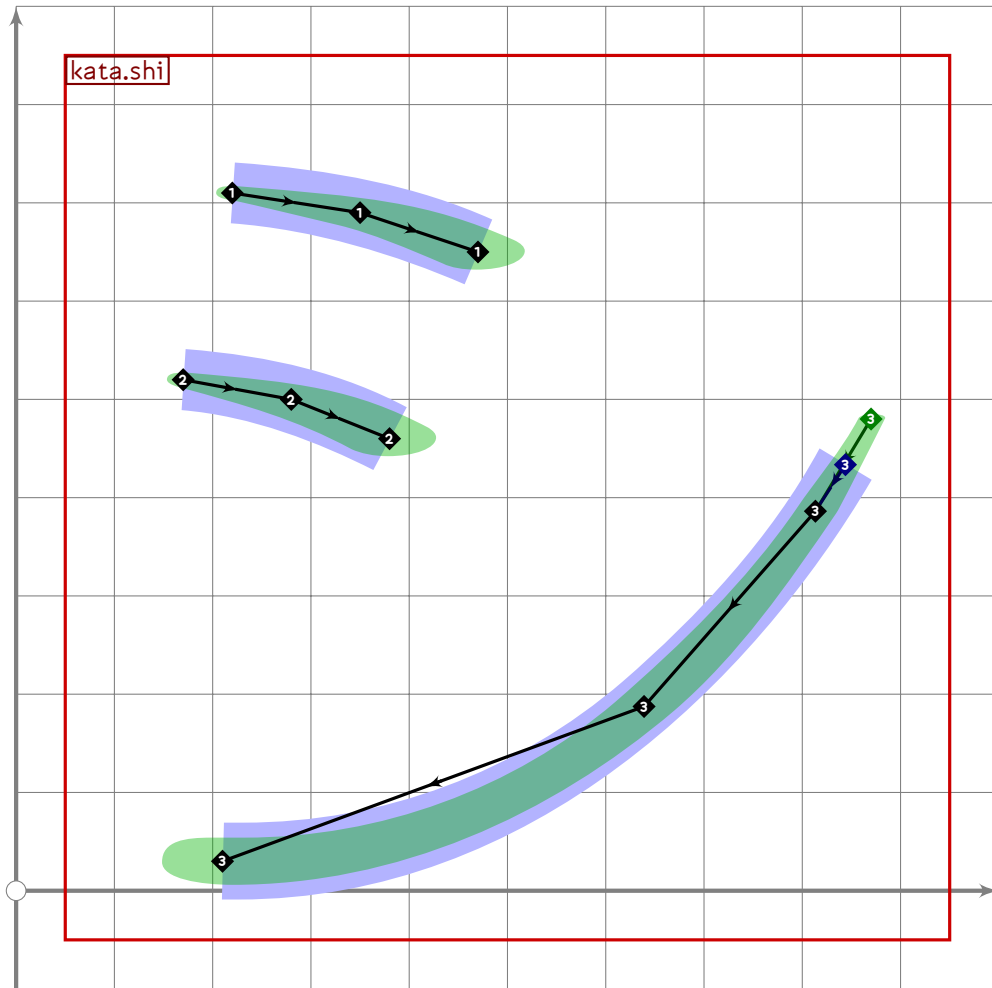
```

```

198
199 vardef tsu_curve.kata.sa =
200   push_pbox_toexpand("kata.sa");
201
202   push_stroke((110,520)-(900,540),
203     (0.7,3)-(1.7,1.7)-(0.7,3));
204   replace_stroke(0)(insert_nodes(olddp)(0.4));
205   set_boserif(0,0,5);
206   set_boserif(0,2,6);
207
208   tsu_curve.kata.ri;
209   expand_pbox;
210 enddef;

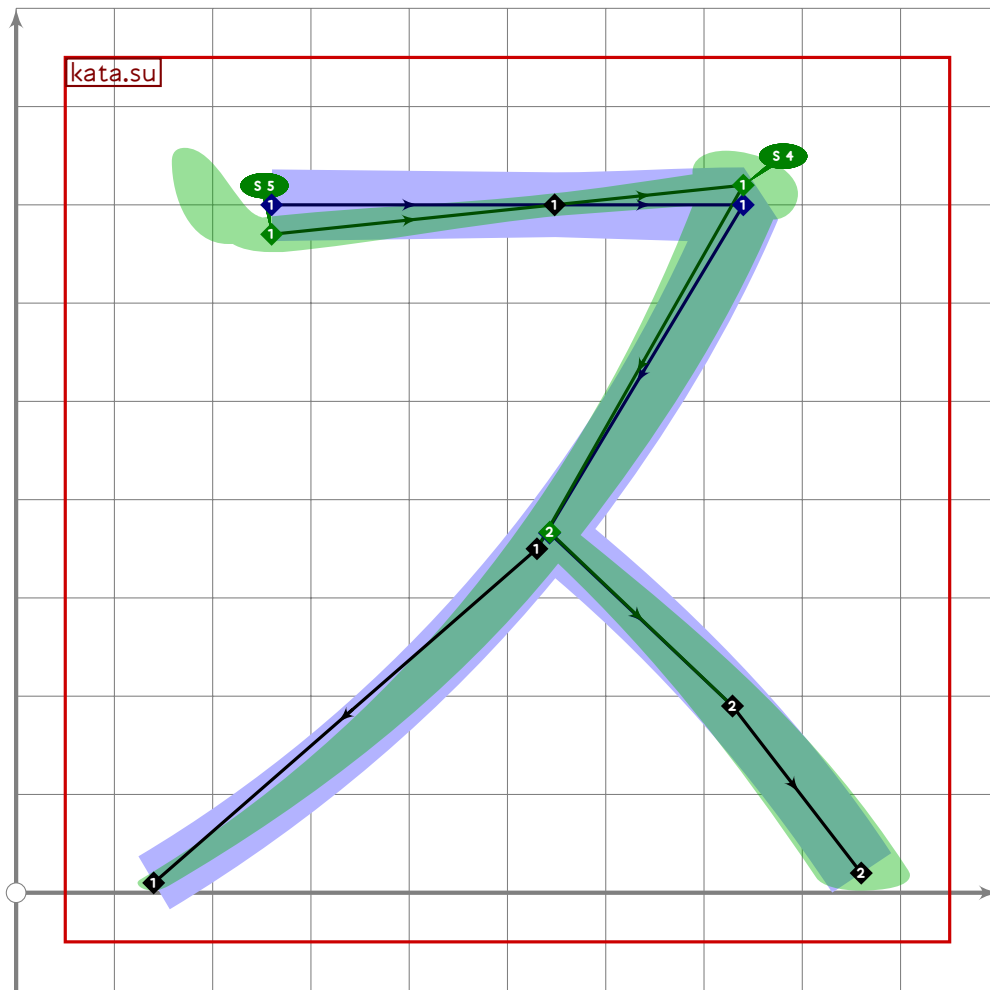
```



```

211
212 vardef tsu_curve.kata.shi =
213   push_pbox_toexpand("kata.shi");
214
215   push_stroke((220,710)..(350,690)..(470,650),
216     (1,1)..(1,6,1,6)..(1,8,1,8));
217
218   push_stroke((170,520)..(280,500)..(380,460),
219     (1,1)..(1,6,1,6)..(1,8,1,8));
220
221   tsu_curve.kata.no_stroke((870,480),(210,30));
222
223   replace_strokeq(0)((0,9,0,9)-(1,1,1,1)-(1,4,1,4)-(2,2,2,2));
224   set_boserif(0,4,5);
225   expand_pbox;
226 enddef;

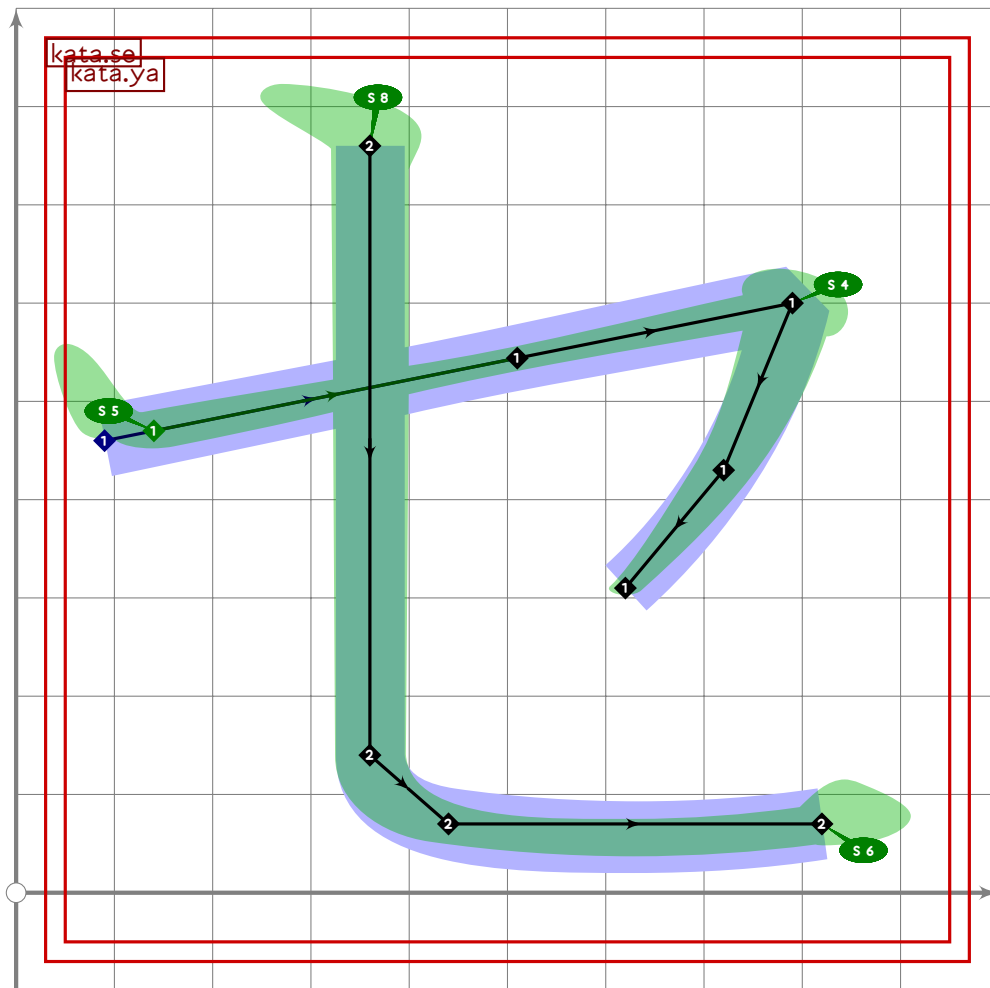
```



```

227
228 vardef tsu_curve.kata.su =
229   push_pbox_toexpand("kata.su");
230
231   push_stroke((260,700-30*mincho)-(740,700+20*mincho)..(530,350)..(140,10),
232     (1.8,1.8)-(1.3,1.3)-(1.7,1.7)-(1.4,1.4)-(1,1));
233   replace_stroke(0)(insert_nodes(oldp)(0.6));
234   set_botip(0,2,0);
235   set_boserif(0,0,5);
236   set_boserif(0,2,4);
237
238   push_stroke((point 2.95 of get_stroke(0)..(729,190)..(860,20),
239     (1.2,1.2)-(1.6,1.6)-(1.8,1.8));
240   expand_pbox;
241 enddef;

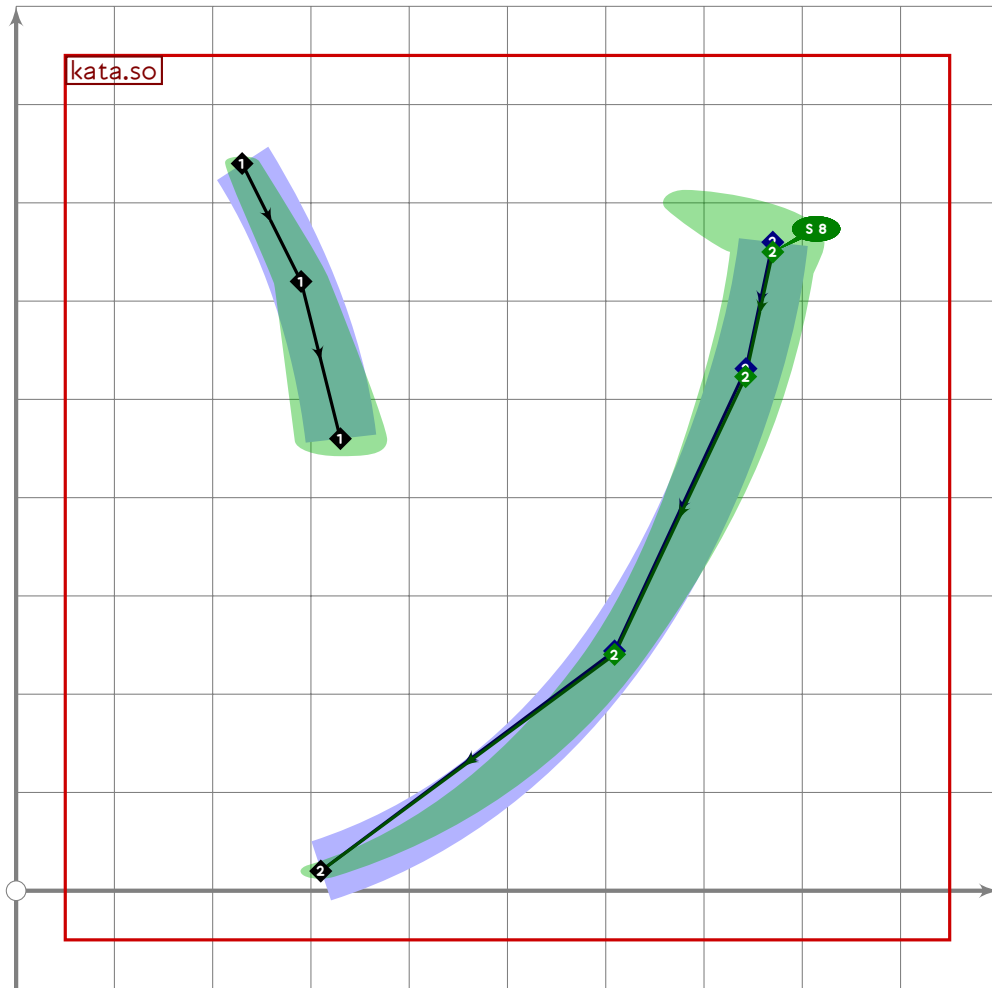
```



```

242
243 vardef tsu_curve.kata.se =
244   push_pbox_toexpand("kata.se");
245
246   tsu_curve.kata.ya;
247
248   replace_strokep(-1)(oldp shifted (-30,0));
249
250   replace_strokep(0)((360,760)-(360,140){dir 274}..
251     (440,70)..tension 2.1..(820,70));
252   replace_strokeq(0)((1,6,1,6)-(1,5,1,5)-(1,9,1,9)-(1,8,1,8));
253   set_boserif(0,0,8);
254   set_boserif(0,3,6);
255   expand_pbox;
256 enddef;

```



```

257
258 vardef tsu_curve.kata.so =
259   push_pbox_toexpand("kata.so");
260
261   push_stroke((230,740)..(290,620)..(330,460),
262     (1,1)..(1.3,1.3)..(1.8,1.8));
263
264   tsu_curve.kata.no_stroke((770,660-10*mincho),(310,20));
265   set_boserif(0,0,8);
266   expand_pbox;
267 enddef;
268

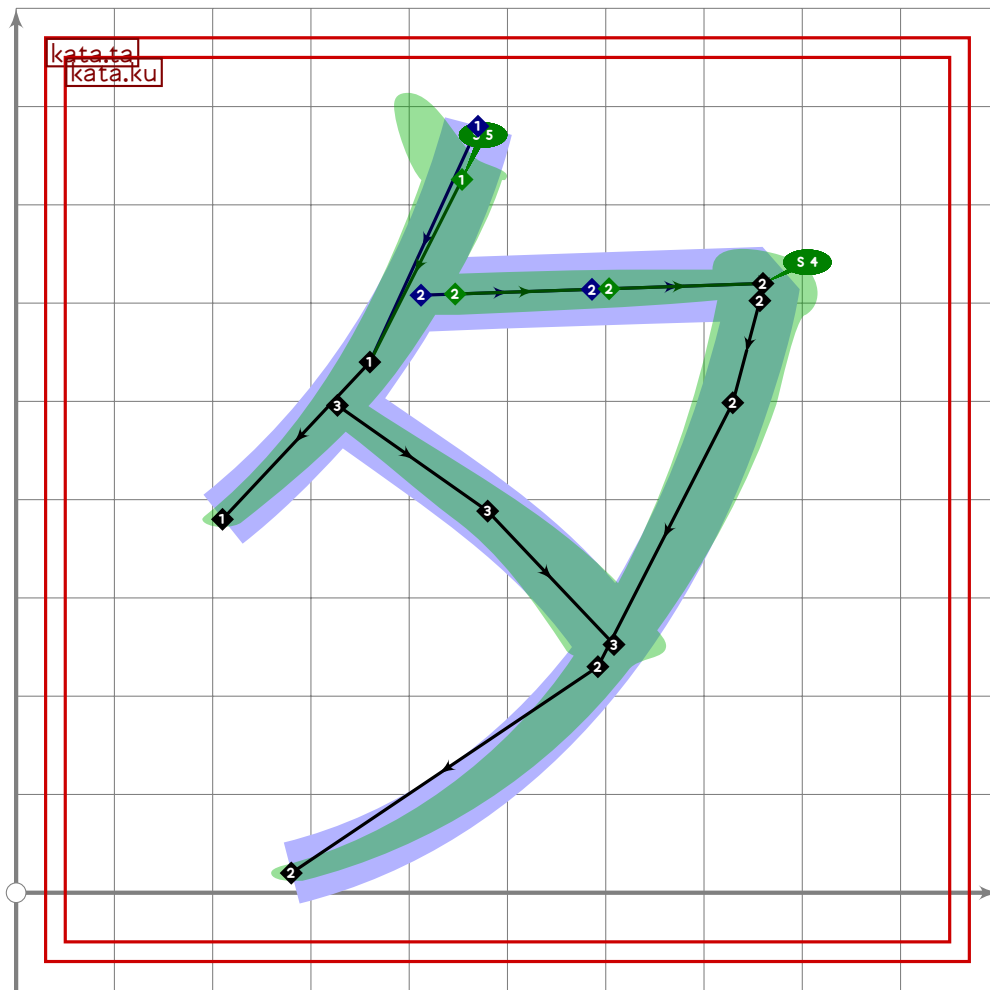
```

Katakana Tachitsuteto/Dajizudedo

```

269 %%%%%%%%% KATAKANA TACHITSUTETO/DAJIZUDED0

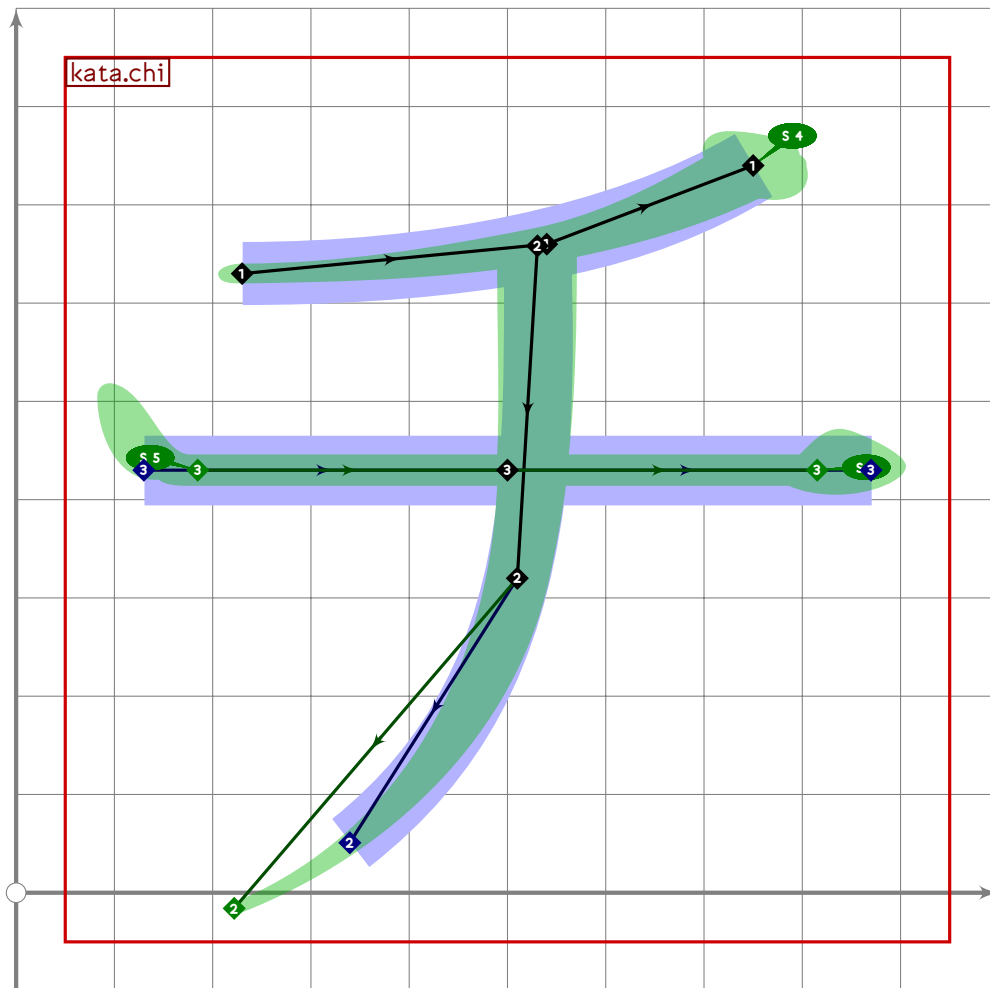
```



```

270
271 vardef tsu_curve.kata.ta =
272   push_pbox_toexpand("kata.ta");
273
274   tsu_curve.kata.ku;
275
276   numeric x[],y[];
277   z1=point 1.25 of get_strokep(-1);
278   z3=point 4.9 of get_strokep(0);
279   z2=(0.5[z1,z3])*0.05*((z3-z1) rotated 90);
280   push_stroke(z1..tension 2..z2..z3,
281     (1.2,1.2)-(1.6,1.6)-(1.9,1.9));
282   expand_pbox;
283 enddef;

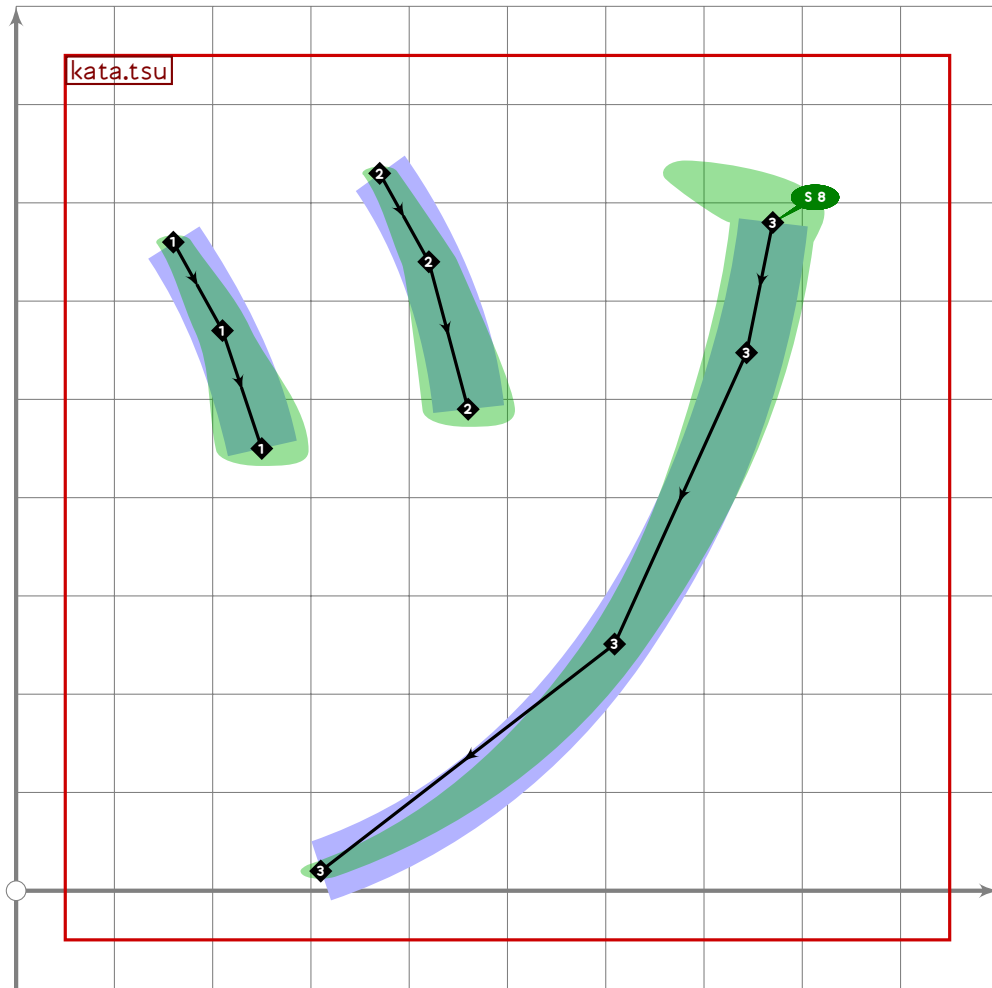
```



```

284
285 vardef tsu_curve.kata.chi =
286   push_pbox_toexpand("kata.chi");
287
288   push_stroke((230,630)..tension 1.3..(540,660)..(750,740),
289     (1,2,1,2)-(1,7,1,7)-(2,2));
290   set_boserif(0,2,4);
291
292   tsu_curve.kata.na_centre;
293   replace_stroke(0)(subpath (xpart (oldp intersectiontimes
294     get_stroke(1)),infinity) of oldp);
295
296   push_stroke((130,430)-(870,430),
297     (0,7,2,7)-(1,6,1,6)-(0,7,2,7));
298   replace_stroke(0)(insert_nodes(oldp)(0,5));
299   set_boserif(0,0,5);
300   set_boserif(0,2,6);
301   expand_pbox;
302 enddef;

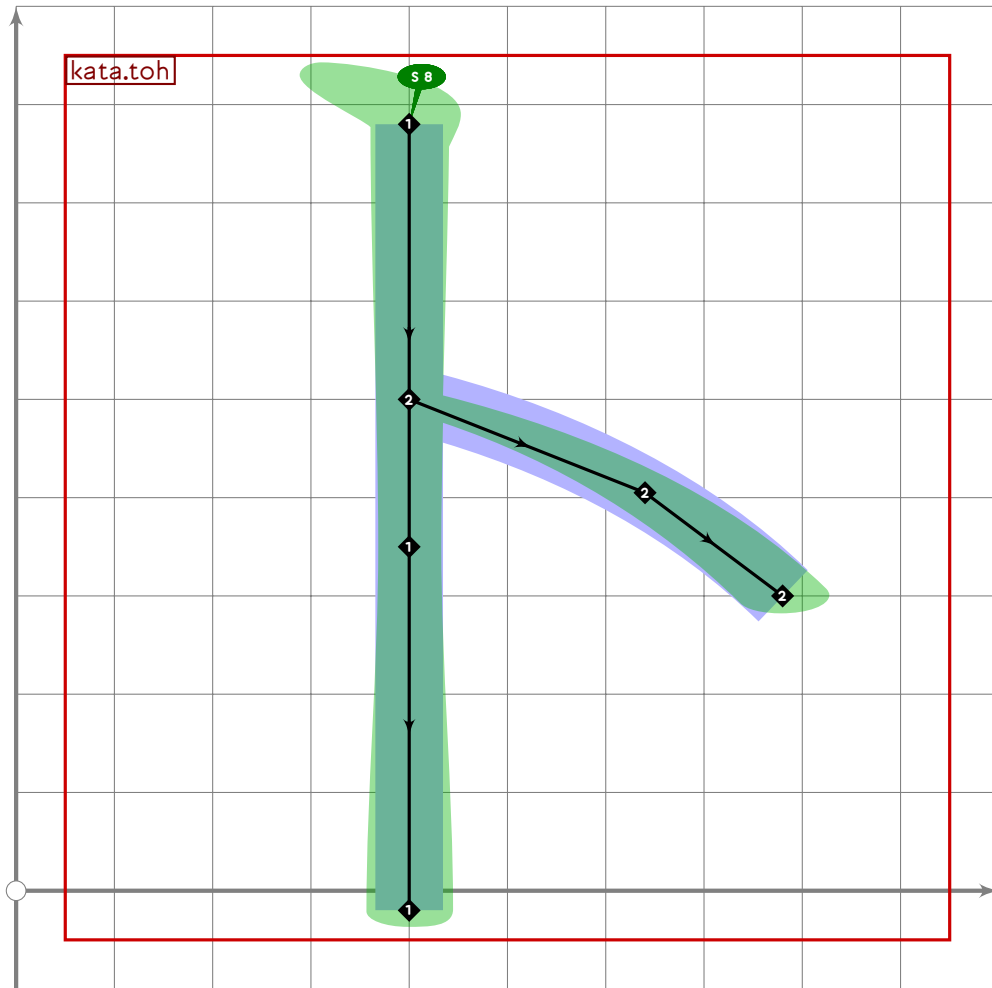
```



```

303
304 vardef tsu_curve.kata.tsu =
305   push_pbox_toexpand("kata.tsu");
306
307   push_stroke((160,660)..(210,570)..(250,450),
308     (1,1)..(1.3,1.3)..(1.8,1.8));
309
310   push_stroke((370,730)..(420,640)..(460,490),
311     (1,1)..(1.3,1.3)..(1.8,1.8));
312
313   tsu_curve.kata.no_stroke((770,680),(310,20));
314   set_boserif(0,0,8);
315   expand_pbox;
316 enddef;
317
318 vardef tsu_curve.kata.te_top =
319   push_pbox_toexpand("kata.te_top");
320
321   push_stroke((220,690-10*mincho)-(780,690-10*mincho),
322     (0.5,2.9)-(1.6,1.6)-(0.5,2.9));
323   replace_strokep(0)(insert_nodes(0)(0.5));

```

```

345
346 vardef tsu_curve.kata.toh =
347   push_pbox_toexpand("kata.toh");
348
349   push_stroke((400,780)-(400,350)-(400;20),
350             (1.6,1.6)-(1.4,1.4)-(1.7,1.7));
351   set_boserif(0,0,8);
352
353   push_stroke((400,500)..tension 1.1..(640,405)..(780,300),
354             (1.3,1.3)-(1.6,1.6)-(1.8,1.8));
355   expand_pbox;
356 enddef;
357

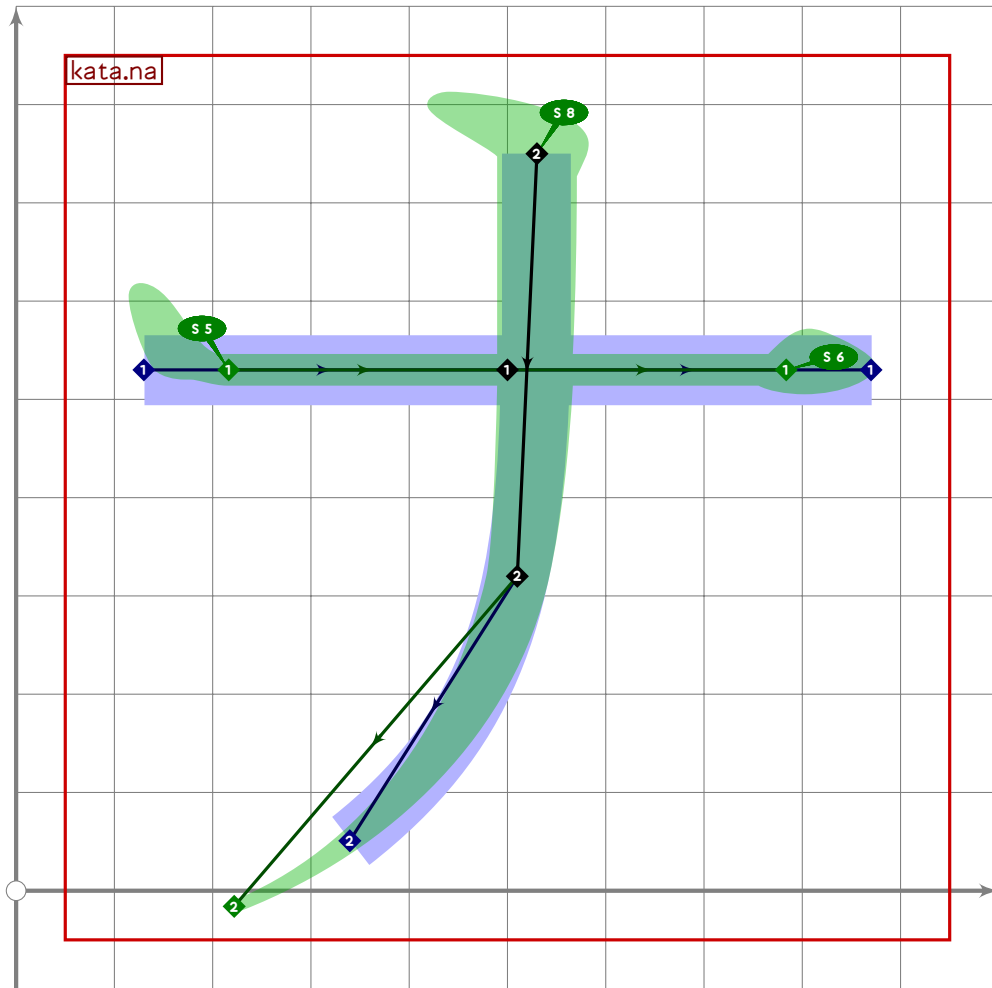
```

Katakana Naninuneno

```

358 %%% KATAKANA NANINUNENO
359
360 vardef tsu_curve.kata.na_centre =
361   push_stroke((530,750){down}.tension 1.2..(510,320)..(180;30),
362             (1.6,1.6)-(1.4,1.4)-(0.78,0.78));
363 enddef;

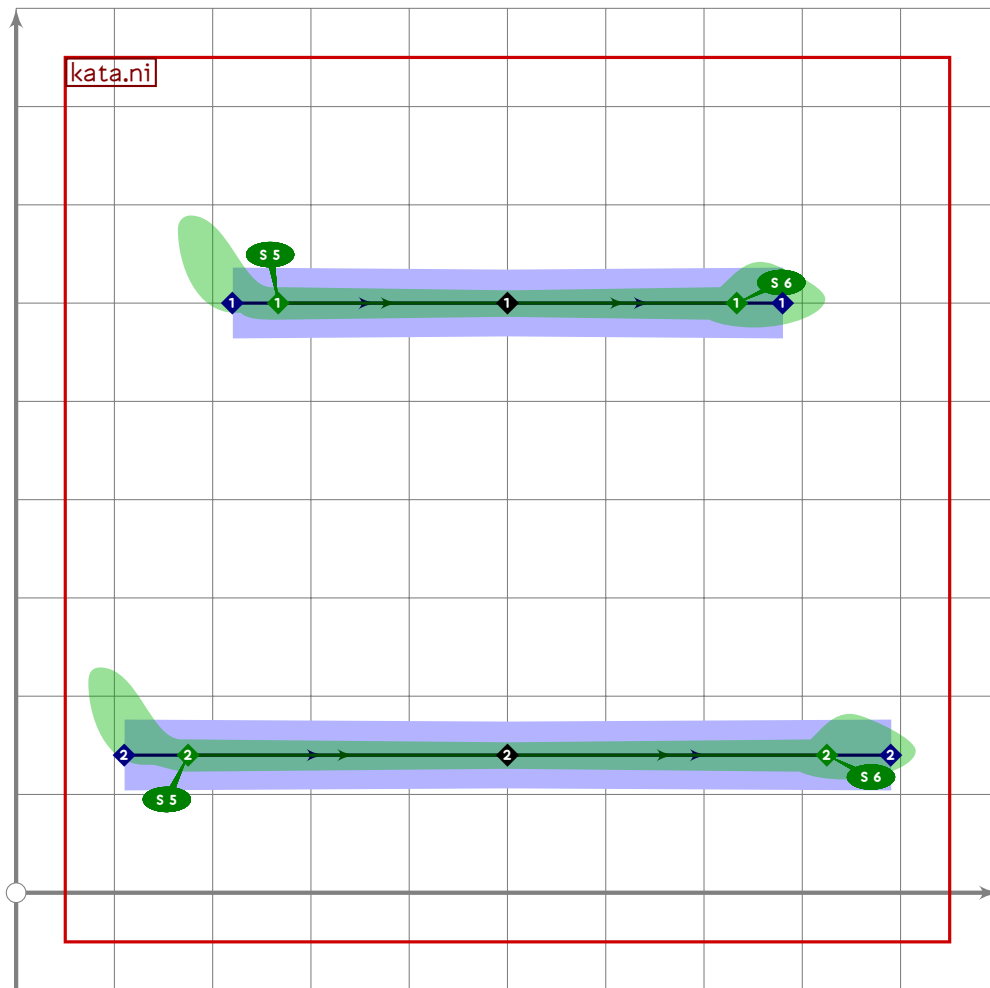
```



```

364
365 vardef tsu_curve.kata.na =
366   push_pbox_toexpand("kata.na");
367
368   push_stroke((130,530)-(870,530),
369     (0,6,2.8)-(1,6,1.6)-(0,6,2.8));
370   replace_stroke(0)(insert_nodes(oldp)(0.5));
371   set_boserif(0,0,5);
372   set_boserif(0,2,6);
373
374   tsu_curve.kata.na_centre;
375   set_boserif(0,0,8);
376   expand_pbox;
377 enddef;

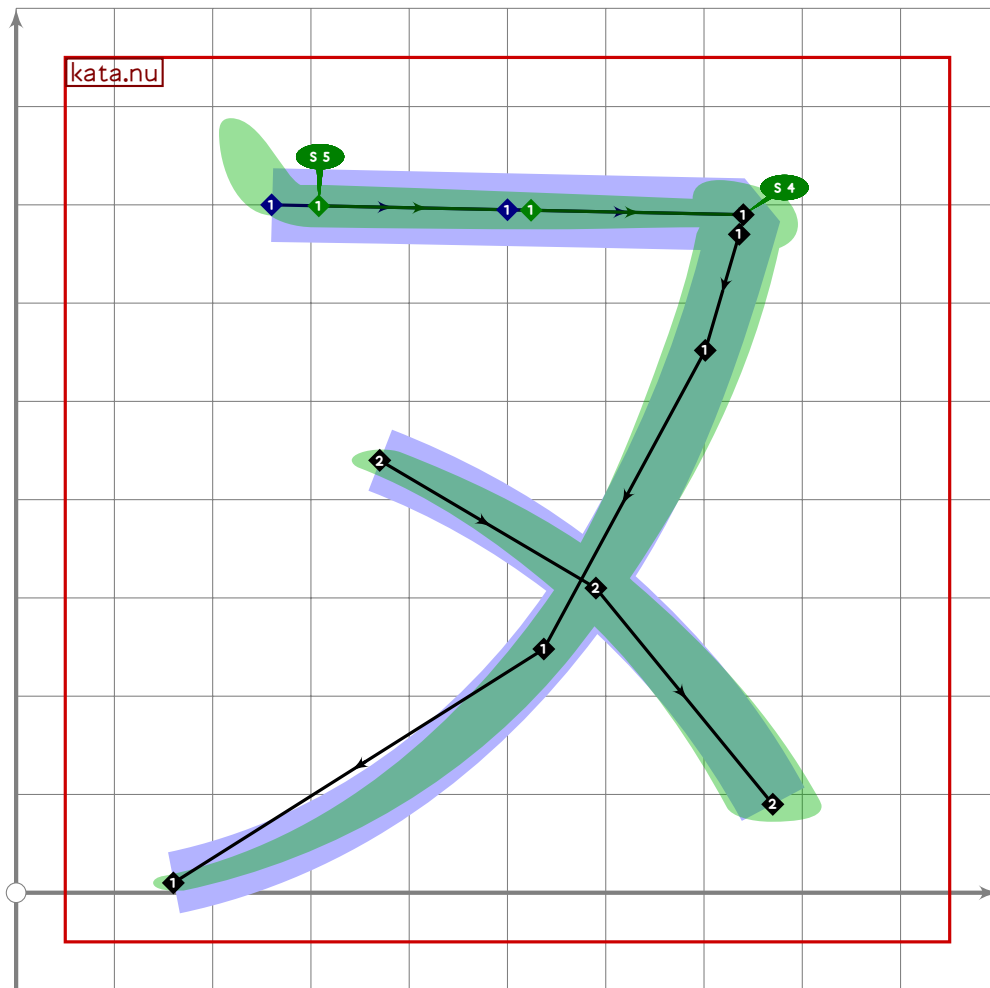
```



```

378
379 vardef tsu_curve.kata.ni =
380   push_pbox_toexpand("kata.ni");
381
382   push_stroke((220,600)-(500,600)-(780,600),
383     (0,7,2,7)-(1,5,1,5)-(0,7,2,9));
384   set_boserif(0,0,5);
385   set_boserif(0,2,6);
386
387   push_stroke((110,140)-(500,140)-(890,140),
388     (0,7,2,7)-(1,5,1,5)-(0,7,2,9));
389   set_boserif(0,0,5);
390   set_boserif(0,2,6);
391   expand_pbox;
392 enddef;

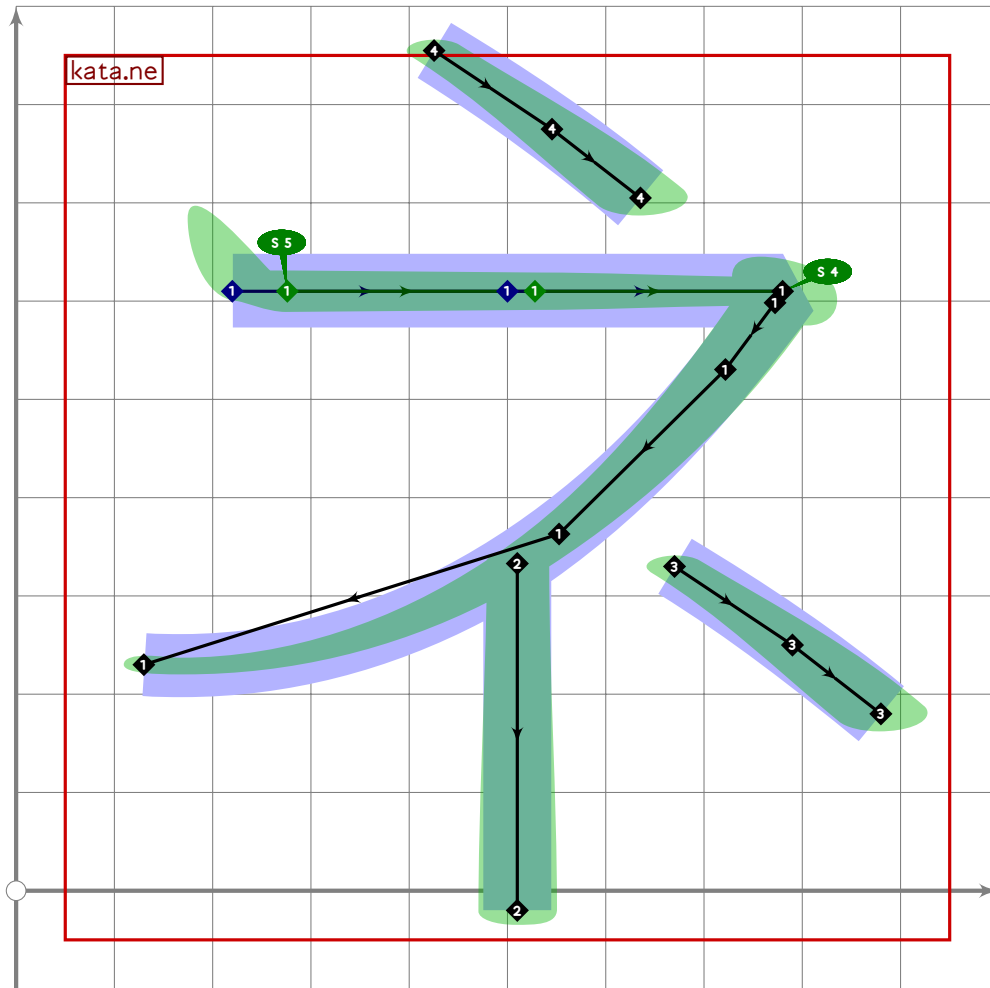
```



```

393
394 vardef tsu_curve.kata.nu =
395   push_pbox_toexpand("kata.nu");
396
397   tsu_curve.kata.fu_stroke((260,700),(740,690),(160,10));
398
399   push_stroke((370,440)..(590,310)..(770,90),
400     (1.3,1.3)-(1.6,1.6)-(1.8,1.8));
401   expand_pbox;
402 enddef;

```



```

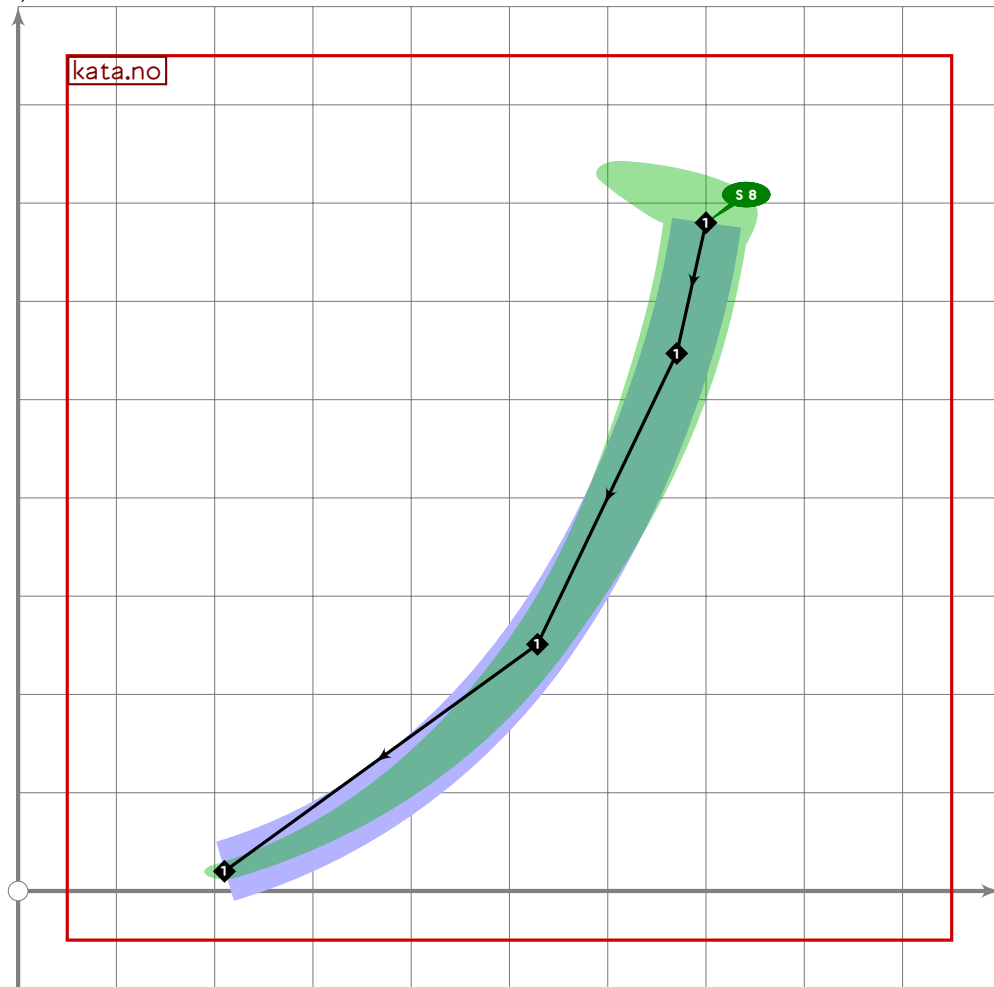
403
404 vardef tsu_curve.kata.ne =
405   push_pbox_toexpand("kata.ne");
406
407   tsu_curve.kata.fu_stroke((220,610),(780,610),(130,230));
408
409   push_stroke(((510,0)-(510,1000)) intersectionpoint
410     reverse get_stroke(0)-(510,20),
411     (1.4,1.4)-(1.6,1.6));
412
413   push_stroke((670,330)..(790,250)..(880,180),
414     (1.3,1.3)-(1.6,1.6)-(1.8,1.8));
415
416   push_stroke(get_stroke(0) shifted ((510,800)-point 0.7 of get_stroke(0)),
417     get_stroke(0));
418   expand_pbox;
419 enddef;
420
421 vardef tsu_curve.kata.no_stroke(expr ur,ll) =
422   push_stroke(insert_nodes(ur..tension 1.1..
423     (0.65[xpart ll,xpart ur],0.35[ypart ll,ypart ur])..{curl 1.2}ll)(0.3),

```

```

424 (1.7,1.7)-(1.7,1.7)-(1.4,1.4)-(1.1,1.1));
425 enddef;

```



```

426
427 vardef tsu_curve.kata.no =
428   push_pbox_toexpand("kata.no");
429
430   tsu_curve.kata.no_stroke((700,680),(210,20));
431   set_boserif(0,0,8);
432   expand_pbox;
433 enddef;
434

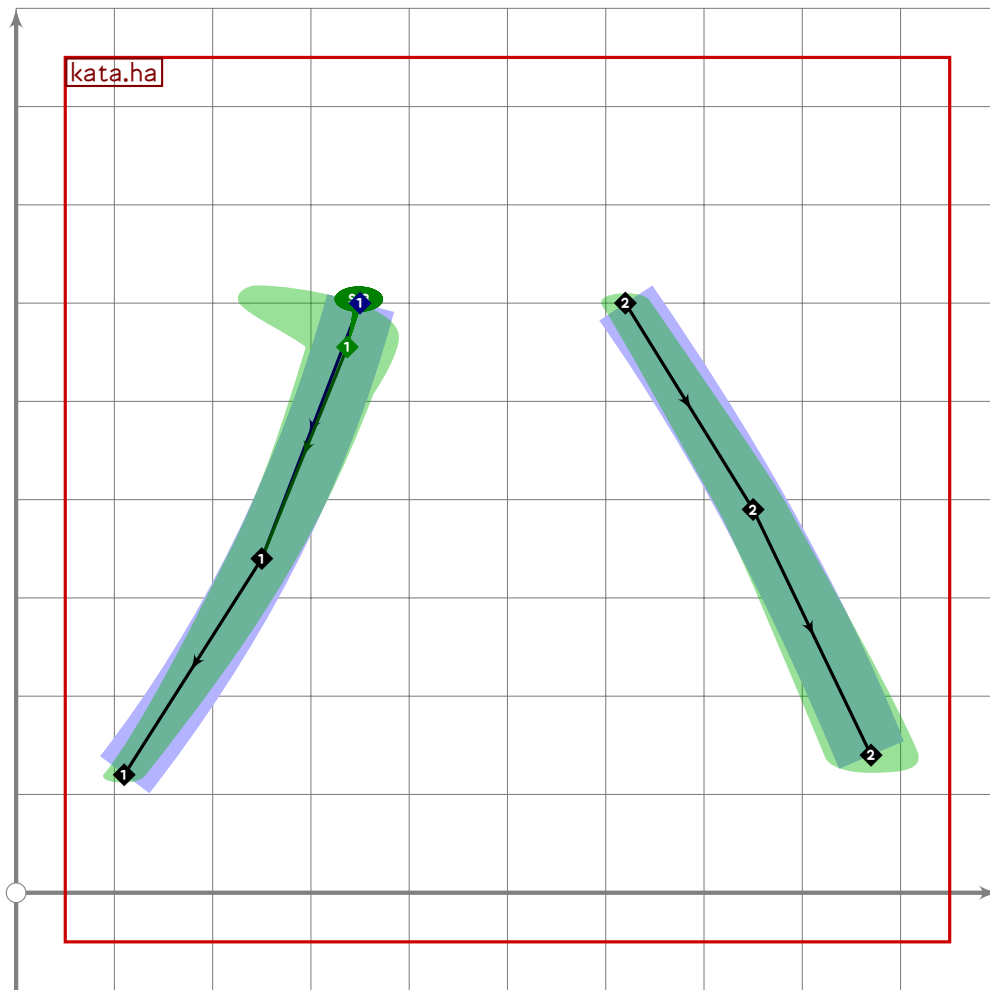
```

Katakana Hahifuheho/Babibubebo/Papipupepo

```

435 %%% KATAKANA HAHIFUHEHO/BABIBUBEBO/PAPIPUPEPO

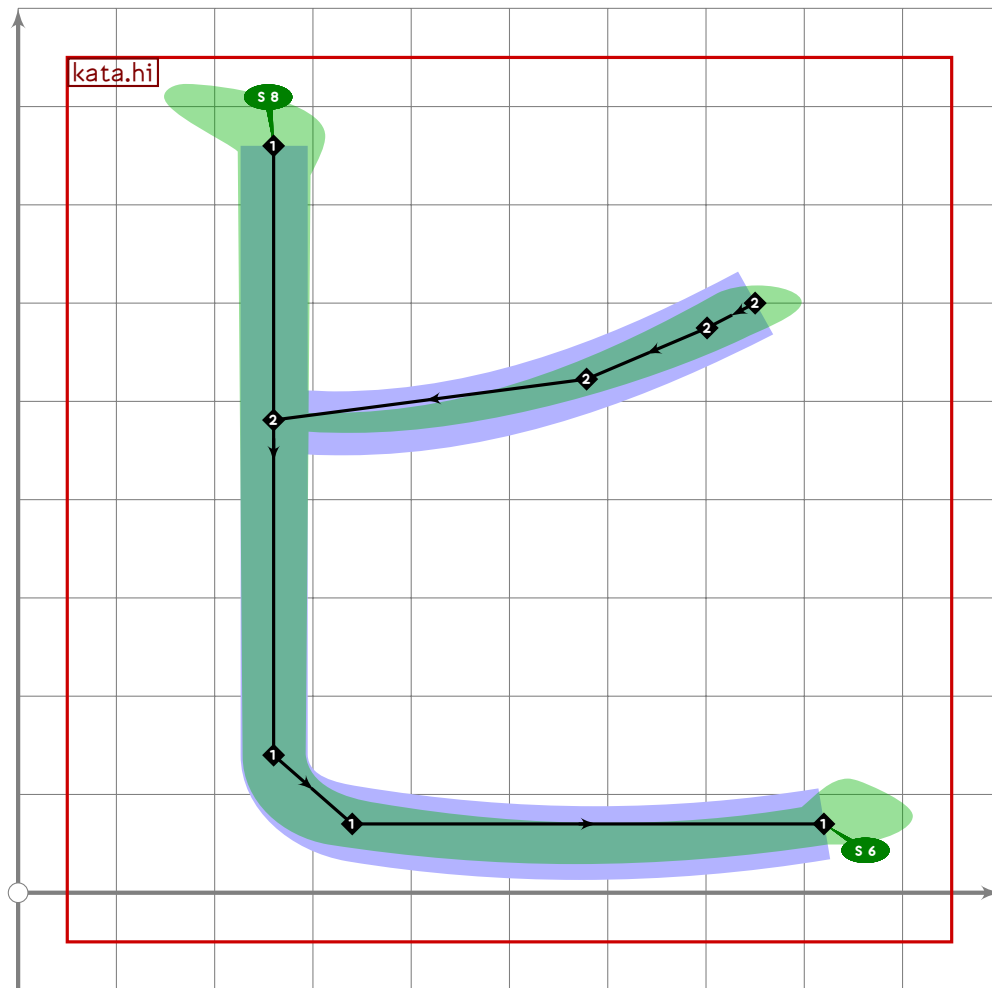
```



```

436
437 vardef tsu_curve.kata.ha =
438   push_pbox_toexpand("kata.ha");
439
440   push_stroke((350,600)..(250,340)..(110,120),
441     (0,7,2,7)-(1,5,1,5)-(1,1,1,1));
442   set_boserif(0,0,8);
443
444   push_stroke((620,600)..(750,390)..(870,140),
445     (1,2,1,2)-(1,5,1,5)-(1,8,1,8));
446   expand_pbox;
447 enddef;

```

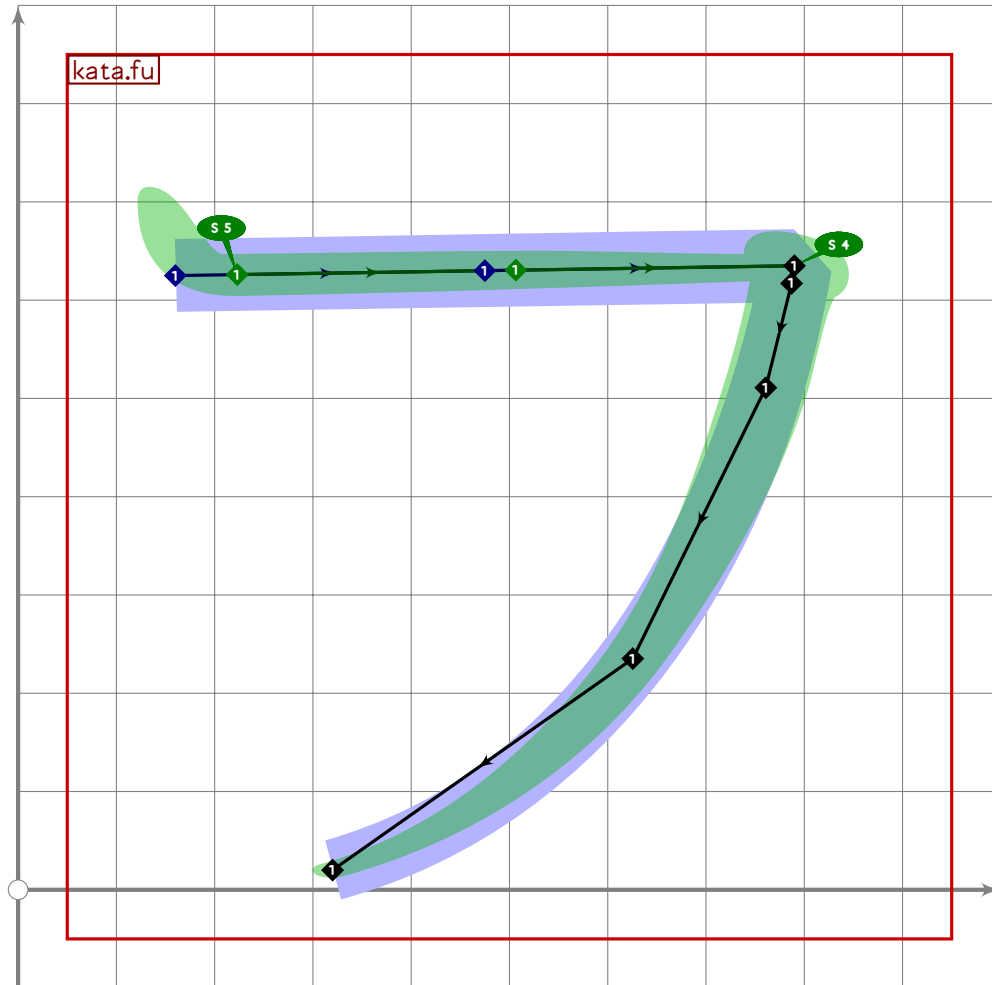



```

448
449 vardef tsu_curve.kata.hi =
450   push_pbox_toexpand("kata,hi");
451
452   push_stroke((260,760)-(260,140){dir 274}..(340,70)..tension 21..(820,70),
453     (0,84,2.18)-(1.4,1.4)-(2.1,2.1)-(1.9,1.9));
454   set_boserif(0,0,8);
455   set_boserif(0,3,6);
456
457   tsu_curve.kata.no_stroke((750,600),point 0.45 of get_strokep(0));
458   replace_strokeq(0)(oldq shifted (0.1,0.1));
459   expand_pbox;
460 enddef;
461
462 vardef tsu_curve.kata.fu_stroke(expr ul,ur,ll) =
463   tsu_curve.kata.no_stroke(ur,ll);
464   replace_strokep(0)(insert_nodes(((mincho*0.1)[ul,ur]-oldp)(0.5,1.15));
465   replace_strokeq(0)((2,2)-(1.9,1.9)-(1.5,1.5)-oldq);
466   set_botip(0,2,0);
467   set_boserif(0,0,5);
468   set_boserif(0,2,4);

```

469 enddef;



470

```
471 vardef tsu_curve.kata.fu =
```

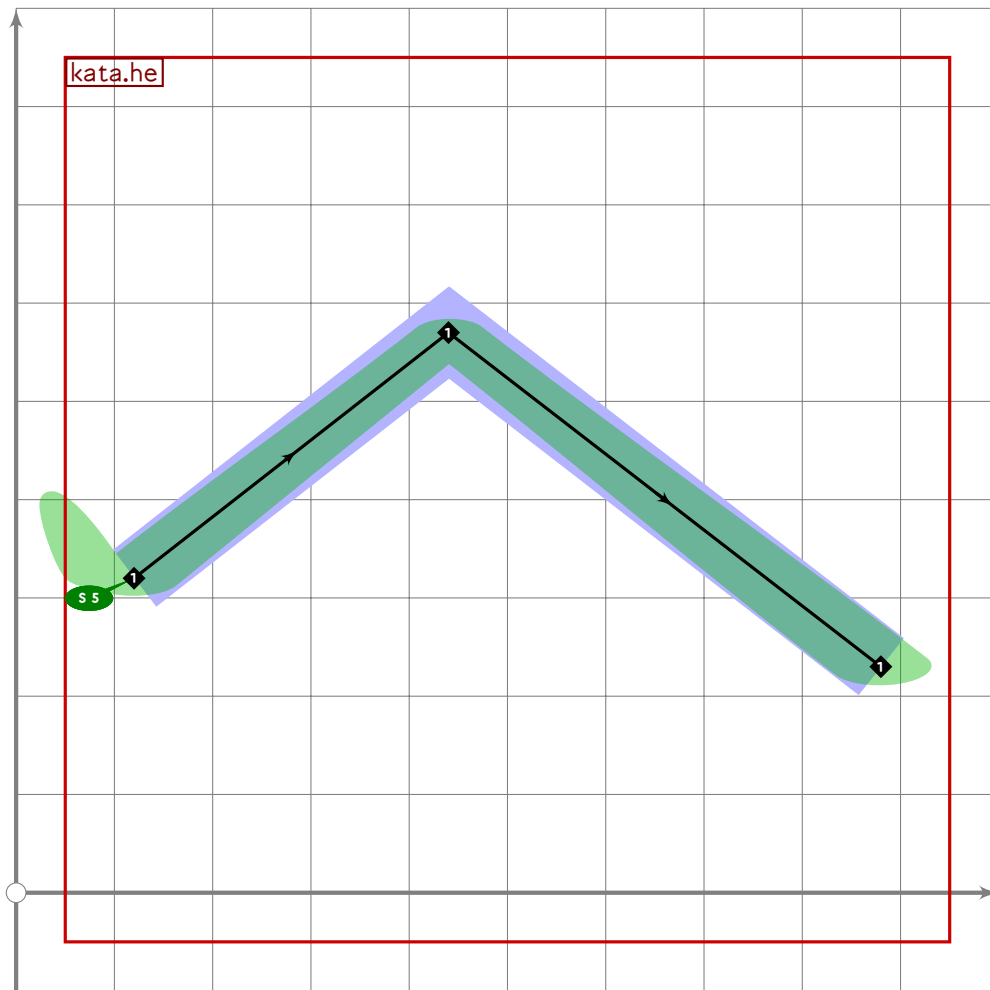
```
472   push_pbox_toexpand("kata.fu");
```

473

```
474   tsu_curve.kata.fu_stroke((160,625),(790,635),(320,20));
```

```
475   expand_pbox;
```

```
476 enddef;
```



```

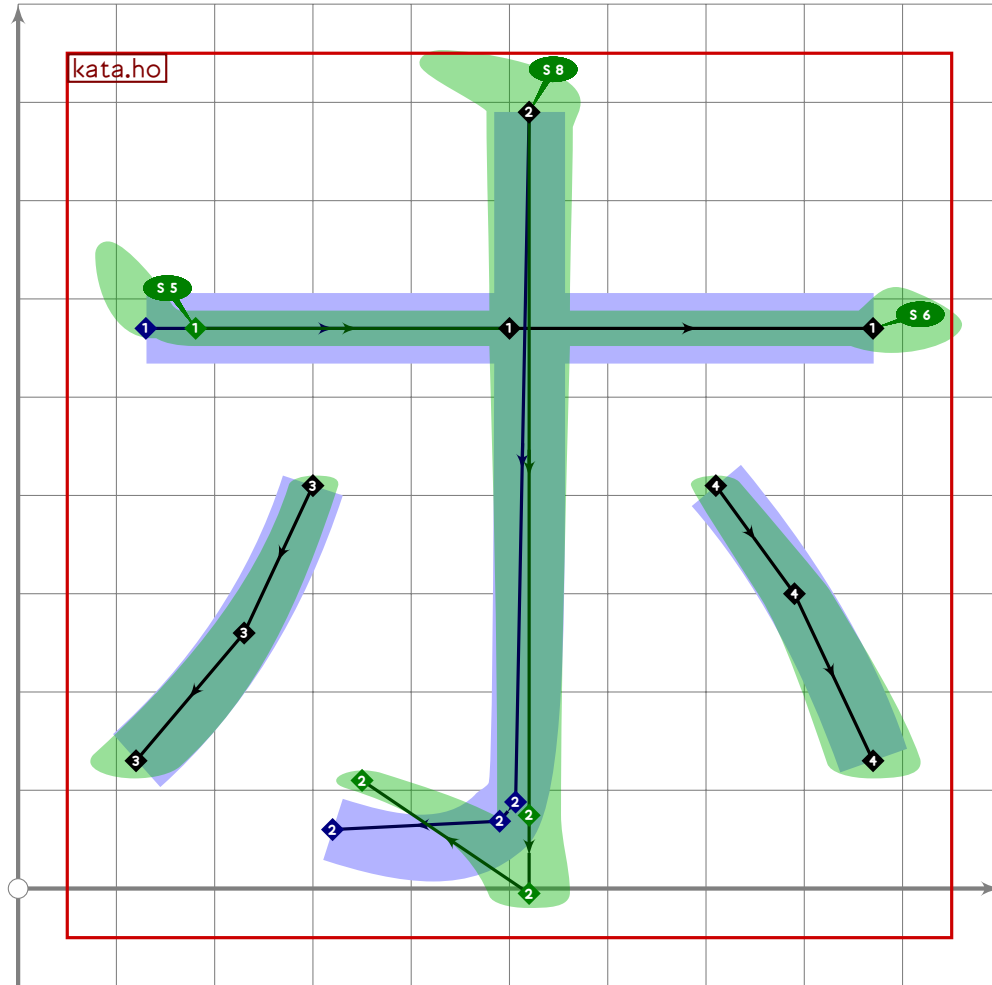
477
478 vardef tsu_curve.kata.he =
479   push_pbox_toexpand("kata.he");
480
481   push_stroke((120,320)-(440,570)-(880,230),
482     (1.8,1.8)-(1.5,1.5)-(1.9,1.9));
483   set_botip(0,1);
484   set_boserif(0,0,5);
485   expand_pbox;
486 enddef;
487
488 vardef tsu_curve.kata.ho_centre(expr pta,ptb) =
489   push_stroke(begingroup
490     numeric x[],y[];
491     path mycirc,ripx,ripy;
492     mycirc:=fullcircle scaled 100 shifted ptb;
493     z1=(pta-ptb) intersectionpoint mycirc;
494     z2=ptb*(-200,40);
495     z3=0.85[z2,z1];
496     ripx:=pta{down}..tension 1.6..z3..{curl 0}z2;
497     ripx:=insert_nodes(ripx)(0.95);

```

```

498 z4=1.5[z1,ptb];
499 z5=ptb*(-170,90);
500 ripy:=pta-z4{z3-z4}..{curl 0}z5;
501 ripy:=insert_nodes(ripy)(0.90);
502 interpath(mincho,ripx,ripy)
503 endgroup,
504 (1.7,1.7)-(1.4,1.4)-(1.6,1.6)-(0.9,1.6));
505 set_botip(0,2,0);
506 set_boserif(0,0,8);
507 enddef;

```



```

508
509 vardef tsu_curve.kata.ho =
510 push_pbox_toexpand("kata.ho");
511
512 push_stroke((130,570)-(500,570)-(870,570),
513 (0.68,2.92)-(1.8,1.8)-(1.9,1.9));
514 set_boserif(0,0,5);
515 set_boserif(0,2,6);
516
517 tsu_curve.kata.ho_centre((520,790),(520,20));
518

```

```

519 push_stroke((300,410)..(230,260)..(120,130),
520   (1.2,1.2)-(1.5,1.5)-(1.8,1.8));
521
522 push_stroke((710,410)..(790,300)..(870,130),
523   (1.2,1.2)-(1.5,1.5)-(1.8,1.8));
524 expand_pbox;
525 enddef;
526

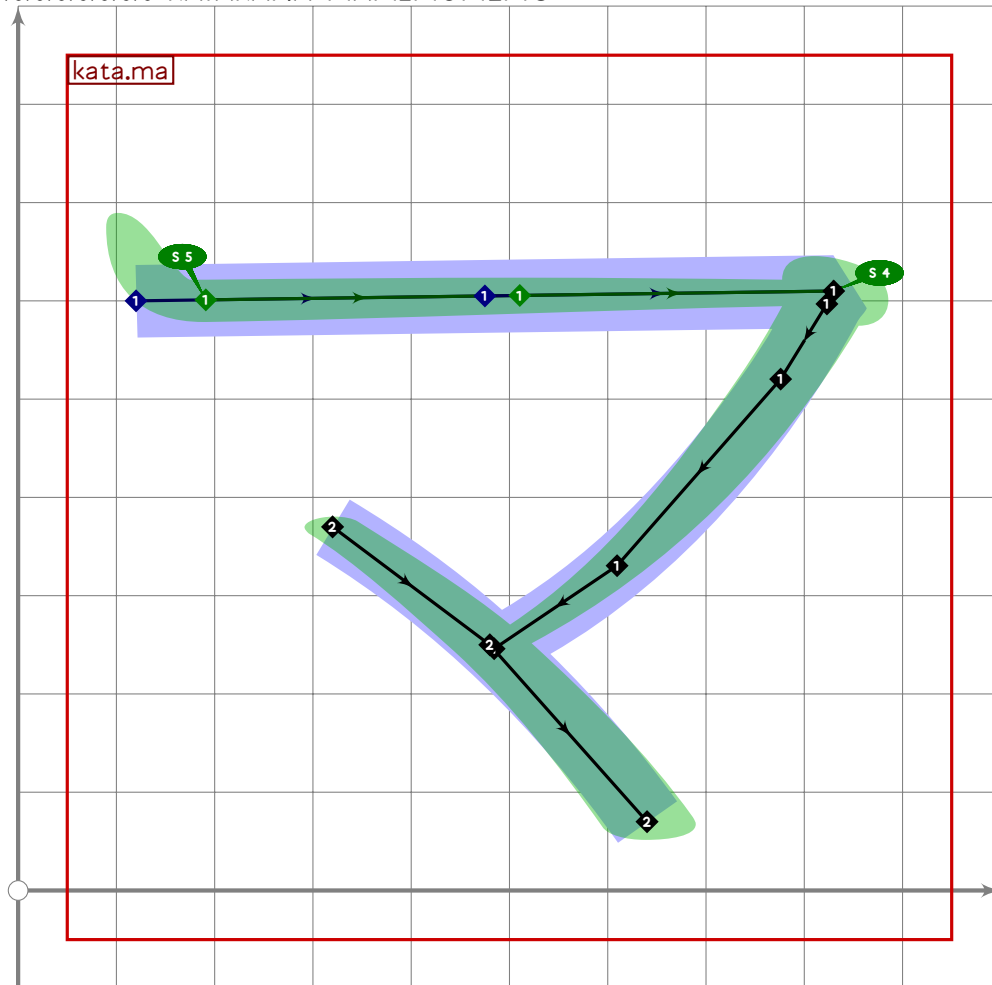
```

Katakana Mamimumemo

```

527 %%% KATAKANA MAMIMUMEMO

```



```

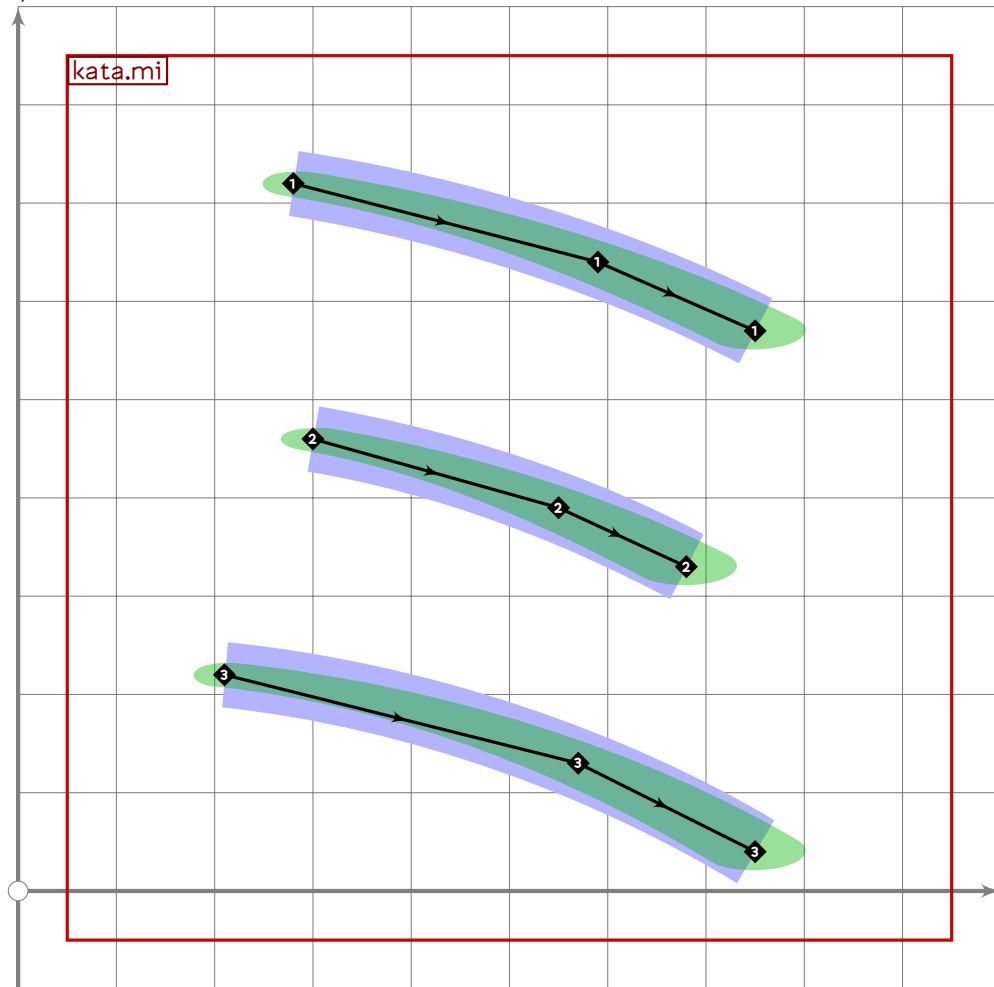
528
529 vardef tsu_curve.kata.ma =
530   push_pbox_toexpand("kata.ma");
531
532   tsu_curve.kata.fu_stroke((120,600),(830,610),(200,180));
533
534   push_stroke((320,370)..(480,250)..(640,70),
535     (1.3,1.3)-(1.6,1.6)-(1.8,1.8));
536   replace_stroke(-1)(subpath (0,xpart (oldp intersectiontimes
537     get_stroke(0))) of oldp);

```

```

538 expand_pbox;
539 enddef;

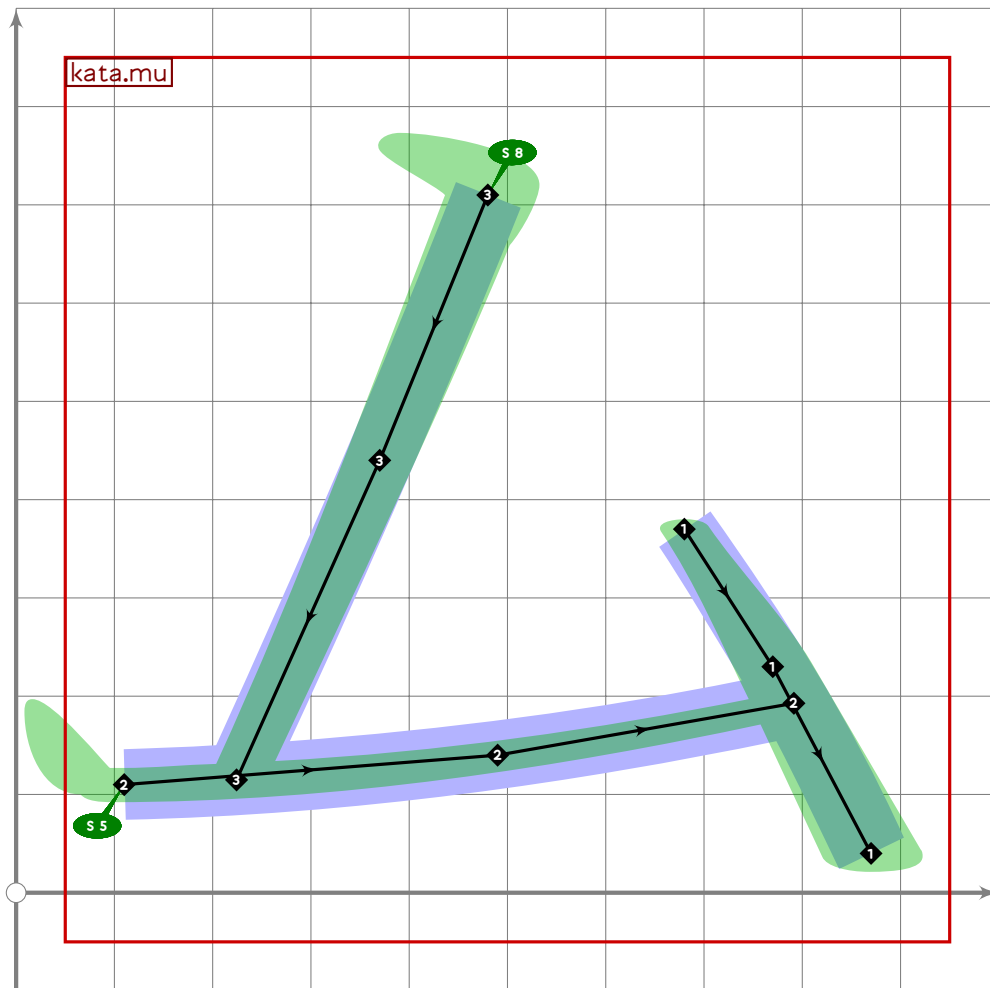
```



```

540
541 vardef tsu_curve.kata.mi =
542   push_pbox_toexpand("kata.mi");
543
544   push_stroke((280,720)..(590,640)..(750,570),
545     (1.4,1.4)-(1.7,1.7)-(1.9,1.9));
546
547   push_stroke((300,460)..(550,390)..(680,330),
548     (1.4,1.4)-(1.7,1.7)-(1.9,1.9));
549
550   push_stroke((210,220)..(570,130)..(750,40),
551     (1.4,1.4)-(1.7,1.7)-(1.9,1.9));
552   expand_pbox;
553 enddef;

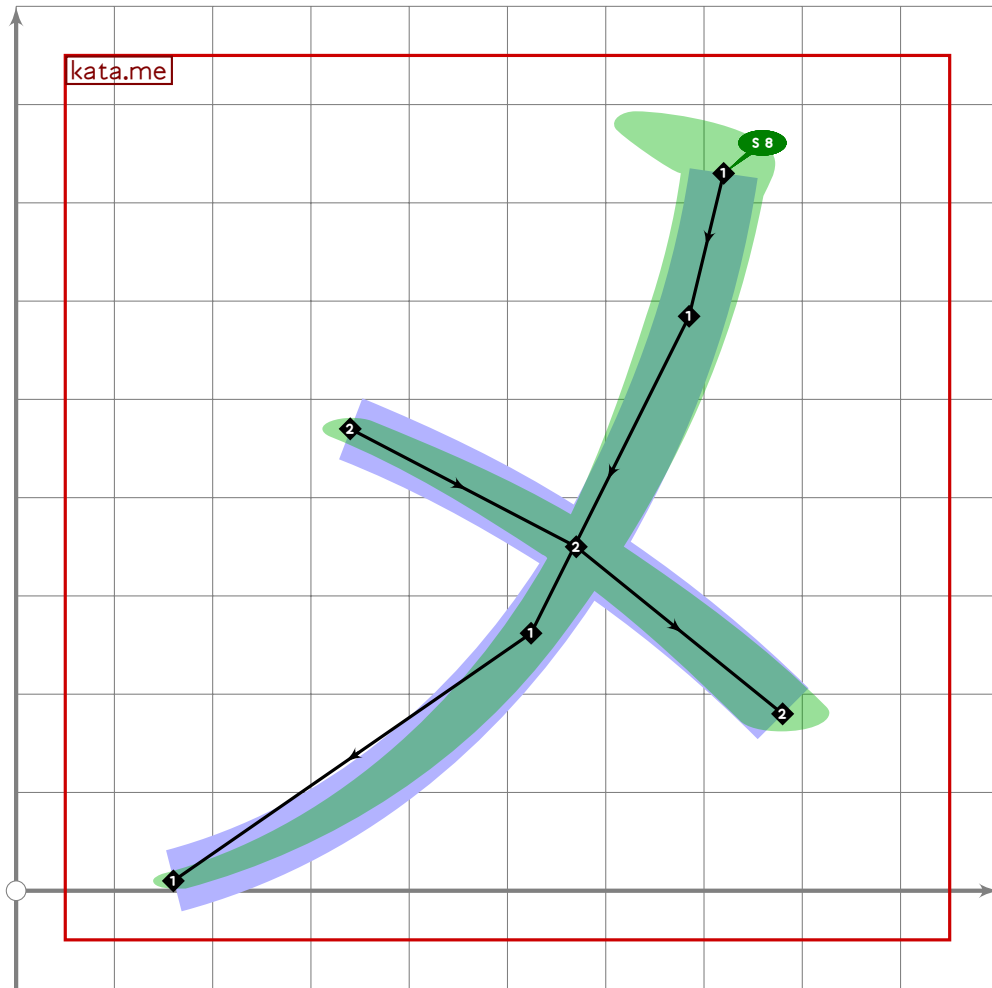
```



```

554
555 vardef tsu_curve.kata.mu =
556   push_pbox_toexpand("kata.mu");
557
558   push_stroke((680,370)..(770,230)..(870,40),
559     (1.2,1.2)-(1.6,1.6)-(1.9,1.9));
560
561   push_stroke((110,110)..(490,140)..(point 1.2 of get_strokep(0)),
562     (1.8,1.8)-(1.6,1.6)-(1.4,1.4));
563   set_boserif(0,0,5);
564
565   push_stroke((480,710)..(370,440)..(point 0.3 of get_strokep(0)),
566     (1.7,1.7)-(1.5,1.5)-(1.3,1.3));
567   set_boserif(0,0,8);
568   expand_pbox;
569 enddef;

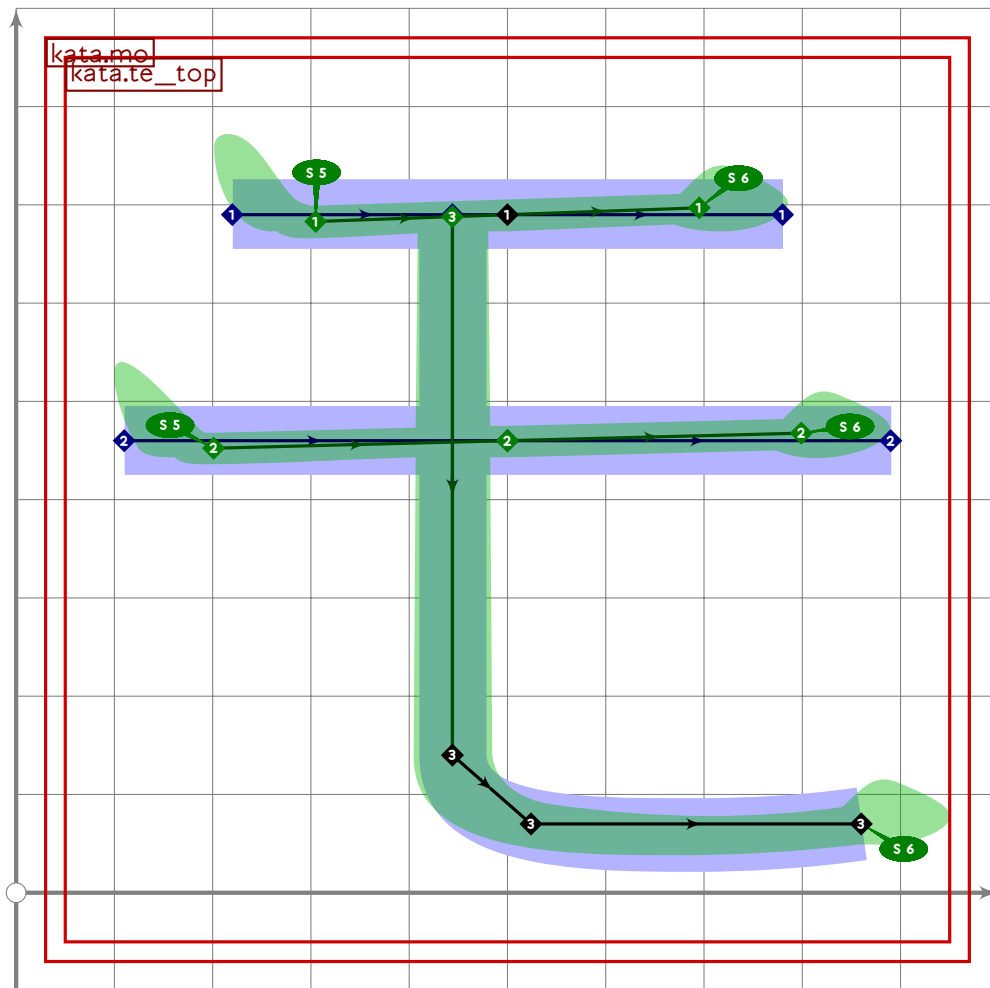
```



```

570
571 vardef tsu_curve.kata.me =
572   push_pbox_toexpand("kata.me");
573
574   tsu_curve.kata.no_stroke((720,730),(160,10));
575   set_boserif(0,0,8);
576
577   push_stroke((340,470)..(570,350)..(780,180),
578     (1.3,1.3)-(1.6,1.6)-(1.8,1.8));
579   expand_pbox;
580 enddef;

```

```

581
582 vardef tsu_curve.kata.mo =
583   push_pbox_toexpand("kata.mo");
584
585   tsu_curve.kata.te_top;
586
587   push_stroke((point 0.8 of get_strokep(-1))-
588     (xpart point 0.8 of get_strokep(-1),140){dir 274}..
589     (80*xpart point 0.8 of get_strokep(-1),70)..tension 2.1..(860,70),
590     (1.5,1.5)-(1.6,1.6)-(2,2)-(1.9,1.9));
591   set_boserif(0,3,6);
592   expand_pbox;
593 enddef;
594

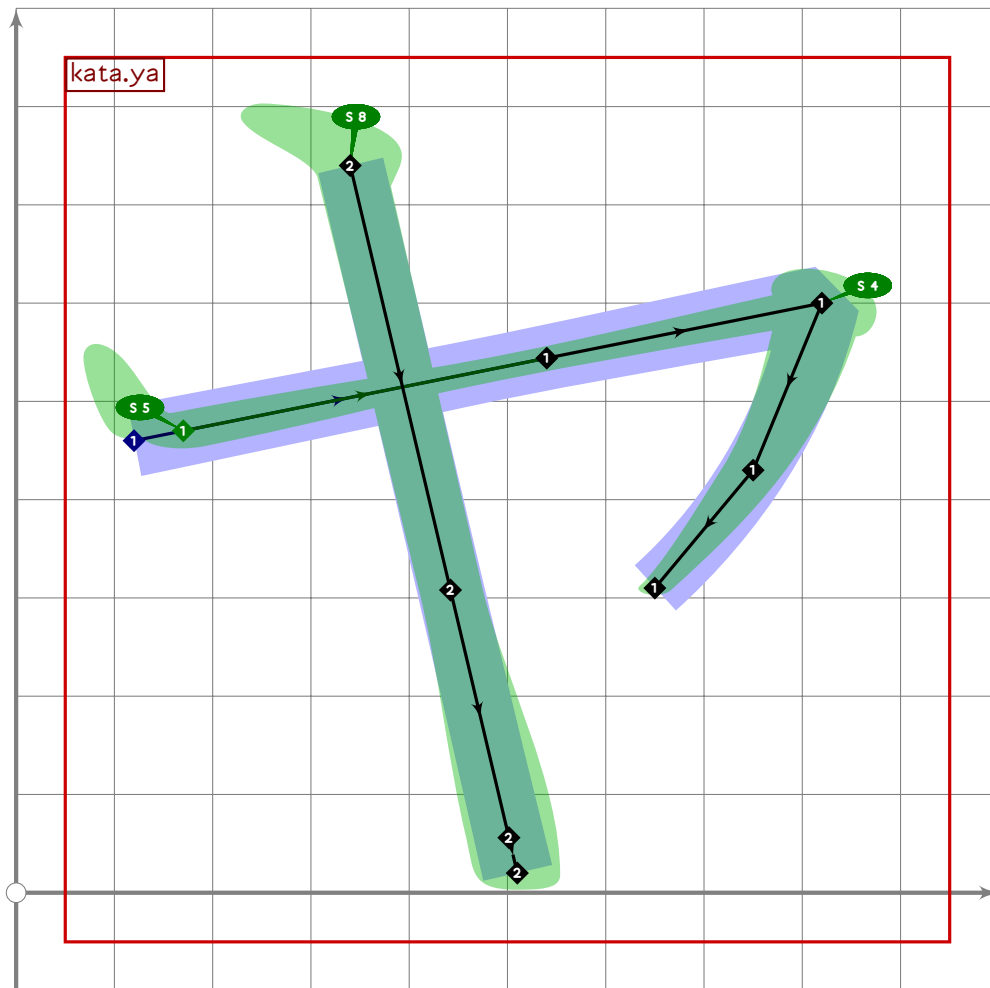
```

Katakana Yayuyo

```

595 %%%%%%%%% KATAKANA YAYUYO

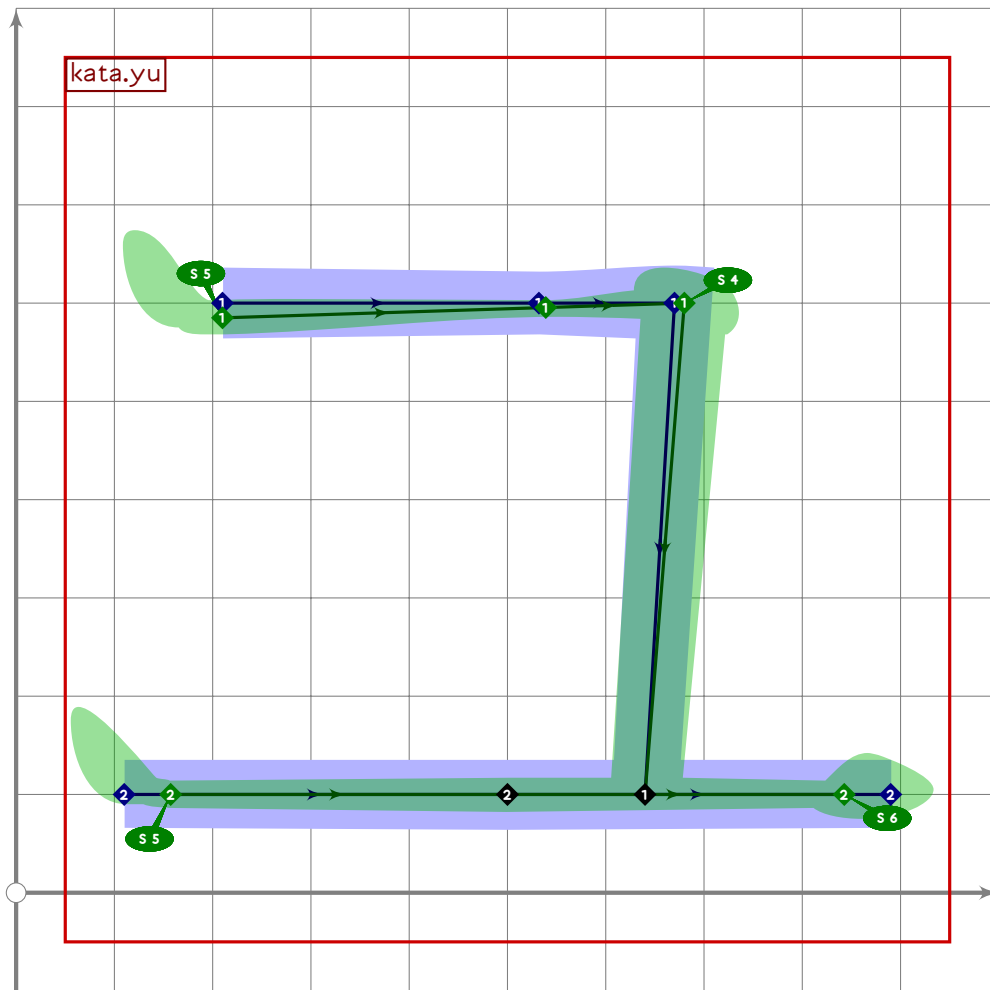
```



```

596
597 vardef tsu_curve.kata.ya =
598   push_pbox_toexpand("kata.ya");
599
600   push_stroke((120,460)-(820,600)..(750,430)..(650,310),
601     (0.77,2.9)-(1.3,1.3)-(1.7,1.7)-(1.4,1.4)-(1,1));
602   replace_stroke(0)(insert_nodes(olddp)(0.6));
603   set_botip(0,2,0);
604   set_boserif(0,0,5);
605   set_boserif(0,2,4);
606
607   push_stroke((340,740)-(510,20),
608     (1.5,1.5)-(1.4,1.4)-(1.7,1.7)-(1.7,1.7));
609   replace_stroke(0)(insert_nodes(olddp)(0.6,0.95));
610   set_boserif(0,0,8);
611   expand_pbox;
612 enddef;

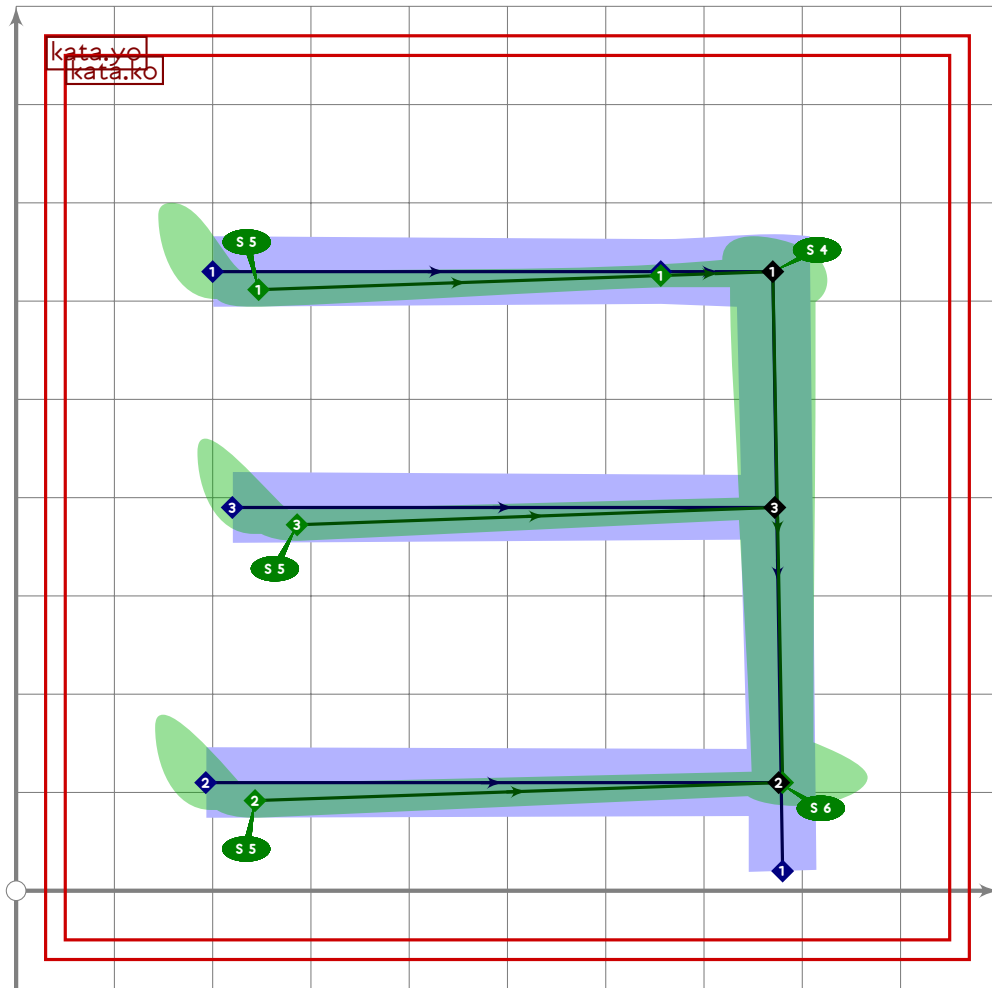
```



```

613
614 vardef tsu_curve.kata.yu =
615   push_pbox_toexpand("kata.yu");
616
617   push_stroke((210,600-15*mincho)-(670*10*mincho,600)-(640,100),
618     (1.8,1.8)-(1.2,1.2)-(1.7,1.7)-(1.5,1.5));
619   replace_stroke(0)(insert_nodes(oldp)(0.7));
620   set_botip(0,2,1);
621   set_boserif(0,0,5);
622   set_boserif(0,2,4);
623
624   push_stroke((110,100)-(500,100)-(890,100),
625     (0.7,2.2)-(1.8,1.8)-(0.7,2.2));
626   set_boserif(0,0,5);
627   set_boserif(0,2,6);
628   expand_pbox;
629 enddef;

```



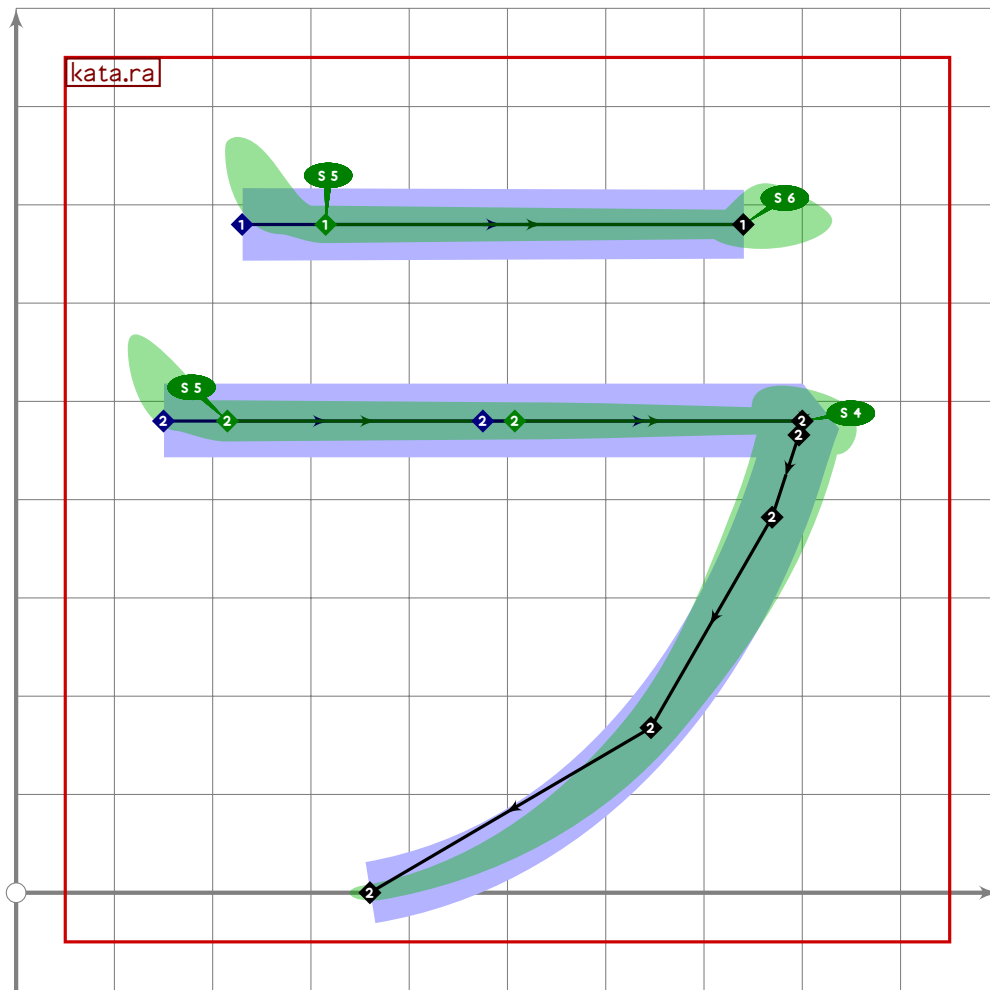
```

630
631 vardef tsu_curve.kata.yo =
632   push_pbox_toexpand("kata.yo");
633
634   tsu_curve.kata.ko;
635
636   push_stroke((220,390-20*mincho)-(772,390),
637     (0.77,2.7)-(1.3,1.3));
638   set_boserif(0,0,5);
639   expand_pbox;
640 enddef;
641

```

Katakana Rarirurero

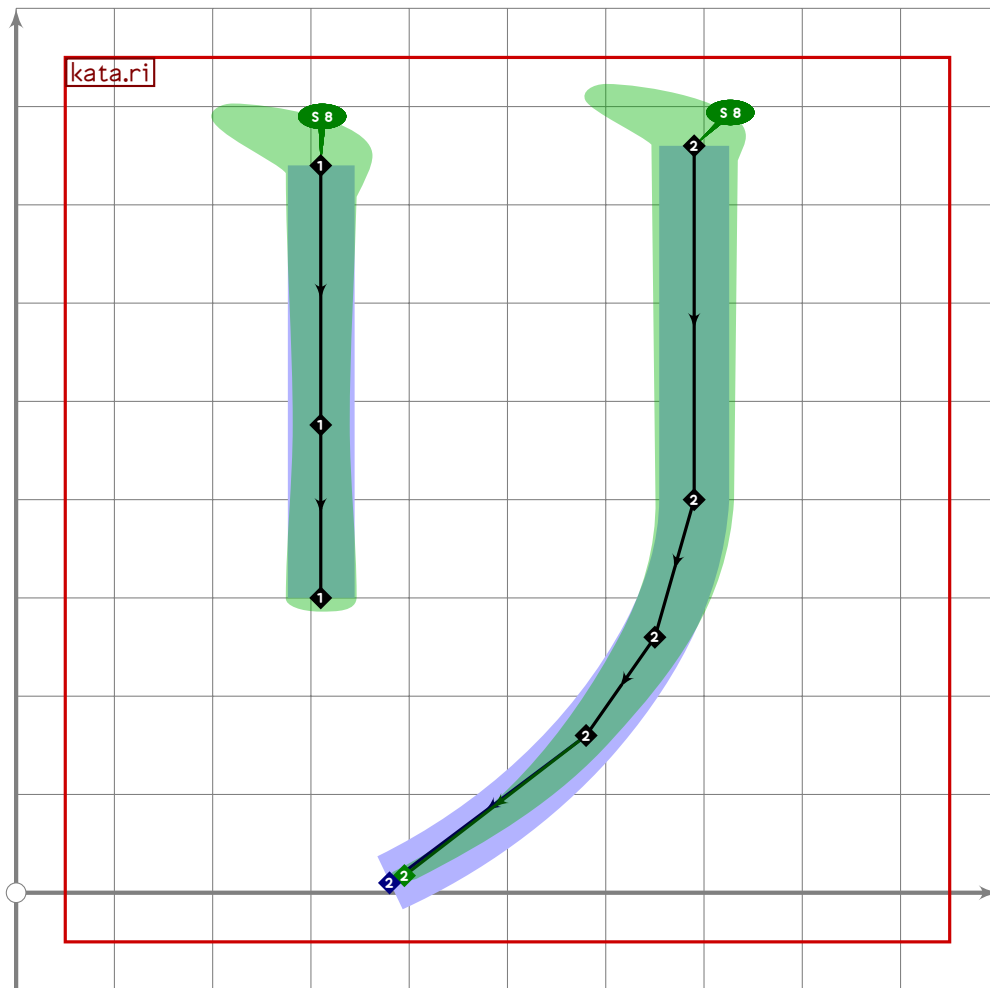
642 %%% KATAKANA RARIRURERO



```

643
644 vardef tsu_curve.kata.ra =
645   push_pbox_toexpand("kata.ra");
646
647   push_stroke((230,680)-(740,680),
648     (0.68,3.12)-(1.6,1.6));
649   set_boserif(0,0,5);
650   set_boserif(0,1,6);
651
652   tsu_curve.kata.fu_stroke((150,480),(800,480),(360,0));
653   expand_pbox;
654 enddef;

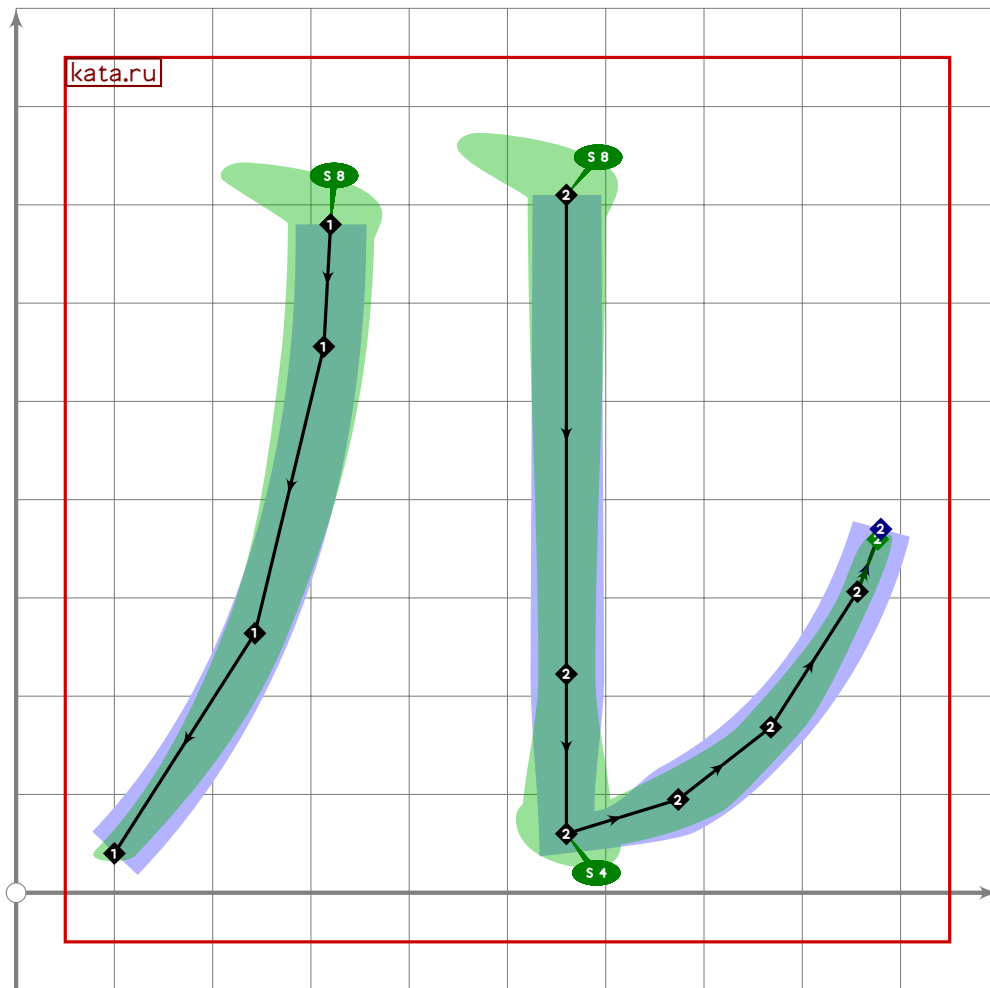
```



```

655
656 vardef tsu_curve.kata.ri =
657   push_pbox_toexpand("kata.ri");
658
659   push_stroke((310,740)-(310,300),
660     (1.5,1.5)-(1.3,1.3)-(1.5,1.5));
661   replace_strokep(0)(insert_nodes(oldp)(0.6));
662   set_boserif(0,0,8);
663
664   push_stroke((690,760)-(690,400){dir 267}..(650,260)..(580,160)..(380,10),
665     (1.7,1.7)-(1.6,1.6)-(1.5,1.5)-(1.3,1.3)-(0.8,1));
666   set_boserif(0,0,8);
667   expand_pbox;
668 enddef;

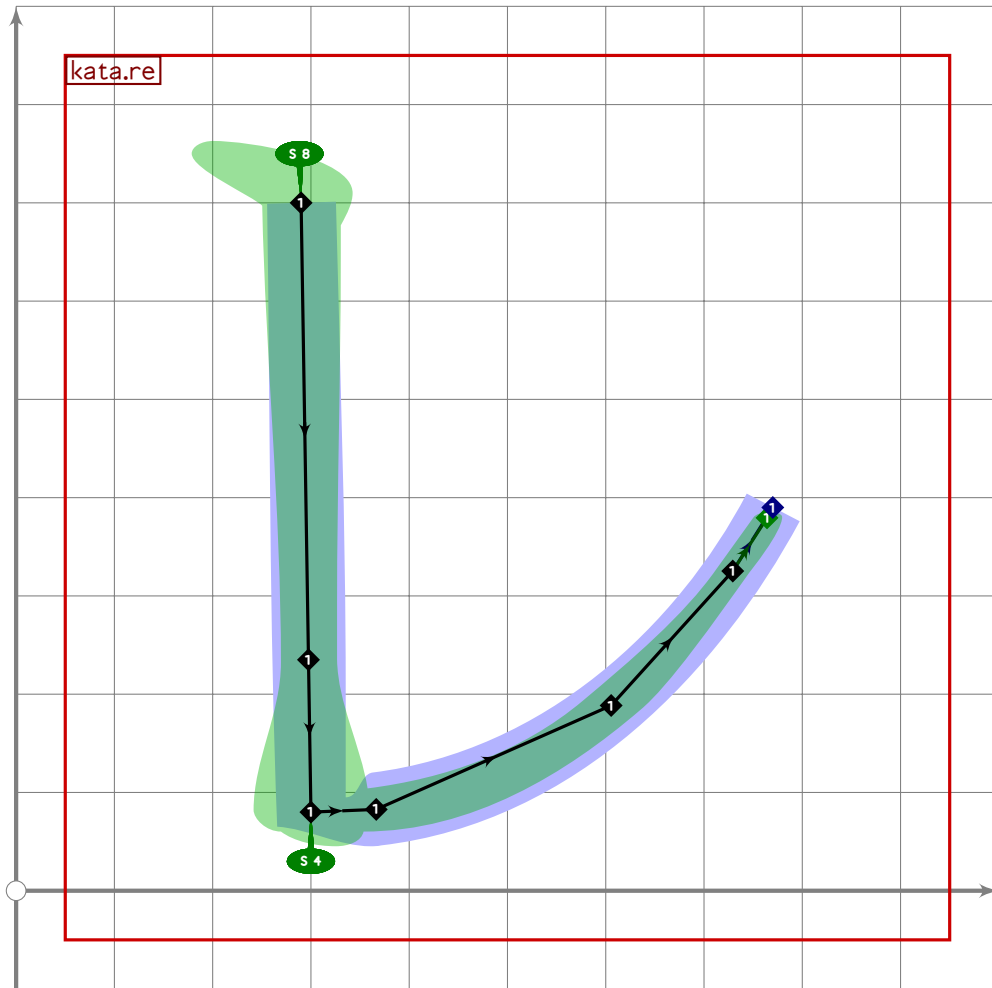
```



```

669
670 vardef tsu_curve.kata.ru =
671   push_pbox_toexpand("kata.ru");
672
673   tsu_curve.kata.no_stroke((320,680),(100,40));
674   set_boserif(0,0,8);
675
676   tsu_curve.kata.no_stroke((880,370),(560,60));
677   replace_strokep(0)(insert_nodes((560,710)-reverse oldp)(0.75,1.5));
678   replace_strokeq(0)((1.6,1.6)-(1.3,1.3)-(1.8,1.8)-
679     (2,2)-(1.4,1.4)-(1,1)-(0.8,1));
680   set_botip(0,1,0);
681   set_boserif(0,0,8);
682   set_boserif(0,2,4);
683   expand_pbox;
684 enddef;

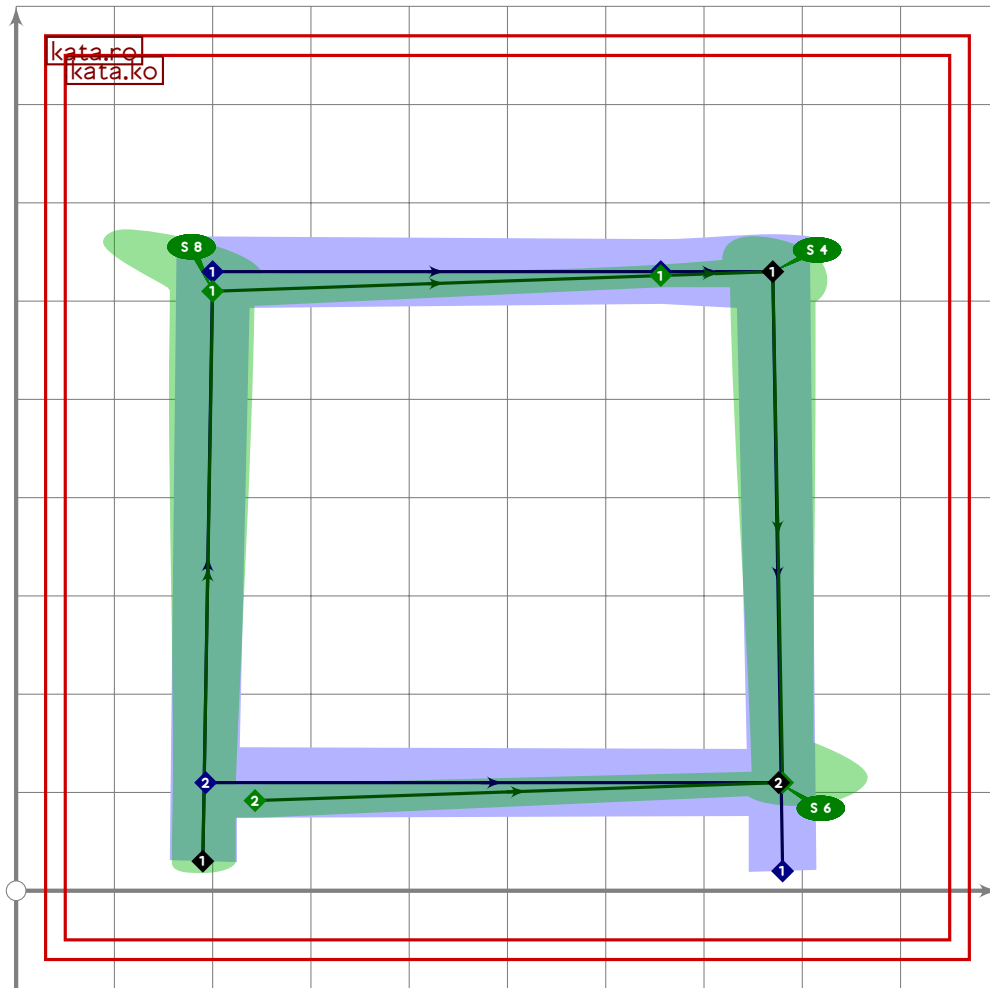
```



```

685
686 vardef tsu_curve.kata.re =
687   push_pbox_toexpand("kata.re");
688
689   tsu_curve.kata.no_stroke((770,390),(300,80));
690   replace_strokep(0)(insert_nodes((290,700)-reverse oldp)(0.75,1.2));
691   replace_strokeq(0)((1.6,1.6)-(1.3,1.3)-(2.1,2.1)-
692     (2,2)-(1.4,1.4)-(1,1)-(0.8,1));
693   set_botip(0,1,0);
694   set_boserif(0,0,8);
695   set_boserif(0,2,4);
696   expand_pbox;
697 enddef;

```

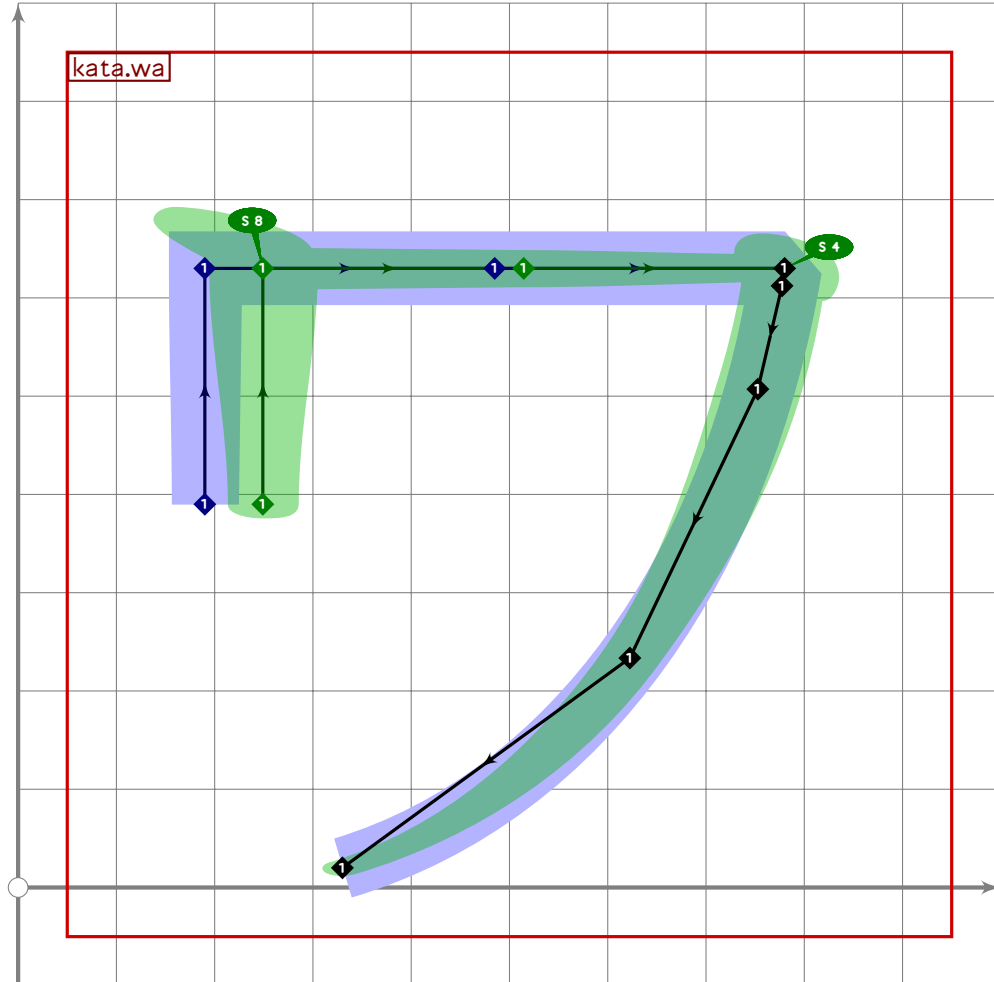
```

698
699 vardef tsu_curve.kata.ro =
700   push_pbox_toexpand("kata.ro");
701
702   tsu_curve.kata.ko;
703
704   replace_stroke(-1)((190,30)-oldp);
705   replace_strokeq(-1)((1.4,1.4)-(1.7,1.7)-(subpath (1,infinity) of oldq));
706   set_botip(-1,1,1);
707   set_botip(-1,2,whatever);
708   set_botip(-1,3,1);
709   set_boserif(-1,0,whatever);
710   set_boserif(-1,1,8);
711   set_boserif(-1,2,whatever);
712   set_boserif(-1,3,4);
713   set_boserif(0,0,whatever);
714   expand_pbox;
715   enddef;
716

```

Katakana Wawiwewo/N/Iteration

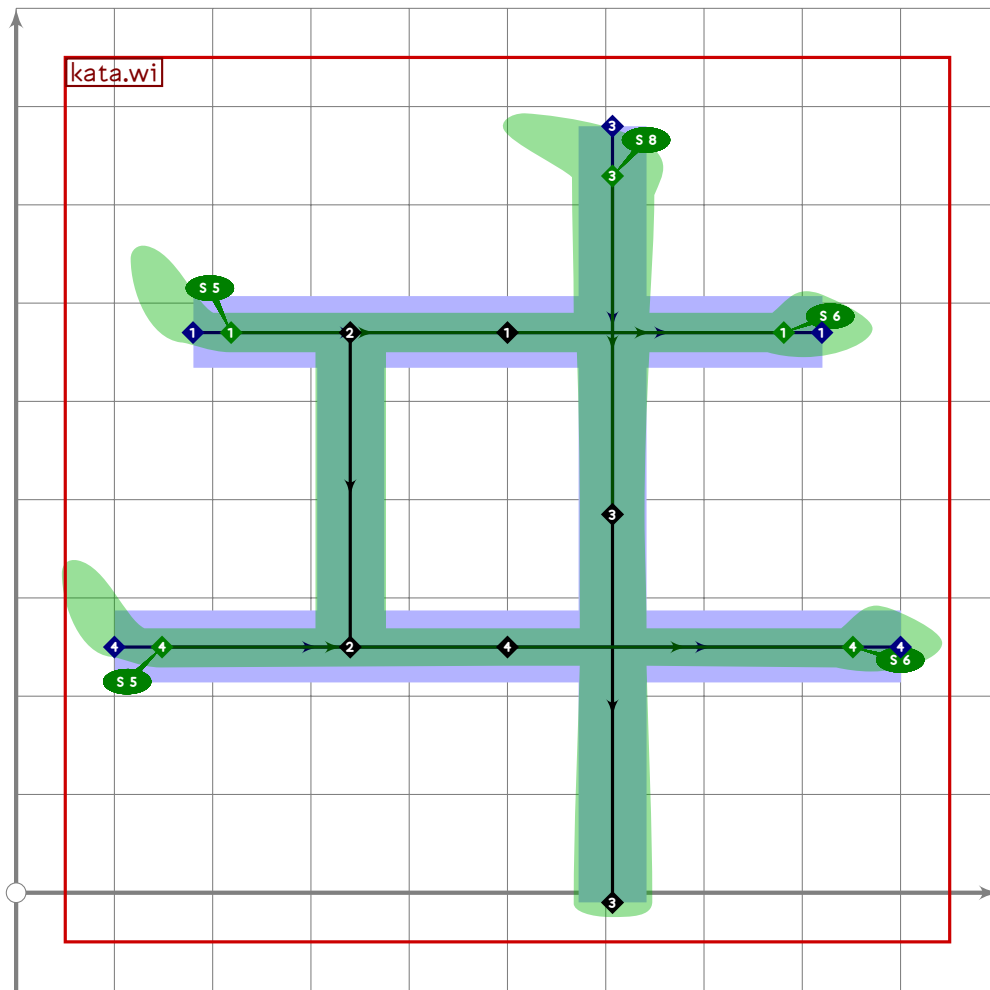
717 %%%%%%%%% KATAKANA WAWIWEWO/N/ITERATION



```

718
719 vardef tsu_curve.kata.wa =
720   push_pbox_toexpand("kata.wa");
721
722   tsu_curve.kata.fu_stroke((190,630),(780,630),(330,20));
723   replace_strokep(0)((xpart point 0 of oldp,390)-oldp);
724   replace_strokeq(0)((1,5,1,5)-oldq);
725   set_botip(0,1,1);
726   set_botip(0,3,0);
727   set_boserif(0,0,whatever);
728   set_boserif(0,1,8);
729   set_boserif(0,2,whatever);
730   set_boserif(0,3,4);
731   expand_pbox;
732 enddef;

```



```

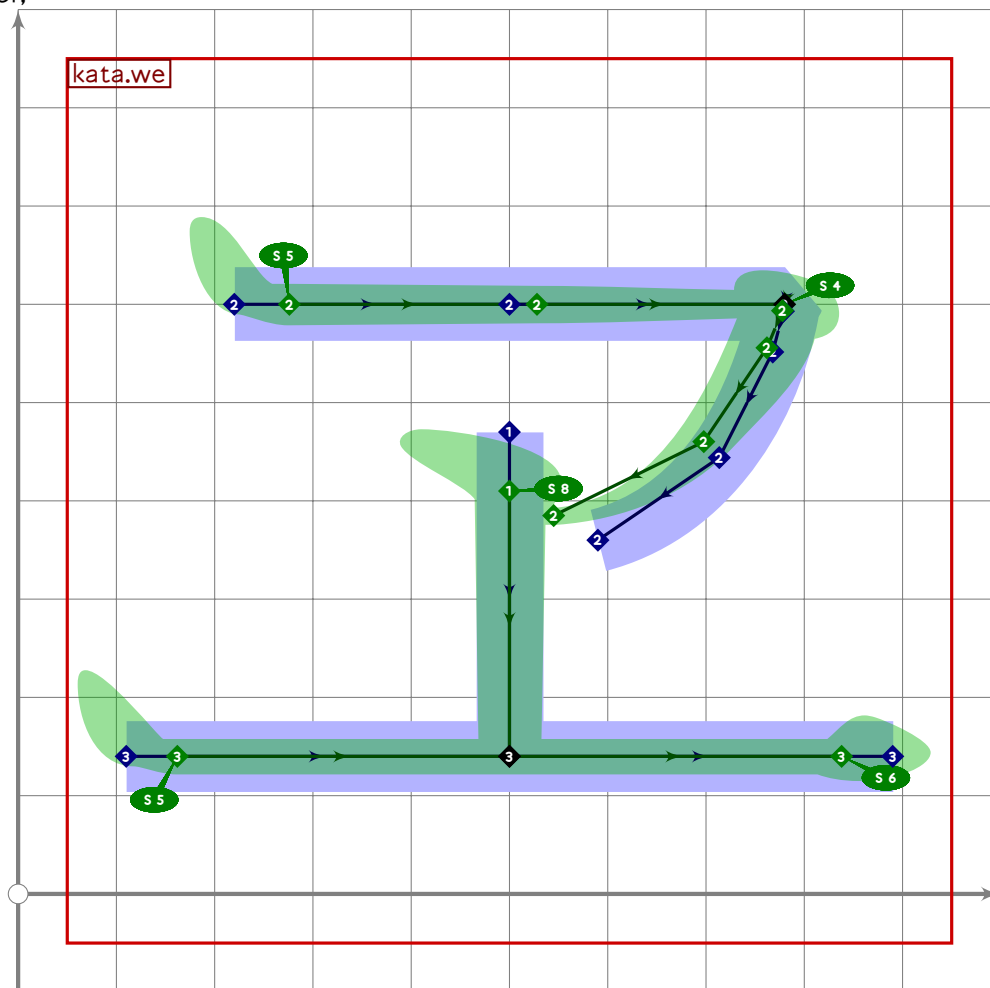
733
734 vardef tsu_curve.kata.wi =
735   push_pbox_toexpand("kata.wi");
736
737   x1=100;
738   x2=180;
739   x3=0.25[x2,x5];
740   x4=0.667[x2,x5];
741   (x5*x2)/2=(x1*x6)/2=500;
742   y1=-10;
743   y2=250;
744   y3=570;
745   y4=780;
746   push_stroke((x2,y3)-(x5,y3),
747     (0.7,3.3)-(1.8,1.8)-(0.7,3.3));
748   replace_strokep(0)(insert_nodes(oldp)(0.5));
749   set_boserif(0,0,5);
750   set_boserif(0,2,6);
751
752   push_stroke((x3,y3)-(x3,y2),
753     (1.5,1.5)-(1.5,1.5));

```

```

754
755 push_stroke((x4,y4)-(x4,0.5[y4,y1])-(x4,y1),
756   (0.75,2.65)-(1.4,1.4)-(1.6,1.6));
757 set_boserif(0,0,8);
758
759 push_stroke((x1,y2)-(x6,y2),
760   (0.7,3.3)-(1.8,1.8)-(0.7,3.3));
761 replace_strokep(0)(insert_nodes(oldep)(0.5));
762 set_boserif(0,0,5);
763 set_boserif(0,2,6);
764 expand_pbox;
765 enddef;

```



```

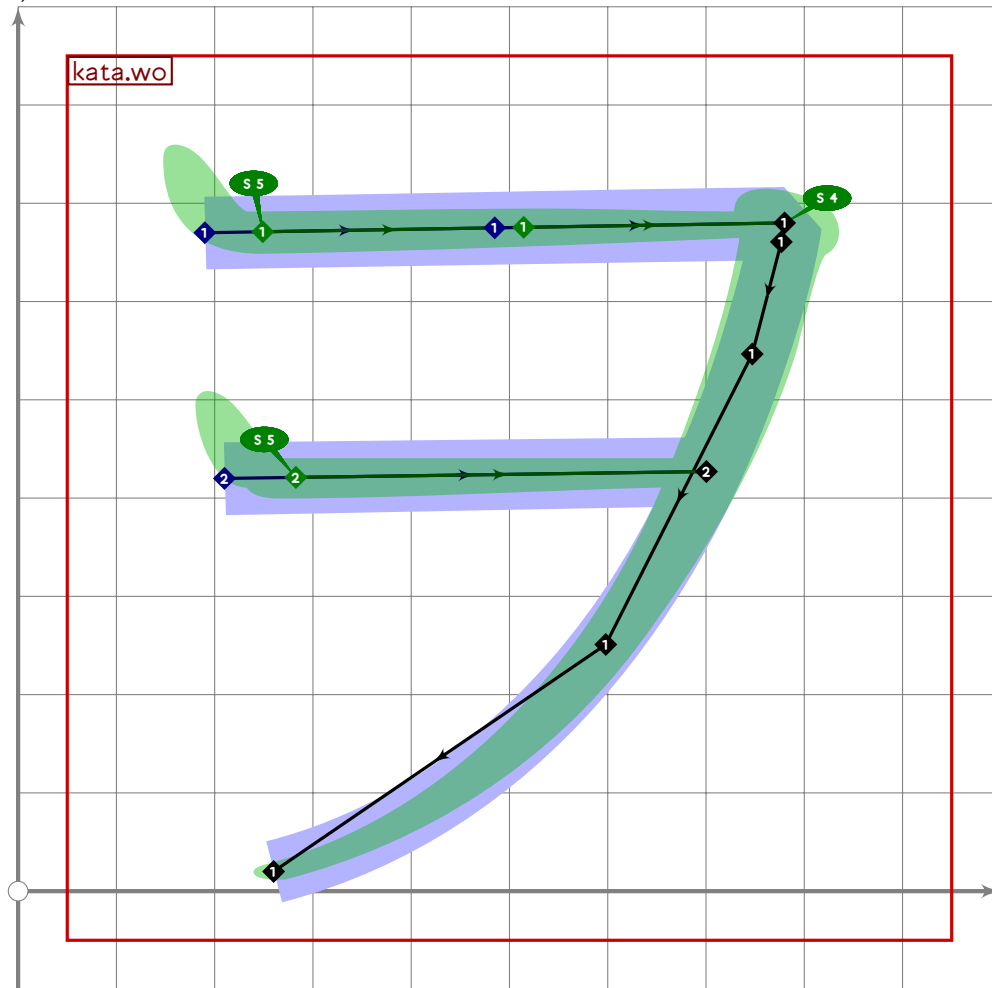
766
767 vardef tsu_curve.kata.we =
768   push_pbox_toexpand("kata.we");
769
770   push_stroke((500,470-60*mincho)-(500,140),
771     (1.5,1.5)-(1.4,1.4));
772   set_boserif(0,0,8);
773
774   tsu_curve.kata.fu_stroke((220,600),(780,600),

```

```

775 (0.5*mincho)[(590,360),point 0 of get_strokep(0)];
776
777 push_stroke((110,140)-(500,140)-(890,140),
778 (0.7,2.9)-(1.7,1.7)-(0.7,2.9));
779 set_boserif(0,0,5);
780 set_boserif(0,2,6);
781 expand_pbox;
782 enddef;

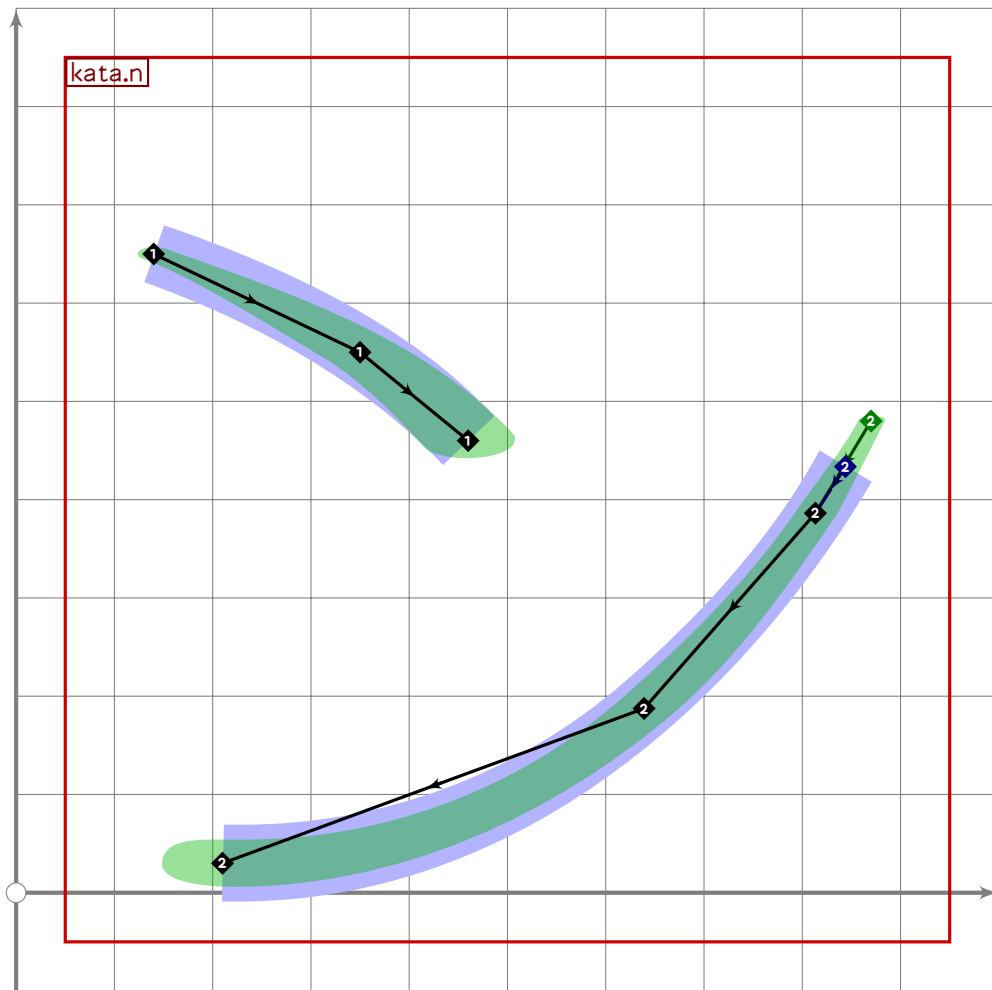
```



```

783
784 vardef tsu_curve.kata.wo =
785   push_pbox_toexpand("kata.wo");
786
787   tsu_curve.kata.fu_stroke((190,670),(780,680),(260,20));
788
789   z1=get_strokep(0) intersectionpoint ((0,420)-(1000,430));
790   push_stroke((210,420)-z1,
791 (0.7,3.3)-(1.6,1.6));
792   set_boserif(0,0,5);
793   expand_pbox;
794 enddef;

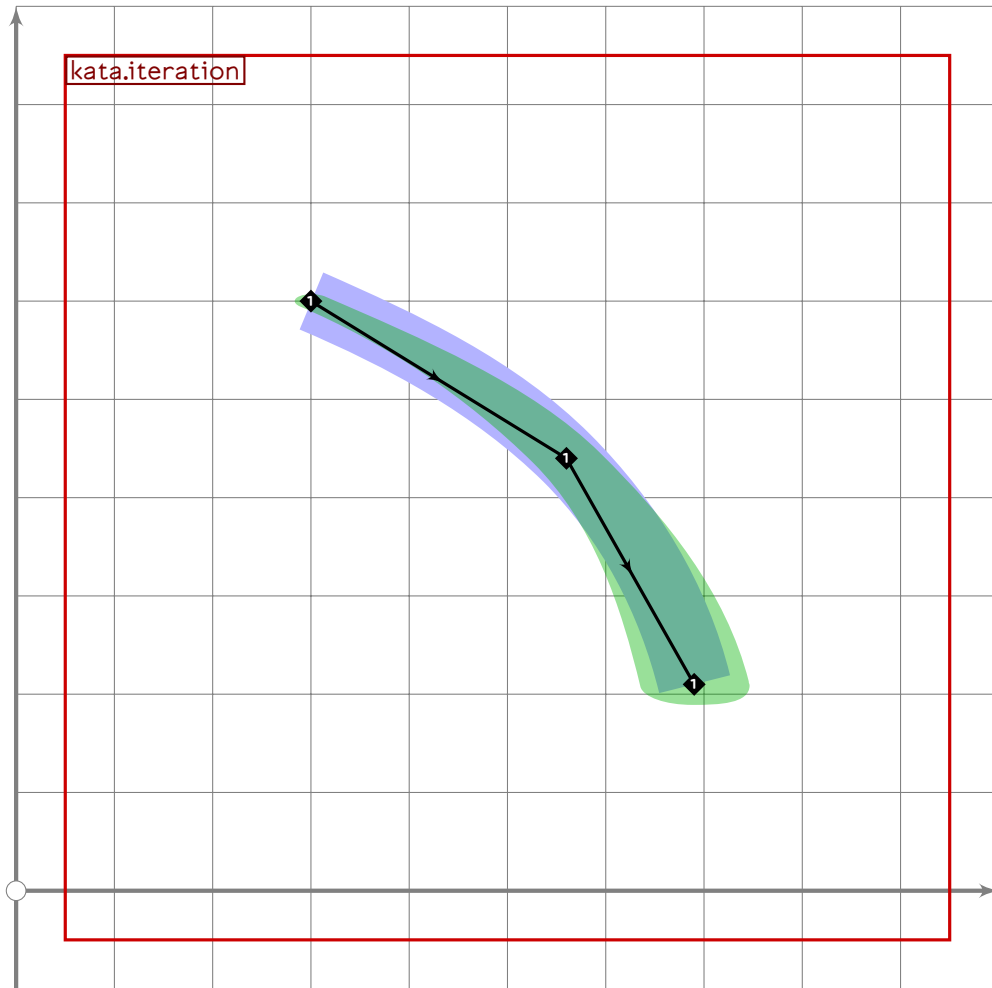
```



```

795
796 vardef tsu_curve.kata.n =
797   push_pbox_toexpand("kata.n");
798
799   push_stroke((140,650)..tension 1.2..(350,550)..(460,460),
800     (1,1)..(1,6,1,6)..(1,8,1,8));
801
802   tsu_curve.kata.no_stroke((870,480),(210,30));
803   replace_strokeq(0)((0,9,0,9)-(1,1,1,1)-(1,4,1,4)-(2,2,2,2));
804   set_boserif(0,4,5);
805   expand_pbox;
806 enddef;

```



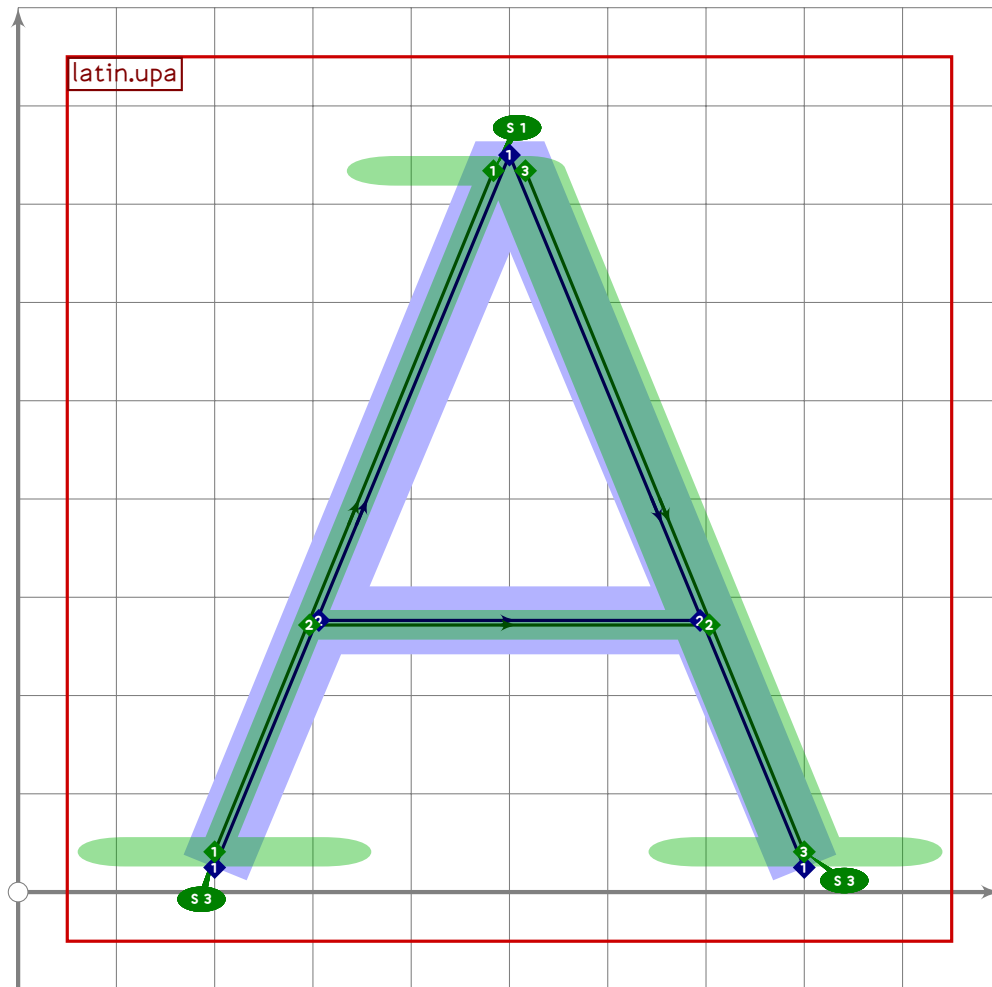
```

807
808 vardef tsu_curve.kata.iteration =
809   push_pbox_toexpand("kata.iteration");
810
811   push_stroke((300,600){curl 0.2}..(560,440)..(690,210),
812     (1,1)-(1.5,1.5)-(2,2));
813   expand_pbox;
814 enddef;

```

latin.mp

```
1 %  
2 % Latin and related letters for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31
```



```
32  
33 vardef tsu_curve.latin.upa =  
34   push_pbox_toexpand("latin.upa");  
35   z1=(200,latin_wide_low_v);  
36   z2=(500,latin_wide_high_v);  
37   z3=(800,latin_wide_low_v);  
38  
39   if do_alteration:  
40     z4=whatever[z1,(z2*alternate_adjust*left/2)]*(2,0);  
41     z5=whatever[(z2*alternate_adjust*right/2),z3]-(2,0);  
42     y4=y5=vmetric(0.333);  
43
```



```

44   push_stroke(z1-(z2*alternate__adjust*left/2),(1.6,1.6)-(1.6,1.6));
45   set_boalternate(0);
46   set_botip(0,1,0);
47   set_boserif(0,0,3);
48   set_boserif(0,1,1);
49
50   push_stroke(z4-z5,(1.6,1.6)-(1.6,1.6));
51   set_boalternate(0);
52
53   push_stroke((z2*alternate__adjust*right/2)-z3,(1.6,1.6)-(1.6,1.6));
54   set_boserif(0,1,3);
55   else:
56     z4=whatever[z1,z2]*(2,0);
57     z5=whatever[z2,z3]-(2,0);
58     y4=y5=vmetric(0.333);
59
60     push_stroke(z1-z2-z3,(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
61     set_botip(0,1,0);
62     set_boserif(0,0,3);
63     set_boserif(0,1,1);
64     set_boserif(0,2,3);
65
66     push_stroke(z4-z5,(1.6,1.6)-(1.6,1.6));
67   fi;
68   expand_pbox;
69 enddef;

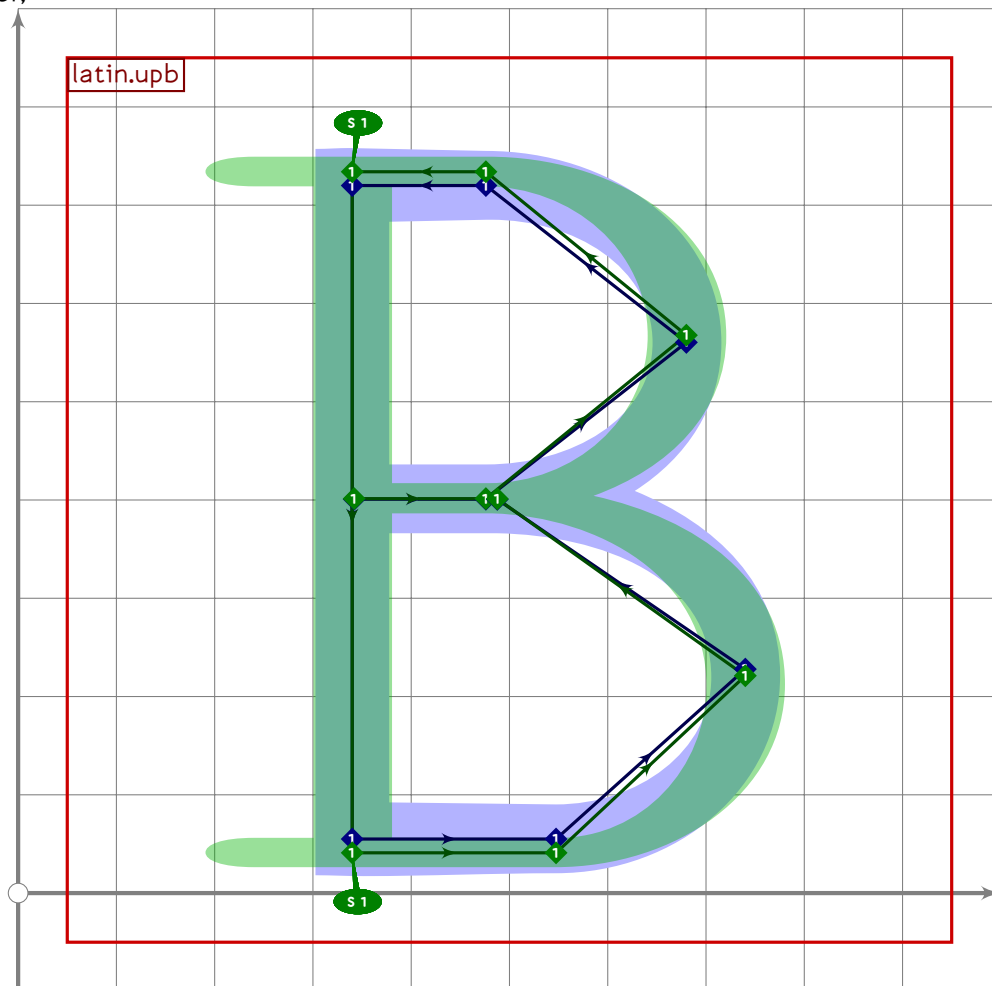
```



```

89 y8=y9=vmetric(0.250);
90
91 push_stroke(z1-z10-z7,(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
92 set_botip(0,1,1);
93 set_boserif(0,1,1);
94 set_boserif(0,2,3);
95 set_boalternate(0);
96
97 push_stroke(z8-z9,(1.6,1.6)-(1.6,1.6));
98 set_boalternate(0);
99
100 push_stroke(z2-z3-z4,(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
101 set_botip(0,1,1);
102 set_boserif(0,1,1);
103
104 push_stroke(z5-z6,(1.6,1.6)-(1.6,1.6));
105 expand_pbox;
106 enddef;

```



```

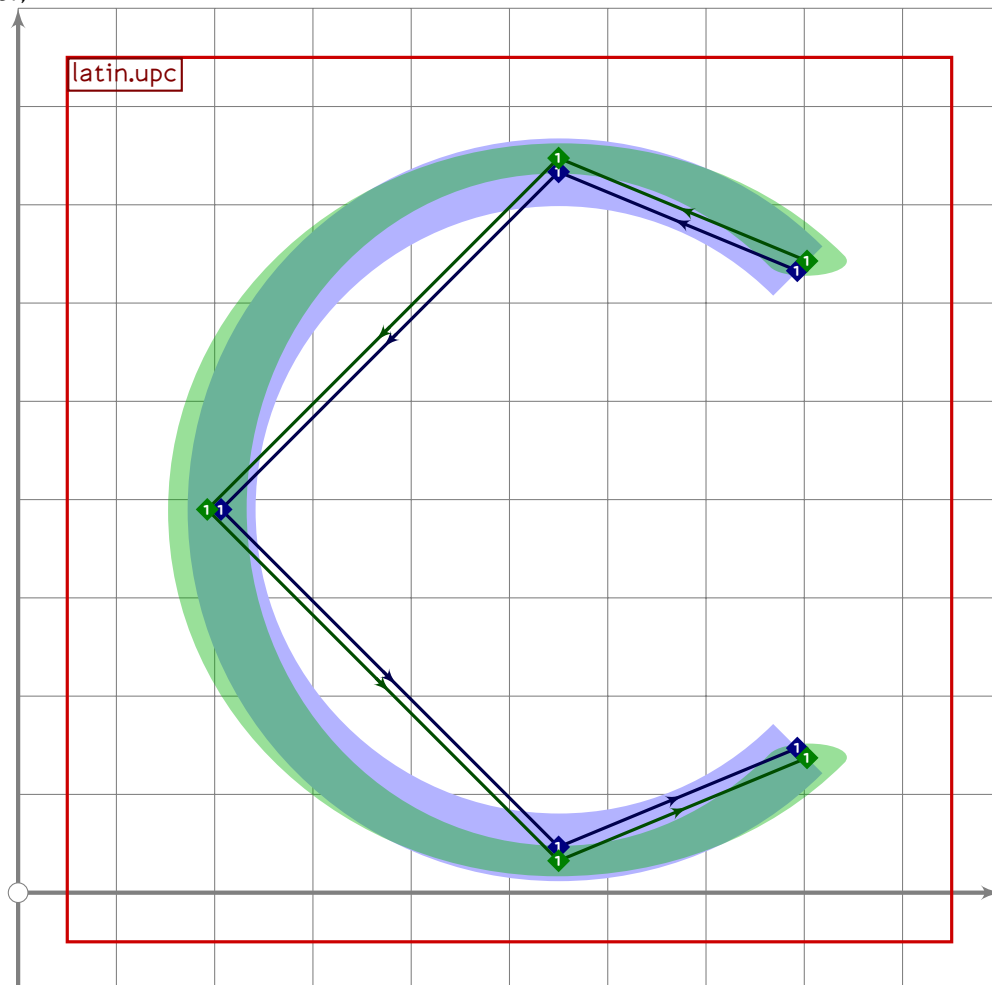
107
108 vardef tsu_curve.latin.upb =
109   push_pbox_toexpand("latin.upb");

```

```

110 tsu_curve.latin.upp_base(340);
111
112 x6=x5;
113 x7=0.61[x5,x3];
114 x8=x5+400;
115
116 y6=y7=latin_wide_low_h;
117 y8=0.5[y6,y1];
118
119 z9=z2;
120
121 replace_strokep(0)(oldp-z6-z7{right}..z8..{left}z9);
122 replace_strokep(0)(subpath (0,7.97) of oldp);
123 replace_strokeq(0)(oldq-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
124
125 set_botip(0,4,1);
126 set_botip(0,5,1);
127 set_boserif(0,4,1);
128 set_boserif(0,5,1);
129 expand_pbox;
130 enddef;

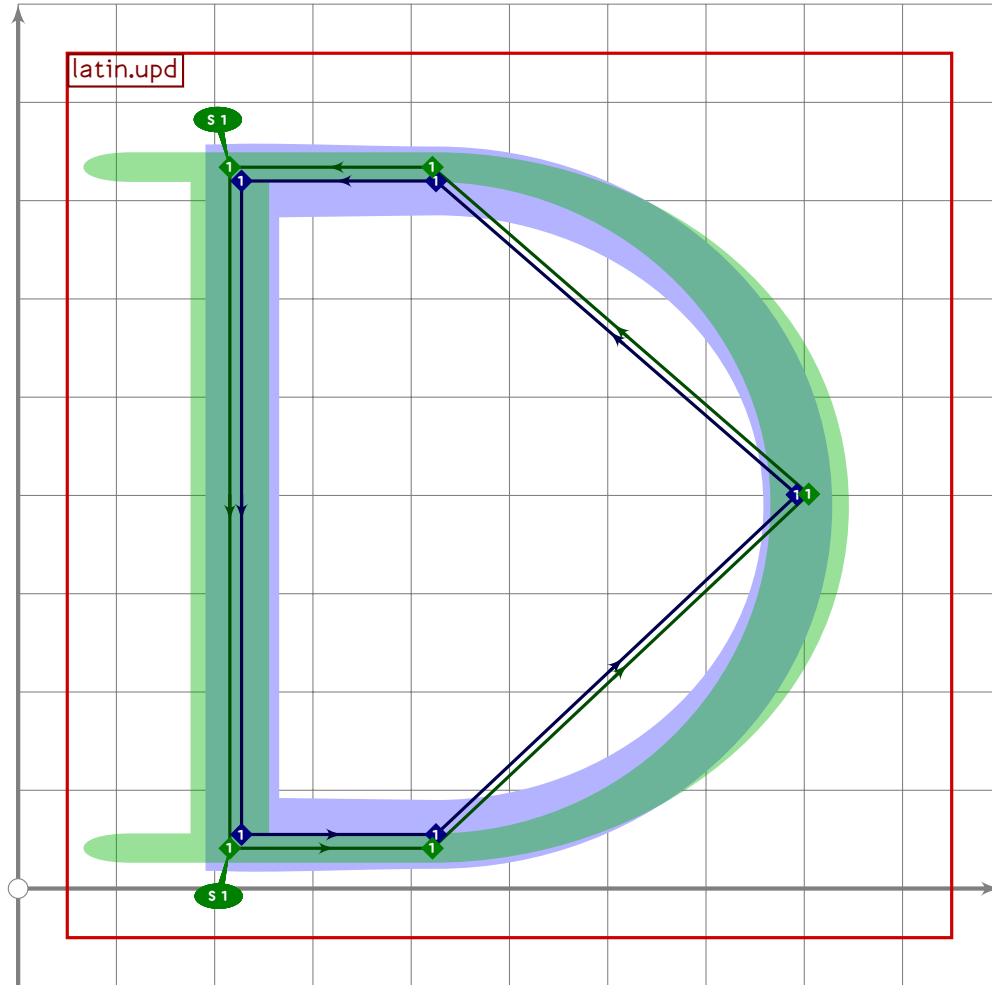
```



```

131
132 vardef tsu_curve.latin.upc =
133   push_pbox_toexpand("latin.upc");
134   push_stroke(
135     (subpath (0.5,3.5) of ((1,0)..(0,1)..(-1,0)..(0,-1)..cycle))
136     scaled ((latin_wide_high_r-latin_wide_low_r)/2)
137     shifted (centre_pt*(50,0)),
138     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
139   expand_pbox;
140 enddef;

```



```

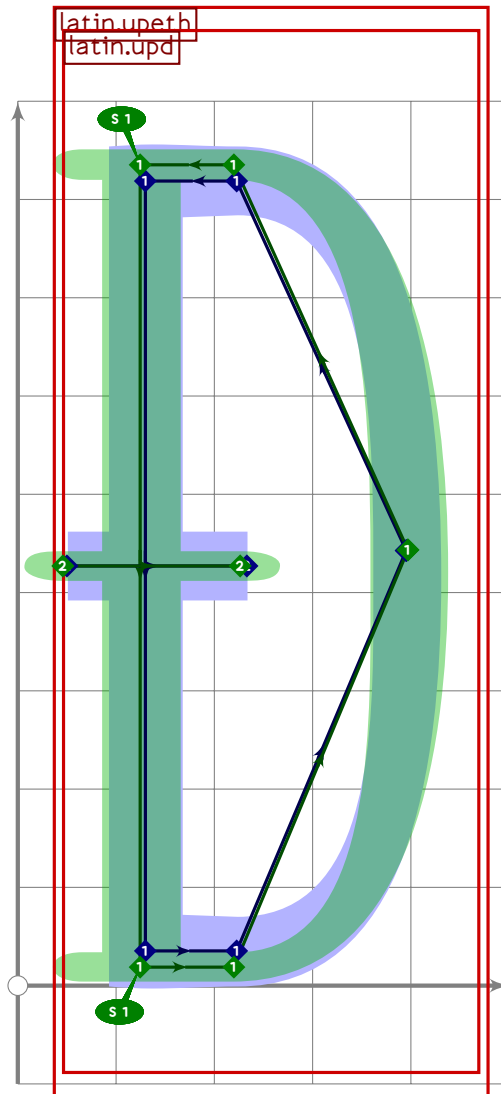
141
142 vardef tsu_curve.latin.upd =
143   push_pbox_toexpand("latin.upd");
144   y1=y5=latin_wide_high_h;
145   y2=y3=latin_wide_low_h;
146   y4=0.52[y2,y1];
147
148   (x1*x4)/2=510;
149   (x4-x1)=0.85*(y1-y2);
150   x1=x2;
151   x3=x5=0.35[x1,x4];

```

```

152
153 push_stroke(z4..{left}z5-z1-z2-z3{right}..cycle,
154   (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-cycle);
155 set_botip(0,2,1);
156 set_botip(0,3,1);
157 set_boserif(0,2,1);
158 set_boserif(0,3,1);
159 expand_pbox;
160 endif;

```



```

161
162 vardef tsu_curve.latin.upeth =
163   push_pbox_toexpand("latin.upeth");
164   tsu_curve.latin.upd;
165   push_stroke((0.5[z1,z2]+(-170,0))-(0.5[z1,z2]+(220,0)),
166     (1.6,1.6)-(1.6,1.6));
167   expand_pbox;
168 endif;

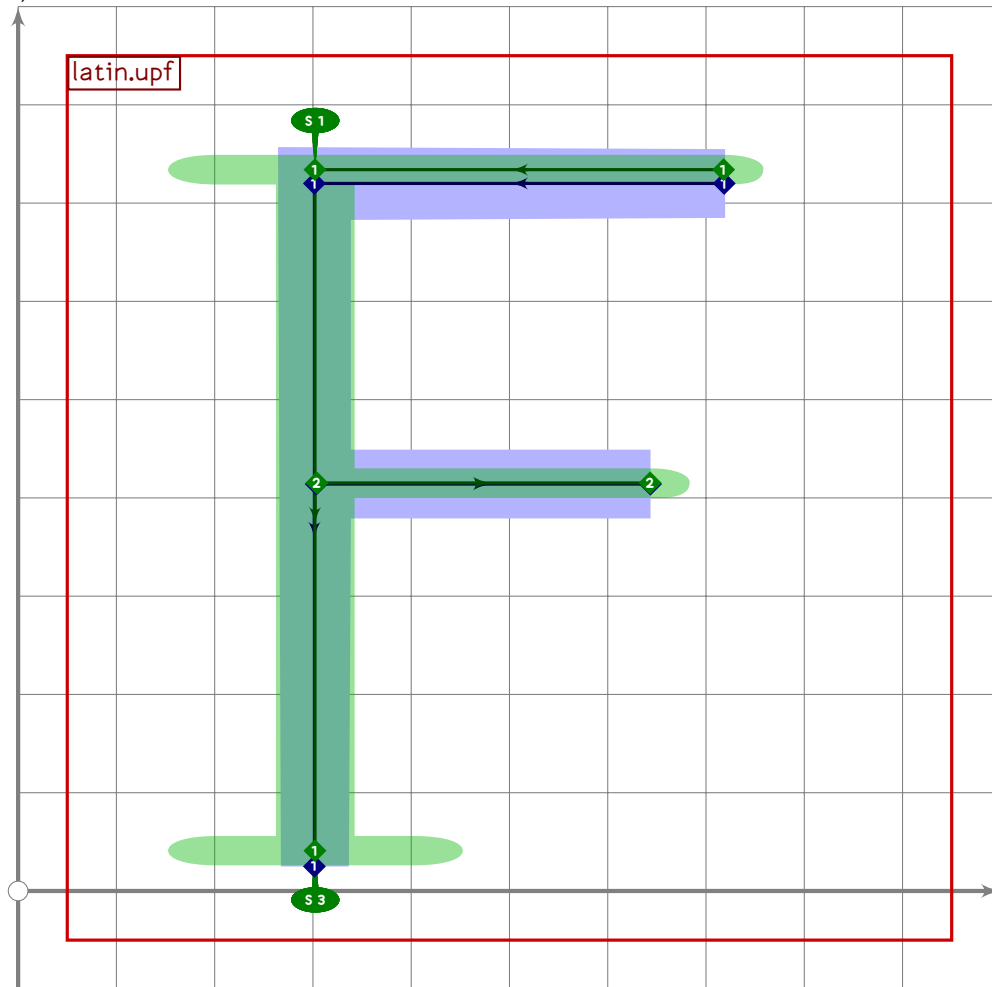
```



```

190 expand_pbox;
191 enddef;

```



```

192
193 vardef tsu_curve.latin.upf =
194   push_pbox_toexpand("latin.upf");
195   y1=y2=latin_wide_high_h;
196   y3=latin_wide_low_v;
197   y4=y5=vmetric(0.54);
198
199   (x1+x2)/2=510;
200   x3=x2;
201   x4=x2*2;
202   x5=0.82[x2,x1];
203   (x1-x2)=(y2-y3)*0.6;
204
205   push_stroke(z1-z2-z3,(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
206   set_botip(0,1,1);
207   set_boserif(0,1,1);
208   set_boserif(0,2,3);
209
210   push_stroke(z4-z5,(1.6,1.6)-(1.6,1.6));

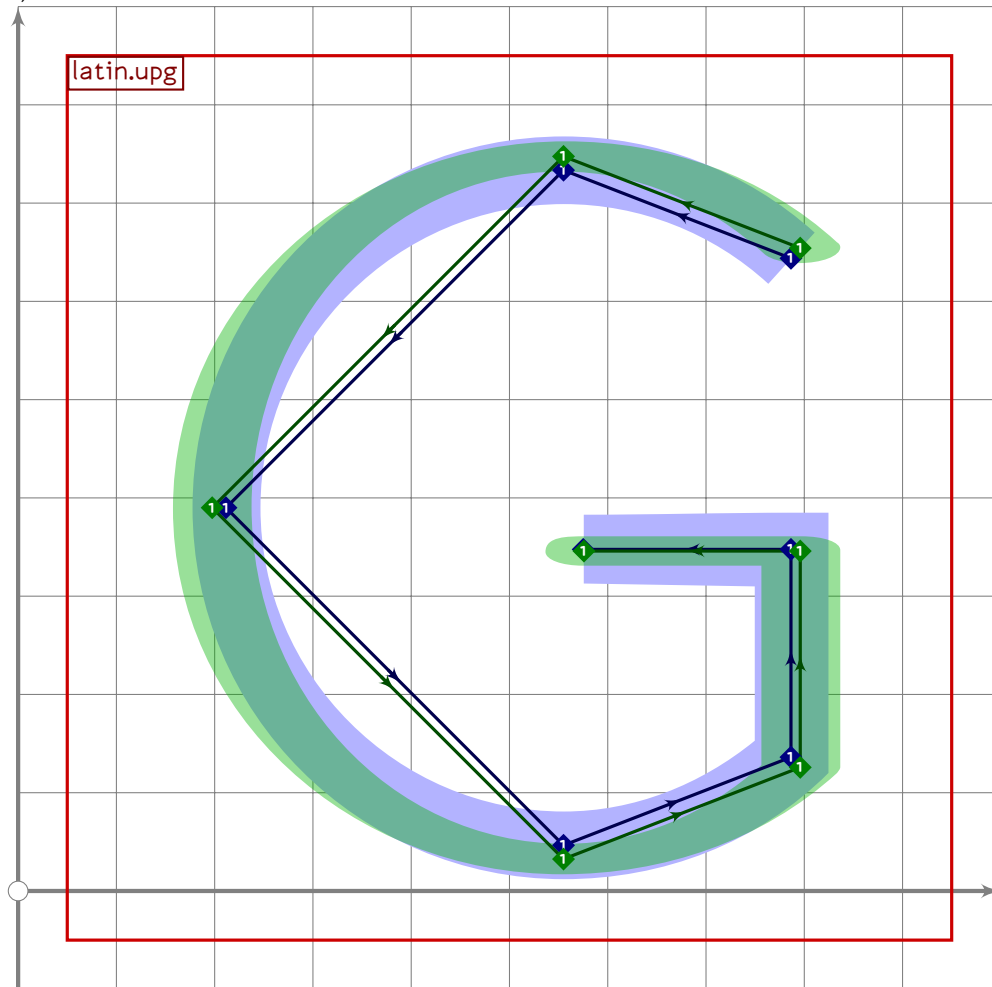
```



```

211 expand_pbox;
212 enddef;

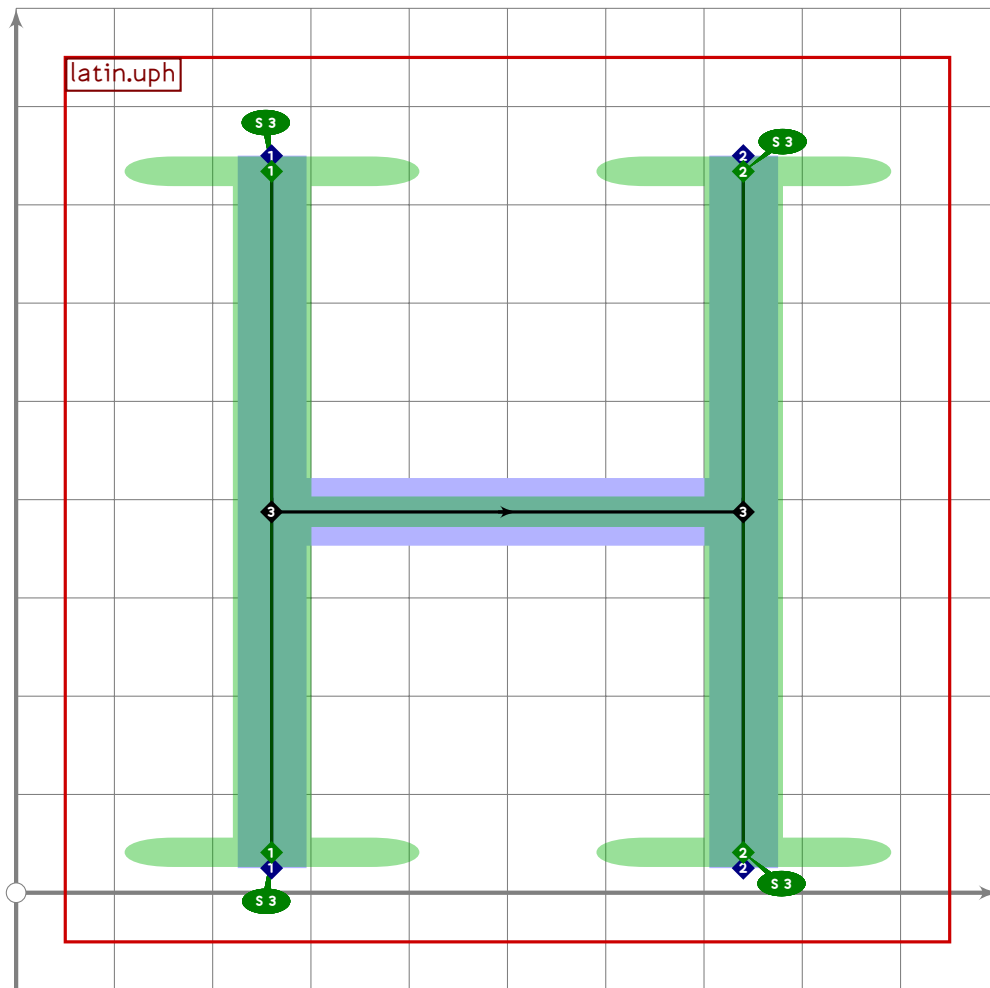
```



```

213
214 vardef tsu_curve.latin.upg =
215   push_pbox_toexpand("latin.upg");
216   push_stroke(
217     (subpath (0.53,3.47) of ((1,0)..(0,1)..(-1,0)..(0,1)..cycle))
218     scaled ((latin_wide_high_r-latin_wide_low_r)/2)
219     shifted (centre_pt*(55,0),
220     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-
221     (1.6,1.6)-(1.6,1.6));
222
223   x1=xpart point 4 of get_stroke(0);
224   y1=y2=vmetric(0.44);
225   x1-x2=y1-(ypart point 4 of get_stroke(0))*1.0;
226
227   replace_stroke(0)(oldp-z1-z2);
228   set_botip(0,4,1);
229   set_botip(0,5,1);
230   expand_pbox;
231 enddef;

```



```

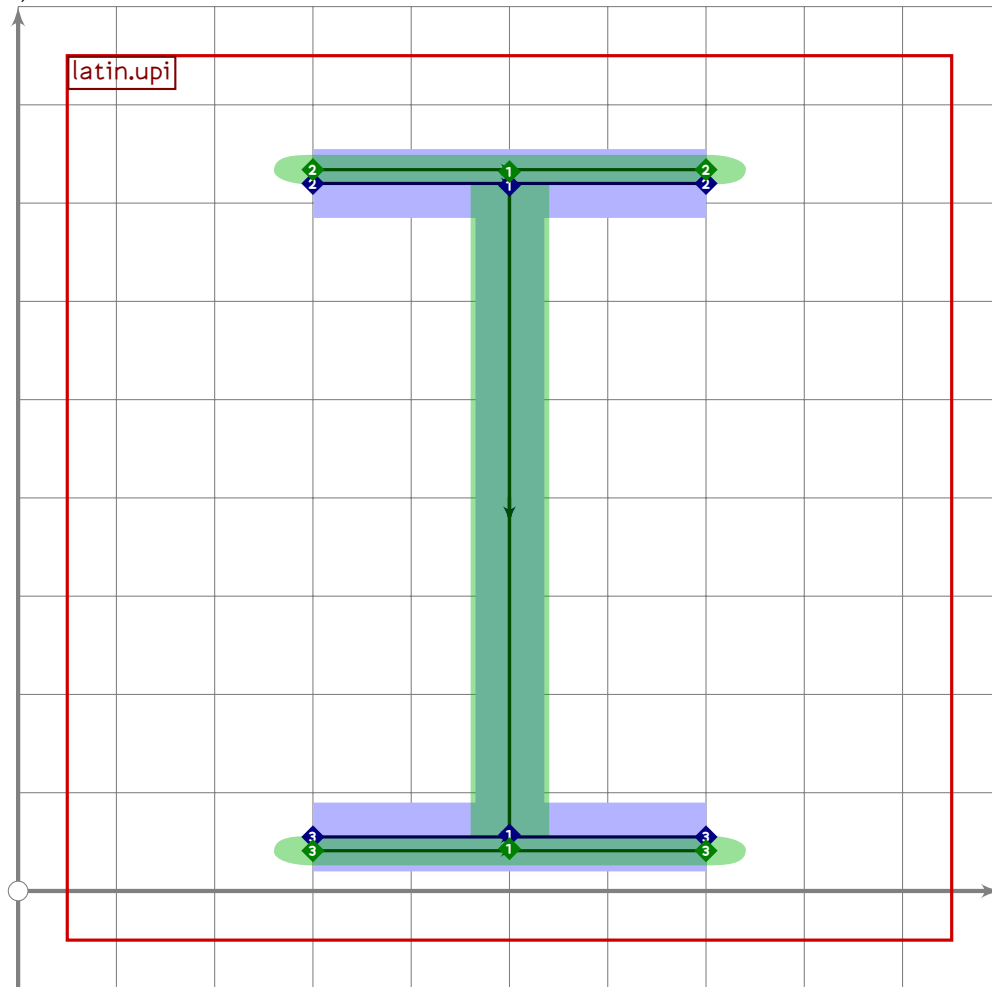
232
233 vardef tsu_curve.latin.uph =
234   push_pbox_toexpand("latin.uph");
235   z1=(260,latin_wide_high_v);
236   z2=(740,latin_wide_high_v);
237   z3=(260,latin_wide_low_v);
238   z4=(740,latin_wide_low_v);
239
240   z5=whatever[z1,z3];
241   z6=whatever[z2,z4];
242   y5=y6=vmetric(0.5);
243
244   push_stroke(z1-z3,(1.6,1.6)-(1.6,1.6));
245   set_boserif(0,0,3);
246   set_boserif(0,1,3);
247
248   push_stroke(z2-z4,(1.6,1.6)-(1.6,1.6));
249   set_boserif(0,0,3);
250   set_boserif(0,1,3);
251
252   push_stroke(z5-z6,(1.6,1.6)-(1.6,1.6));

```

```

253 expand_pbox;
254 enddef;

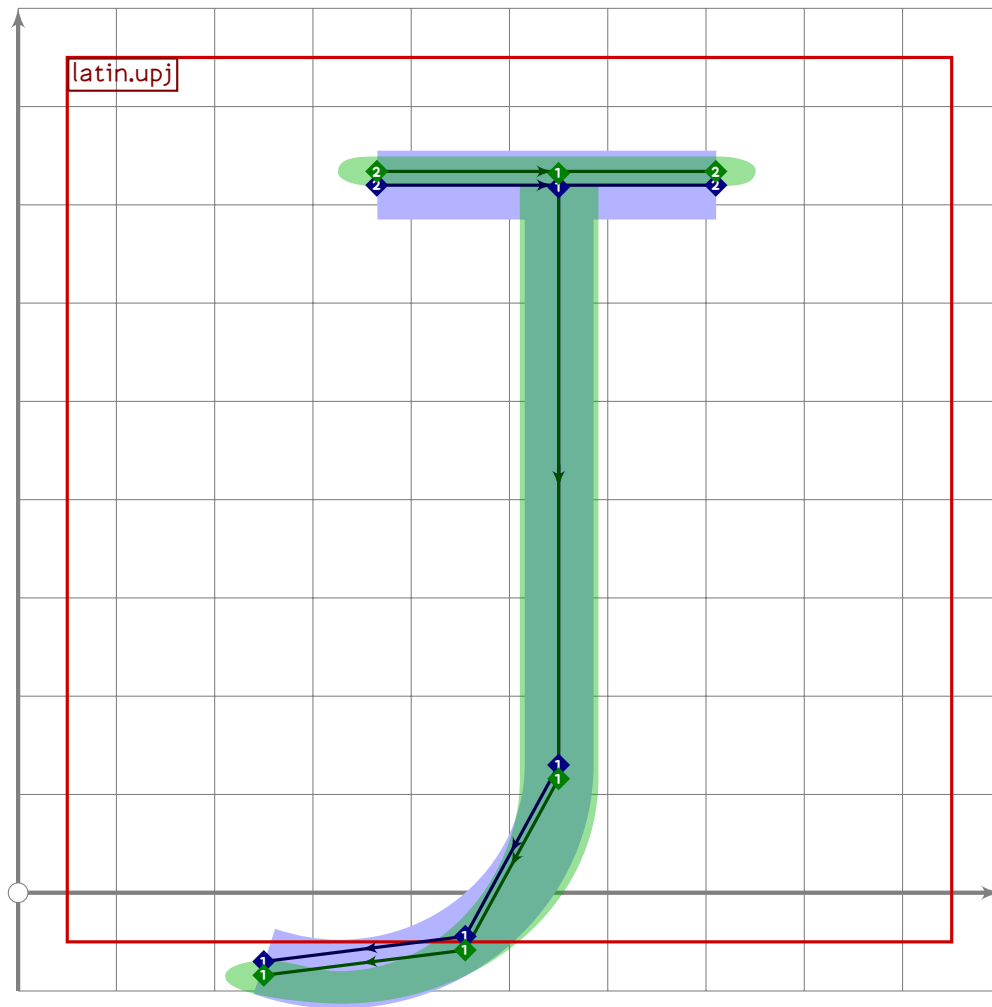
```



```

255
256 vardef tsu_curve.latin.upi =
257   push_pbox_toexpand("latin.upi");
258   push_stroke((500,latin_wide_high_h-2)-(500,latin_wide_low_h+2),
259     (1.6,1.6)-(1.6,1.6));
260
261   push_stroke((300,latin_wide_high_h)-(700,latin_wide_high_h),
262     (1.6,1.6)-(1.6,1.6));
263
264   push_stroke((300,latin_wide_low_h)-(700,latin_wide_low_h),
265     (1.6,1.6)-(1.6,1.6));
266   expand_pbox;
267 enddef;

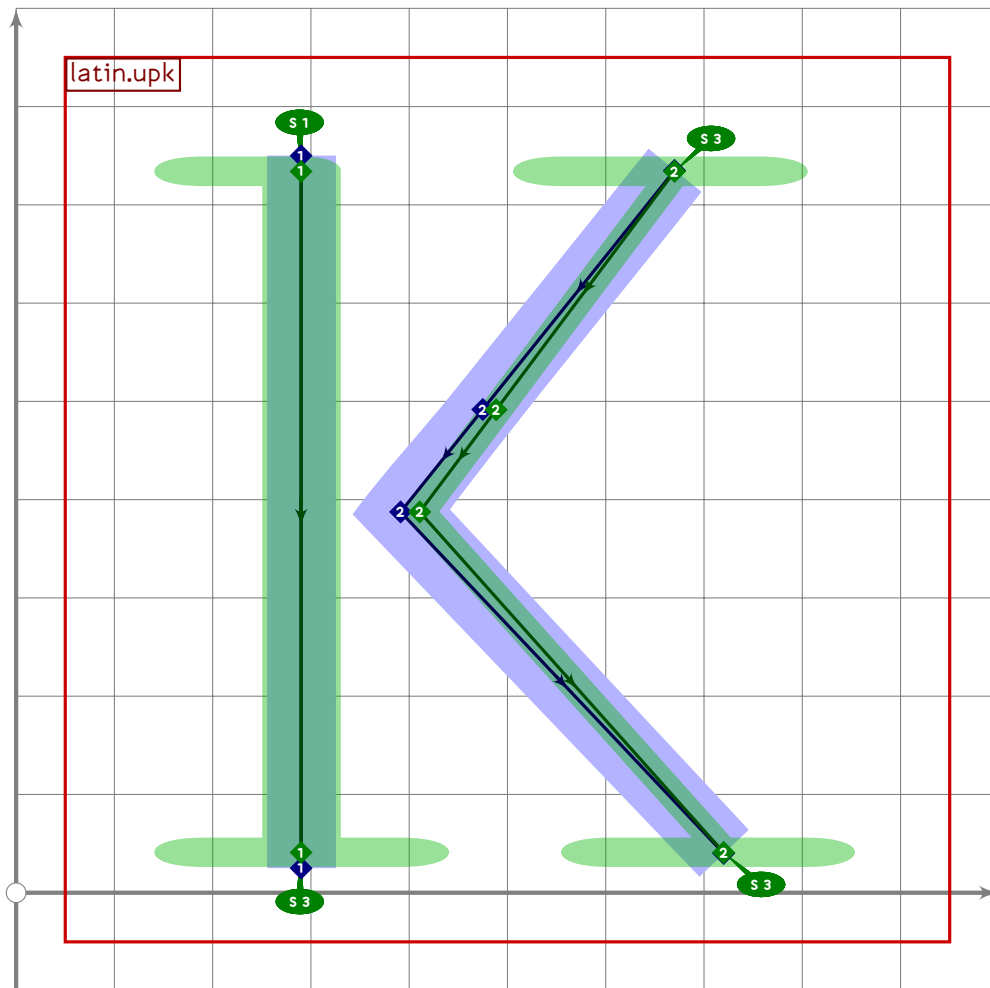
```



```

268
269 vardef tsu_curve.latin.upj =
270   push_pbox_toexpand("latin.upj");
271   z1=(550,latin_wide_high_h-2);
272   z2=(550,latin_wide_low_h*75);
273   z3=z2*(-300,200);
274
275   push_stroke((z1-z2)..{curl 0.8}z3,
276     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
277   replace_strokep(0)(insert_nodes(oldp)(1.5));
278
279   push_stroke((365,latin_wide_high_h)-(710,latin_wide_high_h),
280     (1.6,1.6)-(1.6,1.6));
281   expand_pbox;
282 enddef;

```

```

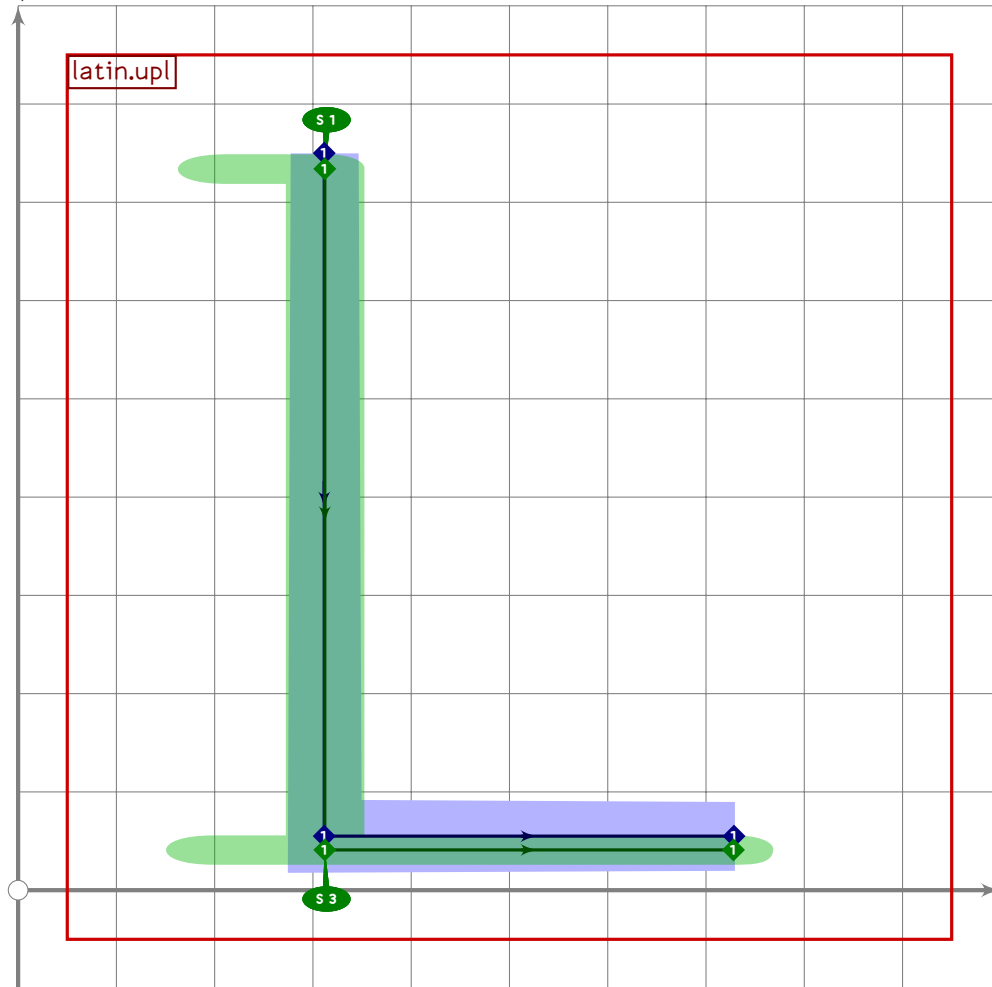
290
291 vardef tsu_curve.latin.upk =
292   push_pbox_toexpand("latin.upk");
293   z1=(290,latin_wide_high_v);
294   z2=(290,latin_wide_low_v);
295   z3=(670,0.5[latin_wide_high_h,latin_wide_high_v]);
296   x4=290+mbrush_width*if sharp_corners: 2.7 else: 2.3 fi;
297   y4=vmetric(0.5);
298   z5=(720,0.5[latin_wide_low_h,latin_wide_low_v]);
299
300   push_stroke(z1-z2,(1.6,1.6)-(1.6,1.6));
301   set_boserif(0,0,1);
302   set_boserif(0,1,3);
303
304   push_stroke(z3-(0.7[z3,z4])-z4-z5,
305     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
306   set_botip(0,2,1);
307   if do_alteration:
308     set_boalternate(0);
309     set_boserif(0,0,3);
310     set_boserif(0,3,3);

```

```

311 fi;
312 expand_pbox;
313 enddef;

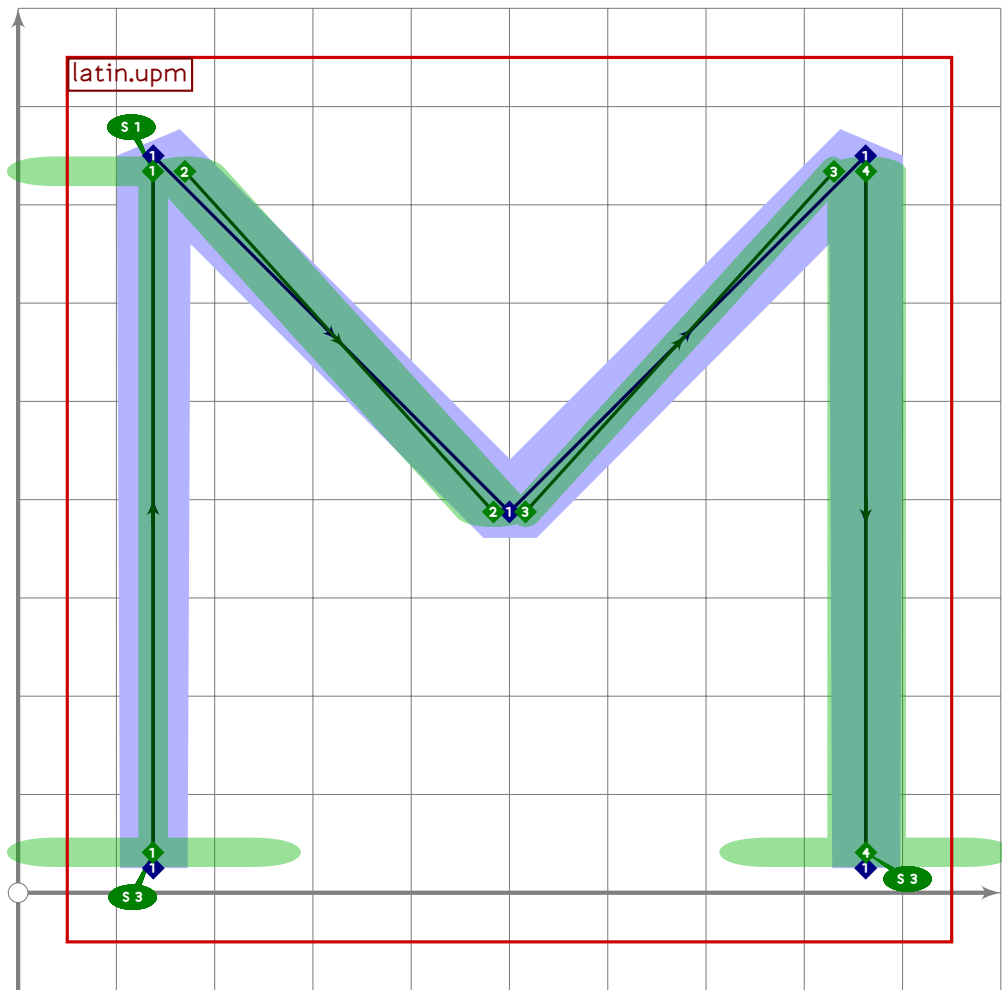
```



```

314
315 vardef tsu_curve.latin.upl =
316   push_pbox_toexpand("latin.upl");
317   y1=latin_wide_high_v;
318   y2=y3=latin_wide_low_h;
319   x1=x2;
320   (x1+x3)/2=520;
321   (x3-x1)=(y1-y2)*0.6;
322
323   push_stroke(z1-z2-z3,(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
324   set_botip(0,1,1);
325   set_boserif(0,0,1);
326   set_boserif(0,1,3);
327   expand_pbox;
328 enddef;

```



```

329
330 vardef tsu_curve.latin.upm =
331   push_pbox_toexpand("latin.upm");
332   y1=y5=latin_wide_low_v;
333   y2=y4=latin_wide_high_v;
334   y3=(y1+y2)/2;
335
336   if do_alteration:
337     x1=x2;
338     x3=500*alternate_adjust/2;
339     x4=x5;
340     (x3-x1)=(x5-x3);
341
342     (x5-x1)=(y2-y1);
343
344   push_stroke((z1-z2) shifted (alternate_adjust*left),
345     (1.6,1.6)-(1.6,1.6));
346   set_boserif(0,0,3);
347   set_boserif(0,1,1);
348   set_boalternate(0);
349

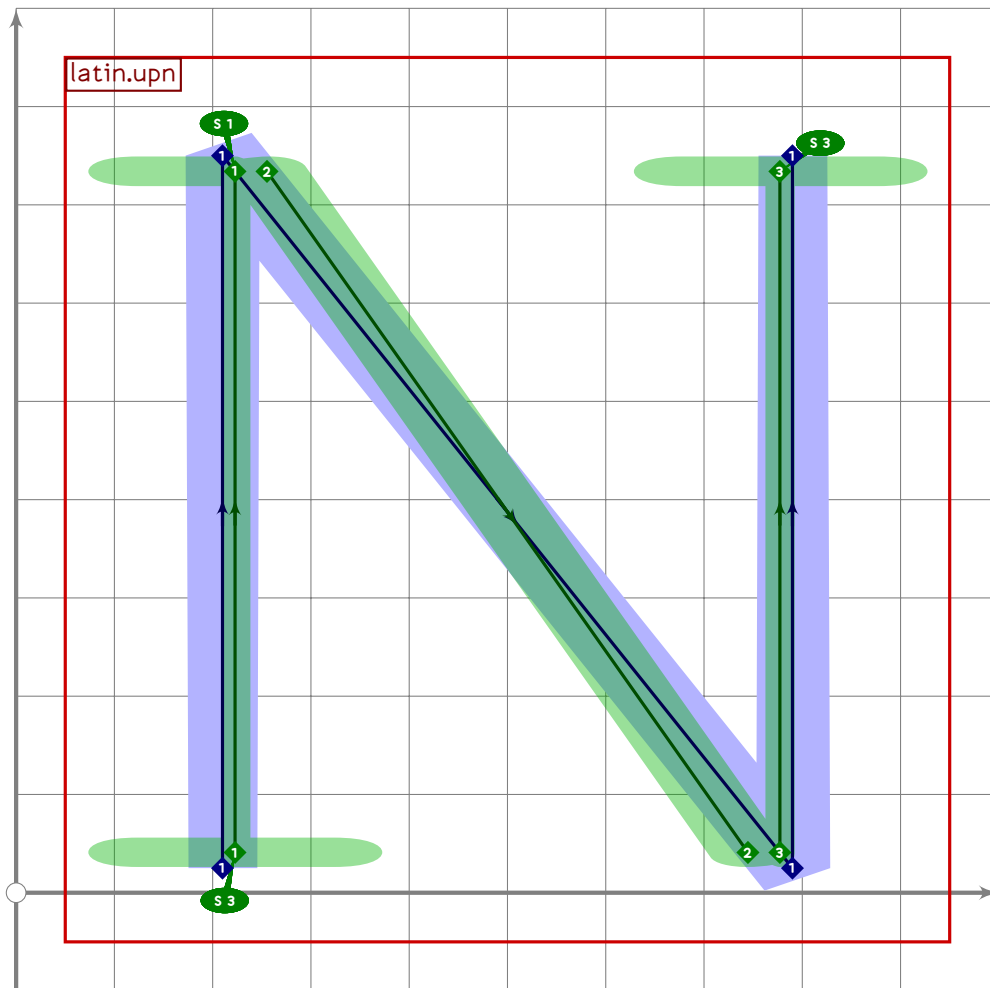
```



```

350   push_stroke(z2-(z3*alternate_adjust*left),(1.6,1.6)-(1.6,1.6));
351
352   push_stroke(z3-(z4*alternate_adjust*left),(1.6,1.6)-(1.6,1.6));
353   set_boalternate(0);
354
355   push_stroke(z4-z5,(1.6,1.6)-(1.6,1.6));
356   set_boserif(0,1,3);
357 else:
358   x1=x2;
359   x3=500;
360   x4=x5;
361   (x3-x1)=(x5-x3);
362
363   (x5-x1)=(y2-y1);
364
365   push_stroke(z1-z2-z3-z4-z5,
366     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
367   set_botip(0,1,0);
368   set_botip(0,2,0);
369   set_botip(0,3,0);
370   set_boserif(0,0,3);
371   set_boserif(0,1,1);
372   set_boserif(0,4,3);
373 fi;
374 expand_pbox;
375 enddef;

```



```

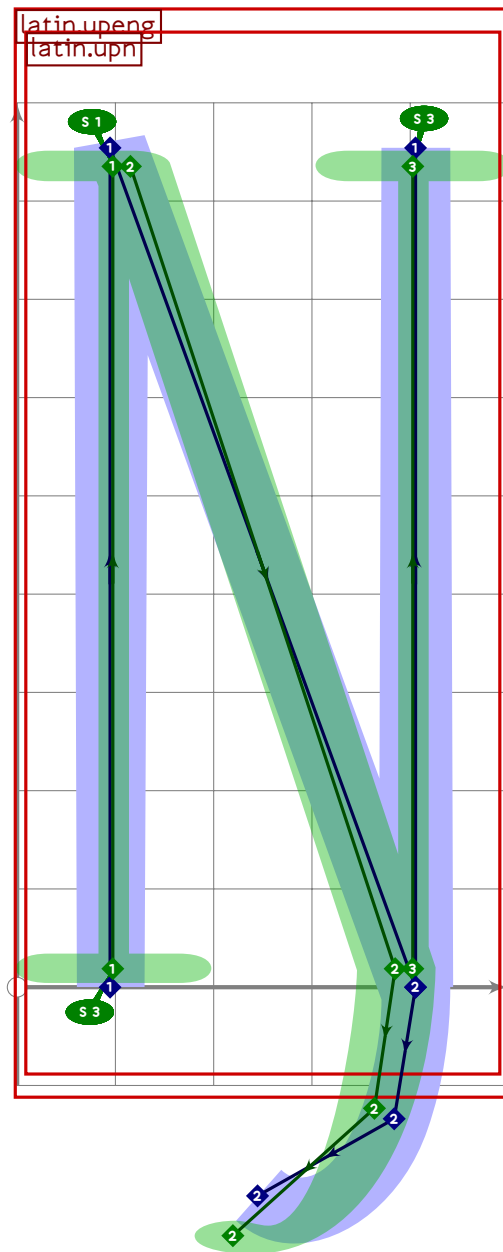
376
377 vardef tsu_curve.latin.upn =
378   push_pbox_toexpand("latin.upn");
379   y1=y3=latin_wide_low_v;
380   y2=y4=latin_wide_high_v;
381
382   x1=x2;
383   x3=x4;
384   (x1+x3)/2=500;
385   (x3-x1)=(y2-y1)*4/5;
386
387   if do_alteration:
388     push_stroke(z1-z2,(1.6,1.6)-(1.6,1.6));
389     set_boserif(0,0,3);
390     set_boserif(0,1,1);
391     set_boalterate(0);
392
393     push_stroke((z2*alternate_adjust*right)-(z3*alternate_adjust*left),
394       (1.6,1.6)-(1.6,1.6));
395
396     push_stroke(z3-z4,(1.6,1.6)-(1.6,1.6));

```

```

397     set_boserif(0,1,3);
398     set_boalternate(0);
399     else:
400     push_stroke(z1-z2-z3-z4,(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
401     set_botip(0,1,0);
402     set_botip(0,2,0);
403     set_boserif(0,0,3);
404     set_boserif(0,1,1);
405     set_boserif(0,3,3);
406     fi;
407     expand_pbox;
408 enddef;

```



```

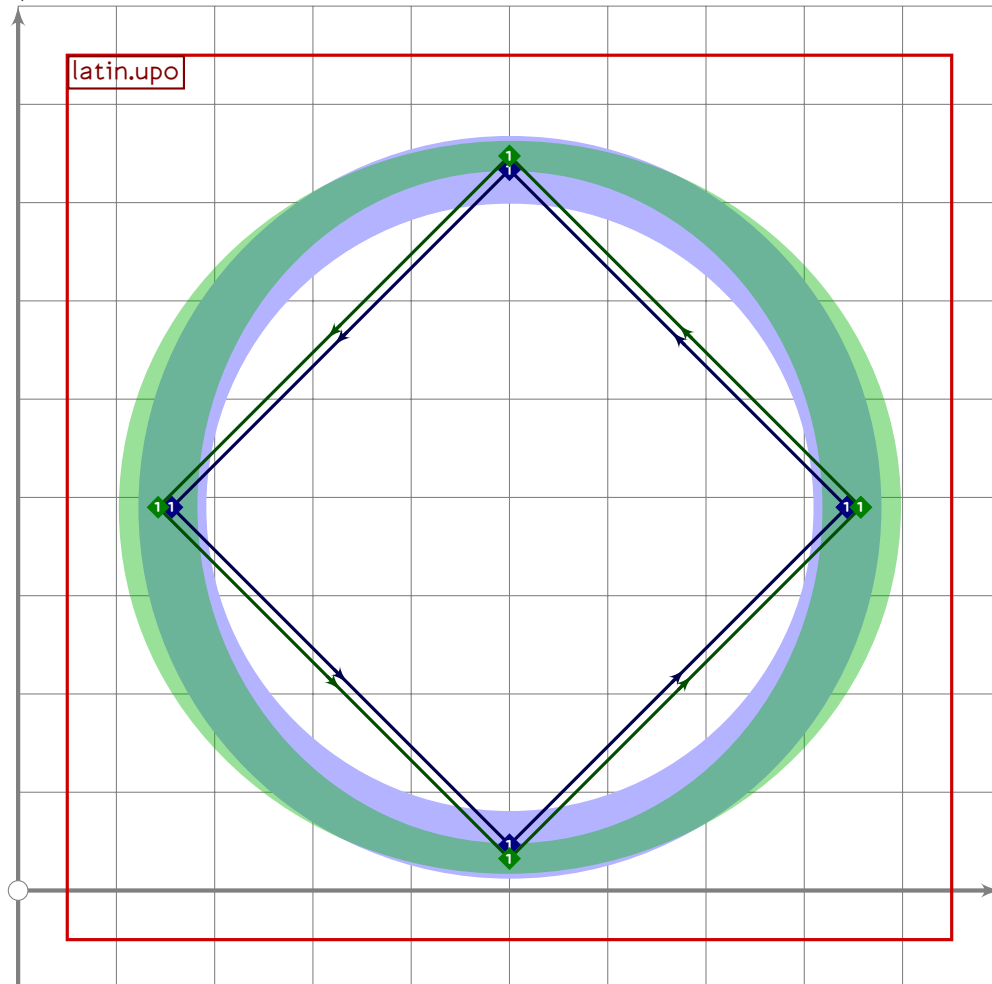
409
410 vardef tsu_curve.latin.upeng =

```

```

411 push_pbox_toexpand("latin.upeng");
412 tsu_curve.latin.upn;
413 y5=latin_wide_desc_h;
414 if do_alteration:
415   x5=x3-alternate_adjust-300;
416   replace_stroke(-1)(oldp{dir 268}..{curl 0.8}z5);
417   replace_stroke(-1)(insert_nodes(oldp)(1.3));
418   replace_strokeq(-1)(oldq-(1.6,1.6)-(1.6,1.6));
419 else:
420   x5=x3-300;
421   push_stroke(z3{dir 268}..{curl 0.8}z5,(1.6,1.6)-(1.6,1.6));
422   replace_stroke(0)(insert_nodes(oldp)(0.3));
423 fi;
424 expand_pbox;
425 enddef;

```



```

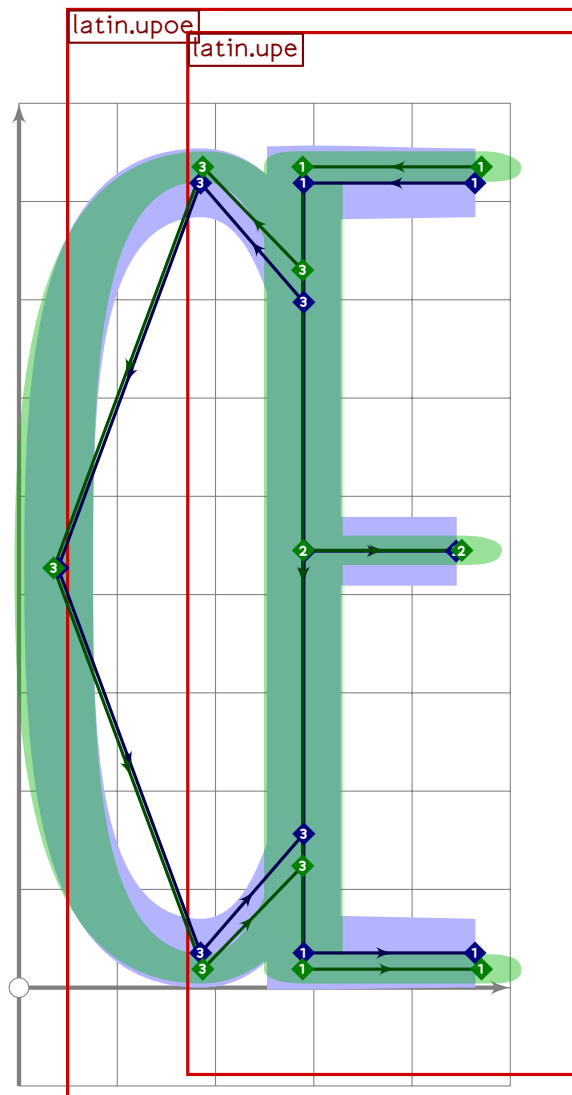
426
427 vardef tsu_curve.latin.upo =
428   push_pbox_toexpand("latin.upo");
429   push_stroke(
430     ((1,0)..(0,1)..(-1,0)..(0,-1)..cycle)
431     scaled ((latin_wide_high_r-latin_wide_low_r)/2)

```

```

432   shifted centre_pt,
433   (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-cycle);
434   expand_pbox;
435 enddef;

```



```

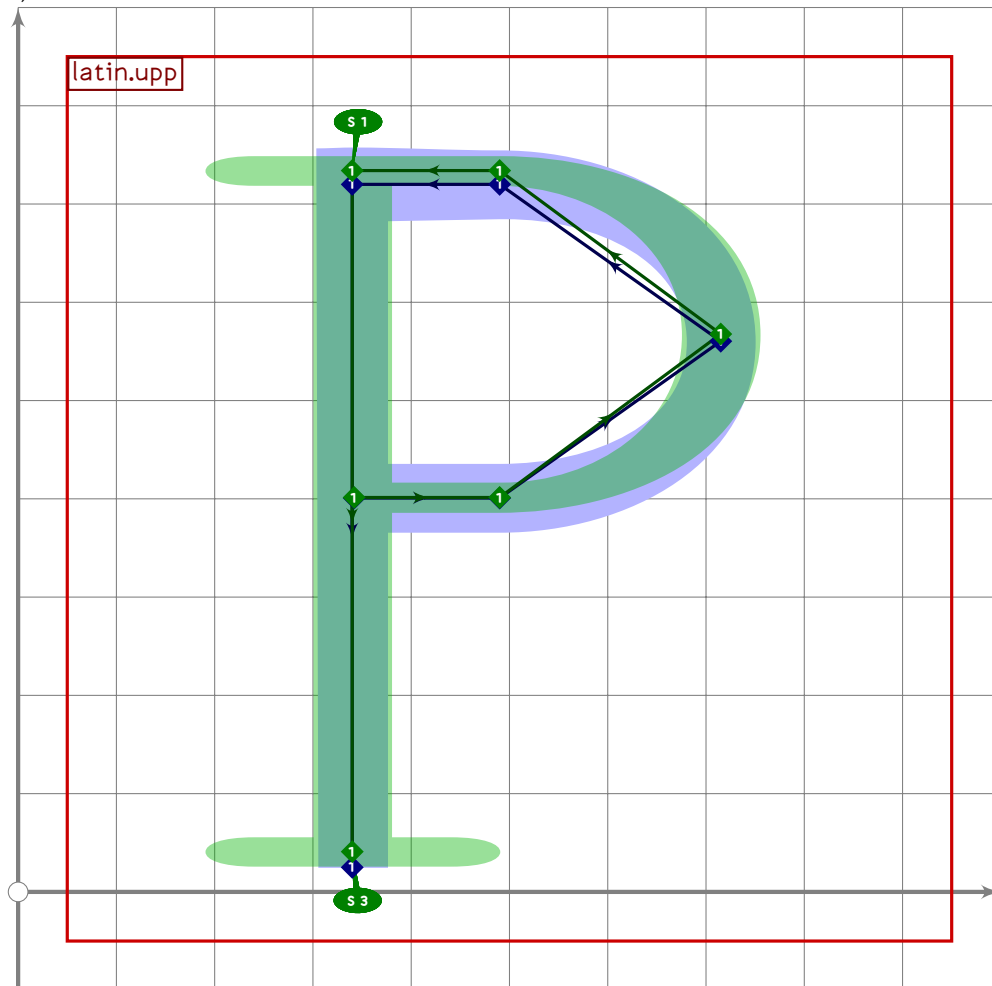
436
437 vardef tsu_curve.latin.upoe =
438   push_pbox_toexpand("latin.upoe");
439   tsu_xform(identity shifted (280,0))(tsu_curve.latin.upe);
440   set_boserif(-1,1,whatever);
441   set_boserif(-1,2,whatever);
442   push_stroke(
443     ((1,0)..(0,1)..(-1,0)..(0,-1)..(1,0))
444     scaled ((latin_wide_high_h-latin_wide_low_h)/2)
445     shifted (360,0.5[latin_wide_high_h,latin_wide_low_h]),
446     (1.2,1.2)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.2,1.2));
447   replace_stroke(0)(
448     subpath (xpart (oldp intersectiontimes get_stroke(-2)),
449       4-xpart ((reverse oldp) intersectiontimes get_stroke(-2))))

```

```

450   of oldp);
451   expand_pbox;
452 enddef;
453
454 vardef tsu_curve.latin.upp_base(expr b) =
455   x1=x5*2;
456   x5=340;
457   x2=x4=x5*b*0,4;
458   x3=x5*b;
459
460   y1=y2=vmetric(0.52);
461   y3=(y2*y4)/2;
462   y4=y5=latin_wide_high_h;
463
464   push_stroke(z1-z2{right}..z3..{left}z4-z5,
465     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
466 enddef;

```



```

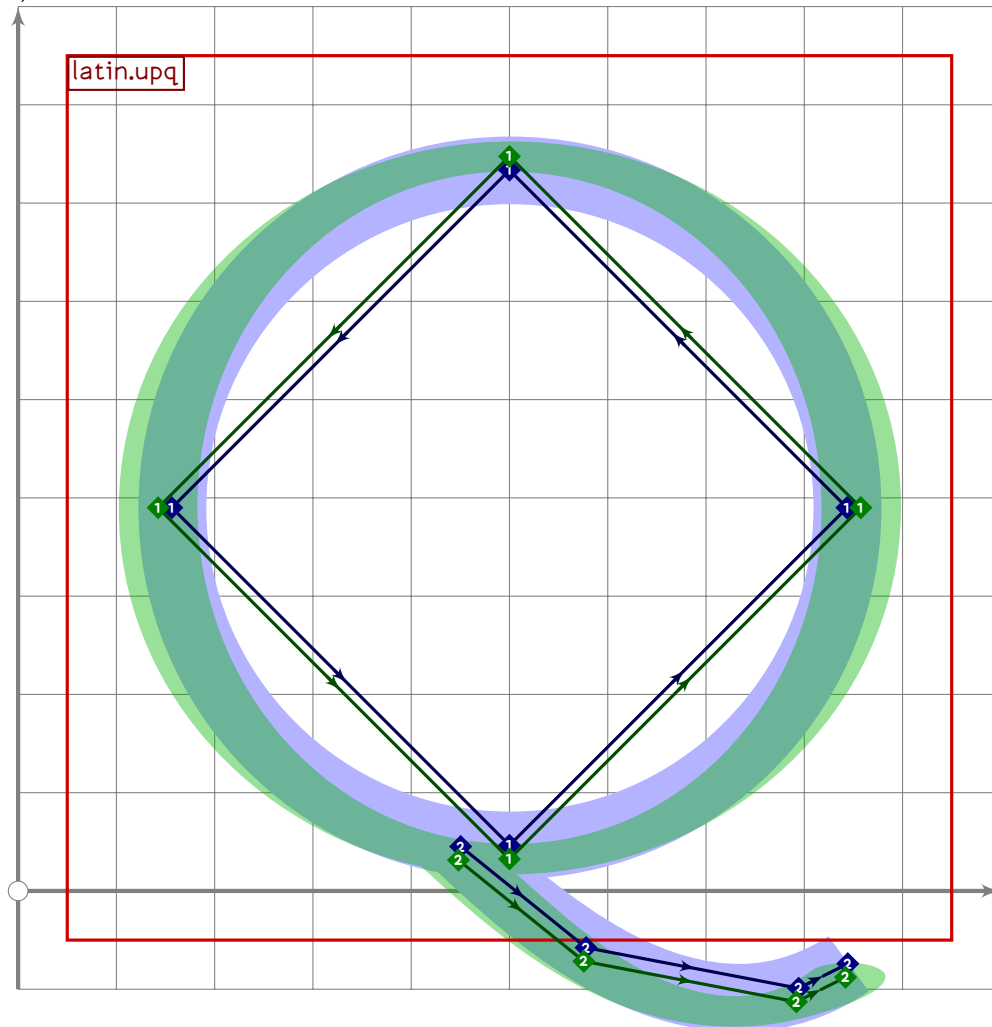
467
468 vardef tsu_curve.latin.upp =
469   push_pbox_toexpand("latin.upp");
470   tsu_curve.latin.upp_base(375);

```

```

471 replace_strokep(0)(oldp-(xpart point infinity of oldp,latin_wide_low_v));
472 replace_strokeq(0)(oldq-(1.6,1.6));
473 set_botip(0,4,1);
474 set_boserif(0,4,1);
475 set_boserif(0,5,3);
476 expand_pbox;
477 enddef;

```



```

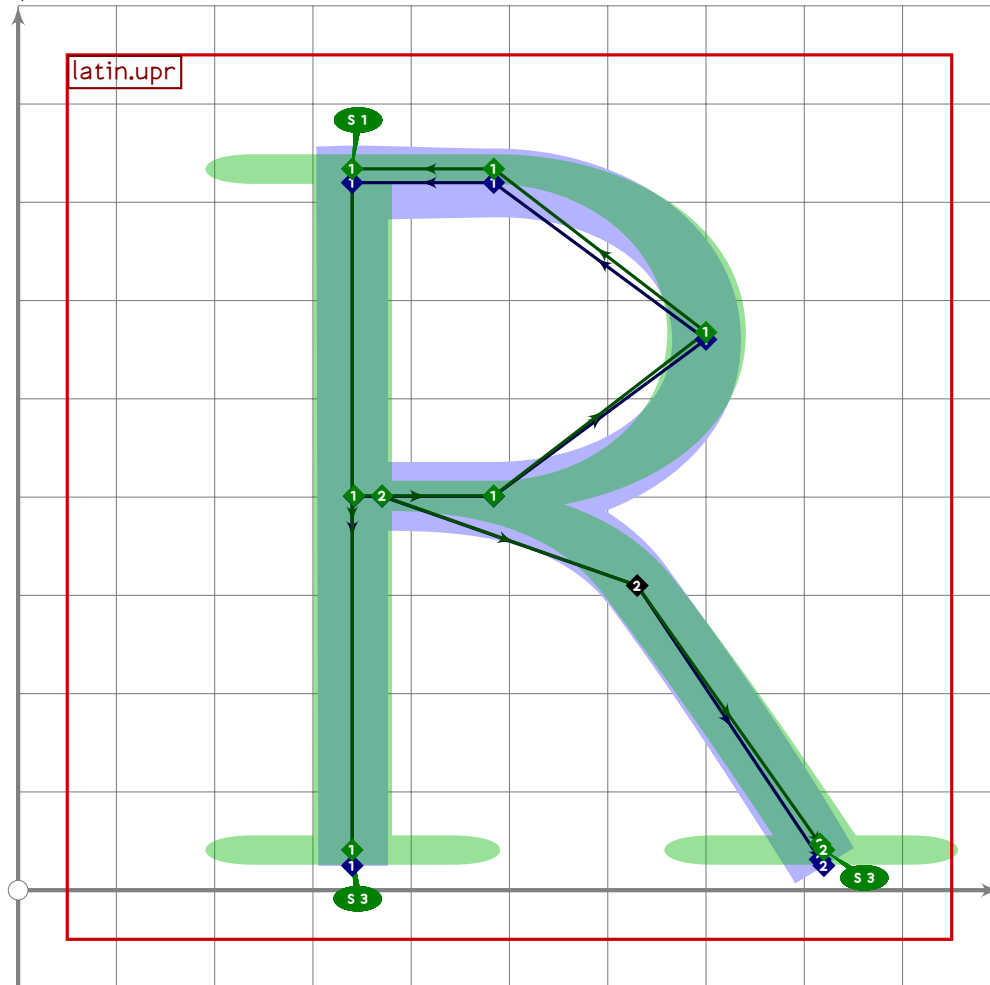
478
479 vardef tsu_curve.latin.upq =
480   push_pbox_toexpand("latin.upq");
481   push_stroke(((1,0)..(0,1)..(-1,0)..(0,-1)..cycle)
482     scaled ((latin_wide_high_r-latin_wide_low_r)/2)
483     shifted centre_pt,
484     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-cycle);
485
486   z1=point 2.9 of get_strokep(0);
487   z2=z1*(350,-150);
488   z3=z2*(50,25);
489   push_stroke(subpath (0,02,2) of (z1{curl 0}..z2..z3),
490     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));

```

```

491 replace_strokep(0)(insert_nodes(oldp)(0.4));
492 expand_pbox;
493 enddef;

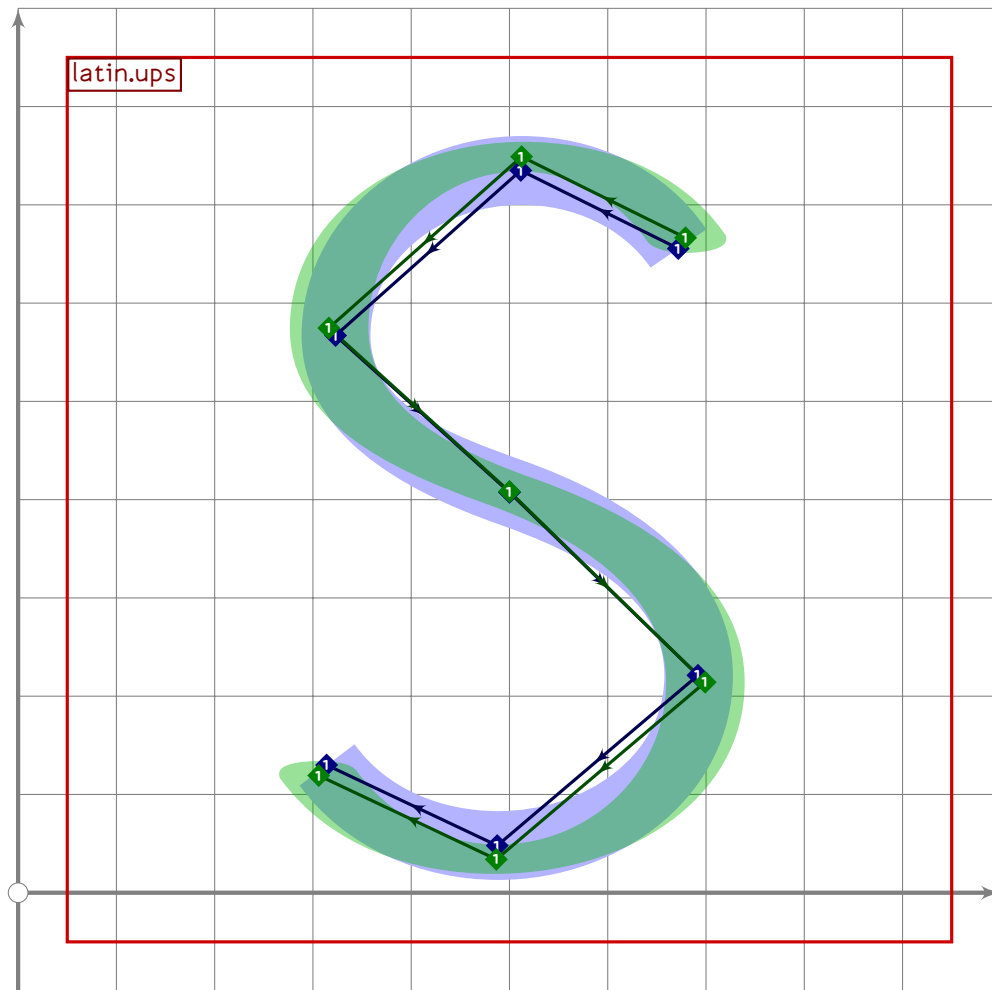
```



```

494
495 vardef tsu_curve.latin.upr =
496   push_pbox_toexpand("latin.upr");
497   tsu_curve.latin.upp_base(360);
498   replace_strokep(0)(oldp-(xpart point infinity of oldp,latin_wide_low_v));
499   replace_strokeq(0)(oldq-(1.6,1.6));
500   set_botip(0,4,1);
501   set_boserif(0,4,1);
502   set_boserif(0,5,3);
503
504   push_stroke((point 0.2 of get_strokep(0)){right}..(630,310)..
505     tension 3..(820,latin_wide_low_v),
506     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
507   replace_strokep(0)(insert_nodes(oldp)(1.95));
508   set_boserif(0,3,3);
509   expand_pbox;
510 enddef;

```

```

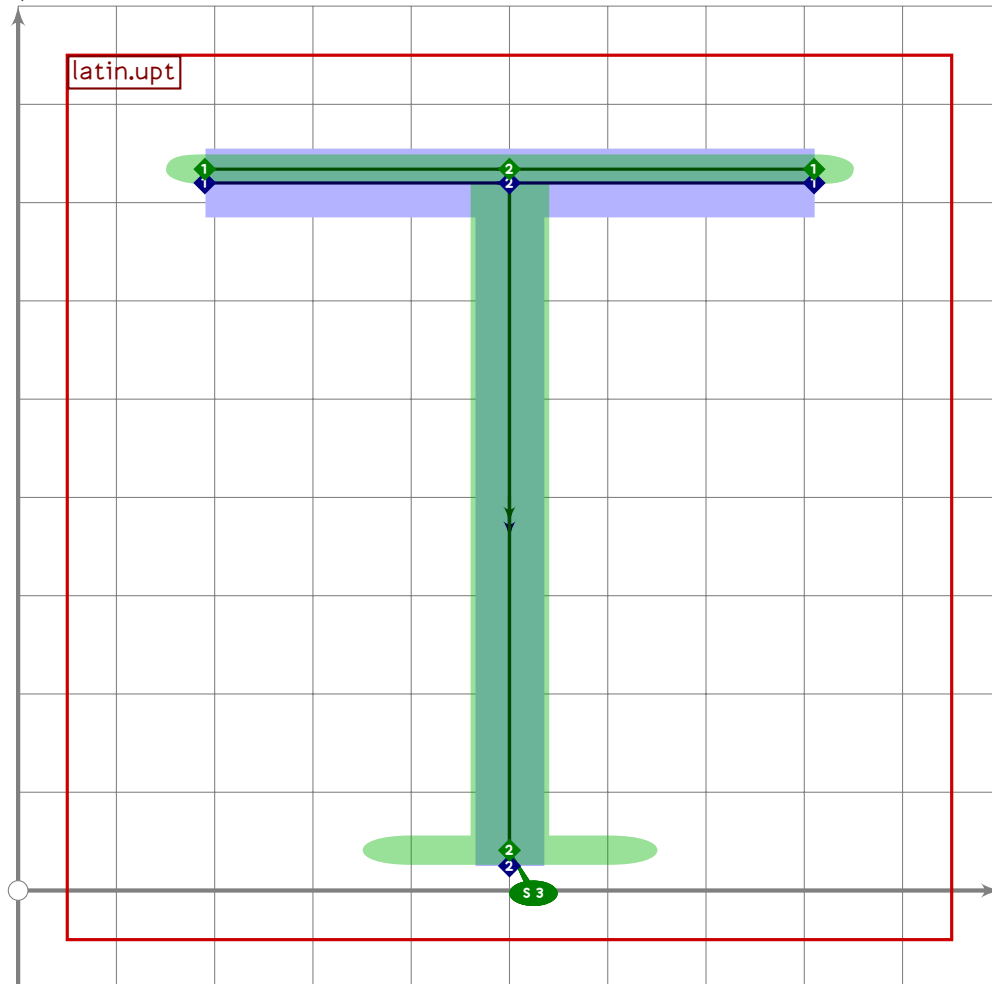
511
512 vardef tsu_curve.latin.ups =
513   push_pbox_toexpand("latin.ups");
514   transform ta,tb;
515   path mycurve;
516
517   mycurve:=(1,0)..(0,1)..(-1,0);
518
519   y2=latin_wide_high_r;
520   y0=y3=vmetric(0.77);
521   y4=vmetric(0.53);
522   y5=y8=vmetric(0.25);
523   y6=latin_wide_low_r;
524
525   0.48[x1,x7]=0.48[x2,x6]=0.48[x3,x5]=x4=500;
526   x5-x1=20;
527   x5-x7=(y2-y6)*0.55;
528
529   (point 0 of mycurve) transformed ta=z0;
530   (point 0.35 of mycurve) transformed ta=z1;
531   (point 1 of mycurve) transformed ta=z2;

```

```

532 (point 2 of mycurve) transformed ta=z3;
533 xypart ta=0;
534
535 (point 0 of mycurve) transformed tb=z8;
536 (point 0.35 of mycurve) transformed tb=z7;
537 (point 1 of mycurve) transformed tb=z6;
538 (point 2 of mycurve) transformed tb=z5;
539
540 mycurve:=subpath (0.35,2) of mycurve;
541
542 push_stroke((mycurve transformed ta)..z4..(reverse mycurve transformed tb),
543 (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)
544 -(1.6,1.6));
545 expand_pbox;
546 enddef;

```



```

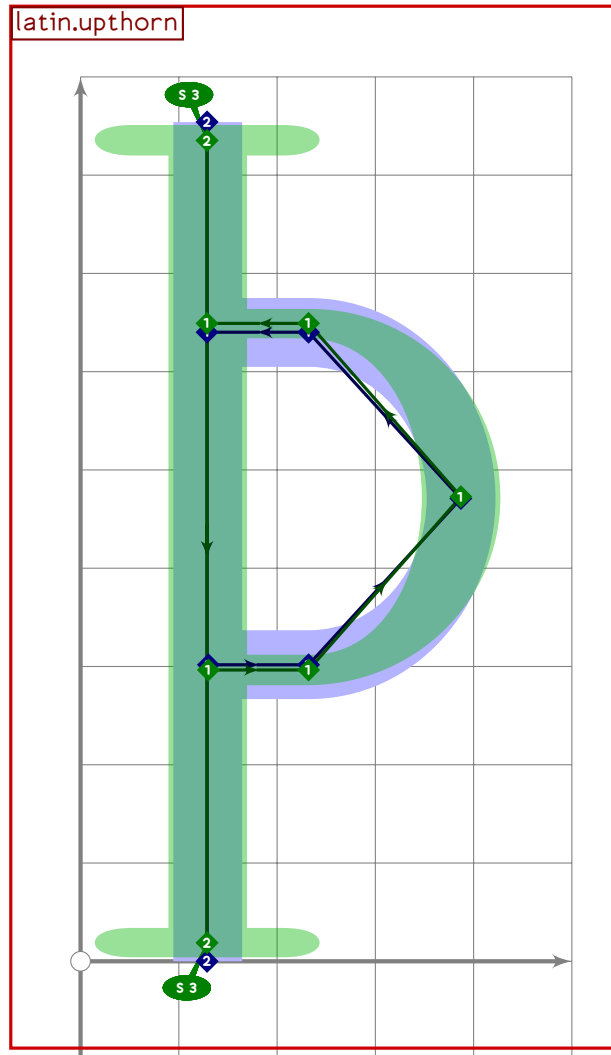
547
548 vardef tsu_curve.latin.upt =
549   push_pbox_toexpand("latin.upt");
550   z1=(190,latin_wide_high_h);
551   z2=(500,latin_wide_high_h);
552   z3=(810,latin_wide_high_h);

```

```

553 z4=(500,latin_wide_low_v);
554
555 push_stroke(z1-z3,(1.6,1.6)-(1.6,1.6));
556
557 push_stroke(z2-z4,(1.6,1.6)-(1.6,1.6));
558 set_boserif(0,1,3);
559 expand_pbox;
560 endif;

```



```

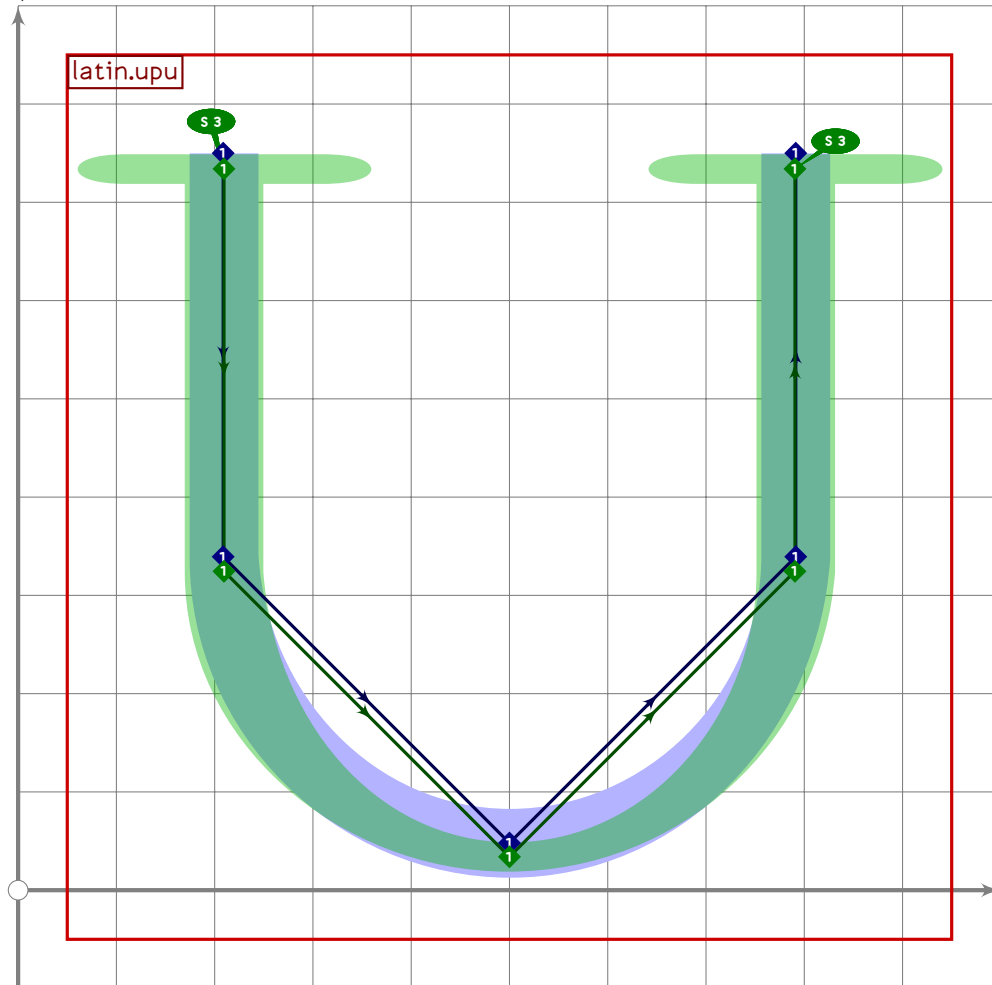
561
562 vardef tsu_curve.latin.upthorn =
563   push_pbox_toexpand("latin.upthorn");
564   tsu_curve.latin.upp_base(375);
565   replace_strokep(0)(oldp
566     shifted (-llcorner oldp) yscaled 0.9
567     shifted ((llcorner oldp)*(0,vmetric(0)-vmetric(0.18))));
568   push_stroke((xpart point infinity of get_strokep(0),latin_wide_high_v)
569     -(xpart point infinity of get_strokep(0),latin_wide_low_v),
570     (1.6,1.6)-(1.6,1.6));
571   set_boserif(0,0,3);

```

```

572 set_boserif(0,1,3);
573 expand_pbox;
574 enddef;

```



```

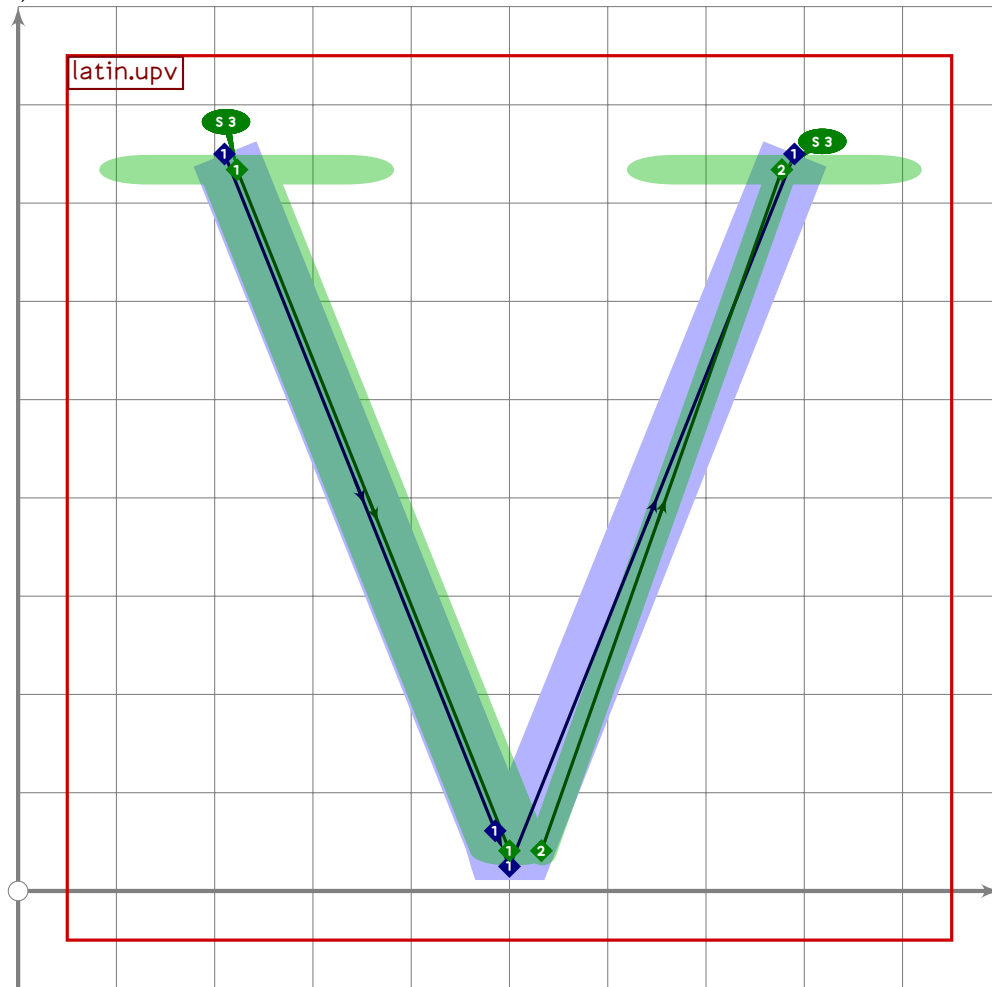
575
576 vardef tsu_curve.latin.upu =
577   push_pbox_toexpand("latin.upu");
578   x1=x2;
579   x3=500;
580   x4=x5;
581   (x1+x5)/2=x3;
582   (x5-x1)=(y1-y3)*0.83;
583
584   y1=y5=latin_wide_high_v;
585   y2=y4;
586   y2-y3=x3-x2;
587   y3=latin_wide_low_r;
588
589   push_stroke(z1-z2{dir 274}..z3..{dir 86}z4-z5,
590     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
591   set_boserif(0,0,3);
592   set_boserif(0,4,3);

```

```

593 expand_pbox;
594 enddef;

```



```

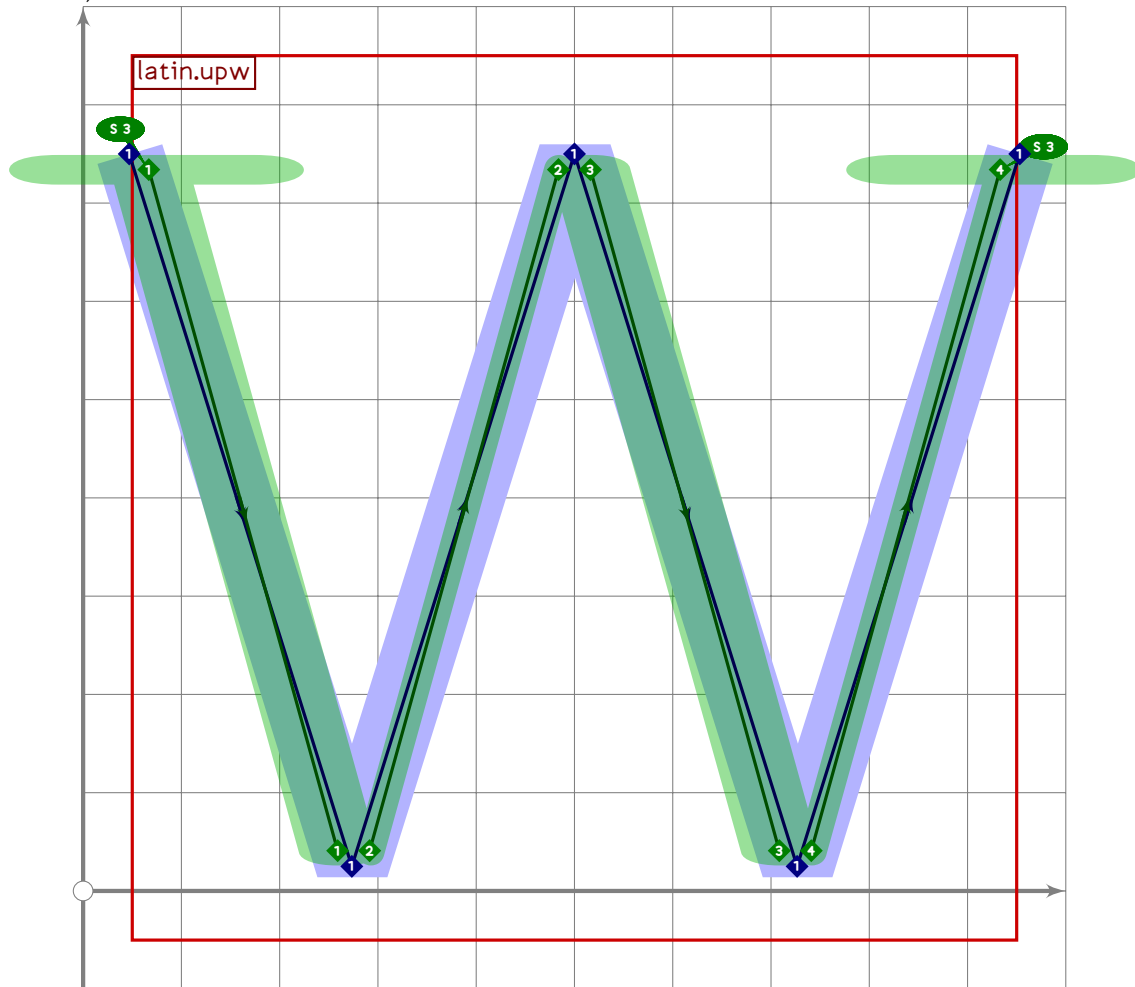
595
596 vardef tsu_curve.latin.upv =
597   push_pbox_toexpand("latin.upv");
598   (x1*x3)/2=x2=500;
599
600   y1=y3=latin_wide_high_v;
601   y2=latin_wide_low_v;
602
603   (x3-x1)=(y1-y2)*0.8;
604
605   if do_alteration:
606     push_stroke(z1-z2,(1.6,1.6)-(1.6,1.6));
607     set_boserif(0,0,3);
608
609     push_stroke((z2*alternate_adjust*right)-z3,(1.6,1.6)-(1.6,1.6));
610     set_boserif(0,1,3);
611     set_boalternate(0);
612   else:
613     push_stroke(z1-(0.95[z1,z2])-z2-z3,

```

```

614     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
615     set_botip(0,2,0);
616     set_boserif(0,0,3);
617     set_boserif(0,3,3);
618     fi;
619     expand_pbox;
620 enddef;

```



```

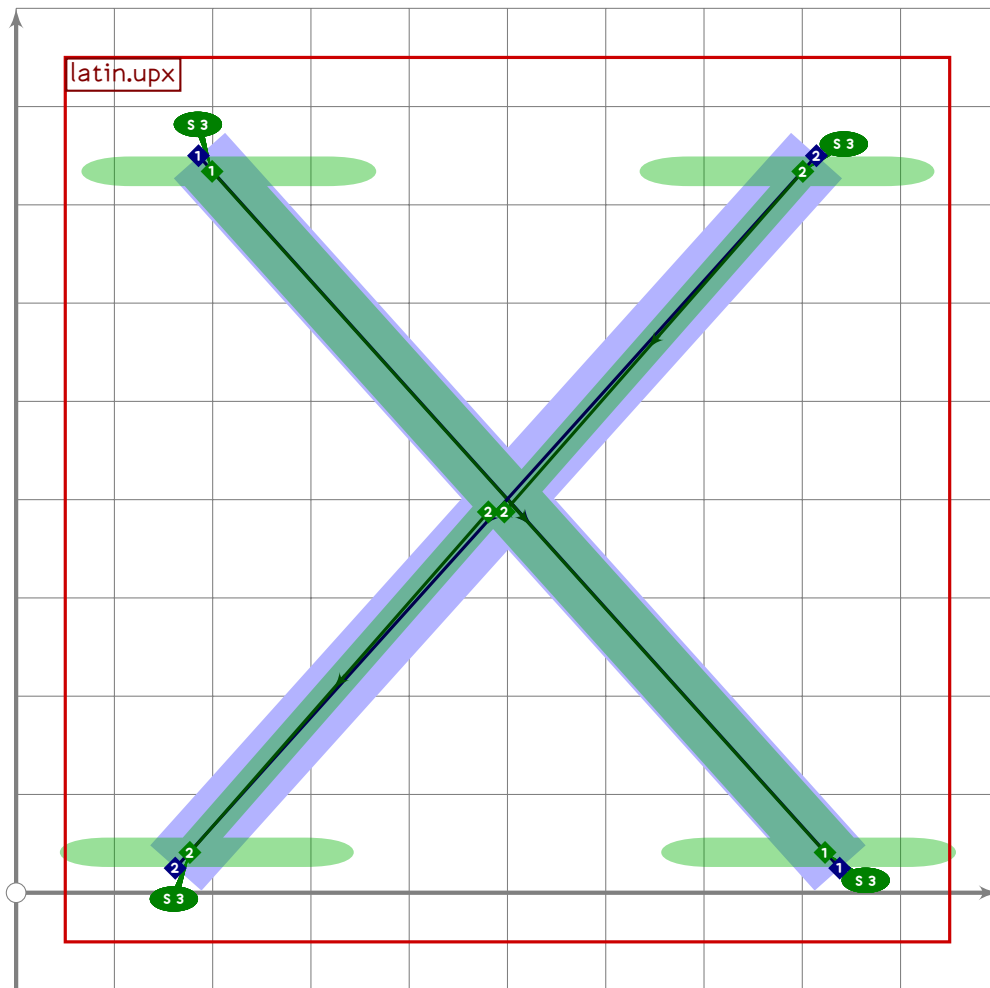
621
622 vardef tsu_curve.latin.upw =
623     push_pbox_toexpand("latin.upw");
624     if do_alteration:
625         (x1*x5)/2=(x2*x4)/2=x3=500-alternate_adjust/2;
626         (x3-x2)=(x2-x1);
627
628         y1=y3=y5=latin_wide_high_v;
629         y2=y4=latin_wide_low_v;
630
631         (x5-x1)=(y1-y2)*1.25-(3*alternate_adjust);
632
633         push_stroke((z1-z2) shifted (alternate_adjust*left),
634             (1.6,1.6)-(1.6,1.6));

```

```

635     set_boserif(0,0,3);
636
637     push_stroke(z2-z3,(1.6,1.6)-(1.6,1.6));
638     set_boalternate(0);
639
640     push_stroke((z3-z4) shifted (alternate_adjust*right),
641               (1.6,1.6)-(1.6,1.6));
642
643     push_stroke((z4-z5) shifted (alternate_adjust*right*2),
644               (1.6,1.6)-(1.6,1.6));
645     set_boserif(0,1,3);
646     set_boalternate(0);
647 else:
648     (x1*x5)/2=(x2*x4)/2=x3=500;
649     (x3-x2)=(x2-x1);
650
651     y1=y3=y5=latin_wide_high_v;
652     y2=y4=latin_wide_low_v;
653
654     (x5-x1)=(y1-y2)*1.25;
655
656     push_stroke(z1-z2-z3-z4-z5,
657               (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
658     set_botip(0,1,0);
659     set_botip(0,2,0);
660     set_botip(0,3,0);
661     set_boserif(0,0,3);
662     set_boserif(0,4,3);
663 fi;
664 expand_pbox;
665 enddef;

```



```

666
667 vardef tsu_curve.latin.upx =
668   push_pbox_toexpand("latin.upx");
669   (x1*x3)/2=500;
670   (x2*x4)/2=500;
671   (x2*x3-x1*x4)=((y1-y2)*0.9)*2;
672   (x3-x1)=(x2-x4)*0.93;
673
674   y1=y3=latin_wide_high_v;
675   y2=y4=latin_wide_low_v;
676
677   push_stroke(z1-z2,(1.6,1.6)-(1.6,1.6));
678   set_boserif(0,0,3);
679   set_boserif(0,1,3);
680
681   if do_alteration:
682     push_stroke(z3-(0.5[z3,z4]*alternate_adjust*right/4)
683       -(0.5[z3,z4]*alternate_adjust*left/4)-z4,
684       (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
685     set_boserif(0,0,3);
686     set_boserif(0,3,3);

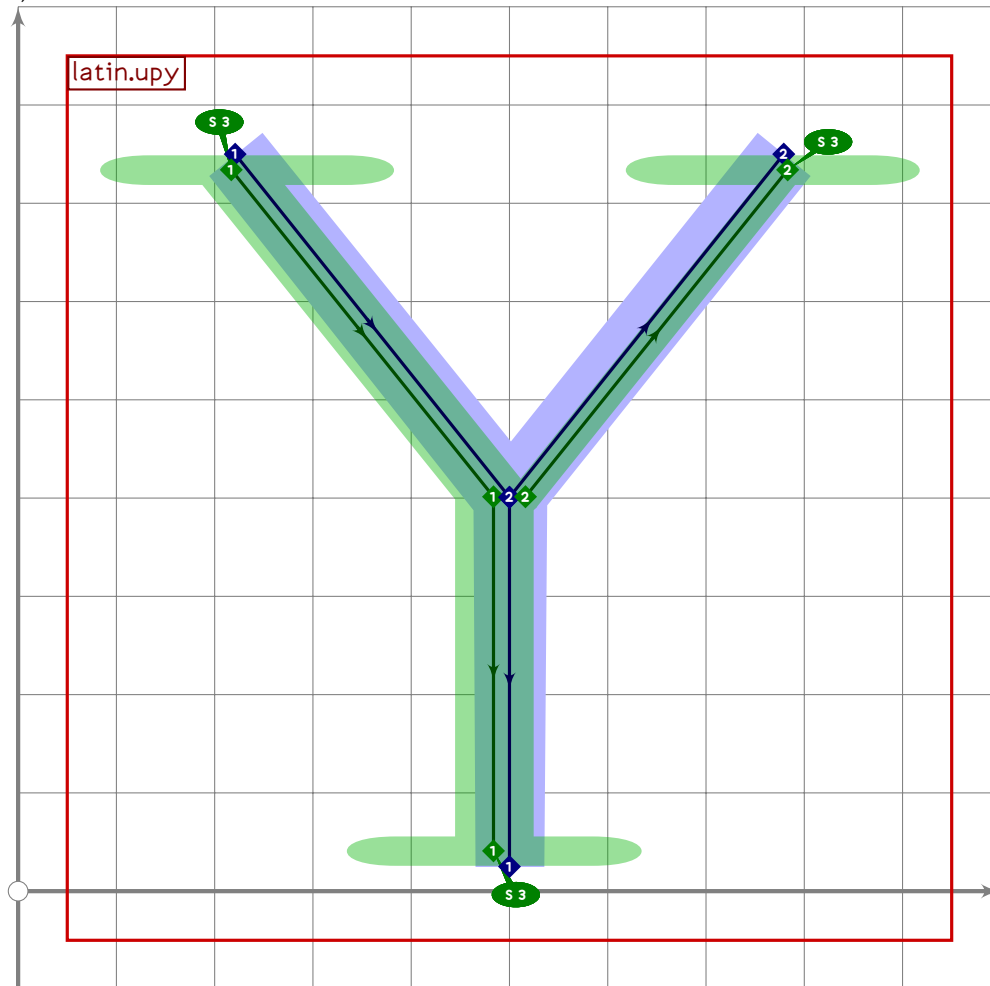
```



```

687 else:
688     push_stroke(z3-z4,(1.6,1.6)-(1.6,1.6));
689     set_boserif(0,0,3);
690     set_boserif(0,1,3);
691 fi;
692 set_boalternate(0);
693 expand_pbox;
694 enddef;

```



```

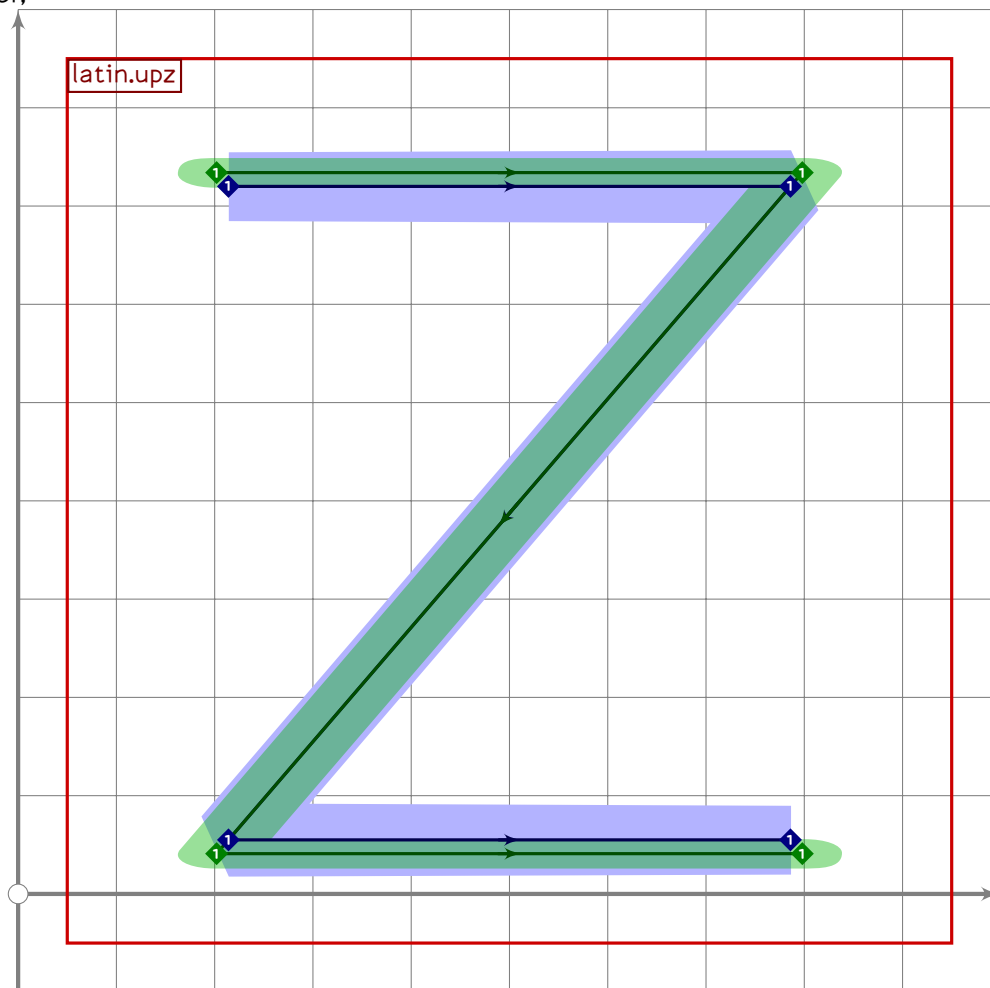
695
696 vardef tsu_curve.latin.upy =
697     push_pbox_toexpand("latin.upy");
698     (x3*x1)/2=x2=x4=if do_alteration: 500-alternate_adjust/2 else: 500 fi;
699     (x3-x1)=0.77*(y1-y4);
700
701     y1=y3=latin_wide_high_v;
702     y2=vmetric(0.52);
703     y4=latin_wide_low_v;
704
705     push_stroke(z1-z2-z4,(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
706     set_botip(0,1,0);
707     set_boserif(0,0,3);

```

```

708 set_boserif(0,2,3);
709
710 if do_alteration:
711     push_stroke((z2-z3) shifted (alternate_adjust*right),
712         (1.6,1.6)-(1.6,1.6));
713 else:
714     push_stroke(z2-z3,(1.6,1.6)-(1.6,1.6));
715 fi;
716 set_boserif(0,1,3);
717 set_boalternate(0);
718 expand_pbox;
719 enddef;

```



```

720
721 vardef tsu_curve.latin.upz =
722     push_pbox_toexpand("latin.upz");
723     y1=y2=latin_wide_high_h;
724     y3=y4=latin_wide_low_h;
725
726     x1=x3;
727     x2=x4;
728     (x1*x2)/2=500;

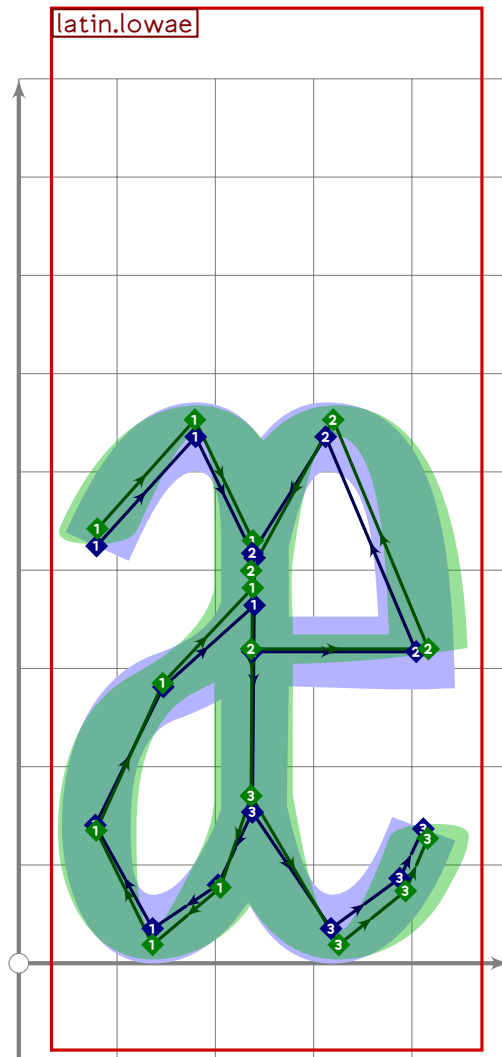
```



```

750 y2=latin_wide_xheight_r;
751 y4=latin_wide_low_v;
752 y5=0.68[y4,y2];
753 y6=0.32[y7,y5];
754 y7=latin_wide_low_h;
755 y8=0.3[y4,y2];
756
757 push_stroke(z1{curl 0.2}..z2{right}..z3{down}..z4,
758   (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
759 replace_strokep(0)(subpath (0.2,3) of oldp);
760 set_boserif(0,3,2);
761
762 push_stroke(z5{dir 240}..z6{down}..z7{right}..z8,
763   (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
764 replace_strokep(0)(subpath (0,2.97) of oldp);
765 replace_strokep(0)(insert_nodes(oldp)(0.5));
766 expand_pbox;
767 endif;

```



768

```

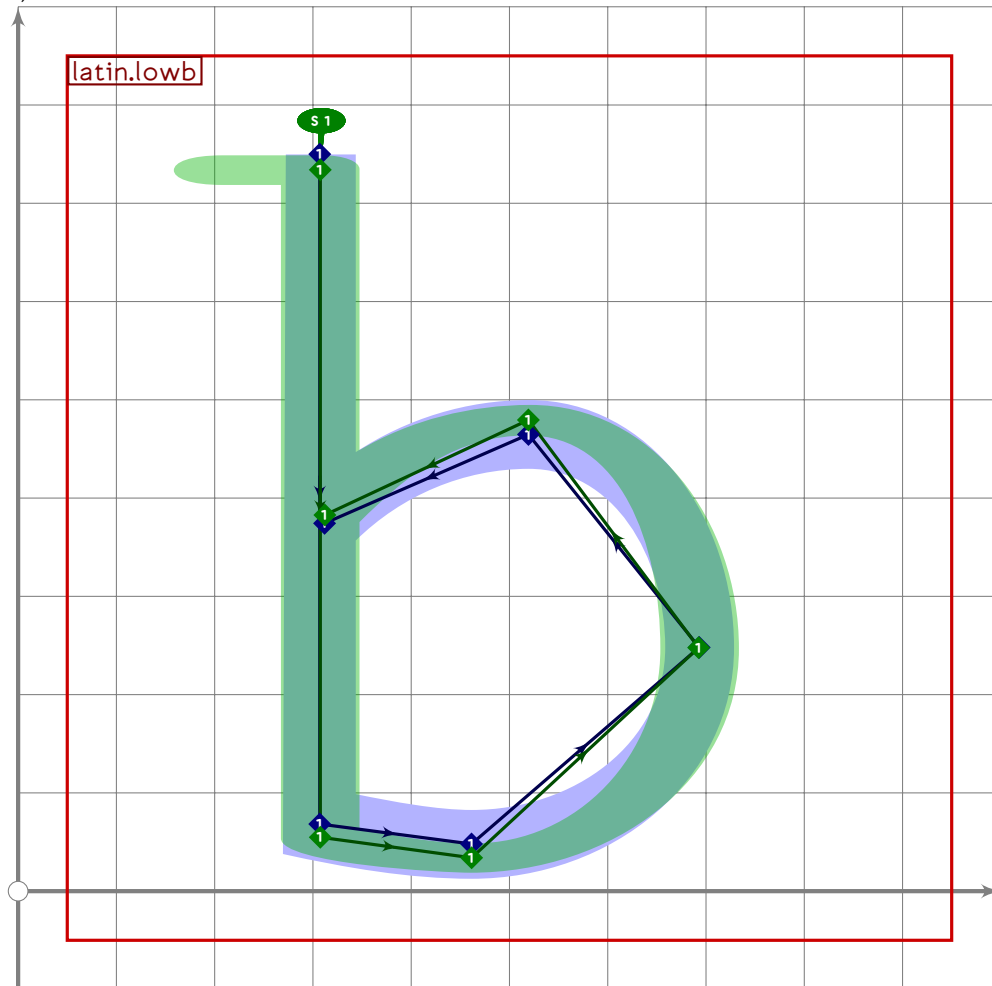
769 vardef tsu_curve.latin.lowae =
770   push_pbox_toexpand("latin.lowae");
771   begingroup
772     save saved_sp;
773     save astem,abowl,astroke,estroke,etop,ebot;
774     path astem,abowl,astroke,estroke,etop,ebot;
775     saved_sp:=sp;
776
777     tsu_curve.latin.lowa;
778     set_boserif(-1,3,whatever);
779     astem:=get_stroke(-1);
780     abowl:=get_stroke(0);
781
782     numeric x[],y[];
783     tsu_curve.latin.lowe;
784     estroke:=get_stroke(0);
785
786     for i=saved_sp upto sp-1:
787       obstacktype[i]:=otnull;
788     endfor;
789
790     astroke:=(subpath (0,2) of astem)-reverse abowl;
791
792     numeric x[],y[];
793     z1=point 3 of astroke;
794     path xbp;
795     xbp=estroke shifted (0,ypart ((llcorner astroke)-(llcorner estroke)));
796     x2=xpart (xbp intersectionpoint ((470,y1)-(0,y1)));
797     astroke:=astroke shifted (470-x1,0);
798
799     estroke:=estroke shifted (470-x2,0);
800     xbp:=xbp shifted (470-x2,0);
801
802     ebot:=subpath (xpart (xbp intersectiontimes ((500,y1)-(0,y1))),
803                 infinity) of xbp;
804     ebot:=insert_nodes(ebot)((length ebot)-0.3);
805
806     etop:=
807       subpath (ypart (((470,1000)-(470,0))
808                 intersectiontimes (subpath (0,1) of estroke)),
809             1*ypart (((470,1000)-(470,0))
810                 intersectiontimes (subpath (1,infinity) of estroke)))
811       of estroke;
812
813     astroke:=insert_nodes(astroke)(3,4);
814
815     push_stroke(astroke,
816       (1.6,1.6) for i=1 upto length astroke: -(1.6,1.6) endfor);

```

```

817   push_stroke(etop,
818     (1.6,1.6) for i=1 upto length etop: -(1.6,1.6) endfor);
819   set_botip(0,1,1);
820   push_stroke(ebot,
821     (1.6,1.6) for i=1 upto length ebot: -(1.6,1.6) endfor);
822   endgroup;
823   expand_pbox;
824   enddef;

```



```

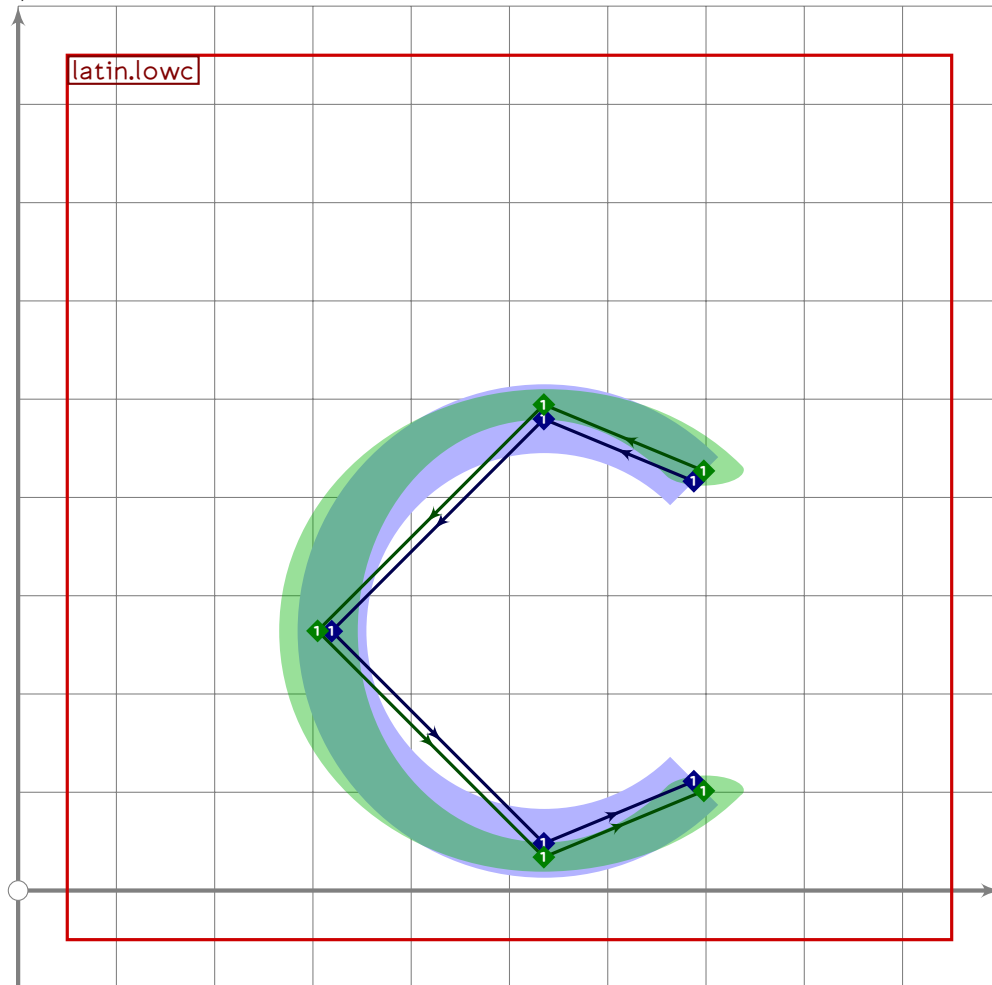
825
826   vardef tsu_curve.latin.lowb =
827     push_pbox_toexpand("latin.lowb");
828     (x1*x4)/2=500;
829     (x4-x1)=(y1-y3)*0.55;
830     x2=x1+x6;
831     x3=0.4[x2,x4];
832     x5=0.55[x2,x4];
833
834     y1=latin_wide_high_v;
835     y2=latin_wide_lc_baselif;
836     y3=latin_wide_low_r;
837     y4=0.48[y3,y5];

```

```

838 y5=latin_wide_xheight_h;
839 y6=0.77[y3,y5];
840
841 push_stroke(z1-z2{curl 0.05}..{right}z3..{up}z4..{left}z5..z6,
842 (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
843 replace_stroke(0)(subpath (0,4.97) of oldp);
844 set_botip(0,1,1);
845 set_boserif(0,0,1);
846 expand_pbox;
847 enddef;

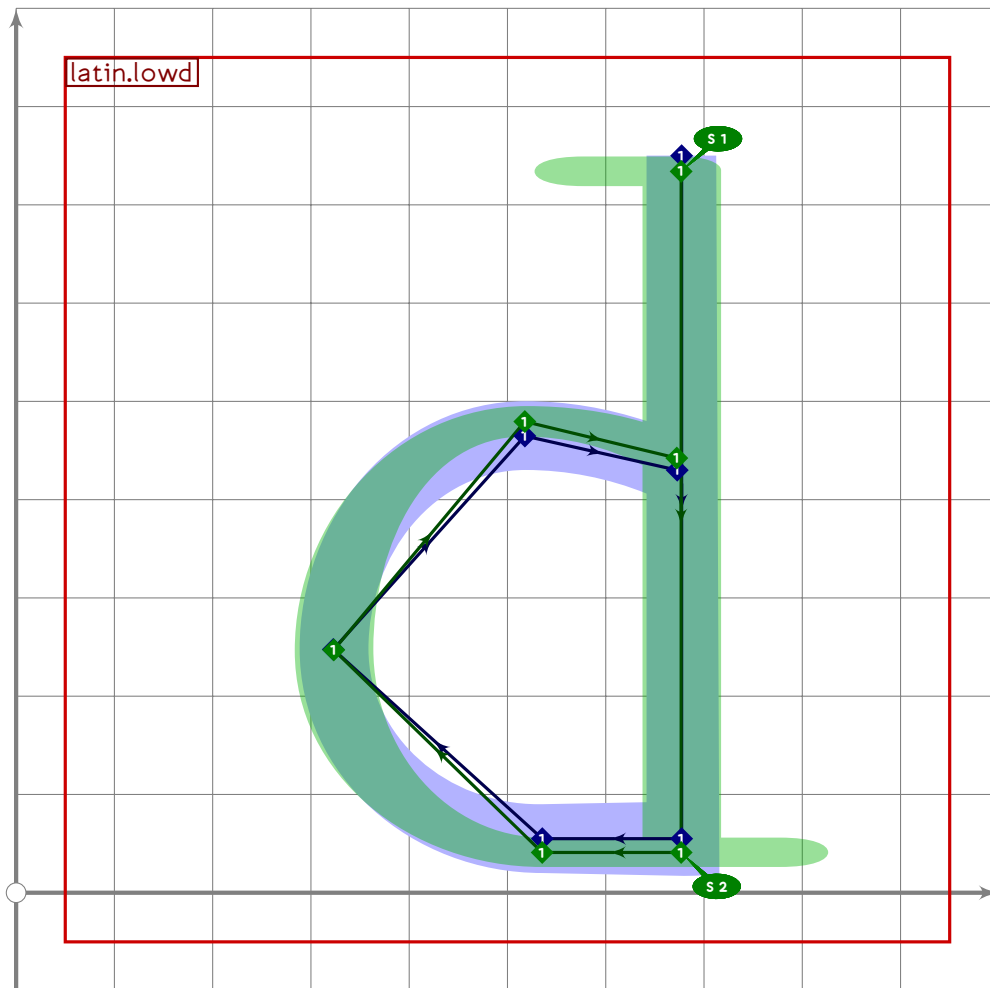
```



```

848
849 vardef tsu_curve.latin.lowc =
850 push_pbox_toexpand("latin.lowc");
851 push_stroke((subpath (0.5,3.5) of ((1,0)..(0,1)..(-1,0)..(0,-1)..cycle))
852 scaled ((latin_wide_xheight_r-latin_wide_low_r)/2)
853 shifted ((xpart centre_pt,(latin_wide_xheight_r*latin_wide_low_r)/2)
854 *(35,0)),
855 (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
856 expand_pbox;
857 enddef;

```



```

858
859 vardef tsu_curve.latin.lowd =
860   push_pbox_toexpand("latin.lowd");
861   (x1*x4)/2=500;
862   (x1-x4)=(y1-y3)*0.51;
863   x2=x1+x6;
864   x3=0.4[x2,x4];
865   x5=0.45[x2,x4];
866
867   y1=latin_wide_high_v;
868   y2=y3=latin_wide_low_h;
869   y4=0.47[y3,y5];
870   y5=latin_wide_xheight_h;
871   y6=0.91[y3,y5];
872
873   push_stroke(z1-z2{left}..{left}z3..{up}z4..{right}z5..z6,
874     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
875   replace_stroke(0)(subpath (0,4.97) of oldp);
876   set_botip(0,1);
877   set_boserif(0,0,1);
878   set_boserif(0,1,2);

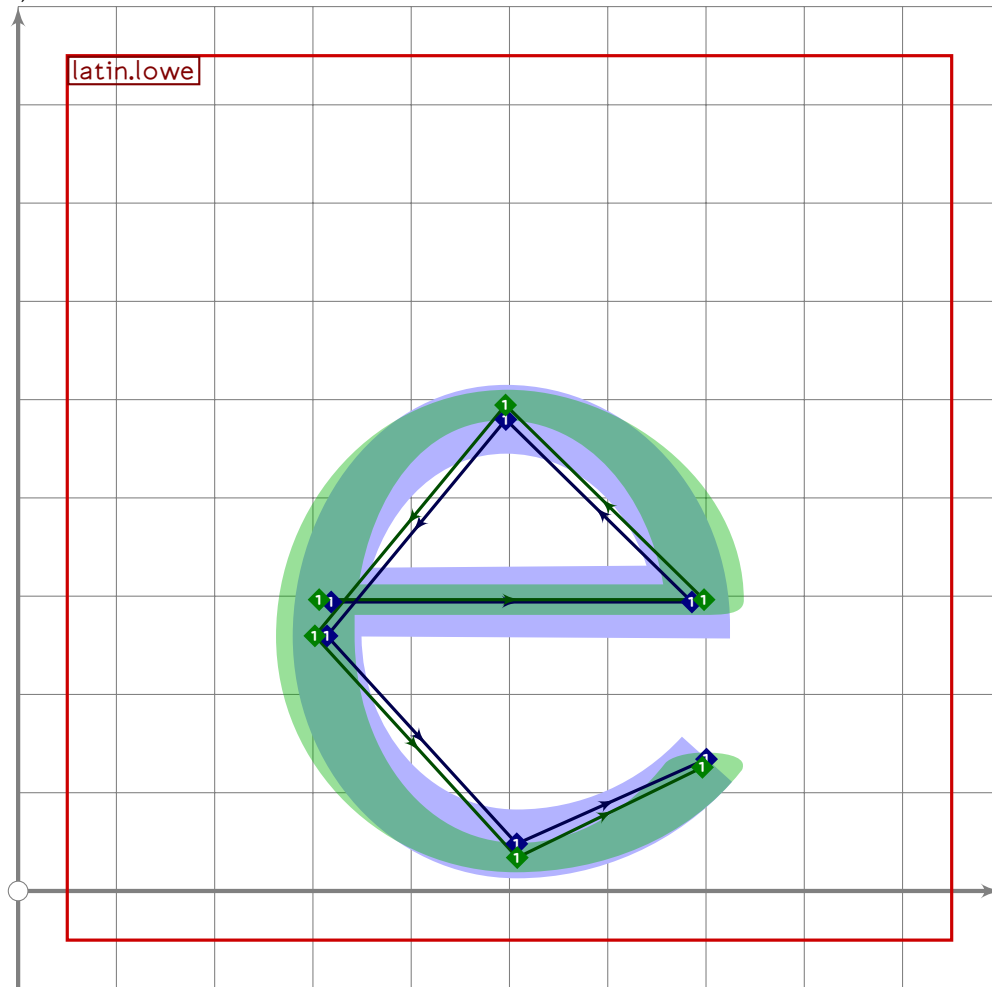
```



```

879 expand_pbox;
880 enddef;

```



```

881
882 vardef tsu_curve.latin.lowe =
883   push_pbox_toexpand("latin.lowe");
884   y2=0.57[y5,y3];
885   y3=latin_wide_xheight_r;
886   y4=0.49[y5,y3];
887   y5=latin_wide_low_r;
888   y6=0.35[y5,y2];
889
890   (x2*x4)/2=500;
891   (x2-x4)=0.86*(y3-y5);
892   x3=0.49[x4,x2];
893   x5=0.52[x4,x2];
894   x6=1.04[x4,x2]-(if sharp_corners: 0 else: (mbrush_width/3) fi);
895
896   push_stroke(z2{curl 0.7}..z3{left}..z4{down}..z5{right}..z6,
897     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
898   z1=get_strokep(0) intersectionpoint ((z2*(-1000,0))-z2*(-10,0));
899   replace_strokep(0)((z1*2*right)-oldp);

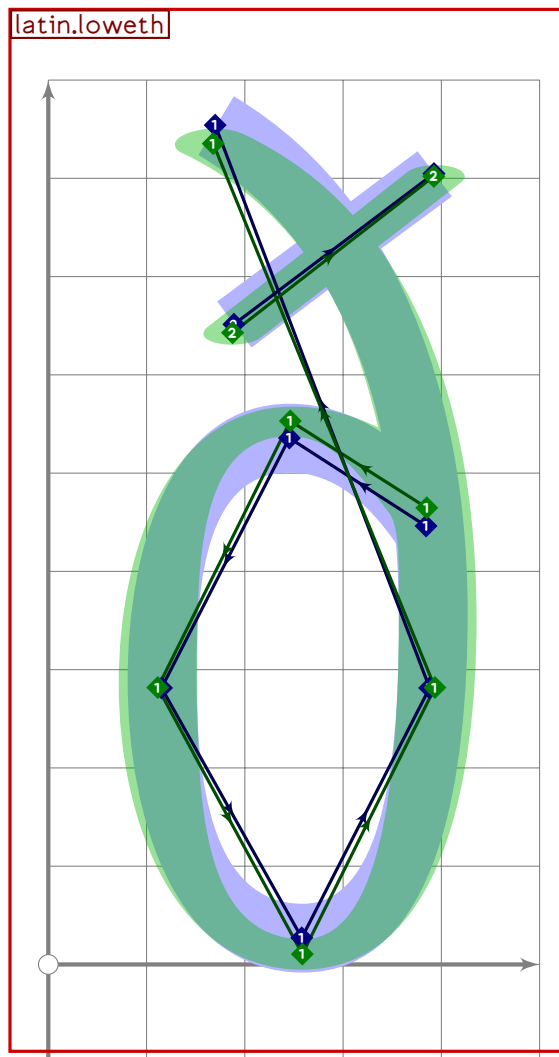
```



```

919 y7=latin_wide_low_h;
920 y8=0.18[y7,y5];
921
922 push_stroke(z1-z2{dir 88}..z3{right}..z4..{dir 200}z5{dir 350}..
923   z6..z7{left}..z8{dir 120},
924   (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-
925   (1.6,1.6)-(1.6,1.6)-(1.6,1.6));
926 set_botip(0,4,0);
927 set_boserif(0,0,1);
928
929 push_stroke((x1-150,latin_wide_xheight_h)-(x1,latin_wide_xheight_h),
930   (1.6,1.6)-(1.6,1.6));
931 expand_pbox;
932 enddef;

```



```

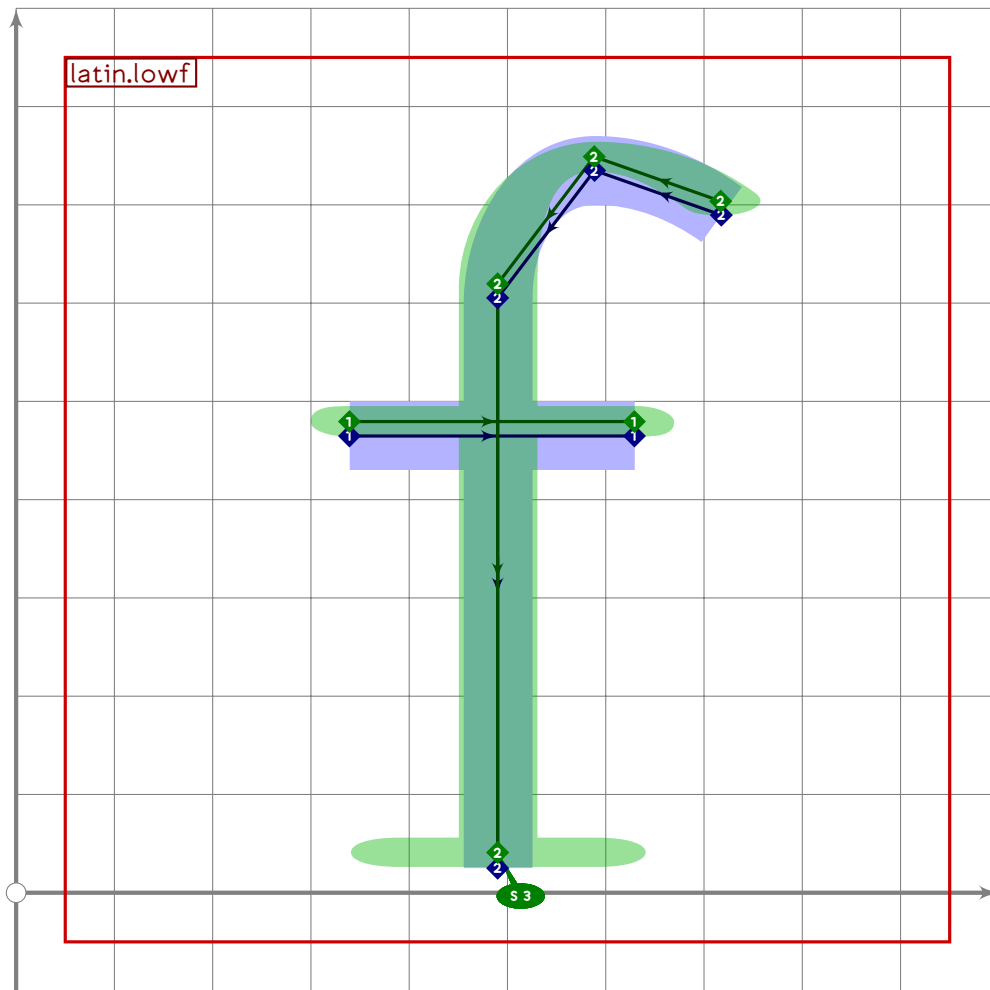
933
934 vardef tsu_curve.latin.loweth =
935   push_pbox_toexpand("latin.loweth");
936   (x3*x5)/2=(x2*x4)/2=510;
937   x4*x2=20;

```

```

938 (x5-x3)=(y2-y4);
939 x1=1.3[x3,x5];
940 x6=0.2[x3,x5];
941
942 y1=0.25[y4,y2];
943 y3=y5=0.5[y4,y2];
944 y2=latin__wide__xheight__r;
945 y4=latin__wide__low__r;
946 y6=latin__wide__high__v;
947
948 push_stroke(z1..z2{left}..z3..z4{right}..z5..{curl 0.6}z6,
949 (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
950 replace_strokep(0)(subpath (xpart ((subpath (0,1) of oldp)
951 intersectiontimes
952 (subpath (2,infinity) of oldp)),infinity) of oldp);
953
954 z7=point 4.67 of get_strokep(0);
955 z8=z7*whatever*dir 202;
956 x8=0.27[x3,x5];
957 z9=2[z8,z7];
958
959 push_stroke(z8-z9,(1.5,1.5)-(1.5,1.5));
960 set_bosize(0)(85);
961 expand_pbox;
962 enddef;

```

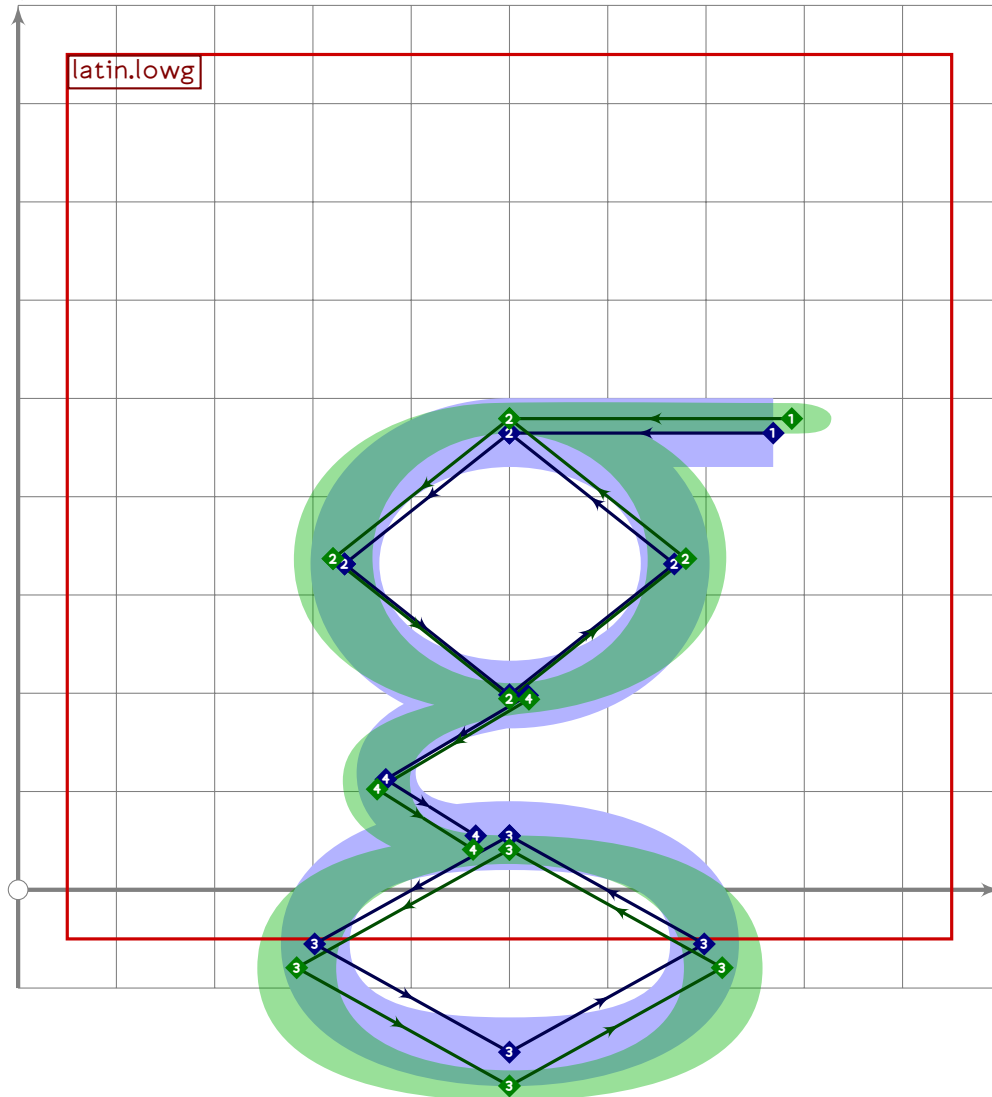


```

963
964 vardef tsu_curve.latin.lowf =
965   push_pbox_toexpand("latin.lowf");
966   (x2-x1)=290;
967   x5=x6=490=0.52[x1,x2];
968   x3-x5=2*(y4-y5);
969   x4=0.38[x5,x3];
970
971   y1=y2=latin_wide_xheight_h;
972   y5=0.52[y2,y4];
973   y3=0.73[y2,y4];
974   y4=latin_wide_high_r;
975   y6=latin_wide_low_v;
976
977   push_stroke(z1-z2,(1.6,1.6)-(1.6,1.6));
978
979   push_stroke(z3{curl 0.6}..z4{left}..{dir 268}z5{down}-z6,
980     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
981   replace_stroke(0)(subpath (0.23,3) of oldp);
982   set_boserif(0,3,3);
983   expand_pbox;

```

984 endif;



985

986 vardef tsu_curve.latin.lowg =

987 push_pbox_toexpand("latin.lowg");

988 x2=x4=x7=x9=500;

989 x1=1.6[x2,x5];

990 x5-x2=x2-x3;

991 x5-x3=1.26*(y2-y4);

992 x6=0.25[x3,x2];

993 x10-x7=x7-x8;

994 x10-x8=1.8*(y7-y9);

995

996 y1=y2=latin_wide_xheight_h;

997 y3=y5=0.5[y4,y2];

998 y4=0.35[y7,y2];

999 y6=0.4[y7,y4];

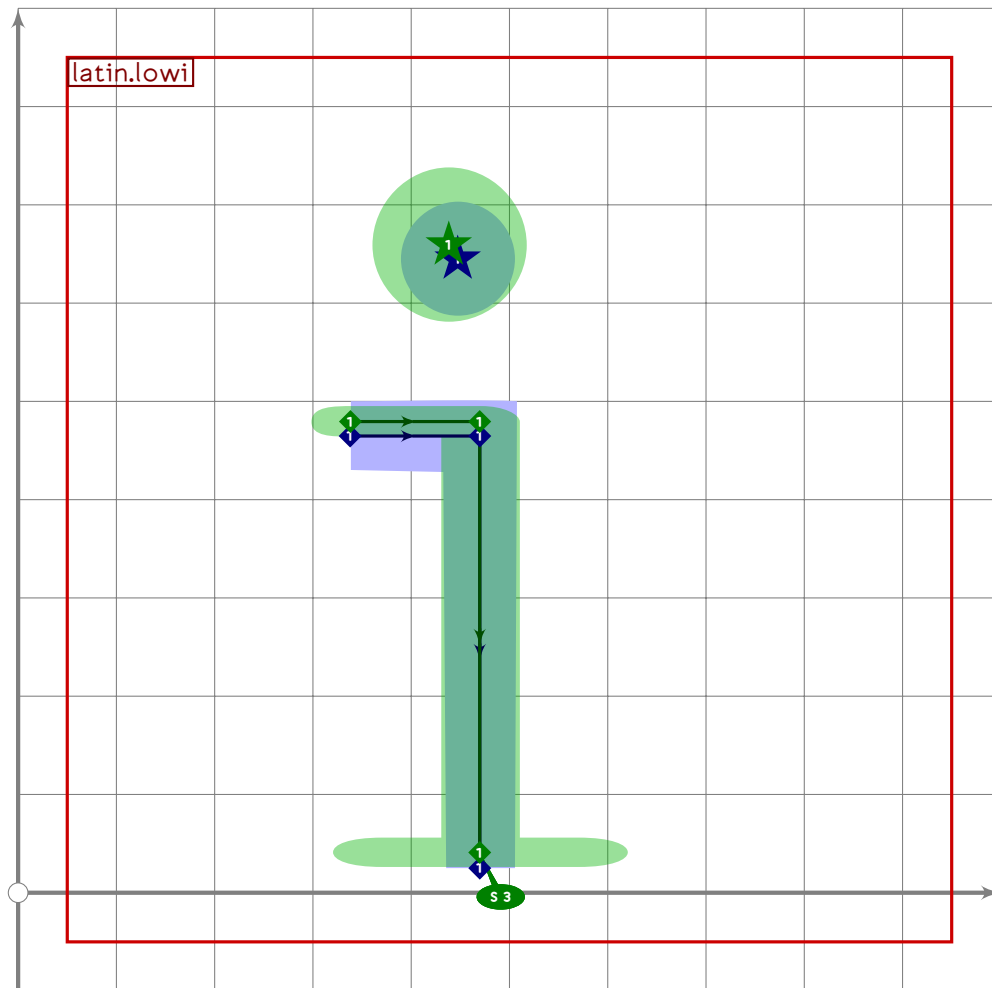
1000 y7=latin_wide_low_h;

1001 y8=y10=0.5[y9,y7];


```

1023 (x1+x5)/2=510;
1024 (x5-x1)=(y1-y2)*0.44;
1025 x2=x1=x3;
1026 x4=0.55[x3,x5];
1027 x6=x5;
1028
1029 y1=latin__wide__high__v;
1030 y2=y6=latin__wide__low__v;
1031 y3=0.77[y2,y4];
1032 y4=latin__wide__xheight__h;
1033 y5=0.60[y2,y4];
1034
1035 push__stroke(z1-z2,(1.6,1.6)-(1.6,1.6));
1036 set__boserif(0,0,1);
1037 set__boserif(0,1,3);
1038
1039 push__stroke(z3..z4{right}..z5{dir 273}-z6,
1040 (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
1041 replace__strokep(0)(subpath (0.03,3) of oldp);
1042 set__boserif(0,3,2);
1043 expand__pbox;
1044 enddef;

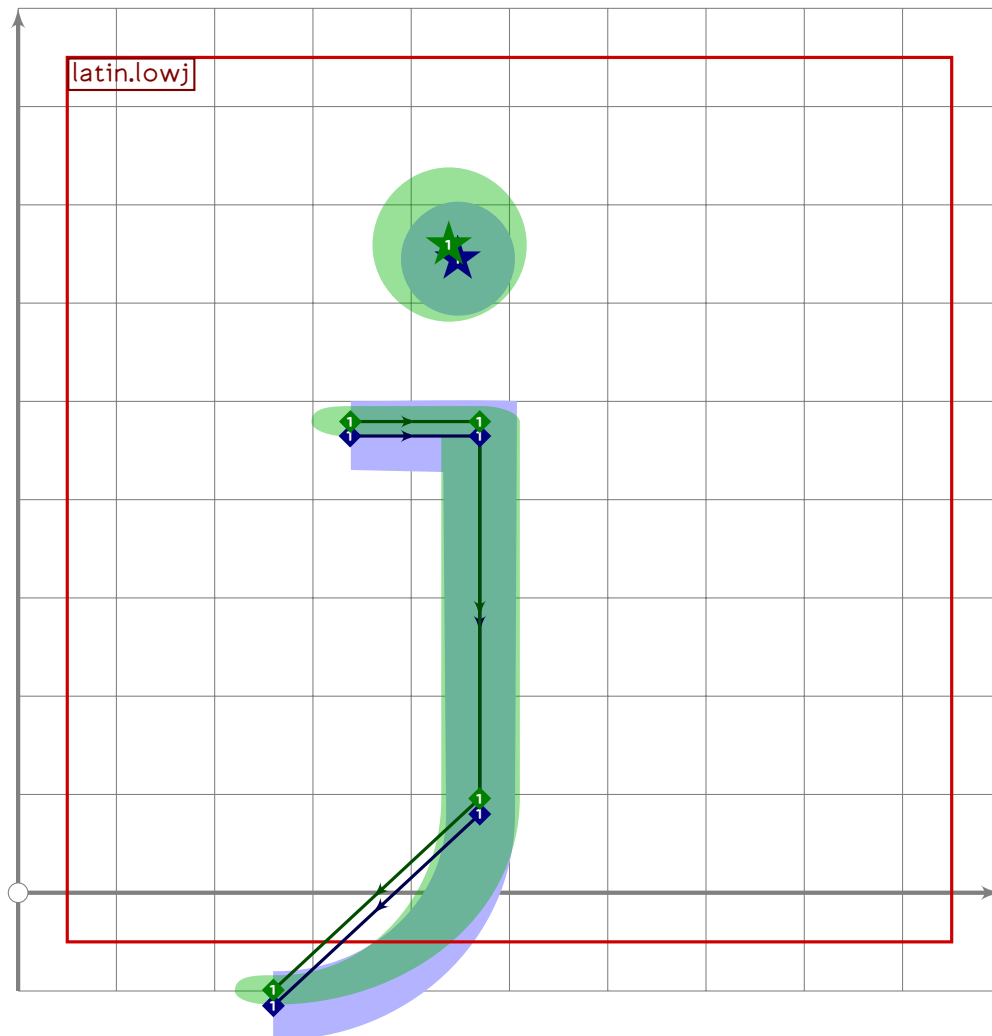
```

```

1045
1046 vardef tsu_curve.latin.lowi =
1047   push_pbox_toexpand("latin.lowi");
1048   x2=x3;
1049   0.85[x1,x2]=450;
1050   (x2-x1)=0.3(y2-y3);
1051   x4=x2-mbrush_width*0.6;
1052
1053   y1=y2=latin_wide_xheight_h;
1054   y3=latin_wide_low_v;
1055   y4=0.5[y2,latin_wide_high_v]*mbrush_width;
1056
1057   push_stroke(z1-z2-z3,(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
1058   set_botip(0,1,1);
1059   set_boserif(0,2,3);
1060
1061   push_lcblob(fullcircle rotated 45 scaled (mbrush_width*2.7*15)
1062     shifted (z4 transformed tsu_rescale_xform)
1063     transformed inverse tsu_rescale_xform);
1064   expand_pbox;
1065 enddef;

```



```

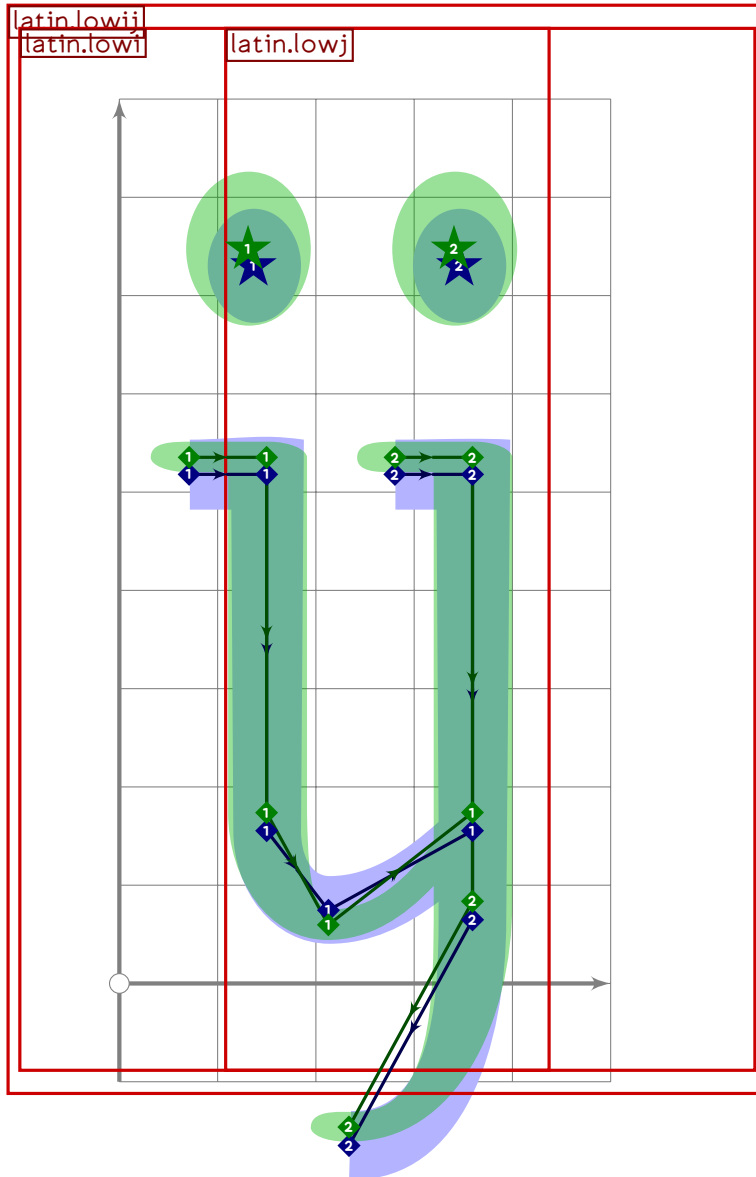
1066
1067 vardef tsu_curve.latin.lowj =
1068   push_pbox_toexpand("latin.lowj");
1069   x2=x3;
1070   0.85[x1,x2]=450;
1071   (x2-x1)=0.3(y2-y3);
1072   x5=x2-mbrush_width*0.6;
1073
1074   y1=y2=latin_wide_xheight_h;
1075   y3=latin_wide_low_v;
1076   y5=0.5[y2,latin_wide_high_v]+mbrush_width;
1077
1078   z4=z3*(-210,-140);
1079
1080   push_stroke((z1-z2-(z3*(0,55))).{curl 0.8}z4,
1081     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
1082   set_botip(0,1,1);
1083
1084   push_lcblob(fullcircle scaled (mbrush_width*2.7*15)
1085     shifted (z5 transformed tsu_rescale_xform)

```

```

1086     transformed inverse tsu_rescale_xform);
1087     expand_pbox;
1088 endif;

```



```

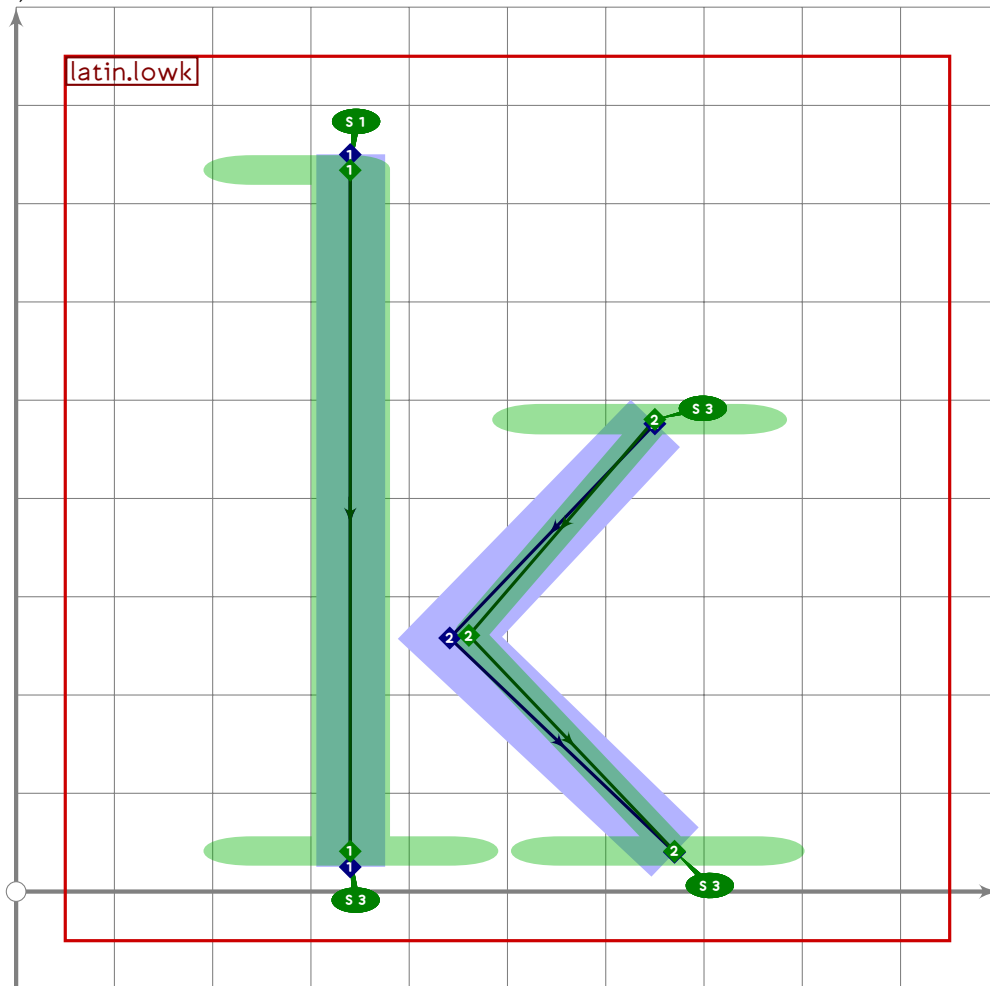
1089
1090 vardef tsu_curve.latin.lowij =
1091     push_pbox_toexpand("latin.lowij");
1092     tsu_xform(identity shifted (-200,0))(tsu_curve.latin.lowj);
1093     numeric x[],y[];
1094     tsu_xform(identity shifted (150,0))(tsu_curve.latin.lowj);
1095     replace_lcblob(-1)(get_lcblob(0) shifted (-350,0));
1096     numeric x[],y[];
1097     z1=point 1.7 of get_strokep(-1);
1098     x2=0.3[x1,x3];
1099     y2=vmetric(0.05);
1100     z3=point 1.8 of get_strokep(0);
1101     replace_strokep(-1)((subpath (0,1) of oldp)-

```

```

1102 z1{dir 273}..z2{right}..{curl 0.3}z3);
1103 replace_stroke(-1)((subpath (0,1) of oldq)-(1.6,1.6)-(1.6,1.6)-(1,1));
1104 set_boserif(-1,2,whatever);
1105 expand_pbox;
1106 enddef;

```



```

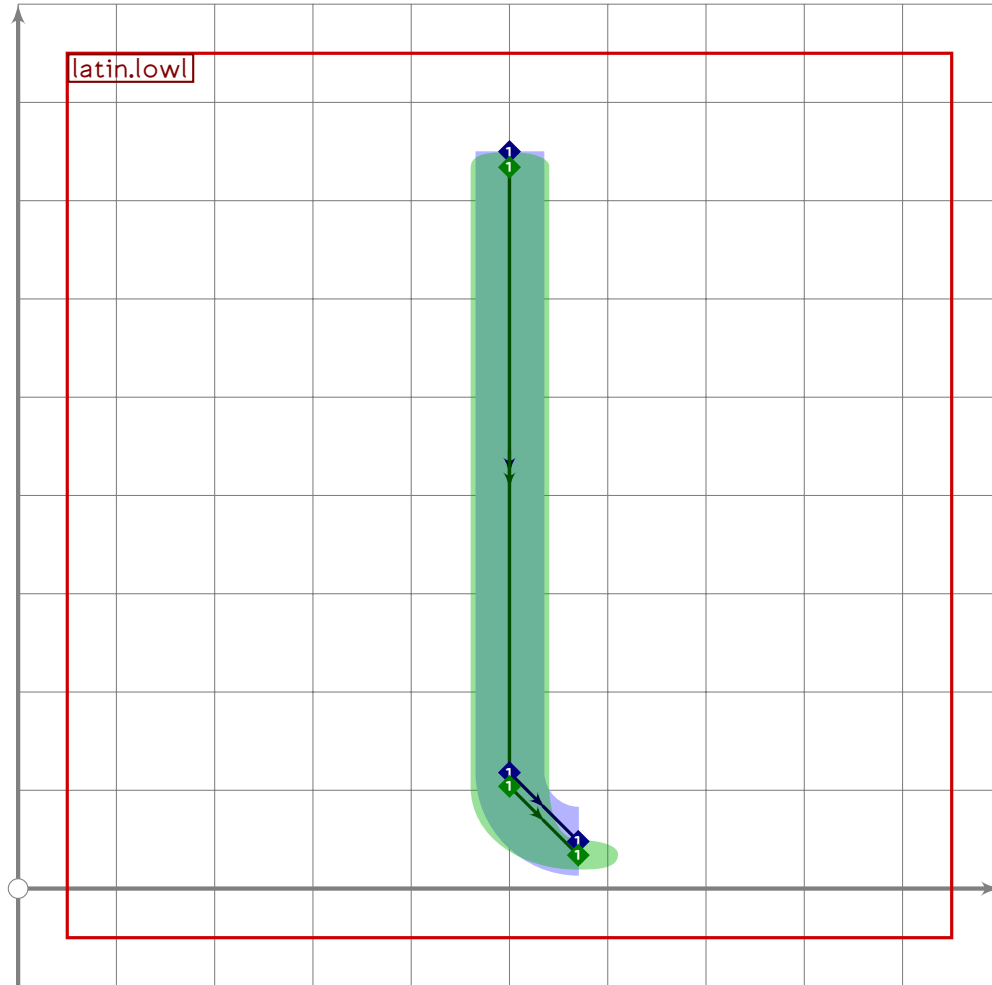
1107
1108 vardef tsu_curve.latin.lowk =
1109   push_pbox_toexpand("latin.lowk");
1110   z1=(340,latin_wide_high_v);
1111   z2=(340,latin_wide_low_v);
1112   z3=(650,(latin_wide_xheight_v*latin_wide_xheight_h)/2);
1113   x4=340+mbrush_width*if sharp_corners: 2.7 else: 2.3 fi;
1114   y4=(y3+y5)/2;
1115   z5=(670,0.5[latin_wide_low_h,latin_wide_low_v]);
1116
1117   push_stroke(z1-z2,(1.6,1.6)-(1.6,1.6));
1118   set_boserif(0,0,1);
1119   set_boserif(0,1,3);
1120
1121   push_stroke(z3-z4-z5,(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
1122   set_botip(0,1,1);

```

```

1123 set_boserif(0,0,3);
1124 set_boserif(0,2,3);
1125 set_boalternate(0);
1126 expand_pbox;
1127 enddef;

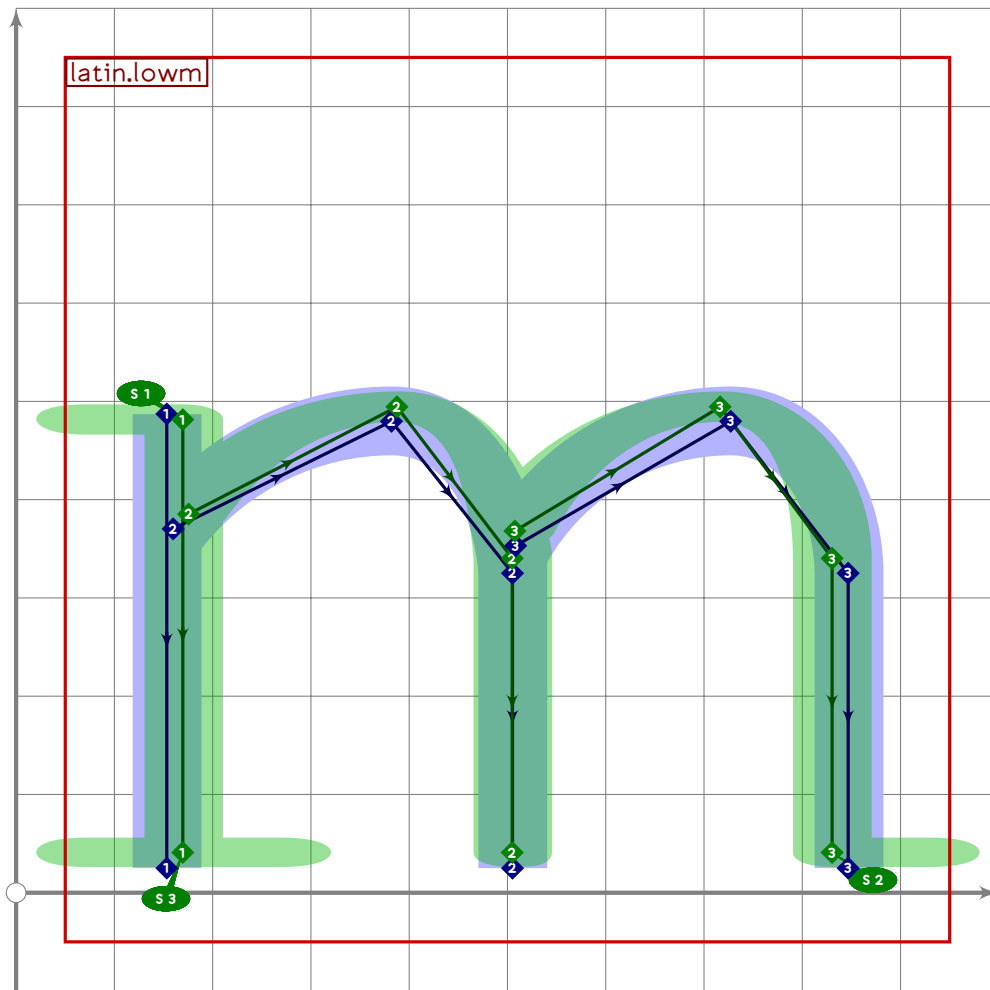
```



```

1128
1129 vardef tsu_curve.latin.lowl =
1130   push_pbox_toexpand("latin.lowl");
1131   x1=x2=500;
1132   x3=570;
1133
1134   y1=latin_wide_high_v;
1135   y2=y3*(x3-x2);
1136   y3=latin_wide_low_r;
1137
1138   push_stroke(z1-z2{down}..{right}z3,(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
1139   expand_pbox;
1140 enddef;

```



```

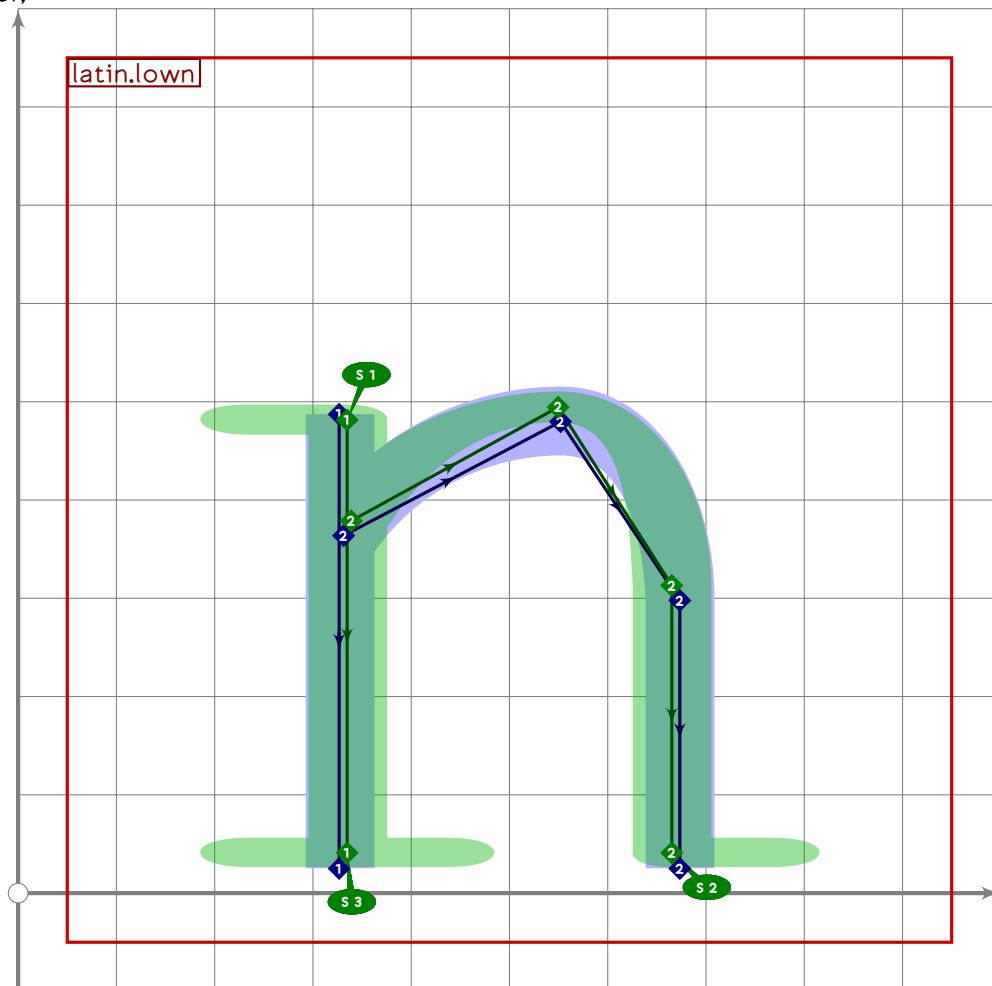
1141
1142 vardef tsu_curve.latin.lowm =
1143   push_pbox_toexpand("latin.lowm");
1144   (x1+x9)/2=500;
1145   (x9-x1)*2=(y1-y2)*3;
1146   (x5-x1)=(x9-x5)*1.03;
1147   x2=x1+x3;
1148   x4=0.65[x3,x5];
1149   x6=x5;
1150   x8=0.65[x6,x9];
1151   x9=x10;
1152
1153   y1=latin_wide_xheight_v;
1154   y2=y6=y10=latin_wide_low_v;
1155   y3=0.74[y2,y4];
1156   y4=y8=latin_wide_xheight_r;
1157   y5=y9=0.66[y2,y4];
1158
1159   push_stroke(z1-z2,(1.6,1.6)-(1.6,1.6));
1160   set_boserif(0,0,1);
1161   set_boserif(0,1,3);

```

```

1162
1163 push_stroke(z3..z4{right}..z5{dir 275}-z6,
1164   (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
1165 replace_stroke(0)(subpath (0.04,3) of oldp);
1166
1167 z7=get_stroke(0) intersectionpoint (z3-z9);
1168
1169 push_stroke(z7..z8{right}..z9{dir 271}-z10,
1170   (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
1171 replace_stroke(0)(subpath (0.04,3) of oldp);
1172 set_boserif(0,3,2);
1173 expand_pbox;
1174 enddef;

```



```

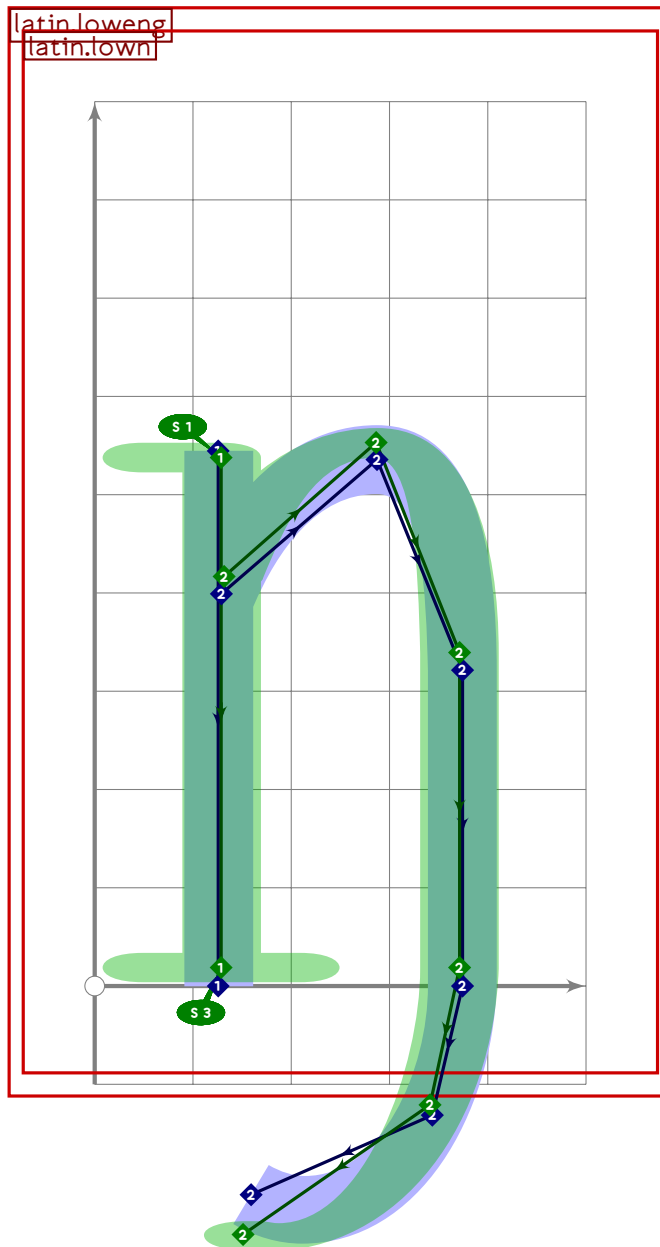
1175
1176 vardef tsu_curve.latin.lown =
1177   push_pbox_toexpand("latin.lown");
1178   (x1*x5)/2=500;
1179   (x5-x1)=(y1-y2)*0.75;
1180   x2=x1=x3;
1181   x4=0.65[x3,x5];
1182   x6=x5;

```

```

1183
1184 y1=latin_wide_xheight_v;
1185 y2=y6=latin_wide_low_v;
1186 y3=0.73[y2,y4];
1187 y4=latin_wide_xheight_r;
1188 y5=0.60[y2,y4];
1189
1190 push_stroke(z1-z2,(1.6,1.6)-(1.6,1.6));
1191 set_boserif(0,0,1);
1192 set_boserif(0,1,3);
1193
1194 push_stroke(z3..z4{right}..z5{dir 273}-z6,
1195   (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
1196 replace_strokep(0)(subpath (0.03,3) of oldp);
1197 set_boserif(0,3,2);
1198 expand_pbox;
1199 endif;

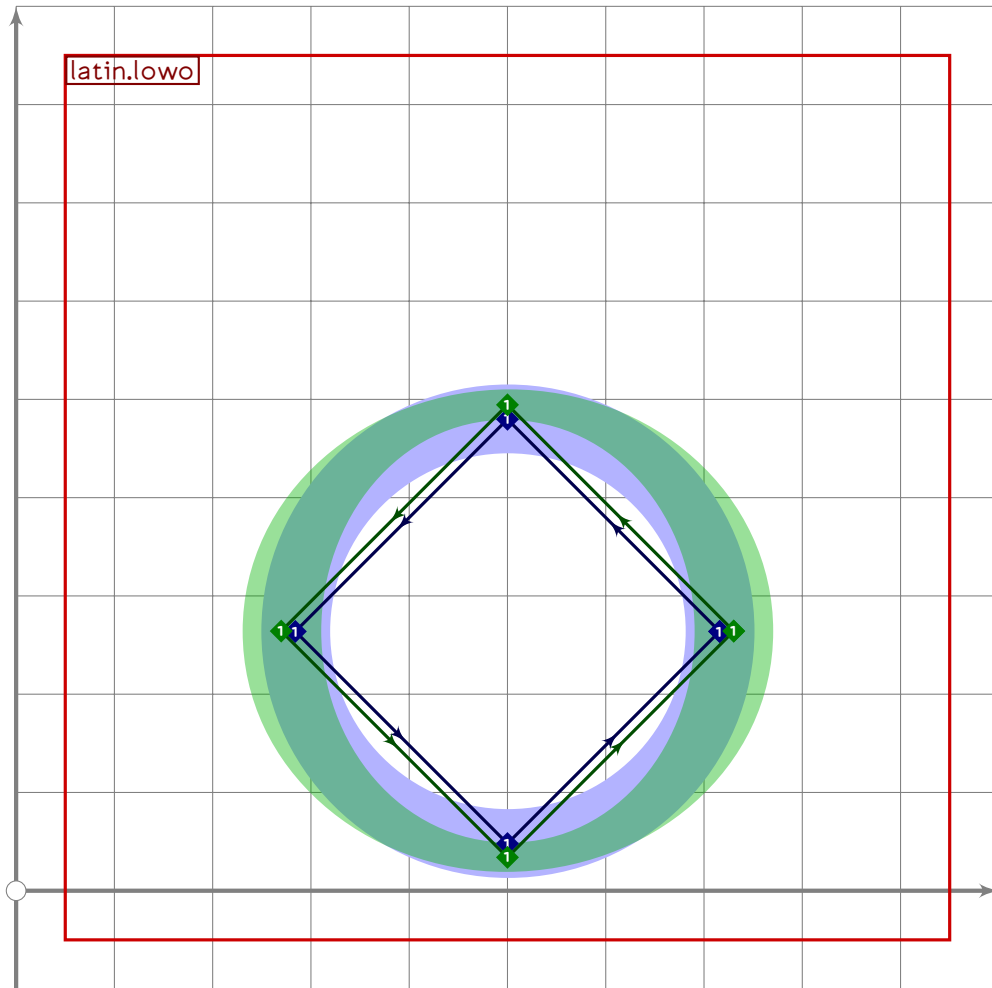
```

```

1200
1201 vardef tsu_curve.latin.loweng =
1202   push_pbox_toexpand("latin.loweng");
1203   tsu_curve.latin.lown;
1204   x7=x6-300;
1205   y7=latin_wide_desc_h;
1206   replace_strokep(0)(oldp{dir 266}..{curl 0.8}z7);
1207   replace_strokep(0)(insert_nodes(oldp)(3.3));
1208   replace_strokeq(0)(oldq-(1.6,1.6)-(1.6,1.6));
1209   set_boserif(0,3,whatever);
1210   expand_pbox;
1211 enddef;

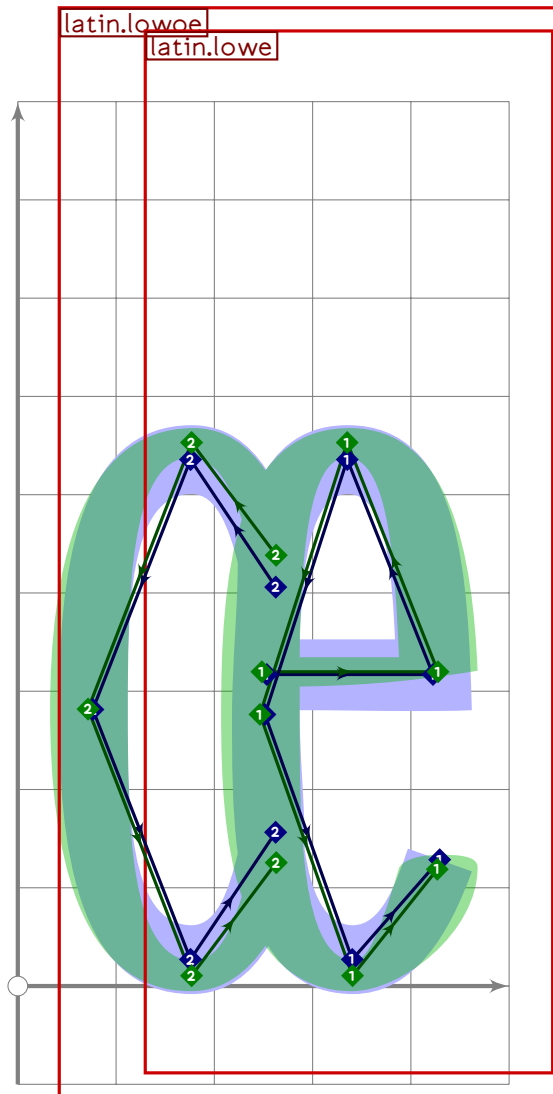
```



```

1212
1213 vardef tsu_curve.latin.lowo =
1214   push_pbox_toexpand("latin.lowo");
1215   push_stroke(((1,0)..(0,1)..(-1,0)..(0,-1)..cycle)
1216     scaled ((latin_wide_xheight_r-latin_wide_low_r)/2)
1217     shifted (xpart centre_pt,(latin_wide_xheight_r*latin_wide_low_r)/2),
1218     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-cycle);
1219   expand_pbox;
1220 enddef;

```



```

1221
1222 vardef tsu_curve.latin.lowoe =
1223   push_pbox_toexpand("latin.lowoe");
1224   tsu_xform(identity shifted (190,0))(tsu_curve.latin.lowe);
1225   push_stroke(((1,0)..(0,1)..(-1,0)..(0,-1)..(1,0))
1226     scaled ((latin_wide_xheight_r-latin_wide_low_r)/2)
1227     shifted (340,0.5[latin_wide_xheight_r,latin_wide_low_r]),
1228     (1.2,1.2)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.2,1.2));
1229   replace_strokep(0)(subpath (xpart (oldp intersectiontimes
1230     (subpath (2,infinity) of get_strokep(-1))),
1231     4-xpart ((reverse oldp) intersectiontimes get_strokep(-1)))
1232     of oldp);
1233   expand_pbox;
1234 enddef;

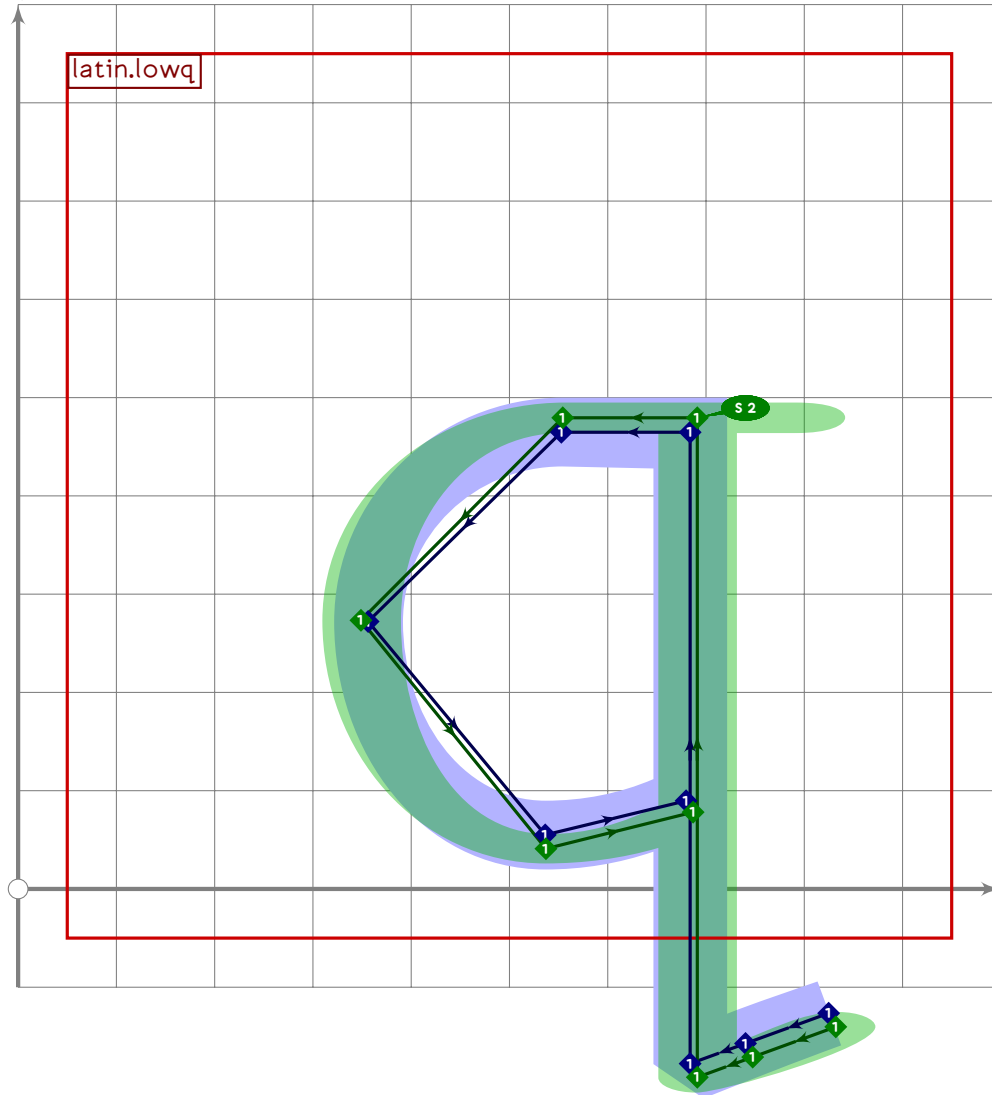
```



```

1252     (1.6,1.6)-(1.6,1.6));
1253     replace_strokep(0)(subpath (0,4.97) of oldp);
1254     set_botip(0,1,1);
1255     set_boserif(0,0,3);
1256     set_boserif(0,1,1);
1257     expand_pbox;
1258 enddef;

```



```

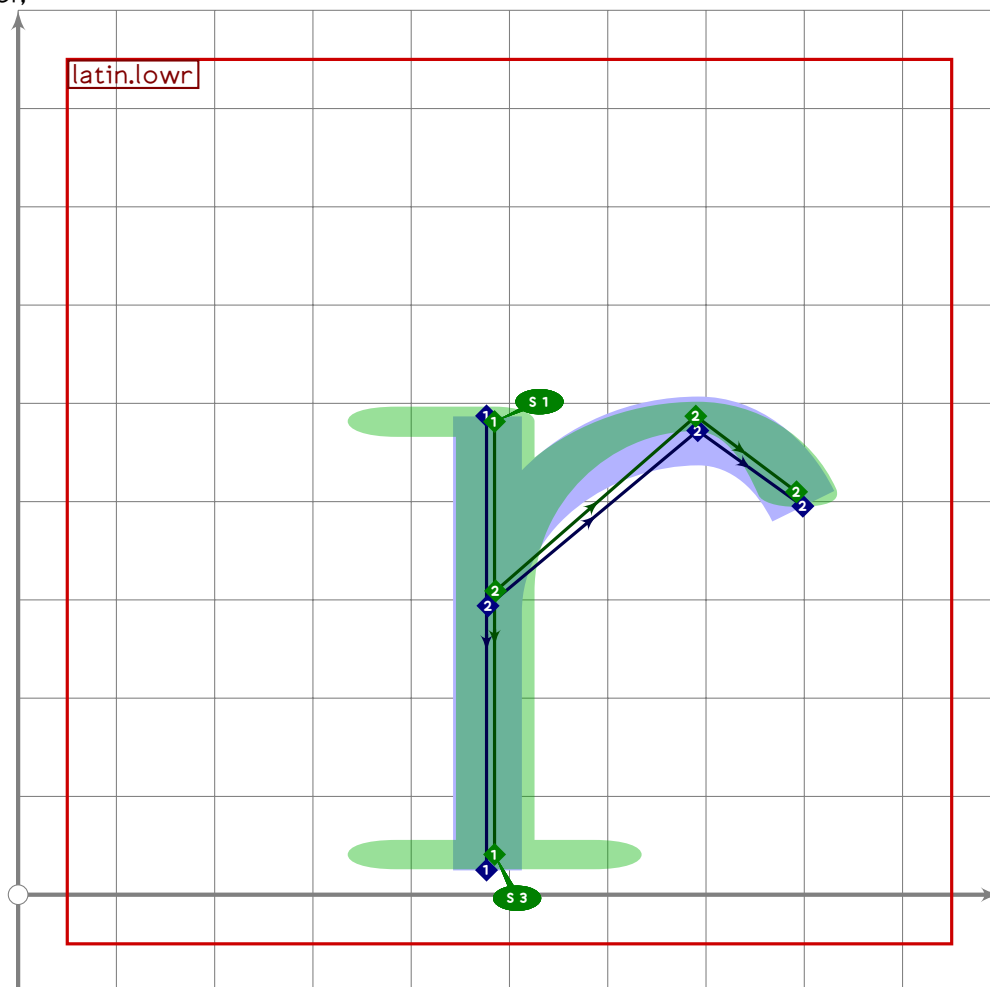
1259
1260 vardef tsu_curve.latin.lowq =
1261     push_pbox_toexpand("latin.lowq");
1262     (x1+x4)/2=520;
1263     (x1-x4)=(y2-y1)*0.51;
1264     x2=x1+x6;
1265     x3=0.4[x2,x4];
1266     x5=0.45[x2,x4];
1267
1268     y1=latin_wide_desc_v;
1269     y2=y3=latin_wide_xheight_h;

```

```

1270 y4=0.47[y3,y5];
1271 y5=latin_wide_low_h;
1272 y6=0.91[y3,y5];
1273
1274 z0=z1*150*(dir 20);
1275
1276 push_stroke(z0-(0.6[z0,z1])-z1-z2{left}..
1277   {left}z3..{down}z4..{right}z5..z6,
1278   (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-
1279   (1.6,1.6)-(1.6,1.6)-(1.6,1.6));
1280 replace_stroke(0)(subpath (0,6.97) of oldp);
1281 set_botip(0,2,0);
1282 set_botip(0,3,1);
1283 set_boserif(0,3,2);
1284 expand_pbox;
1285 enddef;

```



```

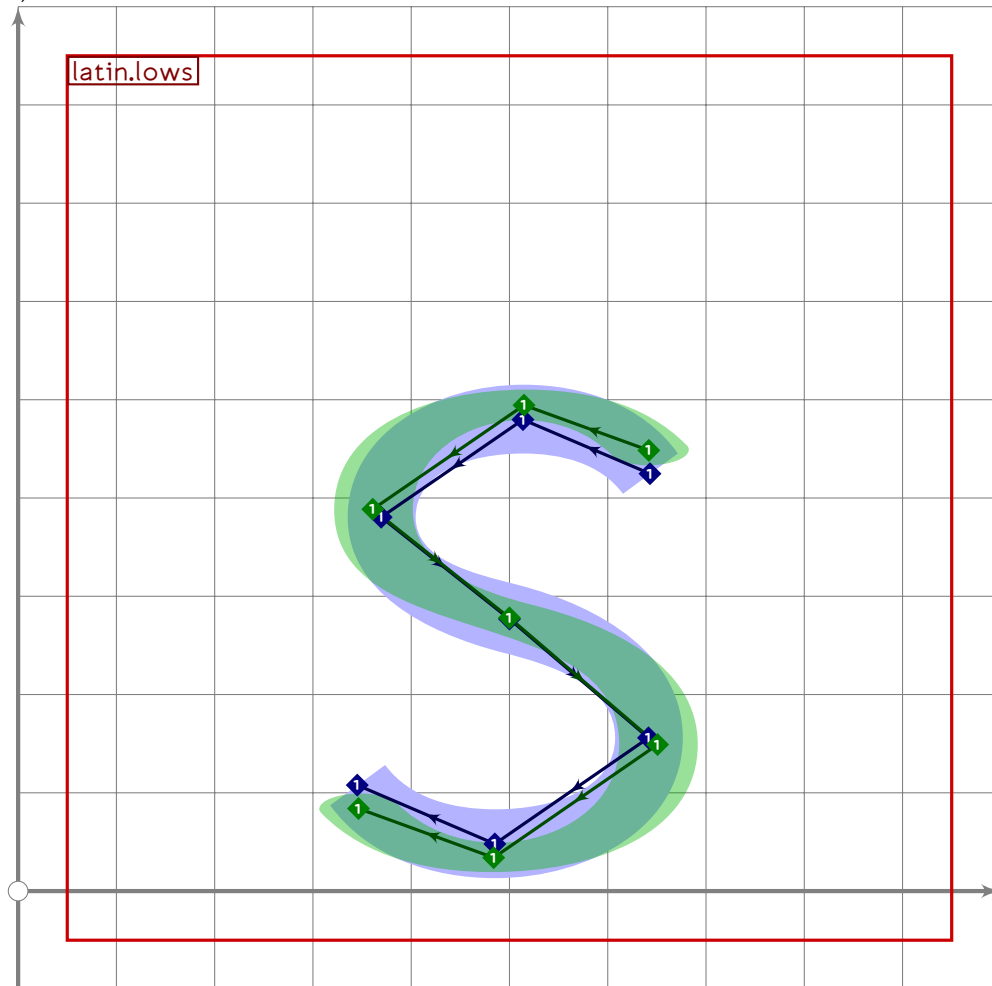
1286
1287 vardef tsu_curve.latin.lowr =
1288   push_pbox_toexpand("latin.lowr");
1289   (x1*x5)/2=650;
1290   (x5-x1)=(y1-y2)*0.75;

```

```

1291 x2=x1=x3;
1292 x4=0.62[x3,x5];
1293
1294 y1=latin_wide_xheight_v;
1295 y2=latin_wide_low_v;
1296 y3=0.58[y2,y4];
1297 y4=0.5[latin_wide_xheight_h,latin_wide_xheight_r];
1298 y5=0.60[y2,y4];
1299
1300 push_stroke(z1-z2,(1.6,1.6)-(1.6,1.6));
1301 set_boserif(0,0,1);
1302 set_boserif(0,1,3);
1303
1304 push_stroke(z3..z4{right}..{dir 273}z5,
1305 (1.6,1.6)-(1.6,1.6)-(1.6,1.6));
1306 replace_strokep(0)(subpath (0.03,1.6) of oldp);
1307 expand_pbox;
1308 enddef;

```



```

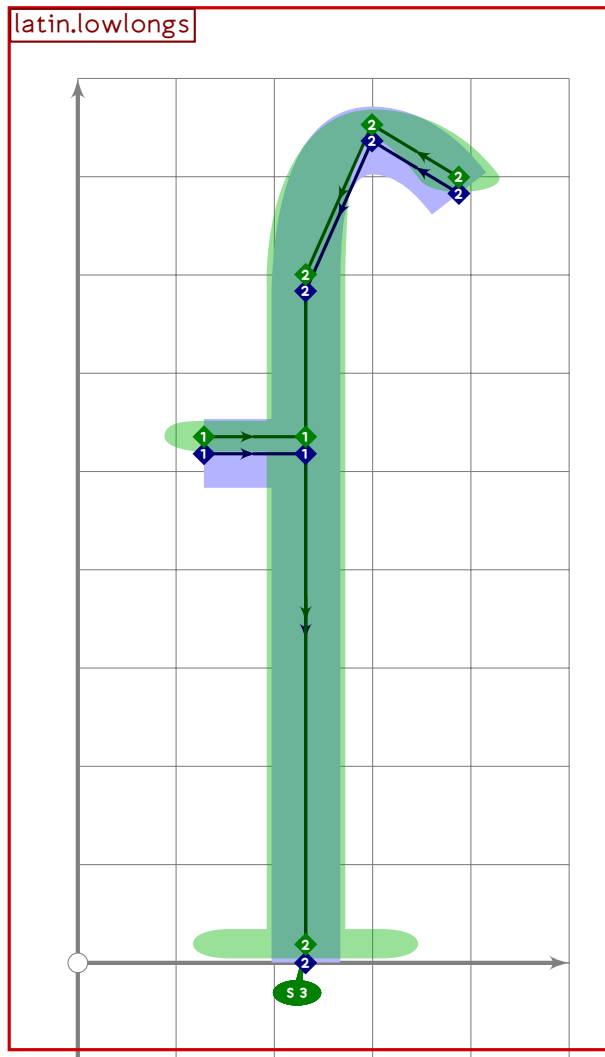
1309
1310 vardef tsu_curve.latin.lows =
1311   push_pbox_toexpand("latin.lows");

```

```

1312 transform ta,tb;
1313 path mycurve;
1314
1315 mycurve:=(1,0)..(0,1)..(-1,0);
1316
1317 y2=latin_wide_xheight_r;
1318 y0=y3=0.77[y6,y2];
1319 y4=0.53[y6,y2];
1320 y5=y8=0.25[y6,y2];
1321 y6=latin_wide_low_r;
1322
1323 0.48[x1,x7]=0.48[x2,x6]=0.48[x3,x5]=x4=500;
1324 x5-x1=5;
1325 x5-x7=(y2-y6)*0.67;
1326
1327 (point 0 of mycurve) transformed ta=z0;
1328 (point 0.35 of mycurve) transformed ta=z1;
1329 (point 1 of mycurve) transformed ta=z2;
1330 (point 2 of mycurve) transformed ta=z3;
1331 xypart ta=0;
1332
1333 (point 0 of mycurve) transformed tb=z8;
1334 (point 0.35 of mycurve) transformed tb=z7;
1335 (point 1 of mycurve) transformed tb=z6;
1336 (point 2 of mycurve) transformed tb=z5;
1337
1338 if sharp_corners:
1339   mycurve:=subpath (0.29,2) of mycurve;
1340 else:
1341   mycurve:=subpath (0.38,2) of mycurve;
1342 fi;
1343
1344 push_stroke((mycurve transformed ta)..z4..(reverse mycurve transformed tb),
1345   (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-
1346   (1.6,1.6)-(1.6,1.6));
1347 expand_pbox;
1348 enddef;

```

```

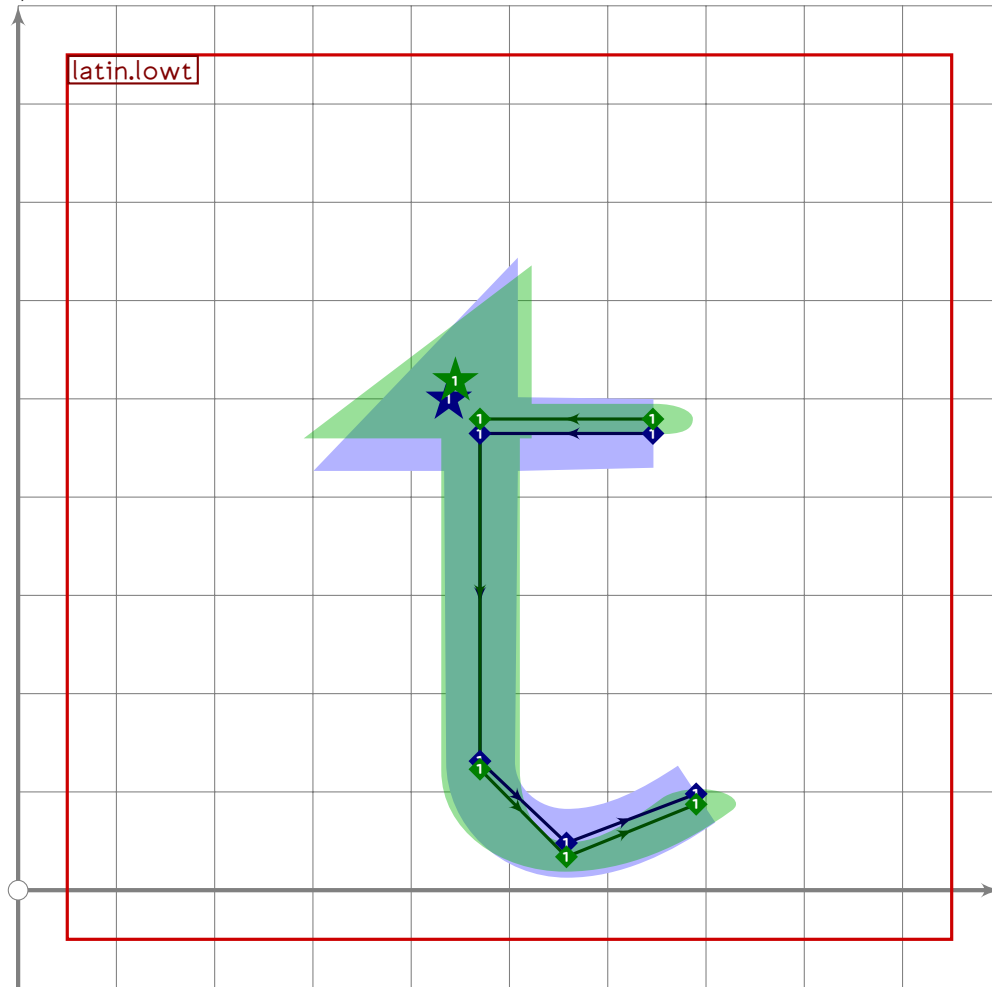
1349
1350 vardef tsu_curve.latin.lowlongs =
1351   push_pbox_toexpand("latin.lowlongs");
1352   (x2-x1)=290;
1353   x5=x6=490=0.52[x1,x2];
1354   x3-x5=2*(y4-y5);
1355   x4=0.38[x5,x3];
1356
1357   y1=y2=latin_wide_xheight_h;
1358   y5=0.52[y2,y4];
1359   y3=0.73[y2,y4];
1360   y4=latin_wide_high_r;
1361   y6=latin_wide_low_v;
1362
1363   push_stroke(z1-(x5,y1),(1.6,1.6)-(1.6,1.6));
1364
1365   push_stroke(z3{curl 0.6}..z4{left}..{dir 268}z5{down}-z6,
1366     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
1367   replace_strokep(0)(subpath (0.23,3) of oldp);

```

```

1368 set_boserif(0,3,3);
1369 expand_pbox;
1370 enddef;

```



```

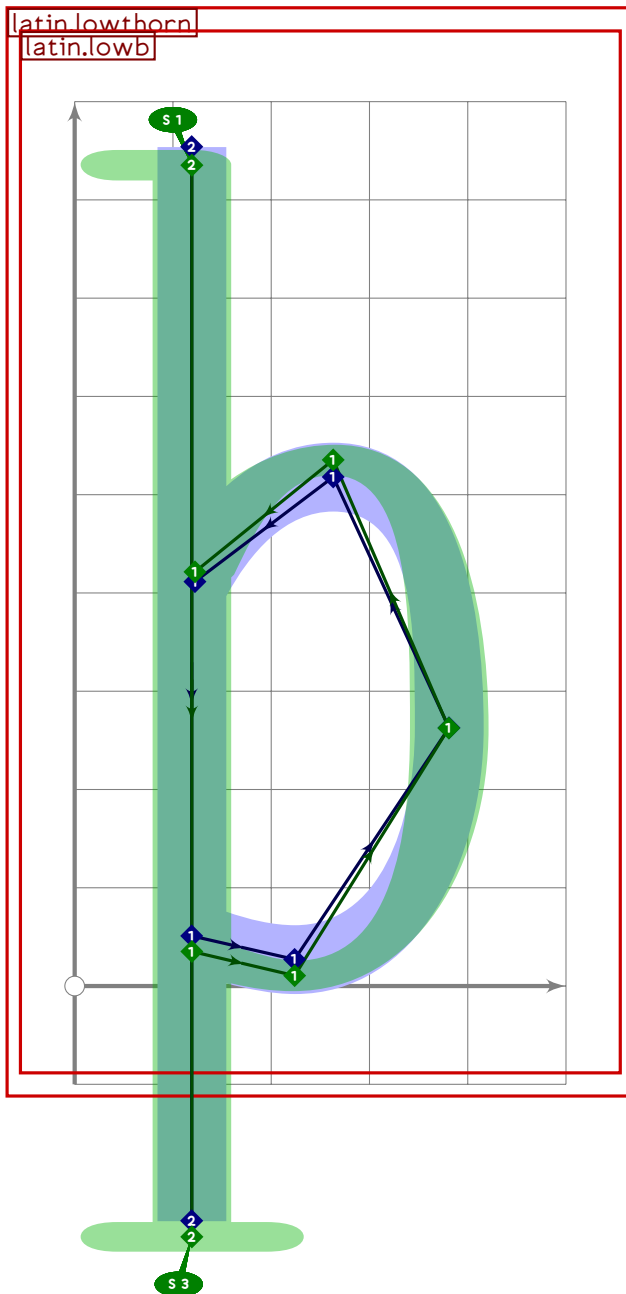
1371
1372 vardef tsu_curve.latin.lowt =
1373   push_pbox_toexpand("latin.lowt");
1374   x2=x3=x10=470;
1375   x1=0.2[x5,x2];
1376   x4=0.6[x5,x2];
1377   x5-x2=220;
1378
1379   y1=y2=y6=latin_wide_xheight_h;
1380   y3=0.2[y4,y1];
1381   y4=latin_wide_low_r;
1382   y5=0.12[y4,y1];
1383   y10=vmetric(0.83);
1384
1385   if is_proportional:
1386     z10-z6=whatever*dir 58;
1387   else:
1388     z10-z6=whatever*dir 47;

```

```

1389 fi;
1390
1391 if tsu_pbrush_size<30:
1392     push_stroke(z1-z6-z10-z3{down}..z4{right}..{curl 0.2}z5,
1393         (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
1394     set_botip(0,1,1);
1395     set_botip(0,2,1);
1396 else:
1397     push_stroke(z1-z2-z3{down}..z4{right}..{curl 0.2}z5,
1398         (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
1399     set_botip(0,1,0);
1400 fi;
1401
1402 push_stroke(z6-z1,(0,0)-(0,0));
1403
1404 x7=x8=x2;
1405 x9=x6;
1406
1407 y7=y9=y2;
1408
1409 if is_proportional:
1410     z8-z9=whatever*dir 58;
1411 else:
1412     z8-z9=whatever*dir 47;
1413 fi;
1414
1415 if tsu_pbrush_size>=30:
1416     begingroup
1417         save t; transform t;
1418         t:=tsu_rescale_xform;
1419         push_lcblob((z7 transformed t)*(mbrush_width,mbrush_height))-
1420             ((z8 transformed t)*(mbrush_width,mbrush_height))-
1421             ((z9 transformed t)*(mbrush_width,mbrush_height))-cycle);
1422         replace_lcblob(0)(oldblob transformed inverse t);
1423     endgroup;
1424 fi;
1425 expand_pbox;
1426 enddef;

```



```

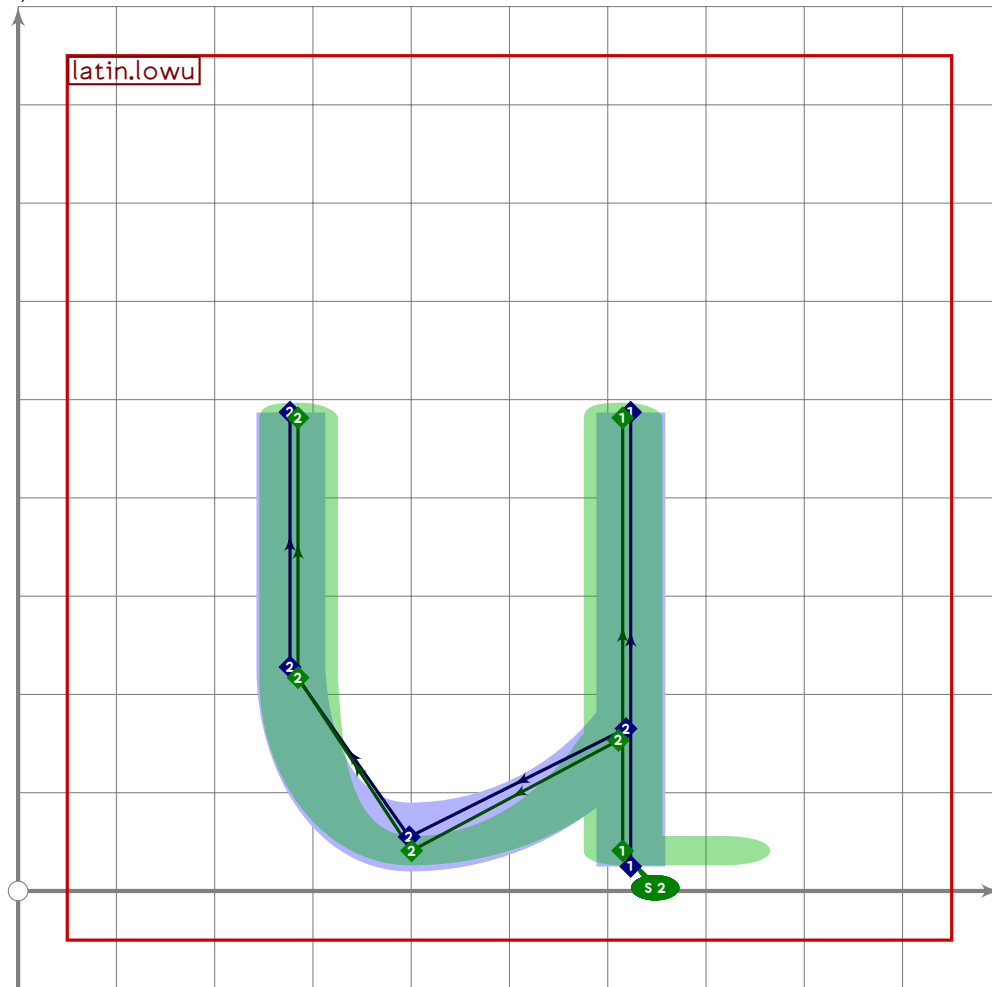
1427
1428 vardef tsu_curve.latin.lowthorn =
1429   push_pbox_toexpand("latin.lowthorn");
1430   tsu_curve.latin.lowb;
1431   set_botip(0,1,whatever);
1432   set_boserif(0,0,whatever);
1433   push_stroke((point 0 of get_strokep(0))–
1434     (xpart point 0 of get_strokep(0),latin_wide_desc_v),
1435     (1.6,1.6)–(1.6,1.6));
1436   set_boserif(0,0,1);
1437   set_boserif(0,1,3);
1438   replace_strokep(-1)(subpath (1,infinity) of oldp);
1439   replace_strokeq(-1)(subpath (1,infinity) of oldq);

```

```

1440 expand_pbox;
1441 enddef;

```



```

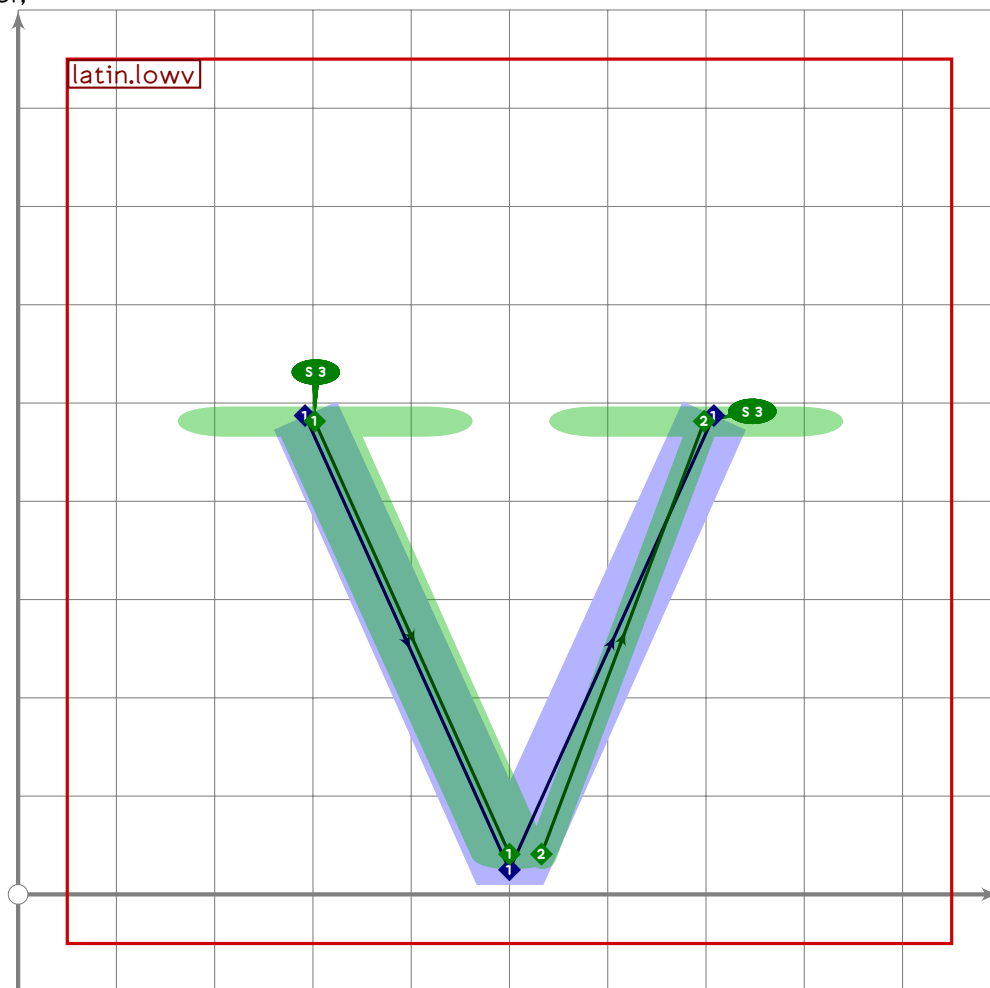
1442
1443 vardef tsu_curve.latin.lowu =
1444   push_pbox_toexpand("latin.lowu");
1445   (x1*x5)/2=450;
1446   (x1-x5)=(y2-y1)*0.75;
1447   x2=x1-x3;
1448   x4=0.65[x3,x5];
1449   x6=x5;
1450
1451   y1=latin_wide_low_v;
1452   y2=y6=latin_wide_xheight_v;
1453   y3=0.73[y2,y4];
1454   y4=latin_wide_low_h;
1455   y5=0.60[y2,y4];
1456
1457   push_stroke(z1-z2,(1.6,1.6)-(1.6,1.6));
1458   set_boserif(0,0,2);
1459
1460   push_stroke(z3..z4{left}..z5{dir 93}-z6,

```

```

1461 (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
1462 replace_stroke(0)(subpath (0,0,3) of oldp);
1463 expand_pbox;
1464 enddef;

```



```

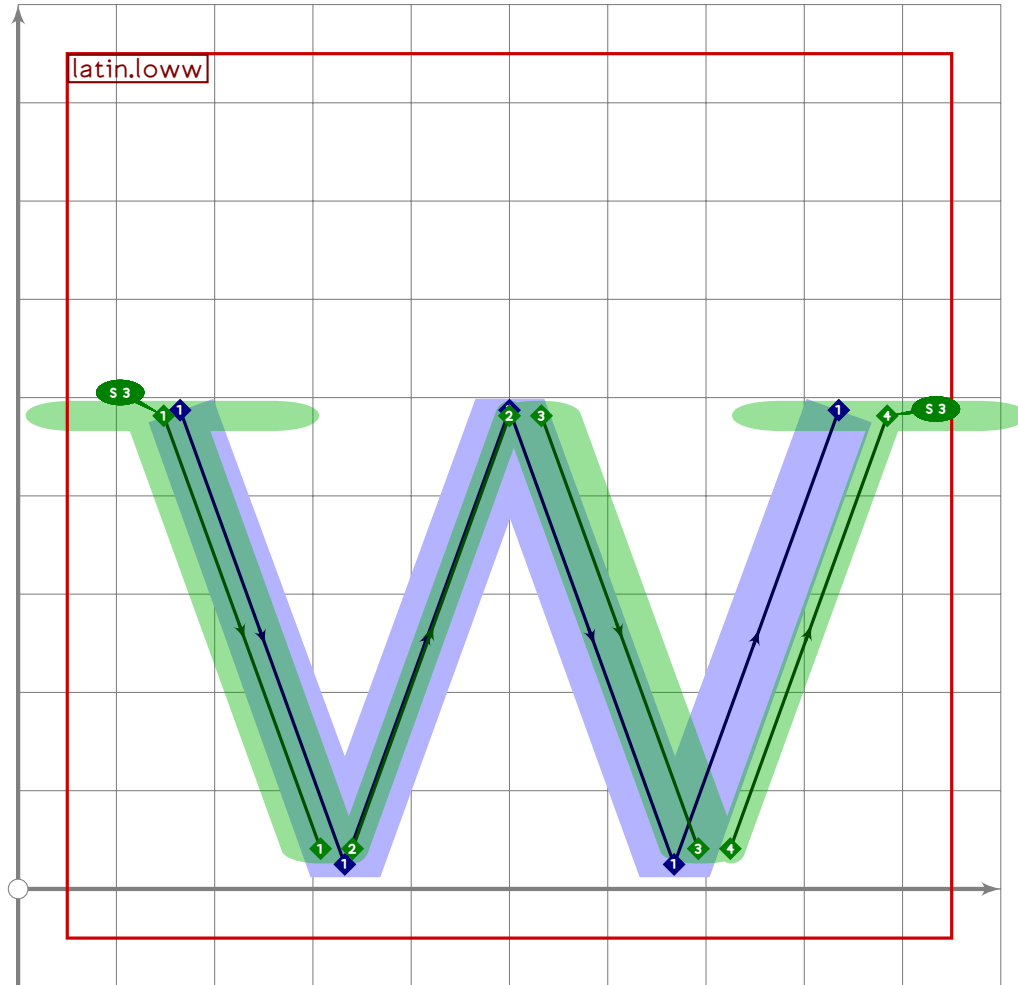
1465
1466 vardef tsu_curve.latin.lowv =
1467   push_pbox_toexpand("latin.lowv");
1468   (x1*x3)/2=x2=500;
1469
1470   y1=y3=latin_wide_xheight_v;
1471   y2=latin_wide_low_v;
1472
1473   (x3-x1)=(y1-y2)*0.9;
1474
1475   if do_alteration:
1476     push_stroke(z1-z2,(1.6,1.6)-(1.6,1.6));
1477     set_boserif(0,0,3);
1478
1479     push_stroke((z2*alternate_adjust*right)-z3,(1.6,1.6)-(1.6,1.6));
1480     set_boserif(0,1,3);
1481     set_boalterate(0);

```

```

1482 else:
1483     push_stroke(z1-z2-z3,(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
1484     set_botip(0,1,0);
1485     set_boserif(0,0,1);
1486 fi;
1487 expand_pbox;
1488 enddef;

```



```

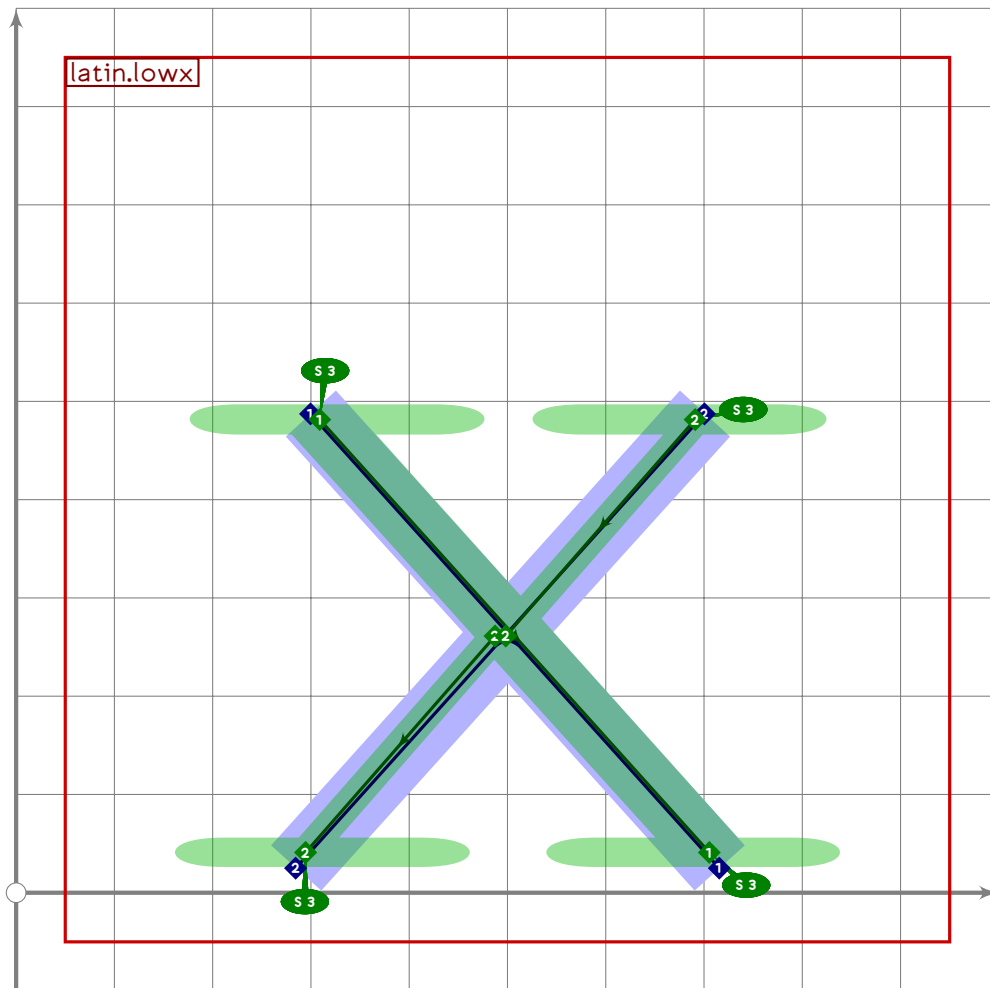
1489
1490 vardef tsu_curve.latin.loww =
1491     push_pbox_toexpand("latin.loww");
1492     (x1+x5)/2=(x2+x4)/2=x3=500;
1493     (x3-x2)=(x2-x1);
1494
1495     y1=y3=y5=latin_wide_xheight_v;
1496     y2=y4=latin_wide_low_v;
1497
1498     (x5-x1)=(y1-y2)*1.45;
1499
1500     if do_alteration:
1501         push_stroke((z1-z2) shifted (alternate_adjust*left),
1502             (1.6,1.6)-(1.6,1.6));

```

```

1503     set_boserif(0,0,3);
1504
1505     push_stroke(z2-z3,
1506               (1.6,1.6)-(1.6,1.6));
1507     set_boalternate(0);
1508
1509     push_stroke((z3-z4) shifted (alternate_adjust*right),
1510               (1.6,1.6)-(1.6,1.6));
1511
1512     push_stroke((z4-z5) shifted (alternate_adjust*right*2),
1513               (1.6,1.6)-(1.6,1.6));
1514     set_boserif(0,1,3);
1515     set_boalternate(0);
1516 else:
1517     push_stroke(z1-z2-z3-z4-z5,
1518               (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
1519     set_botip(0,1,0);
1520     set_botip(0,2,0);
1521     set_botip(0,3,0);
1522     set_boserif(0,0,1);
1523 fi;
1524 expand_pbox;
1525 endif;

```

```

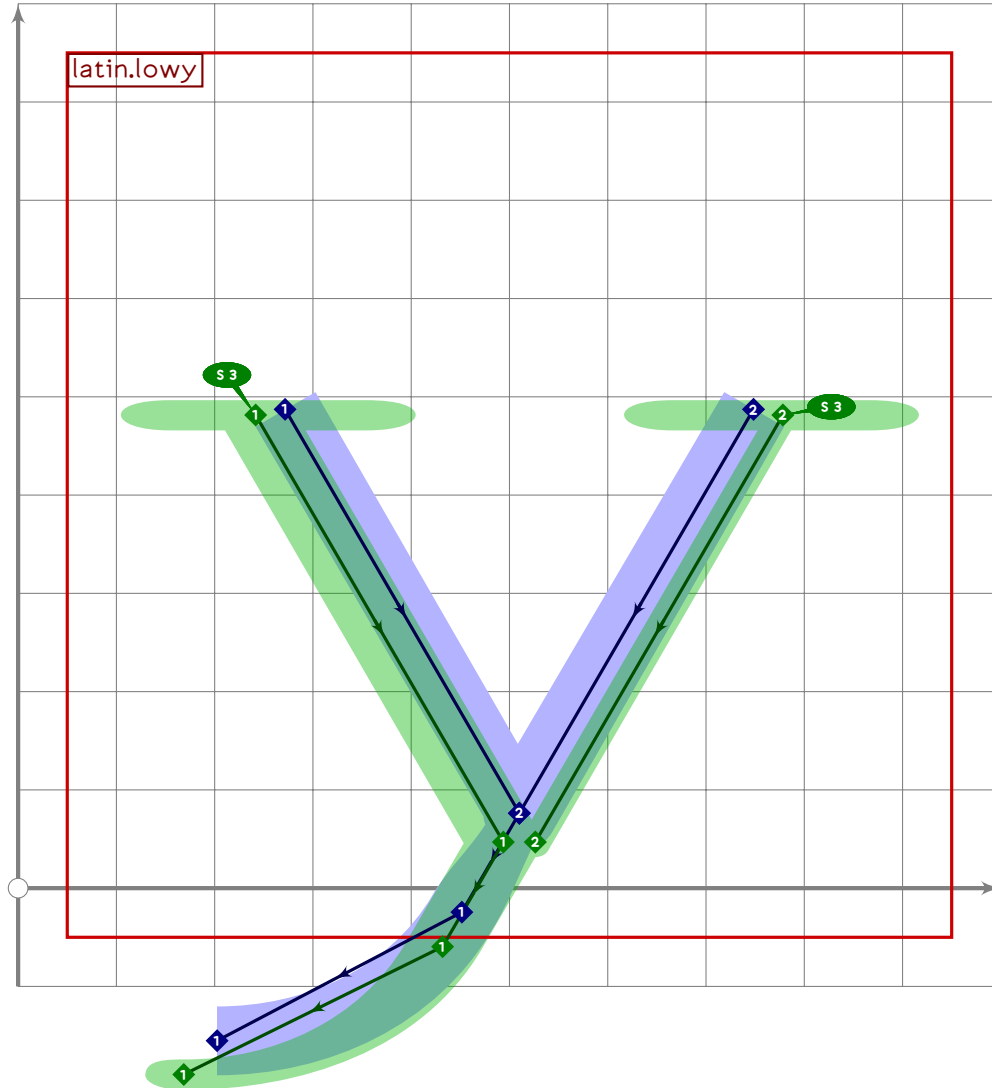
1526
1527 vardef tsu_curve.latin.lowx =
1528   push_pbox_toexpand("latin.lowx");
1529   (x1*x3)/2=500;
1530   (x2*x4)/2=500;
1531   (x2*x3-x1*x4)=((y1-y2)*0.9)*2;
1532   (x3-x1)=(x2-x4)*0.93;
1533
1534   y1=y3=latin_wide_xheight_v;
1535   y2=y4=latin_wide_low_v;
1536
1537   push_stroke(z1-z2,(1.6,1.6)-(1.6,1.6));
1538   set_boserif(0,0,3);
1539   set_boserif(0,1,3);
1540
1541   if do_alteration:
1542     push_stroke(z3-(0.5[z3,z4]*alternate_adjust*right/6)
1543       -(0.5[z3,z4]*alternate_adjust*left/6)-z4,
1544       (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
1545     set_boserif(0,0,3);
1546     set_boserif(0,3,3);

```

```

1547 else:
1548     push_stroke(z3-z4,(1.6,1.6)-(1.6,1.6));
1549     set_boserif(0,0,3);
1550     set_boserif(0,1,3);
1551     fi;
1552     set_boalternate(0);
1553     expand_pbox;
1554 enddef;

```



```

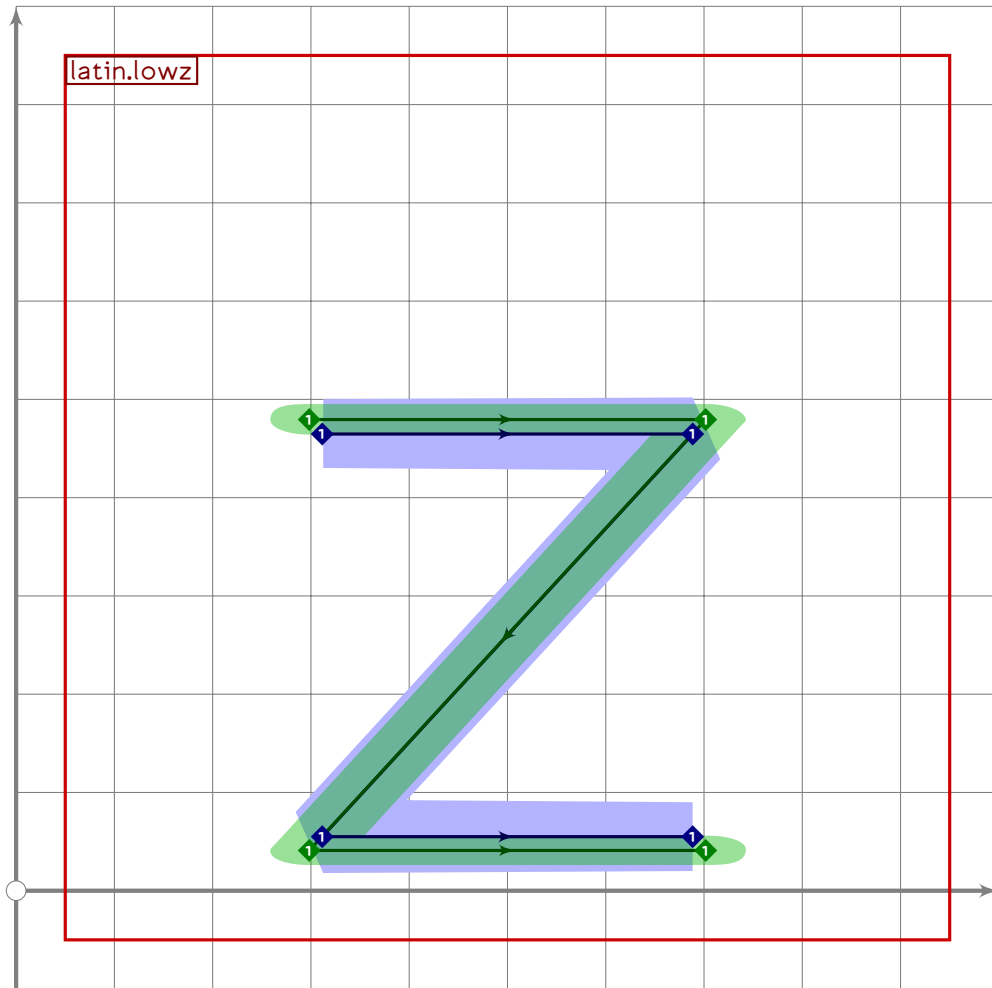
1555
1556 vardef tsu_curve.latin.lowy =
1557     push_pbox_toexpand("latin.lowy");
1558     (x1+x3)/2=(x2+x4)/2=510;
1559     (x2*x3-x1-x4)=((y1-y2)*0.58)*2;
1560     (x3-x1)=(x2-x4)*0.93;
1561     x5=x4-0.1*(x2-x4);
1562
1563     y1=y3=latin_wide_xheight_v;
1564     y2=y4;

```

```

1565 y5=0.5[y4,latin_wide_low_h]=latin_wide_desc_h;
1566
1567 push_stroke(z1-z2,(1.6,1.6)-(1.6,1.6));
1568
1569 push_stroke(z3..tension 10..(0.6[z3,z4])..tension 0.8 and 3..{left}z5,
1570 (1.6,1.6)-(1.6,1.6)-(1.6,1.6));
1571
1572 numeric xchgtime;
1573 xchgtime:=ypart (get_strokep(-1) intersectiontimes get_strokep(0));
1574
1575 replace_strokep(-1)(z1-subpath (xchgtime,infinity) of get_strokep(0));
1576 replace_strokeq(-1)
1577 ((1.6,1.6)-subpath (xchgtime,infinity) of get_strokeq(0));
1578
1579 replace_strokep(0)(subpath (0,xchgtime) of oldp);
1580 replace_strokeq(0)(subpath (0,xchgtime) of oldq);
1581
1582 set_boserif(-1,0,3);
1583 set_boserif(0,0,3);
1584 set_botip(0,1,1);
1585 set_boalternate(0);
1586
1587 if do_alteration:
1588   replace_strokep(-1)(oldp shifted (alternate_adjust*left/2));
1589   replace_strokeq(0)(oldq shifted (alternate_adjust*right/2));
1590 fi;
1591 expand_pbox;
1592 enddef;

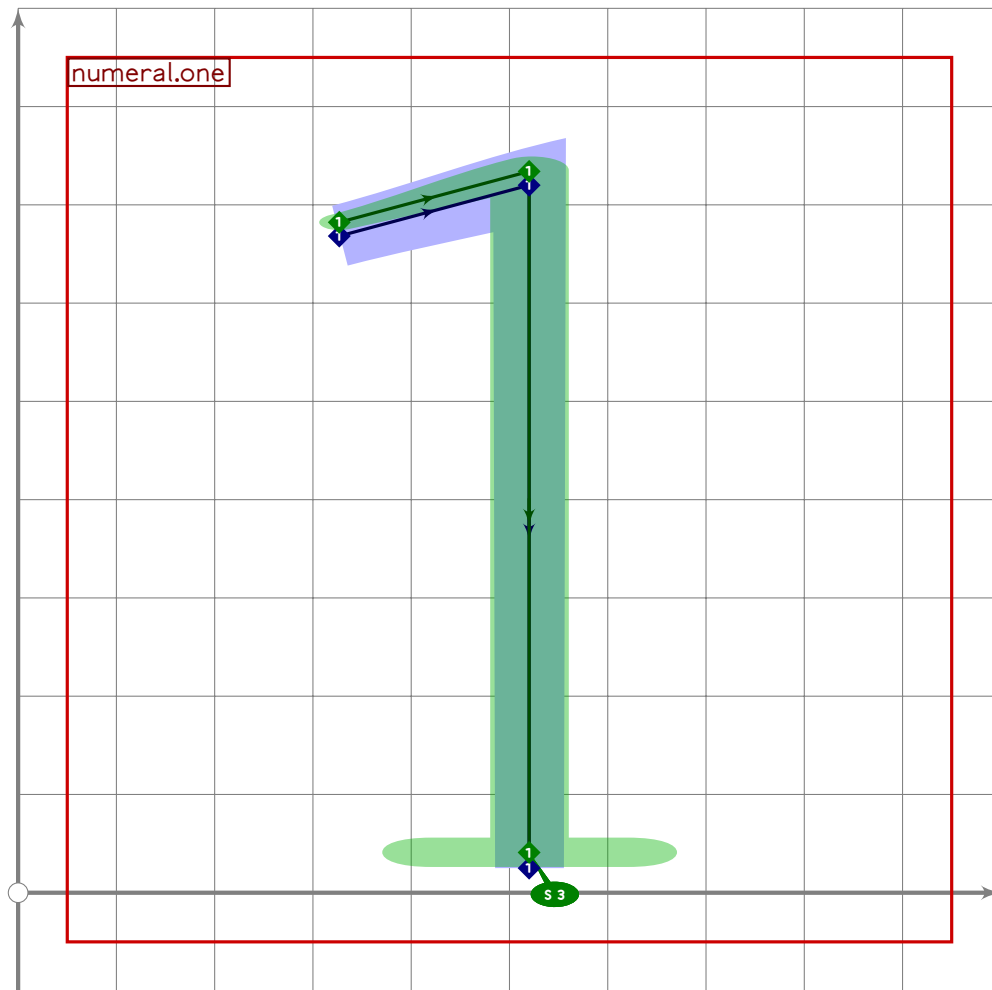
```



```

1593
1594 vardef tsu_curve.latin.lowz =
1595   push_pbox_toexpand("latin.lowz");
1596   y1=y2=latin_wide_xheight_h;
1597   y3=y4=latin_wide_low_h;
1598
1599   x1=x3;
1600   x2=x4;
1601   (x1+x2)/2=500;
1602   (x2-x1)=(y1-y3)*0.92;
1603
1604   push_stroke(z1-z2-z3-z4,(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
1605   set_botip(0,1,0);
1606   set_botip(0,2,0);
1607   expand_pbox;
1608 enddef;

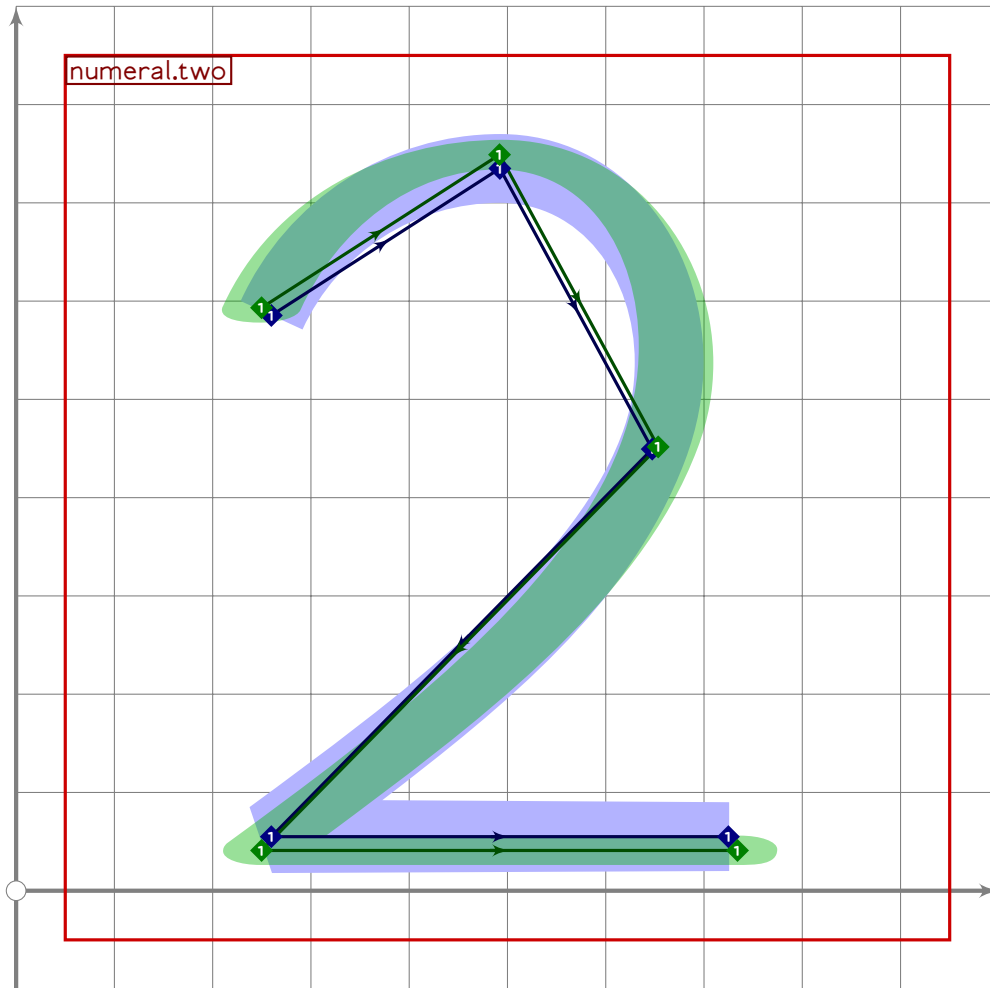
```

```

42
43 vardef tsu_curve.numeral.one =
44   push_pbox_toexpand("numeral.one");
45   x3=x2=520;
46
47   y2=latin_wide_high_h;
48   y3=latin_wide_low_v;
49
50   z1=z2*200*dir 195;
51
52   push_stroke(z1-z2-z3,(1,1,1)-(1.6,1.6)-(1.6,1.6));
53   set_botip(0,1,1);
54   set_boserif(0,2,3);
55   expand_pbox;
56 enddef;

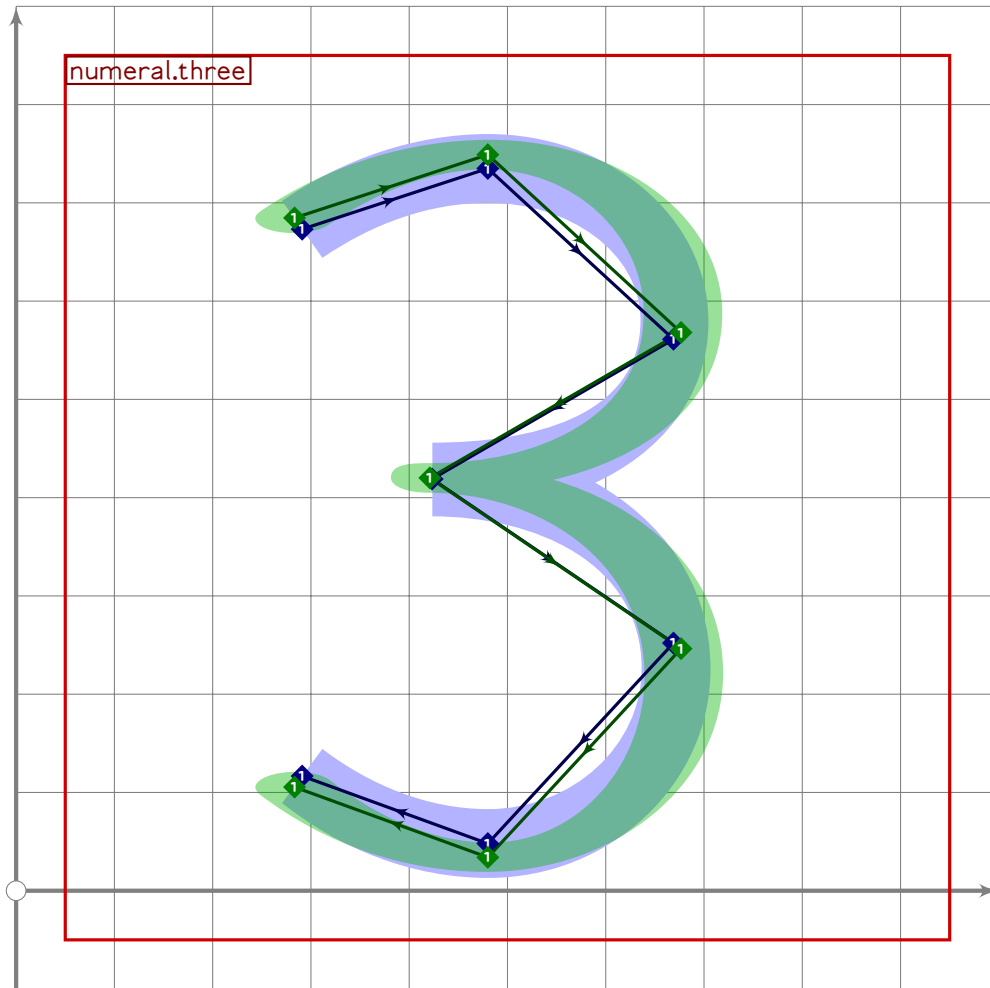
```



```

57
58 vardef tsu_curve.numeral.two =
59   push_pbox_toexpand("numeral.two");
60   x1=x4;
61   0.62[x1,x3]=500;
62   x2=0.6[x1,x3];
63   x5=1.2[x1,x3];
64   x3-x1=0.57*(y2-y4);
65
66   y1=0.78[y4,y2];
67   y2=latin_wide_high_r;
68   y3=0.58[y4,y2];
69   y4=y5=latin_wide_low_h;
70
71   push_stroke(z1..z2{right}..z3..tension 1.2..{curl 0}z4-z5,
72     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
73   set_botip(0,3,0);
74   expand_pbox;
75 enddef;

```



```

76
77 vardef tsu_curve.numeral.three =
78   push_pbox_toexpand("numeral.three");
79   x1=x7;
80   x2=x6=0.5[x1,x3];
81   x3=x5;
82   x4=0.35[x1,x3];
83   (x1+x3)/2=480;
84   (x3-x1)=0.55*(y2-y6);
85
86   y1=0.91[y6,y2];
87   y2=latin_wide_high_r;
88   y3=0.45[y4,y2];
89   y4=0.54[y6,y2];
90   y5=0.45[y4,y6];
91   y6=latin_wide_low_r;
92   y7=0.1[y6,y2];
93
94   push_stroke(z1{curl 0.7}..z2{right}..z3..{left}z4{right}..
95     z5..z6{left}..{curl 0.7}z7,
96     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-

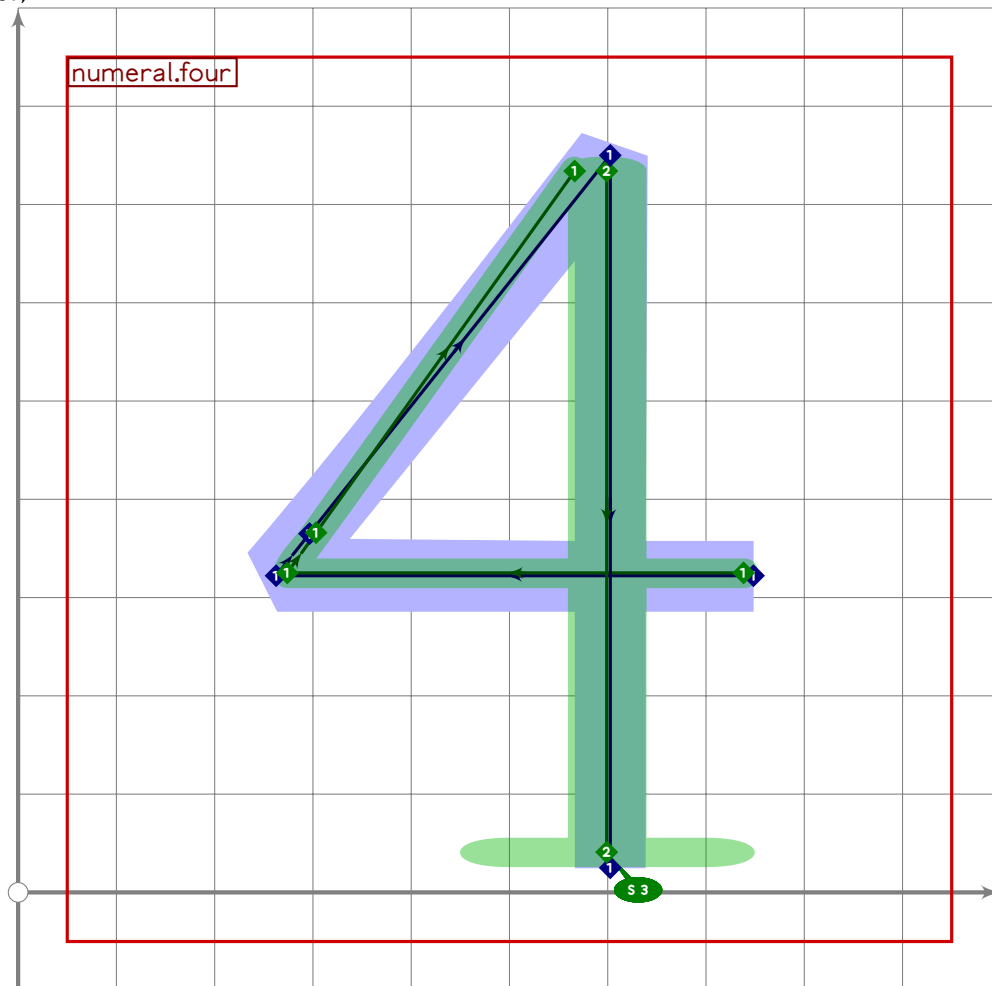
```



```

97     (1.6,1.6)-(1.6,1.6));
98     set_botip(0,3,0);
99     expand_pbox;
100 enddef;

```



```

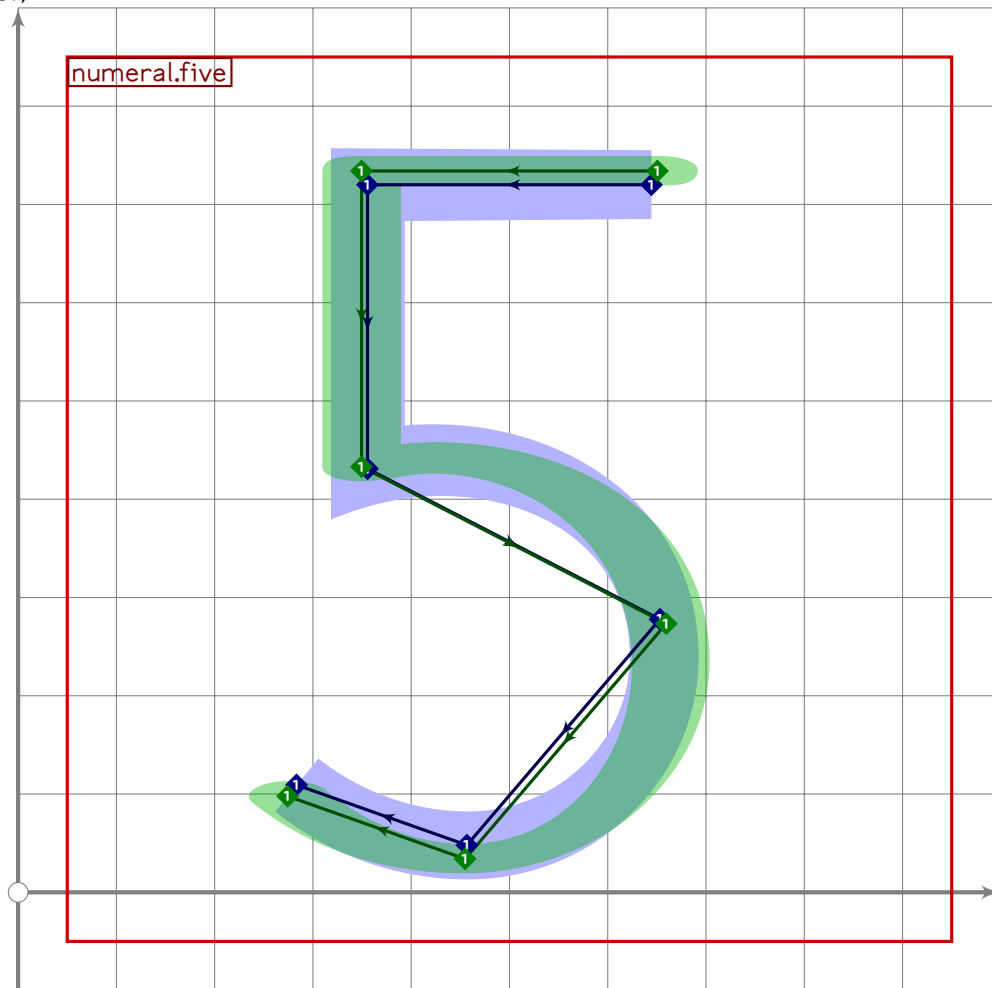
101
102 vardef tsu_curve.numeral.four =
103     push_pbox_toexpand("numeral.four");
104     x3=x4=0.7[x2,x1];
105     0.53[x2,x1]=520;
106     (x1-x2)=0.67(y3-y4);
107
108     y1=y2=0.41[y4,y3];
109     y3=latin_wide_high_v;
110     y4=latin_wide_low_v;
111
112     if do_alteration:
113         push_stroke(z1-z2-(0.1[z2,(z3*alternate_adjust*left)])-
114             (z3*alternate_adjust*left),
115             (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
116         set_botip(0,1,0);
117         set_botip(0,2,0);

```

```

118   set_boalternate(0);
119
120   push_stroke(z3-z4,(1.6,1.6)-(1.6,1.6));
121   set_botip(0,0,0);
122   set_boserif(0,1,3);
123 else:
124   push_stroke(z1-z2-(0.1[z2,z3])-z3-z4,
125     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
126   set_botip(0,1,0);
127   set_botip(0,3,0);
128   set_boserif(0,4,3);
129 fi;
130 expand_pbox;
131 enddef;

```



```

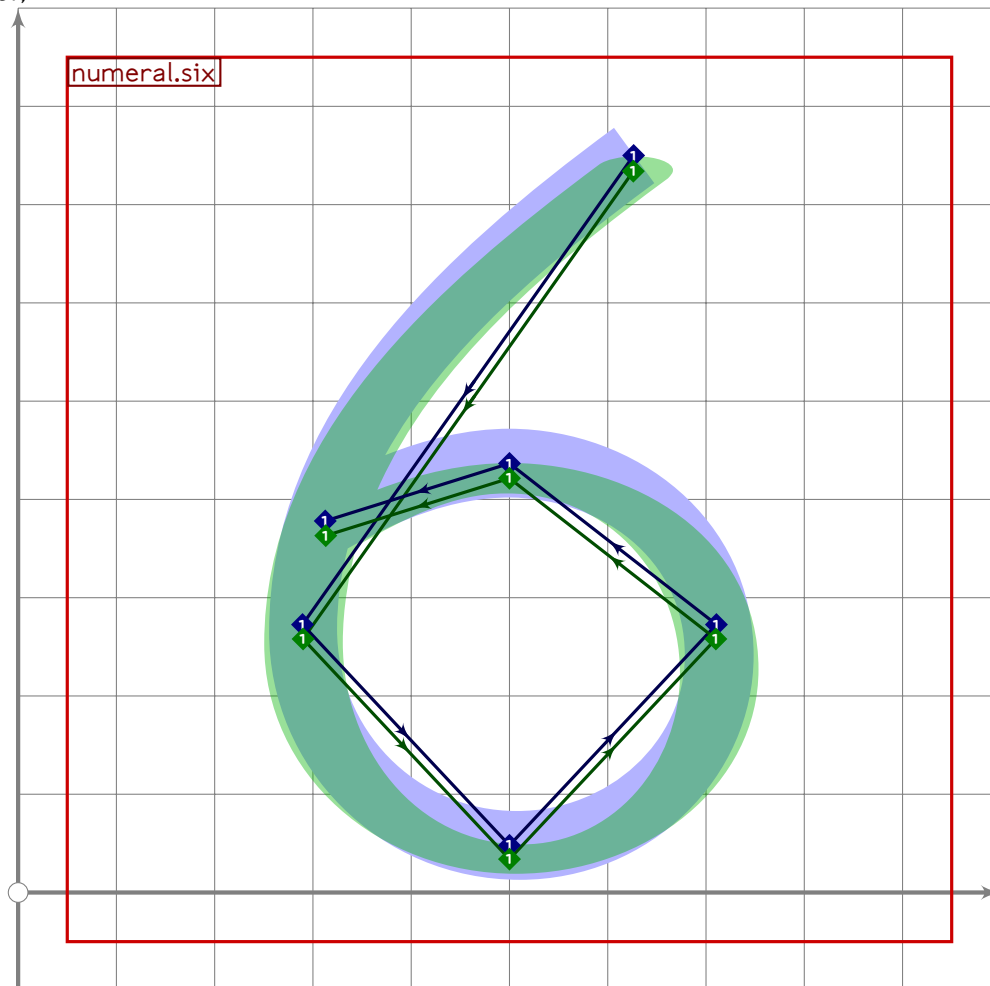
132
133 vardef tsu_curve.numeral.five =
134   push_pbox_toexpand("numeral.five");
135   (x1*x2)/2=500;
136   (x1-x2)=(y2-y3);
137   x2=x3;
138   x4=1.03[x2,x1];

```

```

139 x5=0.35[x2,x1];
140 x6=(-0.25)[x2,x1];
141
142 y1=y2=latin_wide_high_h;
143 y3=0.57[y5,y1];
144 y4=0.6[y5,y3];
145 y5=latin_wide_low_r;
146 y6=0.16[y5,y3];
147
148 push_stroke(z1-z2-z3{curl 0.5}..z4..z5{left}..z6,
149 (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
150 set_botip(0,1);
151 set_botip(0,2,1);
152 expand_pbox;
153 endif;

```



```

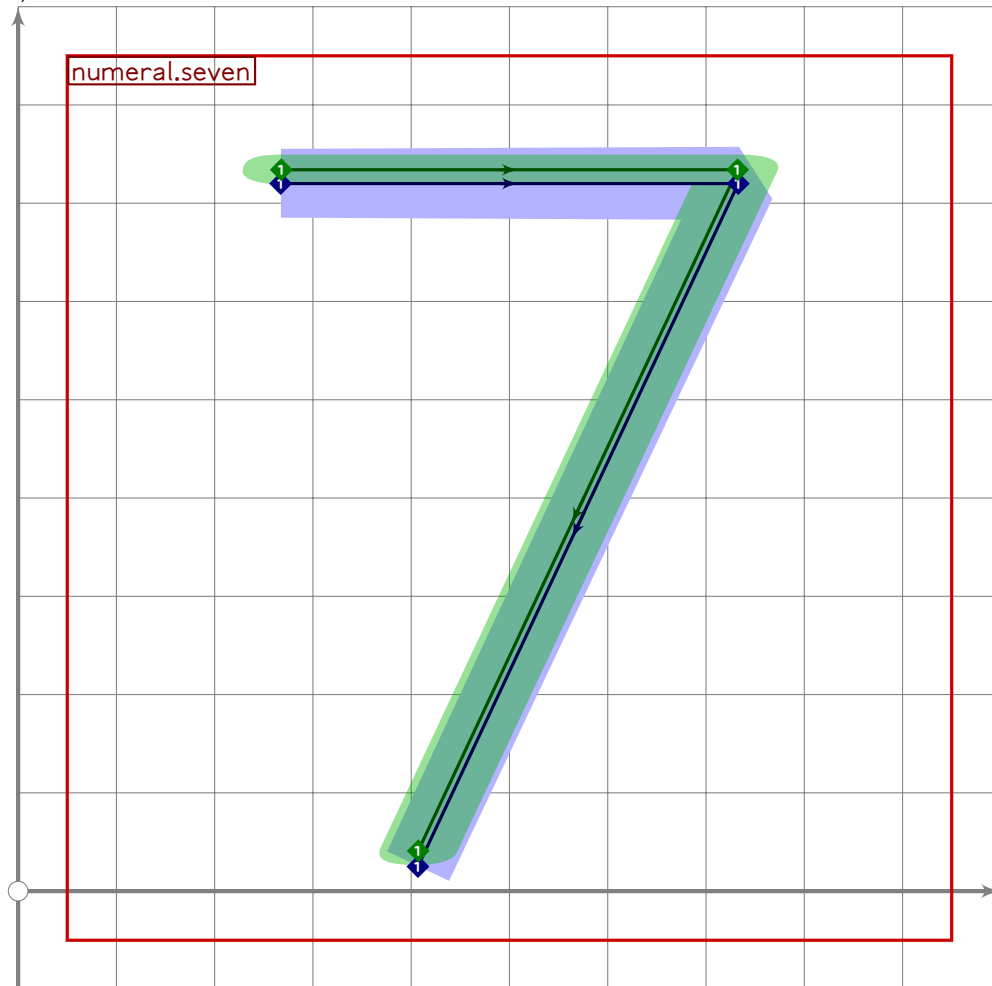
154
155 vardef tsu_curve.numeral.six =
156   push_pbox_toexpand("numeral.six");
157   x1=0.8[x2,x4];
158   (x2*x4)/2=x3=500;
159   (x4-x2)=0.6(y1-y3);

```

```

160 x5=x3;
161
162 y1=latin_wide_high_v;
163 y2=y4=0.32[y3,y1];
164 y3=latin_wide_low_r;
165 y5-y4=0.73*(y4-y3);
166
167 push_stroke(z1{curl 0.2}..tension 1.2..z2..z3..z4{dir 100},
168 (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
169 replace_strokep(0)(z1{curl 0.2}..tension 1.2..z2..z3..z4{dir 100}..
170 z5..{curl 0.2}(point 0.8 of oldp));
171 expand_pbox;
172 enddef;

```



```

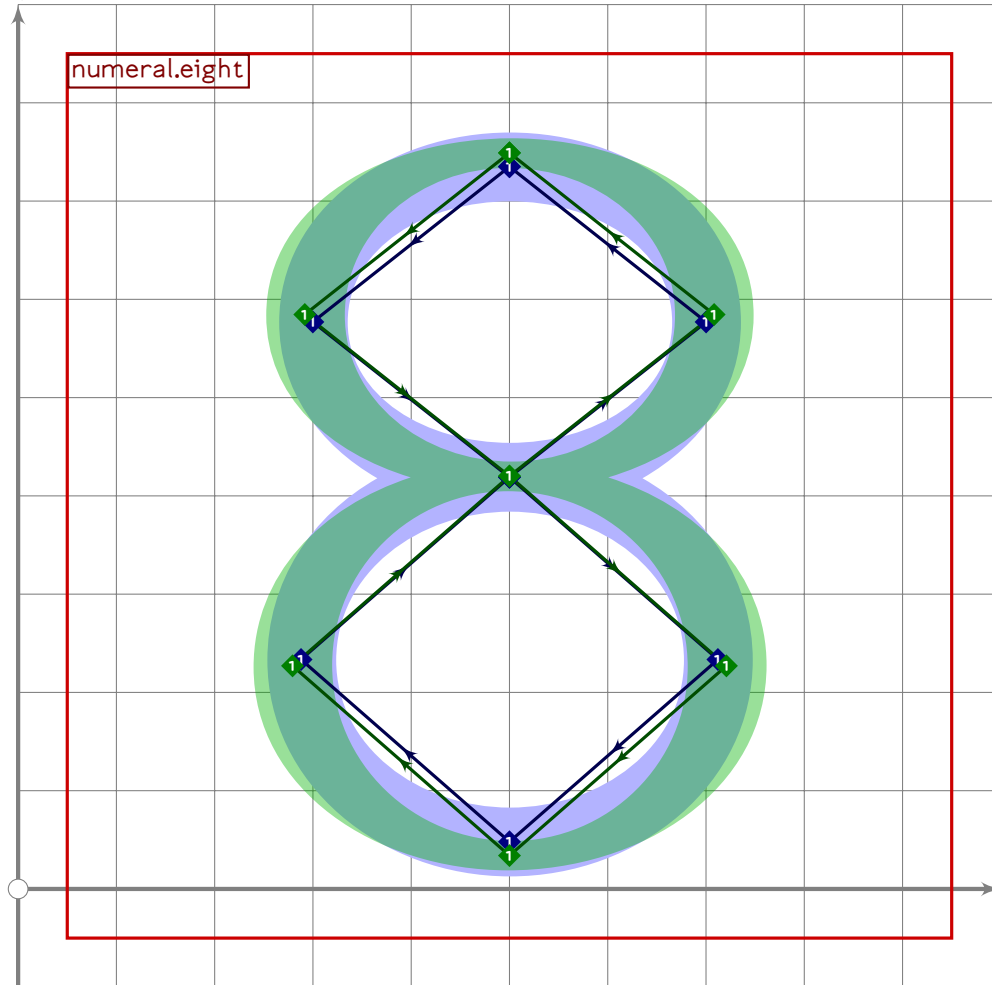
173
174 vardef tsu_curve.numeral.seven =
175 push_pbox_toexpand("numeral.seven");
176 (x1*x2)/2=500;
177 x3=0.3[x1,x2];
178 (x2-x1)=0.67*(y1-y3);
179
180 y1=y2=latin_wide_high_h;

```

```

181 y3=latin_wide_low_v;
182
183 push_stroke(z1-z2-z3,
184   (1.6,1.6)-(1.6,1.6)-(1.6,1.6));
185 set_botip(0,1,0);
186 expand_pbox;
187 enddef;

```



```

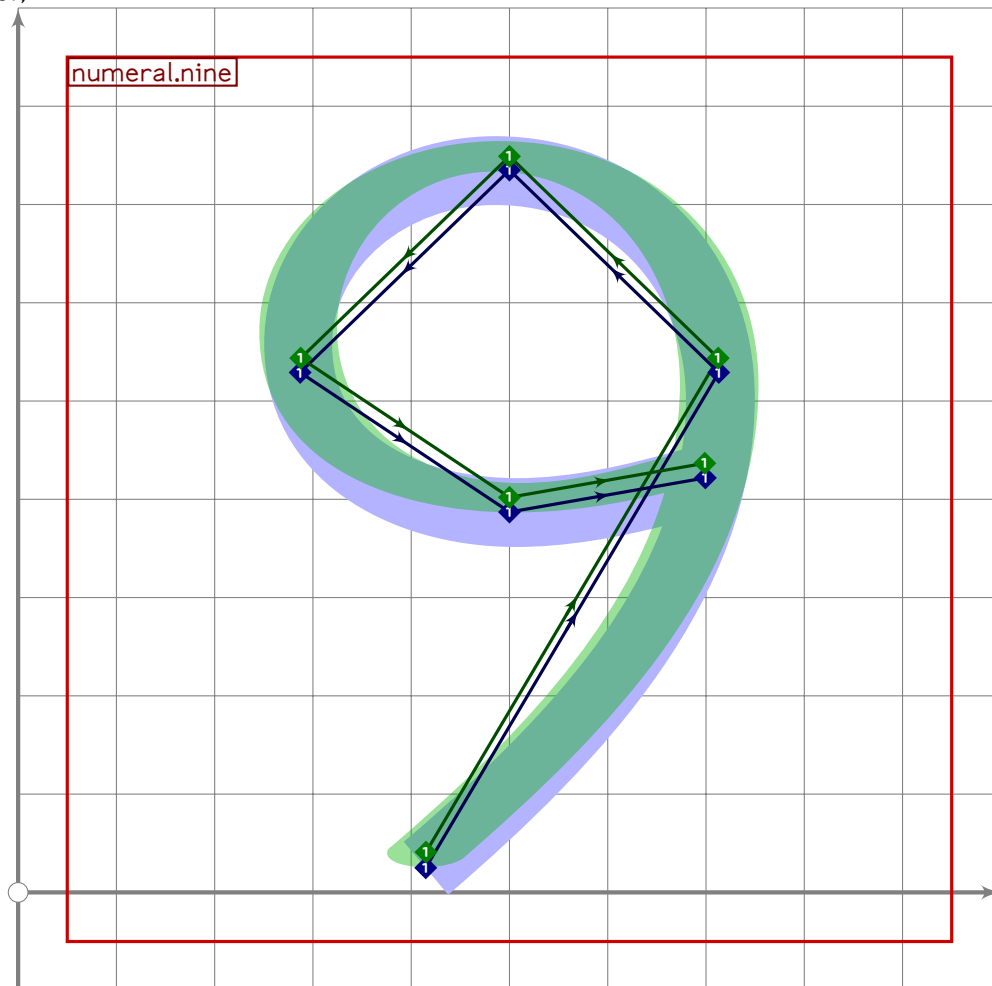
188
189 vardef tsu_curve.numeral.eight =
190   push_pbox_toexpand("numeral.eight");
191   x1=x3=x5=x7=(x2+x8)/2=(x4+x6)/2=500;
192   (x4-x6)=1.06*(x8-x2);
193   (x4+x8-x6-x2)/2=0.6*(y1-y5);
194
195   y1=latin_wide_high_r;
196   y2=y8=0.5[y3,y1];
197   y3=y7=0.54[y5,y1];
198   y4=y6=0.5[y5,y3];
199   y5=latin_wide_low_r;
200
201   push_stroke(z1..z2..z3{right}..z4..z5..z6..z7{right}..z8..cycle,

```

```

202 (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-
203 (1.6,1.6)-(1.6,1.6)-cycle);
204 expand_pbox;
205 enddef;

```



```

206
207 vardef tsu_curve.numeral.nine =
208   push_pbox_toexpand("numeral.nine");
209   x1=0.3[x4,x2];
210   (x2*x4)/2=x3=500;
211   (x2-x4)=0.6(y3-y1);
212   x5=x3;
213
214   y1=latin_wide_low_v;
215   y2=y4=0.29[y3,y1];
216   y3=latin_wide_high_r;
217   y5-y4=0.69*(y4-y3);
218
219   push_stroke(z1{curl 0.2}..tension 1.2..z2..z3..z4{dir 280},
220 (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
221   replace_strokep(0)(z1{curl 0.2}..tension 1.2..z2..z3..z4{dir 280}..
222     z5..{curl 0.2}(point 0.8 of oldp));

```

```
223 expand_pbox;  
224 endif;
```

obstack.mp

```
1 %
2 % Object stack for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
```

```
5-29 [Standard copyright notice]
```

```
30
```

```
31
```

```
32
```

Object Stack Data

```
33 % OBJECT STACK DATA
```

```
34
```

```
35 % object types:
```

```
36 % "null"
```

```
37 % "stroke"
```

```
38 % "lcblob"
```

```
39 % "pbox"
```

```
40
```

```
41 vardef init_obstack =
```

```
42   numeric obstacktype[];
```

```
43   numeric obstackn[];
```

```
44   numeric obstackna[][];
```

```
45   numeric obstacknaa[][][];
```

```
46   boolean obstackb[];
```

```
47   boolean obstackba[][];
```

```
48   path obstackp[];
```

```
49   path obstackq[];
```

```
50   transform obstackt[];
```

```
51   string obstacks[];
```

```
52   numeric sp;
```

```
53   sp:=1;
```

```
54 enddef;
```

```
55
```

```
56 % numeric values, needed for syntax reasons
```

```
57
```

```
58 def boalternate = 1924 enddef;
```

```
59 def boserif = 1746 enddef;
```

```
60 def bosize = 1393 enddef;
```

```
61 def botip = 1322 enddef;
```

```
62 def botoexpand = 1972 enddef;
```

```
63
```

```
64 def otlcblob = 1722 enddef;
```

```
65 def otnull = 1699 enddef;
```

```
66 def otpbox = 1007 enddef;
```

```
67 def otstroke = 1069 enddef;
```

```
68
```


Object Stack Methods

```

71 % OBJECT STACK METHODS
72
73 vardef expand_pbox =
74   begingroup
75     save mysp,i;
76     numeric mysp;
77     for i=sp-1 downto 1:
78       if (obstacktype[i]=otpbox) and (known obstackba.botoexpand[i]):
79         if obstackba.botoexpand[i]:
80           mysp:=i;
81           fi;
82         fi;
83       exitif known mysp;
84     endfor;
85     if known mysp:
86       obstackba.botoexpand[mysp]=false;
87 % message "expanding " & decimal mysp;
88       save x,y,myxf;
89       numeric x[],y[];
90       transform myxf;
91       z1=(70,830);
92       z2=(930,30);
93       for i=mysp+1 upto sp-1:
94         if obstacktype[i]=otpbox:
95           x3:=xpart ((0,0.5) transformed obstackt[i]);
96           if x3<x1: x1:=x3; fi;
97           y3:=ypart ((0.5,1) transformed obstackt[i]);
98           if y3>y1: y1:=y3; fi;
99           x4:=xpart ((1,0.5) transformed obstackt[i]);
100          if x4>x2: x2:=x4; fi;
101          y4:=ypart ((0.5,0) transformed obstackt[i]);
102          if y4<y2: y2:=y4; fi;
103        fi;
104      endfor;
105      z0=(x1,y2);
106      (0,0) transformed myxf=z0*(-20,20);
107      (0,1) transformed myxf=z1*(-20,20);
108      (1,0) transformed myxf=z2*(20,20);
109      obstackt[mysp]=myxf;
110    else:
111      errmsg "Can't find PBOX to expand";
112    fi;
113  endgroup;

```

```

114 endif;
115
116 vardef find_stroke(expr idx) =
117   (find_whatever(otstroke,idx))
118 endif;
119
120 vardef find_whatever(expr w,idx) =
121   begingroup
122     save i,j;
123     numeric i,j;
124     i:=sp-1;
125     j:=idx;
126     forever:
127       exitif i<=0;
128       if obstacktype[i]=w:
129         j:=j-1;
130         fi;
131       exitif j<0;
132       i:=i-1;
133     endfor;
134   i
135 endgroup
136 endif;
137
138 vardef get_bosize(expr idx) =
139   obstackna.bosize[find_whatever(otstroke,idx)]
140 endif;
141
142 vardef get_lcblob(expr idx) =
143   obstackp[find_whatever(otlcblob,idx)]
144 endif;
145
146 vardef get_strokep(expr idx) =
147   obstackp[find_whatever(otstroke,idx)]
148 endif;
149
150 vardef get_strokeq(expr idx) =
151   obstackq[find_whatever(otstroke,idx)]
152 endif;
153
154 vardef pop_lcblob =
155   obstacktype[find_whatever(otlcblob,0)]:=otnull;
156 endif;
157
158 vardef push_lcblob(expr blob) =
159   obstacktype[sp]:=otlcblob;
160   obstackp[sp]:=blob;
161   sp:=sp+1;

```

```

162 enddef;
163
164 vardef push_pbox(expr pbox) =
165   obstacktype[sp]:=otpbbox;
166   obstackt[sp]:=identity scaled 900 shifted (50,50);
167   obstacks[sp]:=pbox;
168   sp:=sp*1;
169 enddef;
170
171 vardef push_pbox_explicit(expr pbox) =
172   obstacktype[sp]:=otpbbox;
173   obstackt[sp]:=pbox;
174   obstacks[sp]:=pbox;
175   sp:=sp*1;
176 enddef;
177
178 vardef push_pbox_toexpand(expr pbox) =
179   obstacktype[sp]:=otpbbox;
180   obstackt[sp]:=identity scaled 1000 shifted (0,100);
181   obstacks[sp]:=pbox;
182   obstackba.botoexpand[sp]:=true;
183   % message "to expand " & decimal sp;
184   sp:=sp*1;
185 enddef;
186
187 vardef push_stroke(expr p,q) =
188   obstacktype[sp]:=otstroke;
189   obstackp[sp]:=p;
190   obstackq[sp]:=q;
191   obstackna.bosize[sp]:=100;
192   sp:=sp*1;
193 enddef;
194
195 vardef replace_lcblob(expr idx)(text blob) =
196   begingroup
197     save oldblob;
198     path oldblob;
199     oldblob:=obstackp[find_whatever(otlcblob,idx)];
200     obstackp[find_whatever(otlcblob,idx)]:=blob;
201   endgroup;
202 enddef;
203
204 vardef replace_strokep(expr idx)(text curves) =
205   begingroup
206     save oldp;
207     path oldp;
208     oldp:=obstackp[find_whatever(otstroke,idx)];
209     obstackp[find_whatever(otstroke,idx)]:=curves;

```

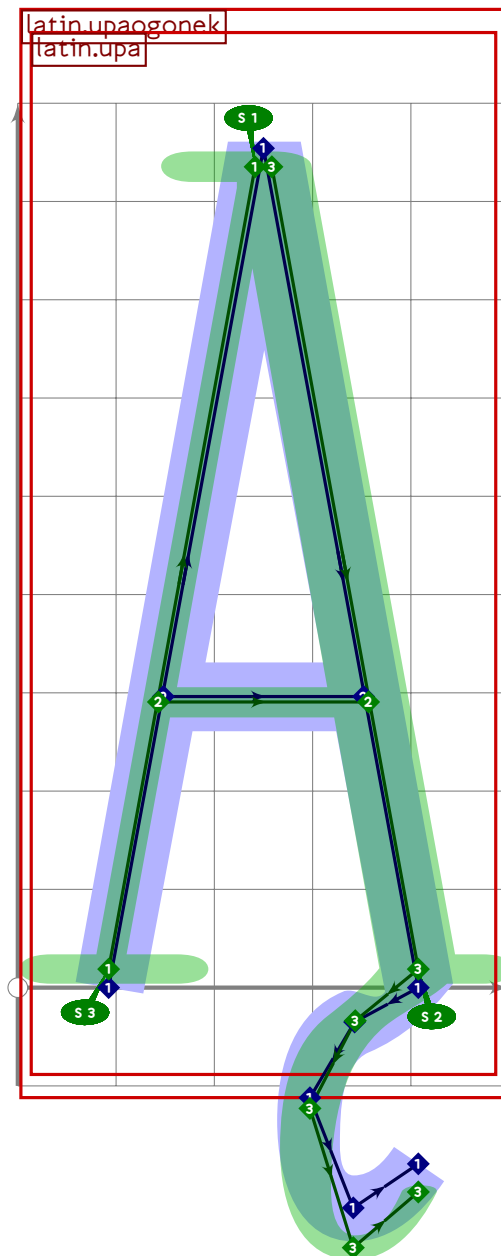
```

210 endgroup;
211 enddef;
212
213 vardef replace__strokeq(expr idx)(text curves) =
214   begingroup
215     save oldq;
216     path oldq;
217     oldq:=obstackq[find__whatever(otstroke,idx)];
218     obstackq[find__whatever(otstroke,idx)]:=curves;
219   endgroup;
220 enddef;
221
222 vardef set__boalternate(expr idx) =
223   obstackba.boalternate[find__stroke(idx)]:=true;
224 enddef;
225
226 vardef set__boserif(expr idx,t,srf) =
227   obstacknaa.boserif[find__stroke(idx)][t]:=srf;
228 enddef;
229
230 vardef set__bosize(expr idx,bos) =
231   obstackna.bosize[find__stroke(idx)]:=bos;
232 enddef;
233
234 vardef set__botip(expr idx,t,bt) =
235   obstacknaa.botip[find__stroke(idx)][t]:=bt;
236 enddef;

```

ogonek.mp

```
1 %  
2 % Ogonek letters for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31
```

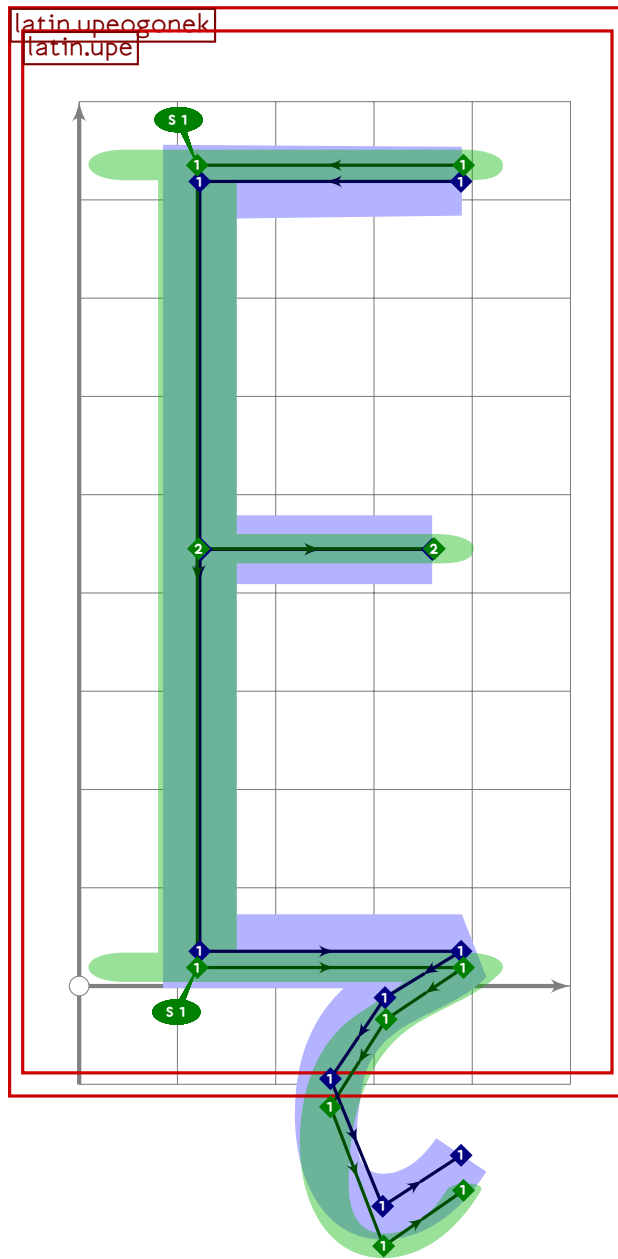


```
32  
33 vardef tsu_curve.latin.upaogonek =  
34   push_pbox_toexpand("latin.upaogonek");  
35   tsu_curve.latin.upa;  
36
```

```

37 x6=0.3[x2,x3];
38 x7=0.4[x6,x8];
39 x8=x3;
40
41 y6=0.5[y7,y3];
42 y7=latin_wide_desc_r;
43 y8=0.2[y7,y3];
44
45 if do_alteration:
46   replace__strokep(0)(oldp{dir 210}..z6..z7{right}..z8);
47   replace__strokep(0)(insert__nodes(oldp)(length(oldp)-2.5));
48   replace__strokeq(0)(oldq-(1.4,1.4)-(1.3,1.3)-(1.4,1.4)-(1,1));
49   set__boserif(0,1,2);
50   set__botip(0,length(get__strokep(0))-4,1);
51 else:
52   replace__strokep(-1)(oldp{dir 210}..z6..z7{right}..z8);
53   replace__strokep(-1)(insert__nodes(oldp)(length(oldp)-2.5));
54   replace__strokeq(-1)(oldq-(1.4,1.4)-(1.3,1.3)-(1.4,1.4)-(1,1));
55   set__boserif(-1,1,2);
56   set__botip(-1,length(get__strokep(0))-4,1);
57 fi;
58 expand__pbox;
59 enddef;

```



```

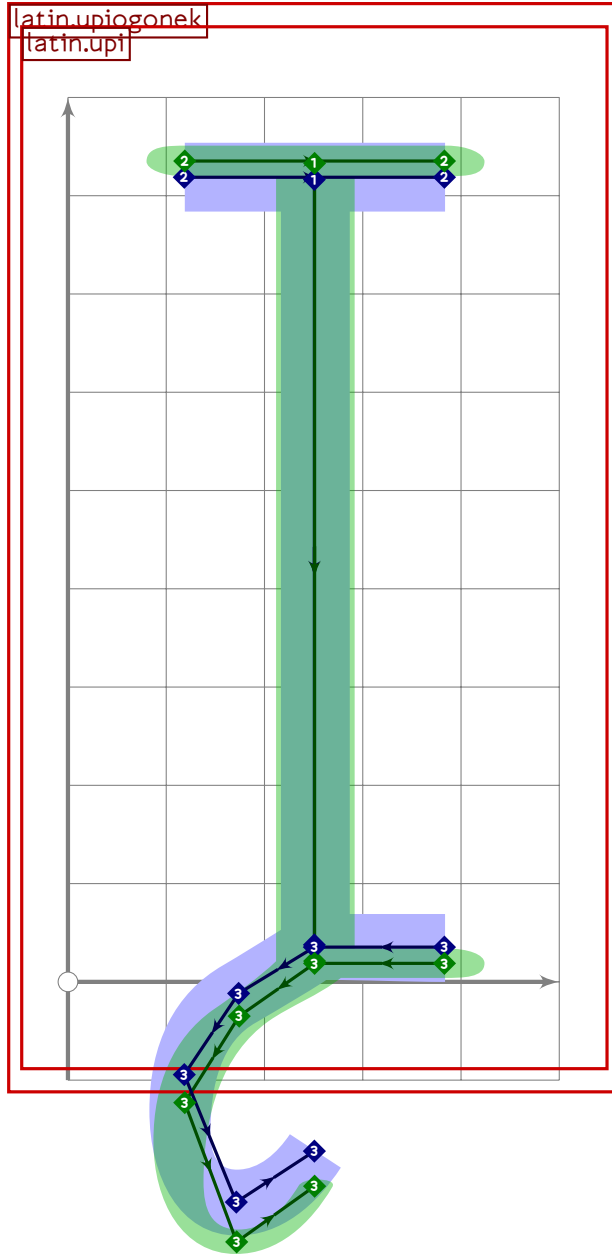
60
61 vardef tsu_curve.latin.ueogonek =
62   push_pbox_toexpand("latin.ueogonek");
63   tsu_curve.latin.upe;
64
65   x7=0.5[x3,x4];
66   x8=0.4[x7,x9];
67   x9=x4;
68
69   y7=0.5[y8,y4];
70   y8=latin_wide_desc_r;
71   y9=0.2[y8,y4];
72
73   replace_strokep(1)(oldp{dir 210}..z7..z8{right}..z9);

```

```

74 replace_stroke(1)(insert_nodes(oldp)(length(oldp)-2.5));
75 replace_stroke(1)(oldq-(1.4,1.4)-(1.3,1.3)-(1.4,1.4)-(1,1));
76 set_botip(1,length(get_stroke(1))-4,0);
77 expand_pbox;
78 enddef;

```



```

79
80 vardef tsu_curve.latin.upiogonek =
81   push_pbox_toexpand("latin.upiogonek");
82   tsu_curve.latin.upi;
83
84   x1=x4=500;
85   x2=300;
86   x3=0.4[x2,x4];
87

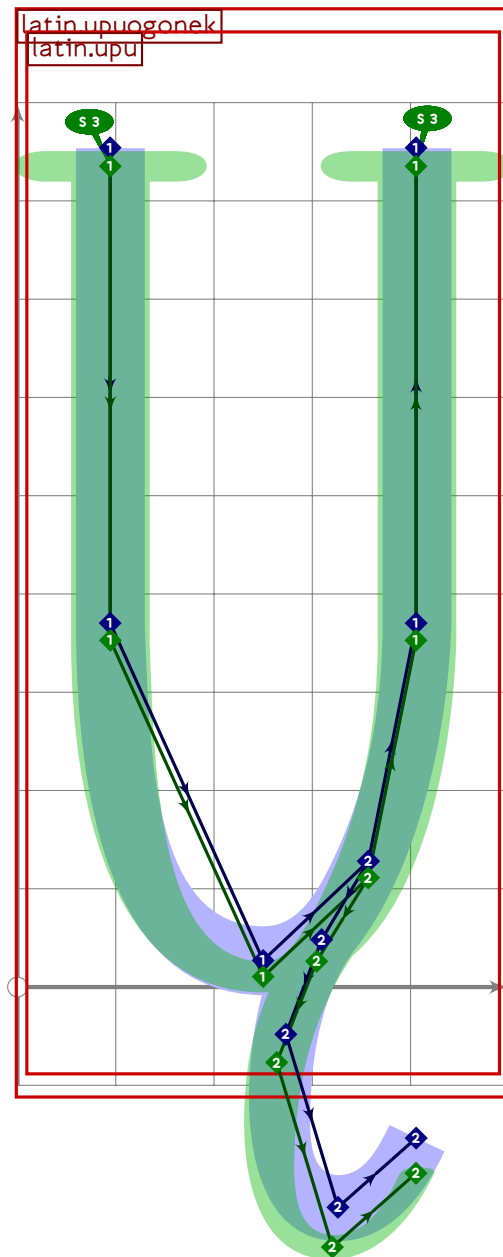
```



```

88 y1=latin_wide_low_h;
89 y2=0.5[y3,y1];
90 y3=latin_wide_desc_r;
91 y4=0.2[y3,y1];
92
93 replace_strokep(0)((700,latin_wide_low_h)-z1{dir 210}..z2..z3{right}..z4);
94 replace_strokep(0)(insert_nodes(oldp)(1.5));
95 replace_strokeq(0)((1.6,1.6)-(1.6,1.6)-(1.4,1.4)-
96 (1.3,1.3)-(1.4,1.4)-(1,1));
97 expand_pbox;
98 endif;

```



```

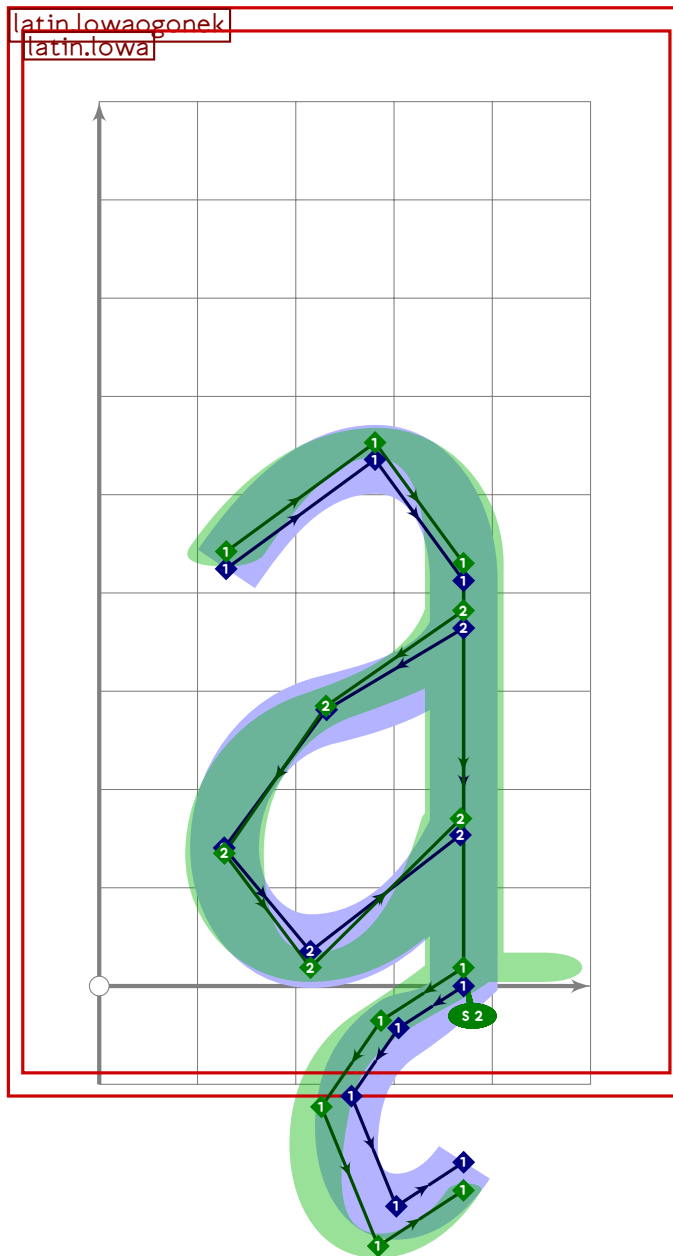
99
100 vardef tsu_curve.latin.upuogonek =
101   push_pbox_toexpand("latin.upuogonek");

```

```

102 tsu_curve.latin.upu;
103
104 replace_strokep(0)(insert_nodes(oldp)(2.5));
105 replace_strokeq(0)(insert_nodes(oldq)(2.5));
106 set_boserif(0,5,3);
107 set_boserif(0,4,whatever);
108
109 z6=point 3 of get_strokep(0);
110
111 y7=0.5[y8,y6];
112 y8=latin_wide_desc_r;
113 y9=0.2[y8,y6];
114
115 x9-x7=(x4-x2)*((y6-y8)/(y1-y3));
116 x8=0.4[x7,x9];
117 x9=x4;
118
119 push_stroke(z6{direction 3 of get_strokep(0)}..z7..z8{right}..z9,
120 (1,1,1)-(1,4,1.4)-(1,3,1.3)-(1,4,1.4)-(1,1));
121 replace_strokep(0,insert_nodes(oldp)(length(oldp)-2.5));
122 expand_pbox;
123 enddef;

```



```

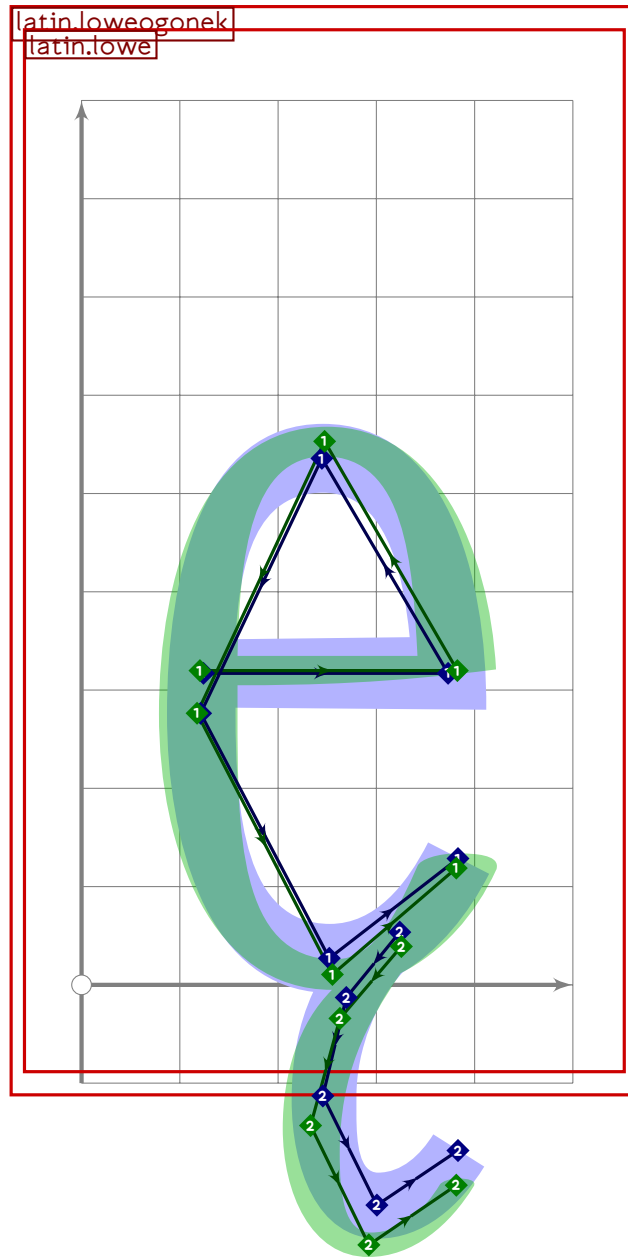
124
125 vardef tsu_curve.latin.lowaogonek =
126   push_pbox_toexpand("latin.lowaogonek");
127   tsu_curve.latin.lowa;
128
129   y9=0.5[y10,y4];
130   y10=latin_wide_desc_r;
131   y11=0.2[y10,y4];
132
133   x11-x9=(x4-x1)*((y4-y10)/(y2-y4));
134   x10=0.4[x9,x11];
135   x11=x4;
136
137   replace_strokep(-1)(oldp{dir 210}..z9..z10{right}..z11);

```

```

138 replace_strokep(-1)(insert_nodes(oldp)(length(oldp)-2.5));
139 replace_strokeq(-1)(oldq-(1.4,1.4)-(1.3,1.3)-(1.4,1.4)-(1,1));
140 set_botip(0,length(get_strokep(-1))-4,1);
141 expand_pbox;
142 enddef;

```



```

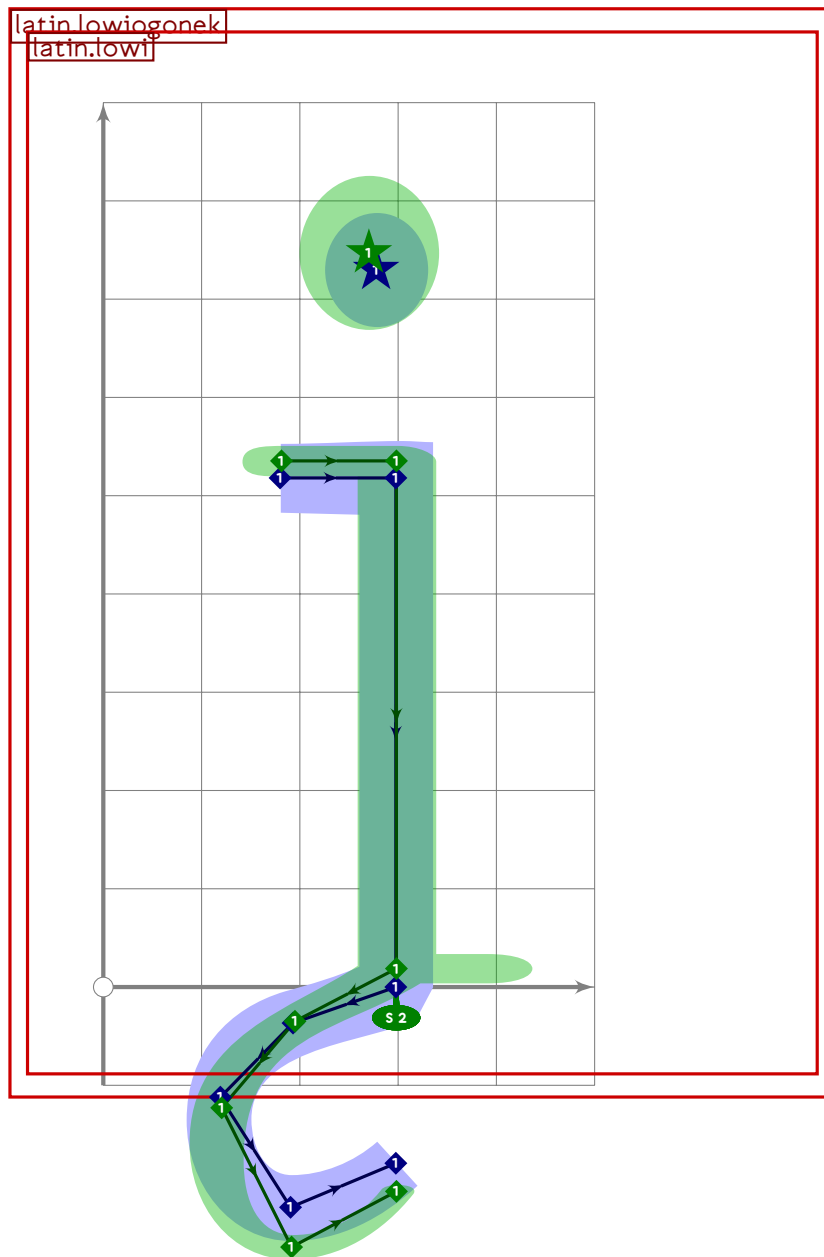
143
144 vardef tsu_curve.latin.loweogonek =
145   push_pbox_toexpand("latin.loweogonek");
146   tsu_curve.latin.lowe;
147
148   z7=point 4.5 of get_strokep(0);
149
150   y8=0.4[y9,y7];
151   y9=latin_wide_desc_r;

```

```

152 y10=0.2[y9,y7];
153
154 x10-x8=(x2-x4)*((y7-y9)/(y3-y5));
155 x9=0.4[x8,x10];
156 x10=x6;
157
158 push_stroke(z7{direction 4.5 of get_stroke(0)}..z8..z9{right}..z10,
159 (1,1,1)-(1,4,1,4)-(1,3,1,3)-(1,4,1,4)-(1,1));
160 replace_stroke(0,insert_nodes(oldp)(length(oldp)-2.5));
161 expand_pbox;
162 enddef;

```



```

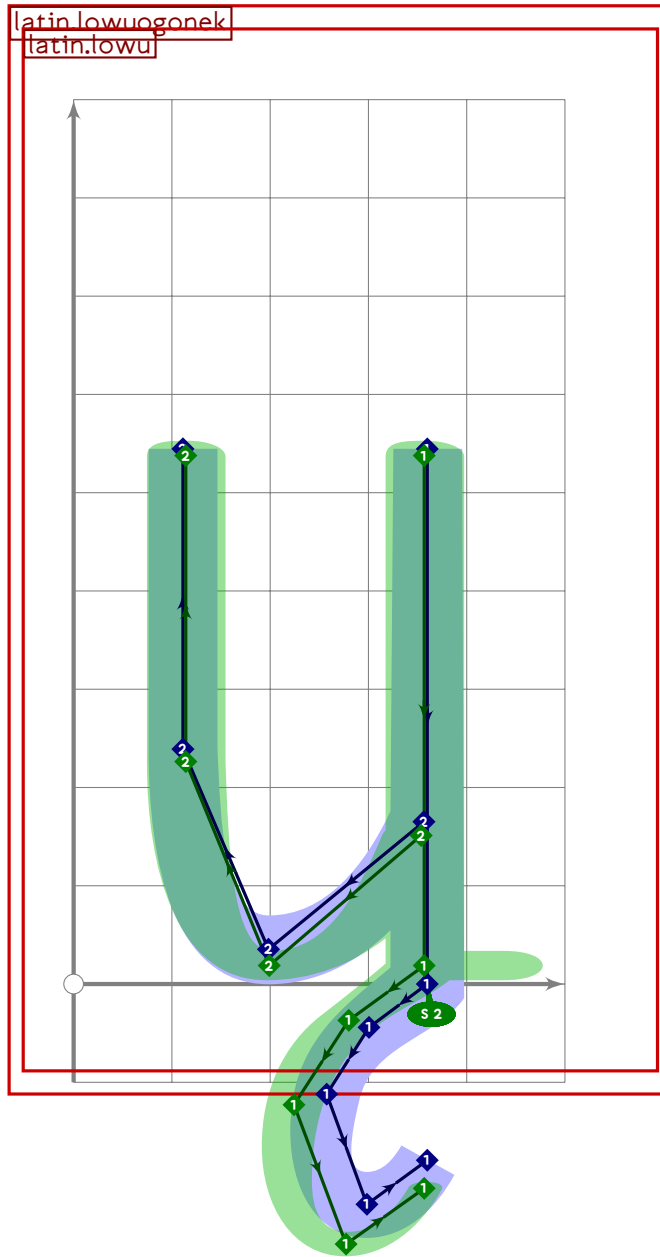
163
164 vardef tsu_curve.latin.lowiogonek =
165   push_pbox_toexpand("latin.lowiogonek");

```

```

166  tsu_curve.latin.lowi;
167
168  x5=x7-200;
169  x6=0.4[x5,x7];
170  x7=x3;
171
172  y5=0.5[y6,y3];
173  y6=latin_wide_desc_r;
174  y7=0.2[y6,y3];
175
176  replace_strokep(0)(oldp{dir 210}..z5..z6{right}..z7);
177  replace_strokep(0)(insert_nodes(oldp)(2.5));
178  replace_strokeq(0)(oldq-(1.4,1.4)-(1.3,1.3)-(1.4,1.4)-(1,1));
179  set_boserif(0,2,2);
180  set_botip(0,2,1);
181  expand_pbox;
182  enddef;

```



```

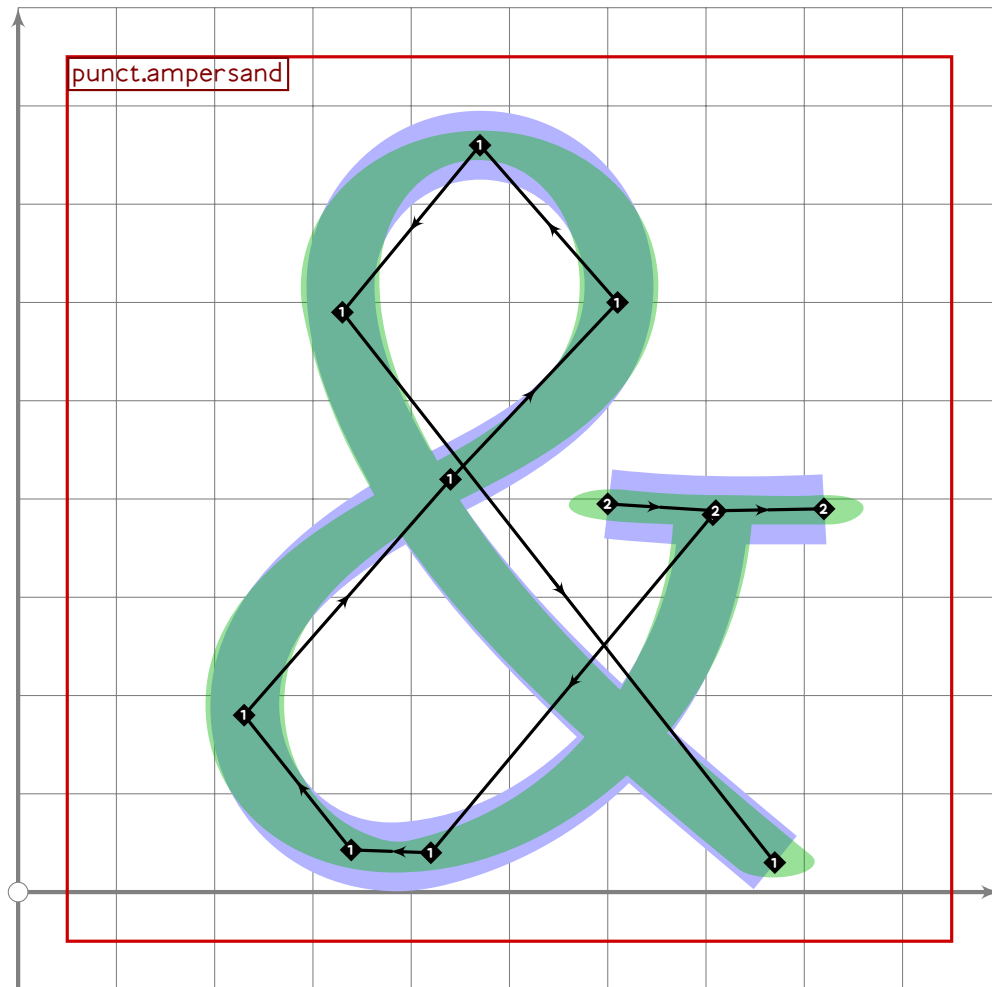
183
184 vardef tsu_curve.latin.lowuogonek =
185   push_pbox_toexpand("latin.lowuogonek");
186   tsu_curve.latin.lowu;
187
188   y7=0.5[y8,y1];
189   y8=latin_wide_desc_r;
190   y9=0.2[y8,y1];
191
192   x9-x7=(x1-x6)*((y1-y8)/(y2-y1));
193   x8=0.4[x7,x9];
194   x9=x1;
195
196   replace_strokep(-1)(z2-z1{dir 210}..z7..z8{right}..z9);

```

```
197 replace__strokep(-1)(insert__nodes(oldp)(length(oldp)-2.5));
198 replace__strokeq(-1)((1.6,1.6)-(1.6,1.6)-(1.4,1.4)-(1.3,1.3)-
199   (1.4,1.4)-(1,1));
200 set__botip(-1,1,1);
201 set__boserif(-1,0,whatever);
202 set__boserif(-1,1,2);
203 expand__pbox;
204 endif;
```


punct.mp

```
1 %  
2 % Punctuation for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31
```

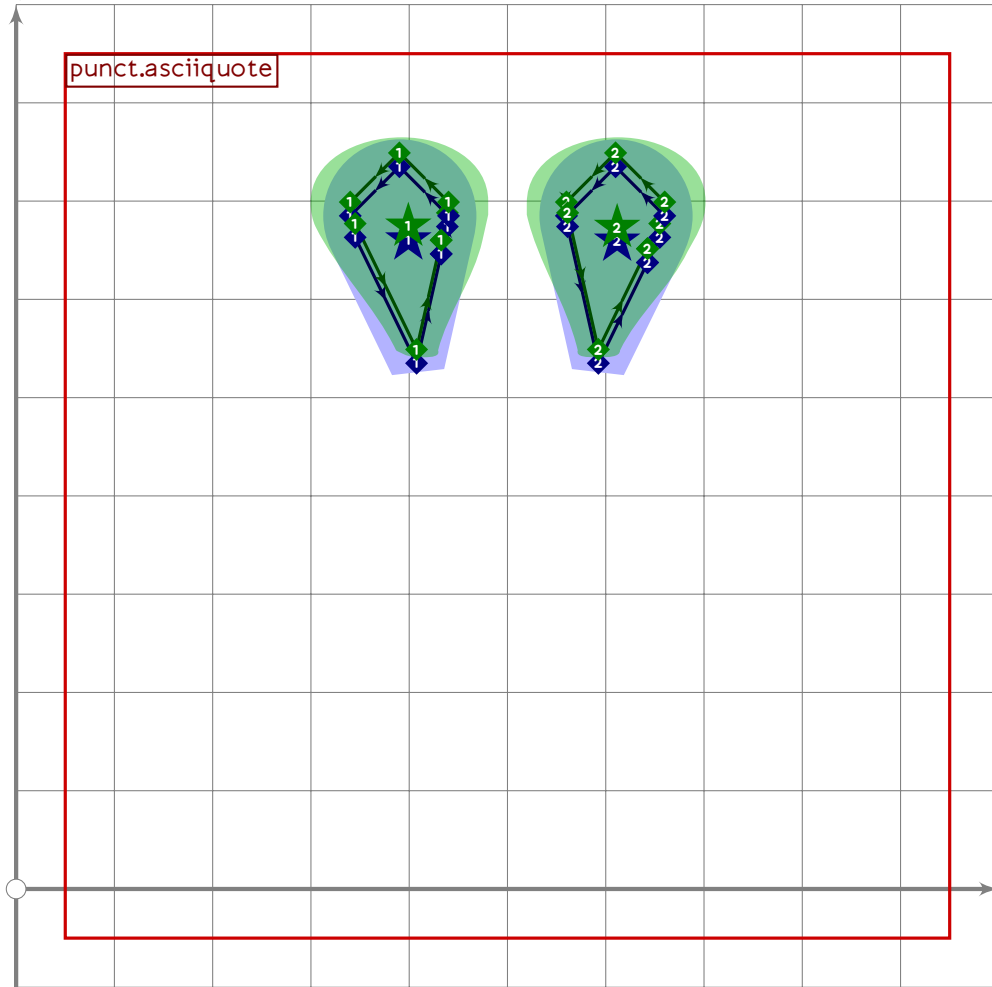


```
32  
33 vardef tsu_curve.punct.ampersand =  
34   push_pbox_toexpand("punct.ampersand");  
35  
36   push_stroke((707,384)..tension 1.3..(420,40)..(230,180)..(440,420)..  
37     (610,600)..(470,760)..(330,590)..tension 1.5 and 4..(770,30),  
38     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-  
39     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));  
40   replace_strokep(0)(insert_nodes(oldp)(1.3));  
41  
42   push_stroke((600,395)..(710,388)..(820,390),  
43     (1.6,1.6)-(1.6,1.6)-(1.6,1.6));
```

```

44 expand_pbox;
45 enddef;

```



```

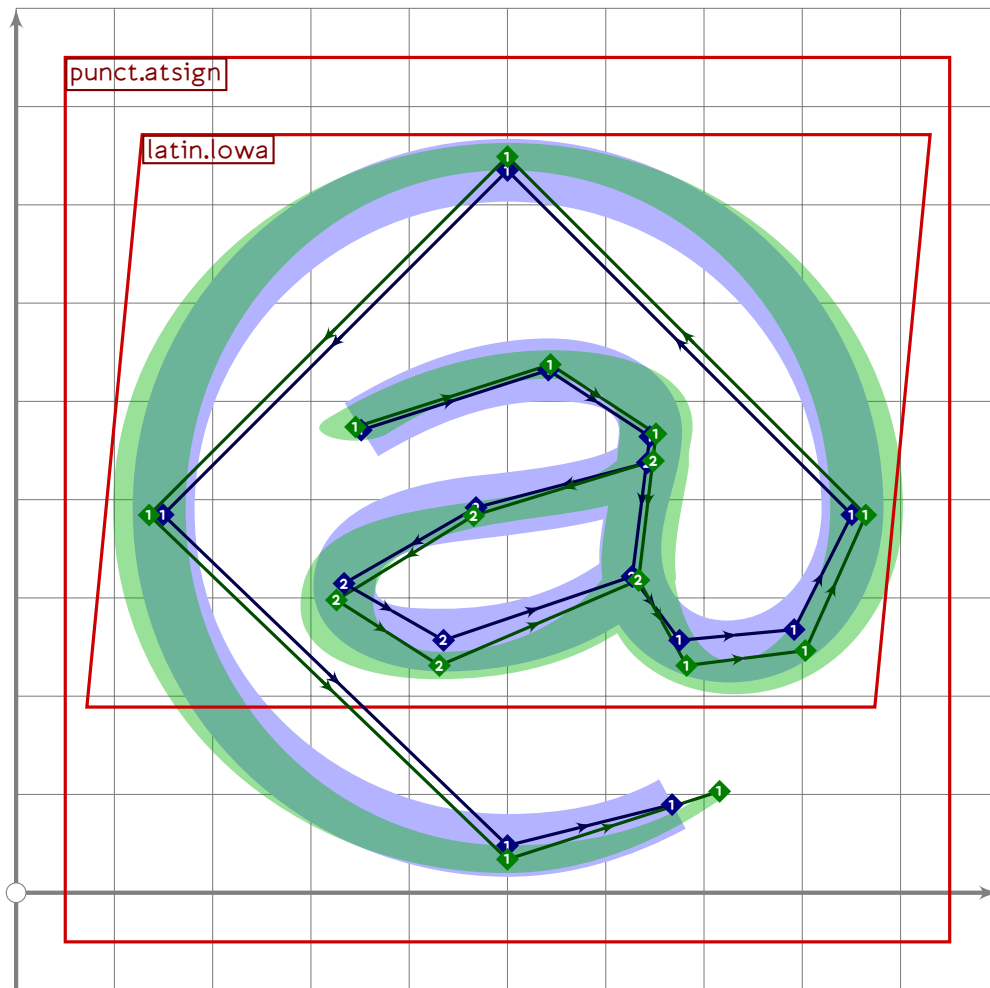
46
47 vardef tsu_curve.punct.asciquote =
48   push_pbox_toexpand("punct.asciquote");
49
50   numeric dx;
51   dx=tsu_punct_size;
52
53   (x1+x2)/2=(x3+x4)/2=500;
54   x2-x1=1.2*dx*tsu_punct_size;
55   x4-x3=tsu_punct_size*1.85;
56
57   y1=y2=latin_wide_high_r-dx/2;
58   y3=y4=y1-1.5*dx;
59
60   path ptmp;
61   ptmp=(down..right..up..left..cycle)
62     scaled (abs(z3-z1)+*(dx/2));
63
64   push_stroke((down..right..up..left..cycle) scaled (dx/2) shifted z1,

```

```

65     (2,2)-(2,2)-(2,2)-(2,2)-(2,2)-(2,2)-(1.3,1.3)-cycle);
66     replace__strokep(0)(z3-(subpath ((xpart (oldp intersectiontimes
67     (ptmp shifted z3))),4-xpart ((reverse oldp) intersectiontimes
68     (ptmp shifted z3)))) of oldp)-cycle);
69     replace__strokep(0)((subpath (0,8,6) of oldp)-cycle);
70     set__bysize(0,75);
71     set__botip(0,6,0);;
72
73     push__stroke((down..right..up..left..cycle) scaled (dx/2) shifted z2,
74     (2,2)-(2,2)-(2,2)-(2,2)-(2,2)-(2,2)-(1.3,1.3)-cycle);
75     replace__strokep(0)(z4-(subpath ((xpart (oldp intersectiontimes
76     (ptmp shifted z4))),4-xpart ((reverse oldp) intersectiontimes
77     (ptmp shifted z4)))) of oldp)-cycle);
78     replace__strokep(0)((subpath (0,8,6) of oldp)-cycle);
79     set__bysize(0,75);
80     set__botip(0,6,0);;
81
82     if tsu_pbrush_size>=30:
83         push__lcblob(get__strokep(-1));
84         push__lcblob(get__strokep(0));
85     fi;
86     expand__pbox;
87 enddef;

```



```

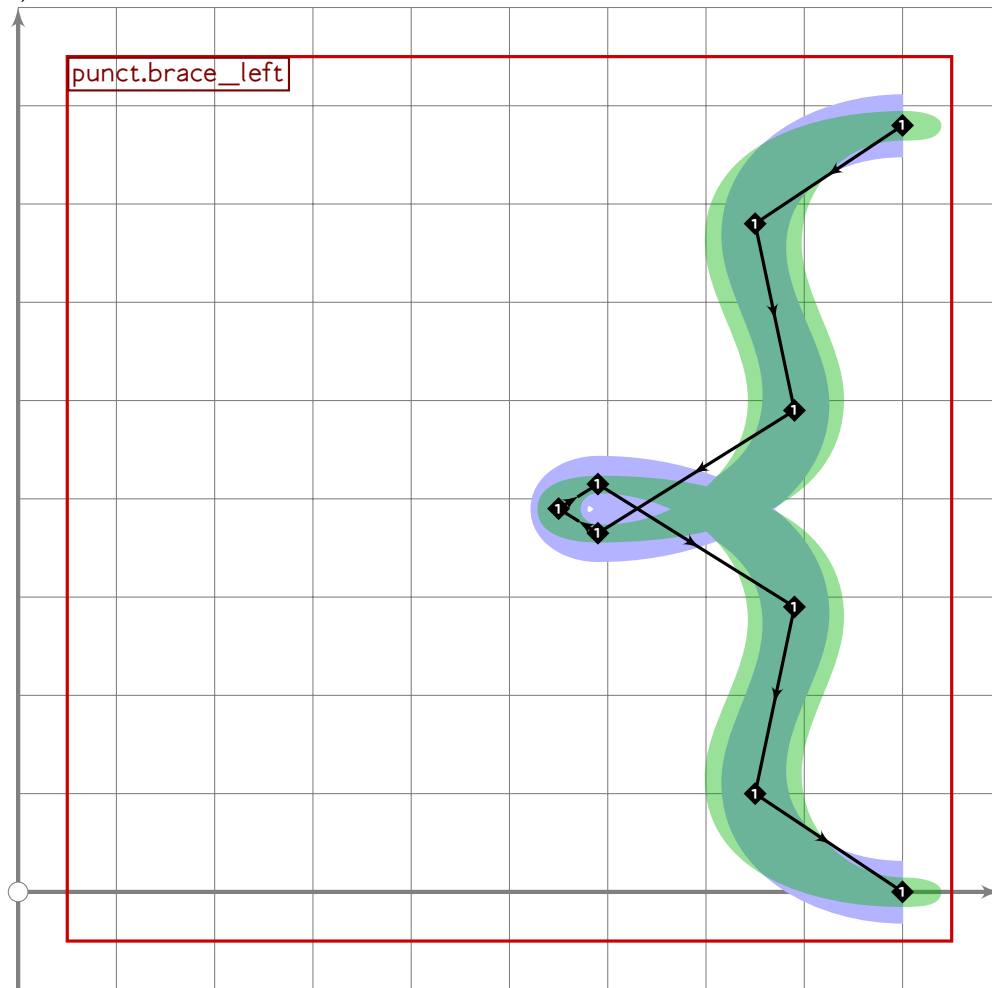
88
89 vardef tsu_curve.punct.atsign =
90   push_pbox_toexpand("punct.atsign");
91   begingroup
92     save xsp,ysp;
93     xsp:=sp;
94     tsu_curve.latin.lowa;
95     set_boserif(-1,3,whatever);
96     ysp:=sp;
97
98     numeric x[],y[];
99     x1-x2=x2-x3=y2-y1;
100    x2=x4=500;
101    y1=y3=0.49[y4,y2];
102    y2=latin_wide_high_r;
103    y4=latin_wide_low_r;
104
105    transform shrinka;
106    (0.5[llcorner get_strokep(-1),urcorner get_strokep(-1)])
107      transformed shrinka=0.5[z3,z1];
108    (0.5[lrcorner get_strokep(-1),urcorner get_strokep(-1)])

```

```

109   transformed shrinka=0.71[z3,z1];
110   (0.5[ulcorner get_strokep(-1),urcorner get_strokep(-1)])
111   transformed shrinka=z2*(0.07;1)*0.29*(x1-x3);
112   sp:=xsp;
113   tsu_xform(shrinka shifted (-10,0))(sp:=ysp);
114
115   z5=point infinity of get_strokep(0);
116   y6=ypart lrcorner get_strokep(0);
117   x6=0.5[x2,x1];
118   replace_strokep(-1)((subpath (0,length(oldd)-1) of oldp)..z5..z6..
119     (subpath (0,3.85) of (z1..z2..z3..z4..cycle)));
120   replace_strokep(-1)(insert_nodes(oldd)((length oldp-4.5)));
121   replace_strokeq(-1)(oldq-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-
122     (1.6,1.6)-(1.6,1.6)-(0,0));
123   endgroup;
124   expand_pbox;
125   enddef;

```



```

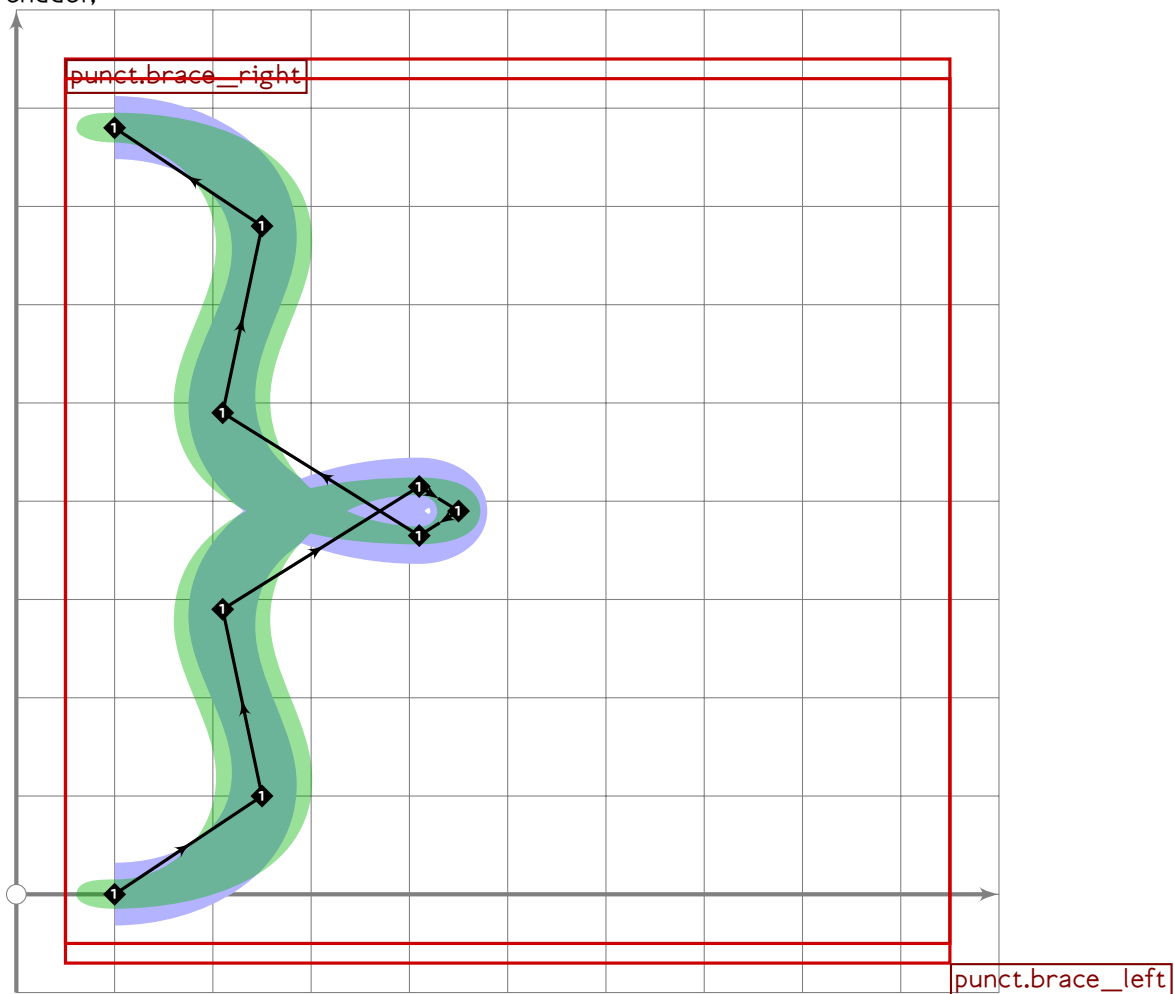
126
127 vardef tsu_curve.punct.brace_left =
128   push_pbox_toexpand("punct.brace_left");
129   push_stroke((900,780){left}..

```

```

130 (900-1.5*tsu_punct_size,680)..
131 (900-1.1*tsu_punct_size,490)..
132 (900-3.1*tsu_punct_size,390-0.25*tsu_punct_size){left}..
133 (900-3.5*tsu_punct_size,390)..
134 (900-3.1*tsu_punct_size,390+0.25*tsu_punct_size){right}..
135 (900-1.1*tsu_punct_size,290)..
136 (900-1.5*tsu_punct_size,100)..
137 (900,0){right},
138 (1.7,1.7)-(2,2)-(2,2)-
139 (1.2,1.2)-(1.2,1.2)-(1.2,1.2)-
140 (2,2)-(2,2)-(1.7,1.7));
141 set_bosize(0,90);
142 expand_pbox;
143 enddef;

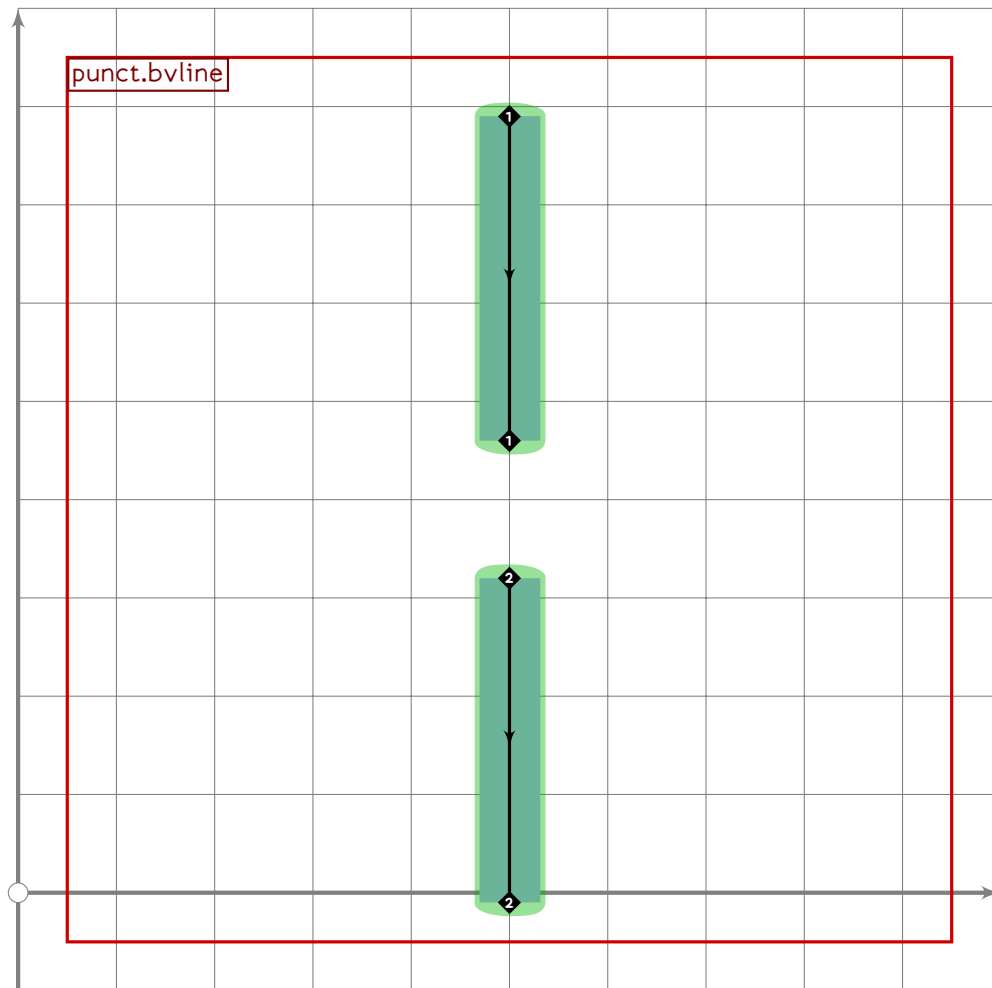
```



```

144 vardef tsu_curve.punct.brace_right =
145   push_pbox_toexpand("punct.brace_right");
146   tsu_xform(identity rotatedaround (centre_pt,180))
147   (tsu_curve.punct.brace_left);
148   expand_pbox;
149 enddef;

```



```

150
151 vardef tsu_curve.punct.bvline =
152   push_pbox_toexpand("punct.bvline");
153
154   push_stroke((500,690+tsu_punct_size)-(500,390+0.7*tsu_punct_size),
155     (1.6,1.6)-(1.6,1.6));
156   set_bsize(0,90);
157
158   push_stroke((500,390-0.7*tsu_punct_size)-(500,90-tsu_punct_size),
159     (1.6,1.6)-(1.6,1.6));
160   set_bsize(0,90);
161   expand_pbox;
162 enddef;
163
164 vardef tsu_curve.punct.make_comma(expr cpos,cang) =
165   begingroup
166     save x,y,t,u,xsp;
167     numeric x[],y[];
168     transform t,u;
169     xsp:=sp;
170     sp:=1;

```

```

171 t:=tsu_rescale_xform;
172 sp:=xsp;
173
174 x1=0.8[x2,x4];
175 (x2*x4)/2=x3=0;
176 (x2-x4)=0.45*(y3-y1)=tsu_punct_size;
177 x5=x3;
178
179 y2=y4=0.32[y3,y1]=0;
180 y5-y4=0.73*(y4-y3);
181
182 push_stroke(z1{curl 0.2}..tension 1.2..z2..z3..z4{dir 280}..
183 z5..{curl 0.2}(point 0.8 of (z1{curl 0.2}..tension 1.2..
184 z2..z3..z4{dir 280})),
185 (2,2)-(1,1)-(2,2)-(2,2)-(2,2)-(2,2)-(2,2));
186 replace_strokep(0)((point 4.2 of oldp)-oldp);
187 (0,0) transformed u=llcorner get_strokep(0);
188 (1,0) transformed u=lrcorner get_strokep(0);
189 (0,1) transformed u=ulcorner get_strokep(0);
190 replace_strokep(0)(oldp rotated (cang-6) shifted (cpos transformed t)
191 transformed inverse t);
192 u:=u scaled 1.3 rotated (cang-6) shifted (cpo transformed t)
193 transformed inverse t;
194 set_botip(0,1,0);
195
196 if tsu_pbrush_size>=30:
197 replace_strokep(0)(subpath (0.03,5.75) of oldp);
198 set_bosize(0,40);
199 push_lcblob((subpath (1.6,4.9) of get_strokep(0))-cycle);
200 else:
201 replace_strokep(0)(subpath (0,5.2) of oldp);
202 set_bosize(0,80);
203 fi;
204 push_pbox_explicit("punct.make_comma",u);
205 endgroup;
206 enddef;
207
208 vardef tsu_curve.punct.make_revcomma(expr cpos,cang) =
209 begingroup
210 save x,y,t,u,xsp;
211 numeric x[],y[];
212 transform t,u;
213 xsp:=sp;
214 sp:=1;
215 t:=tsu_rescale_xform;
216 sp:=xsp;
217
218 x1=0.8[x2,x4];

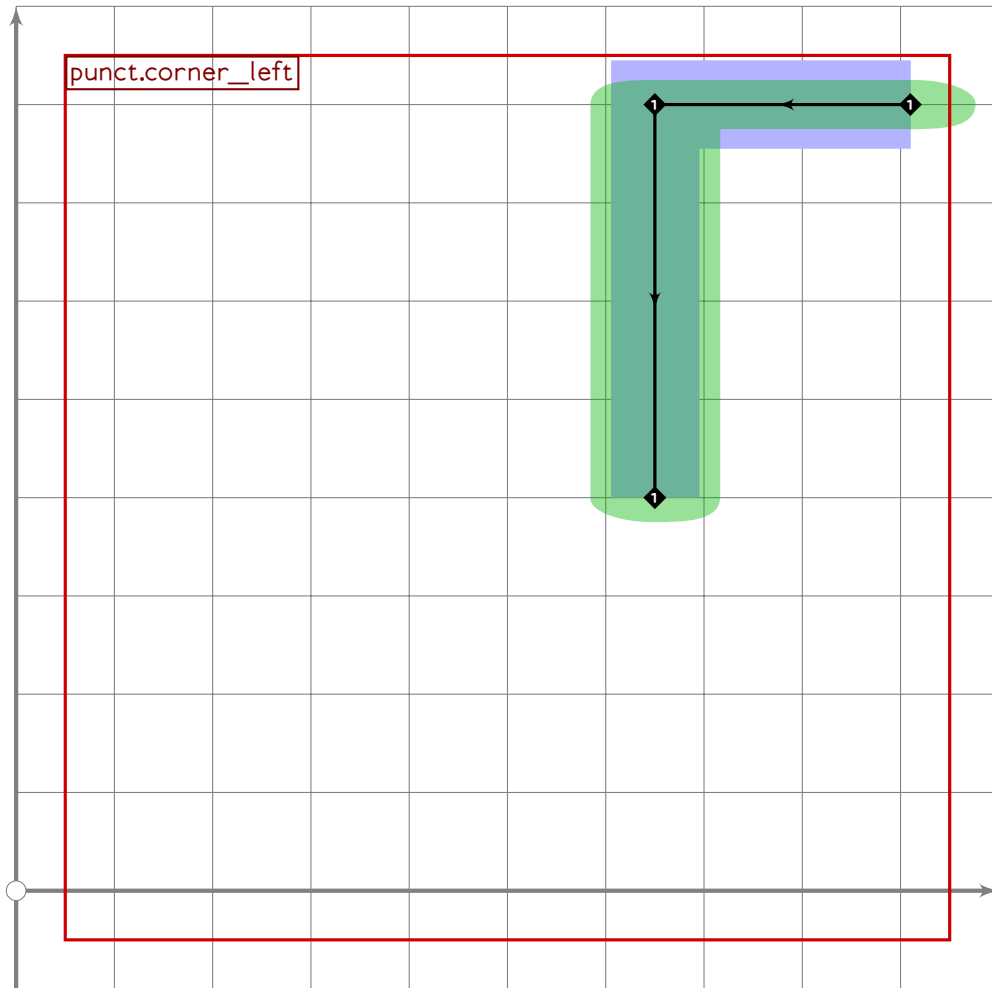
```



```

219 (x2*x4)/2=x3=0;
220 (x2-x4)=0.45*(y3-y1)=tsu_punct_size;
221 x5=x3;
222
223 y2=y4=0.32[y3,y1]=0;
224 y5-y4=0.73*(y4-y3);
225
226 push_stroke(z1{curl 0.2}..tension 1.2..z2..z3..z4{dir 280}..
227     z5..{curl 0.2}(point 0.8 of (z1{curl 0.2}..tension 1.2..
228     z2..z3..z4{dir 280})),
229     (2,2)-(1,1)-(2,2)-(2,2)-(2,2)-(2,2)-(2,2));
230 replace_strokep(0)((point 4.2 of oldp)-oldp);
231 (0,0) transformed u=llcorner get_strokep(0);
232 (1,0) transformed u=lrcorner get_strokep(0);
233 (0,1) transformed u=ulcorner get_strokep(0);
234 replace_strokep(0)(reverse (oldp rotated -6 reflectedabout(up,down)));
235 replace_strokep(0)(oldp rotated (cang-6) shifted (cpos transformed t)
236     transformed inverse t);
237 u:=u scaled 1.3 rotated (cang-6) shifted (cpo transformed t)
238     transformed inverse t;
239 set_botip(0,1,0);
240
241 if tsu_pbrush_size>=30:
242     replace_strokep(0)(subpath (0.25,5.97) of oldp);
243     set_bosize(0,40);
244     push_lcblob((subpath (1.1,4.4) of get_strokep(0))-cycle);
245 else:
246     replace_strokep(0)(subpath (0.8,6) of oldp);
247     set_bosize(0,80);
248 fi;
249 push_pbox_explicit("punct.make_revcomma",u);
250 endgroup;
251 enddef;

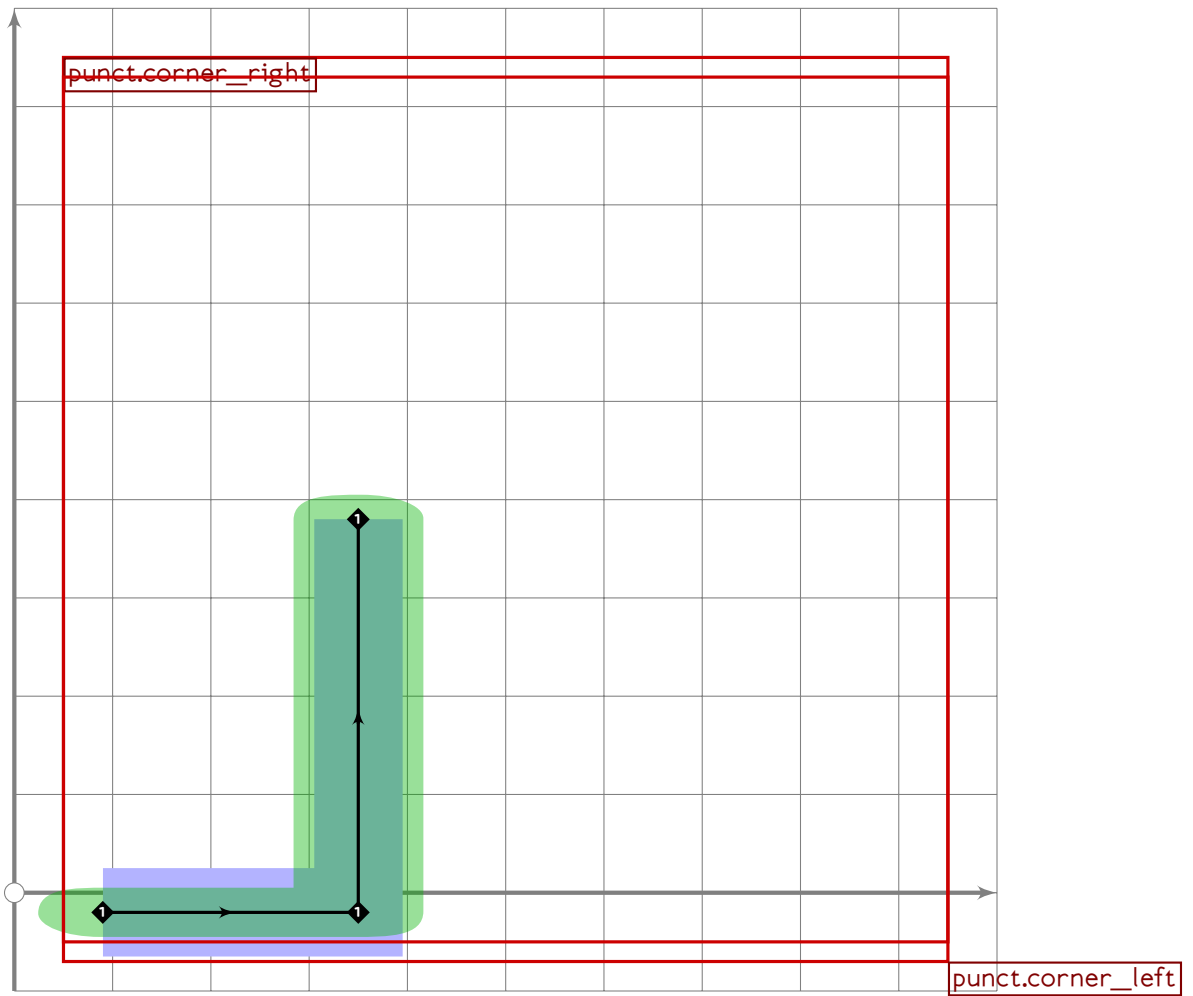
```



```

252
253 vardef tsu_curve.punct.corner_left =
254   push_pbox_toexpand("punct.corner_left");
255   push_stroke((910,800)-(650,800)-(650,400),(2,2)-(2,2)-(2,2));
256   set_bosize(0,120);
257   set_botip(0,1,1);
258   expand_pbox;
259 enddef;

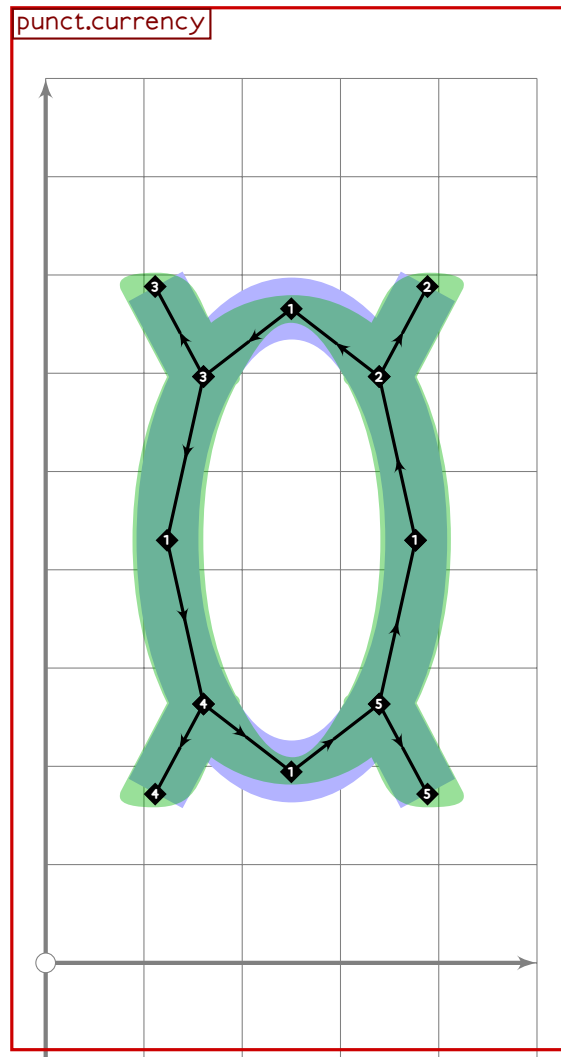
```



```

260 vardef tsu_curve.punct.corner_right =
261   push_pbox_toexpand("punct.corner_right");
262   tsu_xform(identity rotatedaround (centre_pt,180))
263     (tsu_curve.punct.corner_left);
264   expand_pbox;
265 enddef;

```



```

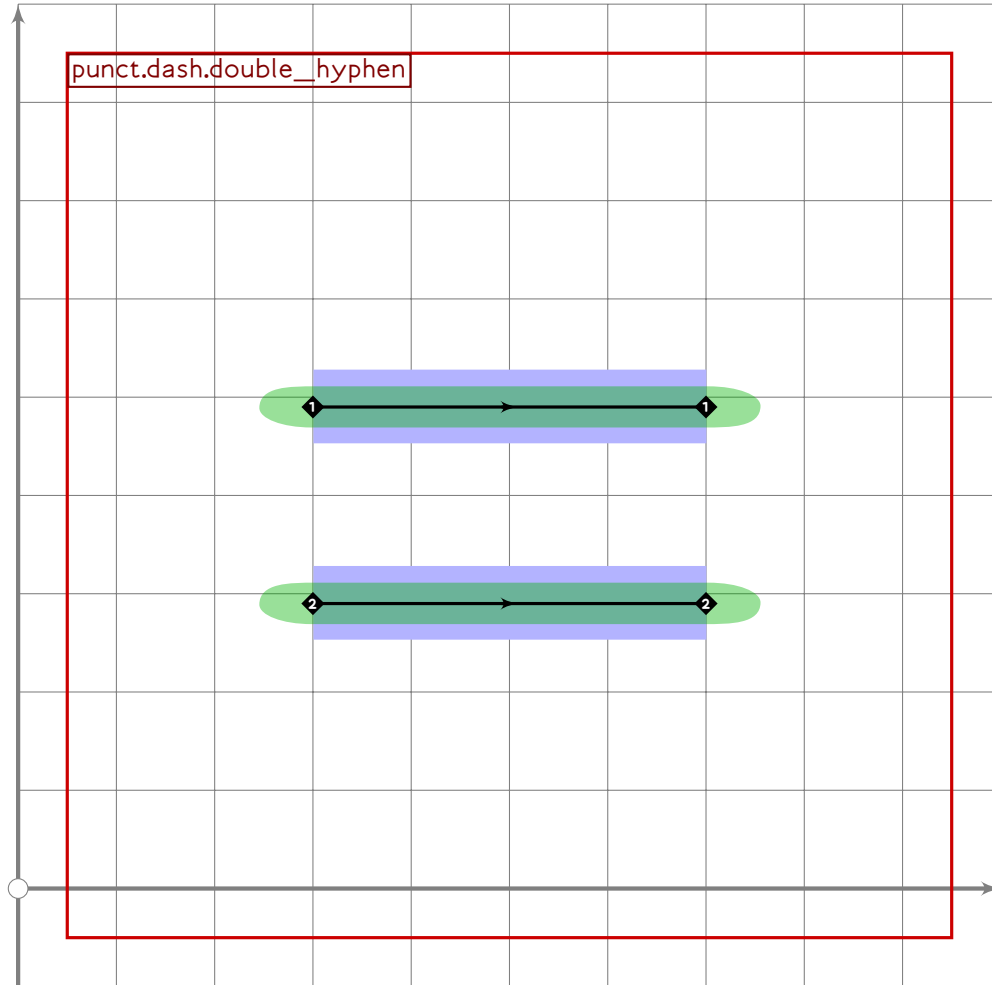
266
267 vardef tsu_curve.punct.currency =
268   push_pbox_toexpand("punct.currency");
269
270   push_stroke(fullcircle scaled (4*tsu_punct_size) shifted centre_pt,
271     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-cycle);
272   set_bosize(0,90);
273
274   push_stroke(((1,0)-(1.55,0)) rotated 45
275     scaled (2*tsu_punct_size) shifted centre_pt,
276     (1.6,1.6)-(1.6,1.6));
277   set_bosize(0,90);
278
279   push_stroke(((1,0)-(1.55,0)) rotated 135
280     scaled (2*tsu_punct_size) shifted centre_pt,
281     (1.6,1.6)-(1.6,1.6));
282   set_bosize(0,90);
283
284   push_stroke(((1,0)-(1.55,0)) rotated 225

```

```

285     scaled (2*tsu_punct_size) shifted centre_pt,
286     (1.6,1.6)-(1.6,1.6));
287     set_bosize(0,90);
288
289     push_stroke(((1,0)-(1.55,0)) rotated 315
290     scaled (2*tsu_punct_size) shifted centre_pt,
291     (1.6,1.6)-(1.6,1.6));
292     set_bosize(0,90);
293     expand_pbox;
294 enddef;

```



```

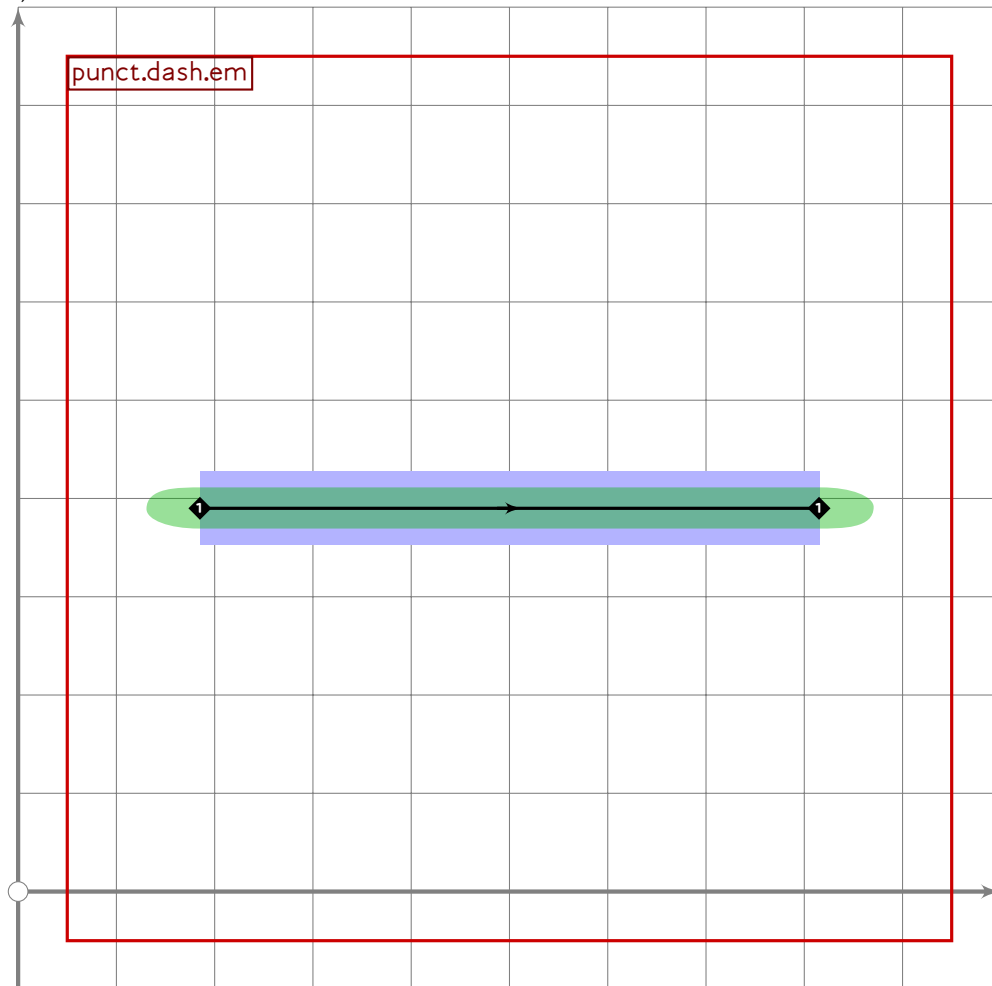
295
296 vardef tsu_curve.punct.dash.double_hyphen =
297     push_pbox_toexpand("punct.dash.double_hyphen");
298
299     (z1+z4)/2=centre_pt;
300     x2-x1=400;
301     y1-y3=200;
302     y1=y2;
303     y3=y4;
304     x1=x3;
305     x2=x4;

```

```

306
307 push_stroke(z1-z2,(2,2)-(2,2));
308 push_stroke(z3-z4,(2,2)-(2,2));
309 expand_pbox;
310 enddef;

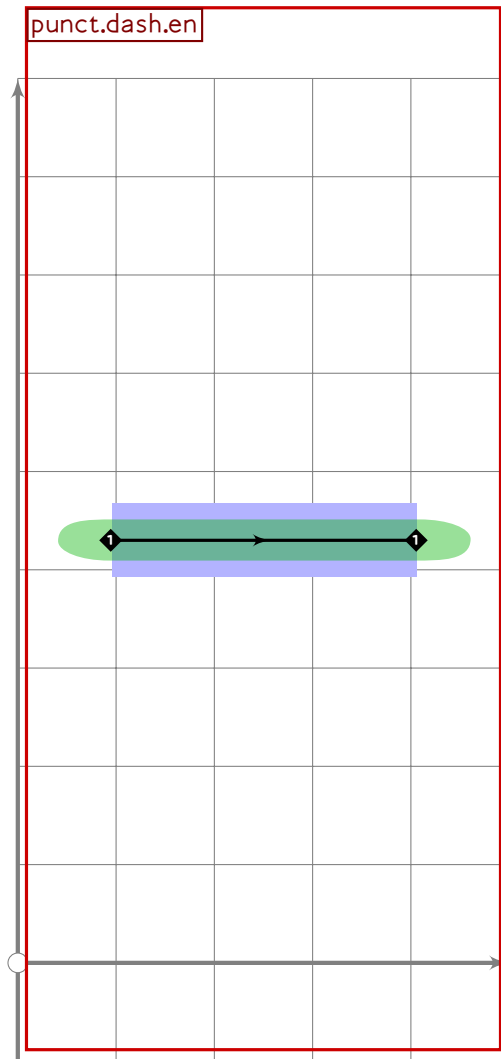
```



```

311
312 vardef tsu_curve.punct.dash.em =
313   push_pbox_toexpand("punct.dash.em");
314   (z1+z2)/2=centre_pt;
315   x2-x1=630;
316   y1=y2;
317   push_stroke(z1-z2,(2,2)-(2,2));
318   expand_pbox;
319 enddef;

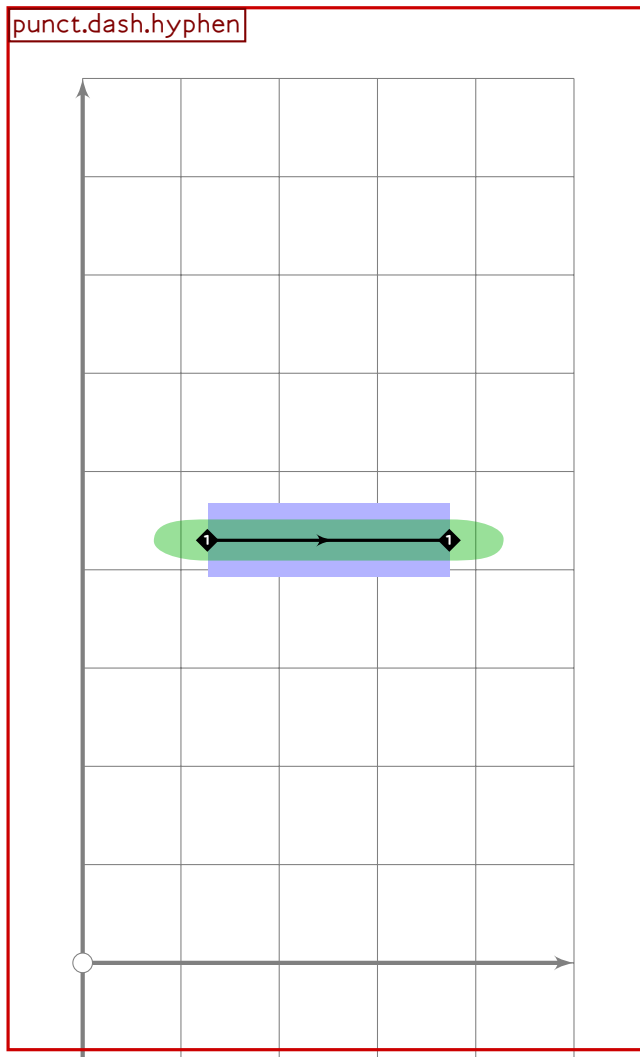
```



```

320
321 vardef tsu_curve.punct.dash.en =
322   push_pbox_toexpand("punct.dash.en");
323   (z1+z2)/2=centre_pt;
324   x2-x1=580;
325   y1=y2;
326   push_stroke(z1-z2,(2,2)-(2,2));
327   expand_pbox;
328 enddef;

```



```

329
330 vardef tsu_curve.punct.dash.hyphen =
331   push_pbox_toexpand("punct.dash.hyphen");
332   (z1+z2)/2=centre_pt;
333   x2-x1=340;
334   y1=y2;
335   push_stroke(z1-z2,(2,2)-(2,2));
336   expand_pbox;
337 enddef;
338
339 vardef tsu_curve.punct.dash.long =
340   push_pbox_toexpand("punct.dash.long");
341   (z1+z2)/2=centre_pt;
342   x2-x1=340;
343   y1=y2;
344   push_stroke(z1-z2,(2,2)-(2,2));
345   expand_pbox;
346 enddef;
347

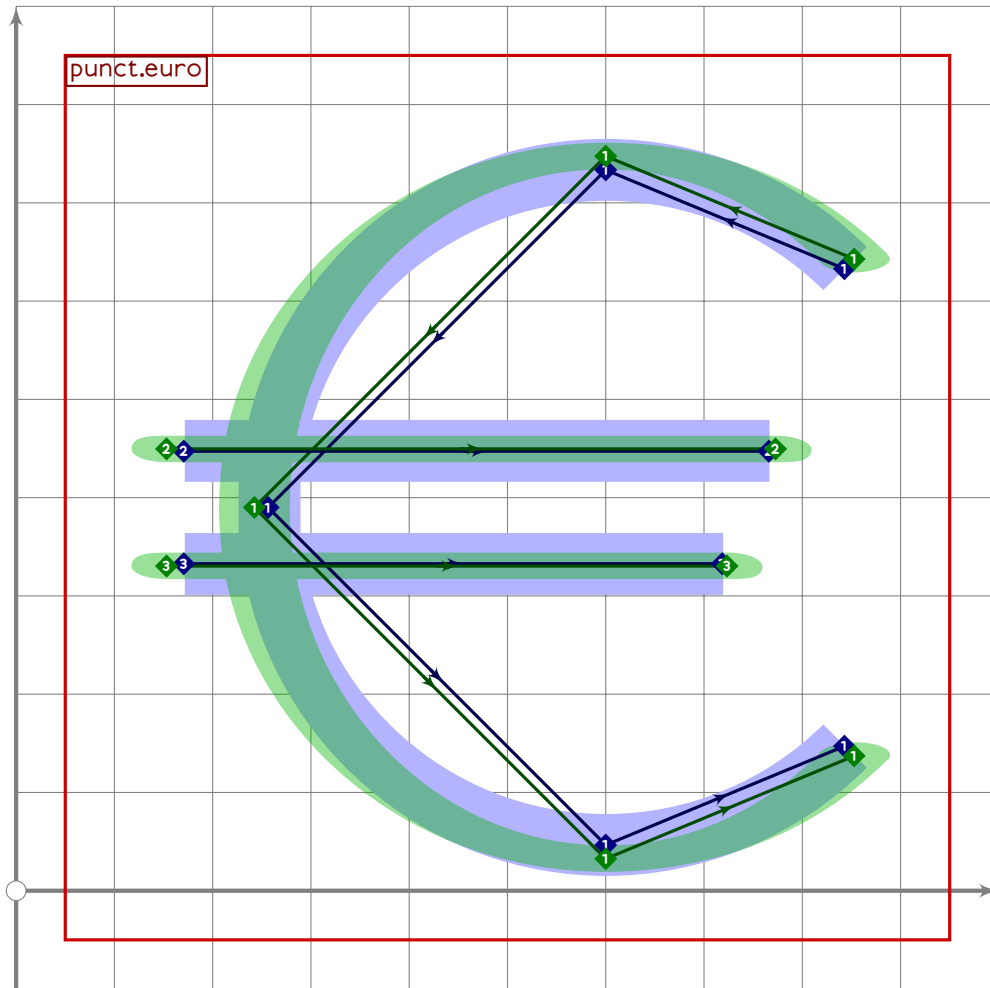
```



```

348 vardef tsu_curve.punct.dividedby(expr t) =
349   push_stroke(((1,0)-(1,0)) transformed t,(2,2)-(2,2));
350   set_bosize(0,90);
351
352   push_lcblob(fullcircle scaled (0.65*tsu_punct_size/xxpart t)
353     shifted (0,0.9) transformed t);
354   push_lcblob(fullcircle scaled (0.65*tsu_punct_size/xxpart t)
355     shifted (0,-0.9) transformed t);
356
357   push_pbox_explicit("punct.dividedby",
358     identity shifted (-0.5,-0.5) scaled 2.4 transformed t);
359 enddef;
360
361 vardef tsu_curve.punct.equals(expr t) =
362   push_stroke(((1,0.667)-(1,0.667)) transformed t,(2,2)-(2,2));
363   set_bosize(0,90);
364
365   push_stroke(((1,-0.667)-(1,-0.667)) transformed t,(2,2)-(2,2));
366   set_bosize(0,90);
367
368   push_pbox_explicit("punct.equals",
369     identity shifted (-0.5,-0.5) xyscaled (2.4,1.8) transformed t);
370 enddef;

```



```

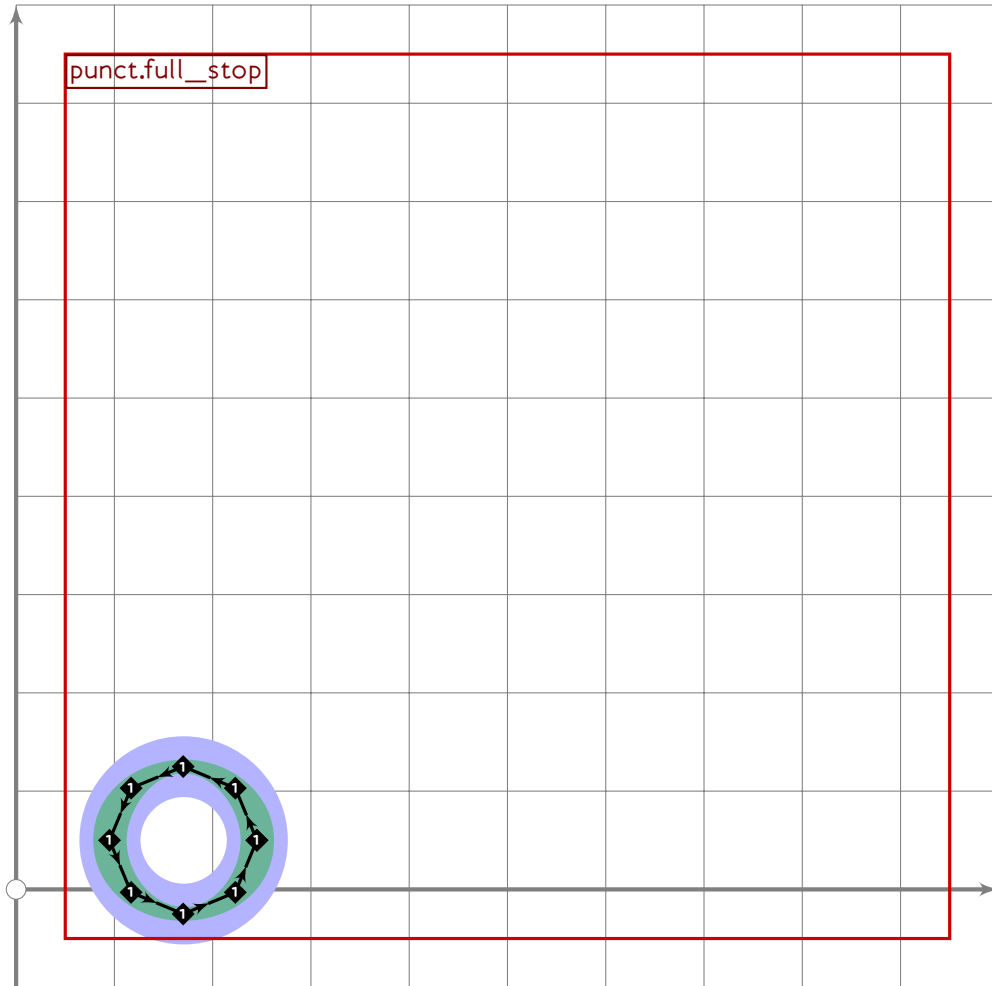
371
372 vardef tsu_curve.punct.euro =
373   push_pbox_toexpand("punct.euro");
374
375   push_stroke((subpath (0.5,3.5) of ((1,0)..(0,1)..(-1,0)..(0,-1)..cycle))
376     scaled ((latin_width_high_r-latin_width_low_r)/2)
377     shifted (centre_pt*(100,0)),
378     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
379   set_bosize(0,90);
380
381   push_stroke((-1.25,0.1667)-
382     (((0,0.1667)-(1,0.1667)) intersectionpoint ((0.707,0.707)-(0,-1))))
383     scaled ((latin_width_high_r-latin_width_low_r)/2)
384     shifted (centre_pt*(100,0)),
385     (1.6,1.6)-(1.6,1.6));
386   set_bosize(0,90);
387
388   push_stroke((-1.25,-0.1667)-
389     (((0,-0.1667)-(1,-0.1667)) intersectionpoint ((0.707,0.707)-(0,-1))))
390     scaled ((latin_width_high_r-latin_width_low_r)/2)
391     shifted (centre_pt*(100,0)),

```

```

392 (1.6,1.6)-(1.6,1.6));
393 set_bosize(0,90);
394 expand_pbox;
395 enddef;
396

```



```

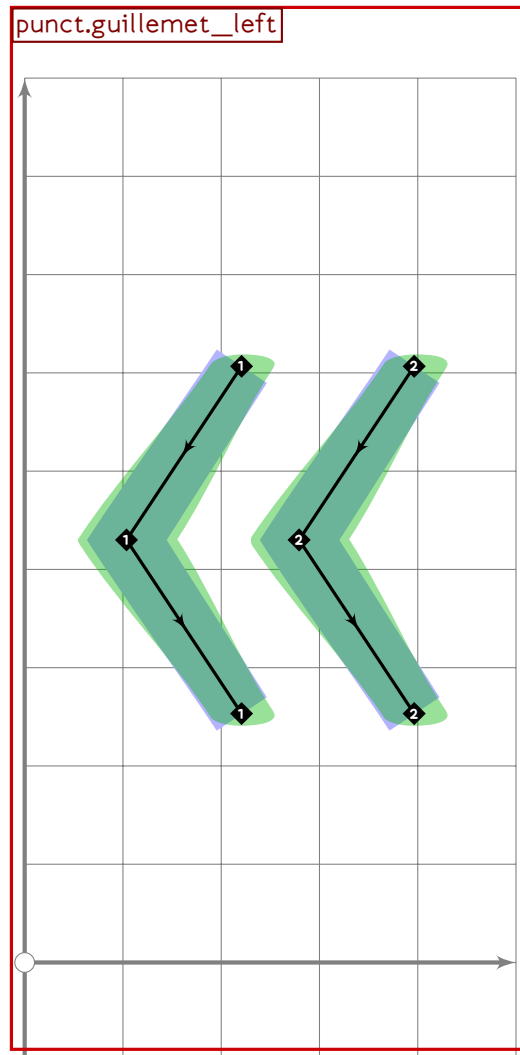
397 % this is *ideographic* full stop, not Latin period
398 vardef tsu_curve.punct.full_stop =
399   push_pbox_toexpand("punct.full_stop");
400
401   if tsu_pbrush_size>=tsu_punct_size:
402     push_lcblob(fullcircle
403       xscaled (1.5*tsu_punct_size*tsu_pbrush_size)
404       yscaled (1.5*tsu_punct_size*tsu_pbrush_size*tsu_pbrush_shape)
405       rotated tsu_pbrush_angle
406       shifted (170,50));
407   else:
408     push_stroke(fullcircle scaled (1.5*tsu_punct_size) shifted (170,50),
409       (1,1)-(1,1)-(1,1)-(1,1)-cycle);
410   fi;
411   expand_pbox;
412 enddef;

```

```

413
414 vardef tsu_curve.punct.greater_than(expr t) =
415   push_stroke(((1,1)-(1,0)-(1,-1)) transformed t,(2,2)-(2,2)-(2,2));
416   set_bosize(0,90);
417   set_botip(0,1);
418
419   push_pbox_explicit("punct.greater_than",
420     identity shifted (-0.5,-0.5) scaled 2.4 transformed t);
421 enddef;

```



```

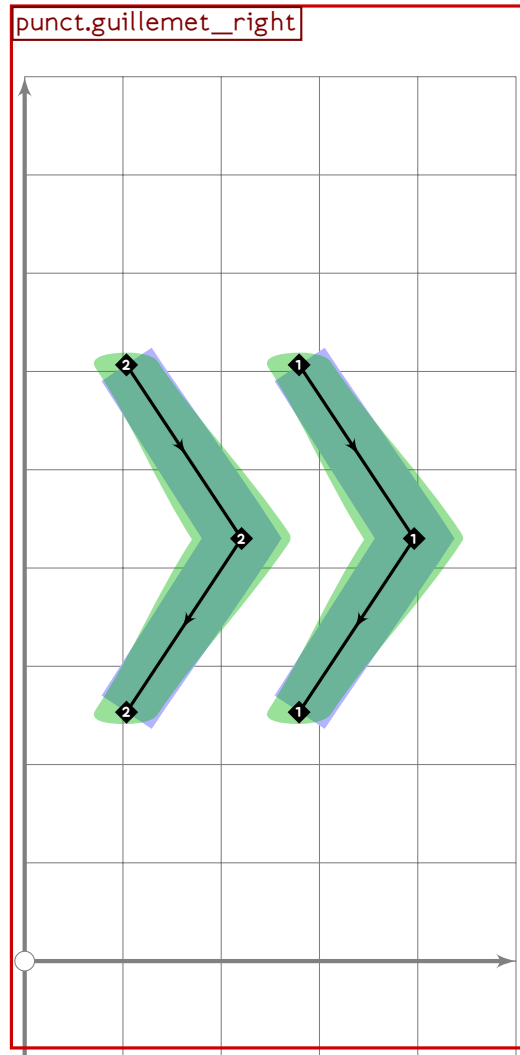
422
423 vardef tsu_curve.punct.guillemet_left =
424   push_pbox_toexpand("punct.guillemet_left");
425
426   push_stroke(((0.5,1.5)-(2.5,0)-(0.5,-1.5))
427     scaled tsu_punct_size shifted centre_pt,
428     (1.5,1.5)-(2,2)-(1.5,1.5));
429   set_bosize(0,90);
430   set_botip(0,1);
431

```

```

432 push_stroke(((2.5,1.5)-(0.5,0)-(2.5;-1.5))
433     scaled tsu_punct_size shifted centre_pt,
434     (1.5,1.5)-(2,2)-(1.5,1.5));
435 set_bosize(0,90);
436 set_botip(0,1,1);
437 expand_pbox;
438 endif;

```



```

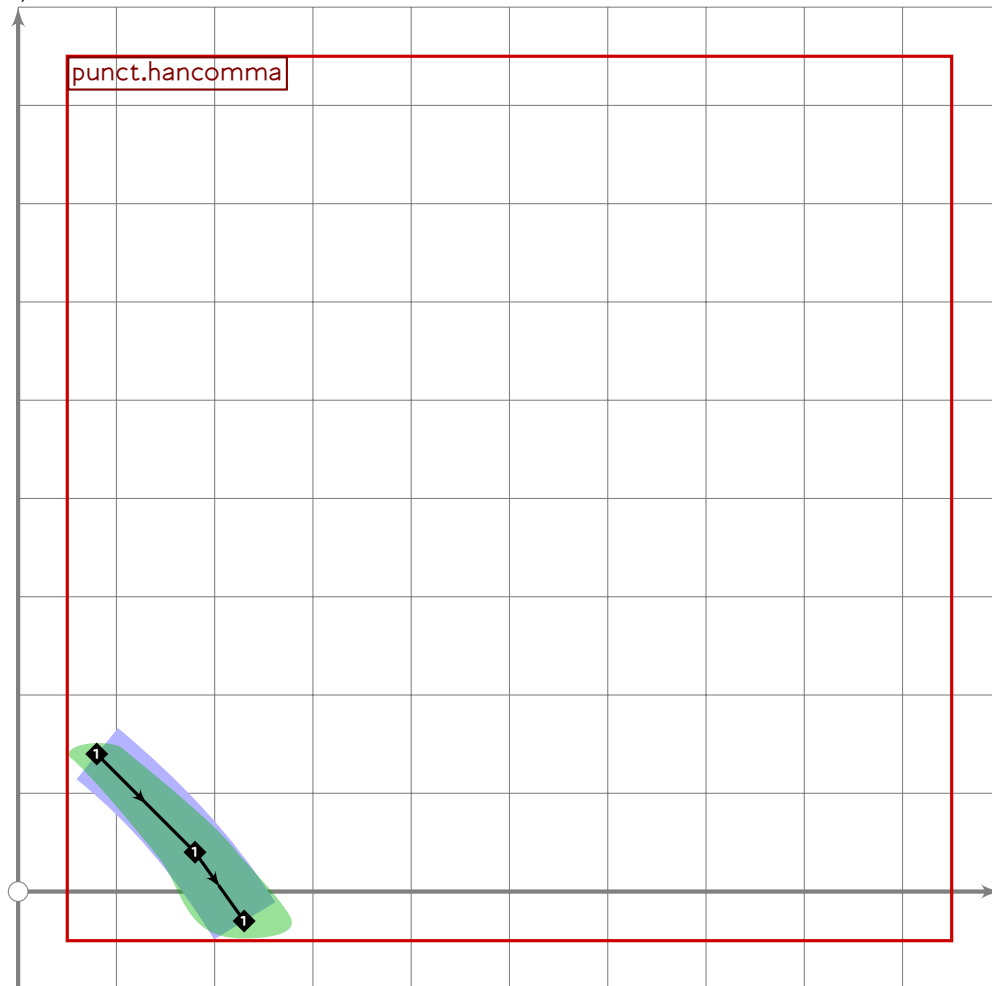
439
440 vardef tsu_curve.punct.guillemet_right =
441   push_pbox_toexpand("punct.guillemet_right");
442
443   push_stroke(((0.5,1.5)-(2.5,0)-(0.5;-1.5))
444     scaled tsu_punct_size shifted centre_pt,
445     (1.5,1.5)-(2,2)-(1.5,1.5));
446   set_bosize(0,90);
447   set_botip(0,1,1);
448
449   push_stroke(((2.5,1.5)-(-0.5,0)-(2.5;-1.5))
450     scaled tsu_punct_size shifted centre_pt,

```

```

451 (1.5,1.5)-(2,2)-(1.5,1.5));
452 set_bosize(0,90);
453 set_botip(0,1,1);
454 expand_pbox;
455 enddef;

```



```

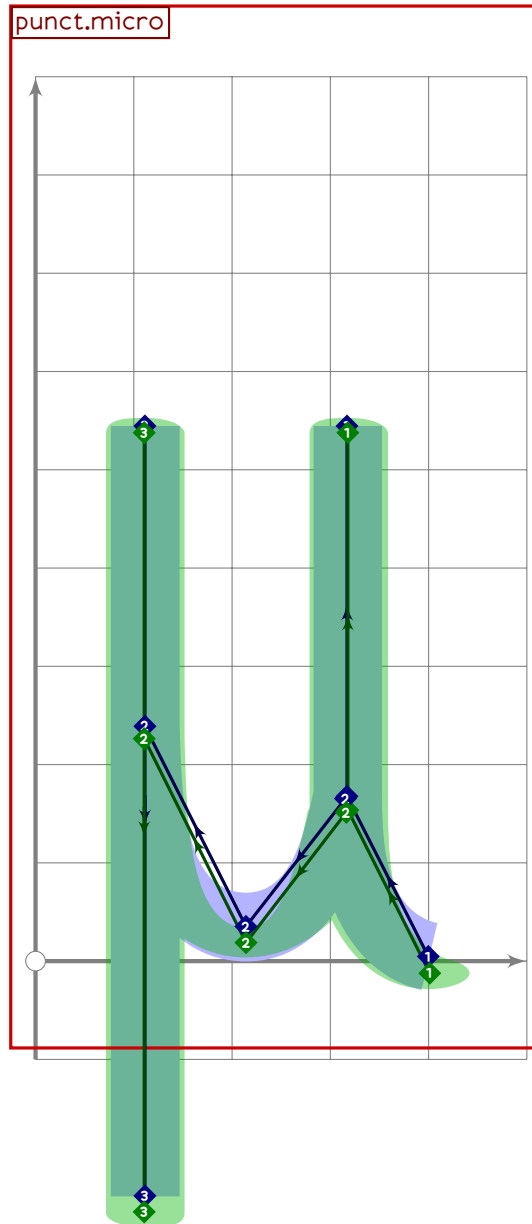
456
457 vardef tsu_curve.punct.hancomma =
458   push_pbox_toexpand("punct.hancomma");
459   push_stroke((80,140)..(180,40)..(230,-30),(1.3,1.3)..(1.6,1.6)..(1.8,1.8));
460   expand_pbox;
461 enddef;
462
463 vardef tsu_curve.punct.hminus(expr t) =
464   push_stroke(((1,0)-(1,0)) transformed t,(2,2)-(2,2));
465   set_bosize(0,90);
466
467   push_pbox_explicit("punct.hminus",
468     identity shifted (-0.5,-0.5) xyscaled (2.4,0.6) transformed t);
469 enddef;
470
471 vardef tsu_curve.punct.less_than(expr t) =

```

```

472 push_stroke(((1,1)-(-1,0)-(-1,1)) transformed t,(2,2)-(2,2)-(2,2));
473 set_bosize(0,90);
474 set_botip(0,1,1);
475
476 push_pbox_explicit("punct.less_than",
477   identity shifted (-0.5,-0.5) scaled 2.4 transformed t);
478 enddef;
479

```



```

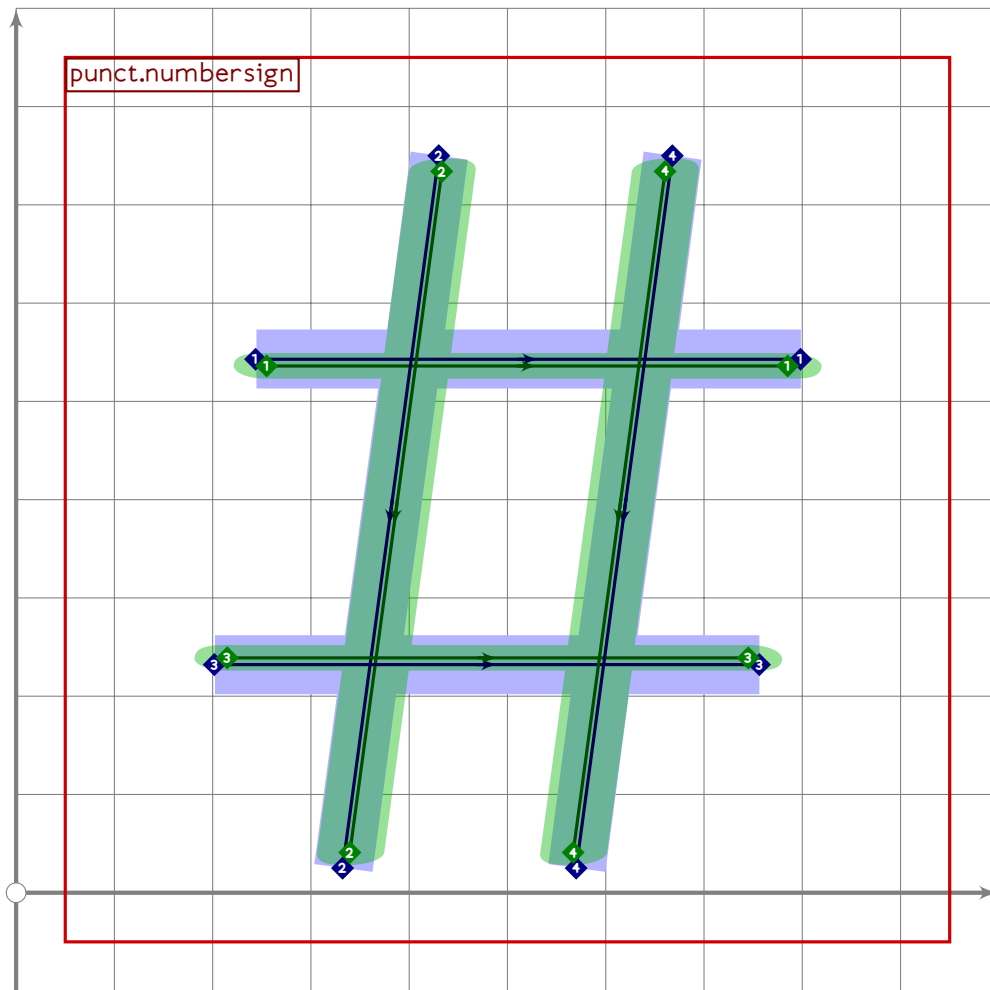
480 % in the future, this will probably become tsu_curve.greek.lowmu
481 vardef tsu_curve.punct.micro =
482   push_pbox_toexpand("punct.micro");
483
484   x1-x2=y2-y1;
485   (x2+x6)/2=450;
486   (x2-x6)=(y3-y1)*0.75;

```

```

487 x3=x2=x4;
488 x5=0.5[x4,x6];
489 x7=x8=x6;
490
491 y1=(-0.06)[y5,y3];
492 y2=0.26[y5,y3];
493 y3=y7=latin_wide_xheight_v;
494 y4=0.73[y3,y5];
495 y5=latin_wide_low_h;
496 y6=0.60[y3,y5];
497 y8=latin_wide_desc_v;
498
499 push_stroke(z1{dir 173}..{up}z2-z3,(1.6,1.6)-(1.6,1.6)-(1.6,1.6));
500 push_stroke(subpath (0.03,2) of (z4..z5{left}..z6{dir 93}),
501   (1.6,1.6)-(1.6,1.6)-(1.6,1.6));
502 push_stroke(z7-z8,(1.6,1.6)-(1.6,1.6));
503 expand_pbox;
504 endif;
505
506 vardef tsu_curve.punct.notsign(expr t) =
507   push_stroke(((1,0)-(1,0)-(1,1)) transformed t,(2,2)-(2,2)-(2,2));
508   set_bosize(0,90);
509   set_botip(0,1,1);
510
511   push_pbox_explicit("punct.notsign",
512     identity shifted (-0.5,0.5) scaled 2.4 transformed t);
513 endif;

```

```

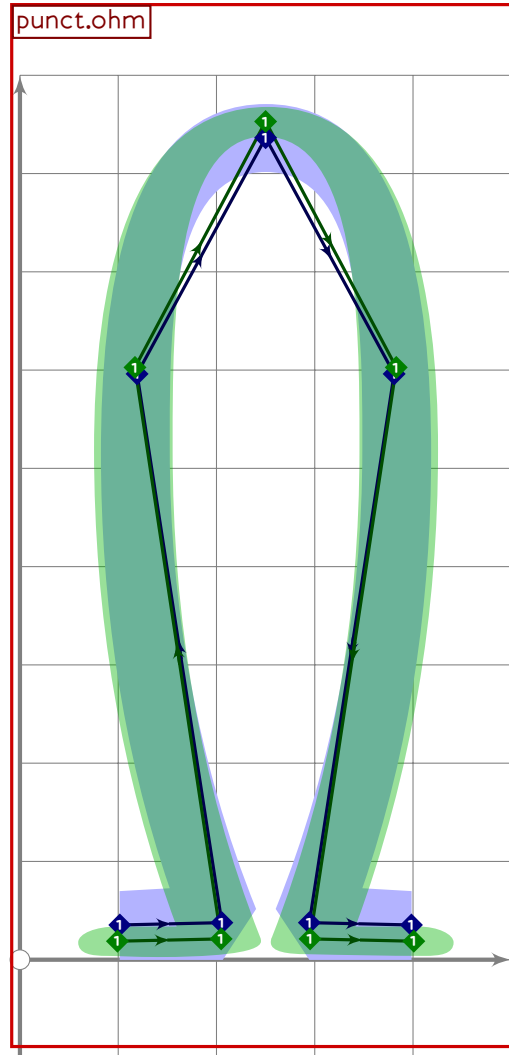
514
515 vardef tsu_curve.punct.numbersign =
516   push_pbox_toexpand("punct.numbersign");
517
518   (x1+x2)/2=500;
519   (x2-x1)=0.9*(y2-y1);
520   x3=0.15[x1,x2];
521
522   y1=latin_wide_low_v;
523   y2=y3=latin_wide_high_v;
524
525   transform xf_num;
526   (0,0) transformed xf_num = z1;
527   (3.5,3.5) transformed xf_num = z2;
528   (0,3.5) transformed xf_num = z3;
529
530   push_stroke(((0,2.5)-(3.5,2.5)) transformed xf_num,(1.6,1.6)-(1.6,1.6));
531   set_bosize(0,85);
532   push_stroke(((1,3.5)-(1,0)) transformed xf_num,(1.6,1.6)-(1.6,1.6));
533   set_bosize(0,85);
534   push_stroke(((0,1)-(3.5,1)) transformed xf_num,(1.6,1.6)-(1.6,1.6));

```

```

535 set_bosize(0,85);
536 push_stroke(((2.5,3.5)-(2.5,0)) transformed xf_num,(1.6,1.6)-(1.6,1.6));
537 set_bosize(0,85);
538 expand_pbox;
539 enddef;
540

```



```

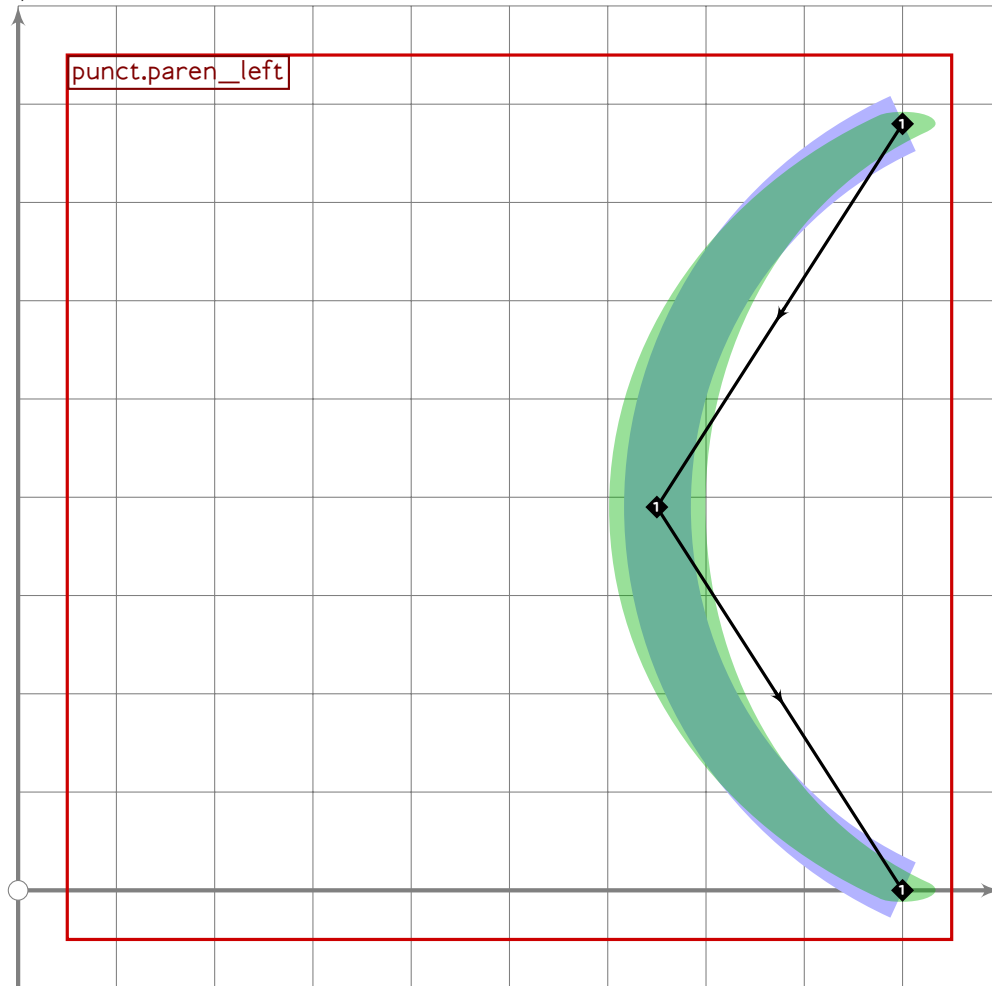
541 % in the future, this will probably become tsu_curve.greek.upomega
542 vardef tsu_curve.punct.ohm =
543   push_pbox_toexpand("punct.ohm");
544
545   (x5*x3)/2=(x6*x2)/2=(x7*x1)/2=x4=500;
546   x2=0.7[x1,x4];
547   x7-x1=0.76*(y4-y1);
548   x5-x3=0.67*(y4-y1);
549
550   y1=y7=latin_wide_low_h;
551   y2=y6=y1*2;
552   y3=y5=0.7[y1,y4];
553   y4=latin_wide_high_r;

```

```

554
555 push_stroke(z1-z2..tension 1.5 and 1.3..z3..z4..
556     z5..tension 1.3 and 1.5..z6-z7,
557     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-
558     (1.6,1.6)-(1.6,1.6));
559 set_botip(0,1,0);
560 set_botip(0,5,0);
561 expand_pbox;
562 enddef;

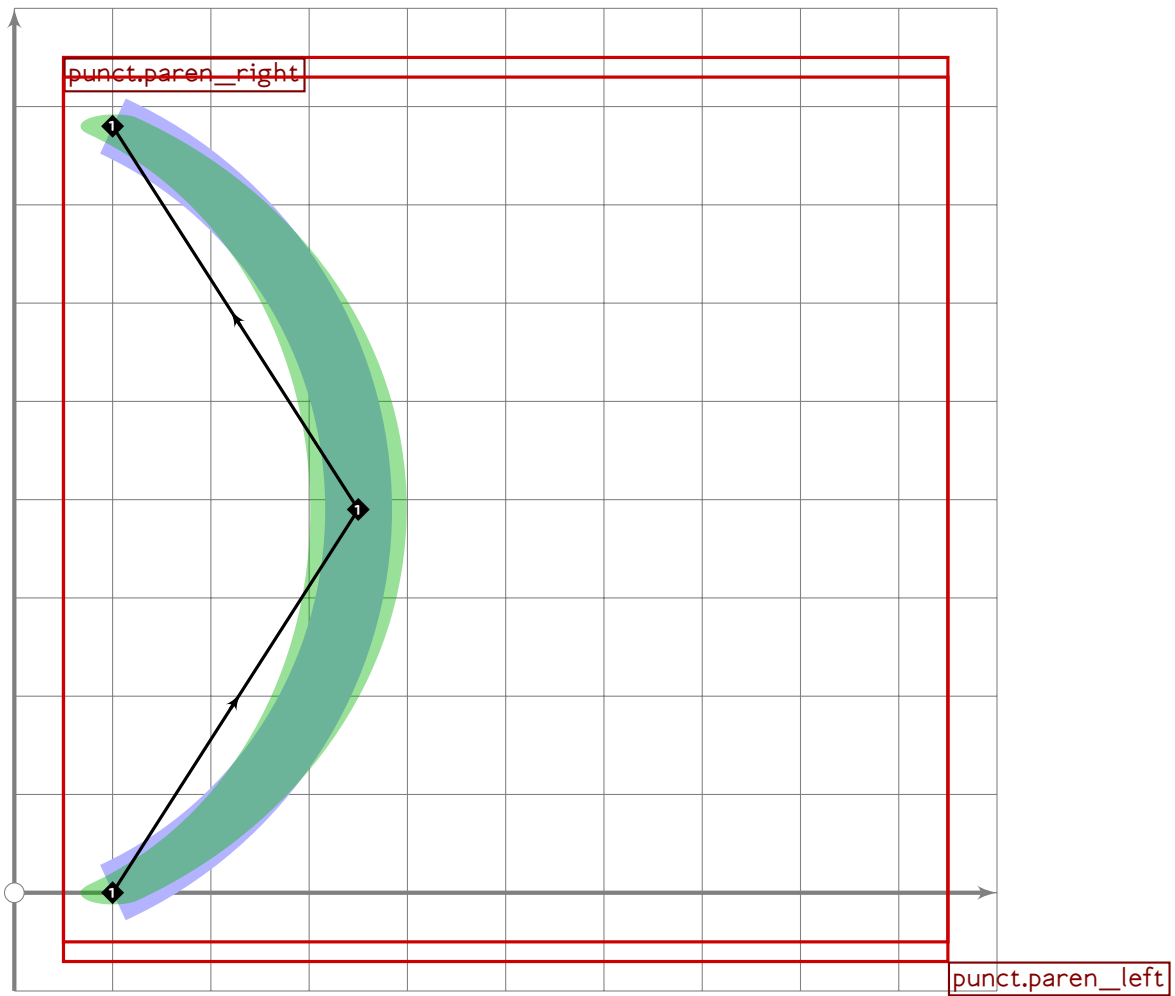
```



```

563
564 vardef tsu_curve.punct.paren_left =
565     push_pbox_toexpand("punct.paren_left");
566     push_stroke((900,780)..(900-2.5*tsu_punct_size,390)..(900,0),
567         (1.5,1.5)-(2,2)-(1.5,1.5));
568     set_bosize(0,90);
569     expand_pbox;
570 enddef;

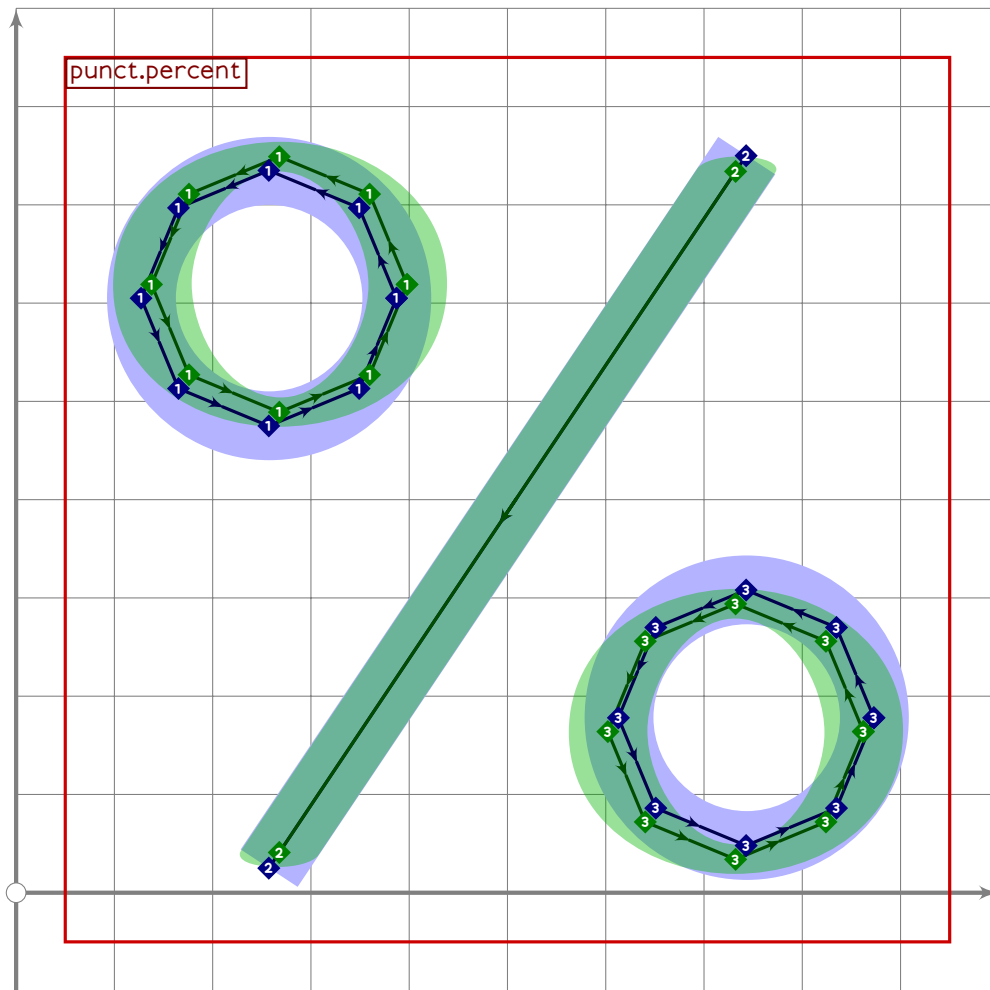
```



```

571
572 vardef tsu_curve.punct.paren_right =
573   push_pbox_toexpand("punct.paren_right");
574   tsu_xform(identity rotatedaround (centre_pt,180))
575     (tsu_curve.punct.paren_left);
576   expand_pbox;
577 enddef;

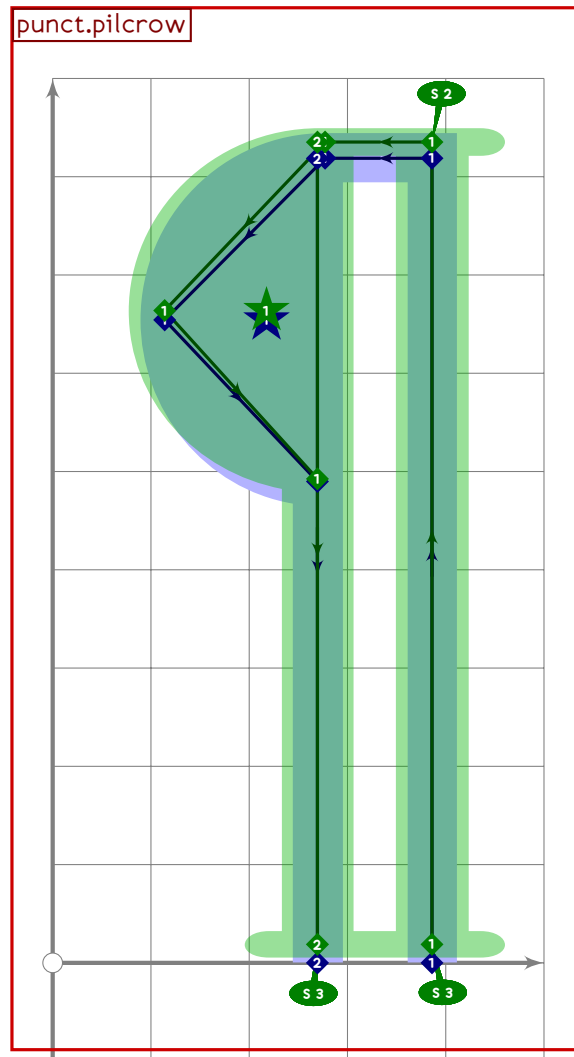
```



```

578
579 vardef tsu_curve.punct.percent =
580   push_pbox_toexpand("punct.percent");
581
582   (x1+x2)/2=500;
583   (x1-x2)=0.67(y1-y2);
584
585   y1=latin_wide_high_v;
586   y2=latin_wide_low_v;
587
588   push_stroke(fullcircle scaled 260 shifted (x2,latin_wide_high_r-130),
589     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-cycle);
590
591   push_stroke((z1-z2)
592     shifted -centre_pt scaled (tsu_punct_size/100) shifted centre_pt,
593     (1.6,1.6)-(1.6,1.6));
594
595   push_stroke(fullcircle scaled 260 shifted (x1,latin_wide_low_r+130),
596     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-cycle);
597   expand_pbox;
598 enddef;

```



```

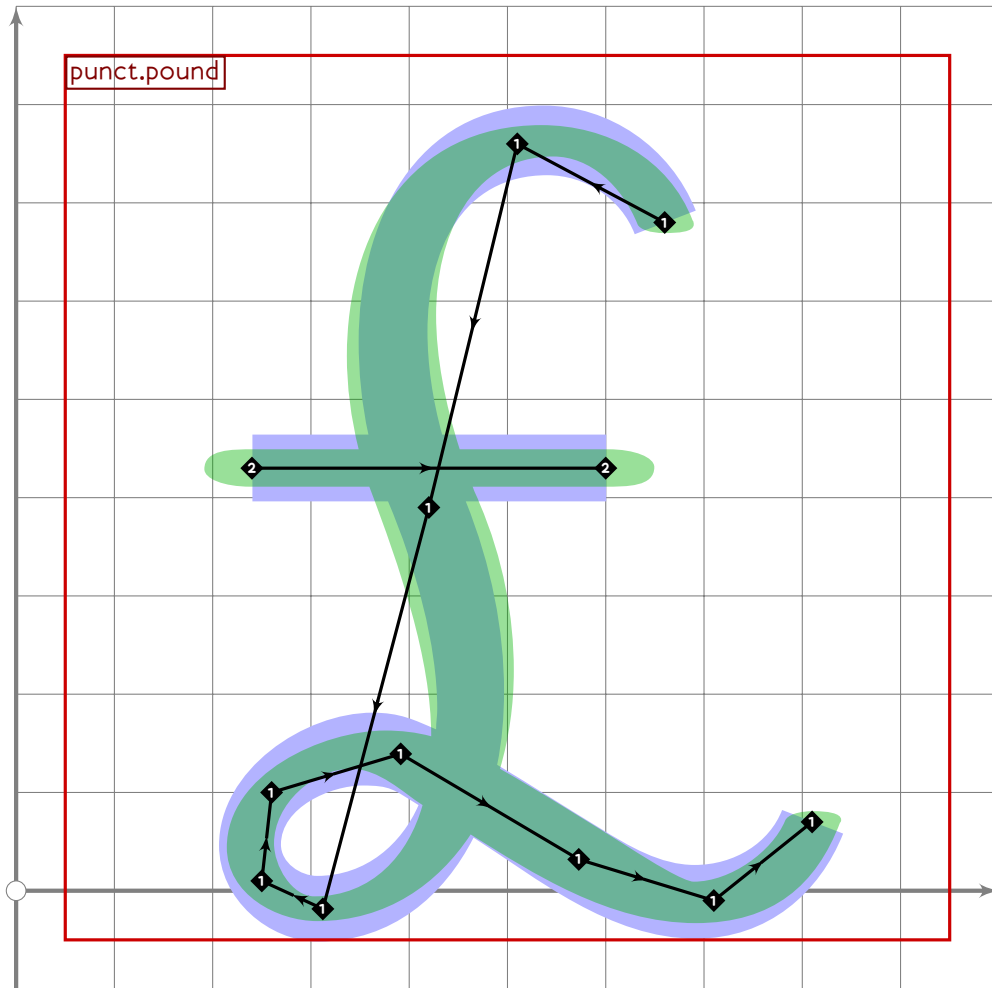
599
600 vardef tsu_curve.punct.pilcrow =
601   push_pbox_toexpand("punct.pilcrow");
602
603   x1=x2=x6=710;
604   x3=x5=x1-420*0.4;
605   x4=x1-420;
606
607   y1=latin_wide_low_v;
608   y2=y3=latin_wide_high_h;
609   y4=(y3*y5)/2;
610   y5=y6=vmetric(0.58);
611
612   x7=x8=x9=x1-1.8*tsu_punct_size;
613   y7=y2+50;
614   y8=y4;
615   y9=y1;
616
617   push_stroke(z1-z2-z3{left}..z4..{right}z5-z6,

```

```

618 (2,2)-(2,2)-(2,2)-(2,2)-(2,2)-(2,2));
619 replace_strokeq(0)(subpath (0,xpart (get_strokeq(0) intersectiontimes
620 (z8-z9))) of oldq);
621 replace_strokep(0)(subpath (0,xpart (oldp intersectiontimes
622 (z8-z9))) of oldp);
623 set_bosize(0,67);
624 set_botip(0,1,1);
625 set_boserif(0,0,3);
626 set_boserif(0,1,2);
627
628 push_stroke(((z7-z8) intersectionpoint get_strokep(0))-z9,(2,2)-(2,2));
629 set_bosize(0,67);
630 set_boserif(0,1,3);
631
632 if tsu_pbrush_size>=30:
633   push_lcblob((subpath (xpart (get_strokep(-1) intersectiontimes (z7-z8)),
634     infinity) of get_strokep(-1))-cycle);
635   fi;
636   expand_pbox;
637 enddef;
638
639 vardef tsu_curve.punct.plus(expr t) =
640   push_stroke((-1,0)-(1,0)) transformed t,(2,2)-(2,2));
641   set_bosize(0,90);
642
643   push_stroke((0,1)-(0,-1)) transformed t,(2,2)-(2,2));
644   set_bosize(0,90);
645
646   push_pbox_explicit("punct.plus",
647     identity shifted (-0.5,-0.5) scaled 2.4 transformed t);
648 enddef;
649
650 vardef tsu_curve.punct.plusminus(expr t) =
651   push_stroke((-1,0.25)-(1,0.25)) transformed t,(2,2)-(2,2));
652   set_bosize(0,90);
653   push_stroke((0,1.25)-(0,-0.75)) transformed t,(2,2)-(2,2));
654   set_bosize(0,90);
655   push_stroke((-1,-1.25)-(1,-1.25)) transformed t,(2,2)-(2,2));
656   set_bosize(0,90);
657
658   push_pbox_explicit("punct.plusminus",
659     identity shifted (-0.5,-0.5) xyscaled (2.4,3.2) transformed t);
660 enddef;

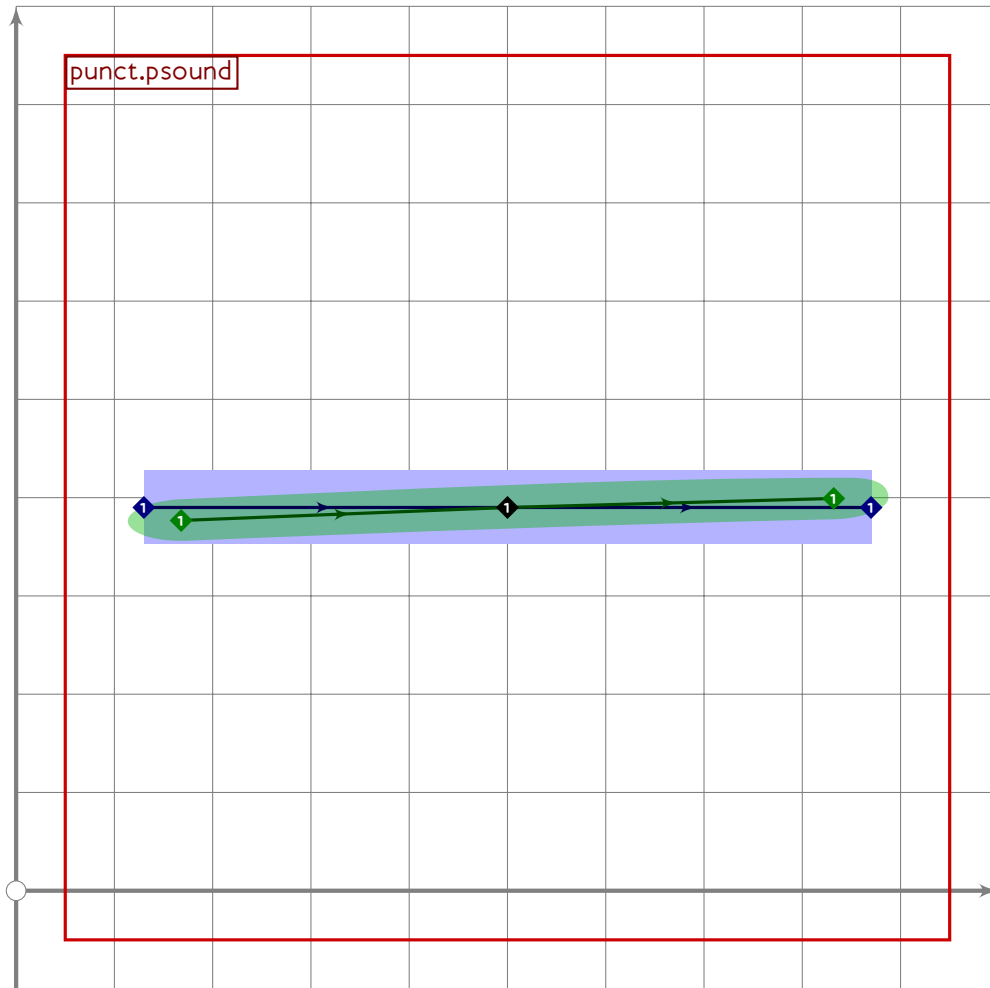
```



```

661
662 vardef tsu_curve.punct.pound =
663   push_pbox_toexpand("punct.pound");
664
665   push_stroke((660,680)..(510,760)..(420,390)..tension 11..(250,10)..
666     (260,100)..(710,-10)..(810,70),
667     (1.3,1.3)-(1.7,1.7)-(1.9,1.9)-(1.4,1.4)-(1.2,1.2)-
668     (1.1,1.2)-(2,2)-(2.1,2.1)-(2,2)-(1.3,1.3));
669   replace_strokep(0)(insert_nodes(oldp)(2.8,4.3,4.7));
670
671   push_stroke((240,430)-(600,430),(2,2)-(2,2));
672   set_bosize(0,90);
673   expand_pbox;
674 enddef;

```

```

675
676 vardef tsu_curve.punct.psound =
677   push_pbox_toexpand("punct.psound");
678   push_stroke((130,390-15*mincho)..(500,390)..(870,390+10*mincho),
679     (0.7,3.3)-(2,2)-(0.7,3.3));
680   expand_pbox;
681 enddef;
682
683 vardef tsu_curve.punct.make__period(expr cpos) =
684   push_stroke(fullcircle scaled (tsu_punct_size*1.15) shifted cpos,
685     (2,2)-(2,2)-(2,2)-(2,2)-cycle);
686
687   if tsu_pbrush_size>=30:
688     set_bsize(0,40);
689     push_lcblob(get_strokep(0));
690   else:
691     set_bsize(0,80);
692   fi;
693
694   push_pbox_explicit("punct.make__period",
695     identity shifted (-0.5,0.5) scaled (tsu_punct_size*1.5) shifted cpos);

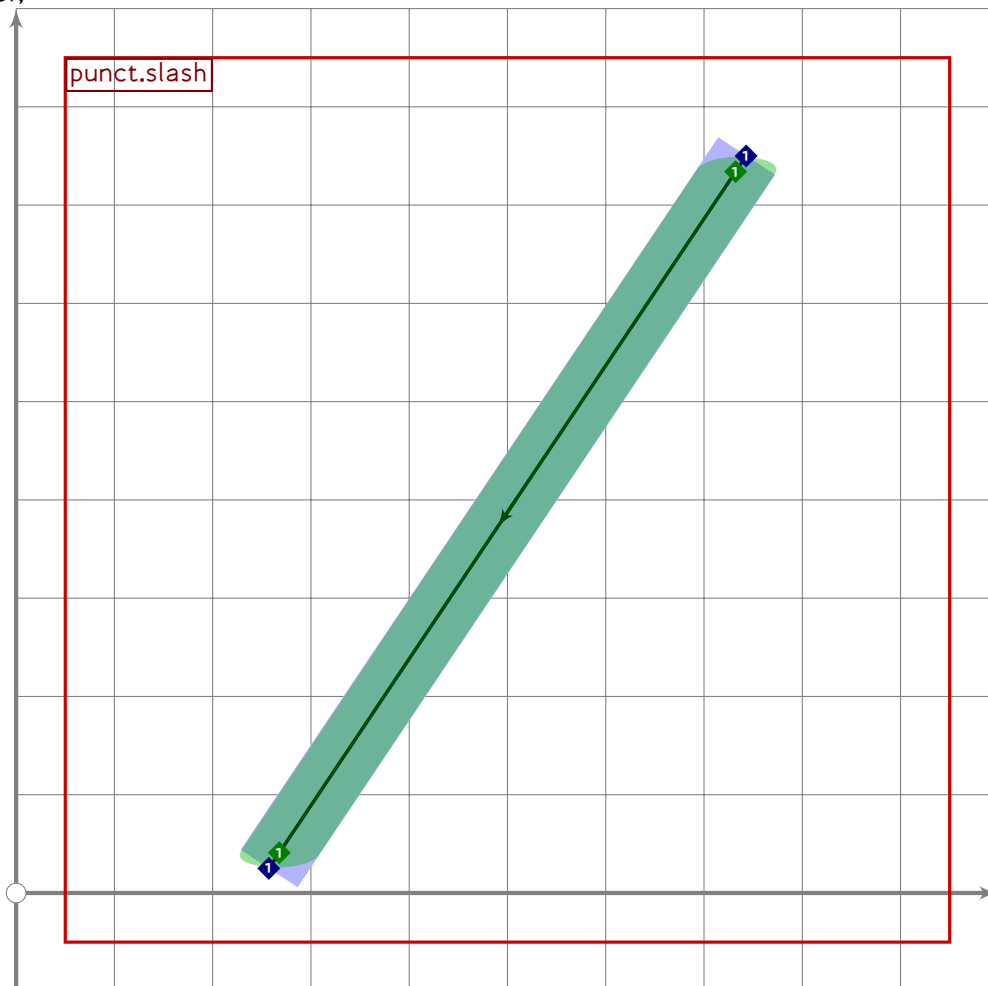
```



```

715 expand_pbox;
716 enddef;

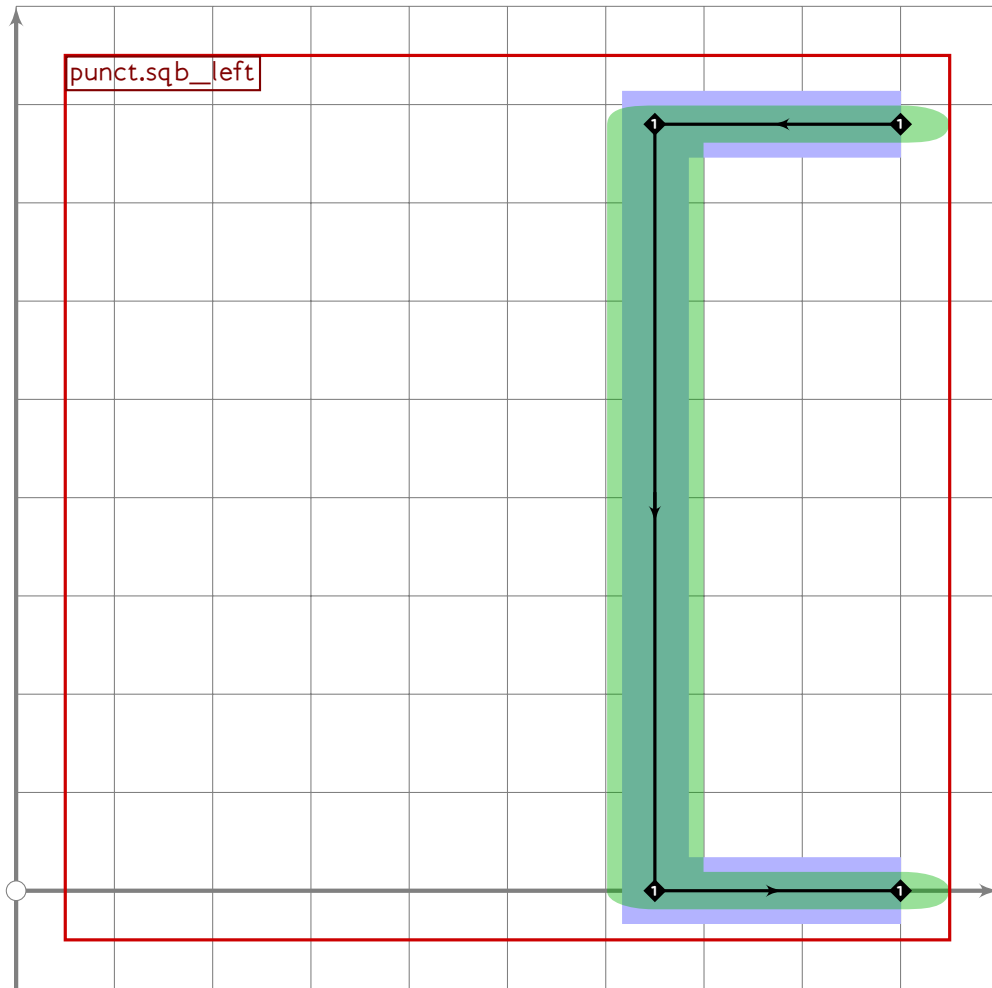
```



```

717
718 vardef tsu_curve.punct.slash =
719   push_pbox_toexpand("punct.slash");
720   (x1+x2)/2=500;
721   (x1-x2)=0.67(y1-y2);
722
723   y1=latin_wide_high_v;
724   y2=latin_wide_low_v;
725
726   push_stroke((z1-z2)
727     shifted -centre_pt scaled (tsu_punct_size/100) shifted centre_pt,
728     (1.6,1.6)-(1.6,1.6));
729   expand_pbox;
730 enddef;

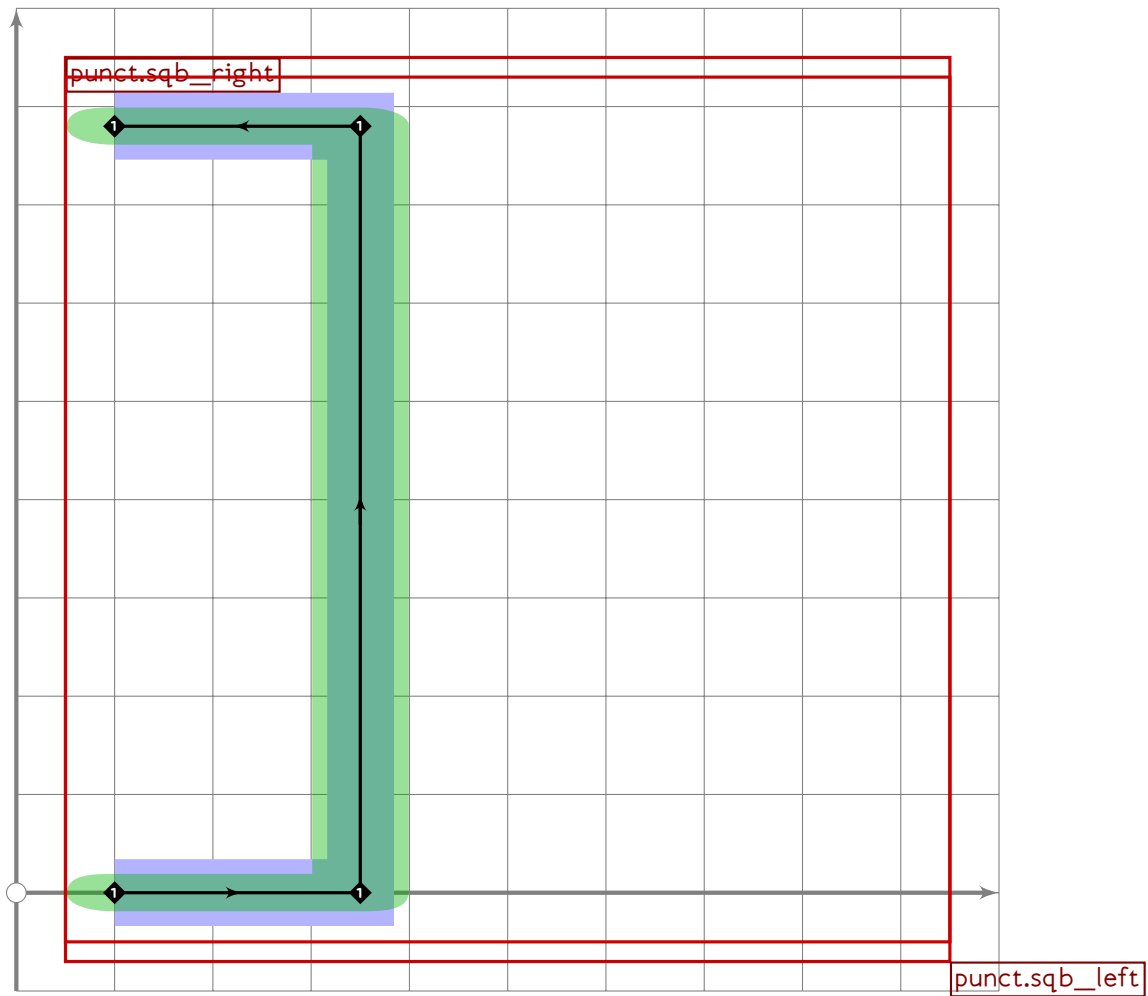
```



```

731
732 vardef tsu_curve.punct.sqb_left =
733   push_pbox_toexpand("punct.sqb_left");
734   push_stroke((900,780)-
735     (900-2.5*tsu_punct_size,780)-
736     (900-2.5*tsu_punct_size,0)-
737     (900,0),
738     (2,2)-(2,2)-(2,2)-(2,2));
739   set_bosize(0,90);
740   set_botip(0,1,1);
741   set_botip(0,2,1);
742   expand_pbox;
743 enddef;

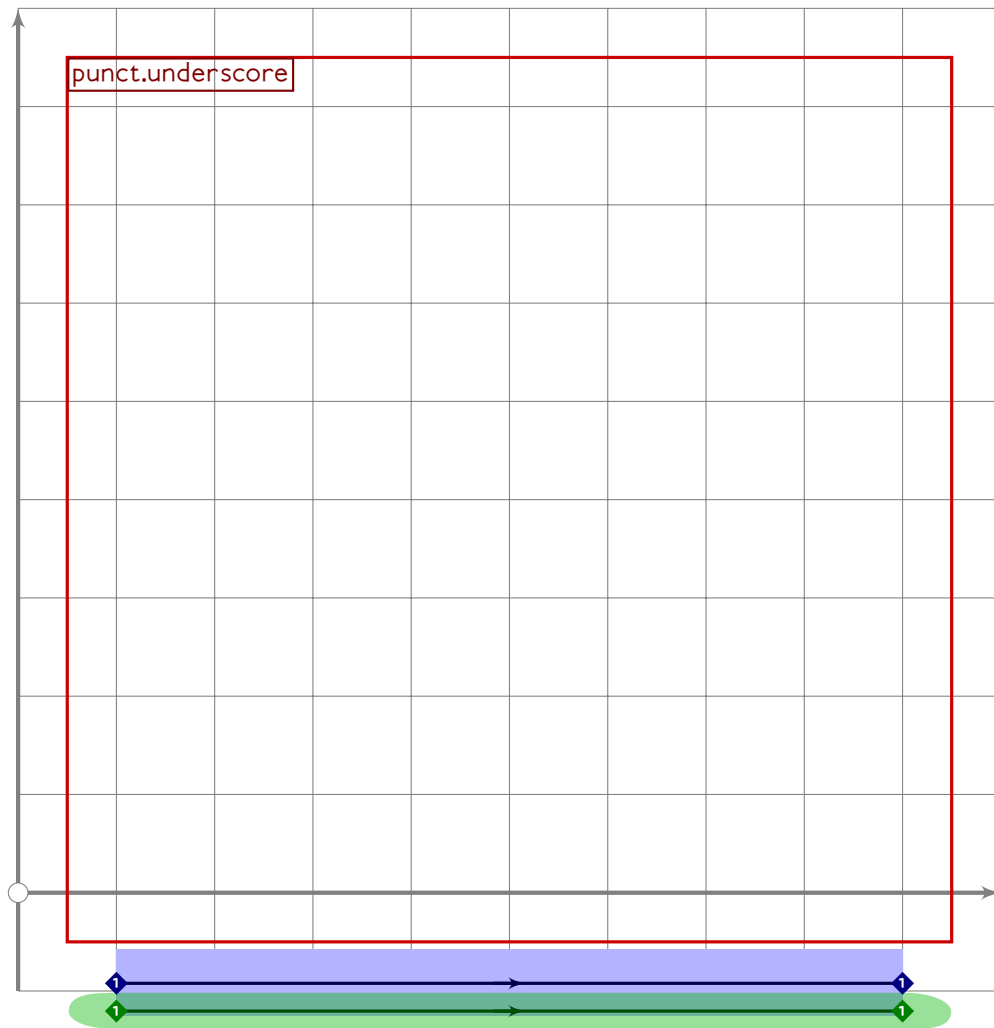
```



```

744
745 vardef tsu_curve.punct.sqb_right =
746   push_pbox_toexpand("punct.sqb_right");
747   tsu_xform(identity rotatedaround (centre_pt,180))
748     (tsu_curve.punct.sqb_left);
749   expand_pbox;
750 enddef;
751
752 vardef tsu_curve.punct.times(expr t) =
753   push_stroke(((1,-1)-(1,1)) transformed t,(2,2)-(2,2));
754   set_bosize(0,90);
755   push_stroke(((1,1)-(1,-1)) transformed t,(2,2)-(2,2));
756   set_bosize(0,90);
757
758   push_pbox_explicit("punct.times",
759     identity shifted (-0.5,-0.5) scaled 2.4 transformed t);
760 enddef;

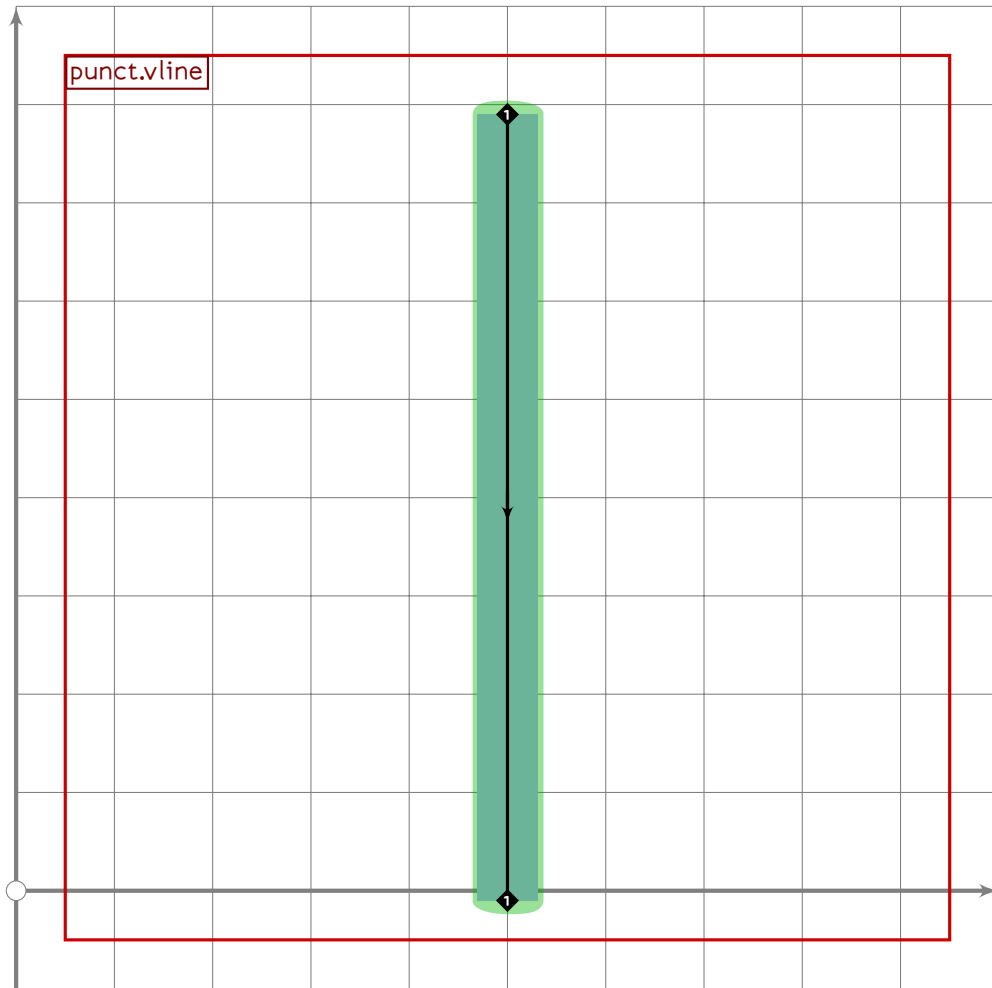
```



```

761
762 vardef tsu_curve.punct.underscore =
763   push_pbox_toexpand("punct.underscore");
764   push_stroke((100,0.3[latin_wide_desc_h,latin_wide_low_h])-
765     (900,0.3[latin_wide_desc_h,latin_wide_low_h]),
766     (2,2)-(2,2));
767   set_bosize(0,90);
768   expand_pbox;
769 enddef;

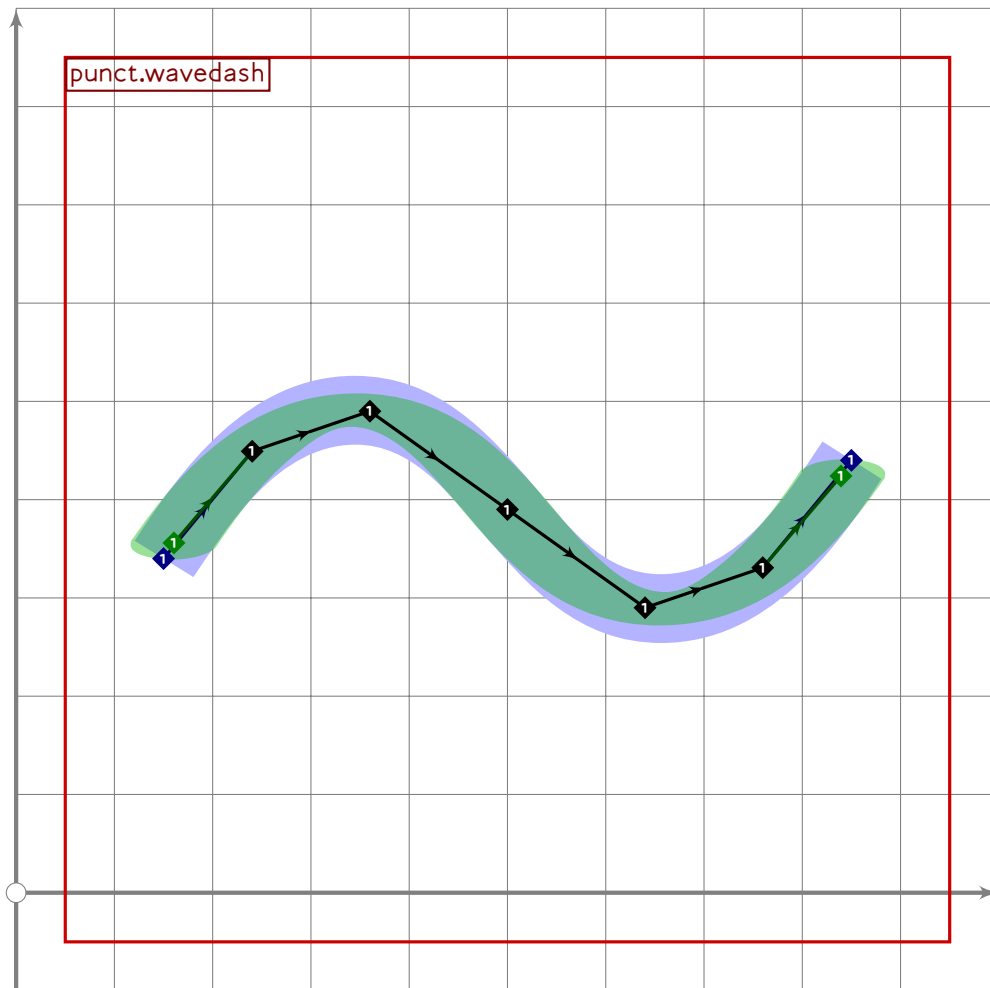
```



```

770
771 vardef tsu_curve.punct.vline =
772   push_pbox_toexpand("punct.vline");
773   push_stroke((500,690+tsu_punct_size)-(500,90-tsu_punct_size),
774     (1.6,1.6)-(1.6,1.6));
775   set_bosize(0,90);
776   expand_pbox;
777 enddef;

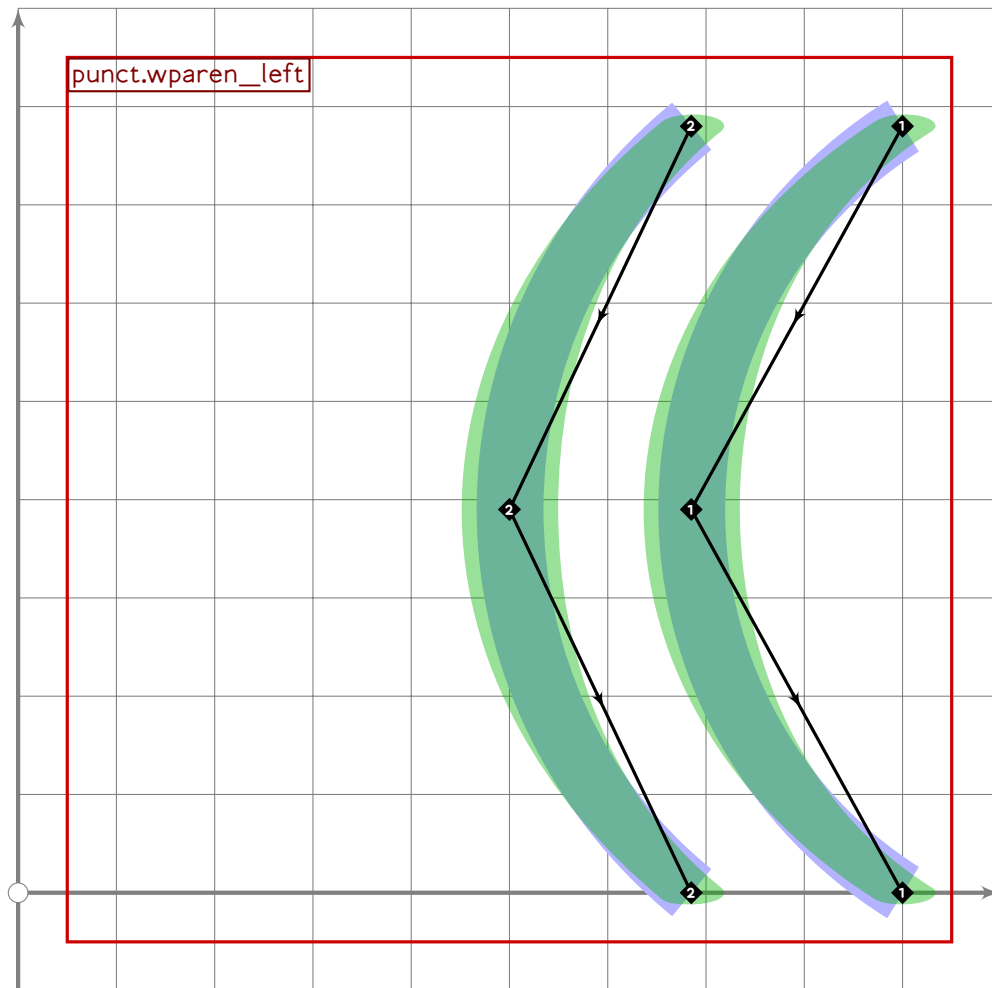
```



```

778
779 vardef tsu_curve.punct.wavedash =
780   push_pbox_toexpand("punct.wavedash");
781   push_stroke(((3.5,-0.5){curl 0}..(-1.4,1)..(0,0)..(1.4,-1)..
782     {curl 0}(3.5,0.5)) scaled tsu_punct_size shifted centre_pt,
783     (0.7,2.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7)-
784     (1.7,1.7)-(0.7,2.7));
785   replace_stroke(0)(insert_nodes(olddp)(0.5,3.5));
786   expand_pbox;
787 enddef;

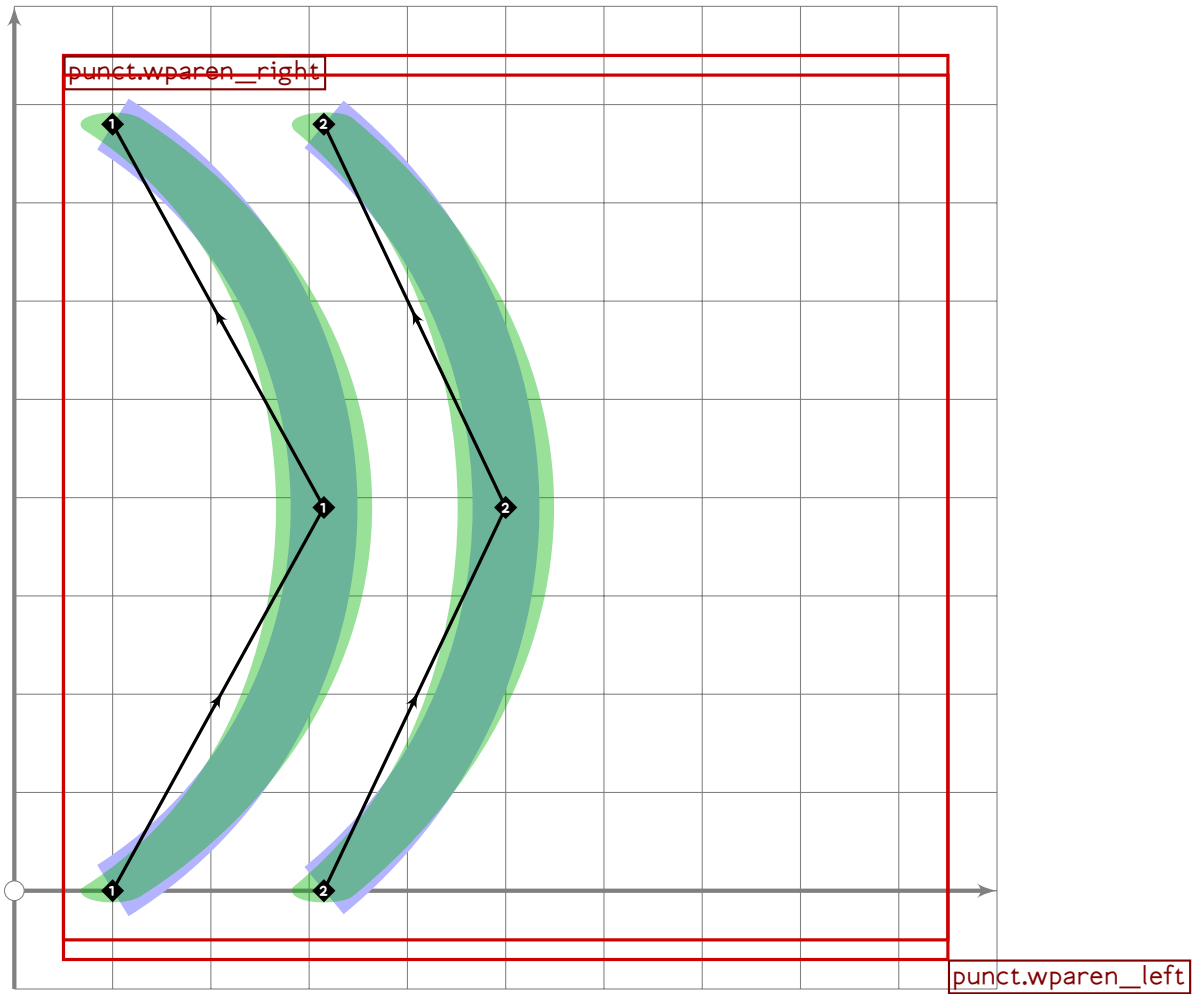
```

```

788
789 vardef tsu_curve.punct.wparen_left =
790   push_pbox_toexpand("punct.wparen_left");
791
792   push_stroke((900,780)..(900-2.15*tsu_punct_size,390)..(900,0),
793     (1.5,1.5)-(2,2)-(1.5,1.5));
794   set_bosize(0,90);
795
796   push_stroke((900-2.15*tsu_punct_size,780)..
797     (900-4*tsu_punct_size,390)..
798     (900-2.15*tsu_punct_size,0),
799     (1.5,1.5)-(2,2)-(1.5,1.5));
800   set_bosize(0,90);
801   expand_pbox;
802 enddef;

```



```

803
804 vardef tsu_curve.punct.wparen_right =
805   push_pbox_toexpand("punct.wparen_right");
806   tsu_xform(identity rotatedaround (centre_pt,180))
807     (tsu_curve.punct.wparen_left);
808   expand_pbox;
809 enddef;

```

serif.mp

```
1 %
2 % Serifs for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 % figure out size of brush
34 (sbrush_width,sbrush_height)=urcorner (
35   fullcircle yscaled tsu_brush_shape
36   rotated tsu_brush_angle
37 );
38 if sbrush_width>sbrush_height:
39   sbrush_long:=sbrush_width;
40   sbrush_short:=sbrush_height;
41 else:
42   sbrush_short:=sbrush_width;
43   sbrush_long:=sbrush_height;
44 fi;
45
46 

---


47
48 vardef tsu_serif.latin.lrcore(expr bst,plp,dlp,l,bts,bos) =
49   serif:=serif xscaled sbrush_long yscaled sbrush_short;
50   serif:=serif xscaled ((1+3*xxpart tsu_rescaling_xf)/4)
51   yscaled bos scaled bts;
52   glstk[ngls]:=regenerate(serif shifted plp);
53   ngls:=ngls*1;
54 enddef;
55
56 vardef tsu_serif.latin.left(expr bst,plp,dlp,l,bts,bos) =
57   begingroup
58     save serif;
59     path serif;
60     if sharp_corners:
61       serif:=(serif_size,1)-(serif_size,-1)-
62         (0,1)-(0,1)-cycle;
63     else:
64       serif:=(serif_size,1){left}..{right}(serif_size,1)-
65         (0,1)-(0,1)-cycle;
66     fi;
67     tsu_serif.latin.lrcore(bst,plp,dlp,l,bts,bos);
68   endgroup;
69 enddef;
70
```

```

71 vardef tsu_serif.latin.right(expr bst,plp,dlp,l,bts,bos) =
72   begingroup
73     save serif;
74     path serif;
75     if sharp_corners:
76       serif:=(0,1)-(0,-1)-
77         (serif_size,1)-(serif_size,1)-cycle;
78     else:
79       serif:=(0,1)-(0,-1)-
80         (serif_size,1){right}..{left}(serif_size,1)-cycle;
81     fi;
82     tsu_serif.latin.lrcore(bst,plp,dlp,l,bts,bos);
83   endgroup;
84 enddef;
85
86 vardef tsu_serif.latin.leftright(expr bst,plp,dlp,l,bts,bos) =
87   begingroup
88     save serif,xoffs;
89     path serif;
90     if sharp_corners:
91       serif:=(serif_size,1)-(serif_size,1)-
92         (serif_size,1)-(serif_size,1)-cycle;
93     else:
94       serif:=(serif_size,1){left}..{right}(serif_size,1)-
95         (serif_size,1){right}..{left}(serif_size,1)-cycle; fi;
96     numeric xoffs;
97     xoffs=xpart (dlp/abs(dlp));
98     tsu_serif.latin.lrcore(bst,
99       plp*if l=0: right else: left fi*50*sbrush_long*xoffs,
100     dlp,l,bts,bos);
101   endgroup;
102 enddef;
103
104
105
106 vardef tsu_serif.mincho.corner(expr bst,plp,dlp,l,bts,bos) =
107   begingroup
108     save serif;
109     path serif;
110     serif:=(1,-0.3)..(0.25,1.3)..(1,1.2)..tension 1.2..
111       (1,0.6)..(-0.25,1.3)..(-1,1.2)..tension 1.2..cycle;
112     serif:=serif yscaled sqrt(tsu_brush_shape) rotated tsu_brush_angle
113       scaled (bts*0.43);
114     glstk[ngls]:=regenerate(serif shifted plp);
115     ngls:=ngls+1;
116   endgroup;
117 enddef;
118

```

```

119 vardef tsu_serif.mincho.ulpoint(expr bst,plp,dlp,l,bts,bos) =
120   begingroup
121     save serif;
122     path serif;
123     serif=(-1.5,2.7)..tension 2..(-1,0)..(-0.4,-0.3)..tension 1.5..
124       (0.707,0)..(0.2,0.6)..(-0.1,1.1)..tension 2..(-1.2,2.9)..cycle;
125     serif:=serif yscaled sqrt(tsu_brush_shape) rotated tsu_brush_angle
126       scaled (bts*0.5);
127     glstk[ngls]:=regenerate(serif shifted
128       (plp*(-1,0)*0.25*bts*(xpart dlp/abs(dlp))));
129     ngls:=ngls+1;
130   endgroup;
131 enddef;
132
133 vardef tsu_serif.mincho.triangle(expr bst,plp,dlp,l,bts,bos) =
134   begingroup
135     save serif;
136     path serif;
137     serif=(-1.2,0)..(0,-0.8)..(1.2,0.4)..tension 2..(0.2,1.3)..
138       (-0.2,1.3)..tension 2..cycle;
139     serif:=serif yscaled sqrt(tsu_brush_shape) rotated tsu_brush_angle
140       scaled (bts*0.5);
141     glstk[ngls]:=regenerate(serif shifted (plp*0.25*bts*dlp/abs(dlp)));
142     ngls:=ngls+1;
143   endgroup;
144 enddef;
145
146 vardef tsu_serif.mincho.llpoint(expr bst,plp,dlp,l,bts,bos) =
147   begingroup
148     save serif;
149     path serif;
150     serif=(-2.1,-1.9)..(-1.8,2.1)..tension 2..(-0.1,-1.2)..(0.2,-1.1)..
151       (0.707,0.707)..(-1,-0.3)..tension 2..cycle;
152     serif:=serif yscaled sqrt(tsu_brush_shape) rotated tsu_brush_angle
153       scaled (bts*0.5);
154     glstk[ngls]:=regenerate(serif shifted plp);
155     ngls:=ngls+1;
156   endgroup;
157 enddef;
158
159 vardef tsu_serif.mincho.lpoint(expr bst,plp,dlp,l,bts,bos) =
160   begingroup
161     save serif;
162     path serif;
163     serif=(-1.5,1.7)..tension 2..(-1,0)..(-0.4,-0.3)..tension 1.8..
164       (0.707,0.2)..(0.2,0.8)..(-0.4,1.1)..tension 2..(-1.2,2.0)..cycle;
165     serif:=reverse serif reflectedabout ((-1,1),(1,-1))
166       xyscaled (0.7,0.9) shifted (0.3,-0.3);

```

```

167 serif:=serif yscaled sqrt(tsu_brush_shape) rotated tsu_brush_angle
168 scaled bts;
169 glstk[ngls]:=regenerate(serif shifted plp);
170 ngls:=ngls*1;
171 endgroup;
172 enddef;
173
174 vardef tsu_serif.mincho.ktriangle(expr bst,plp,dlp,l,bts,bos) =
175 begingroup;
176 save serif,x,y,t,q;
177 path serif;
178 transform t;
179 (0,0) transformed t=(0,0);
180 right transformed t=(dlp/abs(dlp));
181 z1=(dlp/abs(dlp)) rotated 90;
182 if y1<-x1: x1:=-x1; y1:=-y1; fi;
183 up transformed t=z1;
184 q1:=2;
185 q2:=q1**0.5;
186 q3:=0.5*q2/q1;
187 q5:=0.5**q3;
188 z2=(0,q1);
189 z3=(-q3,q5);
190 z4=(q3,q5);
191 serif:=((0.1[z2,z4]){z2-z4}..{z3-z2}(0.1[z2,z3])
192 -z3-z4-cycle)
193 transformed t yscaled tsu_brush_shape
194 rotated tsu_brush_angle
195 scaled (bts*bos*0.98) shifted plp;
196 if (xxpart t)*(yypart t)<0: serif:=reverse serif; fi;
197 glstk[ngls]:=regenerate(serif);
198 ngls:=ngls*1;
199 endgroup;
200 enddef;
201
202 vardef tsu_serif.mincho.khellipse(expr bst,plp,dlp,l,bts,bos) =
203 begingroup;
204 save serif,x,y,t,q;
205 path serif;
206 transform t;
207 (0,0) transformed t=(0,0);
208 right transformed t=(dlp/abs(dlp));
209 z1=(dlp/abs(dlp)) rotated 90;
210 up transformed t=z1;
211 t:=t rotated -tsu_brush_angle yscaled tsu_brush_shape
212 rotated tsu_brush_angle scaled (bts*bos*0.99) shifted plp;
213 z2=(0.5[x3,x4],1);
214 if l=0:

```

```

215     z3=(-0.5,0);
216     z4=(1.3,0);
217     else:
218     z3=(-1.3,0);
219     z4=(0.5,0);
220     fi;
221     serif:=((subpath (0,2,2) of (z4{up}..z2..{down}z3))–cycle) transformed t;
222     glstk[ngls]:=regenerate(serif);
223     ngls:=ngls!1;
224     endgroup;
225 enddef;
226
227 % standard serif codes:
228 % 1 - Latin left
229 % 2 - Latin right
230 % 3 - Latin left and right
231 % 4 - Mincho corner blob
232 % 5 - Mincho blob, pointy to ul
233 % 6 - Mincho blob, triangular
234 % 7 - Mincho blob, point to ll
235 % 8 - Mincho blob, point to l
236 % 9 - Mincho kanji triangle
237 % 10 - Mincho kanji half-ellipse
238
239 boolean tsu_do_serif[];
240
241 vardef tsu_serif.standard(expr bst,plp,dlp,l,bts,bos) =
242   if known tsu_do_serif[1]:
243     if tsu_do_serif[1] and (bst=1):
244       tsu_serif.latin.left(bst,plp,dlp,l,bts,bos);
245     fi;
246   fi;
247   if known tsu_do_serif[2]:
248     if tsu_do_serif[2] and (bst=2):
249       tsu_serif.latin.right(bst,plp,dlp,l,bts,bos);
250     fi;
251   fi;
252   if known tsu_do_serif[3]:
253     if tsu_do_serif[3] and (bst=3):
254       tsu_serif.latin.leftright(bst,plp,dlp,l,bts,bos);
255     fi;
256   fi;
257   if known tsu_do_serif[4]:
258     if tsu_do_serif[4] and (bst=4):
259       tsu_serif.mincho.corner(bst,plp,dlp,l,bts,bos);
260     fi;
261   fi;
262   if known tsu_do_serif[5]:

```

```

263   if tsu_do_serif[5] and (bst=5):
264       tsu_serif.mincho.ulpoint(bst,plp,dlp,l,bts,bos);
265   fi;
266 fi;
267 if known tsu_do_serif[6]:
268   if tsu_do_serif[6] and (bst=6):
269       tsu_serif.mincho.triangle(bst,plp,dlp,l,bts,bos);
270   fi;
271 fi;
272 if known tsu_do_serif[7]:
273   if tsu_do_serif[7] and (bst=7):
274       tsu_serif.mincho.llpoint(bst,plp,dlp,l,bts,bos);
275   fi;
276 fi;
277 if known tsu_do_serif[8]:
278   if tsu_do_serif[8] and (bst=8):
279       tsu_serif.mincho.lpoint(bst,plp,dlp,l,bts,bos);
280   fi;
281 fi;
282 if known tsu_do_serif[9]:
283   if tsu_do_serif[9] and (bst=9):
284       tsu_serif.mincho.ktriangle(bst,plp,dlp,l,bts,bos);
285   fi;
286 fi;
287 if known tsu_do_serif[10]:
288   if tsu_do_serif[10] and (bst=10):
289       tsu_serif.mincho.khellipse(bst,plp,dlp,l,bts,bos);
290   fi;
291 fi;
292 endif;
293
294 vardef tsu_serif.choose(expr bst,plp,dlp,l,bts,bos) =
295   tsu_serif.standard(bst,plp,dlp,l,bts,bos);
296 endif;

```


buildkanji.mp

```
1 %
2 % Build a kanji character by assembling parts
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 % a beret is a tilted hat
34 vardef build_kanji.add_beret(text curves) =
35   begingroup
36     save osp;
37     numeric osp;
38     osp:=sp;
39     curves;
40     save i,lox,hix,toppt,myxf;
41     lox:=infinity;
42     hix:=-infinity;
43     pair toppt;
44     toppt:=(500,infinity);
45     i:=0;
46     forever:
47       exitif find_stroke(i)<osp;
48       if xpart llcorner get_stroke(i)<lox:
49         lox:=xpart llcorner get_stroke(i);
50       fi;
51       if xpart urcorner get_stroke(i)>hix:
52         hix:=xpart urcorner get_stroke(i);
53       fi;
54       if ypart point 0 of get_stroke(i)>ypart toppt:
55         toppt:=point 0 of get_stroke(i);
56       fi;
57       if ypart point infinity of get_stroke(i)>ypart toppt:
58         toppt:=point infinity of get_stroke(i);
59       fi;
60       i:=i-1;
61     endfor;
62     i:=0;
63     forever:
64       exitif find_stroke(i)<osp;
65       if point 0 of get_stroke(i)=toppt:
66         set_boserif(i,0,whatever);
67       fi;
68       if point infinity of get_stroke(i)=toppt:
69         set_boserif(i,length get_stroke(i),whatever);
70       fi;
```

```

71     i:=i-1;
72   endfor;
73   transform myxf;
74   (-500,810) transformed myxf=(lox,(ypart toppt)+30);
75   (500,900) transformed myxf=(hix,900);
76   (0,780) transformed myxf=toppt;
77   push_stroke(
78     ((-400,750)..(0,780)..tension 1.1..(360,840)) transformed myxf,
79     (1,1,1)-(1.6,1.6)-(2.0,2.0));
80   endgroup;
81   enddef;
82
83   vardef build_kanji.add_jtail(expr idx) =
84     replace_strokep(idx)(oldp-(xpart point infinity of oldp,30){down}..
85       {curl 0.2}((xpart point infinity of oldp)-150,0));
86     replace_strokep(idx)(insert_nodes(oldp)((length oldp)-0.5));
87     replace_strokeq(idx)(oldq-(1.5,1.5)-(1.4,1.4)-(1.2,1.2));
88   enddef;
89
90   vardef build_kanji.add_ltail(expr idx) =
91     begingroup
92       save x,y;
93       numeric x[],y[];
94       z1=point infinity of get_strokep(idx);
95       x2=x1;
96       y2=80-40*mincho;
97       x3=0.4[x2,800];
98       y3=mincho[0,20];
99       replace_strokep(idx)(interpath(mincho,
100         oldp-z2{down}..{right}z3..(750,0)..(810,30)..
101         tension 2..(850,230),
102         oldp-z2{down}..{right}z3..(850,0){curl 0.2}..(810,60)..
103         tension 2..(810,170)));
104       replace_strokeq(idx)(oldq-(1.6,1.6)-(1.9,1.9)-(1.9,1.9)
105         -(1.3,1.3)-(0.8,0.8));
106     endgroup;
107   enddef;
108
109   vardef build_kanji.attach_fishhook(expr scaleamt)(text curves) =
110     begingroup
111       save osp;
112       numeric osp;
113       osp:=sp;
114       tsu_xform(identity yscaled scaleamt)(curves);
115       save i,j,x,y,pp,myxf;
116       path pp;
117       transform myxf;
118       z1=z2=(-infinity,-infinity);

```

```

119 i:=0;
120 forever:
121   exitif find_stroke(i)<osp;
122   pp:=get_strokep(i) rotated -45;
123   for j=0 upto length pp:
124     x3:=xpart point j of pp;
125     y3:=ypart point j of pp;
126     if x3>x1:
127       x1:=x3;
128       y1:=y3;
129     fi;
130     if y3>y2:
131       x2:=x3;
132       y2:=y3;
133     fi;
134   endfor;
135   i:=i+1;
136 endfor;
137 (0,0) transformed myxf=(z2 rotated 45);
138 (1.8,0) transformed myxf=(z1 rotated 45);
139 xpart myxf=0;
140 ypart ((0,1) transformed myxf)=830;
141 push_stroke(
142   ((0.5,0.9)..tension 1.2..(0,0)..(-0.5,-0.5)) transformed myxf,
143   (1.7,1.7)-(1.3,1.3)-(1,1));
144 set_boserif(0,0,10);
145 push_stroke(
146   ((0.4,0.65)-(1.3,0.65)..tension 1.2..(1.14,0.3)..(0.88,0))
147   transformed myxf,
148   (1.6,1.6)-(1.6,1.6)-(1.4,1.4)-(1,1));
149 set_boserif(0,1,4);
150 set_botip(0,1,0);
151 endgroup;
152 enddef;
153
154 vardef build_kanji.box(expr ul,lr) =
155   begingroup
156     save boxext;
157     if (ypart (ul-lr))>500:
158       boxext:=-100/(ypart (ul-lr));
159     else:
160       boxext:=-0.2;
161     fi;
162     push_stroke((xpart ul,(boxext)[ypart lr,ypart ul])-ul-
163       (xpart lr,ypart ul)-(xpart lr,(boxext)[ypart lr,ypart ul]),
164       (1.5,1.5)-(1.7,1.7)-(1.7,1.7)-(1.5,1.5));
165   endgroup;
166   set_botip(0,1,1);

```

```

167 set_botip(0,2,1);
168 set_boserif(0,1,4);
169 set_boserif(0,2,4);
170 push_stroke((xpart ul,ypart lr)-lr,
171   (1.5,1.5)-(1.5,1.5));
172 endif;
173
174 vardef build_kanji.cup(expr ul,lr) =
175   push_stroke(ul-(xpart ul,(-0.2)[ypart lr,ypart ul]),
176     (1.6,1.6)-(1.4,1.4));
177   set_boserif(0,0,10);
178   push_stroke((xpart lr,ypart ul)-(xpart lr,(-0.2)[ypart lr,ypart ul]),
179     (1.6,1.6)-(1.4,1.4));
180   set_boserif(0,0,10);
181   push_stroke((xpart ul,ypart lr)-lr,
182     (1.5,1.5)-(1.5,1.5));
183 endif;
184
185 vardef build_kanji.gate_enclose(text contents) =
186   tsu_curve.kanji.grtwo.gate;
187   begingroup
188     transform xf;
189     (50,-50) transformed xf=(220,40);
190     (950,850) transformed xf=(780,420);
191     xypart xf=yxpart xf=0;
192     tsu_xform(xf)(contents);
193   endgroup;
194 endif;
195
196 vardef build_kanji.harmonic(expr gap,sval,lspread)(text curves) =
197   begingroup
198     save myxf;
199     transform myxf;
200     (50,-50) transformed myxf=(50,50);
201     (950,-50) transformed myxf=(950,50);
202     (50,850) transformed myxf=(50,850-gap);
203     tsu_xform(myxf)(curves);
204     save hsp;
205     hsp:=sp;
206     tsu_xform(myxf)(build_kanji.spread_legs(lspread)(curves));
207     save i,tp;
208     numeric i;
209     path tp;
210     i:=0;
211     forever:
212       tp:=get_strokep(i);
213       if (ypart ulcorner tp<450
214         or (abs(ypart (direction 0 of tp)/abs(direction 0 of tp))>0.95)

```

```

215     or (abs(ypart (direction infinity of tp)/
216         abs(direction infinity of tp))>0.95):
217         set_bosize(i,0);
218     else:
219         replace__strokep(i)
220         (tp shifted -(0.5[ulcorner tp,lrcorner tp])
221             scaled sval
222             shifted ((0,gap)+0.5[ulcorner tp,lrcorner tp]));
223         set_bosize(i)(get_bosize(i)*sqrt(sval));
224     fi;
225     i:=i-1;
226     exitif find_stroke(i)<hsp;
227 endfor;
228 endgroup;
229 enddef;
230
231 vardef build_kanji.level(text curves) =
232     begingroup
233     save xsp;
234     xsp:=sp;
235     curves;
236     save lsum,denom,i;
237     lsum:=0;
238     denom:=0;
239     i:=0;
240     forever:
241         exitif find_stroke(i)<xsp;
242         if unknown get_bosize(i):
243             set_bosize(i,100);
244         fi;
245         if (get_bosize(i)>0):
246             lsum:=lsum+mlog(get_bosize(i));
247             denom:=denom+1;
248         fi;
249         i:=i-1;
250     endfor;
251     i:=0;
252     forever:
253         exitif find_stroke(i)<xsp;
254         if get_bosize(i)>0:
255             set_bosize(i,mexp(lsum/denom));
256         fi;
257         i:=i-1;
258     endfor;
259 endgroup;
260 enddef;
261
262 vardef build_kanji.lstransform(expr thresh,dist,mypt) =

```

```

263 if ypart mypt>thresh:
264   mypt
265 else:
266   (xpart mypt,
267     (ypart mypt)*((thresh-dist)/thresh)
268     *(xpart mypt/1000)[(dist/thresh)*ypart mypt,dist])
269 fi
270 enddef;
271
272 vardef build_kanji.lift_skirt(expr thresh,dist)(text curves) =
273   begingroup
274     save osp;
275     numeric osp;
276     osp:=sp;
277     curves;
278     save i,boti,x,y;
279     numeric x[],y[];
280     i:=0;
281     boti:=whatever;
282     y0:=1000;
283     forever:
284       exitif find_stroke(i)<osp;
285       if (ypart llcorner get_strokep(i))=(ypart urcorner get_strokep(i)):
286         if (unknown boti) or (ypart llcorner get_strokep(i)<y0):
287           y0:=ypart llcorner get_strokep(i);
288           boti:=i;
289         fi;
290       fi;
291       replace_strokep(i)(
292         for j=0 upto length oldp-1:
293           build_kanji.lstransform(thresh,dist)(point j of oldp)
294           ..controls build_kanji.lstransform(thresh,dist)(postcontrol j of oldp)
295           and build_kanji.lstransform(thresh,dist)(precontrol j+1 of oldp)..
296         endfor
297         if cycle oldp:
298           cycle
299         else:
300           build_kanji.lstransform(thresh,dist)(point infinity of oldp)
301         fi);
302       i:=i+1;
303     endfor;
304     if known boti:
305       replace_strokep(boti)
306       (((0,7)*point 0 of oldp)..tension 1.2..((0,5)*point 0.5 of oldp)..
307       ((0,10)*point 1 of oldp));
308       replace_strokeq(boti)((1.7,1.7)-(1.5,1.5)-(1,1));
309       set_boserif(boti,1,whatever);
310     fi;

```

```

311 endgroup;
312 enddef;
313
314 vardef build_kanji.lr(expr splitpoint,overlap)
315 (text leftstuff)(text rightstuff) =
316 begingroup
317 save t;
318 transform t[];
319 yypart t1=yypart t2=1;
320 ypart t1=yxpart t1=yxpart t1=yxpart t2=yxpart t2=xy part t2=0;
321 (50,0) transformed t1=(50,0);
322 (950,0) transformed t1=(splitpoint*overlap/2,0);
323 (50,0) transformed t2=(splitpoint-overlap/2,0);
324 (950,0) transformed t2=(950,0);
325 tsu_xform(t1)(leftstuff);
326 tsu_xform(t2)(rightstuff);
327 endgroup;
328 enddef;
329
330 vardef build_kanji.road_enclose(text contents) =
331 push_pbox_toexpand("build_kanji.road_enclose");
332 begingroup
333 save myxf;
334 transform myxf;
335 (50,850) transformed myxf=(315,850);
336 (50,-50) transformed myxf=(315,50);
337 (950,-50) transformed myxf=(950,50);
338 tsu_xform(myxf)(contents);
339 push_stroke((100,770)..tension 1.2..(180,690)..(220,630),
340 (1,1)-(1.3,1.3)-(1.9,1.9));
341 set_bosize(0,92);
342 push_stroke((80,453)-(240,450)..(mincho[230,210],250)
343 ..tension 1.2..(mincho[180,140],50)..{curl 0.4}(60,-40),
344 (1.4,1.4)-(1.6,1.6)-(1.4,1.4)-(1.2,1.2)-(1,1));
345 set_botip(0,1,1);
346 set_botip(0,2,1);
347 set_boserif(0,1,4);
348 set_bosize(0,92);
349 push_stroke((point (2.3*mincho) of get_strokep(0))
350 {(1-2*mincho)*direction (2.3*mincho) of get_strokep(0)}..
351 (240,100)..(270,45*15*mincho)..(400,-10)..tension 3..(950,-20),
352 (1,1)-(1.1,1.1)-(1.1,1.1)-(1.7,1.7)-(1.9,1.9));
353 set_bosize(0,92);
354 endgroup;
355 expand_pbox;
356 enddef;
357
358 vardef build_kanji.sscale(text tran)(text curves) =

```

```

359 tsu_xform(identity shifted (-centre_pt) tran shifted centre_pt)(curves);
360 enddef;
361
362 vardef build_kanji.spread_legs(expr dist)(text curves) =
363   begingroup
364     save osp;
365     numeric osp;
366     osp:=sp;
367     curves;
368     save mytr;
369     transform mytr[];
370     (50,50) transformed mytr1=(50,50);
371     (500,50) transformed mytr1=(500-dist/2,50);
372     (500,850) transformed mytr1=(500-dist/2,850);
373     (950,50) transformed mytr2=(950,50);
374     (500,50) transformed mytr2=(500*dist/2,50);
375     (500,850) transformed mytr2=(500*dist/2,850);
376     save i;
377     i:=0;
378     forever:
379       exitif find_stroke(i)<osp;
380       if xpart 0.75[lcorner get_stroke(i),urcorner get_stroke(i)]<475:
381         replace_stroke(i,oldp transformed mytr1);
382       elseif xpart 0.25[lcorner get_stroke(i),urcorner get_stroke(i)]>525:
383         replace_stroke(i,oldp transformed mytr2);
384       fi;
385       i:=i+1;
386     endfor;
387   endgroup;
388 enddef;
389
390 vardef build_kanji.tb(expr splitpoint,overlap)
391   (text topstuff)(text bottomstuff) =
392   begingroup
393     save t;
394     transform t[];
395     xxpart t1=xxpart t2=1;
396     xpart t1=xy part t1=yx part t1=x part t2=xy part t2=yx part t2=0;
397     (0,850) transformed t1=(0,850);
398     (0,50) transformed t1=(0,splitpoint-overlap/2);
399     (0,850) transformed t2=(0,splitpoint+overlap/2);
400     (0,50) transformed t2=(0,50);
401     tsu_xform(t1)(topstuff);
402     tsu_xform(t2)(bottomstuff);
403   endgroup;
404 enddef;
405
406 vardef build_kanji.tricluster(expr topxscale)

```



```
407 (text topstuff)(text leftstuff)(text rightstuff) =
408 build_kanji.tb(500,0)
409 (build_kanji.sscale(xscaled topxscale)(topstuff))
410 (build_kanji.lr(480,0)
411 (leftstuff)
412 (rightstuff));
413 enddef;
```

leftrad.mp

```
1 %
2 % Radicals for left side (often special forms of other radicals)
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 vardef tsu_curve.kanji.leftrad.day =
34   push_pbox_toexpand("kanji.leftrad.day");
35   tsu_xform(identity shifted (0,600) yscaled 0.62 shifted (0,600))
36     (tsu_curve.kanji.grone.day);
37   expand_pbox;
38 enddef;
39
40 vardef tsu_curve.kanji.leftrad.earth =
41   push_pbox_toexpand("kanji.leftrad.earth");
42   build_kanji.sscale(yscaled 0.9)
43     (build_kanji.lift_skirt(370,150*30*mincho)(tsu_curve.kanji.grone.earth));
44   expand_pbox;
45 enddef;
46
47 vardef tsu_curve.kanji.leftrad.ice =
48   push_pbox_toexpand("kanji.leftrad.ice");
49   push_stroke((450,790)..tension 1.2..(600,730)..(750,650),
50     (1,1)-(1.3,1.3)-(1.9,1.9));
51   push_stroke(
52     interpath(mincho,
53       (880,350)..(810,270)..(750,210)..(600,90)..(450,0),
54       (880,480)..tension 1.2..(630,300)..{dir 180}(360,240){dir 350}..
55       (500,130)..{curl 0}(550,-20)),
56     interpath(mincho,
57       (1.4,1.4)-(1.45,1.45)-(1.5,1.5)-(1.6,1.6)-(1.7,1.7),
58       (0.8,0.8)-(1.2,1.2)-(2.1,2.1)-(1.2,1.2)-(1.9,1.9));
59   expand_pbox;
60 enddef;
61
62 vardef tsu_curve.kanji.leftrad.king =
63   push_pbox_toexpand("kanji.leftrad.king");
64   build_kanji.sscale(yscaled 0.9)
65     (build_kanji.lift_skirt(370,150*30*mincho)(tsu_curve.kanji.grone.king));
66   expand_pbox;
67 enddef;
68
69 vardef tsu_curve.kanji.leftrad.person =
70   push_pbox_toexpand("kanji.leftrad.person");
```

```

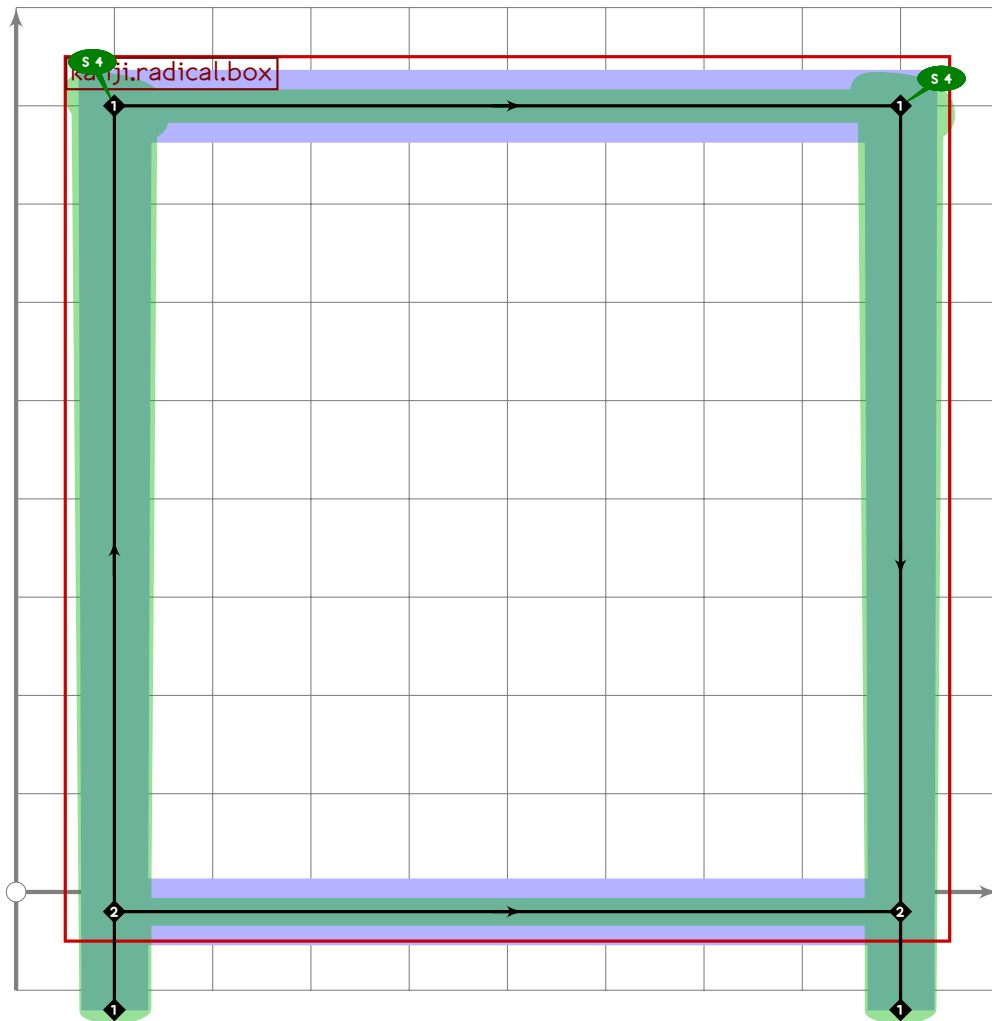
71 push_stroke((900,800)..(500,520)..(0,330),
72   (1.6,1.6)–(1.4,1.4)–(0.8,0.8));
73 set_bosize(0,115);
74 set_boserif(0,0,10);
75 push_stroke(
76   (point 0.7 of get_strokep(0))..(xpart point 0.7 of get_strokep(0);-40),
77   (1.6,1.6)–(1.4,1.4));
78 set_bosize(0,115);
79 expand_pbox;
80 endif;
81
82 vardef tsu_curve.kanji.leftrad.seven =
83   push_pbox_toexpand("kanji.leftrad.seven");
84   build_kanji.sscale(shifted (0,300) yscaled 0.7 shifted (0,300))
85     (tsu_curve.kanji.grone.seven);
86   set_boserif(-1,3,whatever);
87   expand_pbox;
88 endif;
89
90 vardef tsu_curve.kanji.leftrad.water =
91   push_pbox_toexpand("kanji.leftrad.water");
92   tsu_curve.kanji.leftrad.ice;
93   push_stroke((230,590)..tension 1.2..(390,530)..(540,450),
94     (1,1)–(1.3,1.3)–(1.9,1.9));
95   expand_pbox;
96 endif;
97
98 vardef tsu_curve.kanji.leftrad.woman =
99   push_pbox_toexpand("kanji.leftrad.woman");
100  push_stroke((100,580)–(800,580){curl 0}..(550,170)..{curl 0.3}(80,40),
101    (1.6,1.6)–(1.6,1.6)–(1.4,1.4)–(0.94,0.94));
102  set_botip(0,1,0);
103  set_boserif(0,1,4);
104  push_stroke((450,830)..(310,510)..(140,220),
105    (1.6,1.6)–(1.6,1.6)–(1.6,1.6));
106  set_boserif(0,0,10);
107  push_stroke((point 1.75 of get_strokep(0))..(530,200)..(840,60),
108    (0.85,0.85)–(1.5,1.5)–(1.8,1.8)–(1.6,1.6));
109  replace_strokep(0)(insert_nodes(oldp)(1.5));
110  expand_pbox;
111 endif;
112
113 vardef tsu_curve.kanji.leftrad.wood =
114   push_pbox_toexpand("kanji.leftrad.wood");
115   push_stroke((500,780)–(500,0),
116     (1.6,1.6)–(1.6,1.6));
117   set_boserif(0,0,10);
118   push_stroke((100,580)–(830,580),

```

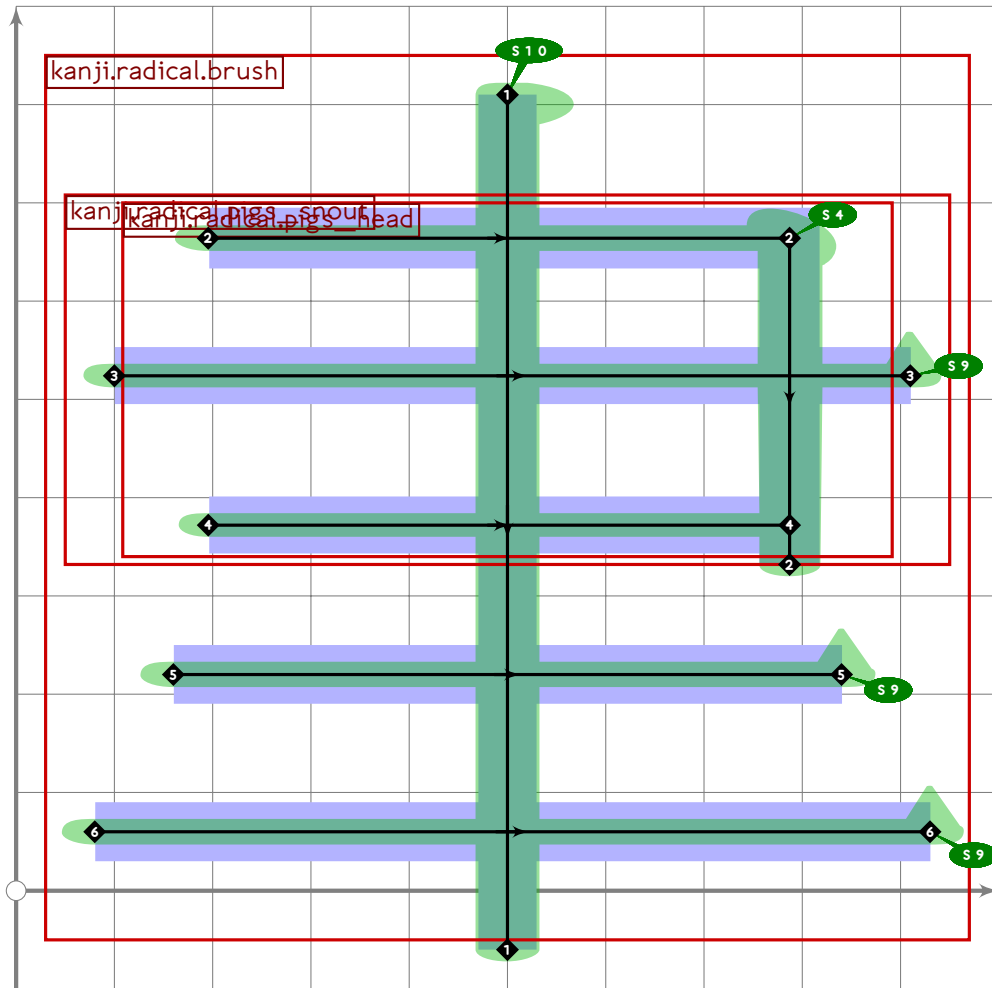
```
119 (1.6,1.6)-(1.6,1.6));
120 set_bosserif(0,1,9);
121 push_stroke((500,580)..(250,200)..(80,70),
122 (1.6,1.6)..(1.3,1.3)..(0.9,0.9));
123 push_stroke((500,470)..(680,320)..(800,210),
124 (1.1,1.1)..(1.5,1.5)..(1.7,1.7));
125 expand_pbox;
126 endif;
```

radical.mp

```
1 %  
2 % Radicals that are not common kanji in themselves  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31
```



```
32  
33 vardef tsu_curve.kanji.radical.box =  
34   push_pbox_toexpand("kanji.radical.box");  
35   build_kanji.box((100,800),(900;20));  
36   expand_pbox;  
37 enddef;
```



```

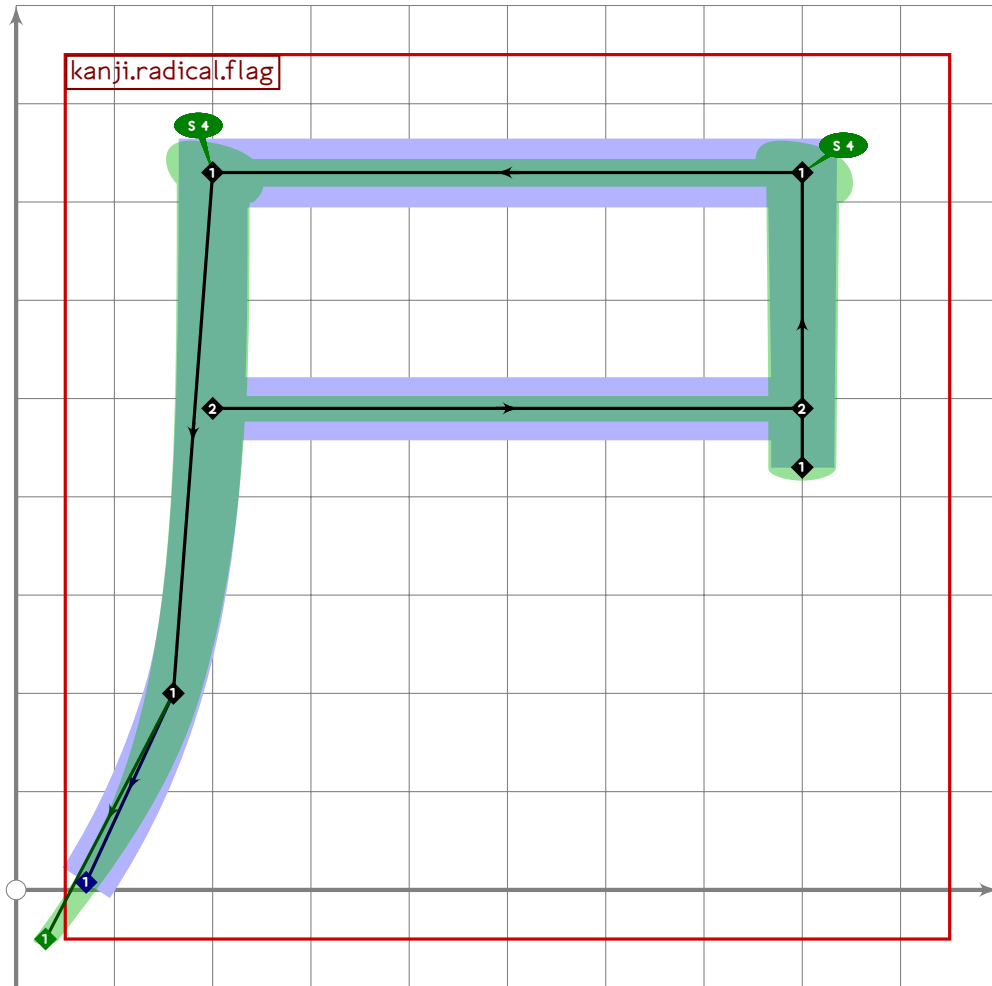
38
39 vardef tsu_curve.kanji.radical.brush =
40   push_pbox_toexpand("kanji.radical.brush");
41   push_stroke((500,810)-(500,-60),(1.6,1.6)-(1.5,1.5));
42   set_boserif(0,0,10);
43   tsu_xform(identity yscaled 0.4 shifted (0,360))
44     (tsu_curve.kanji.radical.pigs_snout);
45   push_stroke((160,220)-(840,220),
46     (1.6,1.6)-(1.6,1.6));
47   set_boserif(0,1,9);
48   push_stroke((80,60)-(930,60),
49     (1.6,1.6)-(1.6,1.6));
50   set_boserif(0,1,9);
51   for i=-5 upto 0: set_bosize(i,85); endfor;
52   expand_pbox;
53 enddef;
54
55 vardef tsu_curve.kanji.radical.cut_the_grass =
56   push_pbox_toexpand("kanji.radical.cut_the_grass");
57   push_stroke((150,750)..(500,500)..(850,50),
58     (1.3,1.3)-(1.5,1.5)-(1.7,1.7));

```

```

59 push_stroke((700,800)..(500,330)..(70,-30),
60   (1.6,1.6)-(1.5,1.5)-(1,1));
61 set_boserif(0,0,10);
62 expand_pbox;
63 enddef;
64
65 vardef tsu_curve.kanji.radical.eight =
66   push_pbox_toexpand("kanji.radical.eight");
67   push_stroke((610,760)..tension 1.3..(760,240)..(880,-10),
68     (1,1)-(1.4,1.4)-(1.8,1.8));
69   set_bosize(0,110);
70   push_stroke((350,740)..(280,360)..(160,80)..(40,-30),
71     (1.6,1.6)-(1.4,1.4)-(1.3,1.3)-(0.88,0.88));
72   set_bosize(0,110);
73   set_boserif(0,0,10);
74   expand_pbox;
75 enddef;

```



```

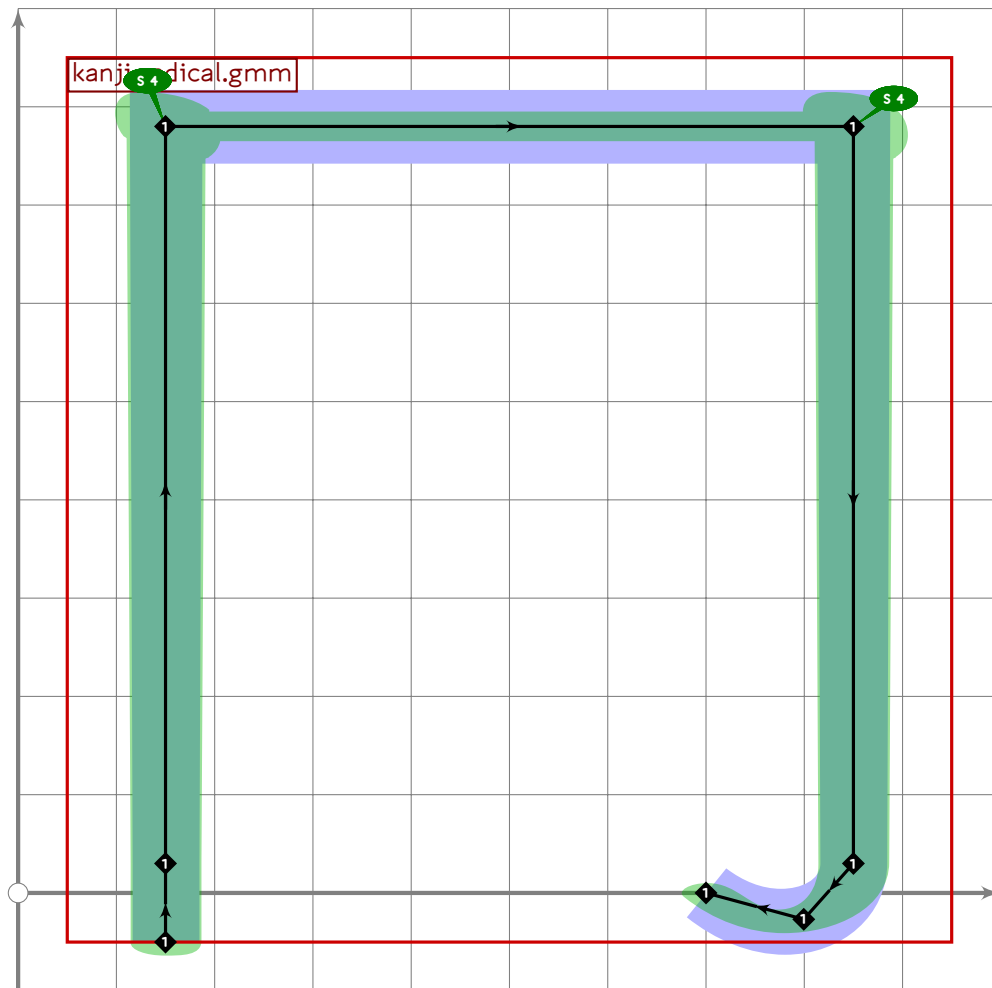
76
77 vardef tsu_curve.kanji.radical.flag =
78   push_pbox_toexpand("kanji.radical.flag");
79   push_stroke((800,430)-(800,730)-(200,730){down}..(160,200)..(30,-50),

```

```

80 (1.5,1.5)-(1.6,1.6)-(1.6,1.6)-(1.3,1.3)-(0.9,0.9));
81 set_botip(0,1);
82 set_botip(0,2,1);
83 set_boserif(0,1,4);
84 set_boserif(0,2,4);
85 set_bosize(0,93);
86 push_stroke((((0,490)-(1000,490))
87 intersectionpoint reverse get_stroke(0)-(800,490),
88 (1.5,1.5)-(1.5,1.5));
89 set_bosize(0,93);
90 expand_pbox;
91 endif;
92

```



```

93 % "George Michael's Moustache" radical, according to Schultzzz
94 vardef tsu_curve.kanji.radical.gmm =
95 push_pbox_toexpand("kanji.radical.gmm");
96 push_stroke((150,-50)-(150,30)-(150,780)-(850,780),
97 (1.5,1.5)-(1.5,1.5)-(1.6,1.6)-(1.6,1.6));
98 build_kanji.add_jtail(0);
99 set_botip(0,2,1);
100 set_botip(0,3,1);

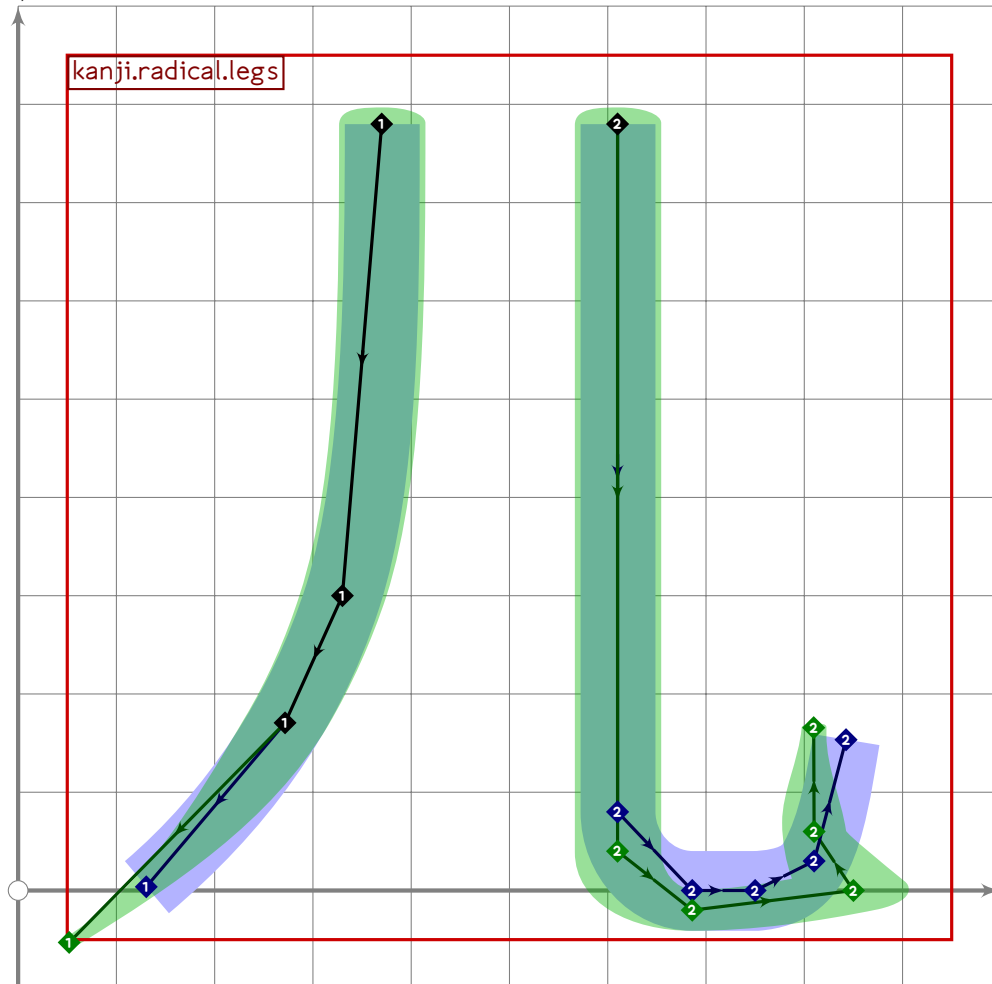
```



```

101 set_boserif(0,2,4);
102 set_boserif(0,3,4);
103 expand_pbox;
104 enddef;
105
106 vardef tsu_curve.kanji.radical.kettle_lid =
107   push_pbox_toexpand("kanji.radical.kettle_lid");
108   push_stroke((500,700)..(500,160),(1.6,1.6)-(1.5,1.5));
109   set_bosize(0,125);
110   set_boserif(0,0,10);
111   push_stroke((100,160)-(900,160),(1.7,1.7)-(1.7,1.7));
112   set_bosize(0,125);
113   set_boserif(0,1,9);
114   expand_pbox;
115 enddef;

```



```

116
117 vardef tsu_curve.kanji.radical.legs =
118   push_pbox_toexpand("kanji.radical.legs");
119   push_stroke((370,780){down}..(330,300)..(40,-60),
120     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(0.8,0.7));
121   replace_strokep(0)(insert_nodes(oldp)(1.3));

```

```

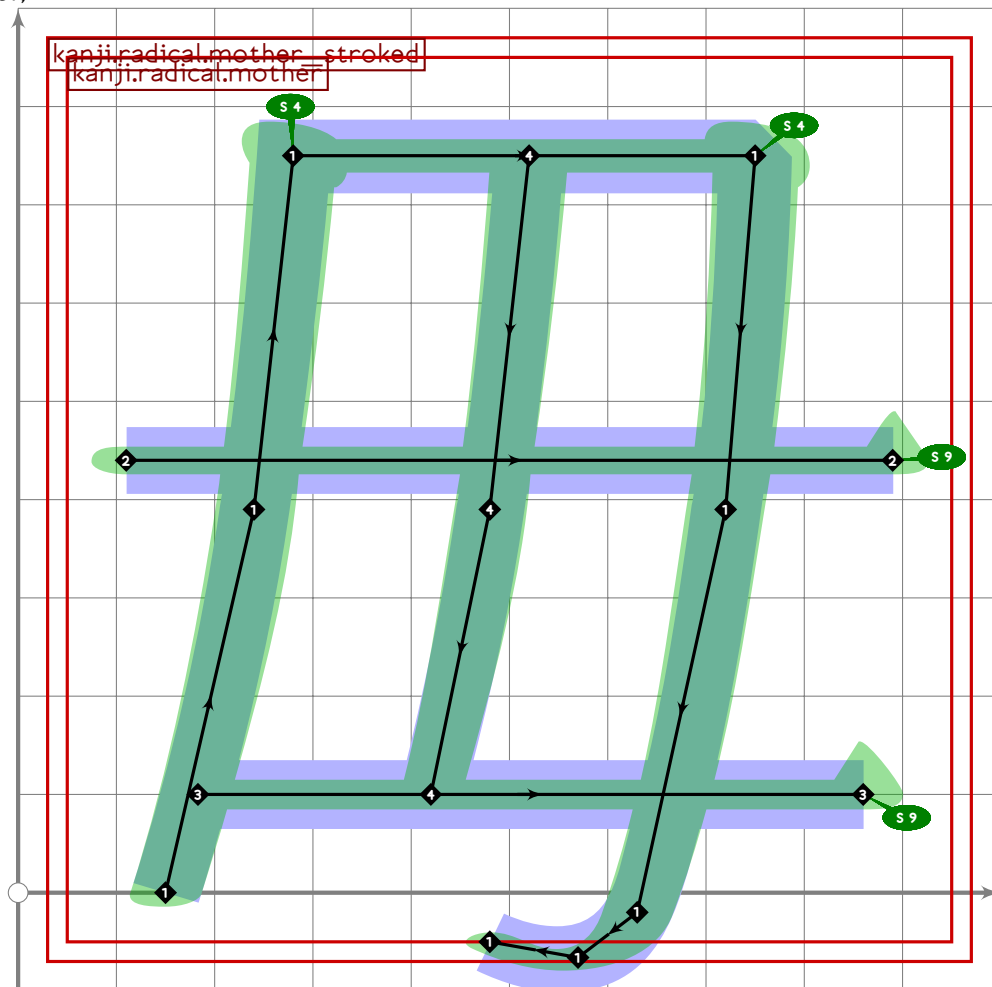
122 set_bosize(0,110);
123 push_stroke((610,780),
124   (1.6,1.6));
125 build_kanji.add_ltail(0);
126 set_bosize(0,110);
127 expand_pbox;
128 enddef;
129
130 vardef tsu_curve.kanji.radical.life_minus =
131   push_pbox_toexpand("kanji.radical.life_minus");
132   push_stroke((500,780)-(500,0),(1.6,1.6)-(1.6,1.6));
133   set_bosize(0,0,10);
134   push_stroke((280,700)..(220,360)..(140,120),
135     (1.6,1.6)-(1.2,1.2)-(0.8,0.8));
136   set_bosize(0,0,10);
137   push_stroke((point 0.9 of get_strokep(0))-
138     (820,y part point 0.9 of get_strokep(0)),
139     (1.6,1.6)-(1.6,1.6));
140   set_bosize(0,1,9);
141   push_stroke((120,0)-(880,0),(1.6,1.6)-(1.6,1.6));
142   set_bosize(0,1,9);
143   expand_pbox;
144 enddef;
145
146 vardef tsu_curve.kanji.bottomrad.long_kimono =
147   push_pbox_toexpand("kanji.bottomrad.long_kimono");
148   build_kanji.box((210,760),(790,540));
149   push_stroke((440,540)..tension 1.2..(330,300)..(110,80),
150     (1.6,1.6)-(1.4,1.4)-(1,1));
151   push_stroke((500,540)-(500,-20),(1.6,1.6)-(1.5,1.5));
152   push_stroke((500,380)..tension 1.2..(710,220)..(800,100),
153     (0.9,0.9)-(1.5,1.5)-(1.9,1.9));
154   push_stroke(
155     (810,410)..tension 1.2..(750,340)..(point 0.8 of get_strokep(0)),
156     (1.7,1.7)-(1.2,1.2)-(0.9,0.9));
157   expand_pbox;
158 enddef;
159
160 vardef tsu_curve.kanji.radical.long_kimono =
161   push_pbox_toexpand("kanji.radical.long_kimono");
162   build_kanji.level(build_kanji.tb(600,50)
163     (tsu_curve.kanji.grone.earth)
164     (tsu_curve.kanji.bottomrad.long_kimono));
165   expand_pbox;
166 enddef;
167
168 vardef tsu_curve.kanji.radical.mother =
169   push_pbox_toexpand("kanji.radical.mother");

```

```

170 push_stroke(
171   (150,0)..(240,390)..tension 1.2..(280,750)-
172   (750,750)..(720,390)..tension 1.2..(630,-20){dir 250}{curl 0.2}(480,50),
173   (1.5,1.5)-(1.6,1.6)-(1.7,1.7)-(1.7,1.7)-(1.6,1.6)-(1.5,1.5));
174 replace_strokep(0)(insert_nodes(oldp)((length oldp)-0.5));
175 replace_strokeq(0)(oldq-(1.4,1.4)-(1.2,1.2));
176 set_botip(0,2,1);
177 set_botip(0,3,0);
178 set_boserif(0,2,4);
179 set_boserif(0,3,4);
180 push_stroke((110,440)-(890,440),(1.5,1.5)-(1.5,1.5));
181 set_boserif(0,1,9);
182 push_stroke((183,100)-(860,100),(1.6,1.6)-(1.6,1.6));
183 set_boserif(0,1,9);
184 expand_pbox;
185 enddef;

```



```

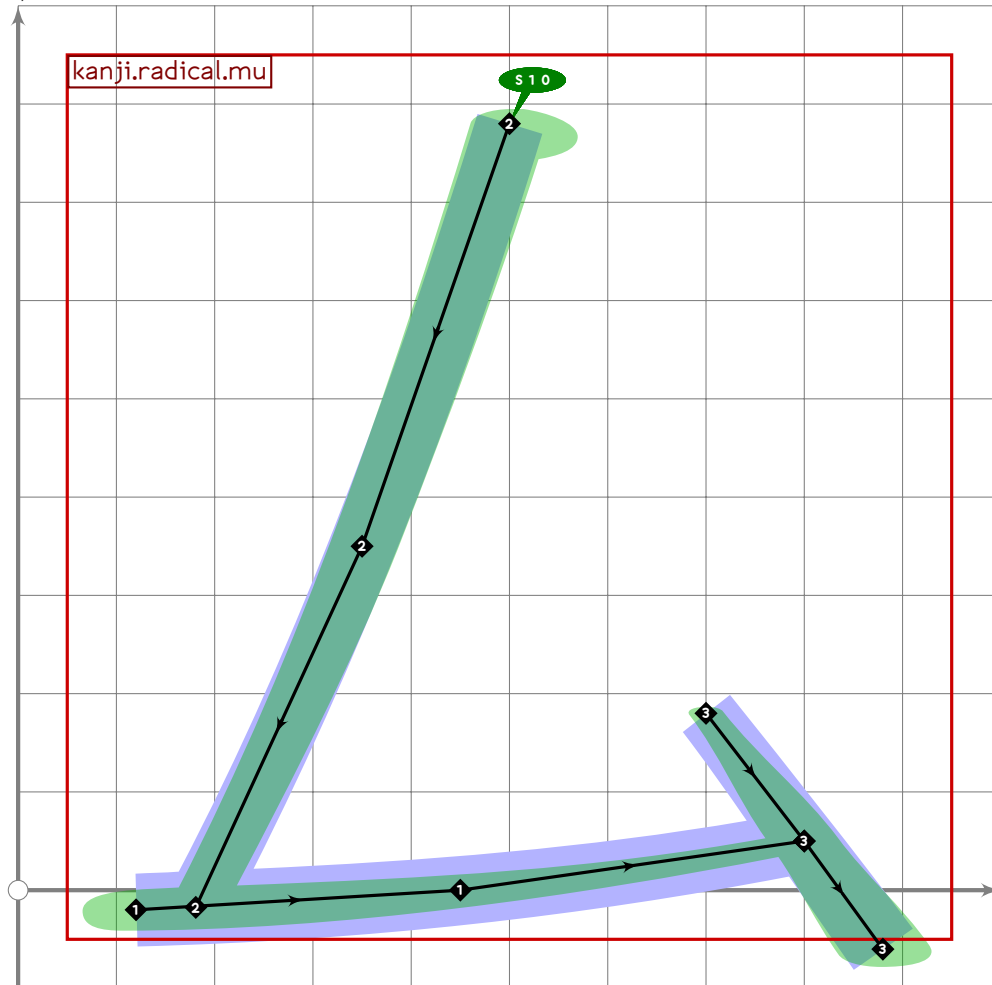
186
187 vardef tsu_curve.kanji.radical.mother_stroked =
188   push_pbox_toexpand("kanji.radical.mother_stroked");
189   tsu_curve.kanji.radical.mother;
190   push_stroke((520,750)..tension 1.2..(480,390)..(420,100),

```

```

191 (1.6,1.6)-(1.5,1.5)-(1.4,1.4));
192 expand_pbox;
193 enddef;

```



```

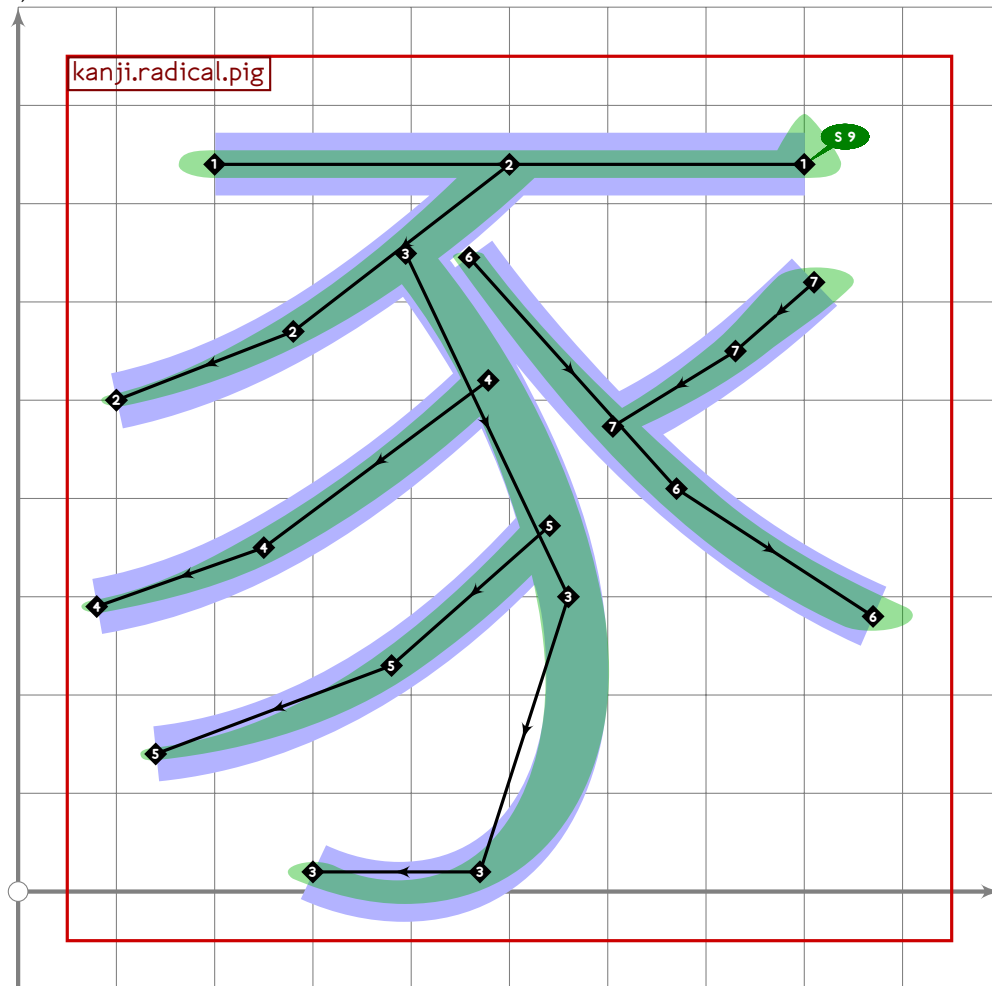
194
195 vardef tsu_curve.kanji.radical.mu =
196   push_pbox_toexpand("kanji.radical.mu");
197   push_stroke((120,-20)..tension 1.2..(450,0)..(800,50),
198     (2,2)-(1.7,1.7)-(1.2,1.2));
199   push_stroke(
200     (500,780)..tension 1.2..(350,350)..(point 0.2 of get_strokep(0)),
201     (1.6,1.6)-(1.5,1.5)-(1.3,1.3));
202   set_boserif(0,0,10);
203   push_stroke((700,180)..tension 1.3..(800,50)..(880,-60),
204     (1,1)-(1.5,1.5)-(1.8,1.8));
205   expand_pbox;
206 enddef;
207
208 vardef tsu_curve.kanji.radical.mu_bar =
209   push_pbox_toexpand("kanji.radical.mu_bar");
210   push_stroke((140,780)-(860,780),(1.6,1.6)-(1.6,1.6));
211   set_boserif(0,1,9);

```

```

212 build_kanji.sscale(xscaled 0.92)(tsu_curve.kanji.radical.mu);
213 set_boserif(0,0,whatever);
214 replace_strokep(0)(oldp rotatedaround (point 1 of oldp,-15));
215 expand_pbox;
216 enddef;

```



```

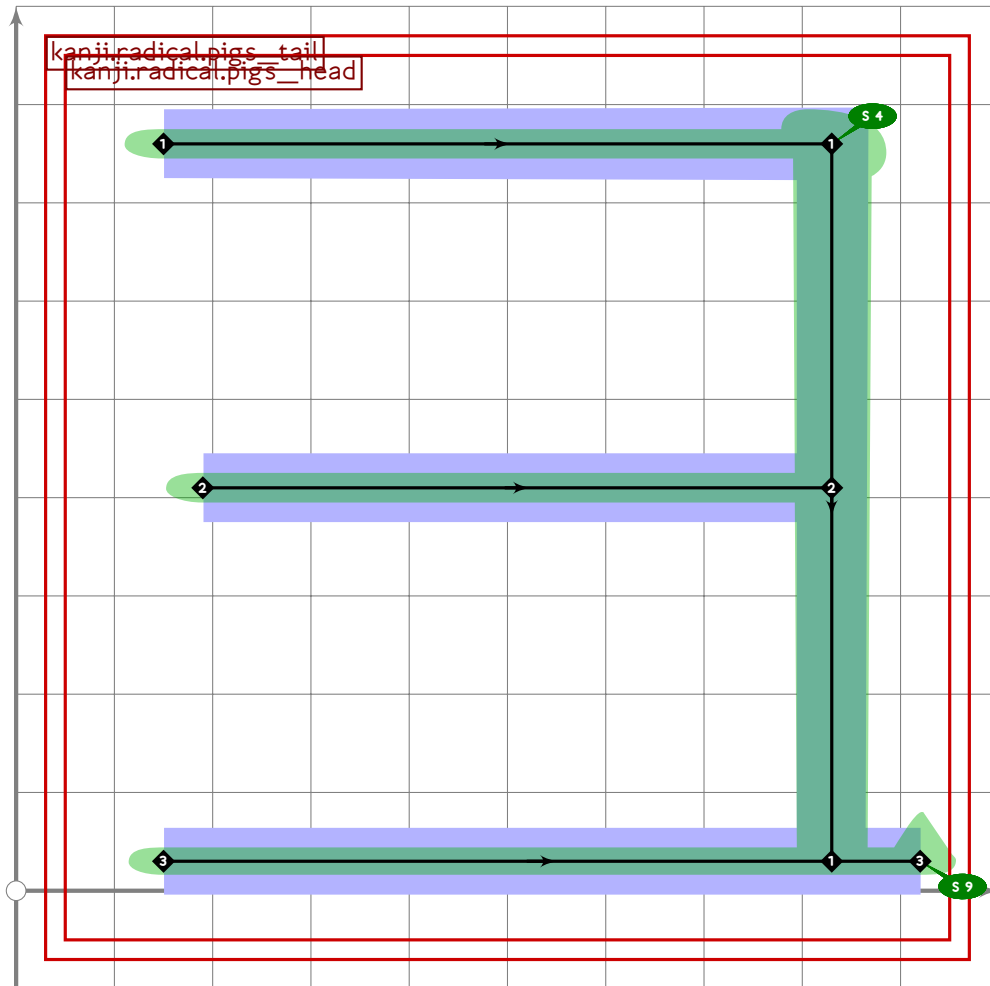
217
218 vardef tsu_curve.kanji.radical.pig =
219   push_pbox_toexpand("kanji.radical.pig");
220   push_stroke((200,740)-(800,740),(1.6,1.6)-(1.6,1.6));
221   set_boserif(0,19);
222   push_stroke((500,740)..tension 1.2..(280,570)..(100,500),
223     (1.6,1.6)-(1.4,1.4)-(1.0,1.0));
224   push_stroke(
225     (point 0.5 of get_strokep(0))..tension 1.1..(560,300)..
226     (470,20)..{curl 0.6}(300,20),
227     (1.3,1.3)-(1.5,1.5)-(1.4,1.4)-(1.3,1.3));
228   push_stroke(
229     (point 0.4 of get_strokep(0))..tension 1.2..(250,350)..(80,290),
230     (1.35,1.35)-(1.4,1.4)-(1.0,1.0));
231   push_stroke(
232     (point 0.8 of get_strokep(-1))..tension 1.2..(380,230)..(140,140),

```

```

233 (1.35,1.35)-(1.4,1.4)-(1.0,1.0));
234 push_stroke(
235 ((0,90)*point 0.3 of get_stroke(-2))..tension 1.2..(670,410)..(870,280),
236 (1,1)-(1.4,1.4)-(1.7,1.7));
237 push_stroke(
238 (810,620)..tension 1.2..(730,550)..(point 0.7 of get_stroke(0)),
239 (1.7,1.7)-(1.4,1.4)-(1.2,1.2));
240 for i=-6 upto 0: set_bosize(i,92); endfor;
241 expand_pbox;
242 enddef;
243
244 vardef tsu_curve.kanji.radical.pigs_head =
245 push_pbox_toexpand("kanji.radical.pigs_head");
246 push_stroke((150,760)-(830,760)-(830,70),
247 (1.6,1.6)-(1.6,1.6)-(1.5,1.5));
248 set_botip(0,1,1);
249 set_boserif(0,1,4);
250 push_stroke((190,410)-(830,410),(1.55,1.55)-(1.55,1.55));
251 push_stroke((150,30)-(830,30),(1.5,1.5)-(1.5,1.5));
252 expand_pbox;
253 enddef;
254
255 % name is mine - it has central horizontal line lengthened
256 vardef tsu_curve.kanji.radical.pigs_snout =
257 push_pbox_toexpand("kanji.radical.pigs_snout");
258 build_kanji.level(
259 build_kanji.sscale(xscaled 0.87)(tsu_curve.kanji.radical.pigs_head);
260 replace_stroke(-1)((100,410)-(910,410));
261 set_boserif(-1,1,9);
262 );
263 expand_pbox;
264 enddef;
265

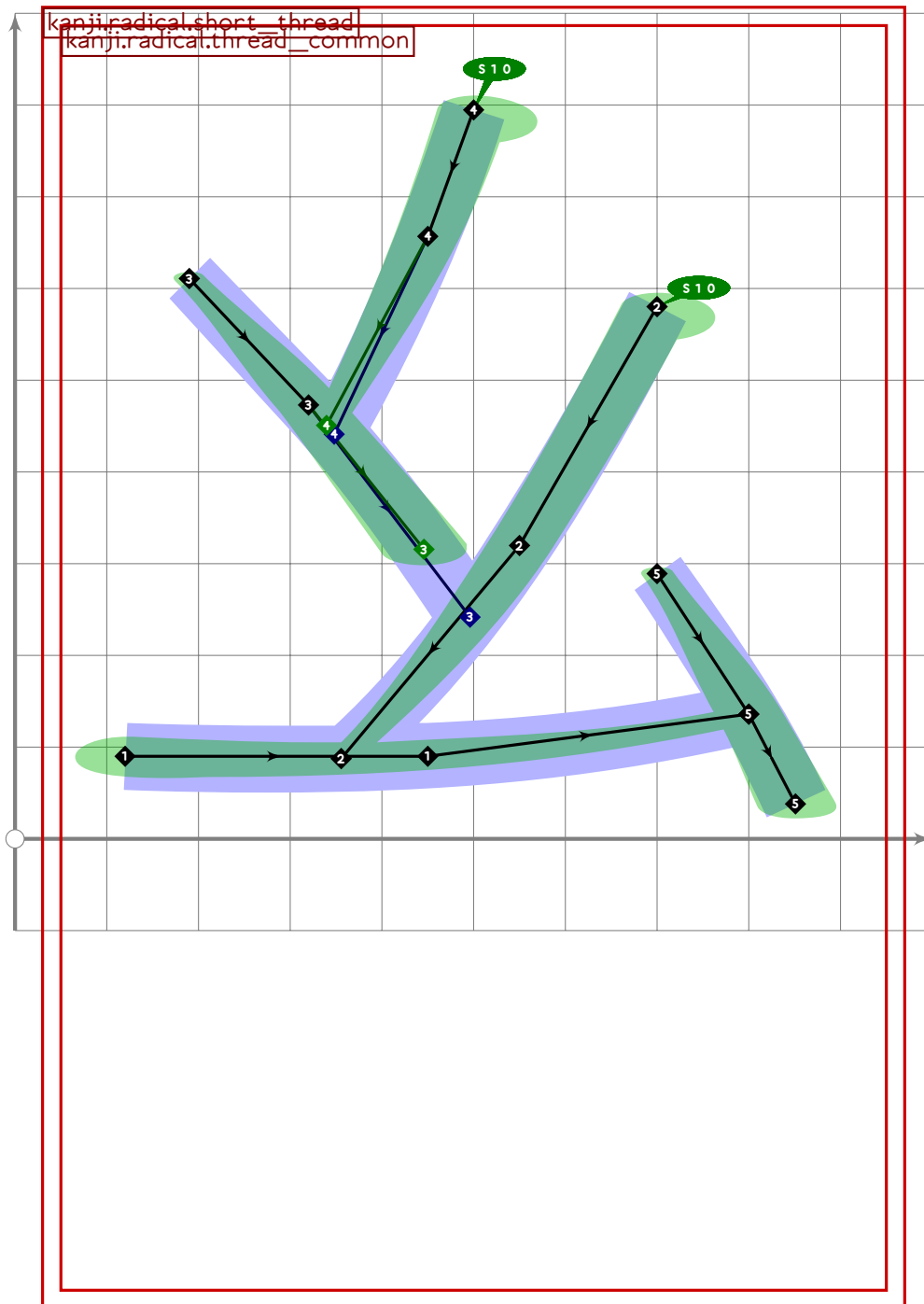
```



```

266 % name is mine - it has bottom horizontal line lengthened, vertical clipped
267 vardef tsu_curve.kanji.radical.pigs_tail =
268   push_pbox_toexpand("kanji.radical.pigs_tail");
269   tsu_curve.kanji.radical.pigs_head;
270   replace_stroke(-2)((150,760)-(830,760)-(830,30));
271   replace_stroke(0)((150,30)-(920,30));
272   set_boserif(0,1,9);
273   expand_pbox;
274 enddef;

```



```

275
276 vardef tsu_curve.kanji.radical.short_thread =
277   push_pbox_toexpand("kanji.radical.short_thread");
278   tsu_xform(begingroup
279     save myxf;
280     transform myxf;
281     xpart myxf=yxpart myxf=0;
282     xxpart myxf=1;
283     (500,330) transformed myxf=(500,90);
284     (500,800) transformed myxf=(500,810);

```



```

285   myxf
286   endgroup)(tsu_curve.kanji.radical.thread_common);
287   replace_strokep(0)(subpath (0,1,6) of oldp);
288   replace_strokeq(0)(subpath (0,1,6) of oldq);
289   for i=-4 upto 0: set_bosize(i,100); endfor;
290   expand_pbox;
291 enddef;
292
293 vardef tsu_curve.kanji.radical.silly_hat =
294   push_pbox_toexpand("kanji.radical.silly_hat");
295   push_stroke((500,800)..(500,500),(1.6,1.6)-(1.5,1.5));
296   set_bosize(0,95);
297   set_boserif(0,0,10);
298   push_stroke((100,100)..(100+50*mincho,300)..(100+70*mincho,500)-
299     (900,500)..(900-40*mincho,200)..(900-70*mincho,100),
300     (1.7,1.7)-(1.6,1.6)-(1.4,1.4)-(1.7,1.7)-(1.6,1.6)-(1.4,1.4));
301   set_bosize(0,95);
302   set_botip(0,2,1);
303   set_botip(0,3,1);
304   set_boserif(0,3,4);
305   expand_pbox;
306 enddef;

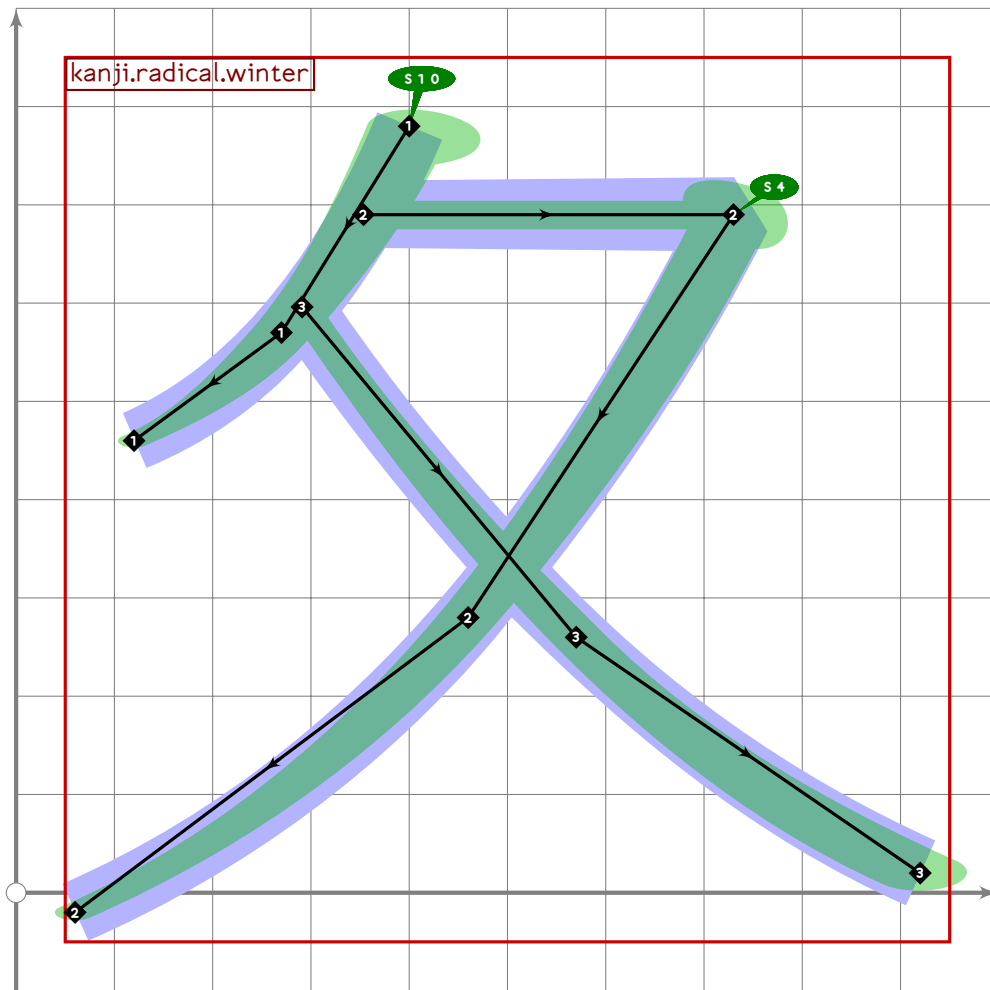
```



```

328 push_stroke((330,470)-(660,470),(1.6,1.6)-(1.6,1.6));
329 set_boserif(0,1,9);
330 expand_pbox;
331 enddef;
332
333 vardef tsu_curve.kanji.radical.thread_common =
334 push_pbox_toexpand("kanji.radical.thread_common");
335 push_stroke((120,330)..tension 1.2..(450,330)..(800,360),
336 (2,2)-(1.7,1.7)-(1.2,1.2));
337 push_stroke((700,650)..tension 1.3..(550,480)..(point 0.7 of get_strokep(0)),
338 (1.6,1.6)-(1.5,1.5)-(1,1));
339 set_boserif(0,0,10);
340 push_stroke(subpath (0,2-0.3*mincho) of
341 ((190,670)..tension 1.3..(320,580)..(point 1.3 of get_strokep(0))),
342 (1,1)-(1.5,1.5)-(1.8,1.8));
343 push_stroke((500,790)..(450,700)..(point 1.15 of get_strokep(0)),
344 (1.6,1.6)-(1.5,1.5)-(1,1));
345 set_boserif(0,0,10);
346 push_stroke((700,460)..tension 1.3..(800,360)..(880,250),
347 (1,1)-(1.5,1.5)-(1.8,1.8));
348 expand_pbox;
349 enddef;
350
351 vardef tsu_curve.kanji.radical.vline =
352 push_pbox_toexpand("kanji.radical.vline");
353 push_stroke((500,780)-(500,-20),(1.7,1.7)-(1.3,1.3));
354 set_boserif(0,0,10);
355 expand_pbox;
356 enddef;

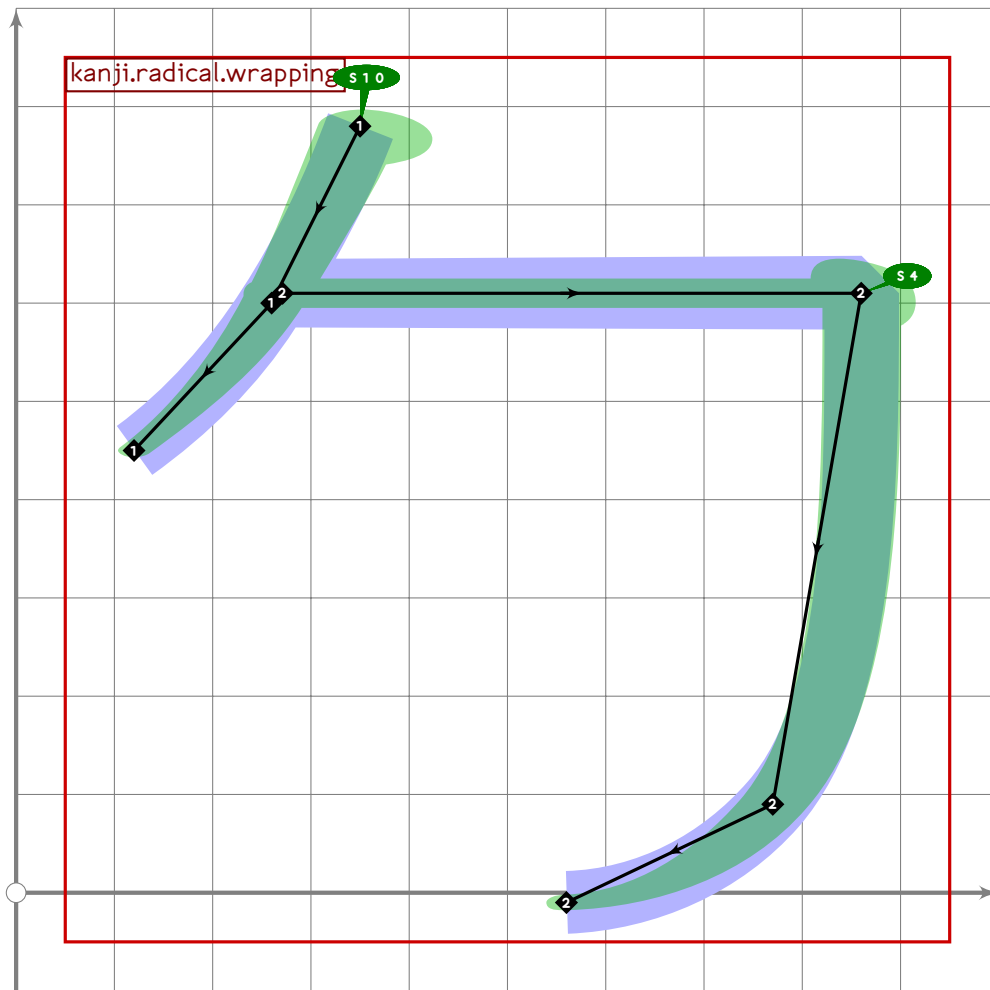
```



```

357
358 vardef tsu_curve.kanji.radical.winter =
359   push_pbox_toexpand("kanji.radical.winter");
360   push_stroke((400,780)..tension 1.2..(270,570)..(120,460),
361     (1.7,1.7)-(1.4,1.4)-(1,1));
362   set_boserif(0,0,10);
363   push_stroke((get_stroke(0) intersectionpoint ((0,690)-(1000,690)))-
364     (730,690)..tension 1.2..(460,280)..(60,20),
365     (1.5,1.5)-(1.6,1.6)-(1.4,1.4)-(1.1,1.1));
366   set_boserif(0,1,4);
367   set_botip(0,1,0);
368   push_stroke((point 0.85 of get_stroke(-1))..tension 1.2..
369     (570,260)..(920,20),
370     (1,1)-(1.3,1.3)-(1.8,1.8));
371   expand_pbox;
372 enddef;

```



```

373
374 vardef tsu_curve.kanji.radical.wrapping =
375   push_pbox_toexpand("kanji.radical.wrapping");
376   push_stroke((350,780)..tension 1.2..(260,600)..(120,450),
377     (1.7,1.7)-(1.4,1.4)-(1,1));
378   set_boserif(0,0,10);
379   push_stroke(
380     ((5,0)+((get_stroke(0) intersectionpoint ((0,610)-(1000,610)))))-
381     (860,610){down}..(770,90)..(560,-10),
382     (1.6,1.6)-(1.6,1.6)-(1.5,1.5)-(1.1,1.1));
383   set_boserif(0,1,4);
384   set_botip(0,1,0);
385   expand_pbox;
386 enddef;

```

toprad.mp

```
1 %
2 % Radicals for top (often special forms of other radicals)
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

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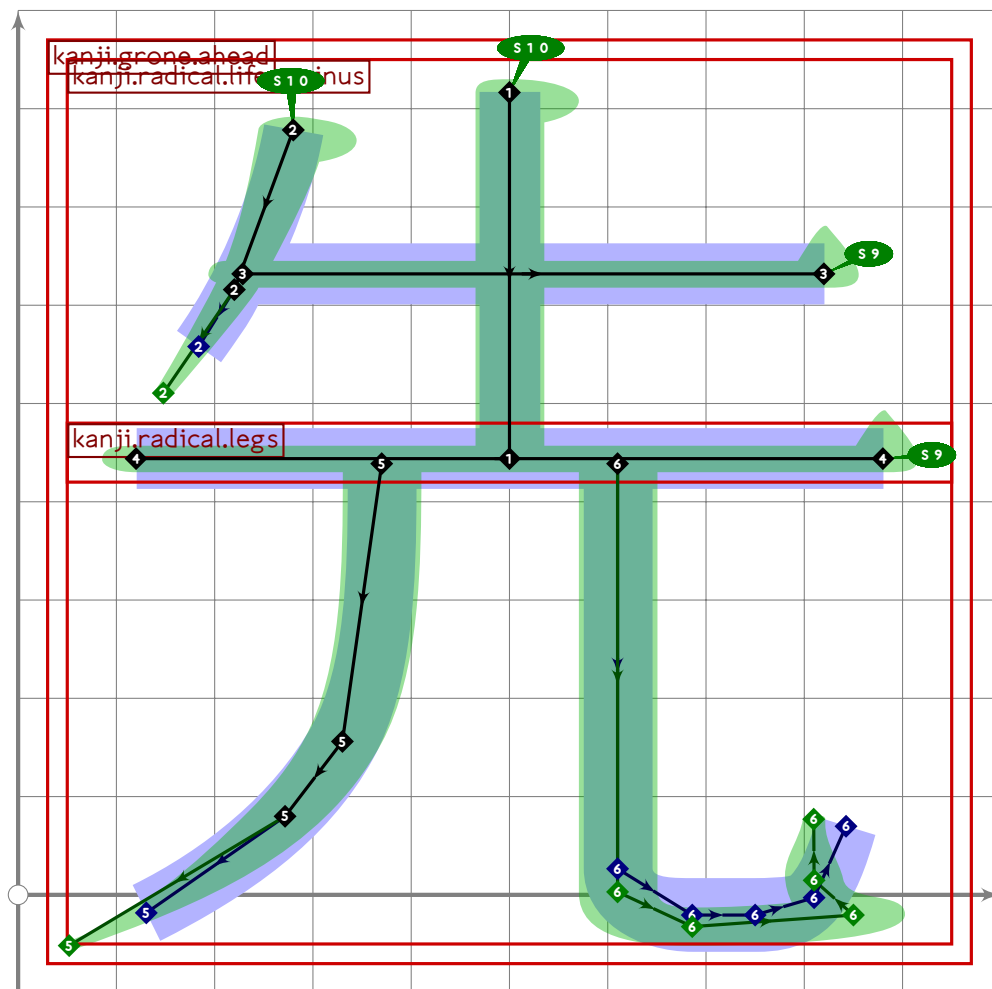

32
33 vardef tsu_curve.kanji.toprad.blue =
34   push_pbox_toexpand("kanji.toprad.blue");
35   push_stroke((120,560)-(880,560),
36     (1.6,1.6)-(1.6,1.6));
37   set_boserif(0,1,9);
38   push_stroke((500,780)-(500,40),
39     (1.6,1.6)-(1.5,1.5));
40   set_boserif(0,0,10);
41   push_stroke((160,310)-(840,310),
42     (1.6,1.6)-(1.6,1.6));
43   set_boserif(0,1,9);
44   push_stroke((80,40)-(920,40),
45     (1.6,1.6)-(1.6,1.6));
46   set_boserif(0,1,9);
47   expand_pbox;
48 enddef;
49
50 vardef tsu_curve.kanji.toprad.cave =
51   push_pbox_toexpand("kanji.toprad.cave");
52   build_kanji.level(build_kanji.tb(400,340)
53     (tsu_curve.kanji.radical.silly_hat)
54     (tsu_curve.kanji.radical.legs));
55   expand_pbox;
56 enddef;
57
58 vardef tsu_curve.kanji.toprad.grass =
59   push_pbox_toexpand("kanji.toprad.grass");
60   push_stroke((350,800)-(350,-30),
61     (1.6,1.6)-(1.4,1.4));
62   set_boserif(0,0,10);
63   push_stroke((650,800)-(650,-30),
64     (1.6,1.6)-(1.4,1.4));
65   set_boserif(0,0,10);
66   push_stroke((100,400)-(900,400),
67     (1.6,1.6)-(1.6,1.6));
68   set_boserif(0,1,9);
69   expand_pbox;
70 enddef;
```

```
71
72 vardef tsu_curve.kanji.toprad.sparkle =
73   push_pbox_toexpand("kanji.toprad.sparkle");
74   push_stroke((200,600)..tension 1.2..(250,440)..(320,160),
75     (1,1)-(1.3,1.3)-(1.9,1.9));
76   push_stroke((500,780)-(500,-20),
77     (1.6,1.6)-(1.5,1.5));
78   set_boserif(0,0,10);
79   push_stroke((790,620)..tension 1.2..(730,370)..(670,170),
80     (1.6,1.6)-(1.5,1.5)-(1.3,1.3));
81   set_boserif(0,0,10);
82   expand_pbox;
83 enddef;
```

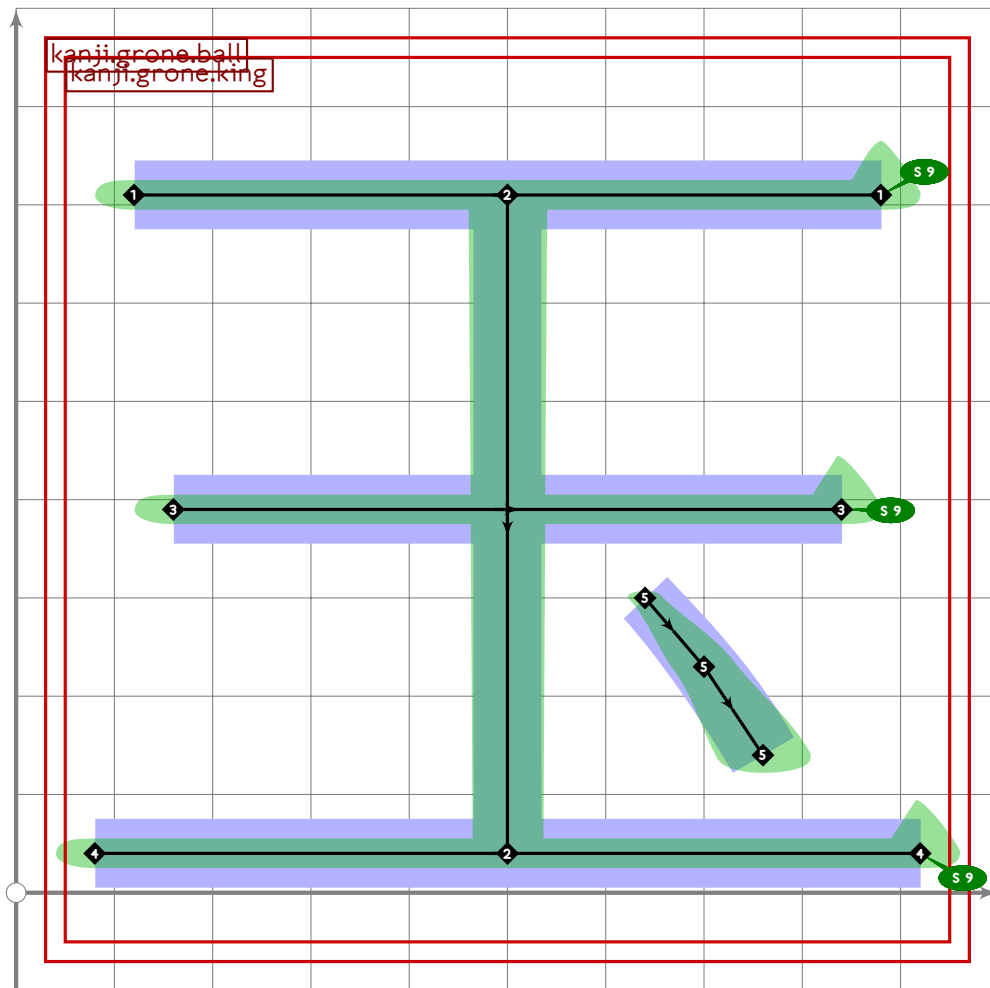
gradeone.mp

1 %
2 % Grade One kanji used on more than one page
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]

30
31



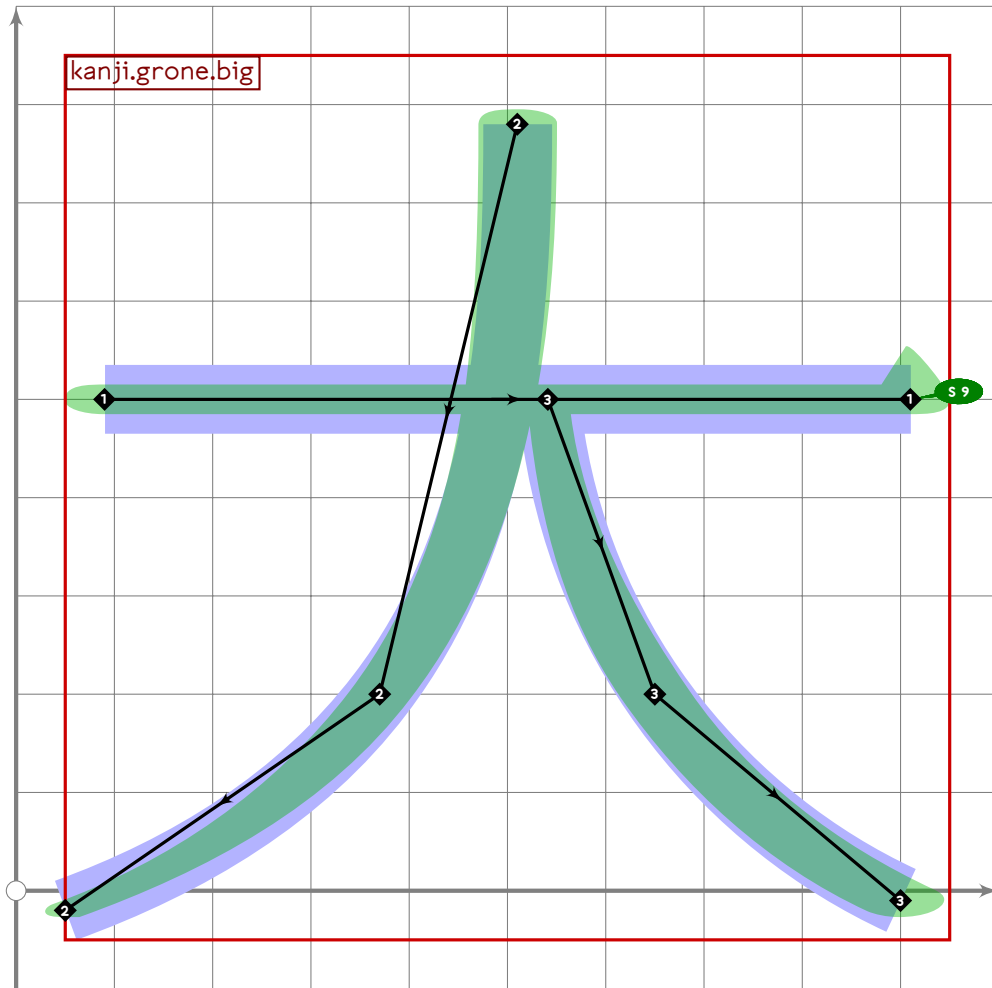
32
33 vardef tsu_curve.kanji.grone.ahead =
34 push_pbox_toexpand("kanji.grone.ahead");
35 build_kanji.tb(450,60)
36 (tsu_curve.kanji.radical.life_minus)
37 (tsu_curve.kanji.radical.legs);
38 expand_pbox;
39 enddef;



```

40
41 vardef tsu_curve.kanji.grone.ball =
42   push_pbox_toexpand("kanji.grone.ball");
43   tsu_curve.kanji.grone.king;
44   push_stroke((640,300)..(700,230)..(760,140),
45     (1,1)-(1.4,1.4)-(1.8,1.8));
46   expand_pbox;
47 enddef;

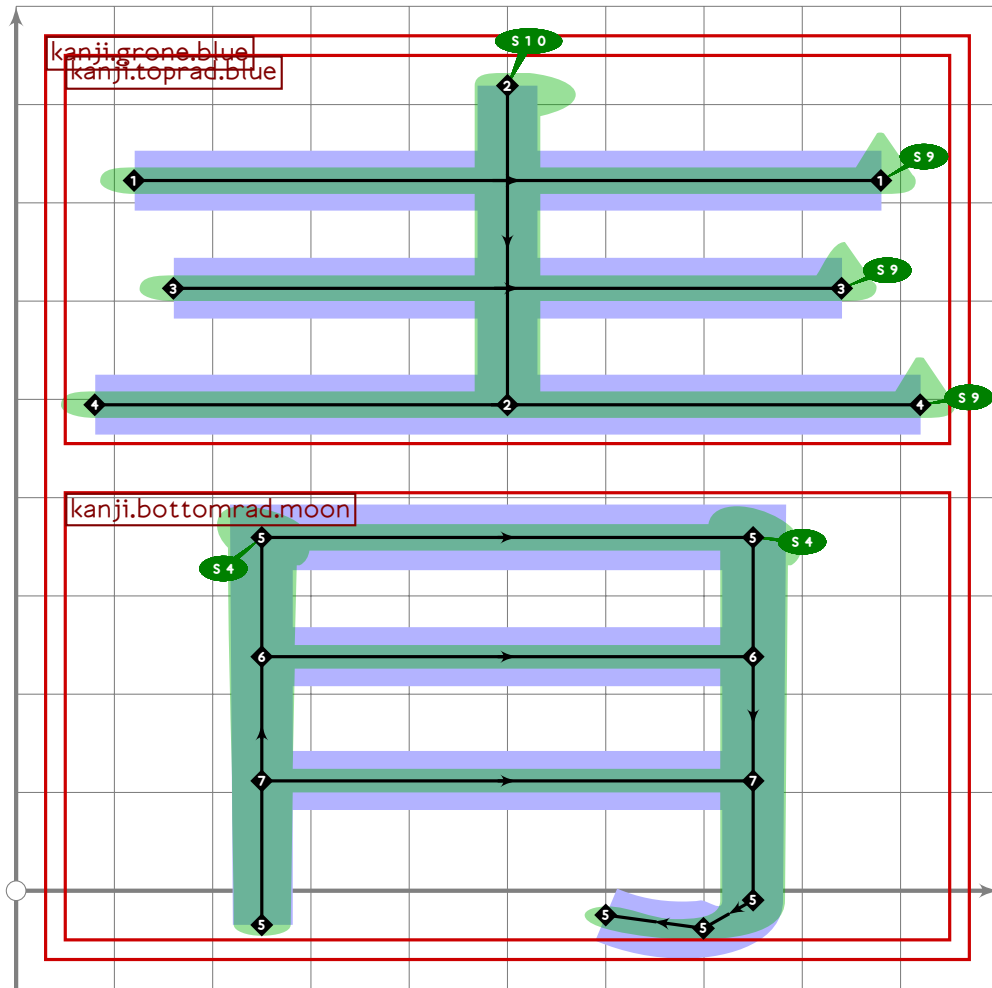
```



```

48
49 vardef tsu_curve.kanji.grone.big =
50   push_pbox_toexpand("kanji.grone.big");
51   push_stroke((90,500)-(910,500),
52     (1.6,1.6)-(1.6,1.6));
53   set_boserif(0,19);
54   push_stroke((510,780){down}..(370,200)..{curl 0.5}(50,-20),
55     (1.6,1.6)-(1.4,1.4)-(1.1,1.1));
56   push_stroke(((get_stroke(-1) intersectionpoint get_stroke(0))*(50,0))..
57     (650,200)..(900,-10),
58     (1.1,1.1)-(1.5,1.5)-(1.7,1.7));
59   expand_pbox;
60 enddef;

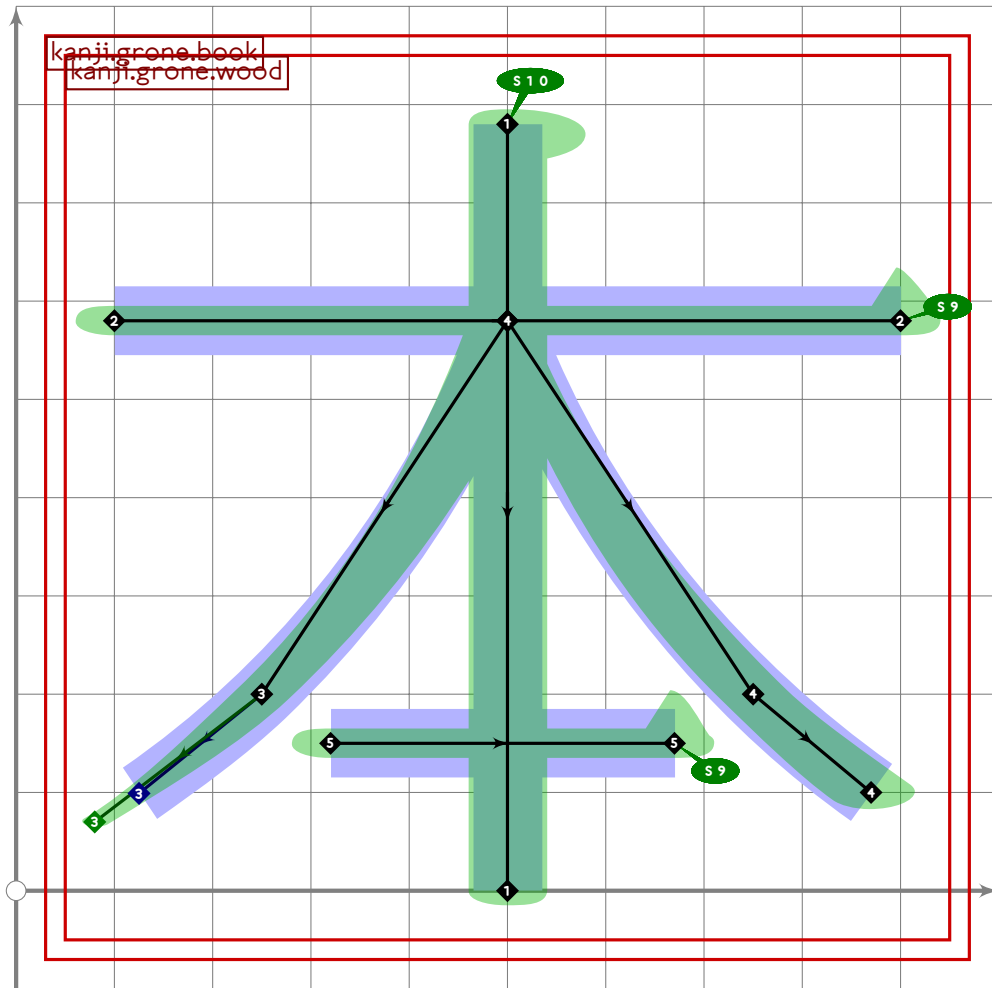
```



```

61
62 vardef tsu_curve.kanji.grone.blue =
63   push_pbox_toexpand("kanji.grone.blue");
64   build_kanji.level(build_kanji.tb(430,50)
65     (tsu_curve.kanji.toprad.blue)
66     (tsu_curve.kanji.bottomrad.moon));
67   expand_pbox;
68 enddef;

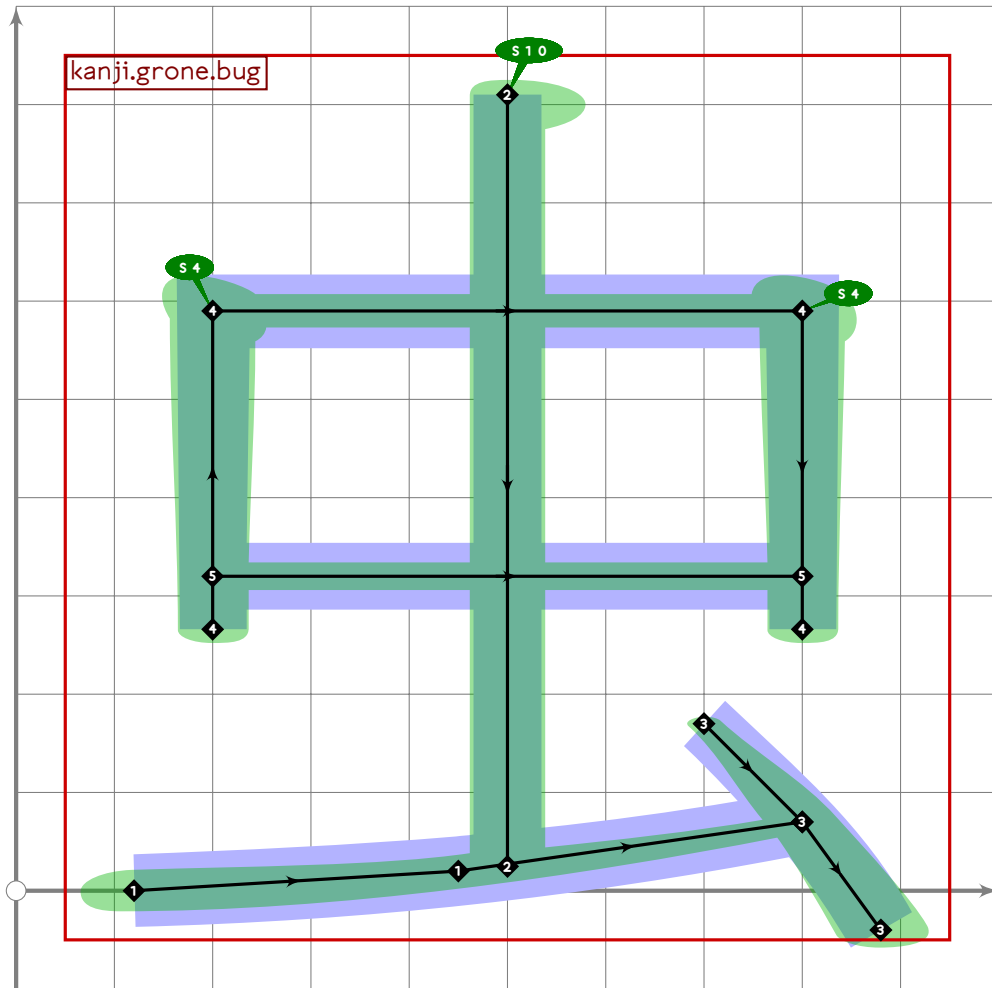
```



```

69
70 vardef tsu_curve.kanji.grone.book =
71   push_pbox_toexpand("kanji.grone.book");
72   tsu_curve.kanji.grone.wood;
73   push_stroke((320,150)-(670,150),
74     (1.6,1.6)-(1.6,1.6));
75   set_boserif(0,1,9);
76   expand_pbox;
77 enddef;

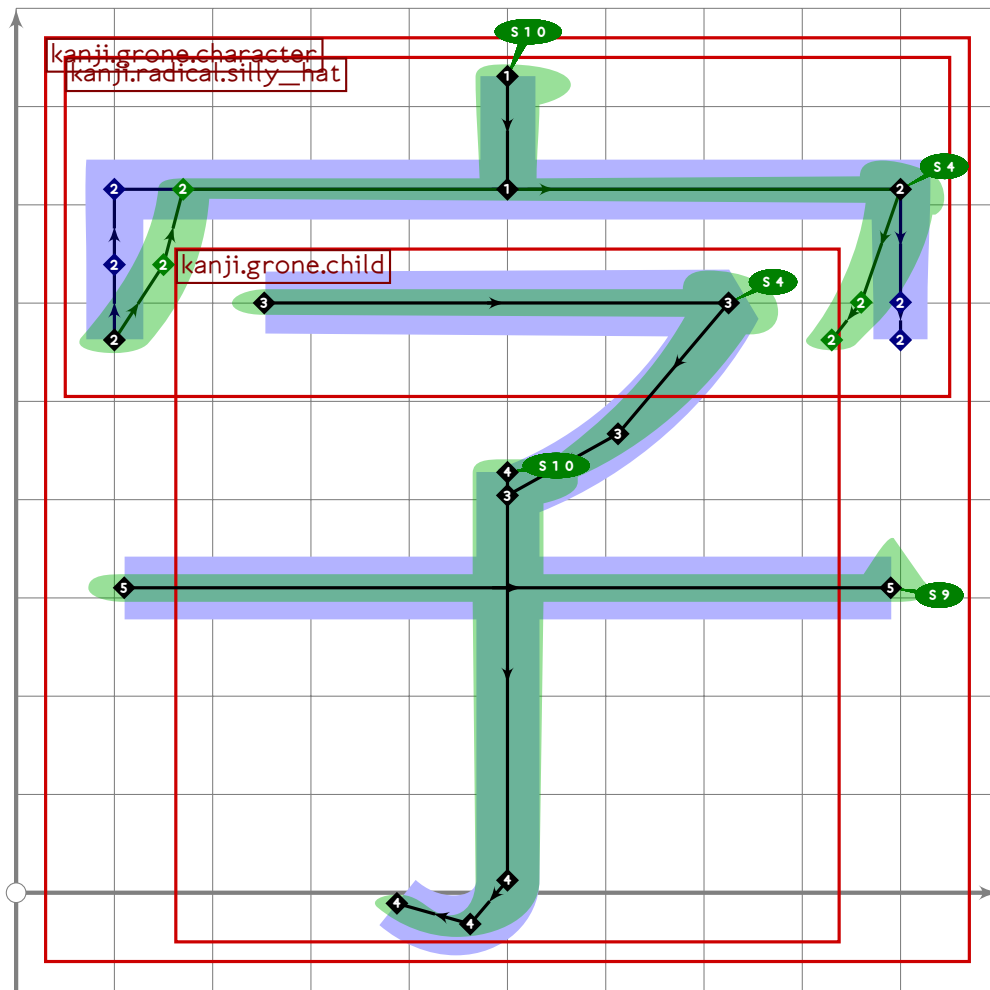
```



```

78
79 vardef tsu_curve.kanji.grone.bug =
80   push_pbox_toexpand("kanji.grone.bug");
81   push_stroke((120,0)..tension 1.2..(450,20)..(800,70),
82     (2,2)-(1.7,1.7)-(1.2,1.2));
83   push_stroke(
84     (500,810)-(get_stroke(0) intersectionpoint ((500,1000)-(500,0))),
85     (1.6,1.6)-(1.5,1.5));
86   set_boserif(0,0,10);
87   push_stroke((700,170)..tension 1.3..(800,70)..(880,-40),
88     (1,1)-(1.5,1.5)-(1.8,1.8));
89   build_kanji.box((200,590),(800,320));
90   expand_pbox;
91 enddef;

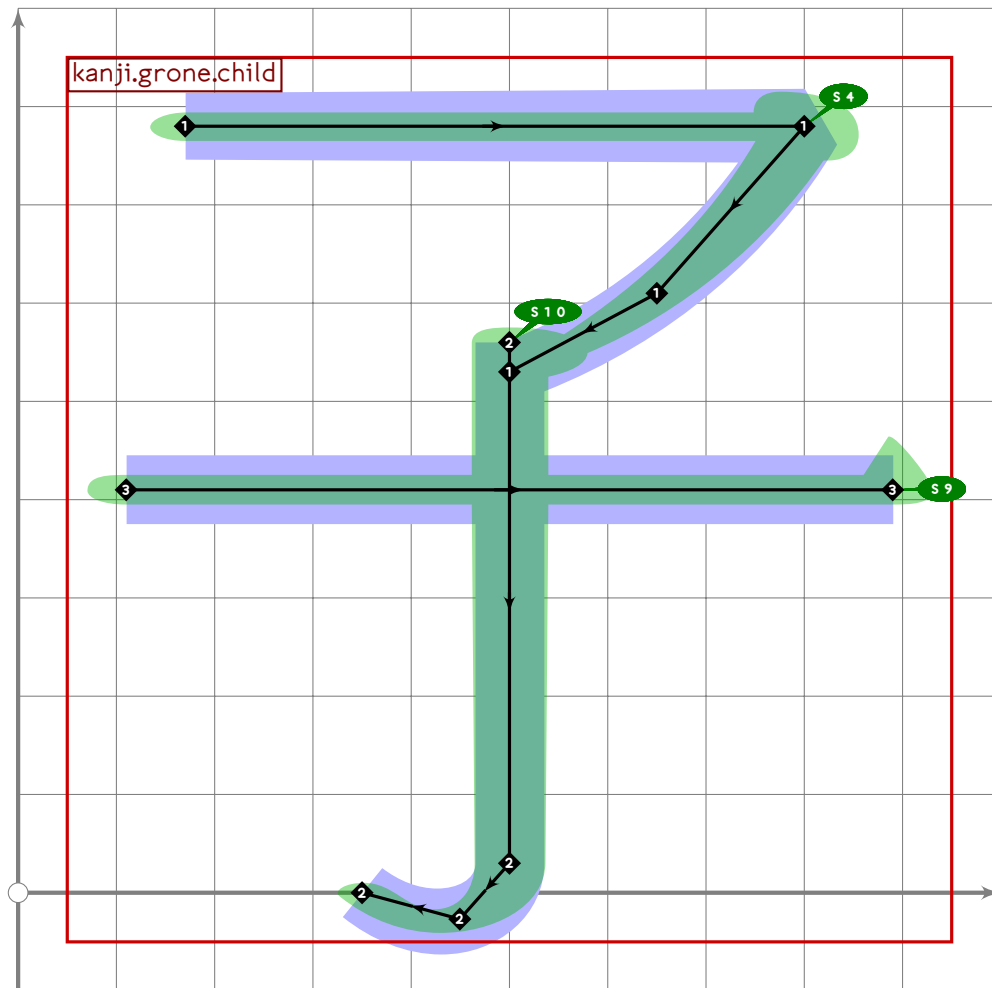
```



```

92
93 vardef tsu_curve.kanji.grone.character =
94   push_pbox_toexpand("kanji.grone.character");
95   begingroup
96     save charsvp;
97     path charsvp;
98     build_kanji.tb(580,150)
99       (tsu_curve.kanji.radical.silly_hat)
100       (build_kanji.sscale(xscaled 0.75)
101         (tsu_curve.kanji.grone.child;
102           charsvp:=get_strokep(0));
103           replace_strokep(0)(charsvp));
104   endgroup;
105   expand_pbox;
106 enddef;

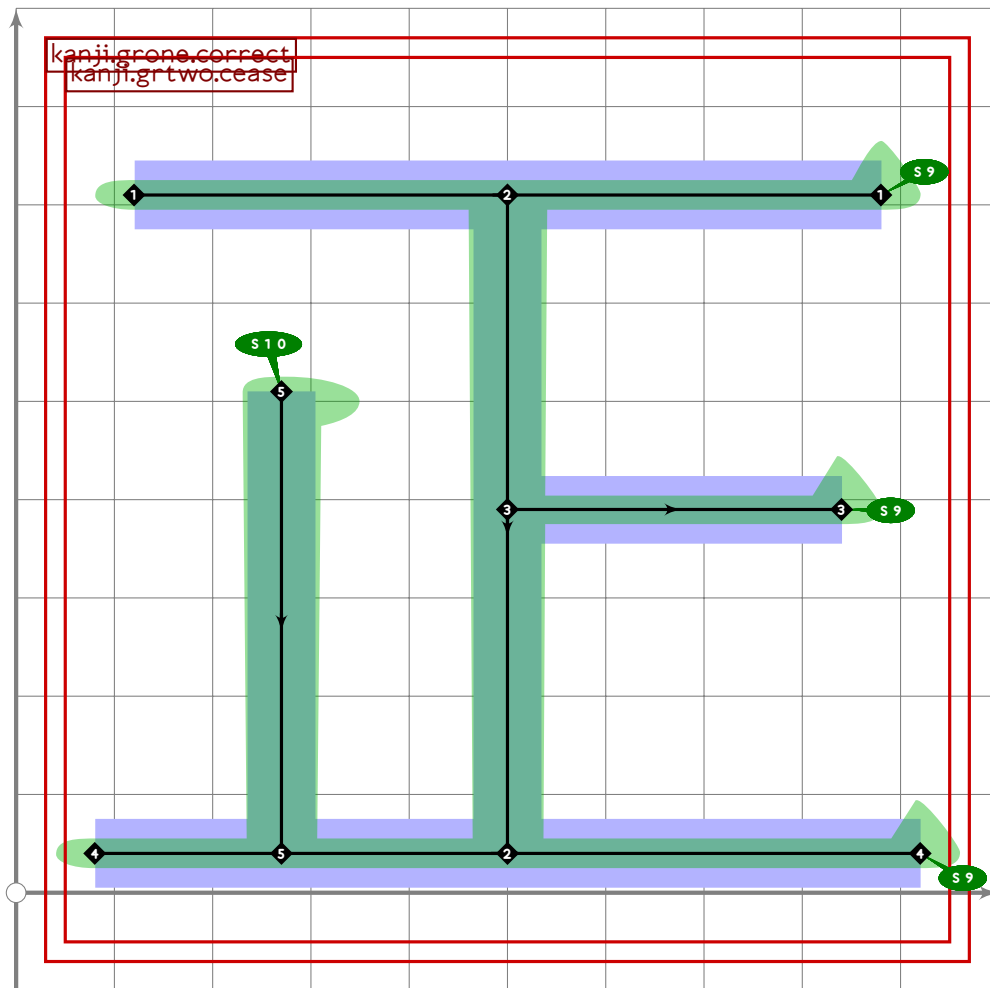
```



```

107
108 vardef tsu_curve.kanji.grone.child =
109   push_pbox_toexpand("kanji.grone.child");
110   push_stroke((170,780)-(800,780)..(650,610)..(500,530),
111     (1.5,1.5)-(1.6,1.6)-(1.4,1.4)-(1,1));
112   set_boserif(0,1,4);
113   set_botip(0,1,0);
114   push_stroke((500,560),
115     (1.6,1.6));
116   build_kanji.add_jtail(0);
117   set_boserif(0,0,10);
118   push_stroke((110,410)-(890,410),
119     (1.6,1.6)-(1.6,1.6));
120   set_boserif(0,1,9);
121   expand_pbox;
122 enddef;

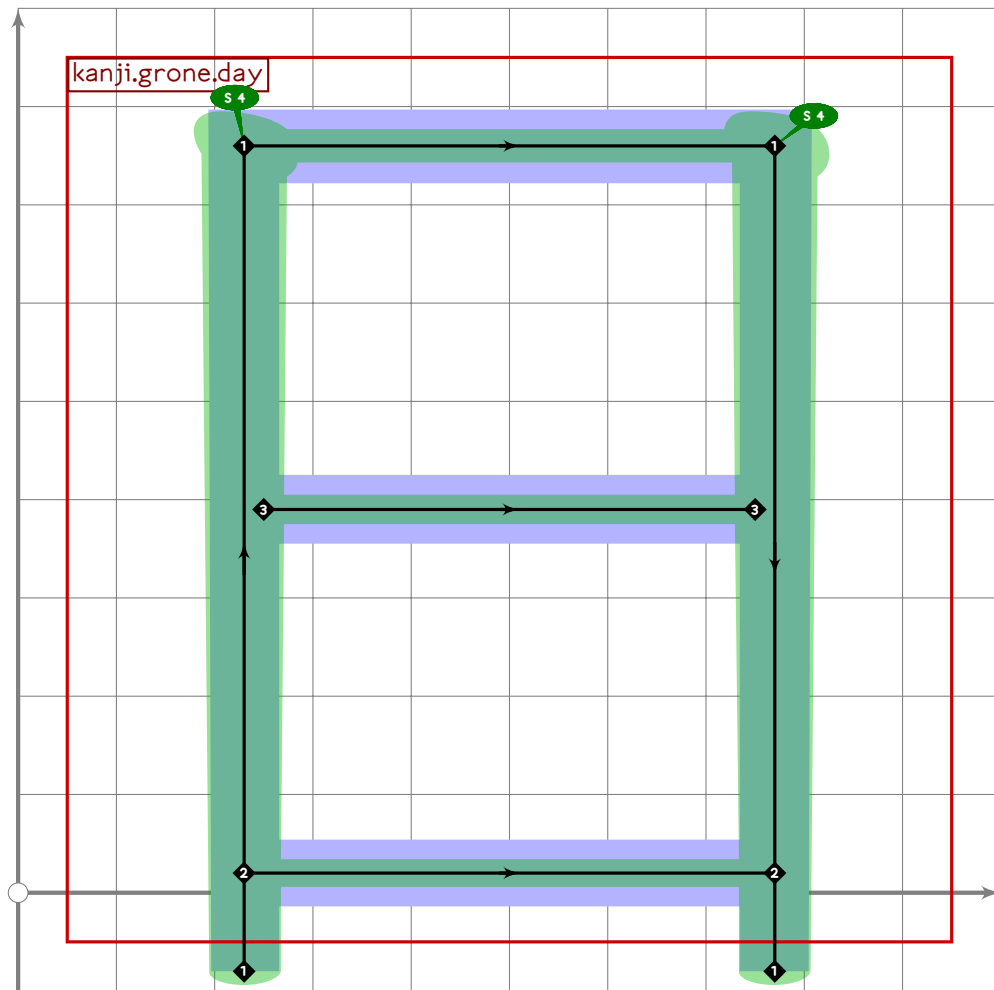
```



```

123
124 vardef tsu_curve.kanji.grtwo.correct =
125   push_pbox_toexpand("kanji.grtwo.correct");
126   push_stroke((120,710)-(880,710),
127     (1.6,1.6)-(1.6,1.6));
128   set_boserif(0,1,9);
129   tsu_curve.kanji.grtwo.cease;
130   expand_pbox;
131 enddef;

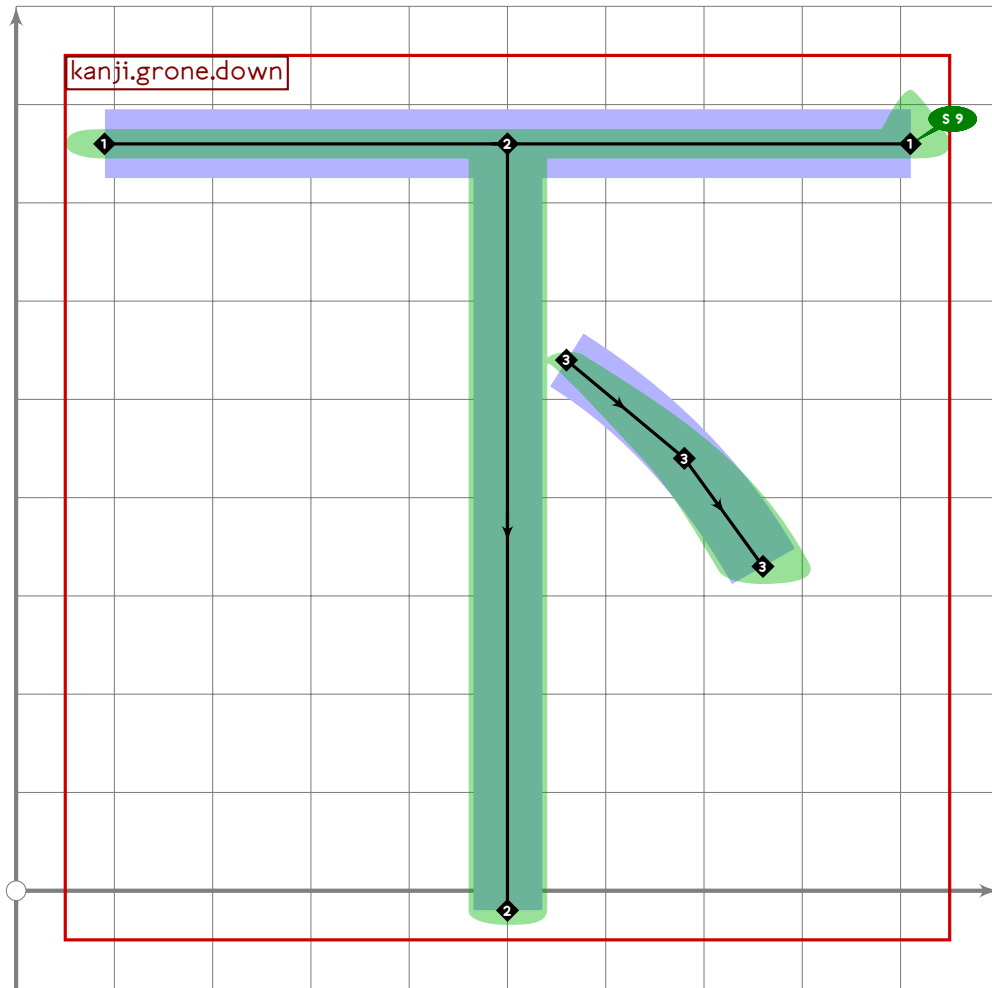
```

```

132
133 vardef tsu_curve.kanji.grone.day =
134   push_pbox_toexpand("kanji.grone.day");
135   build_kanji.box((230,760),(770,20));
136   push_stroke((250,390)-(750,390),
137     (1.6,1.6)-(1.6,1.6));
138   expand_pbox;
139 enddef;

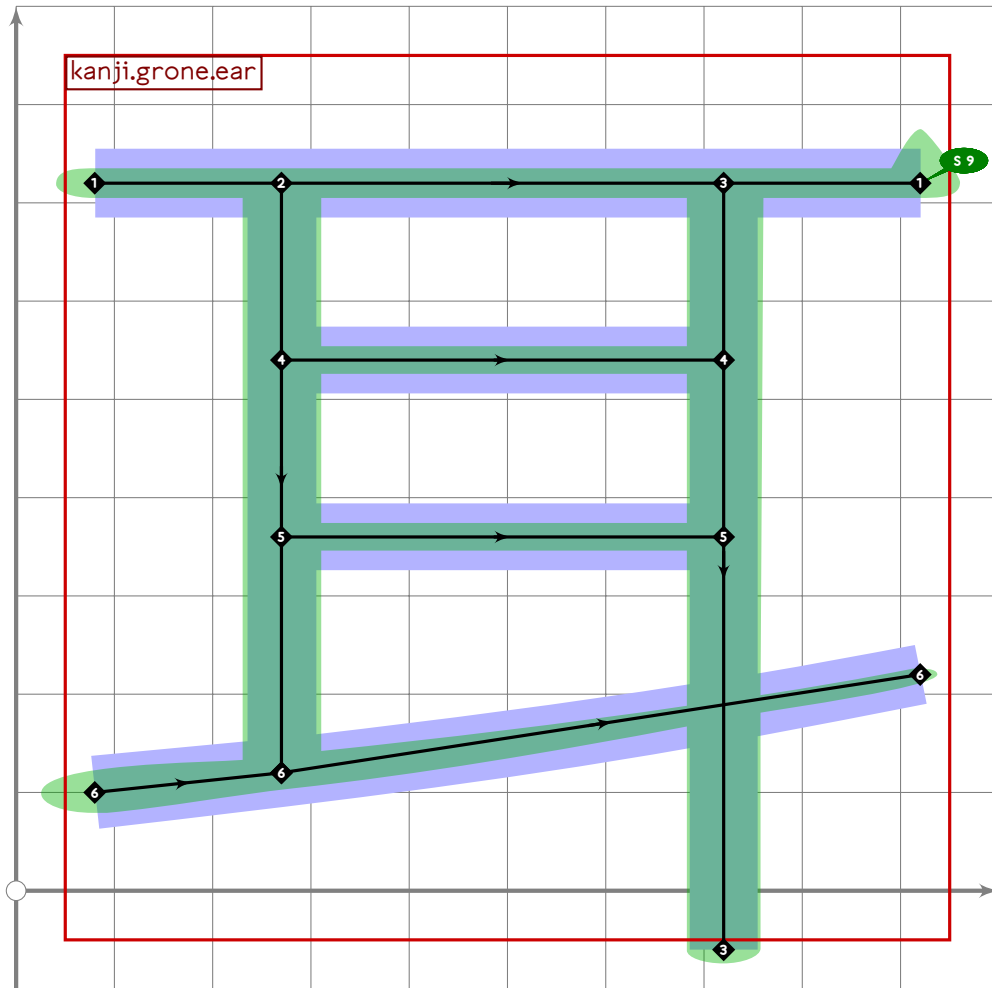
```



```

140
141 vardef tsu_curve.kanji.grone.down =
142   push_pbox_toexpand("kanji.grone.down");
143   push_stroke((90,760)-(910,760),
144     (1.6,1.6)-(1.6,1.6));
145   set_boserif(0,1,9);
146   push_stroke((500,760)-(500;-20),
147     (1.6,1.6)-(1.6,1.6));
148   push_stroke((560,540)..(680,440)..(760,330),
149     (1.1,1.1)-(1.6,1.6)-(1.8,1.8));
150   expand_pbox;
151 enddef;

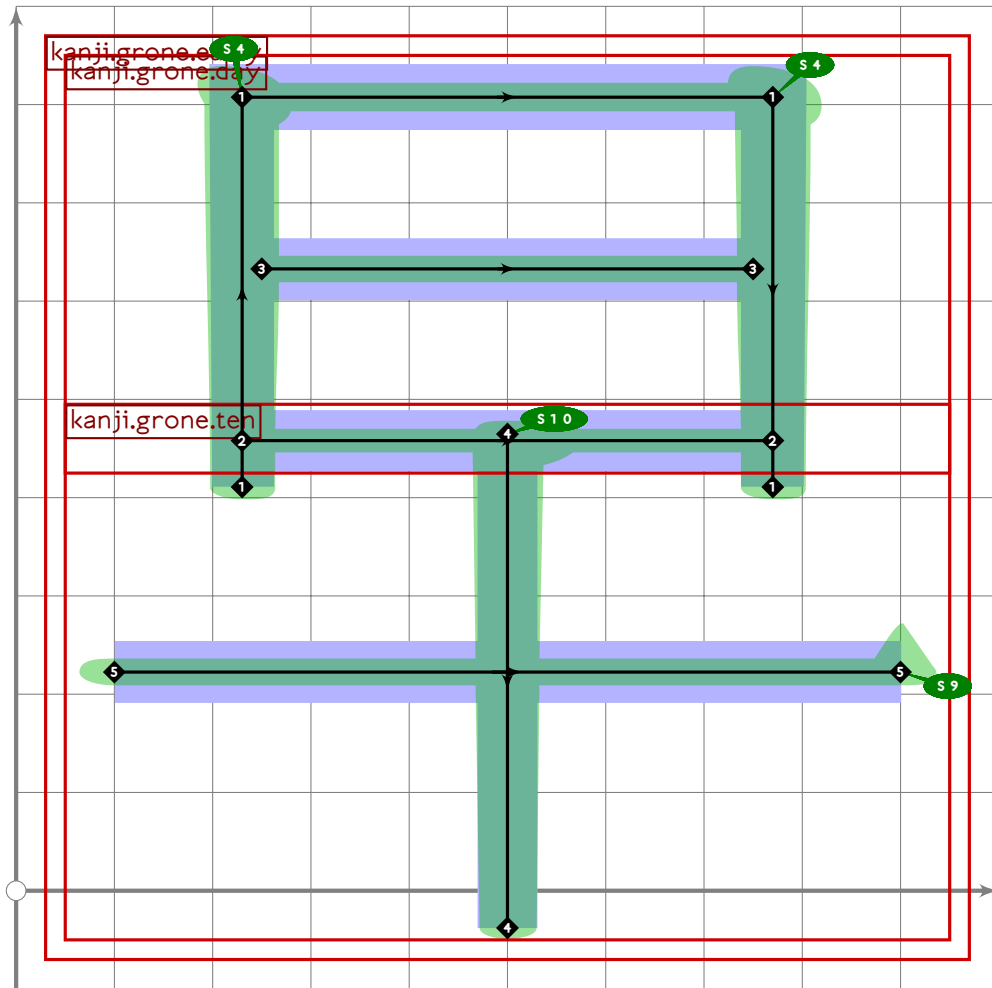
```



```

152
153 vardef tsu_curve.kanji.grone.ear =
154   push_pbox_toexpand("kanji.grone.ear");
155   push_stroke((80,720)-(920,720),
156     (1.6,1.6)-(1.6,1.6));
157   set_boserif(0,1,9);
158   push_stroke((270,720)-(270,120),
159     (1.6,1.6)-(1.6,1.6));
160   push_stroke((720,720)-(720,-60),
161     (1.6,1.6)-(1.5,1.5));
162   push_stroke((270,540)-(720,540),
163     (1.5,1.5)-(1.5,1.5));
164   push_stroke((270,360)-(720,360),
165     (1.5,1.5)-(1.5,1.5));
166   push_stroke((80,100)..tension 1.3..(270,120)..(920,220),
167     (2,2)-(1.7,1.7)-(1,1));
168   expand_pbox;
169 enddef;

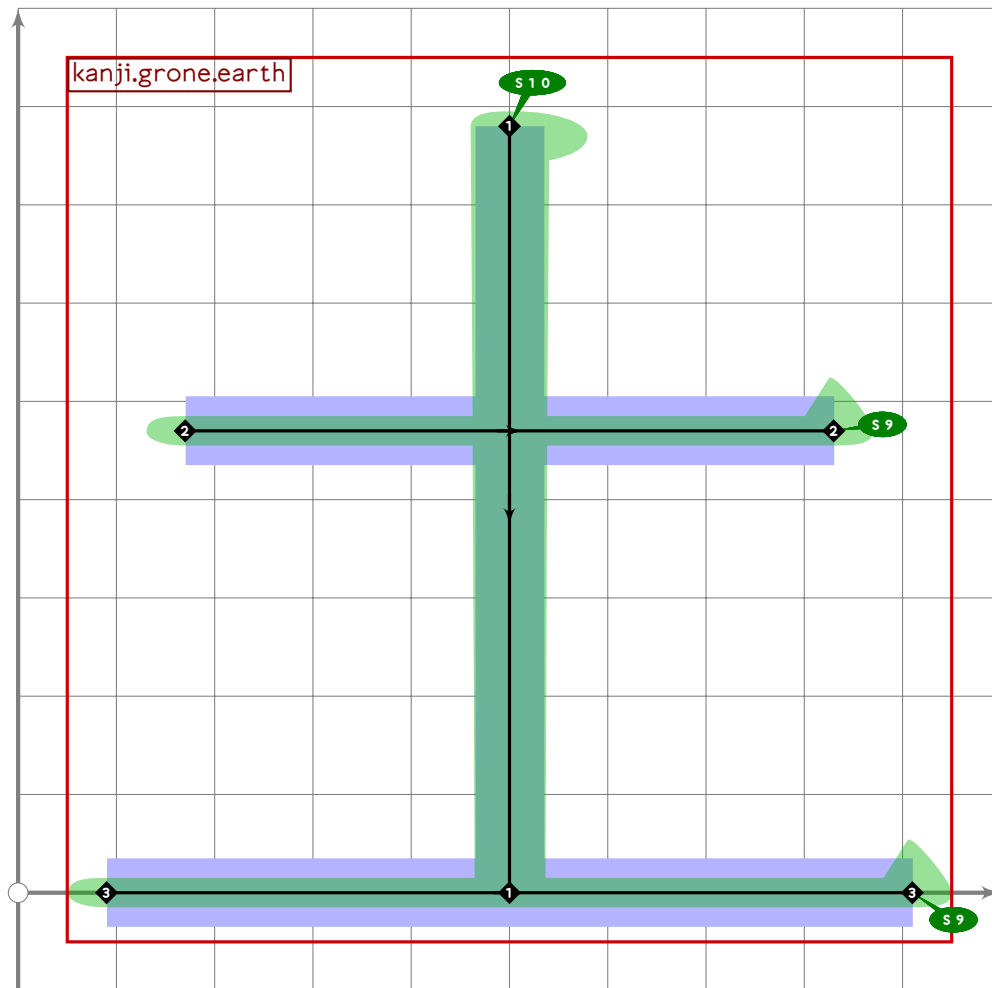
```



```

170
171 vardef tsu_curve.kanji.grone.early =
172   push_pbox_toexpand("kanji.grone.early");
173   build_kanji.level(build_kanji.tb(460,70)
174     (tsu_curve.kanji.grone.day)
175     (tsu_curve.kanji.grone.ten));
176   set_boserif(0,0,whatever);
177   expand_pbox;
178 enddef;

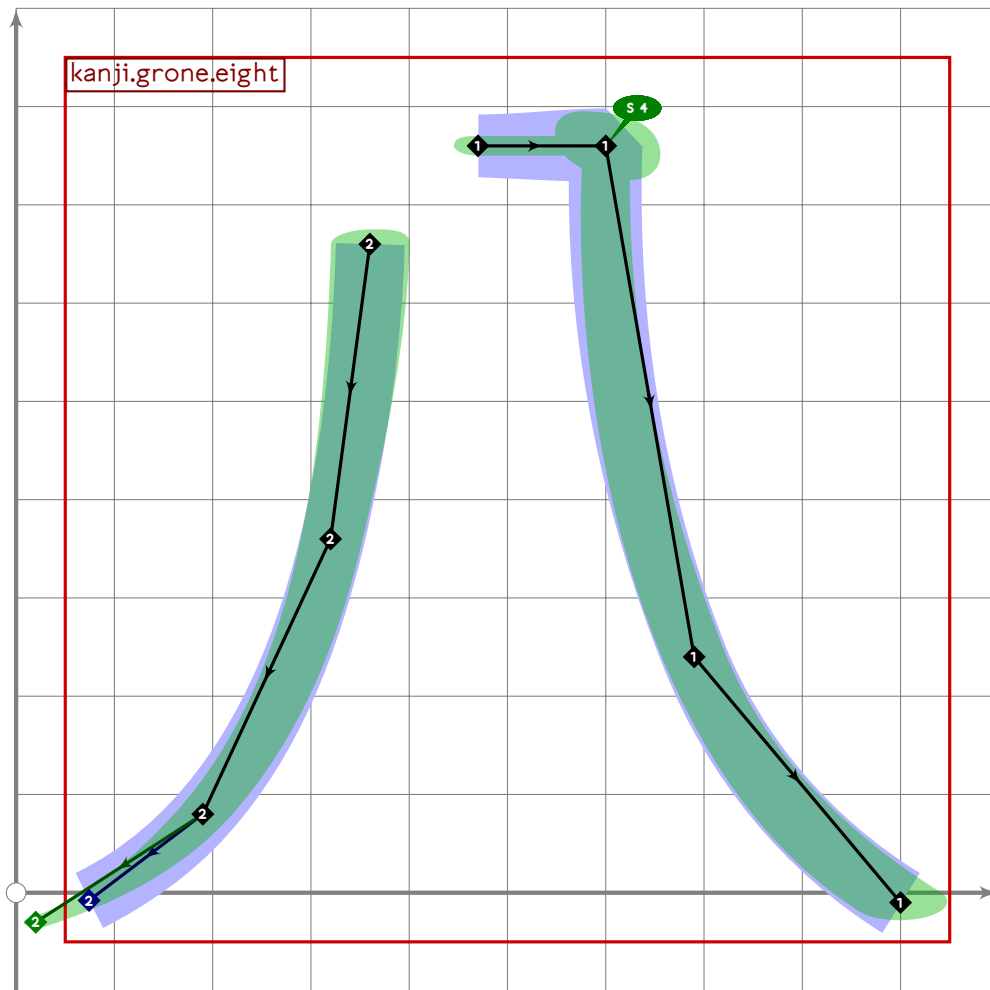
```



```

179
180 vardef tsu_curve.kanji.grone.earth =
181   push_pbox_toexpand("kanji.grone.earth");
182   push_stroke((500,780)-(500,0),
183     (1.6,1.6)-(1.5,1.5));
184   set_boserif(0,0,10);
185   push_stroke((170,470)-(830,470),
186     (1.6,1.6)-(1.6,1.6));
187   set_boserif(0,1,9);
188   push_stroke((90,0)-(910,0),
189     (1.6,1.6)-(1.6,1.6));
190   set_boserif(0,1,9);
191   expand_pbox;
192 enddef;

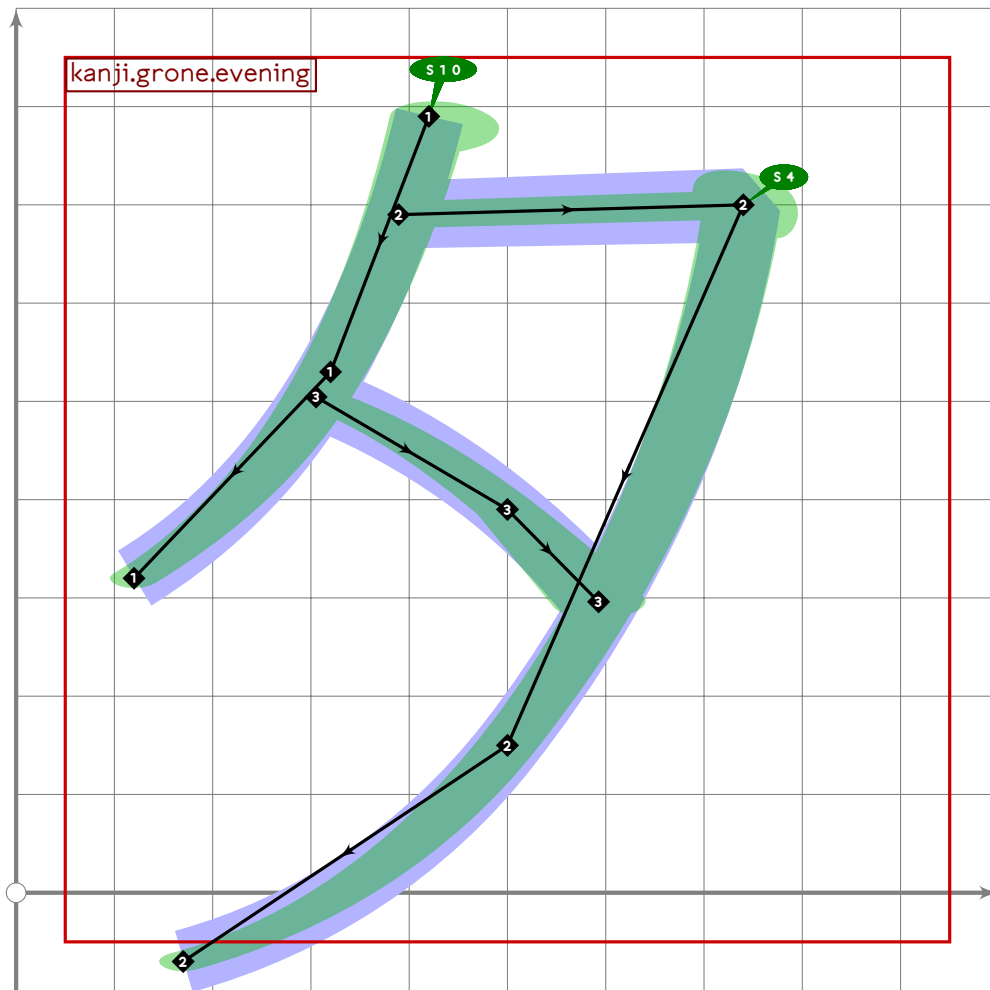
```



```

193
194 vardef tsu_curve.kanji.grone.eight =
195   push_pbox_toexpand("kanji.grone.eight");
196   push_stroke((470,760)-(600,760)..tension 1.3..(690,240)..(900,-10),
197     (1.2,1.2)-(1.2,1.2)-(1.4,1.4)-(1.8,1.8));
198   set_botip(0,1,0);
199   set_boserif(0,1,4);
200   push_stroke((360,660)..(320,360)..(190,80)..(20,-30),
201     (1.6,1.6)-(1.4,1.4)-(1.3,1.3)-(0.88,0.88));
202   expand_pbox;
203 enddef;

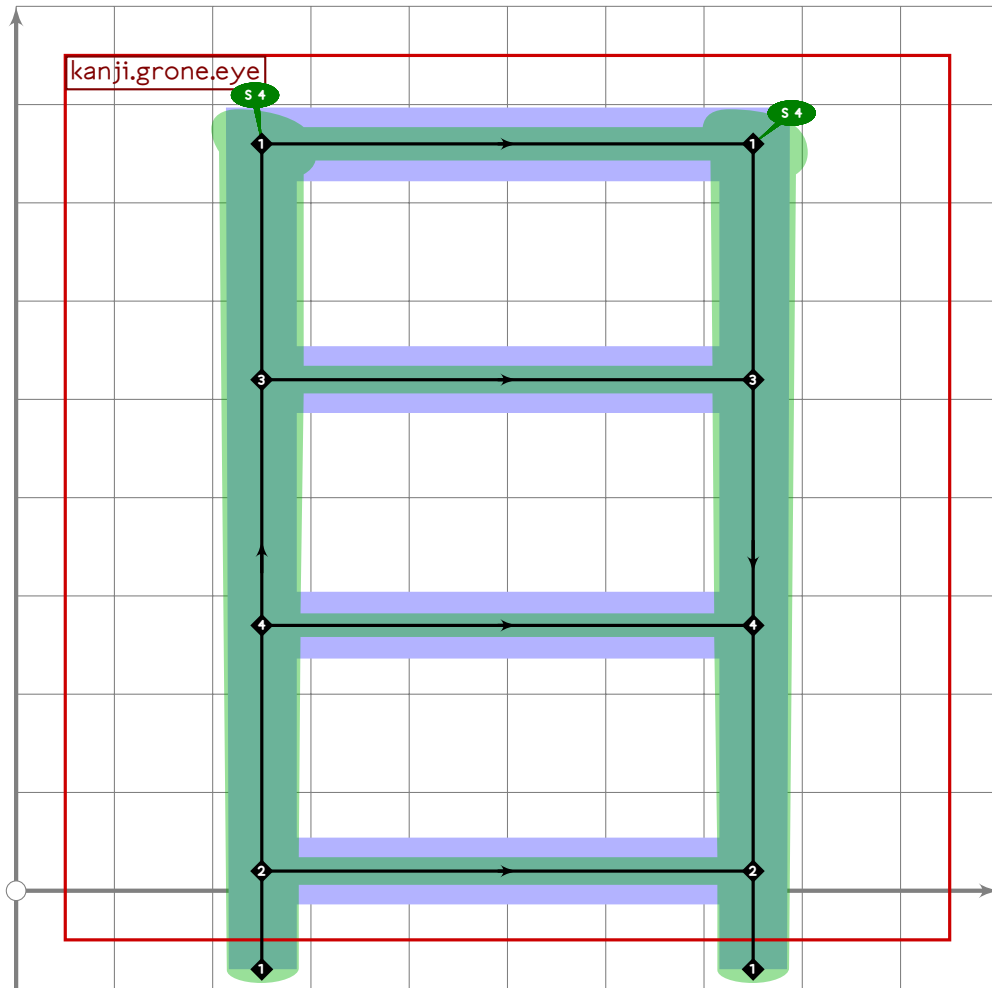
```



```

204
205 vardef tsu_curve.kanji.grone.evening =
206   push_pbox_toexpand("kanji.grone.evening");
207   push_stroke((420,790)..tension 1.2..(320,530)..(120,320),
208     (1.6,1.6)-(1.5,1.5)-(1.2,1.2));
209   set_boserif(0,0,10);
210   push_stroke(
211     (get_stroke(0) intersectionpoint ((-infinity,690)-(-infinity,690))-
212     (740,700)..tension 1.2..(500,150)..(170,70),
213     (1.5,1.5)-(1.6,1.6)-(1.4,1.4)-(1.2,1.2));
214   set_botip(0,1,0);
215   set_boserif(0,1,4);
216   push_stroke(
217     (point 1.1 of get_stroke(-1))..(500,390)..(point 1.7 of get_stroke(0)),
218     (1.2,1.2)-(1.4,1.4)-(1.8,1.8));
219   expand_pbox;
220 enddef;

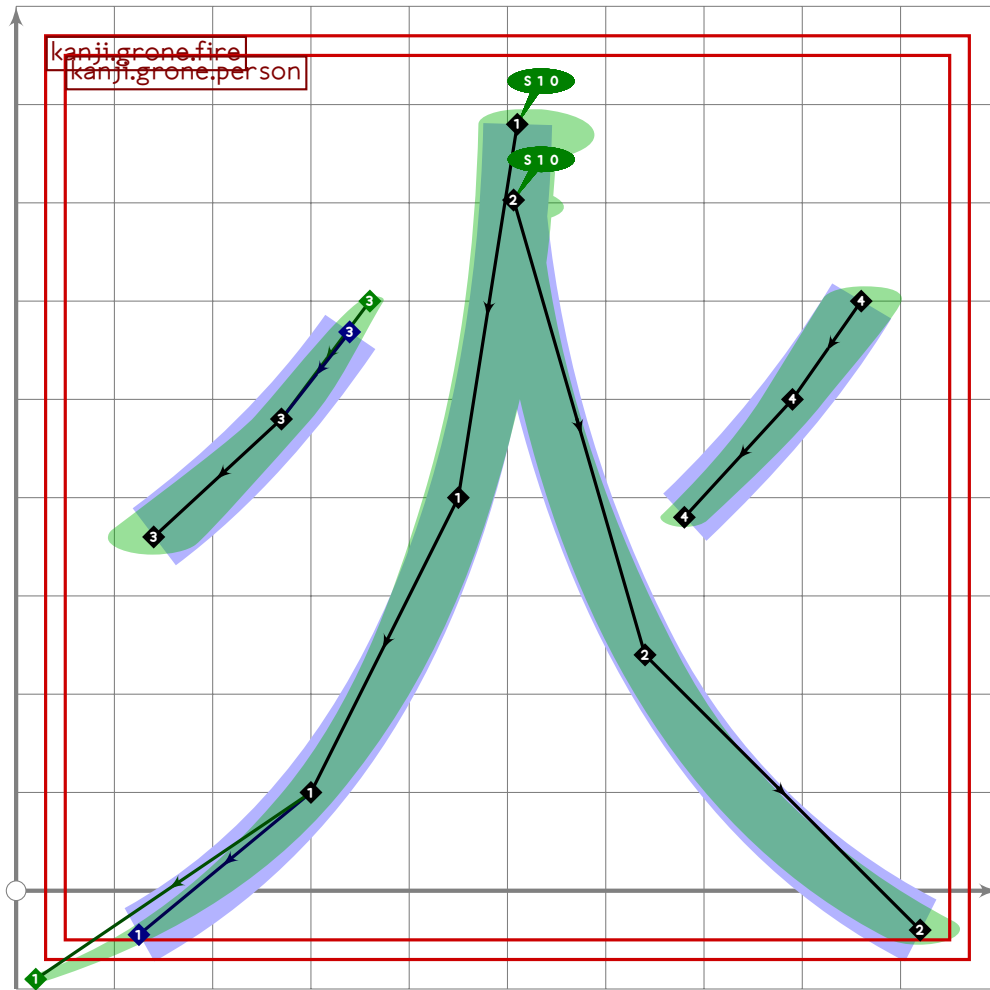
```



```

221
222 vardef tsu_curve.kanji.grone.eye =
223   push_pbox_toexpand("kanji.grone.eye");
224   build_kanji.box((250,760),(750,20));
225   push_stroke((250,520)-(750,520),
226     (1.5,1.5)-(1.5,1.5));
227   push_stroke((250,270)-(750,270),
228     (1.4,1.4)-(1.4,1.4));
229   expand_pbox;
230 enddef;

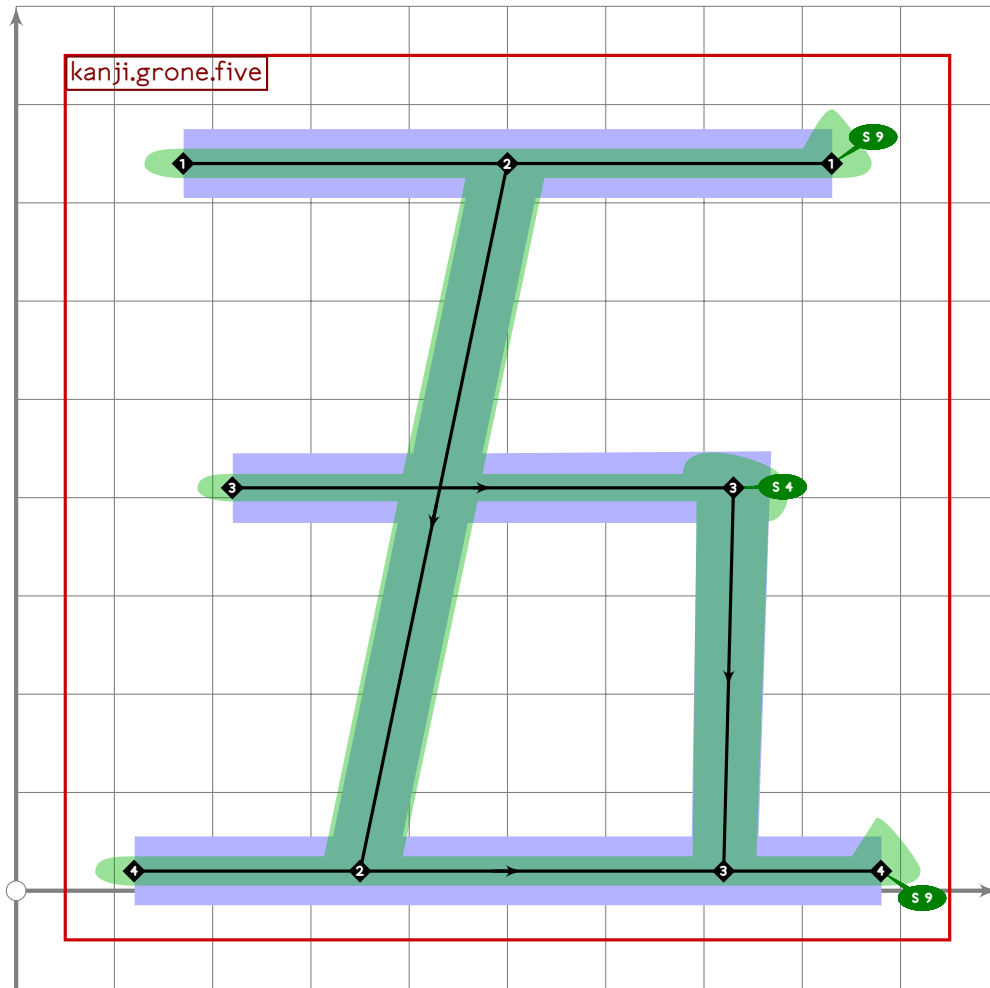
```

```

231
232 vardef tsu_curve.kanji.grone.fire =
233   push_pbox_toexpand("kanji.grone.fire");
234   tsu_curve.kanji.grone.person;
235   set_boserif(0,0,10);
236   push_stroke((360,600)..(270,480)..(140,360),
237     (0.9,0.9)-(1.3,1.3)-(1.8,1.8));
238   push_stroke((860,600)..(790,500)..(680,380),
239     (1.6,1.6)-(1.4,1.4)-(1.2,1.2));
240   expand_pbox;
241 enddef;

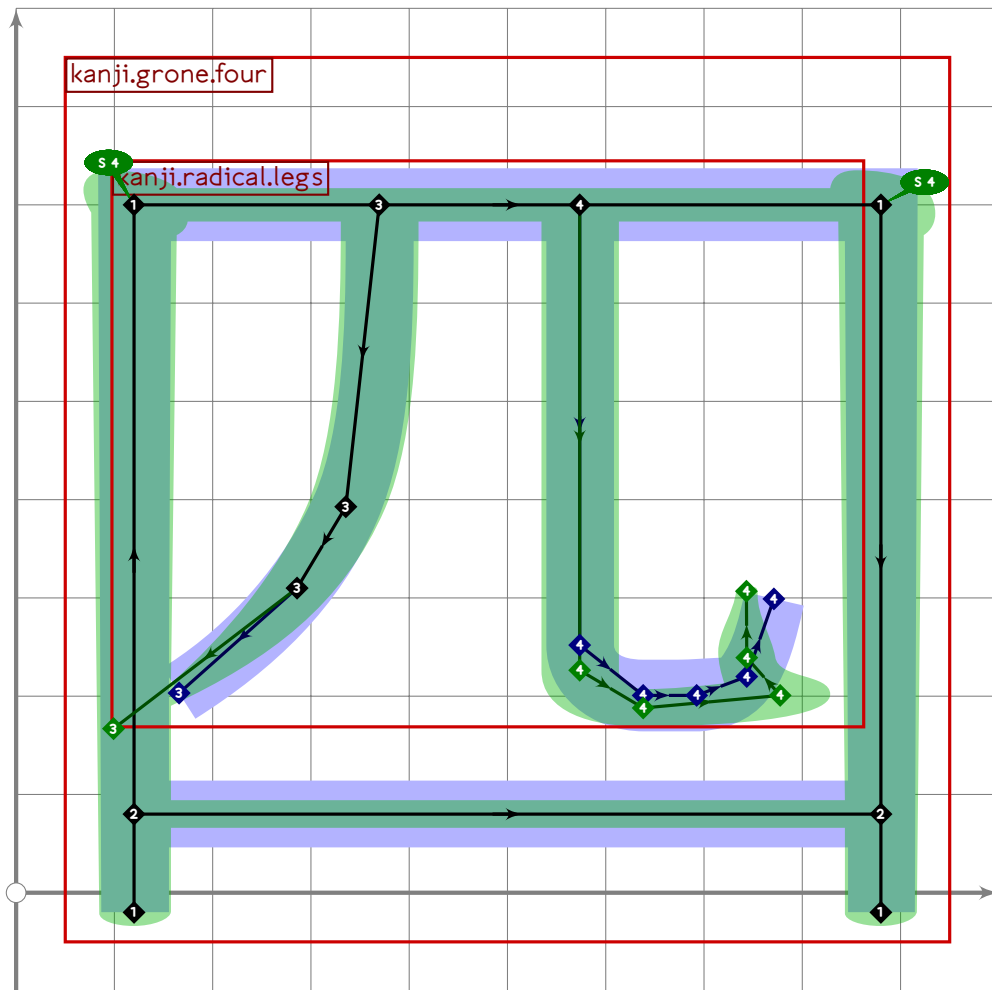
```



```

242
243 vardef tsu_curve.kanji.grone.five =
244   push_pbox_toexpand("kanji.grone.five");
245   push_stroke((170,740)-(830,740),
246     (1.6,1.6)-(1.6,1.6));
247   set_boserif(0,1,9);
248   push_stroke((500,740)-(350,20),
249     (1.6,1.6)-(1.6,1.6));
250   push_stroke((220,410)-(730,410)-(720,20),
251     (1.5,1.5)-(1.5,1.5)-(1.4,1.4));
252   set_boserif(0,1,4);
253   set_botip(0,1,1);
254   push_stroke((120,20)-(880,20),
255     (1.6,1.6)-(1.6,1.6));
256   set_boserif(0,1,9);
257   expand_pbox;
258 enddef;

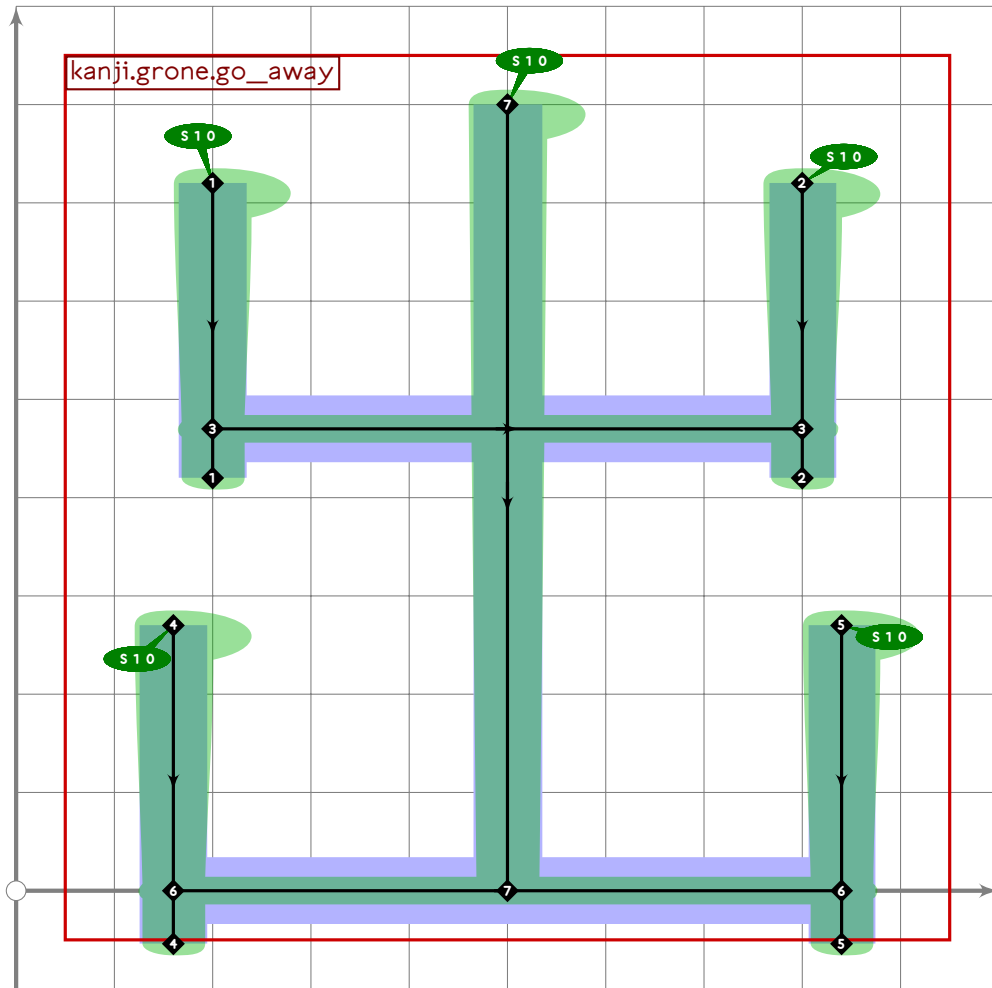
```



```

259
260 vardef tsu_curve.kanji.grone.four =
261   push_pbox_toexpand("kanji.grone.four");
262   build_kanji.box((120,700),(880,80));
263   tsu_xform
264     (identity shifted (-500,780) xyscaled (0.85,0.64) shifted (480,700))
265     (tsu_curve.kanji.radical.legs);
266   expand_pbox;
267 enddef;

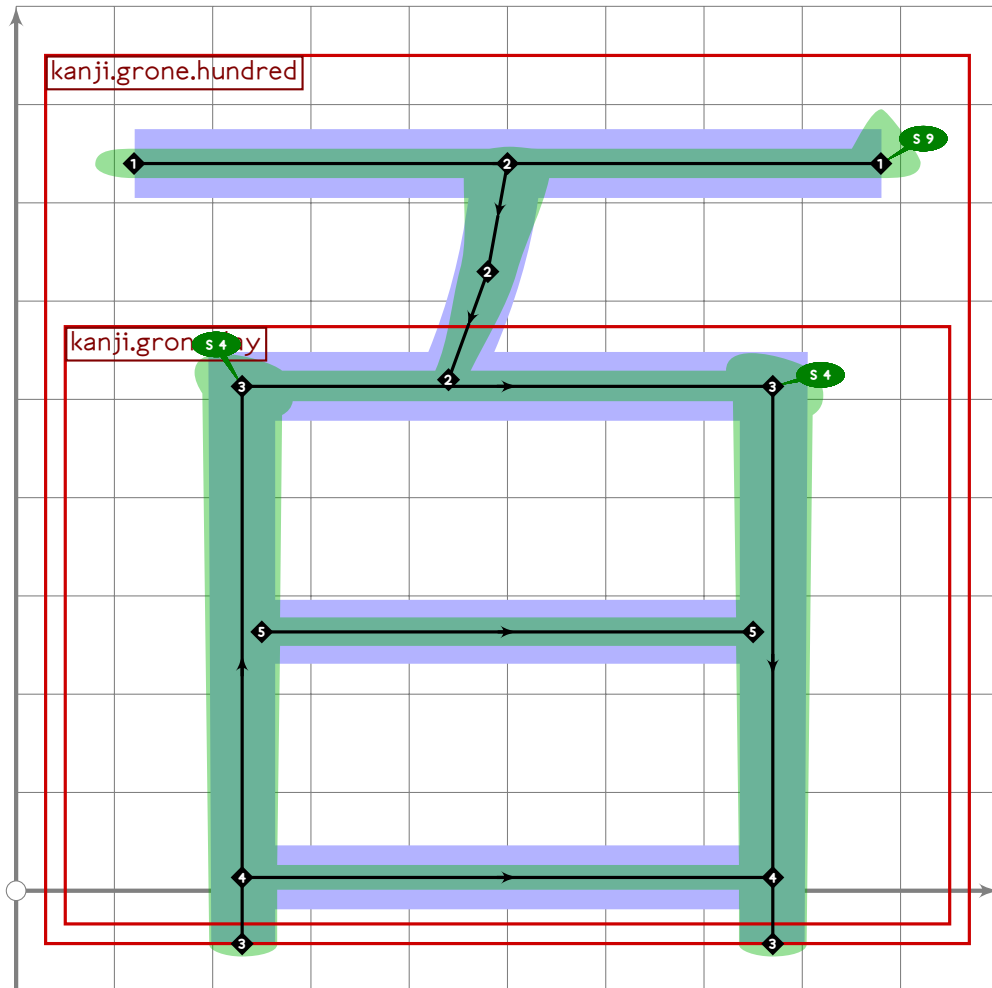
```



```

268
269 vardef tsu_curve.kanji.grone.go_away =
270   push_pbox__toexpand("kanji.grone.go_away");
271   build_kanji.cup((200,720),(800,470));
272   build_kanji.cup((160,270),(840,0));
273   push_stroke((500,800)-(500,0),
274     (1.6,1.6)-(1.4,1.4));
275   set_boserif(0,0,10);
276   expand_pbox;
277 enddef;

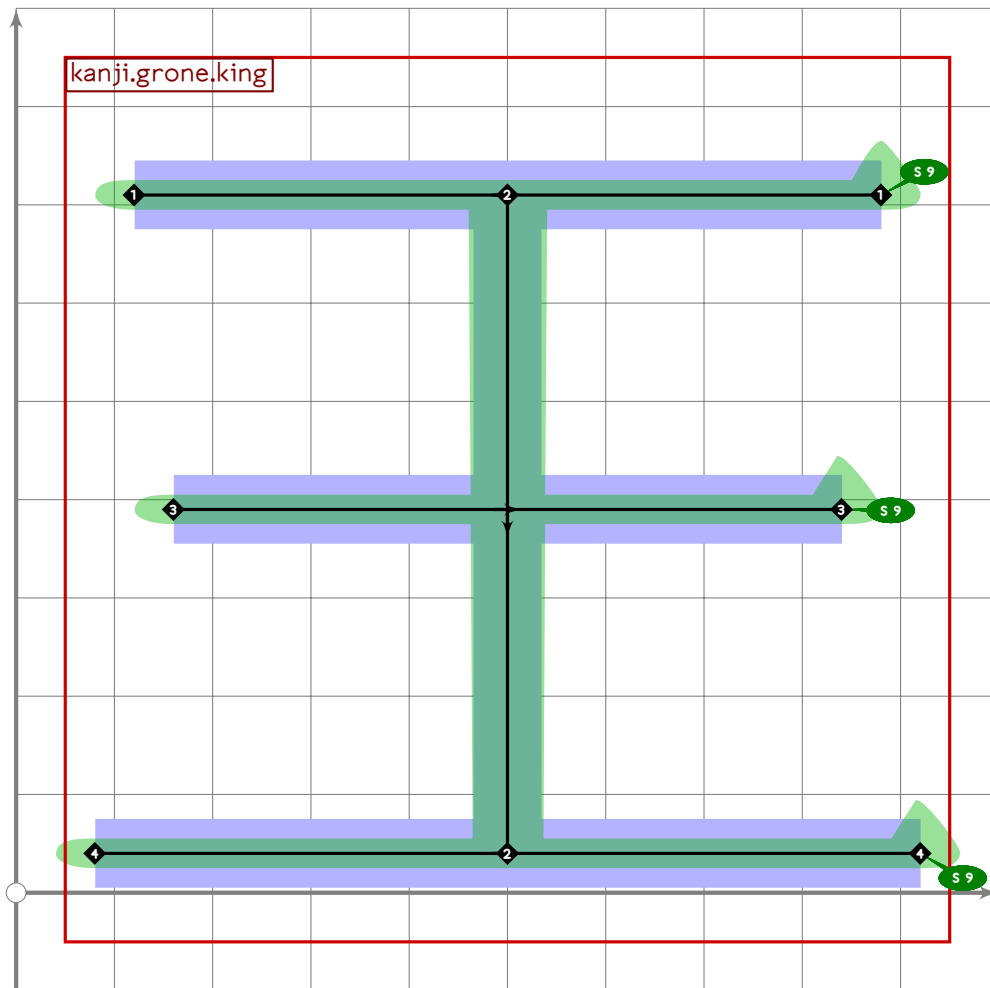
```



```

278
279 vardef tsu_curve.kanji.grone.hundred =
280   push_pbox_toexpand("kanji.grone.hundred");
281   push_stroke((120,740)-(880,740),
282     (1.6,1.6)-(1.6,1.6));
283   set_boserif(0,1,9);
284   push_stroke((500,740)..(480,630)..(440,520),
285     (1.7,1.7)-(1.3,1.3)-(1,1));
286   tsu_xform(identity yscaled (520/770))(tsu_curve.kanji.grone.day);
287   expand_pbox;
288 enddef;

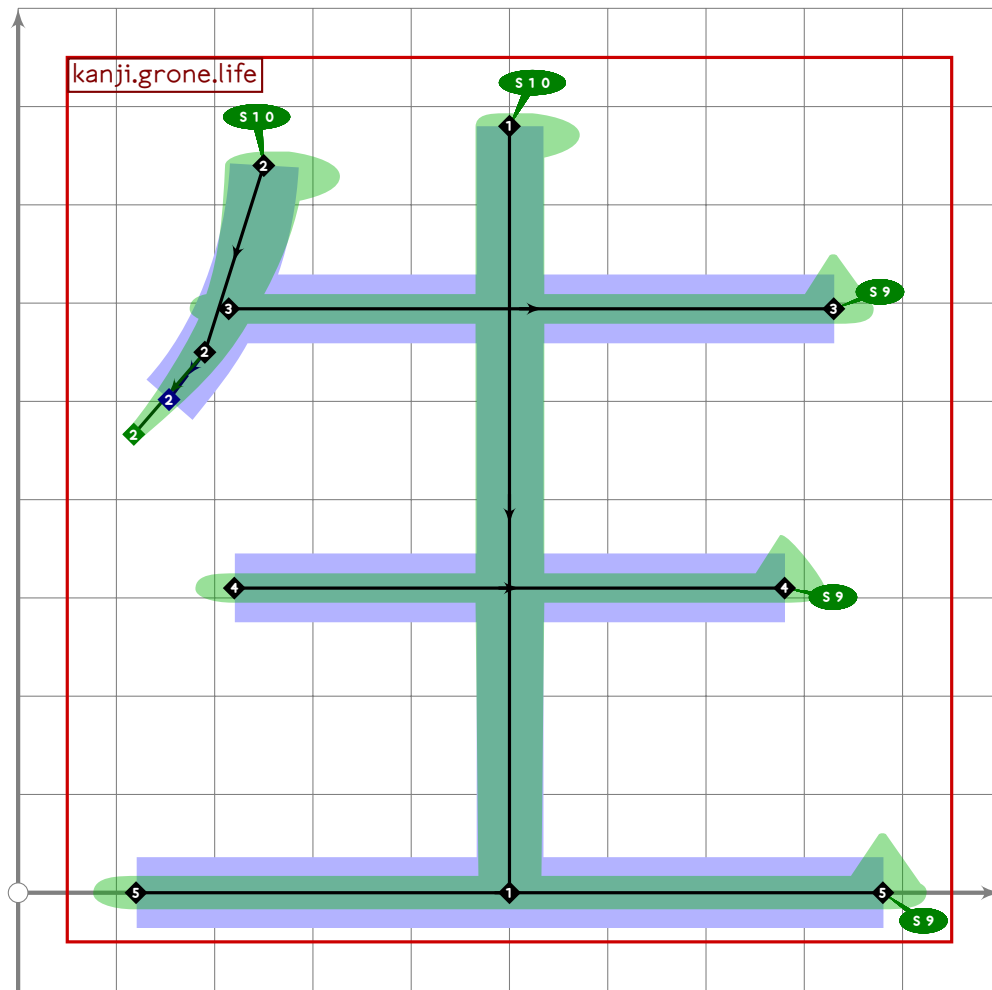
```



```

289
290 vardef tsu_curve.kanji.grone.king =
291   push_pbox_toexpand("kanji.grone.king");
292   push_stroke((120,710)-(880,710),
293     (1.6,1.6)-(1.6,1.6));
294   set_boserif(0,1,9);
295   push_stroke((500,710)-(500,40),
296     (1.6,1.6)-(1.5,1.5));
297   push_stroke((160,390)-(840,390),
298     (1.6,1.6)-(1.6,1.6));
299   set_boserif(0,1,9);
300   push_stroke((80,40)-(920,40),
301     (1.6,1.6)-(1.6,1.6));
302   set_boserif(0,1,9);
303   expand_pbox;
304 enddef;

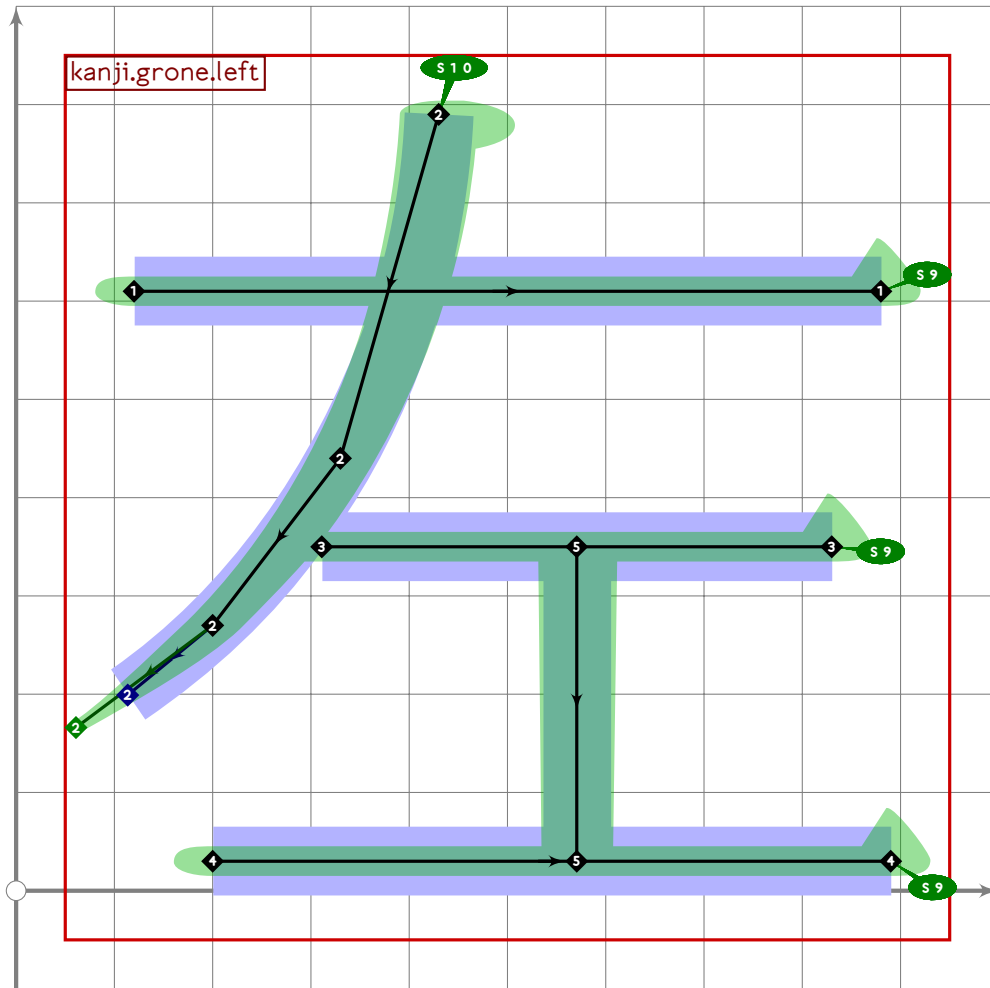
```



```

305
306 vardef tsu_curve.kanji.grone.life =
307   push_pbox_toexpand("kanji.grone.life");
308   push_stroke((500,780)-(500,0),
309     (1.5,1.5)-(1.4,1.4));
310   set_boserif(0,0,10);
311   push_stroke((250,740)..(190,550)..(110,460),
312     (1.6,1.6)-(1.2,1.2)-(0.8,0.8));
313   set_boserif(0,0,10);
314   push_stroke((point 0.75 of get_strokep(0))-
315     (830,ypart point 0.75 of get_strokep(0)),
316     (1.6,1.6)-(1.6,1.6));
317   set_boserif(0,1,9);
318   push_stroke((220,310)-(780,310),
319     (1.6,1.6)-(1.6,1.6));
320   set_boserif(0,1,9);
321   push_stroke((120,0)-(880,0),
322     (1.7,1.7)-(1.7,1.7));
323   set_boserif(0,1,9);
324   expand_pbox;
325 enddef;

```

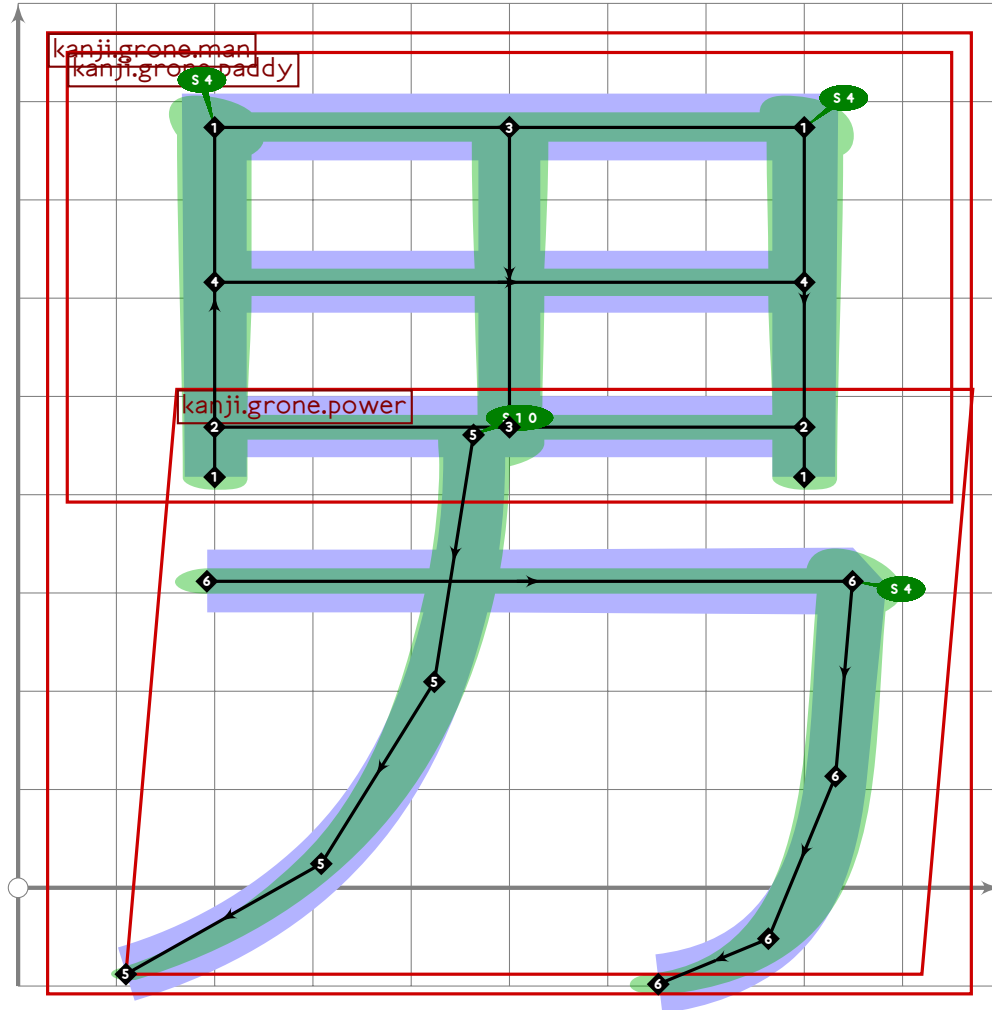


```

326
327 vardef tsu_curve.kanji.grone.left =
328   push_pbox_toexpand("kanji.grone.left");
329   push_stroke((120,610)..(880,610),
330     (1.6,1.6)-(1.6,1.6));
331   set_boserif(0,1,9);
332   push_stroke((430,790)..(330,440)..(200,270)..(50,160),
333     (1.6,1.6)-(1.5,1.5)-(1.3,1.3)-(0.8,0.8));
334   set_boserif(0,0,10);
335   push_stroke(
336     (((0,350)-(1000,350)) intersectionpoint get_stroke(0)*(40,0))..
337     (830,350),
338     (1.6,1.6)-(1.6,1.6));
339   set_boserif(0,1,9);
340   push_stroke((200,30)..(890,30),
341     (1.6,1.6)-(1.6,1.6));
342   set_boserif(0,1,9);
343   push_stroke(
344     (point 0.5 of get_stroke(-1))-(xpart point 0.5 of get_stroke(-1),30),
345     (1.6,1.6)-(1.5,1.5));
346   expand_pbox;

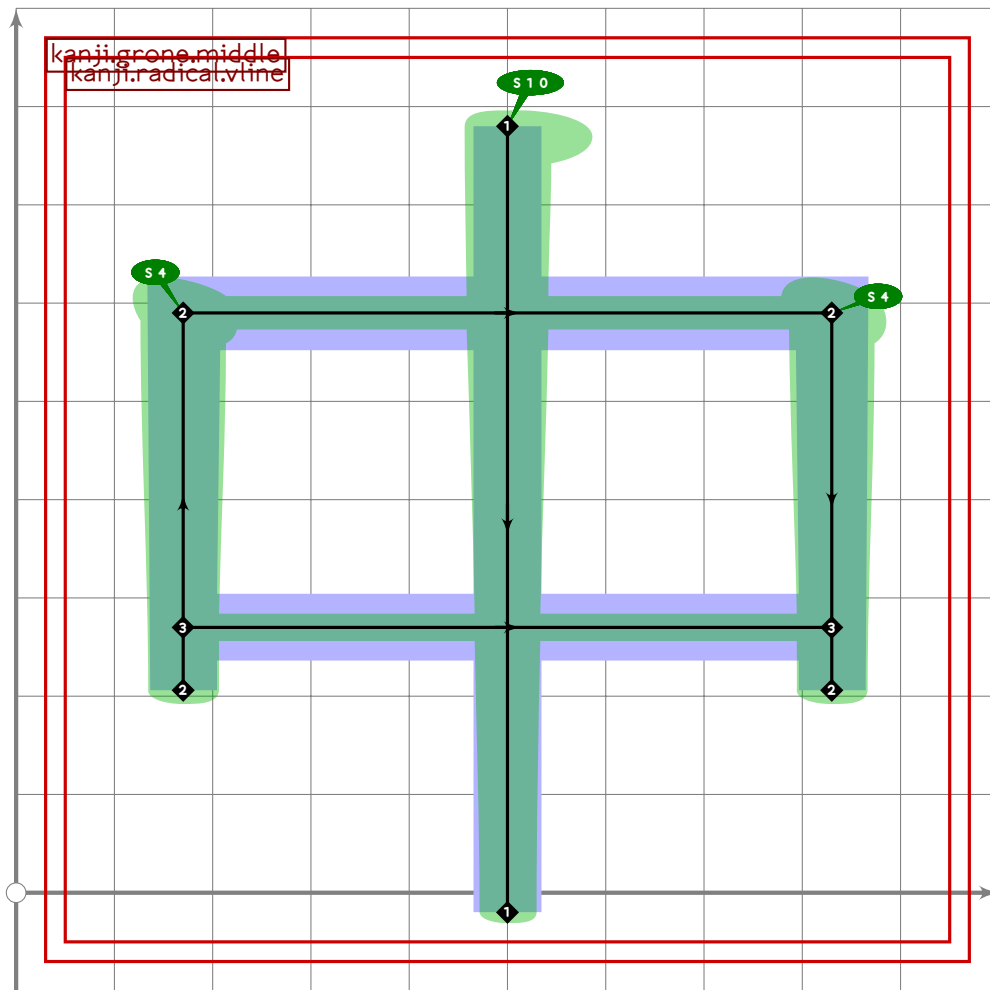
```


347 enddef;



348

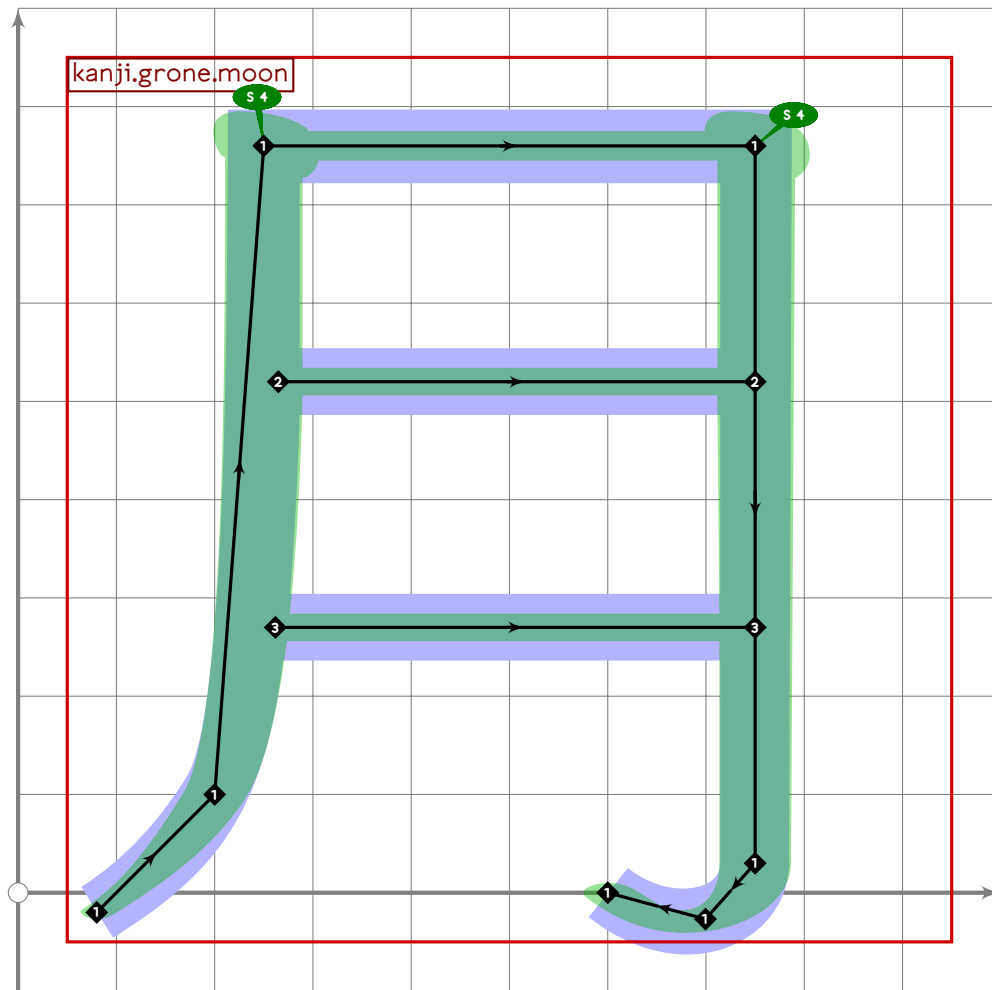
```
349 vardef tsu_curve.kanji.grone.man =  
350   push_pbox_toexpand("kanji.grone.man");  
351   build_kanji.level(build_kanji.tb(430,75)  
352     (tsu_curve.kanji.grone.paddy)  
353     (build_kanji.sscale(xyscaled (0.9,1.15) slanted 0.05 shifted (40,0))  
354       (tsu_curve.kanji.grone.power)));  
355   replace_strokep(0)(oldp shifted (0,-30));  
356   expand_pbox;  
357 enddef;
```



```

358
359 vardef tsu_curve.kanji.grone.middle =
360   push_pbox_toexpand("kanji.grone.middle");
361   tsu_curve.kanji.radical.vline;
362   build_kanji.box((170,590),(830,270));
363   expand_pbox;
364 enddef;

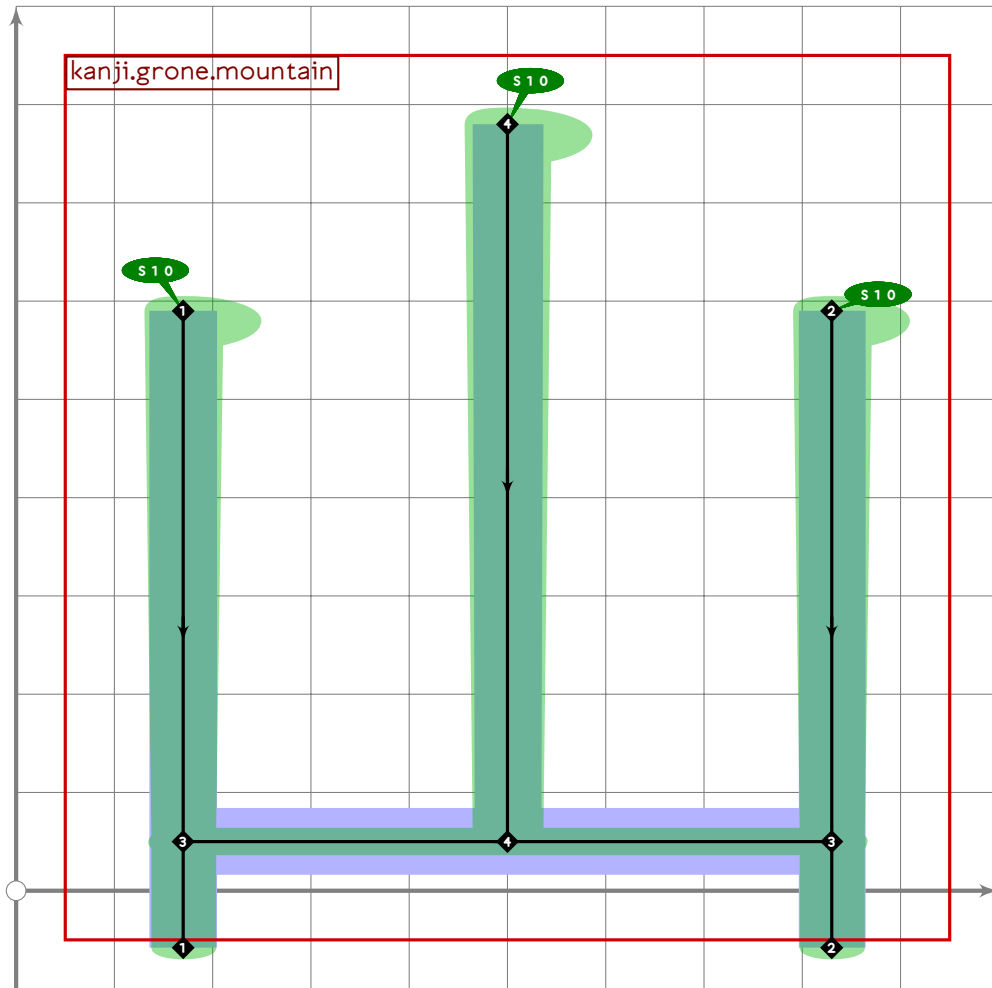
```



```

365
366 vardef tsu_curve.kanji.grone.moon =
367   push_pbox_toexpand("kanji.grone.moon");
368   push_stroke((80,-20)..(200,100)..{up}(250,760)-(750,760),
369     (1,1)-(1.4,1.4)-(1.6,1.6)-(1.6,1.6));
370   build_kanji.add_jtail(0);
371   set_botip(0,2,1);
372   set_botip(0,3,1);
373   set_boserif(0,2,4);
374   set_boserif(0,3,4);
375   push_stroke(
376     (get_strokep(0) intersectionpoint ((0,520)-(1000,520)))-(750,520),
377     (1.5,1.5)-(1.5,1.5));
378   push_stroke(
379     (get_strokep(-1) intersectionpoint ((0,270)-(1000,270)))-(750,270),
380     (1.5,1.5)-(1.5,1.5));
381   expand_pbox;
382 enddef;

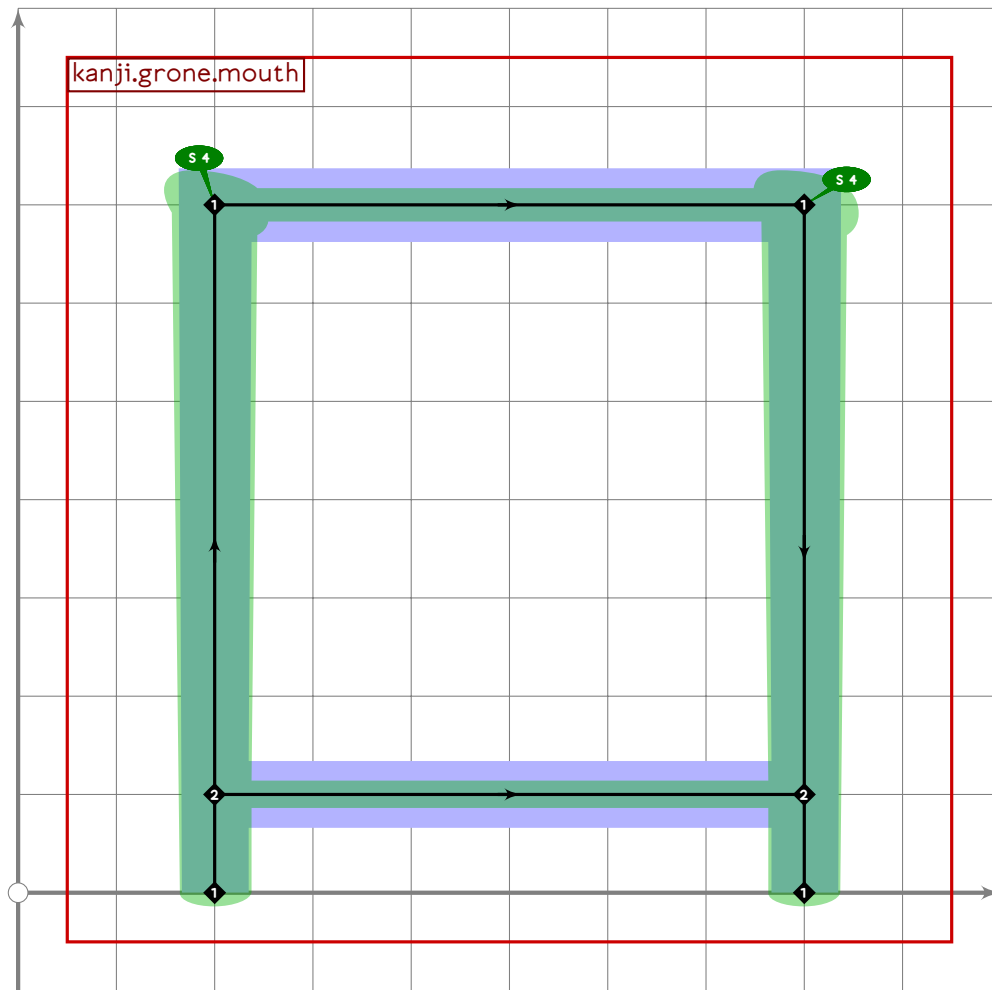
```



```

383
384 vardef tsu_curve.kanji.grone.mountain =
385   push_pbox_toexpand("kanji.grone.mountain");
386   build_kanji.cup((170,590),(830,50));
387   push_stroke((500,780)-(500,50),
388     (1.7,1.7)-(1.5,1.5));
389   set_boserif(0,0,10);
390   expand_pbox;
391 enddef;

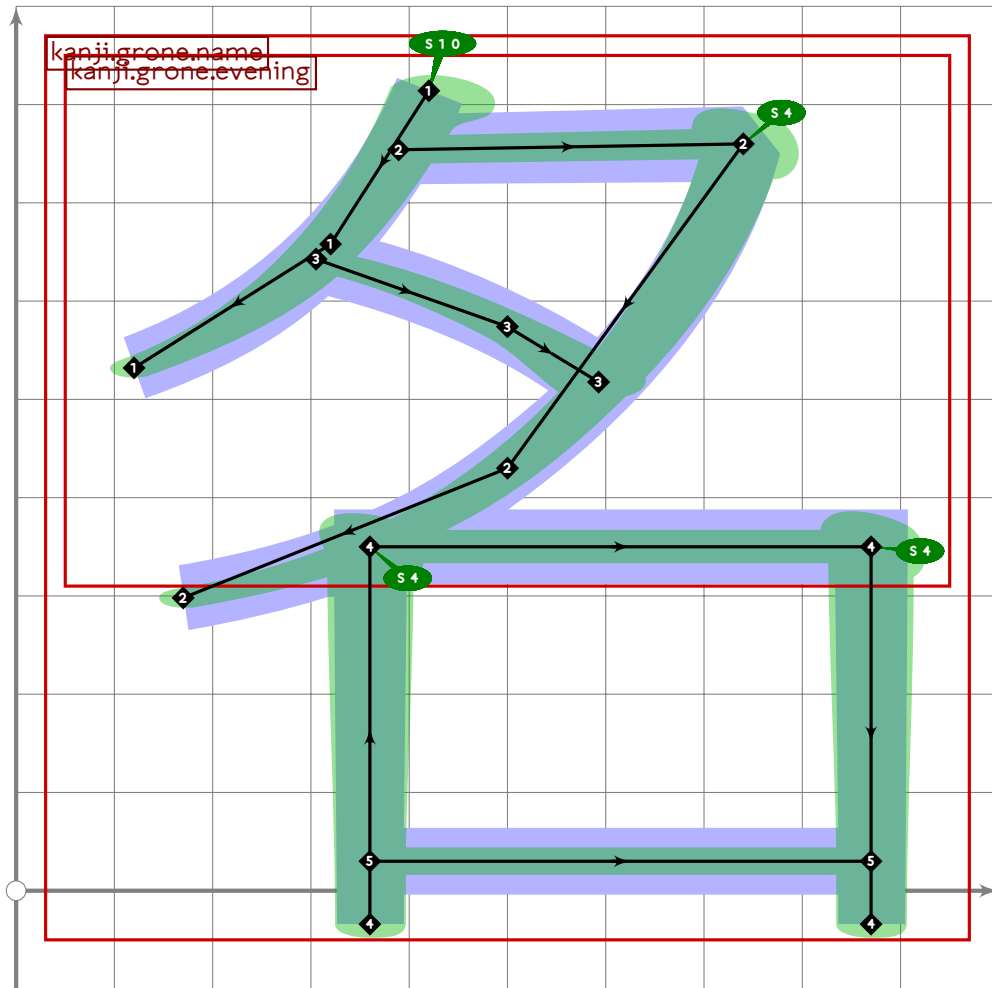
```



```

392
393 vardef tsu_curve.kanji.grone.mouth =
394   push_pbox_toexpand("kanji.grone.mouth");
395   build_kanji.box((200,700),(800,100));
396   expand_pbox;
397 enddef;

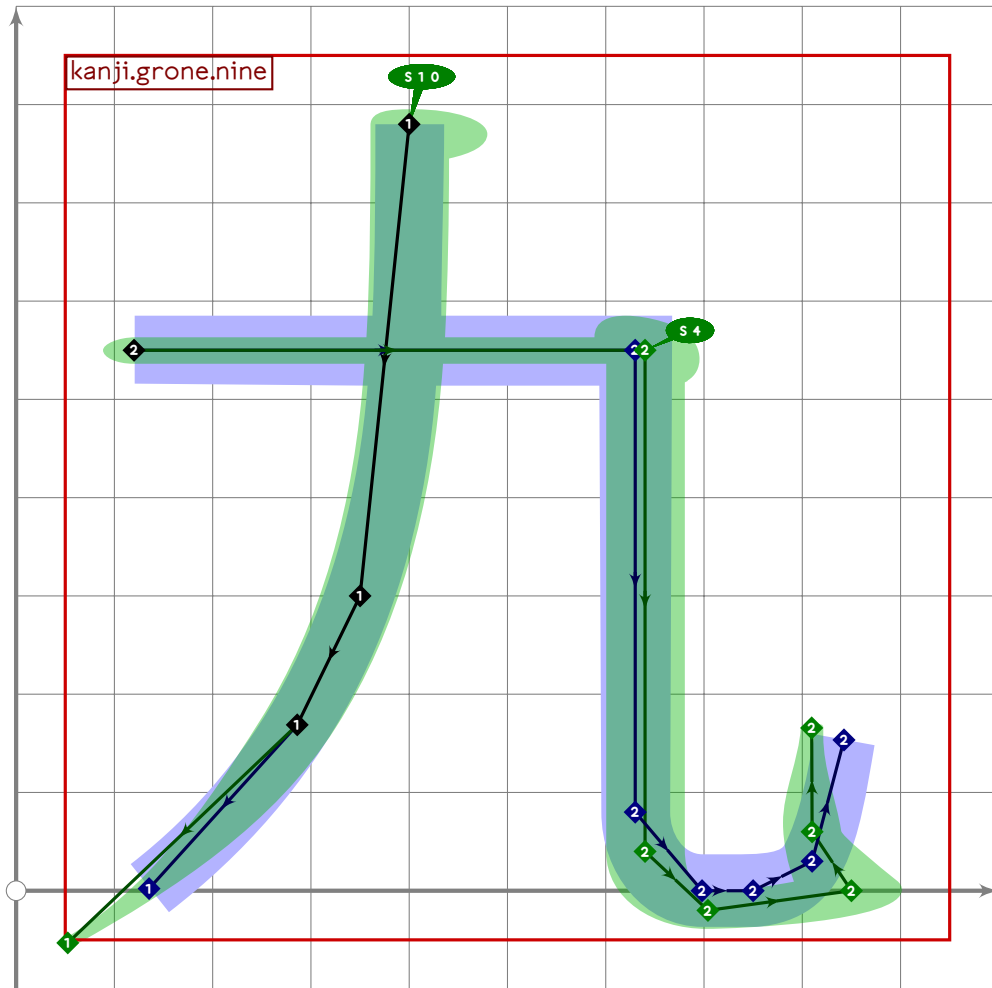
```



```

398
399 vardef tsu_curve.kanji.grone.name =
400   push_pbox_toexpand("kanji.grone.name");
401   tsu_xform(identity shifted (-50;850) yscaled 0.6 shifted (50,850))
402     (tsu_curve.kanji.grone.evening);
403   set_bosize(-2,102);
404   set_bosize(-1,102);
405   set_bosize(0,102);
406   build_kanji.box((360,350),(870,30));
407   expand_pbox;
408 enddef;

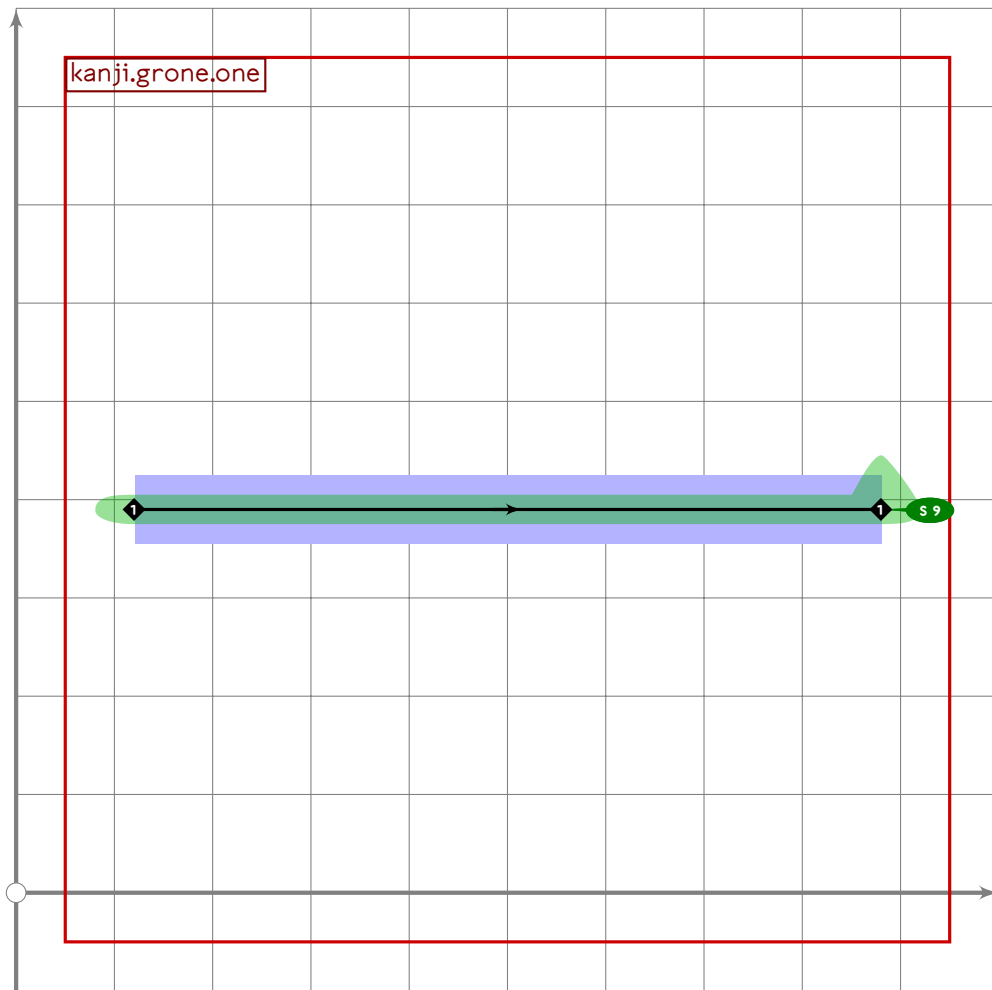
```



```

409
410 vardef tsu_curve.kanji.grone.nine =
411   push_pbox_toexpand("kanji.grone.nine");
412   push_stroke((400,780){down}..(350,300)..(40,-60),
413     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(0.8,0.7));
414   replace_stroke(0)(insert_nodes(oldp)(1.3));
415   set_boserif(0,0,10);
416   push_stroke((120,550)-(630*10*mincho,550),
417     (1.4,1.4)-(1.6,1.6));
418   build_kanji.add_tail(0);
419   set_botip(0,1,1);
420   set_boserif(0,1,4);
421   expand_pbox;
422 enddef;

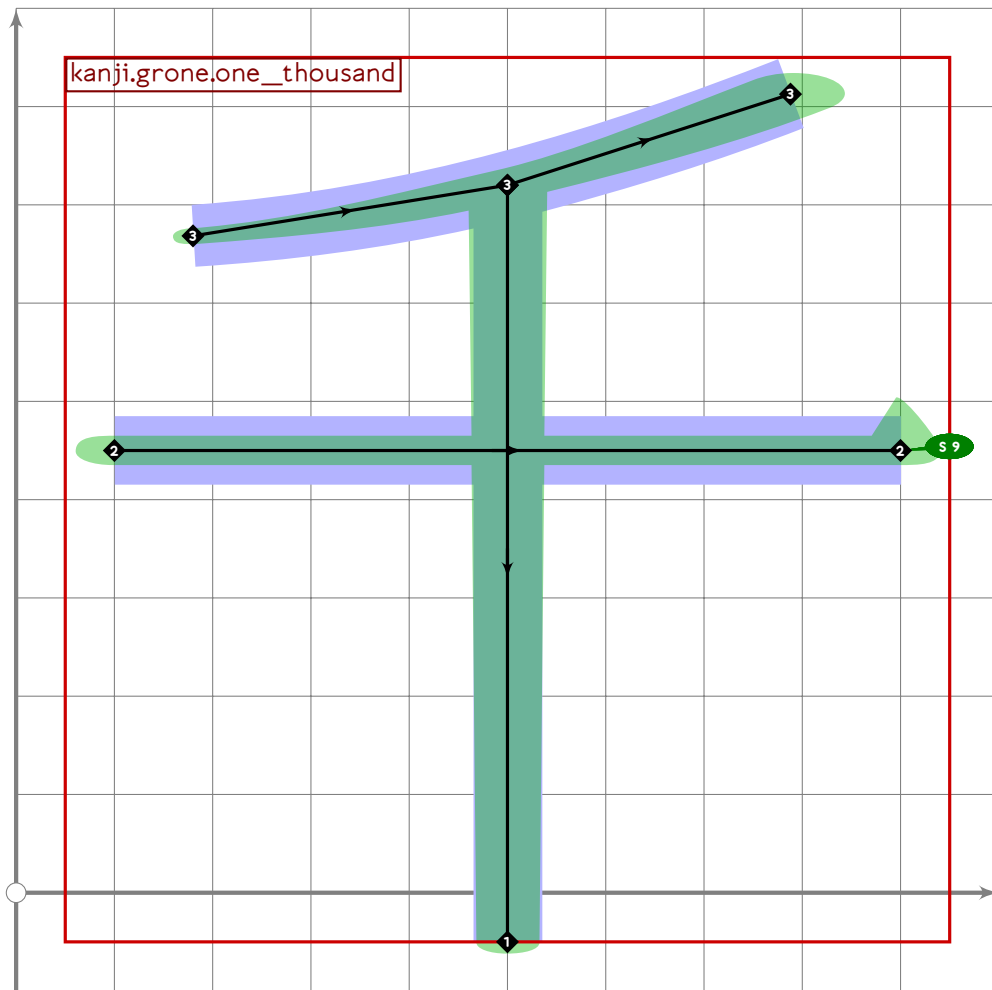
```



```

423
424 vardef tsu_curve.kanji.grone.one =
425   push_pbox_toexpand("kanji.grone.one");
426   push_stroke((120,390)-(880,390),
427     (1.6,1.6)-(1.6,1.6));
428   set_boserif(0,1,9);
429   expand_pbox;
430 enddef;

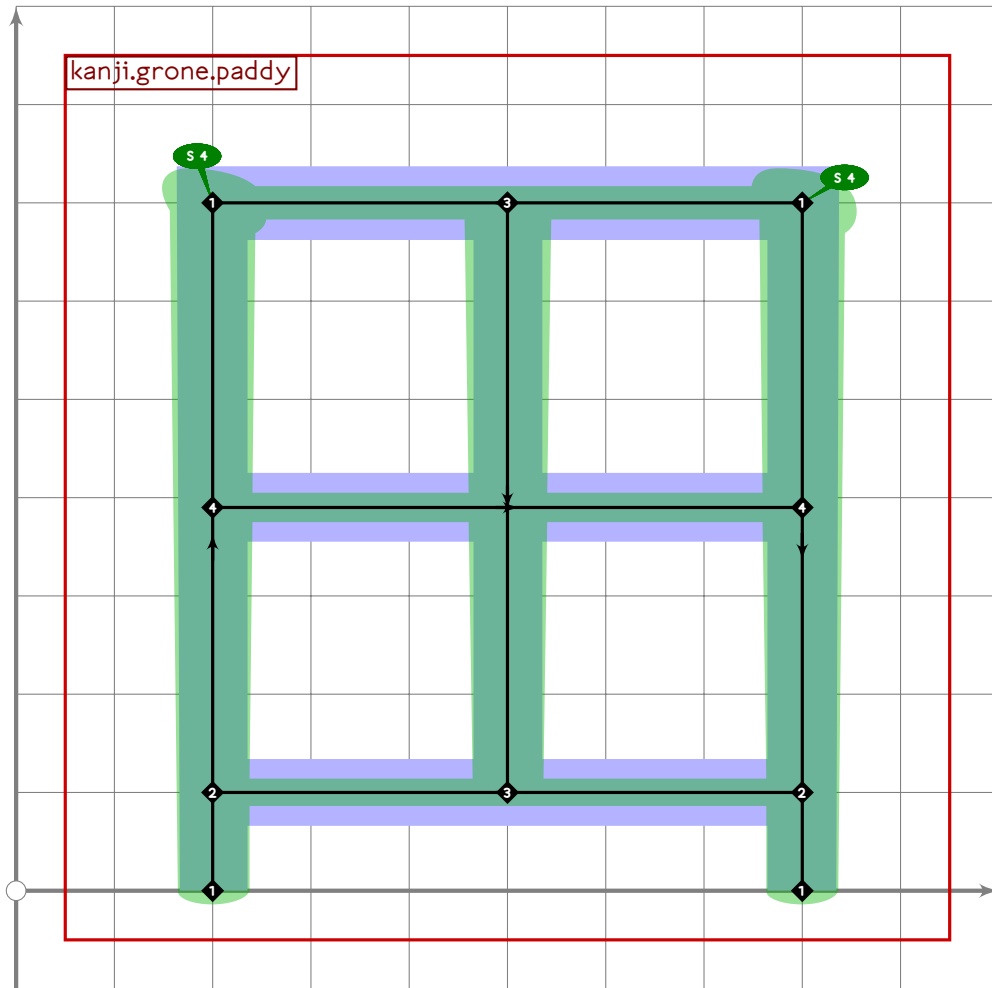
```

```

431
432 vardef tsu_curve.kanji.grone.one_thousand =
433   push_pbox_toexpand("kanji.grone.one_thousand");
434   build_kanji.add_beret(
435     push_stroke((500,720)-(500,-50),(1.6,1.6)-(1.4,1.4));
436     push_stroke((100,450)-(900,450),(1.6,1.6)-(1.6,1.6));
437     set_boserif(0,1,9);
438   );
439   expand_pbox;
440 enddef;

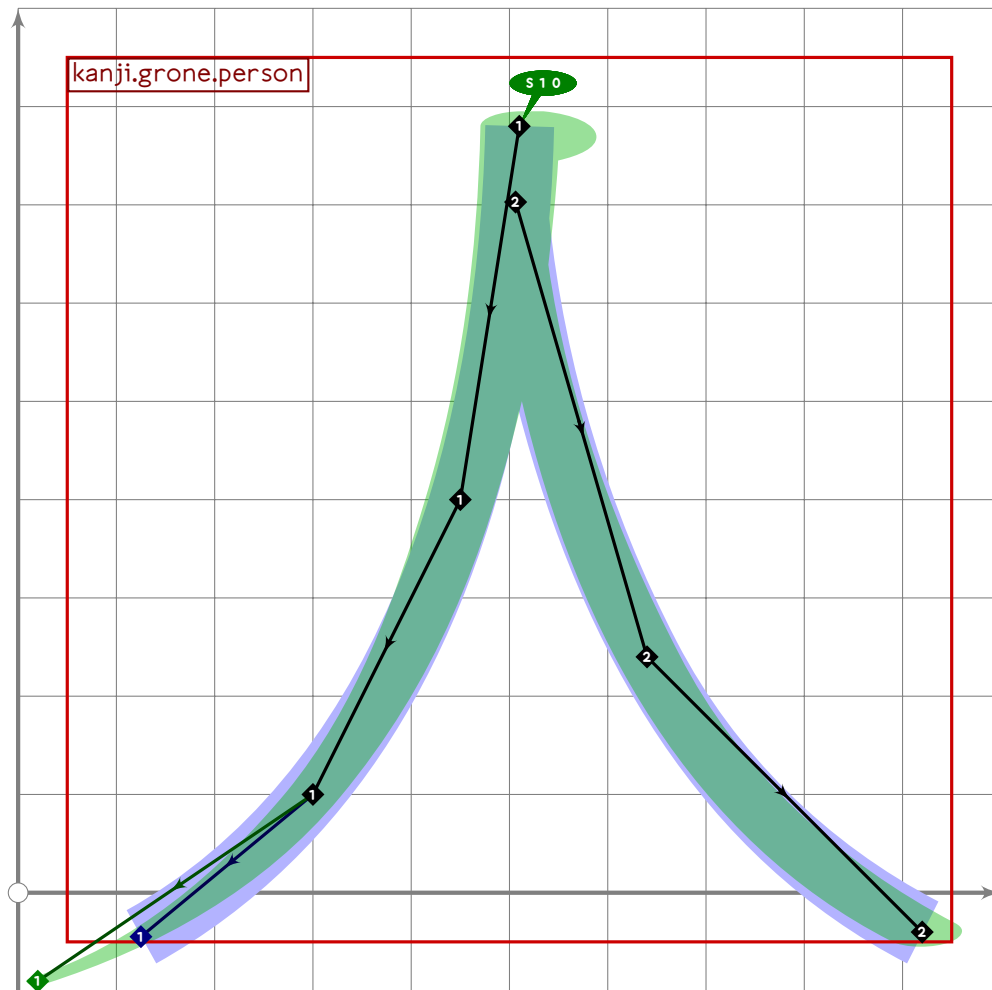
```



```

441
442 vardef tsu_curve.kanji.grone.paddy =
443   push_pbox_toexpand("kanji.grone.paddy");
444   build_kanji.box((200,700),(800,100));
445   push_stroke((500,700)-(500,100),
446     (1.7,1.7)-(1.5,1.5));
447   push_stroke((200,390)-(800,390),
448     (1.6,1.6)-(1.6,1.6));
449   expand_pbox;
450 enddef;

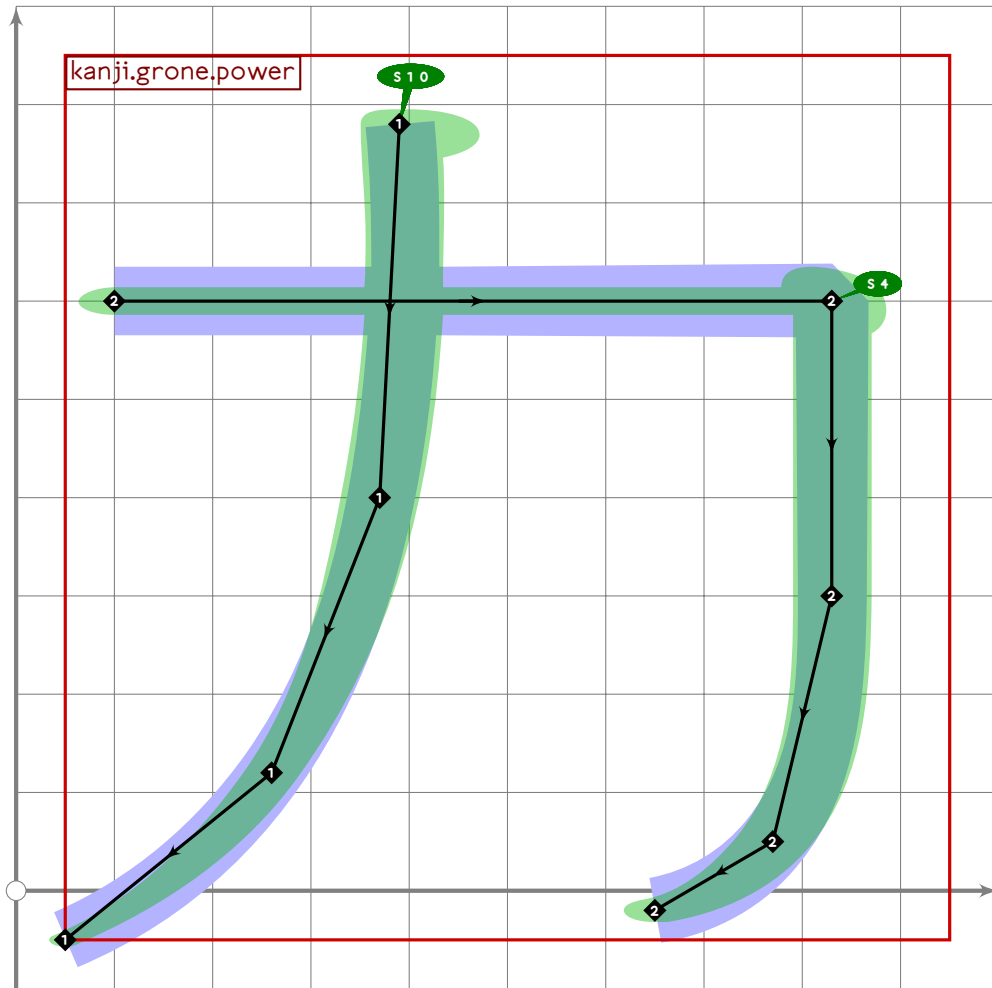
```



```

451
452 vardef tsu_curve.kanji.grone.person =
453   push_pbox_toexpand("kanji.grone.person");
454   push_stroke((510,780)..(450,400)..(300,100)..(20,-90),
455     (1.6,1.6)-(1.5,1.5)-(1.3,1.3)-(0.85,0.85));
456   set_boserif(0,0,10);
457   push_stroke(
458     (point 0.2 of get_stroke(0))..tension 1.2..(640,240)..(920,40),
459     (1.2,1.2)-(1.4,1.4)-(1.6,1.6));
460   expand_pbox;
461 enddef;

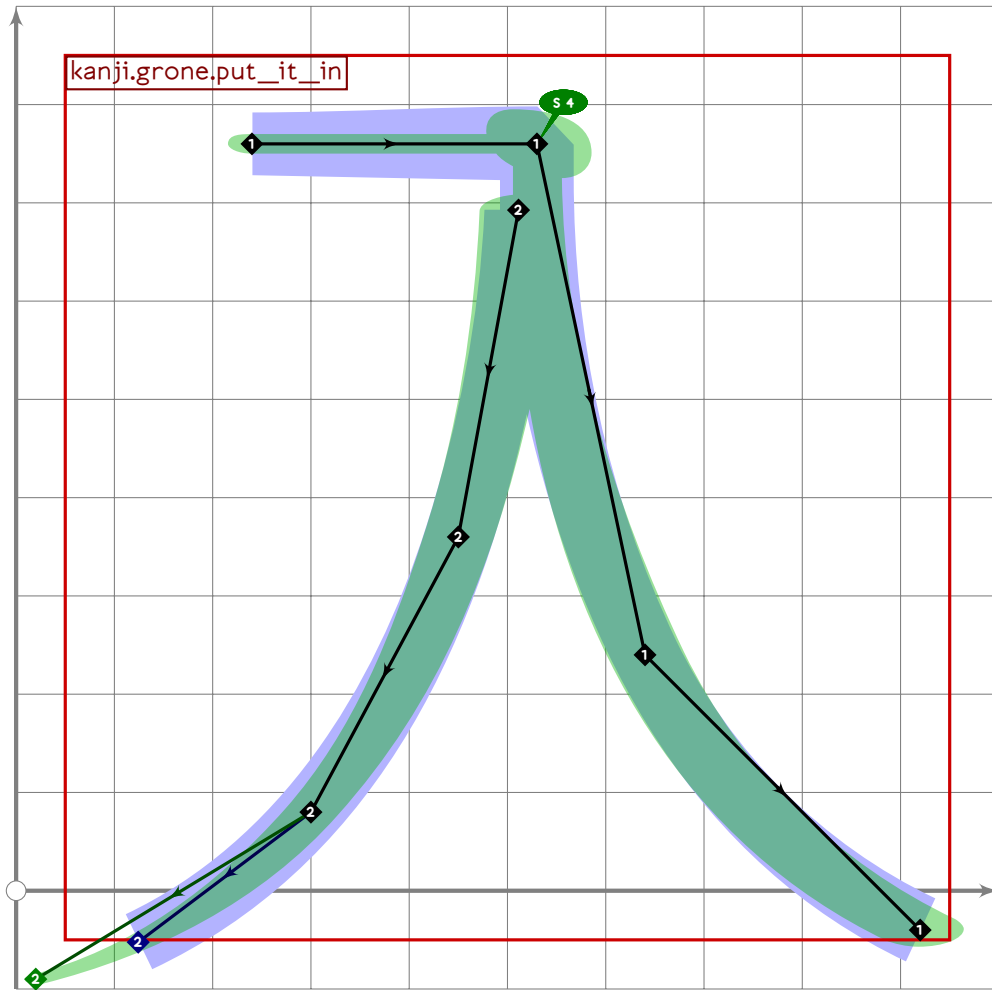
```



```

462
463 vardef tsu_curve.kanji.grone.power =
464   push_pbox_toexpand("kanji.grone.power");
465   push_stroke((390,780)..(370,400)..(260,120)..(50,50),
466     (1.6,1.6)-(1.6,1.6)-(1.3,1.3)-(1,1));
467   set_boserif(0,0,10);
468   push_stroke(
469     (100,600)-(830,600)..tension 11..(830,300)..(770,50)..(650,-20),
470     (1.5,1.5)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.4,1.4));
471   set_botip(0,1,0);
472   set_boserif(0,1,4);
473   expand_pbox;
474 enddef;

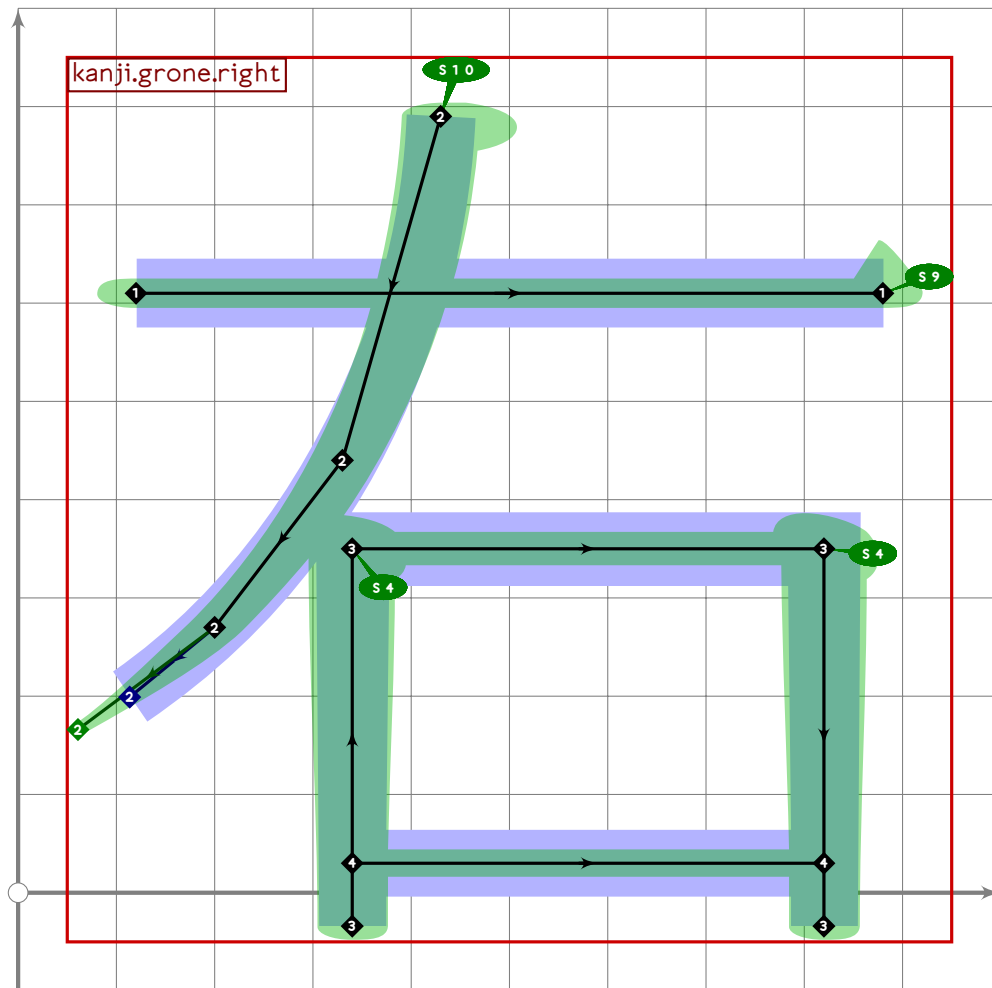
```



```

475
476 vardef tsu_curve.kanji.grone.put_it_in =
477   push_pbox_toexpand("kanji.grone.put_it_in");
478   push_stroke((240,760)-(530,760)..tension 1.2..(640,240)..(920,-40),
479     (1.2,1.2)-(1.2,1.2)-(1.6,1.6)-(1.7,1.7));
480   set_botip(0,1,0);
481   set_boserif(0,1,4);
482   push_stroke(
483     ((-20,0)*point 1.14 of get_stroke(0)..(450,360)..(300,80)..(20,-90),
484     (1.6,1.6)-(1.5,1.5)-(1.3,1.3)-(0.85,0.85));
485   expand_pbox;
486 enddef;

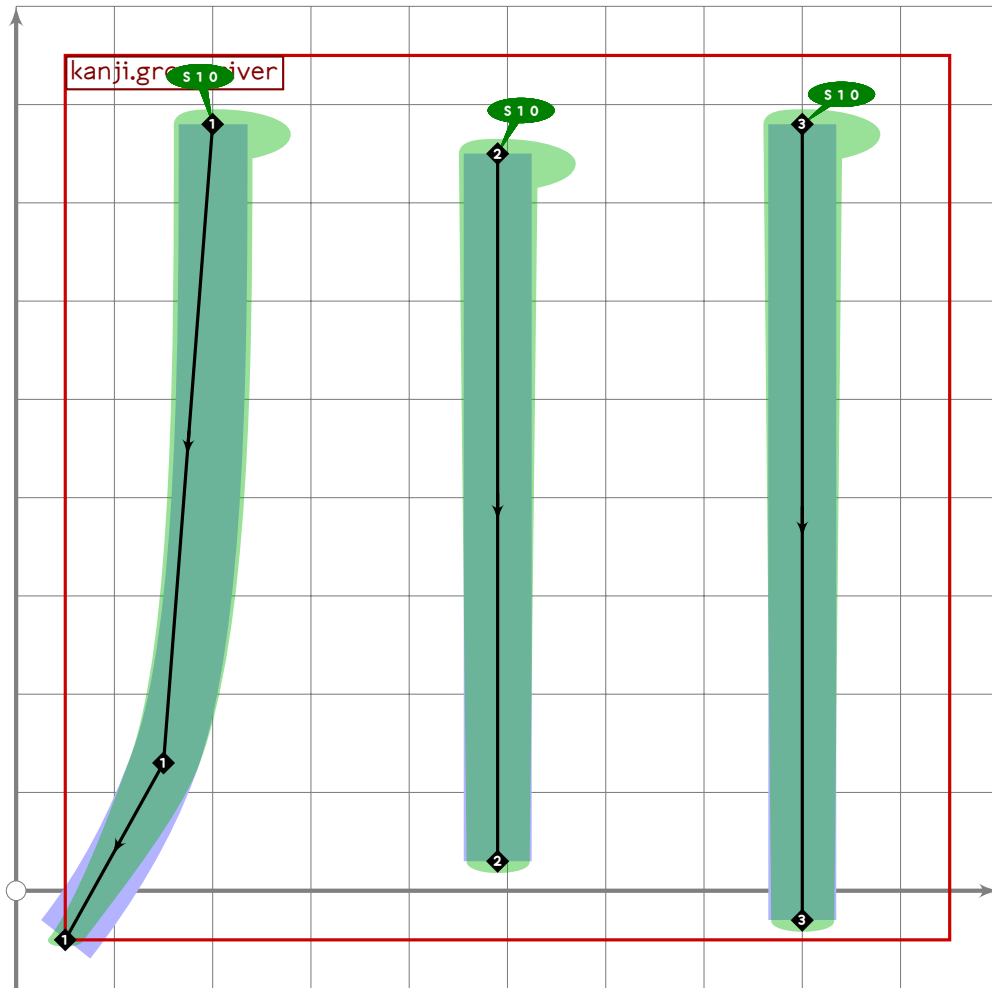
```



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487
488 vardef tsu_curve.kanji.grone.right =
489   push_pbox_toexpand("kanji.grone.right");
490   push_stroke((120,610)..(880,610),
491     (1.6,1.6)-(1.6,1.6));
492   set_boserif(0,1,9);
493   push_stroke((430,790)..(330,440)..(200,270)..(50,160),
494     (1.6,1.6)-(1.5,1.5)-(1.3,1.3)-(0.8,0.8));
495   set_boserif(0,0,10);
496   build_kanji.box((340,350),(820,30));
497   expand_pbox;
498 enddef;

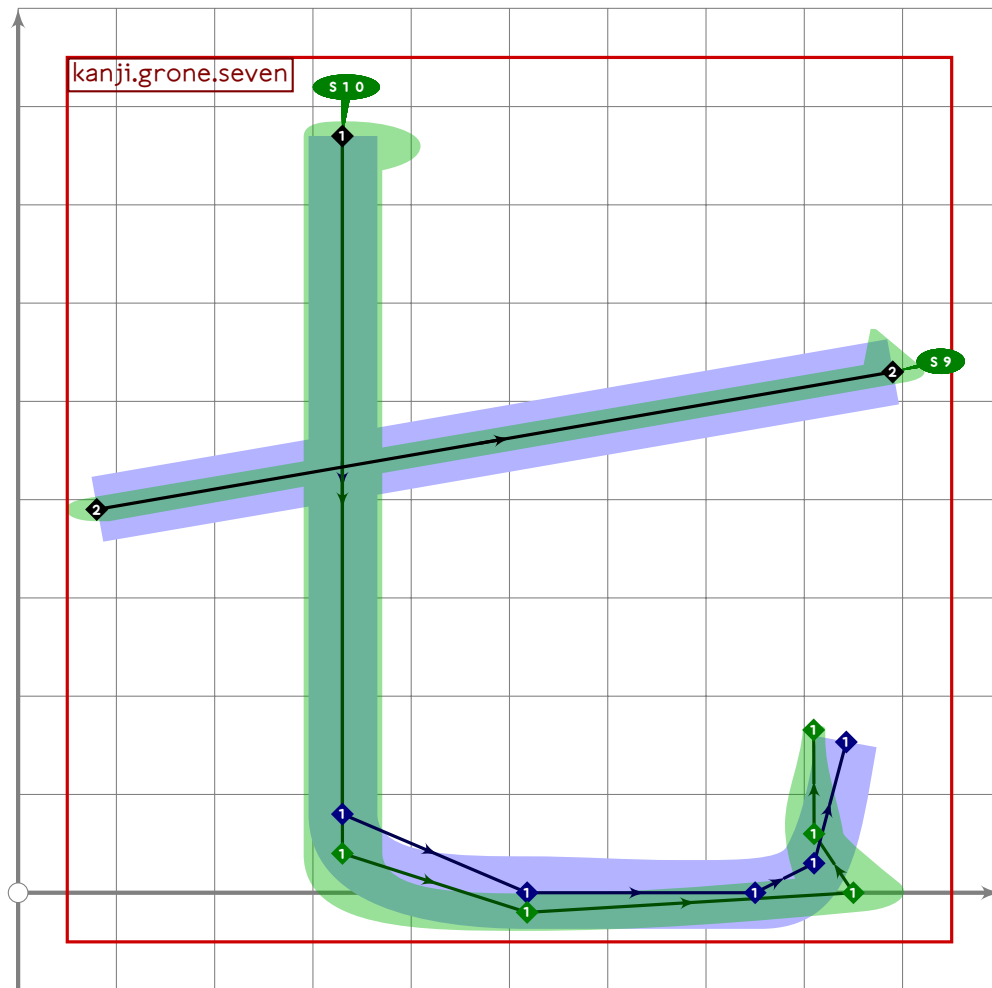
```



```

499
500 vardef tsu_curve.kanji.grone.river =
501   push_pbox_toexpand("kanji.grone.river");
502   push_stroke((200,780){down}..(150,130)..(50,50),
503     (1.6,1.6)-(1.5,1.5)-(1,1));
504   set_boserif(0,0,10);
505   push_stroke((490,750)-(490,30),
506     (1.6,1.6)-(1.4,1.4));
507   set_boserif(0,0,10);
508   push_stroke((800,780)-(800,30),
509     (1.6,1.6)-(1.4,1.4));
510   set_boserif(0,0,10);
511   expand_pbox;
512 enddef;

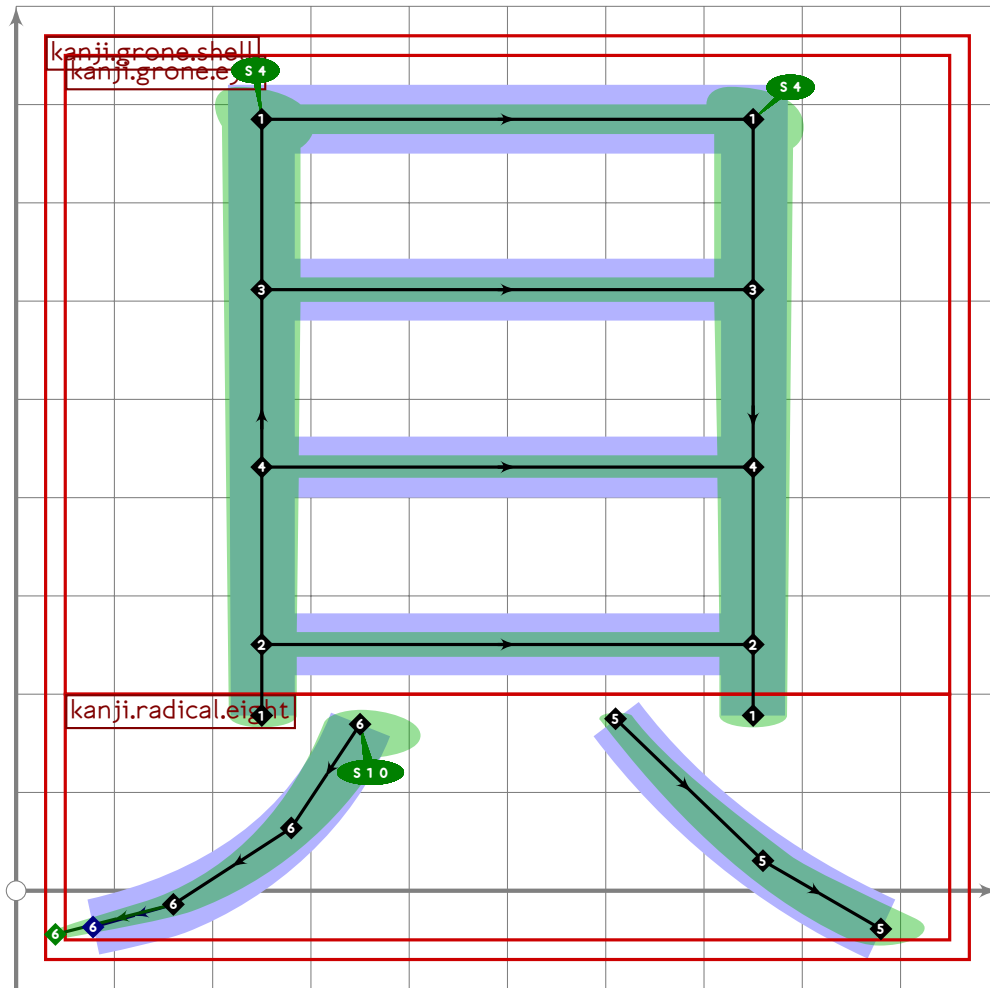
```



```

513
514 vardef tsu_curve.kanji.grone.seven =
515   push_pbox_toexpand("kanji.grone.seven");
516   push_stroke((330,770),
517     (1.6,1.6));
518   build_kanji.add_ltail(0);
519   set_boserif(0,0,10);
520   push_stroke((80,390)-(890,530),
521     (1.4,1.4)-(1.4,1.4));
522   set_boserif(0,1,9);
523   expand_pbox;
524 enddef;

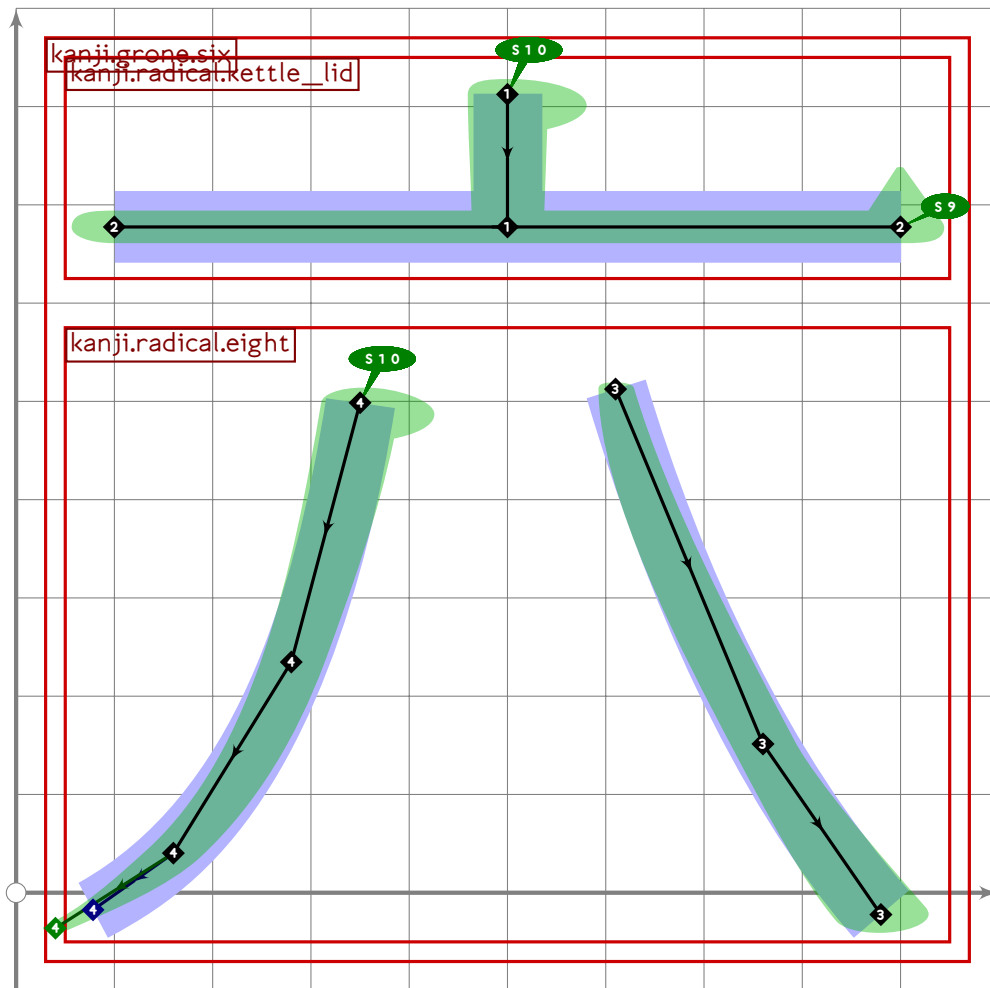
```

```

525
526 vardef tsu_curve.kanji.grone.shell =
527   push_pbox_toexpand("kanji.grone.shell");
528   build_kanji.level(build_kanji.tb(200,0)
529     (tsu_curve.kanji.grone.eye)
530     (tsu_curve.kanji.radical.eight));
531   expand_pbox;
532 enddef;

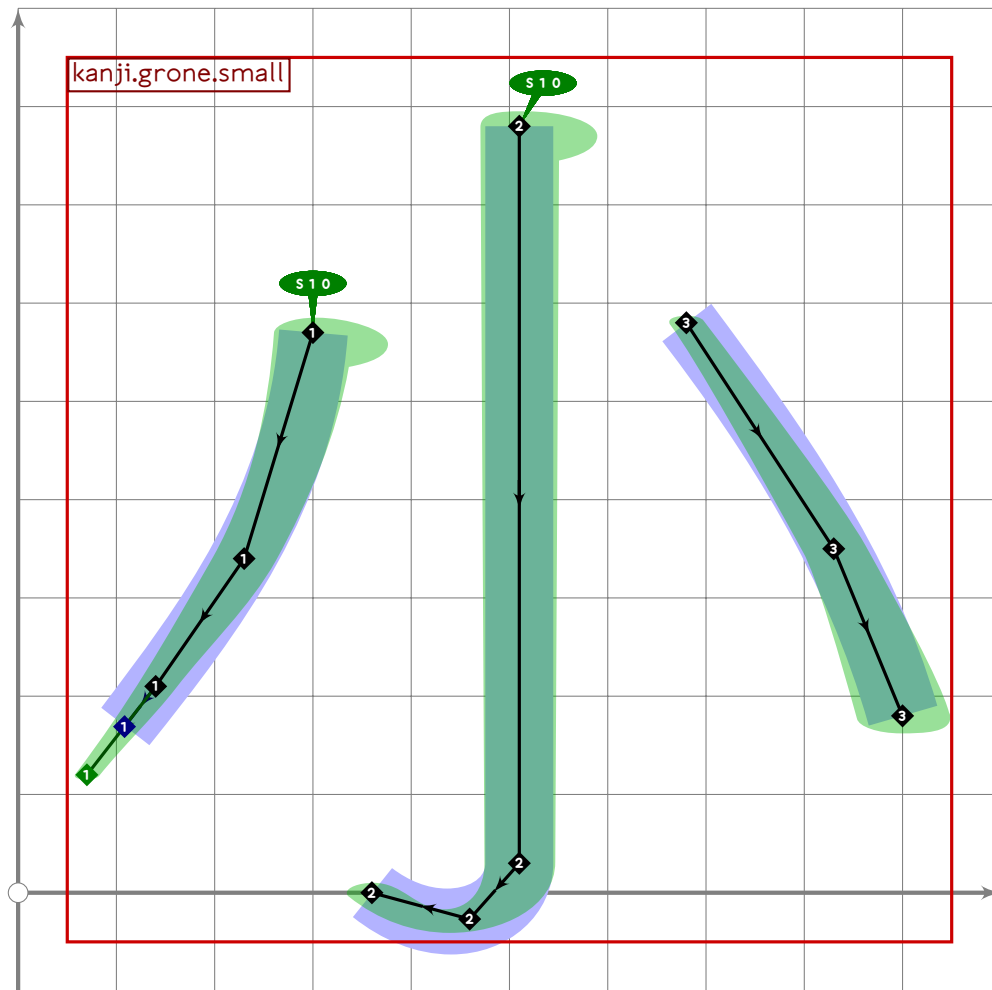
```



```

533
534 vardef tsu_curve.kanji.grone.six =
535   push_pbox_toexpand("kanji.grone.six");
536   build_kanji.level(build_kanji.tb(600;50)
537     (tsu_curve.kanji.radical.kettle_lid)
538     (tsu_curve.kanji.radical.eight));
539   expand_pbox;
540 enddef;

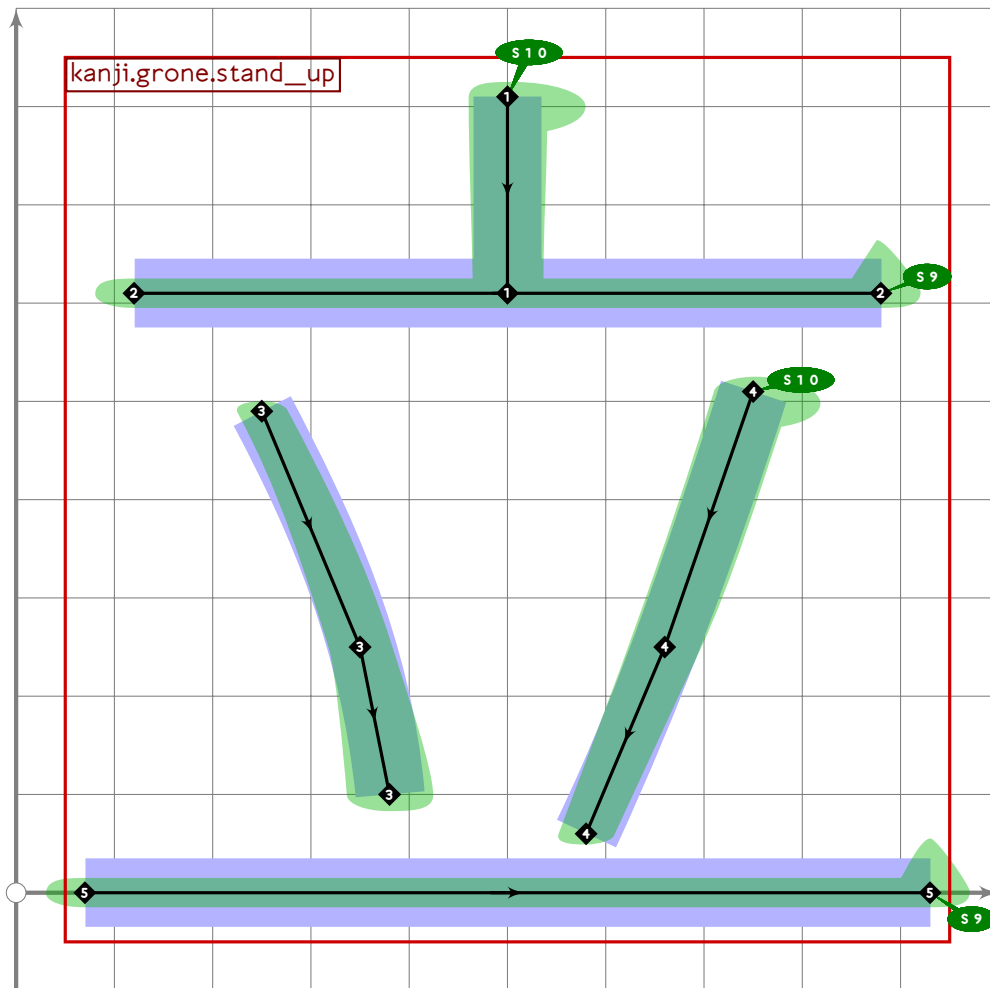
```



```

541
542 vardef tsu_curve.kanji.grone.small =
543   push_pbox_toexpand("kanji.grone.small");
544   push_stroke((300,570)..(230,340)..(140,210)..(70,120),
545     (1.6,1.6)-(1.4,1.4)-(1.1,1.1)-(0.88,0.88));
546   set_boserif(0,0,10);
547   push_stroke((510,780),
548     (1.6,1.6));
549   set_boserif(0,0,10);
550   build_kanji.add_jtail(0);
551   push_stroke((680,580)..tension 1.3..(830,350)..(900,180),
552     (1,1)-(1.4,1.4)-(1.8,1.8));
553   expand_pbox;
554 enddef;

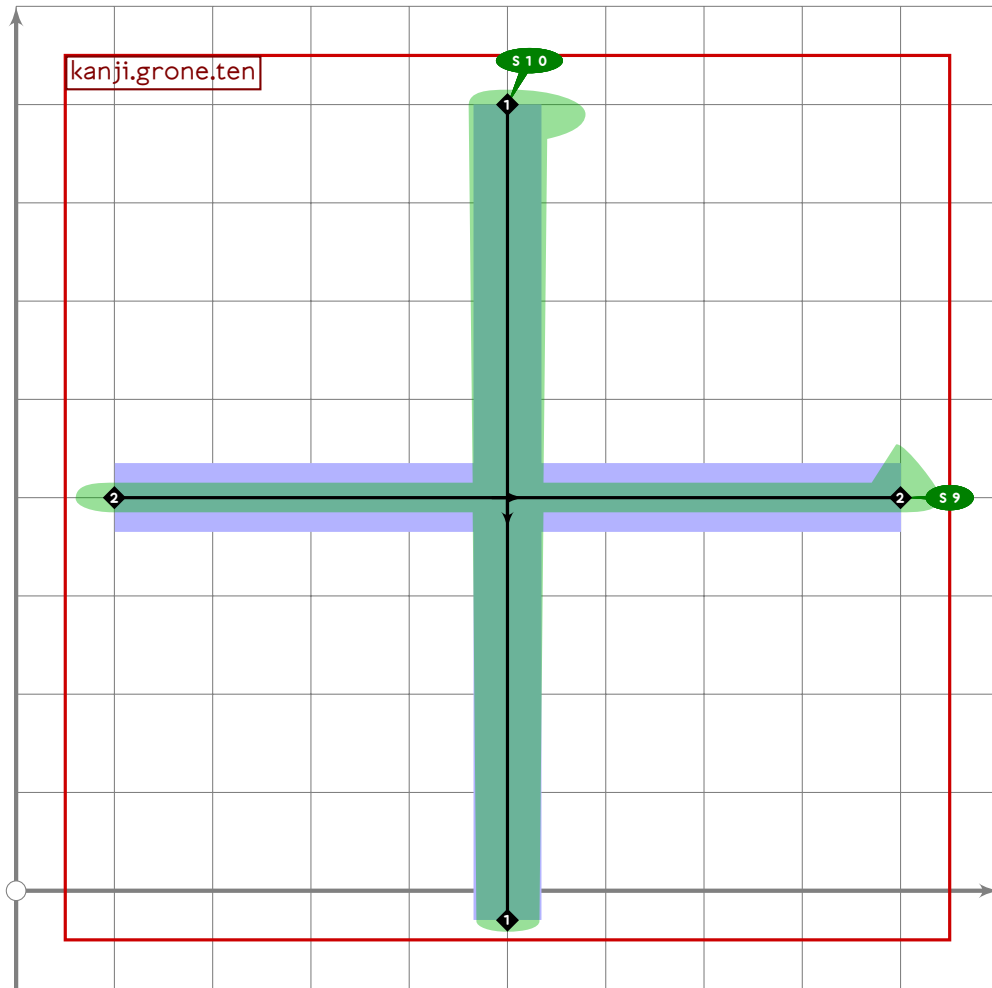
```



```

555
556 vardef tsu_curve.kanji.grone.stand_up =
557   push_pbox_toexpand("kanji.grone.stand_up");
558   push_stroke((500,810)-(500,610),
559     (1.6,1.6)-(1.5,1.5));
560   set_boserif(0,0,10);
561   push_stroke((120,610)-(880,610),
562     (1.6,1.6)-(1.6,1.6));
563   set_boserif(0,1,9);
564   push_stroke((250,490)..tension 1.2..(350,250)..(380,100),
565     (1.2,1.2)-(1.4,1.4)-(1.7,1.7));
566   push_stroke((750,510)..tension 1.2..(660,250)..(580,60),
567     (1.6,1.6)-(1.5,1.5)-(1.3,1.3));
568   set_boserif(0,0,10);
569   push_stroke((70,0)-(930,0),
570     (1.6,1.6)-(1.6,1.6));
571   set_boserif(0,1,9);
572   expand_pbox;
573 enddef;

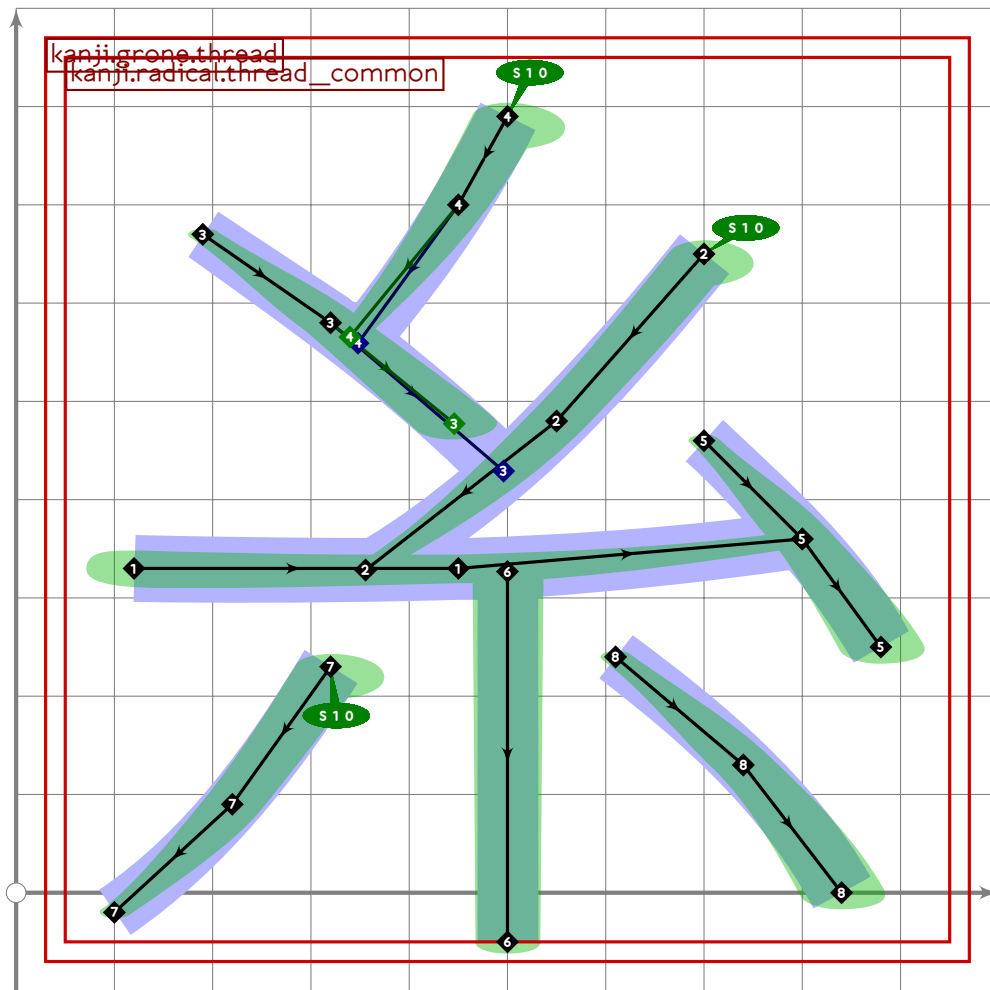
```



```

574
575 vardef tsu_curve.kanji.grone.ten =
576   push_pbox_toexpand("kanji.grone.ten");
577   push_stroke((500,800)-(500,-30),(1.6,1.6)-(1.4,1.4));
578   set_boserif(0,0,10);
579   push_stroke((100,400)-(900,400),(1.6,1.6)-(1.6,1.6));
580   set_boserif(0,1,9);
581   expand_pbox;
582 enddef;

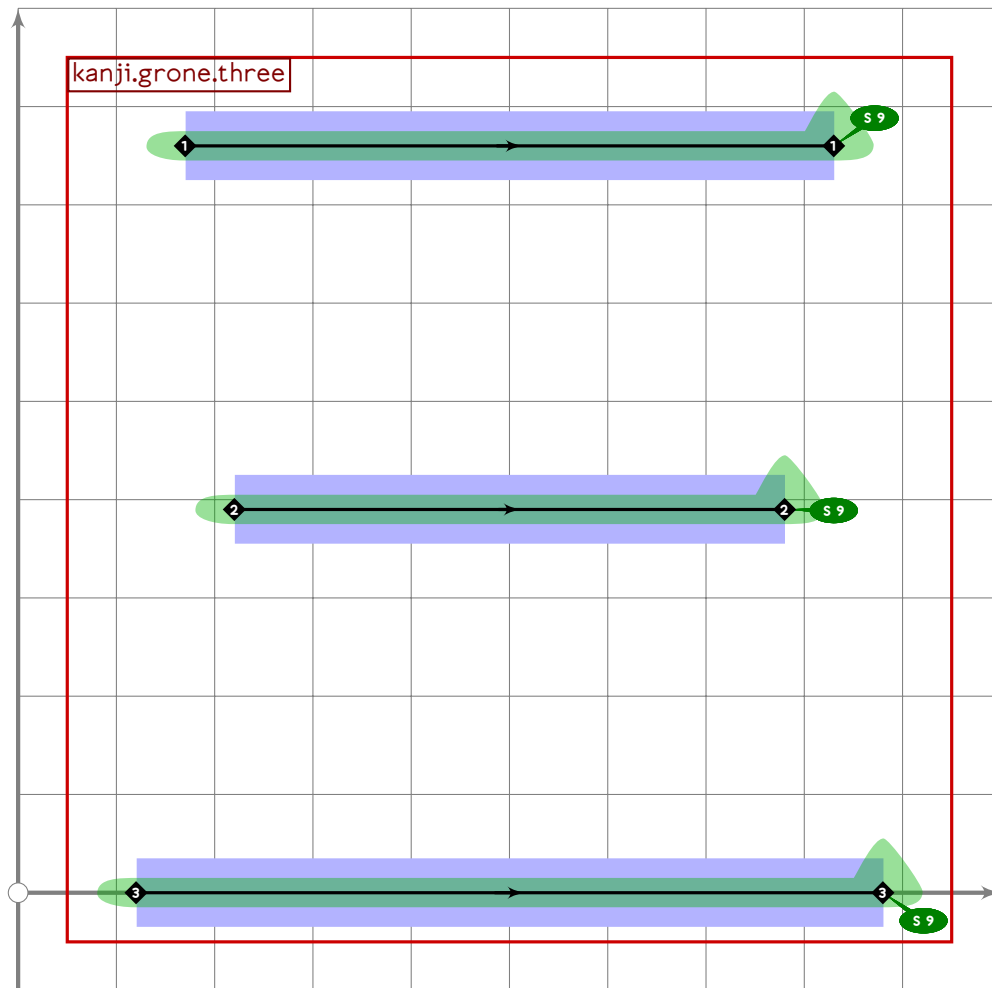
```



```

583
584 vardef tsu_curve.kanji.grone.thread =
585   push_pbox_toexpand("kanji.grone.thread");
586   tsu_curve.kanji.radical.thread_common;
587   push_stroke(
588     ((get_stroke(-4) intersectionpoint ((500,1000)-(500,0)))-(0,-5))
589     -(500,-50),
590     (1.6,1.6)-(1.5,1.5));
591   push_stroke((320,230)..tension 1.3..(220,90)..(100,-20),
592     (1.6,1.6)-(1.5,1.5)-(1,1));
593   set_bosserif(0,0,10);
594   push_stroke((610,240)..tension 1.3..(740,130)..(840,0),
595     (1,1)-(1.5,1.5)-(1.8,1.8));
596   for i=-7 upto 0: set_bosize(i,90); endfor;
597   expand_pbox;
598 enddef;

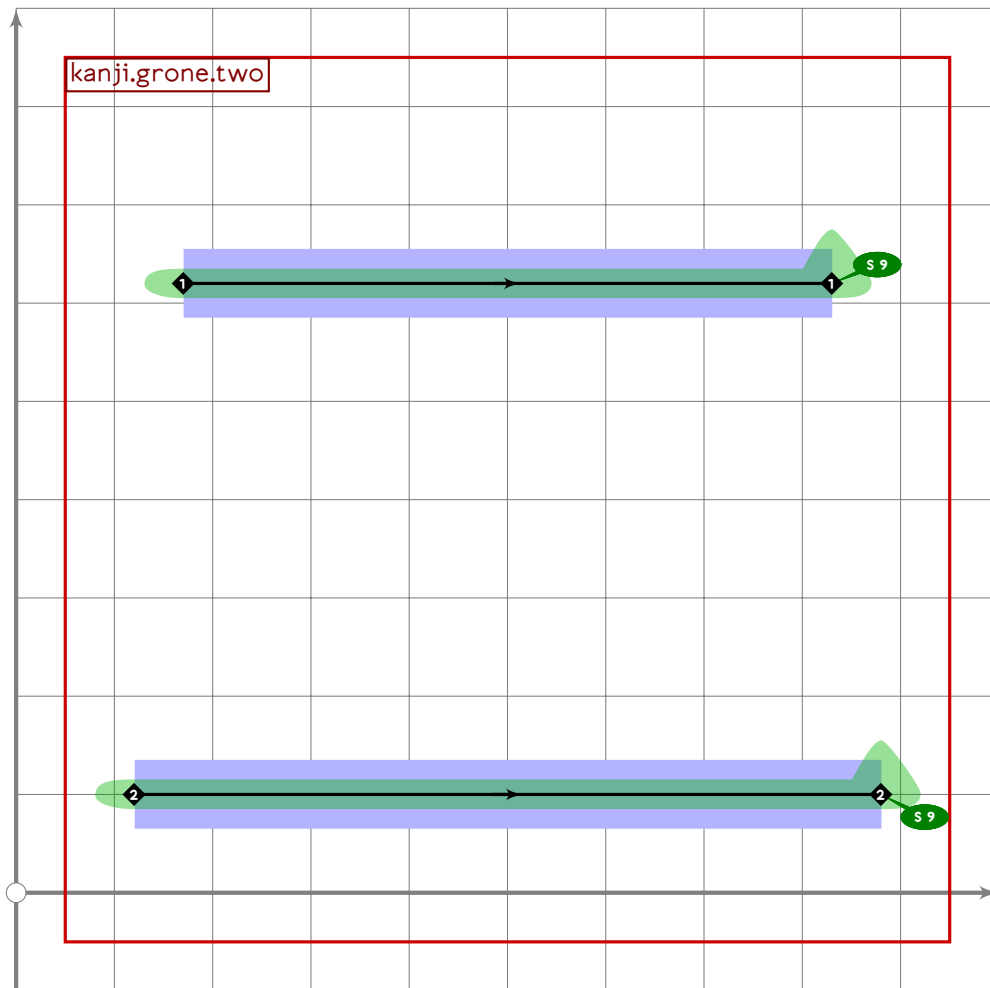
```



```

599
600 vardef tsu_curve.kanji.grone.three =
601   push_pbox_toexpand("kanji.grone.three");
602   push_stroke((170,760)-(830,760),
603     (1.6,1.6)-(1.6,1.6));
604   set_boserif(0,1,9);
605   push_stroke((220,390)-(780,390),
606     (1.6,1.6)-(1.6,1.6));
607   set_boserif(0,1,9);
608   push_stroke((120,0)-(880,0),
609     (1.6,1.6)-(1.6,1.6));
610   set_boserif(0,1,9);
611   expand_pbox;
612 enddef;

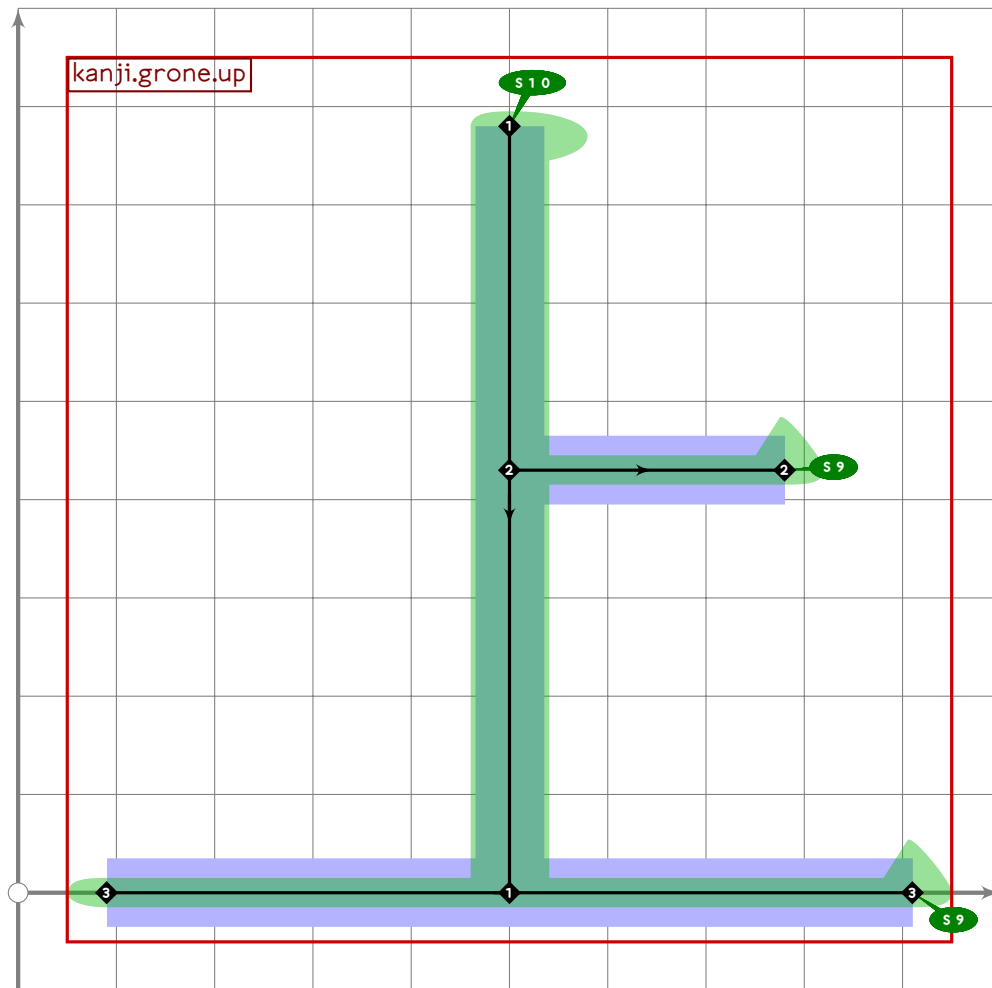
```



```

613
614 vardef tsu_curve.kanji.grone.two =
615   push_pbox_toexpand("kanji.grone.two");
616   push_stroke((170,620)-(830,620),(1.6,1.6)-(1.6,1.6));
617   set_boserif(0,1,9);
618   push_stroke((120,100)-(880,100),(1.6,1.6)-(1.6,1.6));
619   set_boserif(0,1,9);
620   expand_pbox;
621 enddef;

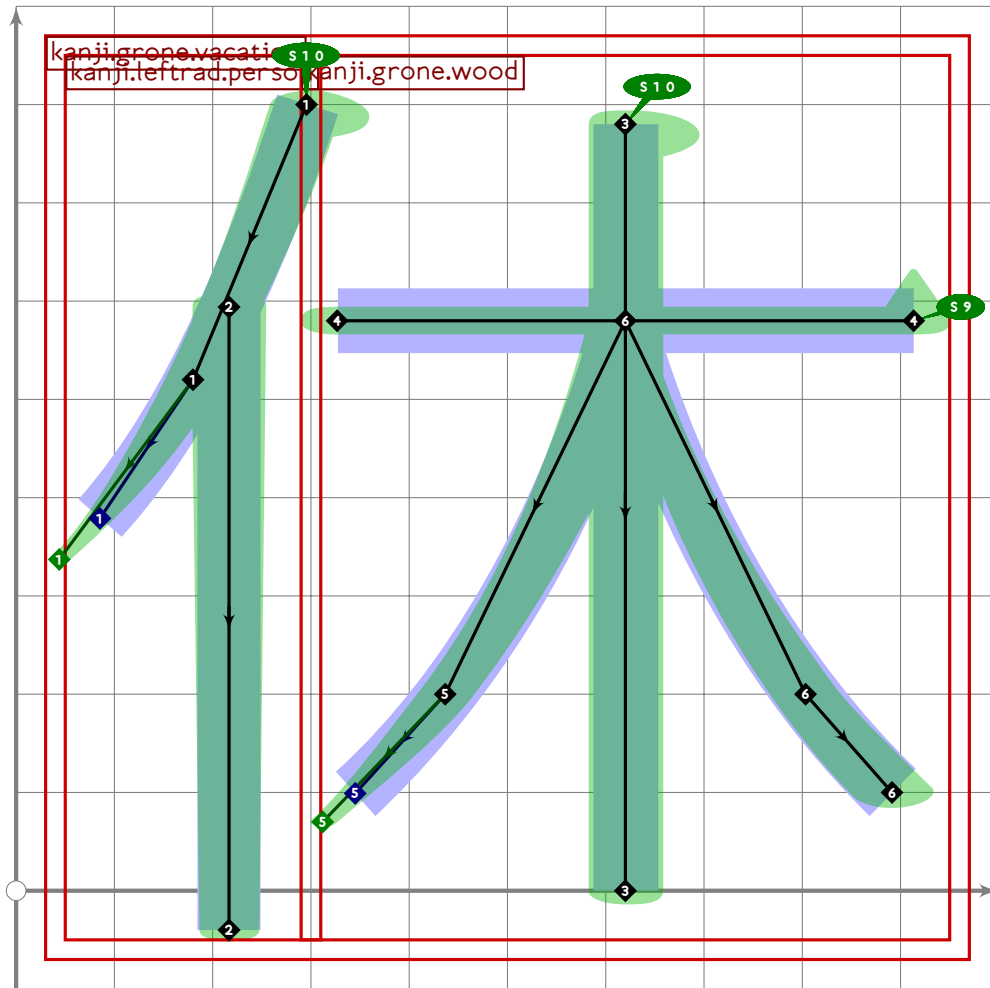
```

```

622
623 vardef tsu_curve.kanji.grone.up =
624   push_pbox_toexpand("kanji.grone.up");
625   push_stroke((500,780)-(500,0),
626     (1.6,1.6)-(1.6,1.6));
627   set_boserif(0,0,10);
628   push_stroke((500,430)-(780,430),
629     (1.6,1.6)-(1.6,1.6));
630   set_boserif(0,1,9);
631   push_stroke((90,0)-(910,0),
632     (1.6,1.6)-(1.6,1.6));
633   set_boserif(0,1,9);
634   expand_pbox;
635 enddef;

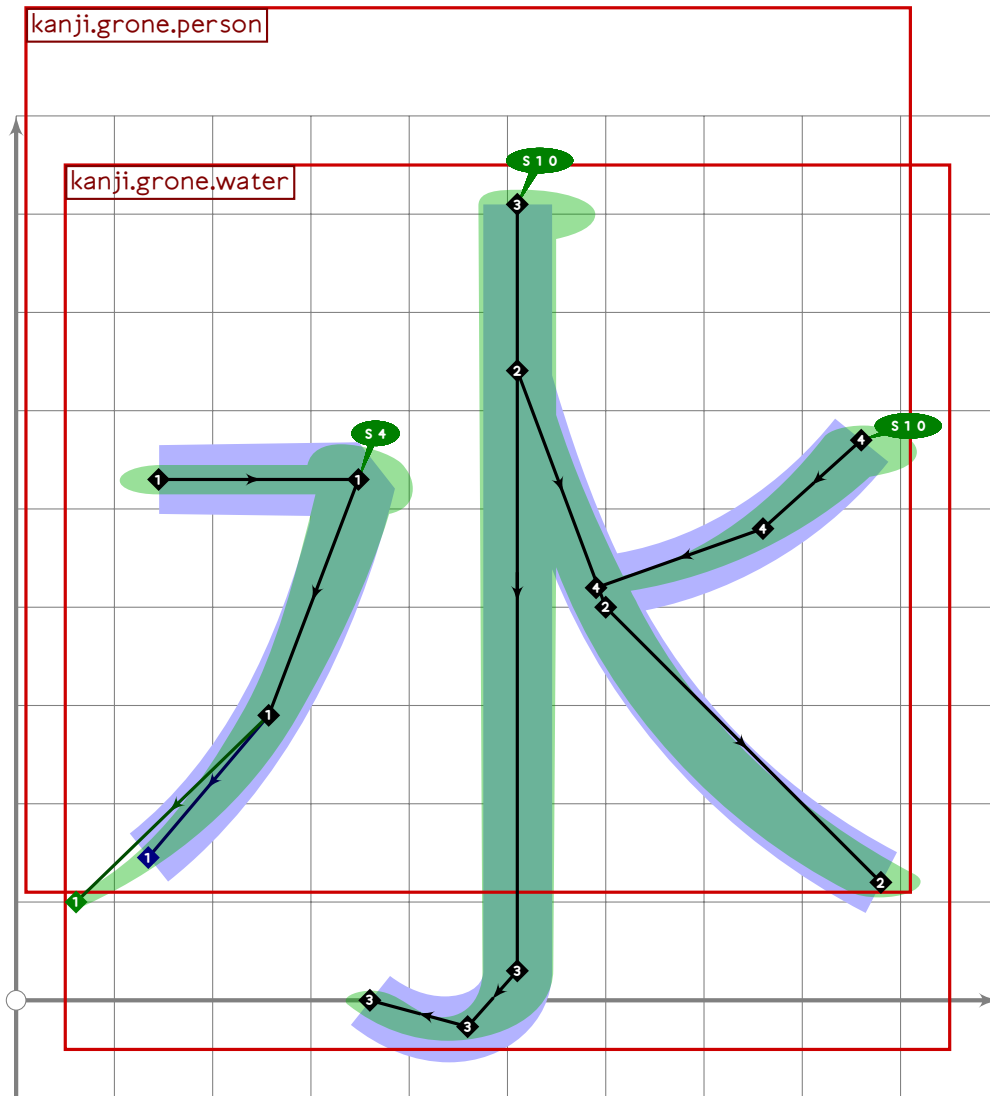
```



```

636
637 vardef tsu_curve.kanji.grone.vacation =
638   push_pbox_toexpand("kanji.grone.vacation");
639   build_kanji.lr(300,20)
640     (tsu_curve.kanji.leftrad.person)
641     (tsu_curve.kanji.grone.wood);
642   expand_pbox;
643 enddef;

```



```

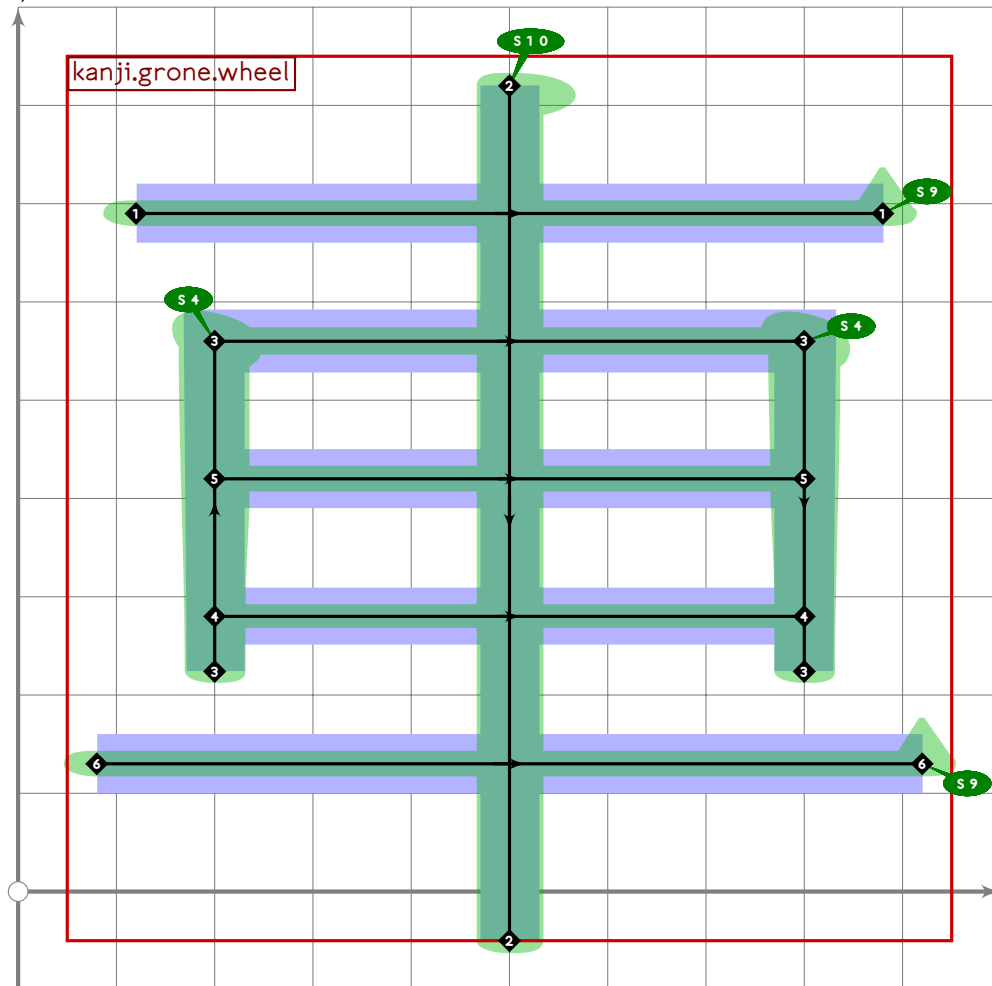
644
645 vardef tsu_curve.kanji.grone.water =
646   tsu_xform(identity shifted (-40,160))(tsu_curve.kanji.grone.person);
647   push_pbox_toexpand("kanji.grone.water");
648   replace_strokep(-1)((100,500)-
649     (subpath (xpart (oldp intersectiontimes
650       ((0,500)-(1000,500))),infinity) of oldp))
651     shifted (-250,0) xscaled 0.7 shifted (250,30));
652   replace_strokeq(-1)((1.6,1.6)-(1.6,1.6)-(1.3,1.3)-(0.85,0.85));
653   set_boserif(-1,0,whatever);
654   set_boserif(-1,1,4);
655   set_botip(-1,1,0);
656   push_stroke((510,810),(1.6,1.6));
657   build_kanji.add_jtail(0);
658   set_boserif(0,0,10);
659   replace_strokep(-1)(
660     subpath (xpart (oldp intersectiontimes get_strokep(0)),infinity)
661     of oldp);

```

```

662 push_stroke((860,570)..(760,480)..(point 0.9 of get_stroke(-1)),
663   (1.6,1.6)-(1.4,1.4)-(1,1));
664 set_boserif(0,0,10);
665 expand_pbox;
666 enddef;

```



```

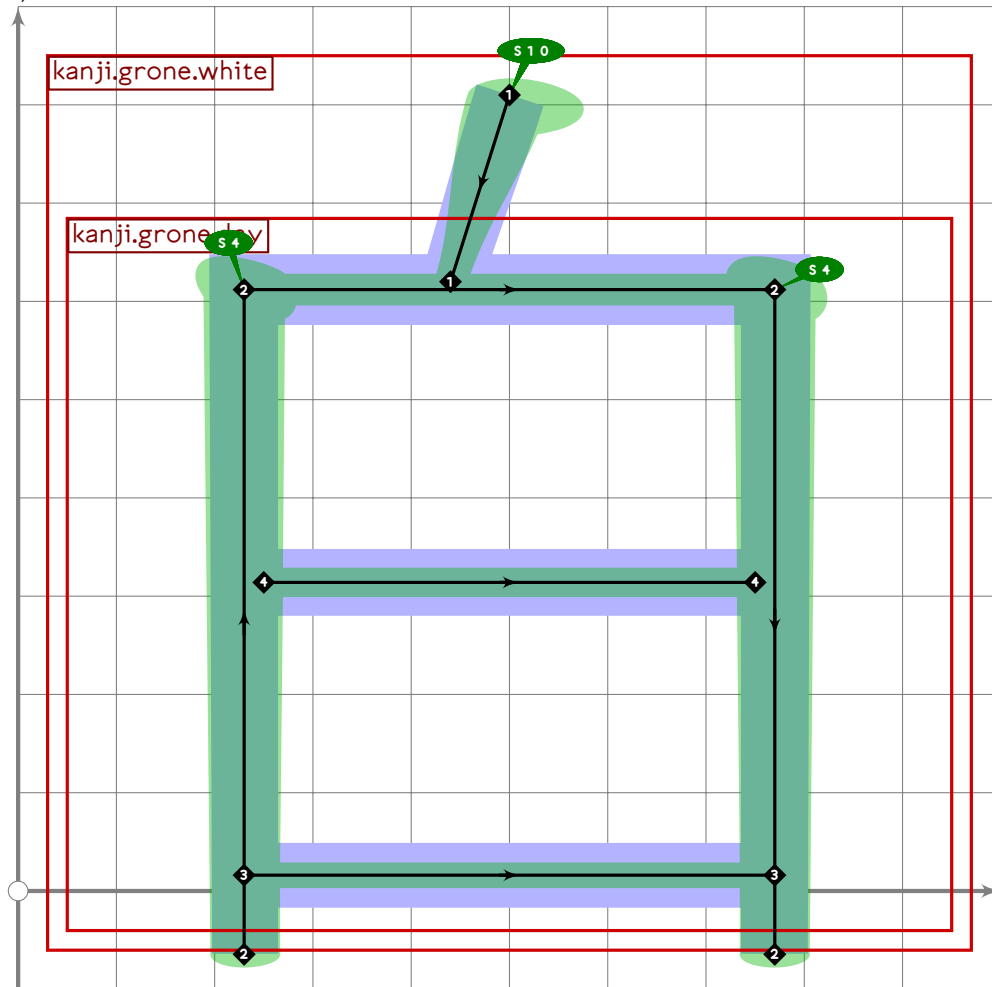
667
668 vardef tsu_curve.kanji.grone.wheel =
669   push_pbox_toexpand("kanji.grone.wheel");
670   push_stroke((120,690)-(880,690),
671     (1.6,1.6)-(1.6,1.6));
672   set_boserif(0,1,9);
673   push_stroke((500,820)-(500,50),
674     (1.6,1.6)-(1.6,1.6));
675   set_boserif(0,0,10);
676   build_kanji.box((200,560),(800,280));
677   push_stroke((200,420)-(800,420),
678     (1.6,1.6)-(1.6,1.6));
679   push_stroke((80,130)-(920,130),
680     (1.6,1.6)-(1.6,1.6));
681   set_boserif(0,1,9);
682   for i=-5 upto 0: set_bosize(i,85); endfor;

```

```

683 expand_pbox;
684 enddef;

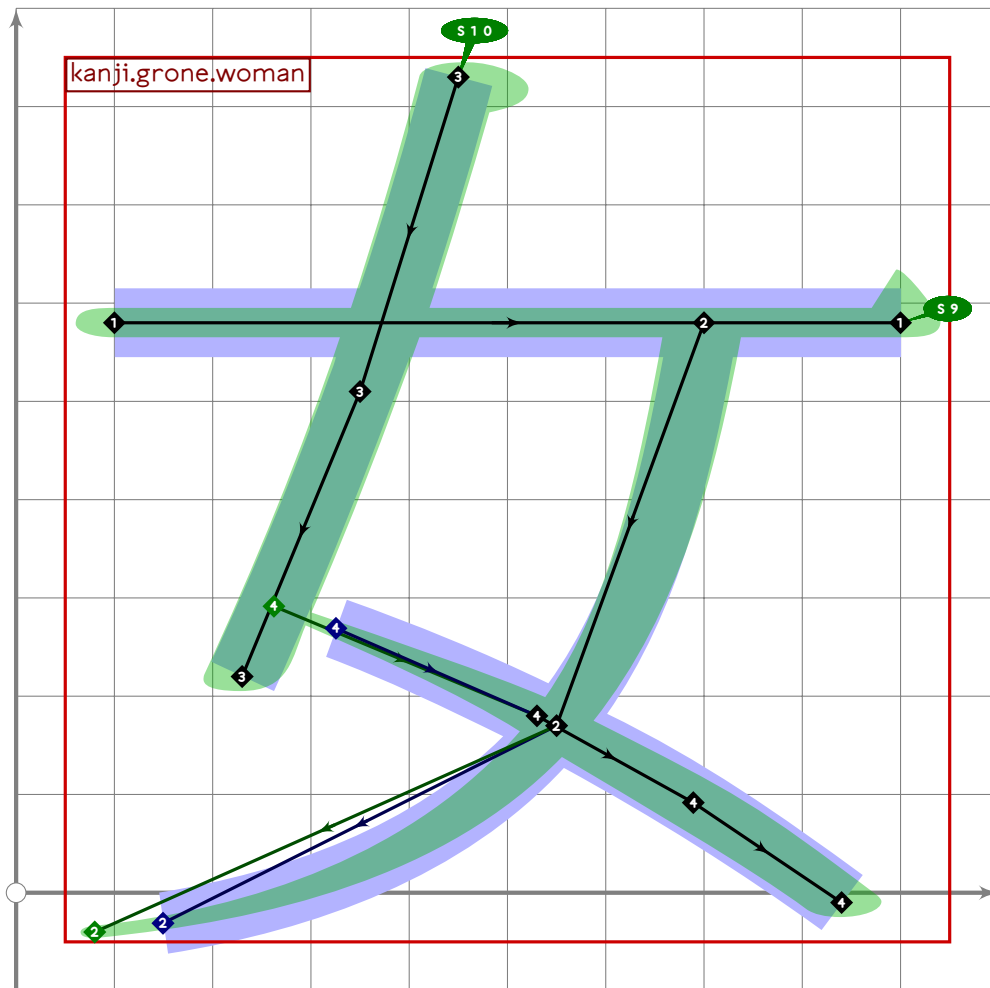
```



```

685
686 vardef tsu_curve.kanji.grone.white =
687   push_pbox_toexpand("kanji.grone.white");
688   push_stroke((500,810)-(440,620),
689     (1.7,1.7)-(1,1));
690   set_boserif(0,0,10);
691   tsu_xform(identity yscaled (620/770))(tsu_curve.kanji.grone.day);
692   expand_pbox;
693 enddef;

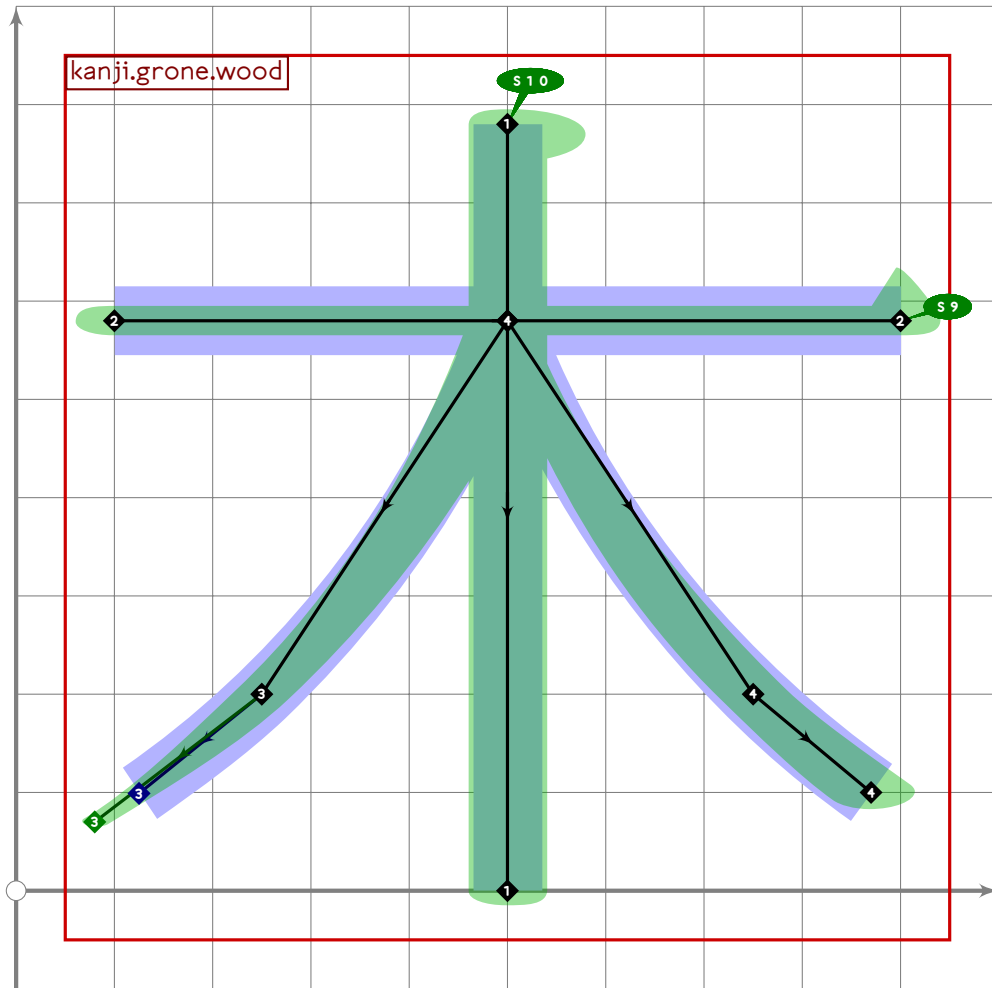
```



```

694
695 vardef tsu_curve.kanji.grone.woman =
696   push_pbox_toexpand("kanji.grone.woman");
697   push_stroke((100,580)-(900,580),
698     (1.6,1.6)-(1.6,1.6));
699   set_boserif(0,1,9);
700   push_stroke((700,580){curl 0}..(550,170)..{curl 0.3}(80,-40),
701     (1.6,1.6)-(1.4,1.4)-(0.94,0.94));
702   push_stroke((450,830)..(350,510)..(230,220),
703     (1.6,1.6)-(1.6,1.6)-(1.6,1.6));
704   set_boserif(0,0,10);
705   push_stroke((point 1.75 of get_strokep(0))..(530,180)..(840,-10),
706     (0.85,0.85)-(1.5,1.5)-(1.8,1.8)-(1.6,1.6));
707   replace_strokep(0)(insert_nodes(oldp)(1.5));
708   expand_pbox;
709 enddef;

```



```

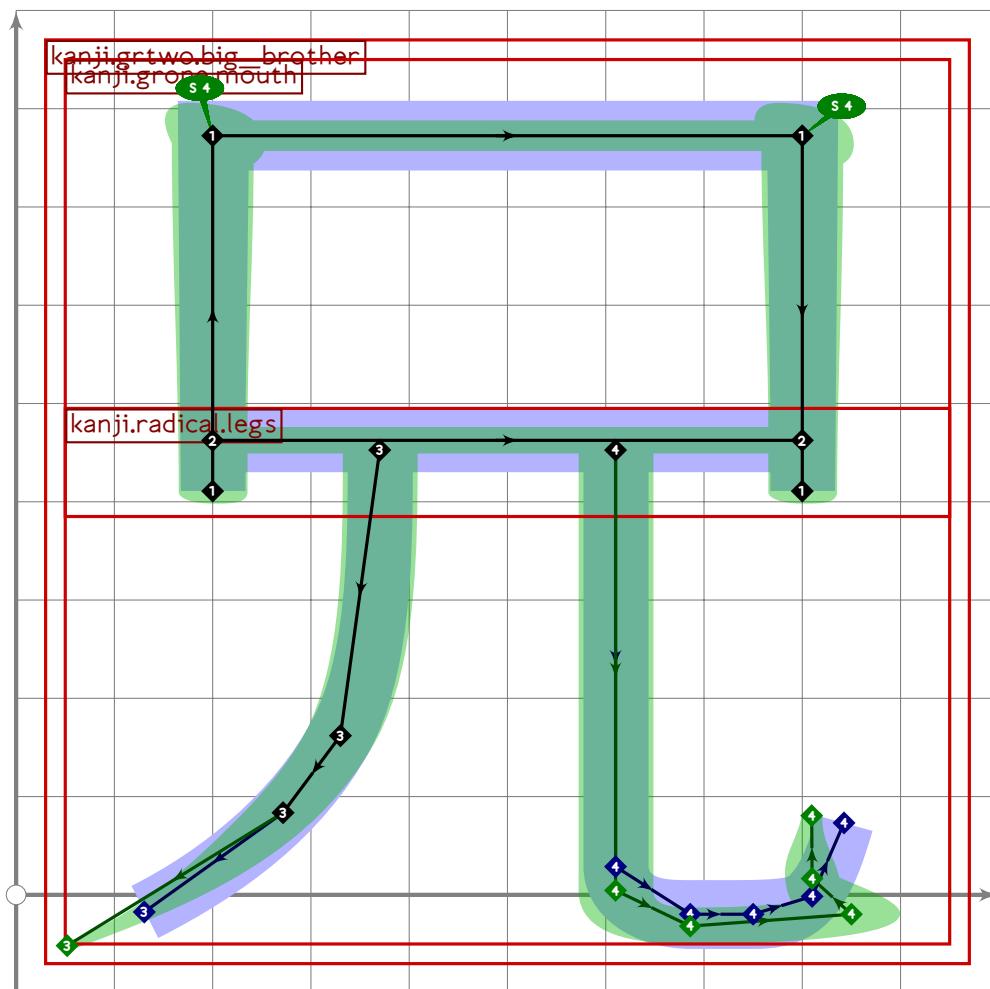
710
711 vardef tsu_curve.kanji.grone.wood =
712   push_pbox_toexpand("kanji.grone.wood");
713   push_stroke((500,780)-(500,0),
714     (1.6,1.6)-(1.6,1.6));
715   set_boserif(0,0,10);
716   push_stroke((100,580)-(900,580),
717     (1.6,1.6)-(1.6,1.6));
718   set_boserif(0,1,9);
719   push_stroke((500,580)..(250,200)..(80,70),
720     (1.6,1.6)..(1.3,1.3)..(0.9,0.9));
721   push_stroke((500,580)..(750,200)..(870,100),
722     (1.1,1.1)..(1.5,1.5)..(1.7,1.7));
723   expand_pbox;
724 enddef;

```

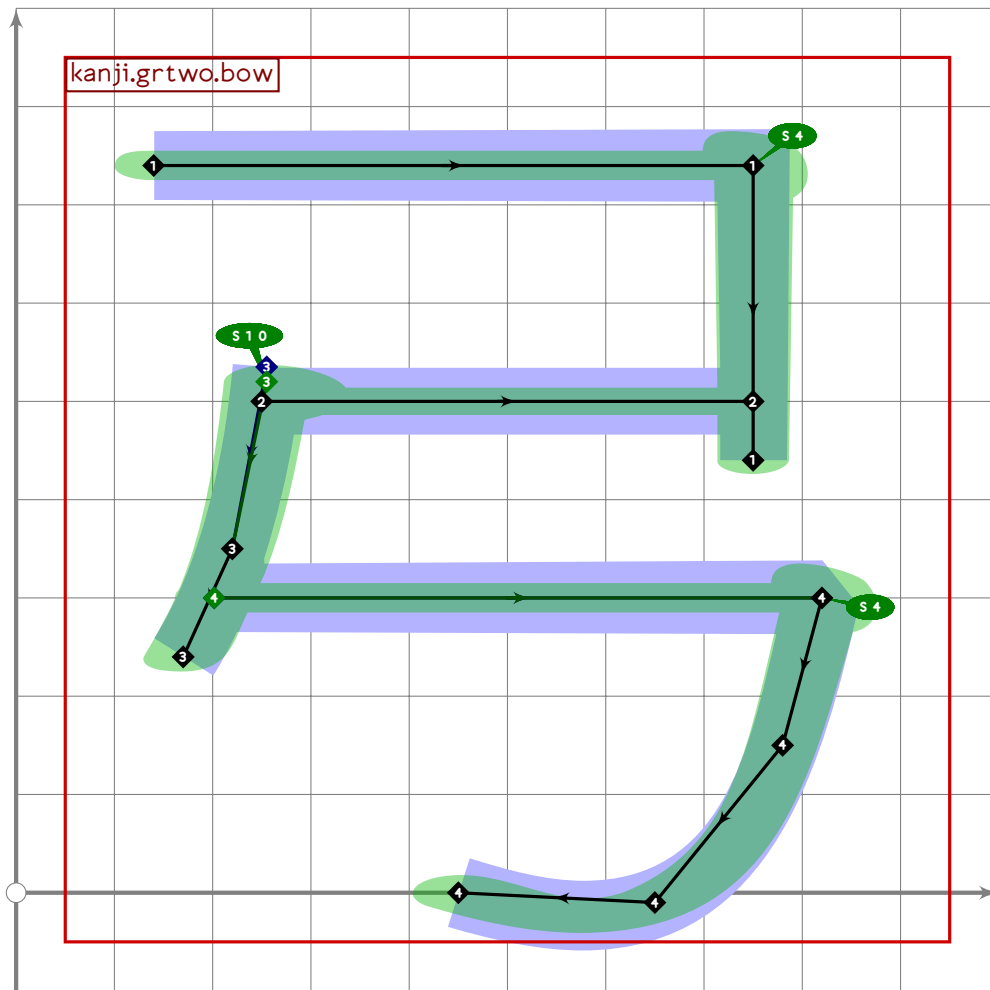
gradetwo.mp

1 %
2 % Grade Two kanji used on more than one page
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]

30
31



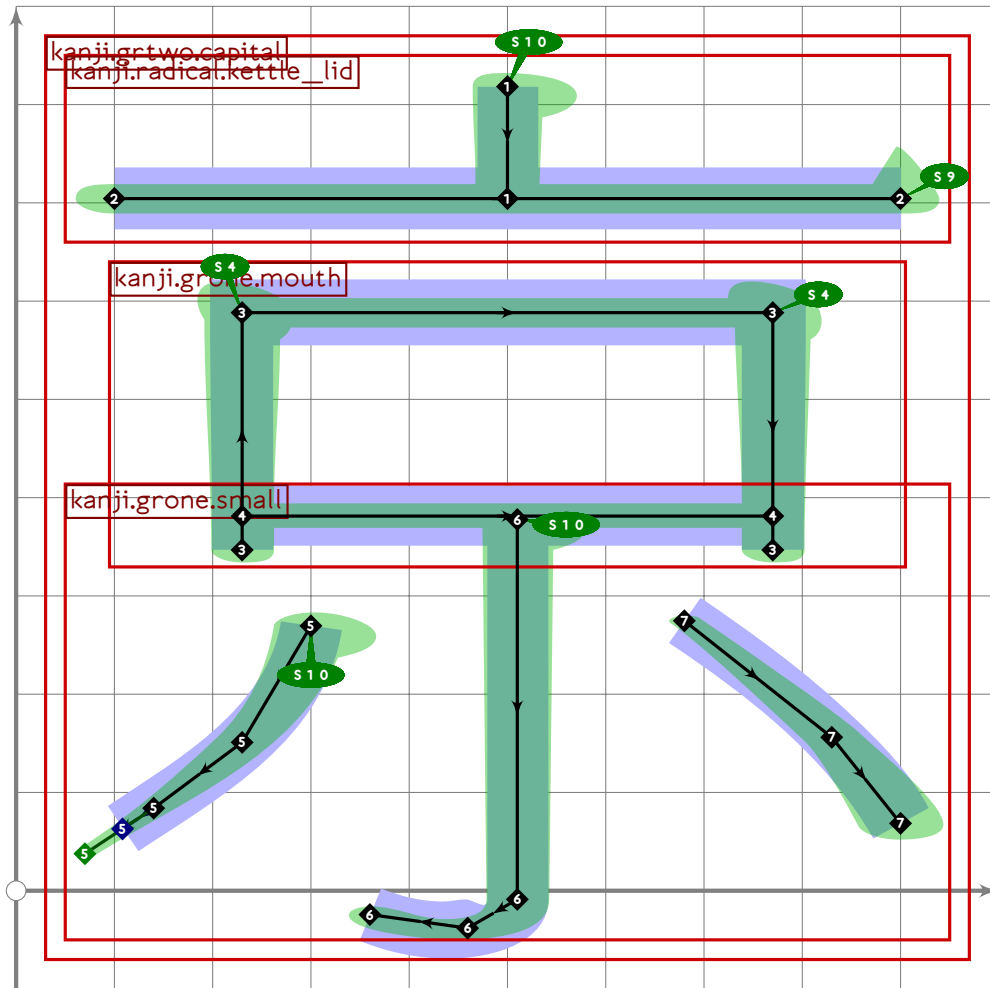
32
33 vardef tsu_curve.kanji.grttwo.big_brother =
34 push_pbox_toexpand("kanji.grttwo.big_brother");
35 build_kanji.level(build_kanji.tb(440,110)
36 (tsu_curve.kanji.grone.mouth)
37 (tsu_curve.kanji.radical.legs));
38 expand_pbox;
39 enddef;



```

40
41 vardef tsu_curve.kanji.grtwo.bow =
42   push_pbox_toexpand("kanji.grtwo.bow");
43   push_stroke((140,740)-(750,740)-(750,440),
44     (1.6,1.6)-(1.6,1.6)-(1.5,1.5));
45   set_botip(0,1);
46   set_boserif(0,1,4);
47   push_stroke((250,500)-(750,500),
48     (1.5,1.5)-(1.5,1.5));
49   push_stroke((255,535-15*mincho)..tension 1.2..(220,350)..(170,240),
50     (1.7,1.7)-(1.6,1.6)-(1.6,1.6));
51   set_boserif(0,0,10);
52   push_stroke((get_stroke(0) intersectionpoint ((0,300)-(1000,300)))-
53     (820,300)..tension 1.7..(780,150)..(650,-10)..{curl 0.1}(450,0),
54     (1.6,1.6)-(1.6,1.6)-(1.5,1.5)-(1.7,1.7)-(1.8,1.8));
55   set_botip(0,1);
56   set_boserif(0,1,4);
57   expand_pbox;
58 enddef;

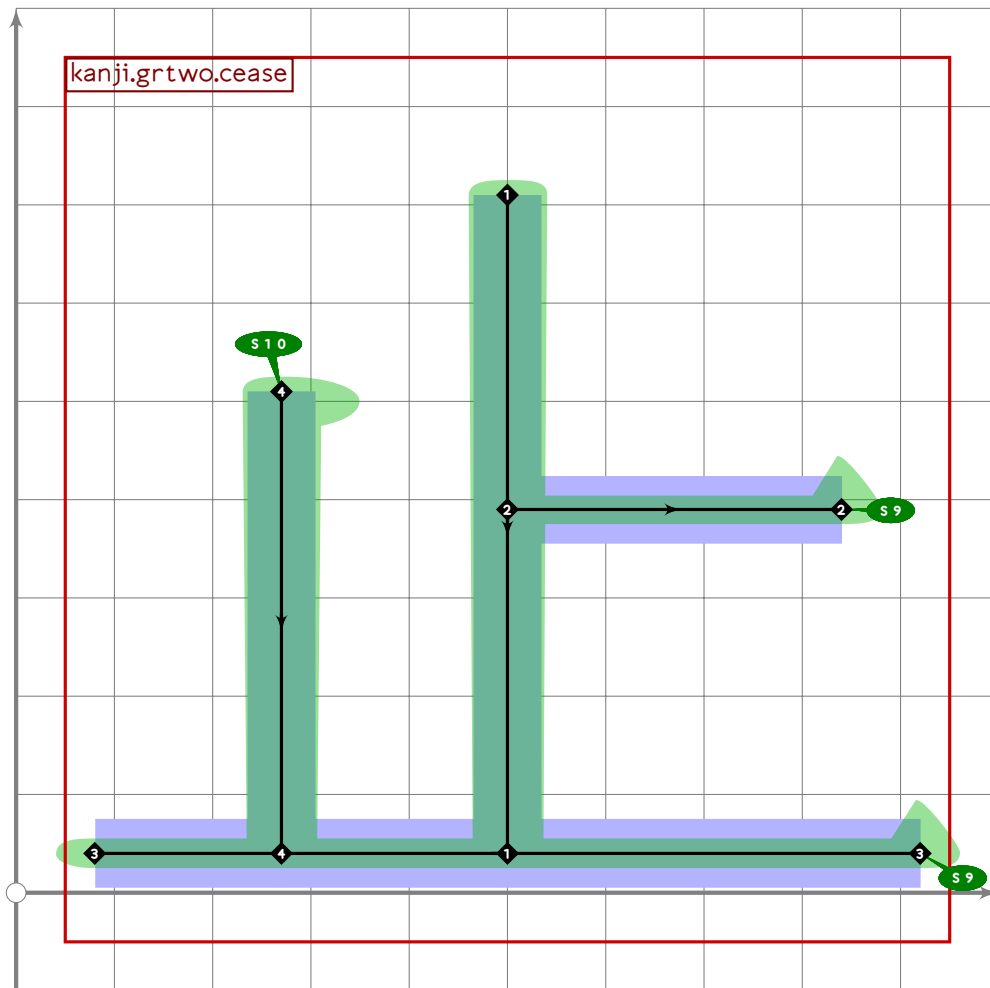
```



```

59
60 vardef tsu_curve.kanji.grtwo.capital =
61   push_pbox_toexpand("kanji.grtwo.capital");
62   build_kanji.level(build_kanji.tb(650;20)
63     (tsu_curve.kanji.radical.kettle_lid)
64     (build_kanji.tb(500;110)
65       (build_kanji.sscale(xscaled 0.9)(tsu_curve.kanji.grone.mouth))
66       (tsu_curve.kanji.grone.small)));
67   set_boserif(0,0,whatever);
68   expand_pbox;
69 enddef;
70

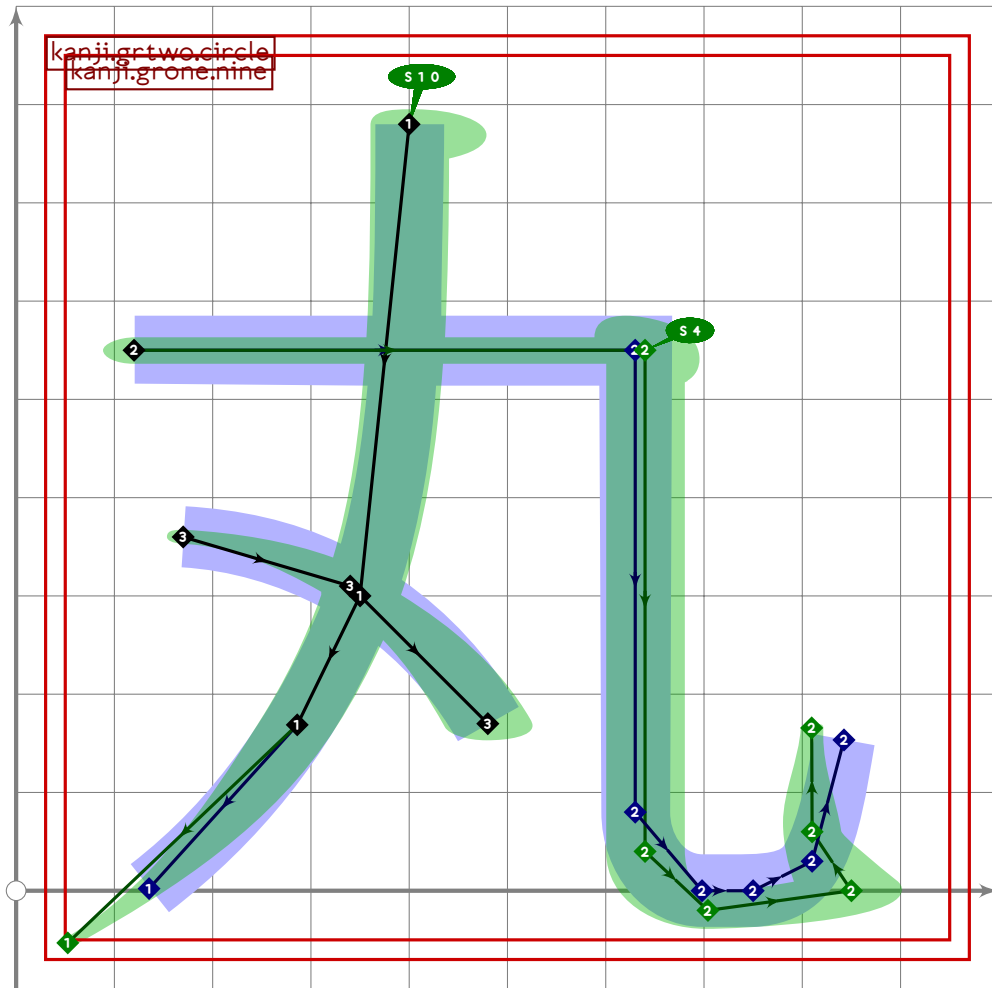
```



```

71 % can't use "stop," it is reserved by Metafont
72 vardef tsu_curve.kanji.grtwo.cease =
73   push_pbox_toexpand("kanji.grtwo.cease");
74   push_stroke((500,710)-(500,40),(1.6,1.6)-(1.5,1.5));
75   push_stroke((500,390)-(840,390),(1.5,1.5)-(1.6,1.6));
76   set_boserif(0,1,9);
77   push_stroke((80,40)-(920,40),(1.6,1.6)-(1.6,1.6));
78   set_boserif(0,1,9);
79   push_stroke((270,510)-(270,40),(1.6,1.6)-(1.5,1.5));
80   set_boserif(0,0,10);
81   expand_pbox;
82 enddef;

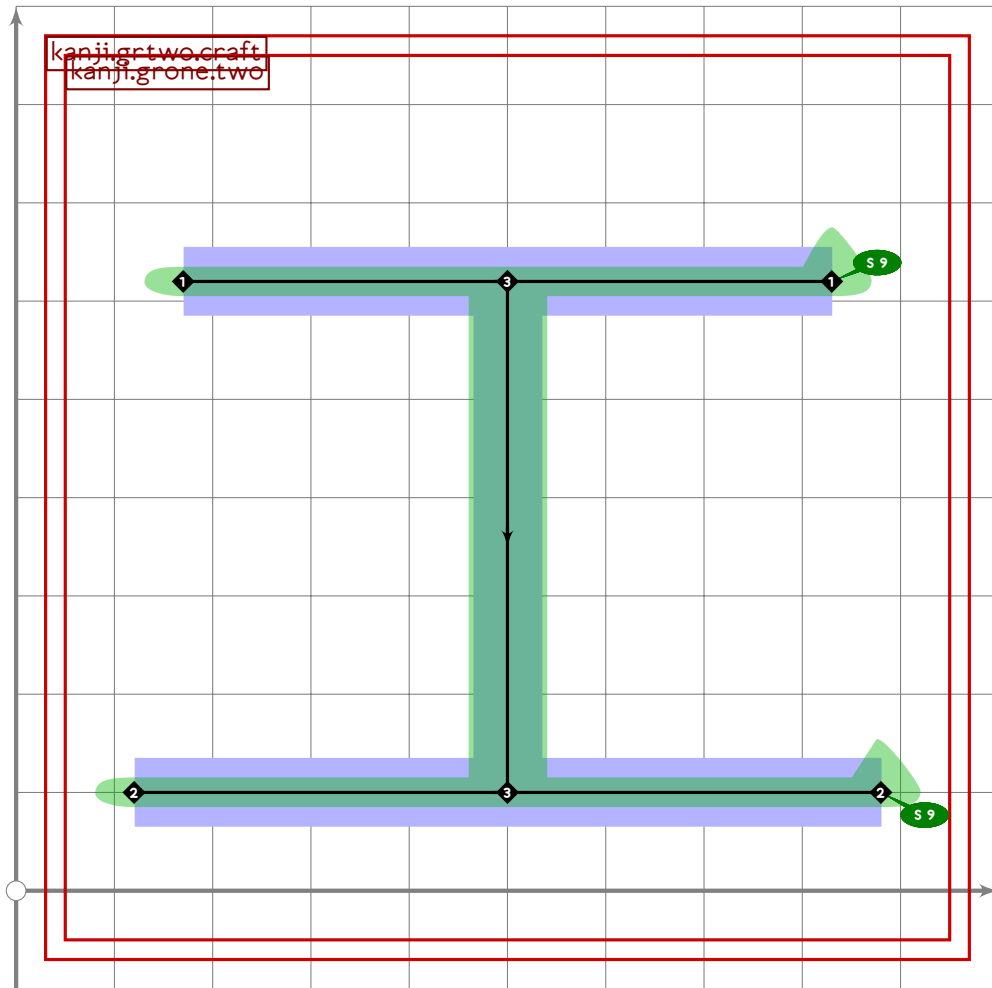
```



```

83
84 vardef tsu_curve.kanji.grtwo.circle =
85   push_pbox_toexpand("kanji.grtwo.circle");
86   tsu_curve.kanji.grone.nine;
87   push_stroke((170,360)..(340,310)..(480,170),
88     (1,1)-(1.4,1.4)-(1.7,1.7));
89   expand_pbox;
90 enddef;

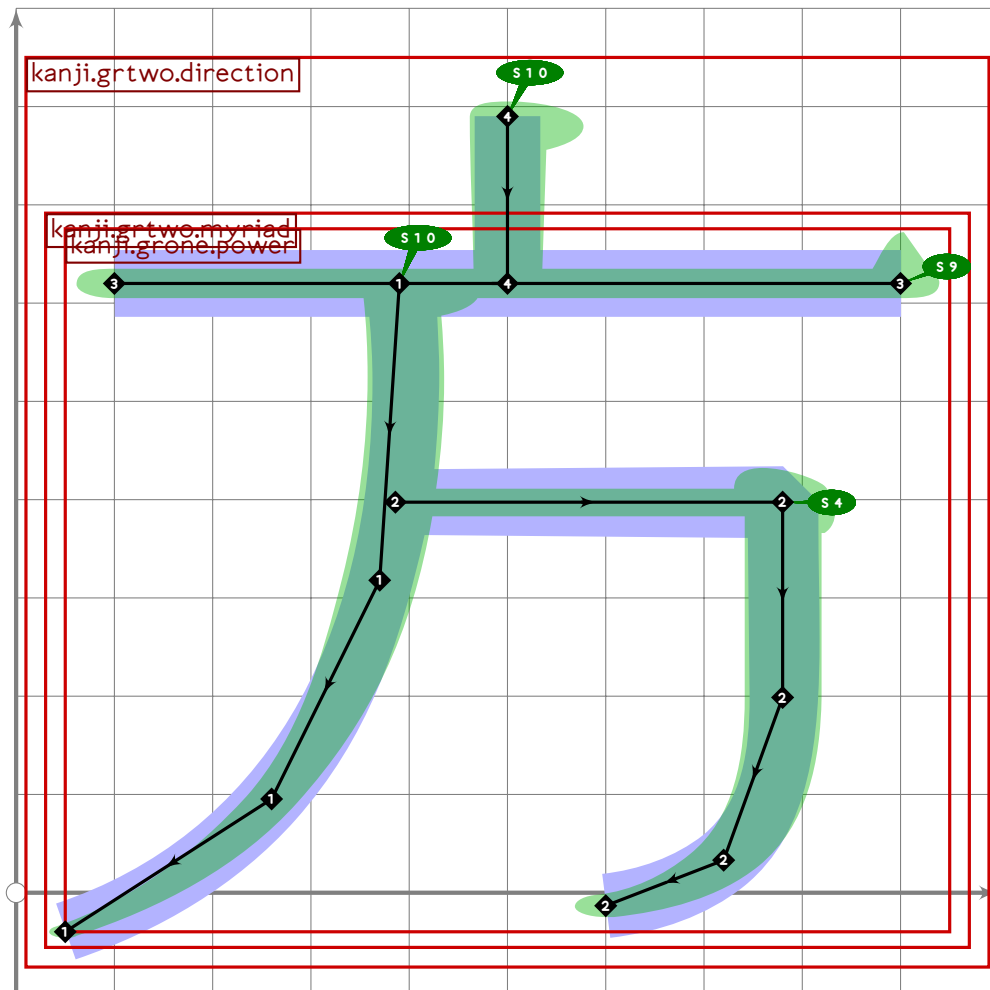
```



```

91
92 vardef tsu_curve.kanji.grtwo.craft =
93   push_pbox_toexpand("kanji.grtwo.craft");
94   tsu_curve.kanji.grone.two;
95   push_stroke((point 0.5 of get_stroke(-1))-(point 0.5 of get_stroke(0)),
96     (1.6,1.6)-(1.6,1.6));
97   expand_pbox;
98 enddef;

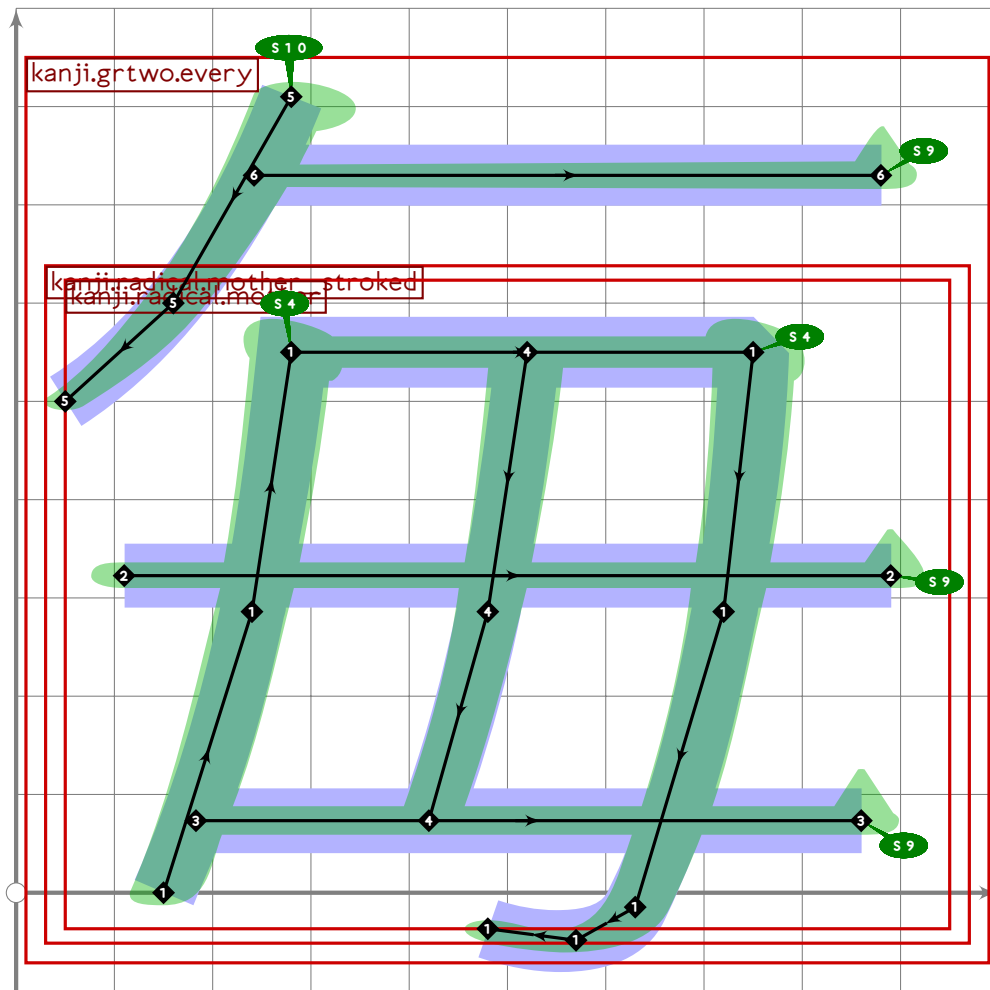
```



```

99
100 vardef tsu_curve.kanji.grtwo.direction =
101   push_pbox_toexpand("kanji.grtwo.direction");
102   build_kanji.level(
103     tsu_xform(identity yscaled (620/780))
104     (tsu_curve.kanji.grtwo.myriad);
105     push_stroke((500,790)..(500,620),(1.6,1.6)-(1.5,1.5));
106     set_boserif(0,0,10);
107   );
108   expand_pbox;
109 enddef;

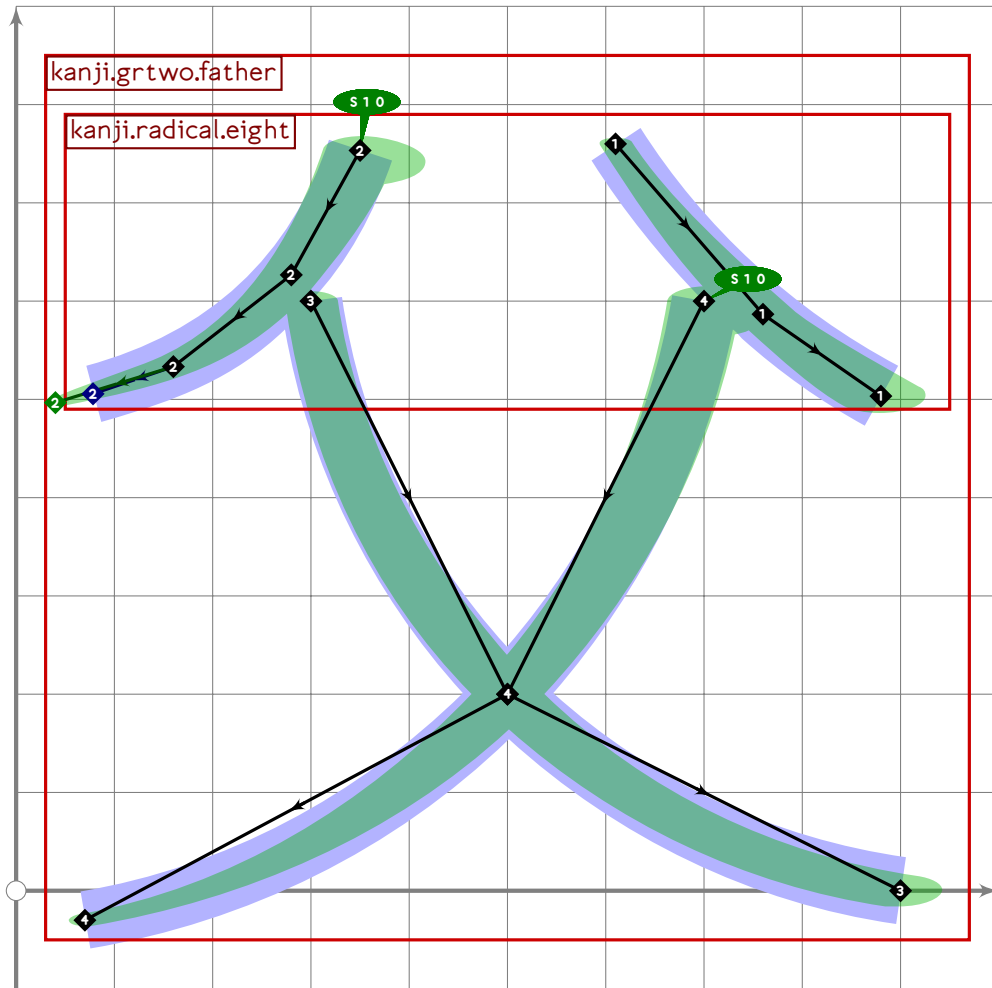
```



```

110
111 vardef tsu_curve.kanji.grtwo.every =
112   push_pbox_toexpand("kanji.grtwo.every");
113   tsu_xform(identity yscaled (550/750))
114     (tsu_curve.kanji.radical.mother_stroked);
115   push_stroke((280,810)..tension 1.2..(160,600)..(50,500),
116     (1.7,1.7)-(1.5,1.5)-(1.2,1.2));
117   set_boserif(0,0,10);
118   set_bosize(0,90);
119   push_stroke((get_strokep(0) intersectionpoint ((0,730)-(1000,730)))-
120     (880,730),
121     (1.5,1.5)-(1.6,1.6));
122   set_boserif(0,1,9);
123   set_bosize(0,90);
124   expand_pbox;
125 enddef;

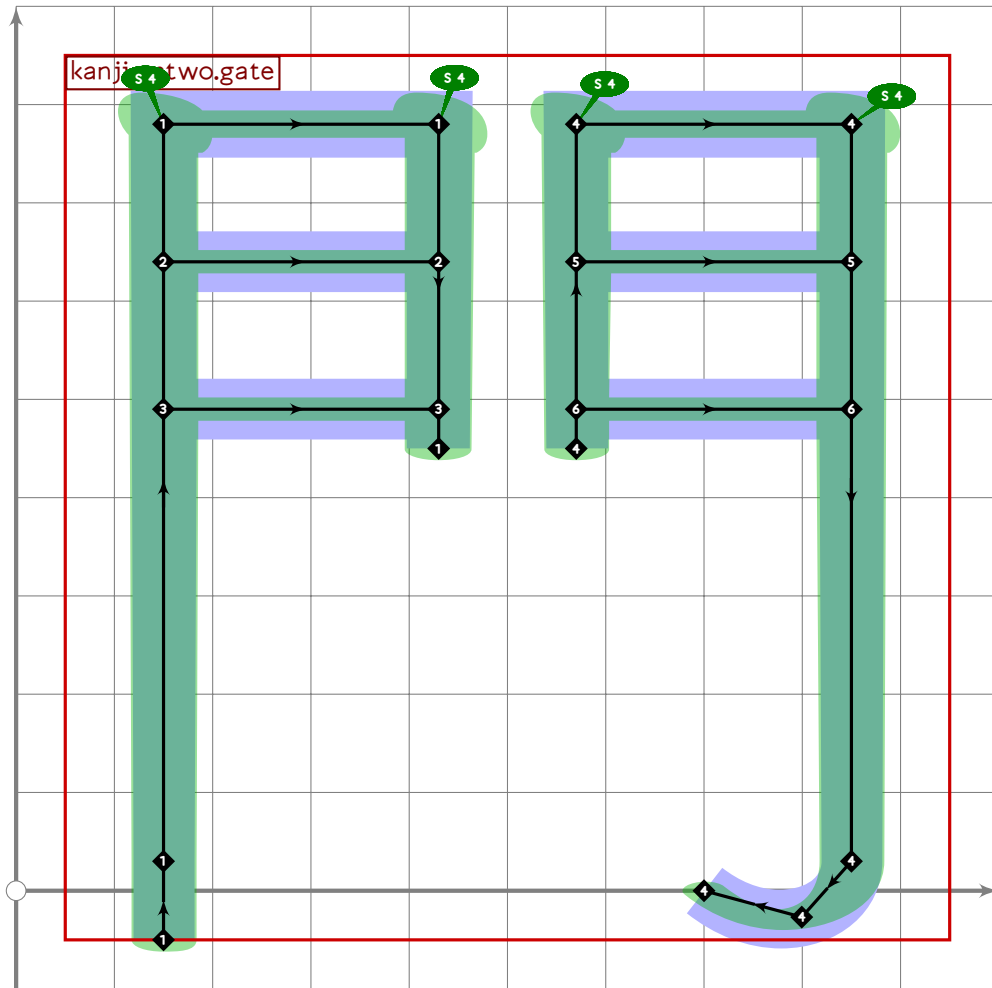
```



```

126
127 vardef tsu_curve.kanji.grtwo.father =
128   push_pbox_toexpand("kanji.grtwo.father");
129   build_kanji.level(build_kanji.tb(700,300)
130     (tsu_xform(identity shifted (0,180))(tsu_curve.kanji.radical.eight))
131     (push_stroke((300,600)..(500,200)..(900,0),
132       (1,3,1,3)-(1,5,1,5)-(1,7,1,7)));
133     push_stroke((700,600)..(500,200)..(70,-30),
134       (1,6,1,6)-(1,5,1,5)-(1,1)));
135     set_boserif(0,0,10);
136   );
137   expand_pbox;
138 enddef;

```

```

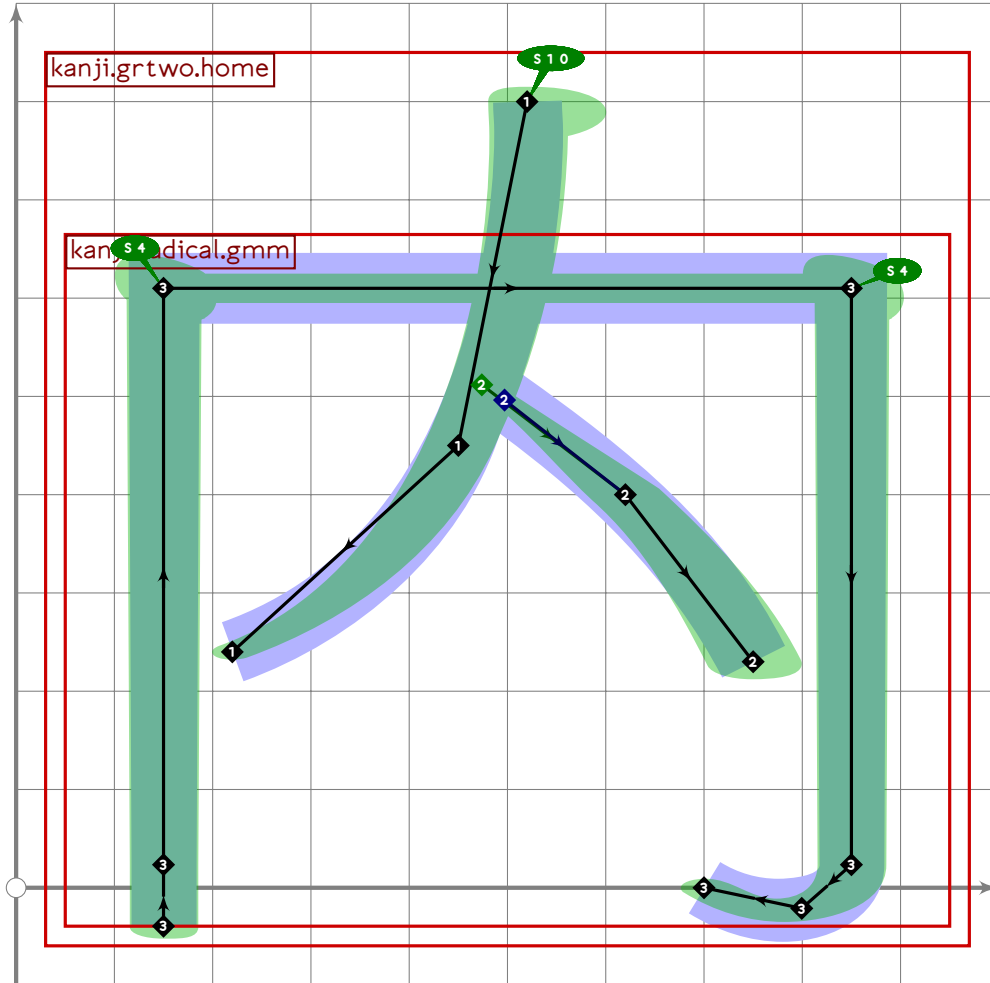
139
140 vardef tsu_curve.kanji.grtwo.gate =
141   push_pbox_toexpand("kanji.grtwo.gate");
142   push_stroke((150;50)-(150,30)-(150,780)-(430,780)-(430,450),
143     (1.5,1.5)-(1.5,1.5)-(1.6,1.6)-(1.6,1.6)-(1.5,1.5));
144   set_botip(0,2,1);
145   set_botip(0,3,1);
146   set_boserif(0,2,4);
147   set_boserif(0,3,4);
148   push_stroke((150,640)-(430,640),
149     (1.5,1.5)-(1.5,1.5));
150   push_stroke((150,490)-(430,490),
151     (1.5,1.5)-(1.5,1.5));
152   push_stroke((570,450)-(570,780)-(850,780),
153     (1.5,1.5)-(1.6,1.6)-(1.6,1.6));
154   build_kanji.add_jtail(0);
155   set_botip(0,1,1);
156   set_botip(0,2,1);
157   set_boserif(0,1,4);
158   set_boserif(0,2,4);
159   push_stroke((570,640)-(850,640),

```

```

160 (1.5,1.5)-(1.5,1.5));
161 push_stroke((570,490)-(850,490),
162 (1.5,1.5)-(1.5,1.5));
163 for i=-5 upto 0: set_bosize(i,90); endfor;
164 expand_pbox;
165 enddef;

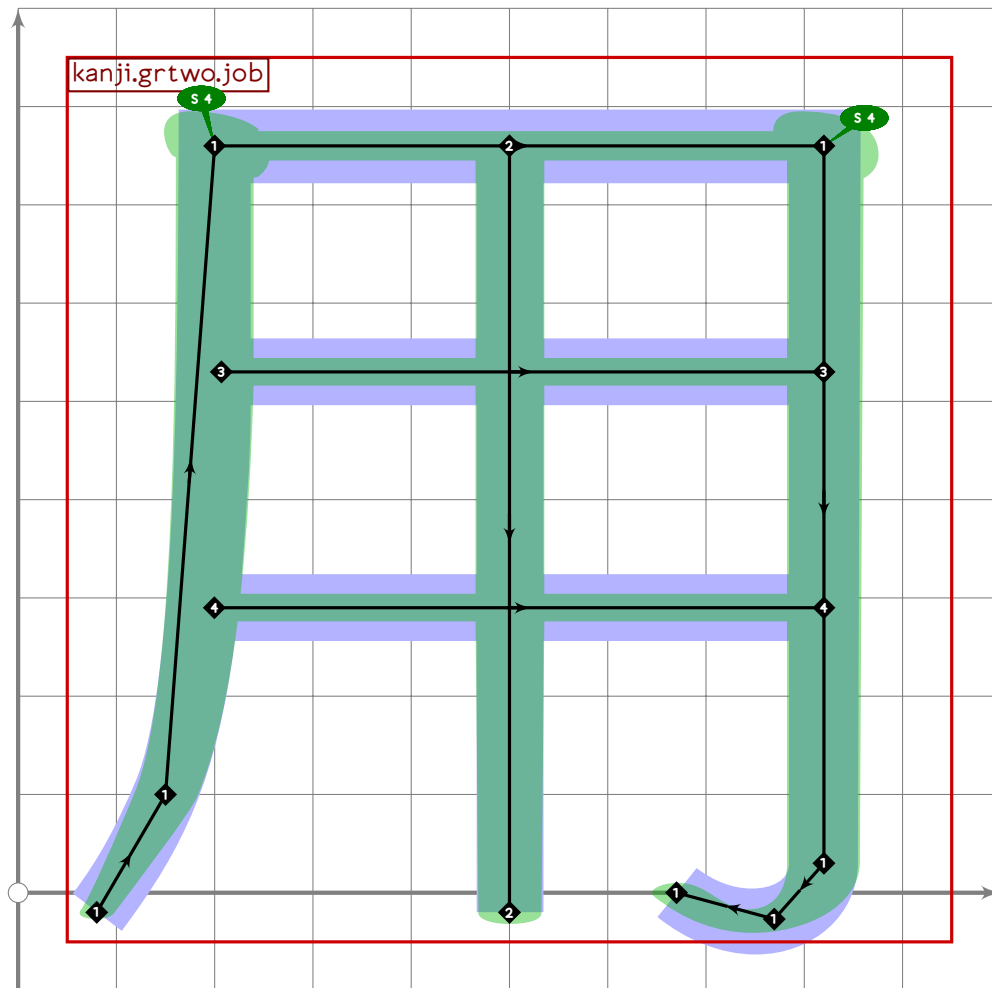
```



```

166
167 vardef tsu_curve.kanji.grtwo.home =
168   push_pbox_toexpand("kanji.grtwo.home");
169   push_stroke((520,800)..tension 1.2..(450,450)..(220,240),
170 (1.6,1.6)-(1.5,1.5)-(1.1,1.1));
171   set_boserif(0,0,10);
172   push_stroke(
173 (point 0.8 of get_strokep(0)..tension 1.2..(620,400)..(750,230),
174 (0.9,0.9)-(1.5,1.5)-(1.8,1.8));
175   tsu_xform(identity yscaled (610/780))(tsu_curve.kanji.radical.gmm);
176   expand_pbox;
177 enddef;

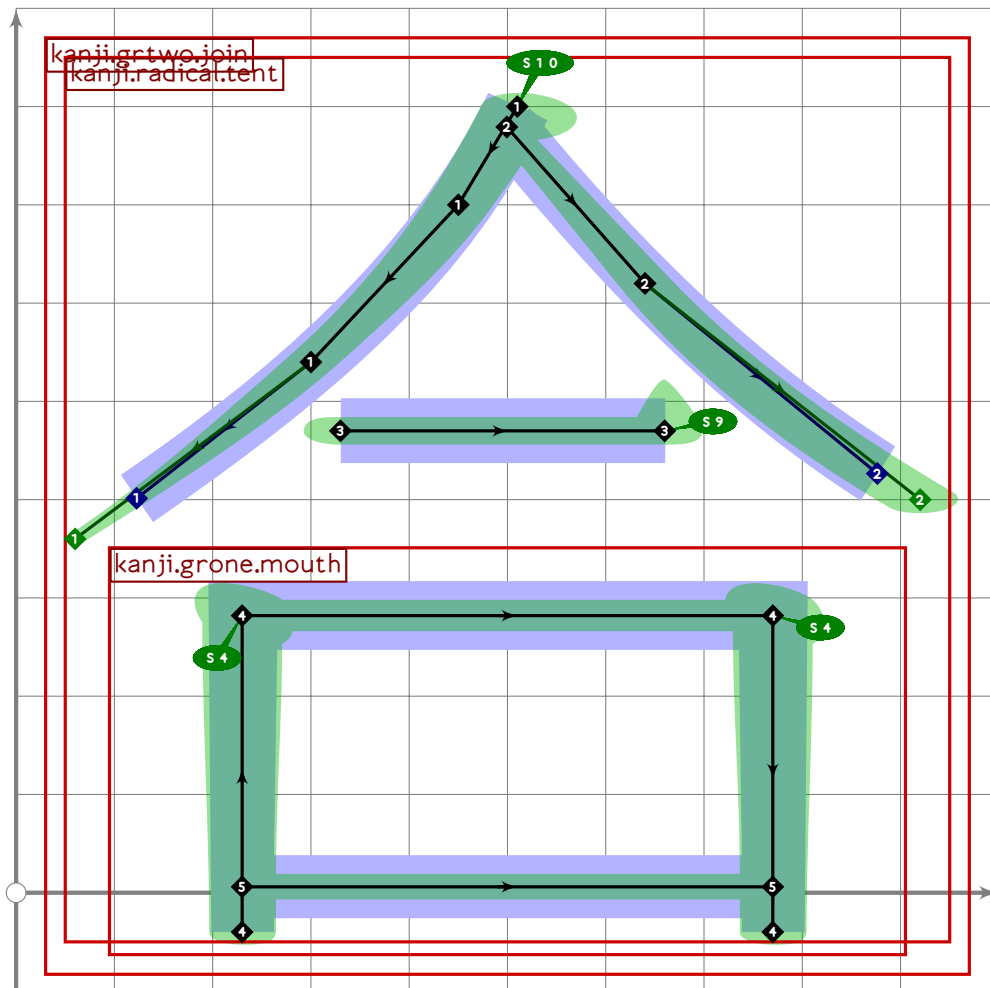
```



```

178
179 vardef tsu_curve.kanji.grtwo.job =
180   push_pbox_toexpand("kanji.grtwo.job");
181   push_stroke((80,20)..(150,100)..{up}(200,760){right}-(820,760),
182     (1,1)-(1.4,1.4)-(1.6,1.6)-(1.6,1.6));
183   build_kanji.add_jtail(0);
184   set_botip(0,2,0.8);
185   set_botip(0,3,1);
186   set_boserif(0,2,4);
187   set_boserif(0,3,4);
188   push_stroke((500,760)-(500,-20),(1.5,1.5)-(1.4,1.4));
189   push_stroke(
190     (get_strokep(-1) intersectionpoint ((0,530)-(1000,530)))-(820,530),
191     (1.5,1.5)-(1.5,1.5));
192   push_stroke(
193     (get_strokep(-2) intersectionpoint ((0,290)-(1000,290)))-(820,290),
194     (1.5,1.5)-(1.5,1.5));
195   expand_pbox;
196 enddef;

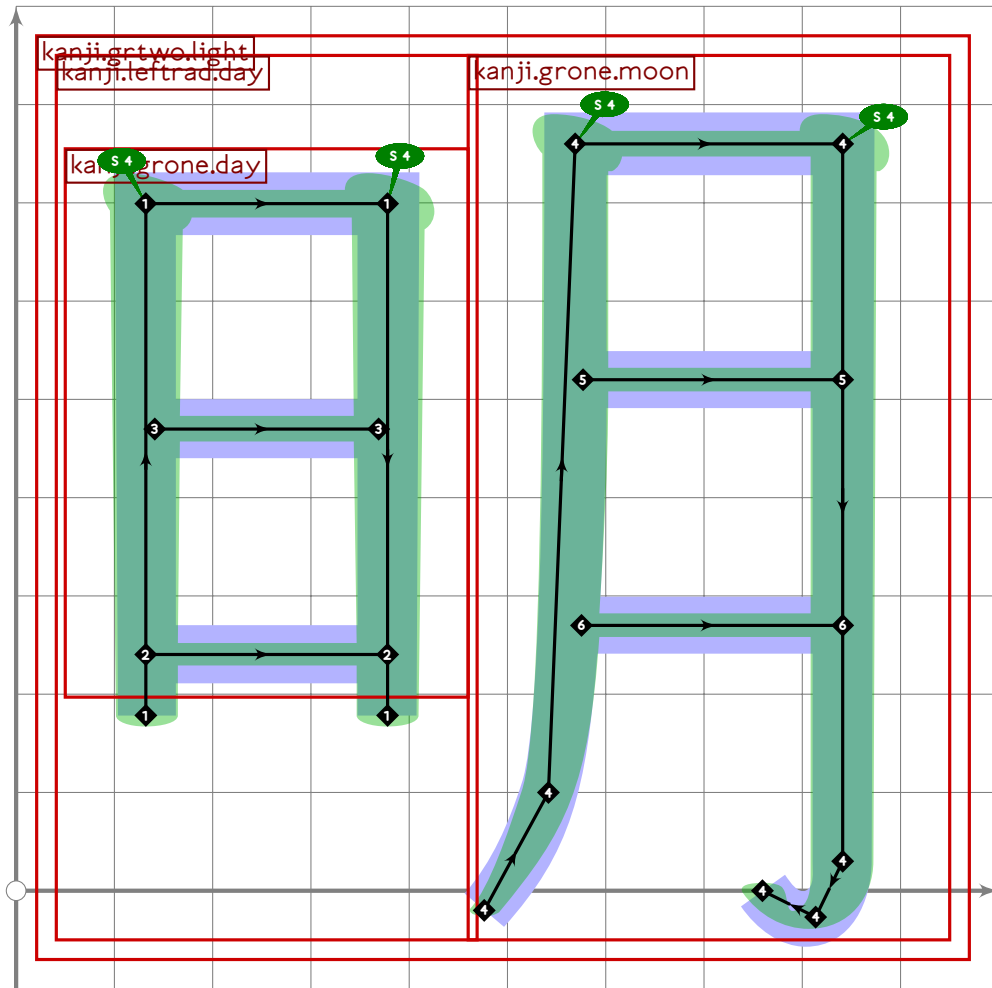
```



```

197
198 vardef tsu_curve.kanji.grtwo.join =
199   push_pbox_toexpand("kanji.grtwo.join");
200   build_kanji.level(
201     tsu_curve.kanji.radical.tent;
202     tsu_xform(identity shifted (-500,0) xyscaled (0.9,0.46) shifted (500,-40))
203     (tsu_curve.kanji.grone.mouth);
204   );
205   expand_pbox;
206 enddef;

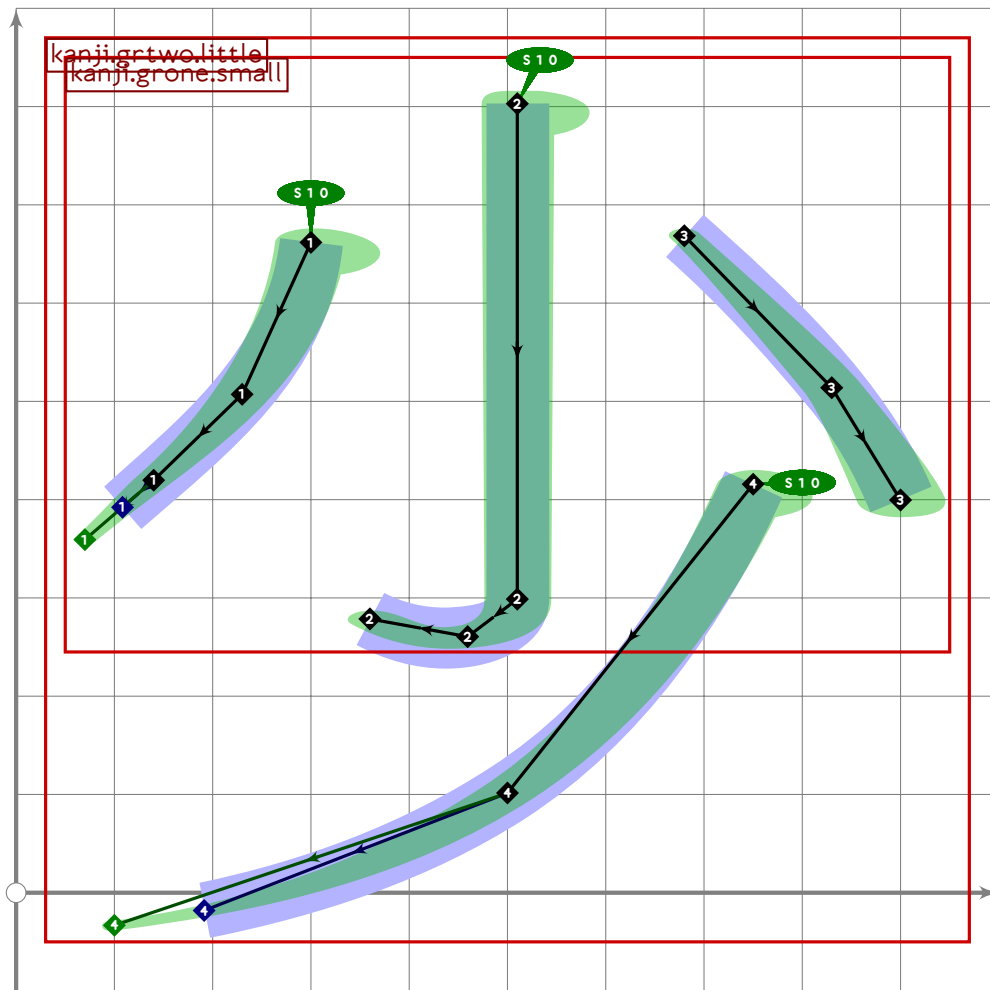
```



```

207
208 vardef tsu_curve.kanji.grtwo.light =
209   push_pbox_toexpand("kanji.grtwo.light");
210   build_kanji.level(build_kanji.lr(460,0)
211     (tsu_curve.kanji.leftrad.day)
212     (tsu_curve.kanji.grone.moon));
213   expand_pbox;
214 enddef;

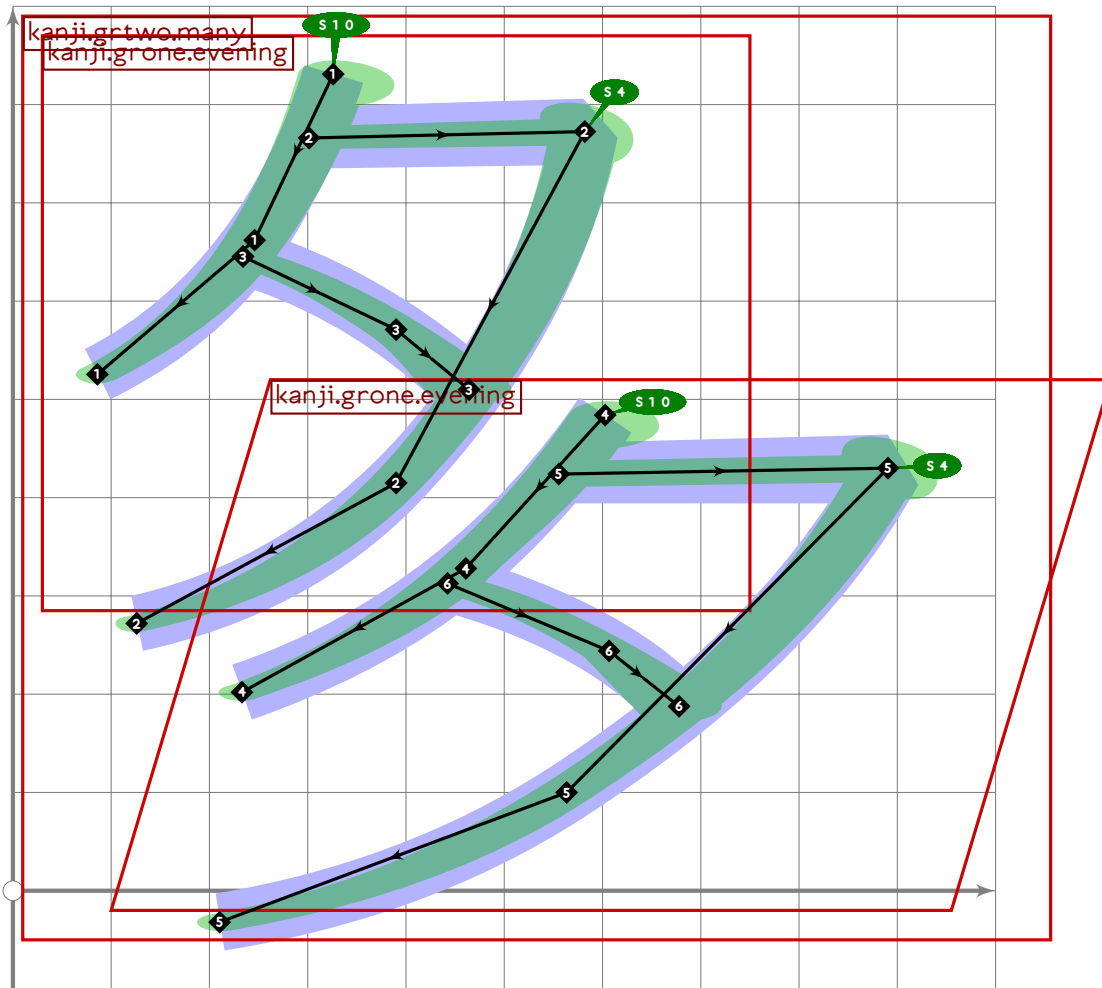
```



```

215
216 vardef tsu_curve.kanji.grtwo.little =
217   push_pbox_toexpand("kanji.grtwo.little");
218   build_kanji.level(build_kanji.tb(350,210)
219     (tsu_curve.kanji.grone.small)
220     (
221       push_stroke((750,780){curl 0.1}..(500,220)..(100,-20),
222         (1.6,1.6)-(1.4,1.4)-(0.9,0.9));
223       set_boserif(0,0,10);
224     ));
225   expand_pbox;
226 enddef;

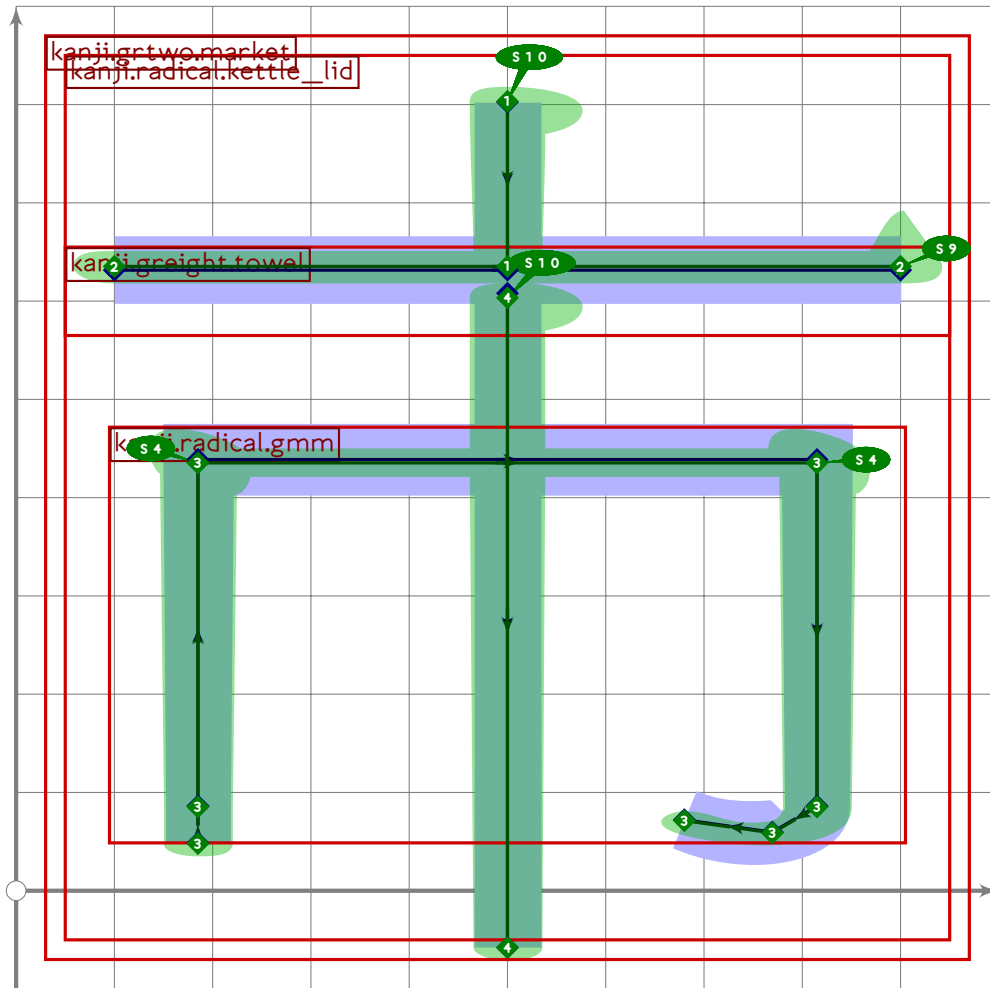
```



```

227
228 vardef tsu_curve.kanji.grtwo.many =
229   push_pbox_toexpand("kanji.grtwo.many");
230   tsu_xform(identity shifted (-50;-850) xyscaled (0.8,0.65) shifted (30,870))
231     (tsu_curve.kanji.grone.evening);
232   tsu_xform(identity shifted (-50,50)
233     xyscaled (0.95,0.6) slanted 0.3 shifted (100;-20))
234     (tsu_curve.kanji.grone.evening);
235   expand_pbox;
236 enddef;

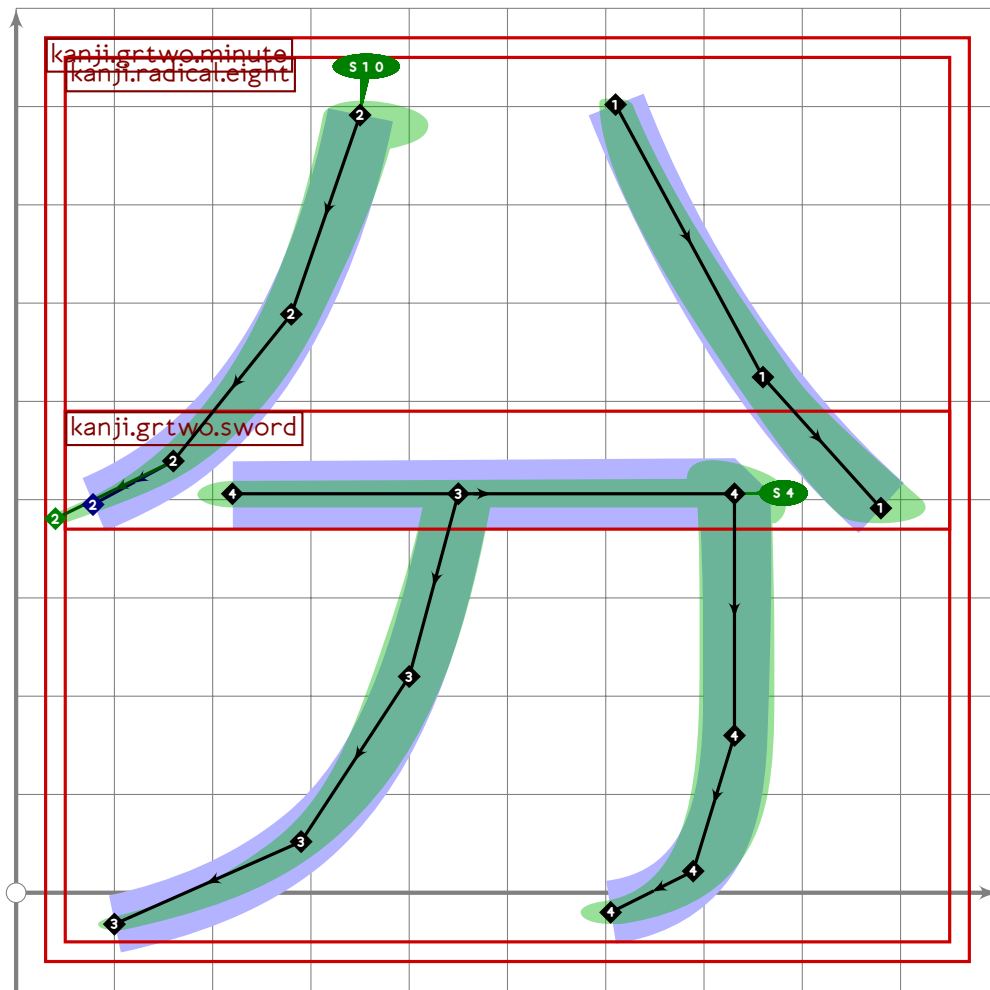
```



```

237
238 vardef tsu_curve.kanji.grtwo.market =
239   push_pbox_toexpand("kanji.grtwo.market");
240   build_kanji.level(build_kanji.tb(610,90-10*mincho)
241     (tsu_curve.kanji.radical.kettle_lid)
242     (tsu_curve.kanji.greight.towel));
243   expand_pbox;
244 enddef;

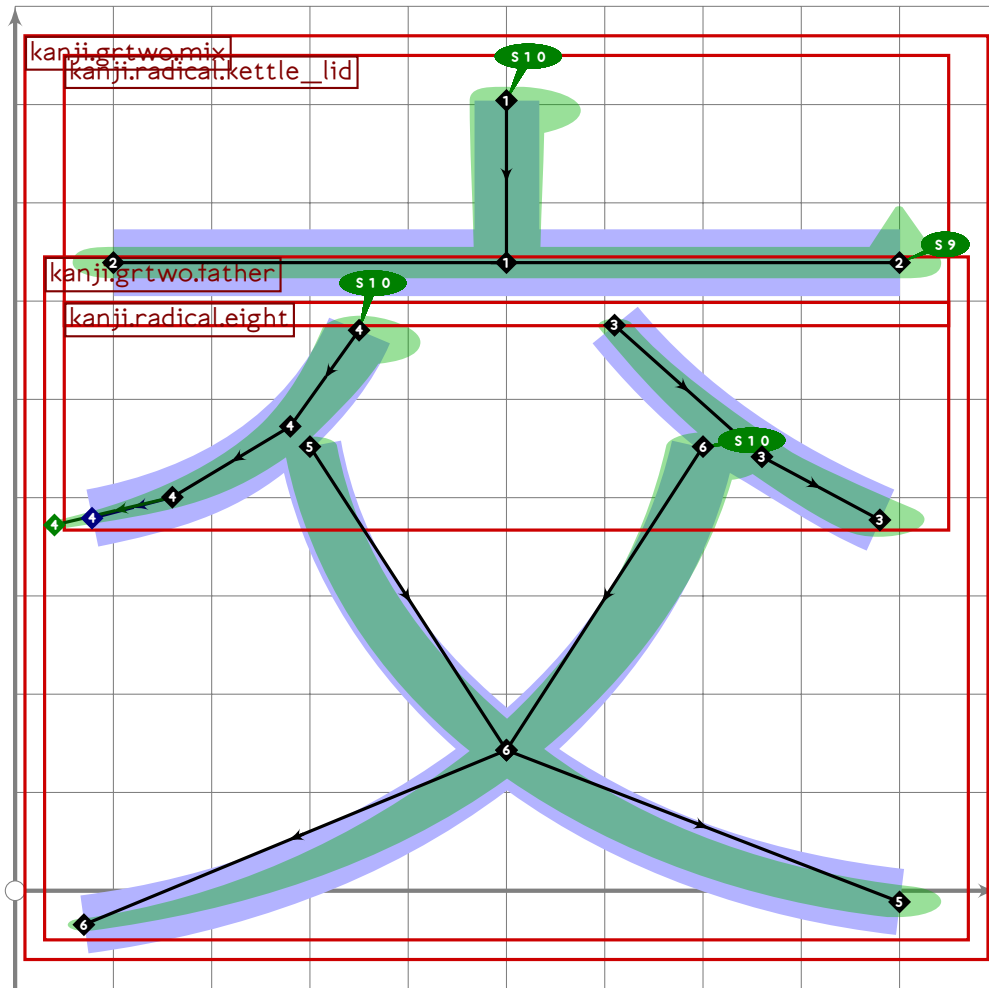
```

```

254
255 vardef tsu_curve.kanji.grtwo.minute =
256   push_pbox_toexpand("kanji.grtwo.minute");
257   build_kanji.level(build_kanji.tb(430,120)
258     (tsu_curve.kanji.radical.eight)
259     (tsu_curve.kanji.grtwo.sword;
260       replace_strokep(0)(oldp shifted (-500,0) xscaled 0.7 shifted (500,0))));
261   expand_pbox;
262 enddef;

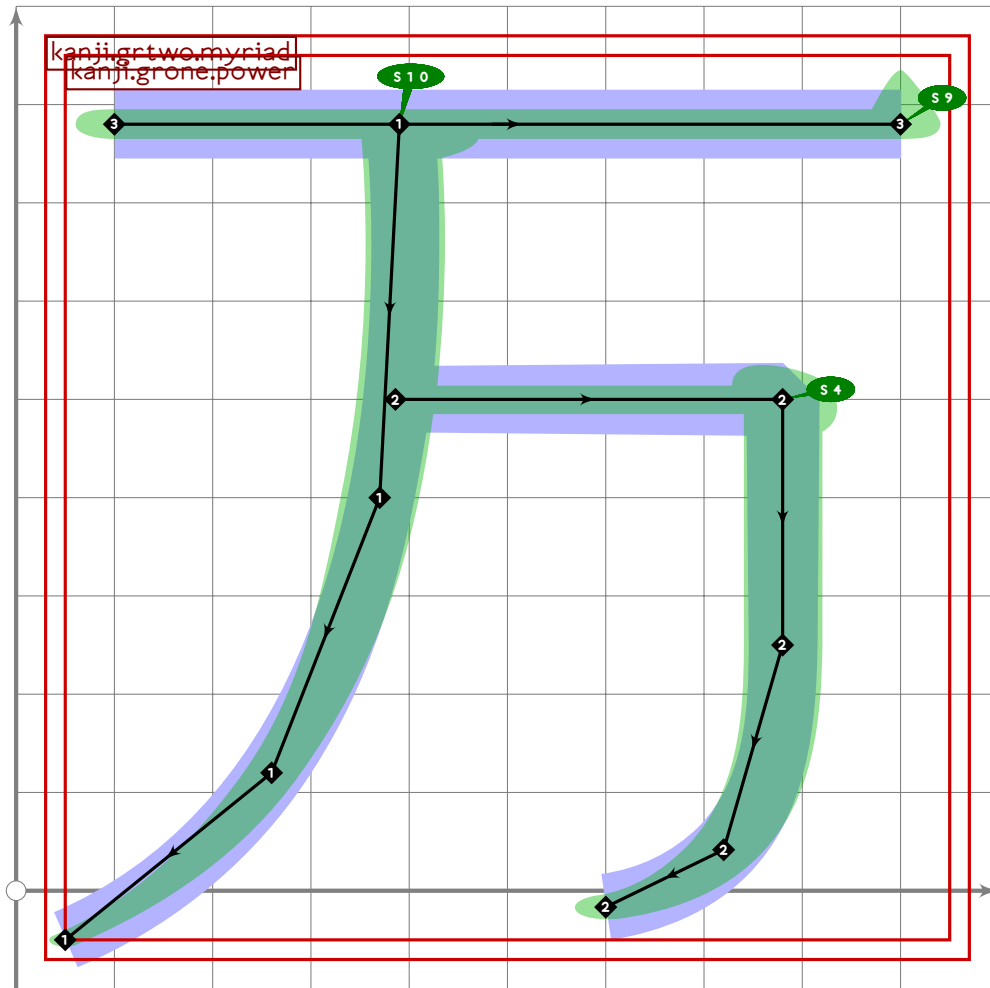
```



```

263
264 vardef tsu_curve.kanji.grtwo.mix =
265   push_pbox_toexpand("kanji.grtwo.mix");
266   build_kanji.level(build_kanji.tb(610,70)
267     (tsu_curve.kanji.radical.kettle_lid)
268     (tsu_curve.kanji.grtwo.father));
269   expand_pbox;
270 enddef;

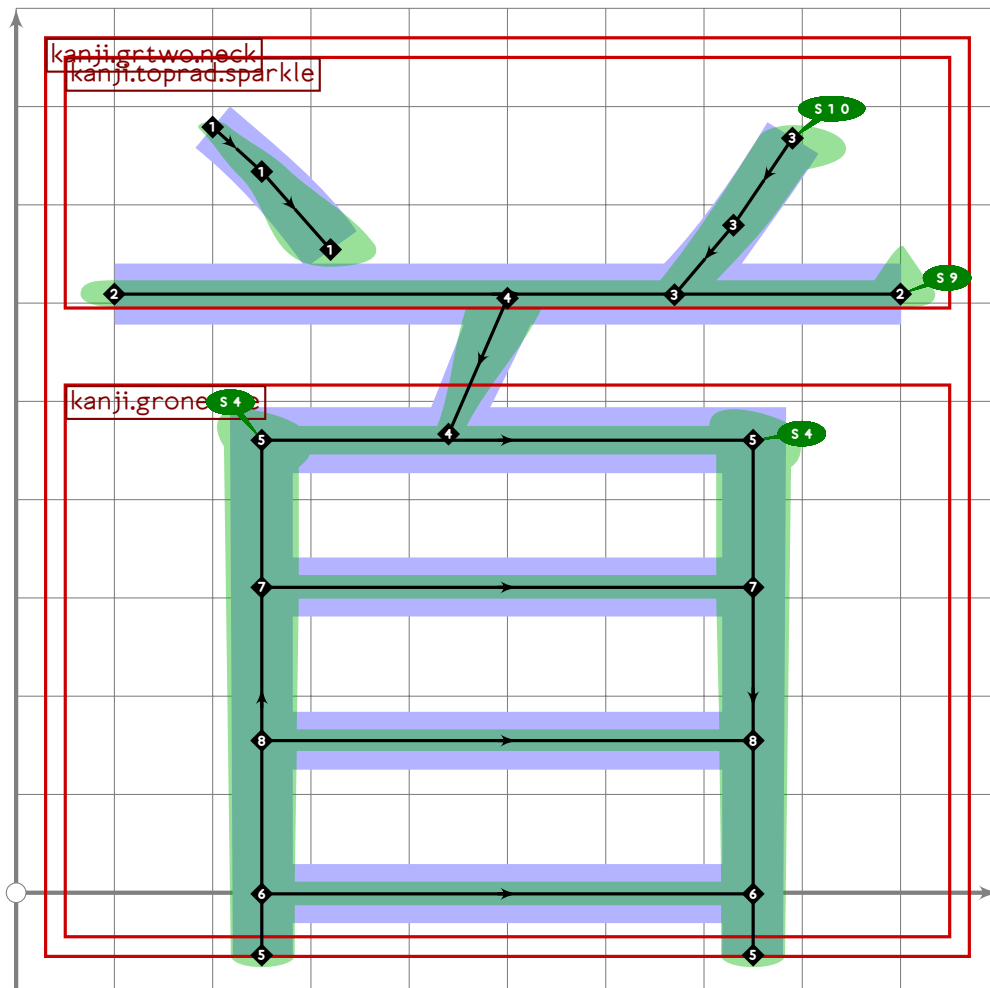
```



```

271
272 vardef tsu_curve.kanji.grtwo.myriad =
273   push_pbox_toexpand("kanji.grtwo.myriad");
274   tsu_curve.kanji.grone.power;
275   set_boserif(0,0,whatever);
276   replace_strokep(0)(oldp yscaled (500/600) shifted (-50,0));
277   replace_strokep(0)(
278     subpath (xpart (oldp intersectiontimes get_strokep(-1)),infinity) of oldp);
279   push_stroke((100,780)-(900,780),(1.6,1.6)-(1.6,1.6));
280   set_boserif(0,1,9);
281   expand_pbox;
282 enddef;

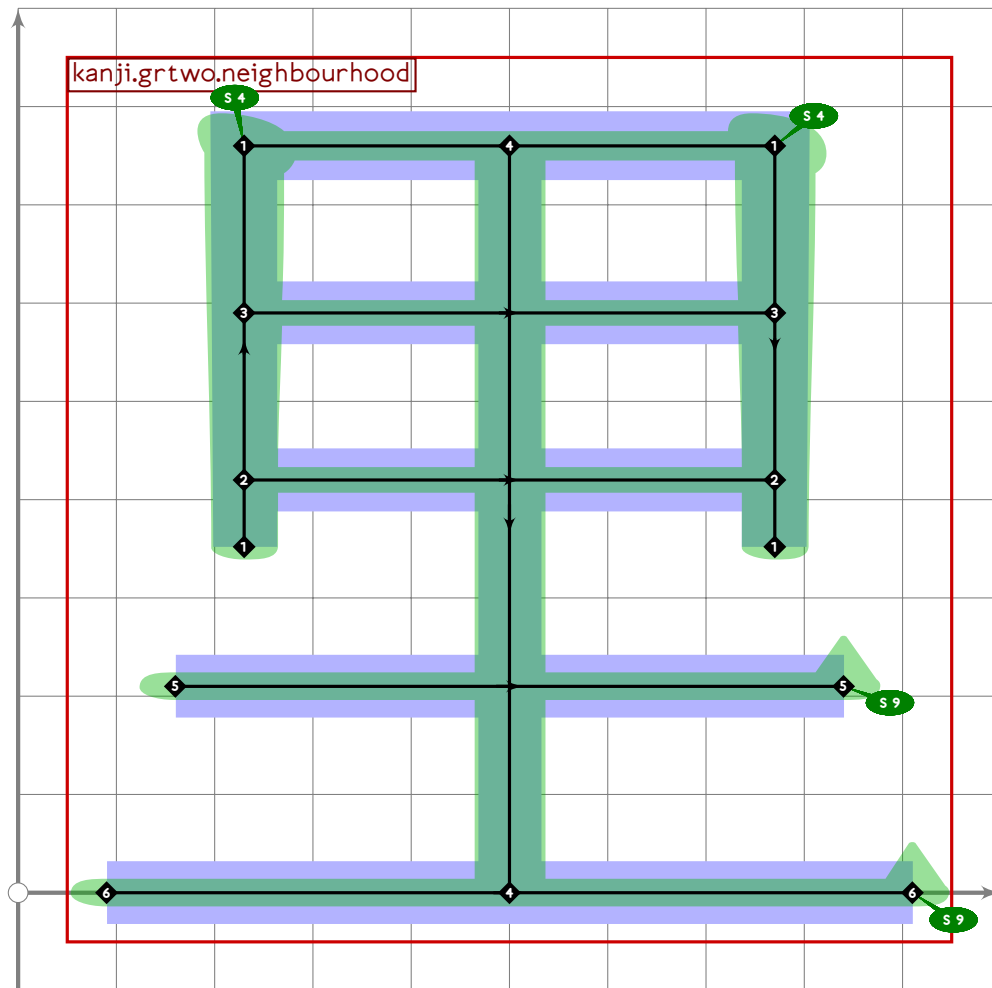
```



```

283
284 vardef tsu_curve.kanji.grtwo.neck =
285   push_pbox_toexpand("kanji.grtwo.neck");
286   build_kanji.level(build_kanji.tb(600,10)
287     (tsu_curve.kanji.toprad.sparkle;
288     replace_stroke(-1)((100,0)-(900,0));
289     replace_strokeq(-1)((1.6,1.6)-(1.6,1.6));
290     set_boserif(-1,0,whatever);
291     set_boserif(-1,1,9);
292     replace_stroke(0)(oldp shifted (-point 0 of oldp)
293       yscaled 1.25 shifted (point 0 of oldp) shifted (0,60)))
294     (push_stroke((500,850)-(440,660),(1.7,1.7)-(1,1));
295     tsu_xform(identity yscaled (660/770))(tsu_curve.kanji.grone.ey)));
296   expand_pbox;
297 enddef;

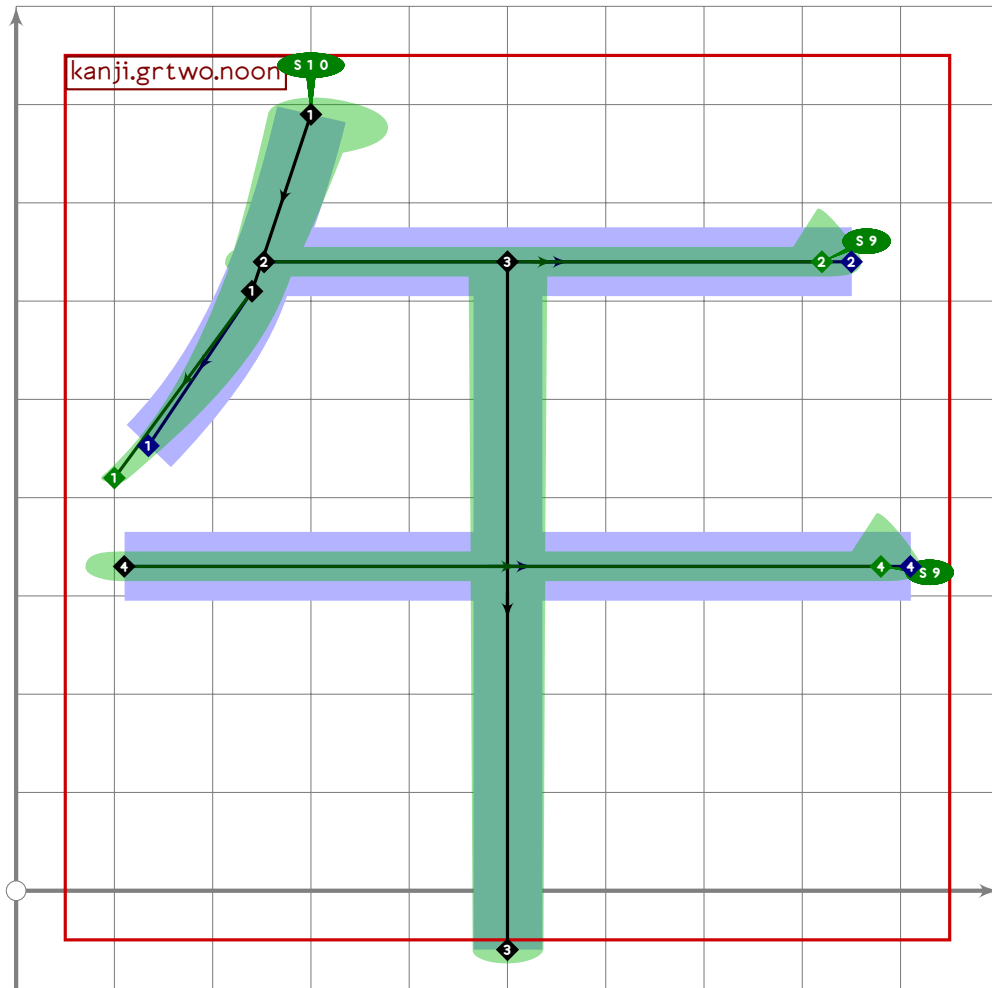
```



```

298
299 vardef tsu_curve.kanji.grtwo.neighbourhood =
300   push_pbox_toexpand("kanji.grtwo.neighbourhood");
301   build_kanji.box((230,760),(770,420));
302   push_stroke((230,590)-(770,590),(1.5,1.5)-(1.5,1.5));
303   push_stroke((500,760)-(500,0),(1.6,1.6)-(1.5,1.5));
304   push_stroke((160,210)-(840,210),(1.6,1.6)-(1.6,1.6));
305   set_boserif(0,1,9);
306   push_stroke((90,0)-(910,0),(1.6,1.6)-(1.6,1.6));
307   set_boserif(0,1,9);
308   for i=-6 upto 0: set_bosize(i,93); endfor;
309   expand_pbox;
310 enddef;

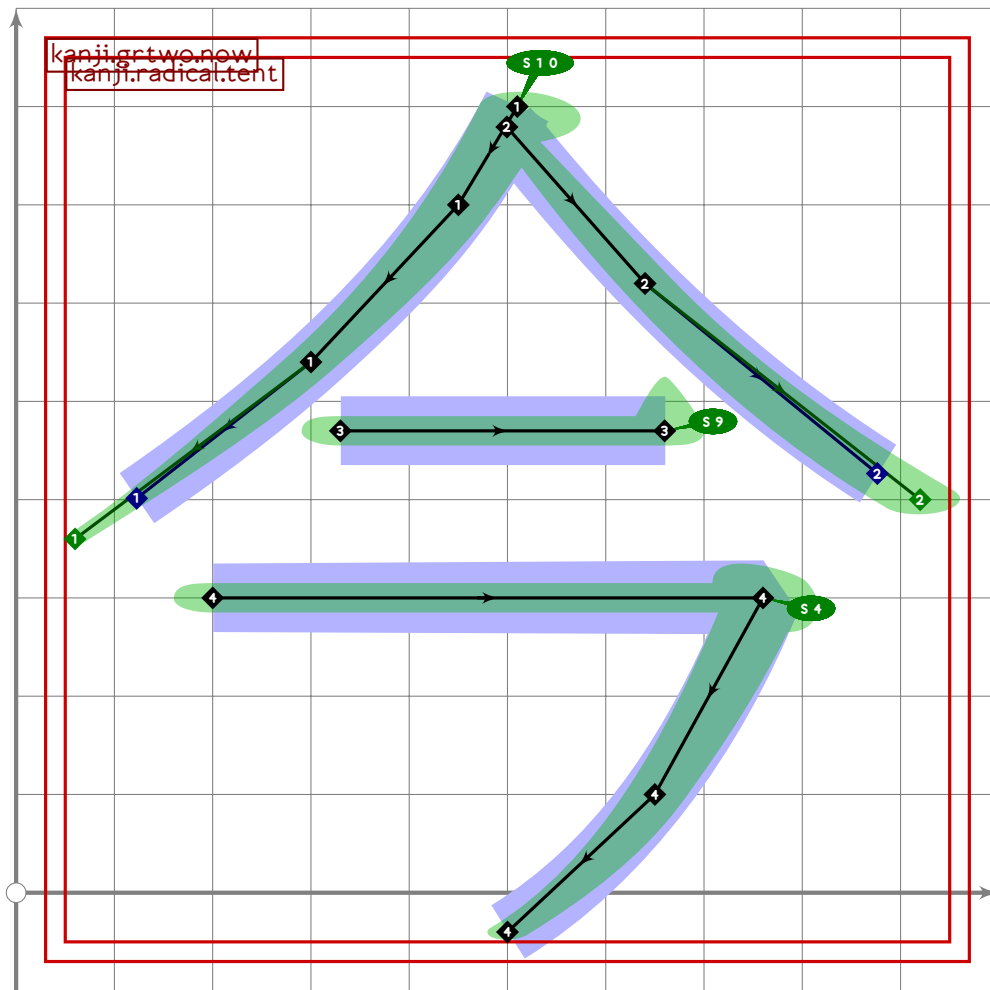
```



```

311
312 vardef tsu_curve.kanji.grtwo.noon =
313   push_pbox_toexpand("kanji.grtwo.noon");
314   push_stroke((300,790)..tension 1.2..(240,610)..(100,420),
315     (1.7,1.7)-(1.4,1.4)-(0.9,0.9));
316   set_boserif(0,0,10);
317   push_stroke((((0,640)-(1000,640)) intersectionpoint get_stroke(0))-
318     (850-30*mincho,640),
319     (1.6,1.6)-(1.6,1.6));
320   set_boserif(0,1,9);
321   push_stroke((500,640)-(500,-60),(1.6,1.6)-(1.5,1.5));
322   push_stroke((110,330)-(910-30*mincho,330),
323     (1.6,1.6)-(1.6,1.6));
324   set_boserif(0,1,9);
325   expand_pbox;
326 enddef;

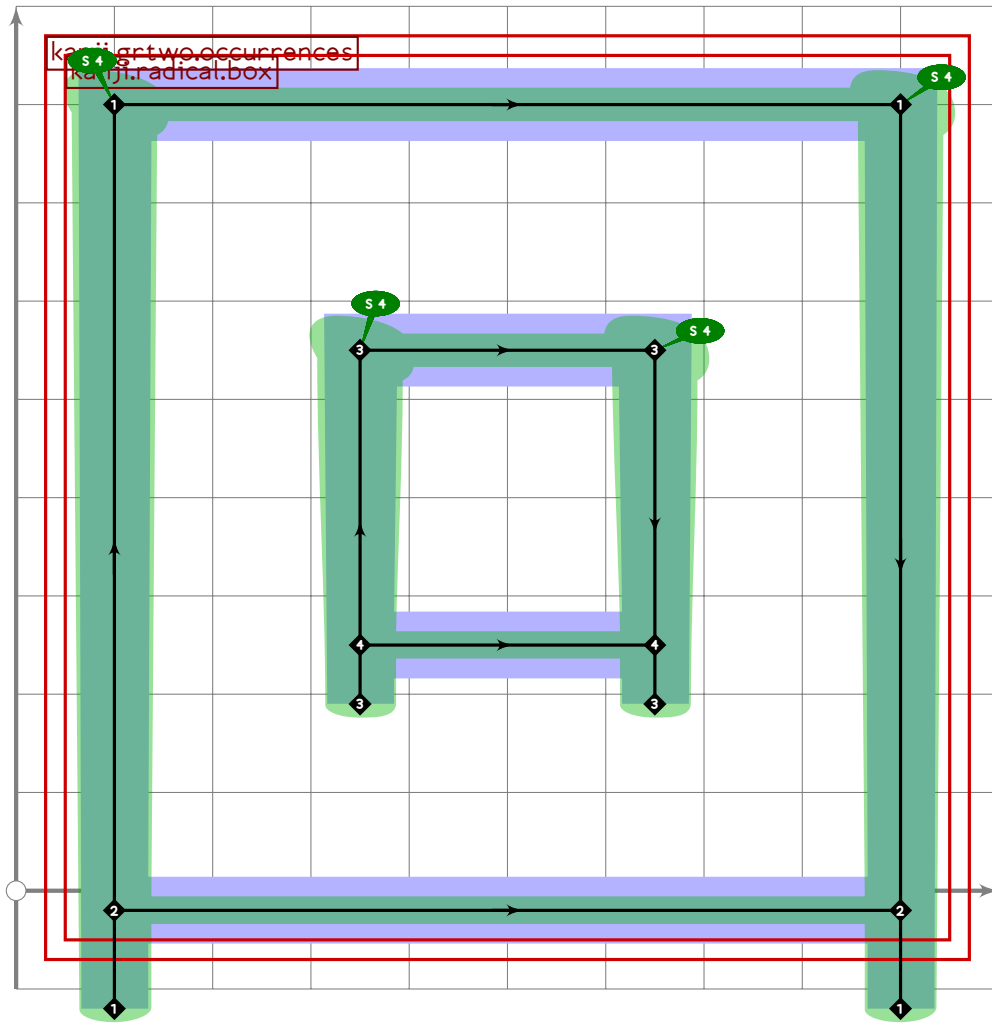
```



```

327
328 vardef tsu_curve.kanji.grtwo.now =
329   push_pbox_toexpand("kanji.grtwo.now");
330   tsu_curve.kanji.radical.tent;
331   push_stroke((200,300)-(760,300)..tension 1.2..(650,100)..(500,-40),
332     (1.6,1.6)-(1.6,1.6)-(1.4,1.4)-(1.1,1.1));
333   set_boserif(0,1,4);
334   set_botip(0,1,0);
335   expand_pbox;
336 enddef;

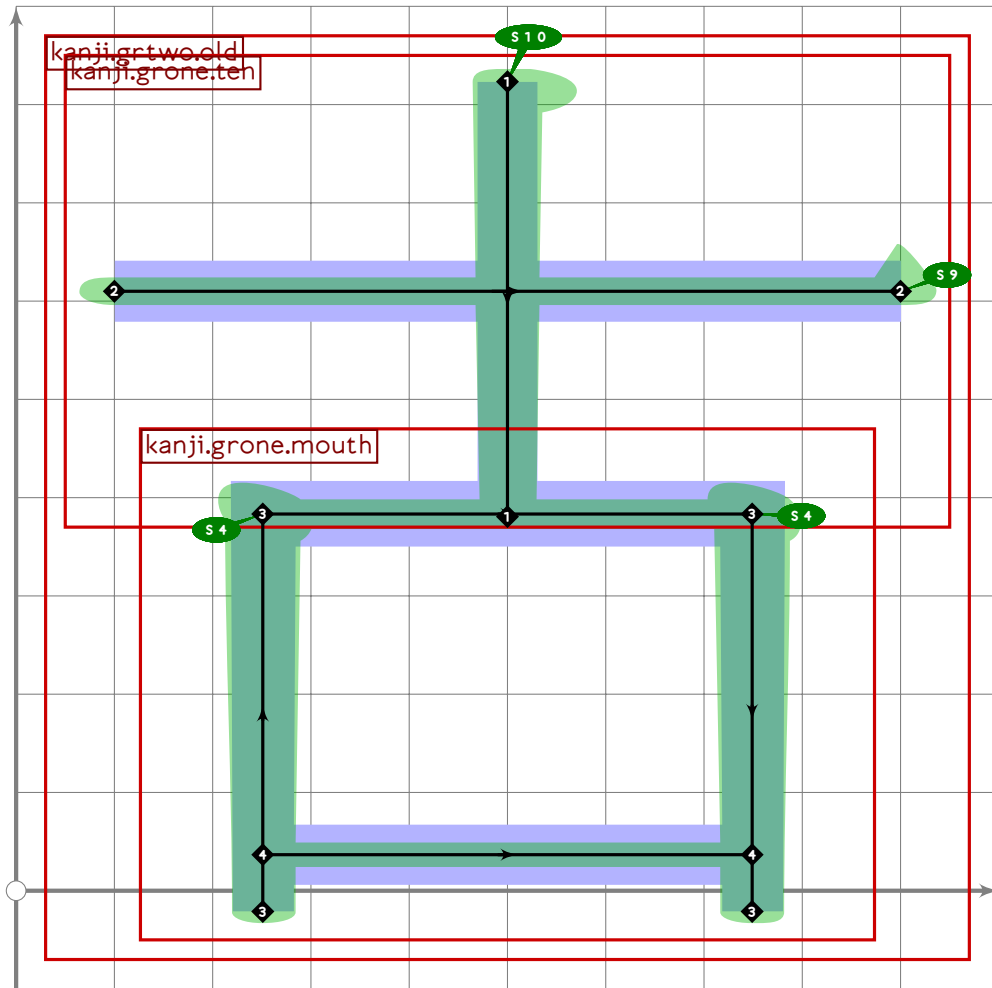
```

```

337
338 vardef tsu_curve.kanji.grtwo.occurrences =
339   push_pbox_toexpand("kanji.grtwo.occurrences");
340   tsu_curve.kanji.radical.box;
341   build_kanji.box((350,550),(650,250));
342   expand_pbox;
343 enddef;

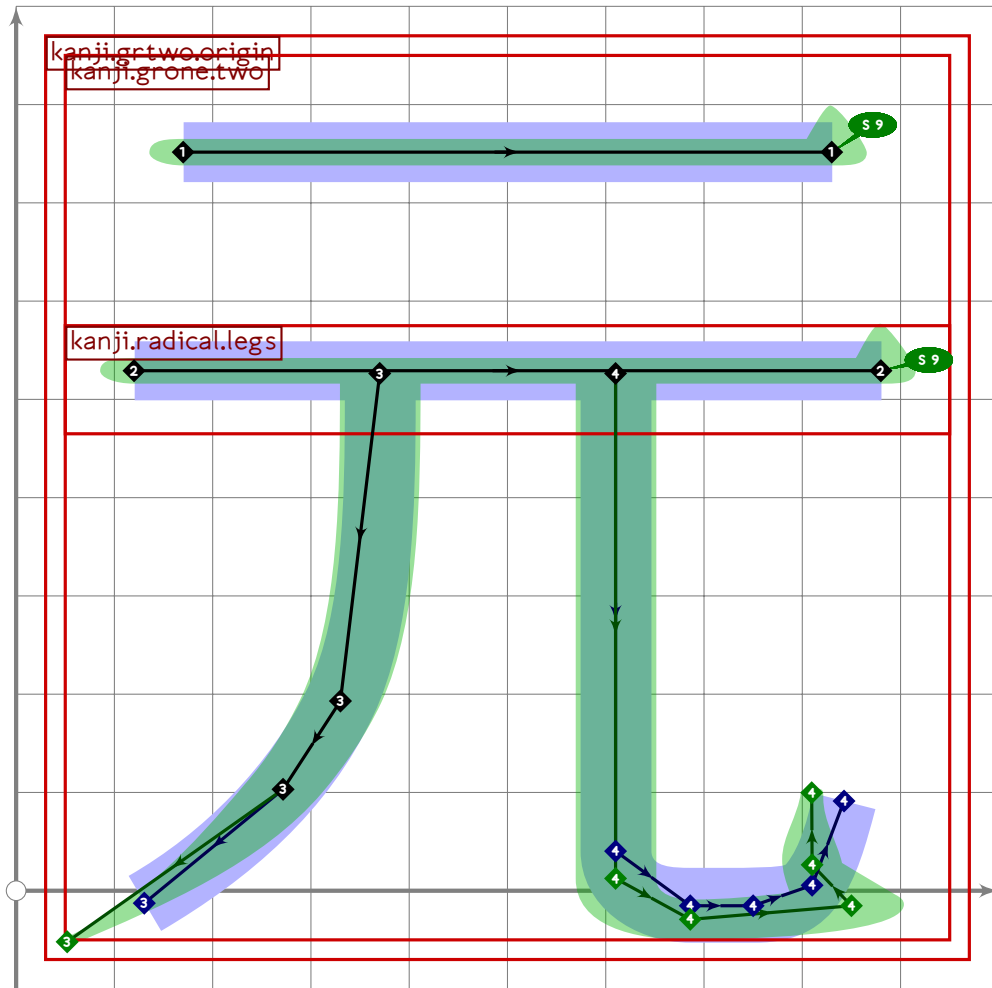
```



```

344
345 vardef tsu_curve.kanji.grtwo.old =
346   push_pbox_toexpand("kanji.grtwo.old");
347   build_kanji.level(build_kanji.tb(420,100)
348     (tsu_curve.kanji.grone.ten)
349     (build_kanji.sscale(xscaled 0.83)(tsu_curve.kanji.grone.mouth)));
350   expand_pbox;
351 enddef;

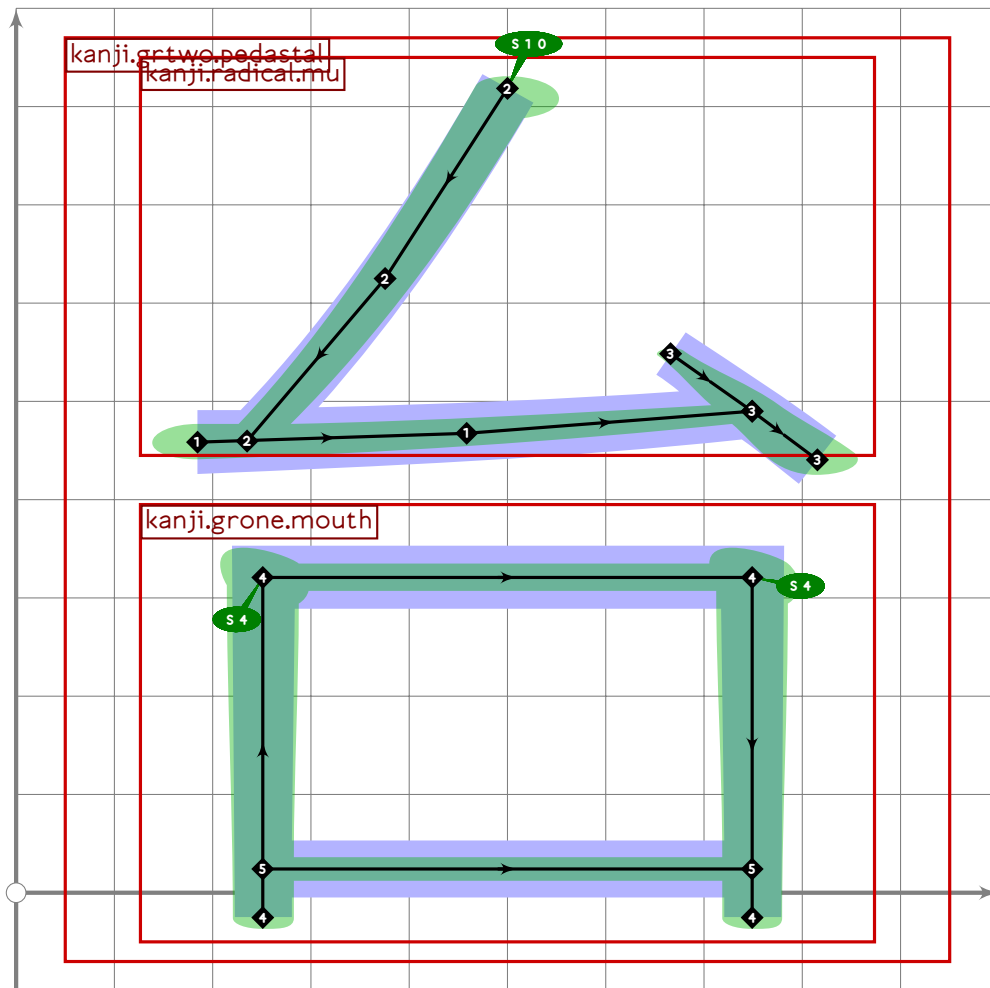
```



```

352
353 vardef tsu_curve.kanji.grtwo.origin =
354   push_pbox_toexpand("kanji.grtwo.origin");
355   build_kanji.tb(520,110)
356     (tsu_curve.kanji.grone.two)
357     (tsu_curve.kanji.radical.legs);
358   expand_pbox;
359 enddef;

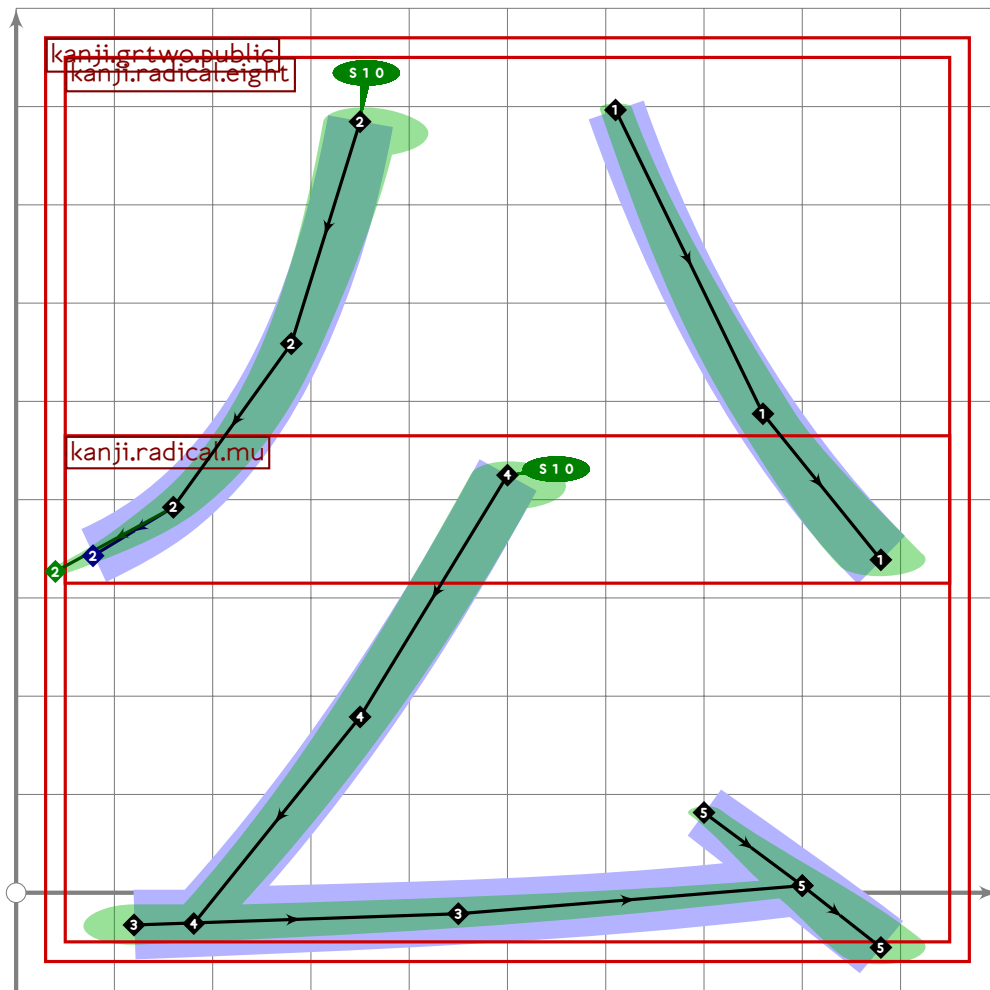
```



```

360
361 vardef tsu_curve.kanji.grtwo.pedestal =
362   push_pbox_toexpand("kanji.grtwo.pedestal");
363   build_kanji.sscale(xscaled 0.83)(
364     build_kanji.level(build_kanji.tb(420,-50)
365       (tsu_curve.kanji.radical.mu)
366       (tsu_curve.kanji.grone.mouth)));
367   expand_pbox;
368 enddef;

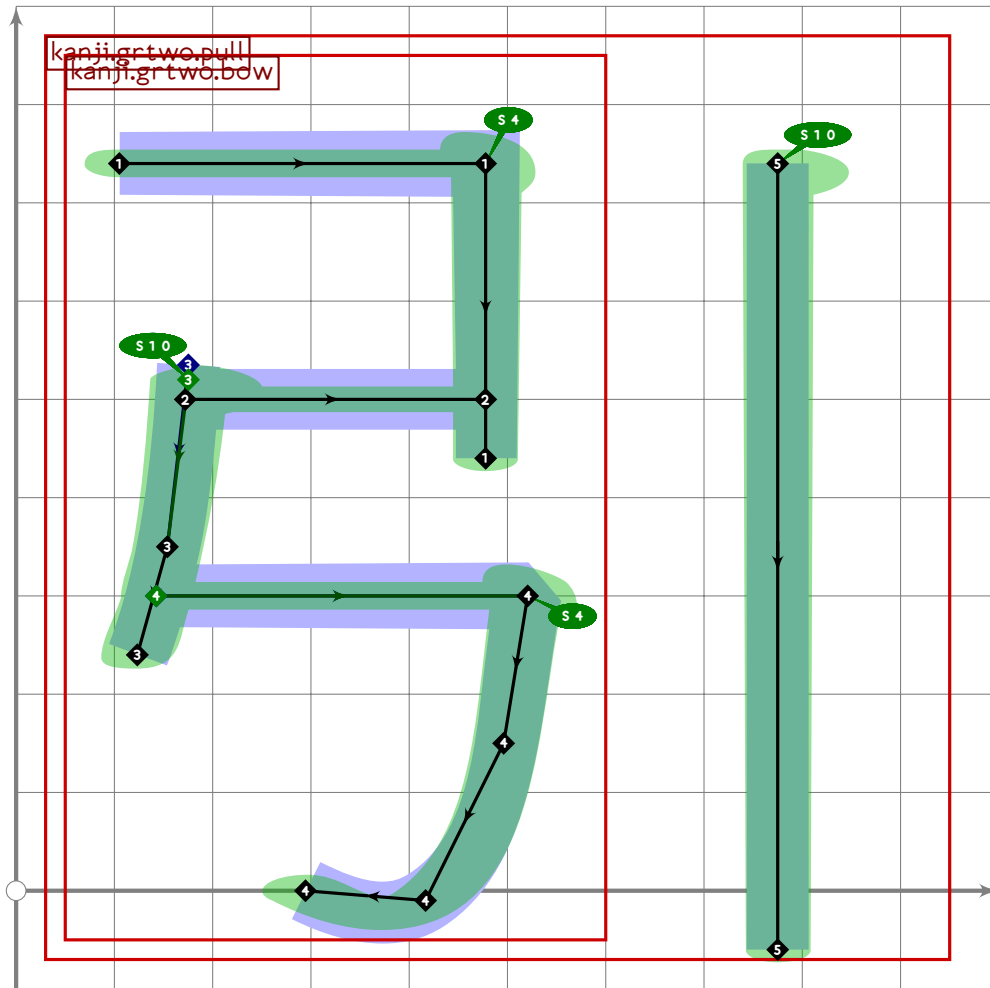
```



```

369
370 vardef tsu_curve.kanji.grtwo.public =
371   push_pbox_toexpand("kanji.grtwo.public");
372   build_kanji.level(build_kanji.tb(390,150)
373     (tsu_curve.kanji.radical.eight)
374     (tsu_curve.kanji.radical.mu));
375   expand_pbox;
376 enddef;

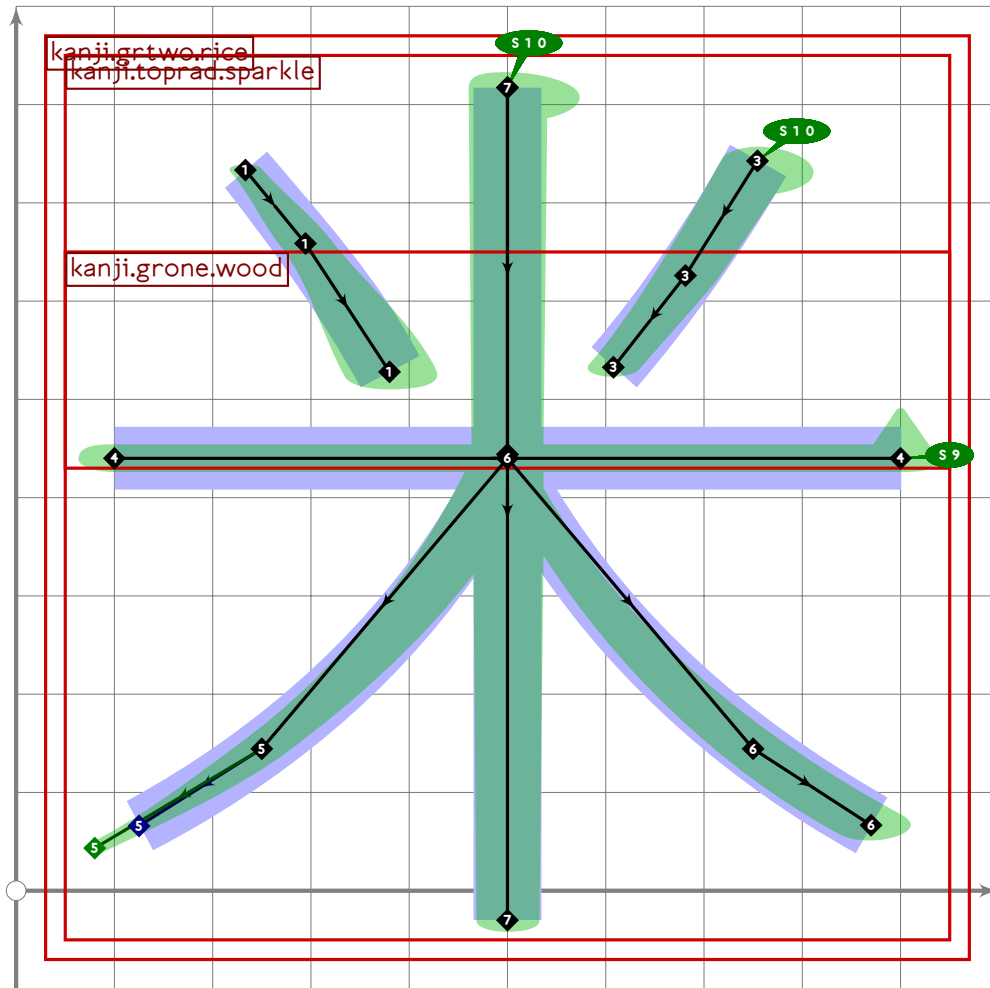
```



```

377
378 vardef tsu_curve.kanji.grtwo.pull =
379   push_pbox_toexpand("kanji.grtwo.pull");
380   build_kanji.level(build_kanji.lr(600,0)
381     (tsu_curve.kanji.grtwo.bow)
382     (push_stroke((500,740)-(500,-60),(1,6,1,6)-(1,5,1,5)));
383     set_boserif(0,0,10);
384   );
385   expand_pbox;
386 enddef;

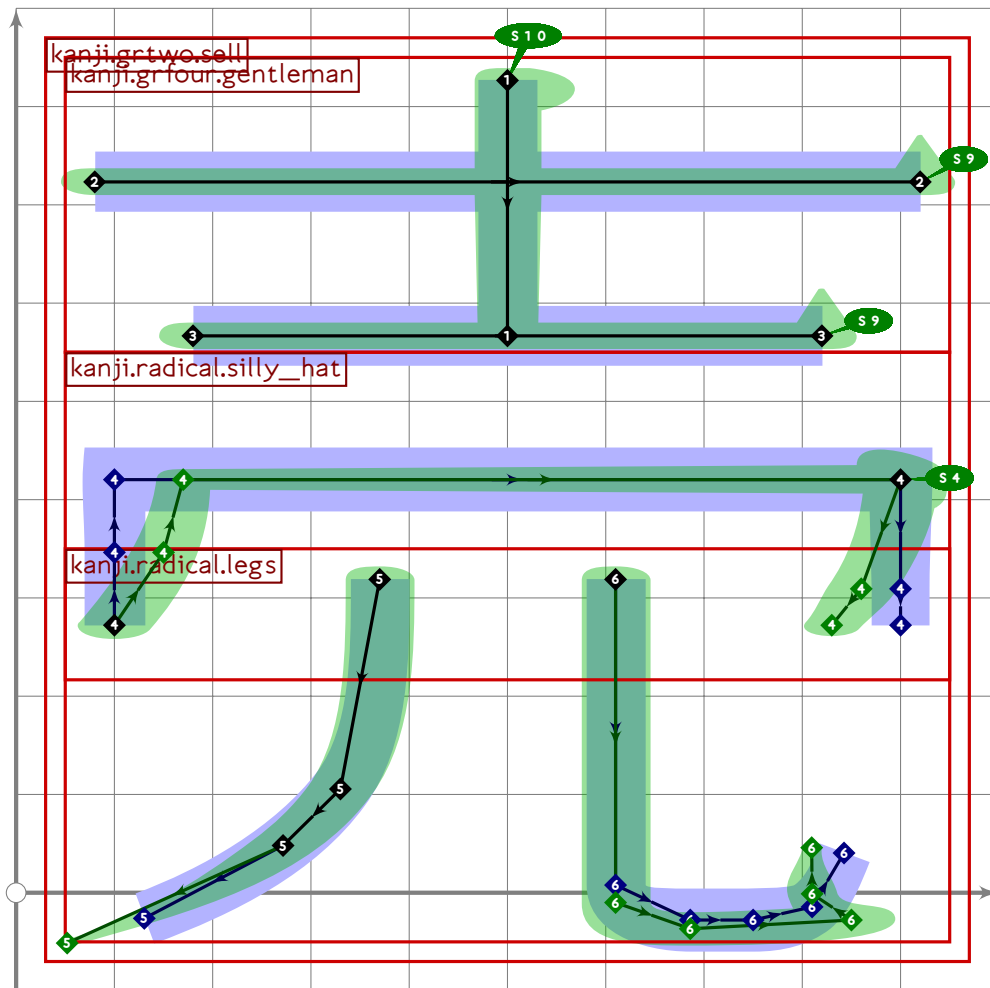
```



```

387
388 vardef tsu_curve.kanji.grtwo.rice =
389   push_pbox_toexpand("kanji.grtwo.rice");
390   build_kanji.level(build_kanji.tb(540,220)
391     (build_kanji.spread_legs(-200)(tsu_curve.kanji.toprad.sparkle))
392     (tsu_curve.kanji.grone.wood));
393   set_bosize(-3,0);
394   push_stroke(
395     (point 0 of get_stroke(-5))-(xpart point 0 of get_stroke(-5),30),
396     (1.6,1.6)-(1.4,1.4));
397   expand_pbox;
398 enddef;

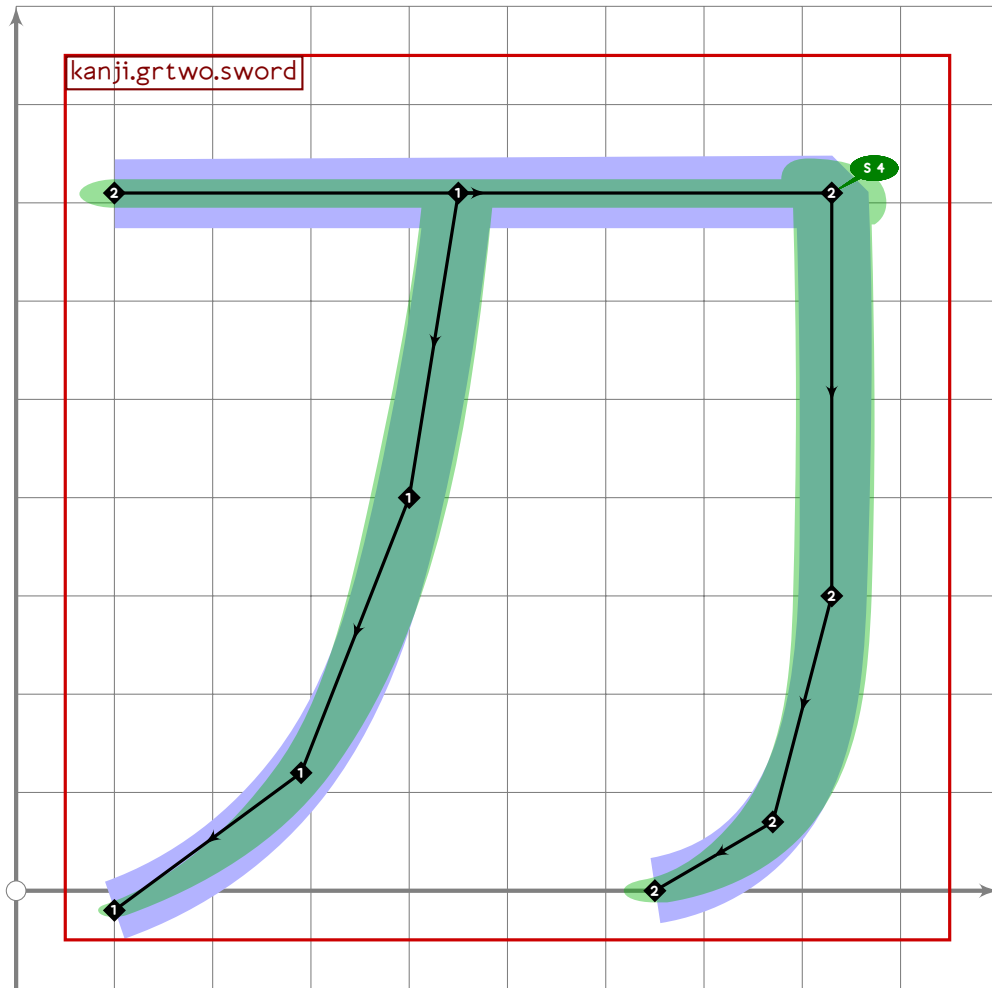
```



```

399
400 vardef tsu_curve.kanji.grtwo.sell =
401   push_pbox_toexpand("kanji.grtwo.sell");
402   build_kanji.level(build_kanji.tb(550,0)
403     (tsu_curve.kanji.grfour.gentleman)
404     (build_kanji.tb(450,200)
405       (tsu_curve.kanji.radical.silly_hat;
406         set_bosize(-1,0))
407       (tsu_curve.kanji.radical.legs)));
408   expand_pbox;
409 enddef;

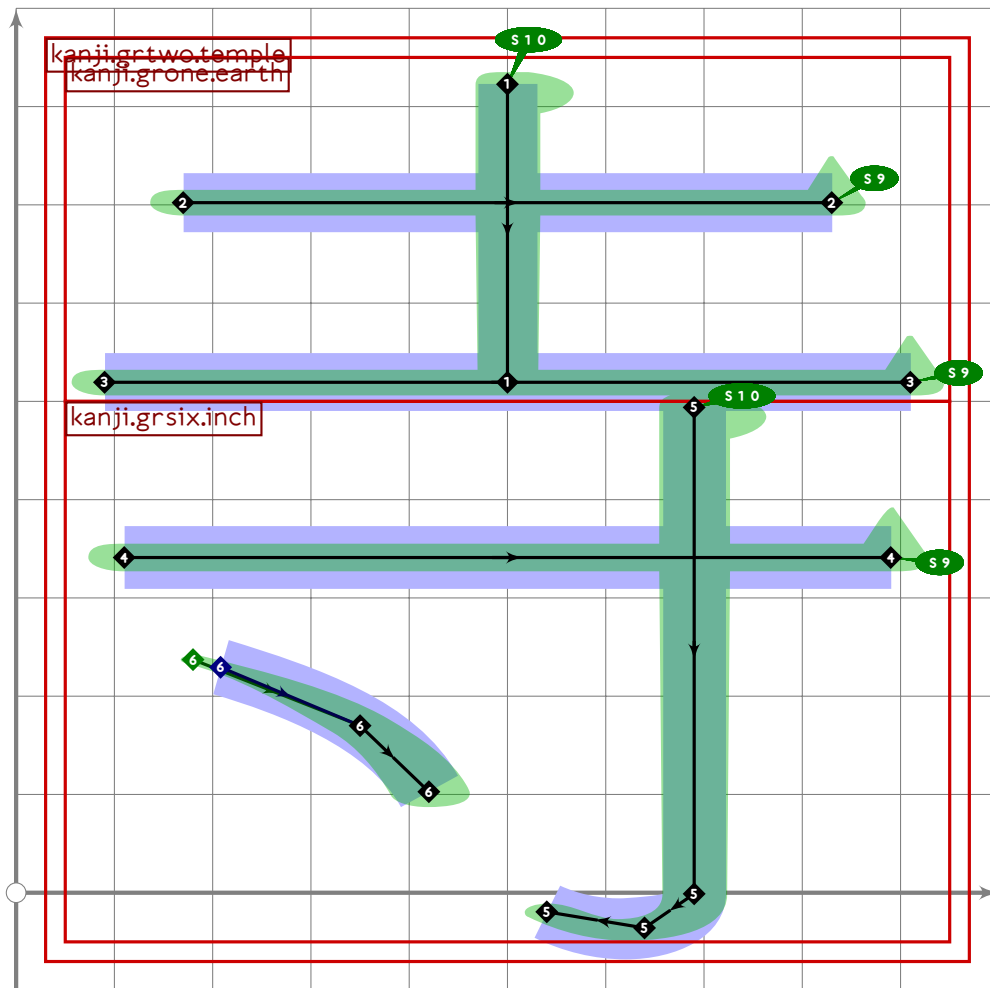
```

```

410
411 vardef tsu_curve.kanji.grtwo.sword =
412   push_pbox_toexpand("kanji.grtwo.sword");
413   push_stroke((450,710)..(400,400)..(290,120)..(100;-20),
414     (1.5,1.5)-(1.6,1.6)-(1.3,1.3)-(1,1));
415   push_stroke((100,710)-(830,710)..tension 1.1..(830,300)..(770,70)..(650,0),
416     (1.5,1.5)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.4,1.4));
417   set_botip(0,1,0);
418   set_boserif(0,1,4);
419   expand_pbox;
420 enddef;

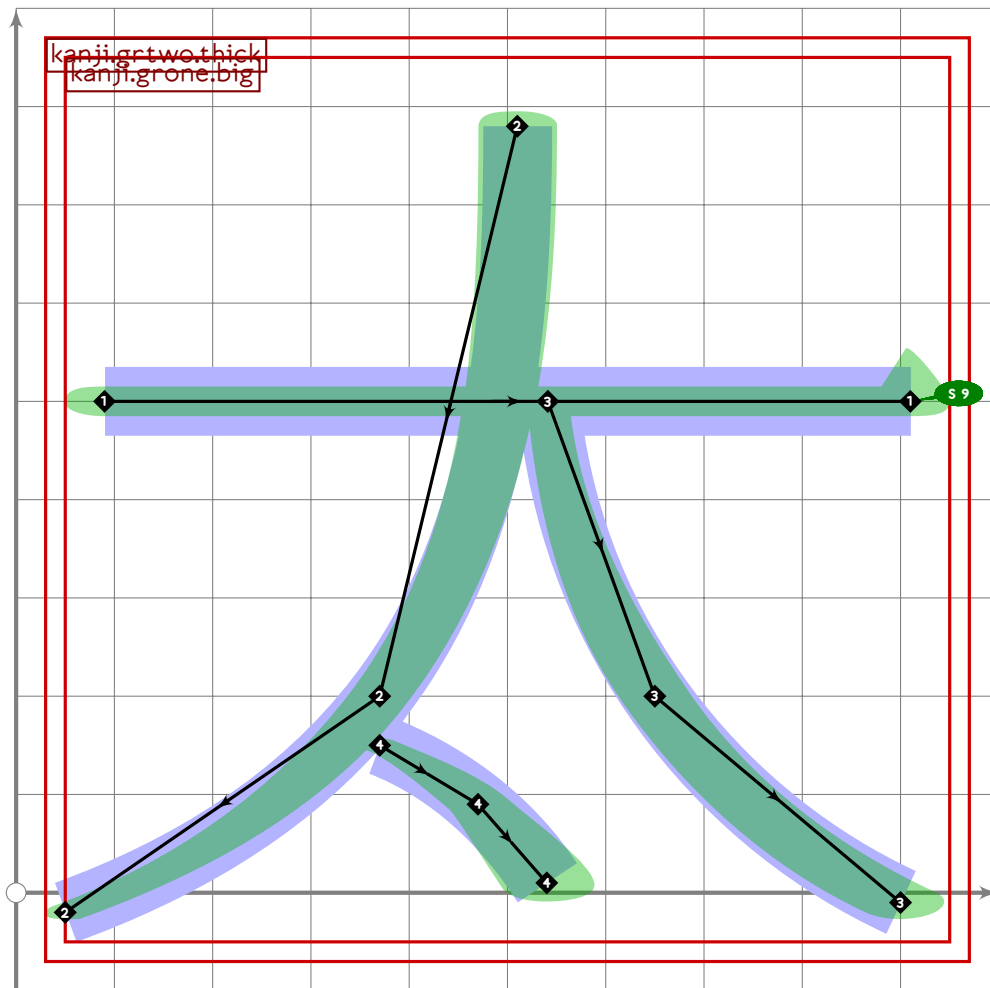
```



```

421
422 vardef tsu_curve.kanji.grtwo.temple =
423   push_pbox_toexpand("kanji.grtwo.temple");
424   build_kanji.tb(500,0)
425     (tsu_curve.kanji.grone.earth)
426     (tsu_curve.kanji.grsix.inch;
427     replace_strokep(-1)((point 0 of oldp)*(0,60))
428     -(subpath (1,infinity) of oldp)));
429   expand_pbox;
430 enddef;

```



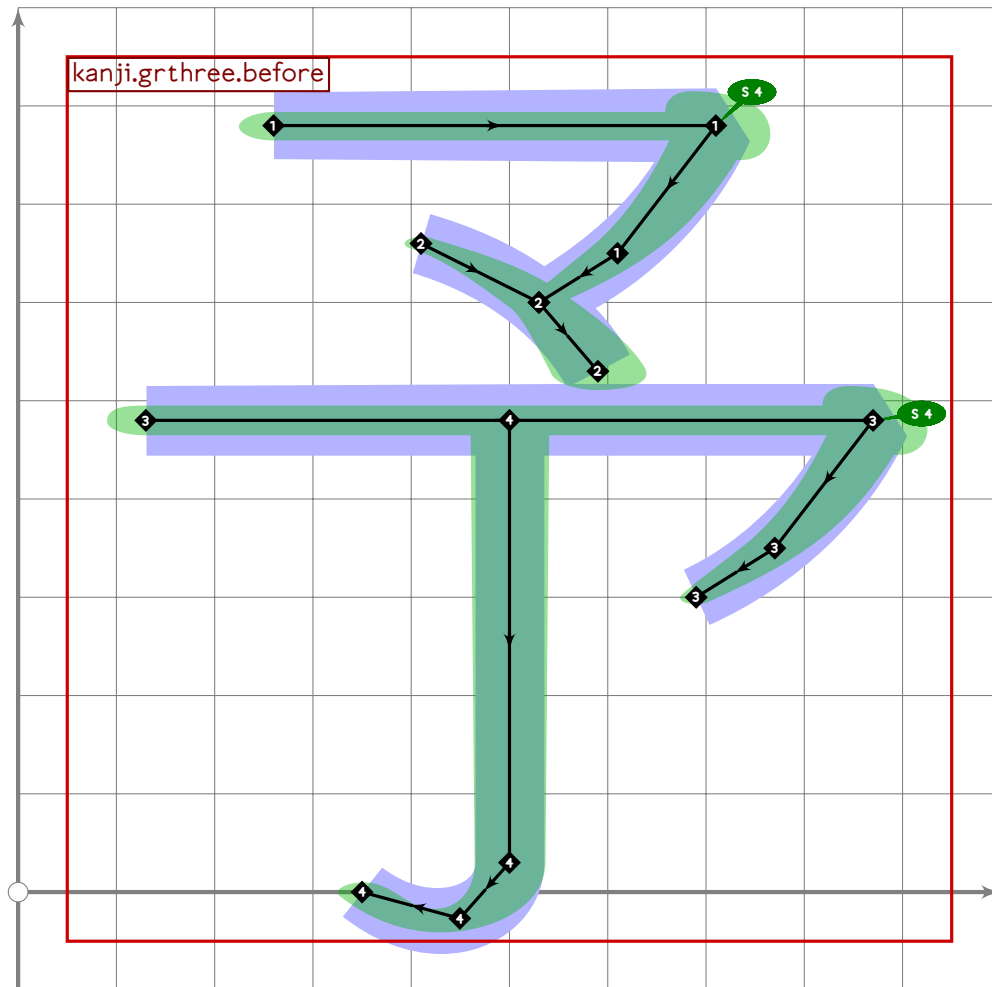
```

431
432 vardef tsu_curve.kanji.grtwo.thick =
433   push_pbox_toexpand("kanji.grtwo.thick");
434   tsu_curve.kanji.grone.big;
435   push_stroke((370,150)..(470,90)..(540,10),
436     (1,1)-(1.4,1.4)-(1.8,1.8));
437   expand_pbox;
438 enddef;

```

gradethree.mp

```
1 %  
2 % Grade Three kanji used on more than one page  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31
```

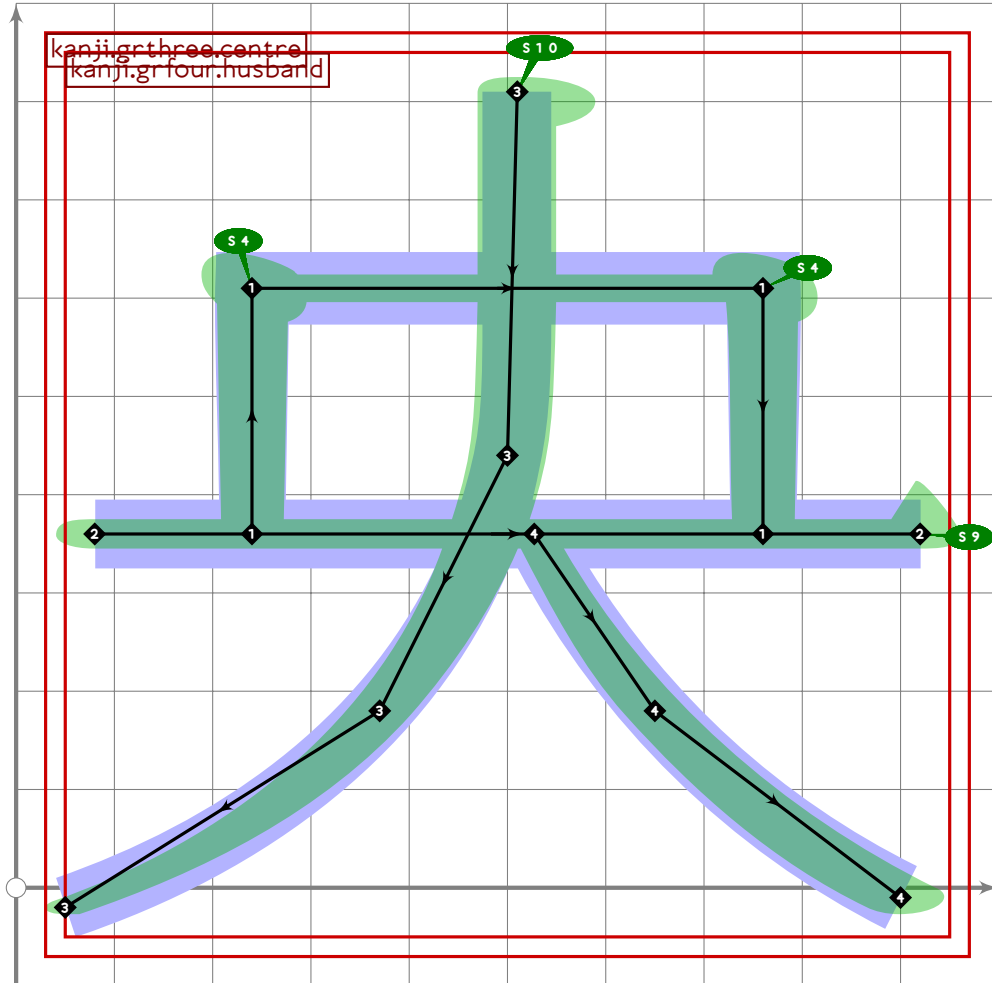


```
32  
33 vardef tsu_curve.kanji.grthree.before =  
34   push_pbox_toexpand("kanji.grthree.before");  
35   push_stroke((260,780)-(710,780)..(610,650)..(530,600),  
36     (1.5,1.5)-(1.6,1.6)-(1.4,1.4)-(1,1));  
37   set_boserif(0,1,4);  
38   set_botip(0,1,0);  
39   push_stroke((410,660)..tension 1.2..(530,600)..(590,530),  
40     (1,1)-(1.4,1.4)-(1.8,1.8));  
41   push_stroke((130,480)-(870,480)..(770,350)..(690,300),  
42     (1.6,1.6)-(1.6,1.6)-(1.4,1.4)-(1,1));  
43   set_boserif(0,1,4);
```

```

44 set_botip(0,1,0);
45 push_stroke((500,480),
46 (1.6,1.6));
47 build_kanji.add_jtail(0);
48 expand_pbox;
49 endif;

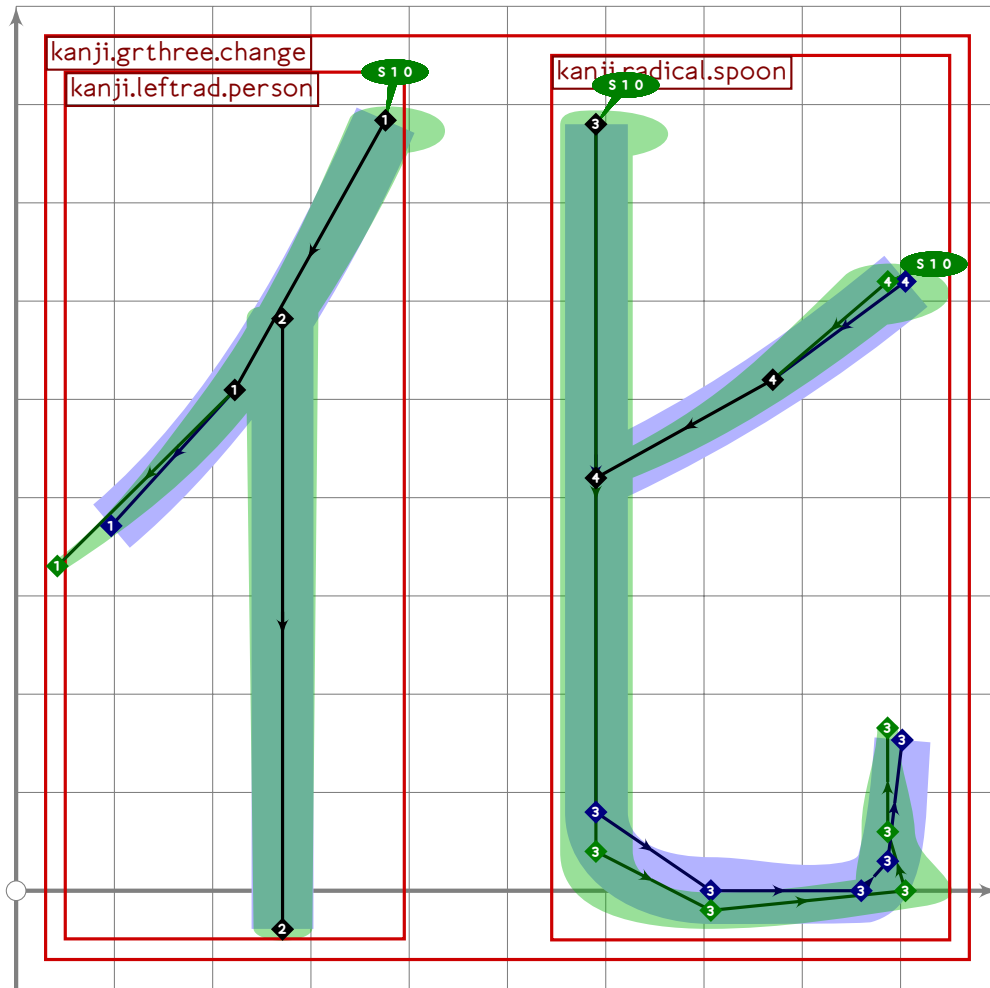
```



```

50
51 vardef tsu_curve.kanji.grthree.centre =
52 push_pbox_toexpand("kanji.grthree.centre");
53 tsu_curve.kanji.grfour.husband;
54 replace_stroke(-3)((240,360)-(240,610)-(760,610)-(760,360));
55 replace_strokeq(-3)((1.4,1.4)-(1.5,1.5)-(1.5,1.5)-(1.4,1.4));
56 set_boserif(-3,1,4);
57 set_boserif(-3,2,4);
58 set_botip(-3,1,1);
59 set_botip(-3,2,1);
60 expand_pbox;
61 endif;

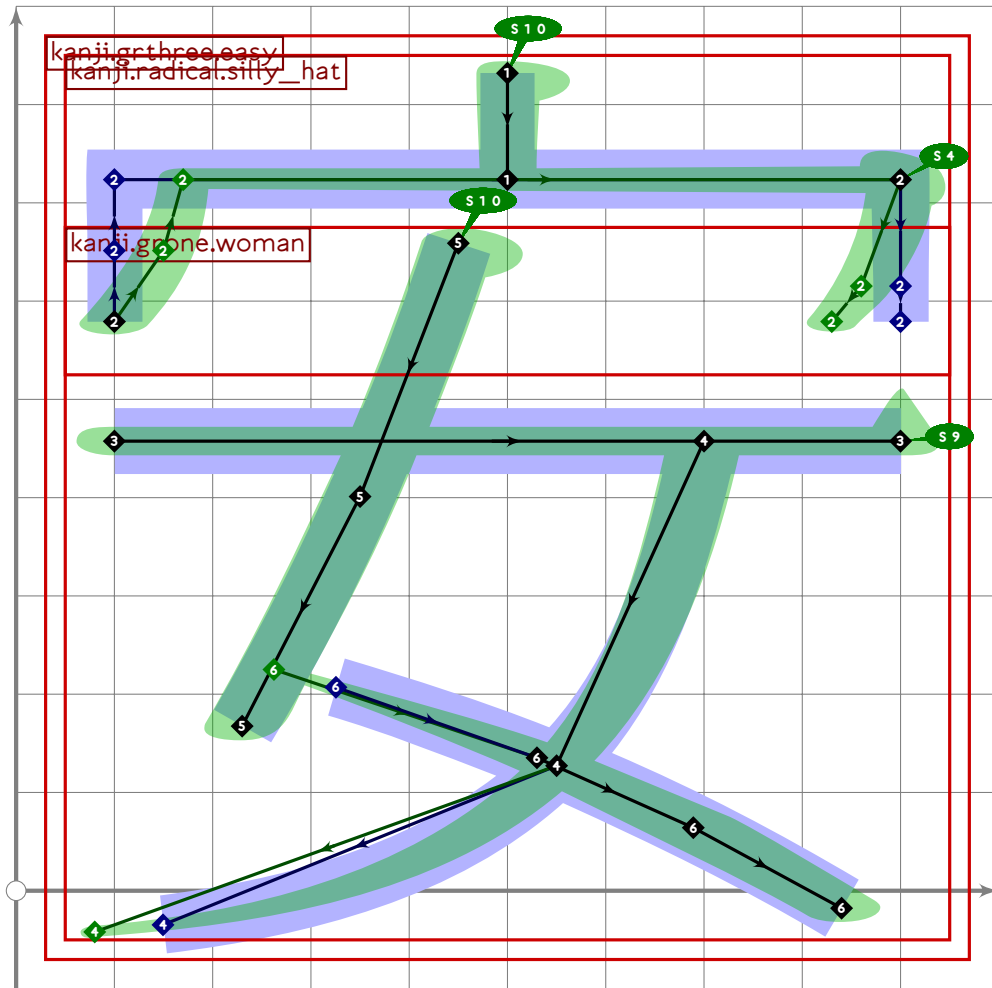
```



```

62
63 vardef tsu_curve.kanji.grthree.change =
64   push_pbox_toexpand("kanji.grthree.change");
65   build_kanji.level(build_kanji.lr(470;-150)
66     (tsu_xform(identity yscaled 0.98)(tsu_curve.kanji.leftrad.person))
67     (tsu_curve.kanji.radical.spoon));
68   set_boserif(0,0,10);
69   expand_pbox;
70 enddef;

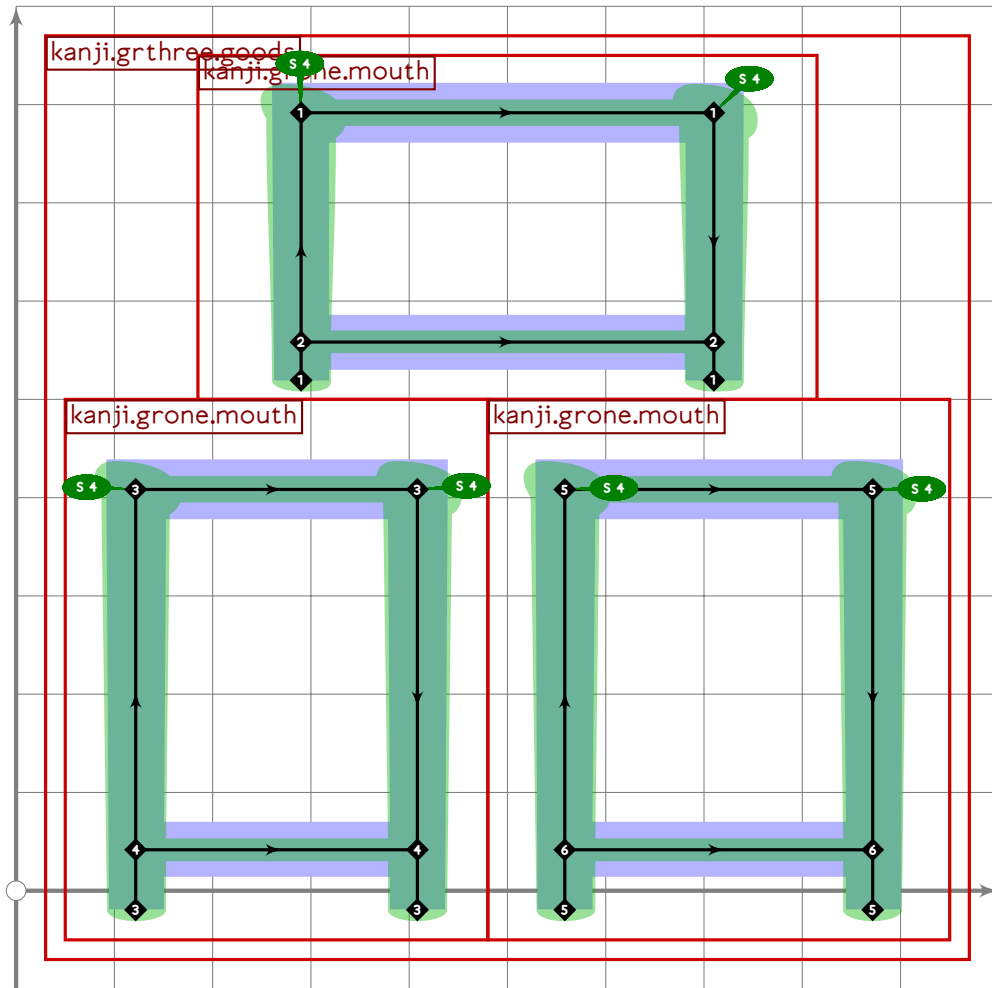
```



```

71
72 vardef tsu_curve.kanji.grthree.easy =
73   push_pbox_toexpand("kanji.grthree.easy");
74   build_kanji.tb(600,150)
75     (tsu_curve.kanji.radical.silly_hat)
76     (tsu_curve.kanji.grone.woman);
77   expand_pbox;
78 enddef;

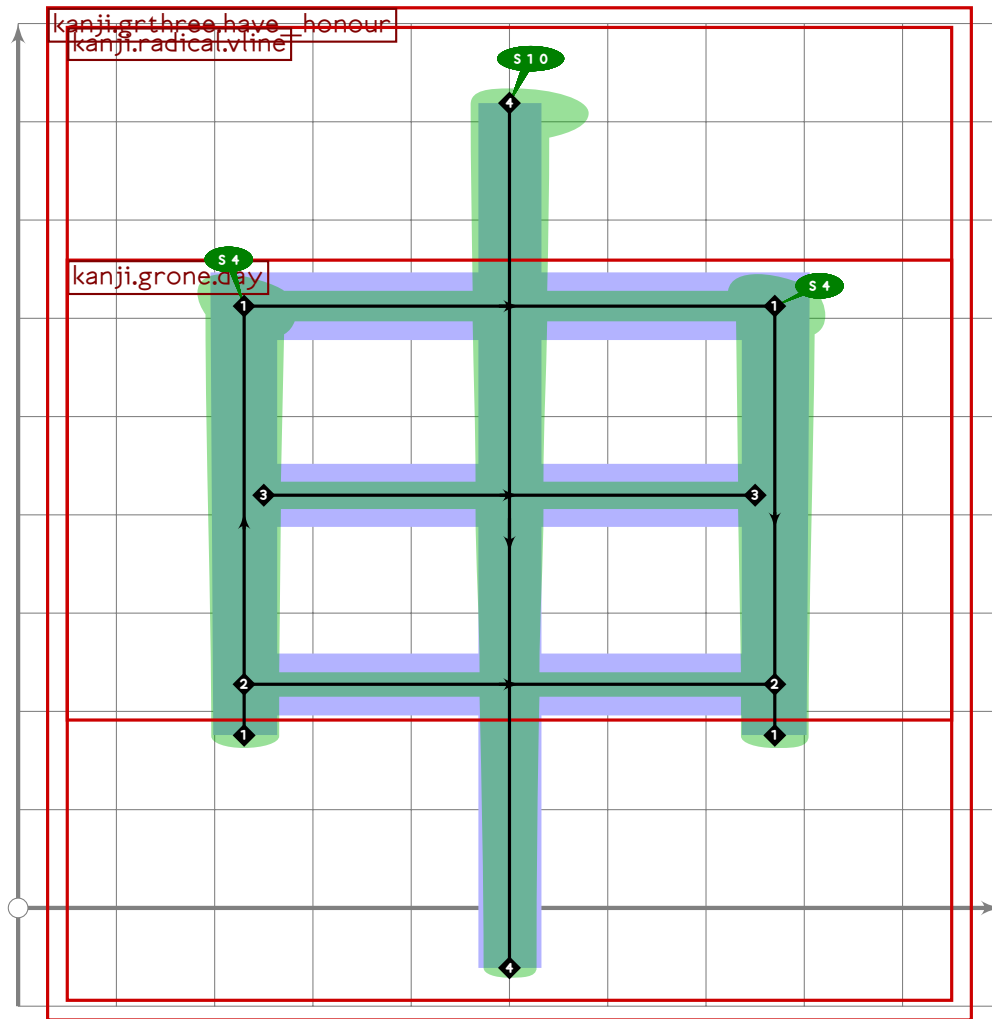
```



```

79
80 vardef tsu_curve.kanji.grthree.goods =
81   push_pbox_toexpand("kanji.grthree.goods");
82   build_kanji.level(build_kanji.tricluster(0.7)
83     (tsu_curve.kanji.grone.mouth)
84     (tsu_curve.kanji.grone.mouth)
85     (tsu_curve.kanji.grone.mouth));
86   expand_pbox;
87 enddef;

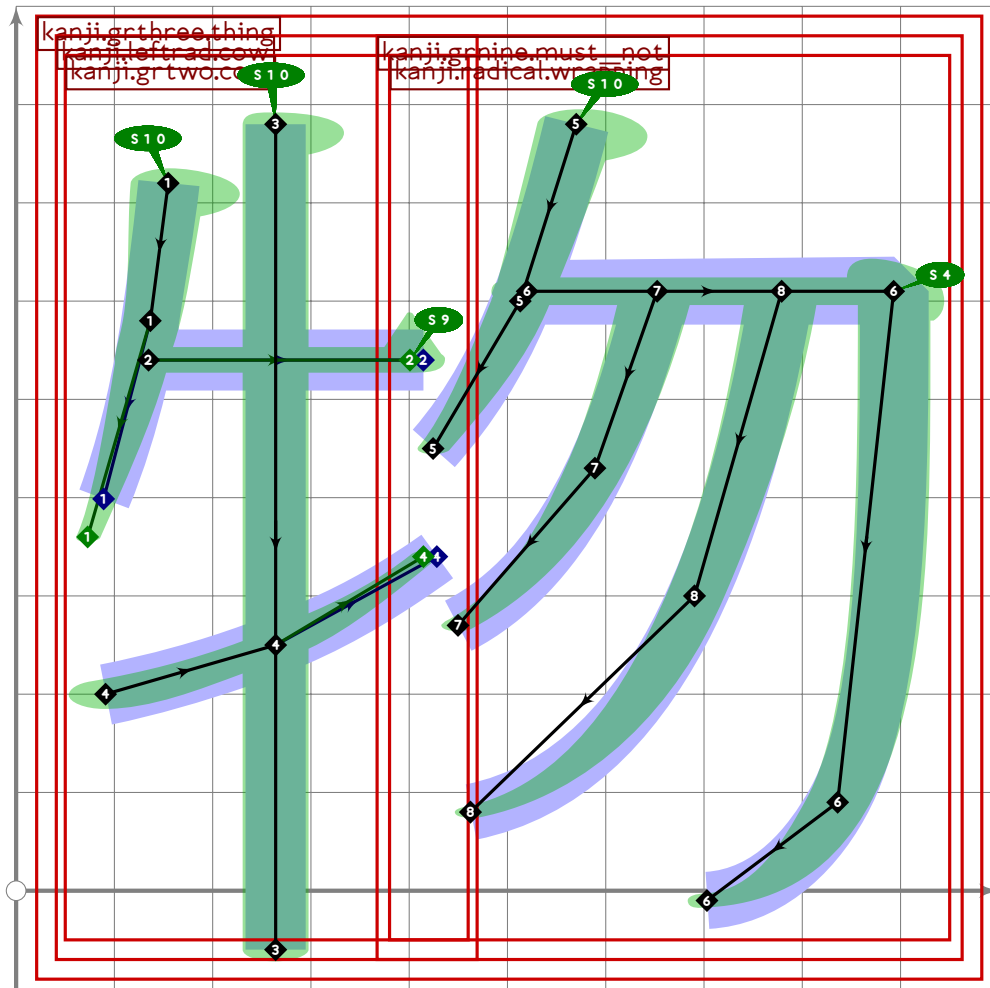
```

```

88
89 vardef tsu_curve.kanji.grthree.have_honour =
90   push_pbox_toexpand("kanji.grthree.have_honour");
91   build_kanji.level(
92     build_kanji.sscale(yscaled 0.52 shifted (0,30))(tsu_curve.kanji.grone.day);
93     build_kanji.sscale(yscaled 1.1)(tsu_curve.kanji.radical.vline));
94   expand_pbox;
95 enddef;

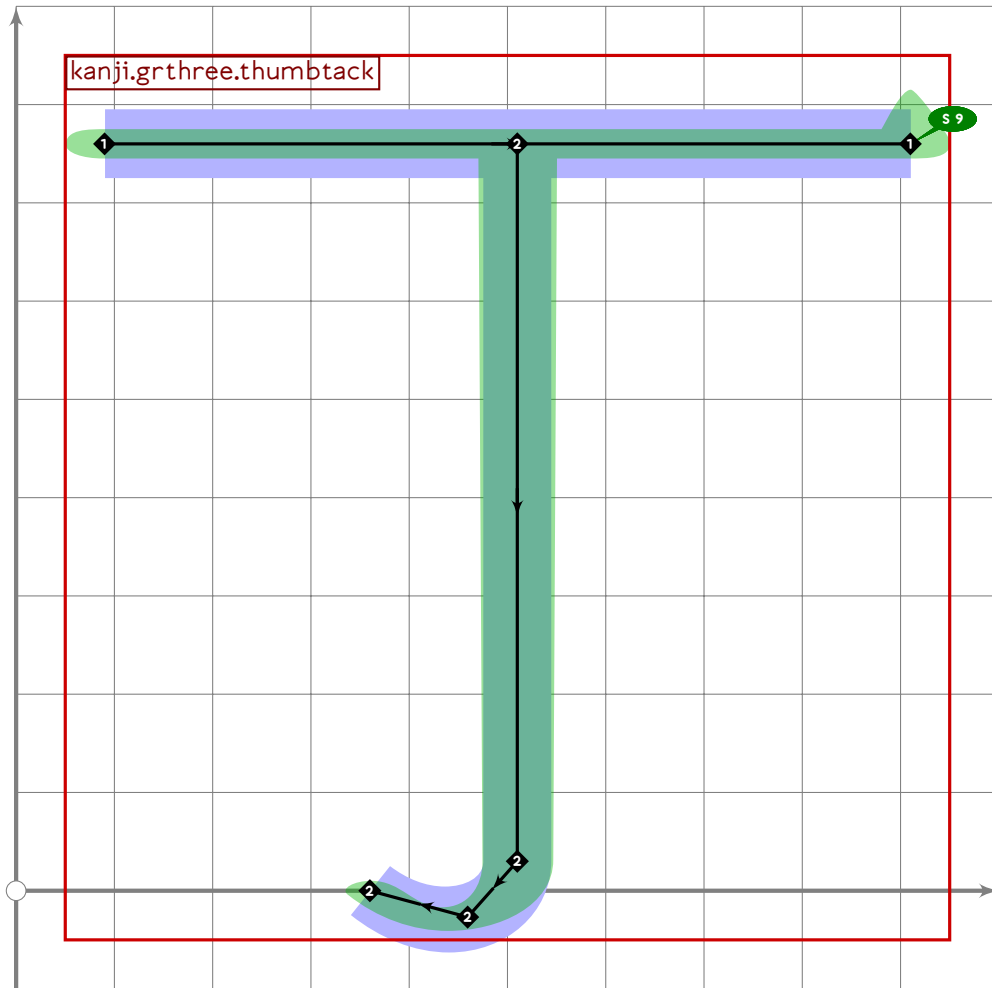
```



```

96
97 vardef tsu_curve.kanji.grthree.thing =
98   push_pbox_toexpand("kanji.grthree.thing");
99   push_stroke((500,810),(1.6,1.6));
100  set_boserif(0,0,10);
101  build_kanji.add_jtail(0);
102  push_stroke((80,720)-(920,720),(1.6,1.6)-(1.6,1.6));
103  set_boserif(0,1,9);
104  build_kanji.box((230,630),(770,500));
105  tsu_xform(identity yscaled 0.37 shifted (0,100))
106    (tsu_curve.kanji.radical.pigs_snout);
107  for i=-7 upto 0: set_bosize(i,85); endfor;
108  expand_pbox;
109 enddef;

```



```

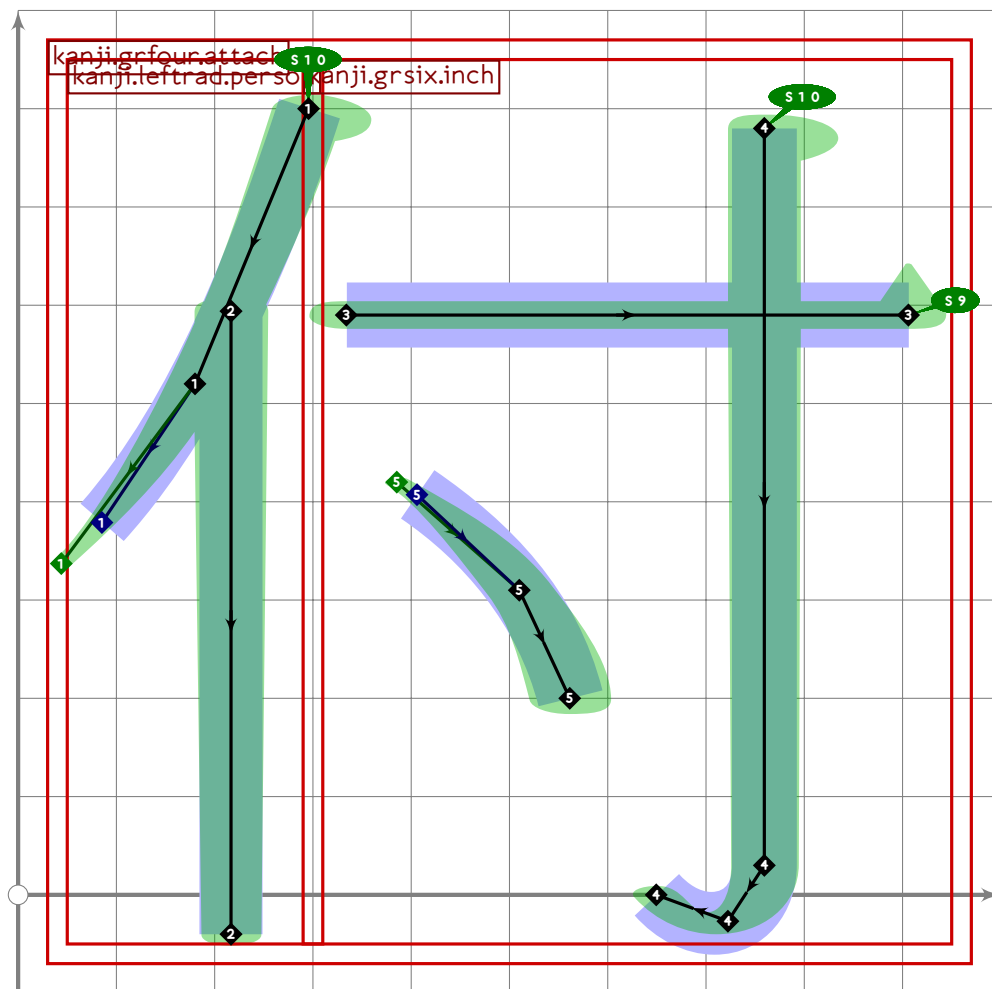
110
111 vardef tsu_curve.kanji.grthree.thumbtack =
112   push_pbox_toexpand("kanji.grthree.thumbtack");
113   push_stroke((90,760)-(910,760),(1.6,1.6)-(1.6,1.6));
114   set_boserif(0,1,9);
115   push_stroke((510,760),(1.6,1.6));
116   build_kanji.add_jtail(0);
117   expand_pbox;
118 enddef;

```

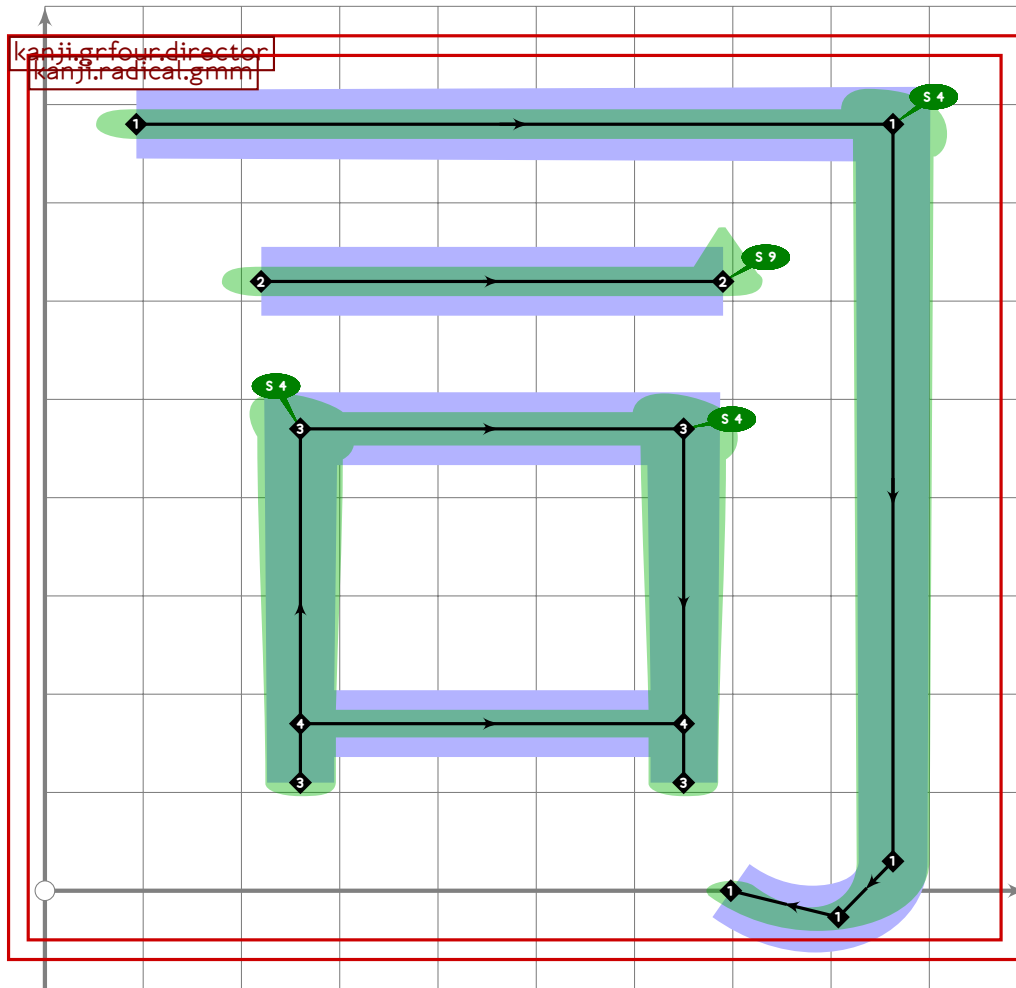
gradefour.mp

```
1 %  
2 % Grade Four kanji used on more than one page  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]
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30  
31
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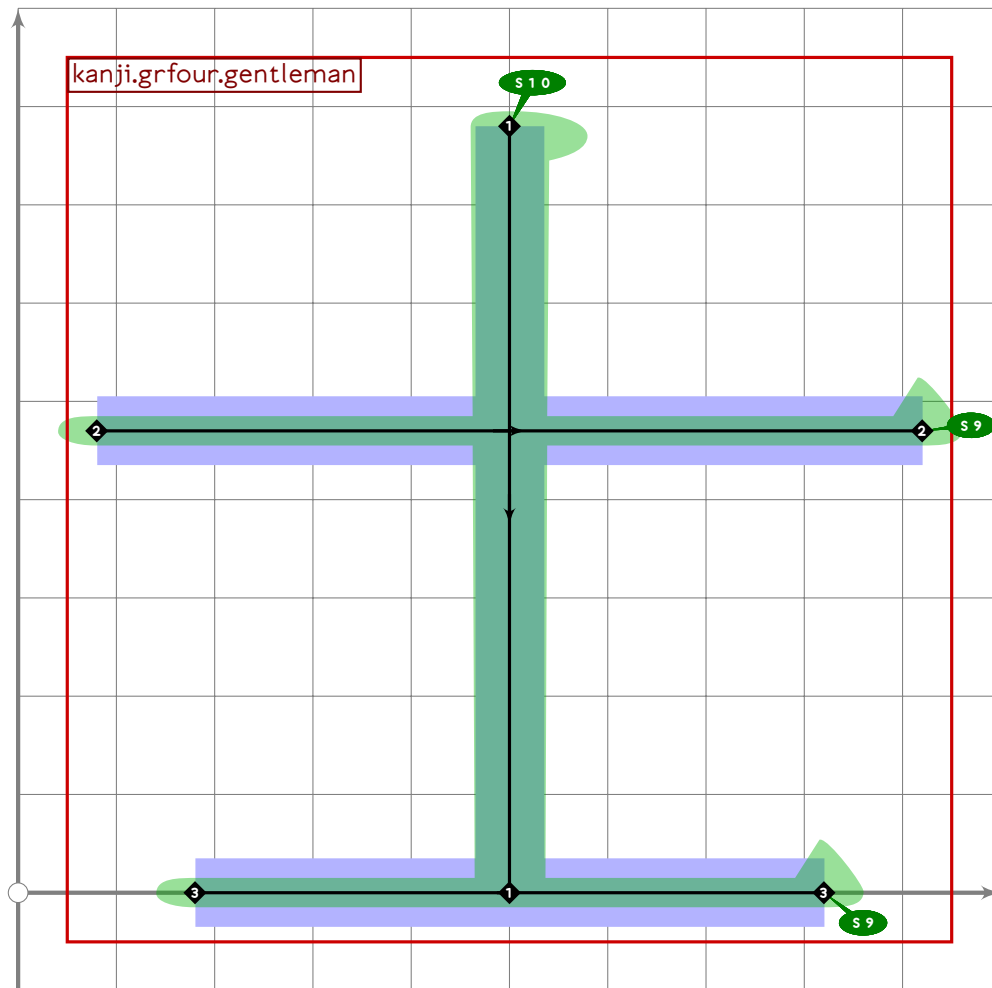
```
32  
33 vardef tsu_curve.kanji.grfour.attach =  
34   push_pbox_toexpand("kanji.grfour.attach");  
35   build_kanji.lr(300,20)  
36     (tsu_curve.kanji.leftrad.person)  
37     (tsu_curve.kanji.grsix.inch);  
38   expand_pbox;  
39 enddef;
```



```

40
41 vardef tsu_curve.kanji.grfour.director =
42   push_pbox_toexpand("kanji.grfour.director");
43   build_kanji.sscale(shifted (-20,0) xscaled 1.1)
44     (tsu_curve.kanji.radical.gmm);
45   replace_stroke(0)(subpath (2,infinity) of oldp);
46   replace_strokeq(0)(subpath (2,infinity) of oldq);
47   set_botip(0,1,4);
48   set_boserif(0,1,4);
49   set_botip(0,2,whatever);
50   set_boserif(0,2,whatever);
51   set_botip(0,3,whatever);
52   set_boserif(0,3,whatever);
53   push_stroke((220,620)-(690,620),
54     (1.6,1.6)-(1.6,1.6));
55   set_boserif(0,1,9);
56   build_kanji.box((260,470),(650,170));
57   expand_pbox;
58 enddef;

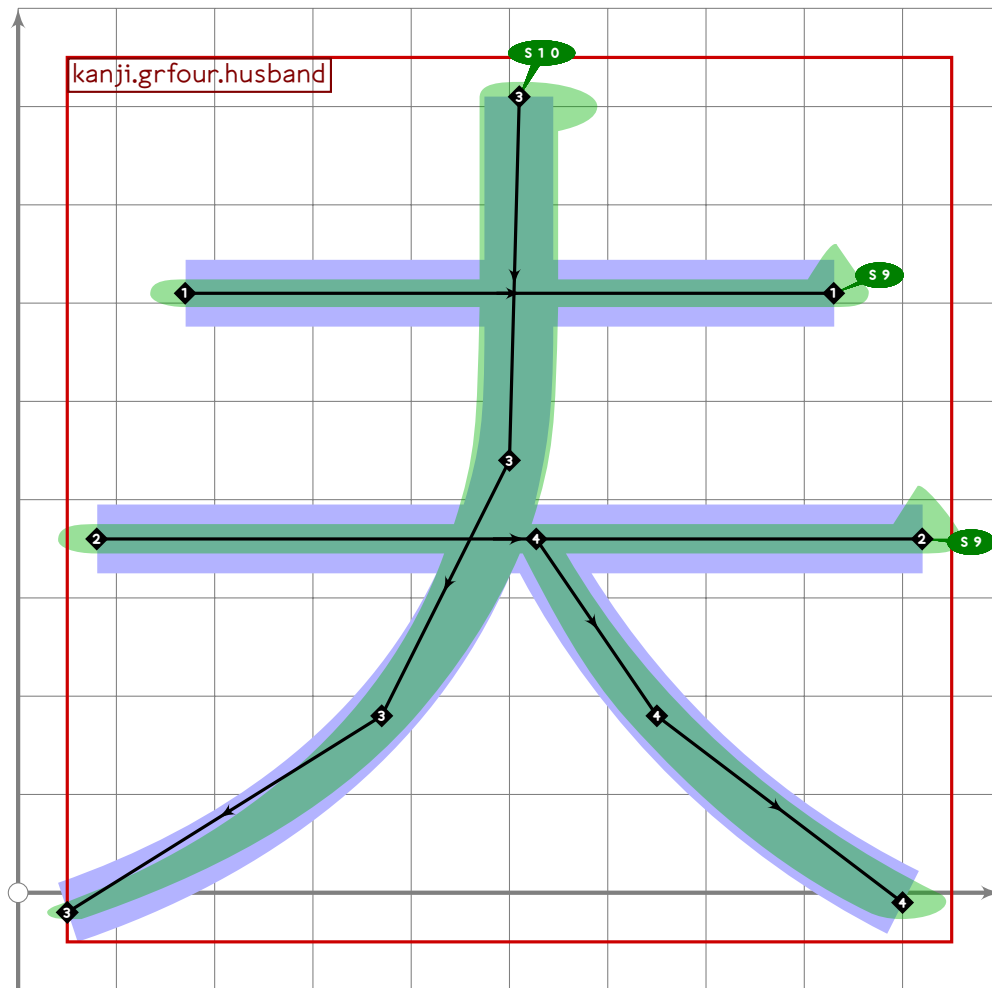
```



```

59
60 vardef tsu_curve.kanji.grfour.gentleman =
61   push_pbox_toexpand("kanji.grfour.gentleman");
62   push_stroke((500,780)-(500,0),
63     (1.6,1.6)-(1.5,1.5));
64   set_boserif(0,0,10);
65   push_stroke((80,470)-(920,470),
66     (1.6,1.6)-(1.6,1.6));
67   set_boserif(0,1,9);
68   push_stroke((180,0)-(820,0),
69     (1.6,1.6)-(1.6,1.6));
70   set_boserif(0,1,9);
71   expand_pbox;
72 enddef;

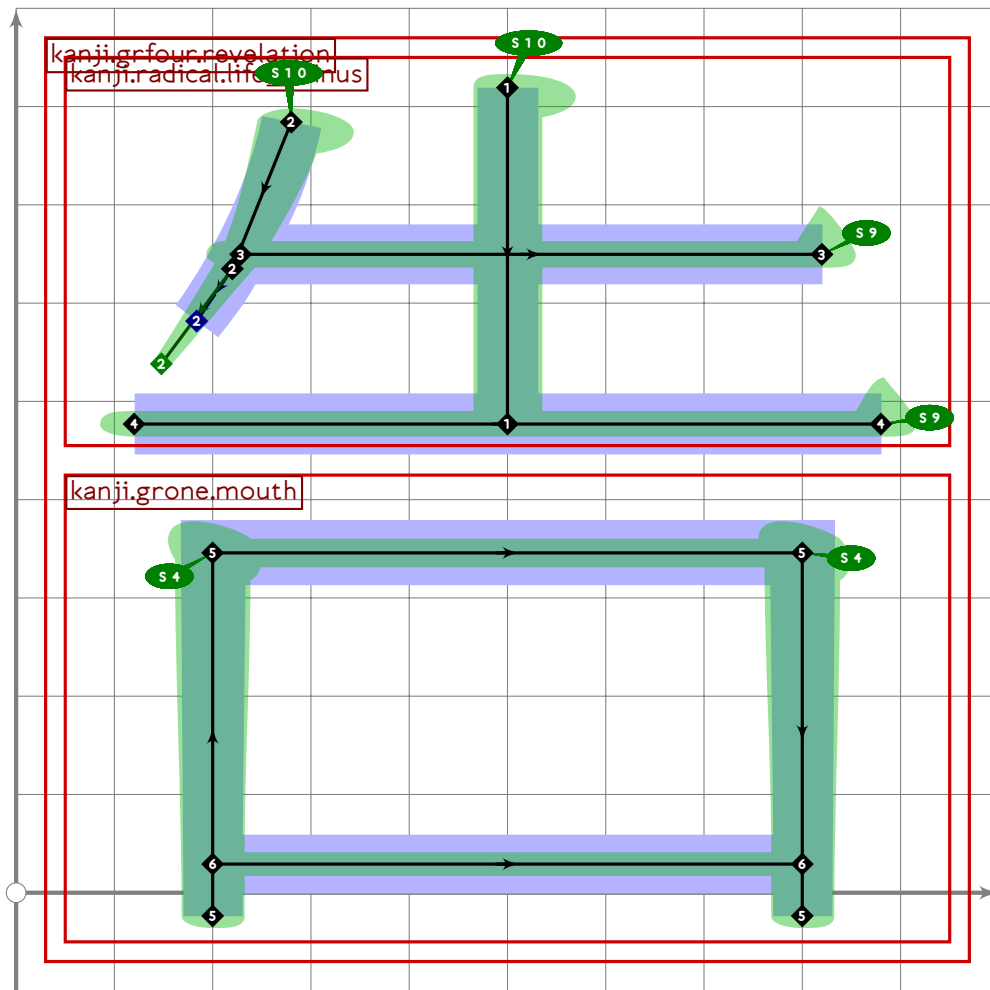
```



```

73
74 vardef tsu_curve.kanji.grfour.husband =
75   push_pbox_toexpand("kanji.grfour.husband");
76   push_stroke((170,610)-(830,610),
77     (1.5,1.5)-(1.5,1.5));
78   set_boserif(0,1,9);
79   push_stroke((80,360)-(920,360),
80     (1.6,1.6)-(1.6,1.6));
81   set_boserif(0,1,9);
82   push_stroke((510,810){down}..(500,440)..(370,180)..{curl 0.5}(50,-20),
83     (1.6,1.6)-(1.6,1.6)-(1.4,1.4)-(1.1,1.1));
84   set_boserif(0,0,10);
85   push_stroke(((get_strokep(-1) intersectionpoint get_strokep(0))*(50,0)..
86     (650,180)..(900,-10),
87     (1.1,1.1)-(1.4,1.4)-(1.7,1.7));
88   expand_pbox;
89 enddef;

```



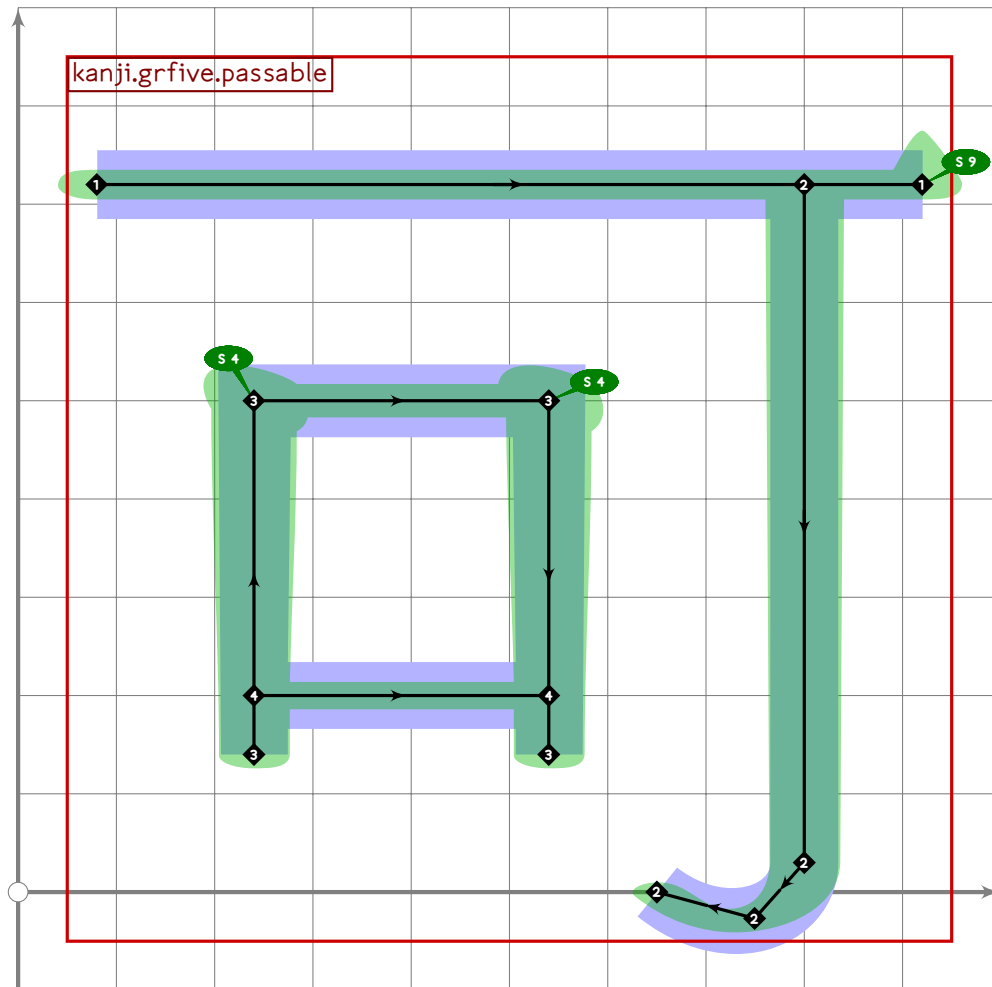
```

90
91 vardef tsu_curve.kanji.grfour.revelation =
92   push_pbox_toexpand("kanji.grfour.revelation");
93   build_kanji.level(build_kanji.tb(440;30)
94     (tsu_curve.kanji.radical.life_minus)
95     (tsu_curve.kanji.grone.mouth));
96   expand_pbox;
97 enddef;

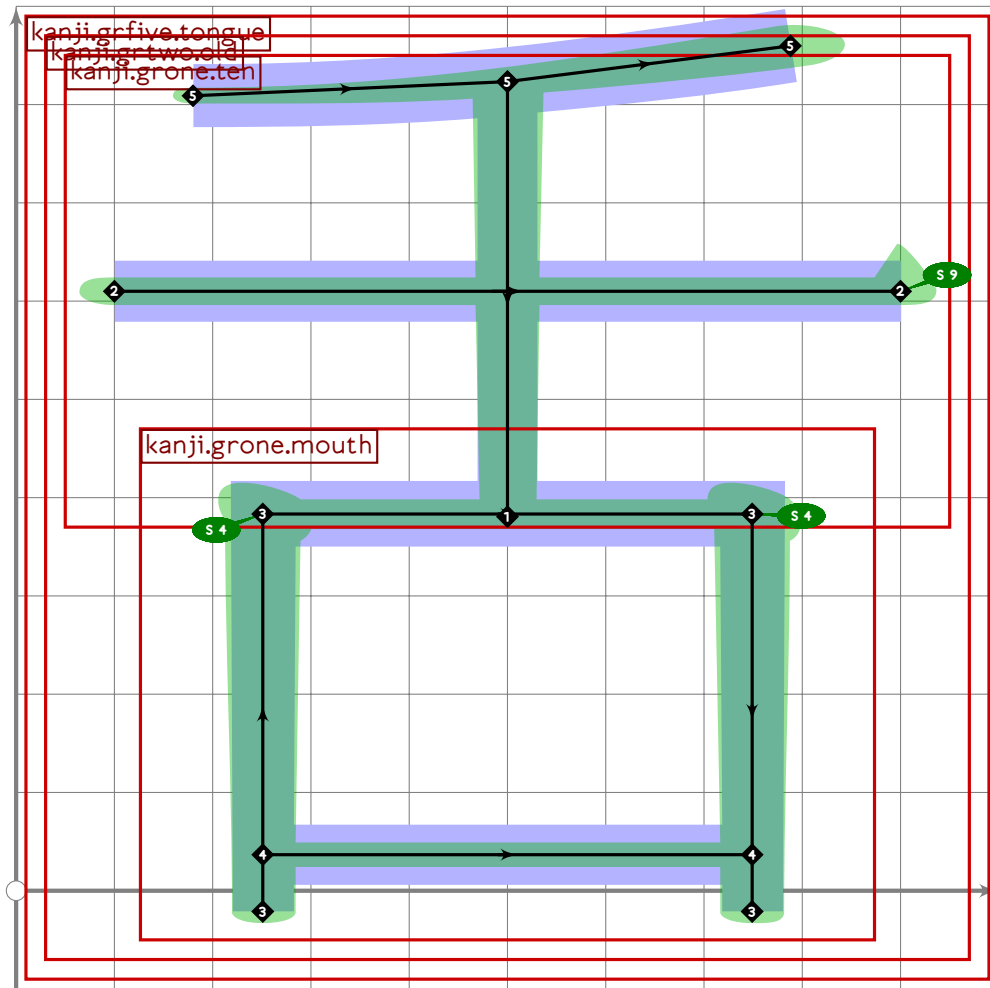
```


gradefive.mp

```
1 %  
2 % Grade Five kanji used on more than one page  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31
```



```
32  
33 vardef tsu_curve.kanji.grfive.passable =  
34   push_pbox_toexpand("kanji.grfive.passable");  
35   push_stroke((80,720)-(920,720),  
36     (1.6,1.6)-(1.6,1.6));  
37   set_bosserif(0,1.9);  
38   push_stroke((800,720),  
39     (1.6,1.6));  
40   build_kanji.add_jtail(0);  
41   build_kanji.box((240,500),(540,200));  
42   expand_pbox;  
43 enddef;
```



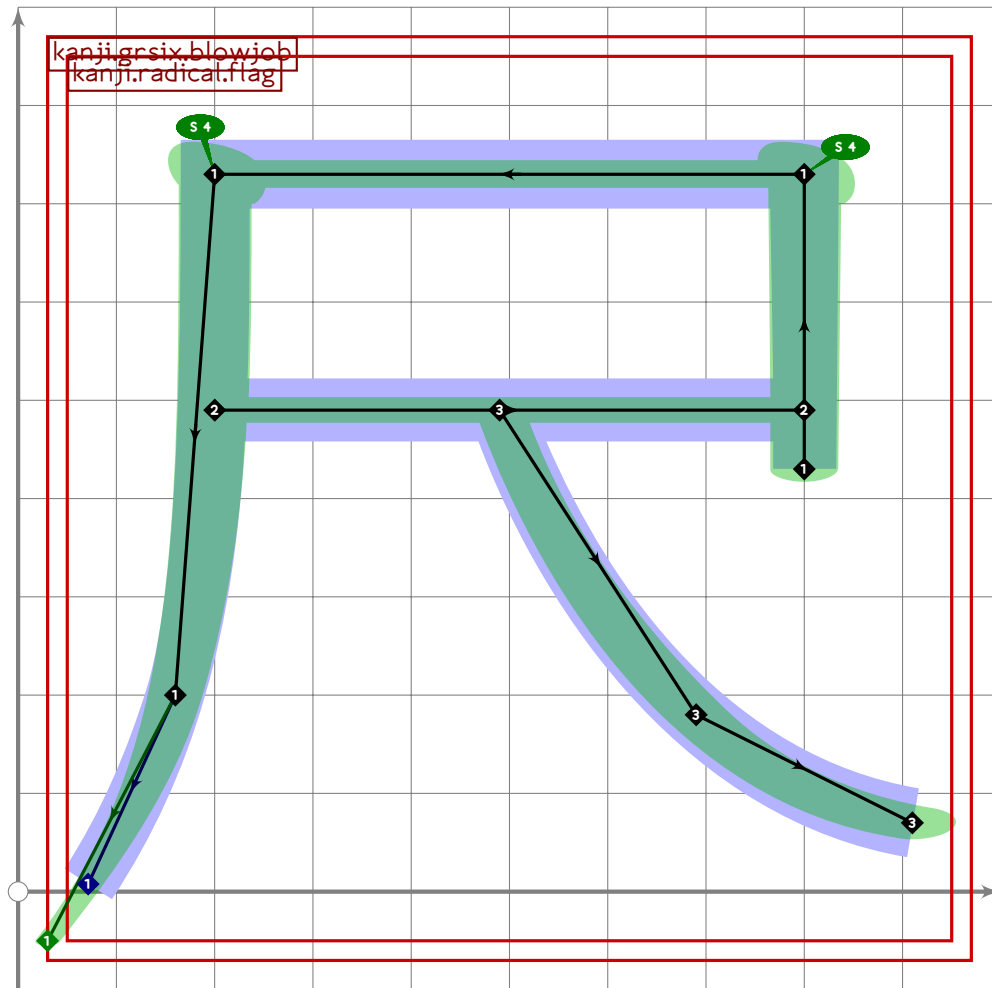
```

44
45 vardef tsu_curve.kanji.grfive.tongue =
46   push_pbox_toexpand("kanji.grfive.tongue");
47   build_kanji.add_beret(tsu_curve.kanji.grtwo.old);
48   expand_pbox;
49 enddef;

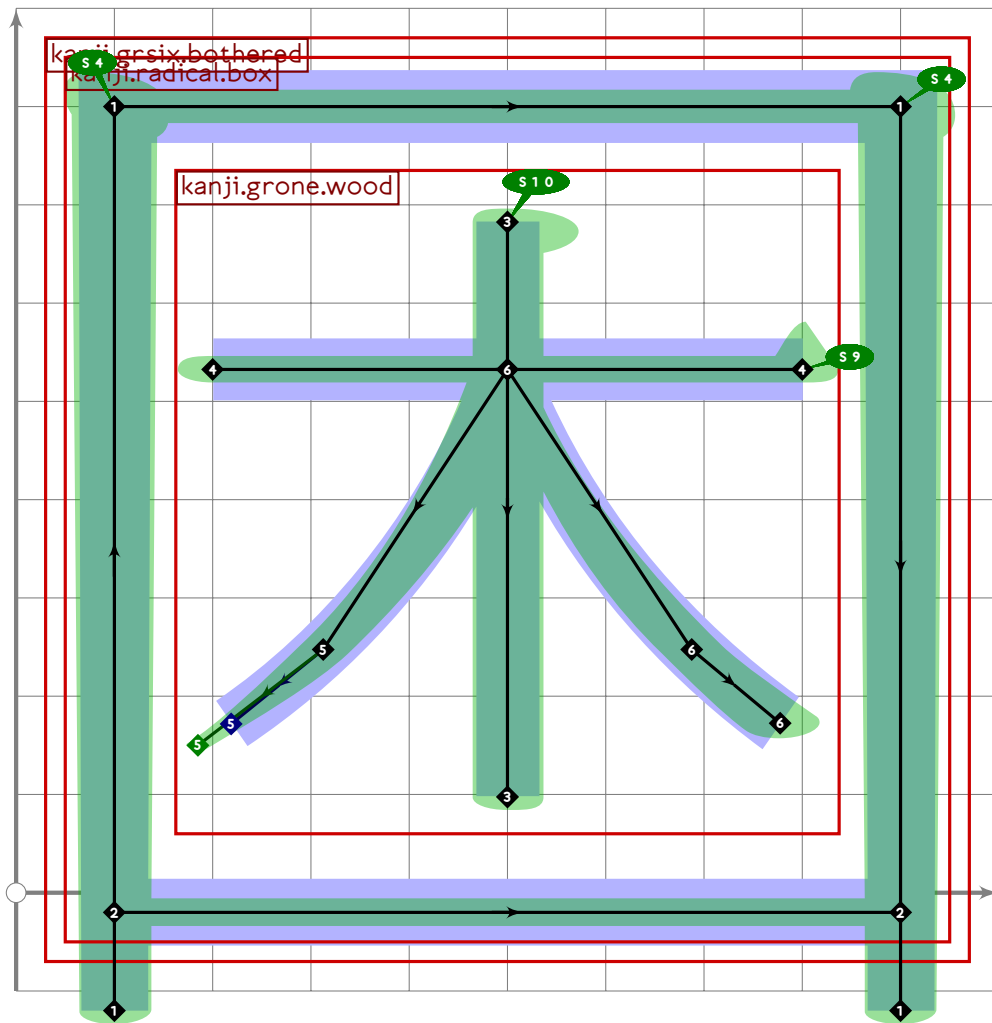
```

gradesix.mp

```
1 %  
2 % Grade Six kanji used on more than one page  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31  
32
```



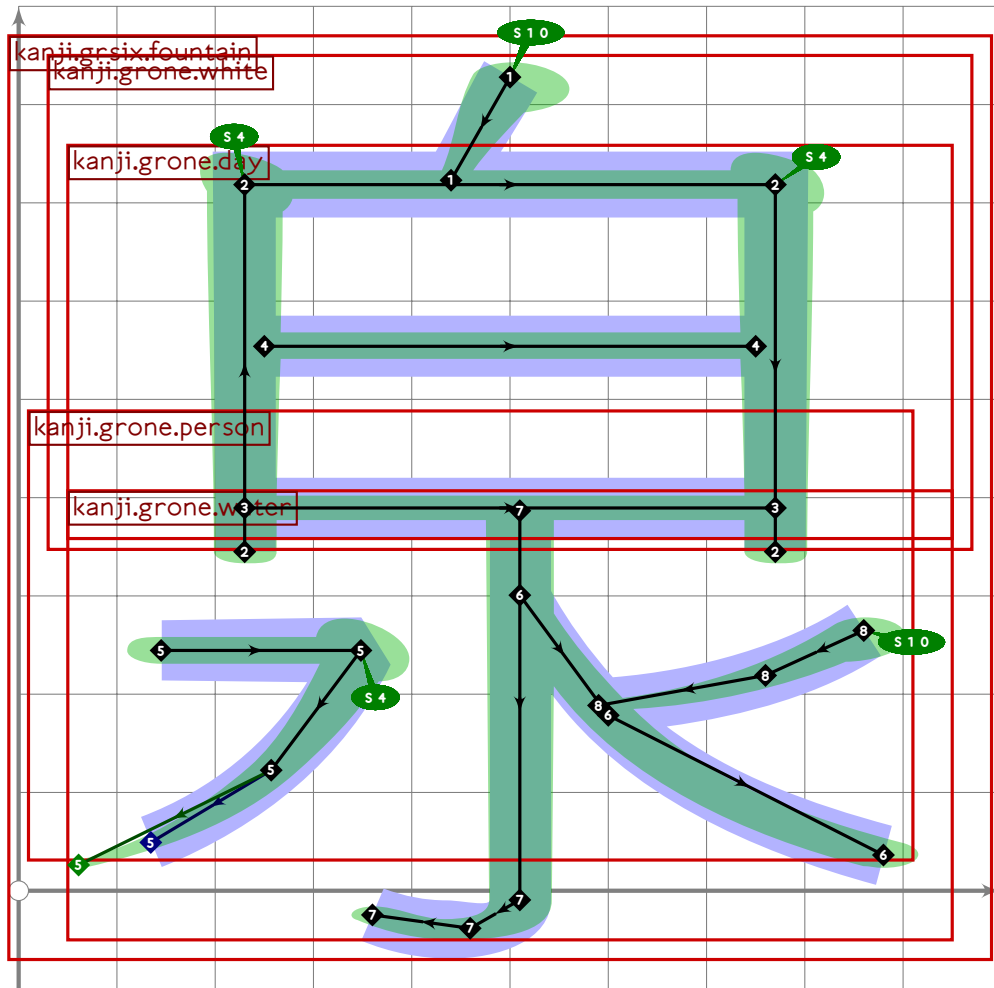
```
33 % the other common word using this kanji is "foot (unit of measure)" but  
34 % that is a poor mnemonic because it's ambiguous with "foot (body part)"  
35 vardef tsu_curve.kanji.grsix.blowjob =  
36   push_pbox_toexpand("kanji.grsix.blowjob");  
37   tsu_curve.kanji.radical.flag;  
38   push_stroke((490,490)..tension 1.2..(690,180)..(910,70),  
39     (1.2,1.2)-(1.4,1.4)-(1.7,1.7));  
40   expand_pbox;  
41 enddef;
```



```

42
43 vardef tsu_curve.kanji.grsix.bothered =
44   push_pbox_toexpand("kanji.grsix.bothered");
45   tsu_curve.kanji.radical.box;
46   build_kanji.sscale(scaled 0.75)(tsu_curve.kanji.grone.wood);
47   expand_pbox;
48 enddef;

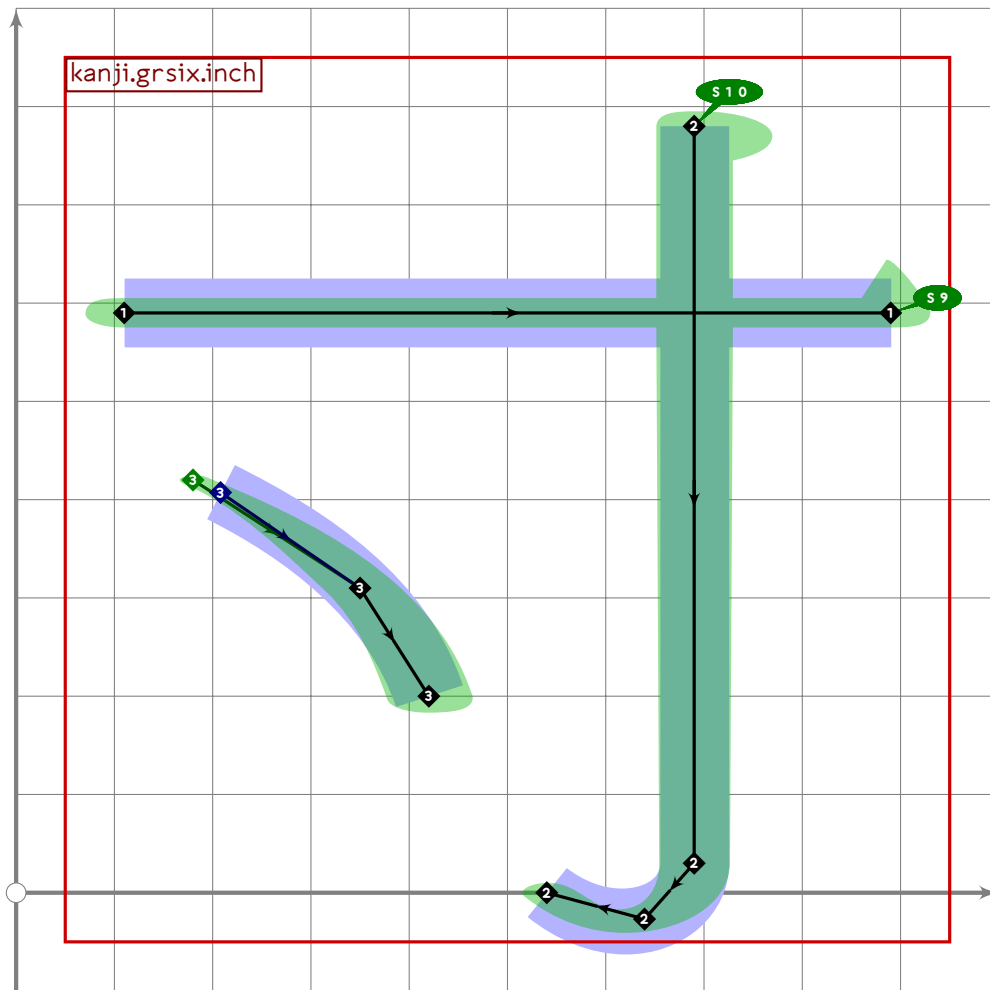
```



```

49
50 vardef tsu_curve.kanji.grsix.fountain =
51   push_pbox_toexpand("kanji.grsix.fountain");
52   build_kanji.level(build_kanji.tb(380,54)
53     (tsu_curve.kanji.grone.white)
54     (tsu_curve.kanji.grone.water;
55       set_boserif(-1,0,whatever)));
56   expand_pbox;
57 enddef;

```



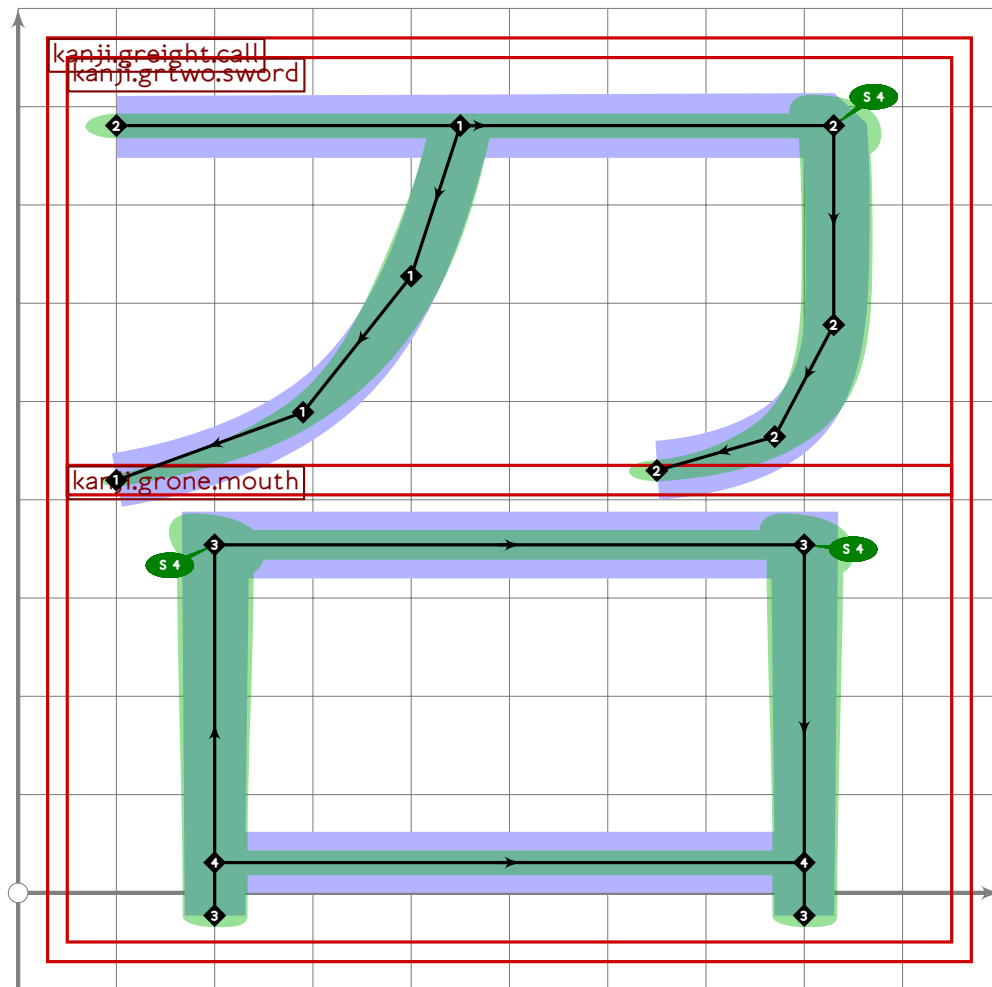
```

58
59 vardef tsu_curve.kanji.grsix.inch =
60   push_pbox_toexpand("kanji.grsix.inch");
61   push_stroke((110,590)-(890,590),(1.6,1.6)-(1.6,1.6));
62   set_boserif(0,1,9);
63   push_stroke((690,780),(1.6,1.6));
64   build_kanji.add_jtail(0);
65   set_boserif(0,0,10);
66   push_stroke((180,420)..tension 1.2..(350,310)..(420,200),
67     (0.9,0.9)-(1.5,1.5)-(1.7,1.7));
68   expand_pbox;
69 enddef;

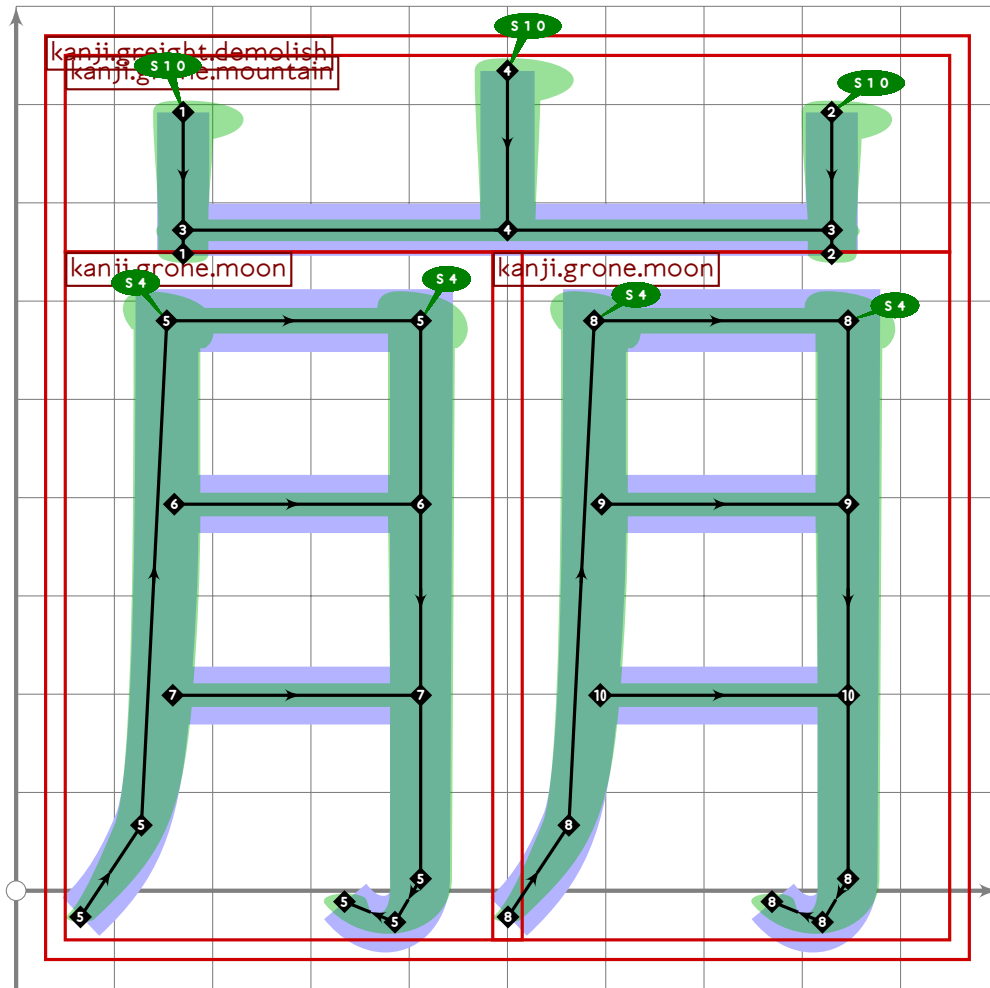
```

gradeeight.mp

```
1 %  
2 % Grade Eight kanji used on more than one page  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31
```



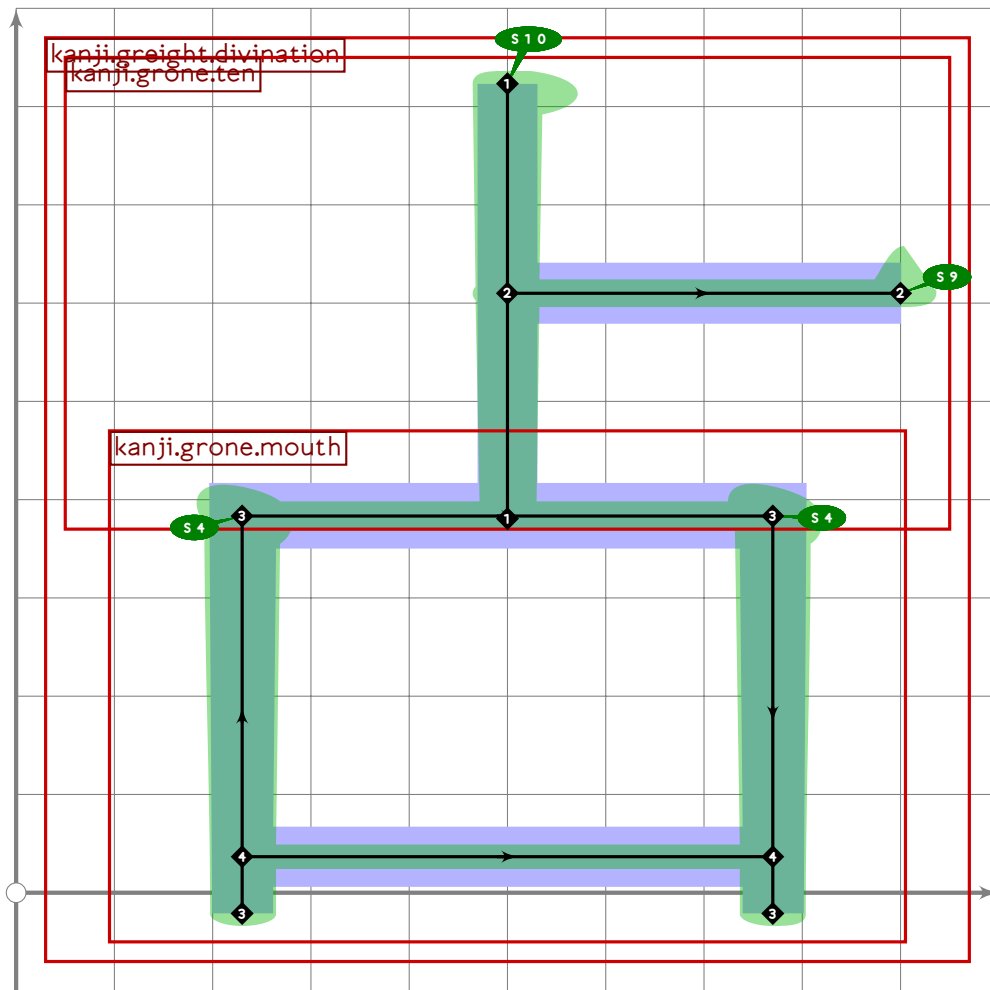
```
32  
33 vardef tsu_curve.kanji.greight.call =  
34   push_pbox_toexpand("kanji.greight.call");  
35   build_kanji.tb(420,30)  
36     (tsu_curve.kanji.grtwo.sword)  
37     (tsu_curve.kanji.grone.mouth);  
38   expand_pbox;  
39 enddef;
```



```

40
41 vardef tsu_curve.kanji.greight.demolish =
42   push_pbox_toexpand("kanji.greight.demolish");
43   build_kanji.tb(650,0)
44     (tsu_curve.kanji.grone.mountain)
45     (build_kanji.lr(500,30)
46     (tsu_curve.kanji.grone.moon)
47     (tsu_curve.kanji.grone.moon));
48   expand_pbox;
49 enddef;

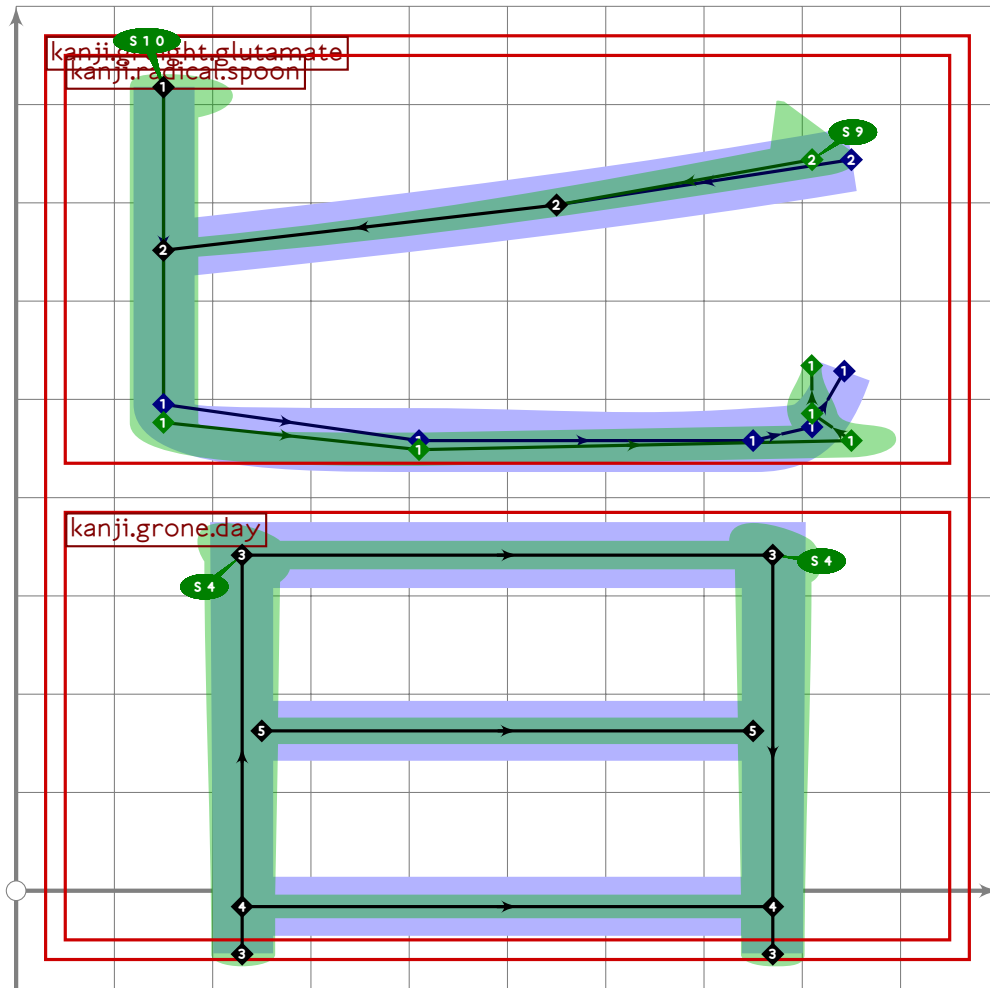
```

```

50
51 vardef tsu_curve.kanji.greight.divination =
52   push_pbox_toexpand("kanji.greight.divination");
53   build_kanji.level(build_kanji.tb(420,100)
54     (tsu_curve.kanji.grone.ten;
55       replace_stroke(0)(subpath (0.5,1) of oldp))
56     (build_kanji.sscale(xscaled 0.9)(tsu_curve.kanji.grone.mouth)));
57   expand_pbox;
58 enddef;
59

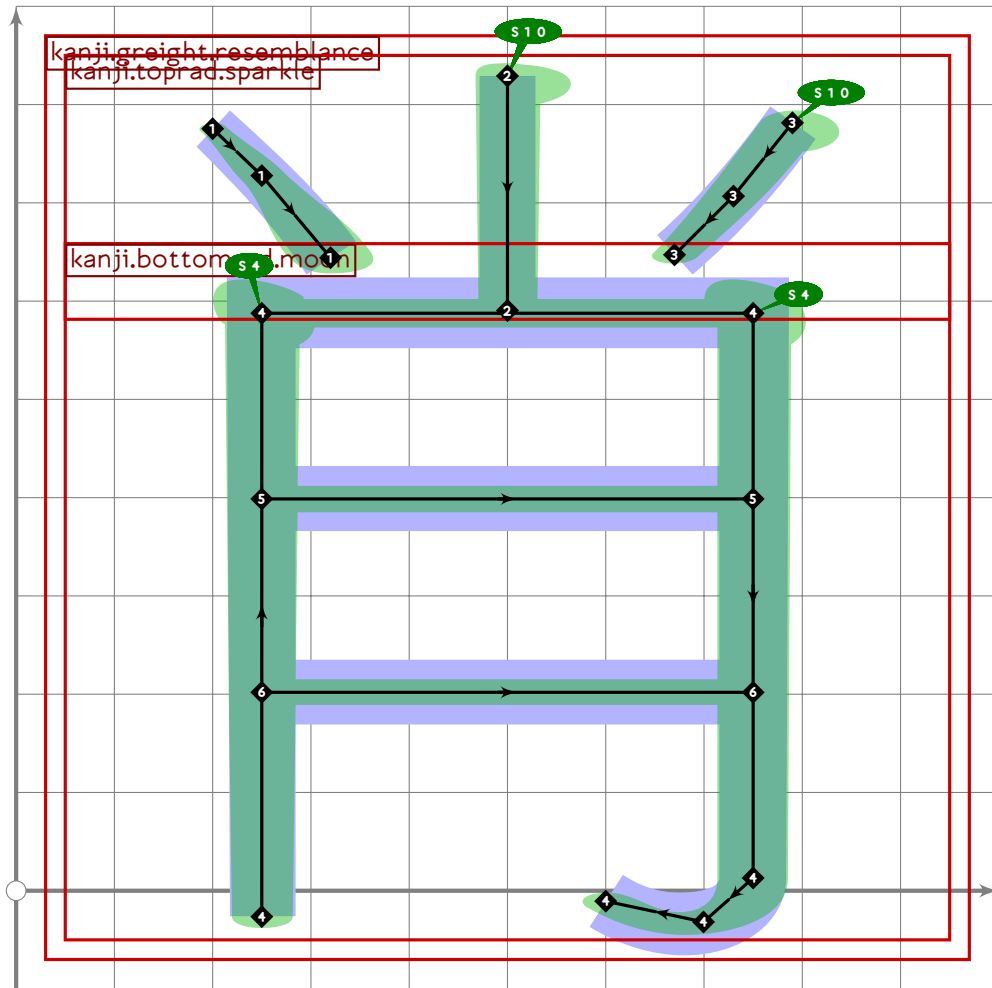
```



```

60 % this actually means sort of generically "good", but it's "uma" in
61 % "umami" and needs to be distinguished from other vague kanji
62 vardef tsu_curve.kanji.greight.glutamate =
63   push_pbox_toexpand("kanji.greight.glutamate");
64   build_kanji.level(build_kanji.tb(410,-50)
65     (tsu_curve.kanji.radical.spoon)
66     (tsu_curve.kanji.grone.day));
67   expand_pbox;
68 enddef;

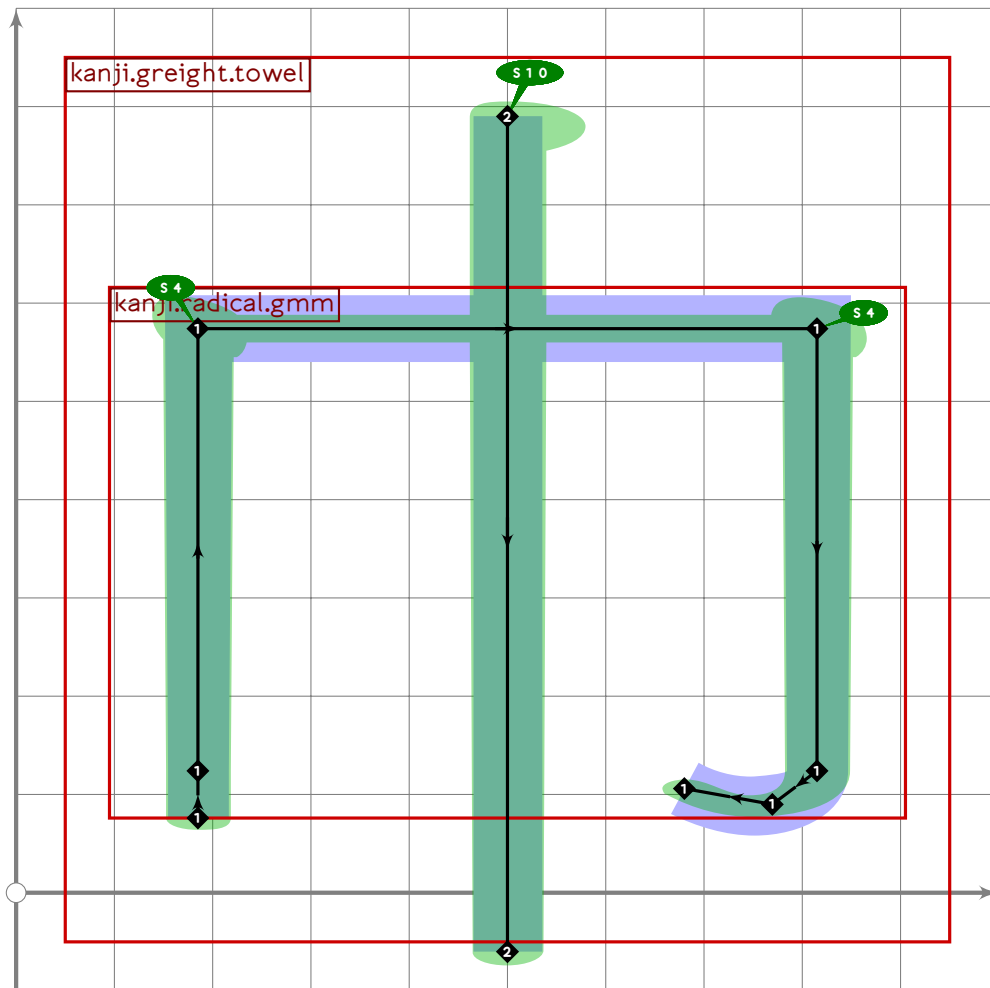
```



```

69
70 vardef tsu_curve.kanji.greight.resemblance =
71   push_pbox_toexpand("kanji.greight.resemblance");
72   build_kanji.tb(620,77)
73     (tsu_curve.kanji.toprad.sparkle)
74     (tsu_curve.kanji.bottomrad.moon);
75   expand_pbox;
76 enddef;

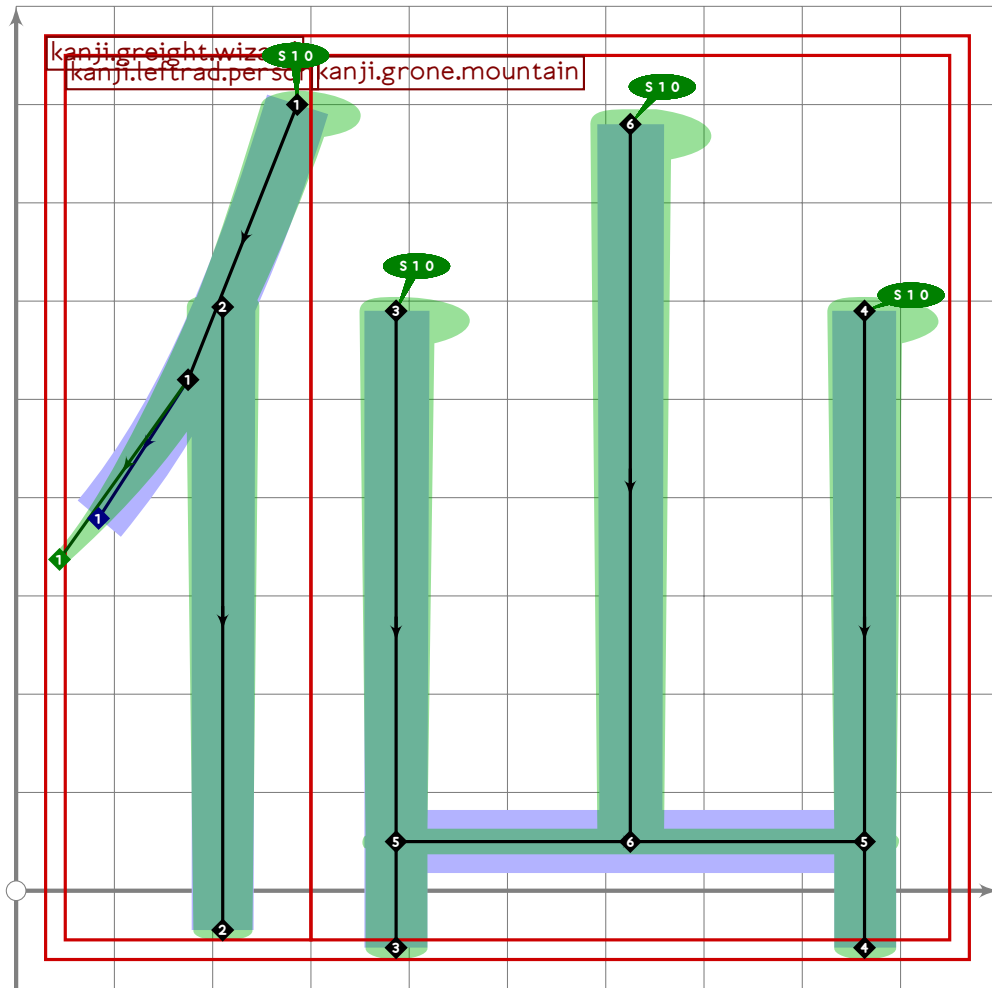
```

```

85
86 vardef tsu_curve.kanji.greight.towel =
87   push_pbox_toexpand("kanji.greight.towel");
88   build_kanji.sscale(xyscaled (0.9,0.6) shifted (0,-50))
89     (tsu_curve.kanji.radical.gmm);
90   push_stroke((500,790)-(500,-60),
91     (1.6,1.6)-(1.5,1.5));
92   set_boserif(0,0,10);
93   expand_pbox;
94 enddef;

```



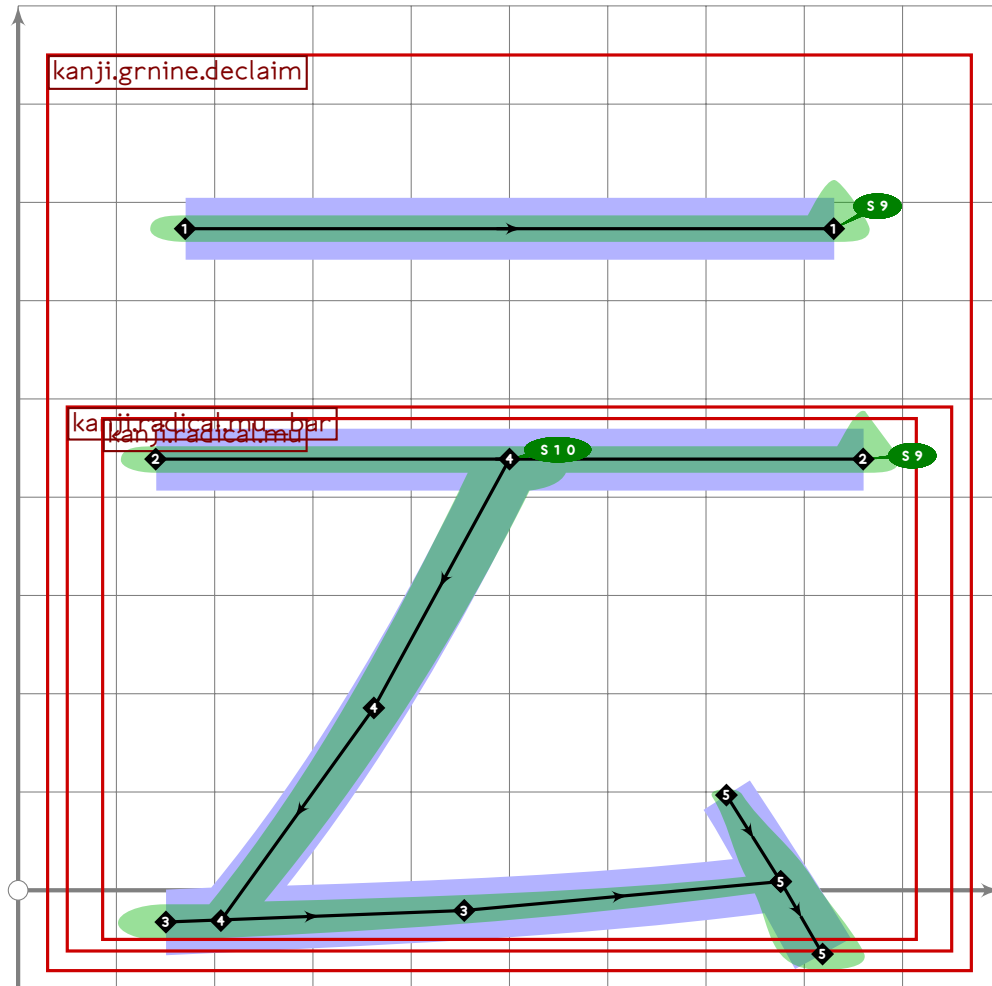
```

95
96 vardef tsu_curve.kanji.greight.wizard =
97   push_pbox_toexpand("kanji.greight.wizard");
98   build_kanji.lr(300,0)
99   (tsu_curve.kanji.leftrad.person)
100   (tsu_curve.kanji.grone.mountain);
101   expand_pbox;
102 enddef;

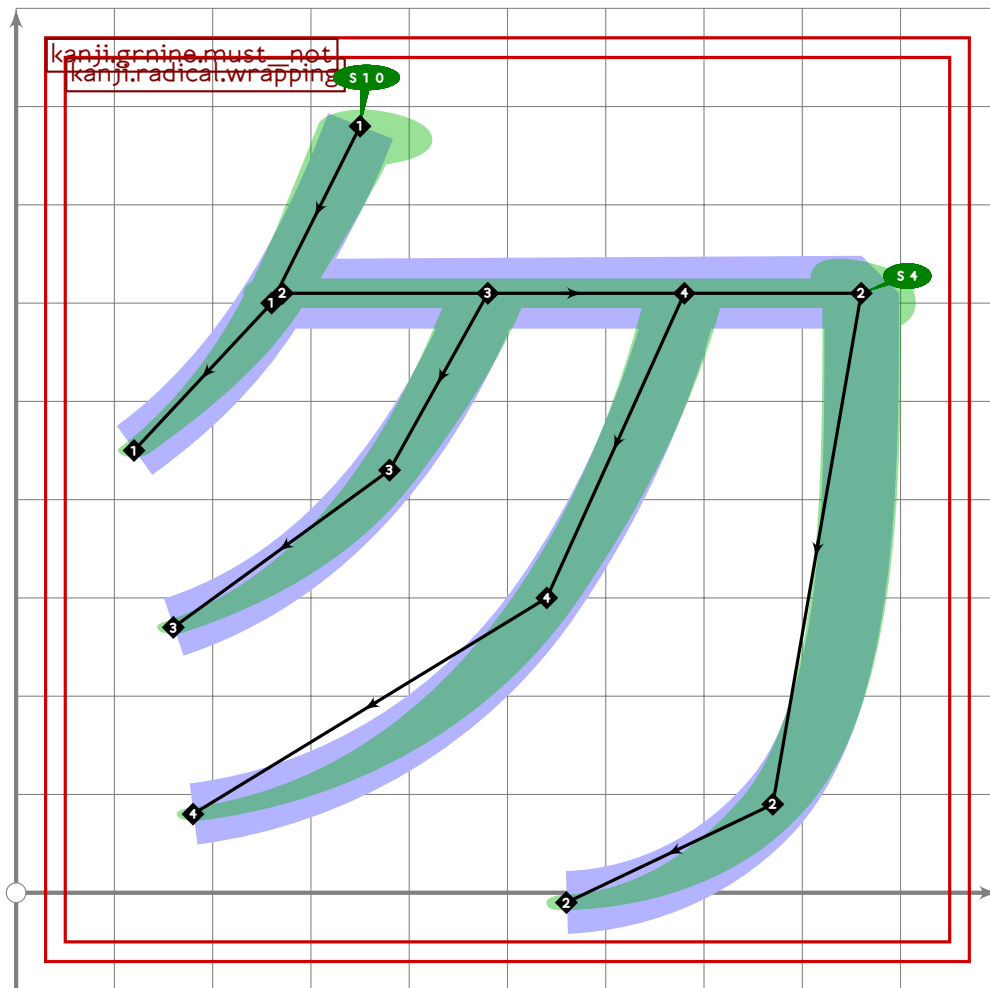
```

gradenine.mp

```
1 %  
2 % Grade Nine kanji used on more than one page  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31
```



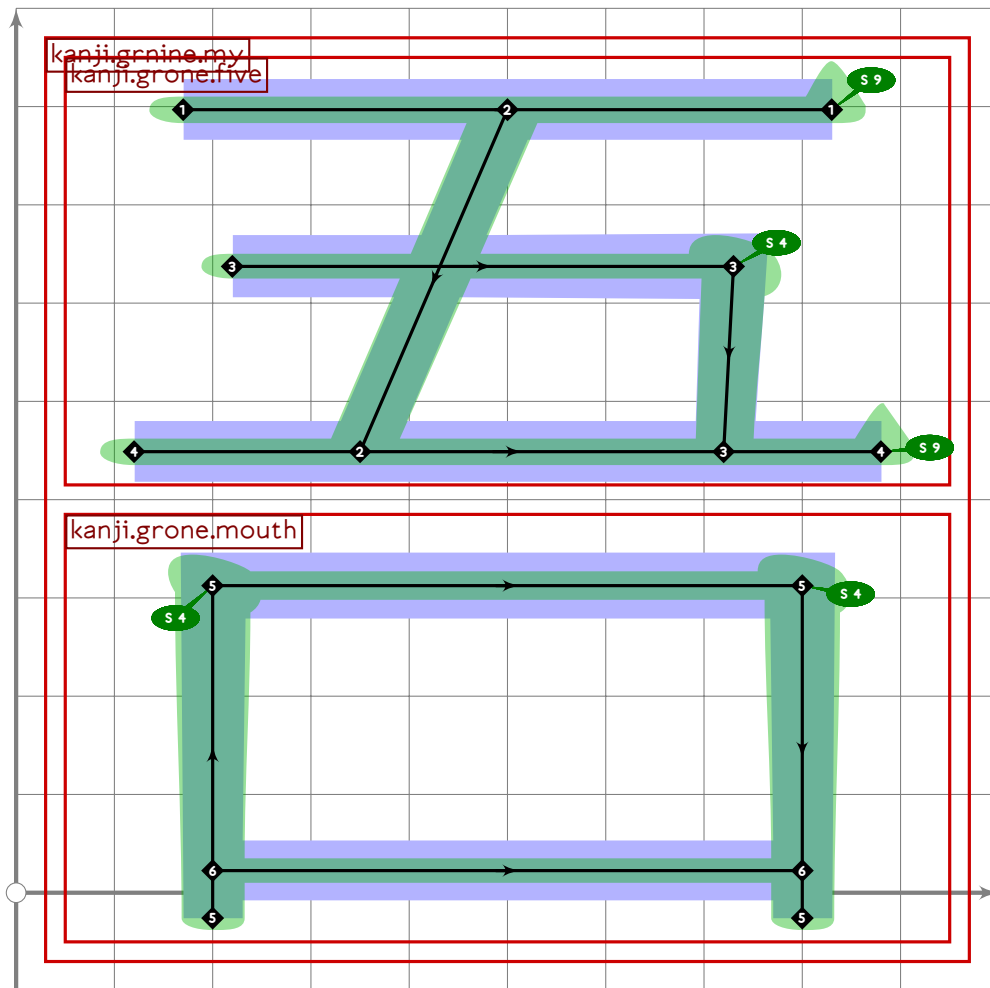
```
32  
33 vardef tsu_curve.kanji.grnine.declaim =  
34   push_pbox_toexpand("kanji.grnine.declaim");  
35   build_kanji.level(build_kanji.tb(480,0)  
36     (push_stroke((170,420)-(830,420),  
37       (1.6,1.6)-(1.6,1.6));  
38     set_boserif(0,1,9);  
39   )  
40   (tsu_curve.kanji.radical.mu_bar));  
41   expand_pbox;  
42 enddef;
```



```

43
44 vardef tsu_curve.kanji.grnine.must_not =
45   push_pbox_toexpand("kanji.grnine.must_not");
46   tsu_curve.kanji.radical.wrapping;
47   push_stroke(
48     (480,610)..tension 1.2..(380,430)..(160,270),
49     (1.6,1.6)-(1.4,1.4)-(1.0,1.0));
50   push_stroke(
51     (680,610)..tension 1.2..(540,300)..(180,80),
52     (1.6,1.6)-(1.4,1.4)-(1.0,1.0));
53   expand_pbox;
54 enddef;

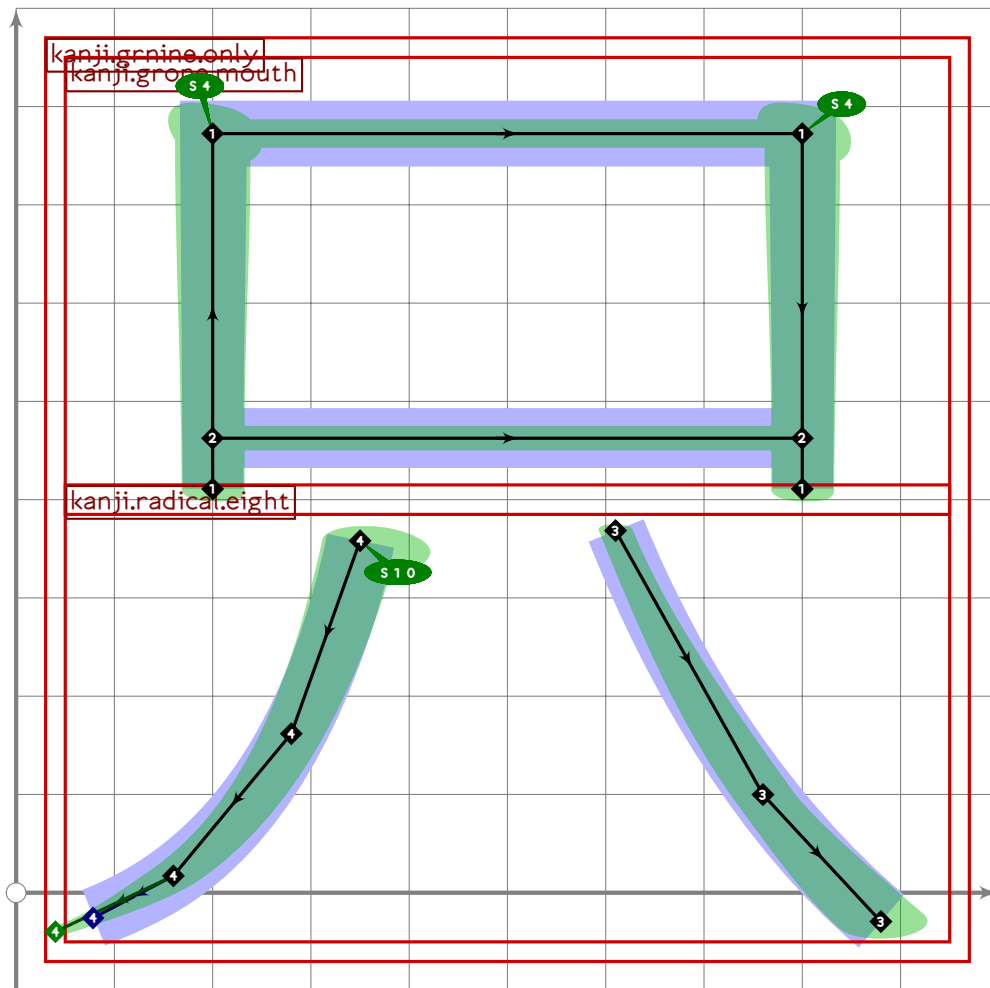
```

```

55
56 vardef tsu_curve.kanji.grnine.my =
57   push_pbox_toexpand("kanji.grnine.my");
58   build_kanji.level(build_kanji.tb(400;30)
59     (tsu_curve.kanji.grone.five)
60     (tsu_curve.kanji.grone.mouth));
61   expand_pbox;
62 enddef;

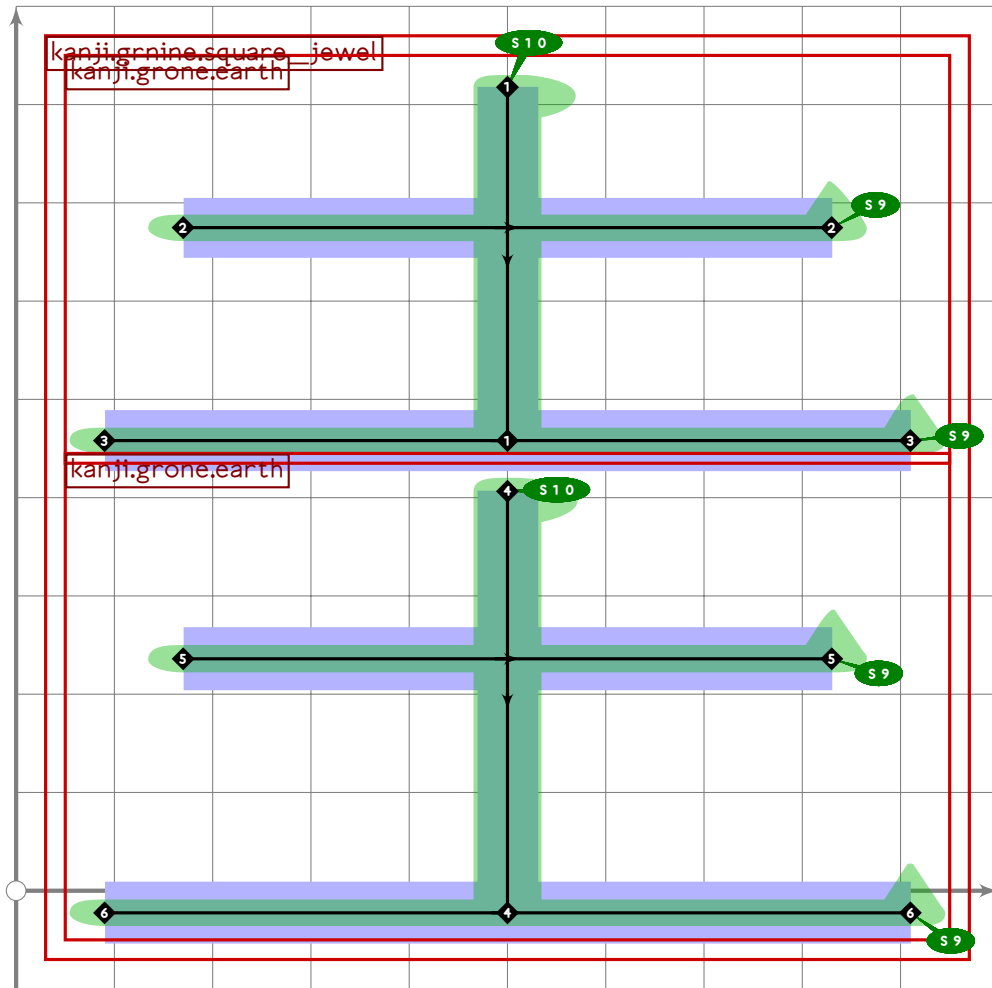
```



```

63
64 vardef tsu_curve.kanji.grnine.only =
65   push_pbox__toexpand("kanji.grnine.only");
66   build_kanji.tb(400,30)
67     (tsu_curve.kanji.grone.mouth)
68     (tsu_curve.kanji.radical.eight);
69   expand_pbox;
70 enddef;

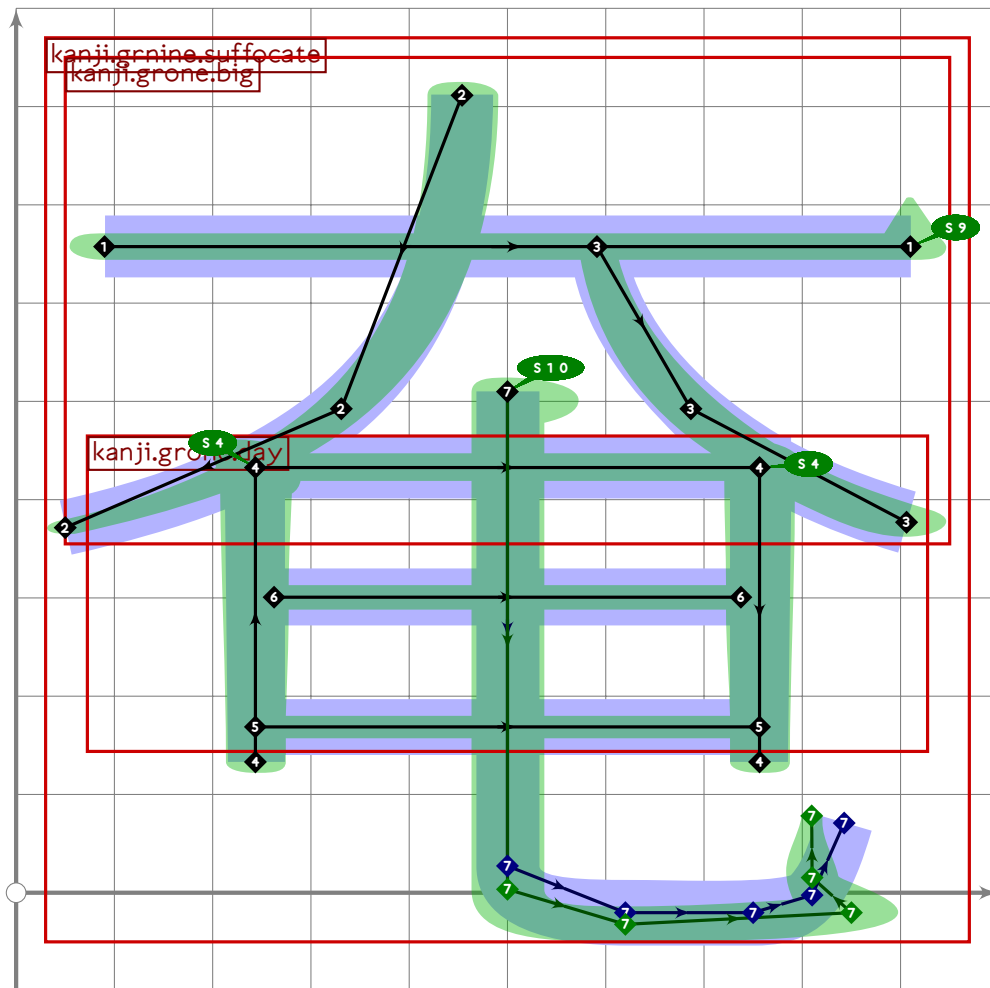
```



```

71
72 vardef tsu_curve.kanji.grnine.square__jewel =
73   push_pbox_toexpand("kanji.grnine.square__jewel");
74   build_kanji.tb(440,10)
75     (tsu_curve.kanji.grone.earth)
76     (tsu_curve.kanji.grone.earth);
77   expand_pbox;
78 enddef;

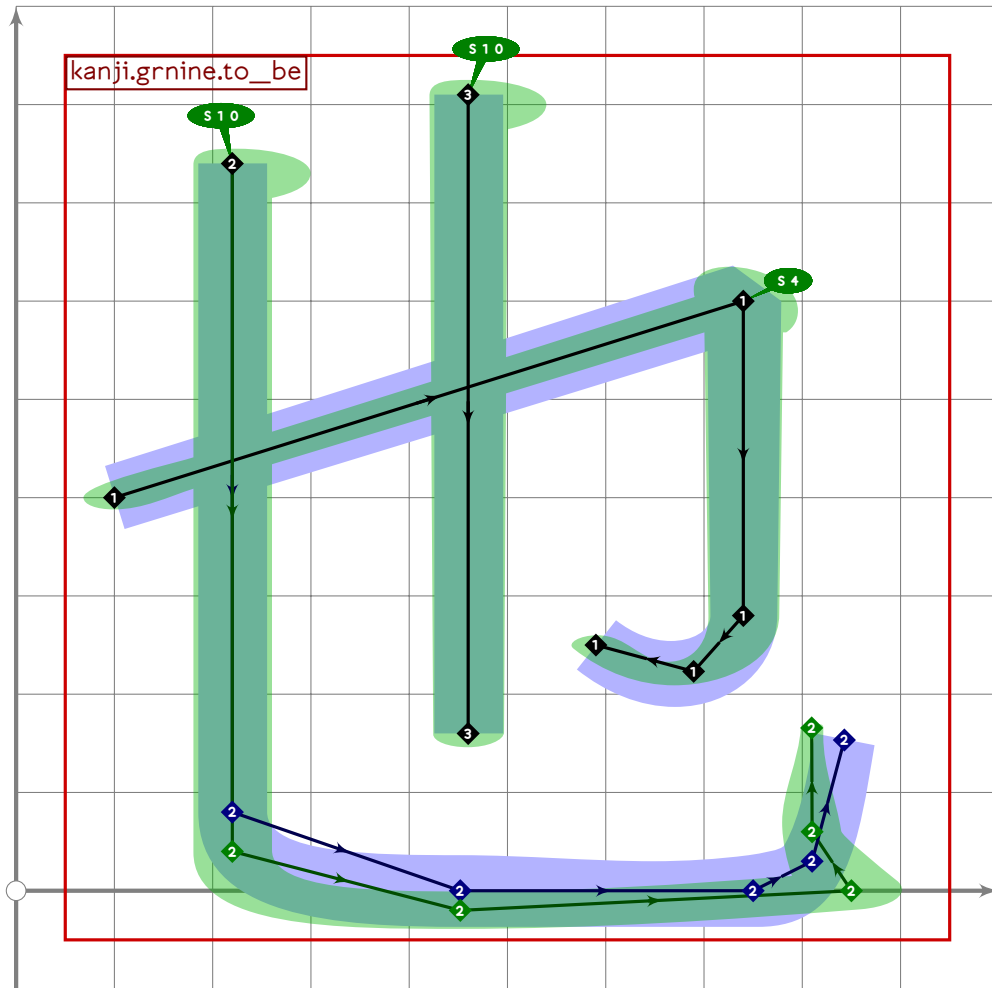
```



```

79
80 vardef tsu_curve.kanji.grnine.suffocate =
81   push_pbox_toexpand("kanji.grnine.suffocate");
82   build_kanji.tb(420,130)
83     (build_kanji.spread_legs(110)
84       (tsu_curve.kanji.grone.big))
85     (build_kanji.sscale(xyscaled (0.95,0.6) shifted (0,150))
86       (tsu_curve.kanji.grone.day);
87     push_stroke(((0,130)*point 1.5 of get_stroke(-2)),(1,6,1,6));
88     build_kanji.add_ltail(0);
89     set_boserif(0,0,10));
90   expand_pbox;
91 enddef;

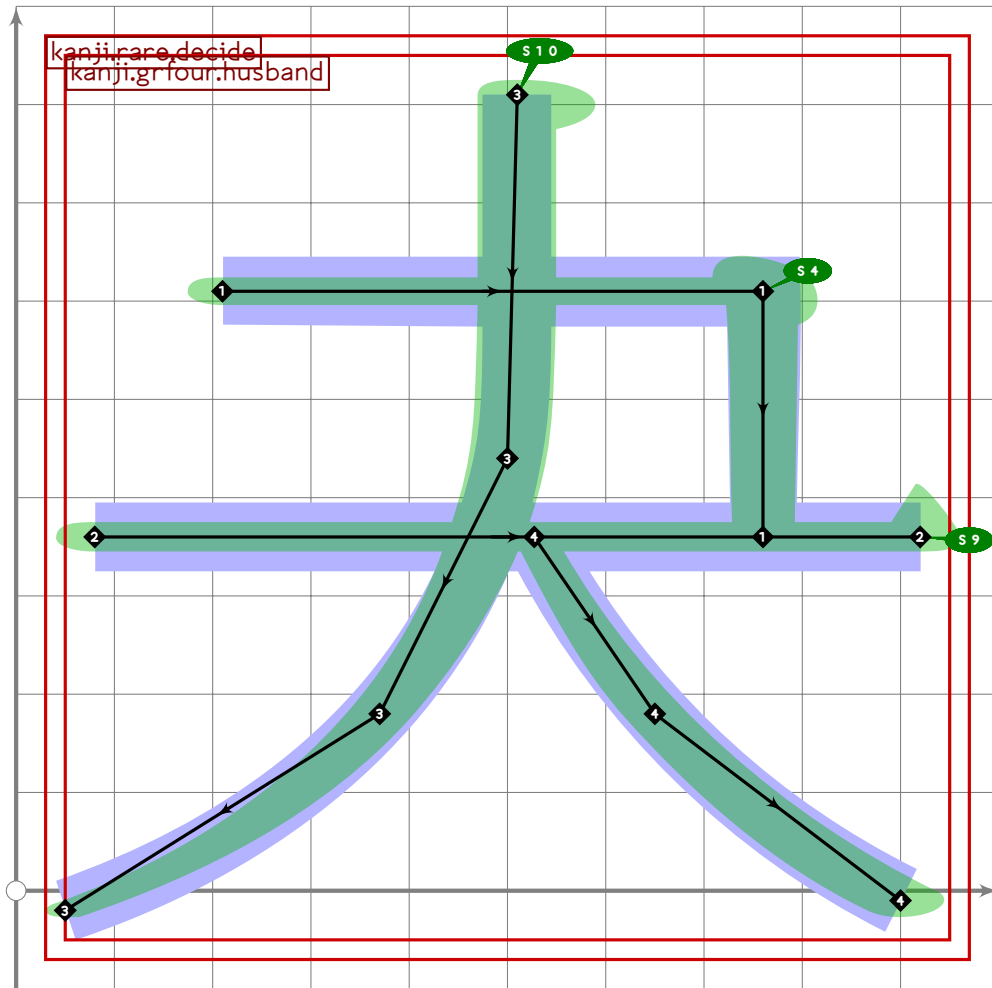
```



```

92
93 vardef tsu_curve.kanji.grnine.to_be =
94   push_pbox_toexpand("kanji.grnine.to_be");
95   tsu_xform(identity shifted (0,250))(
96     push_stroke((100,150)-(740,350),
97       (1.4,1.4)-(1.6,1.6));
98     set_botip(0,1,0);
99     set_boserif(0,1,4);
100    build_kanji.add_jtail(0);
101  );
102  push_stroke((220,740),(1.6,1.6));
103  build_kanji.add_ltail(0);
104  set_boserif(0,0,10);
105  push_stroke((460,810)-(460,160),
106    (1.6,1.6)-(1.5,1.5));
107  set_boserif(0,0,10);
108  expand_pbox;
109 enddef;

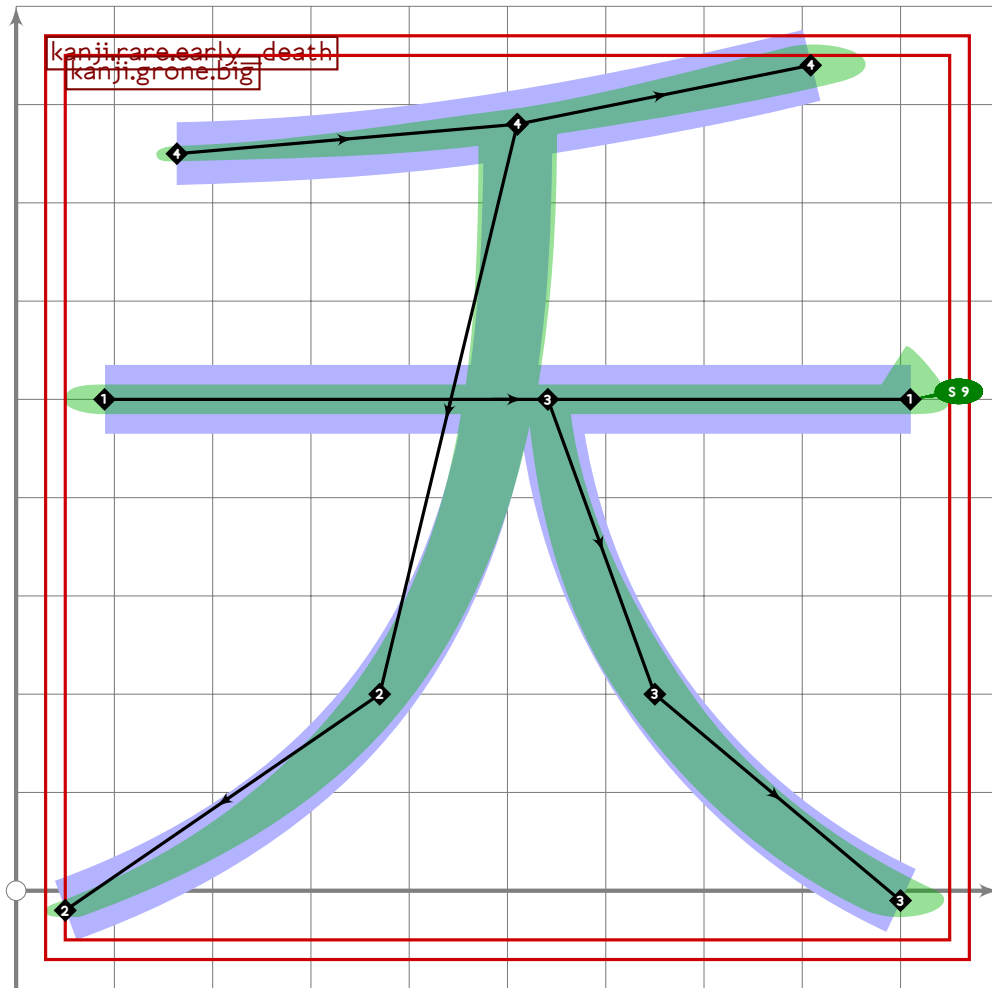
```

```

40
41 vardef tsu_curve.kanji.rare.decide =
42   push_pbox_toexpand("kanji.rare.decide");
43   tsu_curve.kanji.grfour.husband;
44   replace_strokep(-3)((210,610)-(760,610)-(760,360));
45   replace_strokeq(-3)((1.5,1.5)-(1.5,1.5)-(1.4,1.4));
46   set_boserif(-3,1,4);
47   set_botip(-3,1,1);
48   expand_pbox;
49 enddef;

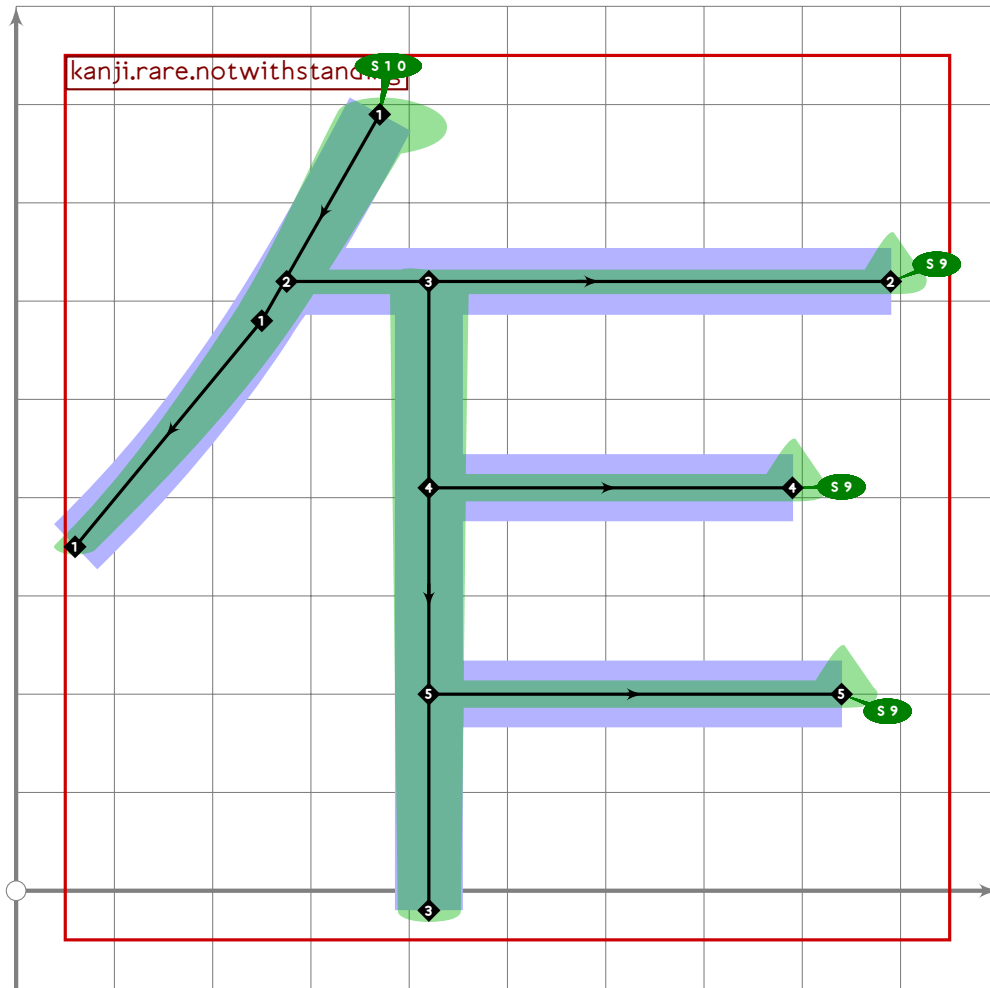
```



```

50
51 vardef tsu_curve.kanji.rare.early_death =
52   push_pbox_toexpand("kanji.rare.early_death");
53   build_kanji.add_beret(tsu_curve.kanji.grone.big);
54   expand_pbox;
55 enddef;

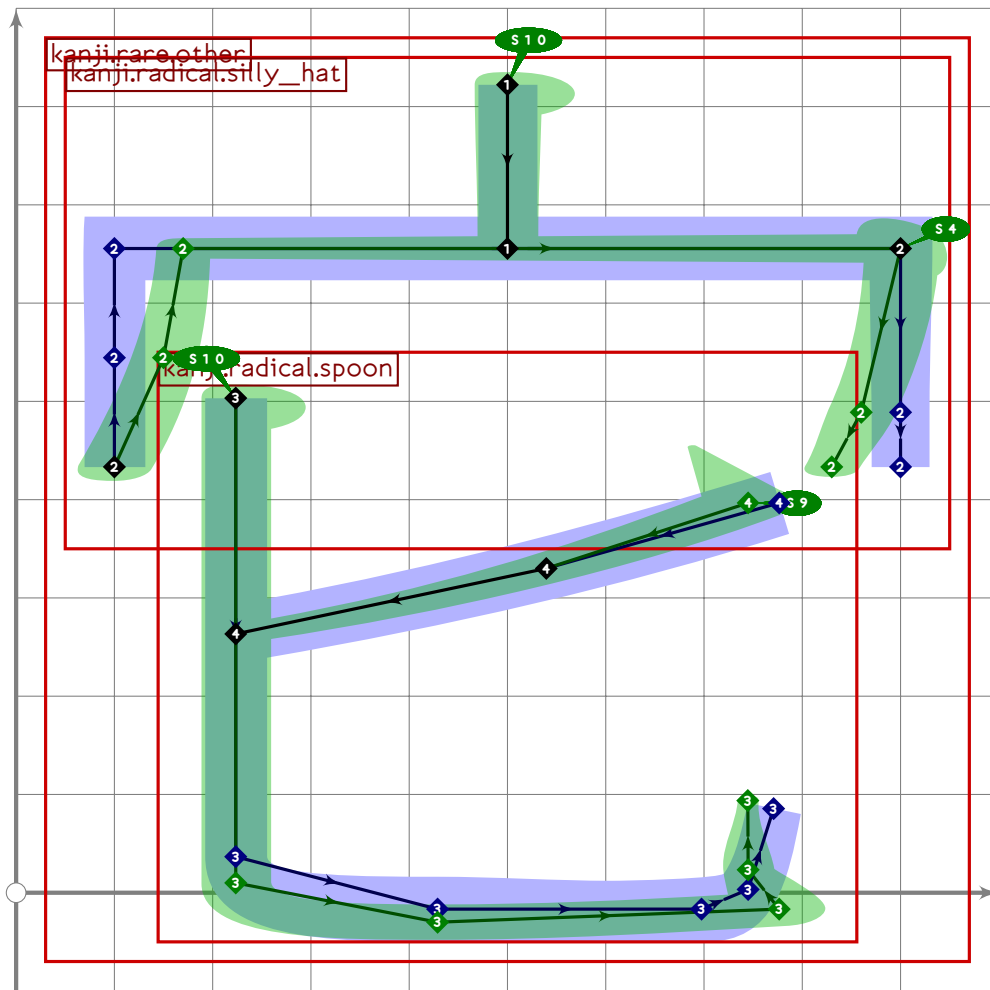
```

```

56
57 vardef tsu_curve.kanji.rare.notwithstanding =
58   push_pbox_toexpand("kanji.rare.notwithstanding");
59   push_stroke((370,790){curl 0.1}..(250,580)..(60,350),
60     (1.7,1.7)-(1.4,1.4)-(1.1,1.1));
61   set_boserif(0,0,10);
62   push_stroke(
63     (((0,620)-(1000,620)) intersectionpoint get_strokep(0))-(890,620),
64     (1.4,1.4)-(1.5,1.5));
65   set_boserif(0,1,9);
66   push_stroke((420,620)-(420,20),
67     (1.6,1.6)-(1.4,1.4));
68   push_stroke((420,410)-(790,410),
69     (1.5,1.5)-(1.5,1.5));
70   set_boserif(0,1,9);
71   push_stroke((420,200)-(840,200),
72     (1.5,1.5)-(1.5,1.5));
73   set_boserif(0,1,9);
74   expand_pbox;
75 enddef;

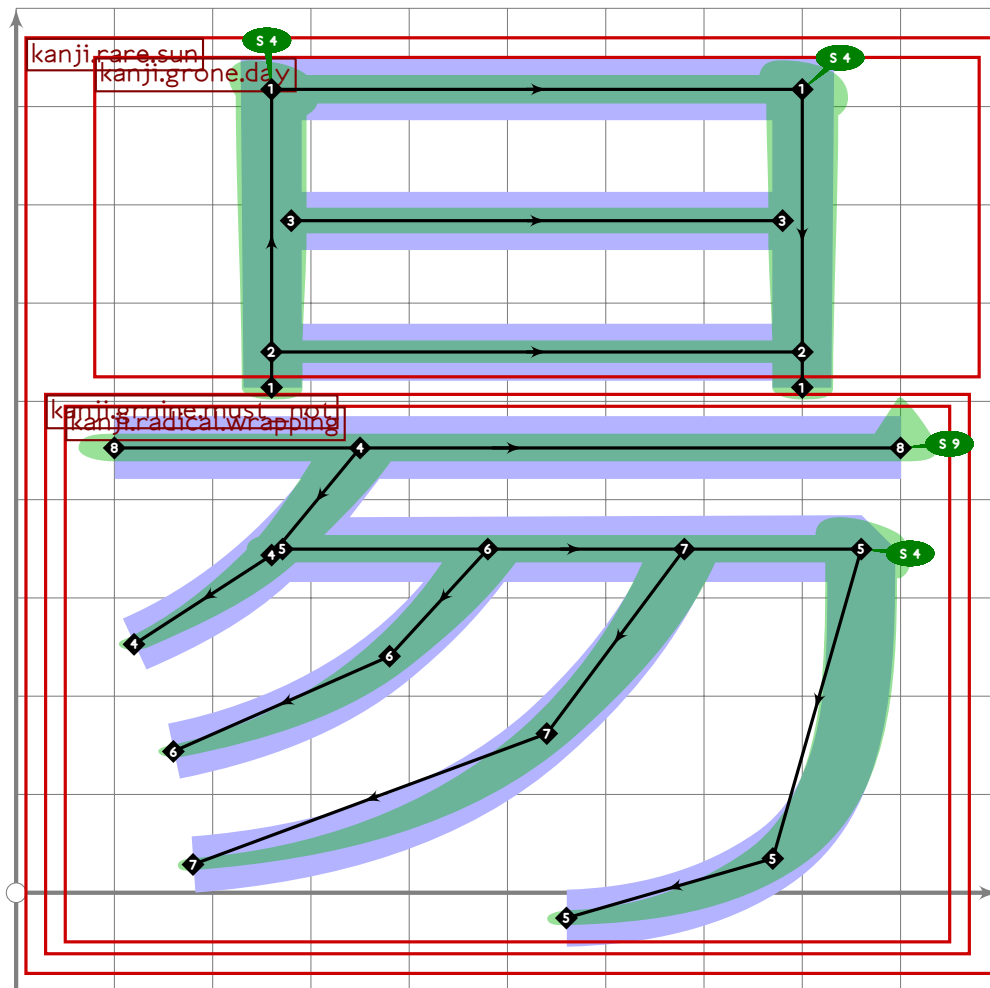
```



```

76
77 vardef tsu_curve.kanji.rare.other =
78   push_pbox_toexpand("kanji.rare.other");
79   build_kanji.tb(450,200)
80     (tsu_curve.kanji.radical.silly_hat)
81     (build_kanji.sscale(xscaled 0.79)
82       (tsu_curve.kanji.radical.spoon));
83   expand_pbox;
84 enddef;

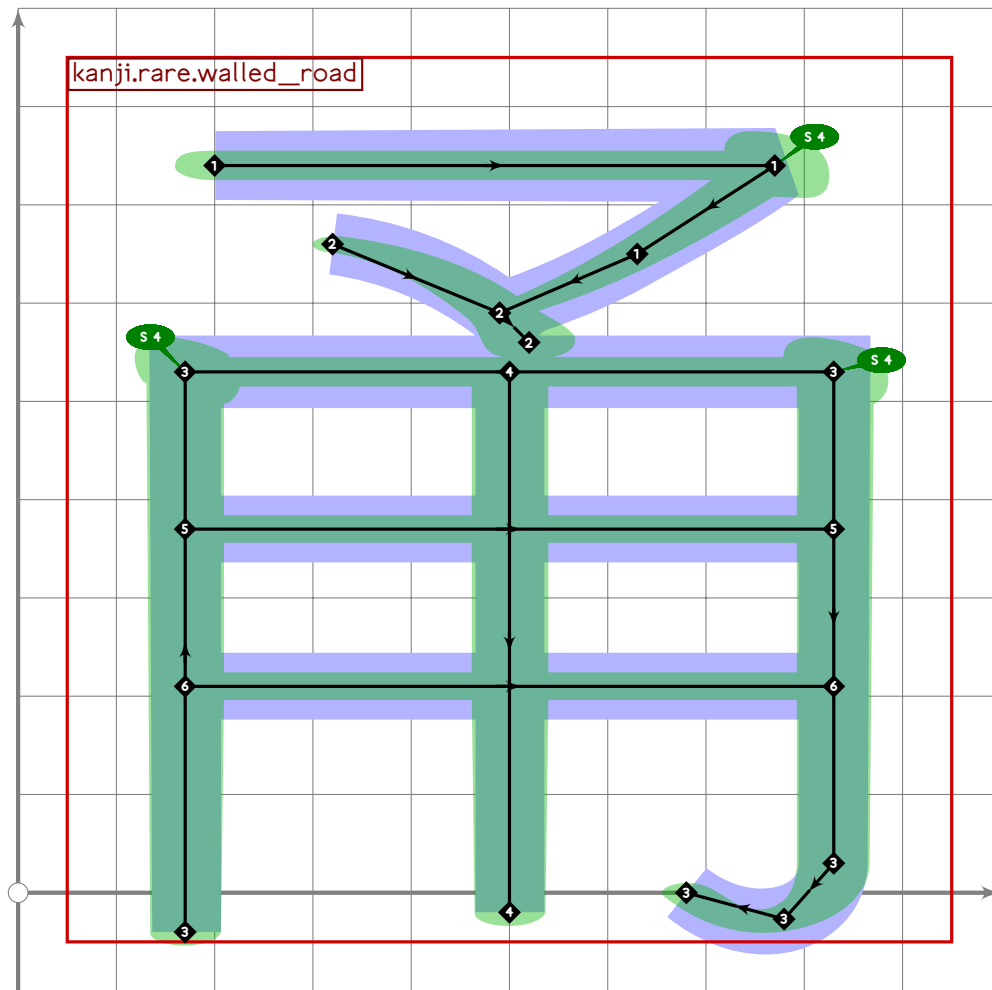
```



```

85
86 vardef tsu_curve.kanji.rare.sun =
87   push_pbox_toexpand("kanji.rare.sun");
88   build_kanji.tb(510,30)
89   (tsu_xform(identity shifted (30,0))(tsu_curve.kanji.grone.day))
90   (tsu_curve.kanji.grnine.must_not;
91    set_boserif(-3,0,whatever);
92    push_stroke((100,780)-(900,780),(1.6,1.6)-(1.6,1.6));
93    set_boserif(0,1,9));
94   expand_pbox;
95 enddef;

```



```

96
97 vardef tsu_curve.kanji.rare.walled_road =
98   push_pbox_toexpand("kanji.rare.walled_road");
99   push_stroke((200,740)-(770,740)..tension 1.2..(630,650)..(490,590),
100     (1.6,1.6)-(1.6,1.6)-(1.4,1.4)-(1.1,1.1));
101   set_botip(0,1,0);
102   set_boserif(0,1,4);
103   push_stroke((320,660)..tension 1.2..(490,590)..(520,560),
104     (1.1,1.1)-(1.5,1.5)-(1.8,1.8));
105   push_stroke((170,-40)-(170,530)-(830,530),
106     (1.5,1.5)-(1.6,1.6)-(1.6,1.6));
107   build_kanji.add_jtail(0);
108   set_botip(0,1,1);
109   set_botip(0,2,1);
110   set_boserif(0,1,4);
111   set_boserif(0,2,4);
112   push_stroke((500,530)-(500,-20),(1.6,1.6)-(1.5,1.5));
113   push_stroke((170,370)-(830,370),(1.5,1.5)-(1.5,1.5));
114   push_stroke((170,210)-(830,210),(1.5,1.5)-(1.5,1.5));
115   expand_pbox;
116 enddef;

```

Part II

U+0000 to U+2FFF

tsuku-00.mp

```
1 %
2 % Unicode page 00 (ASCII/ISO Latin-1) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---

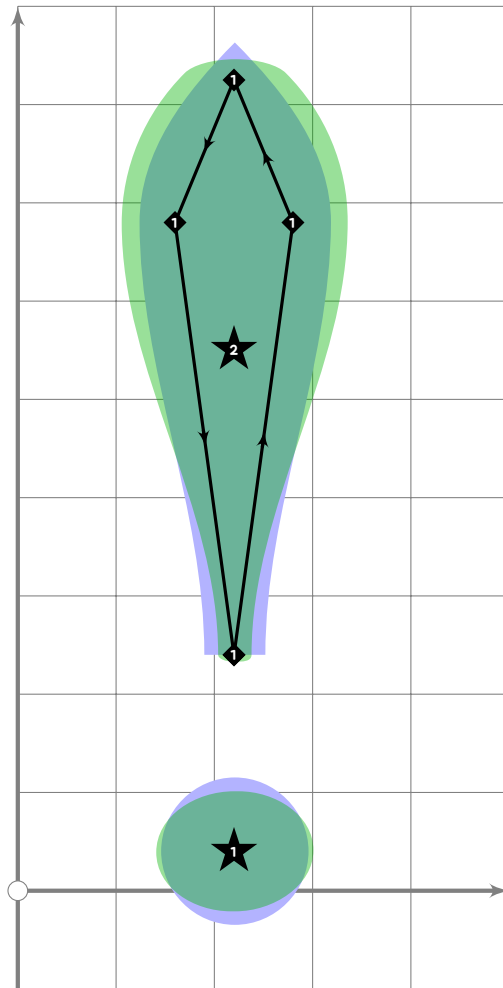

32
33 beginfont
34
35 input latin-intro.mp;
36
37 % AUTODEPS
38 input accent.mp;
39 input latin.mp;
40 input numerals.mp;
41 input punct.mp;
42
43 

---


44
```

Ascii

```
45 % ASCII
46
47 tsu\_rescale\_native\_narrow;
48
49 % WARNING this code is substantially duplicated in tsuku-ff; just
50 % enough differences to make sharing impractical
51
```



```

52 % exclamation point
53 begintsuglyph("exclam",33);
54 if tsu_pbrush_size>=(tsu_punct_size*0.5):
55     push_lcblob(fullcircle
56         xscaled (tsu_punct_size*tsu_pbrush_size)
57         yscaled (tsu_punct_size*tsu_pbrush_size*tsu_pbrush_shape)
58         rotated tsu_pbrush_angle
59         shifted (220,40));
60 else:
61     push_stroke(fullcircle scaled tsu_punct_size shifted (220,40),
62         (2,2)-(2,2)-(2,2)-(2,2)-cycle);
63     push_lcblob(get_strokep(0));
64 fi;
65
66 push_stroke((220,240){up}..(280,680){up}..{curl 1}(220,825){curl 1}..
67     (160,680){down}..{down}(220,240),
68     (1,1)-(2,2)-(2,2)-(2,2)-(1,1));
69
70 if tsu_pbrush_size>=30:
71     push_lcblob((subpath (0,1,3,9) of get_strokep(0))-cycle);
72 fi;

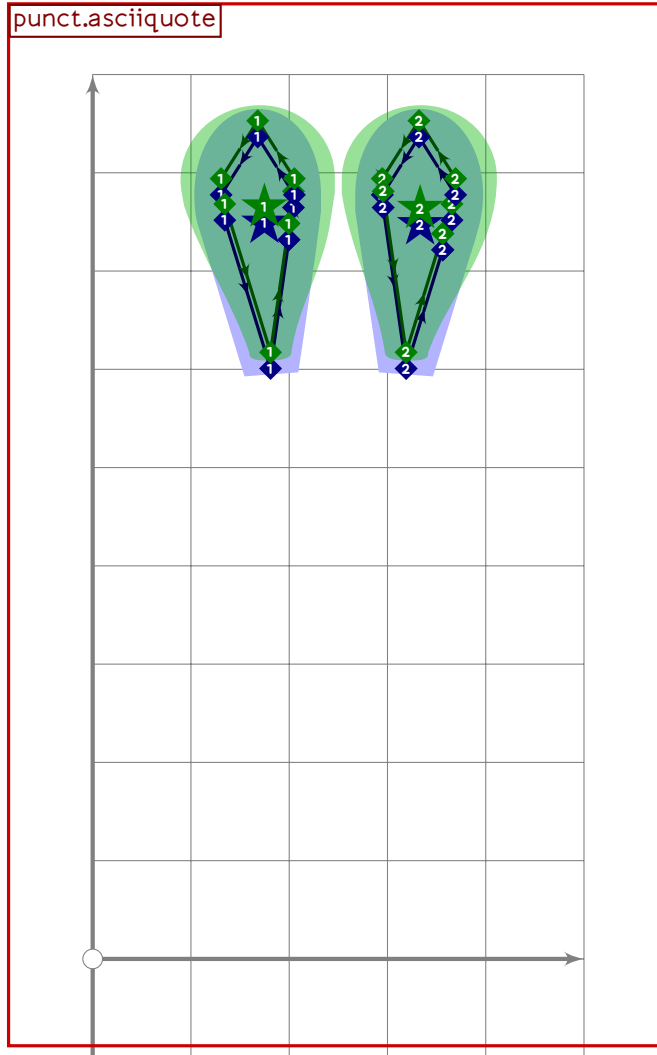
```



```

73
74     tsu_render;
75 endtsuglyph;
76
77 % WARNING changing rescale setting
78 tsu_rescale_half;
79

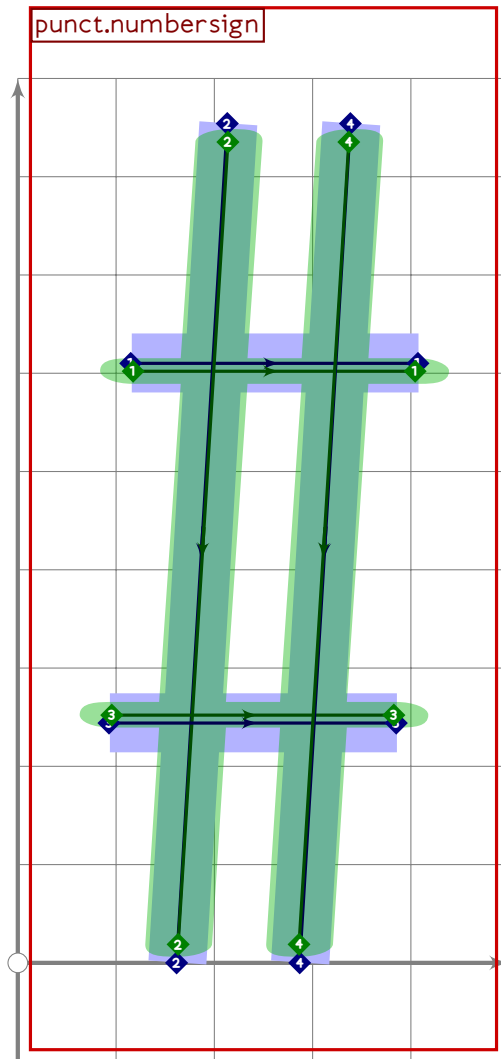
```



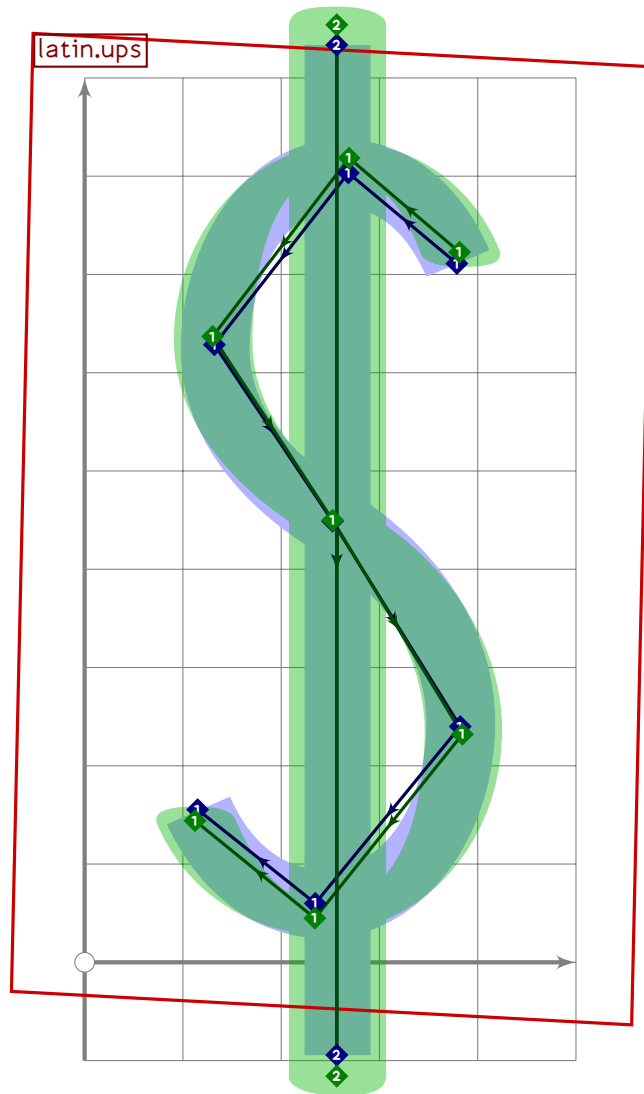
```

80 % ASCII (neither left nor right) quotation mark
81     begint Suglyph("quotedbl",34);
82     tsu_curve.punct.asciquote;
83     tsu_render;
84 endtsuglyph;
85

```



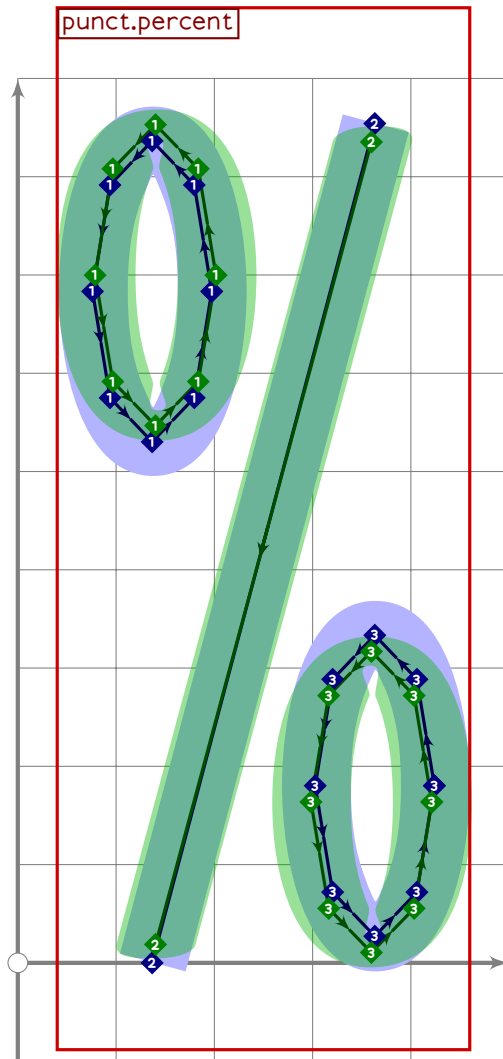
```
86 % number sign
87 beginsuglyph("numbersign",35);
88   tsu_curve.punct.numbersign;
89   tsu_render;
90 endsuglyph;
91
```



```

92 % dollar sign
93 begintsuglyph("dollar",36);
94 tsu_xform(identity shifted -centre_pt
95   rotated -2 xyscaled (1.06,0.92) shifted centre_pt)(tsu_curve.latin.ups);
96
97 numeric x[],y[];
98 x1=x2=0.53[xpart llcorner get_strokep(0),xpart lrcorner get_strokep(0)];
99 y1=1.12[latin_wide_low_r,latin_wide_high_r];
100 y2=(-0.15)[latin_wide_low_r,latin_wide_high_r];
101
102 push_stroke(z1-z2,(2,2)-(2,2));
103 set_bsize(0,90);
104
105 tsu_render;
106 endtsuglyph;
107

```



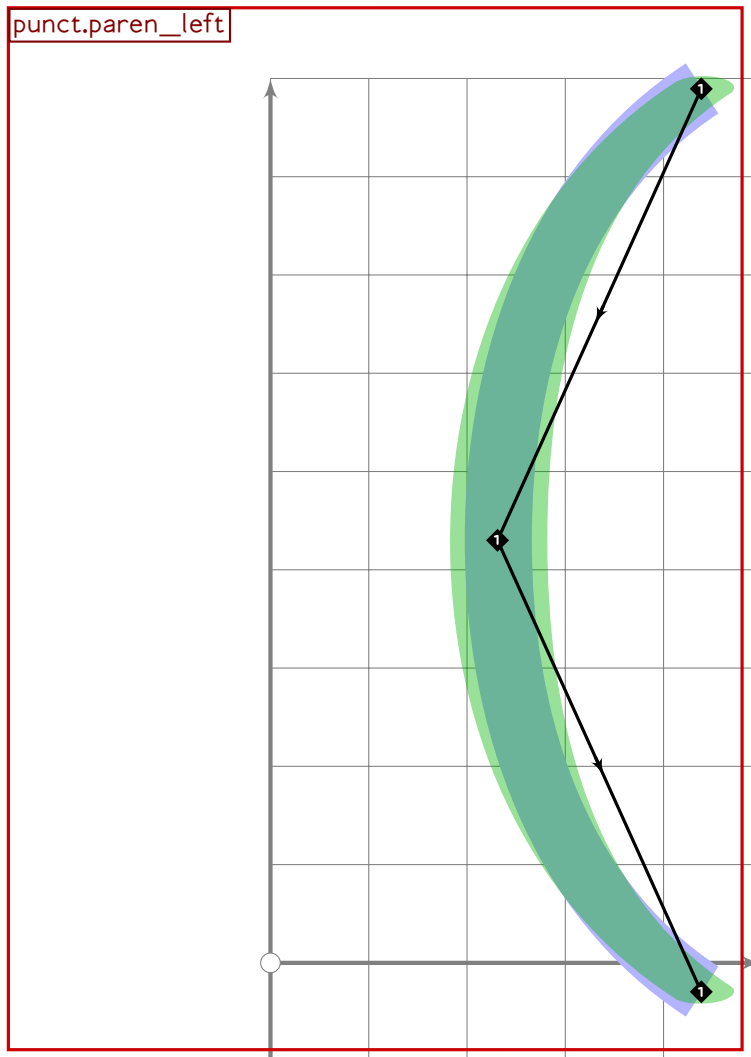
```
108 % percent
109 beginsuglyph("percent",37);
110   tsu_curve.punct.percent;
111   tsu_render;
112 endsuglyph;
113
```




```

120 % apostrophe
121 begintsuglyph("quotesingle",39);
122 tsu_curve.punct.make_comma((480,vmetric(0.94)),0);
123 tsu_render;
124 endsuglyph;
125

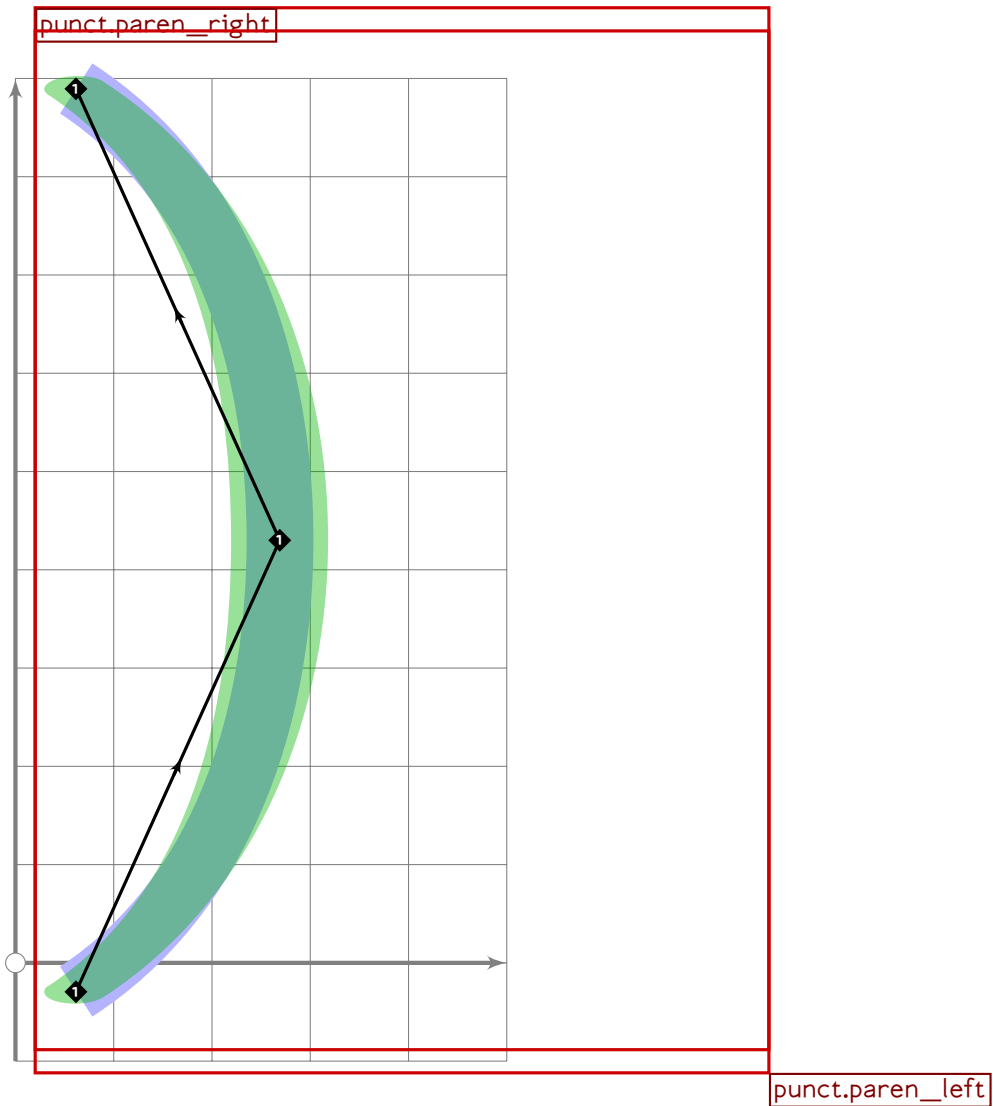
```



```

126 % left and right parentheses
127 begintsuglyph("parenleft",40);
128 tsu_curve.punct.paren_left;
129 tsu_render;
130 endsuglyph;

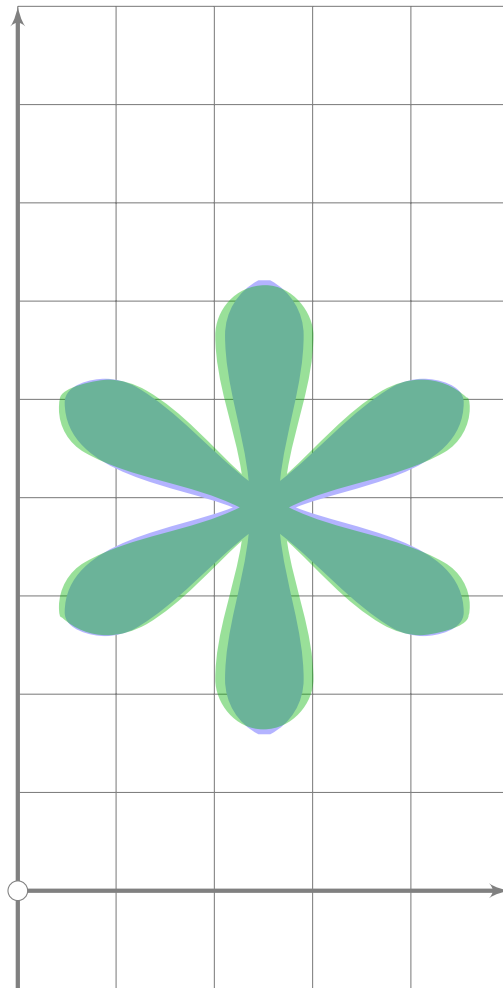
```



```

131 beginsuglyph("parenright",41);
132   tsu_curve.punct.paren_right;
133   tsu_render;
134 endsuglyph;
135
136 % WARNING changing rescale setting
137 tsu_rescale_native_narrow;
138

```

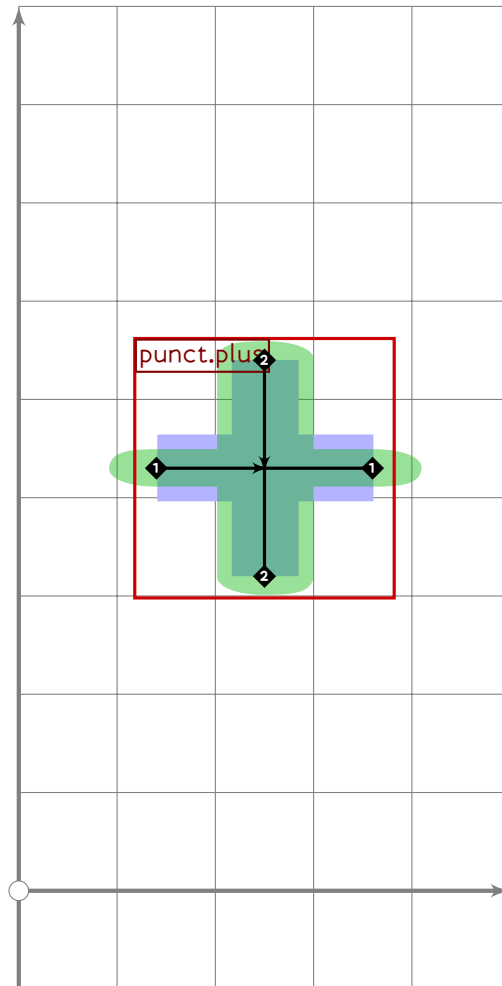
```

139 % asterisk
140 begint Suglyph("asterisk",42);
141   begingroup
142     path lobe, glyph[];
143
144     lobe:=(1,0){up}..((1+tsu_brush_max)*tsu_punct_size/8,140){up}
145       ..{curl 1}(0,175){curl 1}
146       ..(-(1+tsu_brush_max)*tsu_punct_size/8,140){down};
147     lobe:=(lobe..(lobe rotated 180)..cycle) scaled (tsu_punct_size/80);
148
149     default_nib:=fix_nib(35*tsu_brush_max,
150       35*tsu_brush_max*tsu_brush_shape,
151       tsu_brush_angle);
152     pen_stroke()(lobe shifted centre_pt shifted (-250,0))(glyph1);
153     pen_stroke()(lobe rotated 60 shifted centre_pt shifted (-250,0))(glyph2);
154     pen_stroke()(lobe rotated 120 shifted centre_pt shifted (-250,0))(glyph3);
155
156     dangerousFill glyph1.r;
157     dangerousFill glyph2.r;
158     dangerousFill glyph3.r;
159   endgroup;

```

```
160 endtsuglyph;
```

```
161
```



```
162 % plus
```

```
163 begint Suglyph("plus";43);
```

```
164 tsu_curve.punct.plus
```

```
165 (identity scaled (1.1*tsu_punct_size) shifted (250,latin_vcentre));
```

```
166 tsu_render;
```

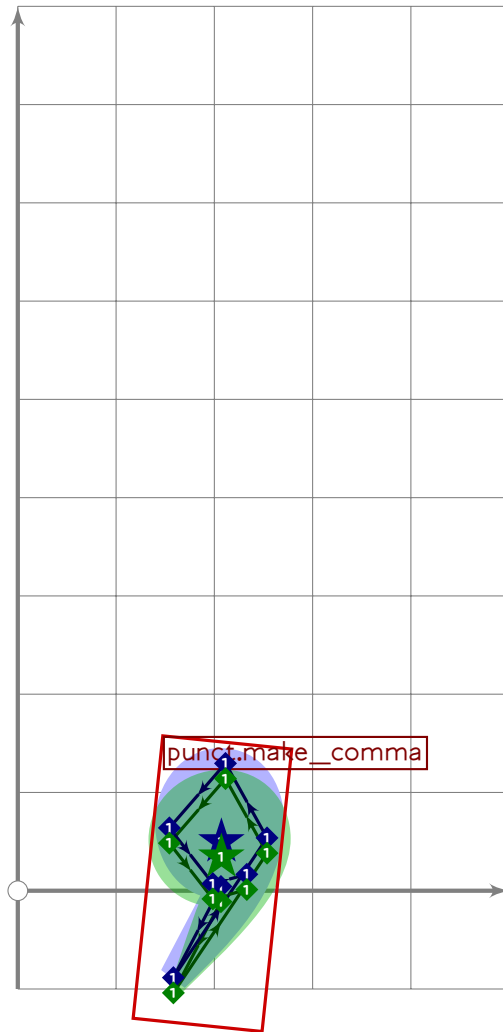
```
167 endtsuglyph;
```

```
168
```

```
169 % WARNING changing rescale setting
```

```
170 tsu_rescale_half;
```

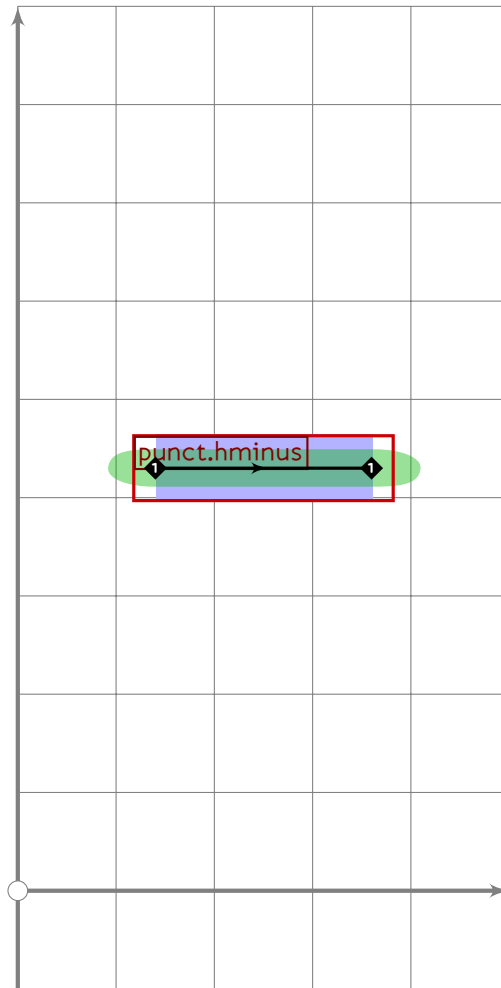
```
171
```



```

172 % comma
173 beginsuglyph("comma",44);
174   tsu_curve.punct.make_comma((380,vmetric(0.03)),0);
175   tsu_render;
176 endsuglyph;
177
178 % WARNING changing rescale setting
179 tsu_rescale_native_narrow;
180

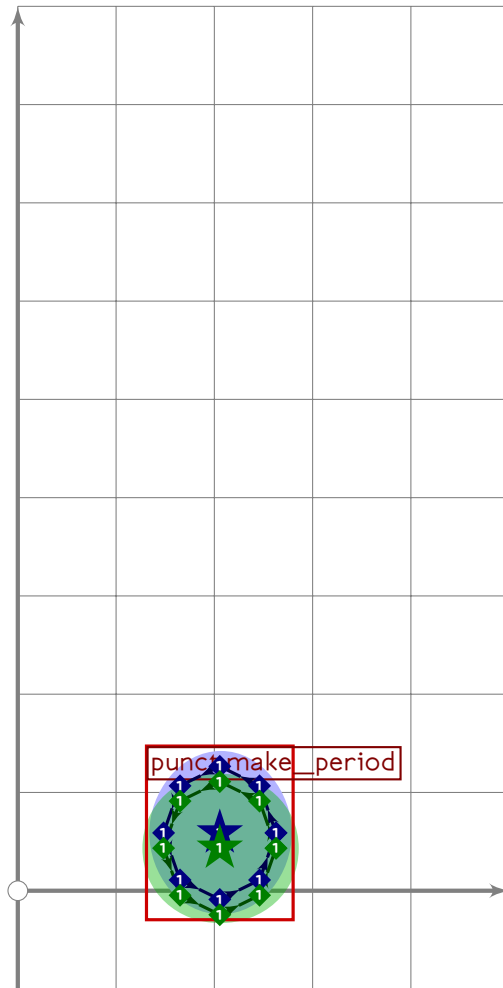
```



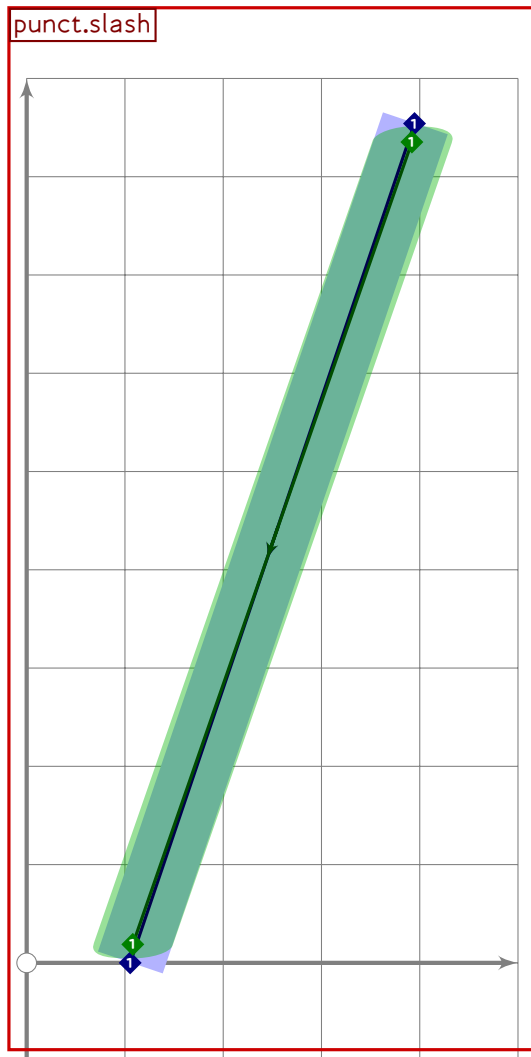
```

181 % hyphen-minus
182 begintsuglyph("hyphen";45);
183 tsu_curve.punct.hminus
184   (identity scaled (1.1*tsu_punct_size) shifted (250,latin_vcentre));
185 tsu_render;
186 endtsuglyph;
187
188 % WARNING changing rescale setting
189 tsu_rescale_half;
190

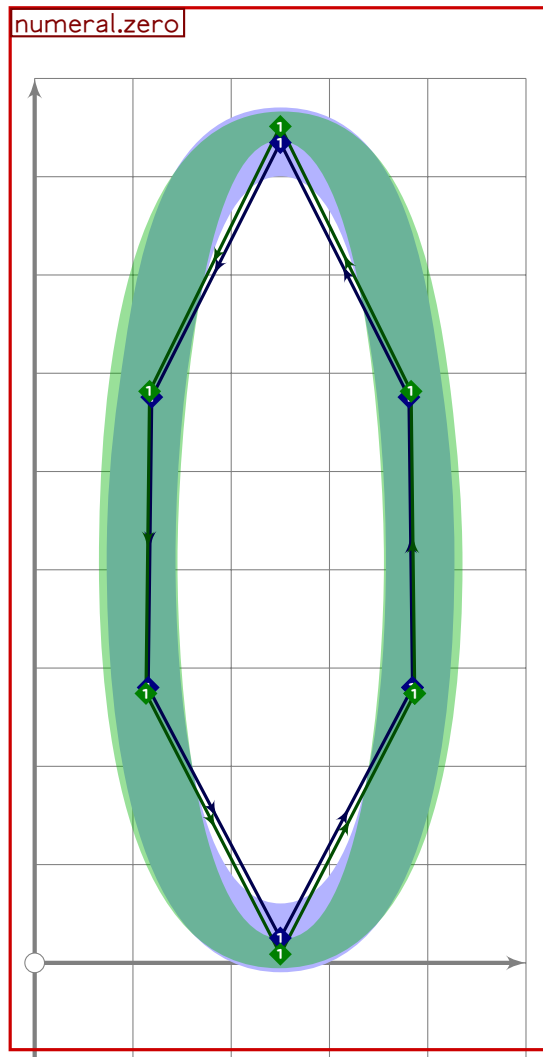
```



```
191 % period
192 beginsuglyph("period",46);
193 tsu_curve.punct.make_period((380,vmetric(0.03)));
194 tsu_render;
195 endsuglyph;
196
```



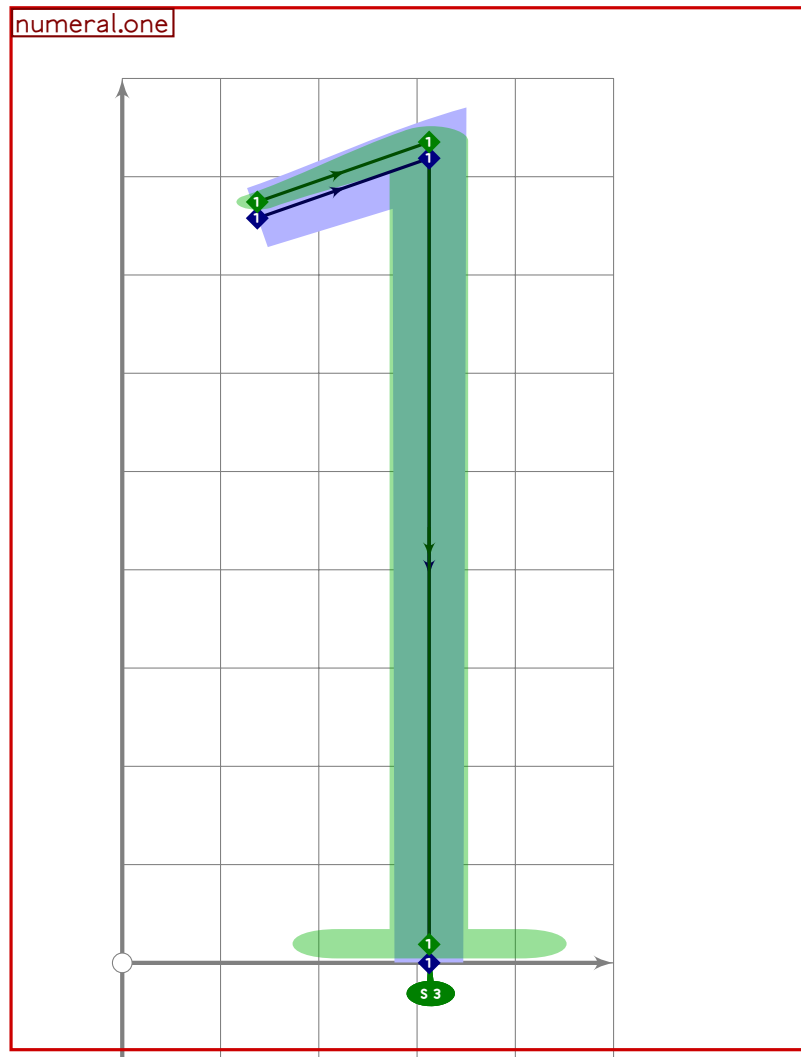
```
197 % slash  
198 begintsuglyph("slash",47);  
199 tsu_curve.punct.slash;  
200 tsu_render;  
201 endtsuglyph;  
202
```



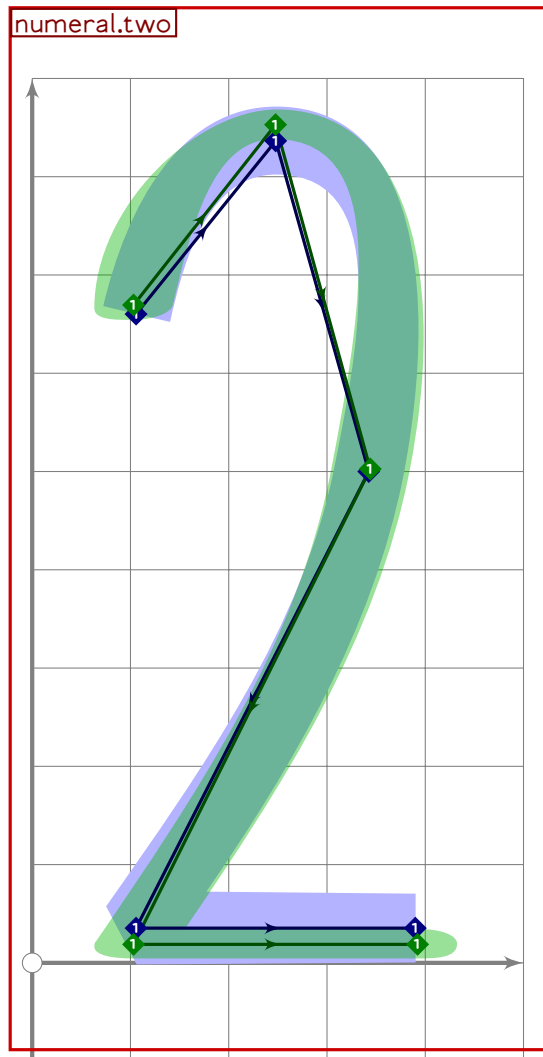
```

203 % 0
204 beginsuglyph("zero",48);
205   tsu_curve.numeral.zero;
206   tsu_render;
207 endsuglyph;
208

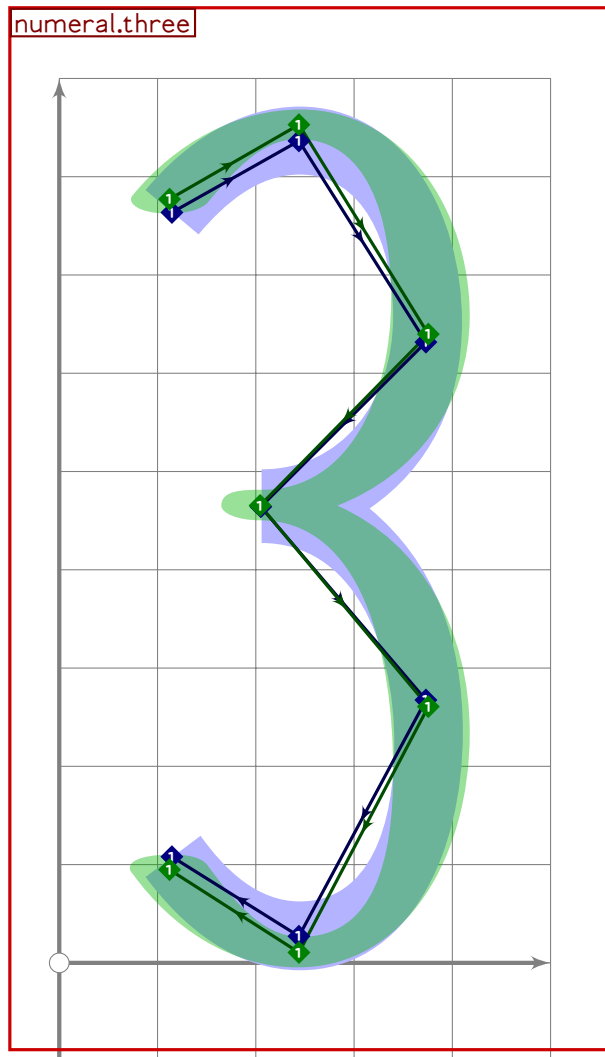
```



```
209 % 1
210 beginsuglyph("one",49);
211   tsu_curve.numeral.one;
212   tsu_render;
213 endsuglyph;
214
```

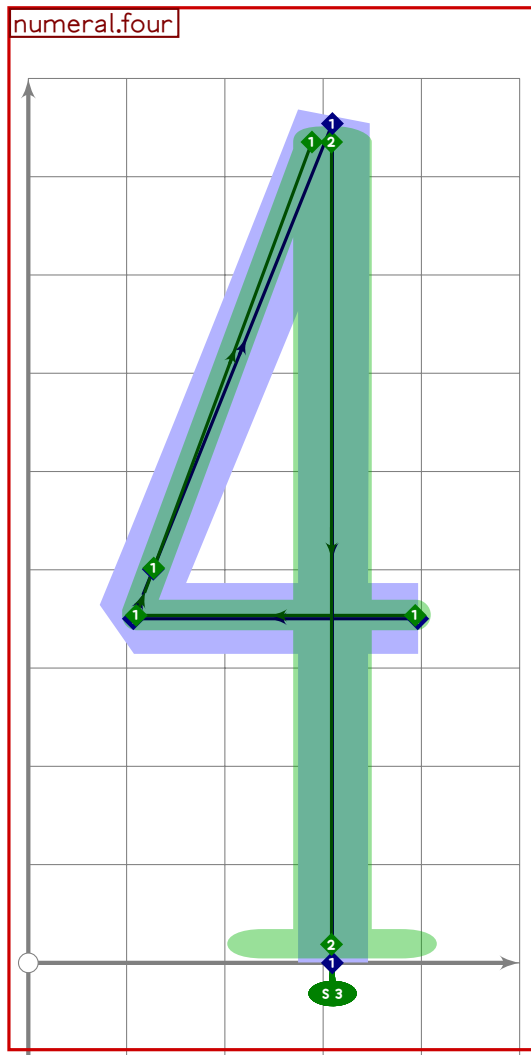
```
215 % 2
216 begintsuglyph("two",50);
217   tsu_curve.numeral.two;
218   tsu_render;
219 endsuglyph;
220
```



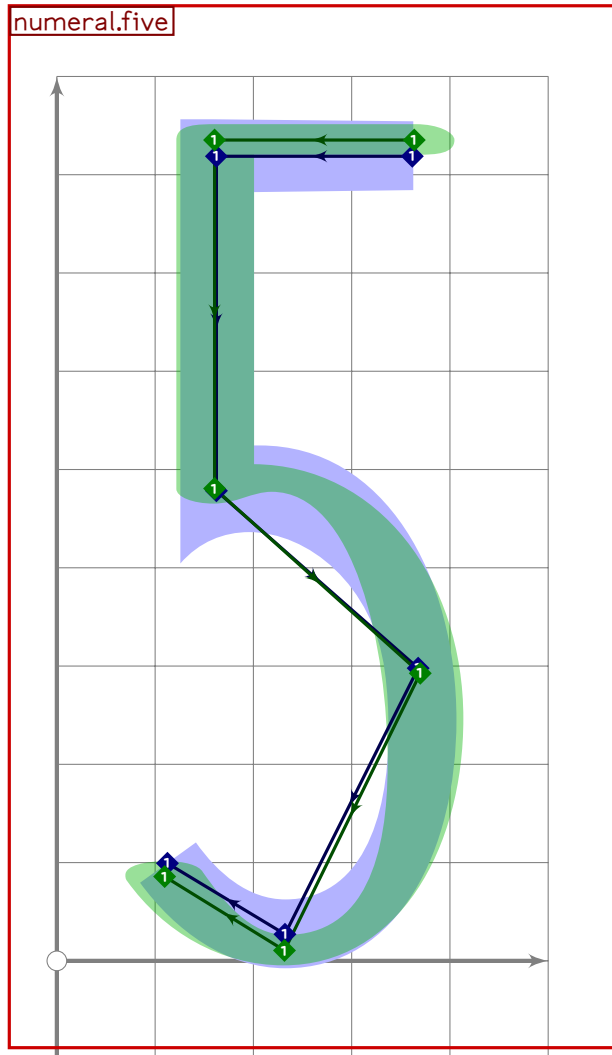
```

221 % 3
222 beginsuglyph("three",51);
223   tsu_curve.numeral.three;
224   tsu_render;
225 endsuglyph;
226

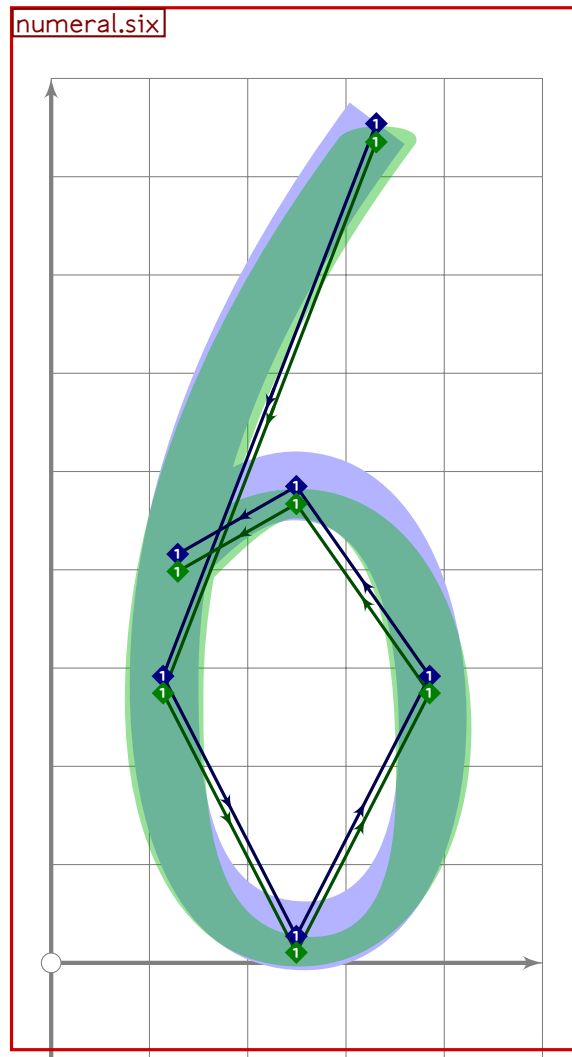
```



```
227 % 4
228 beginsuglyph("four",52);
229   tsu_curve.numeral.four;
230   tsu_render;
231 endsuglyph;
232
```



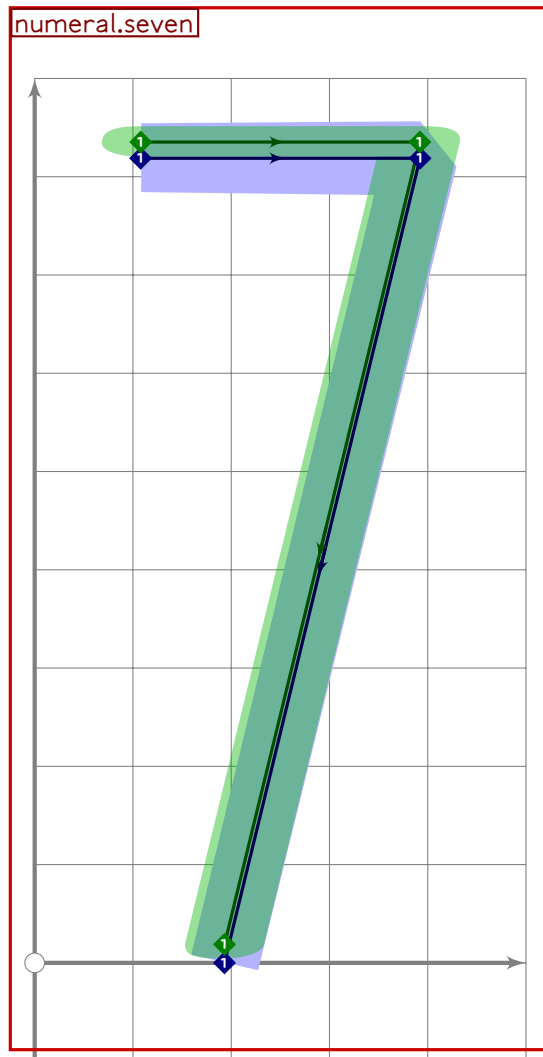
```
233 % 5
234 beginsuglyph("five";53);
235   tsu_curve.numeral.five;
236   tsu_render;
237 endsuglyph;
238
```



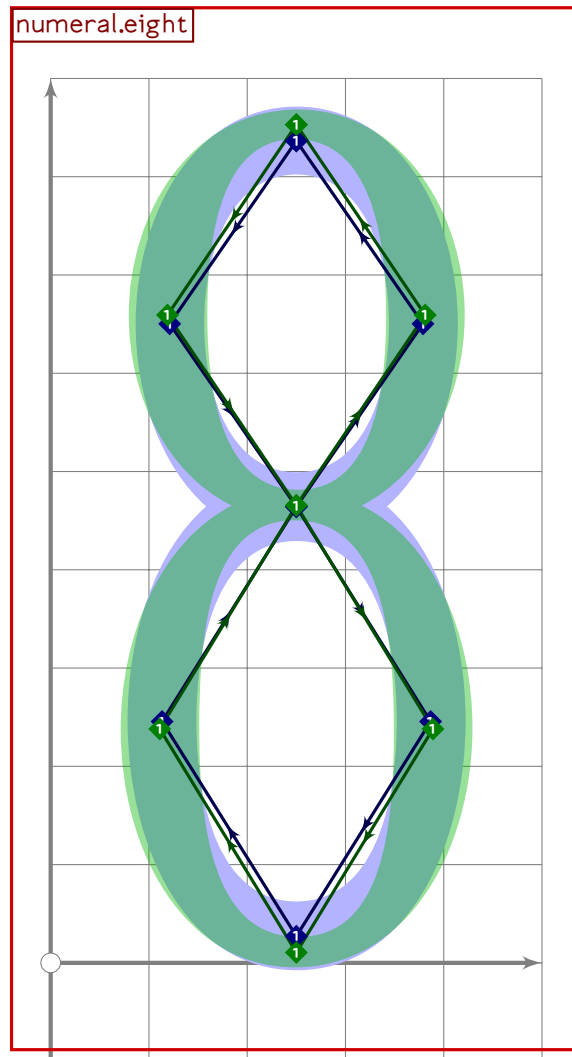
```

239 % 6
240 begintsuglyph("six",54);
241   tsu_curve.numeral.six;
242   tsu_render;
243 endsuglyph;
244

```



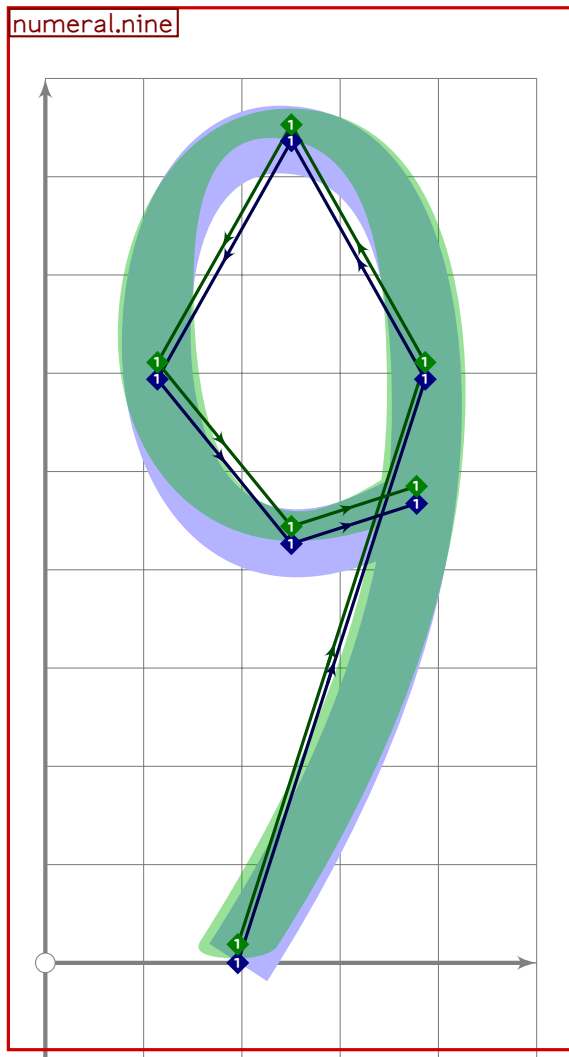
```
245 % 7  
246 begintsuglyph("seven",55);  
247 tsu_curve.numeral.seven;  
248 tsu_render;  
249 endtsuglyph;  
250
```



```

251 % 8
252 beginsuglyph("eight";56);
253   tsu_curve.numeral.eight;
254   tsu_render;
255 endsuglyph;
256

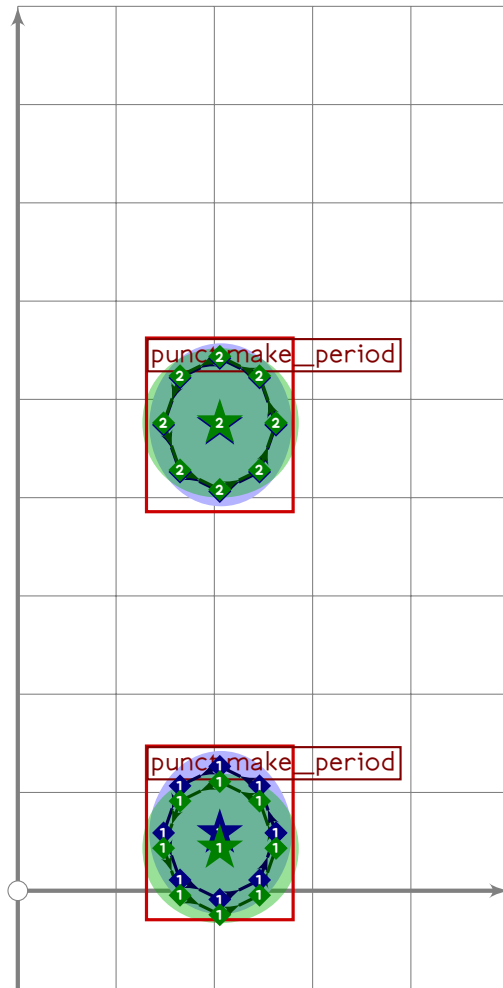
```



```

257 % 9
258 beginsuglyph("nine";57);
259   tsu_curve.numeral.nine;
260   tsu_render;
261 endsuglyph;
262

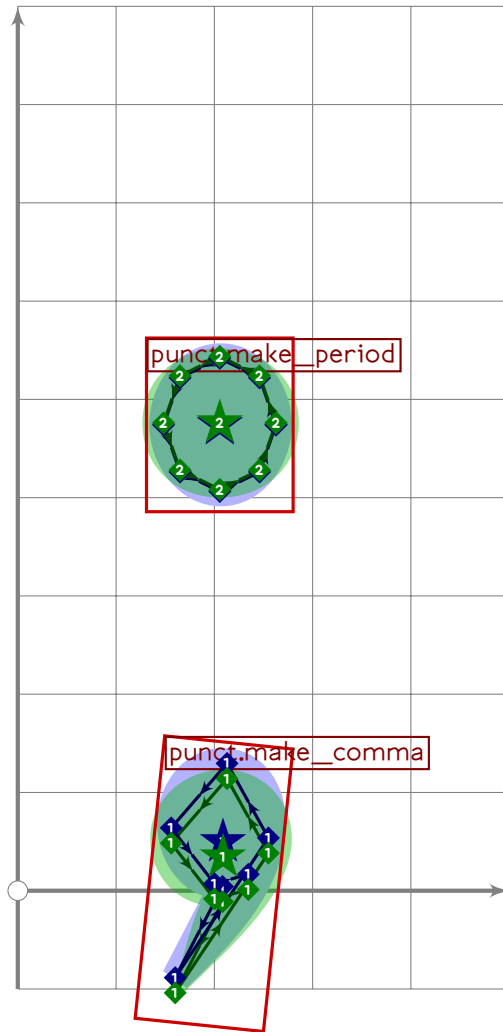
```

```

263 % colon
264 begint Suglyph("colon",58);
265   tsu_curve.punct.make_period((380,vmetric(0.03)));
266   tsu_curve.punct.make_period((380,vmetric(0.56)));
267   tsu_render;
268 endsuglyph;
269

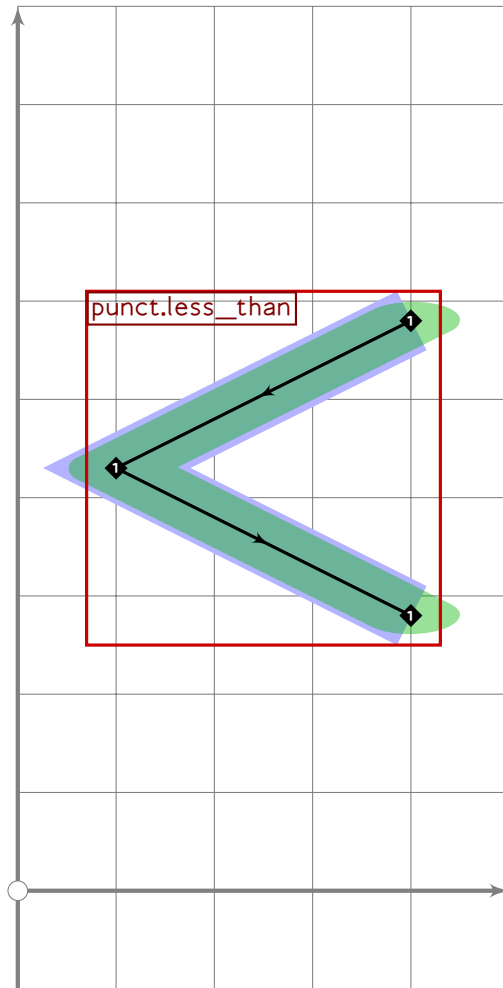
```



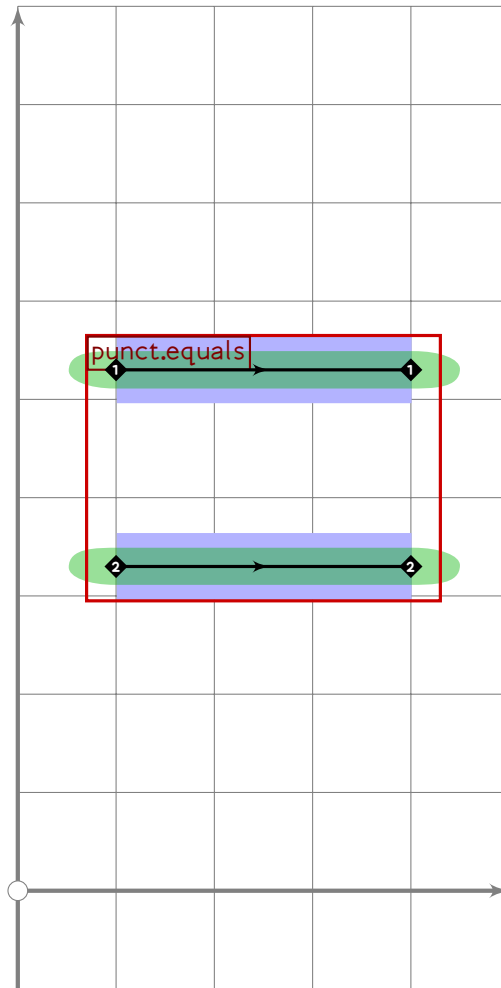
```

270 % semicolon
271 begintsuglyph("semicolon",59);
272 tsu_curve.punct.make_comma((380,vmetric(0.03)),0);
273 tsu_curve.punct.make_period((380,vmetric(0.56)));
274 tsu_render;
275 endsuglyph;
276
277 % WARNING, changing rescale setting
278 tsu_rescale_native_narrow;
279

```



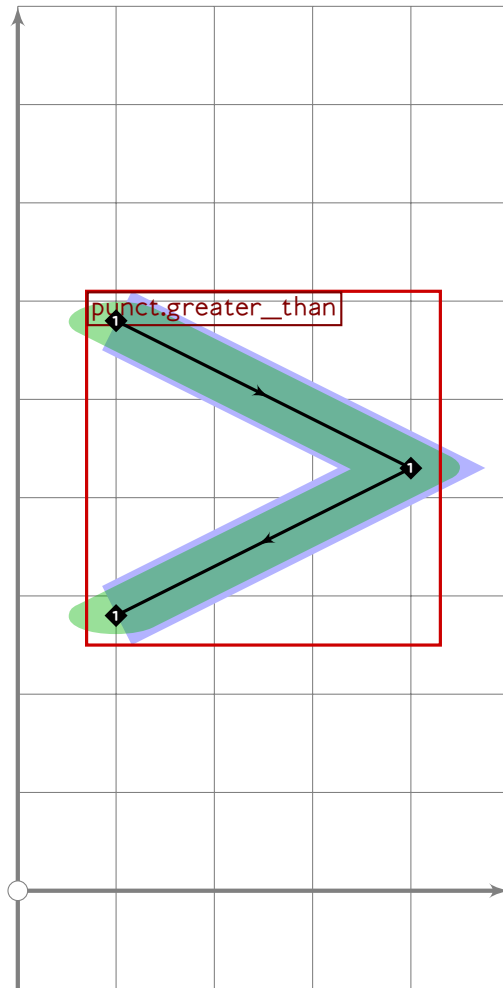
```
280 % less than
281 begintsuglyph("less";60);
282 tsu_curve.punct.less_than
283   (identity scaled (1.5*tsu_punct_size) shifted (250,latin_vcentre));
284 tsu_render;
285 endsuglyph;
286
```



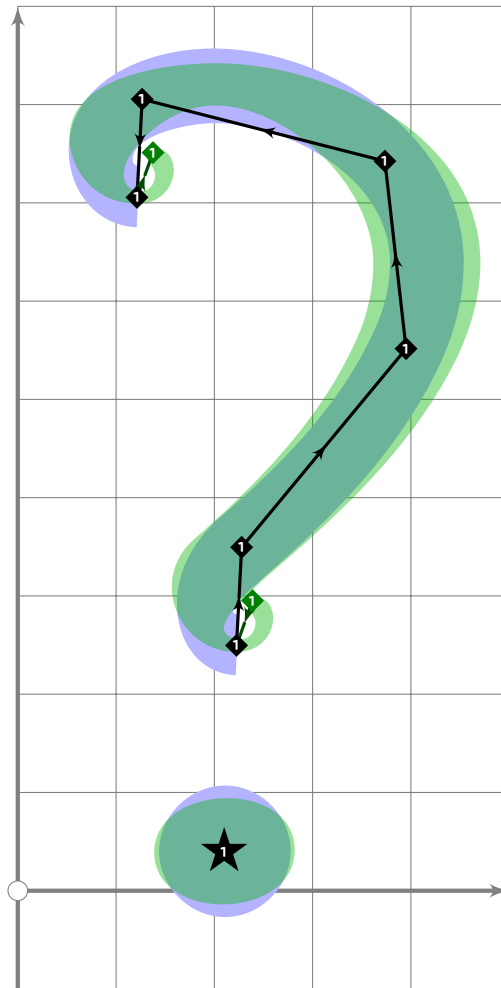
```

287 % equals
288 begintsuglyph("equals",61);
289 tsu_curve.punct.equals
290   (identity scaled (1.5*tsu_punct_size) shifted (250,latin_vcentre));
291 tsu_render;
292 endsuglyph;
293

```



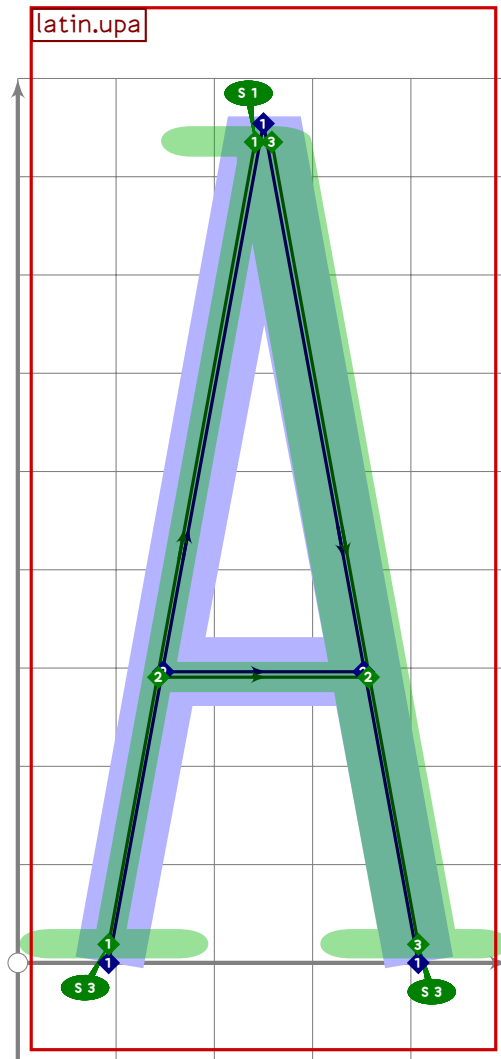
```
294 % greater than
295 begintsuglyph("greater",62);
296 tsu_curve.punct.greater_than
297   (identity scaled (1.5*tsu_punct_size) shifted (250,latin_vcentre));
298 tsu_render;
299 endsuglyph;
300
```



```

301 % question mark
302 begintsuglyph("question",63);
303     numeric r;
304     if tsu_pbrush_size>=(tsu_punct_size*0.5):
305         push_lcblob(fullcircle
306             xscaled ((tsu_punct_size+tsu_pbrush_size)*0.89)
307             yscaled ((tsu_punct_size+tsu_pbrush_size*tsu_pbrush_shape)*0.89)
308             rotated tsu_pbrush_angle
309             shifted (210,40));
310     else:
311         push_stroke(fullcircle scaled tsu_punct_size shifted (210,40),
312             (2,2)-(2,2)-(2,2)-(2,2));
313         if tsu_pbrush_size>=30:
314             push_lcblob(get_strokep(0));
315         fi;
316     fi;
317     r:=tsu_punct_size/2;
318
319     push_stroke((210,300){right}..(210,300-r){left}..
320         (210,300+r)..(210+2.5*r,750)..
321         tension 1.3..(210-2.5*r,750+r)..

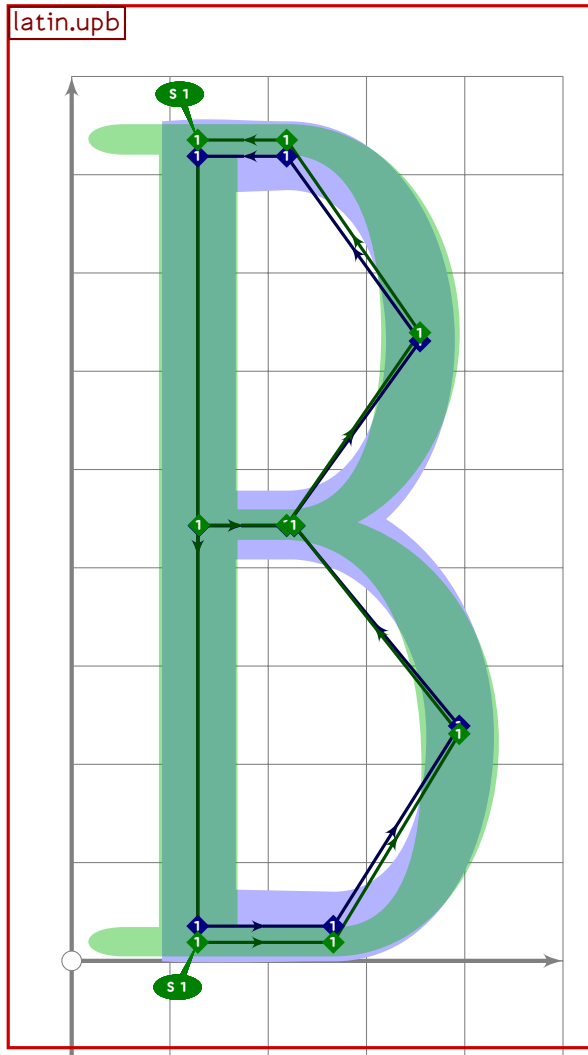
```

```

339 % A
340 begintsuglyph("A";65);
341   tsu_curve.latin.upa;
342   tsu_render;
343 endsuglyph;
344

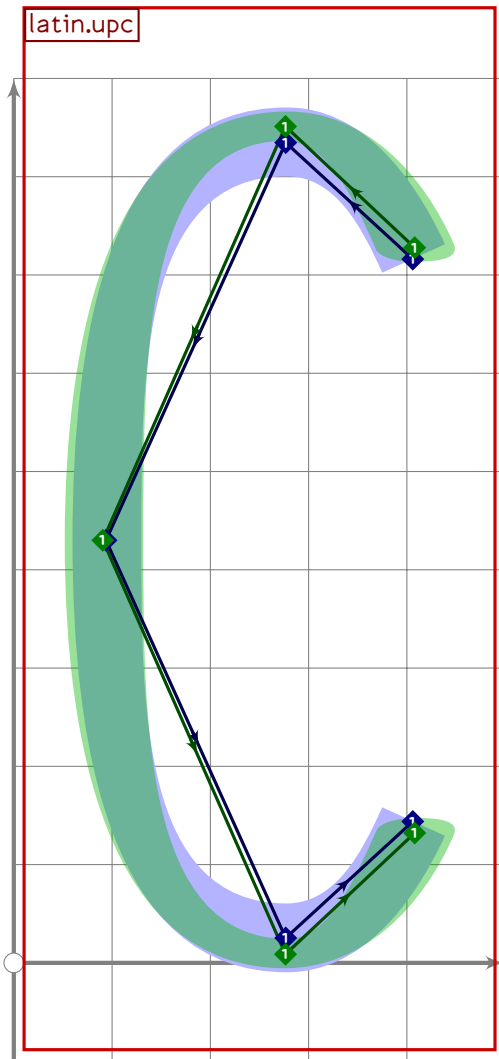
```

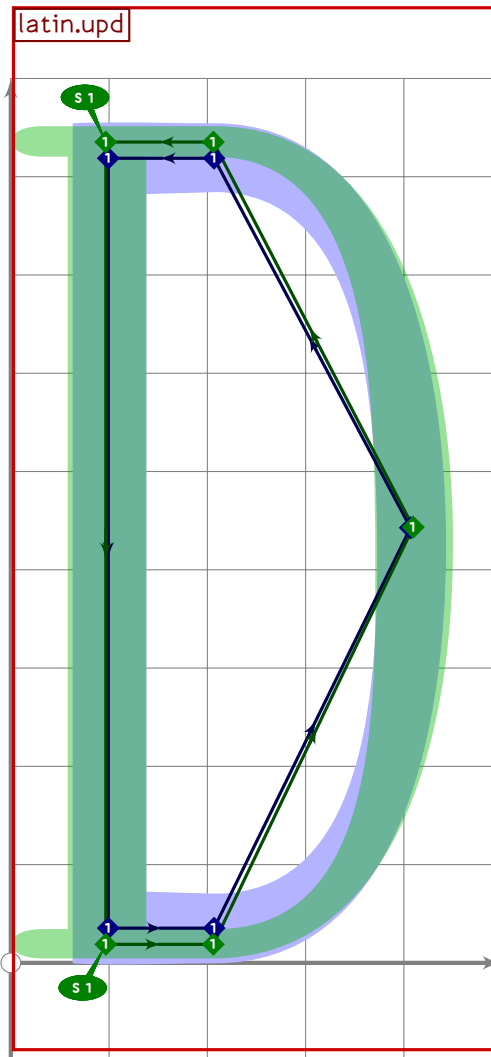
```

345 % B
346 begintsuglyph("B",66);
347   tsu_curve.latin.upb;
348   tsu_render;
349 endsuglyph;
350

```



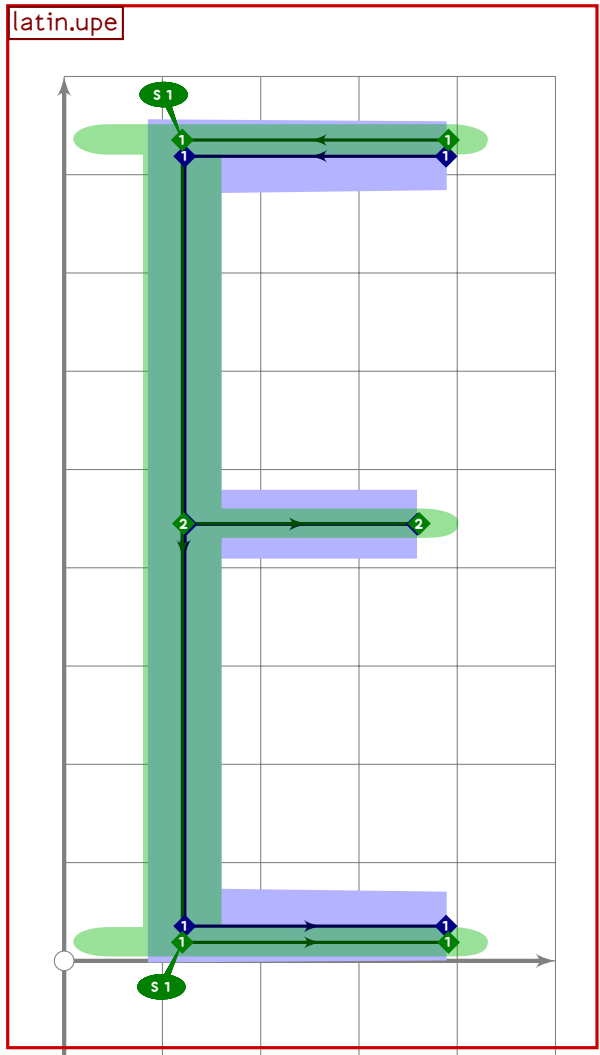
```
351 % C
352 begintsuglyph("C",67);
353   tsu_curve.latin.upc;
354   tsu_render;
355 endsuglyph;
356
```



```

357 % D
358 begintsuglyph("D",68);
359   tsu_curve.latin.upd;
360   tsu_render;
361 endsuglyph;
362

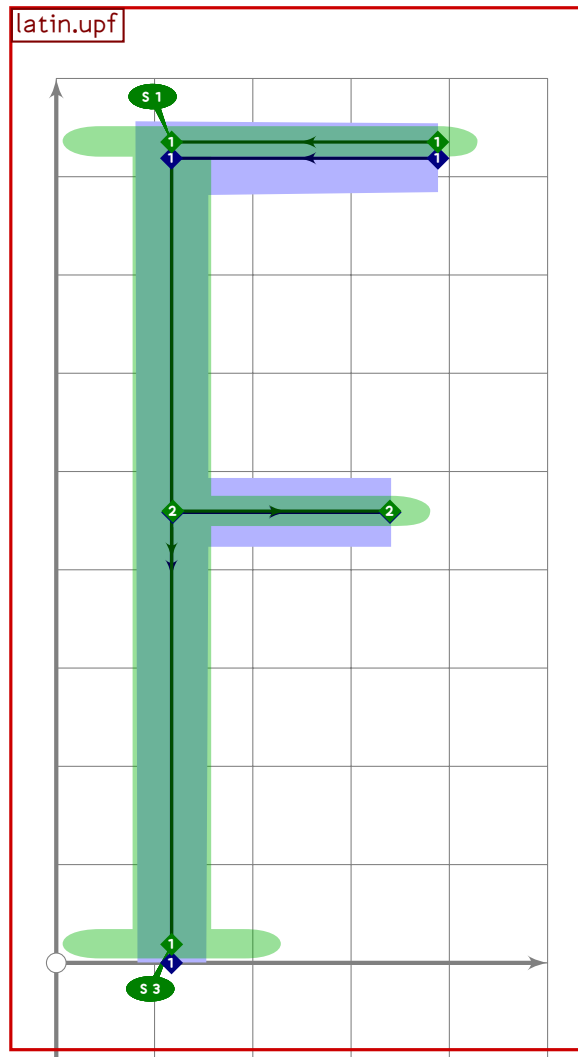
```



```

363 % E
364 begint Suglyph("E",69);
365   tsu_curve.latin.upe;
366   tsu_render;
367 endsuglyph;
368

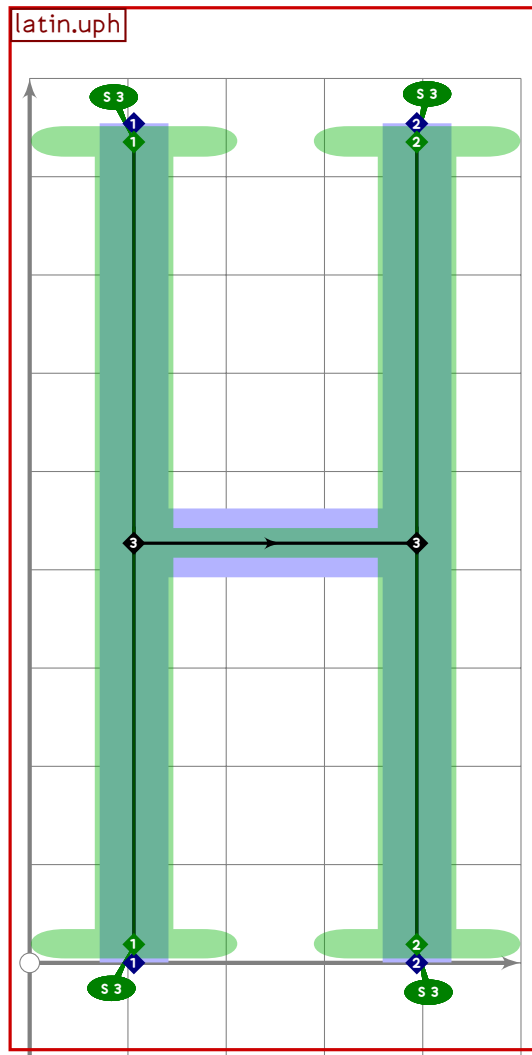
```



```

369 % F
370 begintsuglyph("F";70);
371   tsu_curve.latin.upf;
372   tsu_render;
373 endsuglyph;
374

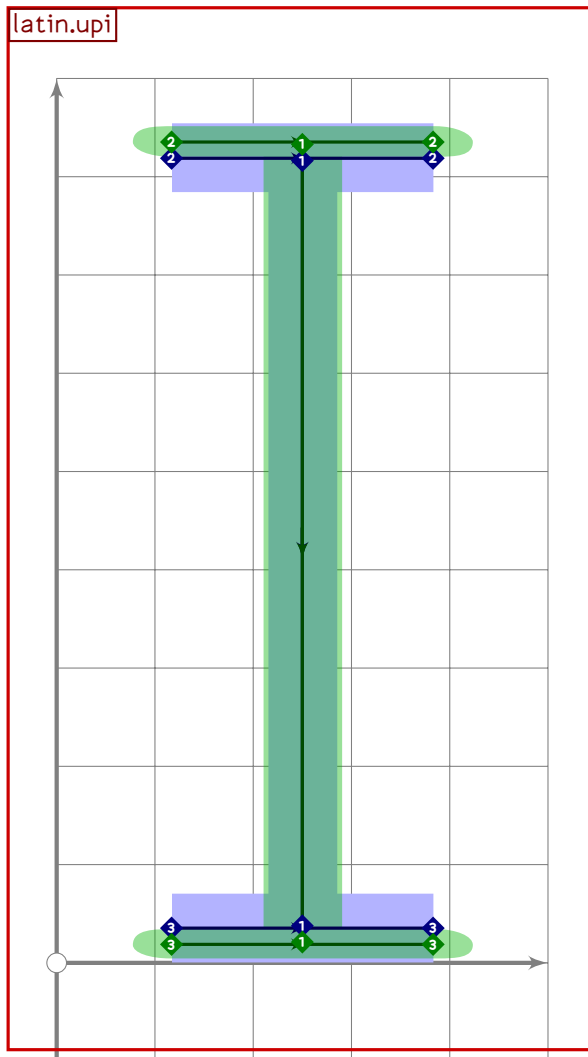
```

```

381 % H
382 begintsuglyph("H",72);
383   tsu_curve.latin.uph;
384   tsu_render;
385 endsuglyph;
386

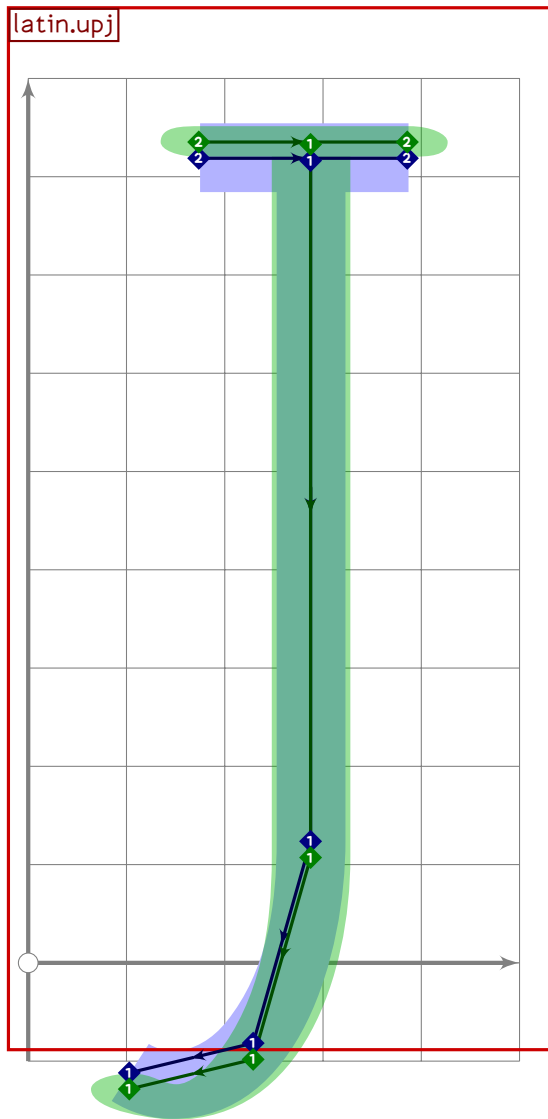
```



```

387 % I
388 begint Suglyph("I";73);
389   tsu_curve.latin.upi;
390   tsu_render;
391 endsuglyph;
392

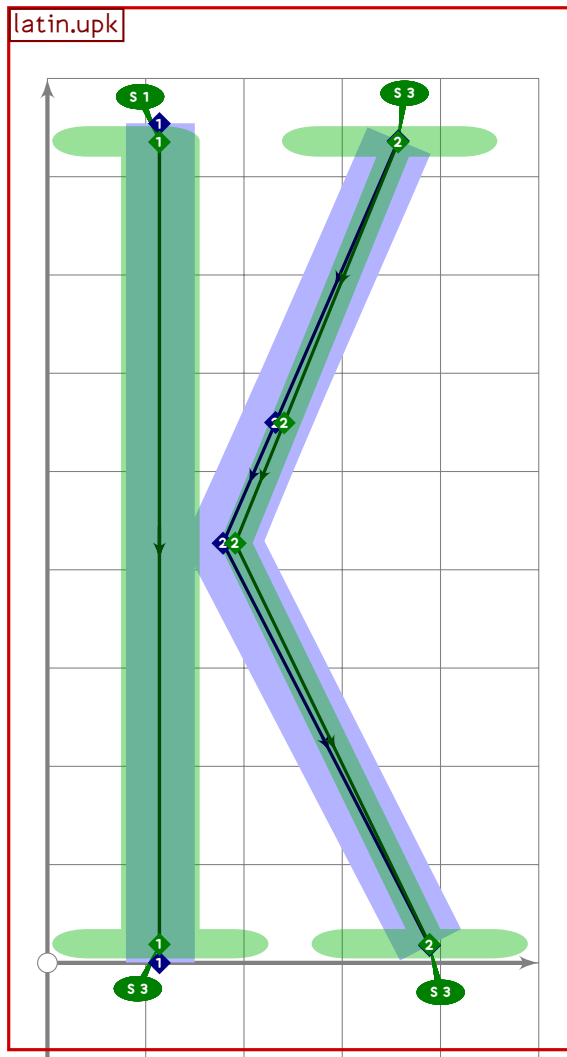
```

```

393 % J
394 beginsuglyph("J";74);
395 tsu_curve.latin.upj;
396 tsu_render;
397 endsuglyph;
398

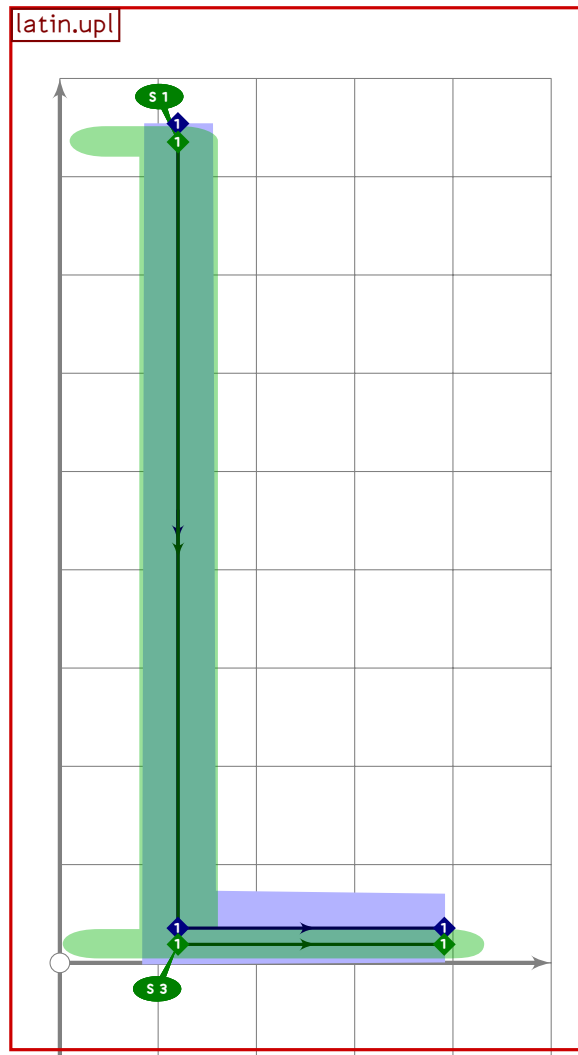
```



```

399 % K
400 beginsuglyph("K",75);
401   tsu_curve.latin.upk;
402   tsu_render;
403 endsuglyph;
404

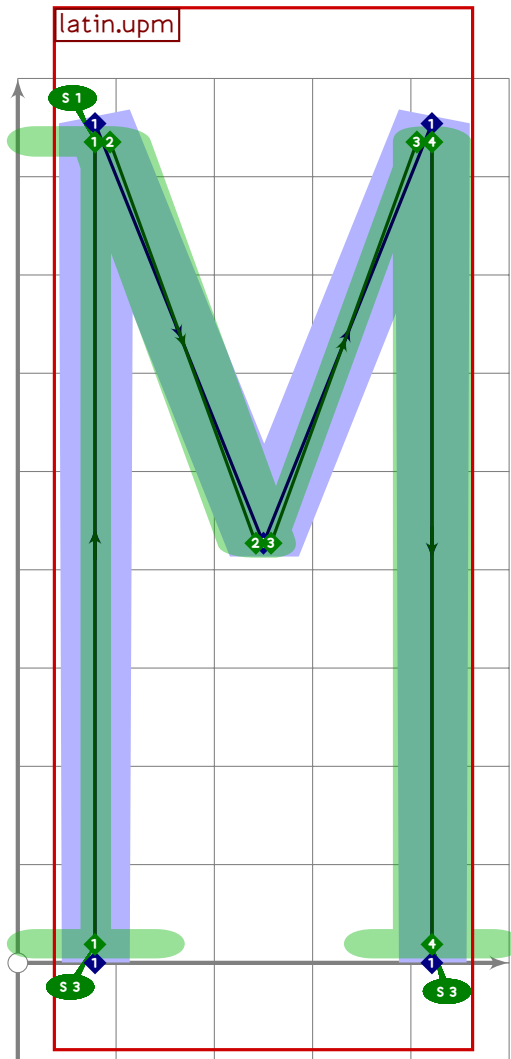
```



```

405 % L
406 begintsuglyph("L";76);
407   tsu_curve.latin.upl;
408   tsu_render;
409 endsuglyph;
410

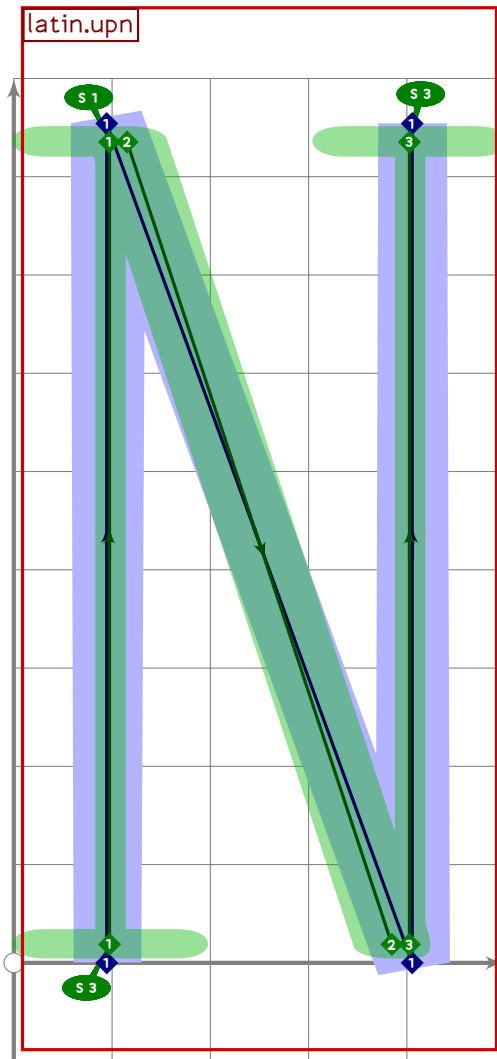
```



```

411 % M
412 beginsuglyph("M";77);
413   tsu_curve.latin.upm;
414   tsu_render;
415 endsuglyph;
416

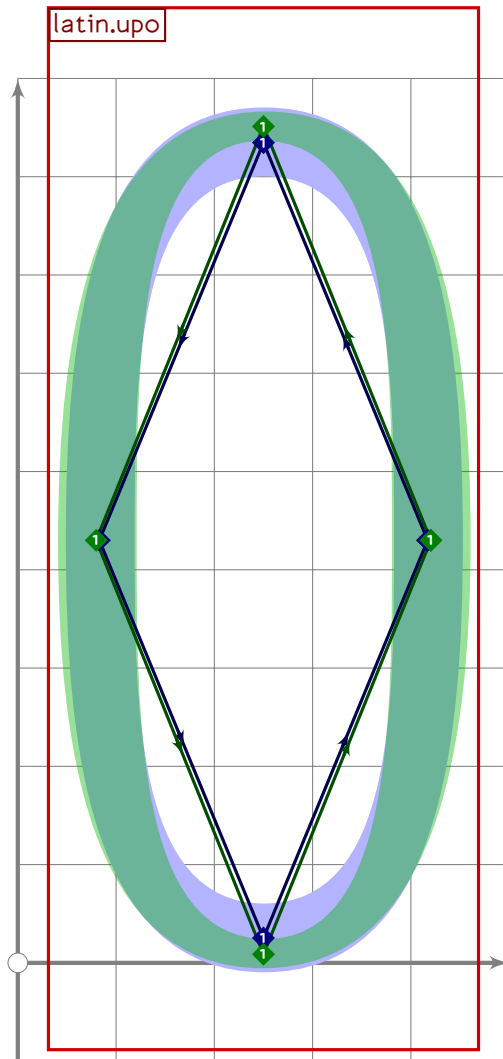
```



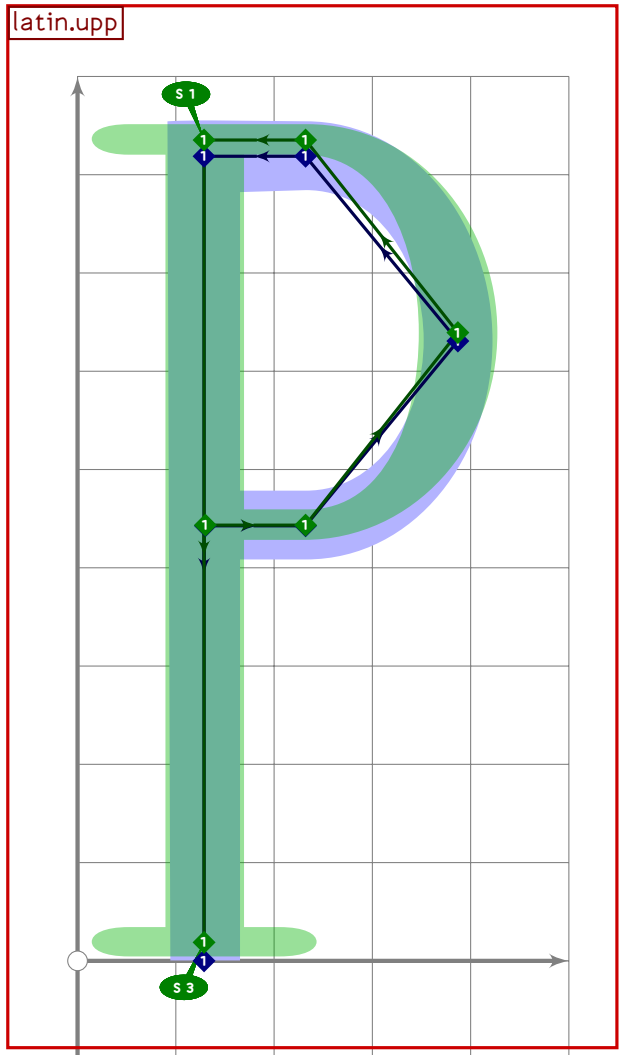
```

417 % N
418 beginsuglyph("N";78);
419   tsu_curve.latin.upn;
420   tsu_render;
421 endsuglyph;
422

```



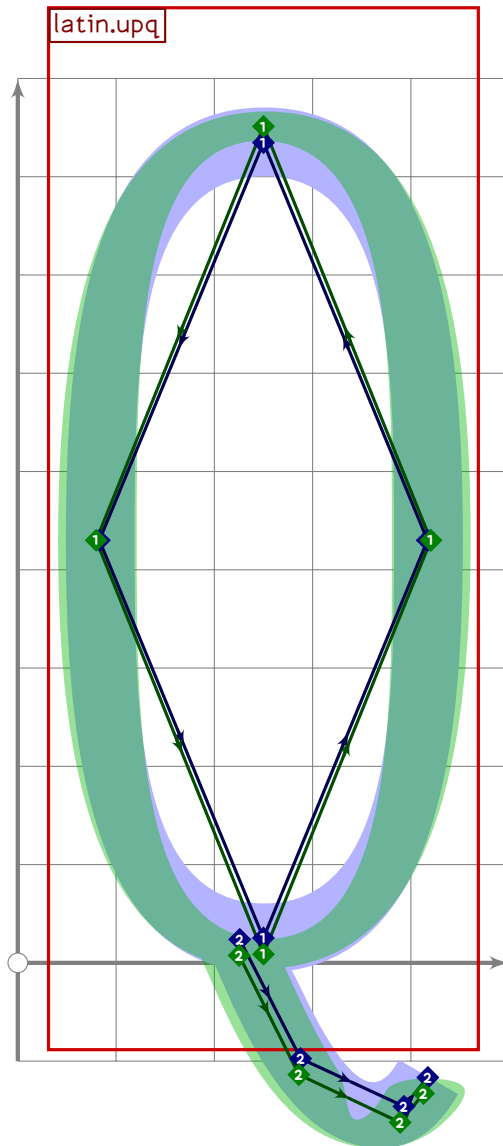
```
423 % O
424 beginsuglyph("O";79);
425   tsu_curve.latin.upo;
426   tsu_render;
427 endsuglyph;
428
```



```

429 % P
430 begintsuglyph("P",80);
431   tsu_curve.latin.upp;
432   tsu_render;
433 endsuglyph;
434

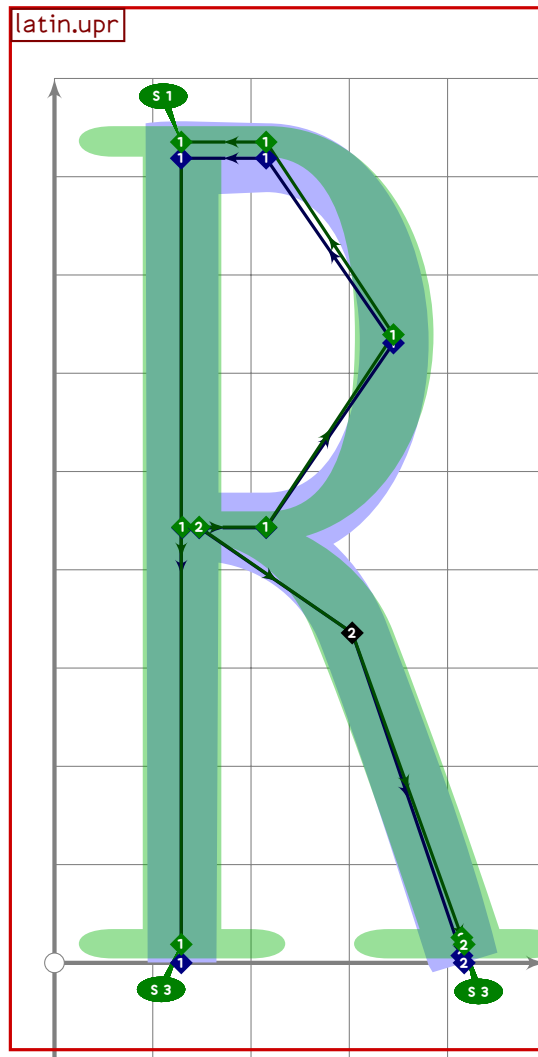
```



```

435 % Q
436 begintsuglyph("Q",81);
437   tsu_curve.latin.upq;
438   tsu_render;
439 endtsuglyph;
440

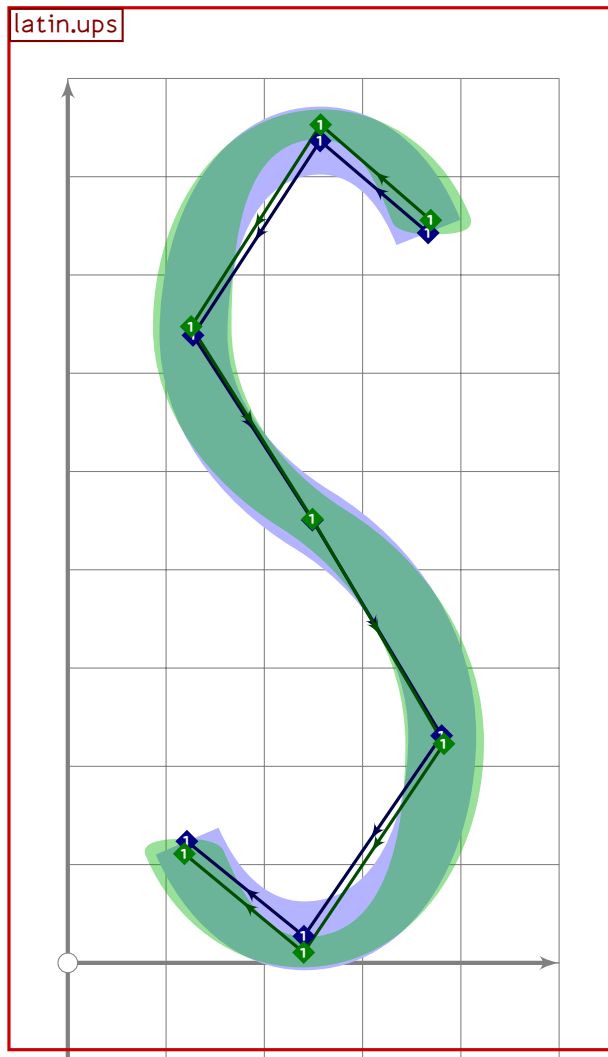
```

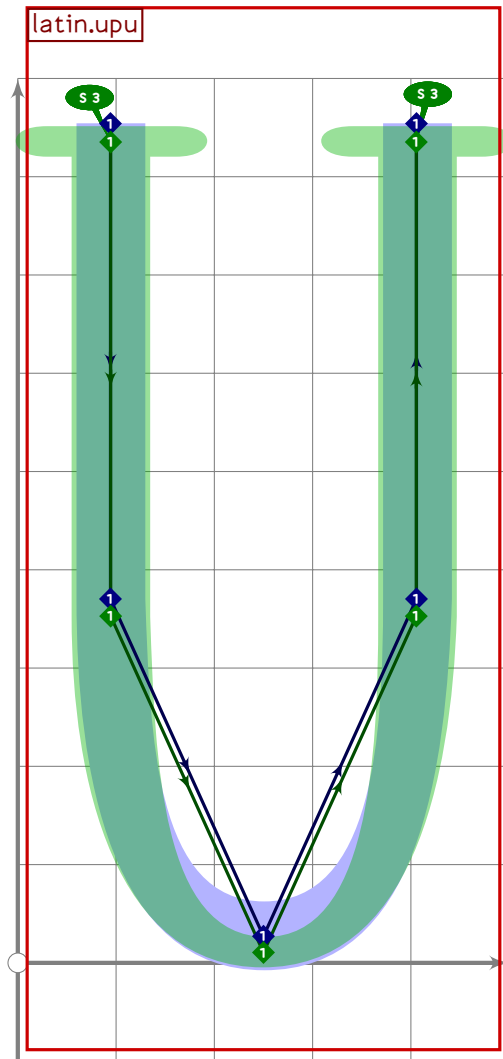
```

441 % R
442 begintsuglyph("R",82);
443   tsu_curve.latin.upr;
444   tsu_render;
445 endsuglyph;
446

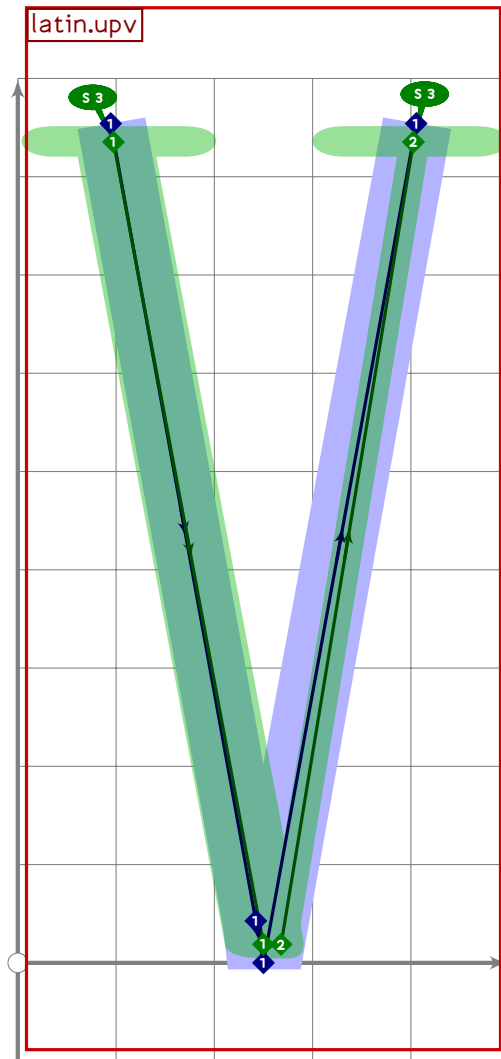
```



```
447 % S
448 begintsuglyph("S";83);
449   tsu_curve.latin.ups;
450   tsu_render;
451 endsuglyph;
452
```

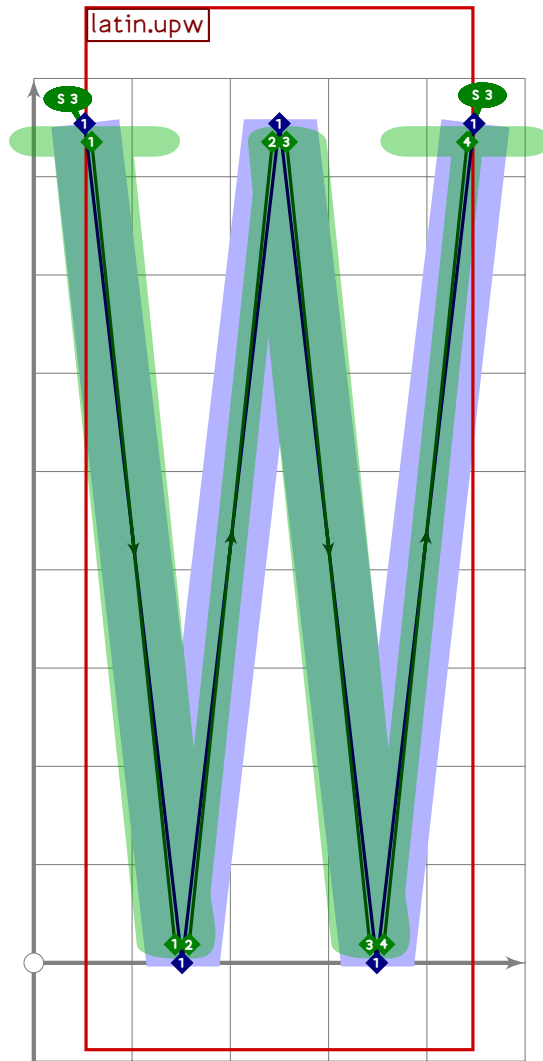
```
459 % U
460 beginsuglyph("U";85);
461   tsu_curve.latin.upu;
462   tsu_render;
463 endsuglyph;
464
```



```

465 % V
466 begint Suglyph("V",86);
467   tsu_curve.latin.upv;
468   tsu_render;
469 endsuglyph;
470

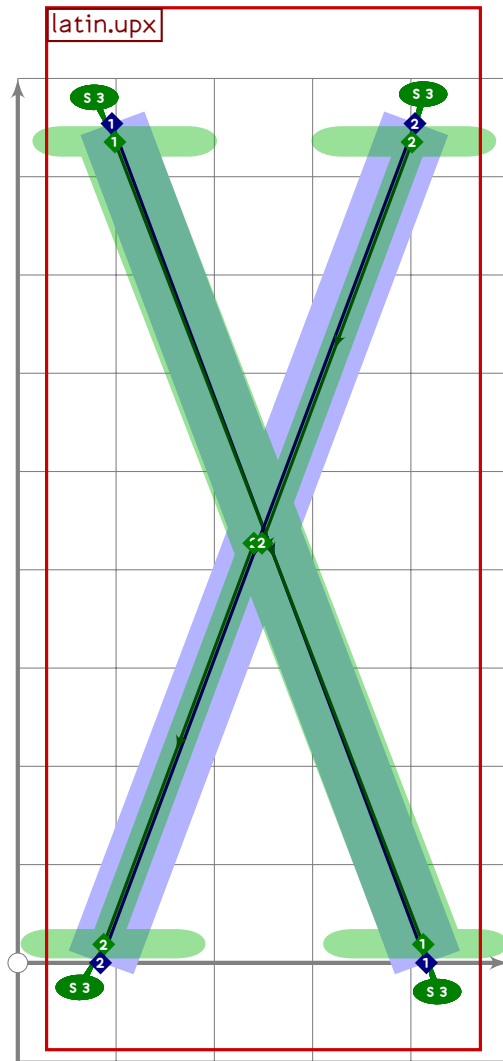
```



```

471 % W
472 beginsuglyph("W";87);
473   tsu_curve.latin.upw;
474   tsu_render;
475 endsuglyph;
476

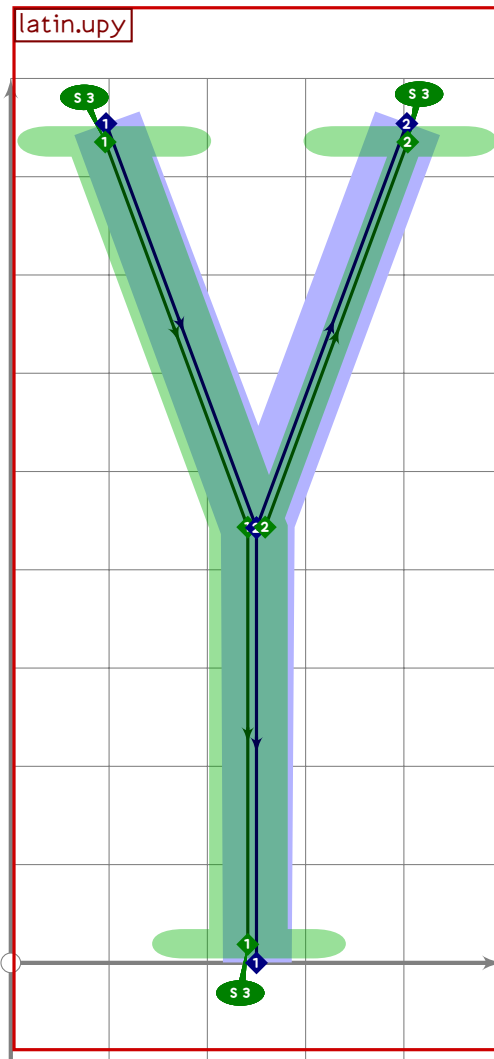
```



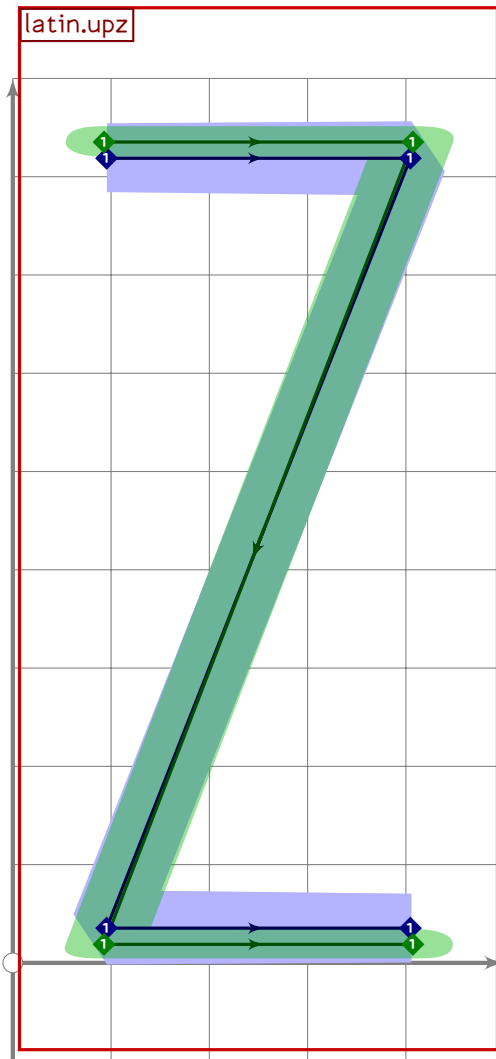
```

477 % X
478 begintsuglyph("X";88);
479   tsu_curve.latin.upx;
480   tsu_render;
481 endsuglyph;
482

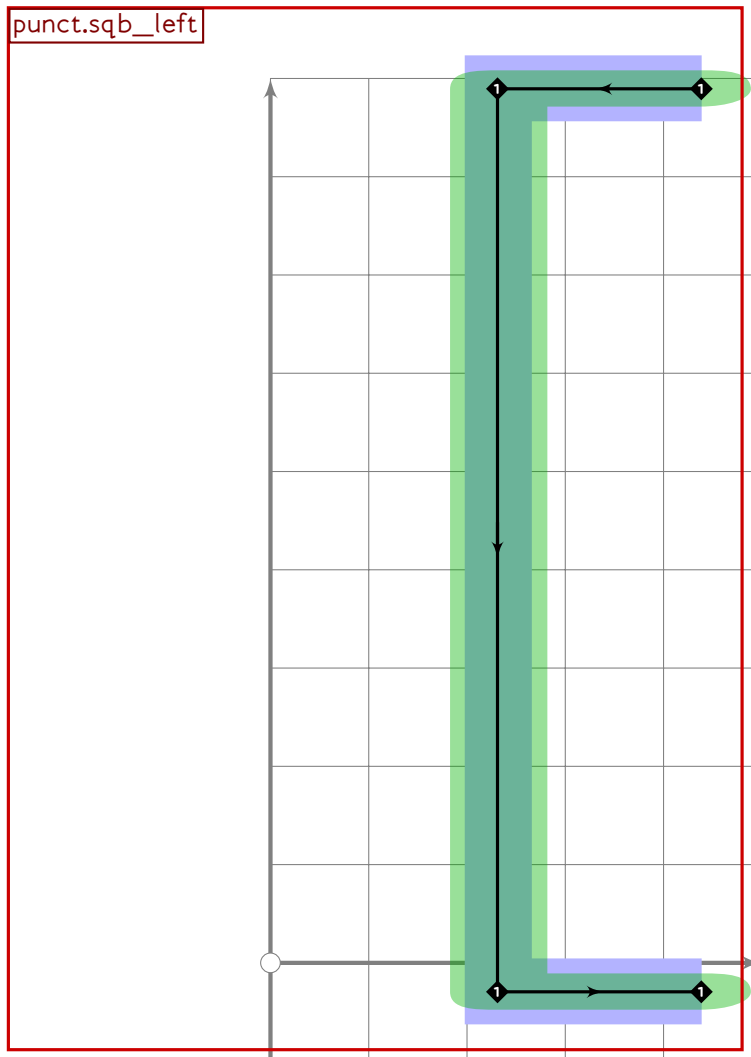
```



```
483 % Y
484 beginsuglyph("Y",89);
485   tsu_curve.latin.upy;
486   tsu_render;
487 endsuglyph;
488
```

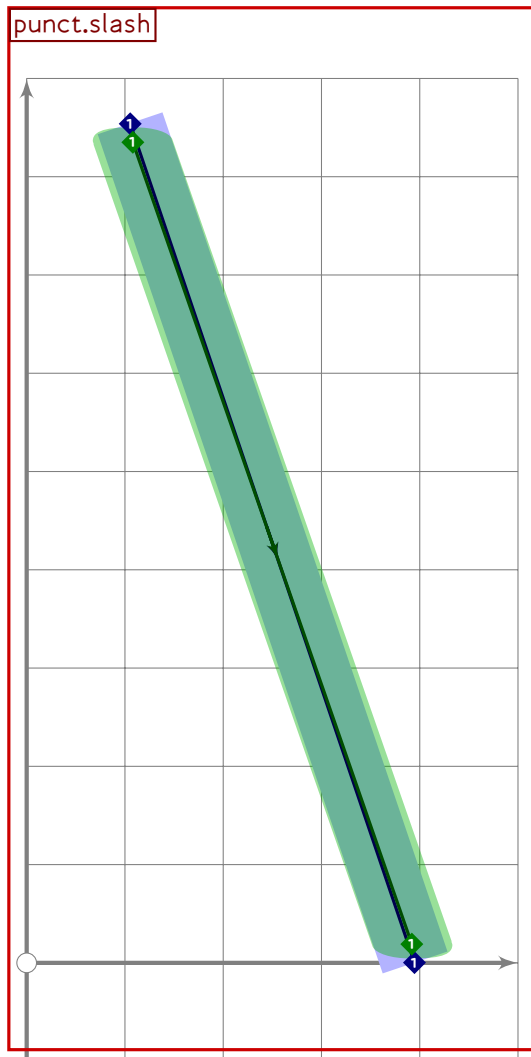
```
489 % Z
490 begintsuglyph("Z";90);
491   tsu_curve.latin.upz;
492   tsu_render;
493 endsuglyph;
494
```



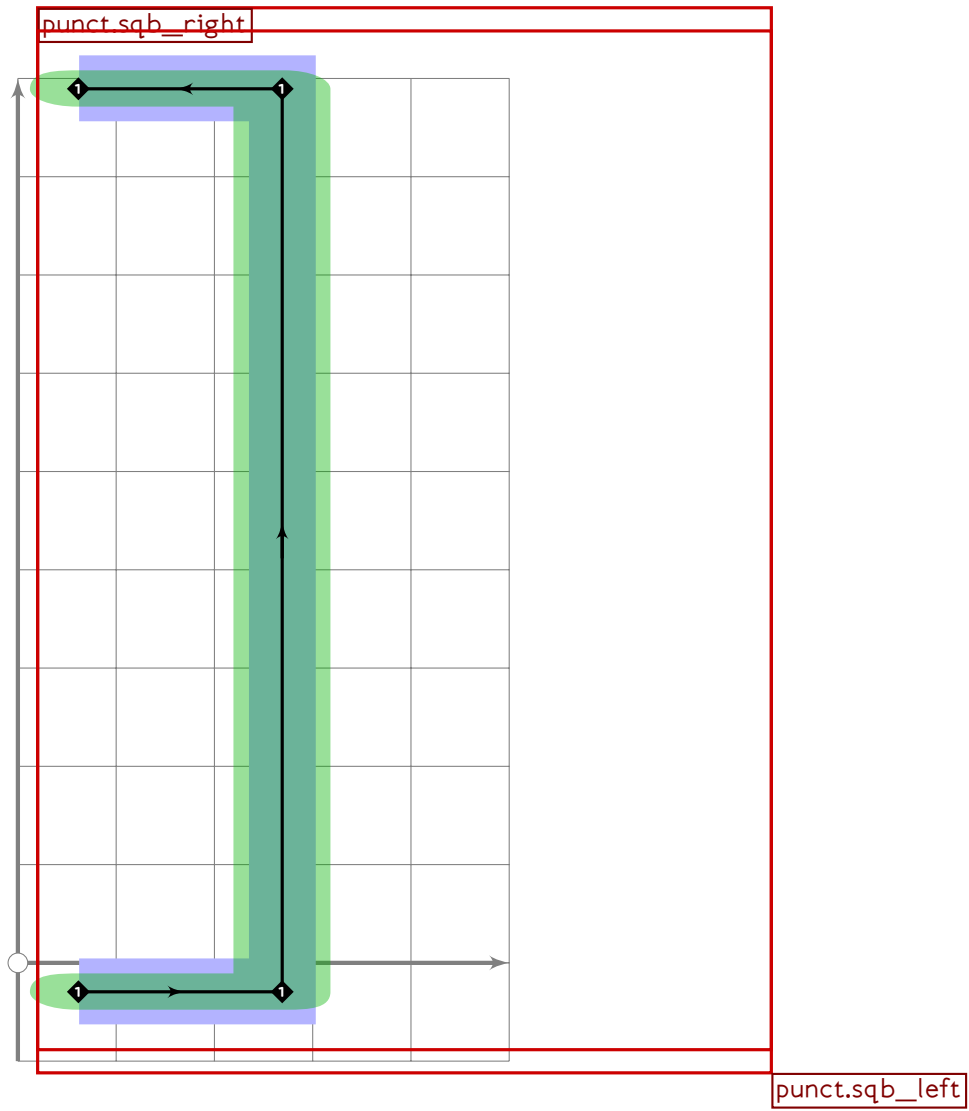
```

495 % left and right square brackets, backslash between
496 beginsuglyph("bracketleft";91);
497   tsu_curve.punct.sqb_left;
498   tsu_render;
499 endsuglyph;

```



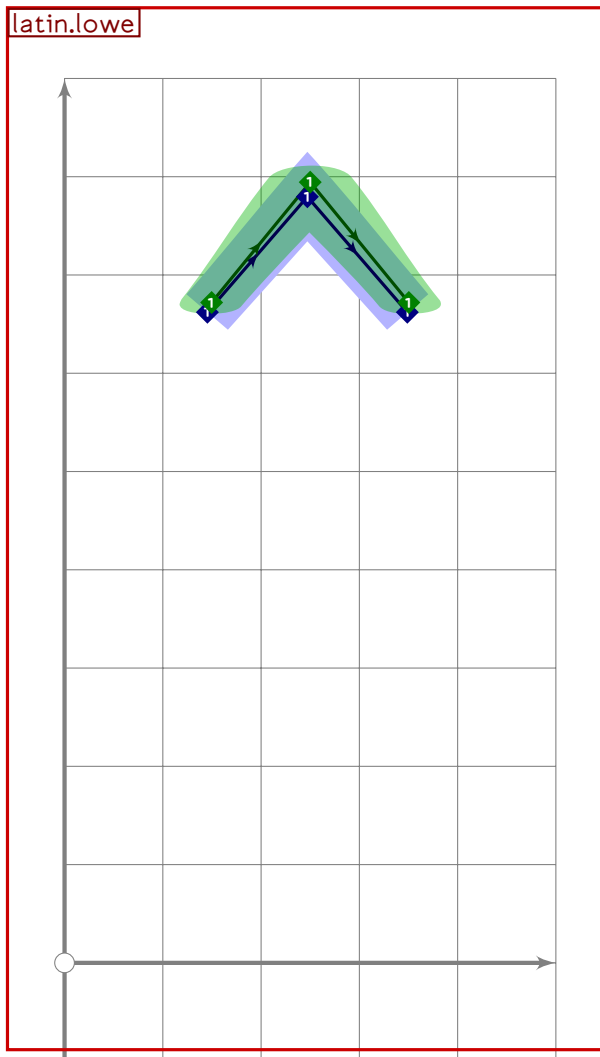
```
500 % backslash
501 begint Suglyph("backslash";92);
502 tsu_curve.punct.slash;
503 replace_strokep(0)(oldp reflectedabout (centre_pt,(centre_pt*down)));
504 tsu_render;
505 endtsuglyph;
```



```

506 begint Suglyph("bracketright";93);
507   tsu_curve.punct.sqb_right;
508   tsu_render;
509 endtsuglyph;
510

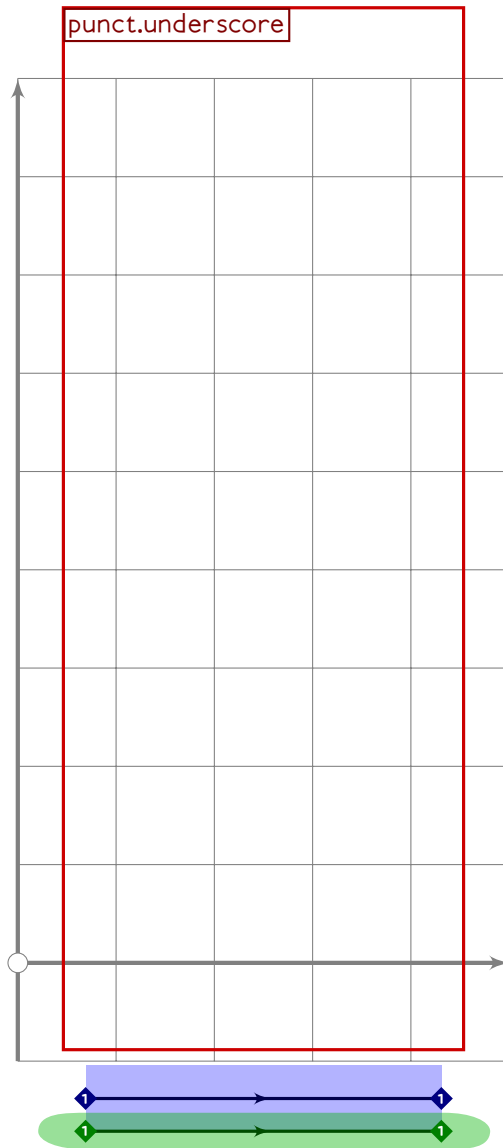
```



```

511 % circumflex accent/caret
512 begintsuglyph("asciicircum";94);
513   tsu_accent.circumflex(tsu_curve.latin.love;set_bosize(0,0));
514   tsu_render;
515 endsuglyph;
516

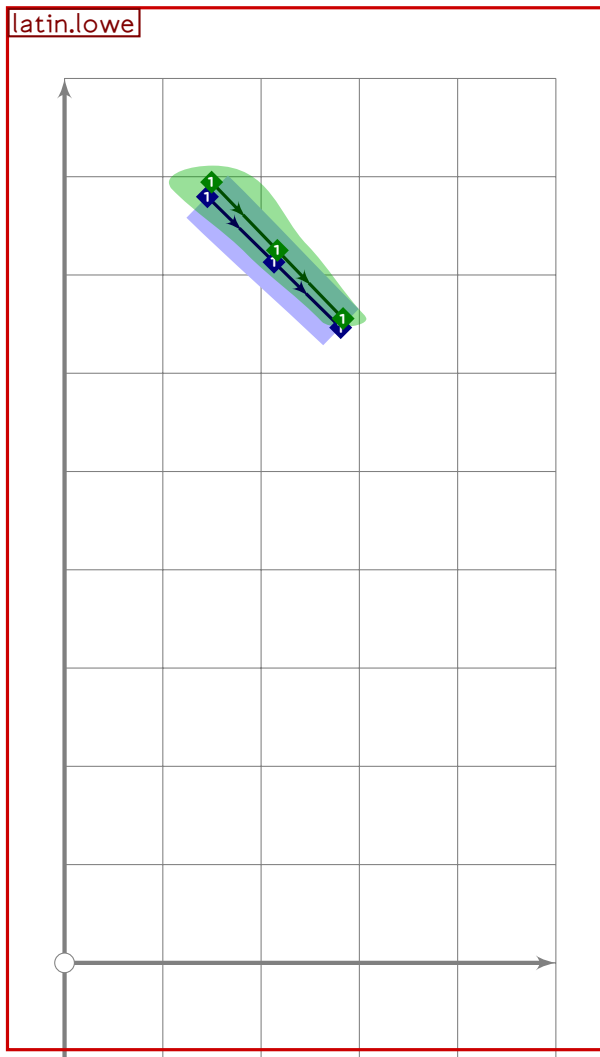
```



```

517 % underscore
518 begintsuglyph("underscore",95);
519 tsu_curve.punct.underscore;
520 tsu_render;
521 endtsuglyph;
522

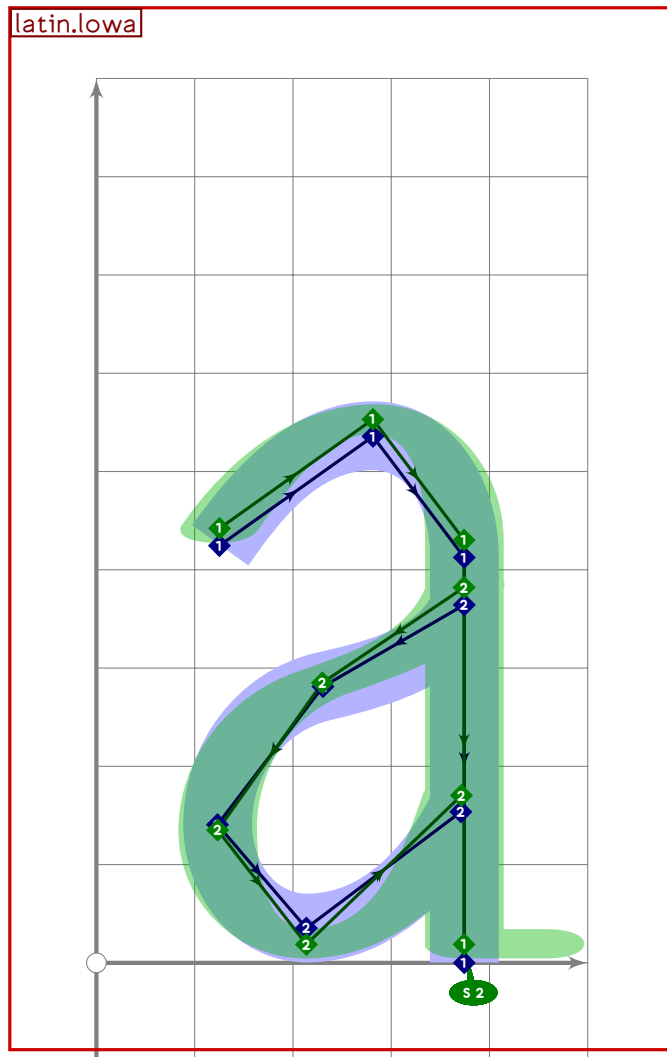
```



```

523 % grave accent
524 begint Suglyph("grave";96);
525   tsu_accent.grave(tsu_curve.latin.love;set_bosize(0,0));
526   tsu_render;
527 endsuglyph;
528
529 % WARNING changing rescale setting
530 tsu_rescale_half_lc;
531

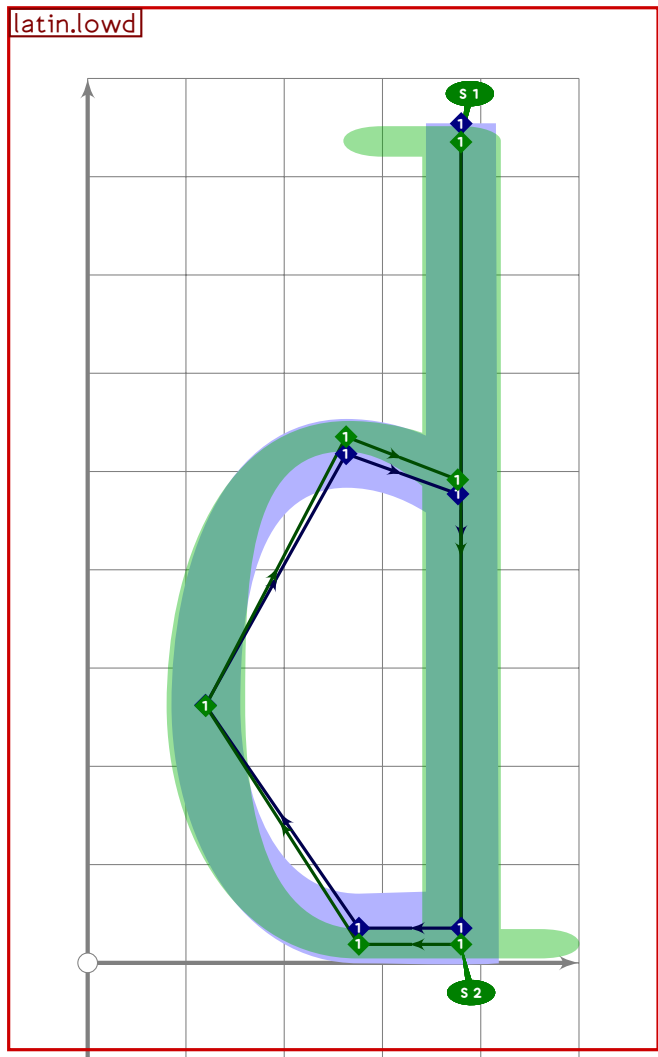
```



```

532 % a
533 begintsuglyph("a";97);
534   tsu_curve.latin.lowa;
535   tsu_render;
536 endsuglyph;
537

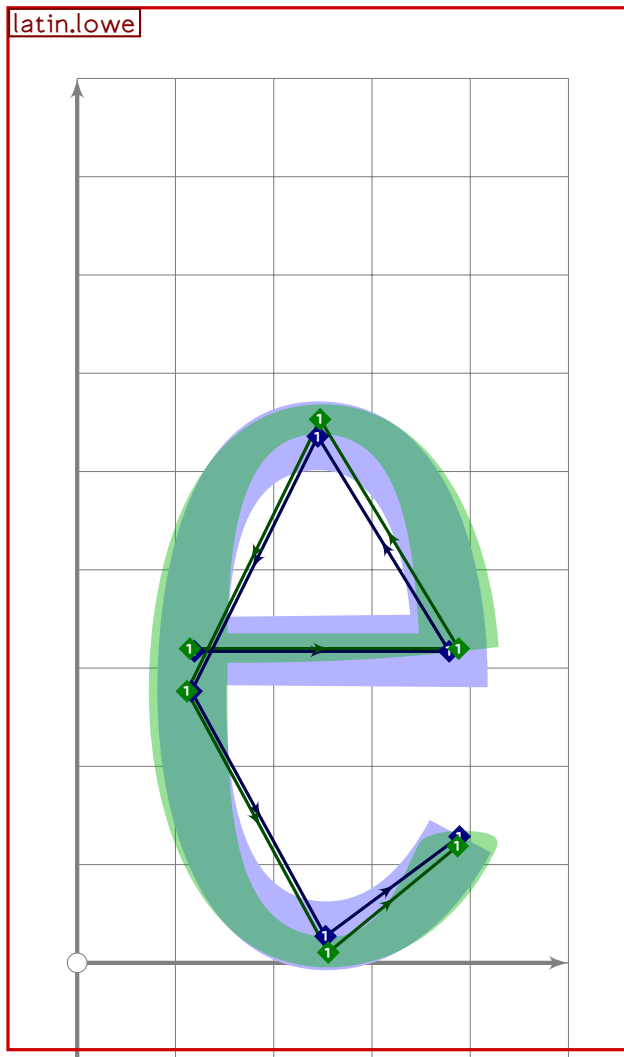
```

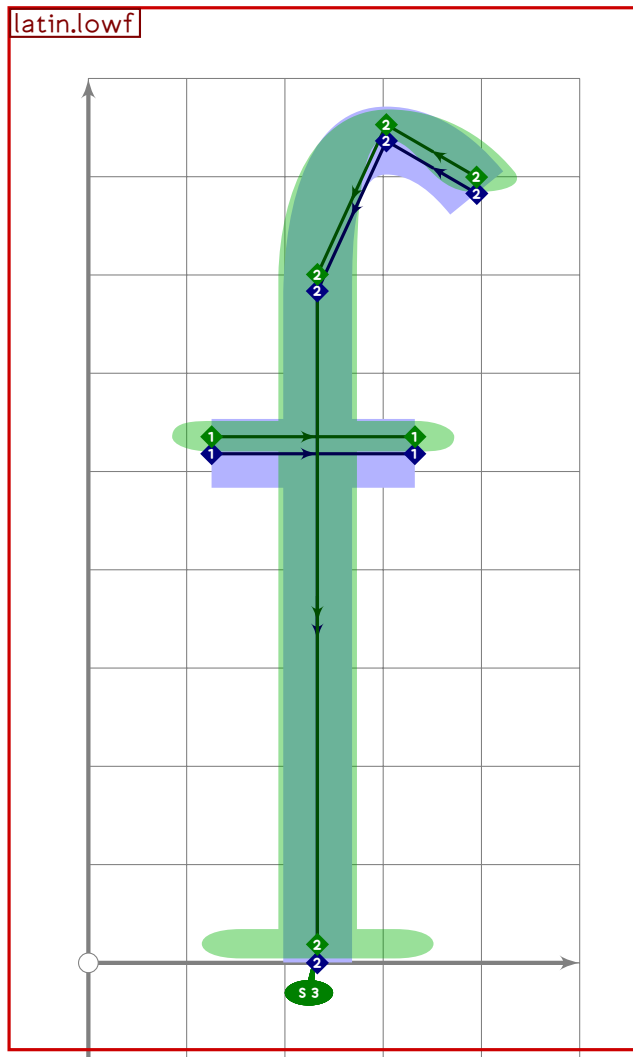
```

550 % d
551 begint Suglyph("d";100);
552   tsu_curve.latin.lowd;
553   tsu_render;
554 endsuglyph;
555

```



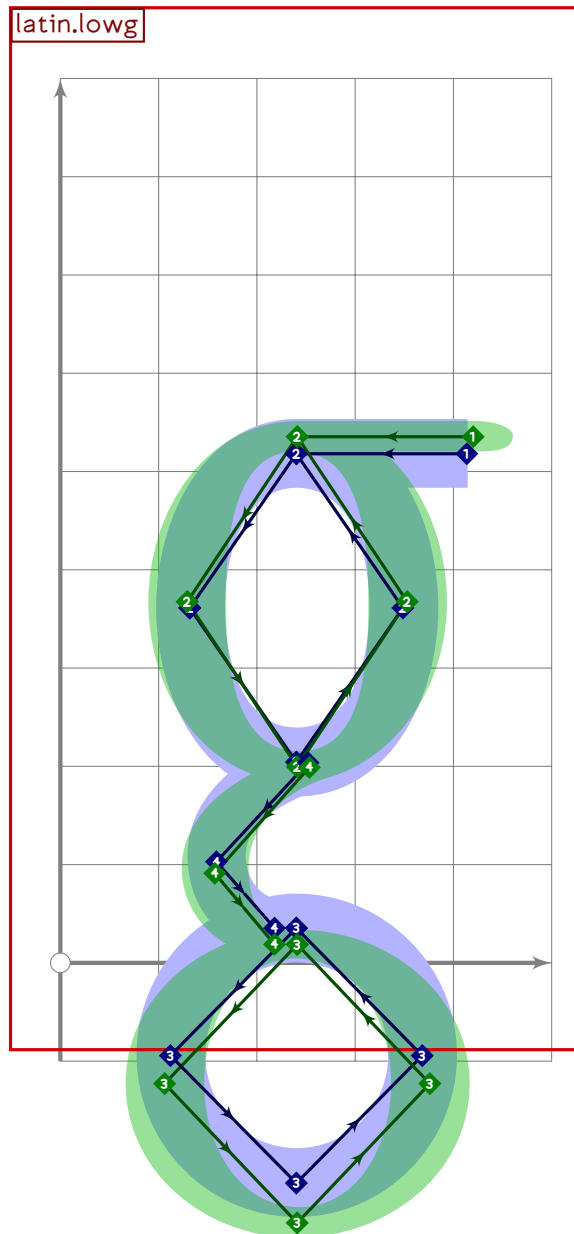
```
556 % e
557 beginsuglyph("e";101);
558   tsu_curve.latin.lower;
559   tsu_render;
560 endsuglyph;
561
```



```

562 % f
563 beginsuglyph("f";102);
564   tsu_curve.latin.lowf;
565   tsu_render;
566 endsuglyph;
567

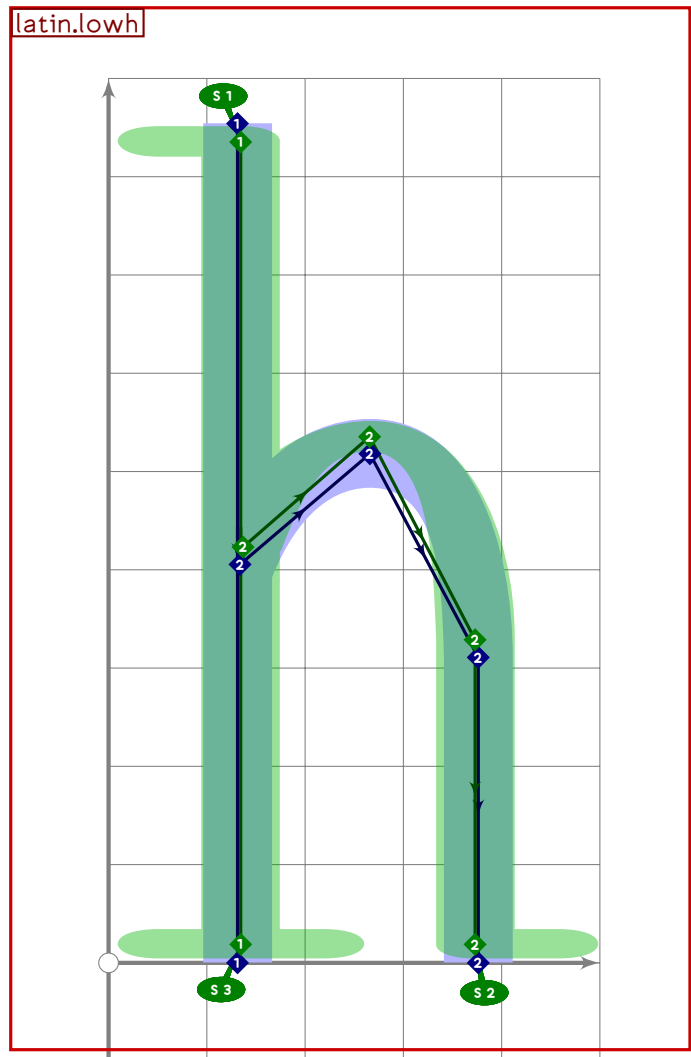
```



```

568 % g
569 beginsuglyph("g";103);
570   tsu_curve.latin.lowg;
571   tsu_render;
572 endsuglyph;
573

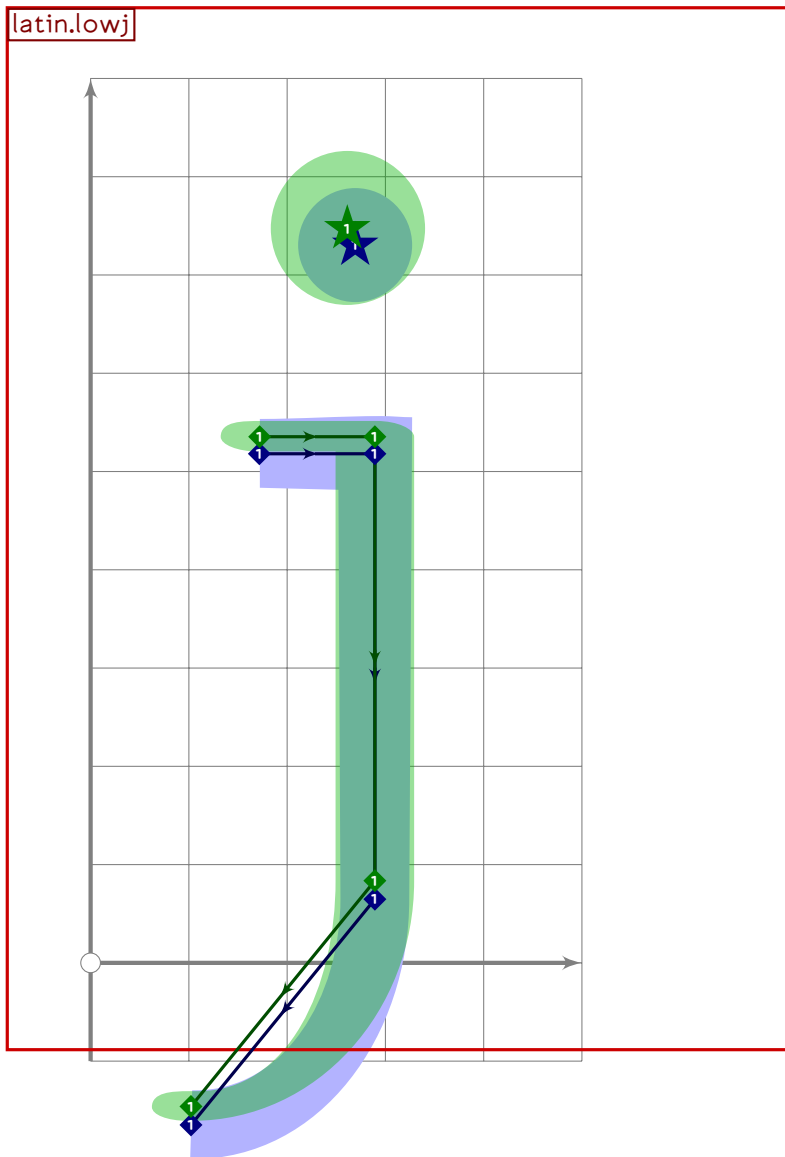
```



```

574 % h
575 begintsuglyph("h";104);
576   tsu_curve.latin.lowh;
577   tsu_render;
578 endsuglyph;
579

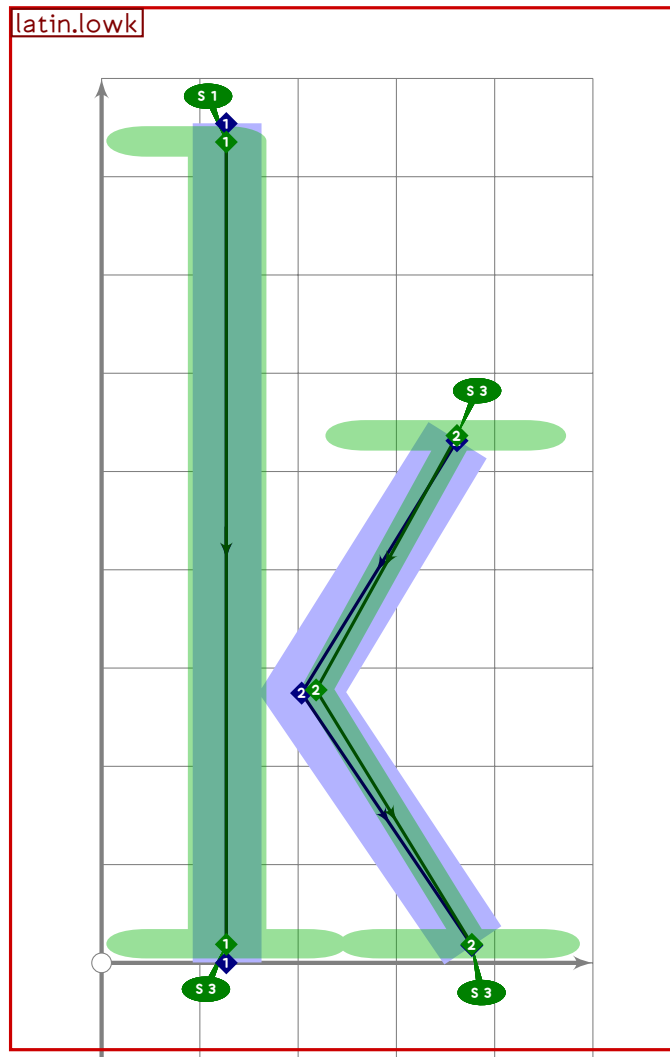
```

```

586 % j
587 begint Suglyph("j";106);
588   tsu_curve.latin.lowj;
589   tsu_render;
590 endsuglyph;
591

```

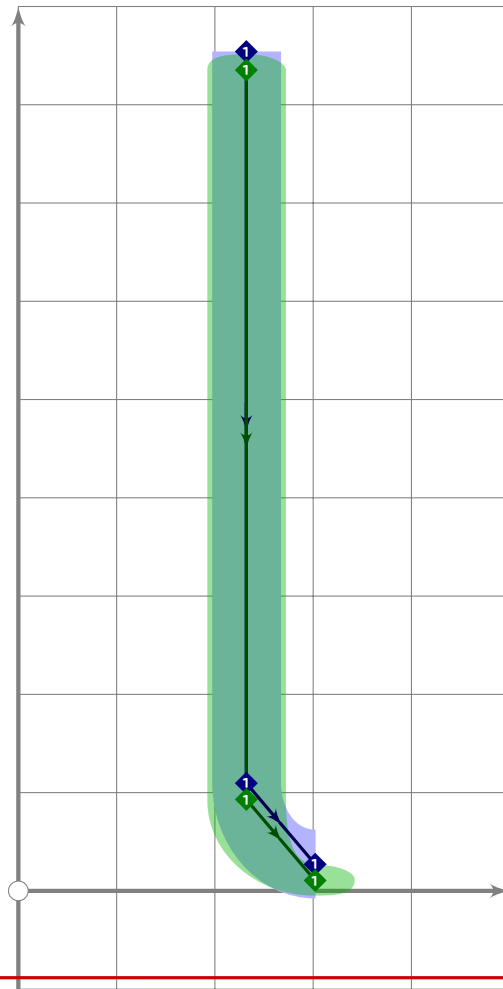


```

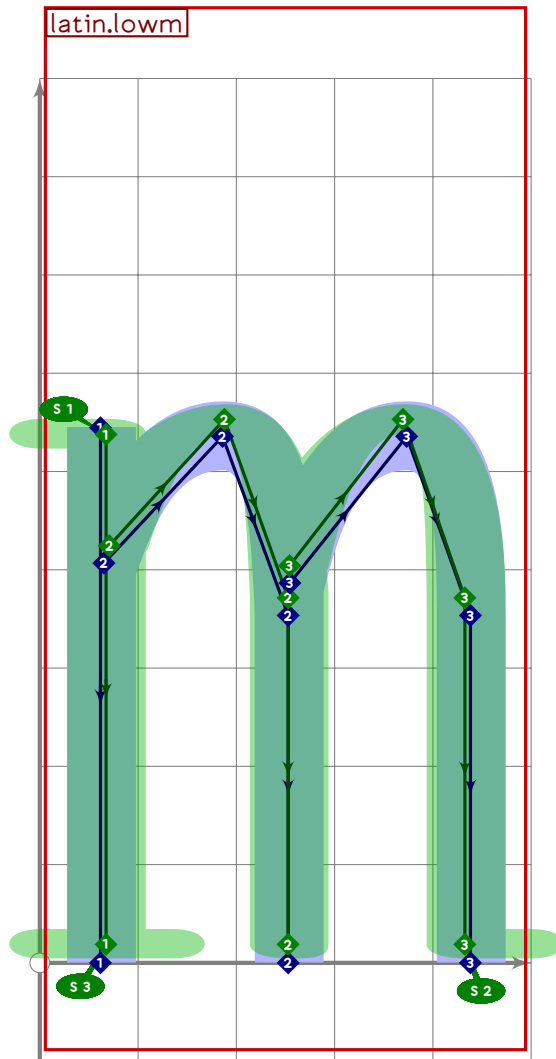
592 % k
593 begintsuglyph("k";107);
594 tsu_curve.latin.lowk;
595 tsu_render;
596 endsuglyph;
597

```

latin.lowl



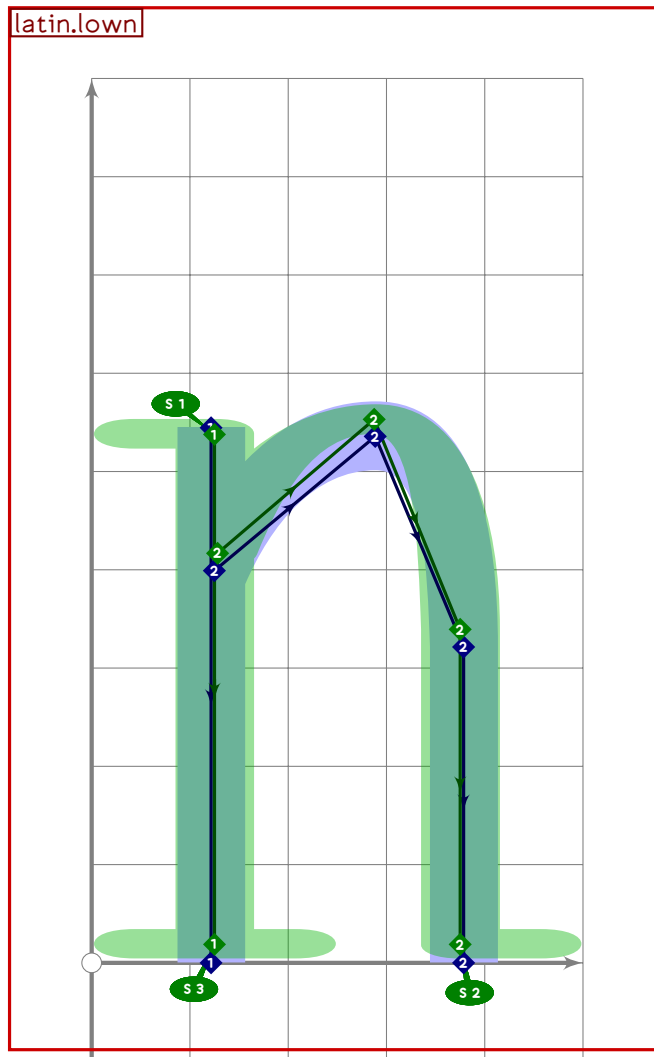
```
598 % l
599 begintsuglyph("l";108);
600 tsu_curve.latin.lowl;
601 tsu_render;
602 endsuglyph;
603
```



```

604 % m
605 begint Suglyph("m",109);
606   tsu_curve.latin.lowm;
607   tsu_render;
608 endsuglyph;
609

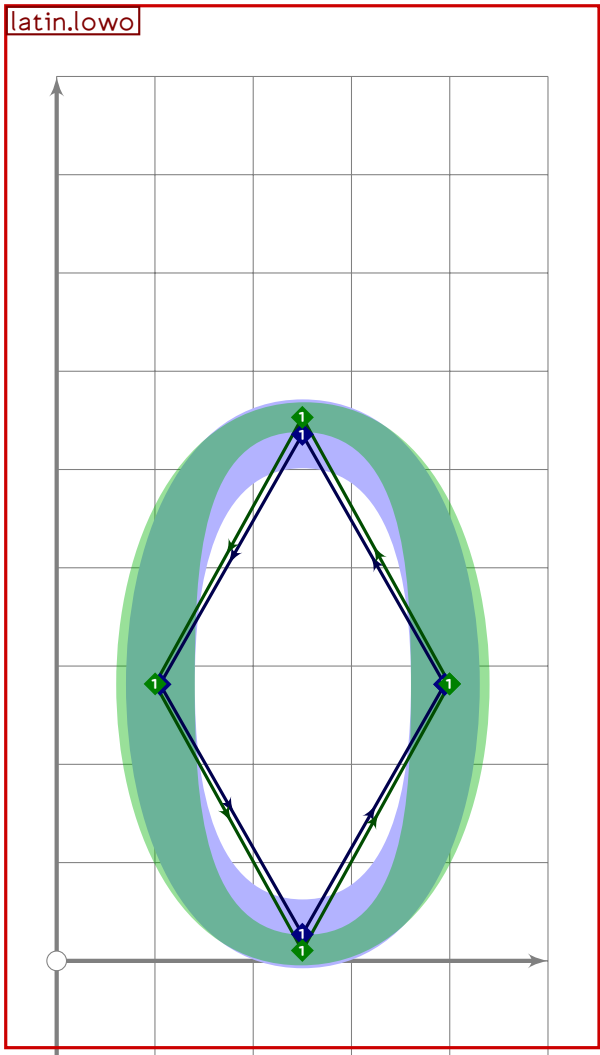
```



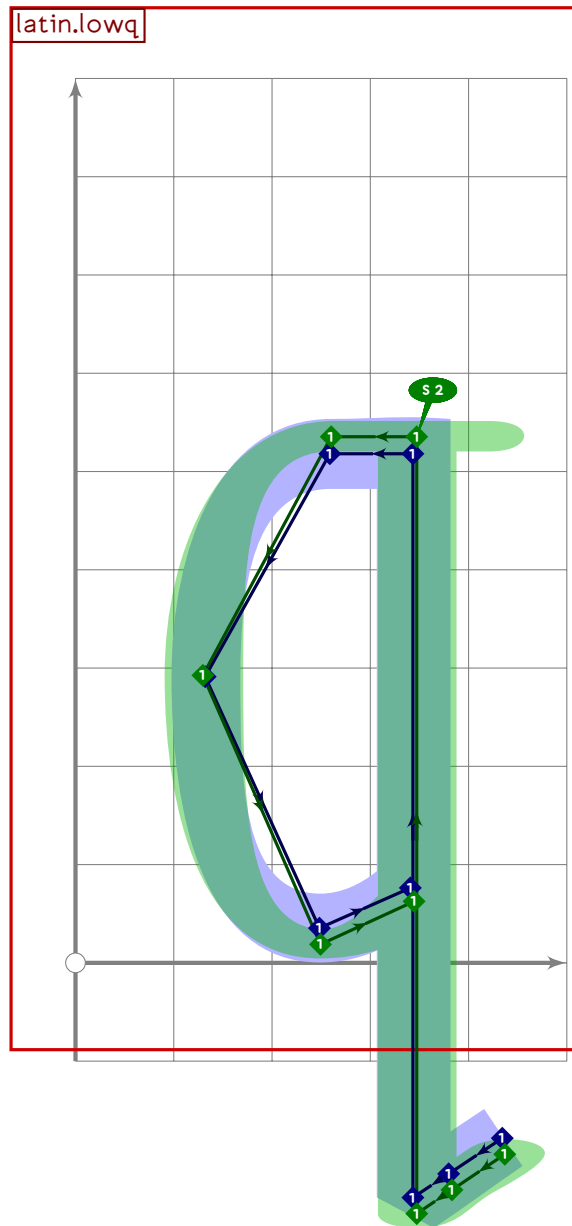
```

610 % n
611 begintsuglyph("n";110);
612 tsu_curve.latin.lown;
613 tsu_render;
614 endsuglyph;
615

```



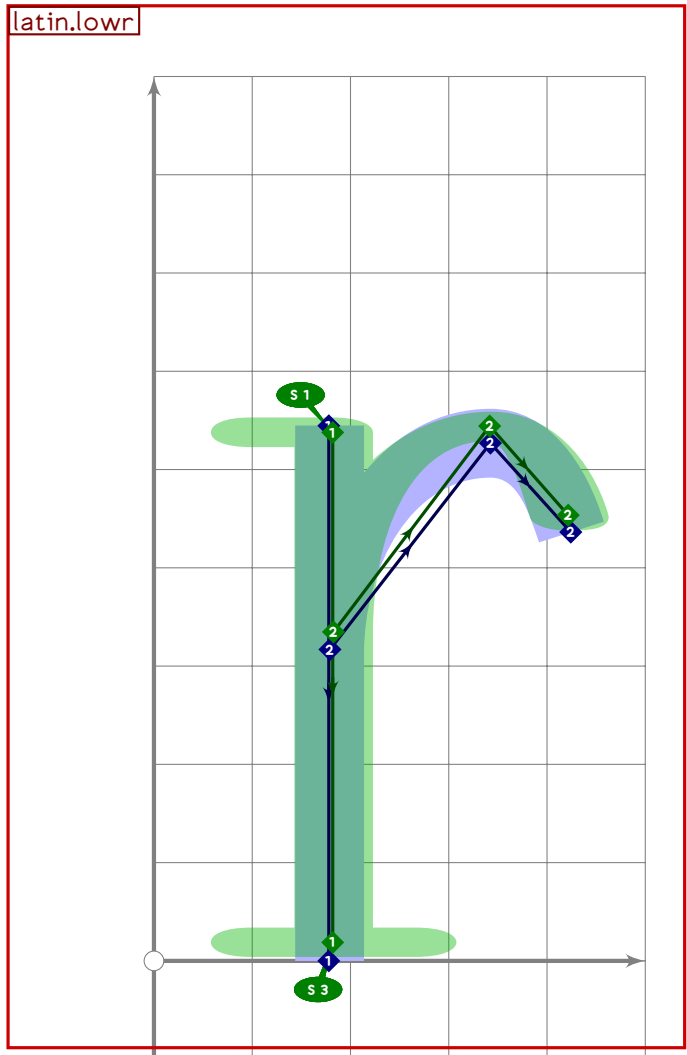
```
616 % o
617 begintsuglyph("o";111);
618   tsu_curve.latin.lowo;
619   tsu_render;
620 endsuglyph;
621
```

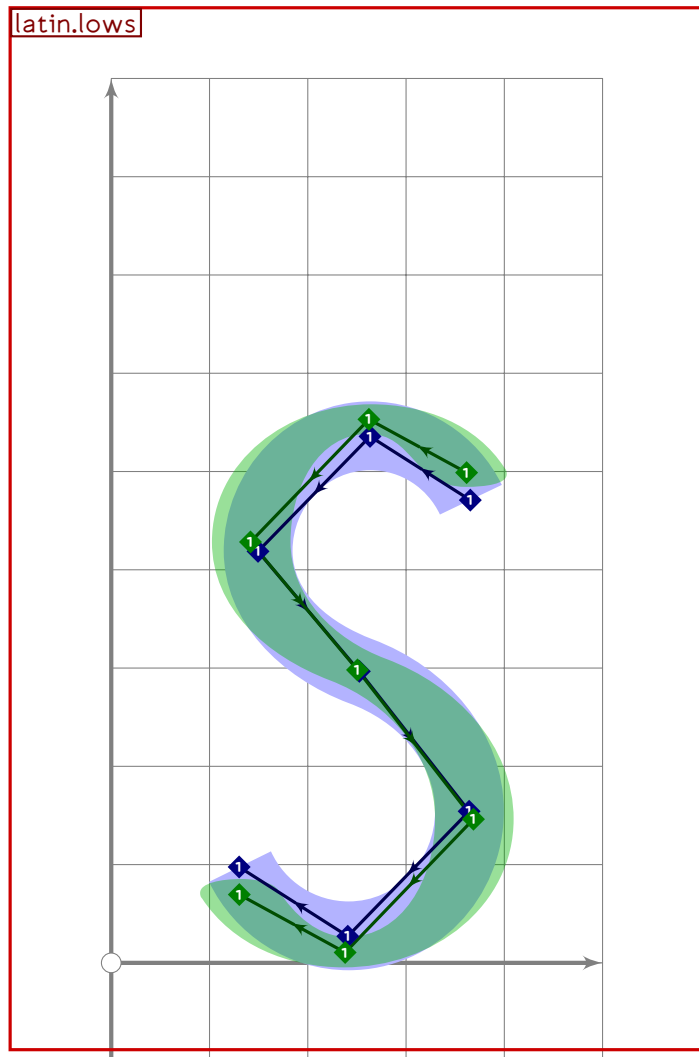
```

628 % q
629 begintsuglyph("q",113);
630   tsu_curve.latin.lowq;
631   tsu_render;
632 endsuglyph;
633

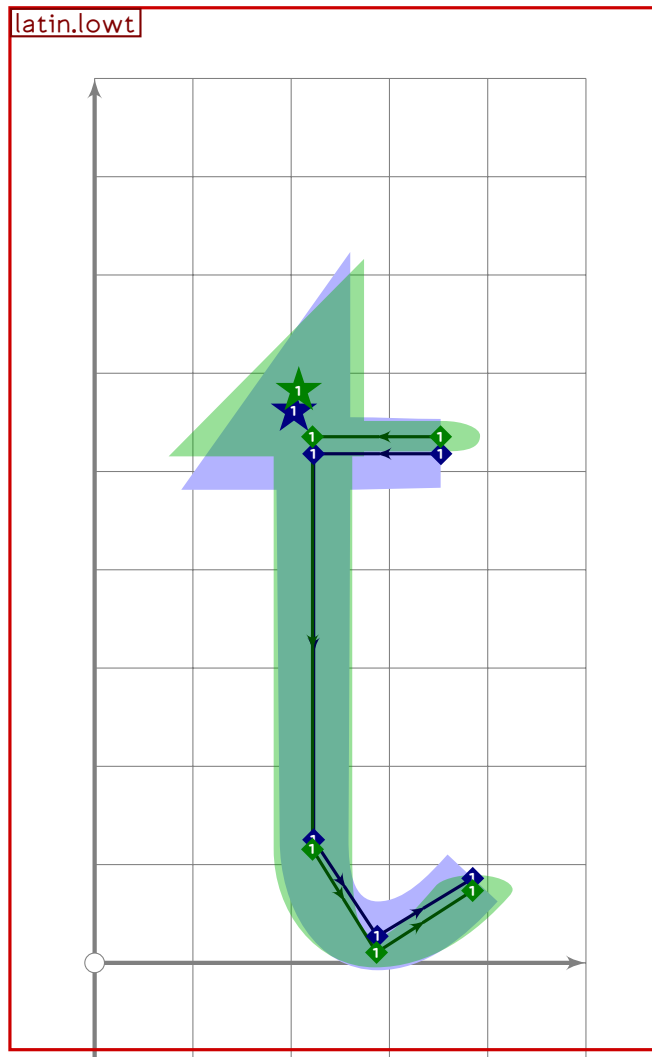
```

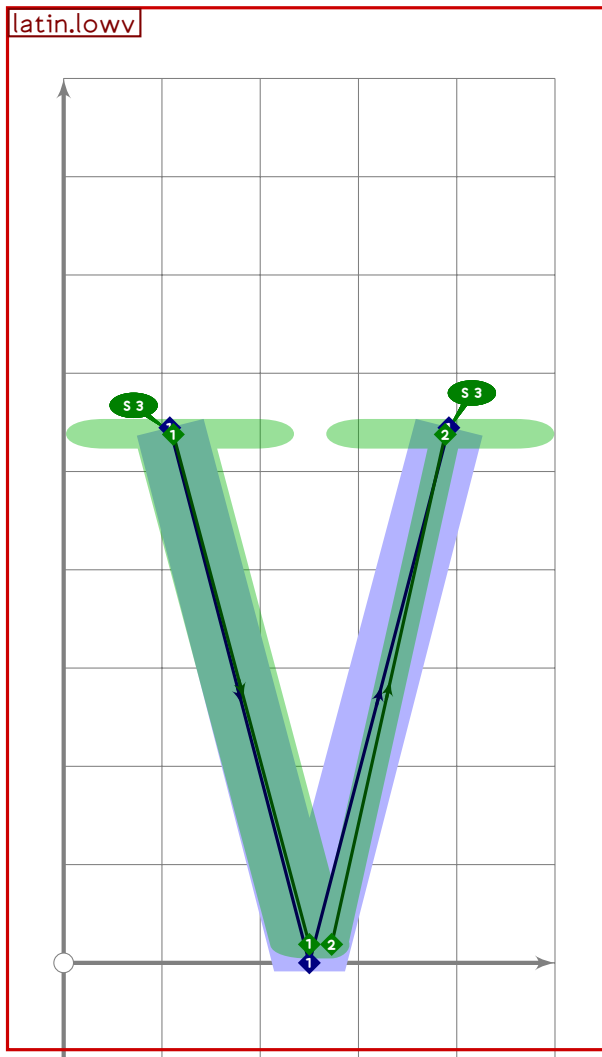
```
634 % r
635 beginsuglyph("r",114);
636   tsu_curve.latin.lower;
637   tsu_render;
638 endsuglyph;
639
```



```
640 % s  
641 begintsuglyph("s";115);  
642 tsu_curve.latin.lows;  
643 tsu_render;  
644 endsuglyph;  
645
```



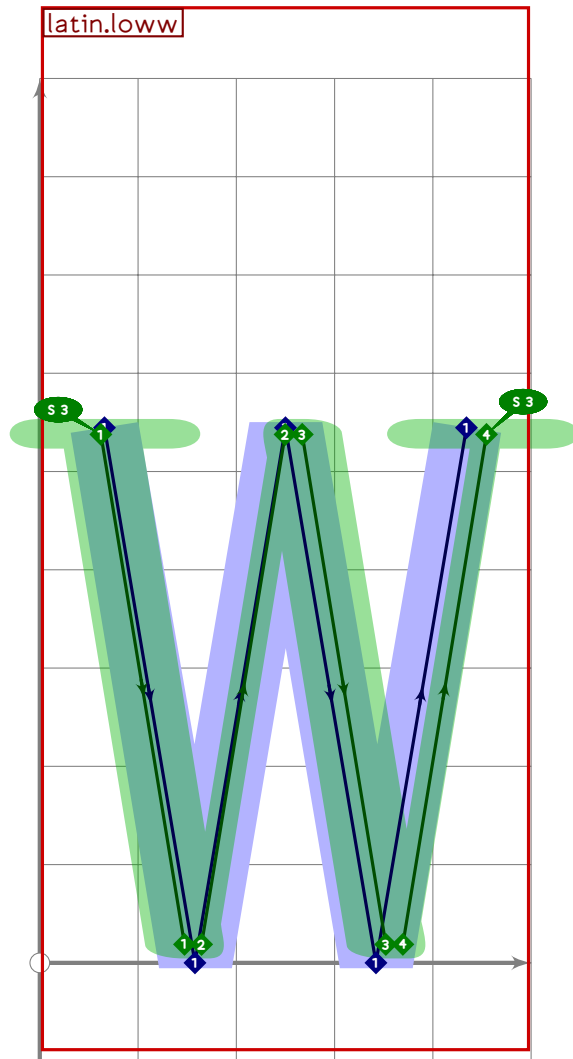
```
646 % t  
647 begintsuglyph("t",116);  
648   tsu_curve.latin.lowt;  
649   tsu_render;  
650 endsuglyph;  
651
```

```

658 % v
659 begint Suglyph("v";118);
660   tsu_curve.latin.lowv;
661   tsu_render;
662 endsuglyph;
663

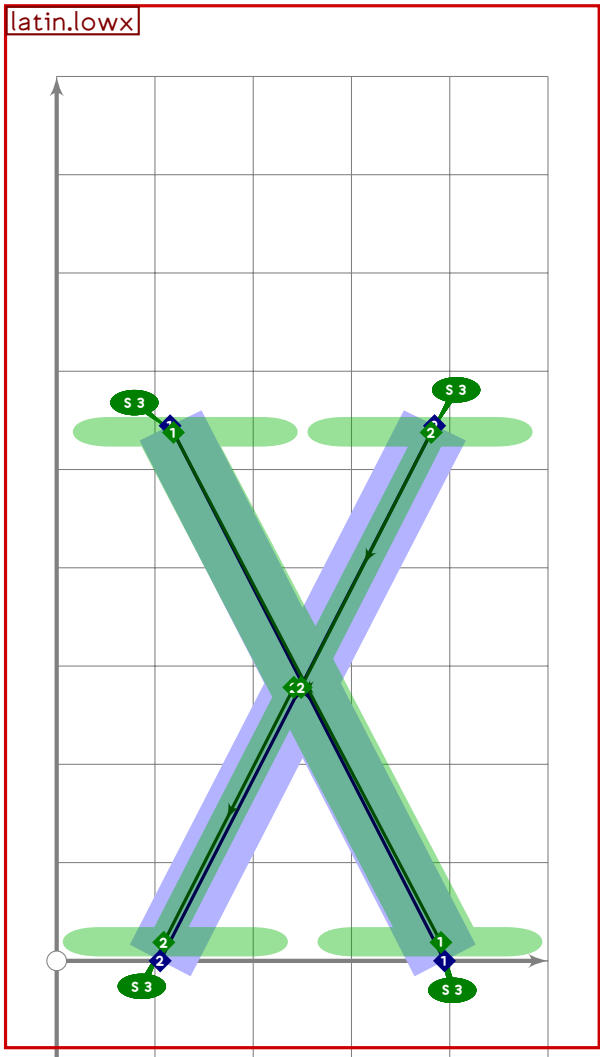
```



```

664 % w
665 beginsuglyph("w",119);
666   tsu_curve.latin.loww;
667   tsu_render;
668 endsuglyph;
669

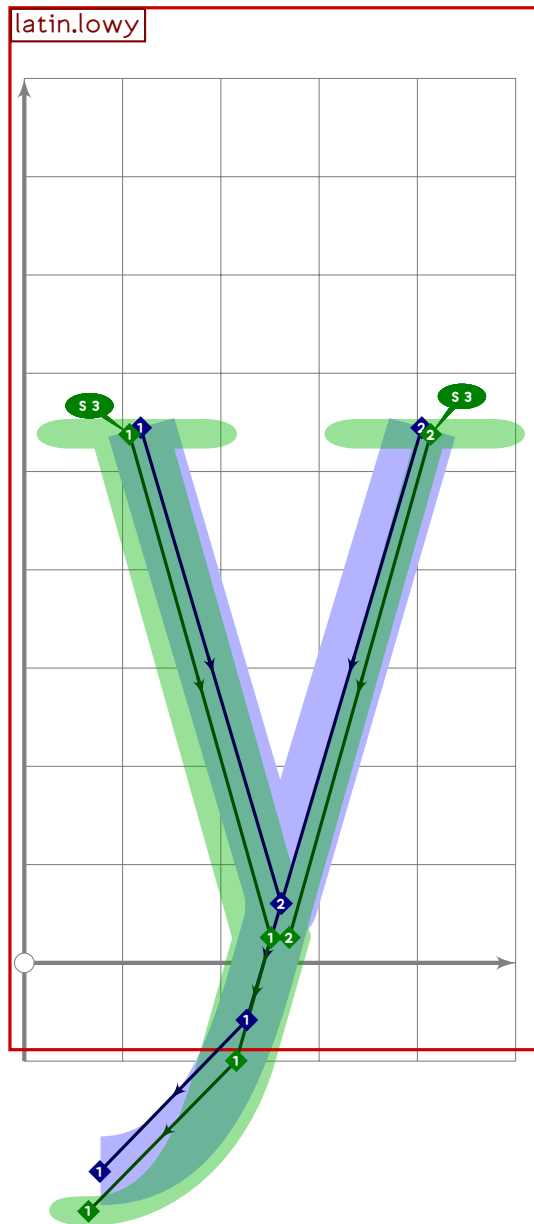
```



```

670 % x
671 begintsuglyph("x";120);
672   tsu_curve.latin.lowx;
673   tsu_render;
674 endsuglyph;
675

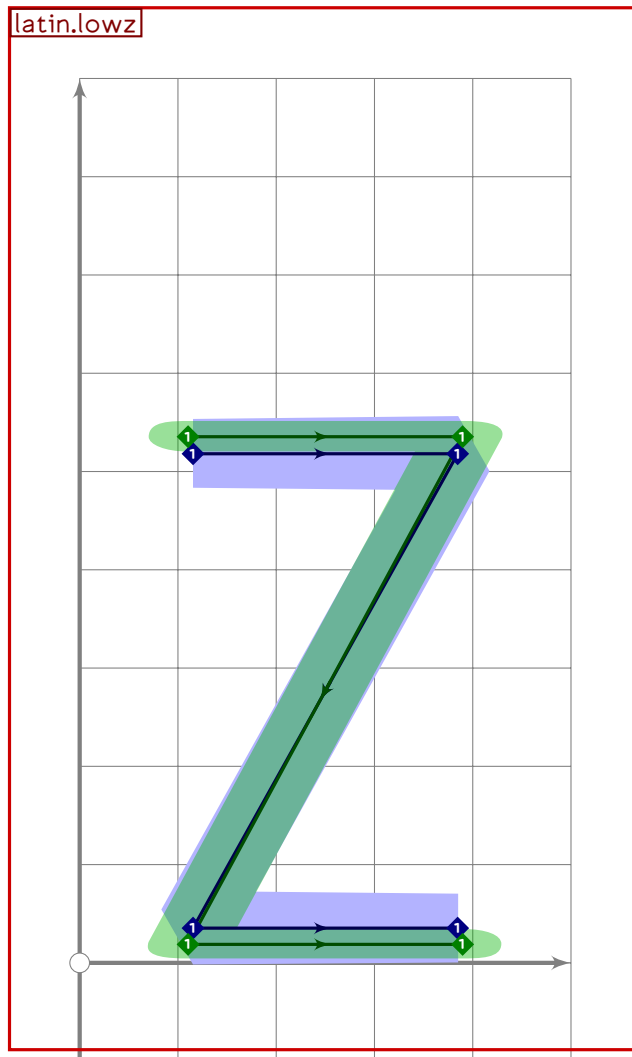
```



```

676 % y
677 beginsuglyph("y";121);
678   tsu_curve.latin.lowy;
679   tsu_render;
680 endsuglyph;
681

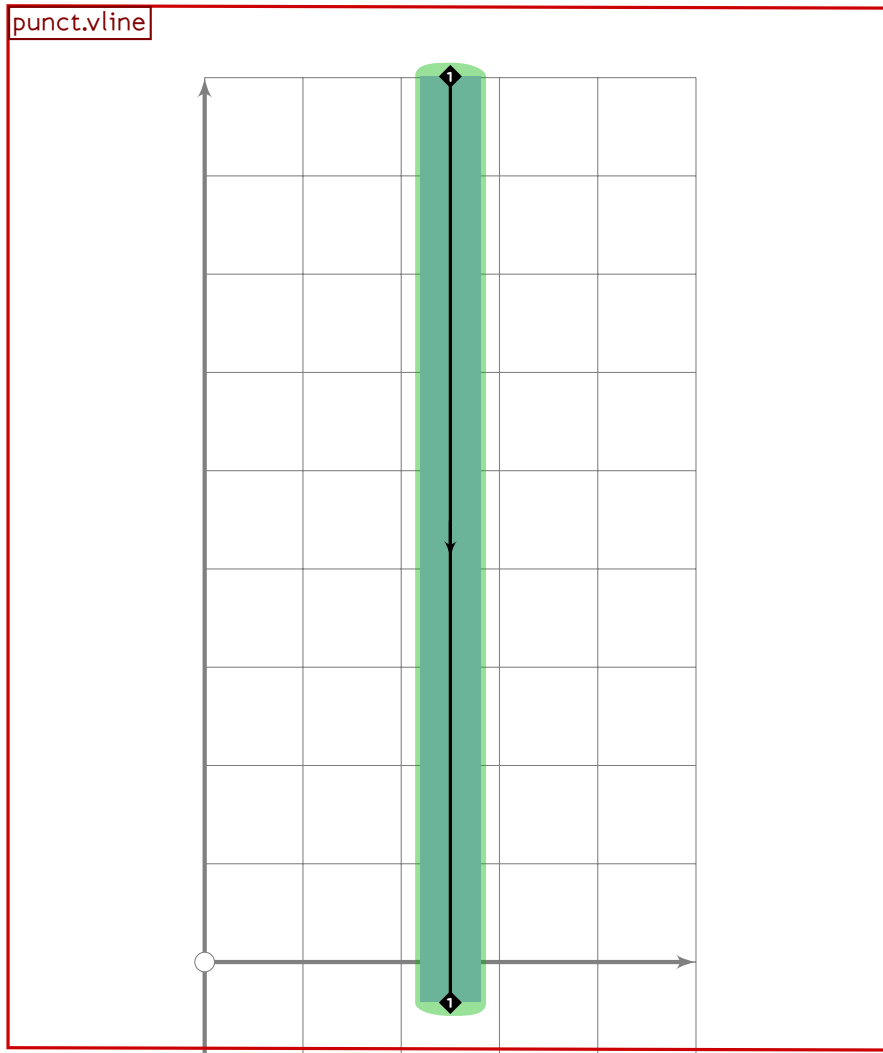
```

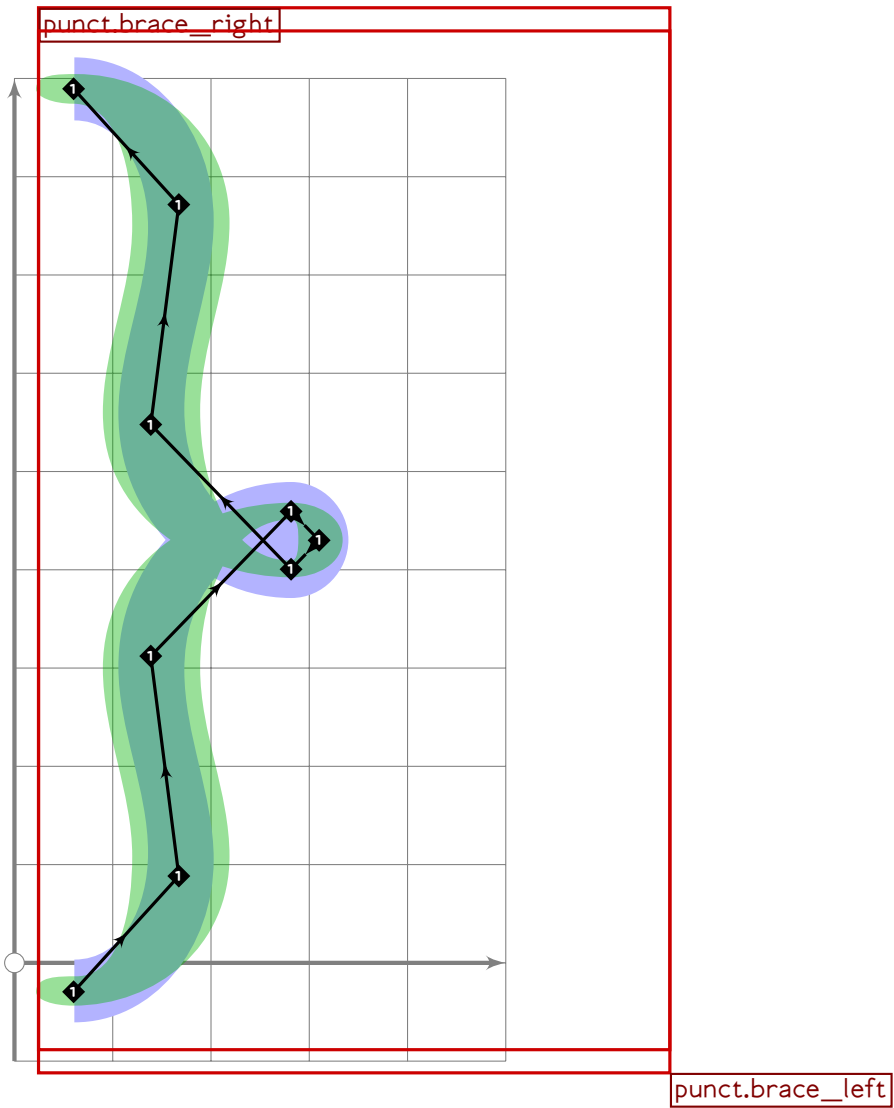
```

682 % z
683 begintsuglyph("z";122);
684   tsu_curve.latin.lowz;
685   tsu_render;
686 endsuglyph;
687
688 % WARNING changing rescale setting
689 tsu_rescale_half;
690

```

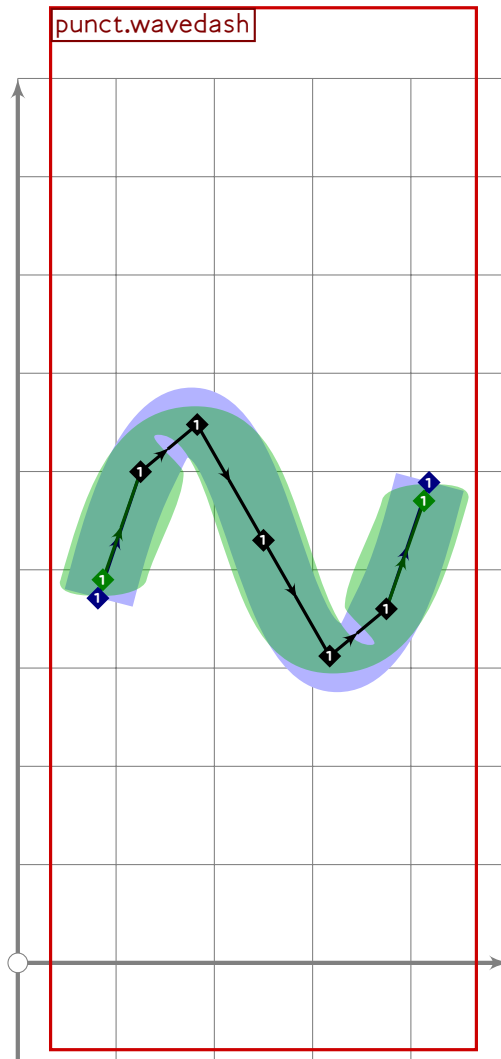
```
696 begint Suglyph("bar",124);  
697 tsu_curve.punct.vline;  
698 tsu_render;  
699 endtsuglyph;
```



```

700 begint Suglyph("braceright",125);
701   tsu_curve.punct.brace_right;
702   tsu_render;
703 endtsuglyph;
704

```



```

705 % "tilde" - rescaled "wave dash"
706 begint Suglyph("asciitilde";126);
707   tsu_curve.punct.wavedash;
708   tsu_render;
709 endsuglyph;

```

710



712

```

713 % 007F through 009F are nonprinting control characters.
714 % 00A0 is a space, supplied by the make-font script later

```

715



717

Latin-1 Extra Characters

```

718 % LATIN-1 EXTRA CHARACTERS

```

719

```

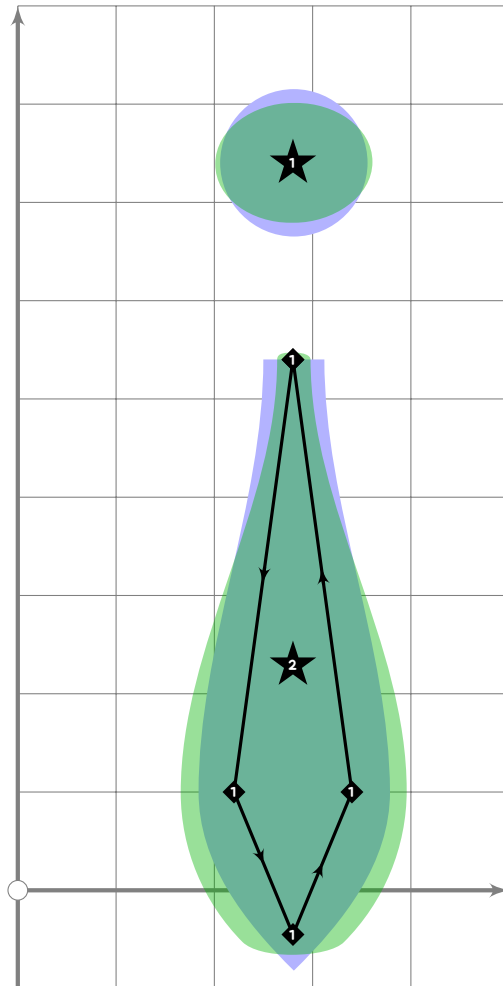
720 transform tsu_xf.latin_one_super,tsu_xf.latin_one_circled,
721   tsu_xf.latin_one_cbound;

```

```

722
723 xypart tsu_xf.latin_one_super=yxpart tsu_xf.latin_one_super=0;
724 xxpart tsu_xf.latin_one_super=yy part tsu_xf.latin_one_super=0.55;
725 (500,latin_wide_xheight_r) transformed tsu_xf.latin_one_super=
726 (250,2*latin_vcentre);
727
728 xypart tsu_xf.latin_one_circled=yxpart tsu_xf.latin_one_circled=0;
729 xxpart tsu_xf.latin_one_circled=yy part tsu_xf.latin_one_circled=0.333;
730 centre_pt transformed tsu_xf.latin_one_circled=(250,latin_vcentre);
731
732 tsu_xf.latin_one_cbound=identity scaled 150 shifted (250,latin_vcentre);
733
734 % WARNING, setting rescale
735 tsu_rescale_native_narrow;
736

```



```

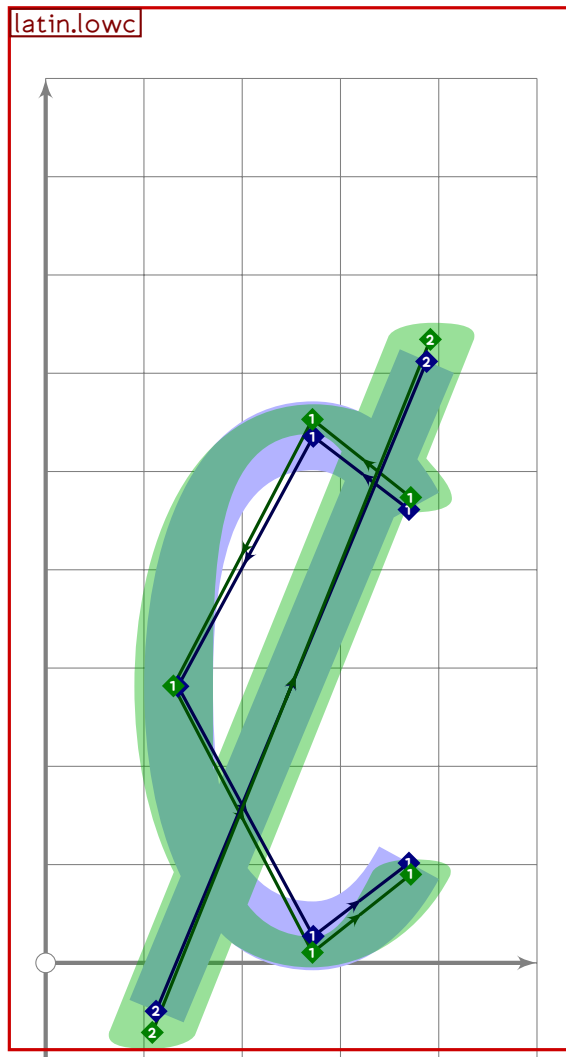
737 % inverted exclamation point
738 beginsuglyph("exclamdown",161);
739 if tsu_pbrush_size>=(tsu_punct_size*0.5):
740     push_lcblob(fullcircle
741         xscaled (tsu_punct_size*tsu_pbrush_size)
742         yscaled (tsu_punct_size*tsu_pbrush_size*tsu_pbrush_shape)

```

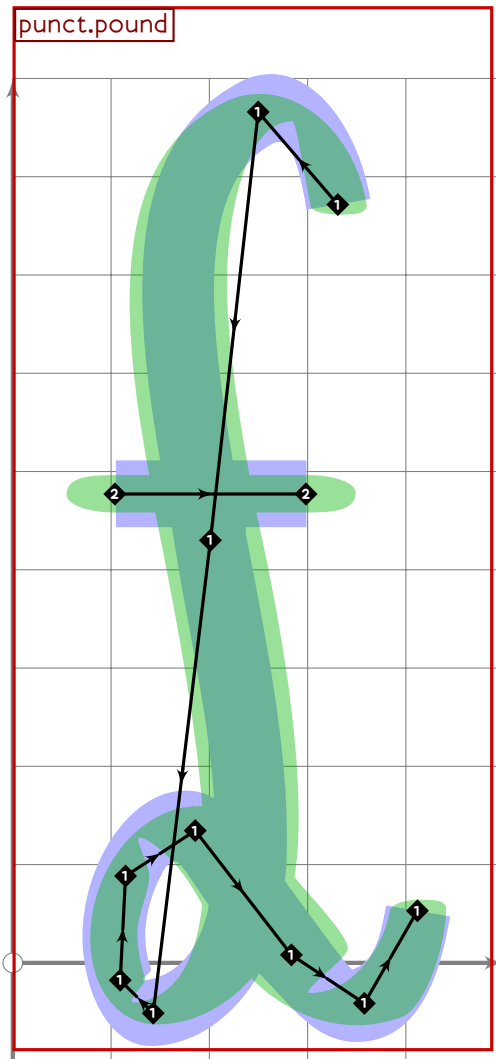
```

743     rotated tsu_pbrush_angle
744     shifted (220,40)
745     rotatedaround ((250,390),180));
746 else:
747     push_stroke(fullcircle
748         scaled tsu_punct_size
749         shifted (220,40)
750         rotatedaround ((250,390),180),
751         (2,2)-(2,2)-(2,2)-(2,2));
752     if tsu_pbrush_size>=30:
753         push_lcblob(get_strokep(0));
754     fi;
755 fi;
756
757 push_stroke(((220,240){up}..(280,680){up}..{curl 1}(220,825){curl 1}..
758     (160,680){down}..{down}(220,240))
759     rotatedaround ((250,390),180),
760     (1,1)-(2,2)-(2,2)-(2,2)-(1,1));
761
762 if tsu_pbrush_size>=30:
763     push_lcblob((subpath (0,1,3,9) of get_strokep(0))-cycle);
764 fi;
765
766 tsu_render;
767 endtsuglyph;
768
769 % WARNING, setting rescale
770 tsu_rescale_half;

```



```
771  
772 begintsuglyph("cent",162);  
773 tsu_accent.lcslash(tsu_curve.latin.lowc);  
774 tsu_render;  
775 endsuglyph;
```

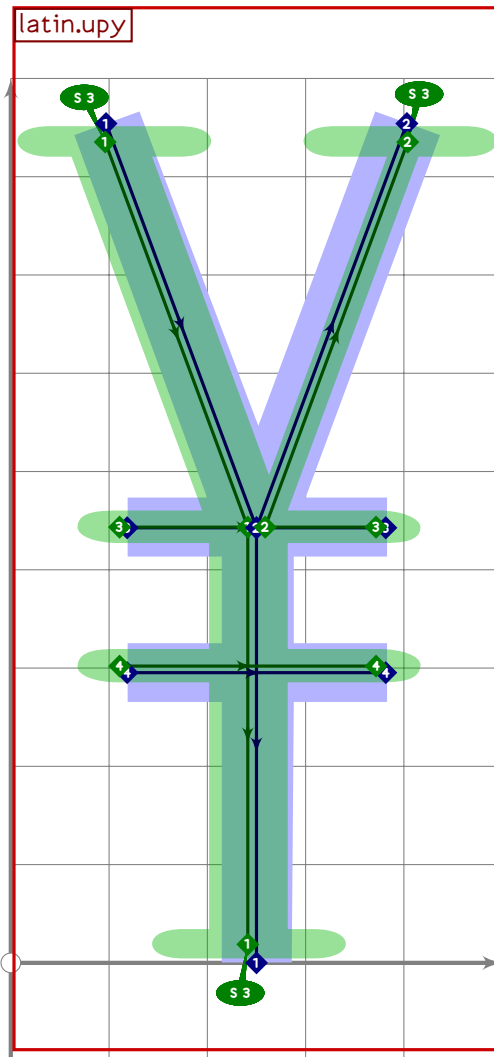



```

776
777 begintsuglyph("sterling",163);
778   tsu_curve.punct.pound;
779   tsu_render;
780 endsuglyph;
781
782 begintsuglyph("currency",164);
783   tsu_curve.punct.currency;
784   tsu_render;
785 endsuglyph;
786

```

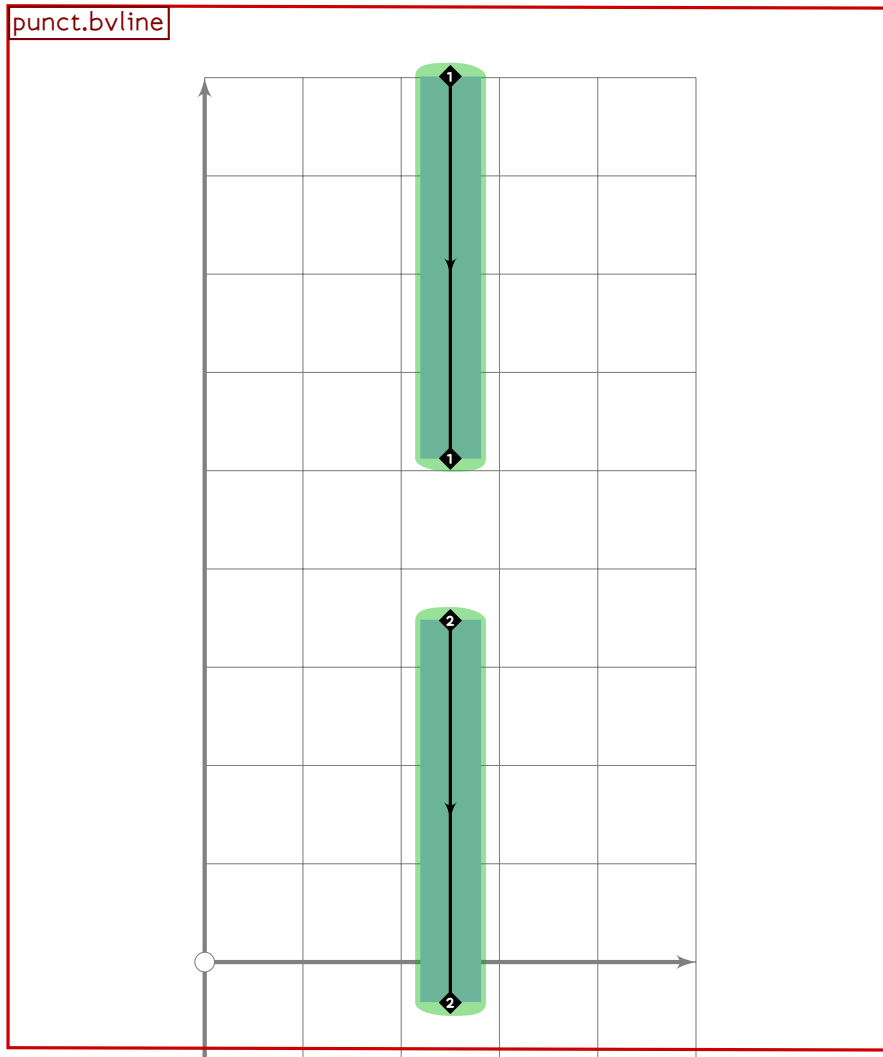
[see page 268]



```

787 % yen sign
788 begintsuglyph("yen";165);
789 tsu_curve.latin.upy;
790 push_stroke(((-240,0)-(240,0)) shifted point 1 of get_strokep(-1),
791   (2,2)-(2,2));
792 set_bosize(0,80);
793 push_stroke(((-240,0)-(240,0)) shifted point 1.333 of get_strokep(-2),
794   (2,2)-(2,2));
795 set_bosize(0,80);
796 tsu_render;
797 endsuglyph;

```

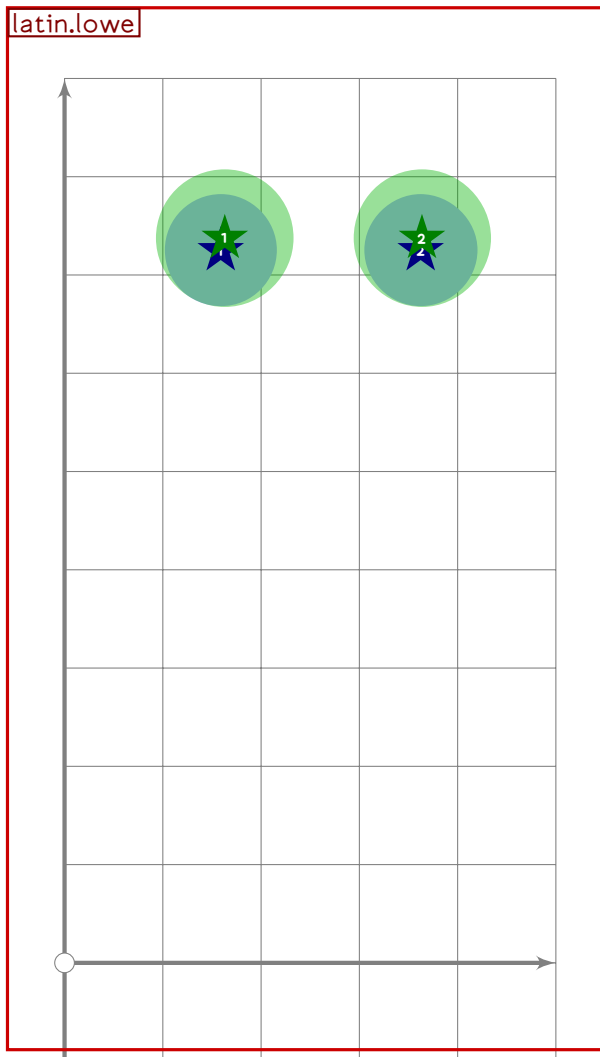


```

798
799 begintsuglyph("brokenbar";166);
800 tsu_curve.punct.bvline;
801 tsu_render;
802 endsuglyph;
803
804 begintsuglyph("section";167);
805 tsu_curve.punct.section;
806 tsu_render;
807 endsuglyph;
808

```

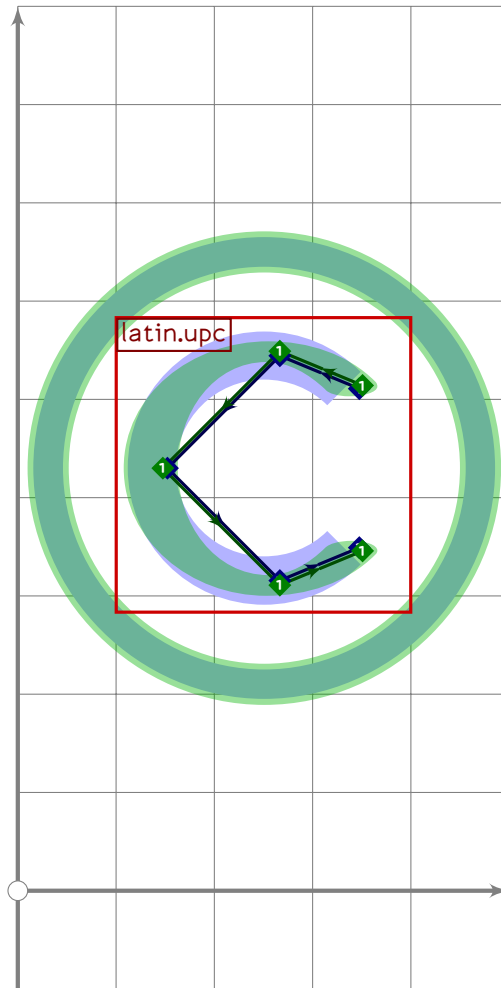
[see page 290]



```

809 % naked umlaut
810 begintsuglyph("dieresis";168);
811 tsu_accent.umlaut(tsu_curve.latin.lowe;set_bosize(0,0));
812 tsu_render;
813 endsuglyph;
814
815 % WARNING, setting rescale
816 tsu_rescale_native_narrow;

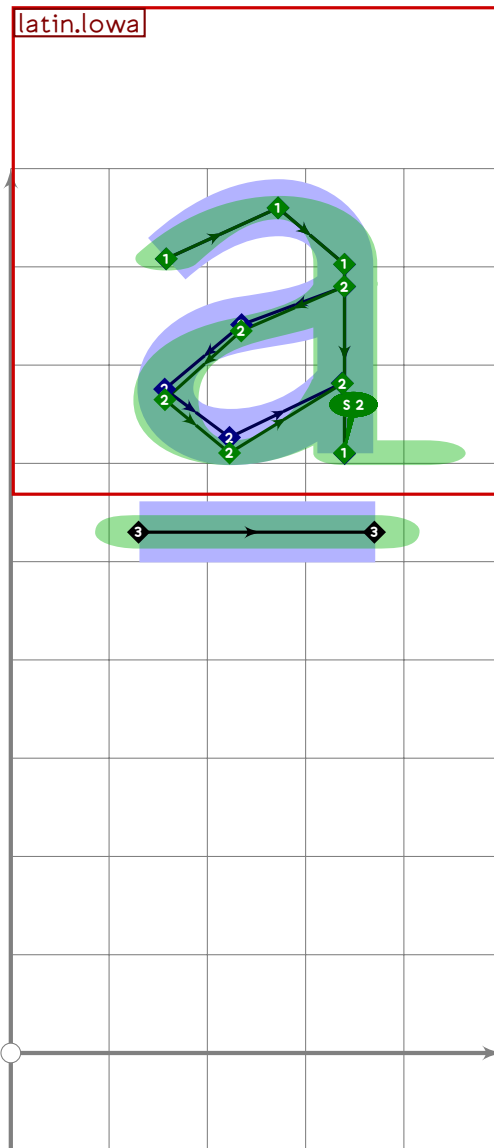
```



```

817
818 begintsuglyph("copyright",169);
819   Fill fullcircle scaled (440*40*tsu_brush_max) shifted (250,latin_vcentre);
820   unFill reverse fullcircle scaled (440*40*tsu_brush_max)
821     shifted (250,latin_vcentre);
822   tsu_xform(tsu_xf.latin_one_circled)(tsu_curve.latin.upc);
823   tsu_render_in_circle(tsu_xf.latin_one_cbound);
824 endtsuglyph;

```



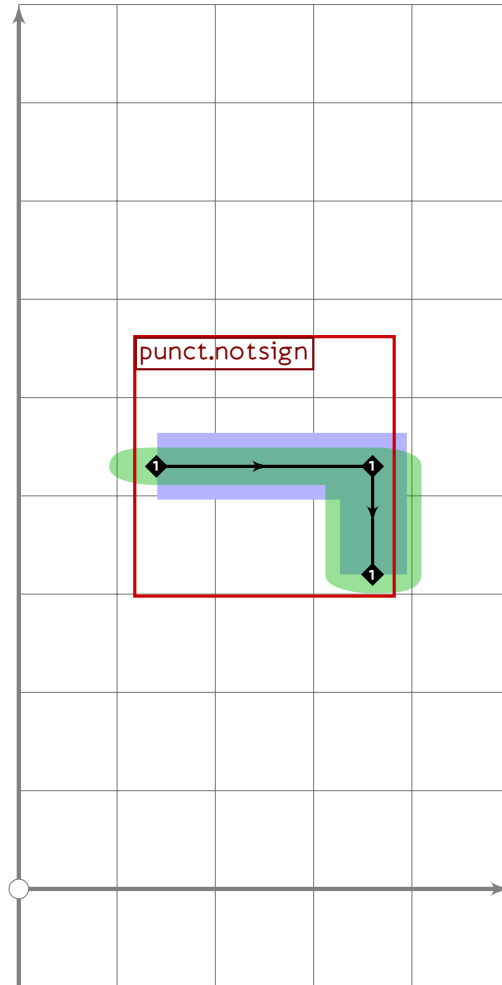
```

825
826 begintsuglyph("ordfeminine";170);
827 tsu_xform(tsu_xf.latin_one_super)(tsu_curve.latin.lowa);
828 push_stroke((130,530)-(370,530),(2,2)-(2,2));
829 set_bosize(0,get_bosize(-1));
830 tsu_render;
831 endtsuglyph;
832
833 % WARNING, changing rescale setting
834 tsu_rescale_half;
835
836 begintsuglyph("guillemotleft";171);
837 tsu_curve.punct.guillemet_left;
838 tsu_render;
839 endtsuglyph;
840
841 % WARNING, setting rescale

```

[see page 276]

```
842 tsu_rescale_native_narrow;
```



```
843
```

```
844 begintsuglyph("logicalnot";172);
```

```
845 tsu_curve.punct.notsign
```

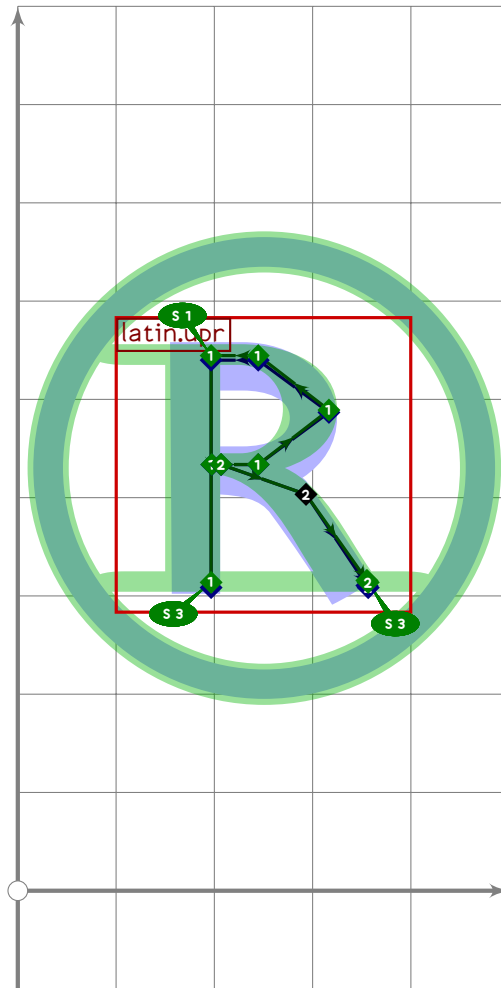
```
846 (identity scaled (1.1*tsu_punct_size) shifted (250,latin_vcentre));
```

```
847 tsu_render;
```

```
848 endtsuglyph;
```

```
849
```

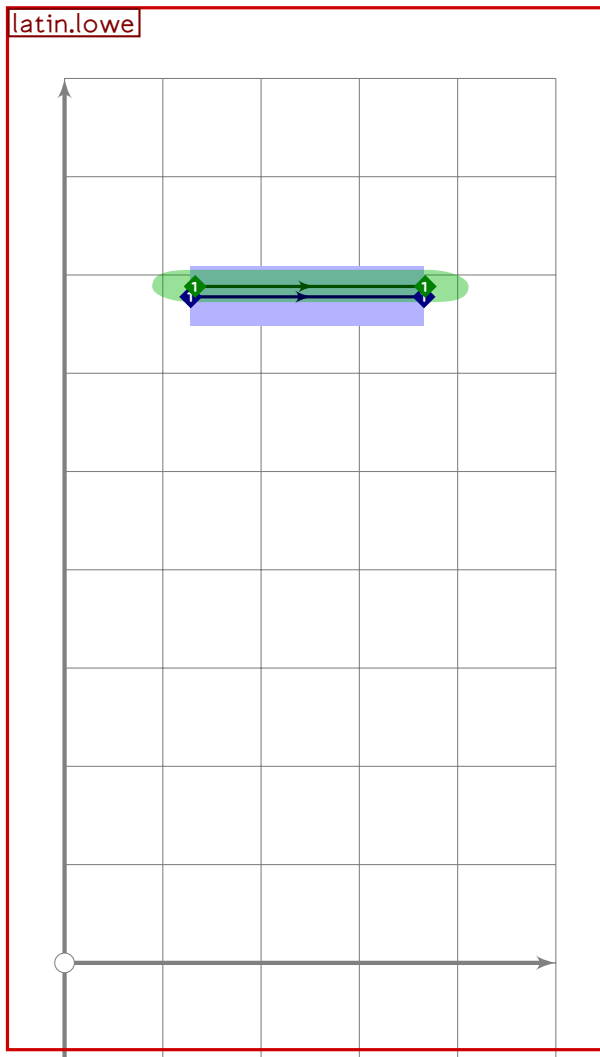
```
850 % soft hyphen is a zero-width space and added by make-font script
```



```

851
852 begintsuglyph("registered",174);
853   Fill fullcircle scaled (440*40*tsu_brush_max) shifted (250,latin_vcentre);
854   unFill reverse fullcircle scaled (440*40*tsu_brush_max)
855     shifted (250,latin_vcentre);
856   tsu_xform(tsu_xf.latin_one_circled)(tsu_curve.latin.upr);
857   tsu_render_in_circle(tsu_xf.latin_one_cbound);
858 endtsuglyph;
859
860 % WARNING, setting rescale
861 tsu_rescale_half;
862

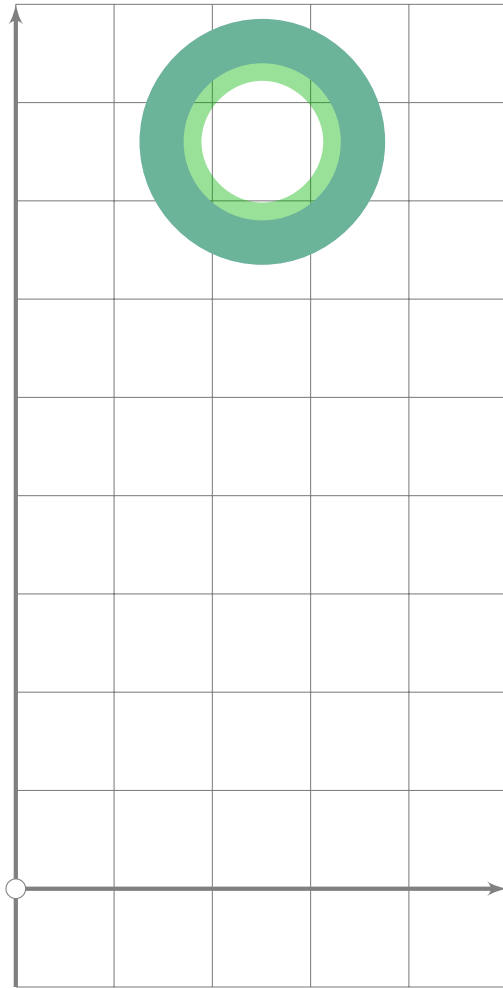
```

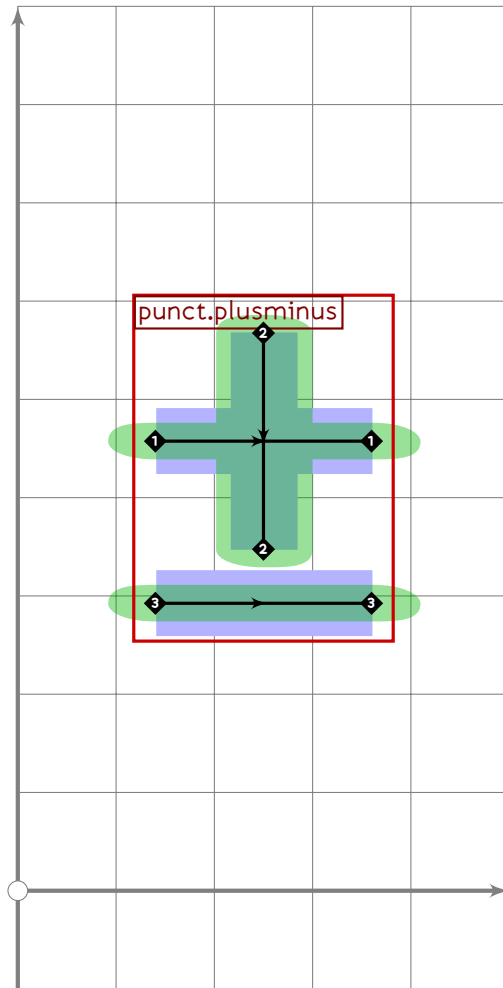
```

863 % naked macron
864 begintsuglyph("macron";175);
865 tsu_accent.macron(tsu_curve.latin.love;set_bosize(0,0));
866 tsu_render;
867 endsuglyph;
868
869 % WARNING, setting rescale
870 tsu_rescale_native_narrow;

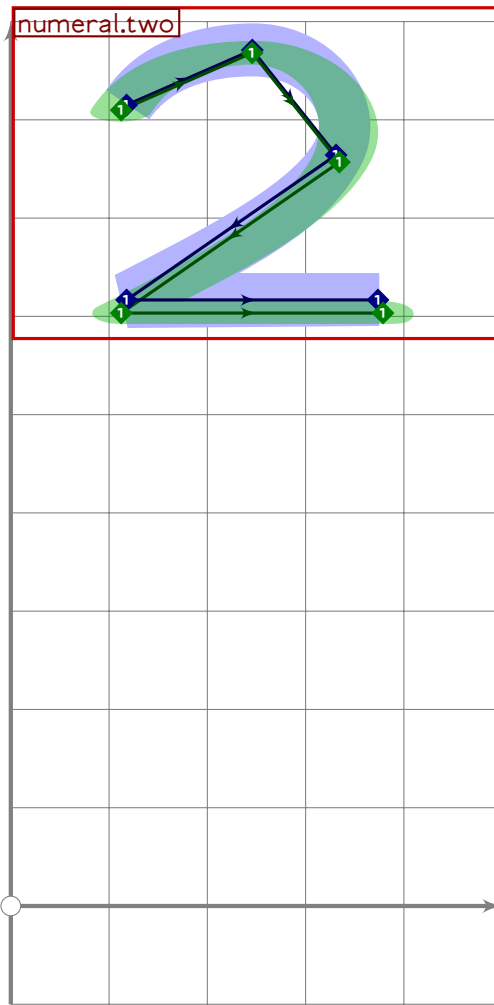
```



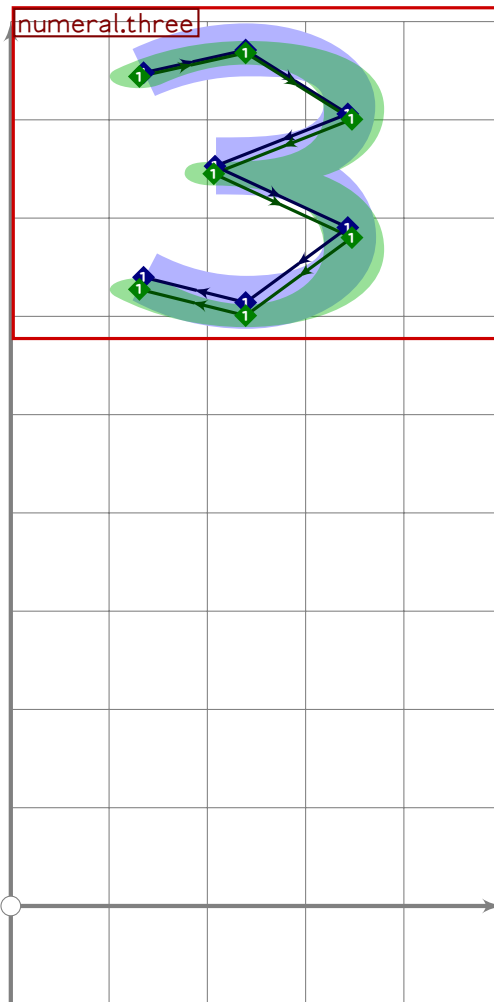
```
871  
872 begintsuglyph("degree",176);  
873   Fill fullcircle scaled (2.5*tsu_punct_size) shifted (250,760);  
874   unFill reverse fullcircle  
875     scaled (2.5*tsu_punct_size-120*tsu_brush_max) shifted (250,760);  
876 endsuglyph;
```



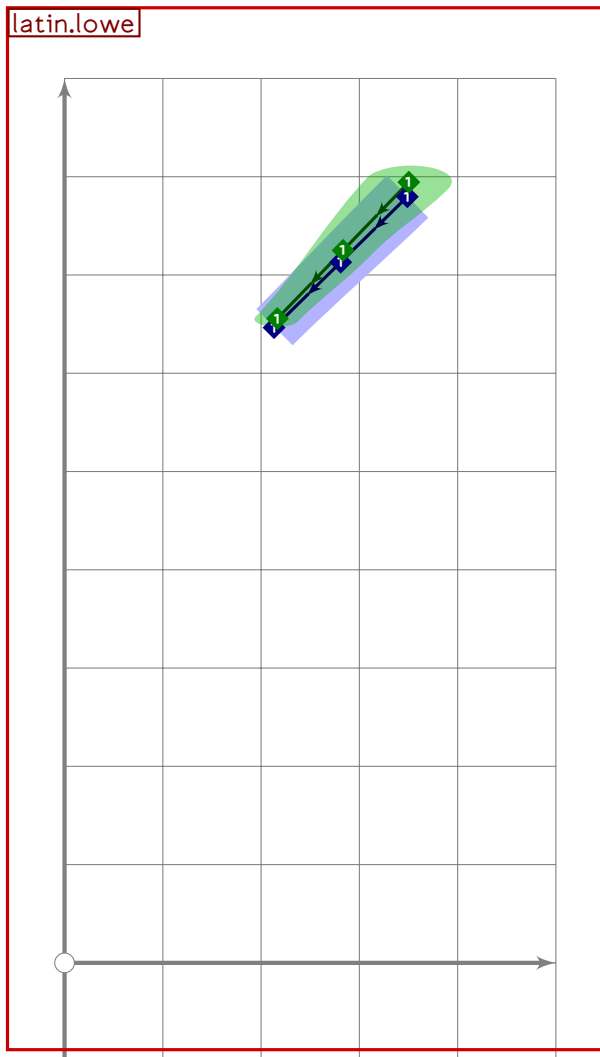
```
877  
878 begintsuglyph("plusminus";177);  
879 tsu_curve.punct.plusminus  
880   (identity scaled (1.1*tsu_punct_size) shifted (250,latin_vcentre));  
881 tsu_render;  
882 endsuglyph;
```



```
883  
884 begintsuglyph("uni00B2",178);  
885 tsu_xform(identity yscaled 0.68 transformed tsu_xf.latin_one_super)(  
886   tsu_curve.numeral.two);  
887 tsu_render;  
888 endtsuglyph;
```



```
889
890 begintsuglyph("uni00B3",179);
891 tsu_xform(identity yscaled 0.68 transformed tsu_xf.latin_one_super)(
892   tsu_curve.numeral.three);
893 tsu_render;
894 endtsuglyph;
895
896 % WARNING, changing rescale setting
897 tsu_rescale_half;
898
```



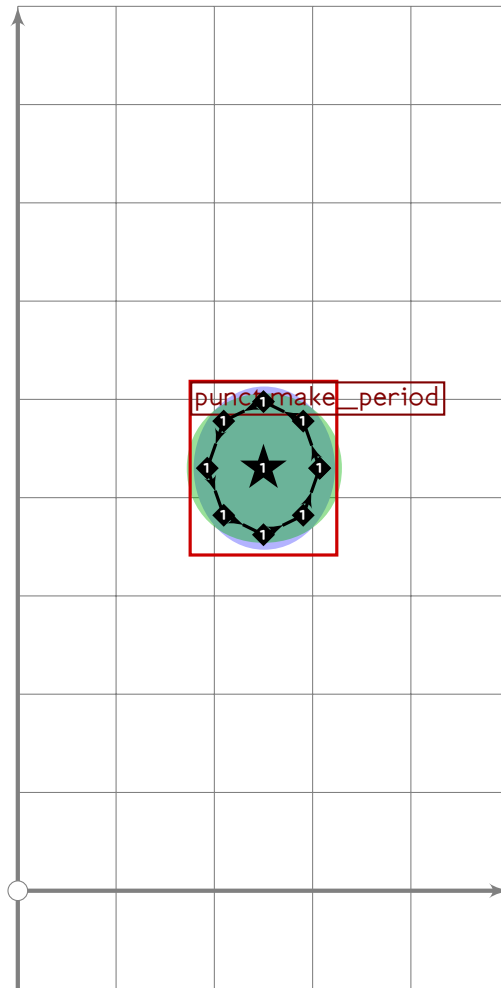
```

899 % naked acute
900 begintsuglyph("acute";180);
901   tsu_accent.acute(tsu_curve.latin.love;set_bosize(0,0));
902   tsu_render;
903 endsuglyph;
904
905 % micro
906 begintsuglyph("mu";181);
907   tsu_curve.punct.micro;
908   tsu_render;
909 endsuglyph;
910
911 % pilcrow
912 begintsuglyph("paragraph";182);
913   tsu_curve.punct.pilcrow;
914   tsu_render;
915 endsuglyph;
916

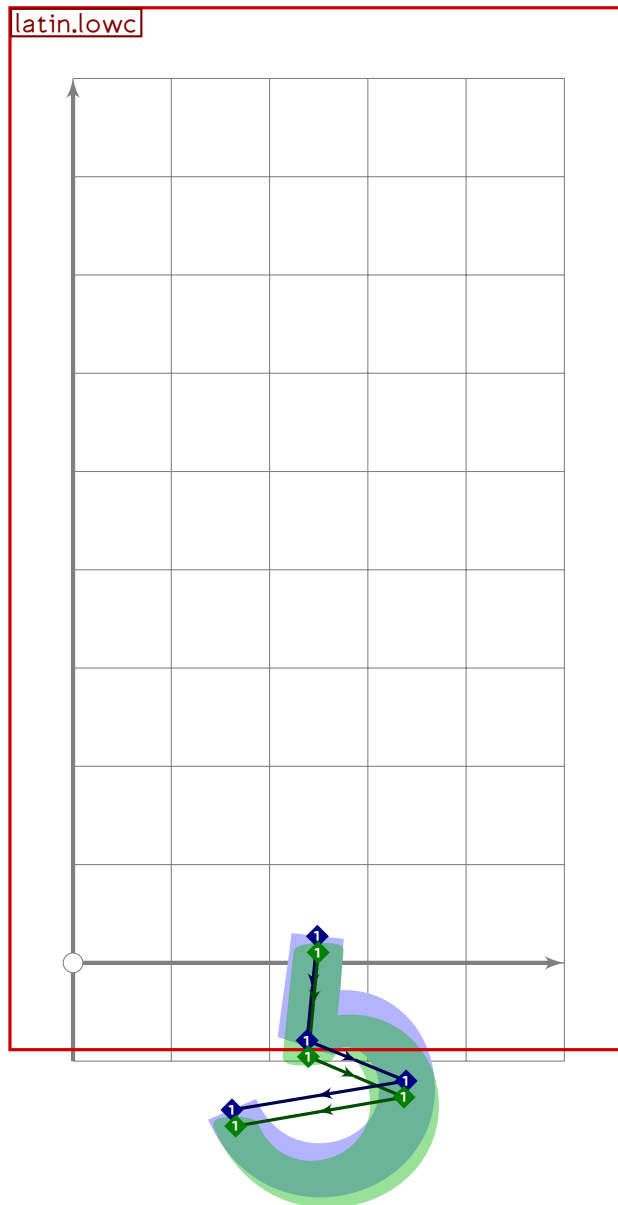
```

[see page 279]

[see page 286]



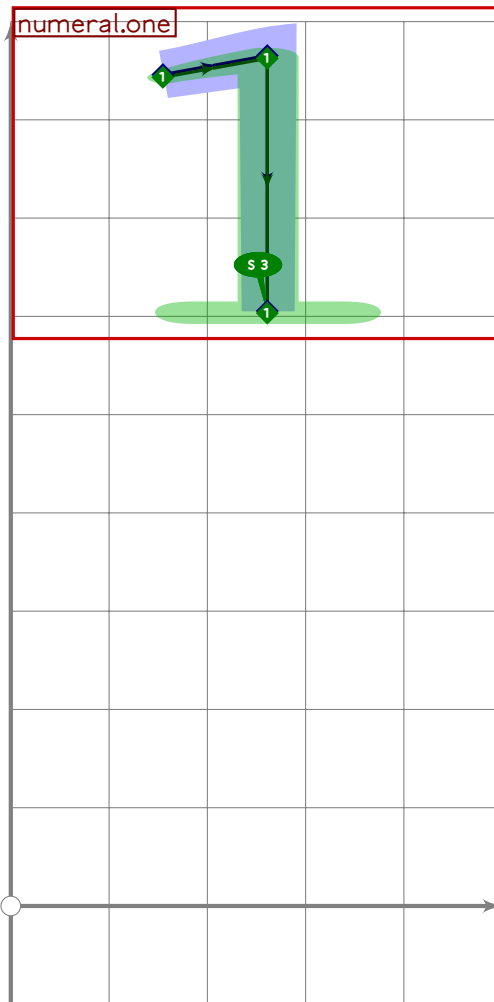
```
917 % period at centre  
918 begintsuglyph("periodcentered";183);  
919 tsu_curve.punct.make_period(centre_pt);  
920 tsu_render;  
921 endtsuglyph;  
922
```



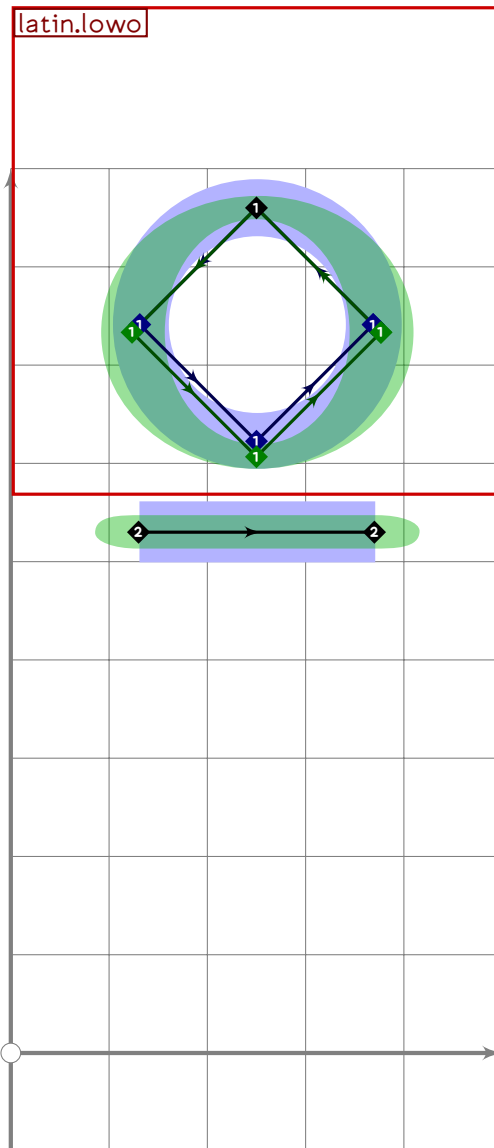
```

923 % naked cedilla
924 begintsuglyph("cedilla";184);
925   tsu_accent.cedilla(tsu_curve.latin.lowc;set_bosize(0,0));
926   tsu_render;
927 endsuglyph;
928
929 % WARNING, changing rescale setting
930 tsu_rescale_native_narrow;

```

```
931  
932 begintsuglyph("uni00B9",185);  
933 tsu_xform(identity yscaled 0.68 transformed tsu_xf.latin_one_super)(  
934   tsu_curve.numeral.one);  
935 tsu_render;  
936 endtsuglyph;
```



```

937
938 begintsuglyph("ordmasculine",186);
939 tsu_xform(tsu_xf.latin_one_super)(tsu_curve.latin.owo);
940 push_stroke((130,530)-(370,530),(2,2)-(2,2));
941 set_bosize(0,get_bosize(-1));
942 tsu_render;
943 endtsuglyph;
944
945 % WARNING, changing rescale setting
946 tsu_rescale_half;
947
948 begintsuglyph("guillemotright",187);
949 tsu_curve.punct.guillemet_right;
950 tsu_render;
951 endtsuglyph;
952
953 % WARNING, changing rescale setting

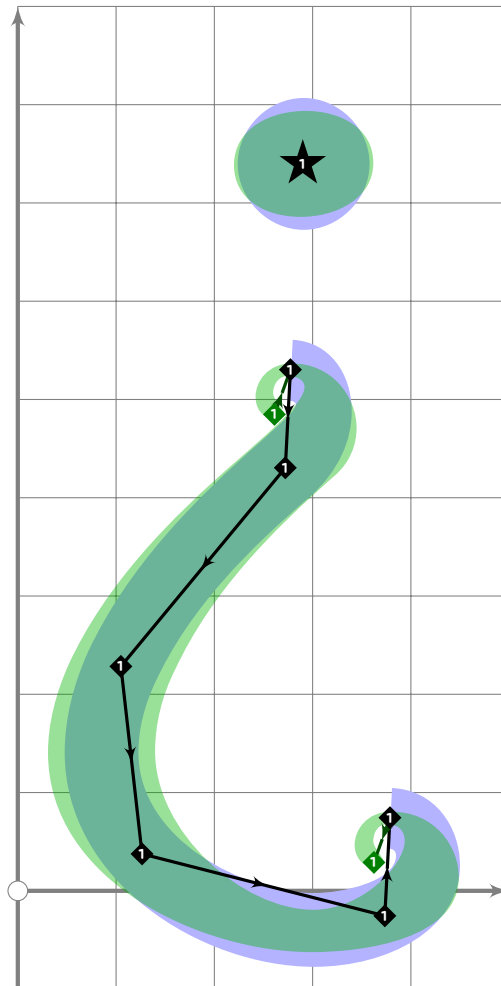
```

[see page 277]

```

954 tsu_rescale_native_narrow;
955

```



```

956 % question mark
957 beginsuglyph("questiondown",191);
958 if tsu_pbrush_size>=(tsu_punct_size*0.5):
959     push_lcblob(fullcircle
960         xscaled ((tsu_punct_size+tsu_pbrush_size)*0.89)
961         yscaled ((tsu_punct_size+tsu_pbrush_size*tsu_pbrush_shape)*0.89)
962         rotated tsu_pbrush_angle
963         shifted (210,40)
964         rotatedaround ((250,390),180));
965 else:
966     push_stroke(fullcircle scaled tsu_punct_size shifted (210,40)
967         rotatedaround ((250,390),180),
968         (1,1)..(2,2)..(2,2)..(1,1));
969     if tsu_pbrush_size>=30:
970         push_lcblob(get_strokep(0));
971     fi;
972 fi;
973 r:=tsu_punct_size/2;
974

```

```

975  push_stroke((210,300){right}..(210,300-r){left}..
976      (210,300+r)..(210+2.5*r,750)..
977      tension 1.3..(210-2.5*r,750+r)..
978      (210-2.5*r,750-r){right}..
979      (210-2.5*r,750){left},
980      (0.8,0.8)-(1,1)-(2,2)-(2,2)-(2,2)-(2,2)-(1,1)-(0.8,0.8));
981  replace_strokep(0)(insert_nodes(oldp)(2.5)
982      rotatedaround ((210,10),-3) rotatedaround ((250,390),180));
983
984  tsu_render;
985  endtsuglyph;
986
987  _____
988

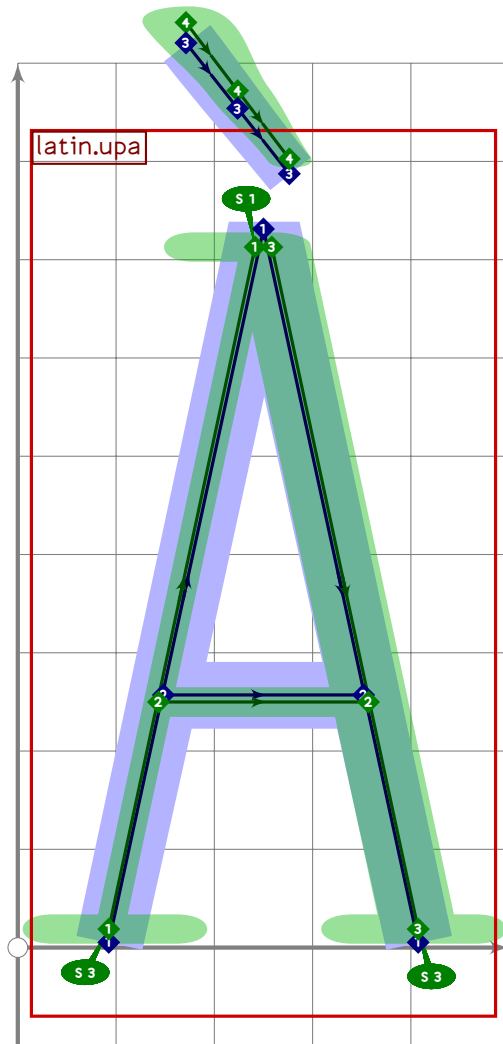
```

Accented Latin

```

989 % ACCENTED LATIN
990
991 % WARNING, setting rescale
992 tsu_rescale_half;
993

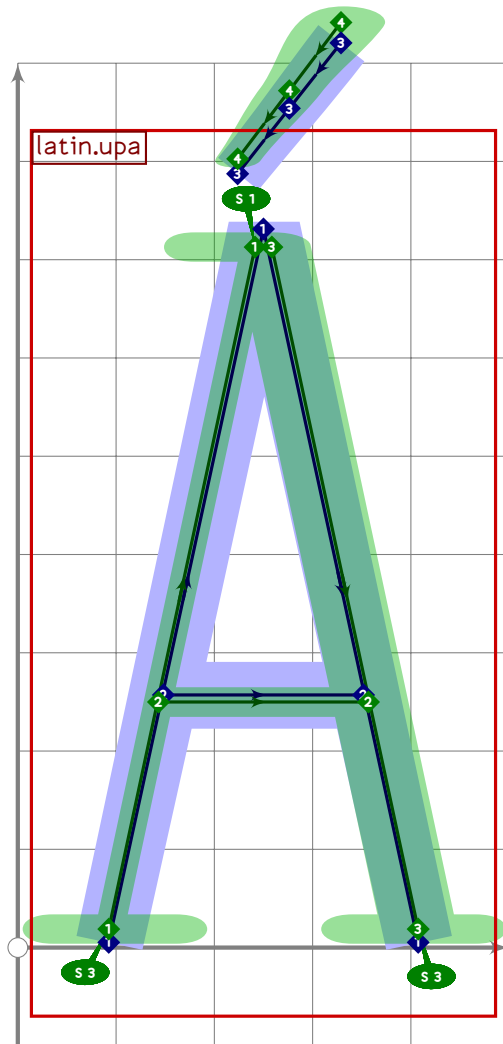
```



```

994 % A with grave
995 begint Suglyph("Agrave",192);
996   tsu_accent.capital(grave)(tsu_curve.latin.upa);
997   tsu_render;
998 endtsuglyph;
999

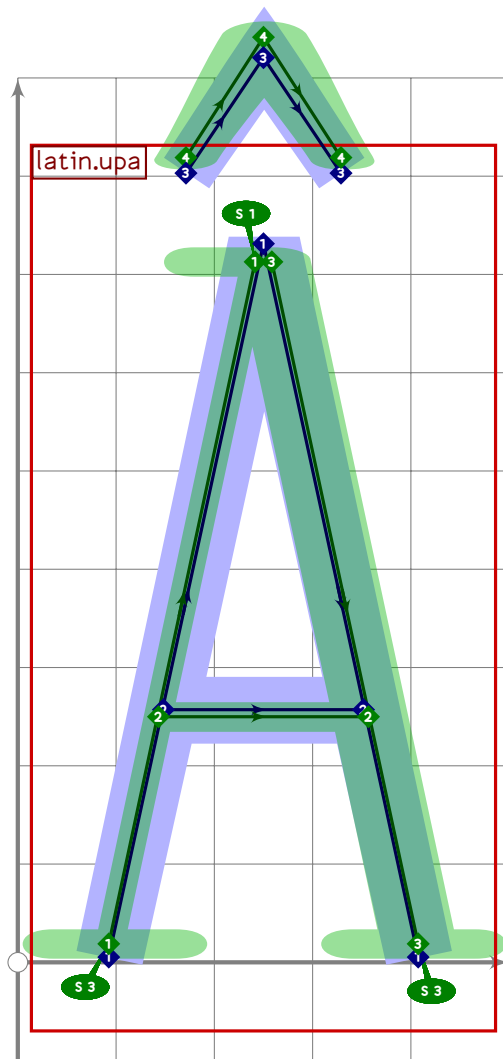
```



```

1000 % A with acute
1001 beginsuglyph("Aacute";193);
1002   tsu_accent.capital(acute)(tsu_curve.latin.upa);
1003   tsu_render;
1004 endsuglyph;
1005

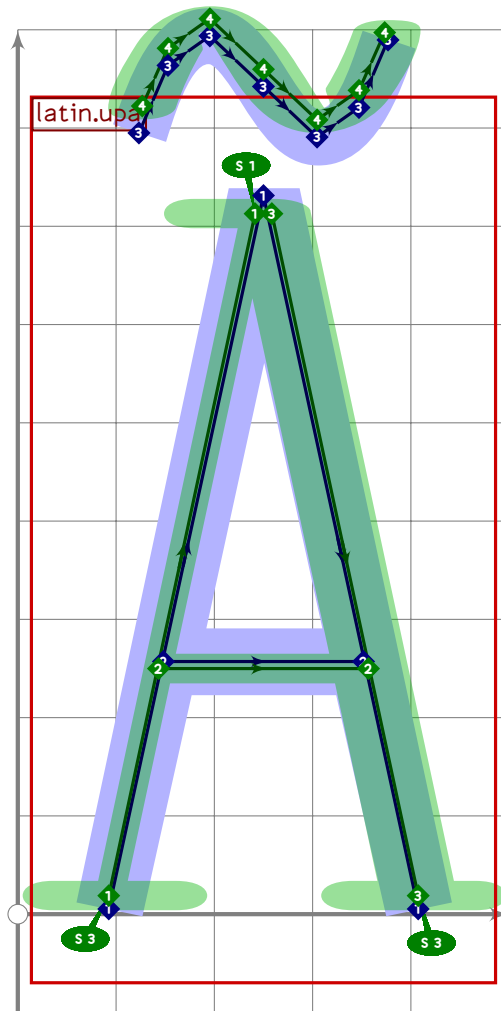
```



```

1006 % A with circumflex
1007 begintsuglyph("Acircumflex";194);
1008 tsu_accent.capital(circumflex)(tsu_curve.latin.upa);
1009 tsu_render;
1010 endsuglyph;
1011

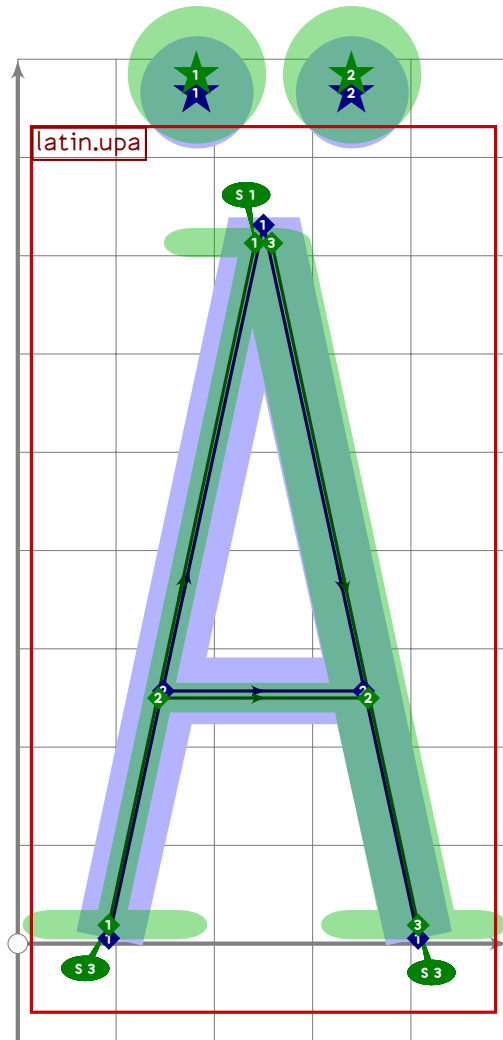
```



```

1012 % A with tilde
1013 begintsuglyph("Atilde";195);
1014 tsu_accent.capital(tilde)(tsu_curve.latin.upa);
1015 tsu_render;
1016 endsuglyph;
1017

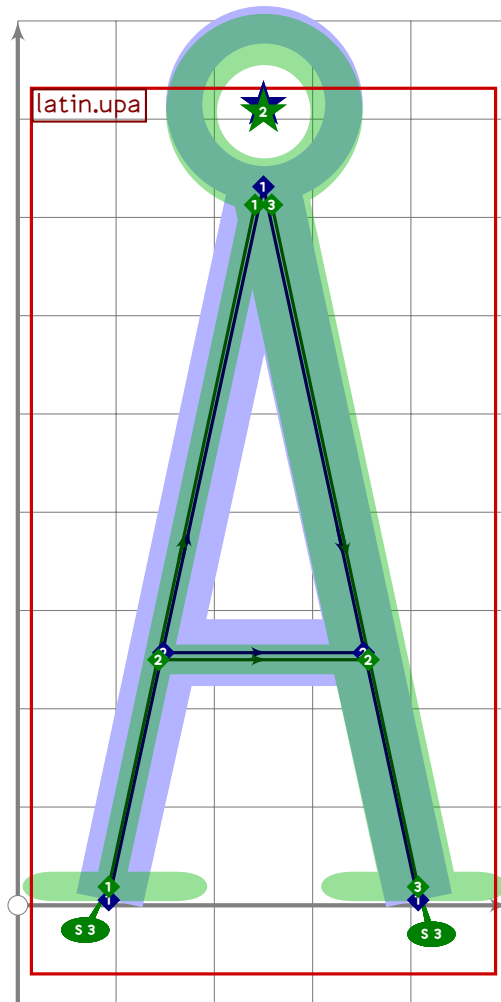
```

```

1018 % A with dieresis/umlaut
1019 begintsuglyph("Adieresis";196);
1020 tsu_accent.capital(umlaut)(tsu_curve.latin.upa);
1021 tsu_render;
1022 endsuglyph;
1023

```

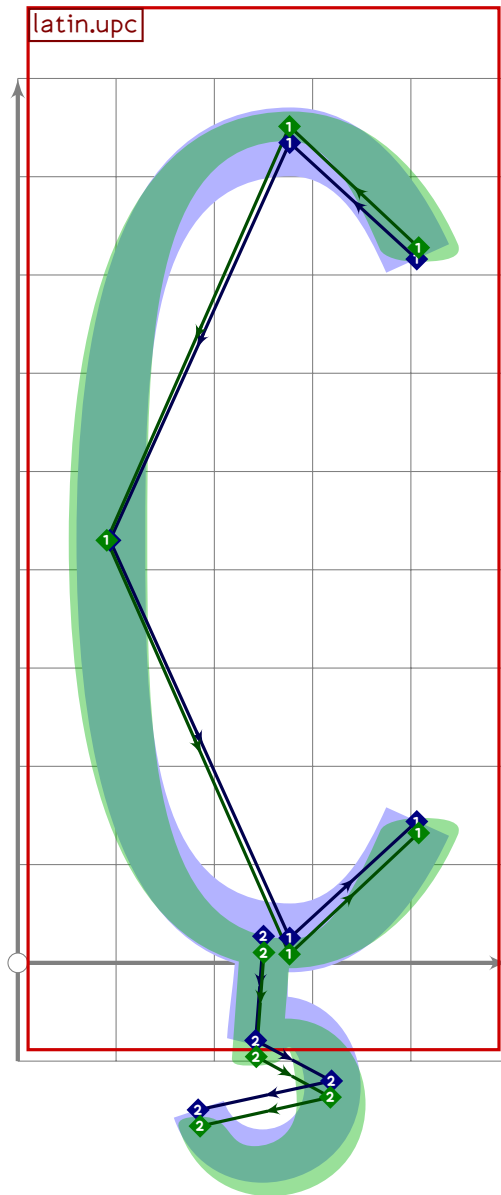


```

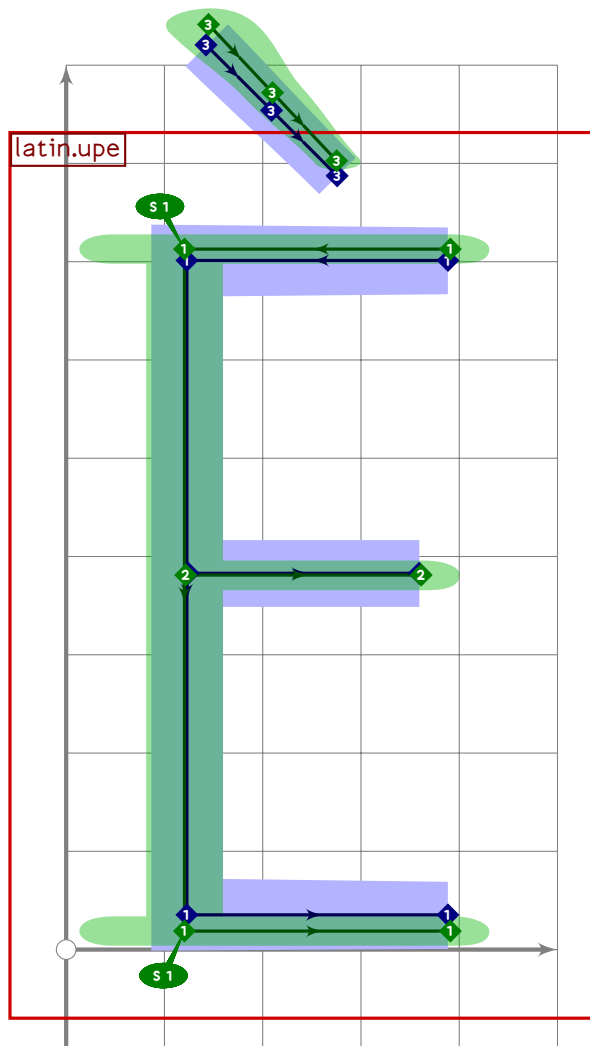
1024 % A with ring above
1025 begintsuglyph("Aring",197);
1026 tsu_accent.capital(ringabove)(tsu_curve.latin.upa);
1027 if do_alteration:
1028     set_boserif(-2,1,whatever);
1029 else:
1030     set_boserif(-1,1,whatever);
1031 fi;
1032 tsu_render;
1033 endtsuglyph;
1034
1035 % AE ligature
1036 begintsuglyph("AE",198);
1037 tsu_curve.latin.upae;
1038 tsu_render;
1039 endtsuglyph;
1040

```

[see page 154]



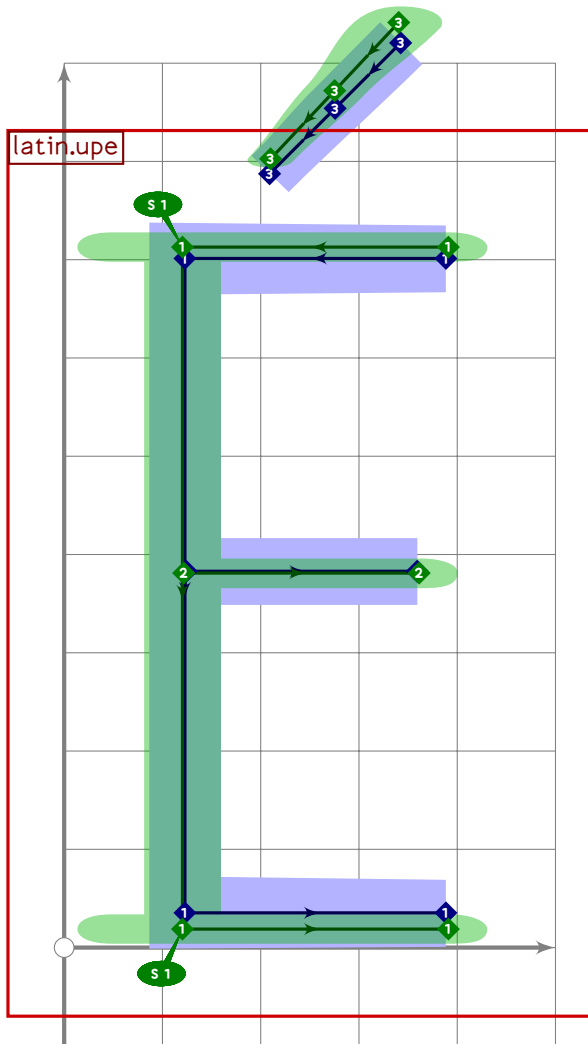
```
1041 % C with cedilla  
1042 begintsuglyph("Ccedilla";199);  
1043 tsu_accent.cedilla(tsu_curve.latin.upc);  
1044 tsu_render;  
1045 endsuglyph;  
1046
```



```

1047 % E with grave
1048 begintsuglyph("Egrave";200);
1049 tsu_accent.capital(grave)(tsu_curve.latin.upe);
1050 tsu_render;
1051 endsuglyph;
1052

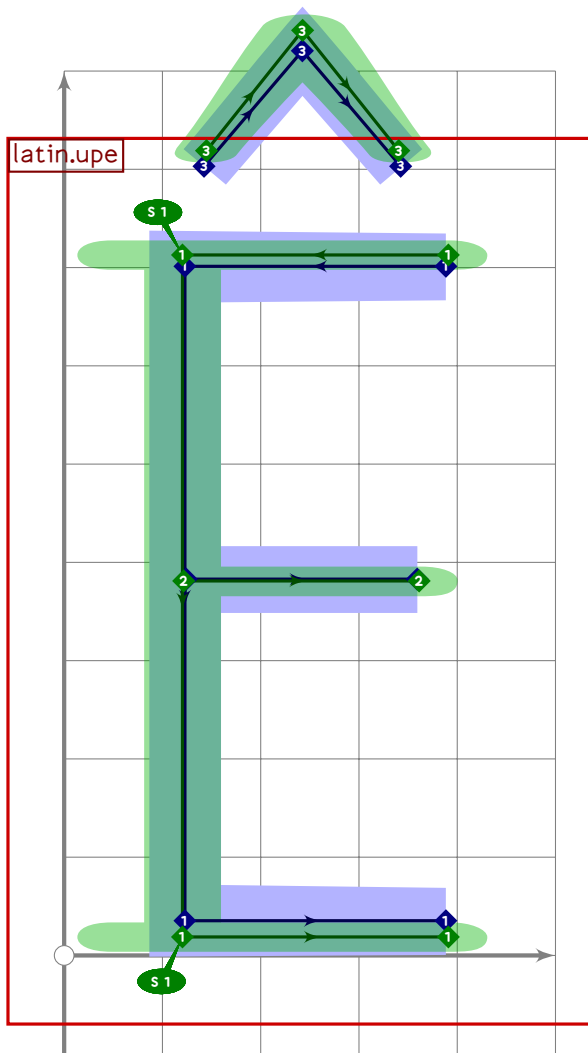
```



```

1053 % E with acute
1054 begintsuglyph("Eacute",201);
1055 tsu_accent.capital(acute)(tsu_curve.latin.upe);
1056 tsu_render;
1057 endsuglyph;
1058

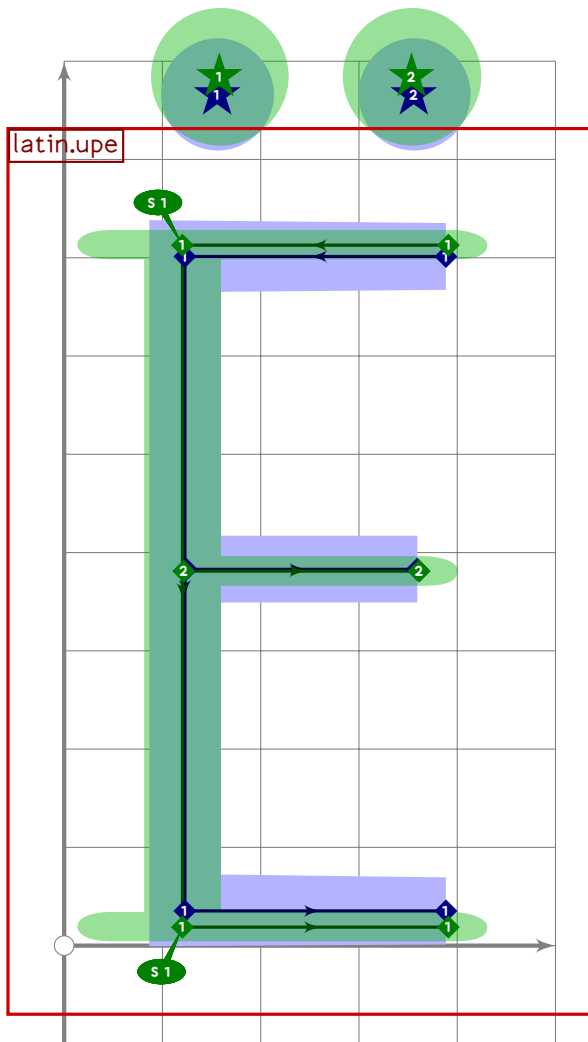
```



```

1059 % E with circumflex
1060 begintsuglyph("Ecircumflex",202);
1061 tsu_accent.capital(circumflex)(tsu_curve.latin.upe);
1062 tsu_render;
1063 endtsuglyph;
1064

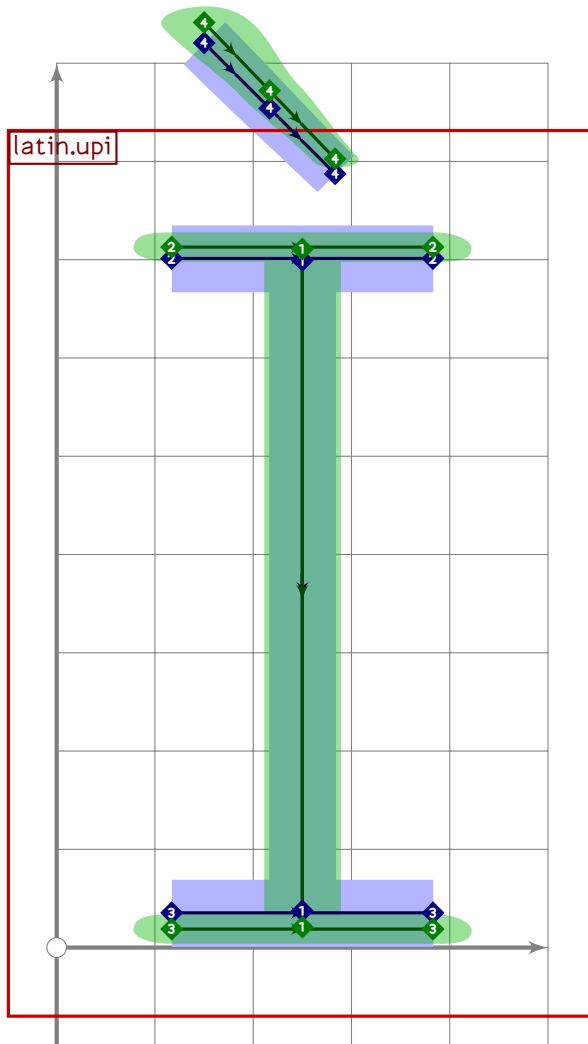
```



```

1065 % E with dieresis/umlaut
1066 begintsuglyph("Edieresis";203);
1067 tsu_accent.capital(umlaut)(tsu_curve.latin.upe);
1068 tsu_render;
1069 endsuglyph;
1070

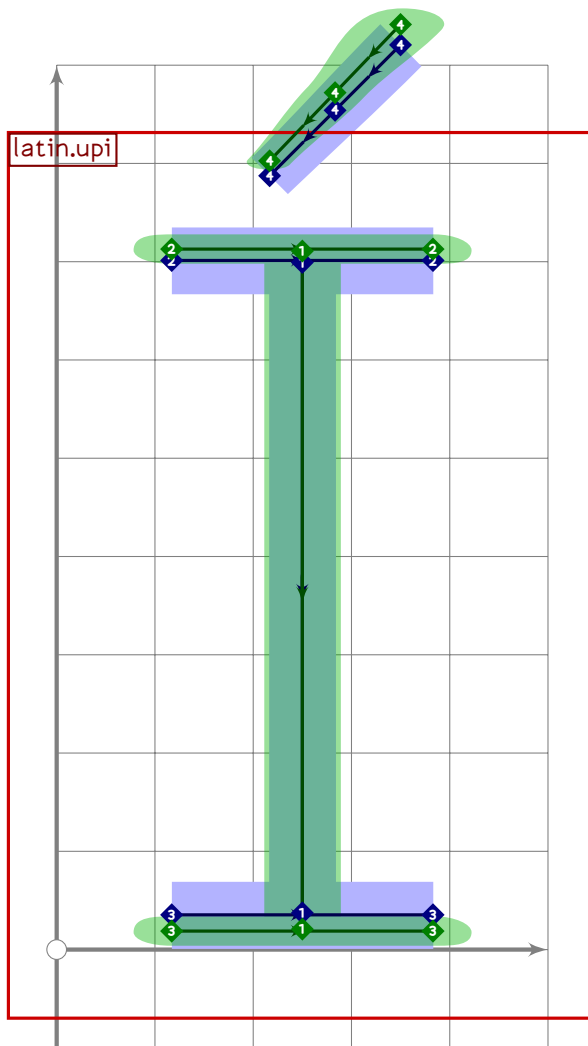
```



```

1071 % I with grave
1072 begintuglyph("Igrave";204);
1073   tsu_accent.capital(grave)(tsu_curve.latin.upi);
1074   tsu_render;
1075 endtuglyph;
1076

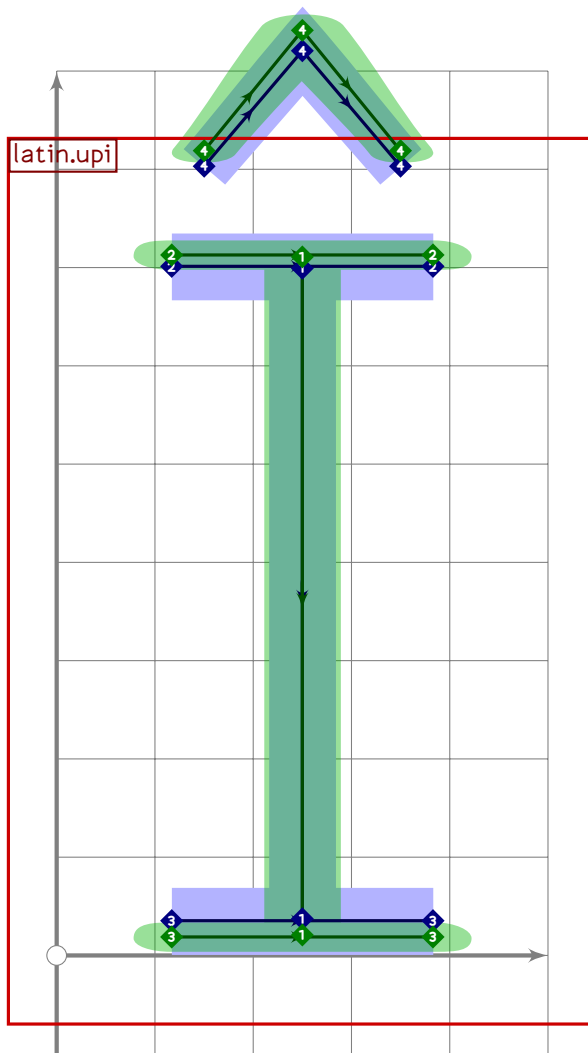
```

```

1077 % I with acute
1078 begint Suglyph("Iacute";205);
1079   tsu_accent.capital(acute)(tsu_curve.latin.upi);
1080   tsu_render;
1081   endtsuglyph;
1082

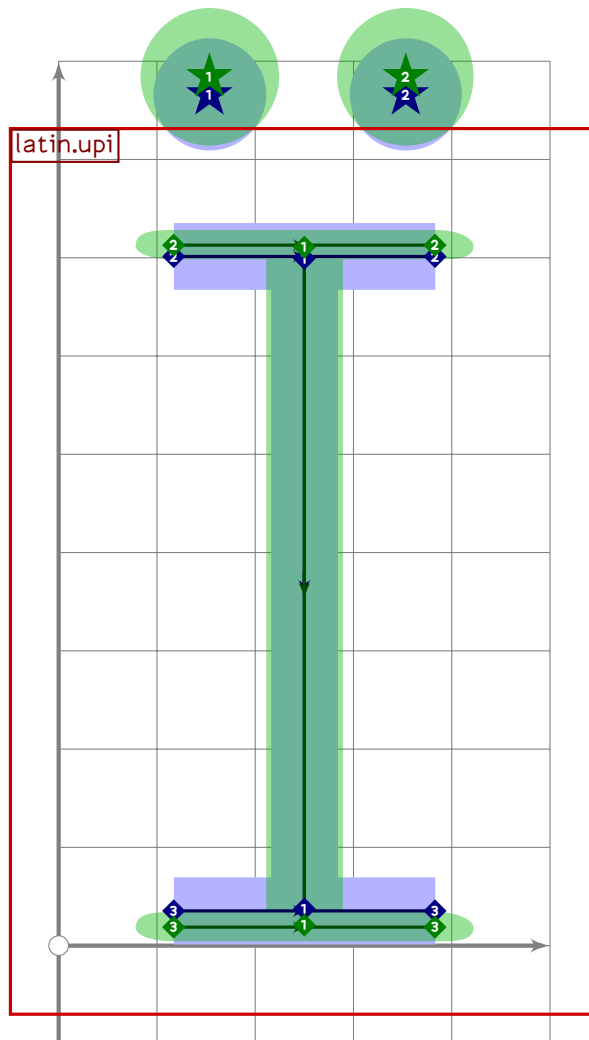
```



```

1083 % I with circumflex
1084 begintsuglyph("Icircumflex",206);
1085 tsu_accent.capital(circumflex)(tsu_curve.latin.upi);
1086 tsu_render;
1087 endtsuglyph;
1088

```

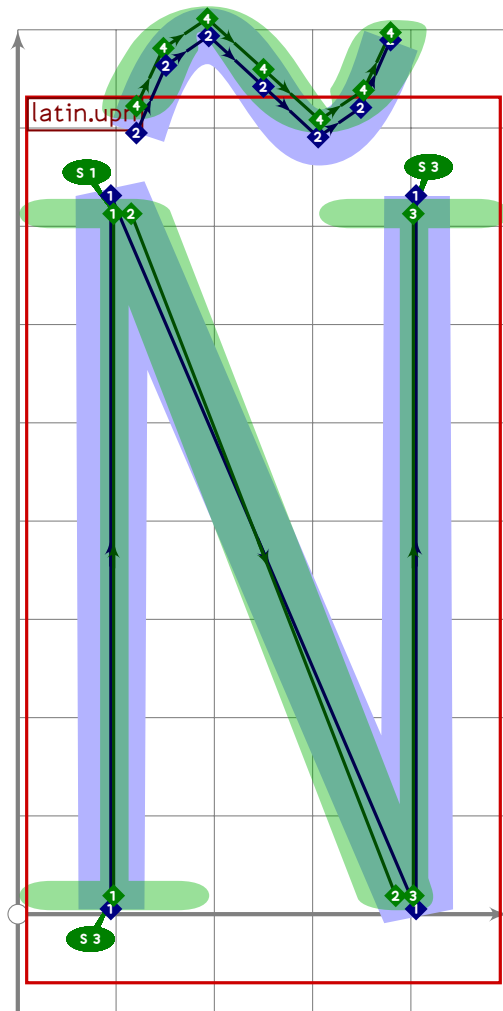


```

1089 % I with dieresis/umlaut
1090 begintsuglyph("Idieresis";207);
1091 tsu_accent.capital(umlaut)(tsu_curve.latin.upi);
1092 replace_lcblob(-1)(oldblob shifted (15*left));
1093 replace_lcblob(0)(oldblob shifted (15*left));
1094 tsu_render;
1095 endtsuglyph;
1096
1097 % uppercase Icelandic Eth
1098 begintsuglyph("Eth";208);
1099 tsu_curve.latin.upeth;
1100 tsu_render;
1101 endtsuglyph;
1102

```

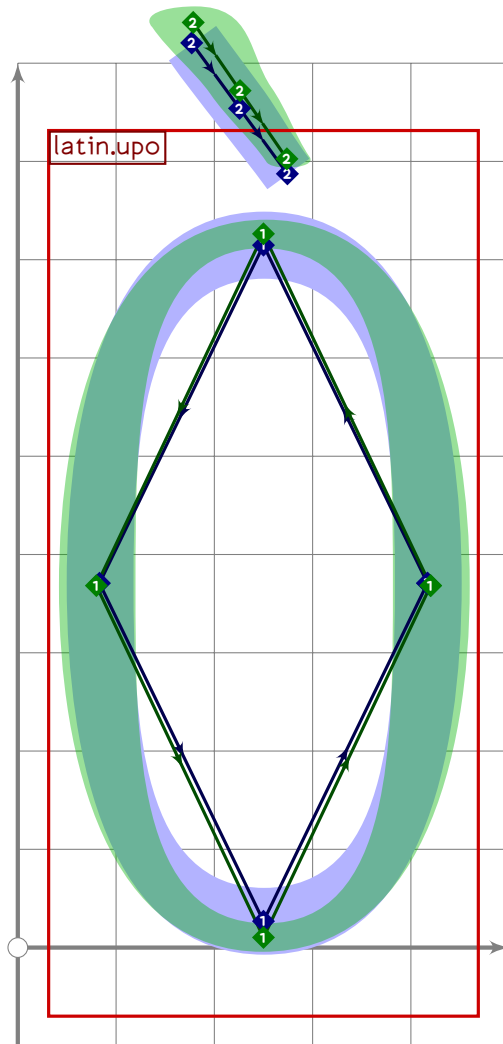
[see page 158]



```

1103 % N with tilde
1104 begintsuglyph("Ntilde";209);
1105 tsu_accent.capital(tilde)(tsu_curve.latin.upn);
1106 tsu_render;
1107 endsuglyph;
1108

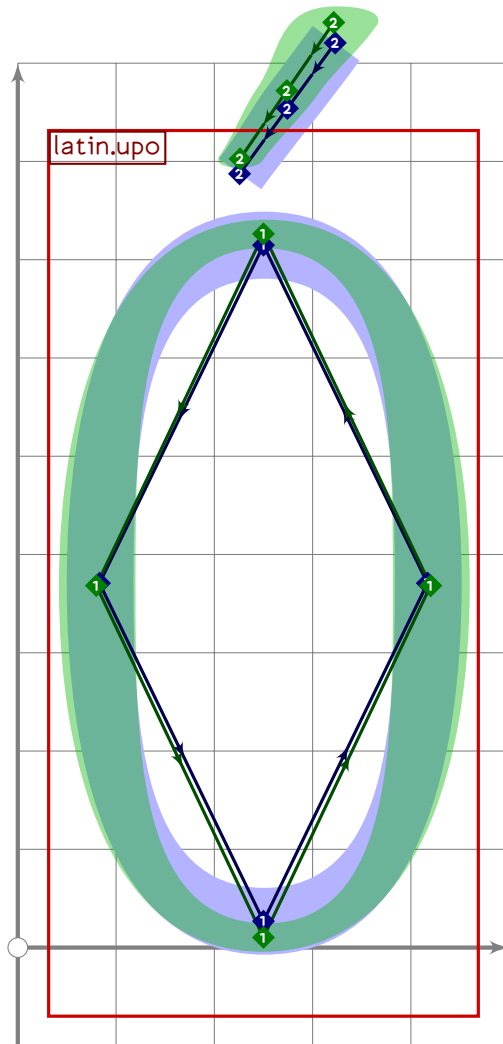
```



```

1109 % O with grave
1110 begintsuglyph("Ograve";210);
1111   tsu_accent.capital(grave)(tsu_curve.latin.upo);
1112   tsu_render;
1113 endsuglyph;
1114

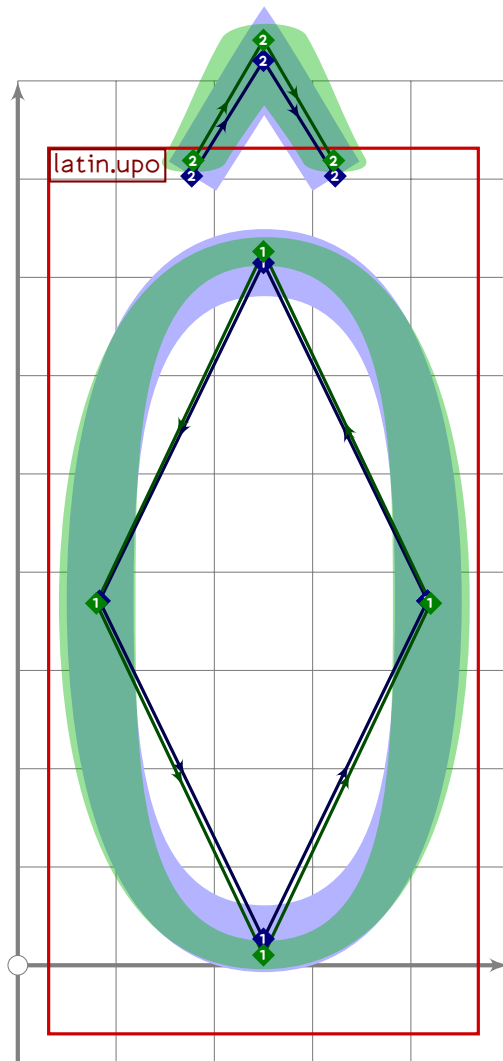
```



```

1115 % O with acute
1116 begintsuglyph("Oacute";211);
1117   tsu_accent.capital(acute)(tsu_curve.latin.upo);
1118   tsu_render;
1119 endsuglyph;
1120

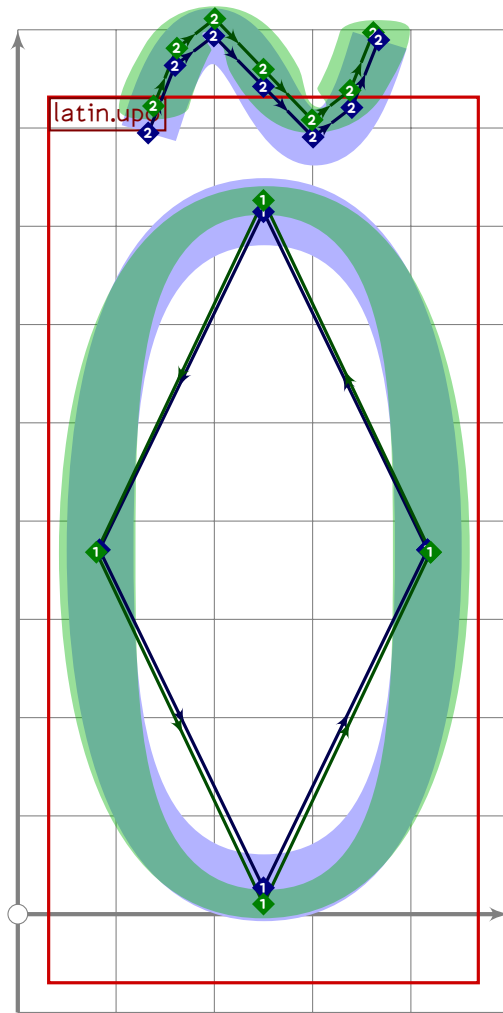
```



```

1121 % O with circumflex
1122 begintsuglyph("Ocircumflex",212);
1123   tsu_accent.capital(circumflex)(tsu_curve.latin.upo);
1124   tsu_render;
1125 endsuglyph;
1126

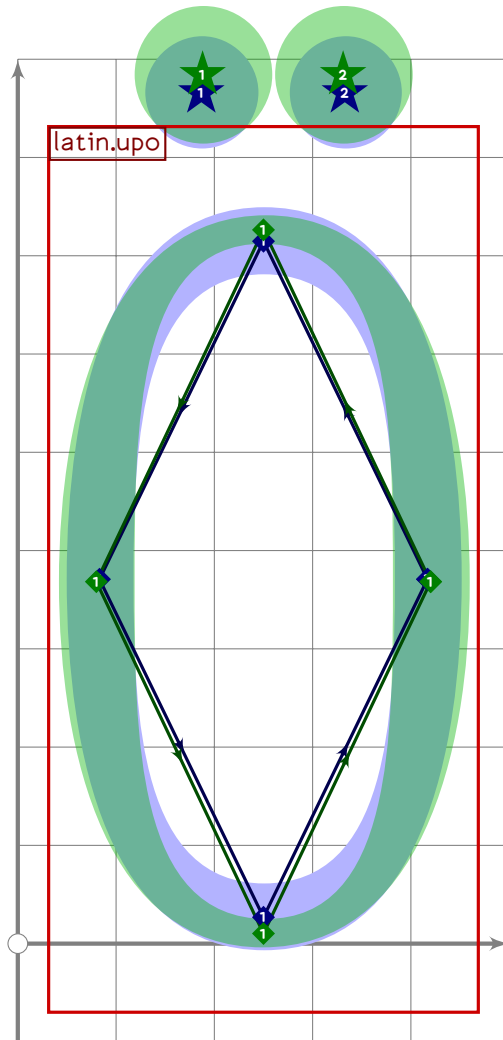
```



```

1127 % O with tilde
1128 begintsuglyph("Otilde";213);
1129   tsu_accent.capital(tilde)(tsu_curve.latin.upo);
1130   tsu_render;
1131 endsuglyph;
1132

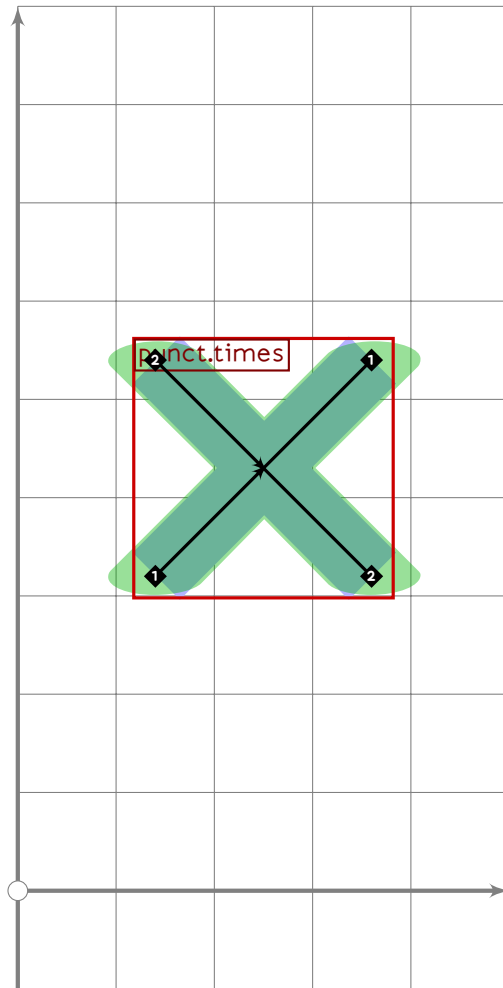
```

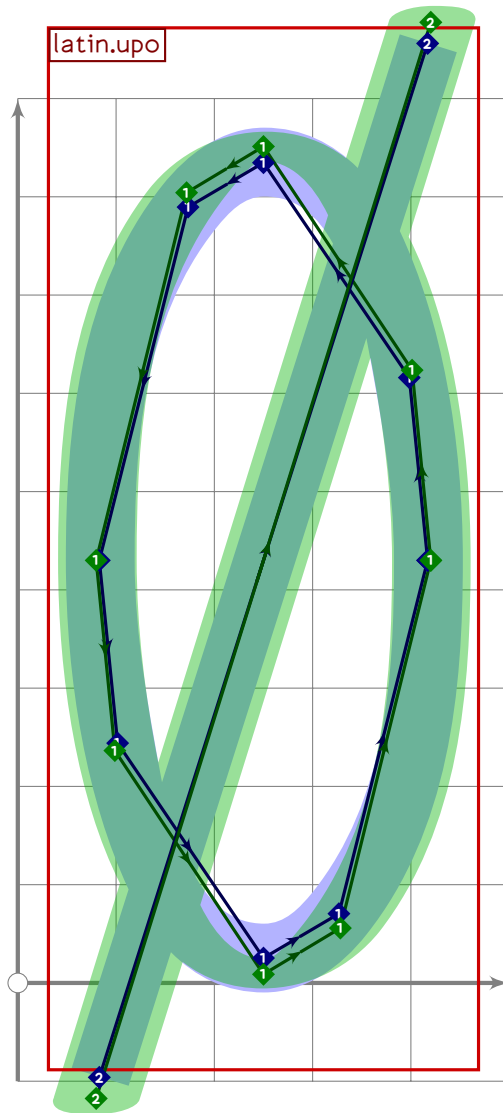
```

1133 % O with dieresis/umlaut
1134 begintsuglyph("Odiereis",214);
1135 tsu_accent.capital(umlaut)(tsu_curve.latin.upo);
1136 tsu_render;
1137 endsuglyph;
1138
1139 % times
1140 tsu_rescale_native_narrow;

```



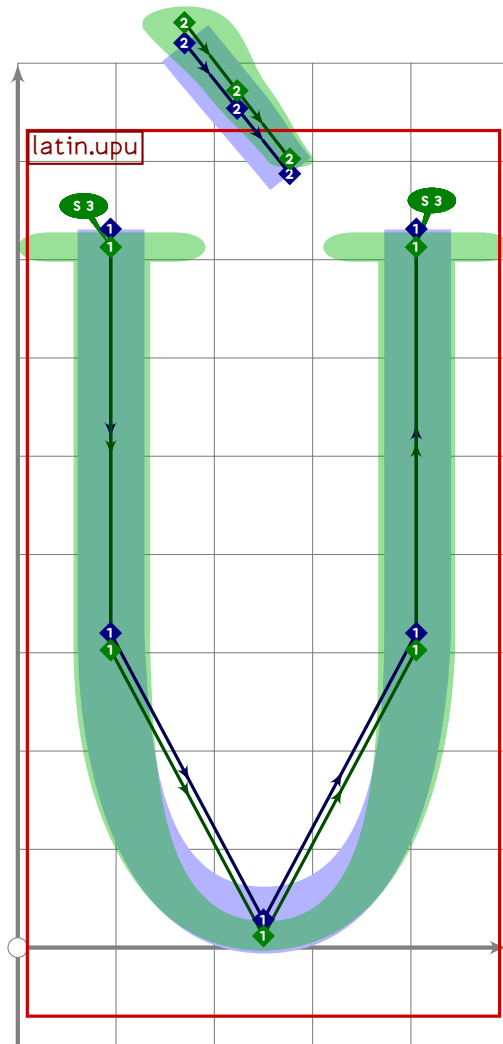
```
1141 begintsuglyph("multiply",215);  
1142 tsu_curve.punct.times  
1143     (identity scaled (1.1*tsu_punct_size) shifted (250,latin_vcentre));  
1144 tsu_render;  
1145 endtsuglyph;  
1146 tsu_rescale_half;  
1147
```



```

1148 % O with stroke
1149 beginsuglyph("Oslash";216);
1150 tsu_accent.ucslash(tsu_curve.latin.upo);
1151 replace_strokep(-1)(insert_nodes(oldp)(0.3,1.3,2.3,3.3));
1152 replace_strokeq(-1)(insert_nodes(oldq)(0.3,1.3,2.3,3.3));
1153 tsu_render;
1154 endsuglyph;
1155

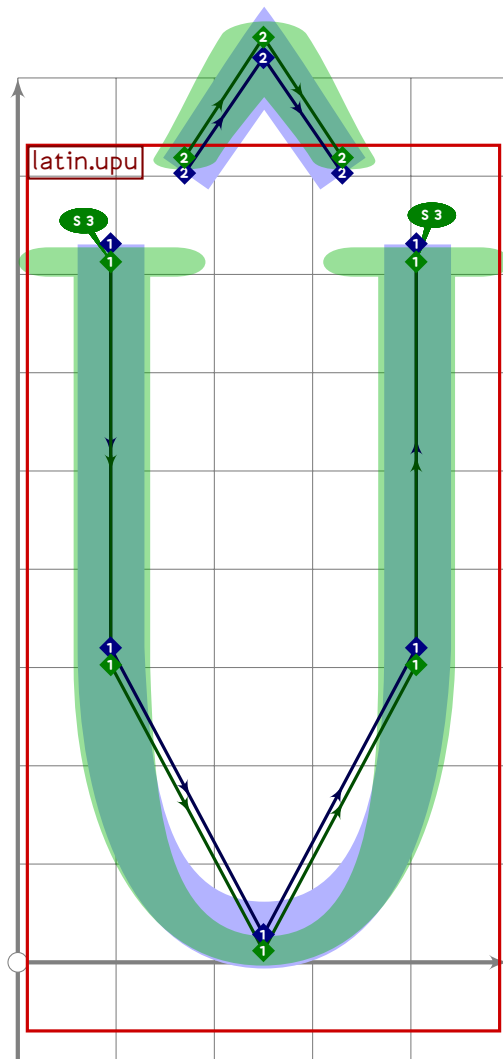
```



```

1156 % U with grave
1157 begint Suglyph("Ugrave";217);
1158   tsu_accent.capital(grave)(tsu_curve.latin.upu);
1159   tsu_render;
1160 endsuglyph;
1161

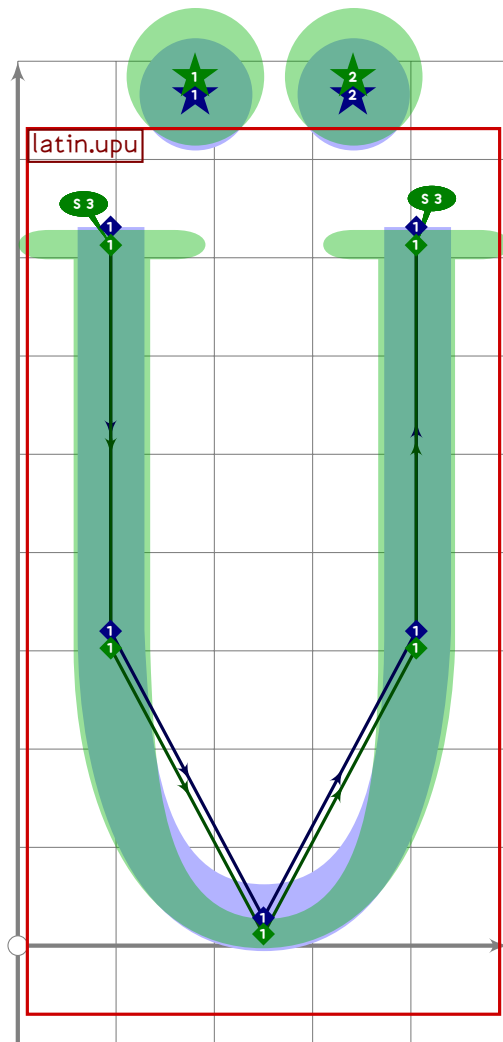
```

```

1168 % U with circumflex
1169 begintsuglyph("Ucircumflex",219);
1170 tsu_accent.capital(circumflex)(tsu_curve.latin.upu);
1171 tsu_render;
1172 endsuglyph;
1173

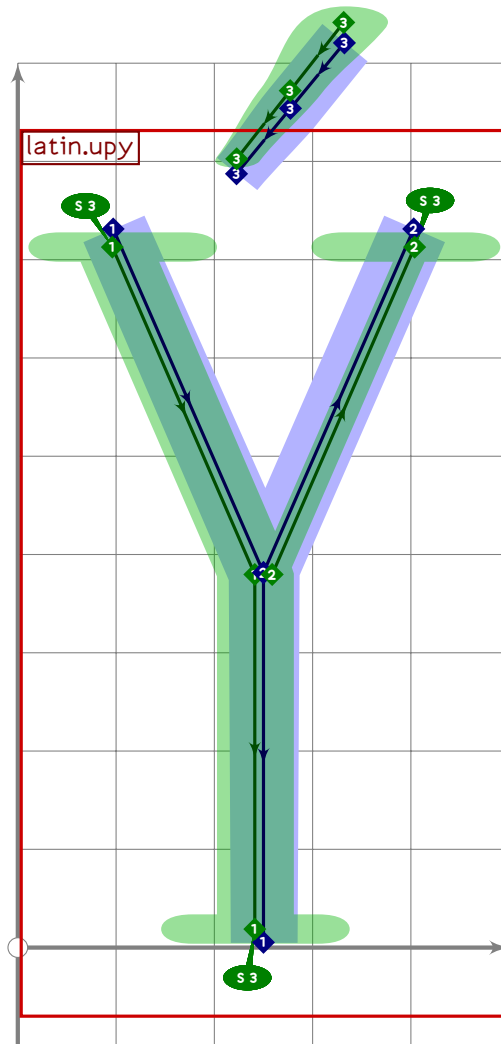
```



```

1174 % U with dieresis/umlaut
1175 begintsuglyph("Udiereis";220);
1176 tsu_accent.capital(umlaut)(tsu_curve.latin.upu);
1177 tsu_render;
1178 endtsuglyph;
1179

```



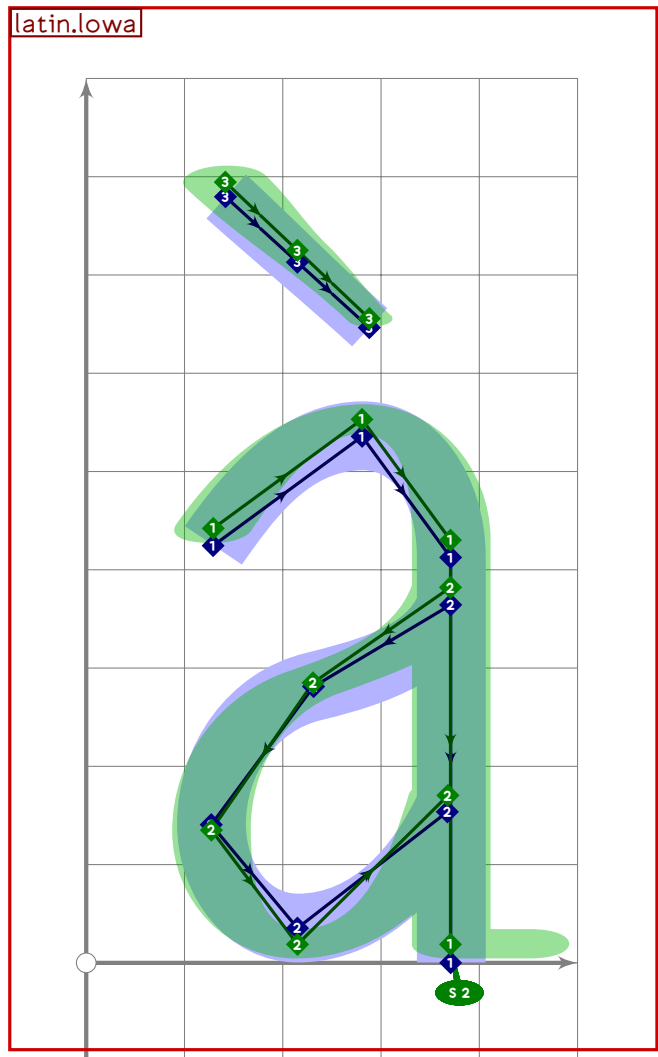
```

1180 % Y with acute
1181 begintsuglyph("Yacute",221);
1182 tsu_accent.capital(acute)(tsu_curve.latin.upy);
1183 tsu_render;
1184 endsuglyph;
1185
1186 % uppercase Thorn
1187 begintsuglyph("Thorn",222);
1188 tsu_curve.latin.upthorn;
1189 tsu_render;
1190 endsuglyph;
1191
1192 % eszett
1193 begintsuglyph("germandbls",223);
1194 tsu_curve.latin.loweszett;
1195 tsu_render;
1196 endsuglyph;
1197

```

[see page 179]

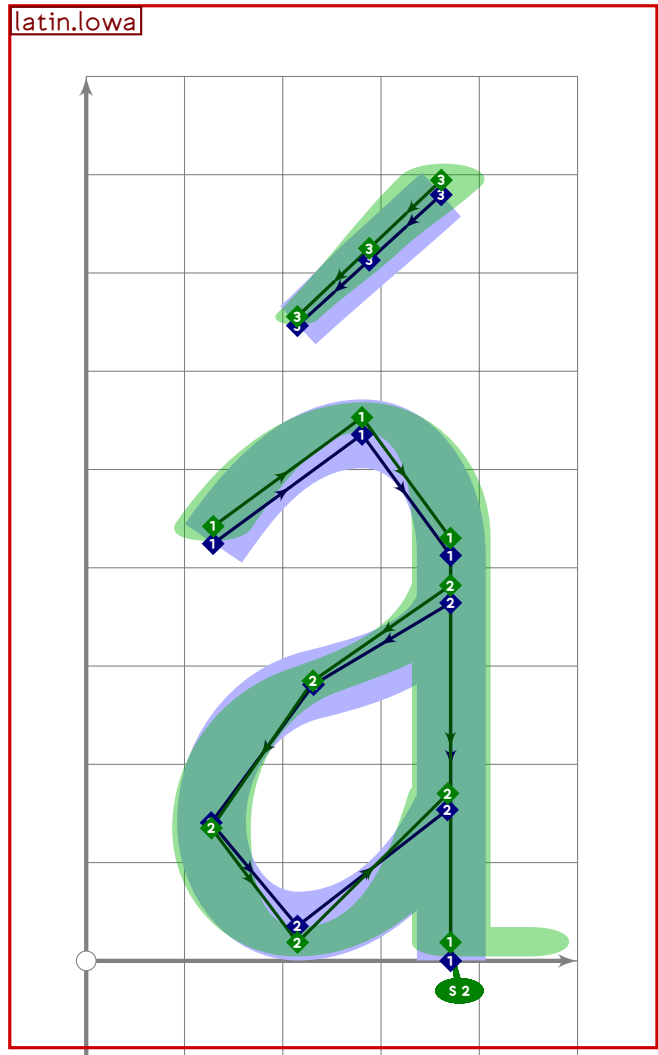
[see page 194]



```

1198 % a with grave
1199 begintsuglyph("agrave";224);
1200 tsu_accent.grave(tsu_curve.latin.lowa);
1201 tsu_render;
1202 endsuglyph;
1203

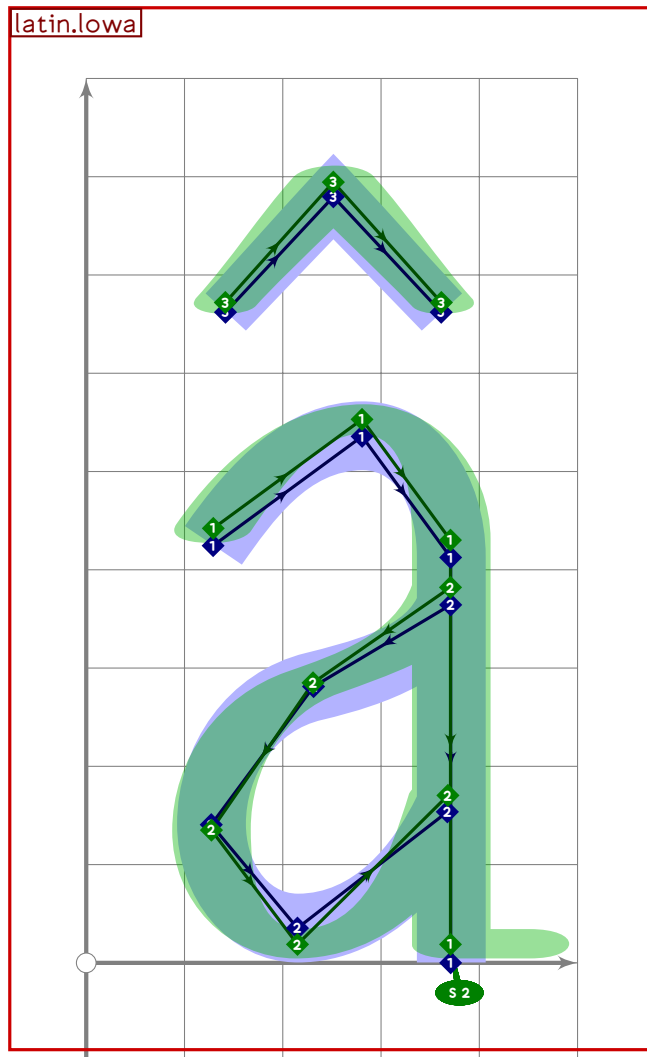
```



```

1204 % a with acute
1205 beginsuglyph("acute";225);
1206 tsu_accent.acute(tsu_curve.latin.low_a);
1207 tsu_render;
1208 endsuglyph;
1209

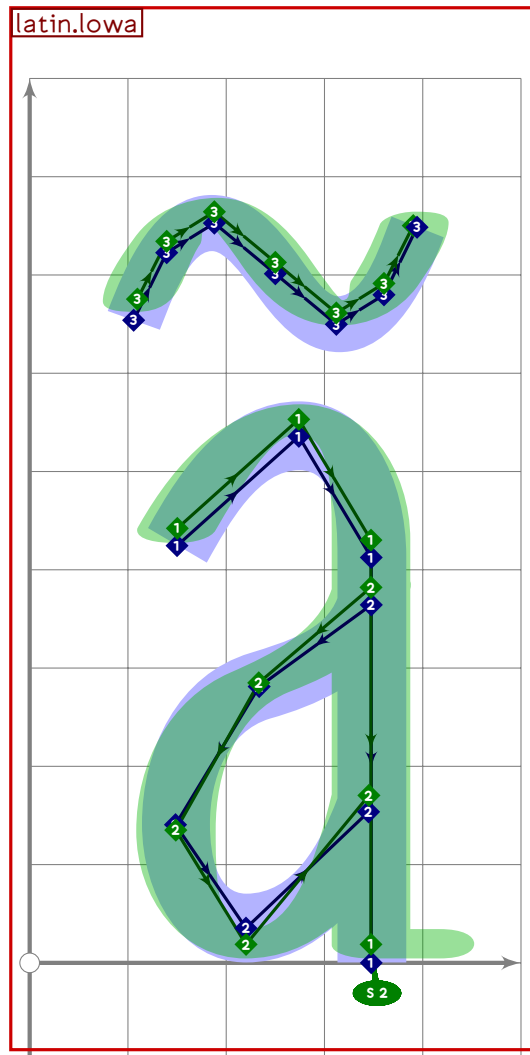
```



```

1210 % a with circumflex
1211 begintsuglyph("acircumflex";226);
1212 tsu_accent.circumflex(tsu_curve.latin.lowa);
1213 tsu_render;
1214 endsuglyph;
1215

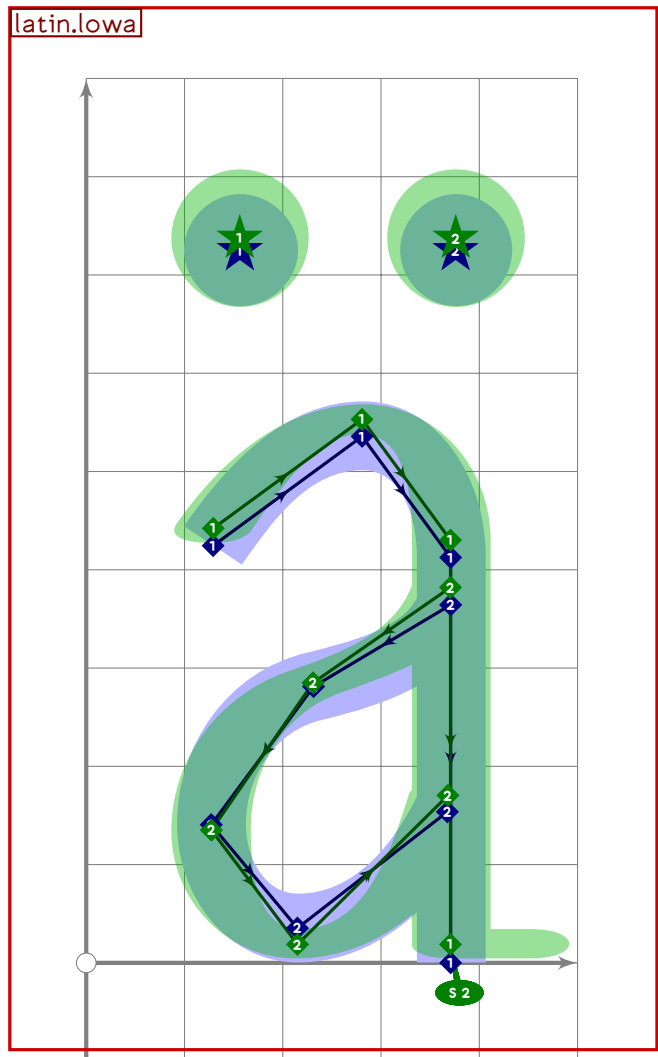
```



```

1216 % a with tilde
1217 begintsuglyph("atilde";227);
1218   tsu_accent.tilde(tsu_curve.latin. lowa);
1219   tsu_render;
1220 endsuglyph;
1221

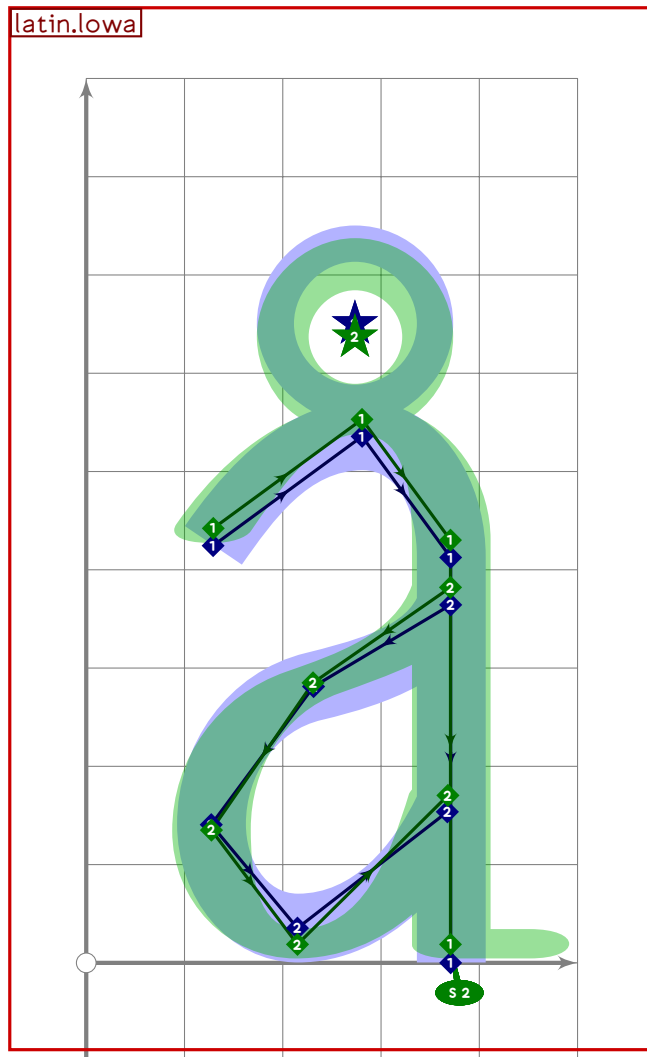
```



```

1222 % a with dieresis/umlaut
1223 beginsuglyph("adieresis";228);
1224   tsu_accent.umlaut(tsu_curve.latin.owa);
1225   tsu_render;
1226 endsuglyph;
1227

```

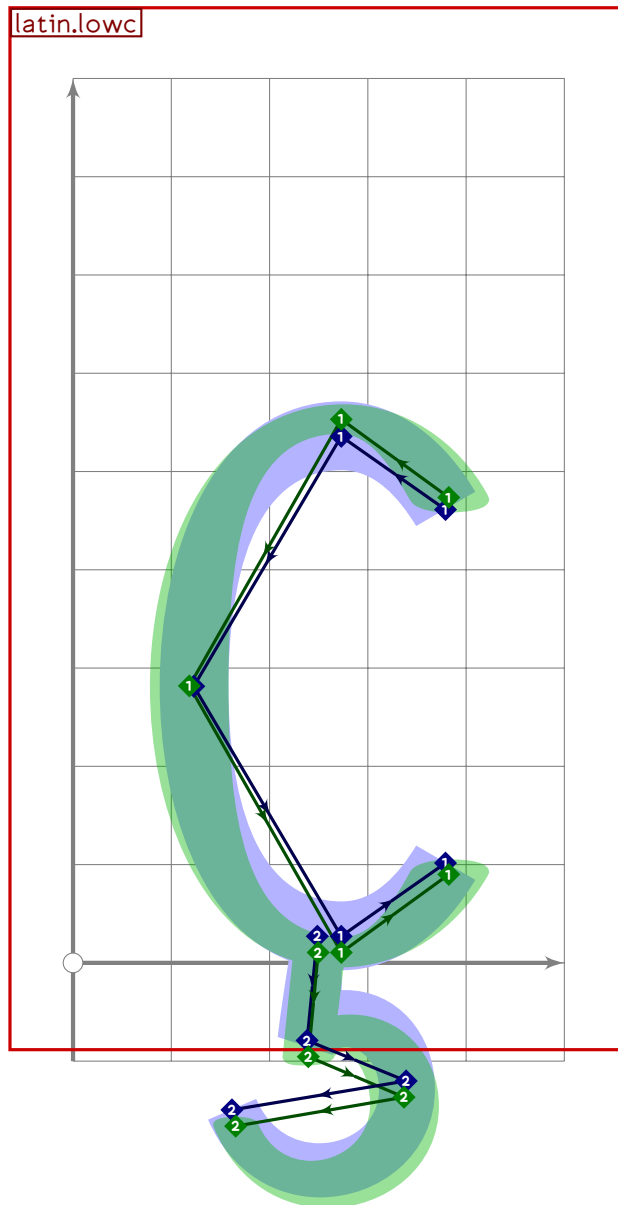


```

1228 % a with ring above
1229 beginsuglyph("aring",229);
1230 tsu_accent.ringabove(tsu_curve.latin.lowae);
1231 replace_lcblob(-1)(oldblob shifted (30;20));
1232 replace_lcblob(0)(oldblob shifted (30;20));
1233 tsu_render;
1234 endsuglyph;
1235
1236 % ae ligature
1237 beginsuglyph("ae",230);
1238 tsu_curve.latin.lowae;
1239 tsu_render;
1240 endsuglyph;
1241

```

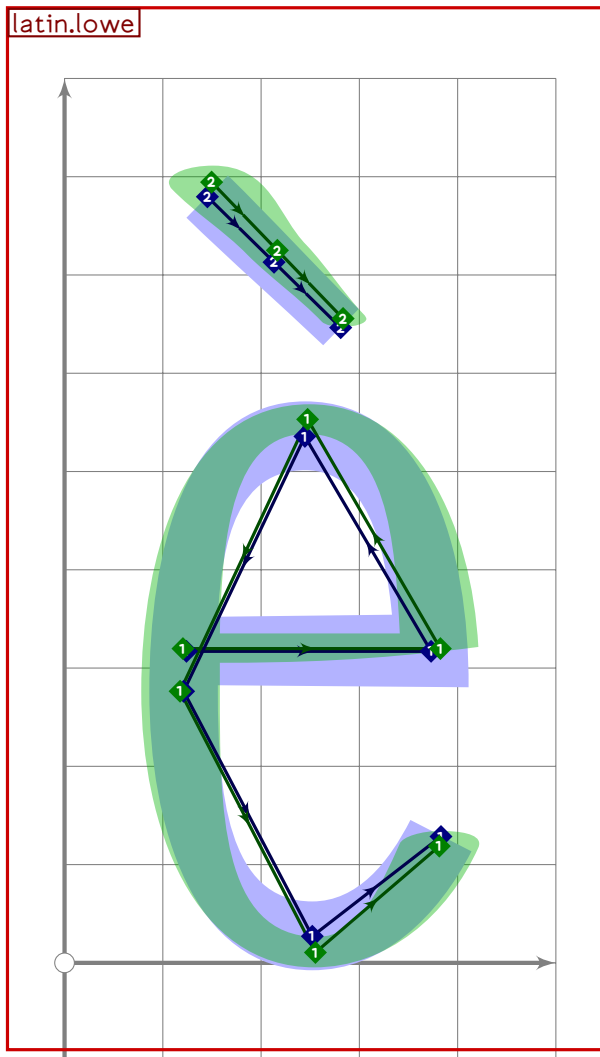
[see page 189]



```

1242 % c with cedilla
1243 begintsuglyph("ccedilla";231);
1244   tsu_accent.cedilla(tsu_curve.latin.lowc);
1245   tsu_render;
1246 endsuglyph;
1247

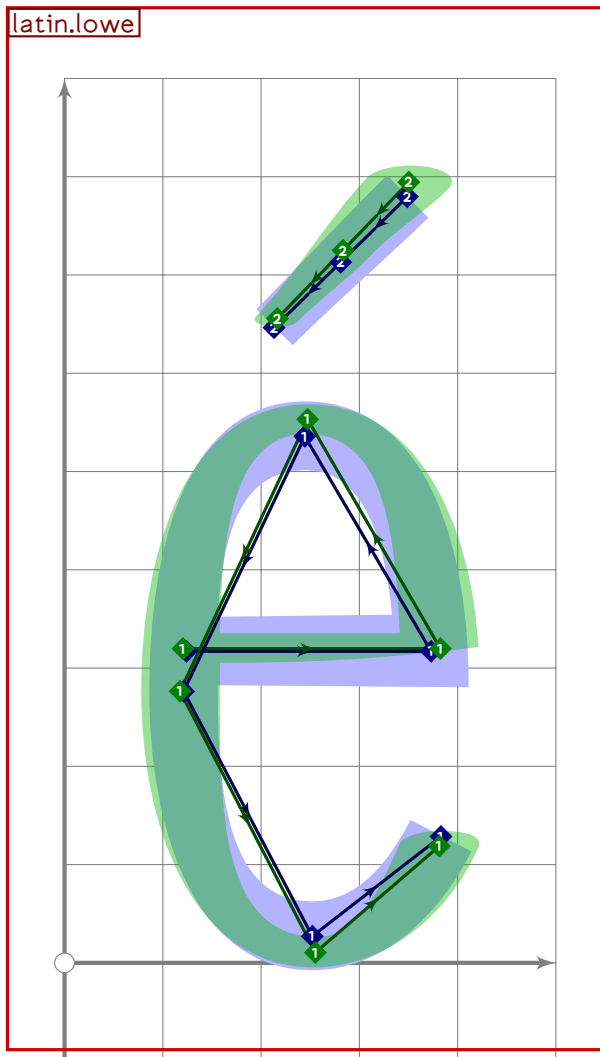
```



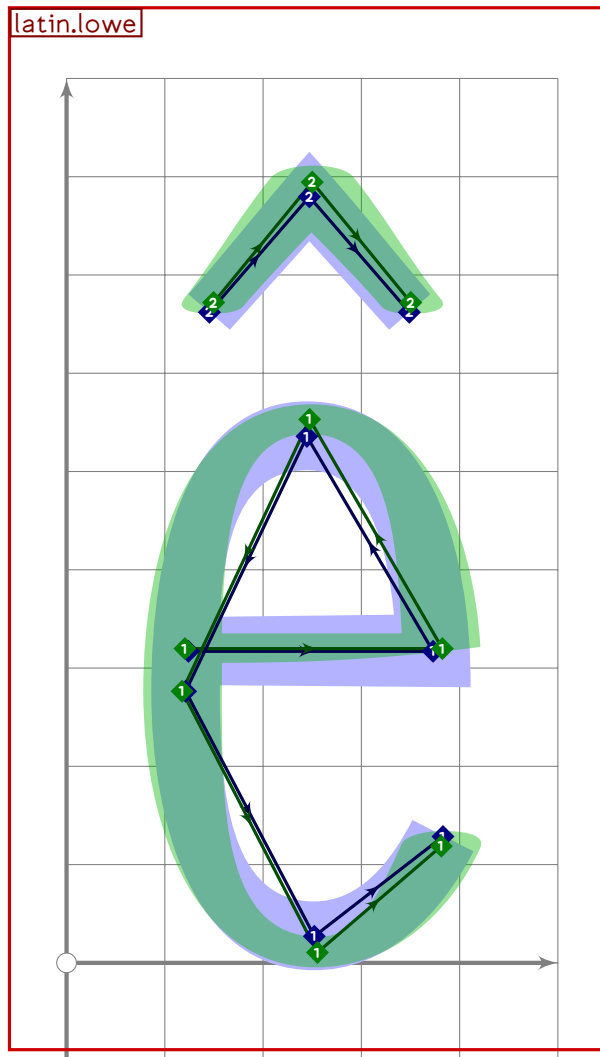
```

1248 % e with grave
1249 begintsuglyph("egrave";232);
1250   tsu_accent.grave(tsu_curve.latin.lowe);
1251   tsu_render;
1252 endsuglyph;
1253

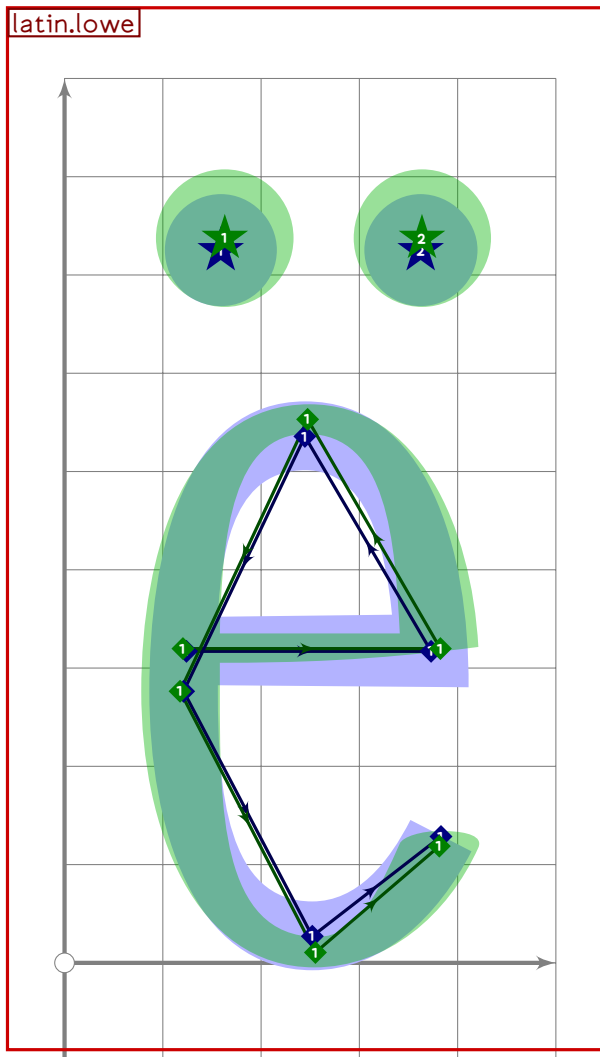
```

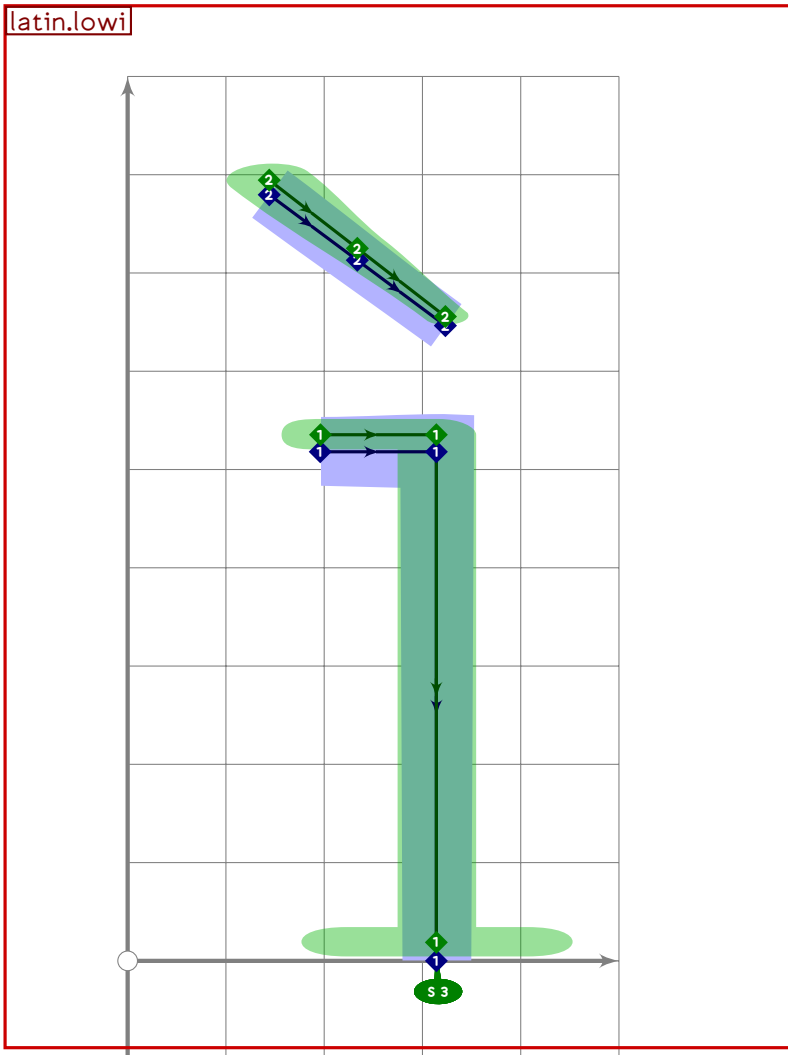
```
1254 % e with acute
1255 beginsuglyph("eacute";233);
1256   tsu_accent.acute(tsu_curve.latin.lowe);
1257   tsu_render;
1258 endsuglyph;
1259
```



```
1260 % e with circumflex
1261 begintsuglyph("ecircumflex",234);
1262 tsu_accent.circumflex(tsu_curve.latin.lowe);
1263 tsu_render;
1264 endsuglyph;
1265
```



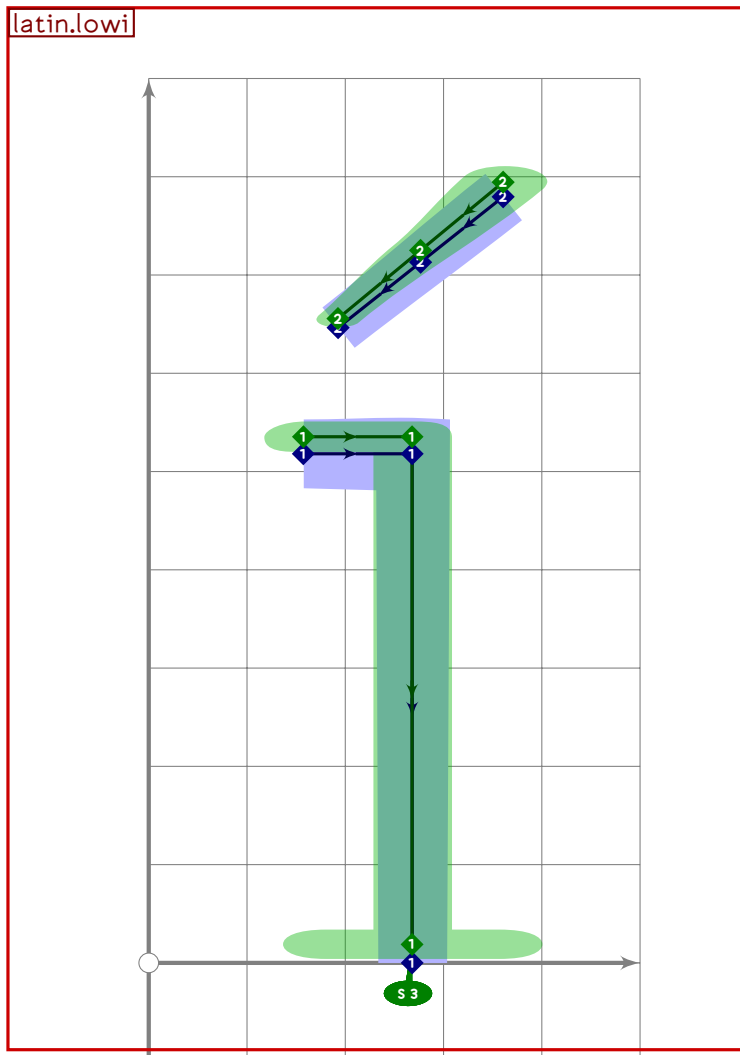
```
1266 % e with dieresis/umlaut
1267 begintsuglyph("edieresis",235);
1268   tsu_accent.umlaut(tsu_curve.latin.lowe);
1269   tsu_render;
1270 endsuglyph;
1271
```



```

1272 % i with grave
1273 begint Suglyph("igrave";236);
1274 tsu_accent.grave(
1275     tsu_curve.latin.lowi;
1276     replace_stroke(0)(oldp shifted (70*right));
1277     pop_lcblob;
1278 );
1279 tsu_render;
1280 endtsuglyph;
1281

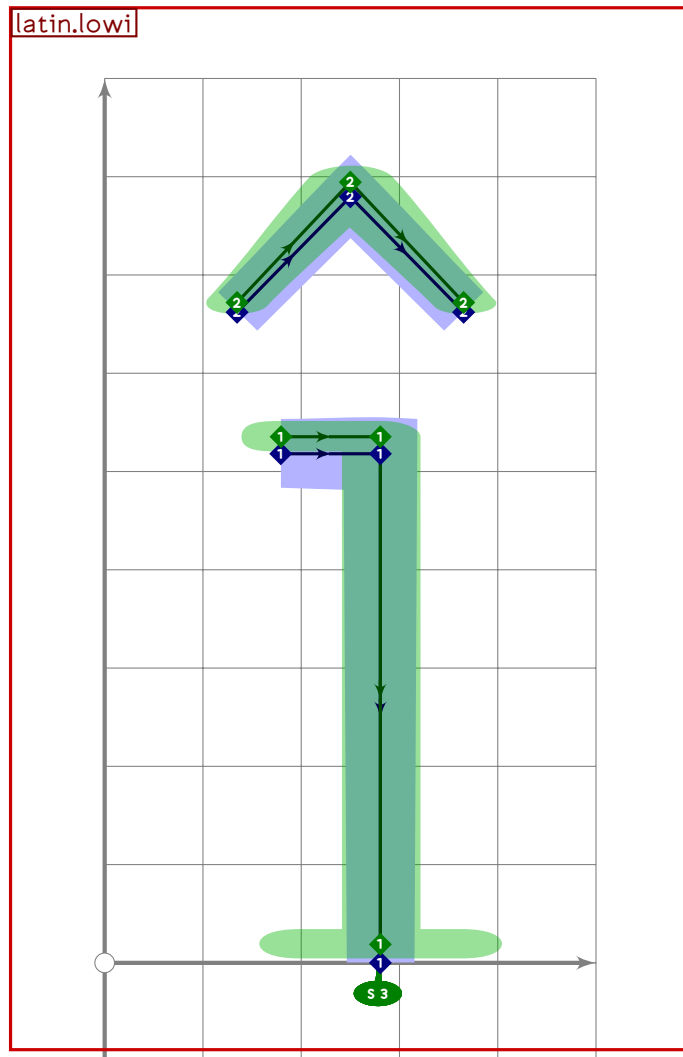
```



```

1282 % i with acute
1283 begintsuglyph("iacute";237);
1284 tsu_accent.acute(
1285     tsu_curve.latin.lowi;
1286     replace_strokep(0)(oldp shifted (70*right));
1287     pop_lcblob;
1288 );
1289 tsu_render;
1290 endtsuglyph;
1291

```

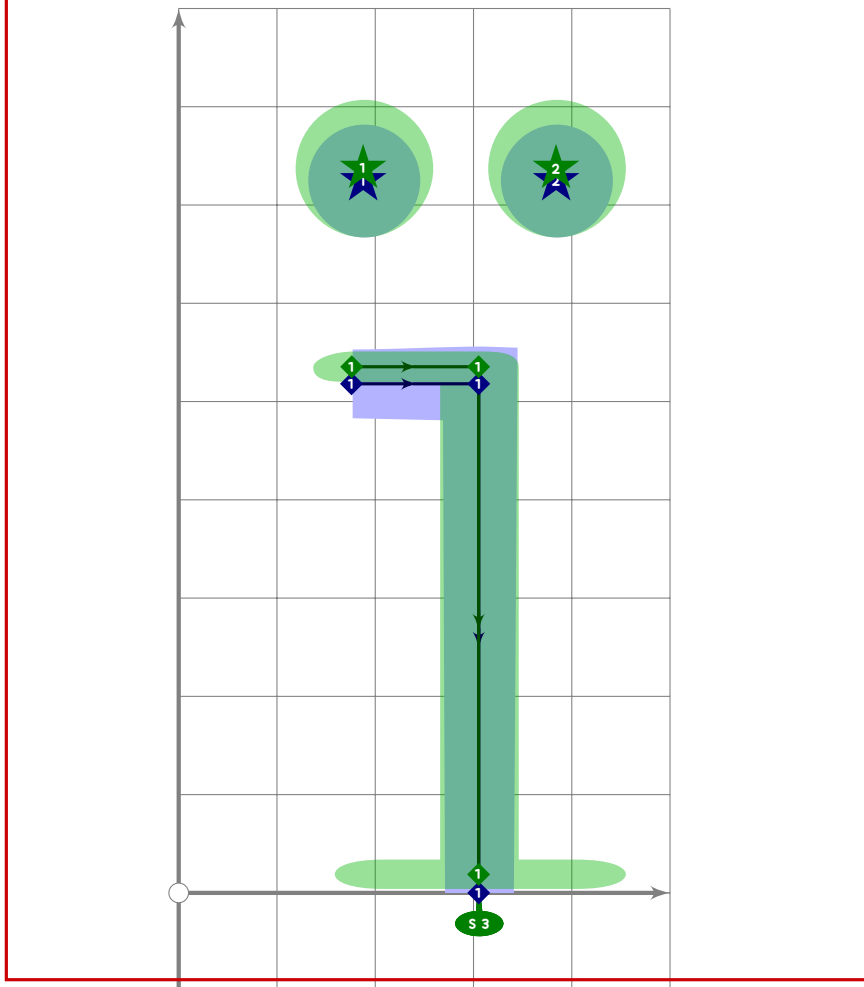


```

1292 % i with circumflex
1293 begintsuglyph("icircumflex",238);
1294   tsu_accent.circumflex(
1295     tsu_curve.latin.lowi;
1296     replace_strokep(0)(oldp shifted (70*right));
1297     pop_lcblob;
1298   );
1299   tsu_render;
1300 endtsuglyph;
1301

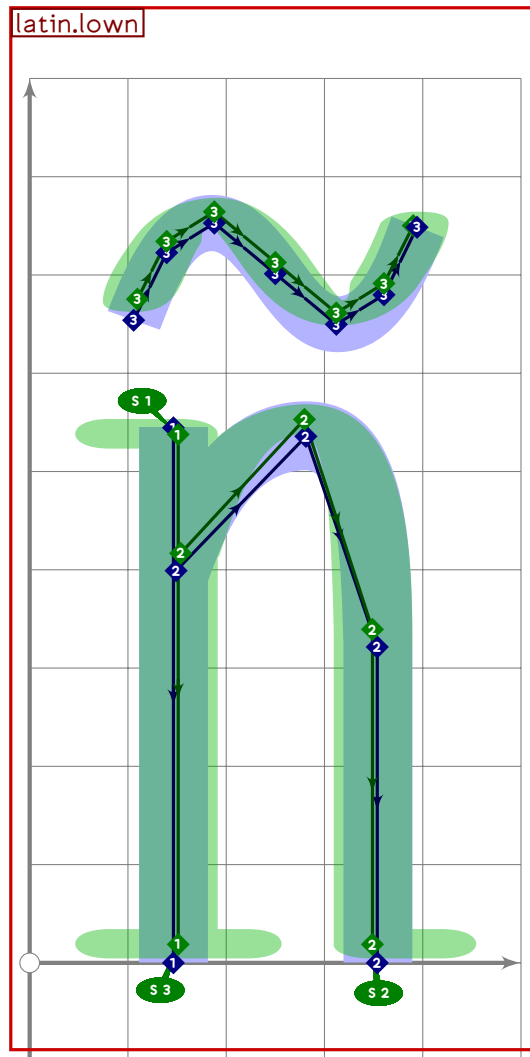
```

latin.lowi



```
1302 % i with dieresis/umlaut
1303 begintsuglyph("idieresis";239);
1304 tsu_accent.umlaut(
1305     tsu_curve.latin.lowi;
1306     replace_strokep(0)(oldp shifted (70*right));
1307     pop_lcblob;
1308 );
1309 replace_lcblob(-1)(oldblob shifted (50*right));
1310 replace_lcblob(0)(oldblob shifted (50*left));
1311 tsu_render;
1312 endsuglyph;
1313
1314 % lowercase Icelandic eth
1315 begintsuglyph("eth";240);
1316 tsu_curve.latin.loweth;
1317 tsu_render;
1318 endsuglyph;
1319
```

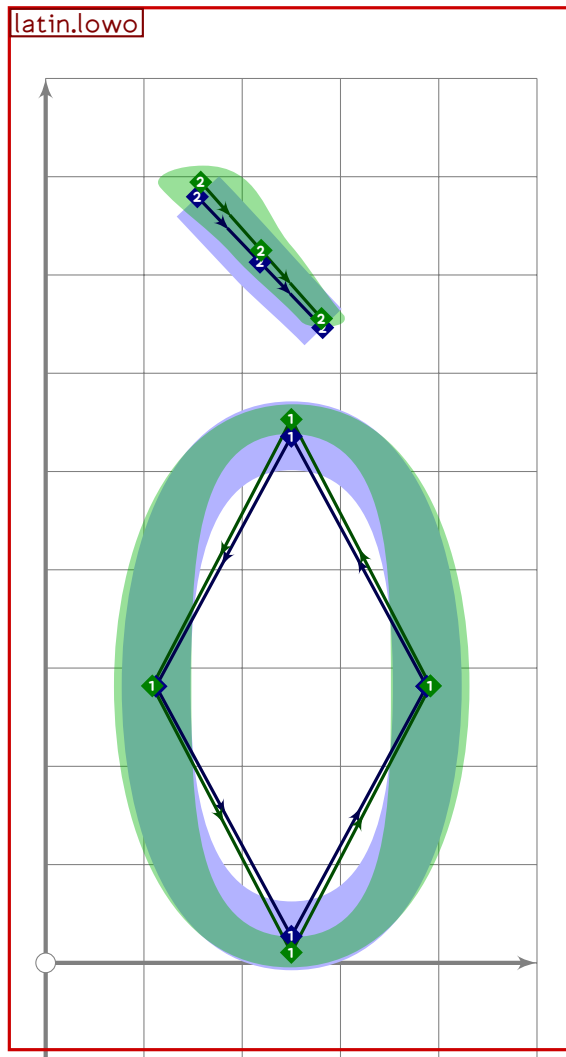
[see page 195]



```

1320 % n with tilde
1321 begintsuglyph("ntilde";241);
1322   tsu_accent.tilde(tsu_curve.latin.lown);
1323   tsu_render;
1324 endsuglyph;
1325

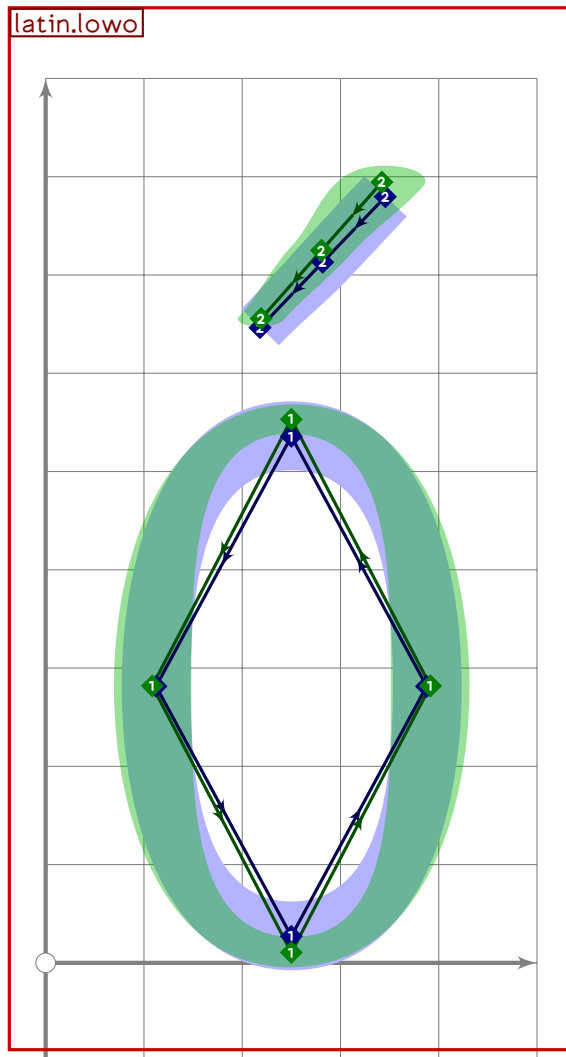
```

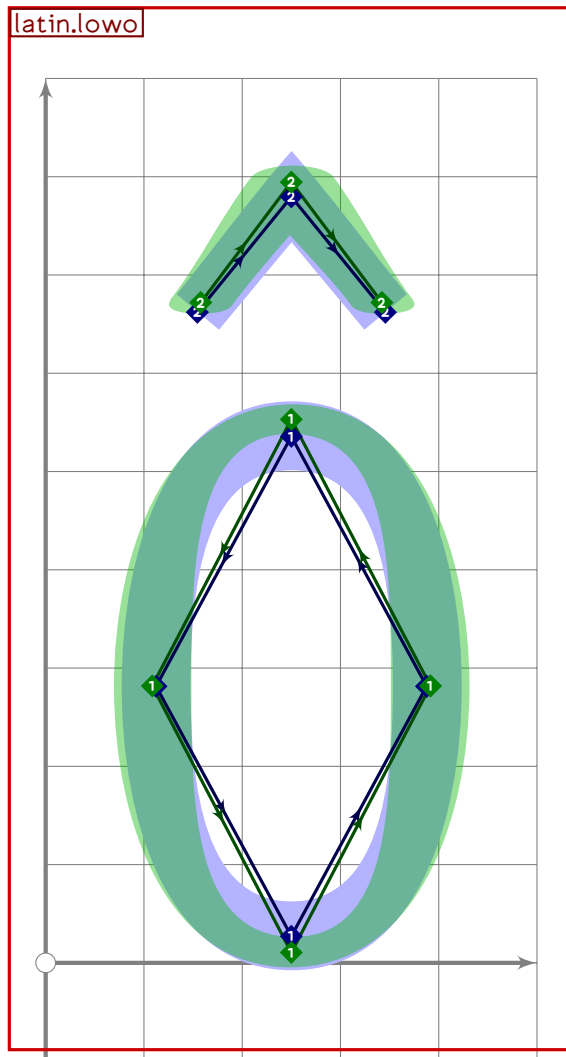
```

1326 % o with grave
1327 begintsuglyph("ograve",242);
1328   tsu_accent.grave(tsu_curve.latin.low);
1329   tsu_render;
1330 endsuglyph;
1331

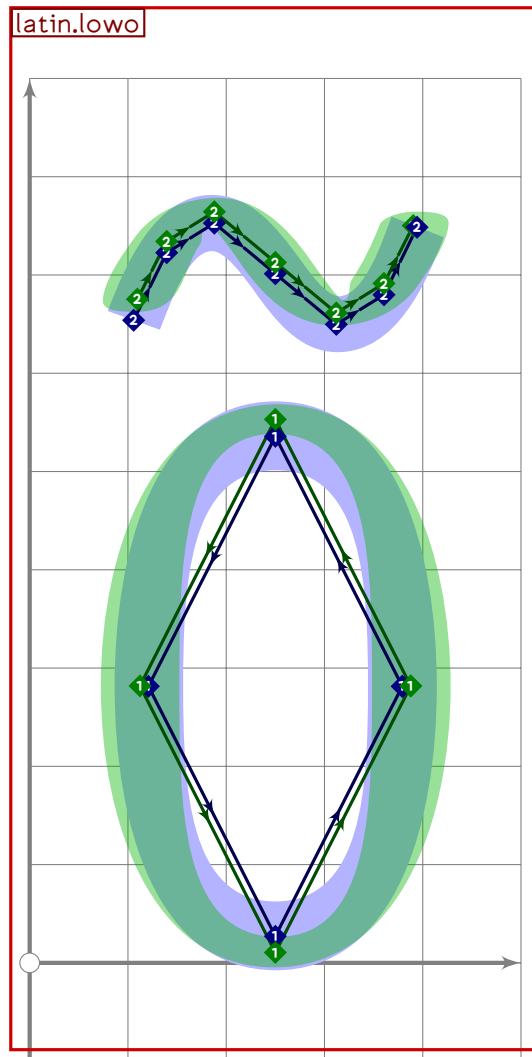
```



```
1332 % o with acute
1333 begintsuglyph("oacute";243);
1334 tsu_accent.acute(tsu_curve.latin.owo);
1335 tsu_render;
1336 endsuglyph;
1337
```



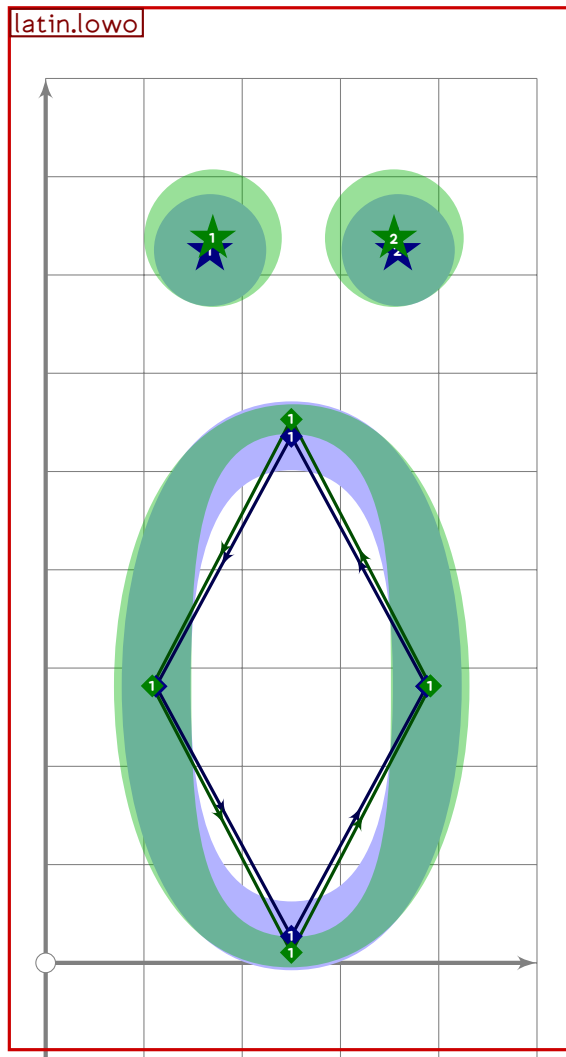
```
1338 % o with circumflex
1339 begintsuglyph("ocircumflex";244);
1340 tsu_accent.circumflex(tsu_curve.latin.owo);
1341 tsu_render;
1342 endsuglyph;
1343
```



```

1344 % o with tilde
1345 begintsuglyph("otilde";245);
1346   tsu_accent.tilde(tsu_curve.latin.owo);
1347   tsu_render;
1348 endsuglyph;
1349

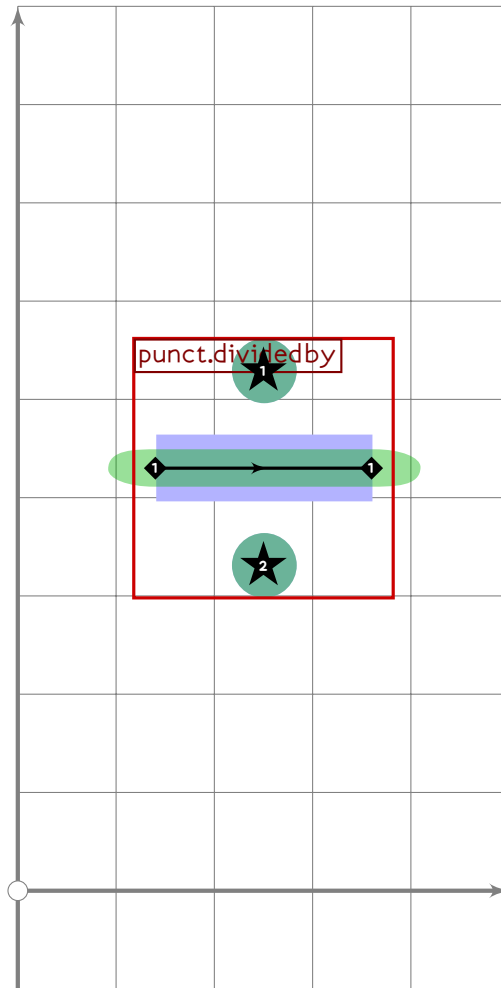
```



```

1350 % o with dieresis/umlaut
1351 beginsuglyph("odieresis";246);
1352   tsu_accent.umlaut(tsu_curve.latin.low);
1353   tsu_render;
1354 endsuglyph;
1355
1356 % division sign
1357 tsu_rescale_native_narrow;

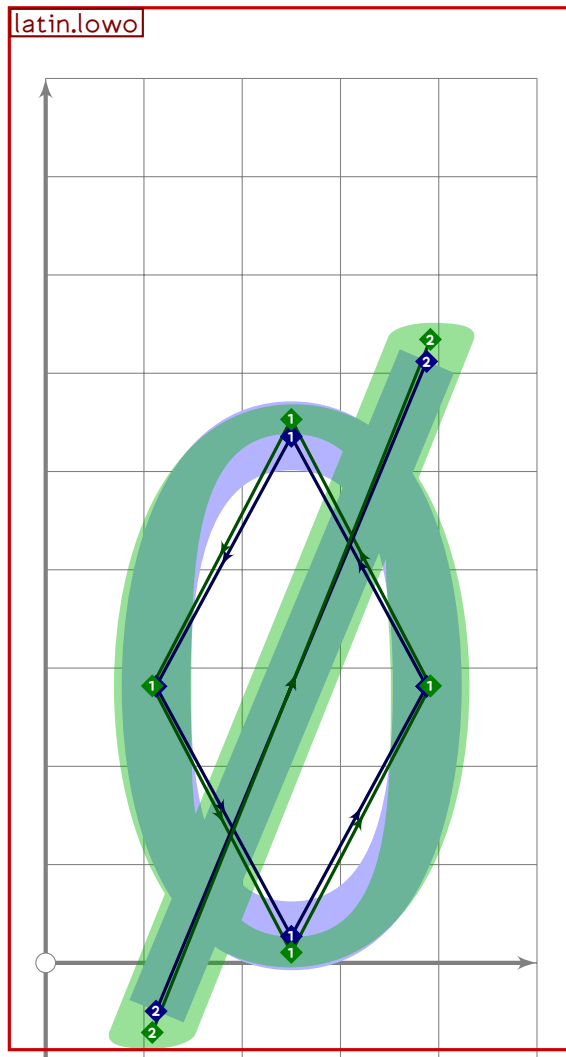
```



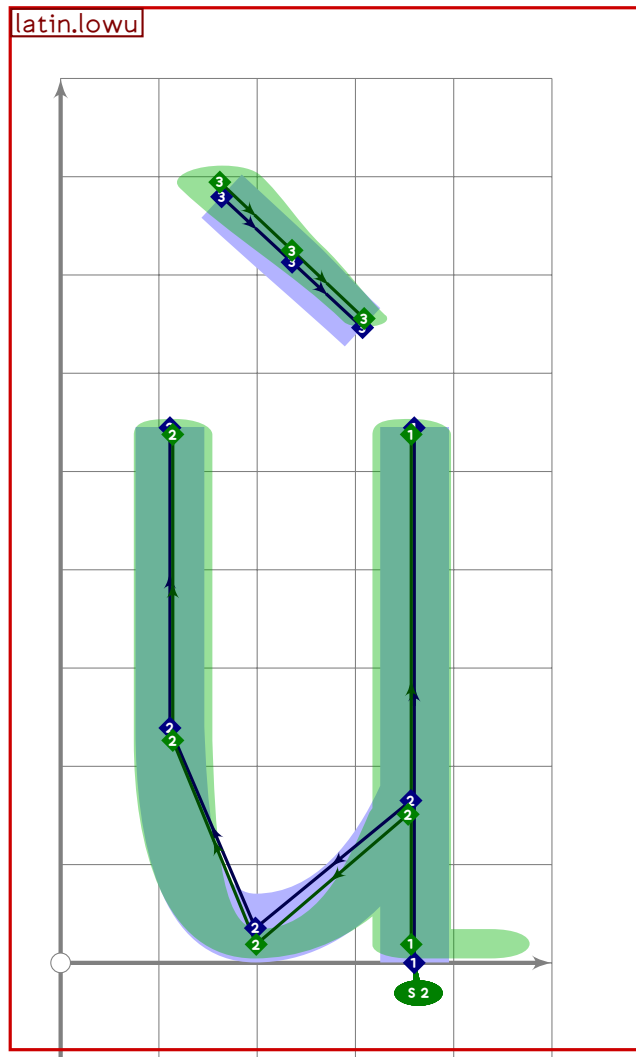
```

1358 begintsuglyph("divide",247);
1359 tsu_curve.punct.dividedby
1360 (identity scaled (1.1*tsu_punct_size) shifted (250,latin_vcentre));
1361 tsu_render;
1362 endsuglyph;
1363 tsu_rescale_half;
1364

```



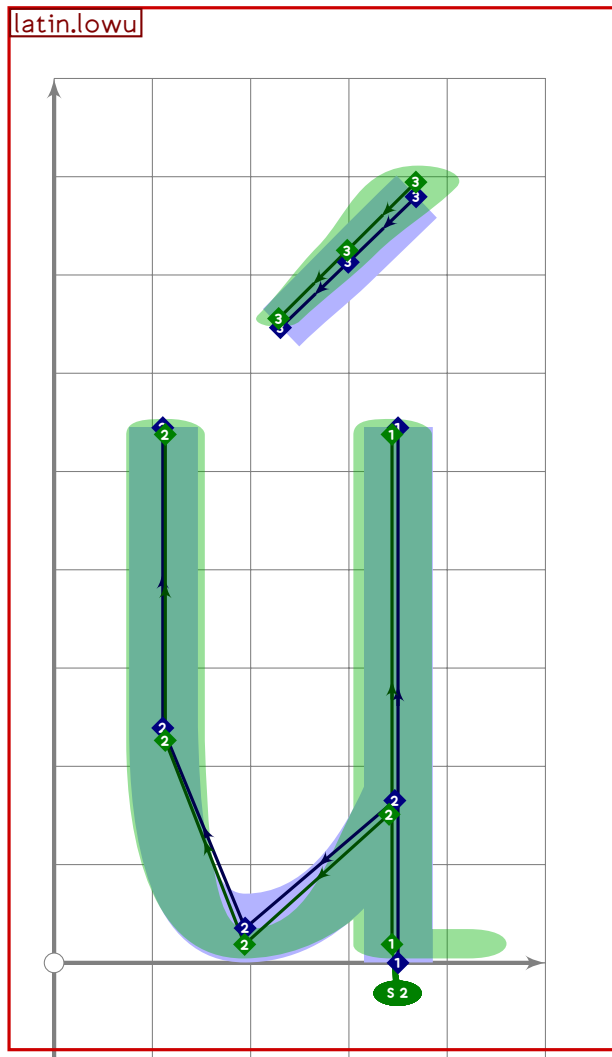
```
1365 % o with stroke
1366 beginsuglyph("oslash";248);
1367 tsu_accent.lcslash(tsu_curve.latin.low);
1368 tsu_render;
1369 endsuglyph;
1370
```



```

1371 % u with grave
1372 begintsuglyph("ugrave",249);
1373   tsu_accent.grave(tsu_curve.latin.lowu);
1374   tsu_render;
1375 endsuglyph;
1376

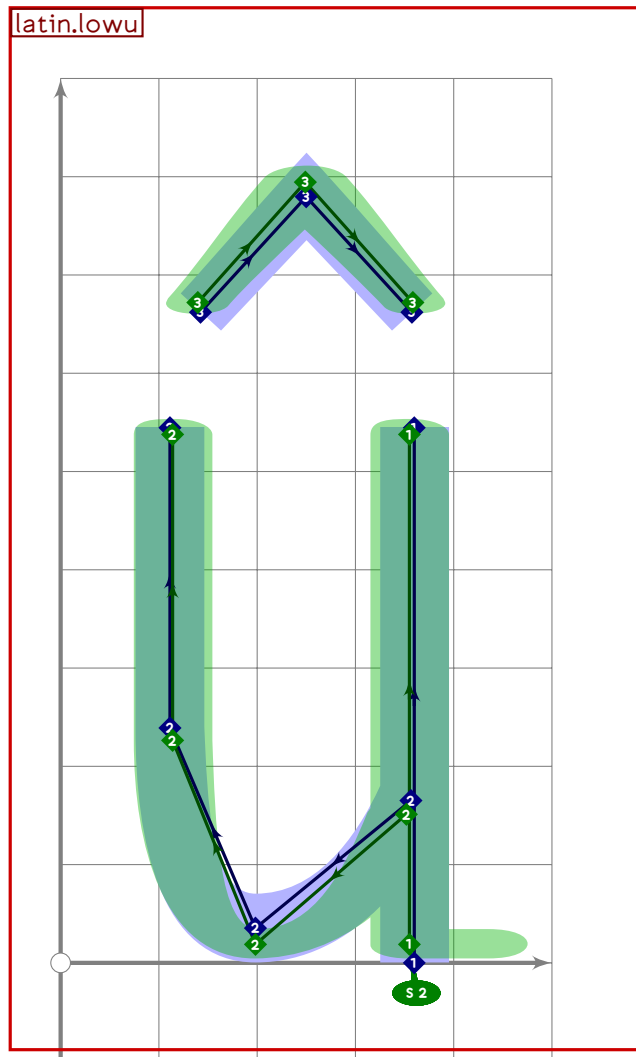
```

```

1377 % u with acute
1378 begintsuglyph("uacute";250);
1379 tsu_accent.acute(tsu_curve.latin.lowu);
1380 tsu_render;
1381 endsuglyph;
1382

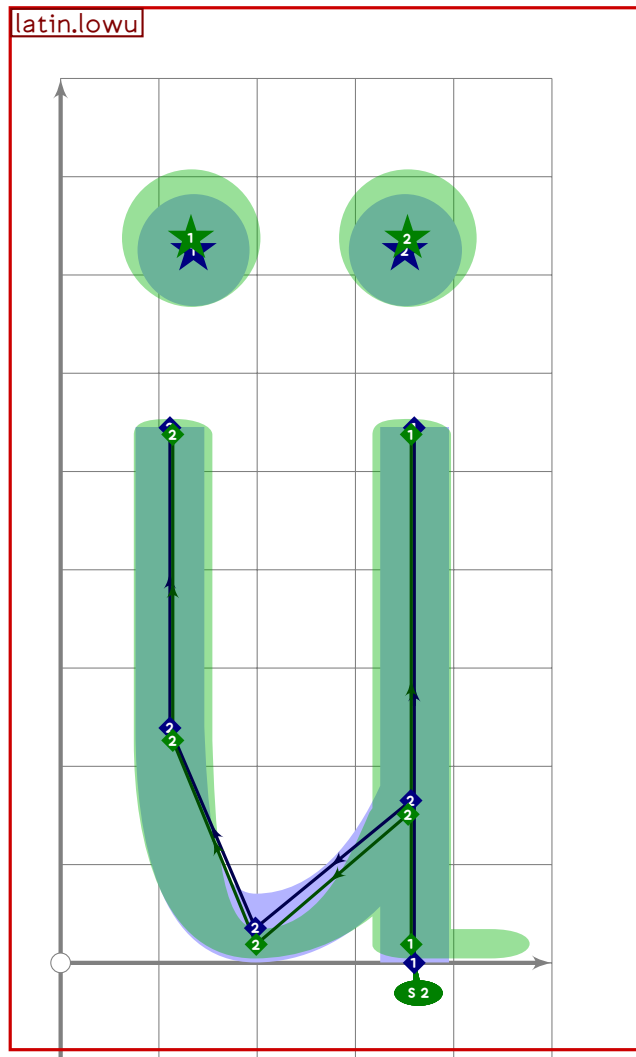
```



```

1383 % u with circumflex
1384 begintsuglyph("ucircumflex",251);
1385 tsu_accent.circumflex(tsu_curve.latin.lowu);
1386 replace_strokep(0)(oldp shifted (-30,0));
1387 tsu_render;
1388 endsuglyph;
1389

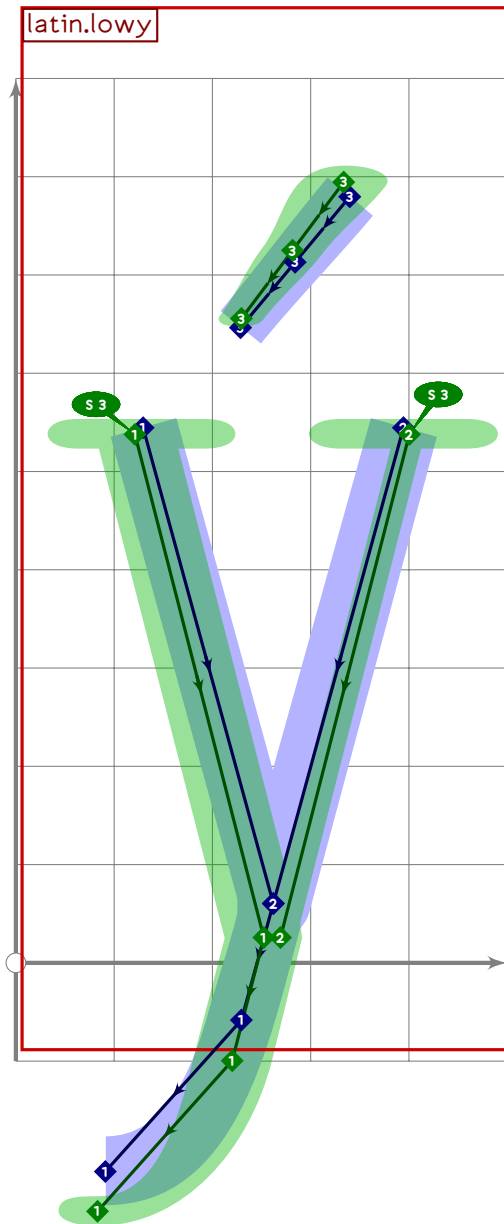
```



```

1390 % u with dieresis/umlaut
1391 begint Suglyph("udieresis";252);
1392 tsu_accent.umlaut(tsu_curve.latin.lowu);
1393 replace_lcblob(-1)(oldblob shifted (-60,0));
1394 replace_lcblob(0)(oldblob shifted (-60,0));
1395 tsu_render;
1396 endtsuglyph;
1397

```

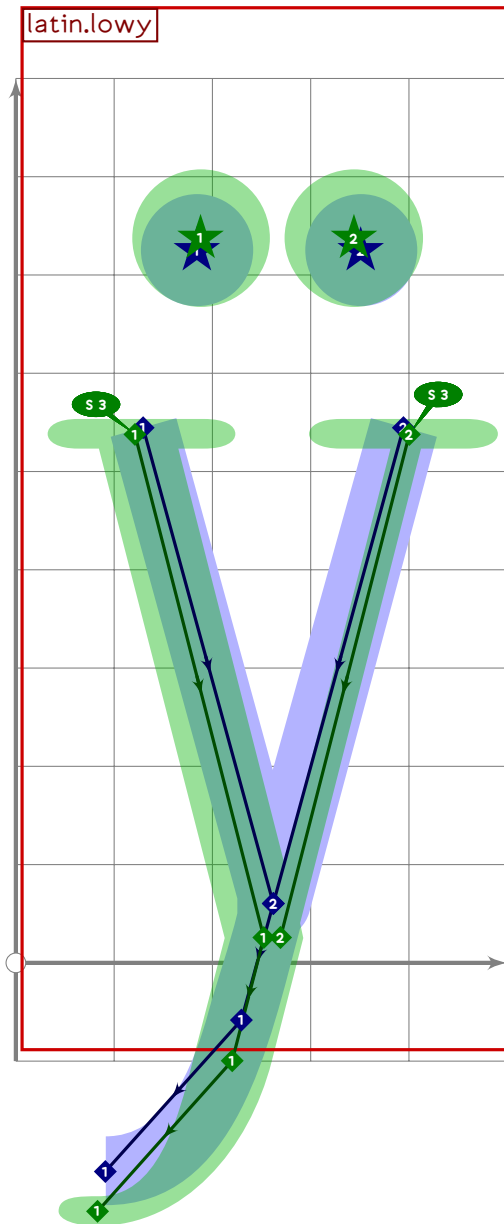


```

1398 % y with acute
1399 begintsuglyph("yacute";253);
1400 tsu_accent.acute(tsu_curve.latin.lowy);
1401 tsu_render;
1402 endsuglyph;
1403
1404 % thorn
1405 begintsuglyph("thorn";254);
1406 tsu_curve.latin.lowthorn;
1407 tsu_render;
1408 endsuglyph;
1409

```

[see page 220]



```

1410 % y with dieresis/umlaut
1411 begintsuglyph("ydieresis";255);
1412 tsu_accent.umlaut(tsu_curve.latin.lowy);
1413 tsu_render;
1414 endtsuglyph;
1415
1416 _____
1417
1418 endfont;
1419
1420 _____

```

tsuku-01.mp

```
1 %
2 % Unicode page 01 (Latin Extended A) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---

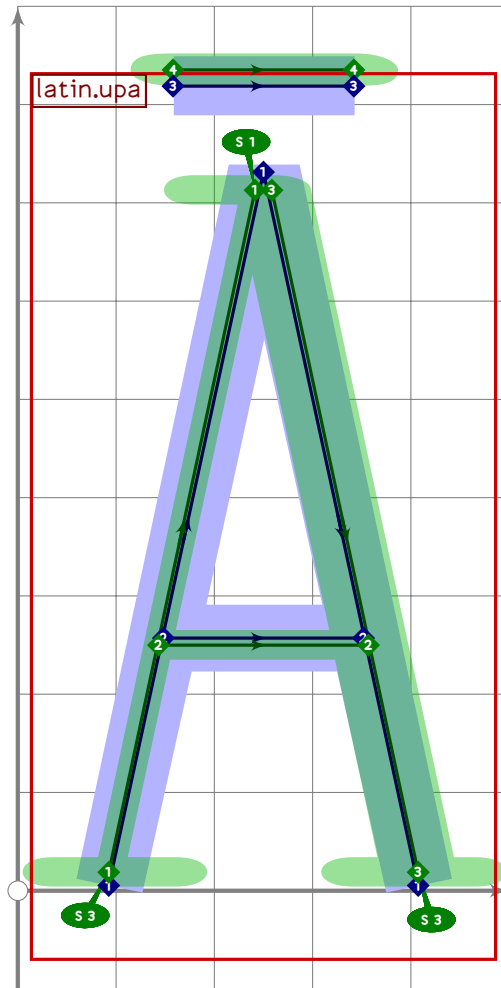

32
33 beginfont
34
35 input latin-intro.mp;
36
37 % AUTODEPS
38 input accent.mp;
39 input latin.mp;
40 input ogonek.mp;
41 input punct.mp;
42
43 

---


44
```

Latin Extended A

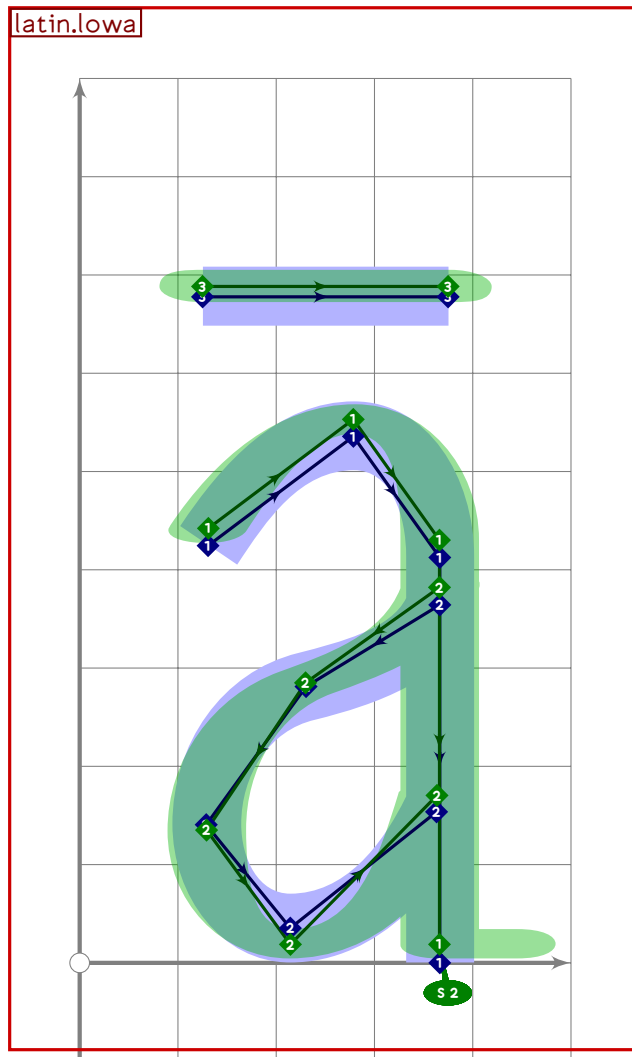
```
45 % LATIN EXTENDED A
46
47 tsu_rescale_half;
48
```



```

49 % A with macron
50 begint Suglyph("A macron",0);
51   tsu_accent.capital(macron)(tsu_curve.latin.upa);
52   tsu_render;
53 endsuglyph;
54

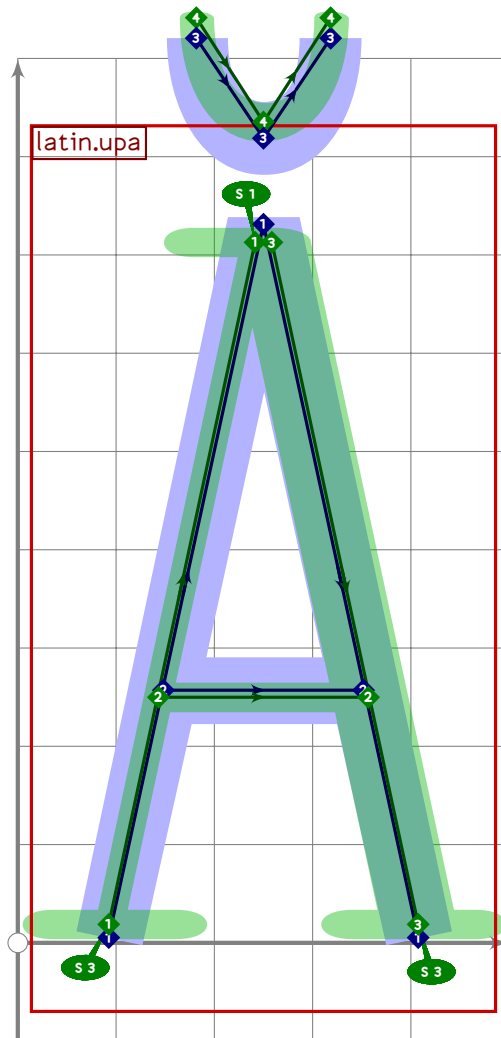
```



```

55 % a with macron
56 begintsuglyph("amacron";1);
57   tsu_accent.macron(tsu_curve.latin.lowa);
58   tsu_render;
59 endsuglyph;
60

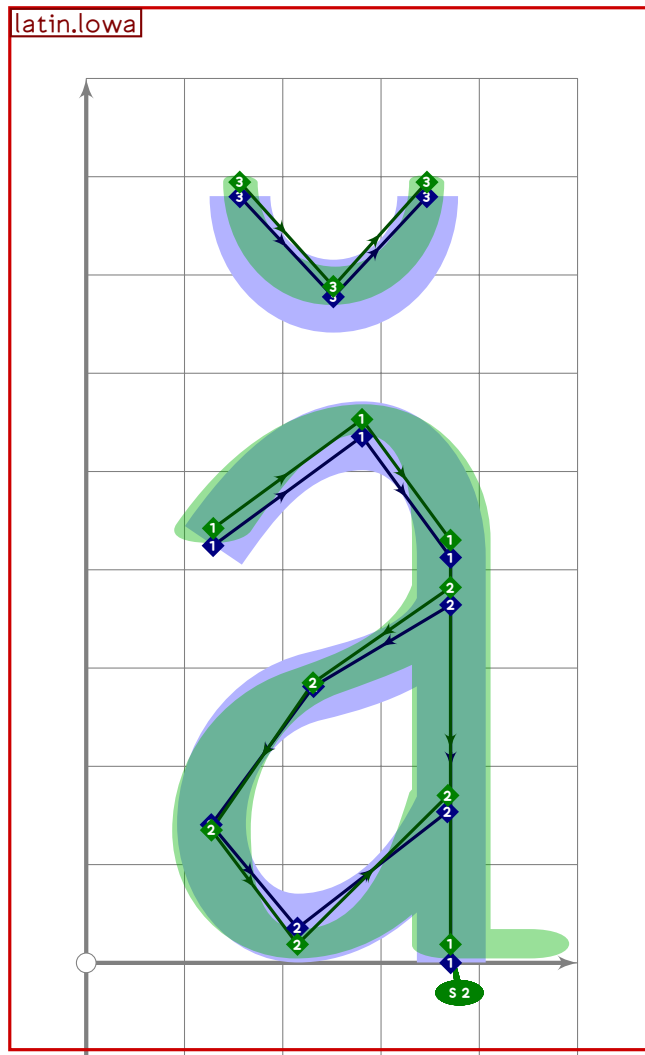
```

```

61 % A with breve
62 begint Suglyph("Abreve";2);
63 tsu_accent.capital(breve)(tsu_curve.latin.upa);
64 tsu_render;
65 endsuglyph;
66

```



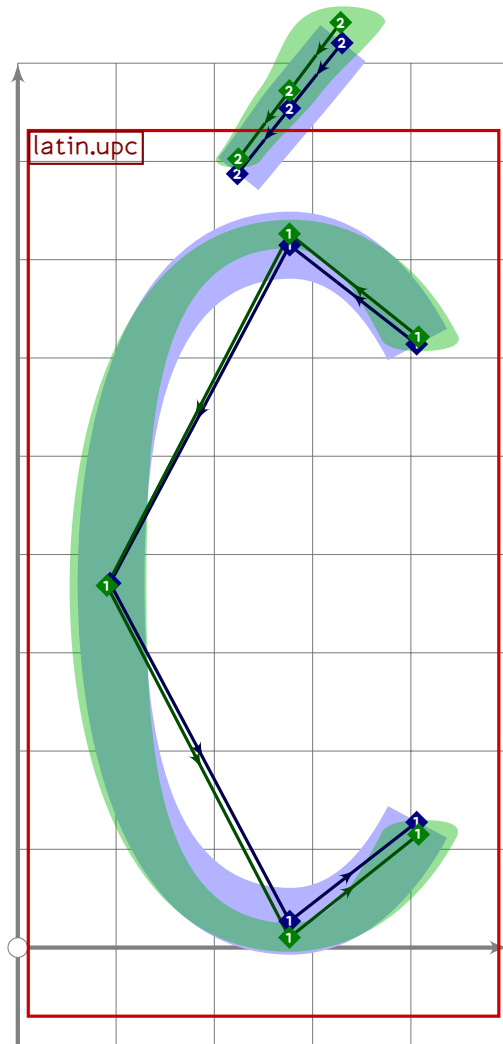
```

67 % a with breve
68 begintsuglyph("abreve",3);
69 tsu_accent.breve(tsu_curve.latin.low);
70 tsu_render;
71 endsuglyph;
72
73 % A with ogonek
74 begintsuglyph("Aogonek",4);
75 tsu_curve.latin.upaogonek;
76 tsu_render;
77 endsuglyph;
78
79 % a with ogonek
80 begintsuglyph("aogonek",5);
81 tsu_curve.latin.lowaogonek;
82 tsu_render;
83 endsuglyph;
84

```

[see page 245]

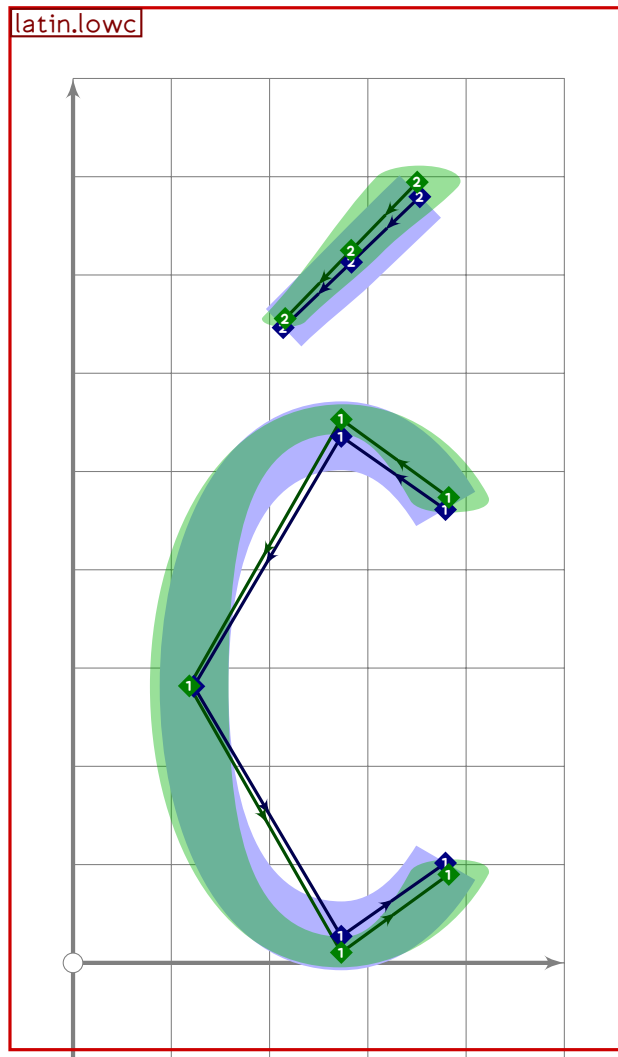
[see page 251]



```

85 % C with acute
86 begint Suglyph("Cacute",6);
87   tsu_accent.capital(acute)(tsu_curve.latin.upc);
88   tsu_render;
89 endsuglyph;
90

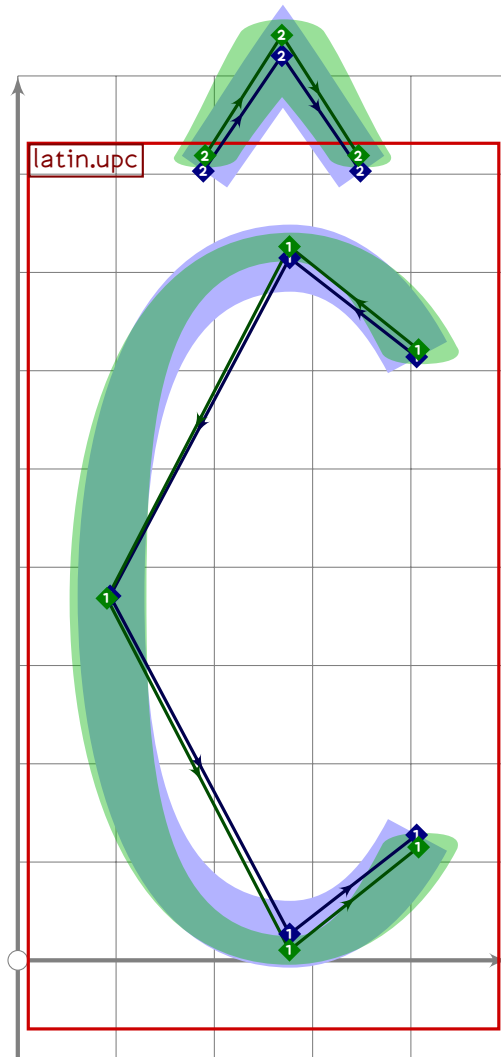
```



```

91 % c with acute
92 begintsuglyph("cacute";7);
93   tsu_accent.acute(tsu_curve.latin.lowc);
94   tsu_render;
95 endsuglyph;
96

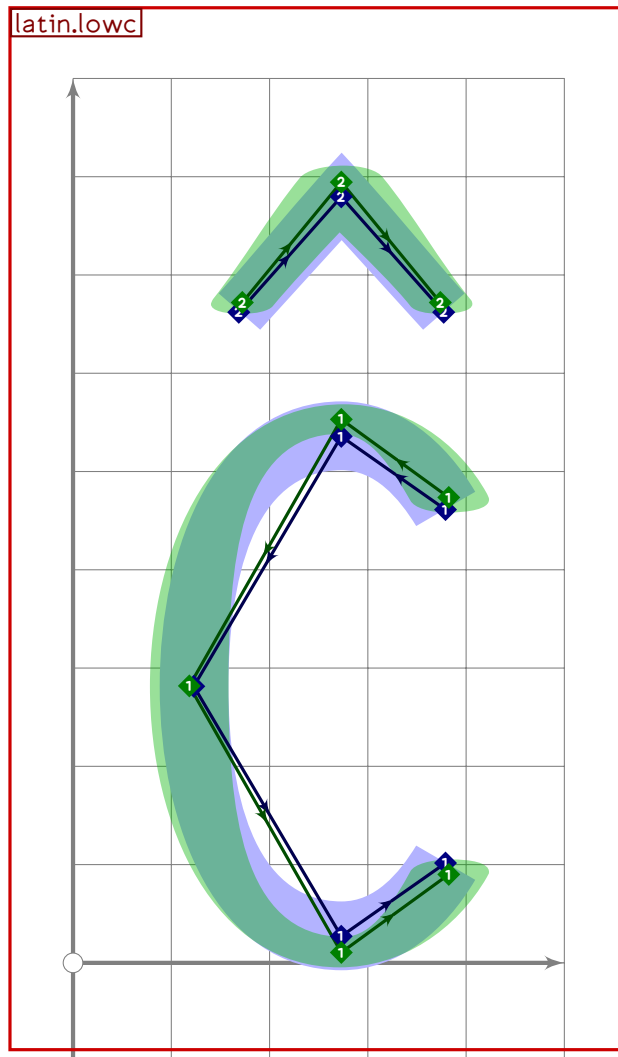
```



```

97 % C with circumflex
98 begintsuglyph("Ccircumflex";8);
99 tsu_accent.capital(circumflex)(tsu_curve.latin.upc);
100 replace_strokep(0)(oldp shifted (35,0));
101 tsu_render;
102 endsuglyph;
103

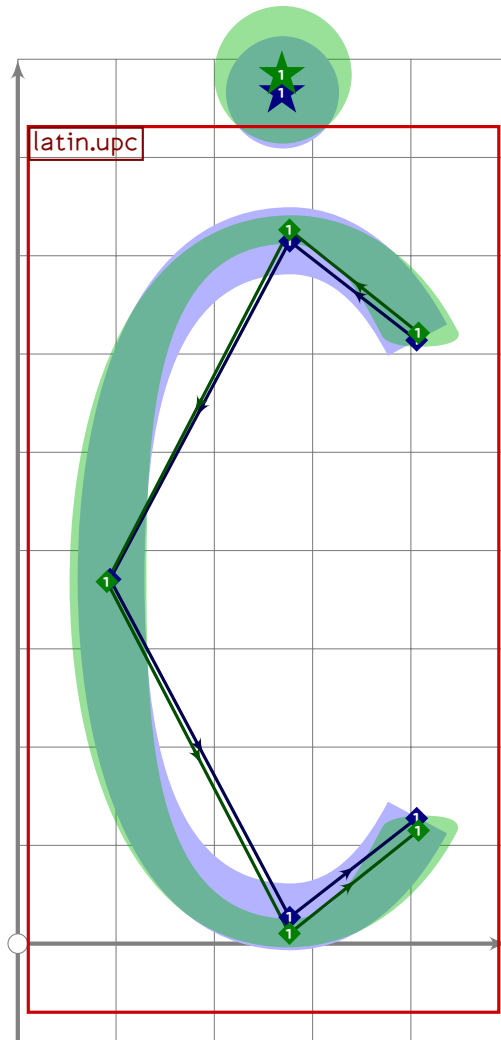
```



```

104 % c with circumflex
105 begintsuglyph("ccircumflex";9);
106 tsu_accent.circumflex(tsu_curve.latin.lowc);
107 replace_strokep(0)(oldp shifted (35,0));
108 tsu_render;
109 endtsuglyph;
110

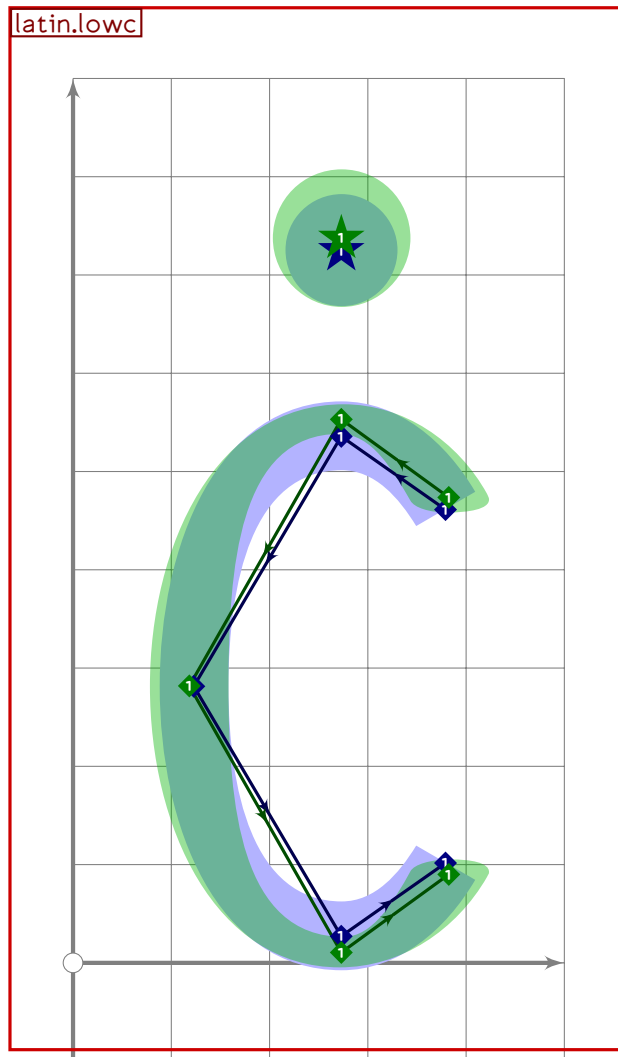
```



```

111 % C with dot above
112 begint Suglyph("Cdotaccent";10);
113   tsu_accent.capital(dotabove)(tsu_curve.latin.upc);
114   replace_lcblob(0)(oldblob shifted (35,0));
115   tsu_render;
116 endsuglyph;
117

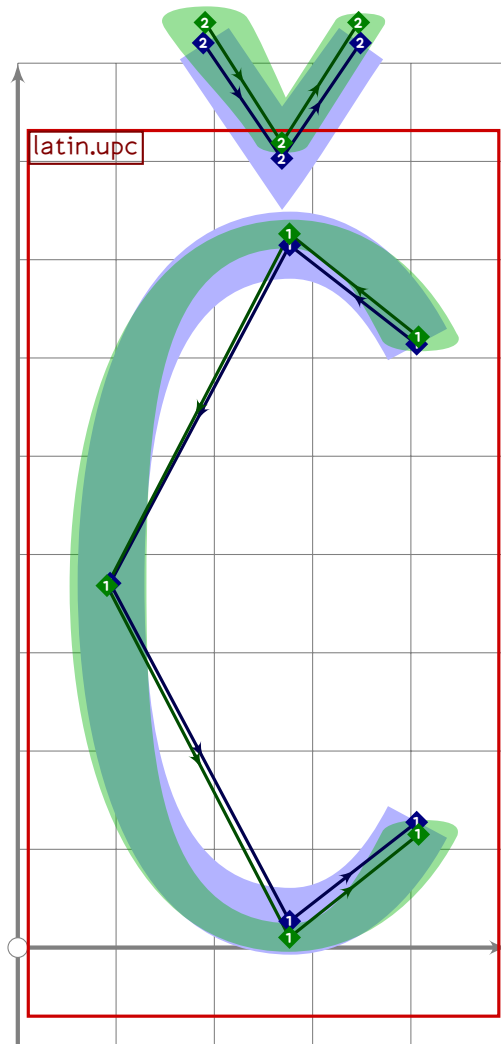
```



```

118 % c with dot above
119 beginsuglyph("cdotaccent";11);
120 tsu_accent.dotabove(tsu_curve.latin.lowc);
121 replace_lcblob(0)(oldblob shifted (35,0));
122 tsu_render;
123 endsuglyph;
124

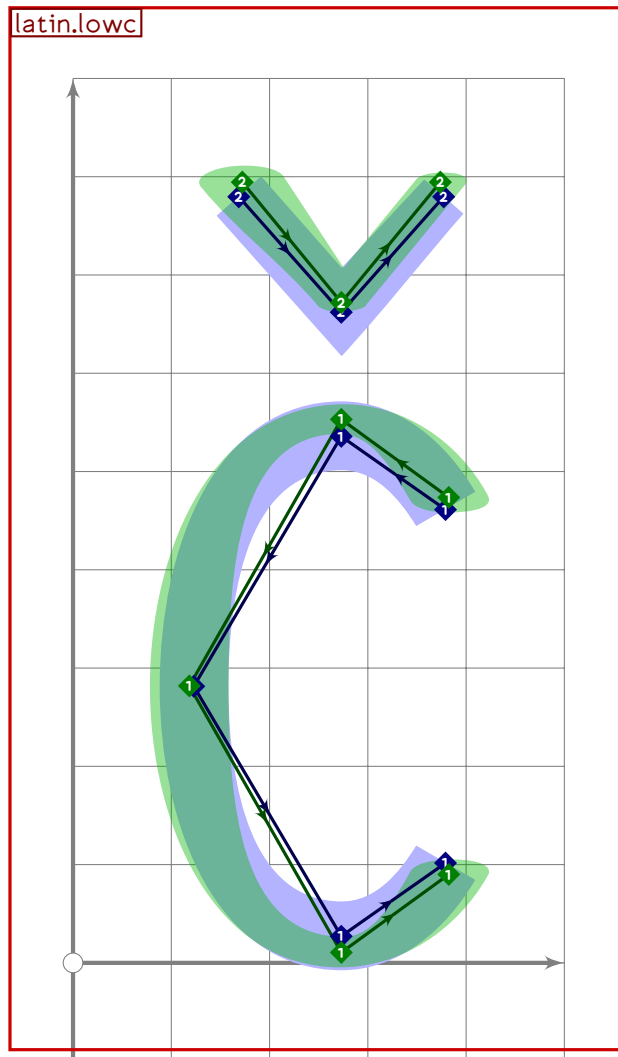
```

```

125 % C with caron
126 begint Suglyph("Ccaron";12);
127   tsu_accent.capital(caron)(tsu_curve.latin.upc);
128   replace_strokep(0)(oldp shifted (35,0));
129   tsu_render;
130 endsuglyph;
131

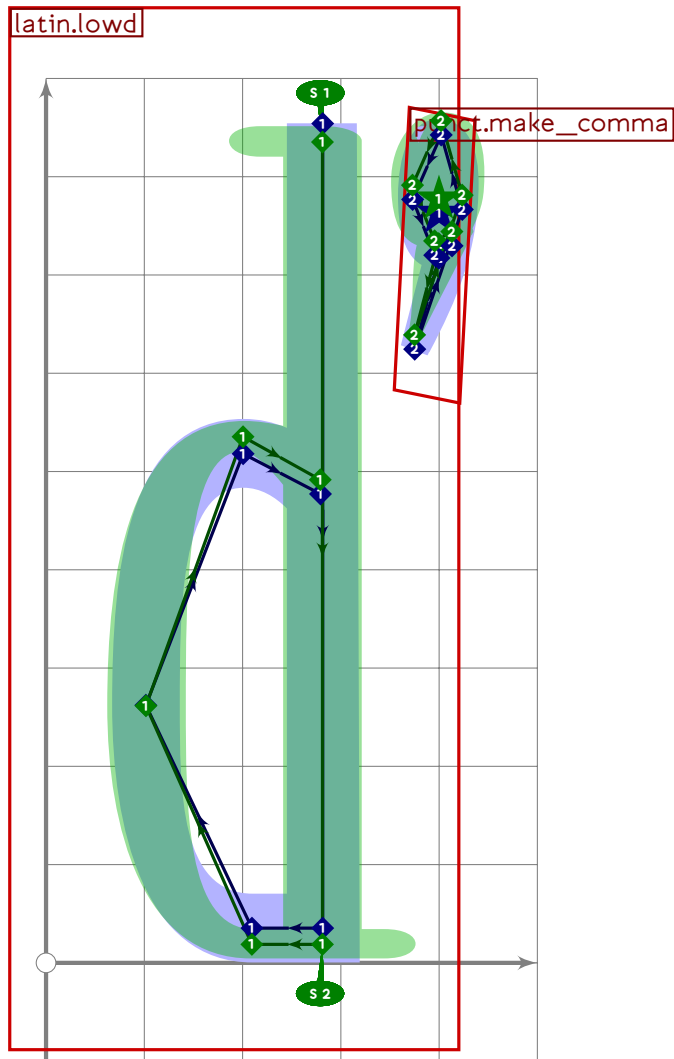
```



```

132 % c with caron
133 begintsuglyph("ccaron",13);
134 tsu_accent.caron(tsu_curve.latin.lowc);
135 replace_strokep(0)(oldp shifted (35,0));
136 tsu_render;
137 endtsuglyph;
138

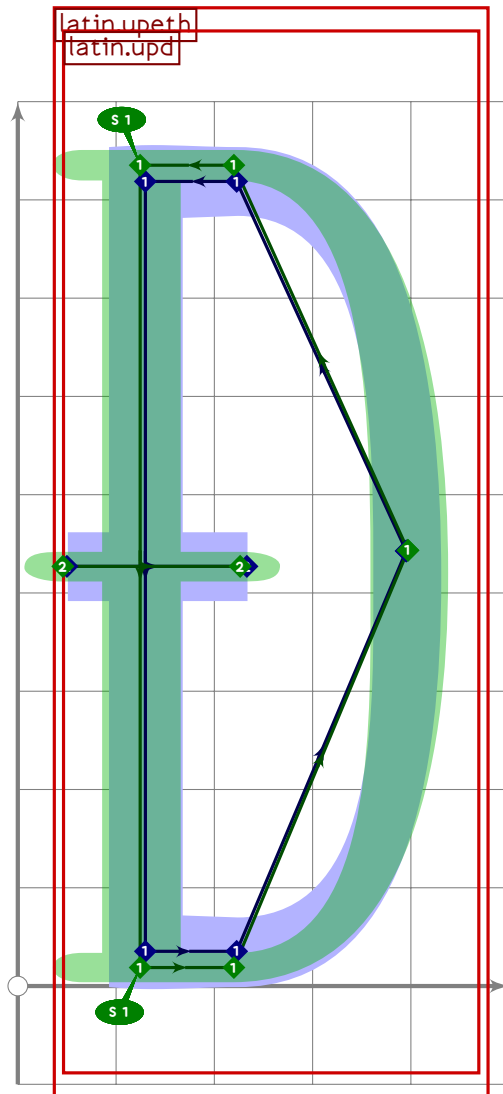
```

```

146 % d with caron apostrophe
147 begintsuglyph("dcaron",15);
148 tsu_accent.caron_apostrophe(0)(tsu_curve.latin.lowd);
149 tsu_render;
150 endsuglyph;
151

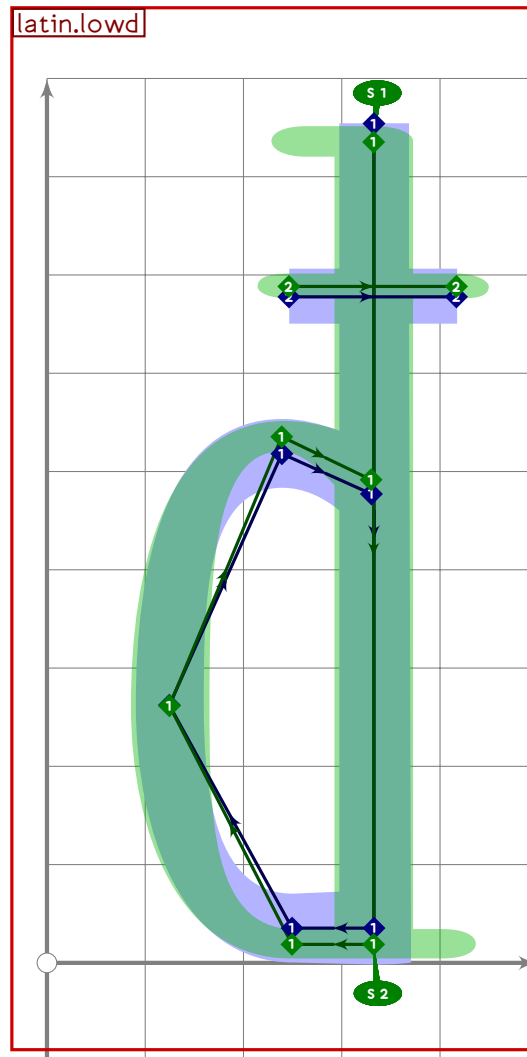
```



```

152 % D with stroke - same as capital Eth
153 beginsuglyph("Dcroat",16);
154   tsu_curve.latin.upeth;
155   tsu_render;
156 endsuglyph;
157

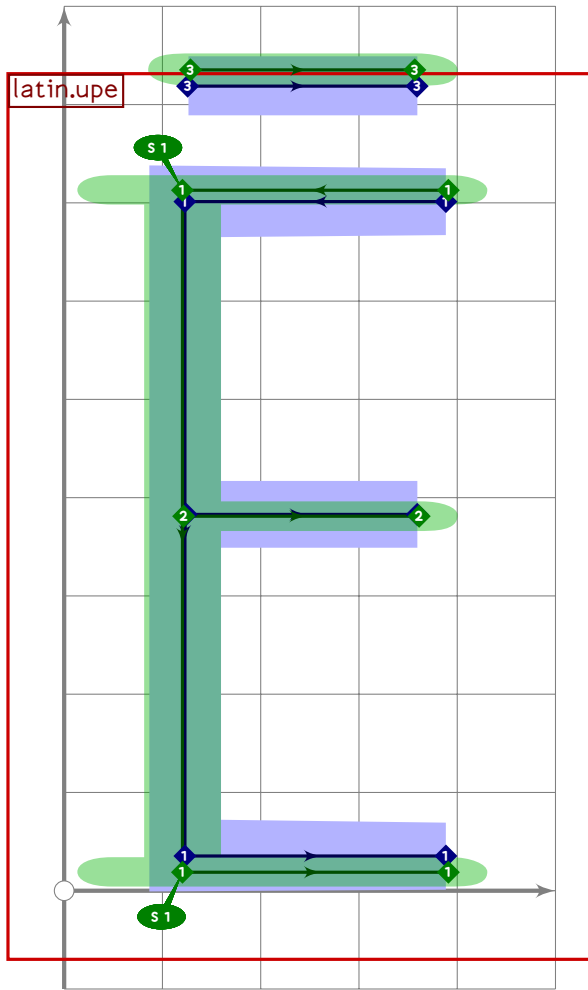
```



```

158 % d with bar
159 beginsuglyph("dcroat",17);
160 tsu_curve.latin.lowd;
161 push_stroke((530,vmetric(0.82))-(820,vmetric(0.82)),
162   (1.6,1.6)-(1.6,1.6));
163 set_bosize(0,80);
164 tsu_render;
165 endsuglyph;
166

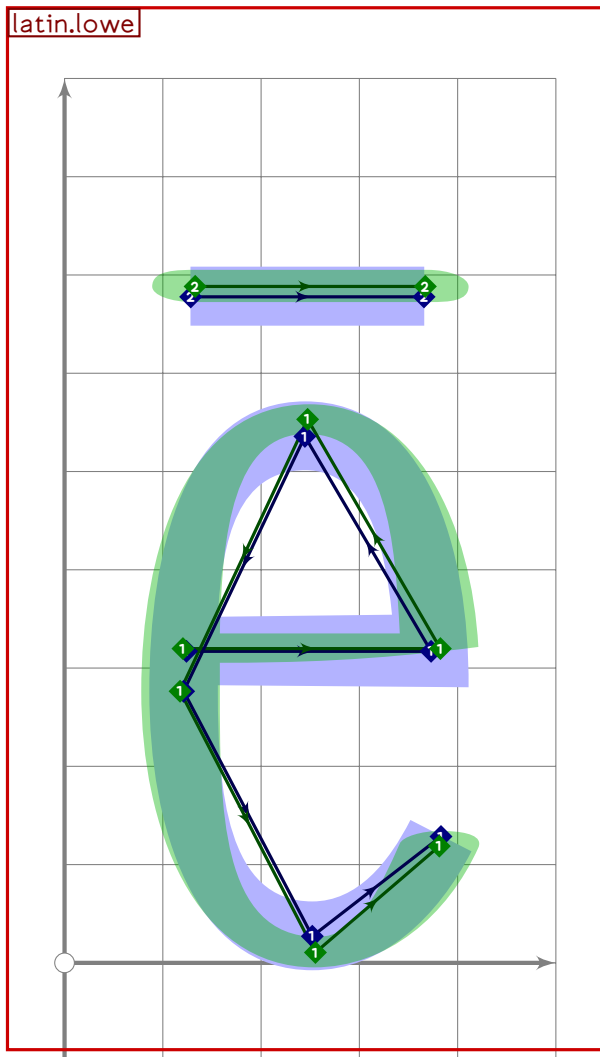
```



```

167 % E with macron
168 begintsuglyph("Emacron";18);
169 tsu_accent.capital(macron)(tsu_curve.latin.upe);
170 tsu_render;
171 endtsuglyph;
172

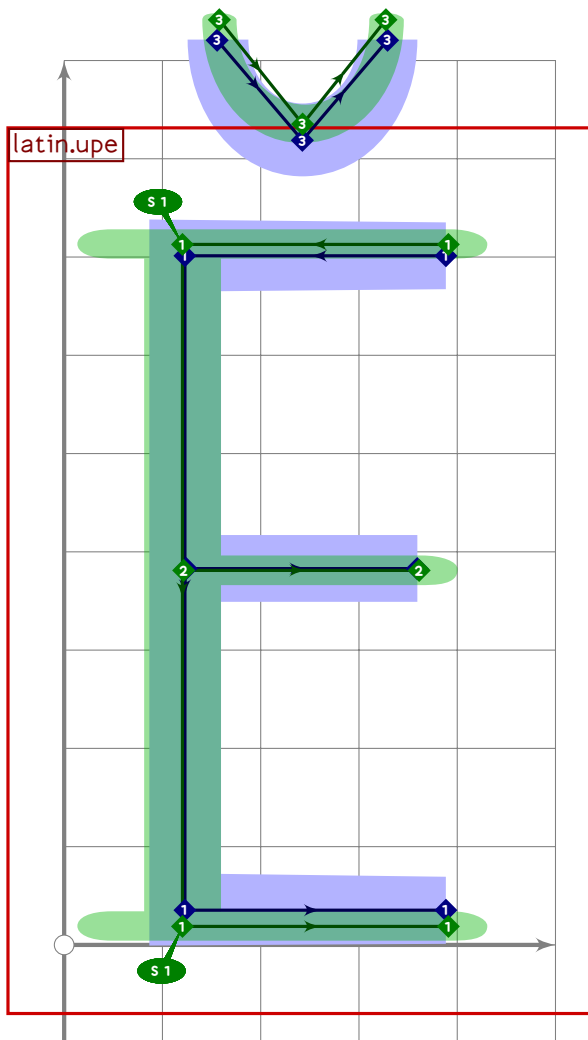
```



```

173 % e with macron
174 begintsuglyph("emacron";19);
175   tsu_accent.macron(tsu_curve.latin.love);
176   tsu_render;
177 endsuglyph;
178

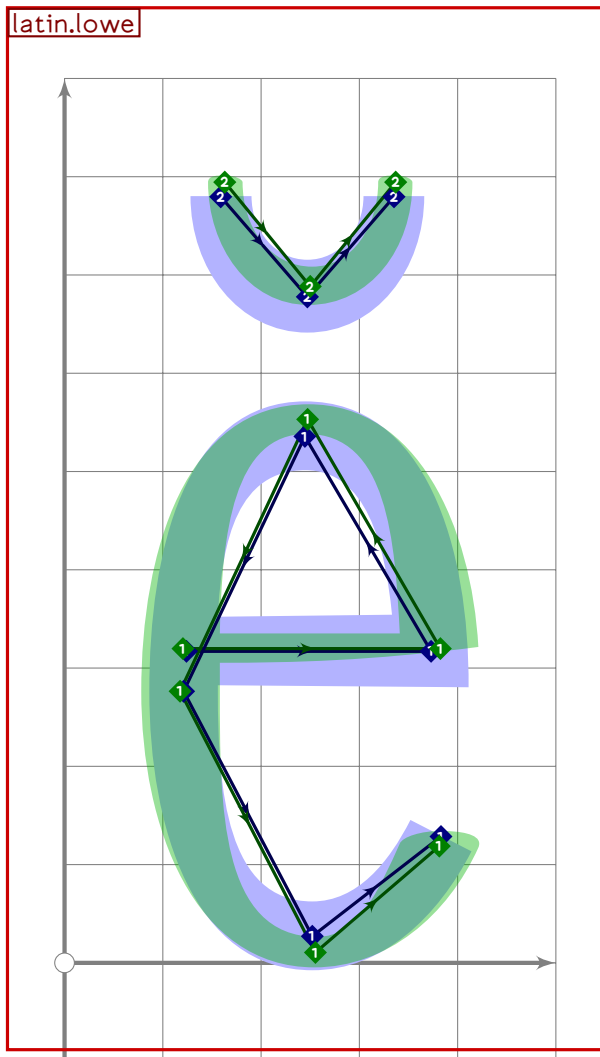
```

```

179 % E with breve
180 begint Suglyph("Ebreve",20);
181   tsu_accent.capital(breve)(tsu_curve.latin.upe);
182   tsu_render;
183 endtsuglyph;
184

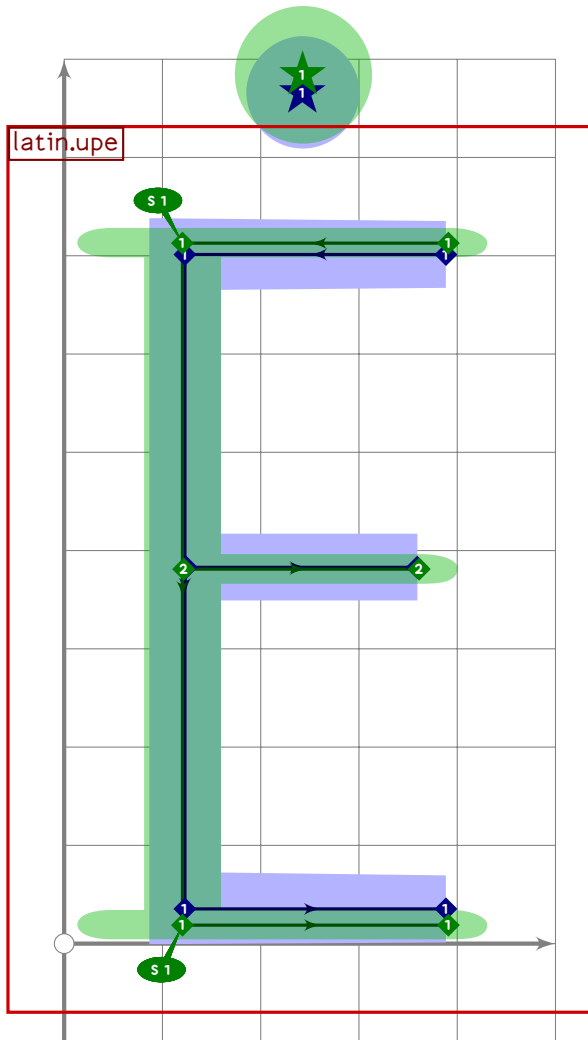
```



```

185 % e with breve
186 begintsuglyph("ebreve",21);
187   tsu_accent.breve(tsu_curve.latin.lowe);
188   tsu_render;
189 endsuglyph;
190

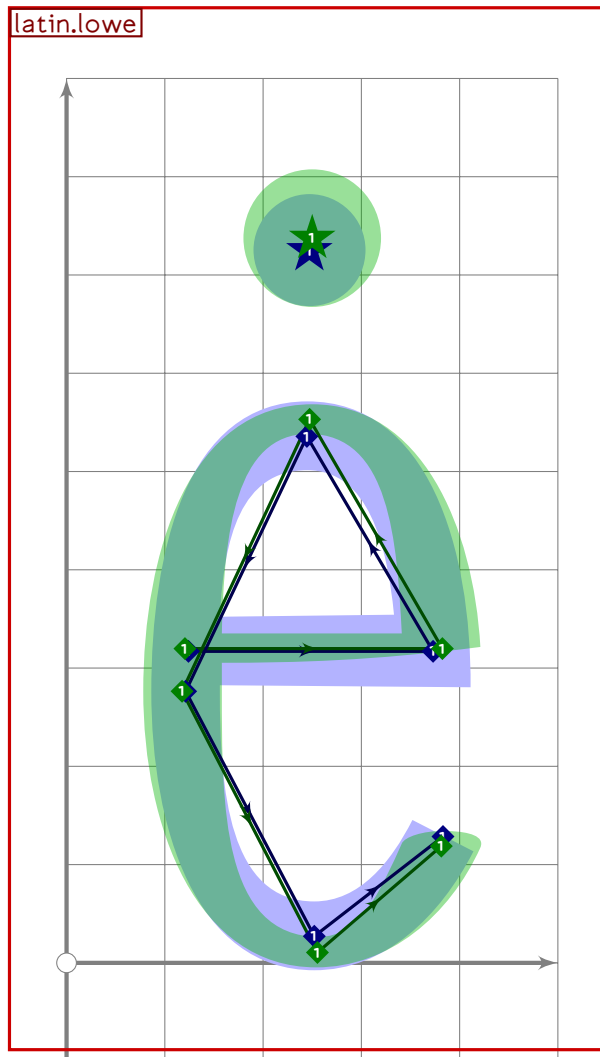
```



```

191 % E with dot
192 begint Suglyph("Edotaccent";22);
193   tsu_accent.capital(dotabove)(tsu_curve.latin.upe);
194   tsu_render;
195 endtsuglyph;
196

```



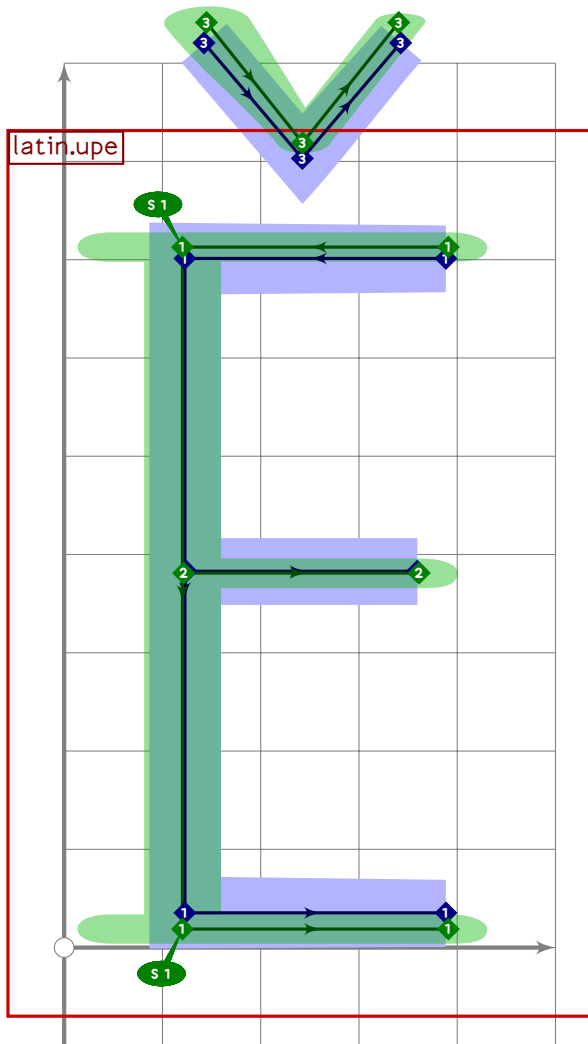
```

197 % e with dot
198 begintsuglyph("edotaccent",23);
199 tsu_accent.dotabove(tsu_curve.latin.lowe);
200 tsu_render;
201 endsuglyph;
202
203 % E with ogonek
204 begintsuglyph("Eogonek",24);
205 tsu_curve.latin.upeogonek;
206 tsu_render;
207 endsuglyph;
208
209 % e with ogonek
210 begintsuglyph("eogonek",25);
211 tsu_curve.latin.loweogonek;
212 tsu_render;
213 endsuglyph;
214

```

[see page 247]

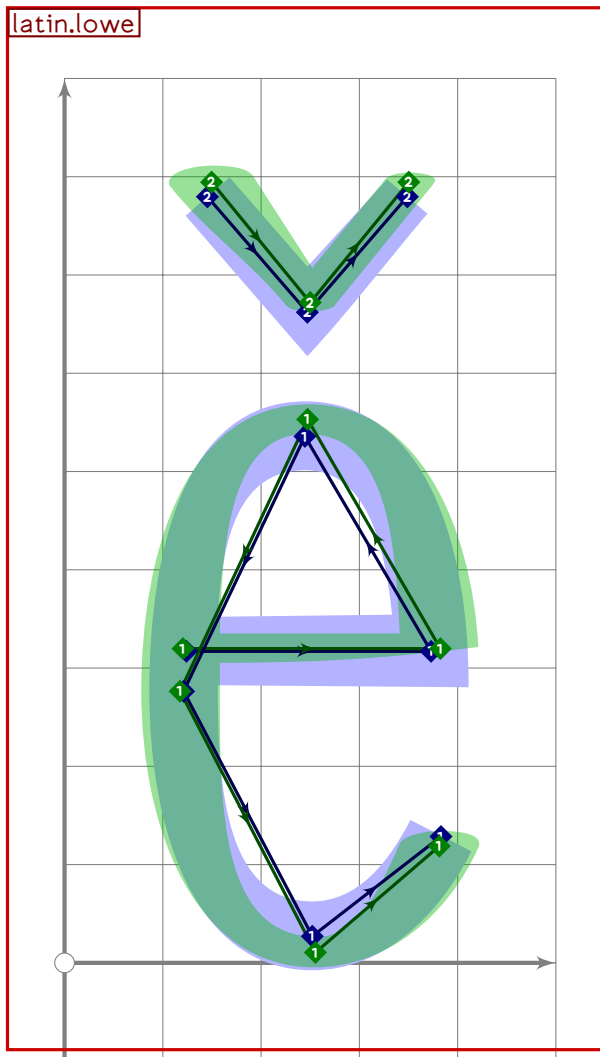
[see page 252]



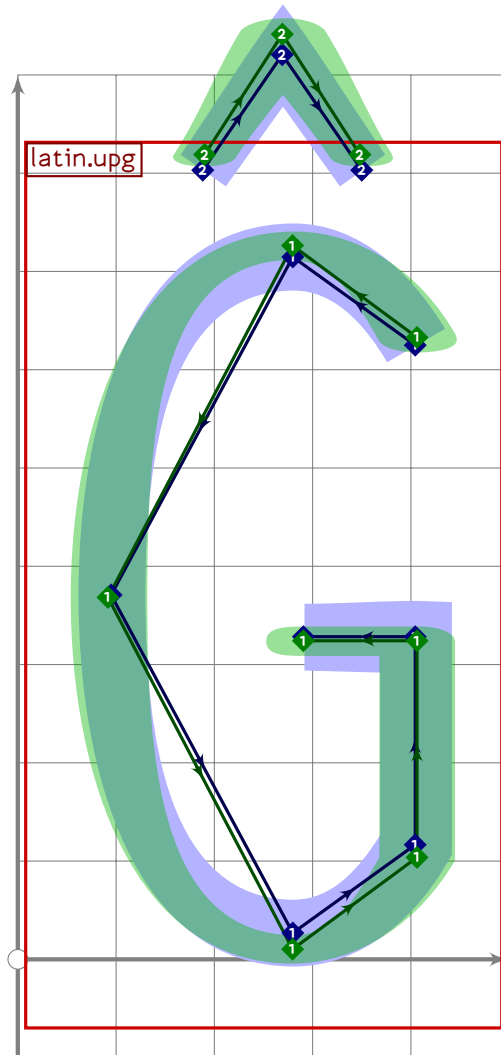
```

215 % E with caron
216 begint Suglyph("Ecaron",26);
217   tsu_accent.capital(caron)(tsu_curve.latin.upe);
218   tsu_render;
219 endtsuglyph;
220

```



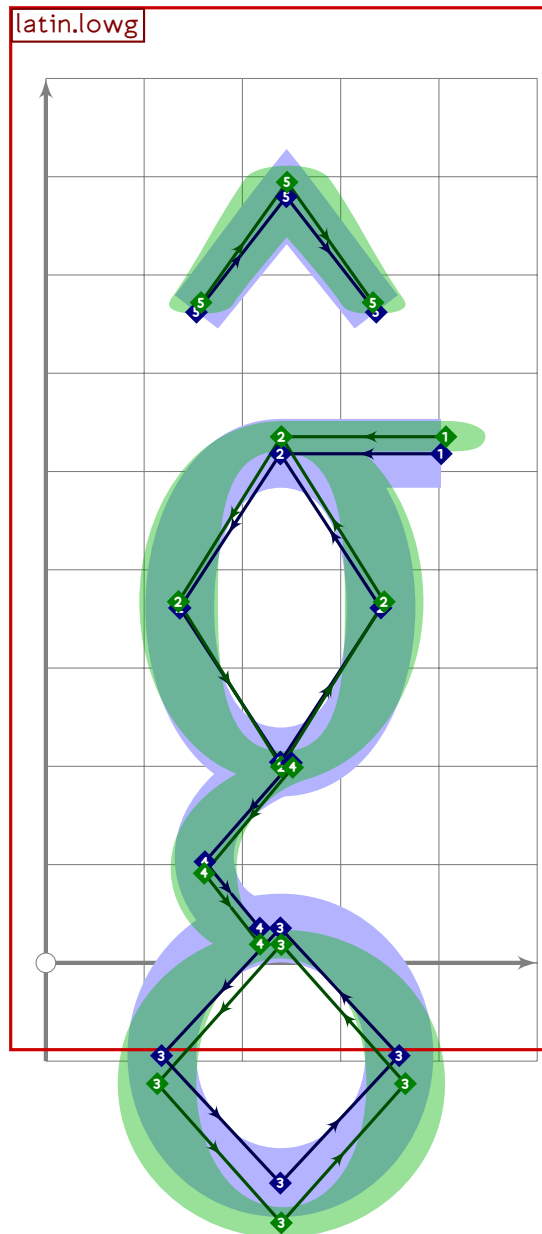
```
221 % e with caron
222 begintsuglyph("ecaron",27);
223 tsu_accent.caron(tsu_curve.latin.lowe);
224 tsu_render;
225 endsuglyph;
226
```



```

227 % G with circumflex
228 begintsuglyph("Gcircumflex";28);
229 tsu_accent.capital(circumflex)(tsu_curve.latin.upg);
230 replace_strokep(0)(oldp shifted (35,0));
231 tsu_render;
232 endsuglyph;
233

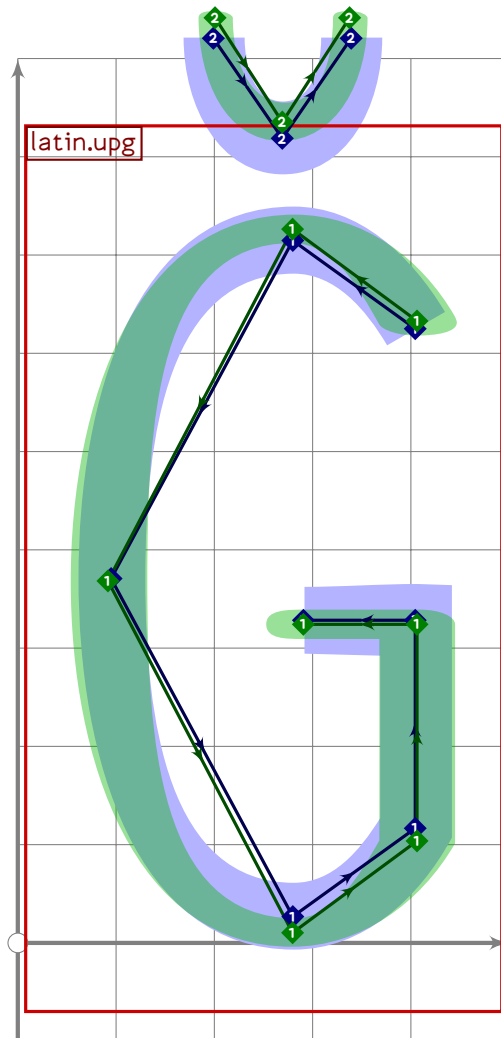
```



```

234 % g with circumflex
235 begint Suglyph("gcircumflex",29);
236   tsu_accent.circumflex(tsu_curve.latin.lowg);
237   replace_strokep(0)(oldp shifted (10,0));
238   tsu_render;
239 endtsuglyph;
240

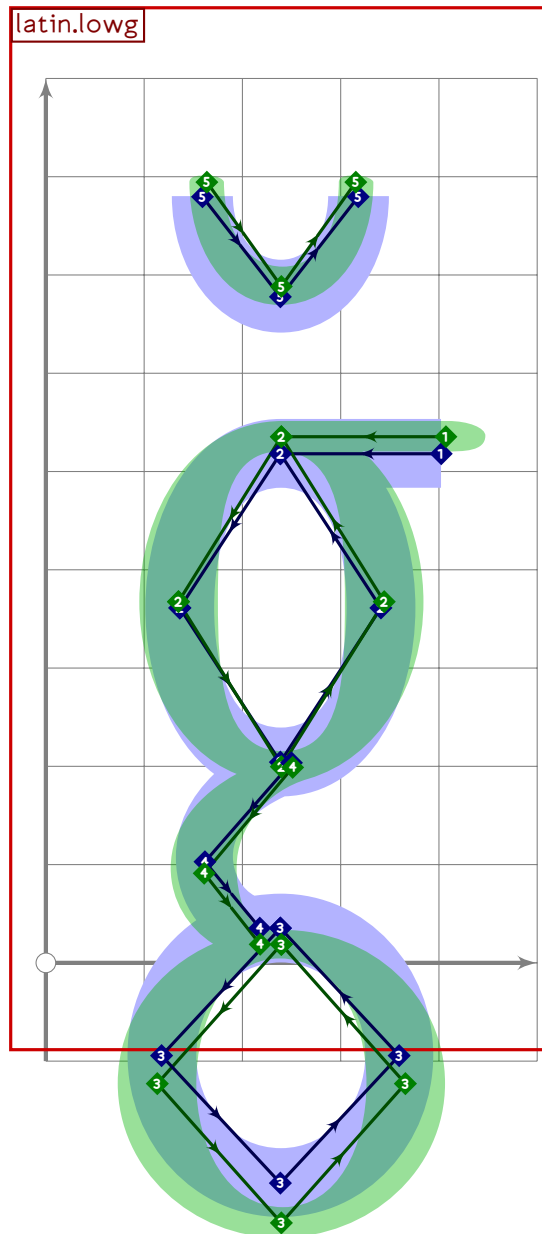
```

```

241 % G with breve
242 begint Suglyph("Gbreve",30);
243 tsu_accent.capital(breve)(tsu_curve.latin.upg);
244 replace_strokep(0)(oldp shifted (35,0));
245 tsu_render;
246 endsuglyph;
247

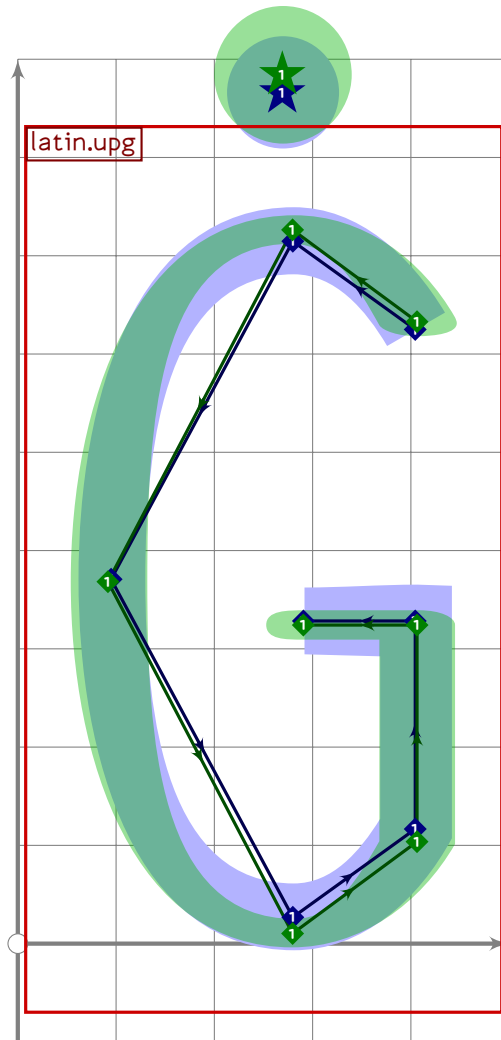
```



```

248 % g with breve
249 begint Suglyph("gbreve",31);
250 tsu_accent.breve(tsu_curve.latin.lowg);
251 tsu_render;
252 endtsuglyph;
253

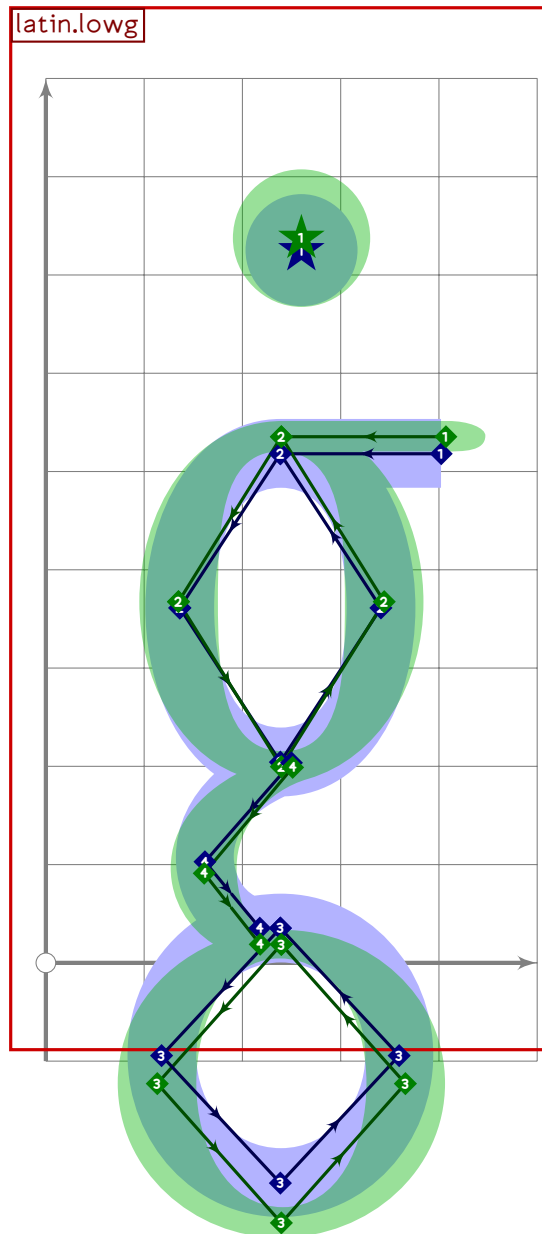
```



```

254 % G with dot
255 begintsuglyph("Gdotaccent",32);
256 tsu_accent.capital(dotabove)(tsu_curve.latin.upg);
257 replace_lcblob(0)(oldblob shifted (35,0));
258 tsu_render;
259 endsuglyph;
260

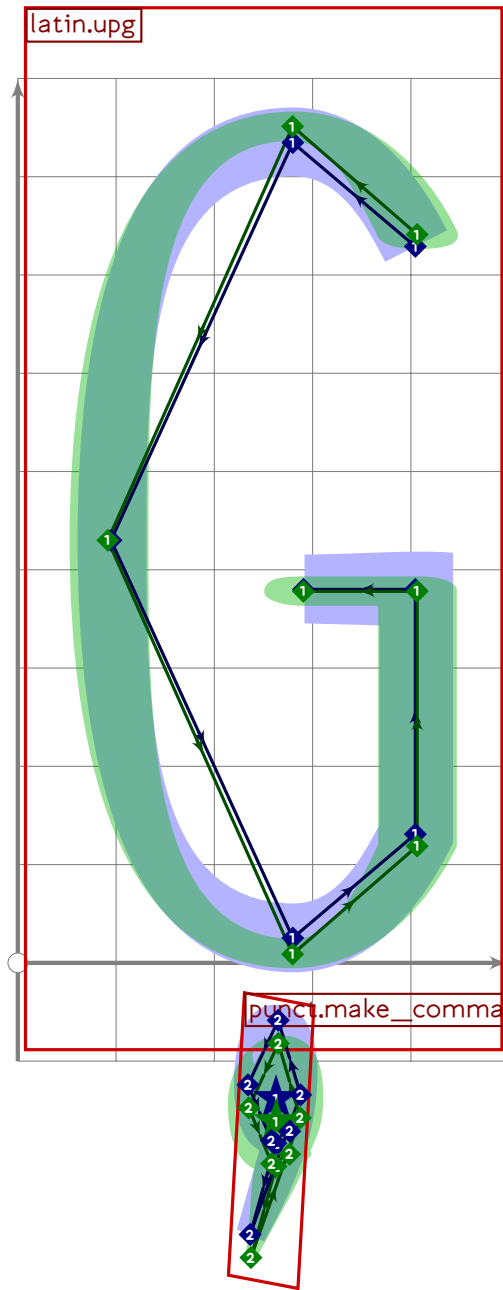
```



```

261 % g with dot
262 begint Suglyph("gdotaccent",33);
263   tsu_accent.dotabove(tsu_curve.latin.lowg);
264   replace_lcblob(0)(oldblob shifted (35,0));
265   tsu_render;
266 endtsuglyph;
267

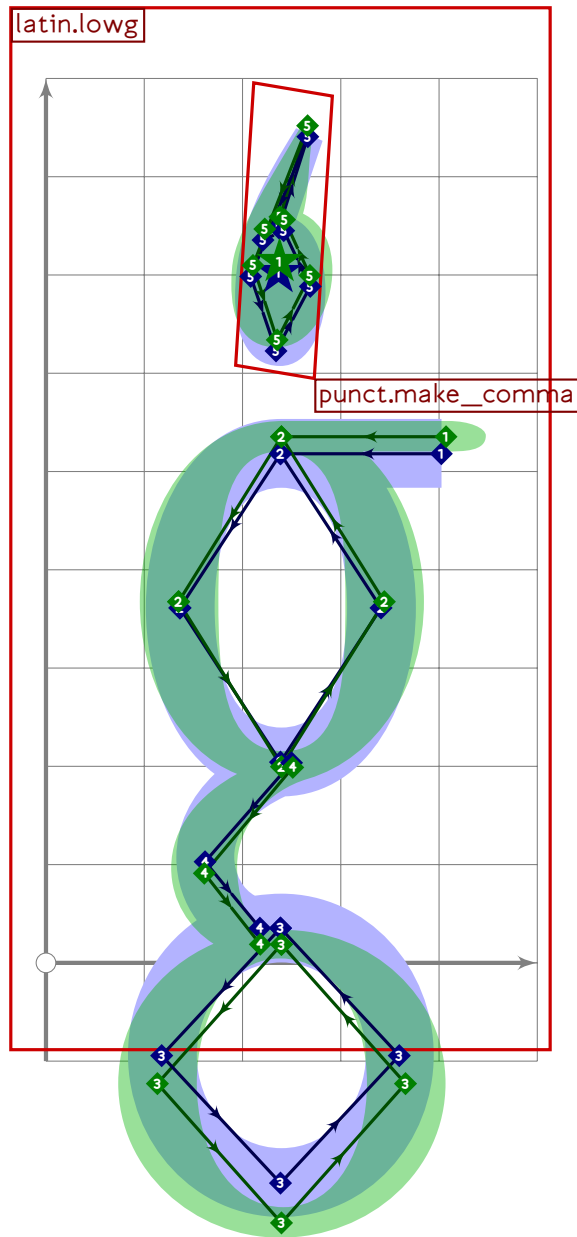
```



```

268 % G with comma below
269 begintsuglyph("uni0122",34);
270 tsu_accent.commabelow(tsu_curve.latin.upg);
271 tsu_render;
272 endsuglyph;
273

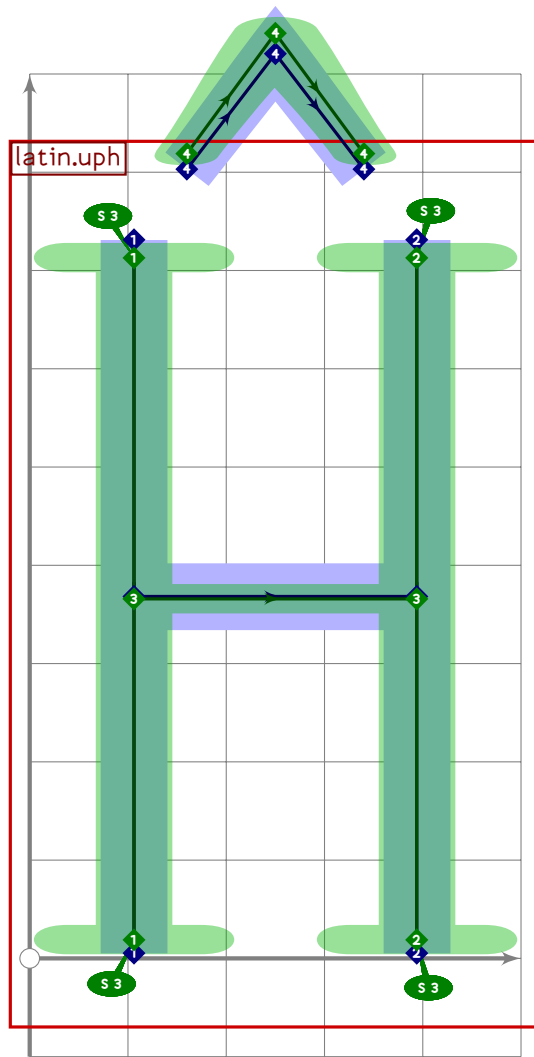
```



```

274 % g with comma upside-down above
275 begintsuglyph("uni0123";35);
276 tsu_curve.latin.low;
277 tsu_curve.punct.make_comma((500,vmetric(0.84)),180);
278 tsu_render;
279 endsuglyph;
280

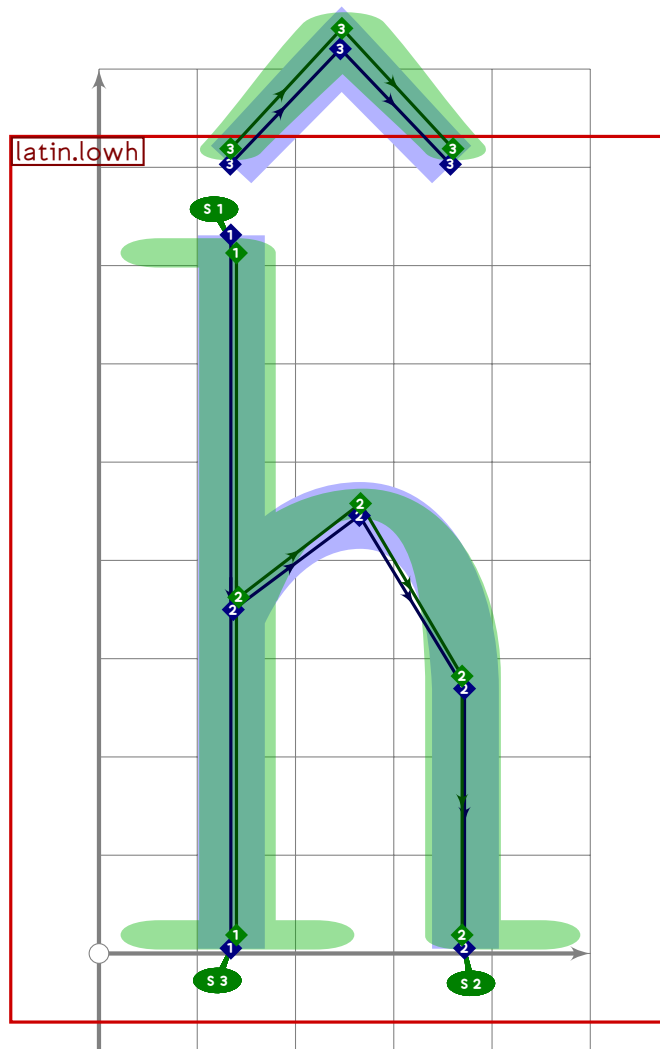
```



```

281 % H with circumflex
282 begintsuglyph("Hcircumflex",36);
283 tsu_accent.capital(circumflex)(tsu_curve.latin.uph);
284 tsu_render;
285 endtsuglyph;
286

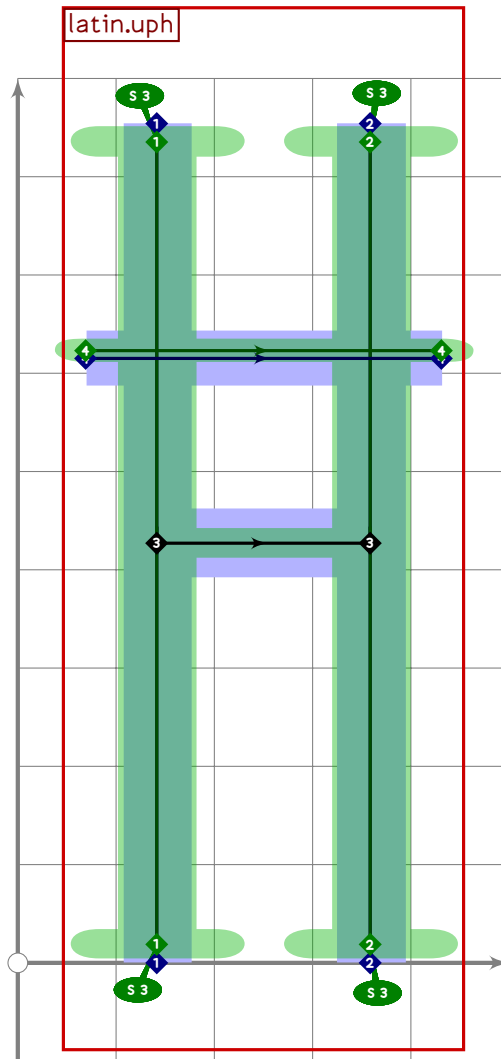
```



```

287 % h with circumflex
288 begint Suglyph("hcircumflex",37);
289   tsu_accent.capital(circumflex)(tsu_curve.latin.lowh);
290   tsu_render;
291 endtsuglyph;
292

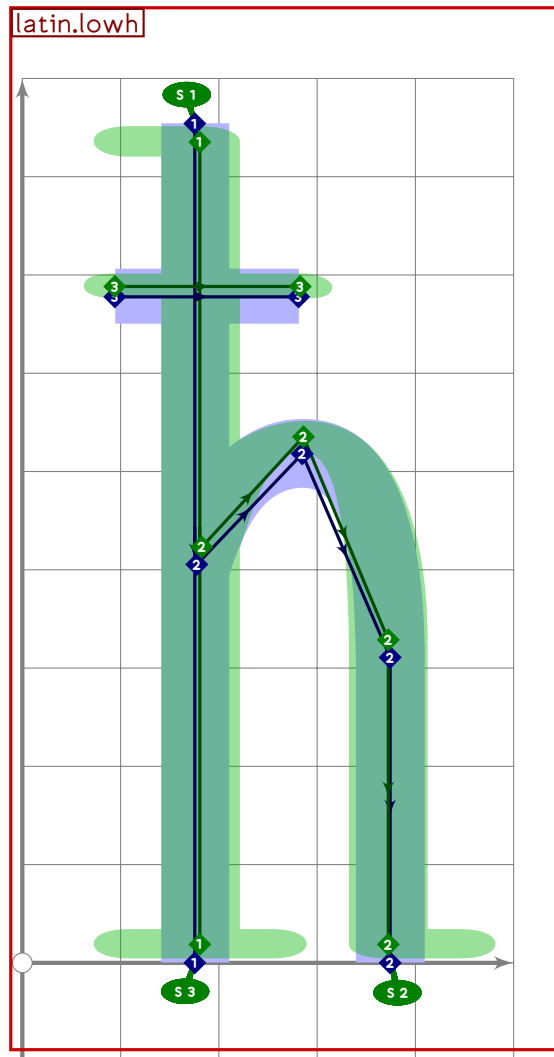
```

```

293 % H with bar
294 begintsuglyph("Hbar";38);
295 tsu_curve.latin.uph;
296 push_stroke((100,vmetric(0.74))-(900,vmetric(0.74)),
297   (1.6,1.6)-(1.6,1.6));
298 set_bosize(0,80);
299 tsu_render;
300 endsuglyph;
301

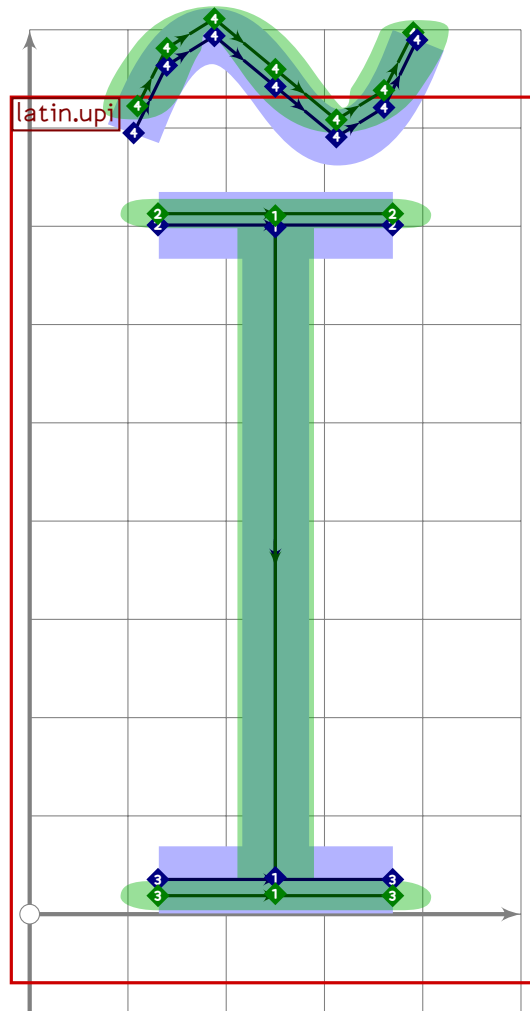
```



```

302 % h with bar
303 beginsuglyph("hbar";39);
304 tsu_curve.latin.lowh;
305 push_stroke((220,vmetric(0.82))-(520,vmetric(0.82)),
306   (1.6,1.6)-(1.6,1.6));
307 set_bosize(0,80);
308 tsu_render;
309 endsuglyph;
310

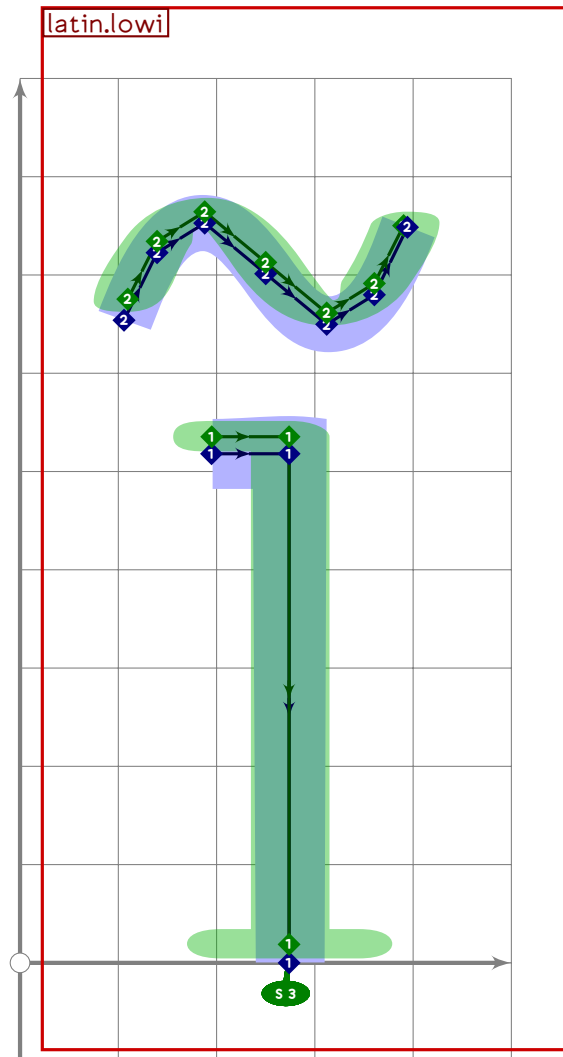
```



```

311 % I with tilde
312 begint Suglyph("Itilde",40);
313   tsu_accent.capital(tilde)(tsu_curve.latin.upi);
314   tsu_render;
315 endtsuglyph;
316

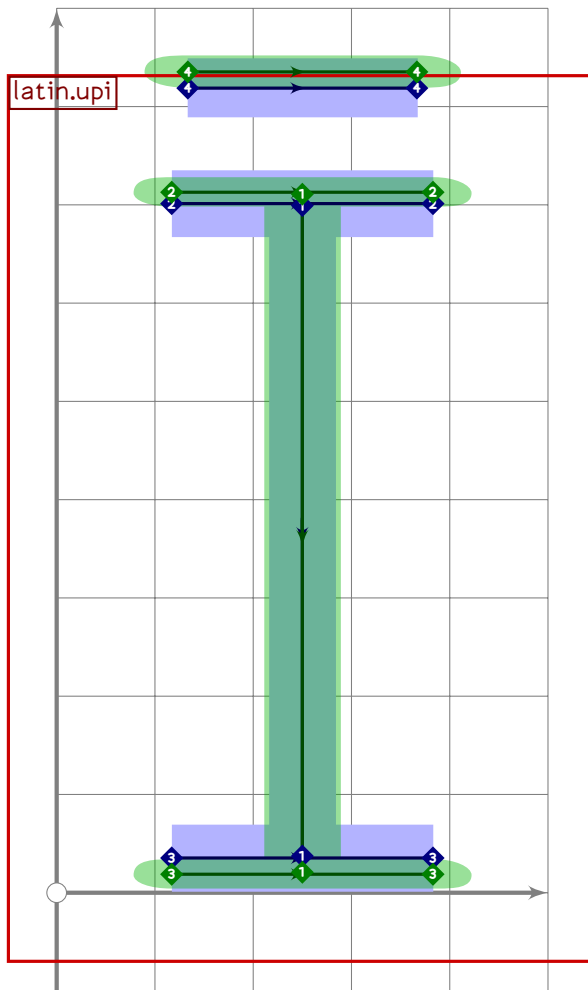
```



```

317 % i with tilde
318 begint Suglyph("itilde",41);
319   tsu_accent.tilde(
320     tsu_xform(identity shifted (70,0))(tsu_curve.latin.lowi);
321     pop_lcblob;
322   );
323   tsu_render;
324   endtsuglyph;
325

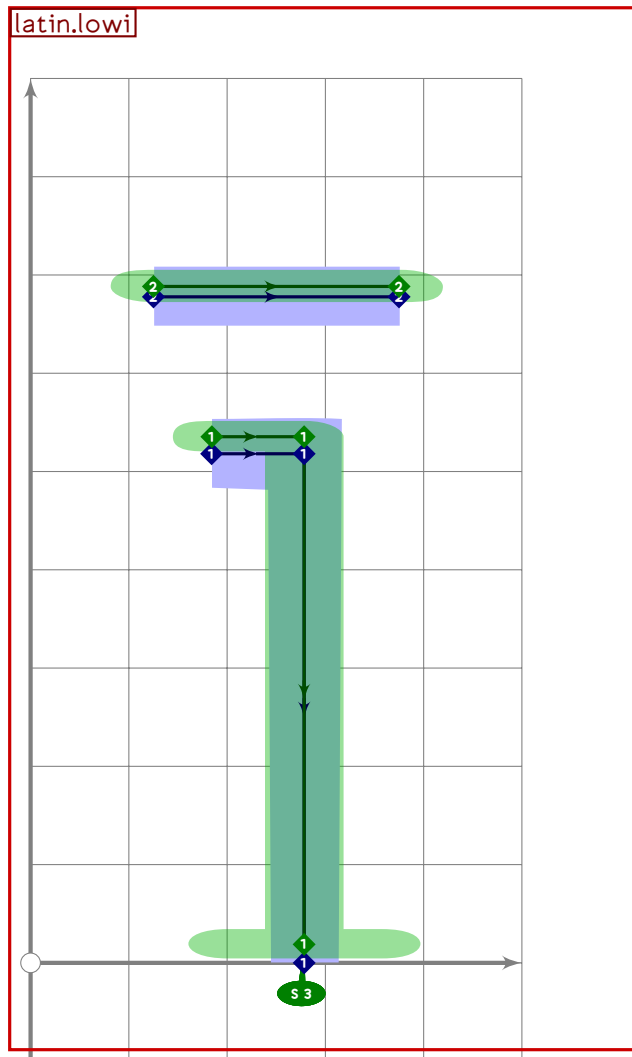
```



```

326 % I with macron
327 begint Suglyph("Imacron",42);
328   tsu_accent.capital(macron)(tsu_curve.latin.upi);
329   tsu_render;
330 endsuglyph;
331

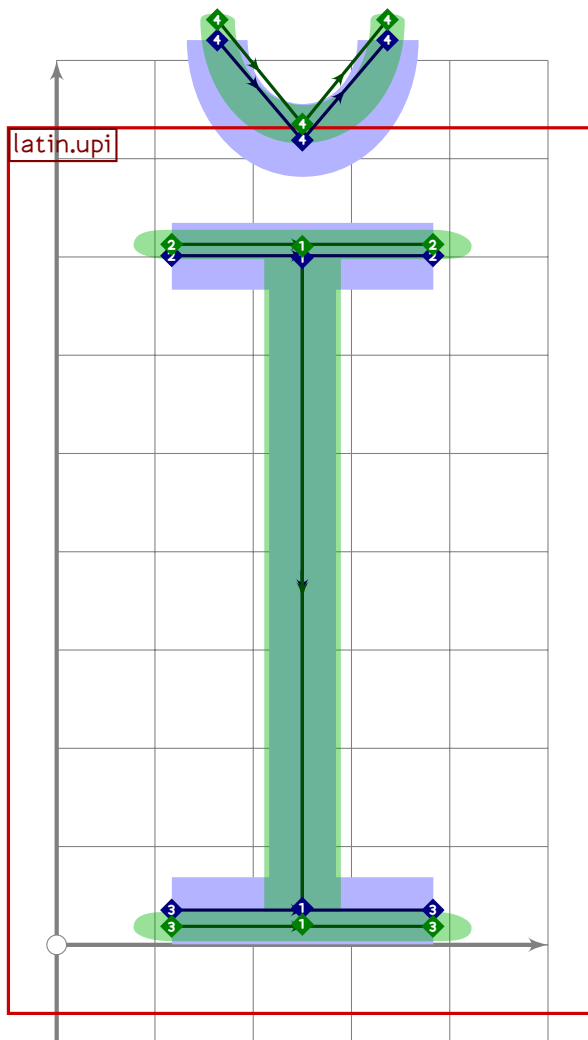
```



```

332 % i with macron
333 beginsuglyph("imacron",43);
334   tsu_accent.macron(
335     tsu_xform(identity shifted (70,0))(tsu_curve.latin.lowi);
336     pop_lcblob;
337   );
338   tsu_render;
339 endsuglyph;
340

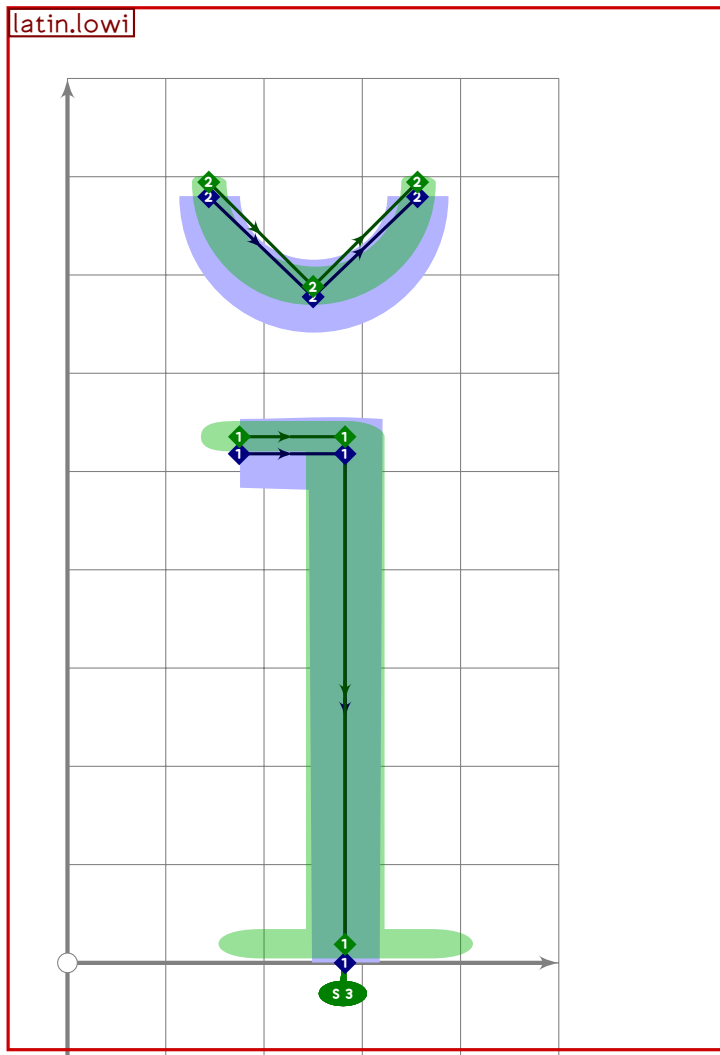
```



```

341 % I with breve
342 begintsuglyph("Ibreve",44);
343 tsu_accent.capital(breve)(tsu_curve.latin.upi);
344 tsu_render;
345 endtsuglyph;
346

```



```

347 % i with breve
348 begintsuglyph("ibreve",45);
349   tsu_accent.breve(
350     tsu_xform(identity shifted (70,0))(tsu_curve.latin.lowi);
351     pop_lcblob;
352   );
353   tsu_render;
354 endsuglyph;
355
356 % I with ogonek
357 begintsuglyph("Iogonek",46);
358   tsu_curve.latin.upiogonek;
359   tsu_render;
360 endsuglyph;
361
362 % i with ogonek
363 begintsuglyph("iogonek",47);
364   tsu_curve.latin.lowiogonek;
365   tsu_render;

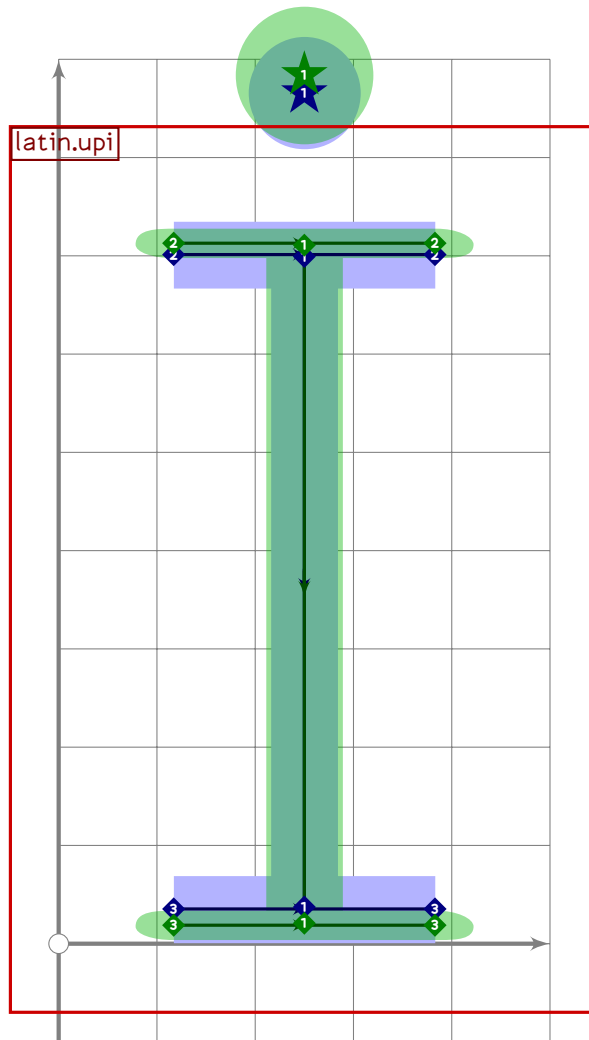
```

[see page 248]

[see page 253]

366 endtsuglyph;

367



368 % I with dot

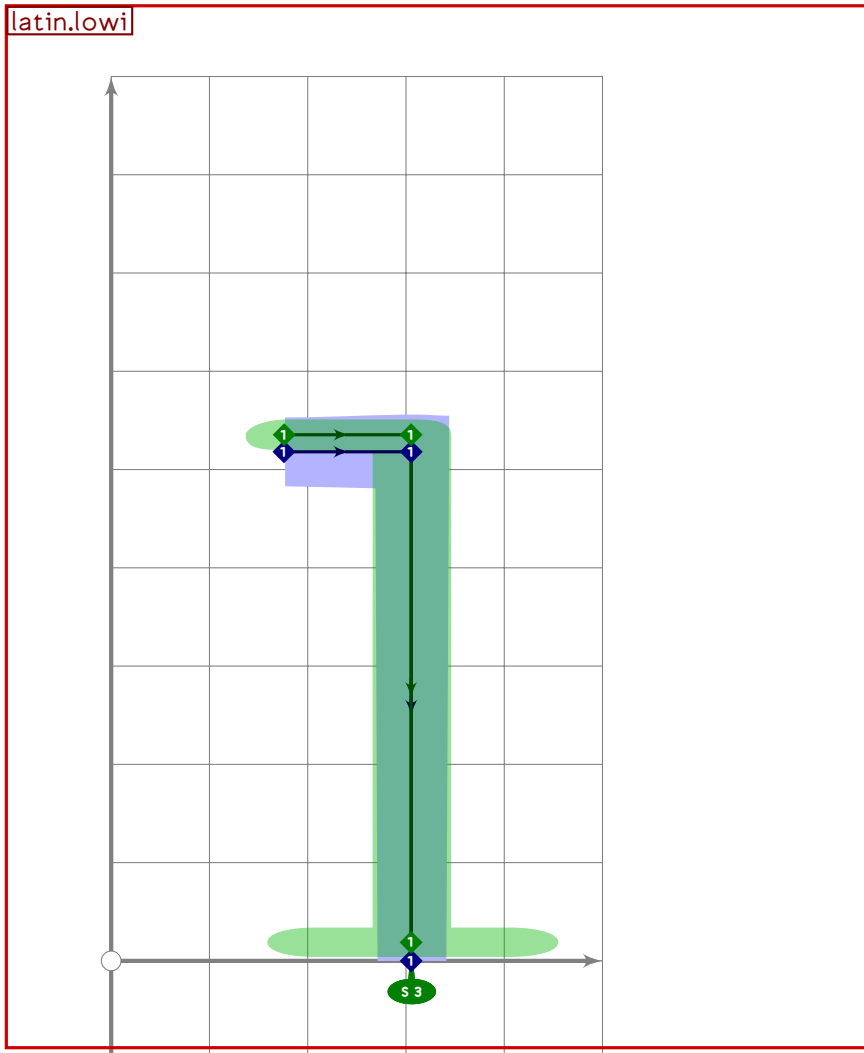
369 `begintsuglyph("Idotaccent",48);`

370 `tsu_accent.capital(dotabove)(tsu_curve.latin.upi);`

371 `tsu_render;`

372 `endtsuglyph;`

373



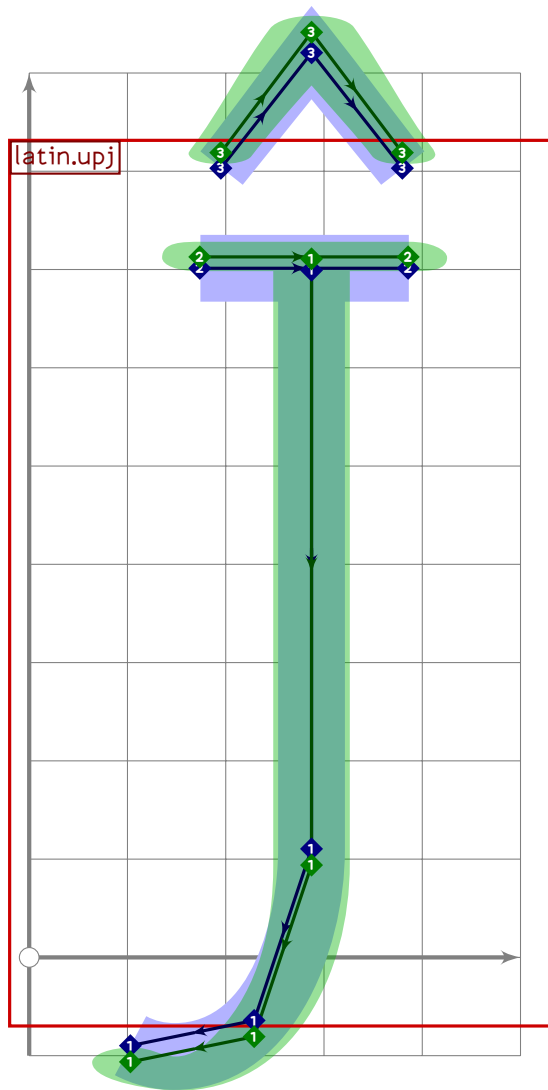
```

374 % i without dot
375 begintsuglyph("dotlessi",49);
376 tsu_xform(identity shifted (70,0))(tsu_curve.latin.lowi);
377 pop_lcblob;
378 tsu_render;
379 endtsuglyph;
380
381 % Dutch IJ ligature
382 begintsuglyph("IJ",50);
383 tsu_curve.latin.upij;
384 tsu_render;
385 endtsuglyph;
386
387 % Dutch ij ligature
388 begintsuglyph("ij",51);
389 tsu_curve.latin.lowij;
390 tsu_render;
391 endtsuglyph;
392

```

[see page 165]

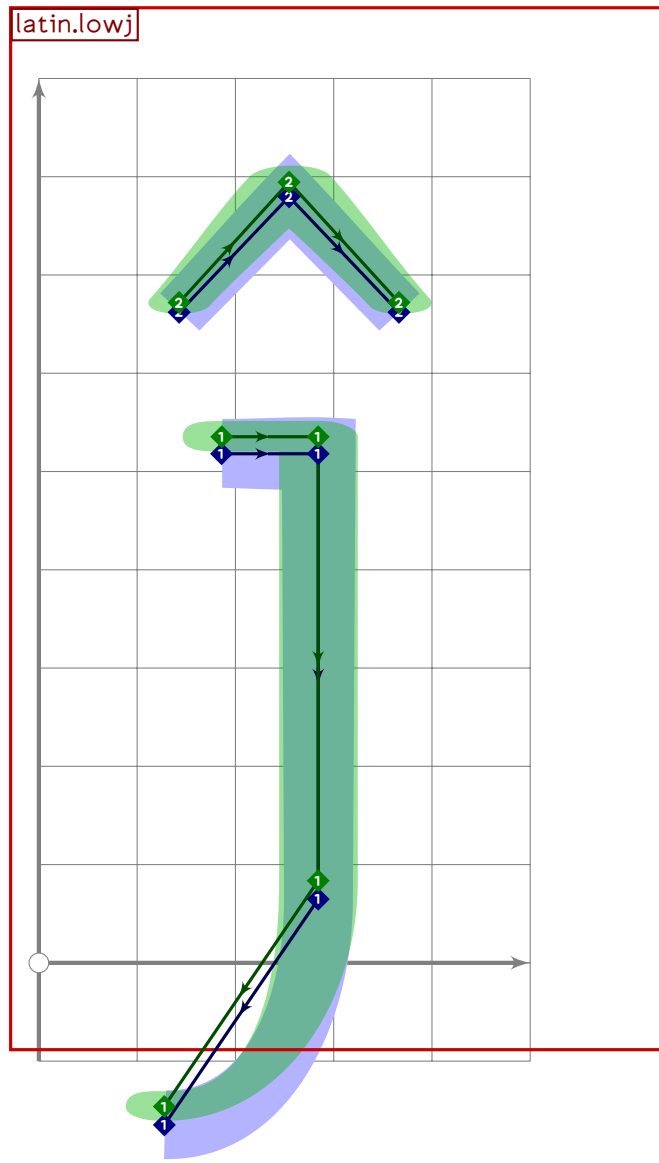
[see page 203]



```

393 % J with circumflex
394 begint Suglyph("Jcircumflex",52);
395   tsu_accent.capital(circumflex)(tsu_curve.latin.upj);
396   replace_strokep(0)(oldp shifted (50,0));
397   tsu_render;
398 endsuglyph;
399

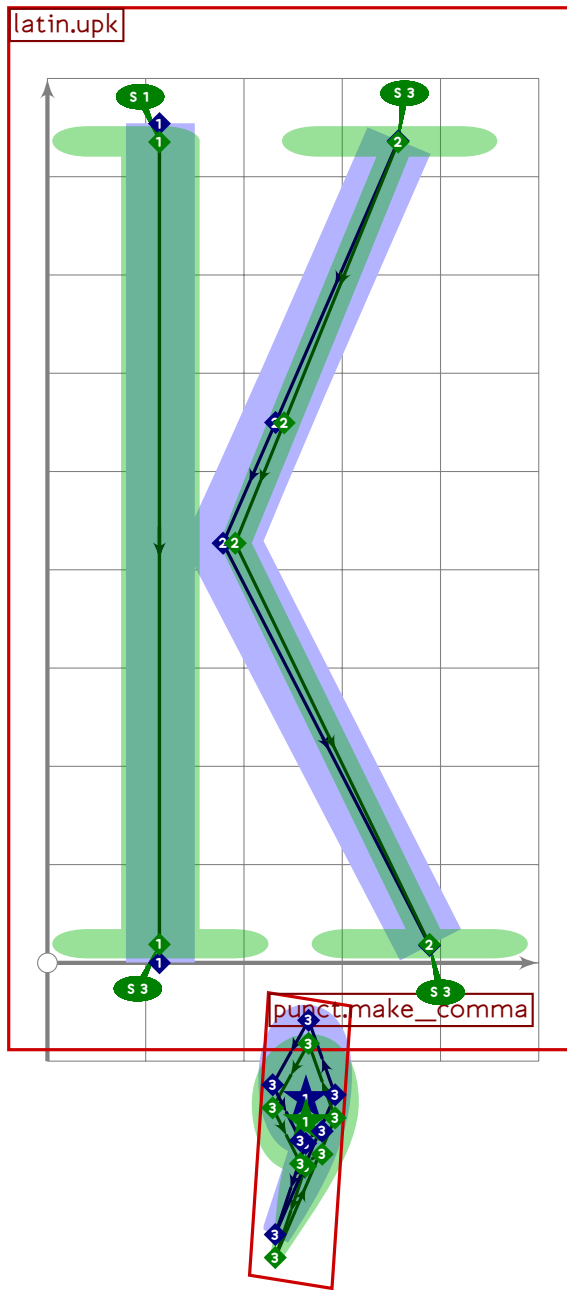
```



```

400 % j with circumflex
401 begintsuglyph("jcircumflex",53);
402 tsu_accent.circumflex(
403     tsu_xform(identity shifted (70,0))(tsu_curve.latin.lowj);
404     pop_lcblob;
405 );
406 tsu_render;
407 endsuglyph;
408

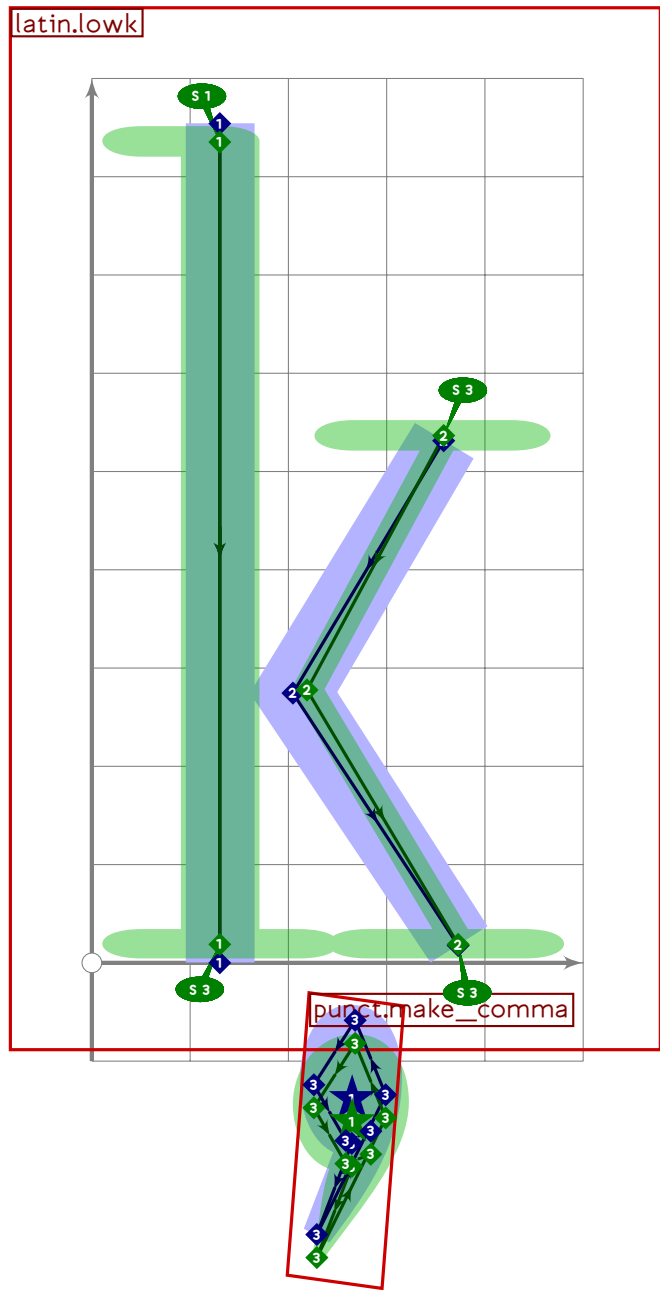
```



```

409 % K with comma below
410 beginsuglyph("uni0136",54);
411   tsu_accent.commabelow(tsu_curve.latin.upk);
412   tsu_render;
413 endsuglyph;
414

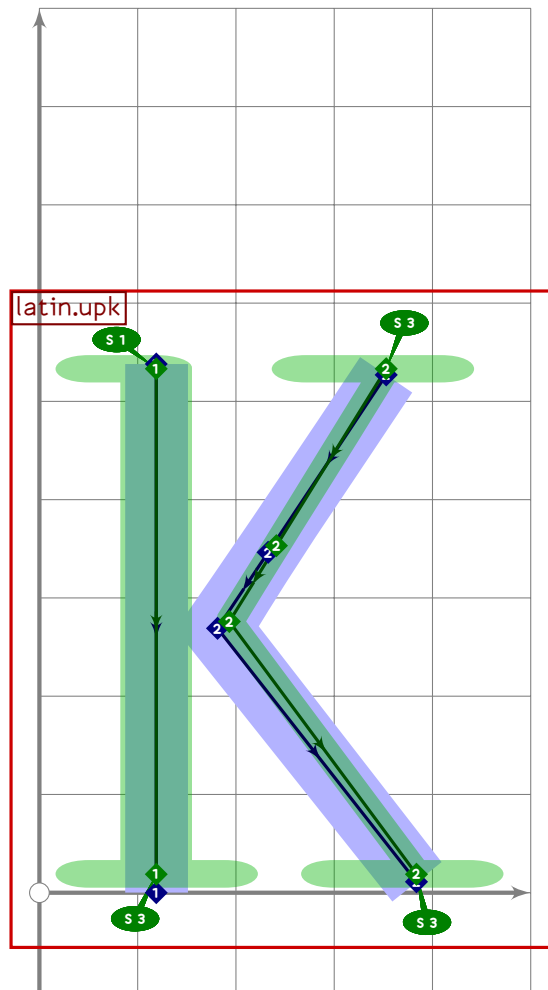
```



```

415 % k with comma below
416 begint Suglyph("uni0137",55);
417   tsu_accent.commabelow(tsu_curve.latin.lowk);
418   tsu_render;
419 endsuglyph;
420

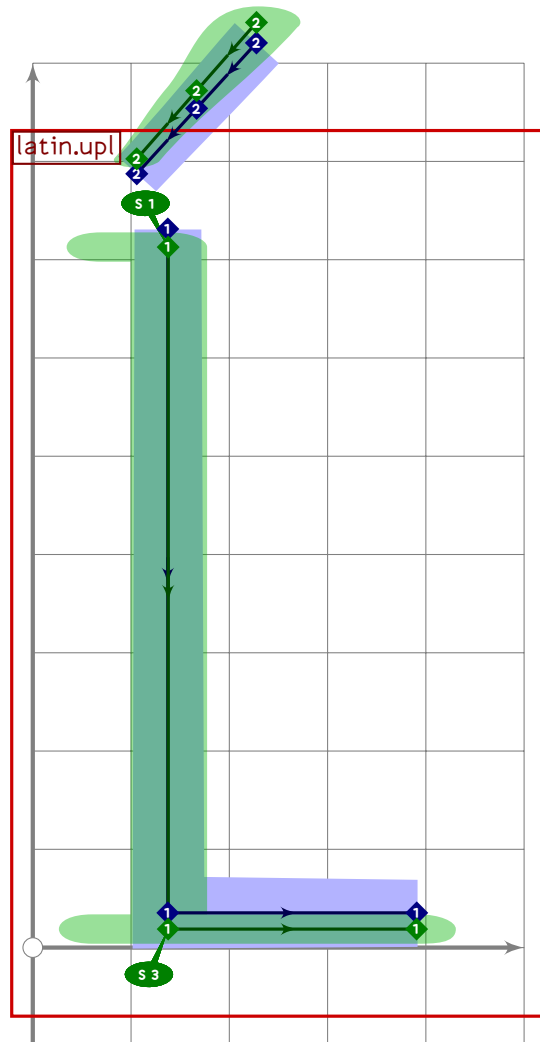
```



```

421 % Greenlandic k, which I'm interpreting as a squashed K
422 begintsuglyph("kgreenlandic";56);
423 tsu_xform(identity shifted (-500,latin_wide_low_v) xyscaled (0.92,0.63)
424   shifted (500,latin_wide_low_v))(tsu_curve.latin.upk);
425 tsu_render;
426 endsuglyph;
427

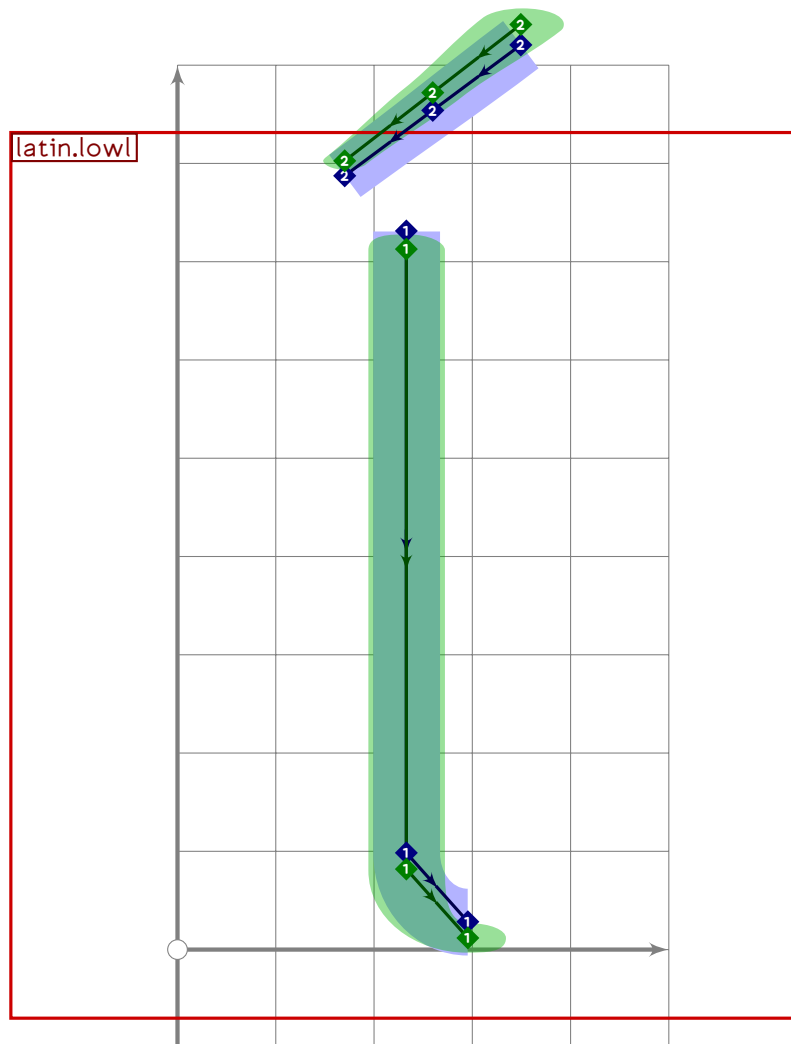
```



```

428 % L with acute
429 begintsuglyph("Lacute",57);
430 tsu_accent.capital(acute)(tsu_curve.latin.upl);
431 replace_strokep(0)(oldp shifted (-190,0));
432 tsu_render;
433 endtsuglyph;
434

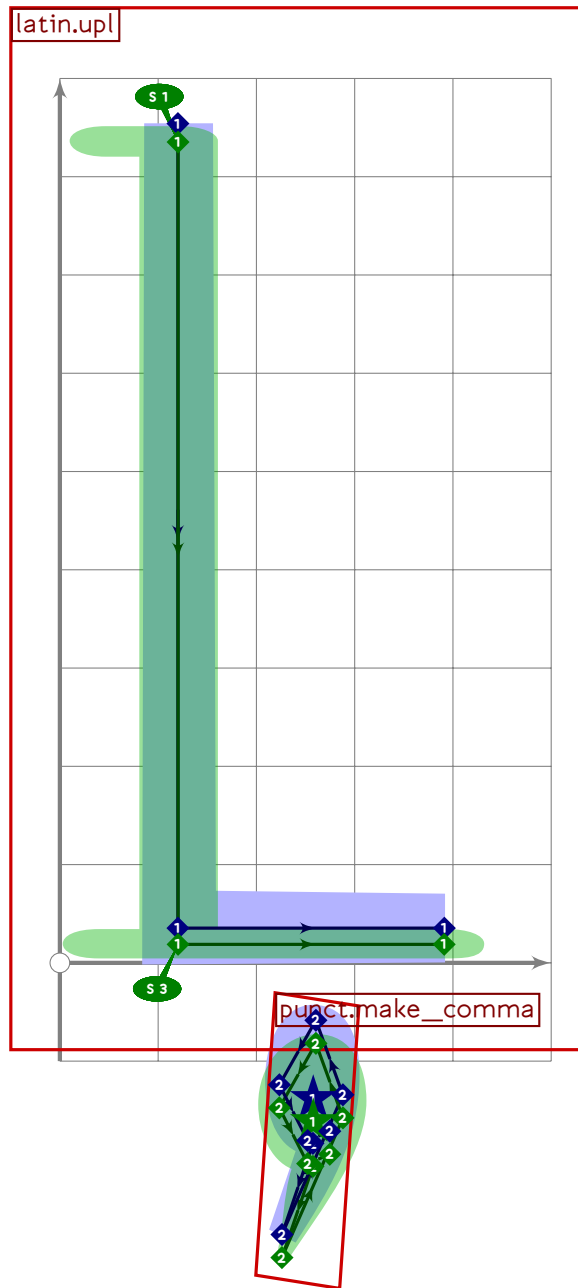
```

```

435 % l with acute
436 begint Suglyph("lacute";58);
437   tsu_accent.capital(acute)(tsu_curve.latin.lowl);
438   replace_strokep(0)(oldp shifted (-20,0));
439   tsu_render;
440 endsuglyph;
441

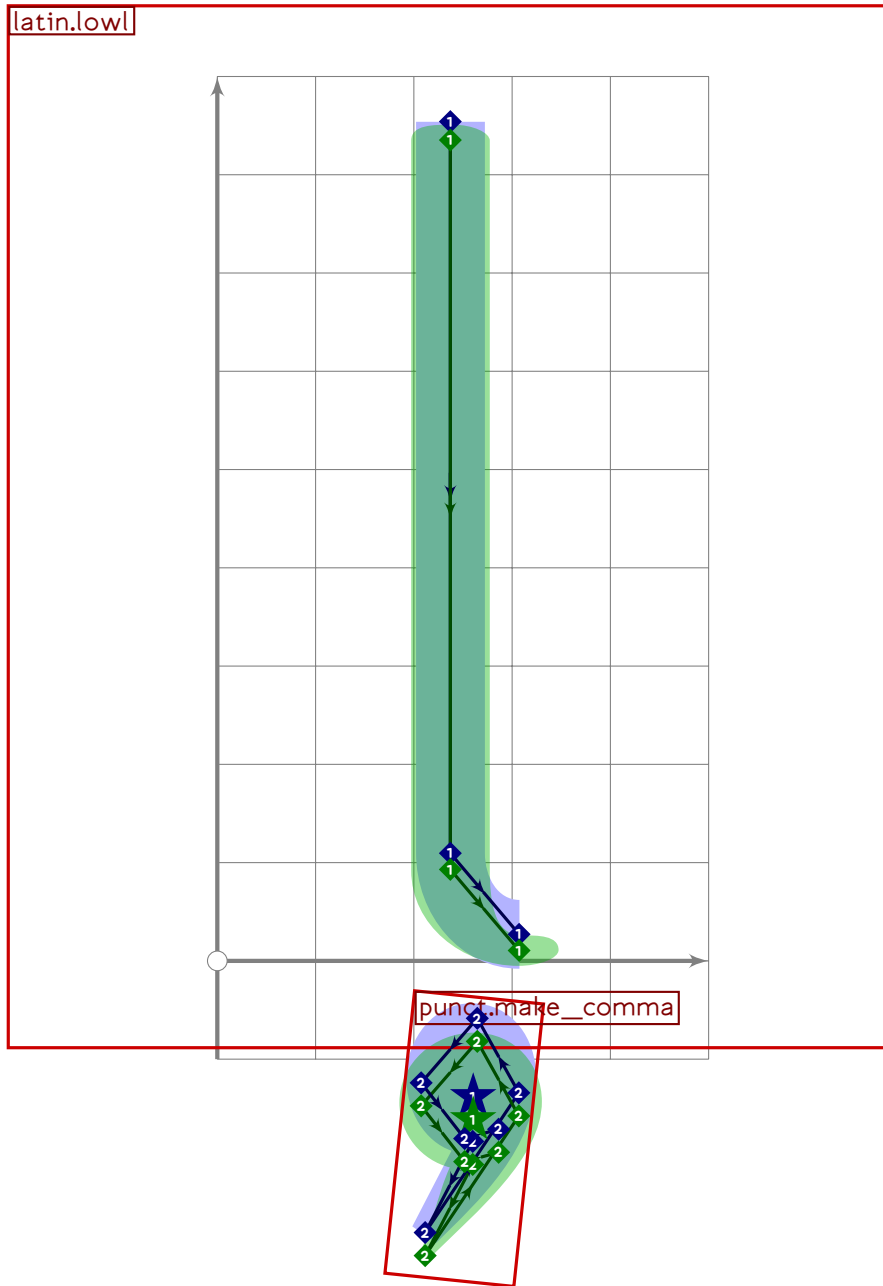
```



```

442 % L with comma below
443 beginsuglyph("uni013B",59);
444   tsu_accent.commabelow(tsu_curve.latin.upl);
445   tsu_render;
446 endsuglyph;
447

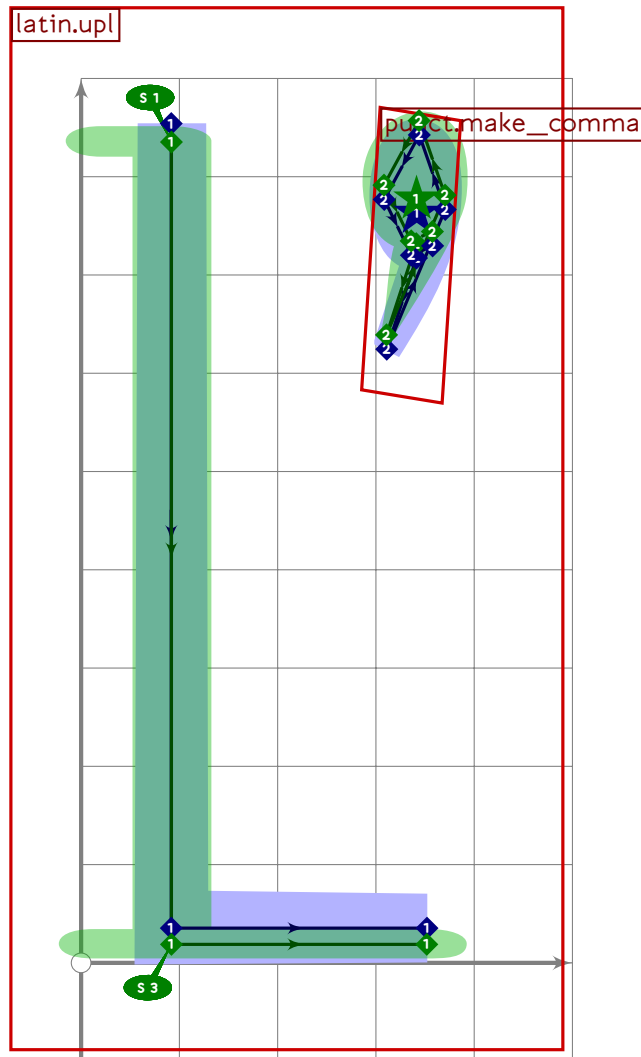
```



```

448 % l with comma below
449 beginsuglyph("uni013C",60);
450 tsu_accent.commabelow(tsu_curve.latin.lowl);
451 tsu_render;
452 endsuglyph;
453

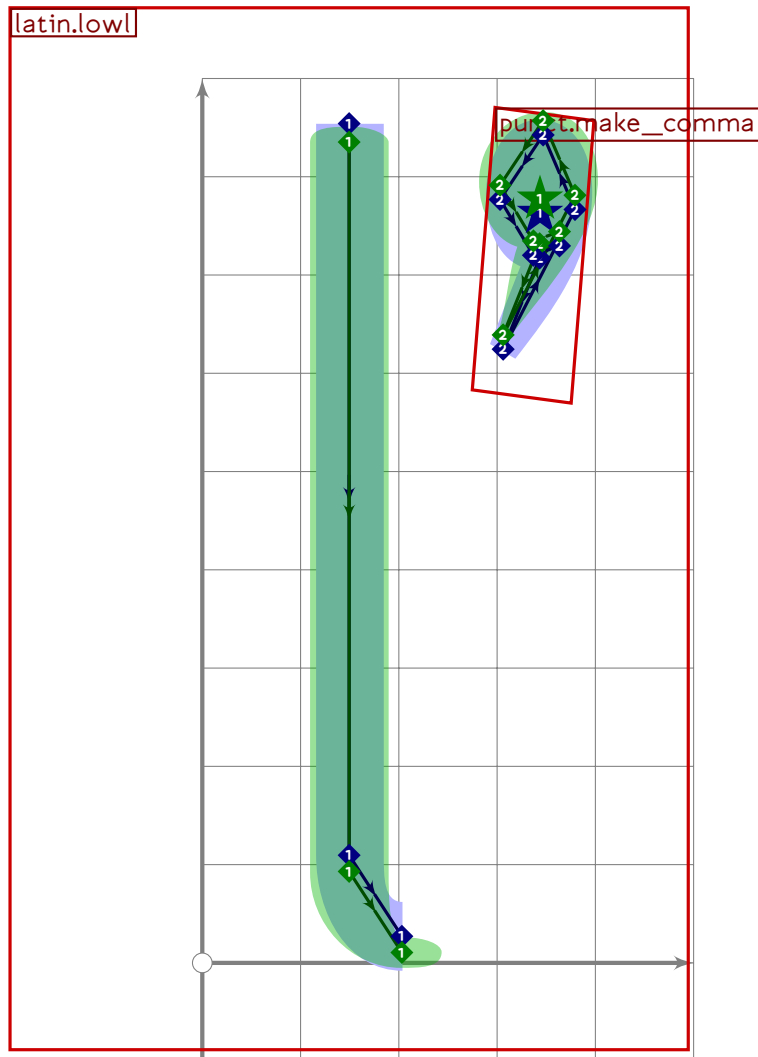
```



```

454 % L with apostrophe caron
455 begint Suglyph("Lcaron",61);
456   tsu_accent.caron_apostrophe(-250)(tsu_curve.latin.upl);
457   tsu_render;
458 endsuglyph;
459

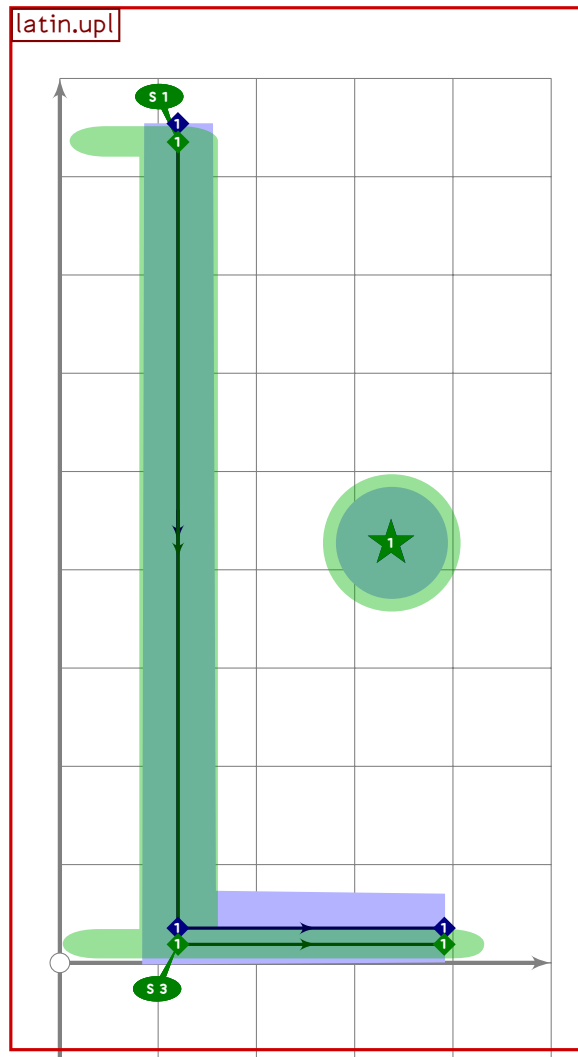
```



```

460 % l with apostrophe caron
461 begintsuglyph("lcaron",62);
462 tsu_accent.caron_apostrophe(-50)(tsu_curve.latin.lowl);
463 tsu_render;
464 endsuglyph;
465

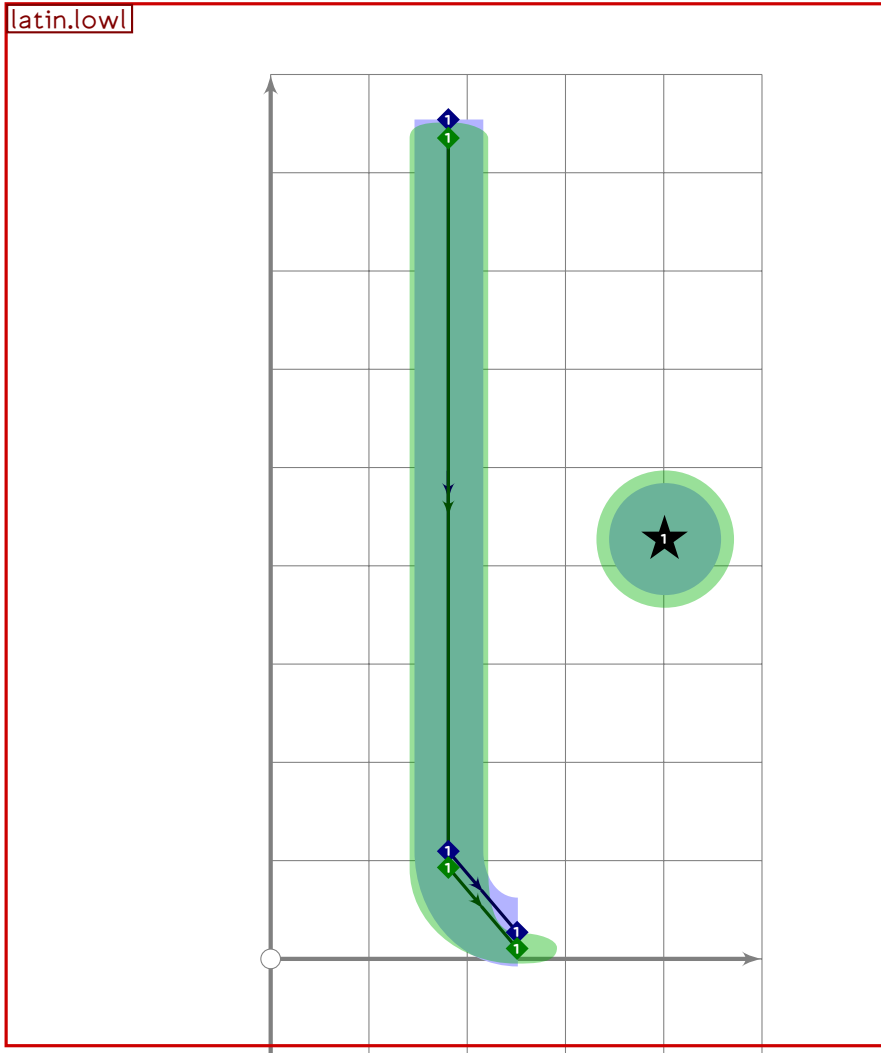
```



```

466 % L with dot
467 begintsuglyph("Ldot",63);
468 tsu_accent.dotabove(tsu_curve.latin.upl);
469 replace_lcblob(0)(oldblob
470   shifted ((xpart 0.8[lcorner get_strokep(0),lrcorner get_strokep(0)],vmetric(0.5))-
471     0.5[lcorner oldblob,urcorner oldblob]));
472 tsu_render;
473 endsuglyph;
474

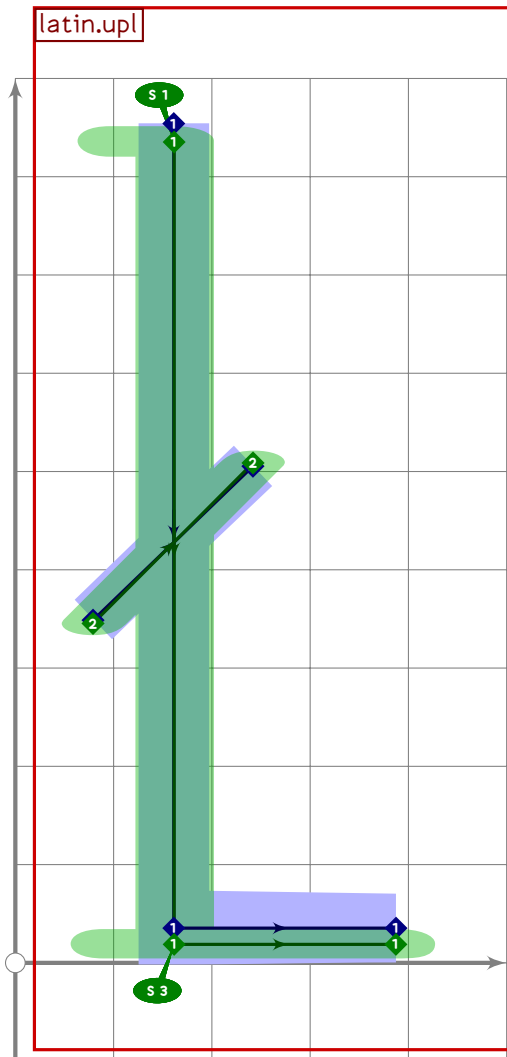
```



```

475 % l with dot
476 begintsuglyph("ldot",64);
477 tsu_accent.dotabove(tsu_xform(identity shifted (-120,0))
478   (tsu_curve.latin.lowl));
479 replace_lcblob(0)(oldblob
480   shifted ((220*xpart llcorner get_stroke(0),vmetric(0.5))-
481     0.5[llcorner oldblob,urcorner oldblob]));
482 tsu_render;
483 endsuglyph;
484

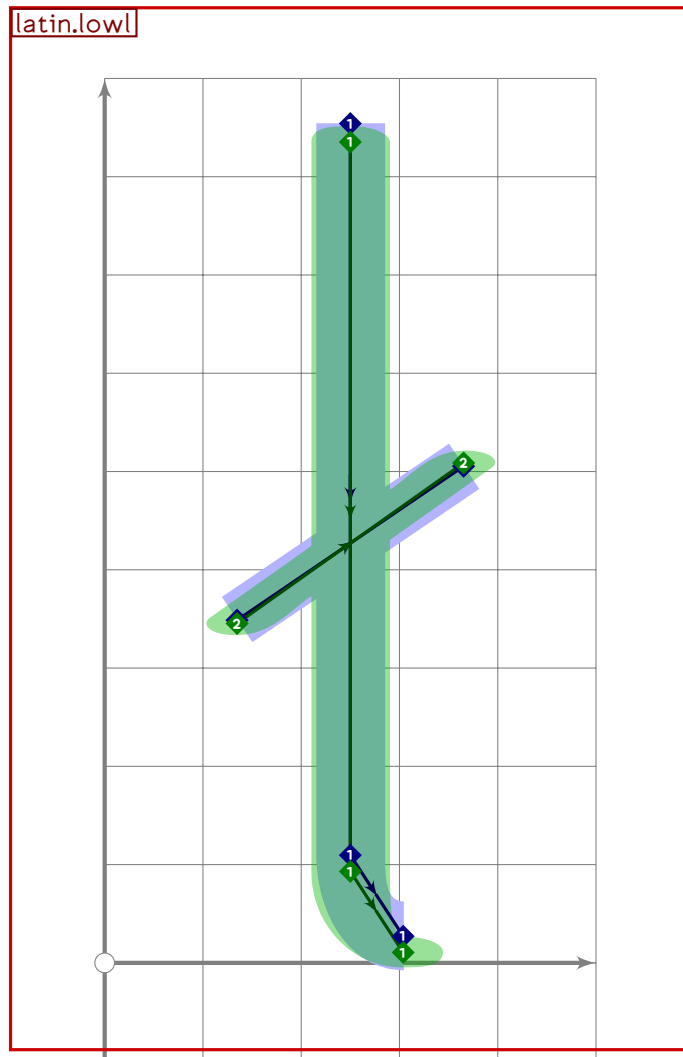
```



```

485 % L with slash
486 beginsuglyph("Lslash",65);
487 tsu_curve.latin.upl;
488 push_stroke((160,vmetric(0.40))-(460,vmetric(0.60)),
489   (1.6,1.6)-(1.6,1.6));
490 set_bosize(0,80);
491 tsu_render;
492 endsuglyph;
493

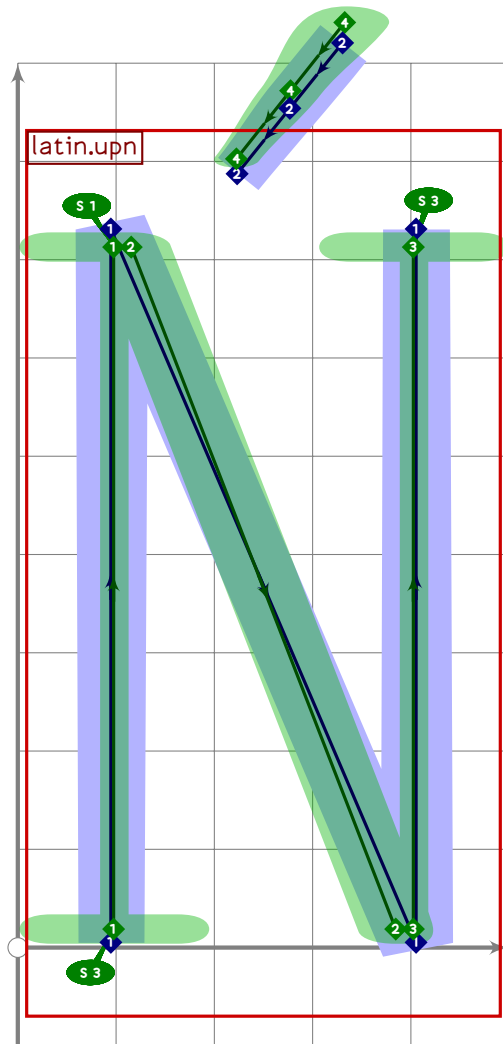
```

```

494 % l with slash
495 beginsuglyph("lslash",66);
496 tsu_curve.latin.lowl;
497 push_stroke((350,vmetric(0.40))-(650,vmetric(0.60)),
498   (1.6,1.6)-(1.6,1.6));
499 set_bosize(0,80);
500 tsu_render;
501 endsuglyph;
502

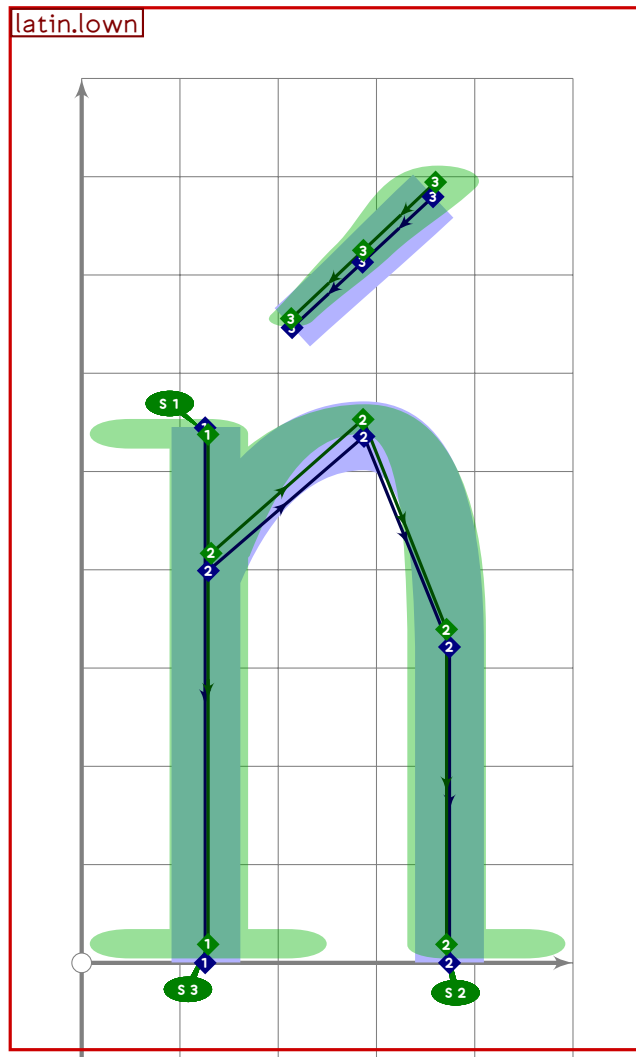
```



```

503 % N with acute
504 begint Suglyph("Nacute",67);
505   tsu_accent.capital(acute)(tsu_curve.latin.upn);
506   tsu_render;
507 endtsuglyph;
508

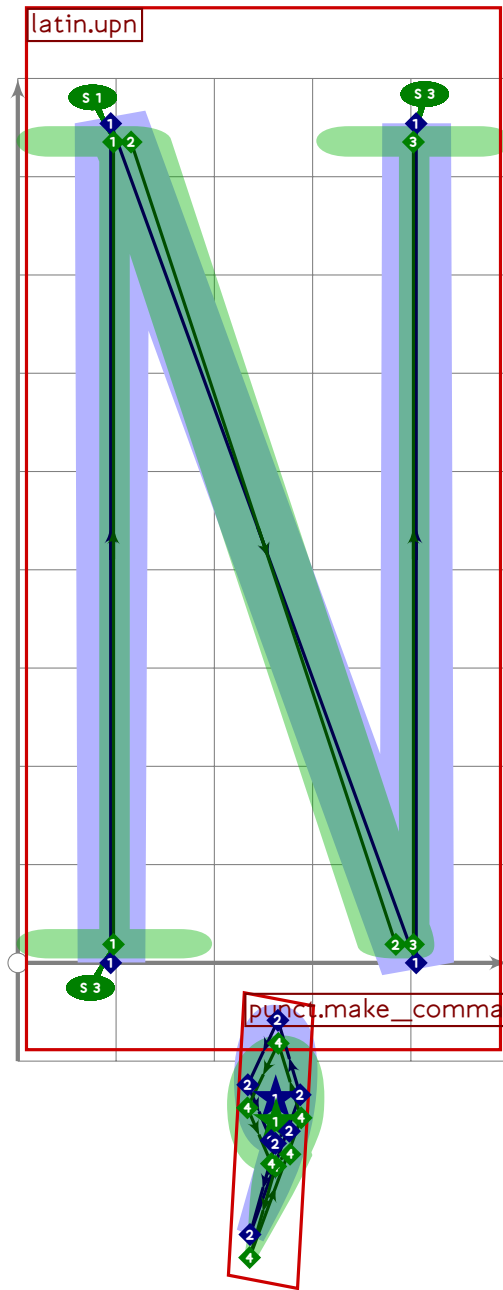
```



```

509 % n with acute
510 begint Suglyph("nacute",68);
511   tsu_accent.acute(tsu_curve.latin.lown);
512   tsu_render;
513 endsuglyph;
514

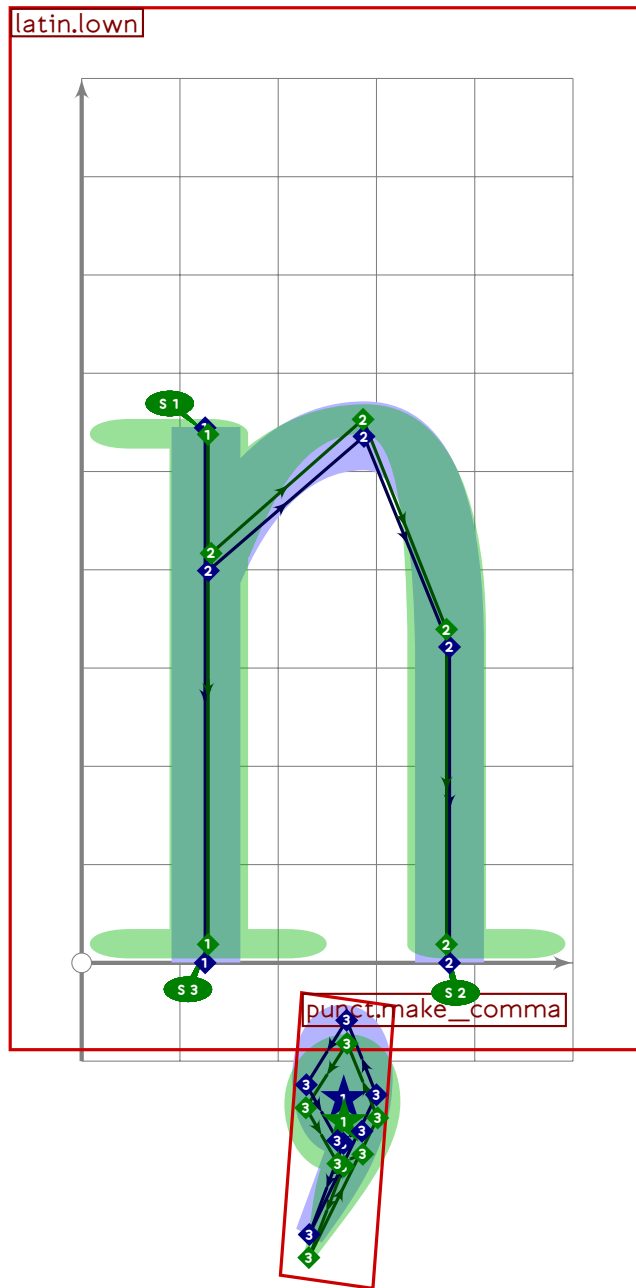
```



```

515 % N with comma below
516 beginsuglyph("uni0145",69);
517   tsu_accent.commabelow(tsu_curve.latin.upn);
518   tsu_render;
519 endsuglyph;
520

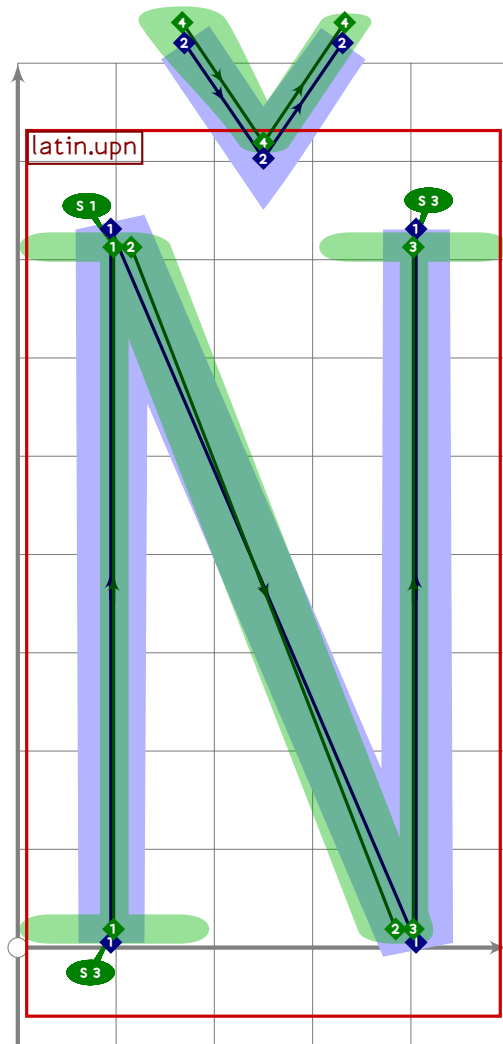
```



```

521 % n with comma below
522 beginsuglyph("uni0146";70);
523   tsu_accent.commabelow(tsu_curve.latin.low);
524   tsu_render;
525 endsuglyph;
526

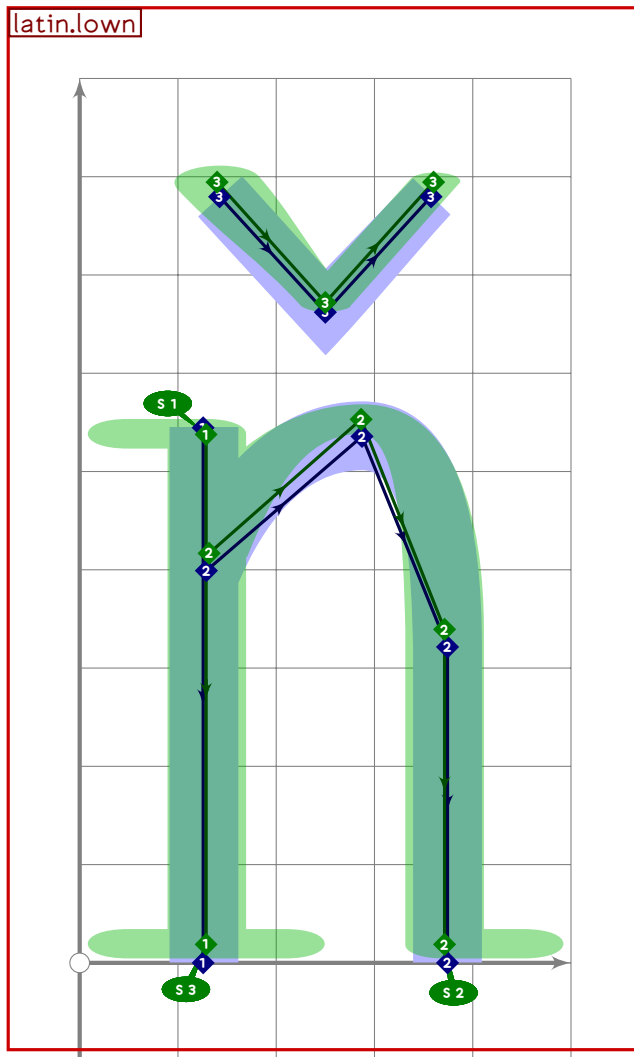
```



```

527 % N with caron
528 begintsuglyph("Ncaron";71);
529   tsu_accent.capital(caron)(tsu_curve.latin.upn);
530   tsu_render;
531 endsuglyph;
532

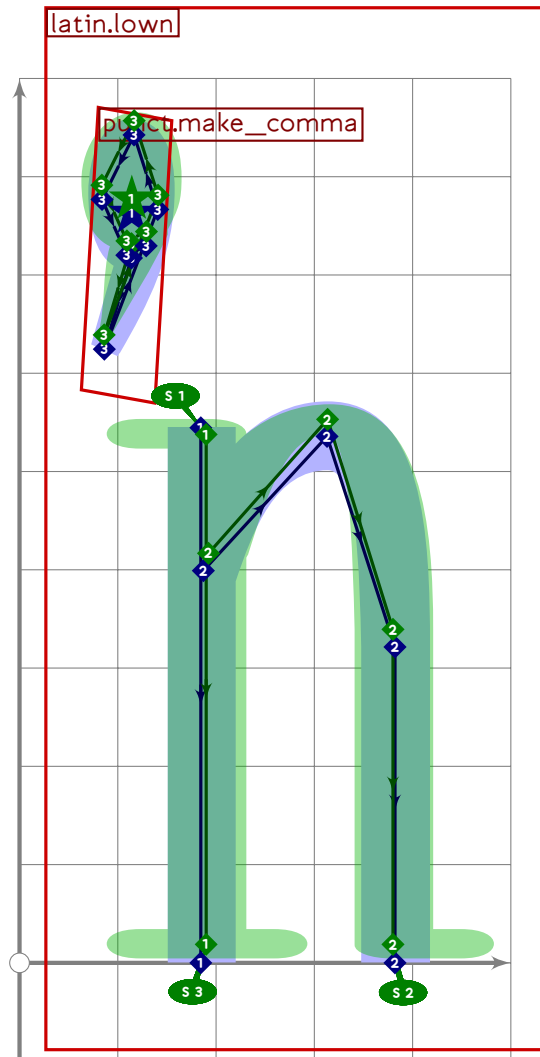
```



```

533 % n with caron
534 begintsuglyph("ncaron";72);
535   tsu_accent.caron(tsu_curve.latin.lown);
536   tsu_render;
537 endsuglyph;
538

```



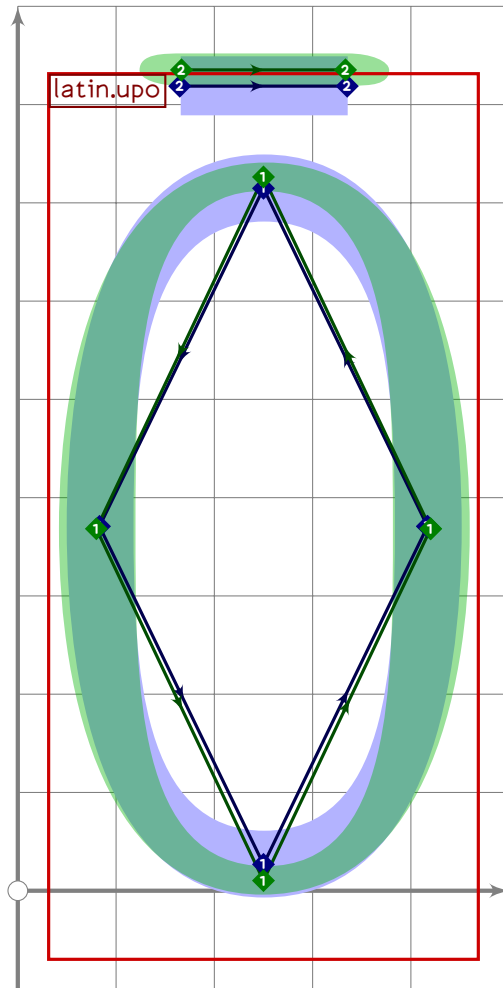
```

539 % n with apostrophe before
540 begintsuglyph("napostrophe",73);
541 tsu_xform(identity shifted (30,0))(tsu_curve.latin.lown);
542 tsu_curve.punct.make_comma((230,vmetric(0.94)),0);
543 tsu_render;
544 endtsuglyph;
545
546 % uppercase Eng
547 begintsuglyph("Eng",74);
548 tsu_curve.latin.upeng;
549 tsu_render;
550 endtsuglyph;
551
552 % lowercase eng
553 begintsuglyph("eng",75);
554 tsu_curve.latin.loweng;
555 tsu_render;
556 endtsuglyph;
557

```

[see page 171]

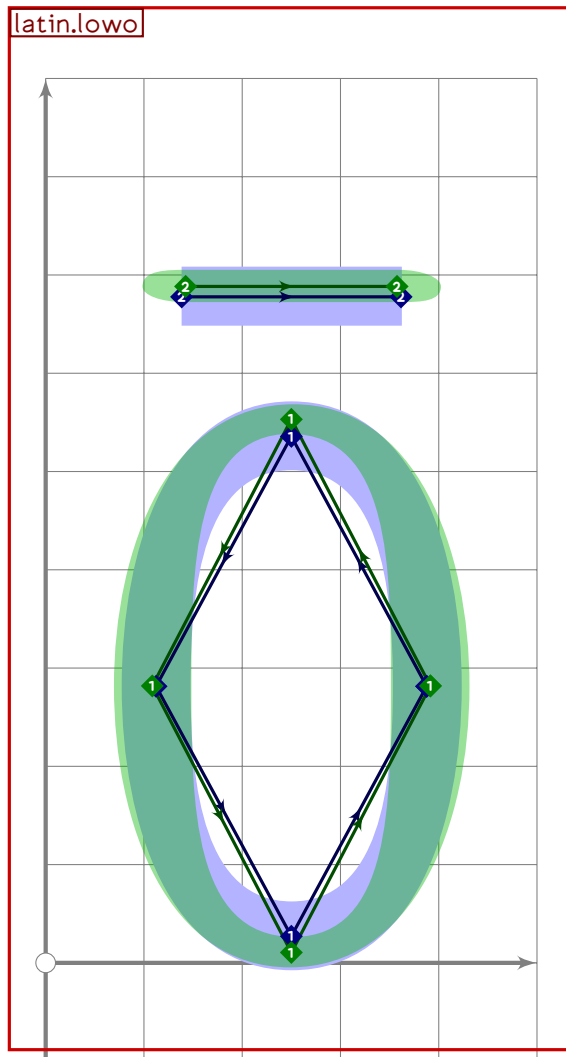
[see page 209]



```

558 % O with macron
559 begintsuglyph("Omacron",76);
560 tsu_accent.capital(macron)(tsu_curve.latin.upo);
561 tsu_render;
562 endsuglyph;
563

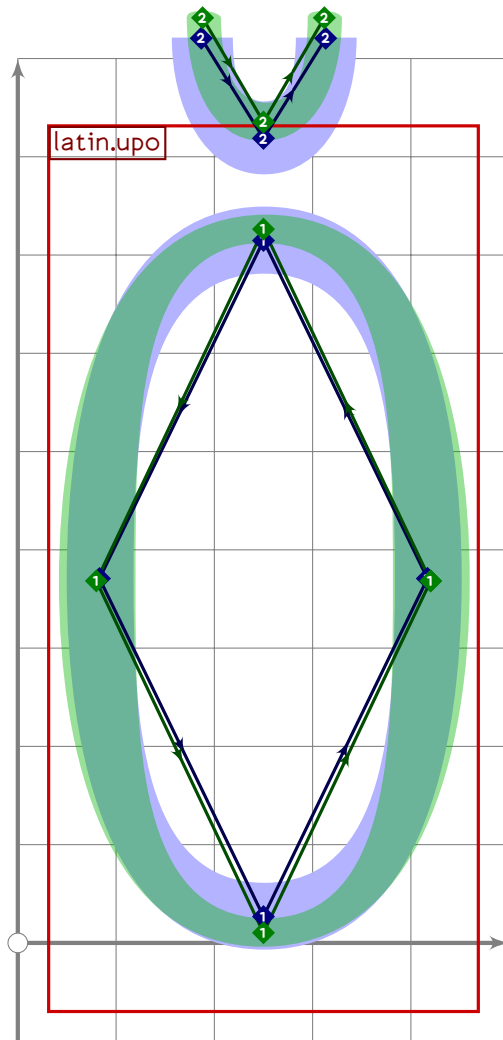
```



```

564 % o with macron
565 begintsuglyph("omacron";77);
566 tsu_accent.macron(tsu_curve.latin.low);
567 tsu_render;
568 endsuglyph;
569

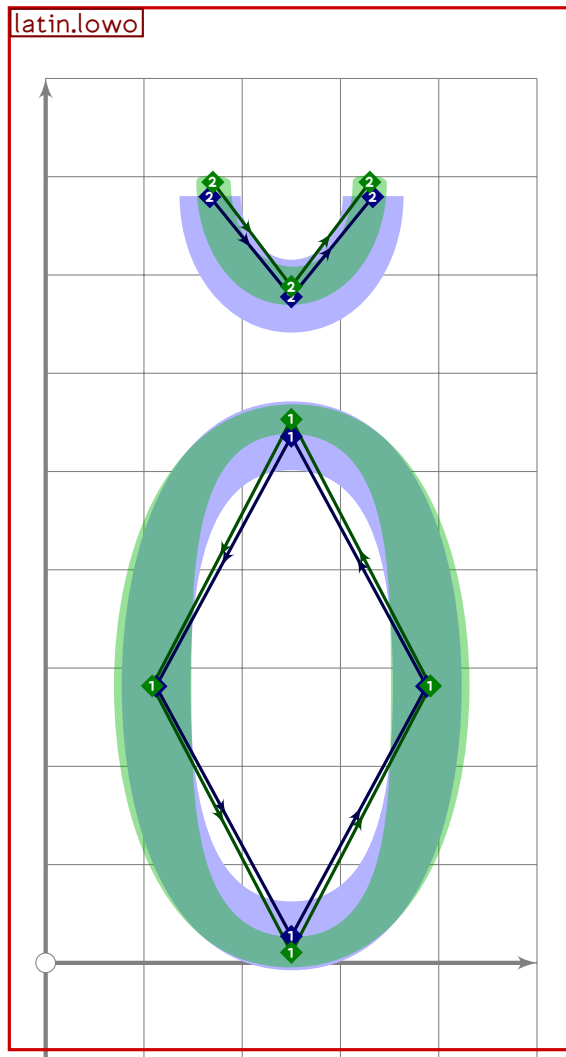
```



```

570 % O with breve
571 begintsuglyph("Obreve";78);
572 tsu_accent.capital(breve)(tsu_curve.latin.upo);
573 tsu_render;
574 endtsuglyph;
575

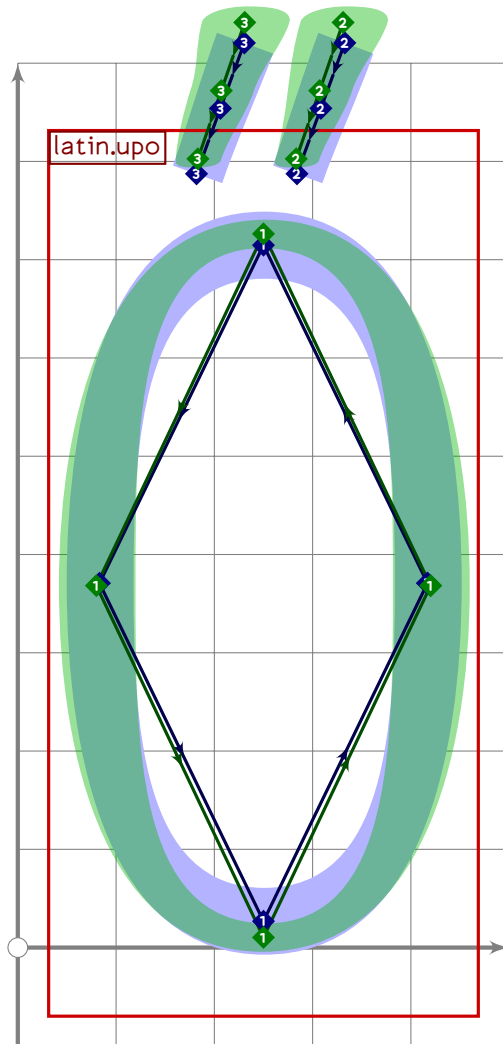
```



```

576 % o with breve
577 begintsuglyph("obreve",79);
578   tsu_accent.breve(tsu_curve.latin.lowo);
579   tsu_render;
580 endsuglyph;
581

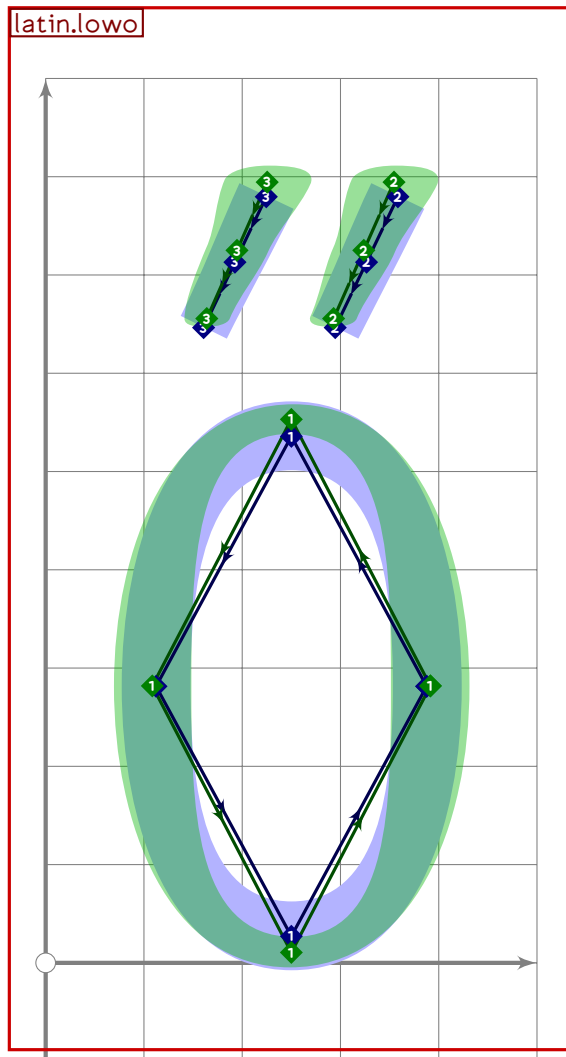
```



```

582 % O with Hunarian umlaut
583 begintsuglyph("Ohungarumlaut",80);
584 tsu_accent.capital(hungarian_umlaut)(tsu_curve.latin.upo);
585 tsu_render;
586 endsuglyph;
587

```



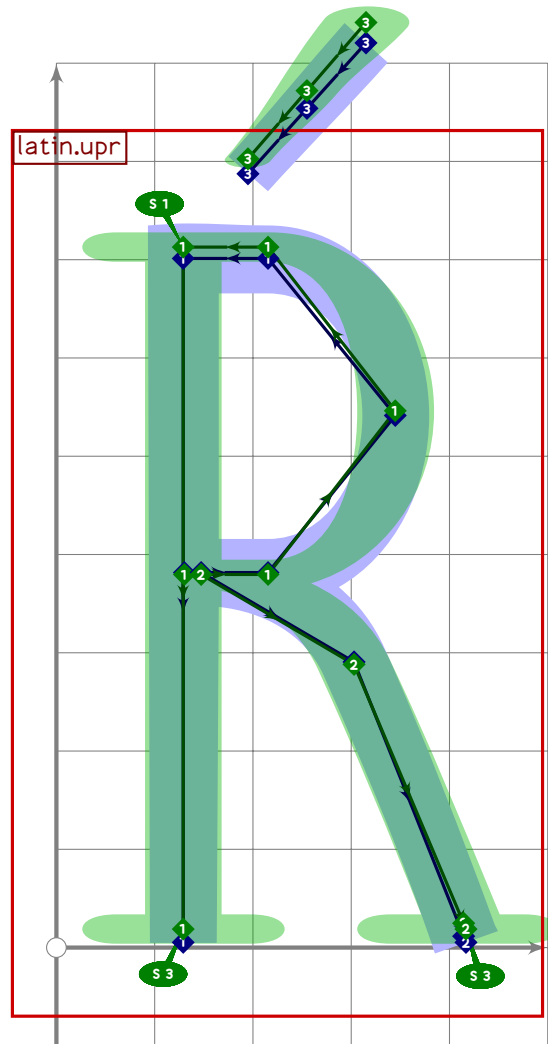
```

588 % o with hungarian umlaut
589 begintsuglyph("ohungarumlaut";81);
590 tsu_accent.hungarian_umlaut(tsu_curve.latin.low);
591 tsu_render;
592 endsuglyph;
593
594 % OE ligature
595 begintsuglyph("OE";82);
596 tsu_curve.latin.upoe;
597 tsu_render;
598 endsuglyph;
599
600 % oe ligature
601 begintsuglyph("oe";83);
602 tsu_curve.latin.lowoe;
603 tsu_render;
604 endsuglyph;
605

```

[see page 173]

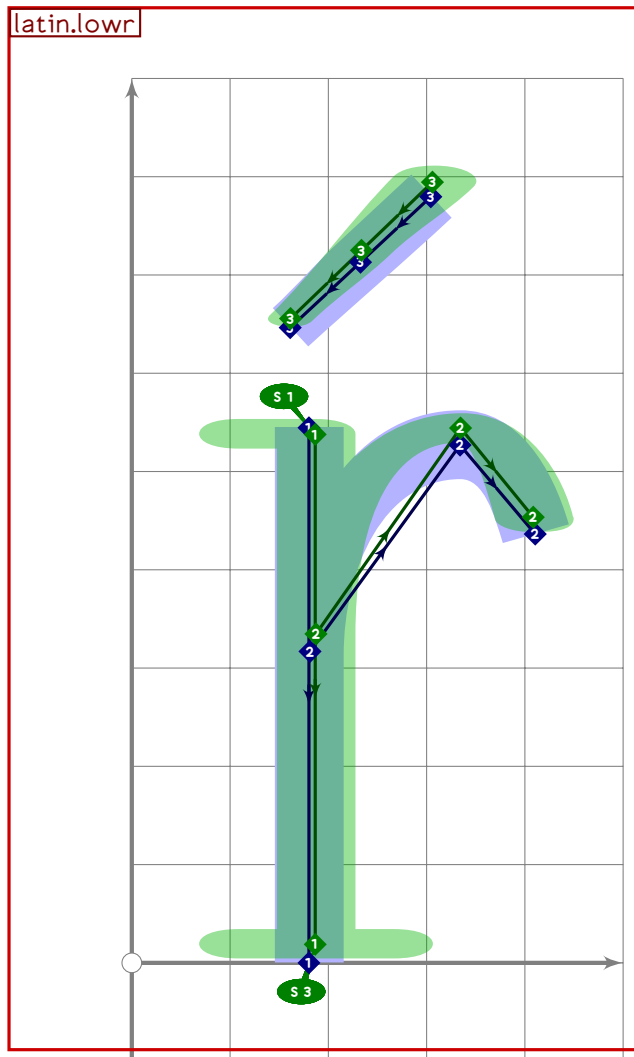
[see page 211]



```

606 % R with acute
607 begintsuglyph("Racute",84);
608   tsu_accent.capital(acute)(tsu_curve.latin.upr);
609   tsu_render;
610 endsuglyph;
611

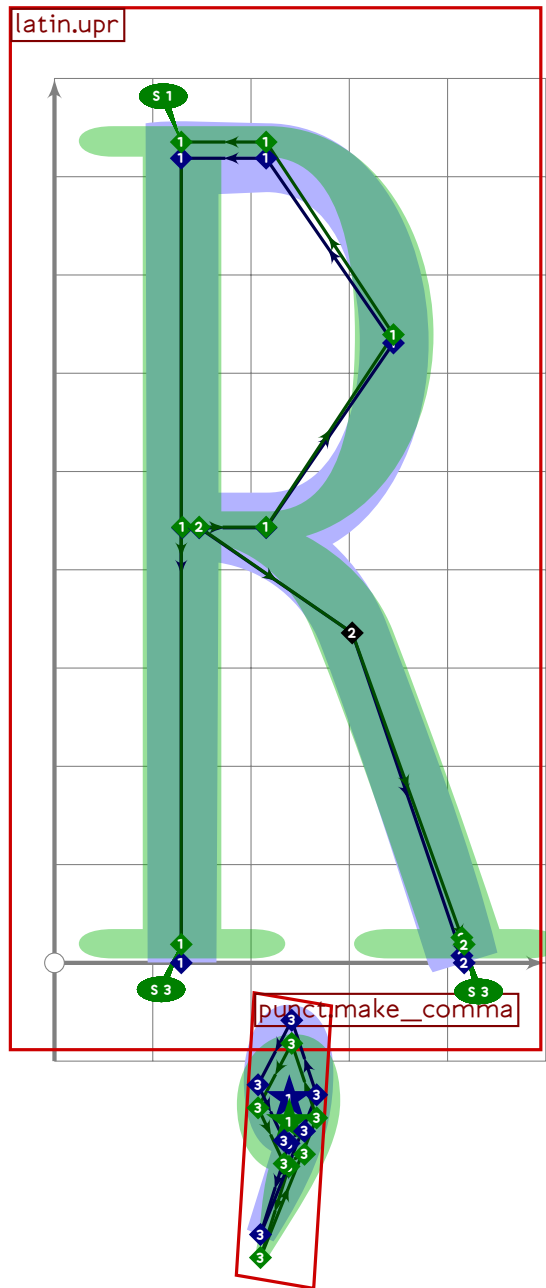
```



```

612 % r with acute
613 begintsuglyph("racute";85);
614 tsu_accent.acute(tsu_curve.latin.lowr);
615 tsu_render;
616 endsuglyph;
617

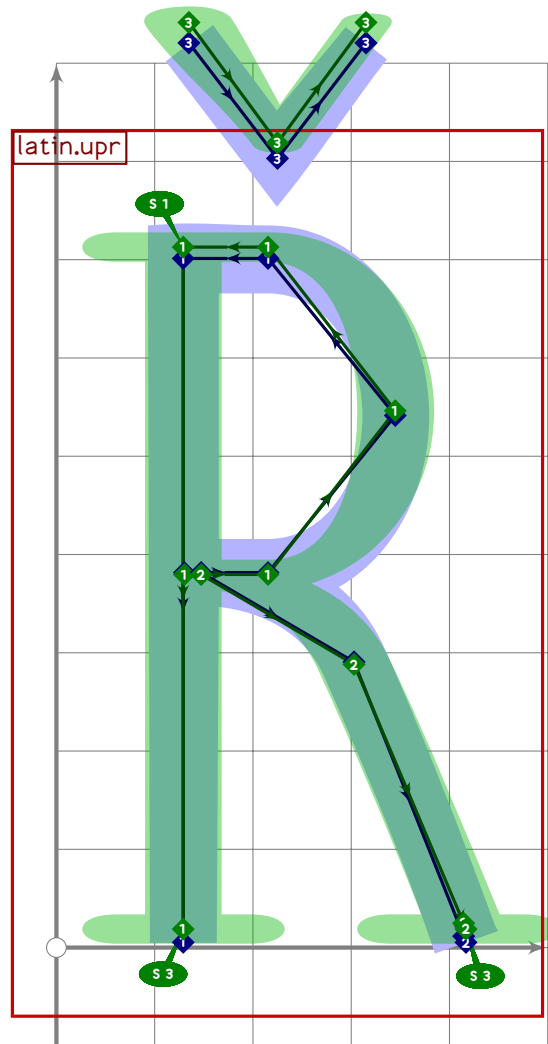
```

```

618 % R with comma below
619 begint Suglyph("uni0156";86);
620   tsu_accent.commabelow(tsu_curve.latin.upr);
621   tsu_render;
622 endsuglyph;
623

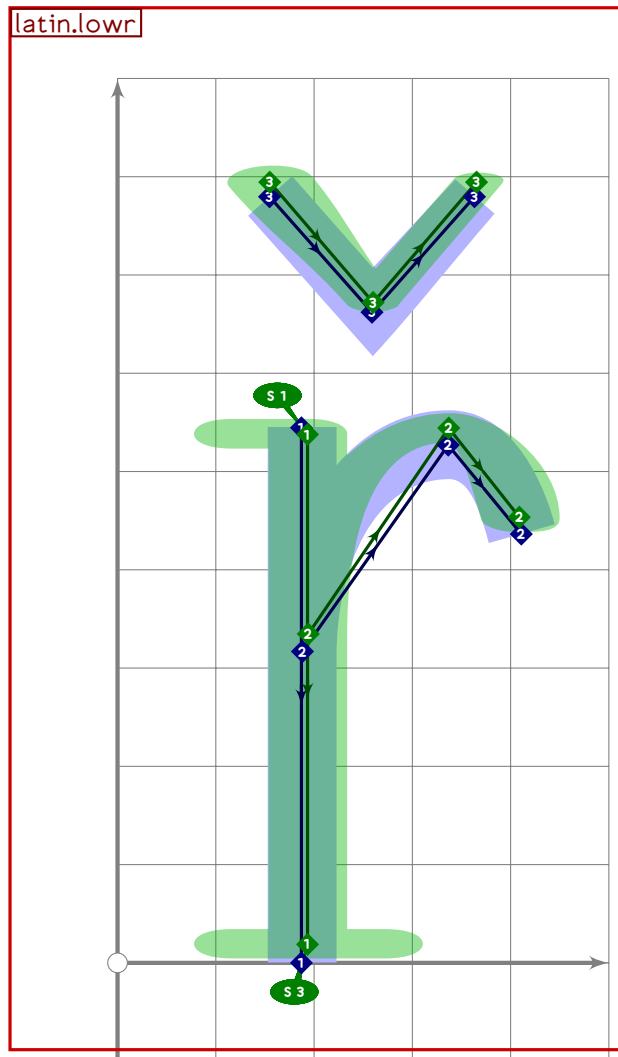
```

```

630 % R with caron
631 begint Suglyph("Rcaron";88);
632   tsu_accent.capital(caron)(tsu_curve.latin.upr);
633   tsu_render;
634 endtsuglyph;
635

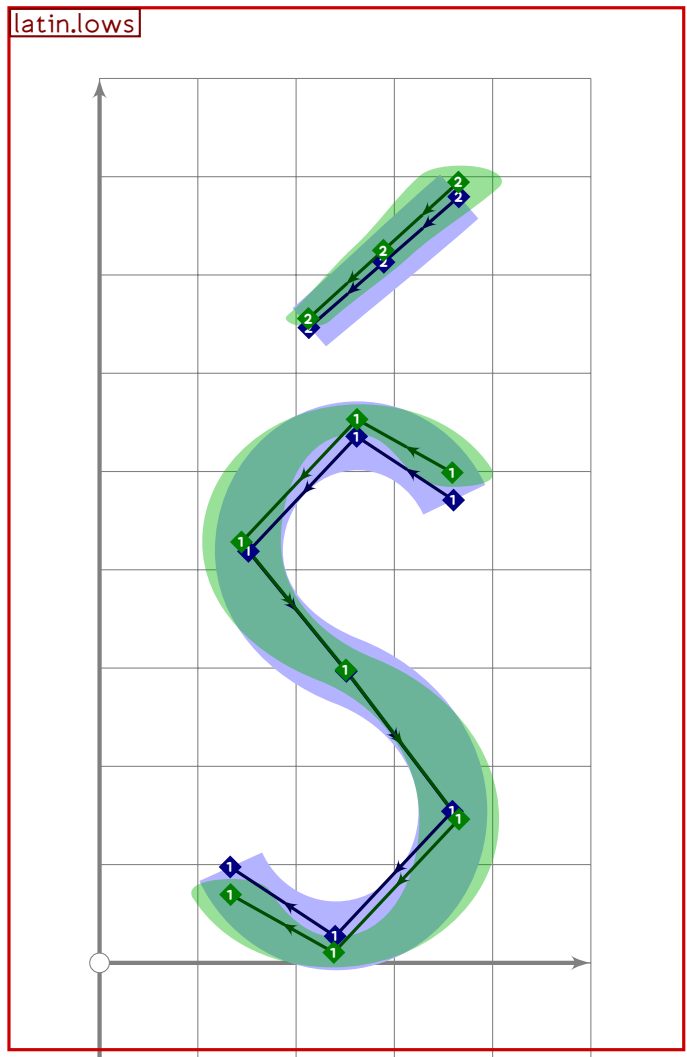
```



```

636 % r with caron
637 begintsuglyph("rcaron";89);
638 tsu_accent.caron(tsu_curve.latin.lowr);
639 replace_strokep(0)(oldp shifted (80,0));
640 tsu_render;
641 endsuglyph;
642

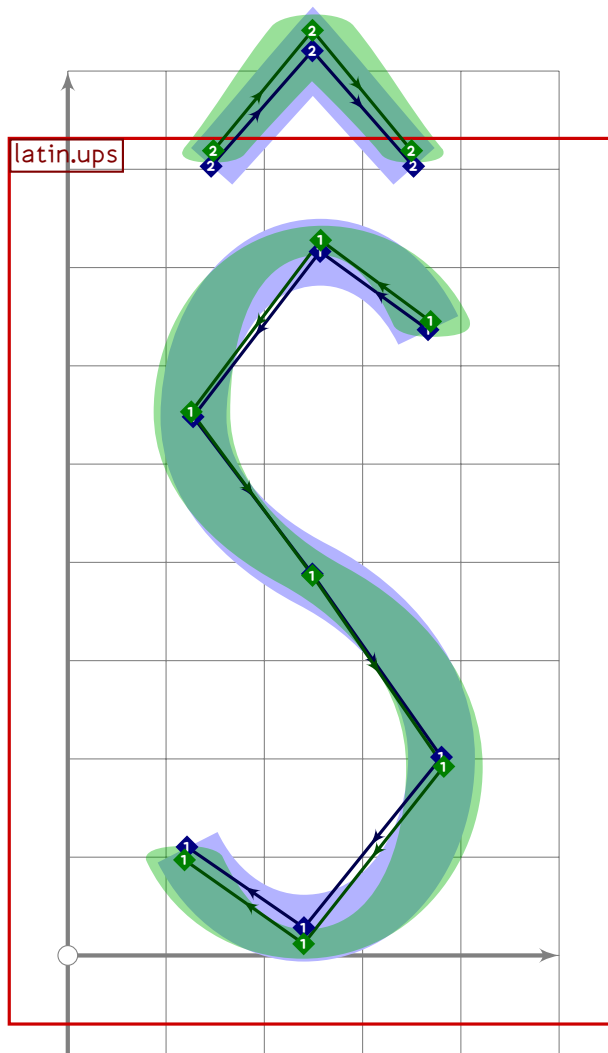
```

```

649 % s with acute
650 begintsuglyph("sacute";91);
651   tsu_accent.acute(tsu_curve.latin.lows);
652   tsu_render;
653 endsuglyph;
654

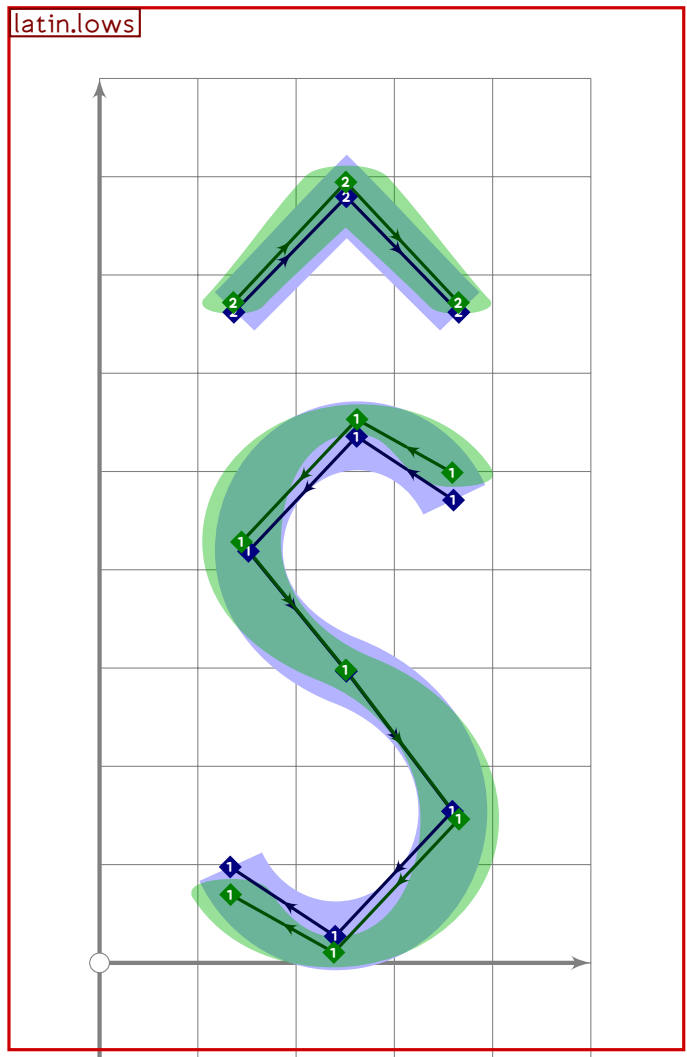
```



```

655 % S with circumflex
656 begintsuglyph("Scircumflex";92);
657 tsu_accent.capital(circumflex)(tsu_curve.latin.ups);
658 tsu_render;
659 endtsuglyph;
660

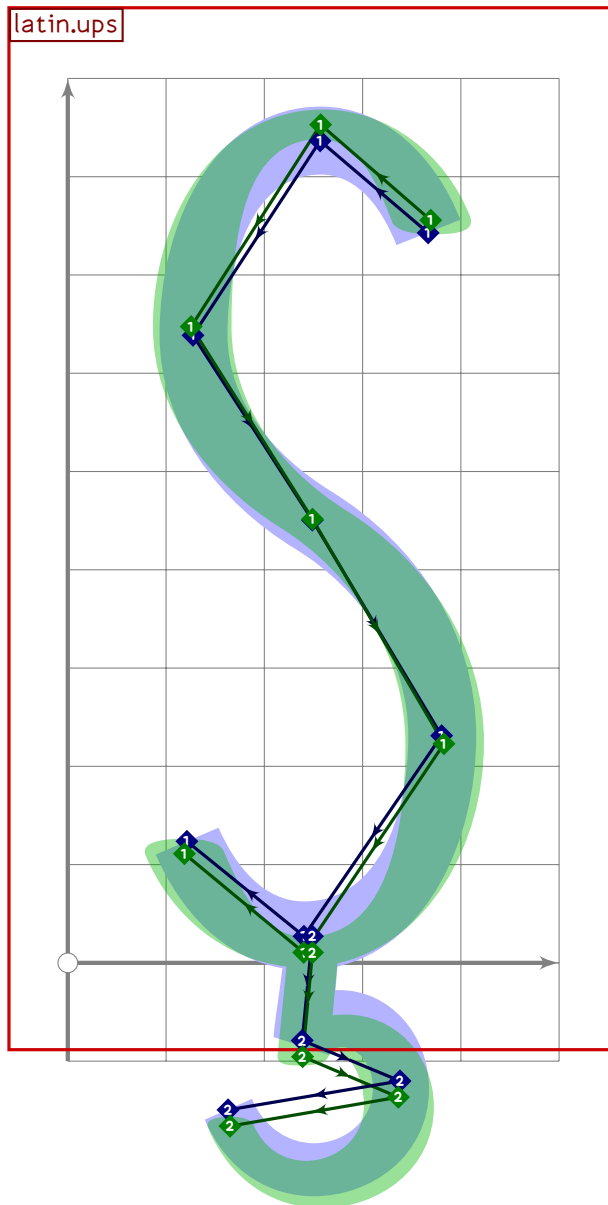
```



```

661 % s with circumflex
662 beginsuglyph("scircumflex",93);
663 tsu_accent.circumflex(tsu_curve.latin.lows);
664 tsu_render;
665 endsuglyph;
666

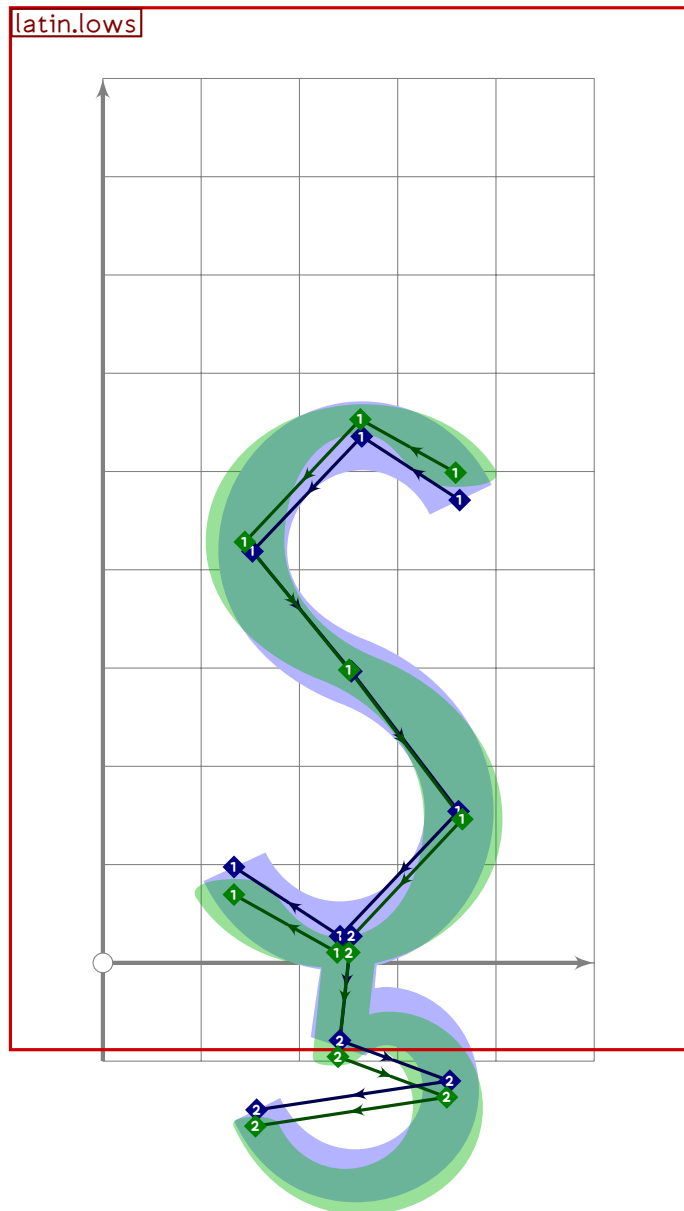
```

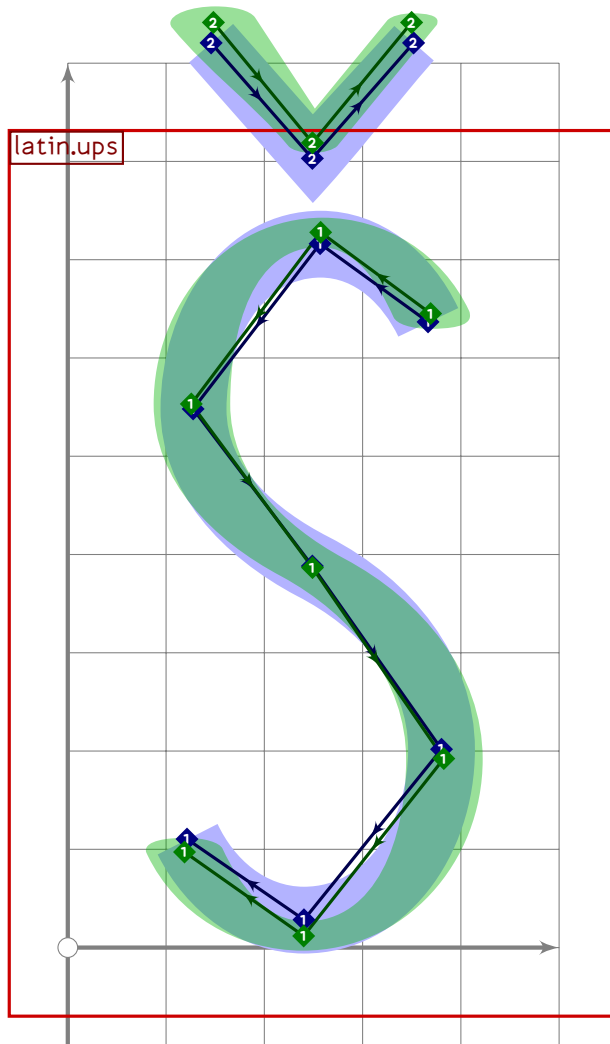
```

667 % S with cedilla
668 begint Suglyph("Scedilla",94);
669   tsu_accent.cedilla(tsu_curve.latin.ups);
670   tsu_render;
671 endtsuglyph;
672

```



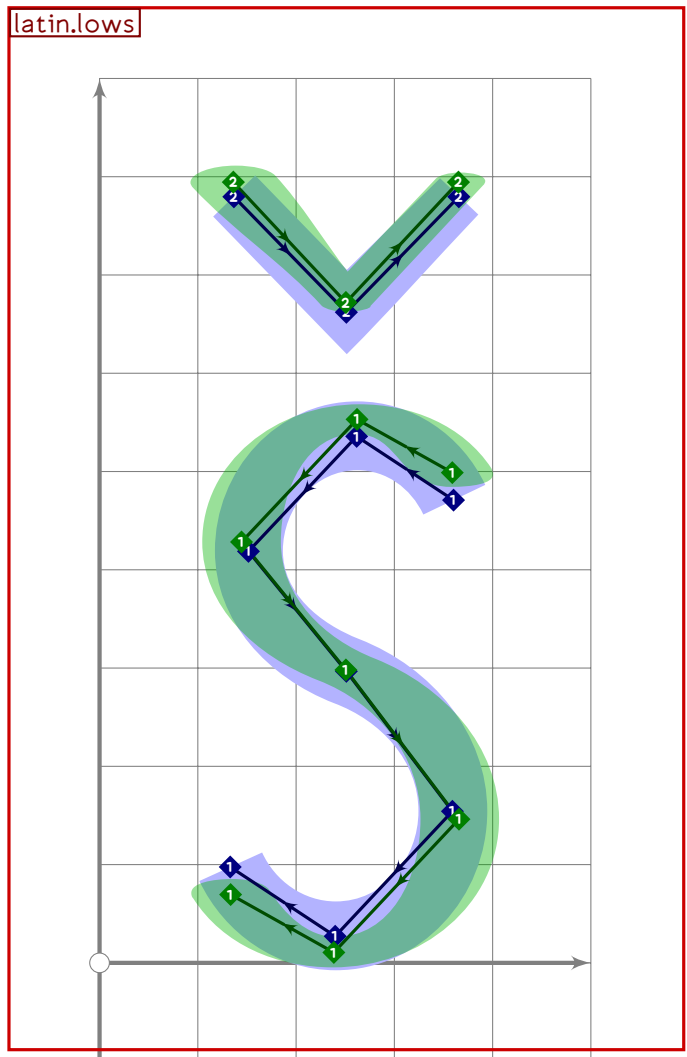
```
673 % s with cedilla
674 begintsuglyph("scedilla";95);
675 tsu_accent.cedilla(tsu_curve.latin.lows);
676 tsu_render;
677 endtsuglyph;
678
```



```

679 % S with caron
680 begint Suglyph("Scaron",96);
681   tsu_accent.capital(caron)(tsu_curve.latin.ups);
682   tsu_render;
683 endsuglyph;
684

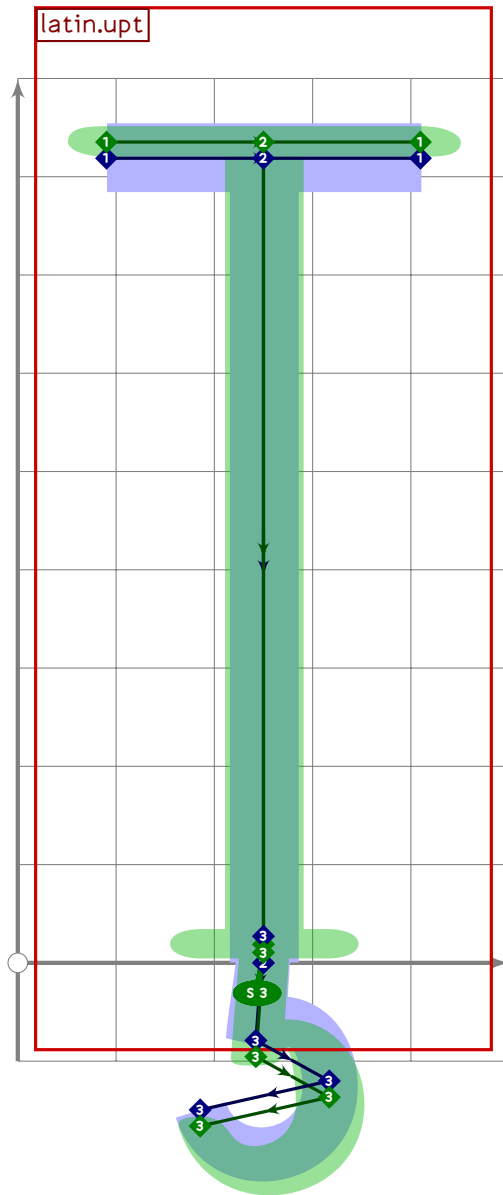
```



```

685 % s with caron
686 begintsuglyph("scaron";97);
687   tsu_accent.caron(tsu_curve.latin.lows);
688   tsu_render;
689 endsuglyph;
690

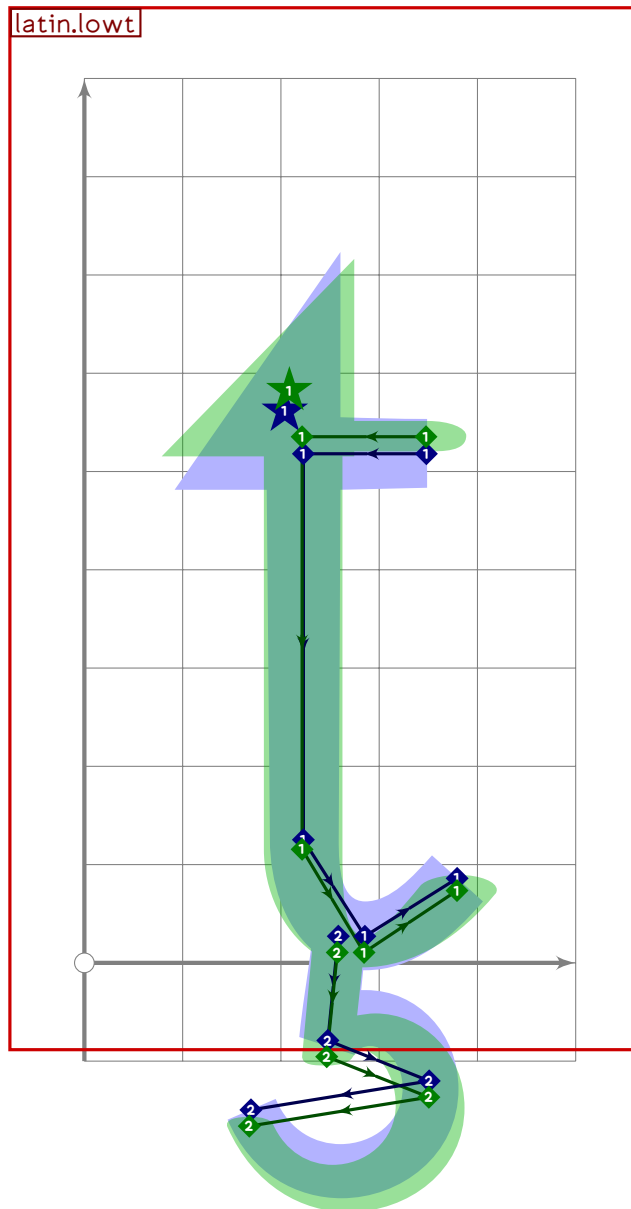
```



```

691 % T with cedilla [sic]
692 begintsuglyph("uni0162";98);
693 tsu_accent.cedilla(tsu_curve.latin.upt);
694 tsu_render;
695 endsuglyph;
696

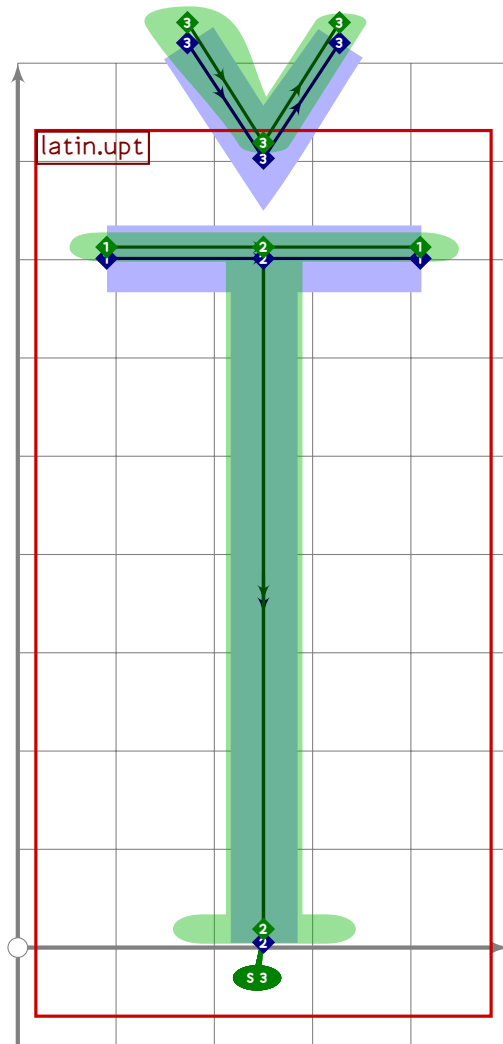
```



```

697 % t with cedilla [sic]
698 begint Suglyph("uni0163";99);
699   tsu_accent.cedilla(tsu_curve.latin.lowt);
700   replace_strokep(0)(oldp shifted (20,0));
701   tsu_render;
702 endtsuglyph;
703

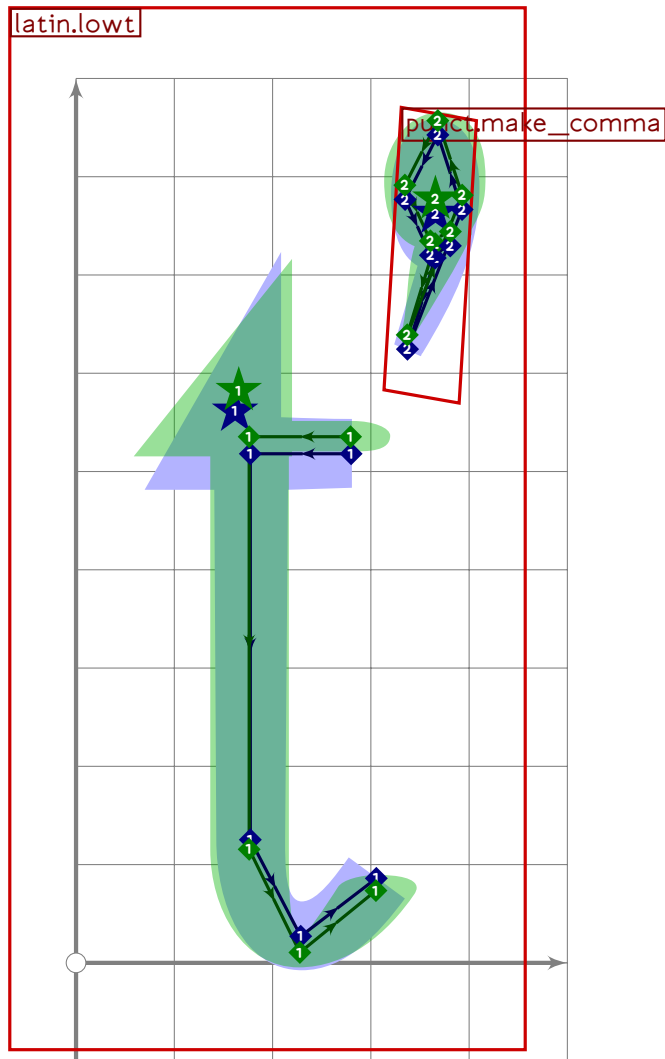
```



```

704 % T with caron
705 begintsuglyph("Tcaron",100);
706   tsu_accent.capital(caron)(tsu_curve.latin.upt);
707   tsu_render;
708 endsuglyph;
709

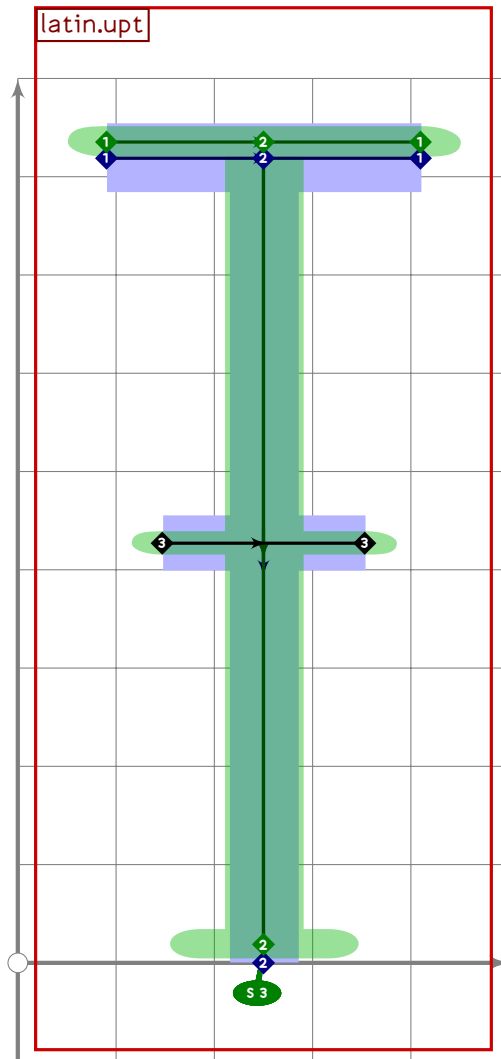
```



```

710 % t with apostrophe caron
711 begintsuglyph("tcaron";101);
712 tsu_accent.caron_apostrophe(-130)(tsu_curve.latin.lowt);
713 tsu_render;
714 endsuglyph;
715

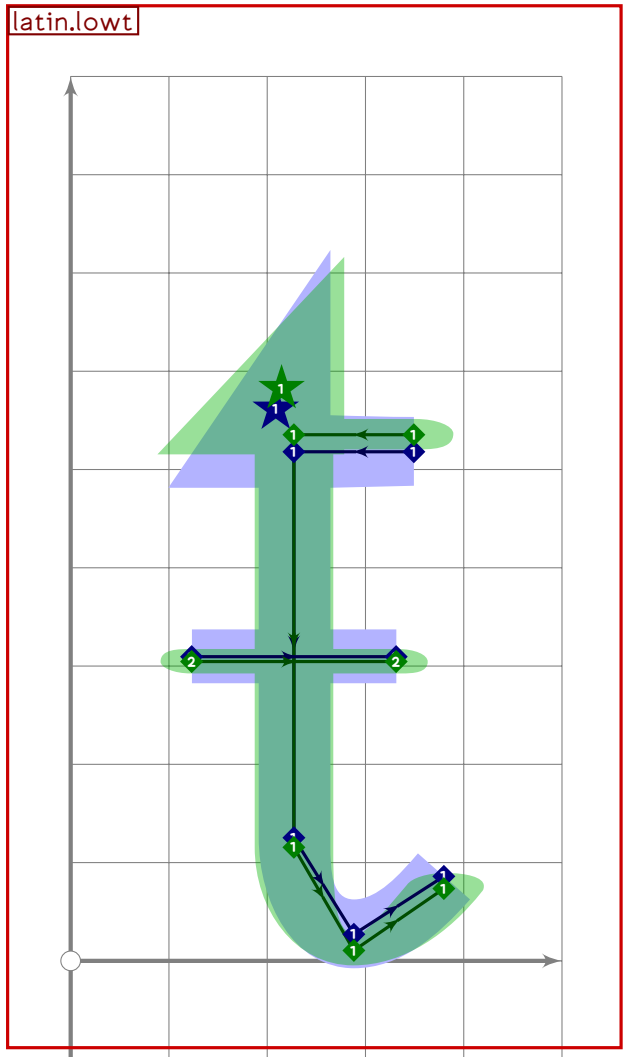
```

```

716 % T with bar
717 begintsuglyph("Tbar";102);
718   tsu_curve.latin.upt;
719   push_stroke((300,vmetric(0.5))-(700,vmetric(0.5)),
720     (1.6,1.6)-(1.6,1.6));
721   set_bosize(0,80);
722   tsu_render;
723 endsuglyph;
724

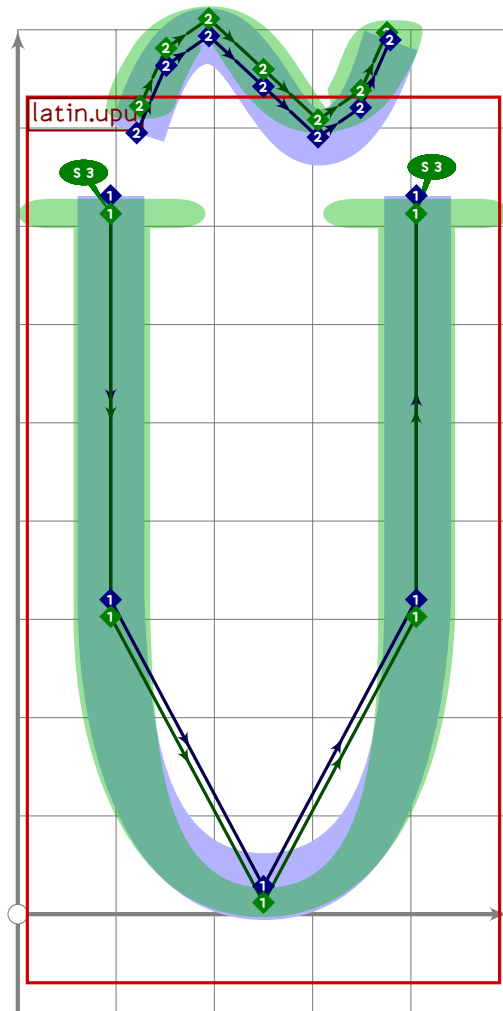
```



```

725 % t with bar
726 beginsuglyph("tbar";103);
727 tsu_curve.latin.lowt;
728 push_stroke((320,vmetric(0.35))-(620,vmetric(0.35)),
729   (1.6,1.6)-(1.6,1.6));
730 set_bosize(0,80);
731 tsu_render;
732 endsuglyph;
733

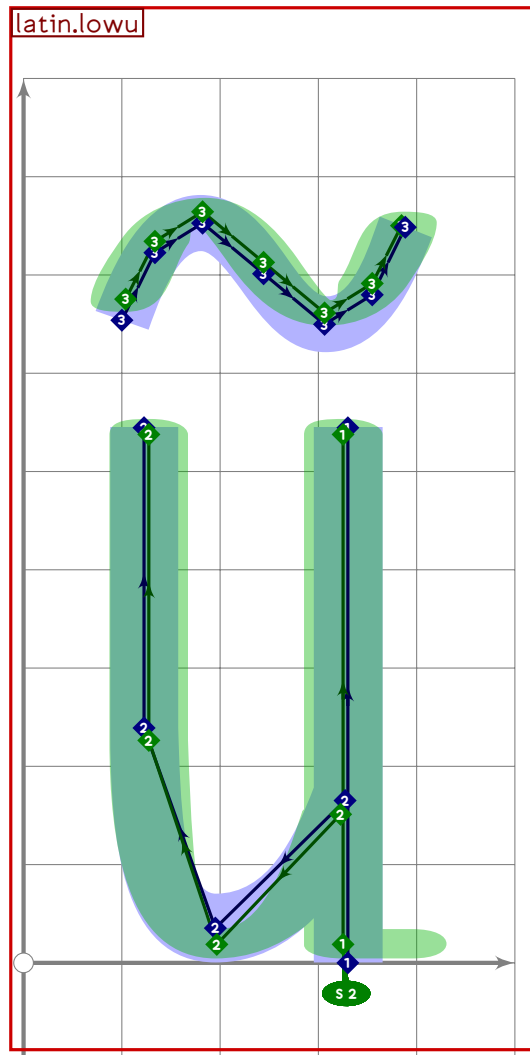
```



```

734 % U with tilde
735 begintsuglyph("Utilde";104);
736 tsu_accent.capital(tilde)(tsu_curve.latin.upu);
737 tsu_render;
738 endsuglyph;
739

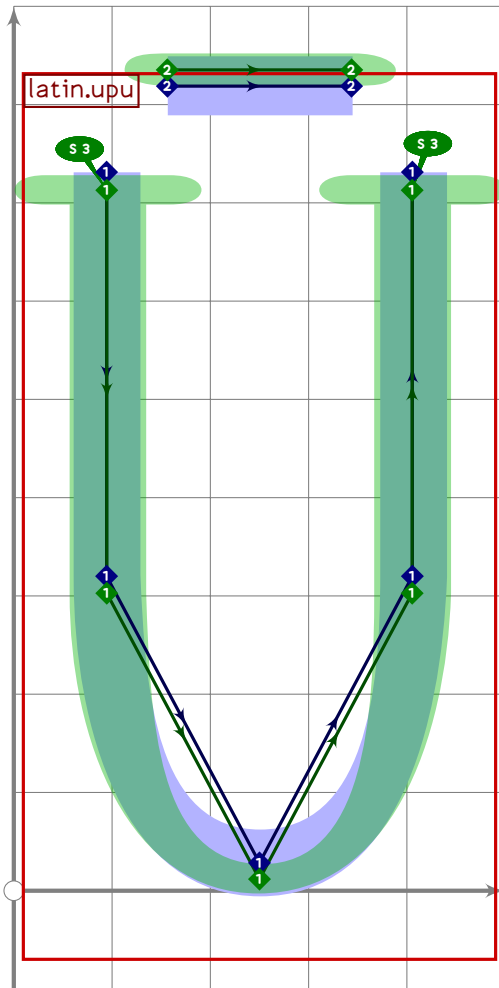
```



```

740 % u with tilde
741 begintsuglyph("utilde";105);
742 tsu_accent.tilde(tsu_curve.latin.lowu);
743 replace_strokep(0)(oldp shifted (-20,0));
744 tsu_render;
745 endtsuglyph;
746

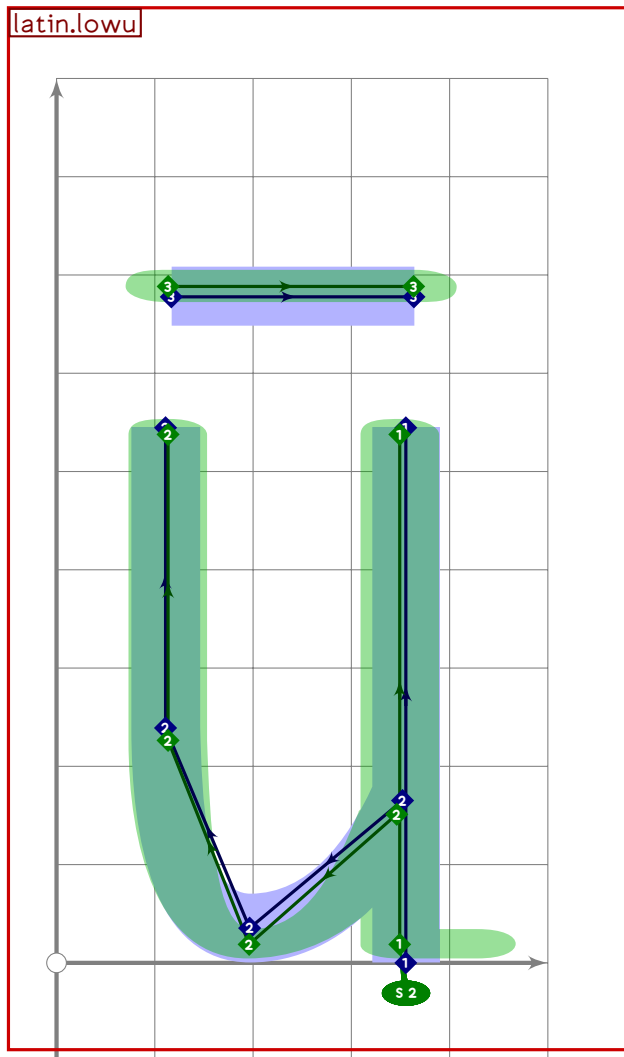
```



```

747 % U with macron
748 begintsuglyph("Umacron",106);
749 tsu_accent.capital(macron)(tsu_curve.latin.upu);
750 tsu_render;
751 endtsuglyph;
752

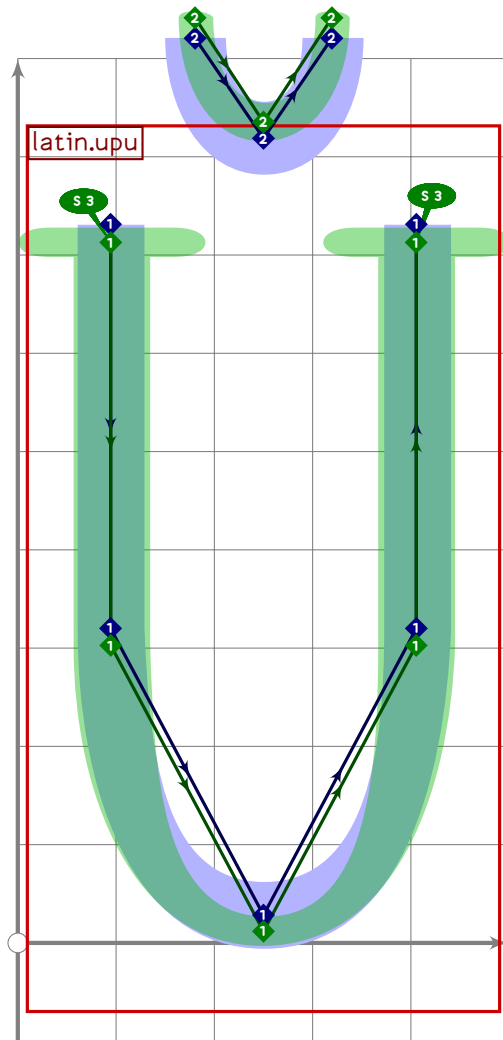
```



```

753 % u with macron
754 begintsuglyph("umacron";107);
755 tsu_accent.macron(tsu_curve.latin.lowu);
756 replace_strokep(0)(oldp shifted (-40,0));
757 tsu_render;
758 endtsuglyph;
759

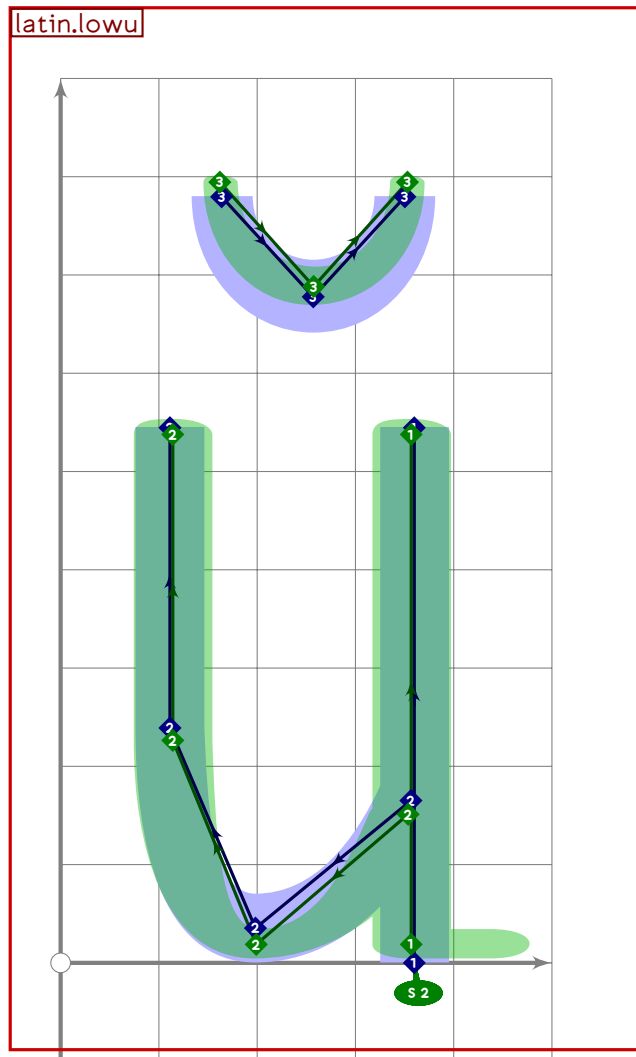
```



```

760 % U with breve
761 begint Suglyph("Ubreve";108);
762   tsu_accent.capital(breve)(tsu_curve.latin.upu);
763   tsu_render;
764 endtsuglyph;
765

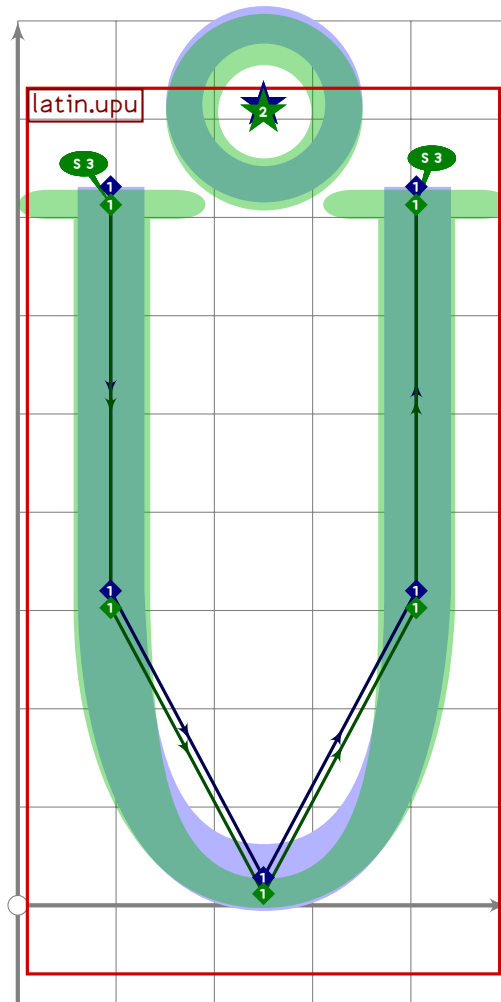
```



```

766 % u with breve
767 begintsuglyph("ubreve";109);
768 tsu_accent.breve(tsu_curve.latin.lowu);
769 replace_strokep(0)(oldp shifted (-20,0));
770 tsu_render;
771 endsuglyph;
772

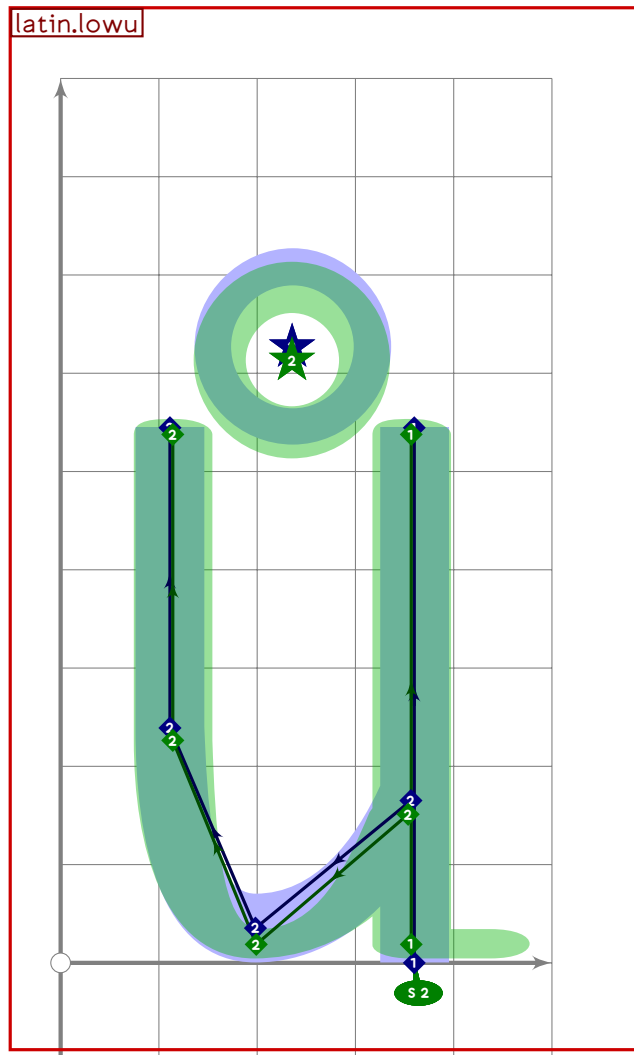
```

```

773 % U with ring above
774 begintsuglyph("Uring",110);
775 tsu_accent.capital(ringabove)(tsu_curve.latin.upu);
776 tsu_render;
777 endtsuglyph;
778

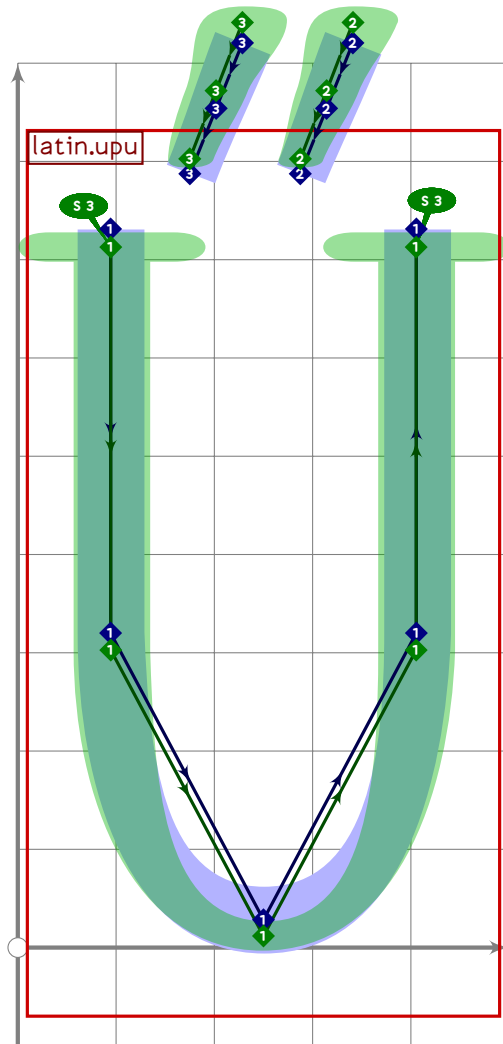
```



```

779 % u with ring above
780 begint Suglyph("uring",111);
781 tsu_accent.ringabove(tsu_curve.latin.lowu);
782 replace_lcblob(-1)(oldblob shifted (-50,-40));
783 replace_lcblob(0)(oldblob shifted (-50,-40));
784 tsu_render;
785 endtsuglyph;
786

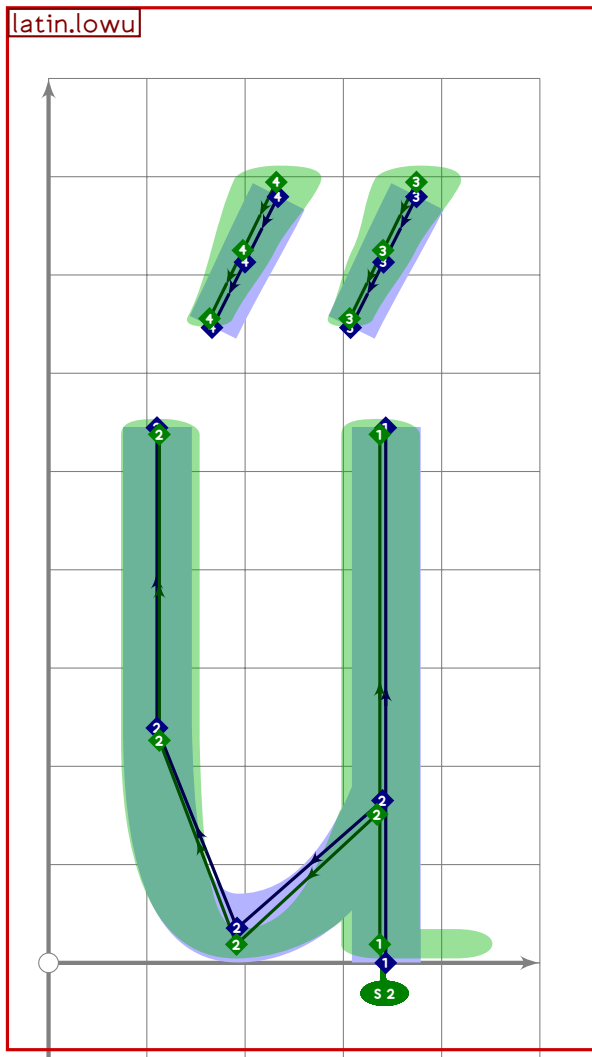
```



```

787 % U with Hungarian umlaut
788 \begintsuglyph("Uhungarumlaut";112);
789 \tsu_accent.capital(hungarian_umlaut)(tsu_curve.latin.upu);
790 \tsu_render;
791 \endsuglyph;
792

```



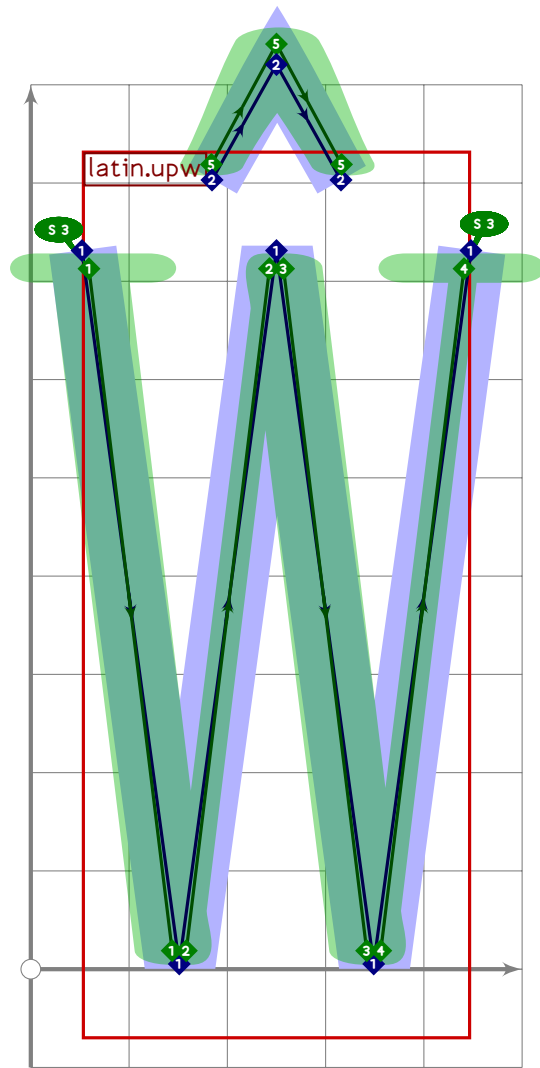
```

793 % u with Hungarian umlaut
794 begintsuglyph("uhungarumlaut";113);
795 tsu_accent.hungarian_umlaut(tsu_curve.latin.lowu);
796 tsu_render;
797 endsuglyph;
798
799 % U with ogonek
800 begintsuglyph("Uogonek";114);
801 tsu_curve.latin.upuogonek;
802 tsu_render;
803 endsuglyph;
804
805 % u with ogonek
806 begintsuglyph("uogonek";115);
807 tsu_curve.latin.lowuogonek;
808 tsu_render;
809 endsuglyph;
810

```

[see page 249]

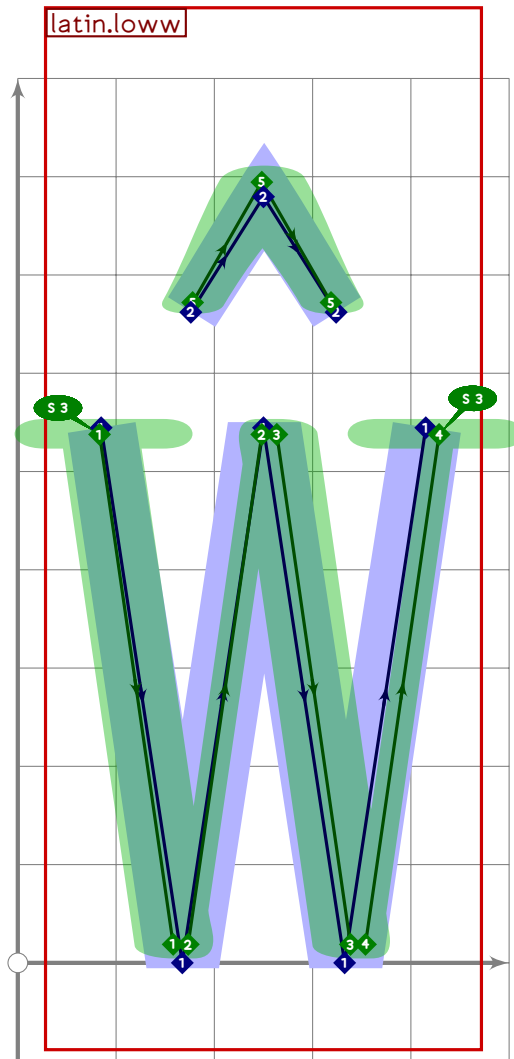
[see page 255]



```

811 % W with circumflex
812 begint Suglyph("Wcircumflex",116);
813   tsu_accent.capital(circumflex)(tsu_curve.latin.upw);
814   tsu_render;
815 endtsuglyph;
816

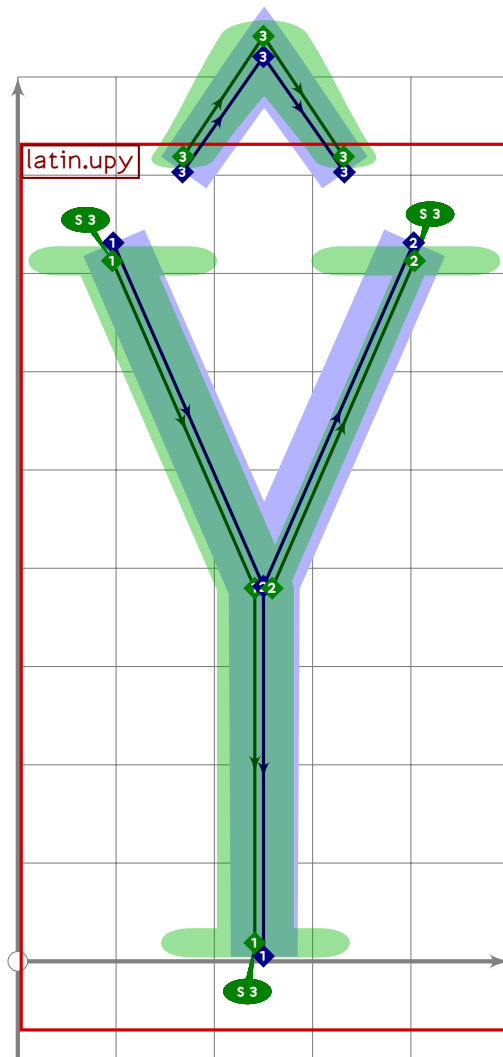
```



```

817 % w with circumflex
818 beginsuglyph("wcircumflex";117);
819 tsu_accent.circumflex(tsu_curve.latin.loww);
820 tsu_render;
821 endsuglyph;
822

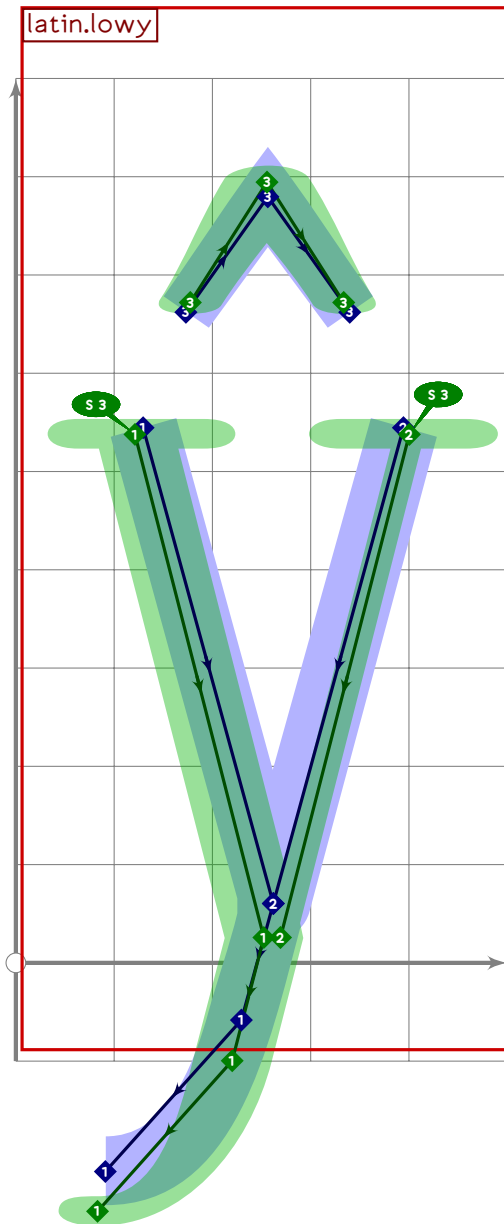
```



```

823 % Y with circumflex
824 begintsuglyph("Ycircumflex";118);
825 tsu_accent.capital(circumflex)(tsu_curve.latin.upy);
826 tsu_render;
827 endsuglyph;
828

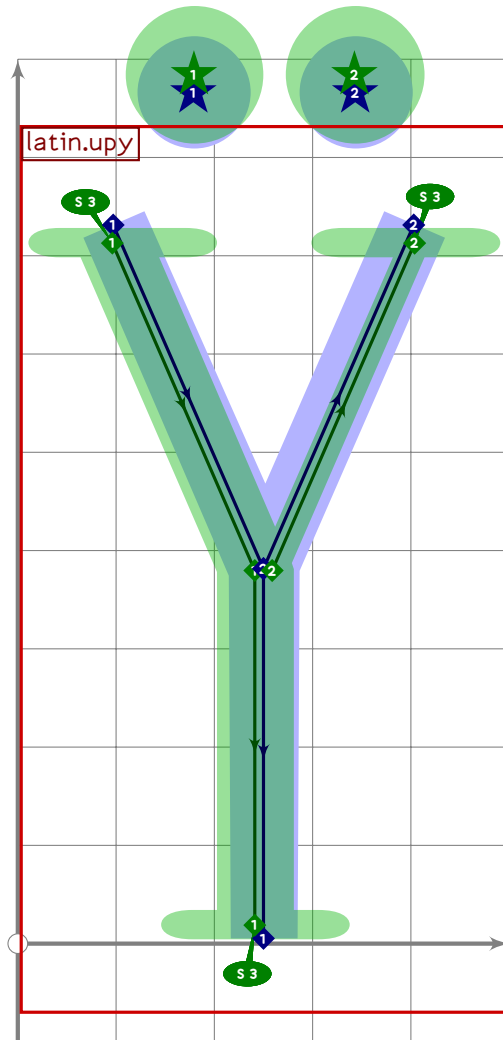
```



```

829 % y with circumflex
830 beginsuglyph("ycircumflex",119);
831   tsu_accent.circumflex(tsu_curve.latin.lowy);
832   tsu_render;
833 endsuglyph;
834

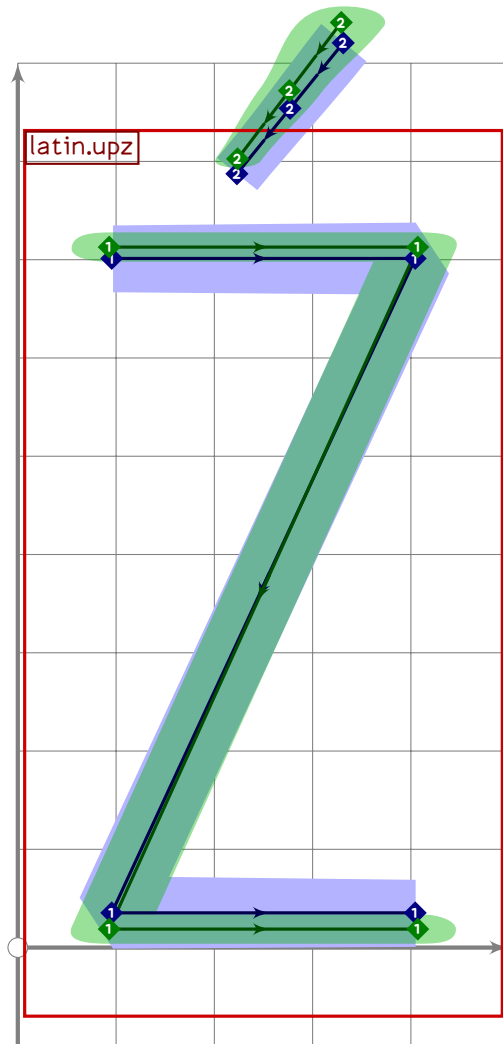
```

```

835 % Y with umlaut/dieresis
836 begintsuglyph("Ydieresis";120);
837 tsu_accent.capital(umlaut)(tsu_curve.latin.upy);
838 tsu_render;
839 endsuglyph;
840

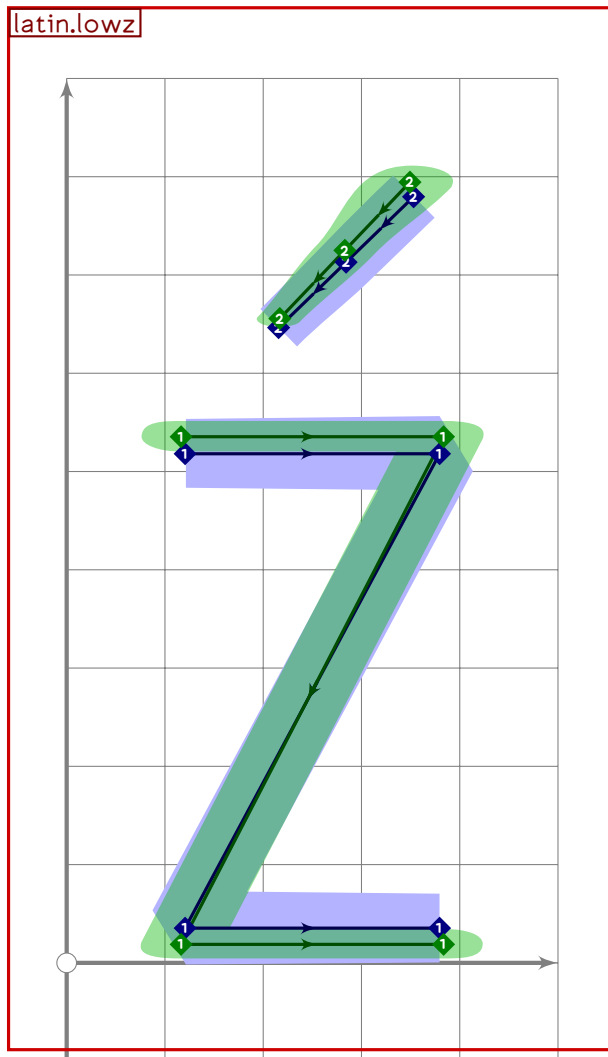
```



```

841 % Z with acute
842 begint Suglyph("Zacute",121);
843   tsu_accent.capital(acute)(tsu_curve.latin.upz);
844   tsu_render;
845 endsuglyph;
846

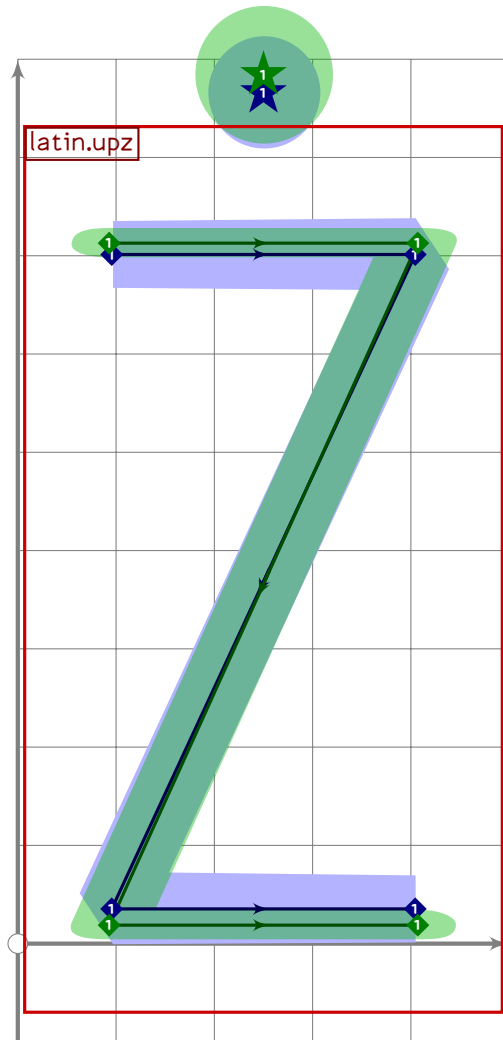
```



```

847 % z with acute
848 begintsuglyph("zacute";122);
849 tsu_accent.acute(tsu_curve.latin.lowz);
850 tsu_render;
851 endsuglyph;
852

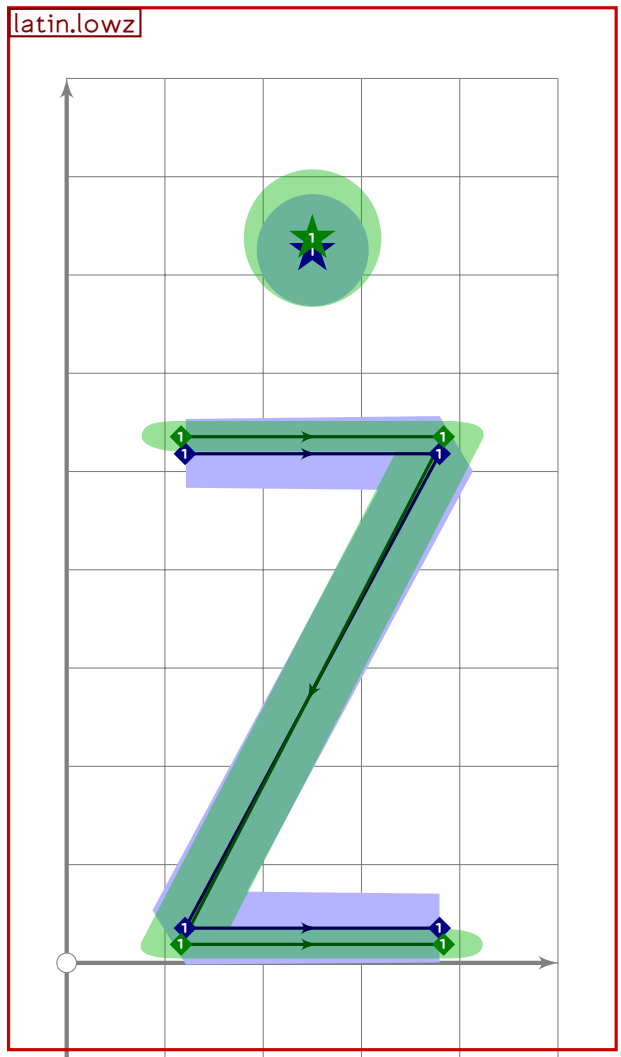
```



```

853 % Z with dot
854 begintsuglyph("Zdotaccent";123);
855 tsu_accent.capital(dotabove)(tsu_curve.latin.upz);
856 tsu_render;
857 endtsuglyph;
858

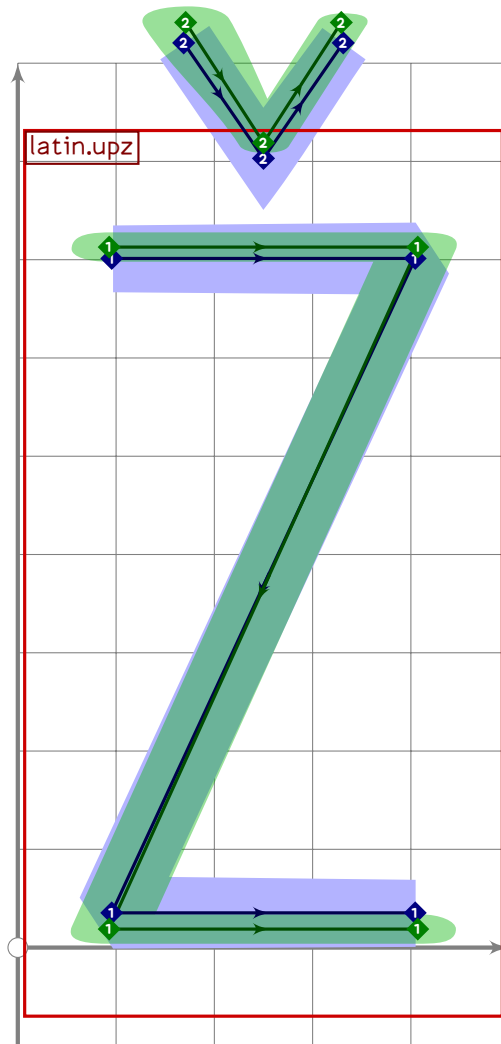
```



```

859 % z with dot
860 begintsuglyph("zdotaccent";124);
861   tsu_accent.dotabove(tsu_curve.latin.lowz);
862   tsu_render;
863 endsuglyph;
864

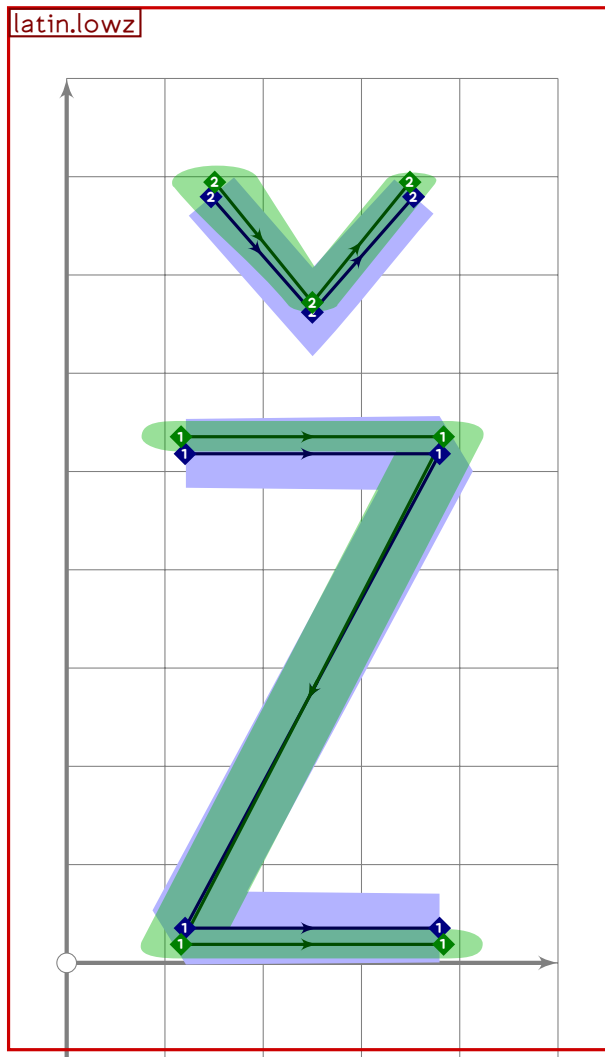
```



```

865 % Z with caron
866 begint Suglyph("Zcaron";125);
867   tsu_accent.capital(caron)(tsu_curve.latin.upz);
868   tsu_render;
869 endtsuglyph;
870

```



```

871 % z with caron
872 begintsuglyph("zcaron",126);
873   tsu_accent.caron(tsu_curve.latin.lowz);
874   tsu_render;
875 endsuglyph;
876
877 % long s
878 begintsuglyph("longs",127);
879   tsu_curve.latin.lowlongs;
880   tsu_render;
881 endsuglyph;
882
883 _____
884
885 endfont;
886
887 _____

```

[see page 217]

tsuku-02.mp

```
1 %
2 % Unicode page 02 (Spacing Modifier Letters) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---

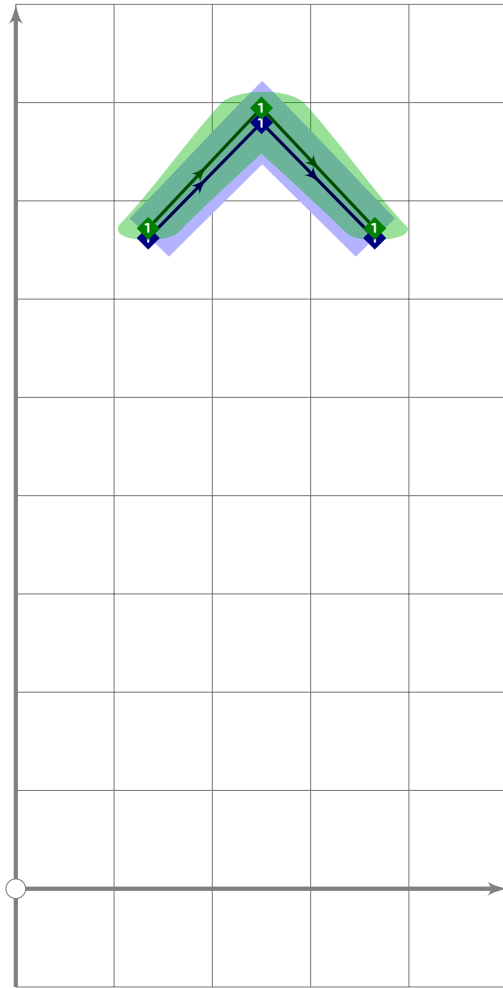

32
33 beginfont
34
35 input latin-intro.mp;
36
37 % AUTODEPS
38 input accent.mp;
39 input latin.mp;
40 input ogonek.mp;
41
42 

---

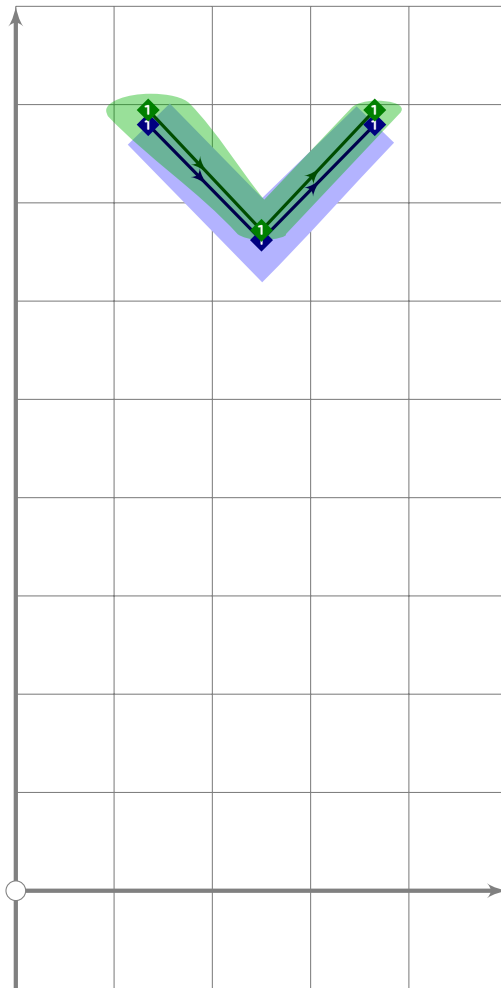

43
```

Spacing Modifier Letters

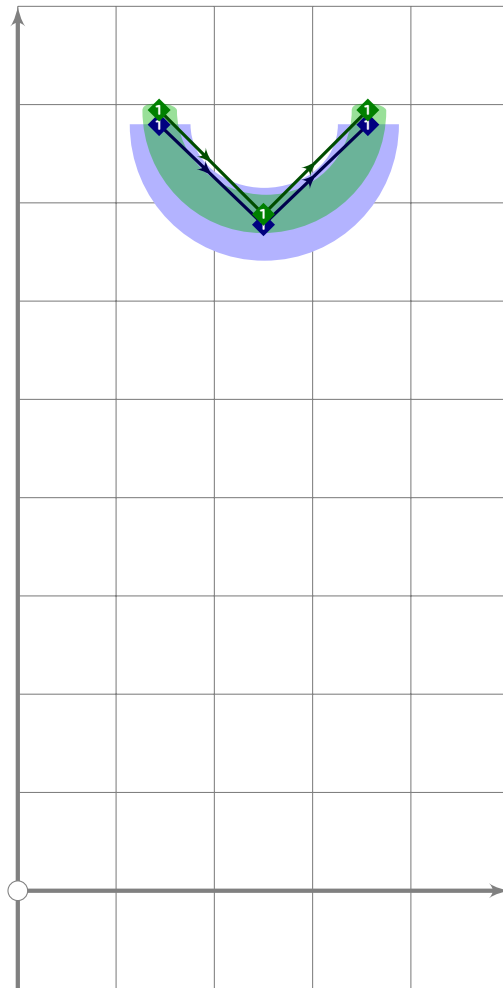
```
44 % SPACING MODIFIER LETTERS
45
46 tsu_rescale_half;
47
```

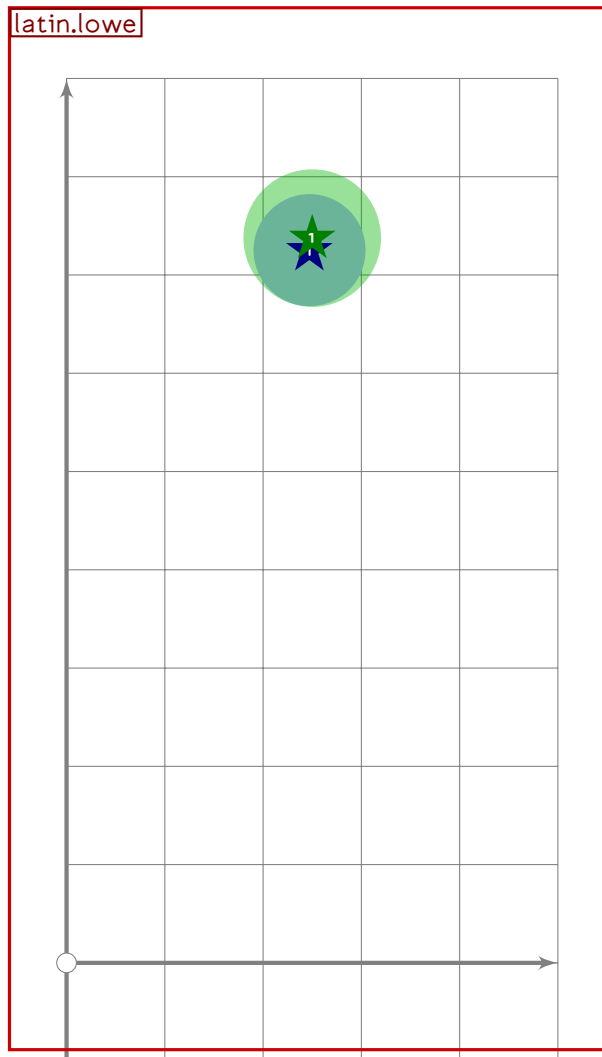
```
48 % circumflex accent
49 begintsuglyph("circumflex",198);
50 tsu_accent.circumflex();
51 tsu_render;
52 endtsuglyph;
53
```



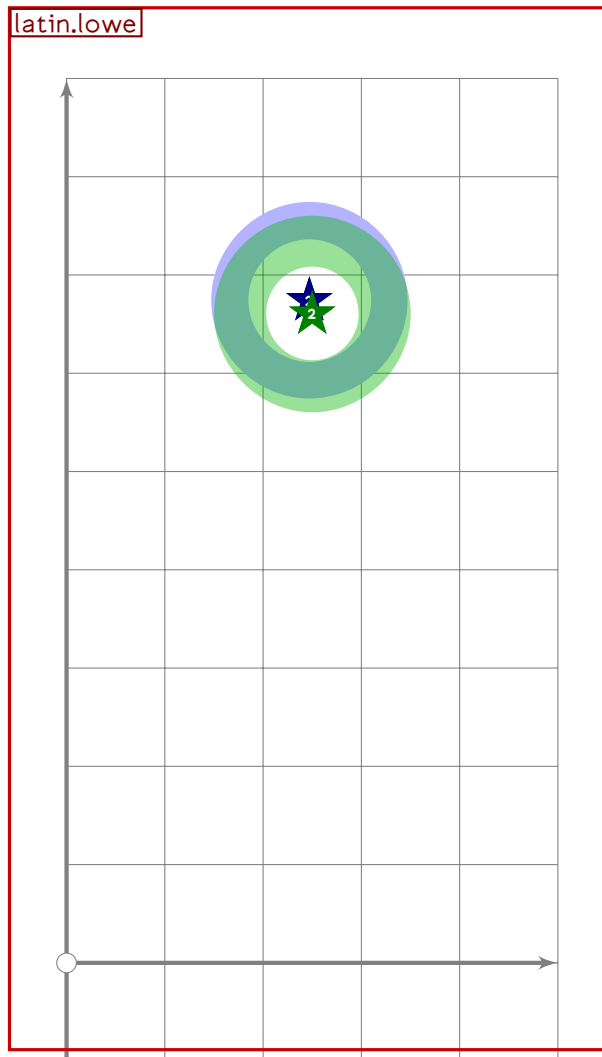
```
54 % caron
55 begintsuglyph("caron";199);
56 tsu_accent.caron();
57 tsu_render;
58 endtsuglyph;
59
```



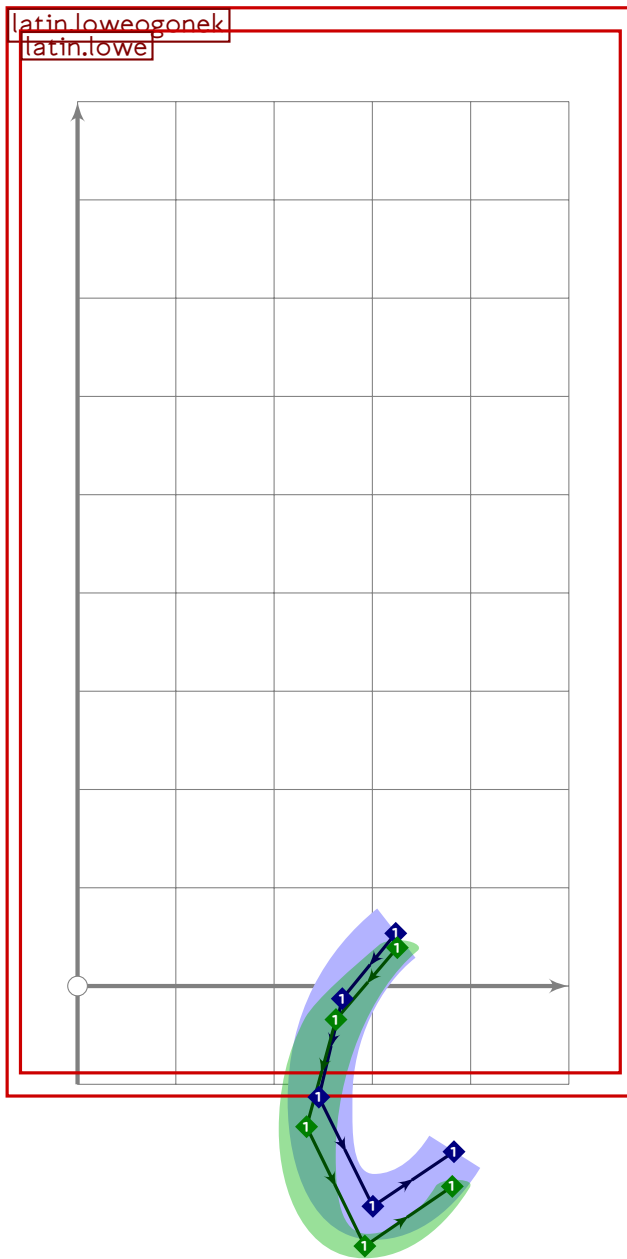
```
60 % breve
61 begint Suglyph("breve",216);
62   tsu_accent.breve();
63   tsu_render;
64 endsuglyph;
65
```



```
66 % dot above
67 begint Suglyph("dotaccent";217);
68 tsu_accent.dotabove(tsu_curve.latin.lowe);
69 set_bosize(0,0);
70 tsu_render;
71 endtsuglyph;
72
```



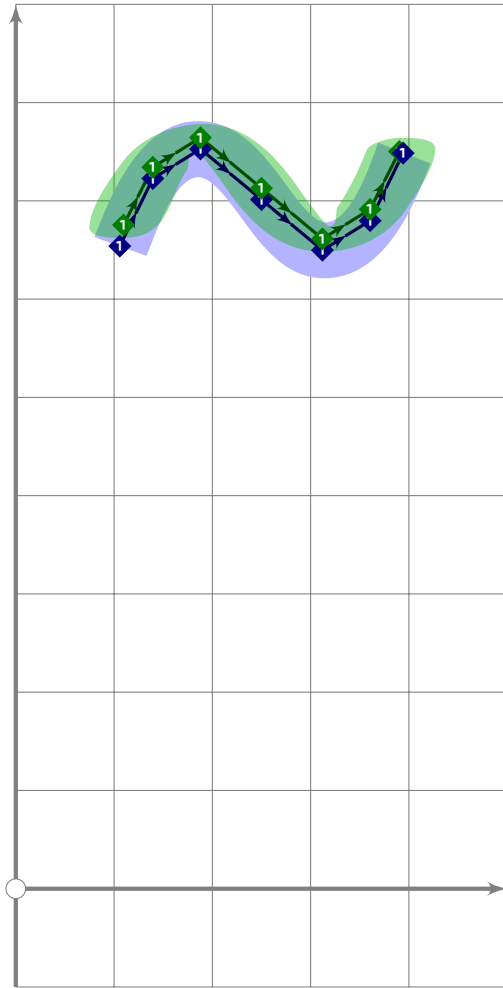
```
73 % ring above
74 begint Suglyph("ring",218);
75 tsu_accent.ringabove(tsu_curve.latin.love);
76 set_bosize(0,0);
77 tsu_render;
78 endtsuglyph;
79
```



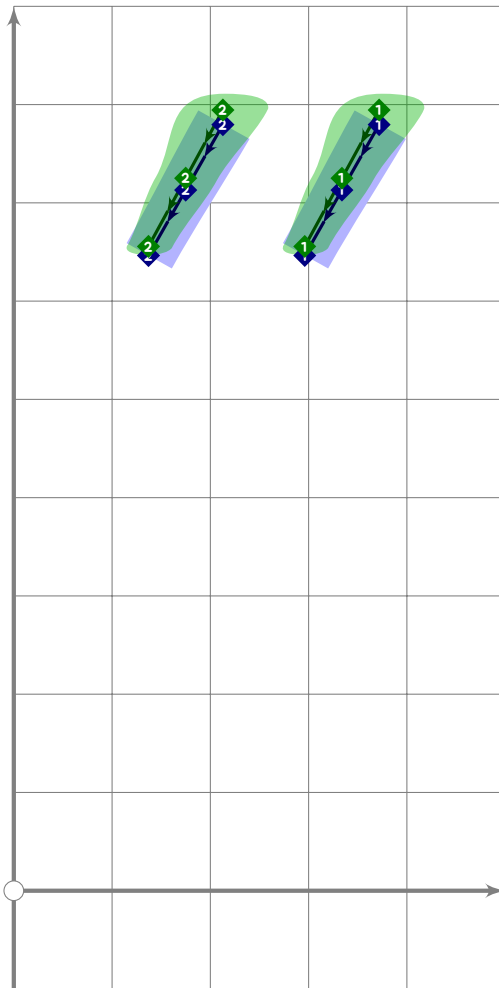
```

80 % ogonek
81 beginsuglyph("ogonek",219);
82   tsu_curve.latin.loveogonek;
83   set_bosize(-1,0);
84   tsu_render;
85 endsuglyph;
86

```



```
87 % small tilde
88 begintsuglyph("tilde",220);
89 tsu_accent.tilde();
90 tsu_render;
91 endsuglyph;
92
```



```

93 % double acute accent
94 begintsuglyph("hungarumlaut";221);
95   tsu_accent.hungarian_umlaut();
96   tsu_render;
97 endsuglyph;
98
99 _____
100
101 endfont;
102
103 _____

```


tsuku-20.mp

```
1 %
2 % Unicode page 20 (Punctuation) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---

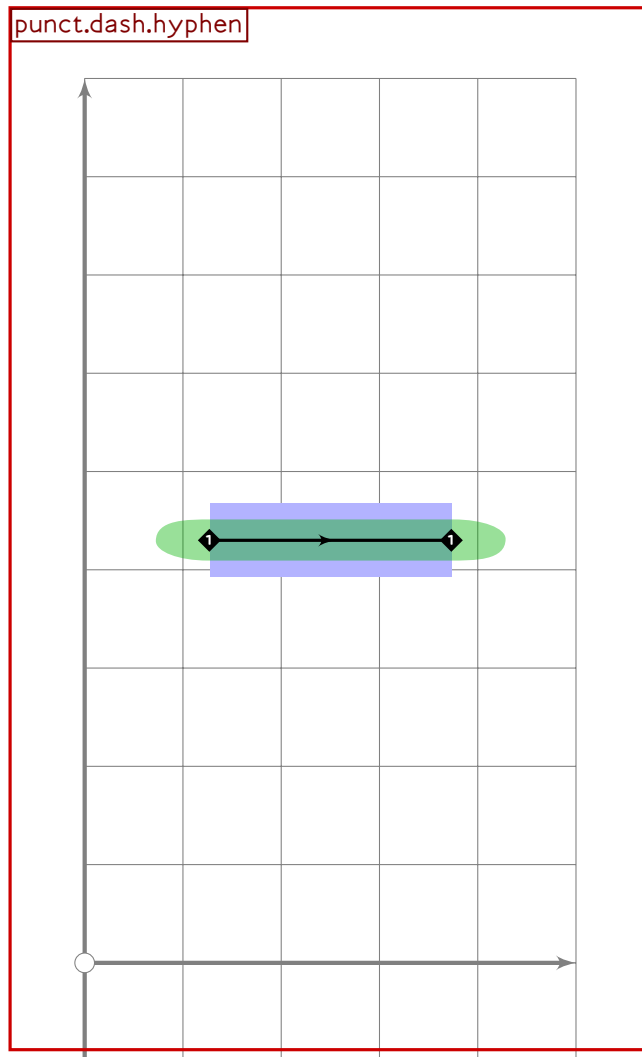

32
33 beginfont
34
35 input latin-intro.mp;
36
37 % AUTODEPS
38 input punct.mp;
39
40 

---


41
```

General Punctuation

```
42 % GENERAL PUNCTUATION
43
44 % WARNING changing rescale setting
45 tsu_rescale_half;
46
47 % hyphen
48 begintsuglyph("uni2010";16); [see page 272]
49 tsu_curve.punct.dash.hyphen;
50 tsu_render;
51 endtsuglyph;
52
```

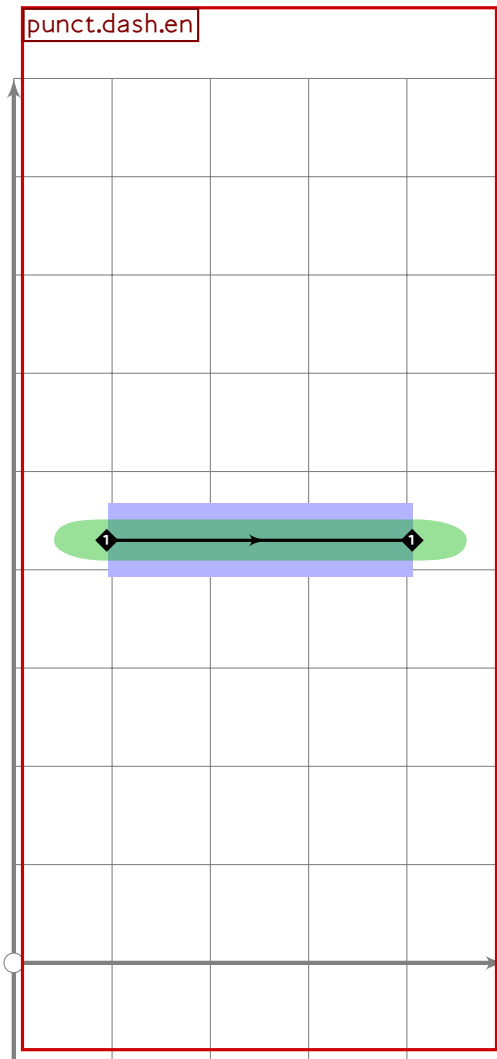


```

53 % non-breaking hyphen
54 begintsuglyph("uni2011";17);
55 tsu_curve.punct.dash.hyphen;
56 tsu_render;
57 endsuglyph;
58
59 % figure dash
60 begintsuglyph("figuredash";18);
61 tsu_curve.punct.dash.en;
62 tsu_render;
63 endsuglyph;
64

```

[see page 271]

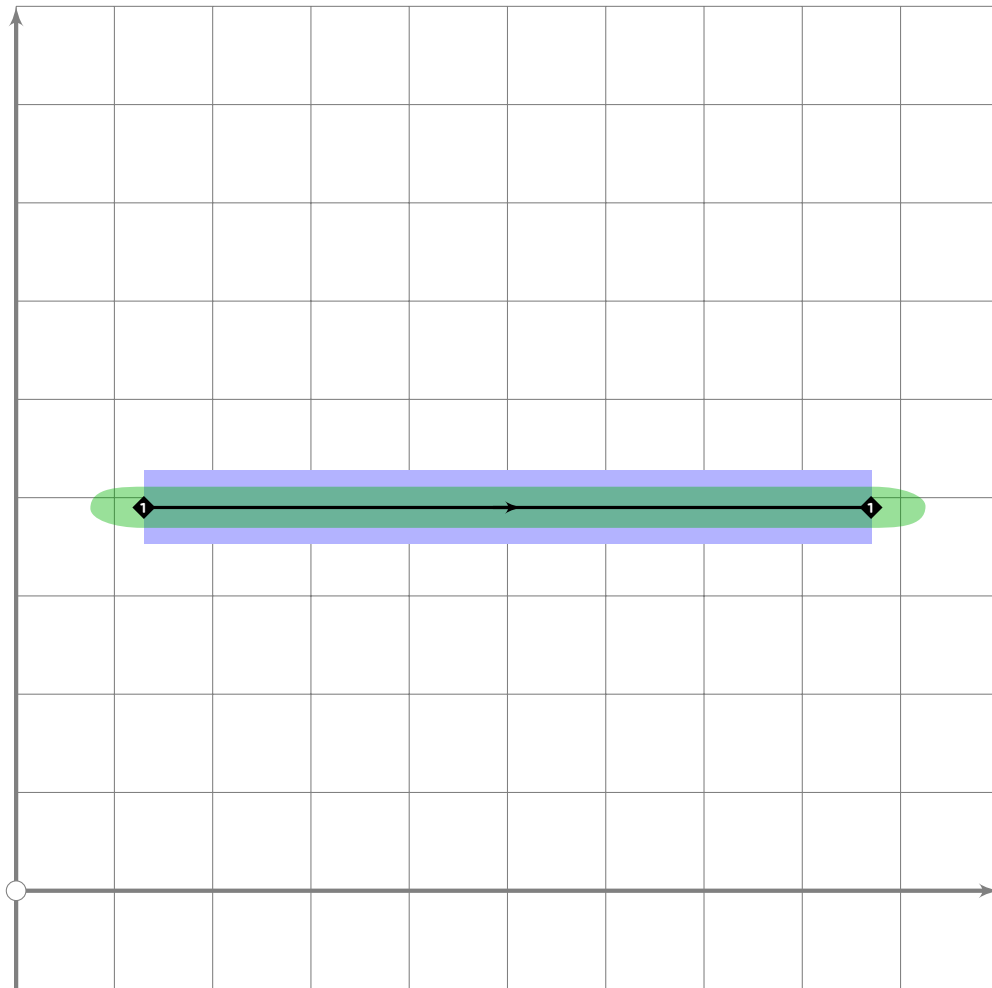


```

65 % en dash
66 begint Suglyph("endash";19);
67 tsu_curve.punct.dash.en;
68 tsu_render;
69 endtsuglyph;
70
71 % WARNING changing rescale setting
72 tsu_rescale_full;
73
74 % em dash
75 begint Suglyph("emdash";20);
76 tsu_curve.punct.dash.em;
77 tsu_render;
78 endtsuglyph;
79

```

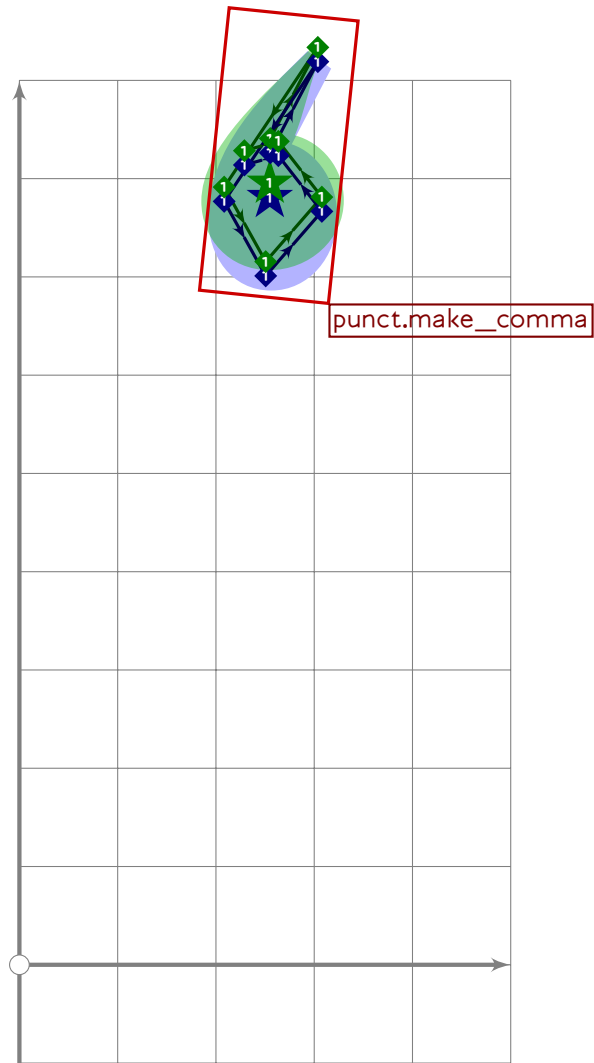
[see page 270]



```

80 % horizontal bar
81 begintsuglyph("uni2015",21);
82 push_stroke((130,390)-(870,390),(2,2)-(2,2));
83 tsu_render;
84 endtsuglyph;
85
86 % WARNING changing rescale setting
87 tsu_rescale_half;
88

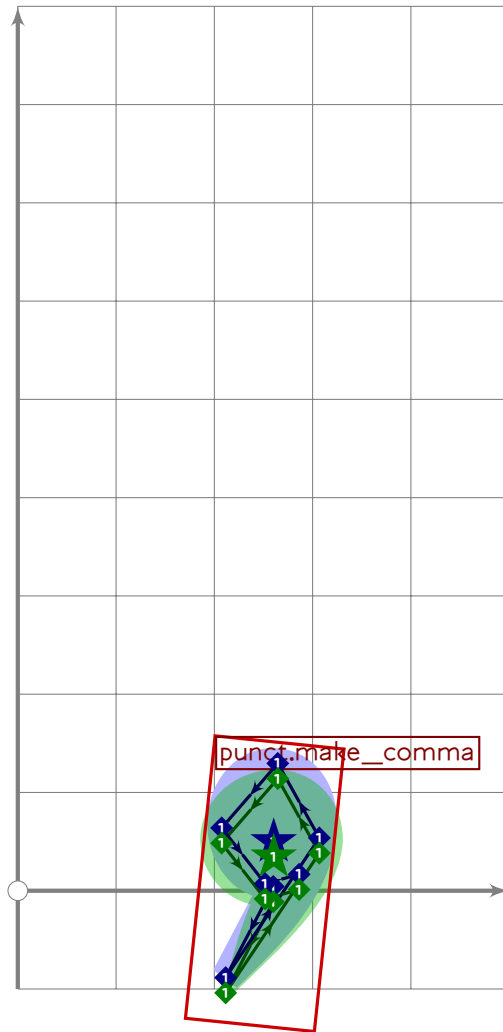
```



```

89 % high-6
90 begintsuglyph("quoteleft",24);
91 tsu_curve.punct.make_comma((520,vmetric(0.94)),180);
92 tsu_render;
93 endsuglyph;
94

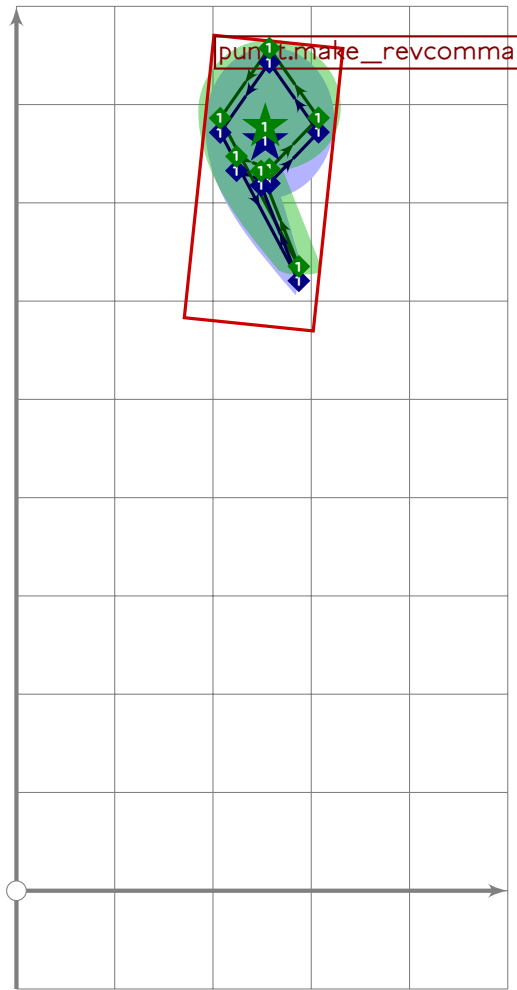
```

```

101 % low-9
102 beginsuglyph("quotesinglbase",26);
103   tsu_curve.punct.make_comma((520,vmetric(0.03)),0);
104   tsu_render;
105 endsuglyph;
106

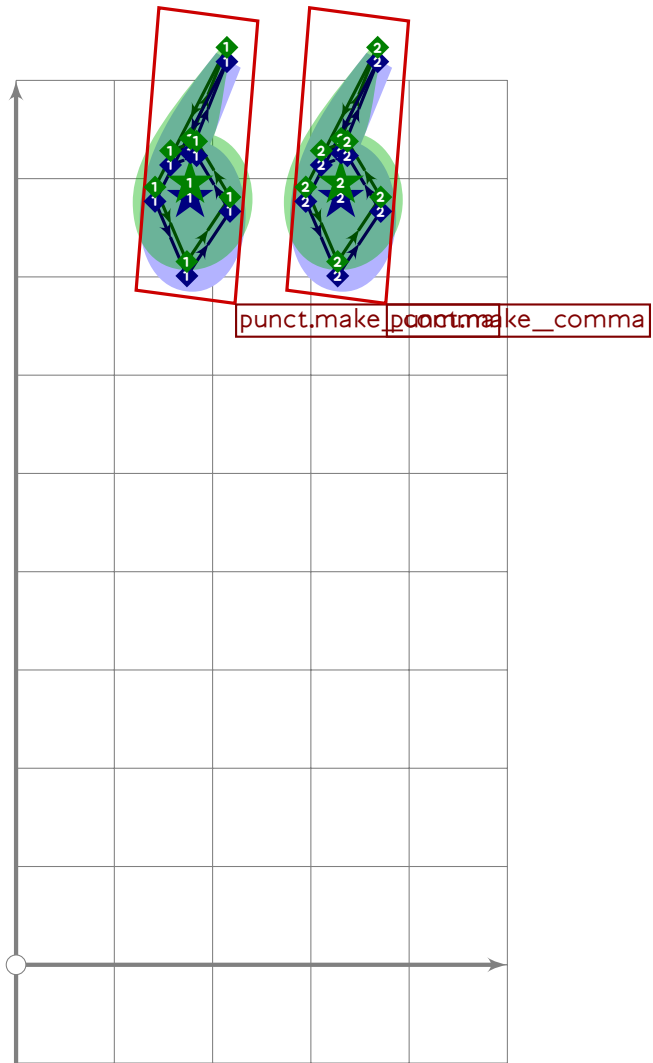
```



```

107 % high-rev-9
108 begintsuglyph("quotereversed",27);
109 tsu_curve.punct.make_revcomma((520,vmetric(0.94)),0);
110 tsu_render;
111 endtsuglyph;
112

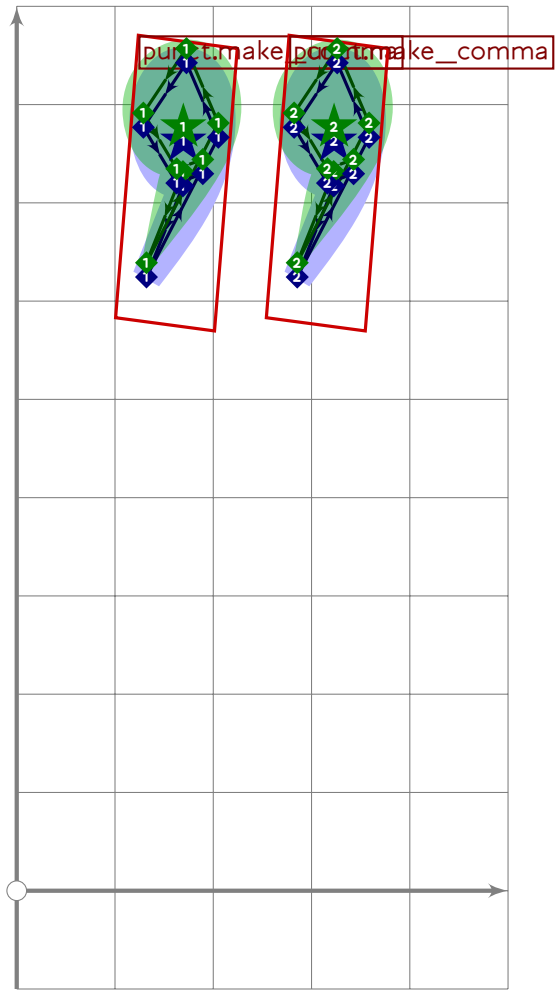
```

```

113 % high-66
114 beginsuglyph("quotedblleft",28);
115 tsu_curve.punct.make_comma((520-tsu_punct_size,vmetric(0.94)),180);
116 tsu_curve.punct.make_comma((520+tsu_punct_size,vmetric(0.94)),180);
117 tsu_render;
118 endsuglyph;
119

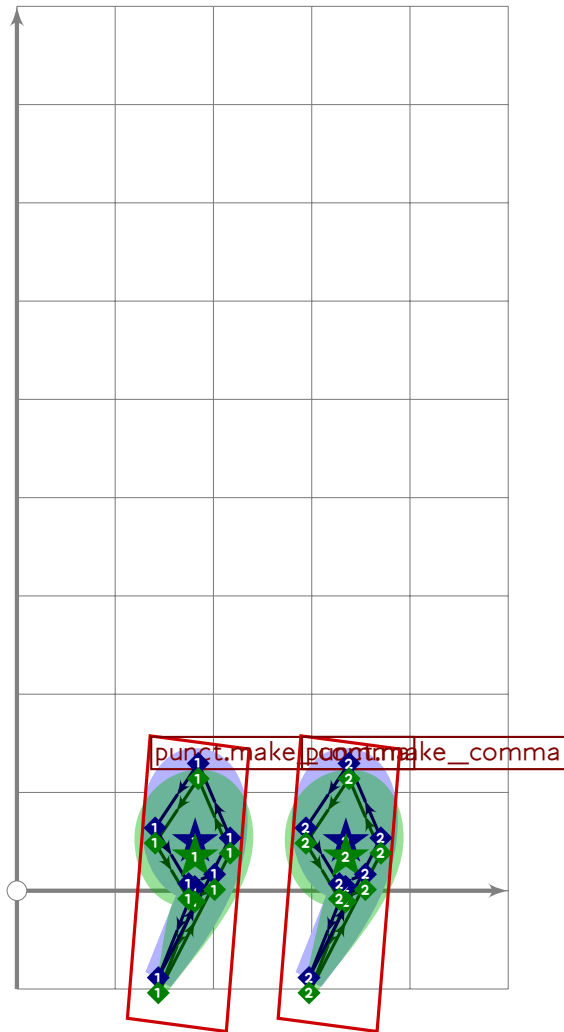
```



```

120 % high-99
121 begint Suglyph("quotedbright",29);
122 tsu_curve.punct.make_comma((480-tsu_punct_size,vmetric(0.94)),0);
123 tsu_curve.punct.make_comma((480+tsu_punct_size,vmetric(0.94)),0);
124 tsu_render;
125 endsuglyph;
126

```



```

127 % low-99
128 begintsuglyph("quotedblbase",30);
129 tsu_curve.punct.make_comma((520-tsu_punct_size,vmetric(0.03)),0);
130 tsu_curve.punct.make_comma((520+tsu_punct_size,vmetric(0.03)),0);
131 tsu_render;
132 endsuglyph;
133

```



```

134 % high-rev-99
135 \begin{suglyph{"quotedblreversed";31};
136   \tsu_curve.punct.make_revcomma((520-\tsu_punct_size,\vmetric{0.94}),0);
137   \tsu_curve.punct.make_revcomma((520+\tsu_punct_size,\vmetric{0.94}),0);
138   \tsu_render;
139 \end{suglyph};
140
141 % WARNING changing rescale setting
142 \tsu_rescale_full;
143
144 % euro symbol
145 \begin{suglyph{"Euro";172};
146   \tsu_curve.punct.euro;
147   \tsu_render;
148 \end{suglyph};
149
150
151
152 \endfont;
153
154

```

[see page 274]

tsuku21.mp

```
1 %
2 % Unicode page 21 (Symbols) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---

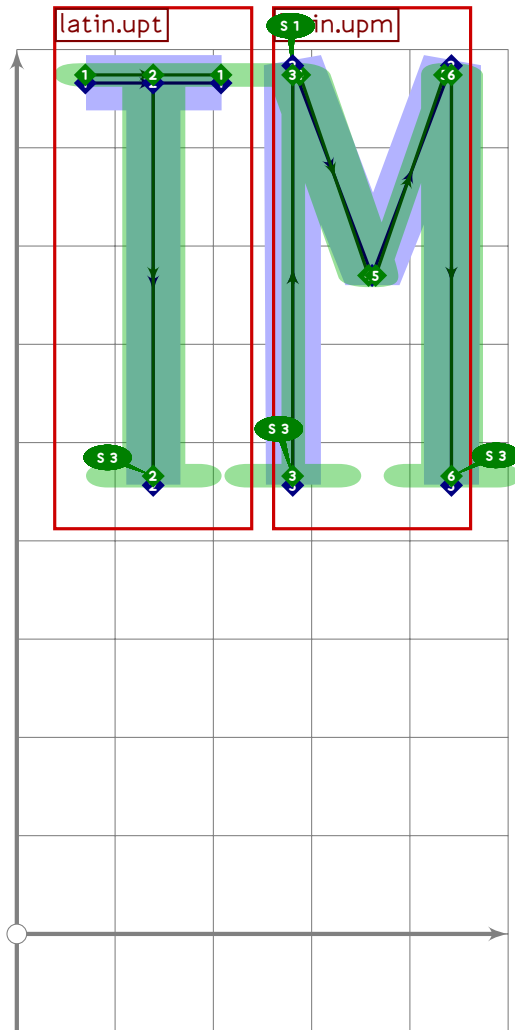

32
33 beginfont
34
35 input latin-intro.mp;
36
37 % AUTODEPS
38 input latin.mp;
39 input punct.mp;
40
41 

---


42
```

Symbols Required By Mes-1

```
43 % SYMBOLS REQUIRED BY MES-1
44
45 % WARNING changing rescale setting
46 tsu_rescale_half;
47
```

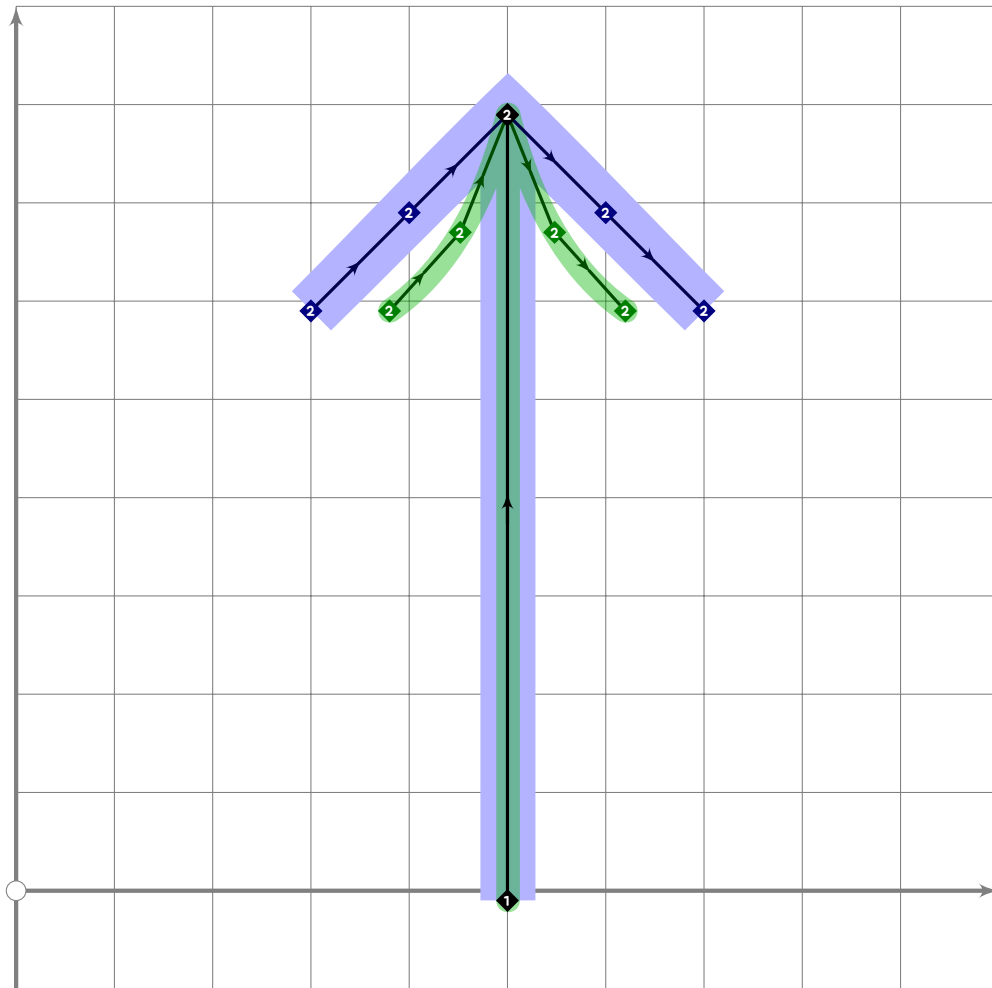


```

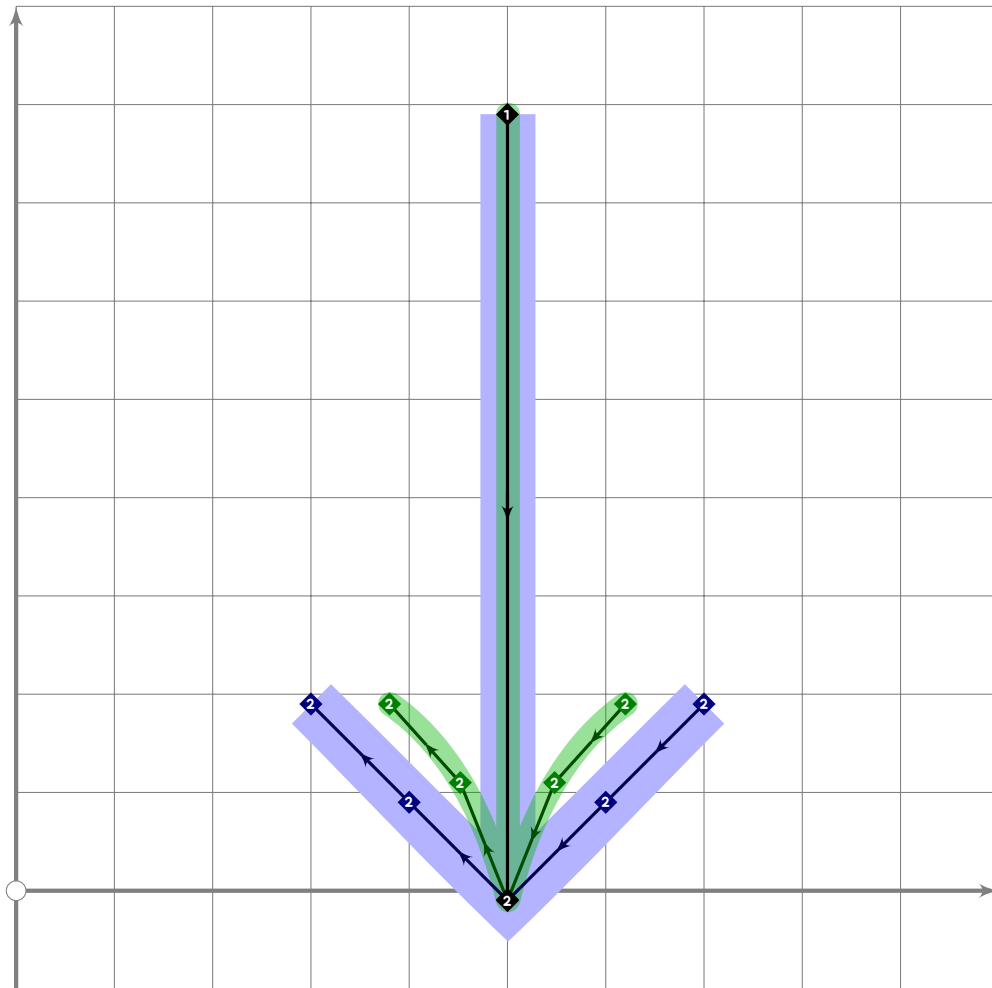
48 % trademark symbol
49 begintsuglyph("trademark",34);
50 tsu_xform(identity scaled 0.5 shifted (0,400))(tsu_curve.latin.upt);
51 numeric x[],y[];
52 tsu_xform(identity scaled 0.5 shifted (500,400))(tsu_curve.latin.upm);
53 tsu_render;
54 endtsuglyph;
55
56 % ohm (resistance unit) symbol
57 begintsuglyph("uni2126",38);
58 tsu_curve.punct.ohm;
59 tsu_render;
60 endtsuglyph;
61
62 % Note: 0x5B through 0x5E, which are x/8 fractions, are assembled by the
63 % assemble-font script
64
65 % WARNING changing rescale setting
66 tsu_rescale_full;
67

```

[see page 282]



```
89  
90 begintsuglyph("arrowup",145);  
91 tsu_curve.arrow(90);  
92 tsu_render;  
93 endsuglyph;
```

```

99
100 begintsuglyph("arrowdown",147);
101   tsu_curve.arrow(270);
102   tsu_render;
103 endsuglyph;
104
105 _____
106
107 endfont;
108
109 _____

```

tsuku-24.mp

```
1 %
2 % Unicode page 24 (Enclosed Numerics) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---

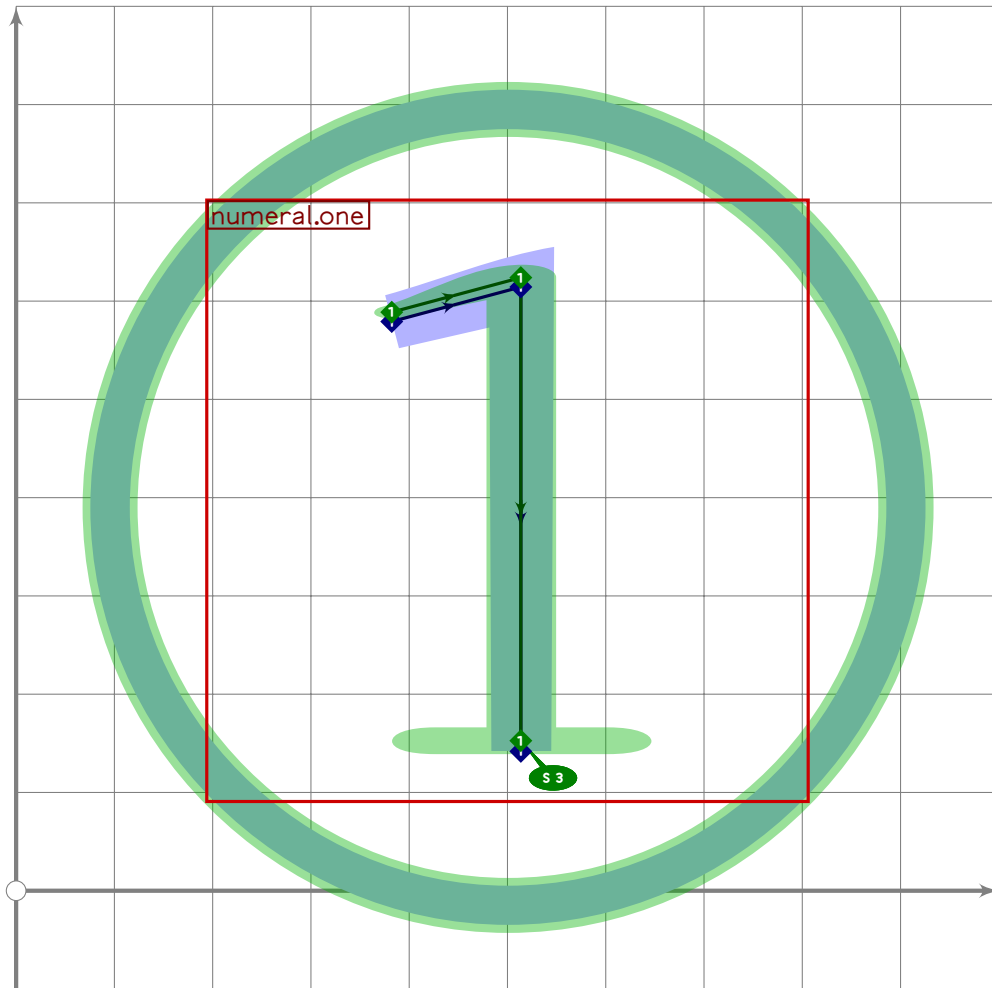

32
33 beginfont
34
35 input latin-intro.mp;
36
37 % AUTODEPS
38 input enclosed.mp;
39 input latin.mp;
40 input numerals.mp;
41
42 

---

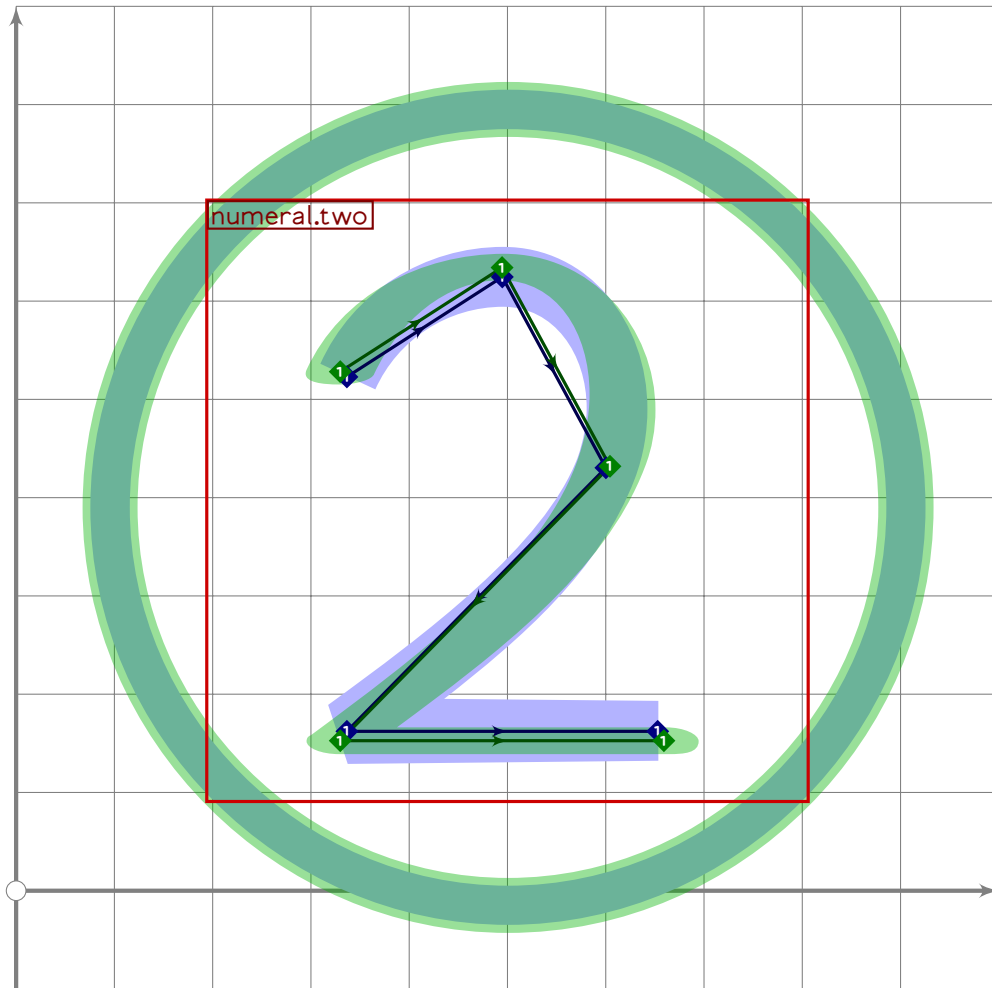

43
```

Circled Numerals

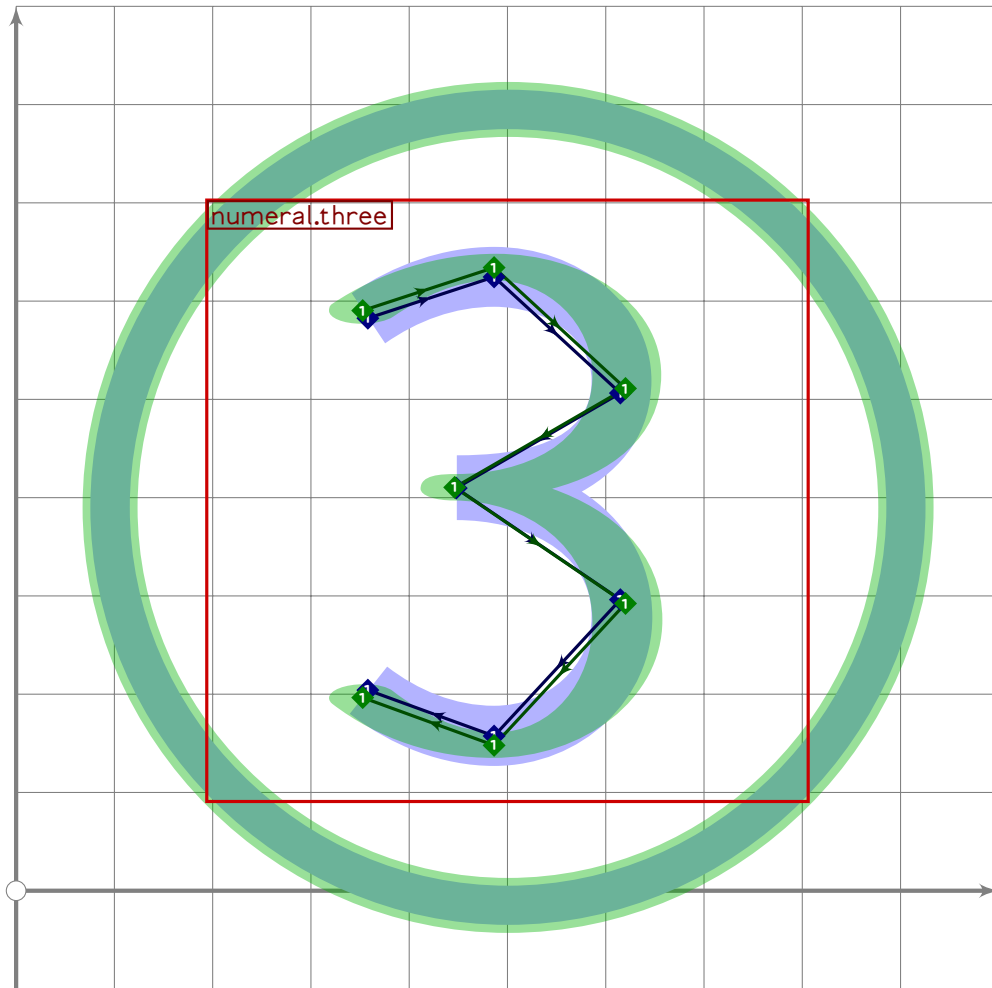
```
44 % CIRCLED NUMERALS
45
```



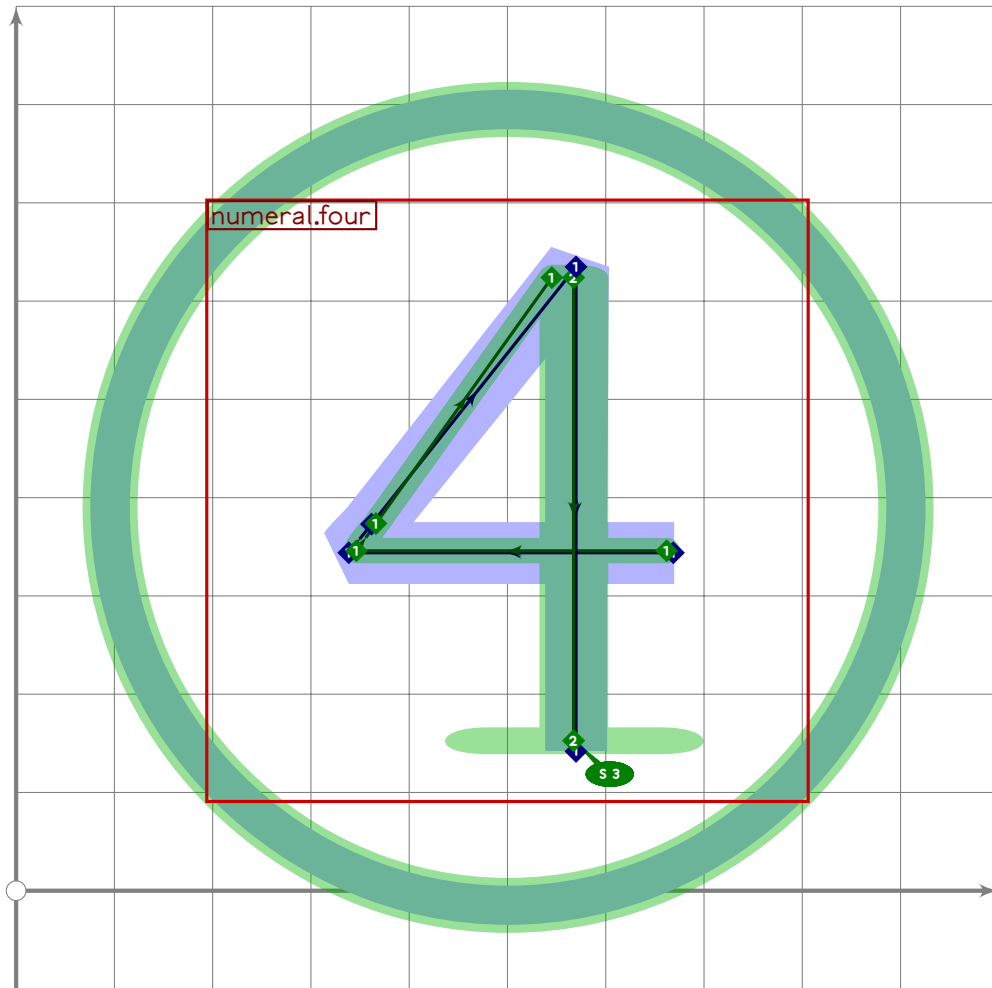
```
46 % 1
47 beginsuglyph("uni2460";96);
48 tsu_curve.circle.single;
49 tsu_xform(tsu_xf.circled)(tsu_curve.numeral.one);
50 tsu_render;
51 endsuglyph;
52
```



```
53 % 2
54 begint Suglyph("uni2461";97);
55   tsu_curve.circle.single;
56   tsu_xform(tsu_xf.circled)(tsu_curve.numeral.two);
57   tsu_render;
58 endsuglyph;
59
```



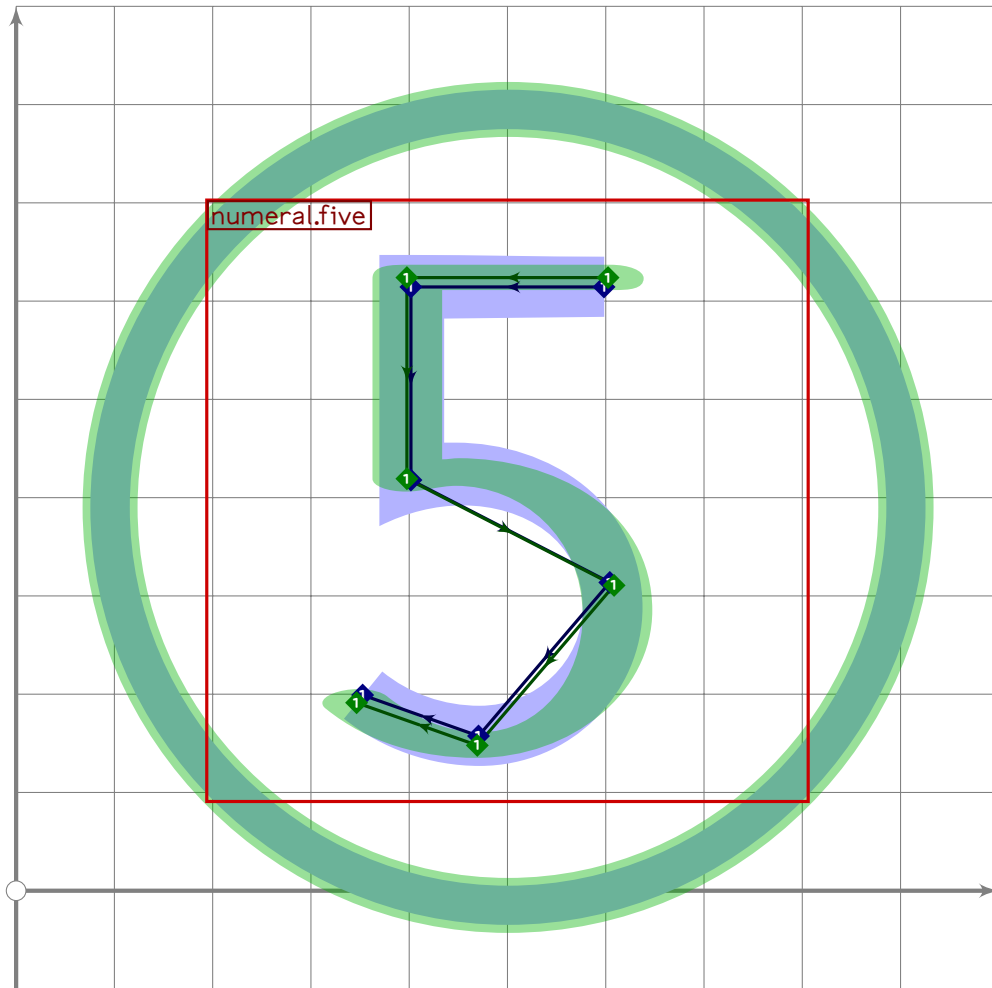
```
60 % 3
61 begint Suglyph("uni2462";98);
62 tsu_curve.circle.single;
63 tsu_xform(tsu_xf.circled)(tsu_curve.numeral.three);
64 tsu_render;
65 endsuglyph;
66
```



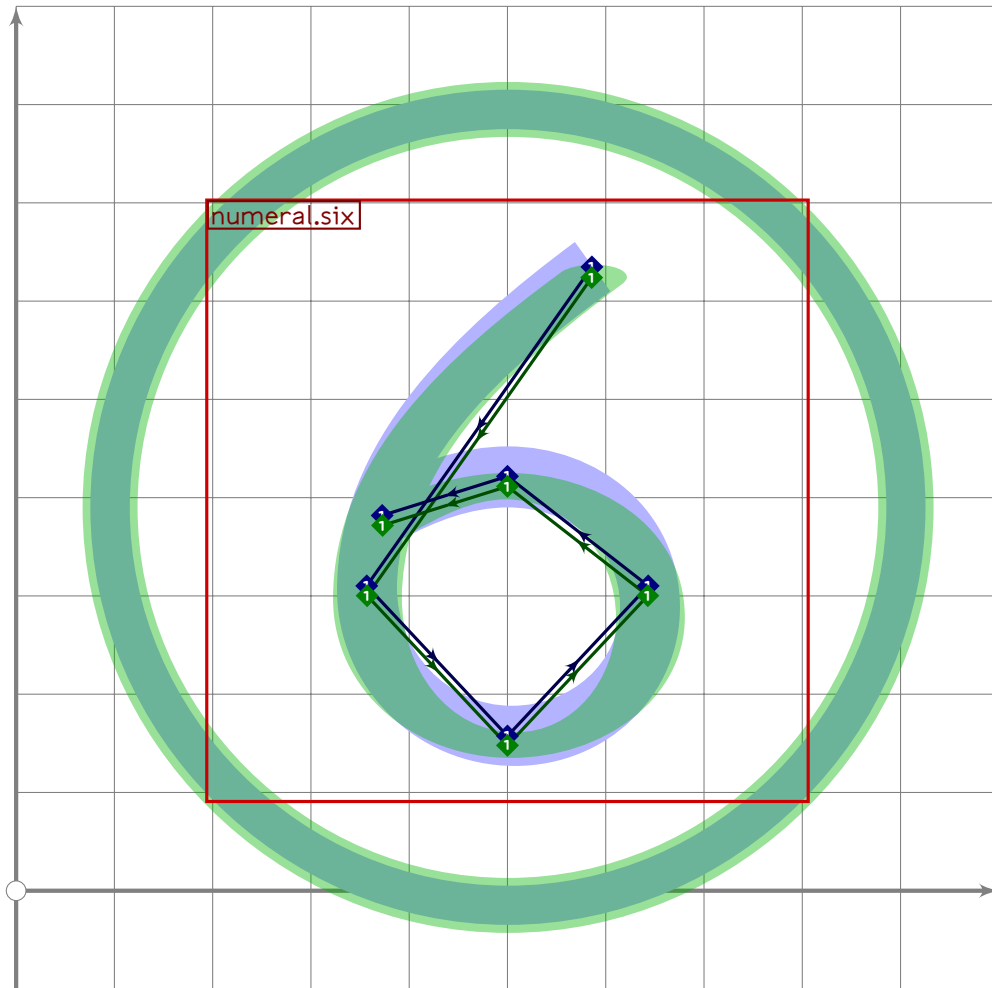
```

67 % 4
68 begint Suglyph("uni2463";99);
69   tsu_curve.circle.single;
70   tsu_xform(tsu_xf.circled)(tsu_curve.numeral.four);
71   tsu_render;
72 endsuglyph;
73

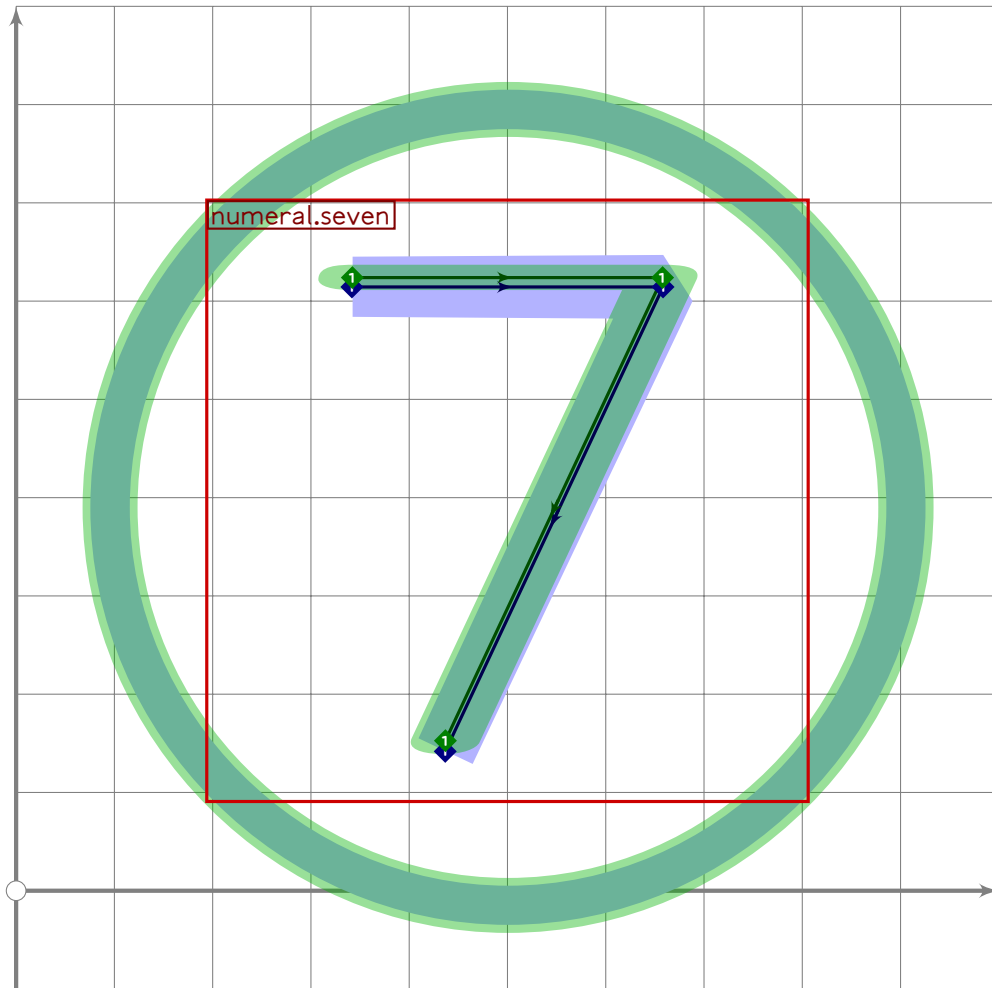
```



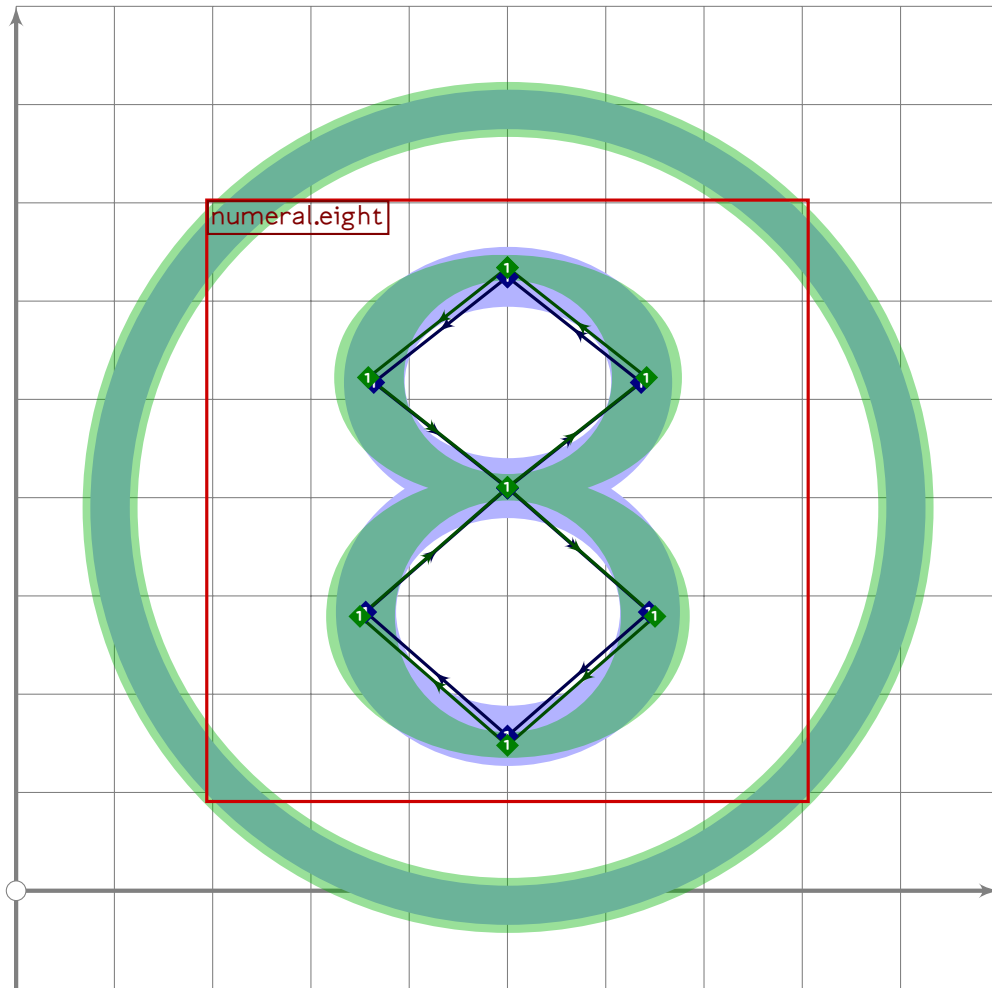
```
74 % 5
75 begint Suglyph("uni2464",100);
76   tsu_curve.circle.single;
77   tsu_xform(tsu_xf.circled)(tsu_curve.numeral.five);
78   tsu_render;
79 endsuglyph;
80
```

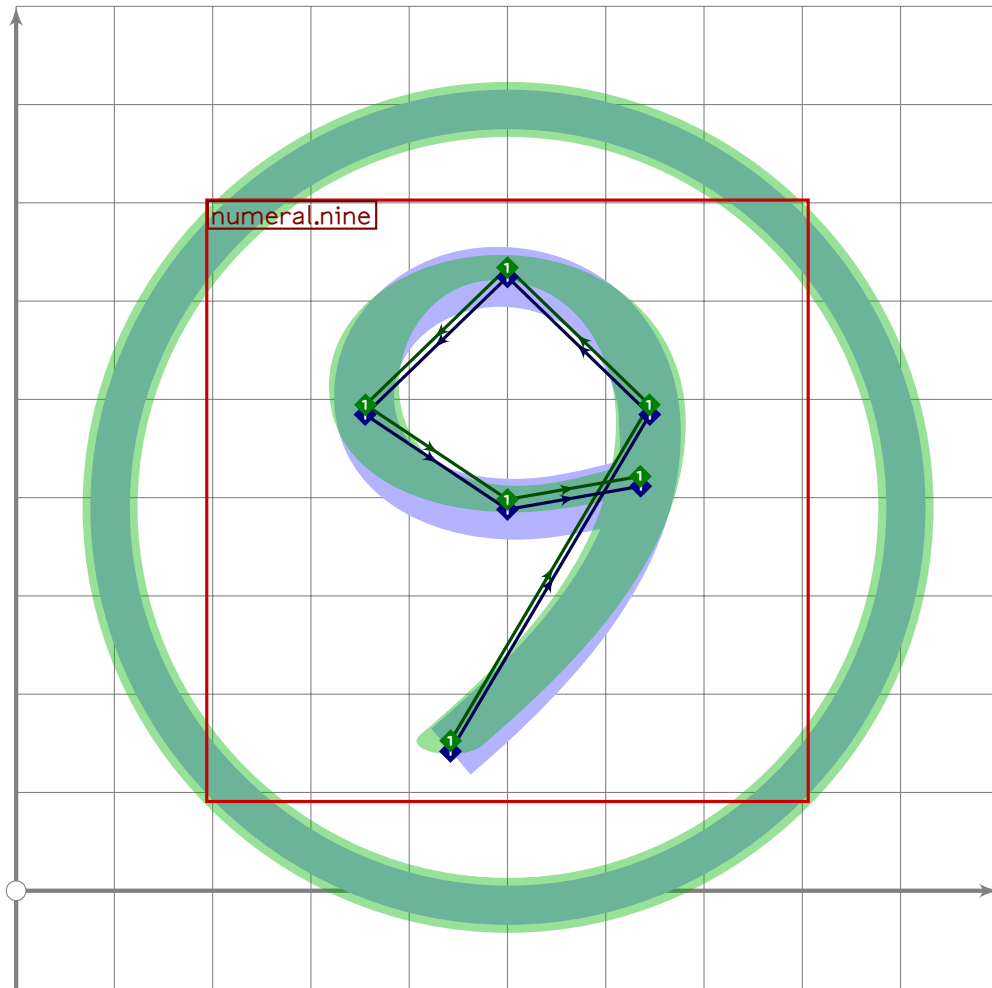
```
81 % 6
82 begint Suglyph("uni2465";101);
83   tsu_curve.circle.single;
84   tsu_xform(tsu_xf.circled)(tsu_curve.numeral.six);
85   tsu_render;
86 endsuglyph;
87
```



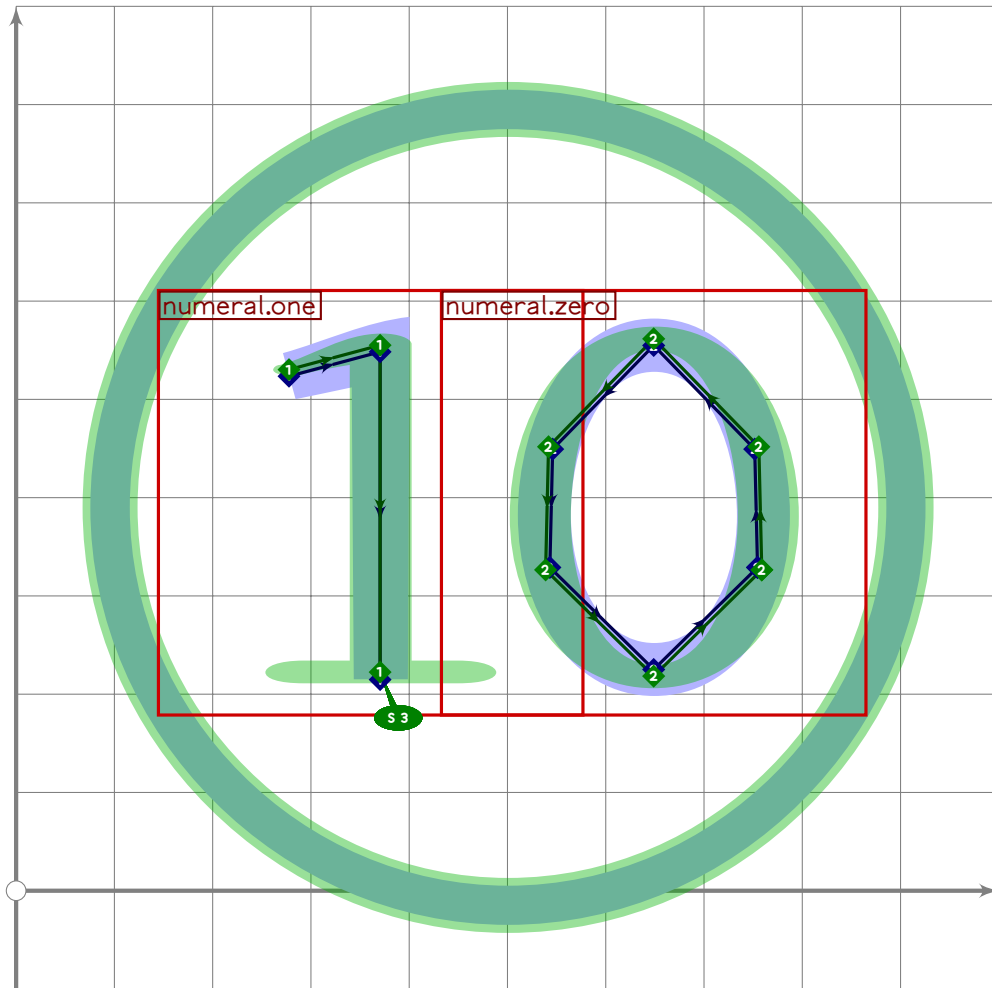
```
88 % 7
89 begint Suglyph("uni2466",102);
90 tsu_curve.circle.single;
91 tsu_xform(tsu_xf.circled)(tsu_curve.numeral.seven);
92 tsu_render;
93 endsuglyph;
94
```



```
95 % 8
96 begint Suglyph("uni2467";103);
97 tsu_curve.circle.single;
98 tsu_xform(tsu_xf.circled)(tsu_curve.numeral.eight);
99 tsu_render;
100 endsuglyph;
101
```



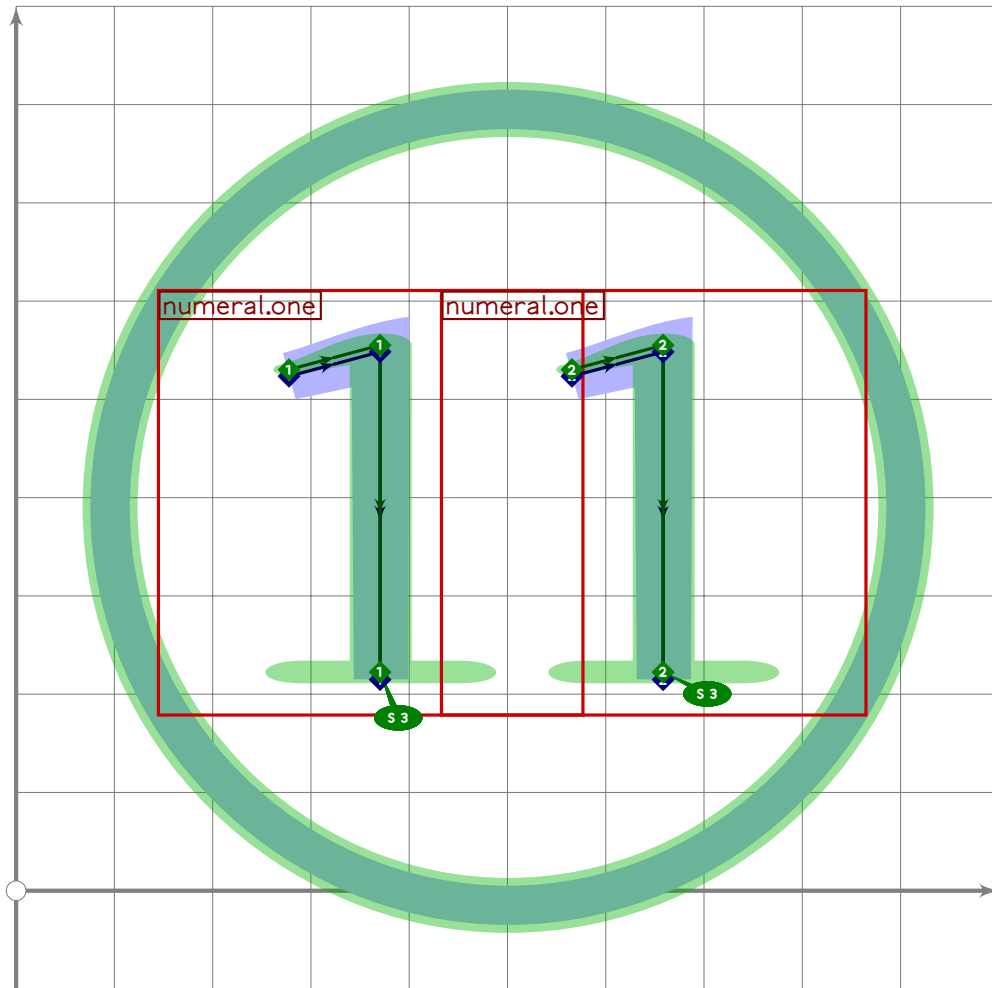
```
102 % 9
103 begint Suglyph("uni2468",104);
104   tsu_curve.circle.single;
105   tsu_xform(tsu_xf.circled)(tsu_curve.numeral.nine);
106   tsu_render;
107 endsuglyph;
108
```



```

109 % 10
110 begintuglyph("uni2469";105);
111   tsu_curve.circle.single;
112   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
113   numeric x[],y[];
114   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.zero);
115   tsu_render;
116 endtuglyph;
117

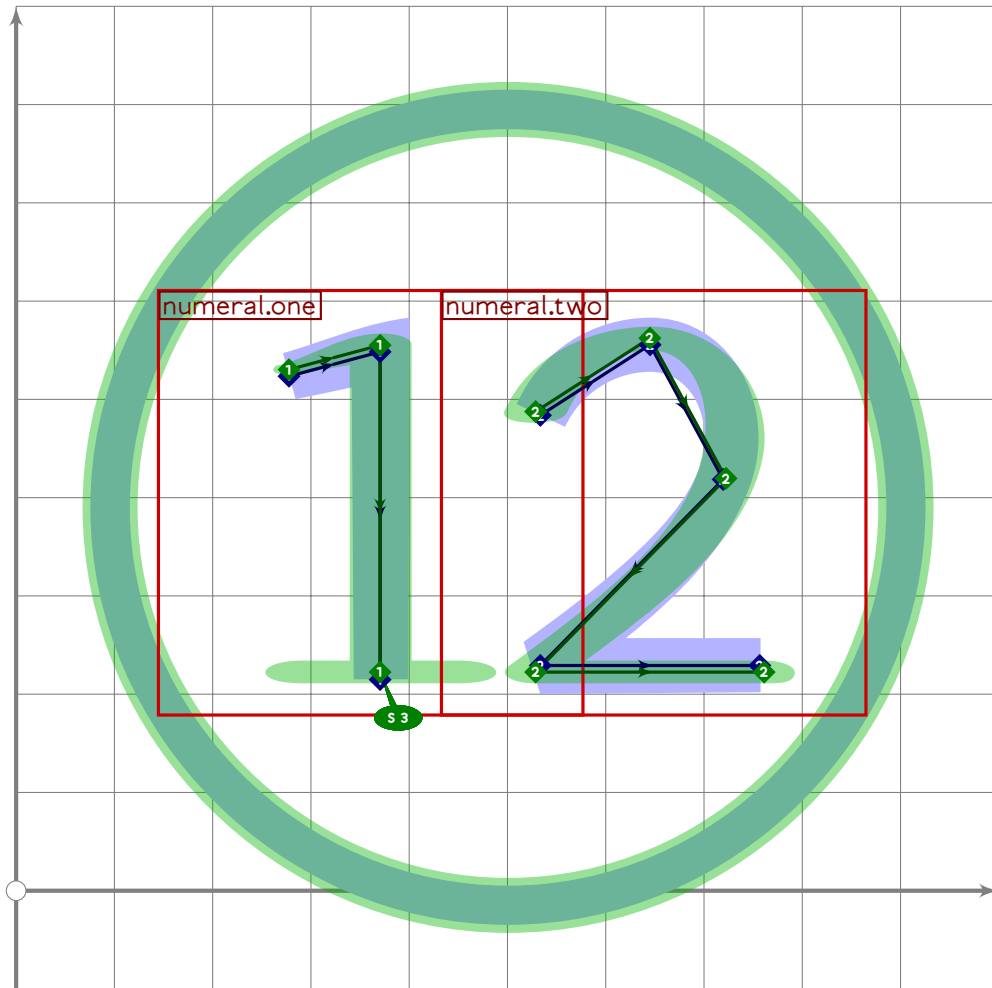
```



```

118 % 11
119 begintuglyph("uni246A",106);
120 tsu_curve.circle.single;
121 tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
122 numeric x[],y[];
123 tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.one);
124 tsu_render;
125 endtuglyph;
126

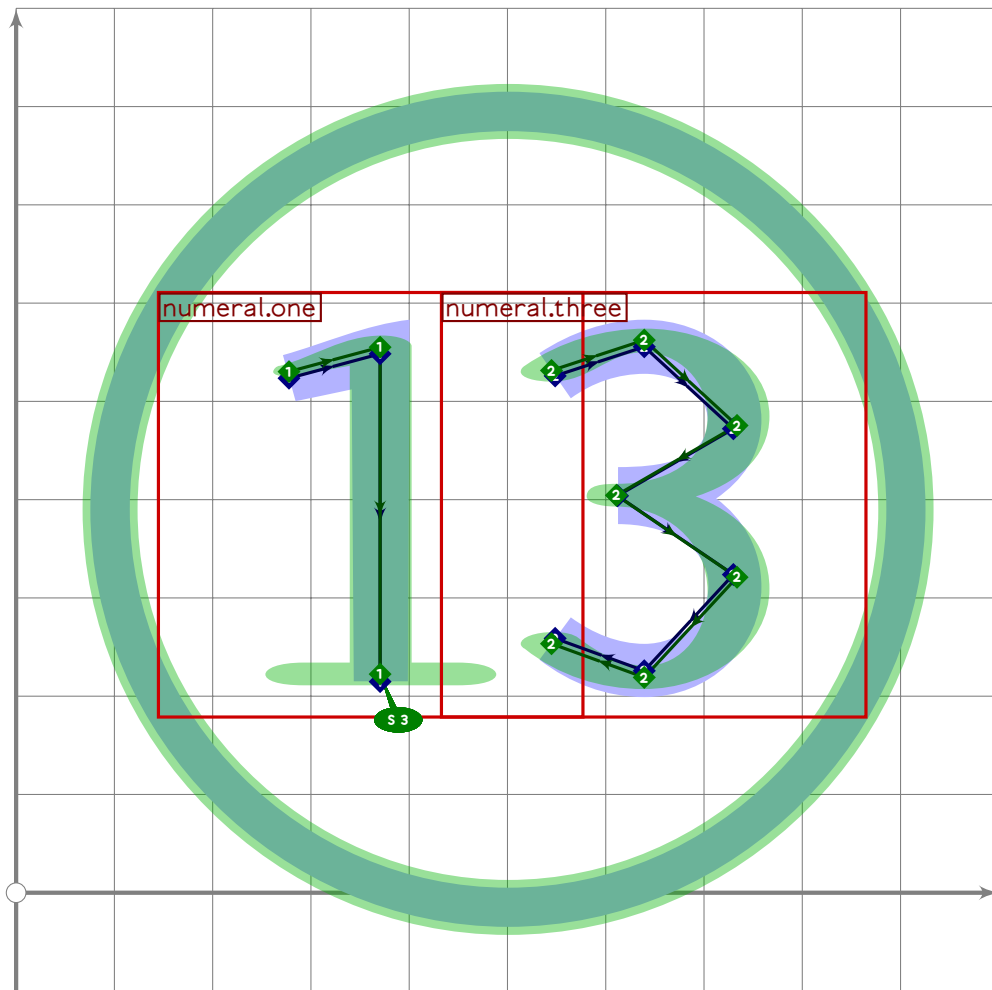
```



```

127 % 12
128 begintuglyph("uni246B",107);
129   tsu_curve.circle.single;
130   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
131   numeric x[],y[];
132   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.two);
133   tsu_render;
134 endtuglyph;
135

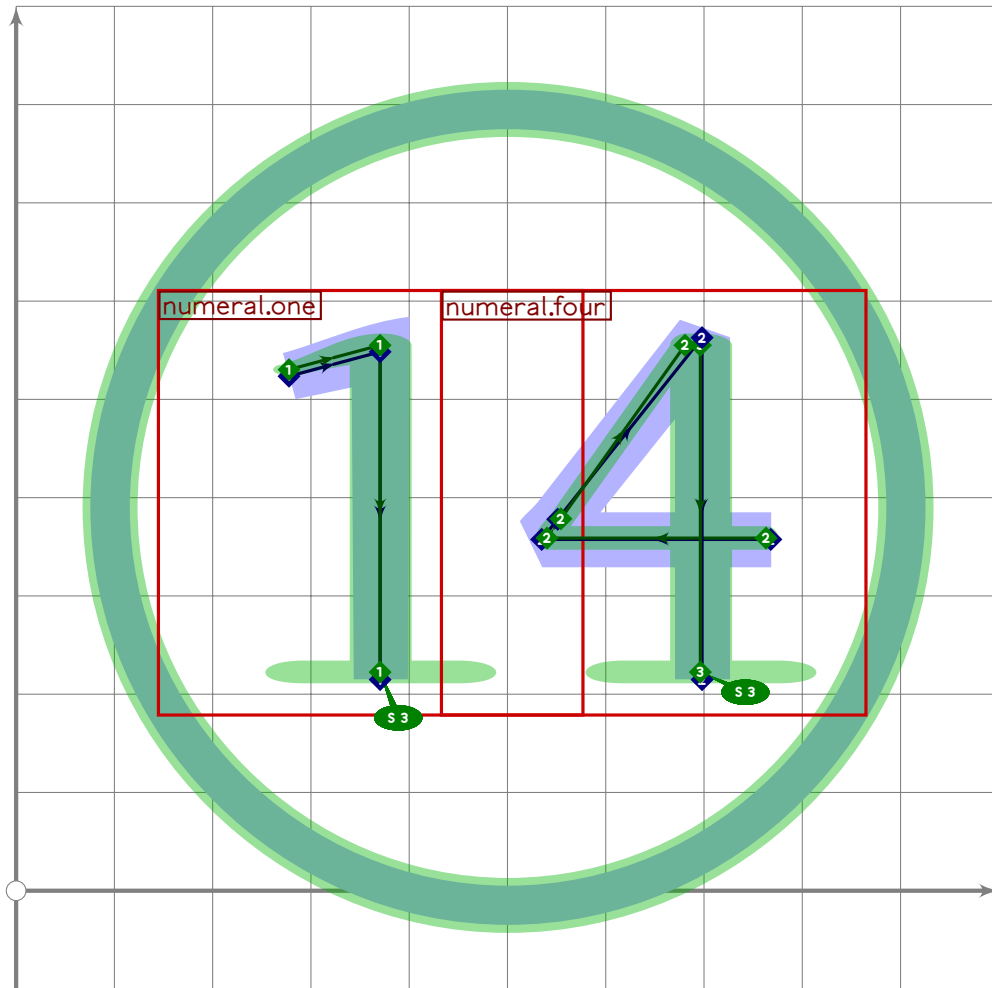
```



```

136 % 13
137 begint Suglyph("uni246C",108);
138   tsu_curve.circle.single;
139   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
140   numeric x[],y[];
141   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.three);
142   tsu_render;
143 endtsuglyph;
144

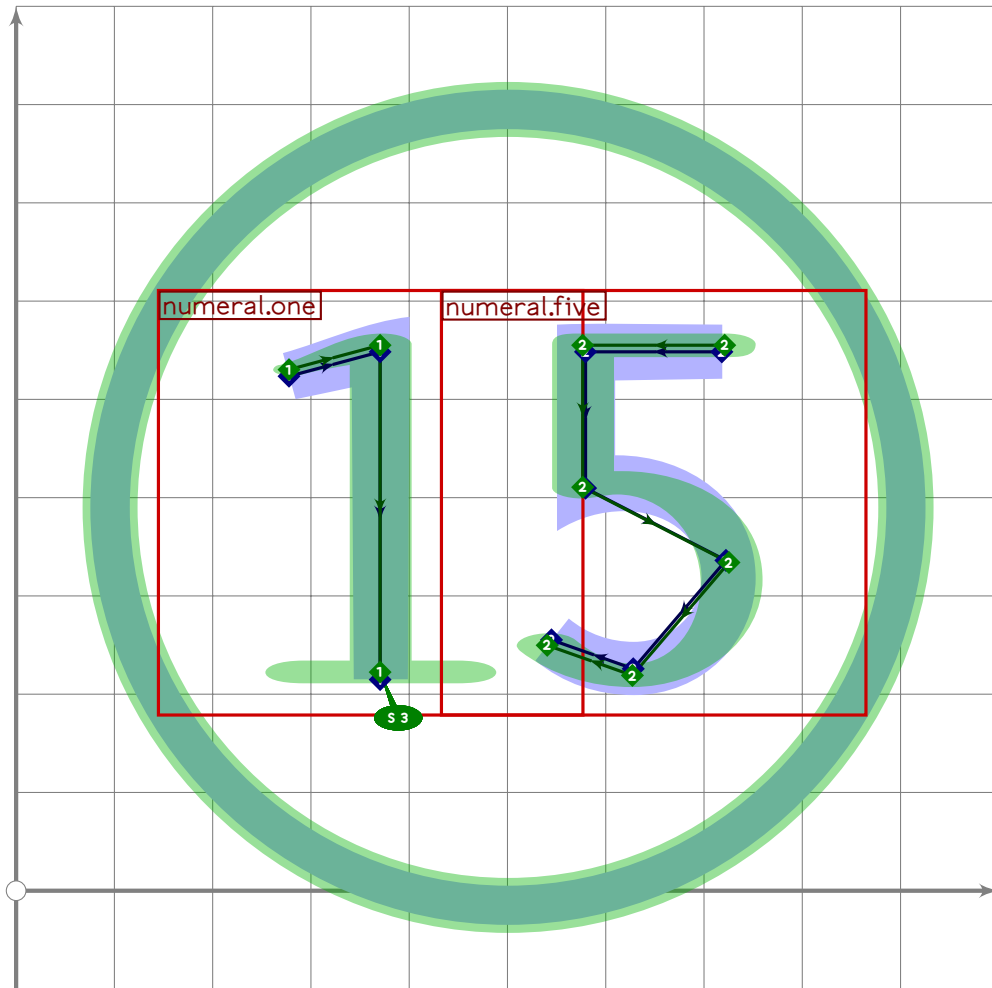
```

```

145 % 14
146 begint Suglyph("uni246D",109);
147   tsu_curve.circle.single;
148   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
149   numeric x[],y[];
150   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.four);
151   tsu_render;
152 endtsuglyph;
153

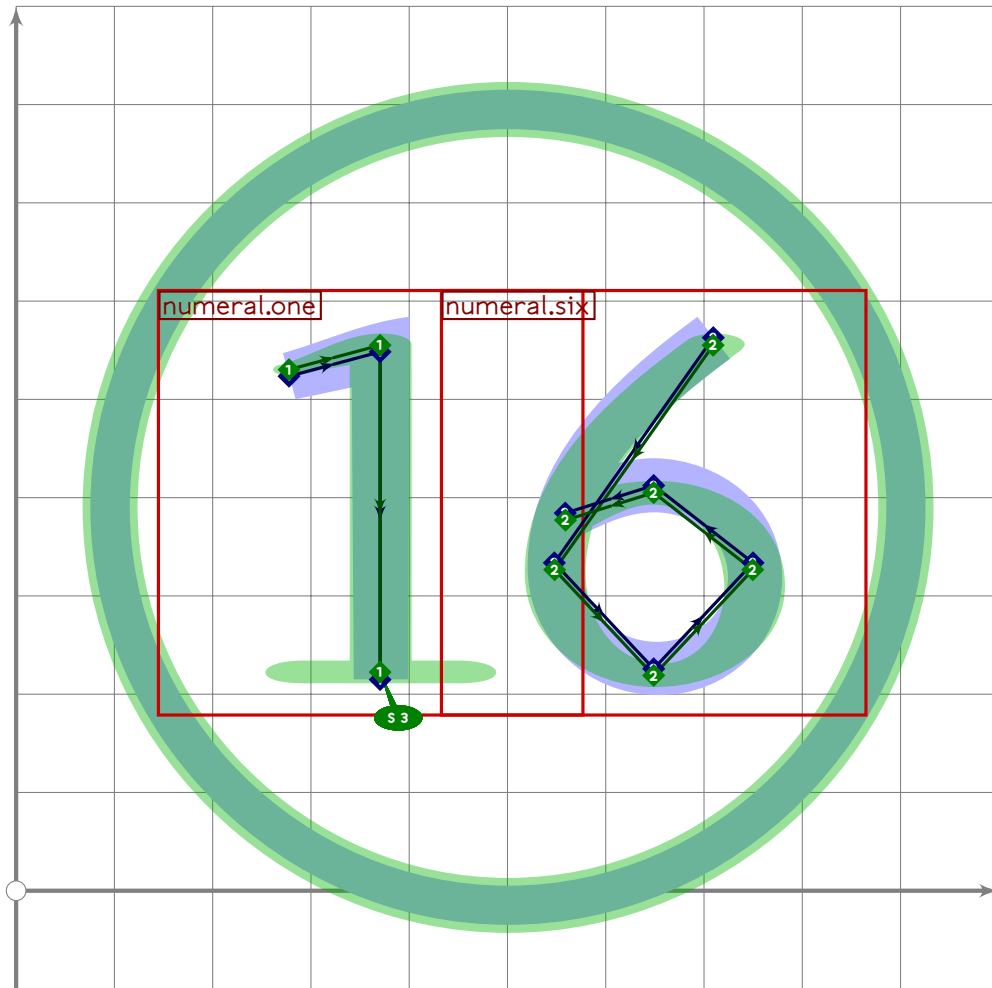
```



```

154 % 15
155 begint Suglyph("uni246E",110);
156 tsu_curve.circle.single;
157 tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
158 numeric x[],y[];
159 tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.five);
160 tsu_render;
161 endsuglyph;
162

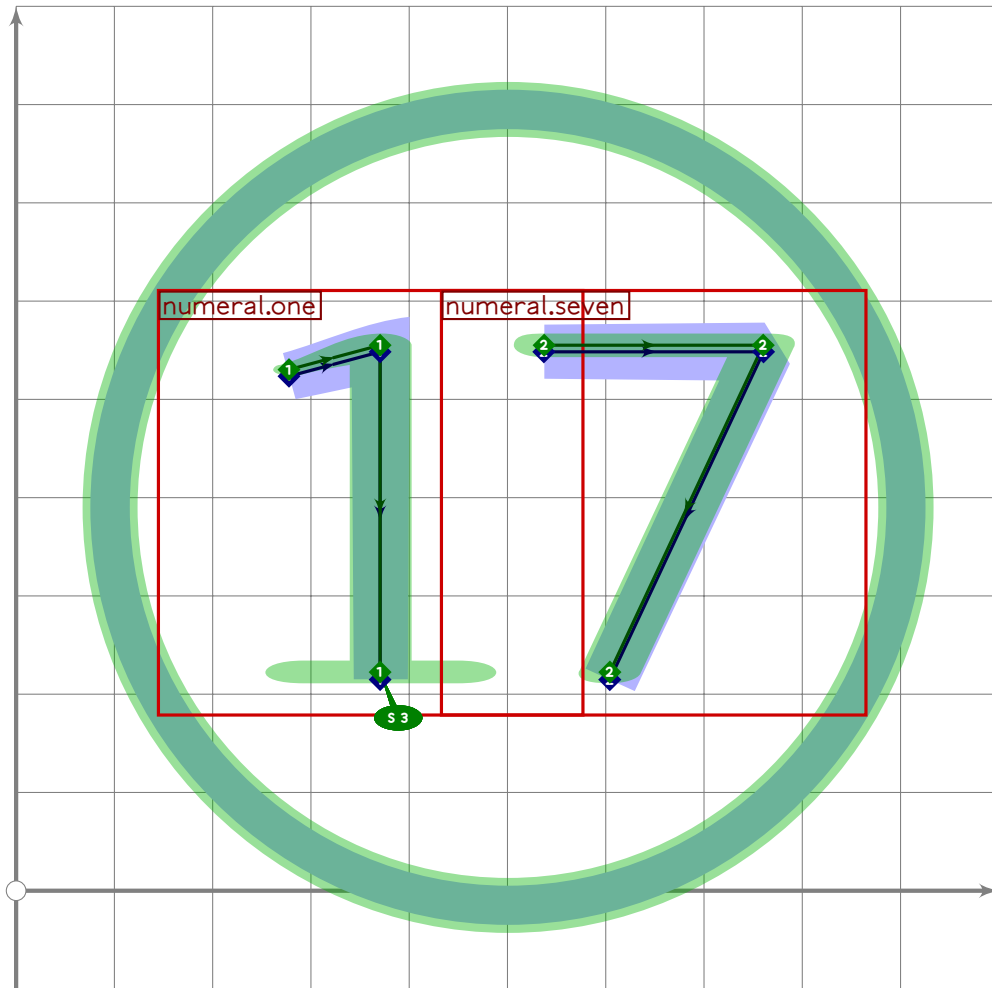
```



```

163 % 16
164 begint Suglyph("uni246F",111);
165   tsu_curve.circle.single;
166   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
167   numeric x[],y[];
168   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.six);
169   tsu_render;
170 endsuglyph;
171

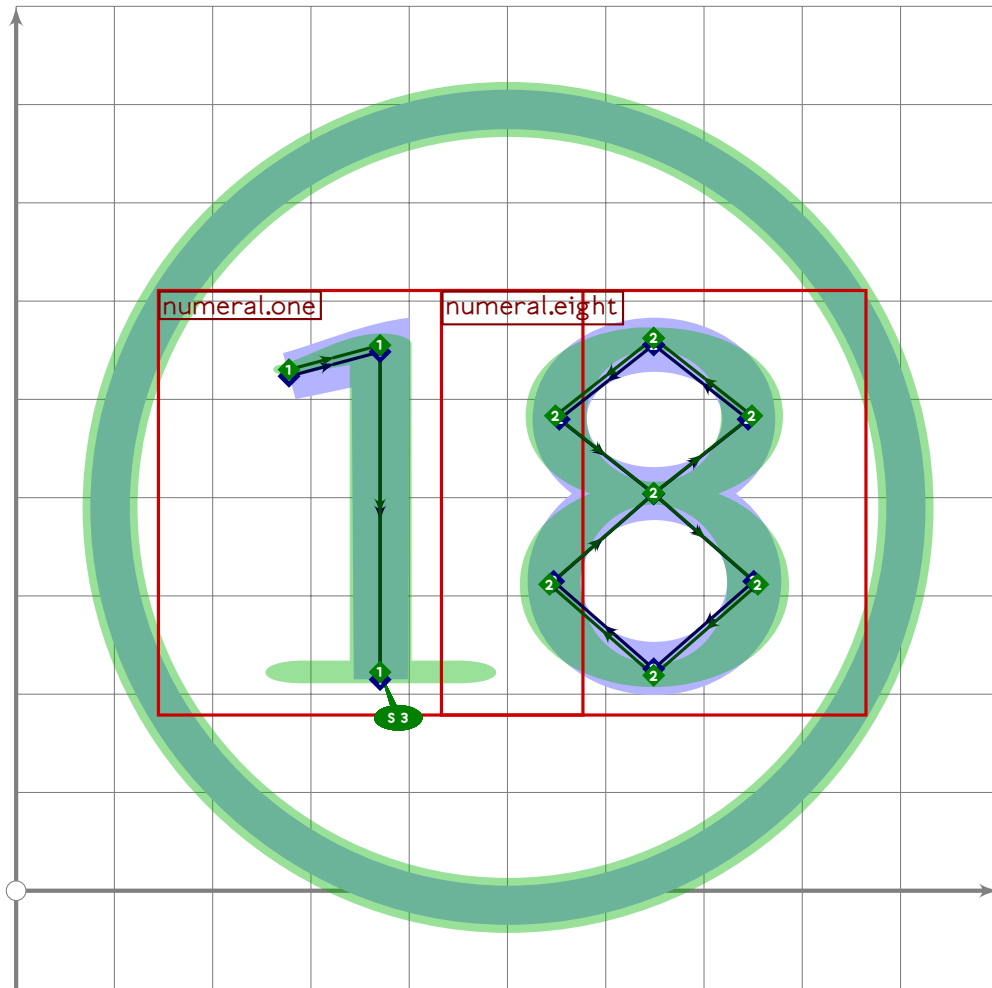
```



```

172 % 17
173 begint Suglyph("uni2470",112);
174   tsu_curve.circle.single;
175   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
176   numeric x[],y[];
177   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.seven);
178   tsu_render;
179 endtsuglyph;
180

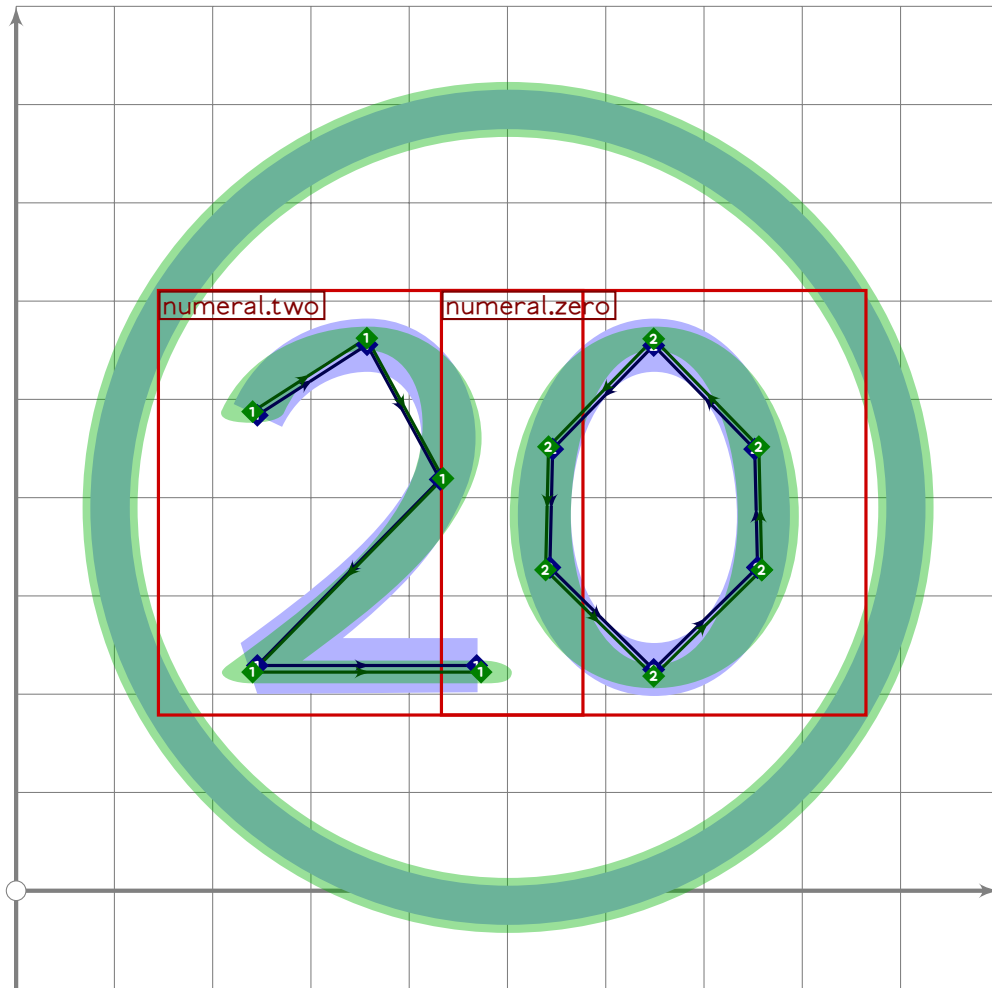
```



```

181 % 18
182 begintuglyph("uni2471";113);
183   tsu_curve.circle.single;
184   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
185   numeric x[],y[];
186   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.eight);
187   tsu_render;
188 endtuglyph;
189

```

```

199 % 20
200 begint Suglyph("uni2473";115);
201   tsu_curve.circle.single;
202   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.two);
203   numeric x[],y[];
204   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.zero);
205   tsu_render;
206 endtsuglyph;
207
208
209

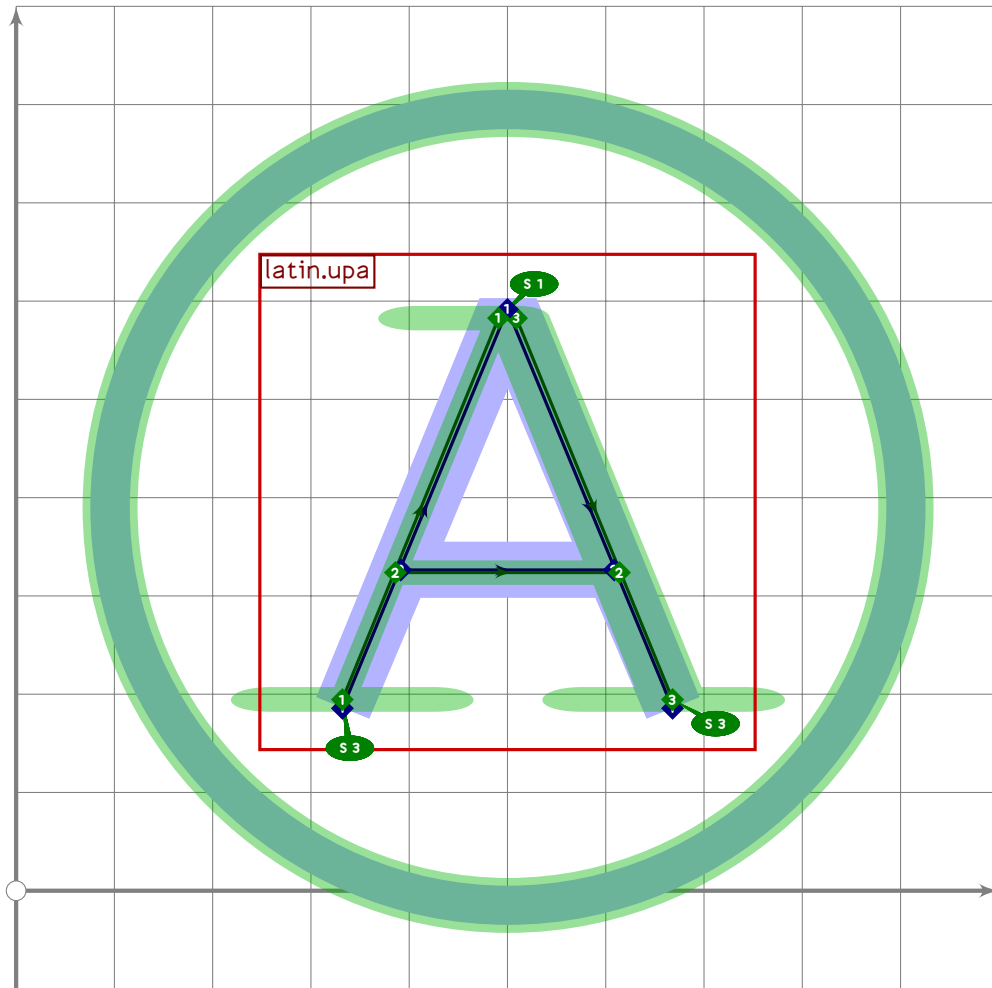
```

Circled Latin And Zero

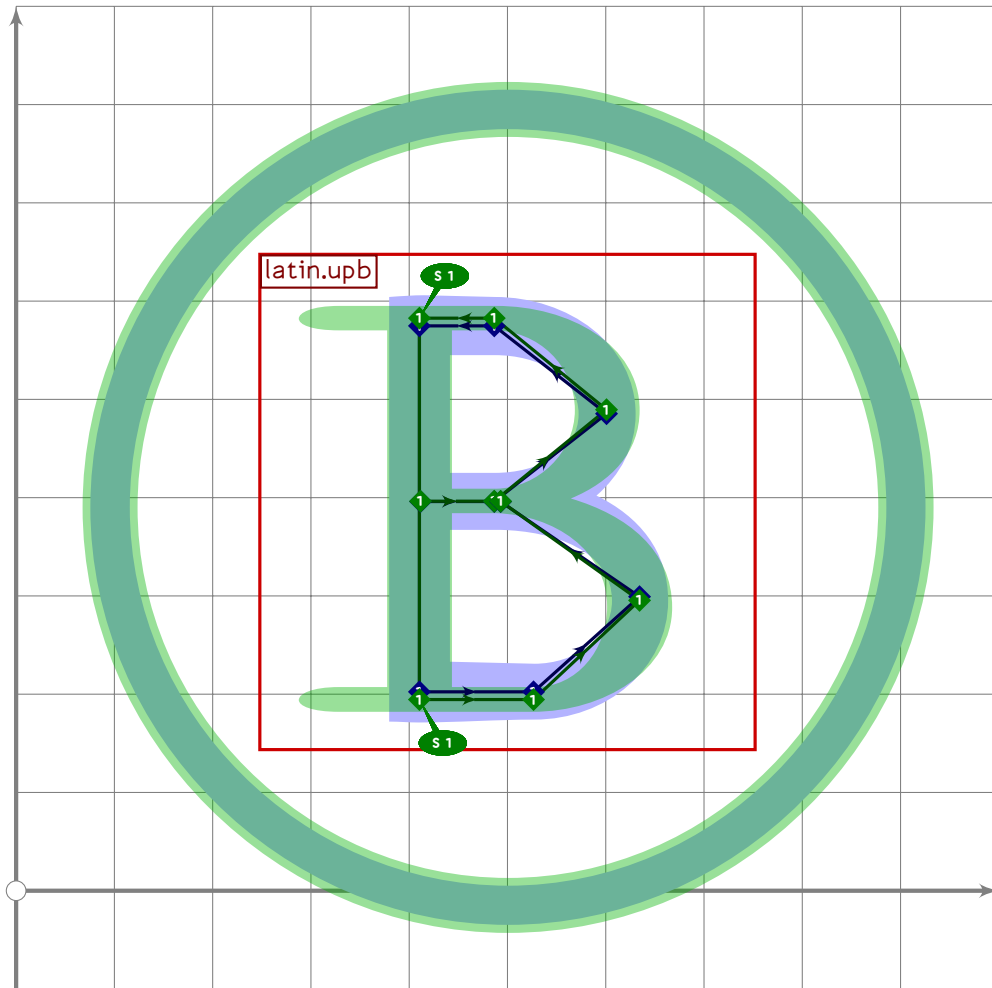
```

210 % CIRCLED LATIN AND ZERO
211

```



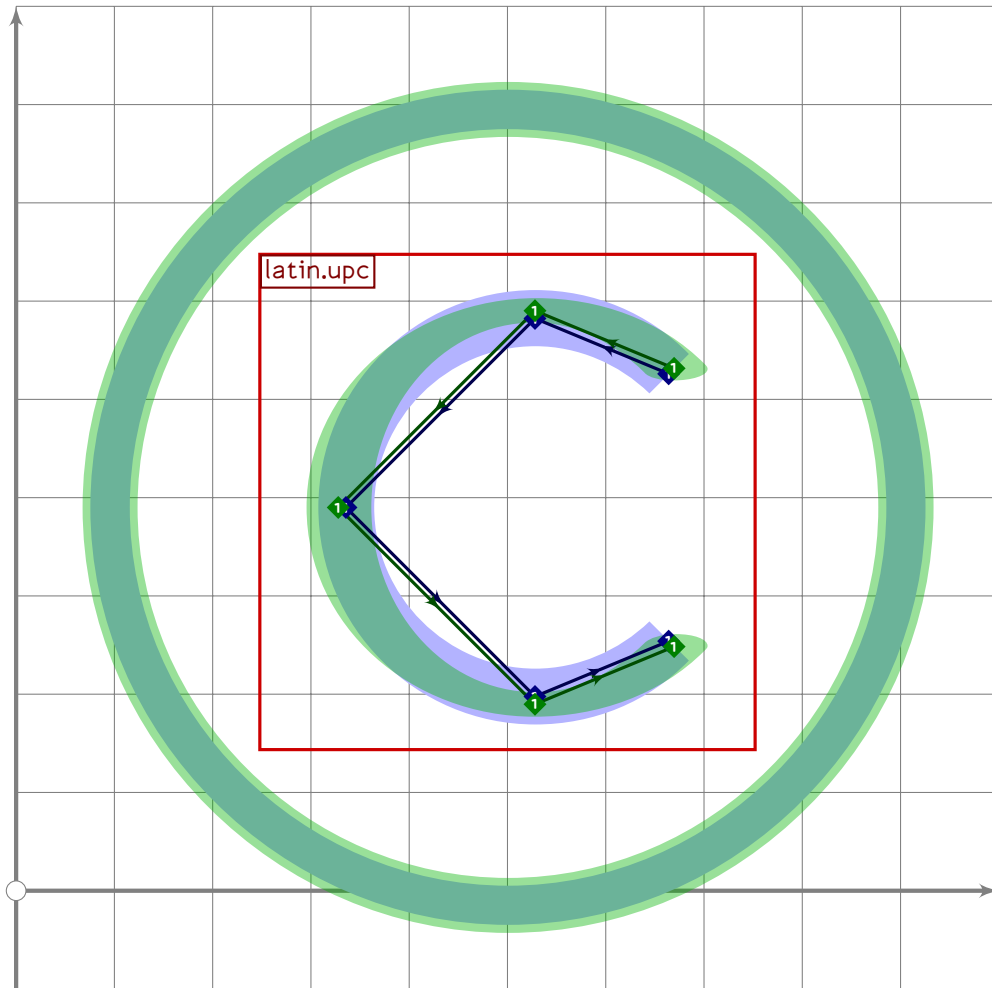
```
212 % A
213 beginsuglyph("uni24B6",182);
214 tsu_curve.circle.single;
215 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upa);
216 tsu_render;
217 endsuglyph;
218
```

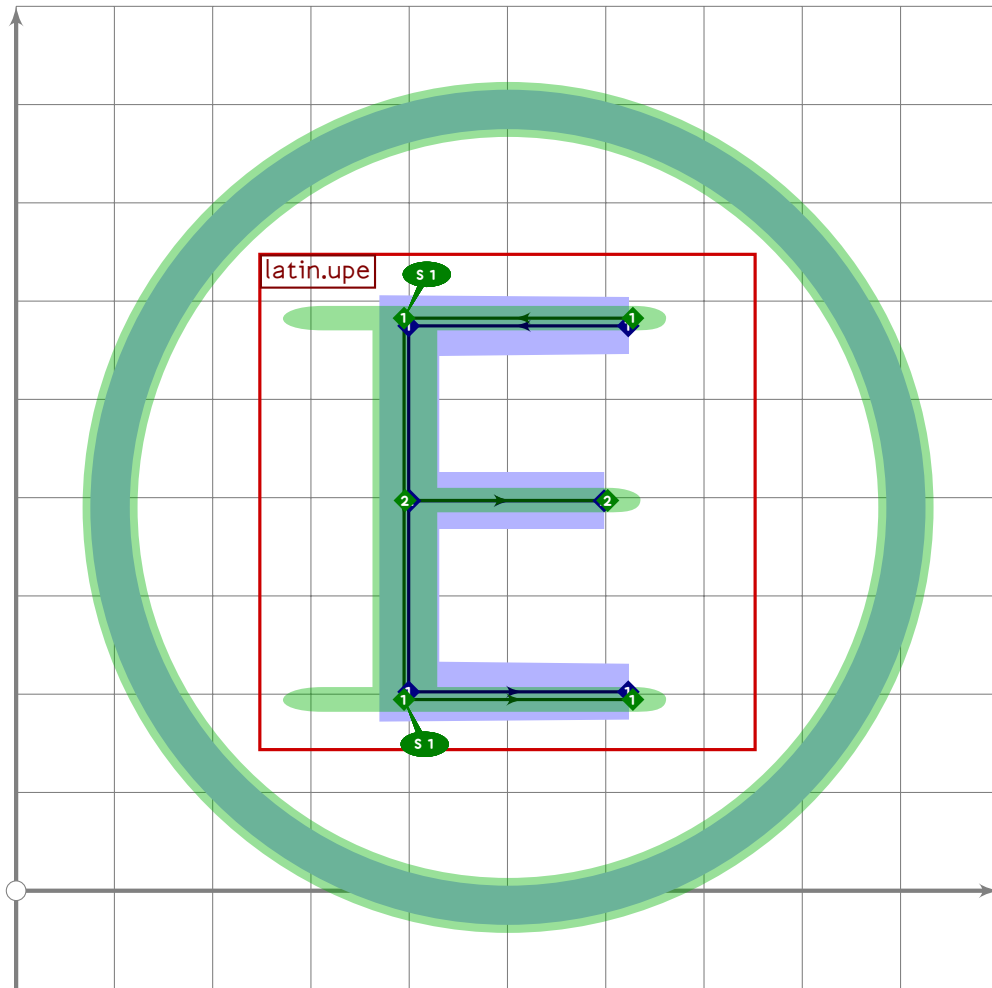
```

219 % B
220 beginsuglyph("uni24B7",183);
221 tsu_curve.circle.single;
222 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upb);
223 tsu_render;
224 endsuglyph;
225

```



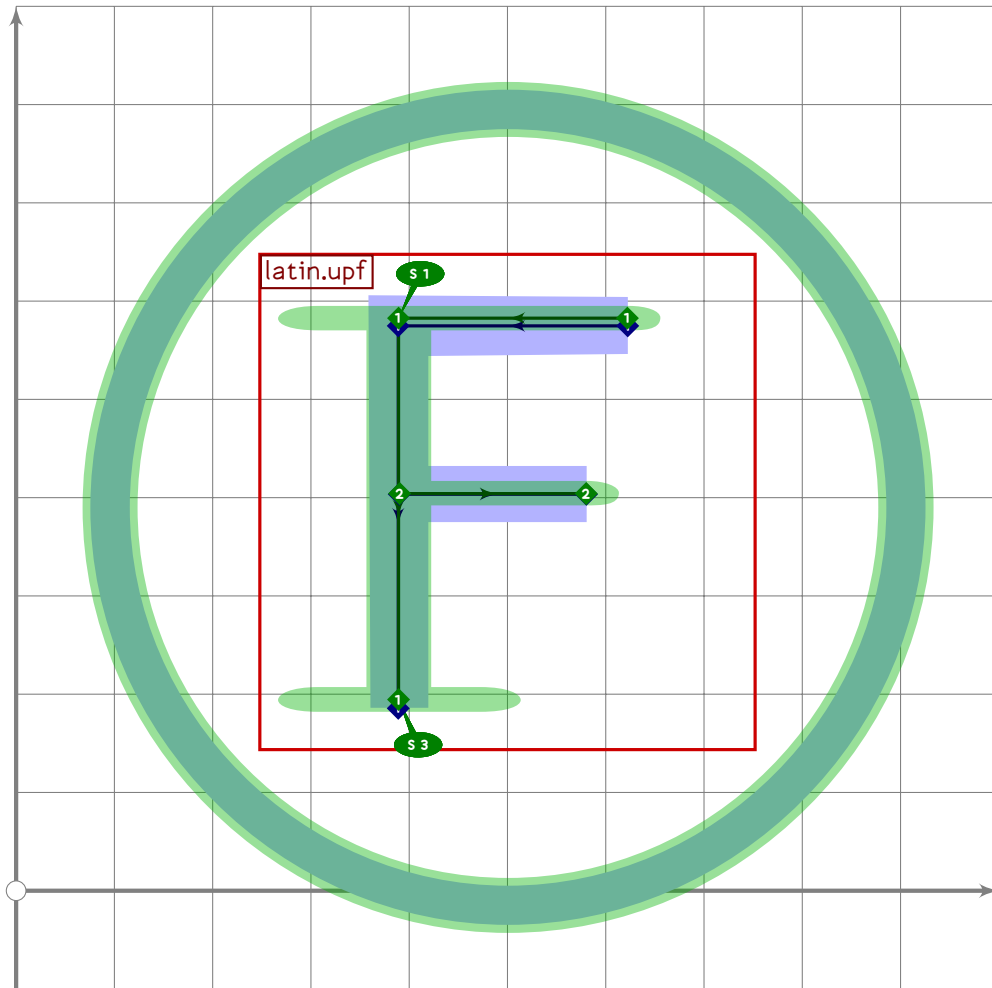
```
226 % C
227 begint Suglyph("uni24B8",184);
228 tsu_curve.circle.single;
229 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upc);
230 tsu_render;
231 endsuglyph;
232
```

```

240 % E
241 begint Suglyph("uni24BA",186);
242   tsu_curve.circle.single;
243   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upe);
244   tsu_render;
245 endsuglyph;
246

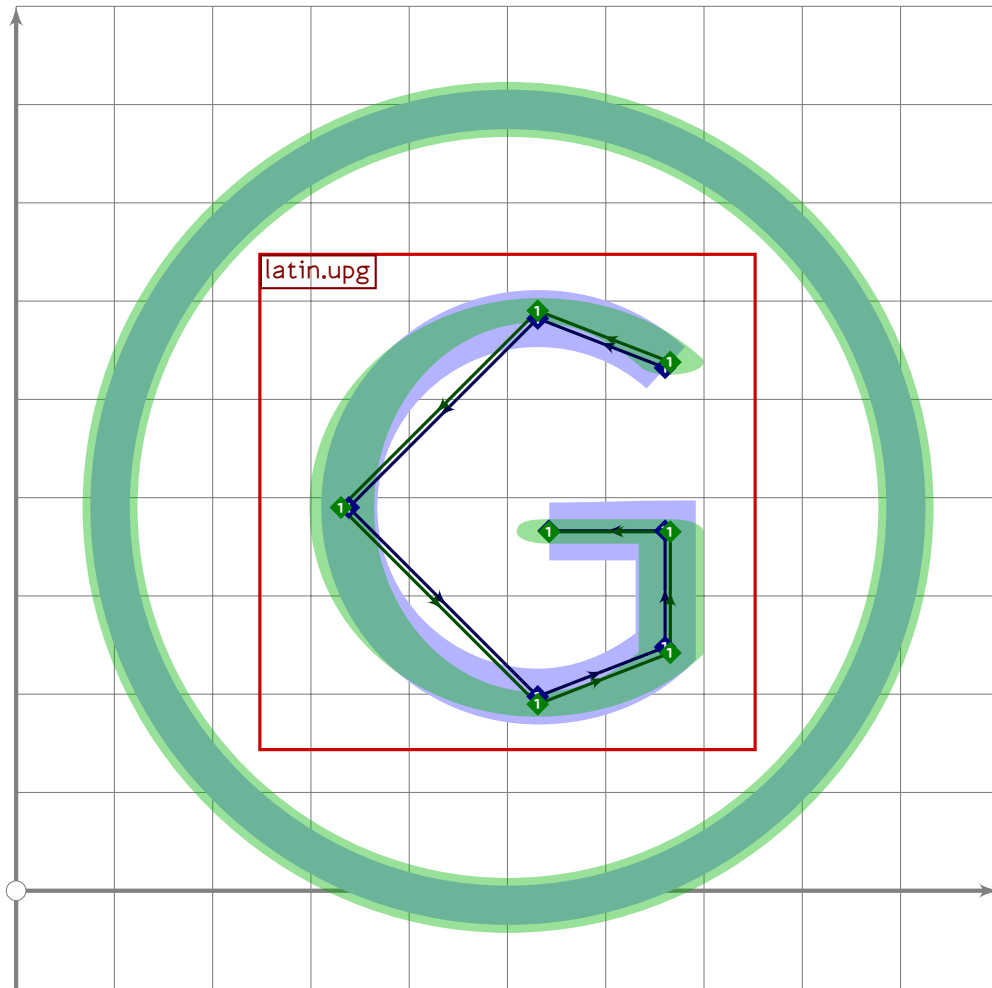
```



```

247 % F
248 begint Suglyph("uni24BB",187);
249 tsu_curve.circle.single;
250 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upf);
251 tsu_render;
252 endsuglyph;
253

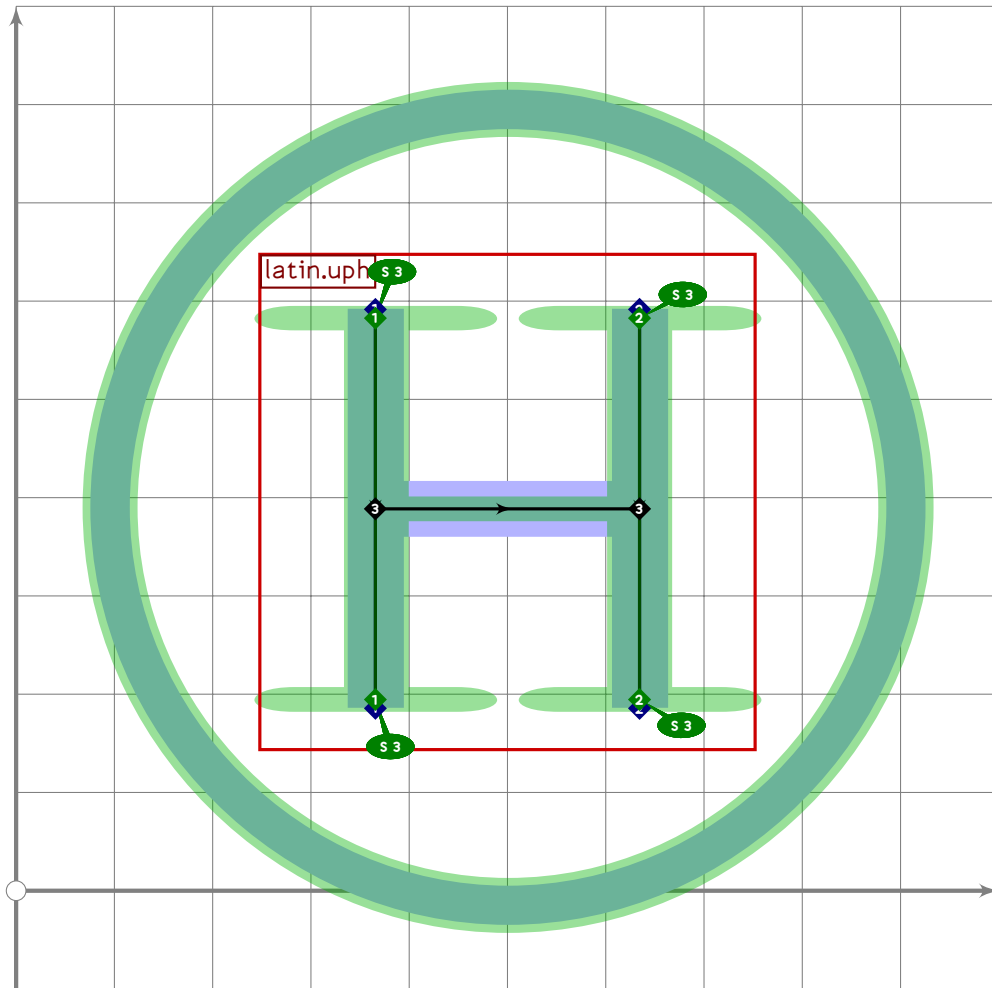
```



```

254 % G
255 begint Suglyph("uni24BC",188);
256   tsu_curve.circle.single;
257   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upg);
258   tsu_render;
259 endsuglyph;
260

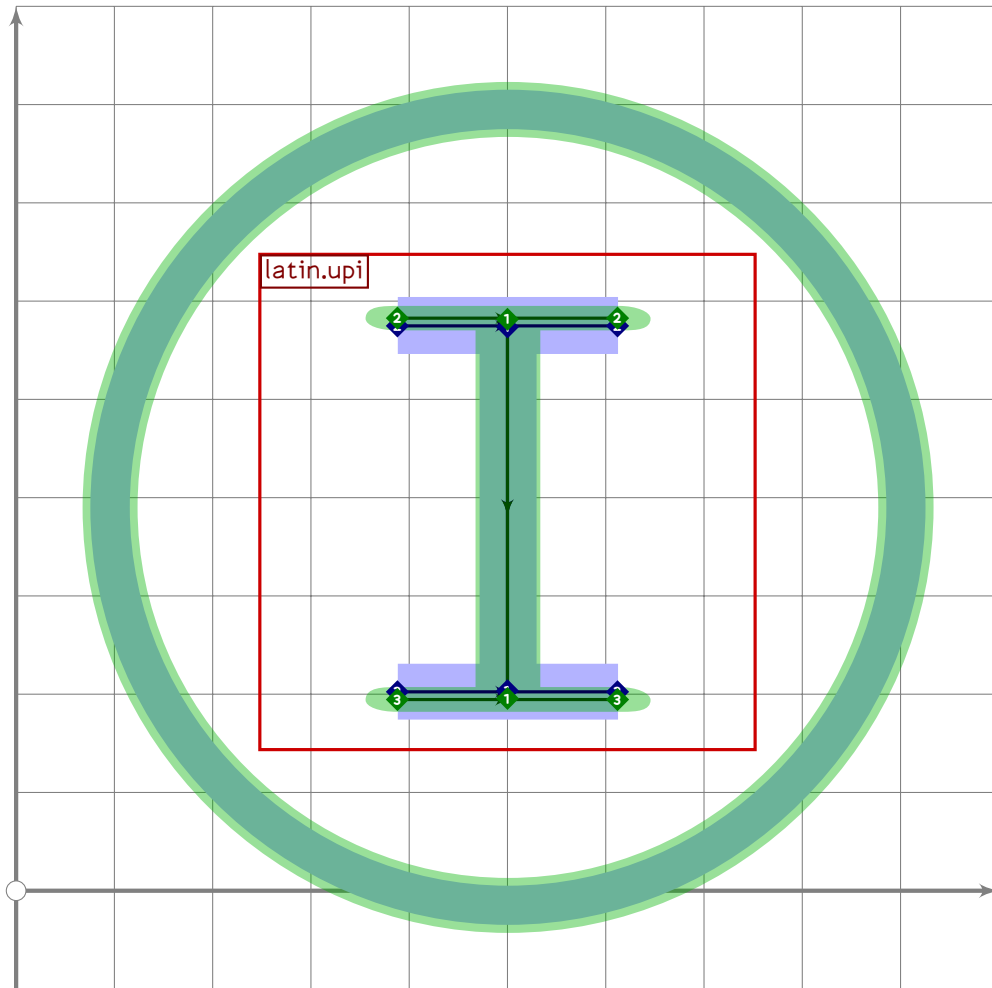
```



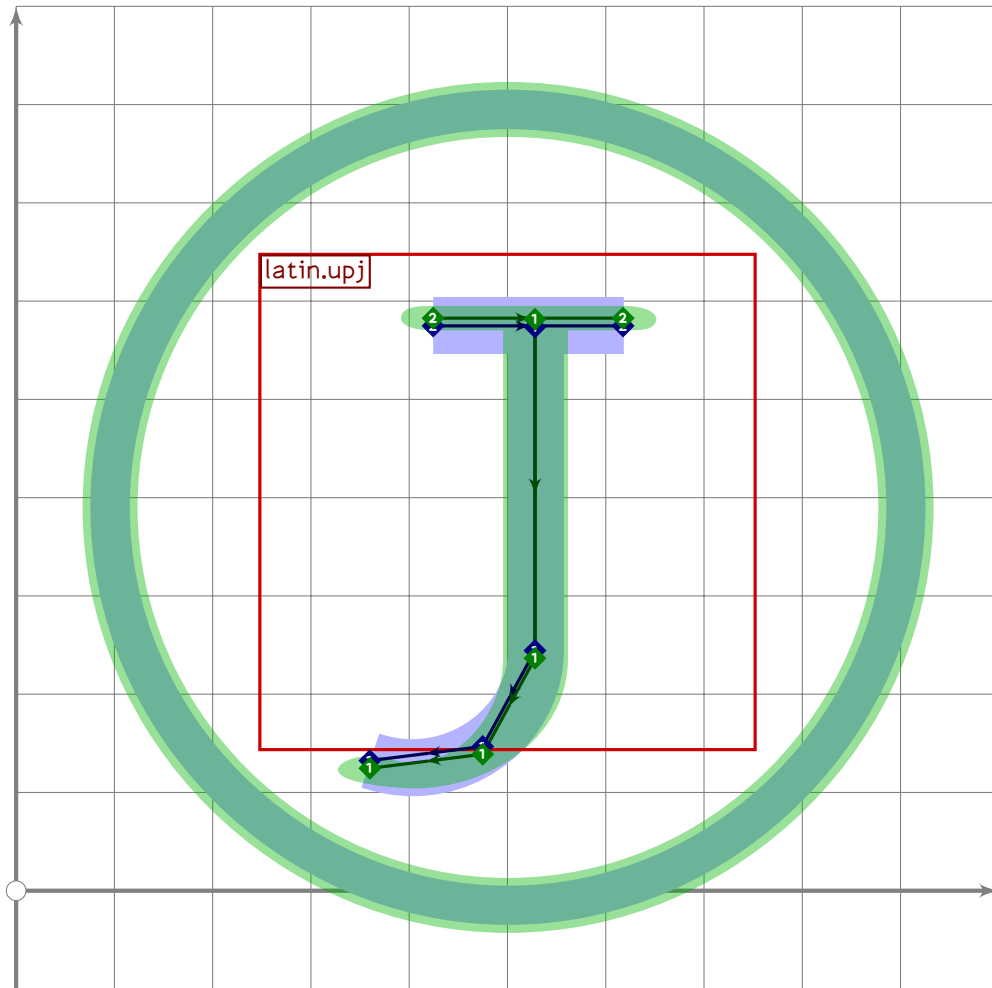
```

261 % H
262 begint Suglyph("uni24BD",189);
263   tsu_curve.circle.single;
264   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.uph);
265   tsu_render;
266 endsuglyph;
267

```



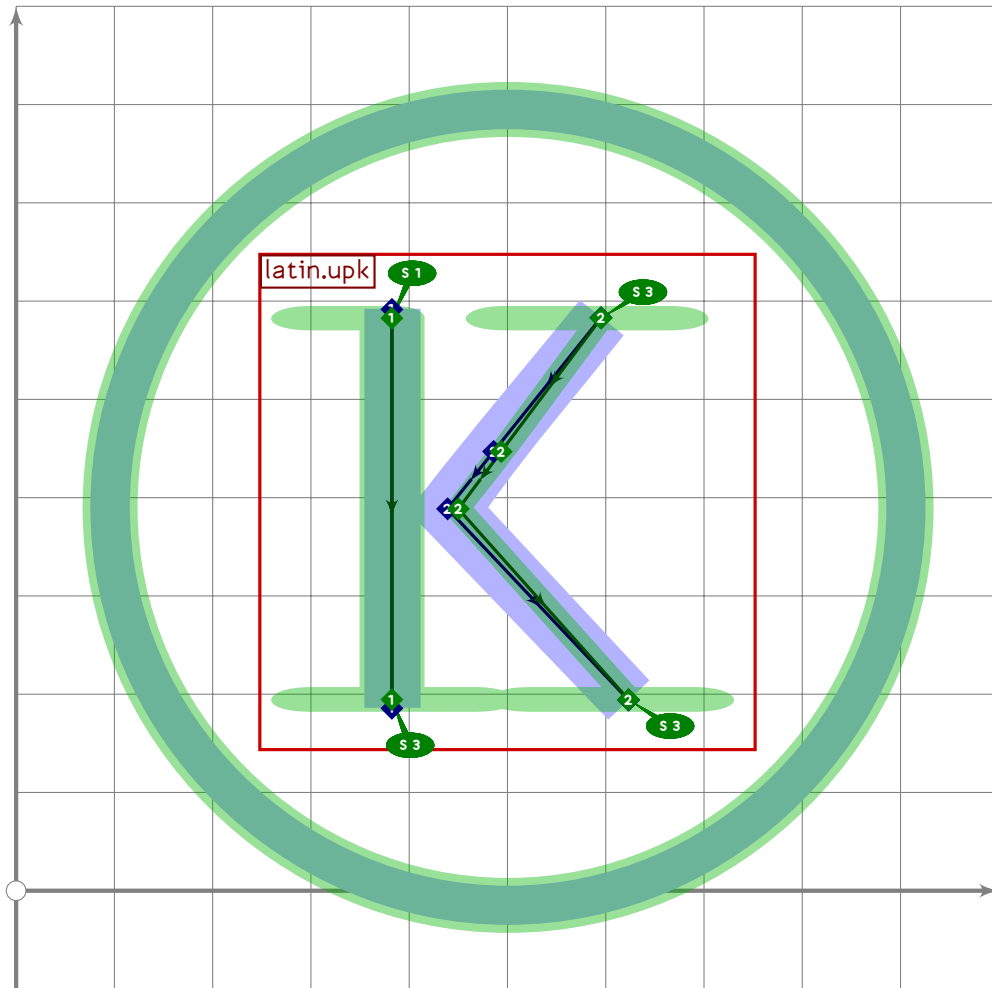
```
268 % I
269 begint Suglyph("uni24BE",190);
270 tsu_curve.circle.single;
271 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upi);
272 tsu_render;
273 endsuglyph;
274
```

```

275 % J
276 begint Suglyph("uni24BF",191);
277 tsu_curve.circle.single;
278 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upj);
279 tsu_render;
280 endsuglyph;
281

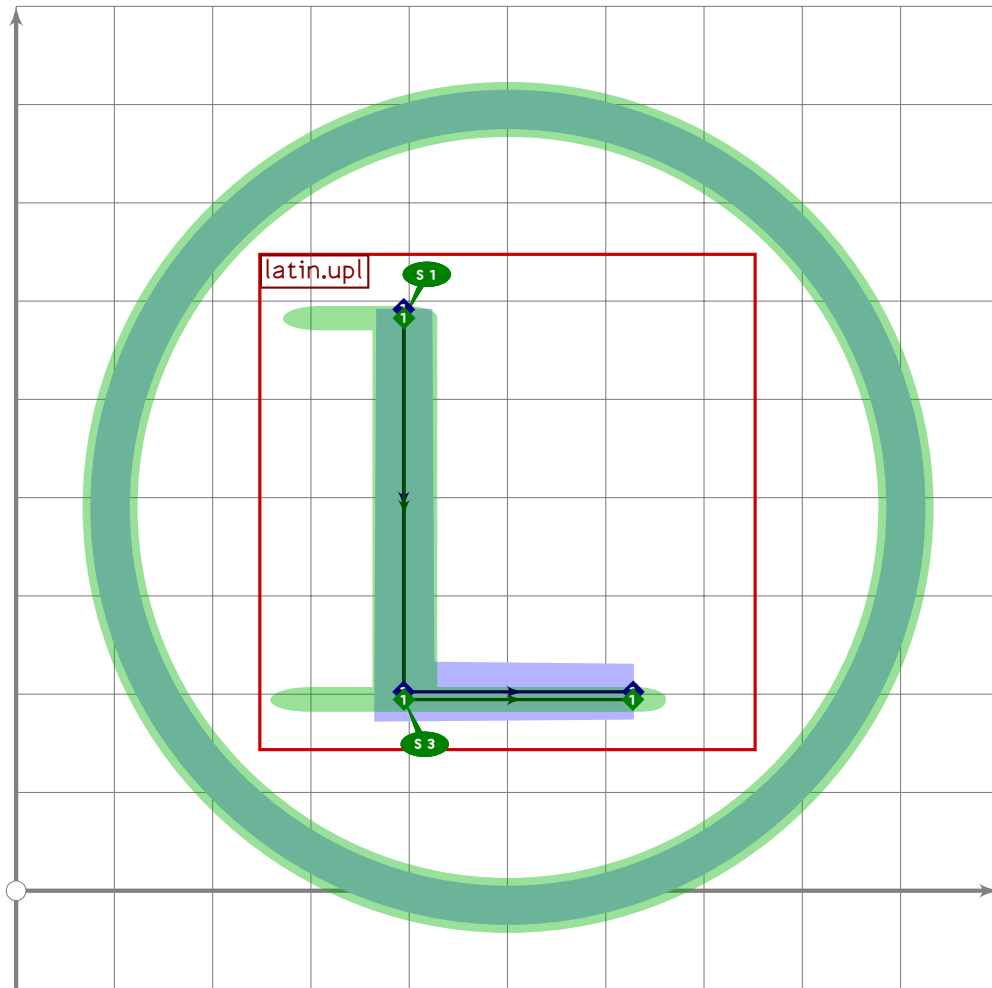
```



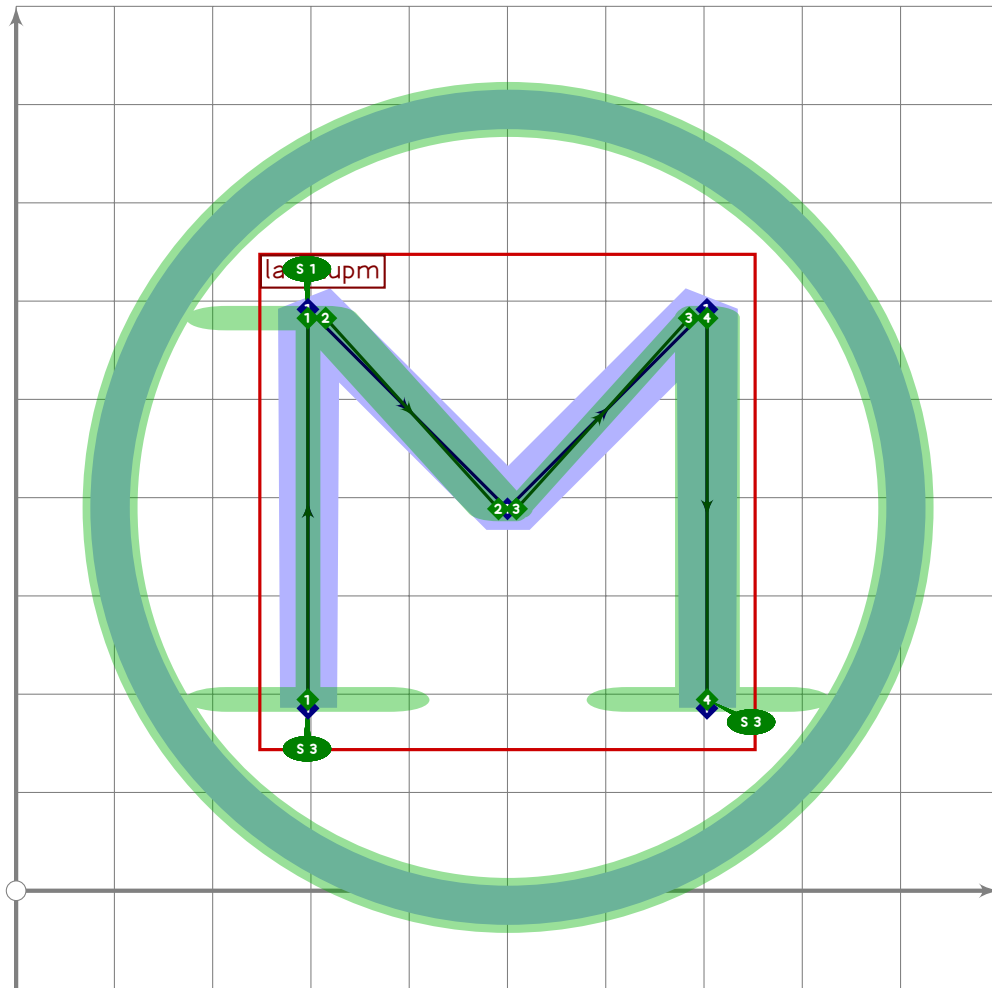
```

282 % K
283 begint Suglyph("uni24C0",192);
284   tsu_curve.circle.single;
285   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upk);
286   tsu_render;
287 endsuglyph;
288

```



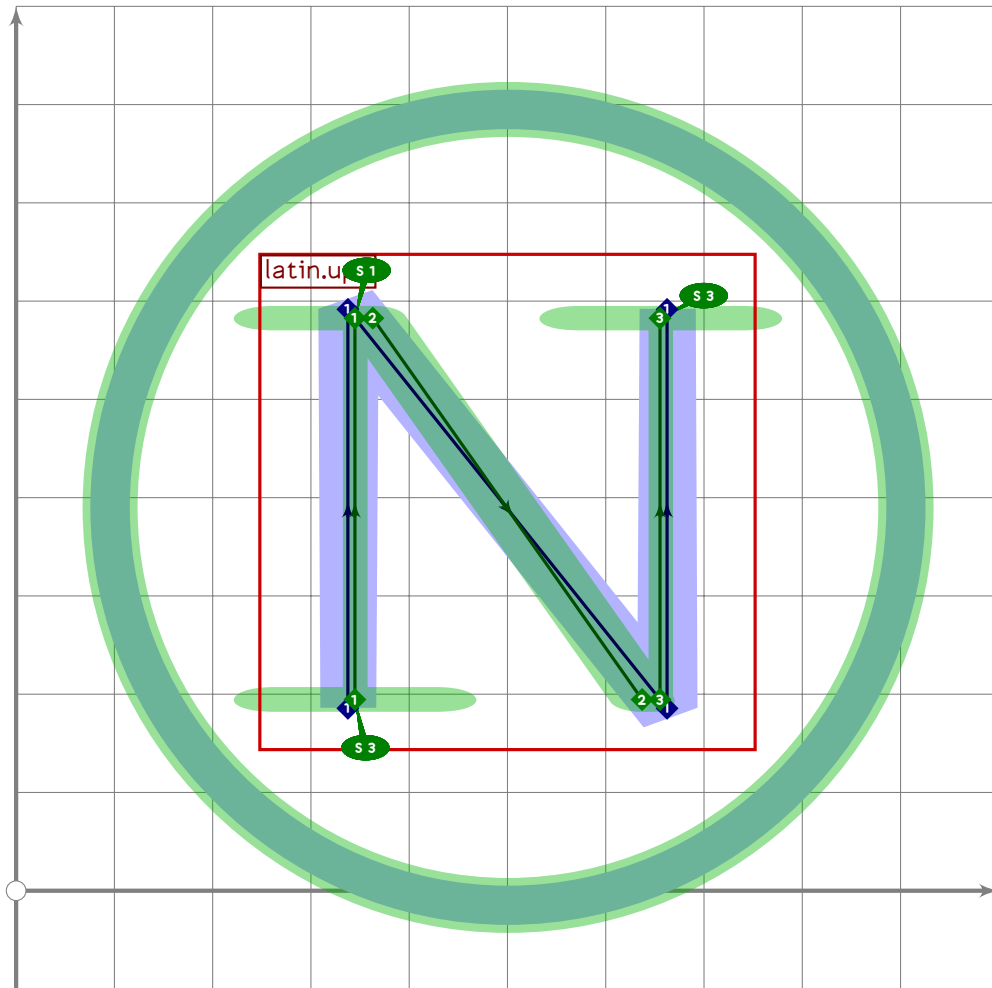
```
289 % L
290 begint Suglyph("uni24C1",193);
291   tsu_curve.circle.single;
292   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upl);
293   tsu_render;
294 endsuglyph;
295
```



```

296 % M
297 begint Suglyph("uni24C2",194);
298   tsu_curve.circle.single;
299   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upm);
300   tsu_render;
301 endsuglyph;
302

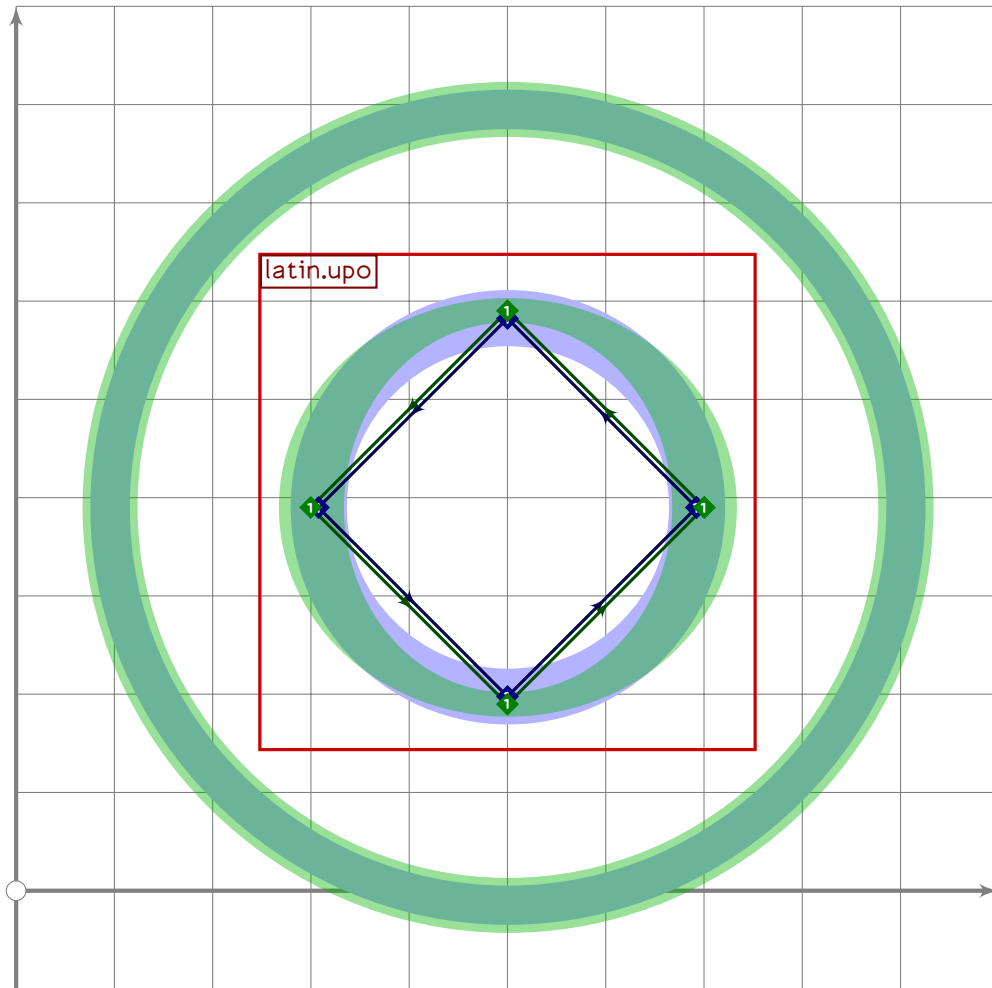
```



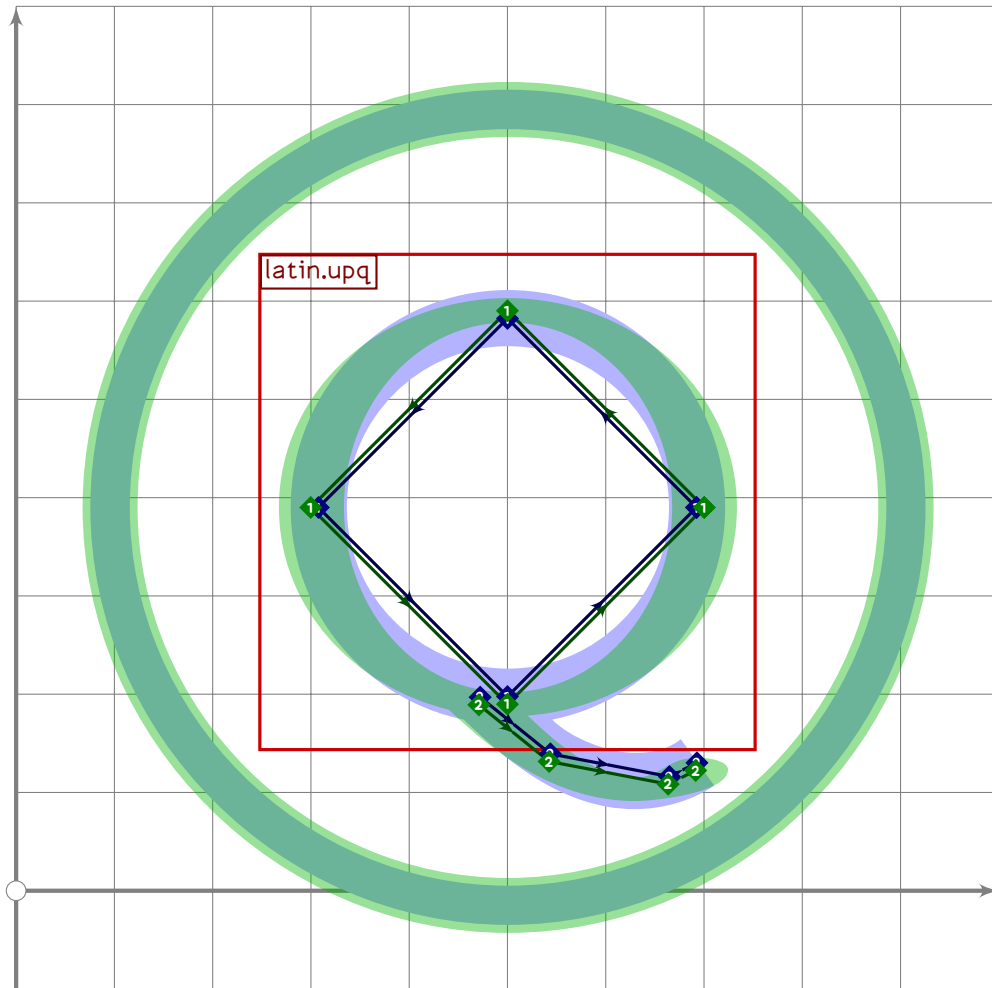
```

303 % N
304 begint Suglyph("uni24C3",195);
305   tsu_curve.circle.single;
306   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upn);
307   tsu_render;
308 endsuglyph;
309

```



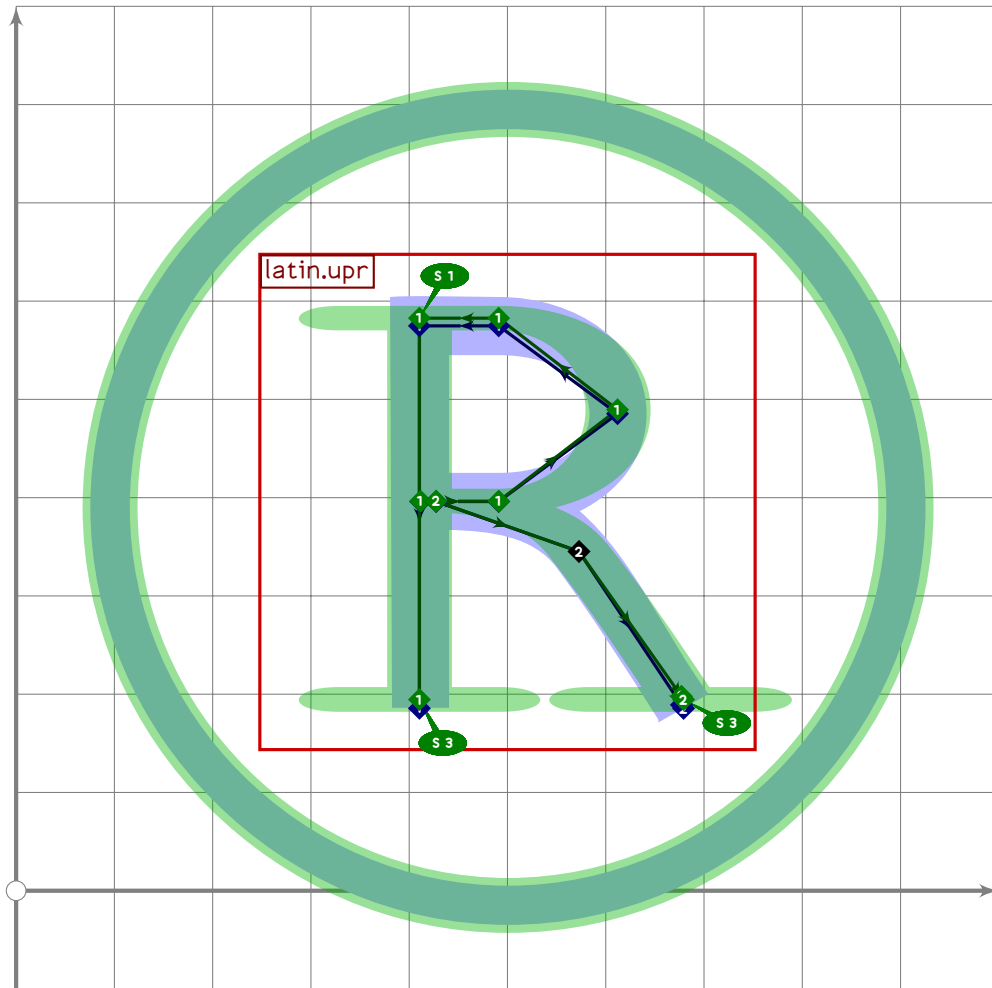
```
310 % O
311 begint Suglyph("uni24C4",196);
312 tsu_curve.circle.single;
313 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upo);
314 tsu_render;
315 endsuglyph;
316
```

```

324 % Q
325 begint Suglyph("uni24C6",198);
326 tsu_curve.circle.single;
327 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upq);
328 tsu_render;
329 endsuglyph;
330

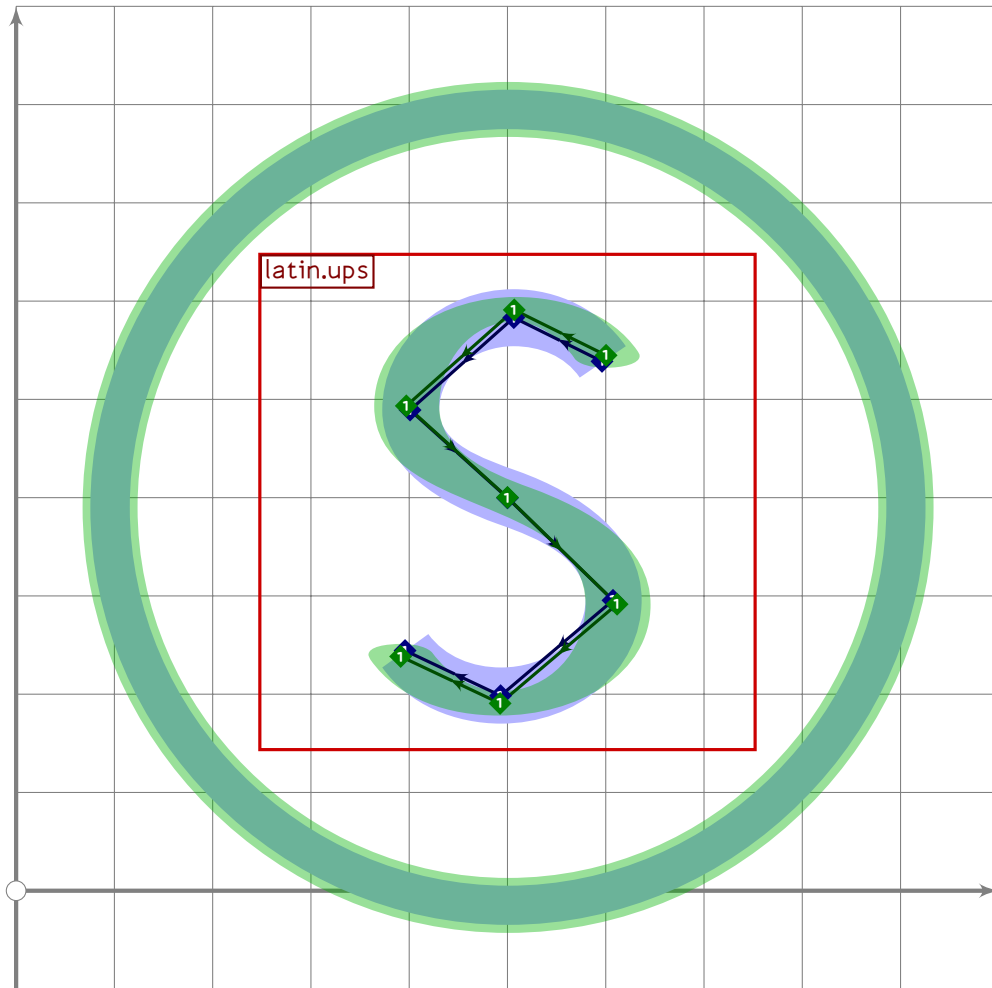
```

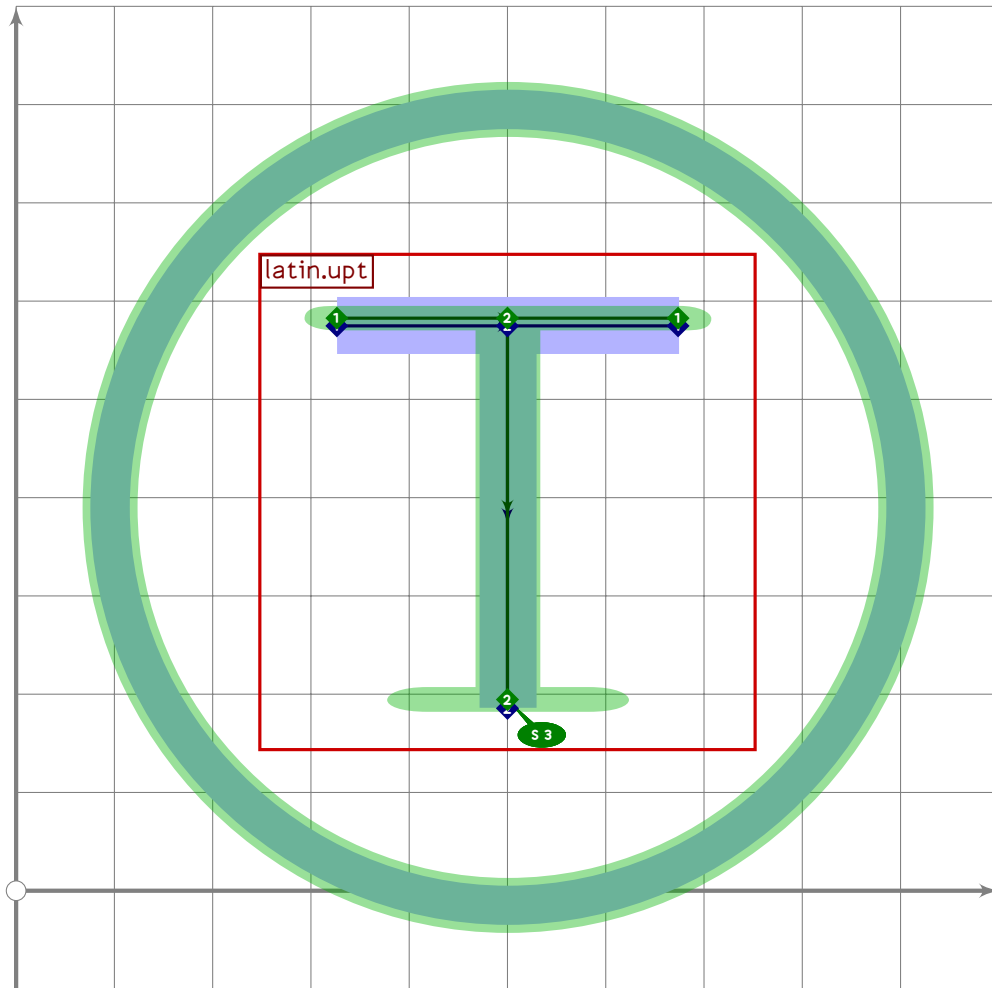
```

331 % R
332 begint Suglyph("uni24C7",199);
333   tsu_curve.circle.single;
334   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upr);
335   tsu_render;
336 endsuglyph;
337

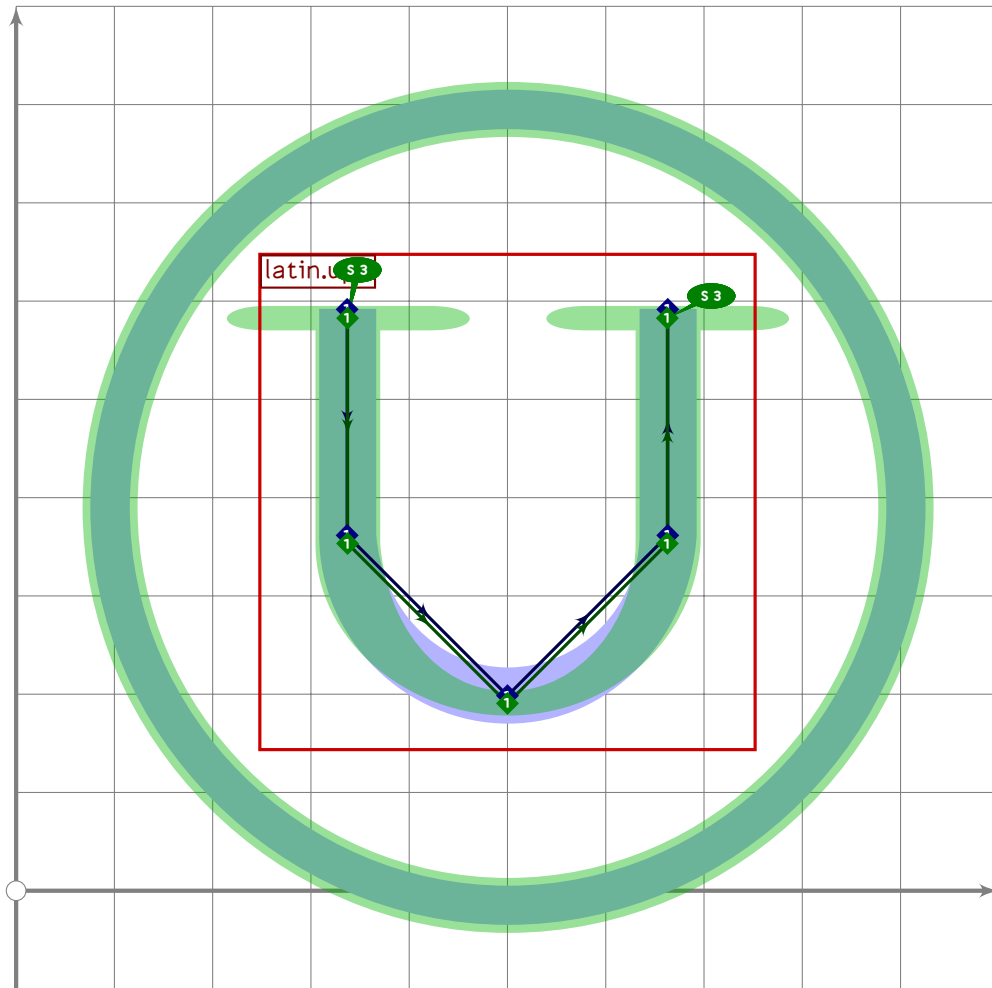
```



```
338 % S
339 begint Suglyph("uni24C8",200);
340 tsu_curve.circle.single;
341 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.ups);
342 tsu_render;
343 endsuglyph;
344
```



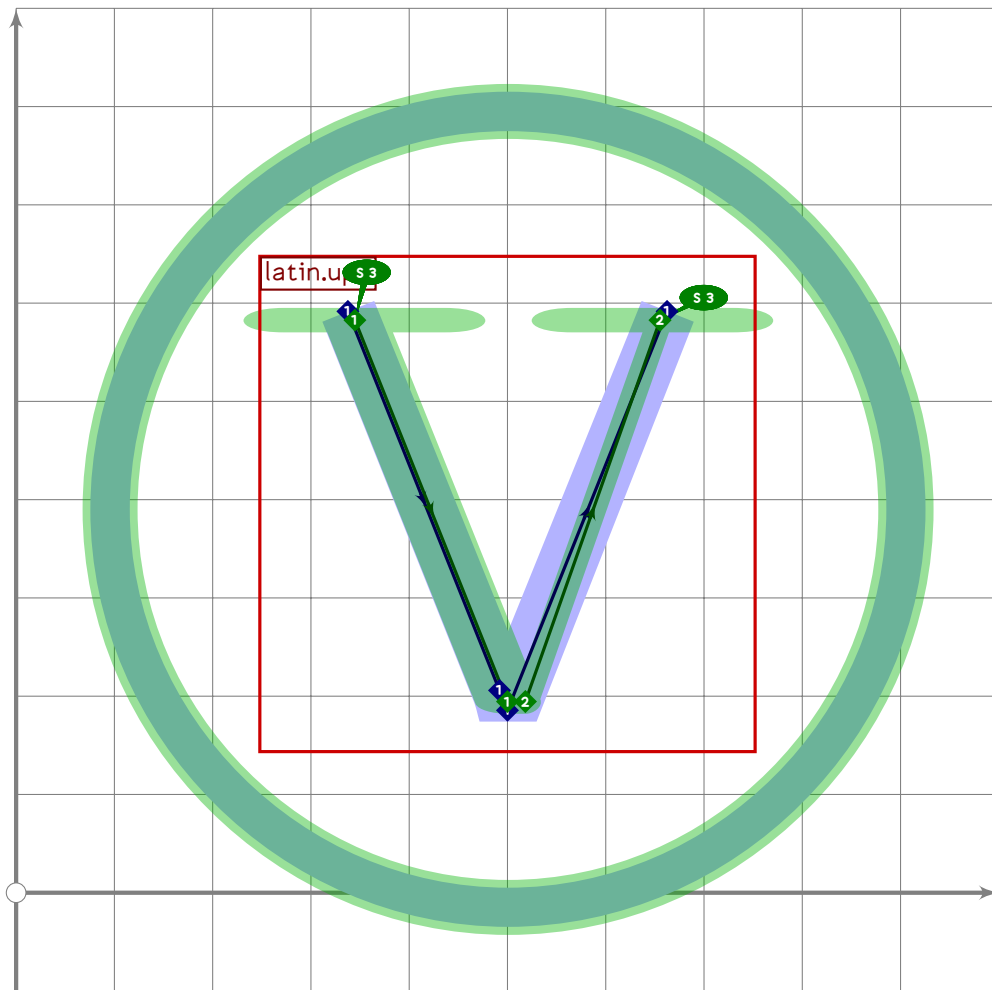
```
345 % T
346 begint Suglyph("uni24C9",201);
347 tsu_curve.circle.single;
348 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upt);
349 tsu_render;
350 endsuglyph;
351
```



```

352 % U
353 begint Suglyph("uni24CA";202);
354   tsu_curve.circle.single;
355   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upu);
356   tsu_render;
357 endsuglyph;
358

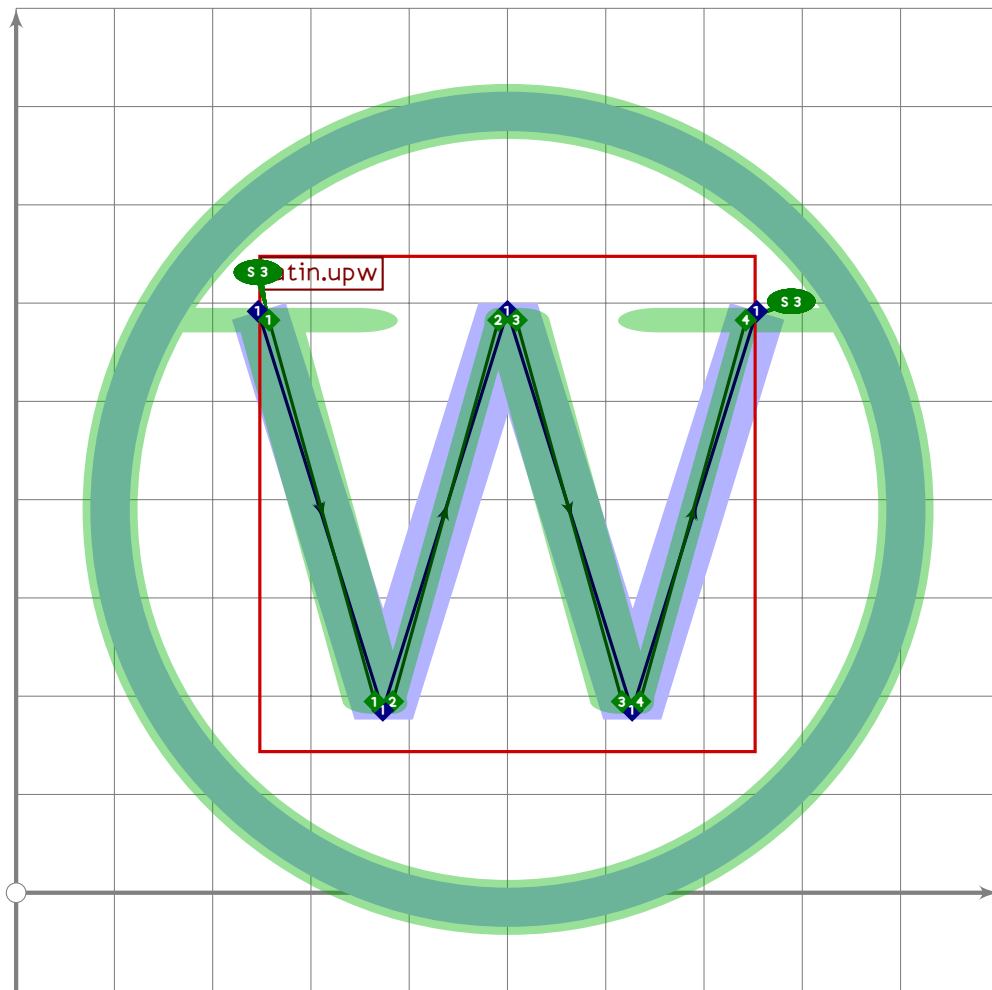
```



```

359 % V
360 begintuglyph("uni24CB";203);
361   tsu_curve.circle.single;
362   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upv);
363   tsu_render;
364 endsuglyph;
365

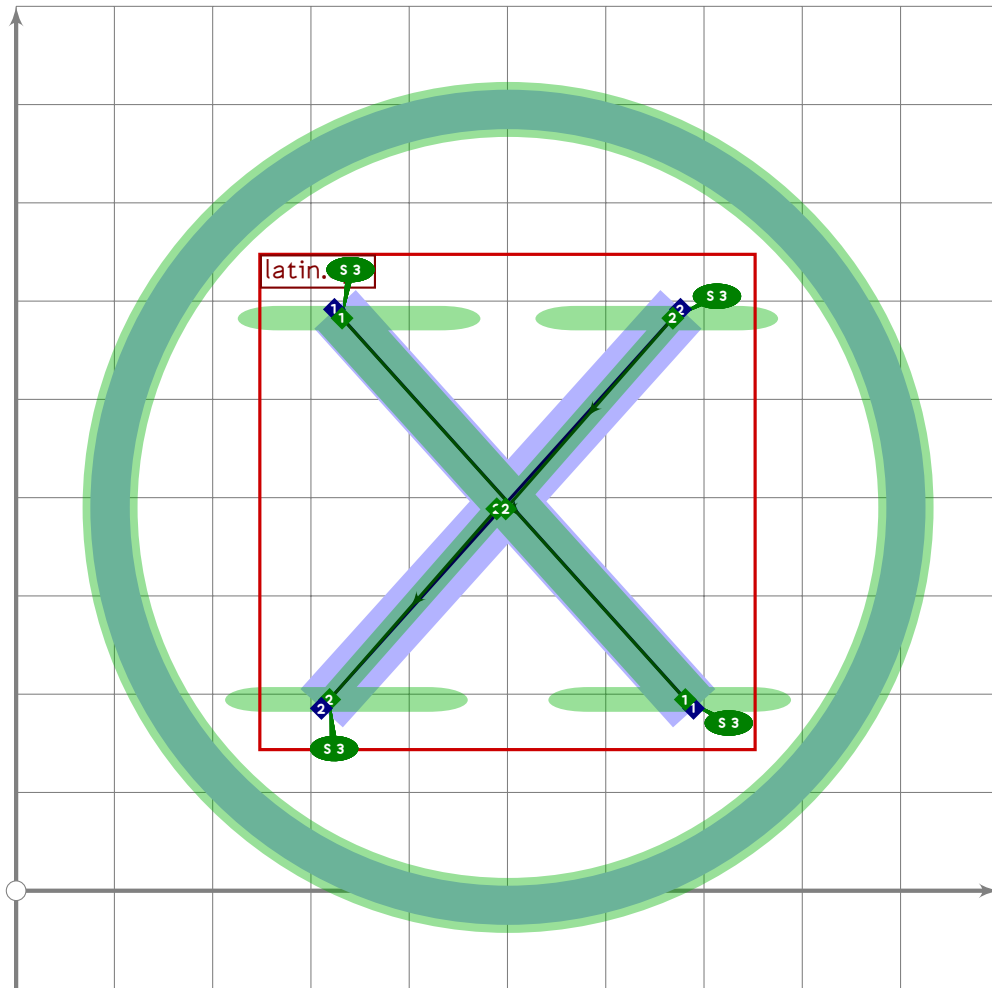
```



```

366 % W
367 beginsuglyph("uni24CC";204);
368 tsu_curve.circle.single;
369 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upw);
370 tsu_render;
371 endsuglyph;
372

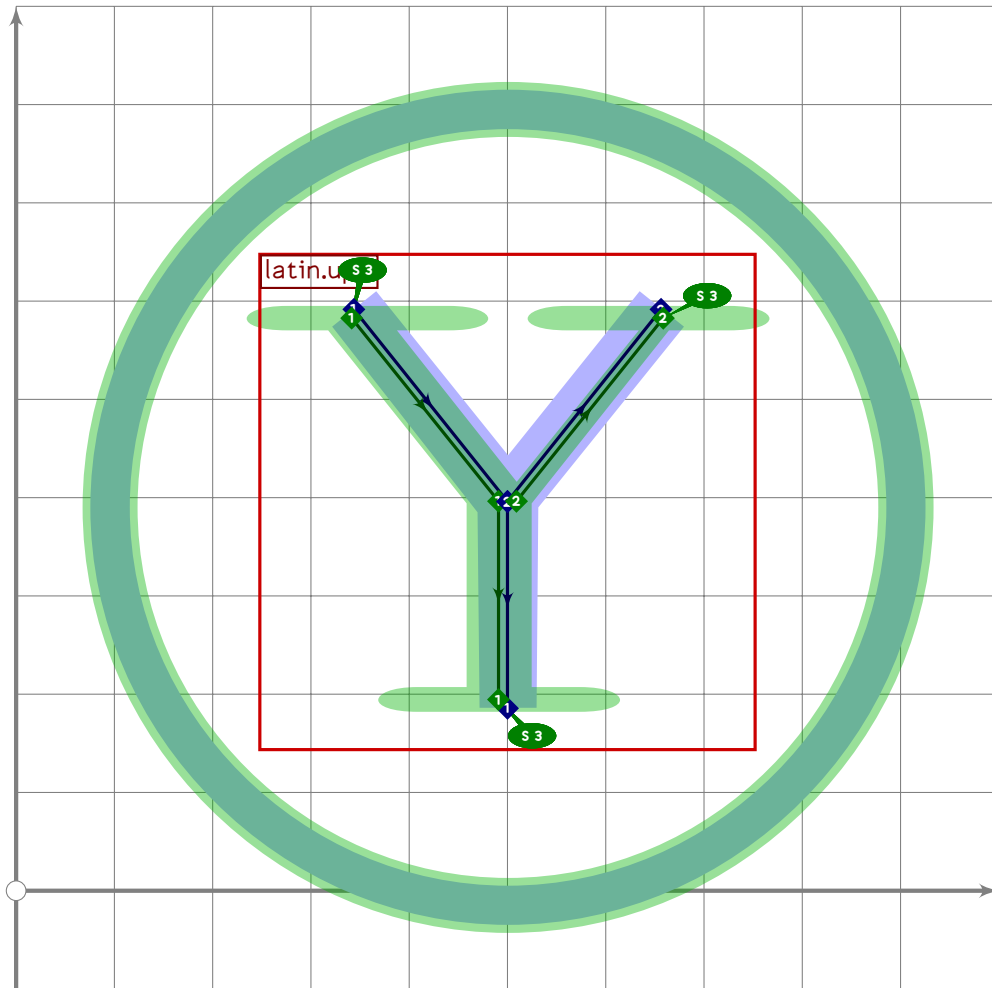
```



```

373 % X
374 begintuglyph("uni24CD",205);
375   tsu_curve.circle.single;
376   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upx);
377   tsu_render;
378 endsuglyph;
379

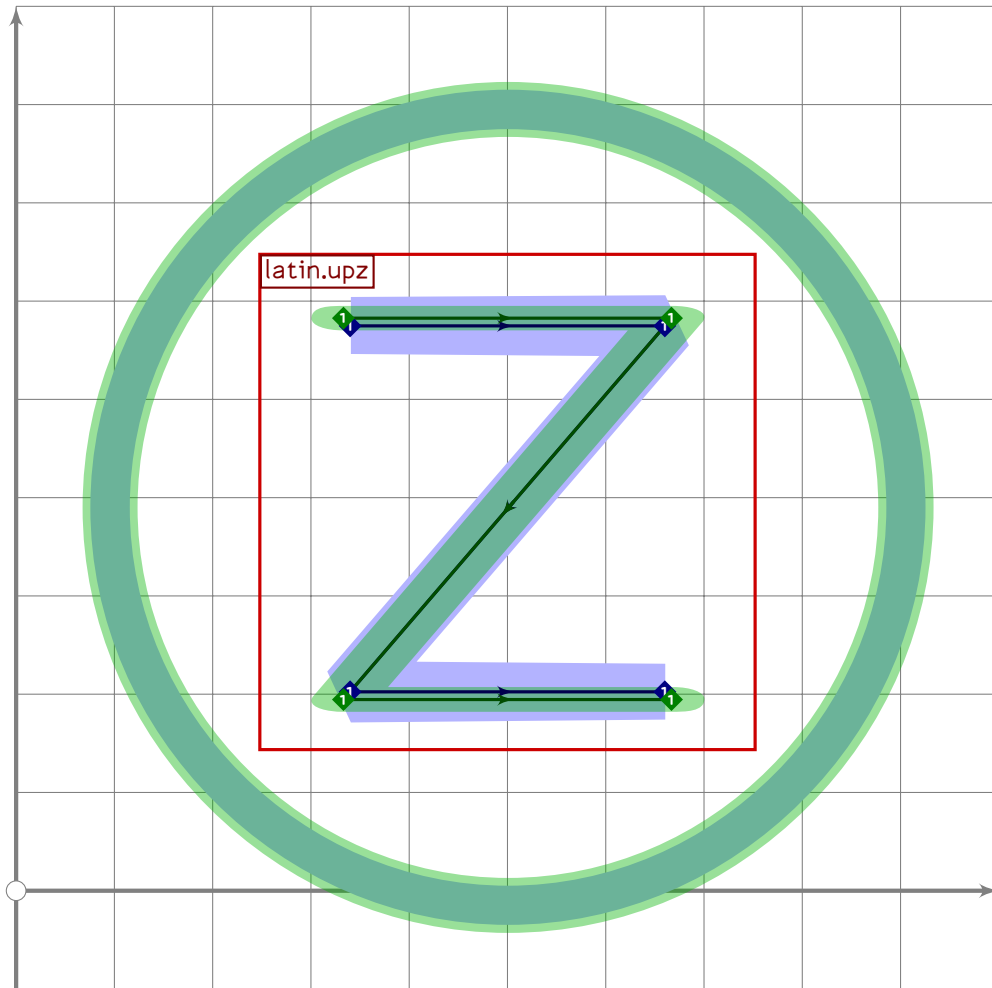
```



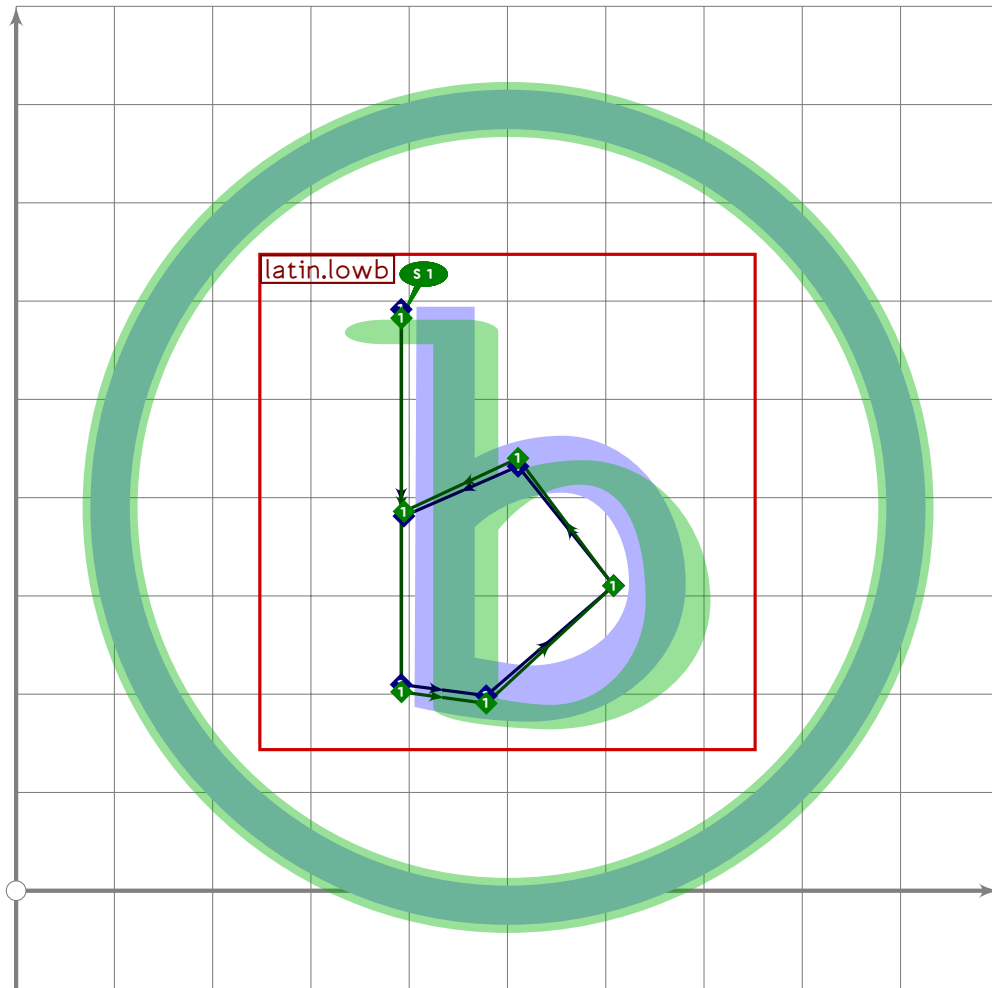
```

380 % Y
381 begint Suglyph("uni24CE";206);
382   tsu_curve.circle.single;
383   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upy);
384   tsu_render;
385 endsuglyph;
386

```

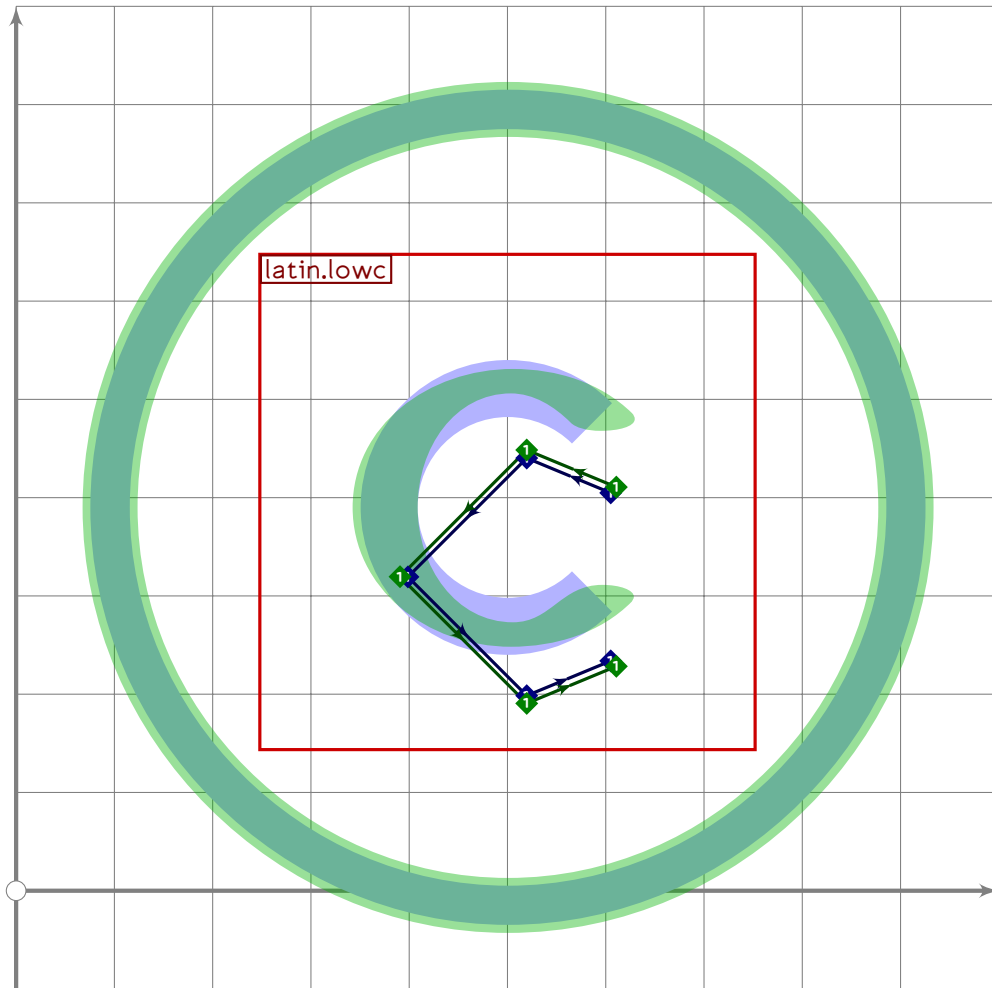
```
387 % Z
388 begint Suglyph("uni24CF";207);
389 tsu_curve.circle.single;
390 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upz);
391 tsu_render;
392 endsuglyph;
393
```

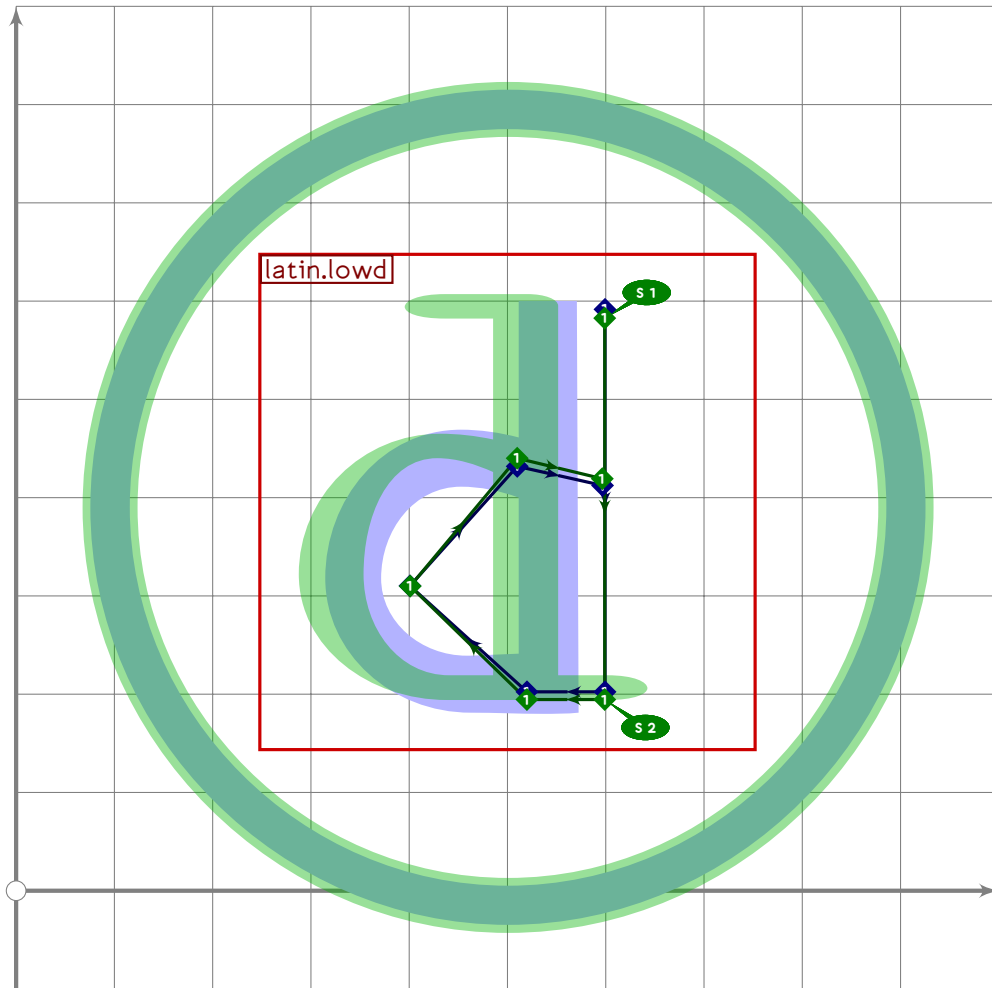
```

401 % b
402 begint Suglyph("uni24D1";209);
403   tsu_curve.circle.single;
404   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowb);
405   tsu_render_in_circle(tsu_xf.cbound);
406 endsuglyph;
407

```



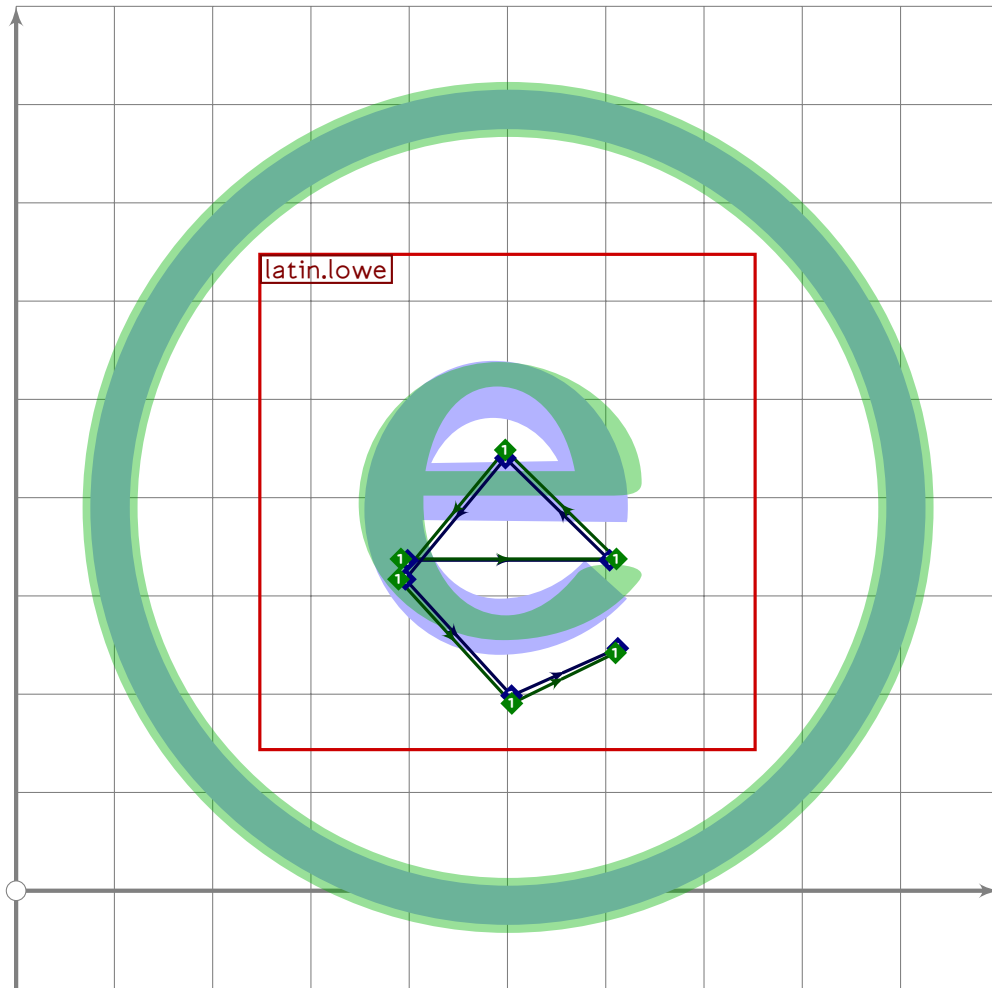
```
408 % c
409 beginsuglyph("uni24D2",210);
410 tsu_curve.circle.single;
411 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowc);
412 tsu_render_in_circle(tsu_xf.cbound);
413 endsuglyph;
414
```



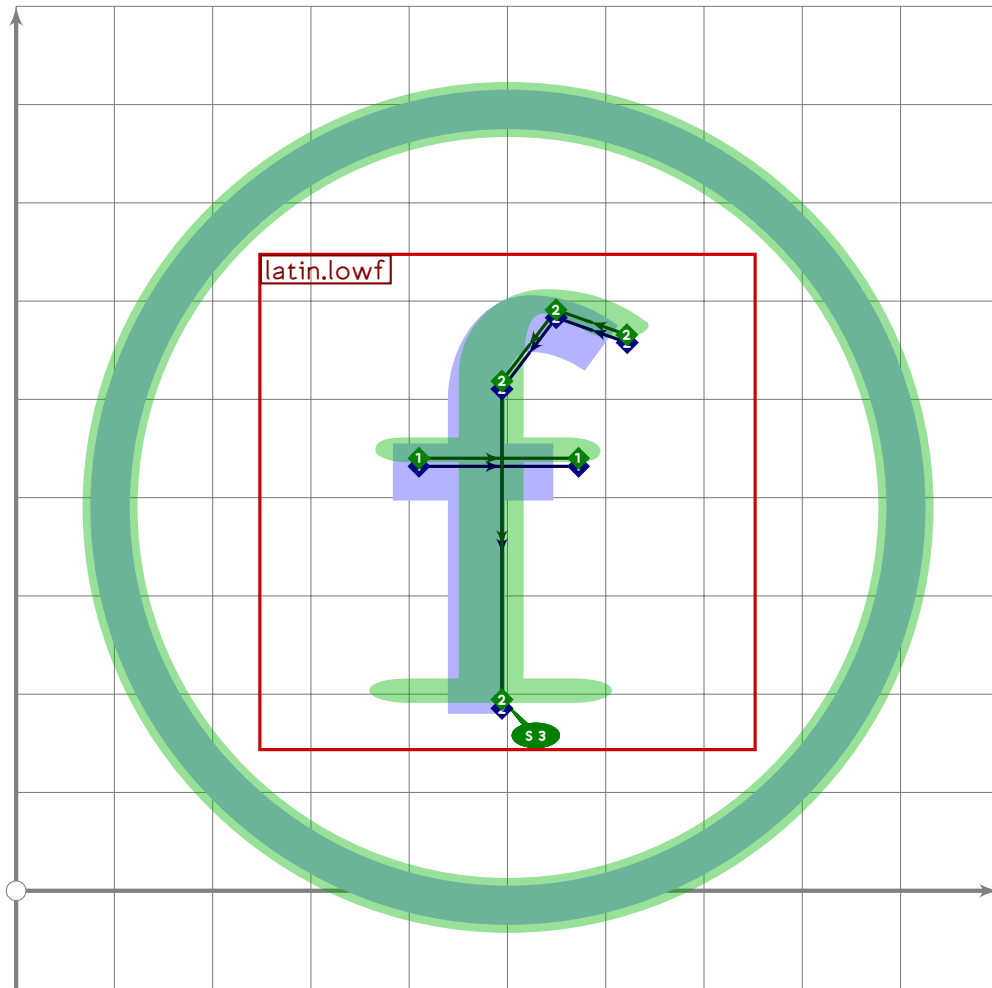
```

415 % d
416 begint Suglyph("uni24D3",211);
417   tsu_curve.circle.single;
418   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowd);
419   tsu_render_in_circle(tsu_xf.cbound);
420 endsuglyph;
421

```



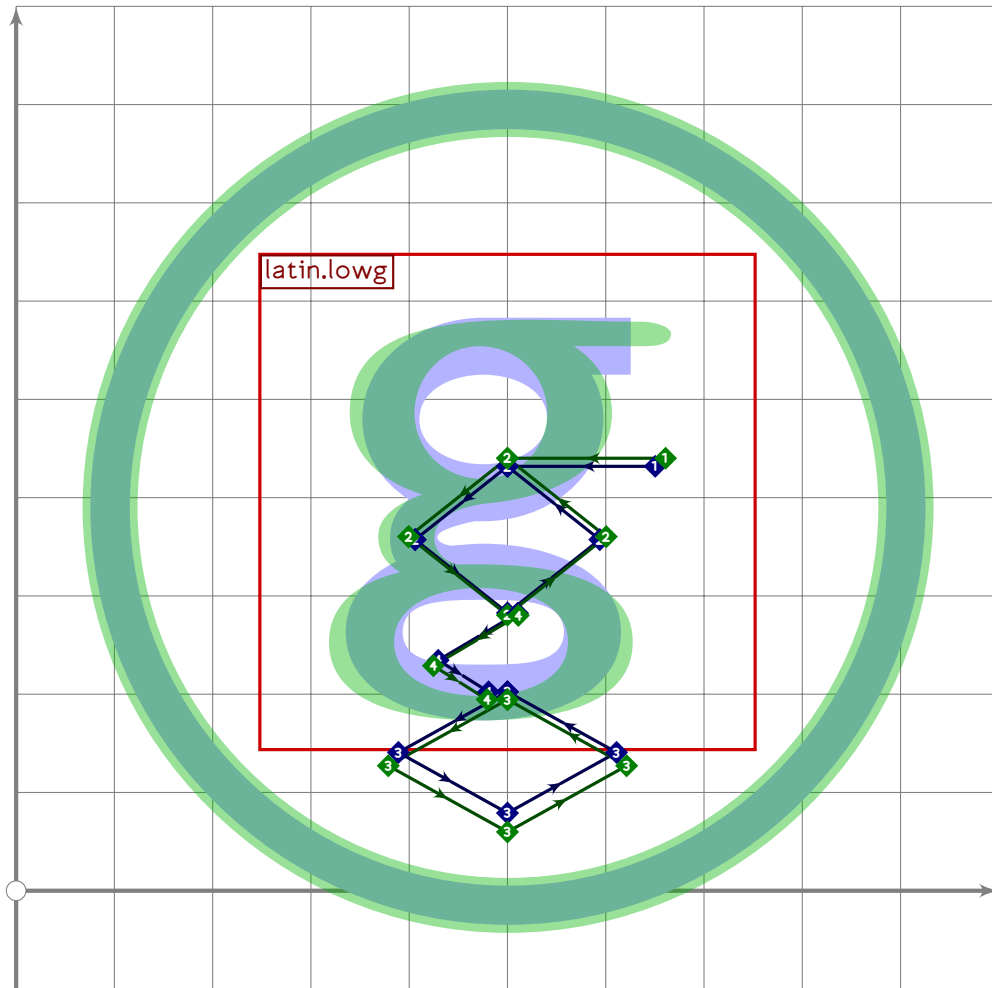
```
422 % e
423 begint Suglyph("uni24D4",212);
424   tsu_curve.circle.single;
425   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.love);
426   tsu_render_in_circle(tsu_xf.cbound);
427 endsuglyph;
428
```



```

429 % f
430 begint Suglyph("uni24D5",213);
431   tsu_curve.circle.single;
432   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowf);
433   tsu_render_in_circle(tsu_xf.cbound);
434 endsuglyph;
435

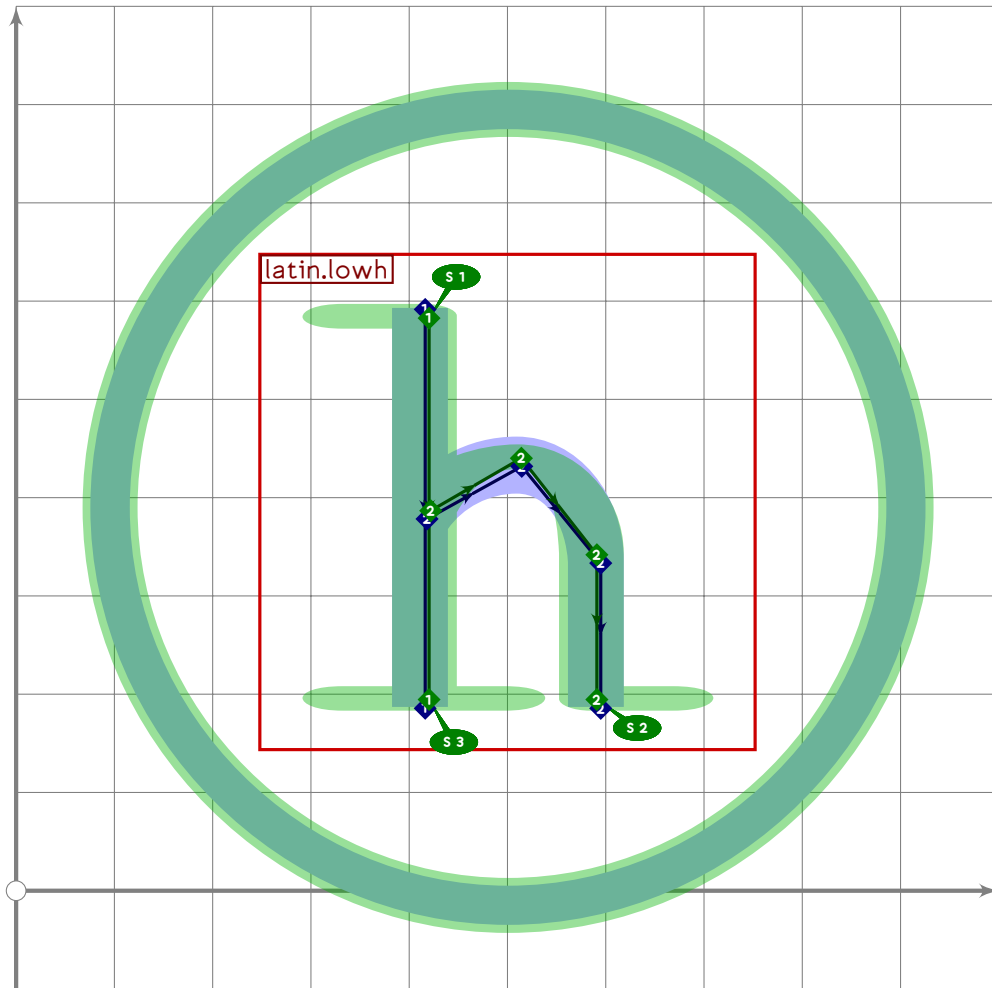
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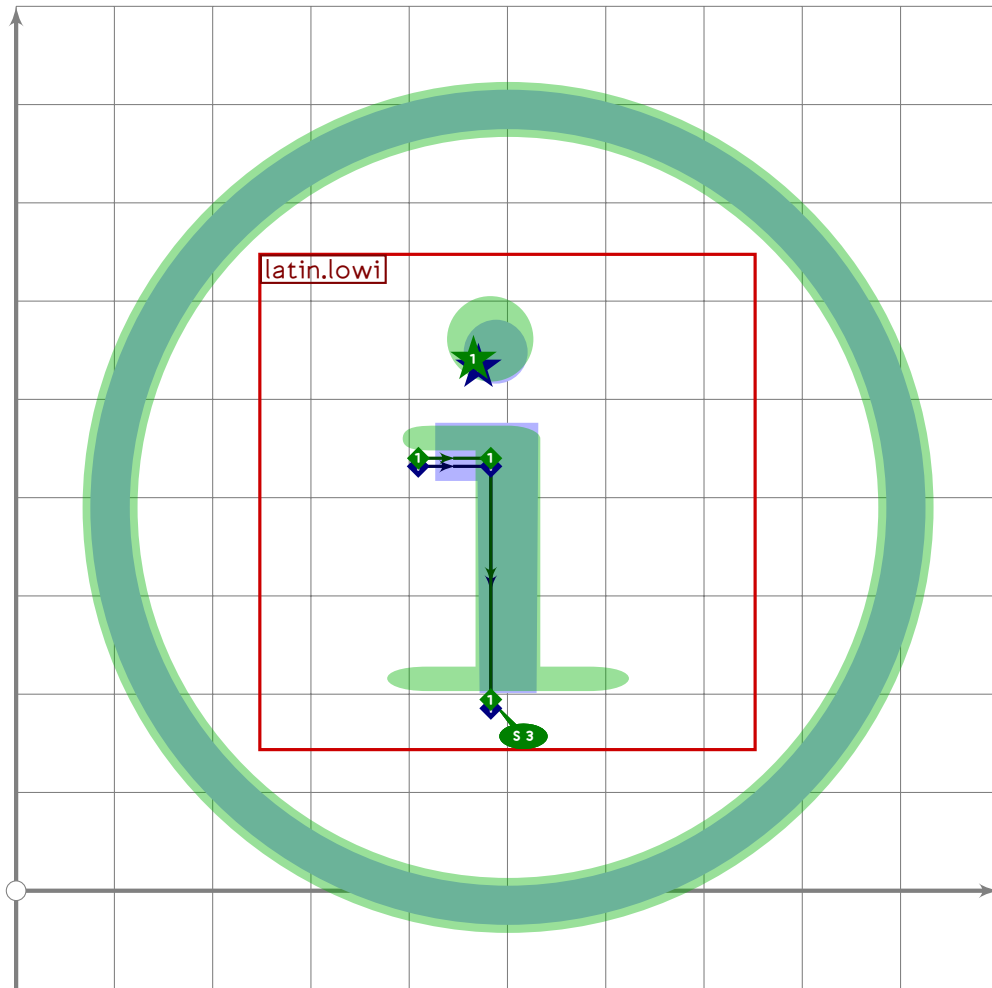
```

436 % g
437 begint Suglyph("uni24D6",214);
438   tsu_curve.circle.single;
439   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowg);
440   tsu_render_in_circle(tsu_xf.cbound);
441 endsuglyph;
442

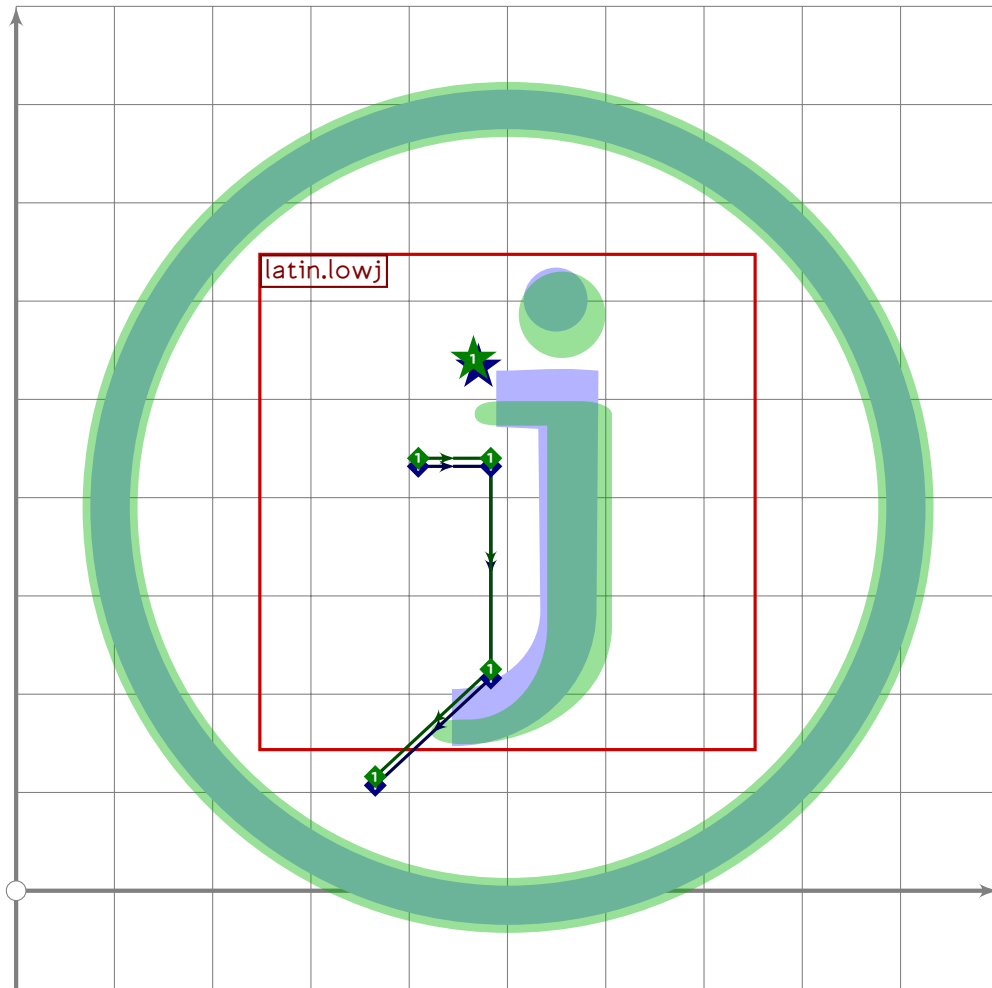
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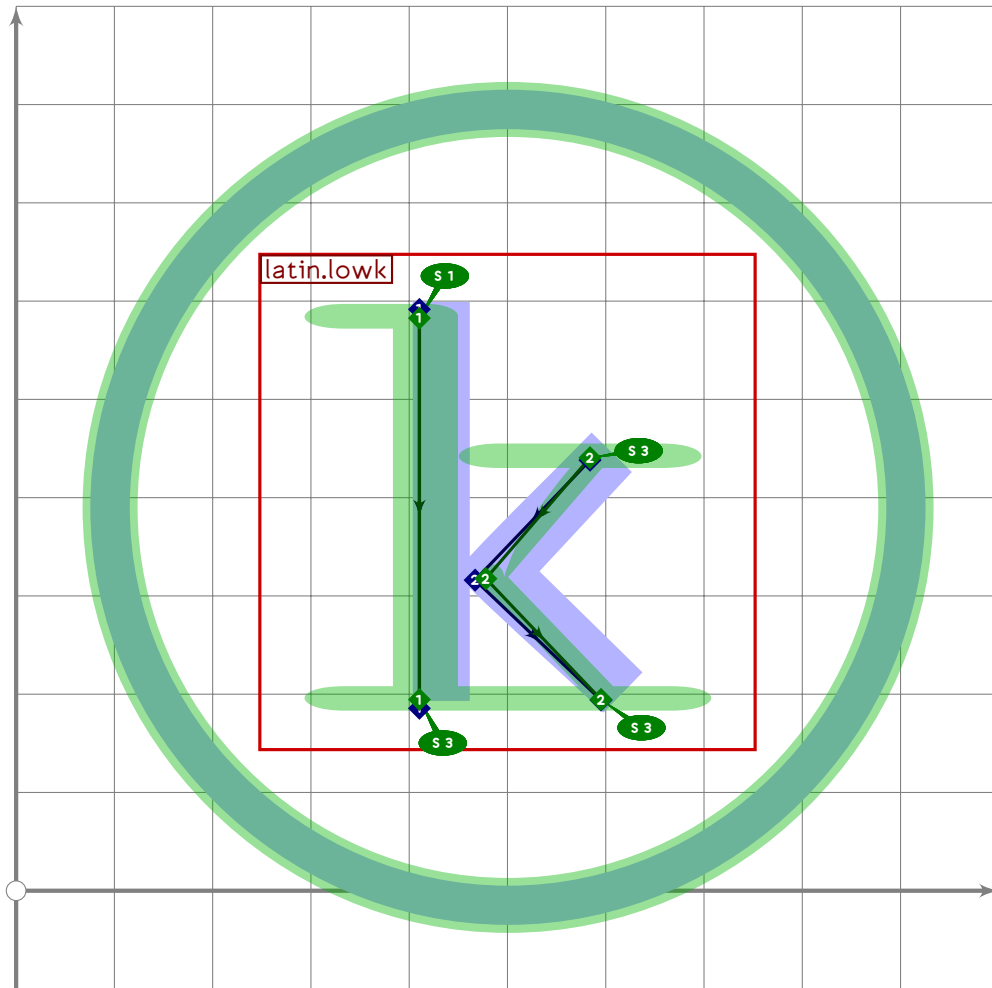
```
443 % h
444 begintuglyph("uni24D7";215);
445   tsu_curve.circle.single;
446   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowh);
447   tsu_render_in_circle(tsu_xf.cbound);
448 endtuglyph;
449
```



```
450 % i
451 begint Suglyph("uni24D8",216);
452 tsu_curve.circle.single;
453 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowi);
454 tsu_render_in_circle(tsu_xf.cbound);
455 endsuglyph;
456
```



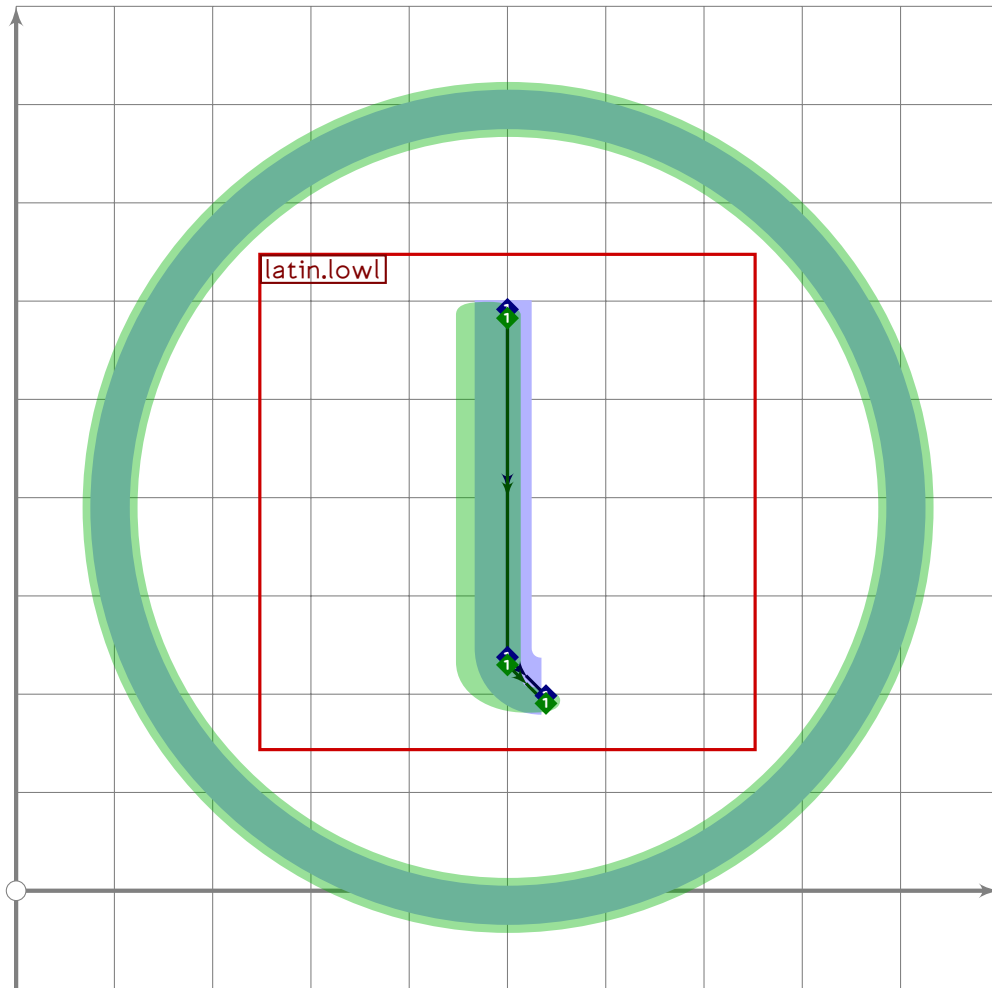
```
457 % j
458 begint Suglyph("uni24D9",217);
459 tsu_curve.circle.single;
460 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowj);
461 tsu_render_in_circle(tsu_xf.cbound);
462 endsuglyph;
463
```



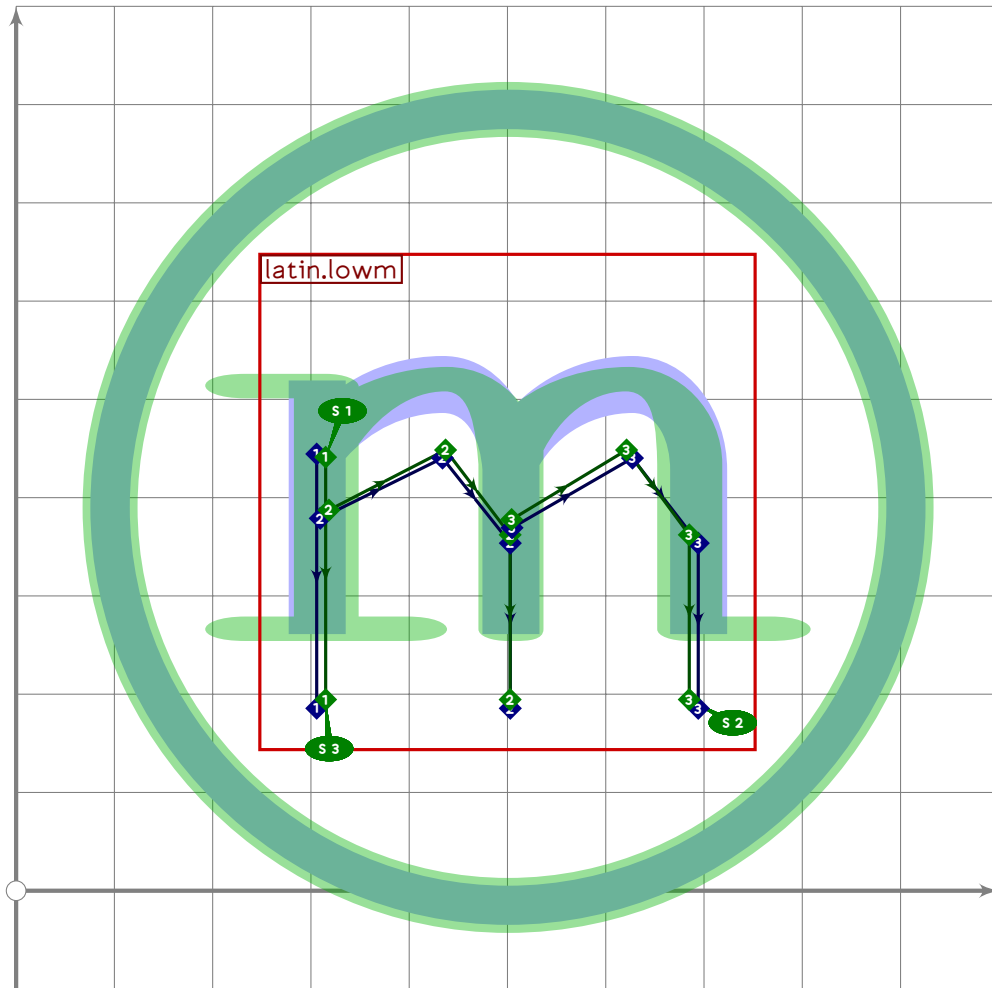
```

464 % k
465 begint Suglyph("uni24DA",218);
466   tsu_curve.circle.single;
467   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowk);
468   tsu_render_in_circle(tsu_xf.cbound);
469 endsuglyph;
470

```



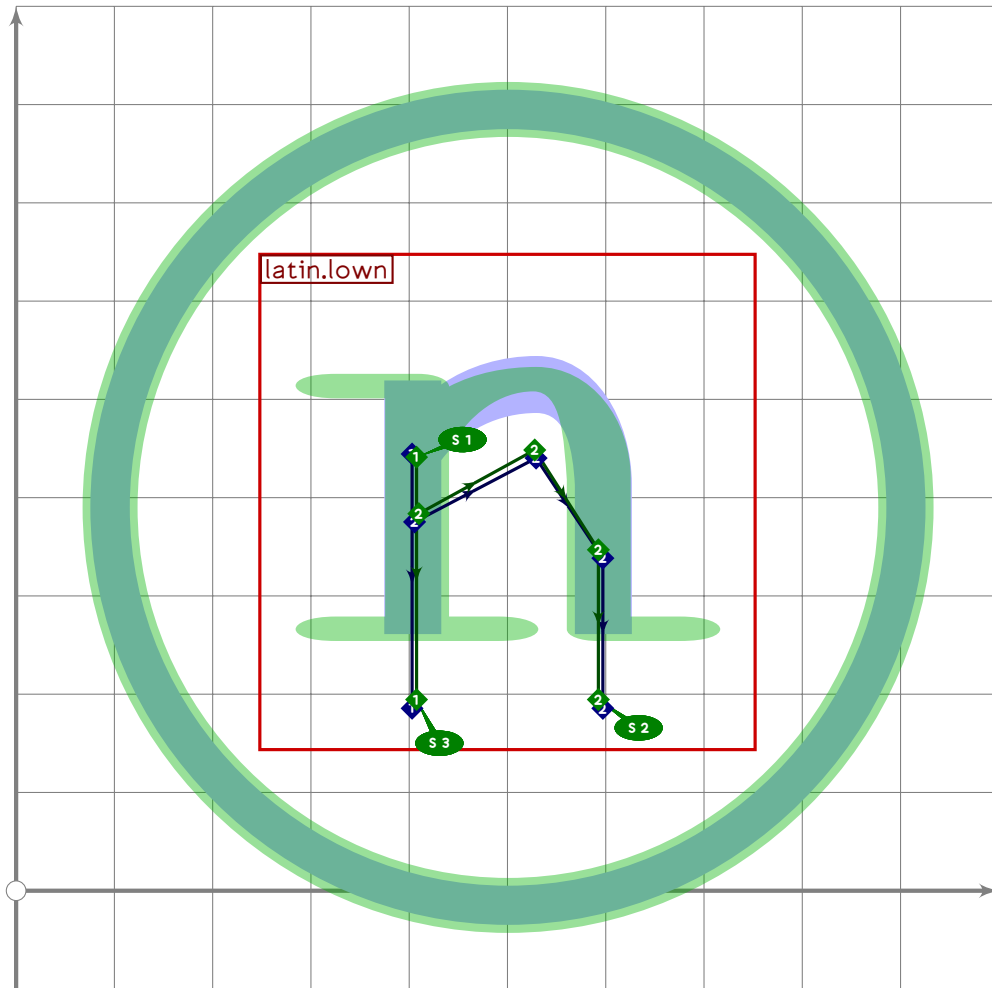
```
471 % l
472 begint Suglyph("uni24DB",219);
473 tsu_curve.circle.single;
474 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowl);
475 tsu_render_in_circle(tsu_xf.cbound);
476 endsuglyph;
477
```



```

478 % m
479 beginsuglyph("uni24DC";220);
480 tsu_curve.circle.single;
481 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowm);
482 tsu_render_in_circle(tsu_xf.cbound);
483 endsuglyph;
484

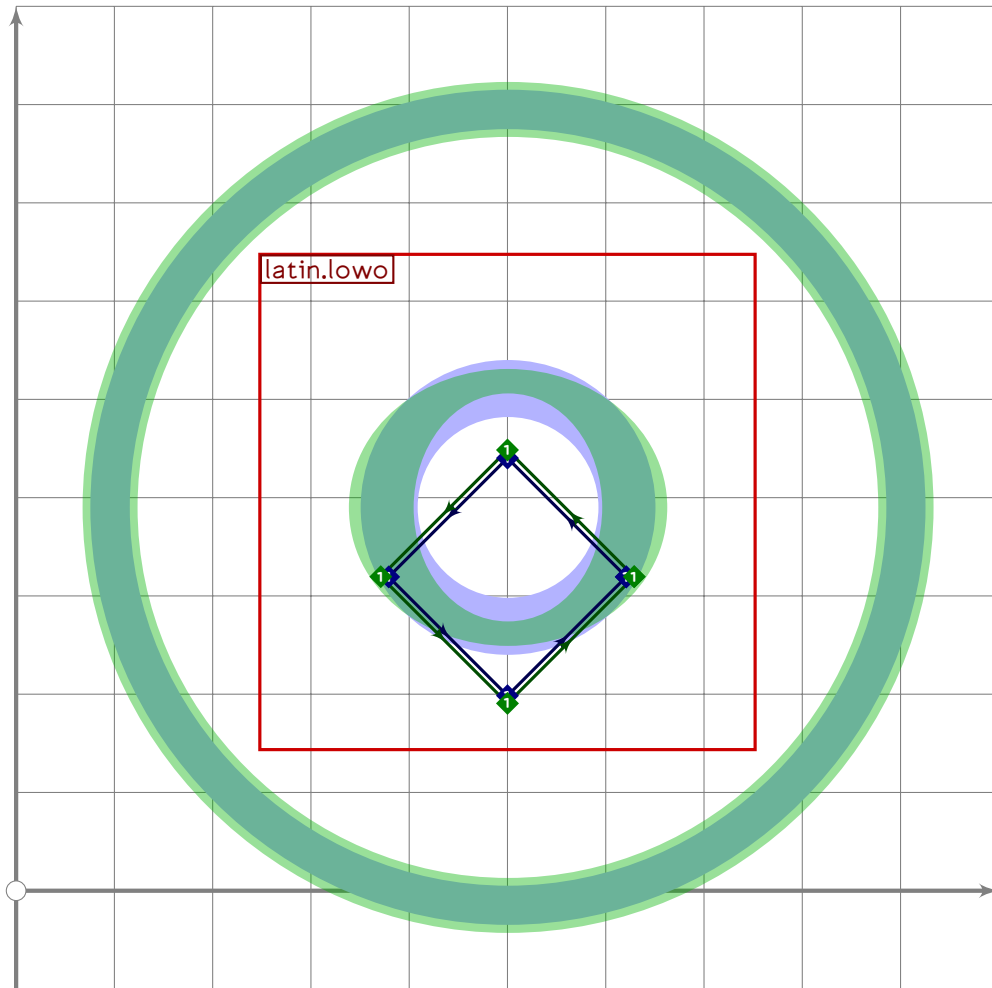
```



```

485 % n
486 begint Suglyph("uni24DD",221);
487 tsu_curve.circle.single;
488 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lown);
489 tsu_render_in_circle(tsu_xf.cbound);
490 endsuglyph;
491

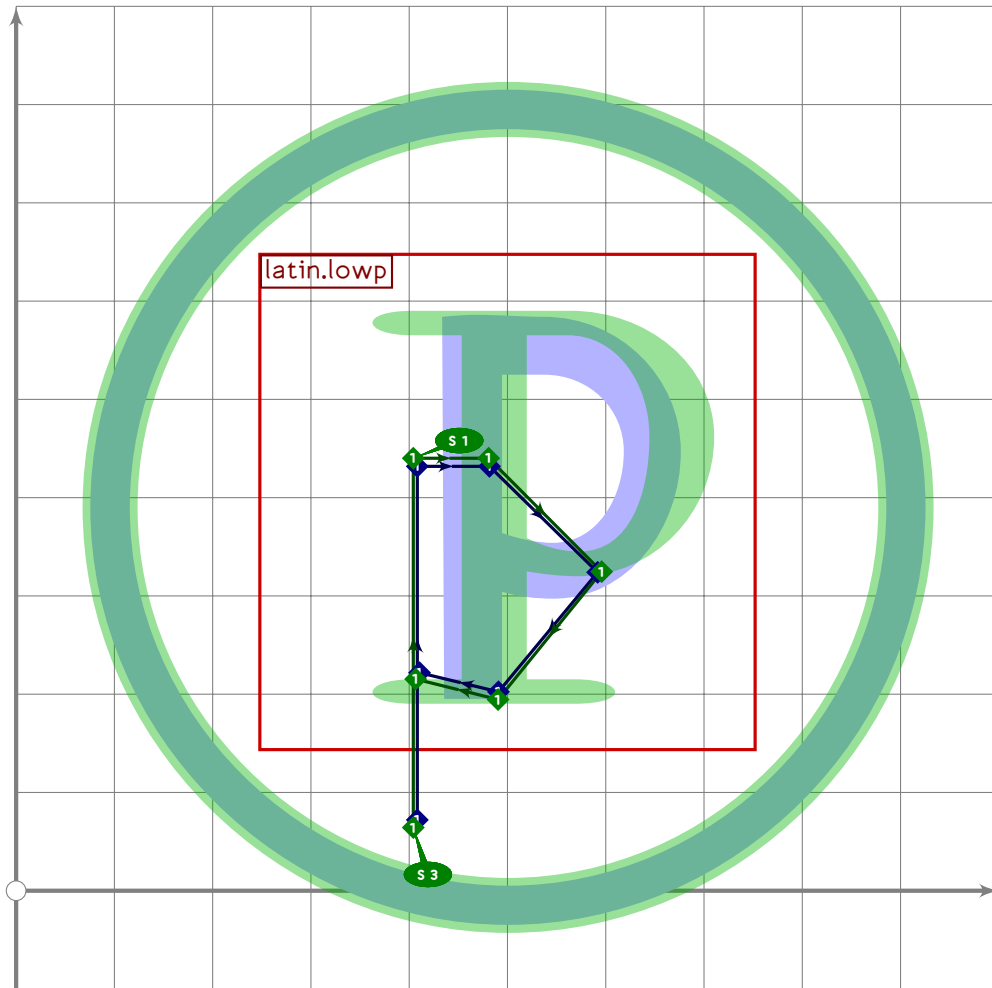
```



```

492 % o
493 begint Suglyph("uni24DE",222);
494   tsu_curve.circle.single;
495   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowo);
496   tsu_render_in_circle(tsu_xf.cbound);
497 endsuglyph;
498

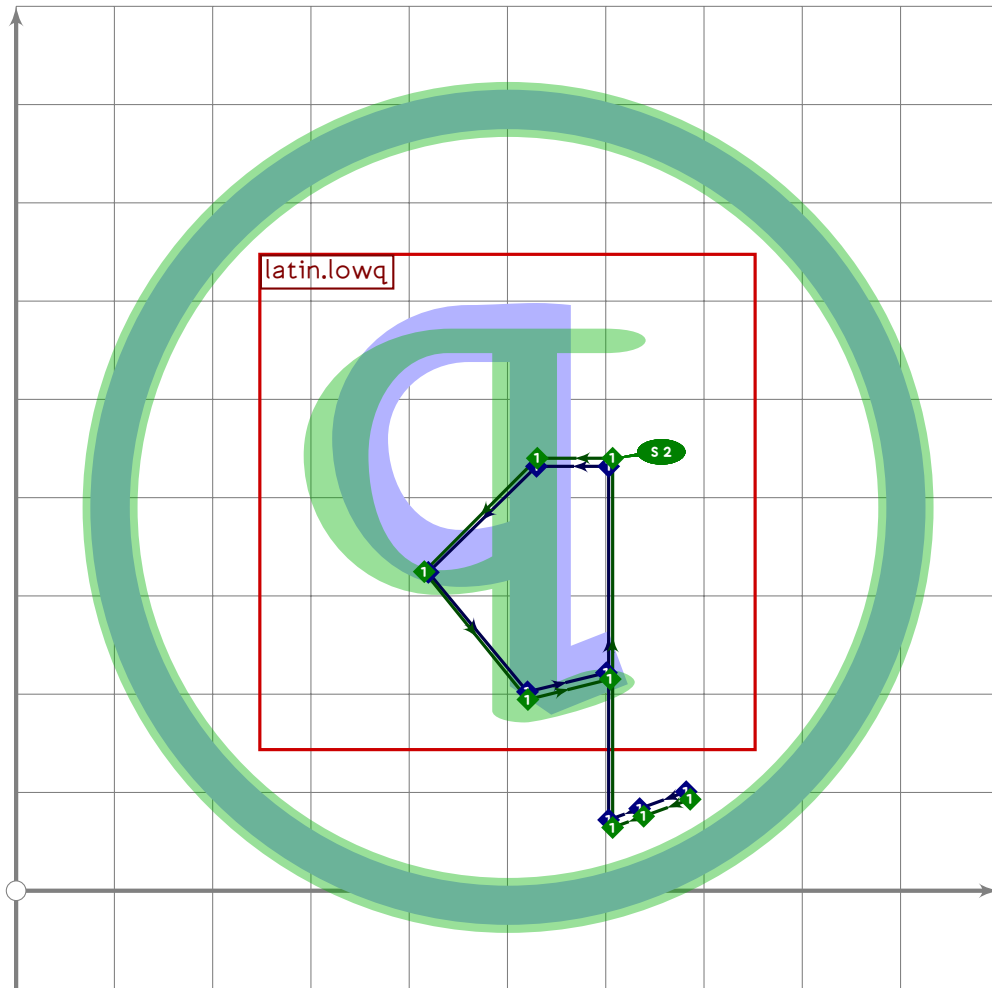
```

```

499 % p
500 begint Suglyph("uni24DF",223);
501   tsu_curve.circle.single;
502   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowp);
503   tsu_render_in_circle(tsu_xf.cbound);
504 endsuglyph;
505

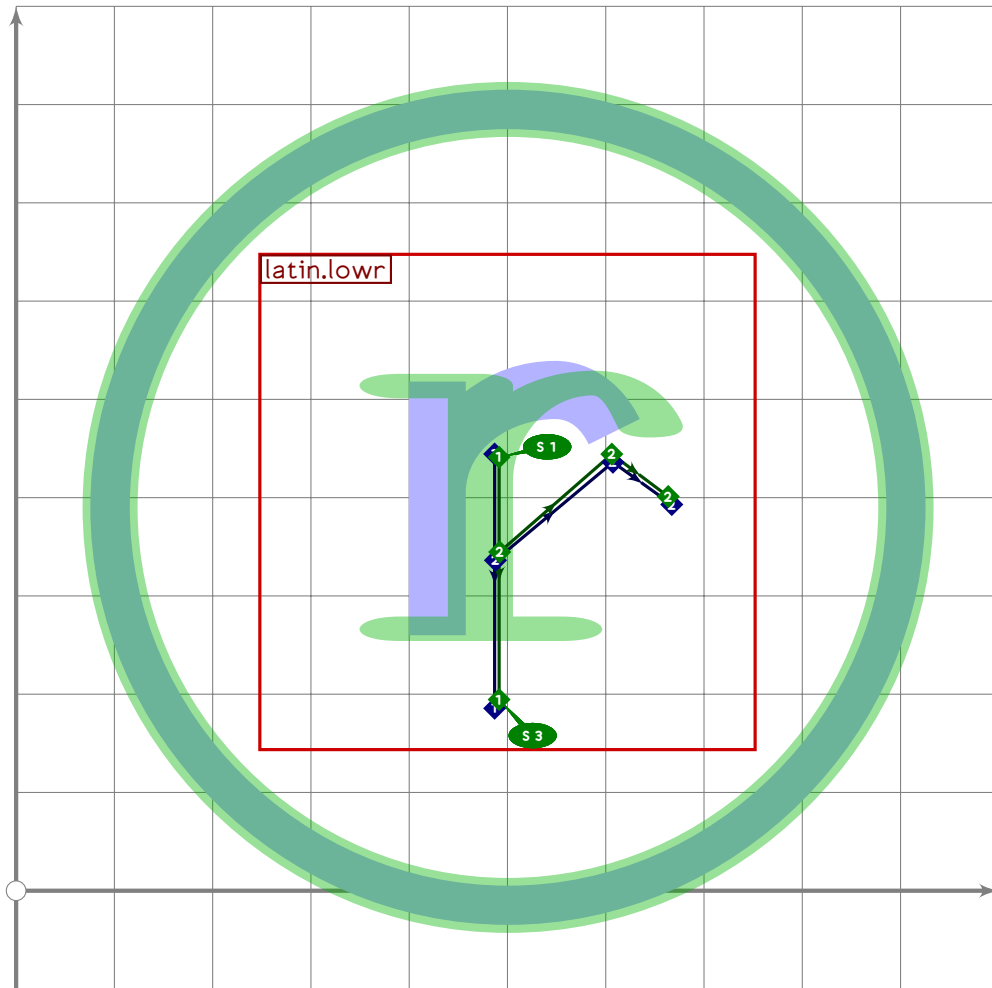
```



```

506 % q
507 begint Suglyph("uni24E0",224);
508   tsu_curve.circle.single;
509   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowq);
510   tsu_render_in_circle(tsu_xf.cbound);
511 endsuglyph;
512

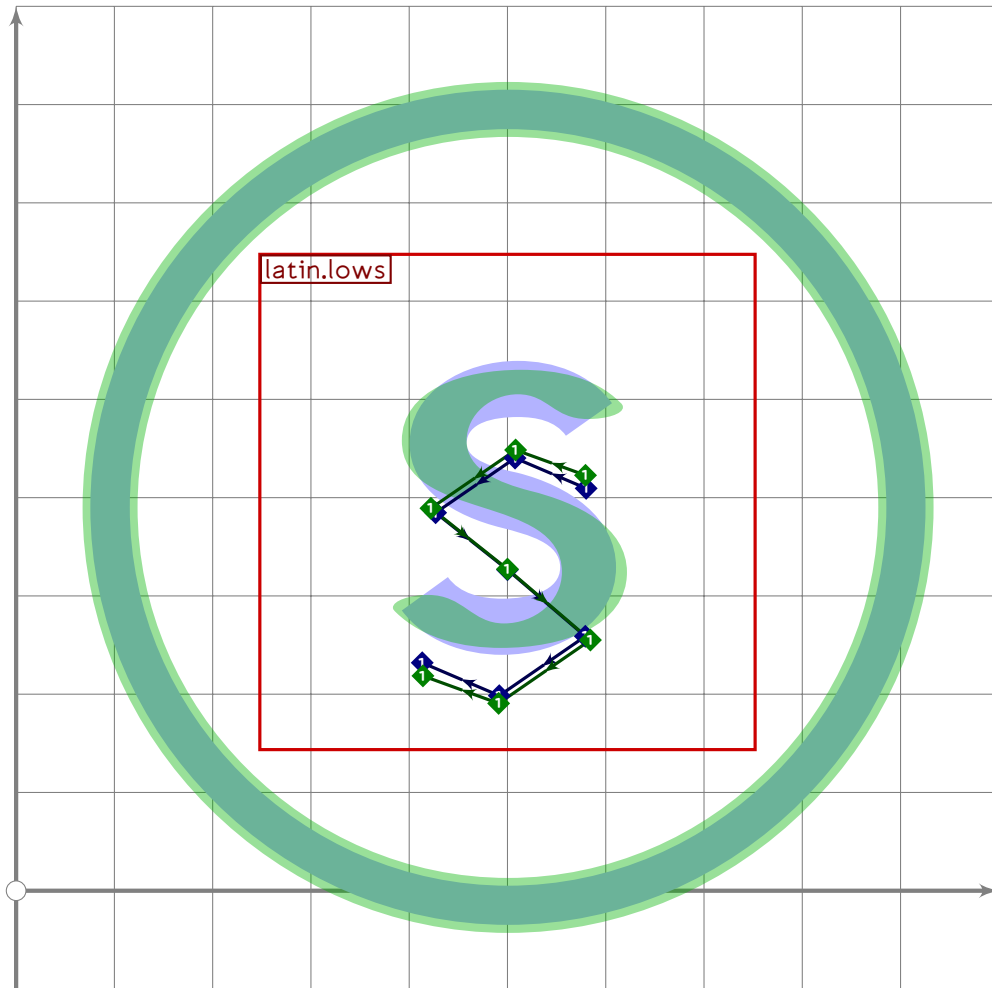
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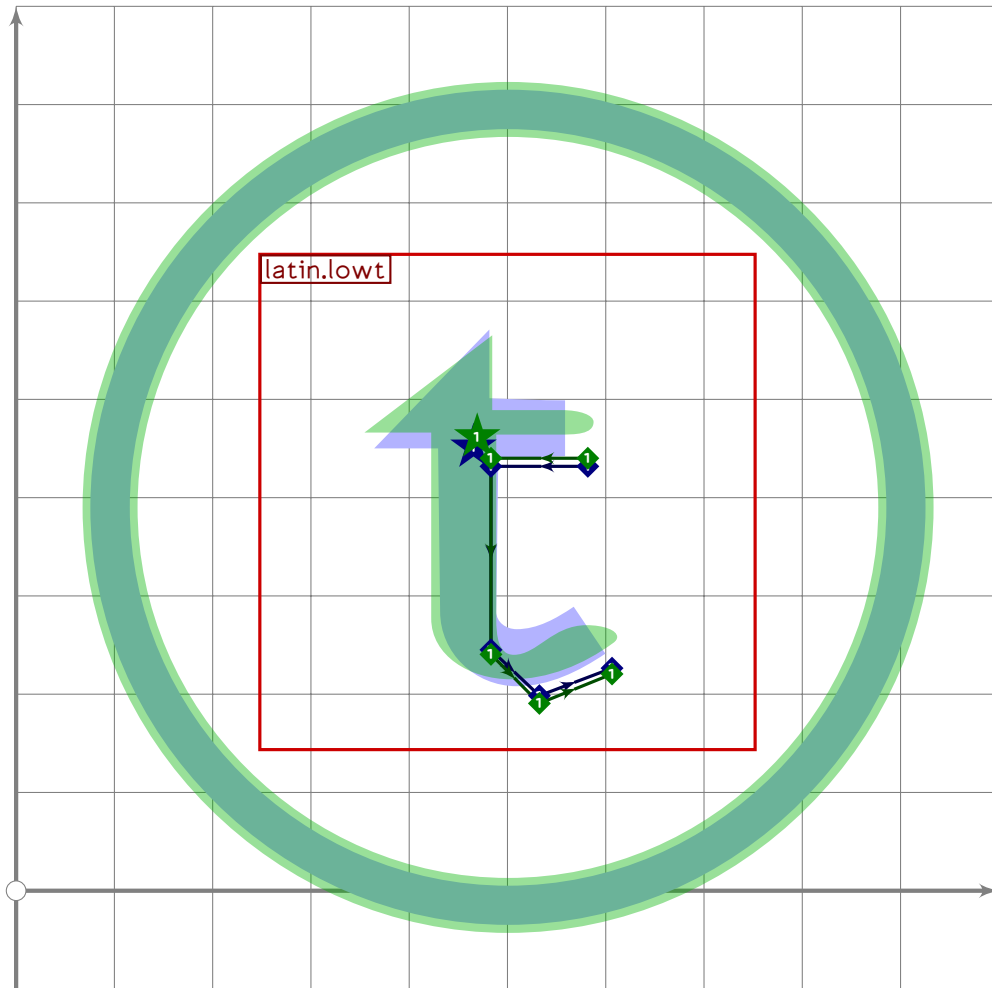
```

513 % r
514 begint Suglyph("uni24E1",225);
515   tsu_curve.circle.single;
516   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowr);
517   tsu_render_in_circle(tsu_xf.cbound);
518 endsuglyph;
519

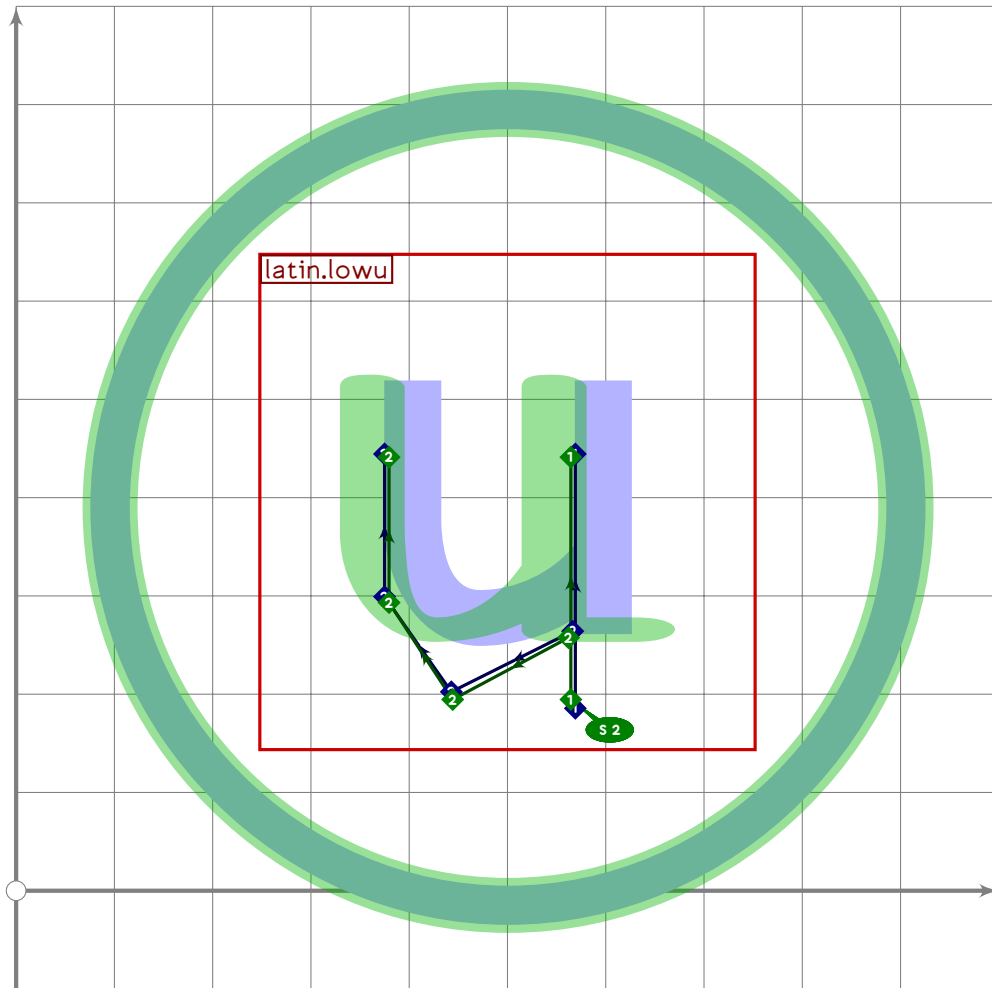
```



```
520 % s
521 begint Suglyph("uni24E2",226);
522 tsu_curve.circle.single;
523 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lows);
524 tsu_render_in_circle(tsu_xf.cbound);
525 endsuglyph;
526
```



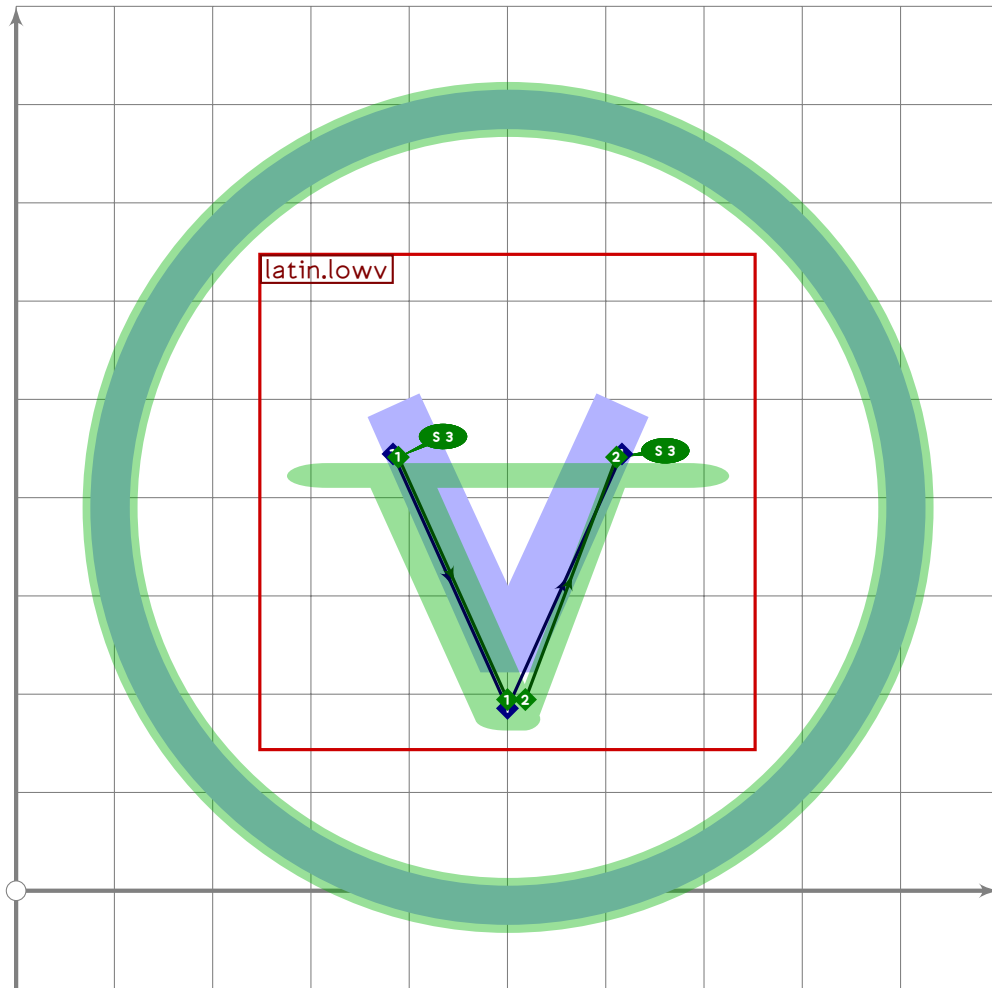
```
527 % t
528 begint Suglyph("uni24E3",227);
529   tsu_curve.circle.single;
530   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowt);
531   tsu_render_in_circle(tsu_xf.cbound);
532 endsuglyph;
533
```



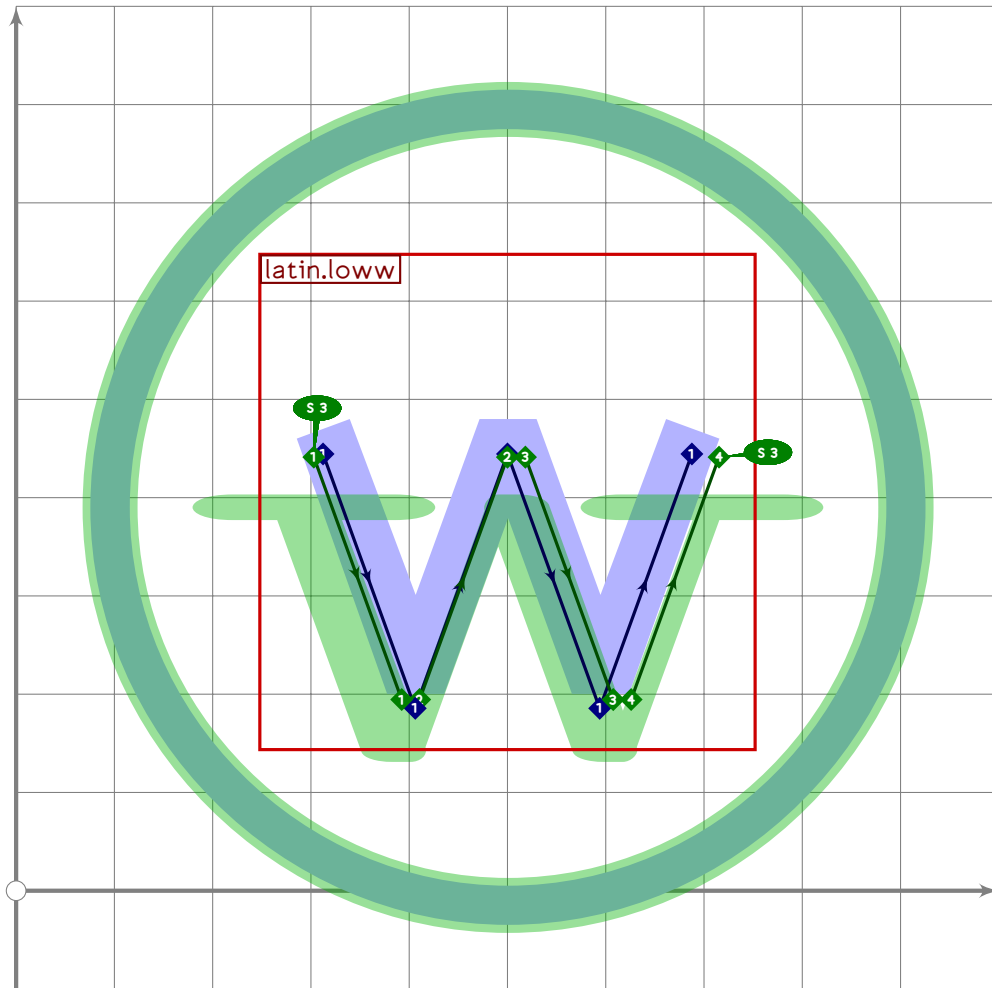
```

534 % u
535 begint Suglyph("uni24E4",228);
536   tsu_curve.circle.single;
537   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowu);
538   tsu_render_in_circle(tsu_xf.cbound);
539 endsuglyph;
540

```



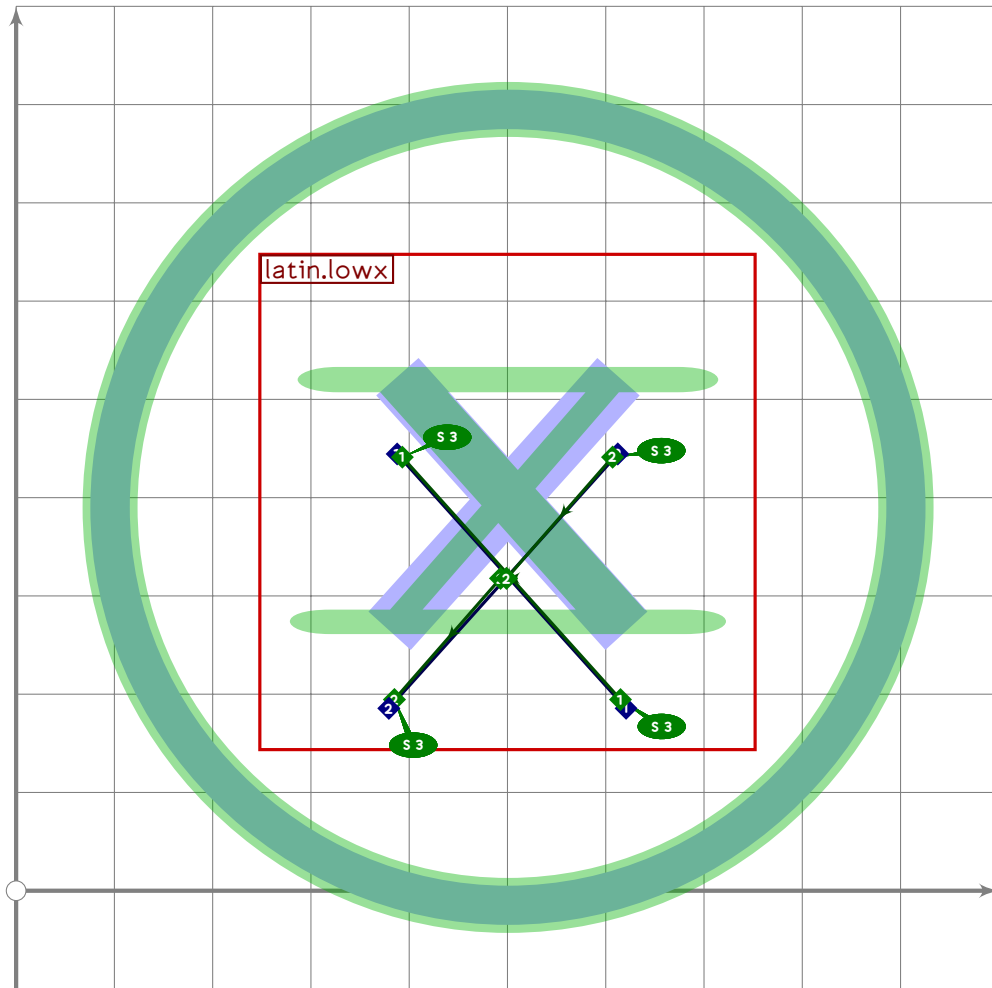
```
541 % v
542 begint Suglyph("uni24E5";229);
543 tsu_curve.circle.single;
544 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowv);
545 tsu_render_in_circle(tsu_xf.cbound);
546 endsuglyph;
547
```



```

548 % w
549 begint Suglyph("uni24E6";230);
550 tsu_curve.circle.single;
551 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.loww);
552 tsu_render_in_circle(tsu_xf.cbound);
553 endsuglyph;
554

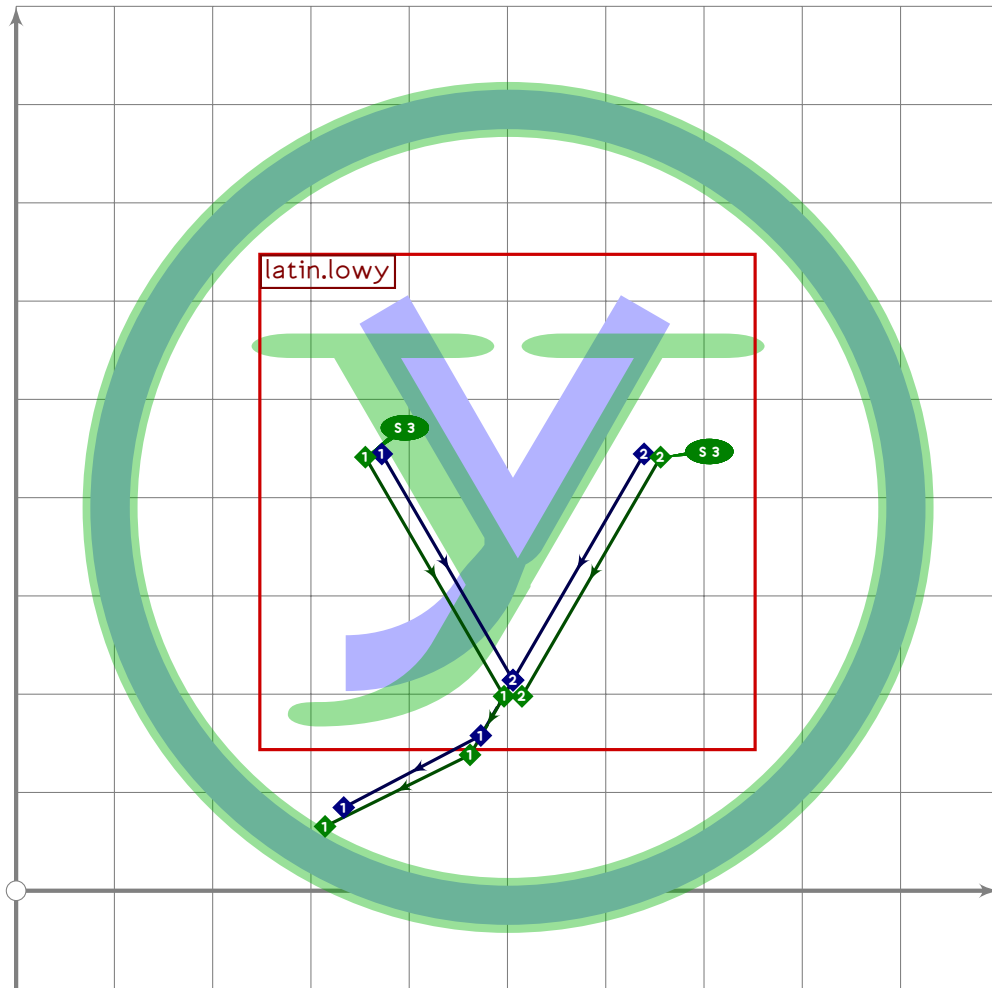
```

```

555 % x
556 begint Suglyph("uni24E7";231);
557   tsu_curve.circle.single;
558   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowx);
559   tsu_render_in_circle(tsu_xf.cbound);
560 endsuglyph;
561

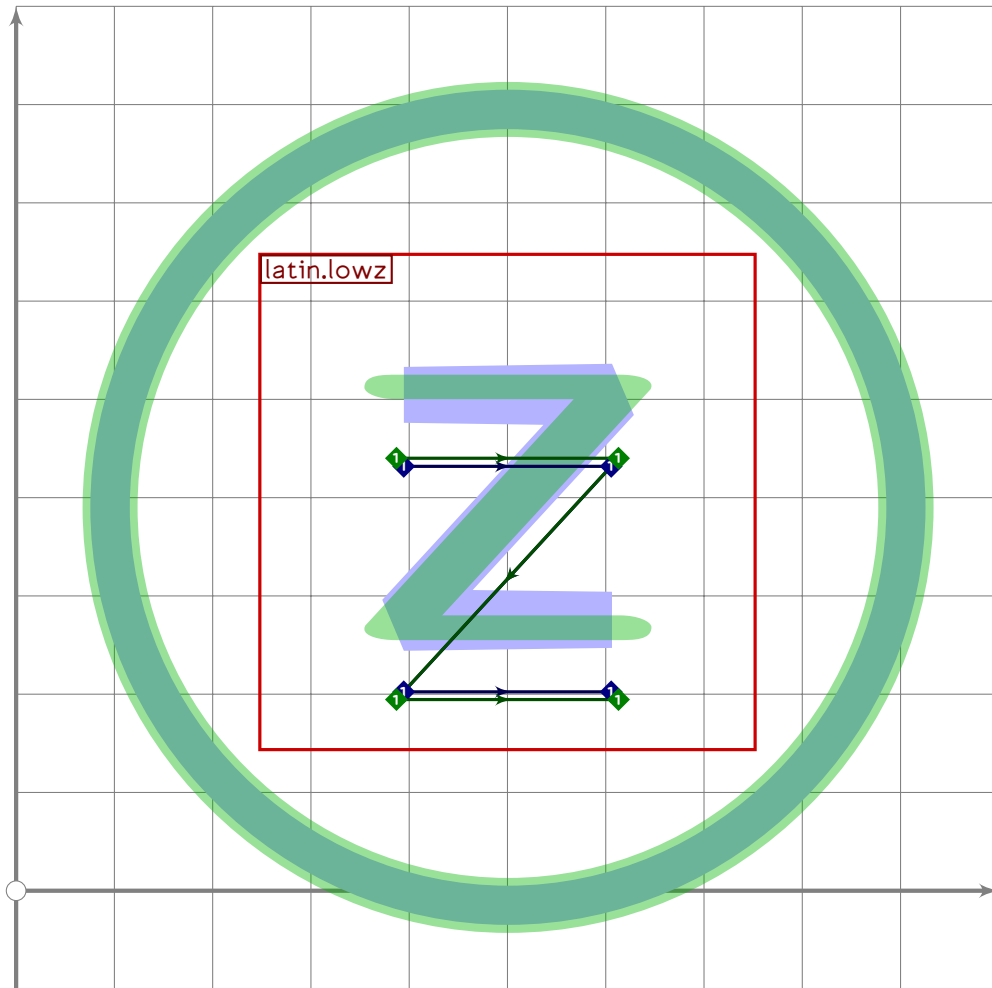
```



```

562 % y
563 begint Suglyph("uni24E8",232);
564   tsu_curve.circle.single;
565   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowy);
566   tsu_render_in_circle(tsu_xf.cbound);
567 endsuglyph;
568

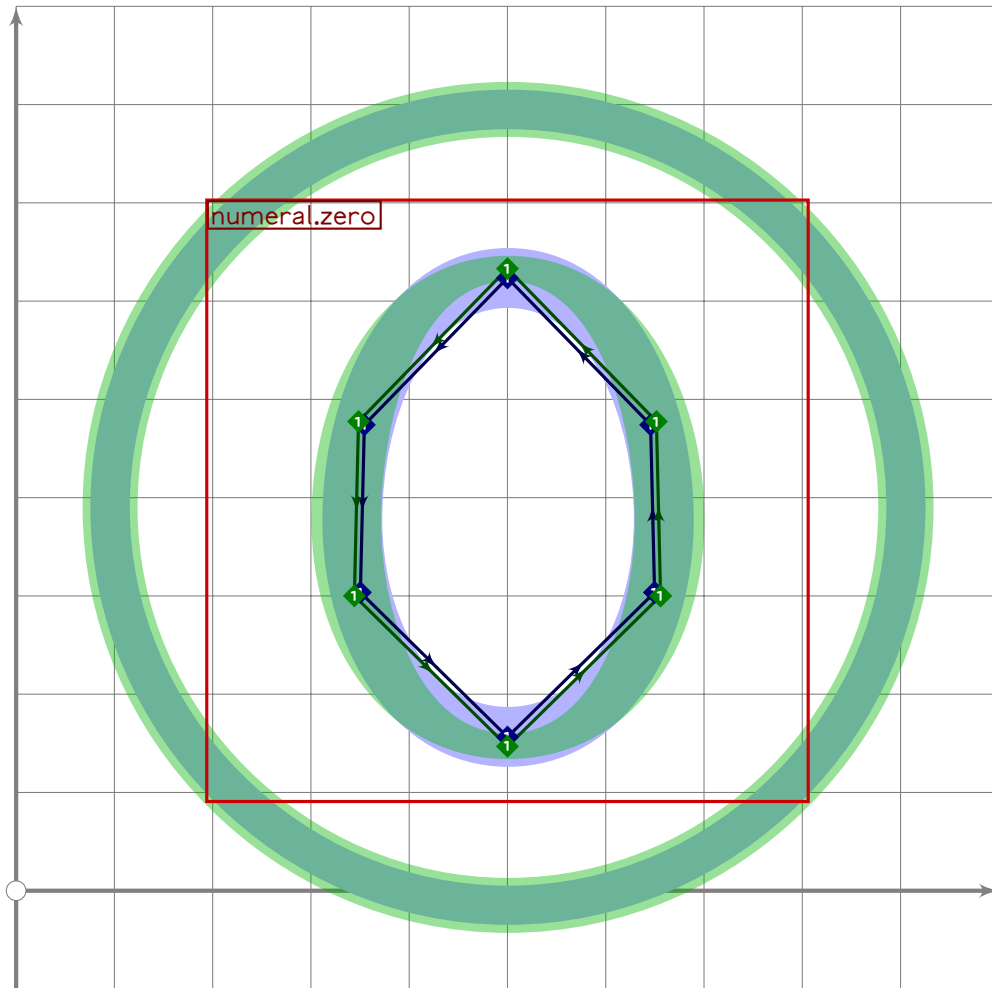
```



```

569 % z
570 begint Suglyph("uni24E9",233);
571   tsu_curve.circle.single;
572   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.lowz);
573   tsu_render_in_circle(tsu_xf.cbound);
574 endsuglyph;
575

```



```

576 % 0
577 begint Suglyph("uni24EA";234);
578   tsu_curve.circle.single;
579   tsu_xform(tsu_xf.circled)(tsu_curve.numeral.zero);
580   tsu_render;
581 endsuglyph;
582
583
584

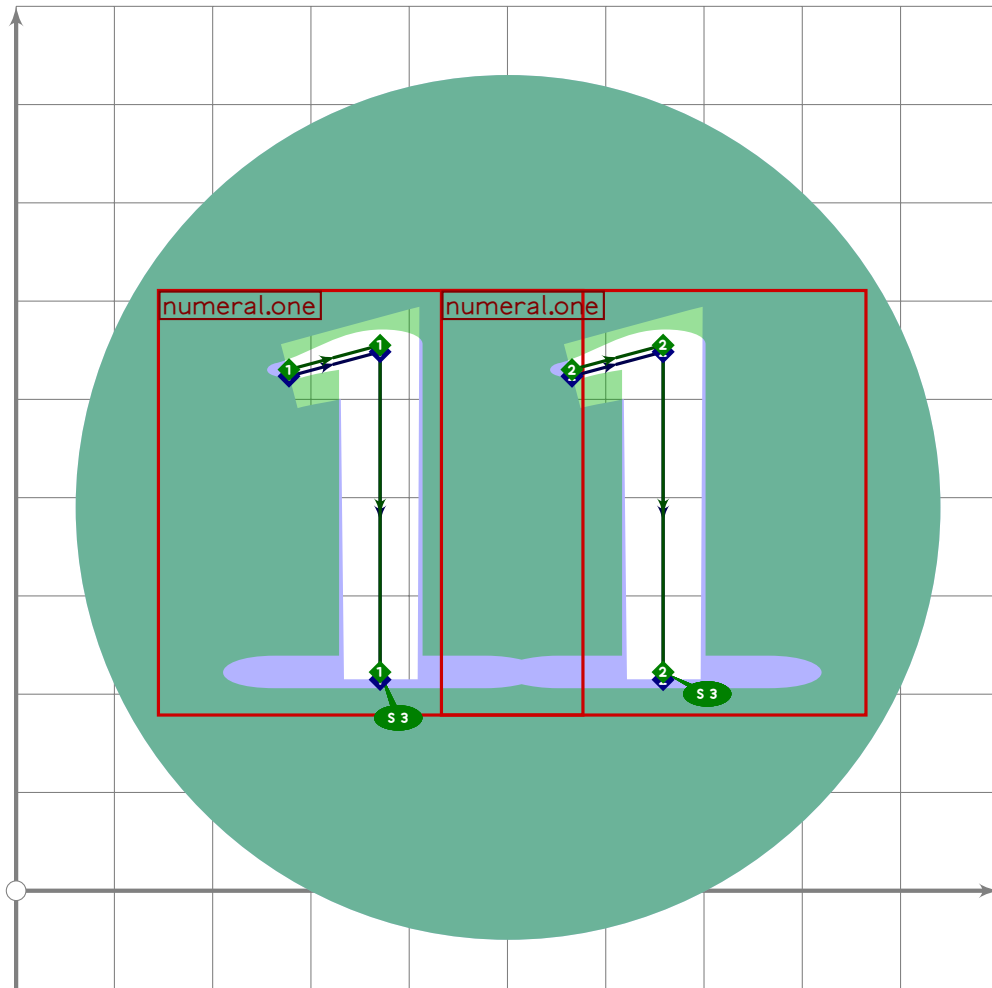
```

Inverted Circled Numerals

```

585 % INVERTED CIRCLED NUMERALS
586

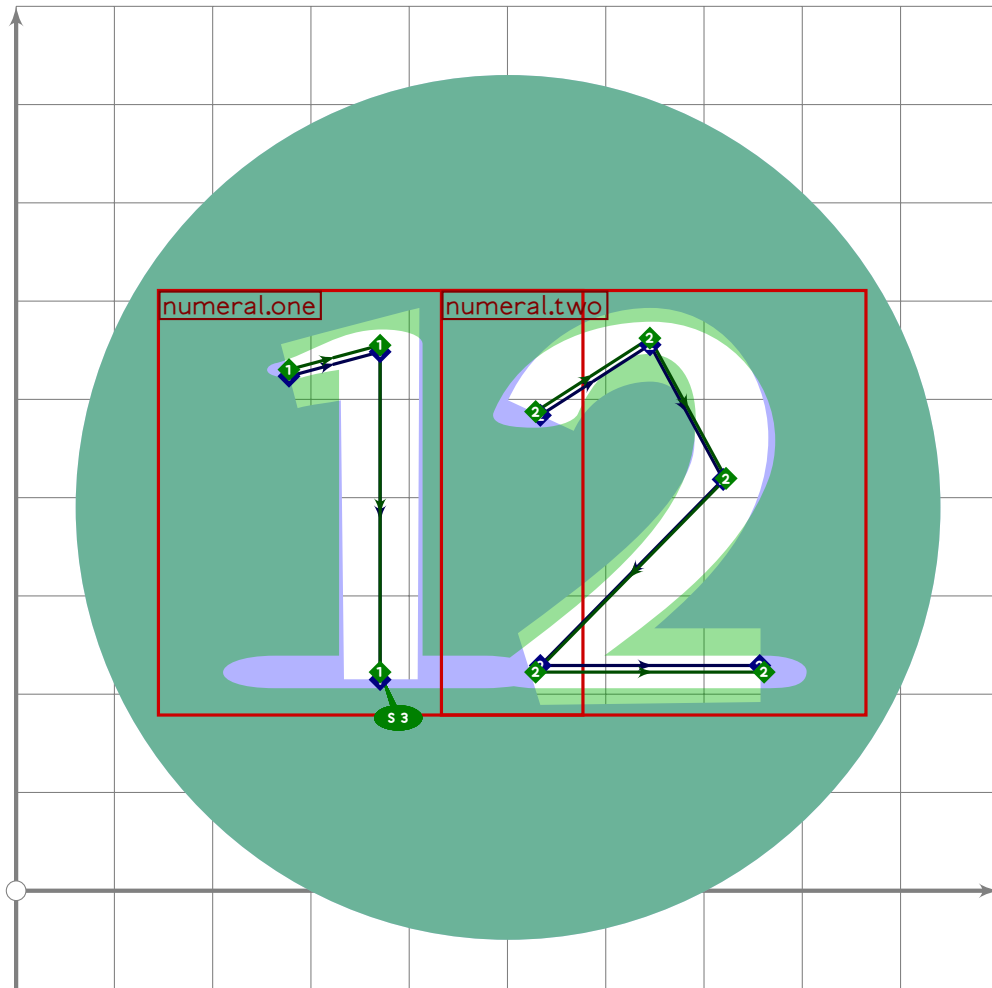
```



```

587 % 11
588 % BACKGROUND 25CF
589 begint Suglyph("uni24EB",235);
590 tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
591 numeric x[],y[];
592 tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.one);
593 i:=0; forever: exitif find_stroke(i)<1;
594     set_bosize(i,107); i:=i+1; endfor;
595 tsu_render;
596 endtsuglyph;
597

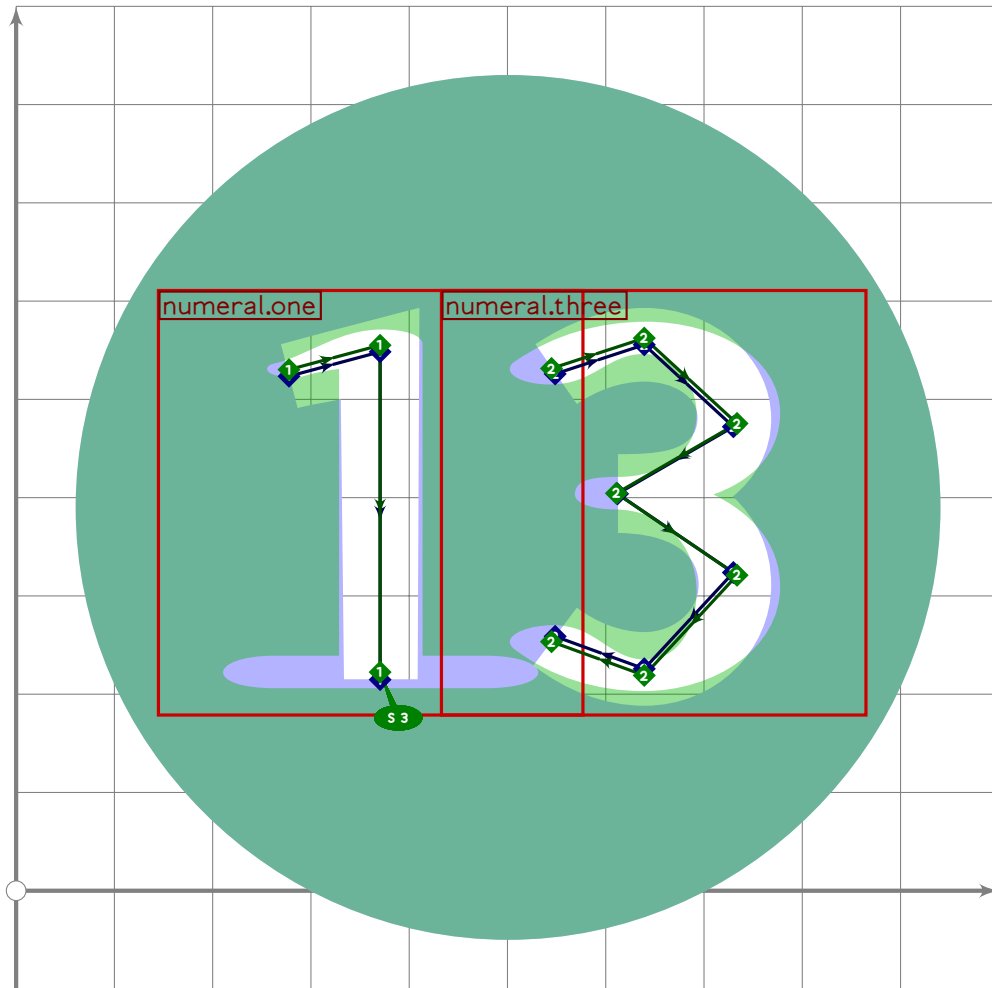
```



```

598 % 12
599 % BACKGROUND 25CF
600 begint Suglyph("uni24EC";236);
601 tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
602 numeric x[],y[];
603 tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.two);
604 i:=0; forever: exitif find_stroke(i)<1;
605     set_bosize(i,107); i:=i+1; endfor;
606 tsu_render;
607 endtsuglyph;
608

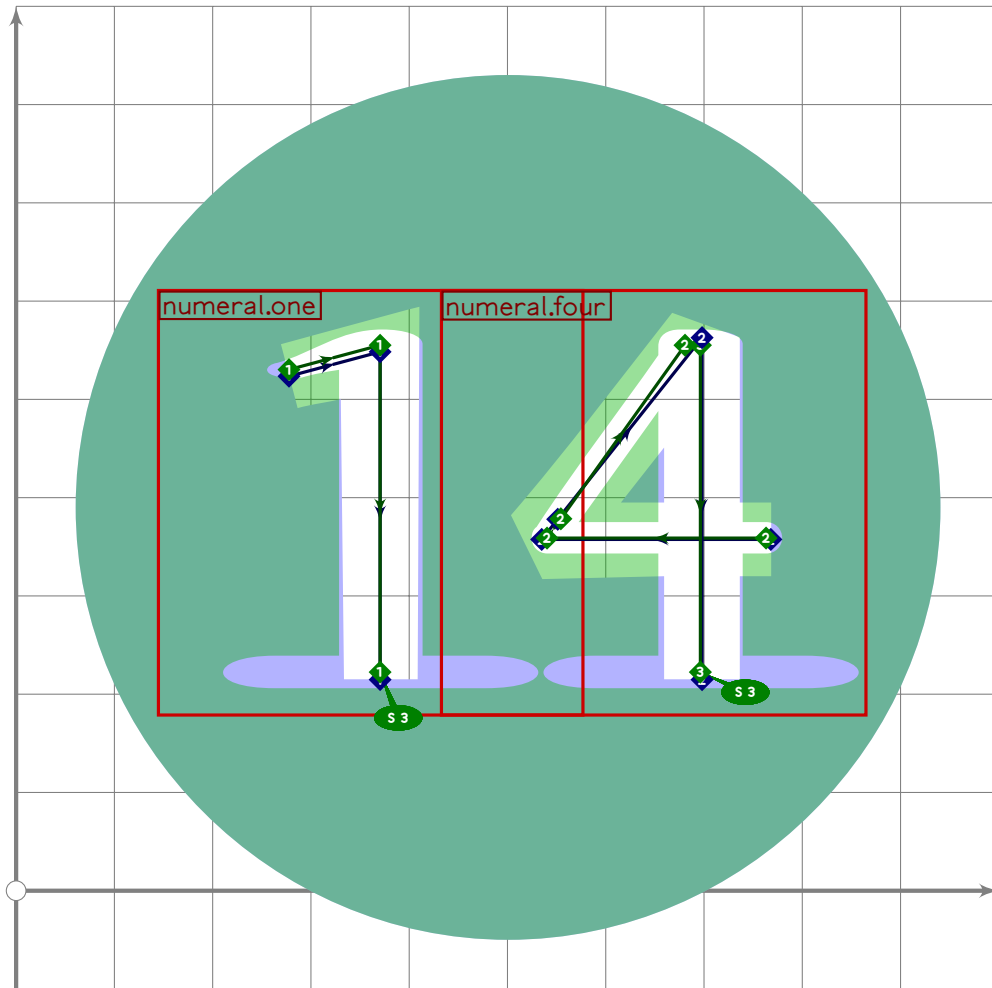
```



```

609 % 13
610 % BACKGROUND 25CF
611 begint Suglyph("uni24ED",237);
612 tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
613 numeric x[],y[];
614 tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.three);
615 i:=0; forever: exitif find_stroke(i)<1;
616     set_bosize(i,107); i:=i+1; endfor;
617 tsu_render;
618 endtsuglyph;
619

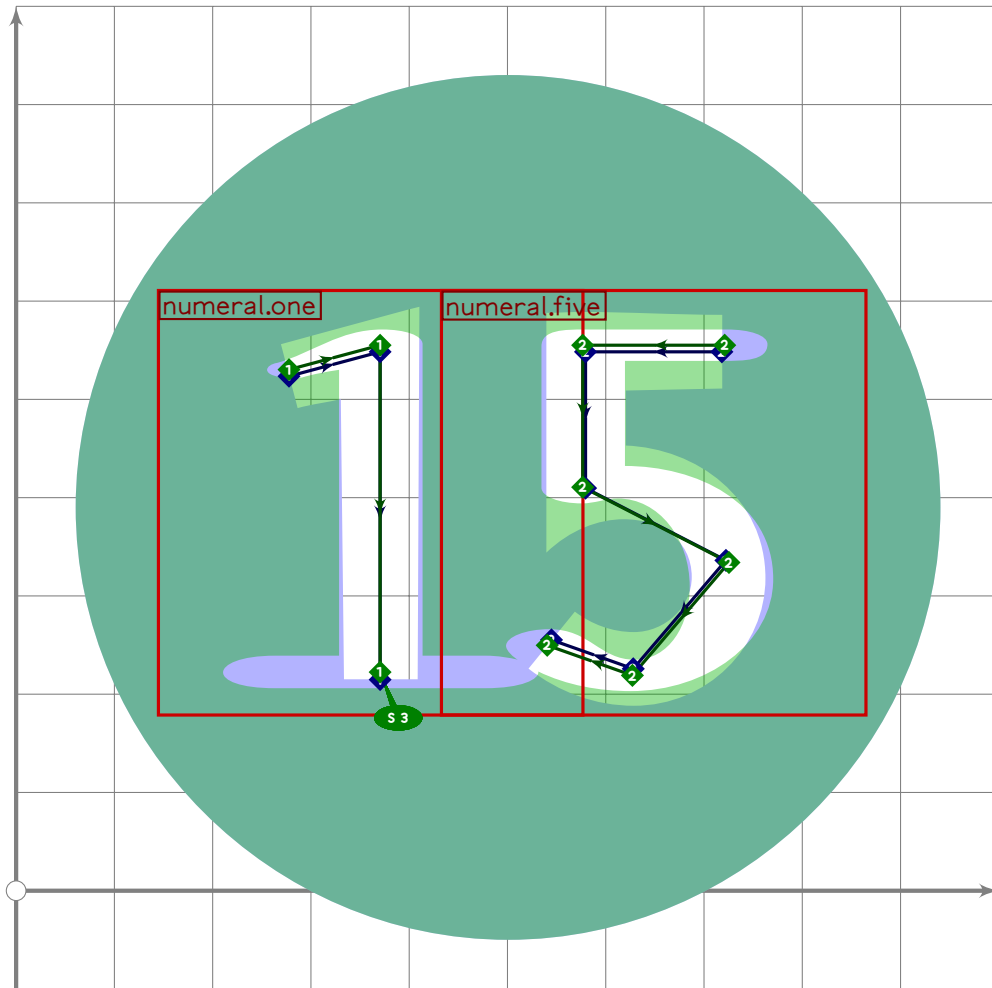
```



```

620 % 14
621 % BACKGROUND 25CF
622 begint Suglyph("uni24EE",238);
623 tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
624 numeric x[],y[];
625 tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.four);
626 i:=0; forever: exitif find_stroke(i)<1;
627     set_bosize(i,107); i:=i+1; endfor;
628 tsu_render;
629 endtsuglyph;
630

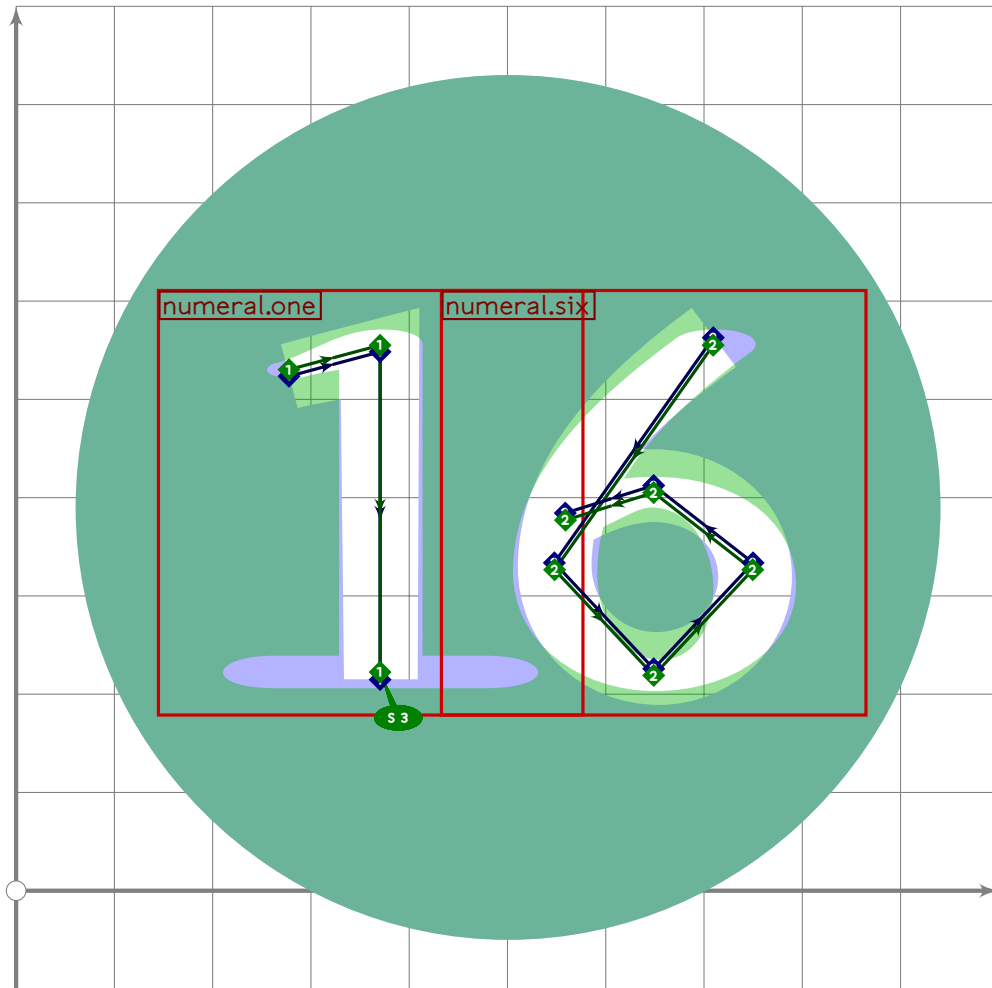
```

```

631 % 15
632 % BACKGROUND 25CF
633 begint Suglyph("uni24EF",239);
634 tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
635 numeric x[],y[];
636 tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.five);
637 i:=0; forever: exitif find_stroke(i)<1;
638     set_bosize(i,107); i:=i+1; endfor;
639 tsu_render;
640 endtsuglyph;
641

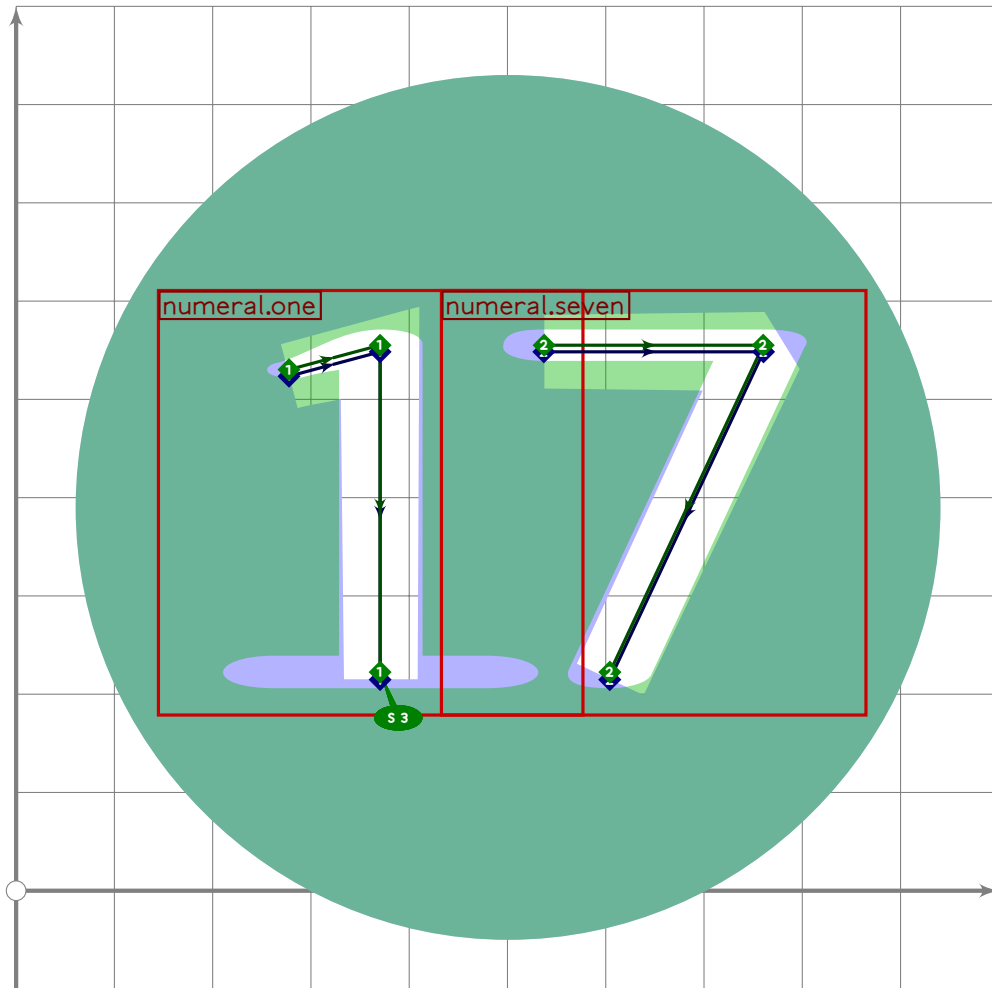
```



```

642 % 16
643 % BACKGROUND 25CF
644 begint Suglyph("uni24F0",240);
645 tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
646 numeric x[],y[];
647 tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.six);
648 i:=0; forever: exitif find_stroke(i)<1;
649     set_bosize(i,107); i:=i+1; endfor;
650 tsu_render;
651 endtsuglyph;
652

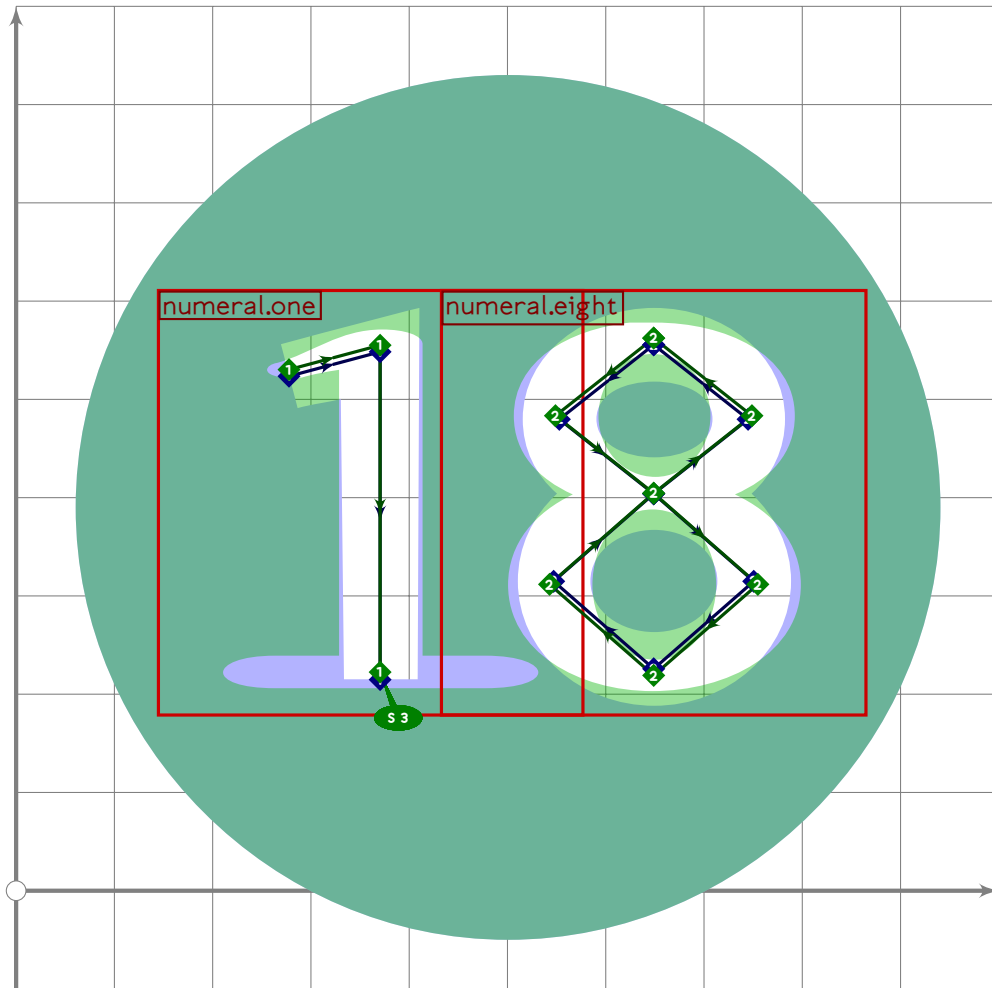
```



```

653 % 17
654 % BACKGROUND 25CF
655 begint Suglyph("uni24F1",241);
656 tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
657 numeric x[],y[];
658 tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.seven);
659 i:=0; forever: exitif find_stroke(i)<1;
660     set_bosize(i,107); i:=i+1; endfor;
661 tsu_render;
662 endtsuglyph;
663

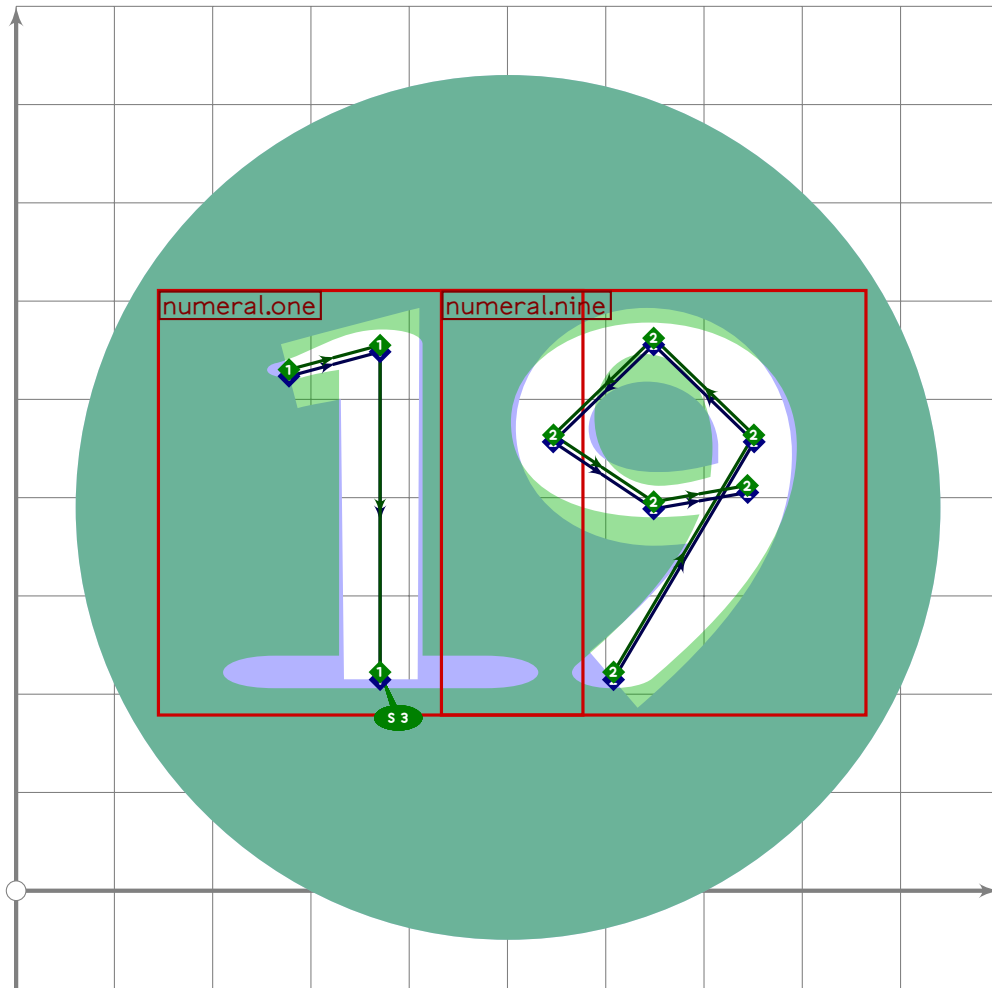
```



```

664 % 18
665 % BACKGROUND 25CF
666 begint Suglyph("uni24F2",242);
667 tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
668 numeric x[],y[];
669 tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.eight);
670 i:=0; forever: exitif find_stroke(i)<1;
671     set_bosize(i,107); i:=i+1; endfor;
672 tsu_render;
673 endtsuglyph;
674

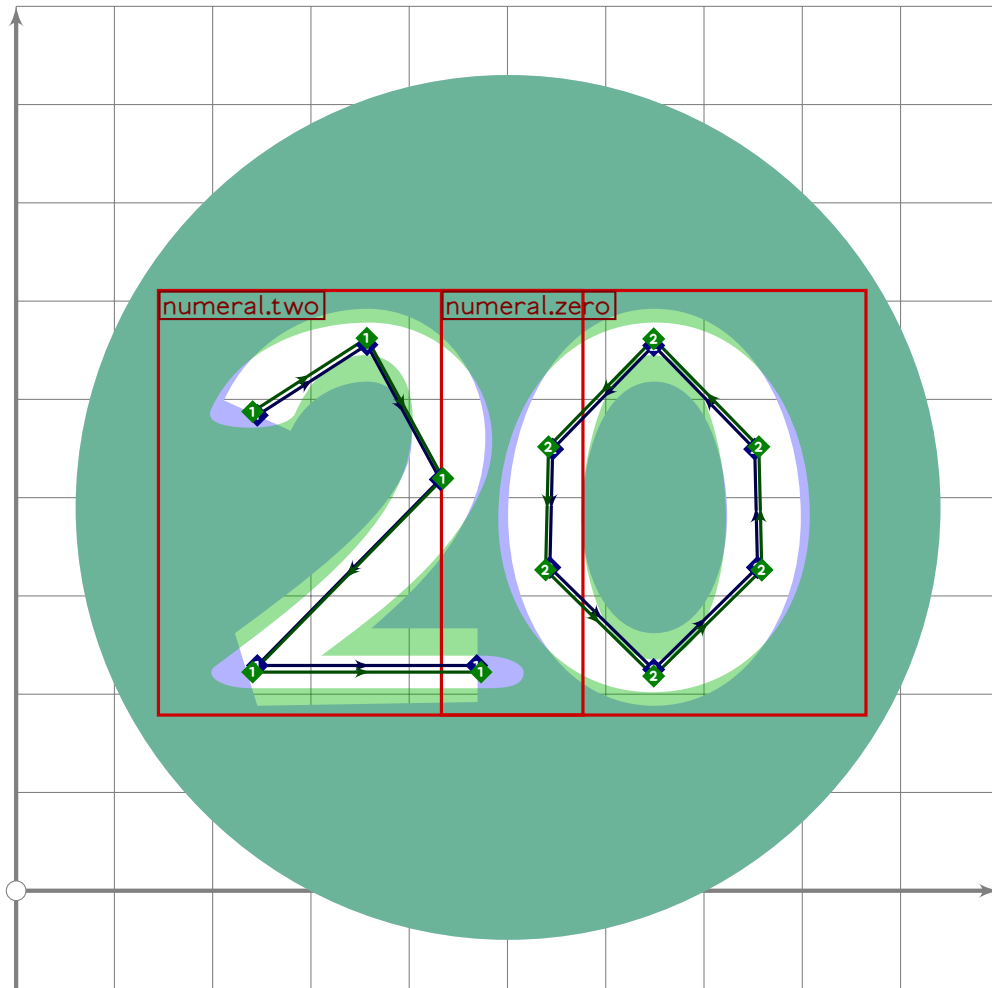
```



```

675 % 19
676 % BACKGROUND 25CF
677 begint Suglyph("uni24F3",243);
678 tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
679 numeric x[],y[];
680 tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.nine);
681 i:=0; forever: exitif find_stroke(i)<1;
682     set_bosize(i,107); i:=i+1; endfor;
683 tsu_render;
684 endtsuglyph;
685

```



```

686 % 20
687 % BACKGROUND 25CF
688 begint Suglyph("uni24F4",244);
689 tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.two);
690 numeric x[],y[];
691 tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.zero);
692 i:=0; forever: exitif find_stroke(i)<1;
693     set_bosize(i,107); i:=i+1; endfor;
694 tsu_render;
695 endtsuglyph;
696
697
698

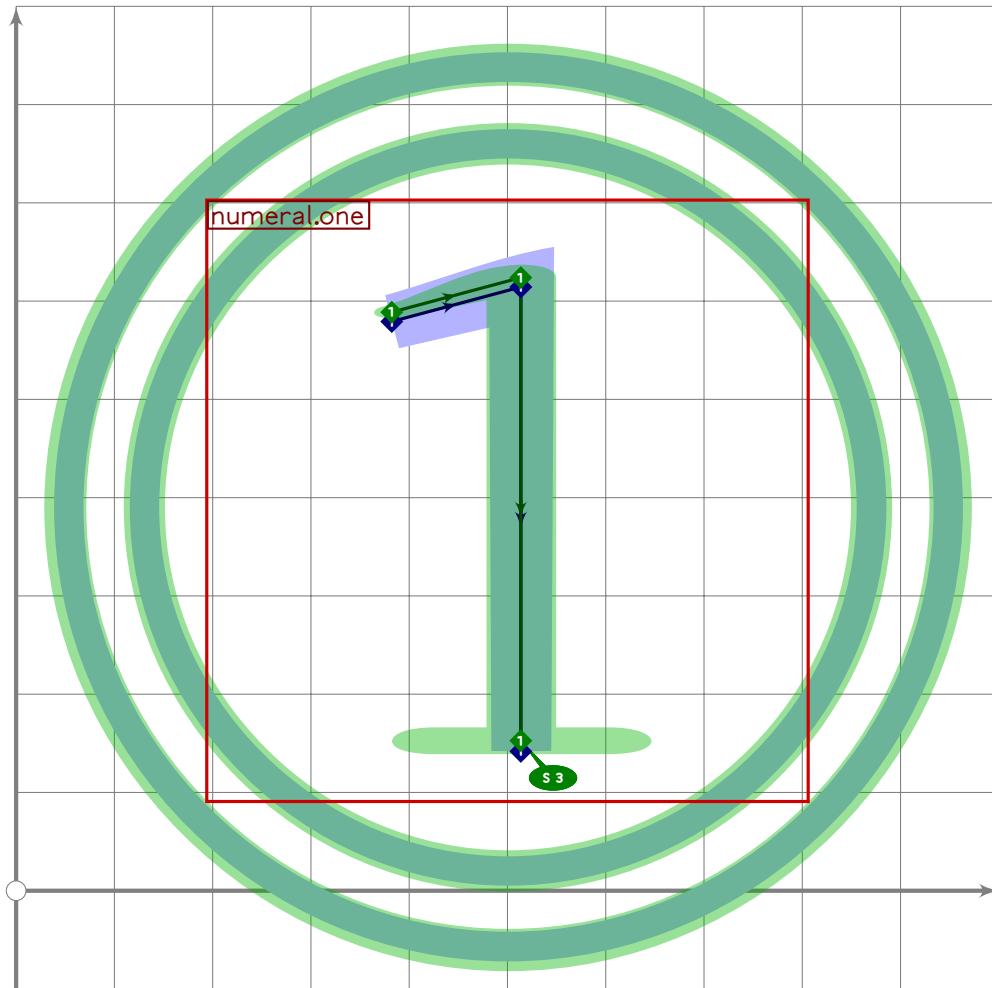
```

Doubly Circled Numerals

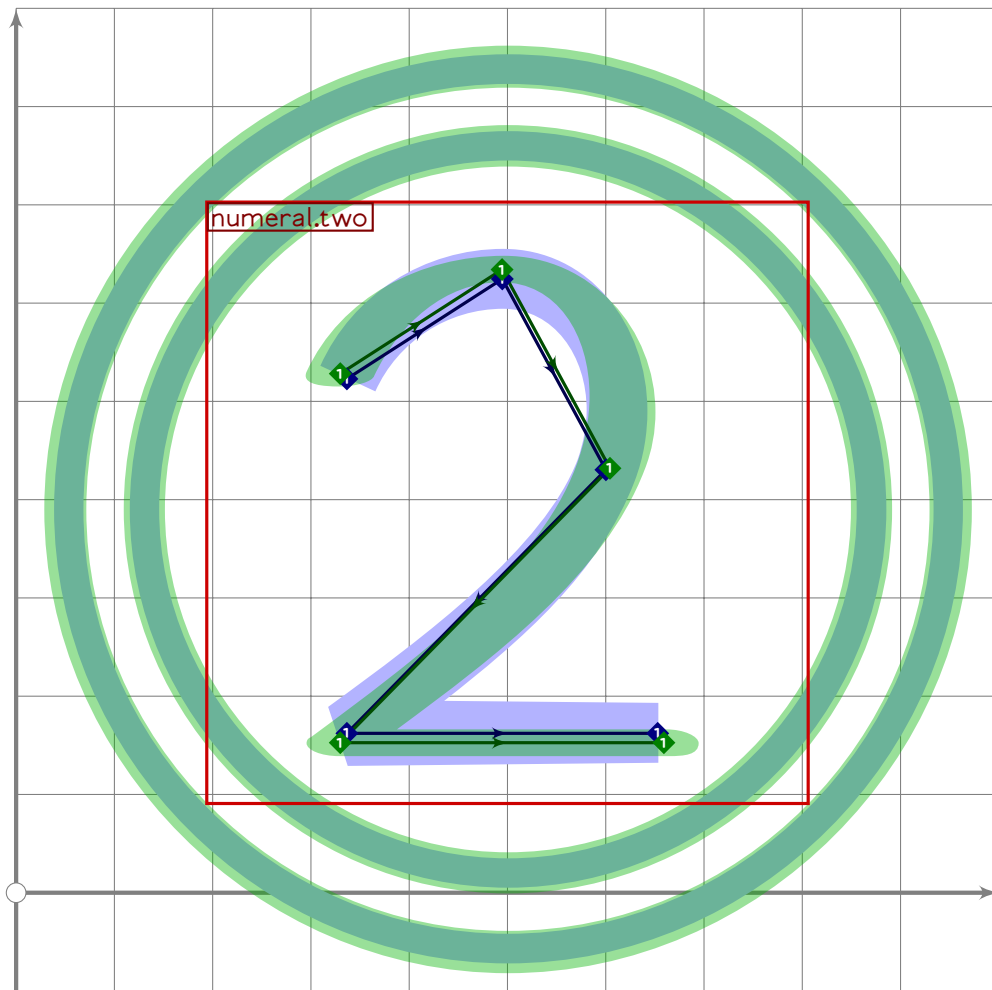
```

699 % DOUBLY CIRCLED NUMERALS
700

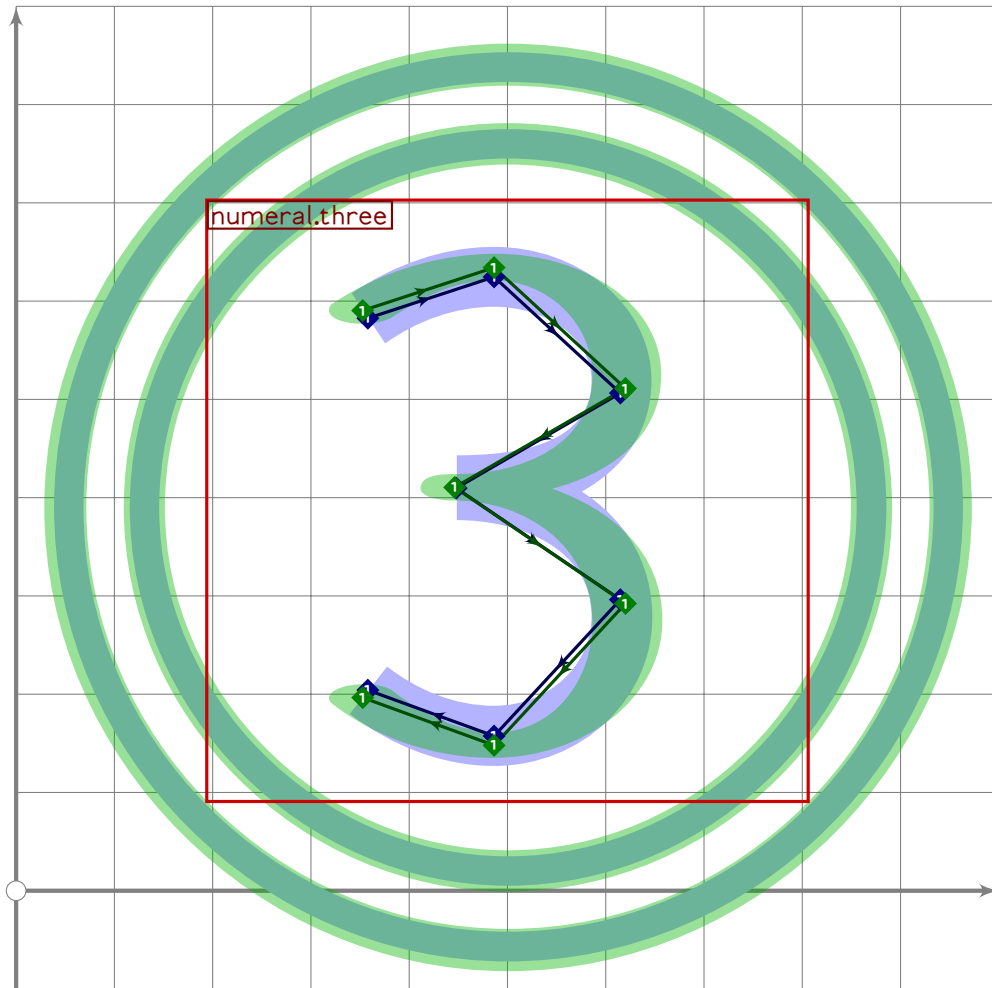
```



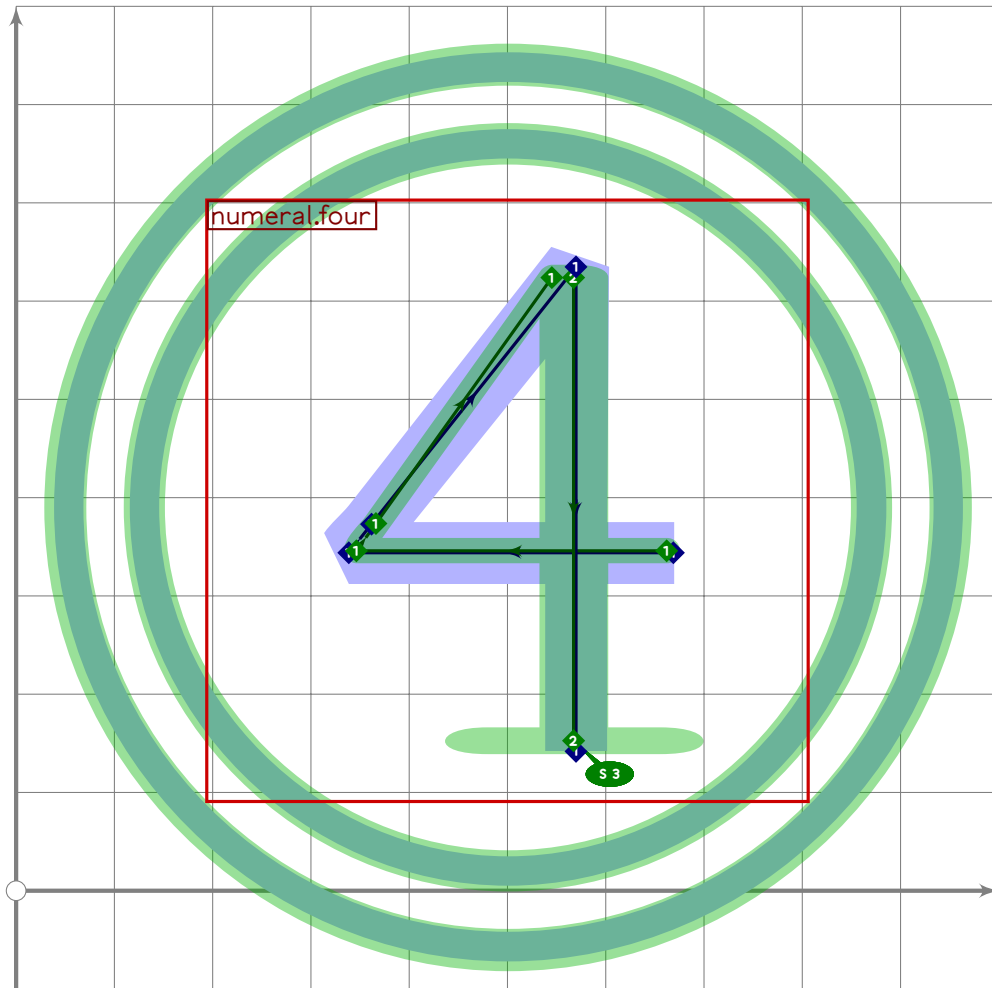
```
701 % 1
702 beginsuglyph("uni24F5";245);
703   tsu_curve.circle.double;
704   tsu_xform(tsu_xf.circled)(tsu_curve.numeral.one);
705   tsu_render;
706 endsuglyph;
707
```



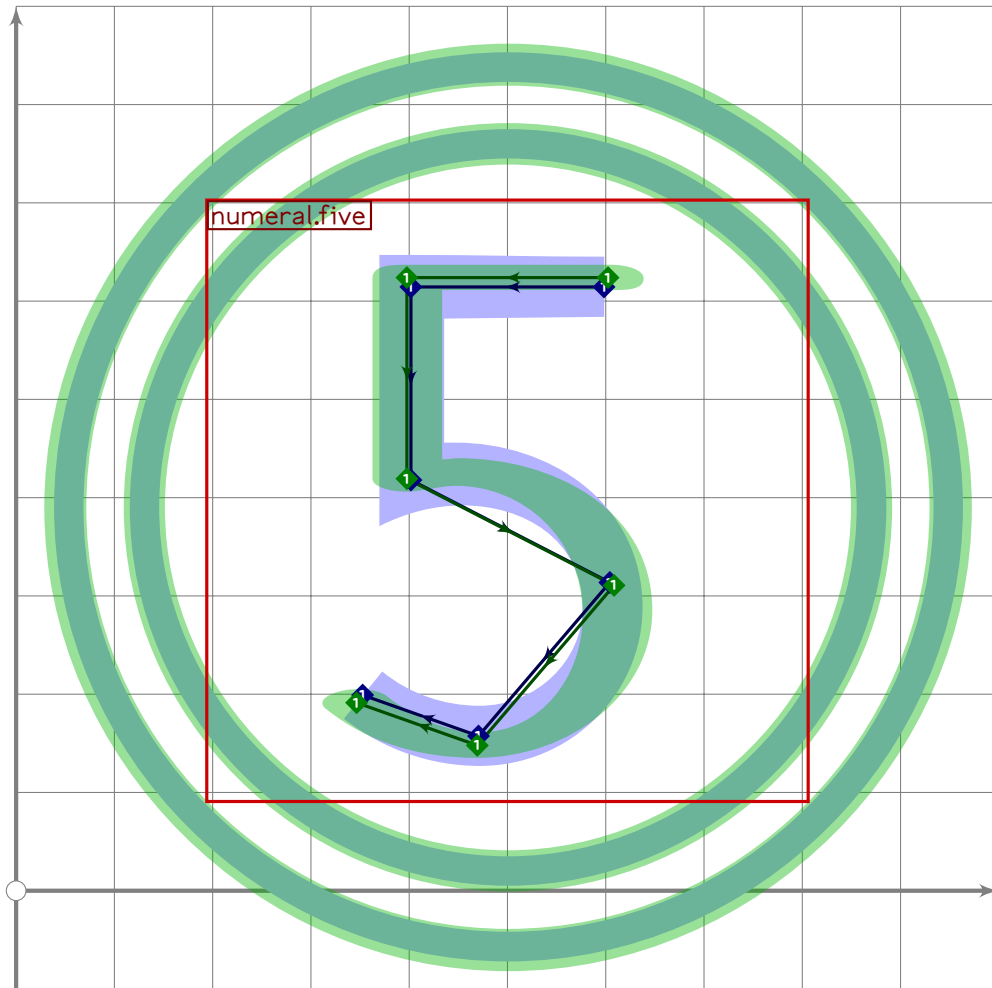
```
708 % 2
709 begintsuglyph("uni24F6";246);
710 tsu_curve.circle.double;
711 tsu_xform(tsu_xf.circled)(tsu_curve.numeral.two);
712 tsu_render;
713 endsuglyph;
714
```

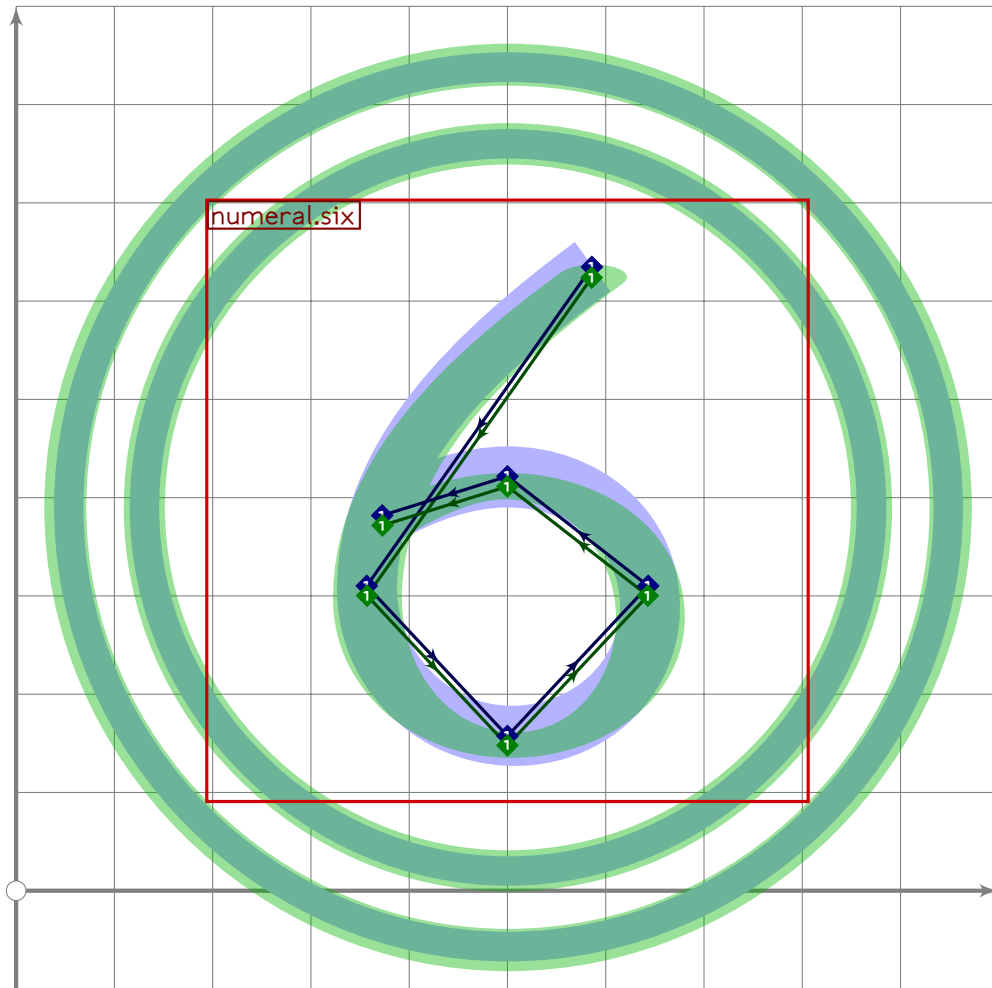
```
715 % 3
716 beginsuglyph("uni24F7",247);
717 tsu_curve.circle.double;
718 tsu_xform(tsu_xf.circled)(tsu_curve.numeral.three);
719 tsu_render;
720 endsuglyph;
721
```



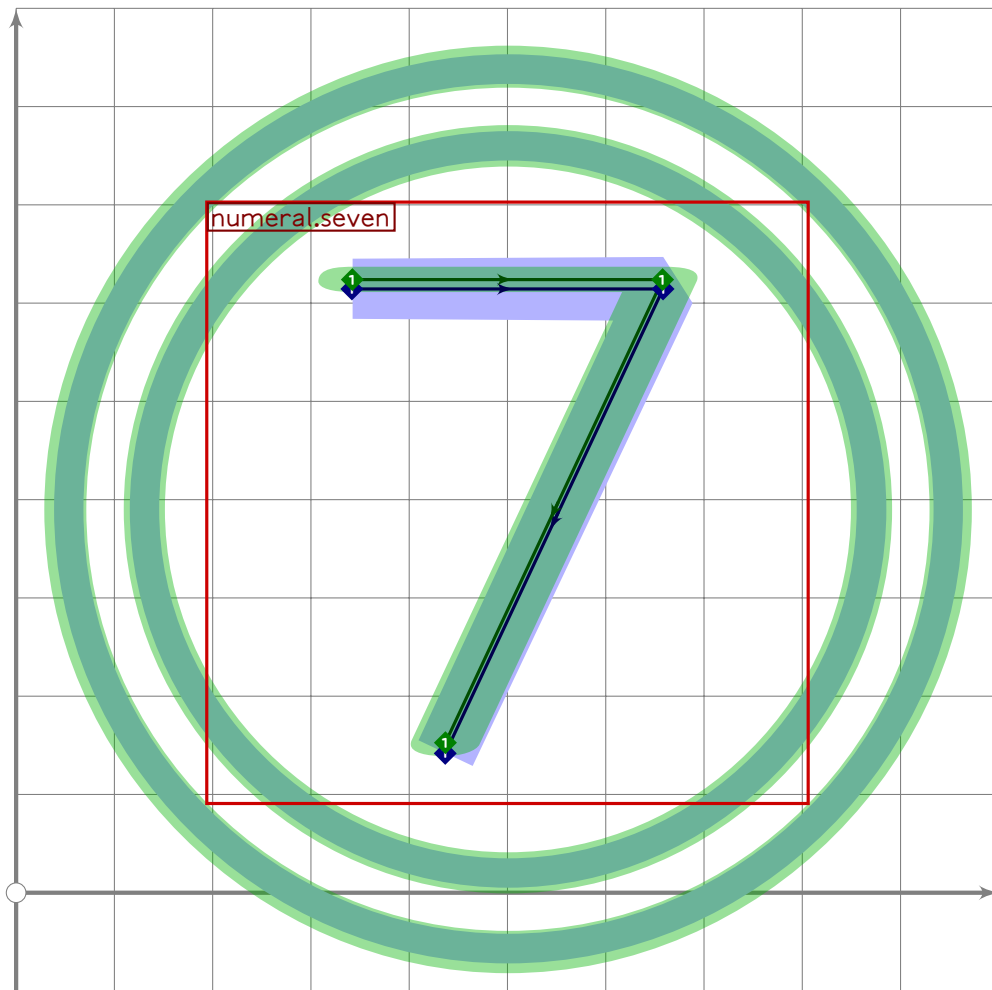
```
722 % 4
723 beginsuglyph("uni24F8",248);
724 tsu_curve.circle.double;
725 tsu_xform(tsu_xf.circled)(tsu_curve.numeral.four);
726 tsu_render;
727 endsuglyph;
728
```



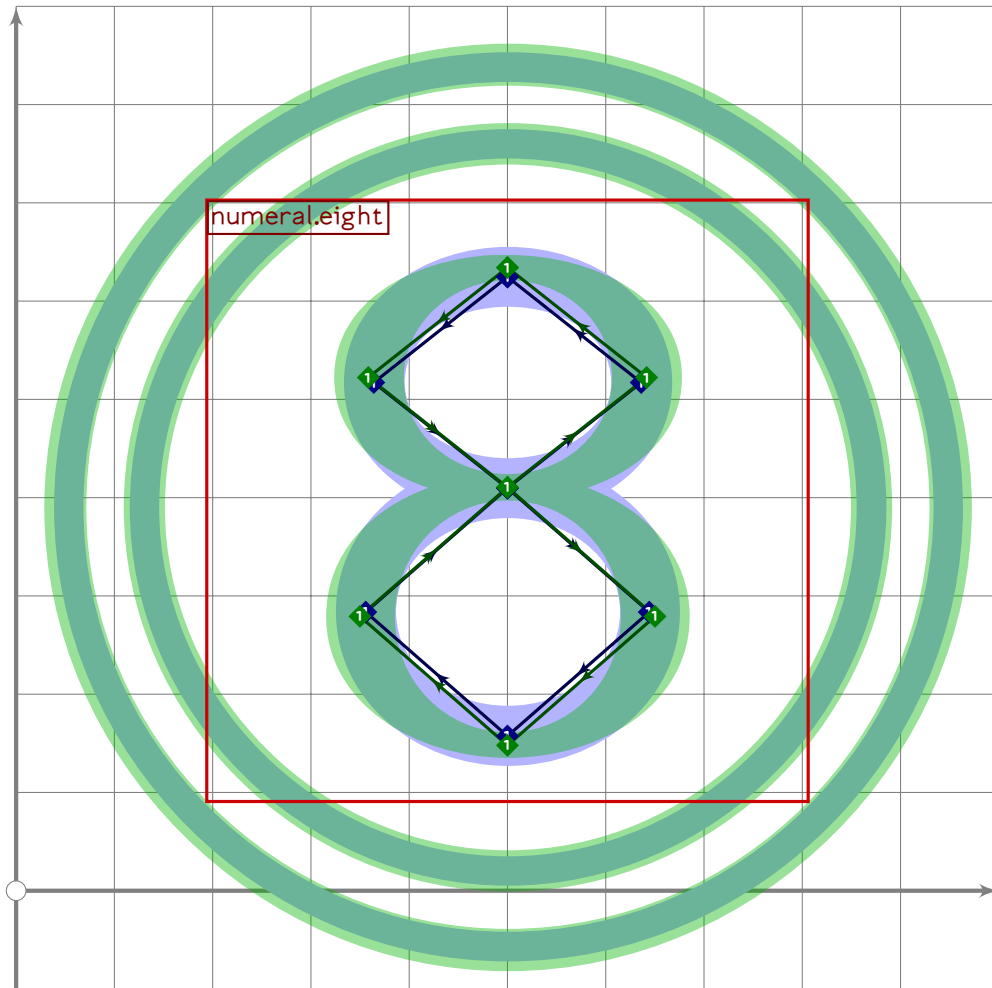
```
729 % 5
730 begint Suglyph("uni24F9",249);
731   tsu_curve.circle.double;
732   tsu_xform(tsu_xf.circled)(tsu_curve.numeral.five);
733   tsu_render;
734 endsuglyph;
735
```



```
736 % 6
737 begint Suglyph("uni24FA",250);
738 tsu_curve.circle.double;
739 tsu_xform(tsu_xf.circled)(tsu_curve.numeral.six);
740 tsu_render;
741 endsuglyph;
742
```



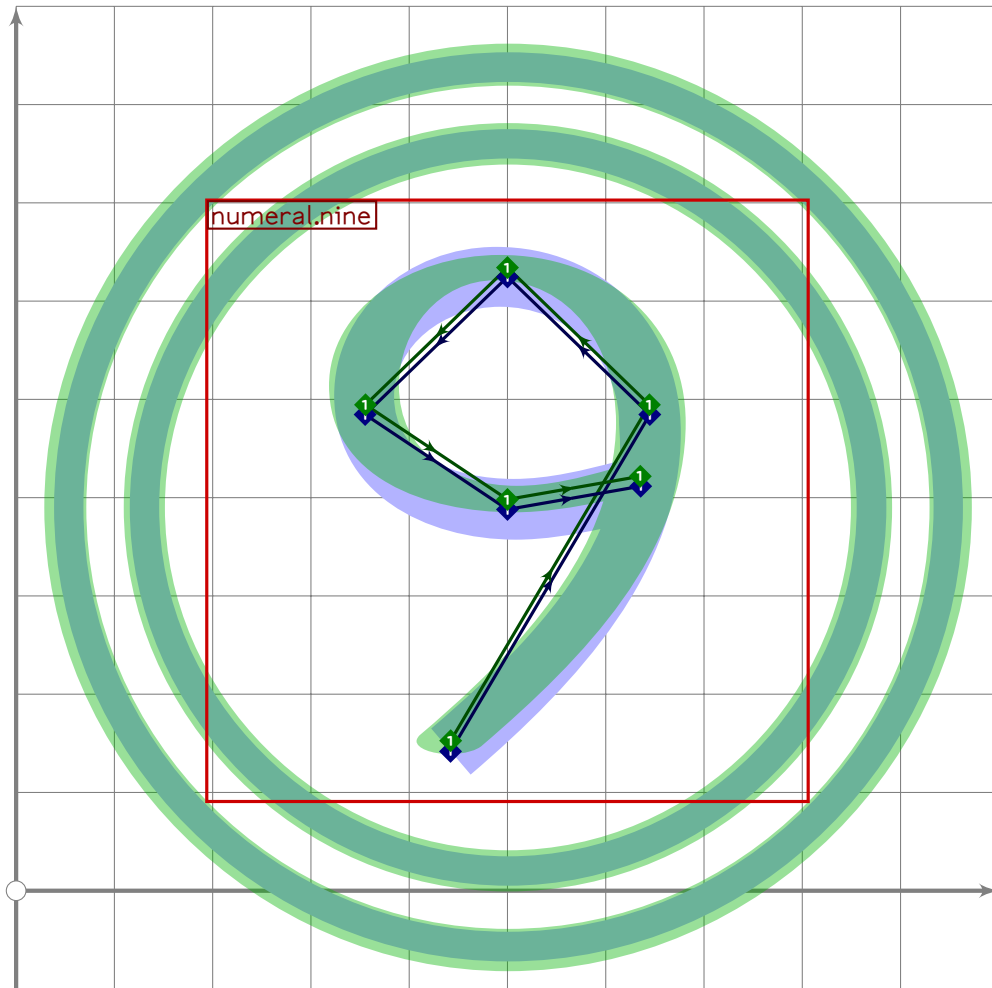
```
743 % 7
744 begint Suglyph("uni24FB";251);
745 tsu_curve.circle.double;
746 tsu_xform(tsu_xf.circled)(tsu_curve.numeral.seven);
747 tsu_render;
748 endsuglyph;
749
```



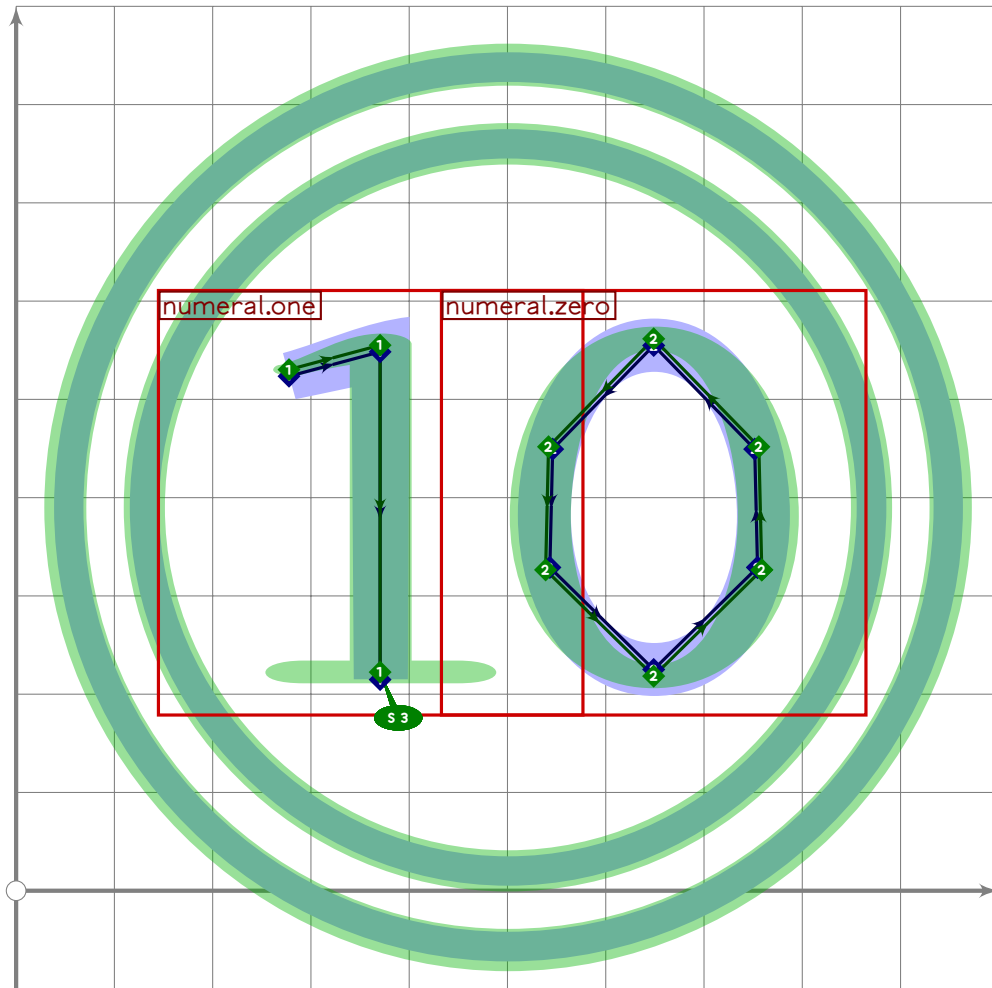
```

750 % 8
751 begintuglyph("uni24FC",252);
752   tsu_curve.circle.double;
753   tsu_xform(tsu_xf.circled)(tsu_curve.numeral.eight);
754   tsu_render;
755 endtuglyph;
756

```



```
757 % 9
758 begintsuglyph("uni24FD",253);
759 tsu_curve.circle.double;
760 tsu_xform(tsu_xf.circled)(tsu_curve.numeral.nine);
761 tsu_render;
762 endsuglyph;
763
```



```

764 % 10
765 begint Suglyph("uni24FE",254);
766   tsu_curve.circle.double;
767   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
768   numeric x[],y[];
769   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.zero);
770   tsu_render;
771 endtsuglyph;
772
773
774

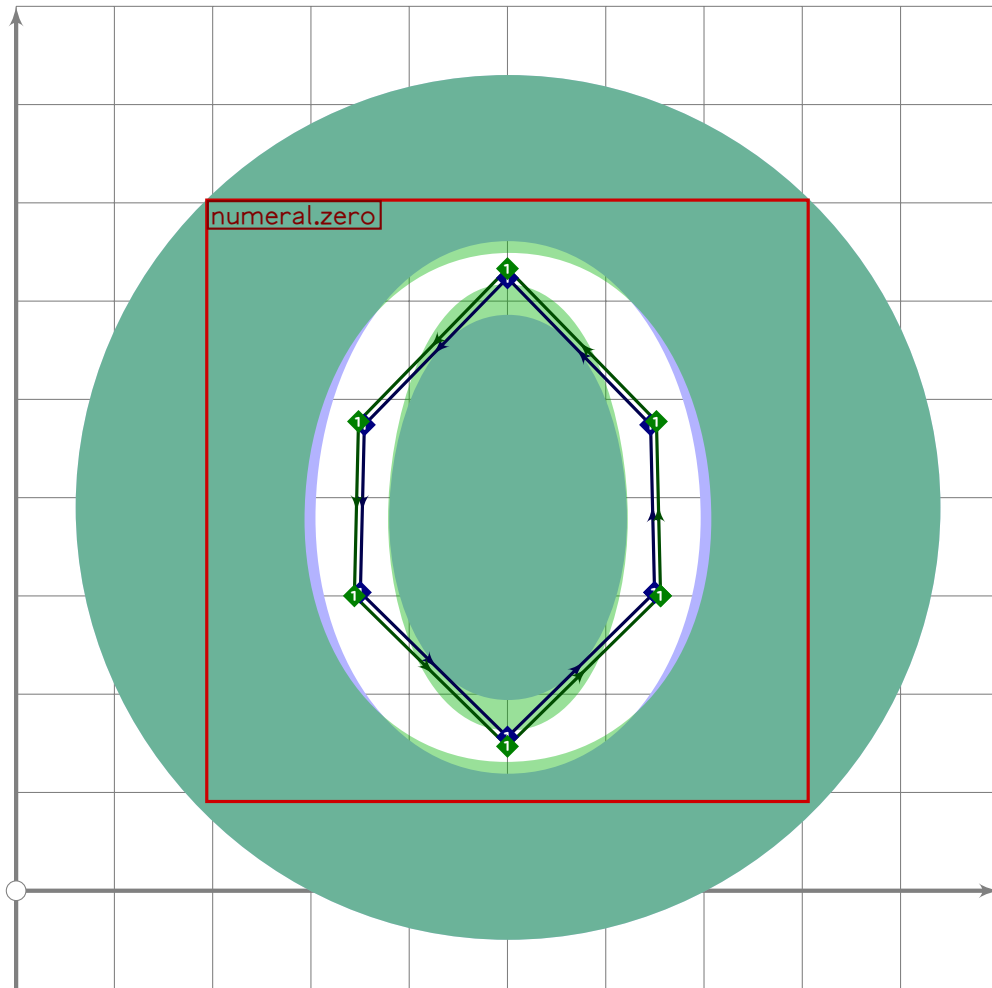
```

One More Inverted Circled Numeral

```

775 % ONE MORE INVERTED CIRCLED NUMERAL
776

```

```

777 % 9
778 % BACKGROUND 25CF
779 begint Suglyph("uni24FF",255);
780 tsu_xform(tsu_xf.circled)(tsu_curve.numeral.zero);
781 i:=0; forever: exitif find_stroke(i)<1;
782   set_bosize(i,107); i:=i+1; endfor;
783 tsu_render;
784 endtsuglyph;
785
786 _____
787
788 endfont;
789
790 _____

```

tsuku25.mp

1 %

2 % Unicode page 24 (Geometric Shapes) for Tsukurimashou

3 % Copyright (C) 2011 Matthew Skala

4 %

5-29 [Standard copyright notice]

30

31

32

33 beginfont

34

35 % AUTODEPS

36

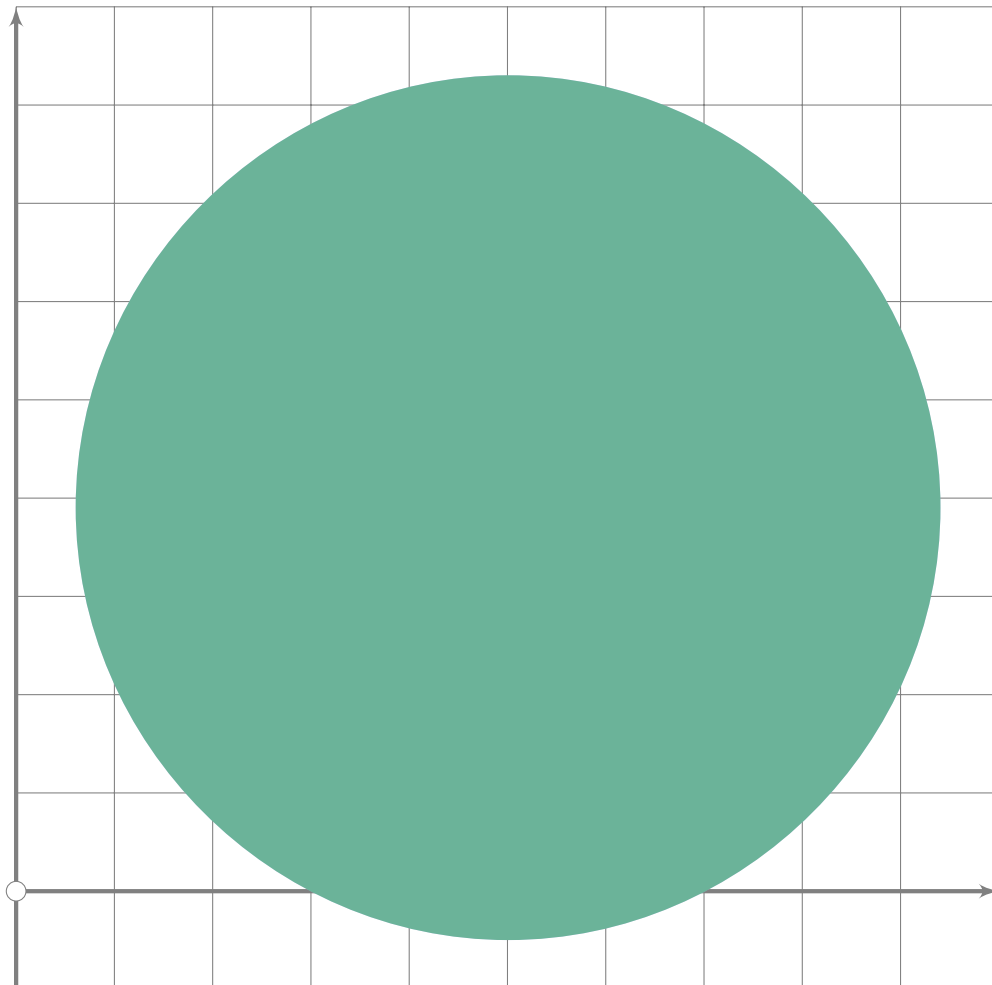
37

38

Geometric Shapes

39 % GEOMETRIC SHAPES

40



41 % black circle - used as background for inverted dingbats

```
42 begintsuglyph("uni25CF",207);
43   Fill fullcircle scaled 880 shifted centre_pt;
44 endsuglyph;
45
46 

---


47
48 endfont;
49
50 

---


```

tsuku-26.mp

```
1 %
2 % Unicode page 26 (Misc. Symbols) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---

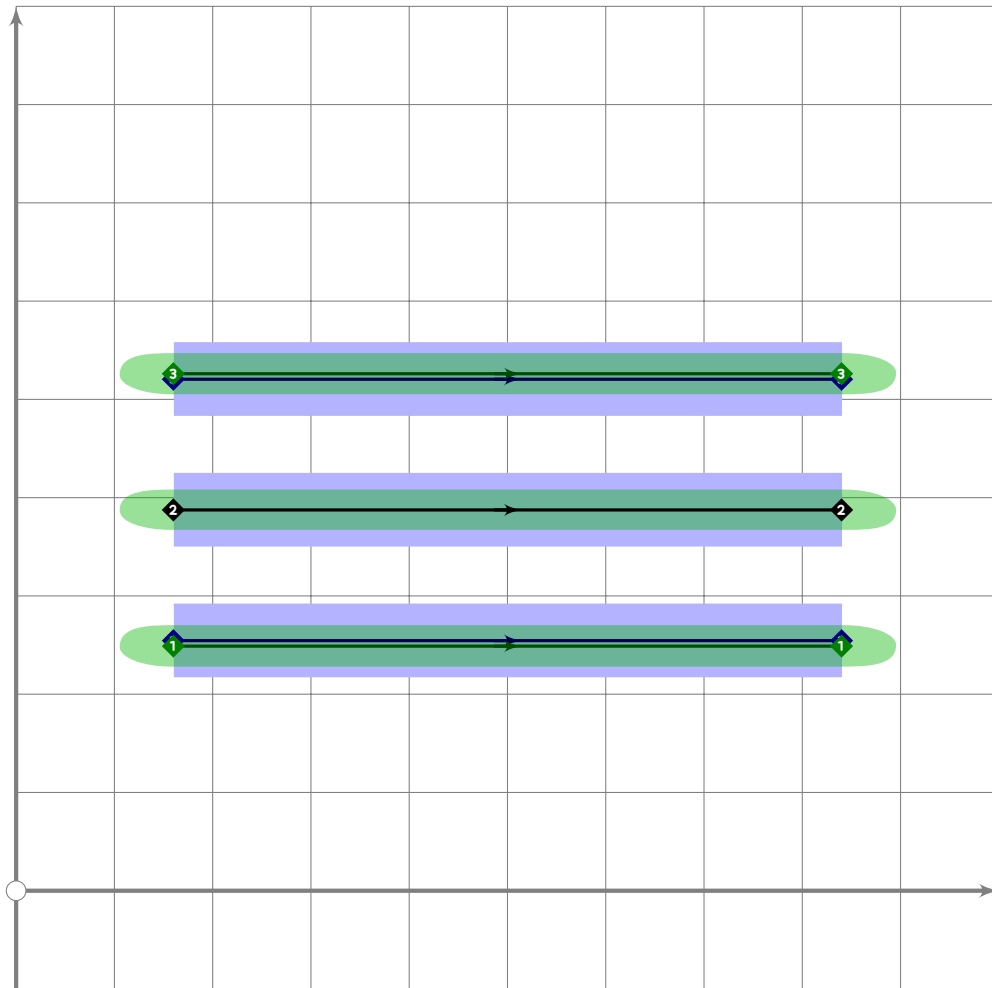

32
33 beginfont
34
35 input latin-intro.mp;
36
37 % AUTODEPS
38 input iching.mp;
39
40 

---


41
```

I Ching

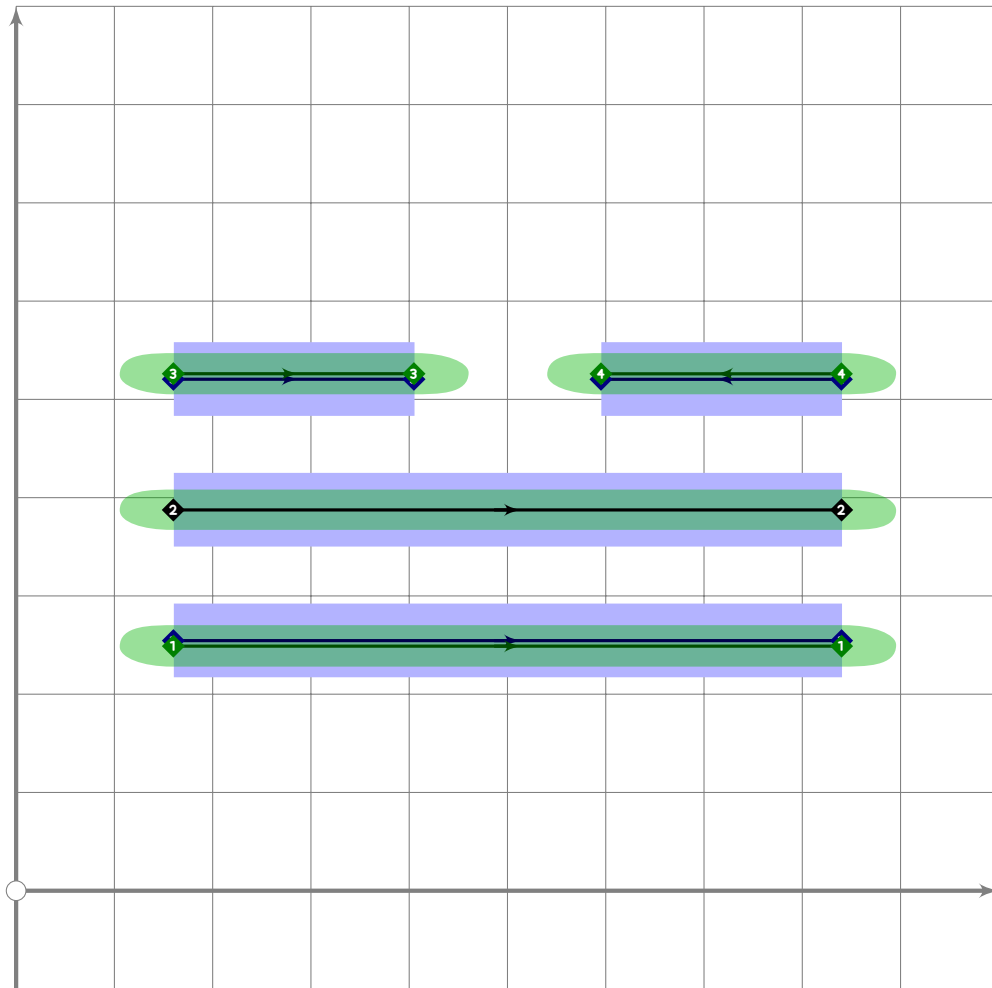
42 % I CHING



```

43
44 begintsuglyph("ichingtri1",48);
45 tsu_curve.iching.line(1,3,1);
46 tsu_curve.iching.line(2,3,1);
47 tsu_curve.iching.line(3,3,1);
48 tsu_render;
49 endsuglyph;

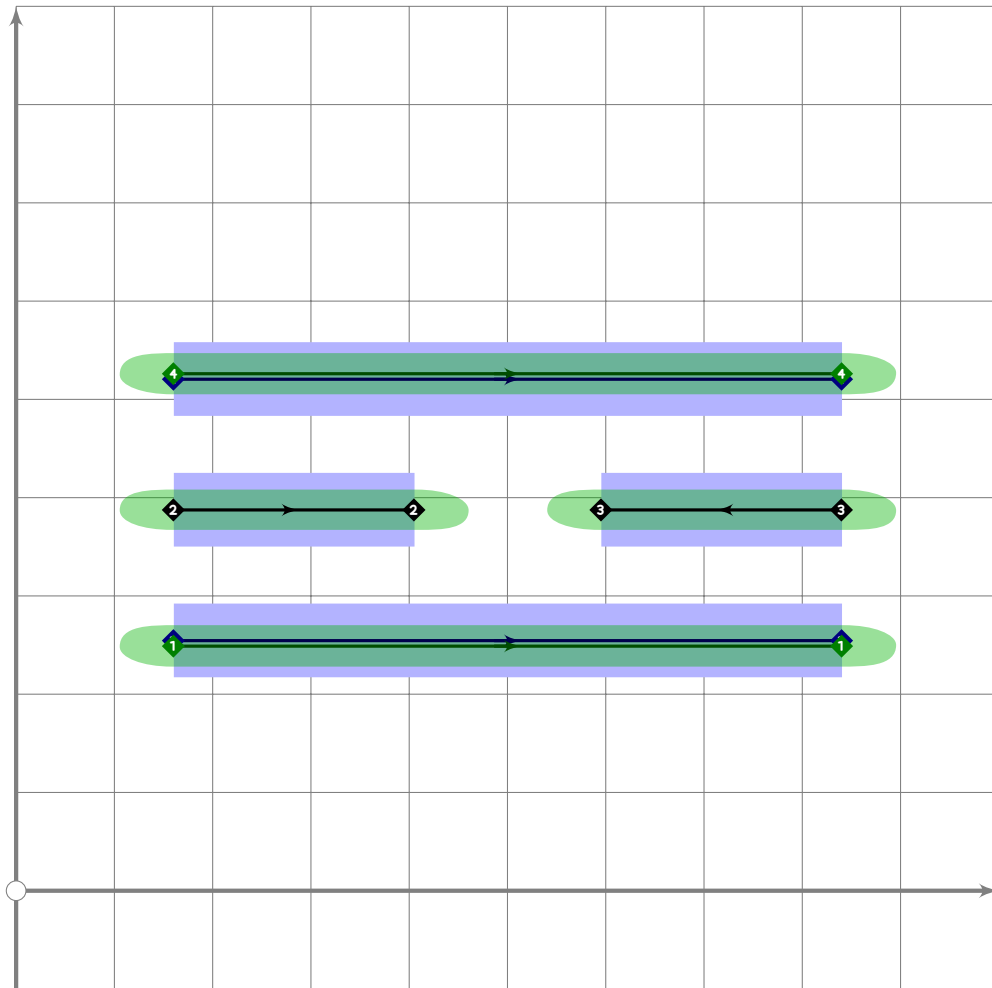
```



```

50
51 begint Suglyph("ichingtri2",49);
52 tsu_curve.iching.line(1,3,1);
53 tsu_curve.iching.line(2,3,1);
54 tsu_curve.iching.line(3,3,0);
55 tsu_render;
56 endsuglyph;

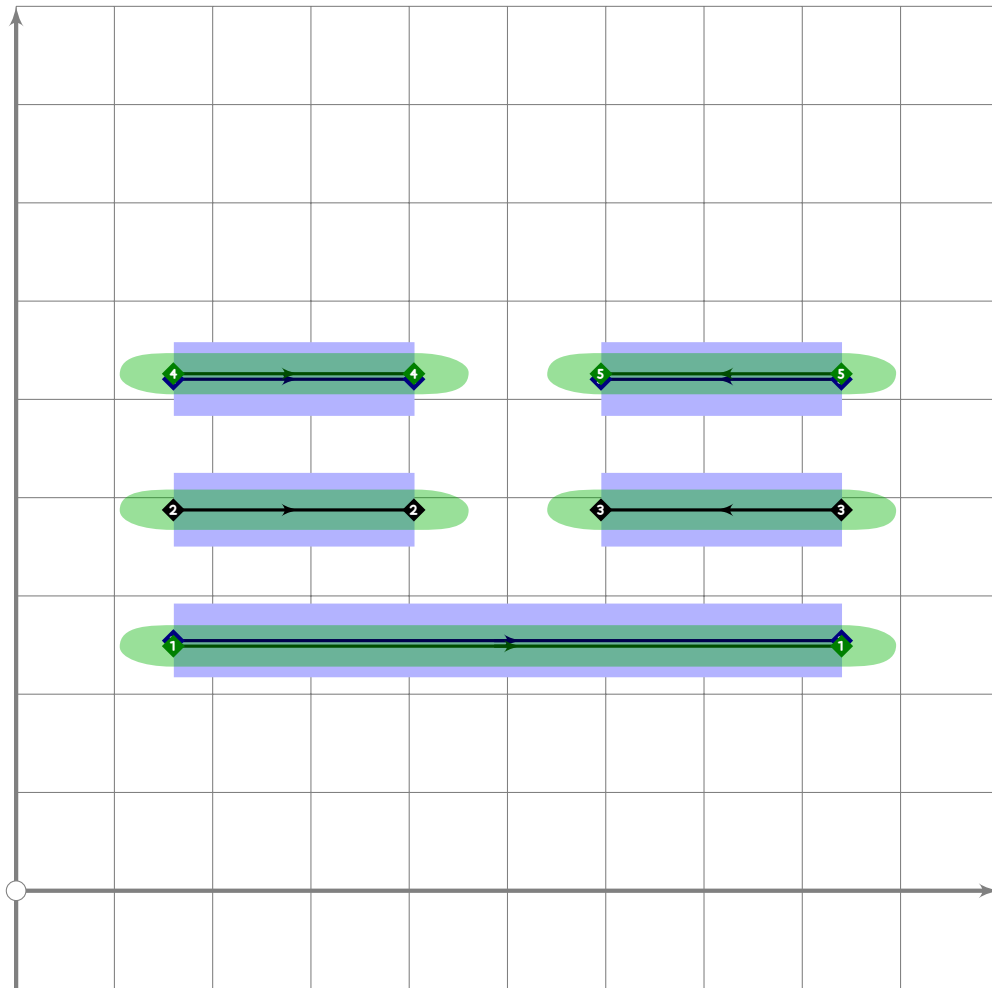
```



```

57
58 begint Suglyph("ichingtri3",50);
59   tsu_curve.iching.line(1,3,1);
60   tsu_curve.iching.line(2,3,0);
61   tsu_curve.iching.line(3,3,1);
62   tsu_render;
63 ends Suglyph;

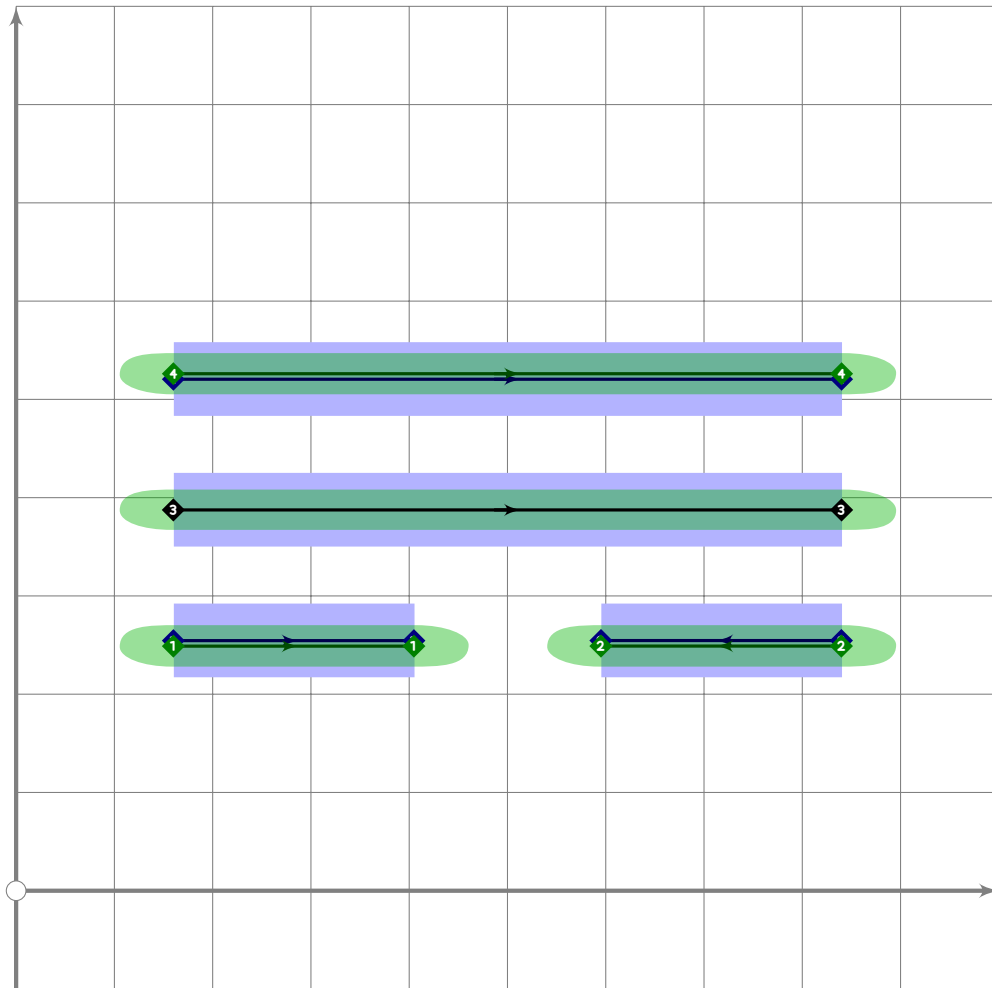
```



```

64
65 begint Suglyph("ichingtri4",51);
66 tsu_curve.iching.line(1,3,1);
67 tsu_curve.iching.line(2,3,0);
68 tsu_curve.iching.line(3,3,0);
69 tsu_render;
70 endsuglyph;

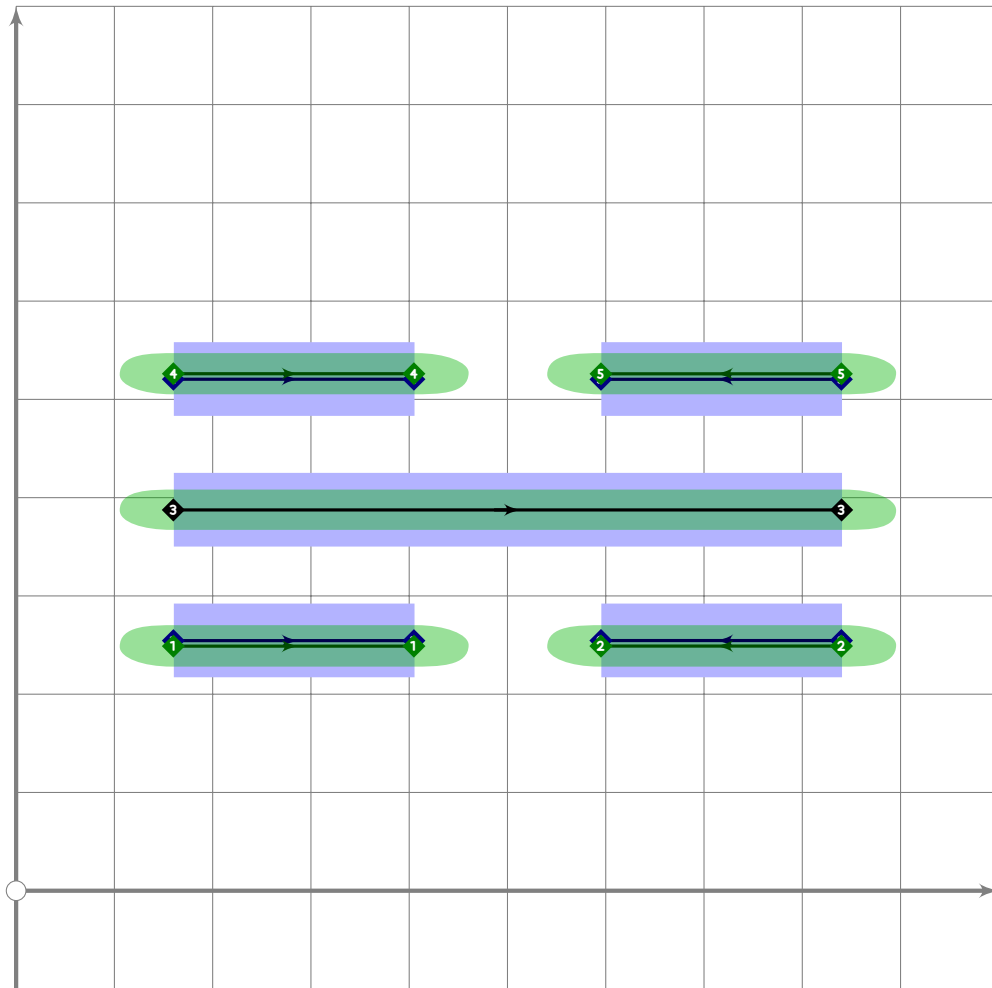
```

```

71
72 begintsuglyph("ichingtri5",52);
73 tsu_curve.iching.line(1,3,0);
74 tsu_curve.iching.line(2,3,1);
75 tsu_curve.iching.line(3,3,1);
76 tsu_render;
77 endsuglyph;

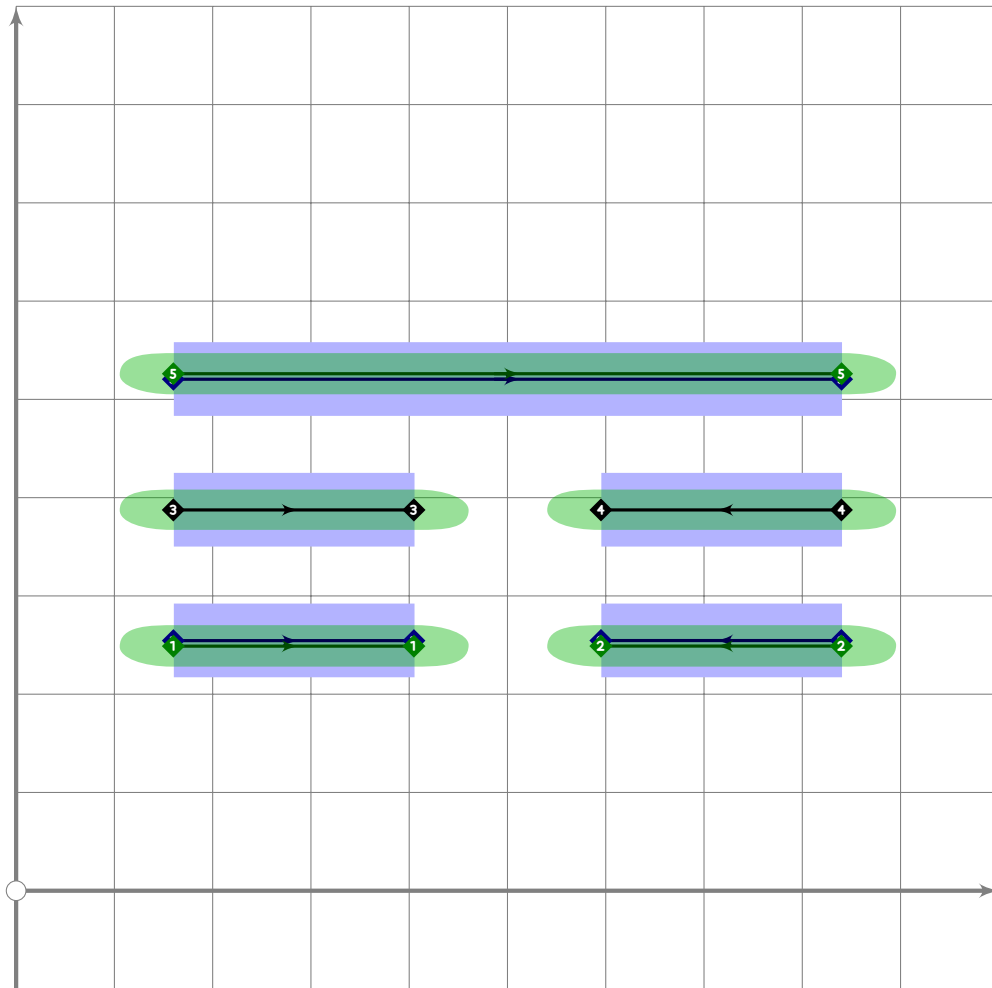
```



```

78
79 begint Suglyph("ichingtri6",53);
80 tsu_curve.iching.line(1,3,0);
81 tsu_curve.iching.line(2,3,1);
82 tsu_curve.iching.line(3,3,0);
83 tsu_render;
84 endtsuglyph;

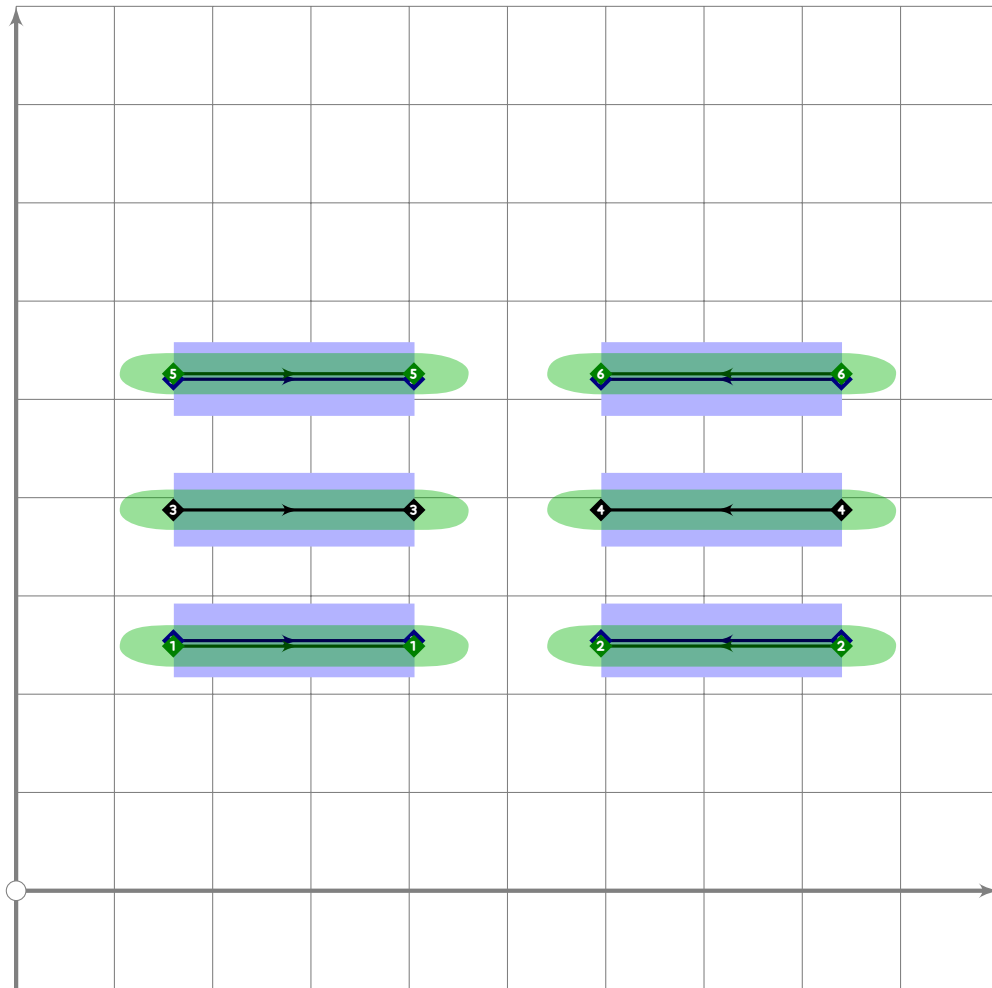
```



```

85
86 begint Suglyph("ichingtri7",54);
87   tsu_curve.iching.line(1,3,0);
88   tsu_curve.iching.line(2,3,0);
89   tsu_curve.iching.line(3,3,1);
90   tsu_render;
91 endtsuglyph;

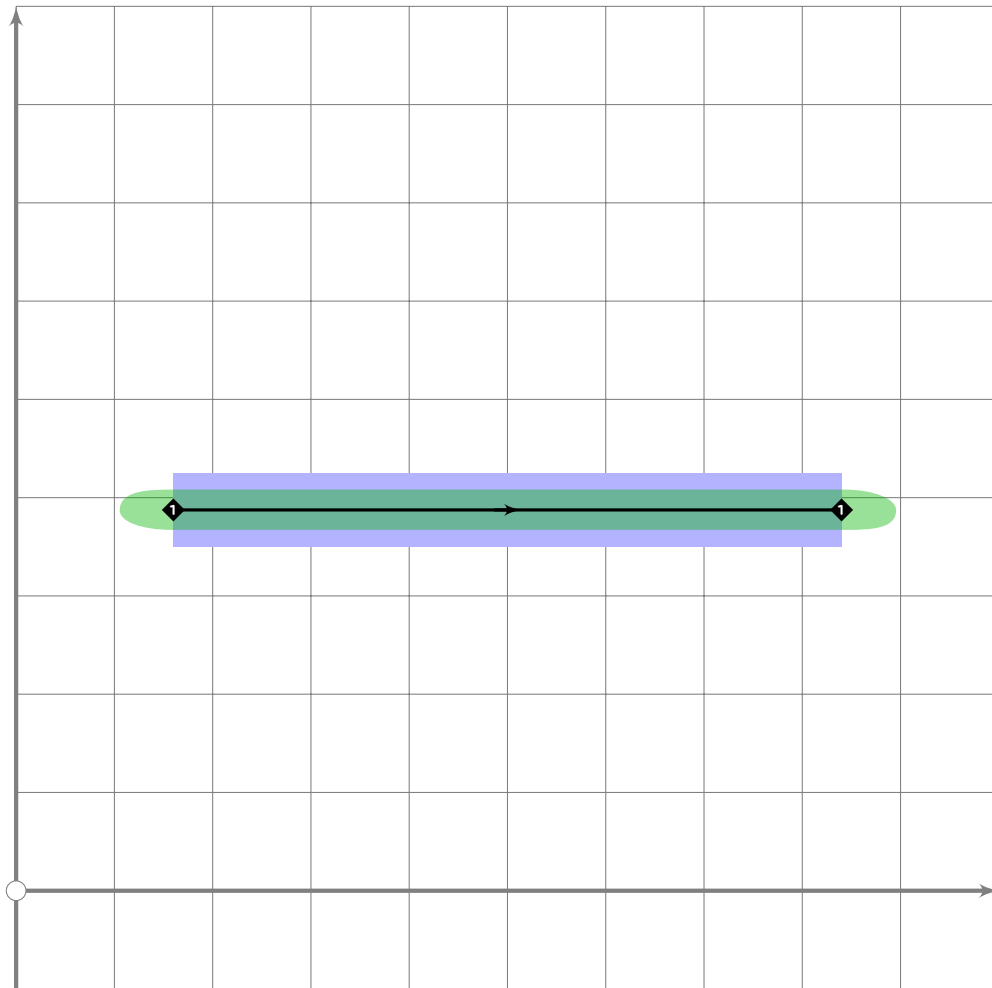
```



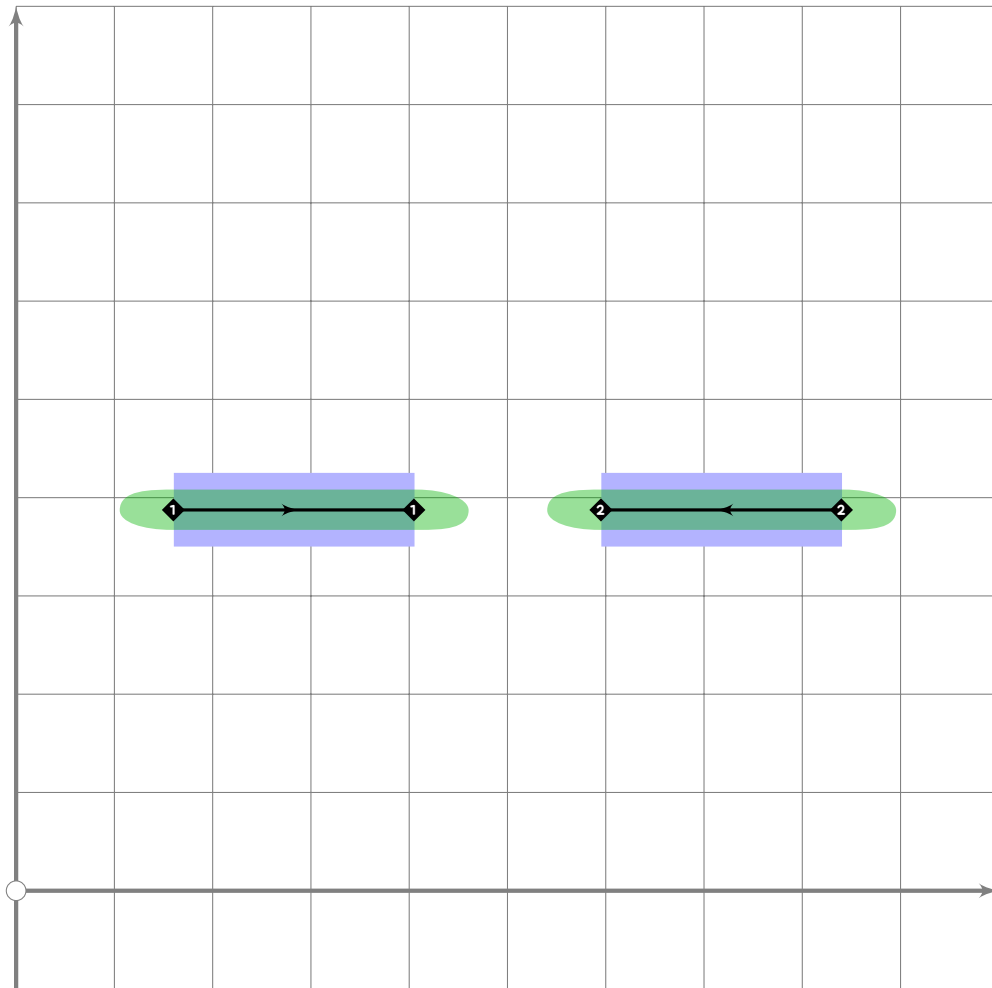
```

92
93 begint Suglyph("ichingtri8",55);
94   tsu_curve.iching.line(1,3,0);
95   tsu_curve.iching.line(2,3,0);
96   tsu_curve.iching.line(3,3,0);
97   tsu_render;
98 endtsuglyph;

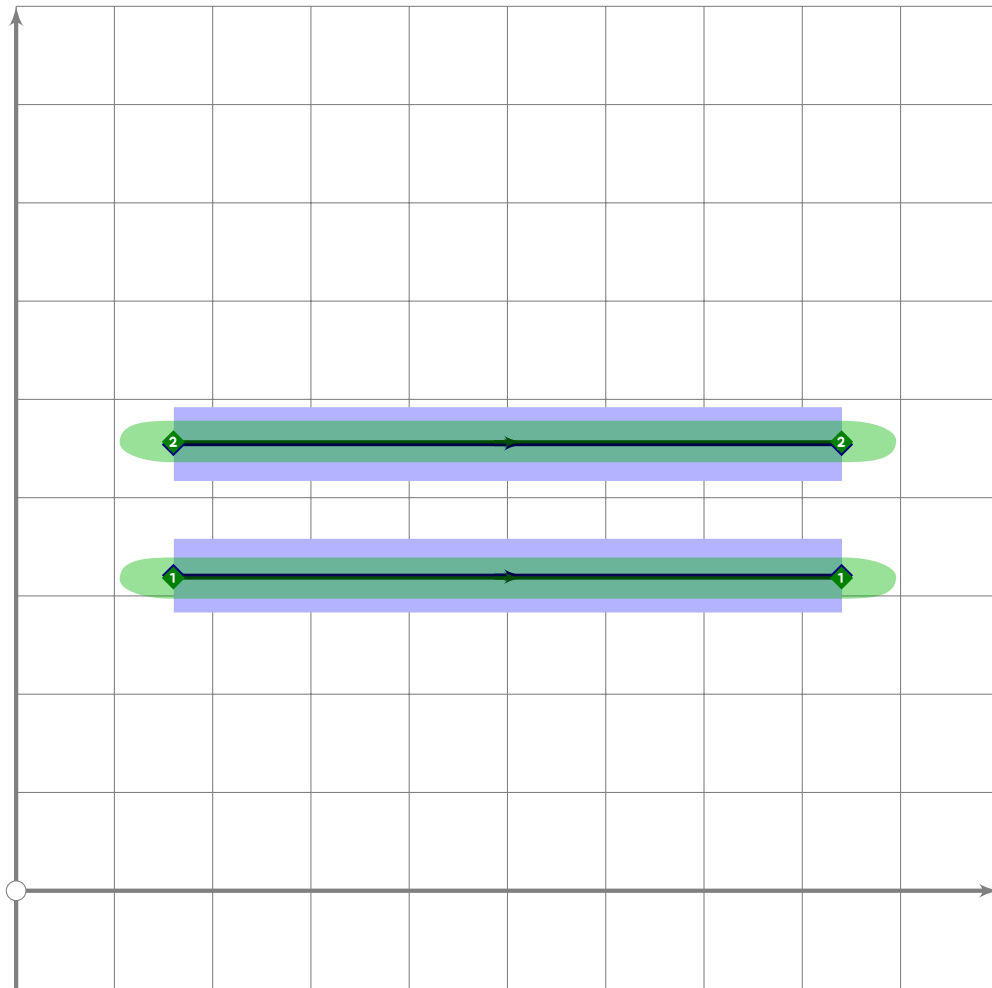
```



```
99  
100 begintsuglyph("ichingmono1",138);  
101 tsu_curve.iching.line(1,1,1);  
102 tsu_render;  
103 endtsuglyph;
```



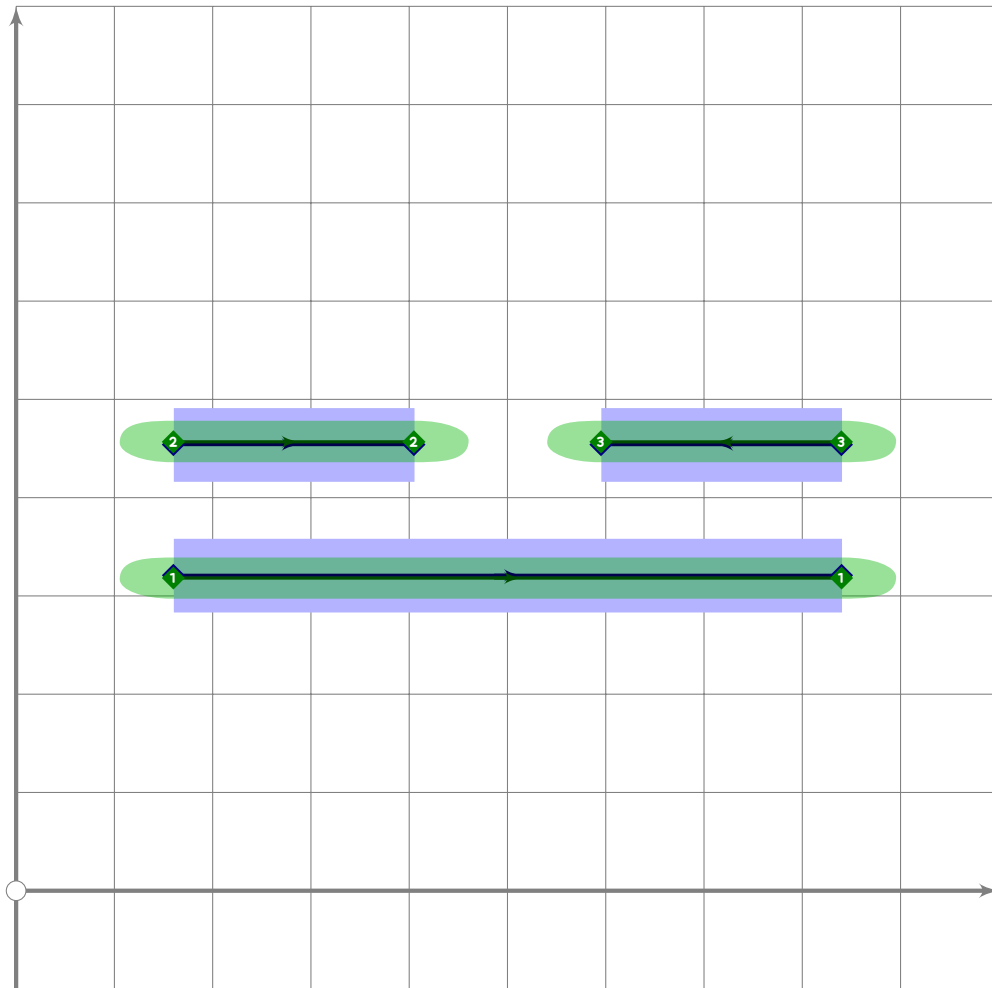
```
104  
105 begintsuglyph("ichingmono2",139);  
106 tsu_curve.iching.line(1,1,0);  
107 tsu_render;  
108 endsuglyph;
```



```

109
110 begintsuglyph("ichingdi1",140);
111 tsu_curve.iching.line(1,2,1);
112 tsu_curve.iching.line(2,2,1);
113 tsu_render;
114 endtsuglyph;

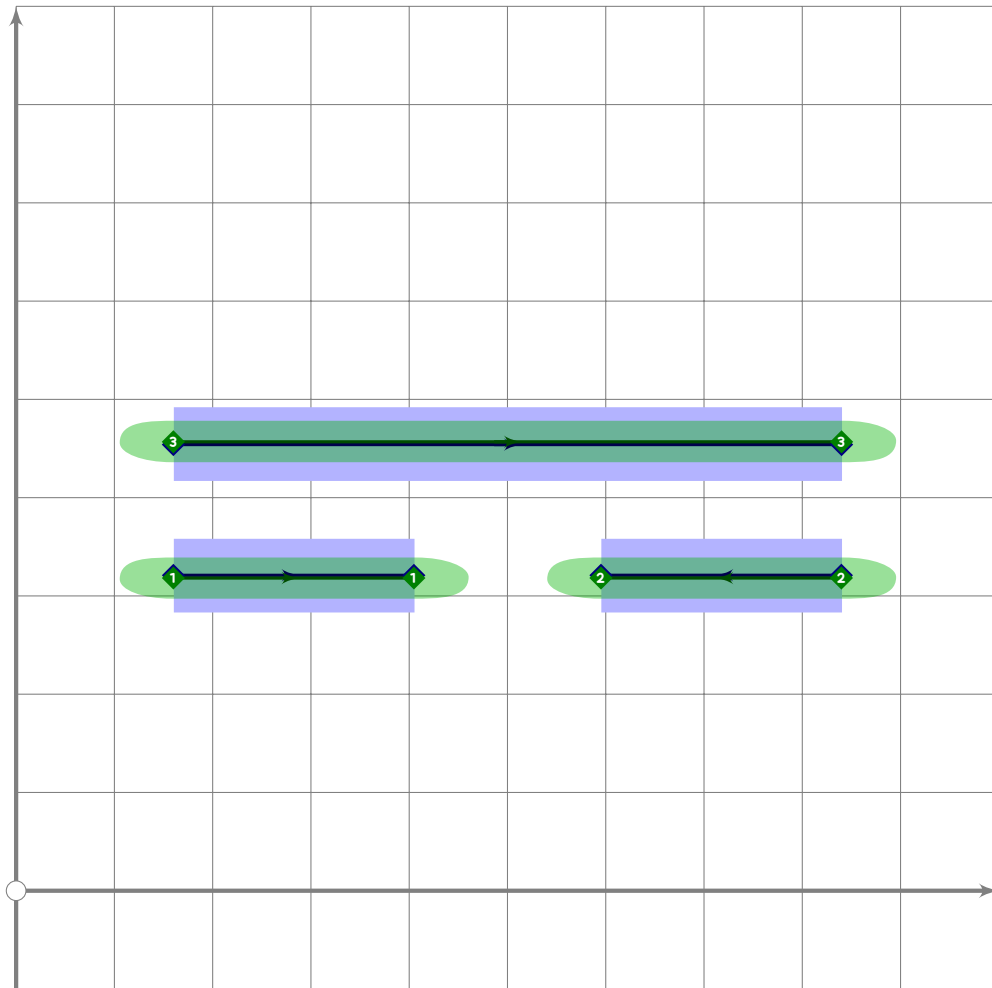
```



```

115
116 begintsuglyph("ichingdi2",141);
117 tsu_curve.iching.line(1,2,1);
118 tsu_curve.iching.line(2,2,0);
119 tsu_render;
120 endsuglyph;

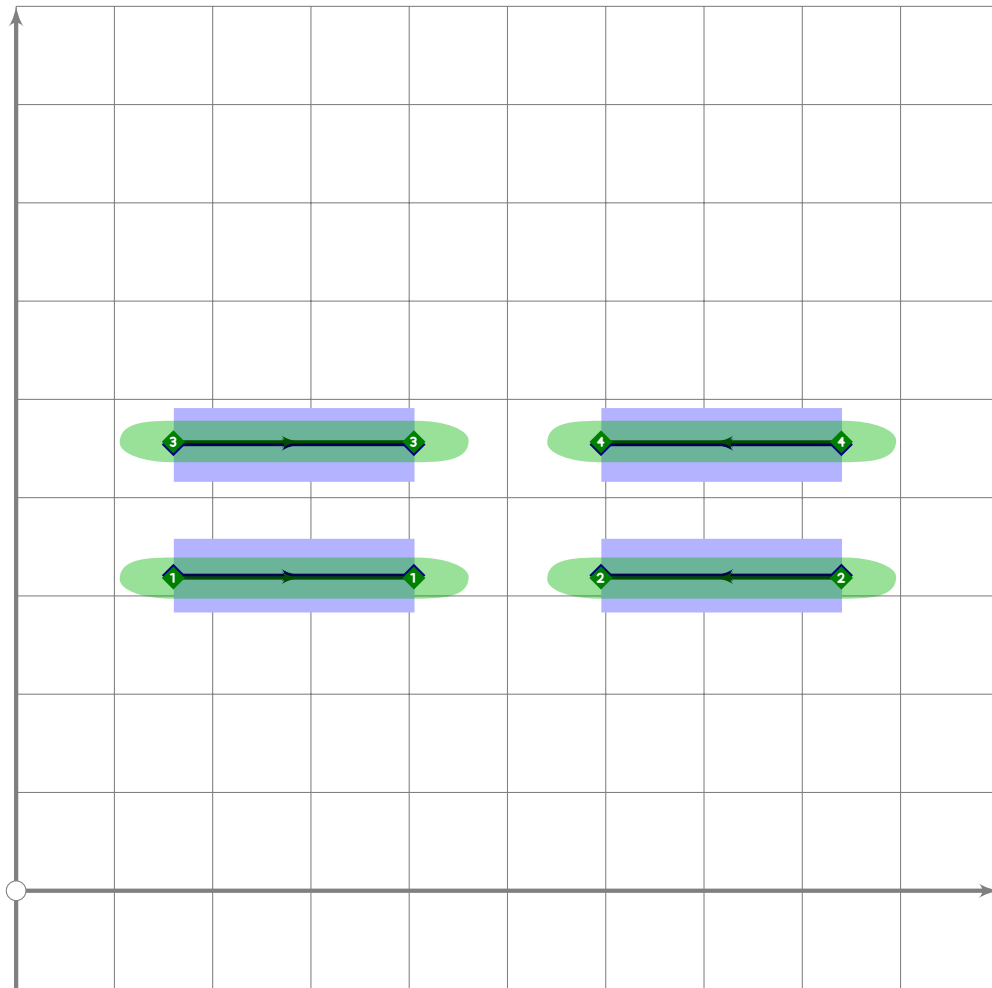
```

```

121
122 begintsuglyph("ichingdi3";142);
123 tsu_curve.iching.line(1,2,0);
124 tsu_curve.iching.line(2,2,1);
125 tsu_render;
126 endsuglyph;

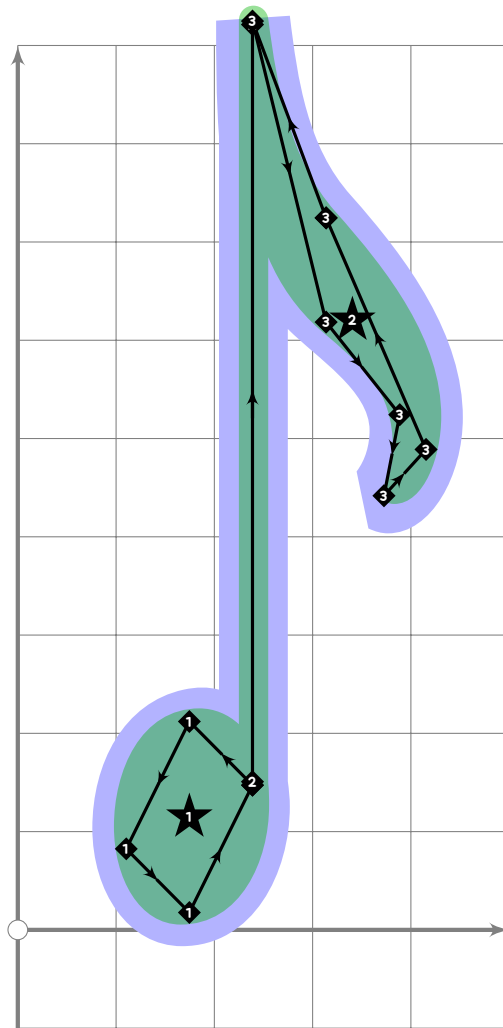
```



```

127
128 begintsuglyph("ichingdi4",143);
129 tsu_curve.iching.line(1,2,0);
130 tsu_curve.iching.line(2,2,0);
131 tsu_render;
132 endsuglyph;
133
134 _____
135
136 % musical eighth note, required for MES-1
137 tsu_rescale_half;

```



```

138 begintsuglyph("musicalnote",106);
139 push_stroke((500,150)..(380,205)..(260,95)..(380,40)..cycle,
140   (1.6,1.6)-(1.4,1.4)-(1.4,1.4)-(1.4,1.4)-cycle);
141 set_boalternate(0);
142 push_stroke((500,153)-(500,807),(1.6,1.6)-(1.6,1.6));
143 set_boalternate(0);
144 push_stroke((640,640)..{curl 1}(500,810){down}(640,550)..(780,470)..
145   {curl 1}(750,400){curl 1}..(830,440)..cycle,
146   (1.3,1.3)-(1.6,1.6)-(1.3,1.3)-(1.3,1.3)-(1,1)-(1.3,1.3));
147 set_botip(0,1,0);
148 set_botip(0,4,0);
149 set_boalternate(0);
150 if tsu_pbrush_size>=30:
151   push_lcblob(get_strokep(-2));
152   push_lcblob(get_strokep(0));
153 fi;
154 tsu_render;
155 endtsuglyph;
156
157

```

158

159 **endfont;**

160

161

tsuku27.mp

```
1 %
2 % Unicode page 27 (Zapfian Dingbats) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---

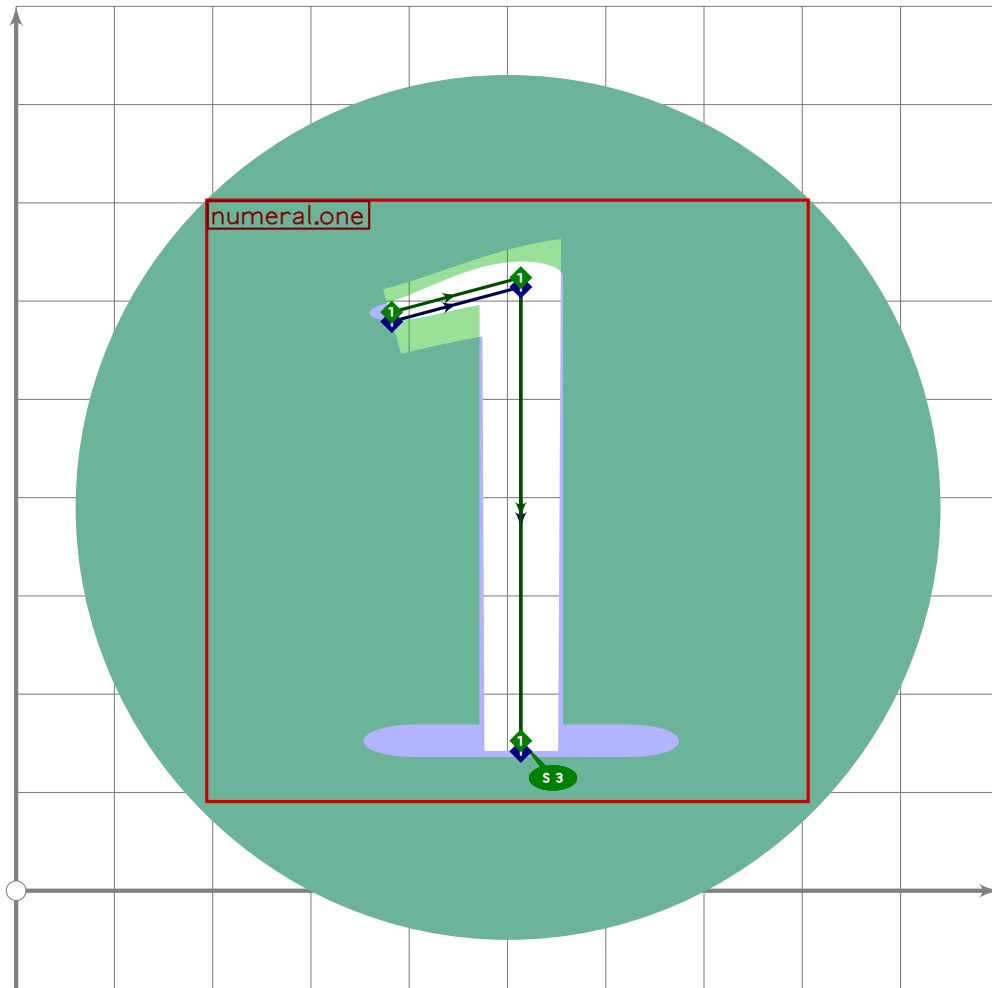

32
33 beginfont
34
35 input latin-intro.mp;
36 input enclosed.mp;
37
38 % AUTODEPS
39 input numerals.mp;
40
41 

---


42
```

Inverted Circled Numerals

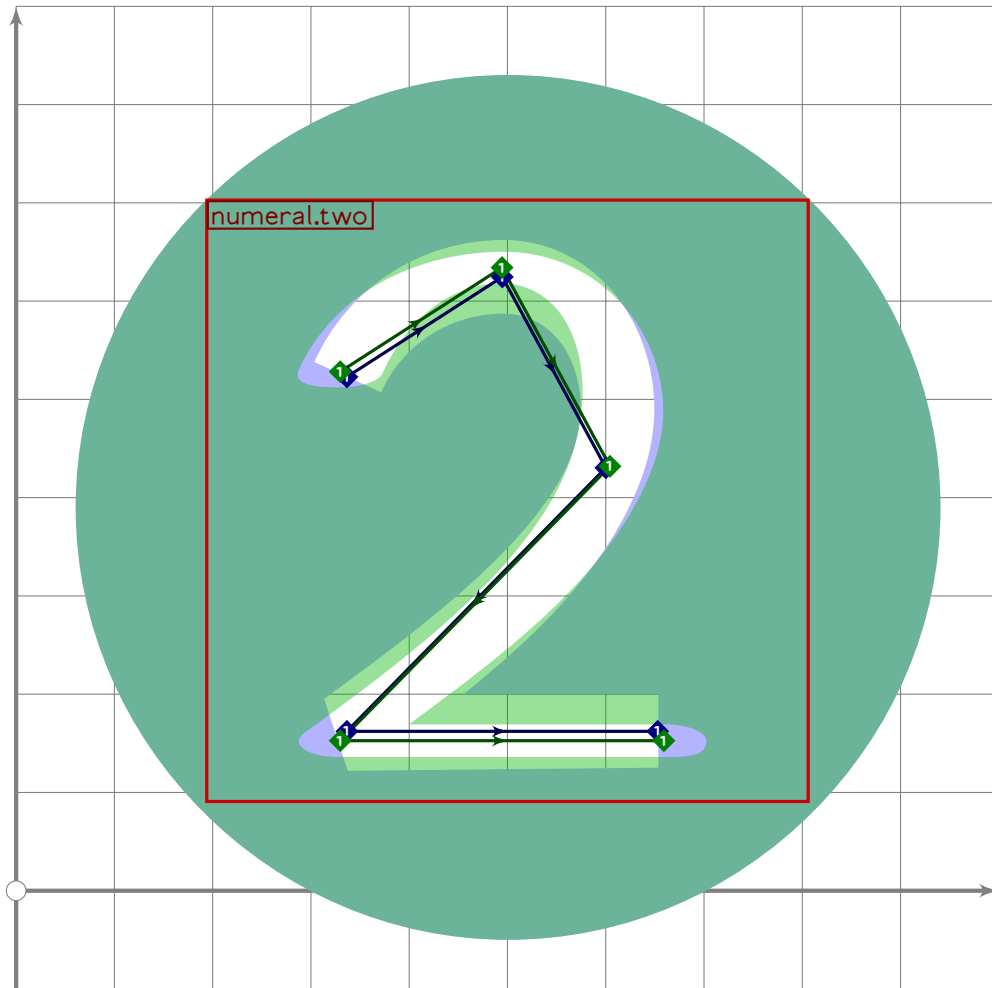
```
43 % INVERTED CIRCLED NUMERALS
44
```



```

45 % 1
46 % BACKGROUND 25CF
47 begint Suglyph("uni2776";118);
48 tsu_xform(tsu_xf.circled)(tsu_curve.numeral.one);
49 i:=0; forever: exitif find_stroke(i)<1;
50   set_bosize(i,107); i:=i+1; endfor;
51 tsu_render;
52 endtsuglyph;
53

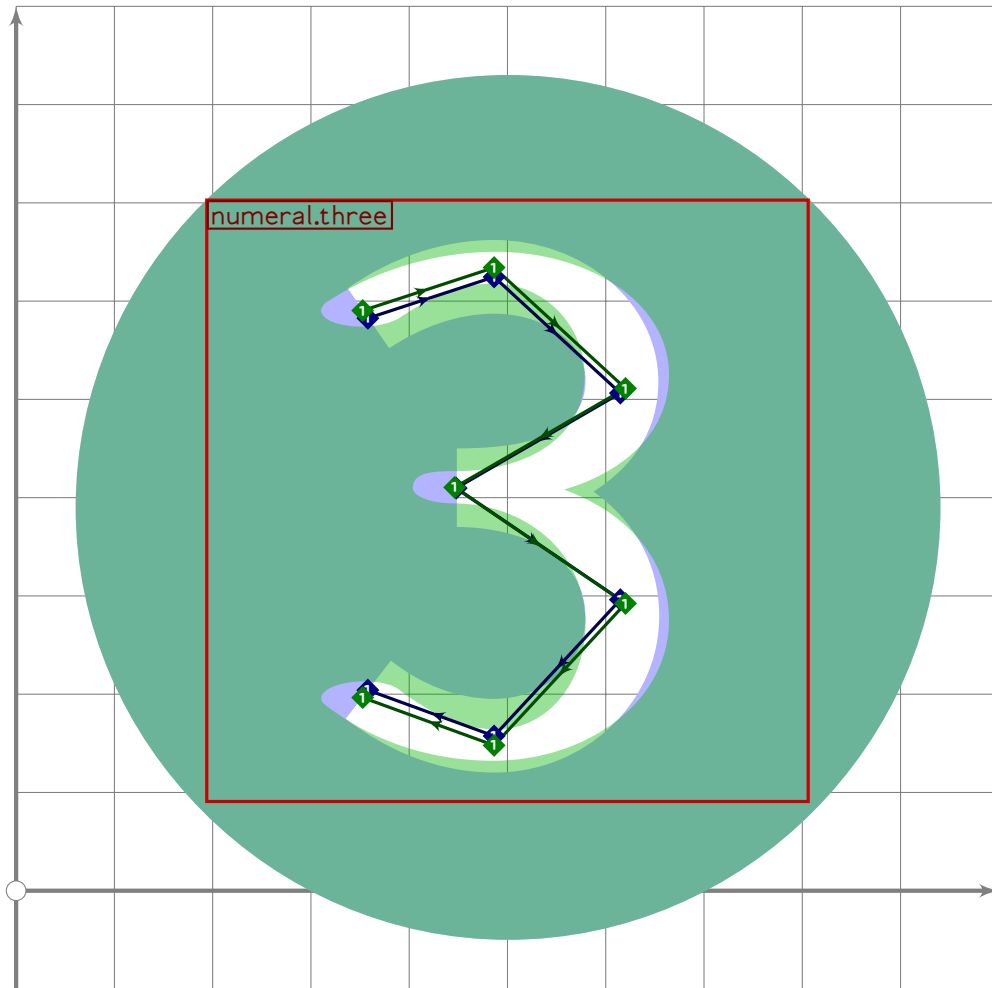
```



```

54 % 2
55 % BACKGROUND 25CF
56 beginsuglyph("uni2777",119);
57 tsu_xform(tsu_xf.circled)(tsu_curve.numeral.two);
58 i:=0; forever: exitif find_stroke(i)<1;
59   set_bosize(i,107); i:=i+1; endfor;
60 tsu_render;
61 endsuglyph;
62

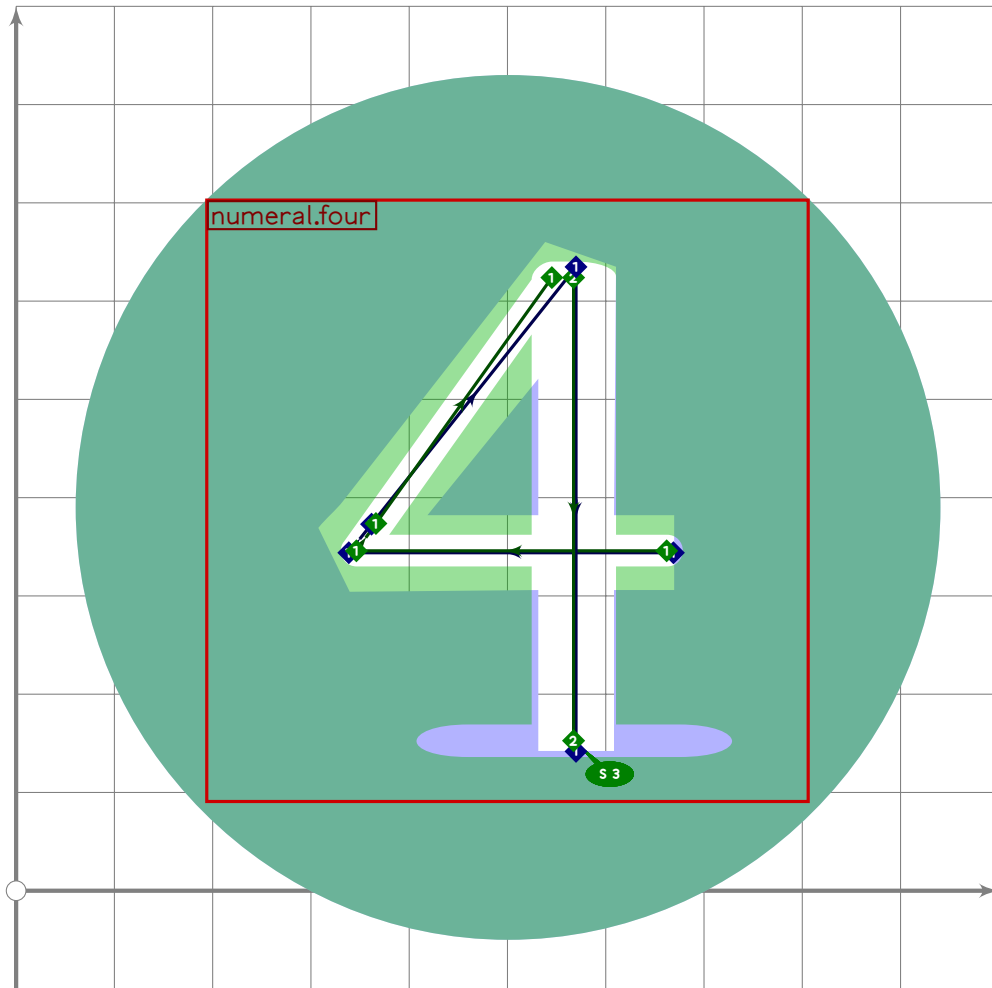
```



```

63 % 3
64 % BACKGROUND 25CF
65 beginsuglyph("uni2778",120);
66 tsu_xform(tsu_xf.circled)(tsu_curve.numeral.three);
67 i:=0; forever: exitif find_stroke(i)<1;
68   set_bosize(i,107); i:=i+1; endfor;
69 tsu_render;
70 endsuglyph;
71

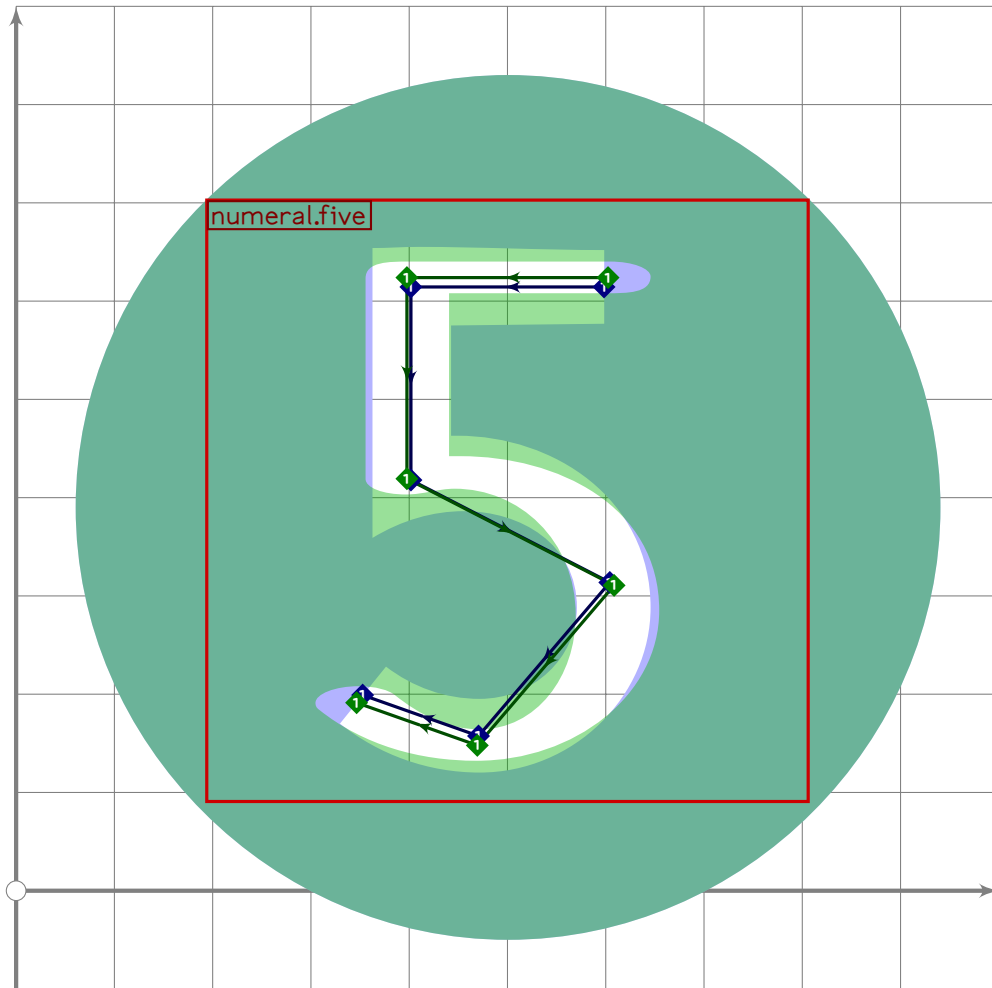
```

```

72 % 4
73 % BACKGROUND 25CF
74 begint Suglyph("uni2779",121);
75   tsu_xform(tsu_xf.circled)(tsu_curve.numeral.four);
76   i:=0; forever: exitif find_stroke(i)<1;
77     set_bosize(i,107); i:=i+1; endfor;
78   tsu_render;
79 endtsuglyph;
80

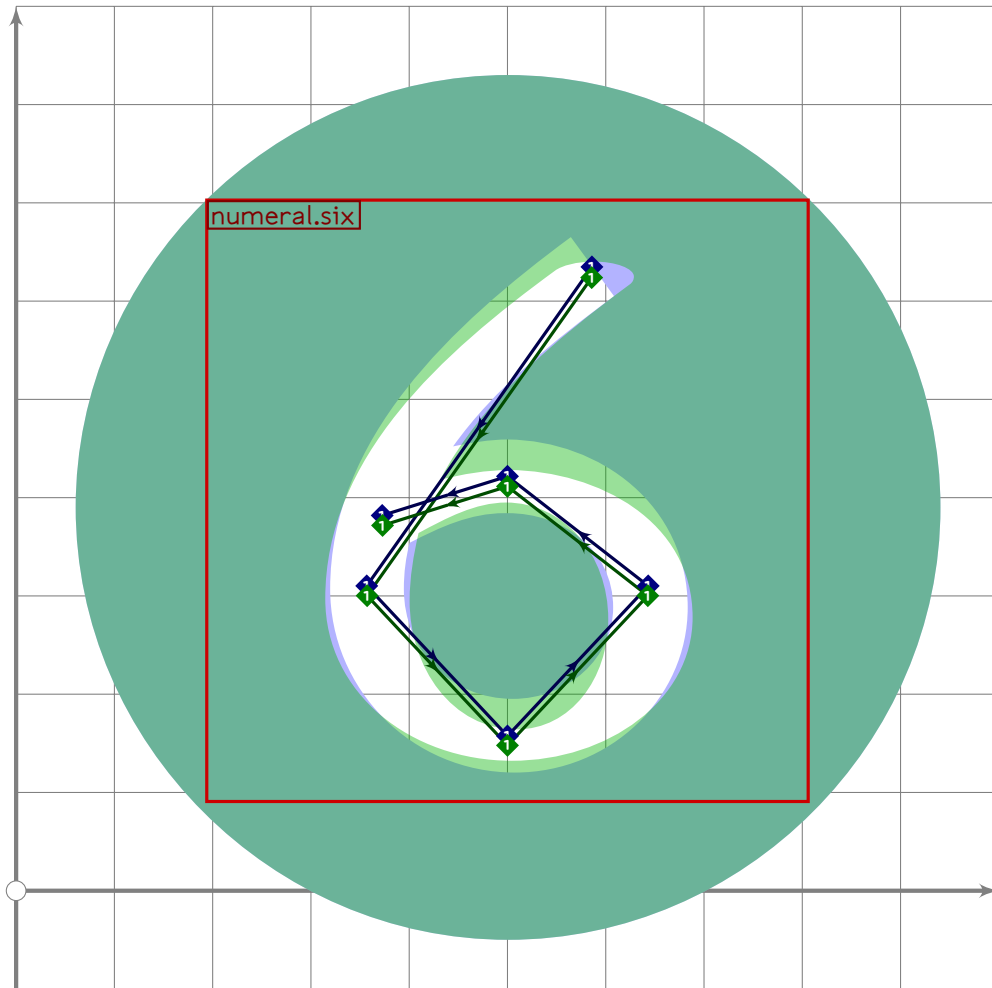
```



```

81 % 5
82 % BACKGROUND 25CF
83 begint Suglyph("uni277A";122);
84   tsu_xform(tsu_xf.circled)(tsu_curve.numeral.five);
85   i:=0; forever: exitif find_stroke(i)<1;
86     set_bosize(i,107); i:=i+1; endfor;
87   tsu_render;
88 endtsuglyph;
89

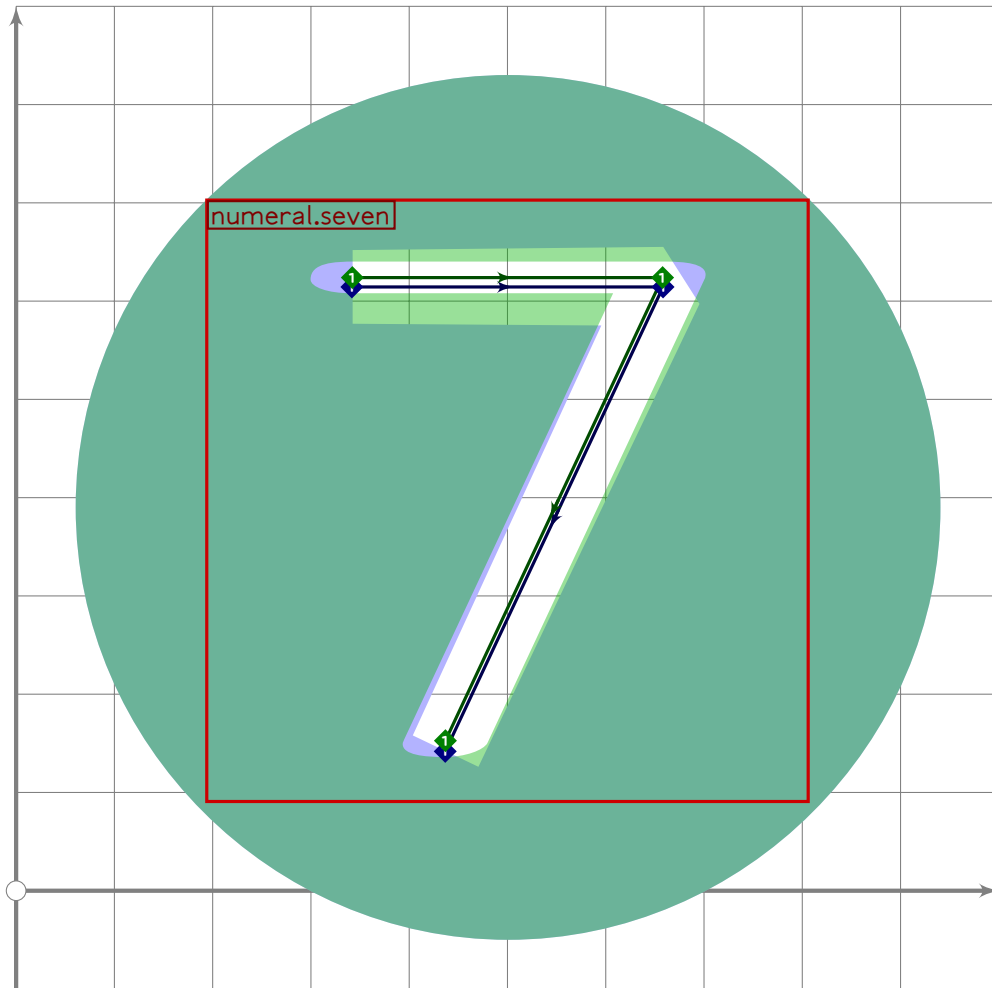
```



```

90 % 6
91 % BACKGROUND 25CF
92 begint Suglyph("uni277B",123);
93   tsu_xform(tsu_xf.circled)(tsu_curve.numeral.six);
94   i:=0; forever: exitif find_stroke(i)<1;
95     set_bosize(i,107); i:=i+1; endfor;
96   tsu_render;
97 endtsuglyph;
98

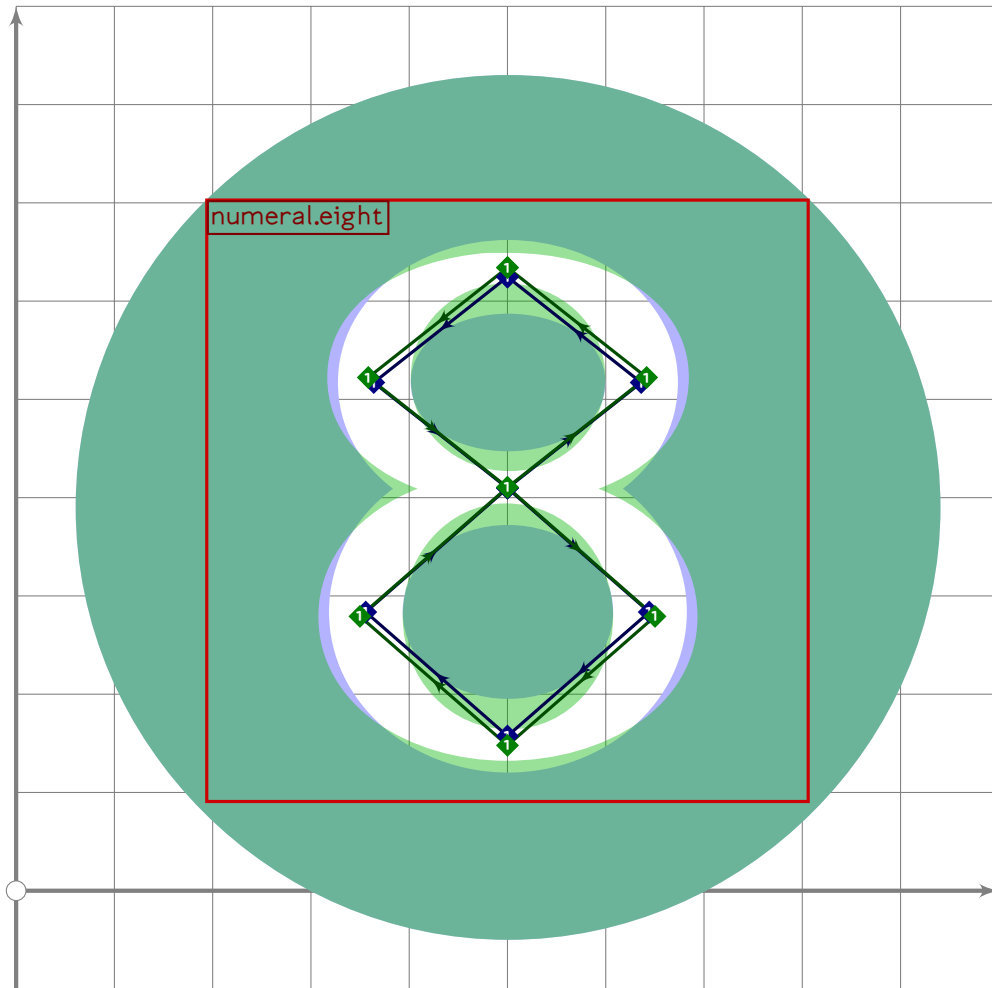
```



```

99 % 7
100 % BACKGROUND 25CF
101 begint Suglyph("uni277C",124);
102   tsu_xform(tsu_xf.circled)(tsu_curve.numeral.seven);
103   i:=0; forever: exitif find_stroke(i)<1;
104     set_bosize(i,107); i:=i+1; endfor;
105   tsu_render;
106 endtsuglyph;
107

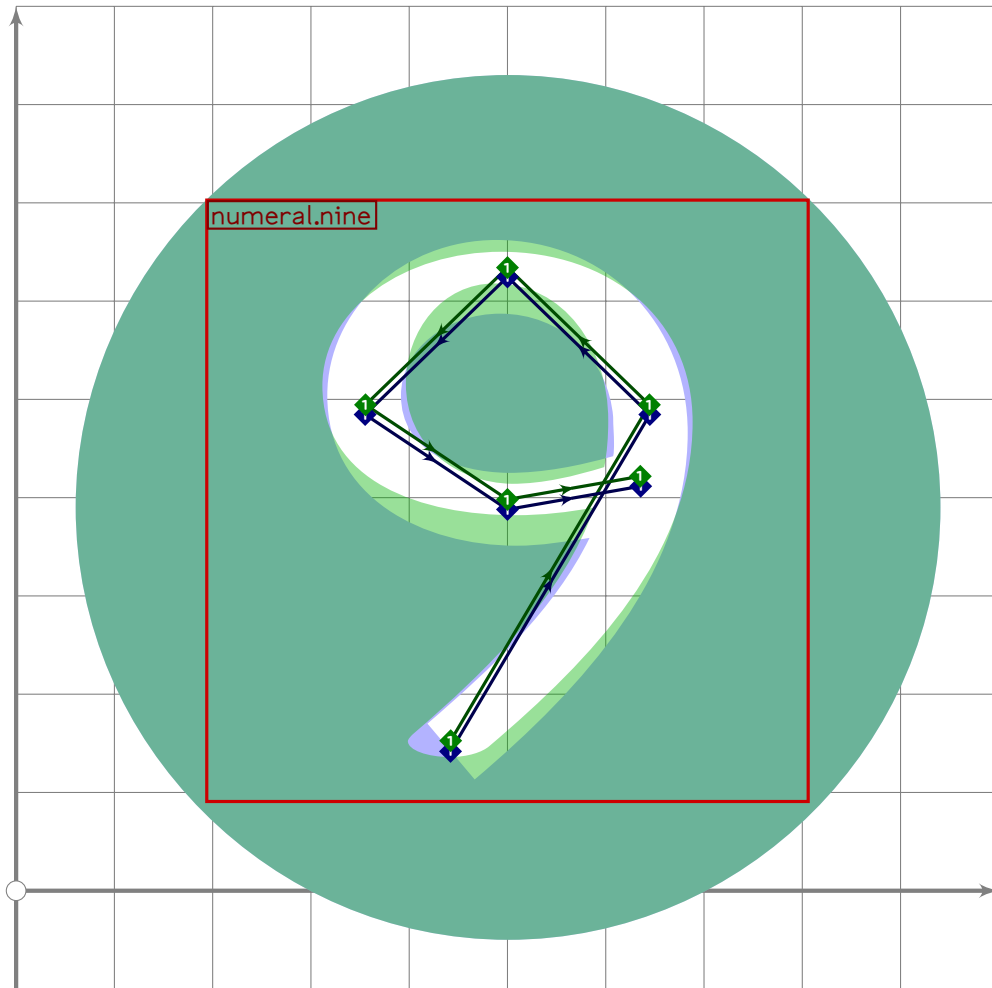
```



```

108 % 8
109 % BACKGROUND 25CF
110 beginsuglyph("uni277D";125);
111   tsu_xform(tsu_xf.circled)(tsu_curve.numeral.eight);
112   i:=0; forever: exitif find_stroke(i)<1;
113     set_bosize(i,107); i:=i+1; endfor;
114   tsu_render;
115 endsuglyph;
116

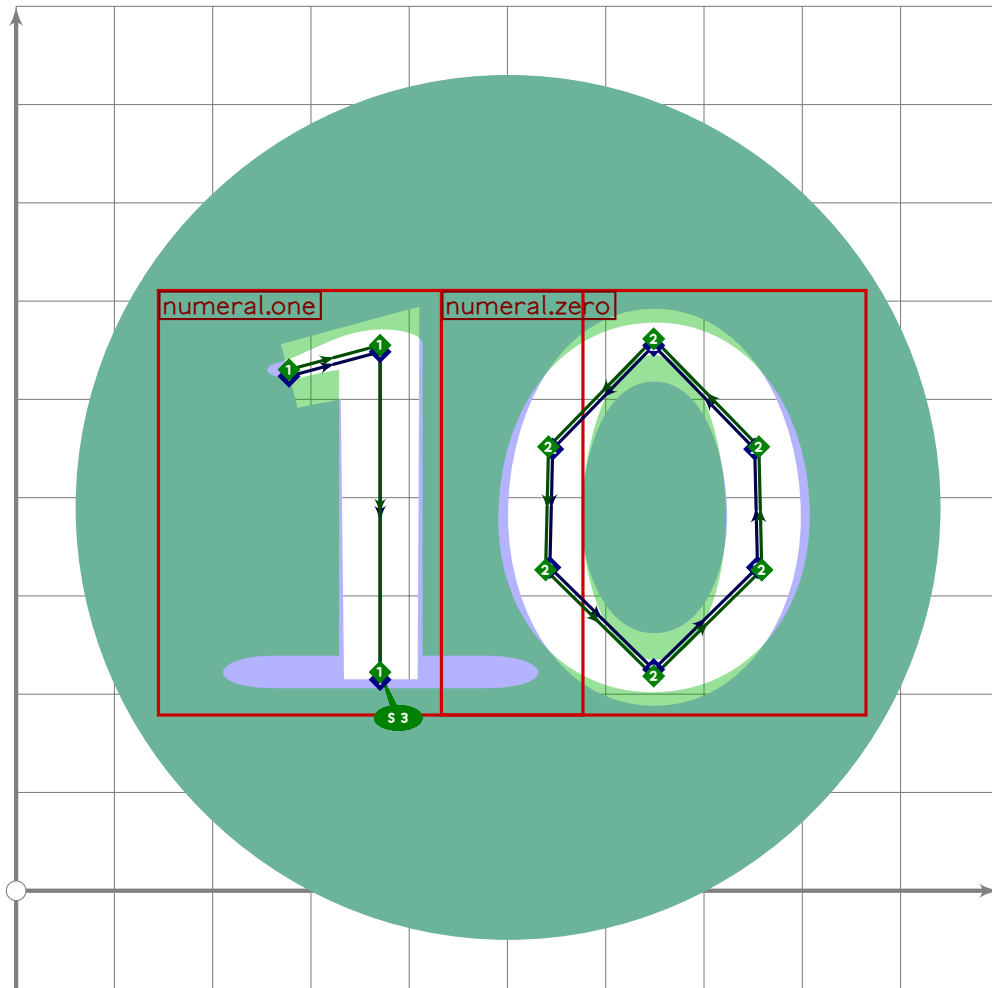
```



```

117 % 9
118 % BACKGROUND 25CF
119 beginsuglyph("uni277E",126);
120 tsu_xform(tsu_xf.circled)(tsu_curve.numeral.nine);
121 i:=0; forever: exitif find_stroke(i)<1;
122   set_bosize(i,107); i:=i+1; endfor;
123 tsu_render;
124 endsuglyph;
125

```



```

126 % 10
127 % BACKGROUND 25CF
128 beginTsuglyph("uni277F",127);
129   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.one);
130   numeric x[],y[];
131   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.zero);
132   i:=0; forever: exitif find_stroke(i)<1;
133     set_bosize(i,107); i:=i+1; endfor;
134   tsu_render;
135 endTsuglyph;
136
137 _____
138
139 endfont;
140
141 _____

```


Part III

U+3000 to U+4DFF

tsuku-30.mp

```
1 %
2 % Unicode page 30 (Kana) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---

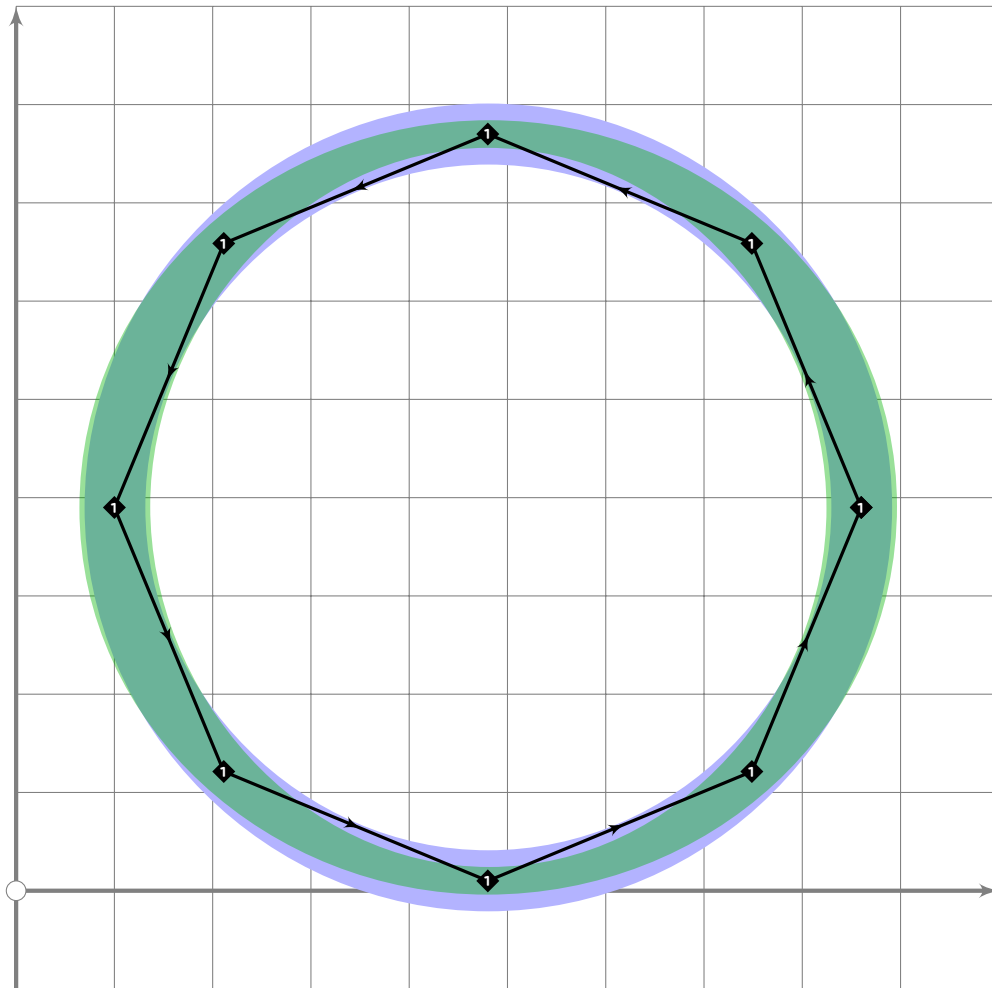

32
33 beginfont
34
35 % AUTODEPS
36 input dakuten.mp;
37 input hiragana.mp;
38 input katakana.mp;
39 input punct.mp;
40
41 

---


42
```

Ideographic Symbols And Punctuation

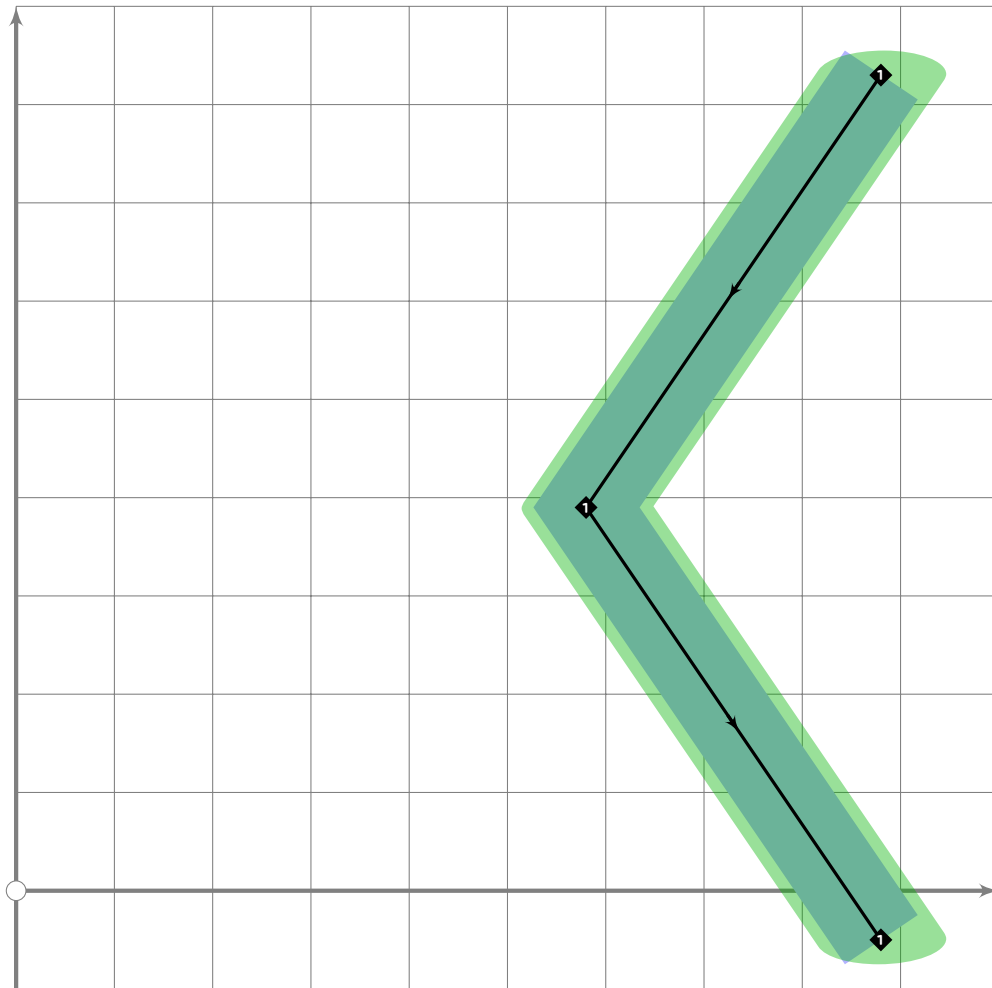
```
43 % IDEOGRAPHIC SYMBOLS AND PUNCTUATION
44
45 % ideographic comma
46 begintsuglyph\("uni3001";1\); [see page 278]
47 tsu\_curve.punct.hancomma;
48 tsu\_render;
49 endtsuglyph;
50
51 % ideographic full stop
52 begintsuglyph\("uni3002";2\); [see page 275]
53 tsu\_curve.punct.full\_stop;
54 tsu\_render;
55 endtsuglyph;
56
```



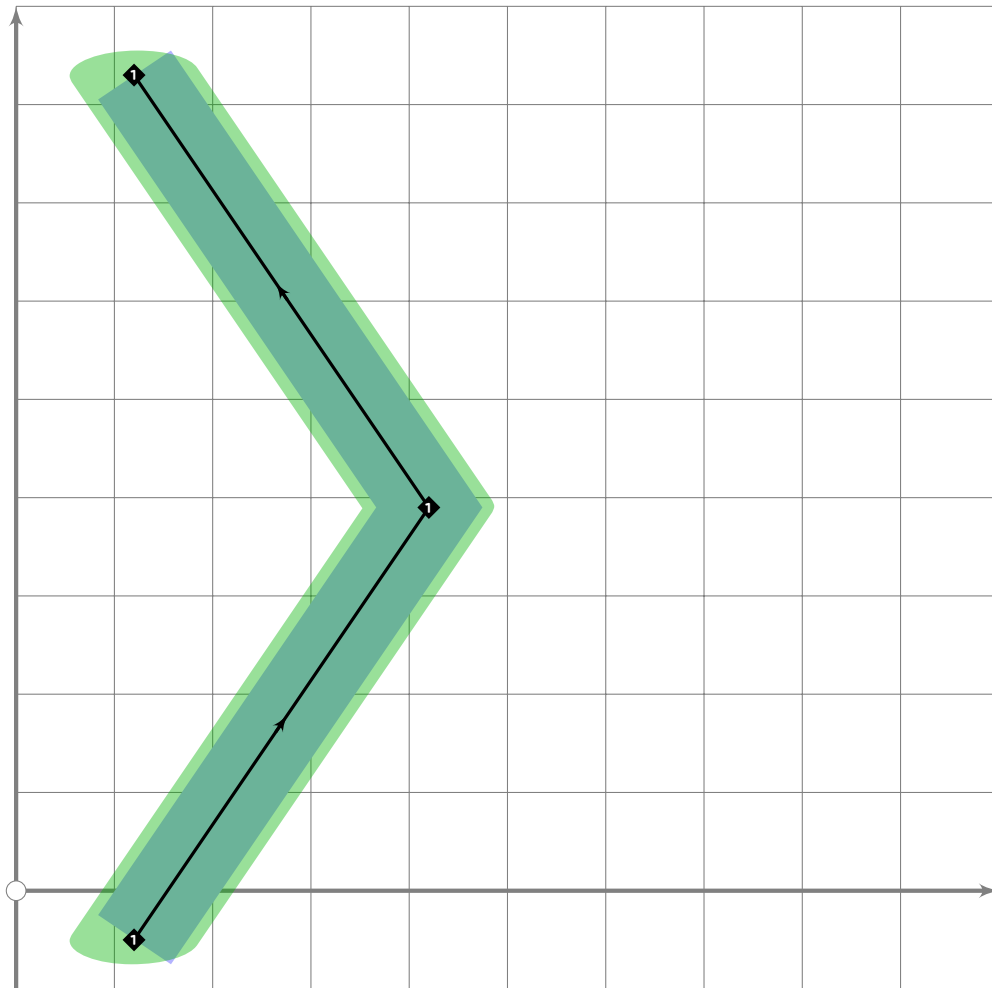
```

57 % kanji zero
58 begintsuglyph("uni3007";7);
59 % letter brush for this so it blends better with other kanji digits;
60 % let's drag the Japanese kicking and screaming into the Sixth Century!
61 push_stroke(fullcircle scaled 760 shifted (480,390),
62   (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(1.6,1.6)-cycle);
63 set_bosize(0,90);
64 tsu_render;
65 endtsuglyph;
66
67 path bracket[];
68
69 % left and right single angle brackets
70 bracket1:=(880,830)-(580,390)-(880,50);

```



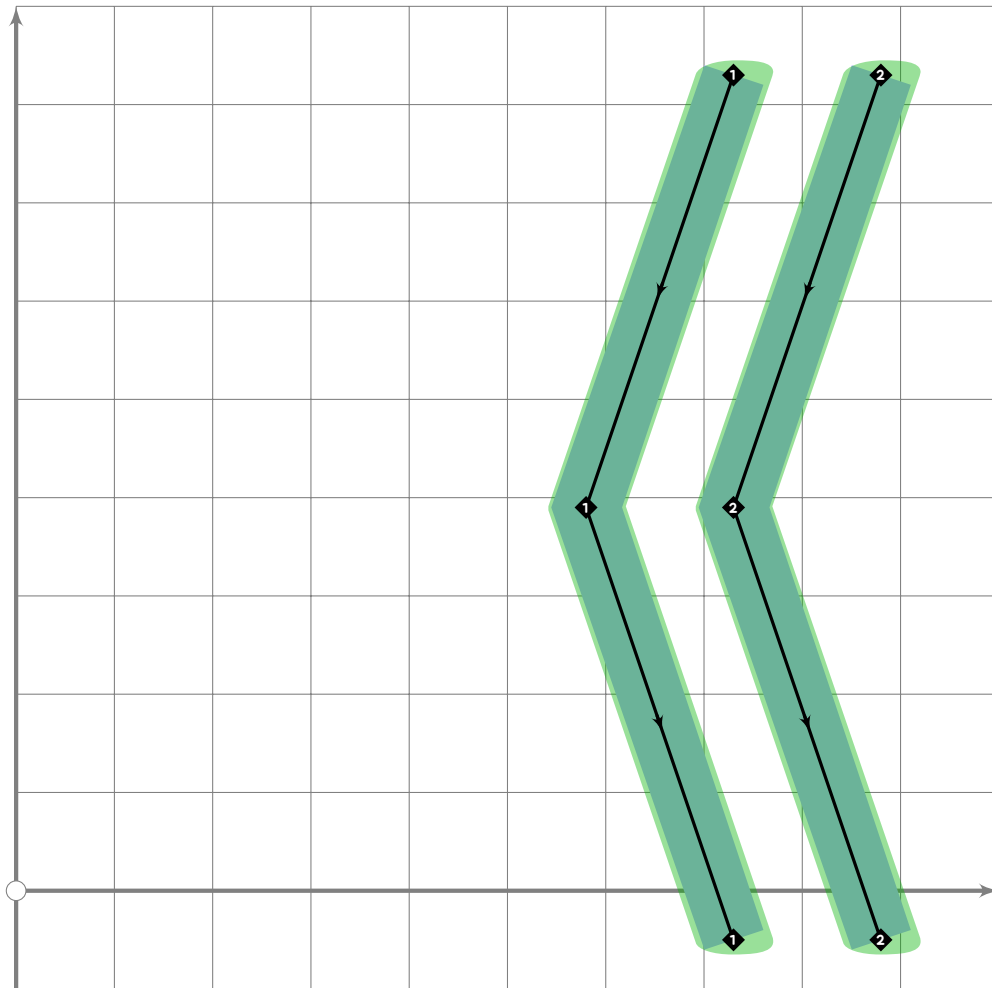
```
71 begint Suglyph("uni3008",8);  
72 push_stroke((880,830)-(580,390)-(880,-50),  
73 (2,2)-(2,2)-(2,2));  
74 set_bosize(0,120);  
75 set_botip(0,1,1);  
76 tsu_render;  
77 endtsuglyph;
```



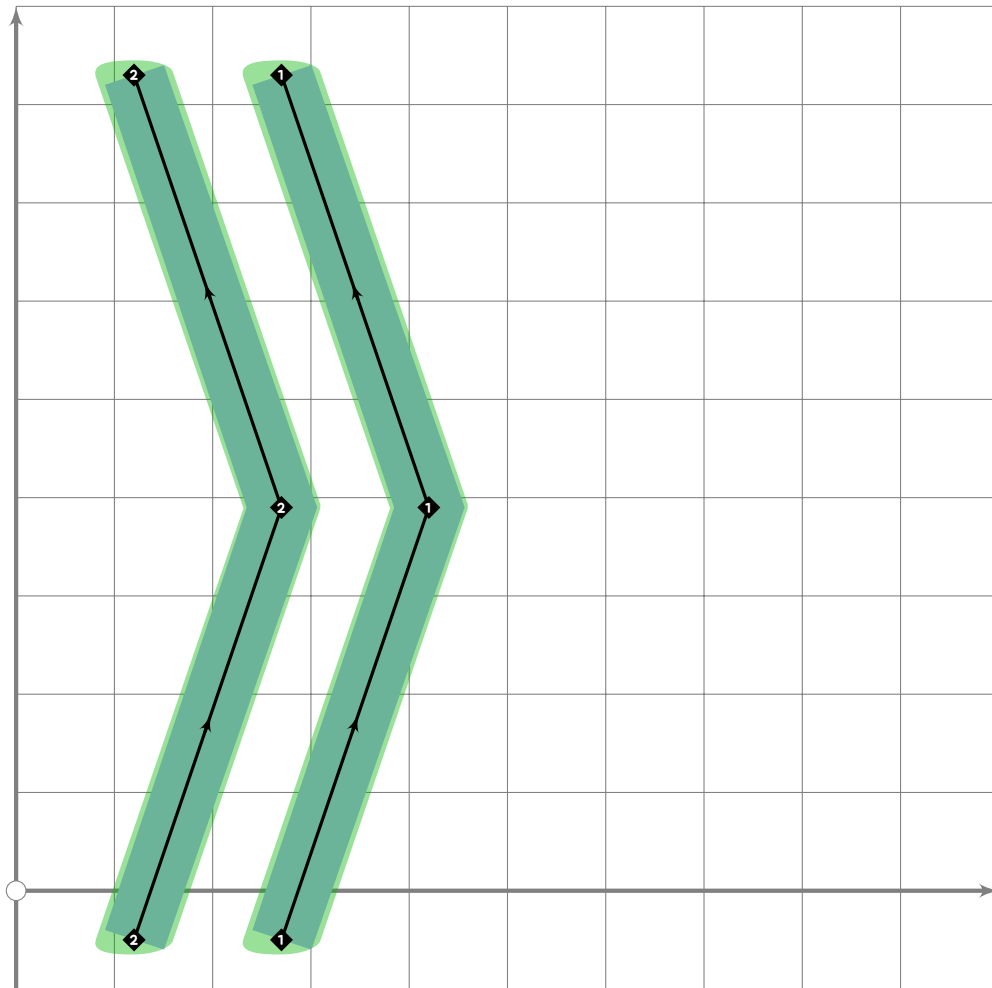
```

78 begintsuglyph("uni3009";9);
79 push_stroke((880,830)-(580,390)-(880,50)) rotatedaround (centre_pt,180),
80   (2,2)-(2,2)-(2,2));
81 set_bosize(0,120);
82 set_botip(0,1,1);
83 tsu_render;
84 endsuglyph;
85
86 % left and right double angle brackets
87 bracket1:=(880-tsu_punct_size*3/2,830)-(580,390)
88   -(880-tsu_punct_size*3/2,-50);
89 bracket2:=(880,830)-(580*tsu_punct_size*3/2,390)-(880,50);

```



```
90 begintsuglyph("uni300A",10);  
91 push_stroke(bracket1,  
92   (1.7,1.7)-(1.7,1.7)-(1.7,1.7));  
93 set_bosize(0,90);  
94 set_botip(0,1,1);  
95  
96 push_stroke(bracket2,  
97   (1.7,1.7)-(1.7,1.7)-(1.7,1.7));  
98 set_bosize(0,90);  
99 set_botip(0,1,1);  
100  
101 tsu_render;  
102 endtsuglyph;
```



```

103 begintsuglyph("uni300B",11);
104 push_stroke(bracket1 rotatedaround (centre_pt,180),
105   (1.7,1.7)-(1.7,1.7)-(1.7,1.7));
106 set_bosize(0,90);
107 set_botip(0,1,1);
108
109 push_stroke(bracket2 rotatedaround (centre_pt,180),
110   (1.7,1.7)-(1.7,1.7)-(1.7,1.7));
111 set_bosize(0,90);
112 set_botip(0,1,1);
113
114 tsu_render;
115 endtsuglyph;
116
117 % left and right corner brackets
118 begintsuglyph("uni300C",12);
119 tsu_curve.punct.corner_left;
120 tsu_render;
121 endtsuglyph;
122 begintsuglyph("uni300D",13);
123 tsu_curve.punct.corner_right;

```

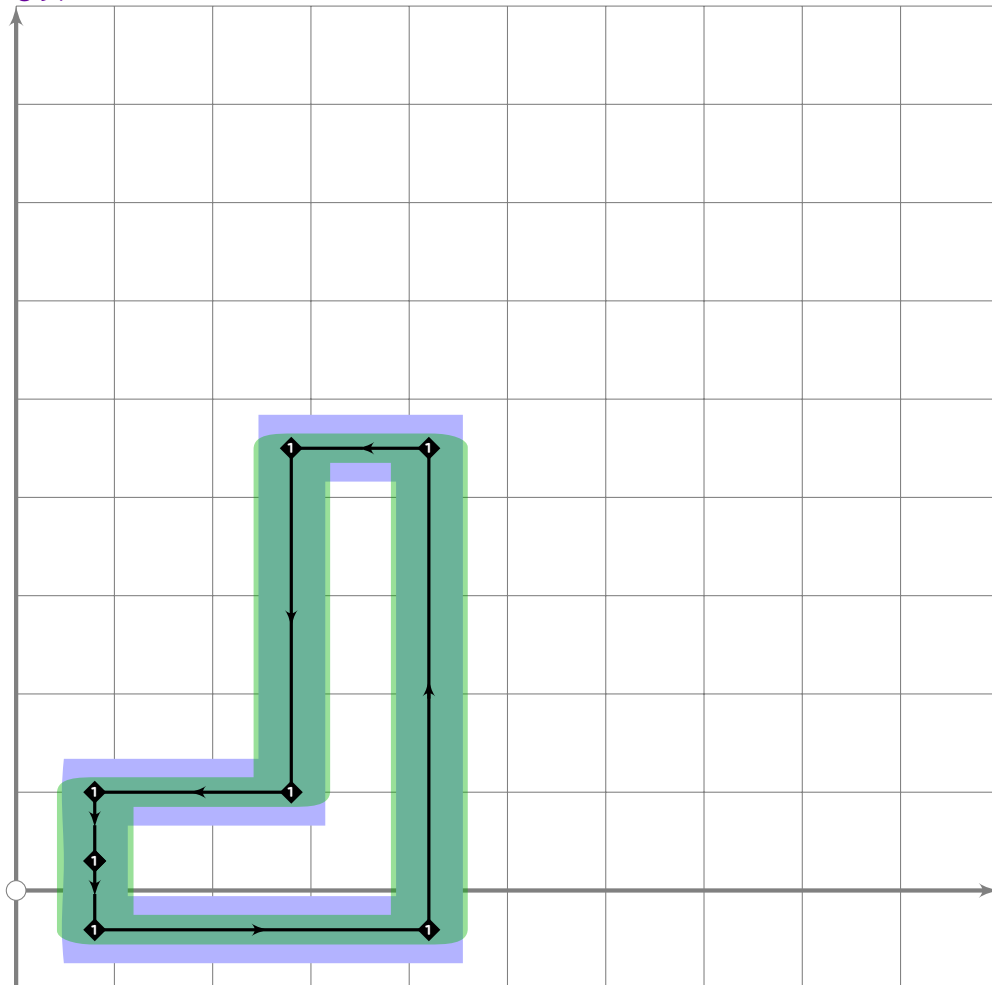
[see page 266]

[see page 267]


```

145 set_botip(0,6,1);
146
147 tsu_render;
148 endtsuglyph;

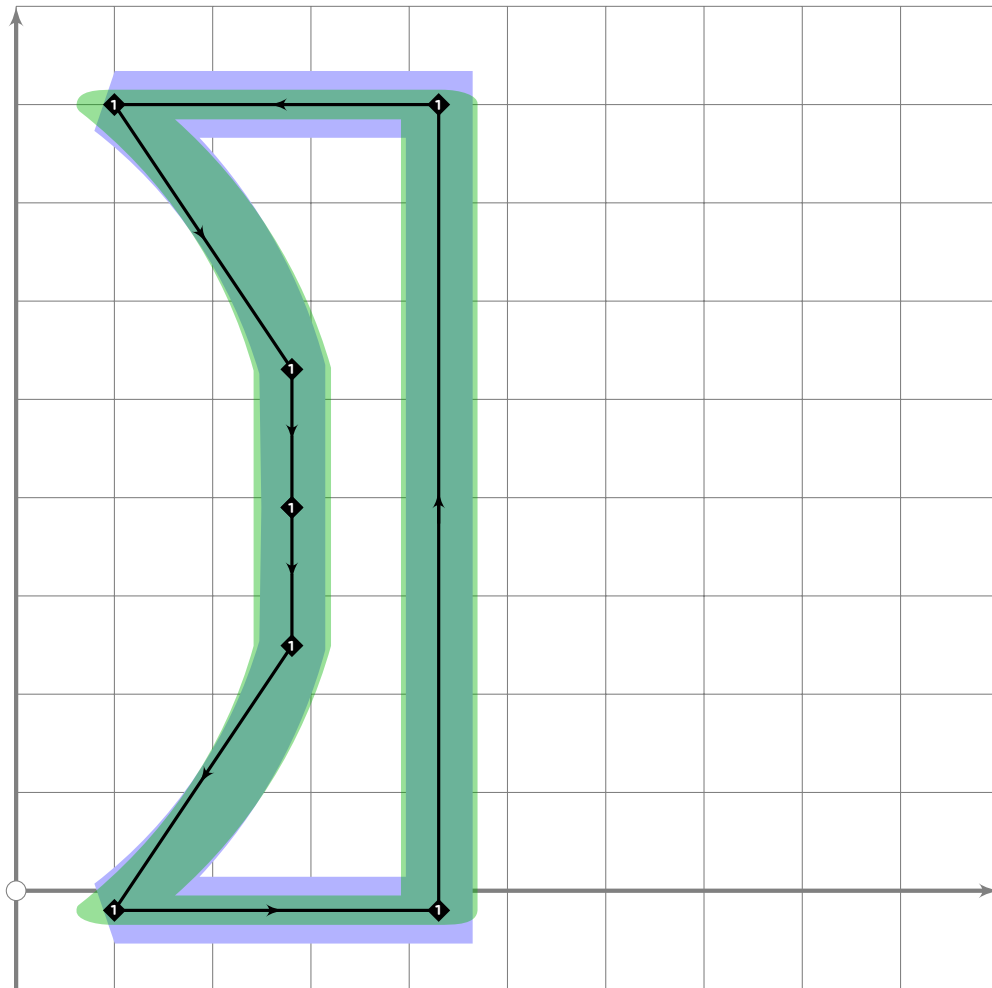
```



```

149 beginsuglyph("uni300F",15);
150 push_stroke(bracketl rotatedaround (centre_pt,180),
151   (1.7,1.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7)-
152   (1.7,1.7)-(1.7,1.7)-cycle);
153 set_bosize(0,90);
154 set_botip(0,1,1);
155 set_botip(0,2,1);
156 set_botip(0,3,1);
157 set_botip(0,4,1);
158 set_botip(0,5,1);
159 set_botip(0,6,1);
160
161 tsu_render;
162 endtsuglyph;
163
164 % left and right white and black lenticular brackets
165 % grouped here, out of Unicode sequence, to share the outline

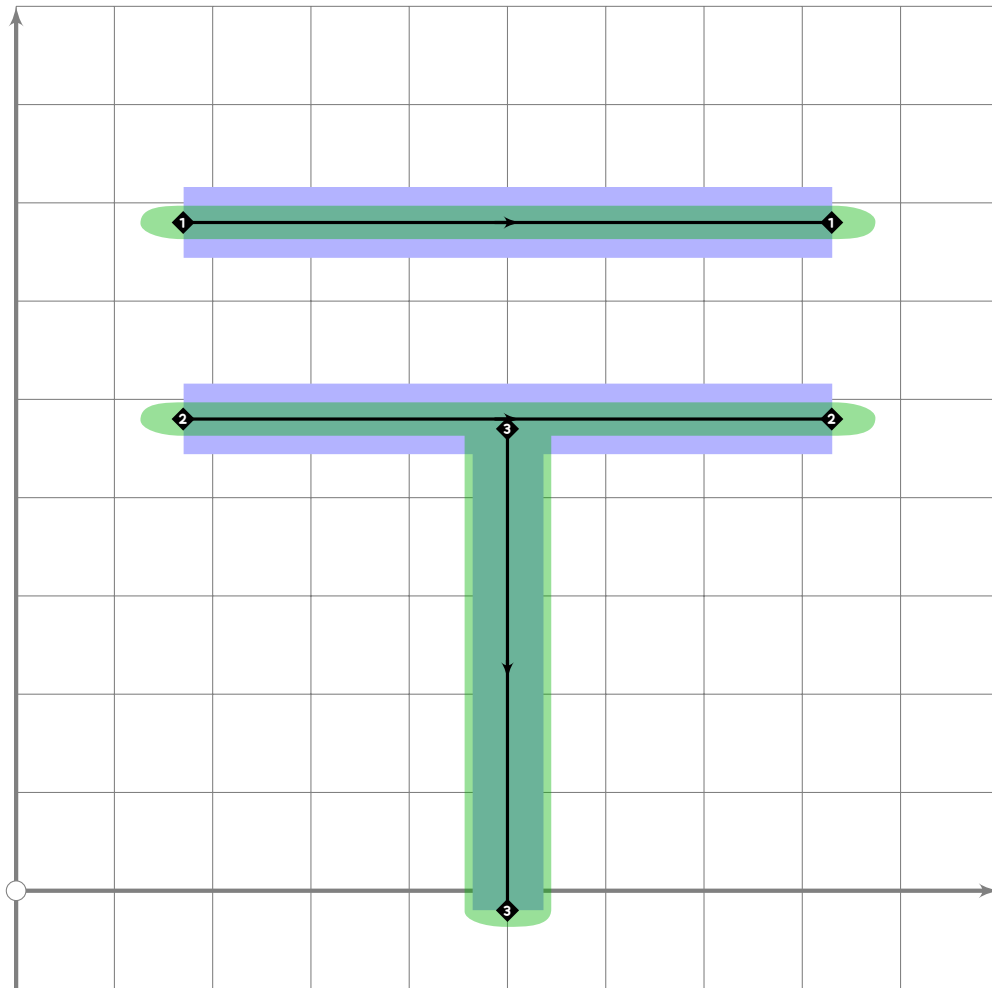
```

```

214 begintsuglyph("uni3017",23);
215 push_stroke(bracket1 rotatedaround (centre_pt,180),
216   (1,7,1,7)-(1,7,1,7)-(1,7,1,7)-(1,7,1,7)-(1,7,1,7)-
217   (1,7,1,7)-(1,7,1,7)-cycle);
218 set_bosize(0,90);
219 set_botip(0,1,1);
220 set_botip(0,2,0);
221 set_botip(0,3,1);
222 set_botip(0,4,1);
223 set_botip(0,5,0);
224 set_botip(0,6,1);
225
226 tsu_render;
227 endtsuglyph;
228

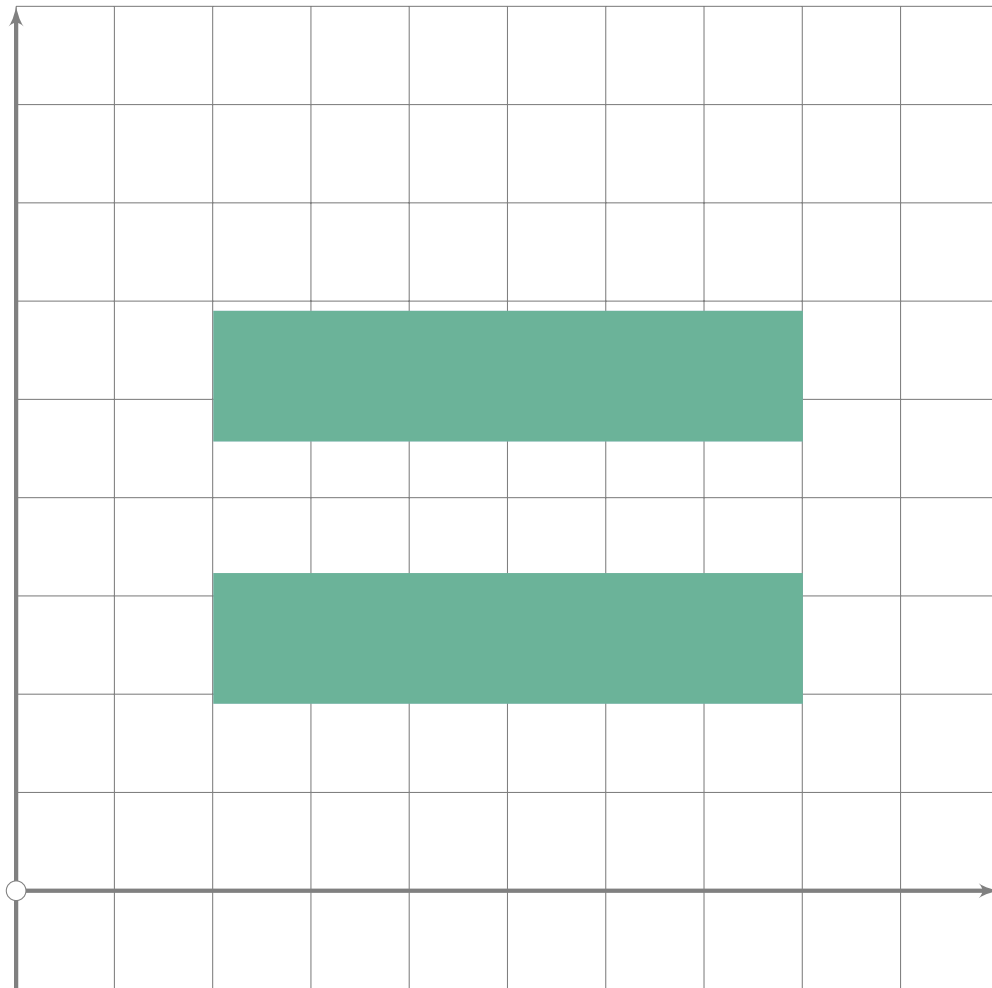
```



```

229 % Japanese postal mark
230 begintsuglyph("uni3012";18);
231 push_stroke((170,680)-(830,680),(1.7,1.7)-(1.7,1.7));
232
233 push_stroke((170,680-2*tsu_punct_size)-(830,680-2*tsu_punct_size),
234   (1.7,1.7)-(1.7,1.7));
235
236 push_stroke((500,720-2.5*tsu_punct_size)-(500,20),
237   (1.7,1.7)-(1.7,1.7));
238
239 tsu_render;
240 endtsuglyph;
241

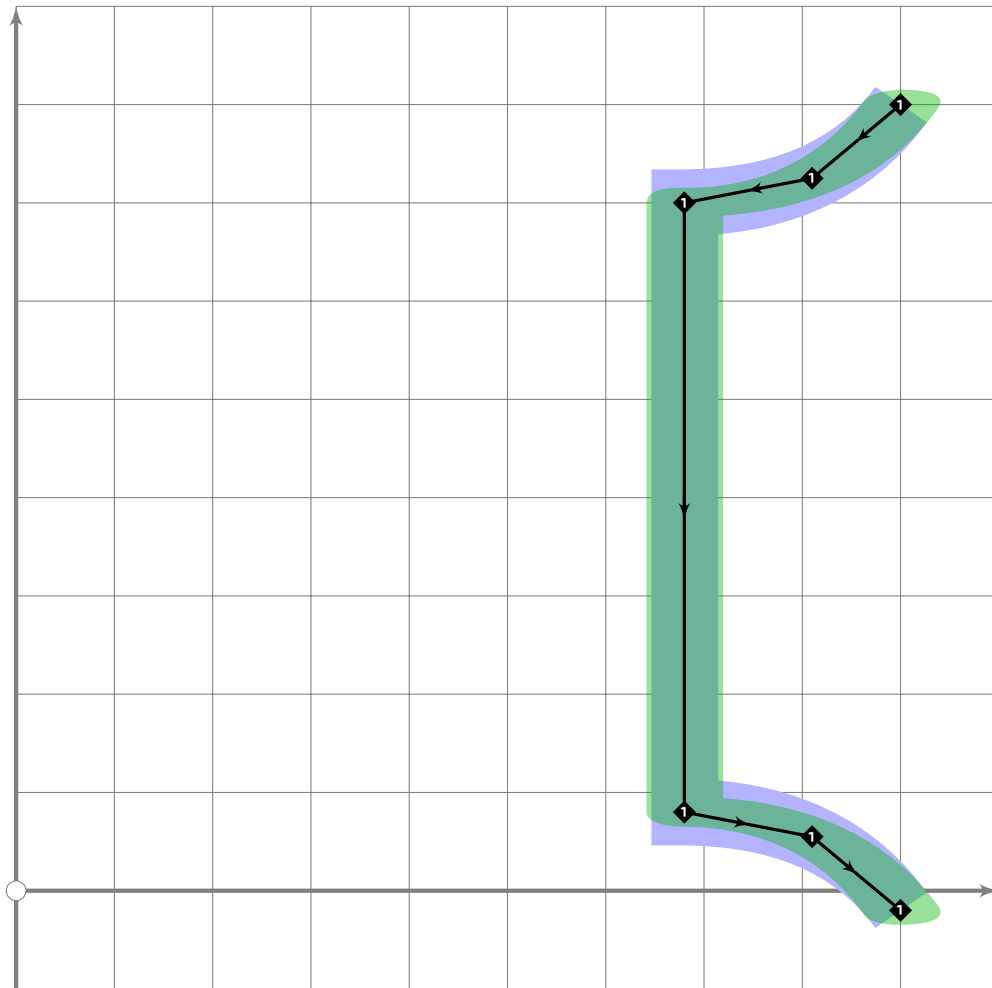
```



```

242 % "geta" or substitute mark
243 begintsuglyph("uni3013";19);
244   x2-x1=6*tsu_punct_size;
245   0.5[x1,x2]=500;
246   y4-y1=4*tsu_punct_size;
247   y2-y1=y3-y2=y4-y3;
248   0.5[y1,y4]=390;
249   dangerousFill
250     (x1,y4)-(x1,y3)-(x2,y3)-(x2,y4)-cycle,
251     (x1,y2)-(x1,y1)-(x2,y1)-(x2,y2)-cycle;
252 endtsuglyph;
253
254 % left and right plain and white tortoise shell brackets
255 % grouped here, out of Unicode sequence, to share the outline
256 bracket1=(900,800)..
257   (900-tsu_punct_size*0.9,800-tsu_punct_size*3/4)..
258   {left}(900-2.2*tsu_punct_size,800-tsu_punct_size)-
259   (900-2.2*tsu_punct_size,20*tsu_punct_size){right}..
260   (900-tsu_punct_size*0.9;20*tsu_punct_size*3/4)..
261   (900;20);
262 bracket2=(point 1 of bracket1)-(point 4 of bracket1);

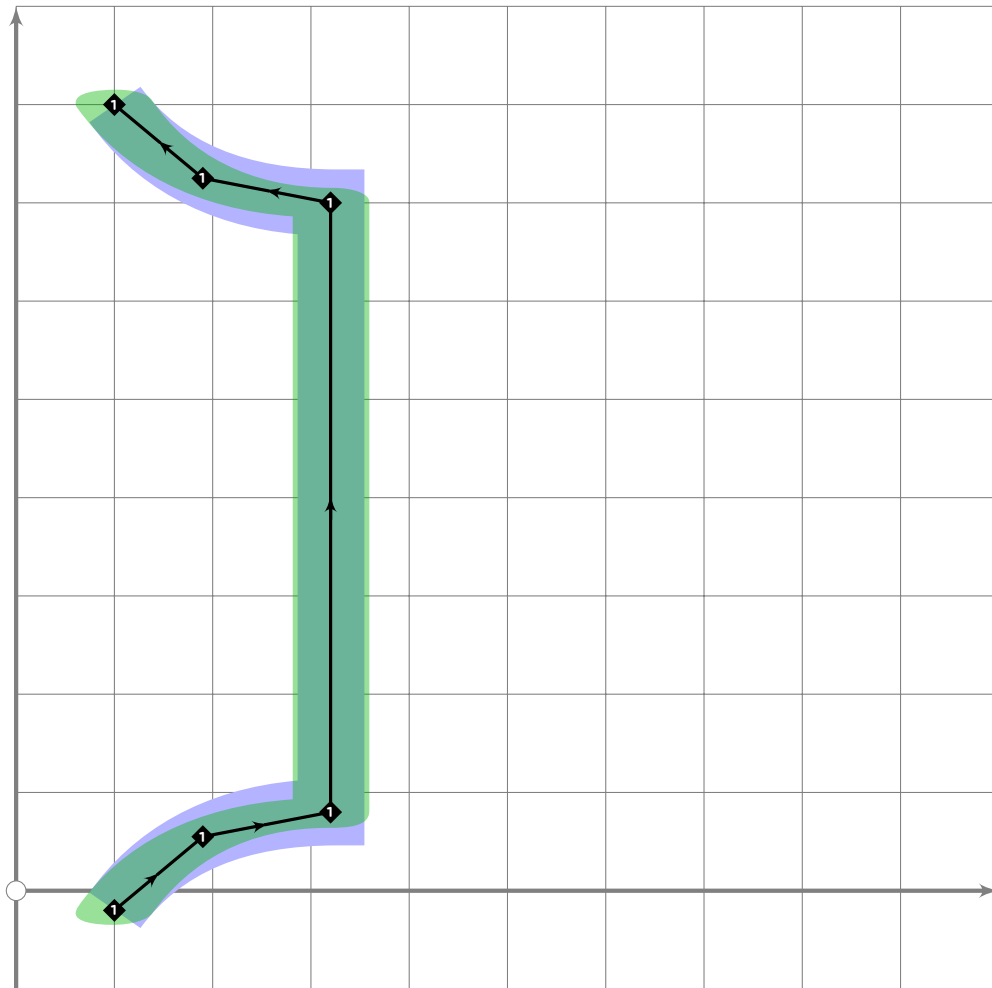
```

```

263 begintsuglyph("uni3014",20);
264 push_stroke(bracket1,
265     (1.7,1.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7));
266 set_bosize(0,90);
267 set_botip(0,2,1);
268 set_botip(0,3,1);
269
270 tsu_render;
271 endtsuglyph;

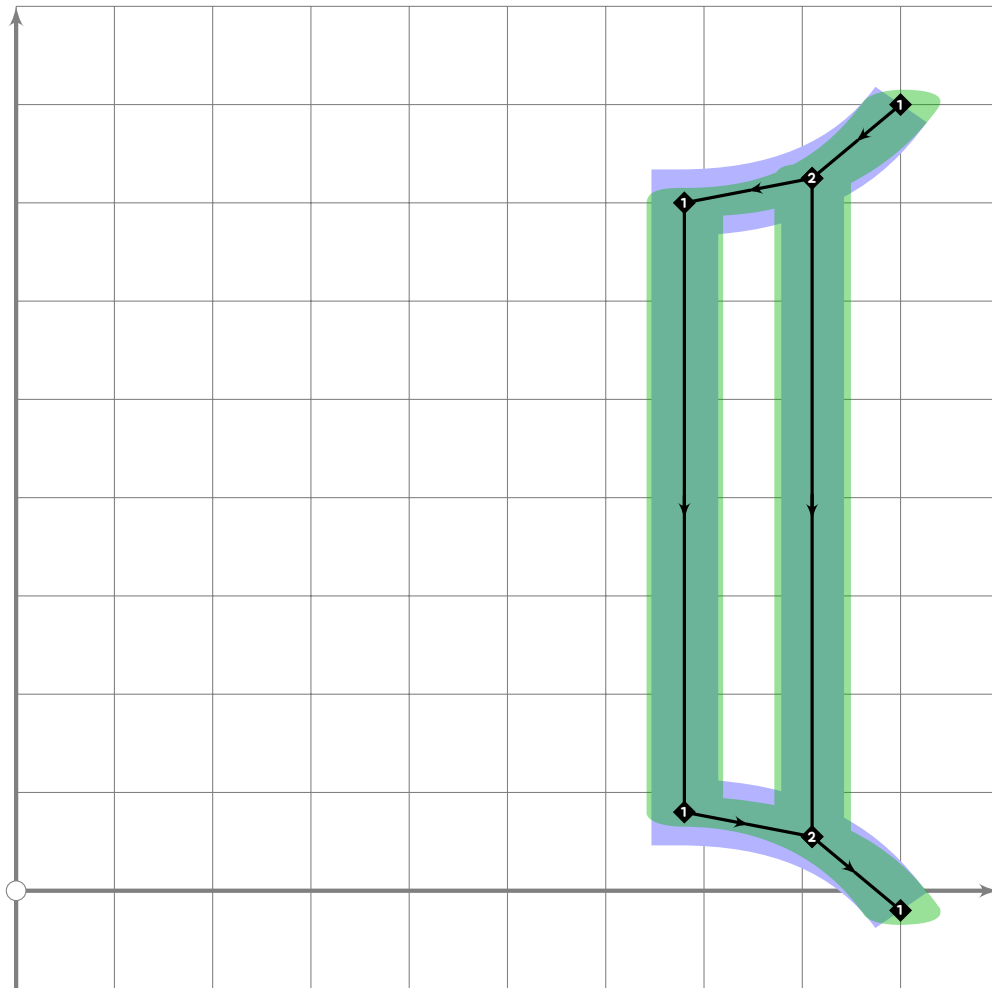
```



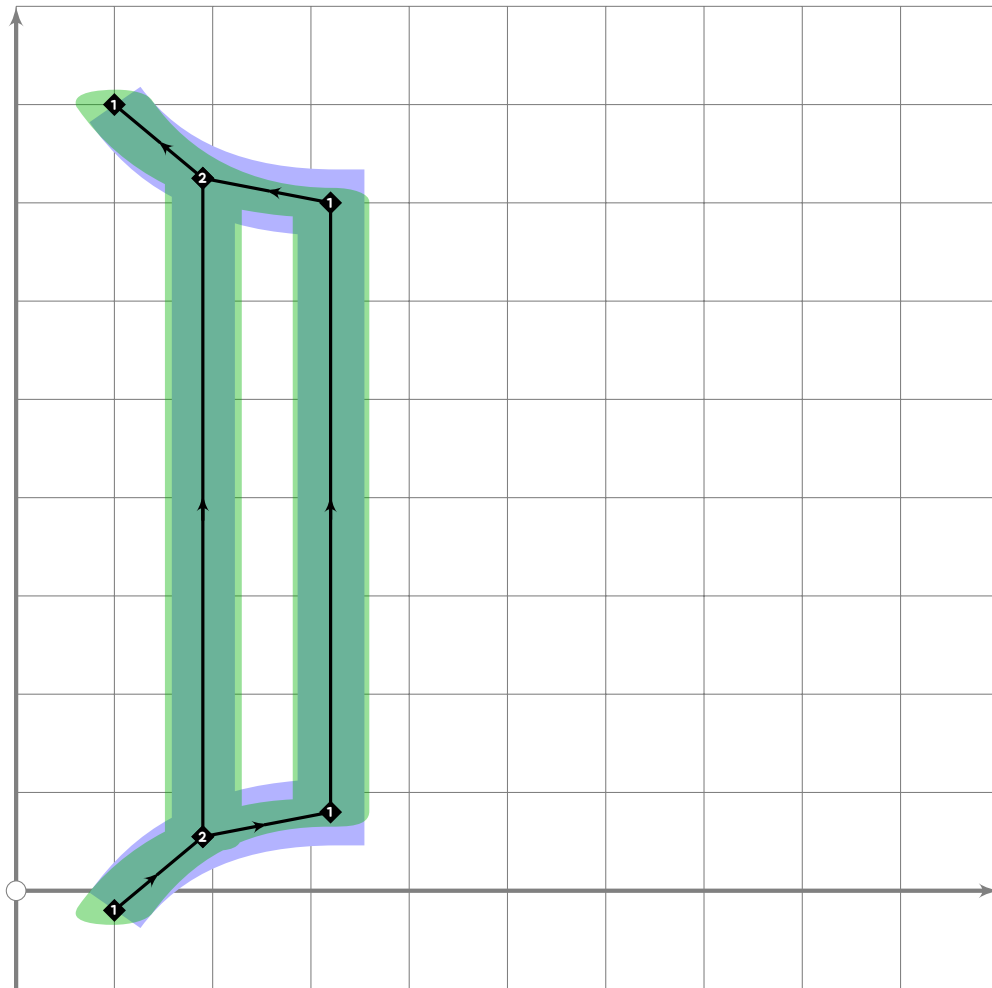
```

272 begintsuglyph("uni3015",21);
273 push_stroke(bracket1 rotatedaround (centre_pt,180),
274   (1.7,1.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7));
275 set_bosize(0,90);
276 set_botip(0,2,1);
277 set_botip(0,3,1);
278
279 tsu_render;
280 endtsuglyph;

```



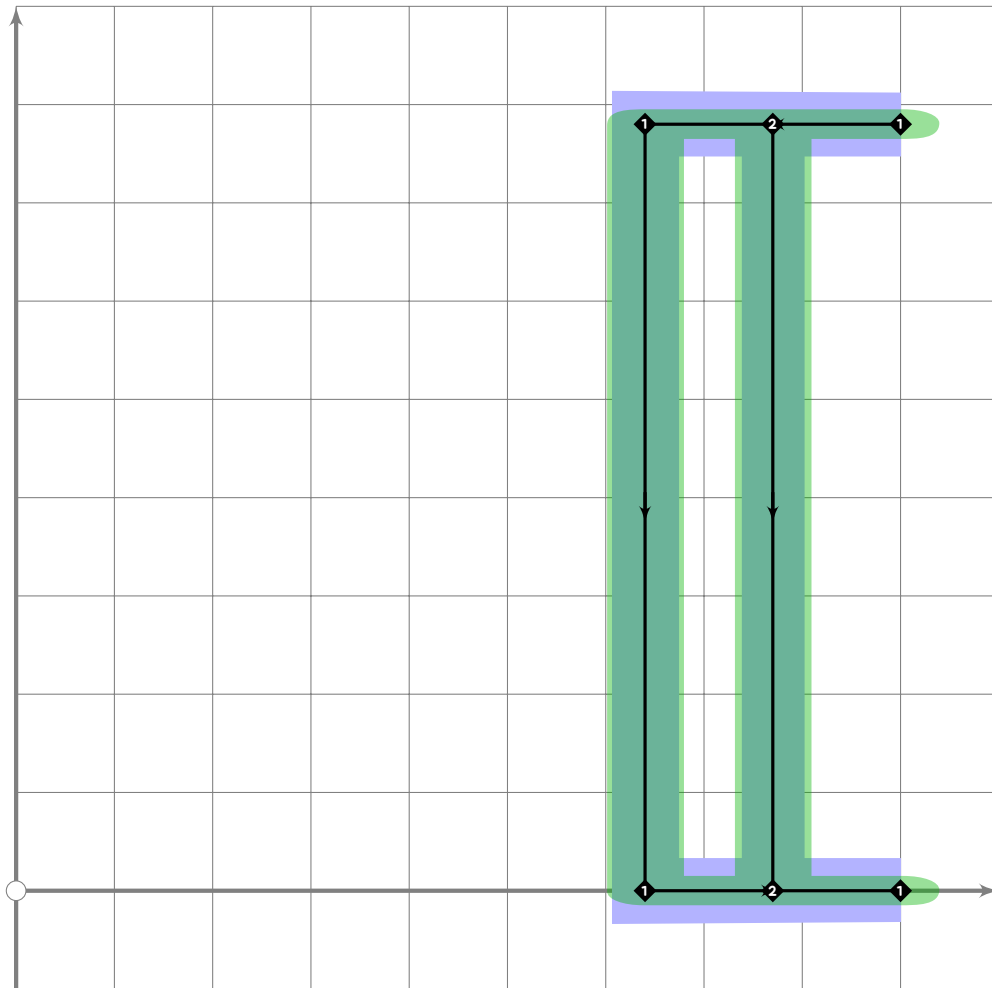
```
281 begintuglyph("uni3018",24);
282 push_stroke(bracket1,
283   (1.7,1.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7));
284 set_bosize(0,90);
285 set_botip(0,2,1);
286 set_botip(0,3,1);
287
288 push_stroke(bracket2,
289   (1.7,1.7)-(1.7,1.7));
290 set_bosize(0,90);
291
292 tsu_render;
293 endtuglyph;
```



```

294 begint Suglyph("uni3019",25);
295 push_stroke(bracket1 rotatedaround (centre_pt,180),
296   (1.7,1.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7));
297 set_bosize(0,90);
298 set_botip(0,2,1);
299 set_botip(0,3,1);
300
301 push_stroke(bracket2 rotatedaround (centre_pt,180),
302   (1.7,1.7)-(1.7,1.7));
303 set_bosize(0,90);
304
305 tsu_render;
306 endtsuglyph;
307
308 % left and right white square brackets
309 bracket1:=(900,780)-
310   (900-2.6*tsu_punct_size,780)-
311   (900-2.6*tsu_punct_size,0)-
312   (900,0);
313 bracket2:=(point 0.5 of bracket1)-(point 2.5 of bracket1);

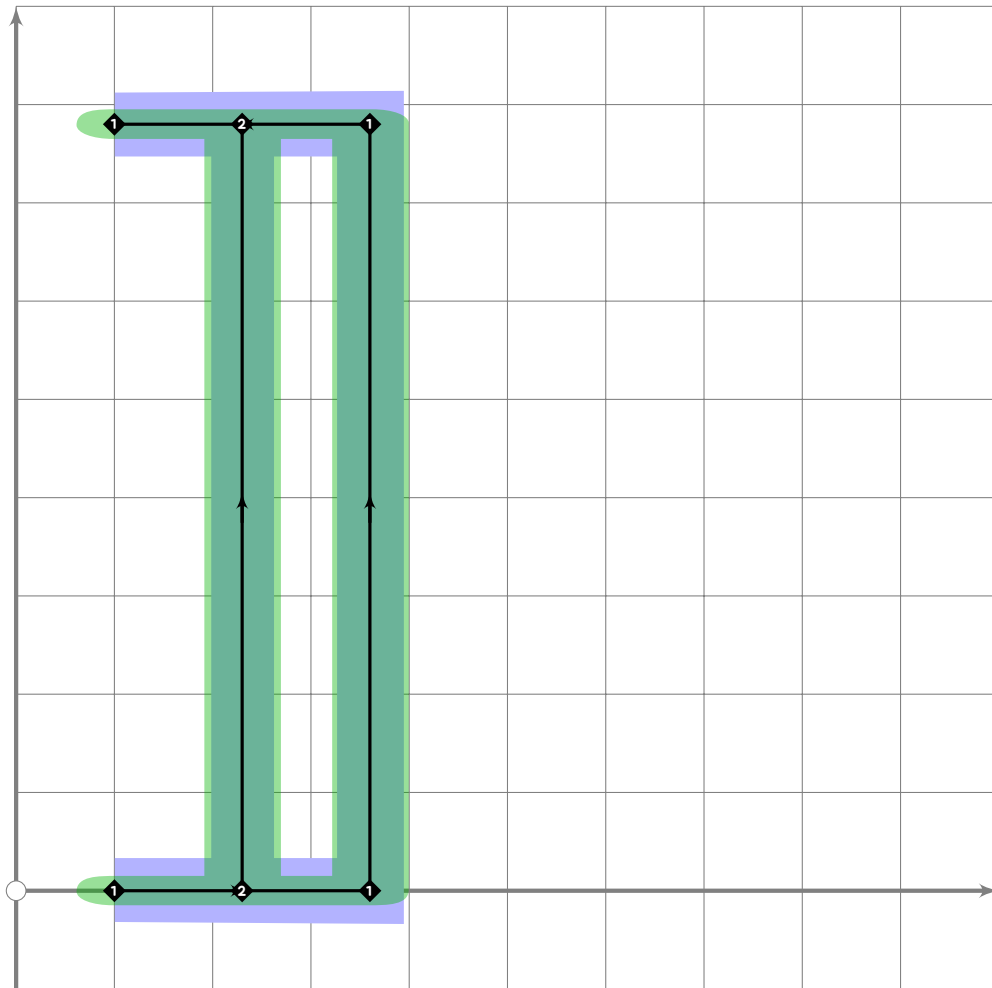
```



```

314 begintsuglyph("uni301A",26);
315 push_stroke(bracket1,
316   (1.7,1.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7));
317 set_bosize(0,90);
318 set_botip(0,1,1);
319 set_botip(0,2,1);
320
321 push_stroke(bracket2,
322   (1.7,1.7)-(1.7,1.7));
323 set_bosize(0,90);
324
325 tsu_render;
326 endtsuglyph;

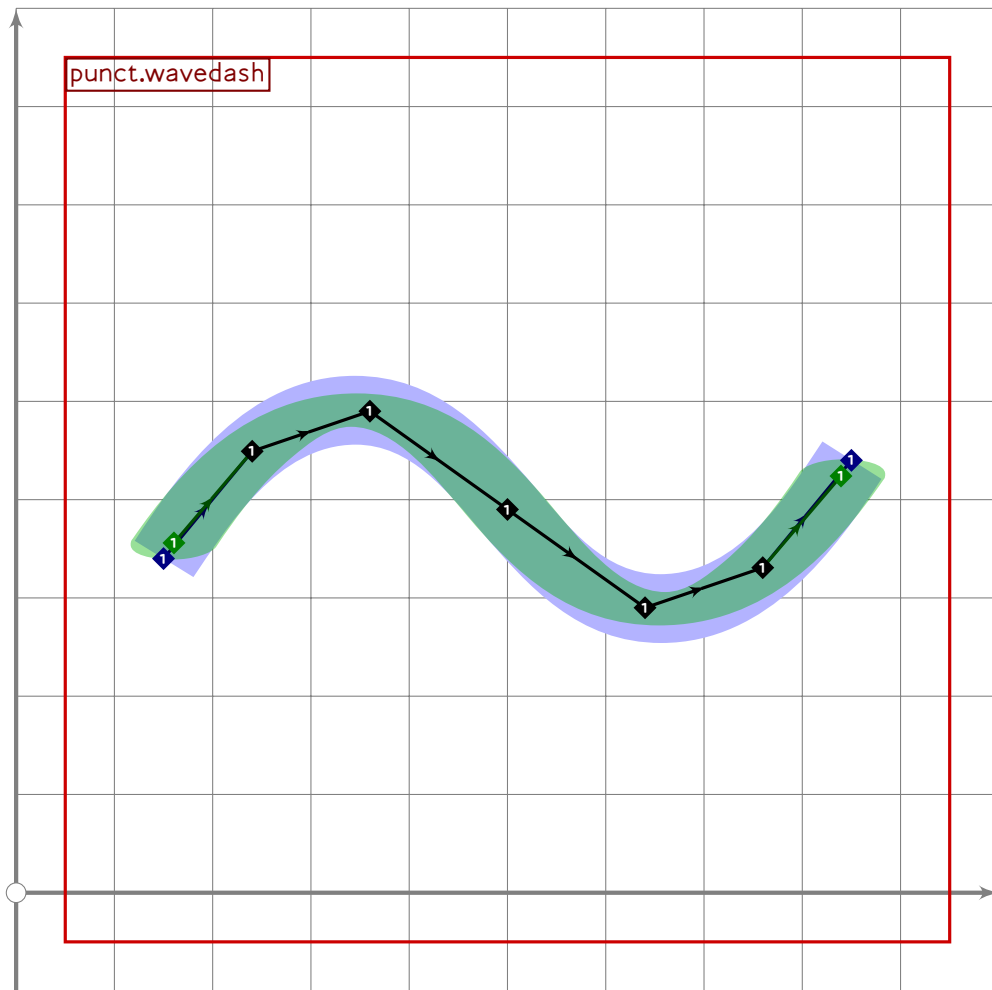
```



```

327 begint Suglyph("uni301B",27);
328 push_stroke(bracket1 rotatedaround (centre_pt,180),
329   (1.7,1.7)-(1.7,1.7)-(1.7,1.7)-(1.7,1.7));
330 set_bosize(0,90);
331 set_botip(0,1,1);
332 set_botip(0,2,1);
333
334 push_stroke(bracket2 rotatedaround (centre_pt,180),
335   (1.7,1.7)-(1.7,1.7));
336 set_bosize(0,90);
337
338 tsu_render;
339 endtsuglyph;
340

```



```

341 % "wave dash"
342 begint Suglyph("uni301C";28);
343   tsu_curve.punct.wavedash;
344   bo_serif.a0:=5;
345   bo_serif.a6:=8;
346   tsu_render;
347 endtsuglyph;
348
349
350

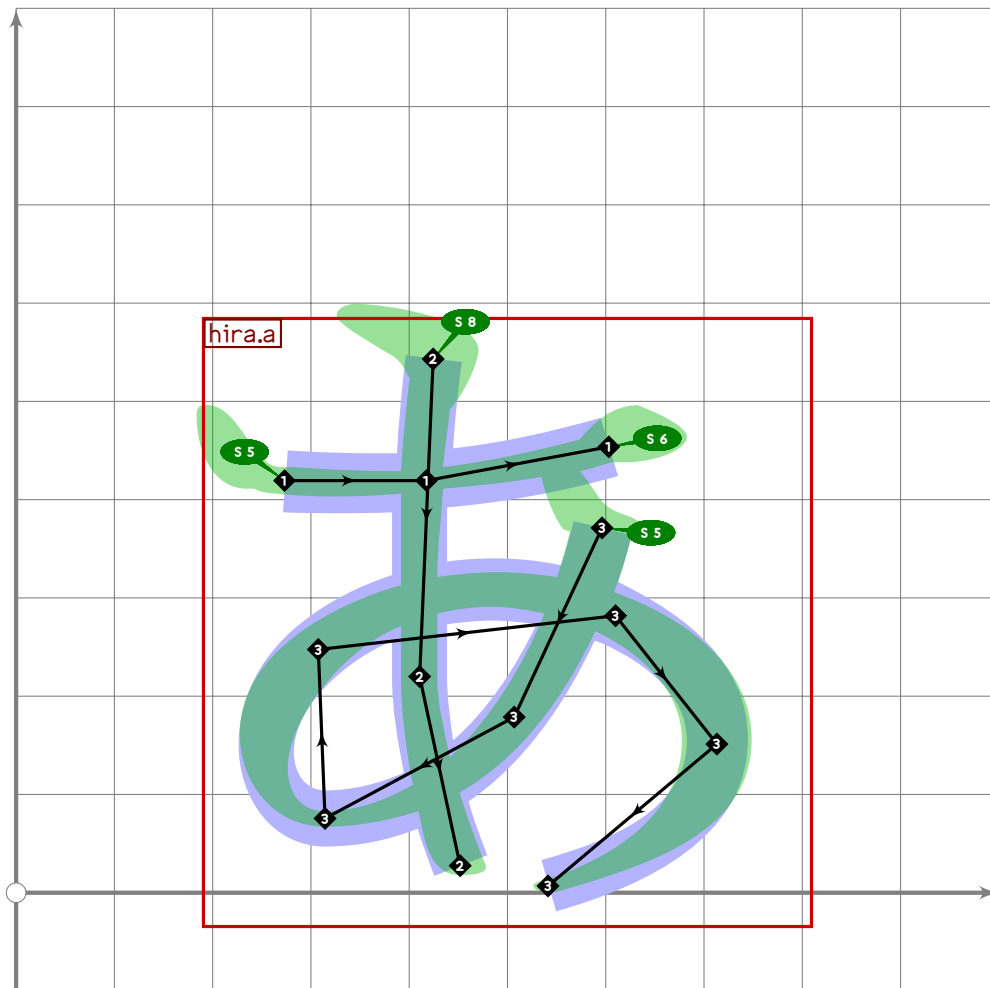
```

Hiragana

```

351 % HIRAGANA
352

```

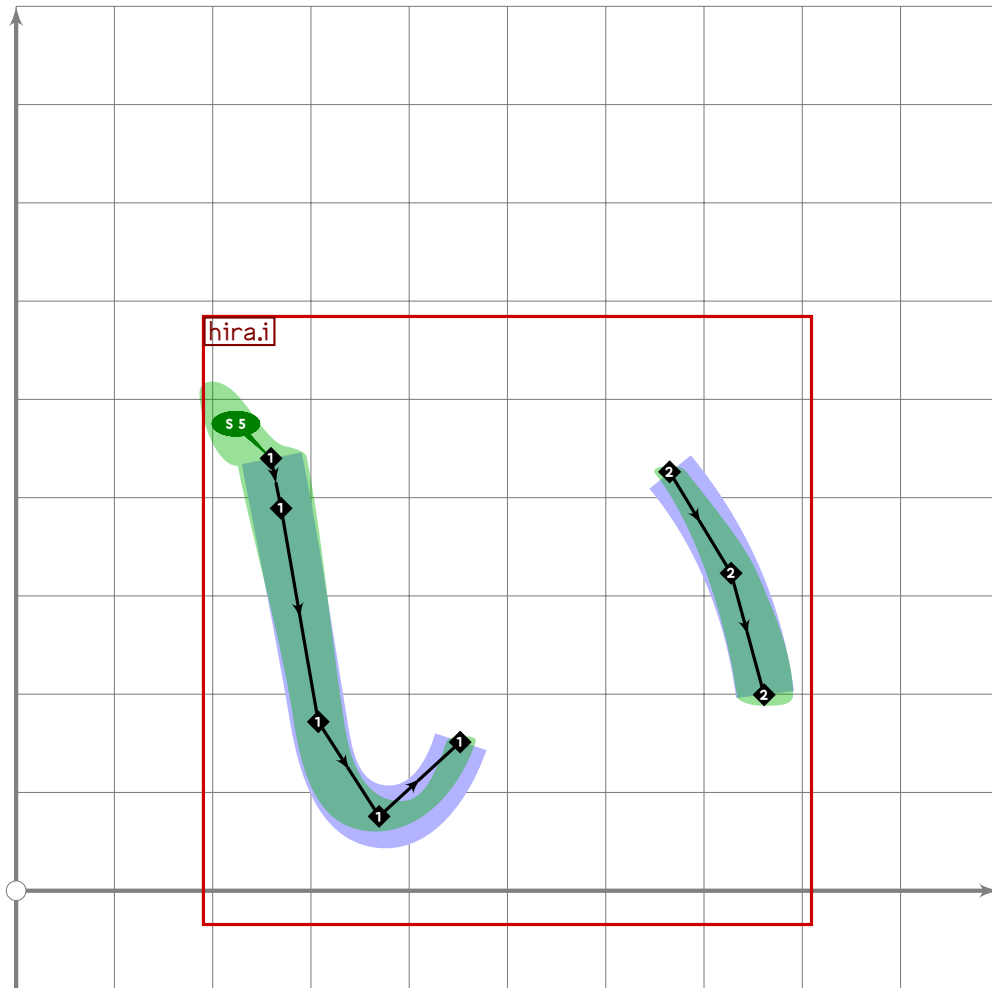


```

353 % hiragana "small a"
354 begint Suglyph("uni3041",65);
355 tsu_xform(tsu_xf.smallkana)(tsu_curve.hira.a);
356 tsu_render;
357 endtsuglyph;
358
359 % hiragana "a"
360 begint Suglyph("uni3042",66);
361 tsu_curve.hira.a;
362 tsu_render;
363 endtsuglyph;
364

```

[see page 49]

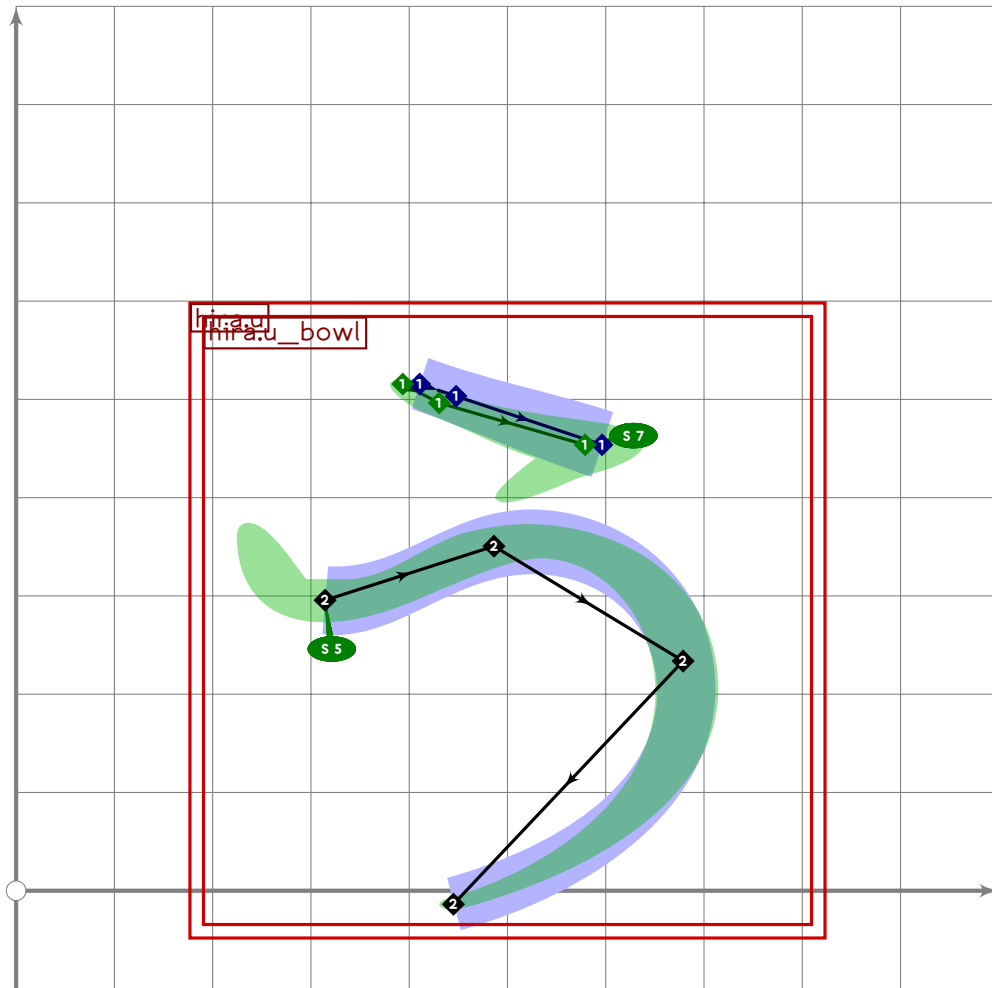


```

365 % hiragana "small i"
366 begintsuglyph("uni3043",67);
367 tsu_xform(tsu_xf.smallkana)(tsu_curve.hira.i);
368 tsu_render;
369 endtsuglyph;
370
371 % hiragana "i"
372 begintsuglyph("uni3044",68);
373 tsu_curve.hira.i;
374 tsu_render;
375 endtsuglyph;
376

```

[see page 50]

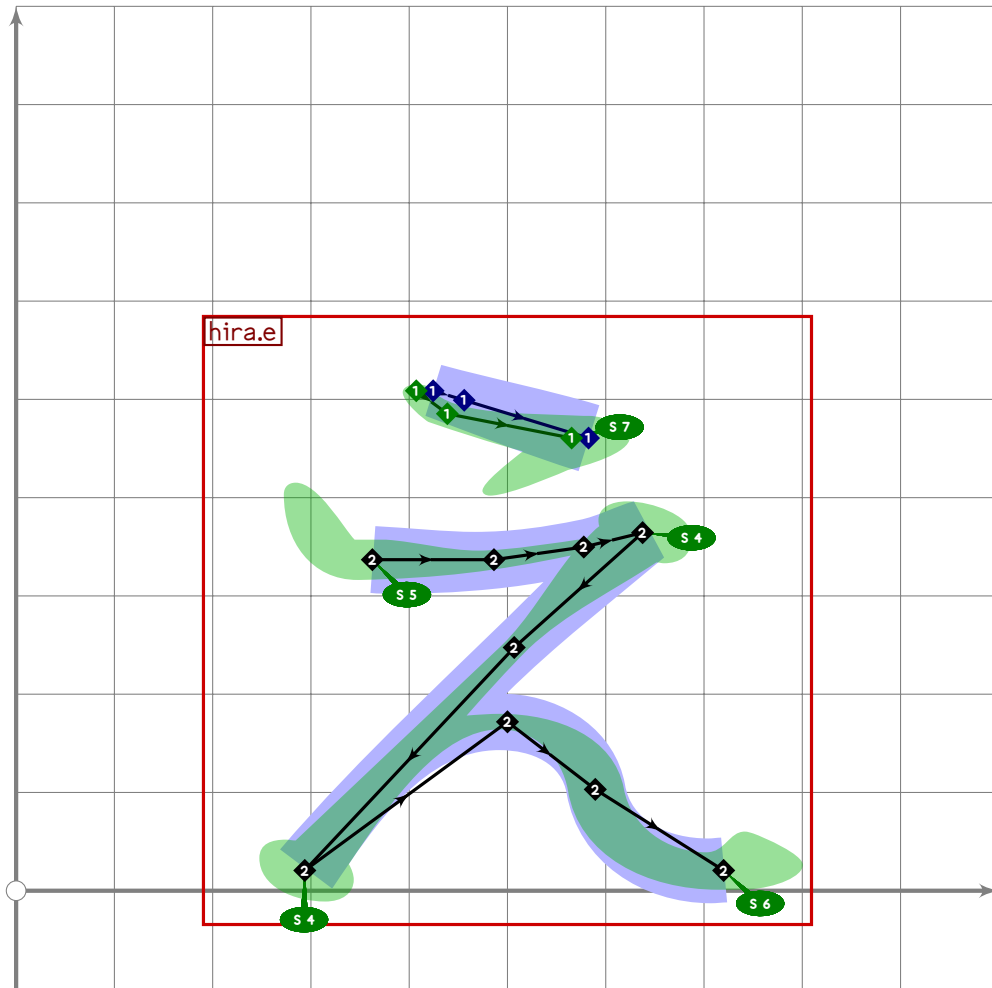


```

377 % hiragana "small u"
378 begintuglyph("uni3045",69);
379 tsu_xform(tsu_xf.smallkana)(tsu_curve.hira.u);
380 tsu_render;
381 endtuglyph;
382
383 % hiragana "u"
384 begintuglyph("uni3046",70);
385 tsu_curve.hira.u;
386 tsu_render;
387 endtuglyph;
388

```

[see page 51]

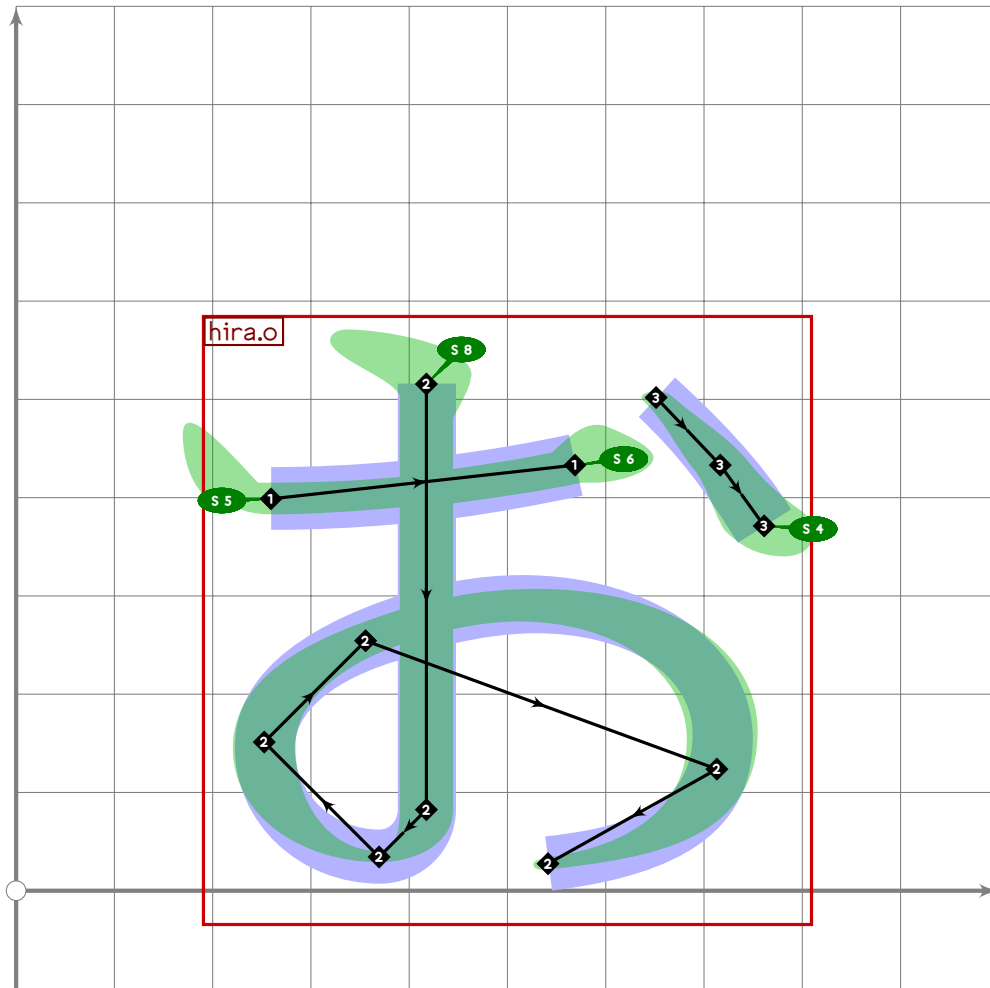


```

389 % hiragana "small e"
390 begintuglyph("uni3047";71);
391 tsu_xform(tsu_xf.smallkana)(tsu_curve.hira.e);
392 tsu_render;
393 endtuglyph;
394
395 % hiragana "e"
396 begintuglyph("uni3048";72);
397 tsu_curve.hira.e;
398 tsu_render;
399 endtuglyph;
400

```

[see page 52]



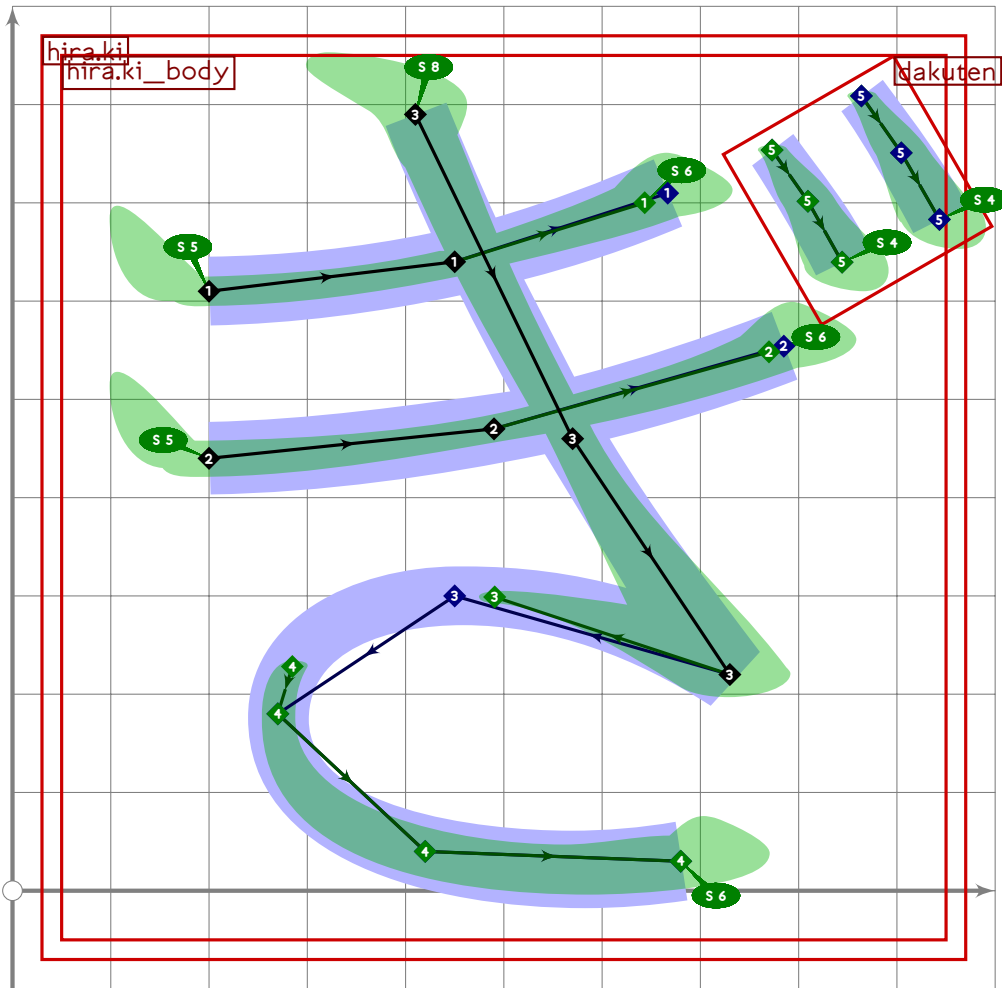
```

401 % hiragana "small o"
402 begint Suglyph("uni3049",73);
403   tsu_xform(tsu_xf.smallkana)(tsu_curve.hira.o);
404   tsu_render;
405 endtsuglyph;
406
407 % hiragana "o"
408 begint Suglyph("uni304A",74);
409   tsu_curve.hira.o;
410   tsu_render;
411 endtsuglyph;
412
413 % hiragana "ka"
414 begint Suglyph("uni304B",75);
415   tsu_curve.hira.ka;
416   tsu_render;
417 endtsuglyph;
418

```

[see page 53]

[see page 54]

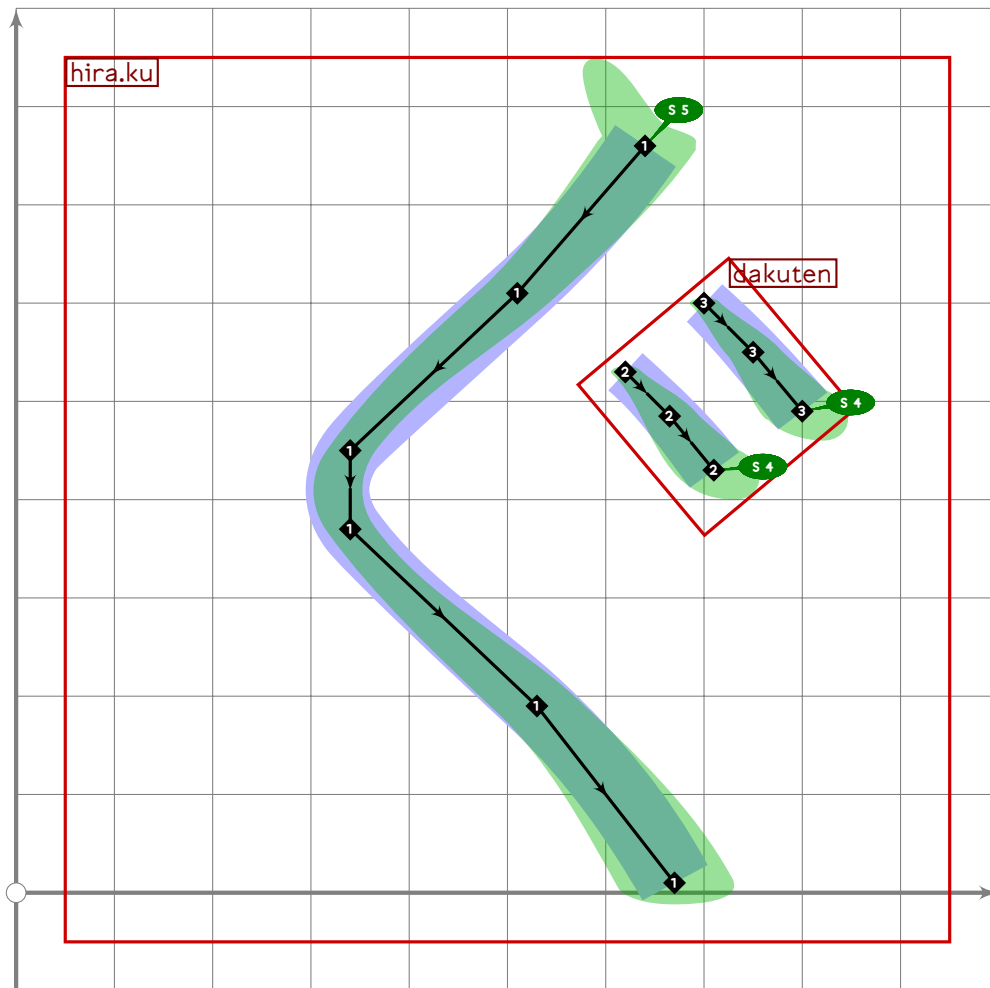


```

432 % hiragana "gi"
433 begint Suglyph("uni304E",78);
434 tsu_curve.hira.ki;
435 replace_stroke(-2,subpath (0,1,9-0.1*mincho) of oldp);
436 replace_stroke(-1,subpath (0,1,95-0.05*mincho) of oldp);
437 tsu_curve.dakuten(identity rotated -10 shifted (850,730));
438 tsu_render;
439 endtsuglyph;
440
441 % hiragana "ku"
442 begint Suglyph("uni304F",79);
443 tsu_curve.hira.ku;
444 tsu_render;
445 endtsuglyph;
446

```

[see page 56]

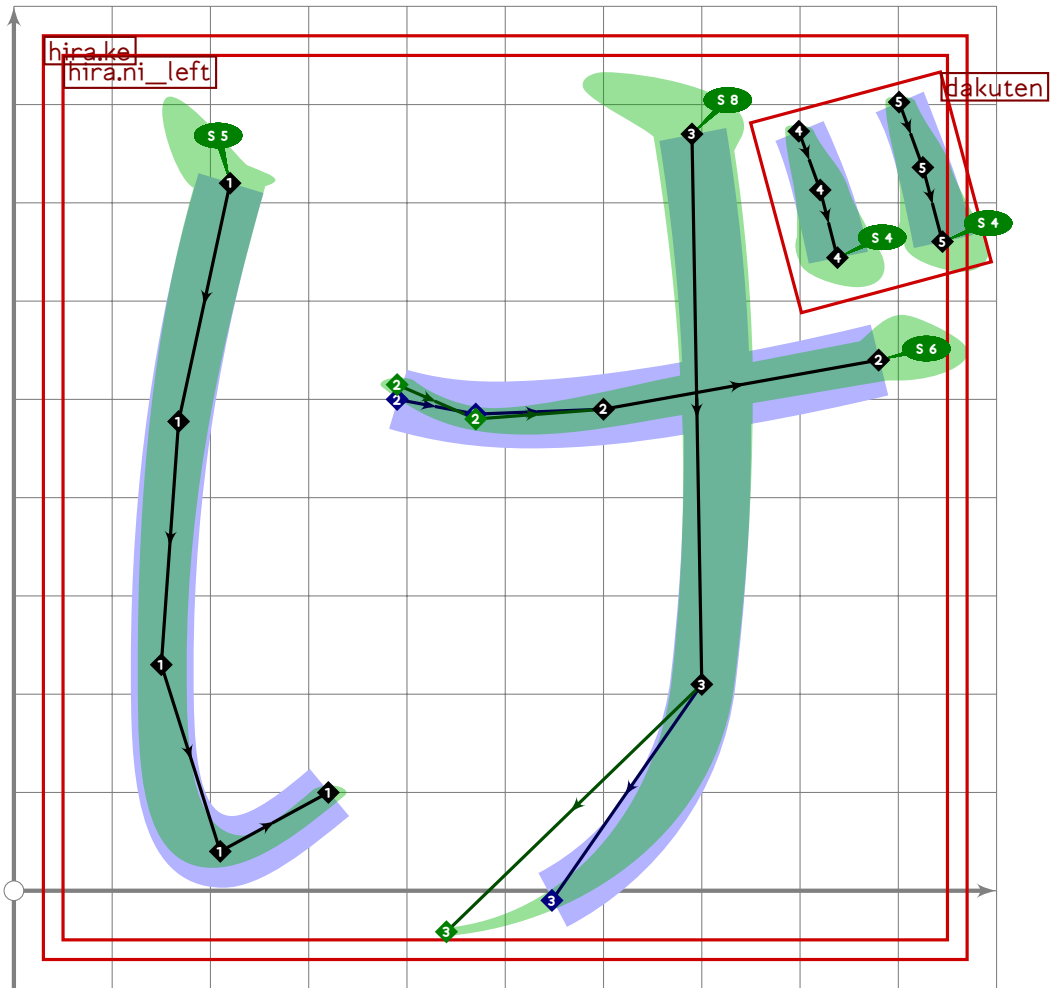


```

447 % hiragana "gu"
448 begint Suglyph("uni3050",80);
449 tsu_curve.hira.ku;
450 tsu_curve.dakuten(identity shifted (700,520));
451 tsu_render;
452 endsuglyph;
453
454 % hiragana "ke"
455 begint Suglyph("uni3051",81);
456 tsu_curve.hira.ke;
457 tsu_render;
458 endsuglyph;
459

```

[see page 57]

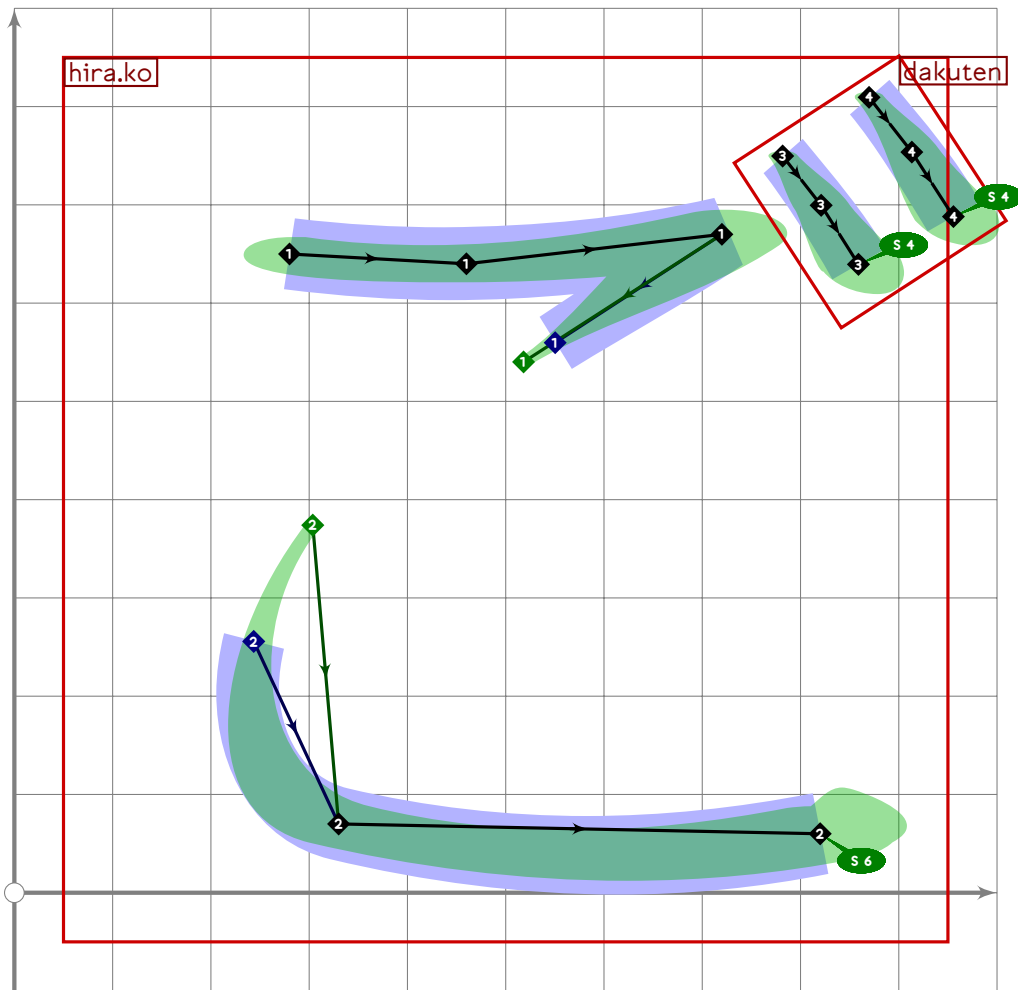


```

460 % hiragana "ge"
461 begint Suglyph("uni3052",82);
462 tsu_curve.hira.ke;
463 tsu_curve.dakuten(identity rotated -25 shifted (867,730));
464 tsu_render;
465 endsuglyph;
466
467 % hiragana "ko"
468 begint Suglyph("uni3053",83);
469 tsu_curve.hira.ko;
470 tsu_render;
471 endsuglyph;
472

```

[see page 58]

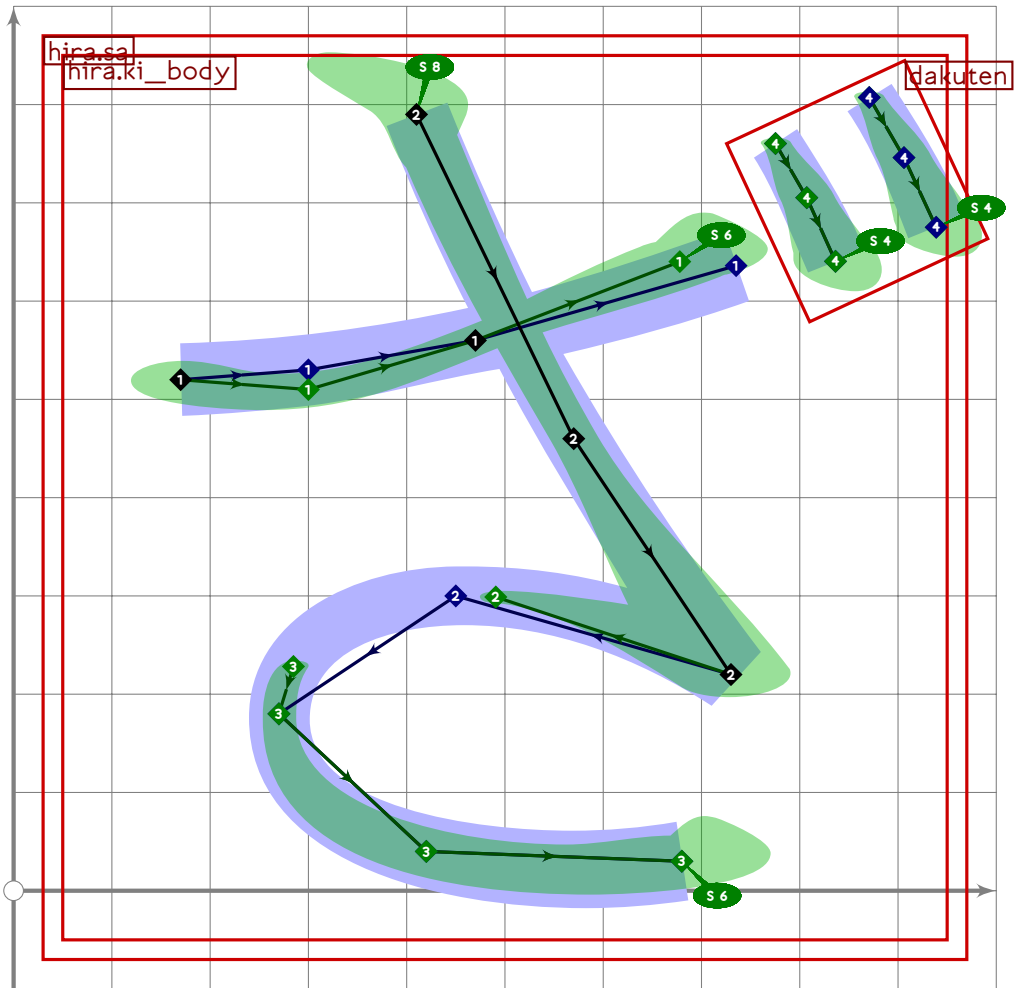


```

473 % hiragana "go"
474 begintsuglyph("uni3054",84);
475 tsu_curve.hira.ko;
476 tsu_curve.dakuten(identity rotated -7 shifted (860,730));
477 tsu_render;
478 endsuglyph;
479
480 % hiragana "sa"
481 begintsuglyph("uni3055",85);
482 tsu_curve.hira.sa;
483 tsu_render;
484 endsuglyph;
485

```

[see page 59]

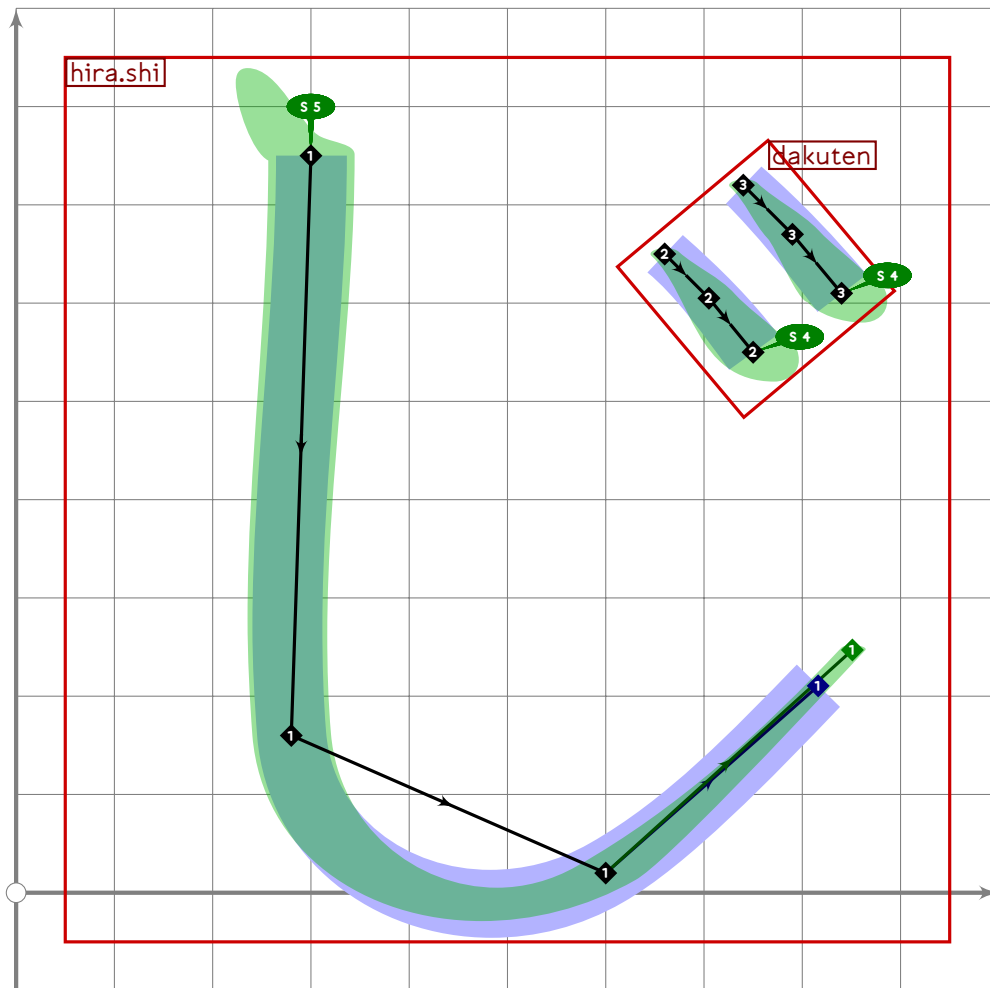


```

486 % hiragana "za"
487 begintsuglyph("uni3056",86);
488 tsu_curve.hira.sa;
489 replace_stroke(-1,subpath (0,2.8) of oldp);
490 tsu_curve.dakuten(identity rotated -15 shifted (850,730));
491 tsu_render;
492 endsuglyph;
493
494 % hiragana "shi"
495 begintsuglyph("uni3057",87);
496 tsu_curve.hira.shi;
497 tsu_render;
498 endsuglyph;
499

```

[see page 60]

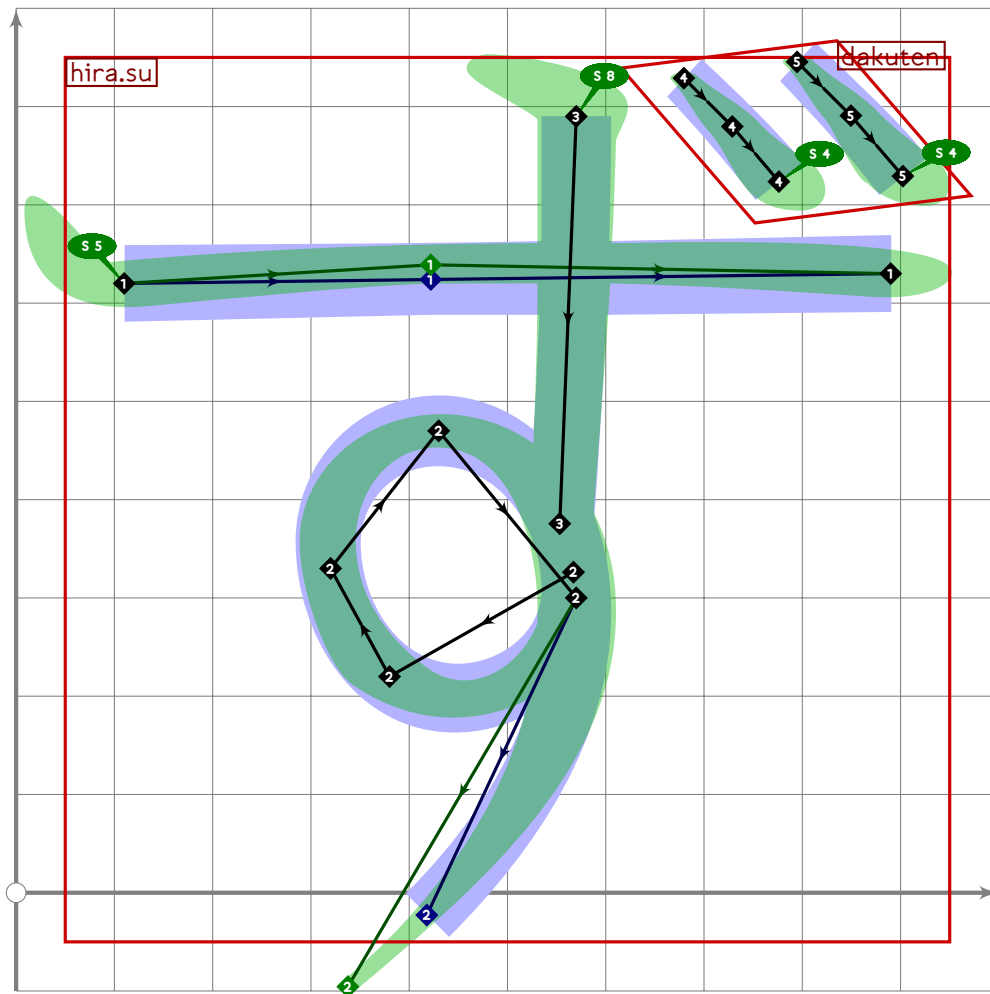


```

500 % hiragana "ji"
501 begint Suglyph("uni3058",88);
502 tsu_curve.hira.shi;
503 tsu_curve.dakuten(identity shifted (740,640));
504 tsu_render;
505 endsuglyph;
506
507 % hiragana "su"
508 begint Suglyph("uni3059",89);
509 tsu_curve.hira.su;
510 tsu_render;
511 endsuglyph;
512

```

[see page 61]

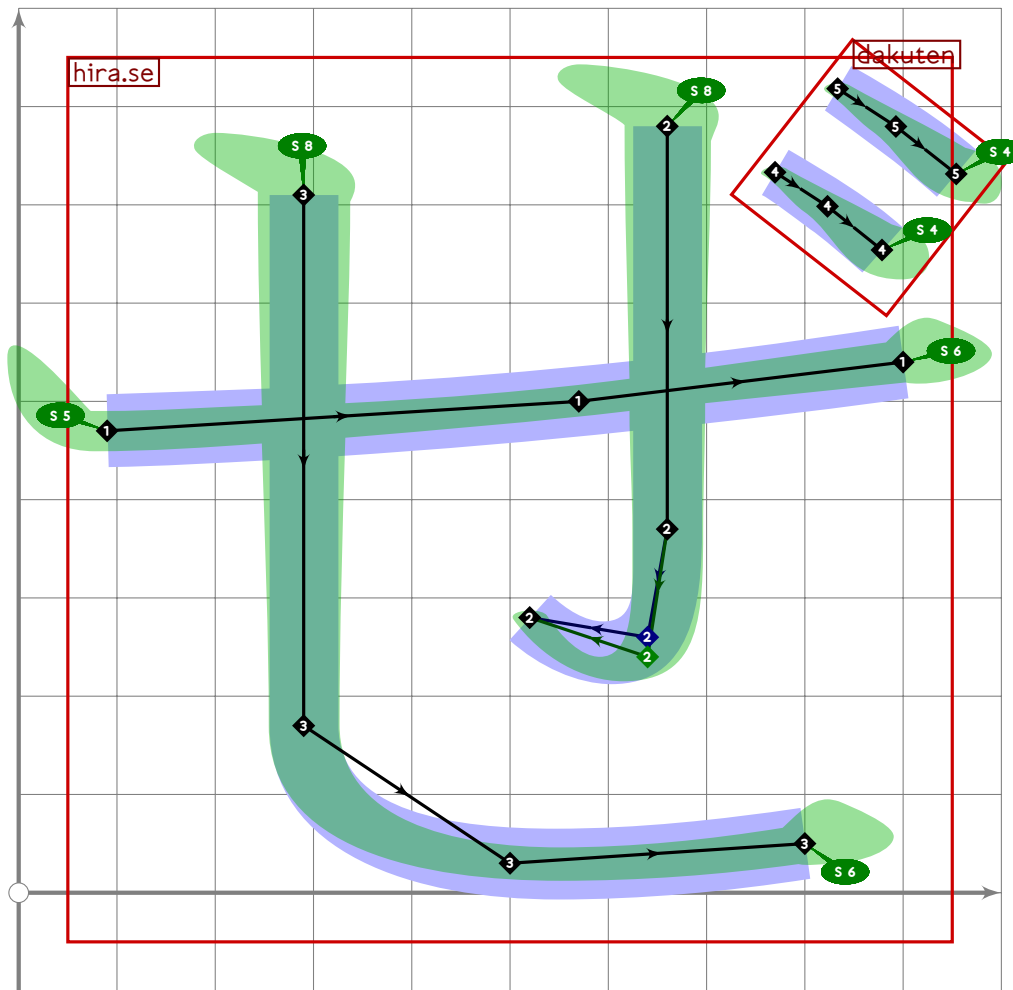


```

513 % hiragana "zu"
514 begint Suglyph("uni305A";90);
515 tsu_curve.hira.su;
516 tsu_curve.dakuten(identity rotated -30 slanted -0.4 xyscaled (1.2,0.8)
517   shifted (780,790));
518 tsu_render;
519 endtsuglyph;
520
521 % hiragana "se"
522 begint Suglyph("uni305B";91);
523 tsu_curve.hira.se;
524 tsu_render;
525 endtsuglyph;
526

```

[see page 62]

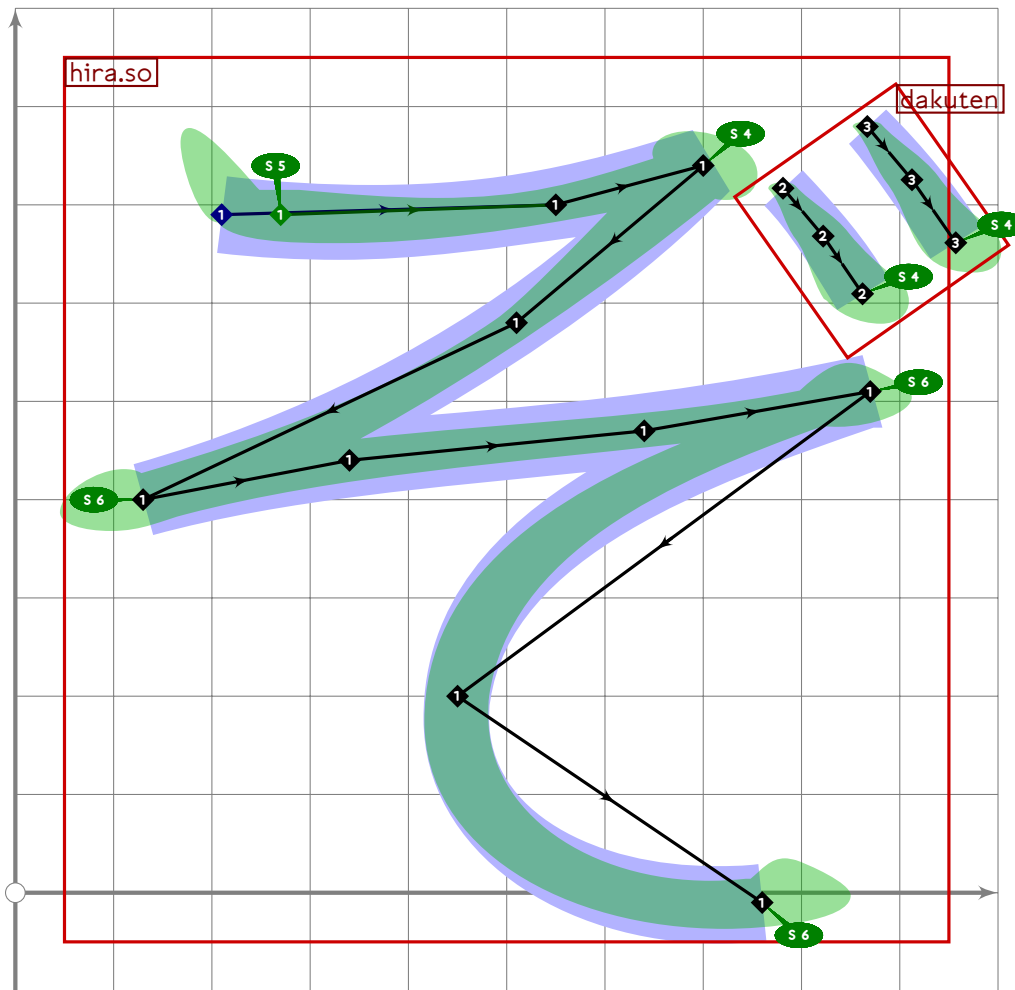


```

527 % hiragana "ze"
528 begintsuglyph("uni305C";92);
529 tsu_curve.hira.se;
530 tsu_curve.dakuten(identity rotated 12 shifted (850,740));
531 tsu_render;
532 endsuglyph;
533
534 % hiragana "so"
535 begintsuglyph("uni305D";93);
536 tsu_curve.hira.so;
537 tsu_render;
538 endsuglyph;
539

```

[see page 63]

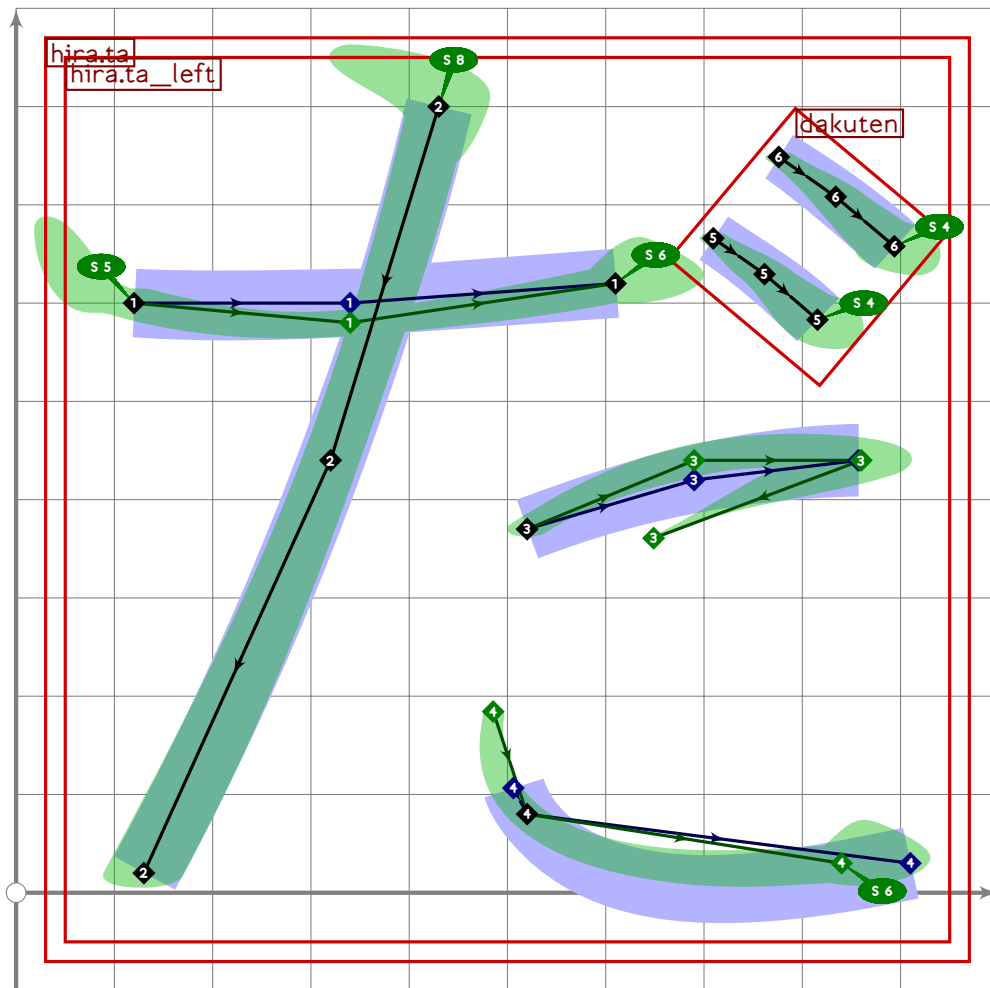


```

540 % hiragana "zo"
541 begint Suglyph("uni305E";94);
542 tsu_curve.hira.so;
543 tsu_curve.dakuten(identity rotated -5 shifted (860,700));
544 tsu_render;
545 endsuglyph;
546
547 % hiragana "ta"
548 begint Suglyph("uni305F";95);
549 tsu_curve.hira.ta;
550 tsu_render;
551 endsuglyph;
552

```

[see page 65]

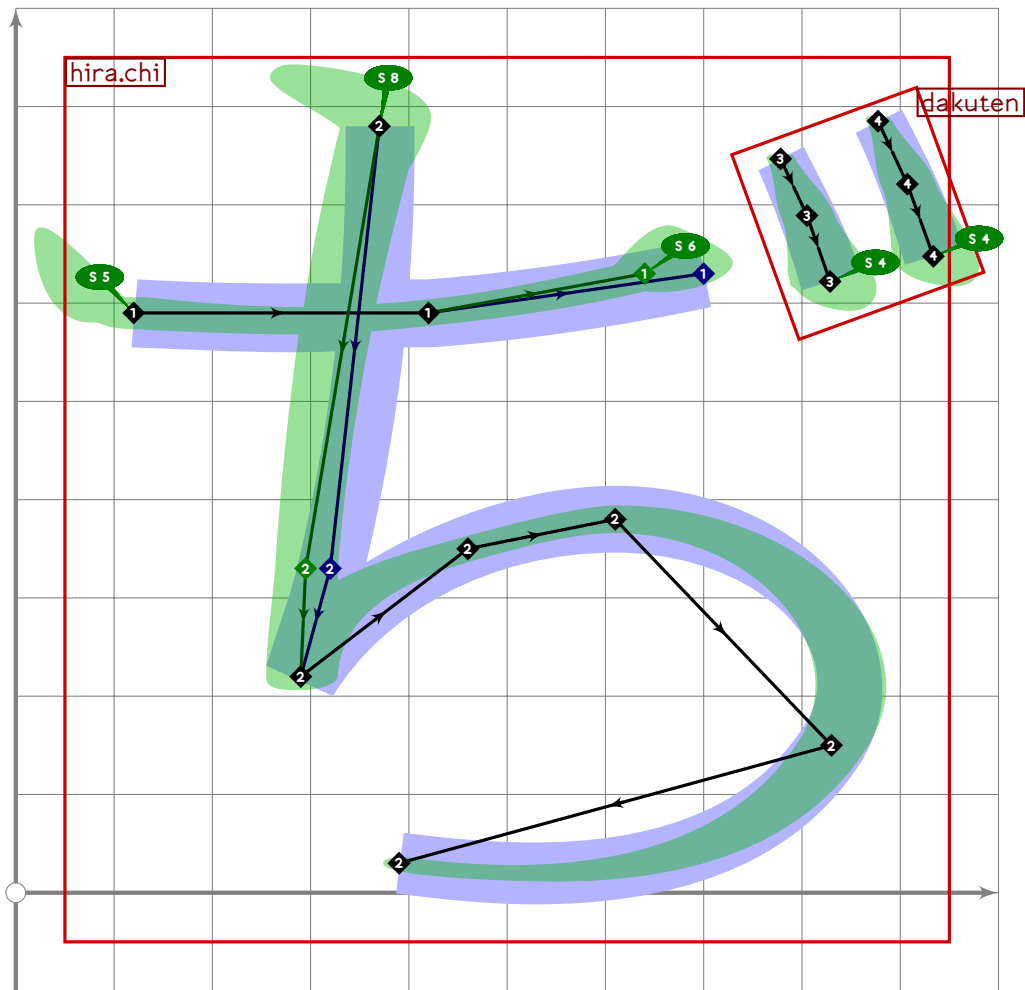


```

553 % hiragana "da"
554 begint Suglyph("uni3060";96);
555   tsu_curve.hira.ta;
556   tsu_curve.dakuten(identity rotated 10 shifted (790,670));
557   tsu_render;
558 endsuglyph;
559
560 % hiragana "chi"
561 begint Suglyph("uni3061";97);
562   tsu_curve.hira.chi;
563   tsu_render;
564 endsuglyph;
565

```

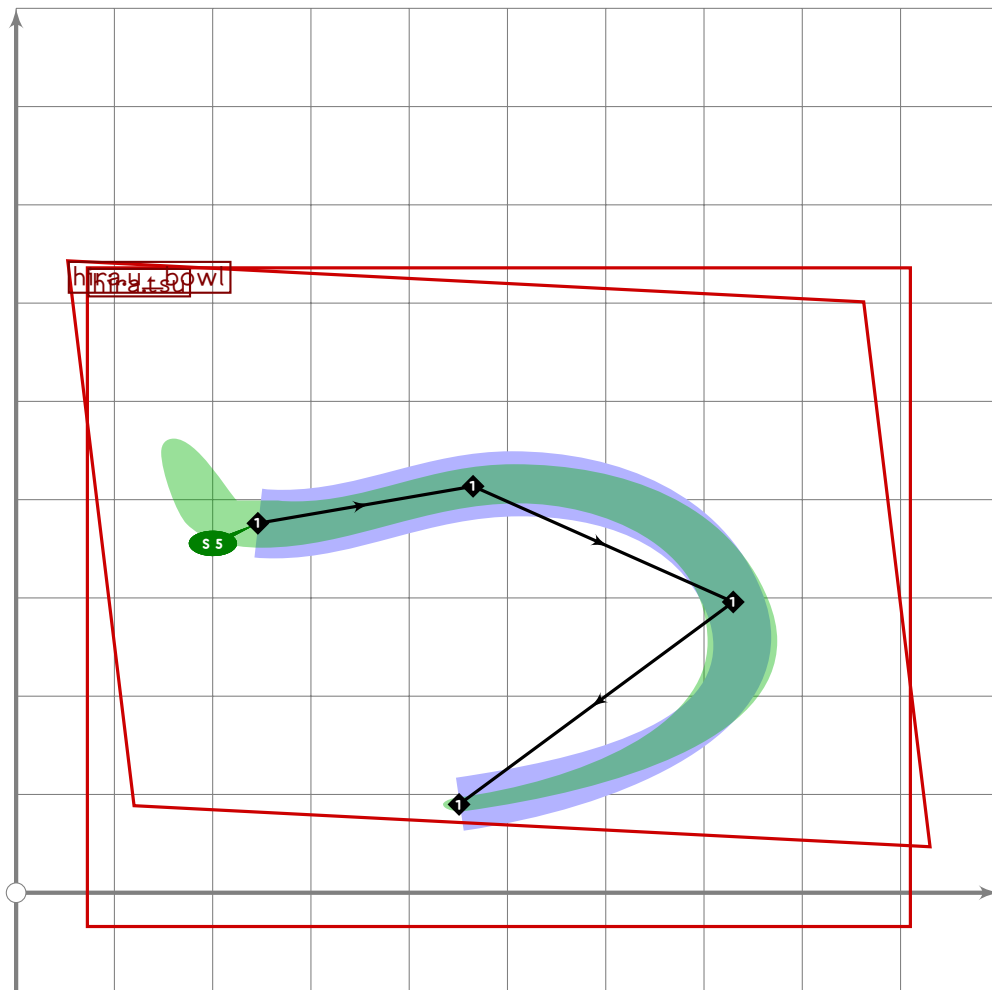
[see page 66]



```

566 % hiragana "dji"
567 begint Suglyph("uni3062";98);
568 tsu_curve.hira.chi;
569 tsu_curve.dakuten(identity rotated -20 shifted (850,710));
570 tsu_render;
571 endsuglyph;
572

```

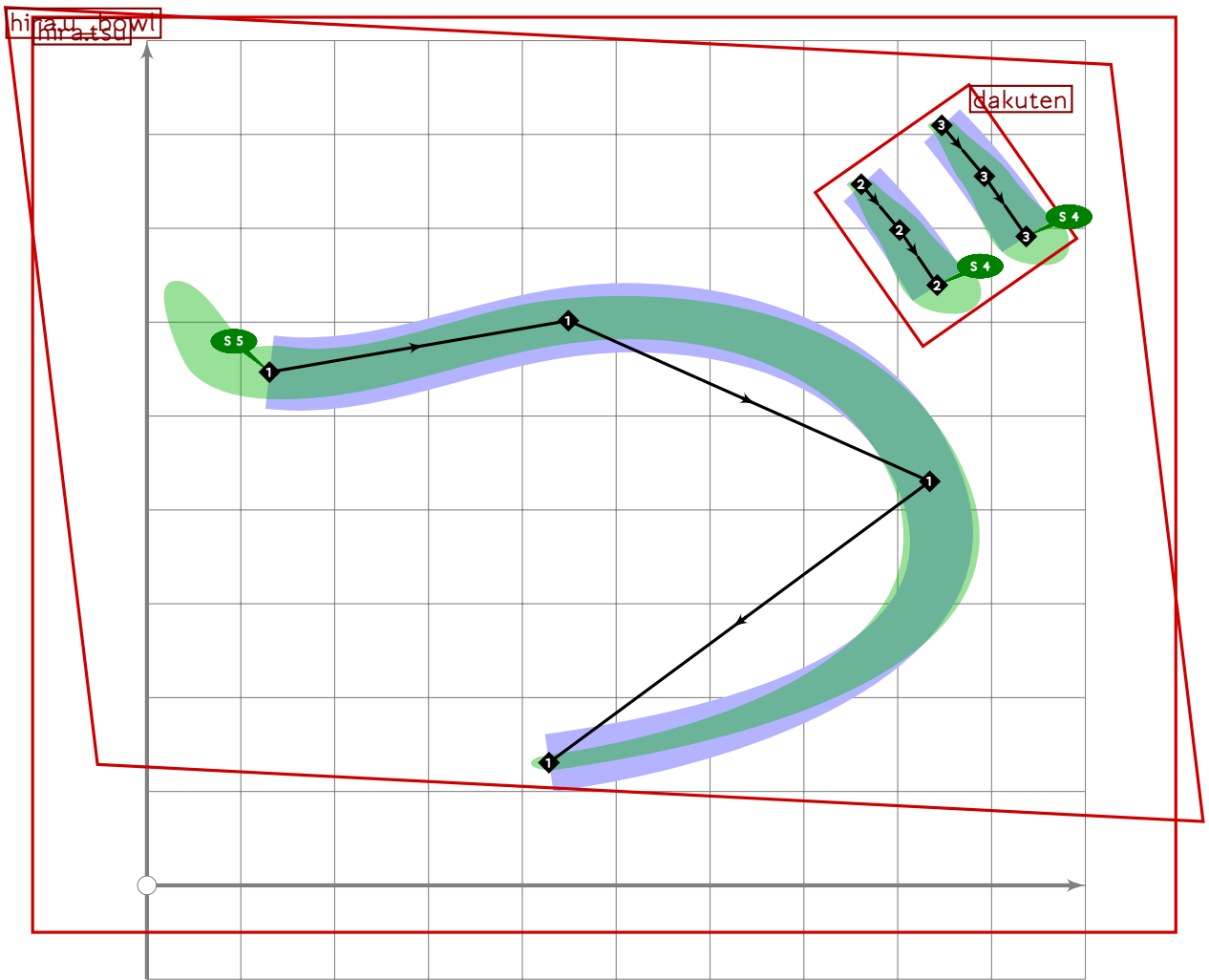



```

573 % hiragana "small tsu"
574 begint Suglyph("uni3063",99);
575 tsu_xform(tsu_xf.smallkana)(tsu_curve.hira.tsu);
576 tsu_render;
577 endtsuglyph;
578
579 % hiragana "tsu"
580 begint Suglyph("uni3064",100);
581 tsu_curve.hira.tsu;
582 tsu_render;
583 endtsuglyph;
584

```

[see page 66]

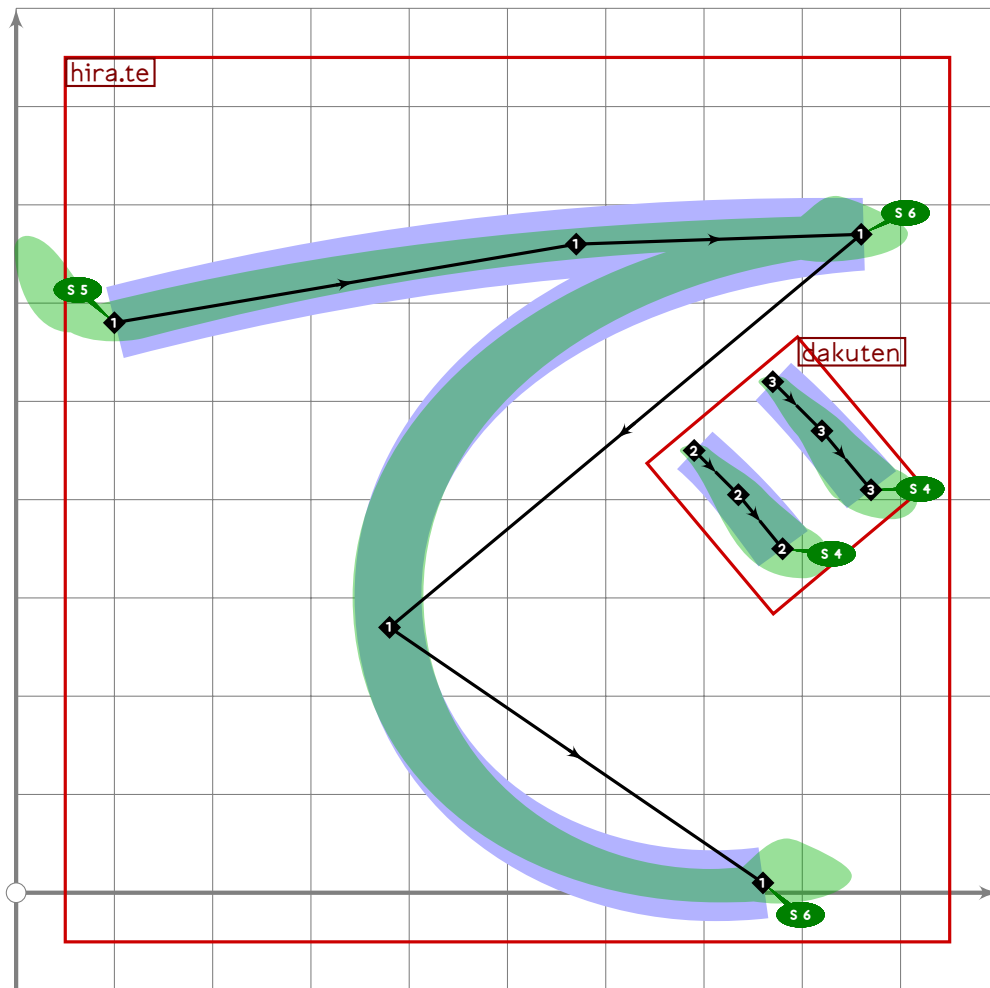


```

585 % hiragana "dzu"
586 begintsuglyph("uni3065";101);
587   tsu_curve.hira.tsu;
588   tsu_curve.dakuten(identity rotated -5 shifted (840,730));
589   tsu_render;
590 endsuglyph;
591
592 % hiragana "te"
593 begintsuglyph("uni3066";102);
594   tsu_curve.hira.te;
595   tsu_render;
596 endsuglyph;
597

```

[see page 67]

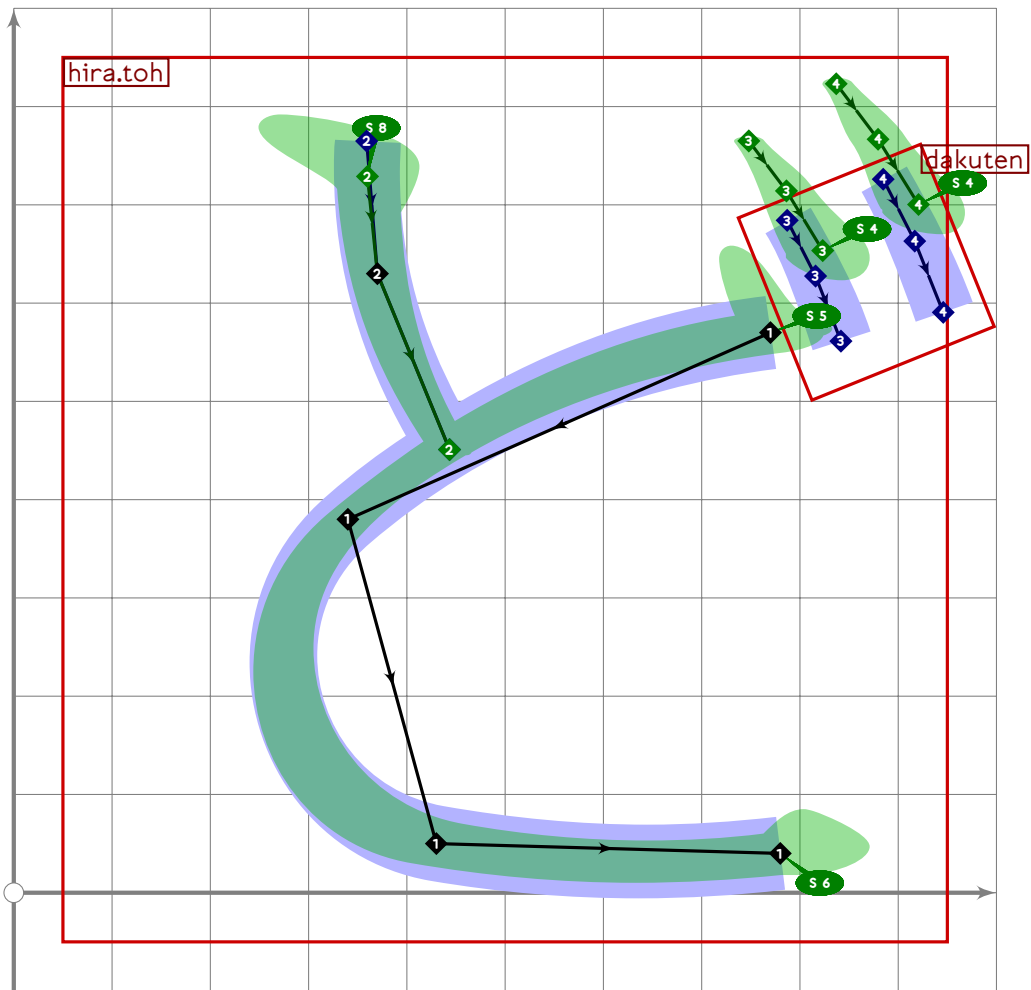


```

598 % hiragana "de"
599 begint Suglyph("uni3067",103);
600 tsu_curve.hira.te;
601 tsu_curve.dakuten(identity shifted (770,440));
602 tsu_render;
603 endsuglyph;
604
605 % hiragana "to"
606 begint Suglyph("uni3068",104);
607 tsu_curve.hira.toh;
608 tsu_render;
609 endsuglyph;
610

```

[see page 68]



```

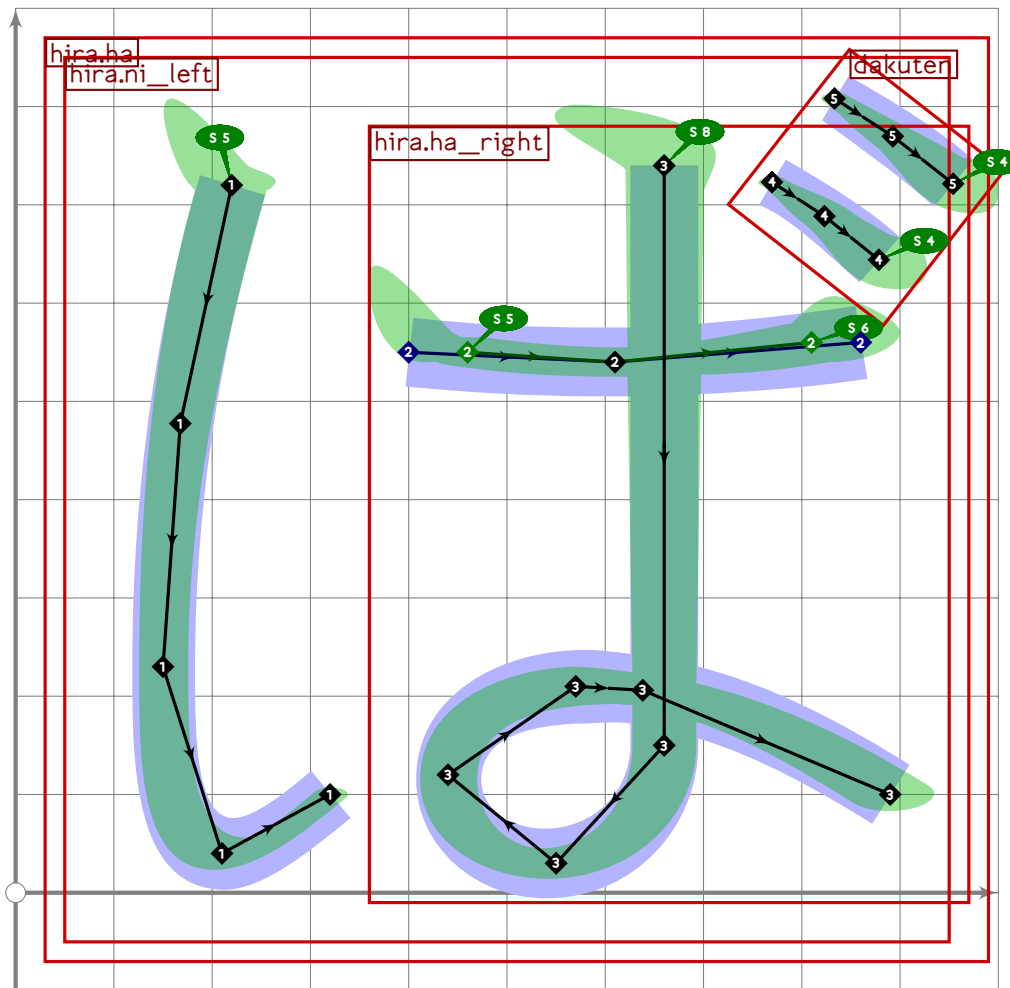
611 % hiragana "do"
612 begintsuglyph("uni3069",105);
613 tsu_curve.hira.toh;
614 replace_strokep(0,subpath (0,infinity) of oldp);
615 tsu_curve.dakuten(identity rotated (-18*10*mincho)
616   shifted ((860,650) shifted (100*mincho*(dir 110))));
617 tsu_render;
618 endtsuglyph;
619
620 % hiragana "na"
621 begintsuglyph("uni306A",106);
622 tsu_curve.hira.na;
623 tsu_render;
624 endtsuglyph;
625
626 % hiragana "ni"
627 begintsuglyph("uni306B",107);
628 tsu_curve.hira.ni;
629 tsu_render;
630 endtsuglyph;
631

```

[see page 69]

[see page 70]

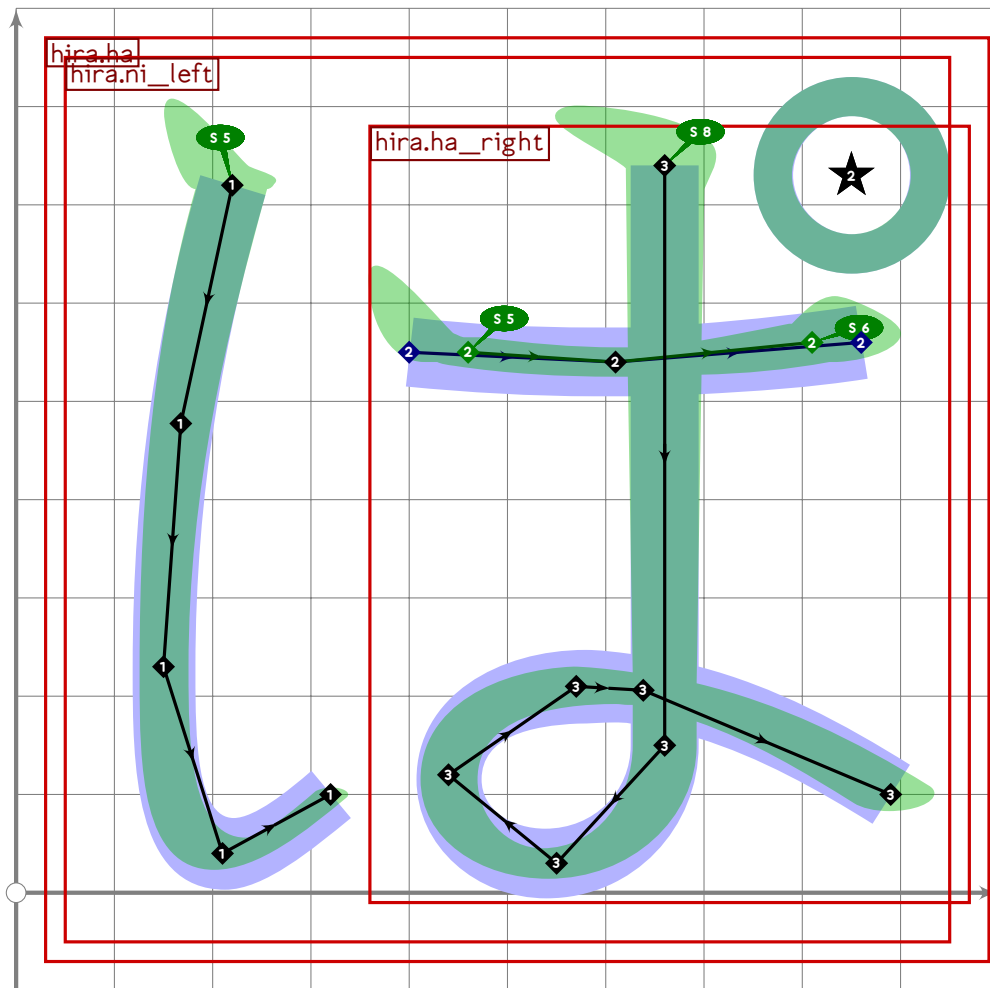
```
632 % hiragana "nu"
633 begintsuglyph("uni306C",108); [see page 71]
634 tsu_curve.hira.nu;
635 tsu_render;
636 endsuglyph;
637
638 % hiragana "ne"
639 begintsuglyph("uni306D",109); [see page 72]
640 tsu_curve.hira.ne;
641 tsu_render;
642 endsuglyph;
643
644 % hiragana "no"
645 begintsuglyph("uni306E",110); [see page 73]
646 tsu_curve.hira.no;
647 tsu_render;
648 endsuglyph;
649
650 % hiragana "ha"
651 begintsuglyph("uni306F",111); [see page 74]
652 tsu_curve.hira.ha;
653 tsu_render;
654 endsuglyph;
655
```



```

656 % hiragana "ba"
657 begint Suglyph("uni3070",112);
658 tsu_curve.hira.ha;
659 tsu_curve.dakuten(identity rotated 12 shifted (850,730));
660 tsu_render;
661 endsuglyph;
662

```

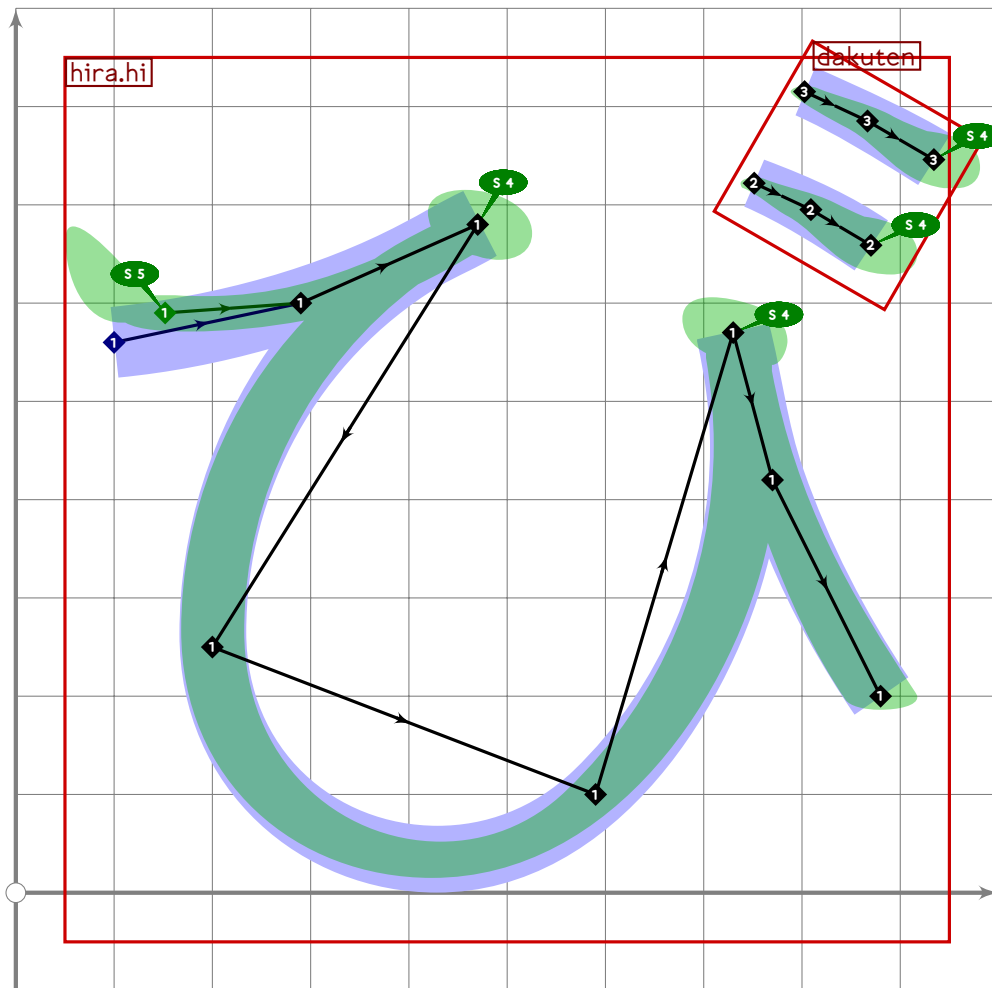


```

663 % hiragana "pa"
664 begint Suglyph("uni3071",113);
665   tsu_curve.hira.ha;
666   tsu_curve.handakuten((850,730));
667   tsu_render;
668 endsuglyph;
669
670 % hiragana "hi"
671 begint Suglyph("uni3072",114);
672   tsu_curve.hira.hi;
673   tsu_render;
674 endsuglyph;
675

```

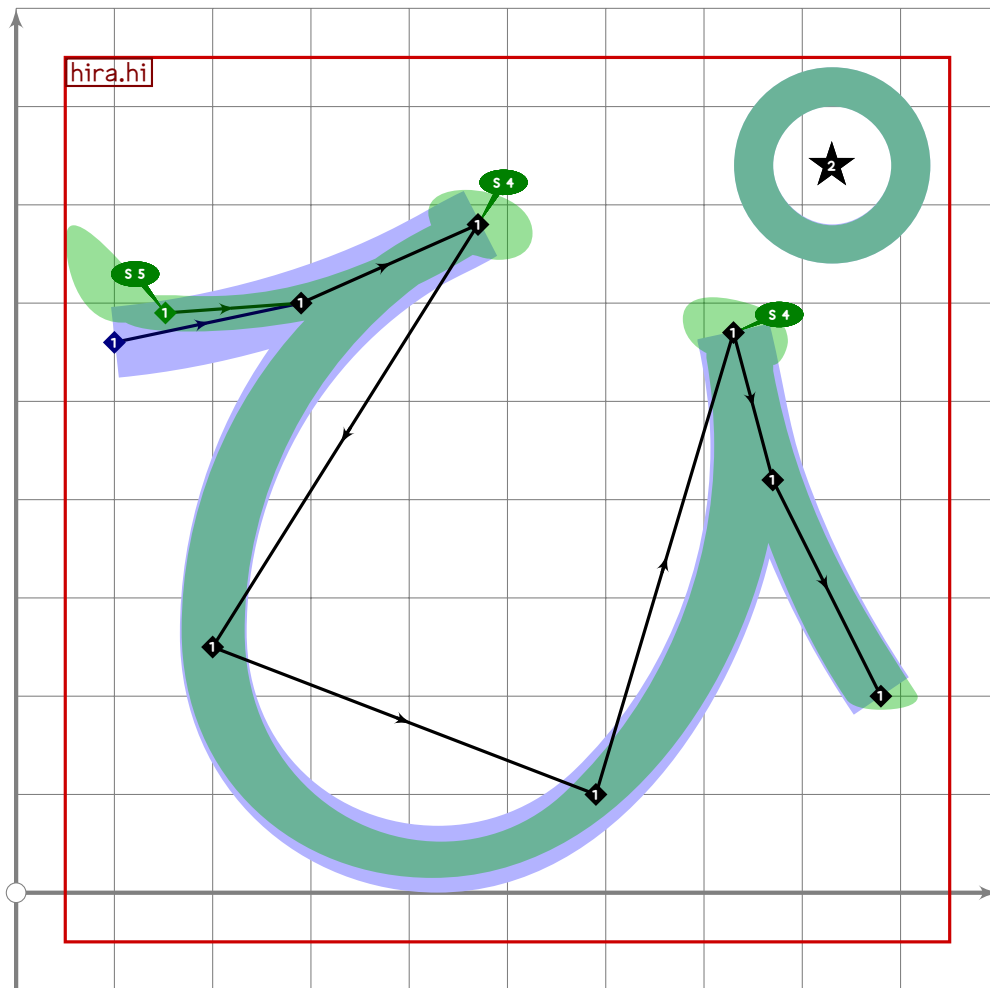
[see page 75]



```

676 % hiragana "bi"
677 begint Suglyph("uni3073";115);
678 tsu_curve.hira.hi;
679 tsu_curve.dakuten(identity rotated 20 shifted (830,740));
680 tsu_render;
681 endsuglyph;
682

```

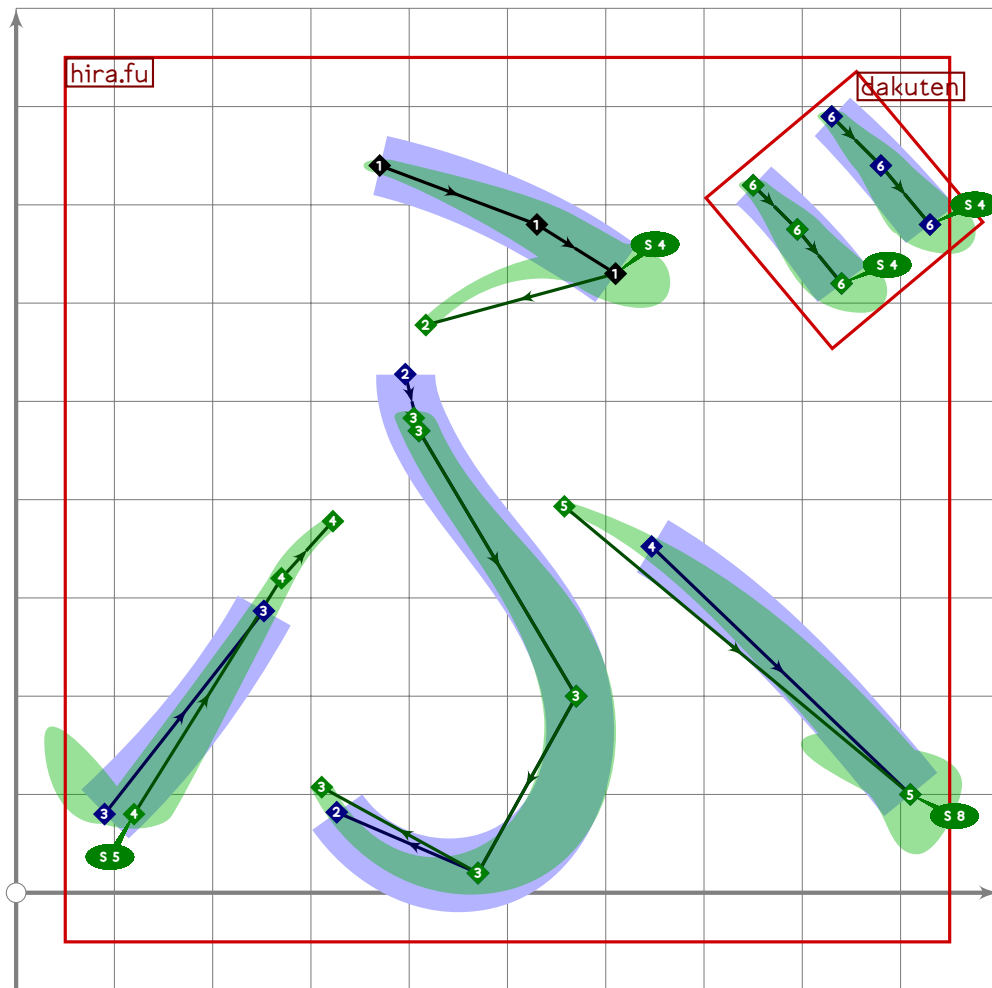



```

683 % hiragana "pi"
684 begint Suglyph("uni3074";116);
685   tsu_curve.hira.hi;
686   tsu_curve.handakuten((830,740));
687   tsu_render;
688 endsuglyph;
689
690 % hiragana "fu"
691 begint Suglyph("uni3075";117);
692   tsu_curve.hira.fu;
693   tsu_render;
694 endsuglyph;
695

```

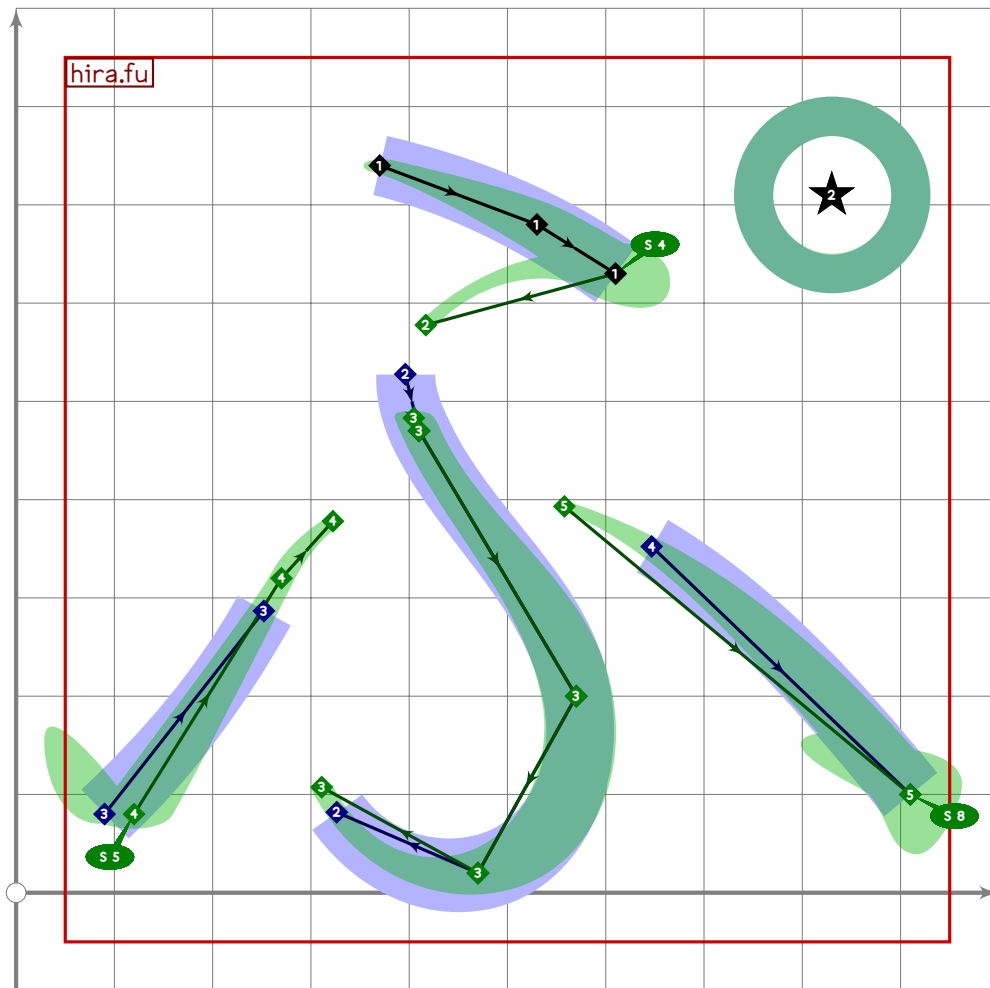
[see page 76]



```

696 % hiragana "bu"
697 begint Suglyph("uni3076";118);
698 tsu_curve.hira.fu;
699 tsu_curve.dakuten(identity shifted (830,710));
700 tsu_render;
701 endsuglyph;
702

```

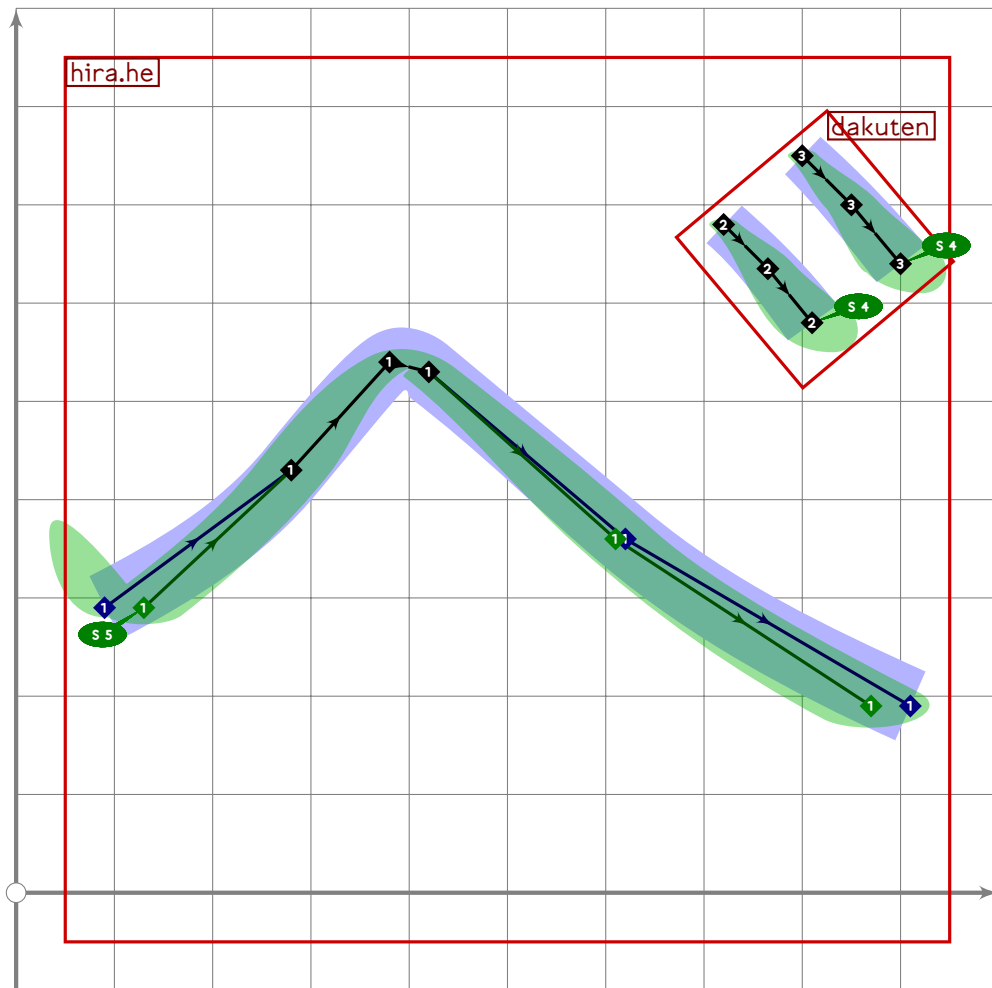


```

703 % hiragana "pu"
704 begintsuglyph("uni3077",119);
705 tsu_curve.hira.fu;
706 tsu_curve.handakuten((830,710));
707 tsu_render;
708 endsuglyph;
709
710 % hiragana "he"
711 begintsuglyph("uni3078",120);
712 tsu_curve.hira.he;
713 tsu_render;
714 endsuglyph;
715

```

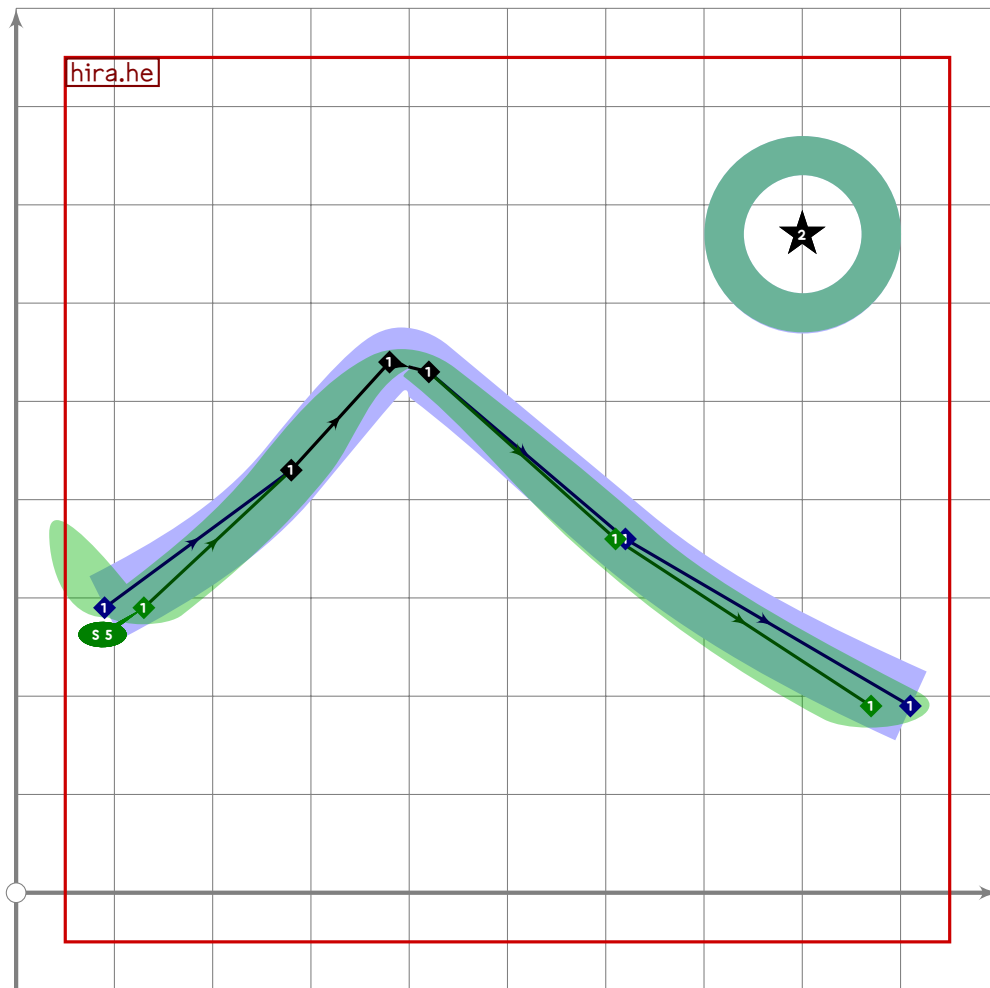
[see page 77]



```

716 % hiragana "be"
717 begint Suglyph("uni3079";121);
718 tsu_curve.hira.he;
719 tsu_curve.dakuten(identity shifted (800,670));
720 tsu_render;
721 endsuglyph;
722

```

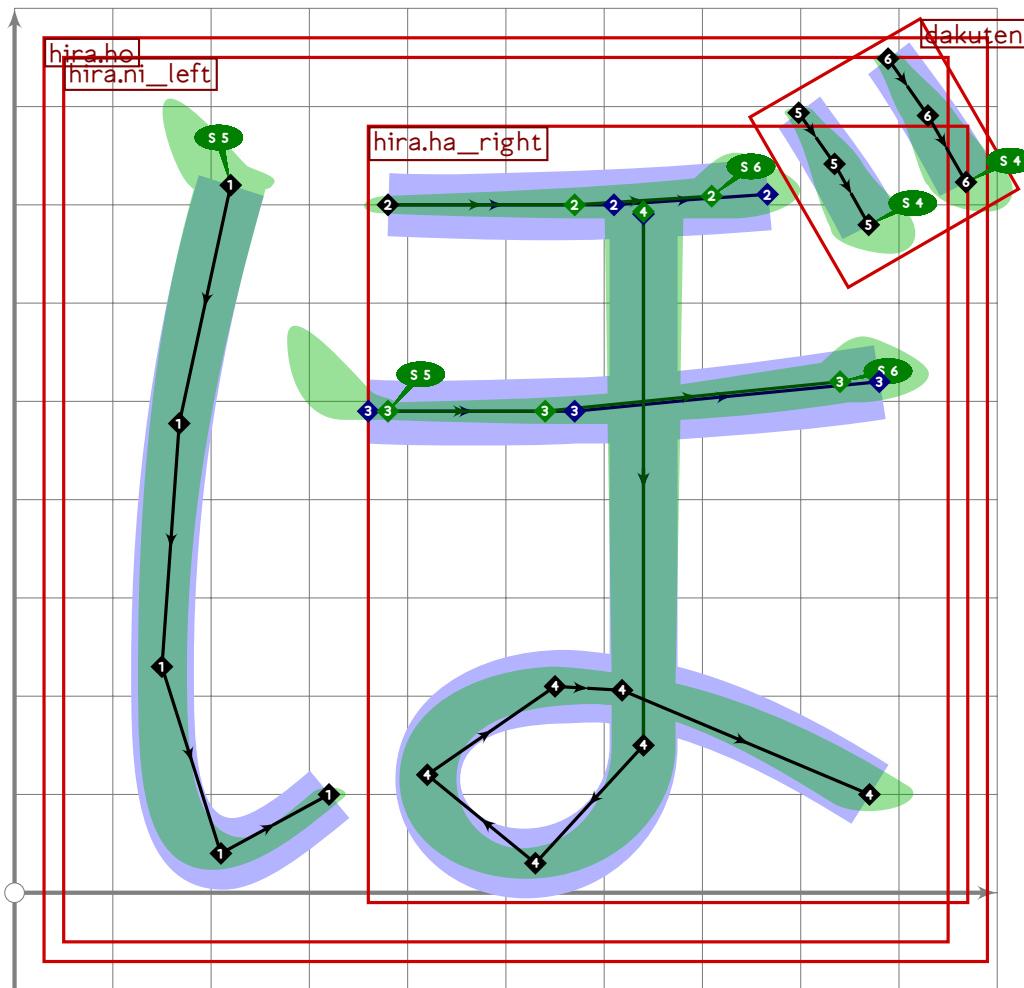


```

723 % hiragana "pe"
724 begintsuglyph("uni307A";122);
725 tsu_curve.hira.he;
726 tsu_curve.handakuten((800,670));
727 tsu_render;
728 endsuglyph;
729
730 % hiragana "ho"
731 begintsuglyph("uni307B";123);
732 tsu_curve.hira.ho;
733 tsu_render;
734 endsuglyph;
735

```

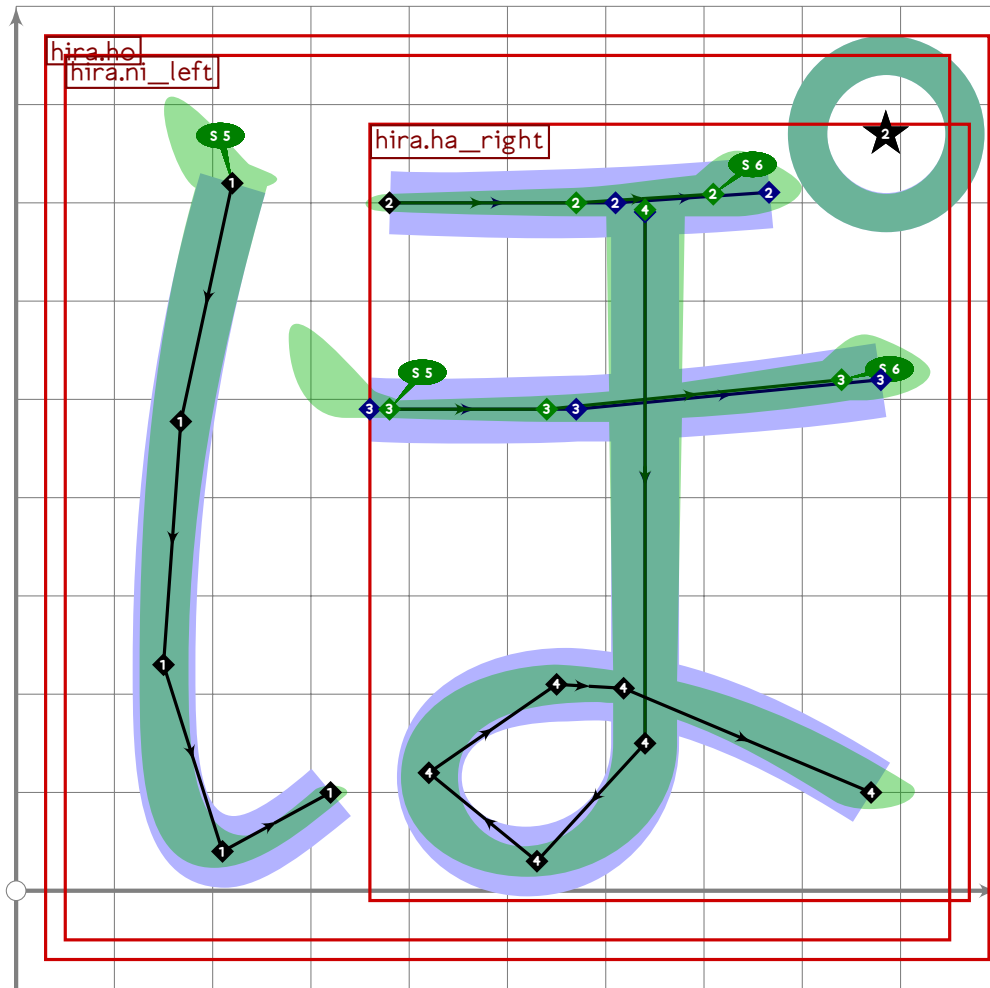
[see page 78]



```

736 % hiragana "bo"
737 beginstuglyph("uni307C",124);
738 tsu_curve.hira.ho;
739 replace_strokep(-2,subpath (0,1.65-0.07*mincho) of oldp);
740 replace_strokep(0,oldp shifted (-20,0));
741 tsu_curve.dakuten(identity rotated -10 shifted (875,770));
742 tsu_render;
743 endstuglyph;
744

```



```

745 % hiragana "po"
746 begintsuglyph("uni307D",125);
747 tsu_curve.hira.ho;
748 replace_stroke(-2,subpath (0,1.65-0.07*mincho) of oldp);
749 replace_stroke(0,oldp shifted (-20,0));
750 tsu_curve.handakuten((885,770));
751 tsu_render;
752 endtsuglyph;
753
754 % hiragana "ma"
755 begintsuglyph("uni307E",126);
756 tsu_curve.hira.ma;
757 tsu_render;
758 endtsuglyph;
759
760 % hiragana "mi"
761 begintsuglyph("uni307F",127);
762 tsu_curve.hira.mi;
763 tsu_render;
764 endtsuglyph;
765

```

[see page 79]

[see page 81]

```

766 % hiragana "mu"
767 begintsuglyph("uni3080";128);
768 tsu_curve.hira.mu;
769 tsu_render;
770 endtsuglyph;

```

[see page 82]

```

771
772 % hiragana "me"
773 begintsuglyph("uni3081";129);
774 tsu_curve.hira.me;
775 tsu_render;
776 endtsuglyph;

```

[see page 83]

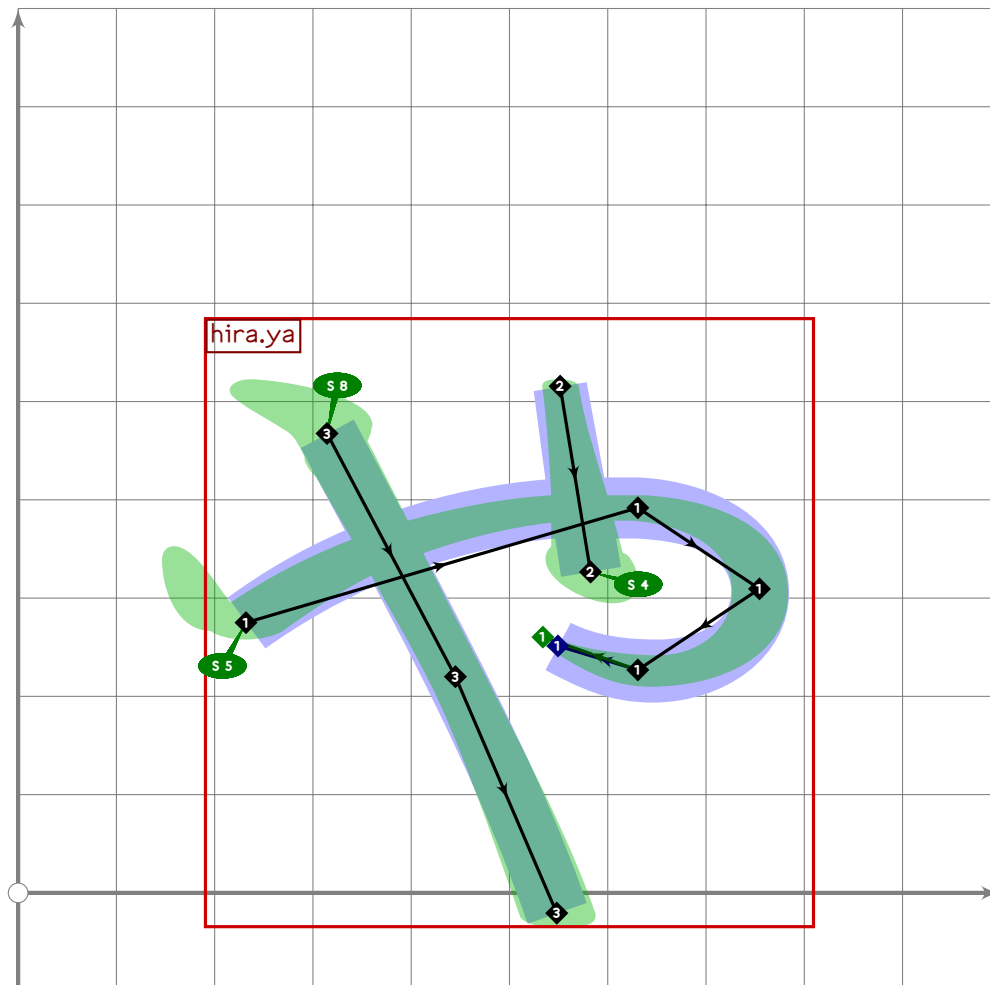
```

777
778 % hiragana "mo"
779 begintsuglyph("uni3082";130);
780 tsu_curve.hira.mo;
781 tsu_render;
782 endtsuglyph;

```

[see page 84]

783



```

784 % hiragana "small ya"
785 begintsuglyph("uni3083";131);
786 tsu_xform(tsu_xf.smallkana)(tsu_curve.hira.ya);

```

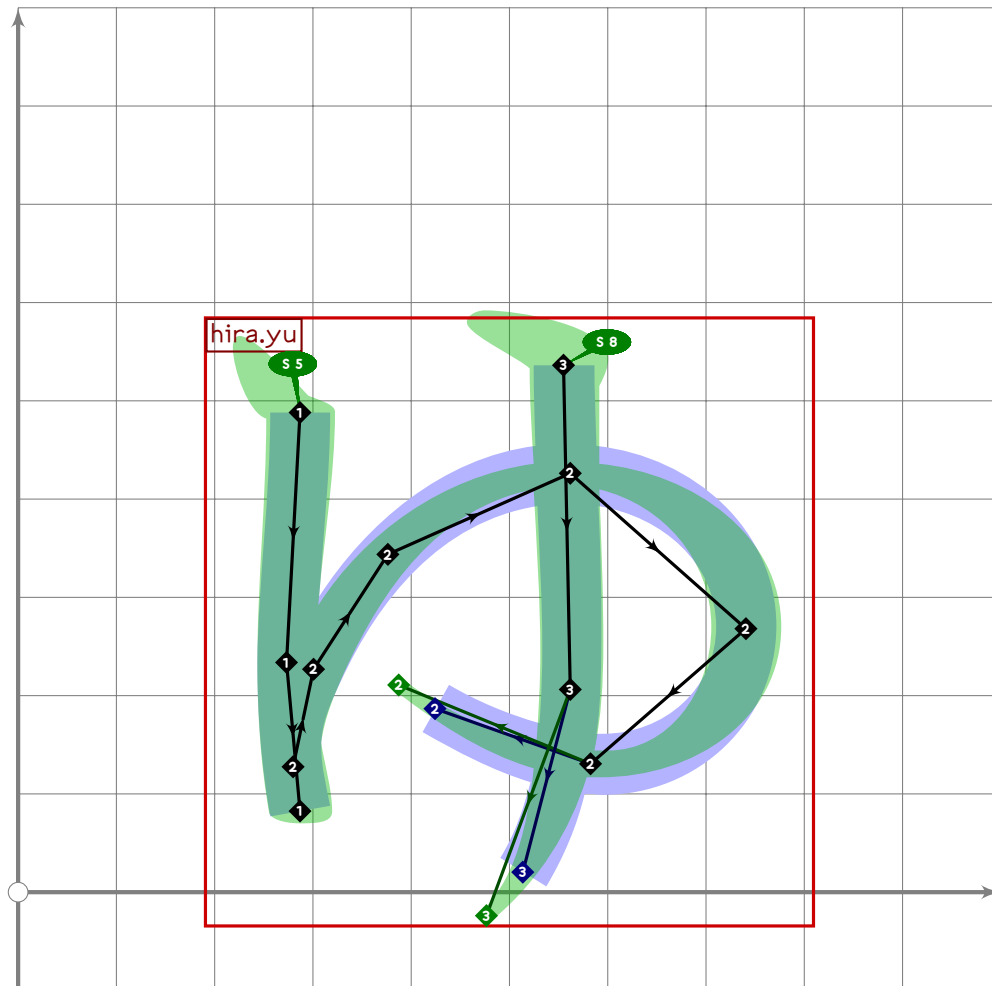


```

787 tsu_render;
788 endtsuglyph;
789
790 % hiragana "ya"
791 begintsuglyph("uni3084",132);
792 tsu_curve.hira.ya;
793 tsu_render;
794 endtsuglyph;
795

```

[see page 85]

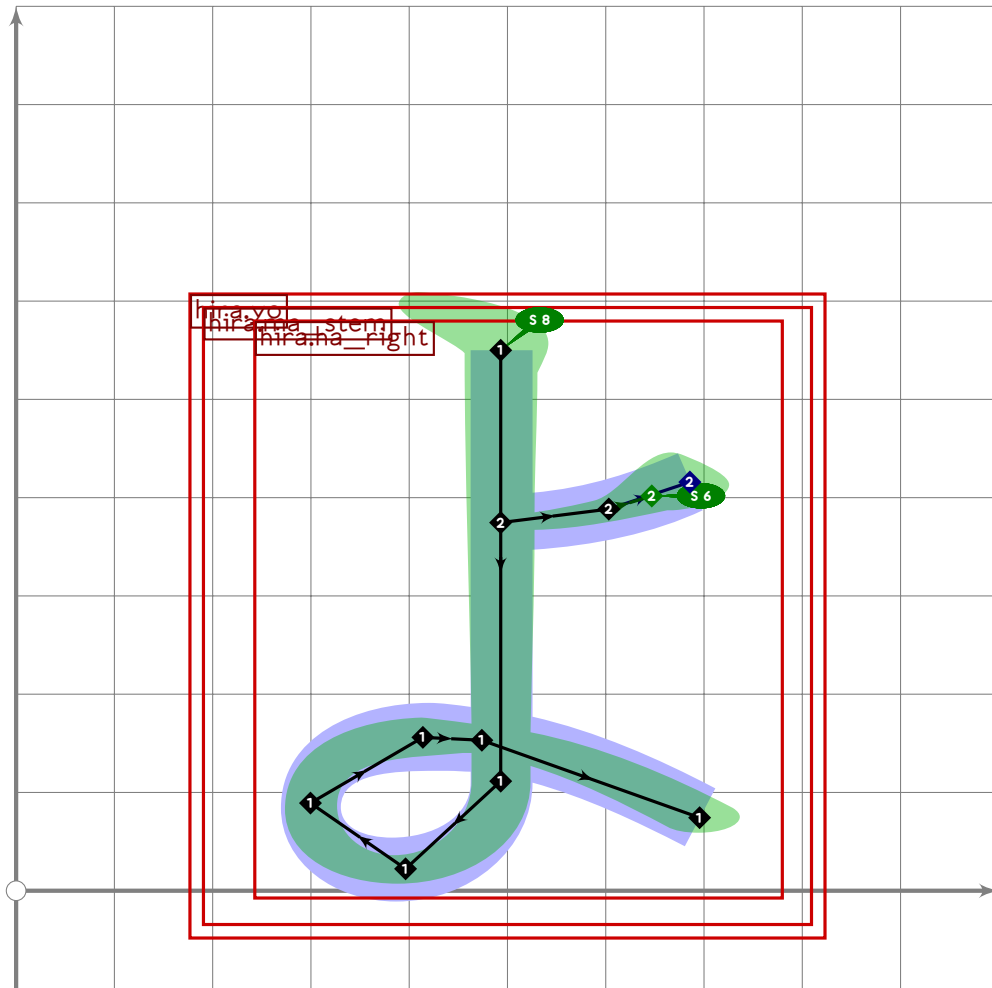


```

796 % hiragana "small yu"
797 begintsuglyph("uni3085",133);
798 tsu_xform(tsu_xf.smallkana)(tsu_curve.hira.yu);
799 tsu_render;
800 endtsuglyph;
801
802 % hiragana "yu"
803 begintsuglyph("uni3086",134);
804 tsu_curve.hira.yu;
805 tsu_render;
806 endtsuglyph;
807

```

[see page 86]



```

808 % hiragana "small yo"
809 begint Suglyph("uni3087",135);
810 tsu_xform(tsu_xf.smallkana)(tsu_curve.hira.yo);
811 tsu_render;
812 endtsuglyph;

```

813

```

814 begint Suglyph("uni3088",136);
815 tsu_curve.hira.yo;
816 tsu_render;
817 endtsuglyph;

```

[see page 87]

818

```

819 % hiragana "ra"
820 begint Suglyph("uni3089",137);
821 tsu_curve.hira.ra;
822 tsu_render;
823 endtsuglyph;

```

[see page 88]

824

```

825 % hiragana "ri"
826 begint Suglyph("uni308A",138);
827 tsu_curve.hira.ri;
828 tsu_render;

```

[see page 89]

```

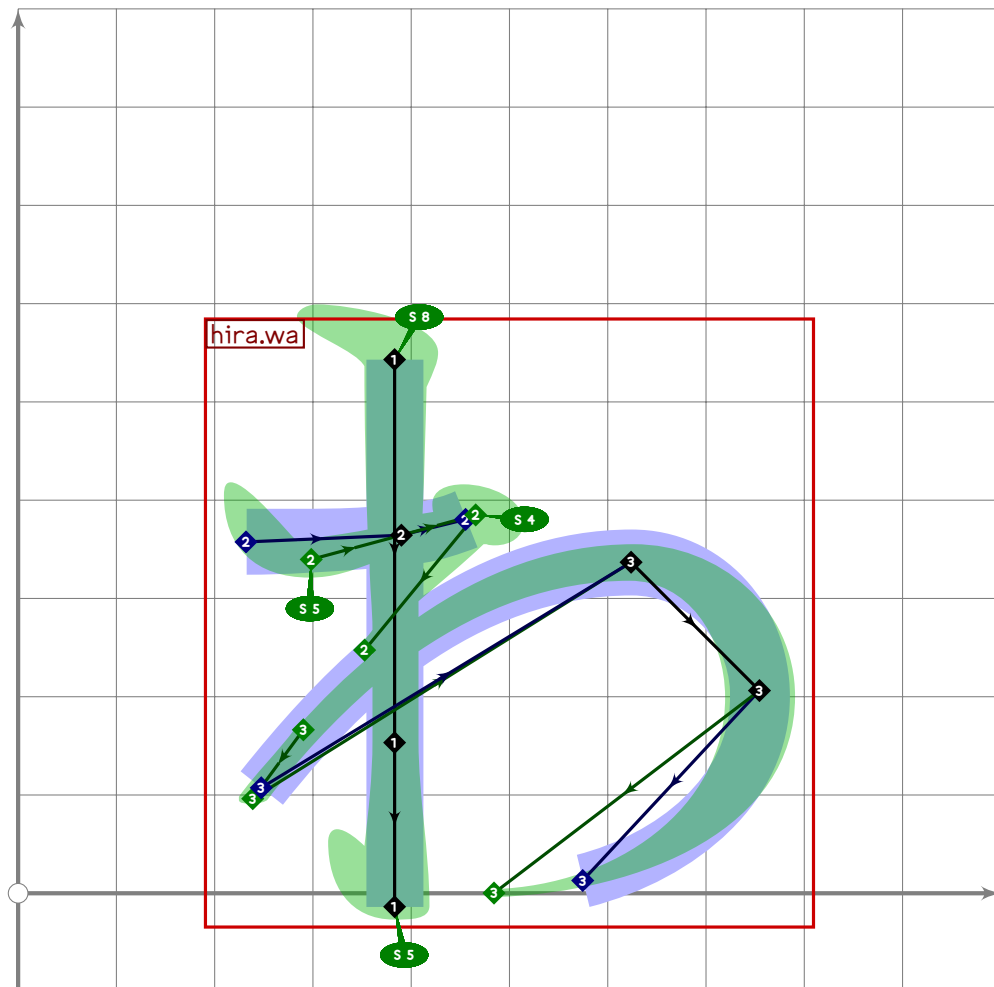
829 endtsuglyph;
830
831 % hiragana "ru"
832 begintsuglyph("uni308B",139);
833   tsu_curve.hira.ru;
834   tsu_render;
835 endtsuglyph;
836
837 % hiragana "re"
838 begintsuglyph("uni308C",140);
839   tsu_curve.hira.re;
840   tsu_render;
841 endtsuglyph;
842
843 % hiragana "ro"
844 begintsuglyph("uni308D",141);
845   tsu_curve.hira.ro;
846   tsu_render;
847 endtsuglyph;
848

```

[see page 90]

[see page 91]

[see page 92]



```

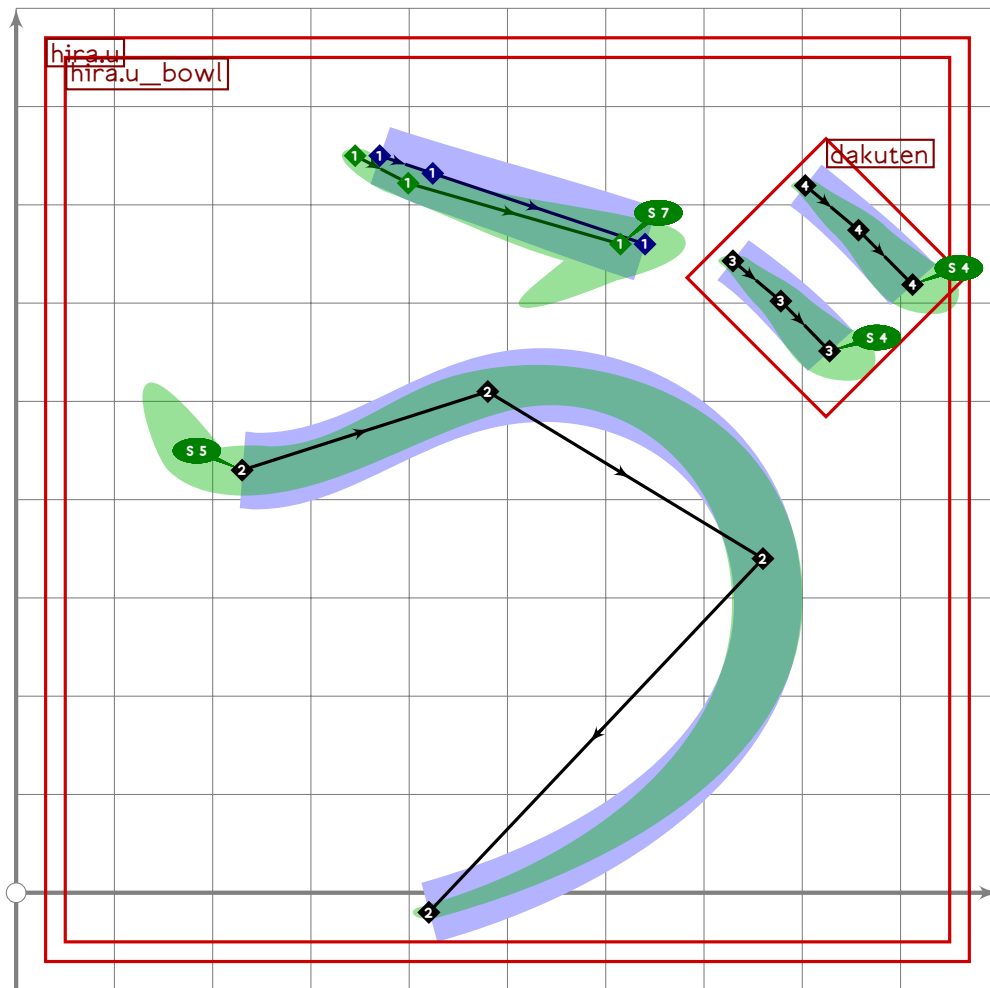
849 % hiragana "small wa"

```

```

850 begintsuglyph("uni308E",142);
851 tsu_xform(tsu_xf.smallkana)(tsu_curve.hira.wa);
852 tsu_render;
853 endtsuglyph;
854
855 % hiragana "wa"
856 begintsuglyph("uni308F",143); [see page 93]
857 tsu_curve.hira.wa;
858 tsu_render;
859 endtsuglyph;
860
861 % obsolete hiragana "wi"
862 begintsuglyph("uni3090",144); [see page 94]
863 tsu_curve.hira.wi;
864 tsu_render;
865 endtsuglyph;
866
867 % obsolete hiragana "we"
868 begintsuglyph("uni3091",145); [see page 95]
869 tsu_curve.hira.we;
870 tsu_render;
871 endtsuglyph;
872
873 % hiragana "wo"
874 begintsuglyph("uni3092",146); [see page 96]
875 tsu_curve.hira.wo;
876 tsu_render;
877 endtsuglyph;
878
879 % hiragana "n"
880 begintsuglyph("uni3093",147); [see page 97]
881 tsu_curve.hira.n;
882 tsu_render;
883 endtsuglyph;
884

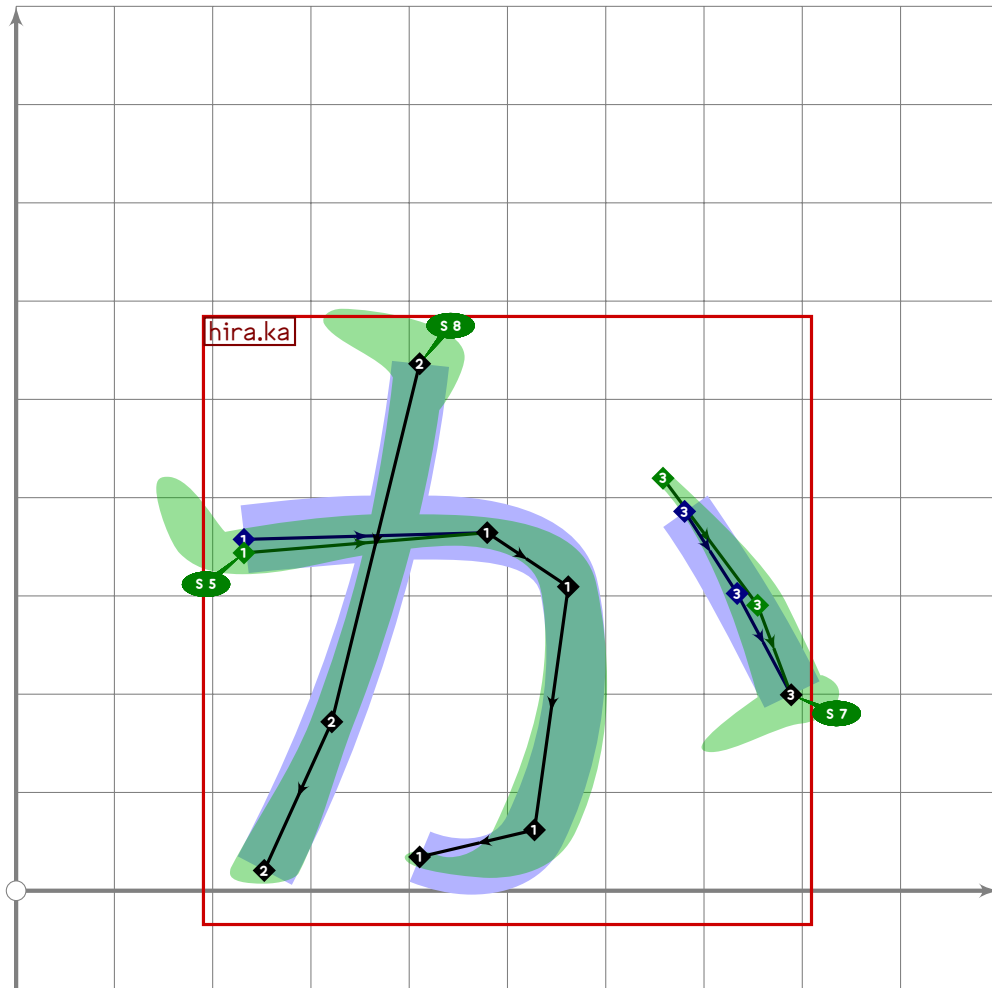
```



```

885 % hiragana "vu"
886 begint Suglyph("uni3094",148);
887 tsu_curve.hira.u;
888 tsu_curve.dakuten(identity rotated 5 shifted (810,640));
889 tsu_render;
890 endsuglyph;
891

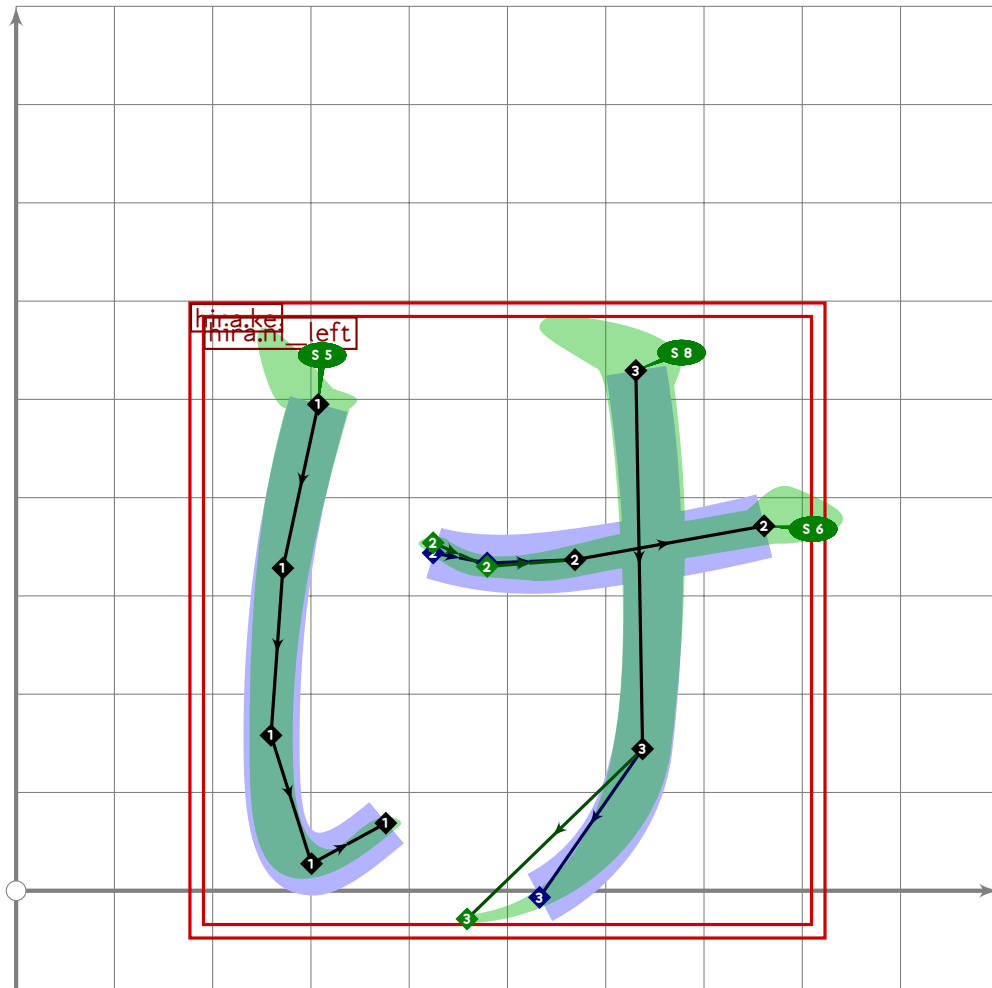
```



```

892 % hiragana "small ka"
893 begintuglyph("uni3095",149);
894 tsu_xform(tsu_xf.smallkana)(tsu_curve.hira.ka);
895 tsu_render;
896 endtuglyph;
897

```



```

898 % hiragana "small ke"
899 begint Suglyph("uni3096",150);
900 tsu_xform(tsu_xf.smallkana)(tsu_curve.hira.ke);
901 tsu_render;
902 endsuglyph;
903
904 % WARNING changing rescale setting
905 tsu_rescale_native_zero;
906

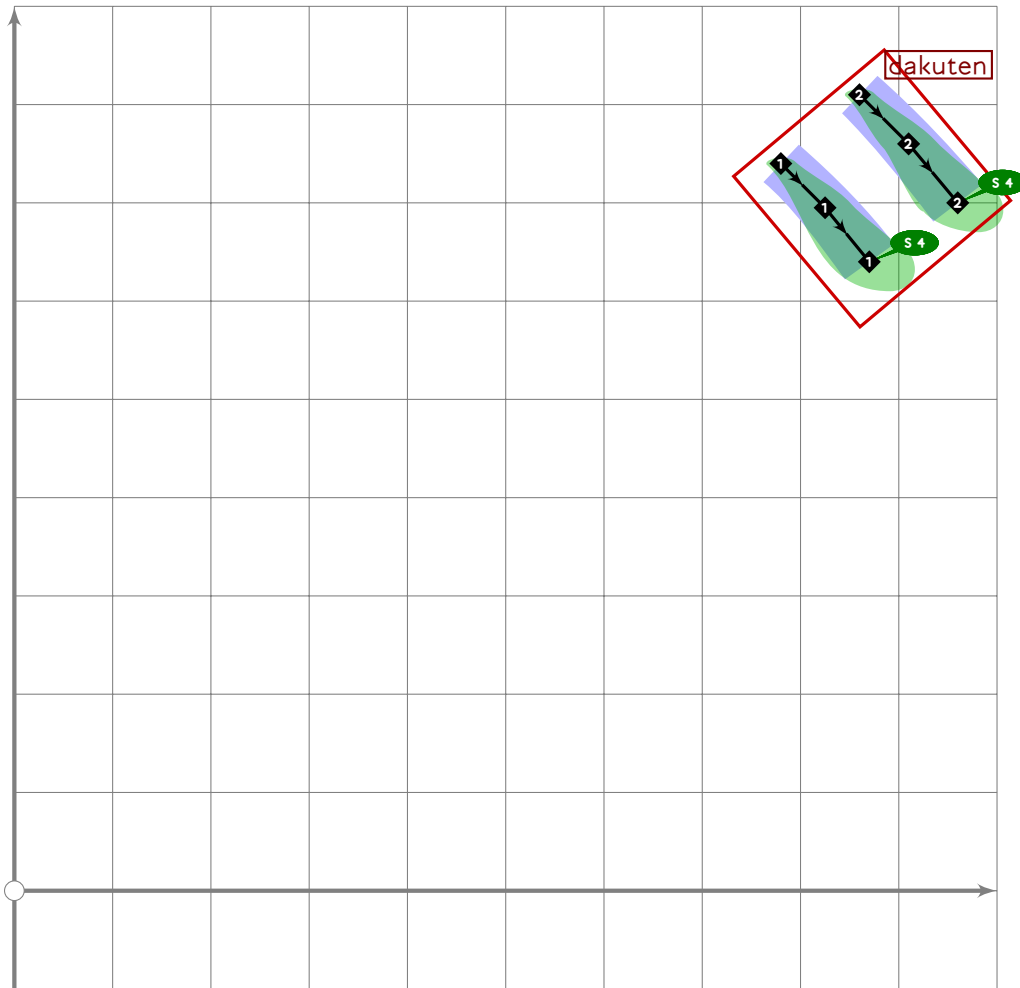
```



```
907 % combining dakuten
908 begintsuglyph("uni3099",153);
909 tsu_curve.dakuten(identity shifted (-140,730));
910 tsu_render;
911 endsuglyph;
912
```



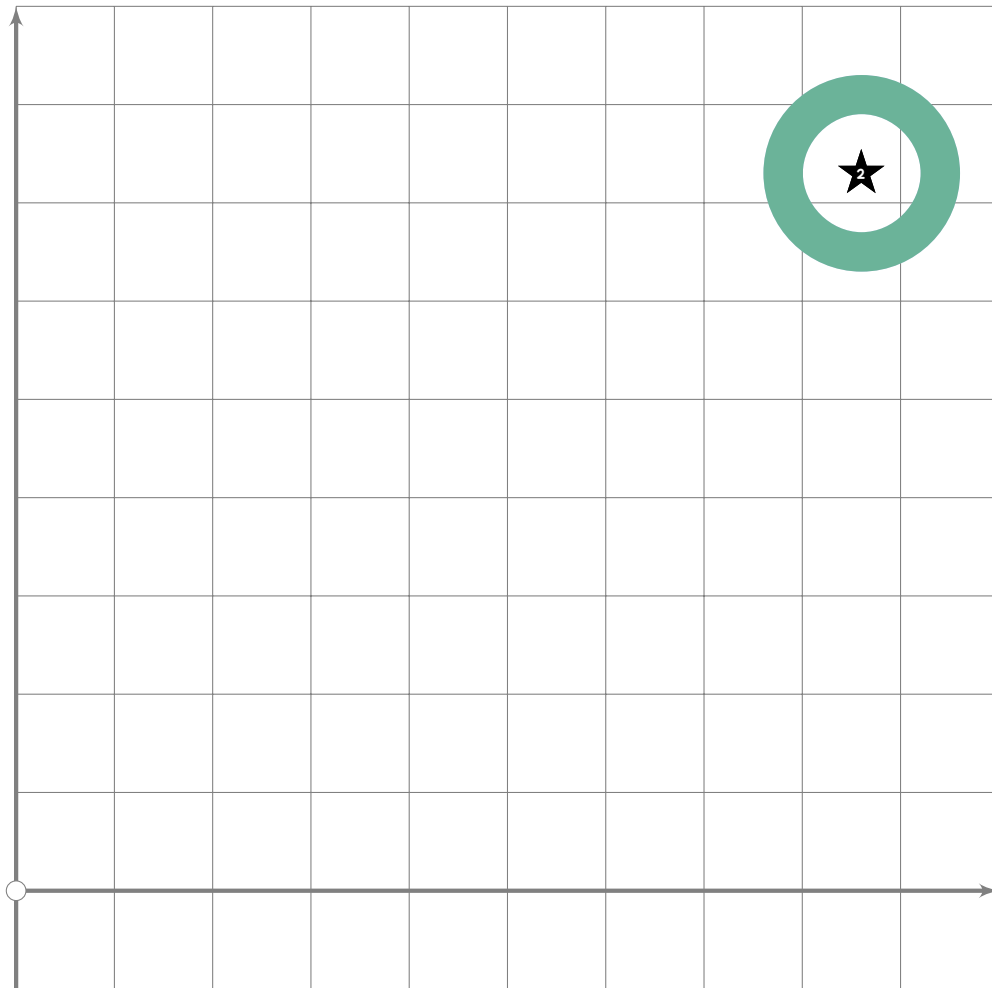

```
913 % combining handakuten
914 begintsuglyph("uni309A",154);
915 tsu_curve.handakuten((-140,730));
916 tsu_render;
917 endsuglyph;
918
919 % WARNING changing rescale setting
920 tsu_rescale_full;
921
```



```

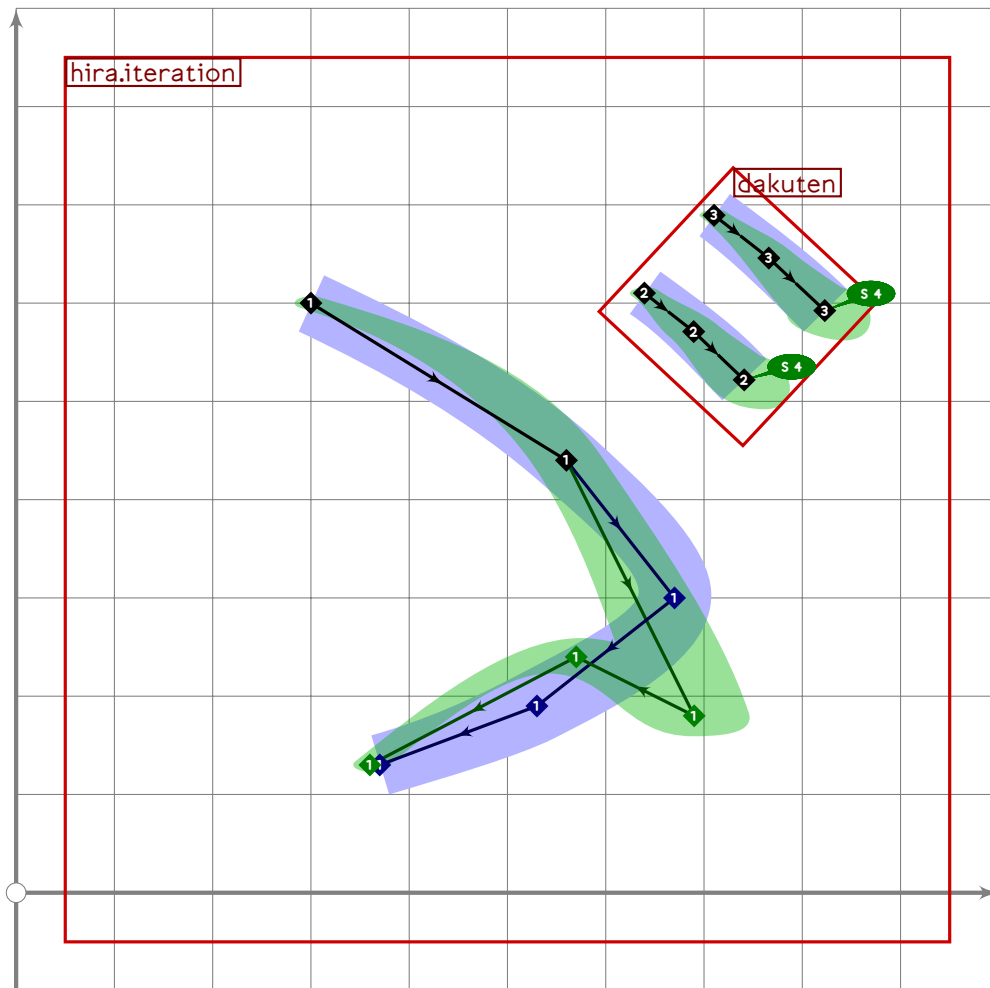
922 % dakuten alone
923 beginsuglyph("uni309B",155);
924   tsu_curve.dakuten(identity shifted (860,730));
925   tsu_render;
926 endsuglyph;
927

```



```
928 % handakuten alone
929 begintsuglyph("uni309C";156);
930 tsu_curve.handakuten((860,730));
931 tsu_render;
932 endsuglyph;
933
934 % hiragana "iteration mark"
935 begintsuglyph("uni309D";157);
936 tsu_curve.hira.iteration;
937 tsu_render;
938 endsuglyph;
939
```

[see page 98]



```

940 % hiragana "voiced iteration mark"
941 begintsuglyph("uni309E";158);
942   tsu_curve.hira.iteration;
943   tsu_curve.dakuten(identity rotated 7 shifted (720,610));
944   tsu_render;
945 endsuglyph;
946
947 % hiragana "yori ligature"
948 begintsuglyph("uni309F";159);
949   tsu_curve.hira.yori;
950   tsu_render;
951 endsuglyph;
952
953
954

```

[see page 99]

Katakana

```

955 % KATAKANA
956
957 % katakana double hyphen
958 begintsuglyph("uni30A0";160);

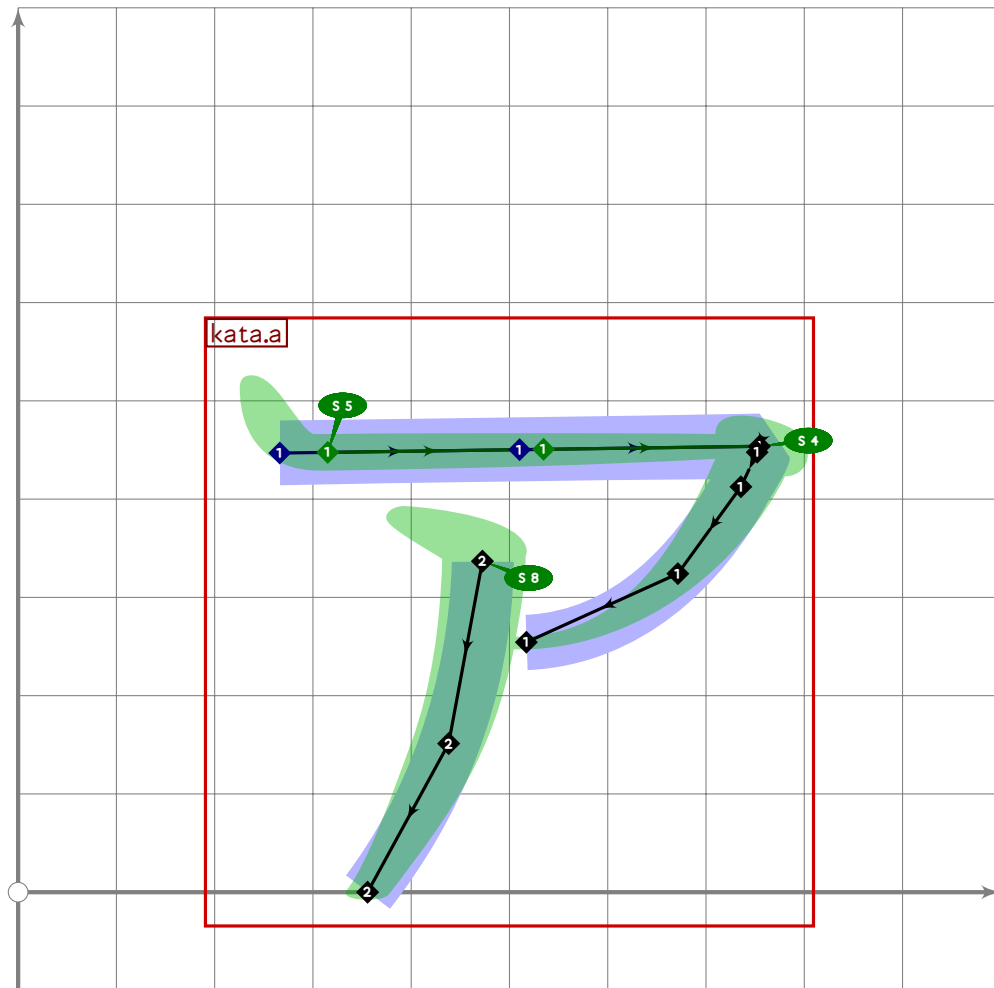
```

[see page 269]

```

959 tsu_curve.punct.dash.double_hyphen;
960 tsu_render;
961 endtsuglyph;
962

```

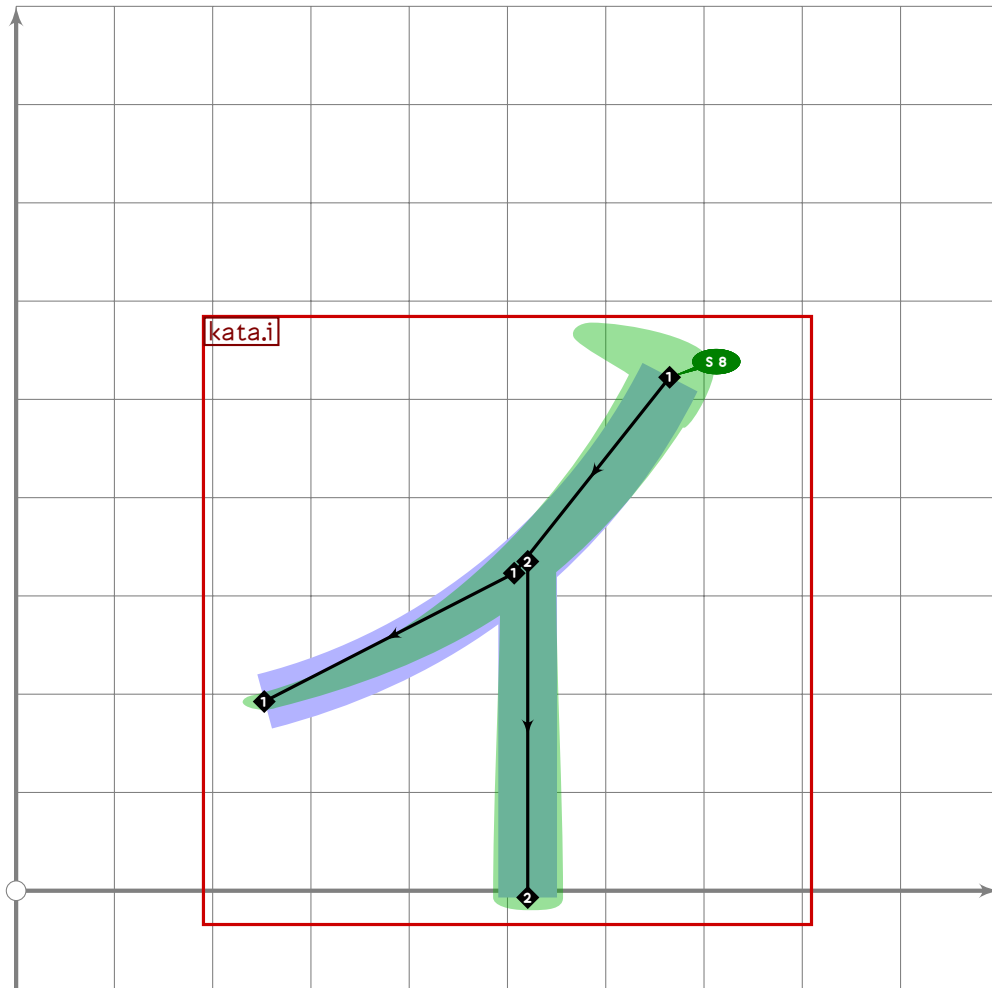


```

963 % katakana "small a"
964 begintsuglyph("uni30A1";161);
965 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.a);
966 tsu_render;
967 endtsuglyph;
968
969 % katakana "a"
970 begintsuglyph("uni30A2";162);
971 tsu_curve.kata.a;
972 tsu_render;
973 endtsuglyph;
974

```

[see page 103]

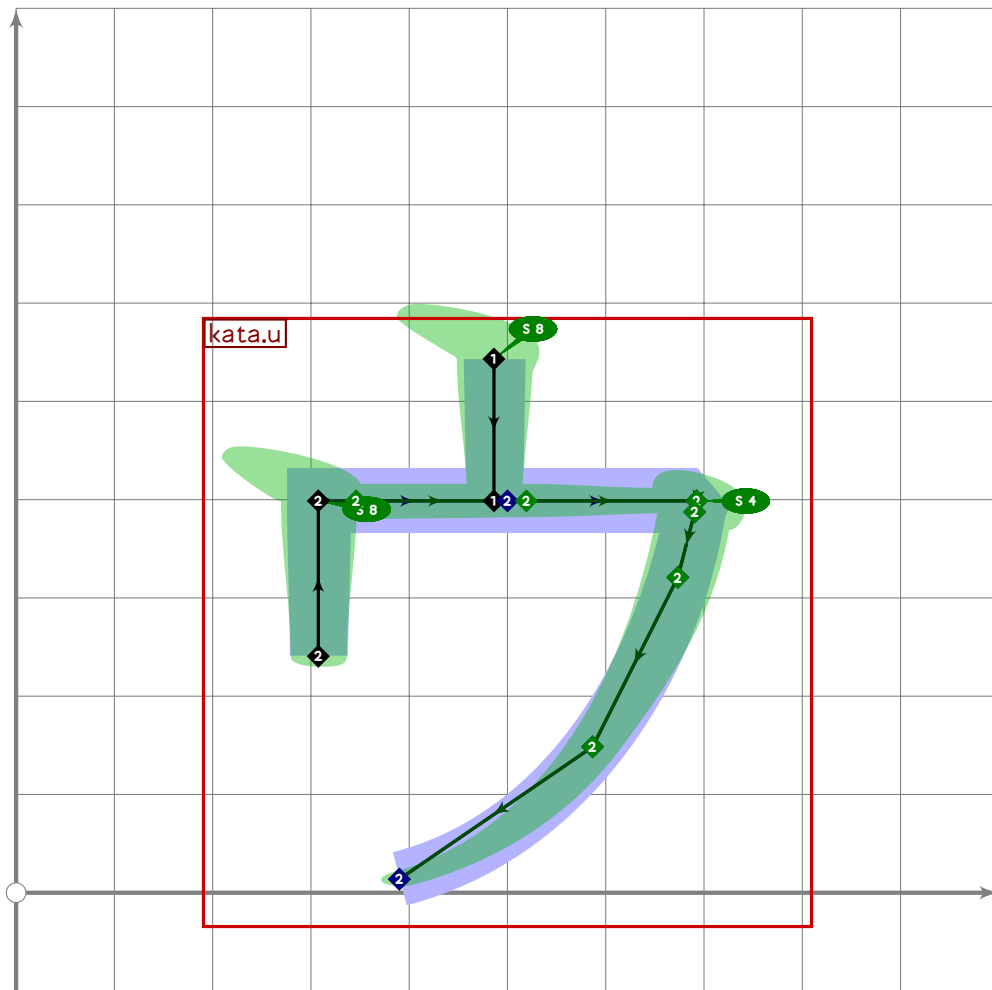


```

975 % katakana "small i"
976 begintsuglyph("uni30A3",163);
977 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.i);
978 tsu_render;
979 endsuglyph;
980
981 % katakana "i"
982 begintsuglyph("uni30A4",164);
983 tsu_curve.kata.i;
984 tsu_render;
985 endsuglyph;
986

```

[see page 104]

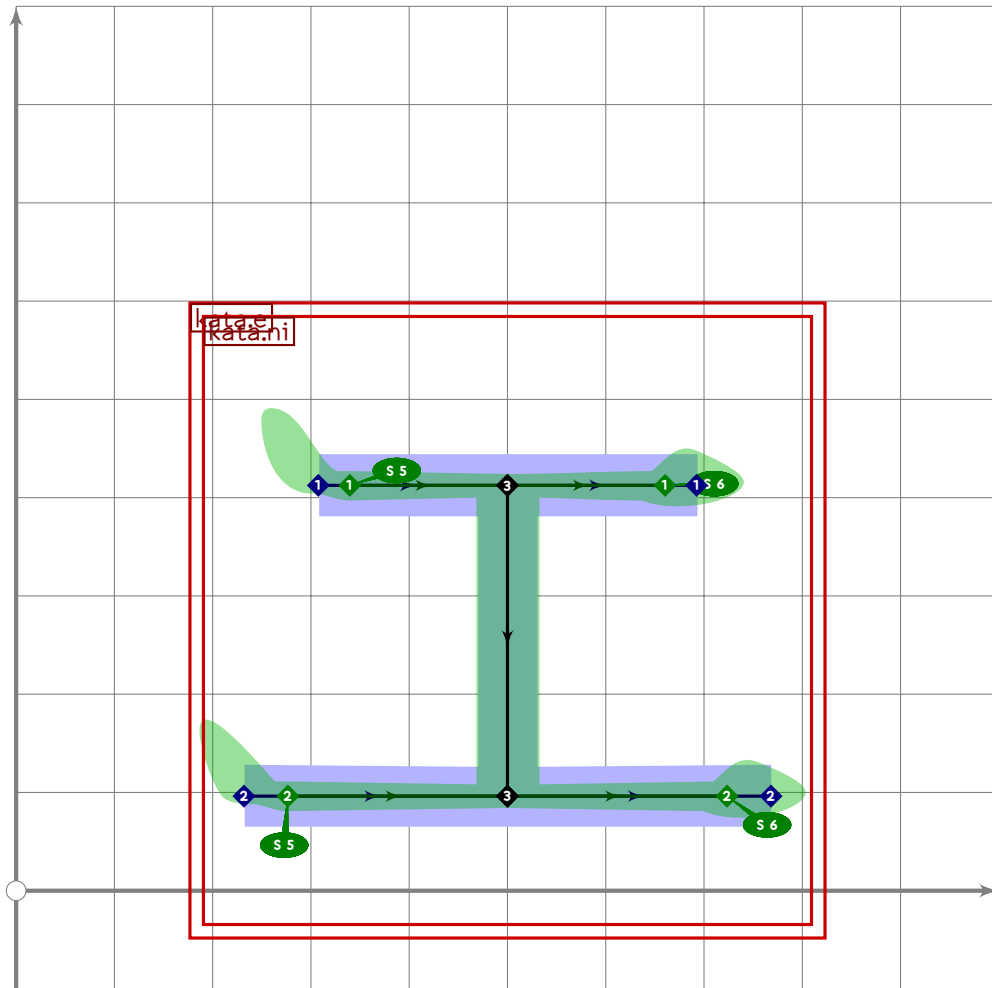


```

987 % katakana "small u"
988 begintsuglyph("uni30A5",165);
989 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.u);
990 tsu_render;
991 endsuglyph;
992
993 % katakana "u"
994 begintsuglyph("uni30A6",166);
995 tsu_curve.kata.u;
996 tsu_render;
997 endsuglyph;
998

```

[see page 105]

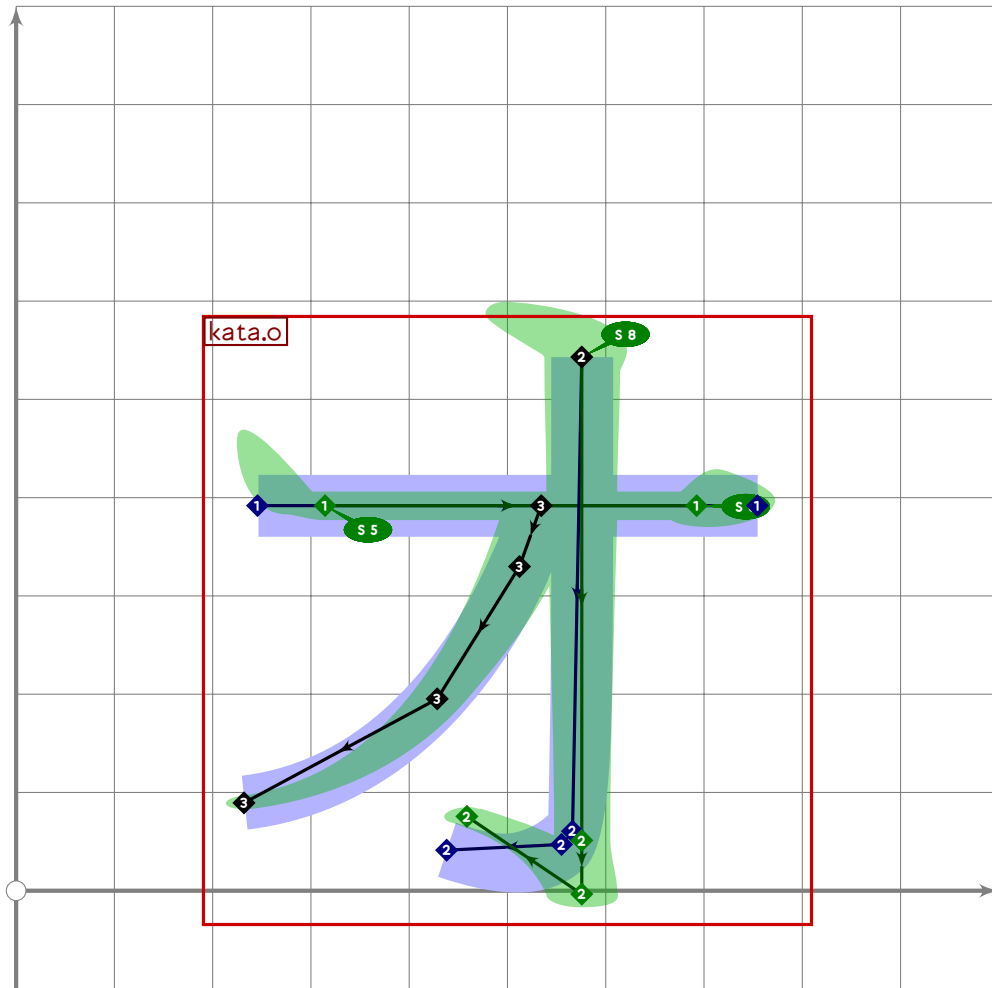


```

999 % katakana "small e"
1000 beginsuglyph("uni30A7",167);
1001 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.e);
1002 tsu_render;
1003 endsuglyph;
1004
1005 % katakana "e"
1006 beginsuglyph("uni30A8",168);
1007 tsu_curve.kata.e;
1008 tsu_render;
1009 endsuglyph;
1010

```

[see page 106]



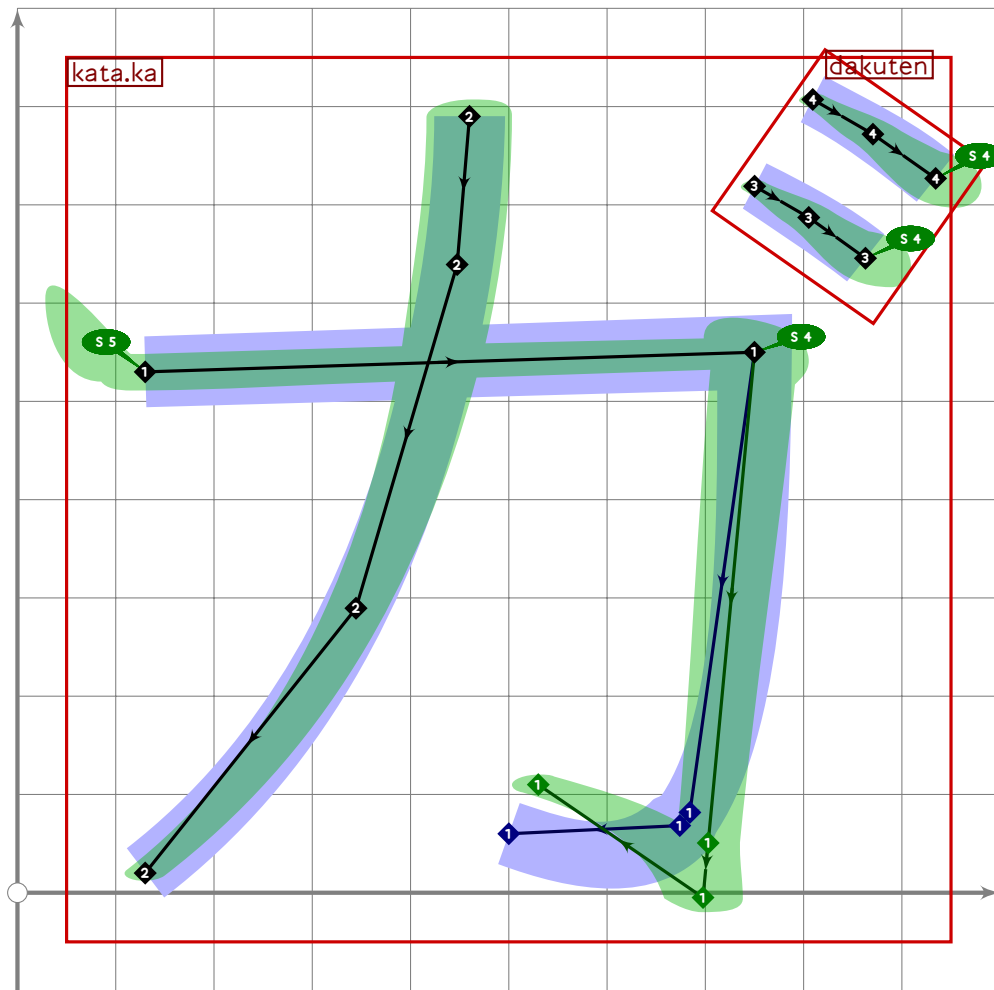
```

1011 % katakana "small o"
1012 begintsuglyph("uni30A9",169);
1013 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.o);
1014 tsu_render;
1015 endtsuglyph;
1016
1017 % katakana "o"
1018 begintsuglyph("uni30AA",170);
1019 tsu_curve.kata.o;
1020 tsu_render;
1021 endtsuglyph;
1022
1023 % katakana "ka"
1024 begintsuglyph("uni30AB",171);
1025 tsu_curve.kata.ka;
1026 tsu_render;
1027 endtsuglyph;
1028

```

[see page 107]

[see page 108]

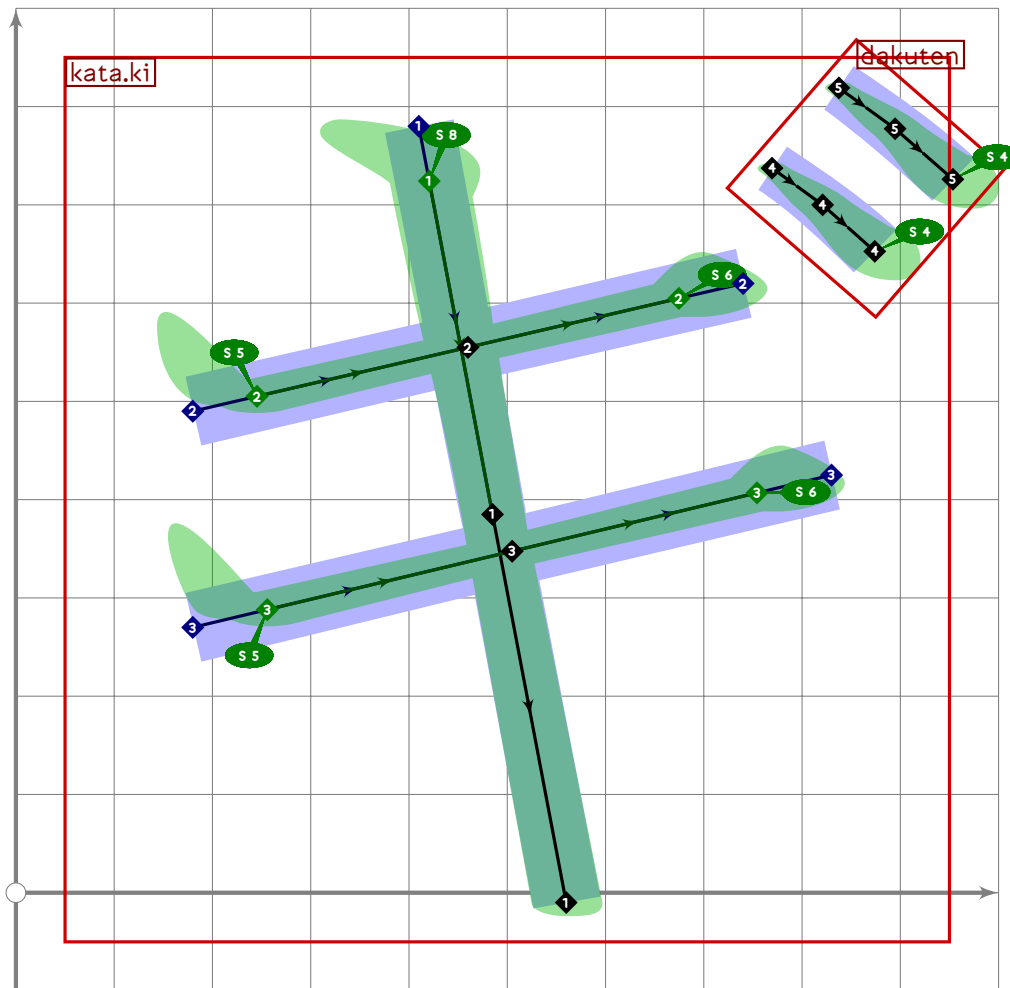


```

1029 % katakana "ga"
1030 begintsuglyph("uni30AC";172);
1031 tsu_curve.kata.ka;
1032 tsu_curve.dakuten(identity rotated 15 shifted (830,730));
1033 tsu_render;
1034 endsuglyph;
1035
1036 % katakana "ki"
1037 begintsuglyph("uni30AD";173);
1038 tsu_curve.kata.ki;
1039 tsu_render;
1040 endsuglyph;
1041

```

[see page 109]

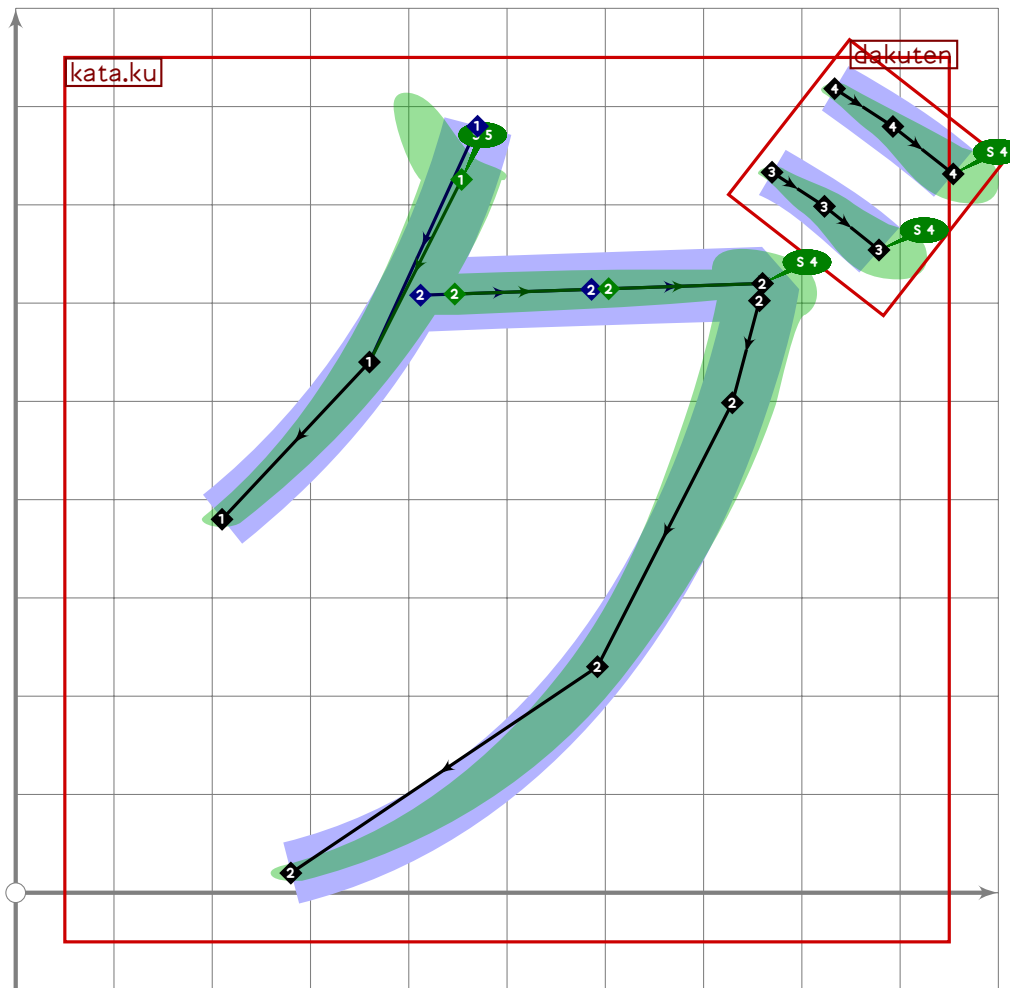


```

1042 % katakana "gi"
1043 begintsuglyph("uni30AE";174);
1044 tsu_curve.kata.ki;
1045 tsu_curve.dakuten(identity rotated 9 shifted (850,740));
1046 tsu_render;
1047 endsuglyph;
1048
1049 % katakana "ku"
1050 begintsuglyph("uni30AF";175);
1051 tsu_curve.kata.ku;
1052 tsu_render;
1053 endsuglyph;
1054

```

[see page 110]

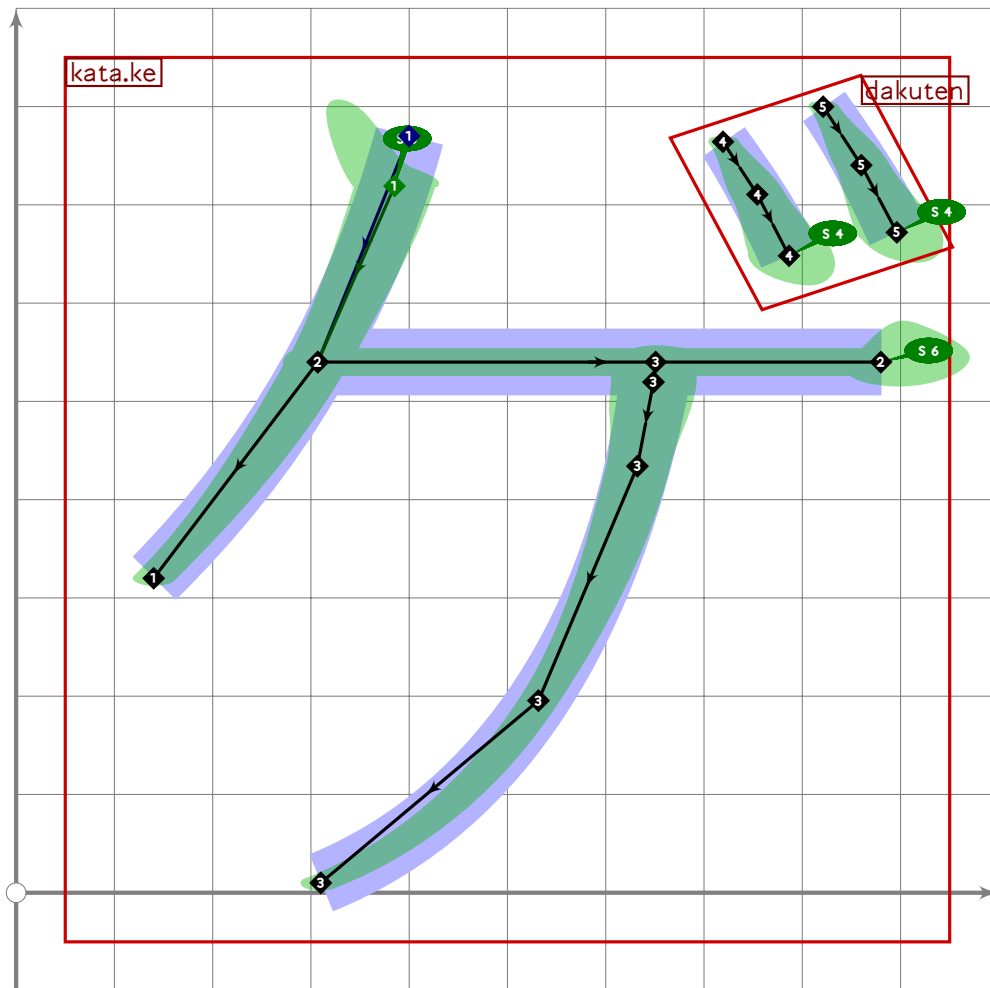


```

1055 % katakana "gu"
1056 begint Suglyph("uni30B0";176);
1057 tsu_curve.kata.ku;
1058 tsu_curve.dakuten(identity rotated 12 shifted (850,740));
1059 tsu_render;
1060 endsuglyph;
1061
1062 % katakana "ke"
1063 begint Suglyph("uni30B1";177);
1064 tsu_curve.kata.ke;
1065 tsu_render;
1066 endsuglyph;
1067

```

[see page 111]

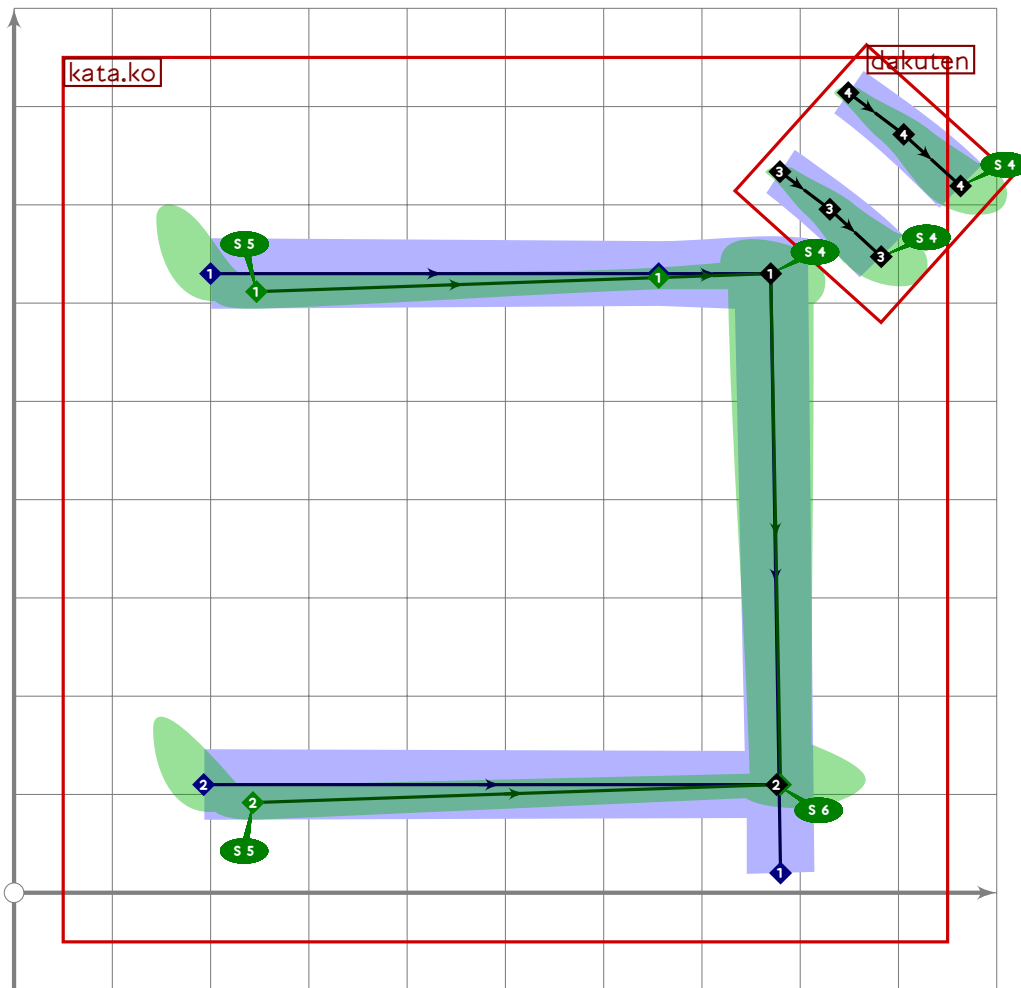


```

1068 % katakana "ge"
1069 begintsuglyph("uni30B2",178);
1070 tsu_curve.kata.ke;
1071 tsu_curve.dakuten(identity
1072     rotated -20 slanted -0.1 xyscaled (1.07,0.93) shifted (800,730));
1073 tsu_render;
1074 endtsuglyph;
1075
1076 % katakana "ko"
1077 begintsuglyph("uni30B3",179);
1078 tsu_curve.kata.ko;
1079 tsu_render;
1080 endtsuglyph;
1081

```

[see page 112]

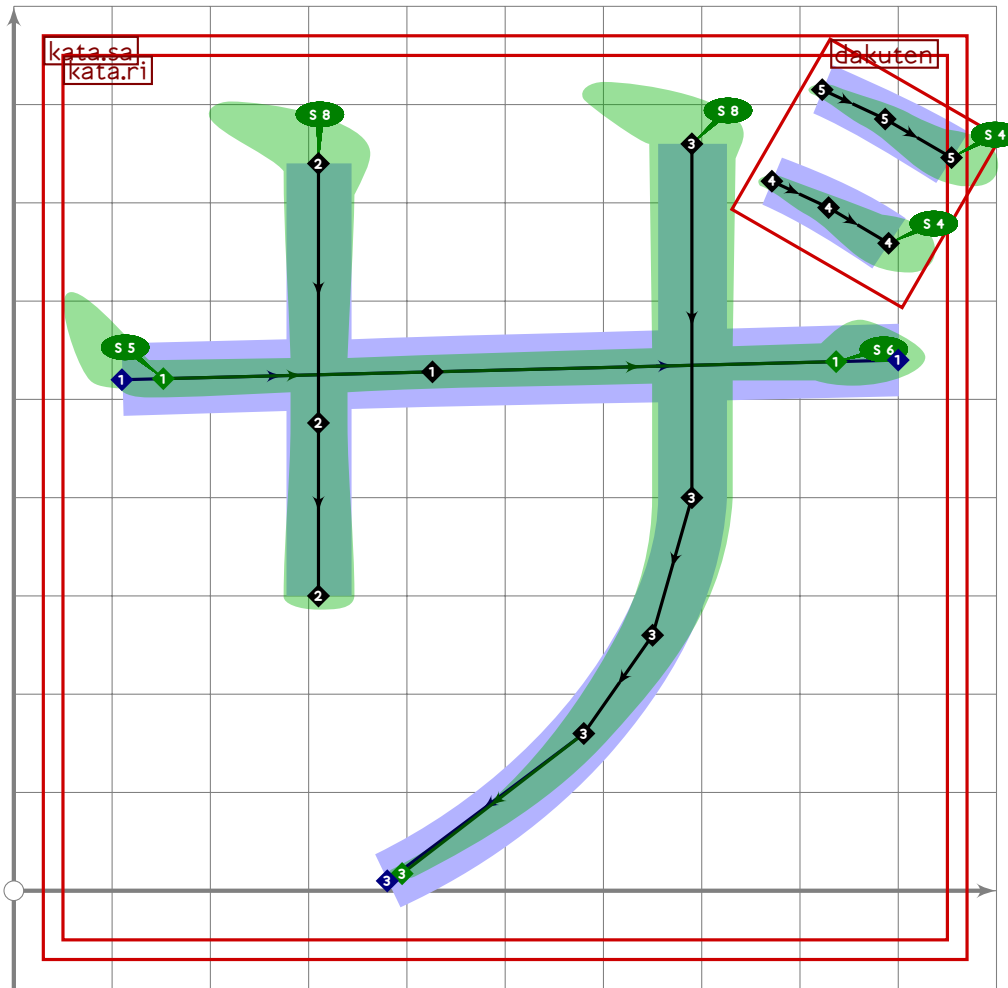


```

1082 % katakana "go"
1083 begint Suglyph("uni30B4",180);
1084 tsu_curve.kata.ko;
1085 bo_tip1[1]:=0;
1086 tsu_curve.dakuten(identity rotated 8 shifted (860,735));
1087 tsu_render;
1088 endtsuglyph;
1089
1090 % katakana "sa"
1091 begint Suglyph("uni30B5",181);
1092 tsu_curve.kata.sa;
1093 tsu_render;
1094 endtsuglyph;
1095

```

[see page 113]

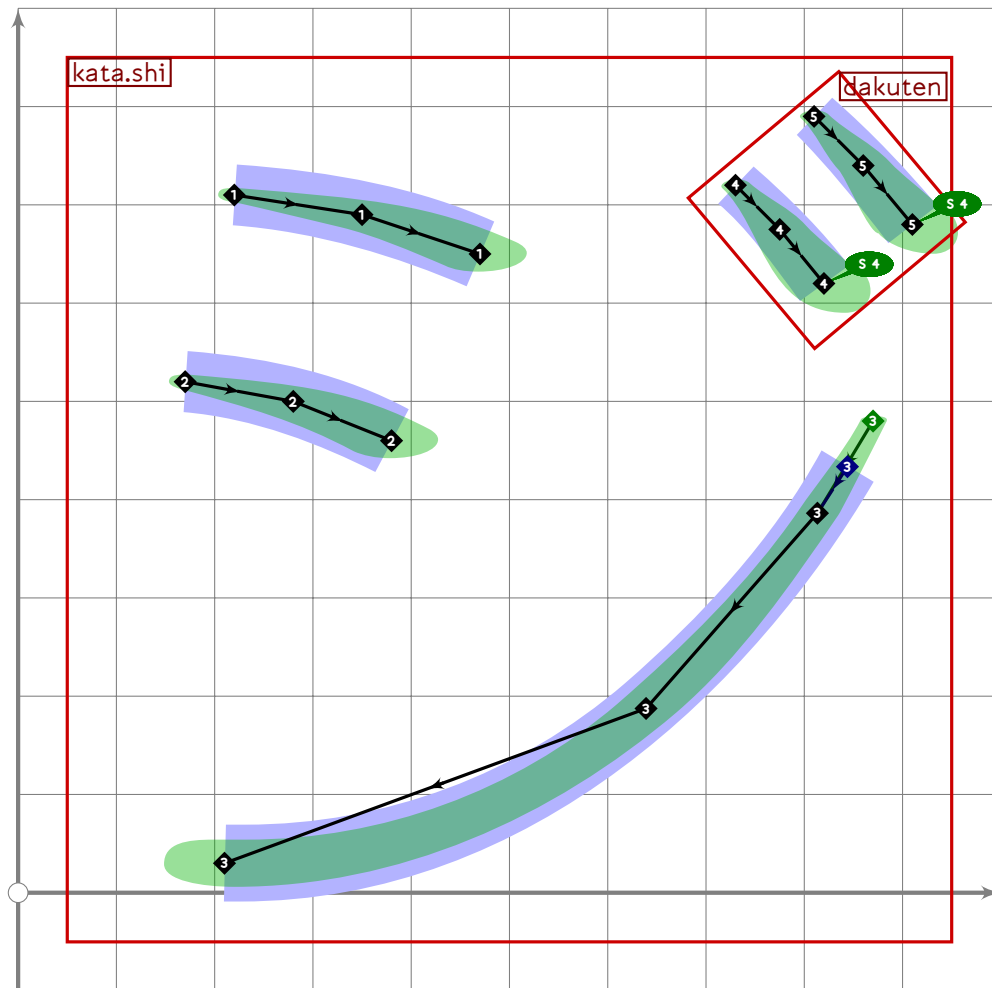


```

1096 % katakana "za"
1097 begint Suglyph("uni30B6",182);
1098   tsu_curve.kata.sa;
1099   tsu_curve.dakuten(identity rotated 20 shifted (850,740));
1100   tsu_render;
1101 endsuglyph;
1102
1103 % katakana "shi"
1104 begint Suglyph("uni30B7",183);
1105   tsu_curve.kata.shi;
1106   tsu_render;
1107 endsuglyph;
1108

```

[see page 114]

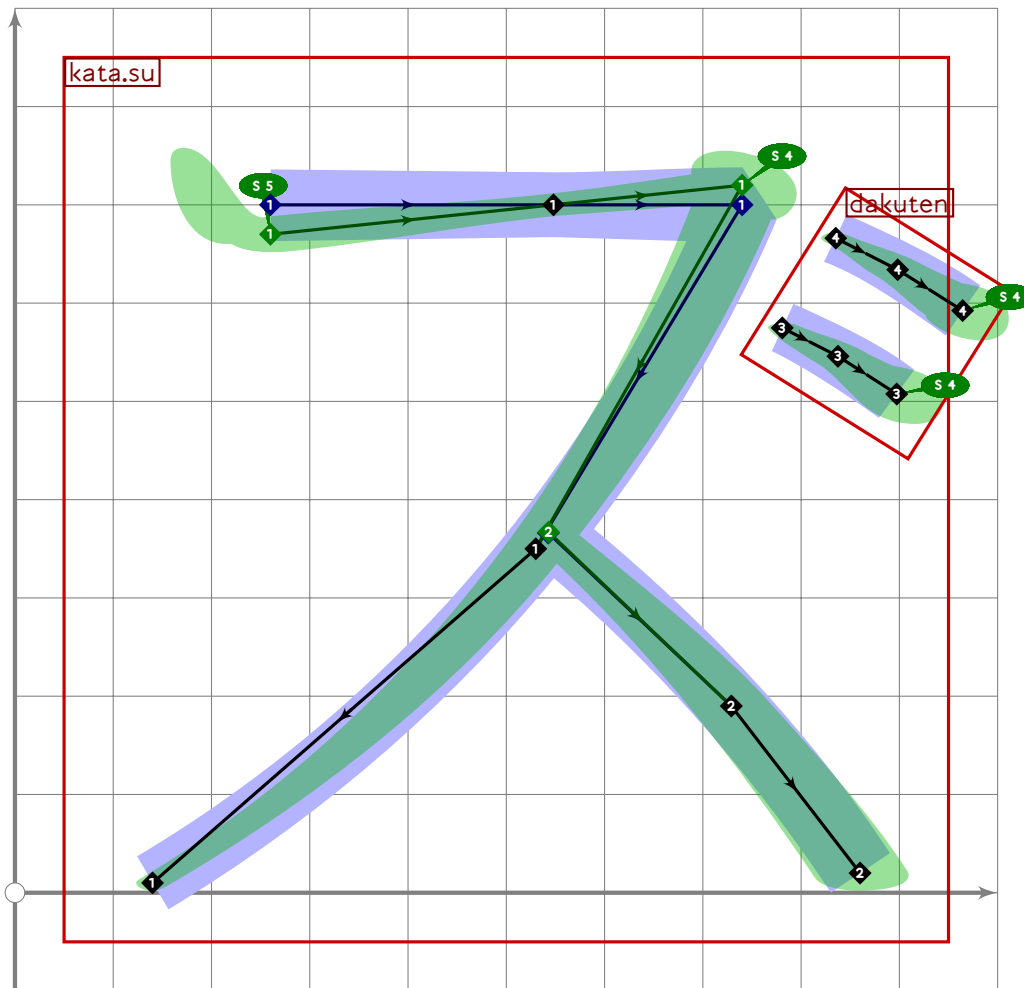


```

1109 % katakana "ji"
1110 begint Suglyph("uni30B8",184);
1111 tsu_curve.kata.shi;
1112 tsu_curve.dakuten(identity shifted (810,710));
1113 tsu_render;
1114 endsuglyph;
1115
1116 % katakana "su"
1117 begint Suglyph("uni30B9",185);
1118 tsu_curve.kata.su;
1119 tsu_render;
1120 endsuglyph;
1121

```

[see page 115]

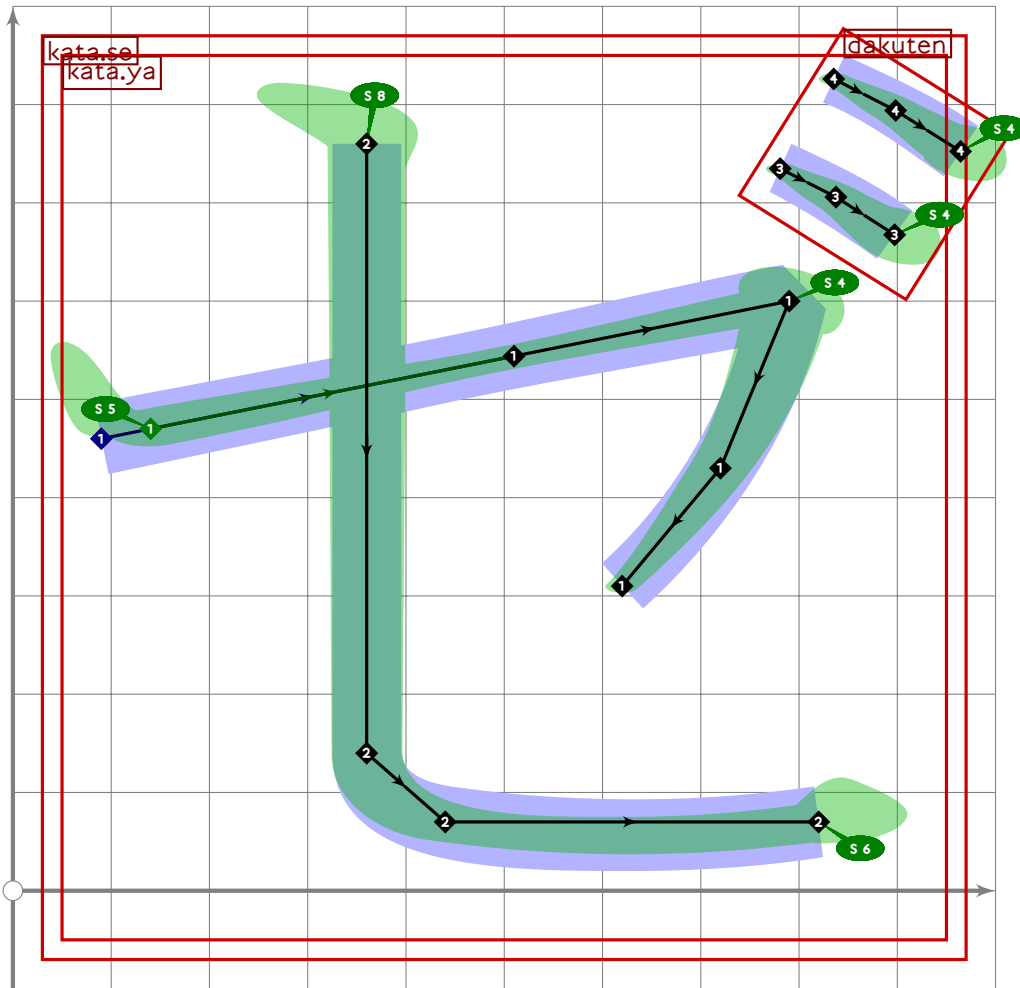


```

1122 % katakana "zu"
1123 beginsuglyph("uni30BA",186);
1124 tsu_curve.kata.su;
1125 tsu_curve.dakuten(identity rotated 18 shifted (860,590));
1126 tsu_render;
1127 endsuglyph;
1128
1129 % katakana "se"
1130 beginsuglyph("uni30BB",187);
1131 tsu_curve.kata.se;
1132 tsu_render;
1133 endsuglyph;
1134

```

[see page 116]

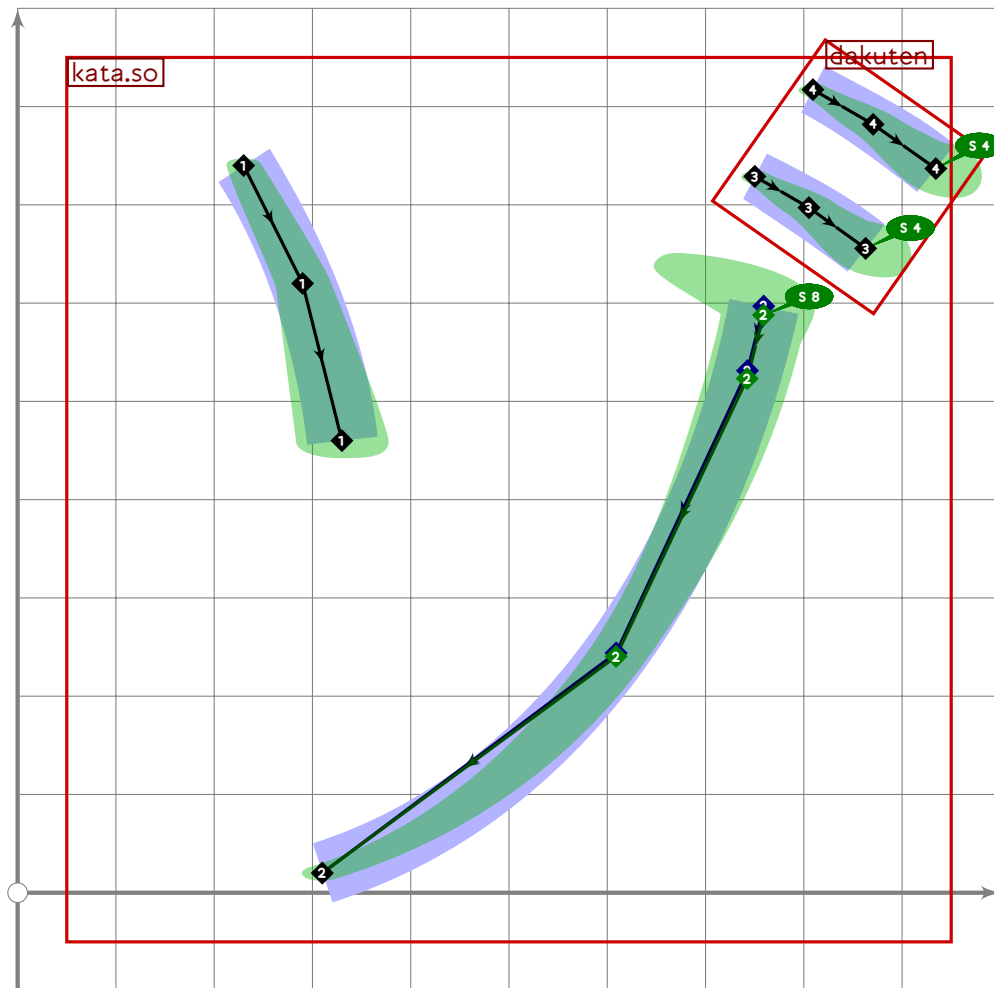


```

1135 % katakana "ze"
1136 begint Suglyph("uni30BC",188);
1137 tsu_curve.kata.se;
1138 tsu_curve.dakuten(identity rotated 18 shifted (860,750));
1139 tsu_render;
1140 endsuglyph;
1141
1142 % katakana "so"
1143 begint Suglyph("uni30BD",189);
1144 tsu_curve.kata.so;
1145 tsu_render;
1146 endsuglyph;
1147

```

[see page 117]

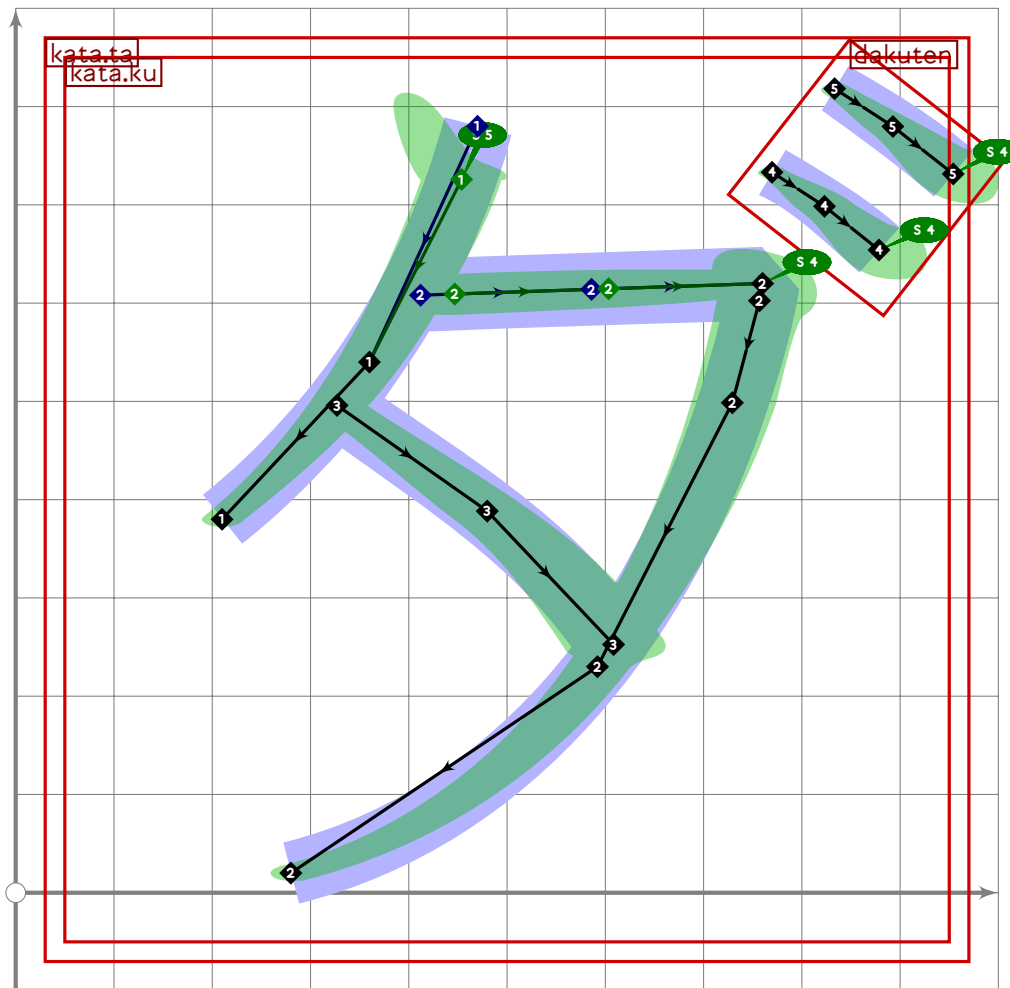


```

1148 % katakana "zo"
1149 begint Suglyph("uni30BE",190);
1150   tsu_curve.kata.so;
1151   replace_strokep(0,subpath (0.5,infinity) of oldp);
1152   tsu_curve.dakuten(identity rotated 15 shifted (830,740));
1153   tsu_render;
1154 endtsuglyph;
1155
1156 % katakana "ta"
1157 begint Suglyph("uni30BF",191);
1158   tsu_curve.kata.ta;
1159   tsu_render;
1160 endtsuglyph;
1161

```

[see page 118]

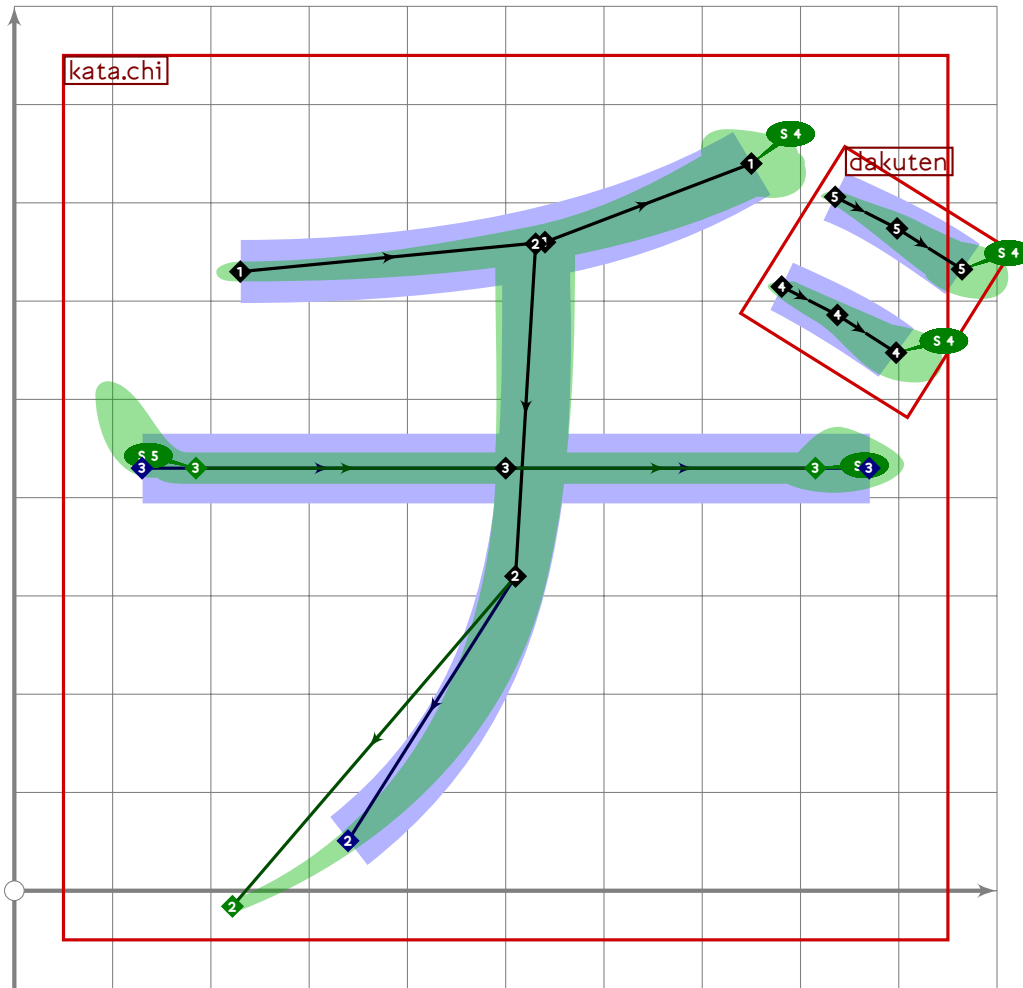


```

1162 % katakana "da"
1163 begint Suglyph("uni30C0",192);
1164 tsu_curve.kata.ta;
1165 tsu_curve.dakuten(identity rotated 12 shifted (850,740));
1166 tsu_render;
1167 endsuglyph;
1168
1169 % katakana "chi"
1170 begint Suglyph("uni30C1",193);
1171 tsu_curve.kata.chi;
1172 tsu_render;
1173 endsuglyph;
1174

```

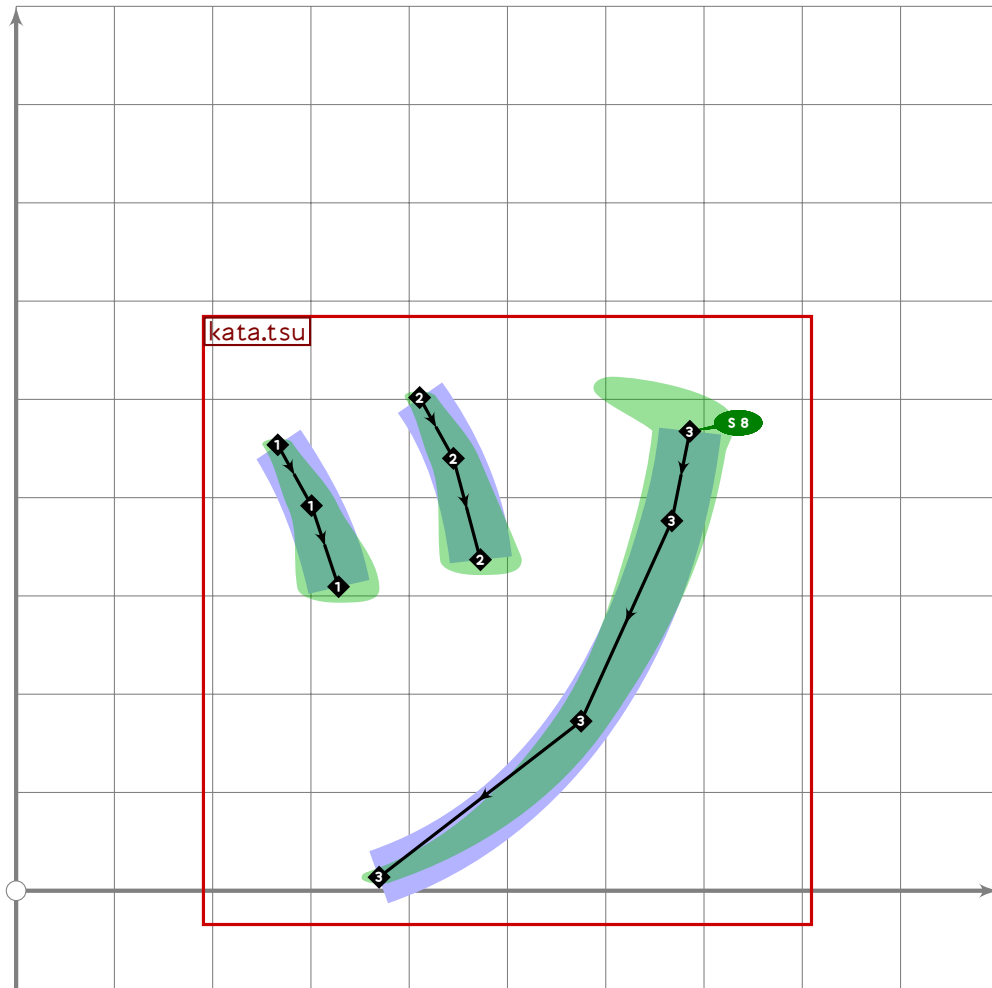
[see page 119]



```

1175 % katakana "dji"
1176 begint Suglyph("uni30C2",194);
1177 tsu_curve.kata.chi;
1178 tsu_curve.dakuten(identity rotated 18 shifted (860,630));
1179 tsu_render;
1180 endsuglyph;
1181

```

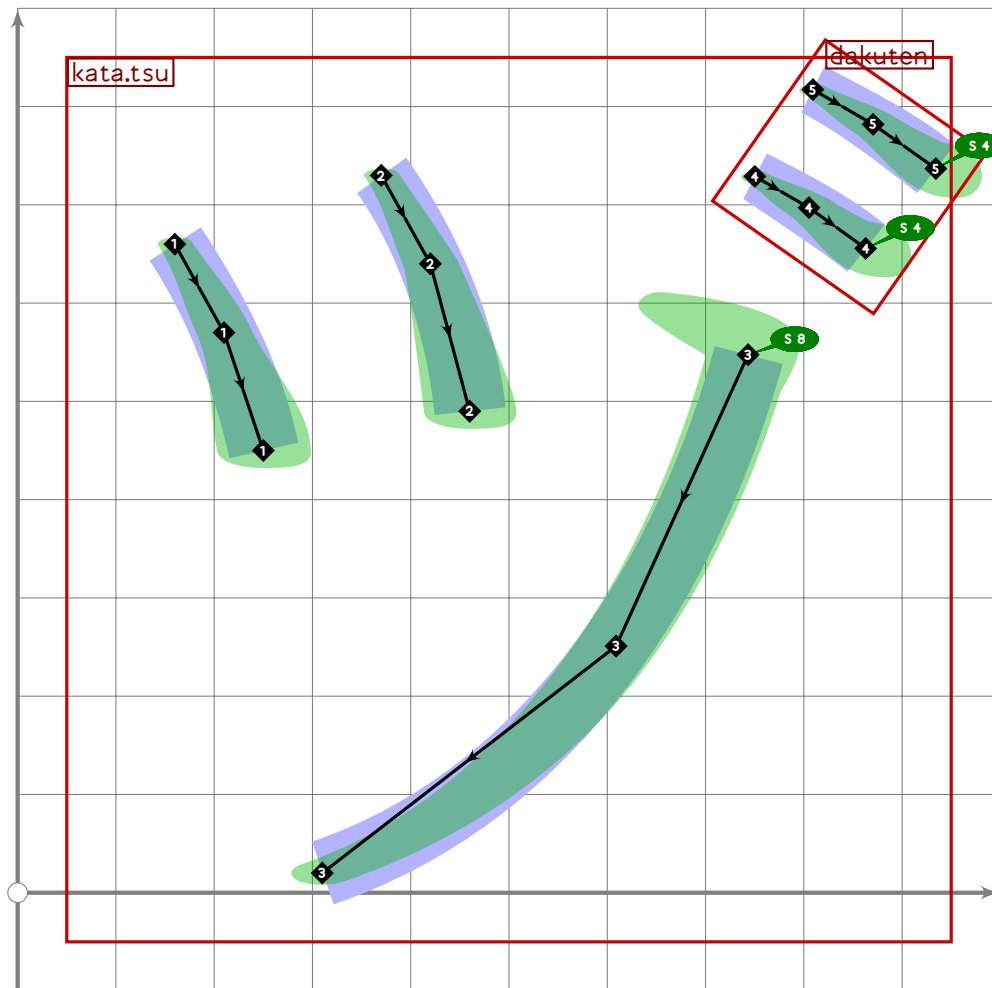


```

1182 % katakana "small tsu"
1183 beginsuglyph("uni30C3",195);
1184 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.tsu);
1185 tsu_render;
1186 endsuglyph;
1187
1188 % katakana "tsu"
1189 beginsuglyph("uni30C4",196);
1190 tsu_curve.kata.tsu;
1191 tsu_render;
1192 endsuglyph;
1193

```

[see page 120]

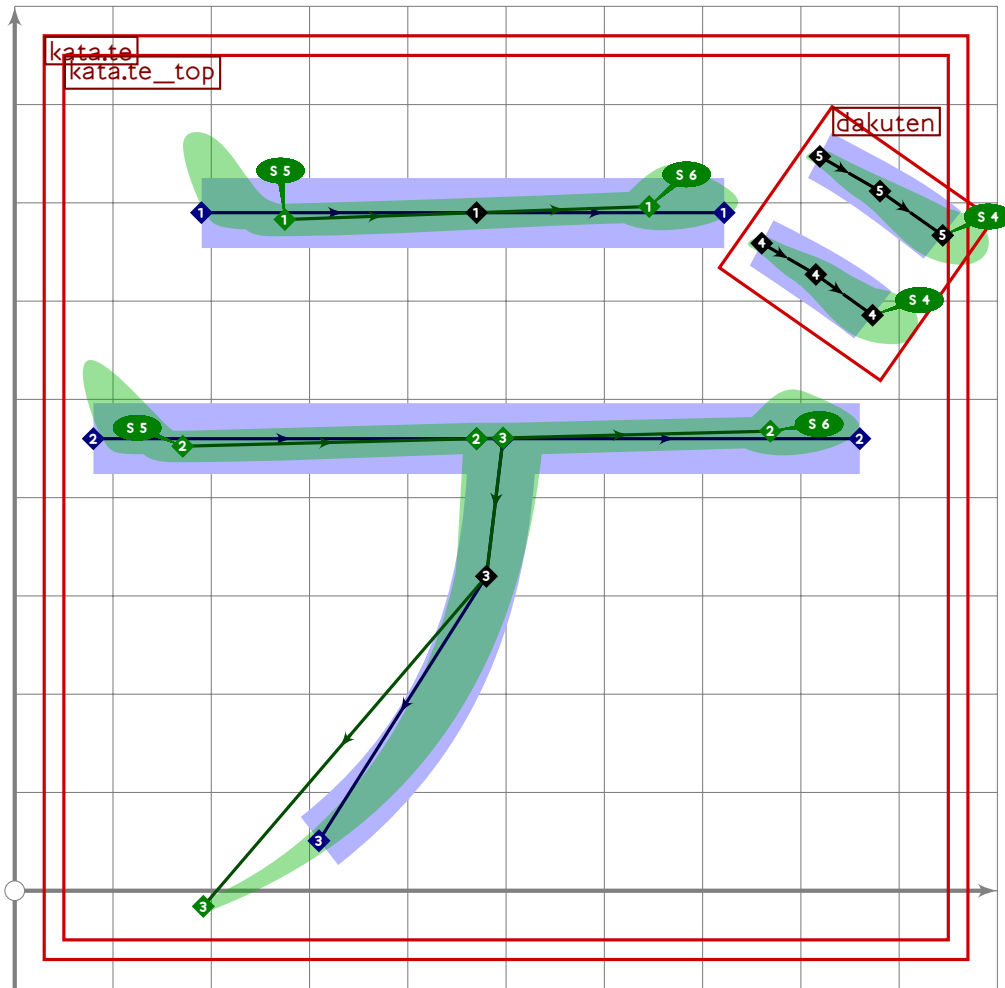


```

1194 % katakana "dzu"
1195 beginsuglyph("uni30C5",197);
1196 tsu_curve.kata.tsu;
1197 replace_stroke(0,subpath (1,infinity) of oldp);
1198 tsu_curve.dakuten(identity rotated 15 shifted (830,740));
1199 tsu_render;
1200 endsuglyph;
1201
1202 % katakana "te"
1203 beginsuglyph("uni30C6",198);
1204 tsu_curve.kata.te;
1205 tsu_render;
1206 endsuglyph;
1207

```

[see page 121]

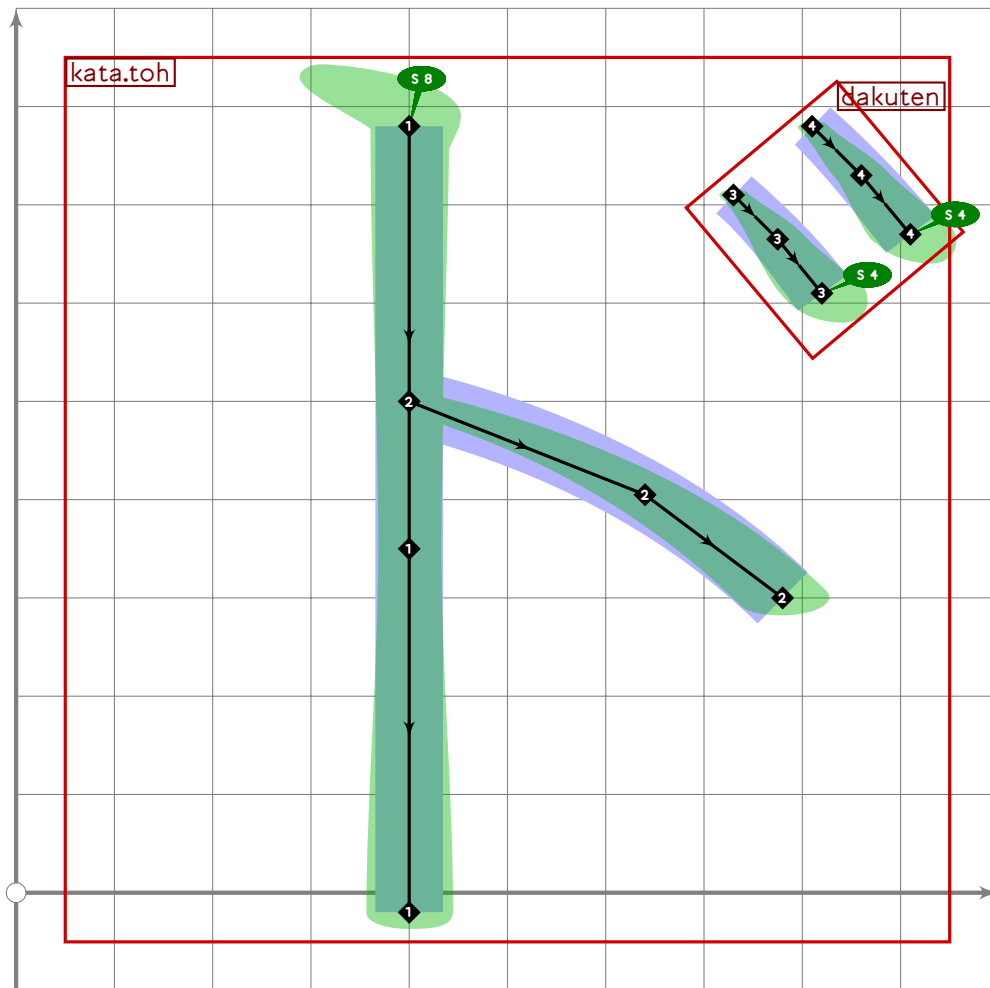


```

1208 % katakana "de"
1209 beginsuglyph("uni30C7",199);
1210 tsu_curve.kata.te;
1211 replace_strokep(-2,(subpath (0,1,9) of oldp) shifted (-30,0));
1212 replace_strokep(-1,oldp shifted (-30,0));
1213 replace_strokep(0,oldp shifted (-30,0));
1214 tsu_curve.dakuten(identity rotated 15 shifted (840,670));
1215 tsu_render;
1216 endsuglyph;
1217
1218 % katakana "to"
1219 beginsuglyph("uni30C8",200);
1220 tsu_curve.kata.toh;
1221 tsu_render;
1222 endsuglyph;
1223

```

[see page 122]



```

1224 % katakana "do"
1225 begintsuglyph("uni30C9";201);
1226 tsu_curve.kata.toh;
1227 tsu_curve.dakuten(identity shifted (810,700));
1228 tsu_render;
1229 endsuglyph;

```

1230

```

1231 % katakana "na"
1232 begintsuglyph("uni30CA";202);
1233 tsu_curve.kata.na;
1234 tsu_render;
1235 endsuglyph;

```

[see page 123]

1236

```

1237 % katakana "ni"
1238 begintsuglyph("uni30CB";203);
1239 tsu_curve.kata.ni;
1240 tsu_render;
1241 endsuglyph;

```

[see page 124]

1242

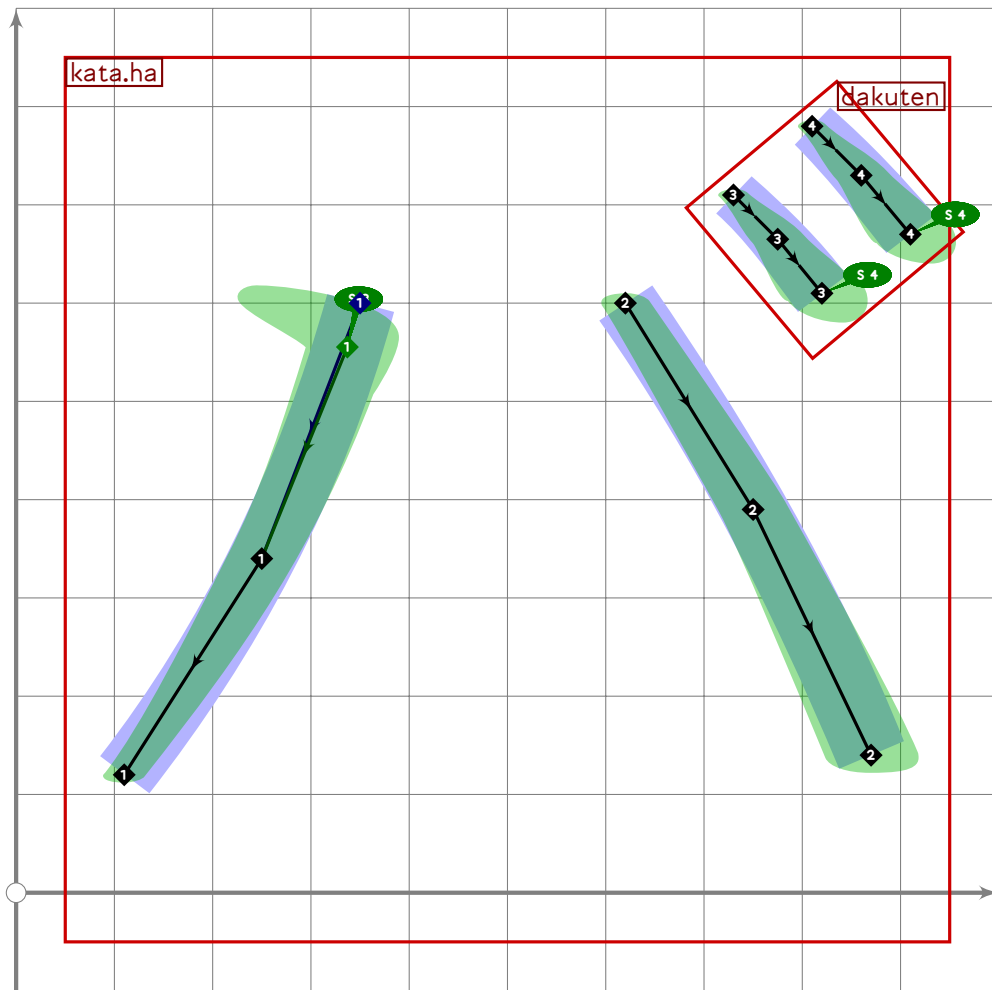
```

1243 % katakana "nu"
1244 begintsuglyph("uni30CC";204);

```

[see page 125]

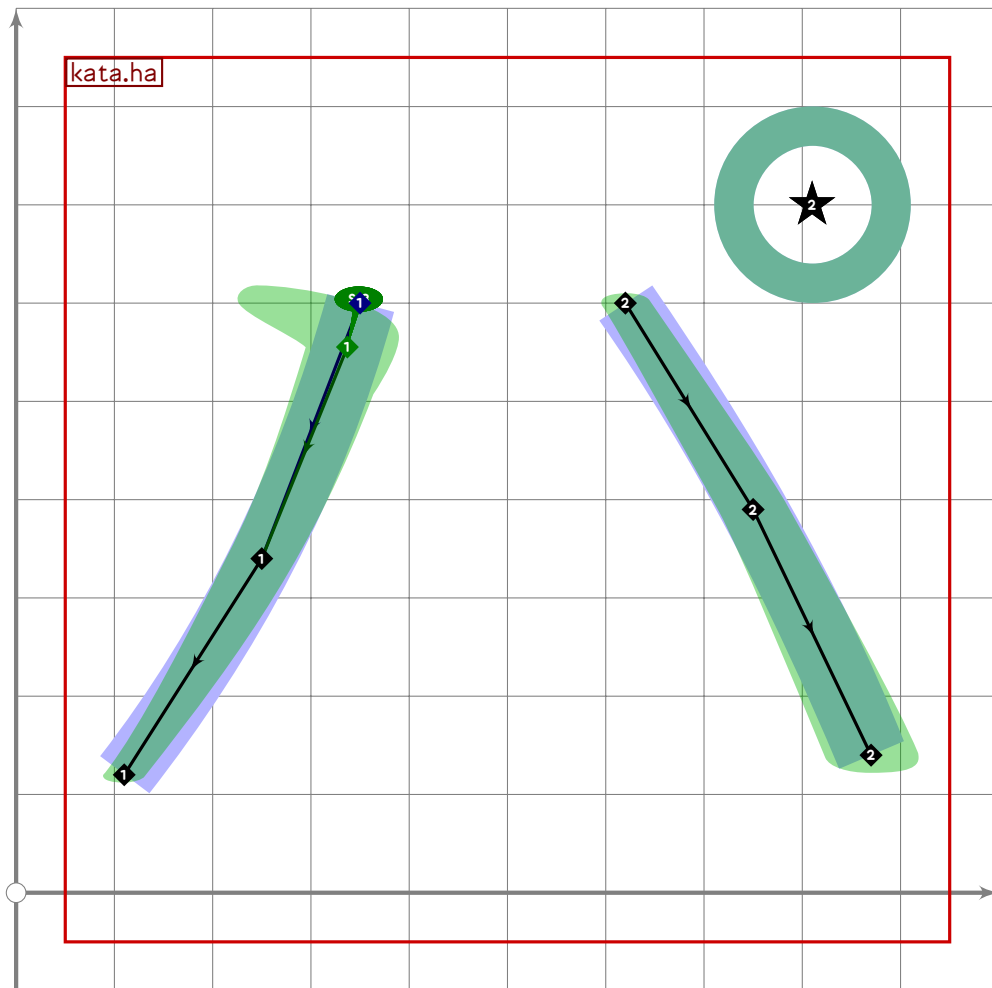
1245 `tsu_curve.kata.nu;`
1246 `tsu_render;`
1247 `endtsuglyph;`
1248
1249 `% katakana "ne"`
1250 `begintsuglyph("uni30CD",205);` [see page 126]
1251 `tsu_curve.kata.ne;`
1252 `tsu_render;`
1253 `endtsuglyph;`
1254
1255 `% katakana "no"`
1256 `begintsuglyph("uni30CE",206);` [see page 127]
1257 `tsu_curve.kata.no;`
1258 `tsu_render;`
1259 `endtsuglyph;`
1260
1261 `% katakan "ha"`
1262 `begintsuglyph("uni30CF",207);` [see page 128]
1263 `tsu_curve.kata.ha;`
1264 `tsu_render;`
1265 `endtsuglyph;`
1266



```

1267 % katakan "ba"
1268 begintsuglyph("uni30D0";208);
1269 tsu_curve.kata.ha;
1270 tsu_curve.dakuten(identity shifted (810,700));
1271 tsu_render;
1272 endsuglyph;
1273

```

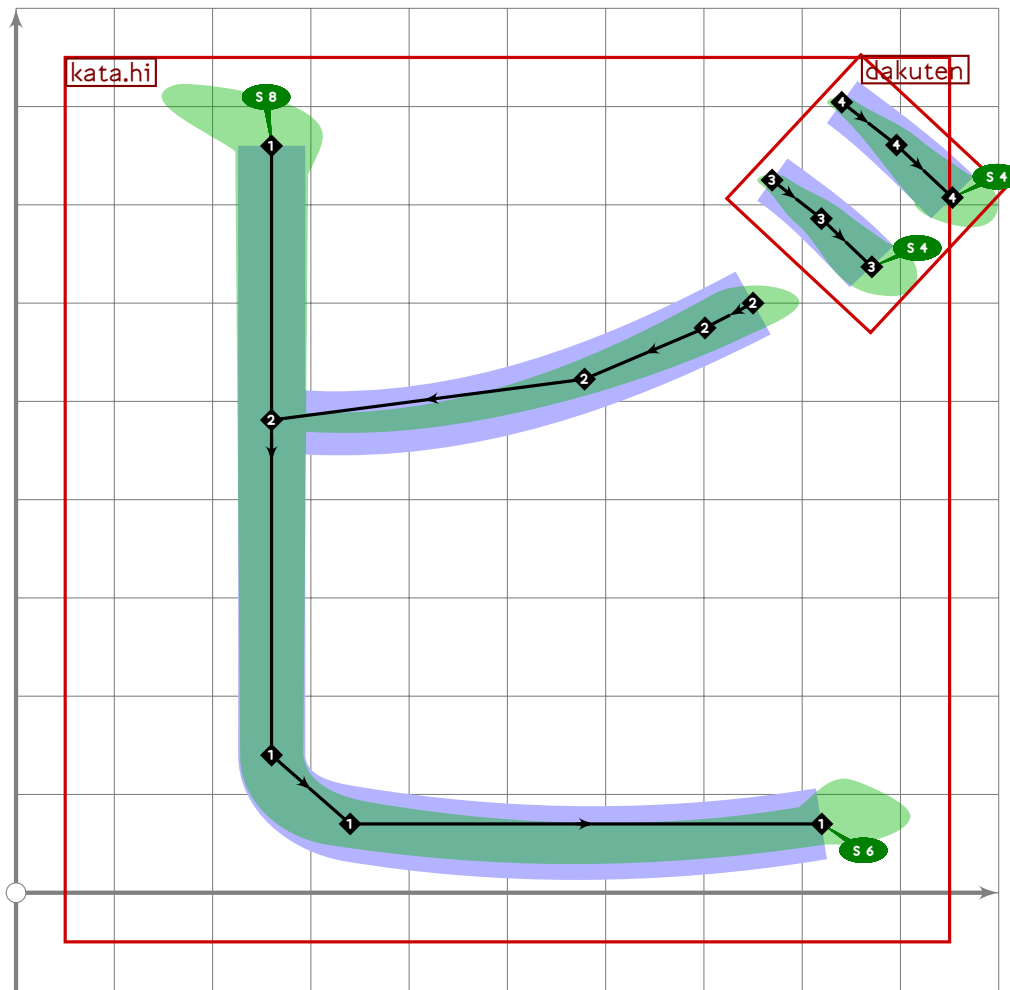


```

1274 % katakan "pa"
1275 begint Suglyph("uni30D1",209);
1276 tsu_curve.kata.ha;
1277 tsu_curve.handakuten((810,700));
1278 tsu_render;
1279 endtsuglyph;
1280
1281 % katakana "hi"
1282 begint Suglyph("uni30D2",210);
1283 tsu_curve.kata.hi;
1284 tsu_render;
1285 endtsuglyph;
1286

```

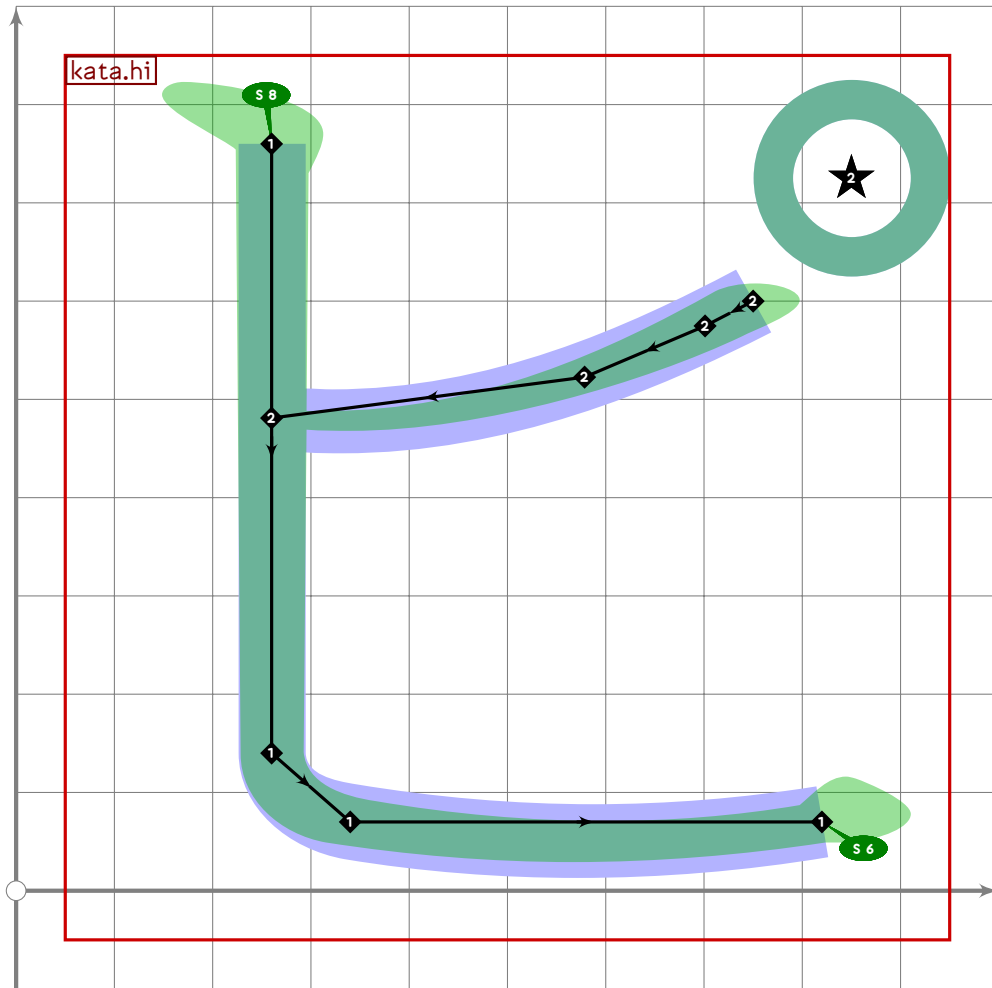
[see page 129]



```

1287 % katakana "bi"
1288 begintsuglyph("uni30D3",211);
1289 tsu_curve.kata.hi;
1290 tsu_curve.dakuten(identity rotated 7 shifted (850,725));
1291 tsu_render;
1292 endsuglyph;
1293

```

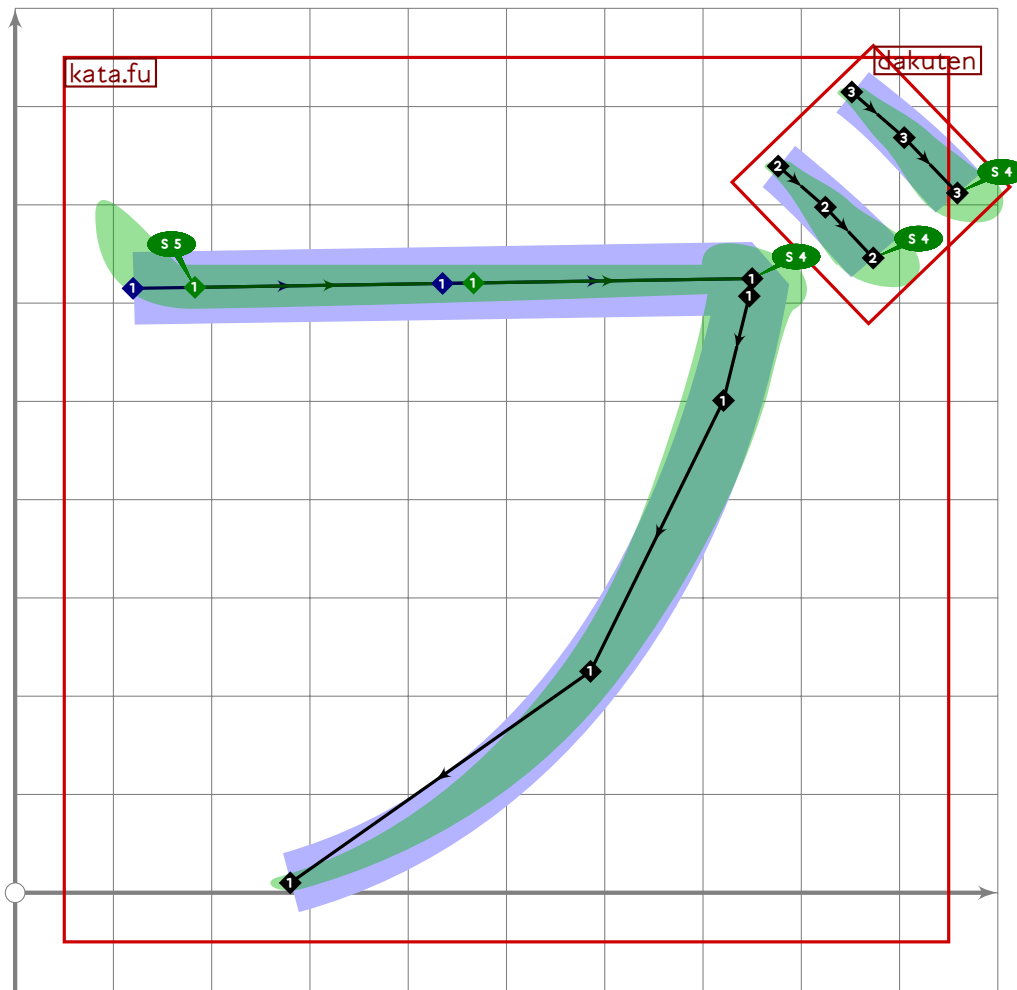


```

1294 % katakana "pi"
1295 begint Suglyph("uni30D4",212);
1296 tsu_curve.kata,hi;
1297 tsu_curve.handakuten((850,725));
1298 tsu_render;
1299 endsuglyph;
1300
1301 % katakana "fu"
1302 begint Suglyph("uni30D5",213);
1303 tsu_curve.kata,fu;
1304 tsu_render;
1305 endsuglyph;
1306

```

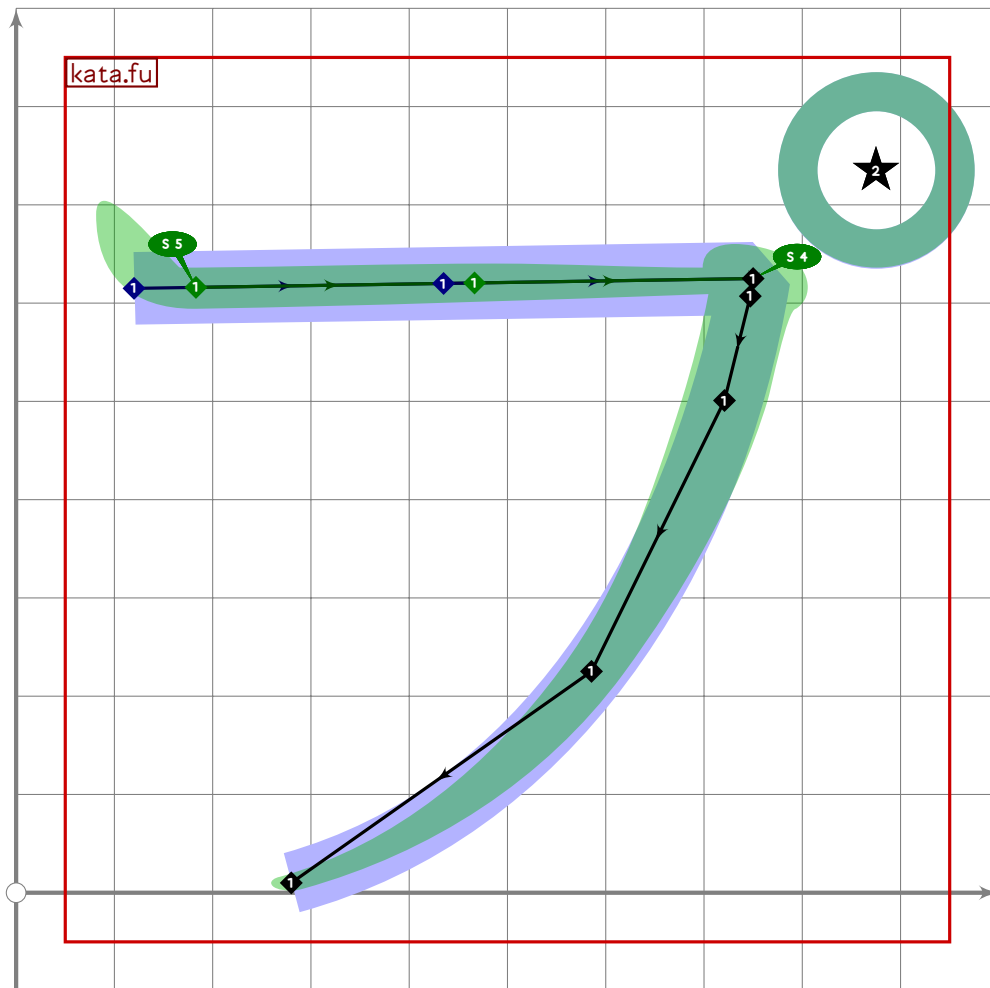
[see page 130]



```

1307 % katakana "bu"
1308 begint Suglyph("uni30D6",214);
1309 tsu_curve.kata.fu;
1310 replace_strokep(0,oldp shifted (-40,10));
1311 tsu_curve.dakuten(identity rotated 4 shifted (857,735));
1312 tsu_render;
1313 endtsuglyph;
1314

```

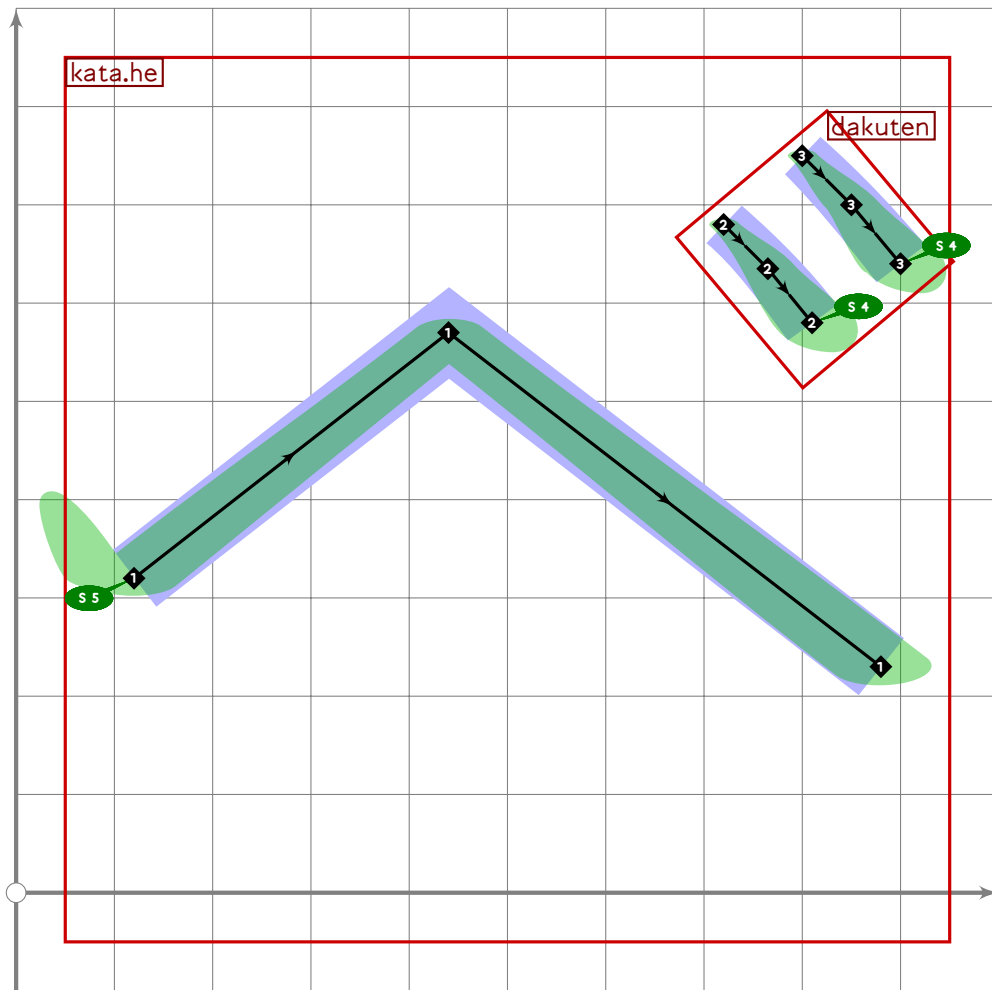


```

1315 % katakana "pu"
1316 begint Suglyph("uni30D7",215);
1317 tsu_curve.kata.fu;
1318 replace_strokep(0,oldp shifted (-40,10));
1319 tsu_curve.handakuten((875,735));
1320 tsu_render;
1321 endtsuglyph;
1322
1323 % katakana "he"
1324 begint Suglyph("uni30D8",216);
1325 tsu_curve.kata.he;
1326 tsu_render;
1327 endtsuglyph;
1328

```

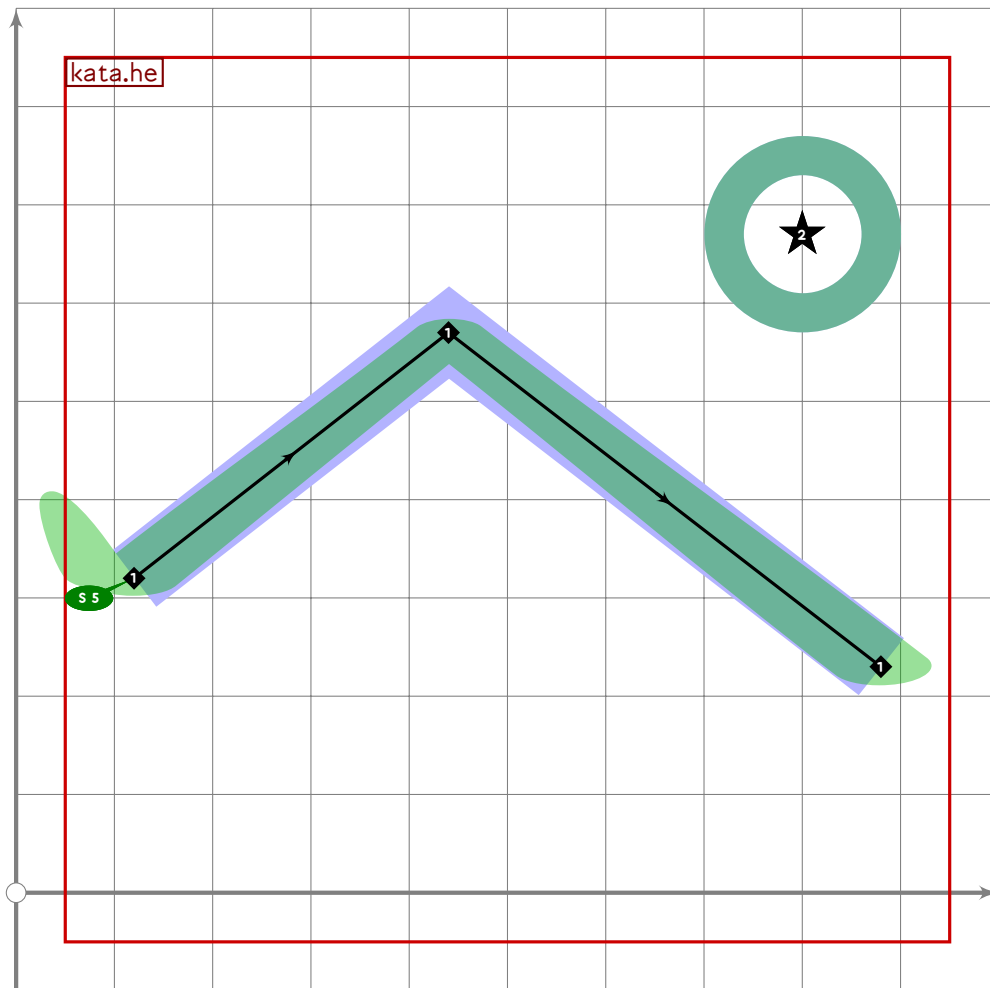
[see page 131]



```

1329 % katakana "be"
1330 begint Suglyph("uni30D9",217);
1331 tsu_curve.kata.he;
1332 tsu_curve.dakuten(identity shifted (800,670));
1333 tsu_render;
1334 endsuglyph;
1335

```

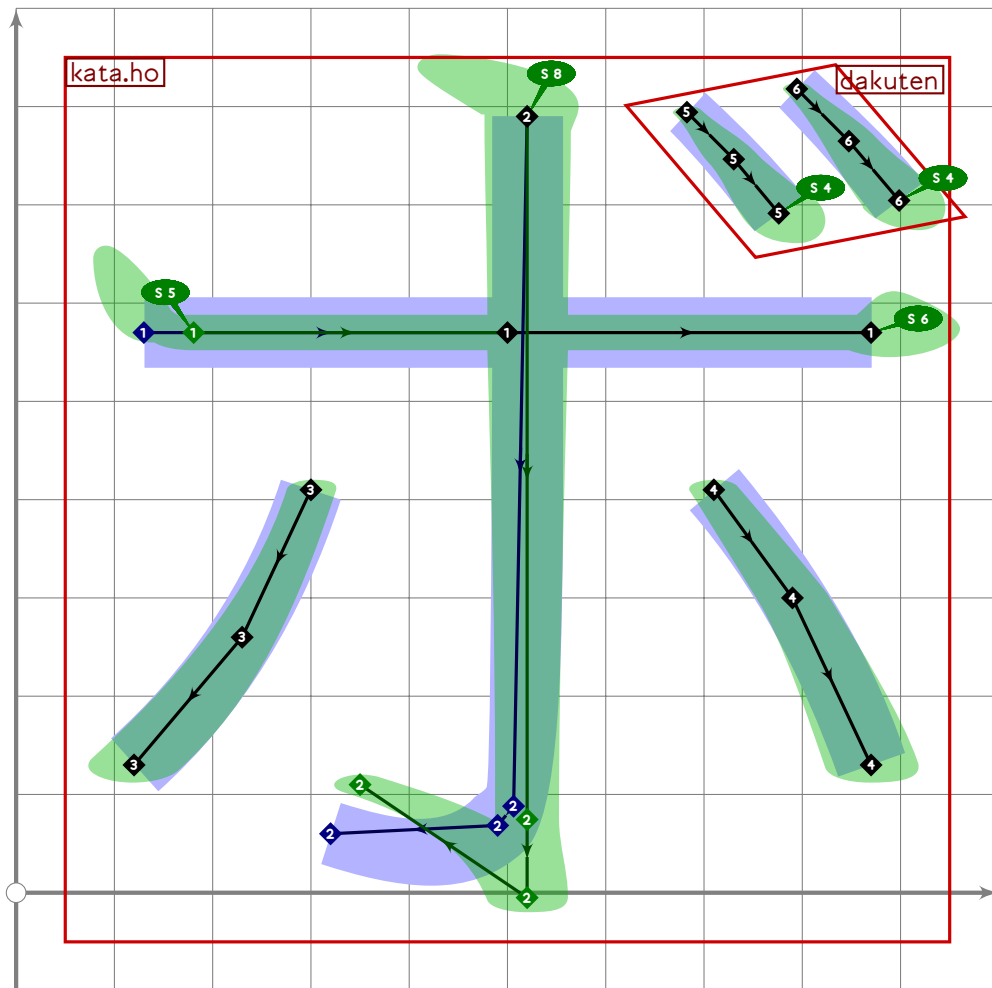


```

1336 % katakana "pe"
1337 begint Suglyph("uni30DA",218);
1338 tsu_curve.kata.he;
1339 tsu_curve.handakuten((800,670));
1340 tsu_render;
1341 endsuglyph;
1342
1343 % katakana "ho"
1344 begint Suglyph("uni30DB",219);
1345 tsu_curve.kata.ho;
1346 tsu_render;
1347 endsuglyph;
1348

```

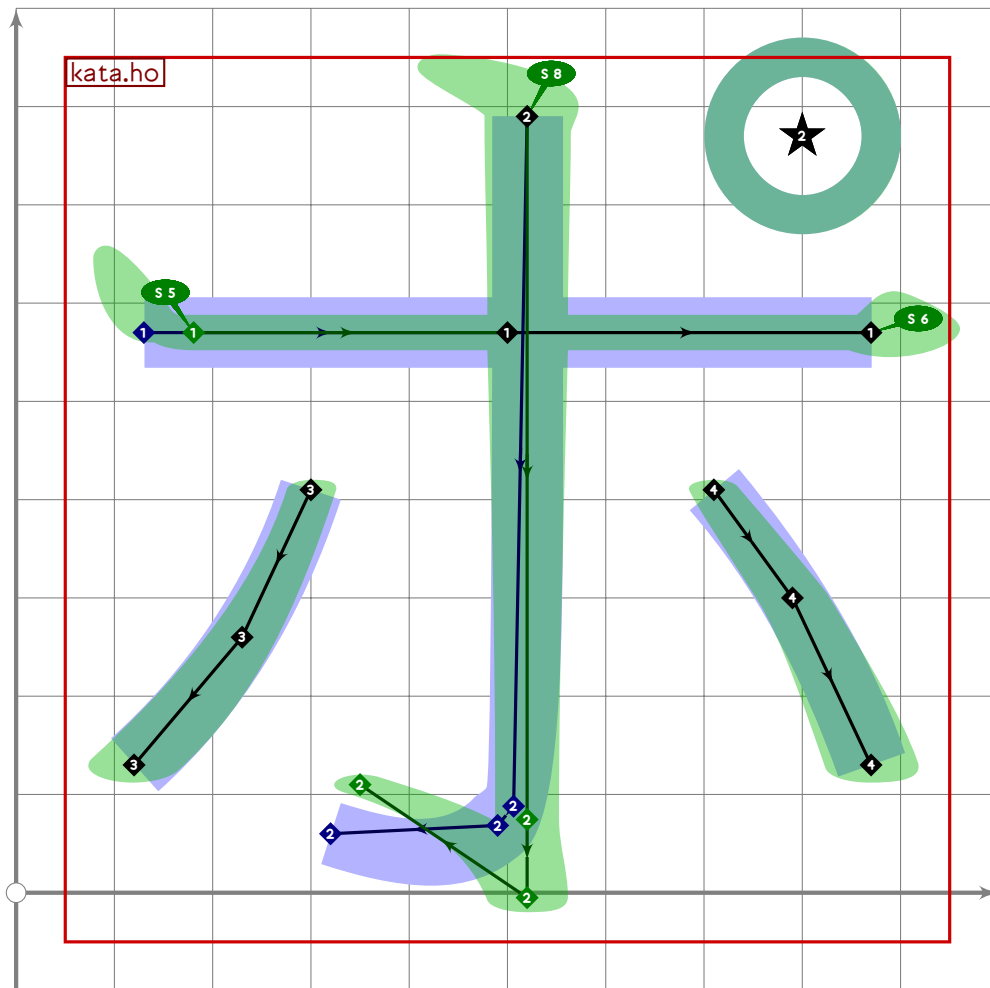
[see page 132]



```

1349 % katakana "bo"
1350 beginsuglyph("uni30DC";220);
1351 tsu_curve.kata.ho;
1352 tsu_curve.dakuten(identity
1353     rotated -25 slanted -0.3 xyscaled (1.2,0.8) shifted (780,760));
1354 tsu_render;
1355 endsuglyph;
1356

```



```

1357 % katakana "po"
1358 begint Suglyph("uni30DD",221);
1359 tsu_curve.kata.ho;
1360 tsu_curve.handakuten((800,770));
1361 tsu_render;
1362 endtsuglyph;

```

1363

```

1364 % katakana "ma"
1365 begint Suglyph("uni30DE",222);
1366 tsu_curve.kata.ma;
1367 tsu_render;
1368 endtsuglyph;

```

[see page 133]

1369

```

1370 % katakana "mi"
1371 begint Suglyph("uni30DF",223);
1372 tsu_curve.kata.mi;
1373 tsu_render;
1374 endtsuglyph;

```

[see page 134]

1375

```

1376 % katakana "mu"
1377 begint Suglyph("uni30E0",224);

```

[see page 135]

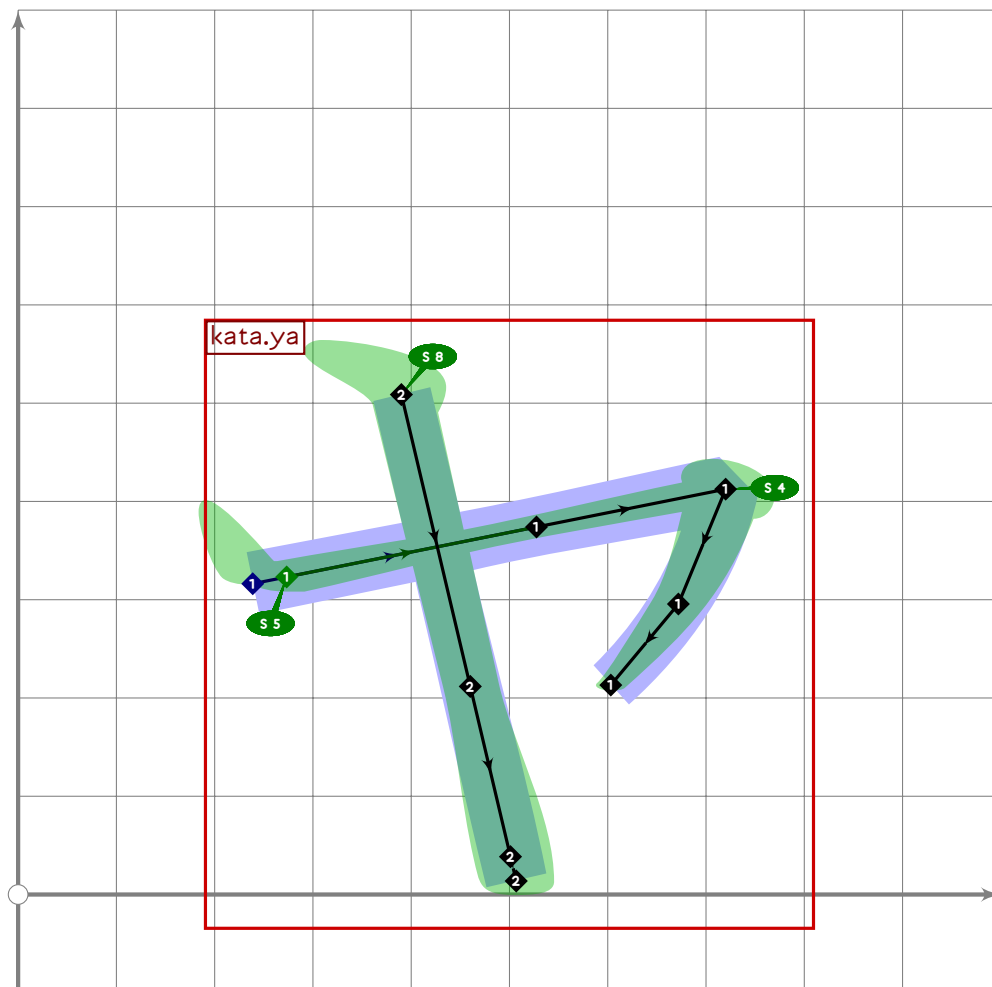
```

1378 tsu_curve.kata.mu;
1379 tsu_render;
1380 endtsuglyph;
1381
1382 % katakana "me"
1383 begintsuglyph("uni30E1",225);
1384 tsu_curve.kata.me;
1385 tsu_render;
1386 endtsuglyph;
1387
1388 % katakana "mo"
1389 begintsuglyph("uni30E2",226);
1390 tsu_curve.kata.mo;
1391 tsu_render;
1392 endtsuglyph;
1393

```

[see page 136]

[see page 137]



```

1394 % katakana "small ya"
1395 begintsuglyph("uni30E3",227);
1396 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.ya);
1397 tsu_render;
1398 endtsuglyph;

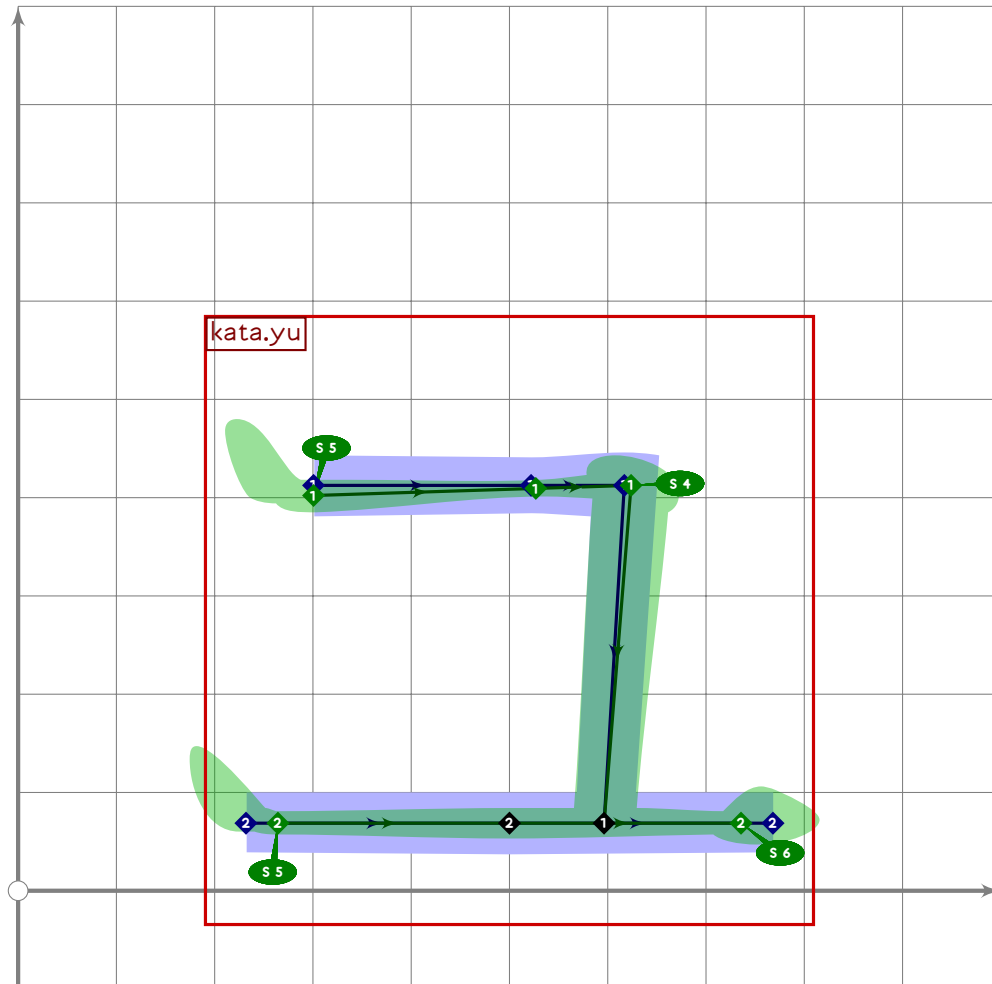
```

```

1399
1400 % katakana "ya"
1401 begint Suglyph("uni30E4";228);
1402   tsu_curve.kata.ya;
1403   tsu_render;
1404 endtsuglyph;
1405

```

[see page 138]

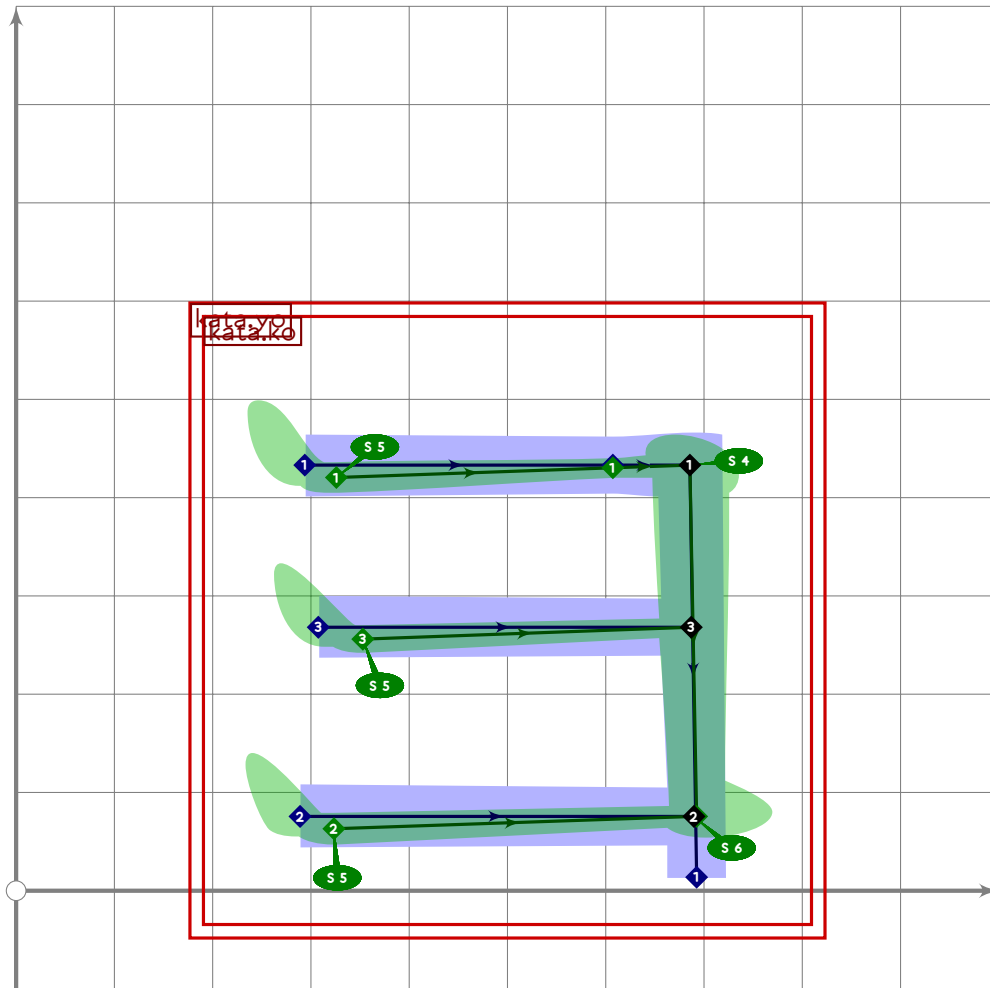


```

1406 % katakana "small yu"
1407 begint Suglyph("uni30E5";229);
1408   tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.yu);
1409   tsu_render;
1410 endtsuglyph;
1411
1412 % katakana "yu"
1413 begint Suglyph("uni30E6";230);
1414   tsu_curve.kata.yu;
1415   tsu_render;
1416 endtsuglyph;
1417

```

[see page 139]



```

1418 % katakana "small yo"
1419 begintsuglyph("uni30E7",231);
1420 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.yo);
1421 tsu_render;
1422 endsuglyph;

```

1423

```

1424 % katakana "yo"
1425 begintsuglyph("uni30E8",232);
1426 tsu_curve.kata.yo;
1427 tsu_render;
1428 endsuglyph;

```

[see page 140]

1429

```

1430 % katakana "ra"
1431 begintsuglyph("uni30E9",233);
1432 tsu_curve.kata.ra;
1433 tsu_render;
1434 endsuglyph;

```

[see page 141]

1435

```

1436 % katakana "ri"
1437 begintsuglyph("uni30EA",234);
1438 tsu_curve.kata.ri;

```

[see page 142]

```

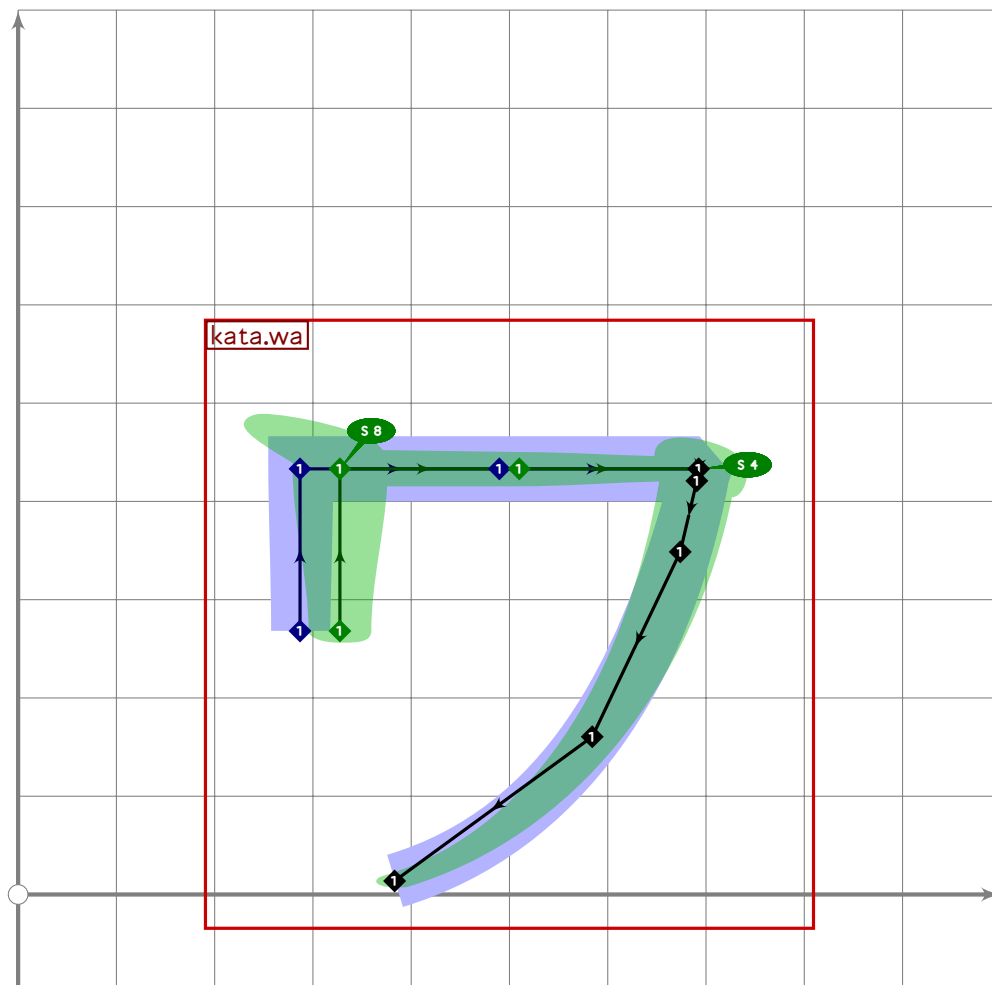
1439 tsu_render;
1440 endtsuglyph;
1441
1442 % katakana "ru"
1443 begintsuglyph("uni30EB",235);
1444 tsu_curve.kata.ru;
1445 tsu_render;
1446 endtsuglyph;
1447
1448 % katakana "re"
1449 begintsuglyph("uni30EC",236);
1450 tsu_curve.kata.re;
1451 tsu_render;
1452 endtsuglyph;
1453
1454 % katakana "ro"
1455 begintsuglyph("uni30ED",237);
1456 tsu_curve.kata.ro;
1457 tsu_render;
1458 endtsuglyph;
1459

```

[see page 143]

[see page 144]

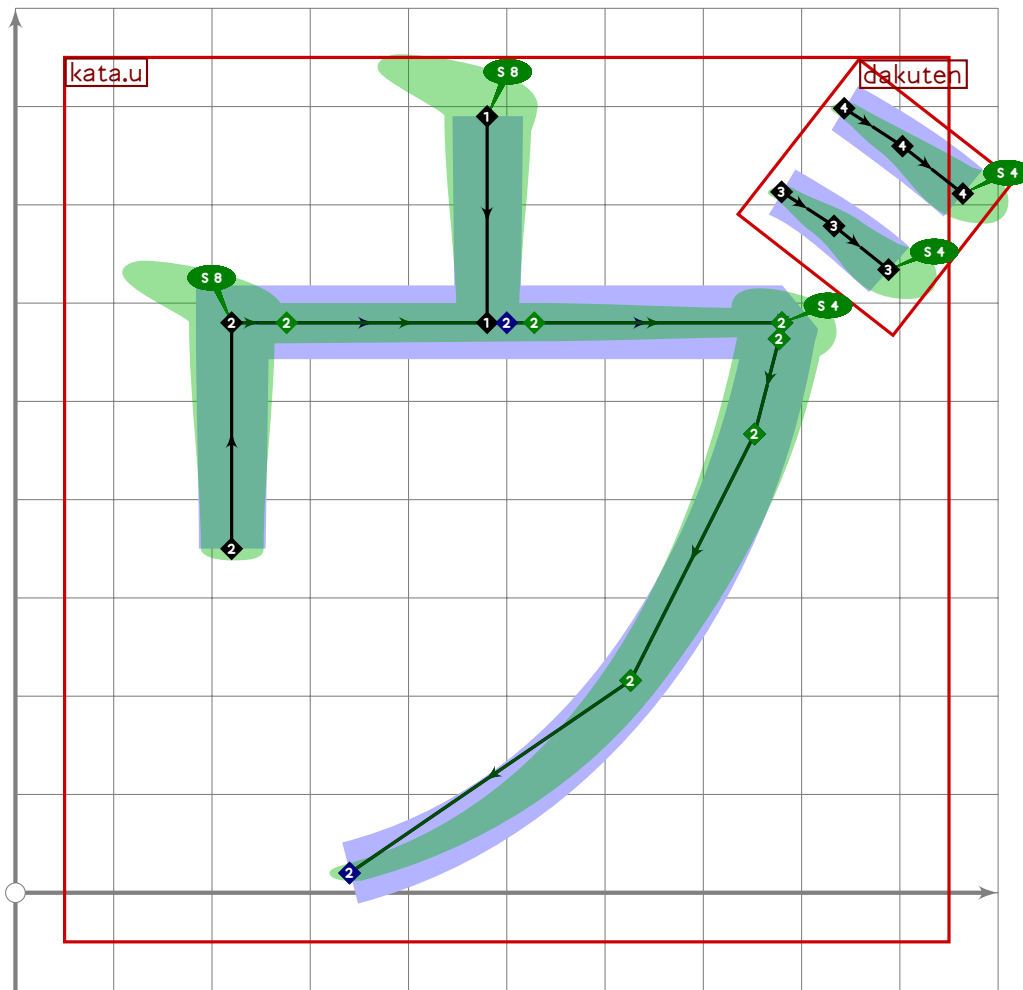
[see page 145]




```

1460 % katakana "small wa"
1461 begintsuglyph("uni30EE",238);
1462 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.wa);
1463 tsu_render;
1464 endtsuglyph;
1465
1466 % katakana "wa"
1467 begintsuglyph("uni30EF",239); [see page 146]
1468 tsu_curve.kata.wa;
1469 tsu_render;
1470 endtsuglyph;
1471
1472 % katakana "wi"
1473 begintsuglyph("uni30F0",240); [see page 147]
1474 tsu_curve.kata.wi;
1475 tsu_render;
1476 endtsuglyph;
1477
1478 % katakana "we"
1479 begintsuglyph("uni30F1",241); [see page 148]
1480 tsu_curve.kata.we;
1481 tsu_render;
1482 endtsuglyph;
1483
1484 % katakana "wo"
1485 begintsuglyph("uni30F2",242); [see page 149]
1486 tsu_curve.kata.wo;
1487 tsu_render;
1488 endtsuglyph;
1489
1490 % katakana "n"
1491 begintsuglyph("uni30F3",243); [see page 150]
1492 tsu_curve.kata.n;
1493 tsu_render;
1494 endtsuglyph;
1495

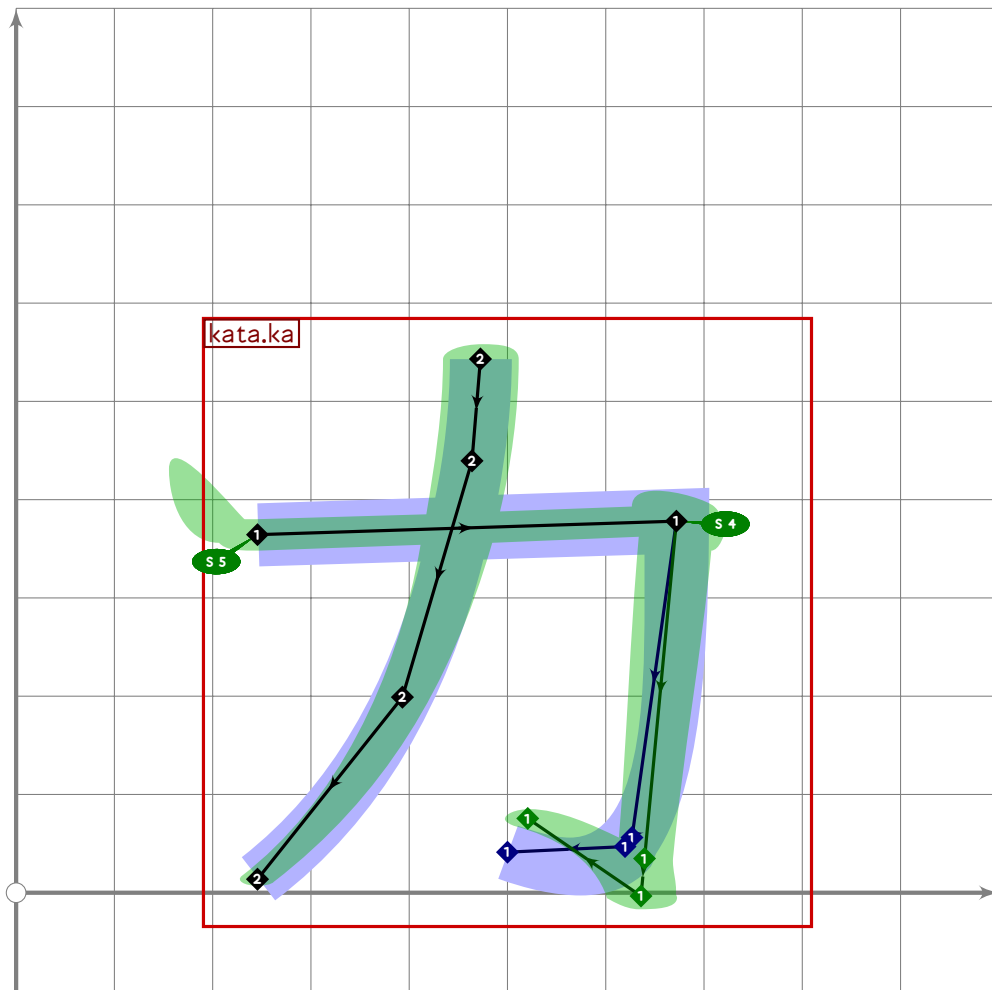
```



```

1496 % katakana "vu"
1497 begint Suglyph("uni30F4",244);
1498 tsu_curve.kata.u;
1499 tsu_curve.dakuten(identity rotated 12 shifted (860,720));
1500 tsu_render;
1501 endsuglyph;
1502

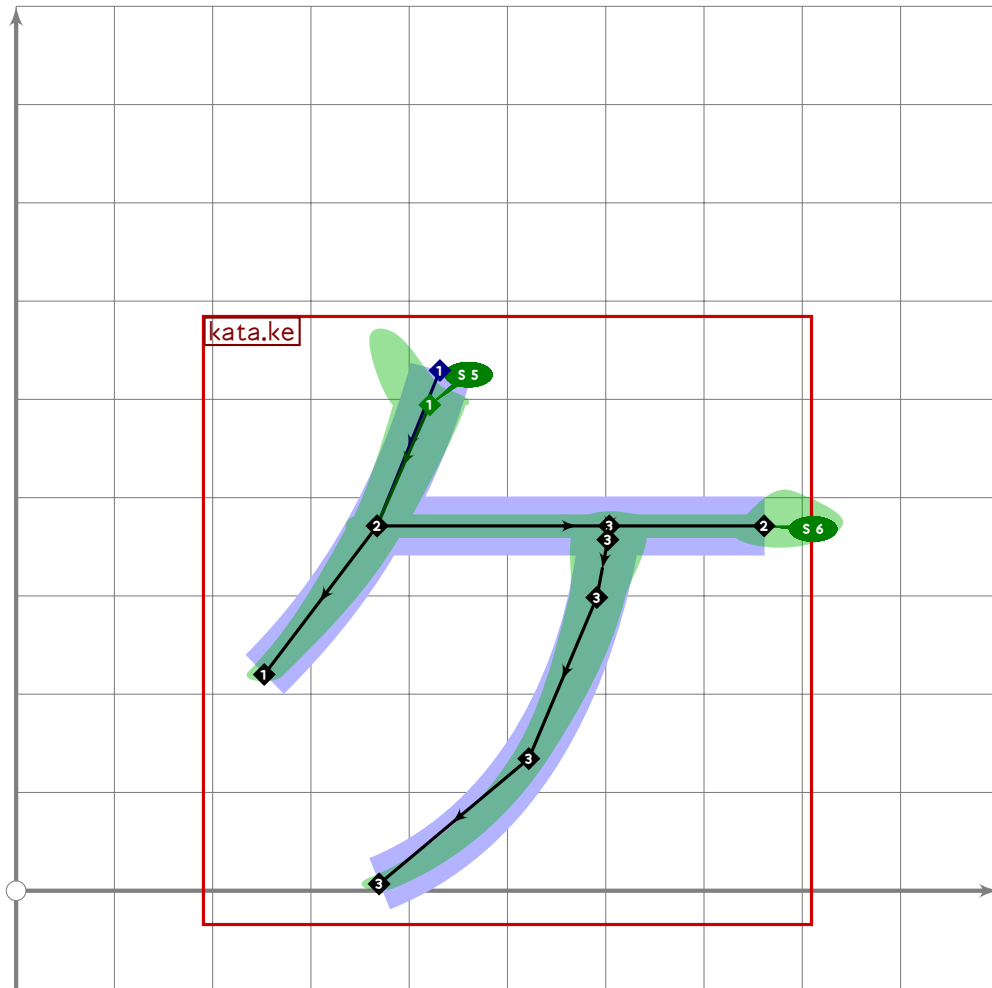
```



```

1503 % katakana "small ka"
1504 begintsuglyph("uni30F5";245);
1505 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.ka);
1506 tsu_render;
1507 endsuglyph;
1508

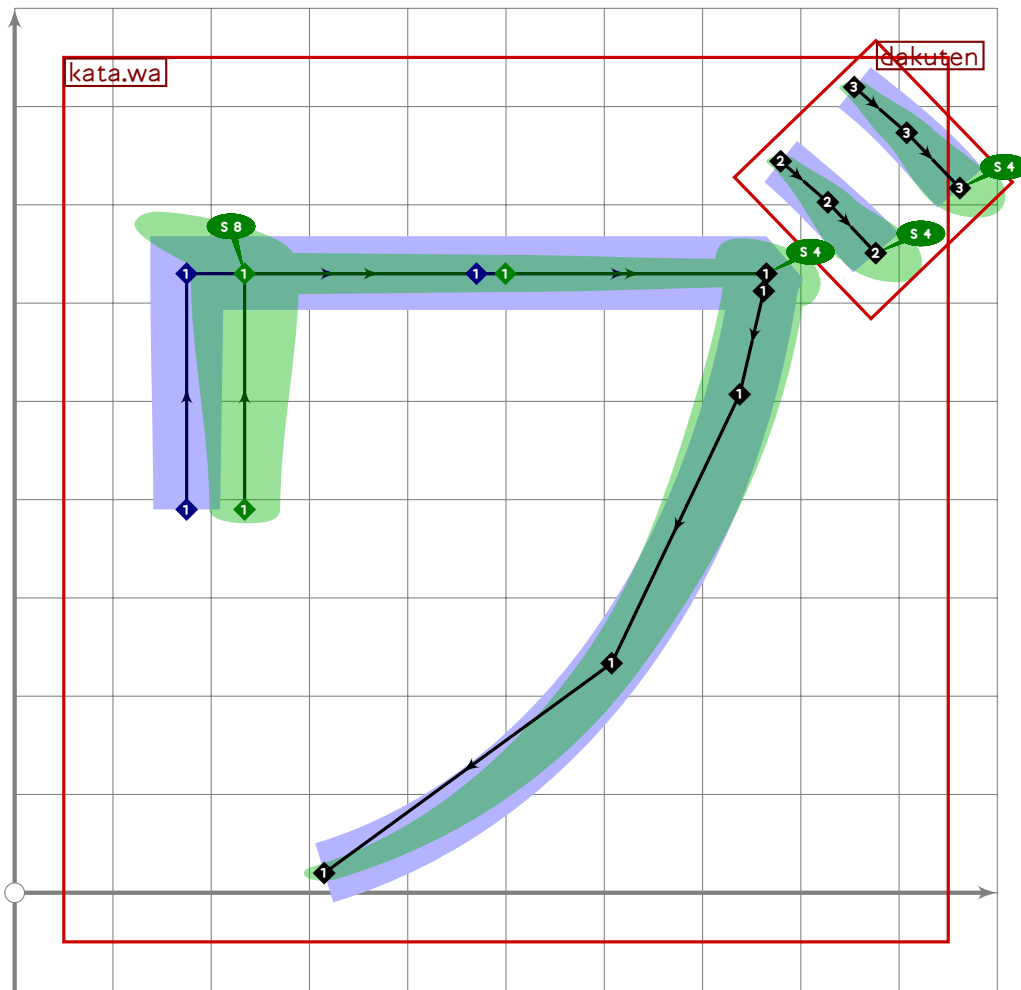
```



```

1509 % katakana "small ke"
1510 begintsuglyph("uni30F6";246);
1511 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.ke);
1512 tsu_render;
1513 endtsuglyph;
1514

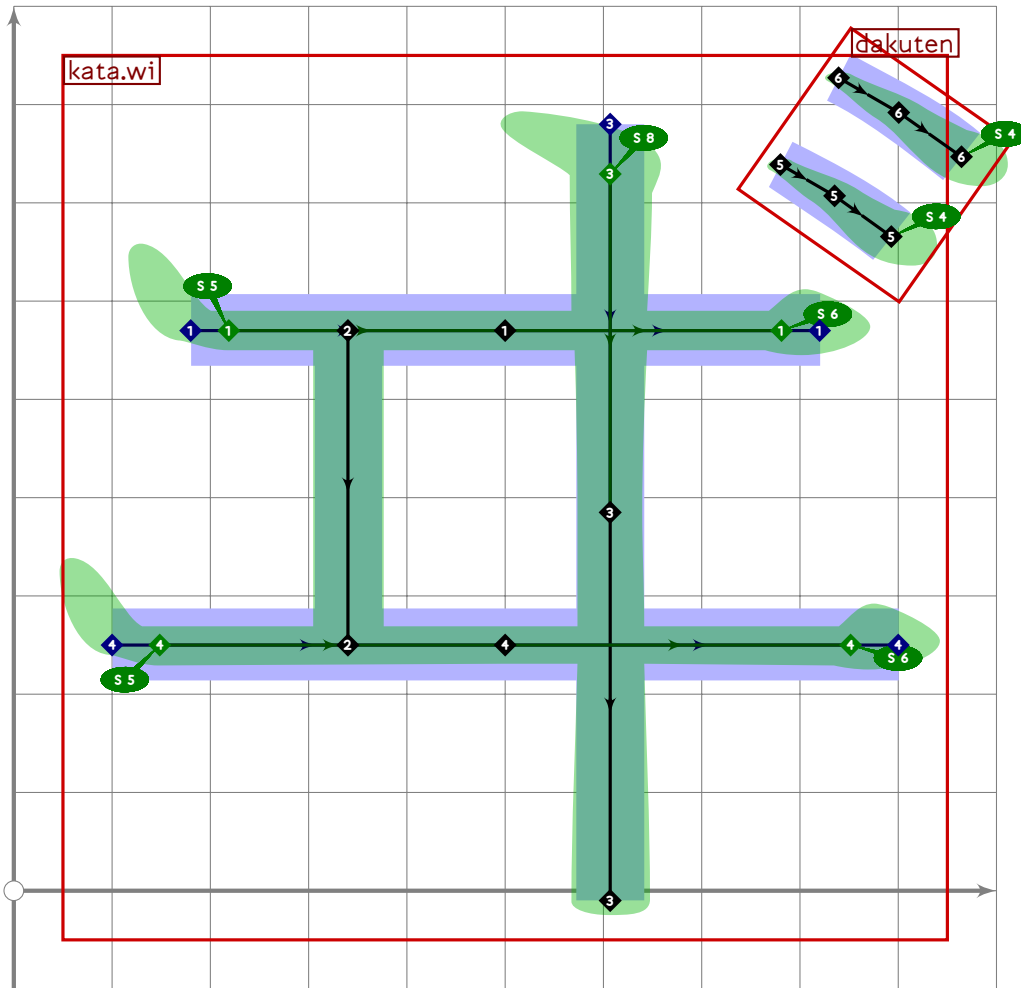
```



```

1515 % katakana "va"
1516 begint Suglyph("uni30F7",247);
1517 tsu_curve.kata.wa;
1518 replace_strokep(0,oldp shifted (-15,0));
1519 tsu_curve.dakuten(identity rotated 4 shifted (860,740));
1520 tsu_render;
1521 endsuglyph;
1522

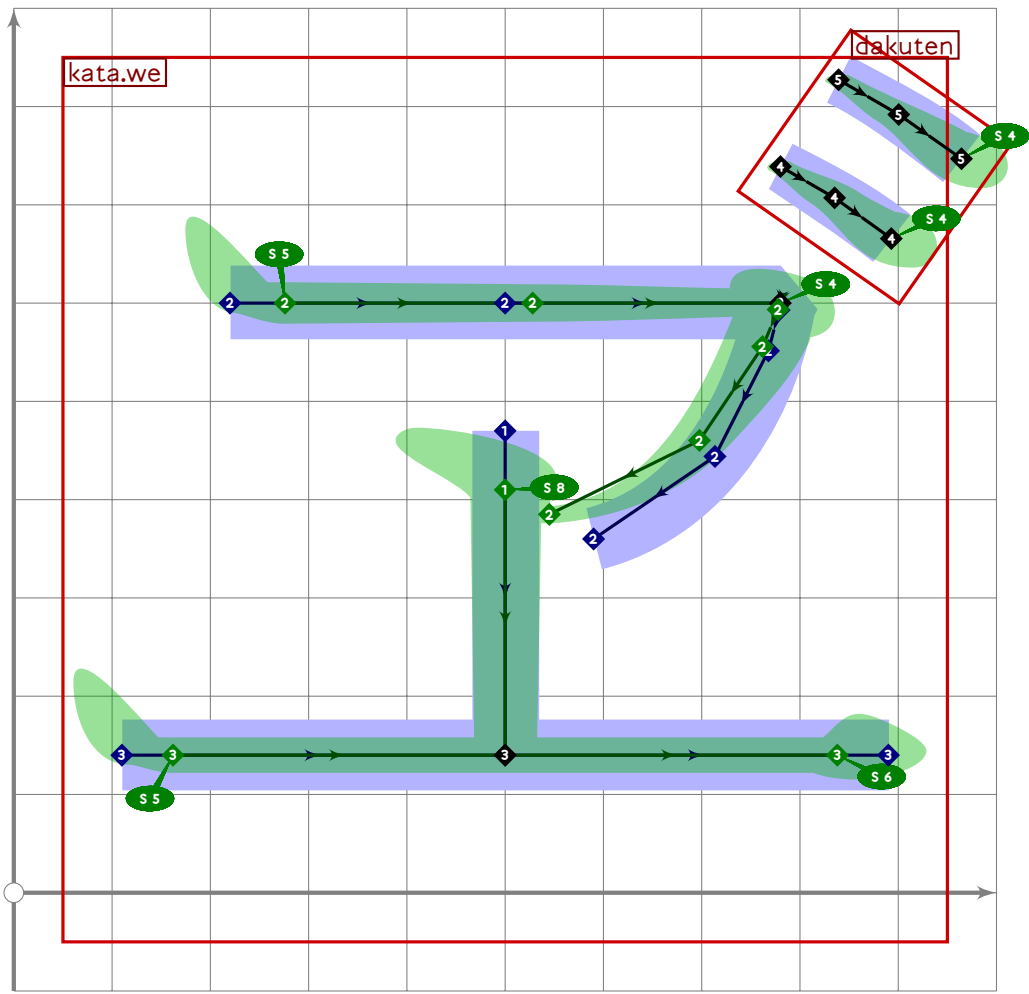
```



```

1523 % katakana "vi"
1524 begintsuglyph("uni30F8",248);
1525 tsu_curve.kata.wi;
1526 tsu_curve.dakuten(identity rotated 15 shifted (860,750));
1527 tsu_render;
1528 endsuglyph;
1529

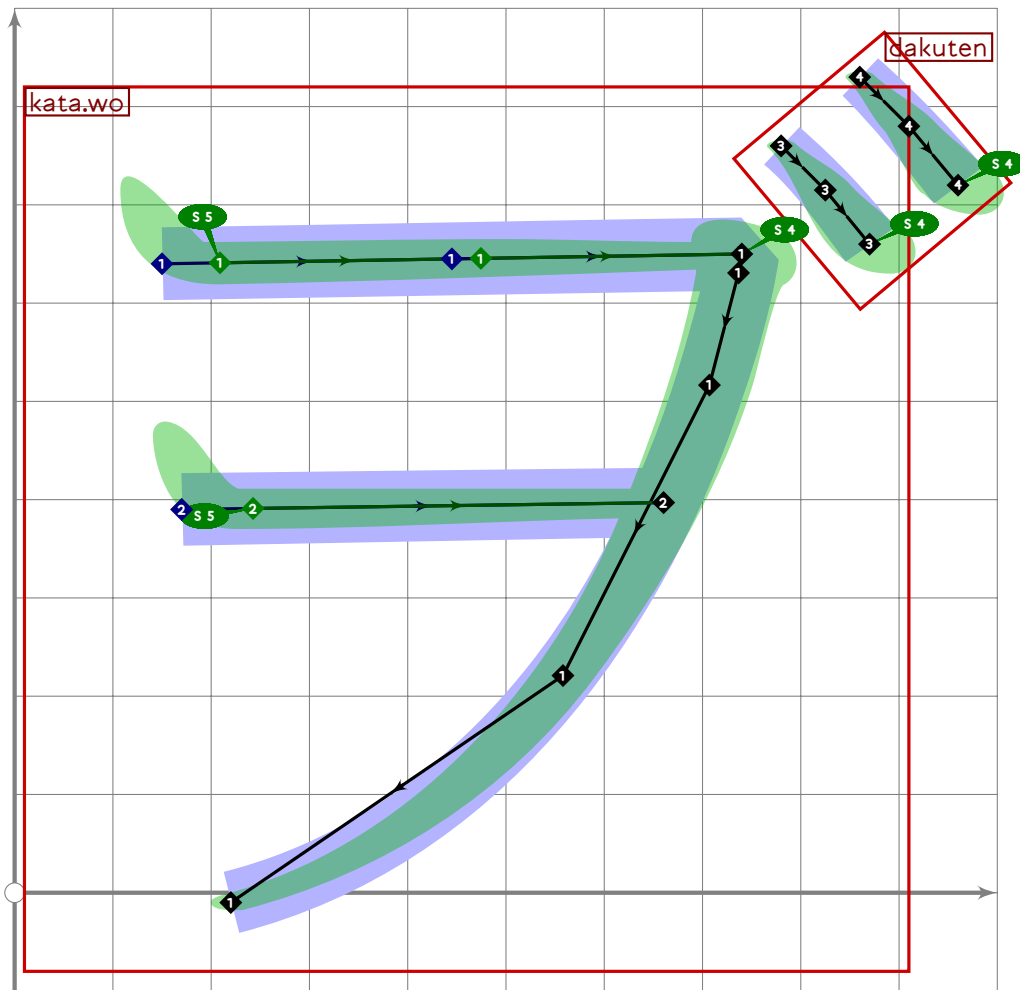
```



```

1530 % katakana "ve"
1531 begint Suglyph("uni30F9",249);
1532 tsu_curve.kata.we;
1533 tsu_curve.dakuten(identity rotated 15 shifted (860,750));
1534 tsu_render;
1535 endsuglyph;
1536

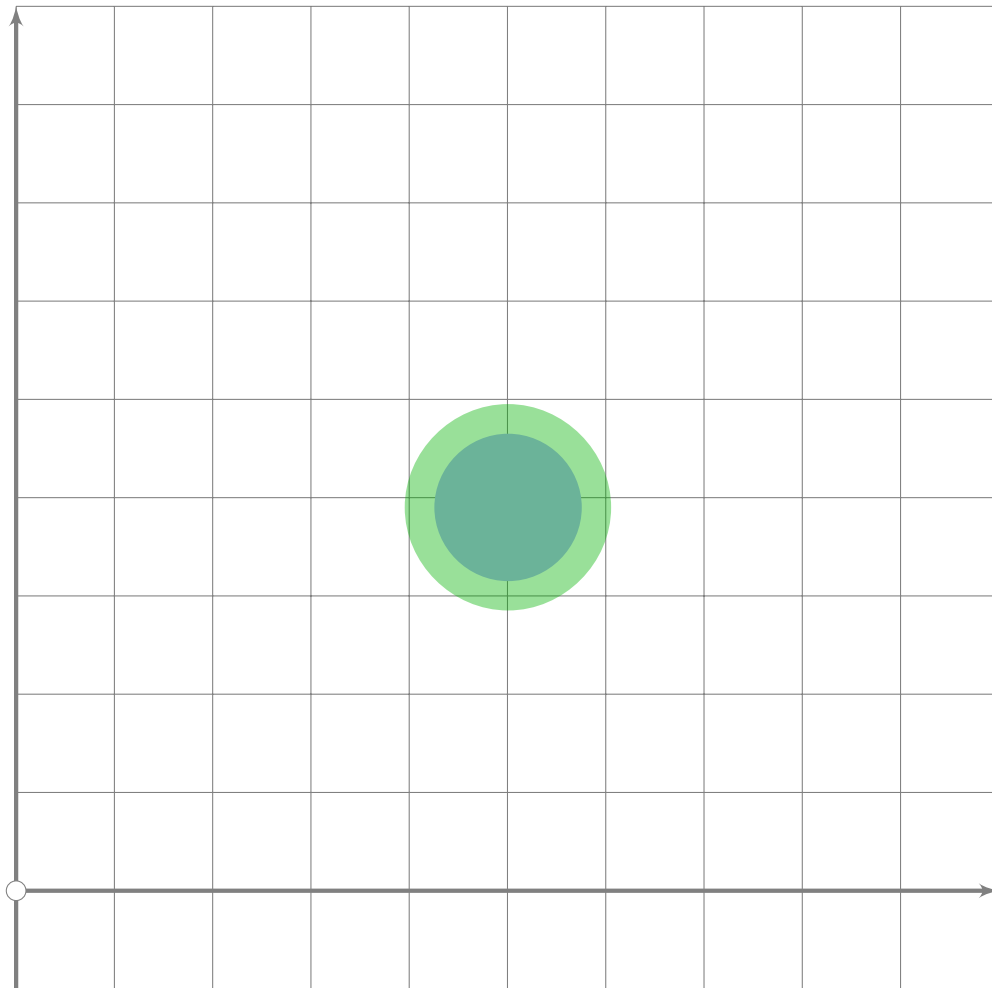
```



```

1537 % katakana "vo"
1538 begint Suglyph("uni30FA",250);
1539 tsu_xform(identity shifted (-40,30))(tsu_curve.kata.wo);
1540 tsu_curve.dakuten(identity shifted (860,750));
1541 tsu_render;
1542 endtsuglyph;
1543

```

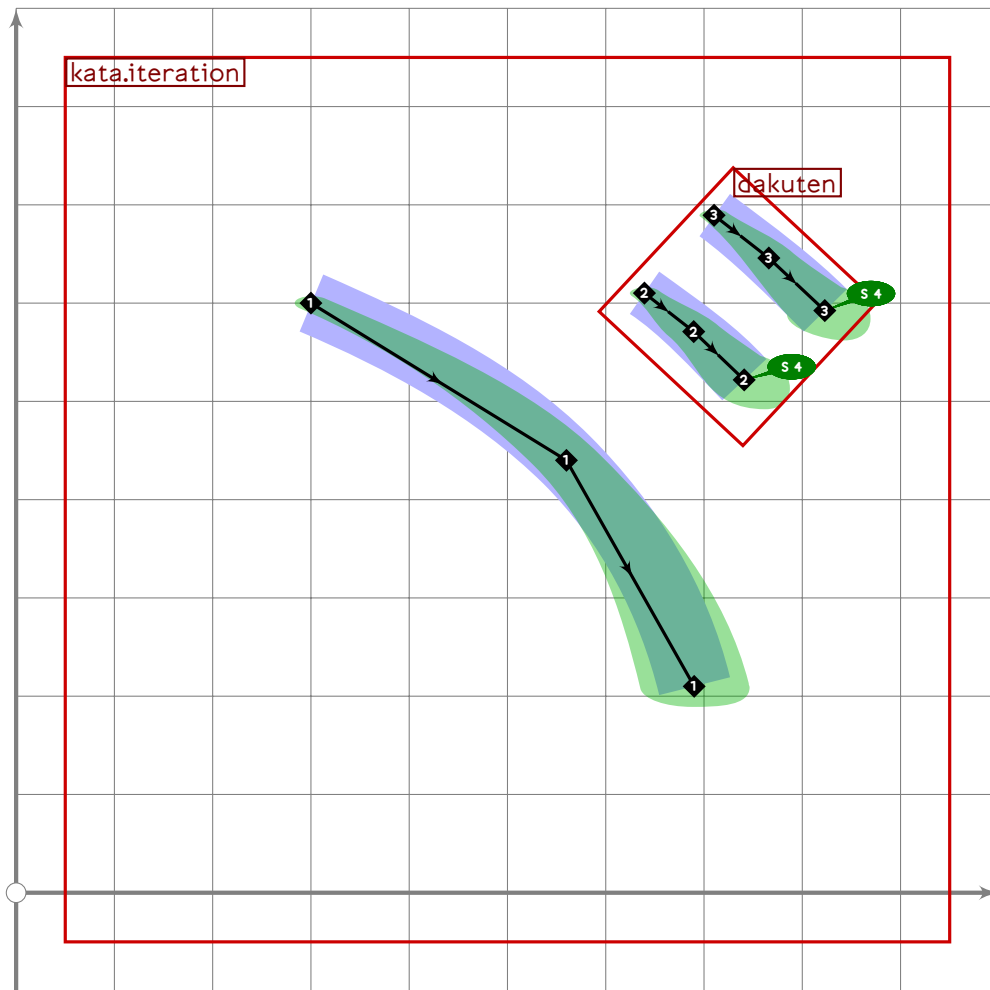
```

1544 % katakana middle dot
1545 begintsuglyph("uni30FB",251);
1546 Fill fullcircle scaled (200*tsu_brush_max) shifted centre_pt;
1547 endsuglyph;
1548
1549 % hira/kata "prolonged sound mark"
1550 begintsuglyph("uni30FC",252);
1551 tsu_curve.punct.psound;
1552 tsu_render;
1553 endsuglyph;
1554
1555 % katakana "iteration mark"
1556 begintsuglyph("uni30FD",253);
1557 tsu_curve.kata.iteration;
1558 tsu_render;
1559 endsuglyph;
1560

```

[see page 289]

[see page 151]



```

1561 % katakana "voiced iteration mark"
1562 begintsuglyph("uni30FE",254);
1563 tsu_curve.kata.iteration;
1564 tsu_curve.dakuten(identity rotated 7 shifted (720,610));
1565 tsu_render;
1566 endsuglyph;
1567
1568 _____
1569
1570 endfont;
1571
1572 _____

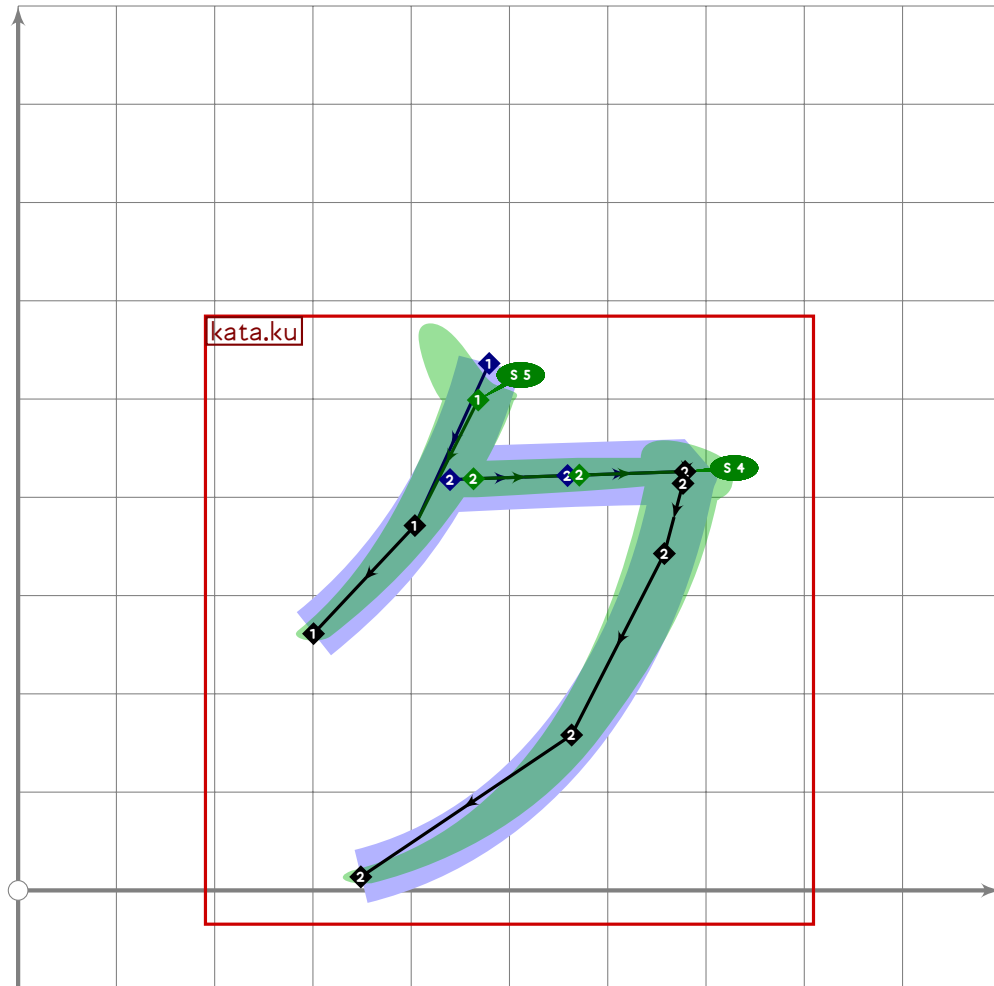
```

tsuku31.mp

```
1 %  
2 % Unicode page 31 (Katakana Phonetic Extensions) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input katakana.mp;  
37  
38 _____  
39
```

Phonetic Extensions For Ainu

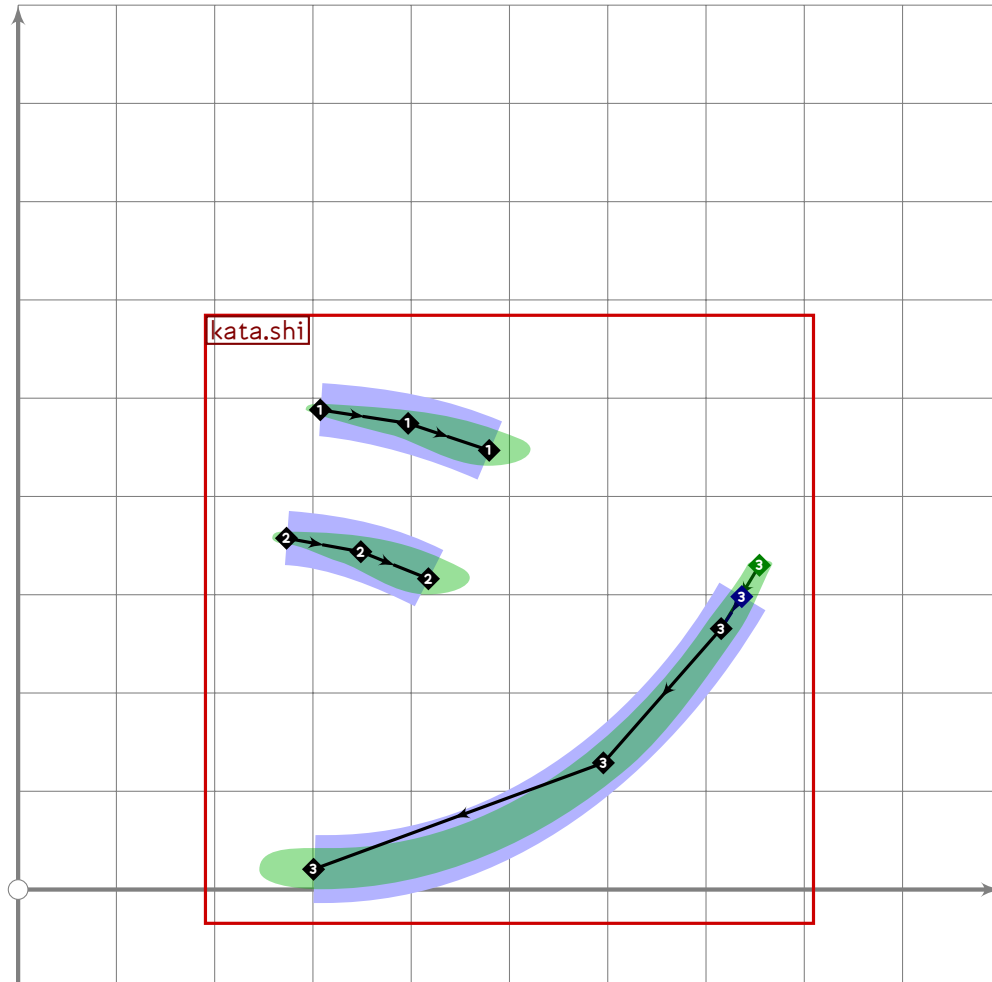
```
40 % PHONETIC EXTENSIONS FOR AINU  
41
```



```

42 % katakana "ku"
43 begintsuglyph("uni31F0",240);
44 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.ku);
45 tsu_render;
46 endtsuglyph;
47

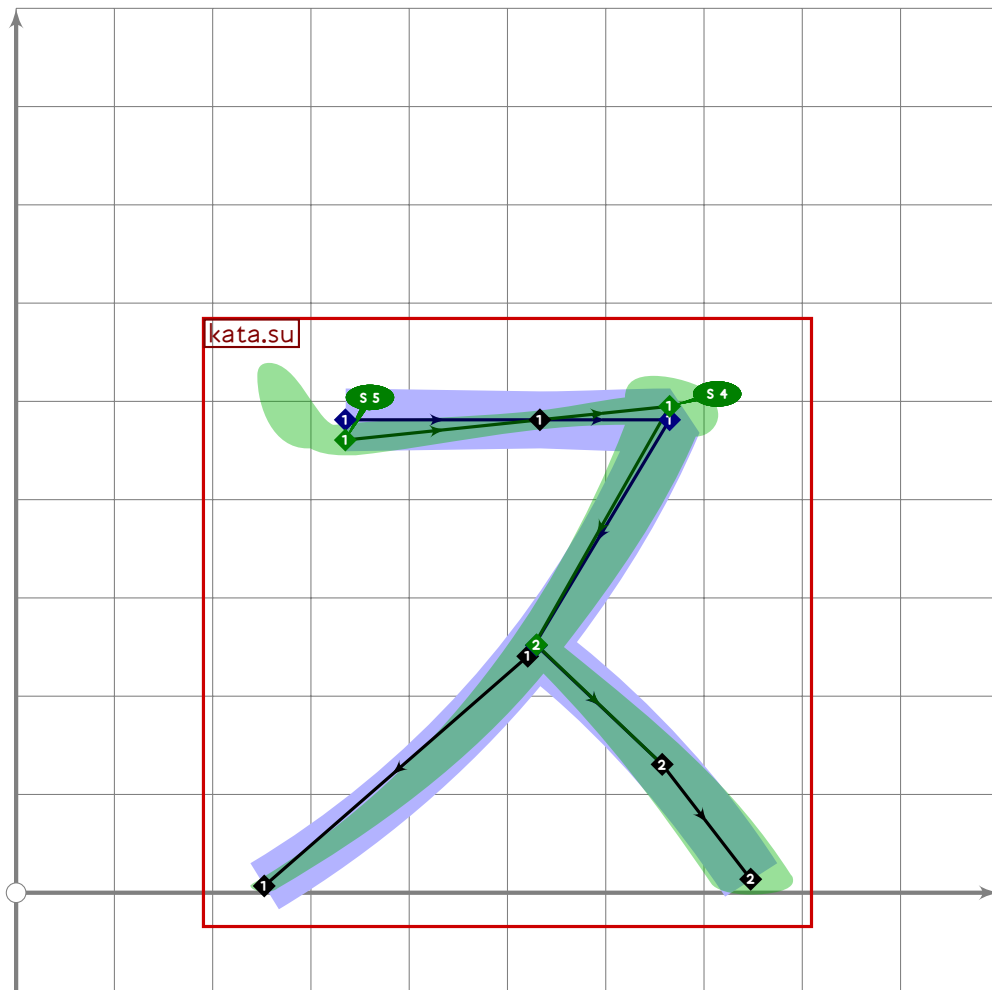
```



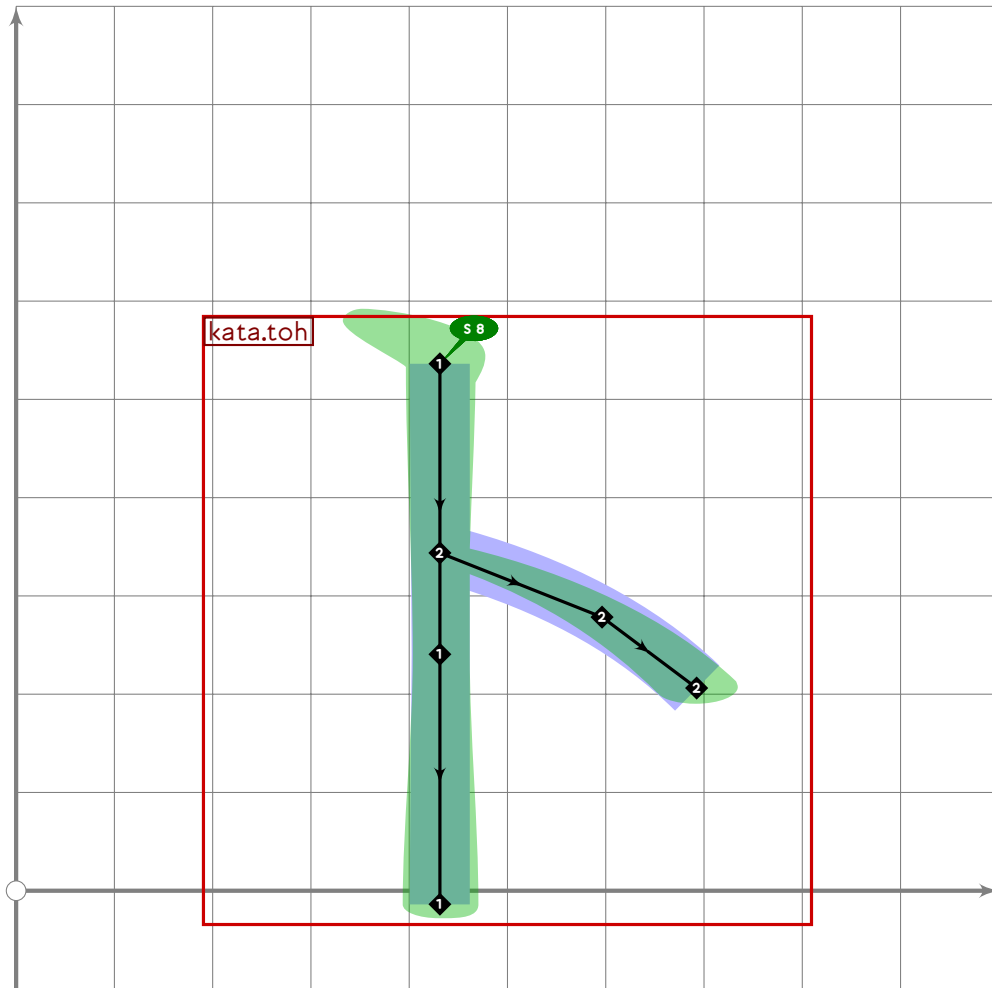
```

48 % katakana "shi"
49 begintsuglyph("uni31F1",241);
50 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.shi);
51 tsu_render;
52 endtsuglyph;
53

```



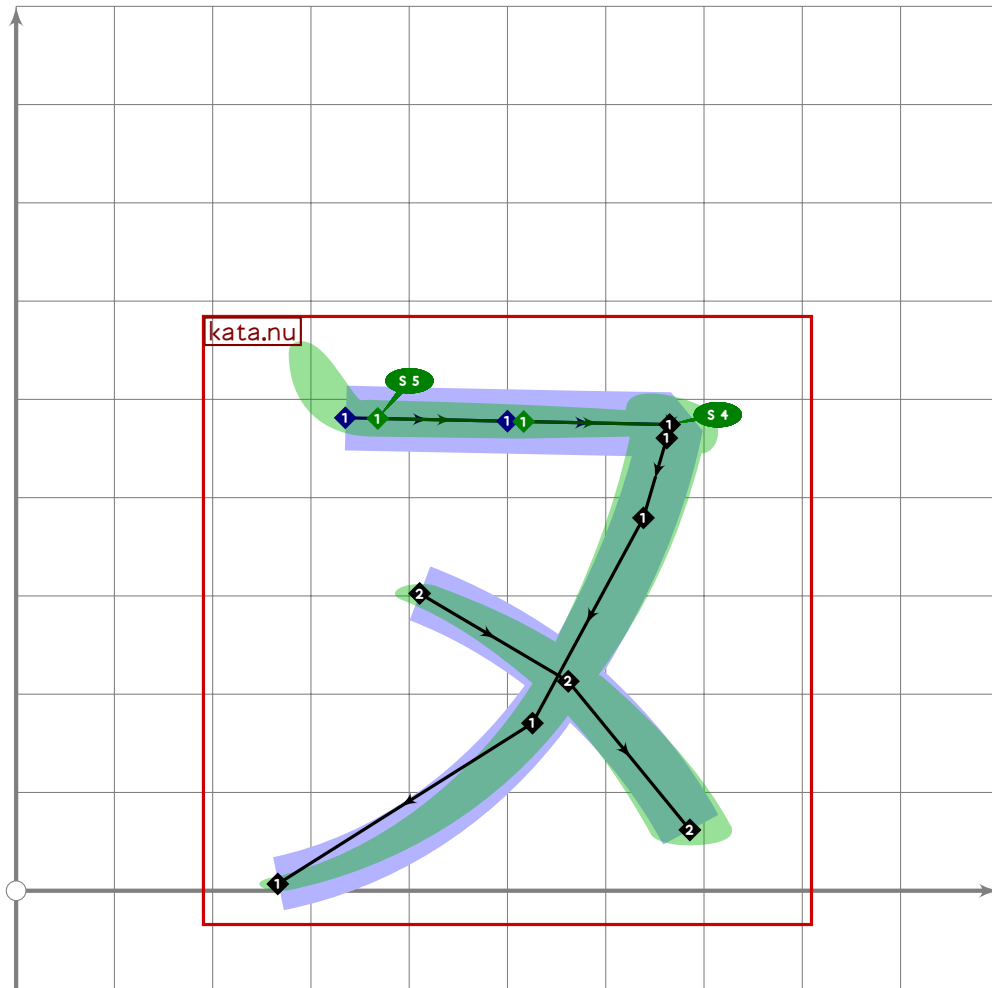
```
54 % katakana "su"  
55 beginsuglyph("uni31F2";242);  
56 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.su);  
57 tsu_render;  
58 endsuglyph;  
59
```



```

60 % katakana "to"
61 beginsuglyph("uni31F3";243);
62 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.toh);
63 tsu_render;
64 endsuglyph;
65

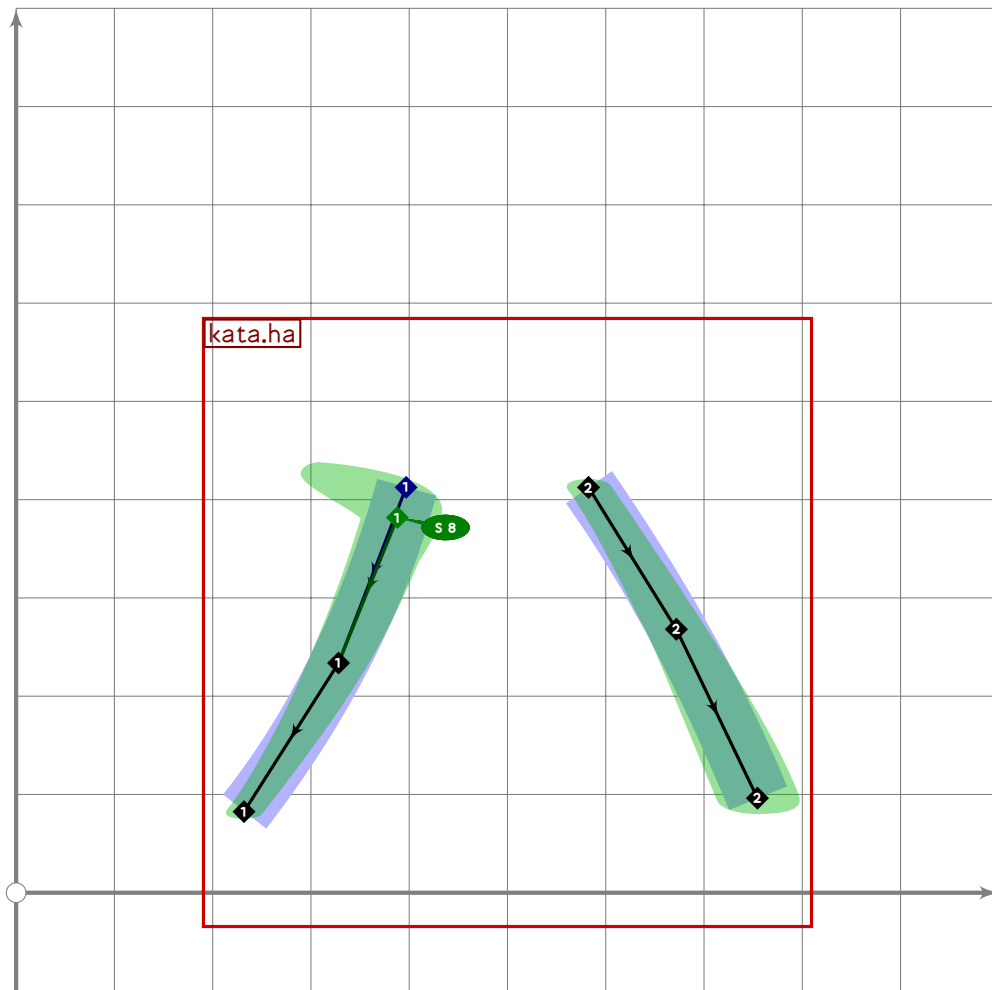
```



```

66 % katakana "nu"
67 beginsuglyph("uni31F4";244);
68 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.nu);
69 tsu_render;
70 endsuglyph;
71

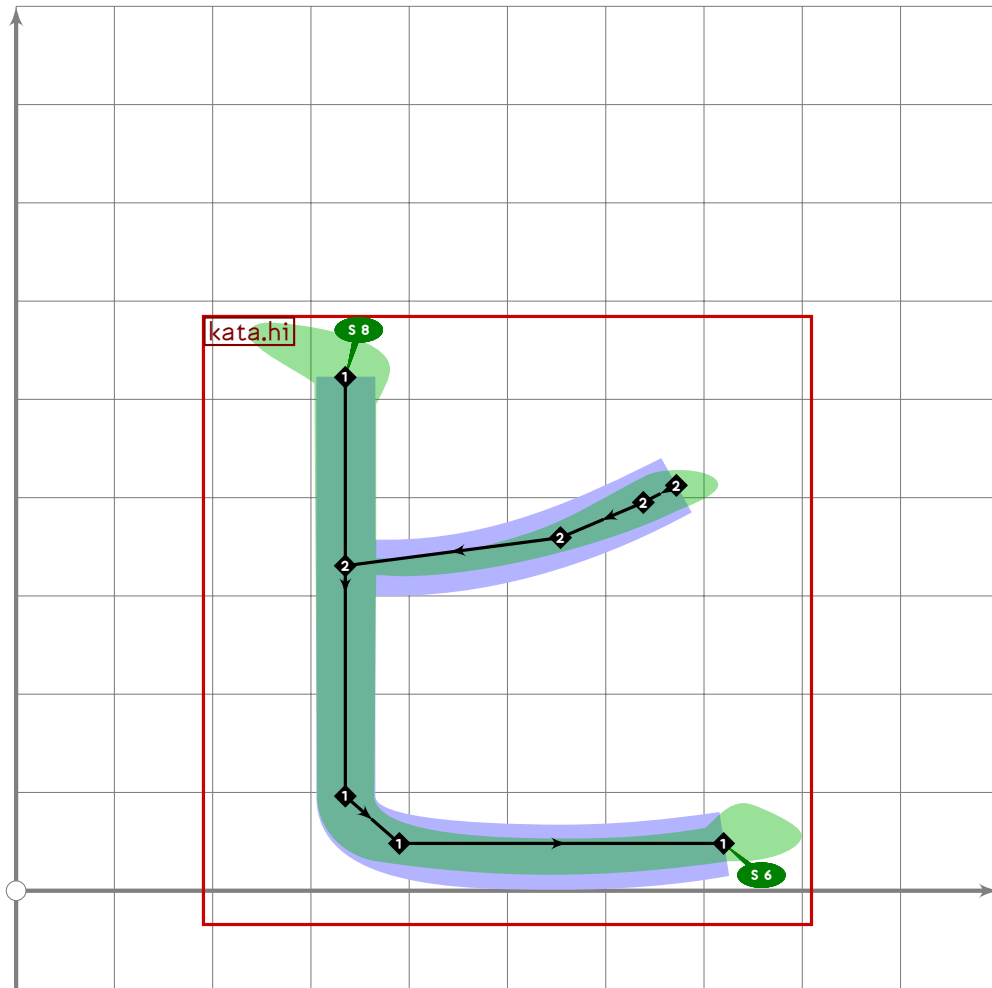
```



```

72 % katakan "ha"
73 beginsuglyph("uni31F5";245);
74 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.ha);
75 tsu_render;
76 endsuglyph;
77

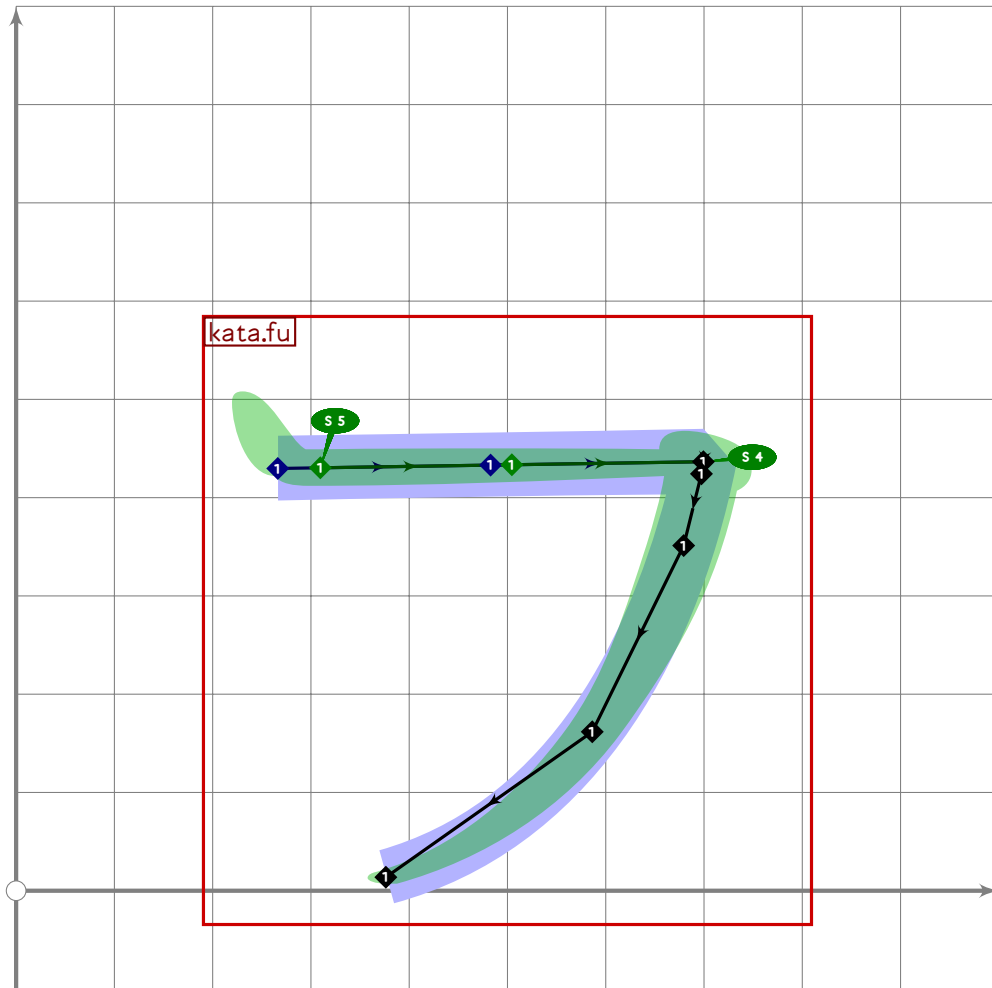
```

```

78 % hiragana "hi"
79 begint Suglyph("uni31F6";246);
80 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.hi);
81 tsu_render;
82 endtsuglyph;
83

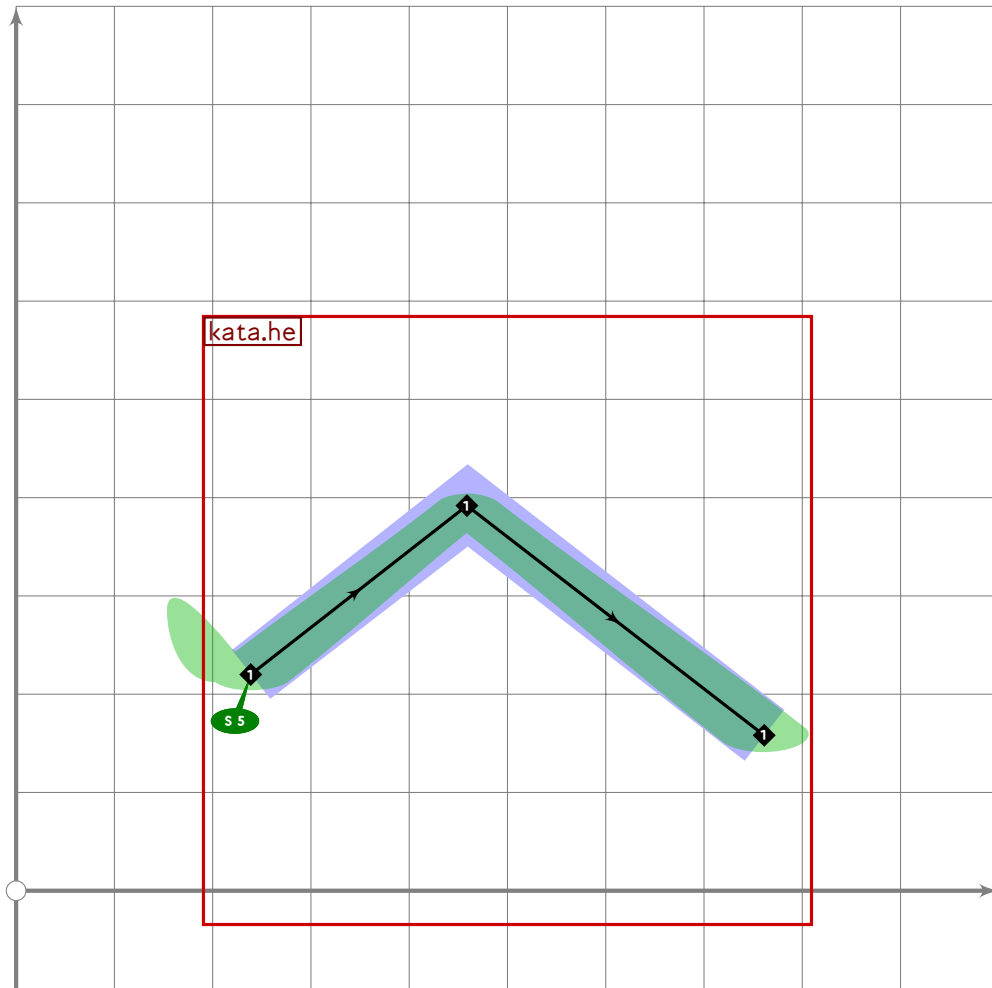
```



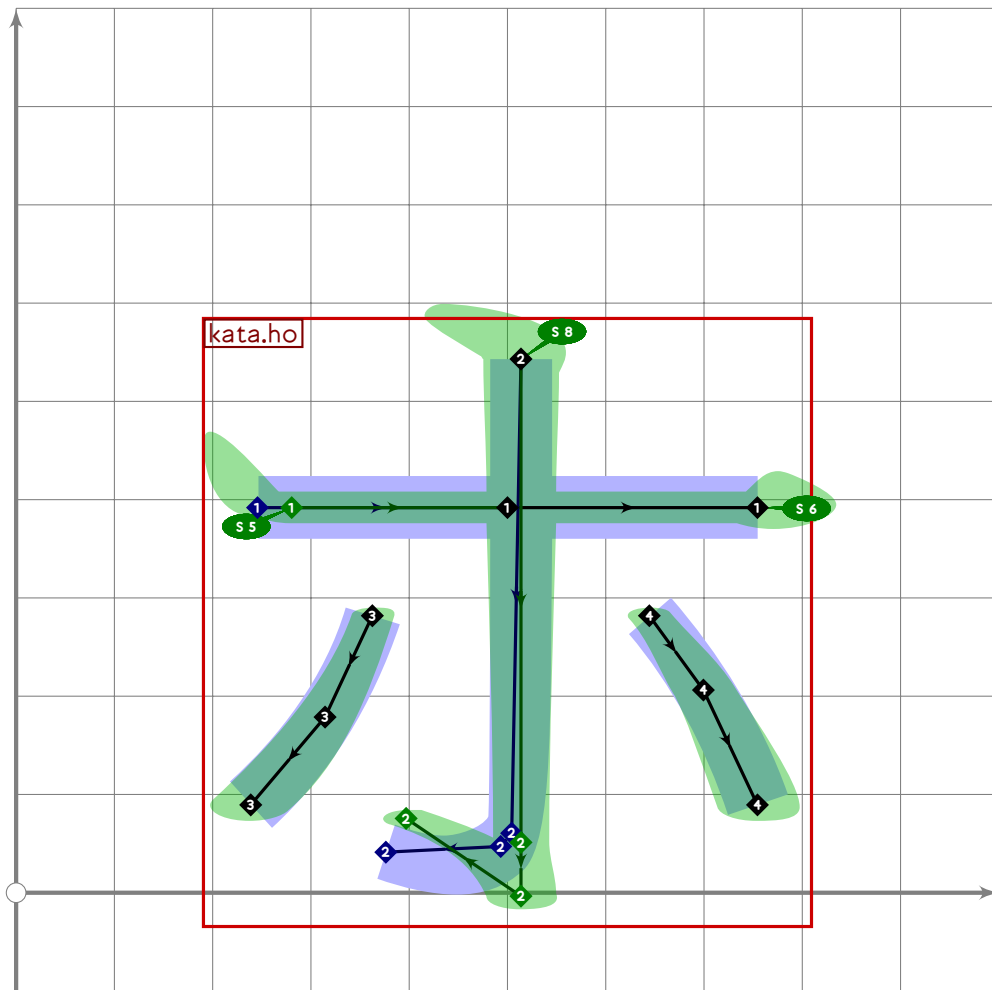
```

84 % katakana "fu"
85 beginsuglyph("uni31F7";247);
86 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.fu);
87 tsu_render;
88 endsuglyph;
89

```



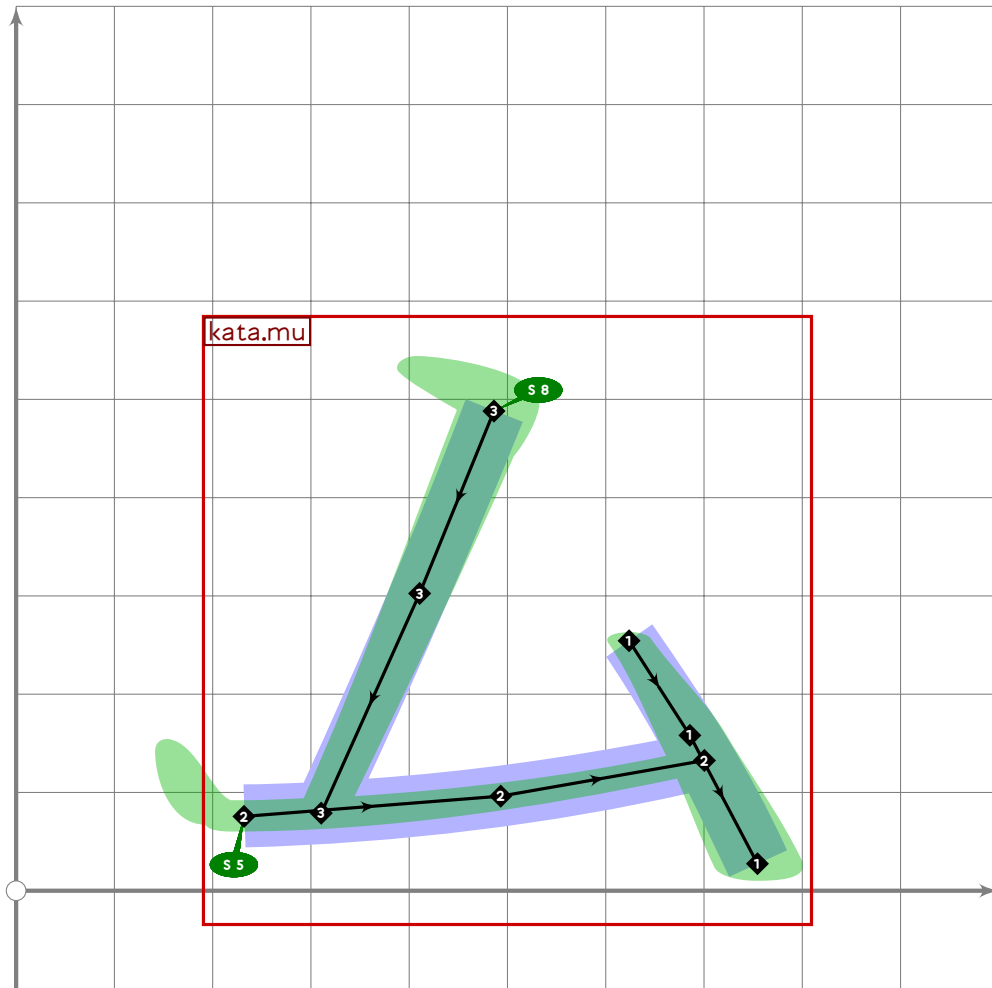
```
90 % katakana "he"  
91 beginsuglyph("uni31F8";248);  
92 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.he);  
93 tsu_render;  
94 endsuglyph;  
95
```



```

96 % katakana "ho"
97 begint Suglyph("uni31F9";249);
98 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.ho);
99 tsu_render;
100 endtsuglyph;
101

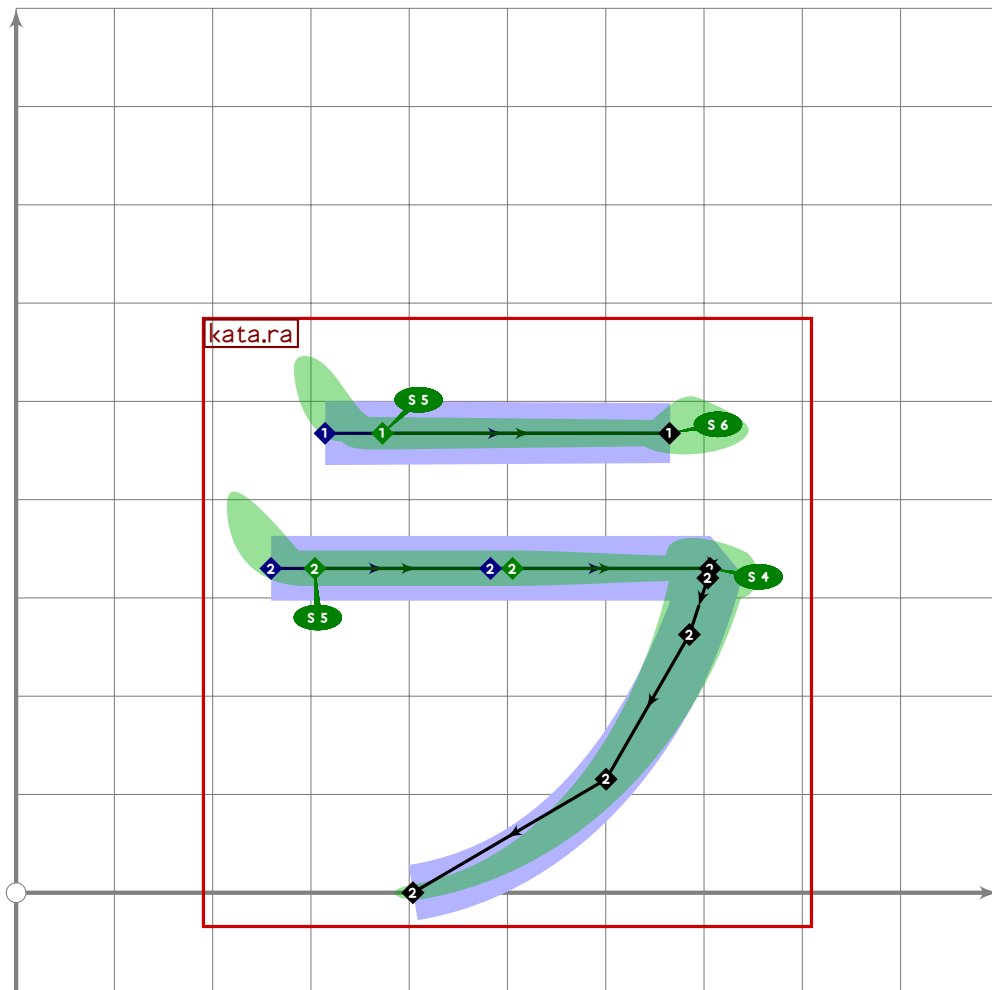
```



```

102 % katakana "mu"
103 beginsuglyph("uni31FA";250);
104 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.mu);
105 tsu_render;
106 endsuglyph;
107

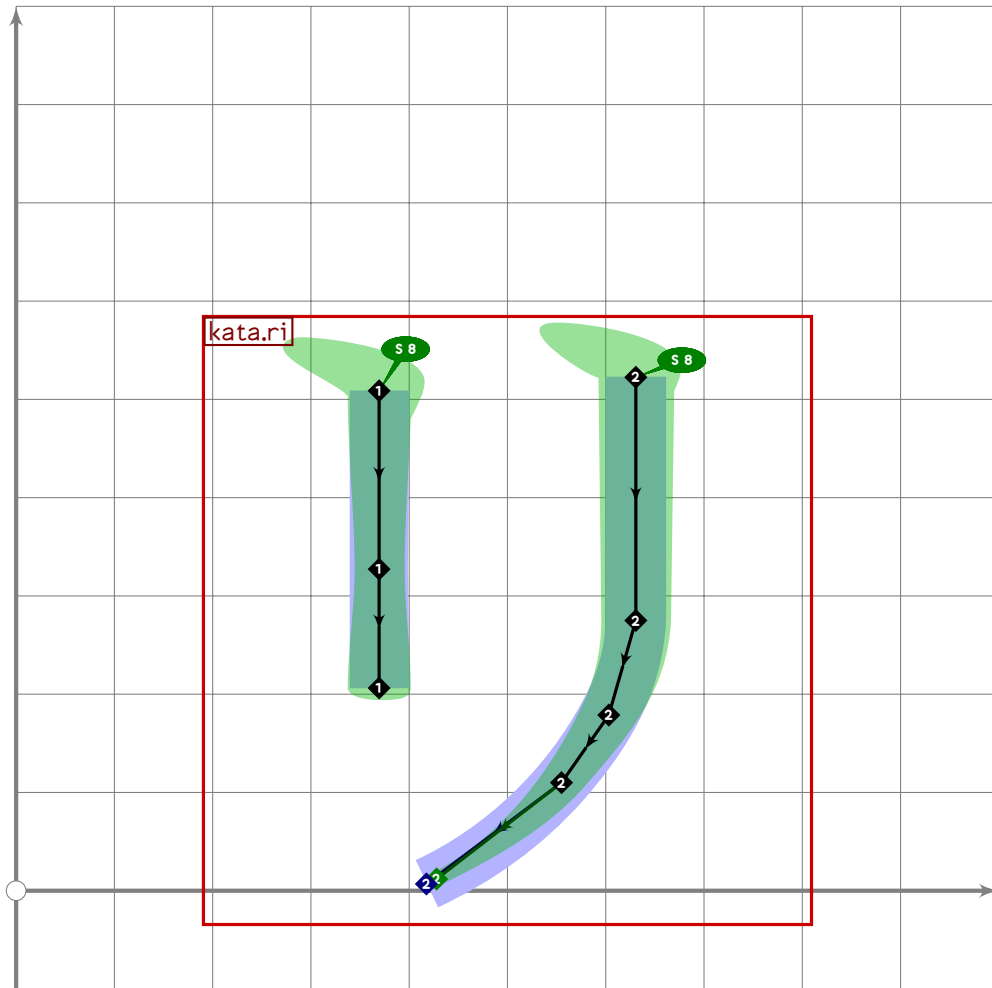
```



```

108 % katakana "ra"
109 beginsuglyph("uni31FB";251);
110 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.ra);
111 tsu_render;
112 endsuglyph;
113

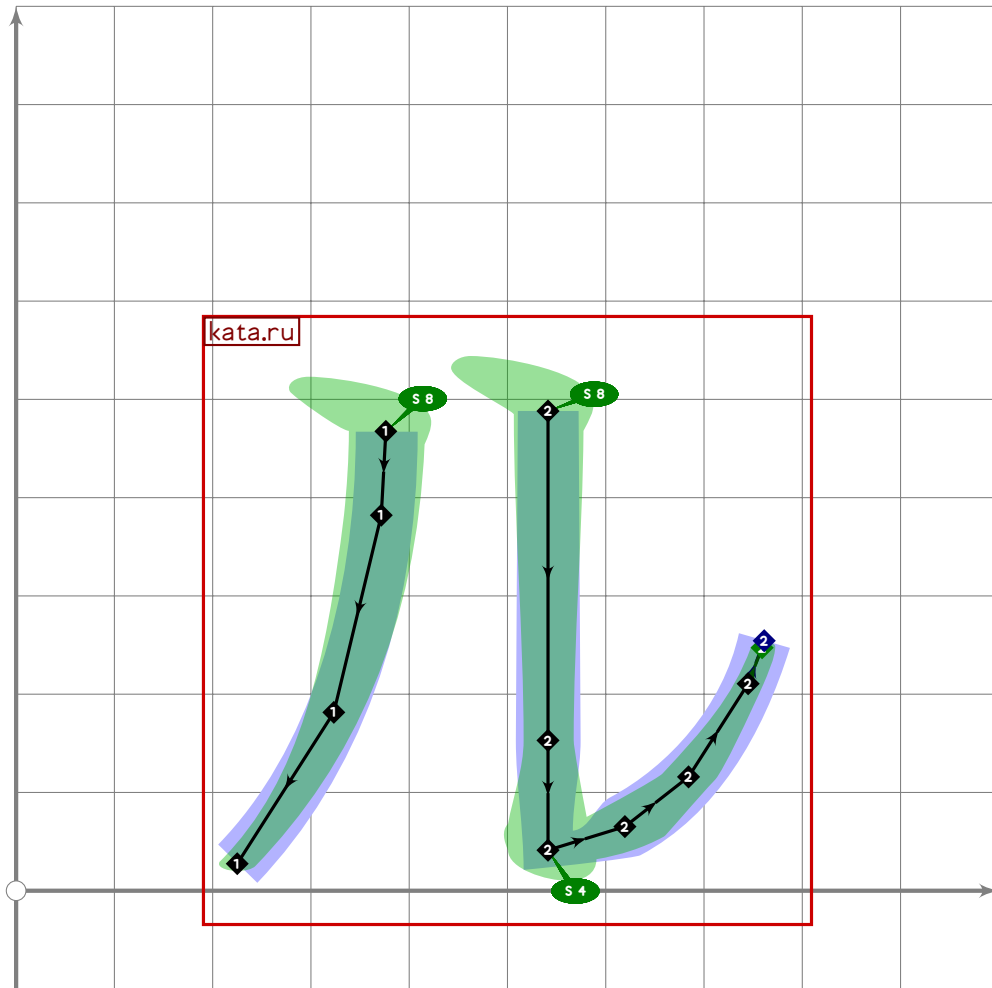
```



```

114 % katakana "ri"
115 begint Suglyph("uni31FC";252);
116 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.ri);
117 tsu_render;
118 endtsuglyph;
119

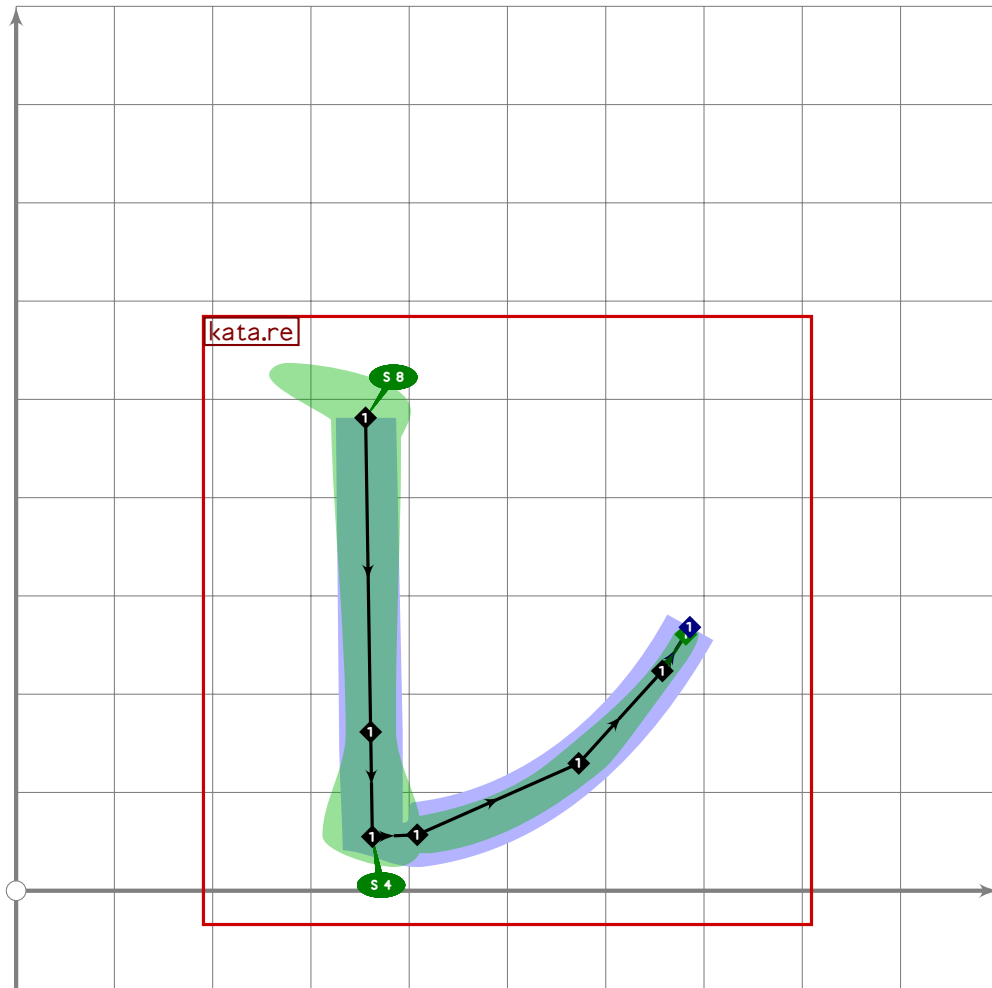
```



```

120 % katakana "ru"
121 begint Suglyph("uni31FD";253);
122 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.ru);
123 tsu_render;
124 endtsuglyph;
125

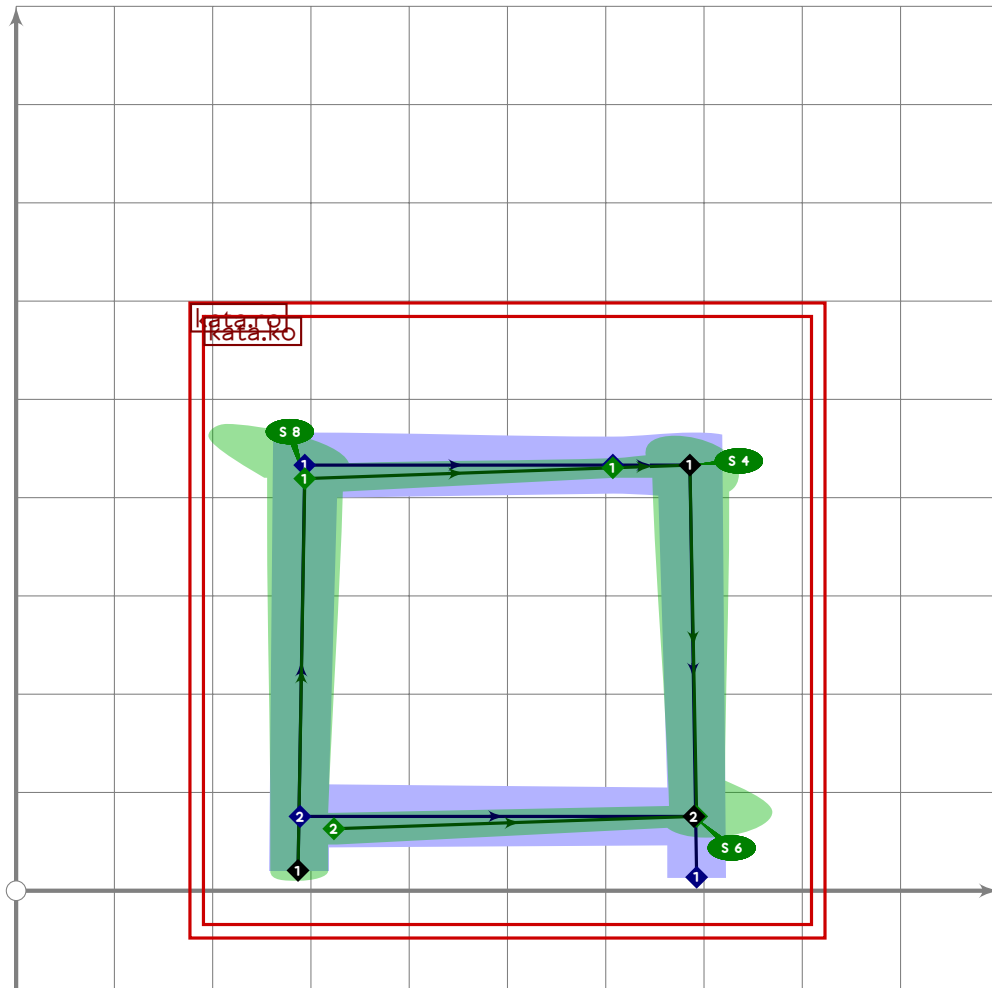
```

```

126 % katakana "re"
127 beginsuglyph("uni31FE";254);
128 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.re);
129 tsu_render;
130 endsuglyph;
131

```



```

132 % katakana "ro"
133 begint Suglyph("uni31FF";255);
134 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.ro);
135 tsu_render;
136 endtsuglyph;
137
138 _____
139
140 endfont;
141
142 _____

```

tsuku32.mp

```
1 %
2 % Unicode page 32 (Enclosed Alpha and Katakana) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---

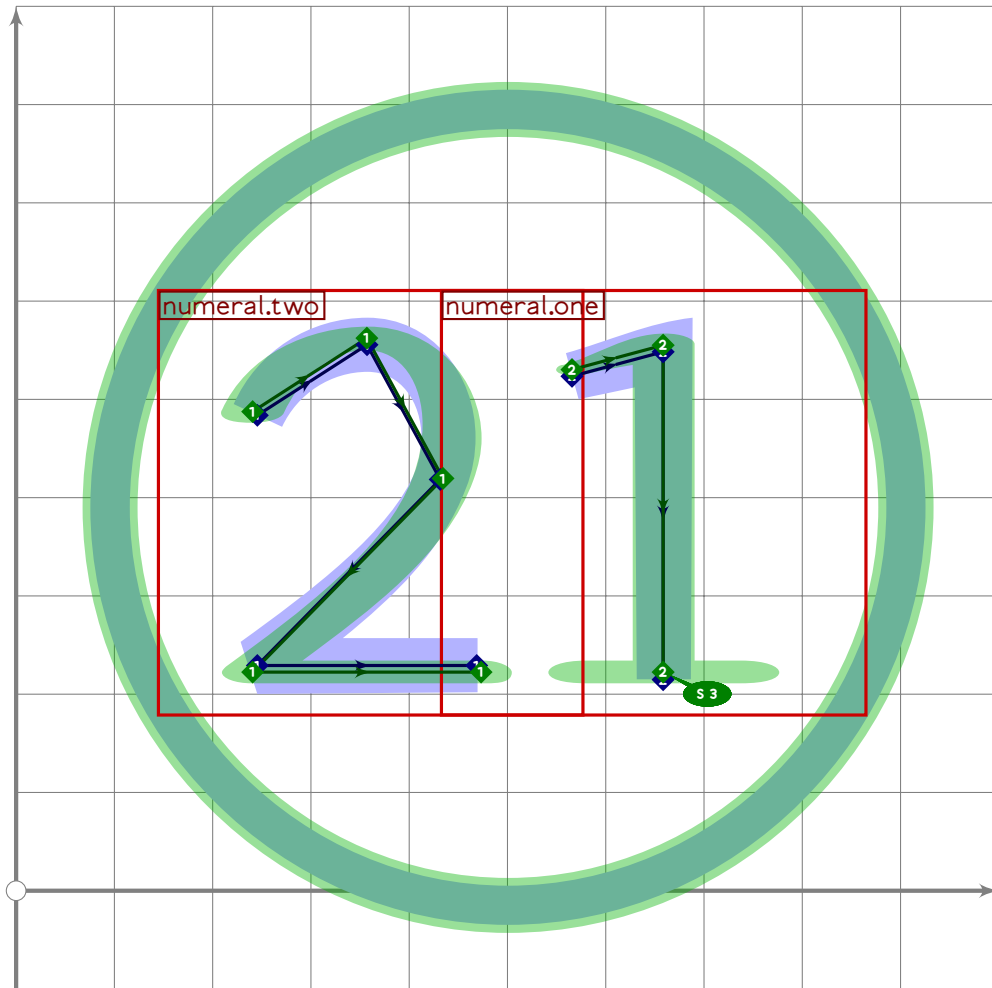

32
33 beginfont
34
35 input latin-intro.mp;
36
37 % AUTODEPS
38 input enclosed.mp;
39 input katakana.mp;
40 input numerals.mp;
41
42 

---


43
```

Circled Numerals

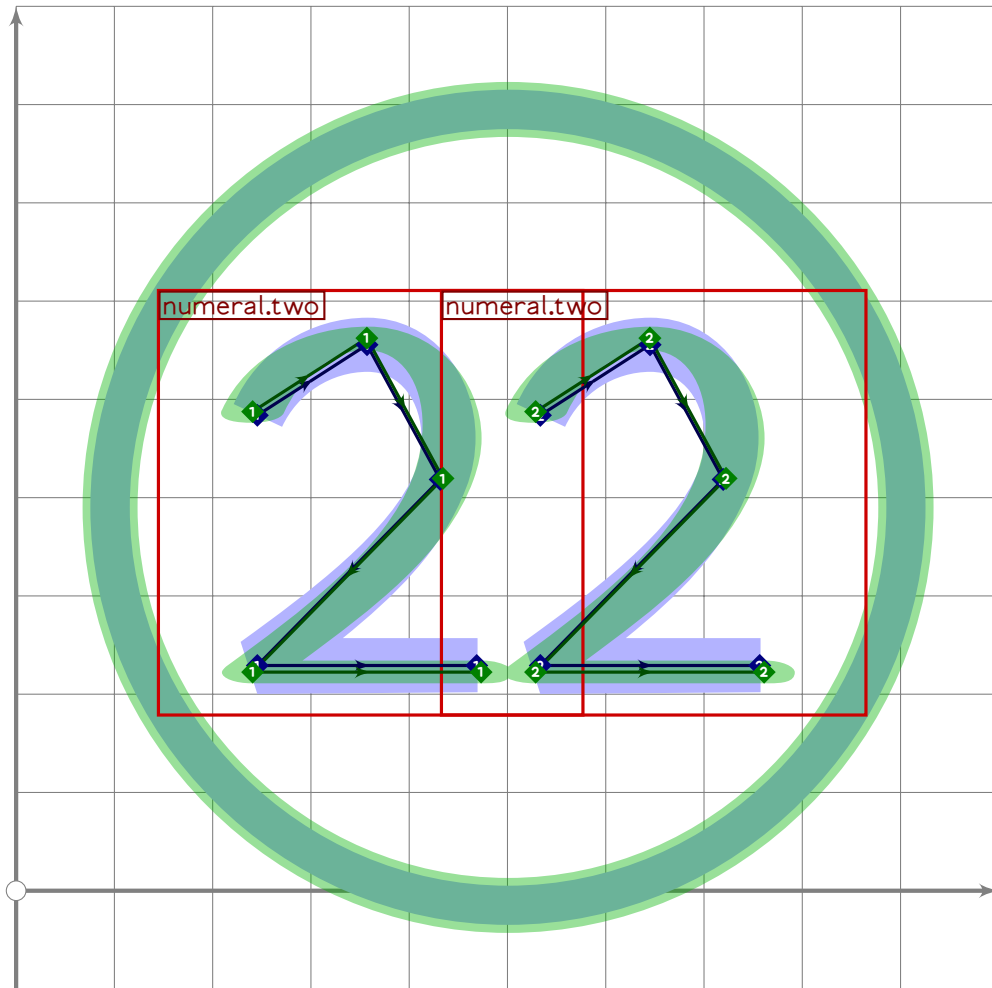
```
44 % CIRCLED NUMERALS
45
```



```

46 % 21
47 begint Suglyph("uni3251",81);
48   tsu_curve.circle.single;
49   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.two);
50   numeric x[],y[];
51   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.one);
52   tsu_render;
53 endtsuglyph;
54

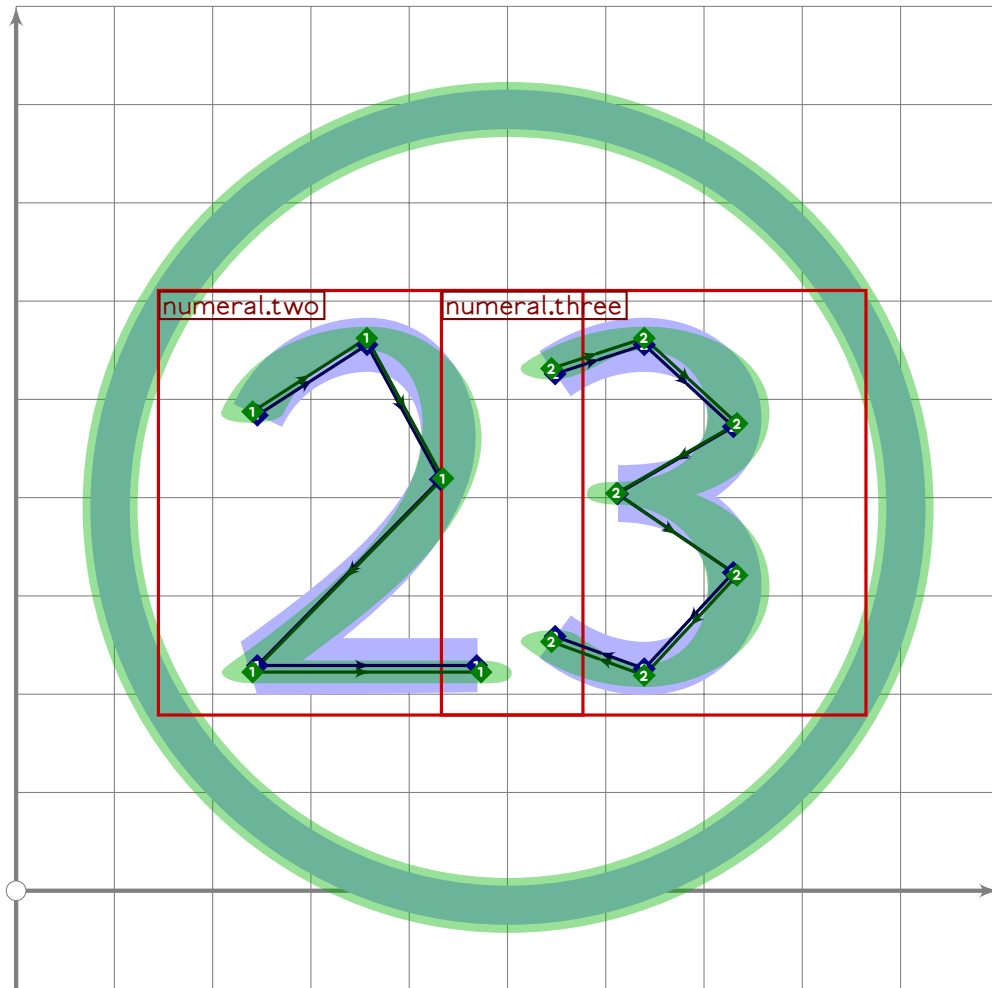
```



```

55 % 22
56 begint Suglyph("uni3252";82);
57   tsu_curve.circle.single;
58   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.two);
59   numeric x[],y[];
60   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.two);
61   tsu_render;
62 endsuglyph;
63

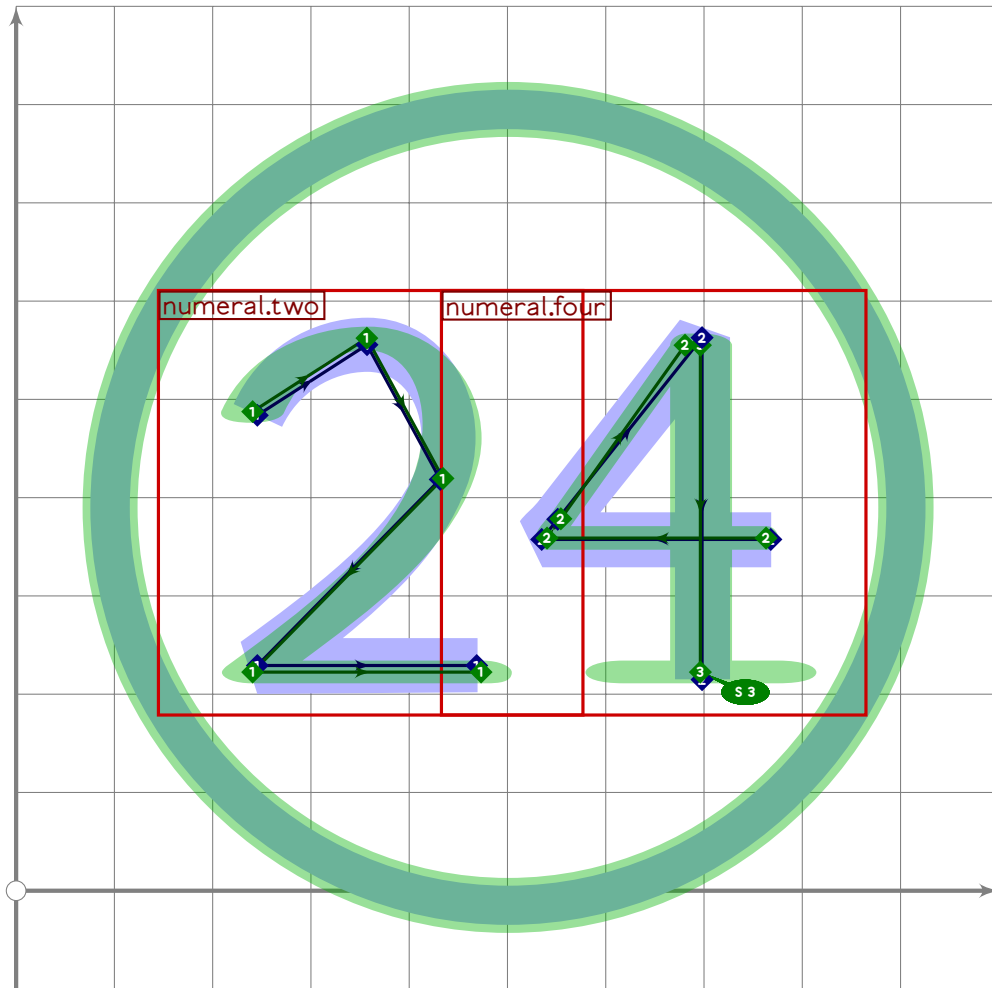
```



```

64 % 23
65 begintsglyph("uni3253";83);
66   tsu_curve.circle.single;
67   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.two);
68   numeric x[],y[];
69   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.three);
70   tsu_render;
71 endsuglyph;
72

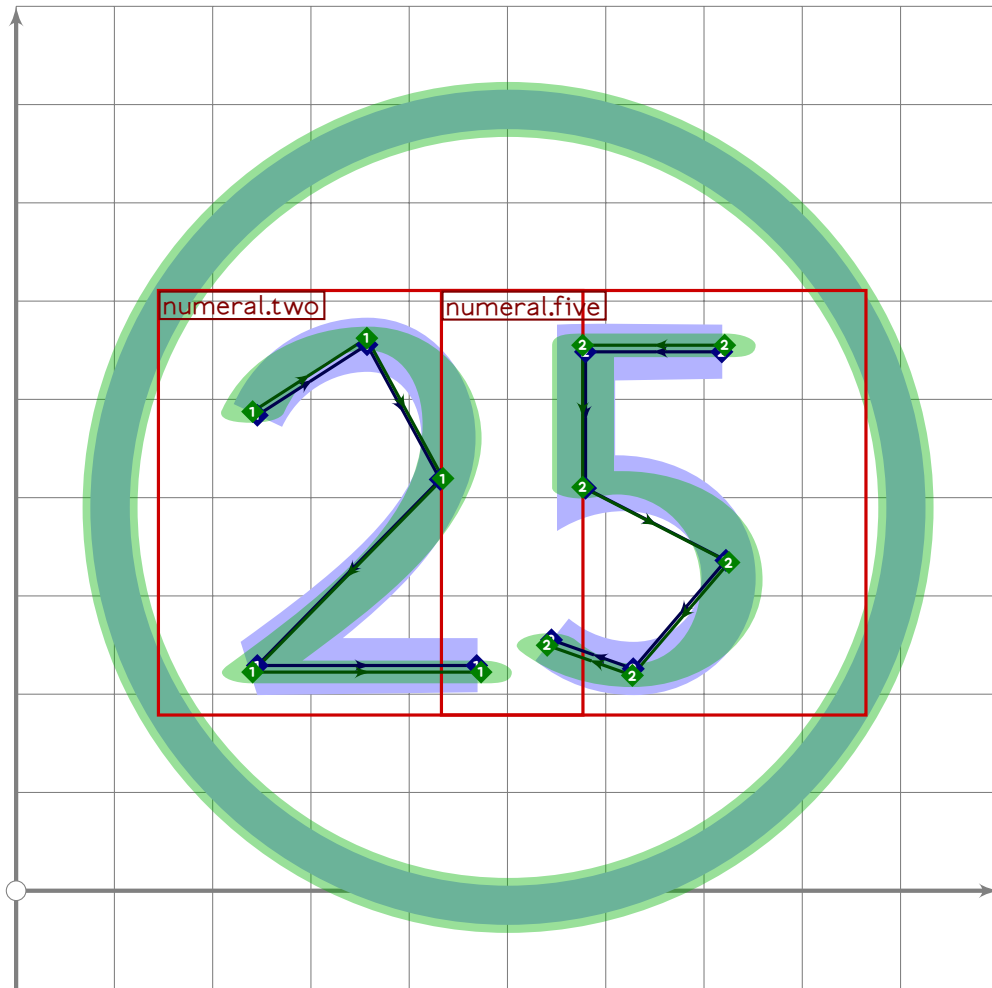
```



```

73 % 24
74 begint Suglyph("uni3254";84);
75   tsu_curve.circle.single;
76   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.two);
77   numeric x[],y[];
78   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.four);
79   tsu_render;
80 endsuglyph;
81

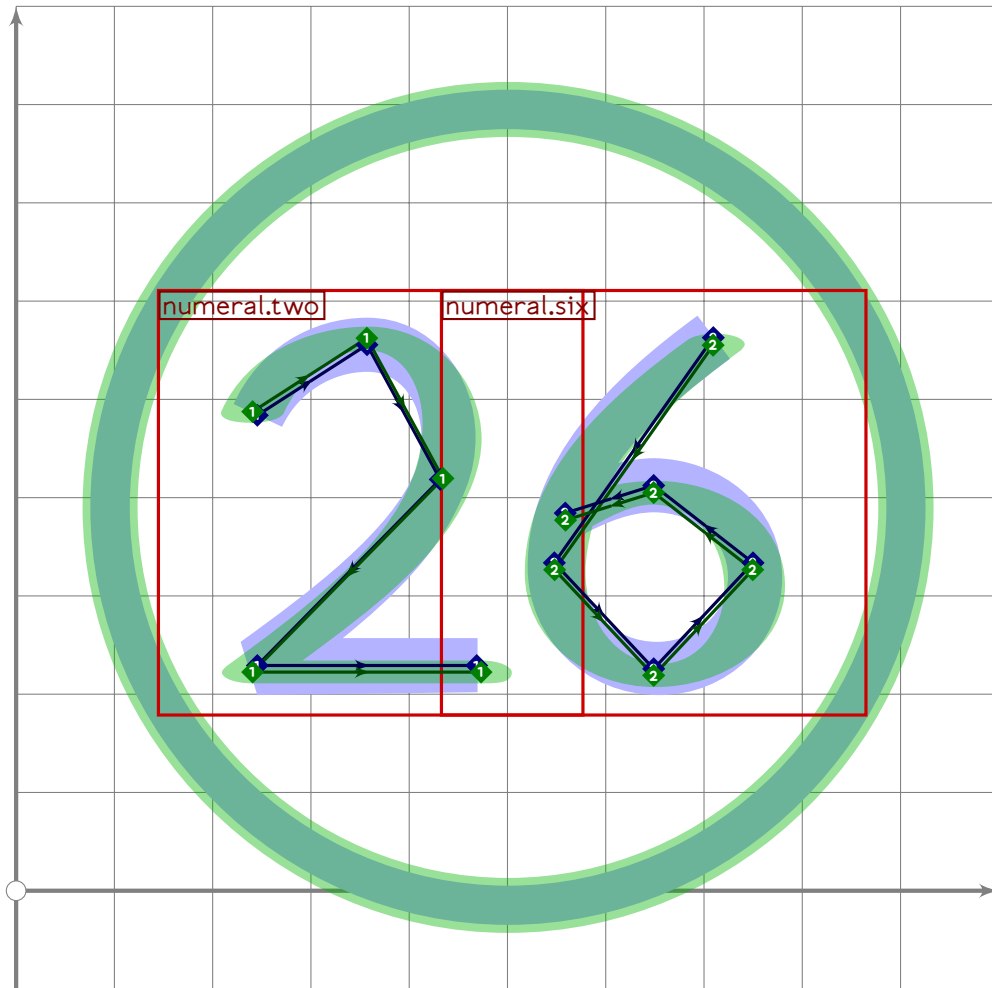
```



```

82 % 25
83 begint Suglyph("uni3255";85);
84 tsu_curve.circle.single;
85 tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.two);
86 numeric x[],y[];
87 tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.five);
88 tsu_render;
89 endsuglyph;
90

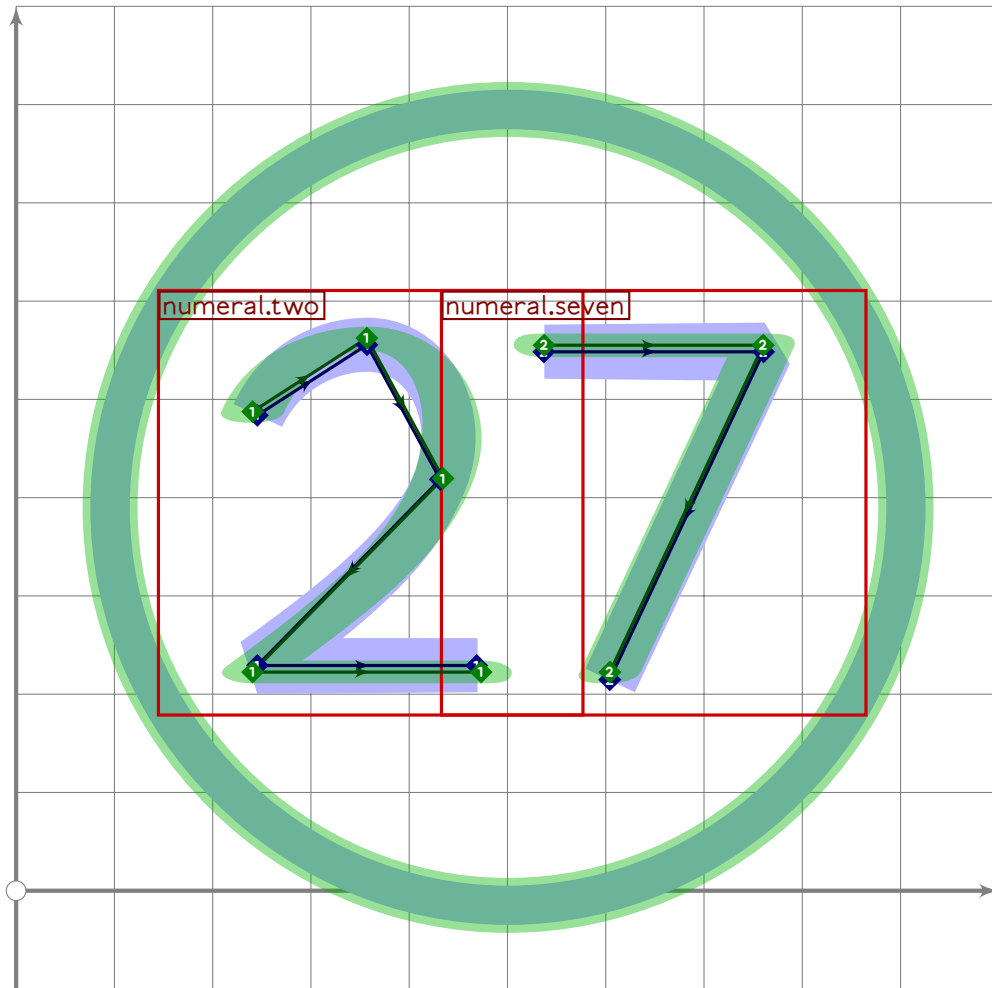
```

```

91 % 26
92 begint Suglyph("uni3256";86);
93   tsu_curve.circle.single;
94   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.two);
95   numeric x[],y[];
96   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.six);
97   tsu_render;
98 endtsuglyph;
99

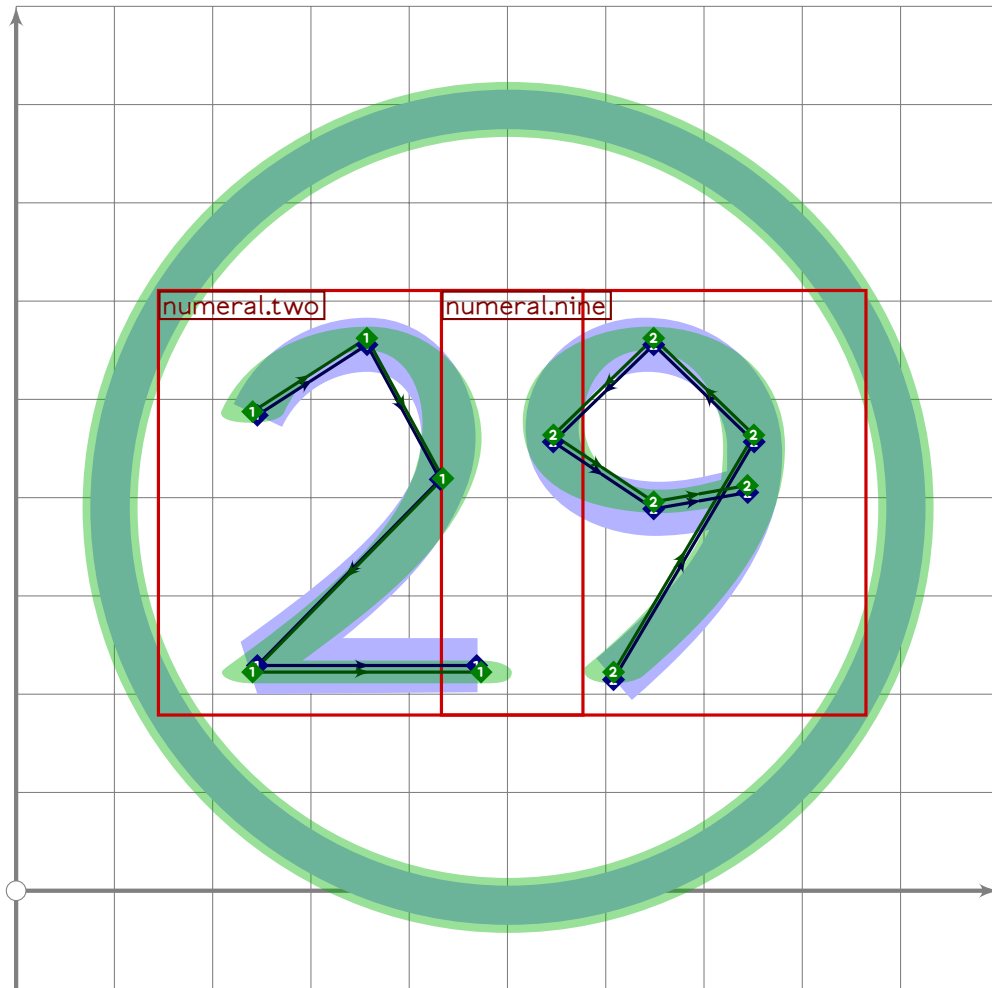
```



```

100 % 27
101 begint Suglyph("uni3257";87);
102   tsu_curve.circle.single;
103   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.two);
104   numeric x[],y[];
105   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.seven);
106   tsu_render;
107 endtsuglyph;
108

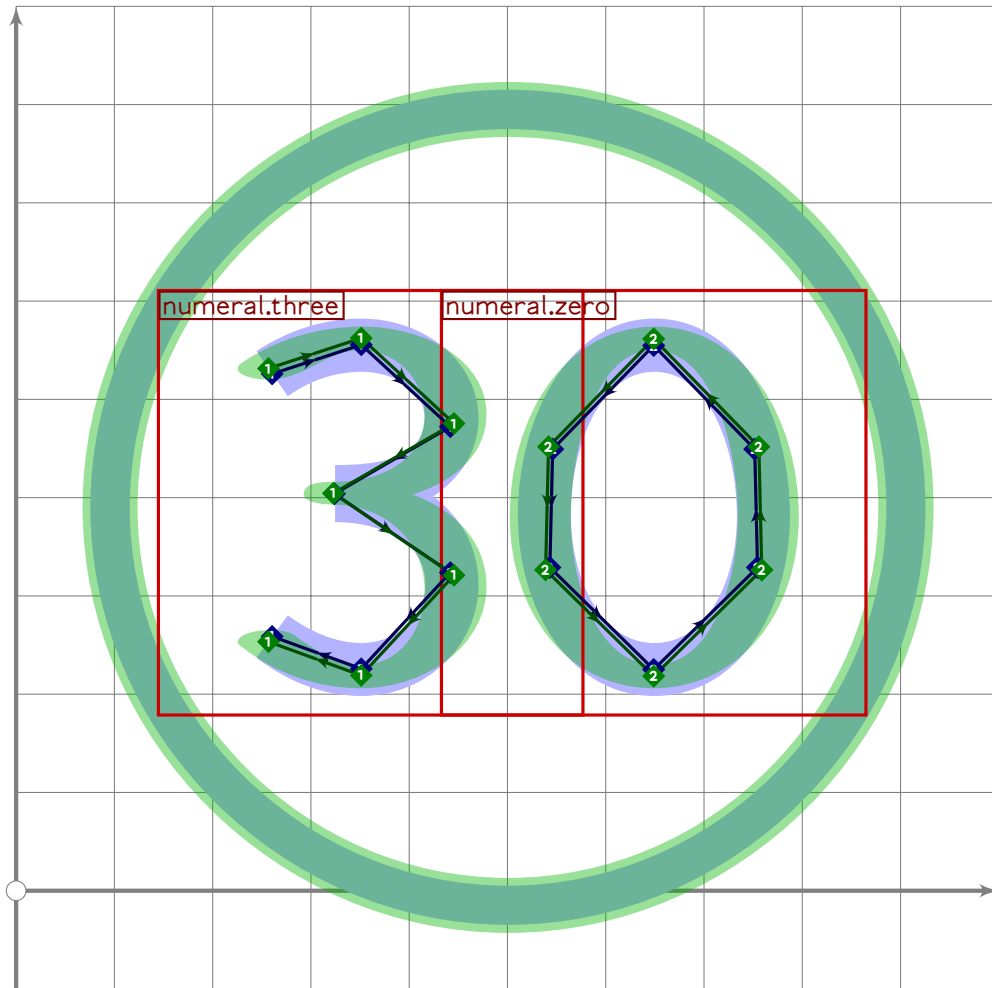
```

```

118 % 29
119 begintuglyph("uni3259";89);
120 tsu_curve.circle.single;
121 tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.two);
122 numeric x[],y[];
123 tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.nine);
124 tsu_render;
125 endtuglyph;
126

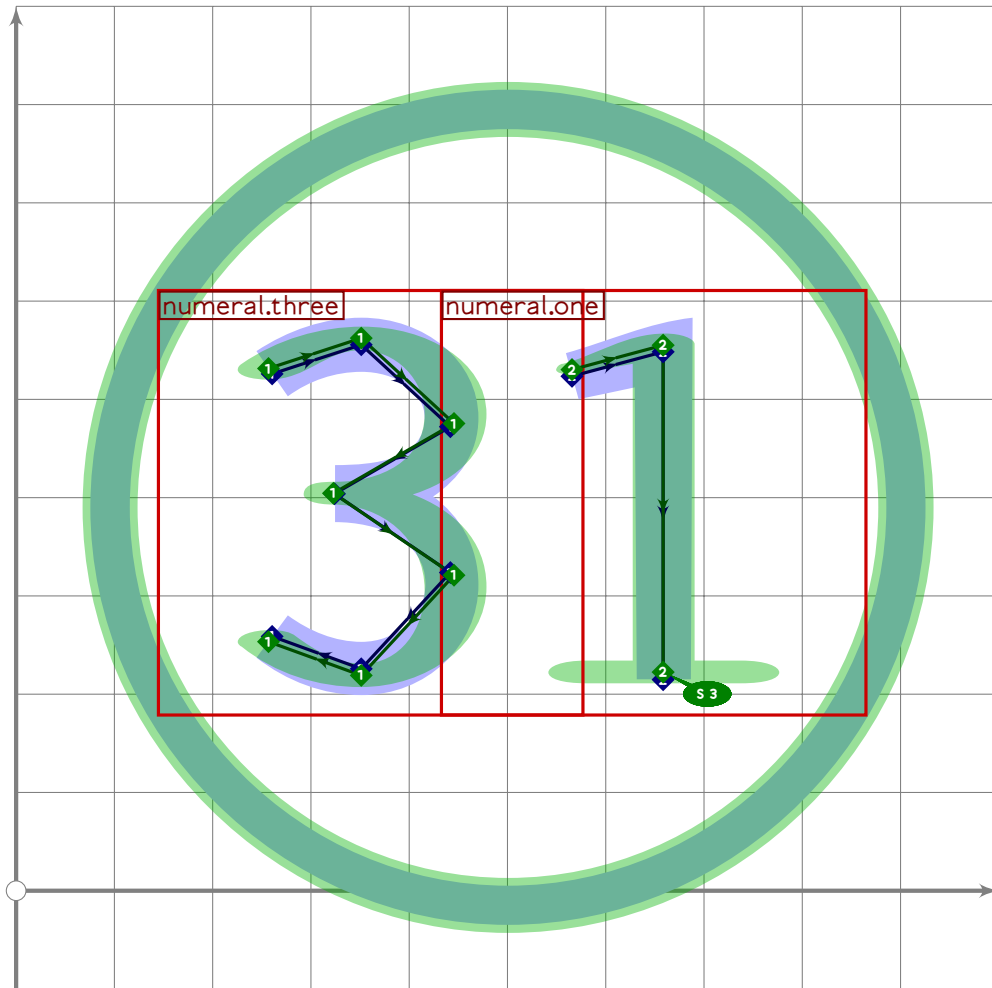
```



```

127 % 30
128 begint Suglyph("uni325A";90);
129   tsu_curve.circle.single;
130   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.three);
131   numeric x[],y[];
132   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.zero);
133   tsu_render;
134 endtsuglyph;
135

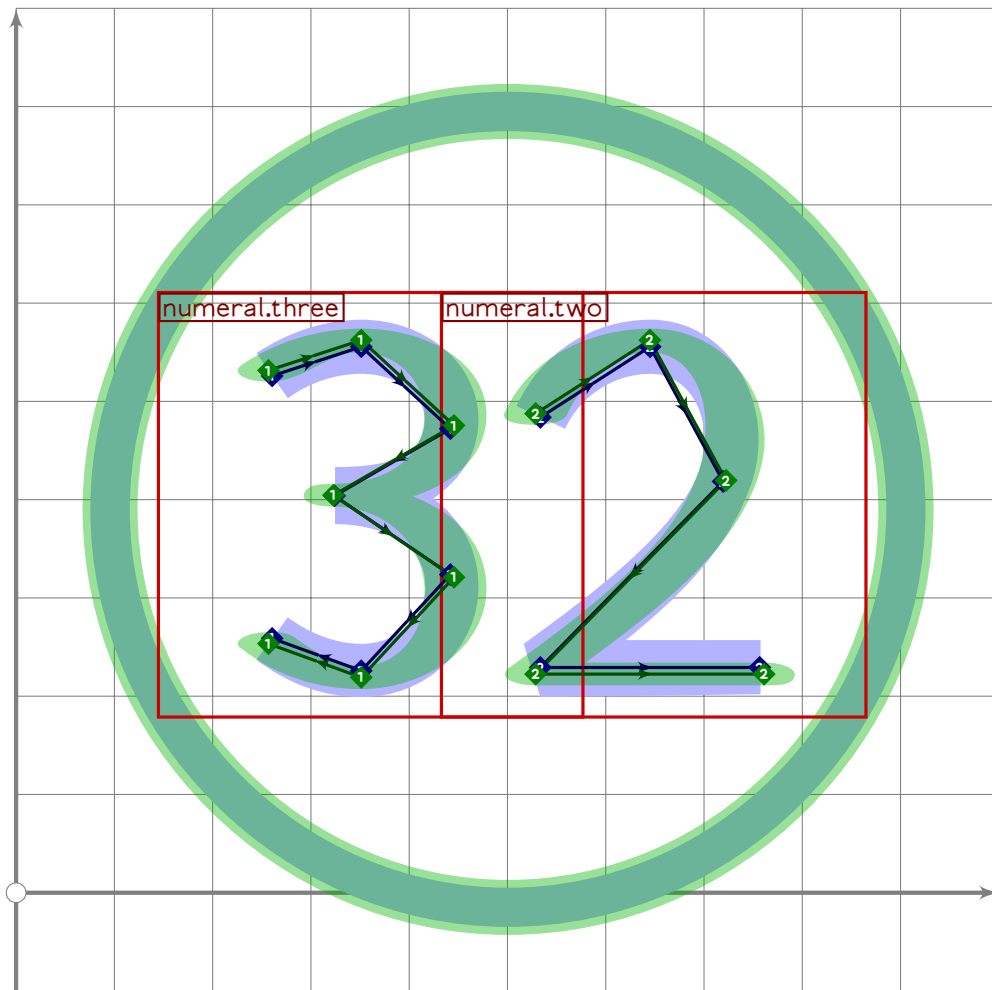
```



```

136 % 31
137 begint Suglyph("uni325B";91);
138   tsu_curve.circle.single;
139   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.three);
140   numeric x[],y[];
141   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.one);
142   tsu_render;
143 endtsuglyph;
144

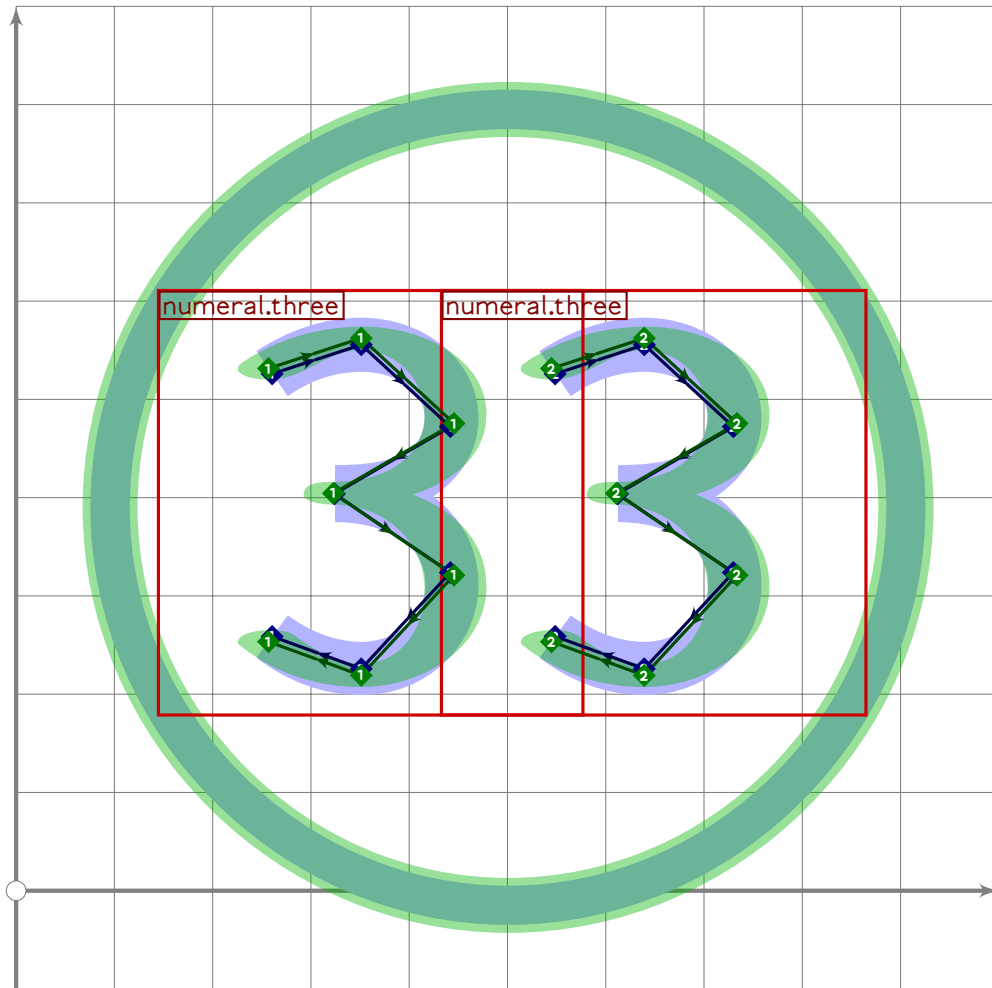
```



```

145 % 32
146 begint Suglyph("uni325C";92);
147   tsu_curve.circle.single;
148   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.three);
149   numeric x[],y[];
150   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.two);
151   tsu_render;
152 endtsuglyph;
153

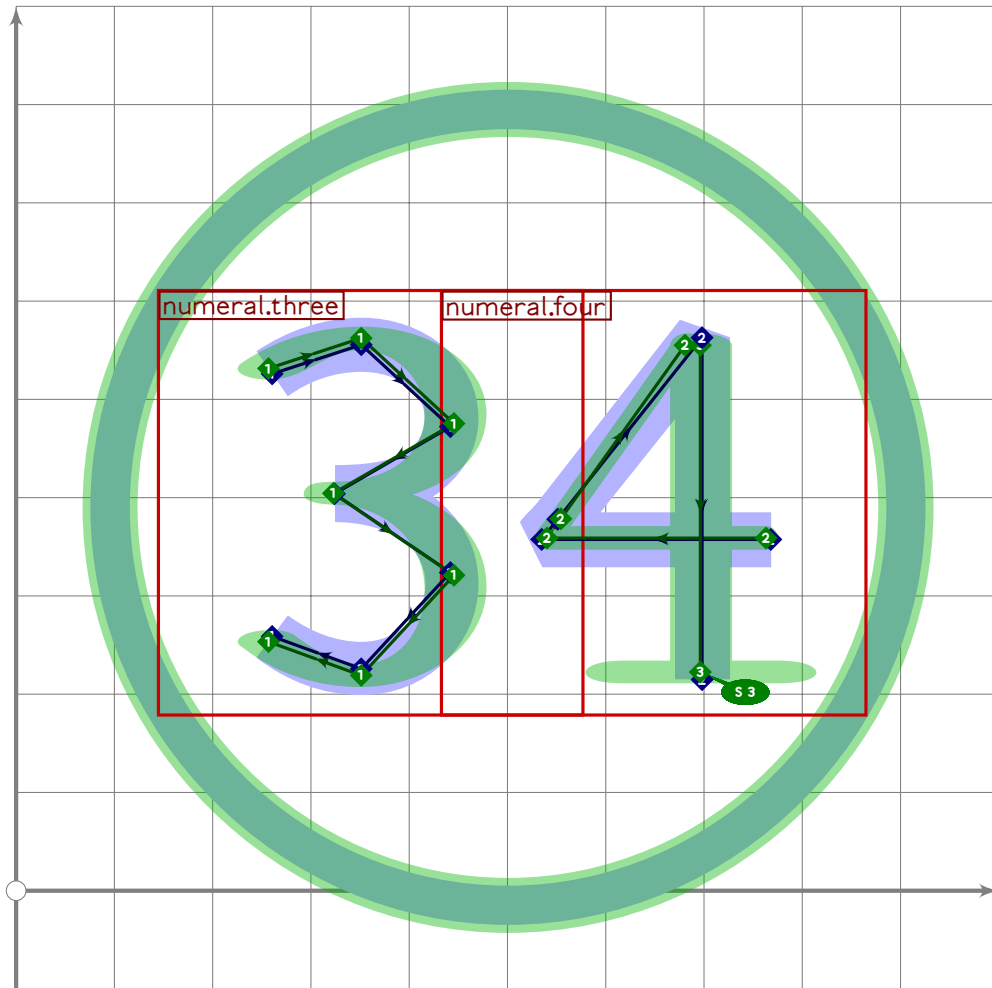
```



```

154 % 33
155 begint Suglyph("uni325D";93);
156   tsu_curve.circle.single;
157   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.three);
158   numeric x[],y[];
159   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.three);
160   tsu_render;
161 endtsuglyph;
162

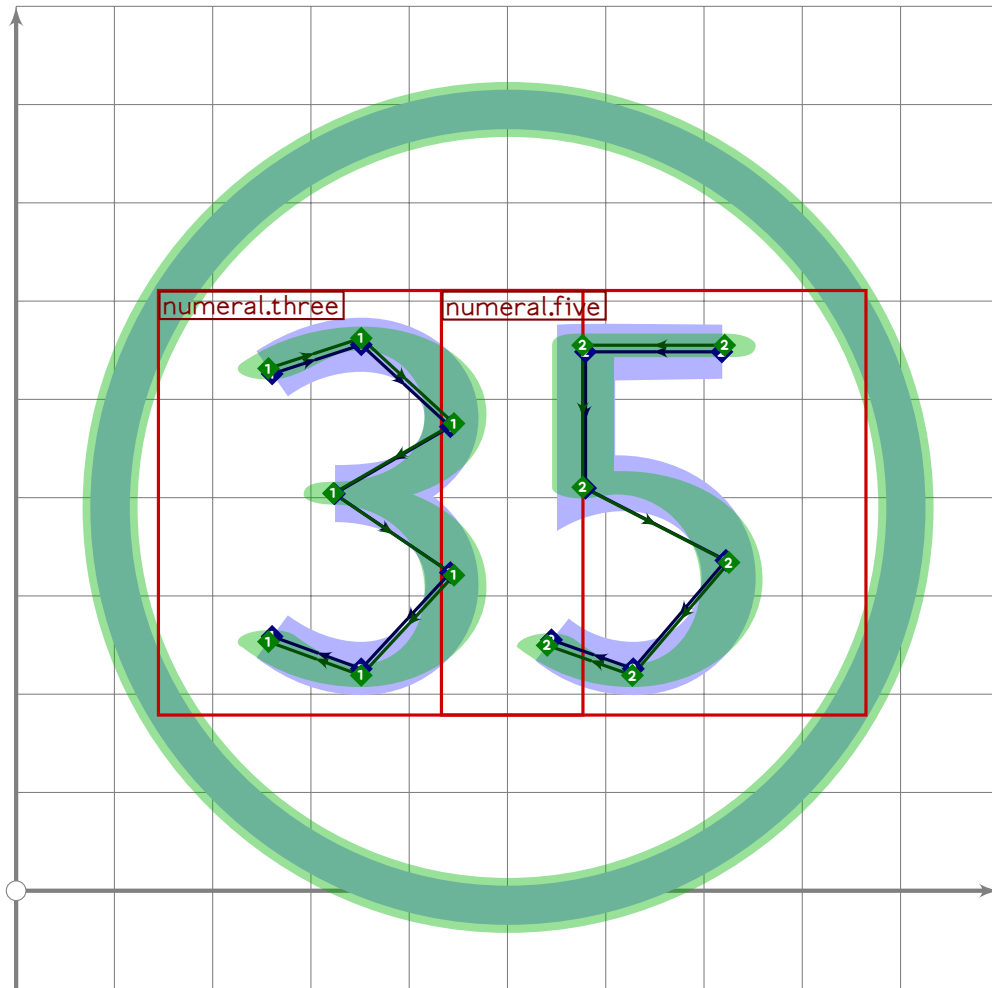
```

```

163 % 34
164 begint Suglyph("uni325E";94);
165   tsu_curve.circle.single;
166   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.three);
167   numeric x[],y[];
168   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.four);
169   tsu_render;
170 endtsuglyph;
171

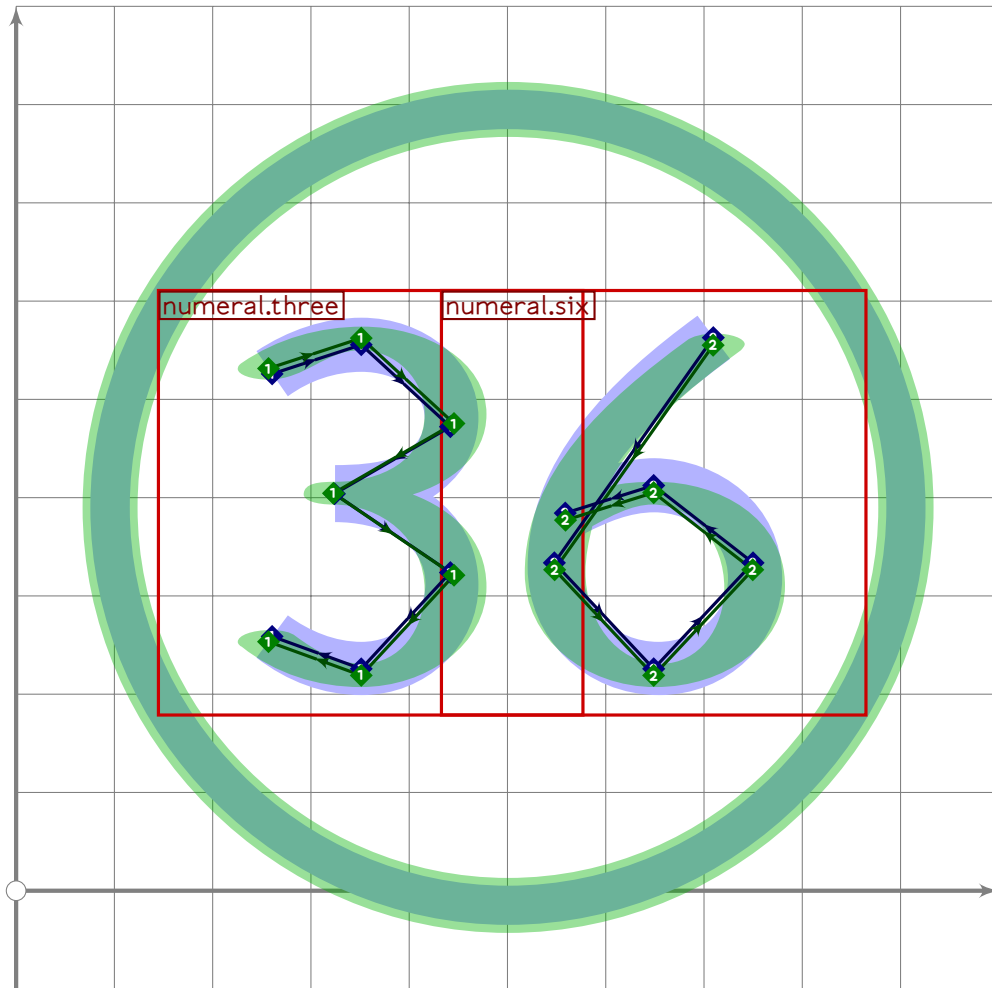
```



```

172 % 35
173 begint Suglyph("uni325F";95);
174   tsu_curve.circle.single;
175   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.three);
176   numeric x[],y[];
177   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.five);
178   tsu_render;
179 endtsuglyph;
180
181 % WARNING discontinuous
182

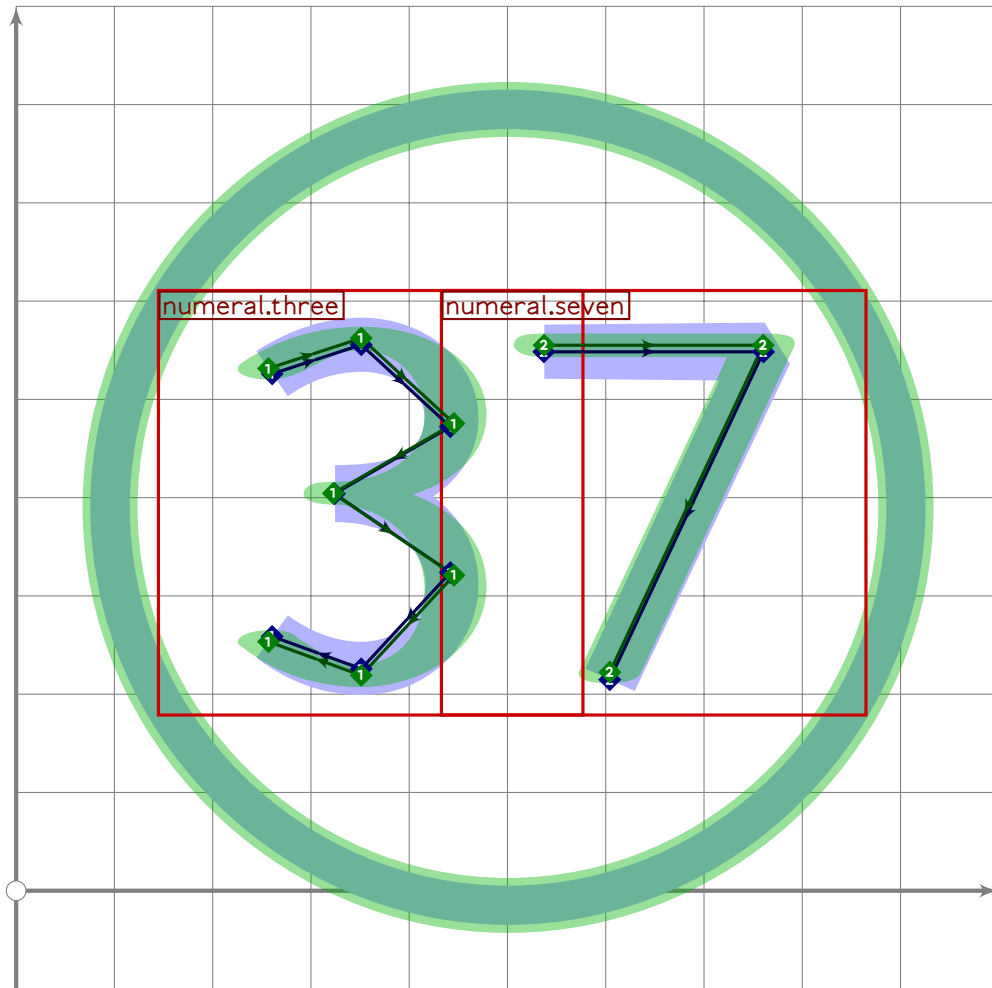
```



```

183 % 36
184 begint Suglyph("uni32B1";177);
185   tsu_curve.circle.single;
186   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.three);
187   numeric x[],y[];
188   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.six);
189   tsu_render;
190 endtsuglyph;
191

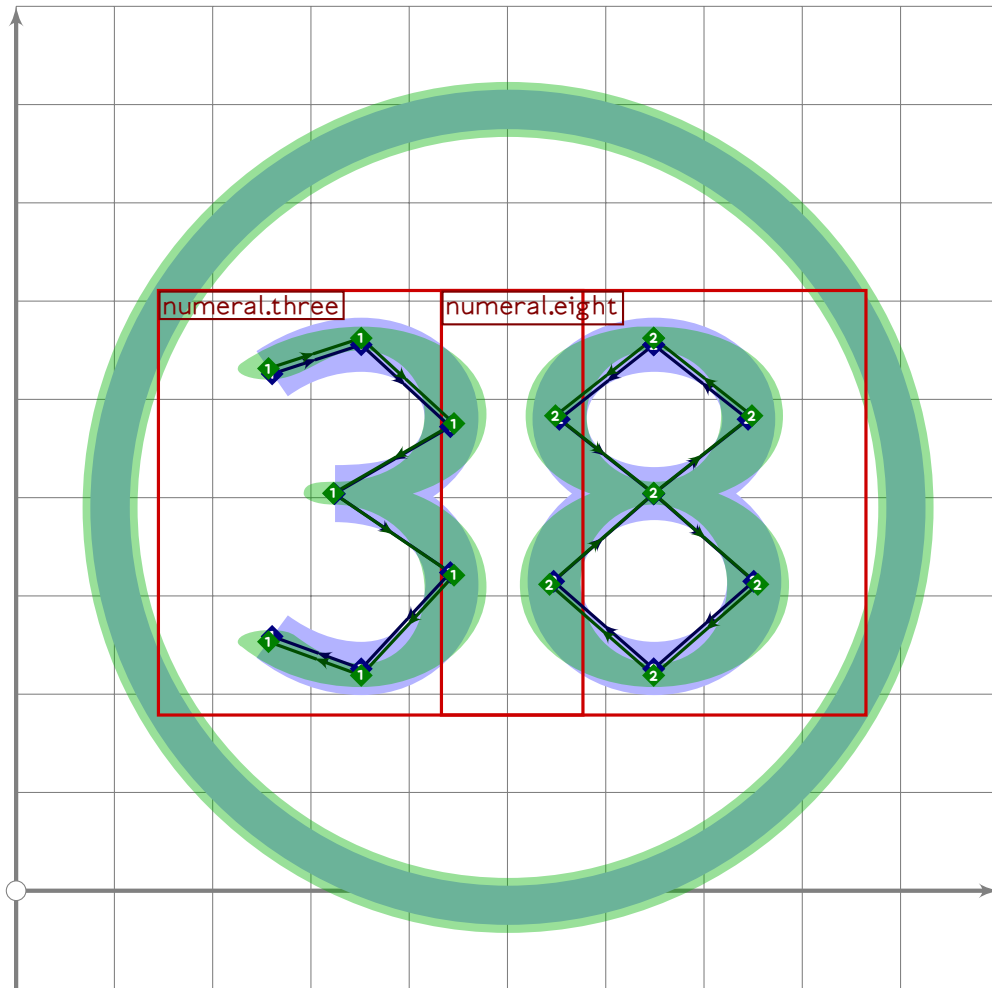
```



```

192 % 37
193 begint Suglyph("uni32B2",178);
194   tsu_curve.circle.single;
195   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.three);
196   numeric x[],y[];
197   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.seven);
198   tsu_render;
199 endtsuglyph;
200

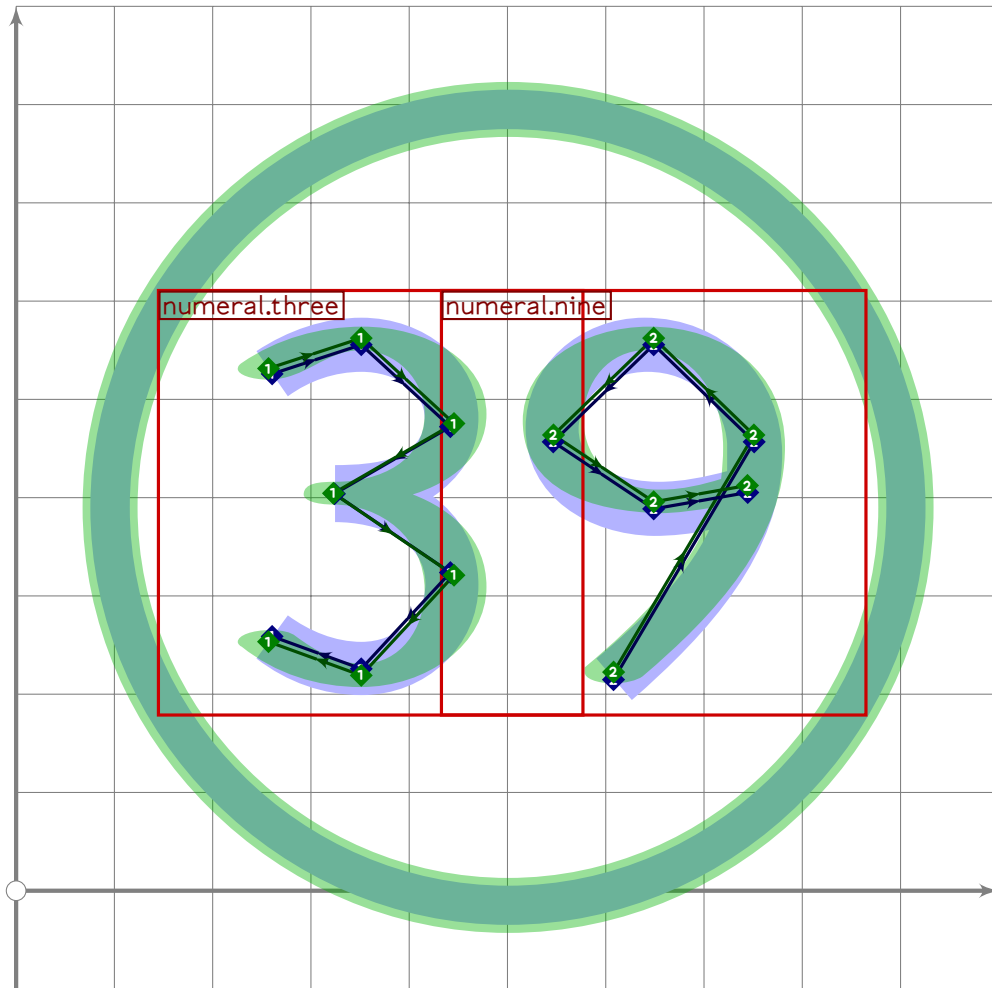
```



```

201 % 38
202 begint Suglyph("uni32B3",179);
203   tsu_curve.circle.single;
204   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.three);
205   numeric x[],y[];
206   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.eight);
207   tsu_render;
208 endtsuglyph;
209

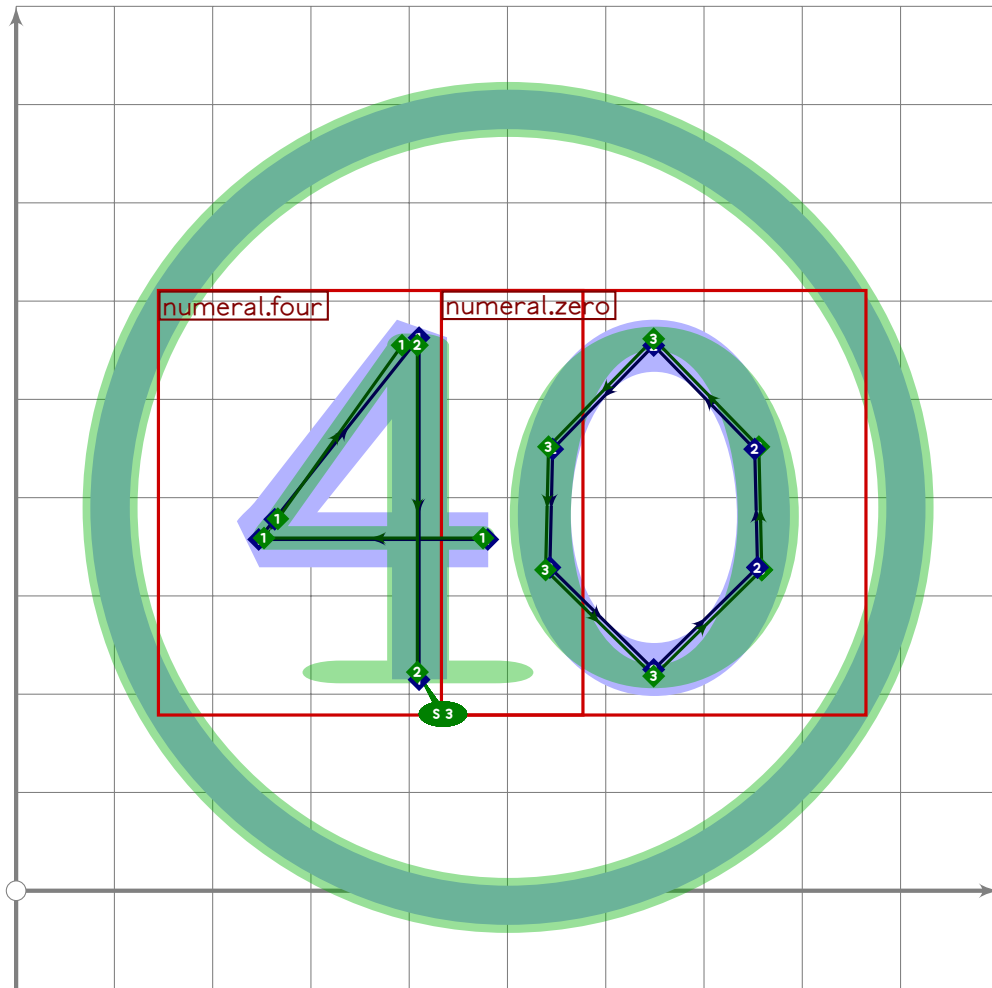
```



```

210 % 39
211 begint Suglyph("uni32B4",180);
212   tsu_curve.circle.single;
213   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.three);
214   numeric x[],y[];
215   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.nine);
216   tsu_render;
217 endtsuglyph;
218

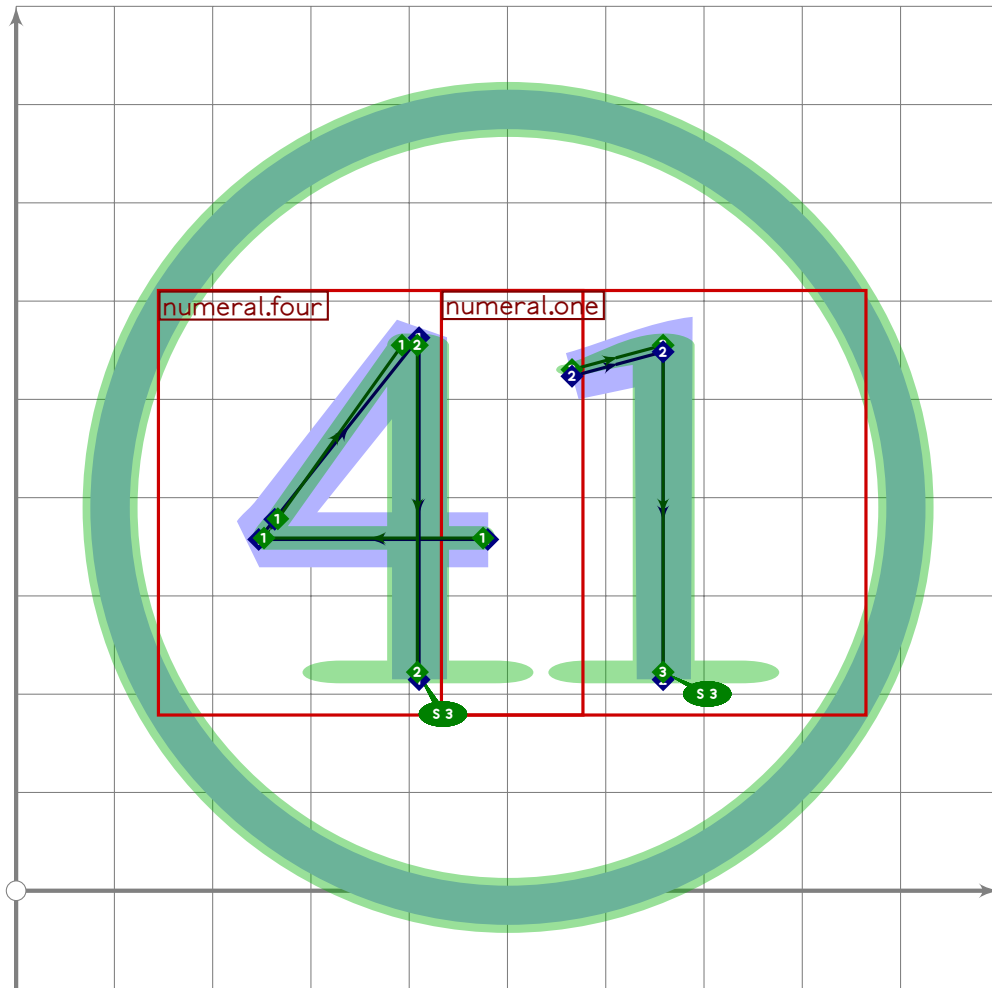
```



```

219 % 40
220 begint Suglyph("uni32B5",181);
221   tsu_curve.circle.single;
222   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.four);
223   numeric x[],y[];
224   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.zero);
225   tsu_render;
226 endtsuglyph;
227

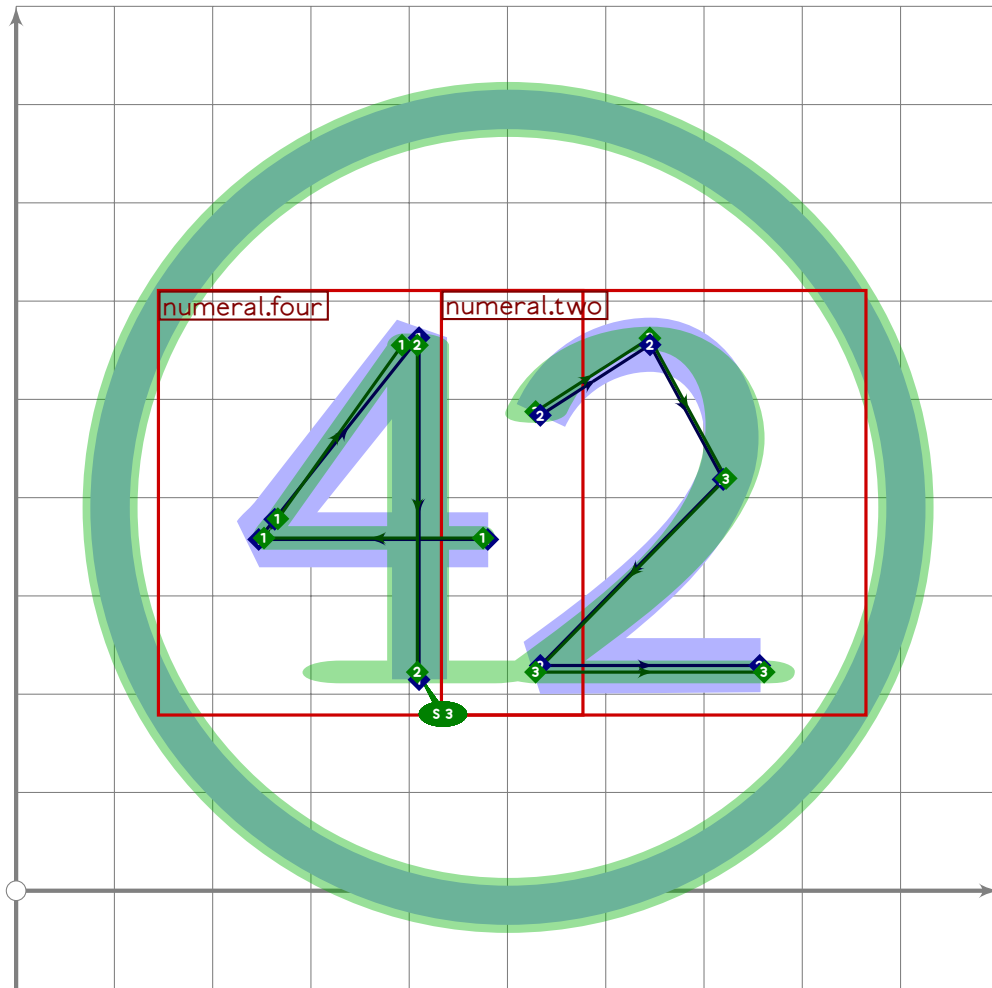
```



```

228 % 41
229 begintuglyph("uni32B6",182);
230 tsu_curve.circle.single;
231 tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.four);
232 numeric x[],y[];
233 tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.one);
234 tsu_render;
235 endtuglyph;
236

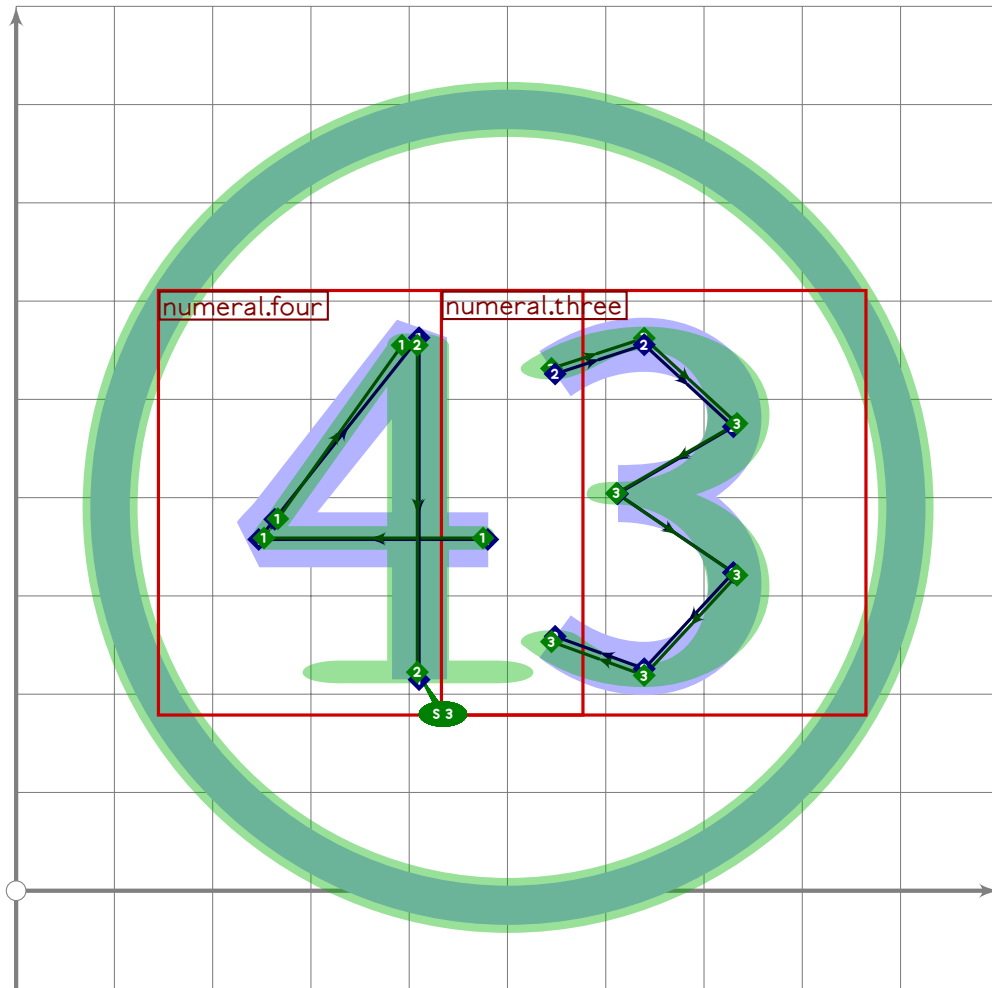
```

```

237 % 42
238 begint Suglyph("uni32B7",183);
239   tsu_curve.circle.single;
240   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.four);
241   numeric x[],y[];
242   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.two);
243   tsu_render;
244 endtsuglyph;
245

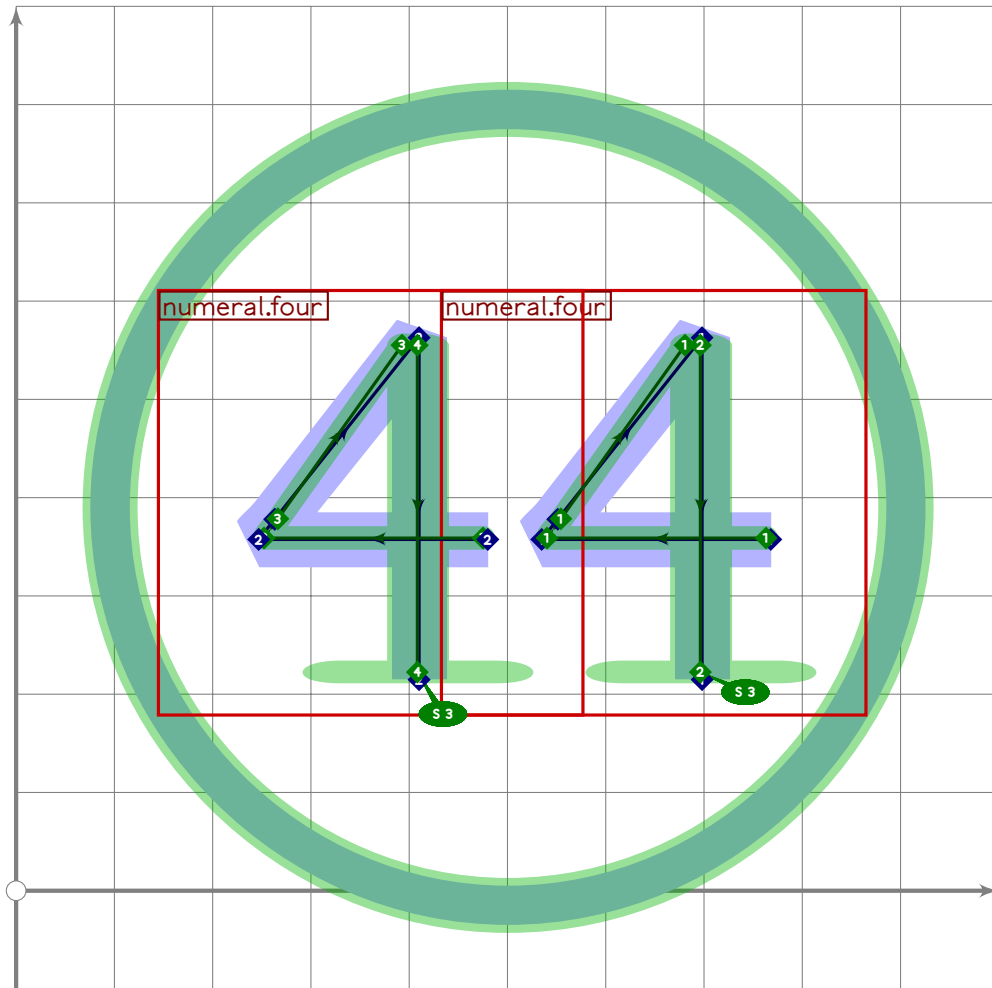
```



```

246 % 43
247 begint Suglyph("uni32B8",184);
248   tsu_curve.circle.single;
249   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.four);
250   numeric x[],y[];
251   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.three);
252   tsu_render;
253 endtsuglyph;
254

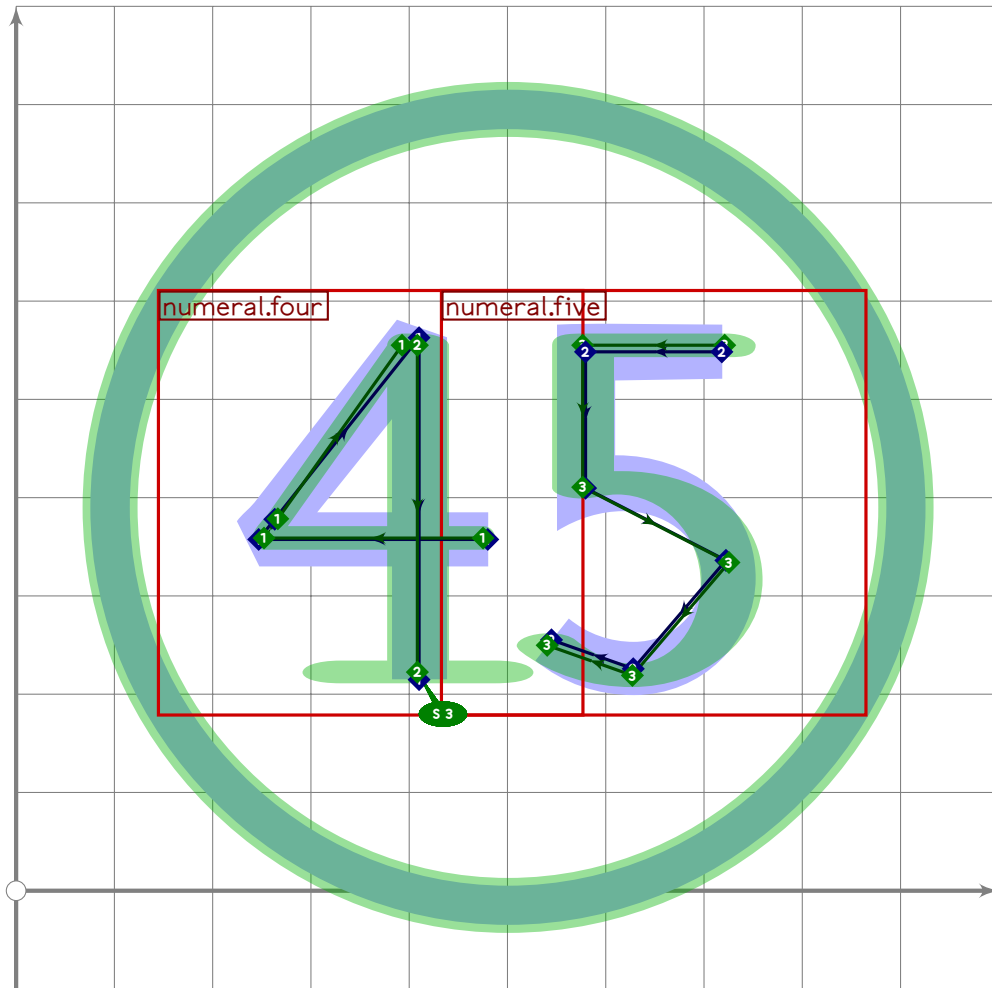
```



```

255 % 44
256 begintsuglyph("uni32B9",185);
257 tsu_curve.circle.single;
258 tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.four);
259 numeric x[],y[];
260 tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.four);
261 tsu_render;
262 endtsuglyph;
263

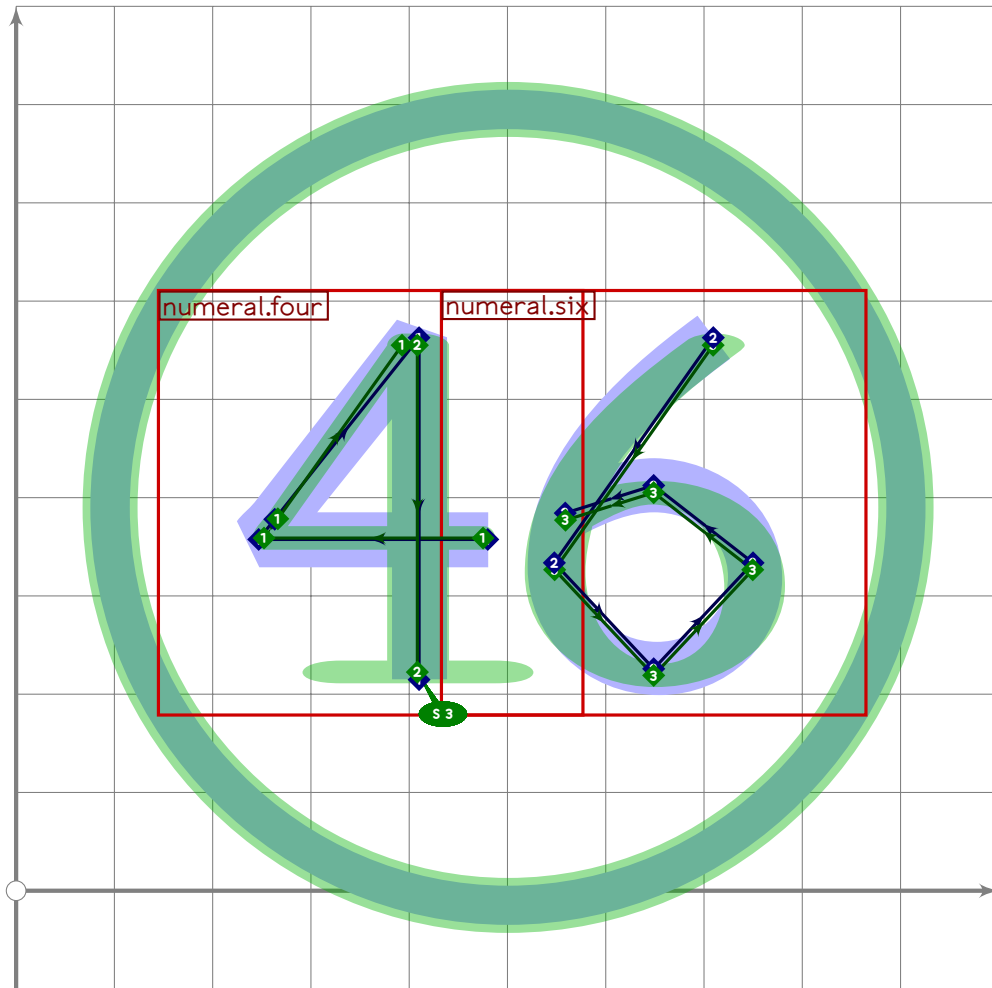
```



```

264 % 45
265 begint Suglyph("uni32BA",186);
266 tsu_curve.circle.single;
267 tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.four);
268 numeric x[],y[];
269 tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.five);
270 tsu_render;
271 endsuglyph;
272

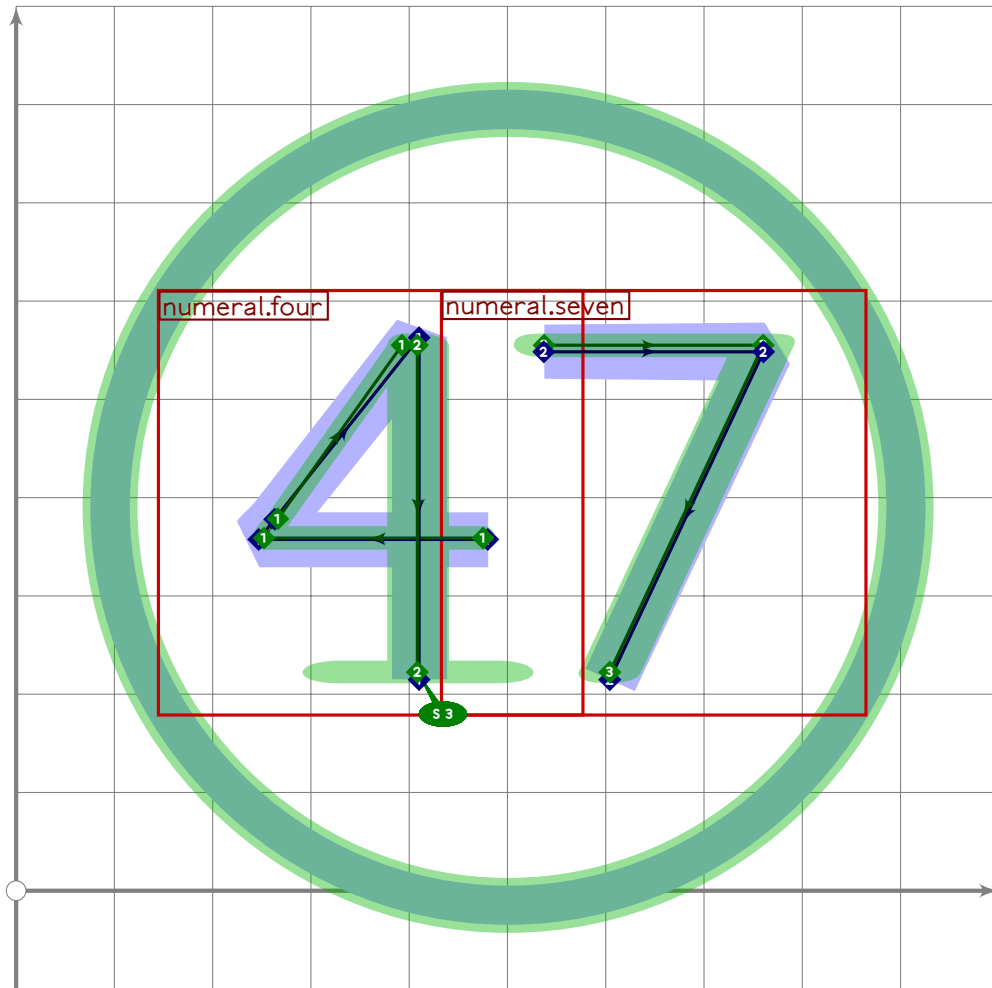
```



```

273 % 46
274 begint Suglyph("uni32BB",187);
275   tsu_curve.circle.single;
276   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.four);
277   numeric x[],y[];
278   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.six);
279   tsu_render;
280 endtsuglyph;
281

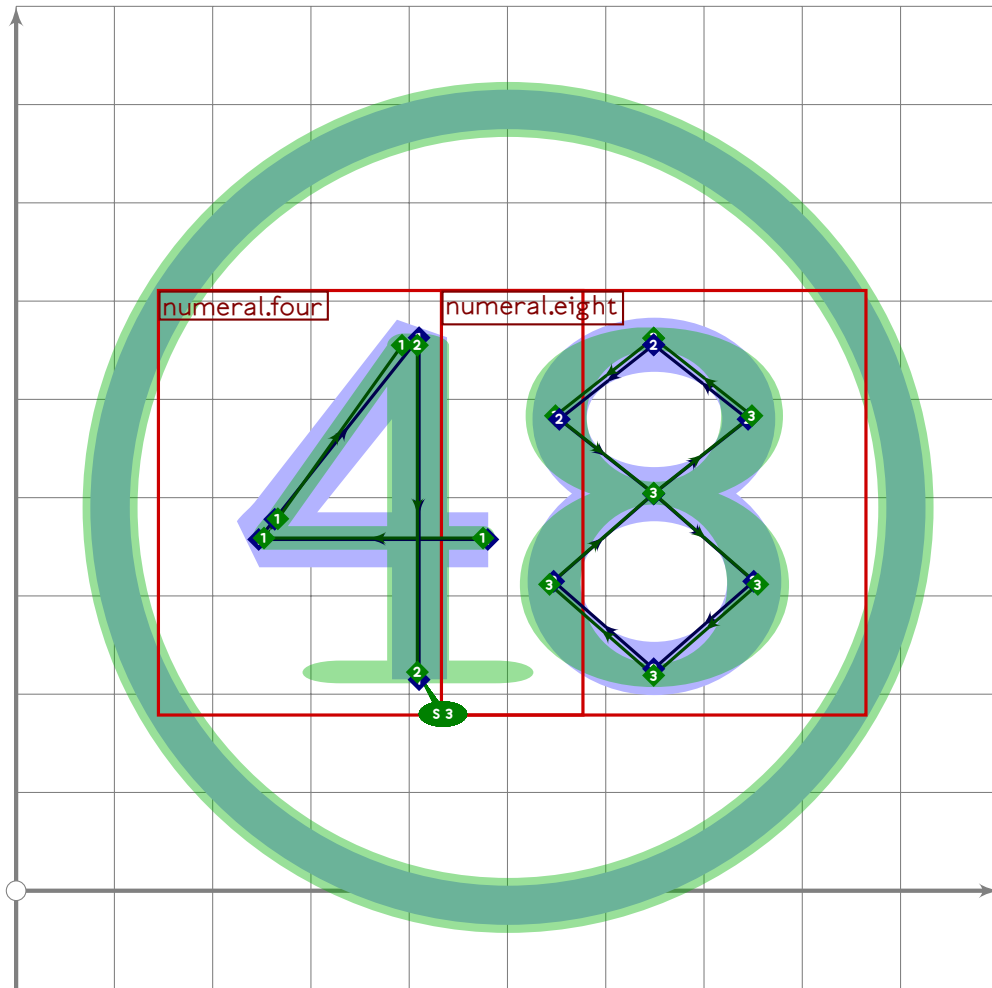
```



```

282 % 47
283 begint Suglyph("uni32BC",188);
284   tsu_curve.circle.single;
285   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.four);
286   numeric x[],y[];
287   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.seven);
288   tsu_render;
289 endtsuglyph;
290

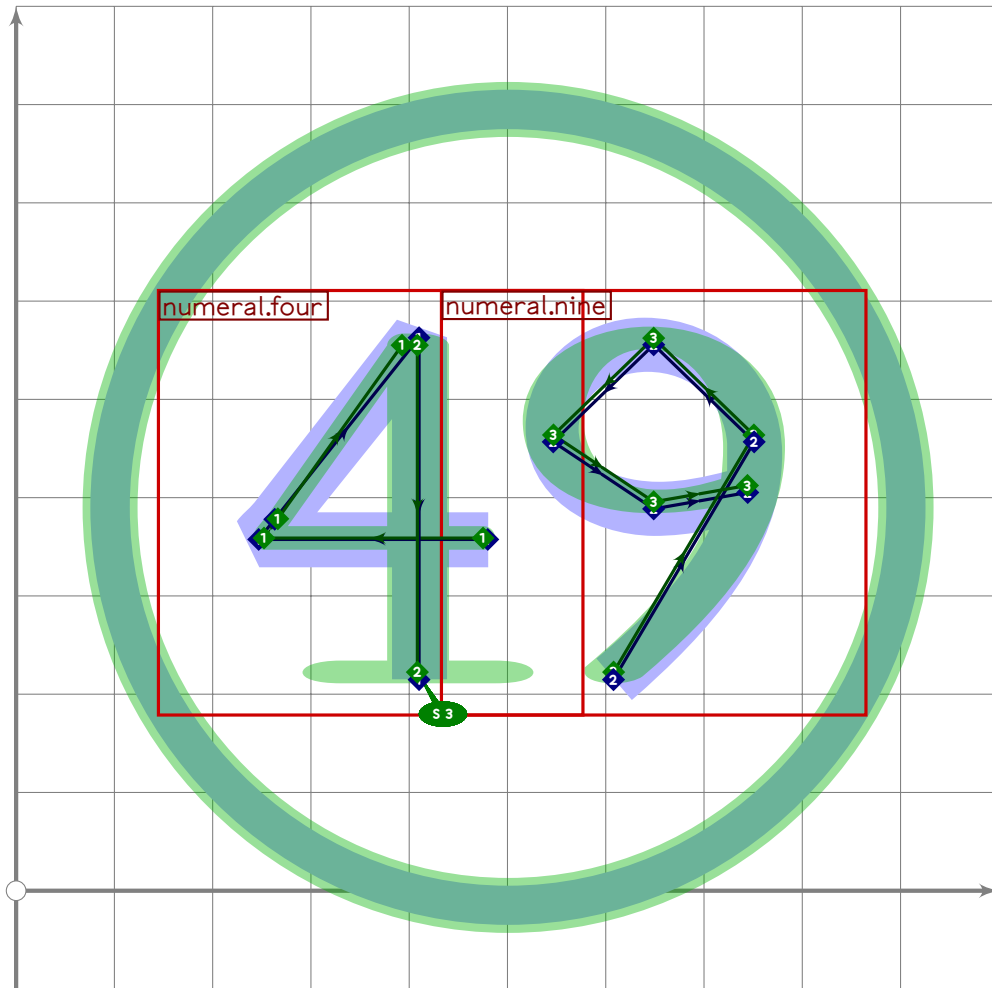
```



```

291 % 48
292 begintuglyph("uni32BD",189);
293   tsu_curve.circle.single;
294   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.four);
295   numeric x[],y[];
296   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.eight);
297   tsu_render;
298 endtuglyph;
299

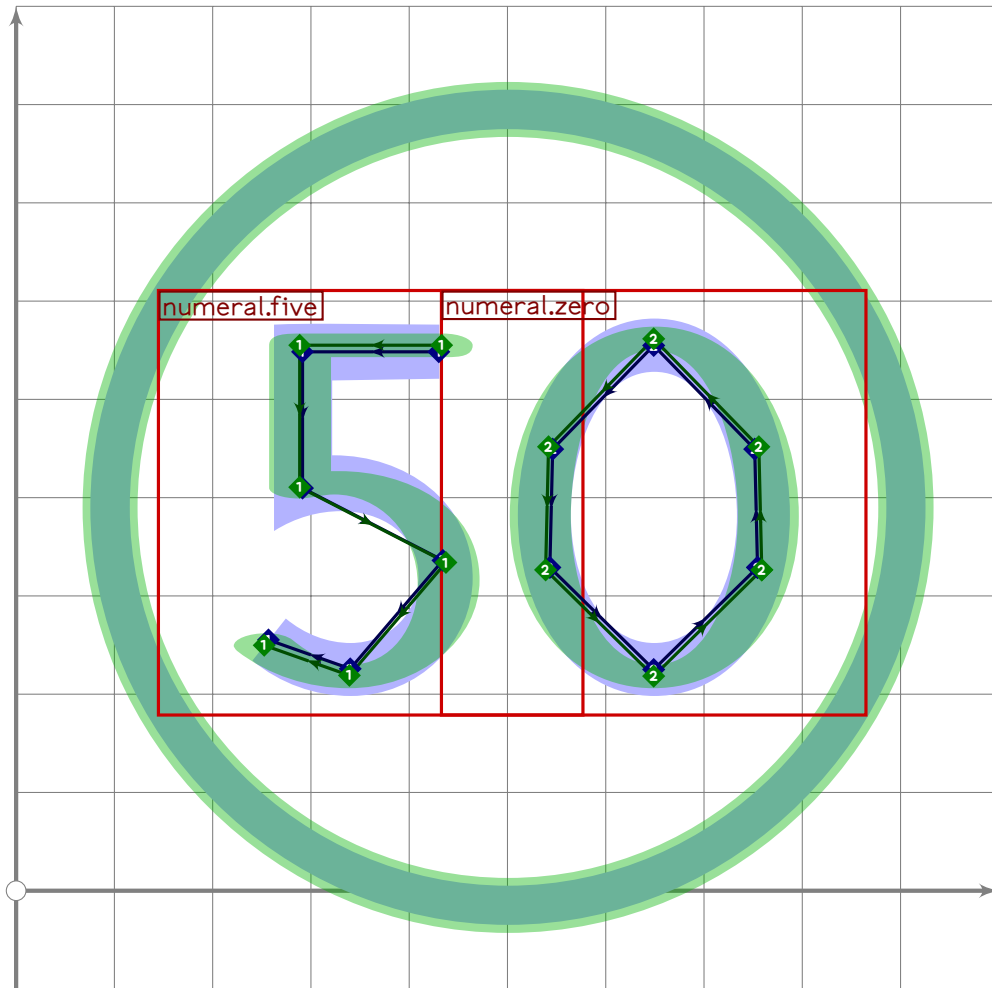
```



```

300 % 49
301 begintuglyph("uni32BE",190);
302   tsu_curve.circle.single;
303   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.four);
304   numeric x[],y[];
305   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.nine);
306   tsu_render;
307 endtuglyph;
308

```

```

309 % 50
310 begint Suglyph("uni32BF",191);
311   tsu_curve.circle.single;
312   tsu_xform(tsu_xf.ctwo.left)(tsu_curve.numeral.five);
313   numeric x[],y[];
314   tsu_xform(tsu_xf.ctwo.right)(tsu_curve.numeral.zero);
315   tsu_render;
316 endtsuglyph;
317
318
319

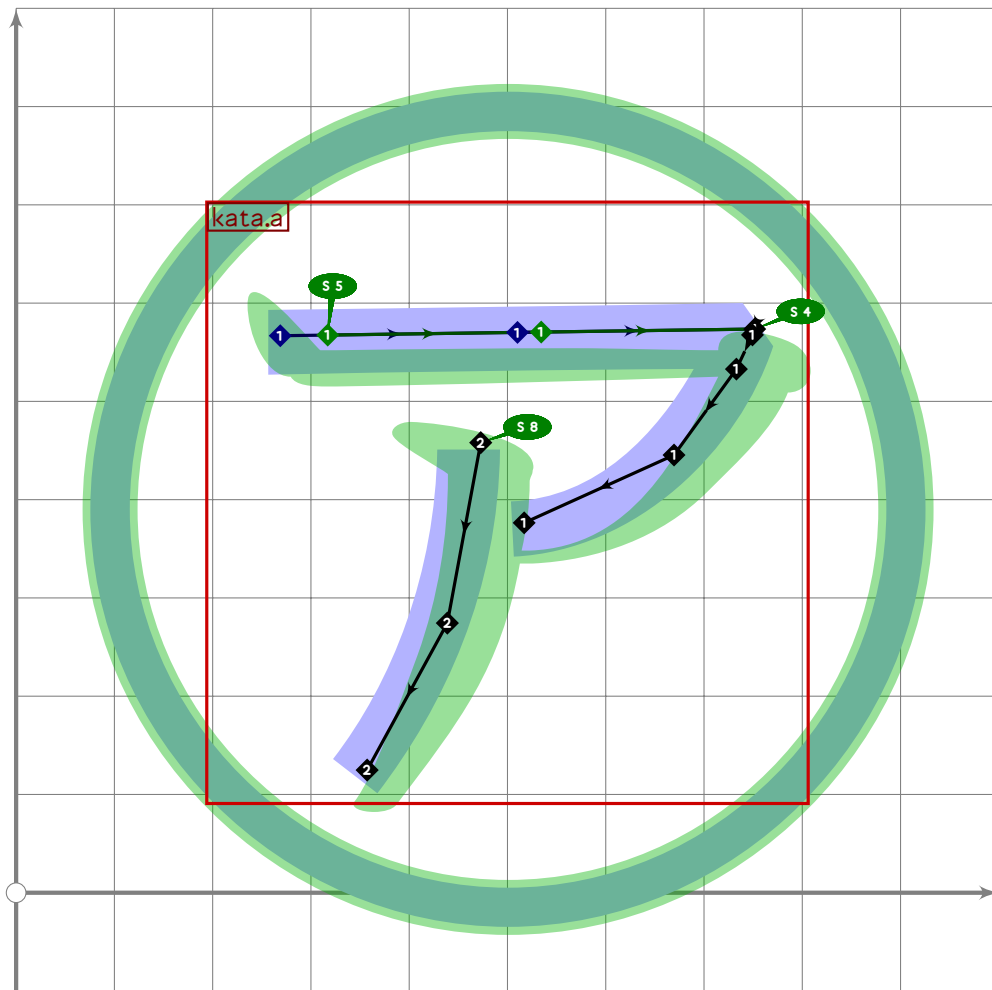
```

Circled Katakana

```

320 % CIRCLED KATAKANA
321

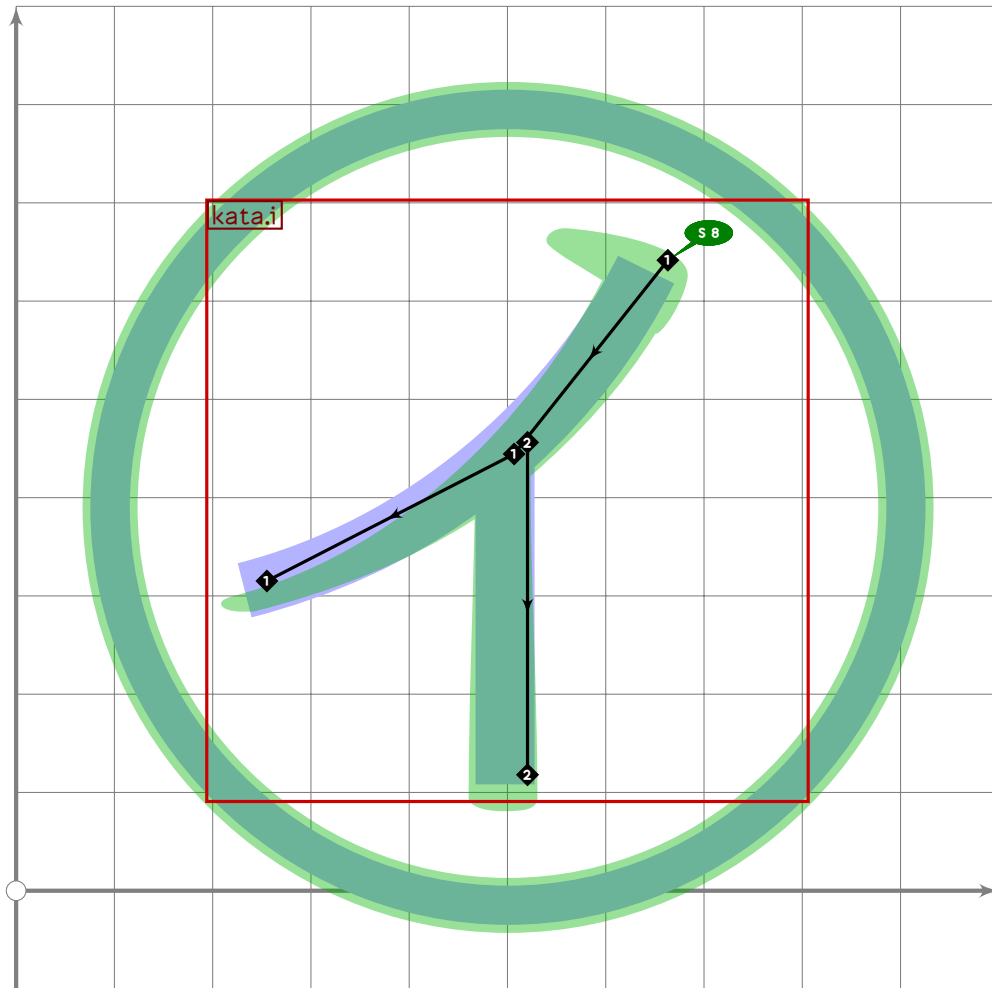
```



```

322 % circled "a"
323 begint Suglyph("uni32D0",208);
324 tsu_curve.circle.single;
325 tsu_xform(tsu_xf.circled)(tsu_curve.kata.a);
326 tsu_render_in_circle(tsu_xf.cbound);
327 endsuglyph;
328

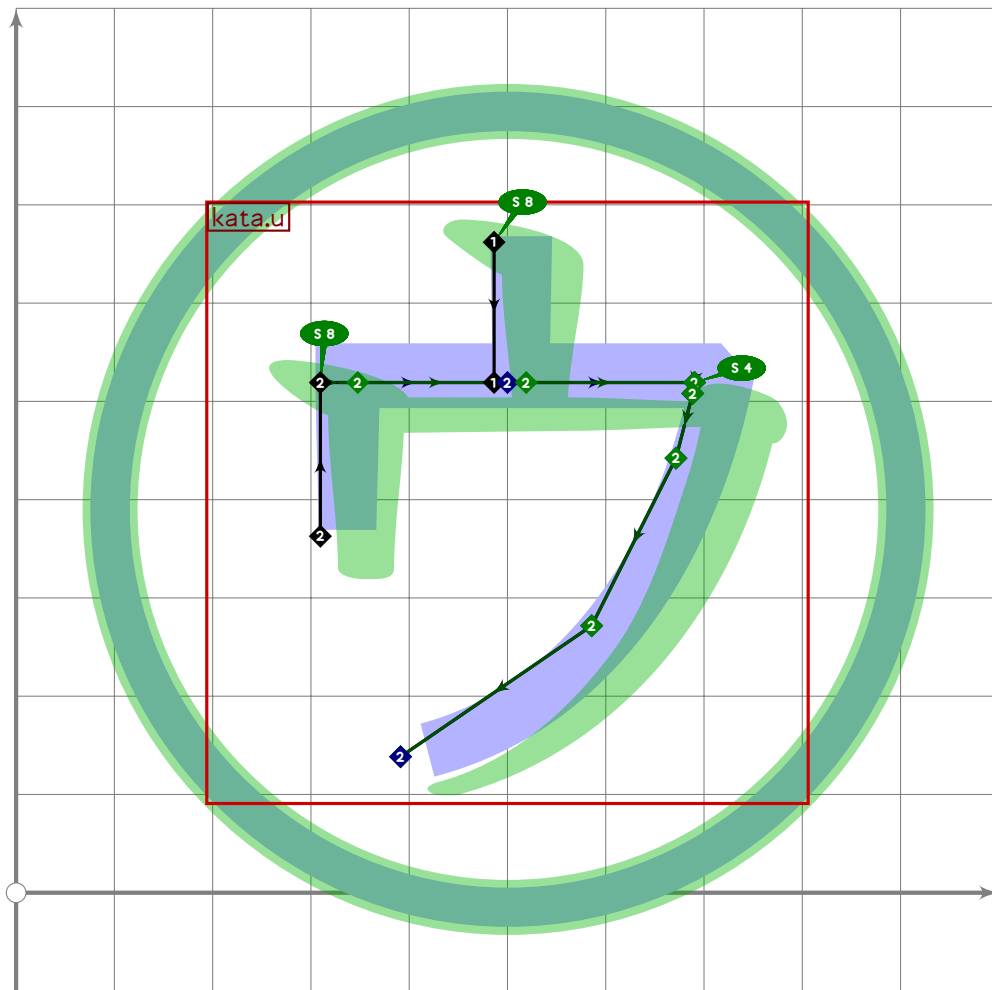
```



```

329 % circled "i"
330 begint Suglyph("uni32D1";209);
331 tsu_curve.circle.single;
332 tsu_xform(tsu_xf.circled)(tsu_curve.kata.i);
333 tsu_render_in_circle(tsu_xf.cbound);
334 endsuglyph;
335

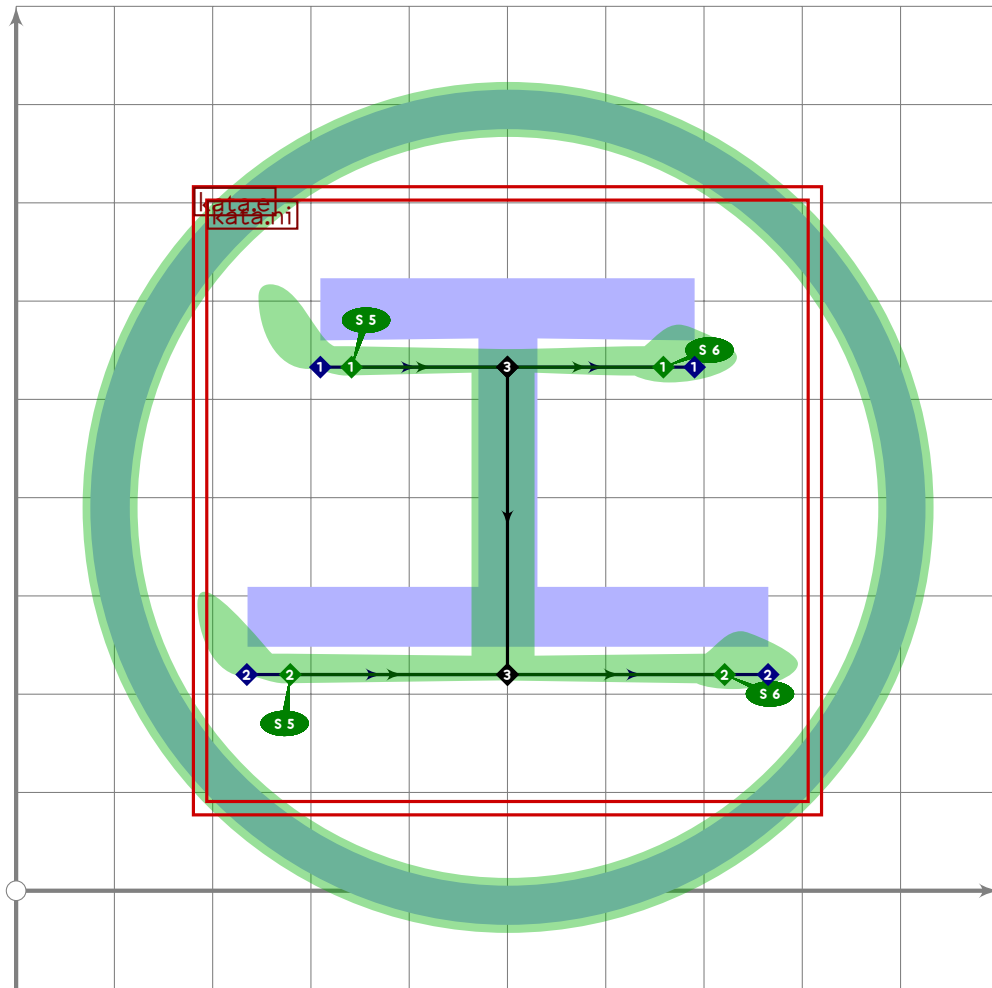
```



```

336 % circled "u"
337 begint Suglyph("uni32D2",210);
338 tsu_curve.circle.single;
339 tsu_xform(tsu_xf.circled)(tsu_curve.kata.u);
340 tsu_render_in_circle(tsu_xf.cbound);
341 endsuglyph;
342

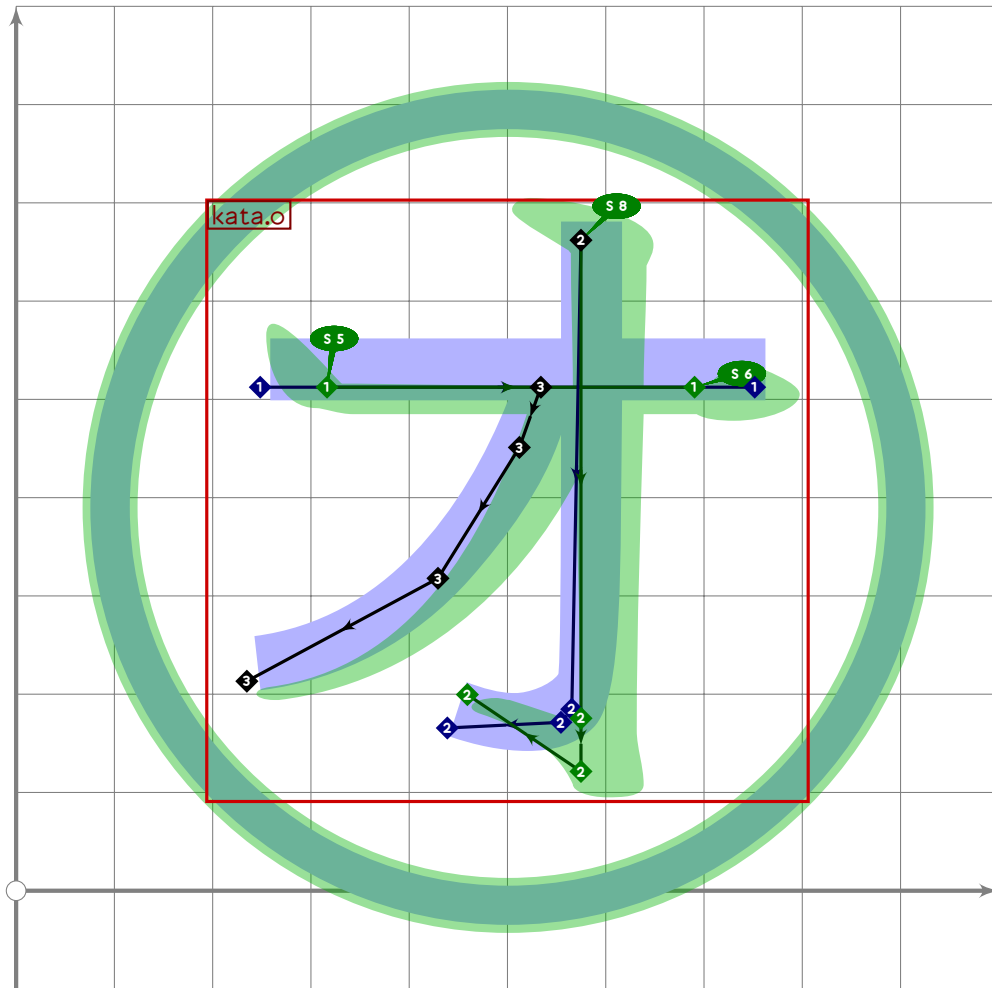
```



```

343 % circled "e"
344 begint Suglyph("uni32D3",211);
345   tsu_curve.circle.single;
346   tsu_xform(tsu_xf.circled)(tsu_curve.kata.e);
347   tsu_render_in_circle(tsu_xf.cbound);
348 endsuglyph;
349

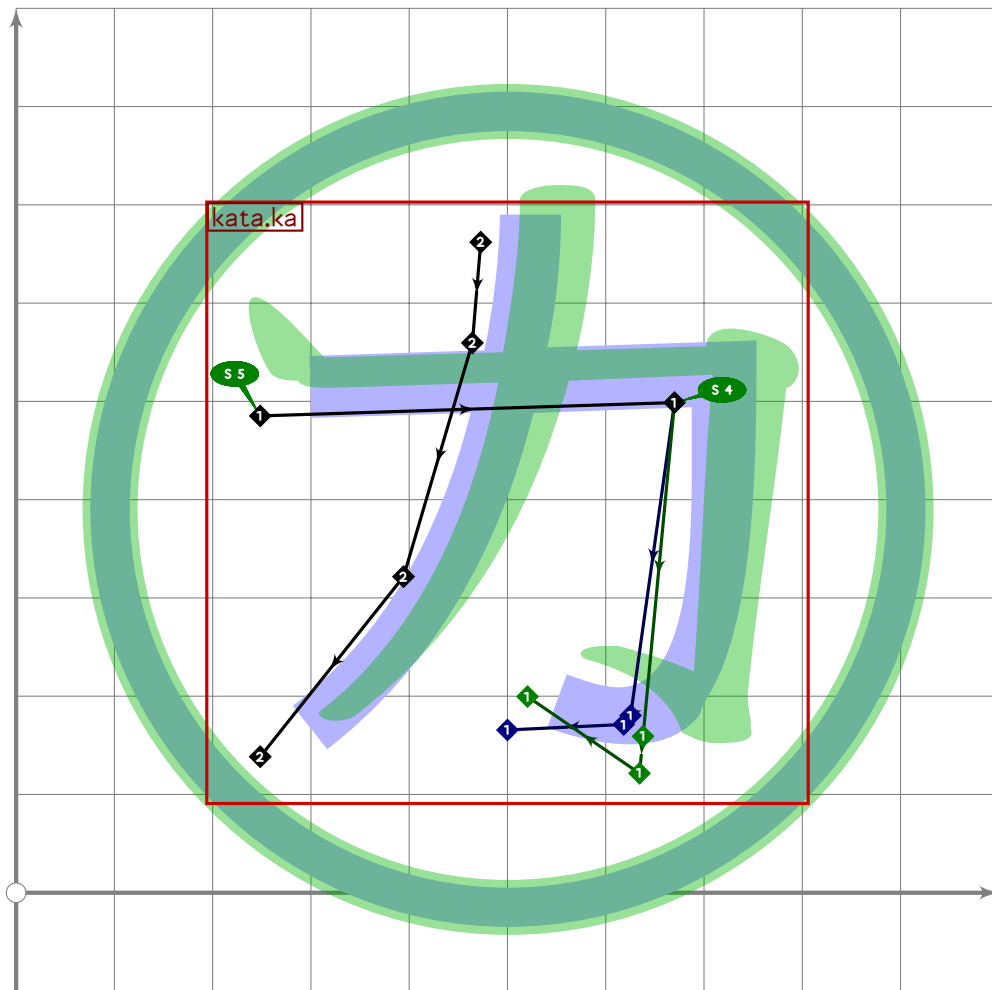
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```

350 % circled "o"
351 begint Suglyph("uni32D4",212);
352 tsu_curve.circle.single;
353 tsu_xform(tsu_xf.circled)(tsu_curve.kata.o);
354 tsu_render_in_circle(tsu_xf.cbound);
355 endsuglyph;
356

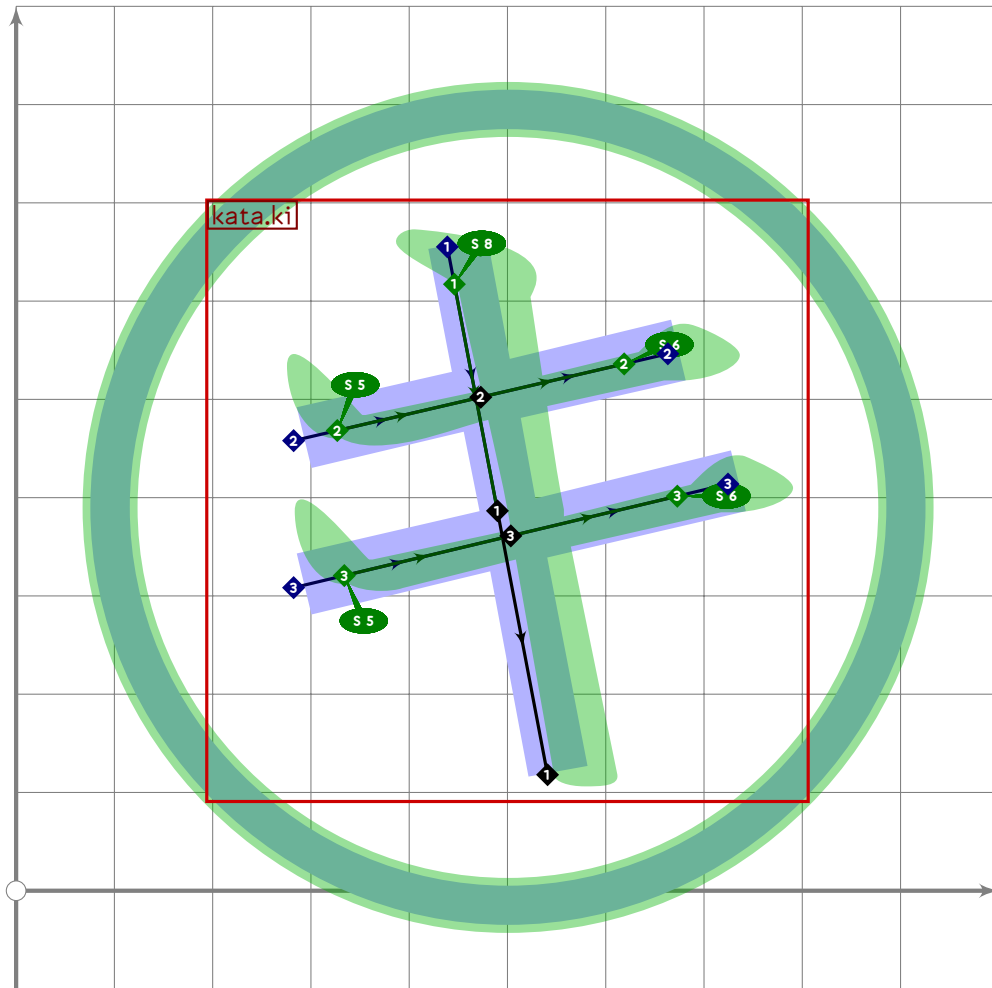
```



```

357 % circled "ka"
358 begint Suglyph("uni32D5",213);
359 tsu_curve.circle.single;
360 tsu_xform(tsu_xf.circled)(tsu_curve.kata.ka);
361 tsu_render_in_circle(tsu_xf.cbound);
362 endsuglyph;
363

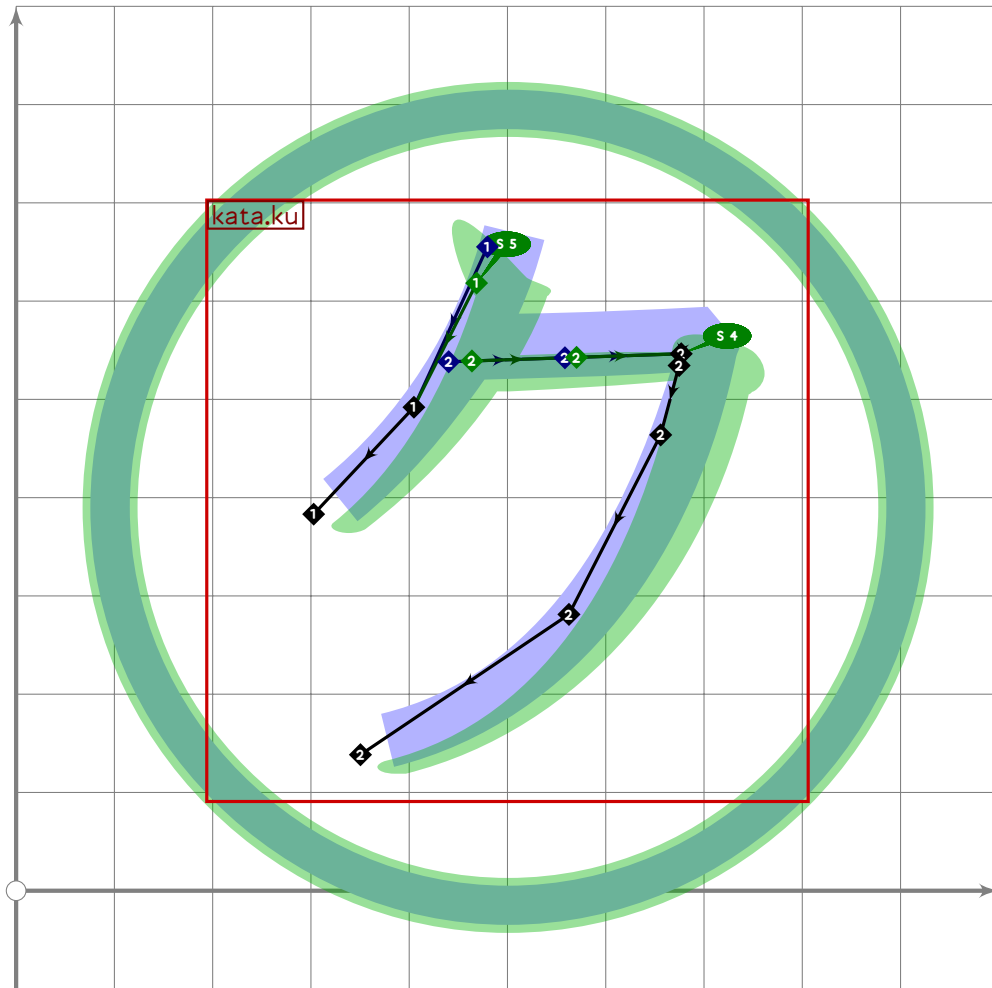
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```

364 % circled "ki"
365 begintsuglyph("uni32D6",214);
366 tsu_curve.circle.single;
367 tsu_xform(tsu_xf.circled)(tsu_curve.kata.ki);
368 tsu_render_in_circle(tsu_xf.cbound);
369 endsuglyph;
370

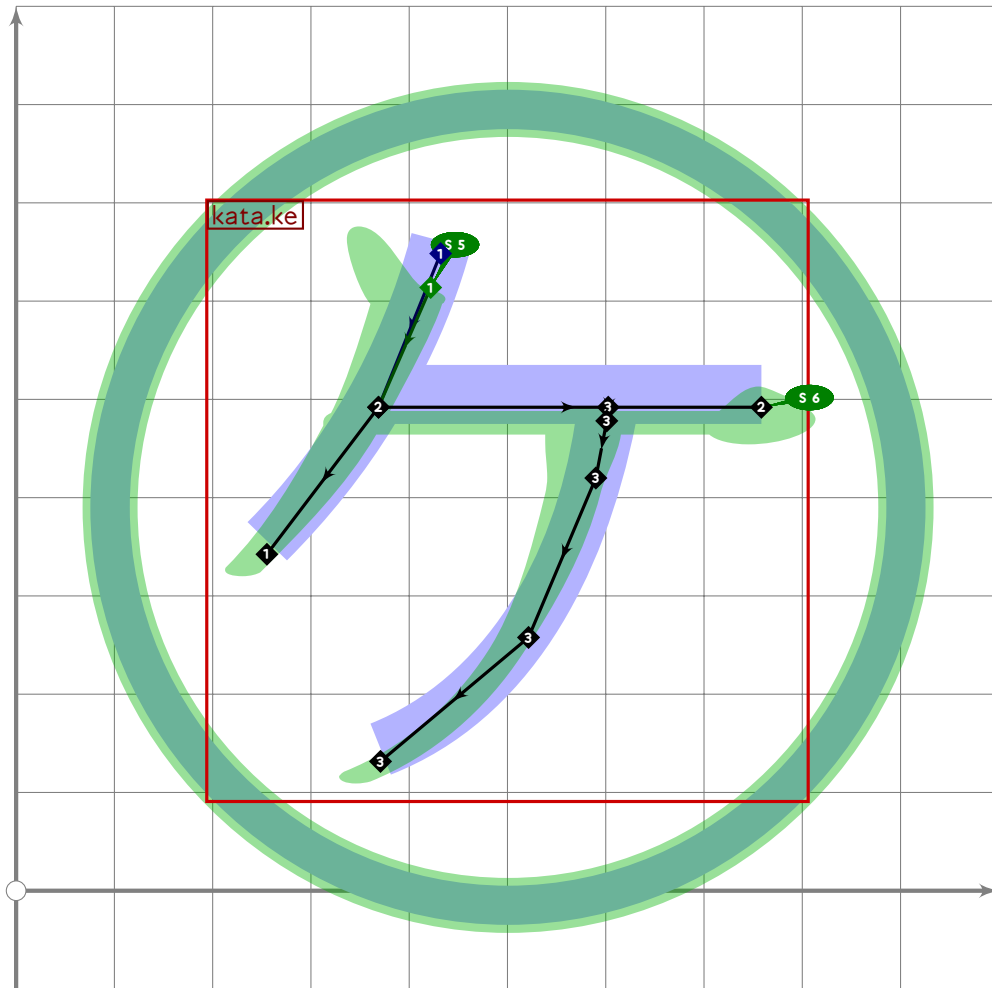
```

```

371 % circled "ku"
372 begint Suglyph("uni32D7",215);
373 tsu_curve.circle.single;
374 tsu_xform(tsu_xf.circled)(tsu_curve.kata.ku);
375 tsu_render_in_circle(tsu_xf.cbound);
376 endsuglyph;
377

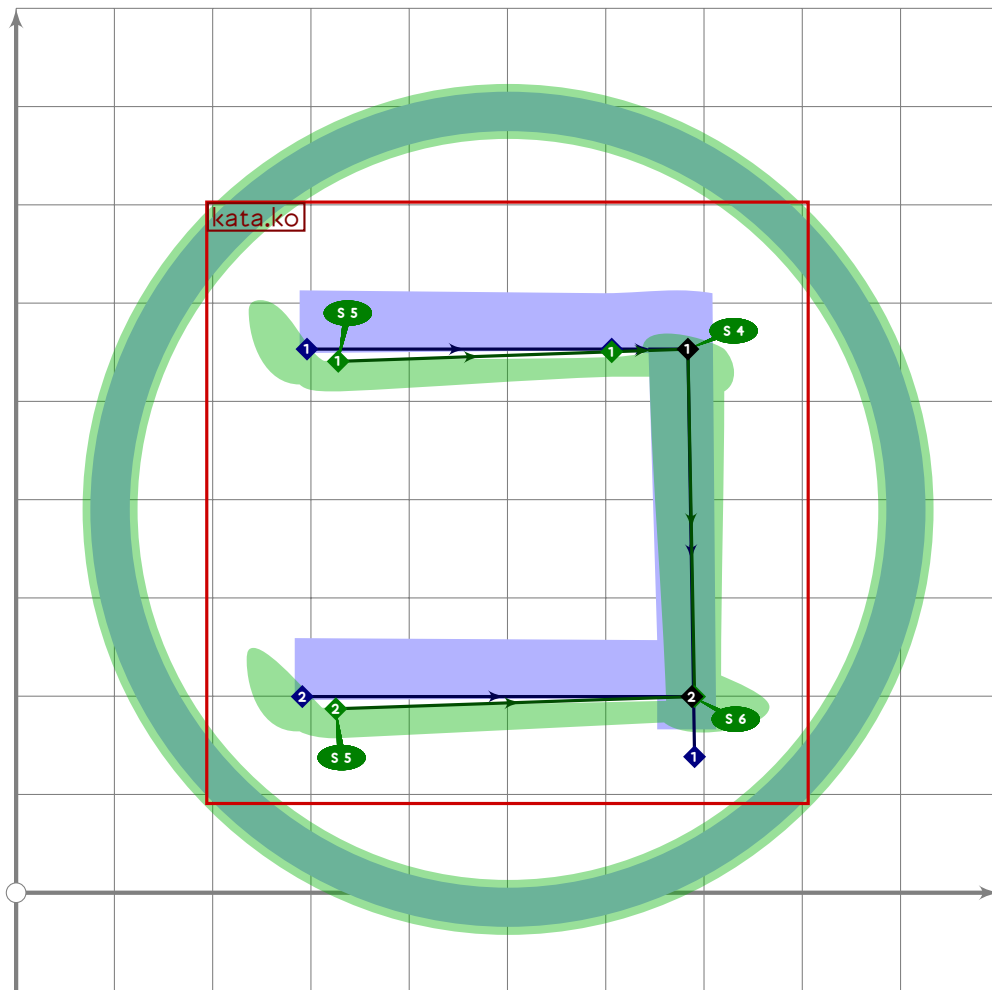
```



```

378 % circled "ke"
379 begint Suglyph("uni32D8",216);
380 tsu_curve.circle.single;
381 tsu_xform(tsu_xf.circled)(tsu_curve.kata.ke);
382 tsu_render_in_circle(tsu_xf.cbound);
383 endsuglyph;
384

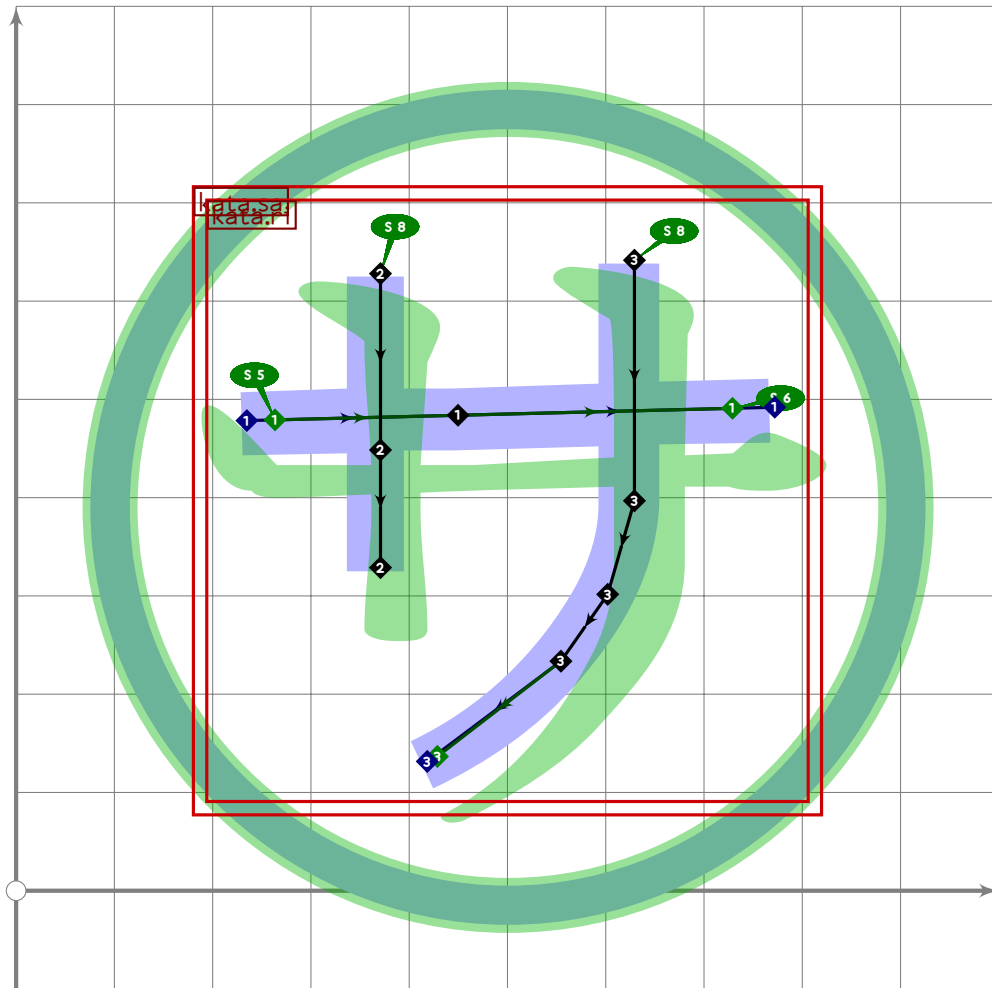
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```

385 % circled "ko"
386 begint Suglyph("uni32D9",217);
387 tsu_curve.circle.single;
388 tsu_xform(tsu_xf.circled)(tsu_curve.kata.ko);
389 tsu_render_in_circle(tsu_xf.cbound);
390 endsuglyph;
391

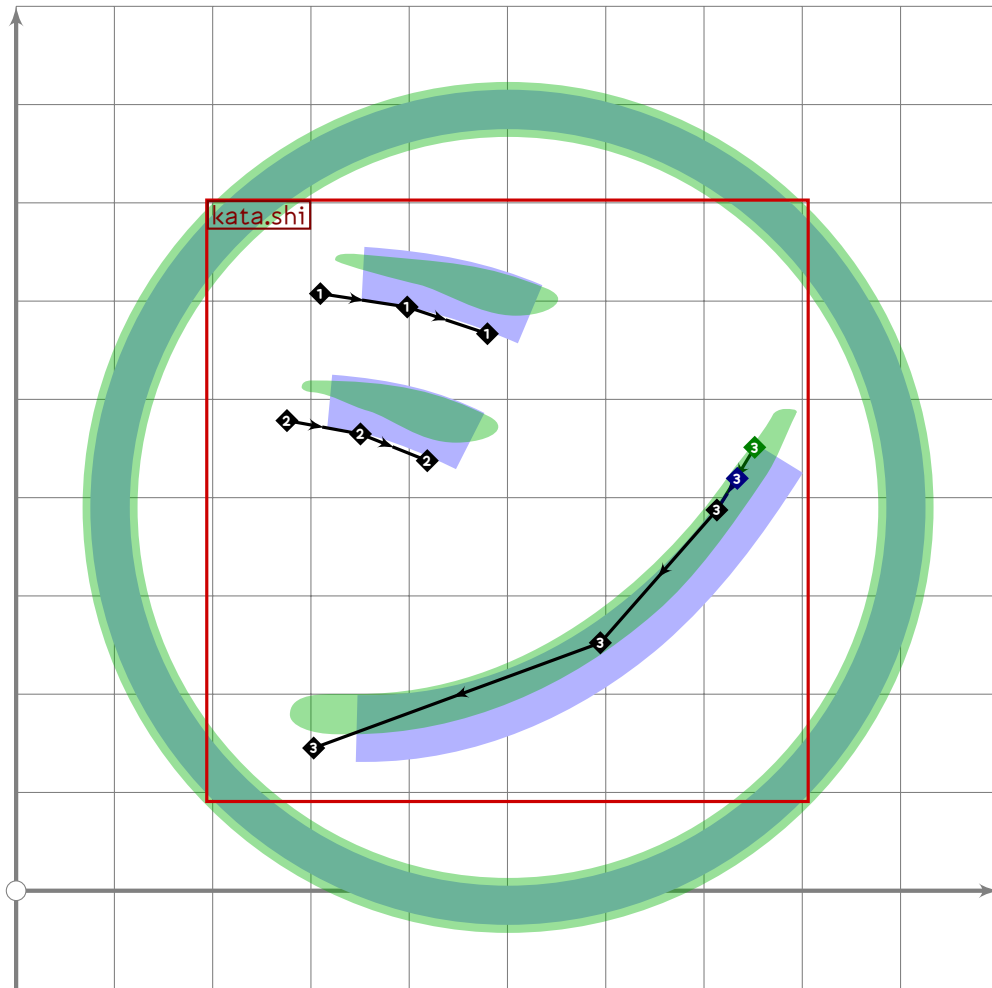
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```

392 % circled "sa"
393 begint Suglyph("uni32DA",218);
394 tsu_curve.circle.single;
395 tsu_xform(tsu_xf.circled)(tsu_curve.kata.sa);
396 tsu_render_in_circle(tsu_xf.cbound);
397 endsuglyph;
398

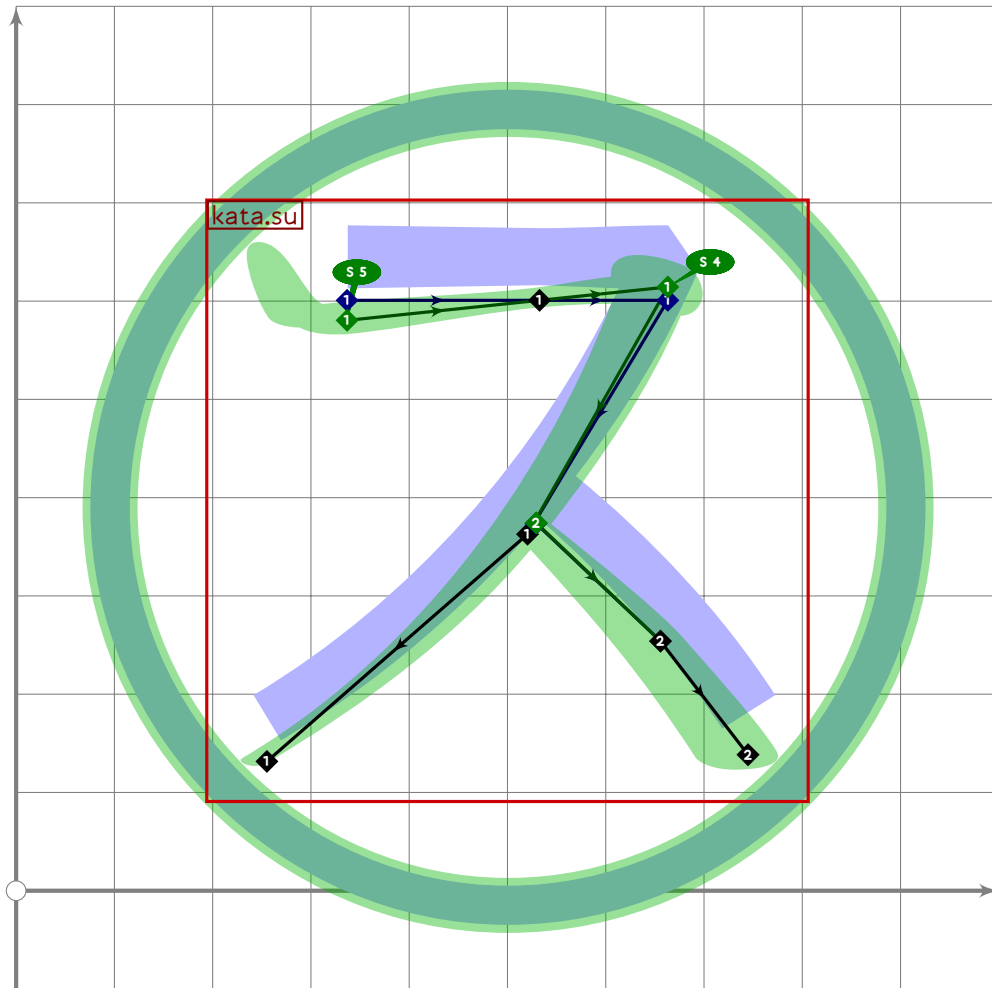
```



```

399 % circled "shi"
400 begint Suglyph("uni32DB",219);
401   tsu_curve.circle.single;
402   tsu_xform(tsu_xf.circled)(tsu_curve.kata.shi);
403   tsu_render_in_circle(tsu_xf.cbound);
404 endsuglyph;
405

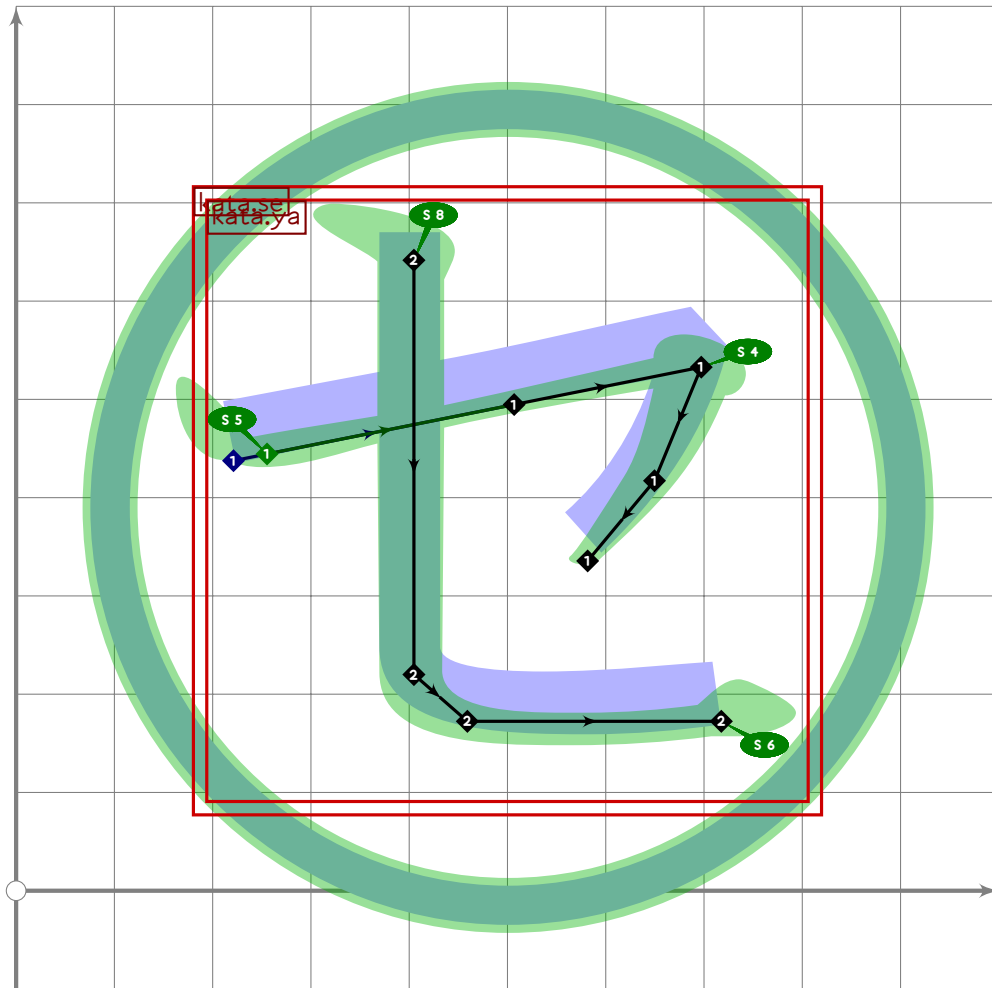
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```

406 % circled "su"
407 begint Suglyph("uni32DC",220);
408   tsu_curve.circle.single;
409   tsu_xform(tsu_xf.circled)(tsu_curve.kata.su);
410   tsu_render_in_circle(tsu_xf.cbound);
411 endsuglyph;
412

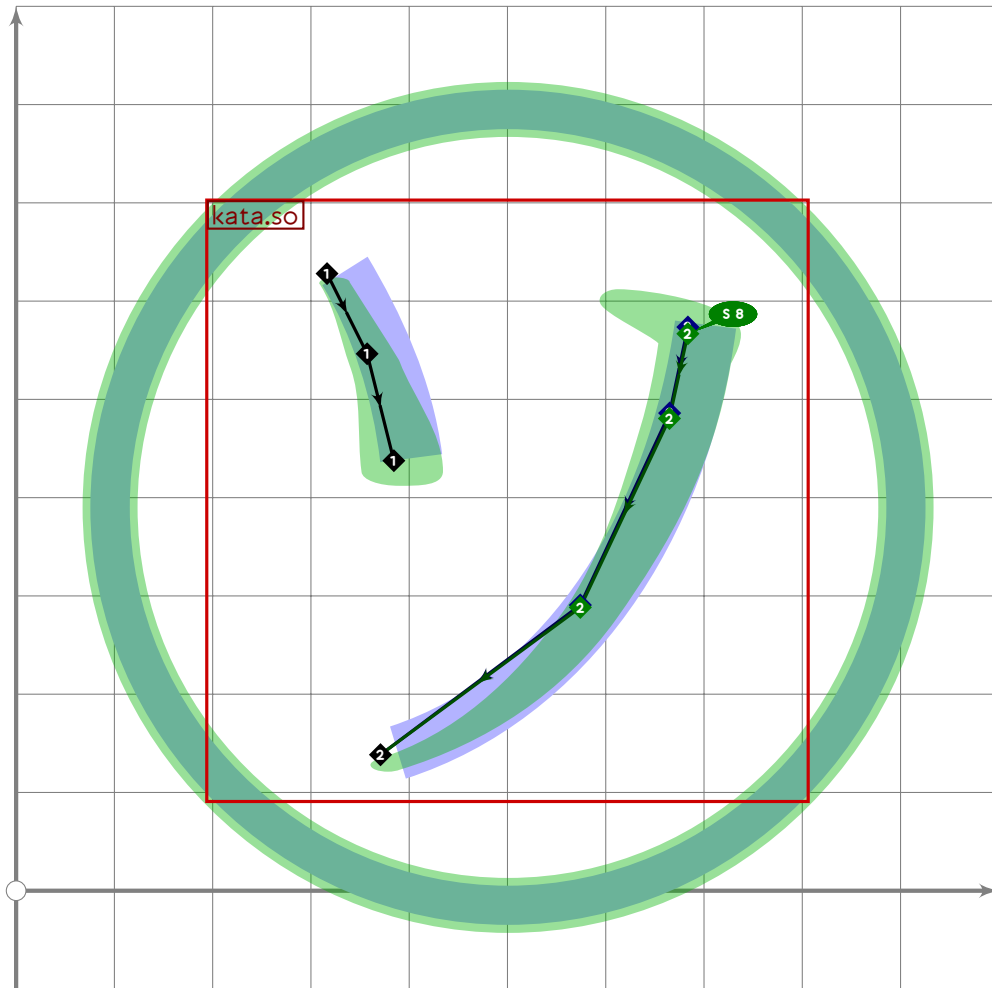
```



```

413 % circled "se"
414 begint Suglyph("uni32DD",221);
415 tsu_curve.circle.single;
416 tsu_xform(tsu_xf.circled)(tsu_curve.kata.se);
417 tsu_render_in_circle(tsu_xf.cbound);
418 endsuglyph;
419

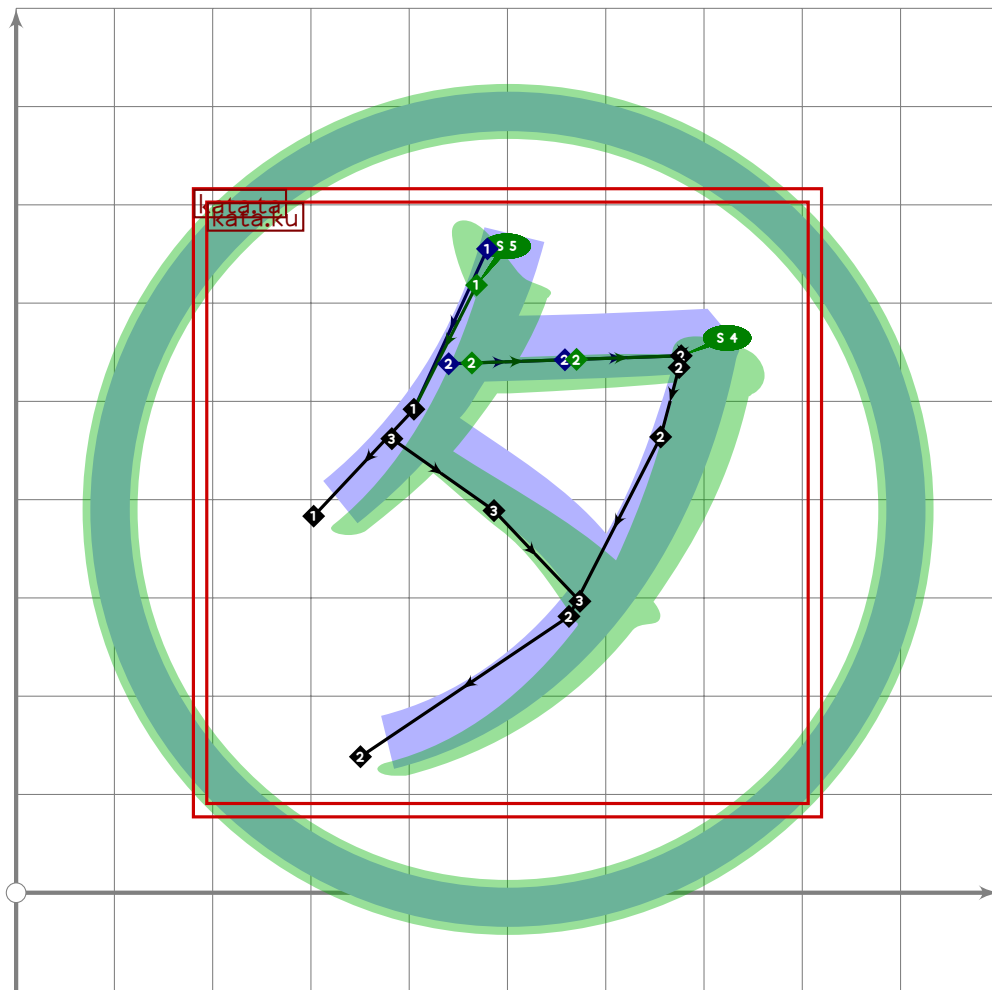
```



```

420 % circled "so"
421 begint Suglyph("uni32DE",222);
422 tsu_curve.circle.single;
423 tsu_xform(tsu_xf.circled)(tsu_curve.kata.so);
424 tsu_render_in_circle(tsu_xf.cbound);
425 endsuglyph;
426

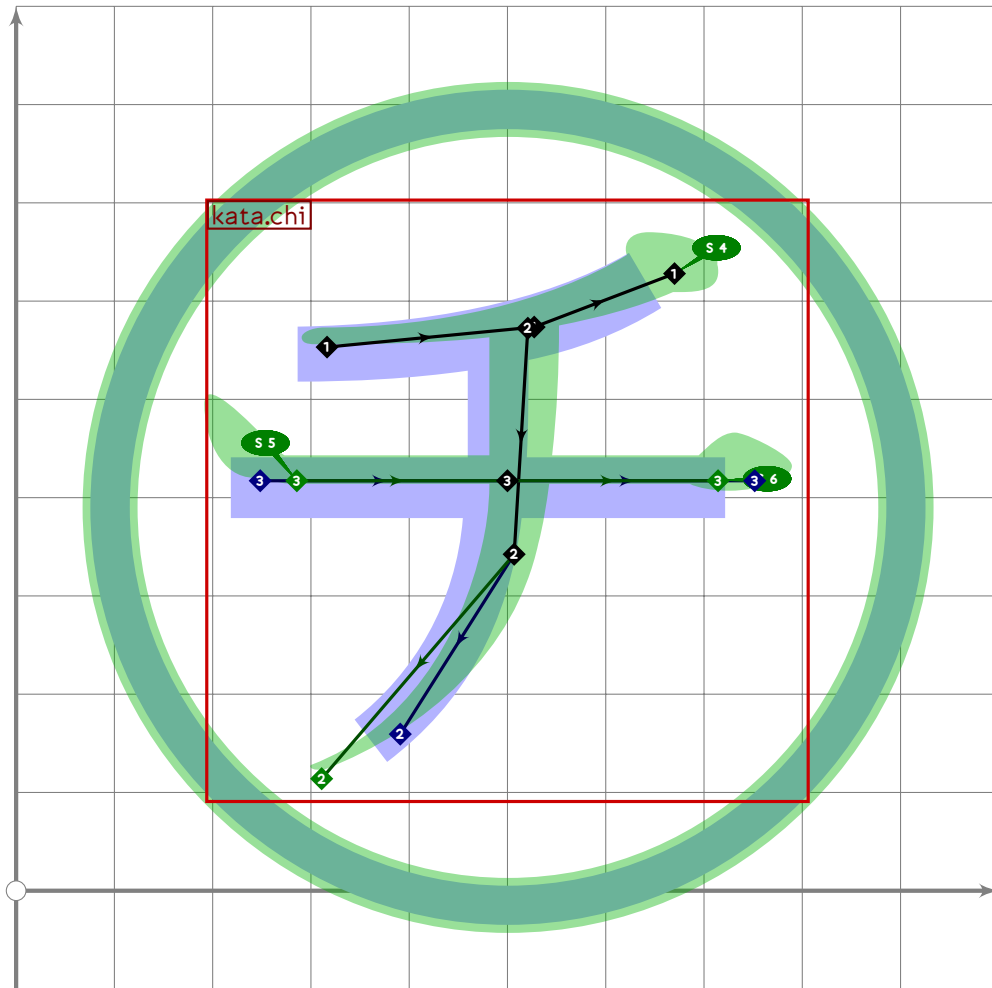
```

```

427 % circled "ta"
428 begint Suglyph("uni32DF",223);
429 tsu_curve.circle.single;
430 tsu_xform(tsu_xf.circled)(tsu_curve.kata.ta);
431 tsu_render_in_circle(tsu_xf.cbound);
432 endsuglyph;
433

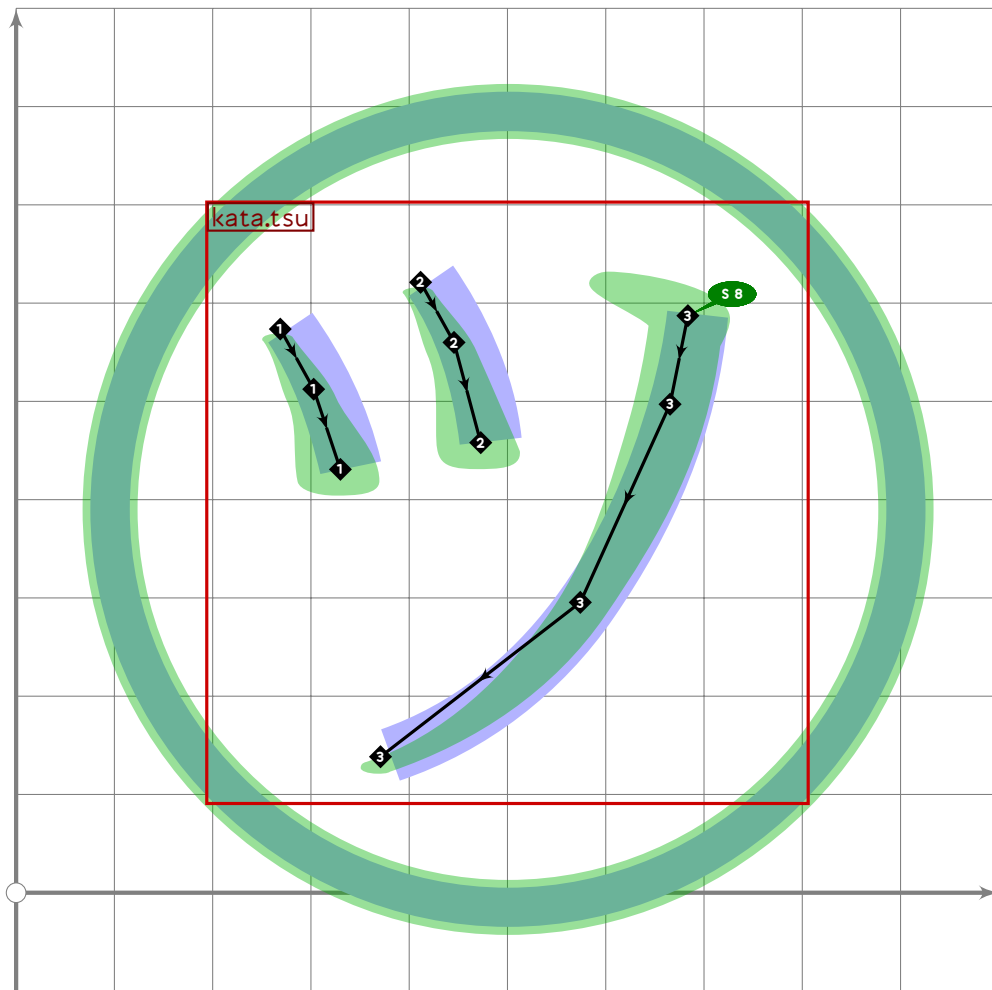
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```

434 % circled "chi"
435 begint Suglyph("uni32E0";224);
436 tsu_curve.circle.single;
437 tsu_xform(tsu_xf.circled)(tsu_curve.kata.chi);
438 tsu_render_in_circle(tsu_xf.cbound);
439 endsuglyph;
440

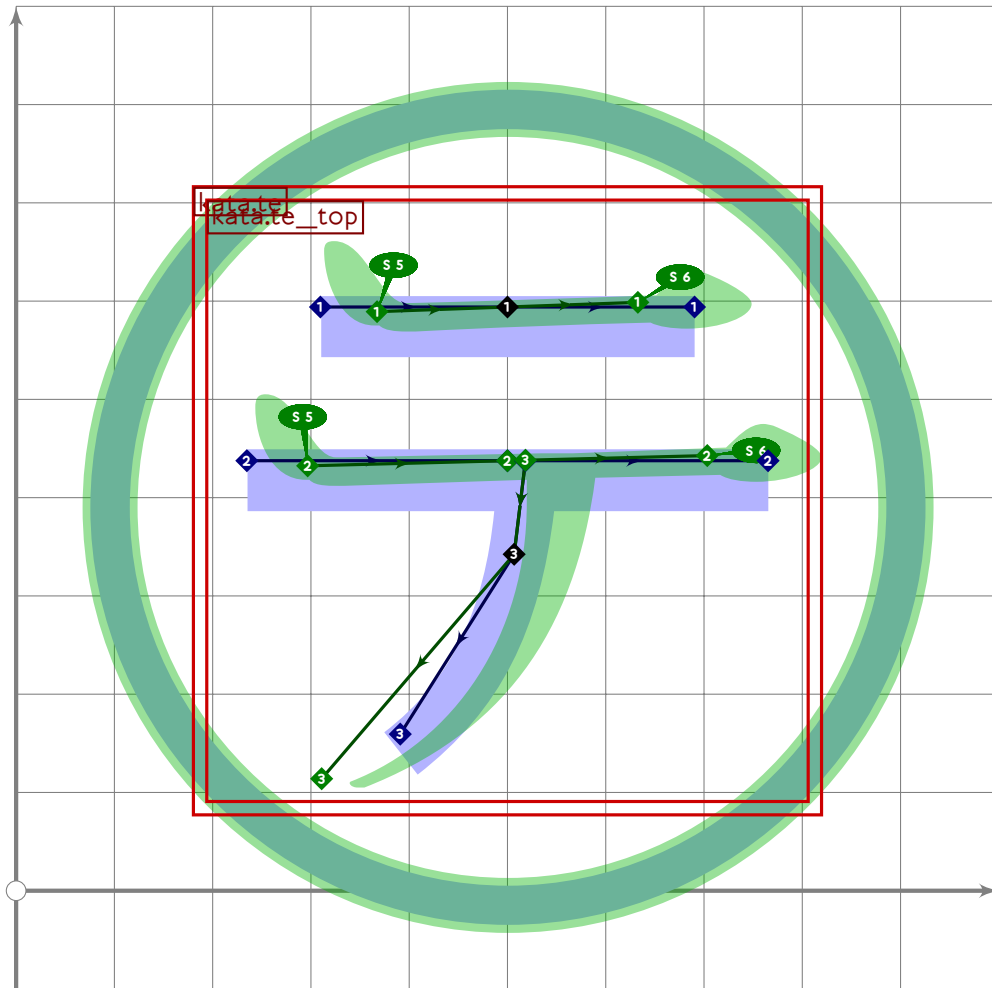
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```

441 % circled "tsu"
442 begint Suglyph("uni32E1",225);
443   tsu_curve.circle.single;
444   tsu_xform(tsu_xf.circled)(tsu_curve.kata.tsu);
445   tsu_render_in_circle(tsu_xf.cbound);
446 endsuglyph;
447

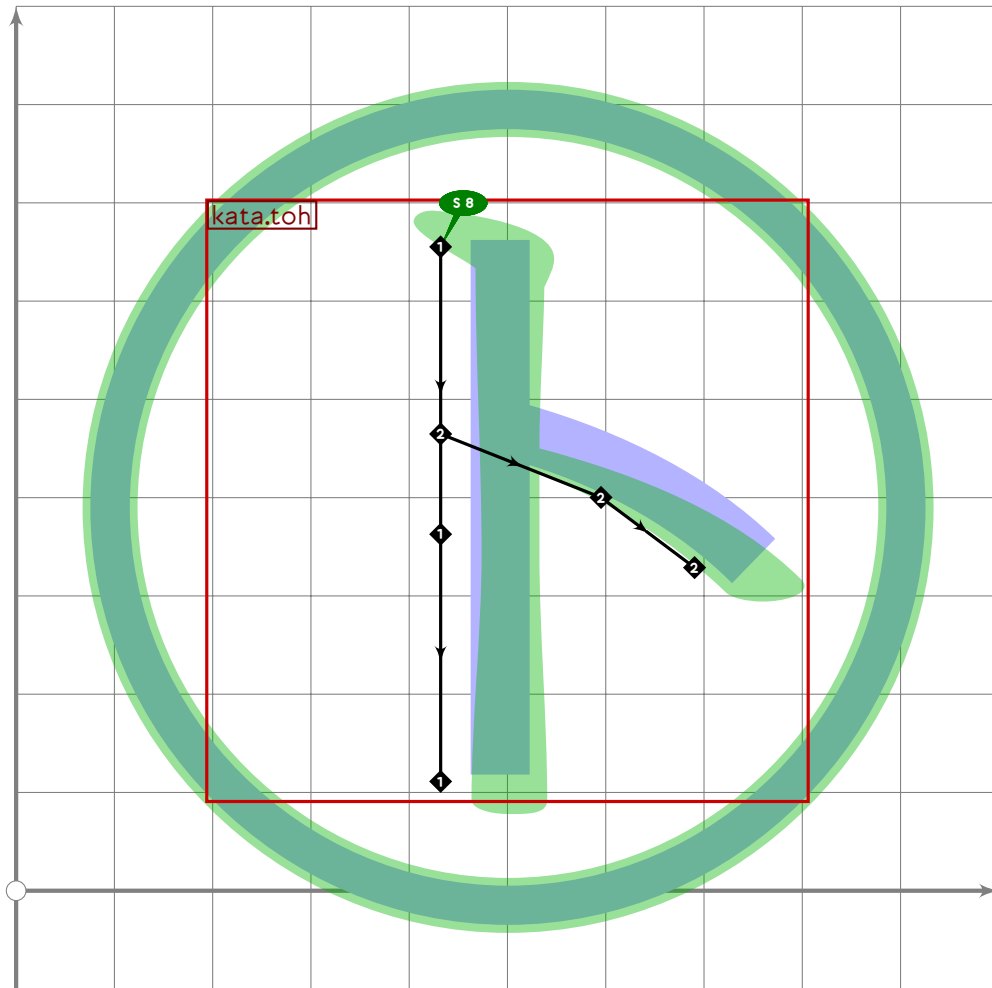
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```

448 % circled "te"
449 begint Suglyph("uni32E2",226);
450 tsu_curve.circle.single;
451 tsu_xform(tsu_xf.circled)(tsu_curve.kata.te);
452 tsu_render_in_circle(tsu_xf.cbound);
453 endsuglyph;
454

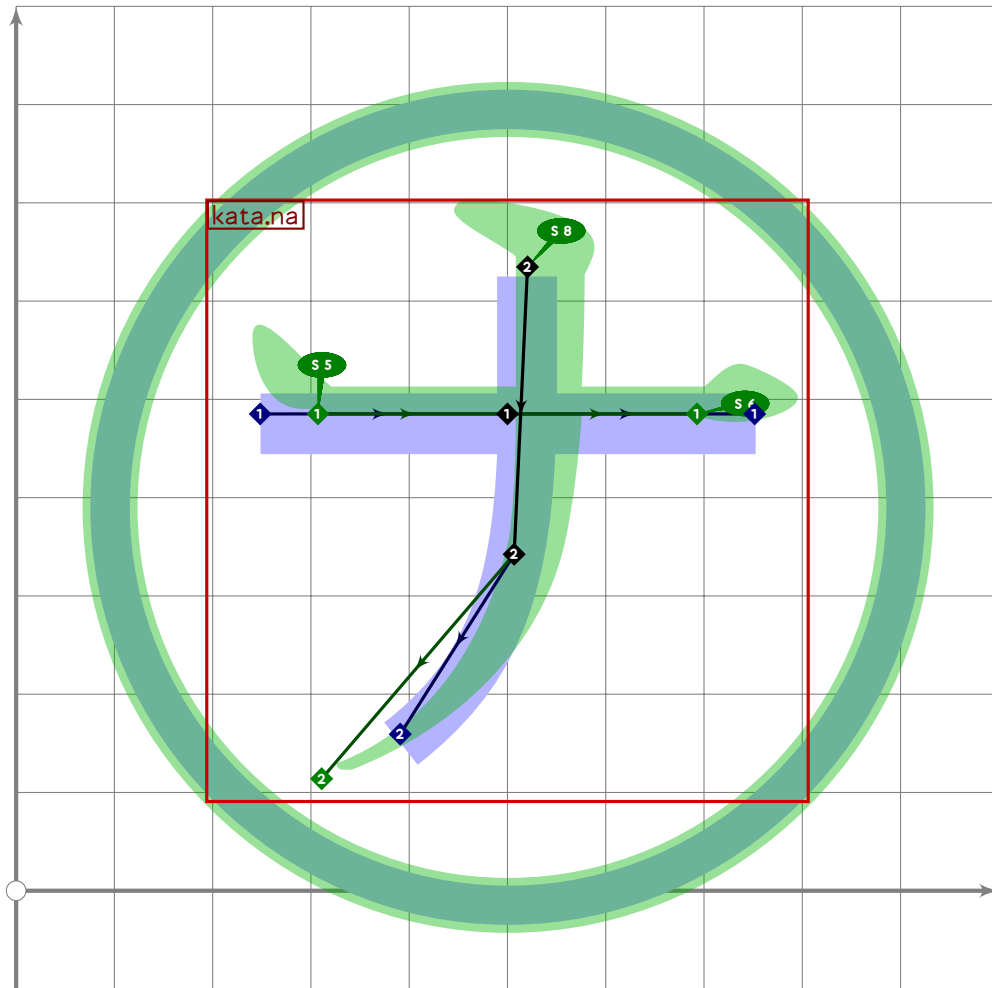
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```

455 % circled "to"
456 begint Suglyph("uni32E3",227);
457 tsu_curve.circle.single;
458 tsu_xform(tsu_xf.circled)(tsu_curve.kata.toh);
459 tsu_render_in_circle(tsu_xf.cbound);
460 endsuglyph;
461

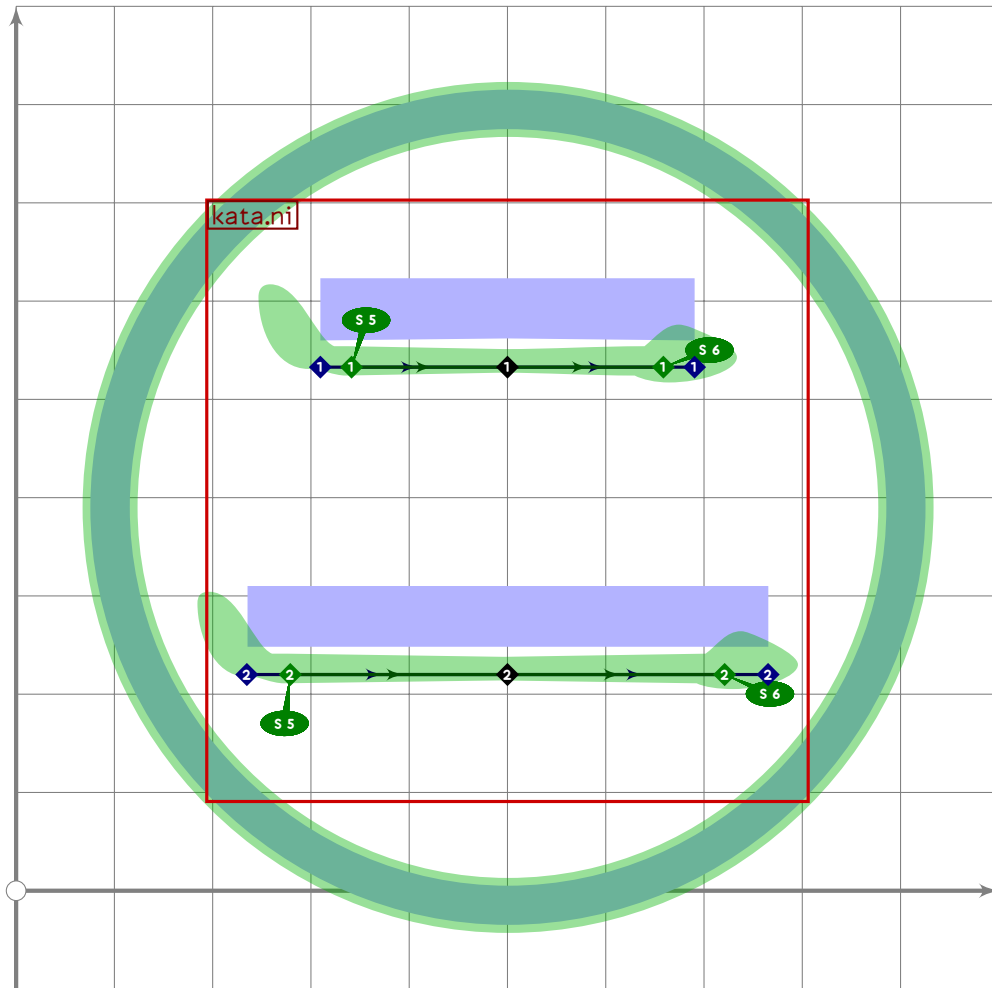
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```

462 % circled "na"
463 begint Suglyph("uni32E4",228);
464   tsu_curve.circle.single;
465   tsu_xform(tsu_xf.circled)(tsu_curve.kata.na);
466   tsu_render_in_circle(tsu_xf.cbound);
467 endsuglyph;
468

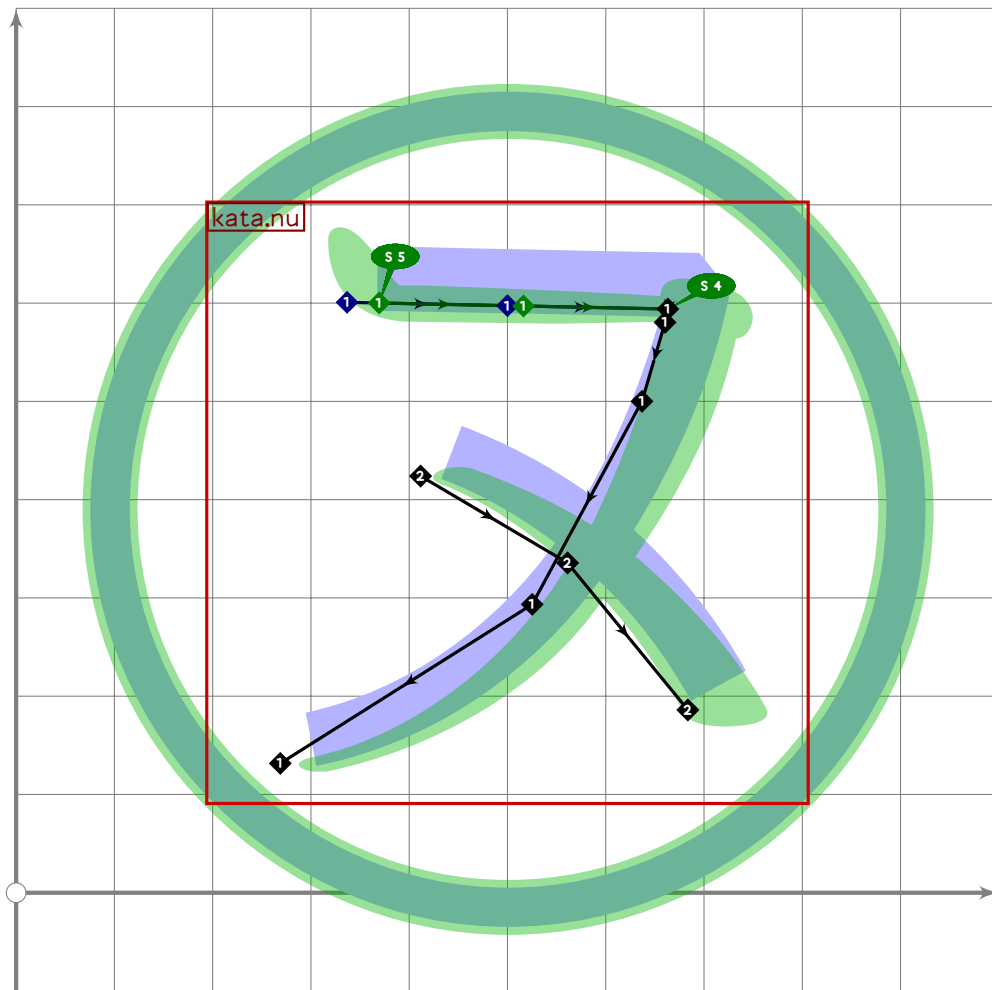
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```

469 % circled "ni"
470 begint Suglyph("uni32E5";229);
471 tsu_curve.circle.single;
472 tsu_xform(tsu_xf.circled)(tsu_curve.kata.ni);
473 tsu_render_in_circle(tsu_xf.cbound);
474 endsuglyph;
475

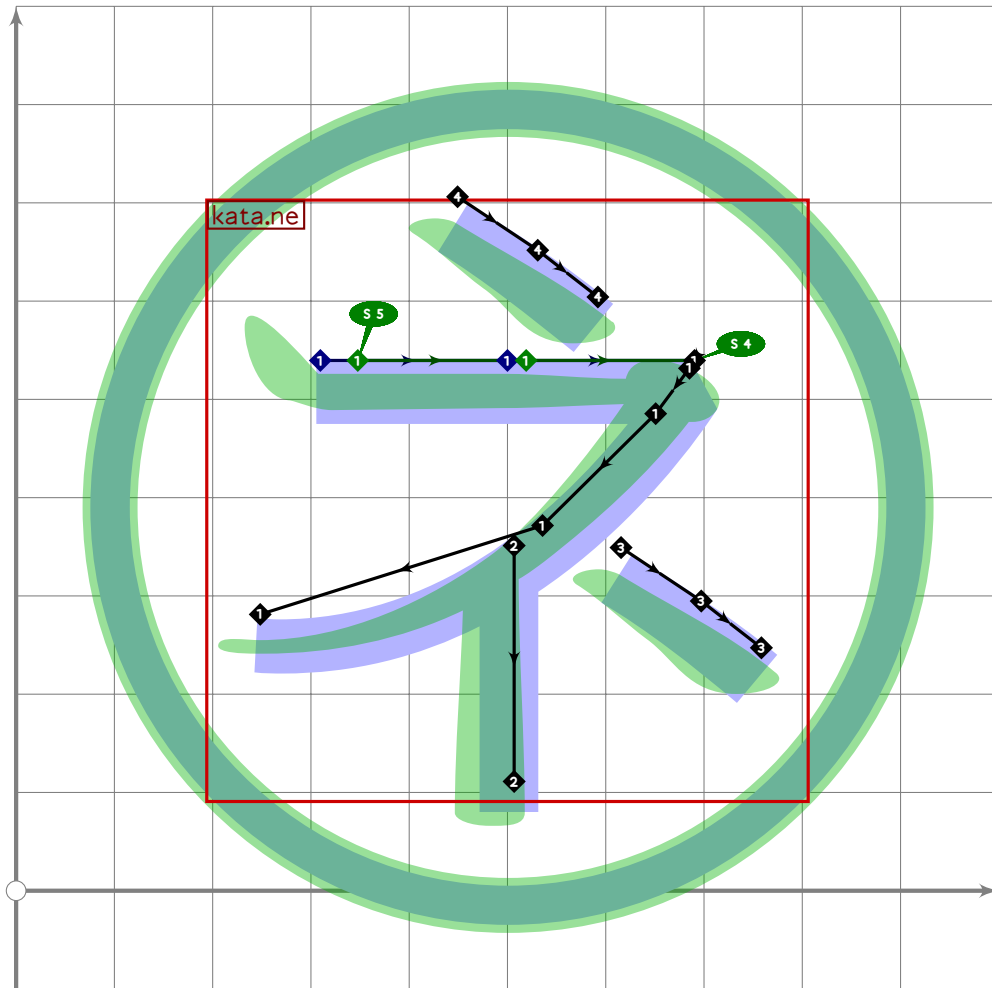
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```

476 % circled "nu"
477 begint Suglyph("uni32E6";230);
478   tsu_curve.circle.single;
479   tsu_xform(tsu_xf.circled)(tsu_curve.kata.nu);
480   tsu_render_in_circle(tsu_xf.cbound);
481 endsuglyph;
482

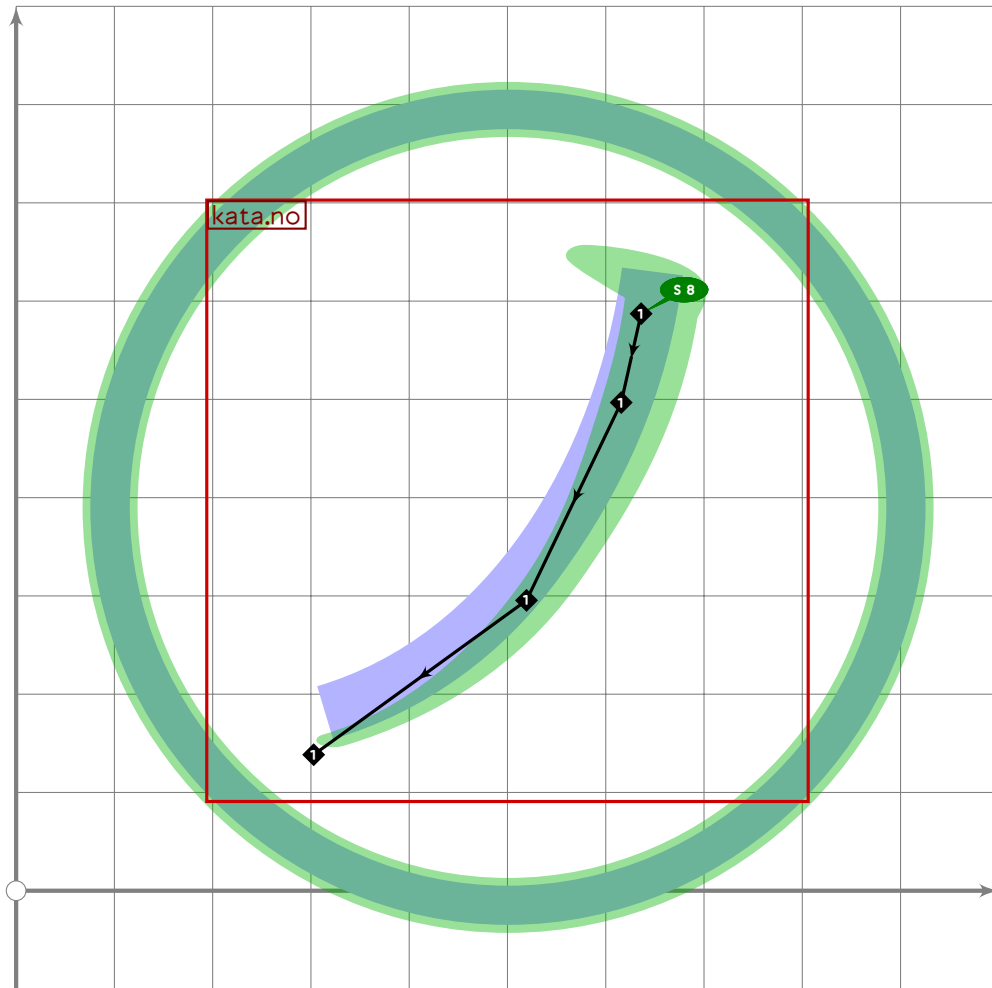
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483 % circled "ne"
484 begint Suglyph("uni32E7";231);
485   tsu_curve.circle.single;
486   tsu_xform(tsu_xf.circled)(tsu_curve.kata.ne);
487   tsu_render_in_circle(tsu_xf.cbound);
488 endsuglyph;
489

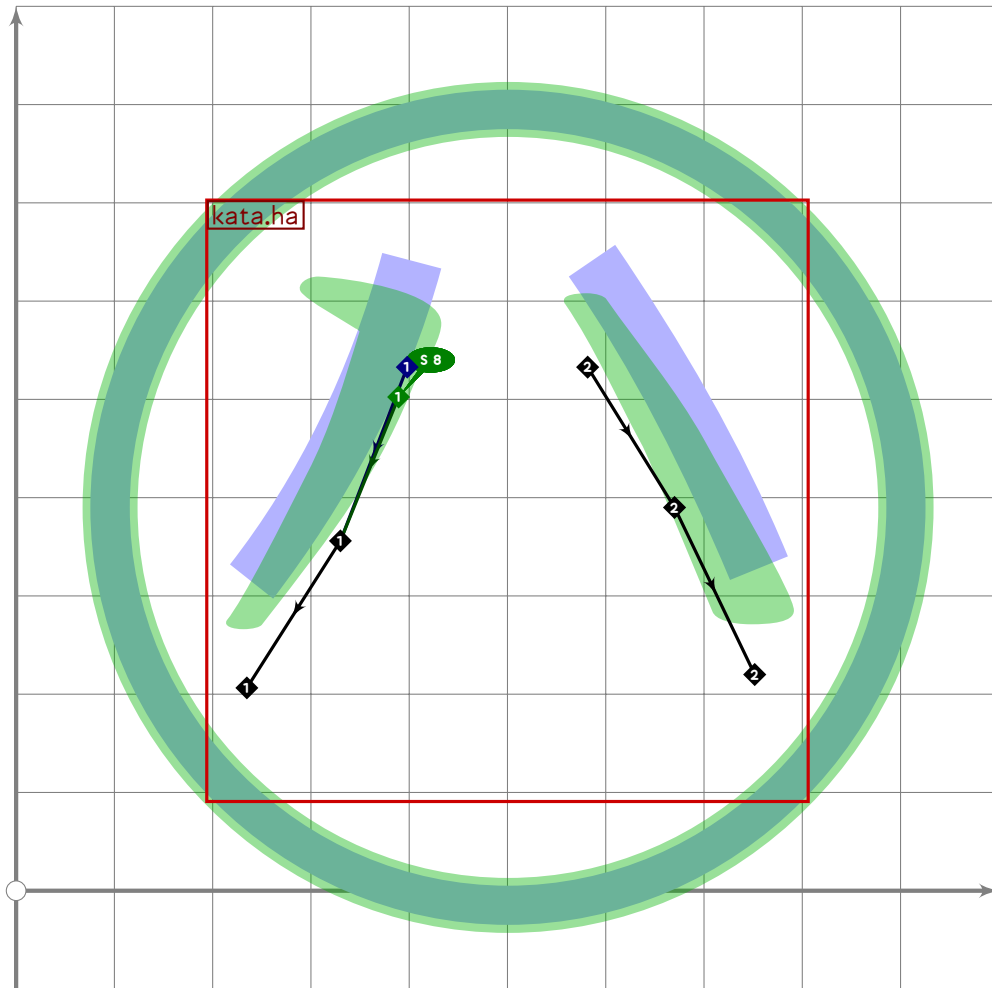
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```

490 % circled "no"
491 begint Suglyph("uni32E8",232);
492 tsu_curve.circle.single;
493 tsu_xform(tsu_xf.circled)(tsu_curve.kata.no);
494 tsu_render_in_circle(tsu_xf.cbound);
495 endsuglyph;
496

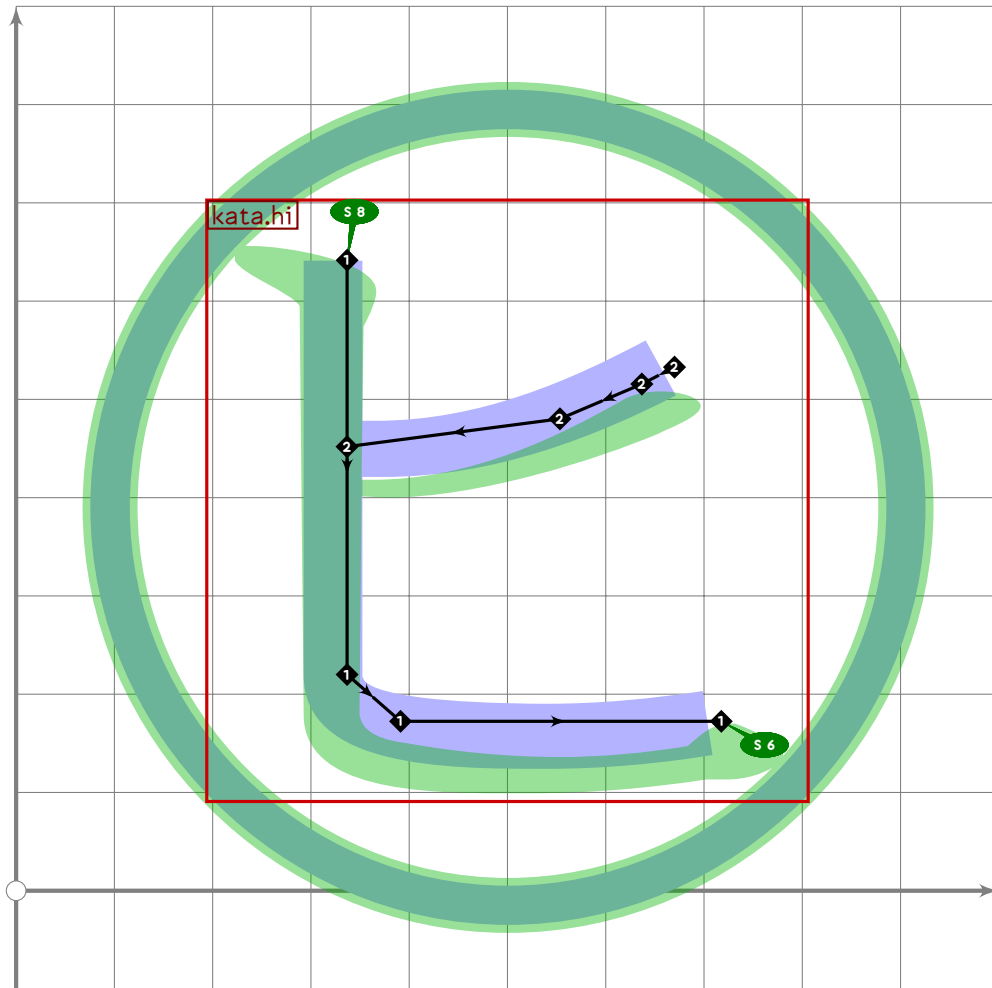
```



```

497 % circled "ha"
498 begint Suglyph("uni32E9",233);
499   tsu_curve.circle.single;
500   tsu_xform(tsu_xf.circled)(tsu_curve.kata.ha);
501   tsu_render_in_circle(tsu_xf.cbound);
502 endsuglyph;
503

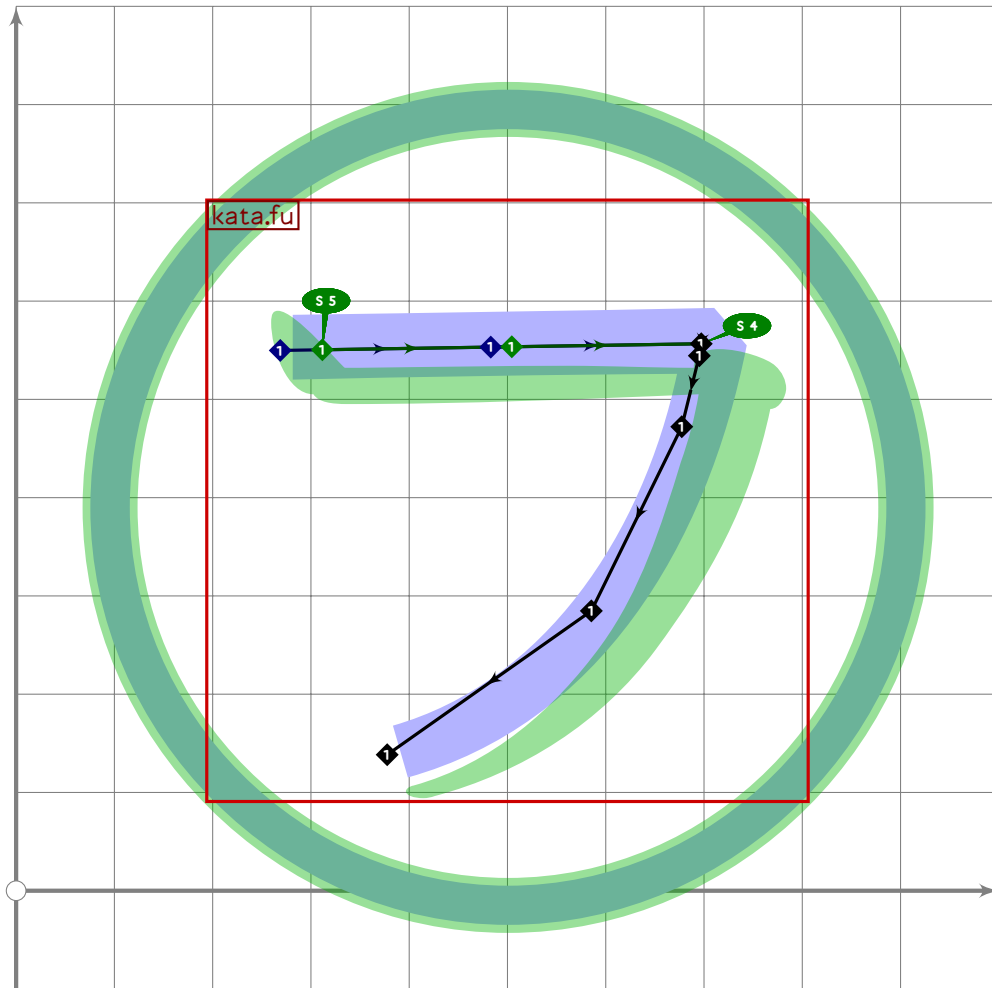
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```

504 % circled "hi"
505 begint Suglyph("uni32EA",234);
506   tsu_curve.circle.single;
507   tsu_xform(tsu_xf.circled)(tsu_curve.kata.hi);
508   tsu_render_in_circle(tsu_xf.cbound);
509 endsuglyph;
510

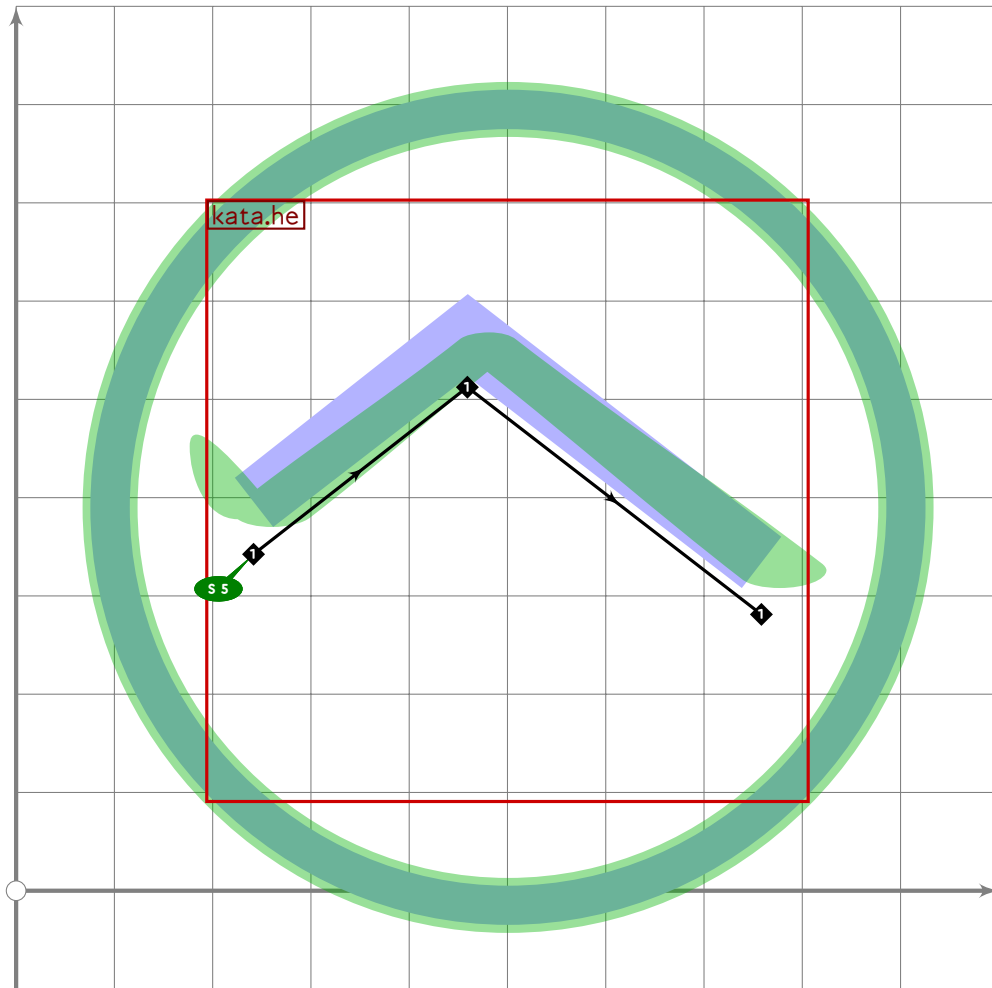
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```

511 % circled "fu"
512 begint Suglyph("uni32EB",235);
513   tsu_curve.circle.single;
514   tsu_xform(tsu_xf.circled)(tsu_curve.kata.fu);
515   tsu_render_in_circle(tsu_xf.cbound);
516 endsuglyph;
517

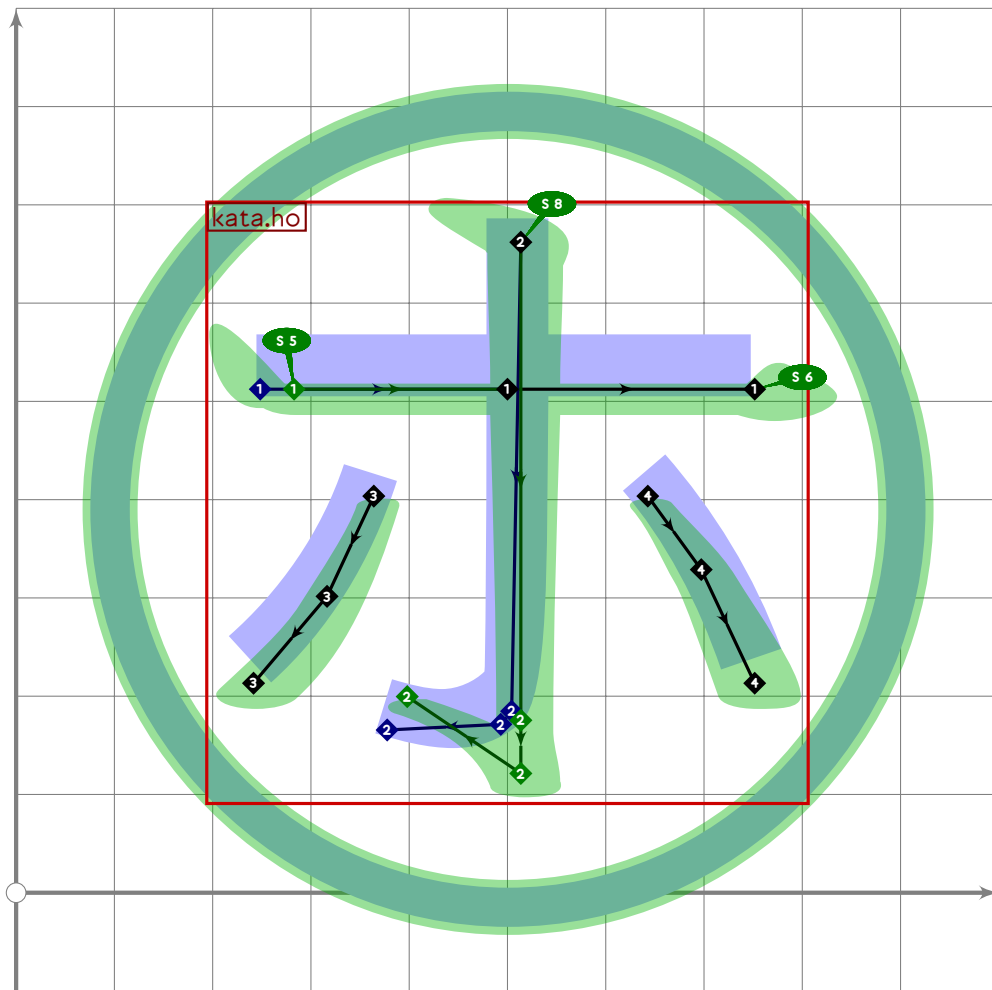
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```

518 % circled "he"
519 begint Suglyph("uni32EC",236);
520 tsu_curve.circle.single;
521 tsu_xform(tsu_xf.circled)(tsu_curve.kata.he);
522 tsu_render_in_circle(tsu_xf.cbound);
523 endsuglyph;
524

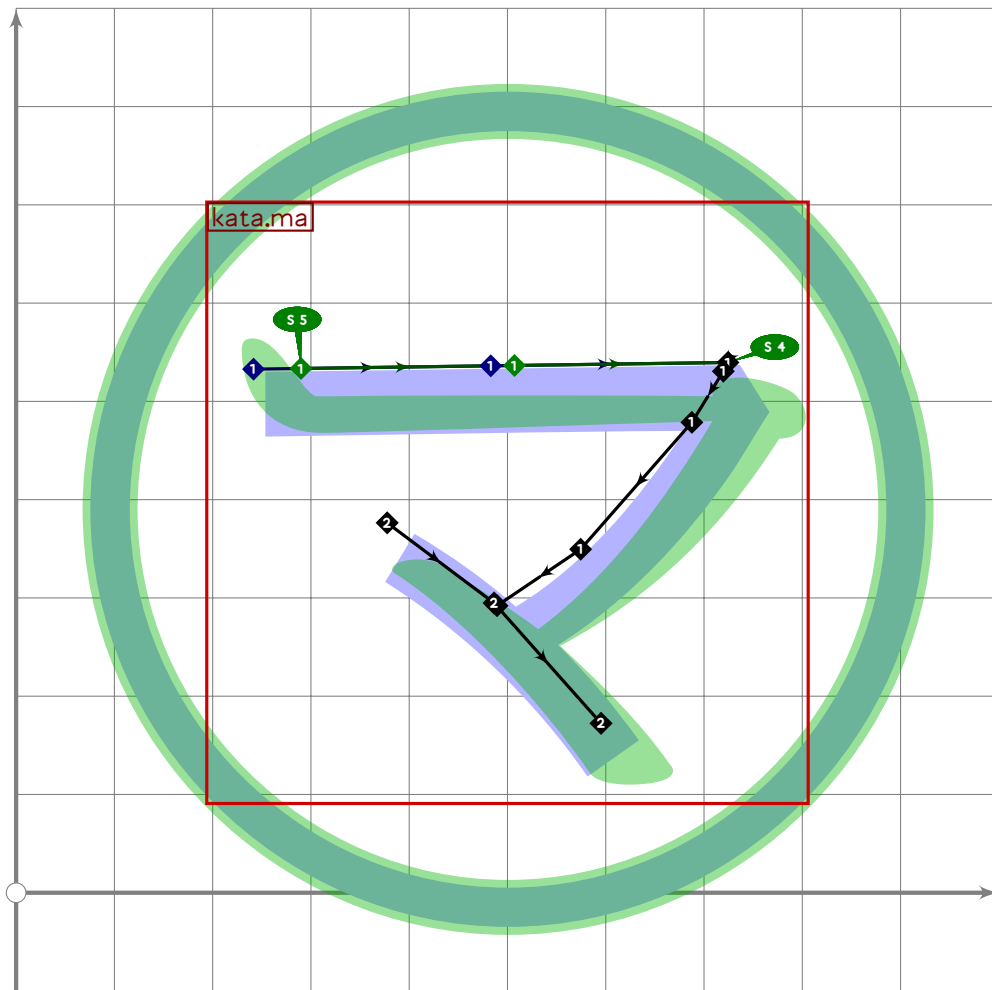
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```

525 % circled "ho"
526 begint Suglyph("uni32ED";237);
527 tsu_curve.circle.single;
528 tsu_xform(tsu_xf.circled)(tsu_curve.kata.ho);
529 tsu_render_in_circle(tsu_xf.cbound);
530 endsuglyph;
531

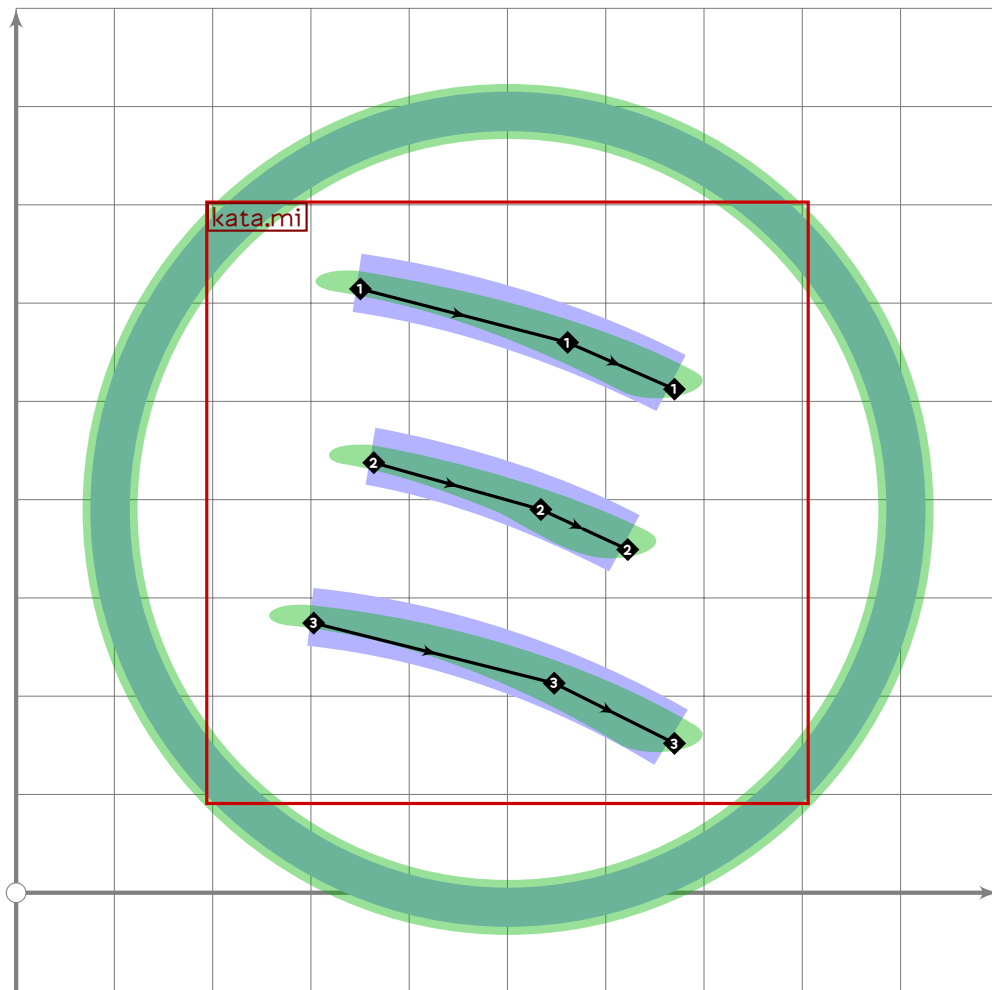
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```

532 % circled "ma"
533 begint Suglyph("uni32EE";238);
534   tsu_curve.circle.single;
535   tsu_xform(tsu_xf.circled)(tsu_curve.kata.ma);
536   tsu_render_in_circle(tsu_xf.cbound);
537 endsuglyph;
538

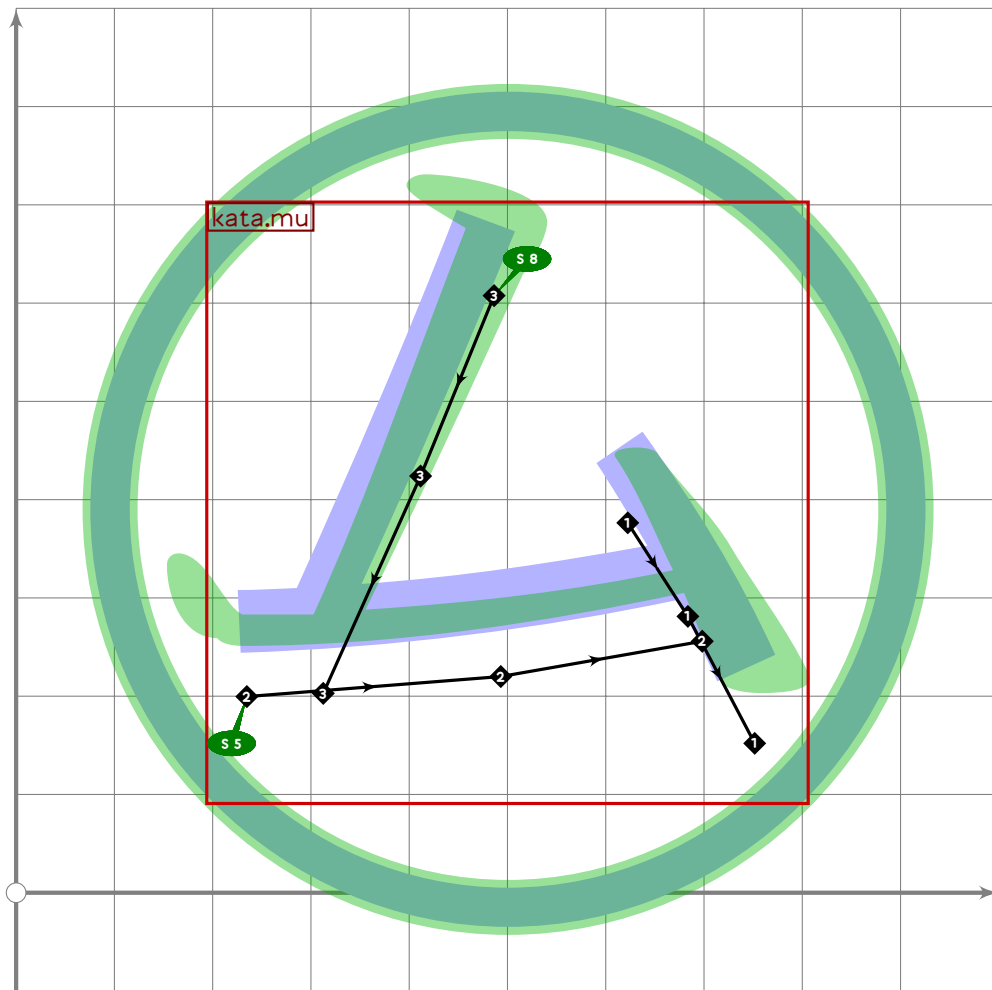
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```

539 % circled "mi"
540 begint Suglyph("uni32EF",239);
541   tsu_curve.circle.single;
542   tsu_xform(tsu_xf.circled)(tsu_curve.kata.mi);
543   tsu_render_in_circle(tsu_xf.cbound);
544 endsuglyph;
545

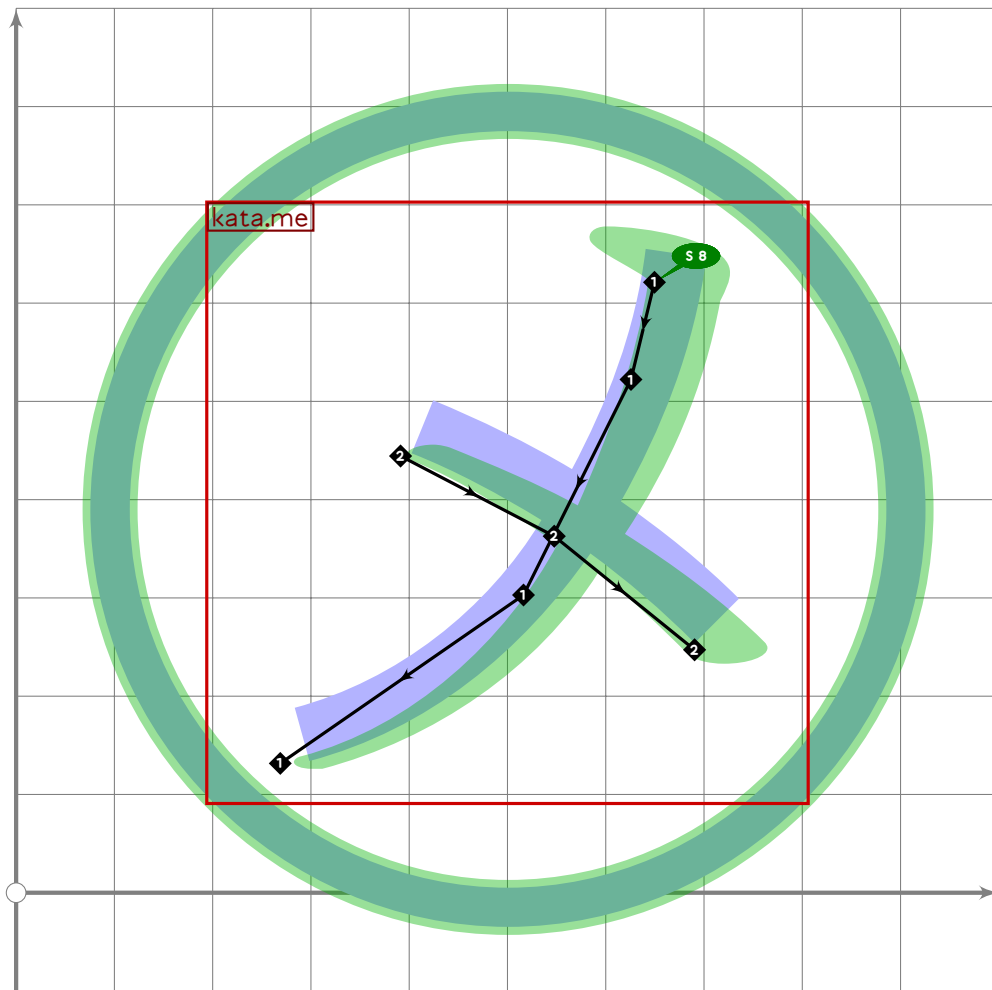
```



```

546 % circled "mu"
547 begint Suglyph("uni32F0",240);
548   tsu_curve.circle.single;
549   tsu_xform(tsu_xf.circled)(tsu_curve.kata.mu);
550   tsu_render_in_circle(tsu_xf.cbound);
551 endsuglyph;
552

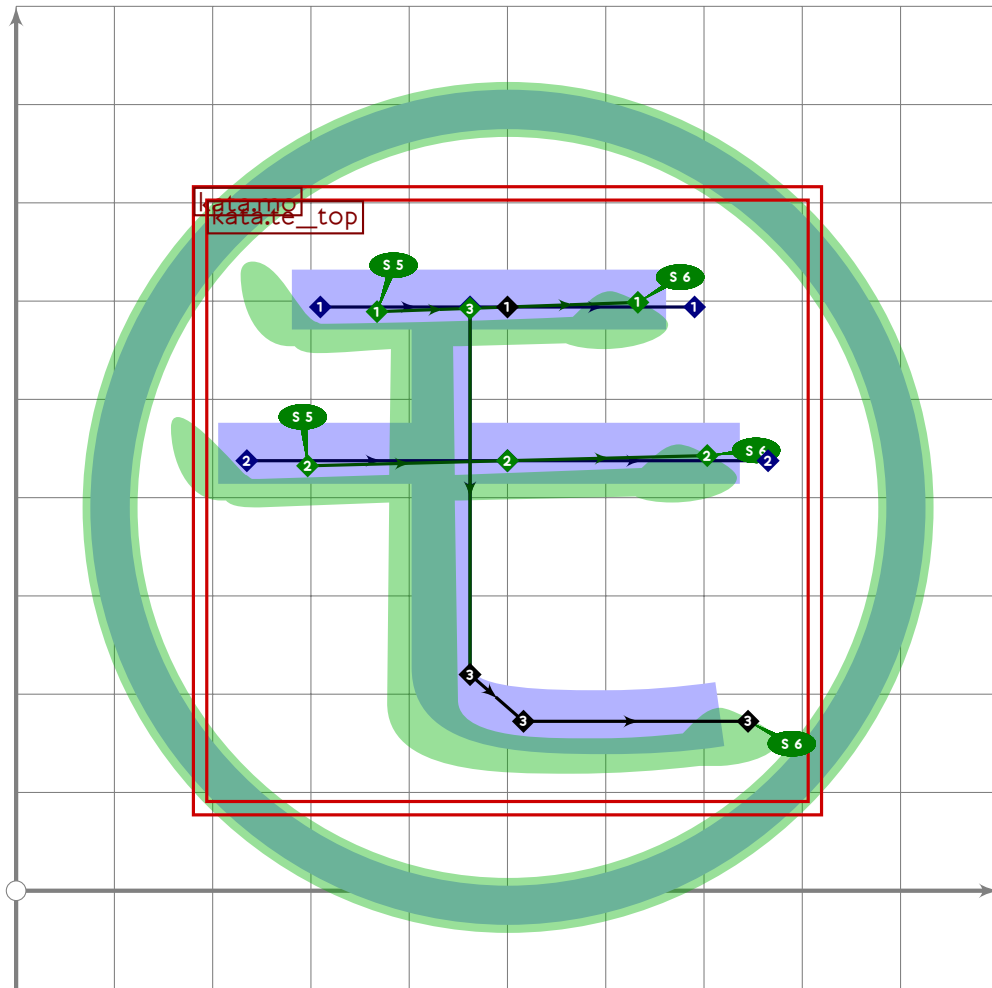
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```

553 % circled "me"
554 begint Suglyph("uni32F1",241);
555 tsu_curve.circle.single;
556 tsu_xform(tsu_xf.circled)(tsu_curve.kata.me);
557 tsu_render_in_circle(tsu_xf.cbound);
558 endsuglyph;
559

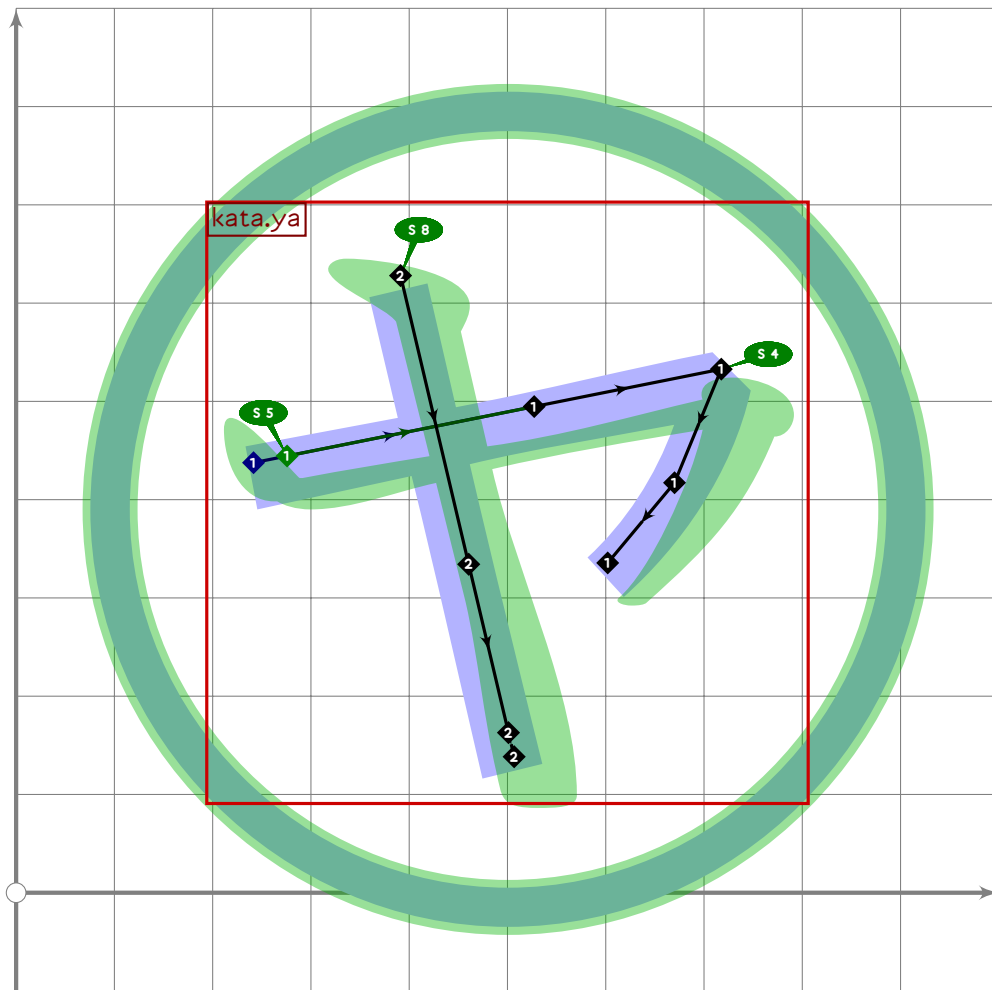
```



```

560 % circled "mo"
561 begint Suglyph("uni32F2",242);
562 tsu_curve.circle.single;
563 tsu_xform(tsu_xf.circled)(tsu_curve.kata.mo);
564 tsu_render_in_circle(tsu_xf.cbound);
565 endsuglyph;
566

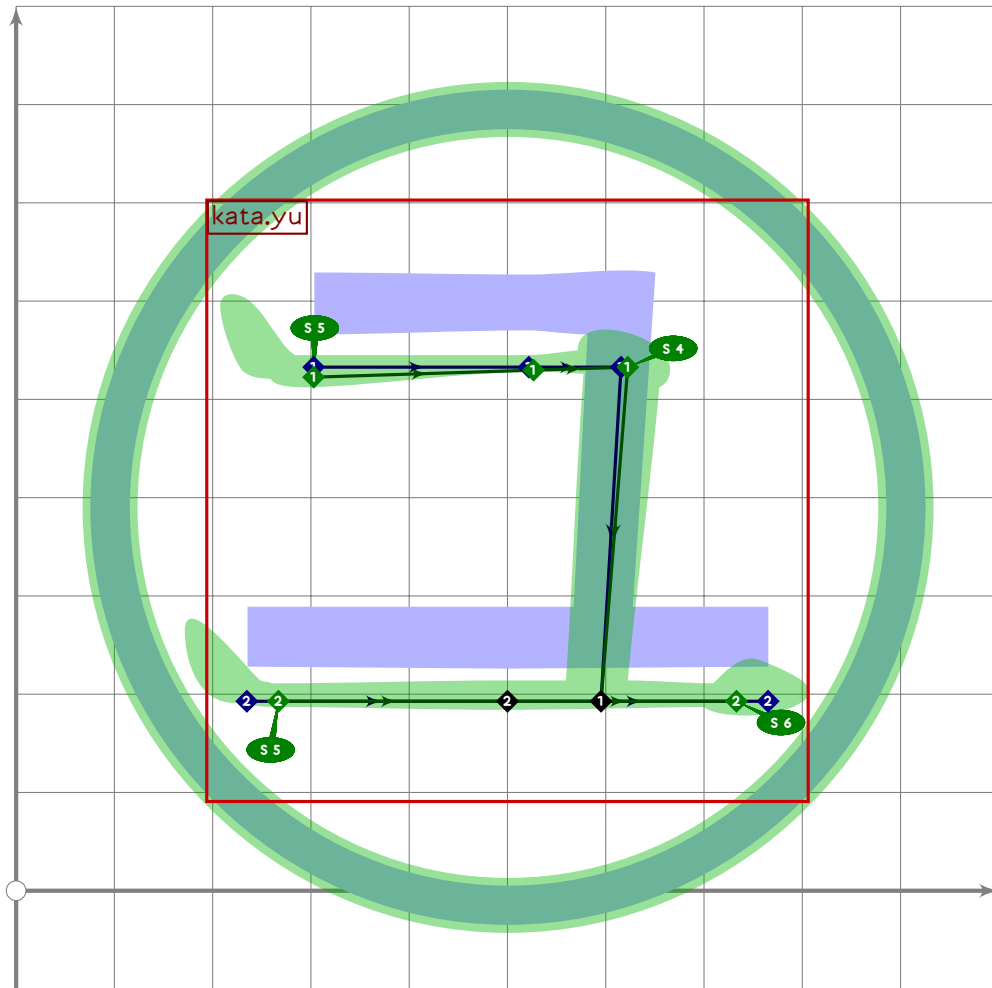
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```

567 % circled "ya"
568 begint Suglyph("uni32F3",243);
569   tsu_curve.circle.single;
570   tsu_xform(tsu_xf.circled)(tsu_curve.kata.ya);
571   tsu_render_in_circle(tsu_xf.cbound);
572 endsuglyph;
573

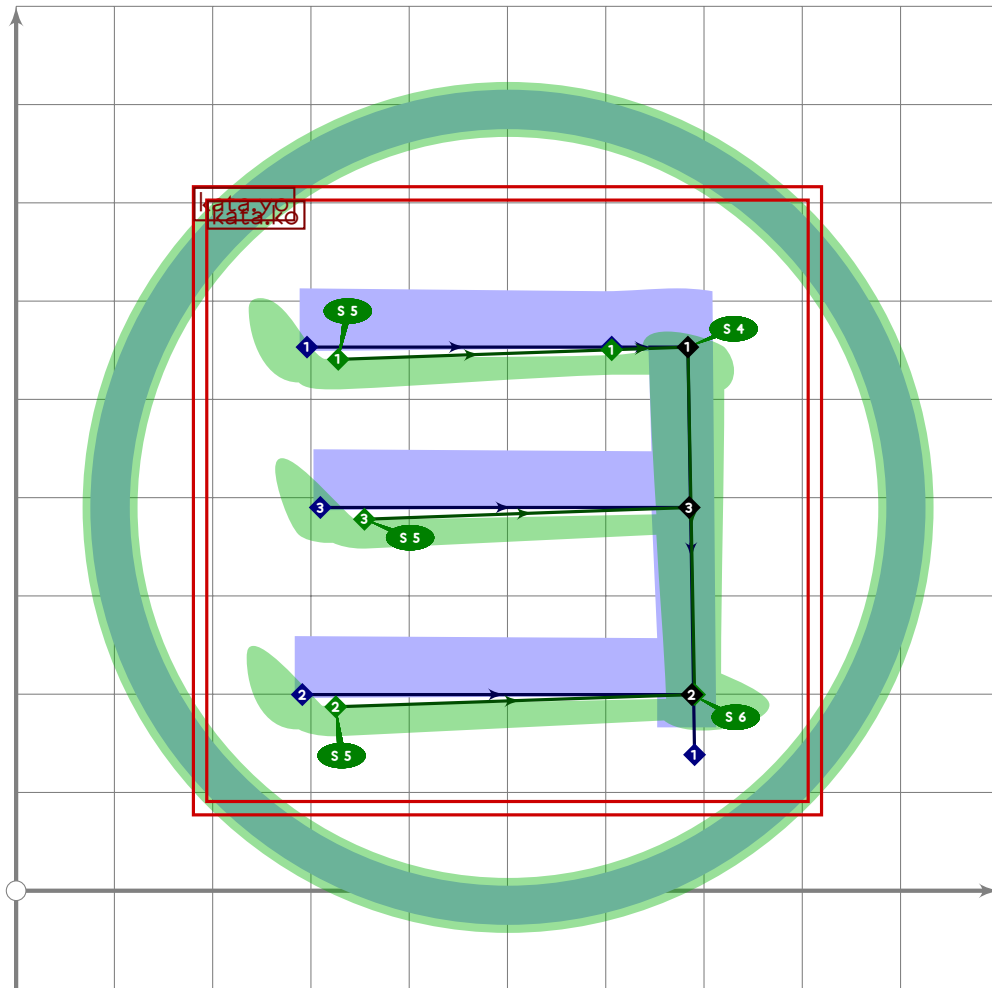
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```

574 % circled "yu"
575 begint Suglyph("uni32F4",244);
576 tsu_curve.circle.single;
577 tsu_xform(tsu_xf.circled)(tsu_curve.kata.yu);
578 tsu_render_in_circle(tsu_xf.cbound);
579 endsuglyph;
580

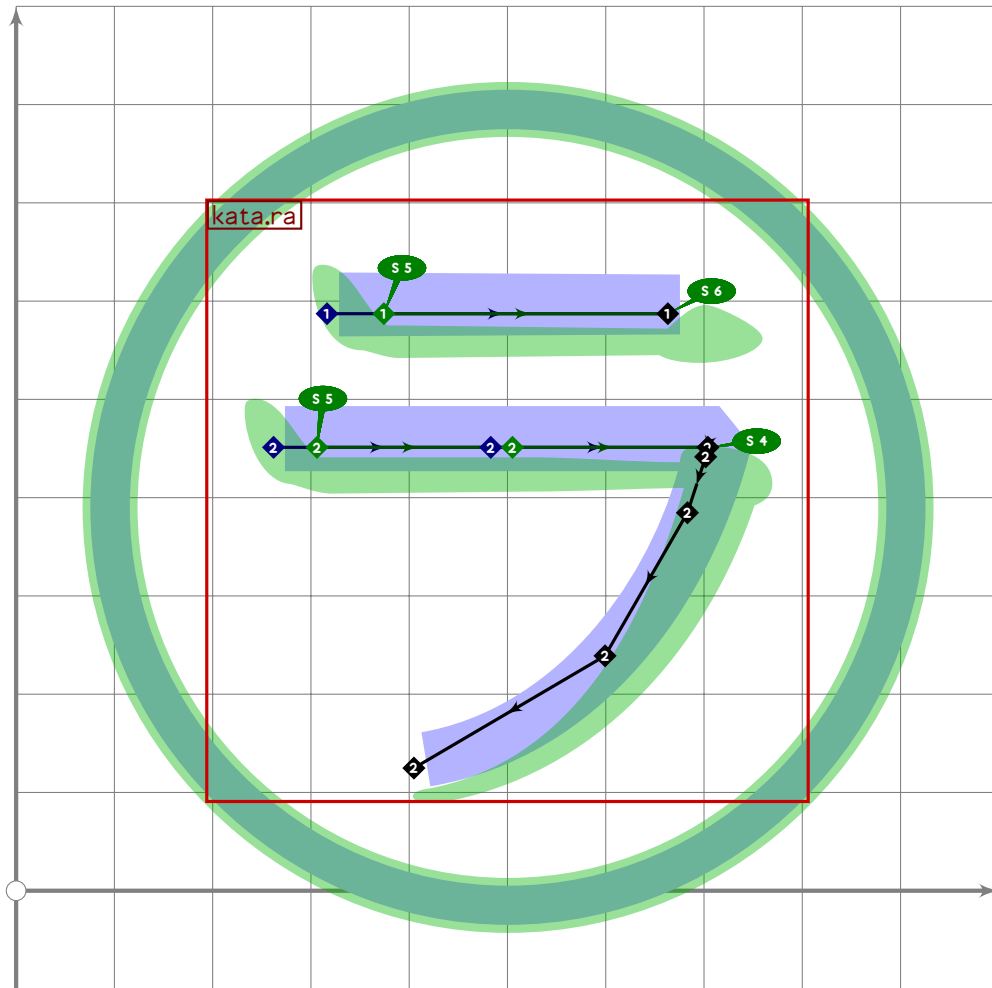
```



```

581 % circled "yo"
582 begint Suglyph("uni32F5";245);
583   tsu_curve.circle.single;
584   tsu_xform(tsu_xf.circled)(tsu_curve.kata.yo);
585   tsu_render_in_circle(tsu_xf.cbound);
586 endsuglyph;
587

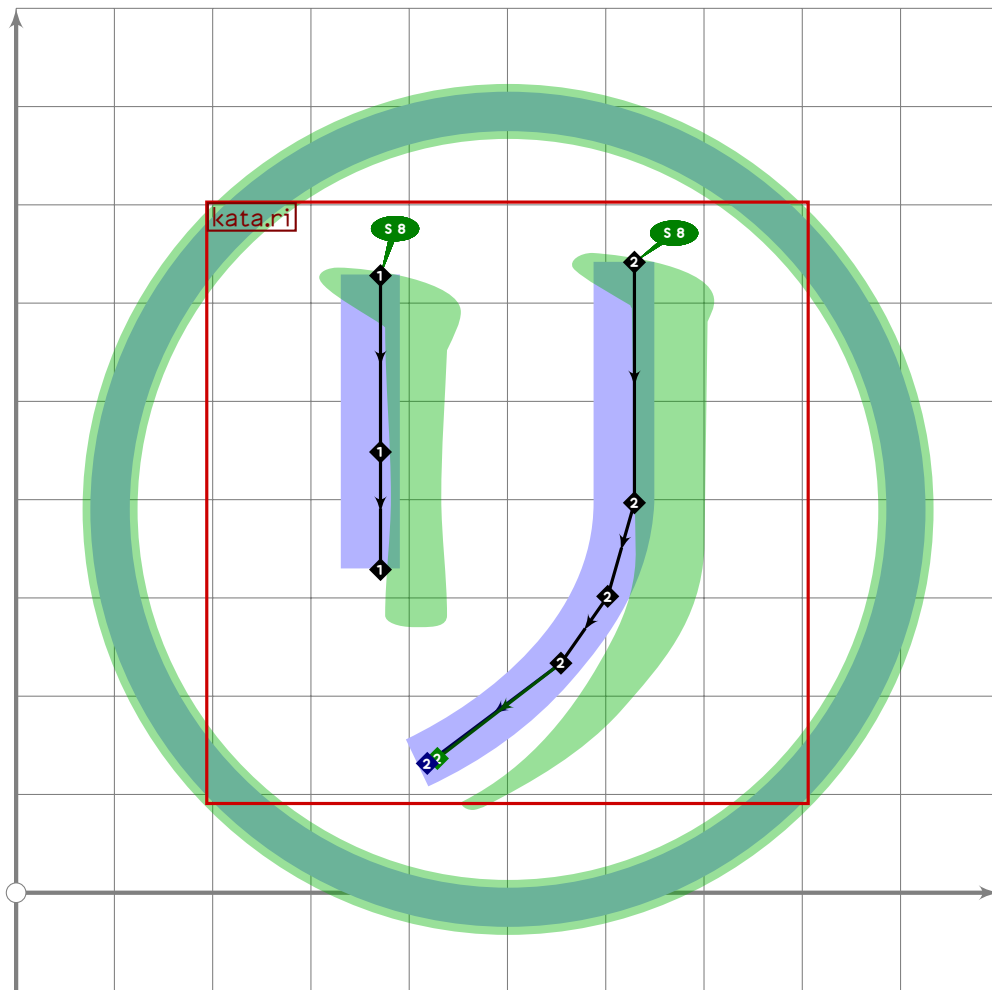
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```

588 % circled "ra"
589 begint Suglyph("uni32F6";246);
590 tsu_curve.circle.single;
591 tsu_xform(tsu_xf.circled)(tsu_curve.kata.ra);
592 tsu_render_in_circle(tsu_xf.cbound);
593 endsuglyph;
594

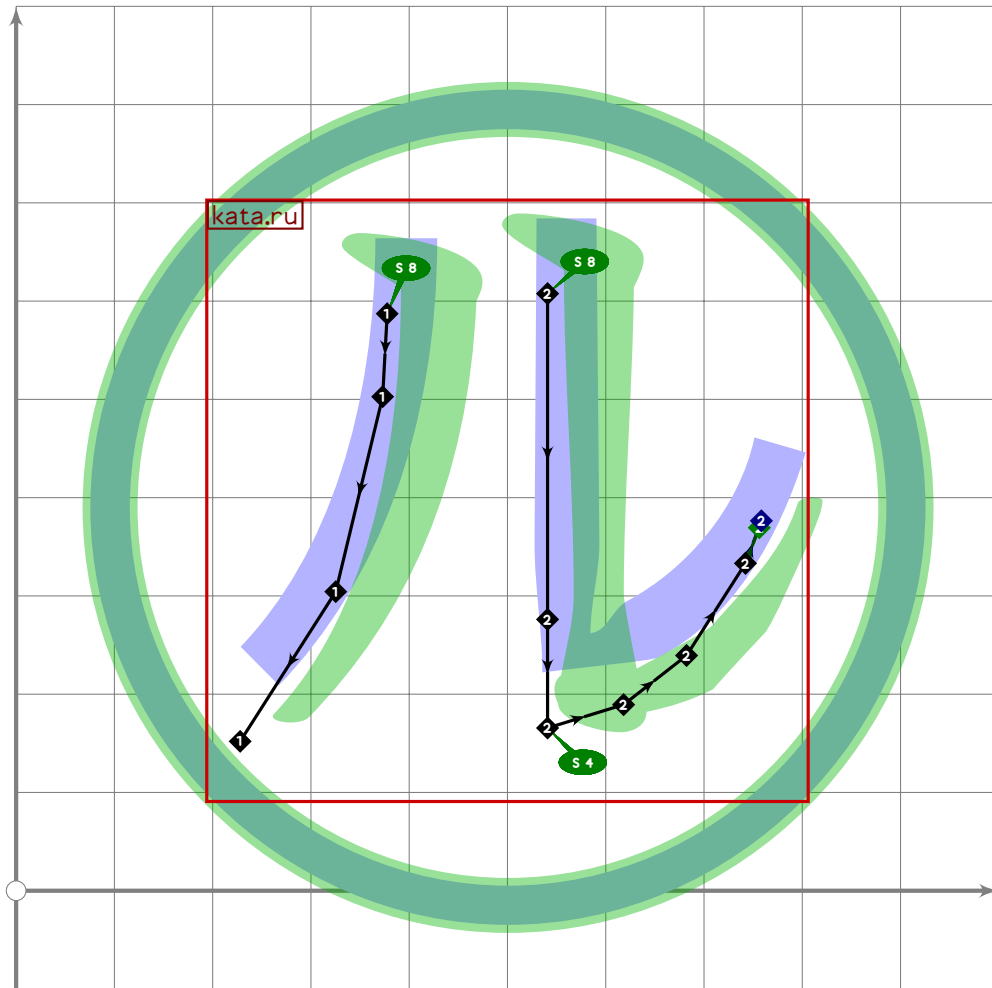
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```

595 % circled "ri"
596 begint Suglyph("uni32F7",247);
597 tsu_curve.circle.single;
598 tsu_xform(tsu_xf.circled)(tsu_curve.kata.ri);
599 tsu_render_in_circle(tsu_xf.cbound);
600 endsuglyph;
601

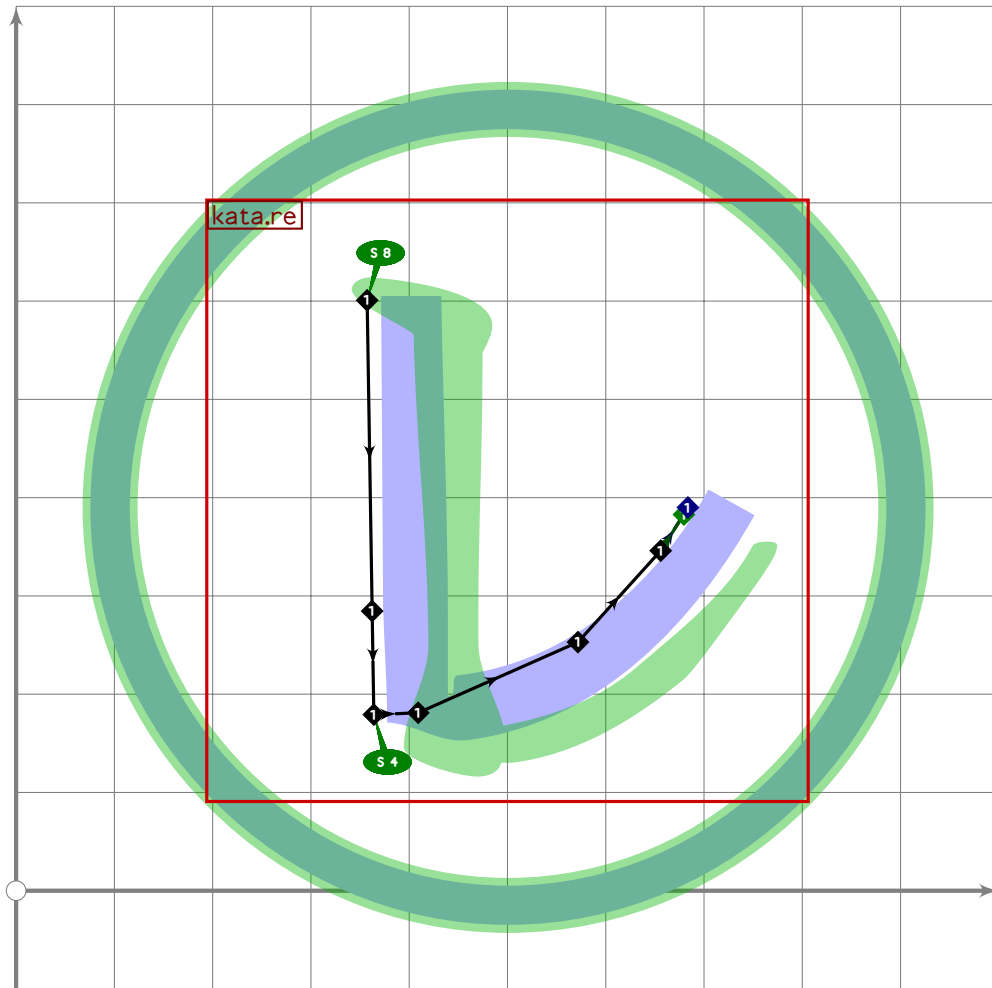
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```

602 % circled "ru"
603 begint Suglyph("uni32F8",248);
604 tsu_curve.circle.single;
605 tsu_xform(tsu_xf.circled)(tsu_curve.kata.ru);
606 tsu_render_in_circle(tsu_xf.cbound);
607 endsuglyph;
608

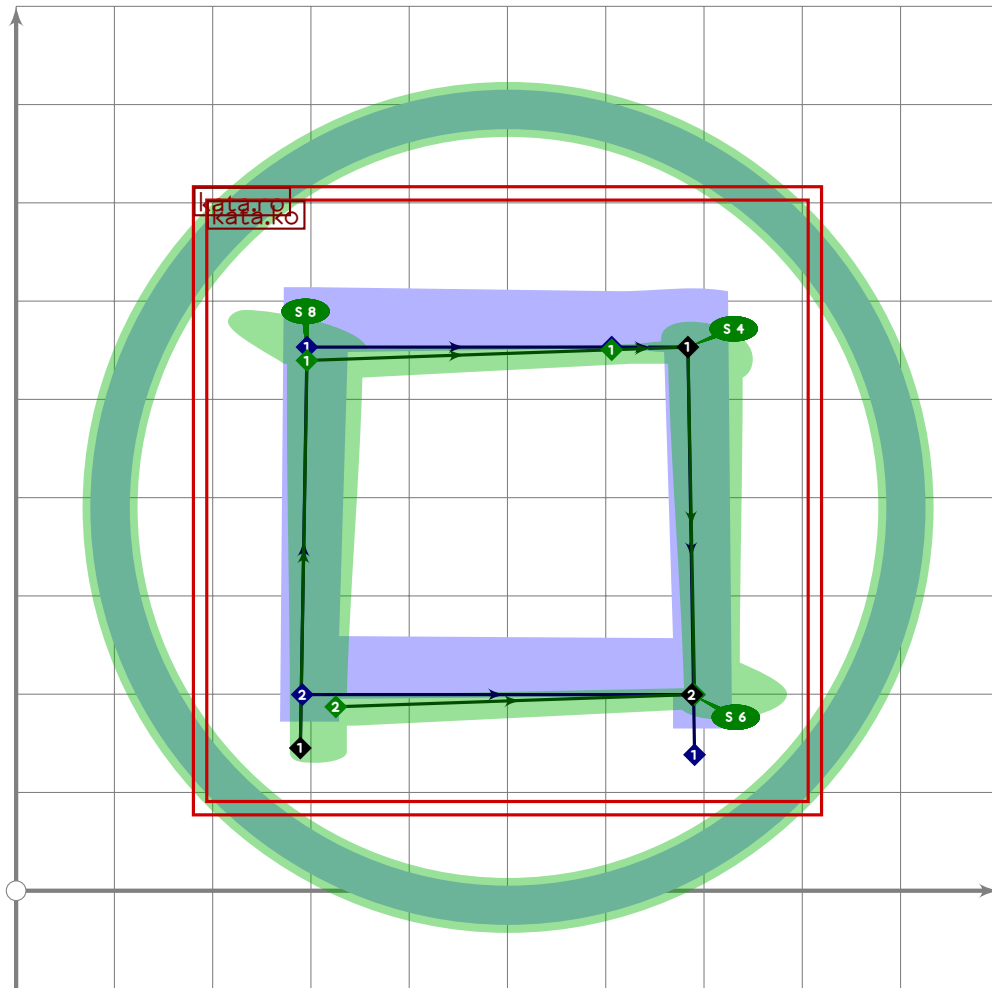
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```

609 % circled "re"
610 begint Suglyph("uni32F9";249);
611   tsu_curve.circle.single;
612   tsu_xform(tsu_xf.circled)(tsu_curve.kata.re);
613   tsu_render_in_circle(tsu_xf.cbound);
614 endsuglyph;
615

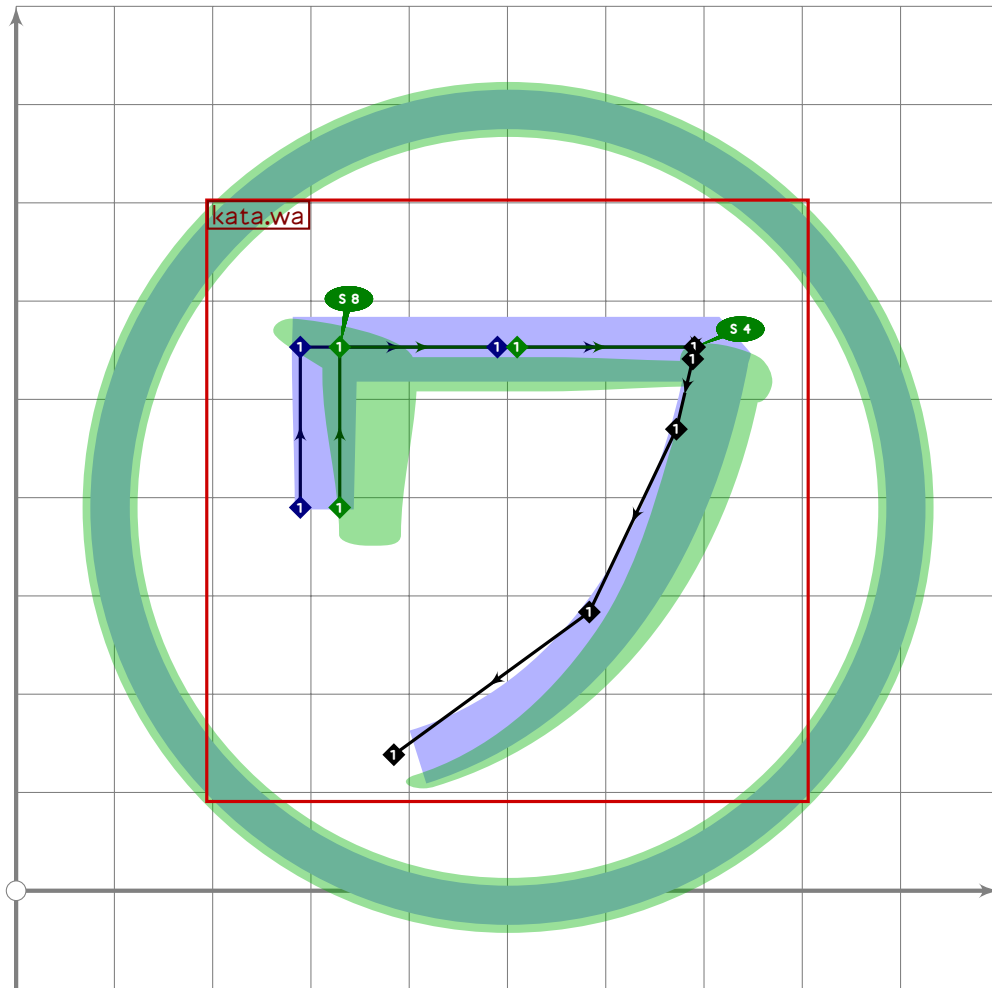
```



```

616 % circled "ro"
617 begint Suglyph("uni32FA";250);
618   tsu_curve.circle.single;
619   tsu_xform(tsu_xf.circled)(tsu_curve.kata.ro);
620   tsu_render_in_circle(tsu_xf.cbound);
621 endsuglyph;
622

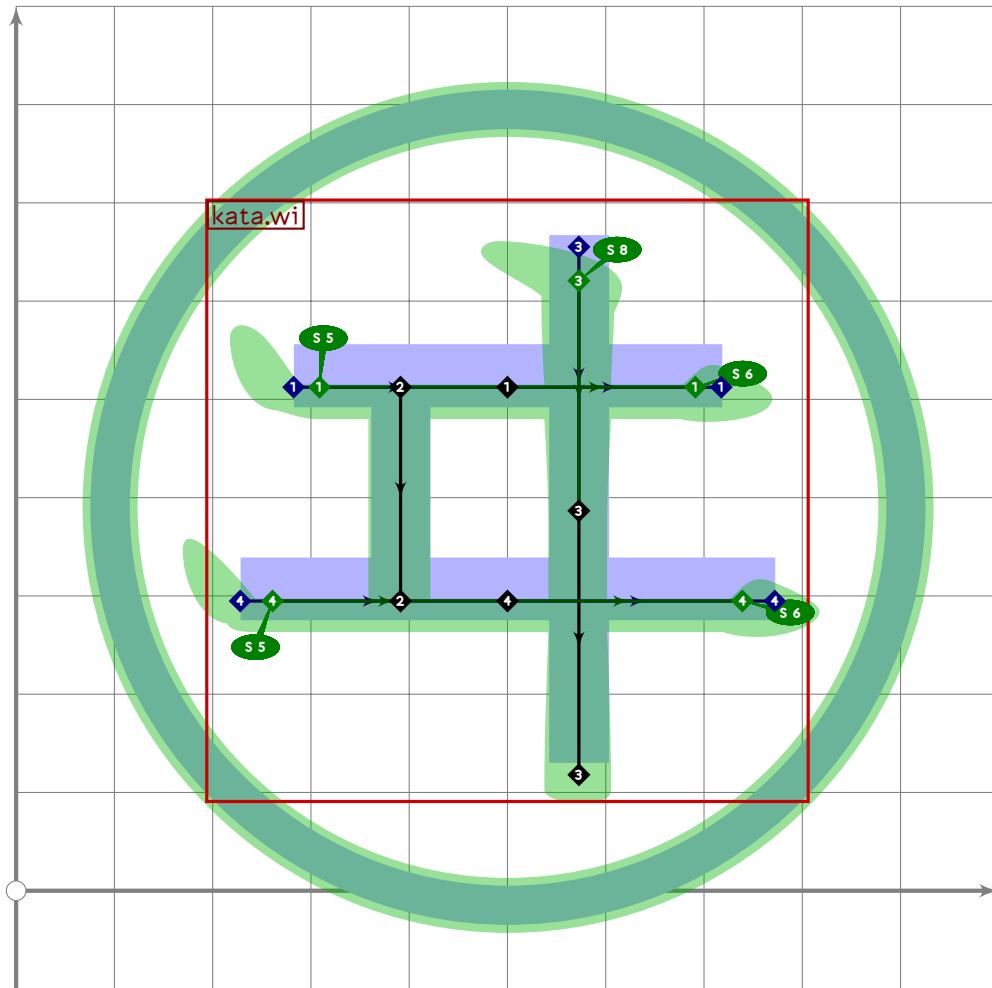
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```

623 % circled "wa"
624 begint Suglyph("uni32FB",251);
625   tsu_curve.circle.single;
626   tsu_xform(tsu_xf.circled)(tsu_curve.kata.wa);
627   tsu_render_in_circle(tsu_xf.cbound);
628 endsuglyph;
629

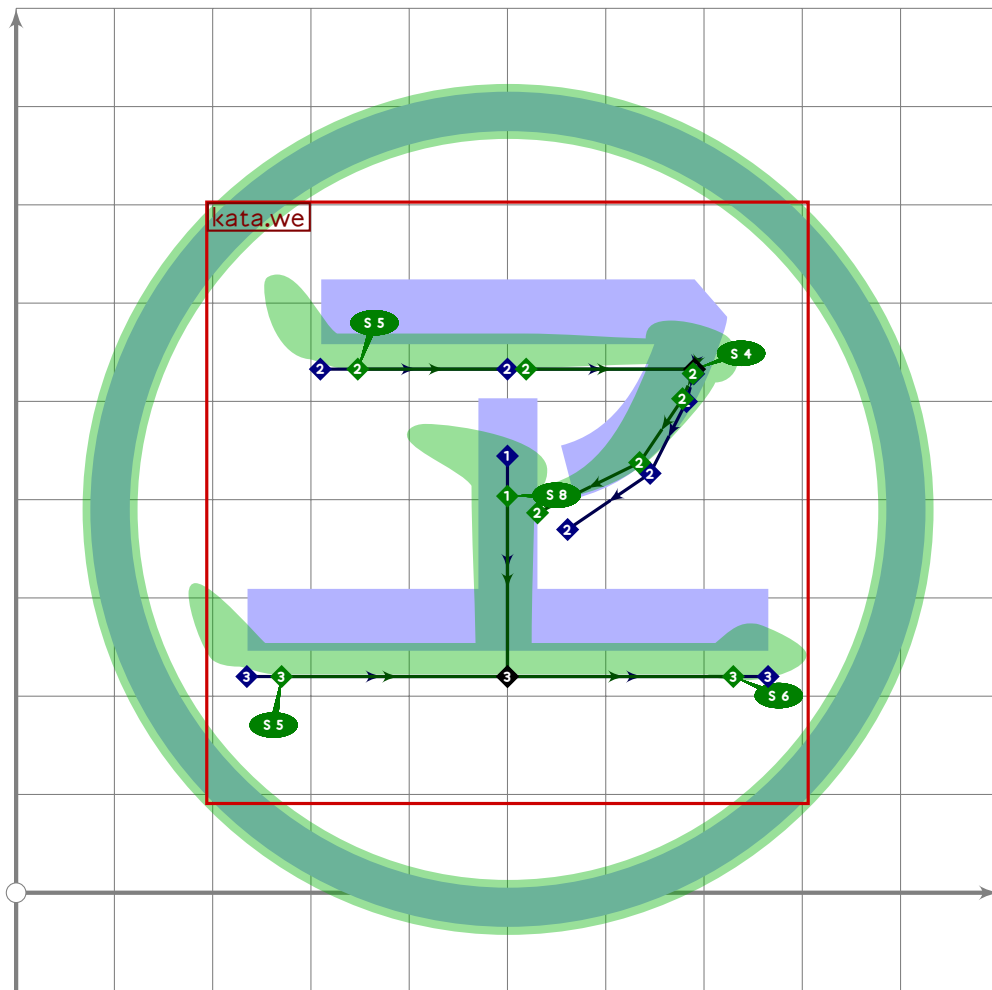
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```

630 % circled "wi"
631 begint Suglyph("uni32FC",252);
632 tsu_curve.circle.single;
633 tsu_xform(tsu_xf.circled)(tsu_curve.kata.wi);
634 tsu_render_in_circle(tsu_xf.cbound);
635 endsuglyph;
636

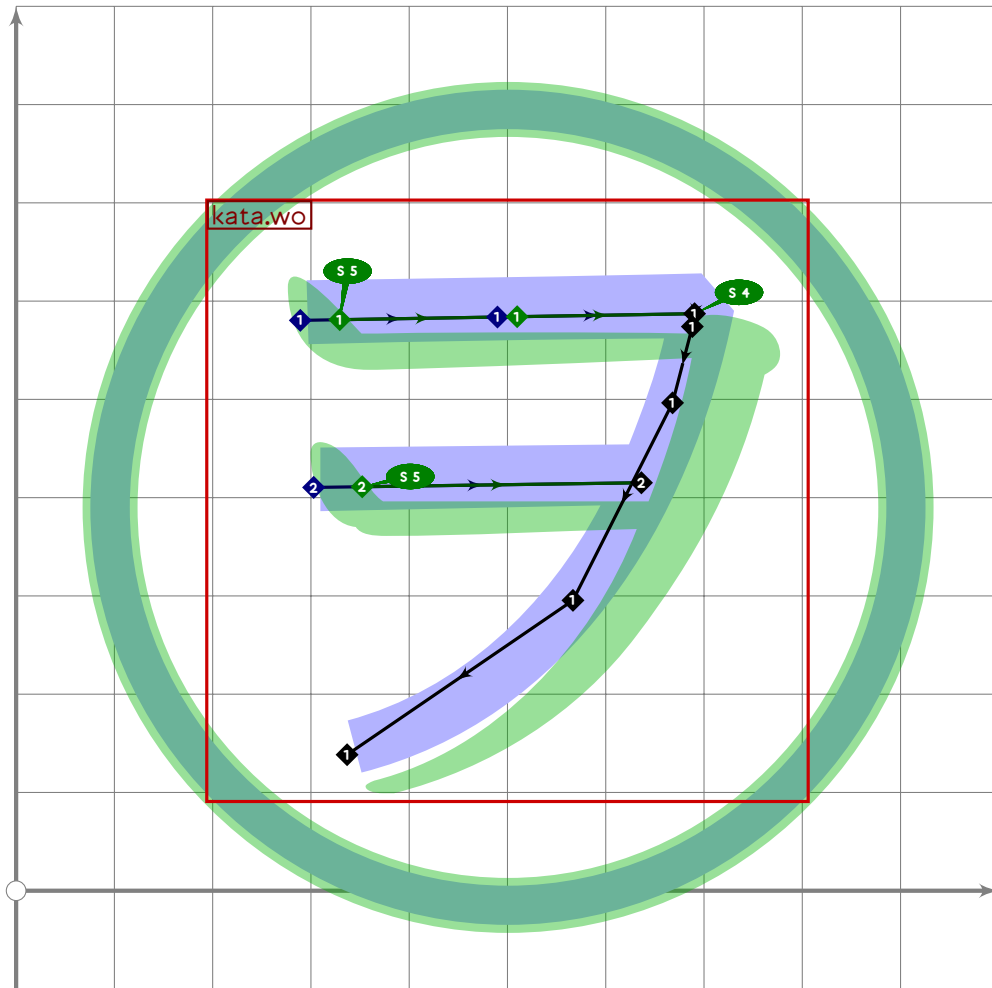
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```

637 % circled "we"
638 begint Suglyph("uni32FD";253);
639   tsu_curve.circle.single;
640   tsu_xform(tsu_xf.circled)(tsu_curve.kata.we);
641   tsu_render_in_circle(tsu_xf.cbound);
642 endsuglyph;
643

```



```

644 % circled "wo"
645 begint Suglyph("uni32FE",254);
646 tsu_curve.circle.single;
647 tsu_xform(tsu_xf.circled)(tsu_curve.kata.wo);
648 tsu_render_in_circle(tsu_xf.cbound);
649 endsuglyph;
650
651 _____
652
653 endfont;
654
655 _____

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tsuku-4d.mp

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1 %
2 % Unicode page 4D (I Ching/Yijing) for Tsukurimashou
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31 

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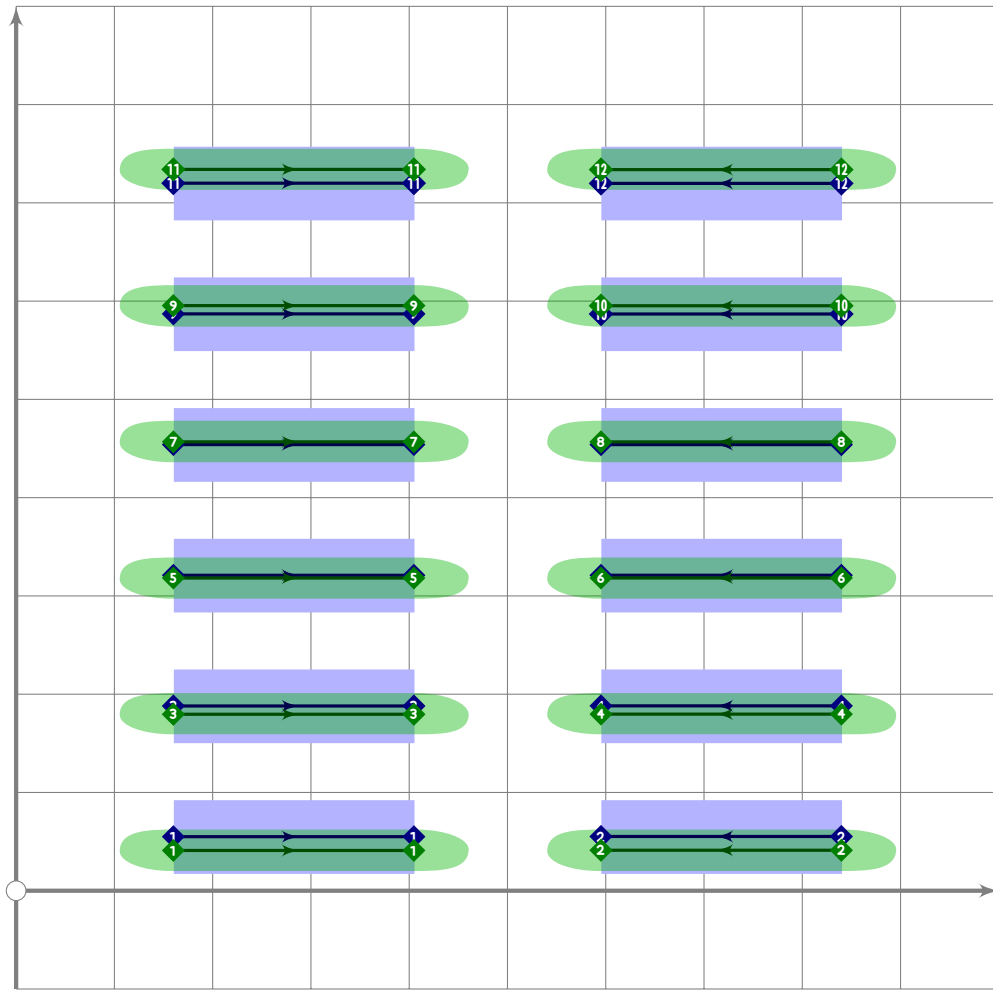

32
33 beginfont
34
35 input latin-intro.mp;
36
37 % AUTODEPS
38 input iching.mp;
39
40 

---

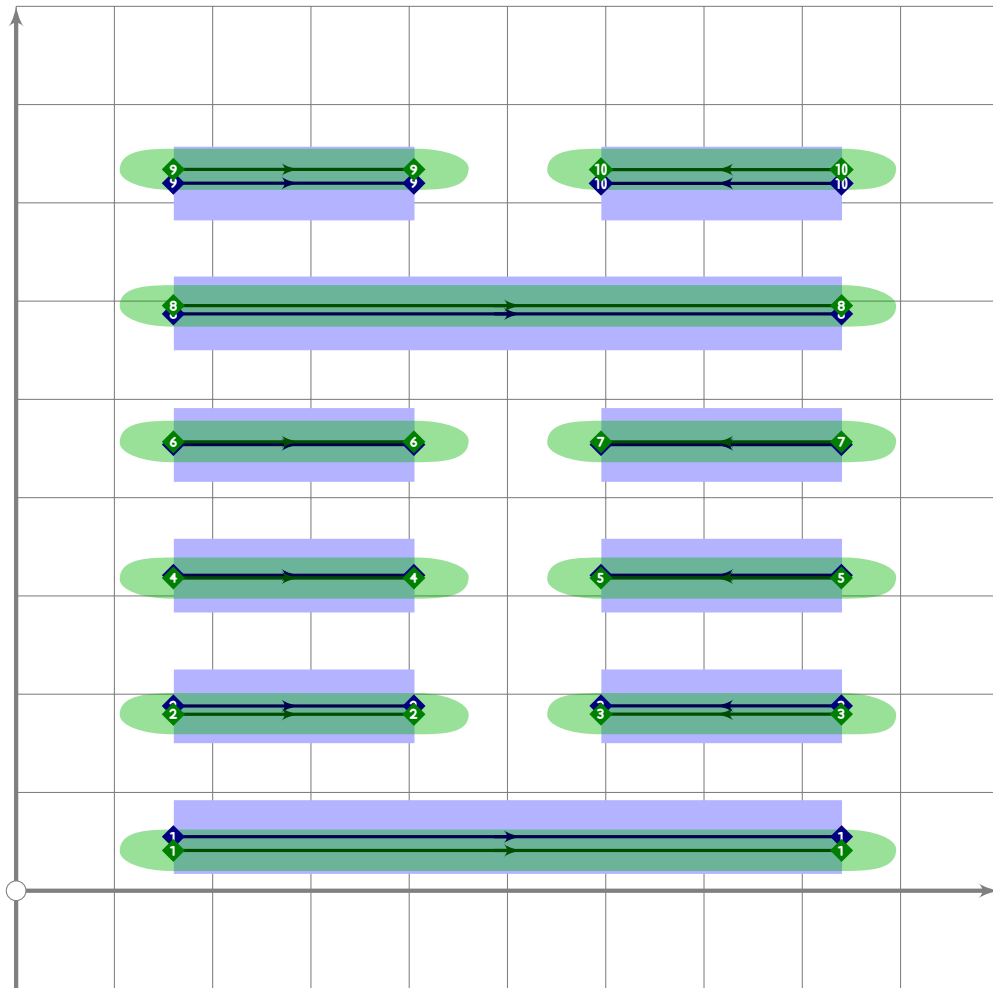

41
```

I Ching

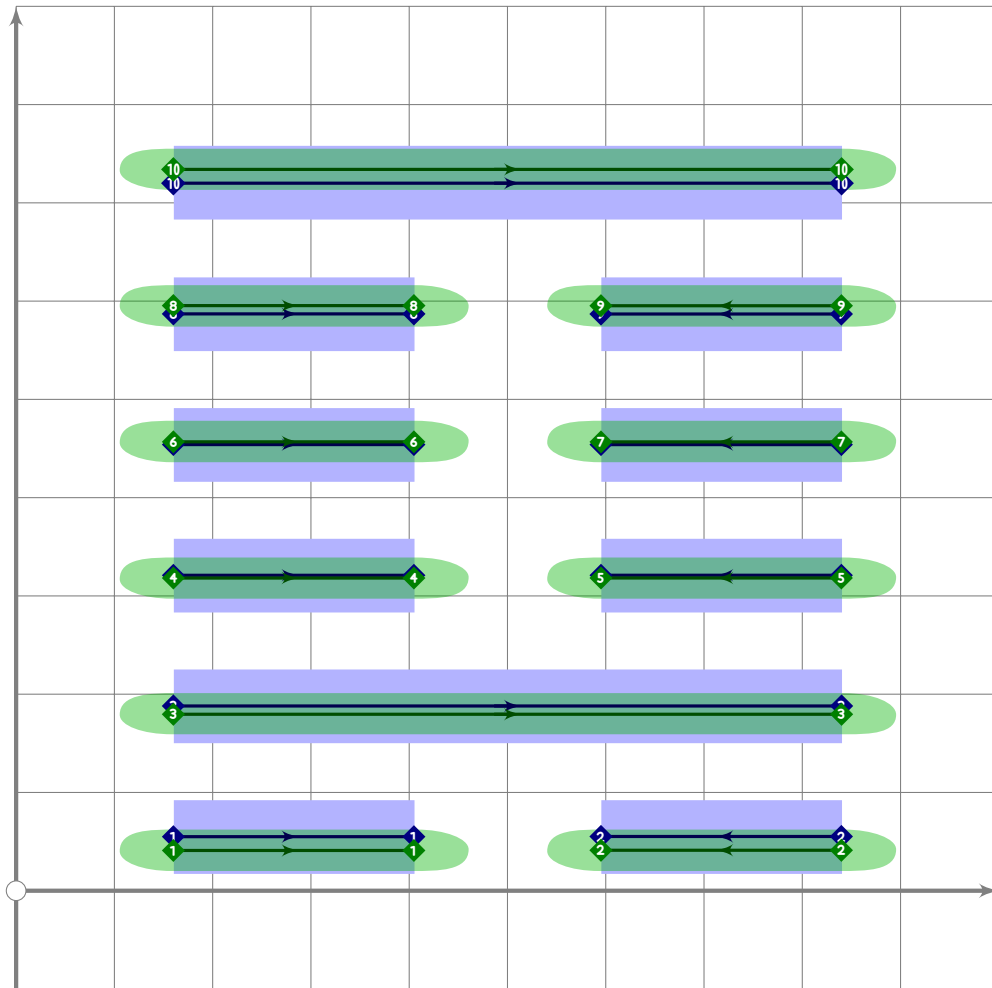
```
42 % I CHING
43
44 vardef make_hexagram(expr i,la,lb,lc,ld,le,lf) =
45   string hexname;
46   hexname:=if i<10: "iching0" else: "iching" fi & decimal i;
47   begintsuglyph(hexname,i*191);
48   tsu_curve.iching.line(1,6,la);
49   tsu_curve.iching.line(2,6,lb);
50   tsu_curve.iching.line(3,6,lc);
51   tsu_curve.iching.line(4,6,ld);
52   tsu_curve.iching.line(5,6,le);
53   tsu_curve.iching.line(6,6,lf);
54   tsu_render;
55   endtsuglyph;
56 enddef;
```

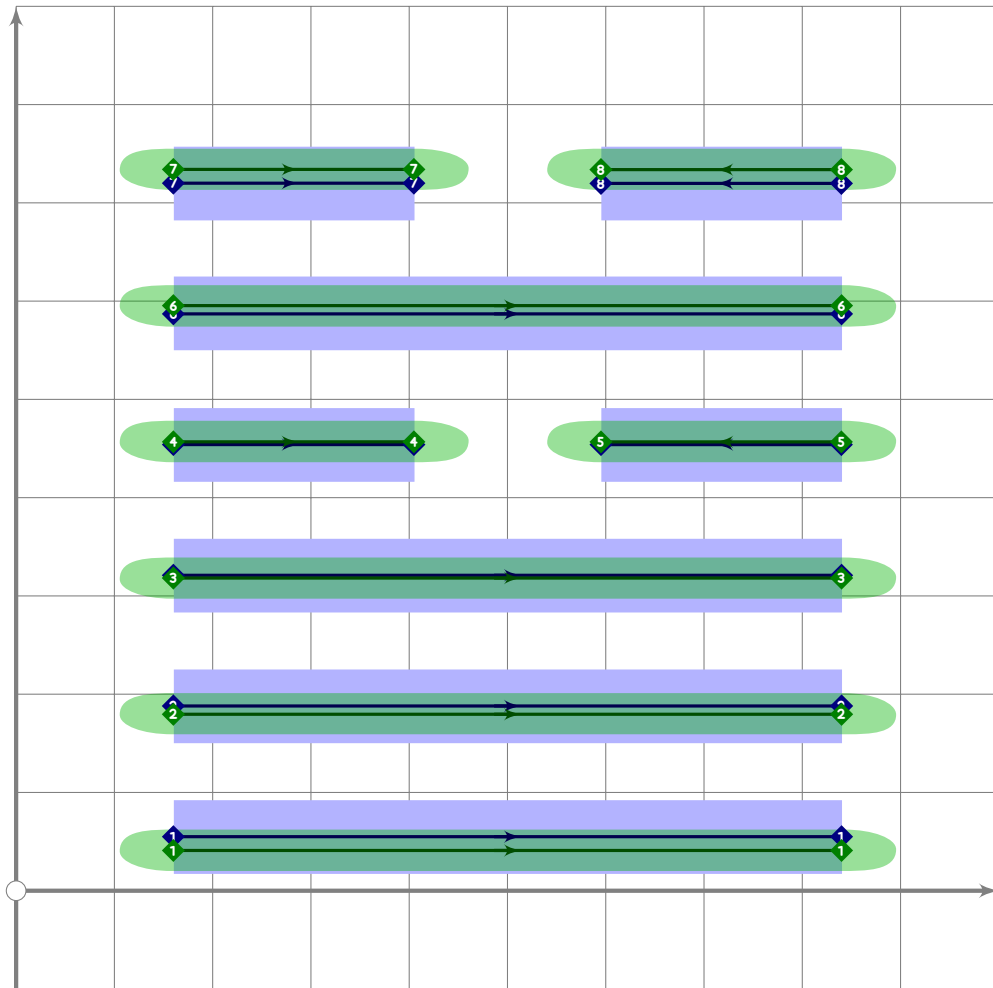
59 `make_hexagram(2, 0,0,0,0,0,0);`



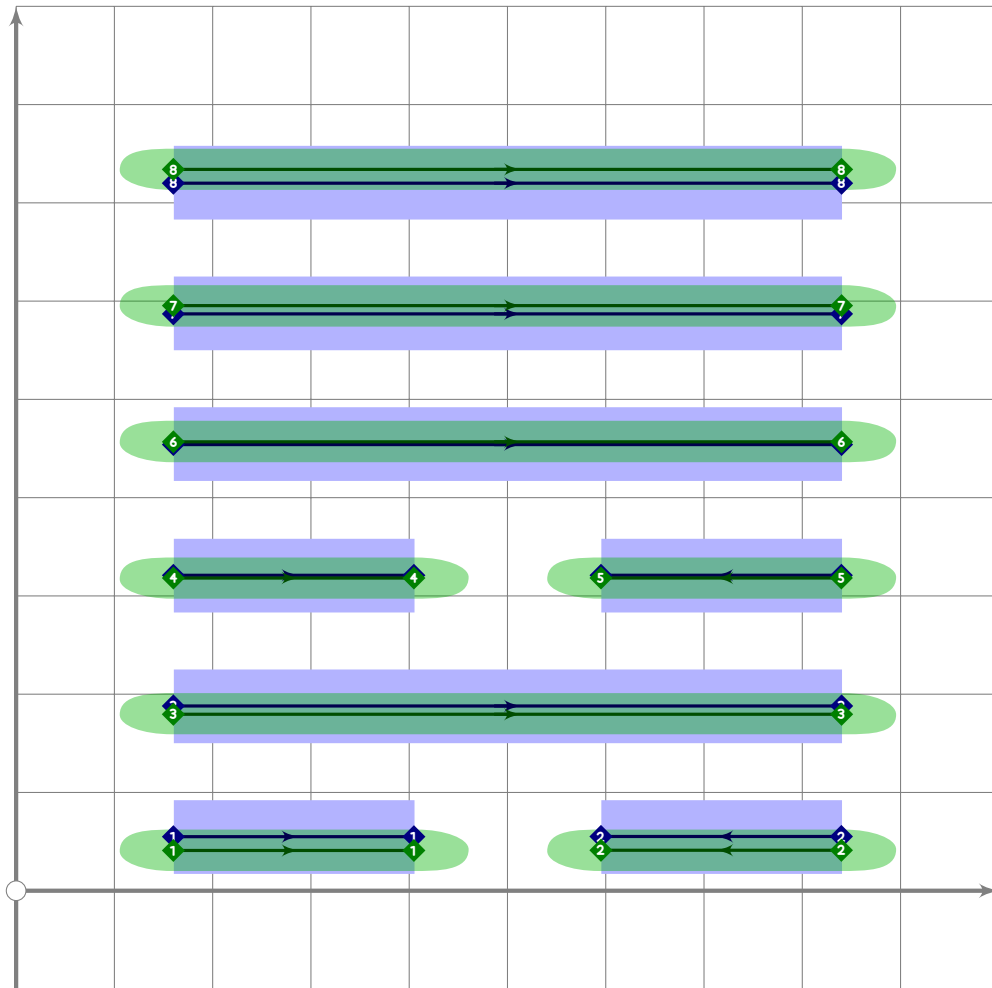
60 `make_hexagram(3, 1,0,0,0,1,0);`



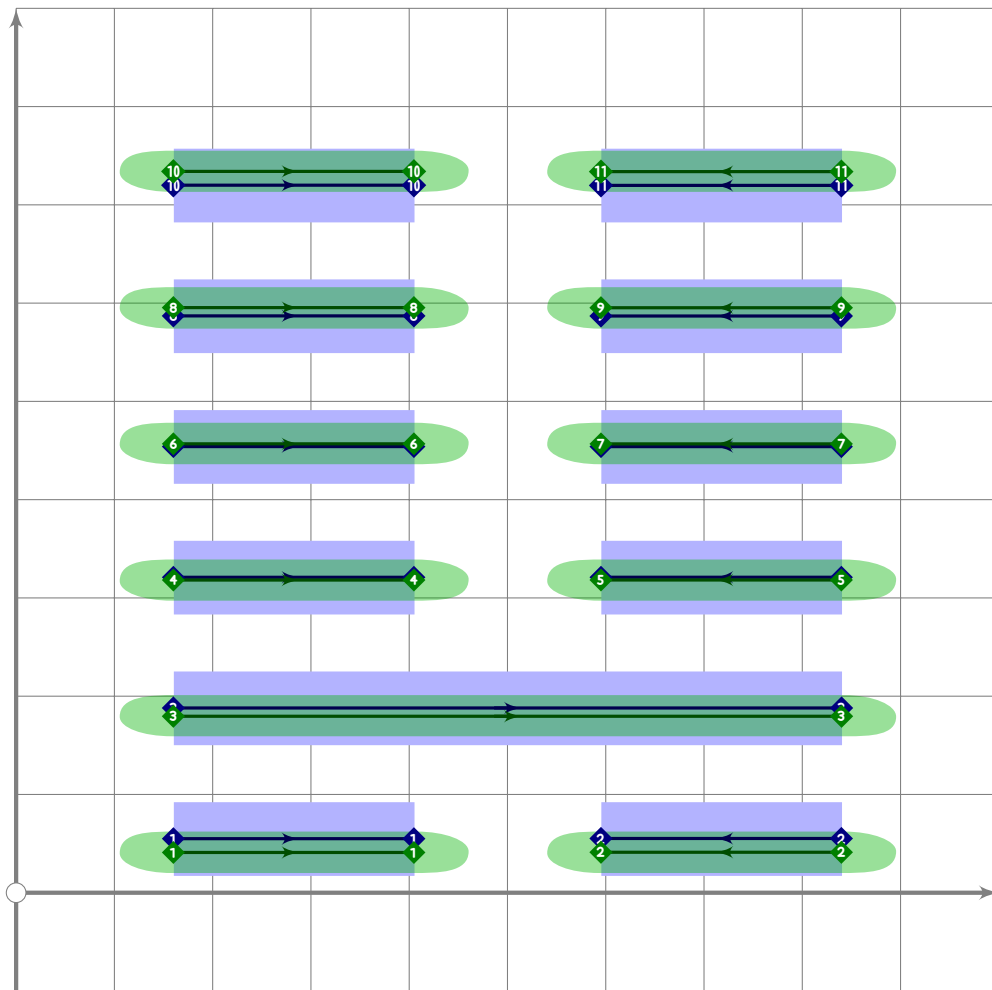
61 `make_hexagram(4, 0,1,0,0,0,1);`



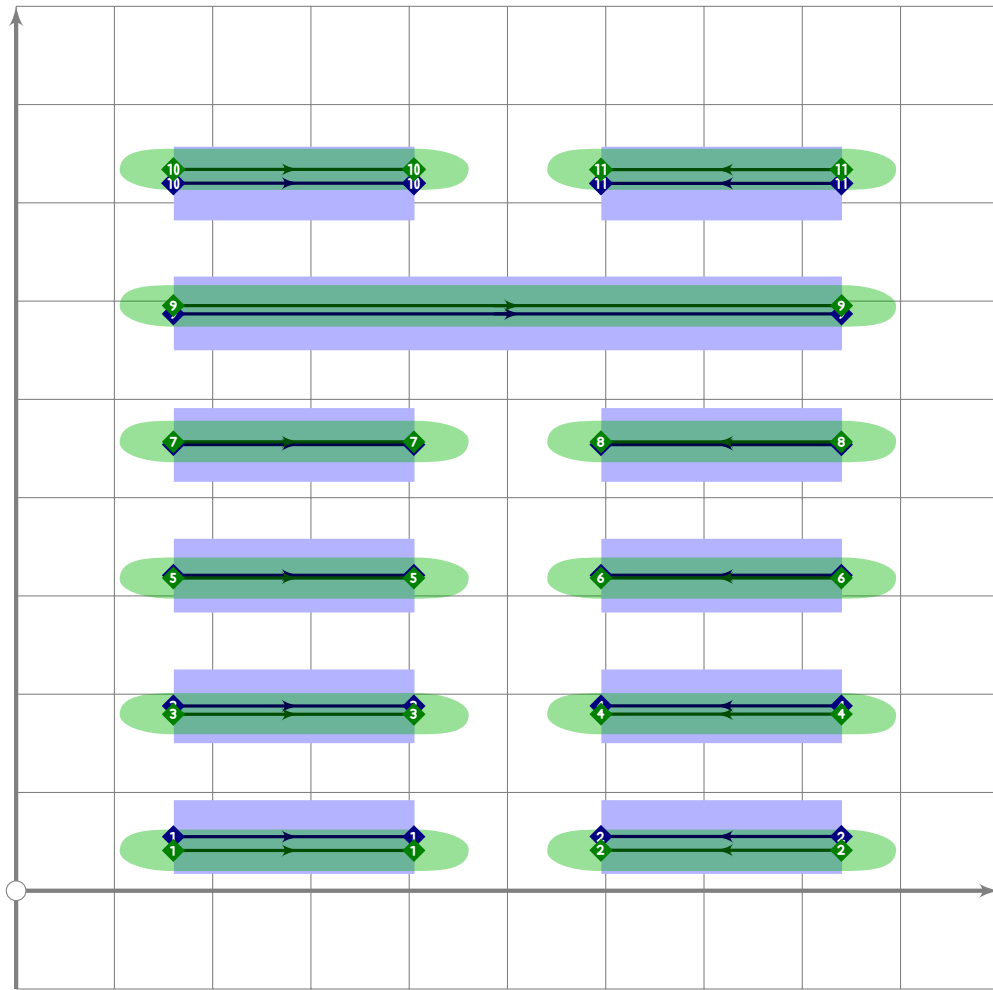
62 `make_hexagram(5, 1,1,0,1,0);`



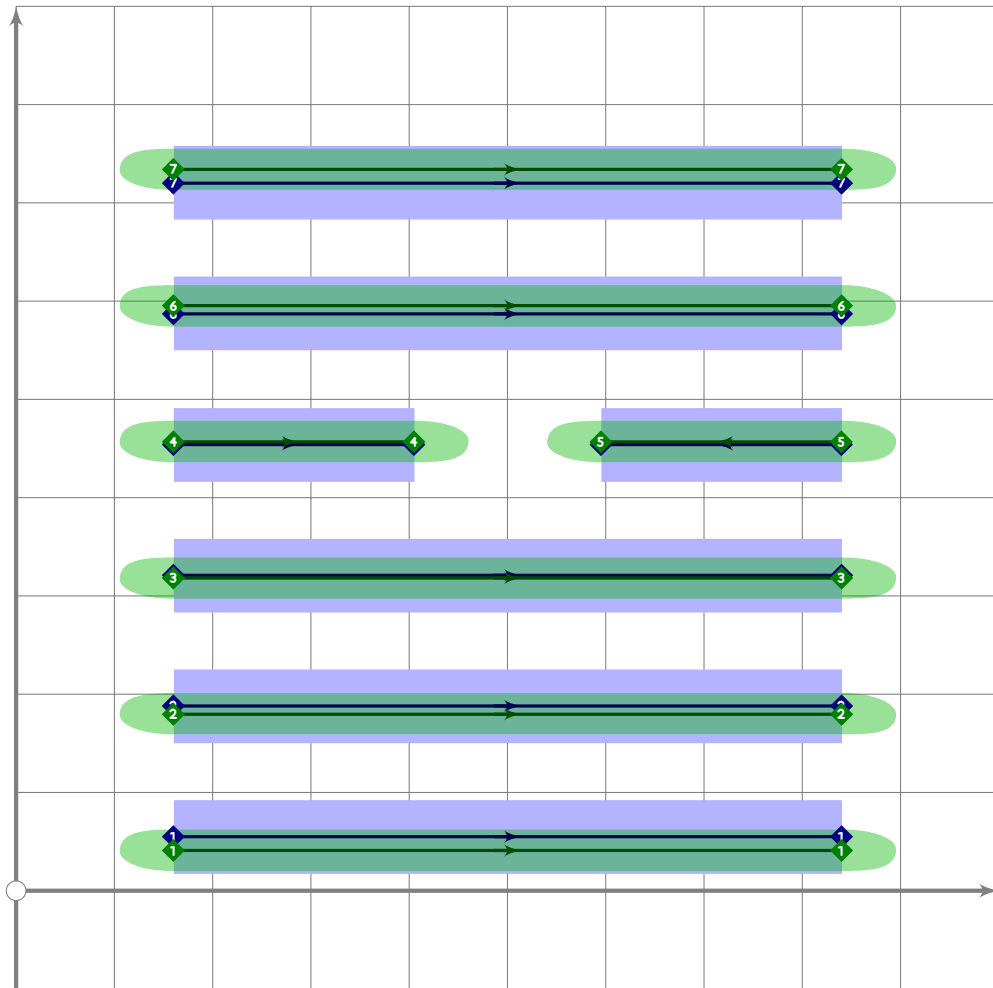
63 `make_hexagram(6, 0,1,0,1,1,1);`



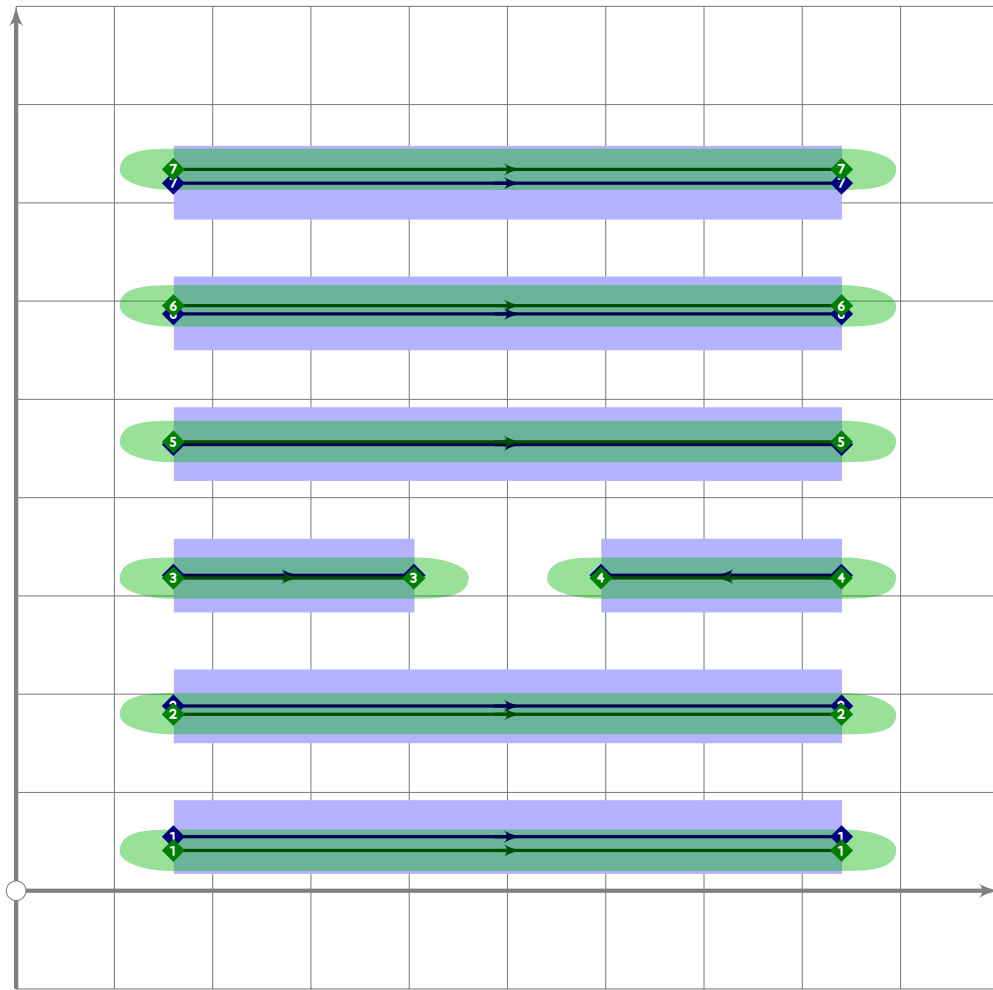
64 `make_hexagram(7, 0,1,0,0,0,0);`



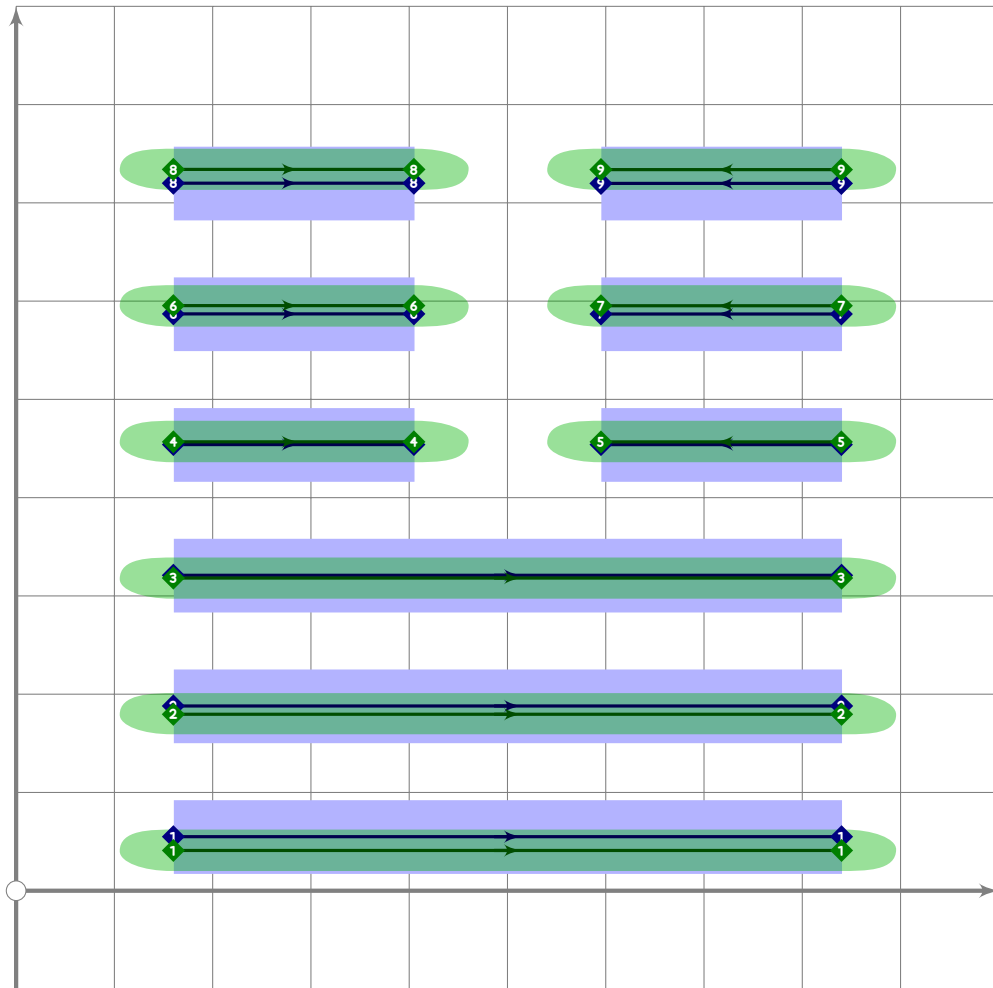
65 `make_hexagram(8, 0,0,0,0,1,0);`



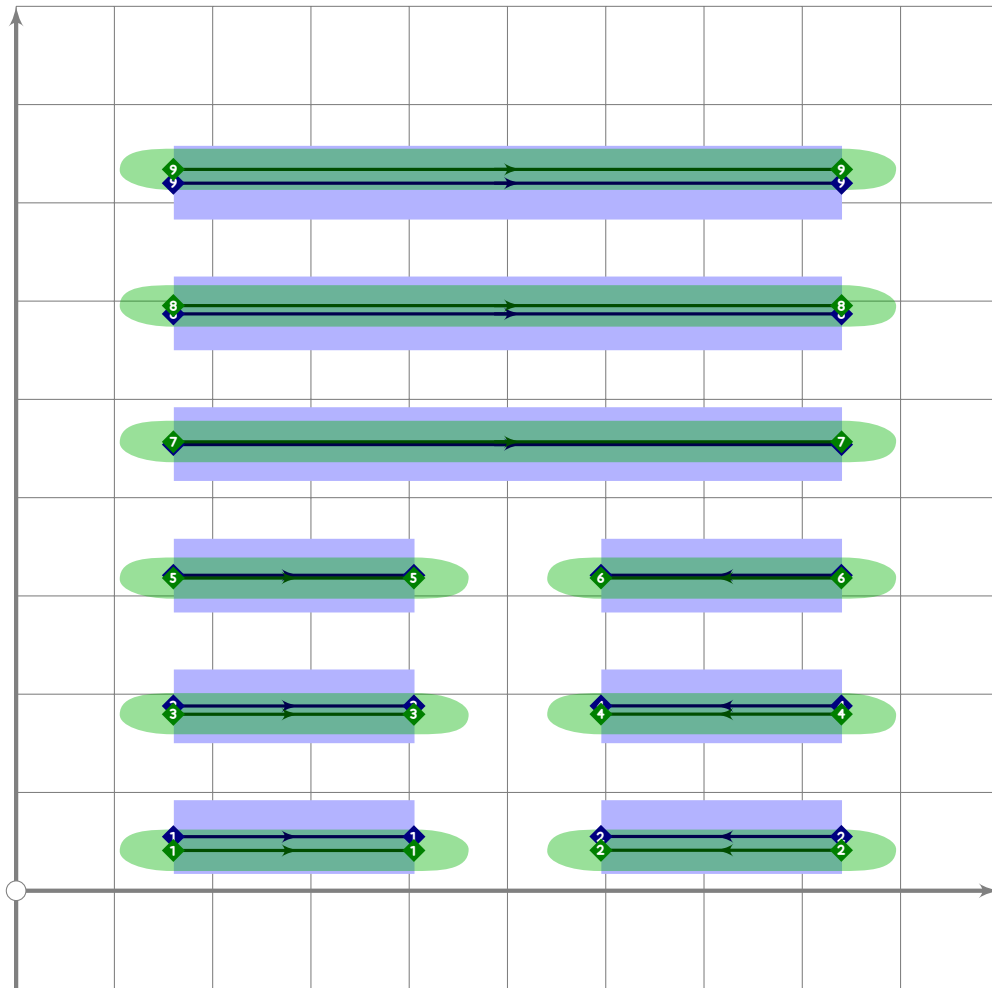
66 `make_hexagram(9, 1,1,1,0,1,1);`



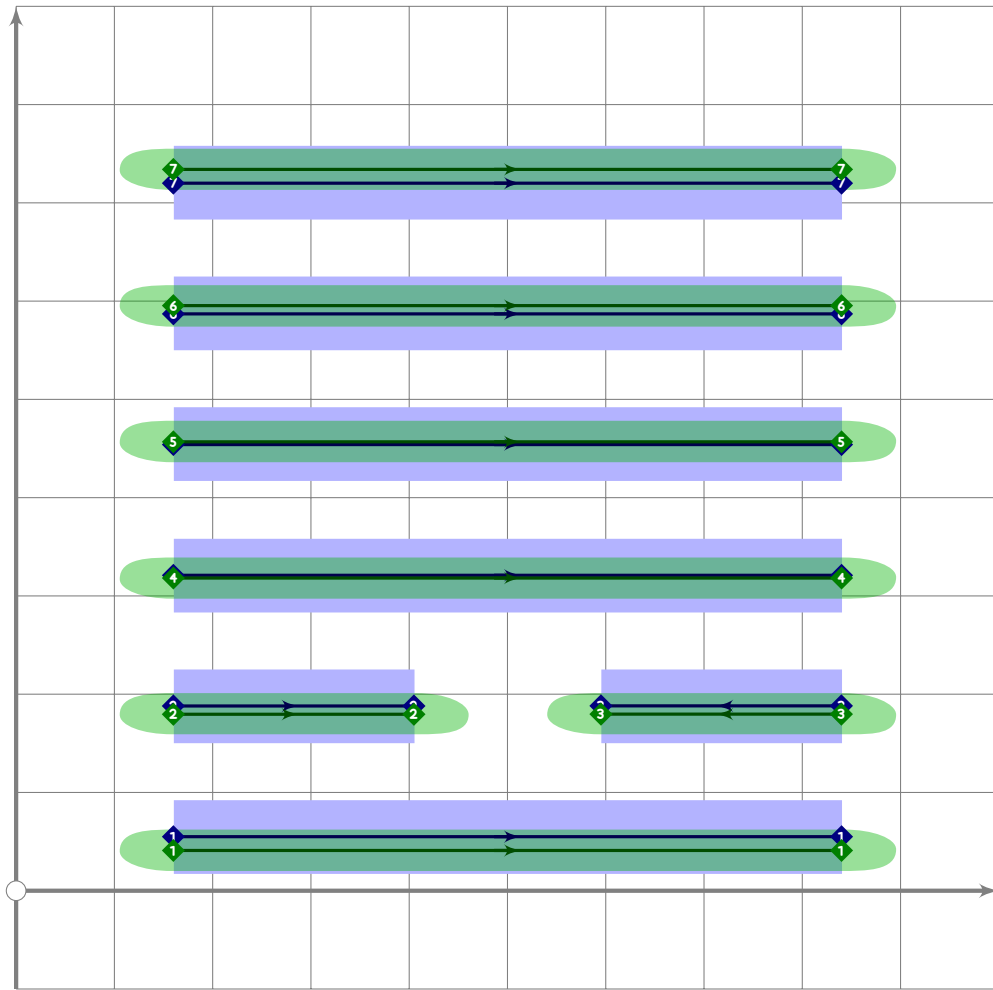
67 `make_hexagram(10,1,1,0,1,1,1);`



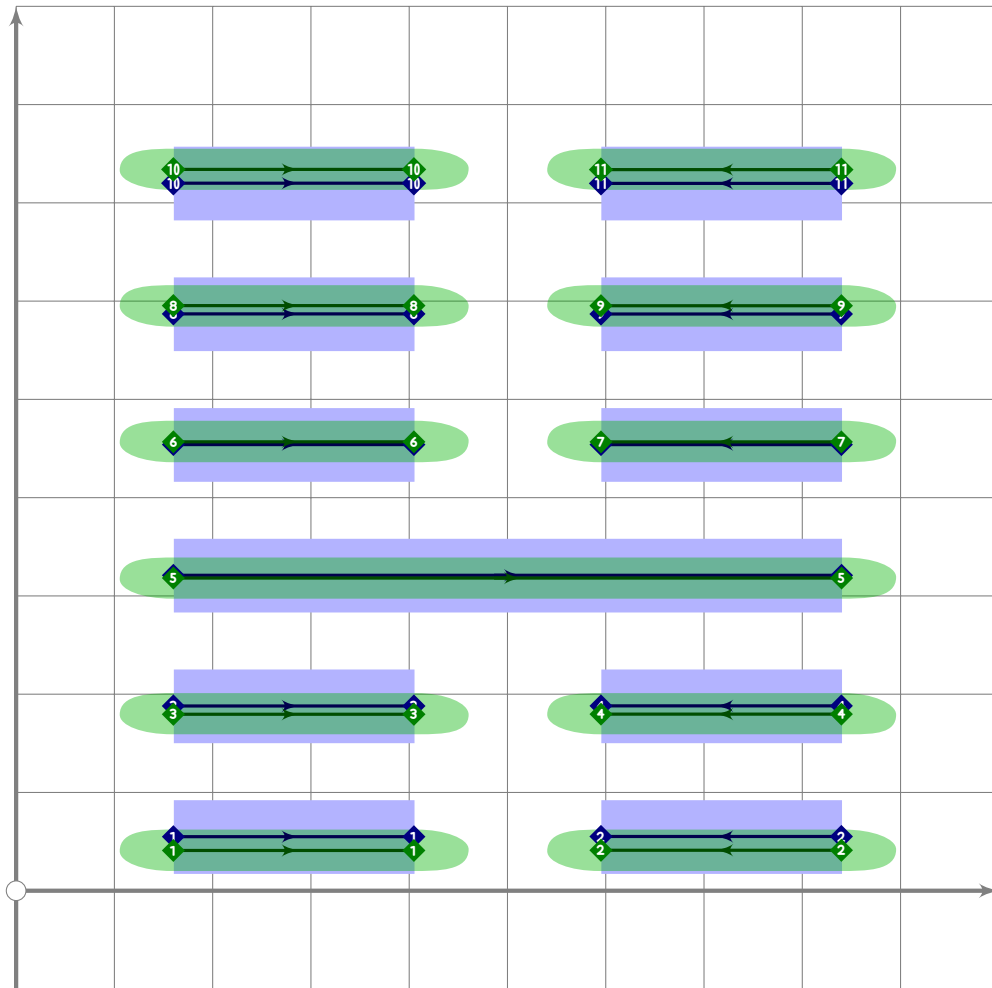
68 `make_hexagram(11,1,1,1,0,0,0);`



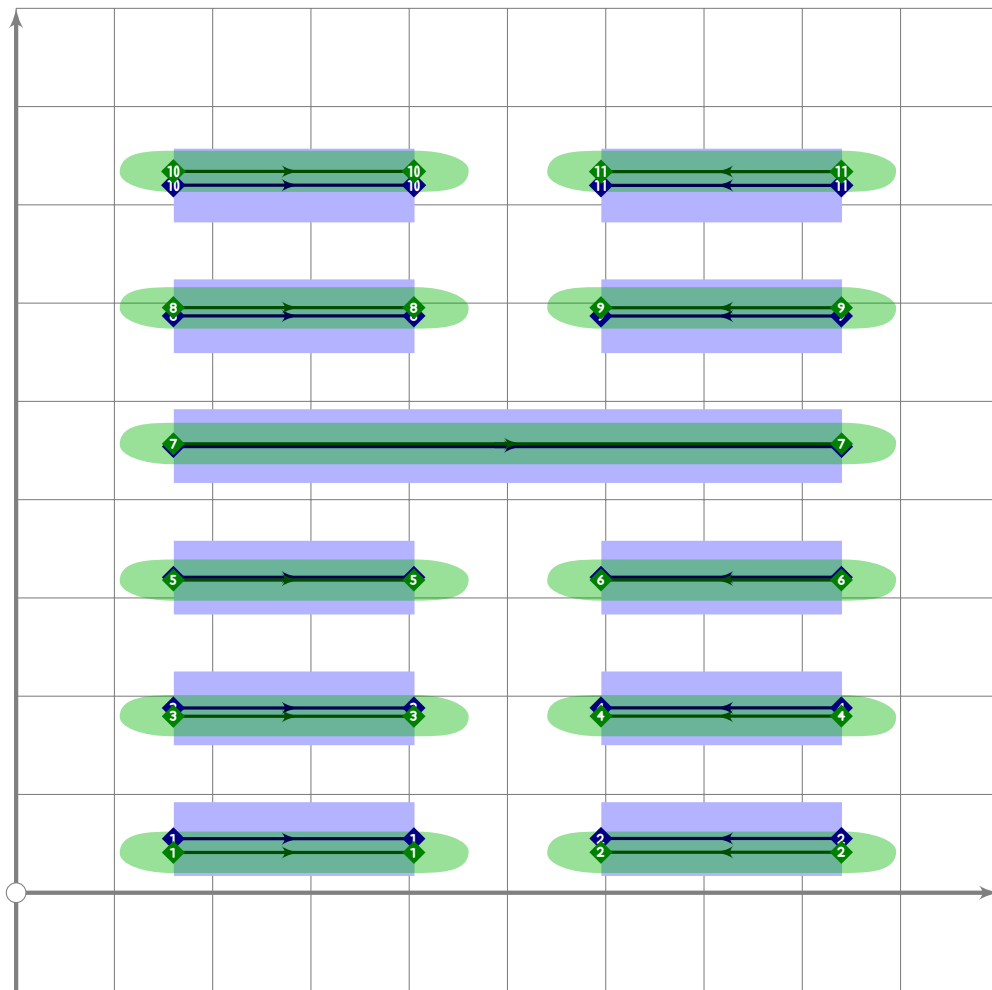
69 `make_hexagram(12,0,0,0,1,1);`



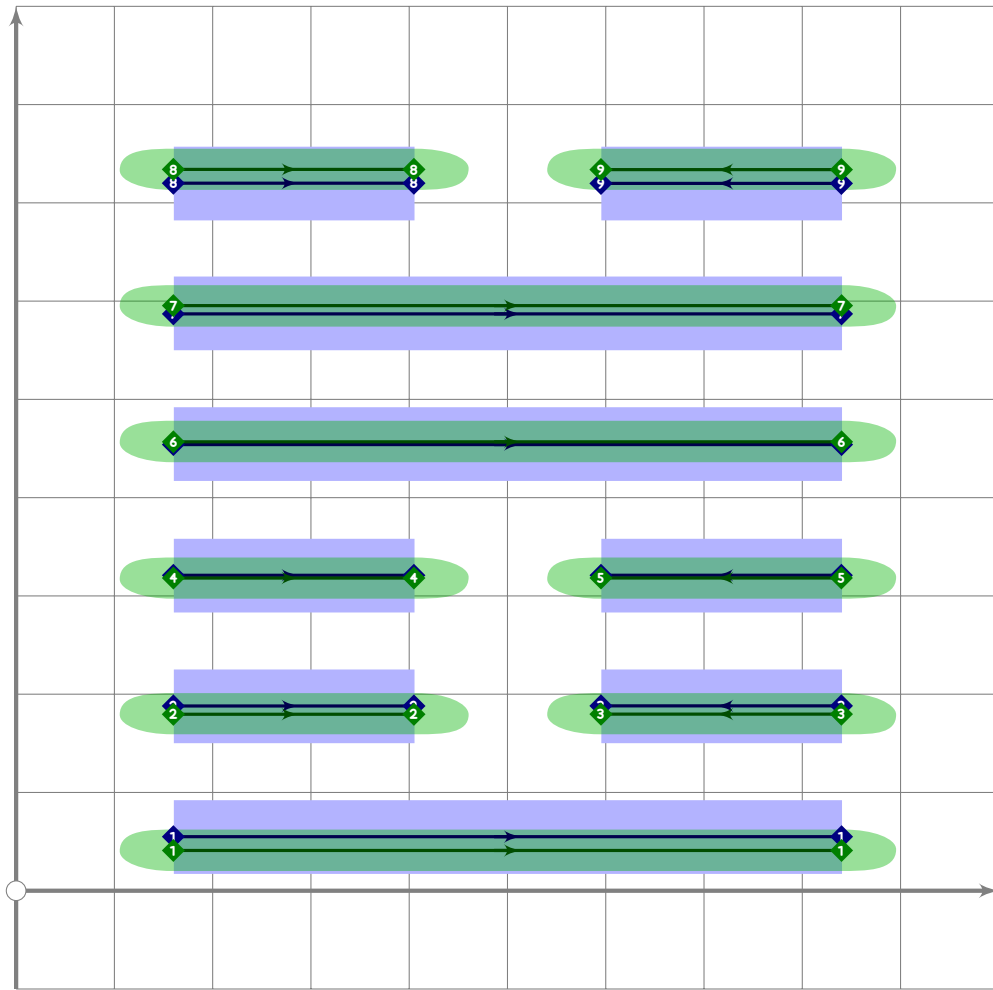
70 `make_hexagram(13,1,0,1,1,1);`



72 `make_hexagram(15,0,0,1,0,0,0);`

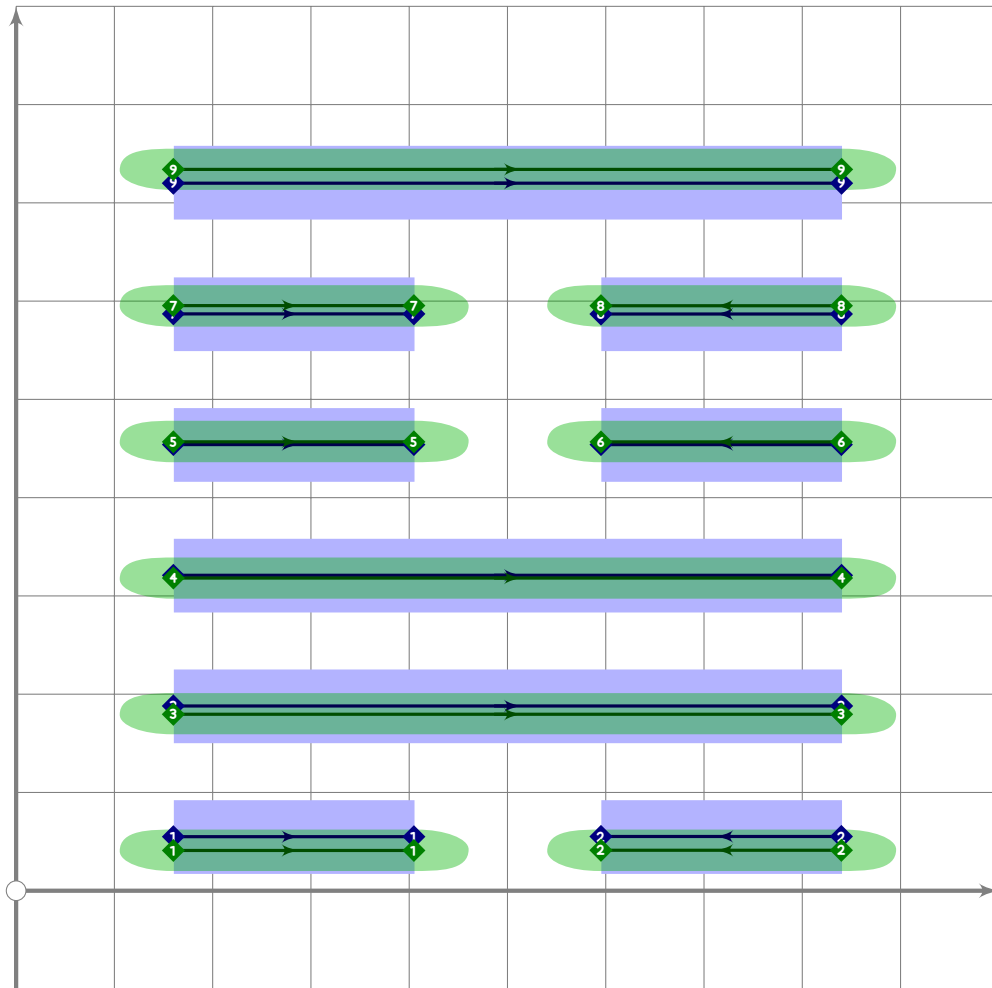


73 `make_hexagram(16,0,0,0,1,0,0);`

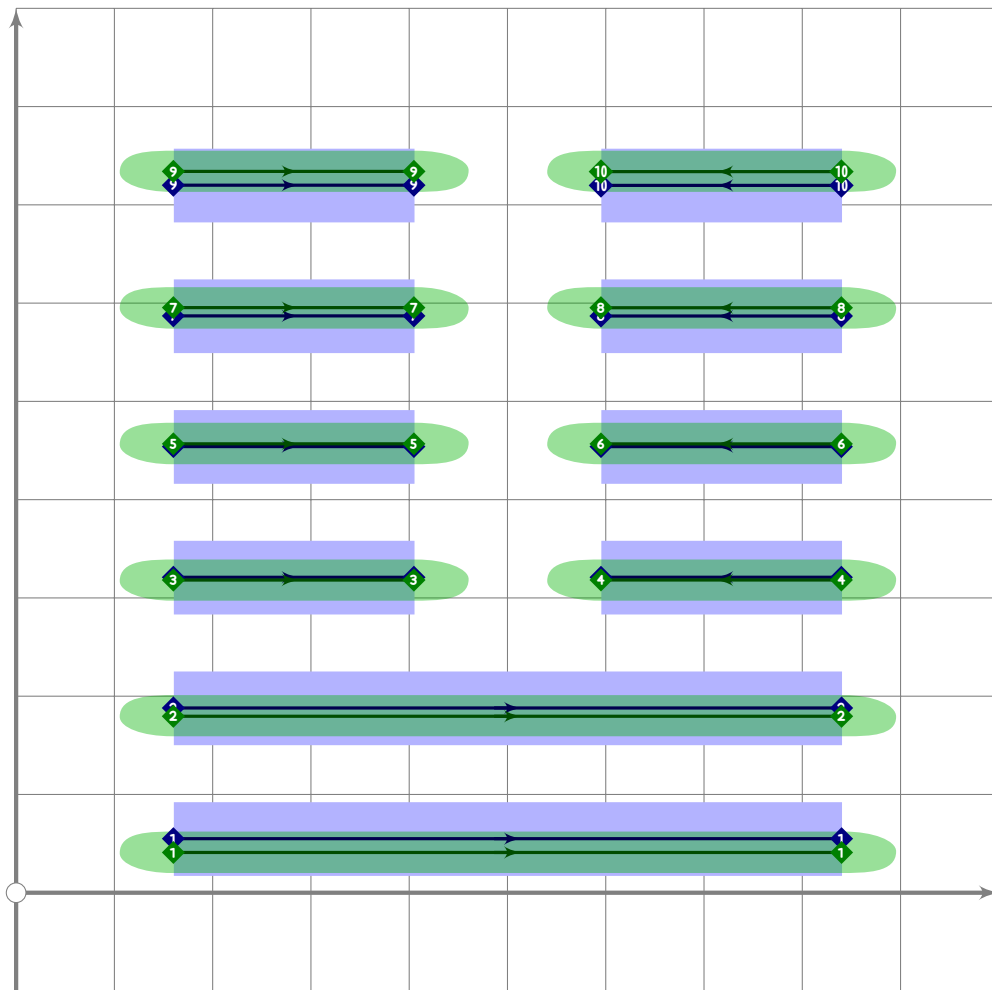


74

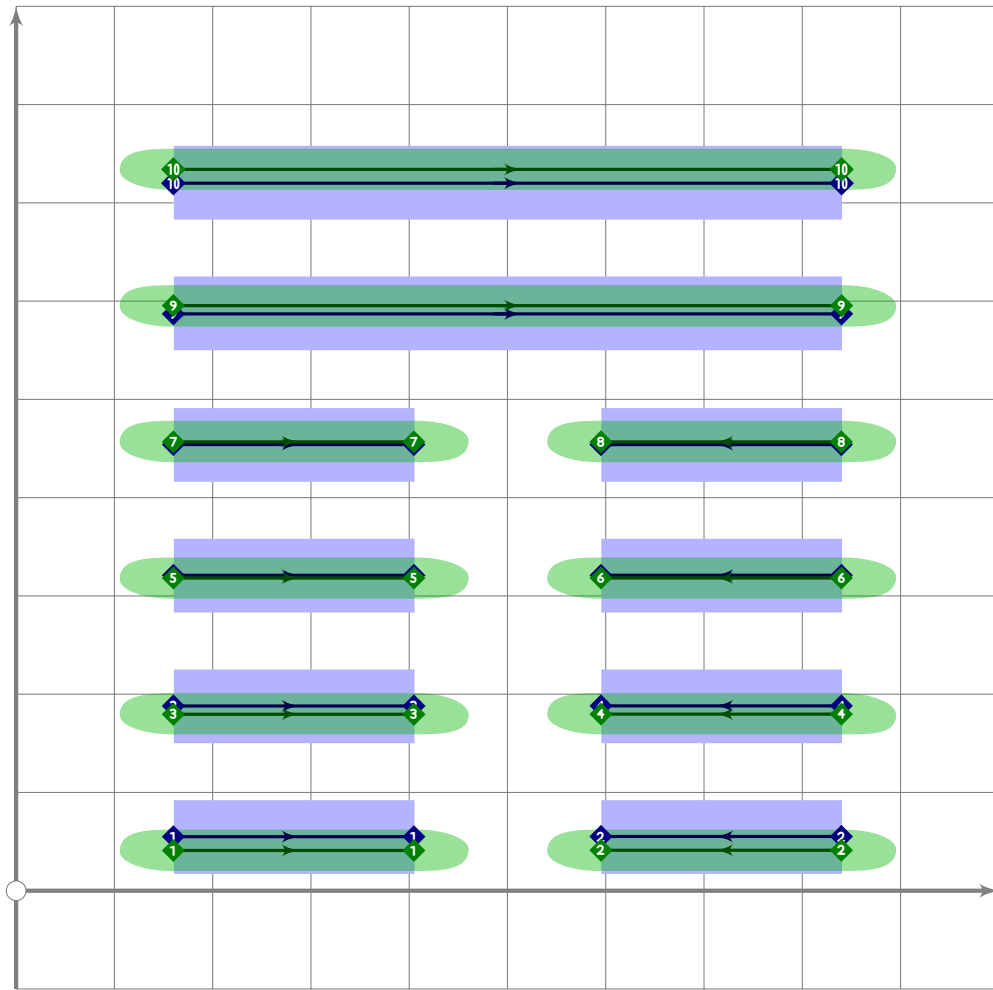
75 `make_hexagram(17,1,0,0,1,1,0);`



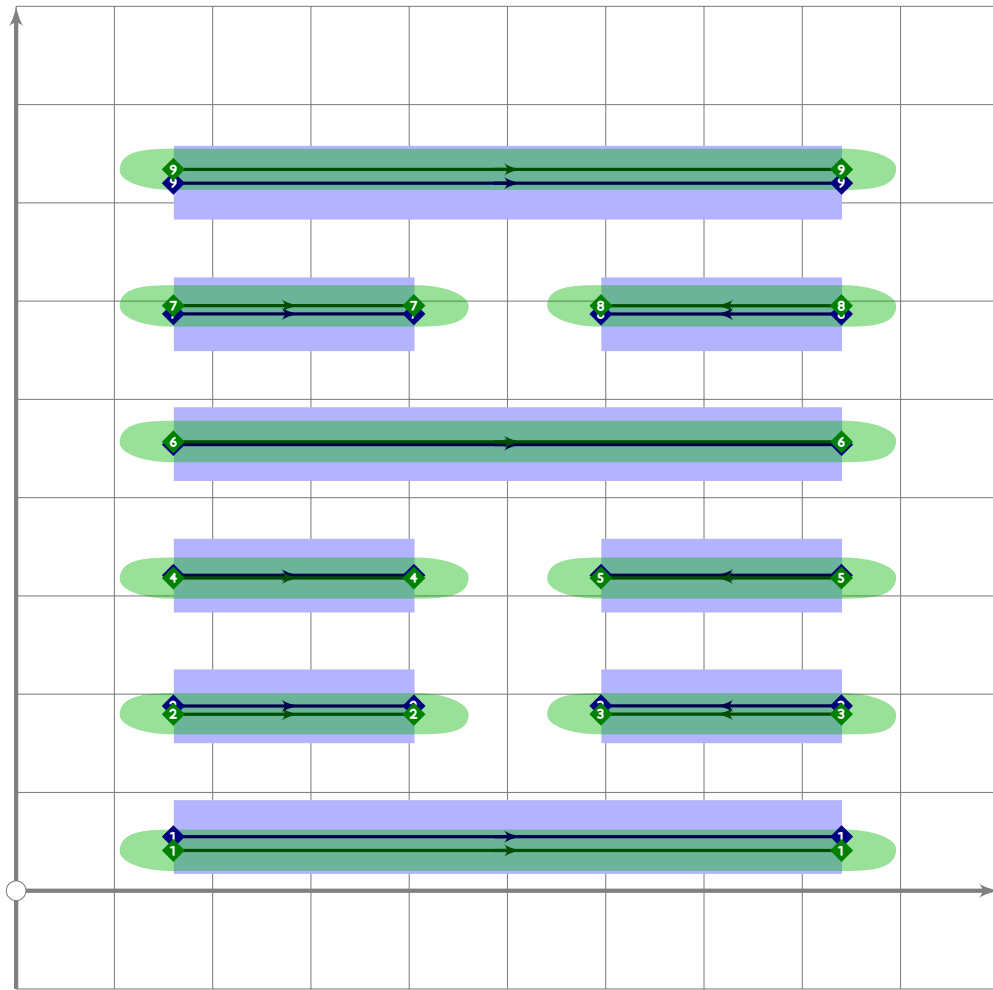
76 `make_hexagram(18,0,1,1,0,0,1);`



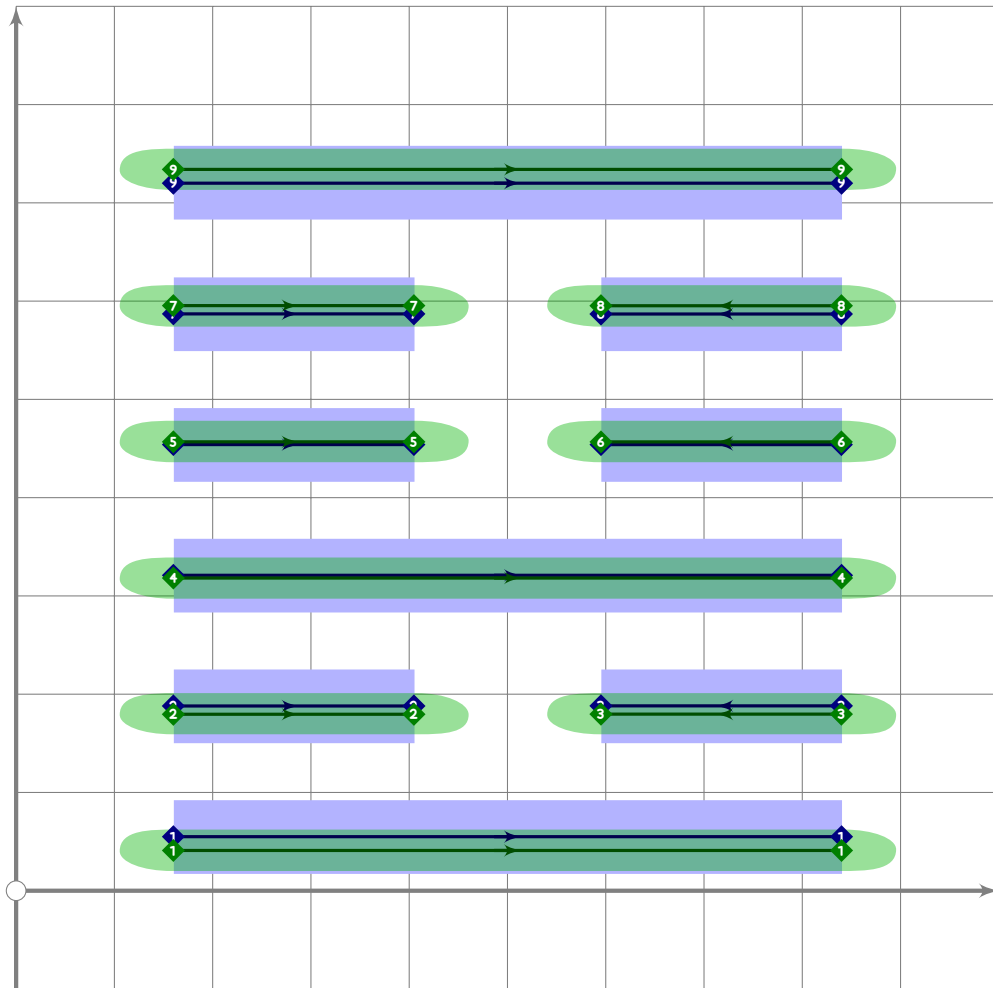
77 `make_hexagram(19,1,1,0,0,0,0);`



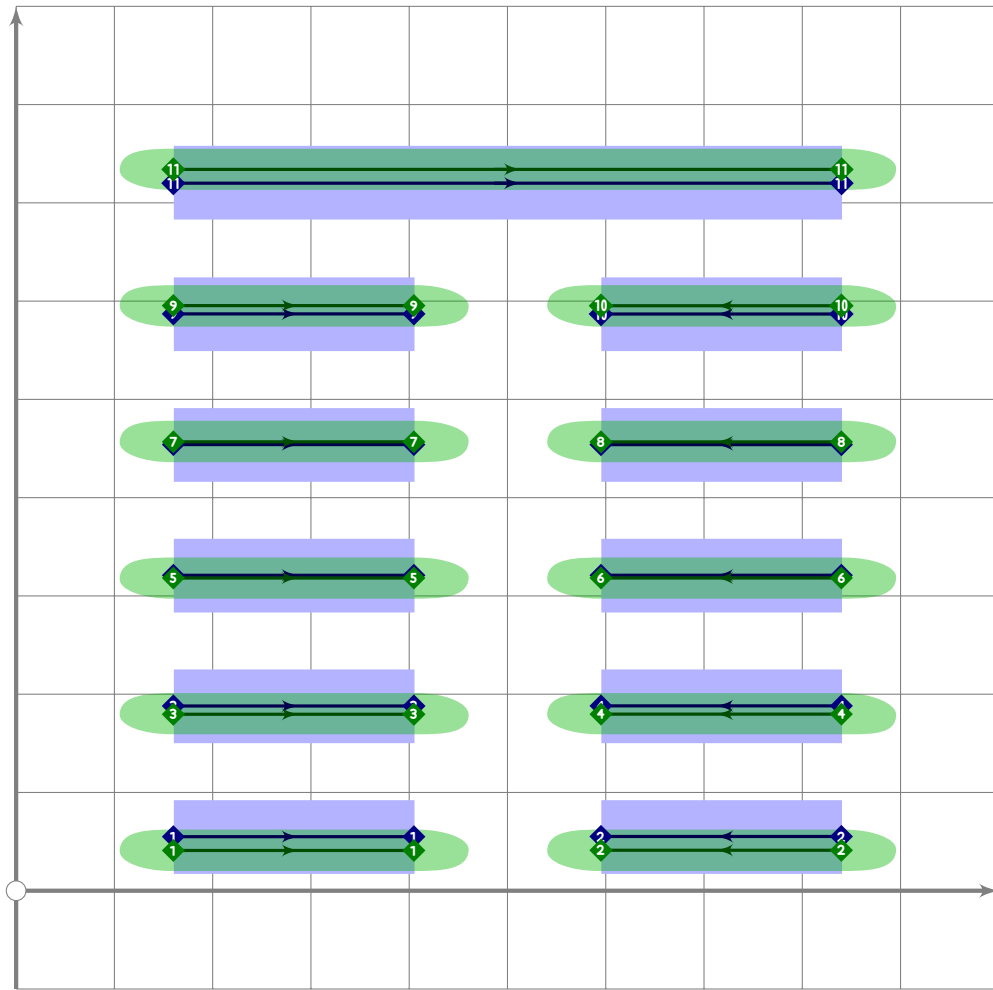
78 `make_hexagram(20,0,0,0,0,1,1);`



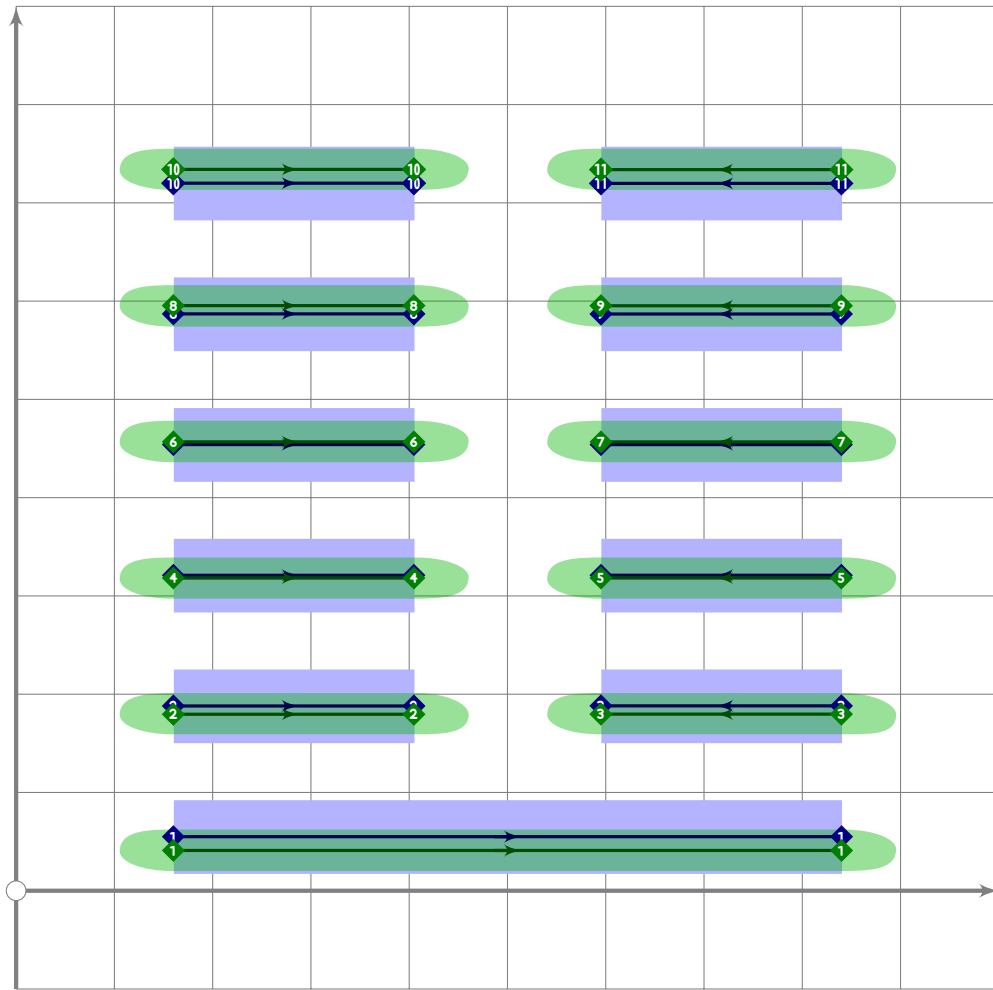
79 `make_hexagram(2,1,1,0,0,1,0,1);`



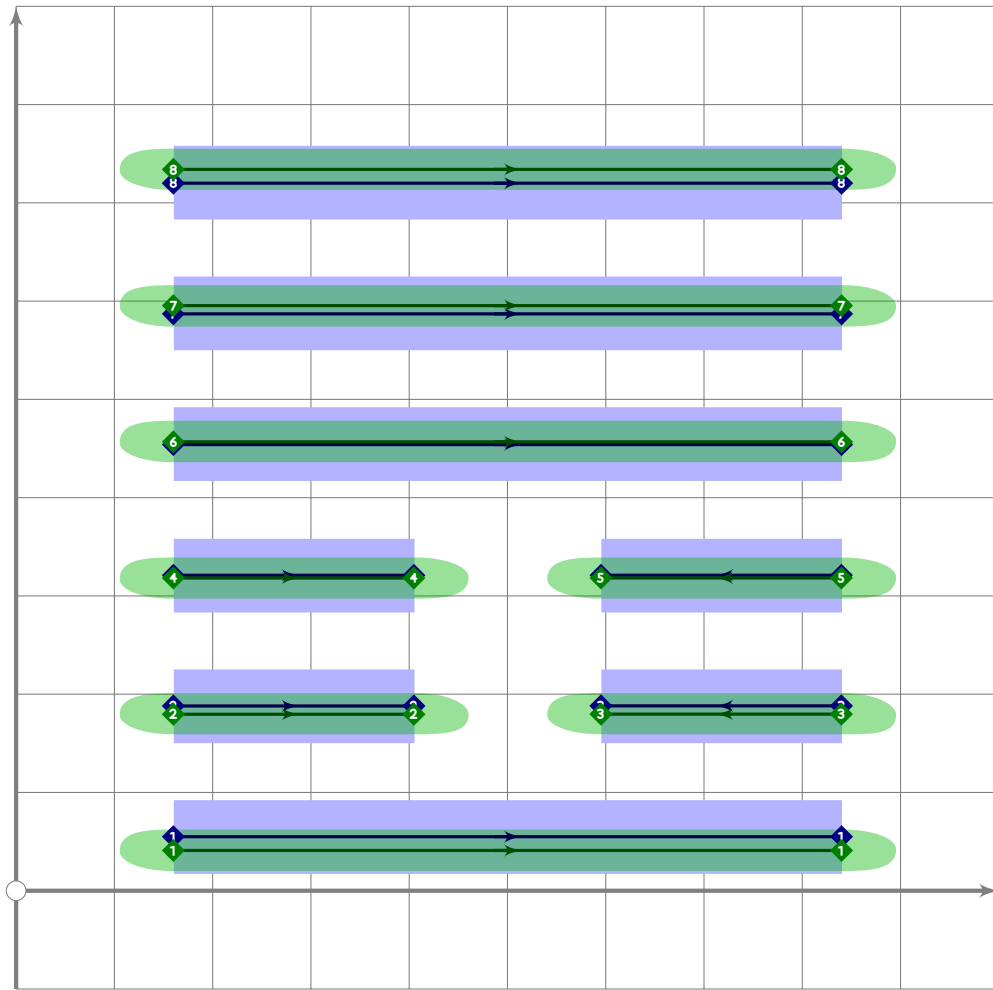
80 `make_hexagram(22,1,0,1,0,0,1);`



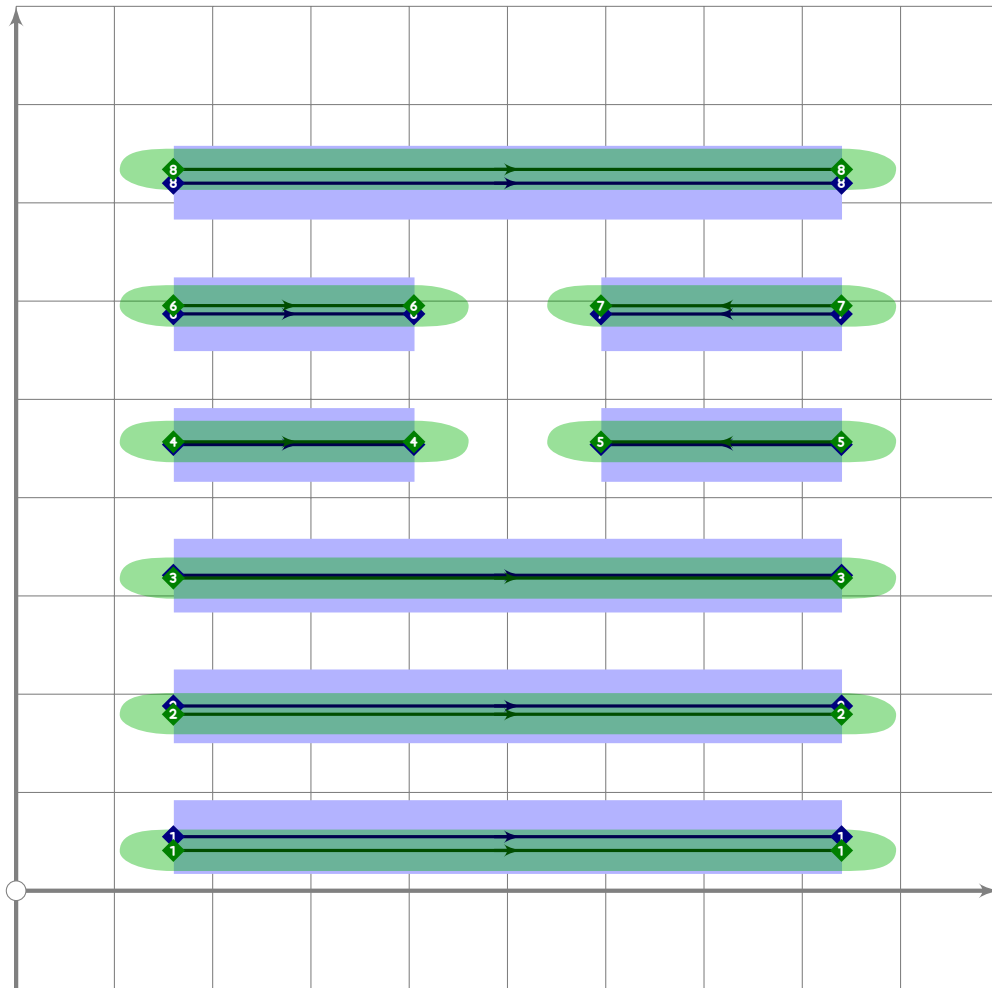
81 `make_hexagram(23,0,0,0,0,0,1);`



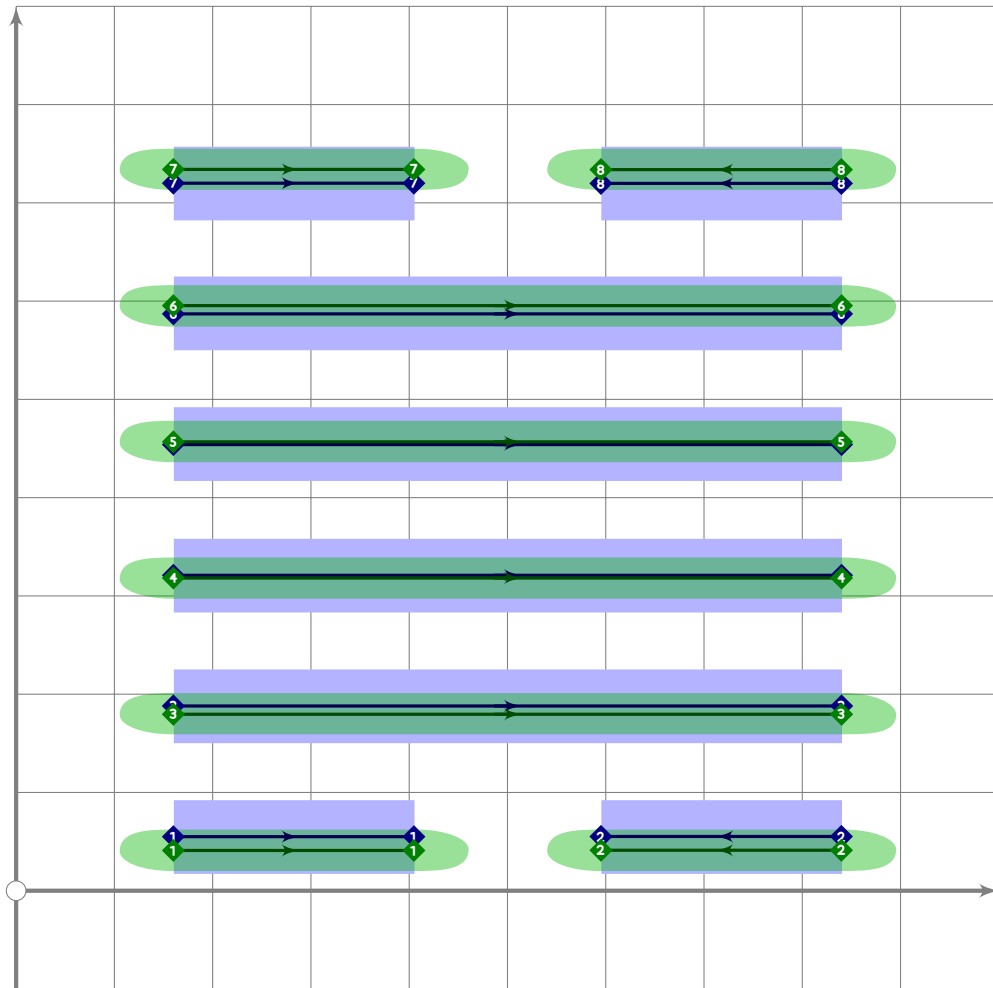
82 `make_hexagram(24,1,0,0,0,0,0);`



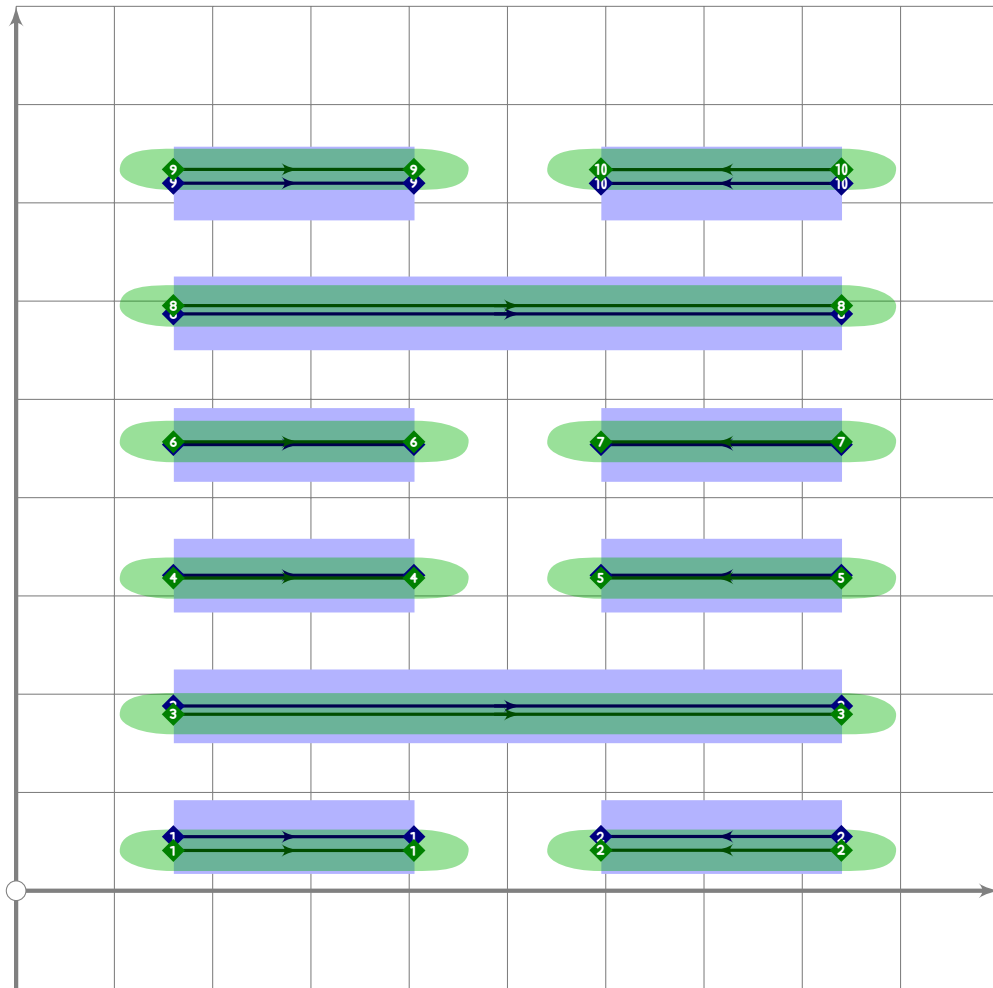
83 `make_hexagram(25,1,0,0,1,1,1);`



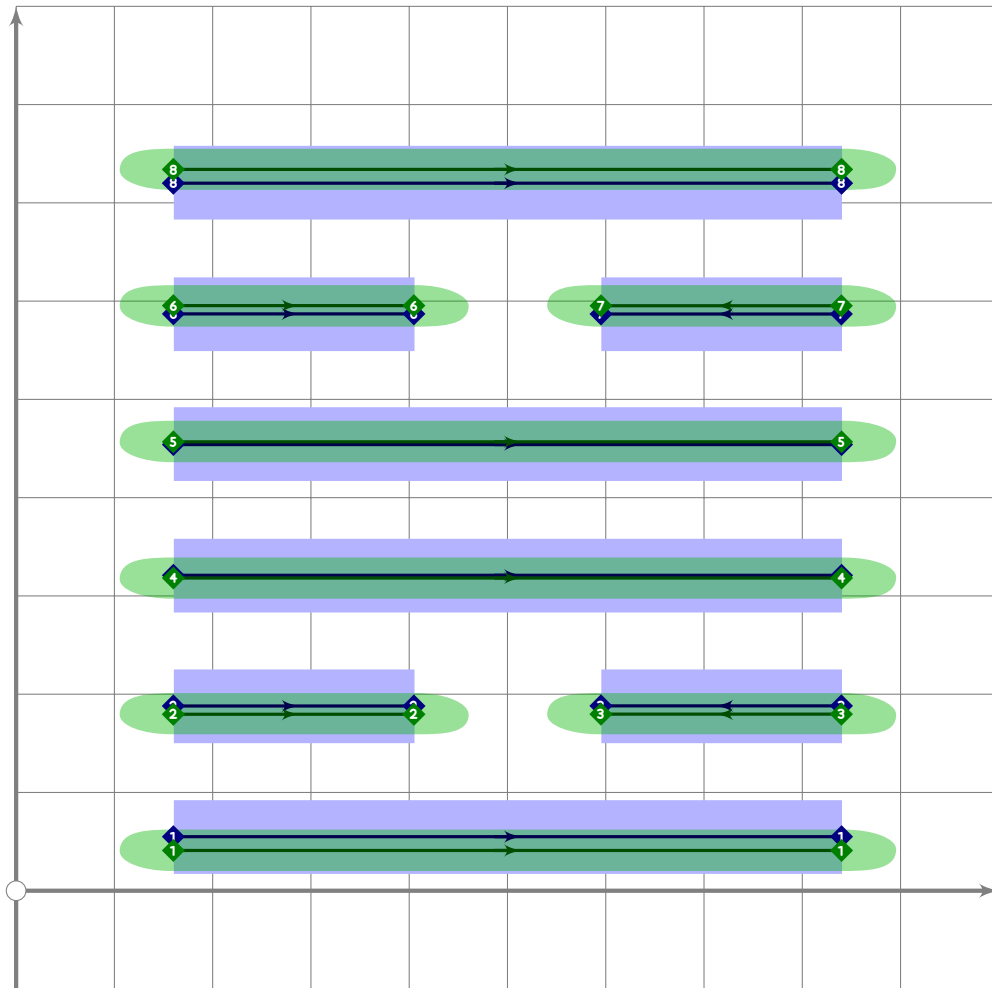
84 `make_hexagram(26,1,1,1,0,0,1);`



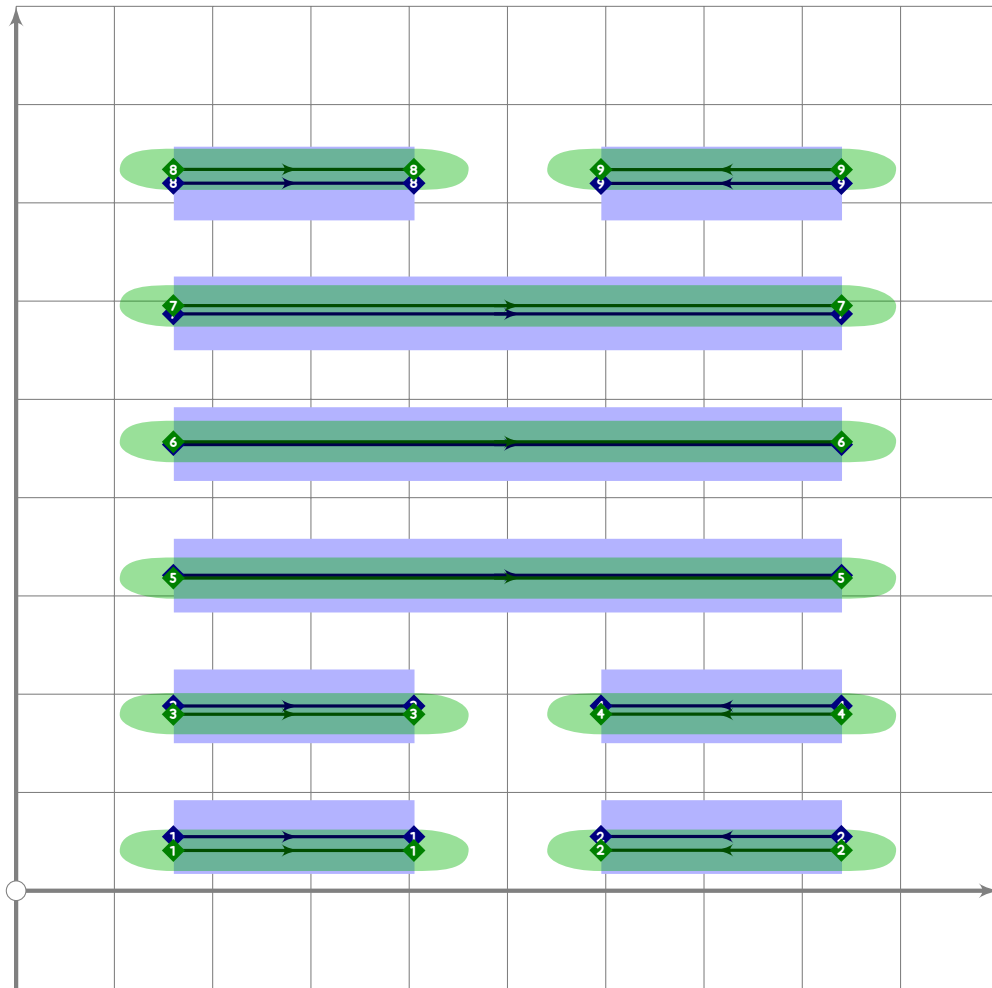
86 `make_hexagram(28,0,1,1,1,0);`



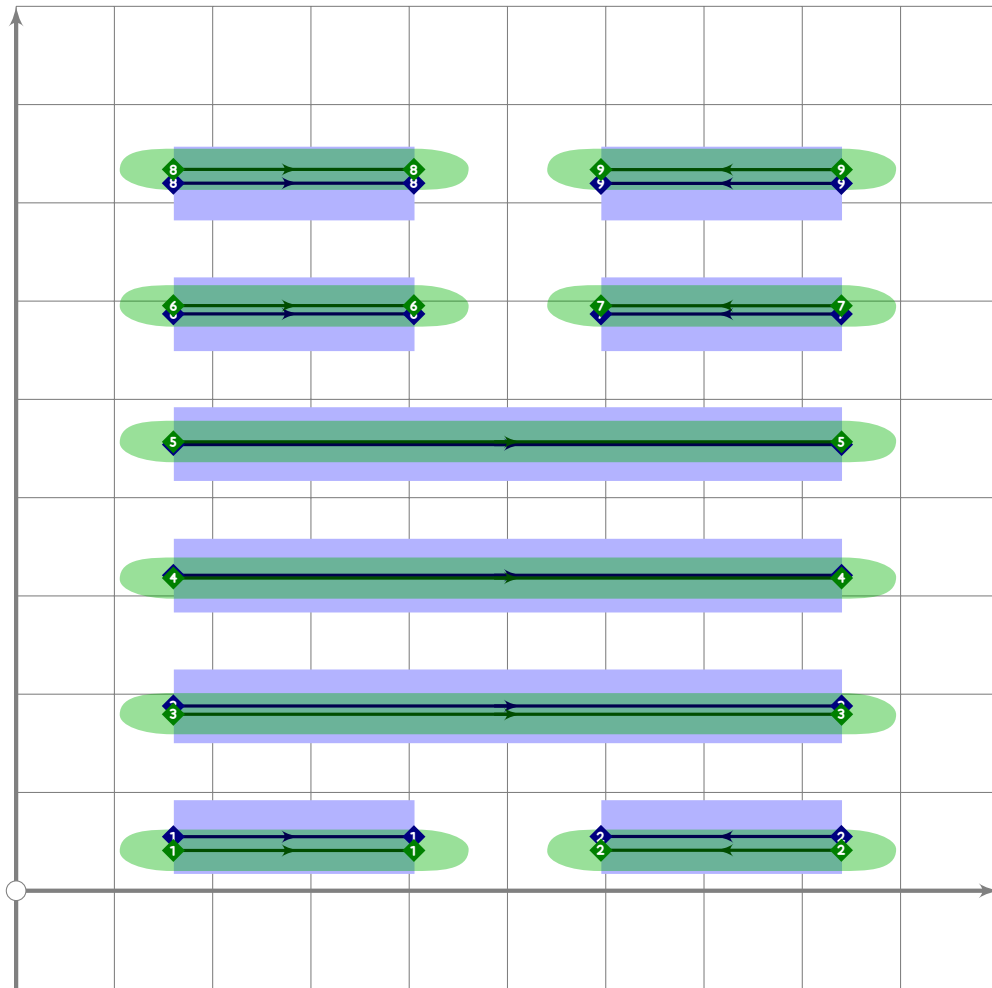
87 `make_hexagram(29,0,1,0,0,1,0);`



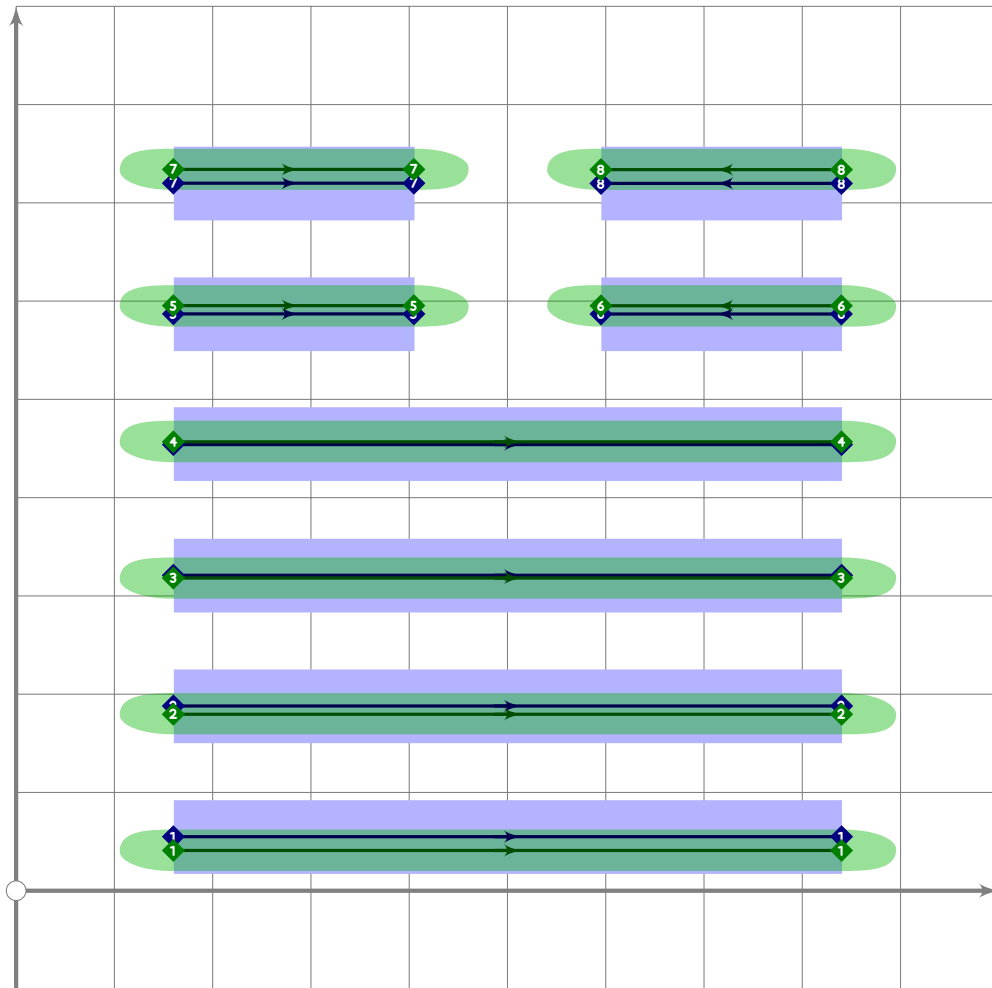
88 `make_hexagram(30,1,0,1,1,0,1);`



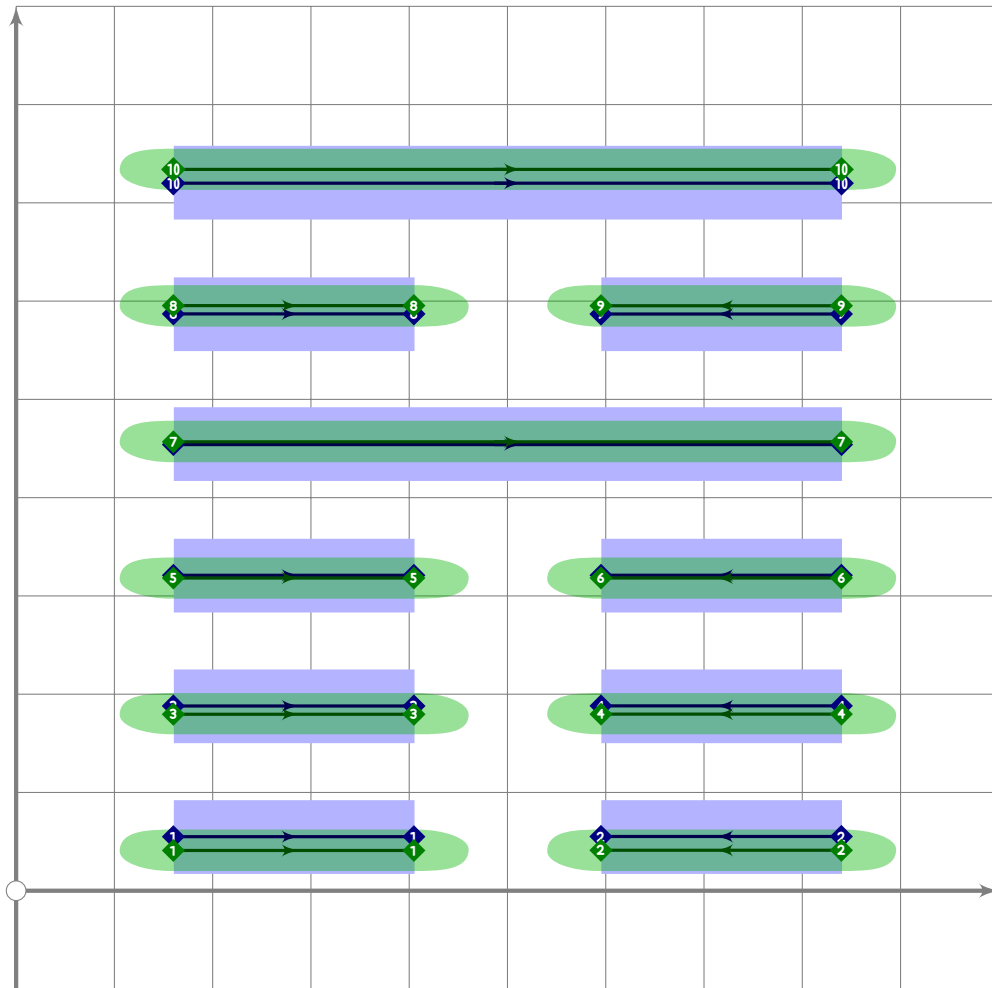
89 `make_hexagram(31,0,0,1,1,0);`



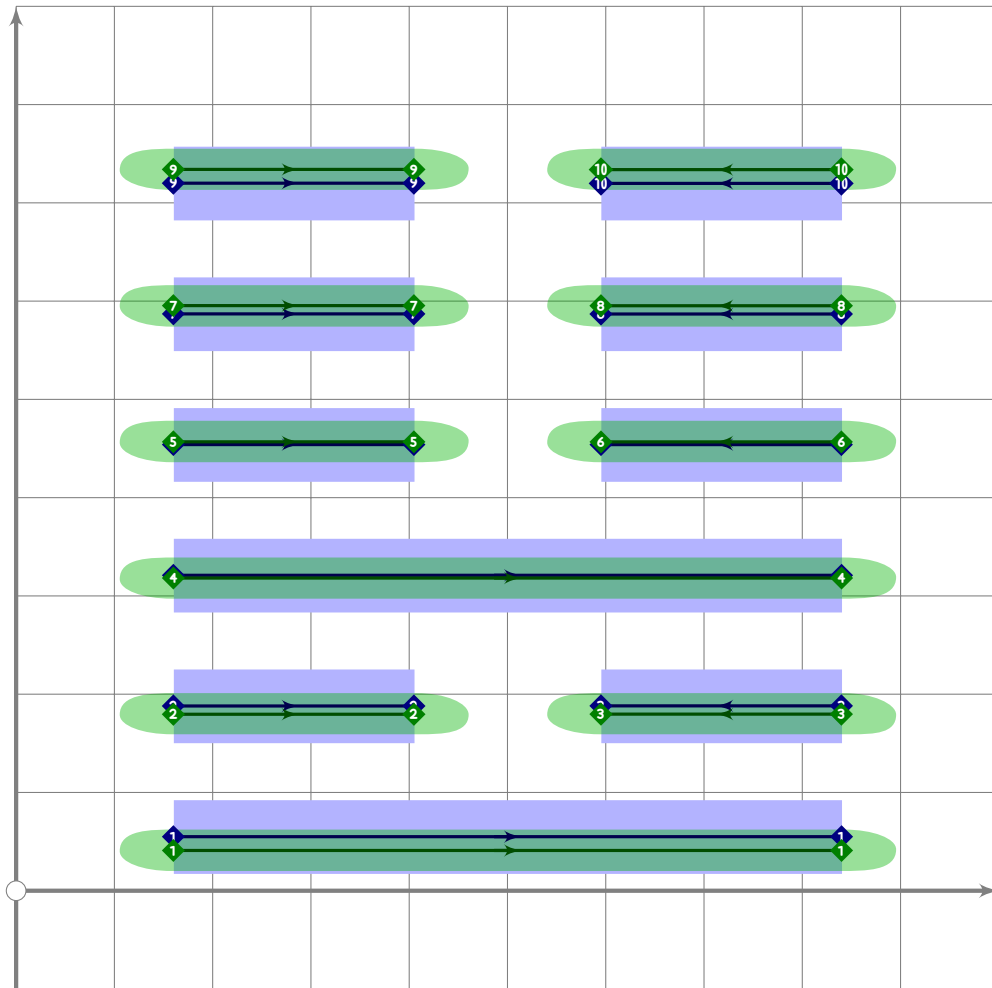
90 `make_hexagram(32,0,1,1,1,0,0);`



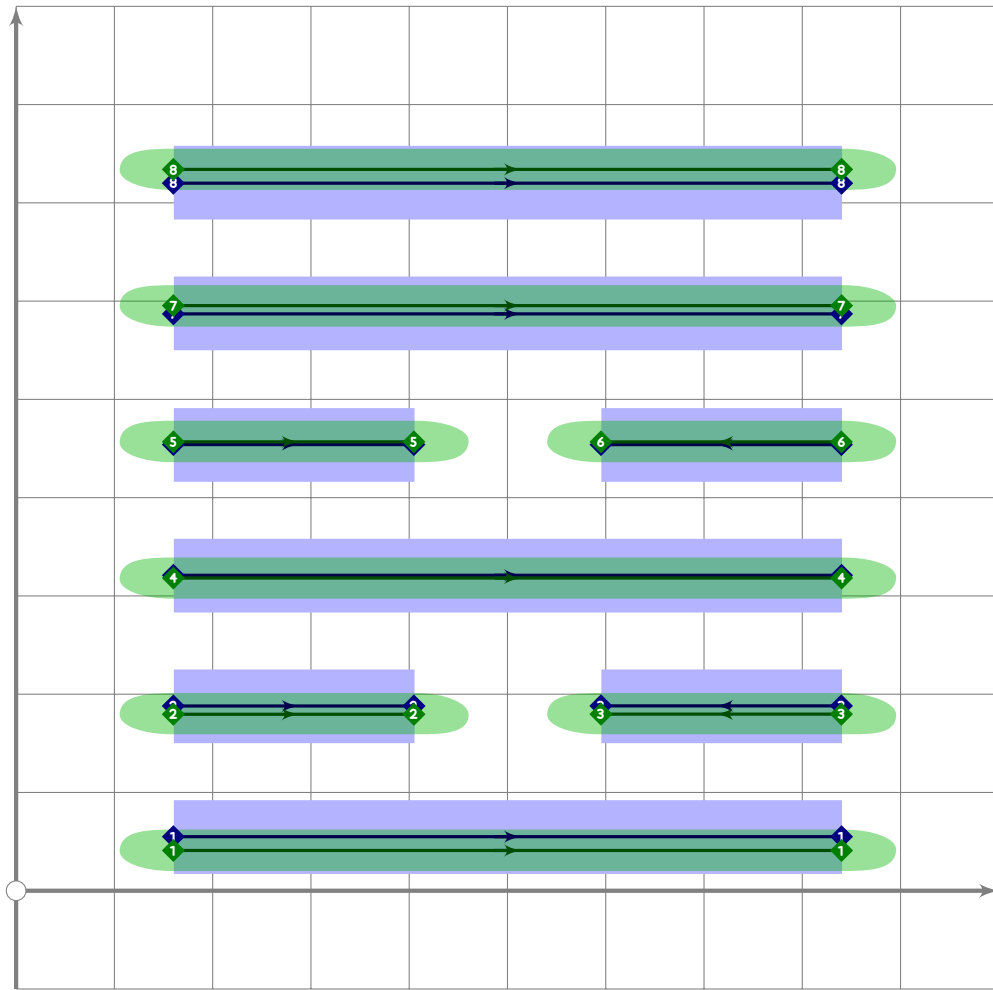
93 `make_hexagram(34,1,1,1,1,0,0);`



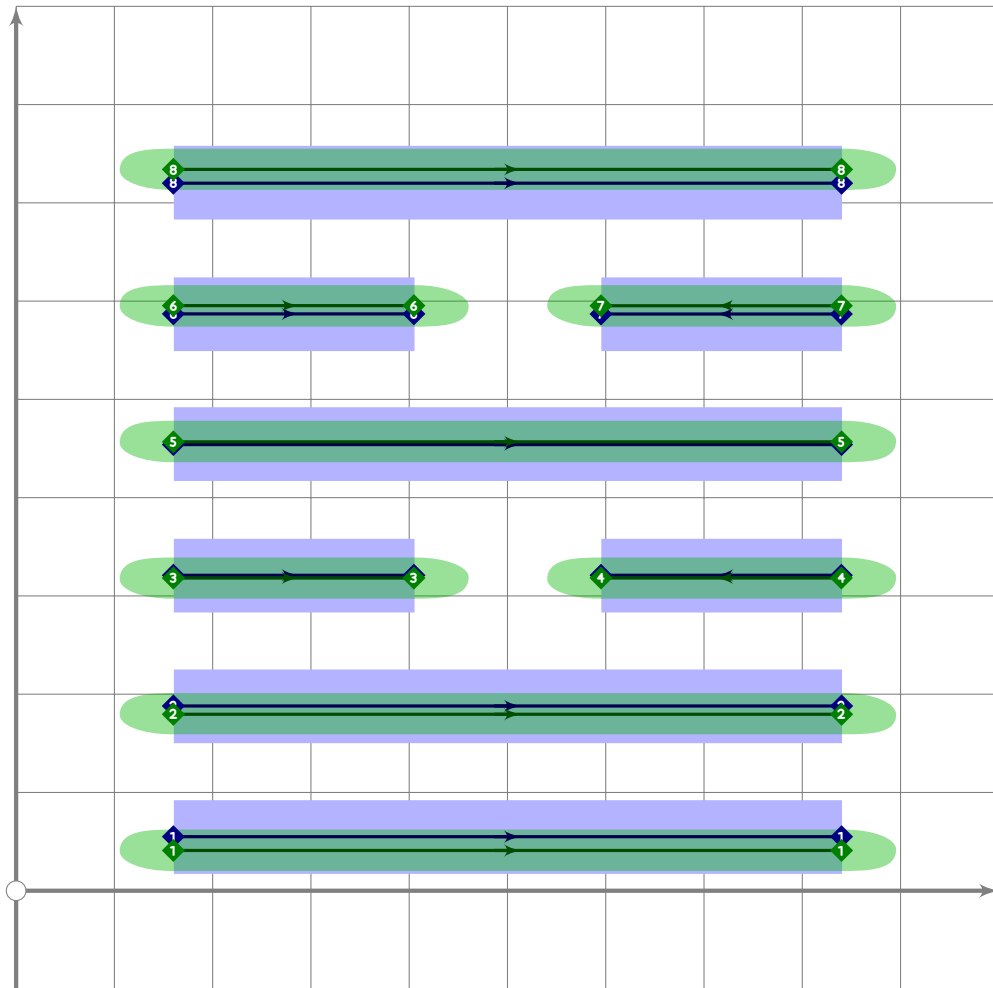
94 `make_hexagram(35,0,0,0,1,0,1);`



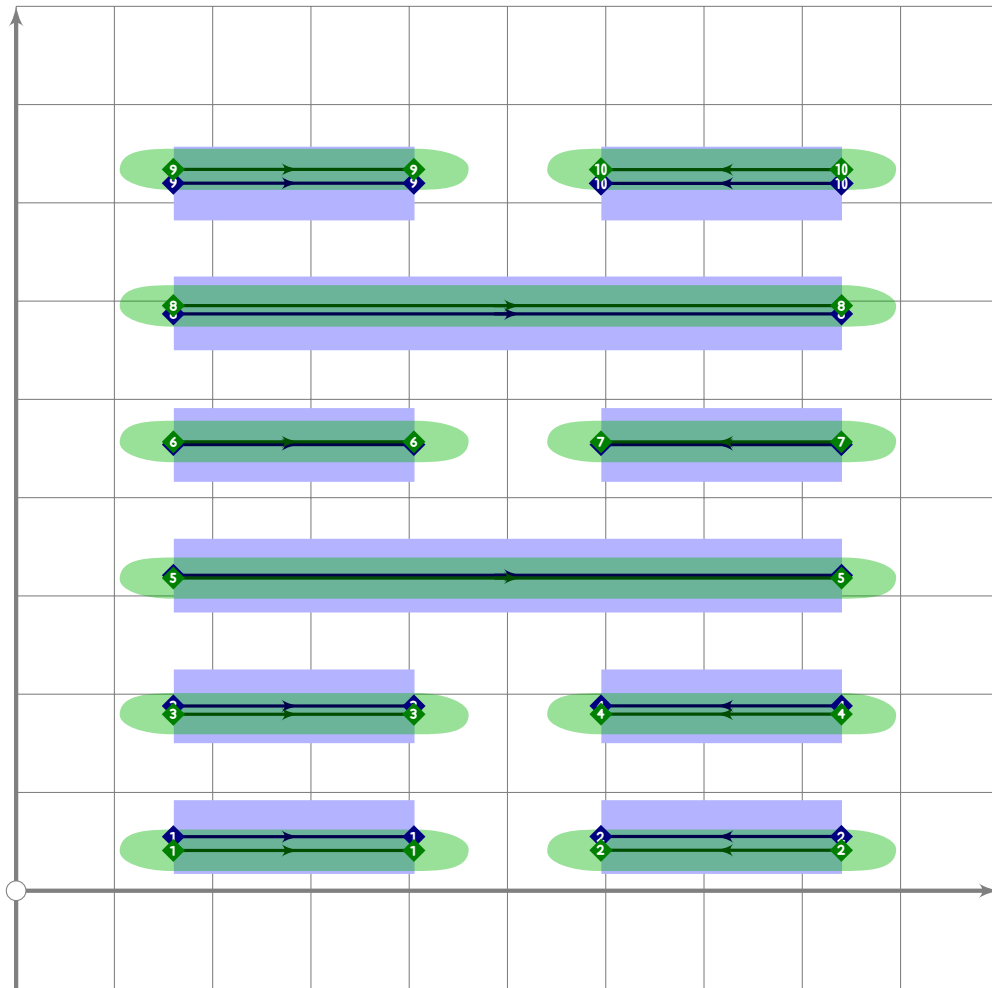
95 `make_hexagram(36,1,0,1,0,0,0);`



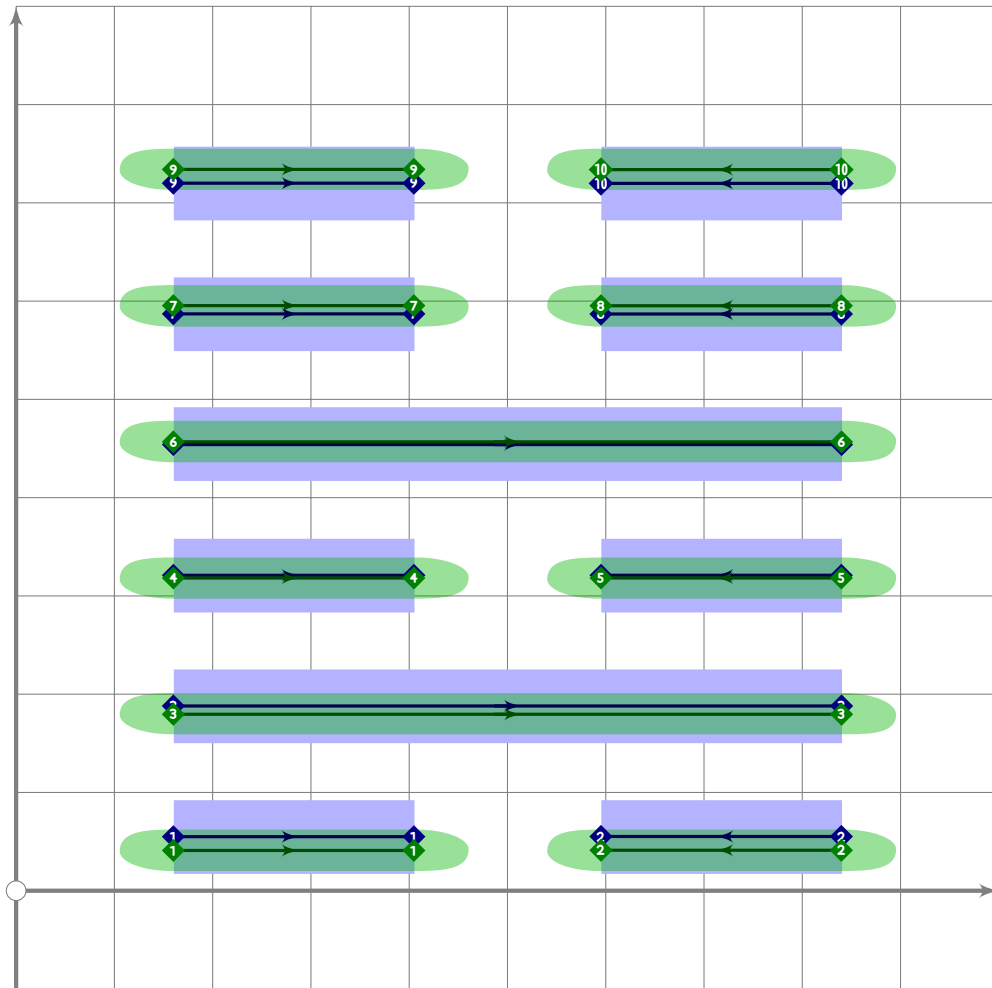
96 `make_hexagram(37,1,0,1,0,1,1);`



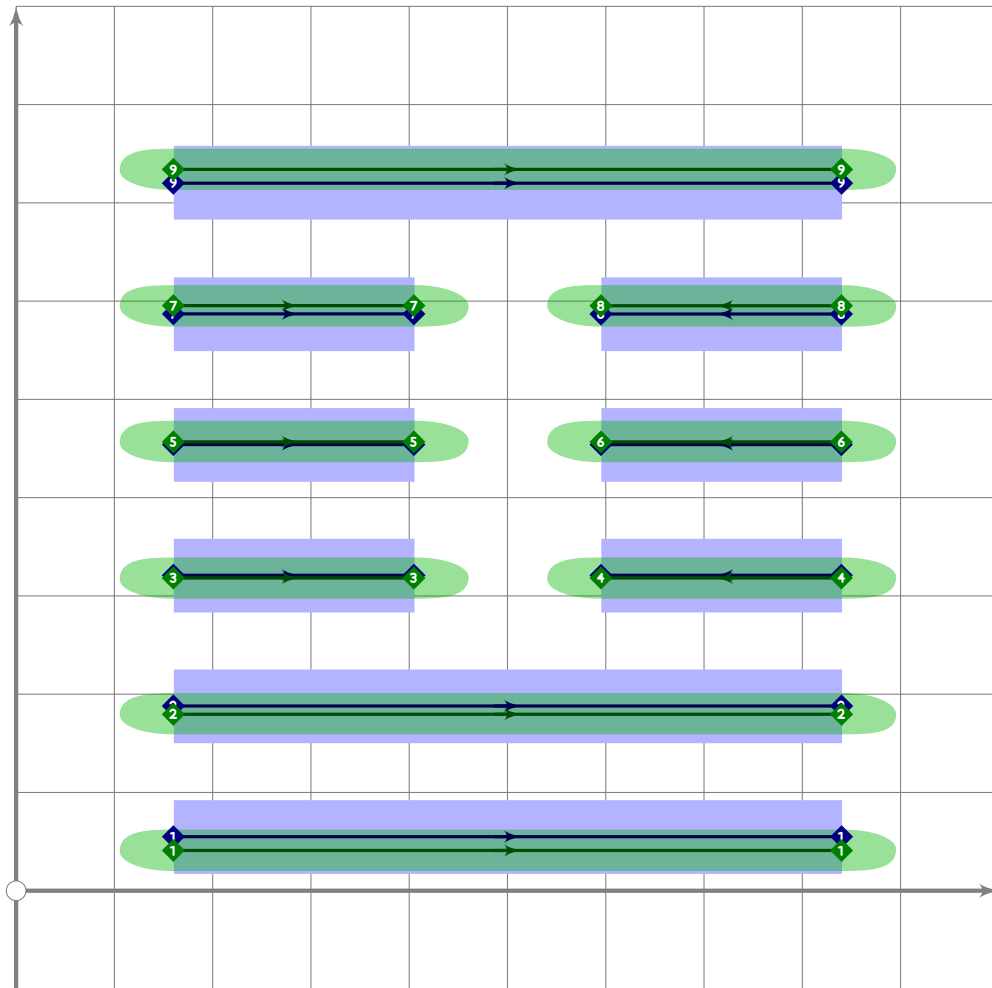
97 `make_hexagram(38,1,1,0,1,0,1);`



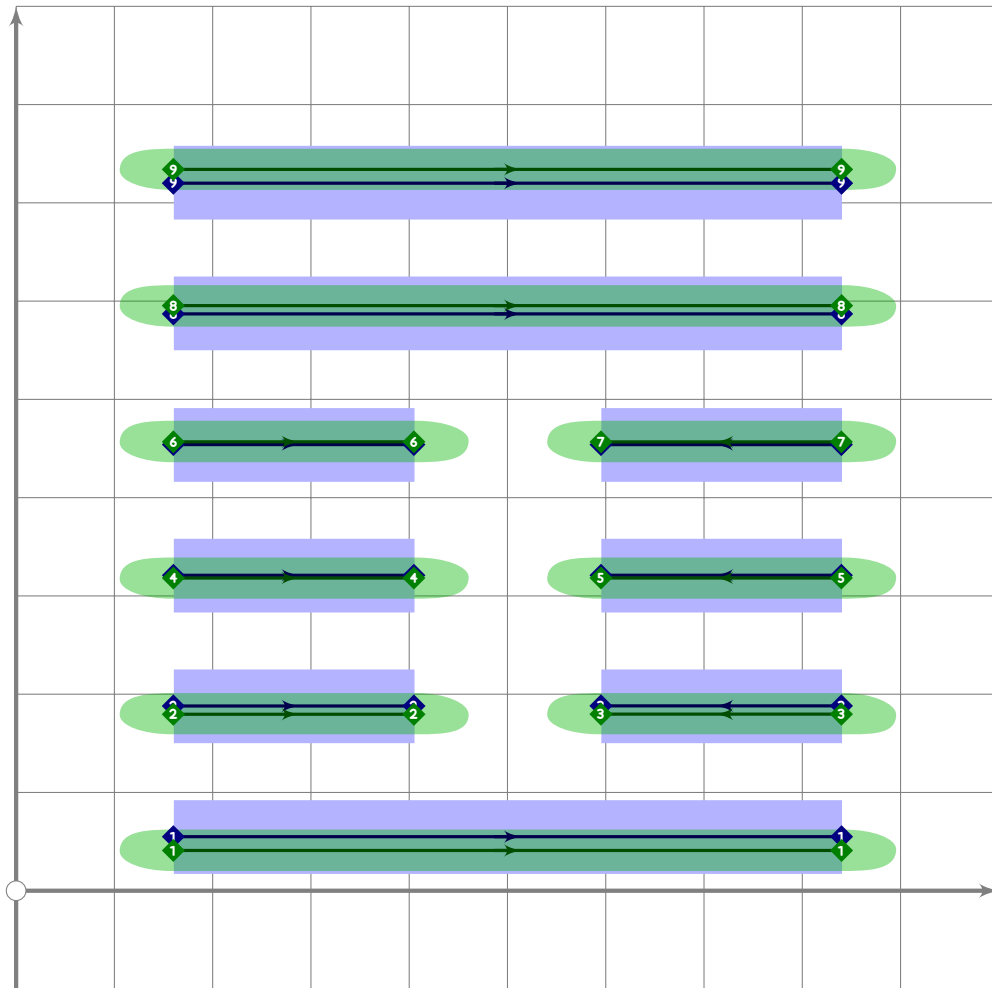
98 `make_hexagram(39,0,0,1,0,1,0);`



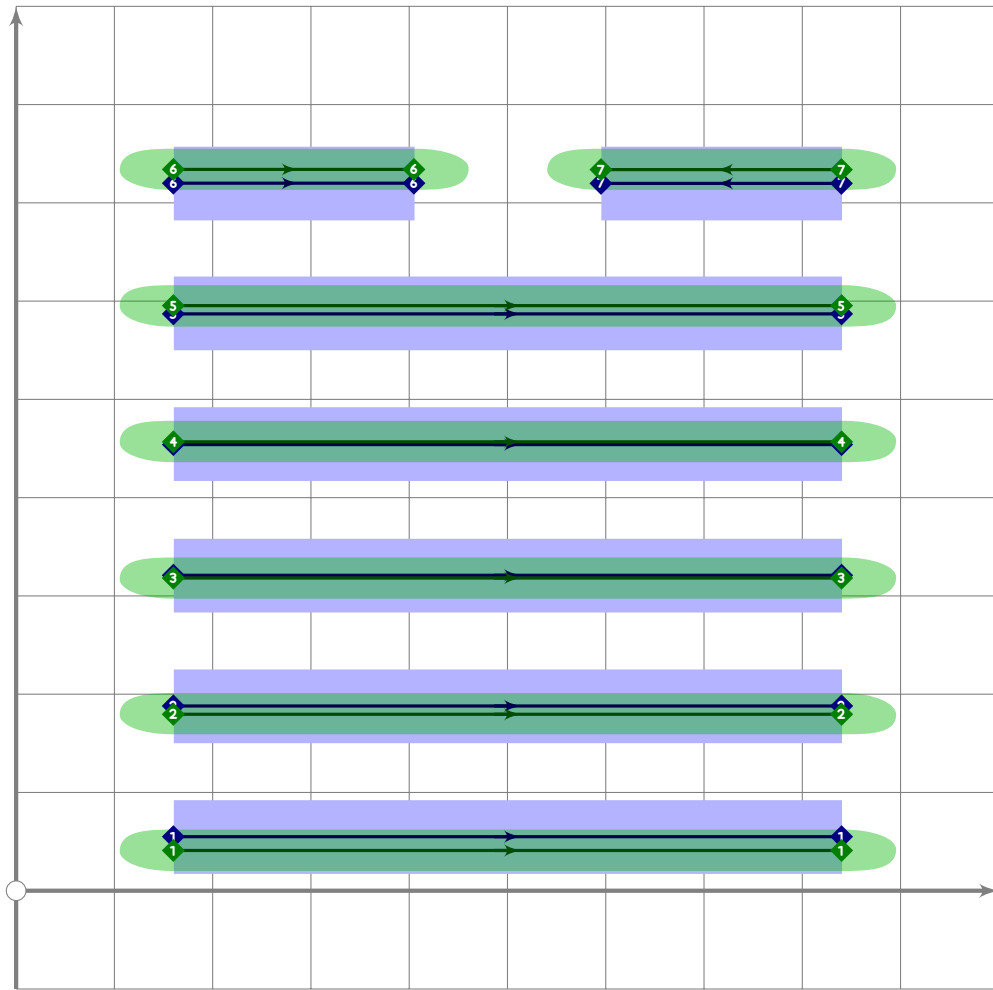
99 `make_hexagram(40,0,1,0,1,0,0);`



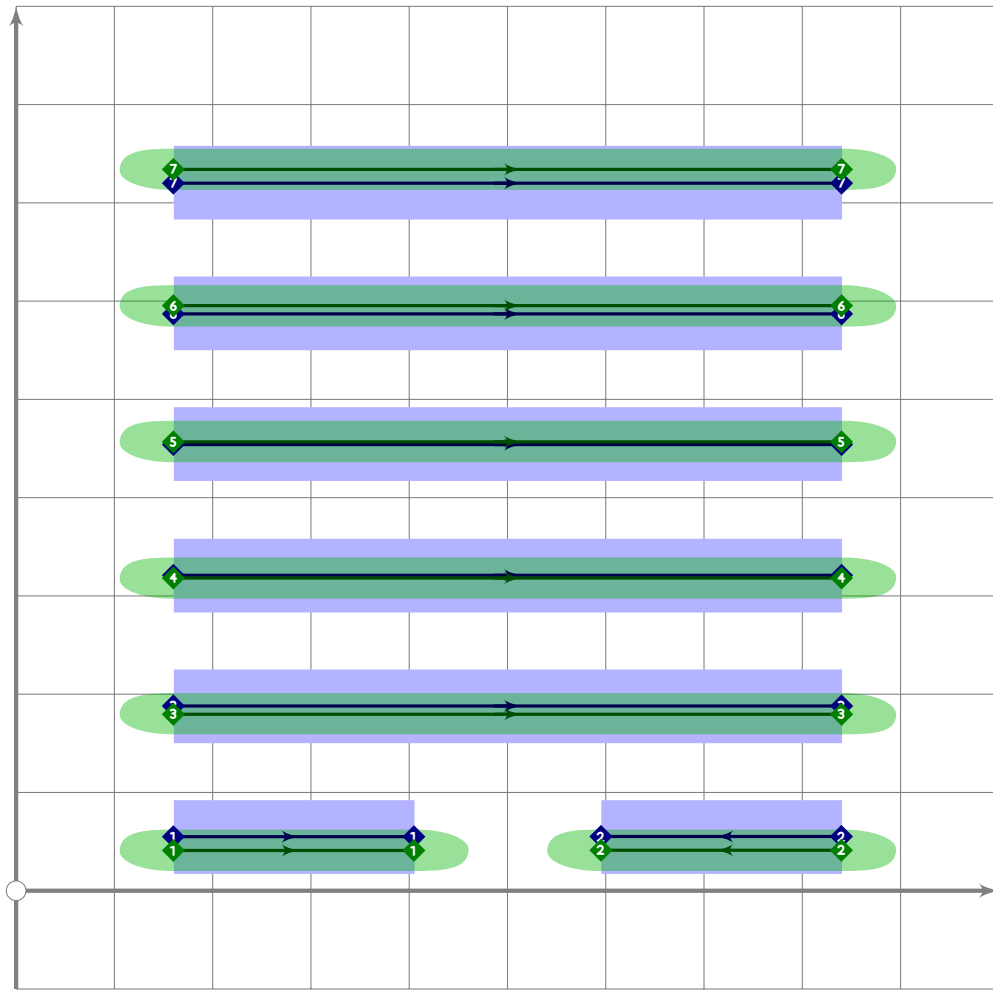
100 `make_hexagram(4,1,1,0,0,0,1);`



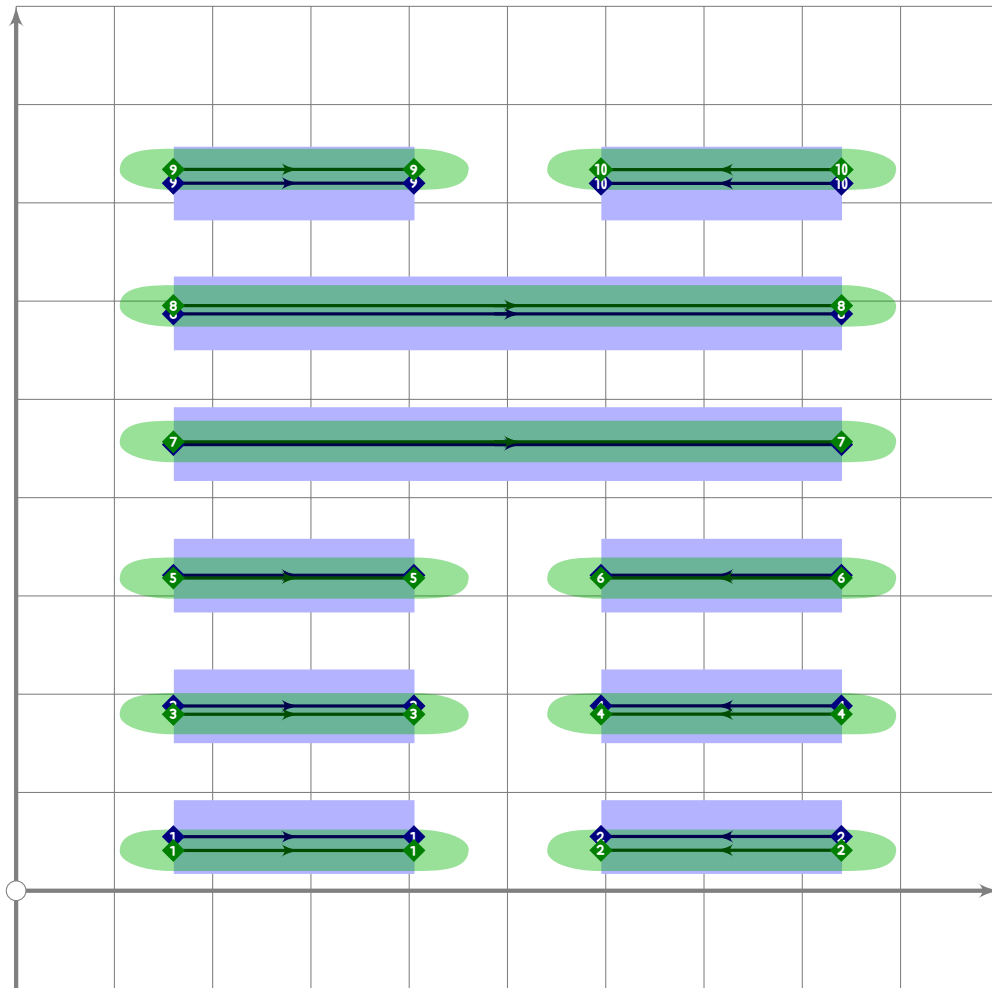
101 `make_hexagram(4,2,1,0,0,0,1,1);`



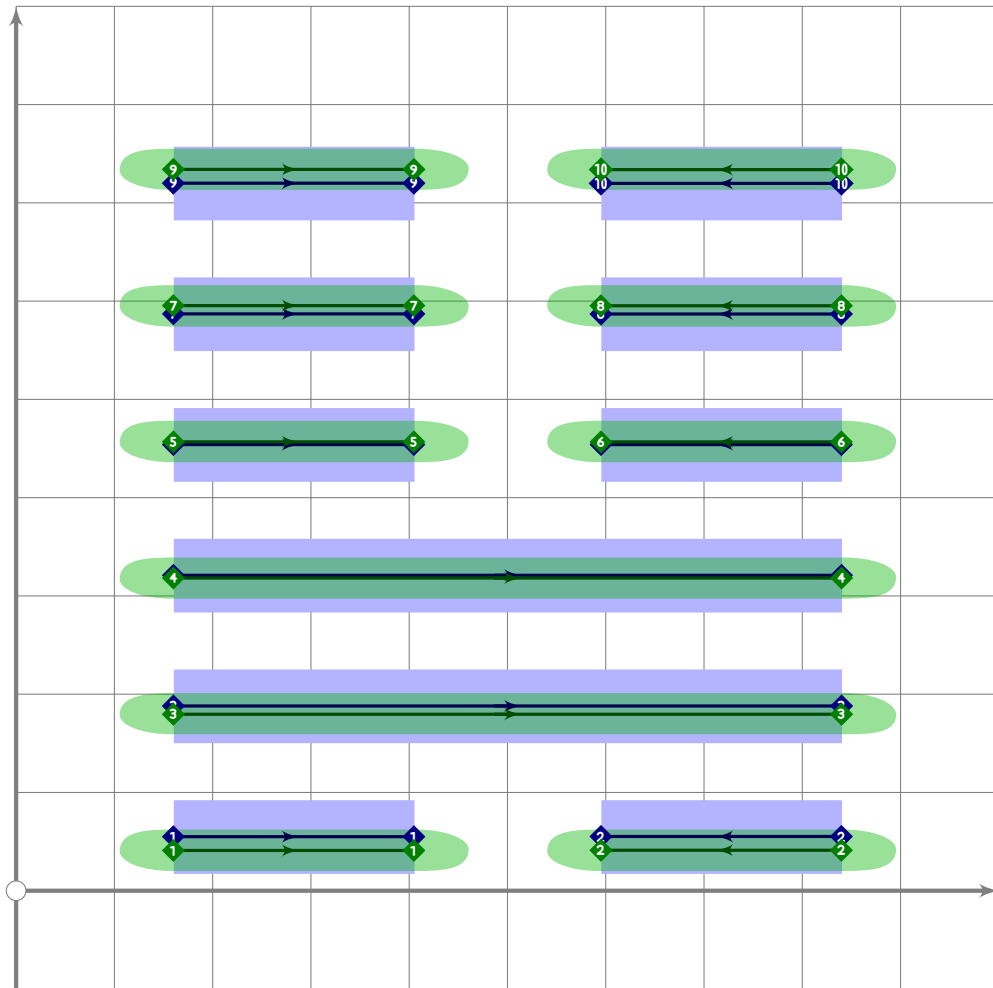
102 `make_hexagram(43,1,1,1,1,0);`



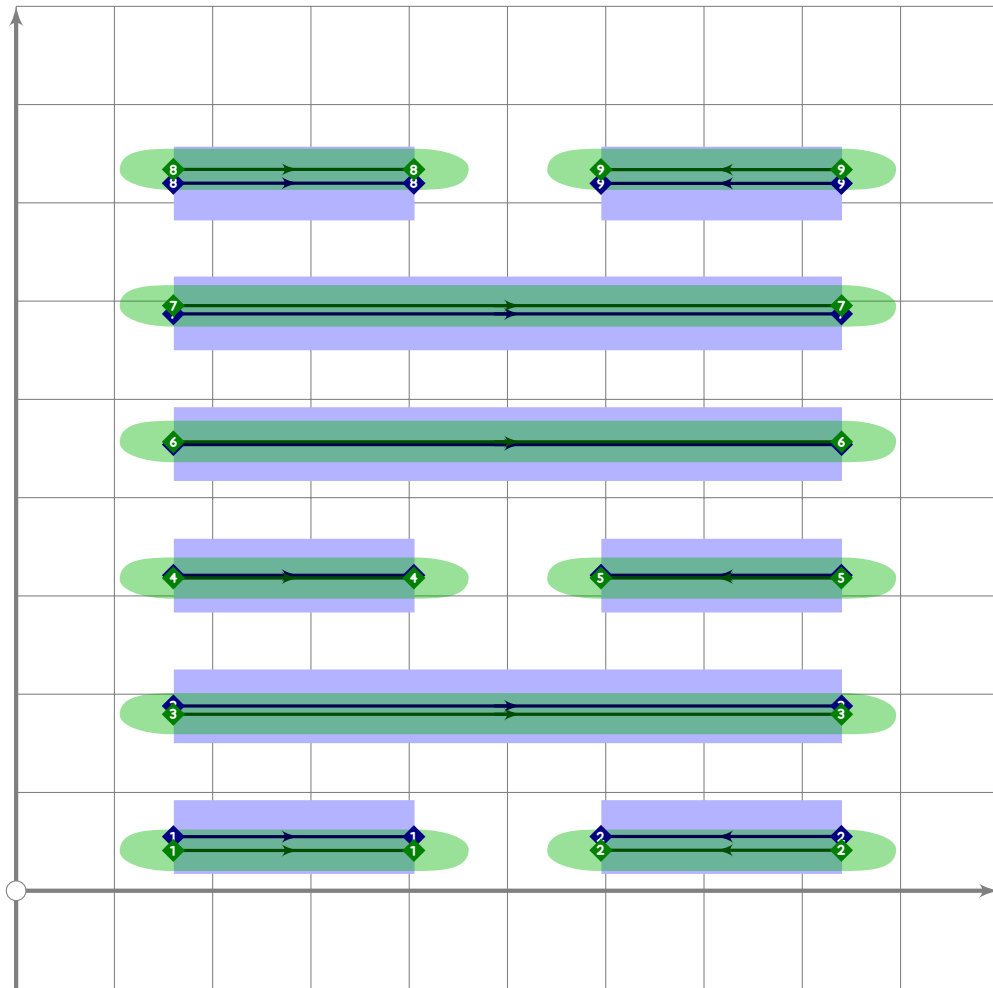
103 `make_hexagram(44,0,1,1,1,1);`



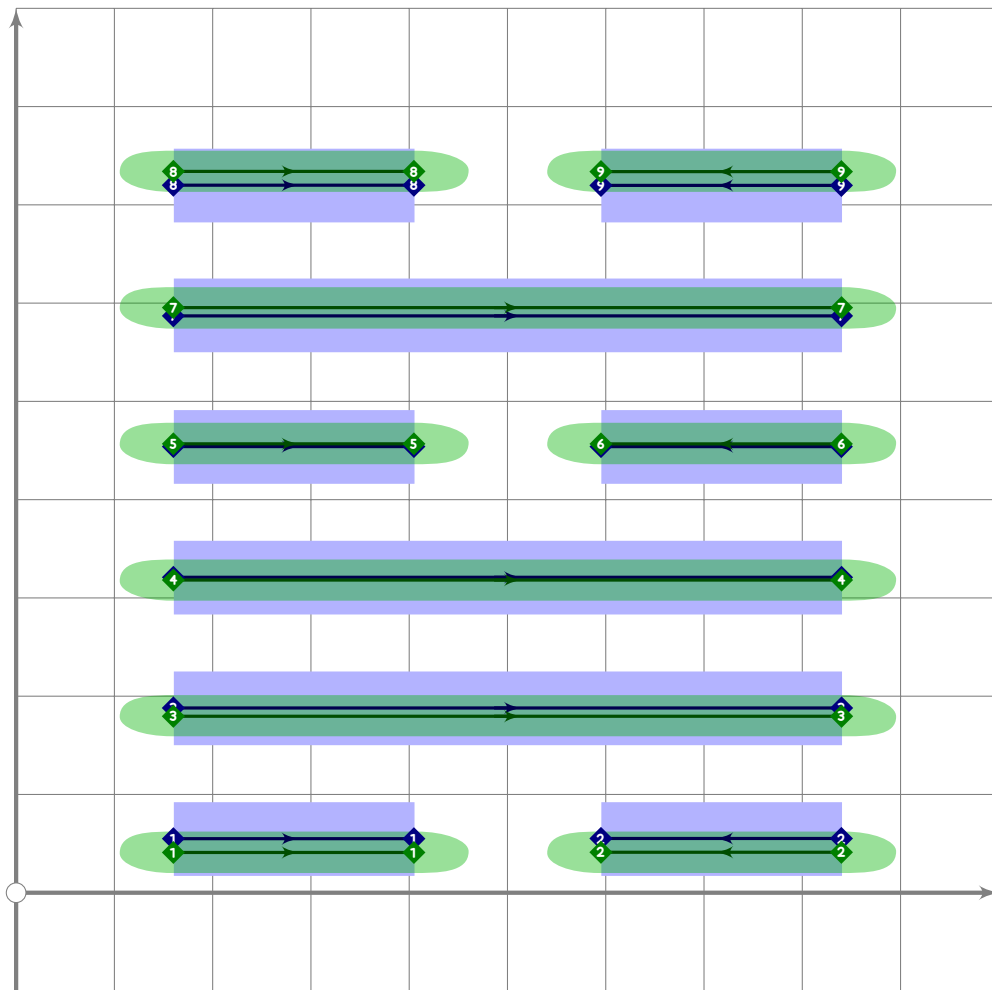
104 `make_hexagram(45,0,0,0,1,1,0);`



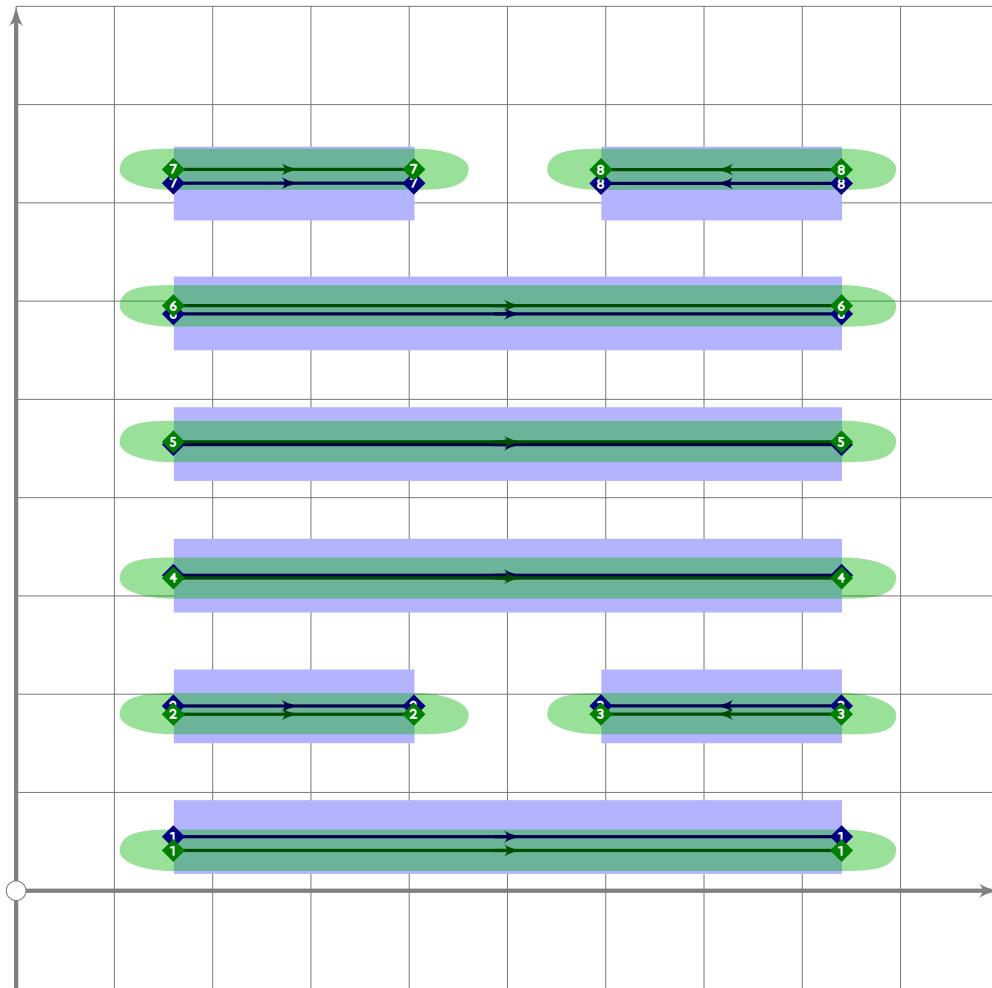
105 `make_hexagram(46,0,1,1,0,0,0);`



106 `make_hexagram(47,0,1,0,1,1,0);`

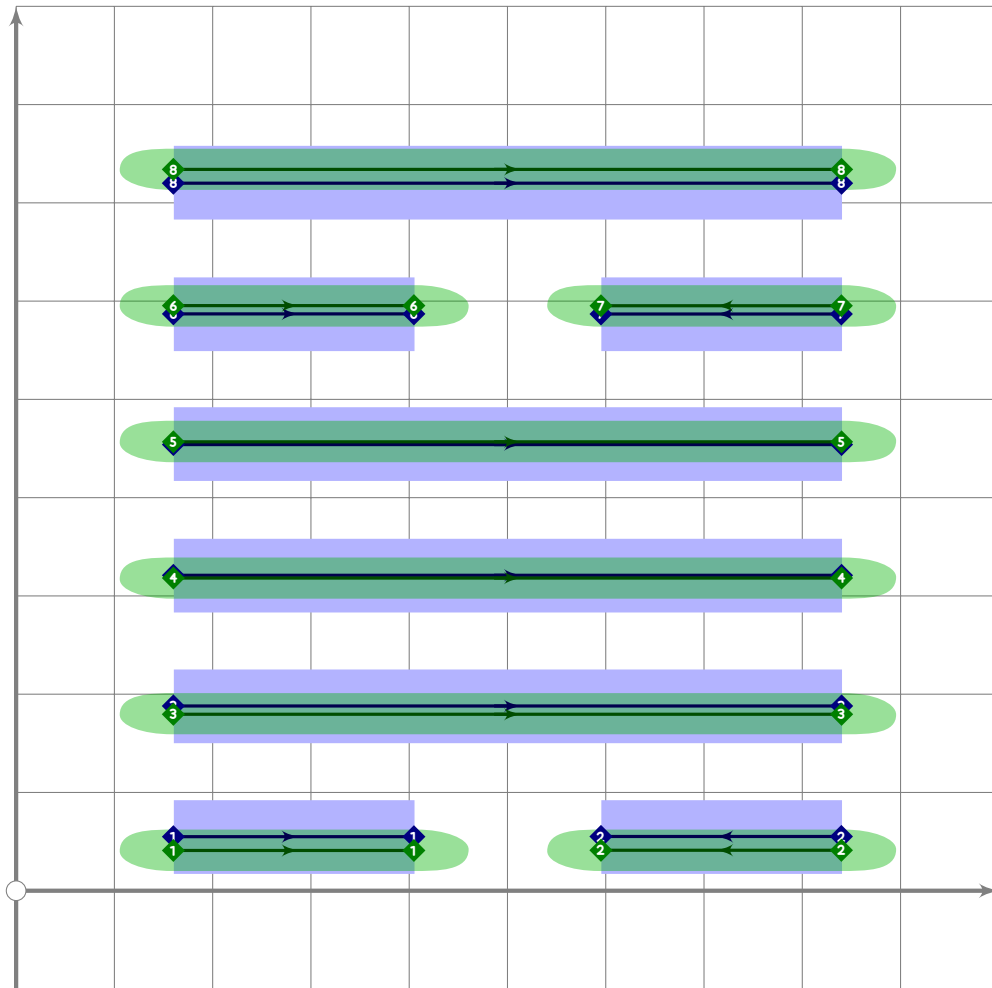


107 `make_hexagram(48,0,1,1,0,1,0);`

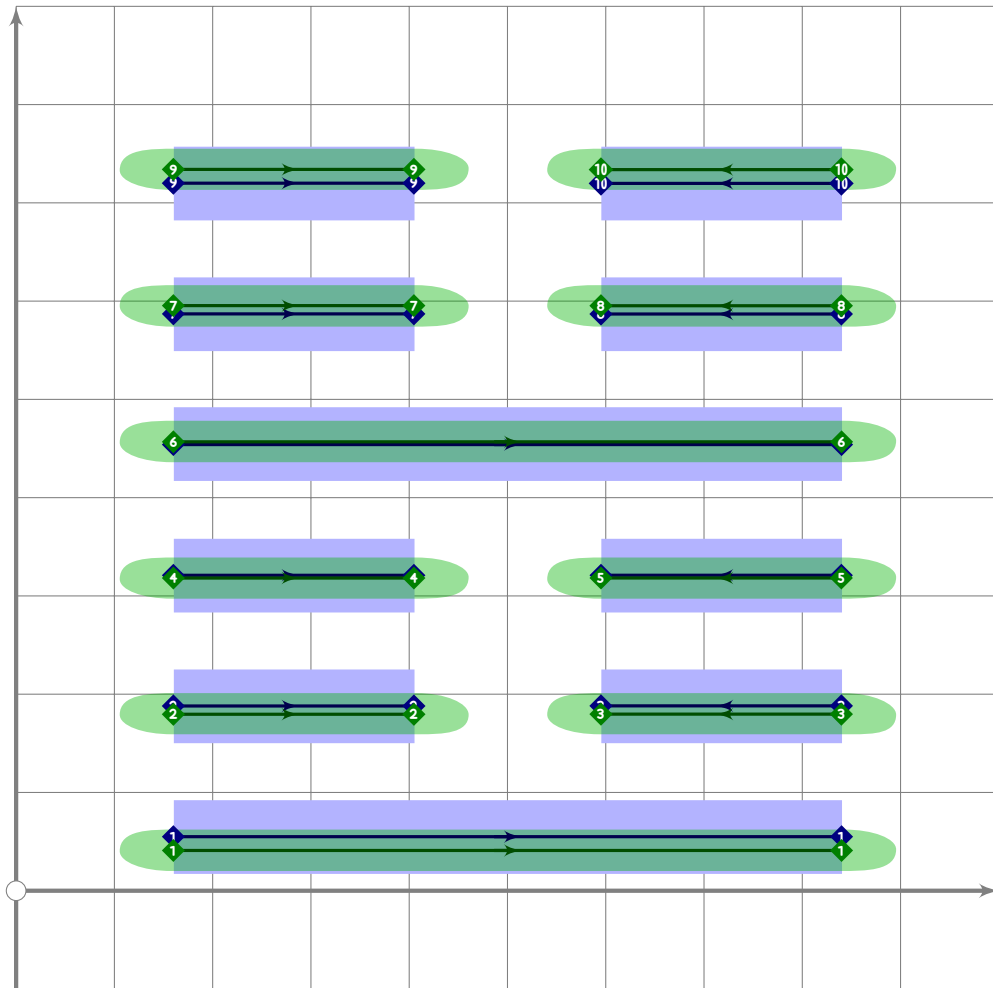


108

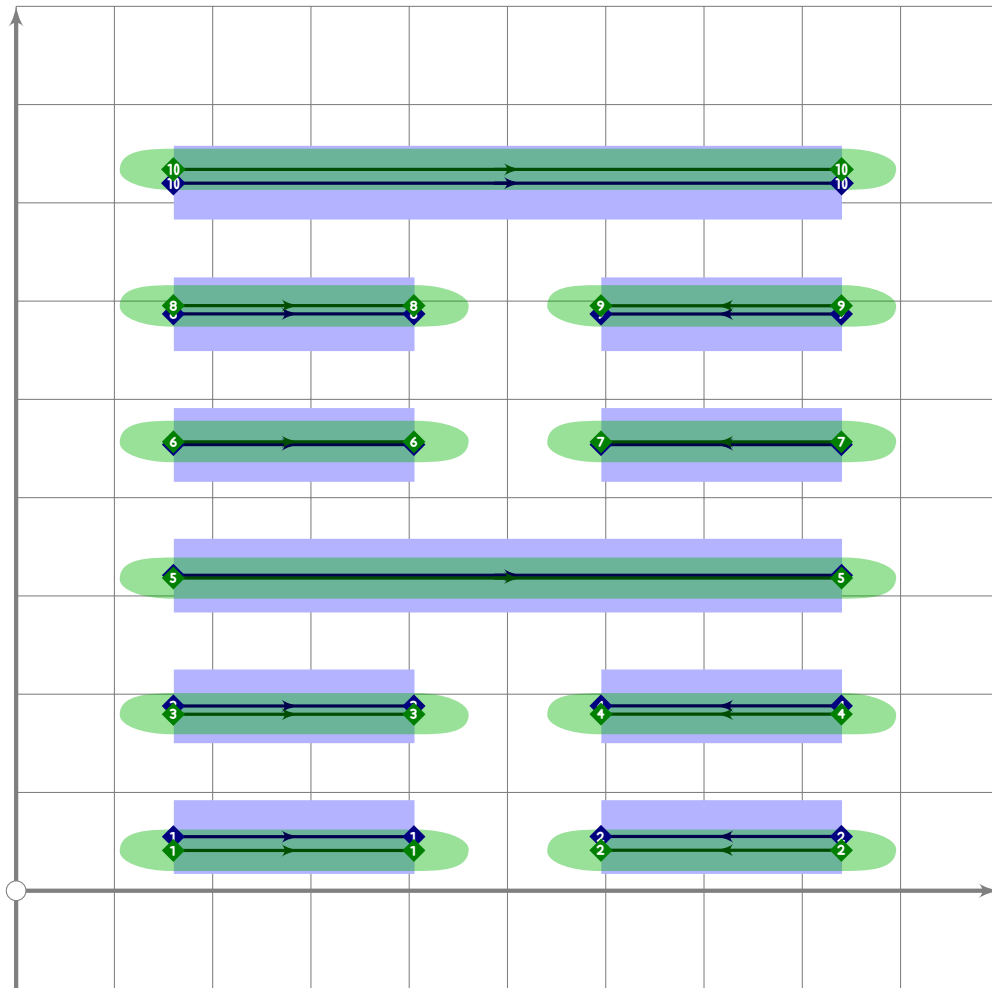
109 `make_hexagram(49,1,0,1,1,0);`



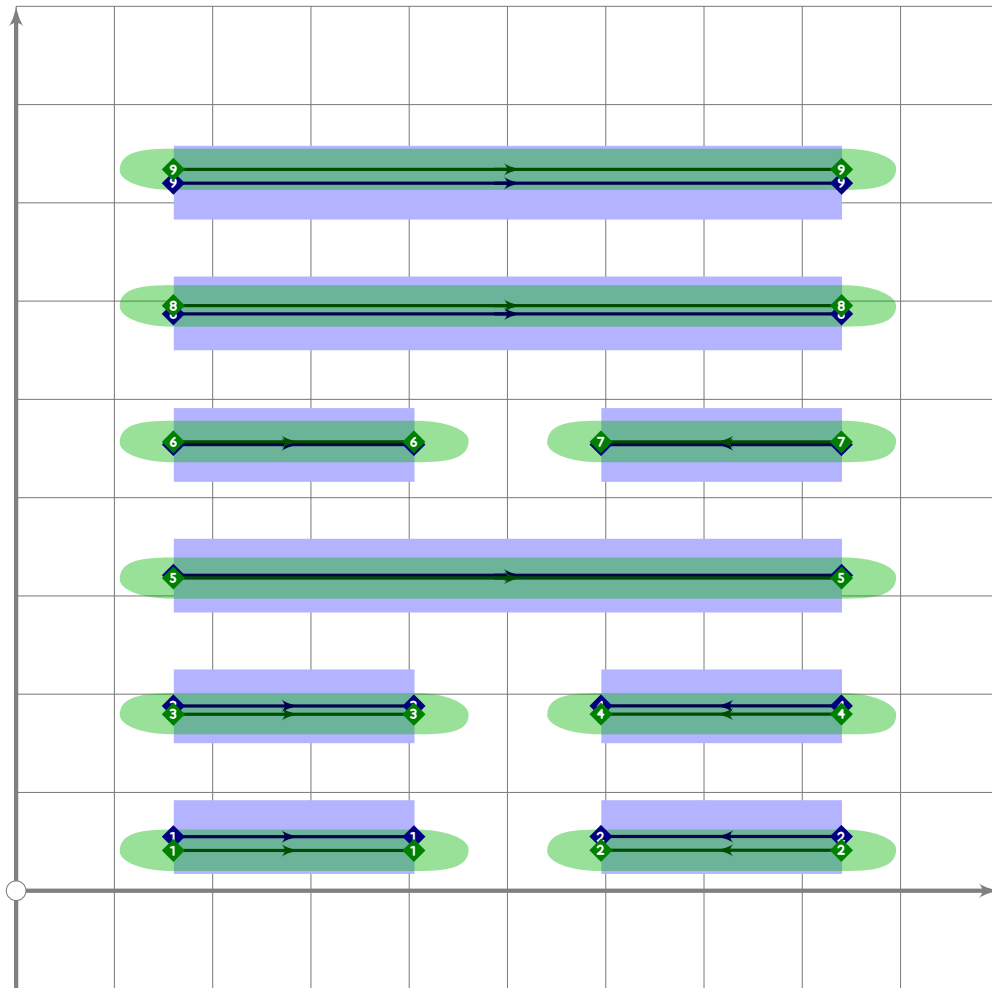
110 `make_hexagram(50,0,1,1,0,1);`



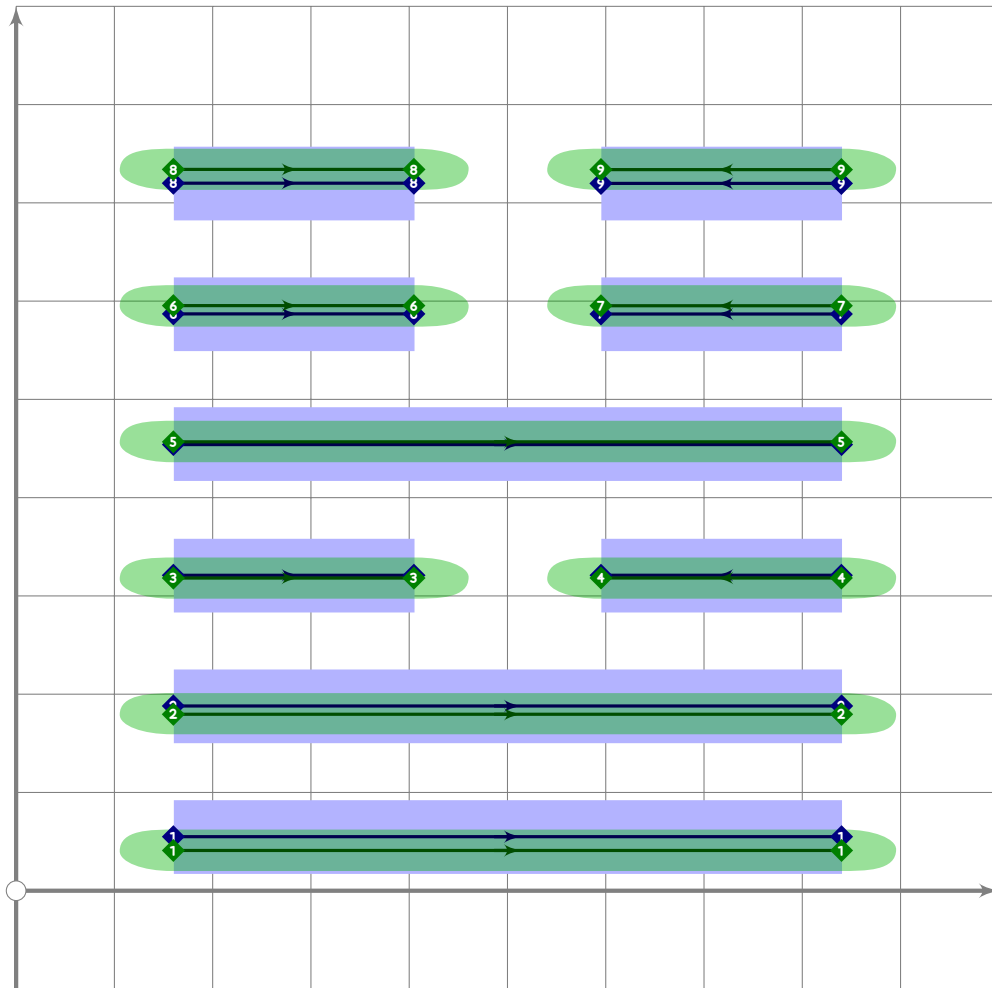
111 make_hexagram(51,1,0,0,1,0,0);



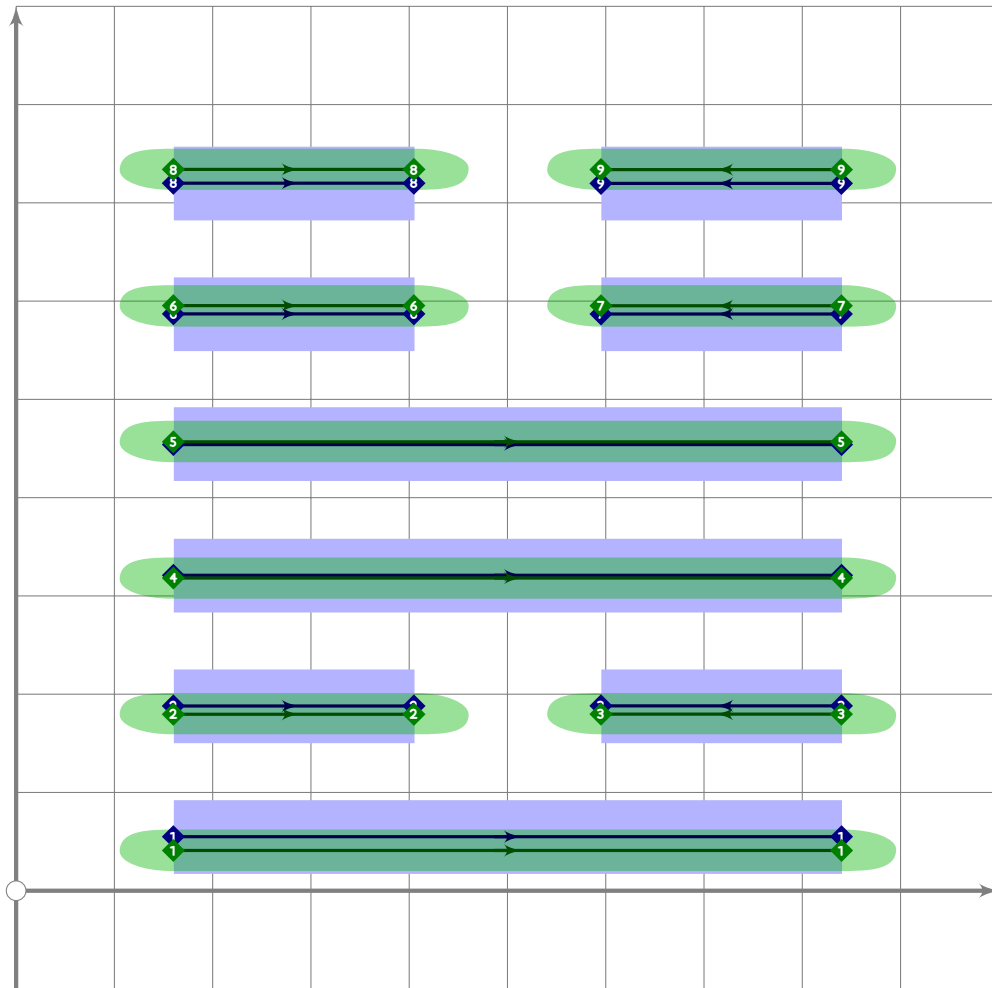
112 `make_hexagram(52,0,0,1,0,0,1);`



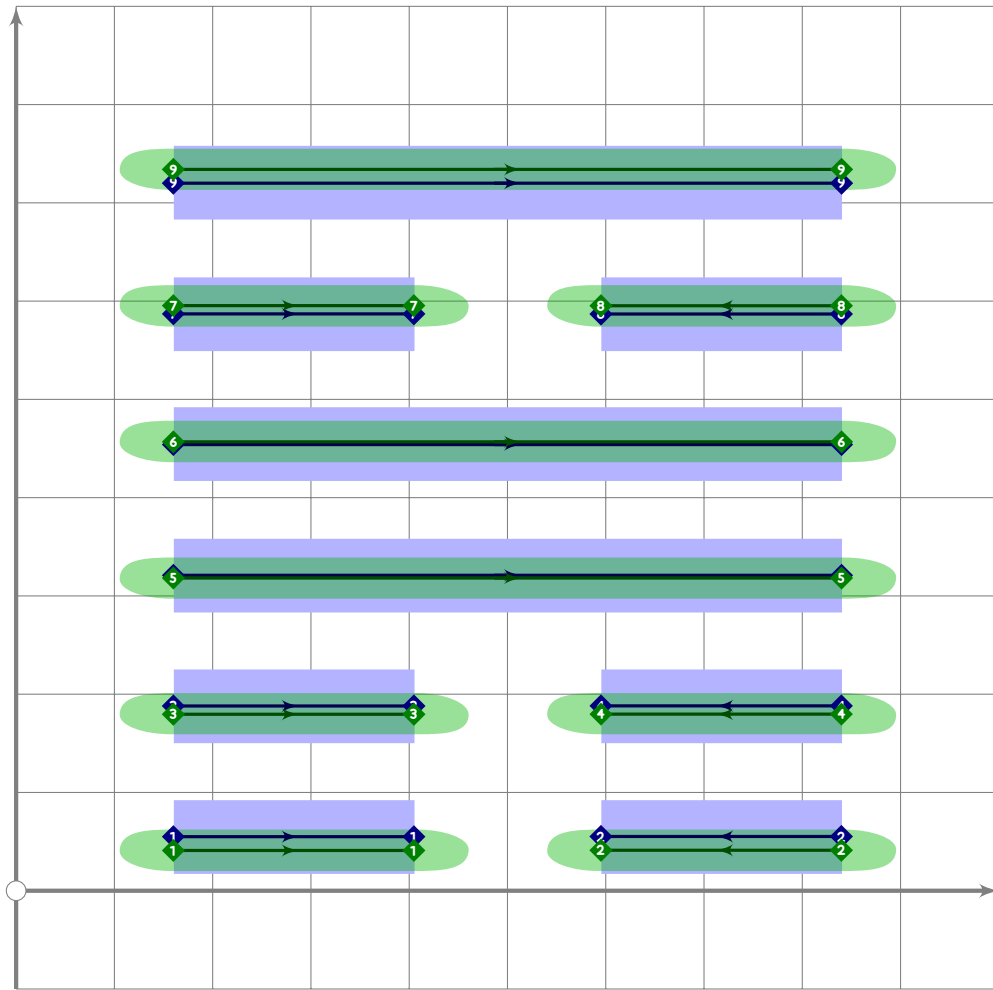
113 `make_hexagram(53,0,0,1,0,1,1);`



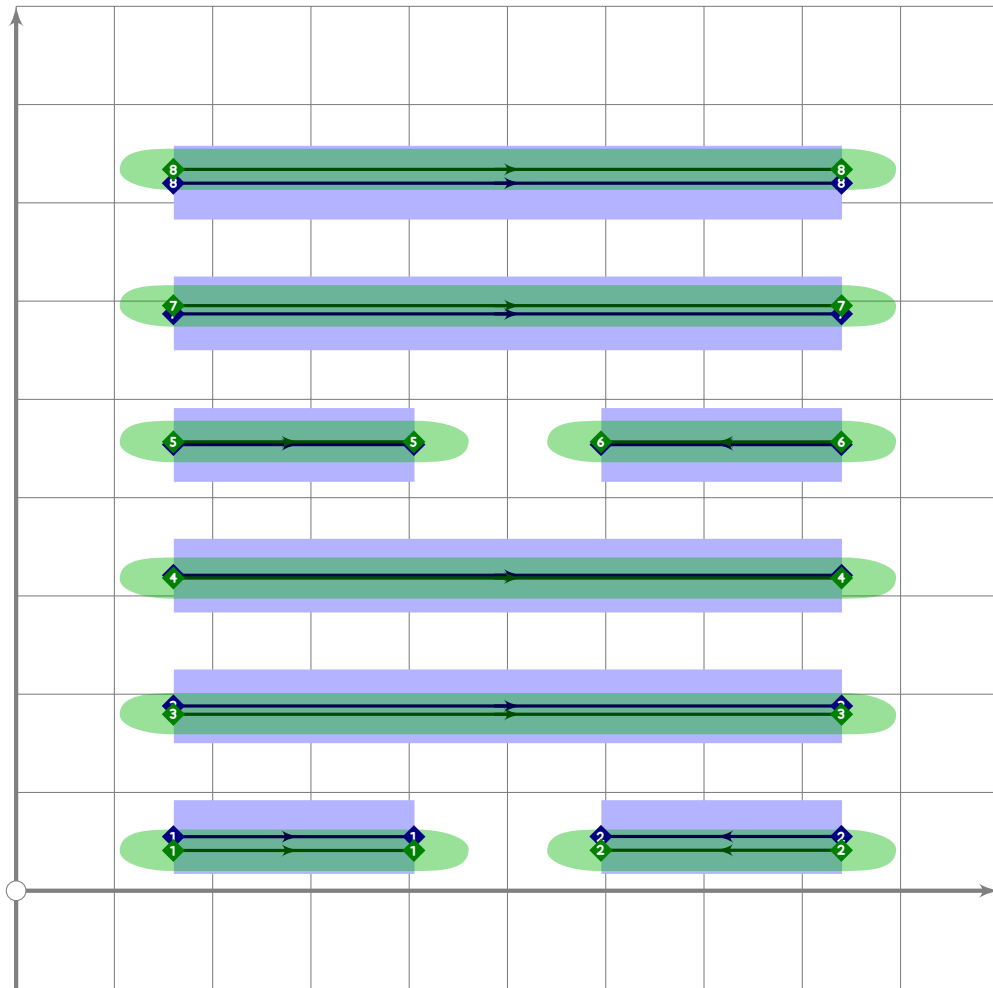
114 `make_hexagram(54,1,1,0,1,0,0);`



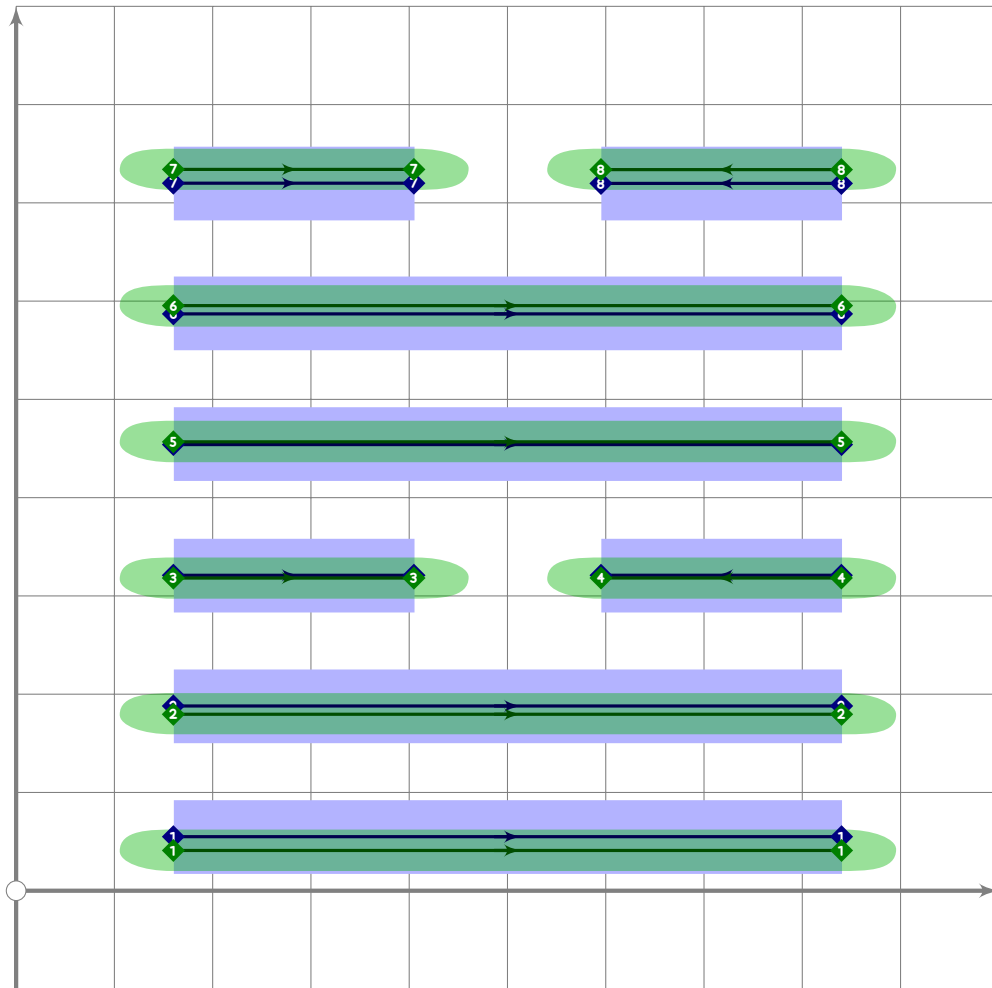
115 `make_hexagram(55,1,0,1,1,0,0);`



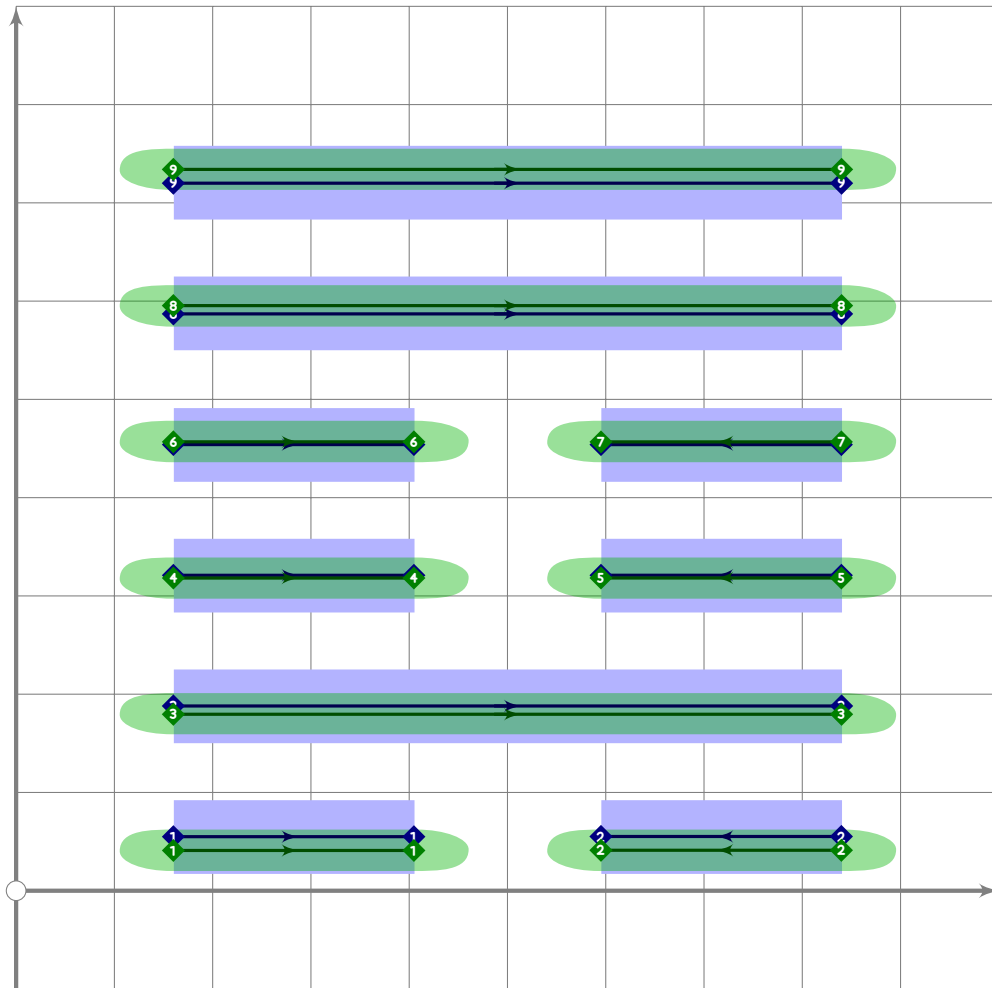
116 `make_hexagram(56,0,0,1,1,0,1);`



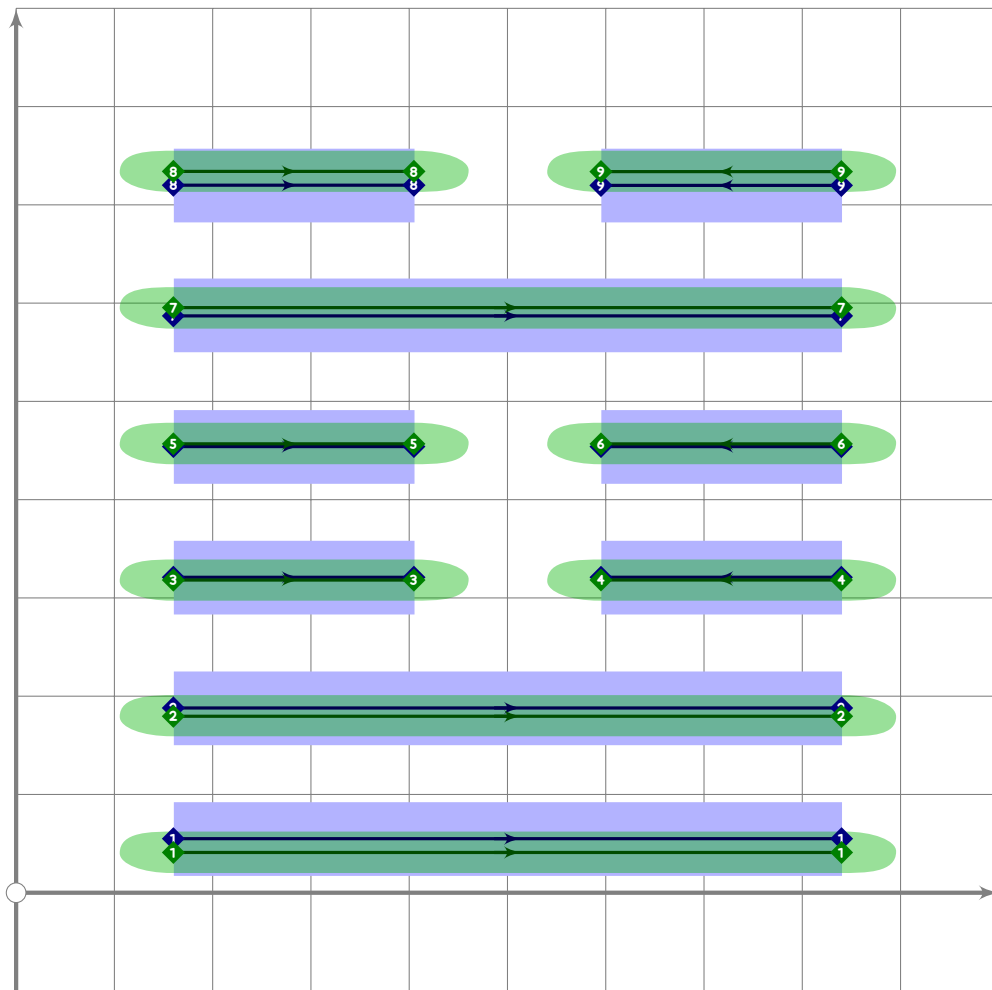
117 `make_hexagram(57,0,1,1,0,1,1);`



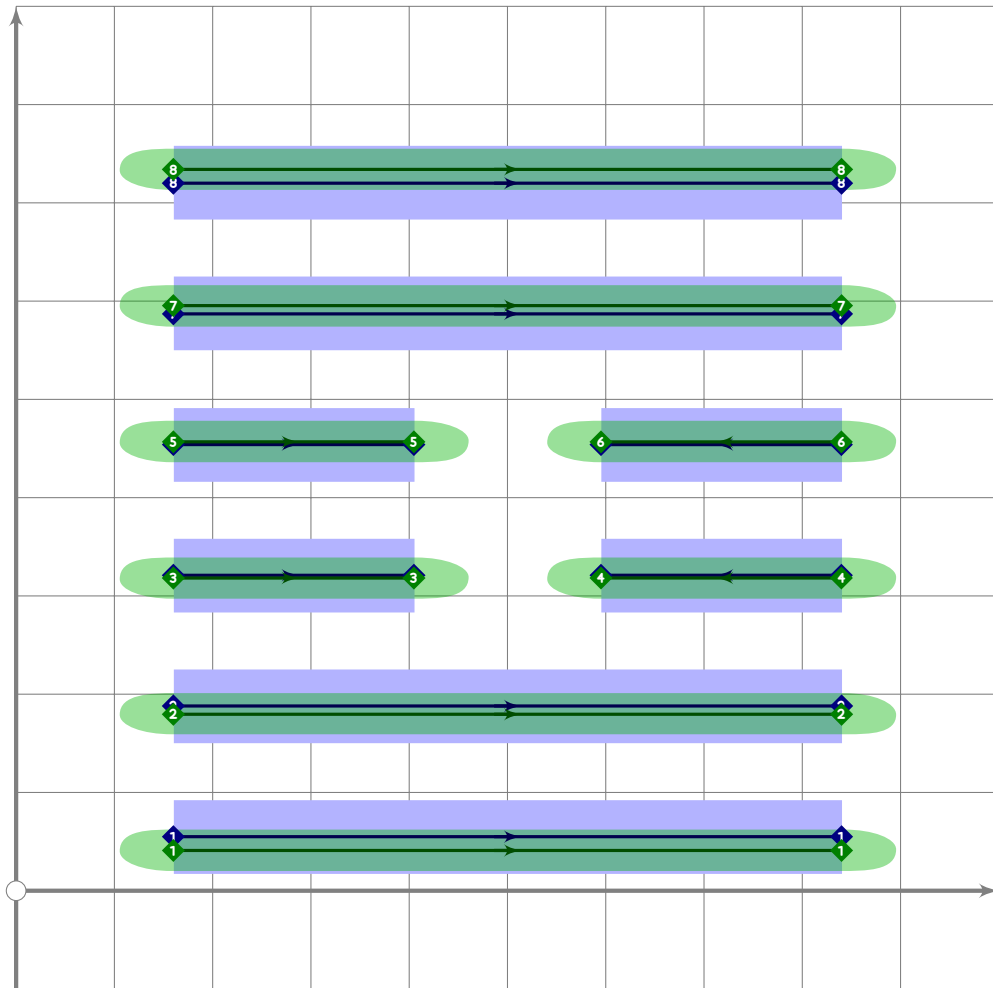
118 `make_hexagram(58,1,1,0,1,1,0);`



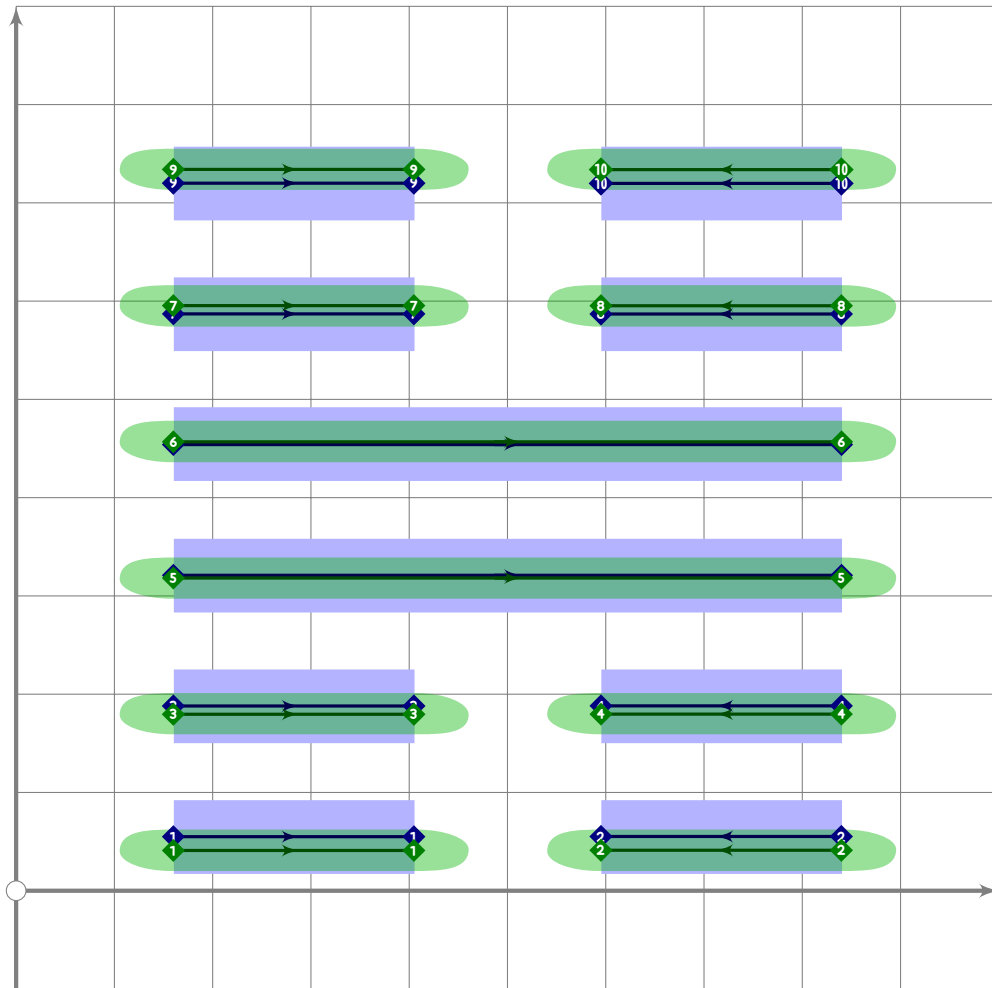
119 `make_hexagram(59,0,1,0,0,1,1);`



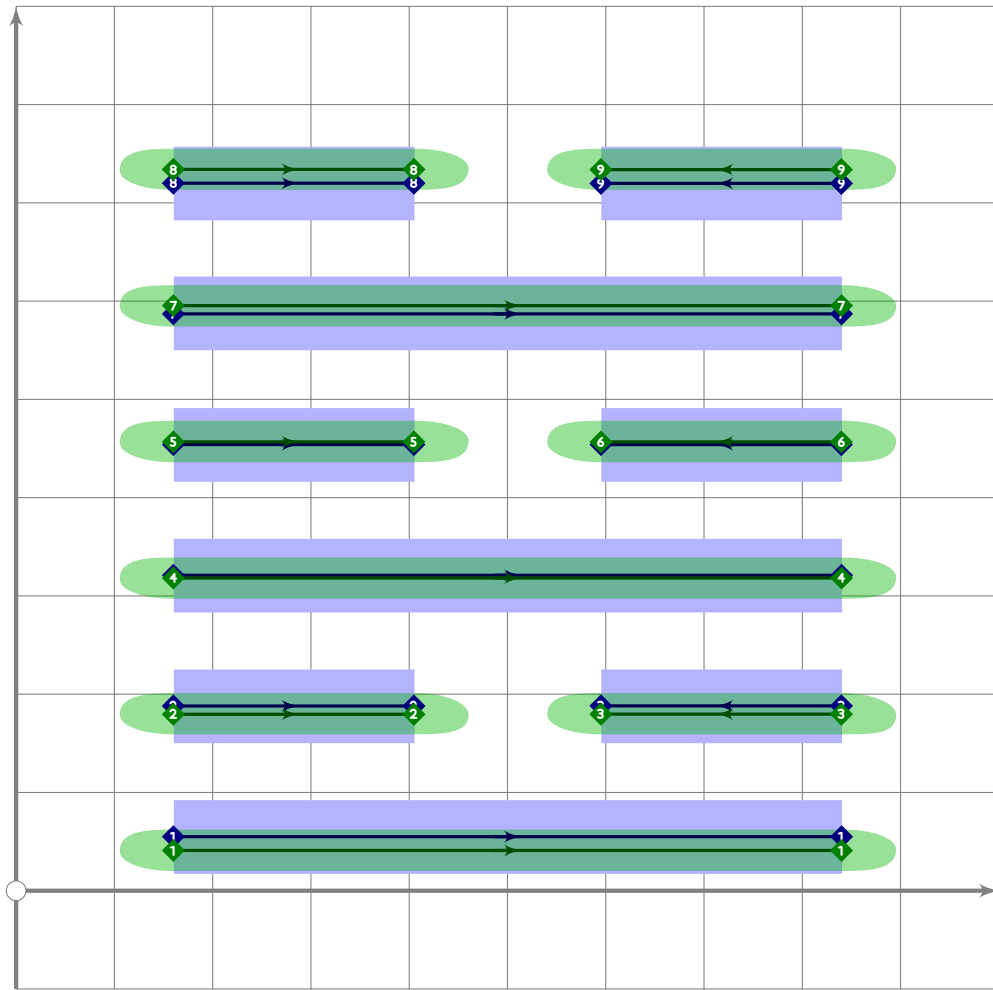
120 `make_hexagram(60,1,1,0,0,1,0);`



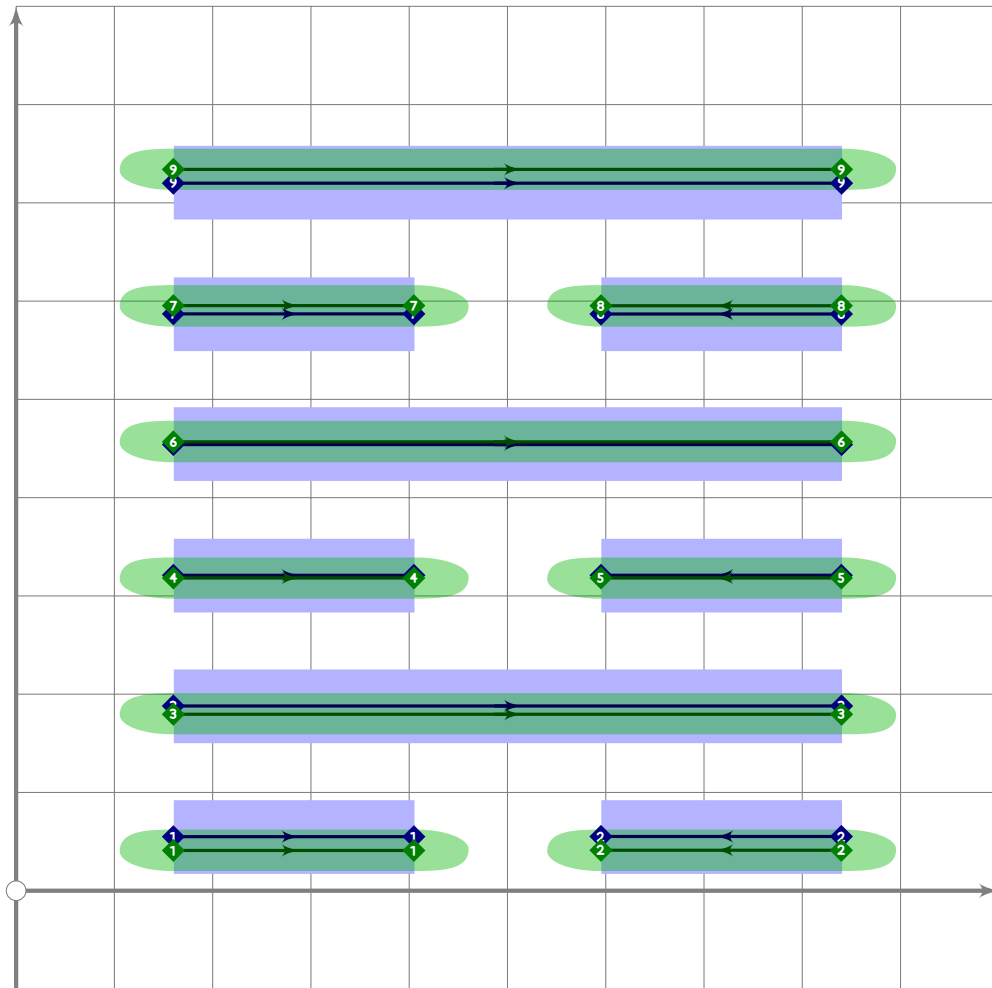
121 `make_hexagram(61,1,1,0,0,1,1);`



122 `make_hexagram(62,0,0,1,1,0,0);`



123 `make_hexagram(63,1,0,1,0,1,0);`



```
124 make_hexagram(64,0,1,0,1,0,1);
```

```
125
```

```
126
```

```
127
```

```
128 endfont;
```

```
129
```

```
130
```

Part IV

U+4E00 to U+75FF

tsuku-4e.mp

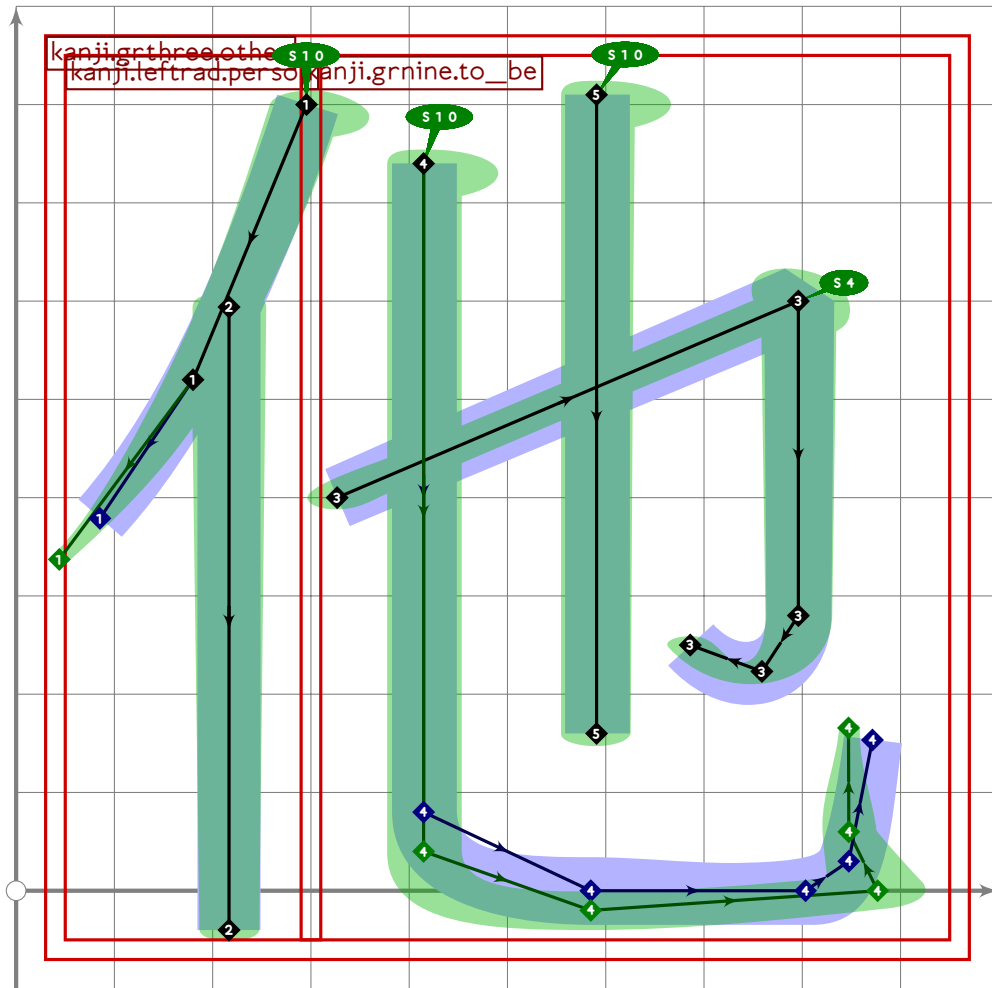
```
1 %
2 % Unicode page 4e (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradeeight.mp;
38 input gradefour.mp;
39 input gradenine.mp;
40 input gradeone.mp;
41 input gradesix.mp;
42 input gradethree.mp;
43 input gradetwo.mp;
44 input leftrad.mp;
45 input radical.mp;
46 input rare.mp;
47
48 

---

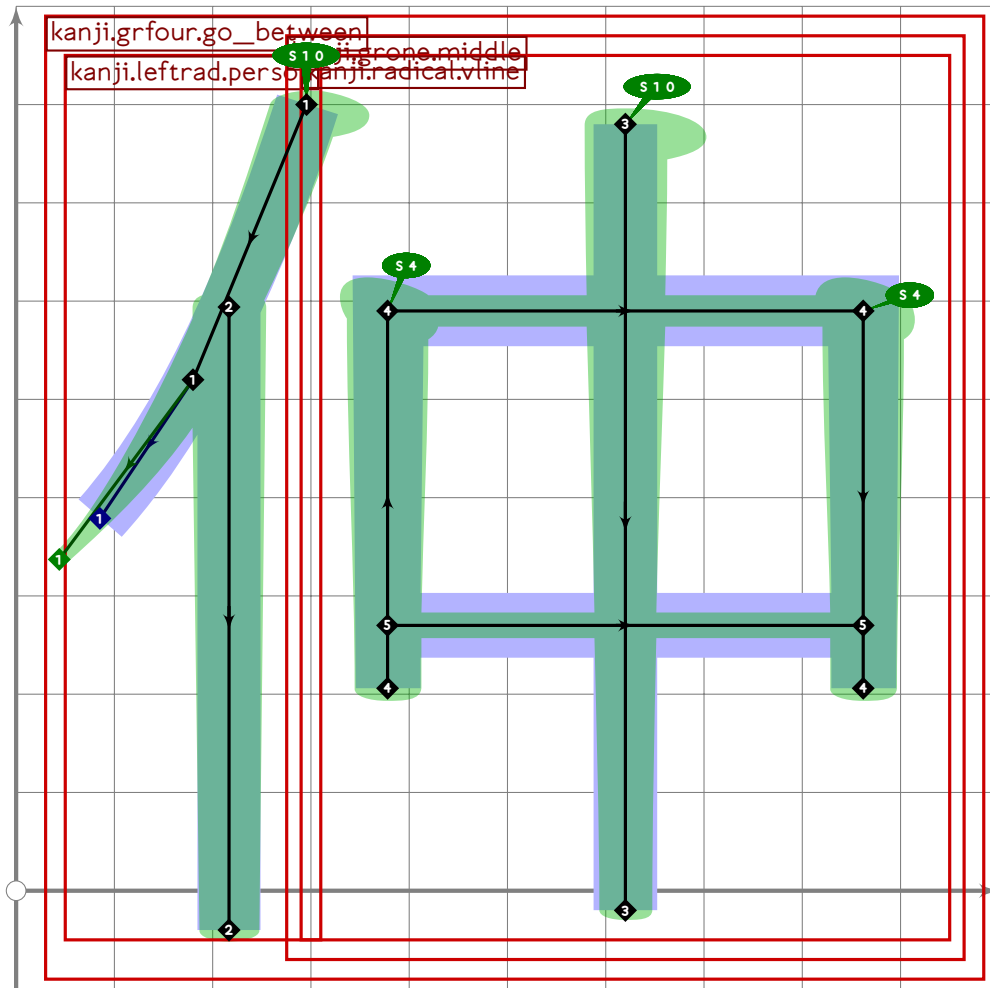

```



```

49
50 vardef tsu_curve.kanji.grthree.other =
51   push_pbox_toexpand("kanji.grthree.other");
52   build_kanji.lr(300,20)
53     (tsu_curve.kanji.leftrad.person)
54     (tsu_curve.kanji.grnine.to_be);
55   expand_pbox;
56 enddef;
57
58

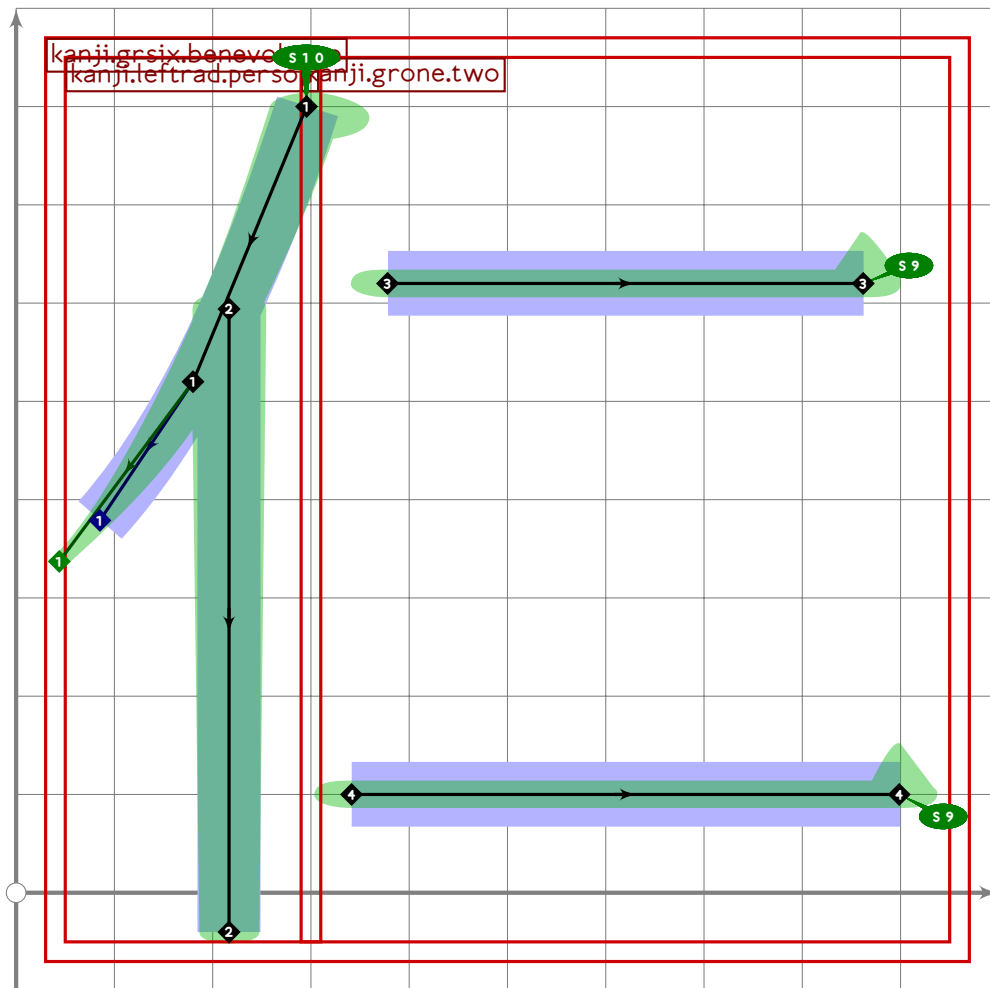
```



```

59
60 vardef tsu_curve.kanji.grfour.go_between =
61   push_pbox_toexpand("kanji.grfour.go_between");
62   build_kanji.lr(300,20)
63     (tsu_curve.kanji.leftrad.person)
64     (tsu_curve.kanji.grone.middle);
65   expand_pbox;
66 enddef;
67
68

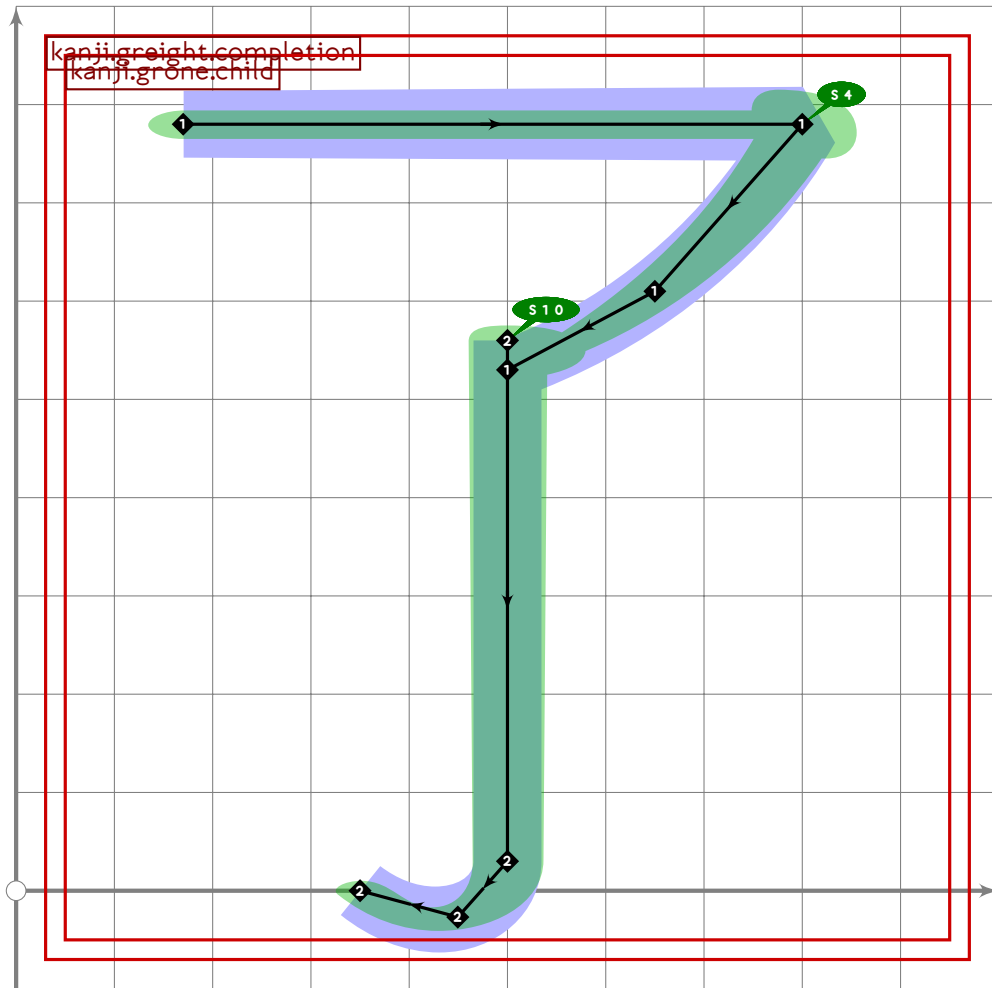
```



```

69
70 vardef tsu_curve.kanji.grsix.benevolence =
71   push_pbox_toexpand("kanji.grsix.benevolence");
72   build_kanji.lr(300,20)
73     (tsu_curve.kanji.leftrad.person)
74     (tsu_curve.kanji.grone.two);
75   expand_pbox;
76 enddef;
77
78

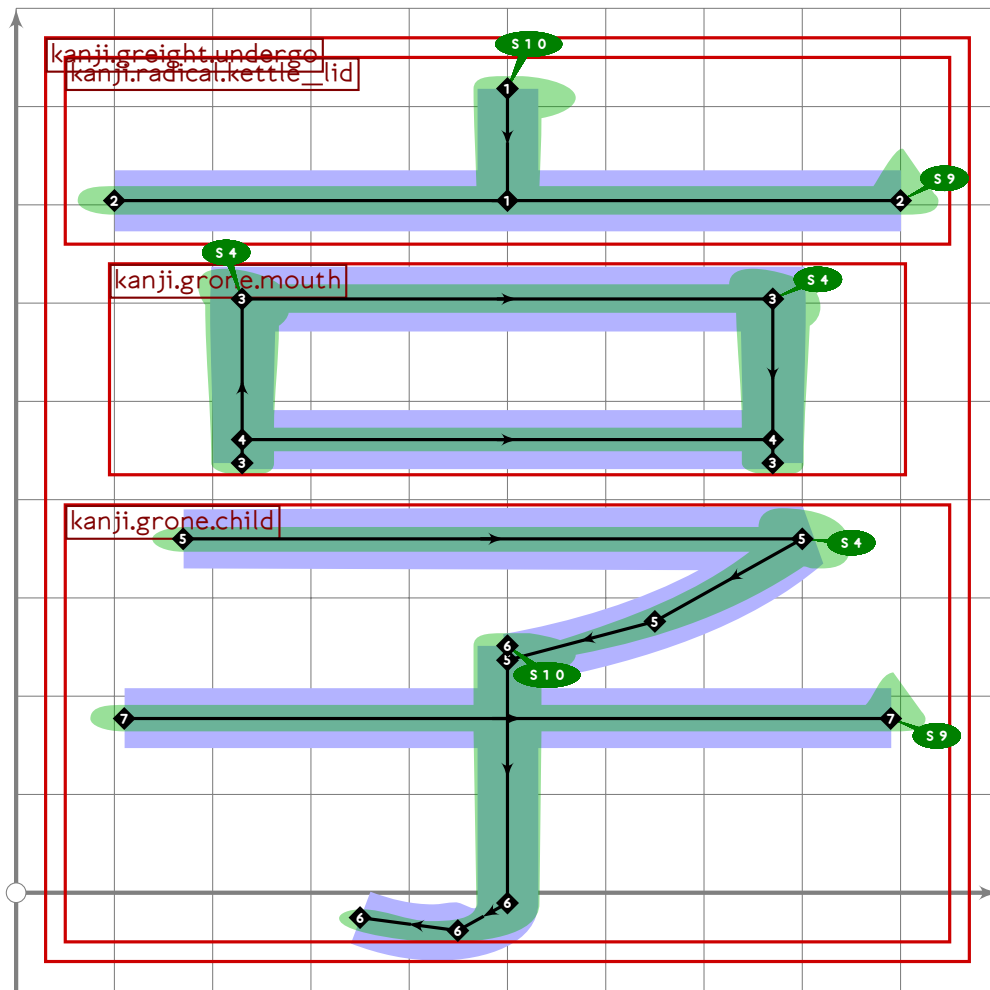
```

```

79
80 vardef tsu_curve.kanji.greight.completion =
81   push_pbox_toexpand("kanji.greight.completion");
82   tsu_curve.kanji.grone.child;
83   set_bosize(0,0);
84   expand_pbox;
85 enddef;

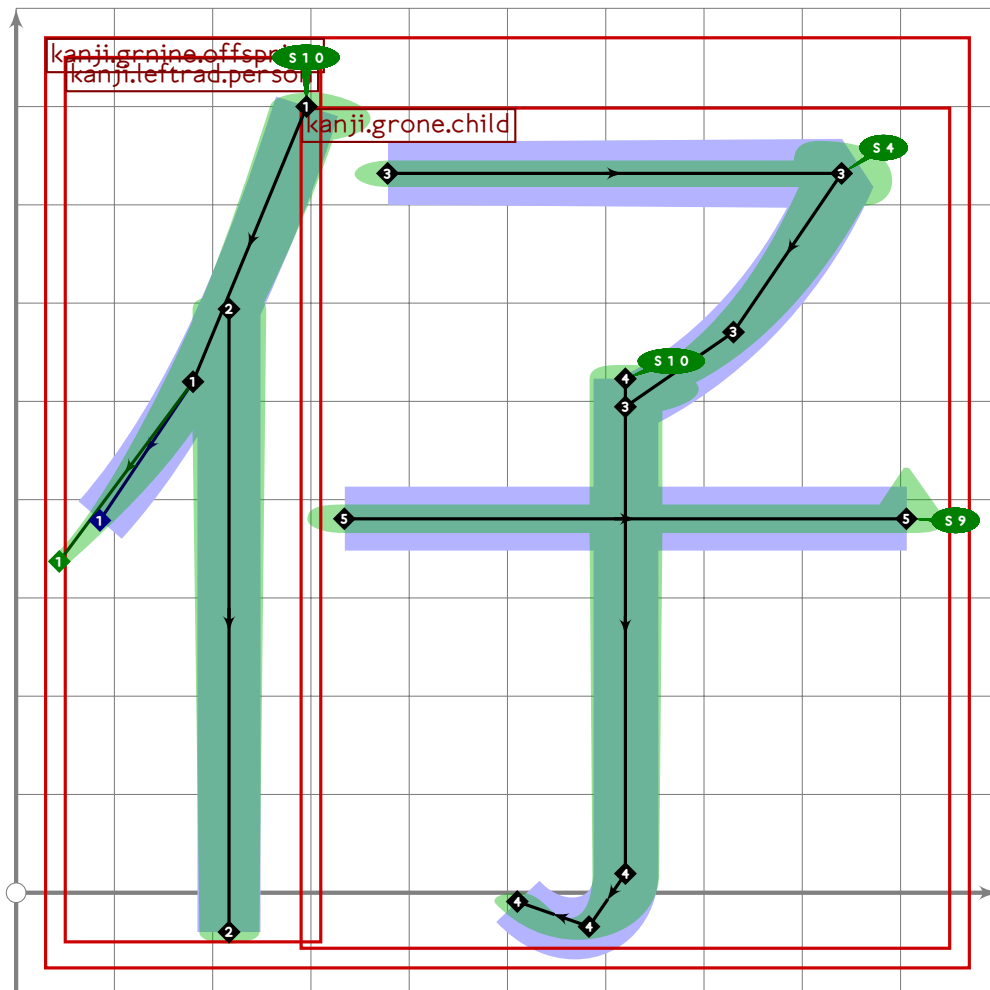
```



```

86
87 vardef tsu_curve.kanji.greight.undergo =
88   push_pbox_toexpand("kanji.greight.undergo");
89   build_kanji.level(build_kanji.tb(650;20)
90     (tsu_curve.kanji.radical.kettle_lid)
91     (build_kanji.tb(550;40)
92       (build_kanji.sscale(xscaled 0.9)(tsu_curve.kanji.grone.mouth))
93       (tsu_curve.kanji.grone.child)));
94   expand_pbox;
95 enddef;
96
97

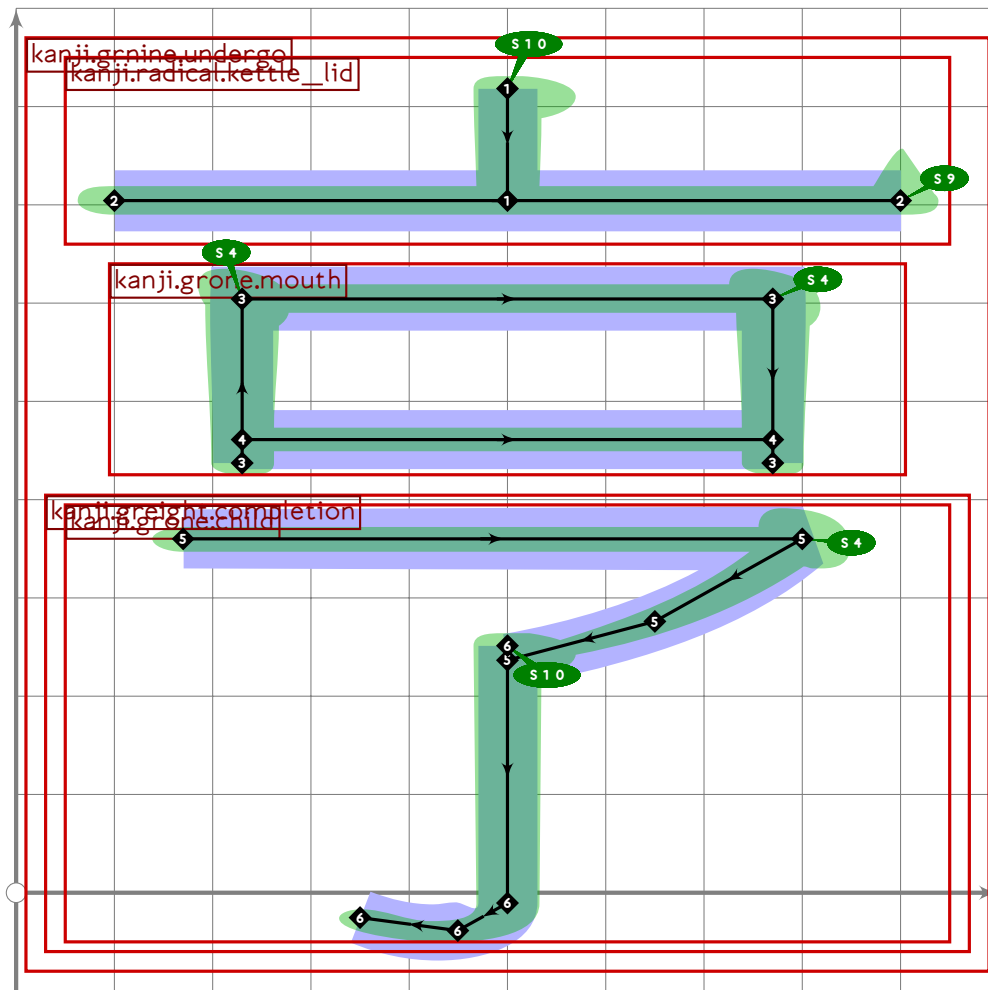
```



```

98
99 vardef tsu_curve.kanji.grnine.offspring =
100   push_pbox_toexpand("kanji.grnine.offspring");
101   build_kanji.level(build_kanji.lr(300,20)
102     (tsu_curve.kanji.leftrad.person)
103     (build_kanji.sscale(shifted (0,30) yscaled 0.95)
104       (tsu_curve.kanji.grone.child)));
105   expand_pbox;
106 enddef;

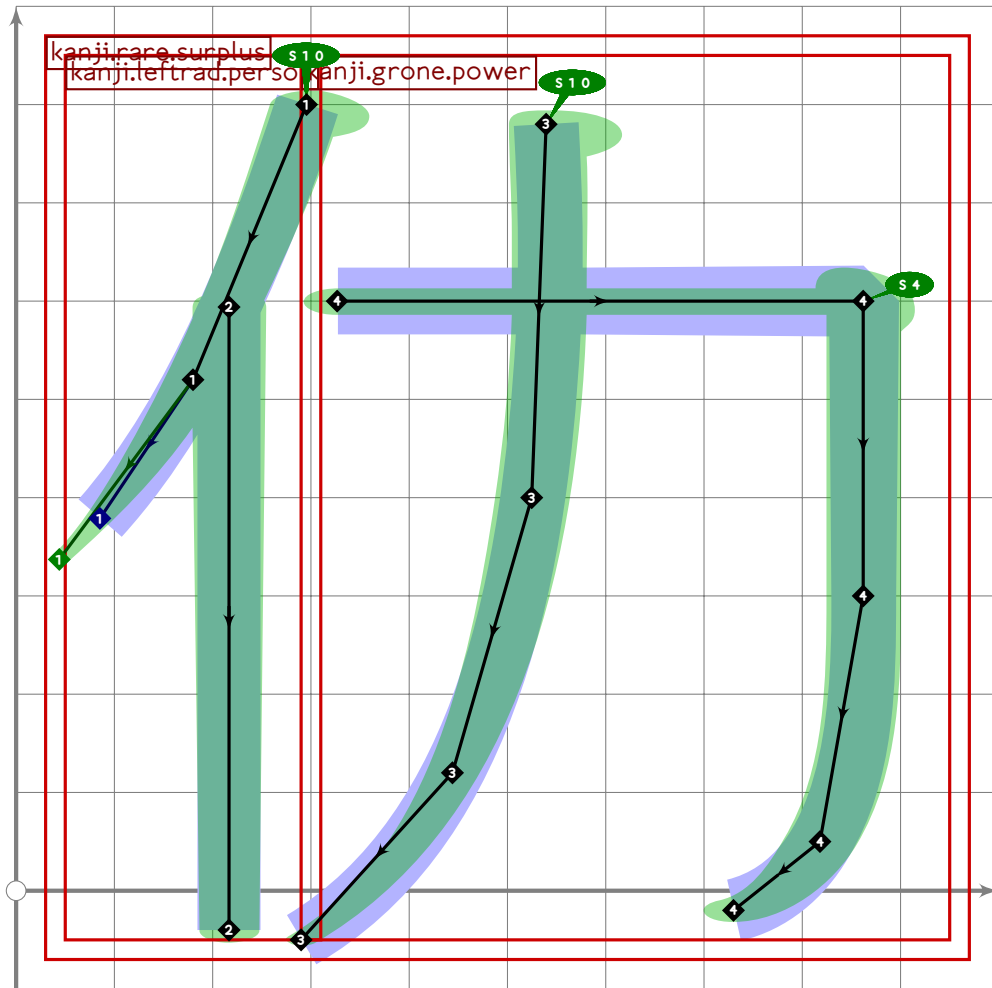
```



```

107
108 vardef tsu_curve.kanji.grnine.undergo =
109   push_pbox_toexpand("kanji.grnine.undergo");
110   build_kanji.level(build_kanji.tb(650;20)
111     (tsu_curve.kanji.radical.kettle_lid)
112     (build_kanji.tb(550;40)
113       (build_kanji.sscale(xscaled 0.9)(tsu_curve.kanji.grone.mouth))
114       (tsu_curve.kanji.greight.completion)));
115   expand_pbox;
116 enddef;
117
118

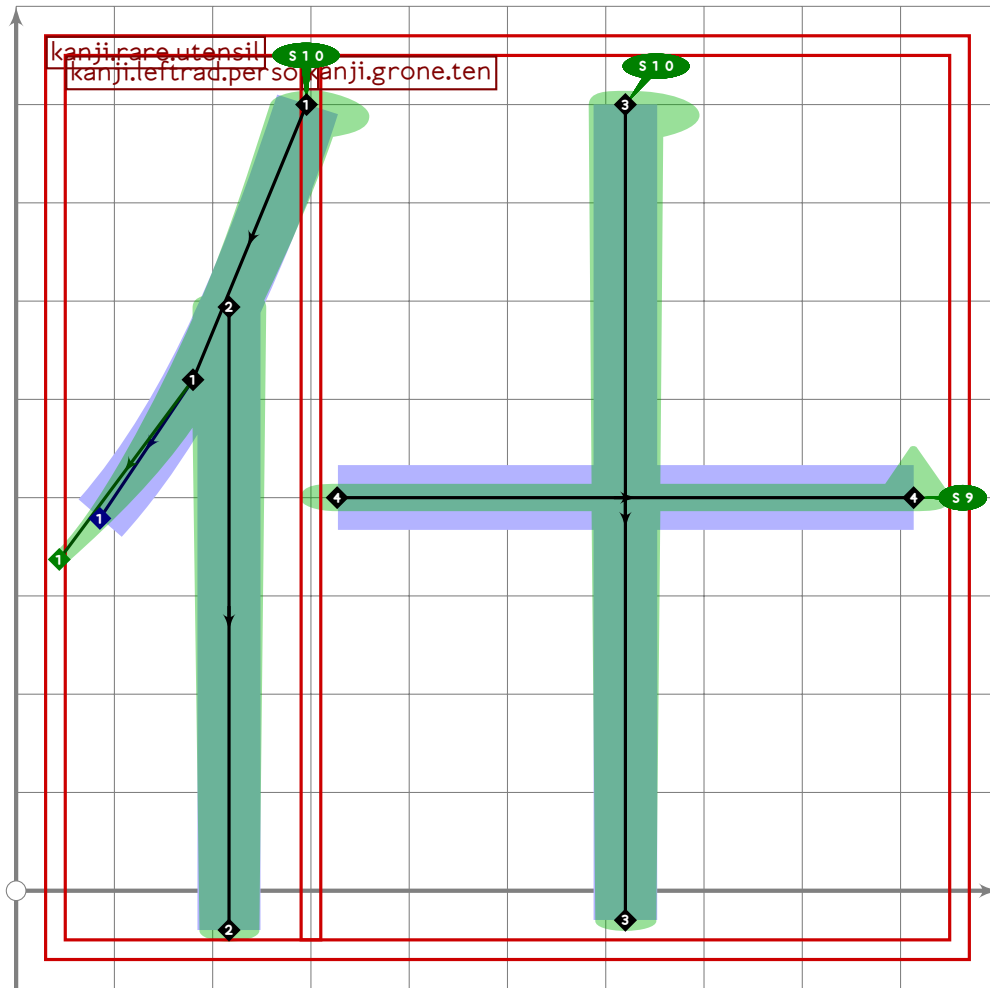
```

```

129
130 vardef tsu_curve.kanji.rare.surplus =
131   push_pbox_toexpand("kanji.rare.surplus");
132   build_kanji.lr(300,20)
133     (tsu_curve.kanji.leftrad.person)
134     (tsu_curve.kanji.grone.power);
135   expand_pbox;
136 enddef;

```



```

137
138 vardef tsu_curve.kanji.rare.utensil =
139   push_pbox_toexpand("kanji.rare.utensil");
140   build_kanji.lr(300,20)
141     (tsu_curve.kanji.leftrad.person)
142     (tsu_curve.kanji.grone.ten);
143   expand_pbox;
144 enddef;

```

145

146

147

148 % ichi/hito "one"

149 `begintsuglyph("uni4E00",0);`

[see page 368]

150 `tsu_curve.kanji.grone.one;`

151 `tsu_render;`

152 `endtsuglyph;`

153

154 % chuu/hinoto: "street"; "counter for leaves or guns"; "fourth zodiac sign"

155 % Uwaa ! Skala-sensei, I don't *want* to stick a thumbtack in my wrist!

156 `begintsuglyph("uni4E01",1);`

[see page 435]

157 `tsu_curve.kanji.grthree.thumbtack;`

```

158  tsu_render;
159  endtsuglyph;
160
161  % nana/shichi "seven"
162  begintsuglyph("uni4E03",3); [see page 376]
163  tsu_curve.kanji.grone.seven;
164  tsu_render;
165  endtsuglyph;
166
167  % man/yorozu "myriad"
168  begintsuglyph("uni4E07",7); [see page 412]
169  tsu_curve.kanji.grtwo.myriad;
170  tsu_render;
171  endtsuglyph;
172
173  % san/mi "three"
174  begintsuglyph("uni4E09",9); [see page 383]
175  tsu_curve.kanji.grone.three;
176  tsu_render;
177  endtsuglyph;
178
179  % ue/jyou "up"
180  begintsuglyph("uni4E0A",10); [see page 385]
181  tsu_curve.kanji.grone.up;
182  tsu_render;
183  endtsuglyph;
184
185  % shita/ka "down"
186  begintsuglyph("uni4E0B",11); [see page 346]
187  tsu_curve.kanji.grone.down;
188  tsu_render;
189  endtsuglyph;
190
191  % naka/chuu "middle"
192  begintsuglyph("uni4E2D",45); [see page 362]
193  tsu_curve.kanji.grone.middle;
194  tsu_render;
195  endtsuglyph;
196
197  % maru "circle"
198  begintsuglyph("uni4E38",56); [see page 396]
199  tsu_curve.kanji.grtwo.circle;
200  tsu_render;
201  endtsuglyph;
202
203  % sa/naga "notwithstanding" (needed for tsuku "make")
204  begintsuglyph("uni4E4D",77); [see page 465]
205  tsu_curve.kanji.rare.notwithstanding;

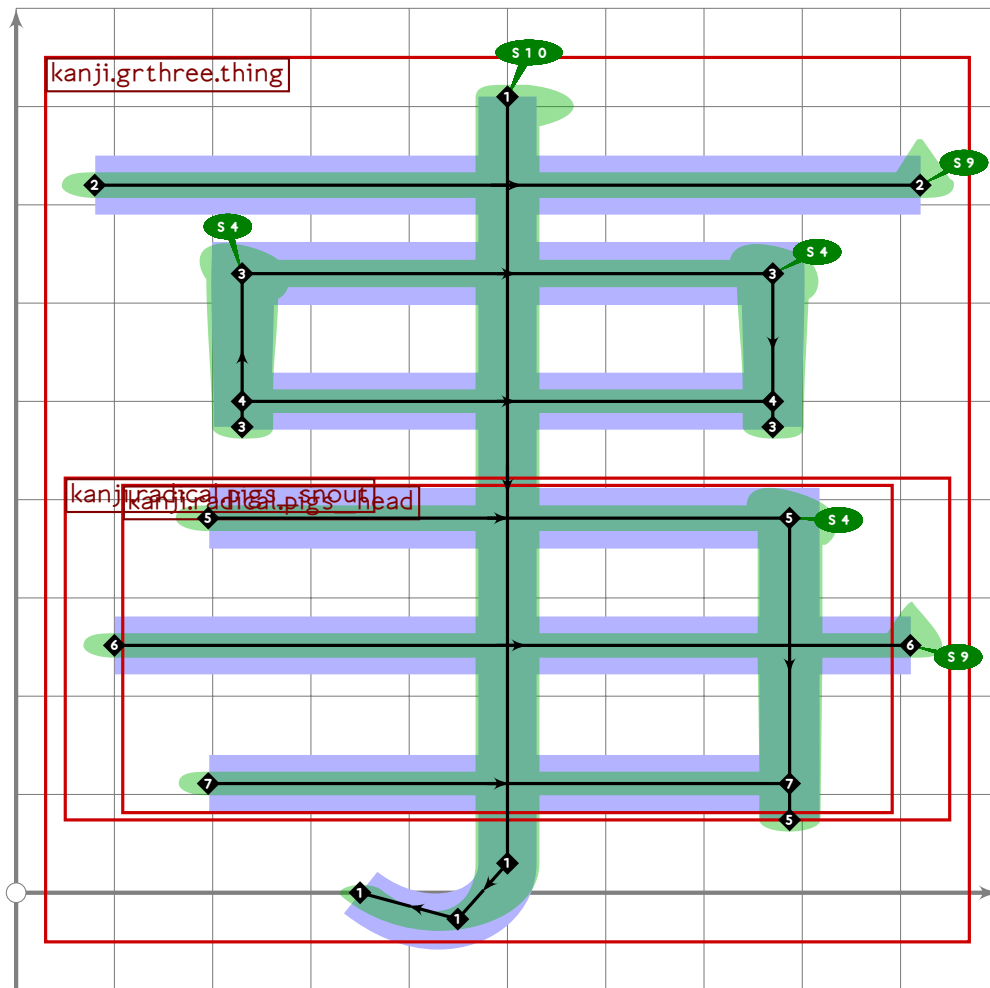
```



```

206  tsu_render;
207  endtsuglyph;
208
209  % kyu/kokono "nine"
210  begintsuglyph("uni4E5D";93); [see page 367]
211  tsu_curve.kanji.grone.nine;
212  tsu_render;
213  endtsuglyph;
214
215  % ya/nari "to be" (archaic)
216  begintsuglyph("uni4E5F";95); [see page 461]
217  tsu_curve.kanji.grnine.to_be;
218  tsu_render;
219  endtsuglyph;
220
221  % ryou "completion"
222  begintsuglyph("uni4E86";134); [see page 1193]
223  tsu_curve.kanji.greight.completion;
224  tsu_render;
225  endtsuglyph;
226
227  % yo/arakaji "before"
228  begintsuglyph("uni4E88";136); [see page 428]
229  tsu_curve.kanji.grthree.before;
230  tsu_render;
231  endtsuglyph;
232

```



```

233 % ji/koto "thing"
234 begintsuglyph("uni4E8B",139);
235 tsu_curve.kanji.grthree.thing;
236 tsu_render;
237 endsuglyph;
238
239 % ni/futa "two"
240 begintsuglyph("uni4E8C",140);
241 tsu_curve.kanji.grone.two;
242 tsu_render;
243 endsuglyph;
244
245 % un/i "say"
246 begintsuglyph("uni4E91",145);
247 tsu_curve.kanji.grnine.declaim;
248 tsu_render;
249 endsuglyph;
250
251 % go/itsu "five"
252 begintsuglyph("uni4E94",148);
253 tsu_curve.kanji.grone.five;

```

[see page 384]

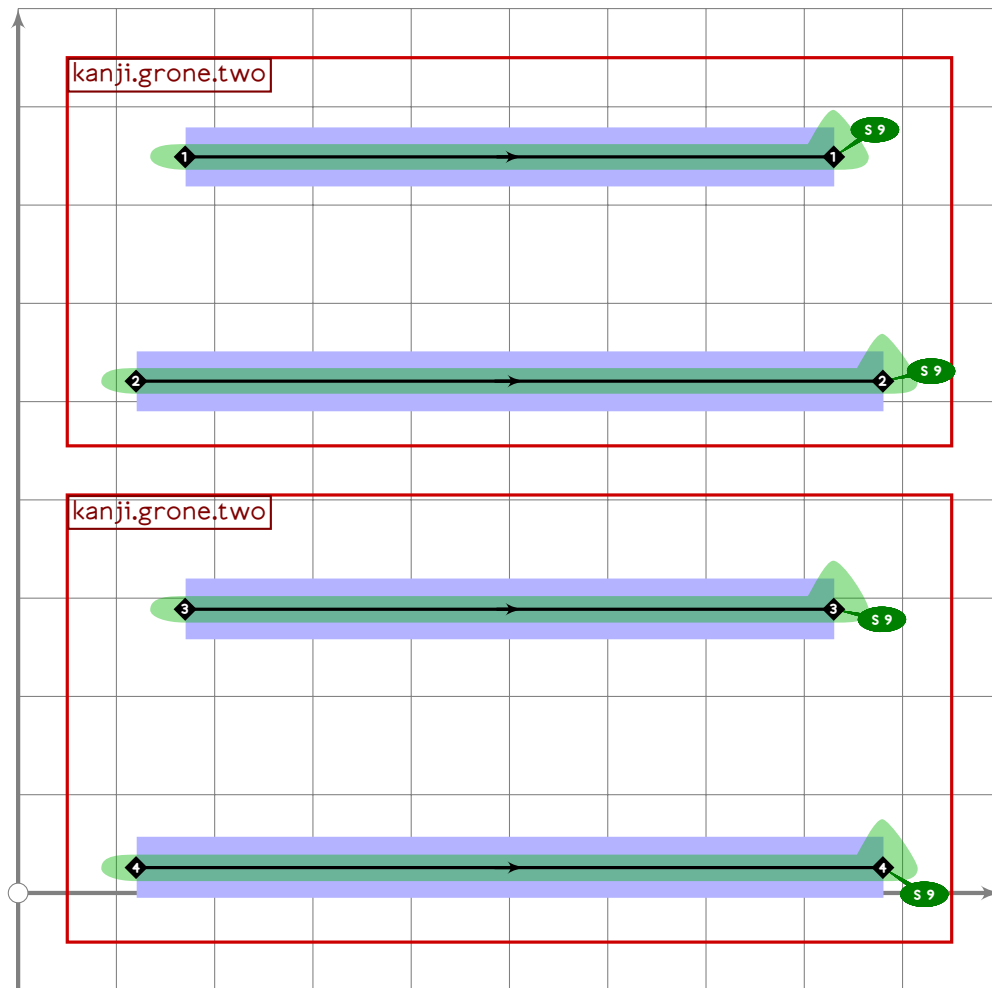
[see page 455]

[see page 354]

```

254 tsu_render;
255 endtsuglyph;
256

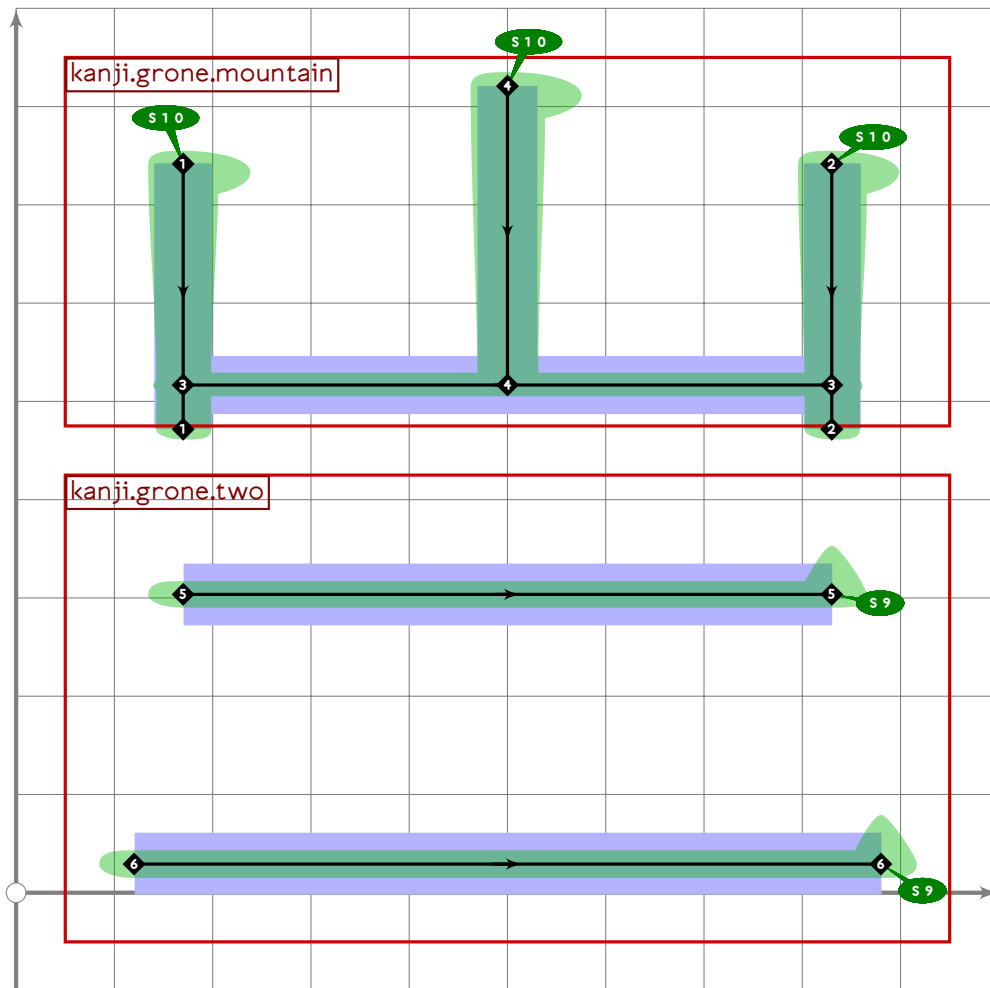
```



```

257 % extra
258 begint Suglyph("uni4E96";150);
259 build_kanji.tb(430;50)
260 (tsu_curve.kanji.grone.two)
261 (tsu_curve.kanji.grone.two);
262 tsu_render;
263 endtsuglyph;
264

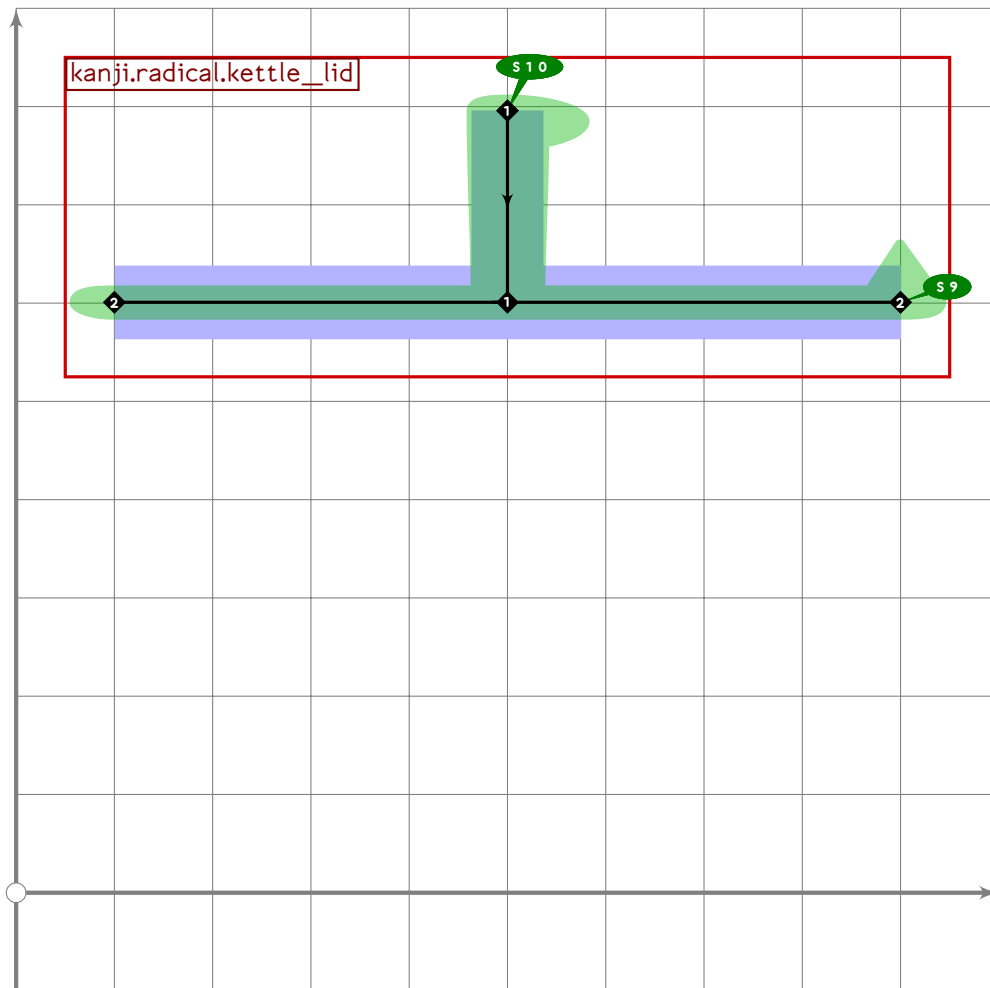
```



```

265 % extra
266 begint Suglyph("uni4E97";151);
267 build_kanji.tb(450;50)
268 (tsu_curve.kanji.grone.mountain)
269 (tsu_curve.kanji.grone.two);
270 tsu_render;
271 endtsuglyph;
272

```



```

273 % "kettle lid radical"
274 begintsuglyph("uni4EA0",160);
275 build_kanji.tb(500;50)
276   (tsu_curve.kanji.radical.kettle_lid)
277   ();
278   tsu_render;
279 endsuglyph;
280
281 % kou/maji "mix"
282 begintsuglyph("uni4EA4",164);
283   tsu_curve.kanji.grtwo.mix;
284   tsu_render;
285 endsuglyph;
286
287 % kou "undergo" (rarer form)
288 begintsuglyph("uni4EA8",168);
289   tsu_curve.kanji.grnine.undergo;
290   tsu_render;
291 endsuglyph;
292
293 % kyou "undergo" (more common form)

```

[see page 411]

[see page 1196]

```

294 begintsuglyph("uni4EAB",171);
295 tsu_curve.kanji.greight.undergo;
296 tsu_render;
297 endtsuglyph;

```

[see page 1194]

298

```

299 % kyou "capital"

```

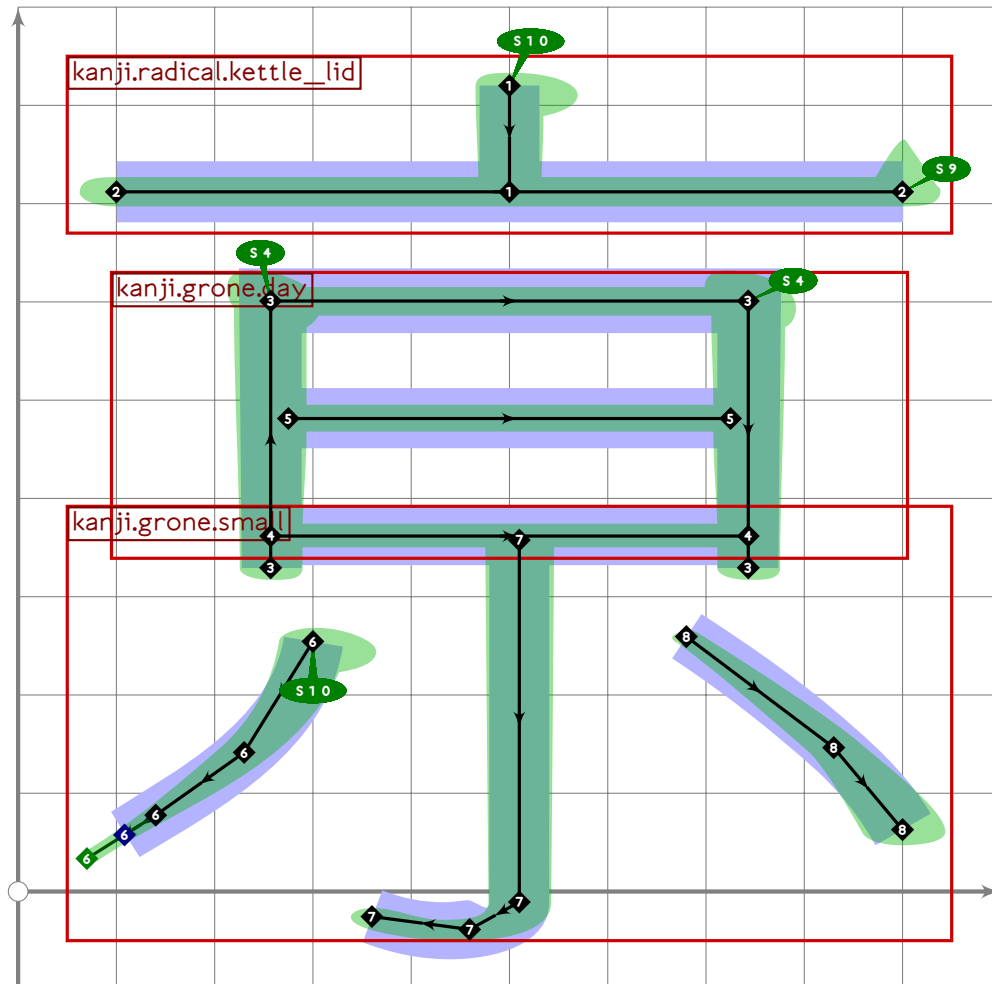
```

300 begintsuglyph("uni4EAC",172);
301 tsu_curve.kanji.grtwo.capital;
302 tsu_render;
303 endtsuglyph;

```

[see page 394]

304



```

305 % extra "capital"

```

```

306 begintsuglyph("uni4EB0",176);
307 build_kanji.level(build_kanji.tb(650,-40)
308   (tsu_curve.kanji.radical.kettle_lid)
309   (build_kanji.tb(500,70)
310     (build_kanji.sscale(xscaled 0.9)(tsu_curve.kanji.grone.day))
311     (tsu_curve.kanji.grone.small)));
312 set_boserif(-1,0,whatever);
313 tsu_render;
314 endtsuglyph;

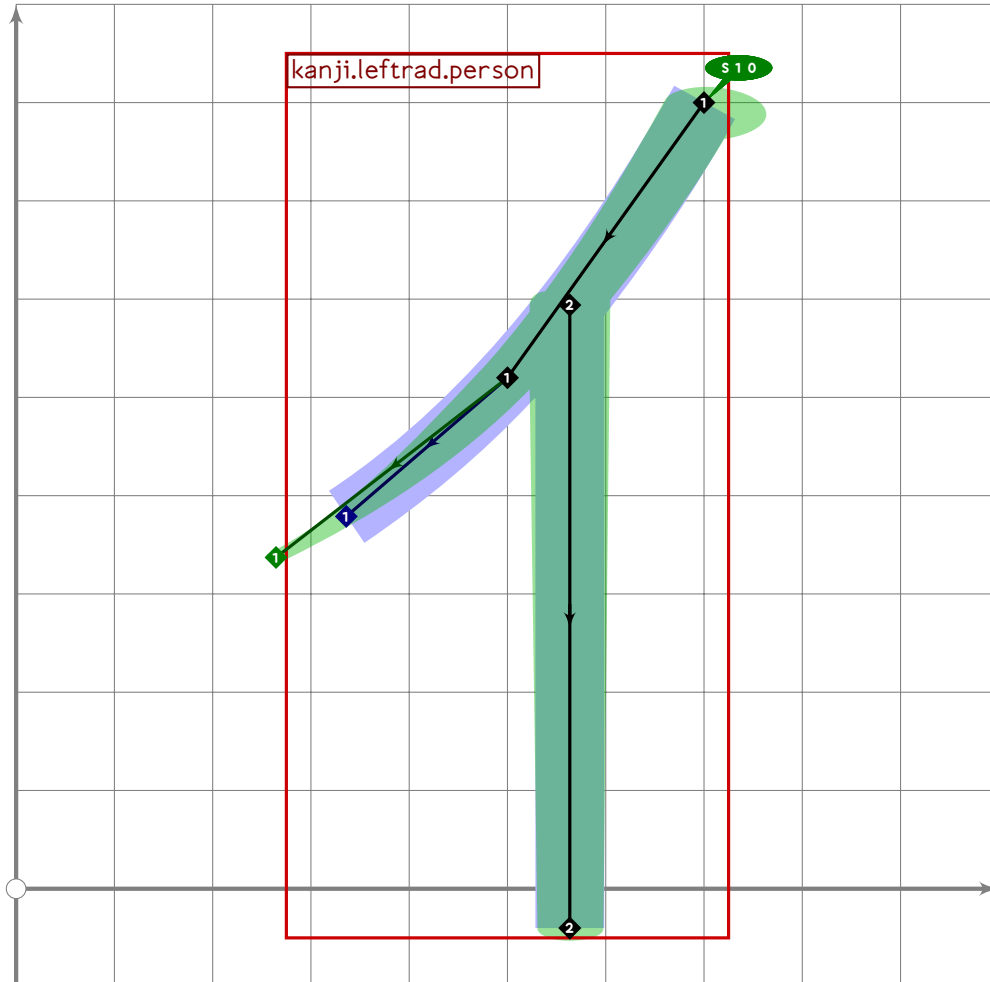
```

```

315
316 % hito/jin "person"
317 begintsuglyph("uni4EBA",186);
318 tsu_curve.kanji.grone.person;
319 tsu_render;
320 endtsuglyph;
321

```

[see page 371]



```

322 % hito/jin "person" as radical
323 begintsuglyph("uni4EBB",187);
324 build_kanji.sscale(xscaled 0.5)(tsu_curve.kanji.leftrad.person);
325 tsu_render;
326 endtsuglyph;
327

```

```

328 % juu "utensil"
329 begintsuglyph("uni4EC0",192);
330 tsu_curve.kanji.rare.utensil;
331 tsu_render;
332 endtsuglyph;
333

```

[see page 1199]

```

334 % jin "benevolence"
335 begintsuglyph("uni4EC1",193);

```

[see page 1192]

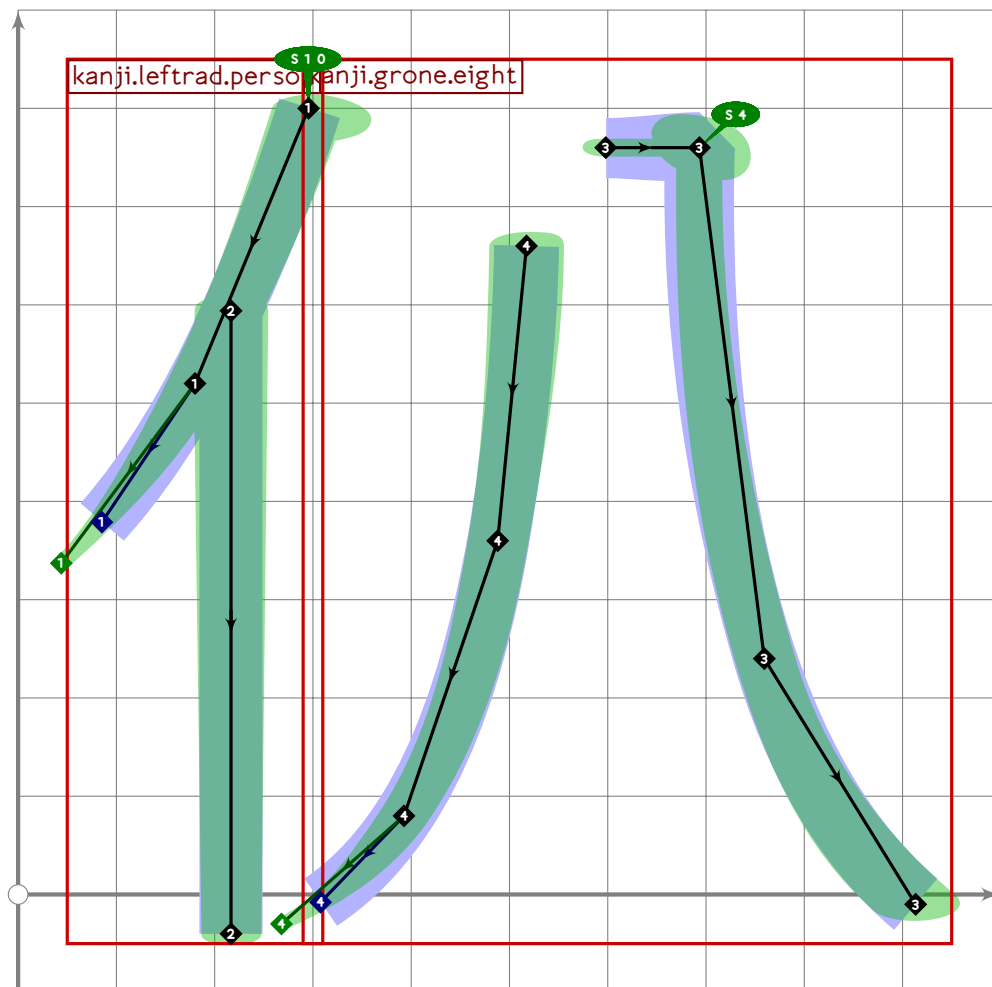
```

336 tsu_curve.kanji.grsix.benevolence;
337 tsu_render;
338 endtsuglyph;
339
340 % "surplus or excess"
341 begintsuglyph("uni4EC2";194);
342 tsu_curve.kanji.rare.surplus;
343 tsu_render;
344 endtsuglyph;
345
346 % ada "enemy"
347 begintsuglyph("uni4EC7";199);
348 tsu_curve.kanji.reference.enemy;
349 tsu_render;
350 endtsuglyph;
351

```

[see page 1198]

[see page 1197]

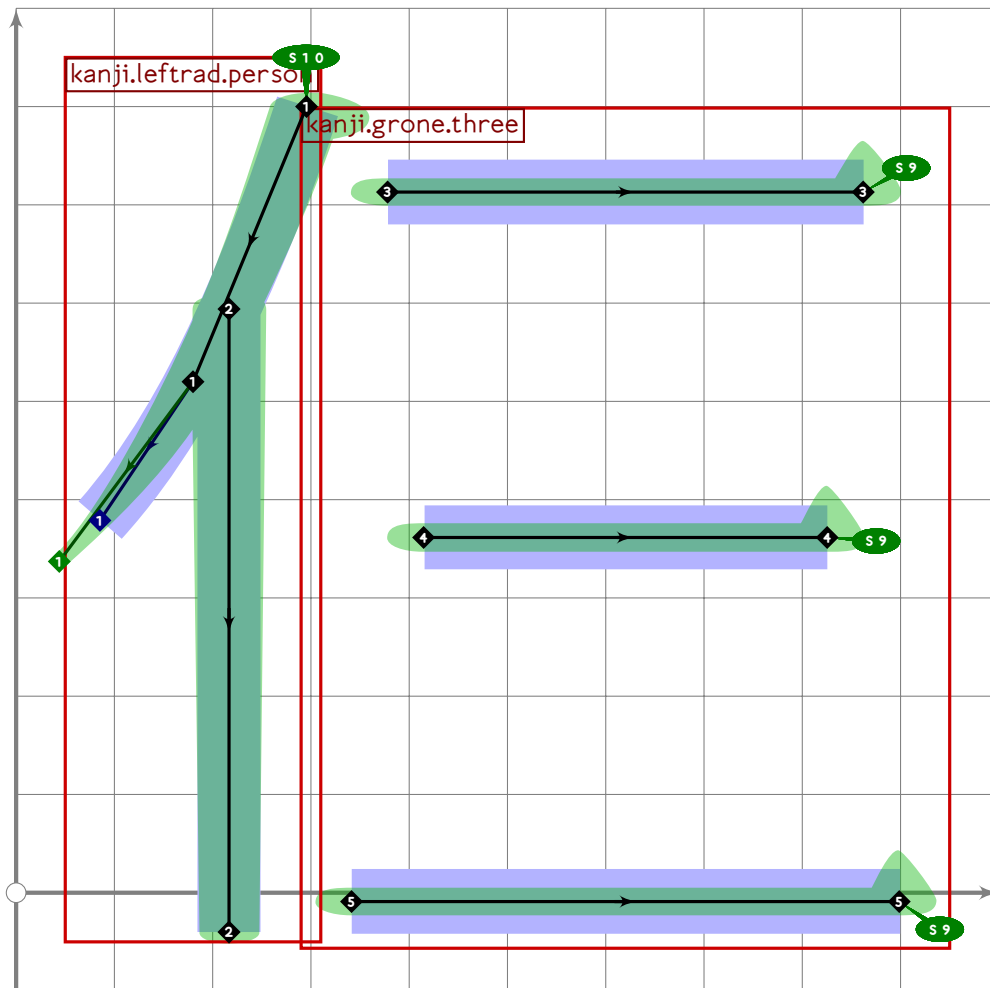


```

352 % extra
353 begintsuglyph("uni4EC8";200);
354 build_kanji.lr(300,20)
355 (tsu_curve.kanji.leftrad.person)
356 (tsu_curve.kanji.grone.eight);

```

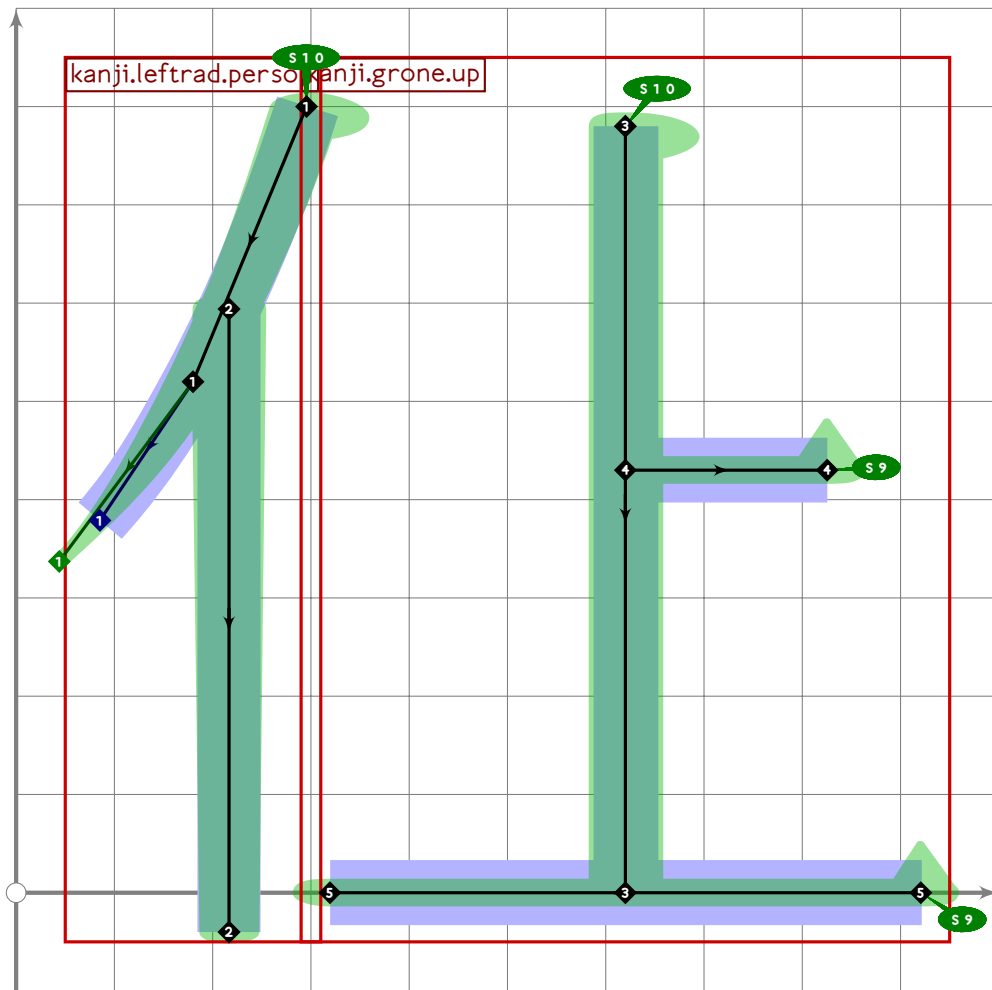

357 `tsu_render;`
358 `endtsuglyph;`
359
360 `% kon/ima "now"`
361 `begintsuglyph("uni4ECA",202);` [see page 416]
362 `tsu_curve.kanji.grtwo.now;`
363 `tsu_render;`
364 `endtsuglyph;`
365
366 `% ko "offspring"`
367 `begintsuglyph("uni4ED4",212);` [see page 1195]
368 `tsu_curve.kanji.grnine.offspring;`
369 `tsu_render;`
370 `endtsuglyph;`
371
372 `% ta/hoka "other"`
373 `begintsuglyph("uni4ED6",214);` [see page 1190]
374 `tsu_curve.kanji.grthree.other;`
375 `tsu_render;`
376 `endtsuglyph;`
377
378 `% fu/tsu "attach"`
379 `begintsuglyph("uni4ED8",216);` [see page 436]
380 `tsu_curve.kanji.grfour.attach;`
381 `tsu_render;`
382 `endtsuglyph;`
383
384 `% sen "wizard"`
385 `begintsuglyph("uni4ED9",217);` [see page 454]
386 `tsu_curve.kanji.greight.wizard;`
387 `tsu_render;`
388 `endtsuglyph;`
389



```

390 % extra
391 begint Suglyph("uni4EE8",232);
392 build_kanji.lr(300,20)
393   (tsu_curve.kanji.leftrad.person)
394   (build_kanji.sscale(shifted (0,-30) yscaled 0.95)
395     (tsu_curve.kanji.grone.three));
396 tsu_render;
397 endtsuglyph;
398

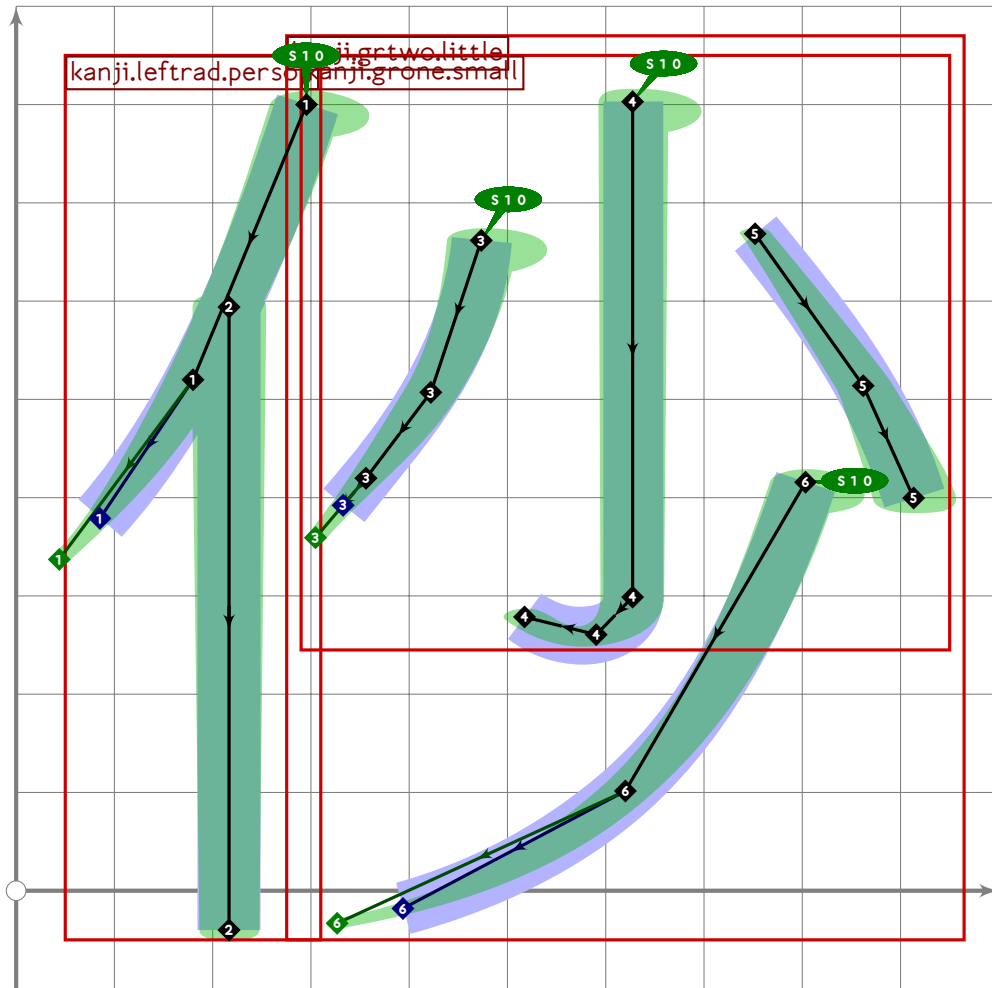
```



```

399 % extra
400 begint Suglyph("uni4EE9";233);
401 build_kanji.lr(300,20)
402   (tsu_curve.kanji.leftrad.person)
403   (tsu_curve.kanji.grone.up);
404   tsu_render;
405   endtsuglyph;
406

```



```

407 % extra
408 begintsuglyph("uni4EEF",239);
409 build_kanji.lr(300,20)
410   (tsu_curve.kanji.leftrad.person)
411   (tsu_curve.kanji.grtwo.little);
412   tsu_render;
413 endsuglyph;
414
415 % naka/chuu "go-between"
416 begintsuglyph("uni4EF2",242);
417   tsu_curve.kanji.grfour.go_between;
418   tsu_render;
419 endsuglyph;
420

```

[see page 1191]

tsuku-4f.mp

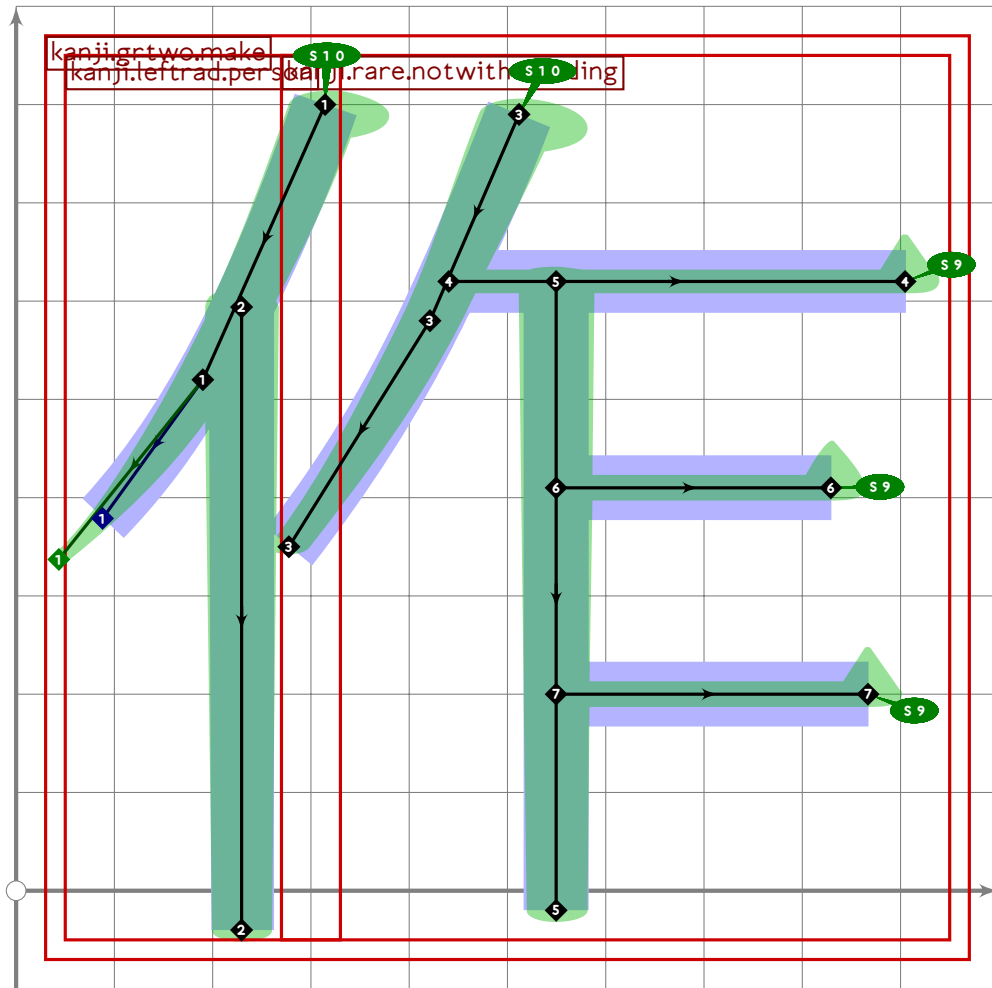
```
1 %
2 % Unicode page 4f (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradefive.mp;
38 input gradefour.mp;
39 input gradenine.mp;
40 input gradeone.mp;
41 input gradethree.mp;
42 input gradetwo.mp;
43 input leftrad.mp;
44 input radical.mp;
45 input rare.mp;
46
47 

---

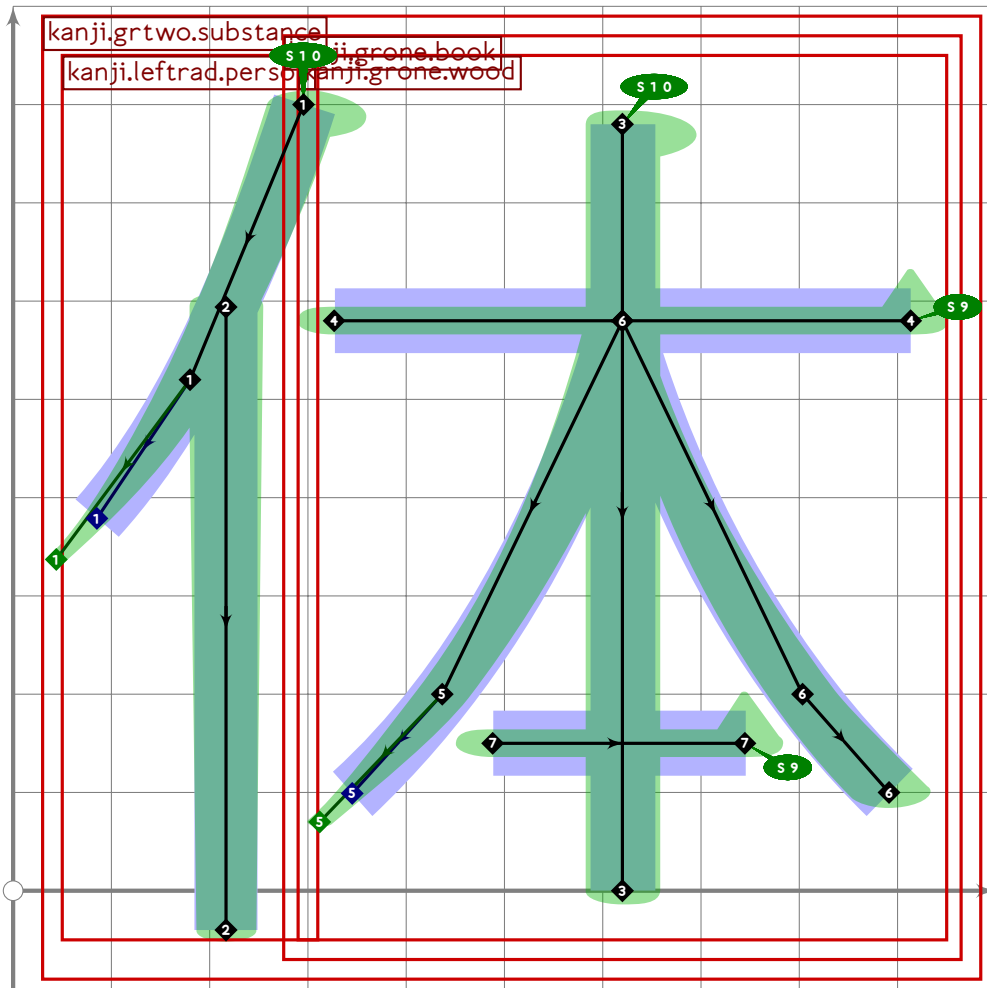

```



```

48
49 vardef tsu_curve.kanji.grtwo.make =
50   push_pbox_toexpand("kanji.grtwo.make");
51   build_kanji.lr(300,60)
52     (tsu_curve.kanji.leftrad.person)
53     (tsu_curve.kanji.rare.notwithstanding);
54   expand_pbox;
55 enddef;

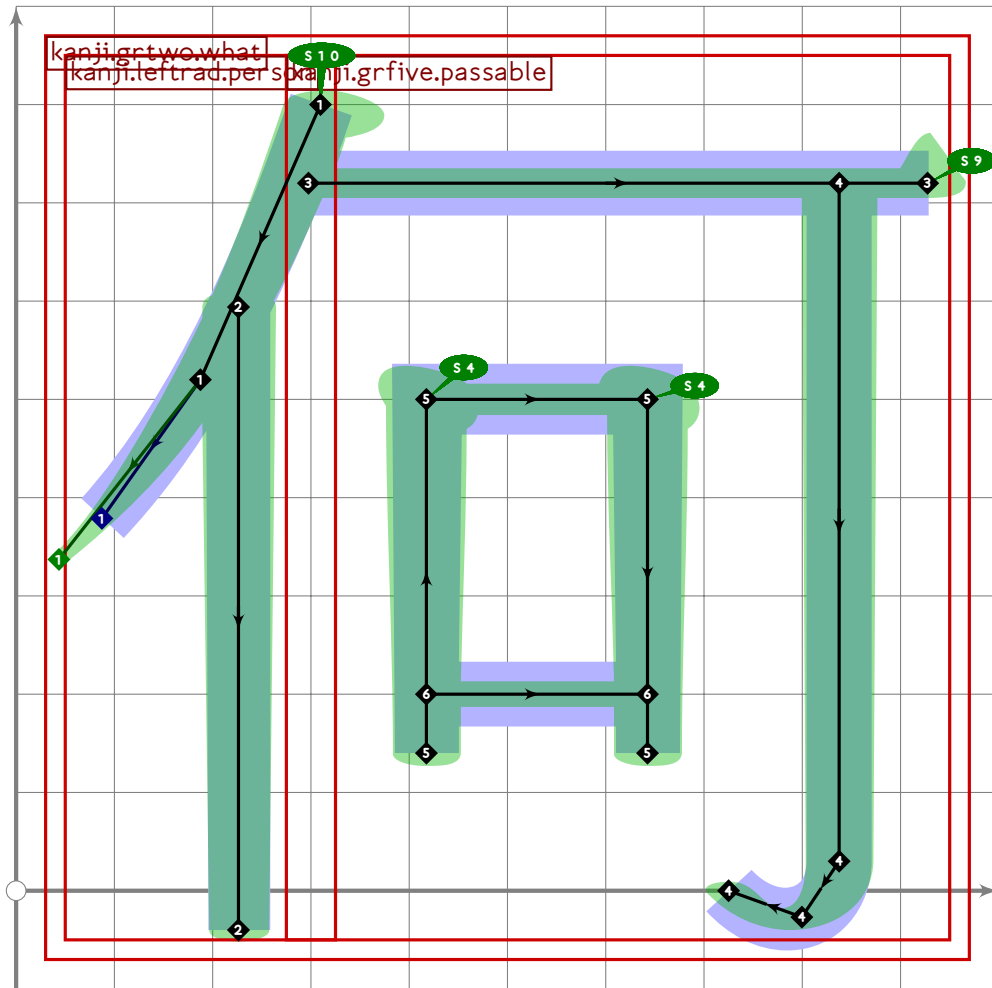
```



```

56
57 vardef tsu_curve.kanji.grtwo.substance =
58   push_pbox_toexpand("kanji.grtwo.substance");
59   build_kanji.lr(300,20)
60     (tsu_curve.kanji.leftrad.person)
61     (tsu_curve.kanji.grone.book);
62   expand_pbox;
63 enddef;

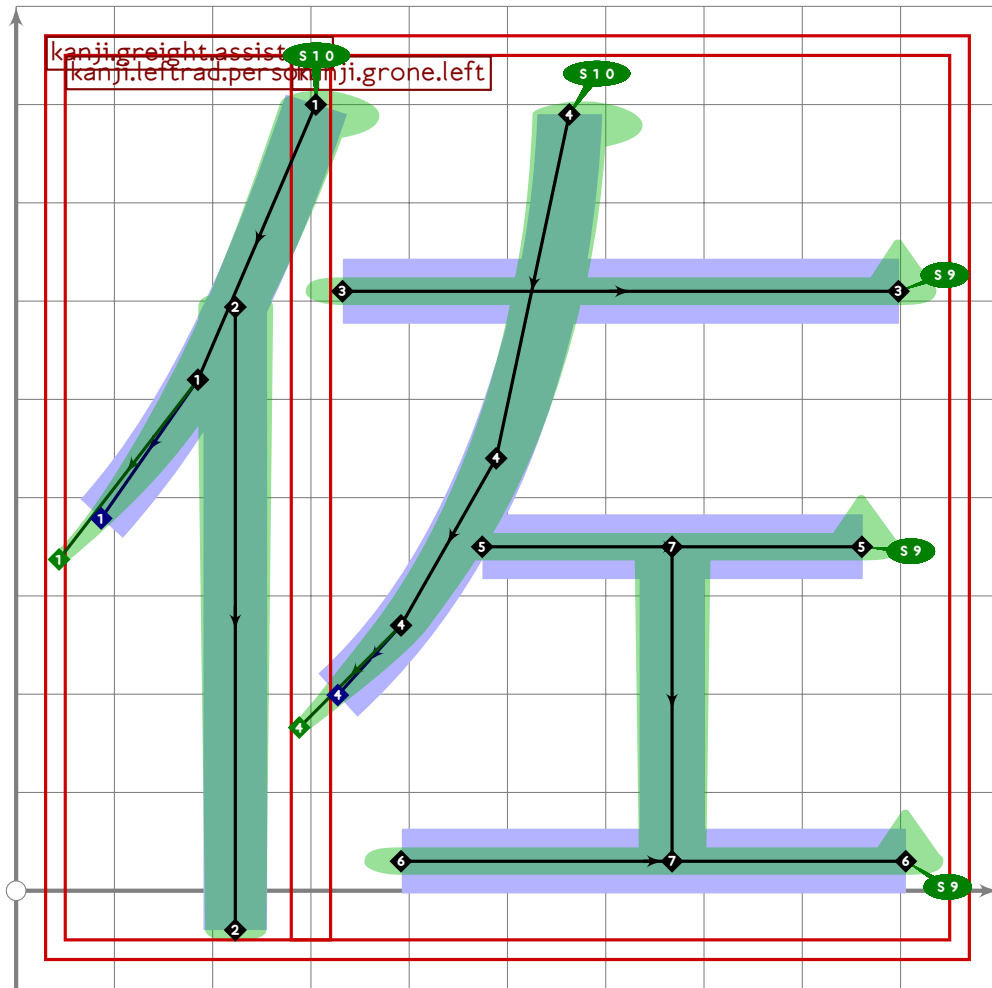
```

```

64
65 vardef tsu_curve.kanji.grtwo.what =
66   push_pbox_toexpand("kanji.grtwo.what");
67   build_kanji.lr(300,50)
68     (tsu_curve.kanji.leftrad.person)
69     (tsu_curve.kanji.grfive.passable);
70   expand_pbox;
71 enddef;
72
73

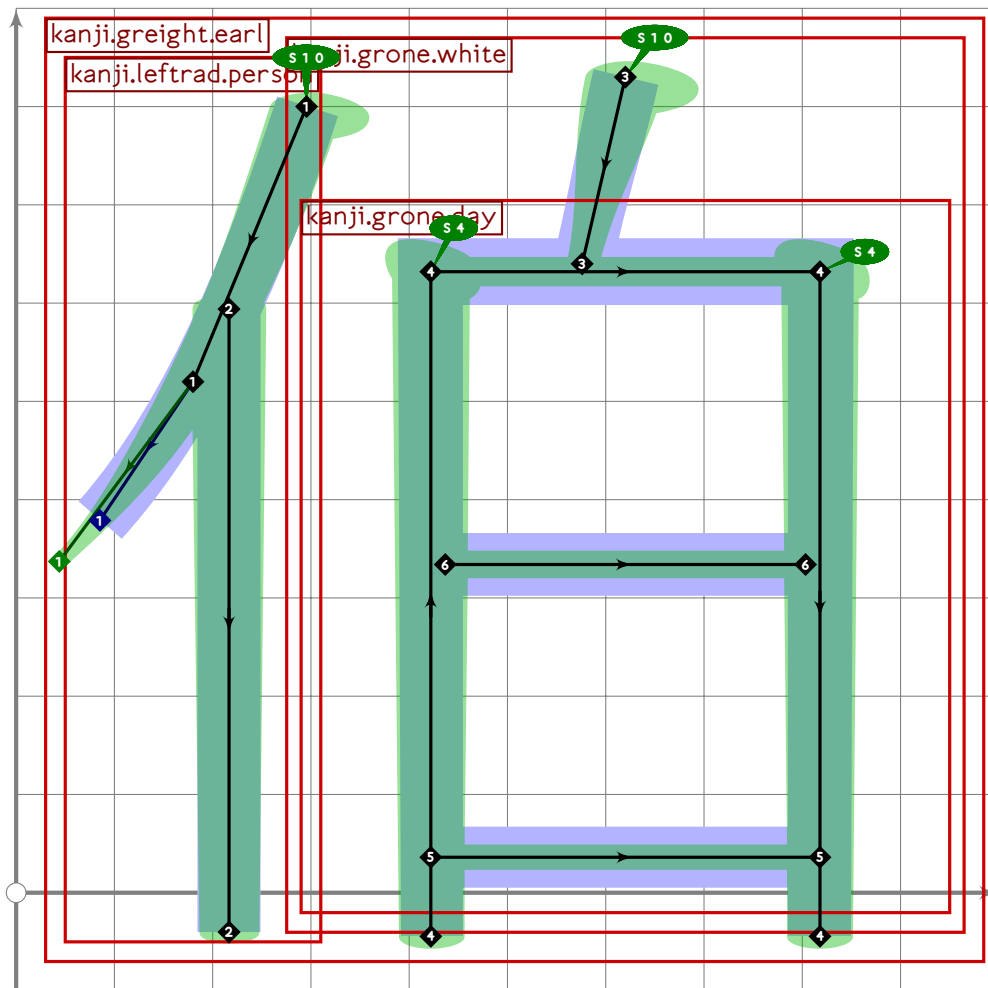
```



```

74
75 vardef tsu_curve.kanji.greight.assist =
76   push_pbox_toexpand("kanji.greight.assist");
77   build_kanji.lr(300,40)
78     (tsu_curve.kanji.leftrad.person)
79     (tsu_curve.kanji.grone.left);
80   expand_pbox;
81 enddef;

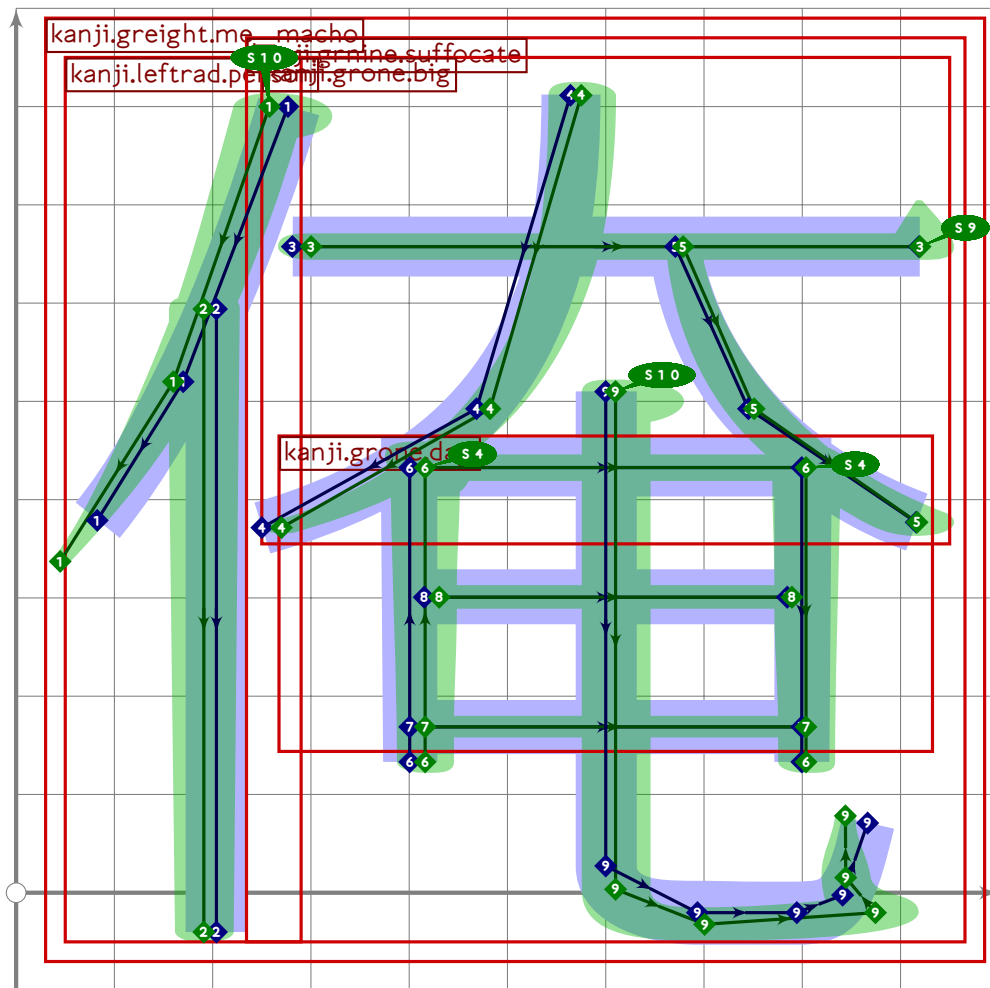
```



```

82
83 vardef tsu_curve.kanji.greight.earl =
84   push_pbox_toexpand("kanji.greight.earl");
85   build_kanji.lr(300,20)
86     (tsu_curve.kanji.leftrad.person)
87     (build_kanji.sscale(shifted (0,20))(tsu_curve.kanji.grone.white));
88   expand_pbox;
89 enddef;

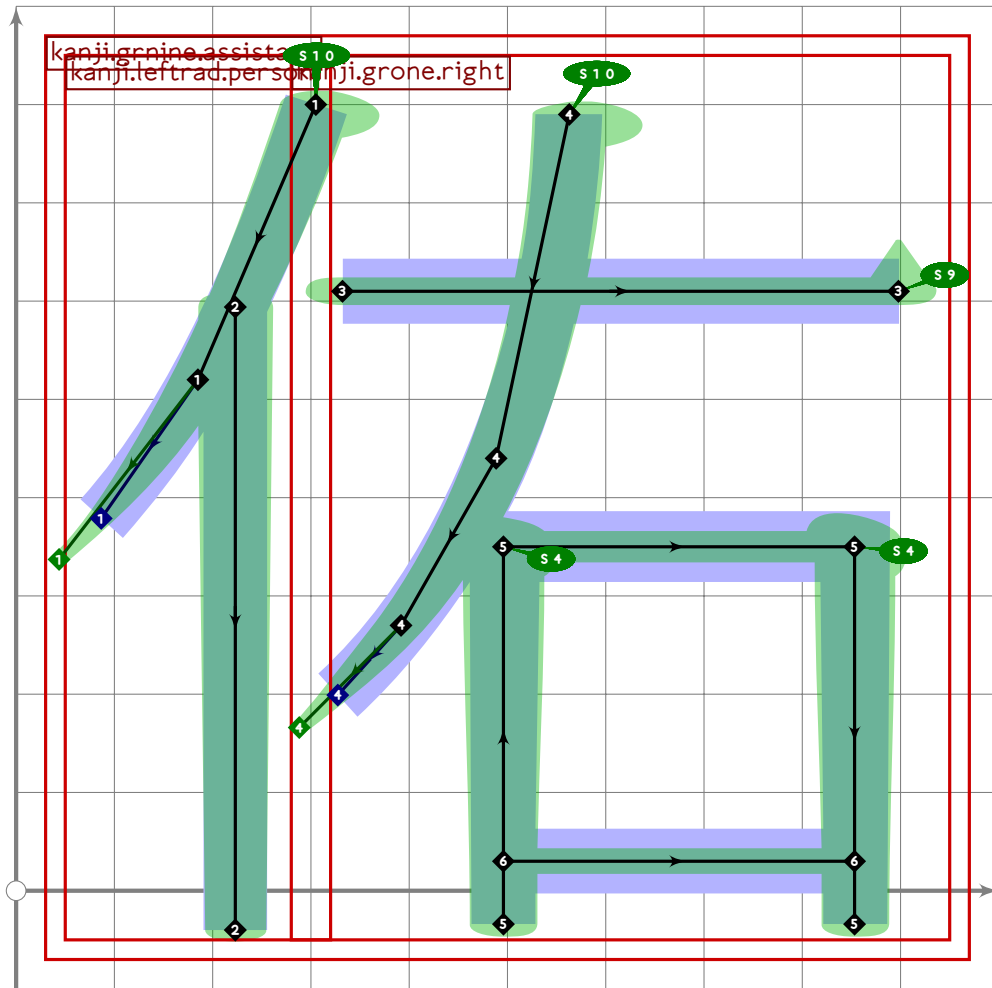
```



```

90
91 vardef tsu_curve.kanji.greight.me_macho =
92   push_pbox_toexpand("kanji.greight.me_macho");
93   build_kanji.lr(270,40*(1-mincho))
94     (tsu_curve.kanji.leftrad.person)
95     (tsu_curve.kanji.grnine.suffocate);
96   expand_pbox;
97 enddef;
98
99

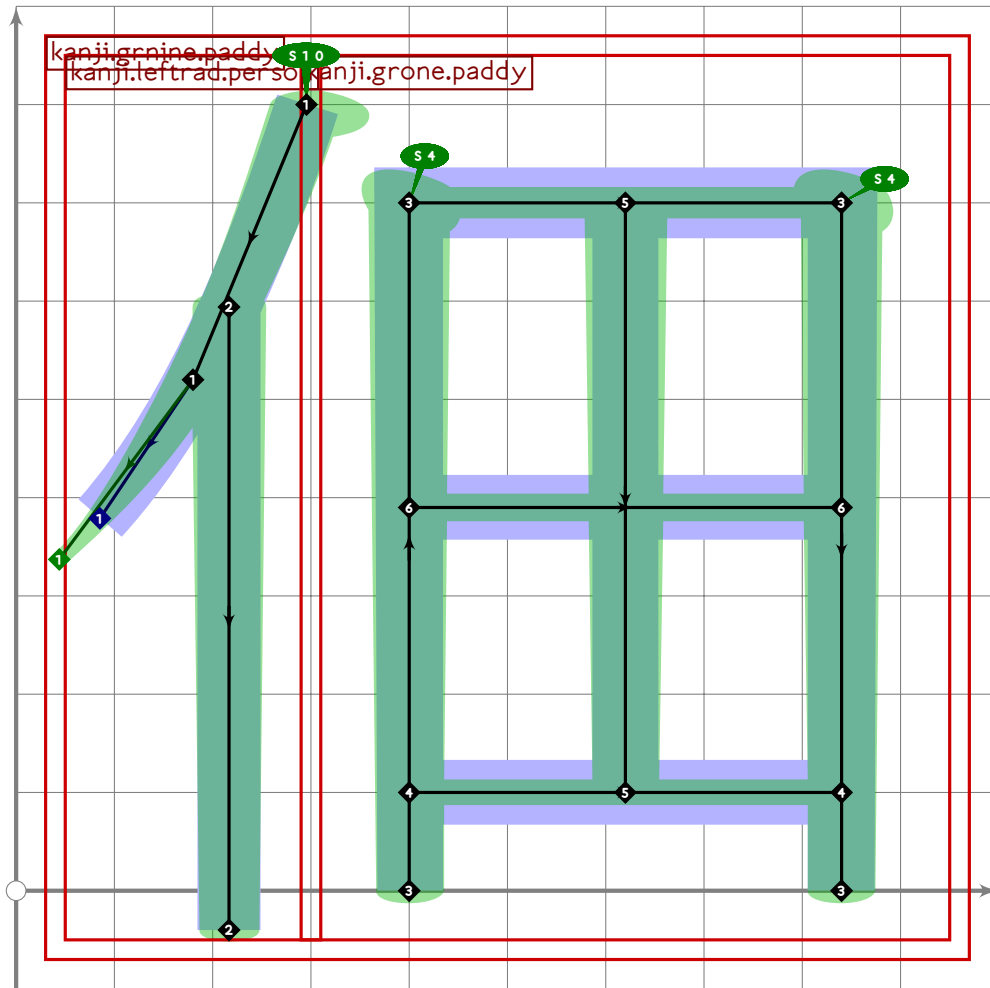
```



```

100
101 vardef tsu_curve.kanji.gnrnine.assista =
102   push_pbox_toexpand("kanji.gnrnine.assista");
103   build_kanji.lr(300,40)
104     (tsu_curve.kanji.leftrad.person)
105     (tsu_curve.kanji.gnrnine.right);
106   expand_pbox;
107 enddef;

```



```

108
109 vardef tsu_curve.kanji.grnine.paddy =
110   push_pbox_toexpand("kanji.grnine.paddy");
111   build_kanji.lr(300,20)
112     (tsu_curve.kanji.leftrad.person)
113     (tsu_curve.kanji.grone.paddy);
114   expand_pbox;
115 enddef;

```

116

117

118

```
119 % yasu "vacation"
```

```
120 begintsuglyph("uni4F11",17);
```

[see page 386]

```
121   tsu_curve.kanji.grone.vacation;
```

```
122   tsu_render;
```

```
123 endtsuglyph;
```

124

```
125 % kai/a "meet"
```

```
126 begintsuglyph("uni4F1A",26);
```

[see page 409]

```
127   tsu_curve.kanji.grtwo.meet;
```

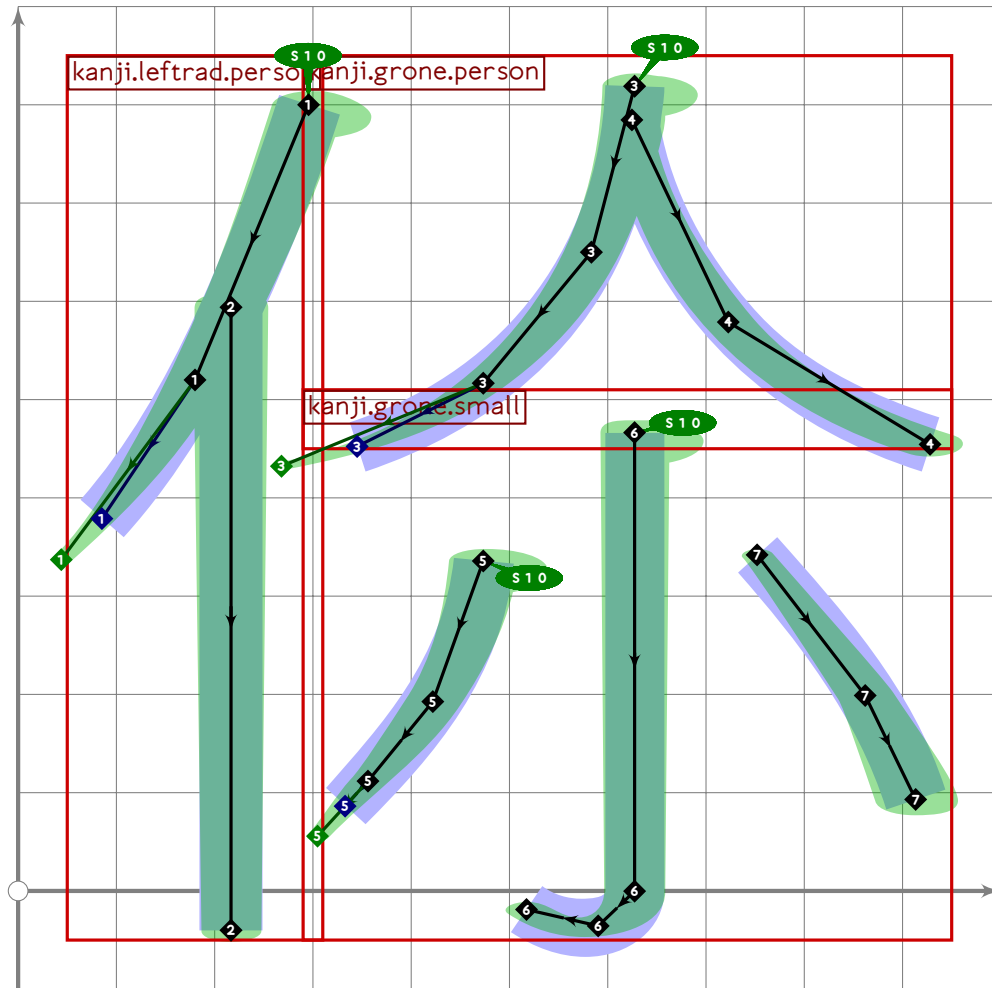
```
128   tsu_render;
```

```

129 endtsuglyph;
130
131 % haku "earl"
132 begintsuglyph("uni4F2F",47);
133   tsu_curve.kanji.greight.earl;
134   tsu_render;
135 endtsuglyph;
136

```

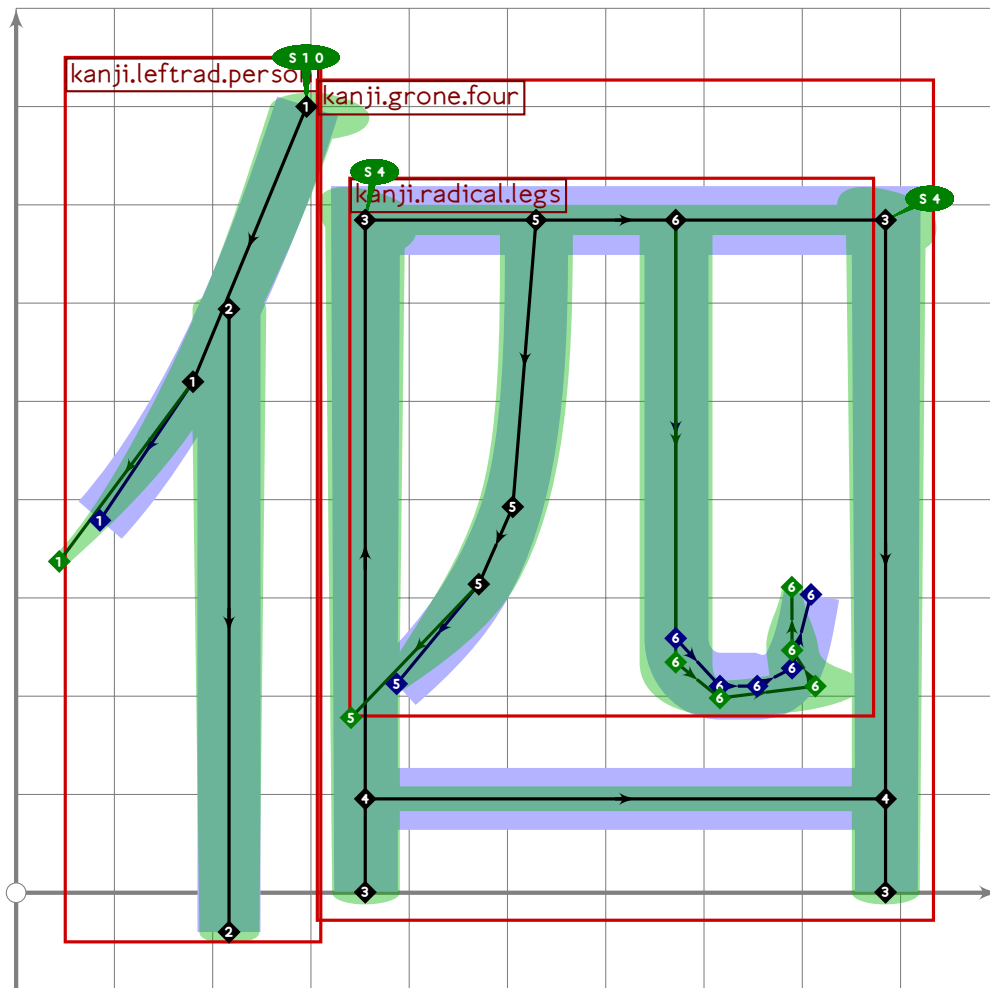
[see page 1219]



```

137 % extra
138 begintsuglyph("uni4F31",49);
139   build_kanji.lr(300,20)
140     (tsu_curve.kanji.leftrad.person)
141     (build_kanji.tb(480,60)
142       (tsu_curve.kanji.grone.person)
143       (tsu_curve.kanji.grone.small));
144   tsu_render;
145 endtsuglyph;
146

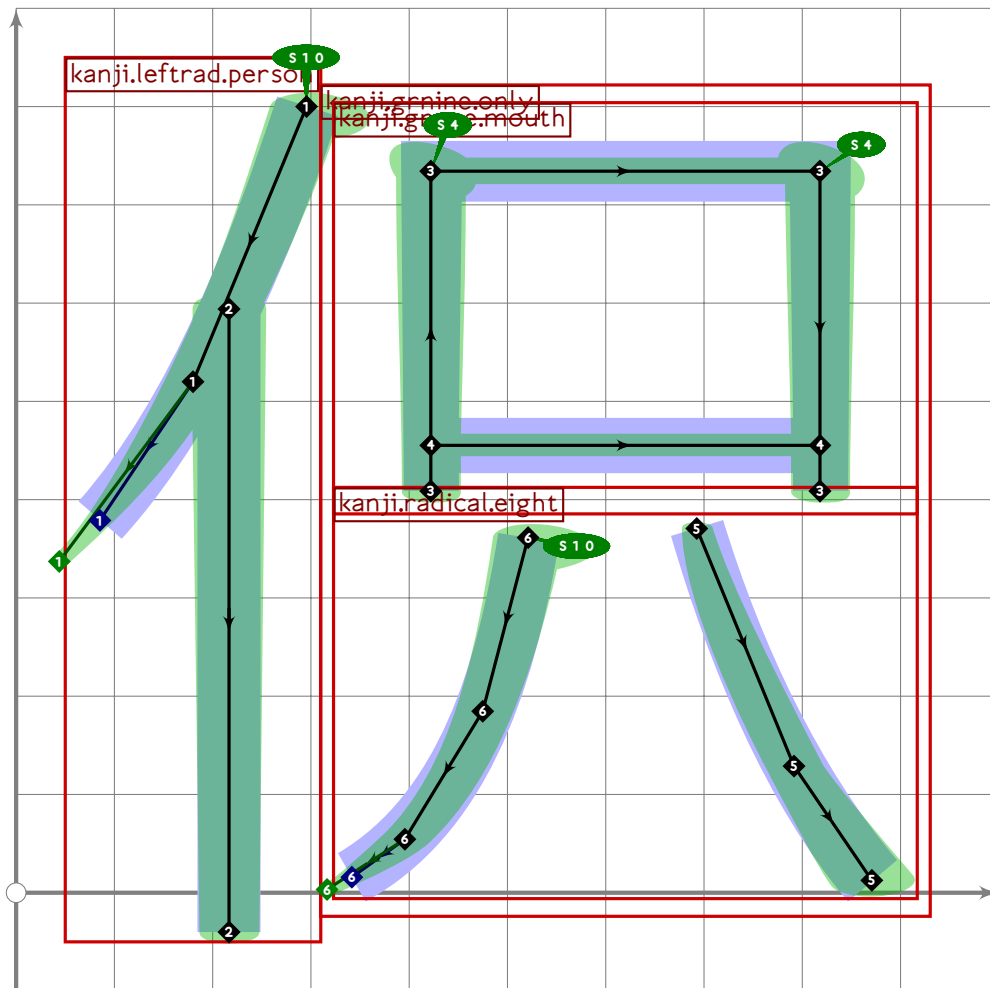
```



```

147 % extra
148 begint Suglyph("uni4F35",53);
149 build_kanji.lr(300,20)
150   (tsu_curve.kanji.leftrad.person)
151   (build_kanji.sscale(scaled 0.95)(tsu_curve.kanji.grone.four));
152   tsu_render;
153   endtsuglyph;
154

```

```

155 % extra
156 begintsuglyph("uni4F3F",63);
157 build_kanji.lr(300,20)
158   (tsu_curve.kanji.leftrad.person)
159   (build_kanji.sscale(scaled 0.9)(tsu_curve.kanji.gnine.only));
160 tsu_render;
161 endsuglyph;
162
163 % ten/tsukuda "cultivated paddy"
164 begintsuglyph("uni4F43",67);
165 tsu_curve.kanji.gnine.paddy;
166 tsu_render;
167 endsuglyph;
168
169 % suke "assistant"
170 begintsuglyph("uni4F50",80);
171 tsu_curve.kanji.greight.assistant;
172 tsu_render;
173 endsuglyph;
174
175 % suke "assistant"

```

[see page 1222]

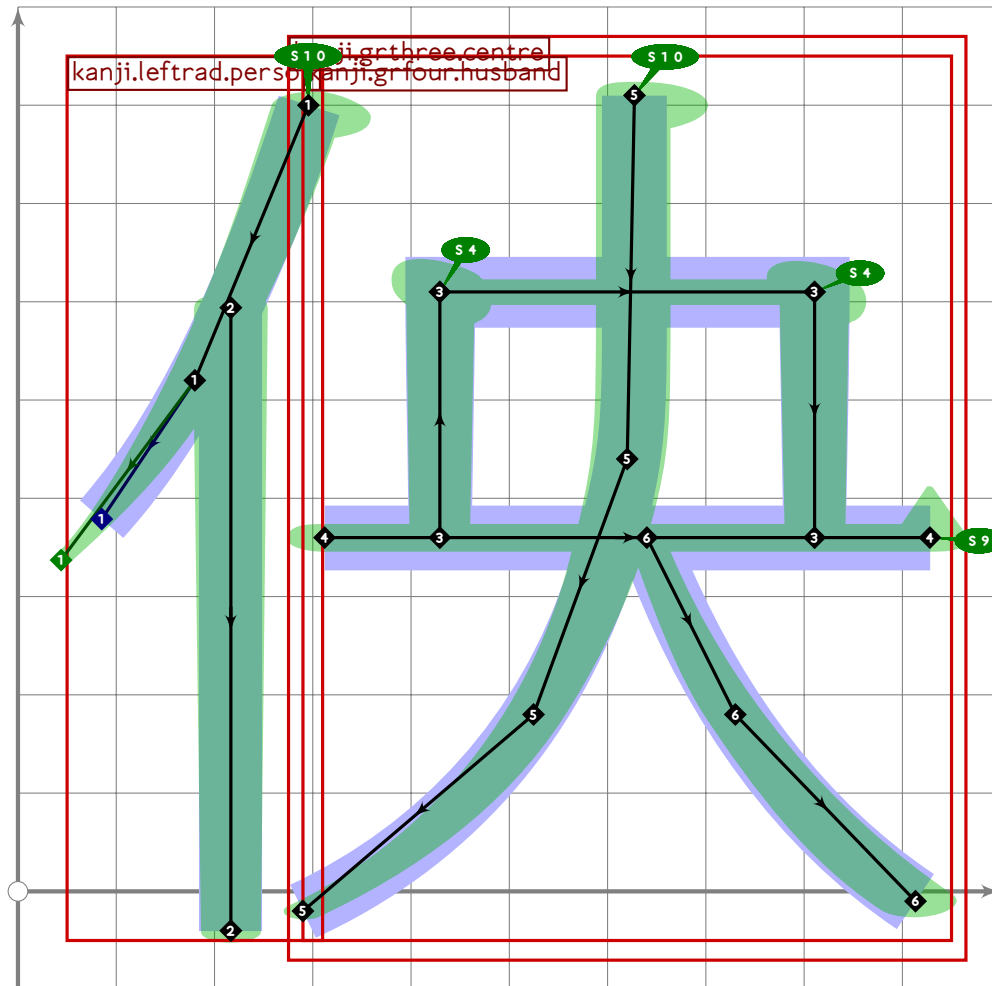
[see page 1218]

```

176 begintsuglyph("uni4F51";81);
177 tsu_curve.kanji.grnine.assistant;
178 tsu_render;
179 endsuglyph;
180

```

[see page 1221]



```

181 % extra
182 begintsuglyph("uni4F52";82);
183 build_kanji.lr(300,20)
184 (tsu_curve.kanji.leftrad.person)
185 (tsu_curve.kanji.grthree centre);
186 tsu_render;
187 endsuglyph;
188

```

```

189 % tai/karada "substance"
190 begintsuglyph("uni4F53";83);
191 tsu_curve.kanji.grtwo.substance;
192 tsu_render;
193 endsuglyph;
194

```

[see page 1216]

```

195 % ka/nani "what"
196 begintsuglyph("uni4F55";85);

```

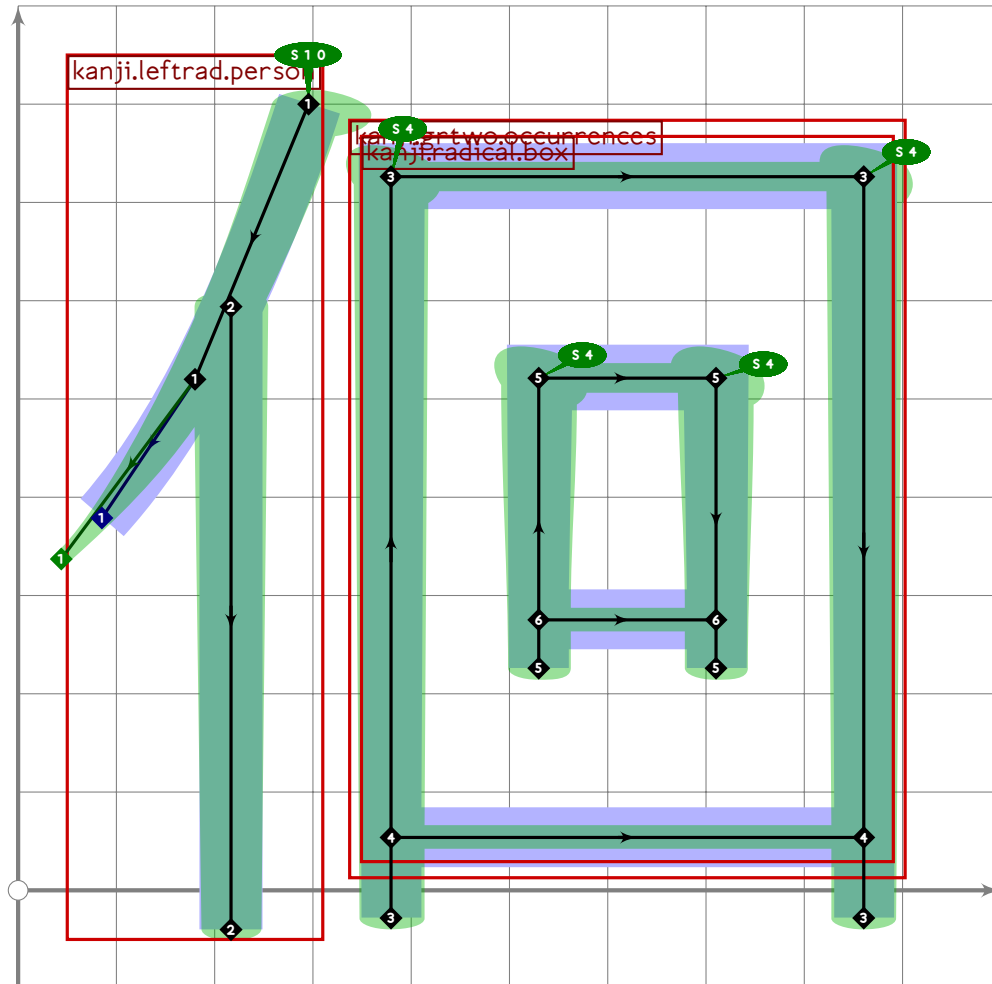
[see page 1217]

```

197 tsu_curve.kanji.grtwo.what;
198 tsu_render;
199 endtsuglyph;
200
201 % tsuku "make"
202 begintsuglyph("uni4F5C";92);
203 tsu_curve.kanji.grtwo.make;
204 tsu_render;
205 endtsuglyph;
206

```

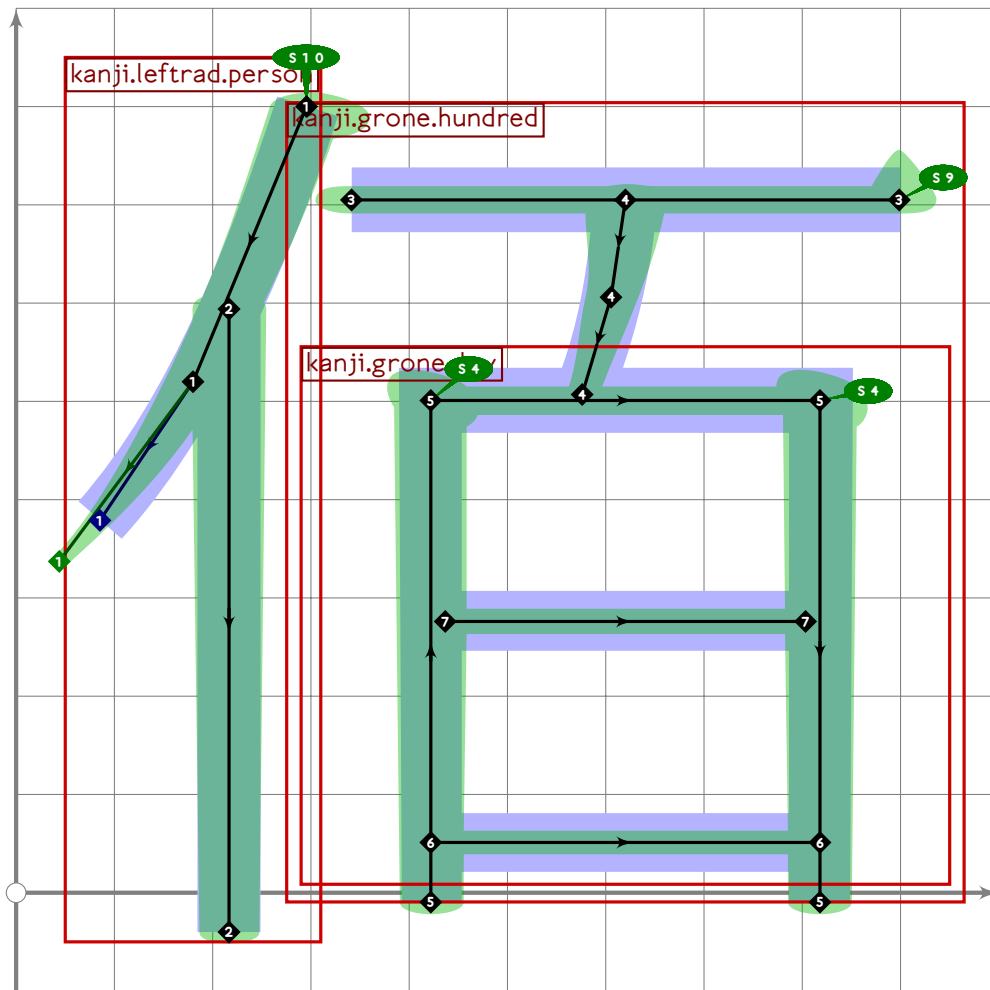
[see page 1215]



```

207 % extra "hesitate"
208 begintsuglyph("uni4F6A";106);
209 build_kanji.lr(300,20)
210   (tsu_curve.kanji.leftrad.person)
211   (build_kanji.sscale(scaled 0.82)(tsu_curve.kanji.grtwo.occurrences));
212 tsu_render;
213 endtsuglyph;
214

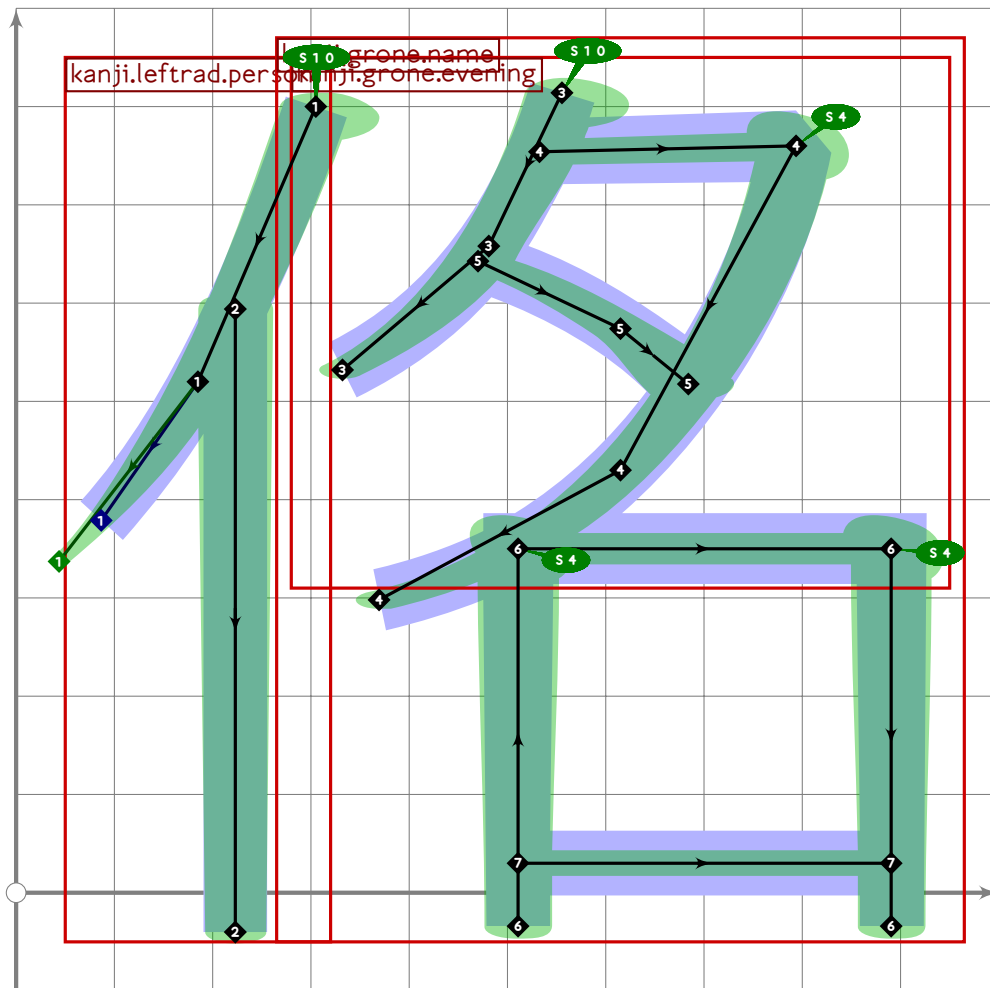
```



```

215 % extra "centurion"
216 begint Suglyph("uni4F70",112);
217 build_kanji.lr(300,20)
218   (tsu_curve.kanji.leftrad.person)
219   (build_kanji.sscale(yscaled 0.9)(tsu_curve.kanji.grone.hundred));
220 tsu_render;
221 endtsuglyph;
222

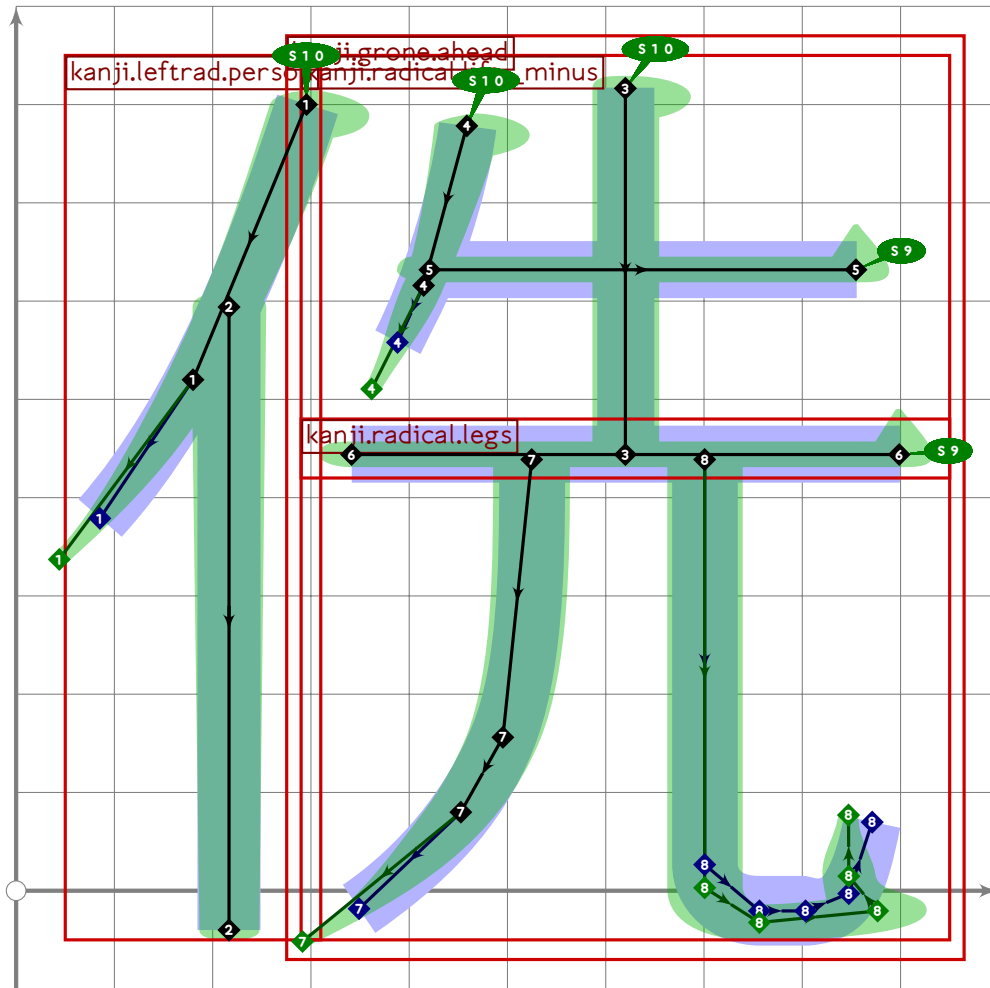
```



```

223 % extra
224 begintuglyph("uni4F72",114);
225 build_kanji.lr(300,40)
226   (tsu_curve.kanji.leftrad.person)
227   (tsu_curve.kanji.grone.name);
228   tsu_render;
229 endsuglyph;
230

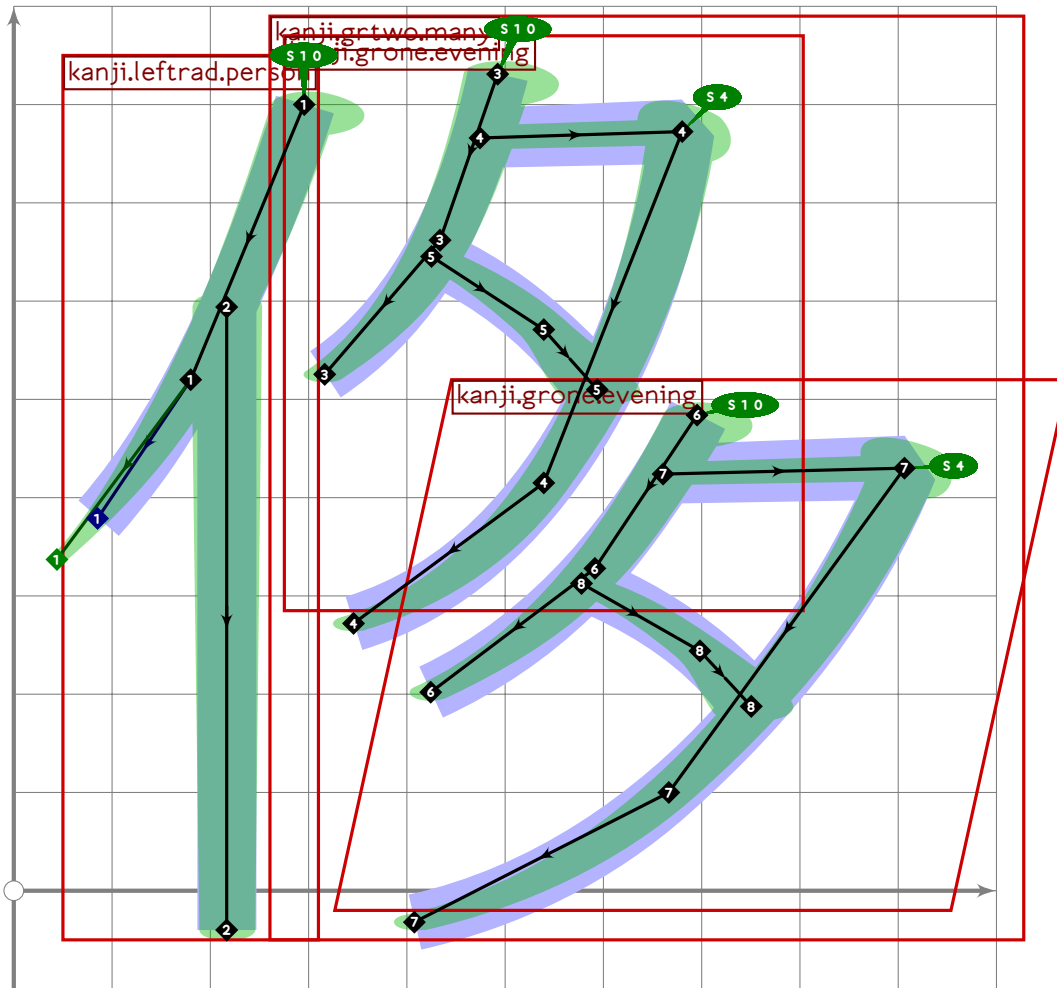
```



```

231 % extra
232 begint Suglyph("uni4F81";129);
233 build_kanji.lr(300,20)
234   (tsu_curve.kanji.leftrad.person)
235   (tsu_curve.kanji.grone.ahead);
236   tsu_render;
237 endsuglyph;
238

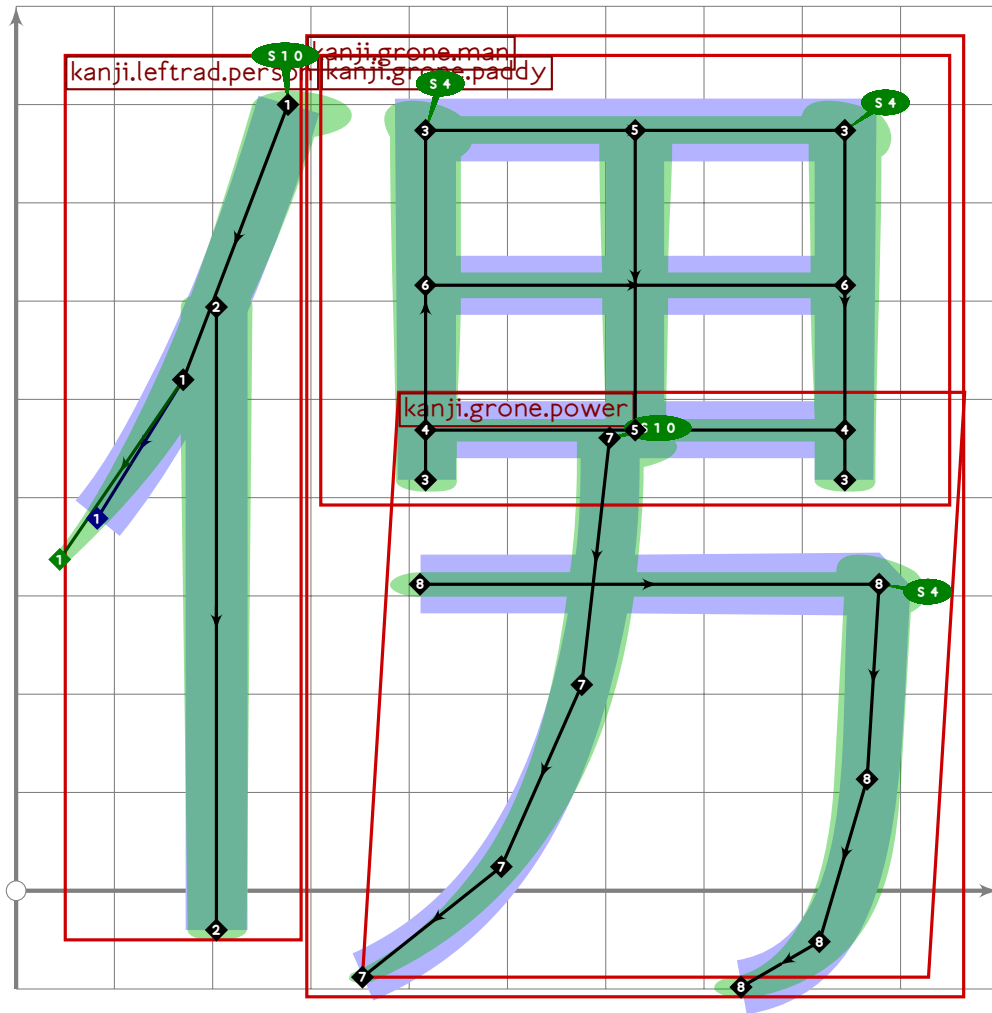
```



```

239 % extra "luxury"
240 beginsuglyph("uni4F88",136);
241 build_kanji.level(build_kanji.lr(300,20)
242   (tsu_curve.kanji.leftrad.person)
243   (tsu_curve.kanji.grtwo.many));
244 tsu_render;
245 endsuglyph;
246

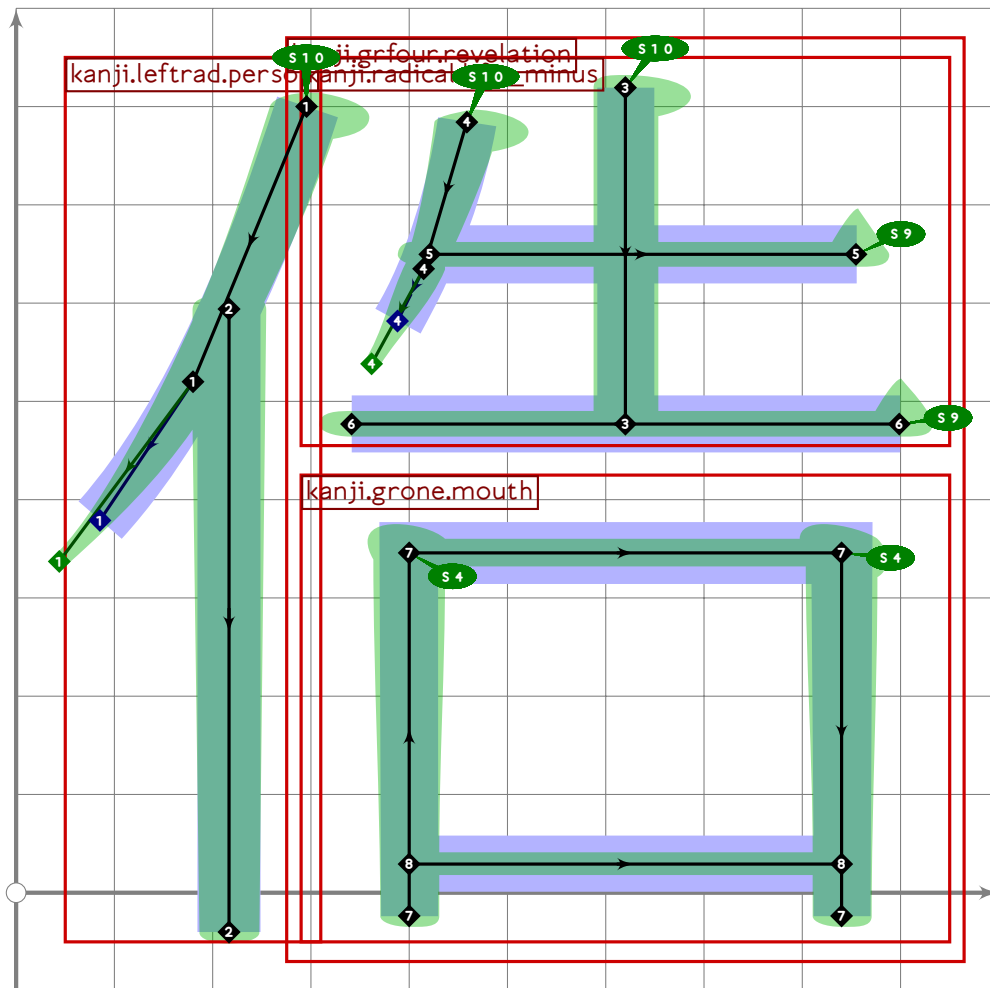
```



```

247 % extra
248 begintsuglyph("uni4FBD";189);
249 build_kanji.lr(300,-20)
250   (tsu_curve.kanji.leftrad.person)
251   (tsu_curve.kanji.grone.man);
252   tsu_render;
253 endsuglyph;
254

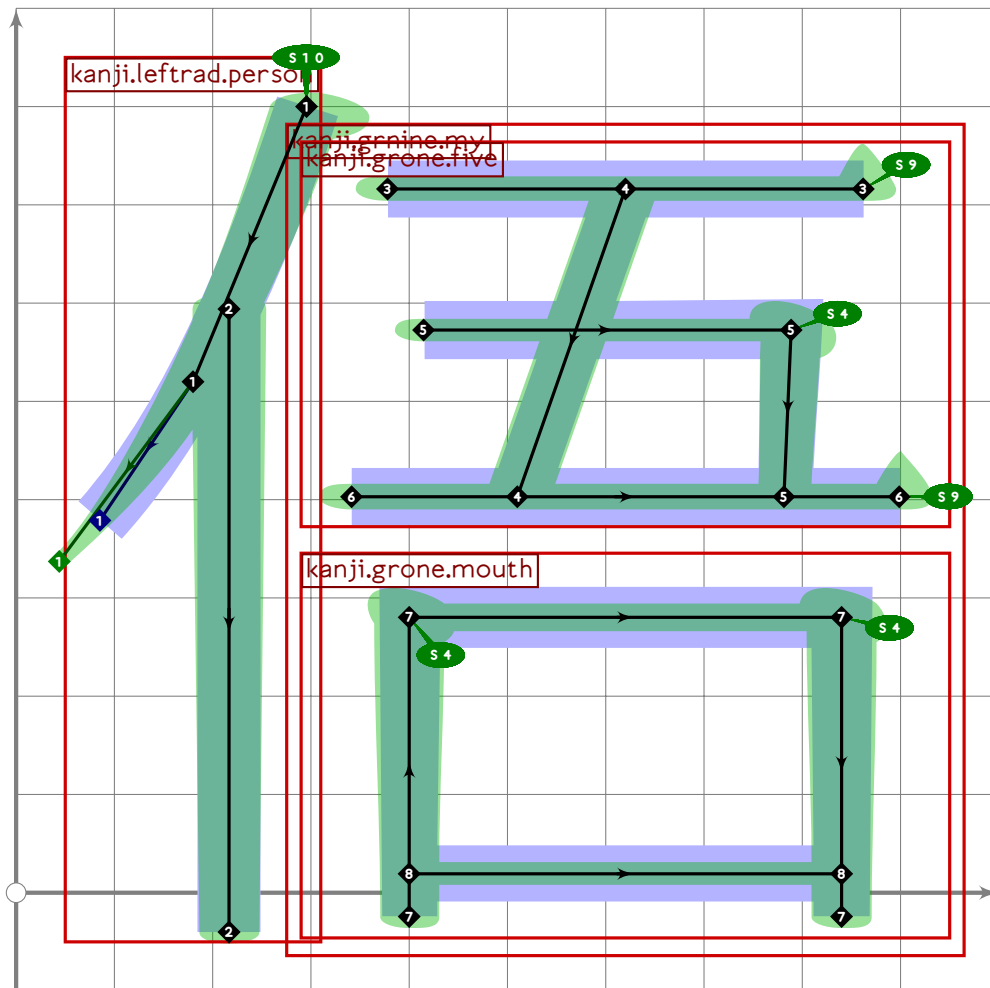
```

```

255 % extra
256 begint Suglyph("uni4FC8";200);
257 build_kanji.lr(300,20)
258   (tsu_curve.kanji.leftrad.person)
259   (tsu_curve.kanji.grfour.revelation);
260   tsu_render;
261   endtsuglyph;
262

```



```

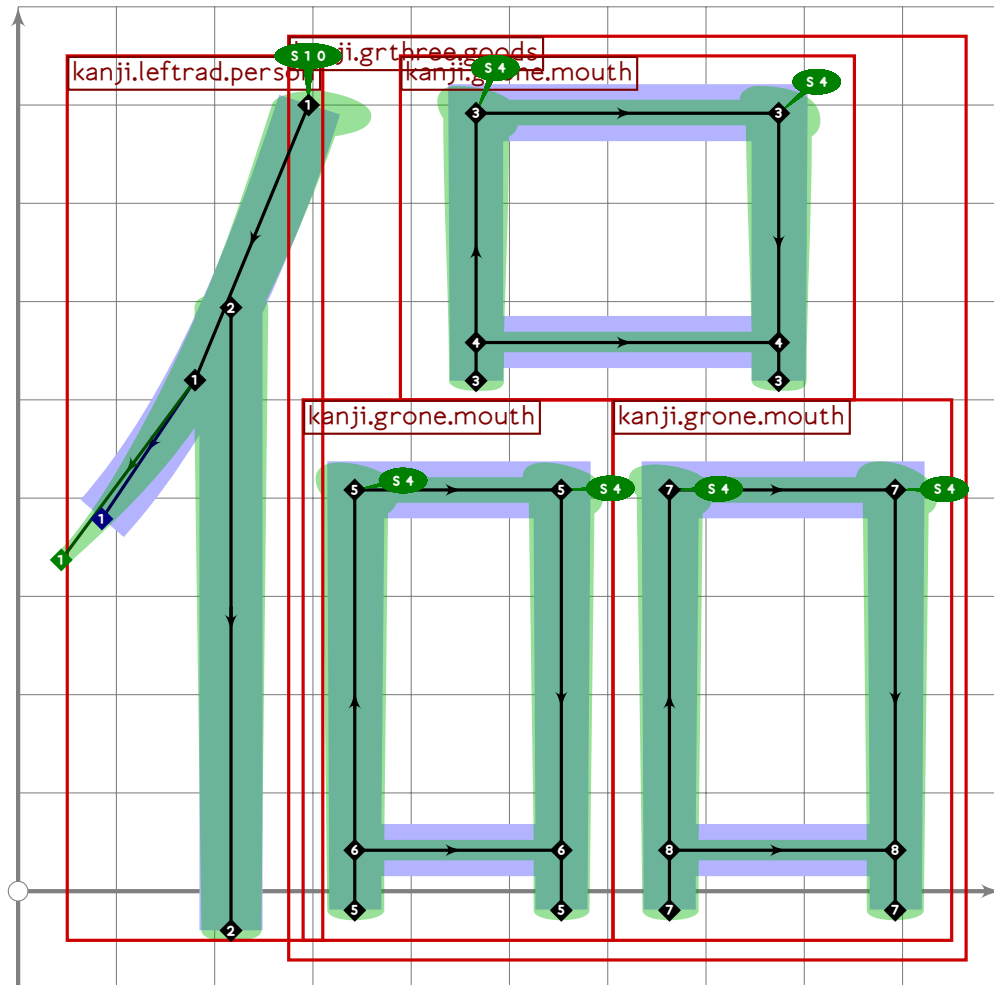
263 % extra
264 \begin{suglyph}{uni4FC9};201);
265 \build_kanji.lr(300,20)
266   (tsu_curve.kanji.leftrad.person)
267   (build_kanji.sscale(yscaled 0.9 shifted (0;40))
268     (tsu_curve.kanji.grnine.myl));
269 \tsu_render;
270 \end{suglyph};
271
272 % en/ore "me" (masculine, aggressive, more so than "boku")
273 \begin{suglyph}{uni4FFA};250);
274 \tsu_curve.kanji.greight.me_macho;
275 \tsu_render;
276 \end{suglyph};
277
278 _____
279
280 \endfont;
281
282 _____

```

[see page 1220]

tsuku-50.mp

```
1 %  
2 % Unicode page 50 (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradeone.mp;  
38 input gradethree.mp;  
39 input leftrad.mp;  
40  
41 _____  
42
```



43 % extra

```
44 begintsuglyph("uni5058",88);
45   build_kanji.lr(300,20)
46     (tsu_curve.kanji.leftrad.person)
47     (tsu_curve.kanji.grthree.goods);
48   tsu_render;
49 endtsuglyph;
50
51 

---

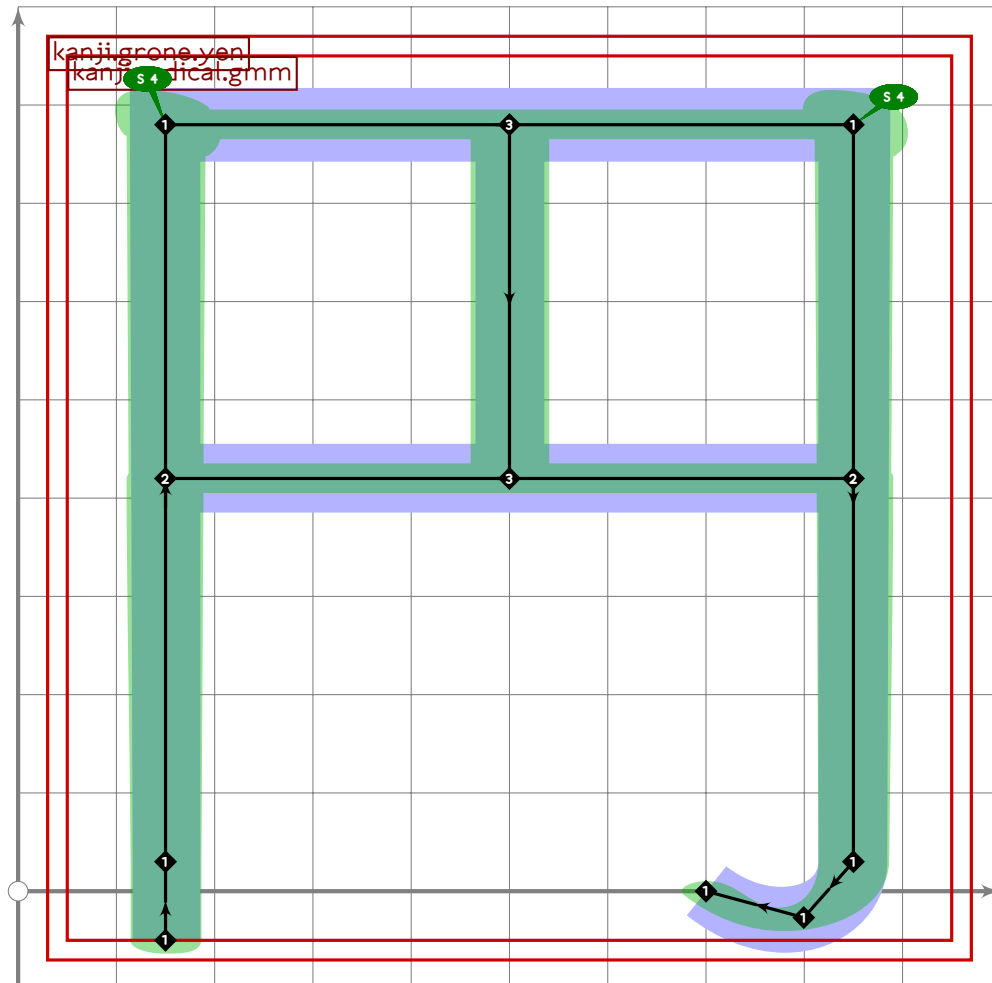

52
53 endfont;
54
55 

---


```

tsuku51.mp

```
1 %  
2 % Unicode page 51 (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradeone.mp;  
38 input gradetwo.mp;  
39 input radical.mp;  
40 input toprad.mp;  
41  
42 _____
```

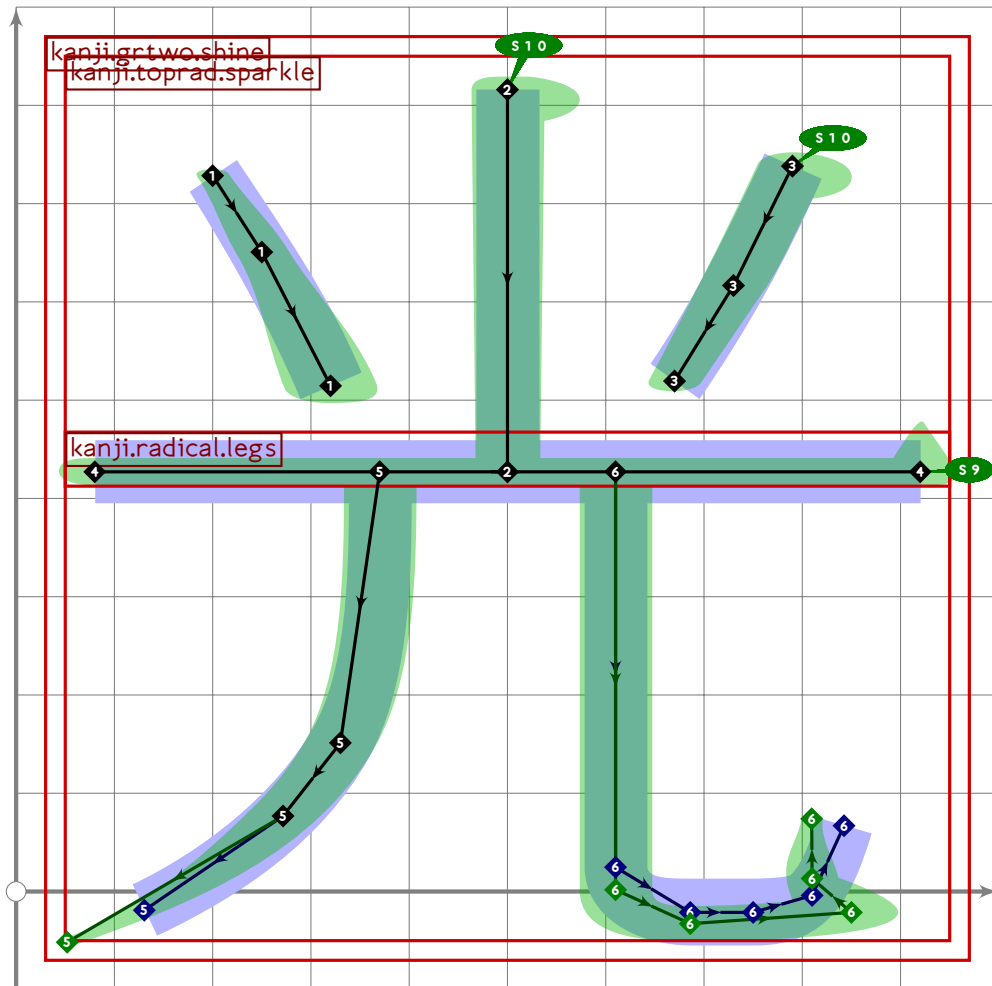


43

```

44 vardef tsu_curve.kanji.grone.yen =
45   push_pbox_toexpand("kanji.grone.yen");
46   tsu_curve.kanji.radical.gmm;
47   push_stroke((point 1.52 of get_strokep(0))-(point 3.48 of get_strokep(0)),
48     (1.6,1.6)-(1.6,1.6));
49   push_stroke((point 2.5 of get_strokep(1))-(point 0.5 of get_strokep(0)),
50     (1.6,1.6)-(1.6,1.6));
51   expand_pbox;
52 enddef;
53
54

```

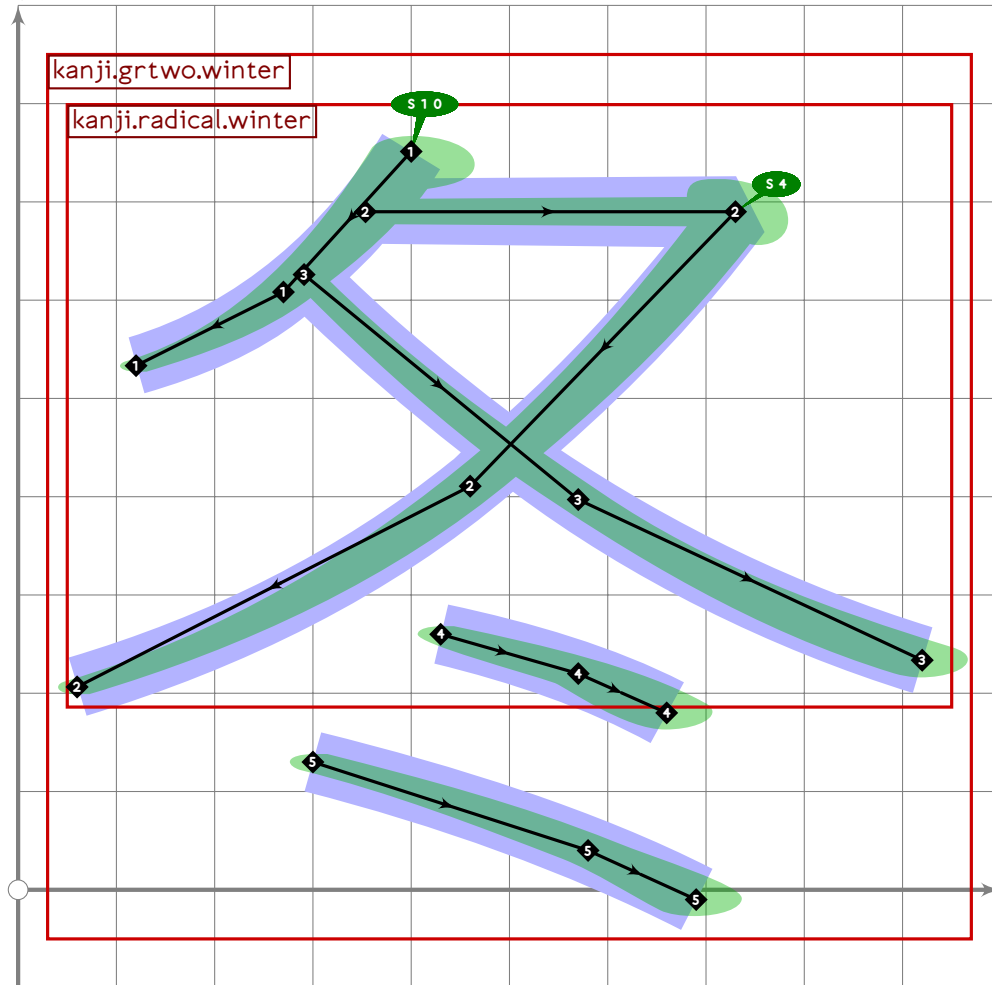


```

55
56 vardef tsu_curve.kanji.grtwo.shine =
57   push_pbox_toexpand("kanji.grtwo.shine");
58   build_kanji.level(build_kanji.tb(440,55)
59     (tsu_curve.kanji.toprad.sparkle;
60       push_stroke((80,-20)-(920,-20),(1.6,1.6)-(1.6,1.6));
61       set_boserif(0,1,9);
62     )
63     (tsu_curve.kanji.radical.legs));
64   expand_pbox;

```

65 enddef;



66

```
67 vardef tsu_curve.kanji.grtwo.winter =  
68   push_pbox_toexpand("kanji.grtwo.winter");  
69   build_kanji.level(  
70     tsu_xform(begingroup  
71       save myxf;  
72       transform myxf;  
73       (0,690) transformed myxf=(0,690);  
74       (1000,690) transformed myxf=(1000,690);  
75       (500,0) transformed myxf=(500,220);  
76       myxf  
77     endgroup)(tsu_curve.kanji.radical.winter);  
78     push_stroke((430,260)..tension 1.2..(570,220)..(660,180),  
79       (1.2,1.2)-(1.5,1.5)-(1.8,1.8));  
80     push_stroke((300,130)..tension 1.2..(580,40)..(690,-10),  
81       (1.2,1.2)-(1.5,1.5)-(1.8,1.8));  
82   );  
83   expand_pbox;  
84 enddef;
```

85

86
87
88 % legs radical
89 `begintsuglyph("uni513F",63);` [see page 321]
90 `tsu_curve.kanji.radical.legs;`
91 `tsu_render;`
92 `endtsuglyph;`
93
94 % moto/gen "origin"
95 `begintsuglyph("uni5143",67);` [see page 419]
96 `tsu_curve.kanji.grtwo.origin;`
97 `tsu_render;`
98 `endtsuglyph;`
99
100 % nii (as in oniisan) "big brother"
101 `begintsuglyph("uni5144",68);` [see page 392]
102 `tsu_curve.kanji.grtwo.big_brother;`
103 `tsu_render;`
104 `endtsuglyph;`
105
106 % sen "ahead"
107 `begintsuglyph("uni5148",72);` [see page 336]
108 `tsu_curve.kanji.grone.ahead;`
109 `tsu_render;`
110 `endtsuglyph;`
111
112 % kou/hikari "shine"
113 `begintsuglyph("uni5149",73);` [see page 1238]
114 `tsu_curve.kanji.grtwo.shine;`
115 `tsu_render;`
116 `endtsuglyph;`
117
118 % hai/i "put it in"
119 `begintsuglyph("uni5165",101);` [see page 373]
120 `tsu_curve.kanji.grone.put_it_in;`
121 `tsu_render;`
122 `endtsuglyph;`
123
124 % hachi/ya "eight"
125 `begintsuglyph("uni516B",107);` [see page 350]
126 `tsu_curve.kanji.grone.eight;`
127 `tsu_render;`
128 `endtsuglyph;`
129
130 % kou/kimi "public" but also the pronoun kimi
131 `begintsuglyph("uni516C",108);` [see page 421]
132 `tsu_curve.kanji.grtwo.public;`
133 `tsu_render;`


```

134 endtsuglyph;
135
136 % roku/mui "six"
137 begintsuglyph("uni516D";109); [see page 378]
138 tsu_curve.kanji.grone.six;
139 tsu_render;
140 endtsuglyph;
141
142 % George Michael's Moustache
143 begintsuglyph("uni5182";130); [see page 320]
144 tsu_curve.kanji.radical.gmm;
145 tsu_render;
146 endtsuglyph;
147
148 % nai/uchi "home, me"
149 begintsuglyph("uni5185";133); [see page 402]
150 tsu_curve.kanji.grtwo.home;
151 tsu_render;
152 endtsuglyph;
153
154 % en "yen" (currency unit)
155 begintsuglyph("uni5186";134); [see page 1238]
156 tsu_curve.kanji.grone.yen;
157 tsu_render;
158 endtsuglyph;
159
160 % tou/fuyu "winter"
161 begintsuglyph("uni51AC";172); [see page 1239]
162 tsu_curve.kanji.grtwo.winter;
163 tsu_render;
164 endtsuglyph;
165
166 % de "go away"
167 begintsuglyph("uni51FA";250); [see page 356]
168 tsu_curve.kanji.grone.go_away;
169 tsu_render;
170 endtsuglyph;
171
172 _____
173
174 endfont;
175
176 _____

```

tsuku-52.mp

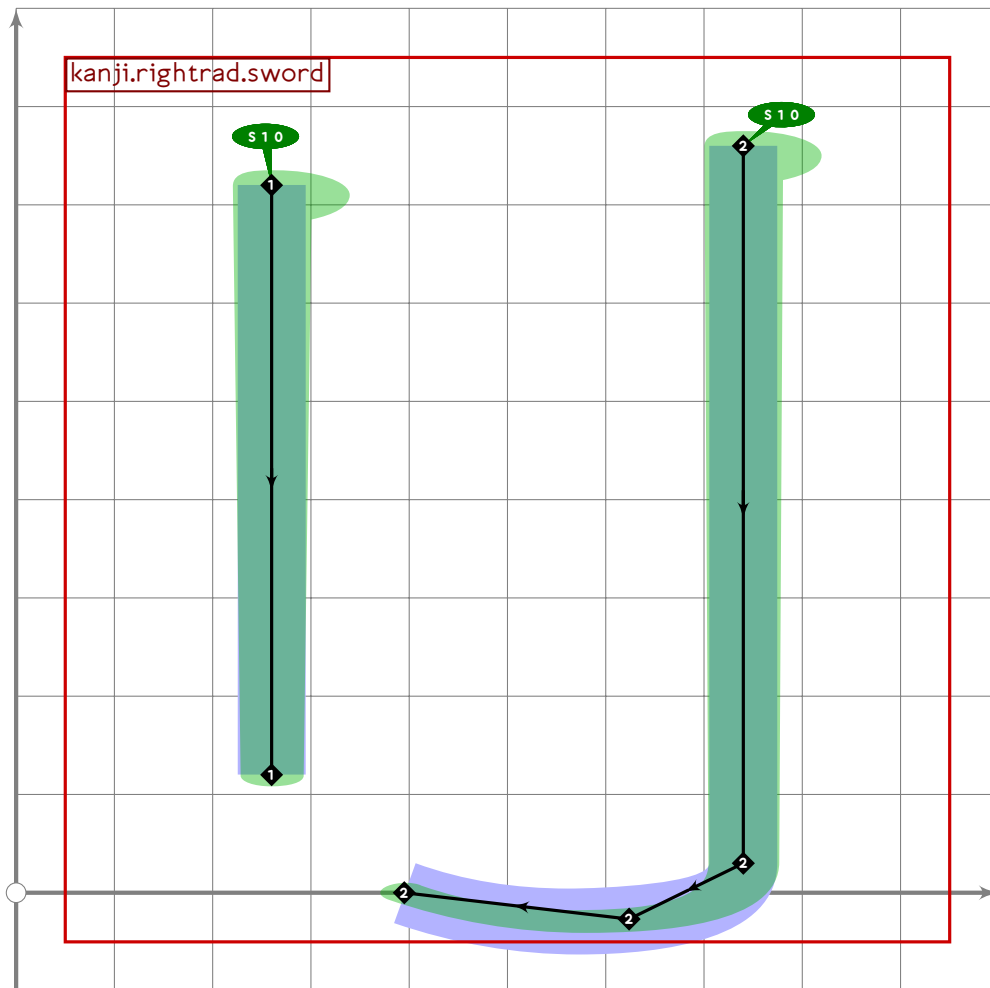
```
1 %
2 % Unicode page 52 (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input bottomrad.mp;
37 input buildkanji.mp;
38 input gradeeight.mp;
39 input gradenine.mp;
40 input gradeone.mp;
41 input gradesix.mp;
42 input gradethree.mp;
43 input gradetwo.mp;
44 input leftrad.mp;
45 input radical.mp;
46 input toprad.mp;
47
48 

---

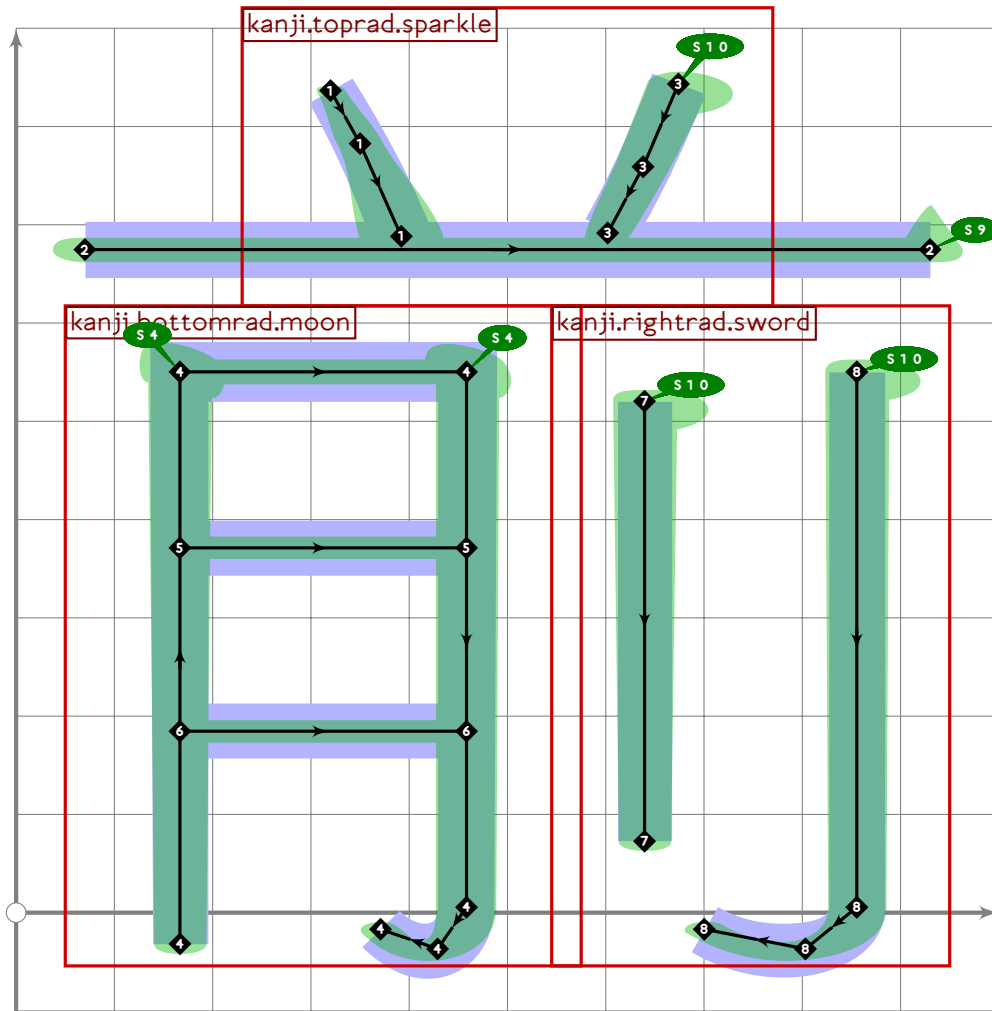

```



```

49
50 vardef tsu_curve.kanji.rightrad.sword =
51   push_pbox_toexpand("kanji.rightrad.sword");
52   push_stroke((260,720)-(260,120),(1.6,1.6)-(1.4,1.4));
53   set_boserif(0,0,10);
54   push_stroke((740,760),(1.6,1.6));
55   set_boserif(0,0,10);
56   build_kanji.add_jtail(0);
57   replace_strokep(0)(oldp shifted (-740,0) xscaled 2.3 shifted (740,0));
58   expand_pbox;
59 enddef;
60
61

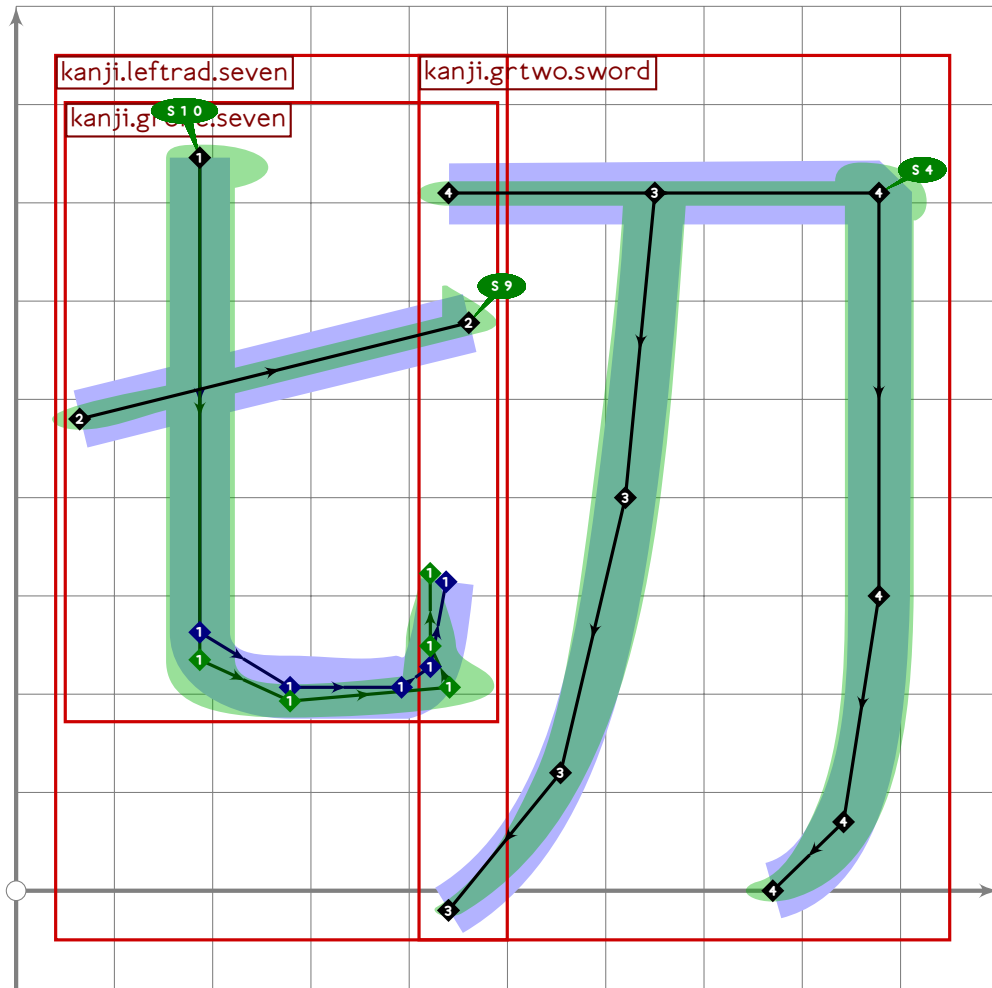
```



```

62
63 vardef tsu_curve.kanji.grtwo.before =
64   tsu_xform(identity yscaled (780/720))
65   (build_kanji.level(build_kanji.tb(570,0)
66     (build_kanji.sscale(xscaled 0.6)(tsu_curve.kanji.toprad.sparkle);
67     replace_stroke(-1)((70,120)-(930,120));
68     replace_stroke(-1)((1.6,1.6)-(1.6,1.6));
69     set_boserif(-1,0,whatever);
70     set_boserif(-1,1,9);
71   )
72   (build_kanji.lr(560,30)
73     (tsu_curve.kanji.bottomrad.moon)
74     (tsu_curve.kanji.rightrad.sword)))));
75 enddef;

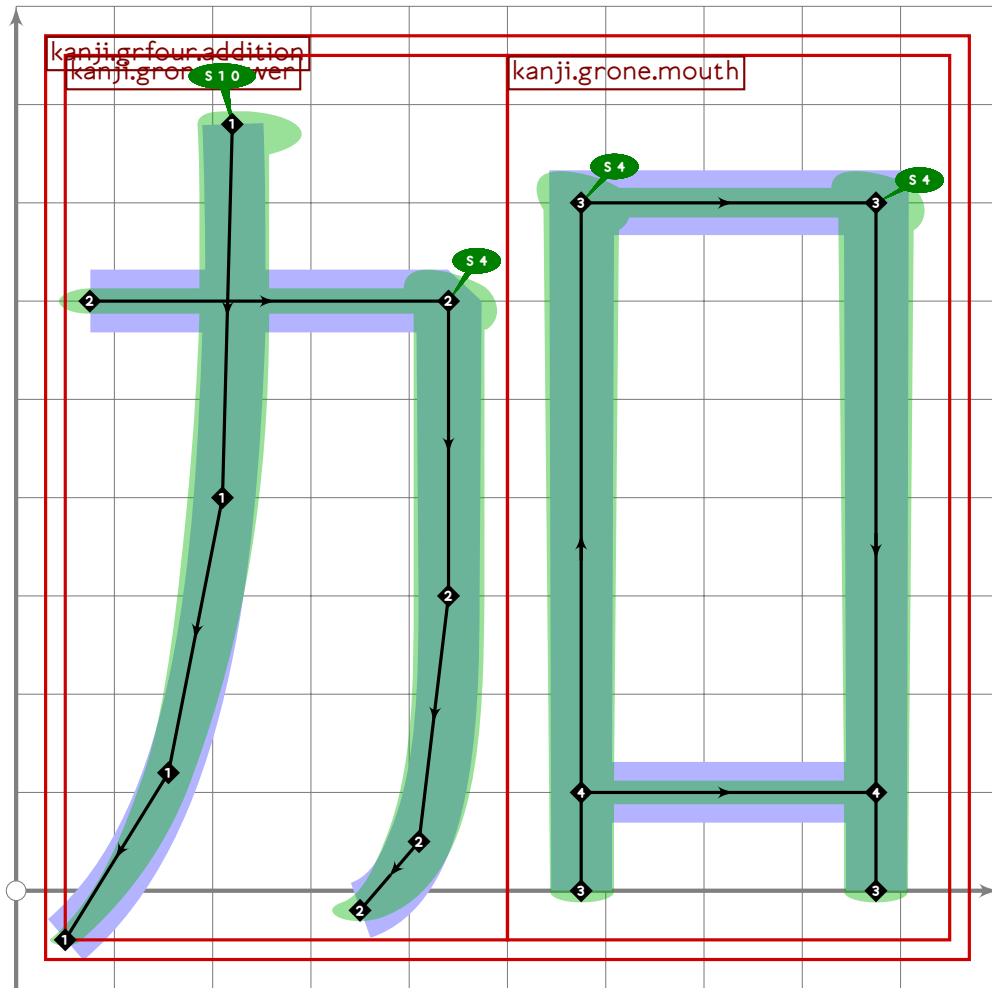
```



```

76
77 vardef tsu_curve.kanji.grtwo.cut =
78   build_kanji.level(build_kanji.lr(450,80)
79     (tsu_curve.kanji.leftrad.seven)
80     (tsu_curve.kanji.grtwo.sword));
81 enddef;
82
83

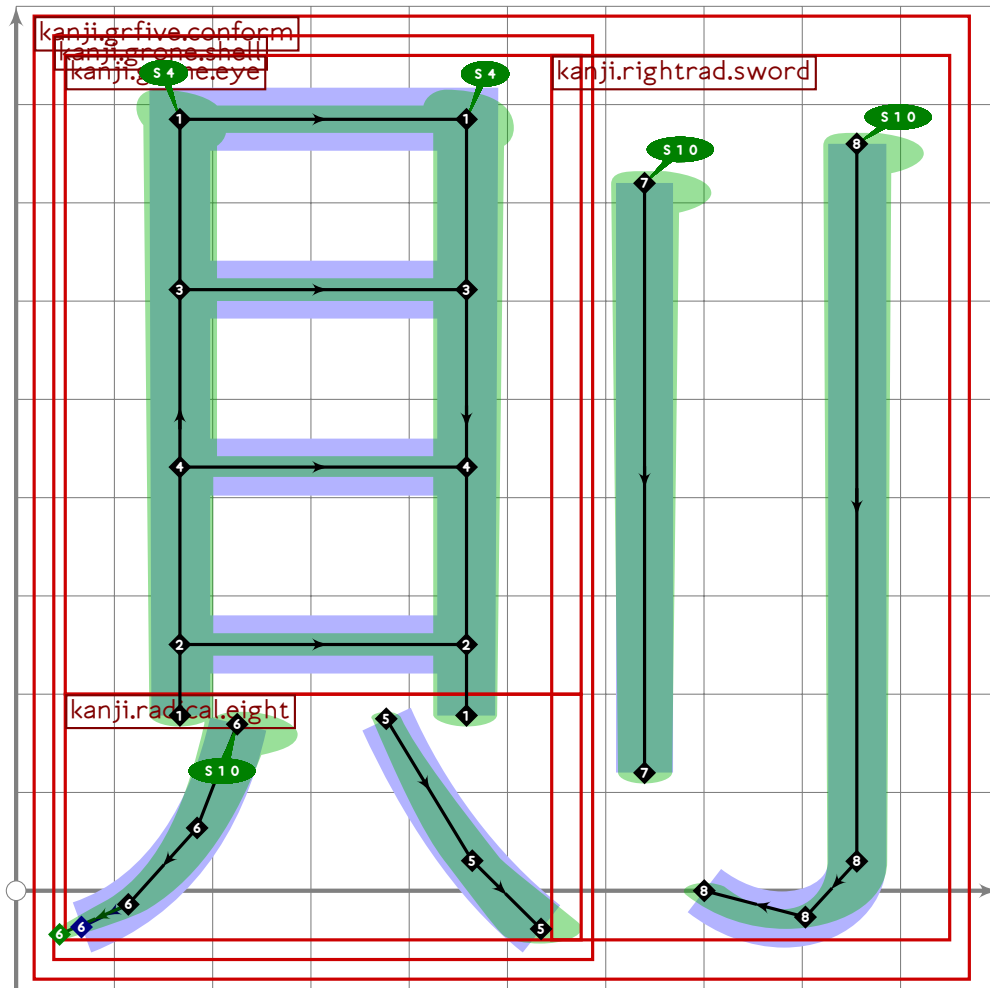
```



```

84
85 vardef tsu_curve.kanji.grfour.addition =
86   push_pbox_toexpand("kanji.grfour.addition");
87   build_kanji.level(build_kanji.lr(500,0)
88     (tsu_curve.kanji.grone.power)
89     (tsu_curve.kanji.grone.mouth));
90   expand_pbox;
91 enddef;
92
93

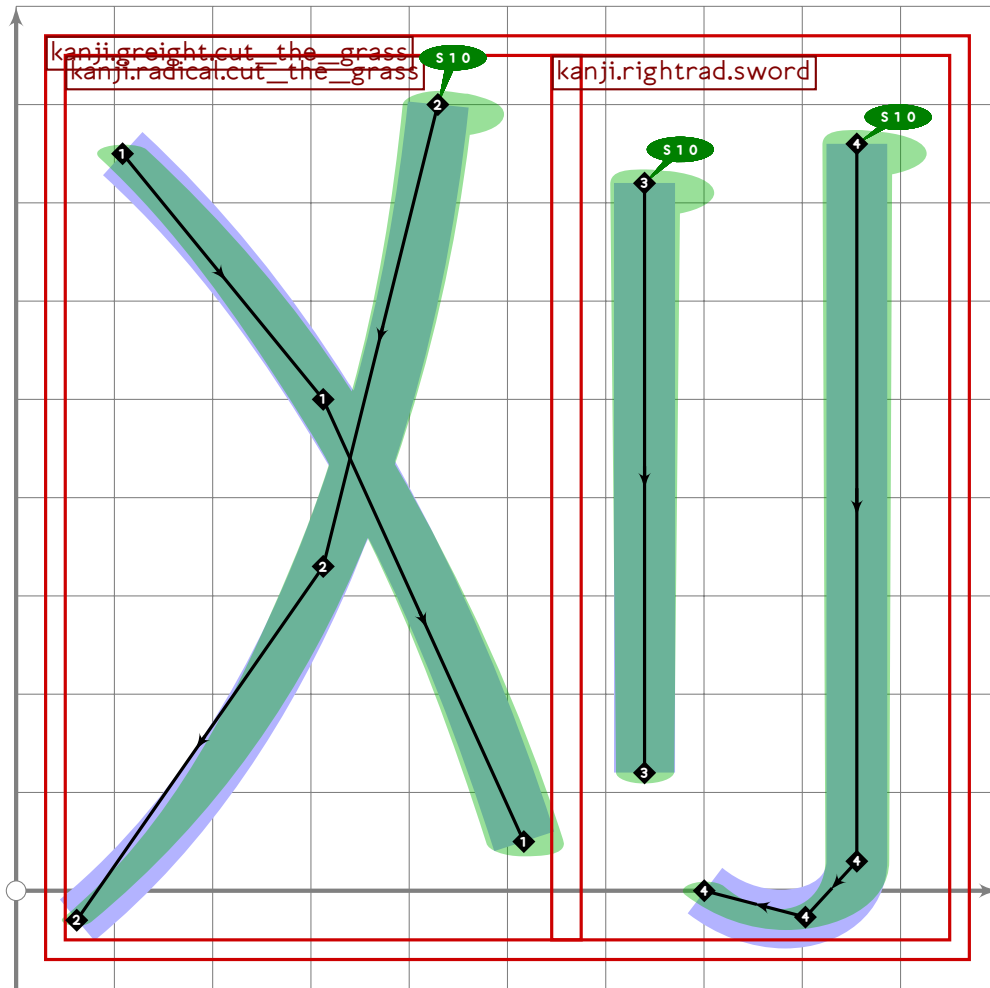
```



```

94
95 vardef tsu_curve.kanji.grfive.conform =
96   push_pbox_toexpand("kanji.grfive.conform");
97   build_kanji.level(build_kanji.lr(560,30)
98     (tsu_curve.kanji.grone.shell)
99     (tsu_curve.kanji.rightrad.sword));
100  expand_pbox;
101  enddef;
102
103

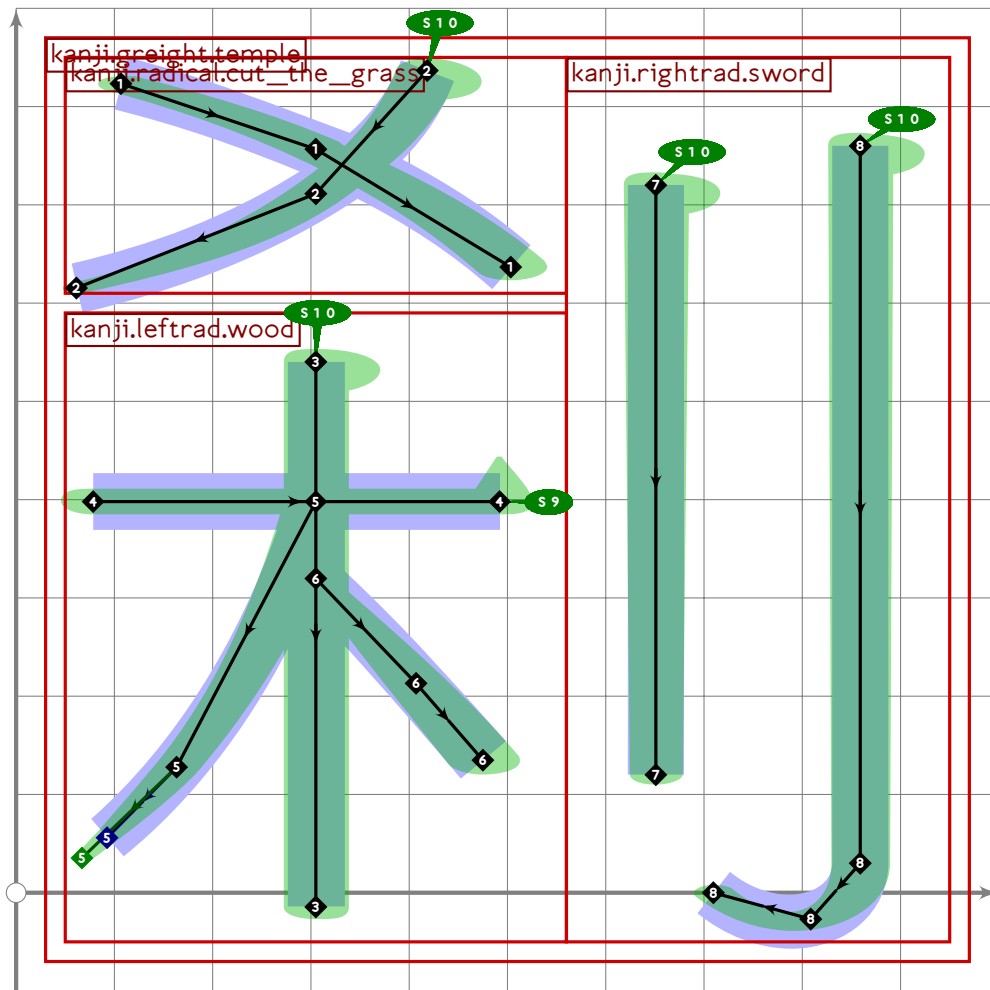
```



```

104
105 vardef tsu_curve.kanji.greight.cut_the_grass =
106   push_pbox_toexpand("kanji.greight.cut_the_grass");
107   build_kanji.level(build_kanji.lr(560,30)
108     (tsu_curve.kanji.radical.cut_the_grass)
109     (tsu_curve.kanji.rightrad.sword));
110   expand_pbox;
111 enddef;

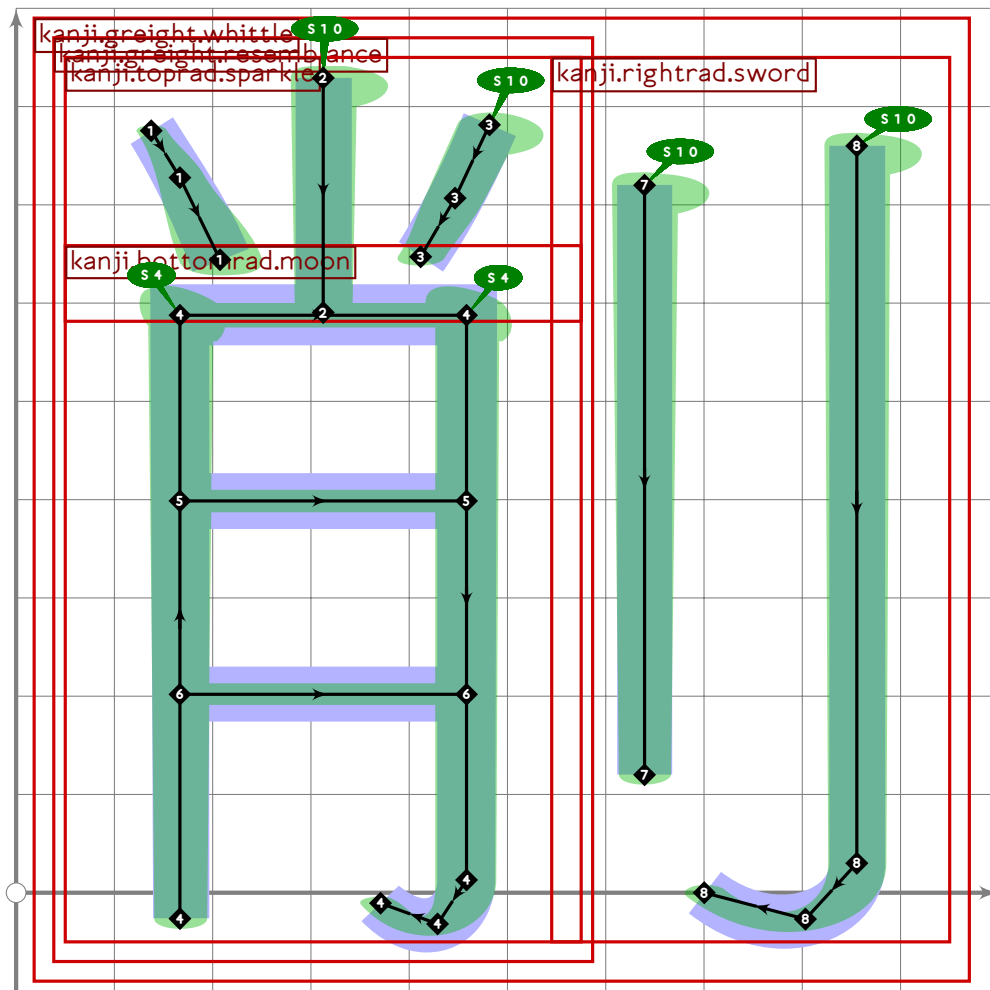
```

```

112
113 vardef tsu_curve.kanji.greight.temple =
114   push_pbox_toexpand("kanji.greight.temple");
115   build_kanji.level(build_kanji.lr(560,0)
116     (build_kanji.tb(600;20)
117       (tsu_curve.kanji.radical.cut_the_grass)
118       (tsu_curve.kanji.leftrad.wood))
119     (tsu_curve.kanji.rightrad.sword));
120   expand_pbox;
121 enddef;

```



```

122
123 vardef tsu_curve.kanji.greight.whittle =
124   push_pbox_toexpand("kanji.greight.whittle");
125   build_kanji.level(build_kanji.lr(560,30)
126     (tsu_curve.kanji.greight.resemblance)
127     (tsu_curve.kanji.rightrad.sword));
128   expand_pbox;
129 enddef;

```

130

131

132

```

133 % tou/katana "sword"

```

```

134 begintsuglyph("uni5200";0);

```

[see page 425]

```

135   tsu_curve.kanji.grtwo.sword;

```

```

136   tsu_render;

```

```

137 endtsuglyph;

```

138

```

139 % tou "sword radical"

```

```

140 begintsuglyph("uni5202";2);

```

[see page 1243]

```

141   tsu_curve.kanji.rightrad.sword;

```

```

142   tsu_render;

```

```

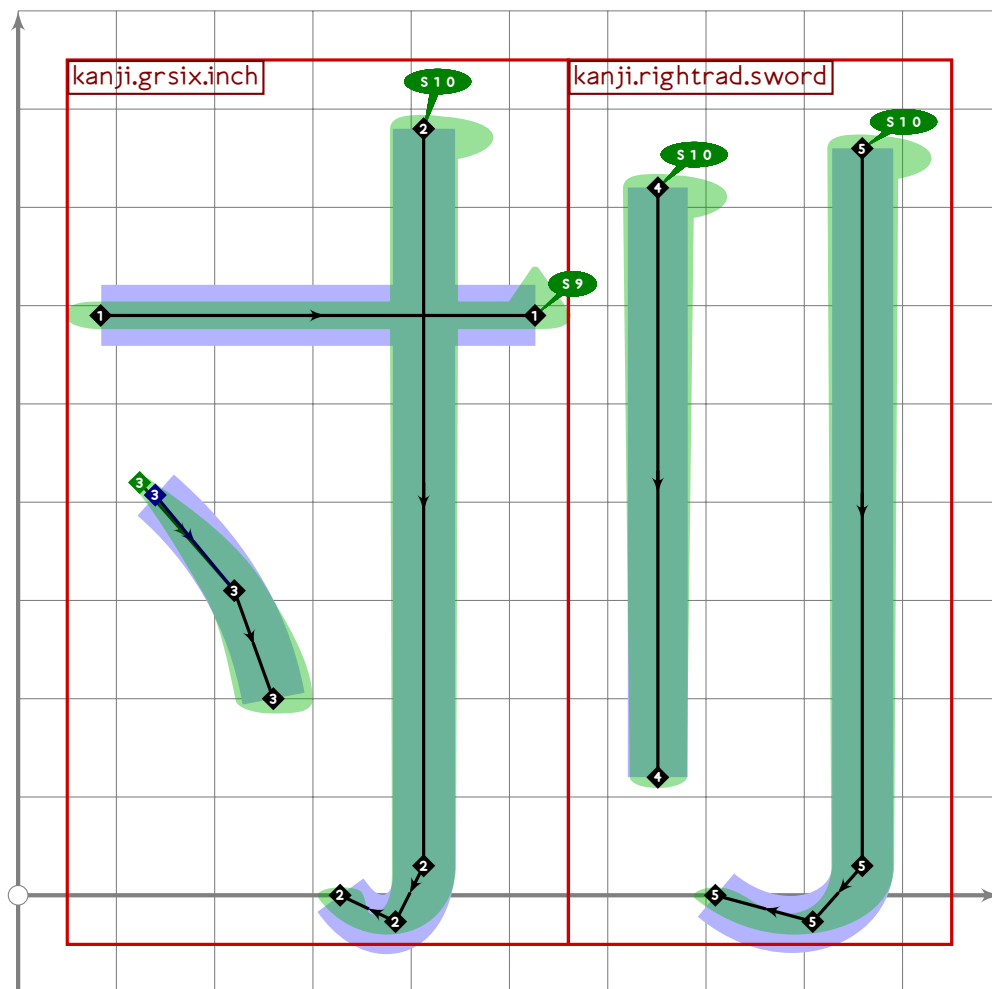
143 endtsuglyph;
144
145 % bun/wa "minute" or "understand" (wakarimasu ka?)
146 begintsuglyph("uni5206";6);
147 tsu_curve.kanji.grtwo.minute;
148 tsu_render;
149 endtsuglyph;
150
151 % setsu/ki "cut"
152 begintsuglyph("uni5207";7);
153 tsu_curve.kanji.grtwo.cut;
154 tsu_render;
155 endtsuglyph;
156
157 % gai/ka "mow"
158 begintsuglyph("uni5208";8);
159 tsu_curve.kanji.greight.cut_the_grass;
160 tsu_render;
161 endtsuglyph;
162

```

[see page 410]

[see page 1245]

[see page 1248]

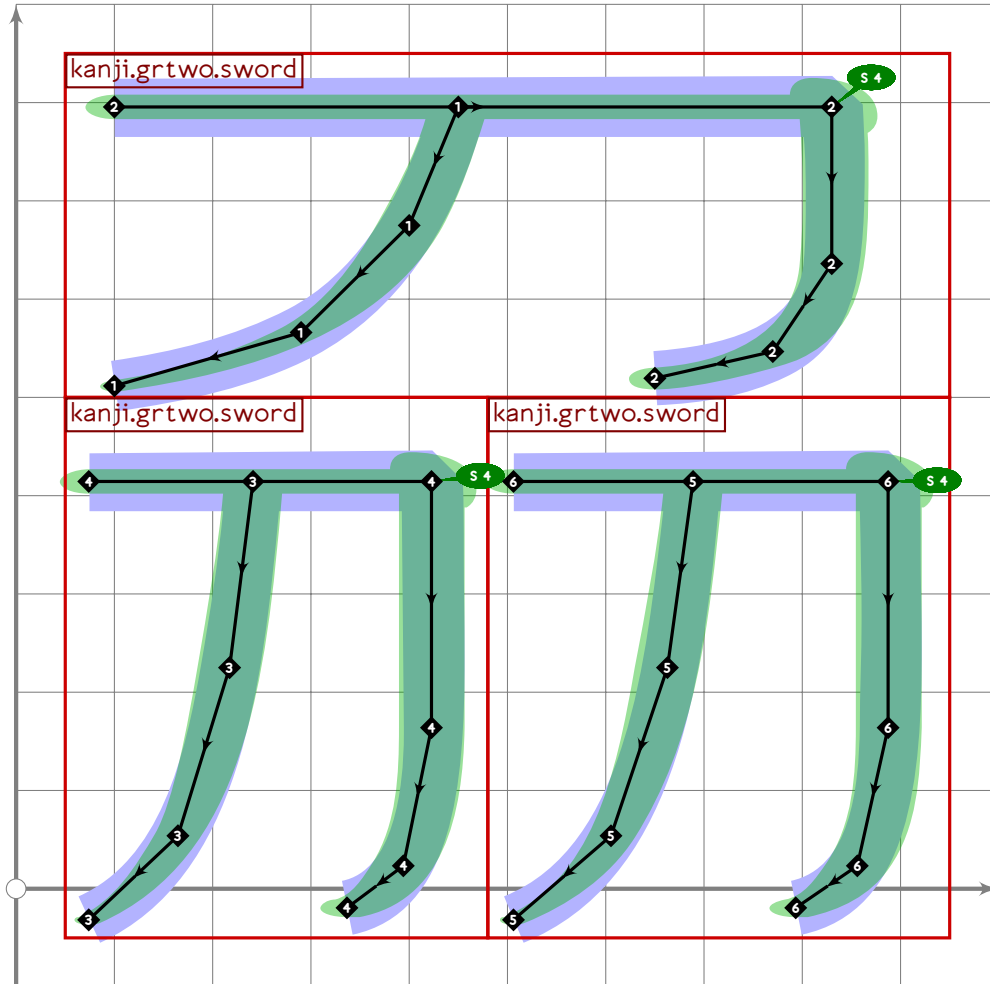


163 % extra

```

164 begintsuglyph("uni520C";12);
165 build_kanji.level(build_kanji.lr(560,0)
166   (tsu_curve.kanji.grsix.inch)
167   (tsu_curve.kanji.rightrad.sword));
168 tsu_render;
169 endtsuglyph;
170

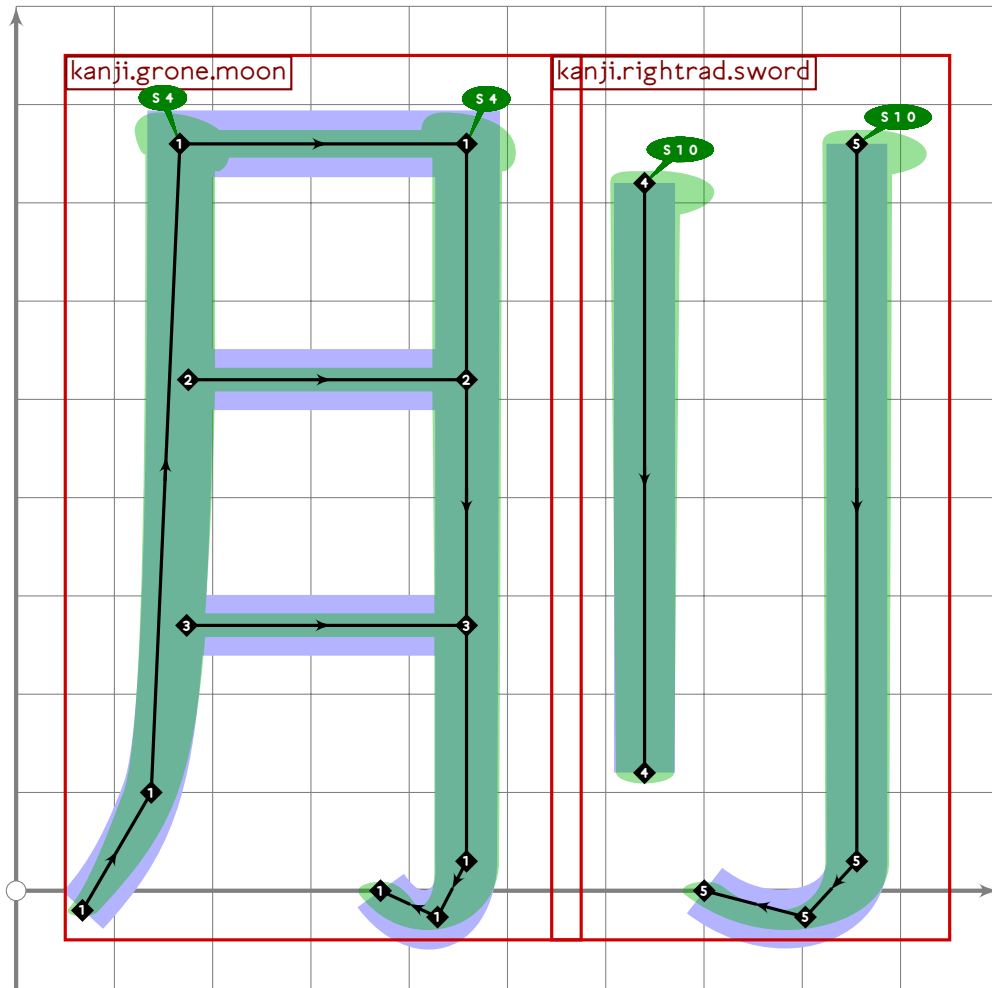
```



```

171 % extra
172 begintsuglyph("uni5215";21);
173 build_kanji.level(build_kanji.tricluster(1)
174   (tsu_curve.kanji.grtwo.sword)
175   (tsu_curve.kanji.grtwo.sword)
176   (tsu_curve.kanji.grtwo.sword));
177 tsu_render;
178 endtsuglyph;
179

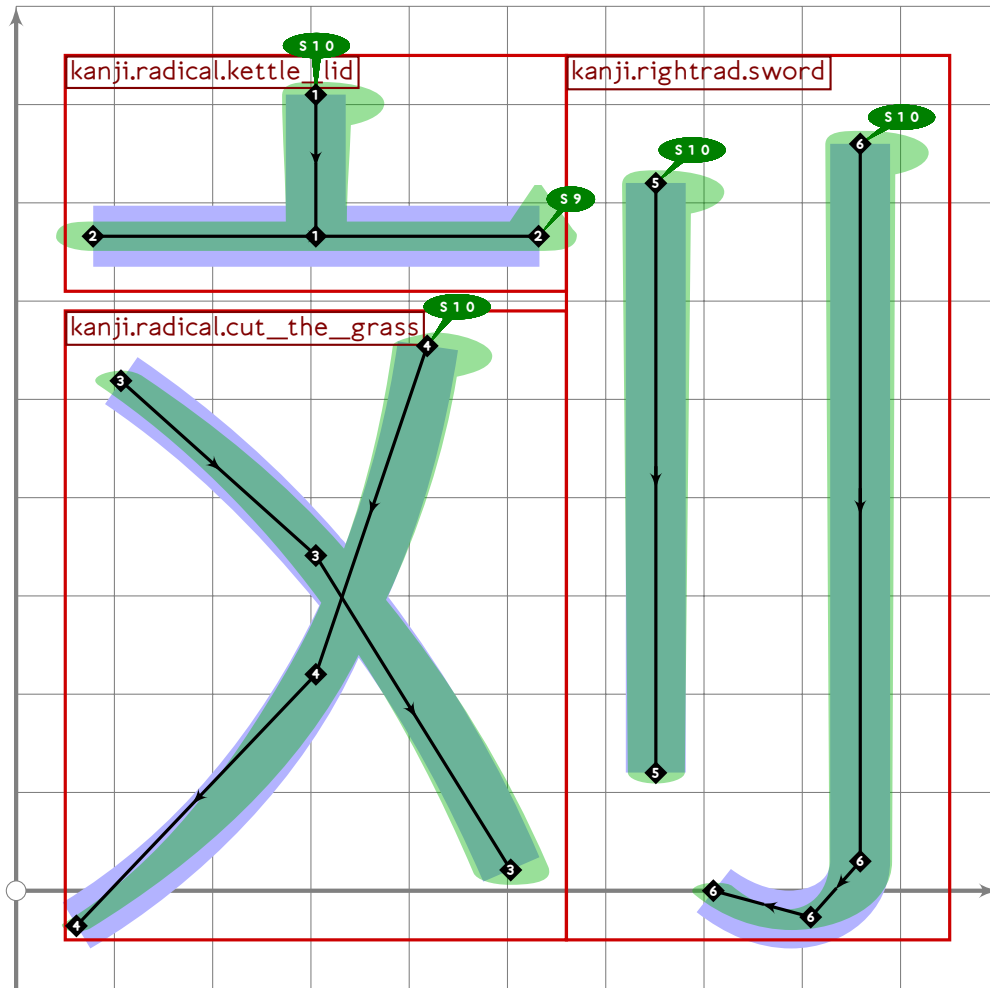
```



```

180 % extra: punishment by cutting off the feet (wtf?)
181 begint Suglyph("uni5216",22);
182   build_kanji.level(build_kanji.lr(560,30)
183     (tsu_curve.kanji.grone.moon)
184     (tsu_curve.kanji.rightrad.sword));
185   tsu_render;
186 endtsuglyph;
187

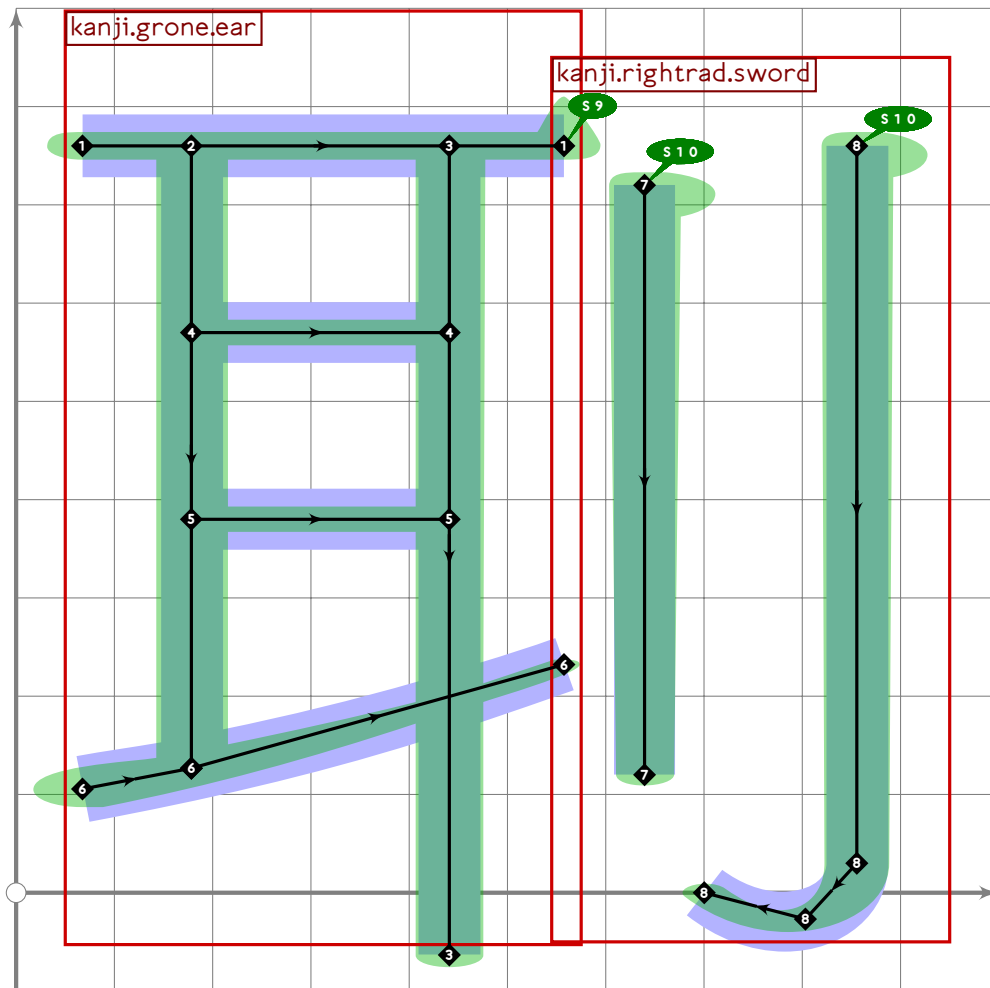
```



```

188 % extra: kill, destroy
189 begint Suglyph("uni5218";24);
190 build_kanji.level(build_kanji.lr(560,0)
191   (build_kanji.tb(600;20)
192     (tsu_curve.kanji.radical.kettle_lid)
193     (tsu_curve.kanji.radical.cut_the_grass))
194   (tsu_curve.kanji.rightrad.sword));
195 tsu_render;
196 endtsuglyph;
197

```



```

198 % extra: punishment by cutting off the ears
199 begint Suglyph("uni5235",53);
200 build_kanji.level(build_kanji.lr(560,30)
201   (tsu_xform(identity yscaled (760/720))(tsu_curve.kanji.grone.ear))
202   (tsu_curve.kanji.rightrad.sword));
203 tsu_render;
204 endtsuglyph;
205
206 % satsu "temple/central pillar of pagoda"
207 begint Suglyph("uni5239",57);
208 tsu_curve.kanji.greight.temple;
209 tsu_render;
210 endtsuglyph;
211
212 % soku/notto "conform"
213 begint Suglyph("uni5247",71);
214 tsu_curve.kanji.grfive.conform;
215 tsu_render;
216 endtsuglyph;
217
218 % saku/kezu "whittle, sharpen, plane"

```

[see page 1249]

[see page 1247]

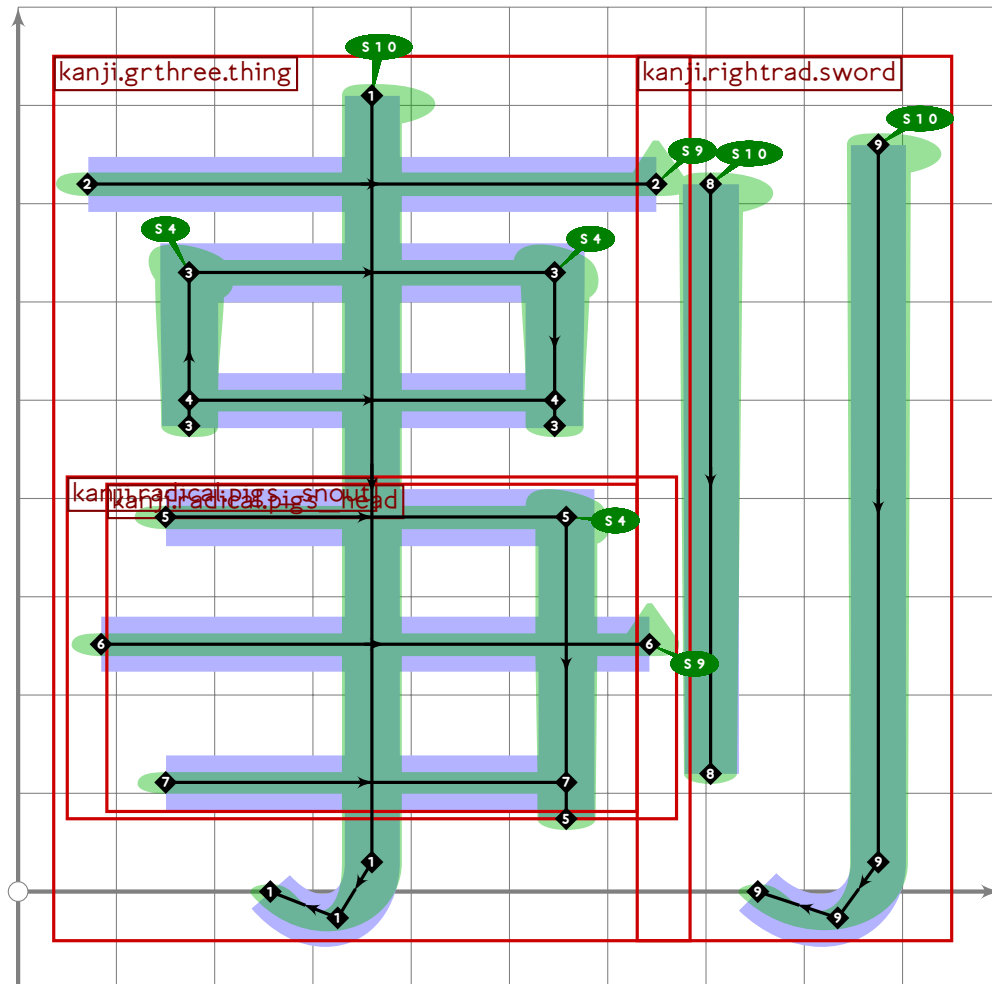
```

219 begintsuglyph("uni524A";74);
220 tsu_curve.kanji.greight.whittle;
221 tsu_render;
222 endtsuglyph;
223
224 % zen/mae "before"
225 begintsuglyph("uni524D";77);
226 tsu_curve.kanji.grtwo.before;
227 tsu_render;
228 endtsuglyph;
229

```

[see page 1250]

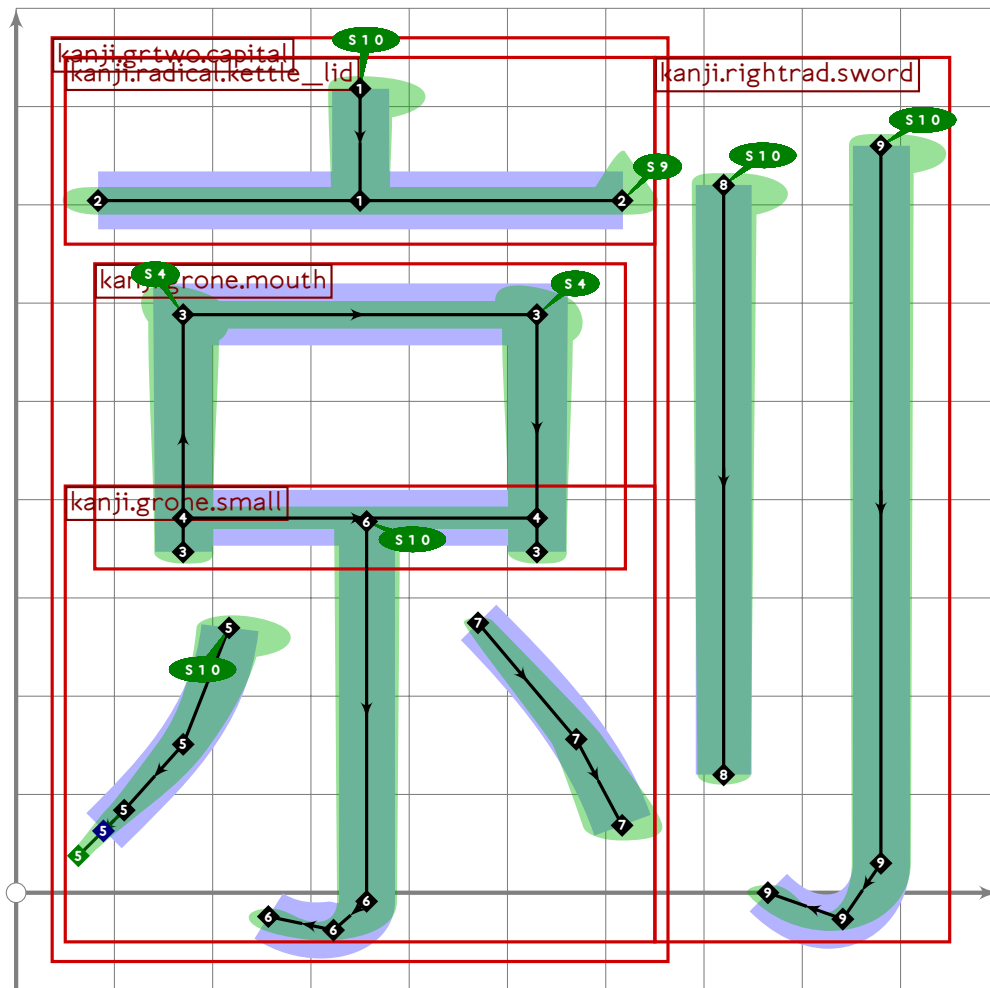
[see page 1244]



```

230 % extra: "stab"
231 begintsuglyph("uni525A";90);
232 build_kanji.level(build_kanji.lr(650,40)
233   (tsu_curve.kanji.grthree.thing)
234   (tsu_curve.kanji.rightrad.sword));
235 tsu_render;
236 endtsuglyph;
237

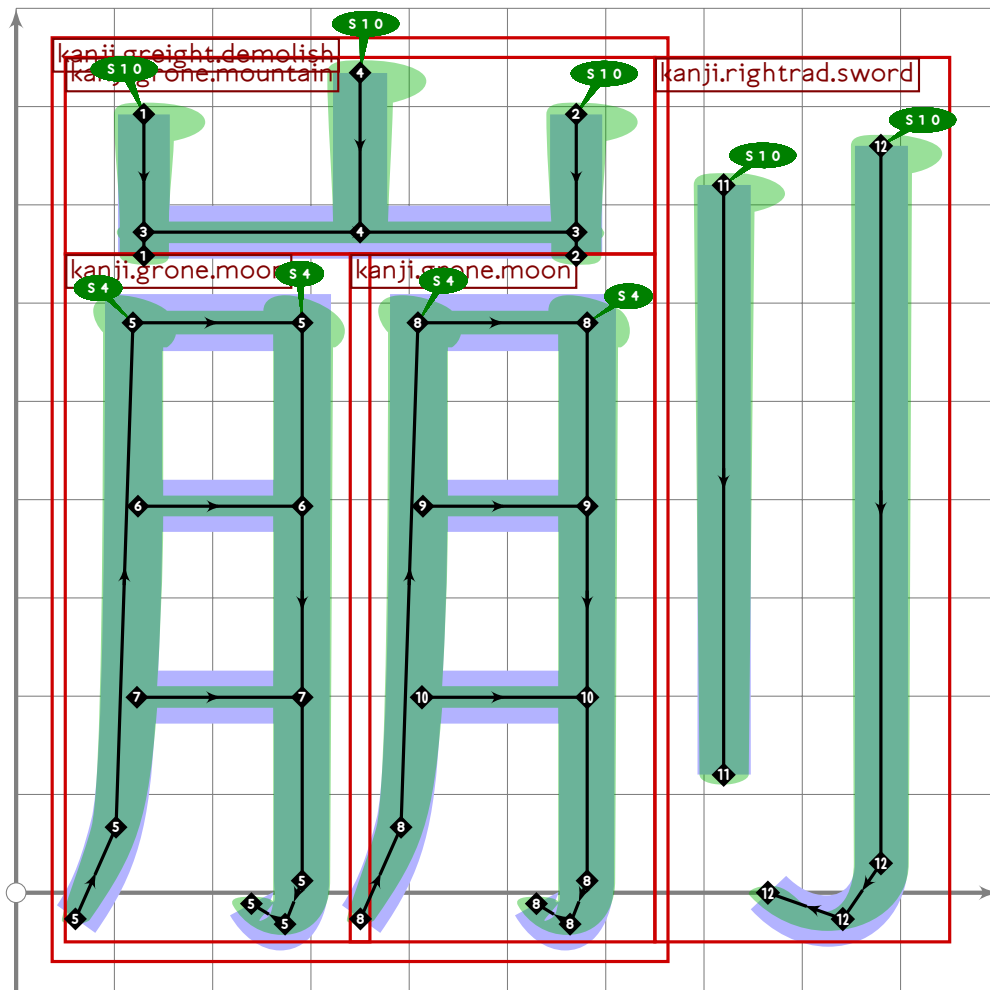
```

```

238 % extra: "brand" (probably yet another criminal punishment)
239 begint Suglyph("uni5260";96);
240 build_kanji.level(build_kanji.lf(650,0)
241   (tsu_curve.kanji.grtwo.capital)
242   (tsu_curve.kanji.rightrad.sword));
243 tsu_render;
244 endtsuglyph;
245

```



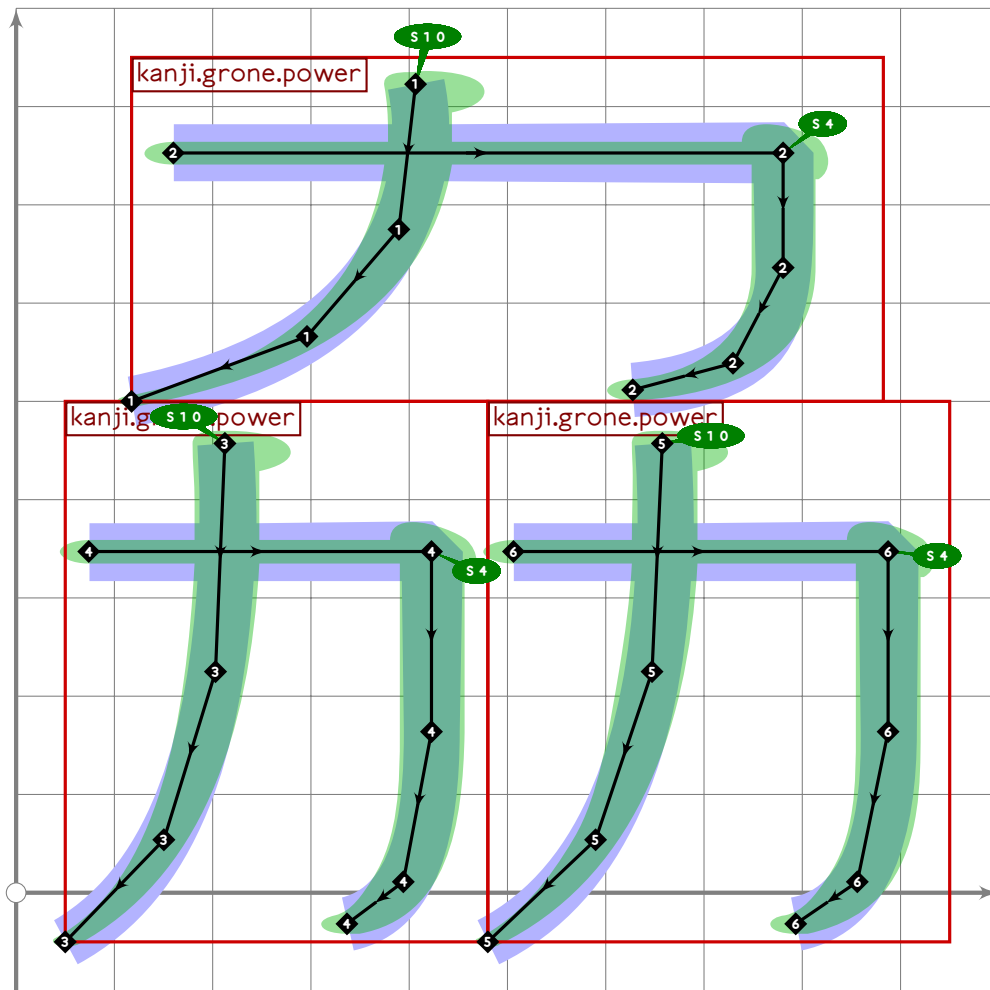
```

246 % extra
247 begintsuglyph("uni527B";123);
248   build_kanji.level(build_kanji.lr(650,0)
249     (tsu_curve.kanji.greight.demolish)
250     (tsu_curve.kanji.rightrad.sword));
251   tsu_render;
252 endsuglyph;
253
254 % ryoku "power", as in Koizumi Itsuki has teh "chounouryoku"
255 begintsuglyph("uni529B";155);
256   tsu_curve.kanji.grone.power;
257   tsu_render;
258 endsuglyph;
259
260 % kuwa "addition", also "Canada"
261 begintsuglyph("uni52A0";160);
262   tsu_curve.kanji.grfour.addition;
263   tsu_render;
264 endsuglyph;
265

```

[see page 372]

[see page 1246]



```

266 % extra
267 begintsuglyph("uni52A6",166);
268 build_kanji.level(build_kanji.tricuster(0.85)
269   (tsu_curve.kanji.grone.power)
270   (tsu_curve.kanji.grone.power)
271   (tsu_curve.kanji.grone.power));
272 tsu_render;
273 endtsuglyph;
274
275 % hou/tsutsu "wrapping radical"
276 begintsuglyph("uni52F9",249);
277 tsu_curve.kanji.radical.wrapping;
278 tsu_render;
279 endtsuglyph;
280
281 % mochi/naka "not", esp. "must not"
282 begintsuglyph("uni52FF",255);
283 tsu_curve.kanji.grnine.must_not;
284 tsu_render;
285 endtsuglyph;
286

```

[see page 333]

[see page 456]

287 _____
288
289 **endfont;**
290
291 _____

tsuku-53.mp

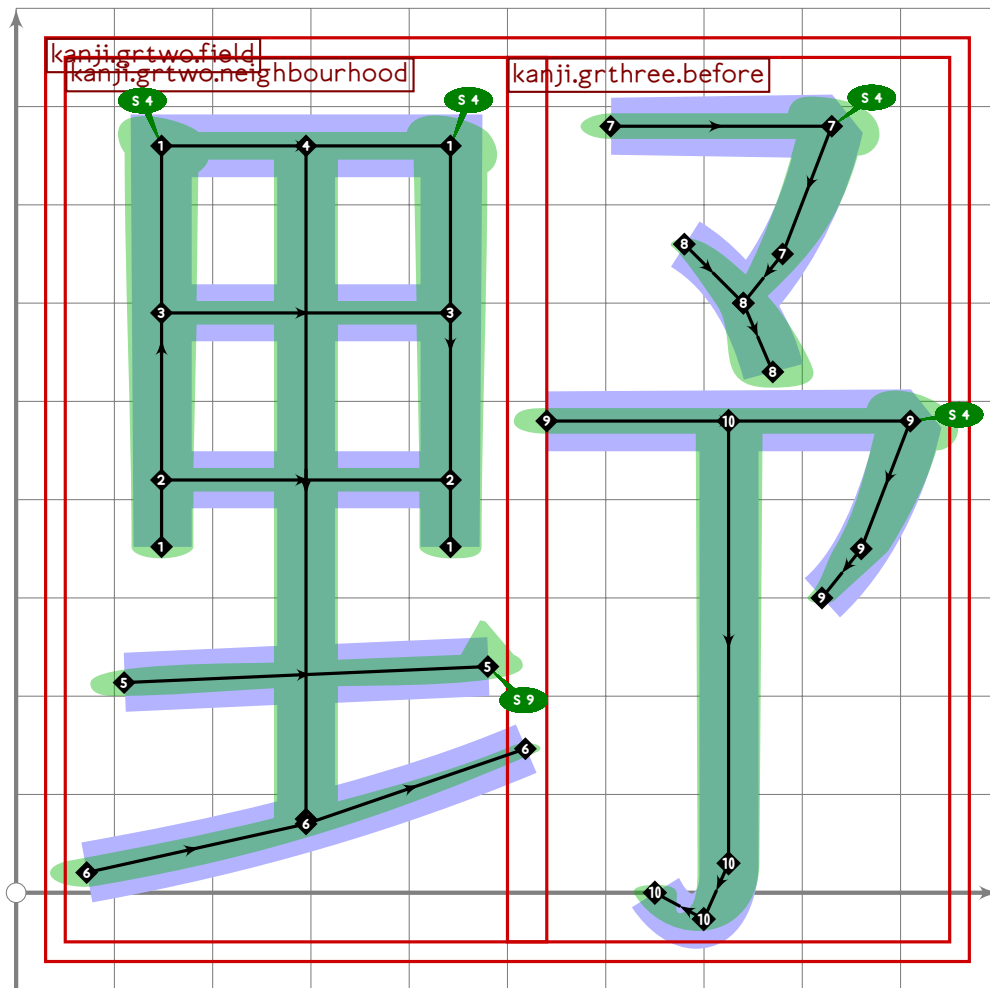
```
1 %
2 % Unicode page 53 (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradeeight.mp;
38 input gradefive.mp;
39 input gradefour.mp;
40 input gradenine.mp;
41 input gradeone.mp;
42 input gradethree.mp;
43 input gradetwo.mp;
44 input leftrad.mp;
45 input radical.mp;
46 input rare.mp;
47 input toprad.mp;
48
49 

---

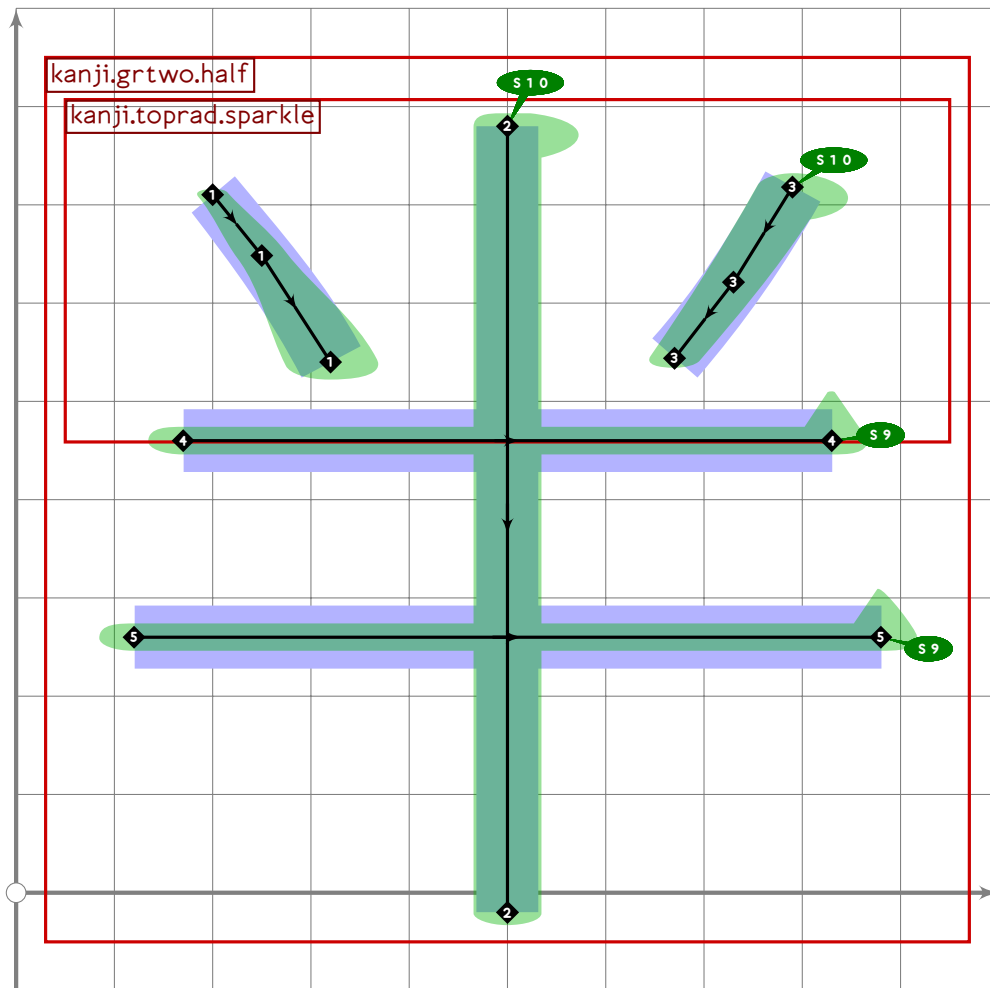

```



```

50
51 vardef tsu_curve.kanji.grtwo.field =
52   push_pbox_toexpand("kanji.grtwo.field");
53   build_kanji.level(build_kanji.cliff_enclose(
54     build_kanji.tb(380,67)
55     (tsu_curve.kanji.grone.white)
56     (tsu_curve.kanji.grone.small)));
57   begingroup
58     save myxf;
59     transform myxf;
60     point 2 of get_stroke(-6) transformed myxf=point 2 of get_stroke(-6);
61     ypart (point 0 of get_stroke(-6) transformed myxf)=760;
62     xpart myxf=yxpart myxf=0;
63     xxpart myxf=1;
64     replace_stroke(-6)(oldp transformed myxf);
65   endgroup;
66   set_boserif(-6,0,whatever);
67   set_boserif(-1,0,whatever);
68   expand_pbox;
69 enddef;

```



```

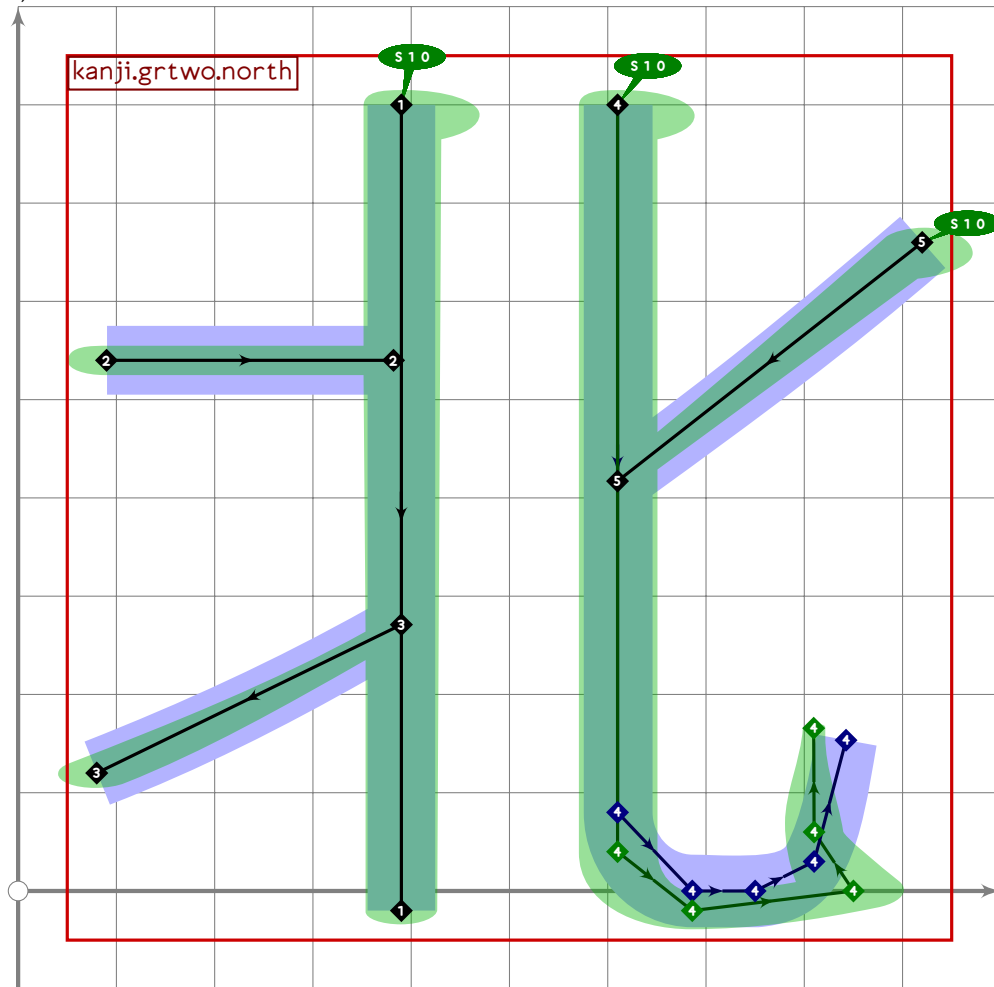
70
71 vardef tsu_curve.kanji.grtwo.half =
72   push_pbox_toexpand("kanji.grtwo.half");
73   build_kanji.level(begingroup
74     save saved_path,mytr;
75     path saved_path;
76     transform mytr;
77     xpart mytr=xypart mytr=yxpart mytr=0;
78     xxpart mytr=1;
79     (500,160) transformed mytr=(500,540);
80     (500,780) transformed mytr=(500,780);
81     tsu_xform(mytr)
82     (tsu_curve.kanji.toprad.sparkle;saved_path:=get_strokep(1));
83     replace_strokep(1)(saved_path);
84     push_stroke((170,460)-(830,460),
85       (1.6,1.6)-(1.6,1.6));
86     set_boserif(0,1,9);
87     push_stroke((120,260)-(880,260),
88       (1.6,1.6)-(1.6,1.6));
89     set_boserif(0,1,9);
90   endgroup);

```

```

91 expand_pbox;
92 enddef;

```



```

93
94 vardef tsu_curve.kanji.grtwo.north =
95   push_pbox_toexpand("kanji.grtwo.north");
96   push_stroke((390,800)-(390,20),(1.6,1.6)-(1.5,1.5));
97   set_boserif(0,0,10);
98   push_stroke((90,540)-(382,540),(1.6,1.6)-(1.6,1.6));
99   push_stroke((920,660)..tension 1.2..(500,340)..(80,120),
100     (1.1,1.1)-(1.6,1.6));
101   push_stroke((610,800),(1.6,1.6));
102   build_kanji.add_tail(0);
103   set_boserif(0,0,10);
104   push_stroke(subpath
105     (0,xpart (get_stroke(-1) intersectiontimes get_stroke(0)))
106     of get_stroke(-1),
107     (1.6,1.6)-(1.1,1.1));
108   set_boserif(0,0,10);
109   replace_stroke(-2)(subpath
110     (xpart (oldp intersectiontimes get_stroke(-4)),infinity)
111     of oldp);

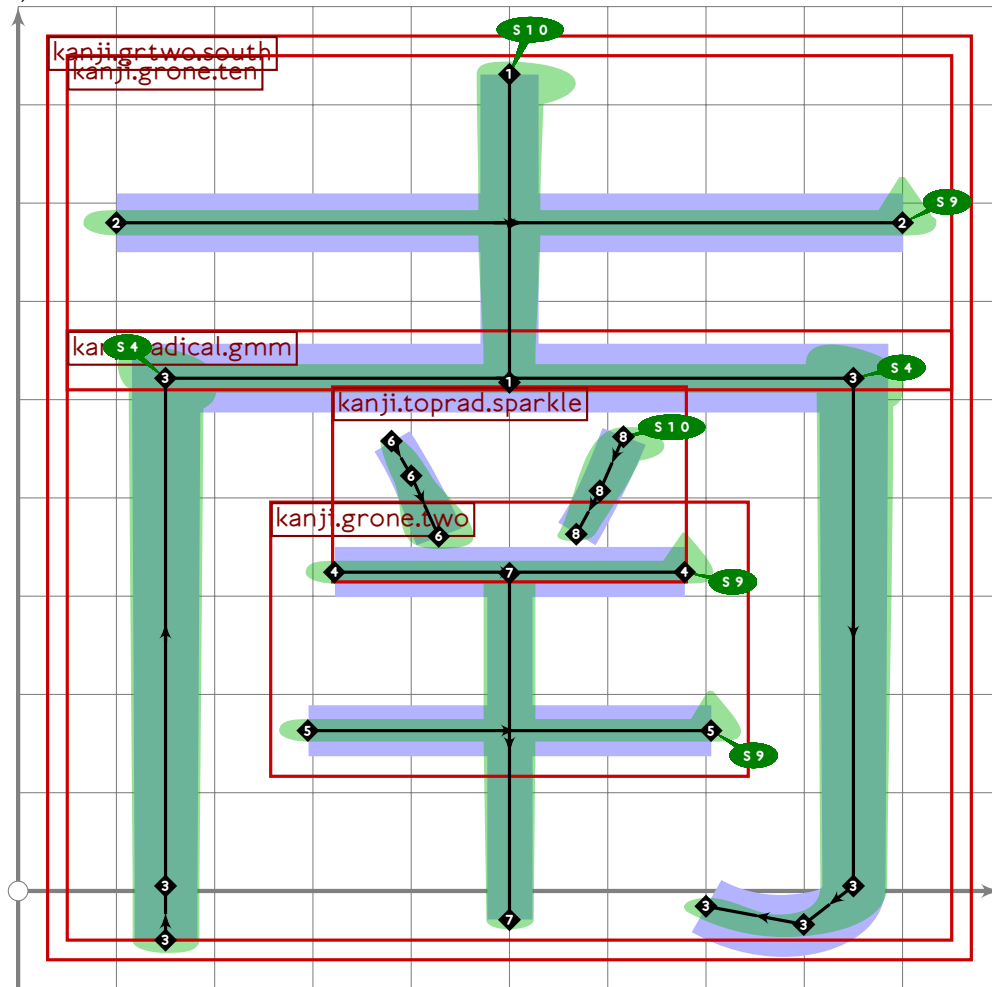
```



```

112 expand_pbox;
113 enddef;

```



```

114
115 vardef tsu_curve.kanji.grtwo.south =
116   push_pbox_toexpand("kanji.grtwo.south");
117   build_kanji.tb(540,60)
118     (tsu_curve.kanji.grone.ten)
119     (tsu_curve.kanji.radical.gmm;
120      build_kanji.sscale(xyscaled (0.54,0.45))(tsu_curve.kanji.grone.two);
121      build_kanji.sscale(xyscaled (0.4,0.32) shifted (0,230))
122        (tsu_curve.kanji.toprad.sparkle);
123      replace_stroke(-1)((500,492)-(500,-20));
124      set_boserif(-1,0,whatever);
125     );
126   expand_pbox;
127 enddef;

```

128

129

130

```

131 vardef build_kanji.cliff_enclose(text contents) =
132   push_pbox_toexpand("build_kanji.cliff_enclose");

```

```

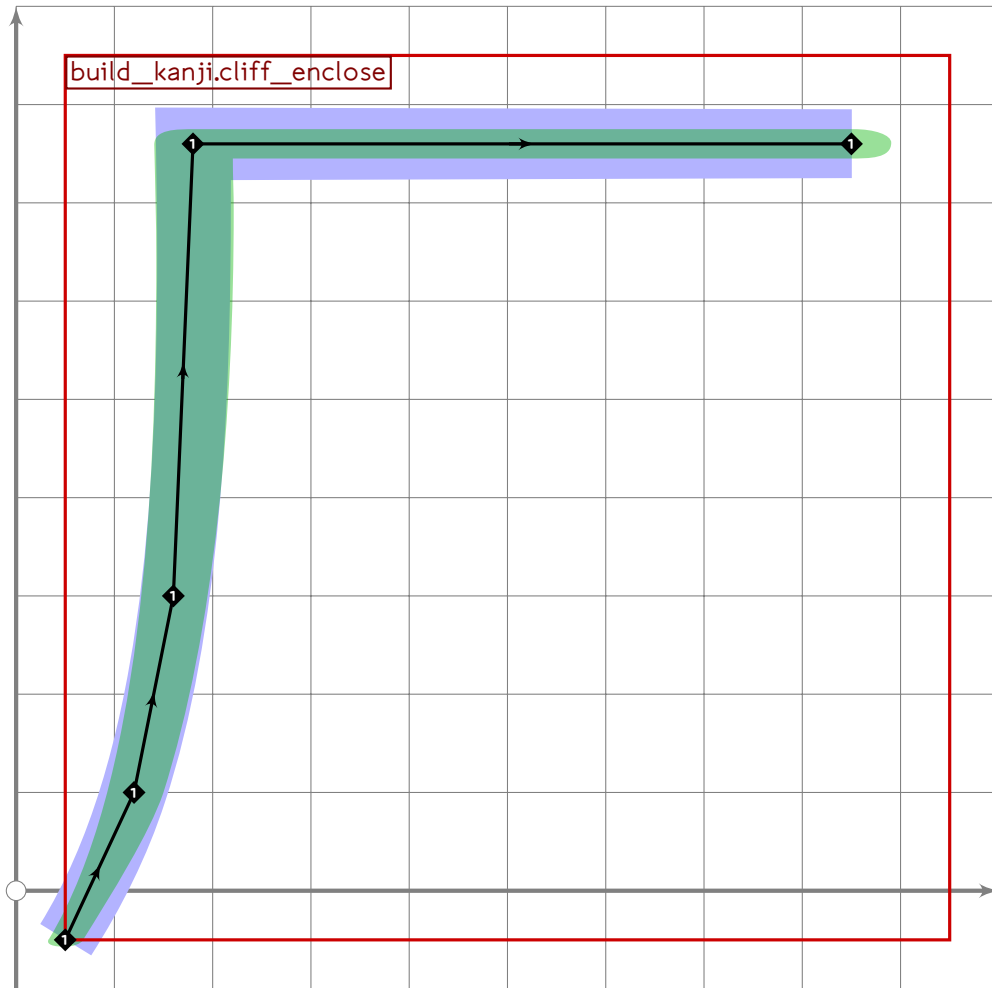
133 push_stroke((50,-50)..(120,100)..(160,300)..tension 1.2..(180,760)
134     -(850,760),
135     (1,1)-(1.3,1.3)-(1.5,1.5)-(1.6,1.6)-(1.6,1.6));
136 set_botip(0,3,1);
137 begingroup
138     save t;
139     transform t;
140     (50,-50) transformed t=(230,-50);
141     (500,-50) transformed t=(560,-50);
142     (500,850) transformed t=(560,730);
143     tsu_xform(t)(contents);
144 endgroup;
145 expand_pbox;
146 enddef;
147
148 

---


149
150 % hi/saji "spoon"
151 begintsuglyph("uni5315",21); [see page 330]
152     tsu_curve.kanji.radical.spoon;
153     tsu_render;
154 endtsuglyph;
155
156 % ka/ba "change"
157 begintsuglyph("uni5316",22); [see page 430]
158     tsu_curve.kanji.grthree.change;
159     tsu_render;
160 endtsuglyph;
161
162 % hoku/kita "north"
163 begintsuglyph("uni5317",23); [see page 1264]
164     tsu_curve.kanji.grtwo.north;
165     tsu_render;
166 endtsuglyph;
167
168 % juu/too "ten"
169 begintsuglyph("uni5341",65); [see page 381]
170     tsu_curve.kanji.grone.ten;
171     tsu_render;
172 endtsuglyph;
173
174 % sen "one thousand"
175 begintsuglyph("uni5343",67); [see page 369]
176     tsu_curve.kanji.grone.one_thousand;
177     tsu_render;
178 endtsuglyph;
179
180 % han/naka "half"

```

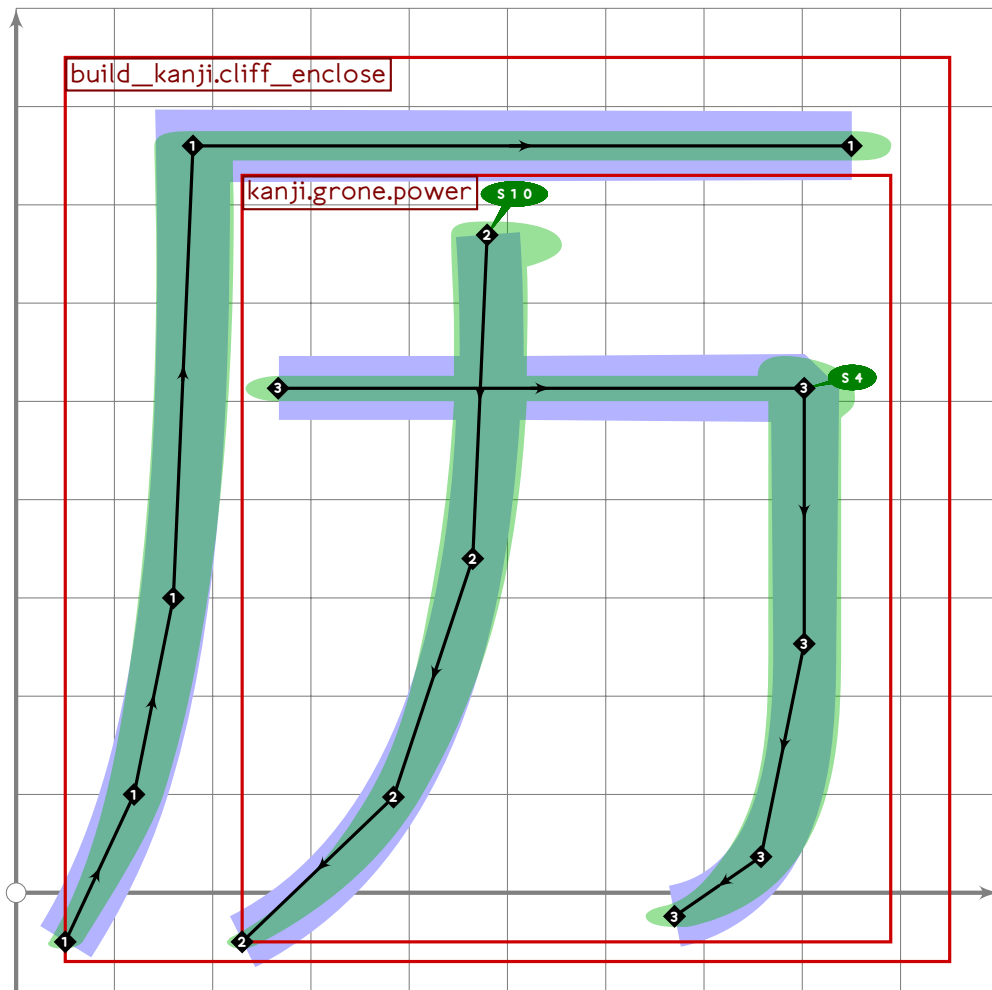
```
181 begintsuglyph\("uni534A";74\); [see page 1263]  
182 tsu\_curve.kanji.grtwo.half;  
183 tsu\_render;  
184 endtsuglyph;  
185  
186 % go/uma "noon"  
187 begintsuglyph\("uni5348";72\); [see page 415]  
188 tsu\_curve.kanji.grtwo.noon;  
189 tsu\_render;  
190 endtsuglyph;  
191  
192 % nan/minami "south"  
193 begintsuglyph\("uni5357";87\); [see page 1265]  
194 tsu\_curve.kanji.grtwo.south;  
195 tsu\_render;  
196 endtsuglyph;  
197  
198 % sen/urana "divination"  
199 begintsuglyph\("uni5360";96\); [see page 449]  
200 tsu\_curve.kanji.greight.divination;  
201 tsu\_render;  
202 endtsuglyph;  
203
```



```

204 % karigane "cliff radical"
205 begint Suglyph("uni5382",130);
206 build_kanji.cliff_enclose();
207 tsu_render;
208 endtsuglyph;
209

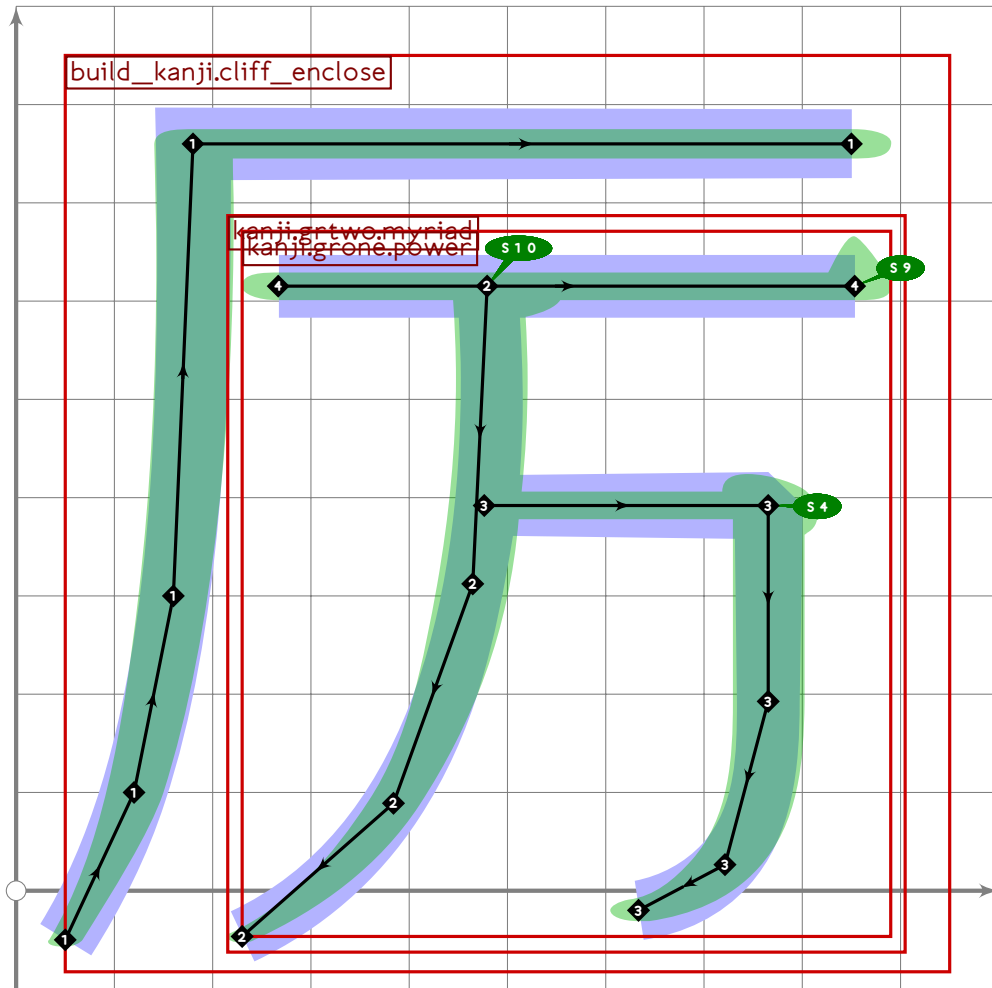
```



```

210 % extra
211 begint Suglyph("uni5386";134);
212 build_kanji.cliff_enclose(tsu_curve.kanji.grone.power);
213 tsu_render;
214 endtsuglyph;
215

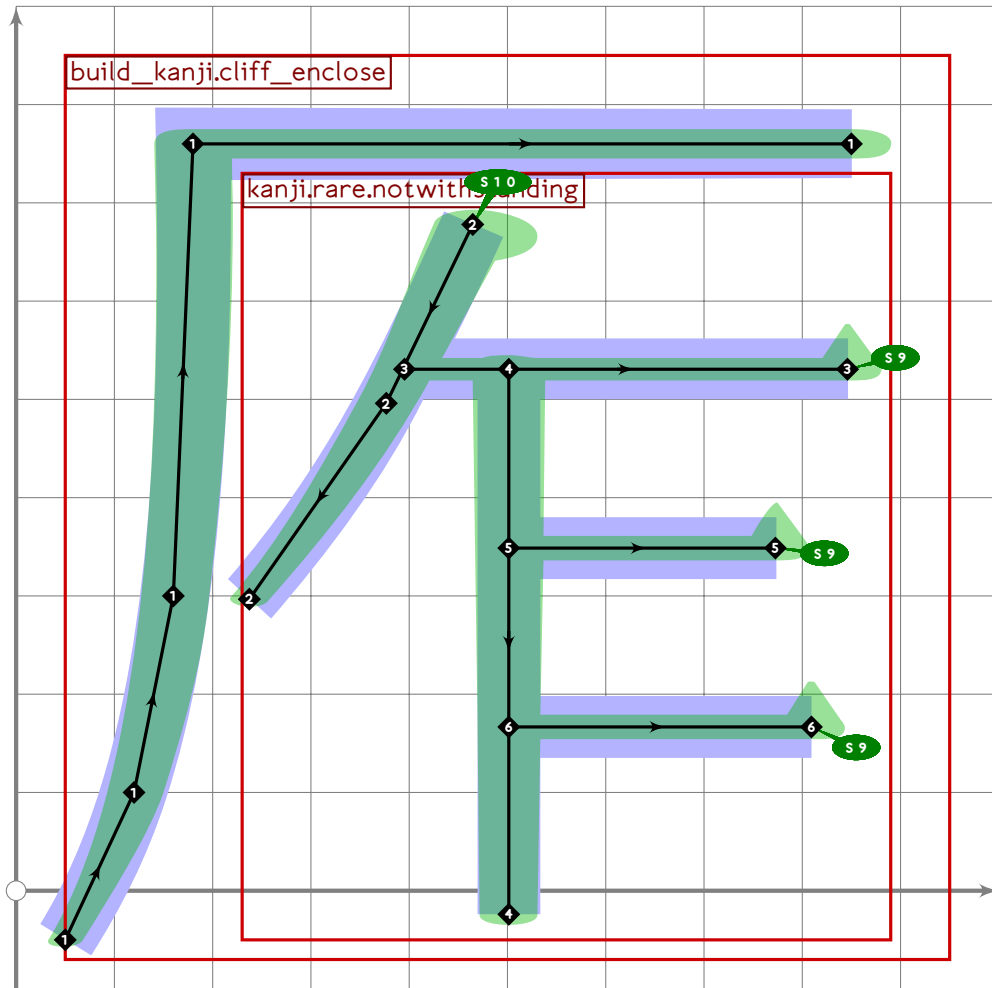
```



```

216 % extra
217 begint Suglyph("uni5389";137);
218 build_kanji.cliff_enclose(tsu_xform(identity yscaled 0.92)
219   (tsu_curve.kanji.grtwo.myriad));
220 tsu_render;
221 endsuglyph;
222

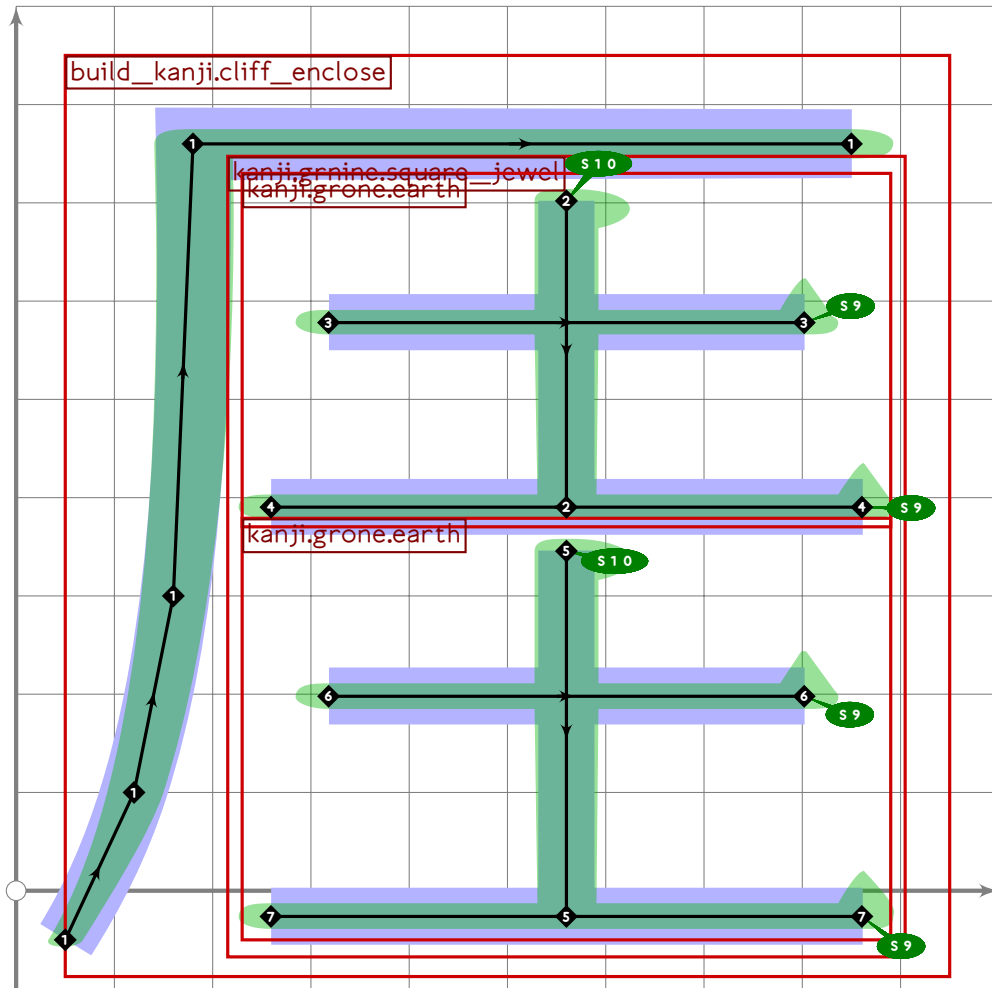
```



```

223 % extra
224 begint Suglyph("uni538F";143);
225 build_kanji.cliff_enclose(tsu_curve.kanji.rare.notwithstanding);
226 tsu_render;
227 endtsuglyph;
228

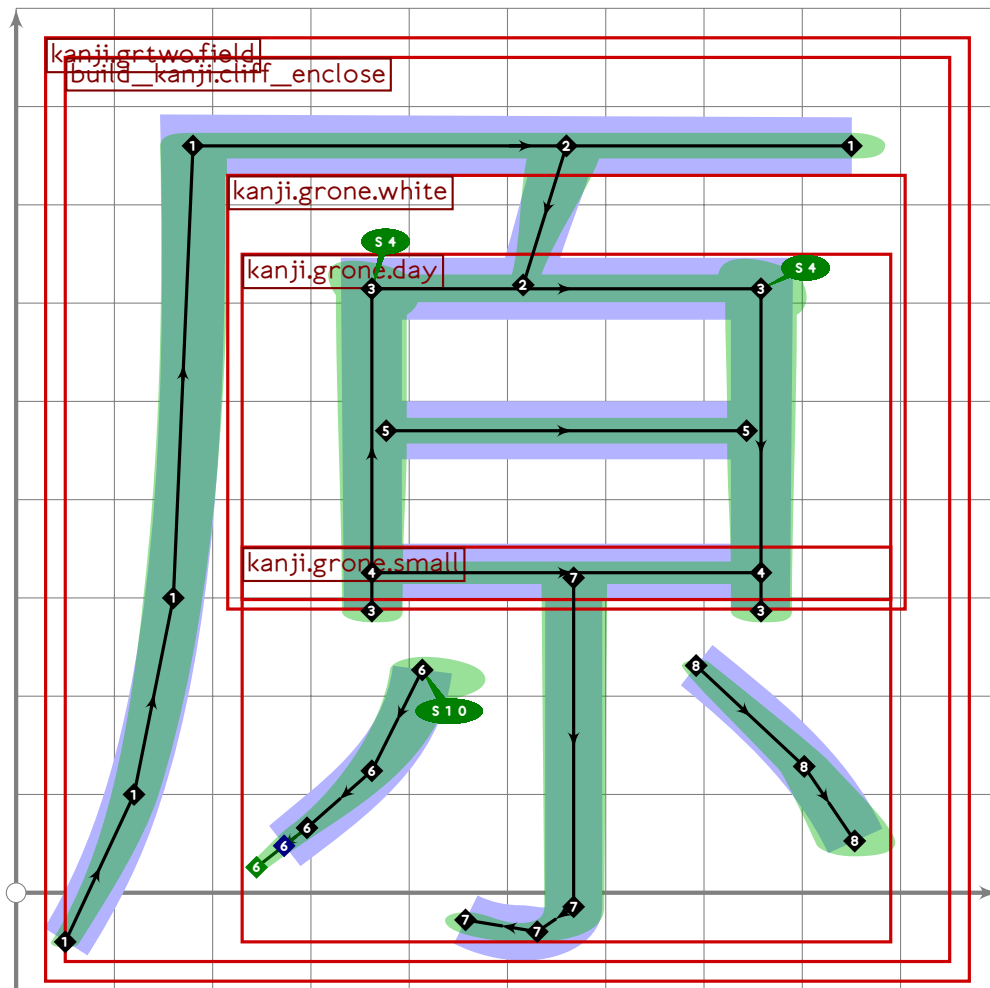
```



```

229 % extra
230 begint Suglyph("uni5393";147);
231 build_kanji.cliff_enclose(tsu_curve.kanji.gnine.square_jewel);
232 tsu_render;
233 endtsuglyph;
234

```

```

235 % gen/hara "field"
236 begint Suglyph("uni539F";159);
237 tsu_curve.kanji.grtwo.field;
238 tsu_render;
239 endtsuglyph;

```

```

241 % "mu radical"
242 begint Suglyph("uni53B6";182);
243 tsu_curve.kanji.radical.mu;
244 tsu_render;
245 endtsuglyph;

```

[see page 324]

```

247 % kou/kuchi "mouth"
248 begint Suglyph("uni53E3";227);
249 tsu_curve.kanji.grone.mouth;
250 tsu_render;
251 endtsuglyph;

```

[see page 365]

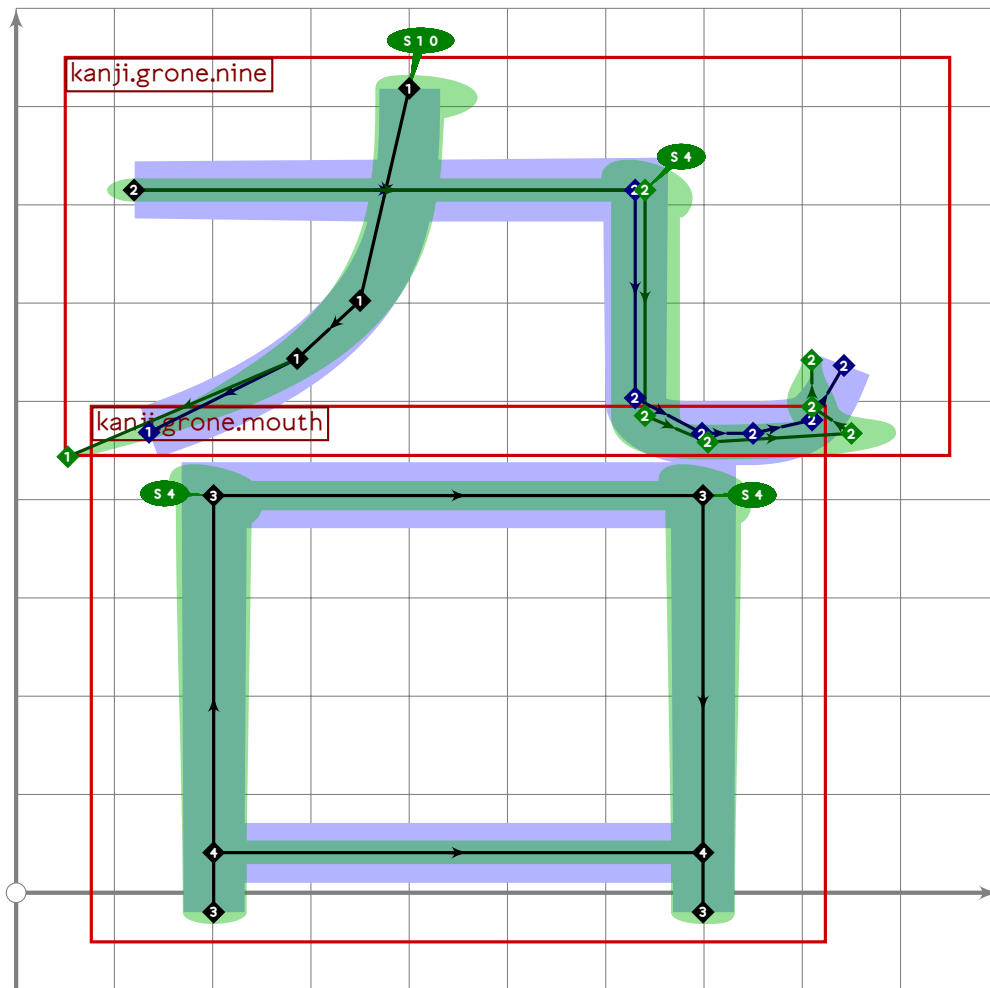
```

252
253 % ko/furo "old"
254 begint Suglyph("uni53E4";228);
255 tsu_curve.kanji.grtwo.old;

```

[see page 418]

256 `tsu_render;`
257 `endtsuglyph;`
258
259 `% tada "only"`
260 `begintsuglyph("uni53EA",234);` [see page 458]
261 `tsu_curve.kanji.grnine.only;`
262 `tsu_render;`
263 `endtsuglyph;`
264
265 `% shou/me "call"`
266 `begintsuglyph("uni53EC",236);` [see page 447]
267 `tsu_curve.kanji.greight.call;`
268 `tsu_render;`
269 `endtsuglyph;`
270
271 `% ka/be "passable"`
272 `begintsuglyph("uni53EF",239);` [see page 441]
273 `tsu_curve.kanji.grfive.passable;`
274 `tsu_render;`
275 `endtsuglyph;`
276
277 `% tai/utana "pedastal"`
278 `begintsuglyph("uni53F0",240);` [see page 420]
279 `tsu_curve.kanji.grtwo.pedastal;`
280 `tsu_render;`
281 `endtsuglyph;`
282
283 `% migi "right"`
284 `begintsuglyph("uni53F3",243);` [see page 374]
285 `tsu_curve.kanji.grone.right;`
286 `tsu_render;`
287 `endtsuglyph;`
288



```

289 % extra
290 \begin{suglyph}{uni53F4}{244};
291   \build_kanji.tb(470,50)
292     (tsu_curve.kanji.grone.nine)
293     (build_kanji.sscale(xscaled 0.83 shifted (-50,0))
294       (tsu_curve.kanji.grone.mouth));
295   \tsu_render;
296 \end{suglyph};

```

```

297
298 % shi/tsukasado "director" or "official (person)"
299 \begin{suglyph}{uni53F8}{248};
300   \tsu_curve.kanji.grfour.director;
301   \tsu_render;
302 \end{suglyph};

```

[see page 437]

```

303
304
305
306 \endfont;
307
308

```

tsuku-54.mp

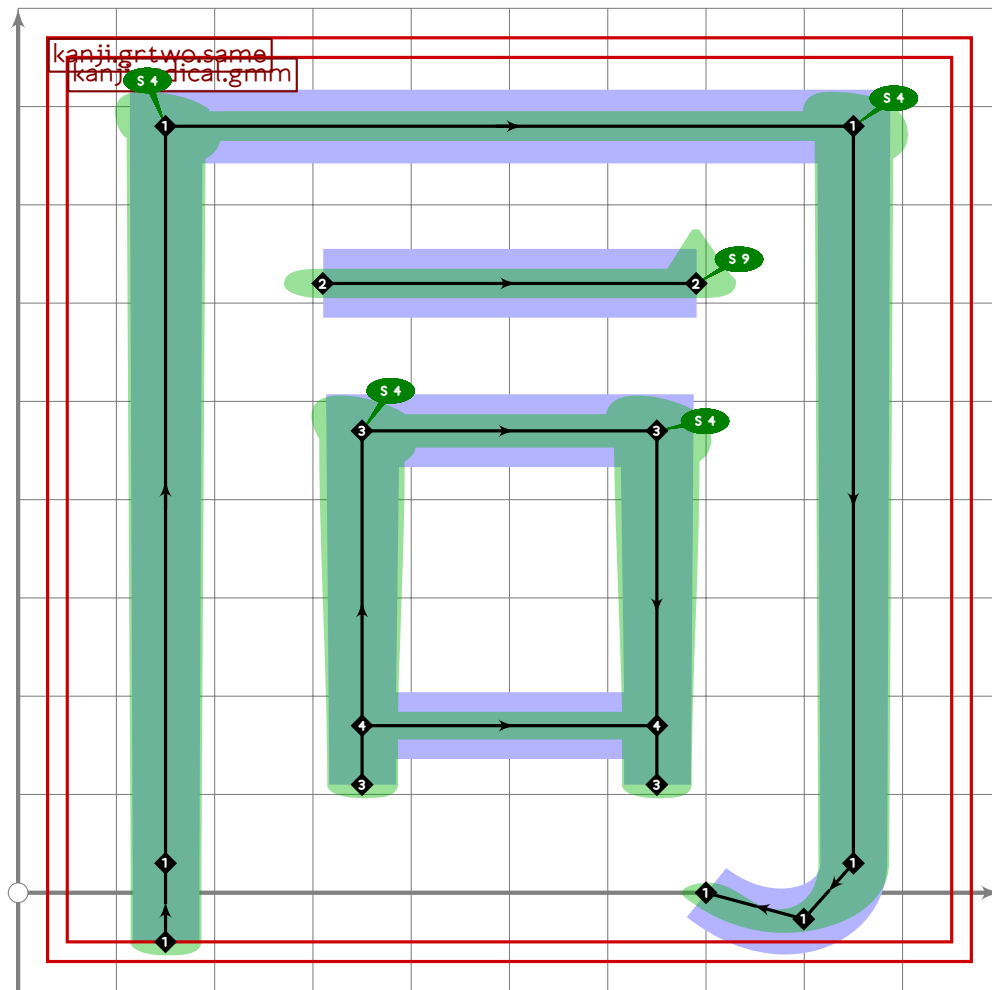
```
1 %
2 % Unicode page 54 (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradefive.mp;
38 input gradefour.mp;
39 input gradenine.mp;
40 input gradeone.mp;
41 input gradethree.mp;
42 input gradetwo.mp;
43 input radical.mp;
44 input rare.mp;
45
46 

---


```



```

47
48 vardef tsu_curve.kanji.grtwo.same =
49   push_pbox_toexpand("kanji.grtwo.same");
50   tsu_curve.kanji.radical.gmm;
51   push_stroke((310,620)-(690,620),(1,6,1,6)-(1,6,1,6));
52   set_boserif(0,1,9);
53   build_kanji.box((350,470),(650,170));
54   expand_pbox;
55 enddef;

```

56

57

58

59 % gou/a "meet"

60 `begintsuglyph("uni5408",8);`

[see page 404]

61 `tsu_curve.kanji.grtwo.join;`

62 `tsu_render;`

63 `endtsuglyph;`

64

65 % dou/onaji "the same"

66 `begintsuglyph("uni540C",12);`

[see page 1277]

67 `tsu_curve.kanji.grtwo.same;`

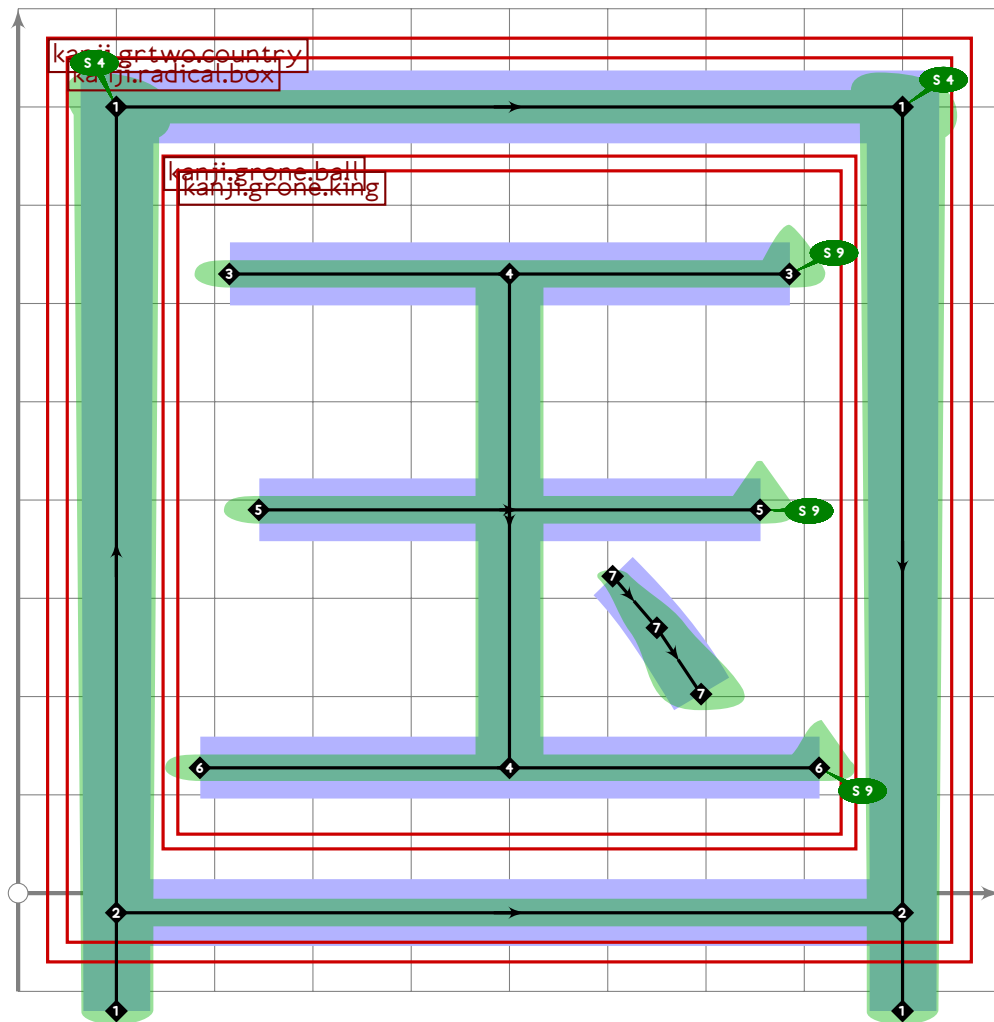
```

68 tsu_render;
69 endtsuglyph;
70
71 % na "name"
72 begintsuglyph("uni540D";13); [see page 366]
73 tsu_curve.kanji.grone.name;
74 tsu_render;
75 endtsuglyph;
76
77 % go/ware "my, mine"
78 begintsuglyph("uni543E";62); [see page 457]
79 tsu_curve.kanji.grnine.my;
80 tsu_render;
81 endtsuglyph;
82
83 % koku "revelation"
84 begintsuglyph("uni544A";74); [see page 440]
85 tsu_curve.kanji.grfour.revelation;
86 tsu_render;
87 endtsuglyph;
88
89 % hin.shina "goods"
90 begintsuglyph("uni54C1";193); [see page 432]
91 tsu_curve.kanji.grthree.goods;
92 tsu_render;
93 endtsuglyph;
94
95 % ka/uta "big brother" (needed for ka/uta "song")
96 begintsuglyph("uni54E5";229); [see page 462]
97 tsu_curve.kanji.rare.big_brother;
98 tsu_render;
99 endtsuglyph;
100
101 _____
102
103 endfont;
104
105 _____

```

tsuku-56.mp

```
1 %  
2 % Unicode page 56 (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradeone.mp;  
38 input gradesix.mp;  
39 input gradetwo.mp;  
40 input radical.mp;  
41  
42 _____
```



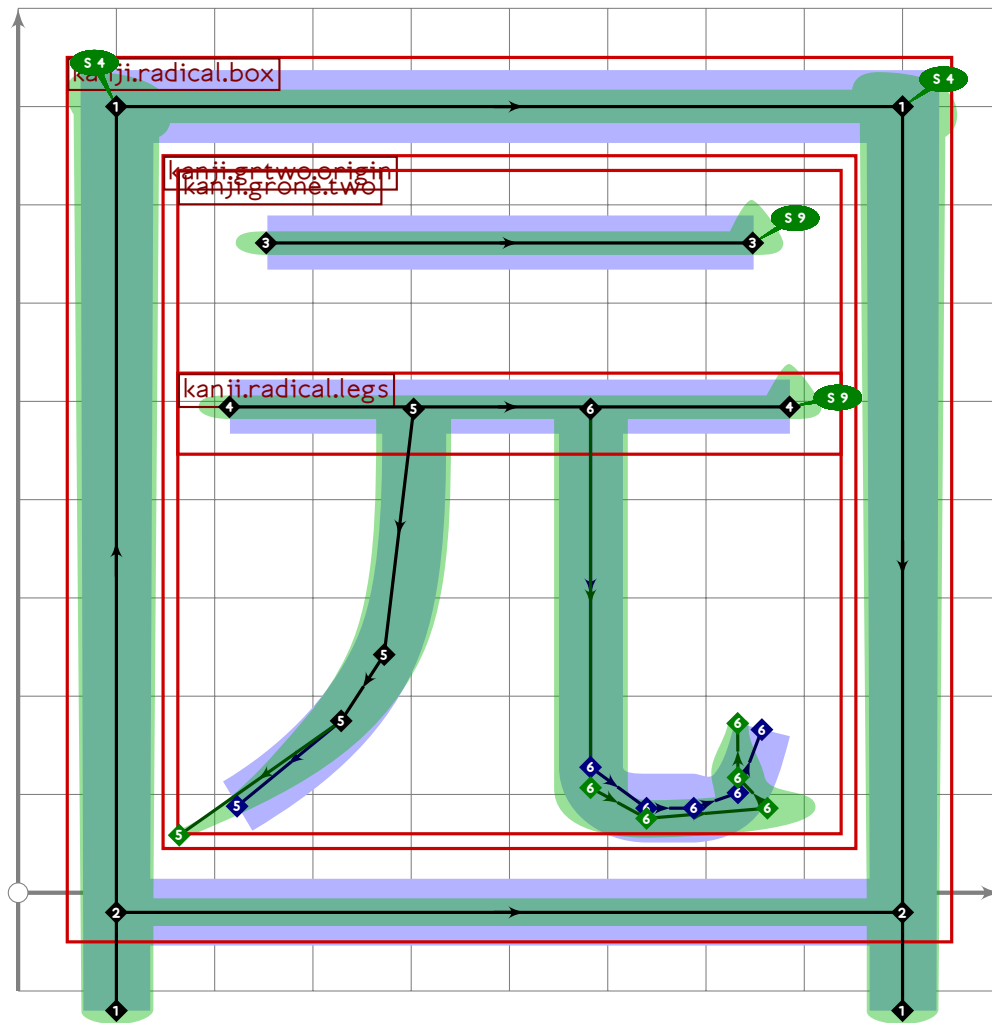
```

43
44 vardef tsu_curve.kanji.grtwo.country =
45   push_pbox_toexpand("kanji.grtwo.country");
46   tsu_curve.kanji.radical.box;
47   build_kanji.sscale(scaled 0.75)(tsu_curve.kanji.grone.ball);
48   expand_pbox;
49 enddef;
50
51 

---


52
53 % box radical
54 begintsuglyph("uni56D7";215); [see page 317]
55   tsu_curve.kanji.radical.box;
56   tsu_render;
57 endtsuglyph;
58
59 % shi/yon "four"
60 begintsuglyph("uni54DB";219); [see page 355]
61   tsu_curve.kanji.grone.four;
62   tsu_render;
63 endtsuglyph;
64
65 % kai "counter for occurrences"
66 begintsuglyph("uni54DE";222); [see page 417]
67   tsu_curve.kanji.grtwo.occurrences;
68   tsu_render;
69 endtsuglyph;
70

```

```

71 % extra
72 begint Suglyph("uni56ED",237);
73 tsu_curve.kanji.radical.box;
74 build_kanji.sscale(scaled 0.75)(tsu_curve.kanji.grtwo.origin);
75 tsu_render;
76 endtsuglyph;

```

```

77
78 % koma "bothered"
79 begint Suglyph("uni56F0",240);
80 tsu_curve.kanji.grsix.bothered;
81 tsu_render;
82 endtsuglyph;

```

[see page 444]

```

83
84 % koku/kuni "country"
85 begint Suglyph("uni56FD",253);
86 tsu_curve.kanji.grtwo.country;
87 tsu_render;
88 endtsuglyph;

```

[see page 1280]

89
90

91

92 **endfont;**

93

94

tsuku-57.mp

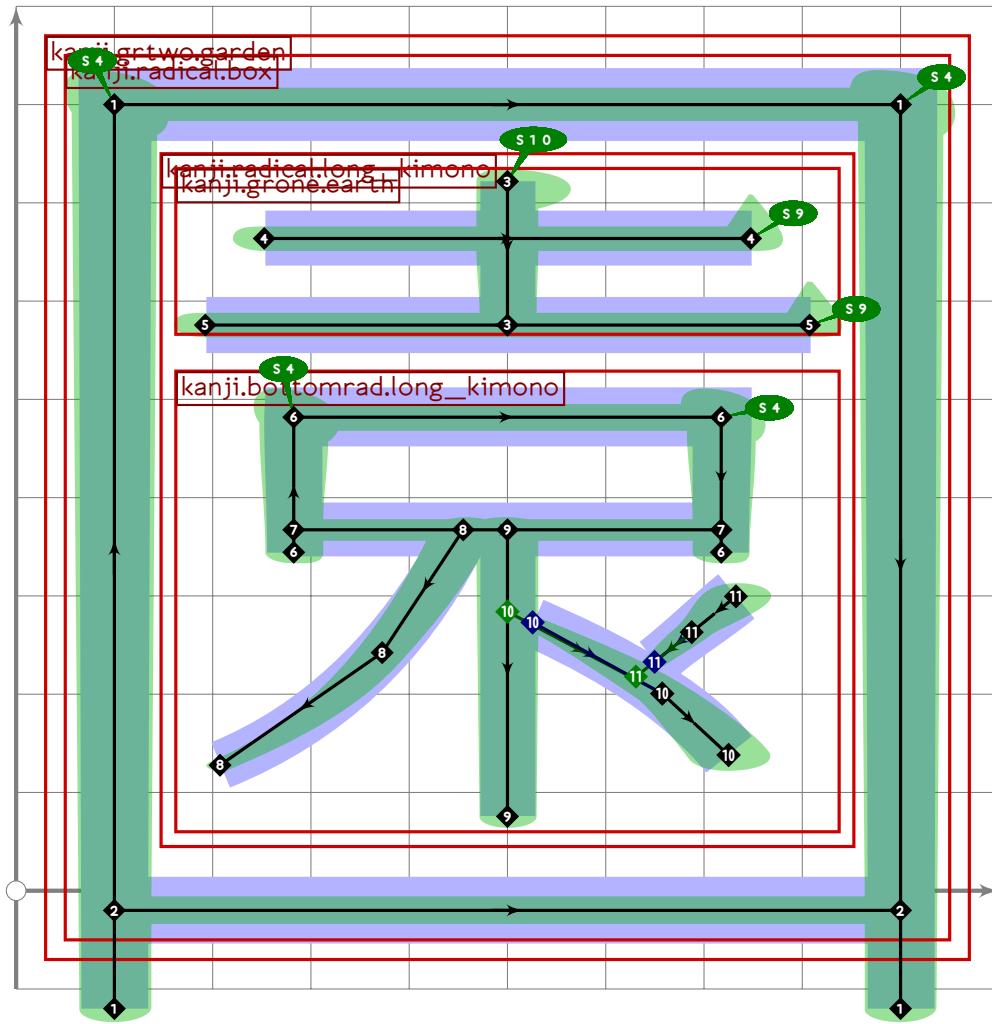
```
1 %
2 % Unicode page 57 (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradenine.mp;
38 input gradeone.mp;
39 input gradethree.mp;
40 input leftrad.mp;
41 input radical.mp;
42
43 

---

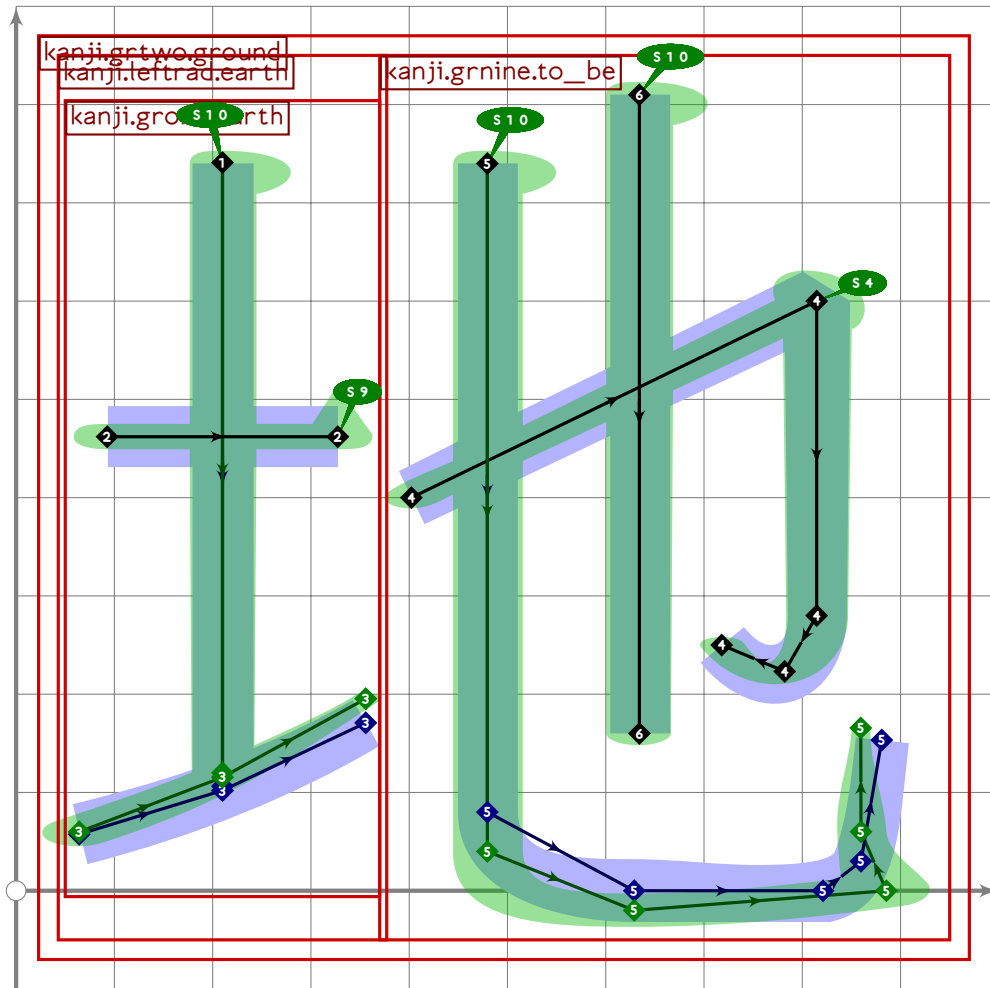

```



```

44
45 vardef tsu_curve.kanji.grtwo.garden =
46   push_pbox_toexpand("kanji.grtwo.garden");
47   tsu_curve.kanji.radical.box;
48   build_kanji.sscale(scaled 0.75)
49     (tsu_curve.kanji.radical.long_kimono);
50   expand_pbox;
51 enddef;

```



```

52
53 vardef tsu_curve.kanji.grtwo.ground =
54   push_pbox_toexpand("kanji.grtwo.ground");
55   build_kanji.level(build_kanji.lr(370,0)
56     (tsu_curve.kanji.leftrad.earth)
57     (tsu_curve.kanji.grnine.to_be));
58   expand_pbox;
59 enddef;

```

```

60
61
62
63 % en/zono "garden"
64 begintsuglyph("uni5712",18);
65 tsu_curve.kanji.grtwo.garden;
66 tsu_render;
67 endtsuglyph;
68
69 % tsuchi/do "earth"
70 begintsuglyph("uni571F",31);
71 tsu_curve.kanji.grone.earth;
72 tsu_render;

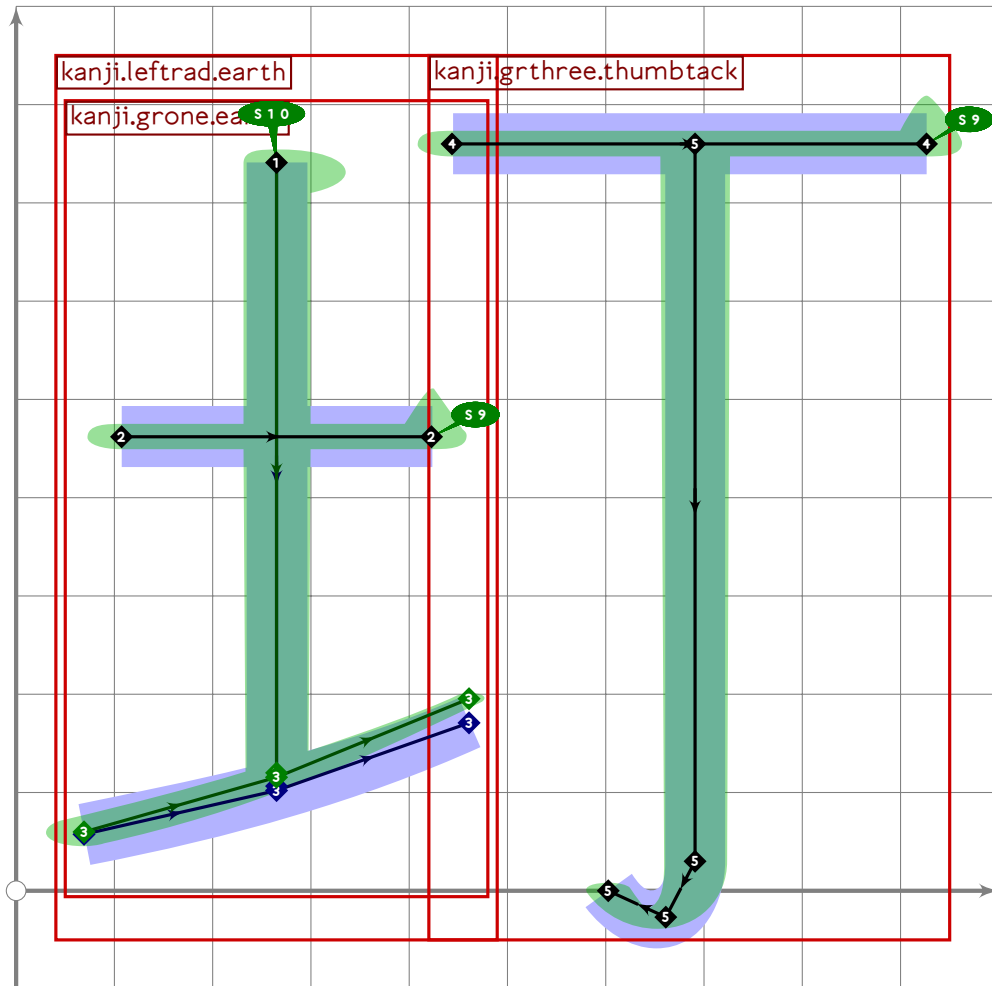
```

[see page 1284]

[see page 349]

73 endtsuglyph;

74



75 % extra

```
76 begintsuglyph("uni5722";34);  
77 build_kanji.level(build_kanji.lr(450,60)  
78 (tsu_curve.kanji.leftrad.earth)  
79 (tsu_curve.kanji.grthree.thumbtack));  
80 tsu_render;  
81 endtsuglyph;
```

82

83 % kei/ka "square jewel"

```
84 begintsuglyph("uni572D";45);  
85 tsu_curve.kanji.grnine.square_jewel;  
86 tsu_render;  
87 endtsuglyph;
```

[see page 459]

88

89 % chi/ji "ground"

```
90 begintsuglyph("uni5730";48);  
91 tsu_curve.kanji.grtwo.ground;  
92 tsu_render;  
93 endtsuglyph;
```

[see page 1285]

94

95

96

97 **endfont;**

98

99

tsuku-58.mp

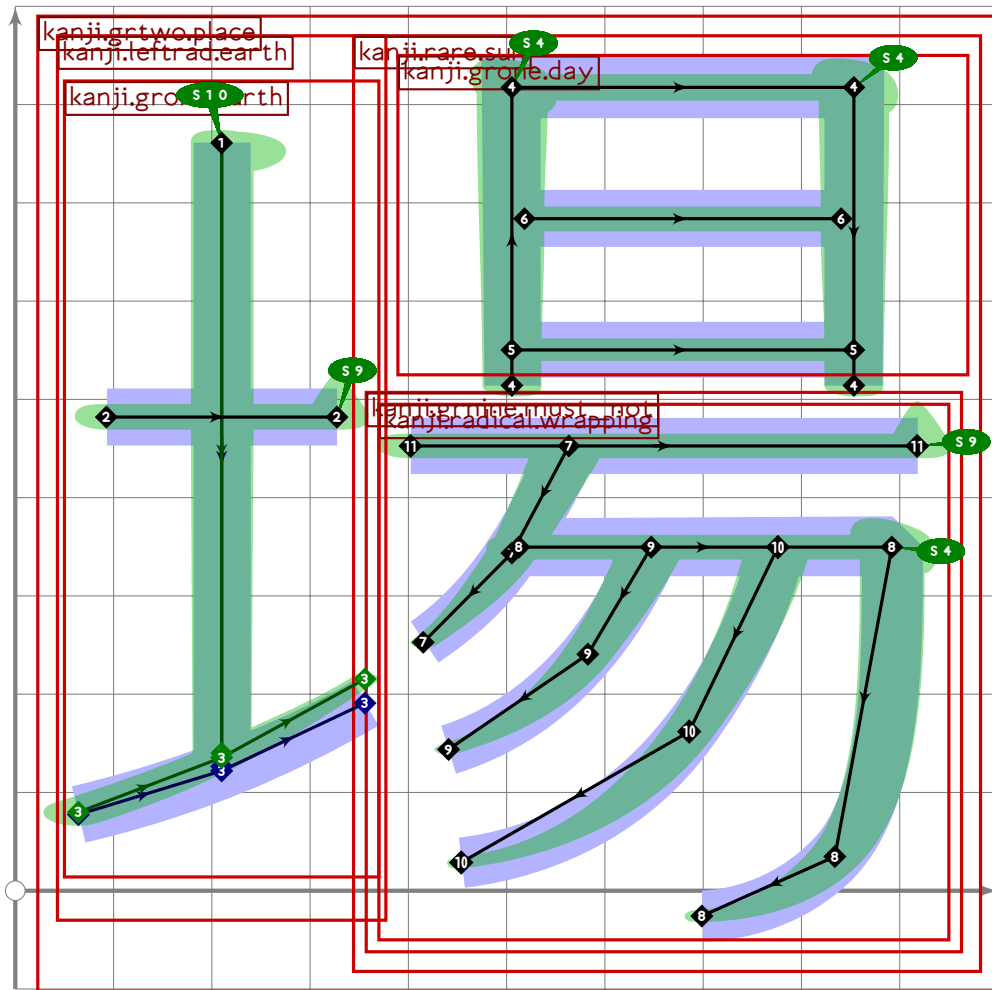
```
1 %
2 % Unicode page 58 (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradefour.mp;
38 input gradenine.mp;
39 input gradeone.mp;
40 input gradetwo.mp;
41 input leftrad.mp;
42 input radical.mp;
43 input rare.mp;
44
45 

---

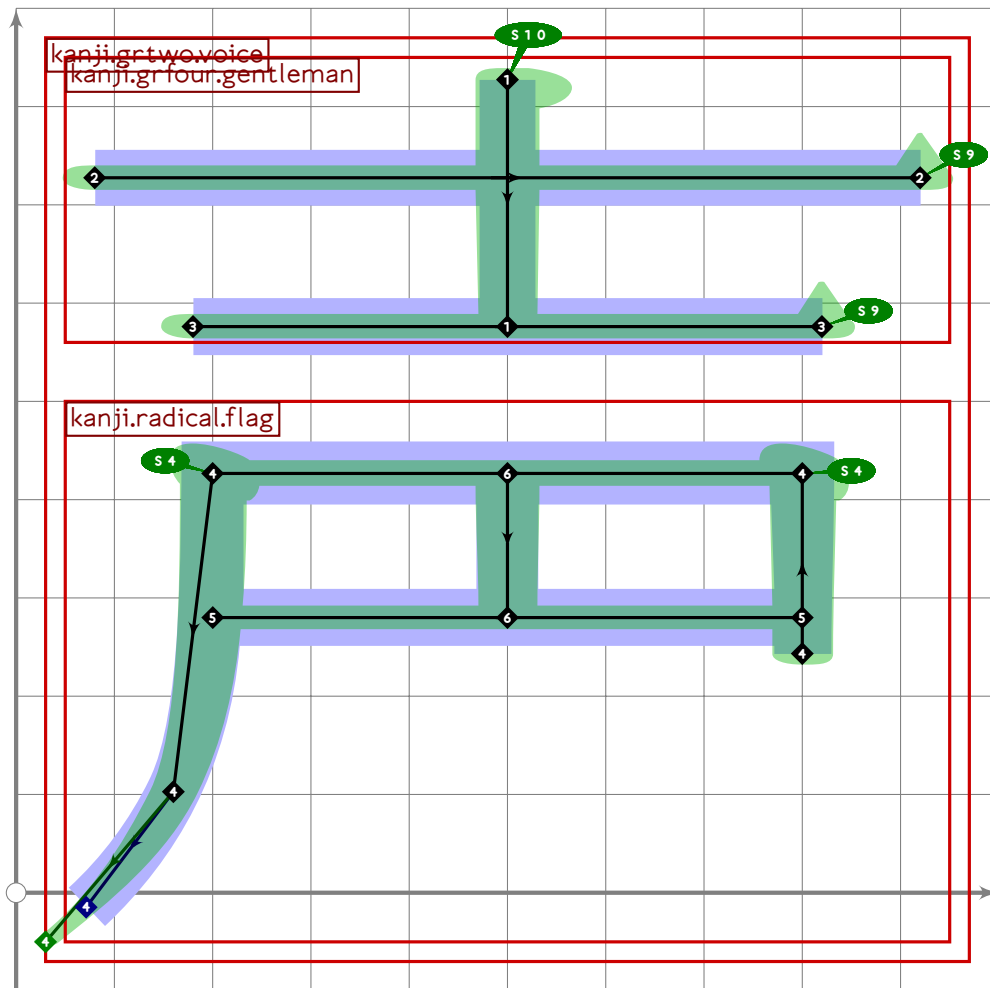

```

```

46
47 vardef tsu_curve.kanji.grtwo.place =
48   push_pbox_toexpand("kanji.grtwo.place");
49   build_kanji.level(build_kanji.lr(370,0)
50     (tsu_xform(identity shifted (0,20))(tsu_curve.kanji.leftrad.earth))
51     (tsu_curve.kanji.rare.sun));
52   expand_pbox;
53 enddef;

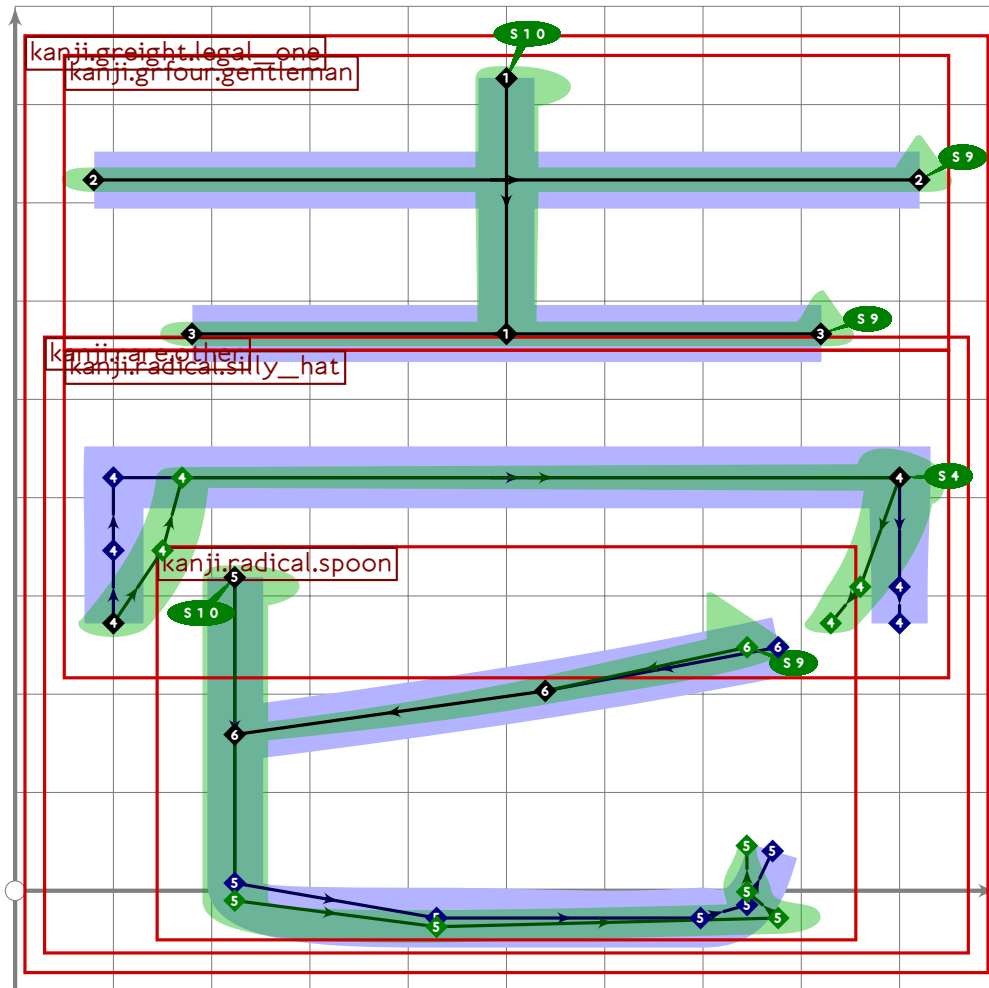
```



```

54
55 vardef tsu_curve.kanji.grtwo.voice =
56   push_pbox_toexpand("kanji.grtwo.voice");
57   build_kanji.tb(530;60)
58     (tsu_curve.kanji.grfour.gentleman)
59     (tsu_curve.kanji.radical.flag;
60       push_stroke((500,730)-(500,490),(1.5,1.5)-(1.4,1.4)));
61     expand_pbox;
62   enddef;
63
64

```



```

65
66 vardef tsu_curve.kanji.greight.legal_one =
67   push_pbox_toexpand("kanji.greight.legal_one");
68   build_kanji.level(build_kanji.tb(550,0)
69     (tsu_curve.kanji.grfour.gentleman)
70     (tsu_curve.kanji.rare.other;
71       set_bosize(-3,0)));
72   expand_pbox;
73 enddef;

```

74



76

```

77 % shou/ba "place"
78   begint Suglyph("uni5834",52);
79   tsu_curve.kanji.grtwo.place;
80   tsu_render;
81   endtsuglyph;

```

[see page 1289]

82

```

83 % shi "gentleman" ("samurai" radical)
84   begint Suglyph("uni58EB",235);
85   tsu_curve.kanji.grfour.gentleman;

```

[see page 438]

```
86 tsu_render;
87 endtsuglyph;
88
89 % ichi/hitotsu "one" (formal, also first musical scale degree)
90 begintsuglyph("uni58F1",241); [see page 1291]
91 tsu_curve.kanji.greight.legal_one;
92 tsu_render;
93 endtsuglyph;
94
95 % sei/koe "voice"
96 begintsuglyph("uni58F0",240); [see page 1290]
97 tsu_curve.kanji.grtwo.voice;
98 tsu_render;
99 endtsuglyph;
100
101 % bai/u "sell"
102 begintsuglyph("uni58F2",242); [see page 424]
103 tsu_curve.kanji.grtwo.sell;
104 tsu_render;
105 endtsuglyph;
106
107 

---


108
109 endfont;
110
111 

---


```

tsuku-59.mp

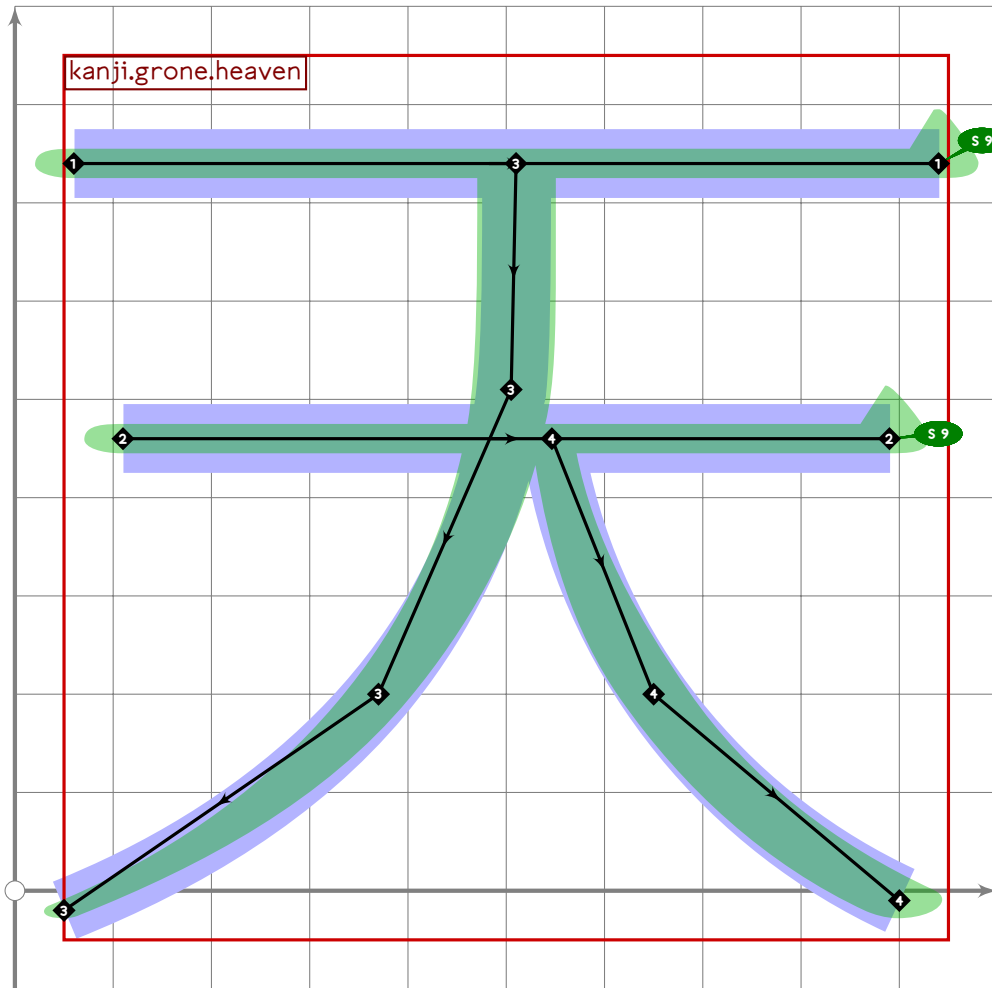
```
1 %
2 % Unicode page 59 (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradeeight.mp;
38 input gradefour.mp;
39 input gradenine.mp;
40 input gradeone.mp;
41 input gradethree.mp;
42 input gradetwo.mp;
43 input leftrad.mp;
44 input radical.mp;
45 input rare.mp;
46
47 

---

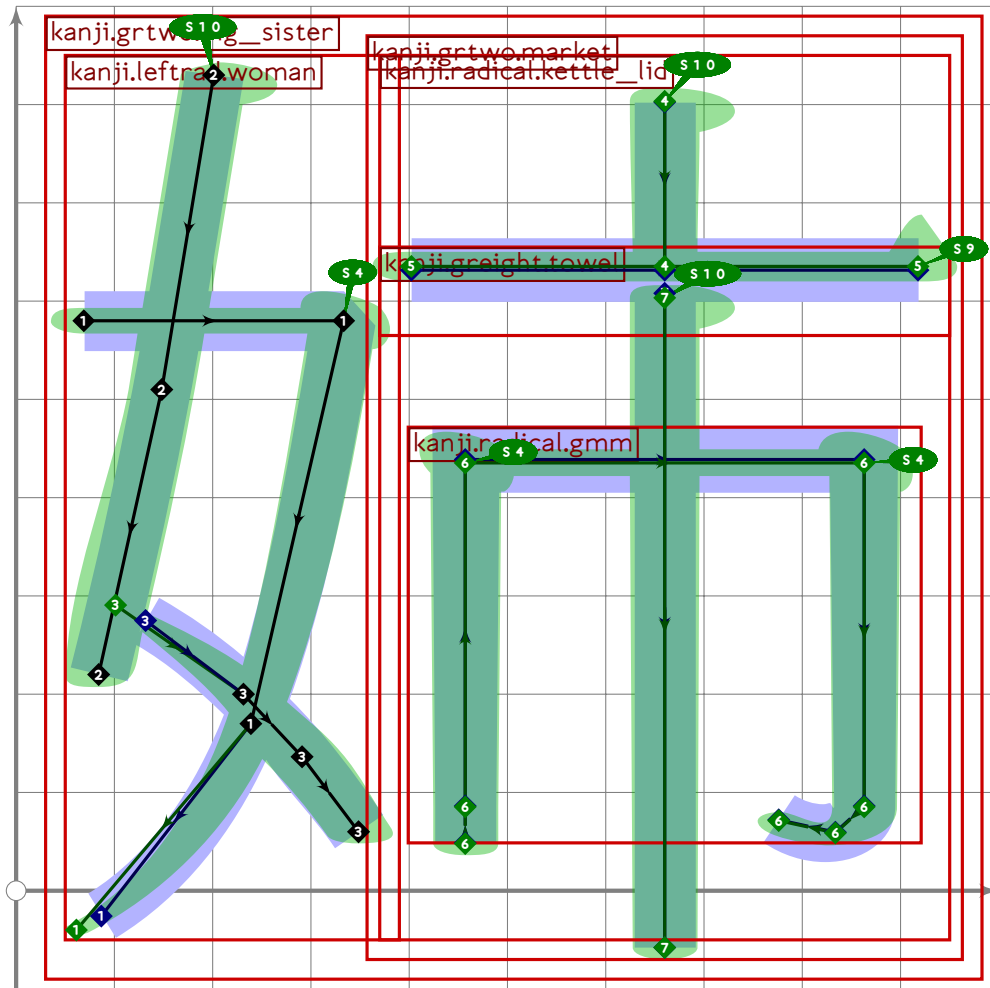

```



```

48
49 vardef tsu_curve.kanji.grone.heaven =
50   push_pbox_toexpand("kanji.grone.heaven");
51   push_stroke((60,740)-(940,740),(1.6,1.6)-(1.6,1.6));
52   set_boserif(0,1,9);
53   push_stroke((110,460)-(890,460),(1.6,1.6)-(1.6,1.6));
54   set_boserif(0,1,9);
55   push_stroke((510,740){down}..(505,510)..(370,200)..{curl 0.5}(50,-20),
56     (1.6,1.6)-(1.6,1.6)-(1.4,1.4)-(1.1,1.1));
57   push_stroke(((get_stroke(-1) intersectionpoint get_stroke(0))*(50,0))..
58     (650,200)..(900,-10),
59     (1.1,1.1)-(1.5,1.5)-(1.7,1.7));
60   expand_pbox;
61 enddef;
62
63

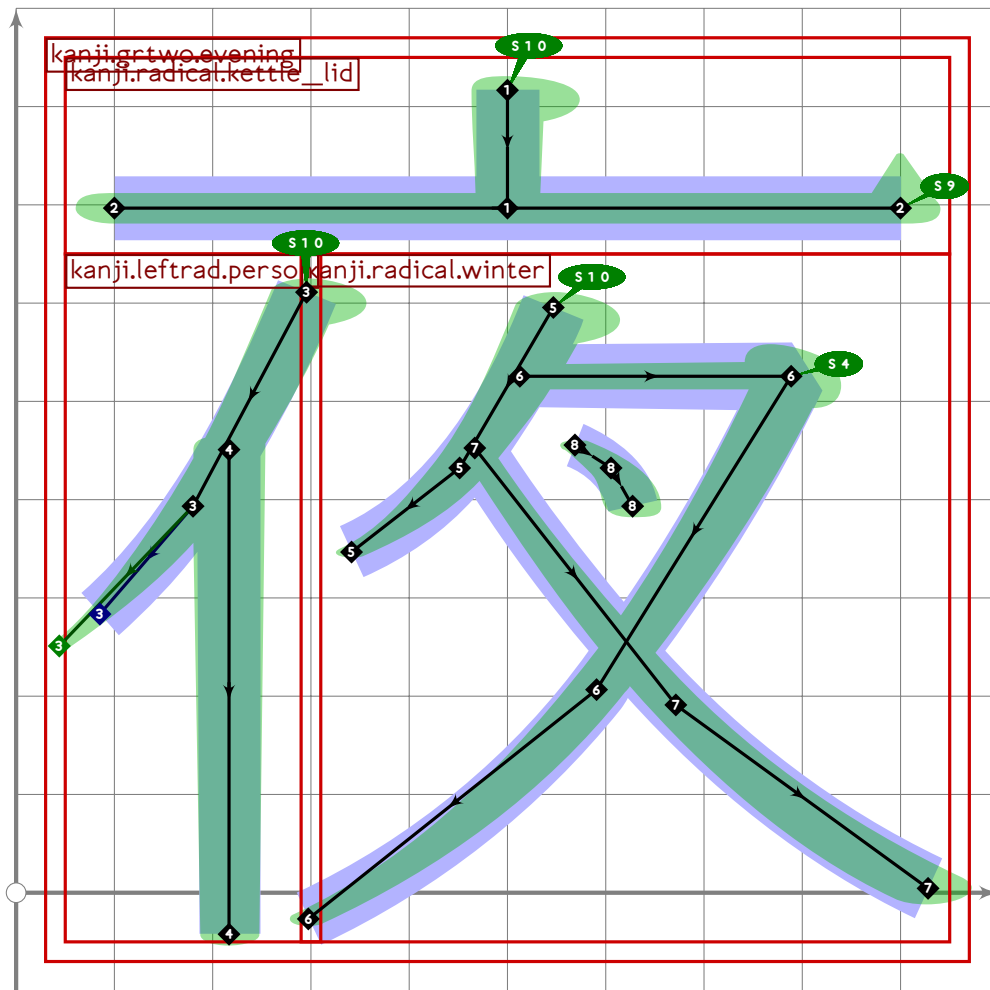
```



```

64
65 vardef tsu_curve.kanji.grtwo.big_sister =
66   push_pbox_toexpand("kanji.grtwo.big_sister");
67   build_kanji.lr(380,20)
68     (tsu_curve.kanji.leftrad.woman)
69     (tsu_curve.kanji.grtwo.market);
70   expand_pbox;
71 enddef;

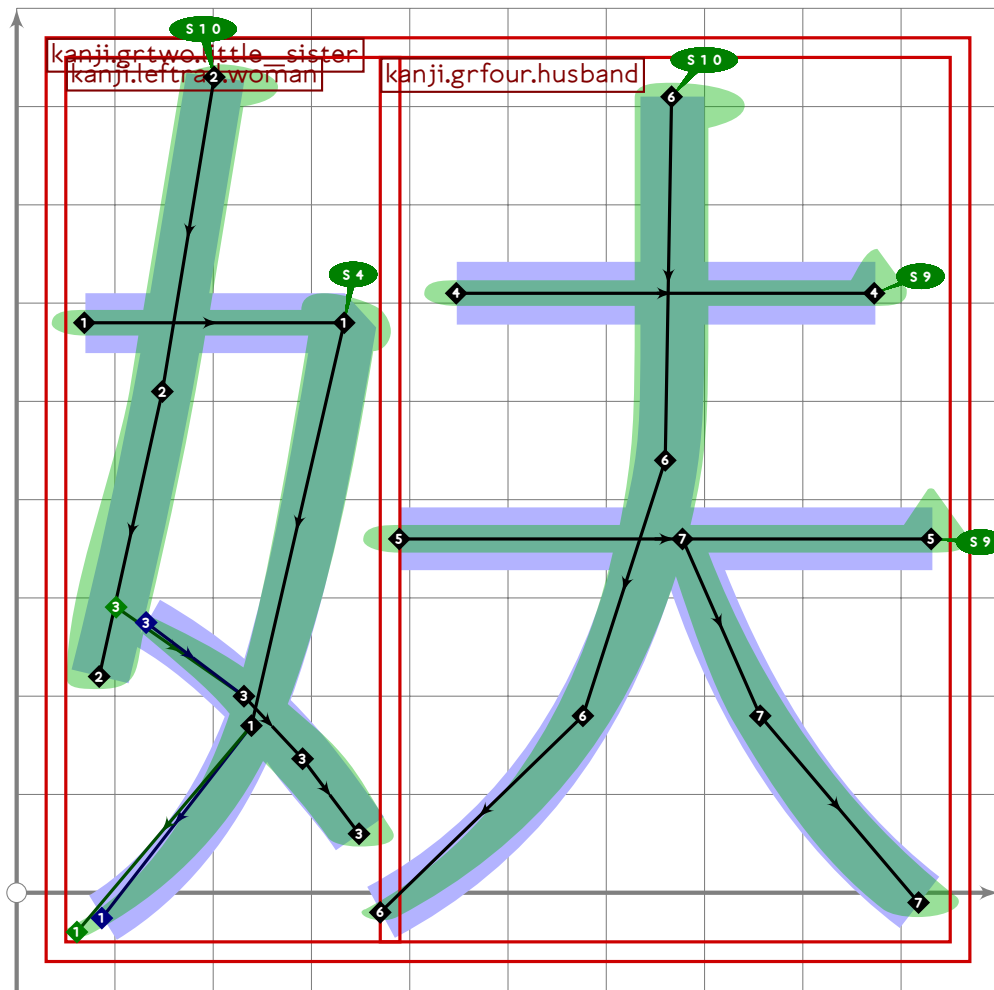
```



```

72
73 vardef tsu_curve.kanji.grtwo.evening =
74   push_pbox_toexpand("kanji.grtwo.evening");
75   build_kanji.level(build_kanji.tb(650,0)
76     (tsu_curve.kanji.radical.kettle_lid)
77     (build_kanji.lr(300,20)
78       (tsu_curve.kanji.leftrad.person)
79       (tsu_curve.kanji.radical.winter;
80         push_stroke(
81           (430,600)..tension 1.2..(480,570)..(510,520),
82           (1,1,1)-(1,4,1,4)-(1,6,1,6)))));
83   set_bosize(0,73);
84   expand_pbox;
85 enddef;

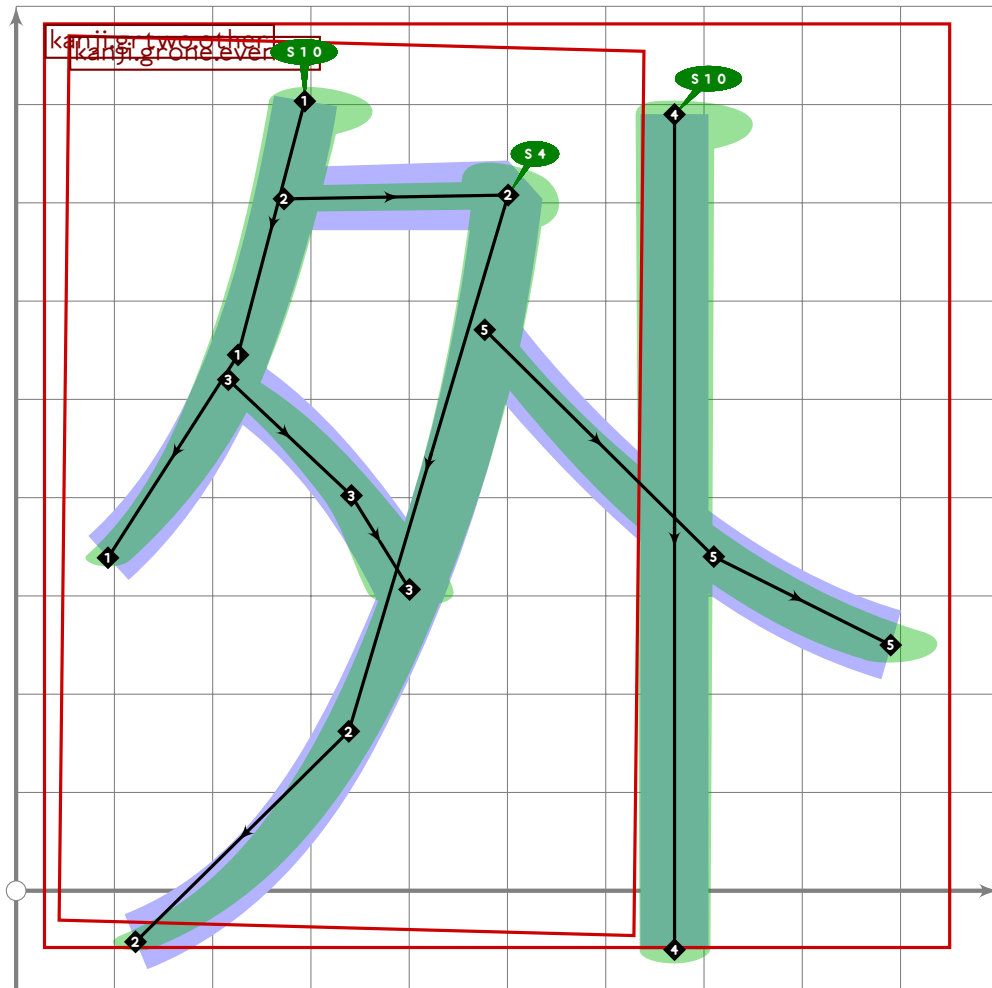
```

```

86
87 vardef tsu_curve.kanji.grtwo.little_sister =
88   push_pbox_toexpand("kanji.grtwo.little_sister");
89   build_kanji.lr(380,20)
90     (tsu_curve.kanji.leftrad.woman)
91     (tsu_curve.kanji.grfour.husband);
92   expand_pbox;
93 enddef;

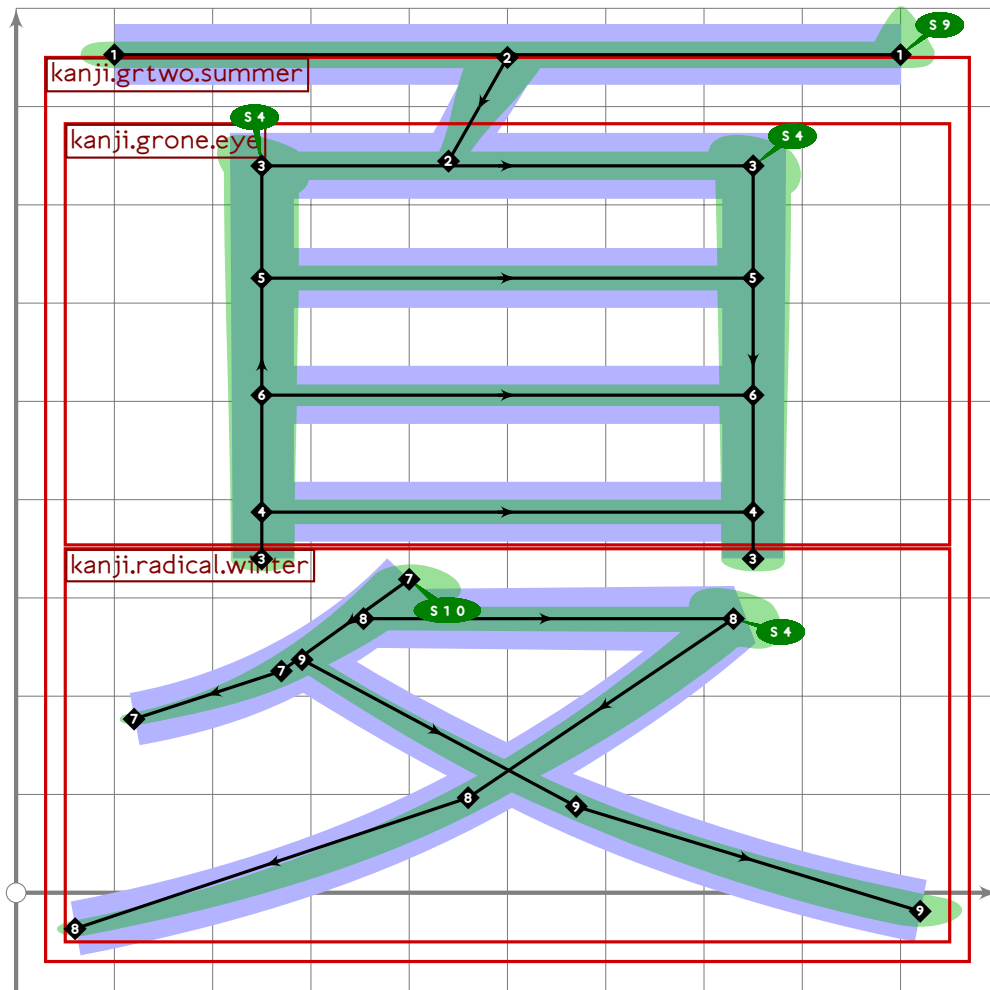
```



```

94
95 vardef tsu_curve.kanji.grtwo.other =
96   push_pbox_toexpand("kanji.grtwo.other");
97   tsu_xform(identity shifted (-50;-500) rotated -1 xscaled 0.65
98     shifted (50,520))
99   (tsu_curve.kanji.grone.evening);
100  push_stroke((670,790)..(670;-60),
101    (1.6,1.6)-(1.5,1.5));
102  set_boserif(0,0,10);
103  push_stroke(
104    (point 1.25 of get_stroke(-2))..tension 1.2..(710,340)..(890,250),
105    (1.1,1.1)-(1.5,1.5)-(1.8,1.8));
106  expand_pbox;
107 enddef;

```



```

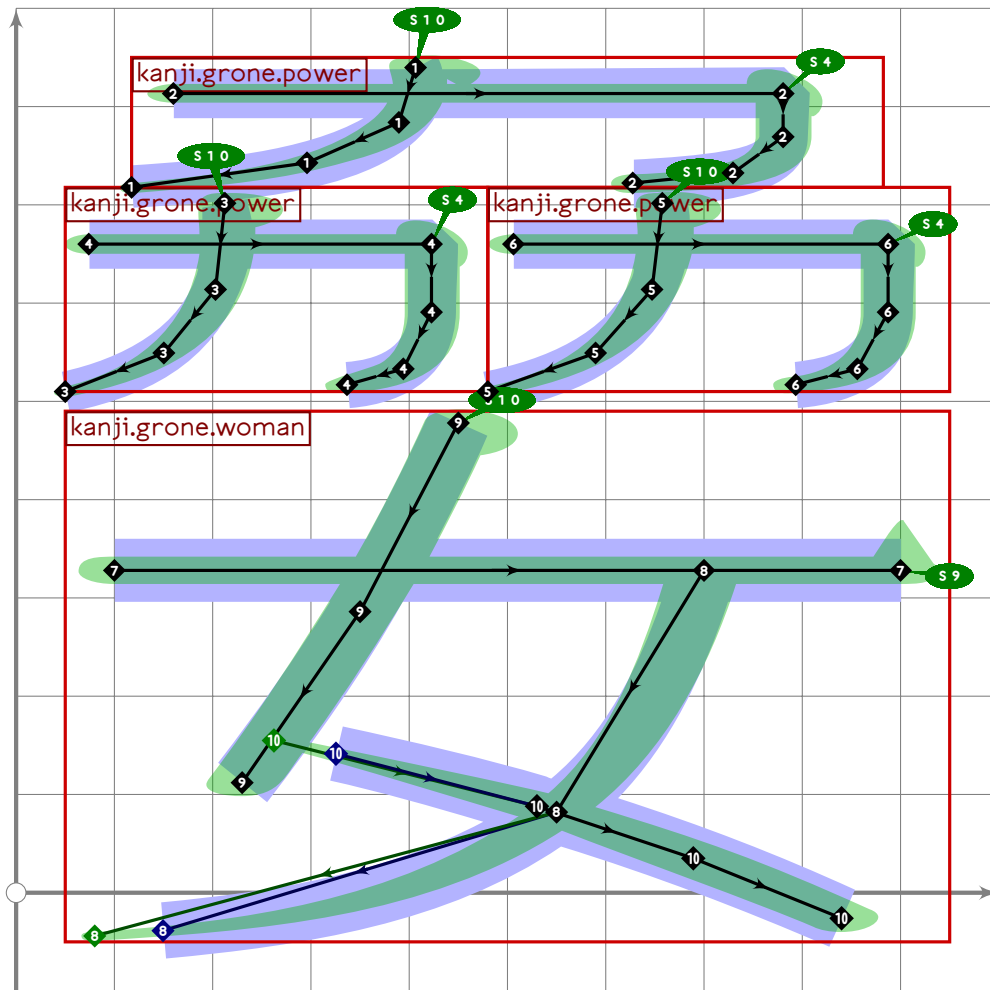
108
109 vardef tsu_curve.kanji.grtwo.summer =
110   push_pbox_toexpand("kanji.grtwo.summer");
111   build_kanji.level(build_kanji.tb(350,0)
112     (push_stroke((100,855)-(900,855),(1.6,1.6));
113     set_boserif(0,1,9);
114     push_stroke((500,850)-(440,660),(1.7,1.7)-(1,1));
115     tsu_xform(identity yscaled (660/770))(tsu_curve.kanji.grone.eye))
116     (tsu_curve.kanji.radical.winter));
117   expand_pbox;
118 enddef;
119
120
121
122 % chi/shuu "winter radical"
123 begint Suglyph("uni5902",2);
124   tsu_curve.kanji.radical.winter;
125   tsu_render;
126 endtsuglyph;
127
128 % ka/natsu "summer"

```

[see page 332]

129 `begintsuglyph("uni590F",15);` [see page 1299]
130 `tsu_curve.kanji.grtwo.summer;`
131 `tsu_render;`
132 `endtsuglyph;`
133
134 `% yuu/seki "evening"`
135 `begintsuglyph("uni5915",21);` [see page 351]
136 `tsu_curve.kanji.grone.evening;`
137 `tsu_render;`
138 `endtsuglyph;`
139
140 `% gai/hoka "except"`
141 `begintsuglyph("uni5916",22);` [see page 1298]
142 `tsu_curve.kanji.grtwo.other;`
143 `tsu_render;`
144 `endtsuglyph;`
145
146 `% ta/oo "many"`
147 `begintsuglyph("uni591A",26);` [see page 407]
148 `tsu_curve.kanji.grtwo.many;`
149 `tsu_render;`
150 `endtsuglyph;`
151
152 `% ya/yoru "evening"`
153 `begintsuglyph("uni591C",28);` [see page 1296]
154 `tsu_curve.kanji.grtwo.evening;`
155 `tsu_render;`
156 `endtsuglyph;`
157
158 `% dai/oo "big"`
159 `begintsuglyph("uni5927",39);` [see page 338]
160 `tsu_curve.kanji.grone.big;`
161 `tsu_render;`
162 `endtsuglyph;`
163
164 `% ten "heaven"`
165 `begintsuglyph("uni5929",41);` [see page 1294]
166 `tsu_curve.kanji.grone.heaven;`
167 `tsu_render;`
168 `endtsuglyph;`
169
170 `% tai/futo "thick"`
171 `begintsuglyph("uni592A",42);` [see page 427]
172 `tsu_curve.kanji.grtwo.thick;`
173 `tsu_render;`
174 `endtsuglyph;`
175
176 `% fu/otto "husband"`

177 `begintsuglyph("uni592B",43);` [see page 439]
178 `tsu_curve.kanji.grfour.husband;`
179 `tsu_render;`
180 `endtsuglyph;`
181
182 `% rare, but needed to build more common glyphs`
183 `begintsuglyph("uni592C",44);` [see page 463]
184 `tsu_curve.kanji.rare.decide;`
185 `tsu_render;`
186 `endtsuglyph;`
187
188 `% rare, but needed to build more common glyphs`
189 `begintsuglyph("uni592D",45);` [see page 464]
190 `tsu_curve.kanji.rare.early_death;`
191 `tsu_render;`
192 `endtsuglyph;`
193
194 `% ou "centre"`
195 `begintsuglyph("uni592E",46);` [see page 429]
196 `tsu_curve.kanji.grthree.centre;`
197 `tsu_render;`
198 `endtsuglyph;`
199
200 `% en/oo "suffocate"`
201 `begintsuglyph("uni5944",68);` [see page 460]
202 `tsu_curve.kanji.grnine.suffocate;`
203 `tsu_render;`
204 `endtsuglyph;`
205
206 `% jo/onna "woman"`
207 `begintsuglyph("uni5973",115);` [see page 390]
208 `tsu_curve.kanji.grone.woman;`
209 `tsu_render;`
210 `endtsuglyph;`
211
212 `% mai/imouto "younger sister"`
213 `begintsuglyph("uni59B9",185);` [see page 1297]
214 `tsu_curve.kanji.grtwo.little_sister;`
215 `tsu_render;`
216 `endtsuglyph;`
217
218 `% nee as in onesan "elder sister"`
219 `begintsuglyph("uni59C9",201);` [see page 1295]
220 `tsu_curve.kanji.grtwo.big_sister;`
221 `tsu_render;`
222 `endtsuglyph;`
223



```

224 % extra
225 begint Suglyph("uni59ED",237);
226 build_kanji.tb(500;20)
227   (build_kanji.tricluster(0.85)
228     (tsu_curve.kanji.grone.power)
229     (tsu_curve.kanji.grone.power)
230     (tsu_curve.kanji.grone.power))
231   (tsu_curve.kanji.grone.woman);
232 tsu_render;
233 endtsuglyph;
234
235 -----
236
237 endfont;
238
239 -----

```

tsuku-5b.mp

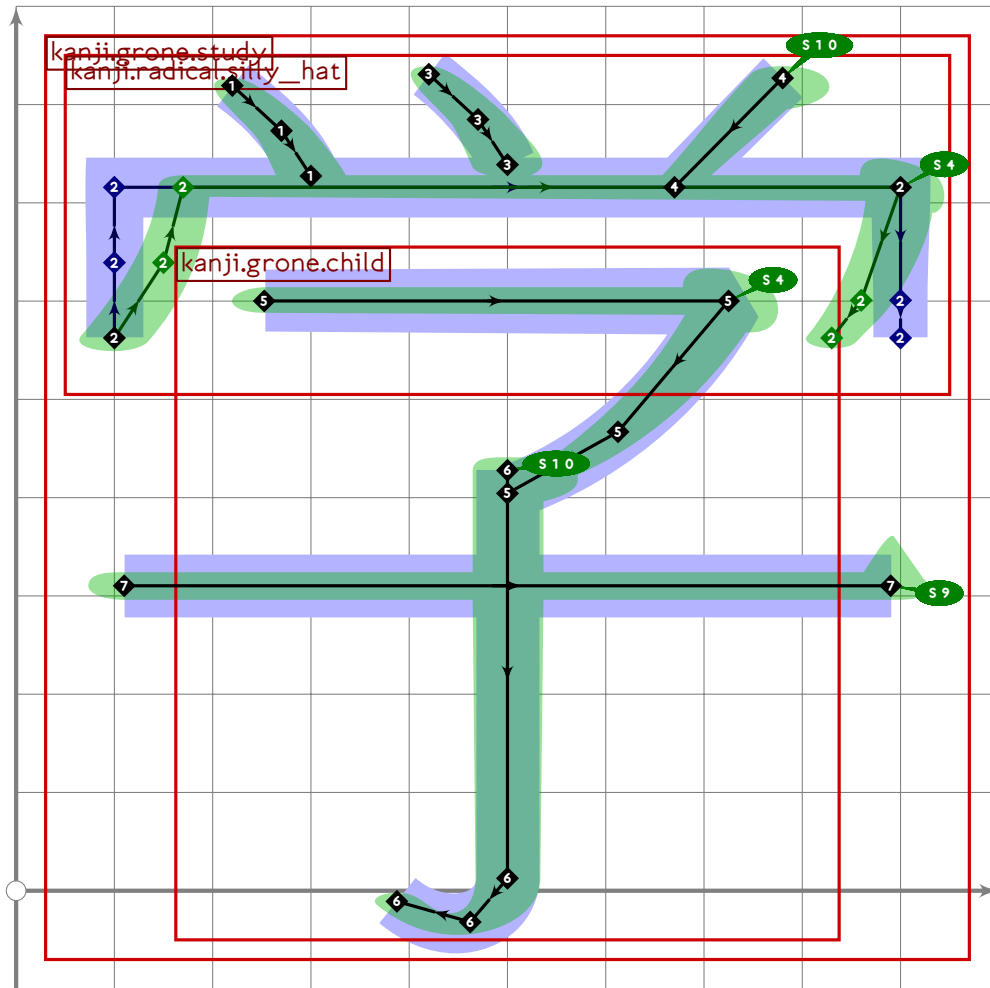
```
1 %
2 % Unicode page 5b (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradeone.mp;
38 input gradesix.mp;
39 input gradethree.mp;
40 input gradetwo.mp;
41 input radical.mp;
42 input rare.mp;
43
44 

---


```



```

45
46 vardef tsu_curve.kanji.grone.study =
47   push_pbox_toexpand("kanji.grone.study");
48   begingroup
49     save saved_path;
50     path saved_path;
51     build_kanji.tb(580,150)
52     (tsu_curve.kanji.radical.silly_hat;
53      replace_stroke(-1)((220,770)..(270,650)..(300,530));
54      replace_stroke(-1)((1.2,1.2)-(1.5,1.5)-(1.7,1.7));
55      set_bosize(-1)(95);
56      set_boserif(-1,0,whatever);
57      push_stroke((420,800)..(470,680)..(500,560),
58                (1.2,1.2)-(1.5,1.5)-(1.7,1.7));
59      set_bosize(0,95);
60      push_stroke((780,790)-(670,500),(1.7,1.7)-(1.3,1.3));
61      set_bosize(0,95);
62      set_boserif(0,0,10);
63     )
64     (build_kanji.sscale(xscaled 0.75)
65      (tsu_curve.kanji.grone.child;saved_path:=get_stroke(0));

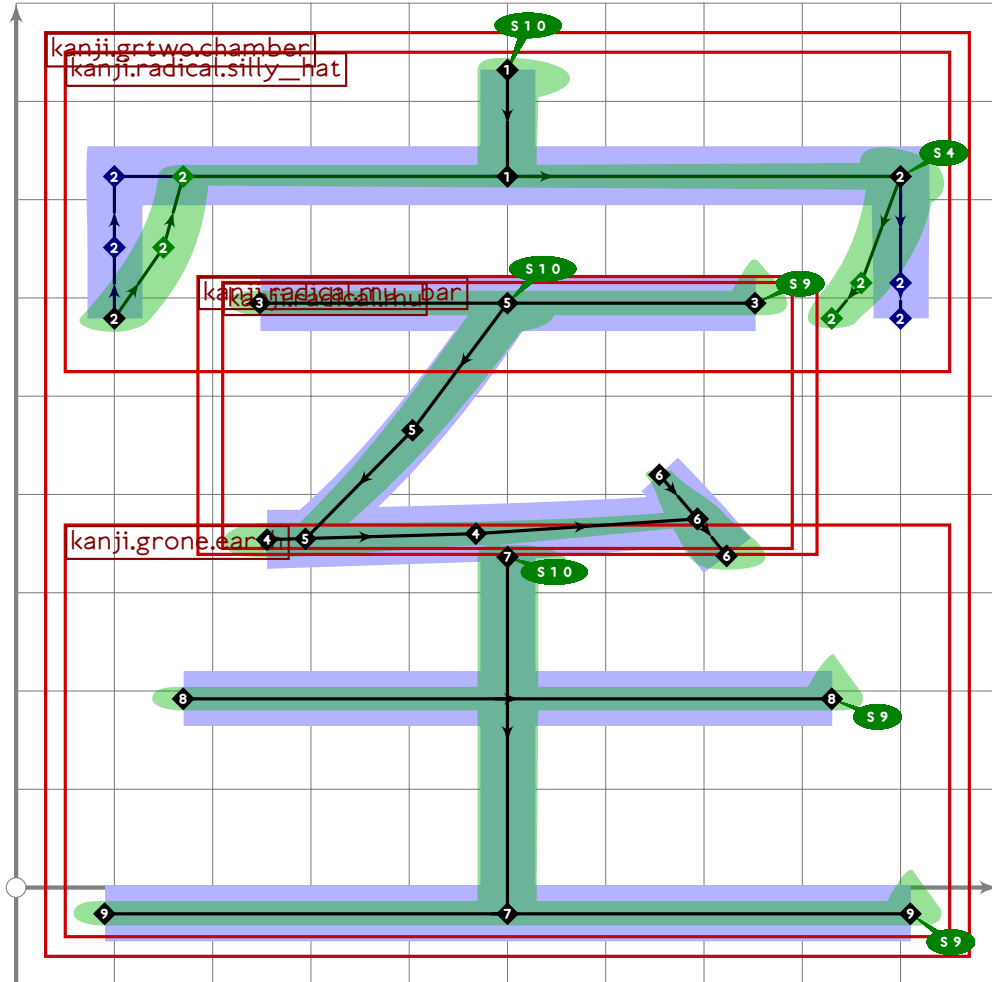
```



```

66     replace_strokep(0)(saved_path));
67 endgroup;
68 expand_pbox;
69 enddef;
70
71

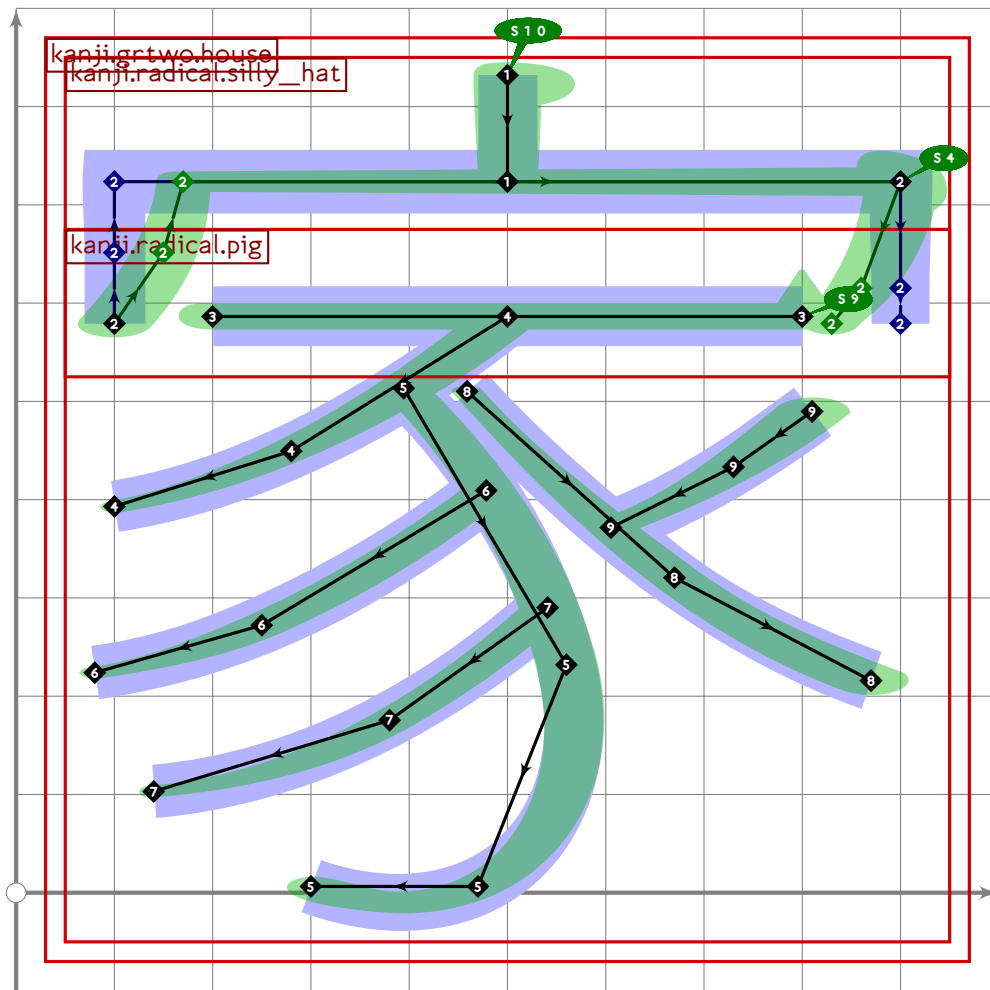
```



```

72
73 vardef tsu_curve.kanji.grtwo.chamber =
74   push_pbox_toexpand("kanji.grtwo.chamber");
75   build_kanji.tb(600,150)
76     (tsu_curve.kanji.radical.silly_hat)
77     (build_kanji.level(build_kanji.tb(420,100)
78       (build_kanji.sscale(scaled 0.7)(tsu_curve.kanji.radical.mu_bar))
79       (tsu_curve.kanji.grone.earth)));
80   expand_pbox;
81 enddef;

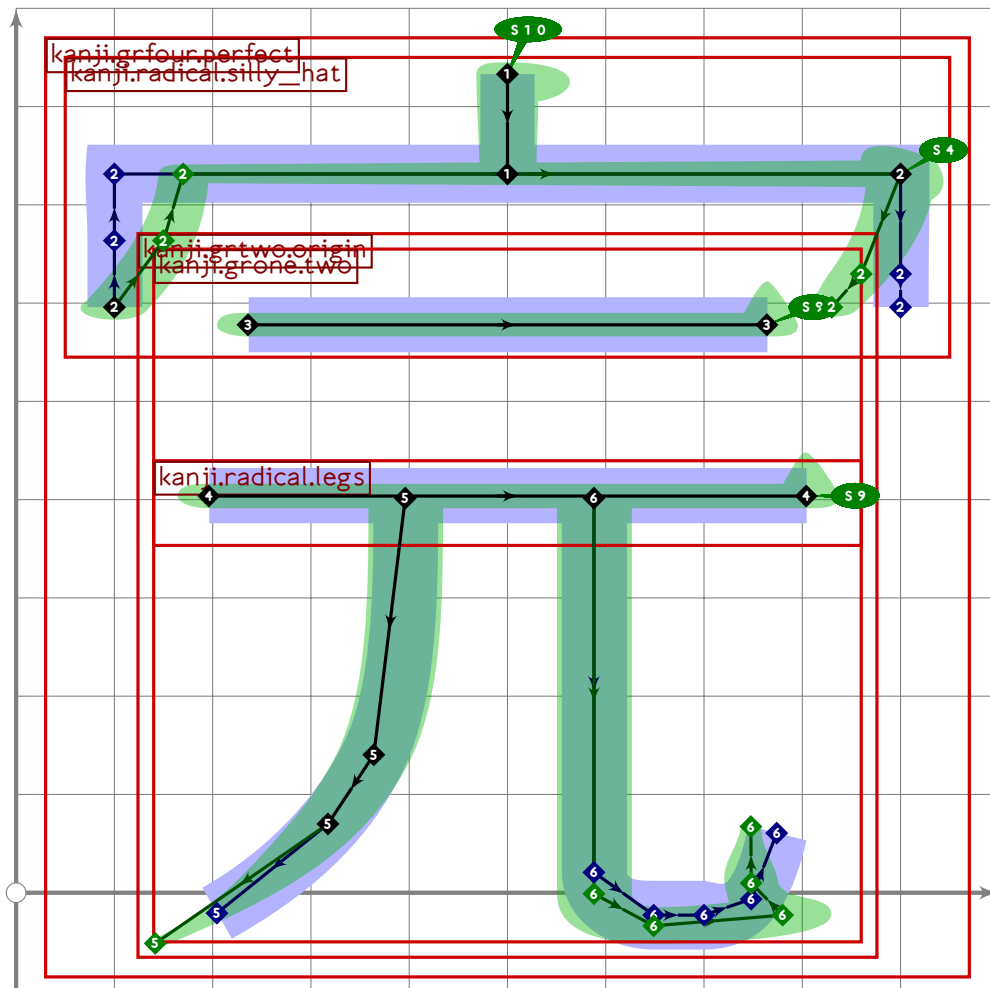
```



```

82
83 vardef tsu_curve.kanji.grtwo.house =
84   push_pbox_toexpand("kanji.grtwo.house");
85   build_kanji.level(build_kanji.tb(600,150)
86     (tsu_curve.kanji.radical.silly_hat)
87     (tsu_curve.kanji.radical.pig));
88   expand_pbox;
89 enddef;
90
91

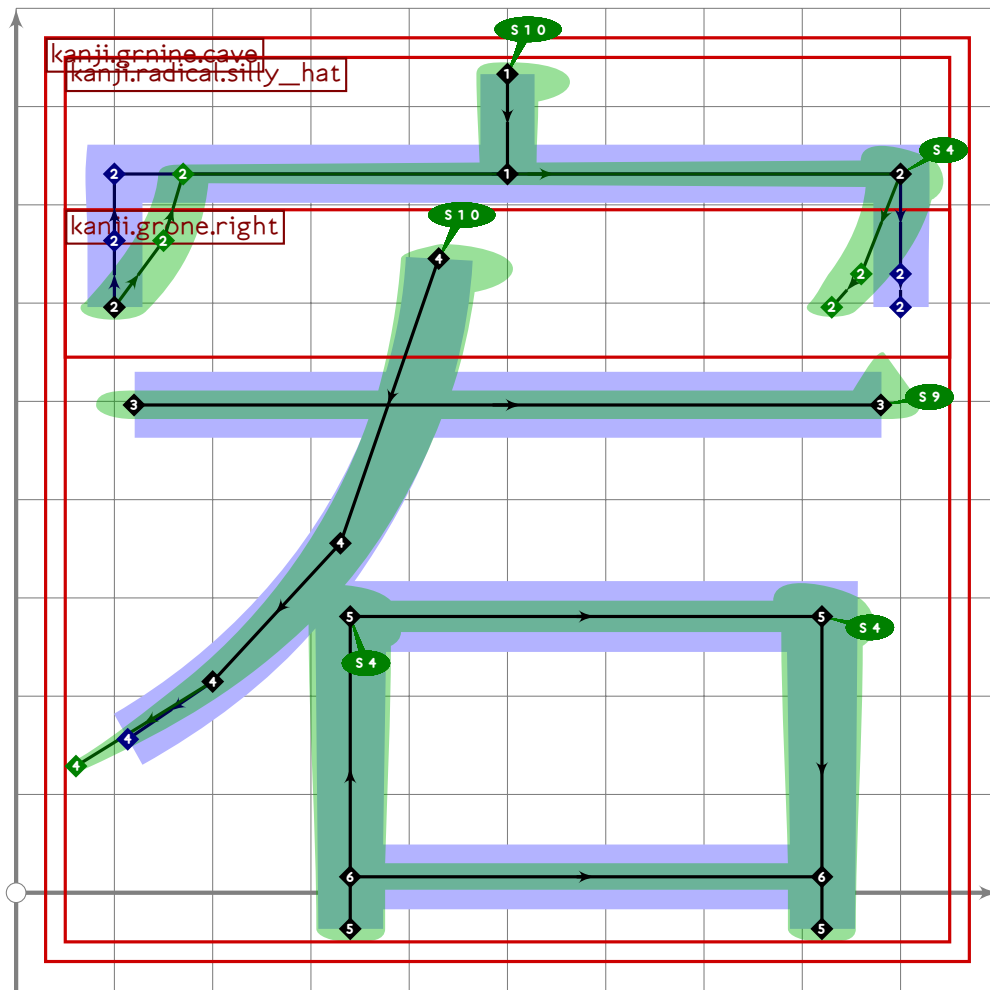
```



```

92
93 vardef tsu_curve.kanji.grfour.perfect =
94   push_pbox_toexpand("kanji.grfour.perfect");
95   build_kanji.tb(600,110)
96     (tsu_curve.kanji.radical.silly_hat)
97     (build_kanji.sscale(xscaled 0.8)(tsu_curve.kanji.grtwo.origin));
98   expand_pbox;
99 enddef;
100
101

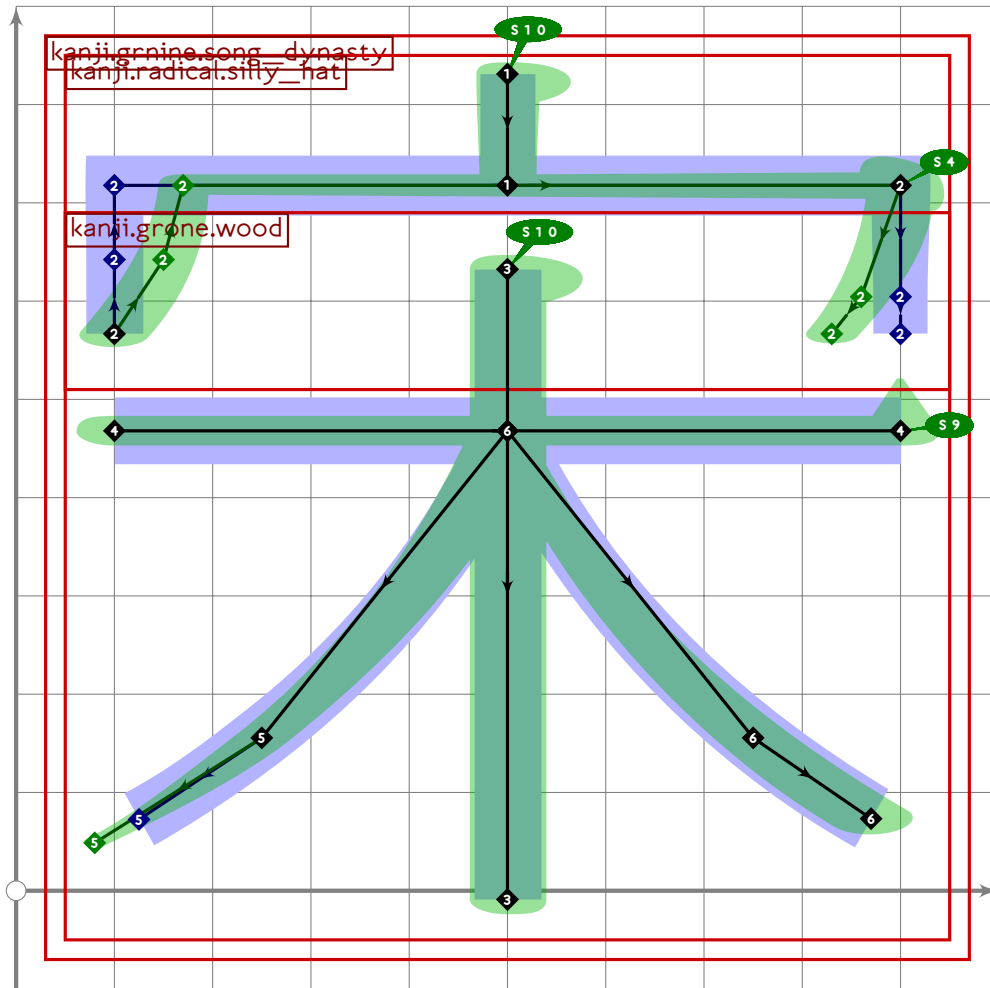
```



```

102
103 vardef tsu_curve.kanji.grnine.cave =
104   push_pbox_toexpand("kanji.grnine.cave");
105   build_kanji.tb(620,150)
106     (tsu_curve.kanji.radical.silly_hat)
107     (tsu_curve.kanji.grone.right);
108   expand_pbox;
109 enddef;

```



```

110
111 vardef tsu_curve.kanji.grnine.song_dynasty =
112   push_pbox_toexpand("kanji.grnine.song_dynasty");
113   build_kanji.tb(600,180)
114     (tsu_curve.kanji.radical.silly_hat)
115     (tsu_curve.kanji.grone.wood);
116   expand_pbox;
117 enddef;

```

118

119

120

121 % ko "child"

```
122 begintsuglyph("uni5B50",80);
```

[see page 343]

```
123   tsu_curve.kanji.grone.child;
```

```
124   tsu_render;
```

```
125 endtsuglyph;
```

126

127 % ji "character"

```
128 begintsuglyph("uni5B57",87);
```

[see page 342]

```
129   tsu_curve.kanji.grone.character;
```

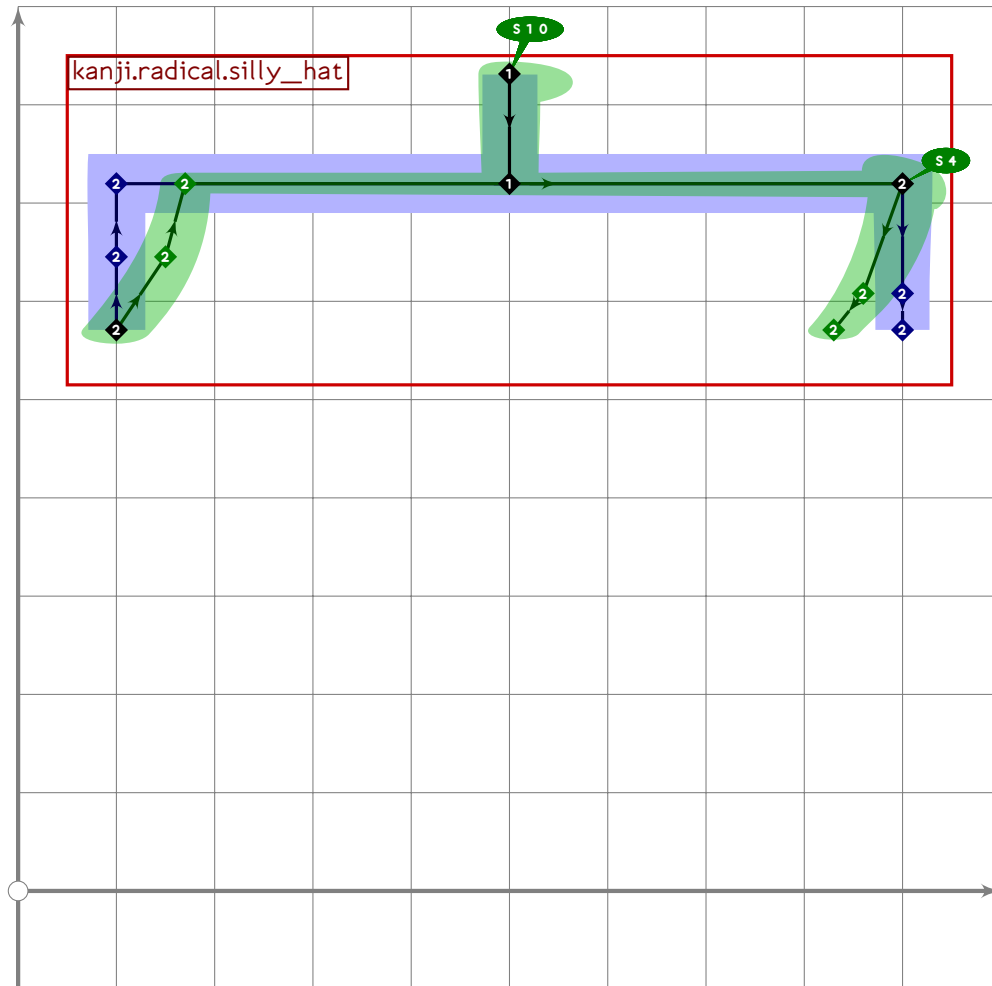
```
130   tsu_render;
```

```

131 endtsuglyph;
132
133 % gaku "school"
134 begintsuglyph("uni5B66";102);
135     tsu_curve.kanji.grone.study;
136     tsu_render;
137 endtsuglyph;
138

```

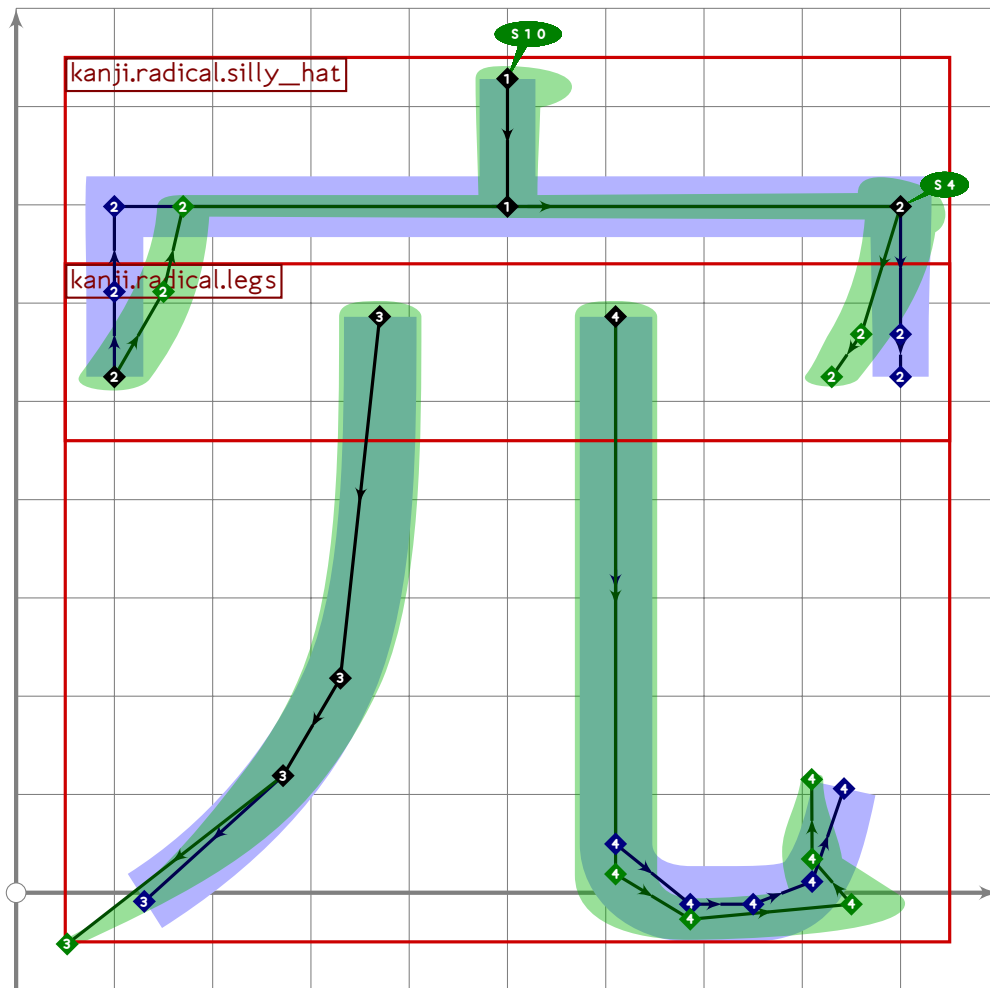
[see page 1304]



```

139 % silly hat radical
140 begintsuglyph("uni5B80";128);
141     build_kanji.tb(500;30)
142     (tsu_curve.kanji.radical.silly_hat)
143     ();
144     tsu_render;
145 endtsuglyph;
146

```

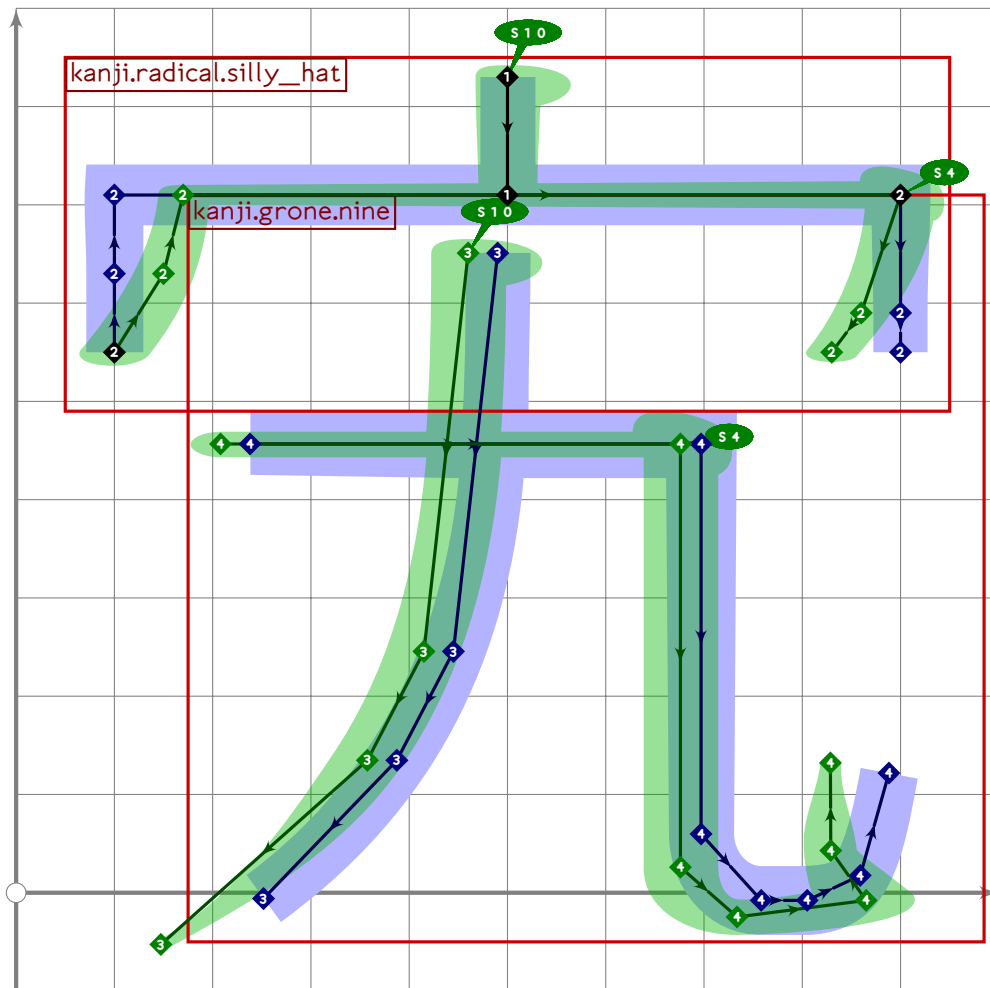


```

147 % extra
148 begintsuglyph("uni5B82",130);
149 build_kanji.tb(550,180)
150   (tsu_curve.kanji.radical.silly_hat)
151   (tsu_curve.kanji.radical.legs);
152   tsu_render;
153 endsuglyph;
154
155 % ta/hebi "other"
156 begintsuglyph("uni5B83",131);
157   tsu_curve.kanji.rare.other;
158   tsu_render;
159 endsuglyph;
160

```

[see page 466]



```

161 % extra
162 begintsuglyph("uni5B84",132);
163   build_kanji.tb(600,220)
164     (tsu_curve.kanji.radical.silly_hat)
165     (build_kanji.sscale(xscaled 0.9 shifted (80-30*mincho,0))
166       (tsu_curve.kanji.grone.nine));
167   tsu_render;
168 endtsuglyph;
169
170 % an/yasu "easy/cheap"
171 begintsuglyph("uni5B89",137);
172   tsu_curve.kanji.grthree.easy;
173   tsu_render;
174 endtsuglyph;
175
176 % "song dynasty"
177 begintsuglyph("uni5B8B",139);
178   tsu_curve.kanji.grnine.song_dynasty;
179   tsu_render;
180 endtsuglyph;
181

```

[see page 431]

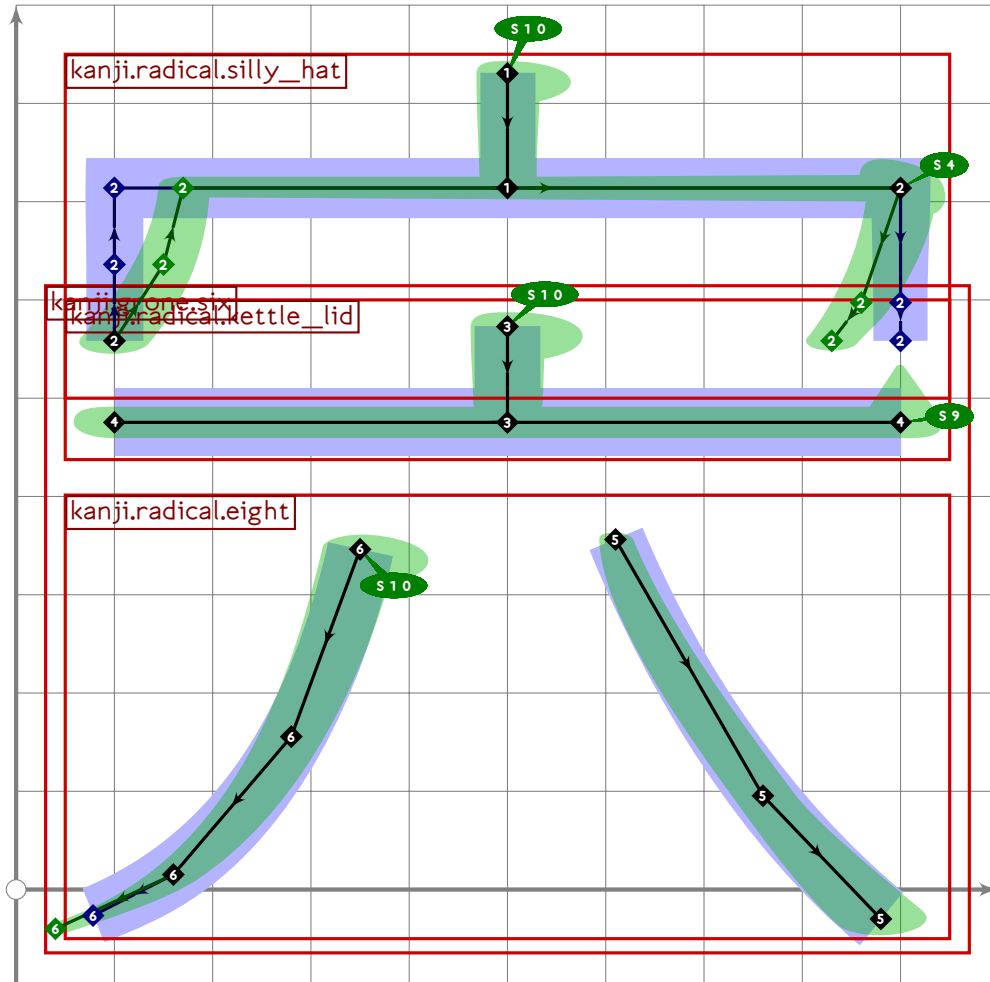
[see page 1309]


```

182 % kan "perfect"
183 begint Suglyph("uni5B8C";140);
184 tsu_curve.kanji.grfour.perfect;
185 tsu_render;
186 endtsuglyph;
187

```

[see page 1307]



```

188 % extra "meat"
189 begint Suglyph("uni5B8D";141);
190 build_kanji.tb(550,100)
191 (tsu_curve.kanji.radical.silly_hat)
192 (tsu_curve.kanji.grone.six);
193 tsu_render;
194 endtsuglyph;
195
196 % "cave"
197 begint Suglyph("uni5B95";149);
198 tsu_curve.kanji.grnine.cave;
199 tsu_render;
200 endtsuglyph;
201
202 % shitsu/muro "chamber"

```

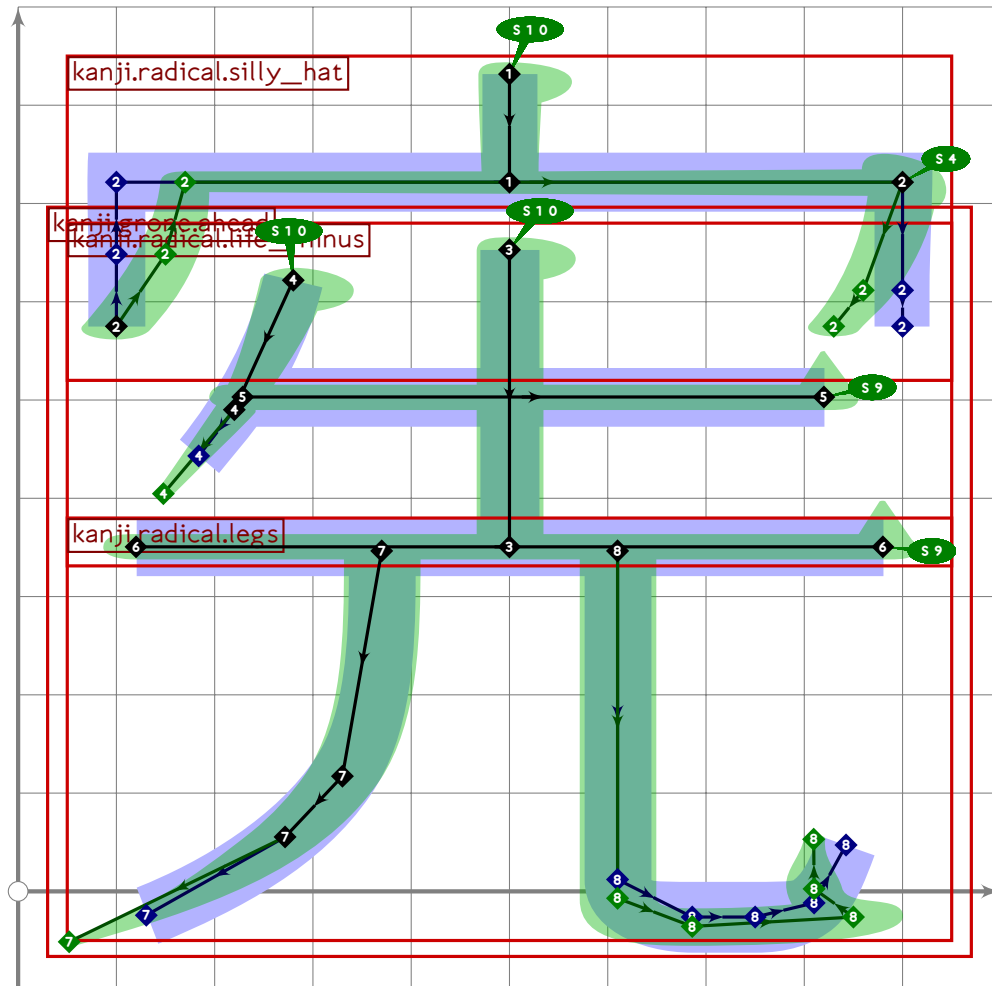
[see page 1308]

```

203 begint Suglyph("uni5BA4",164);
204 tsu_curve.kanji.grtwo.chamber;
205 tsu_render;
206 endtsuglyph;
207

```

[see page 1305]



```

208 % extra
209 begint Suglyph("uni5BAA",170);
210 build_kanji.tb(600,160)
211 (tsu_curve.kanji.radical.silly_hat)
212 (tsu_curve.kanji.grone.ahead);
213 tsu_render;
214 endtsuglyph;
215

```

216 % ka/ie "house"

```

217 begint Suglyph("uni5BB6",182);
218 tsu_curve.kanji.grtwo.house;
219 tsu_render;
220 endtsuglyph;
221

```

[see page 1306]

222 % su/miki "inch", also often a radical

```

223 begint Suglyph("uni5BF8",248);

```

[see page 446]

```
224 tsu_curve.kanji.grsix.inch;
225 tsu_render;
226 endtsuglyph;
227
228 % tera/ji "temple"
229 begintsuglyph("uni5BFA";250); [see page 426]
230 tsu_curve.kanji.grtwo.temple;
231 tsu_render;
232 endtsuglyph;
233
234 

---

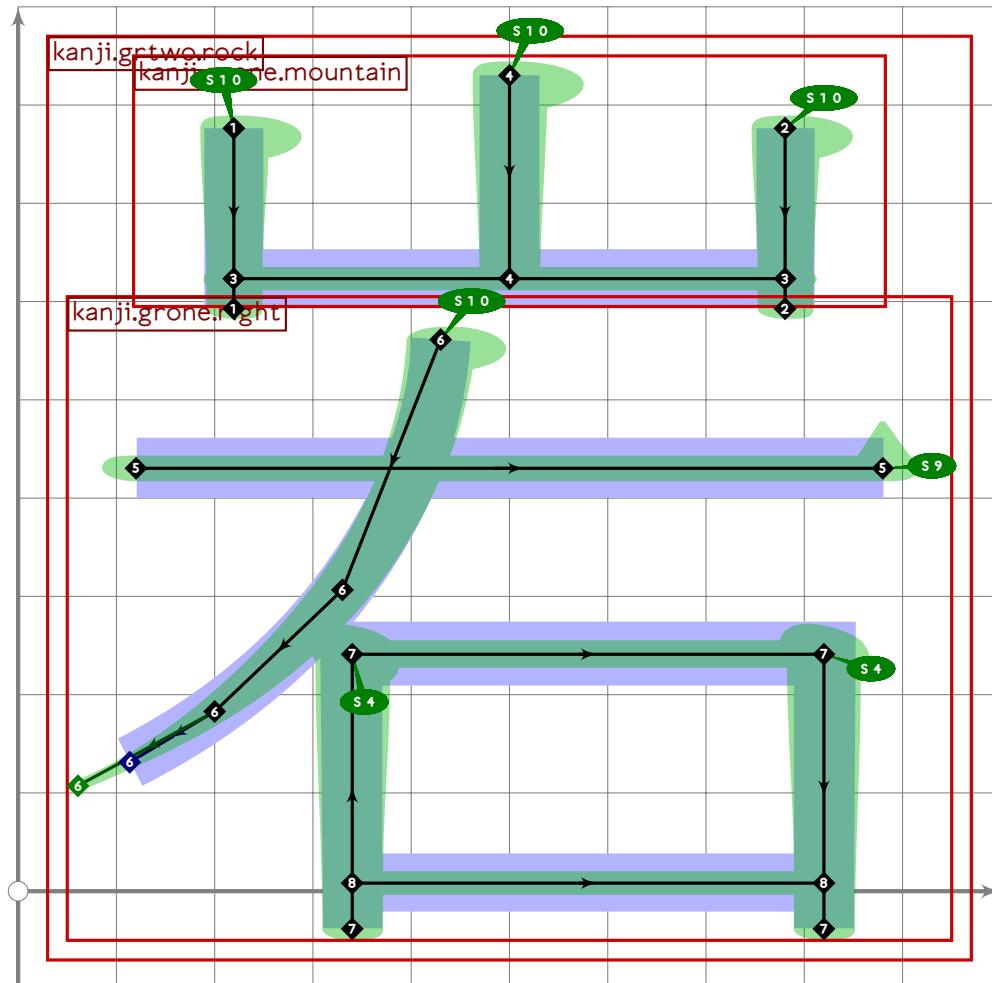

235
236 endfont;
237
238 

---


```

tsuku5c.mp

```
1 %  
2 % Unicode page 5c (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradeone.mp;  
38 input gradesix.mp;  
39 input gradetwo.mp;  
40 input radical.mp;  
41  
42 _____
```

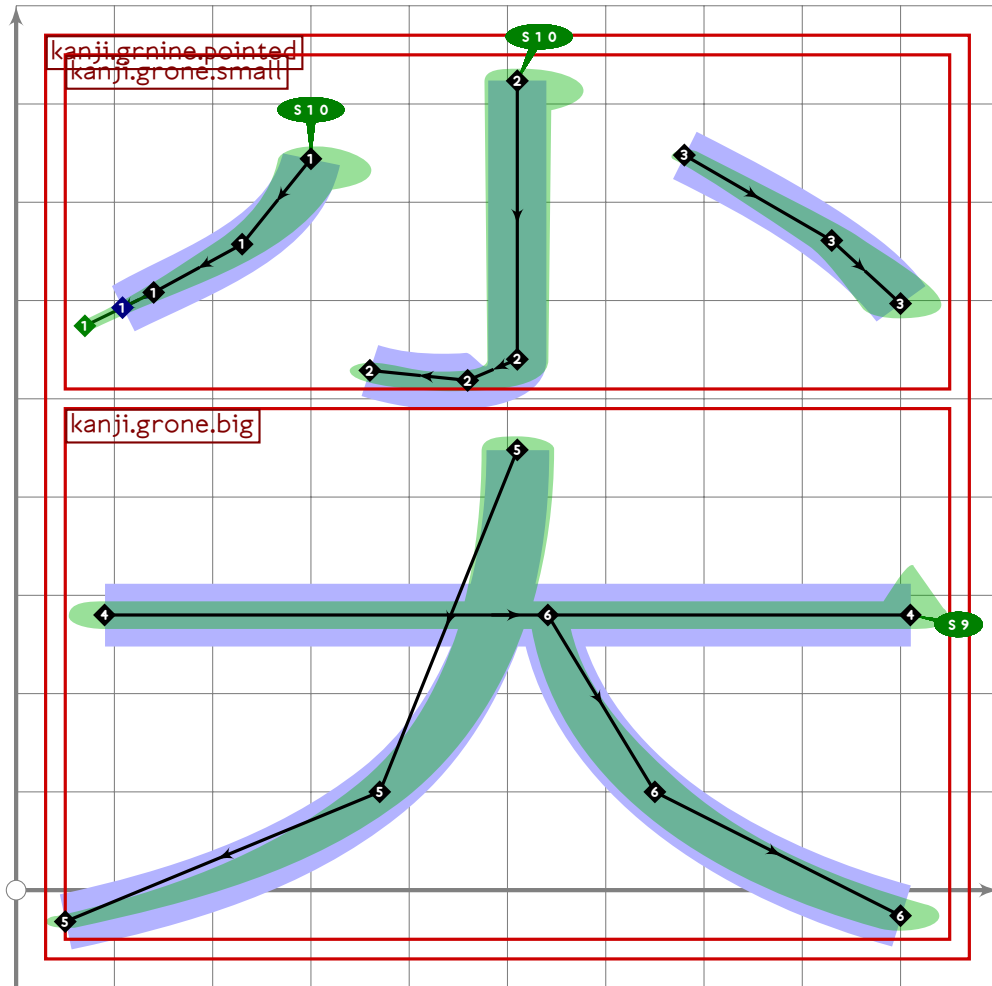


43

```

44 vardef tsu_curve.kanji.grtwo.rock =
45   push_pbox_toexpand("kanji.grtwo.rock");
46   build_kanji.level(build_kanji.tb(600,10)
47     (build_kanji.sscale(xscaled 0.85)(tsu_curve.kanji.grone.mountain))
48     (tsu_curve.kanji.grone.right));
49   expand_pbox;
50 enddef;
51
52

```



```

53
54 vardef tsu_curve.kanji.grnine.pointed =
55   push_pbox_toexpand("kanji.grnine.pointed");
56   build_kanji.tb(500,-20)
57     (tsu_curve.kanji.grone.small)
58     (tsu_curve.kanji.grone.big);
59   expand_pbox;
60 enddef;
61
62
63
64 % shuu/chii "small"

```

```

65 begintsuglyph("uni5C0F",15);
66 tsu_curve.kanji.grone.small;
67 tsu_render;
68 endsuglyph;

```

[see page 379]

```

69
70 % sho/suko "little"
71 begintsuglyph("uni5C11",17);
72 tsu_curve.kanji.grtwo.little;
73 tsu_render;
74 endsuglyph;

```

[see page 406]

```

75
76 % pointed
77 begintsuglyph("uni5C16",22);
78 tsu_curve.kanji.grnine.pointed;
79 tsu_render;
80 endsuglyph;

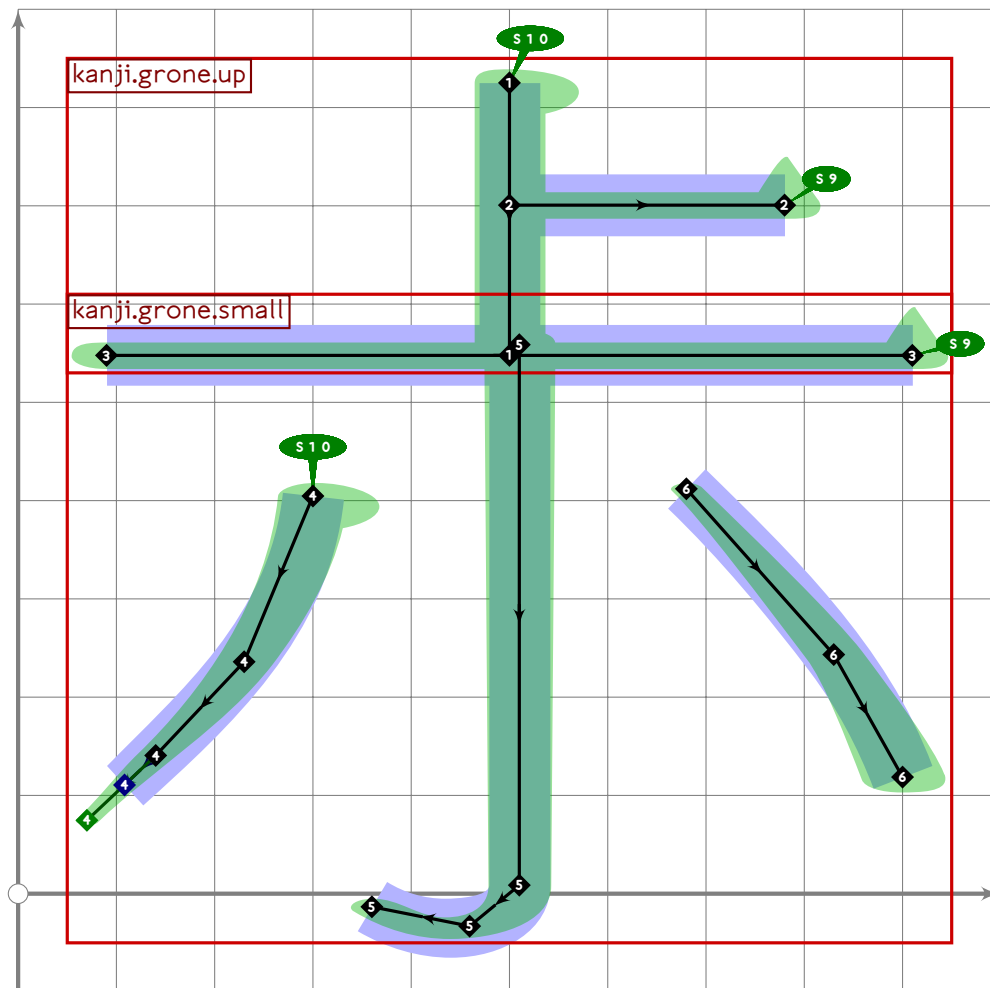
```

[see page 1317]

```

81

```



```

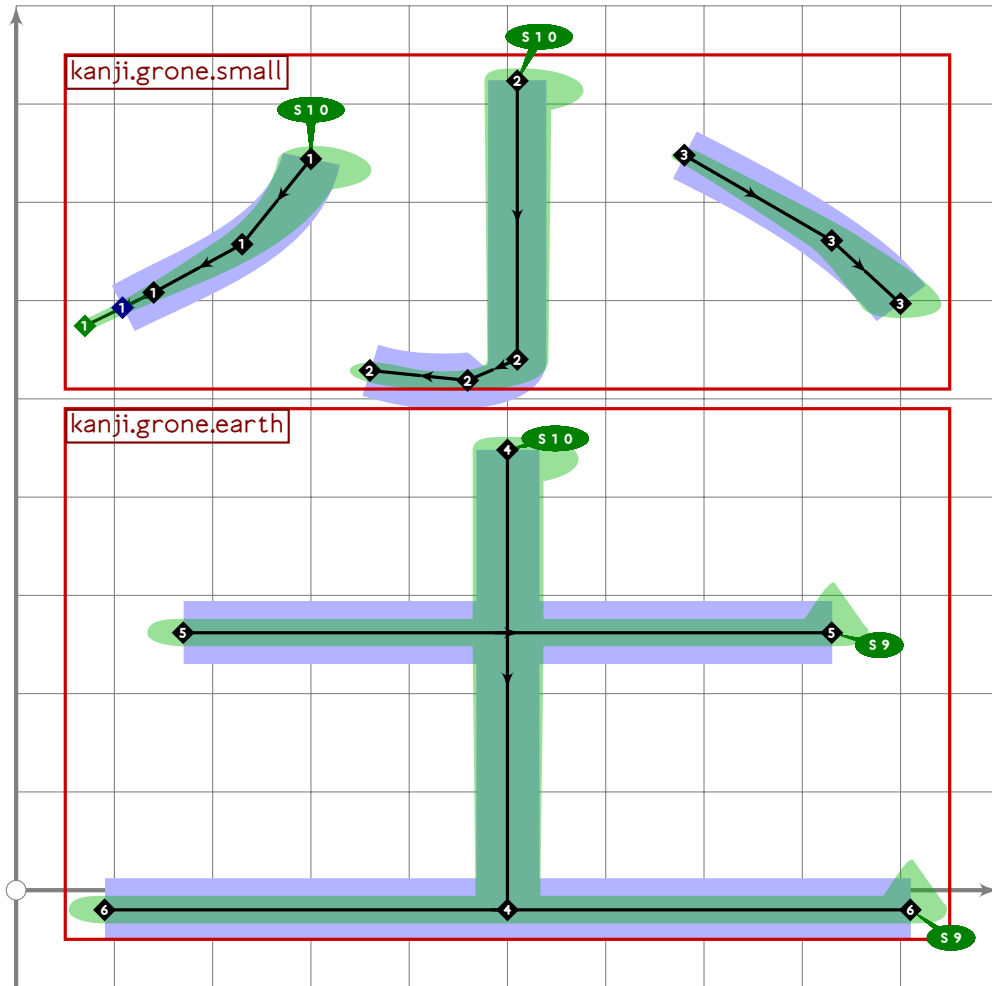
82 % extra "younger brother"
83 begintsuglyph("uni5C17",23);
84 build_kanji.level(build_kanji.tb(570,80)
85   (tsu_curve.kanji.grone.up)

```

```

86 (tsu_curve.kanji.grone.small;set_boserif(-1,0,whatever));
87 tsu_render;
88 endtsuglyph;
89

```



```

90 % extra
91 begint Suglyph("uni5C18",24);
92 build_kanji.tb(500,-20)
93 (tsu_curve.kanji.grone.small)
94 (tsu_curve.kanji.grone.earth);
95 tsu_render;
96 endtsuglyph;
97
98 % shi/katashiro "corpse" or "flag radial"
99 begint Suglyph("uni5C38",56);
100 tsu_curve.kanji.radical.flag;
101 tsu_render;
102 endtsuglyph;
103
104 % shaku "foot (unit of measure)," "bamboo flute," or "blowjob"
105 begint Suglyph("uni5C3A",58);
106 tsu_curve.kanji.grsix.blowjob;

```

[see page 319]

[see page 443]

```
107 tsu_render;
108 endtsuglyph;
109
110 % yama/san "mountain"
111 begintsuglyph("uni5C71";113); [see page 364]
112 tsu_curve.kanji.grone.mountain;
113 tsu_render;
114 endtsuglyph;
115
116 % gan/iwa "rock"
117 begintsuglyph("uni5CA9";169); [see page 1317]
118 tsu_curve.kanji.grtwo.rock;
119 tsu_render;
120 endtsuglyph;
121
122 

---


123
124 endfont;
125
126 

---


```


tsuku-5d.mp

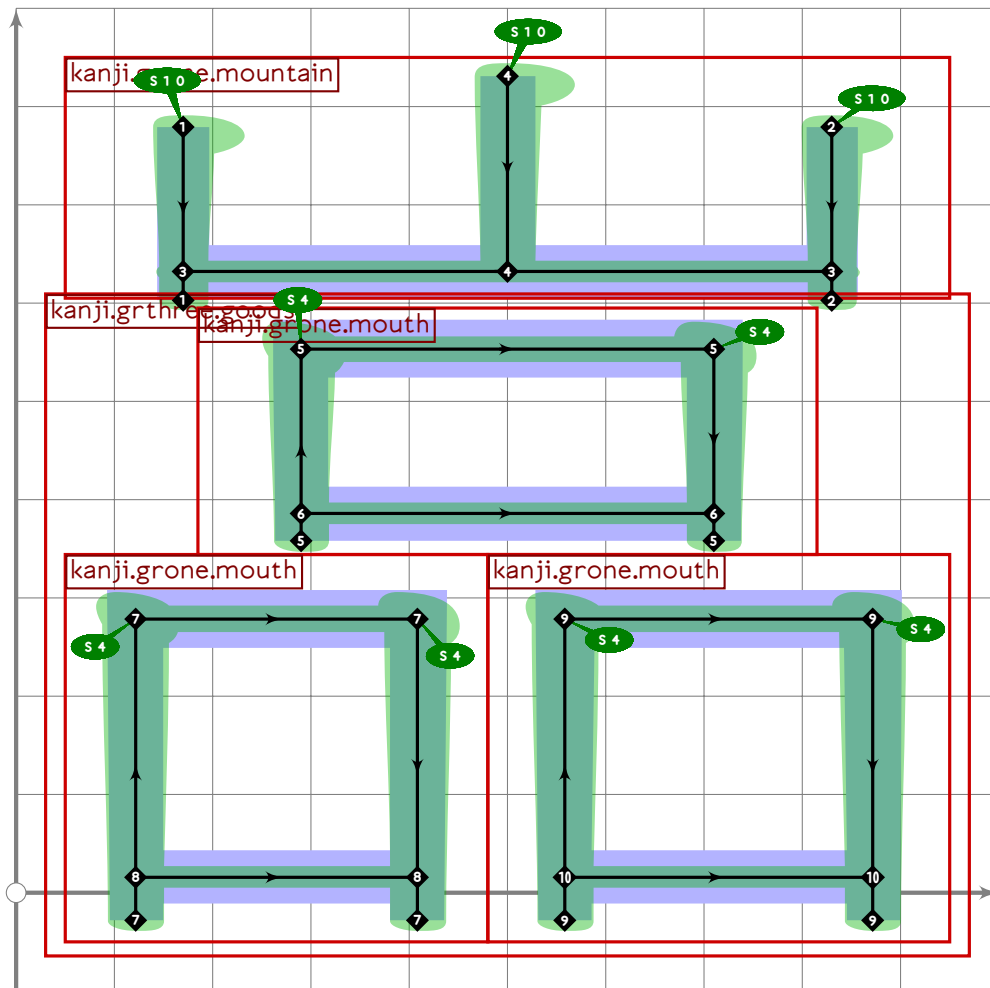
```
1 %
2 % Unicode page 5d (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradeeight.mp;
38 input gradeone.mp;
39 input gradethree.mp;
40 input gradetwo.mp;
41 input radical.mp;
42
43 

---


44
45 % hou/kuzu "demolish"
46 begintsuglyph("uni5D29",41); [see page 448]
47 tsu_curve.kanji.greight.demolish;
48 tsu_render;
49 endtsuglyph;
50
```

```

59 % extra
60 begintsuglyph("uni5D53",83);
61 build_kanji.level(build_kanji.tb(600,10)
62   (tsu_curve.kanji.grone.mountain)
63   (tsu_curve.kanji.grthree.goods));
64 tsu_render;
65 endtsuglyph;
66
67 % kawa "river"
68 begintsuglyph("uni5DDD",221);
69 tsu_curve.kanji.grone.river;
70 tsu_render;
71 endtsuglyph;
72
73 % takumi "craft"
74 begintsuglyph("uni5DE5",229);
75 tsu_curve.kanji.grtwo.craft;
76 tsu_render;
77 endtsuglyph;
78
79 % hidari "left"

```

[see page 375]

[see page 397]

```
80 begintsuglyph("uni5DE6",230); [see page 360]
81 tsu_curve.kanji.grone.left;
82 tsu_render;
83 endtsuglyph;
84
85 % kin/oo/aba "towel" or "hanging scroll"
86 begintsuglyph("uni5DFE",254); [see page 453]
87 tsu_curve.kanji.greight.towel;
88 tsu_render;
89 endtsuglyph;
90
91 

---


92
93 endfont;
94
95 

---


```

tsuku-5e.mp

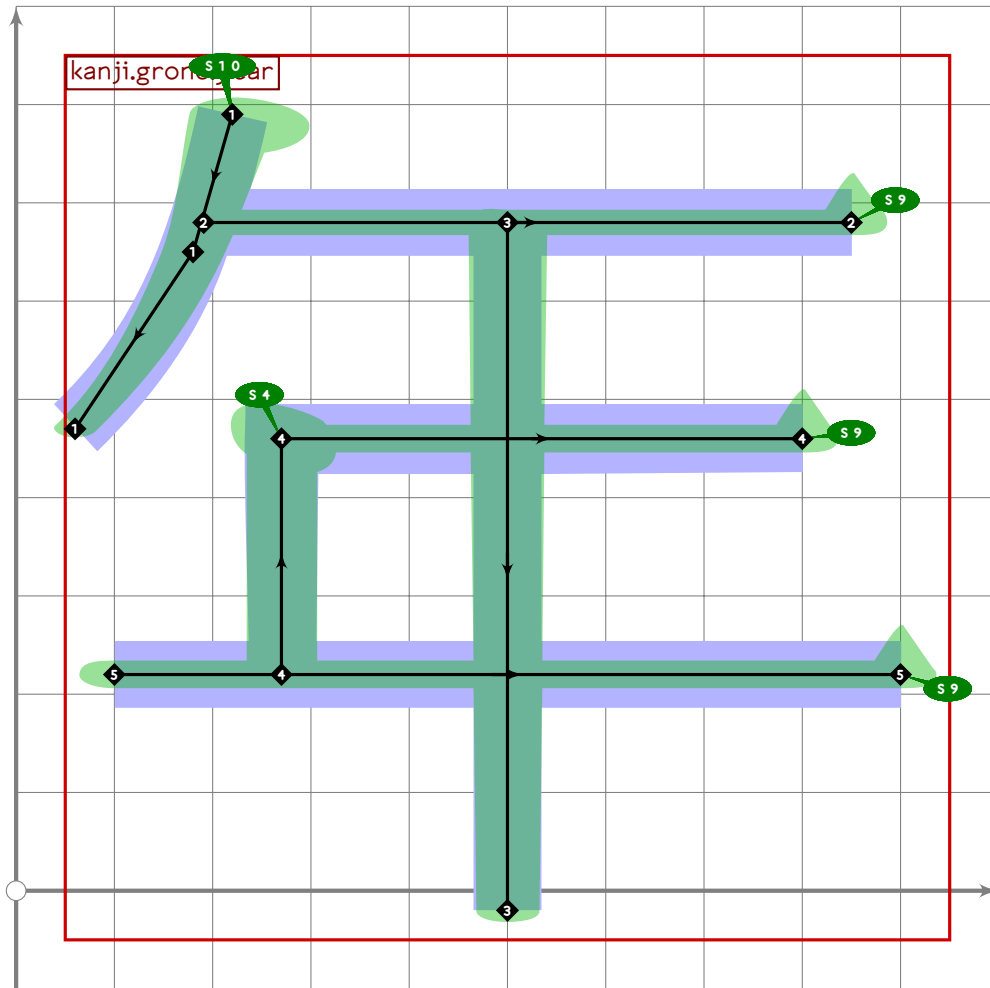
```
1 %
2 % Unicode page 5e (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradeeight.mp;
38 input gradefour.mp;
39 input gradenine.mp;
40 input gradeone.mp;
41 input gradesix.mp;
42 input gradethree.mp;
43 input gradetwo.mp;
44 input leftrad.mp;
45 input radical.mp;
46 input toprad.mp;
47
48 

---


```

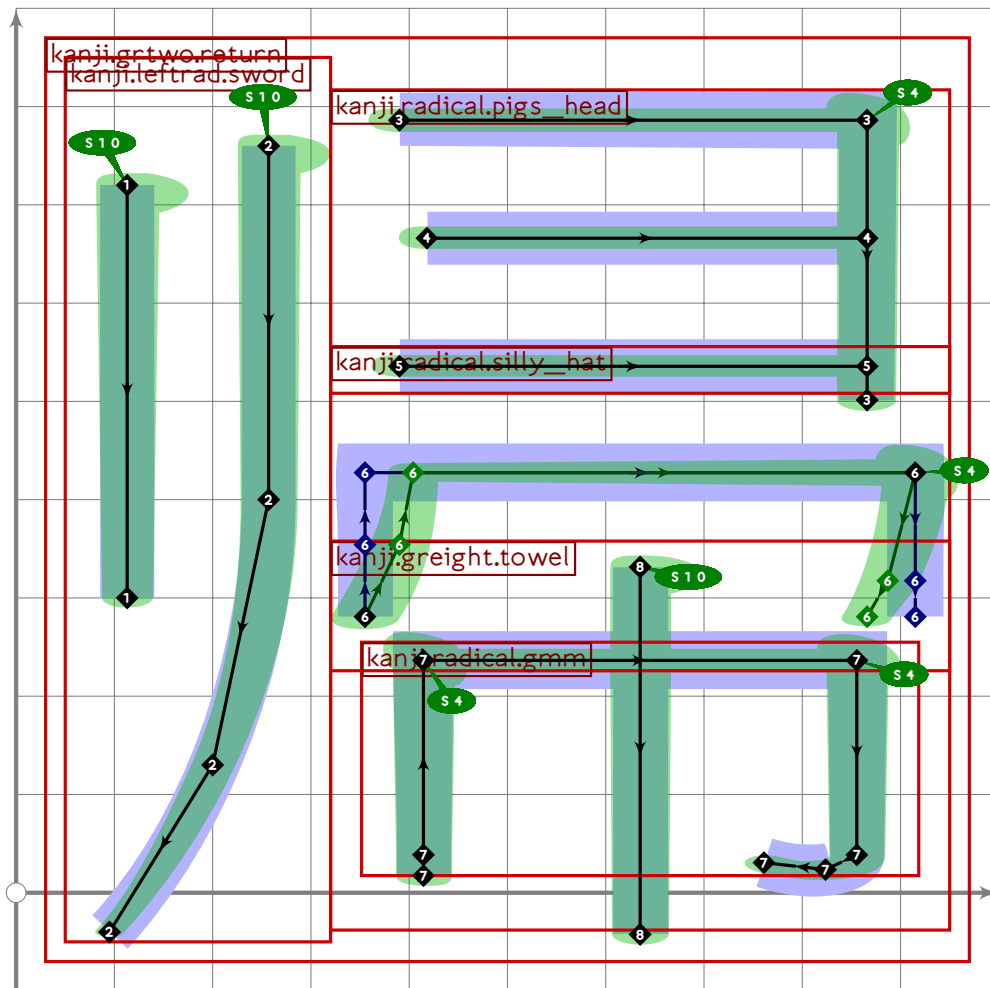


```

49
50 vardef tsu_curve.kanji.grone.year =
51   push_pbox_toexpand("kanji.grone.year");
52   push_stroke((220,790){curl 0.1}..(180,650)..(60,470),
53     (1.7,1.7)-(1.4,1.4)-(1.1,1.1));
54   set_boserif(0,0,10);
55   push_stroke(
56     (((0,680)-(1000,680)) intersectionpoint get_stroke(0))-(850,680),
57     (1.4,1.4)-(1.5,1.5));
58   set_boserif(0,1,9);
59   push_stroke((500,680)-(500,-20),(1.6,1.6)-(1.4,1.4));
60   push_stroke((270,220)-(270,460)-(800,460),
61     (1.5,1.5)-(1.5,1.5)-(1.5,1.5));
62   set_botip(0,1,1);
63   set_boserif(0,1,4);
64   set_boserif(0,2,9);
65   push_stroke((100,220)-(900,220),(1.5,1.5)-(1.5,1.5));
66   set_boserif(0,1,9);
67   expand_pbox;
68 enddef;
69

```

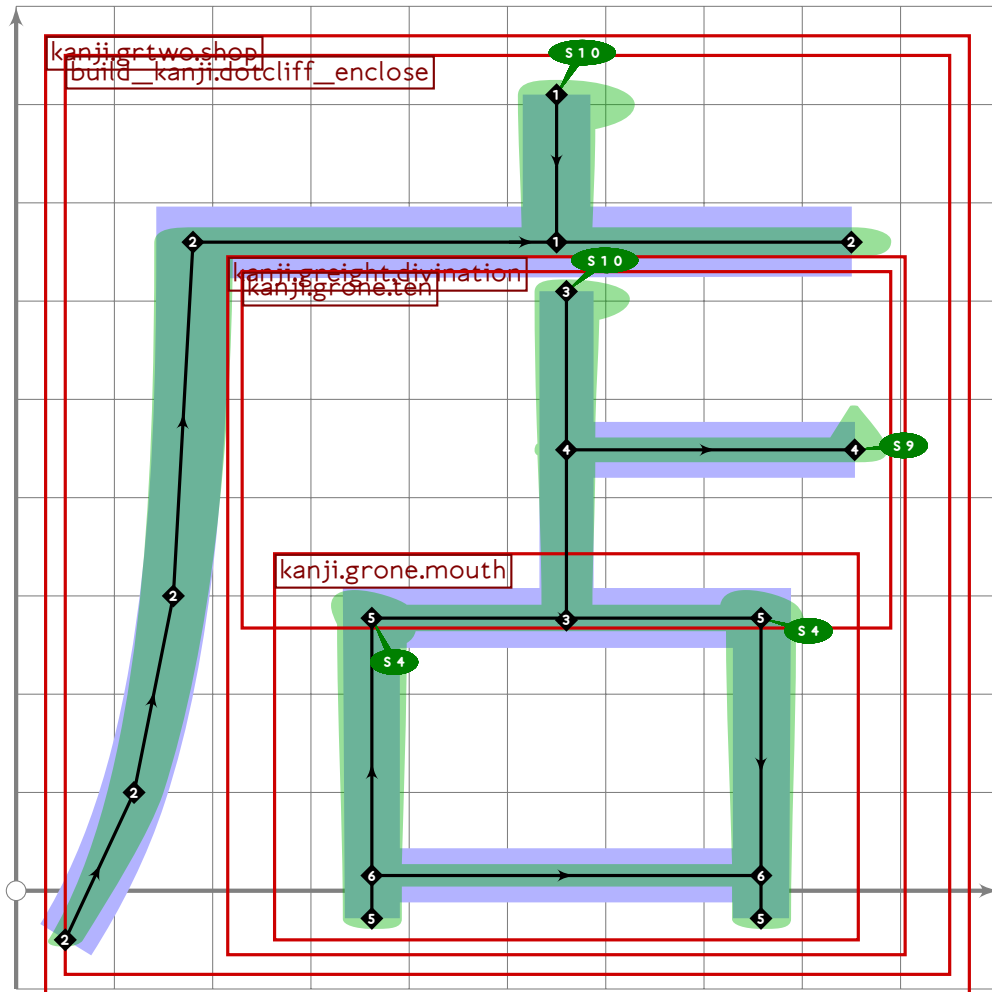
```
70
71
72 vardef build_kanji.dotcliff_enclose(text contents) =
73   push_pbox_toexpand("build_kanji.dotcliff_enclose");
74   push_stroke((550,810)-(550,660),
75     (1.6,1.6)-(1.5,1.5));
76   set_boserif(0,0,10);
77   push_stroke(
78     (50,-50)..(120,100)..(160,300)..tension 1.2..(180,660)-(850,660),
79     (1,1)-(1.3,1.3)-(1.5,1.5)-(1.6,1.6)-(1.6,1.6));
80   set_botip(0,3,1);
81   begingroup
82     save t;
83     transform t;
84     (50,-50) transformed t=(230,-50);
85     (500,-50) transformed t=(560,-50);
86     (500,850) transformed t=(560,630);
87     tsu_xform(t)(contents);
88   endgroup;
89   expand_pbox;
90 enddef;
91
92
```



```

93
94 vardef tsu_curve.kanji.grtwo.return =
95   push_pbox_toexpand("kanji.grtwo.return");
96   % can't just invoke "broom" because of Japanese style difference
97   % between "pig's snout" and "pig's head" radicals
98   build_kanji.level(build_kanji.lr(320,0)
99     (tsu_curve.kanji.leftrad.sword)
100    (build_kanji.sscale(yscaled 0.95 shifted (0,10))
101      (build_kanji.tb(550,50)
102        (tsu_curve.kanji.radical.pigs_head)
103        (build_kanji.tb(450,200)
104          (tsu_curve.kanji.radical.silly_hat;
105            set_bosize(-1,0))
106          (tsu_curve.kanji.greight.towel))))));
107   expand_pbox;
108 enddef;

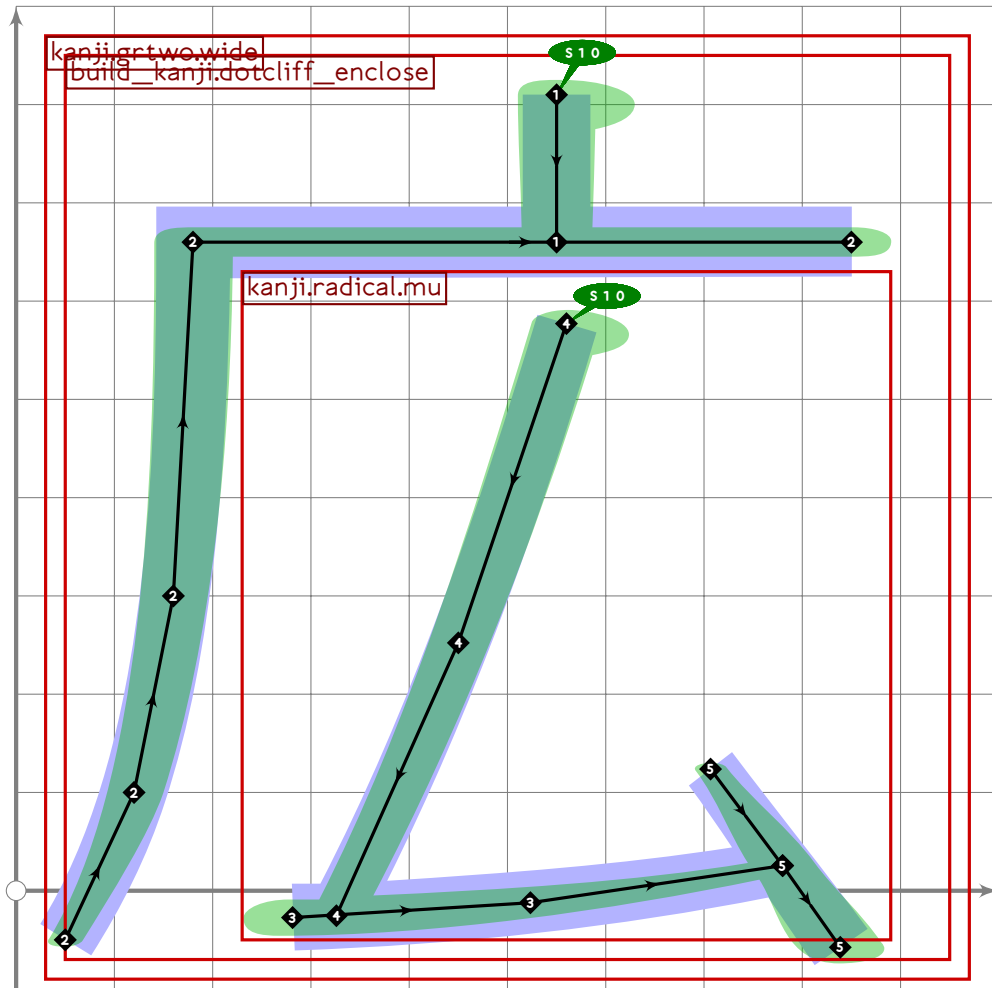
```

```

109
110 vardef tsu_curve.kanji.grtwo.shop =
111   push_pbox_toexpand("kanji.grtwo.shop");
112   build_kanji.dotcliff_enclose(tsu_curve.kanji.greight.divination);
113   expand_pbox;
114 enddef;

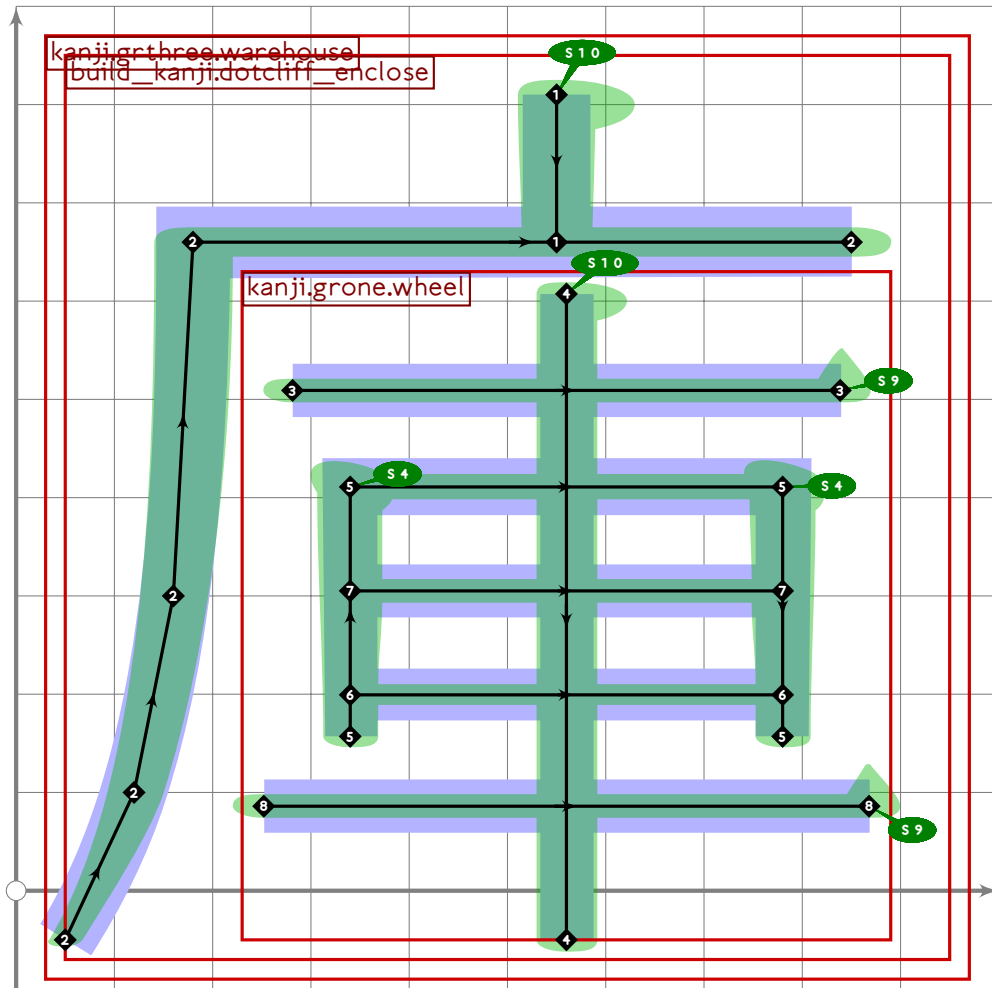
```



```

115
116 vardef tsu_curve.kanji.grtwo.wide =
117   push_pbox_toexpand("kanji.grtwo.wide");
118   build_kanji.dotcliff_enclose(tsu_curve.kanji.radical.mu);
119   expand_pbox;
120 enddef;
121
122

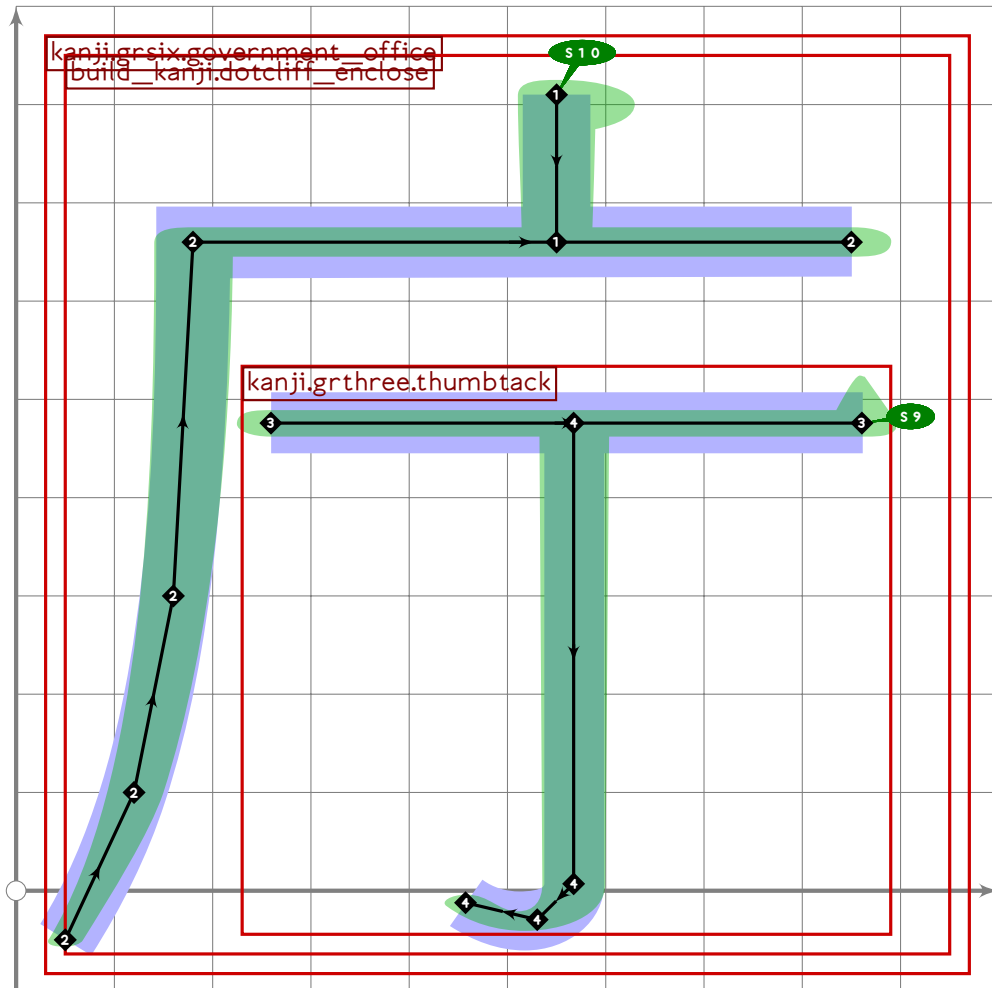
```



```

123
124 vardef tsu_curve.kanji.grthree.warehouse =
125   push_pbox_toexpand("kanji.grthree.warehouse");
126   build_kanji.dotcliff_enclose(tsu_curve.kanji.grone.wheel);
127   expand_pbox;
128 enddef;
129
130

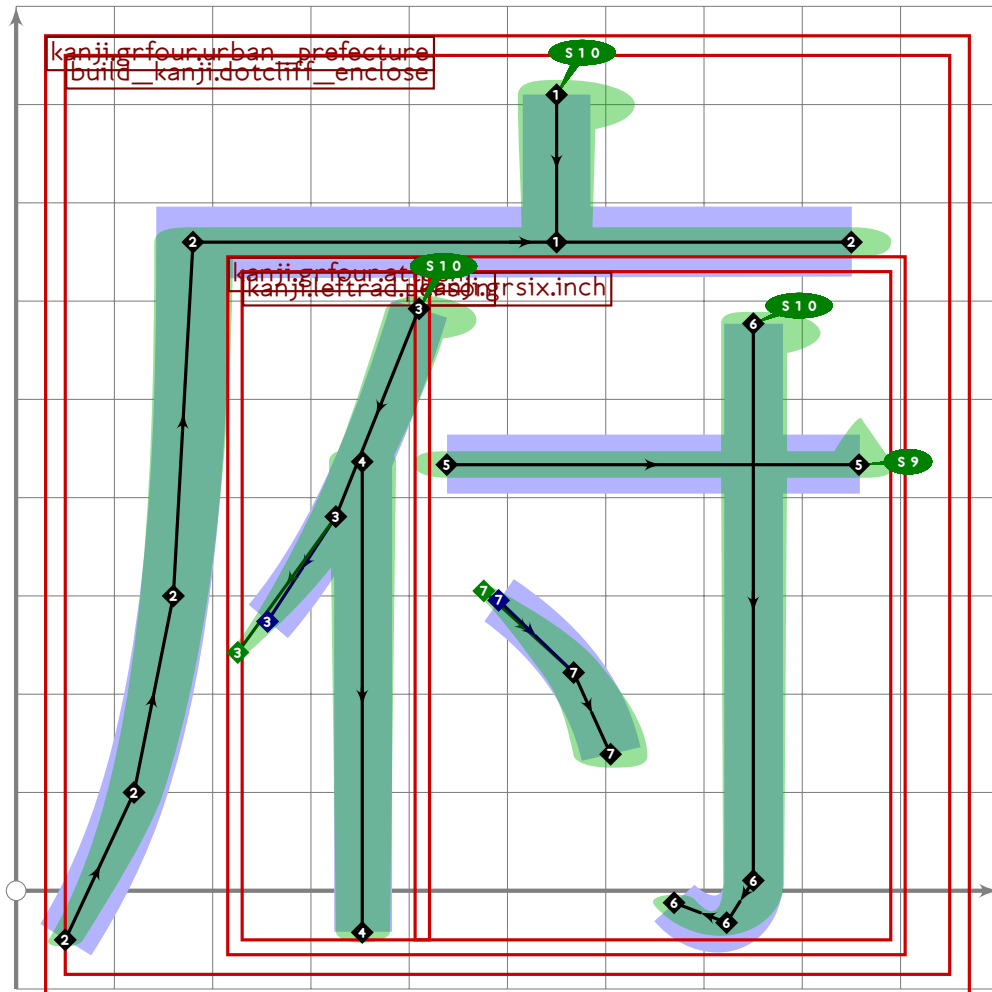
```



```

131
132 vardef tsu_curve.kanji.grsix.government_office =
133   push_pbox_toexpand("kanji.grsix.government_office");
134   build_kanji.dotcliff_enclose(tsu_xform(identity yscaled 0.85)
135     (tsu_curve.kanji.grthree.thumbtack));
136   expand_pbox;
137 enddef;
138
139

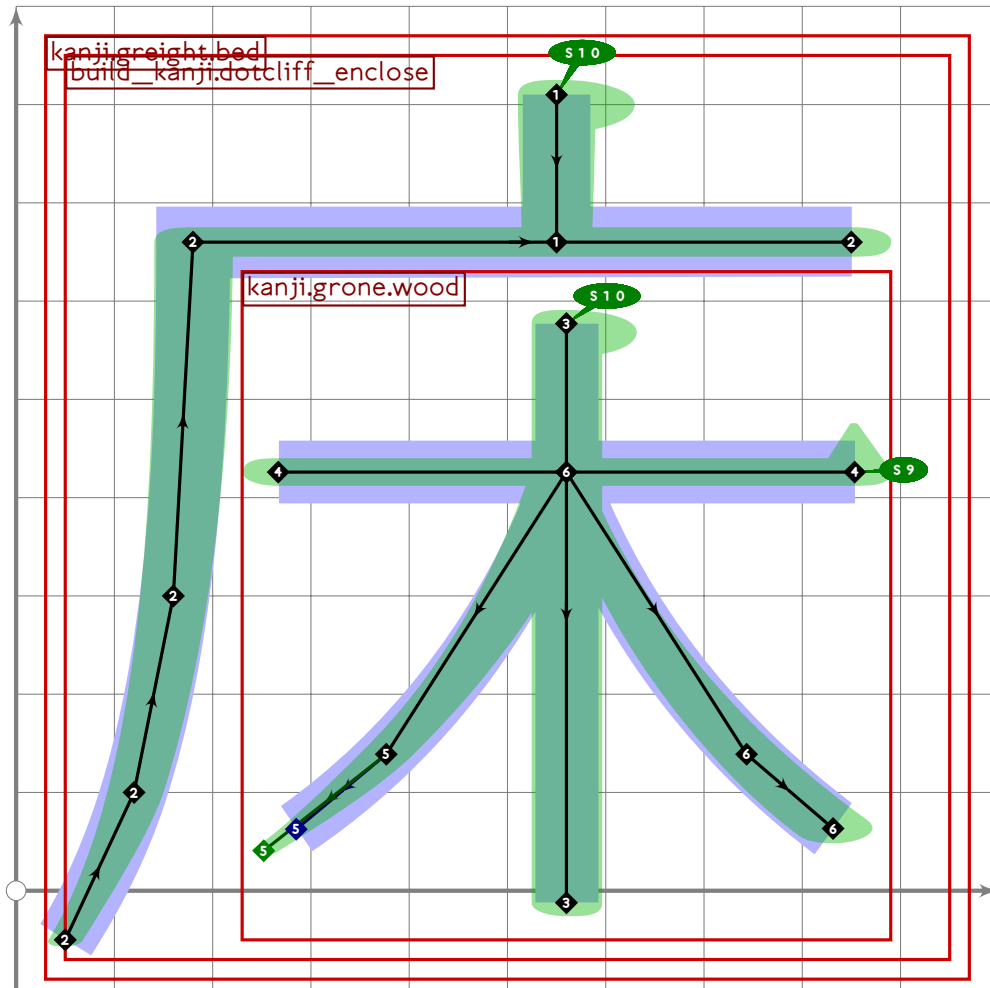
```



```

140
141 vardef tsu_curve.kanji.grfour.urban_prefecture =
142   push_pbox_toexpand("kanji.grfour.urban_prefecture");
143   build_kanji.dotcliff_enclose(tsu_curve.kanji.grfour.attach);
144   expand_pbox;
145 enddef;
146
147

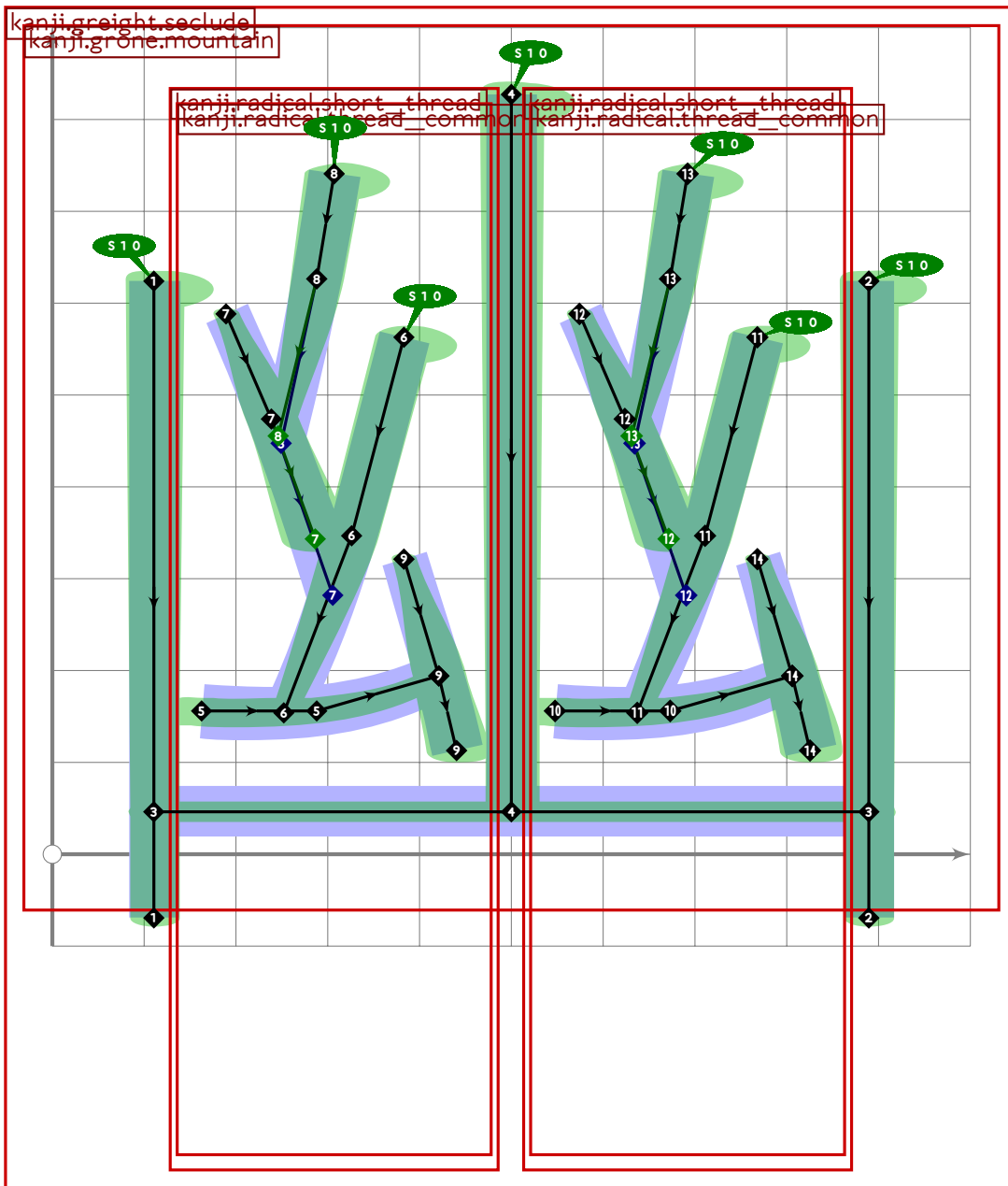
```



```

148
149 vardef tsu_curve.kanji.greight.bed =
150   push_pbox_toexpand("kanji.greight.bed");
151   build_kanji.dotcliff_enclose(tsu_curve.kanji.grone.wood);
152   expand_pbox;
153 enddef;

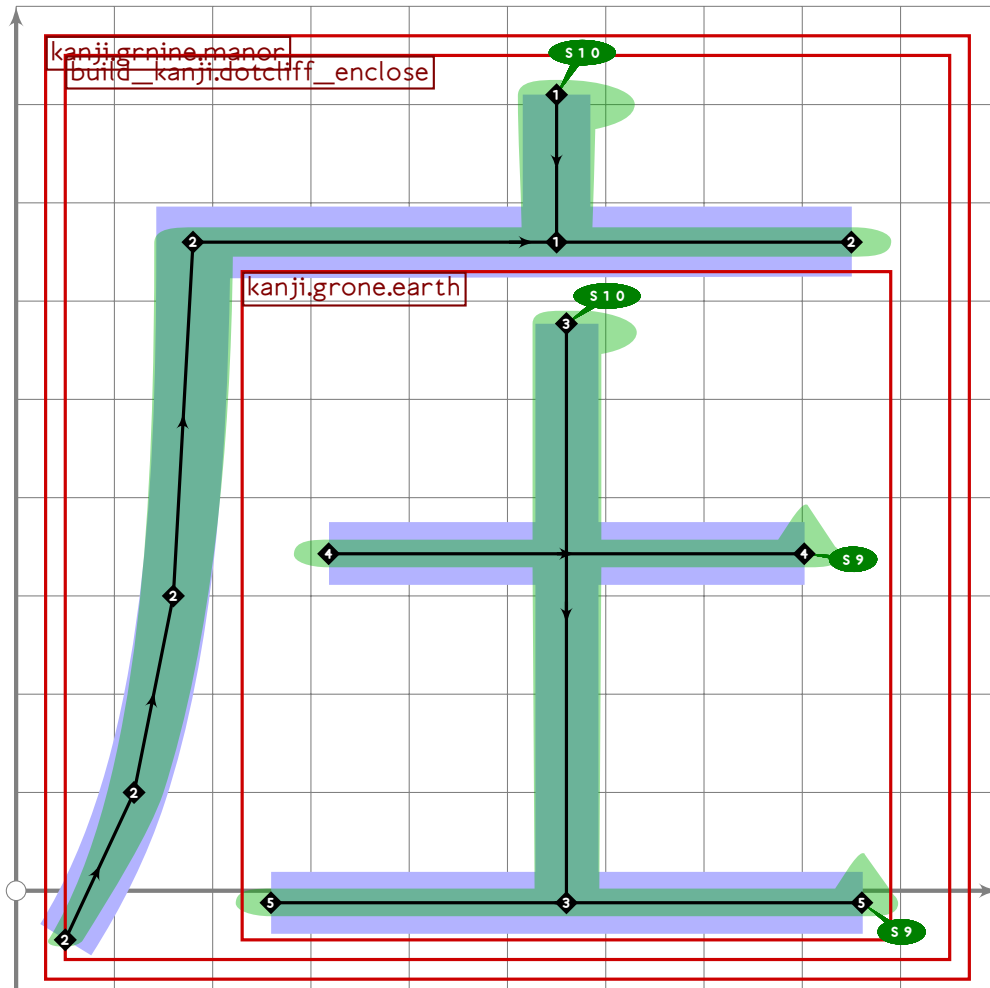
```



```

154
155 vardef tsu_curve.kanji.greight.seclude =
156   push_pbox_toexpand("kanji.greight.seclude");
157   build_kanji.sscale(xyscaled (1.18,1.07) shifted (0,20))
158     (tsu_curve.kanji.grone.mountain);
159   build_kanji.sscale(xyscaled (0.38,0.83) shifted (-193,15))
160     (tsu_curve.kanji.radical.short_thread);
161   build_kanji.sscale(xyscaled (0.38,0.83) shifted (192,15))
162     (tsu_curve.kanji.radical.short_thread);
163   for i=-14 upto 0: set_bosize(i,80); endfor;
164   expand_pbox;
165 enddef;
166

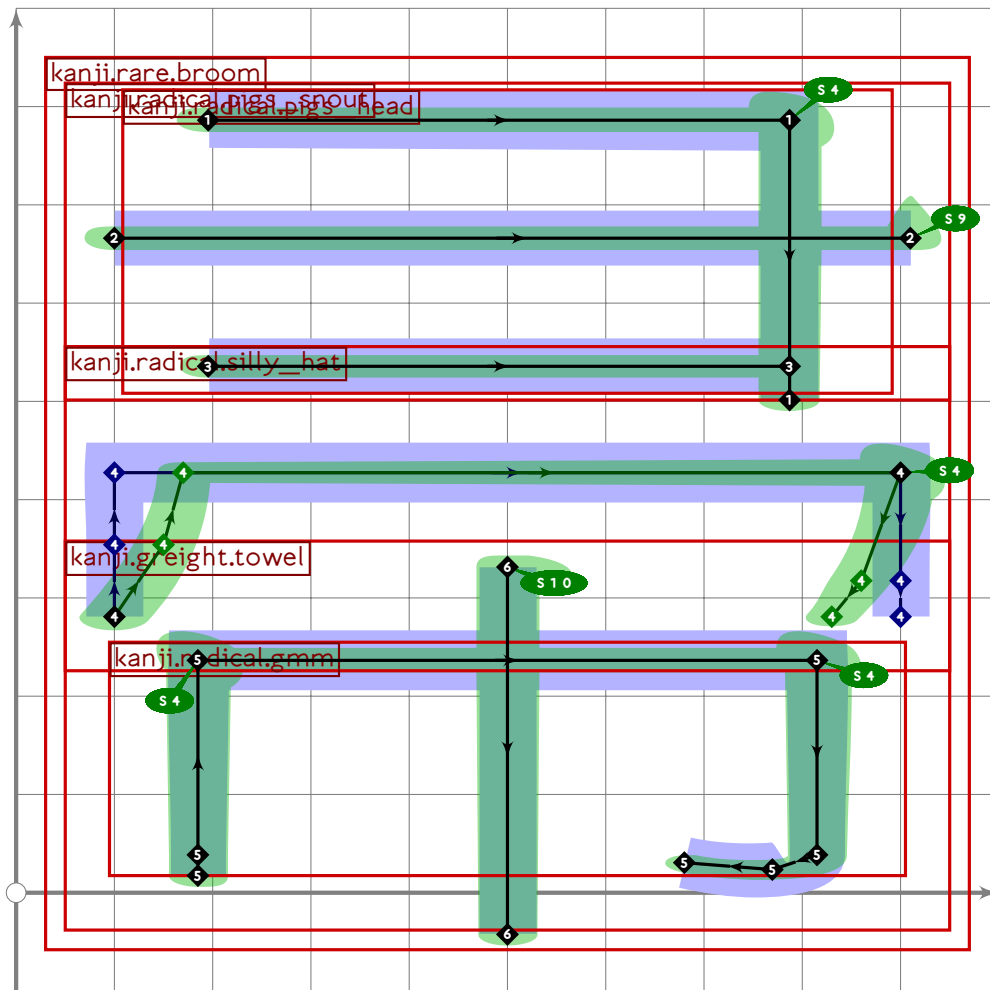
```

```

174
175 vardef tsu_curve.kanji.grnine.manor =
176   push_pbox_toexpand("kanji.grnine.manor");
177   build_kanji.dotcliff_enclose(tsu_curve.kanji.grone.earth);
178   expand_pbox;
179 enddef;
180
181

```



```

182
183 vardef tsu_curve.kanji.rare.broom =
184   push_pbox_toexpand("kanji.rare.broom");
185   build_kanji.level(build_kanji.sscale(yscaled 0.95 shifted (0,10))
186     (build_kanji.tb(550,50)
187       (tsu_curve.kanji.radical.pigs_snout)
188       (build_kanji.tb(450,200)
189         (tsu_curve.kanji.radical.silly_hat;
190           set_bosize(-1,0))
191         (tsu_curve.kanji.greight.towel)))));
192   expand_pbox;
193 enddef;
194
195
196
197 vardef tsu_curve.kanji.leftrad.sword =
198   push_pbox_toexpand("kanji.leftrad.sword");
199   push_stroke((260,720)-(260,300),(1.6,1.6)-(1.4,1.4));
200   set_boserif(0,0,10);
201   push_stroke((740,760)-(740,400){down}..(550,130)..(200,40),
202     (1.6,1.6)-(1.5,1.5)-(1.3,1.3)-(1,1));

```

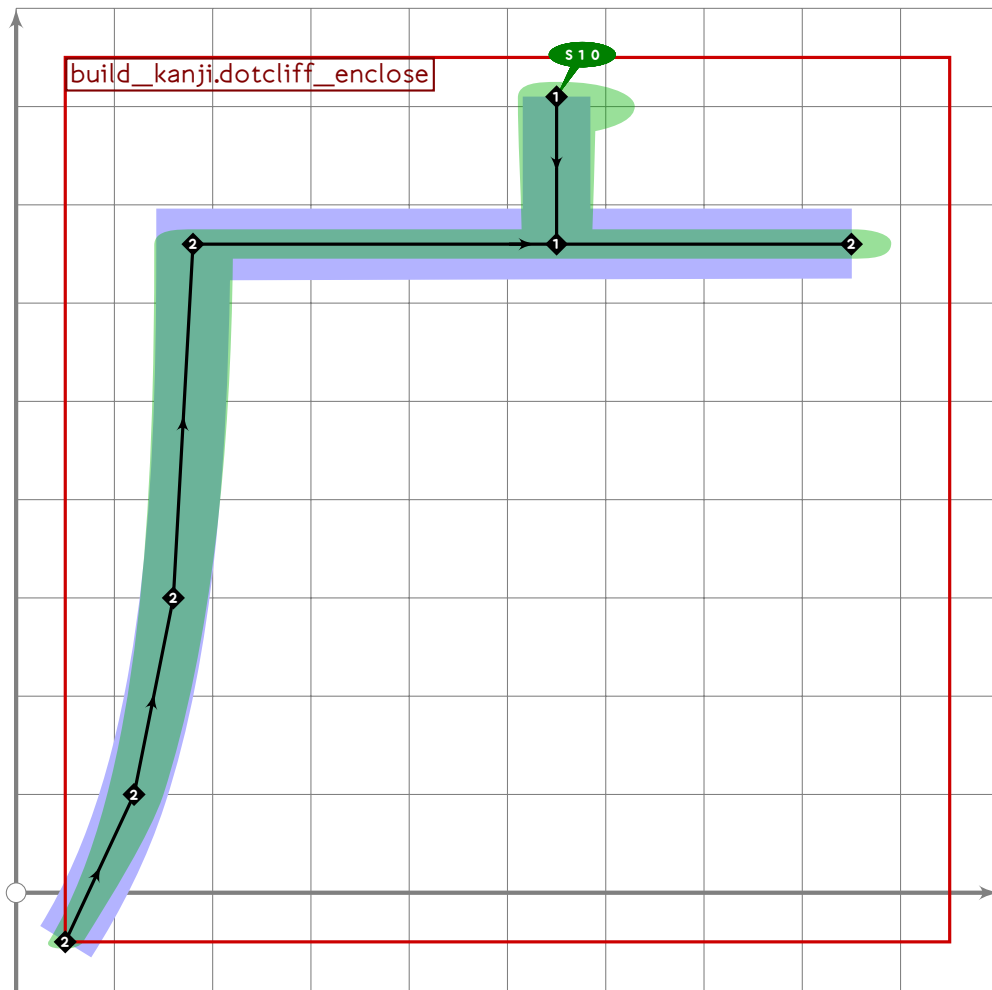
```

203 set_boserif(0,0,10);
204 expand_pbox;
205 enddef;
206
207 

---


208
209 % shi/ichi "market"
210 begintsuglyph("uni5E02",2); [see page 408]
211 tsu_curve.kanji.grtwo.market;
212 tsu_render;
213 endtsuglyph;
214
215 % sou/houki "broom" as in houkiboshi "comet"
216 begintsuglyph("uni5E1A",26); [see page 1338]
217 tsu_curve.kanji.rare.broom;
218 tsu_render;
219 endtsuglyph;
220
221 % ki/kae "return"
222 begintsuglyph("uni5E30",48); [see page 1328]
223 tsu_curve.kanji.grtwo.return;
224 tsu_render;
225 endtsuglyph;
226
227 % nen/toshi "year"
228 begintsuglyph("uni5E74",116); [see page 1326]
229 tsu_curve.kanji.grone.year;
230 tsu_render;
231 endtsuglyph;
232
233 % you/chiisai "short thread radical"
234 begintsuglyph("uni5E7A",122); [see page 328]
235 tsu_curve.kanji.radical.short_thread;
236 tsu_render;
237 endtsuglyph;
238
239 % yuu as in yuurei "seclude"
240 begintsuglyph("uni5E7D",125); [see page 1335]
241 tsu_curve.kanji.greight.seclude;
242 tsu_render;
243 endtsuglyph;
244

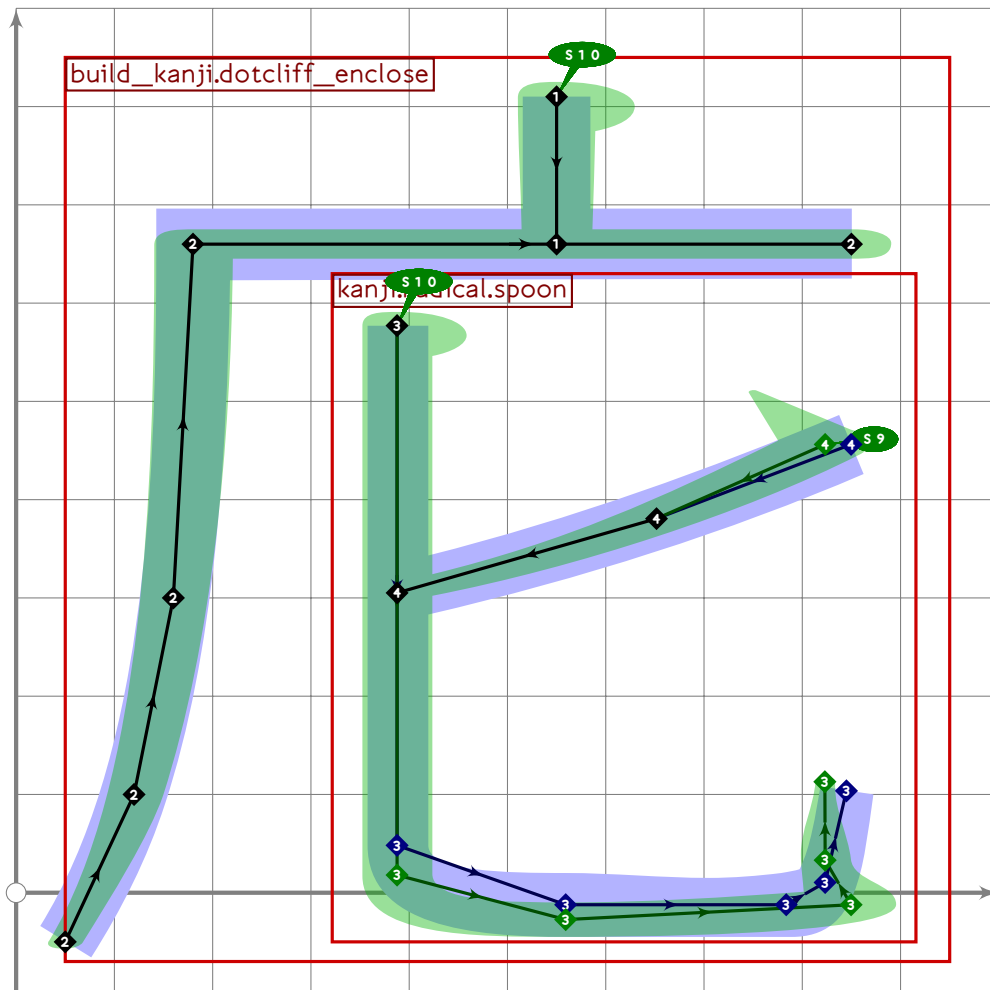
```



```

245 % madare "dotted cliff radical"
246 begint Suglyph("uni5E7F";127);
247 build_kanji.dotcliff_enclose();
248 tsu_render;
249 endtsuglyph;
250

```

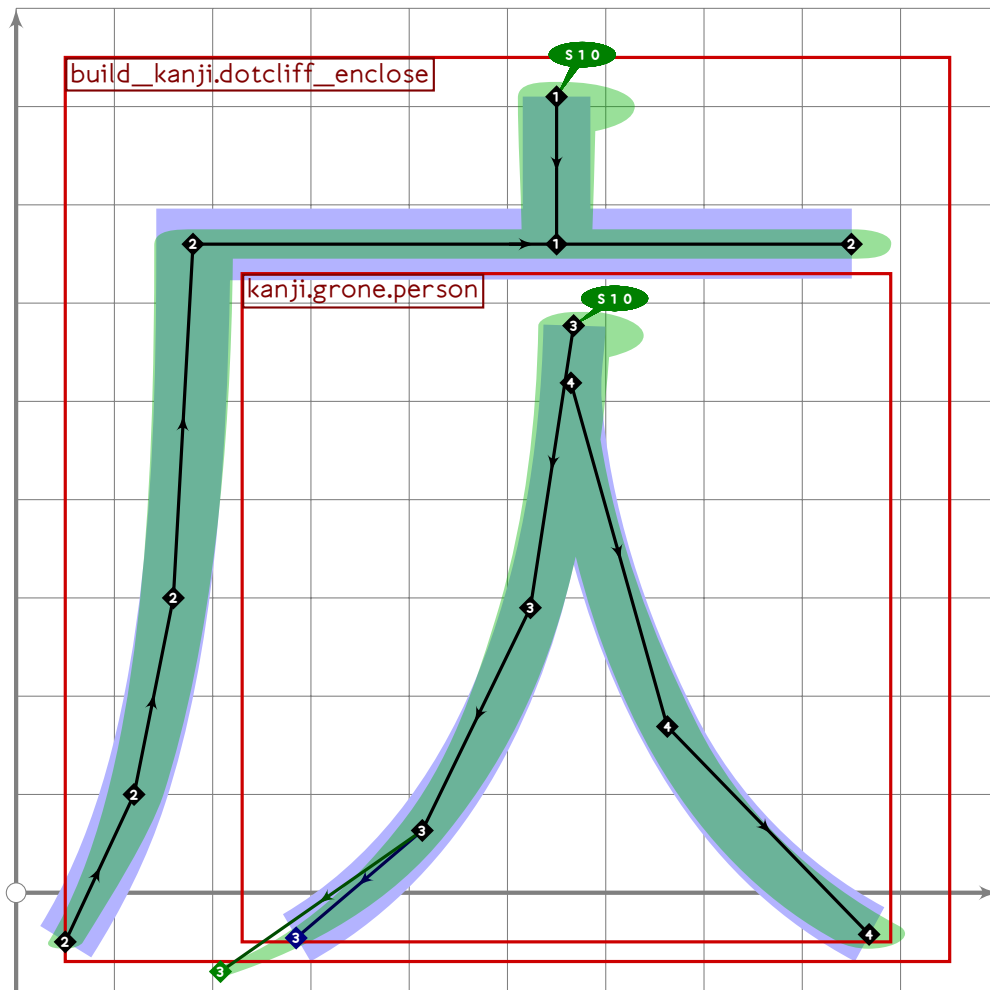


```

251 % extra
252 begintsuglyph("uni5E80",128);
253   build_kanji.dotcliff_enclose(
254     build_kanji.sscale(xscaled 0.9 shifted (80,0))
255       (tsu_curve.kanji.radical.spoon));
256   tsu_render;
257 endtsuglyph;
258
259 % chou/yakushou "government office"
260 begintsuglyph("uni5E81",129);
261   tsu_curve.kanji.grsix.government_office;
262   tsu_render;
263 endtsuglyph;
264

```

[see page 1332]



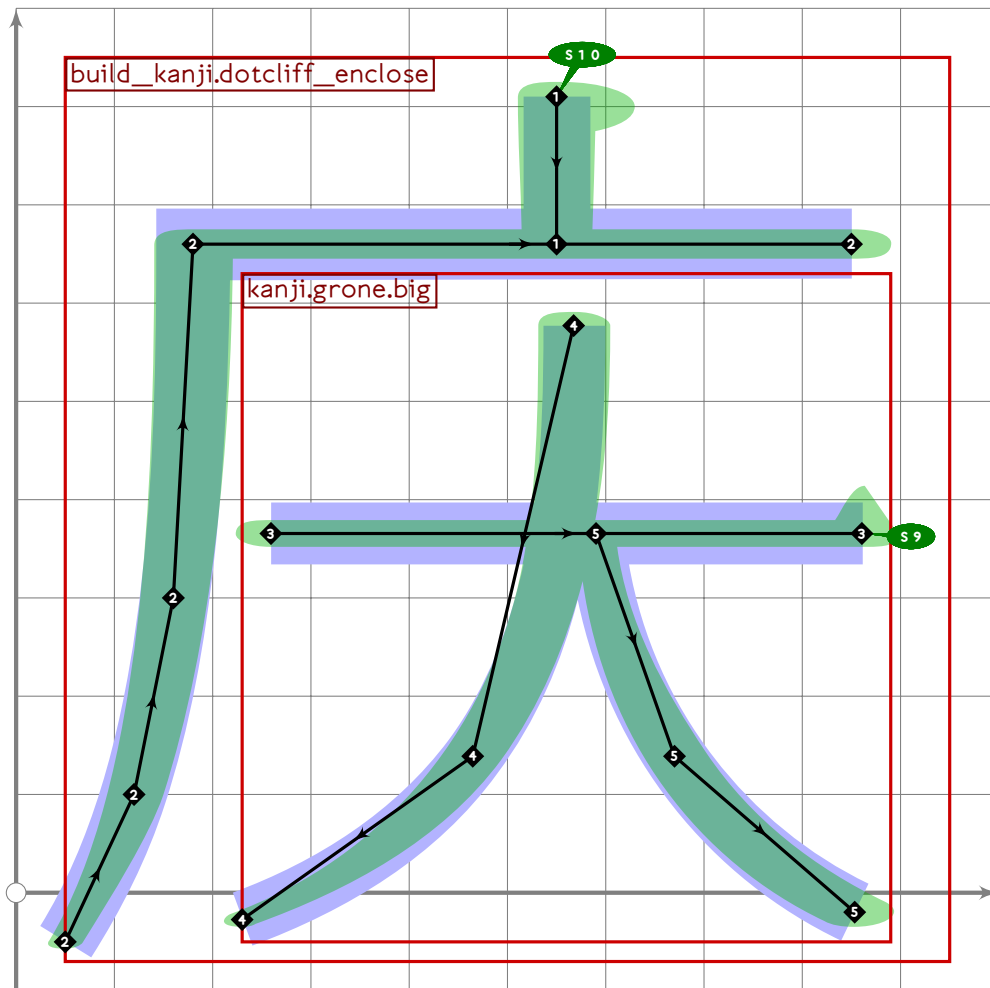
```

265 % extra
266 begint Suglyph("uni5E82";130);
267   build_kanji.dotcliff_enclose(tsu_curve.kanji.grone.person);
268   tsu_render;
269 endtsuglyph;
270
271 % kou/hiro "wide"
272 begint Suglyph("uni5E83";131);
273   tsu_curve.kanji.grtwo.wide;
274   tsu_render;
275 endtsuglyph;
276
277 % kou/hiro "wide"
278 begint Suglyph("uni5E84";132);
279   tsu_curve.kanji.grnine.manor;
280   tsu_render;
281 endtsuglyph;
282

```

[see page 1330]

[see page 1337]



```

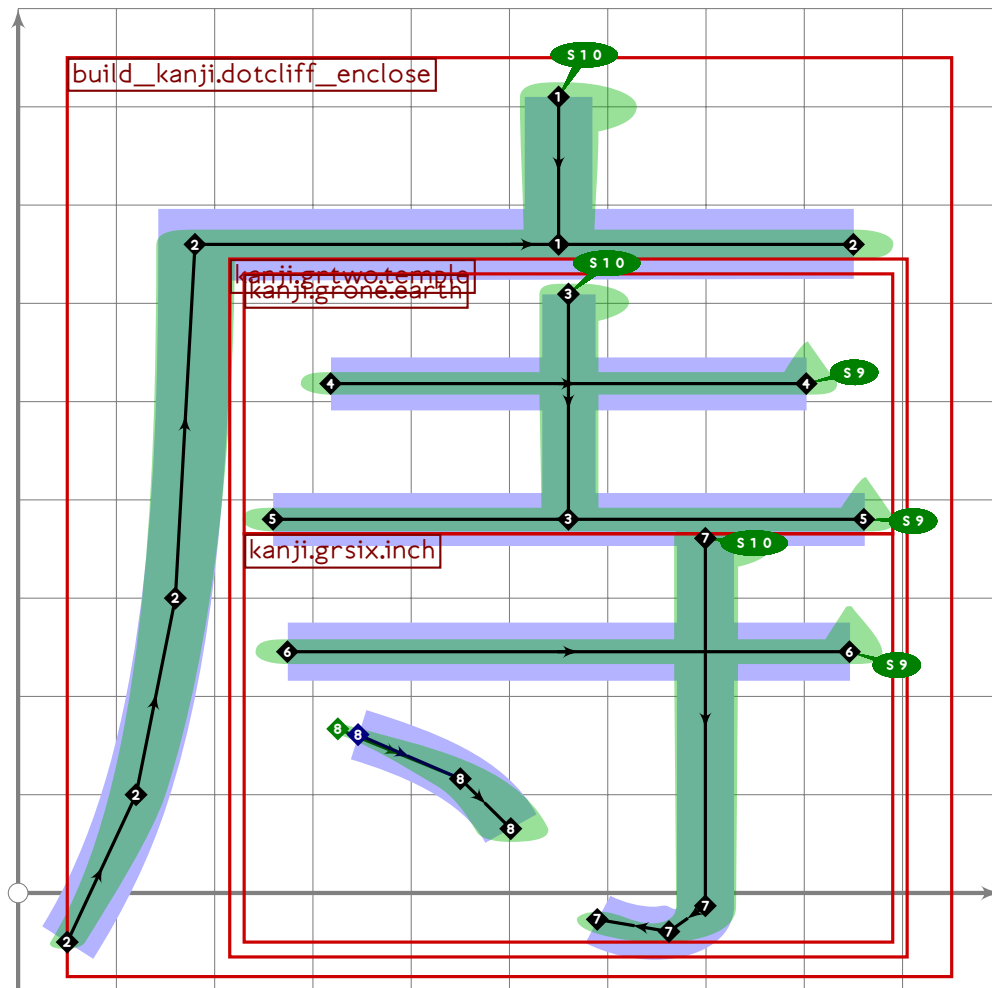
283 % extra
284 begintsuglyph("uni5E86";134);
285 build_kanji.dotcliff_enclose(tsu_curve.kanji.grone.big);
286 tsu_render;
287 endtsuglyph;
288
289 % toko/yuka "bed"
290 begintsuglyph("uni5E8A";138); [see page 1334]
291 tsu_curve.kanji.greight.bed;
292 tsu_render;
293 endtsuglyph;
294
295 % ten/mise "shop"
296 begintsuglyph("uni5E97";151); [see page 1329]
297 tsu_curve.kanji.grtwo.shop;
298 tsu_render;
299 endtsuglyph;
300
301 % fu "urban prefecture"
302 begintsuglyph("uni5E9C";156); [see page 1333]
303 tsu_curve.kanji.grfour.urban_prefecture;

```

```

304 tsu_render;
305 endsuglyph;
306

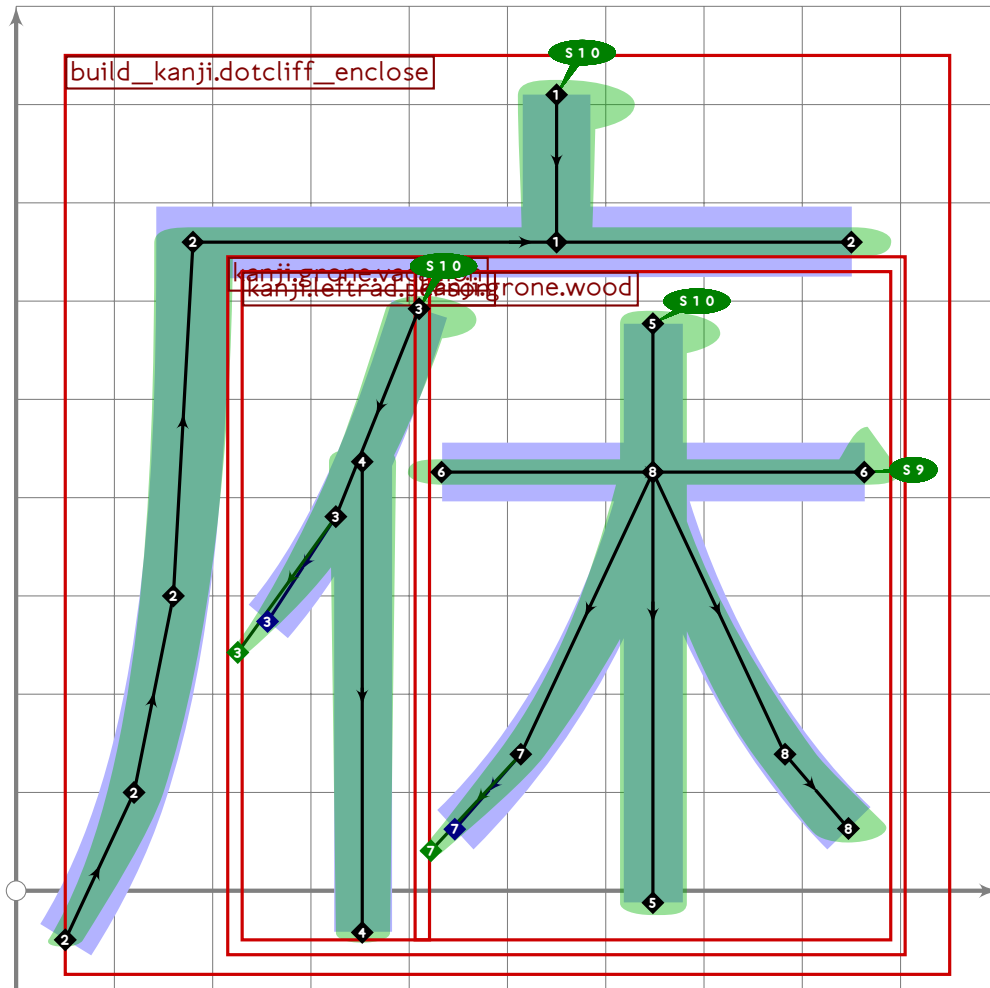
```



```

307 % extra
308 beginsuglyph("uni5EA4",164);
309 build_kanji.dotcliff_enclose(tsu_curve.kanji.grtwo.temple);
310 tsu_render;
311 endsuglyph;
312

```

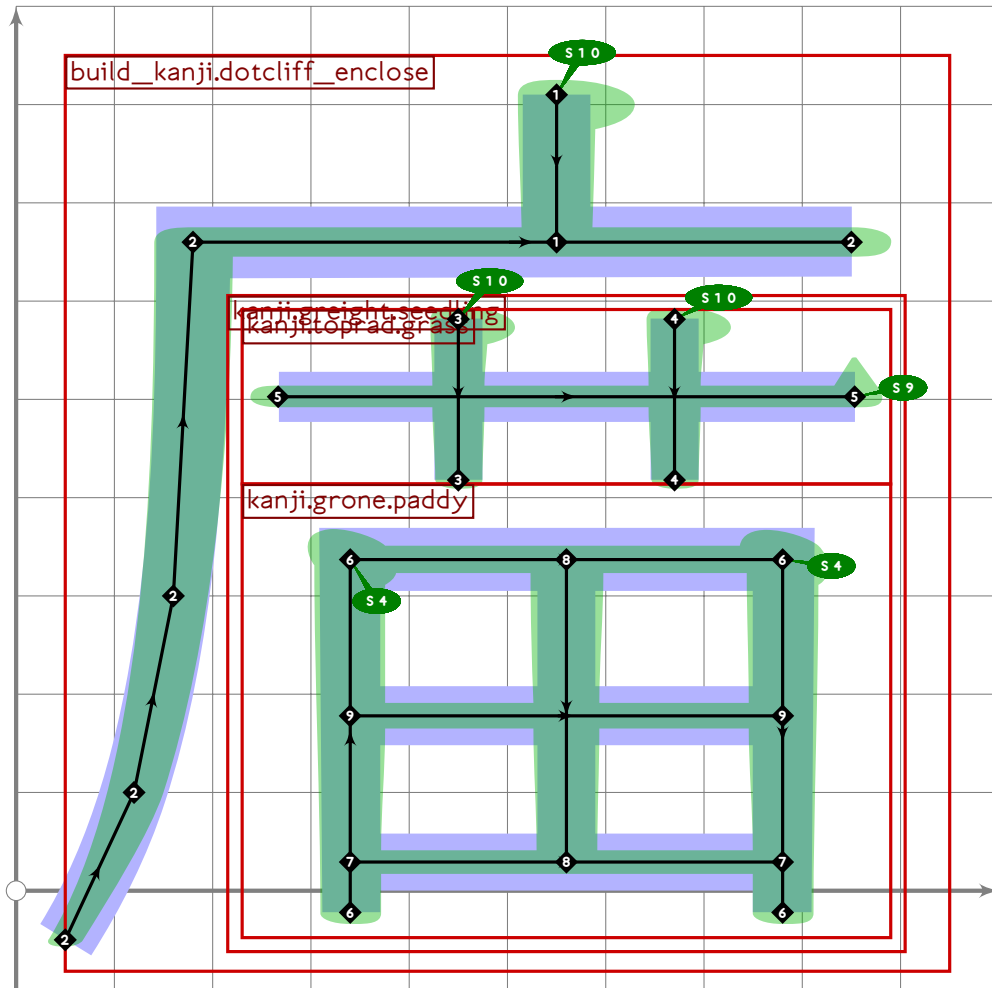
```

313 % extra
314 begintsuglyph("uni5EA5",165);
315 build_kanji.dotcliff_enclose(tsu_curve.kanji.grone.vacation);
316 tsu_render;
317 endsuglyph;
318
319 % ko/kura "warehouse"
320 begintsuglyph("uni5EAB",171);
321 tsu_curve.kanji.grthree.warehouse;
322 tsu_render;
323 endsuglyph;
324
325 % an/iori "hermitage"
326 begintsuglyph("uni5EB5",181);
327 tsu_curve.kanji.grnine.hermitage;
328 tsu_render;
329 endsuglyph;
330

```

[see page 1331]

[see page 1336]



```

331 % extra
332 begint Suglyph("uni5EBF",191);
333   build_kanji.dotcliff_enclose(
334     tsu_xform(identity yscaled 0.94)(tsu_curve.kanji.greight.seedling));
335   tsu_render;
336 endsuglyph;
337
338 _____
339
340 endfont;
341
342 _____

```

tsuku-5f.mp

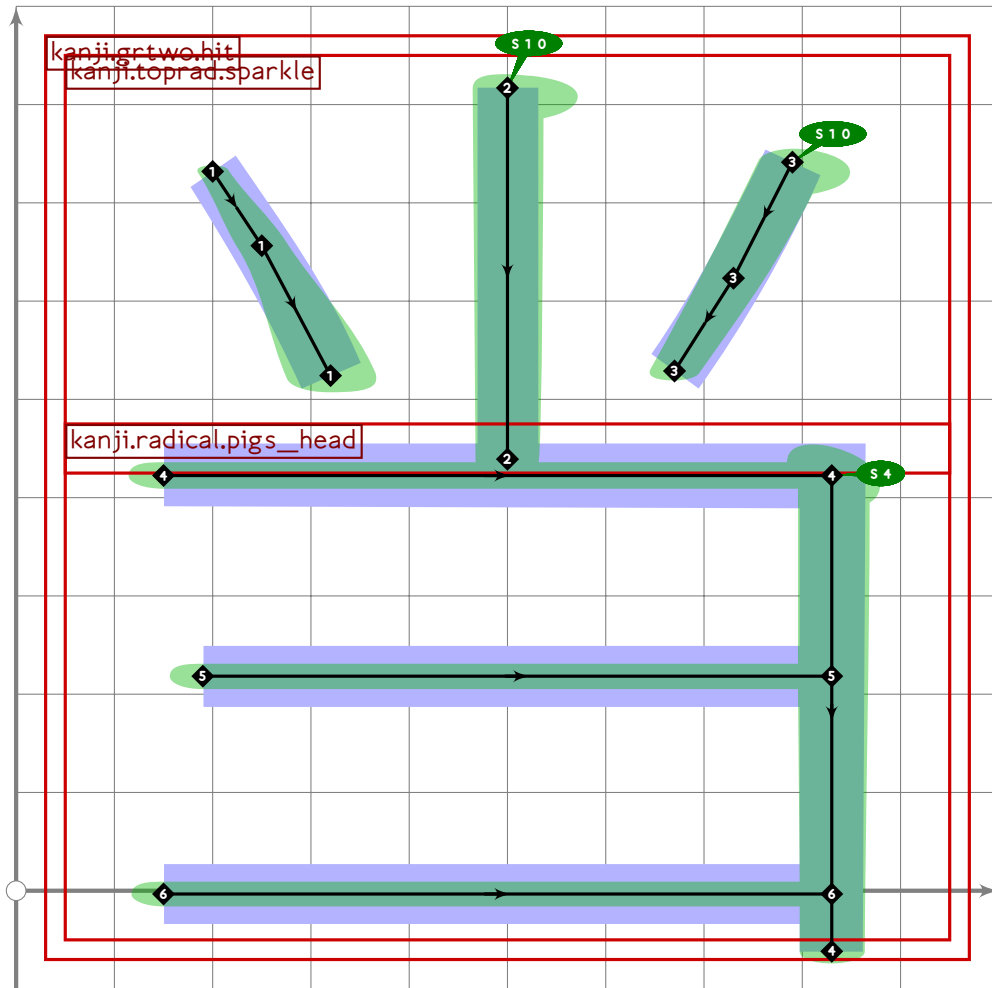
```
1 %
2 % Unicode page 5f (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradenine.mp;
38 input gradeone.mp;
39 input gradetwo.mp;
40 input leftrad.mp;
41 input radical.mp;
42 input toprad.mp;
43
44 

---

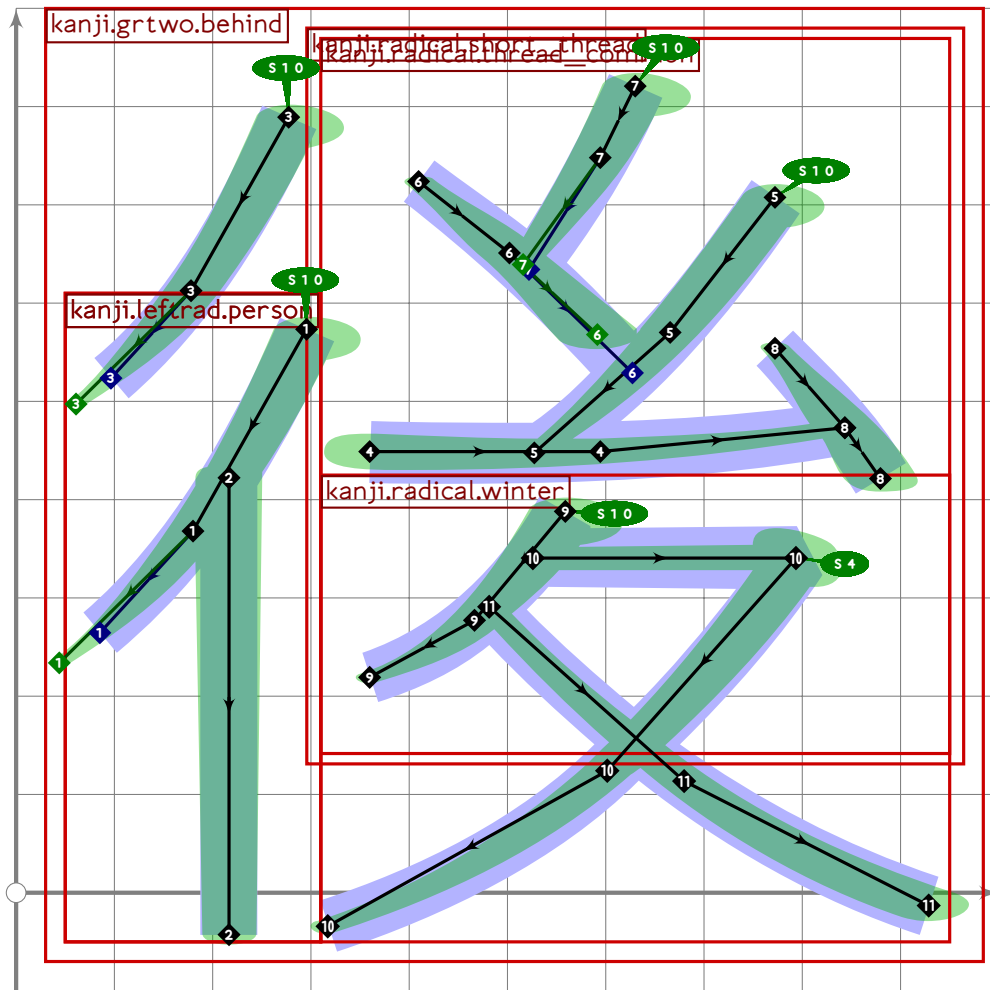

```



```

45
46 vardef tsu_curve.kanji.grtwo.hit =
47   push_pbox_toexpand("kanji.grtwo.hit");
48   build_kanji.level(build_kanji.tb(450,50)
49     (tsu_curve.kanji.toprad.sparkle)
50     (tsu_curve.kanji.radical.pigs_head));
51   expand_pbox;
52 enddef;

```

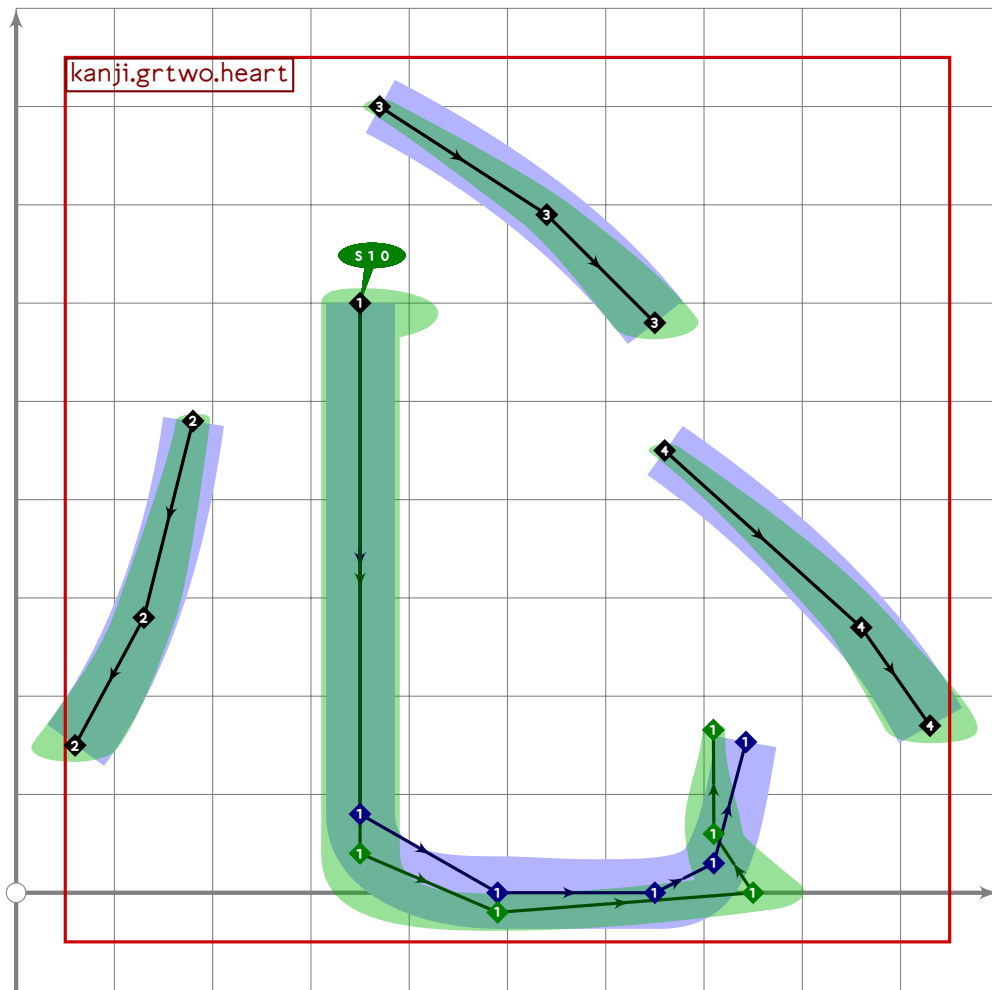


53

```

54 vardef tsu_curve.kanji.grtwo.behind =
55   push_pbox_toexpand("kanji.grtwo.behind");
56   build_kanji.level(build_kanji.lr(310,0)
57     (build_kanji.harmonic(240,0.86,0)(tsu_curve.kanji.leftrad.person))
58     (build_kanji.tb(400,50)
59       (tsu_curve.kanji.radical.short_thread)
60       (tsu_curve.kanji.radical.winter)));
61   expand_pbox;
62 enddef;

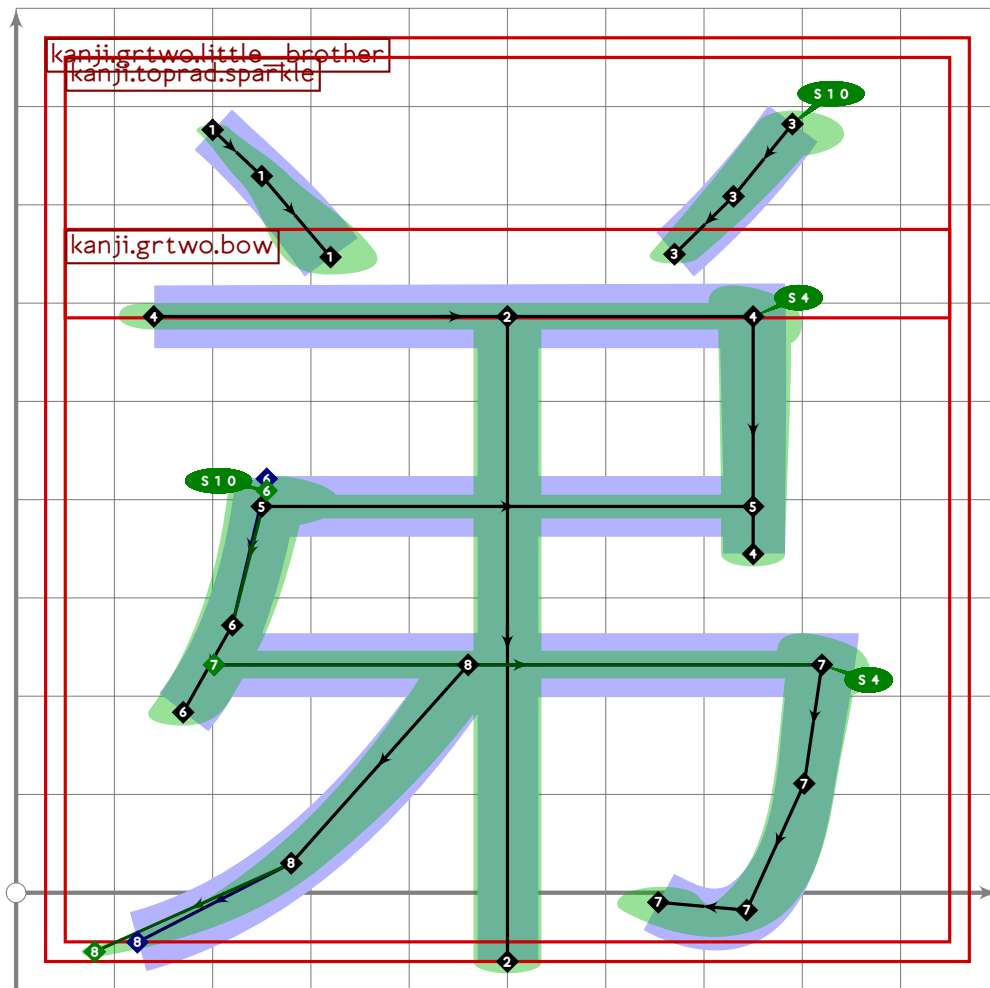
```



```

63
64 vardef tsu_curve.kanji.grtwo.heart =
65   push_pbox_toexpand("kanji.grtwo.heart");
66   tsu_xform(identity shifted (-100,0))
67     (push_stroke((450,600),(1.6,1.6));
68       build_kanji.add_ltail(0));
69   set_boserif(0,0,10);
70   push_stroke((180,480)..tension 1.2..(130,280)..(60,150),
71     (1,1)-(1.4,1.4)-(1.7,1.7));
72   push_stroke((370,800)..tension 1.2..(540,690)..(650,580),
73     (1,1)-(1.4,1.4)-(1.7,1.7));
74   push_stroke((660,450)..tension 1.2..(860,270)..(930,170),
75     (1,1)-(1.5,1.5)-(1.8,1.8));
76   expand_pbox;
77 enddef;

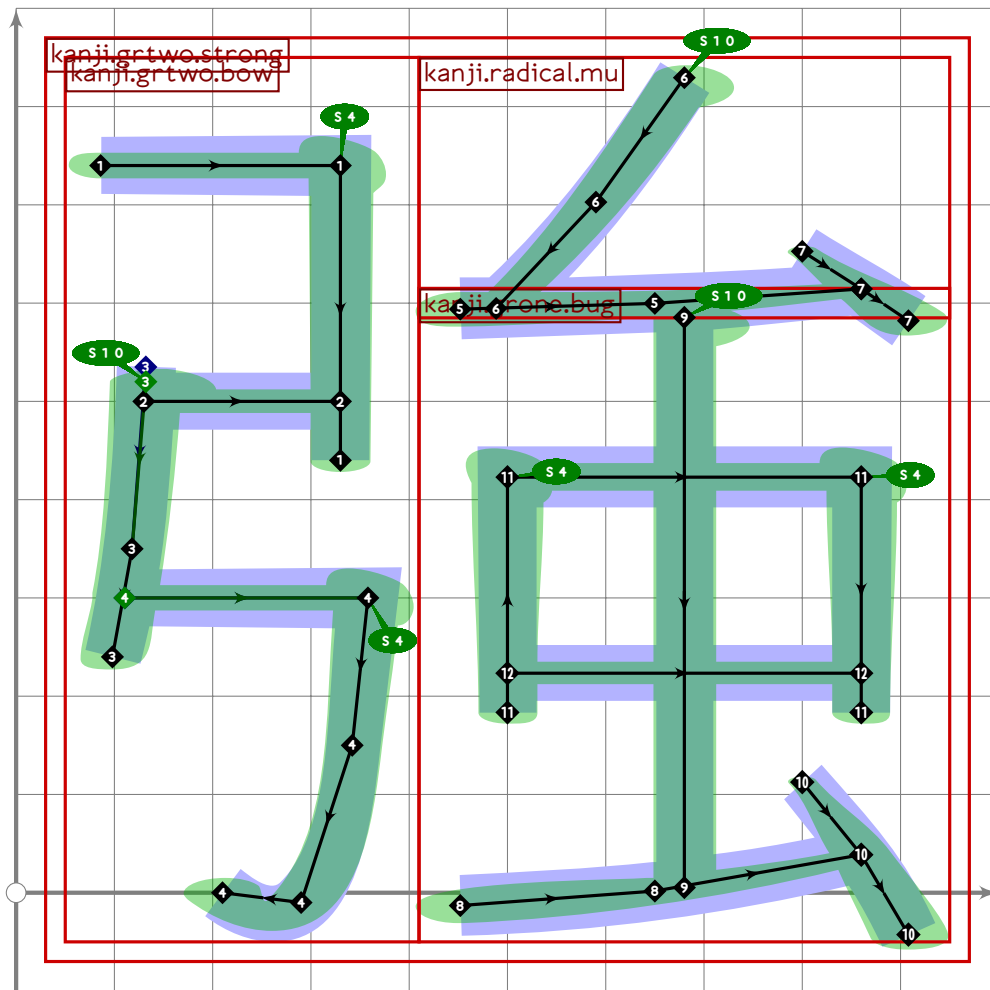
```



```

78
79 vardef tsu_curve.kanji.grtwo.little_brother =
80   push_pbox_toexpand("kanji.grtwo.little_brother");
81   build_kanji.level(build_kanji.tb(630,90)
82     (tsu_curve.kanji.toprad.sparkle)
83     (tsu_curve.kanji.grtwo.bow));
84   replace_stroke(-5)((500,ypart point 0 of get_stroke(-3))-(500;70));
85   set_boserif(-5,0,whatever);
86   replace_stroke(0)((point 0 of oldp)-
87     ((subpath (1,infinity) of oldp)
88       shifted (-820,0) xscaled 0.45 shifted (820,0)));
89   push_stroke(
90     ((get_stroke(-5) intersectionpoint get_stroke(0))*(-40,0)..
91       tension 1.2..(280,30)..(80,-60),
92       (1.6,1.6)-(1.4,1.4)-(0.9,0.9));
93   expand_pbox;
94 enddef;

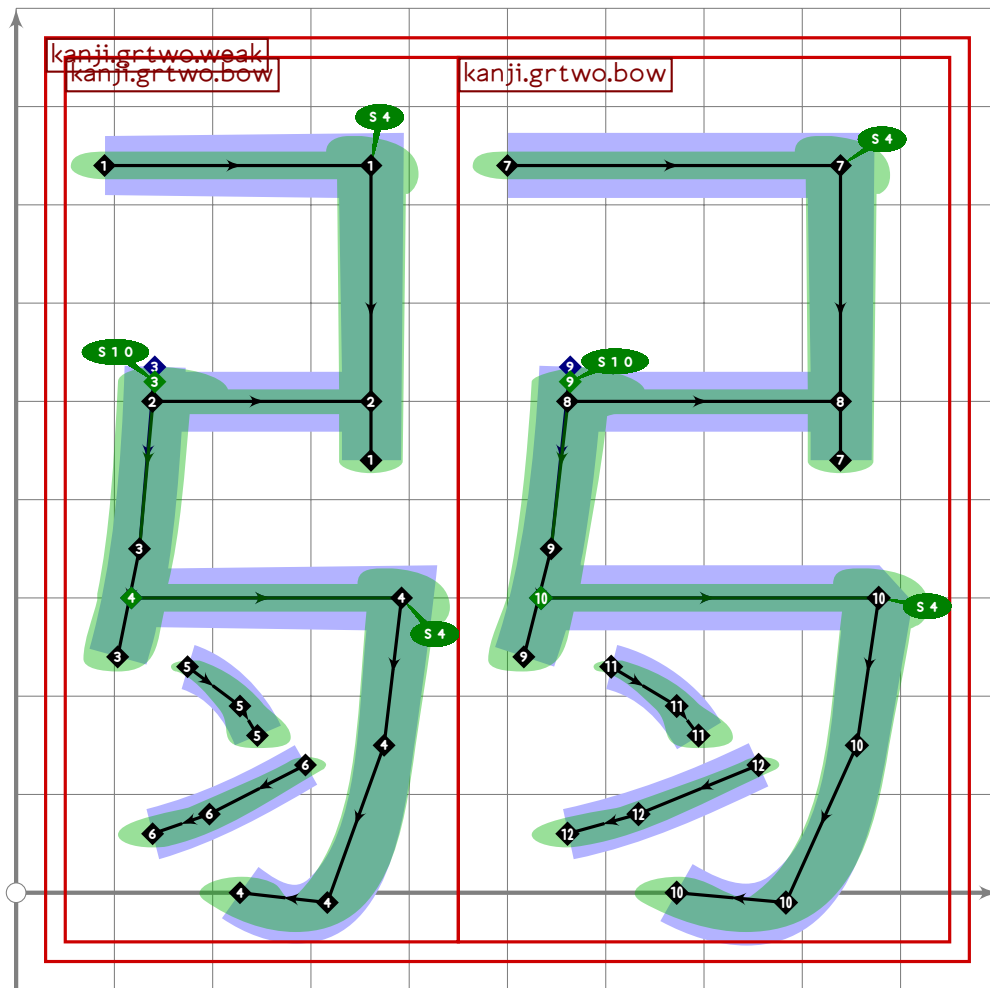
```



```

95
96 vardef tsu_curve.kanji.grtwo.strong =
97   push_pbox_toexpand("kanji.grtwo.strong");
98   build_kanji.level(build_kanji.lr(410,0)
99     (tsu_curve.kanji.grtwo.bow)
100     (build_kanji.tb(600,30)
101       (tsu_curve.kanji.radical.mu)
102       (tsu_curve.kanji.grone.bug)));
103   expand_pbox;
104 enddef;

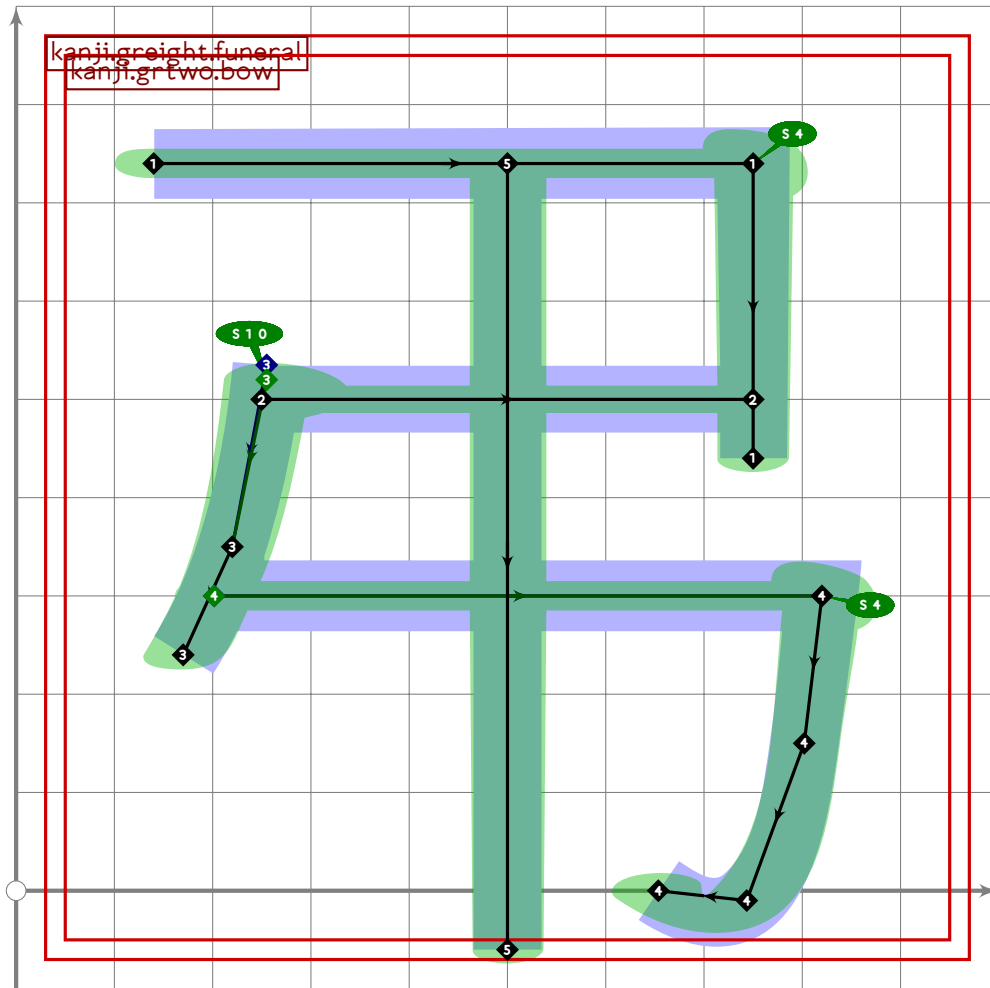
```

```

105
106 vardef tsu_curve.kanji.grtwo.weak =
107   push_pbox_toexpand("kanji.grtwo.weak");
108   build_kanji.lr(450,0)
109     (tsu_curve_kanji.grtwo_helper.weak)
110     (tsu_curve_kanji.grtwo_helper.weak);
111   expand_pbox;
112 enddef;
113
114 vardef tsu_curve_kanji.grtwo_helper.weak =
115   tsu_curve.kanji.grtwo.bow;
116   push_stroke((330,230)..tension 1.2..(450,190)..(490,160),
117     (1.2,1.2)-(1.4,1.4)-(1.8,1.8));
118   set_bosize(0,80);
119   push_stroke((600,130)..tension 1.2..(380,80)..(250,60),
120     (1.3,1.3)-(1.6,1.6)-(1.9,1.9));
121   set_bosize(0,80);
122 enddef;
123
124

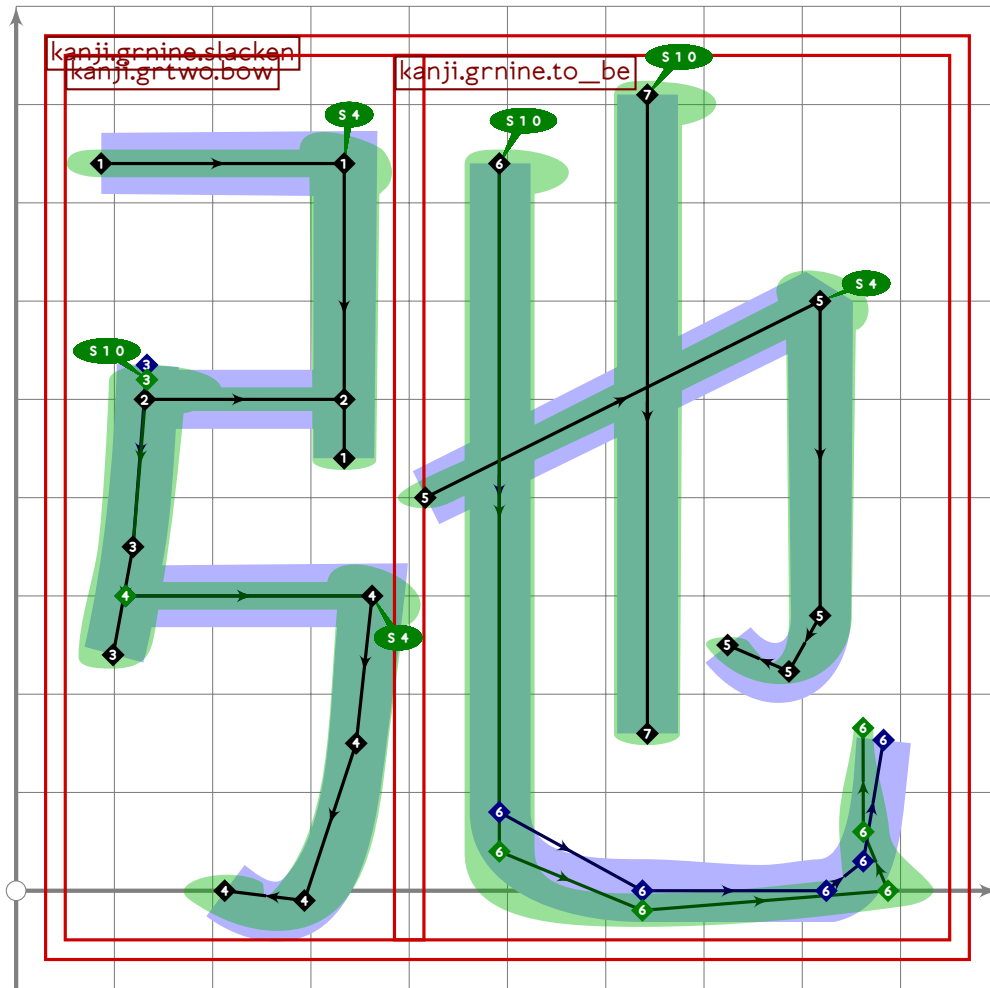
```



```

125
126 vardef tsu_curve.kanji.greight.funeral =
127   push_pbox_toexpand("kanji.greight.funeral");
128   tsu_curve.kanji.grtwo.bow;
129   replace_stroke(0)((point 0 of oldp)-
130     ((subpath (1,infinity) of oldp)
131       shifted (-820,0) xscaled 0.45 shifted (820,0)));
132   push_stroke((500,740)-(500,-60),(1.6,1.6)-(1.5,1.5));
133   expand_pbox;
134 enddef;
135
136

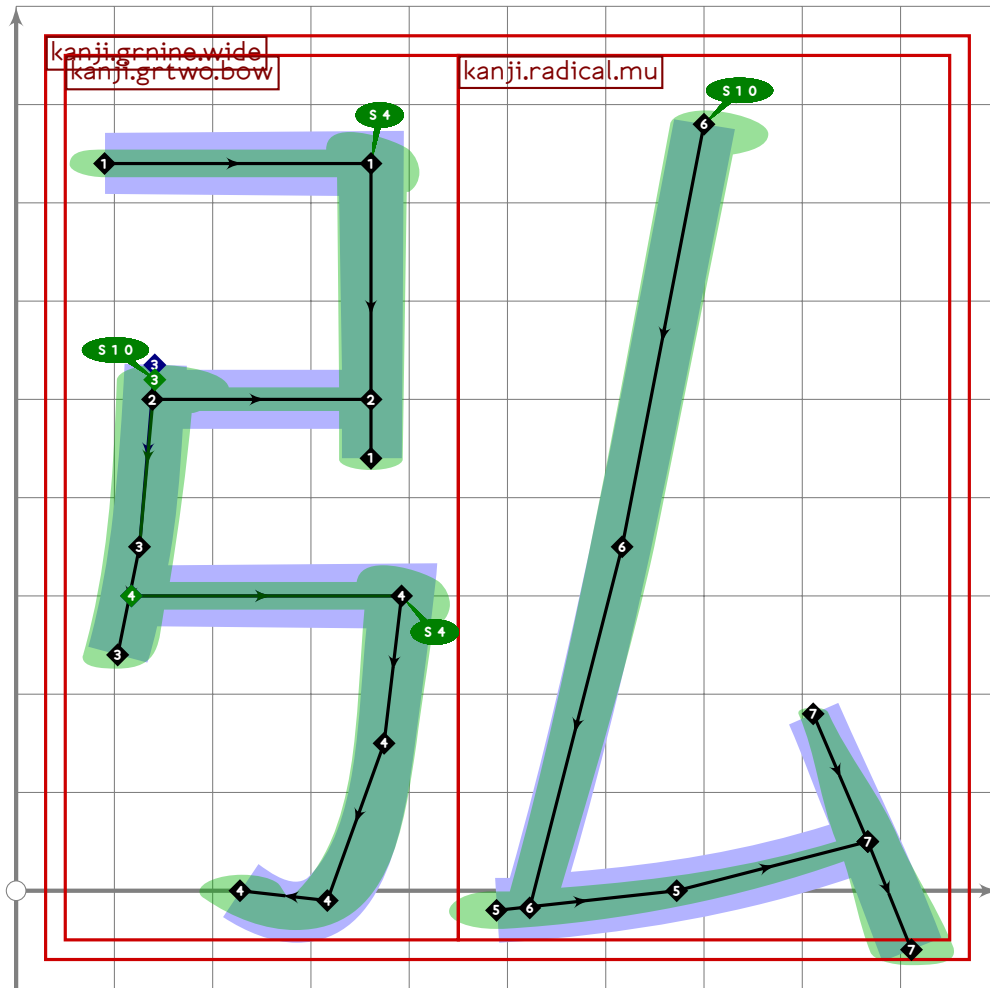
```



```

137
138 vardef tsu_curve.kanji.grnine.slacken =
139   push_pbox_toexpand("kanji.grnine.slacken");
140   build_kanji.level(build_kanji.lr(400,30)
141     (tsu_curve.kanji.grtwo.bow)
142     (tsu_curve.kanji.grnine.to_be));
143   expand_pbox;
144 enddef;

```



```

145
146 vardef tsu_curve.kanji.grnine.wide =
147   push_pbox_toexpand("kanji.grnine.wide");
148   build_kanji.level(build_kanji.lr(450,0)
149     (tsu_curve.kanji.grtwo.bow)
150     (tsu_curve.kanji.radical.mu));
151   expand_pbox;
152 enddef;

```

153

154

155

```

156 % kyuu/yumi "bow" (projectile weapon)

```

```

157 begintsuglyph("uni5F13",19);

```

[see page 393]

```

158   tsu_curve.kanji.grtwo.bow;

```

```

159   tsu_render;

```

```

160 endtsuglyph;

```

161

```

162 % chou/tomura "funeral"

```

```

163 begintsuglyph("uni5F14",20);

```

[see page 1354]

```

164   tsu_curve.kanji.greight.funeral;

```

```

165   tsu_render;

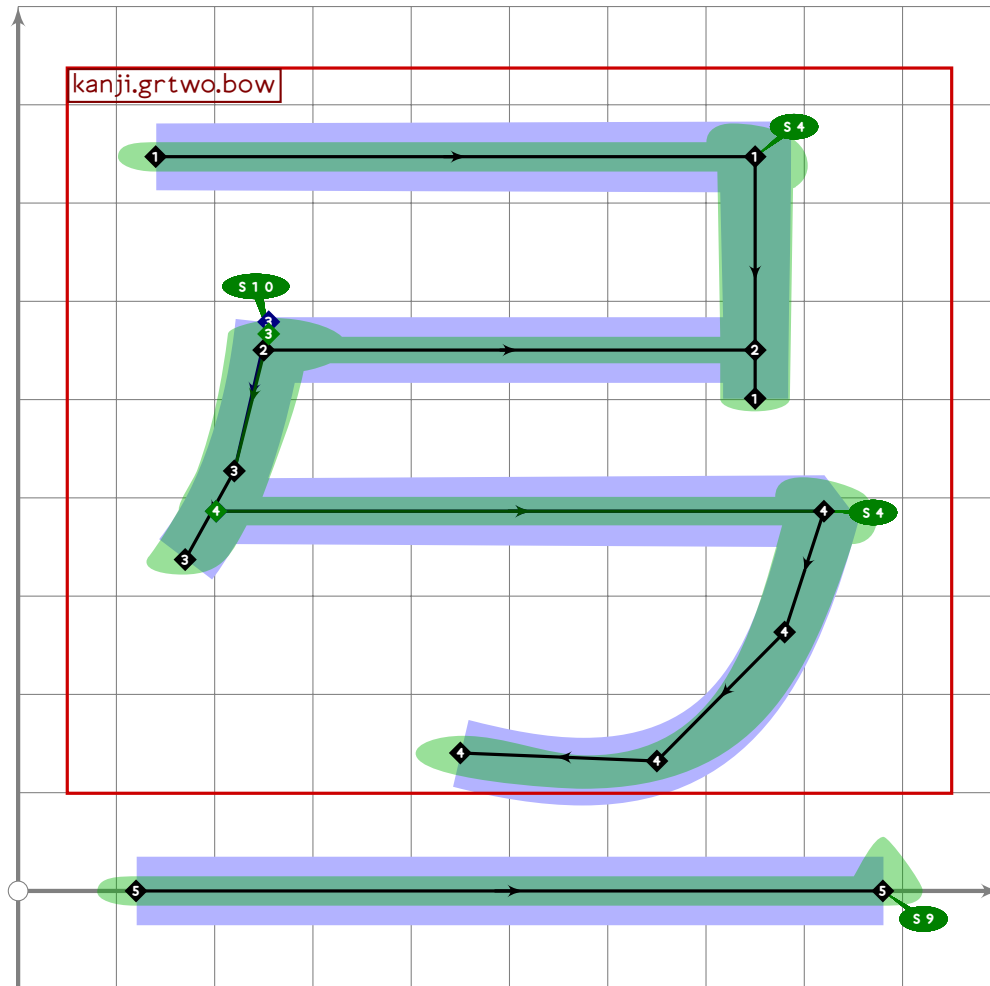
```

```

166 endtsuglyph;
167
168 % in/hi "pull"
169 begint Suglyph("uni5F15",21);
170 tsu_curve.kanji.grtwo.pull;
171 tsu_render;
172 endtsuglyph;
173

```

[see page 422]



```

174 % te "phoneme only"
175 begint Suglyph("uni5F16",22);
176 tsu_xform(identity shifted (0,780) yscaled 0.82 shifted (0,780))
177   (tsu_curve.kanji.grtwo.bow);
178 push_stroke((120,0)-(880,0),(1.6,1.6)-(1.6,1.6));
179 set_boserif(0,1,9);
180 tsu_render;
181 endtsuglyph;
182
183 % kou/hiro "wide" (used in names)
184 begint Suglyph("uni5F18",24);
185 tsu_curve.kanji.grnine.wide;
186 tsu_render;

```

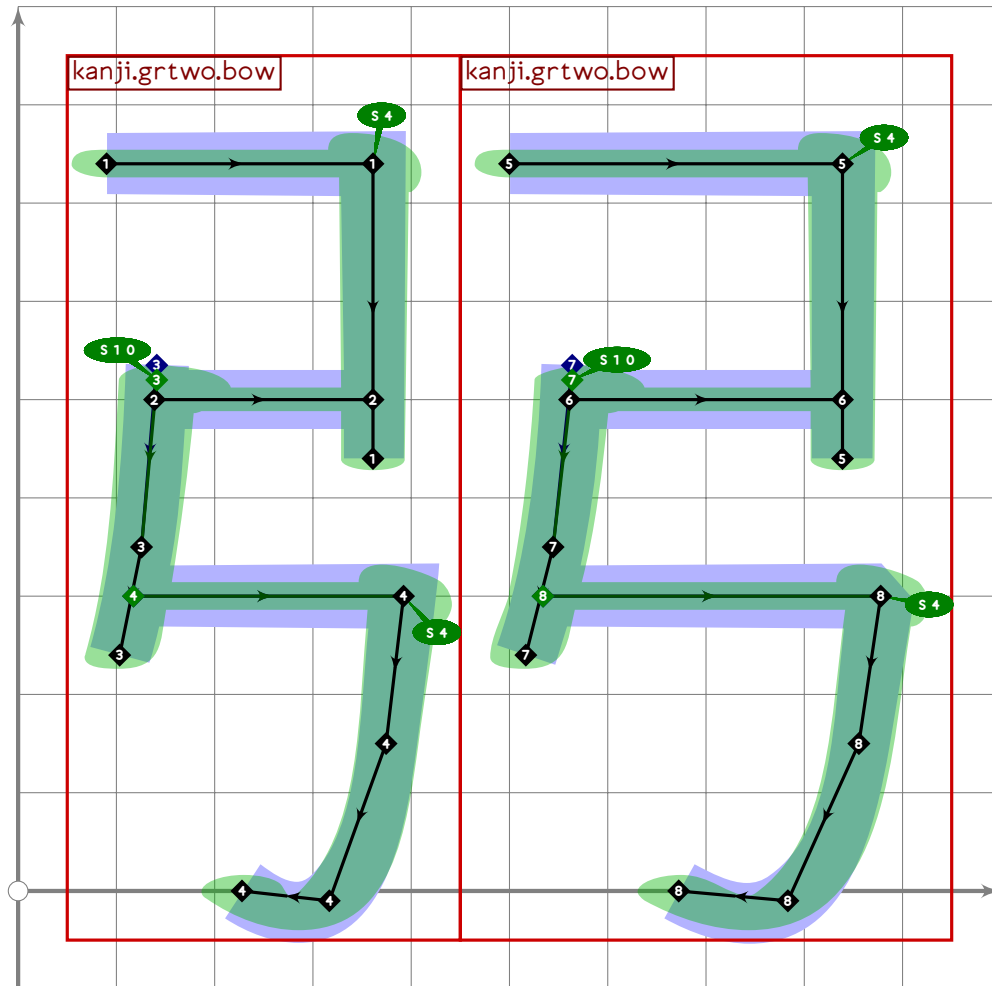
[see page 1356]

```

187 endsuglyph;
188
189 % chi/taru "slacken"
190 begintsuglyph("uni5F1B";27);
191   tsu_curve.kanji.grtwo.slacken;
192   tsu_render;
193 endsuglyph;
194

```

[see page 1355]



```

195 % extra
196 begintsuglyph("uni5F1C";28);
197   build_kanji.level(build_kanji.lr(450,0)
198     (tsu_curve.kanji.grtwo.bow)
199     (tsu_curve.kanji.grtwo.bow));
200   tsu_render;
201 endsuglyph;
202
203 % twi/otouto "little brother"
204 begintsuglyph("uni5F1F";31);
205   tsu_curve.kanji.grtwo.little_brother;
206   tsu_render;
207 endsuglyph;

```

[see page 1351]

```

208
209 % jyaku/yowa "weak"
210 begintsuglyph("uni5F31",49); [see page 1353]
211 tsu_curve.kanji.grtwo.weak;
212 tsu_render;
213 endtsuglyph;
214
215 % kyou/tsuyo "strong"
216 begintsuglyph("uni5F37",55); [see page 1352]
217 tsu_curve.kanji.grtwo.strong;
218 tsu_render;
219 endtsuglyph;
220
221 % needed for lots of other things, rare by itself
222 begintsuglyph("uni5F50",80); [see page 327]
223 tsu_curve.kanji.radical.pigs_tail;
224 tsu_render;
225 endtsuglyph;
226
227 % tou/a(tari) "hit"
228 begintsuglyph("uni5F53",83); [see page 1348]
229 tsu_curve.kanji.grtwo.hit;
230 tsu_render;
231 endtsuglyph;
232
233 % go/shiri "behind"
234 begintsuglyph("uni5F8C",140); [see page 1349]
235 tsu_curve.kanji.grtwo.behind;
236 tsu_render;
237 endtsuglyph;
238
239 % shin/kokoro "heart"
240 begintsuglyph("uni5FC3",195); [see page 1350]
241 tsu_curve.kanji.grtwo.heart;
242 tsu_render;
243 endtsuglyph;
244
245 

---


246
247 endfont;
248
249 

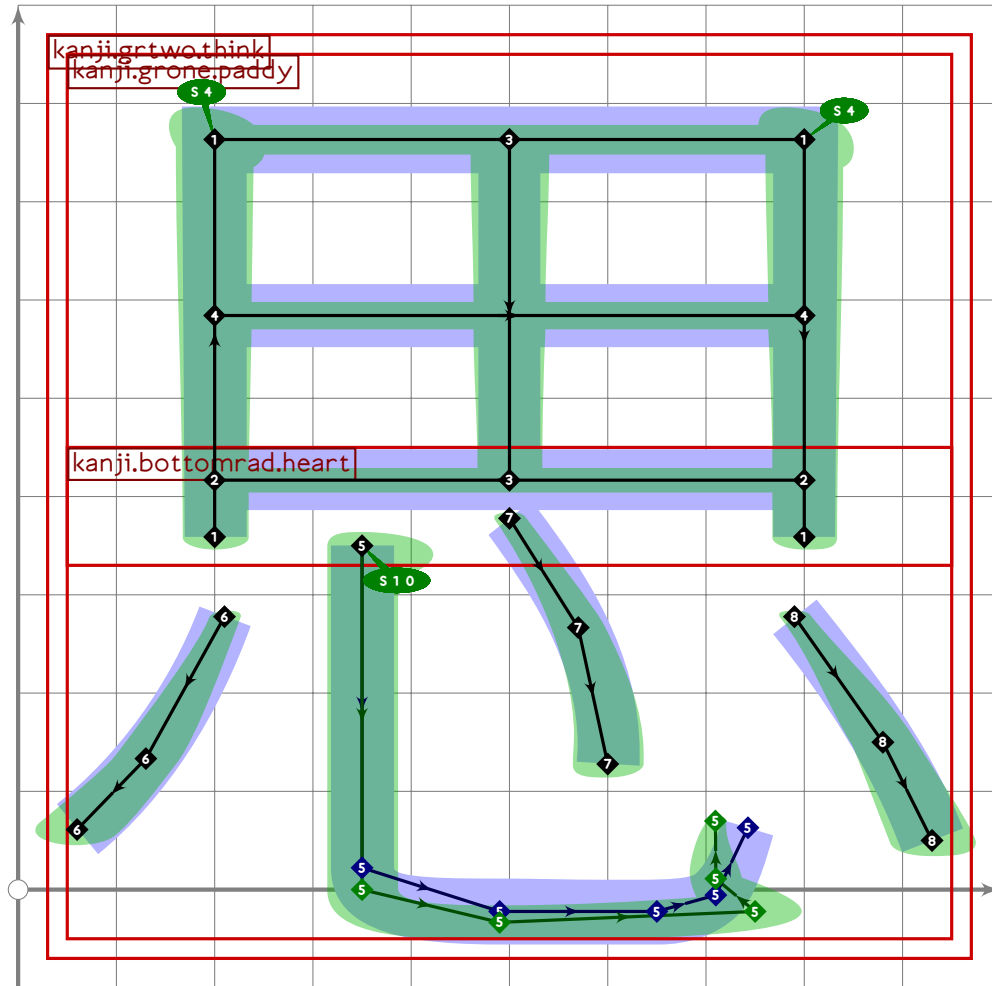
---



```

tsuku-60.mp

```
1 %  
2 % Unicode page 60 (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradeone.mp;  
38  
39 _____
```



```
40  
41 vardef tsu_curve.kanji.grtwo.think =  
42   push_pbox_toexpand("kanji.grtwo.think");  
43   build_kanji.level(build_kanji.tb(390,120)
```



```

44     (tsu_curve.kanji.grone.paddy)
45     (tsu_curve.kanji.bottomrad.heart));
46     expand_pbox;
47 enddef;
48
49 

---


50
51 vardef tsu_curve.kanji.bottomrad.heart =
52     push_pbox_toexpand("kanji.bottomrad.heart");
53     tsu_xform(identity shifted (-100,0))
54     (push_stroke((450,670),(1.6,1.6));
55     build_kanji.add_ltail(0));
56     set_boserif(0,0,10);
57     push_stroke((210,540)..tension 1.2..(130,280)..(60,150),
58     (1,1)-(1.5,1.5)-(1.8,1.8));
59     push_stroke((500,720)..tension 1.2..(570,520)..(600,270),
60     (1,1)-(1.3,1.3)-(1.6,1.6));
61     push_stroke((790,540)..tension 1.2..(880,310)..(930,130),
62     (1,1)-(1.5,1.5)-(1.8,1.8));
63     expand_pbox;
64 enddef;
65
66 

---


67
68 % shi/omo "think"
69 begintsuglyph("uni601D",29);
70     tsu_curve.kanji.grtwo.think;
71     tsu_render;
72 endtsuglyph;
73
74 

---


75
76 endfont;
77
78 

---

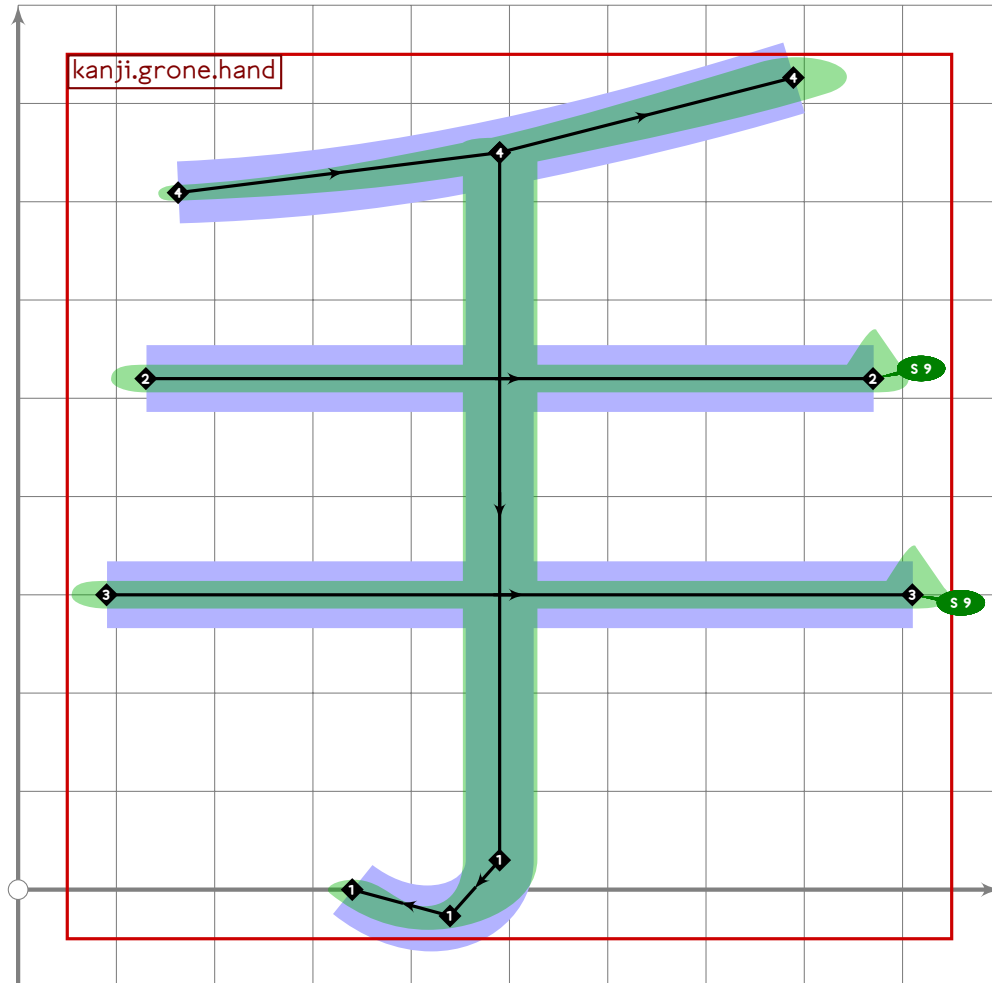


```

[see page 1360]

tsuku-62.mp

```
1 %  
2 % Unicode page 62 (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input radical.mp;  
38  
39 _____
```



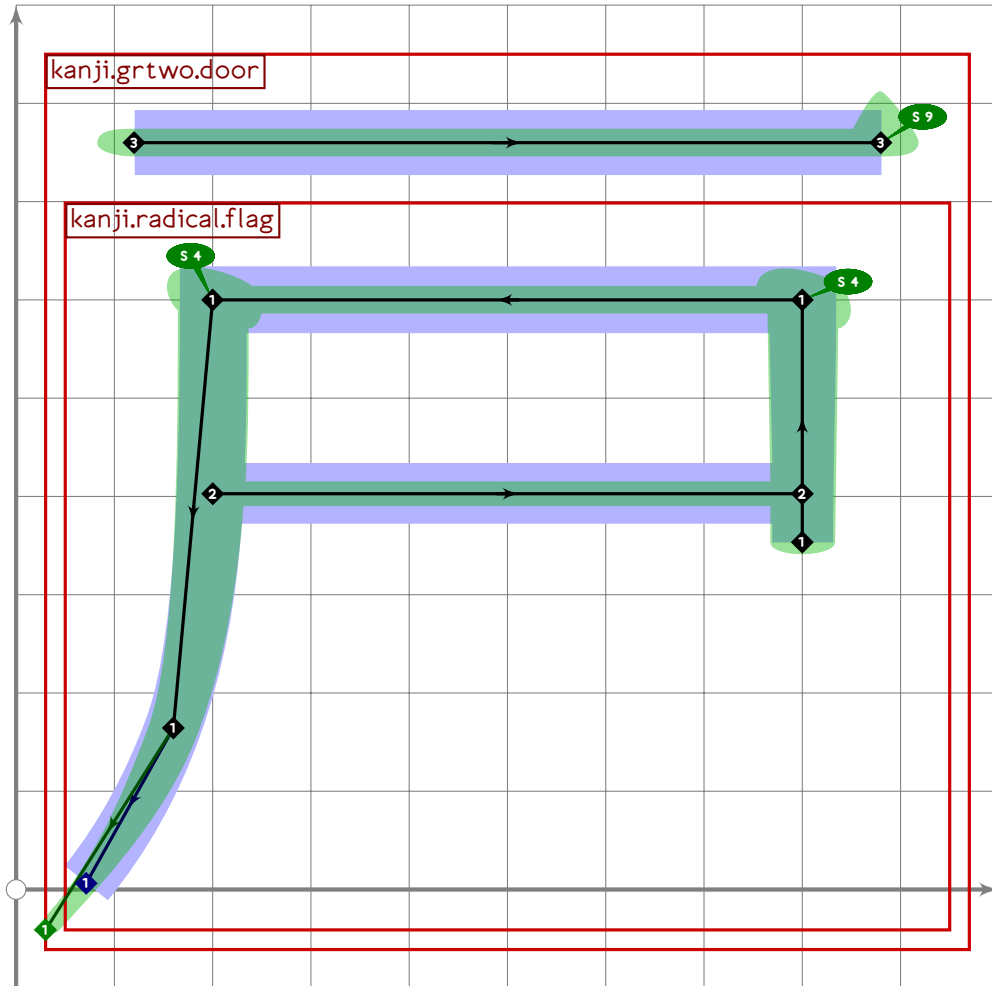
```
40  
41 vardef tsu_curve.kanji.grone.hand =  
42   push_pbox_toexpand("kanji.grone.hand");  
43   build_kanji.add_beret(  

```

```

44 push_stroke((490,750),(1.6,1.6));
45 build_kanji.add_jtail(0);
46 push_stroke((130,520)-(870,520),(1.5,1.5)-(1.5,1.5));
47 set_boserif(0,1,9);
48 push_stroke((90,300)-(910,300),(1.5,1.5)-(1.5,1.5));
49 set_boserif(0,1,9);
50 );
51 expand_pbox;
52 enddef;
53
54

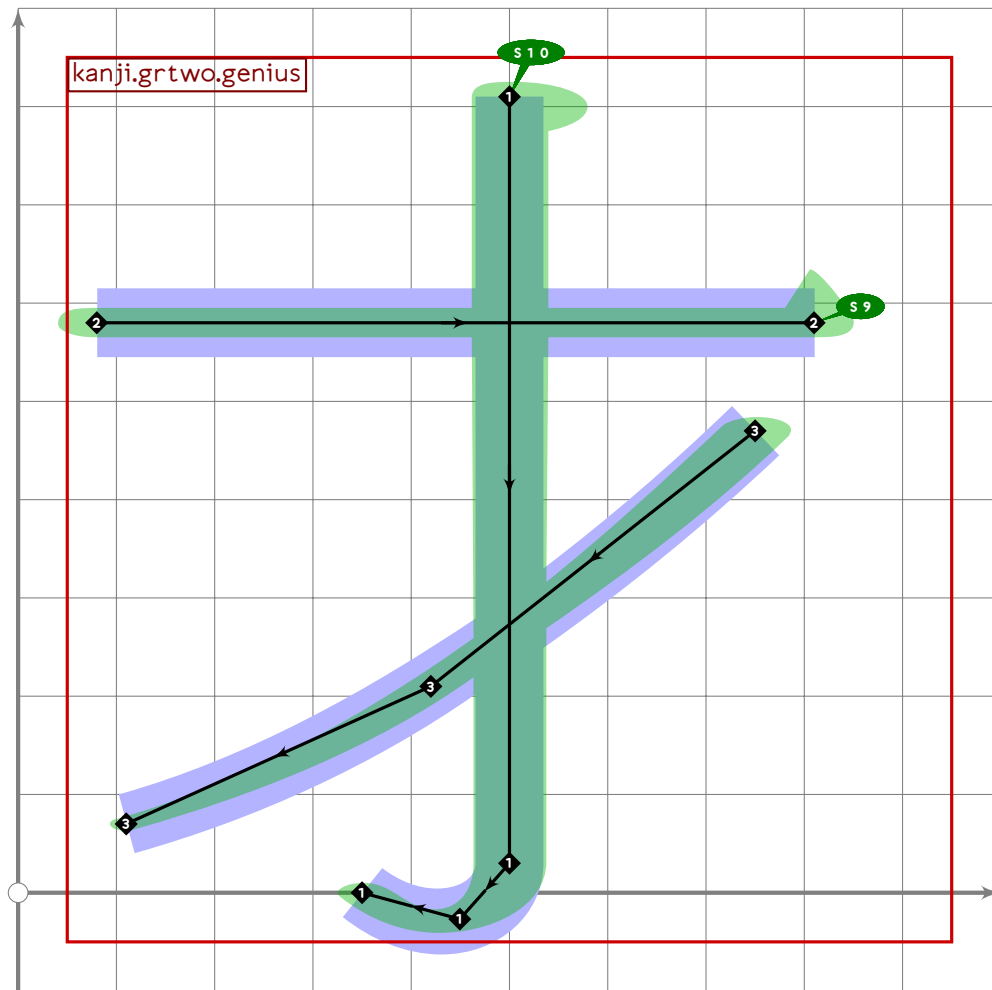
```



```

55
56 vardef tsu_curve.kanji.grtwo.door =
57   push_pbox_toexpand("kanji.grtwo.door");
58   tsu_xform(identity yscaled (600/730))(tsu_curve.kanji.radical.flag);
59   push_stroke((120,760)-(880,760),(1.6,1.6));
60   set_boserif(0,1,9);
61   set_bosize(0,95);
62   expand_pbox;
63 enddef;

```



```

64
65 vardef tsu_curve.kanji.grtwo.genius =
66   push_pbox_toexpand("kanji.grtwo.genius");
67   push_stroke((500,810),(1.6,1.6));
68   build_kanji.add_jtail(0);
69   set_boserif(0,0,10);
70   push_stroke((80,580)-(810,580),(1.6,1.6)-(1.6,1.6));
71   set_boserif(0,1,9);
72   push_stroke((750,470)..tension 1.2..(420,210)..(110,70),
73     (1.5,1.5)-(1.2,1.2)-(1,1));
74   expand_pbox;
75 enddef;

```

76

77

78

79 % ko/to "door"

```

80   begint Suglyph("uni6238",56);
81   tsu_curve.kanji.grtwo.door;
82   tsu_render;
83   endtsuglyph;

```

[see page 1363]

84

```
85 % te "hand"
86 begintsuglyph("uni624B";75); [see page 1362]
87 tsu_curve.kanji.grone.hand;
88 tsu_render;
89 endsuglyph;
90
91 % sai "genius" or "years of age"
92 begintsuglyph("uni624D";77); [see page 1364]
93 tsu_curve.kanji.grtwo.genius;
94 tsu_render;
95 endsuglyph;
96
97 

---

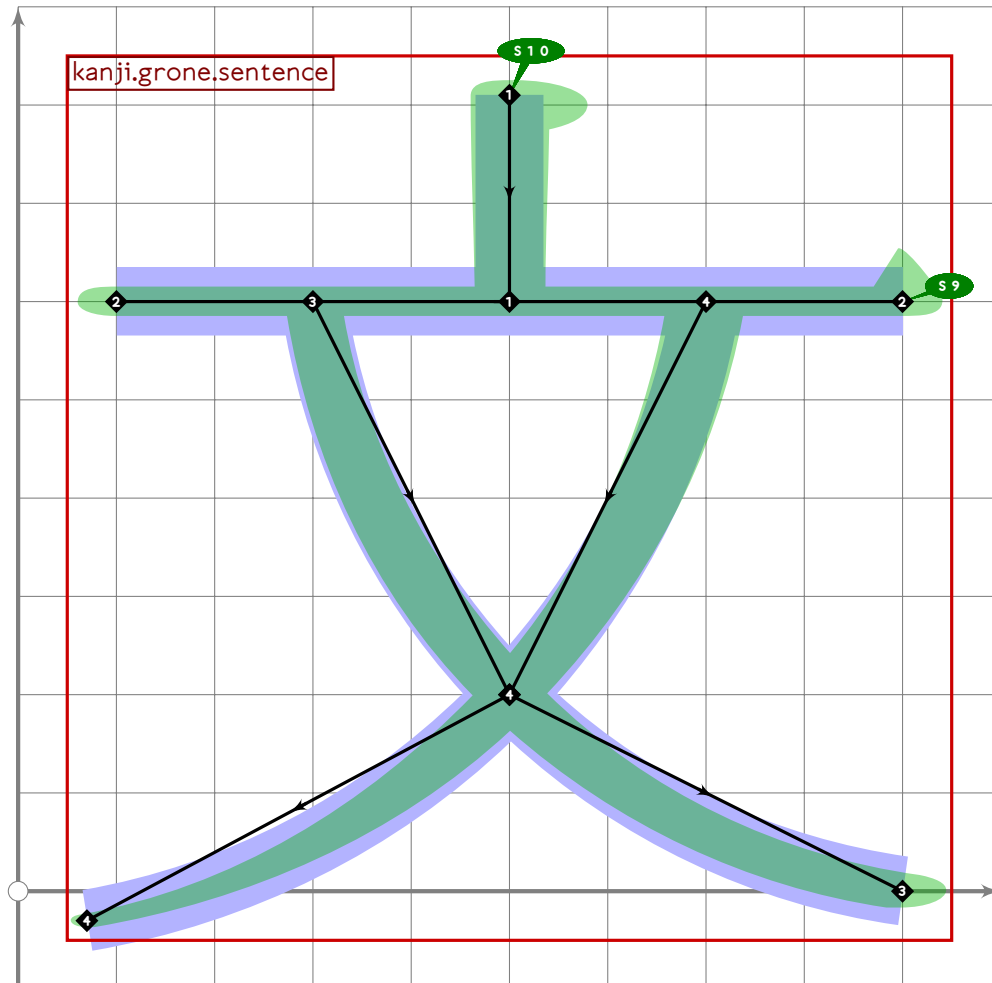

98
99 endfont;
100
101 

---


```

tsuku-65.mp

```
1 %  
2 % Unicode page 65 (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradeeight.mp;  
38 input gradeone.mp;  
39 input gradetwo.mp;  
40 input radical.mp;  
41  
42 _____
```



43

```

44 vardef tsu_curve.kanji.grone.sentence =
45   push_pbox_toexpand("kanji.grone.sentence");
46   push_stroke((500,810)-(500,600),
47     (1.6,1.6)-(1.5,1.5));
48   set_boserif(0,0,10);
49   push_stroke((100,600)-(900,600),
50     (1.6,1.6)-(1.6,1.6));
51   set_boserif(0,1,9);
52   push_stroke((300,600)..(500,200)..(900,0),
53     (1.3,1.3)-(1.5,1.5)-(1.7,1.7));
54   push_stroke((700,600)..(500,200)..(70,-30),
55     (1.6,1.6)-(1.5,1.5)-(1,1));
56   expand_pbox;
57 enddef;
58
59 

---


60
61 % bun/fumi "sentence"
62 begintsuglyph("uni6587",135); [see page 1367]
63   tsu_curve.kanji.grone.sentence;
64   tsu_render;
65 endtsuglyph;
66
67 % hi/nichi "day"
68 begintsuglyph("uni65E5",229); [see page 345]
69   tsu_curve.kanji.grone.day;
70   tsu_render;
71 endtsuglyph;
72
73 % hou/kata "direction" or "how to do it"
74 begintsuglyph("uni65B9",185); [see page 398]
75   tsu_curve.kanji.grtwo.direction;
76   tsu_render;
77 endtsuglyph;
78
79 % shi/mune/uma "vaguely good" or "uma" in "umami"
80 begintsuglyph("uni65E8",232); [see page 450]
81   tsu_curve.kanji.greight.glutamate;
82   tsu_render;
83 endtsuglyph;
84
85 % hayaku "early"
86 begintsuglyph("uni65E9",233); [see page 348]
87   tsu_curve.kanji.grone.early;
88   tsu_render;
89 endtsuglyph;
90
91 

---



```

92

93 **endfont;**

94

95

tsuku-66.mp

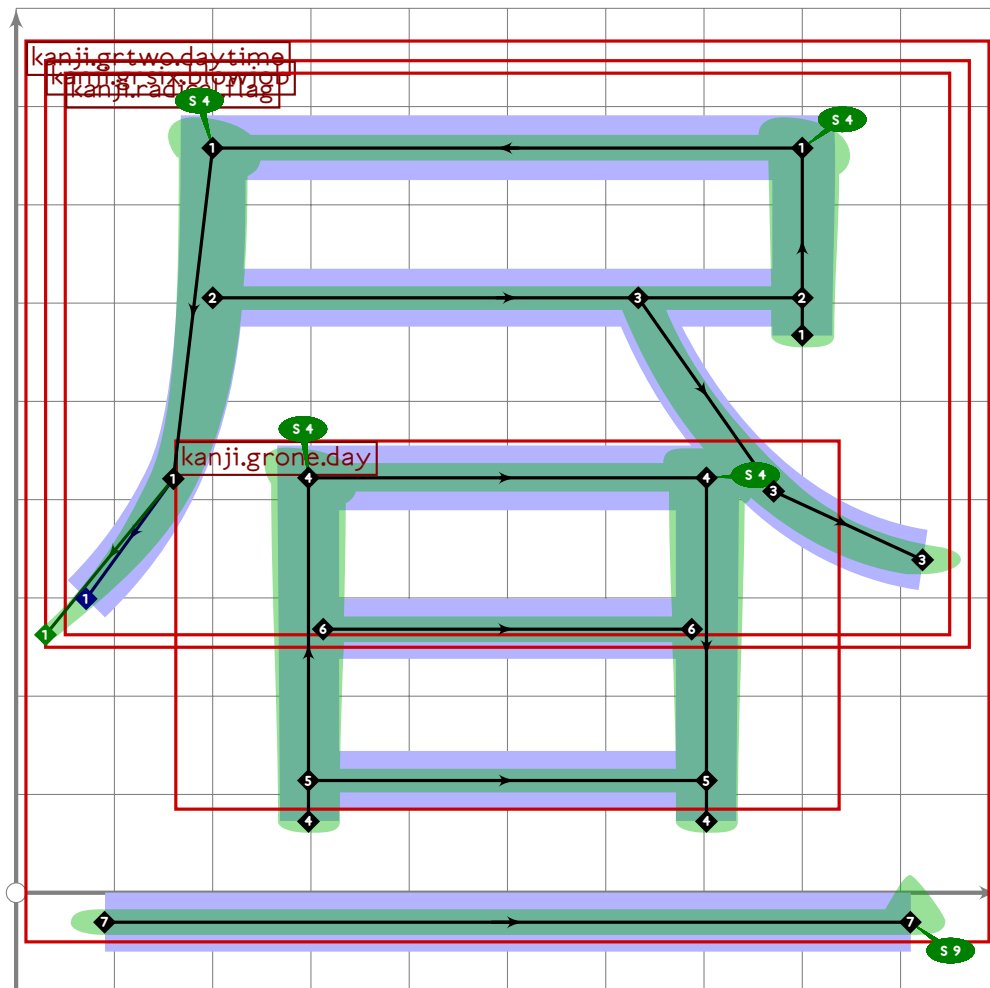
```
1 %
2 % Unicode page 66 (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input bottomrad.mp;
37 input buildkanji.mp;
38 input gradenine.mp;
39 input gradeone.mp;
40 input gradesix.mp;
41 input gradetwo.mp;
42 input leftrad.mp;
43 input radical.mp;
44 input rare.mp;
45 input toprad.mp;
46
47 

---

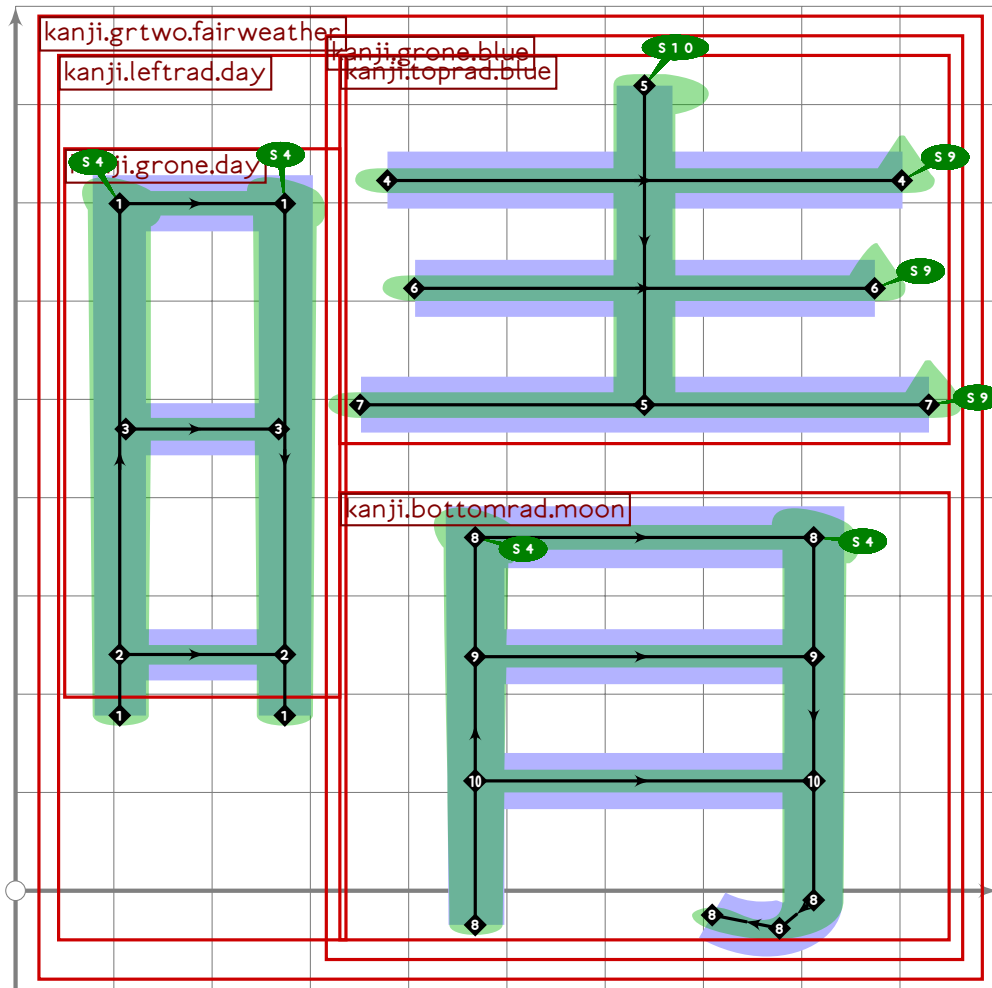

```



```

48
49 vardef tsu_curve.kanji.grtwo.daytime =
50   push_pbox_toexpand("kanji.grtwo.daytime");
51   build_kanji.level(build_kanji.sscale(yscaled 0.9 shifted (0,30))
52     (build_kanji.tb(360,290)
53       (build_kanji.spread_legs(280)(tsu_curve.kanji.grsix.blowjob))
54       (build_kanji.sscale(scaled 0.75)(tsu_curve.kanji.grone.day)));
55   push_stroke((90,-30)-(910,30),(1.6,1.6)-(1.6,1.6));
56   set_boserif(0,1,9));
57   expand_pbox;
58 enddef;

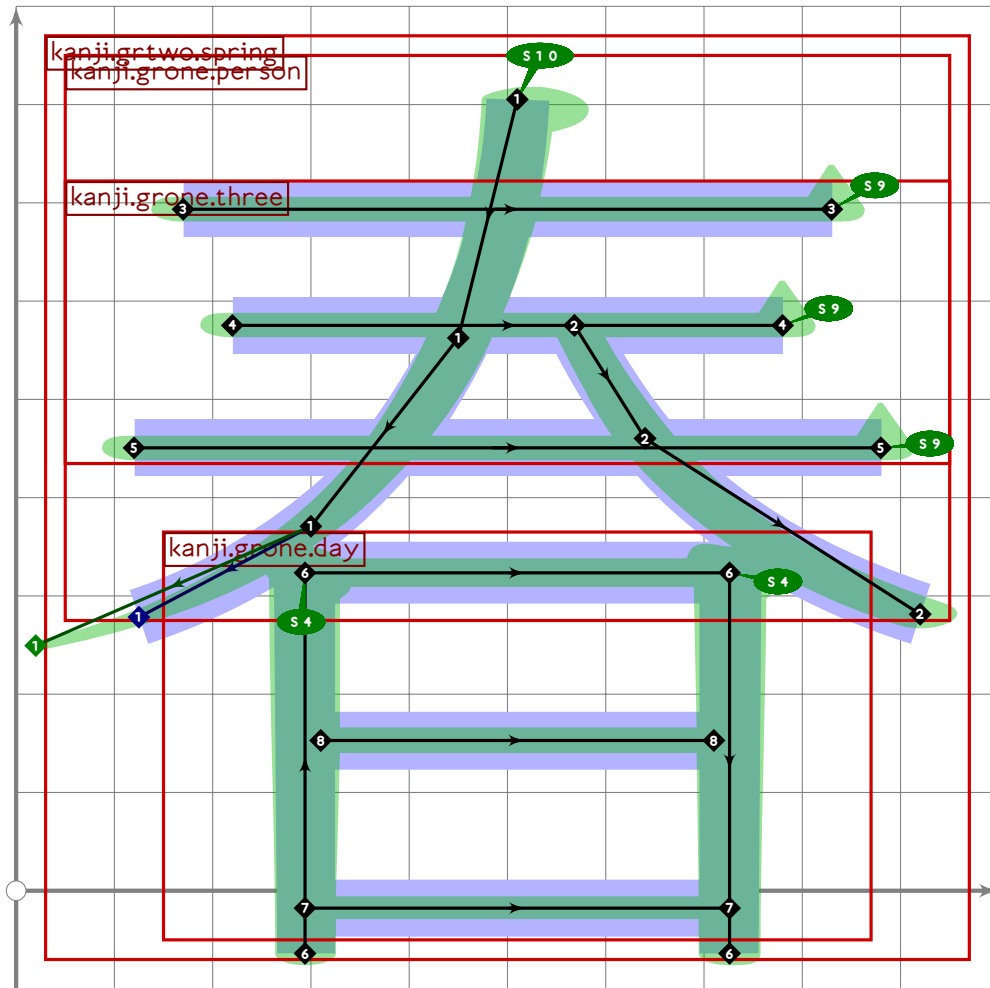
```



```

59
60 vardef tsu_curve.kanji.grtwo.fairweather =
61   push_pbox_toexpand("kanji.grtwo.fairweather");
62   build_kanji.lr(330,0)
63     (tsu_curve.kanji.leftrad.day)
64     (tsu_curve.kanji.grone.blue);
65   expand_pbox;
66 enddef;

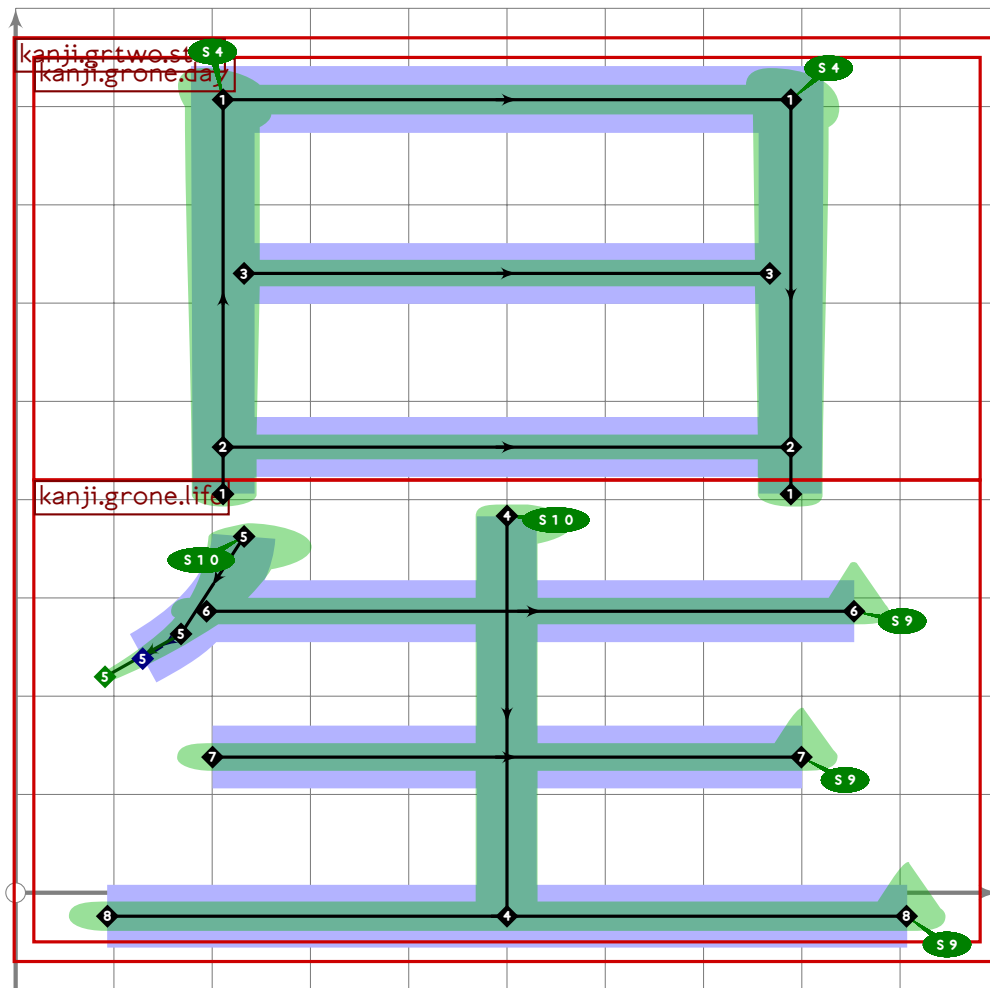
```



```

67
68 vardef tsu_curve.kanji.grtwo.spring =
69   push_pbox_toexpand("kanji.grtwo.spring");
70   build_kanji.tb(320,90)
71     (tsu_curve.kanji.grone.person;
72     build_kanji.sscale(xyscaled (1,0.5) shifted (0,30))
73     (tsu_curve.kanji.grone.three);
74     replace_strokep(-3)
75     (subpath (xpart (oldp intersectiontimes get_strokep(-1)),infinity)
76     of oldp))
77     (build_kanji.sscale(xscaled 0.8 shifted (10,0))
78     (tsu_curve.kanji.grone.day));
79   expand_pbox;
80 enddef;

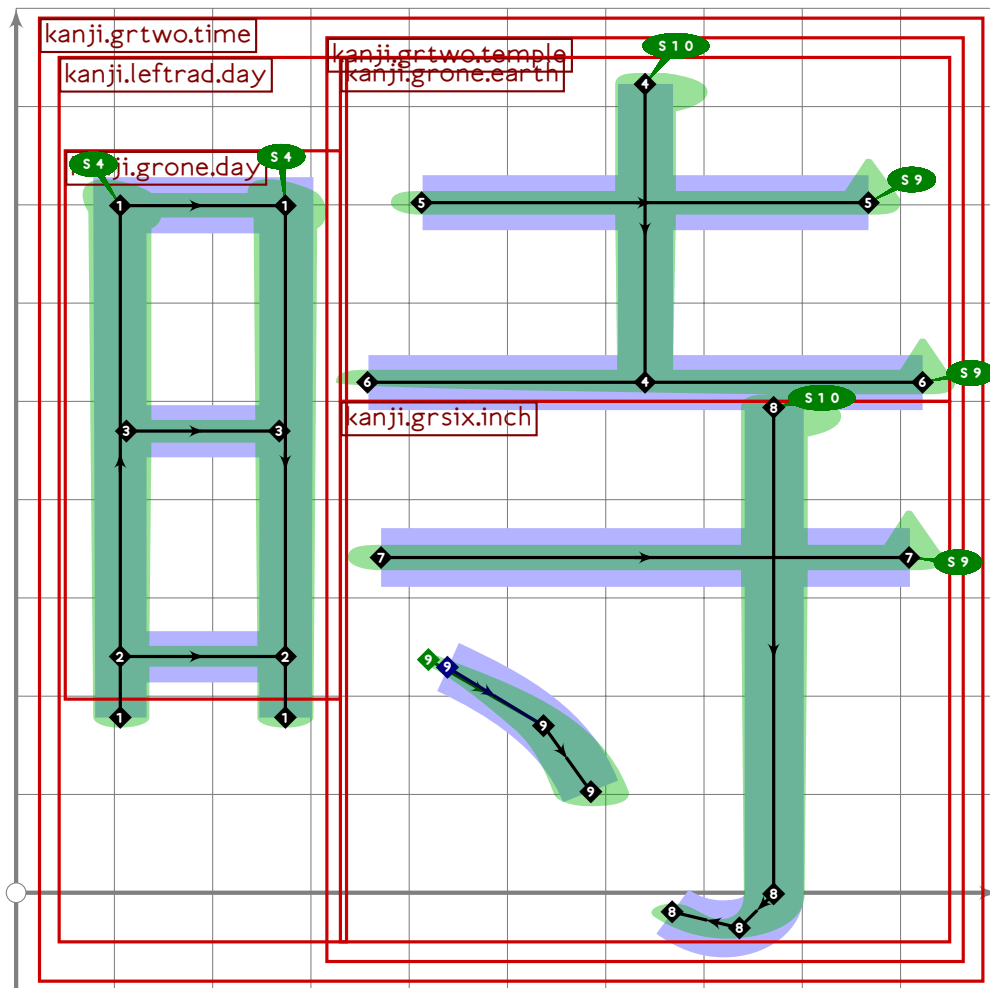
```



```

81
82 vardef tsu_curve.kanji.grtwo.star =
83   push_pbox_toexpand("kanji.grtwo.star");
84   build_kanji.sscale(xscaled 1.07)(build_kanji.tb(420,0)
85     (tsu_curve.kanji.grone.day)
86     (tsu_curve.kanji.grone.life));
87   expand_pbox;
88 enddef;

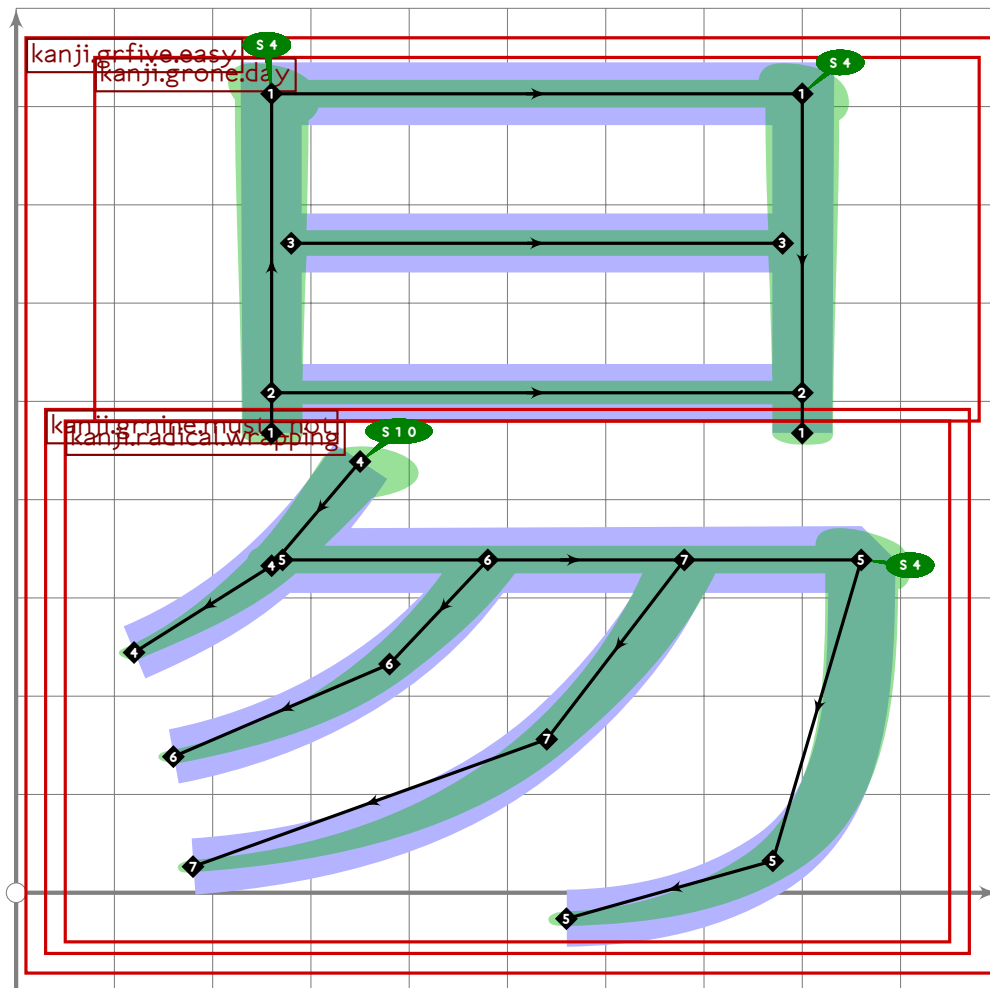
```



```

89
90 vardef tsu_curve.kanji.grtwo.time =
91   push_pbox_toexpand("kanji.grtwo.time");
92   build_kanji.lr(330,0)
93     (tsu_curve.kanji.leftrad.day)
94     (tsu_curve.kanji.grtwo.temple);
95   expand_pbox;
96 enddef;
97

```

```

110
111 vardef tsu_curve.kanji.grfive.easy =
112   push_pbox_toexpand("kanji.grfive.easy");
113   build_kanji.tb(480,0)
114   (tsu_xform(identity shifted (30,0))(tsu_curve.kanji.grone.day))
115   (tsu_curve.kanji.grnine.must_not);
116   expand_pbox;
117 enddef;

```

118

119

120

121 % mei/aka "light"

122 begintsuglyph("uni660E",14);

[see page 405]

123 tsu_curve.kanji.grtwo.light;

124 tsu_render;

125 endtsuglyph;

126

127 % eki/yasi/yasu "easi"

128 begintsuglyph("uni6613",19);

[see page 1376]

129 tsu_curve.kanji.grfive.easy;

130 tsu_render;


```

131 endtsuglyph;
132
133 % you "sun" or "open" (rare, but part of other chars)
134 begintsuglyph("uni661C",28); [see page 467]
135 tsu_curve.kanji.rare.sun;
136 tsu_render;
137 endtsuglyph;
138
139 % sei/hoshi "star"
140 begintsuglyph("uni661F",31); [see page 1373]
141 tsu_curve.kanji.grtwo.star;
142 tsu_render;
143 endtsuglyph;
144
145 % shun/haru "spring (season)"
146 begintsuglyph("uni6625",37); [see page 1372]
147 tsu_curve.kanji.grtwo.spring;
148 tsu_render;
149 endtsuglyph;
150
151 % chuu/hiro "daytime"
152 begintsuglyph("uni663C",60); [see page 1370]
153 tsu_curve.kanji.grtwo.daytime;
154 tsu_render;
155 endtsuglyph;
156
157 % jo/toki "time"
158 begintsuglyph("uni6642",66); [see page 1374]
159 tsu_curve.kanji.grtwo.time;
160 tsu_render;
161 endtsuglyph;
162
163 % sei/ha "fair or clear weather"
164 begintsuglyph("uni6674",116); [see page 1371]
165 tsu_curve.kanji.grtwo.fairweather;
166 tsu_render;
167 endtsuglyph;
168
169 % sho/ka "writing"
170 begintsuglyph("uni66F8",248); [see page 1375]
171 tsu_curve.kanji.grtwo.writing;
172 tsu_render;
173 endtsuglyph;
174
175 

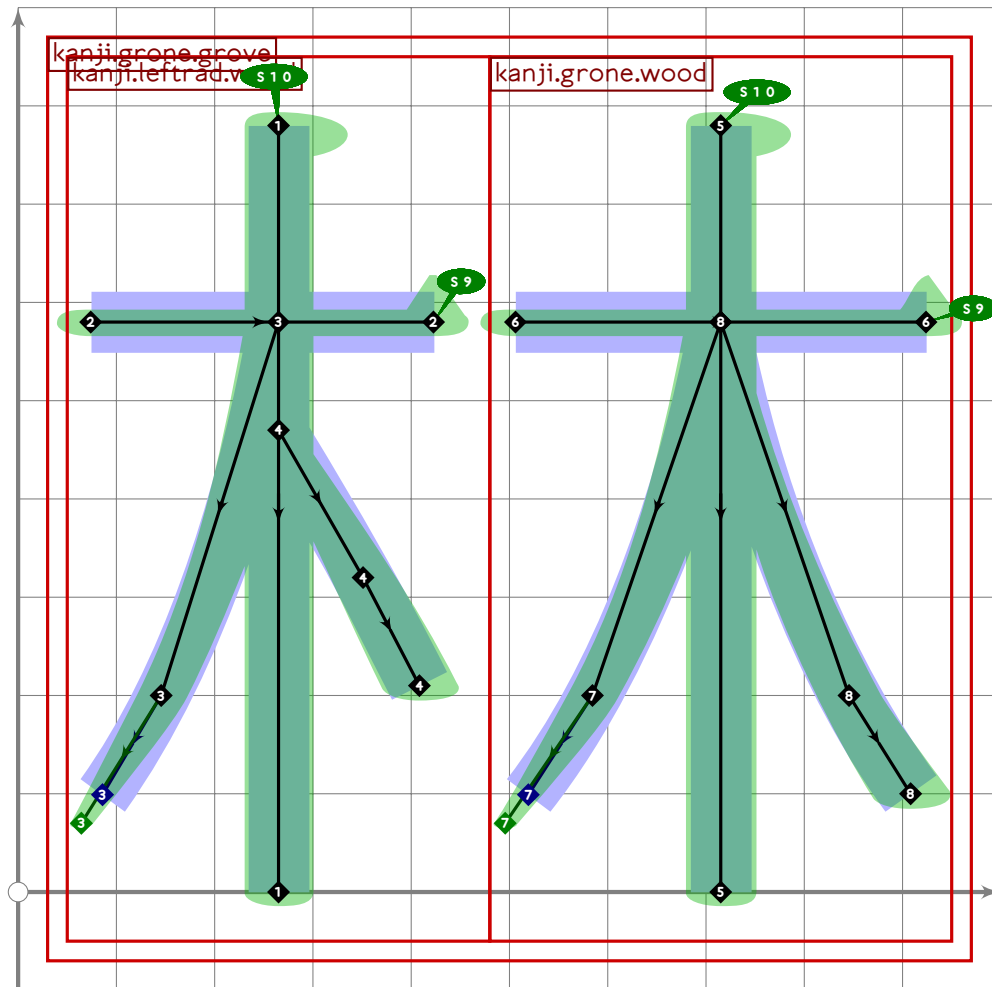
---


176
177 endfont;
178

```


tsukur67.mp

```
1 %  
2 % Unicode page 67 (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradeone.mp;  
38 input gradesix.mp;  
39 input leftrad.mp;  
40  
41 _____
```

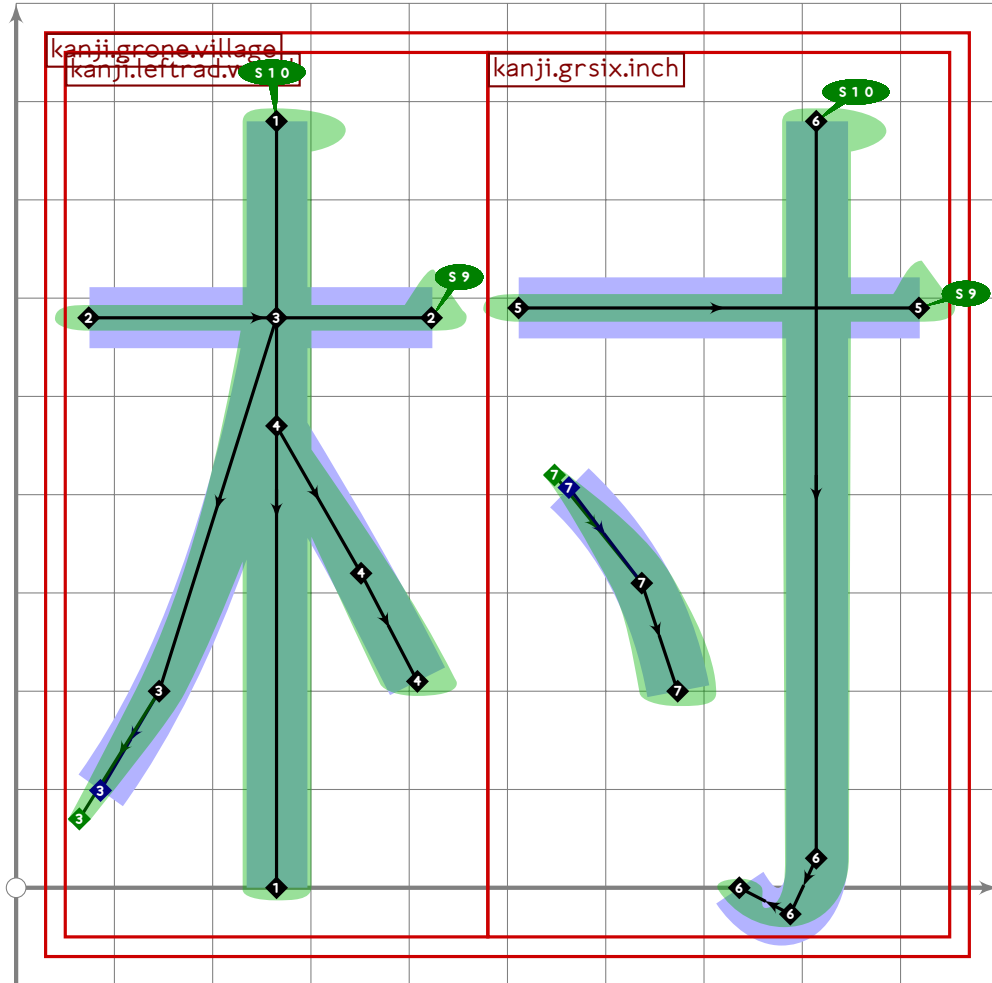


```
42  
43 vardef tsu_curve.kanji.gro.ne.grove =
```

```

44 push_pbox_toexpand("kanji.grone.grove");
45 build_kanji.lr(480,0)
46 (tsu_curve.kanji.leftrad.wood)
47 (tsu_curve.kanji.grone.wood);
48 expand_pbox;
49 enddef;

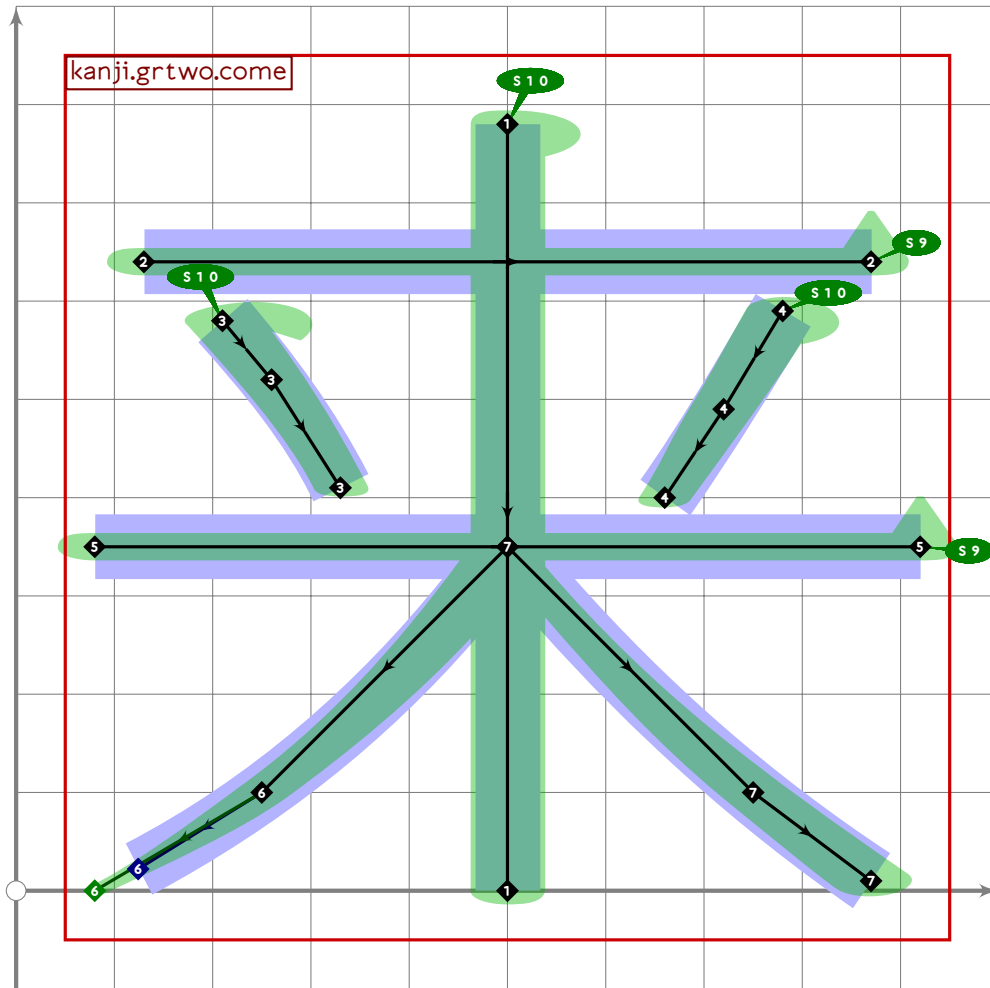
```



```

50
51 vardef tsu_curve.kanji.grone.village =
52 push_pbox_toexpand("kanji.grone.village");
53 build_kanji.lr(480,0)
54 (tsu_curve.kanji.leftrad.wood)
55 (tsu_curve.kanji.grsix.inch);
56 expand_pbox;
57 enddef;
58
59

```

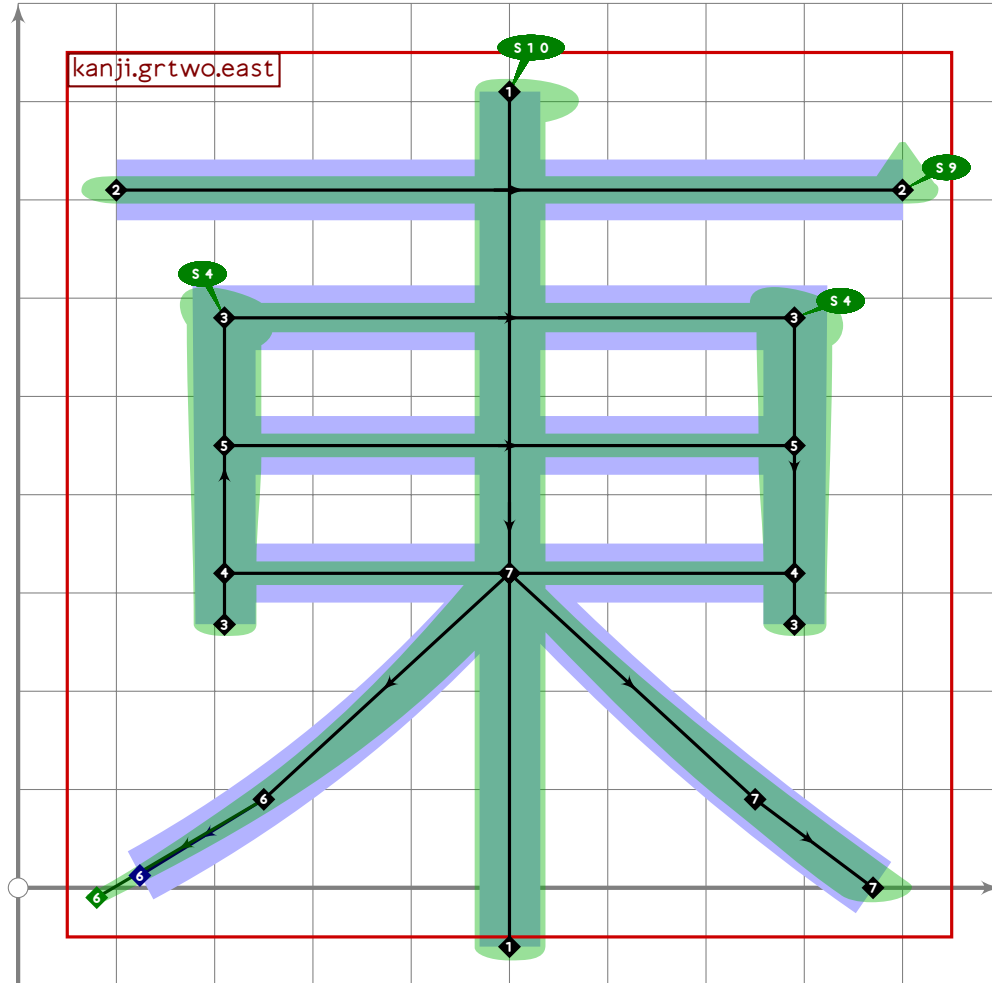


```

60
61 vardef tsu_curve.kanji.grtwo.come =
62   push_pbox_toexpand("kanji.grtwo.come");
63   push_stroke((500,780)-(500,0),(1.6,1.6)-(1.6,1.6));
64   set_boserif(0,0,10);
65   push_stroke((130,640)-(870,640),(1.6,1.6)-(1.6,1.6));
66   set_boserif(0,1,9);
67   push_stroke((210,580)..tension 1.2..(260,520)..(330,410),
68     (1.6,1.6)-(1.5,1.5)-(1.3,1.3));
69   set_boserif(0,0,10);
70   push_stroke((780,590)..tension 1.2..(720,490)..(660,400),
71     (1.6,1.6)-(1.5,1.5)-(1.3,1.3));
72   set_boserif(0,0,10);
73   push_stroke((80,350)-(920,350),(1.6,1.6)-(1.6,1.6));
74   set_boserif(0,1,9);
75   push_stroke((500,350)..(250,100)..(80,0),
76     (1.6,1.6)..(1.3,1.3)..(0.9,0.9));
77   push_stroke((500,350)..(750,100)..(870,10),
78     (1.1,1.1)..(1.5,1.5)..(1.7,1.7));
79   for i=-6 upto 0: set_bosize(i,94); endfor;
80   expand_pbox;

```

81 enddef;



```
82
83 vardef tsu_curve.kanji.grtwo.east =
84   push_pbox_toexpand("kanji.grtwo.east");
85   push_stroke((500,810)-(500,-60),
86     (1.6,1.6)-(1.6,1.6));
87   set_boserif(0,0,10);
88   push_stroke((100,710)-(900,710),
89     (1.6,1.6)-(1.6,1.6));
90   set_boserif(0,1,9);
91   build_kanji.box((210,580),(790,320));
92   push_stroke((210,450)-(790,450),(1.5,1.5)-(1.5,1.5));
93   push_stroke((500,320)..(250,90)..(80,-10),
94     (1.6,1.6)..(1.3,1.3)..(0.9,0.9));
95   push_stroke((500,320)..(750,90)..(870,0),
96     (1.1,1.1)..(1.5,1.5)..(1.7,1.7));
97   for i=-7 upto 0: set_bosize(i,89); endfor;
98   expand_pbox;
99 enddef;
```



```

121   tsu_render;
122 endtsuglyph;
123
124 % chou/asa "morning"
125 begintsuglyph("uni671D";29); [see page 1383]
126   tsu_curve.kanji.grtwo.morning;
127   tsu_render;
128 endtsuglyph;
129
130 % ki "wood"
131 begintsuglyph("uni6728";40); [see page 391]
132   tsu_curve.kanji.grone.wood;
133   tsu_render;
134 endtsuglyph;
135
136 % hon "book"
137 begintsuglyph("uni672C";44); [see page 340]
138   tsu_curve.kanji.grone.book;
139   tsu_render;
140 endtsuglyph;
141
142 % son/mura "village"
143 begintsuglyph("uni6751";81); [see page 1380]
144   tsu_curve.kanji.grone.village;
145   tsu_render;
146 endtsuglyph;
147
148 % ku/rai "come"
149 begintsuglyph("uni6765";101); [see page 1381]
150   tsu_curve.kanji.grtwo.come;
151   tsu_render;
152 endtsuglyph;
153
154 % tou/higashi "east"
155 begintsuglyph("uni6771";113); [see page 1382]
156   tsu_curve.kanji.grtwo.east;
157   tsu_render;
158 endtsuglyph;
159
160 % rin/hayashi "grove"
161 begintsuglyph("uni6797";151); [see page 1379]
162   tsu_curve.kanji.grone.grove;
163   tsu_render;
164 endtsuglyph;
165
166 _____
167
168 endfont;

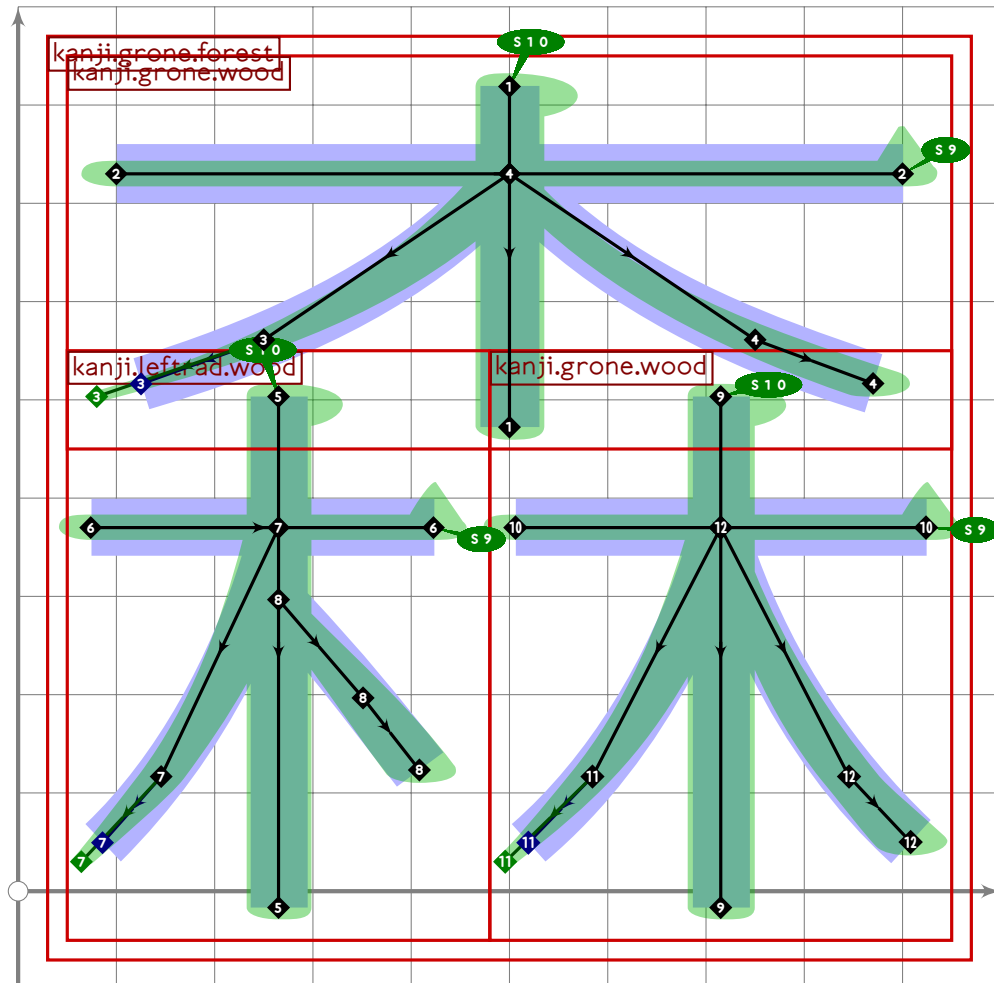
```


169

170

tsuku-68.mp

```
1 %
2 % Unicode page 68 (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 -----
32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradeone.mp;
38 input gradetwo.mp;
39 input leftrad.mp;
40 input radical.mp;
41
42 -----
```

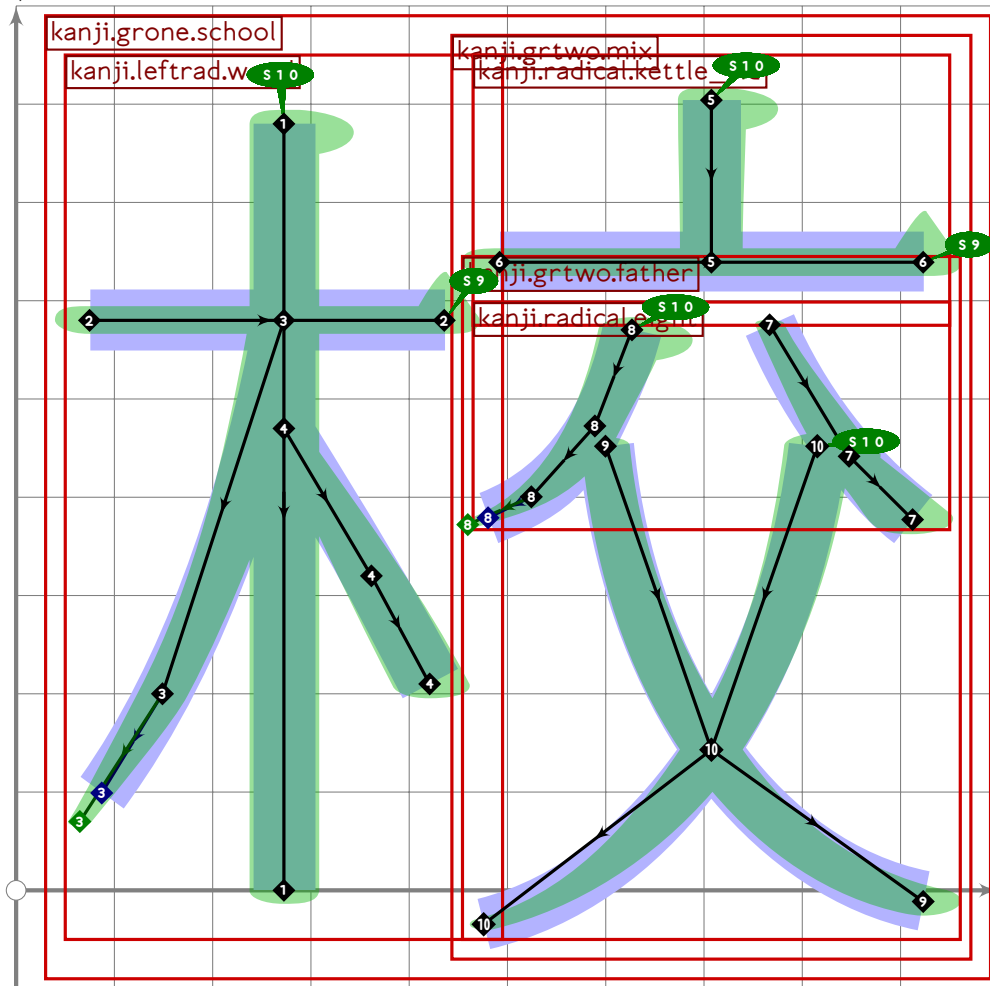


43

```

44 vardef tsu_curve.kanji.grone.forest =
45   push_pbox_toexpand("kanji.grone.forest");
46   build_kanji.tb(500,100)
47     (tsu_curve.kanji.grone.wood)
48     (build_kanji.lr(480,0)
49       (tsu_curve.kanji.leftrad.wood)
50       (tsu_curve.kanji.grone.wood));
51   expand_pbox;
52 enddef;

```



```

53
54 vardef tsu_curve.kanji.grone.school =
55   push_pbox_toexpand("kanji.grone.school");
56   build_kanji.lr(480,30)
57     (tsu_curve.kanji.leftrad.wood)
58     (tsu_curve.kanji.grtwo.mix);
59   expand_pbox;
60 enddef;
61
62
63
64 % kou "school"

```

```
65 begintsuglyph("uni6821",33); [see page 1387]
66   tsu_curve.kanji.grone.school;
67   tsu_render;
68 endsuglyph;
69
70 % shin/mori "forest"
71 begintsuglyph("uni68EE",238); [see page 1387]
72   tsu_curve.kanji.grone.forest;
73   tsu_render;
74 endsuglyph;
75
76 

---


77
78 endfont;
79
80 

---


```



```

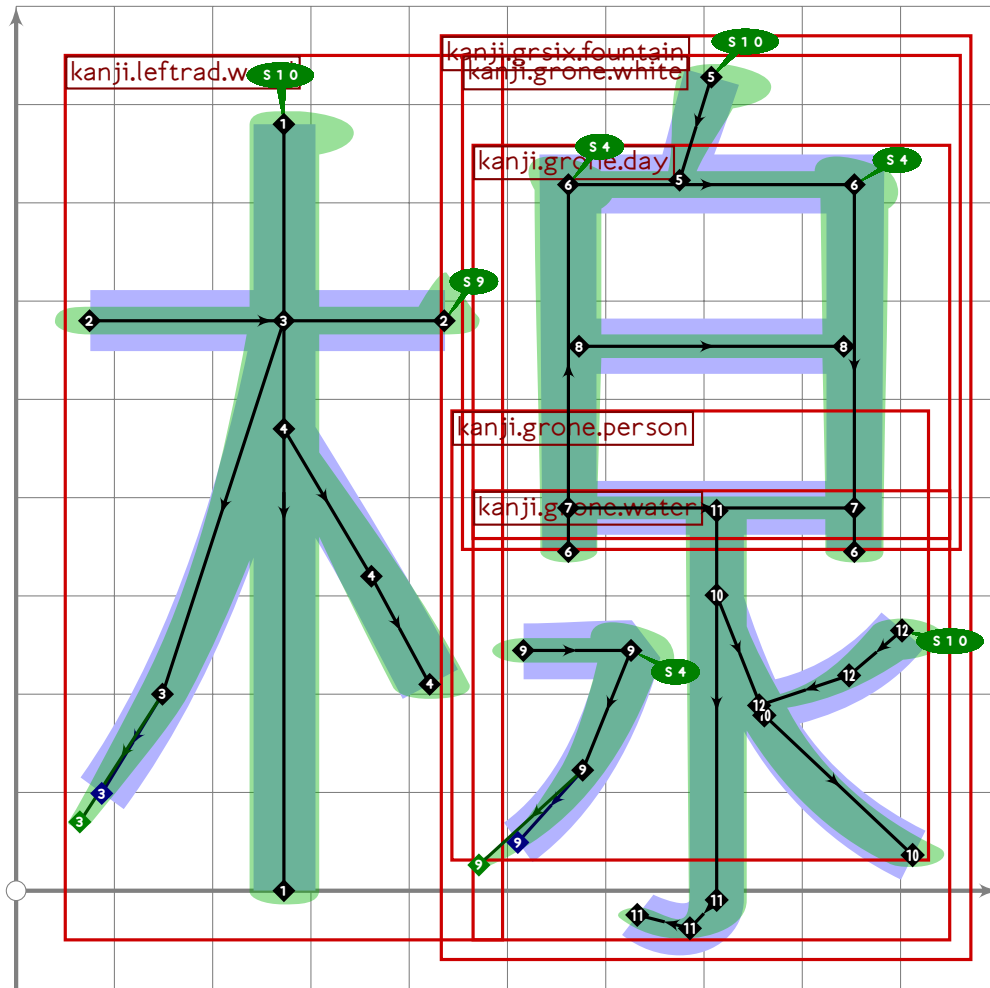
44 push_pbox_toexpand("kanji.grtwo.fun");
45 build_kanji.level(
46   build_kanji.tb(400,20)
47   (build_kanji.sscale(xscaled 0.6)(tsu_curve.kanji.grone.white))
48   (tsu_curve.kanji.grone.wood));
49 push_stroke((80,720)..tension 1.2..(170,650)..(210,600),
50   (1,1)-(1.5,1.5)-(1.8,1.8));
51 set_bosize(0,80);
52 push_stroke((230,510)..(160,440)..tension 1.2..(70,390),
53   (1.1,1.1)-(1.4,1.4)-(1.9,1.9));
54 set_bosize(0,80);
55 push_stroke(get_strokep(-1) shifted ((760,520)-point 0 of get_strokep(-1)),
56   get_strokeq(-1));
57 set_bosize(0,80);
58 push_stroke(get_strokep(-1) shifted ((760,610)-point 2 of get_strokep(-1)),
59   get_strokeq(-1));
60 set_bosize(0,80);
61 expand_pbox;
62 enddef;
63
64 

---


65
66 % gaku/tano "music" or "fun"
67 begintsuglyph("uni697D";125);
68   tsu_curve.kanji.grtwo.fun;
69   tsu_render;
70 endtsuglyph;
71

```

[see page 1389]



72 % hanzou "container for pouring water"

73 `begintsuglyph("uni697E";126);`

74 `build_kanji.lr(480,30)`

75 `(tsu_curve.kanji.leftrad.wood)`

76 `(tsu_curve.kanji.grsix.fountain);`

77 `tsu_render;`

78 `endsuglyph;`

79

80

81

82 `endfont;`

83

84

tsuku-6b.mp

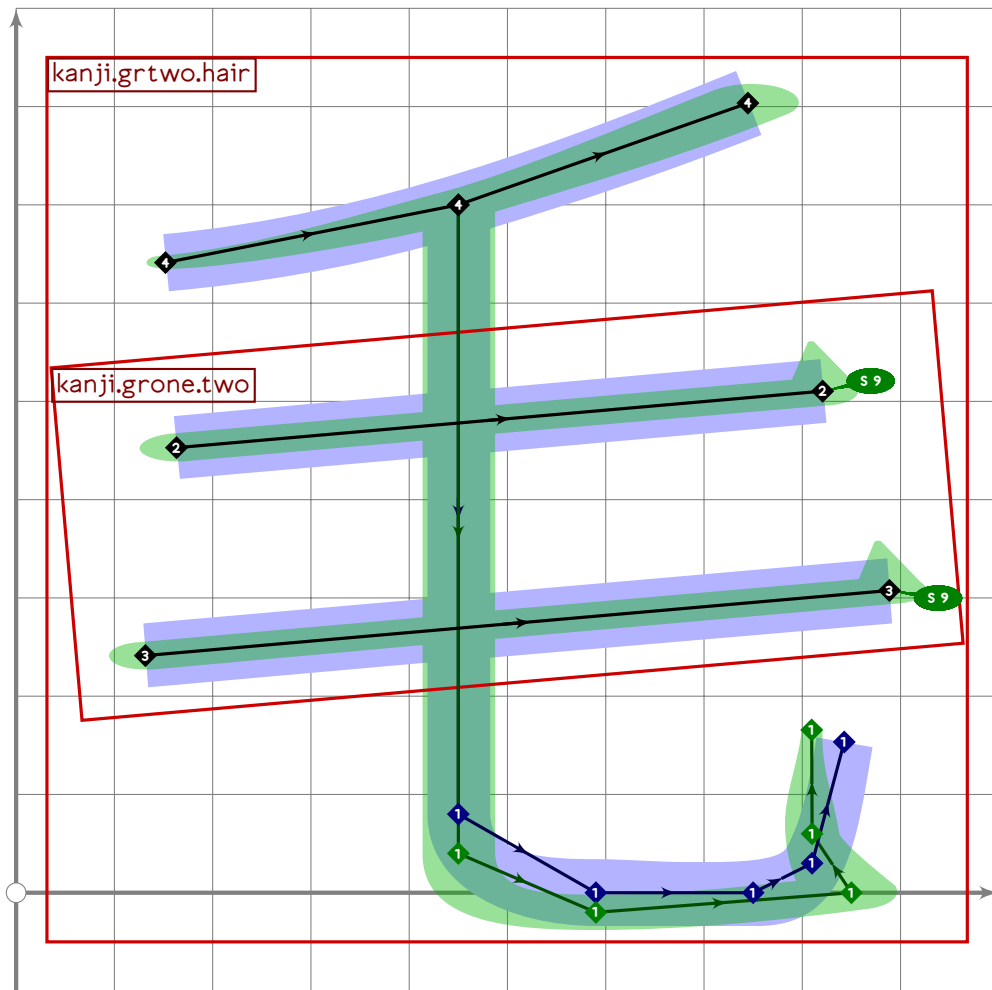
```
1 %
2 % Unicode page 6b (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradefive.mp;
38 input gradeone.mp;
39 input gradetwo.mp;
40 input leftrad.mp;
41 input radical.mp;
42 input rare.mp;
43
44 

---

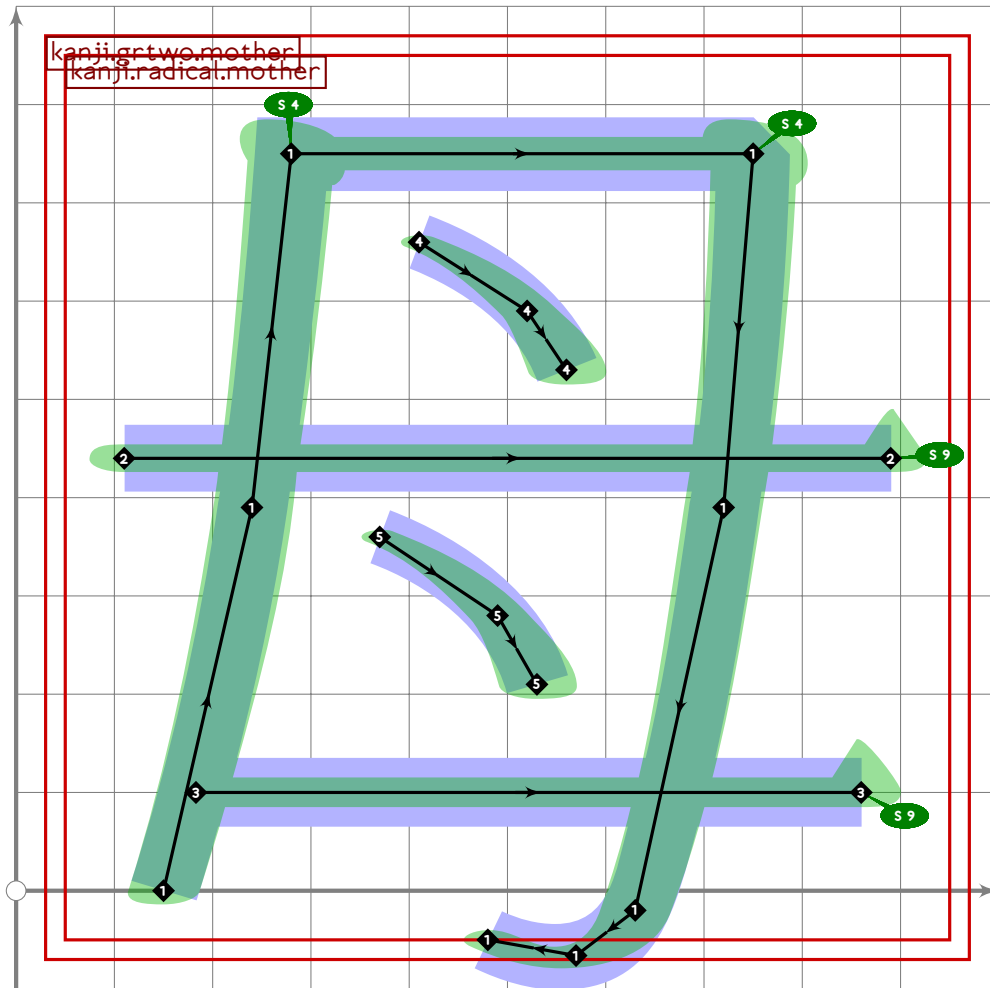

```

```

45
46 vardef tsu_curve.kanji.grtwo.hair =
47   push_pbox_toexpand("kanji.grtwo.hair");
48   build_kanji.level(build_kanji.add_beret(
49     push_stroke((450,700),(1.6,1.6));
50     build_kanji.add_ltail(0);
51     build_kanji.sscale(yscaled 0.4 rotated 5)(tsu_curve.kanji.grone.two)));
52   expand_pbox;
53 enddef;

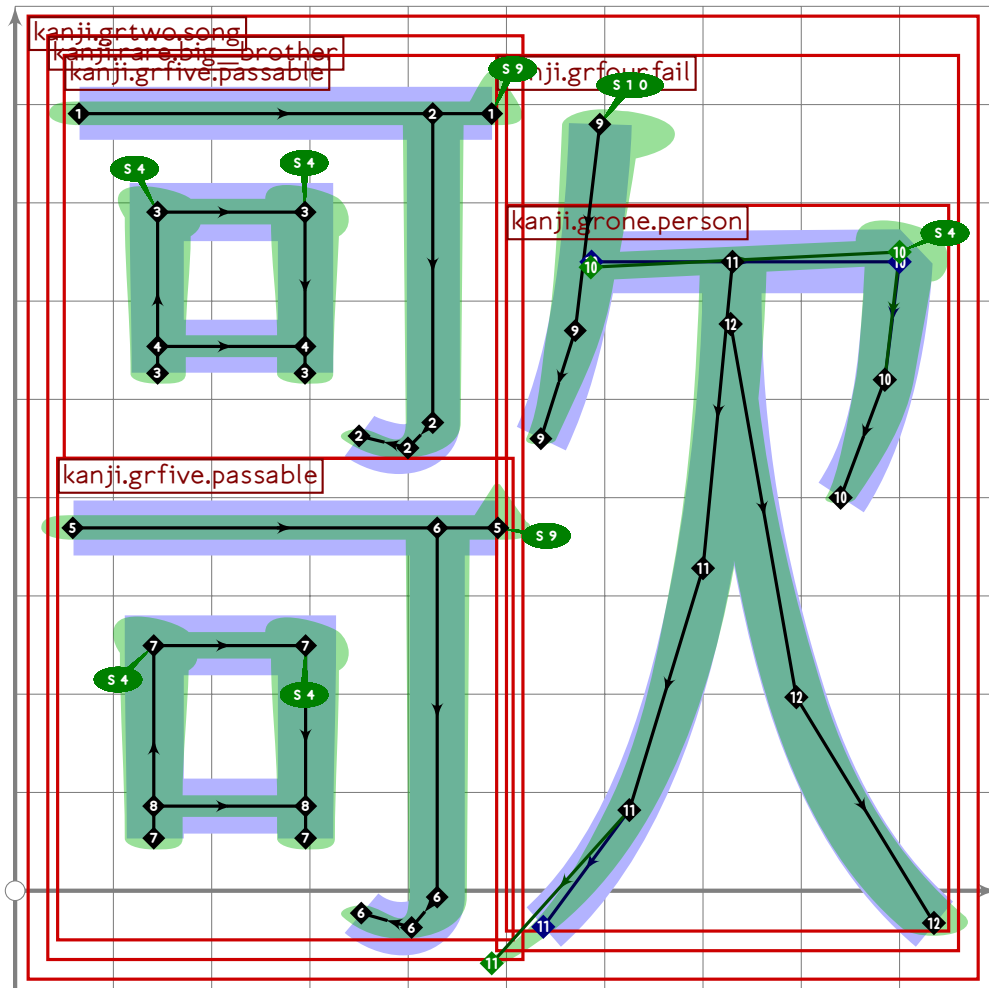
```



```

54
55 vardef tsu_curve.kanji.grtwo.mother =
56   push_pbox_toexpand("kanji.grtwo.mother");
57   tsu_curve.kanji.radical.mother;
58   push_stroke((410,660)..tension 1.2..(520,590)..(560,530),
59     (1,1,1)-(1,4,1,4)-(1,7,1,7));
60   set_bosize(0,90);
61   push_stroke((370,360)..tension 1.2..(490,280)..(530,210),
62     (1,1,1)-(1,4,1,4)-(1,7,1,7));
63   set_bosize(0,90);
64   expand_pbox;
65 enddef;

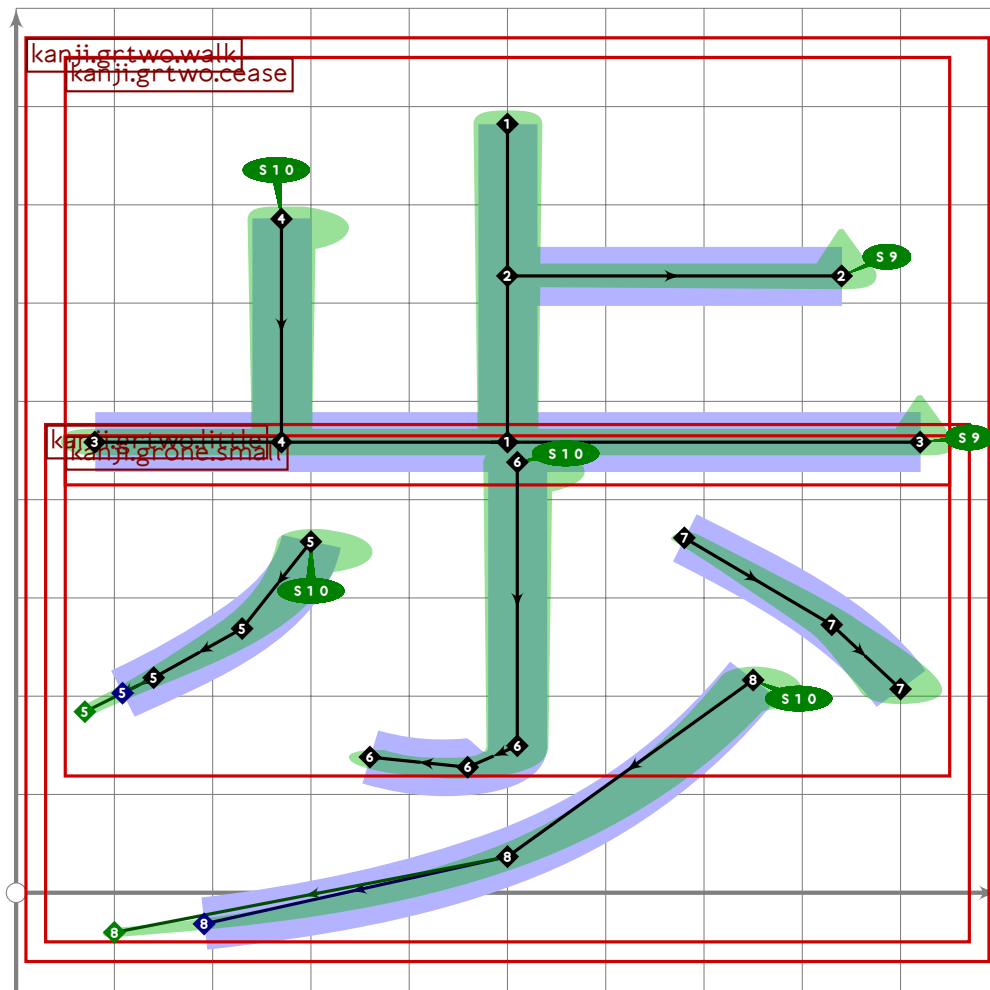
```



```

66
67 vardef tsu_curve.kanji.grtwo.song =
68   push_pbox_toexpand("kanji.grtwo.song");
69   build_kanji.lr(500,0)
70   (tsu_curve.kanji.rare.big_brother)
71   (tsu_curve.kanji.grfour.fail);
72   expand_pbox;
73 enddef;

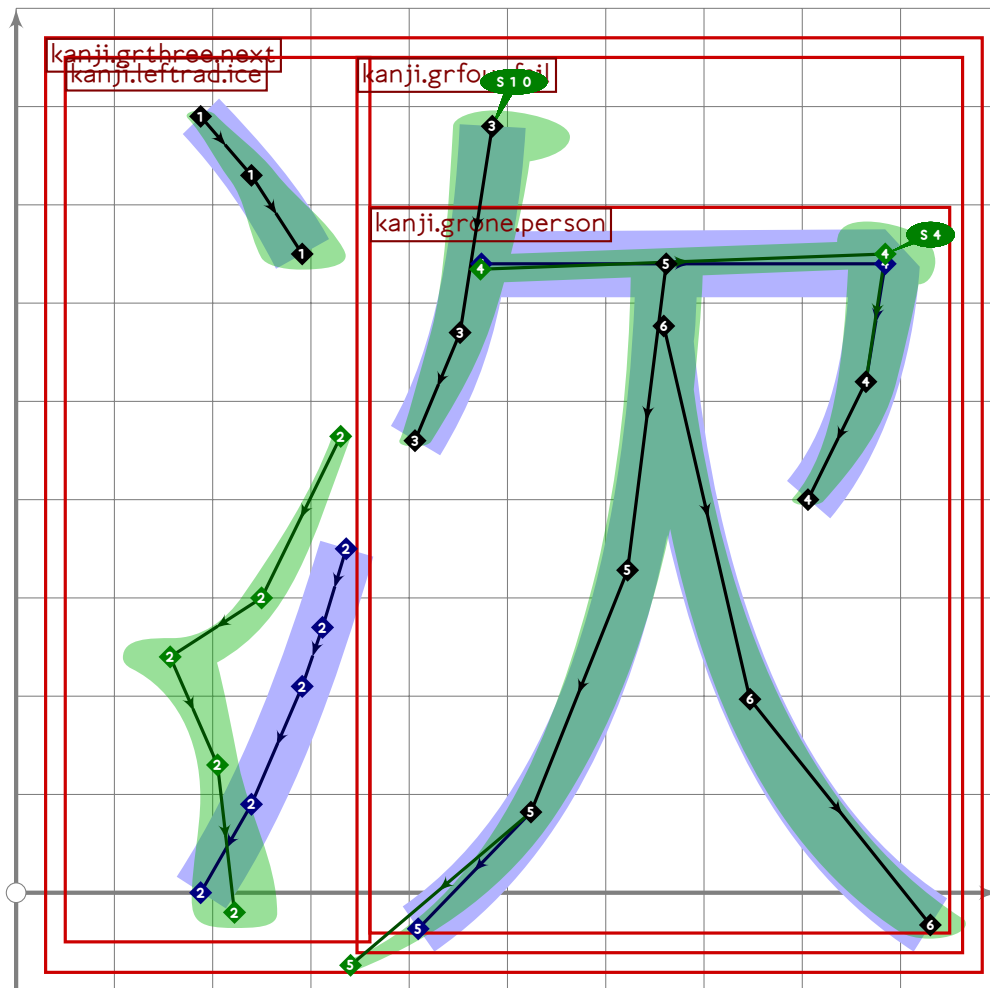
```



```

74
75 vardef tsu_curve.kanji.grtwo.walk =
76   push_pbox_toexpand("kanji.grtwo.walk");
77   build_kanji.level(build_kanji.tb(440,50)
78     (tsu_curve.kanji.grtwo.cease)
79     (tsu_curve.kanji.grtwo.little));
80   expand_pbox;
81 enddef;
82
83

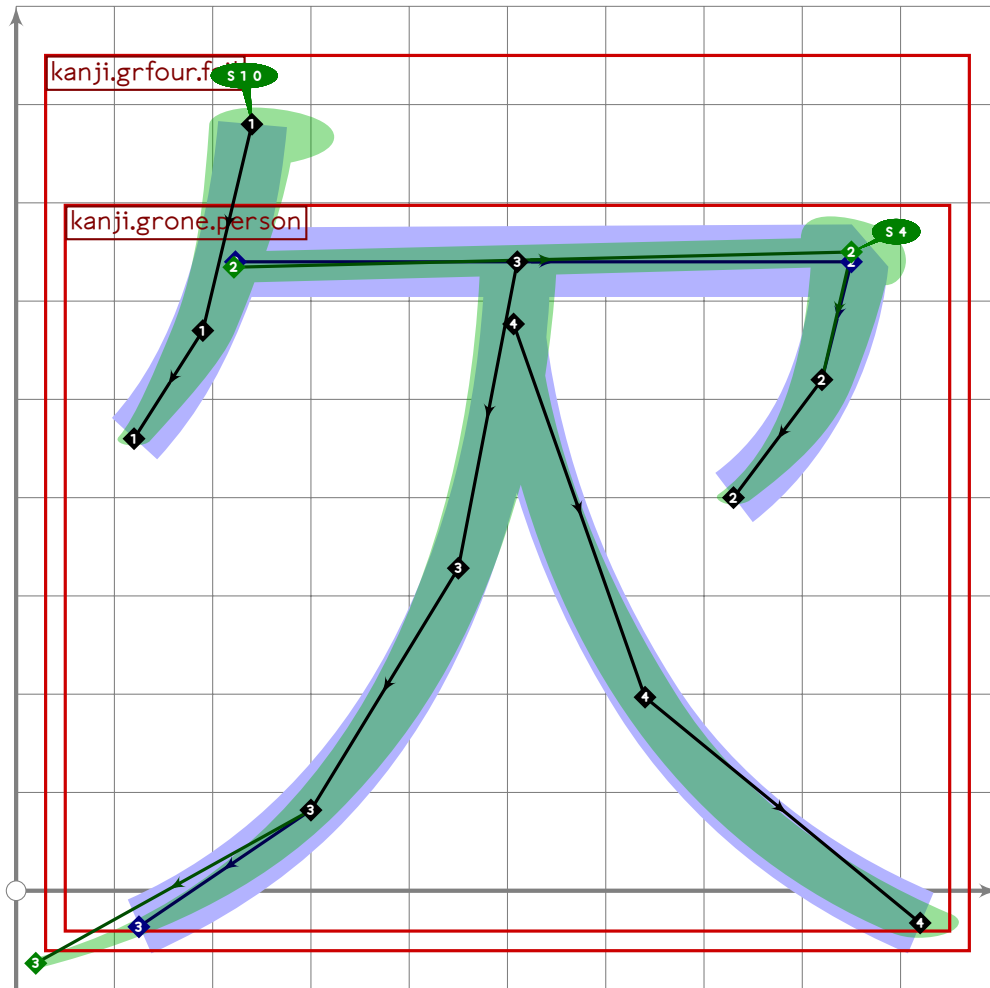
```



```

84
85 vardef tsu_curve.kanji.grthree.next =
86   push_pbox_toexpand("kanji.grthree.next");
87   build_kanji.lr(360,0)
88     (tsu_curve.kanji.leftrad.ice)
89     (tsu_curve.kanji.grfour.fail);
90   expand_pbox;
91 enddef;
92
93

```

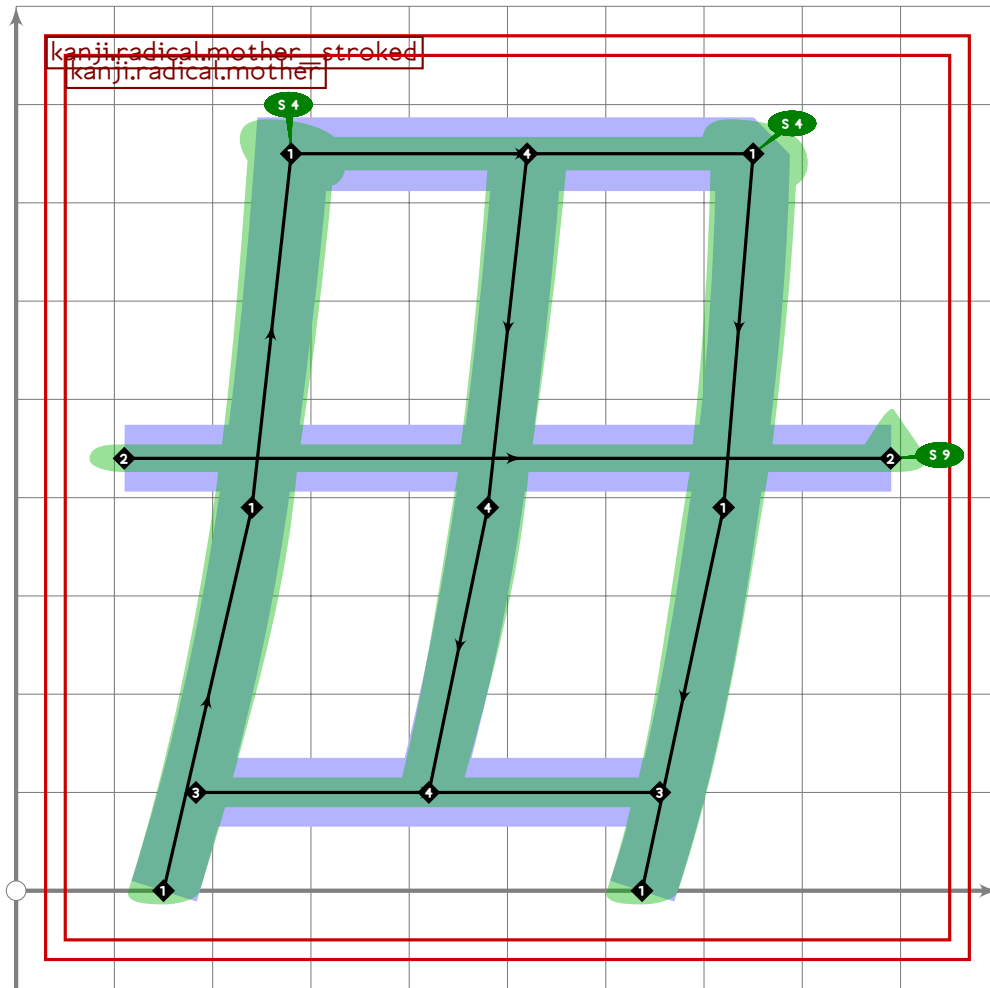


```

94
95 vardef tsu_curve.kanji.grfour.fail =
96   push_pbox_toexpand("kanji.grfour.fail");
97   push_stroke((240,780)..tension 1.2..(190,570)..(120,460),
98     (1.7,1.7)-(1.4,1.4)-(1,1));
99   set_boserif(0,0,10);
100  push_stroke(
101    ((get_strokep(0) intersectionpoint
102      ((0,640-7*mincho)-(1000,640))*(10,0)))-
103      ((850,640)+mincho*(0,10))..tension 1.2..(820,520)..(730,400),
104    (1.6,1.6)-(1.6,1.6)-(1.4,1.4)-(1,1));
105  set_boserif(0,1,4);
106  set_botip(0,1,0);
107  tsu_xform(identity yscaled (640/780))(tsu_curve.kanji.grone.person);
108  set_boserif(-1,0,whatever);
109  expand_pbox;
110 enddef;
111
112
113
114 % ketsu/ka/akubi "fail" or "yawn"

```

115 `begintsuglyph("uni6B20",32);` [see page 1398]
116 `tsu_curve.kanji.grfour.fail;`
117 `tsu_render;`
118 `endtsuglyph;`
119
120 `% ji/tsugi "next"`
121 `begintsuglyph("uni6B21",33);` [see page 1397]
122 `tsu_curve.kanji.grthree.next;`
123 `tsu_render;`
124 `endtsuglyph;`
125
126 `% ka/uta "song"`
127 `begintsuglyph("uni6B4C",76);` [see page 1395]
128 `tsu_curve.kanji.grtwo.song;`
129 `tsu_render;`
130 `endtsuglyph;`
131
132 `% shi/toma "stop"`
133 `begintsuglyph("uni6B62",98);` [see page 395]
134 `tsu_curve.kanji.grtwo.cease;`
135 `tsu_render;`
136 `endtsuglyph;`
137
138 `% sei/tada/machi "correct"`
139 `begintsuglyph("uni6B63",99);` [see page 344]
140 `tsu_curve.kanji.grone.correct;`
141 `tsu_render;`
142 `endtsuglyph;`
143
144 `% ho/aruku "walk"`
145 `begintsuglyph("uni6B69",105);` [see page 1396]
146 `tsu_curve.kanji.grtwo.walk;`
147 `tsu_render;`
148 `endtsuglyph;`
149
150 `% extra: mother radical, stroked version`
151 `begintsuglyph("uni6BCB",203);` [see page 323]
152 `tsu_curve.kanji.radical.mother_stroked;`
153 `tsu_render;`
154 `endtsuglyph;`
155



```

156 % further variation
157 begintsuglyph("uni6BCC",204);
158 tsu_curve.kanji.radical.mother_stroked;
159 replace_strokep(-3)(subpath (0,xpart (oldp intersectiontimes
160 ((500,0)-(1000,0)))) of oldp);
161 replace_strokeq(-3)(subpath (0,length get_strokep(-3)) of oldq);
162 replace_strokep(-1)((183,100)-(655,100));
163 set_boserif(-1,1,whatever);
164 tsu_render;
165 endtsuglyph;

```

```

166
167 % bo/haha "mother"
168 begintsuglyph("uni6BCD",205);
169 tsu_curve.kanji.grtwo.mother;
170 tsu_render;
171 endtsuglyph;

```

[see page 1394]

```

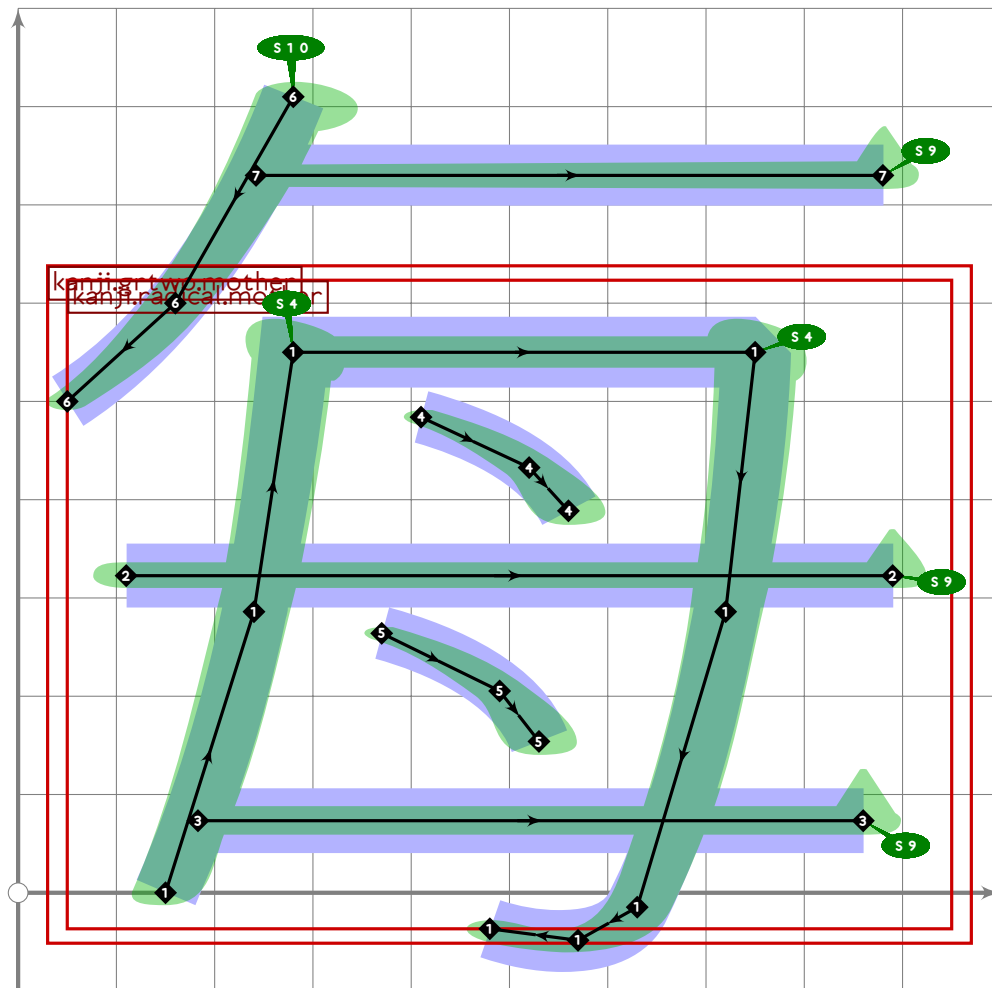
172
173 % mai/goto "every"
174 begintsuglyph("uni6BCE",206);
175 tsu_curve.kanji.grtwo.every;
176 tsu_render;

```

[see page 399]

177 endtsuglyph;

178



179 % extra, closely related to previous

180 `begintsuglyph("uni6BCF",207);`

181 `tsu_xform(identity yscaled (550/750))`

182 `(tsu_curve.kanji.grtwo.mother);`

183 `push_stroke((280,810)..tension 1.2..(160,600)..(50,500),`

184 `(1.7,1.7)-(1.5,1.5)-(1.2,1.2));`

185 `set_boserif(0,0,10);`

186 `set_bosize(0,90);`

187 `push_stroke((get_stroke(0) intersectionpoint ((0,730)-(1000,730)))-`

188 `(880,730),`

189 `(1.5,1.5)-(1.6,1.6));`

190 `set_boserif(0,1,9);`

191 `set_bosize(0,90);`

192 `tsu_render;`

193 `endtsuglyph;`

194

195 % mou/ke "hair"

196 `begintsuglyph("uni6BDB",219);`

197 `tsu_curve.kanji.grtwo.hair;`

[see page 1393]

```
198  tsu_render;  
199  endtsuglyph;  
200  
201  _____  
202  
203  endfont;  
204  
205  _____
```

tsuku-6c.mp

```
1 %
2 % Unicode page 6c (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input bottomrad.mp;
37 input buildkanji.mp;
38 input gradefour.mp;
39 input gradenine.mp;
40 input gradeone.mp;
41 input gradesix.mp;
42 input gradethree.mp;
43 input gradetwo.mp;
44 input leftrad.mp;
45 input radical.mp;
46 input rare.mp;
47 input topfad.mp;
48
49 

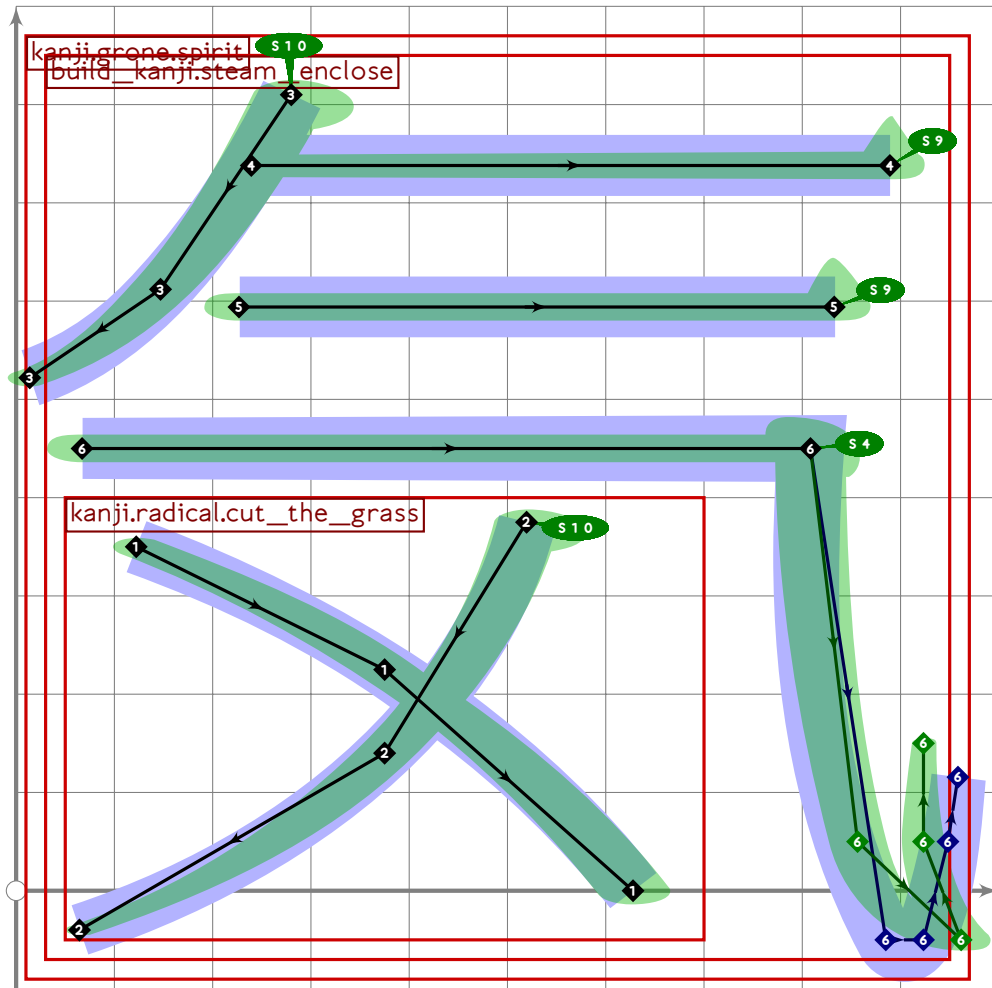
---


50
51 vardef build_kanji.steam_enclose(expr ur)(text contents) =
52   push_pbox_toexpand("build_kanji.steam_enclose");
53   begingroup
54     save xfa,xfb,xfc,xfd;
55     transform xfa,xfb,xfc,xfd;
56     (50,-50) transformed xfc=(50,-50);
57     (950,850) transformed xfc=ur;
58     xypart xfc=yxpart xfc=0;
59     tsu_xform(xfc)(contents);
60
61     (0,0) transformed xfa=(0,950) transformed xfc;
62     (1,1) transformed xfa=(280,810);
63     xypart xfa=yxpart xfa=0;
64     (0,0) transformed xfb=(1100,950) transformed xfc;
65     (1,1) transformed xfb=(970,810);
66     xypart xfb=yxpart xfb=0;
67     (0,1) transformed xfd=(1100,950) transformed xfc;
68     (1,0) transformed xfd=(1000,-50);
69     xypart xfd=yxpart xfd=0;
70
```

```

71  push_stroke(((1,1)..tension 1.2..(0.5,0.45)..(0,0.2)) transformed xfa,
72  (1.7,1.7)–(1.5,1.5)–(1.2,1.2));
73  set_boserif(0,0,10);
74  set_bosize(0,90);
75
76  push_stroke((get_strokep(0) intersectionpoint
77  (((0,0.8)–(1,0.8)) transformed xfa)–
78  ((0.5,0.8) transformed xfb),
79  (1.5,1.5)–(1.6,1.6));
80  set_boserif(0,1,9);
81  set_bosize(0,90);
82
83  push_stroke(((0.8,0.4) transformed xfa)–((0.15,0.4) transformed xfb),
84  (1.6,1.6)–(1.6,1.6));
85  set_boserif(0,1,9);
86  set_bosize(0,90);
87
88  push_stroke(((0.2,0) transformed xfa)–(interpath(mincho,
89  (0,1)..tension 1.6..(0.4,0)..(0.6,0)..tension 1.5..
90  (0.73,0.2)..(0.8,0.4),
91  (0,1)..tension 1.6..(0.25,0.2)..{right}(0.8,0){curl 1}..
92  (0.6,0.2)..(0.6,0.4)
93  ) transformed xfd),
94  (1.6,1.6)–(1.6,1.6)–(1.4,1.4)–
95  (1.4,1.4)–(1.2,1.2)–(0.9,0.9));
96  set_boserif(0,1,4);
97  set_botip(0,1,1);
98  set_bosize(0,90);
99  endgroup;
100 expand_pbox;
101 enddef;
102
103

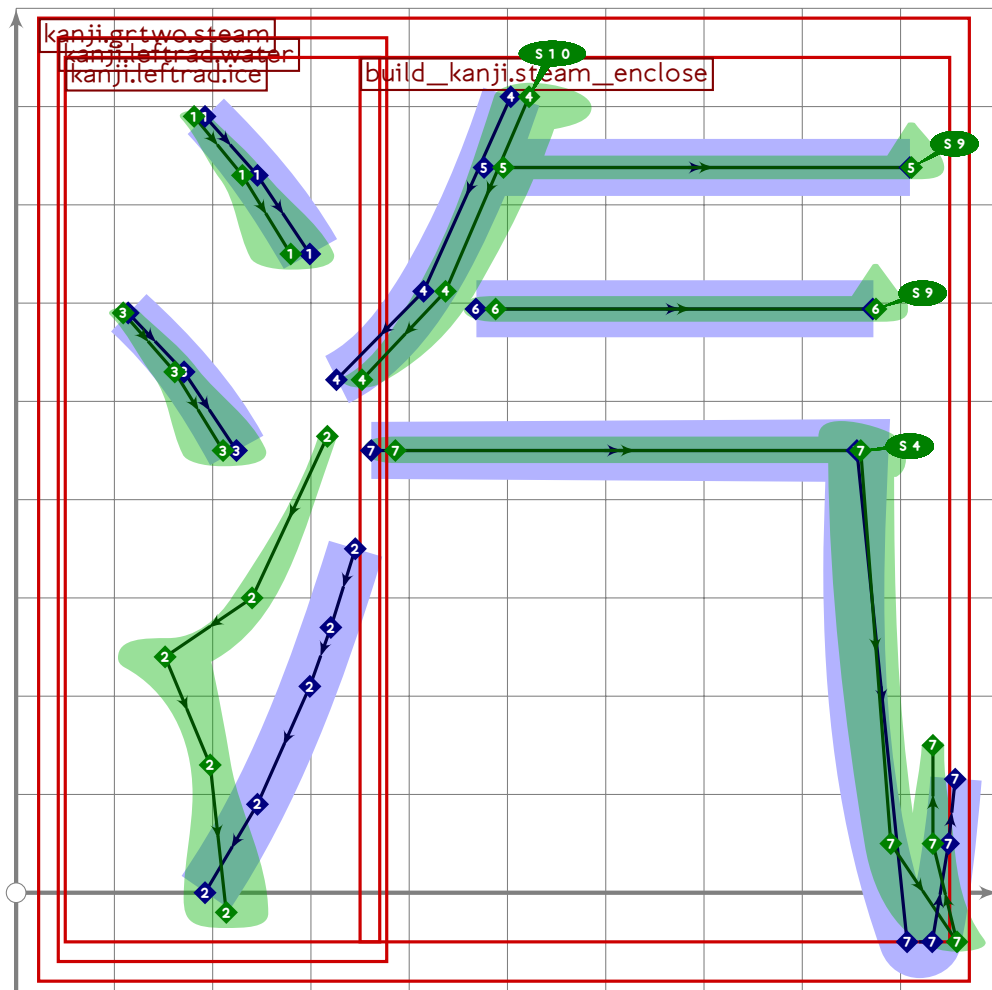
```



```

104
105 vardef tsu_curve.kanji.grone.spirit =
106   push_pbox_toexpand("kanji.grone.spirit");
107   build_kanji.steam_enclose((700,400))
108     (tsu_curve.kanji.radical.cut_the_grass);
109   expand_pbox;
110 enddef;
111
112

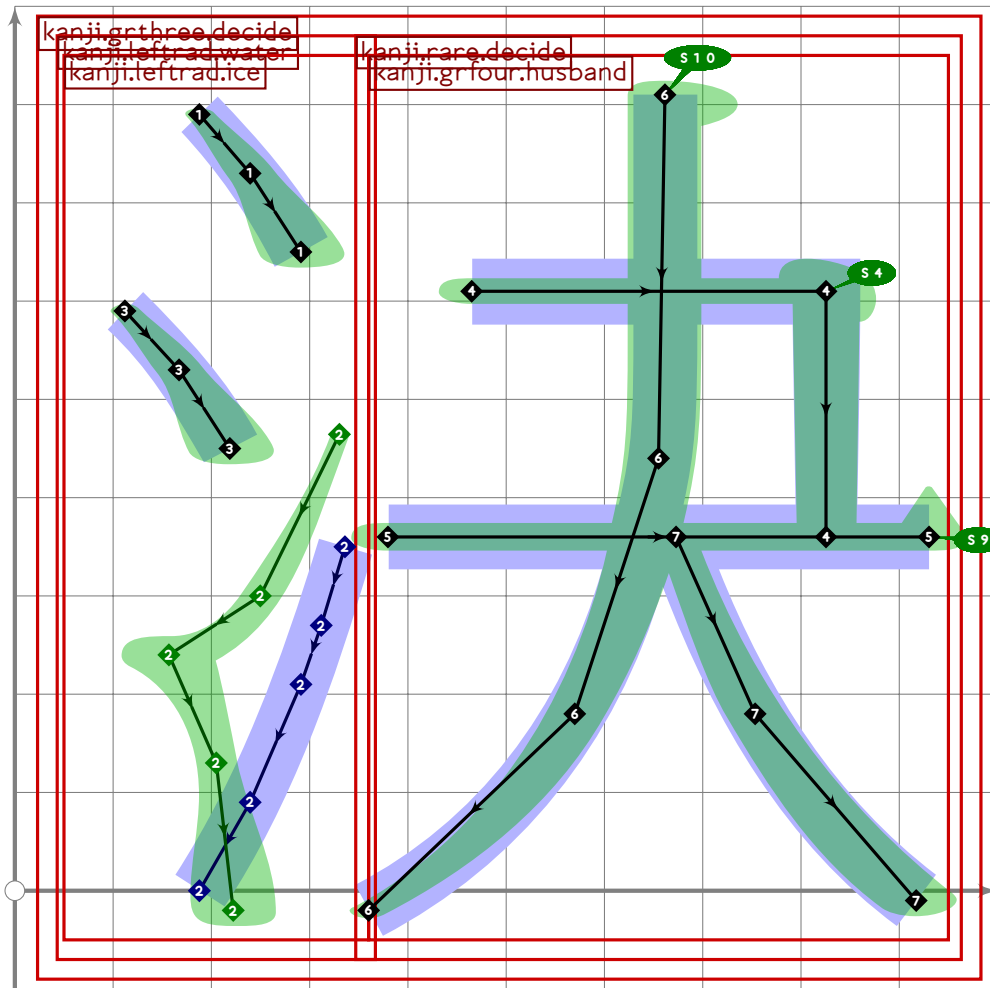
```

```

121
122 vardef tsu_curve.kanji.grtwo.steam =
123   push_pbox_toexpand("kanji.grtwo.steam");
124   build_kanji.lr(360,20-50*mincho)
125     (tsu_curve.kanji.leftrad.water)
126     (build_kanji.steam_enclose((700,400))());
127   expand_pbox;
128 enddef;
129
130

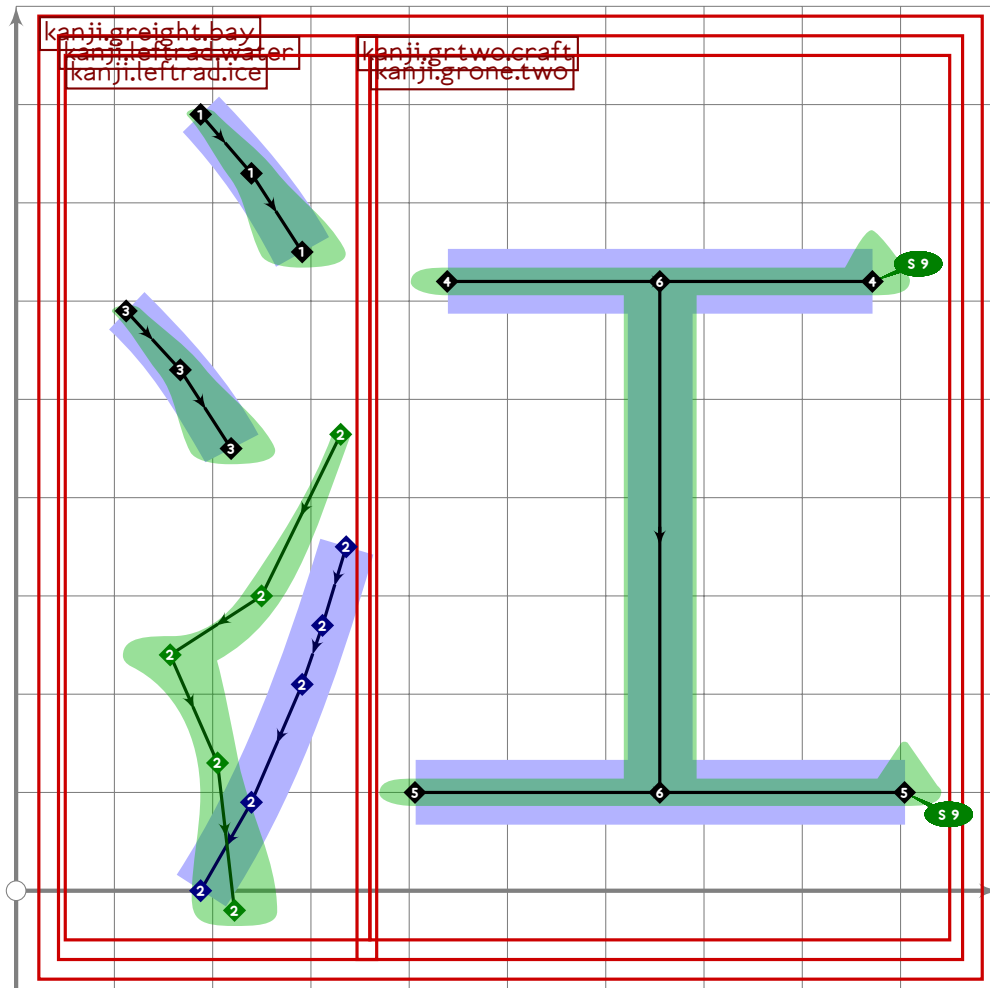
```



```

131
132 vardef tsu_curve.kanji.grthree.decide =
133   push_pbox_toexpand("kanji.grthree.decide");
134   build_kanji.lr(360,0)
135     (tsu_curve.kanji.leftrad.water)
136     (tsu_curve.kanji.rare.decide);
137   expand_pbox;
138 enddef;
139
140

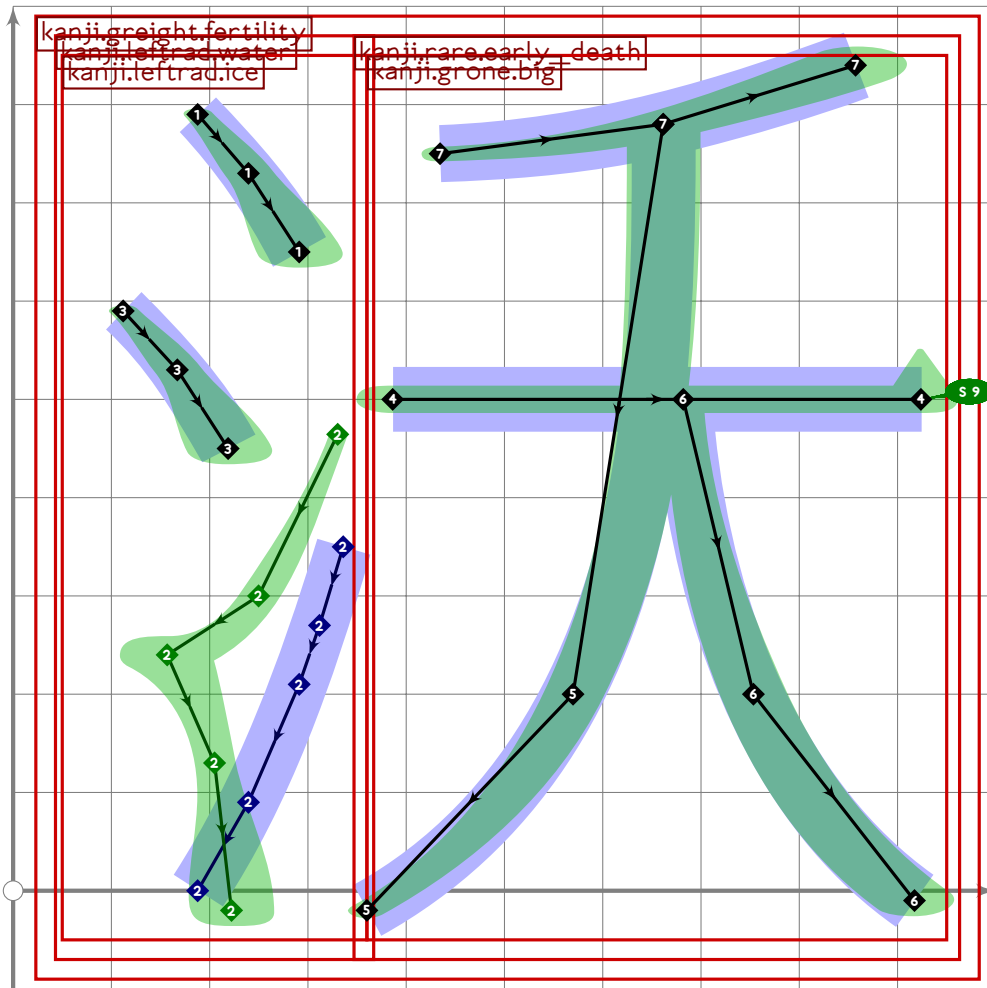
```

```

141
142 vardef tsu_curve.kanji.greight.bay =
143   push_pbox_toexpand("kanji.greight.bay");
144   build_kanji.lr(360,0)
145     (tsu_curve.kanji.leftrad.water)
146     (tsu_curve.kanji.grtwo.craft);
147   expand_pbox;
148 enddef;

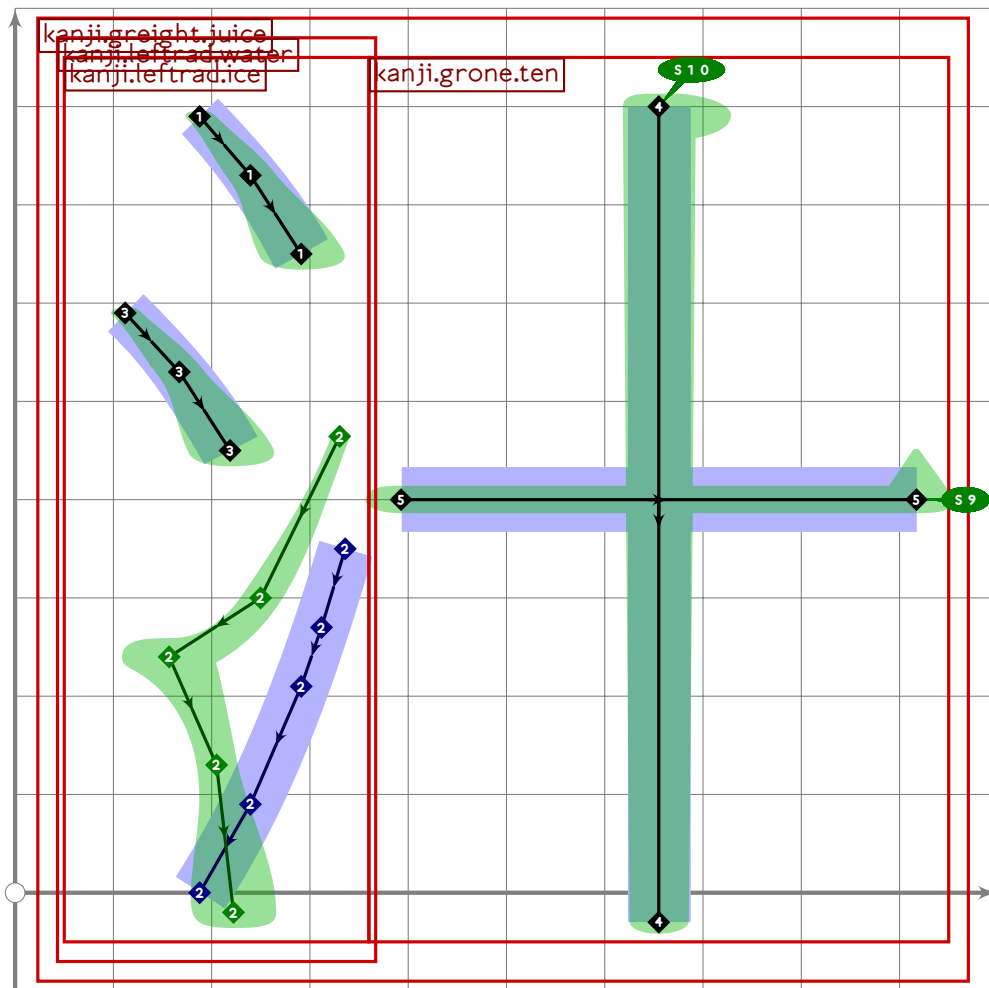
```



```

149
150 vardef tsu_curve.kanji.greight.fertility =
151   push_pbox_toexpand("kanji.greight.fertility");
152   build_kanji.lr(360,0)
153     (tsu_curve.kanji.leftrad.water)
154     (tsu_curve.kanji.rare.early_death);
155   expand_pbox;
156 enddef;

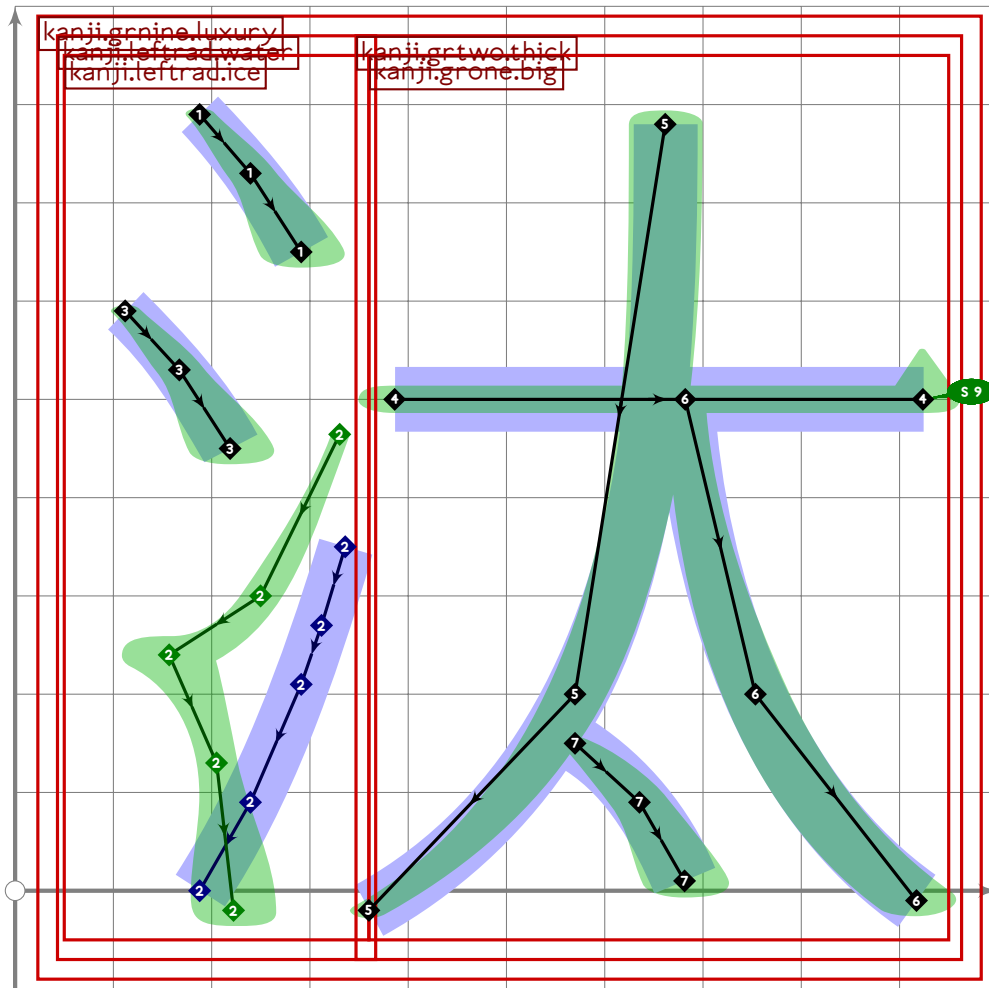
```



```

157
158 vardef tsu_curve.kanji.greight.juice =
159   push_pbox_toexpand("kanji.greight.juice");
160   build_kanji.lr(360,0)
161     (tsu_curve.kanji.leftrad.water)
162     (tsu_curve.kanji.grone.ten);
163   expand_pbox;
164 enddef;
165
166

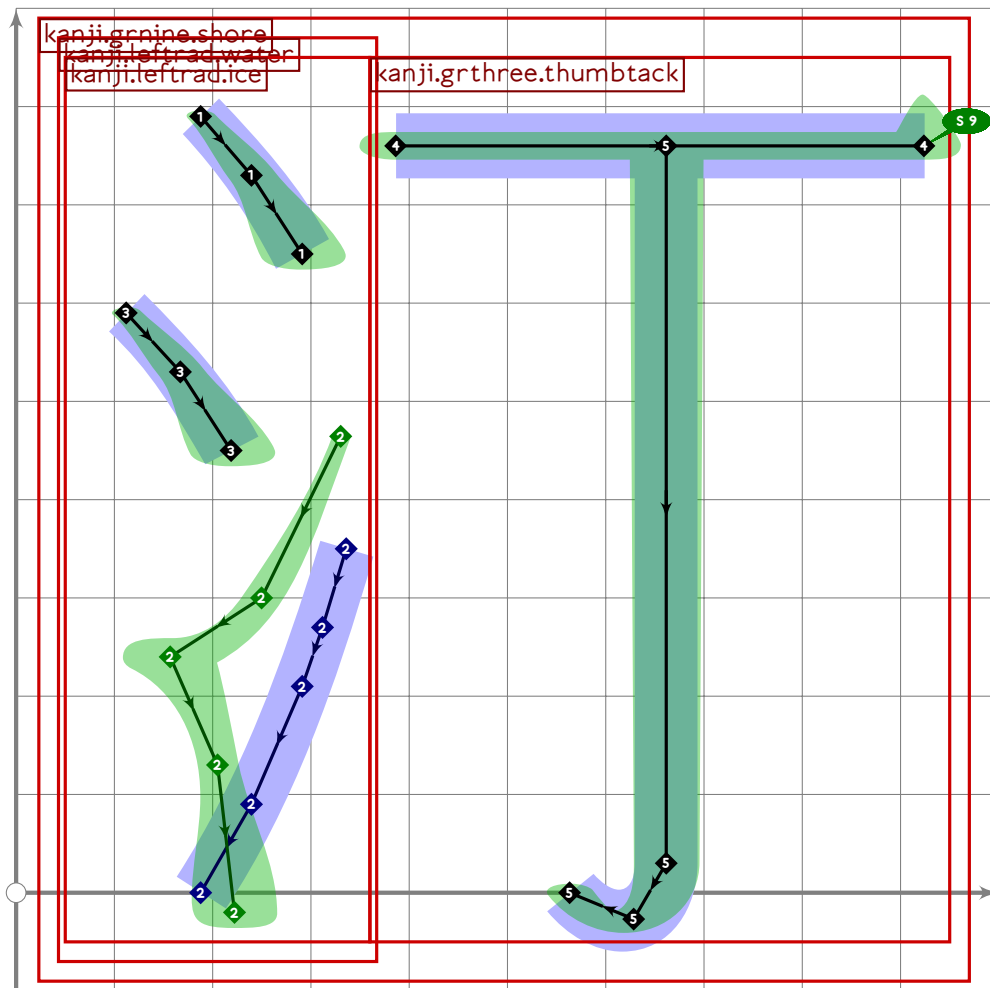
```



```

167
168 vardef tsu_curve.kanji.grnine.luxury =
169   push_pbox_toexpand("kanji.grnine.luxury");
170   build_kanji.lr(360,0)
171     (tsu_curve.kanji.leftrad.water)
172     (tsu_curve.kanji.grtwo.thick);
173   expand_pbox;
174 enddef;

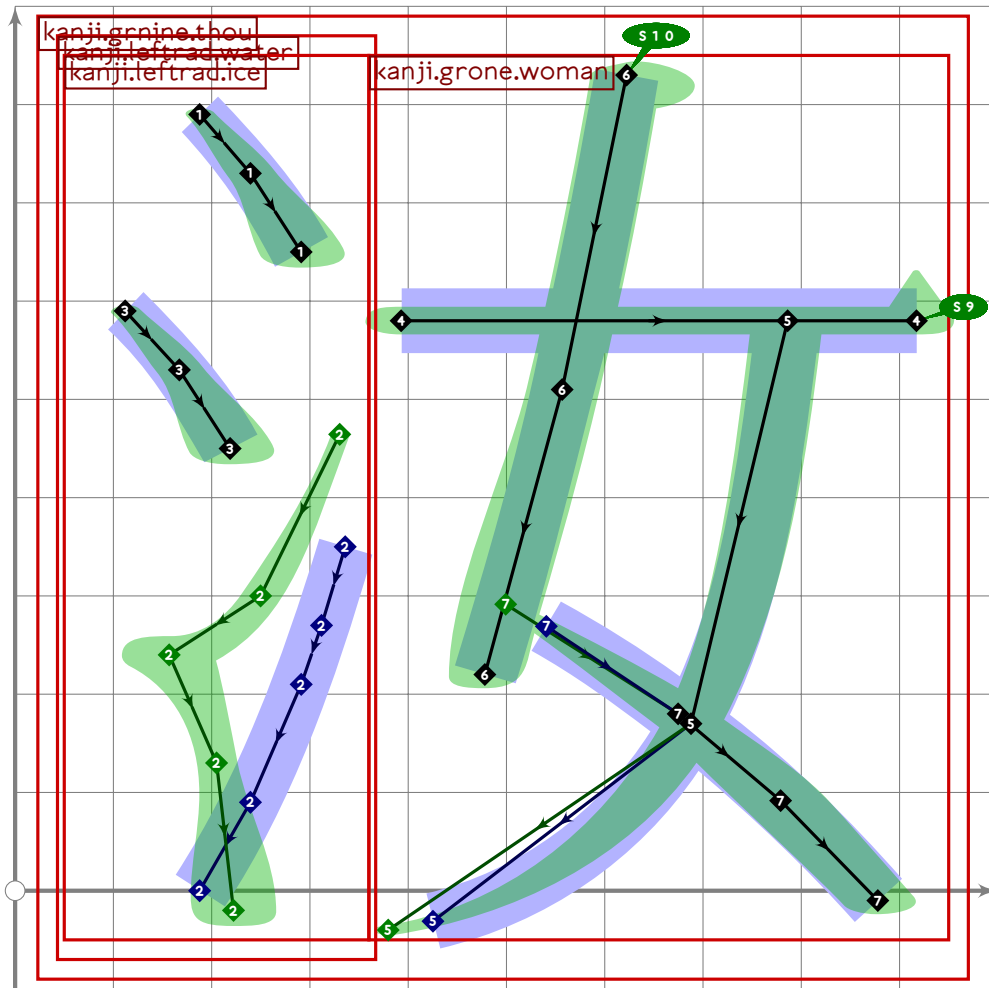
```



```

175
176 vardef tsu_curve.kanji.grnine.shore =
177   push_pbox_toexpand("kanji.grnine.shore");
178   build_kanji.lr(360,0)
179     (tsu_curve.kanji.leftrad.water)
180     (tsu_curve.kanji.grthree.thumbtack);
181   expand_pbox;
182 enddef;

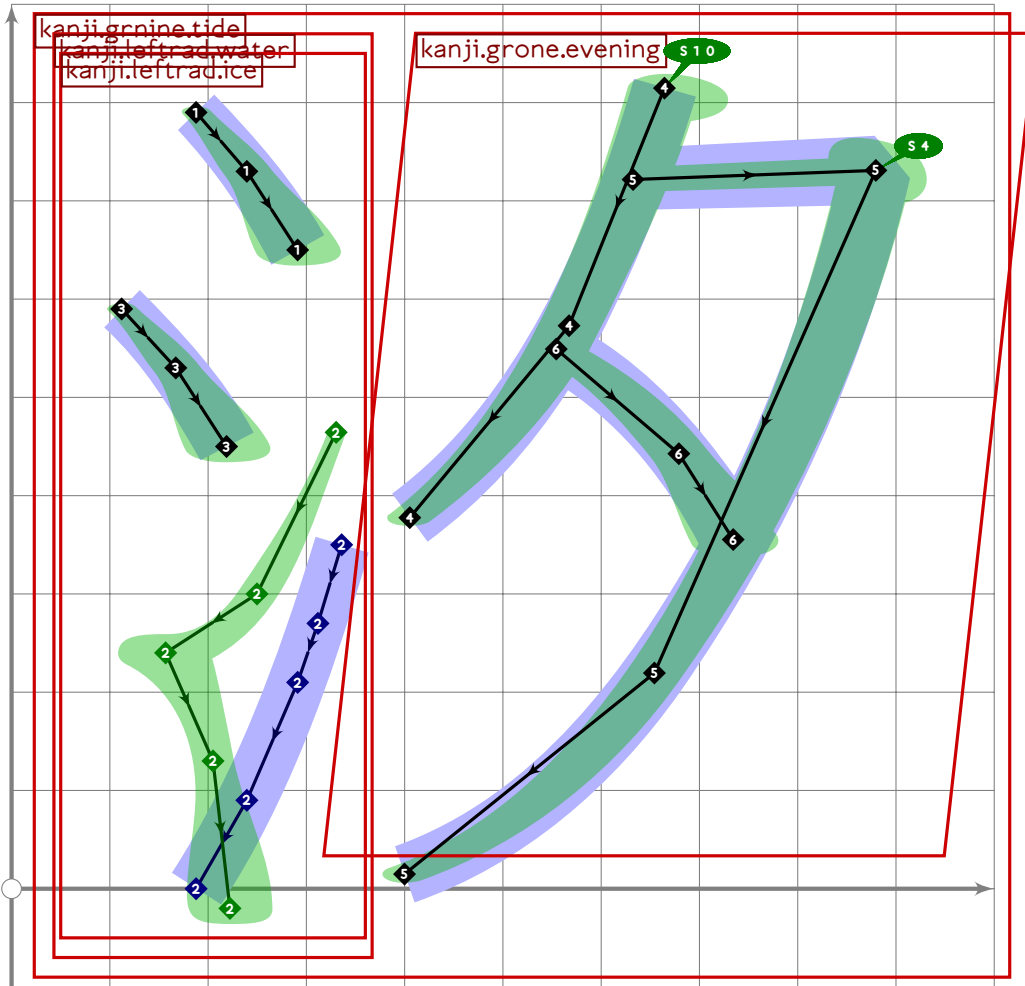
```



```

183
184 vardef tsu_curve.kanji.grnine.thou =
185   push_pbox_toexpand("kanji.grnine.thou");
186   build_kanji.lr(360,0)
187     (tsu_curve.kanji.leftrad.water)
188     (tsu_curve.kanji.grone.woman);
189   expand_pbox;
190 enddef;

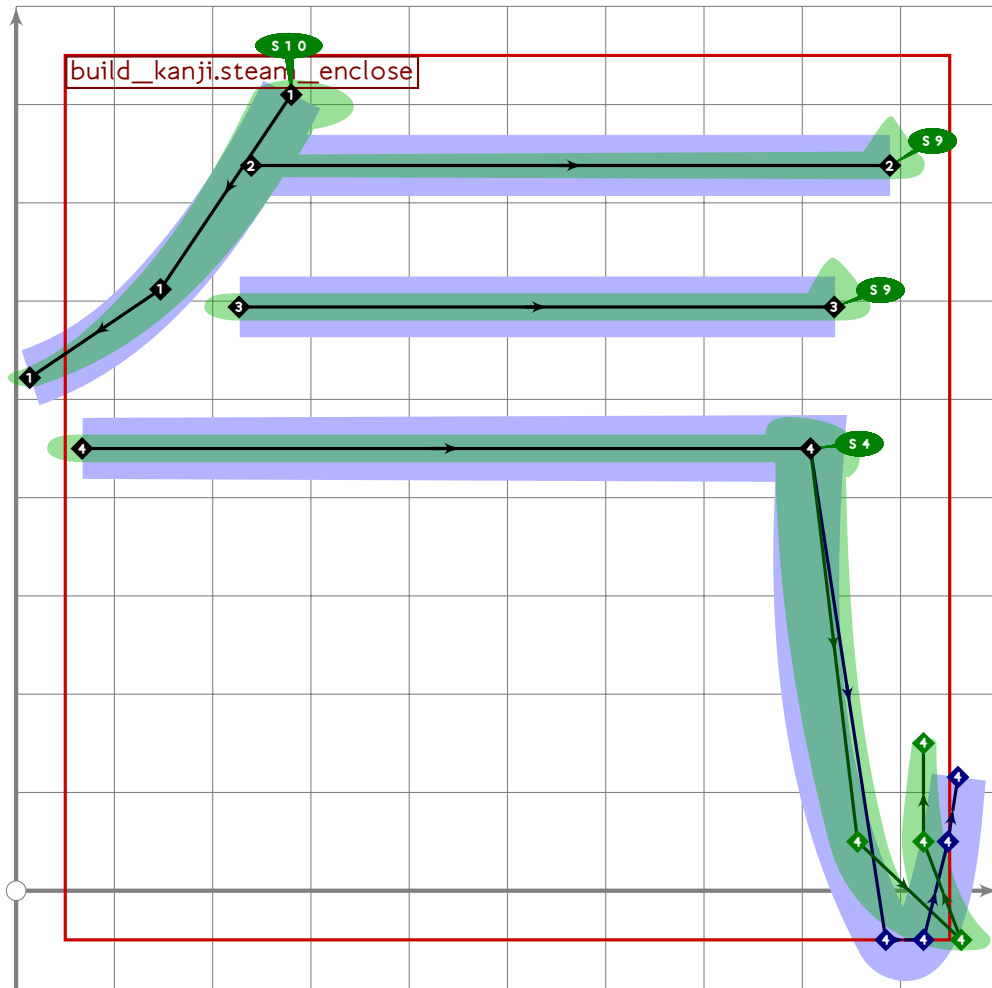
```



```

191
192 vardef tsu_curve.kanji.grnine.tide =
193   push_pbox_toexpand("kanji.grnine.tide");
194   build_kanji.lr(360,0)
195     (tsu_curve.kanji.leftrad.water)
196     (tsu_xform(identity xyscaled (1.07,0.93) slanted 0.17 shifted (-60,80))
197       (tsu_curve.kanji.grone.evening));
198   expand_pbox;
199 enddef;
200
201
202

```

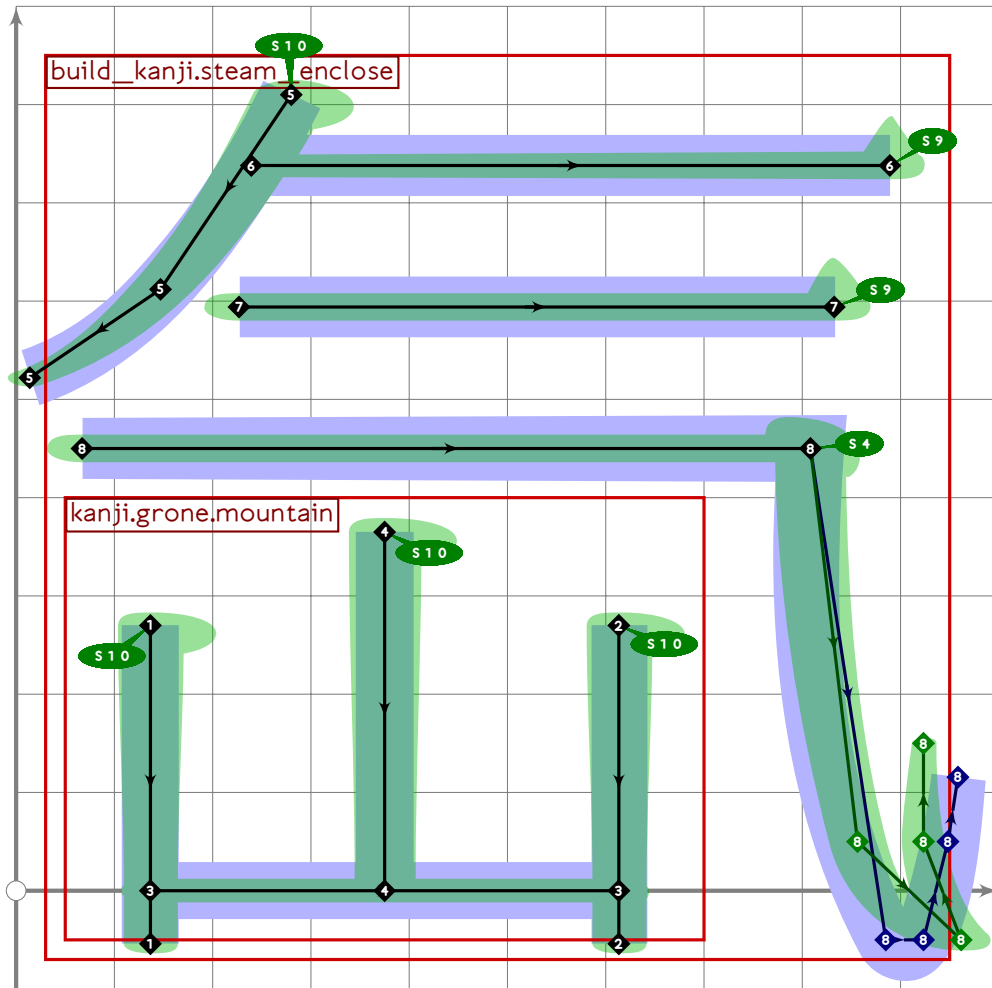


```

203 % sei/tada/machi "correct"
204 begint Suglyph("uni6C14",20);
205 build_kanji.steam_enclose((700,400))();
206 tsu_render;
207 endtsuglyph;
208
209 % ki/iki "spirit"
210 begint Suglyph("uni6C17",23);
211 tsu_curve.kanji.grone.spirit;
212 tsu_render;
213 endtsuglyph;
214

```

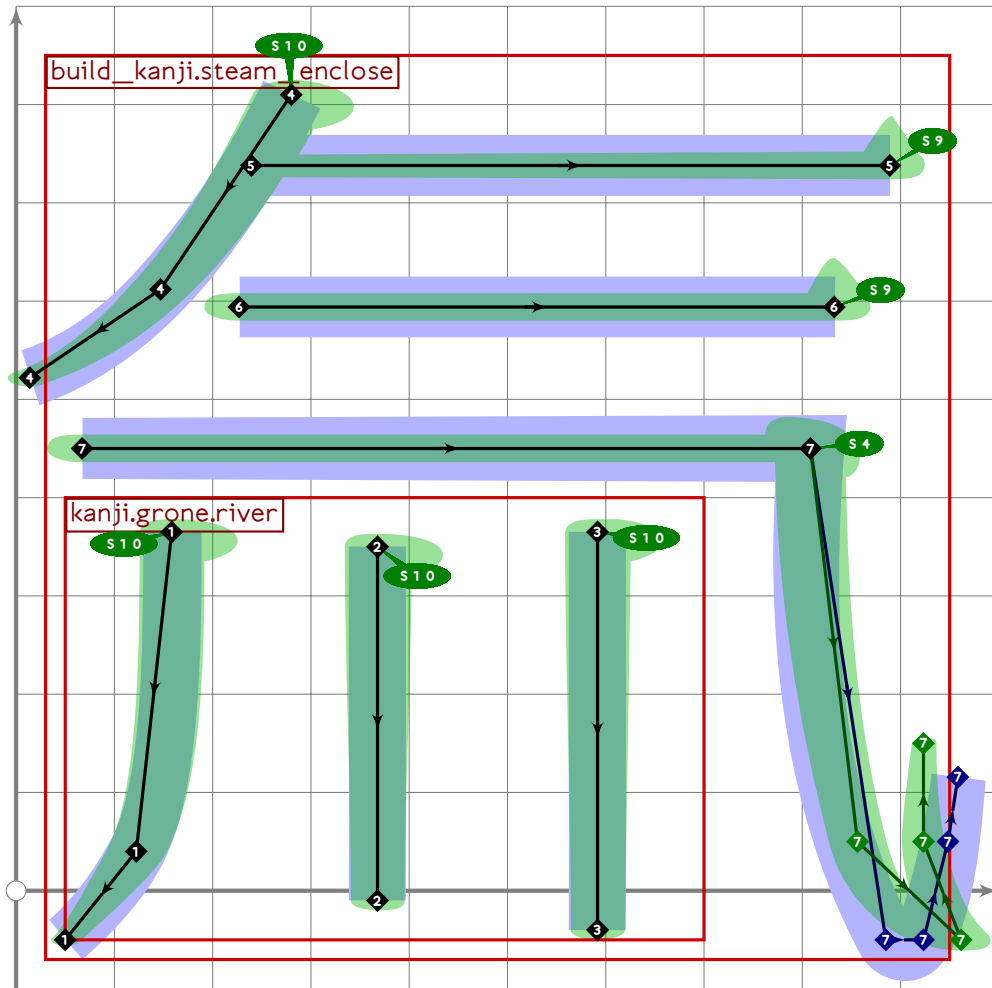
[see page 1405]



```

215 % extra
216 begint Suglyph("uni6C19";25);
217 build_kanji.steam_enclose((700,400))(tsu_curve.kanji.grone.mountain);
218 tsu_render;
219 endtsuglyph;
220

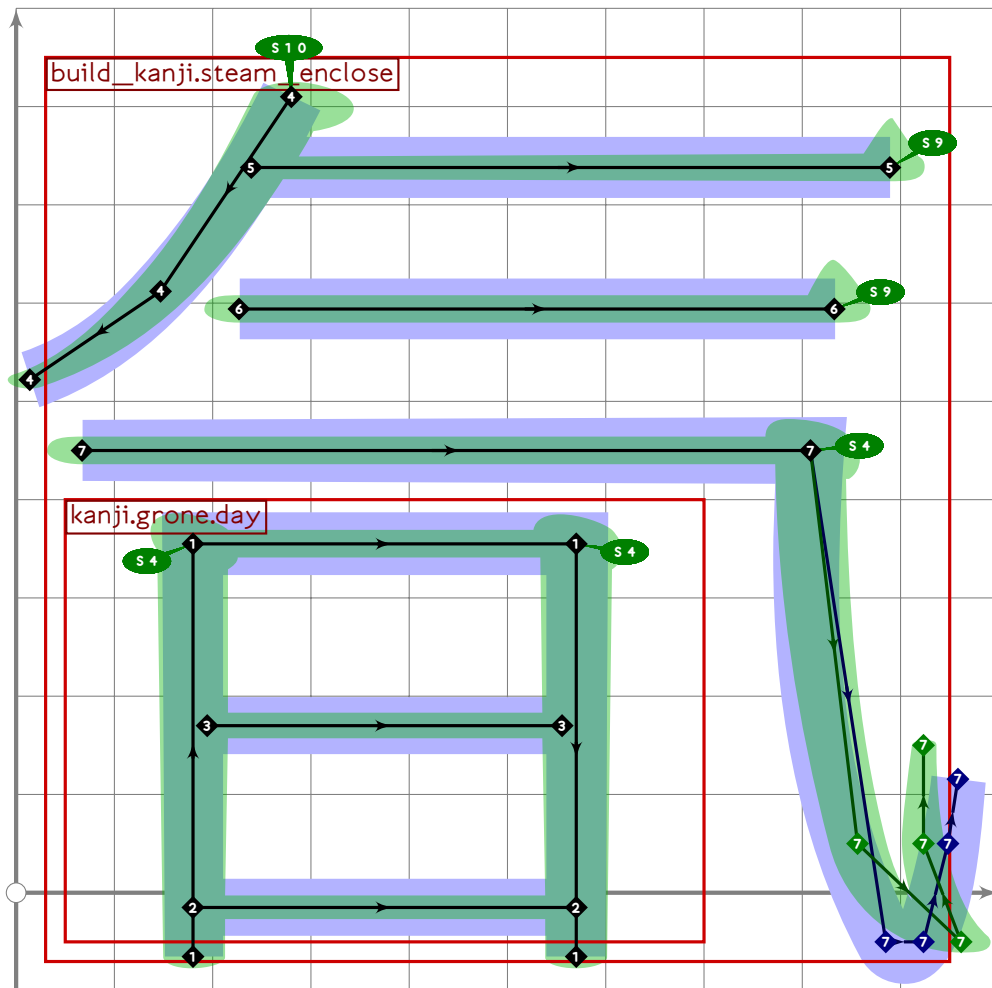
```



```

221 % extra
222 begint Suglyph("uni6C1A",26);
223 build_kanji.steam_enclose((700,400))(tsu_curve.kanji.grone.river);
224 tsu_render;
225 endtsuglyph;
226

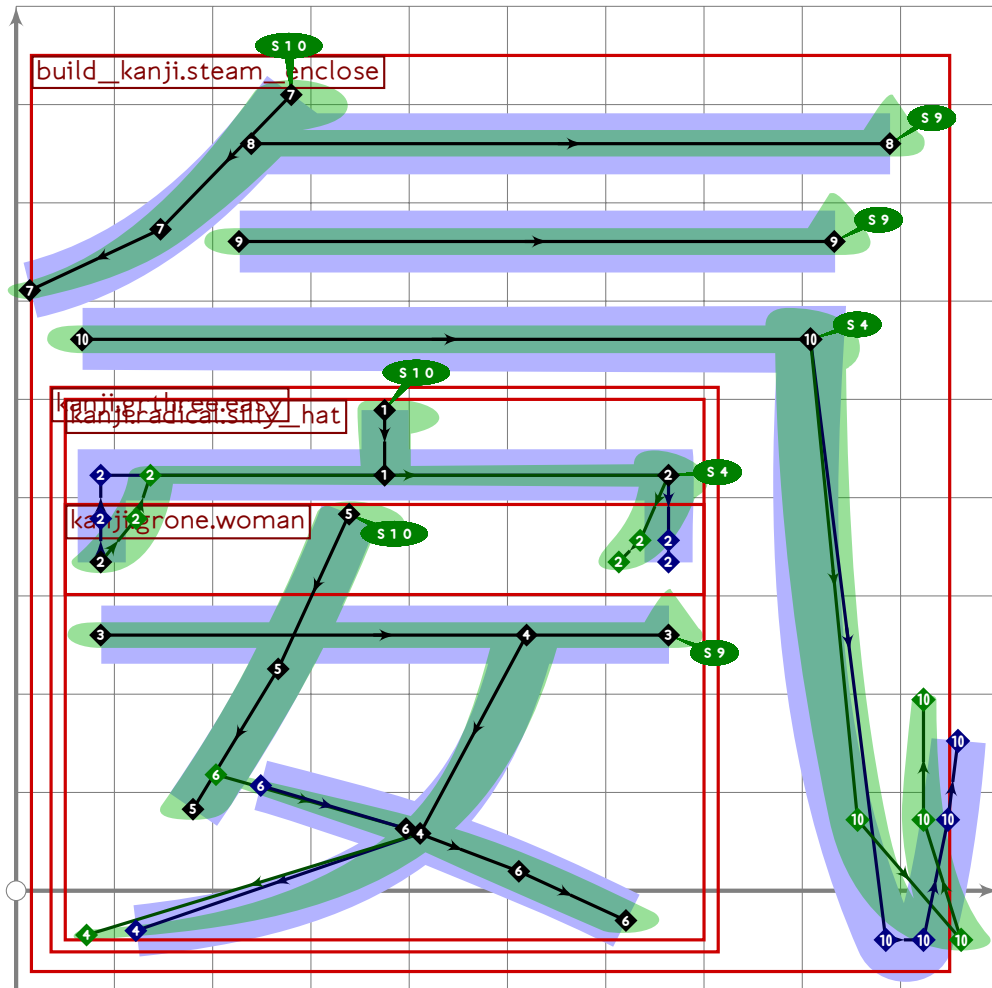
```



```

227 % extra
228 begint Suglyph("uni6C1C",28);
229 build_kanji.steam_enclose((700,400))(tsu_curve.kanji.grone.day);
230 tsu_render;
231 endtsuglyph;
232

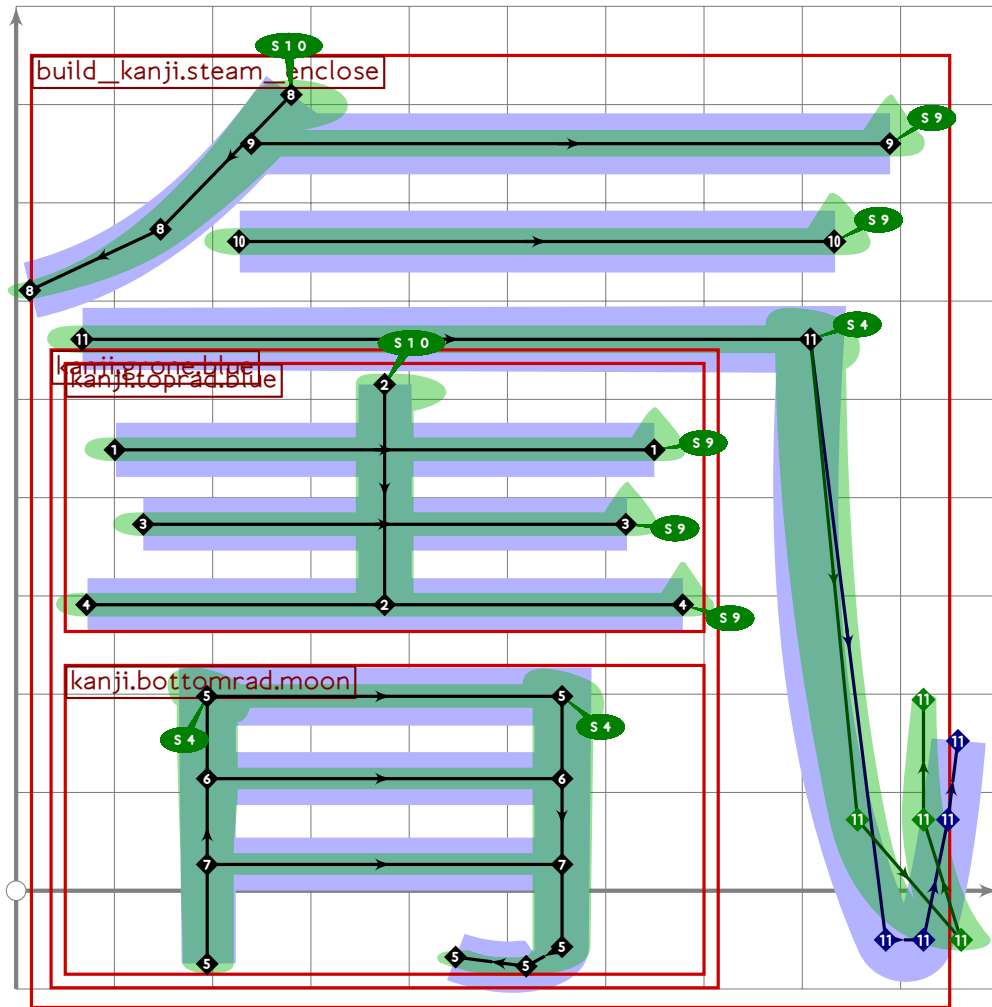
```



```

233 % extra
234 begint Suglyph("uni6C28";40);
235 build_kanji.steam_enclose((700,500))(tsu_curve.kanji.grthree.easy);
236 tsu_render;
237 endsuglyph;
238

```

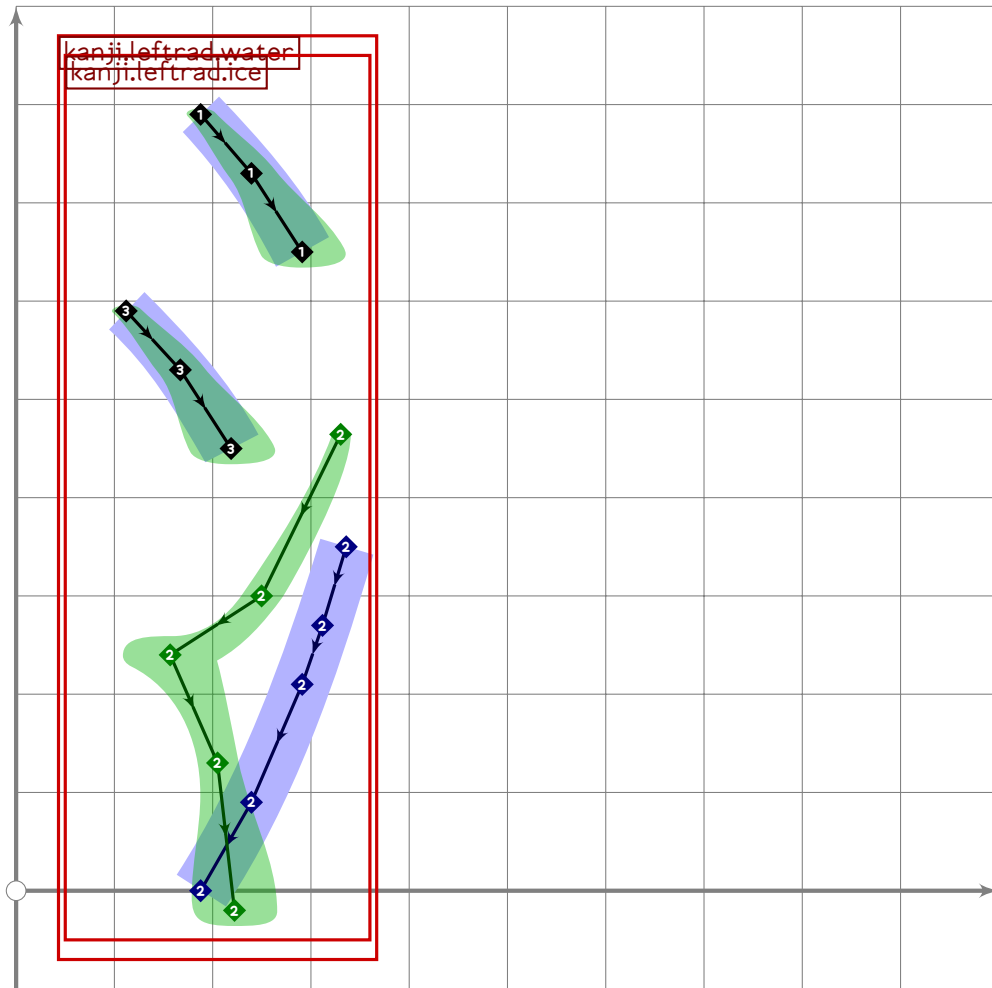


```

239 % extra
240 begintsuglyph("uni6C30",48);
241 build_kanji.steam_enclose((700,500)
242 (build_kanji.sscale(yscaled 1.13)(tsu_curve.kanji.grone.blue));
243 tsu_render;
244 endsuglyph;
245
246 % sui/mizu "water"
247 begintsuglyph("uni6C34",52);
248 tsu_curve.kanji.grone.water;
249 tsu_render;
250 endsuglyph;
251

```

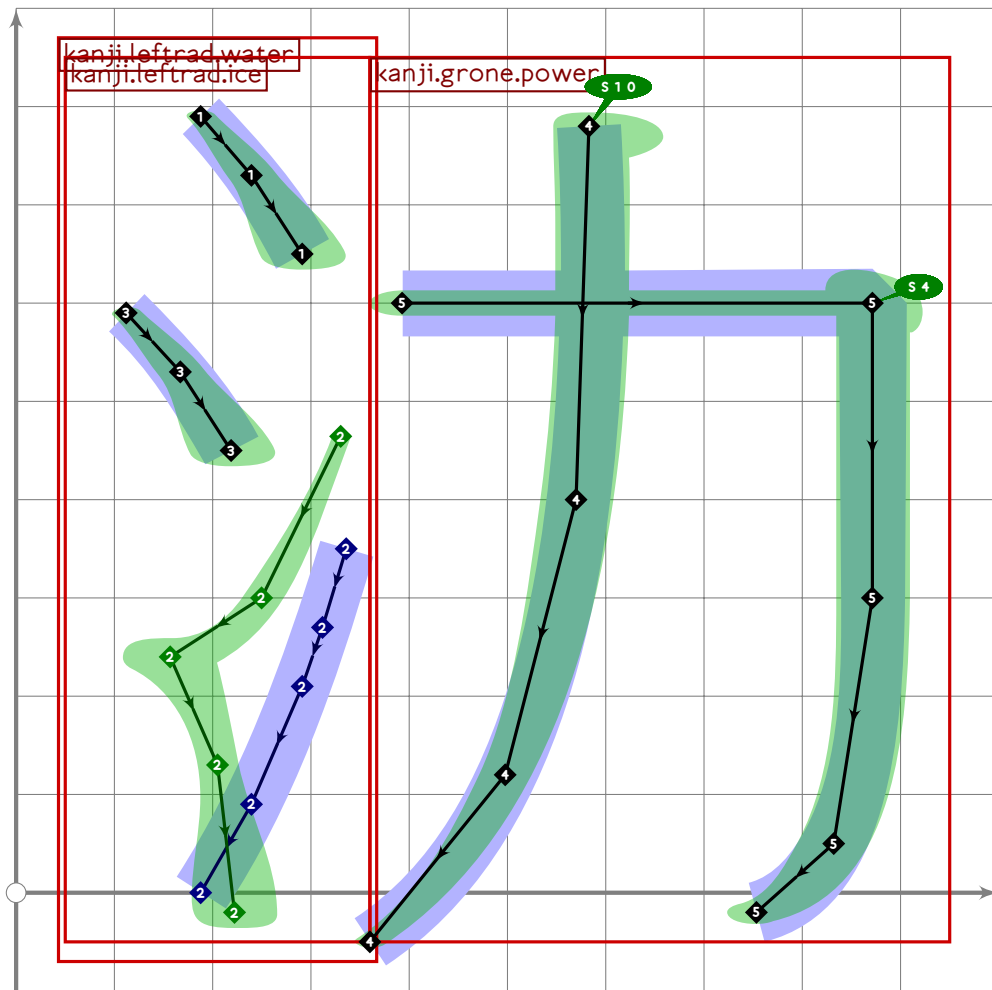
[see page 387]



```

252 % extra "water side radical"
253 begint Suglyph("uni6C35",53);
254 build_kanji.lr(360,0)
255     (tsu_curve.kanji.leftrad.water)
256     ();
257 tsu_render;
258 endtsuglyph;
259

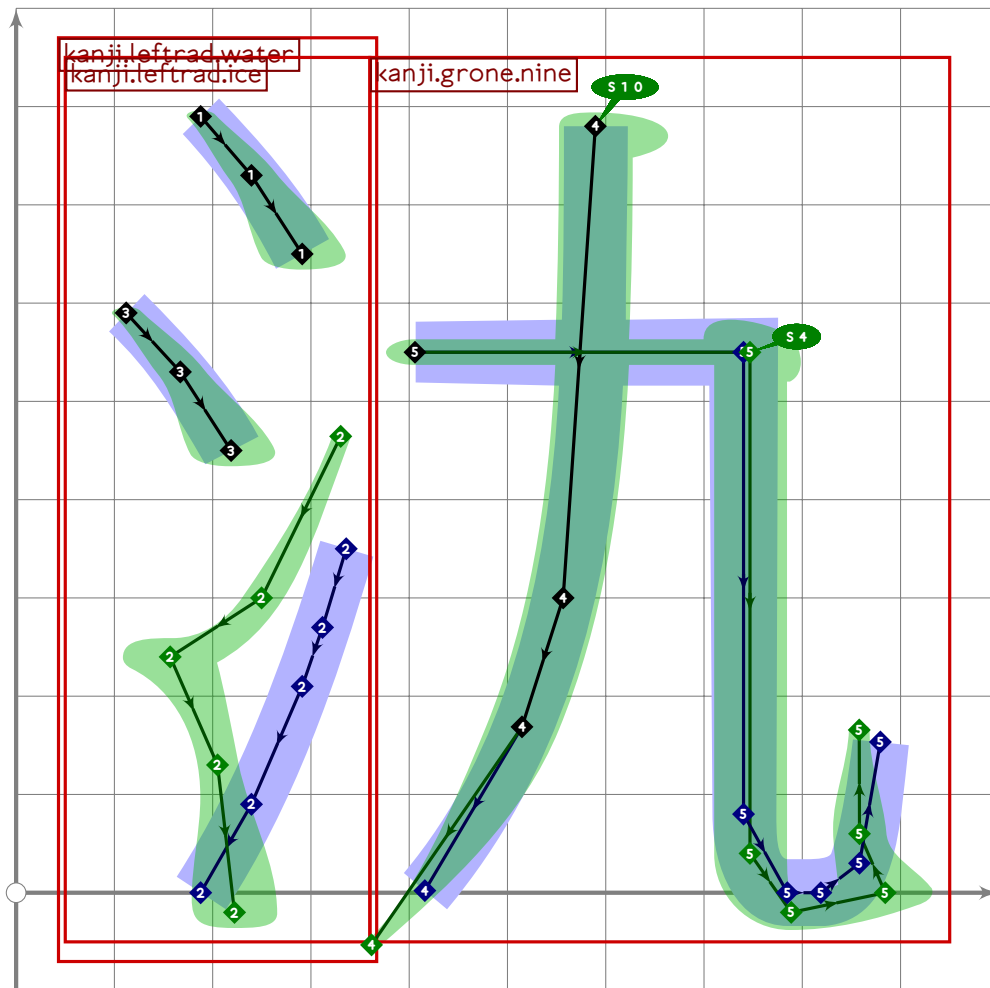
```



```

260 % extra
261 begint Suglyph("uni6C3B",59);
262 build_kanji.lr(360,0)
263   (tsu_curve.kanji.leftrad.water)
264   (tsu_curve.kanji.grone.power);
265   tsu_render;
266 endsuglyph;
267

```



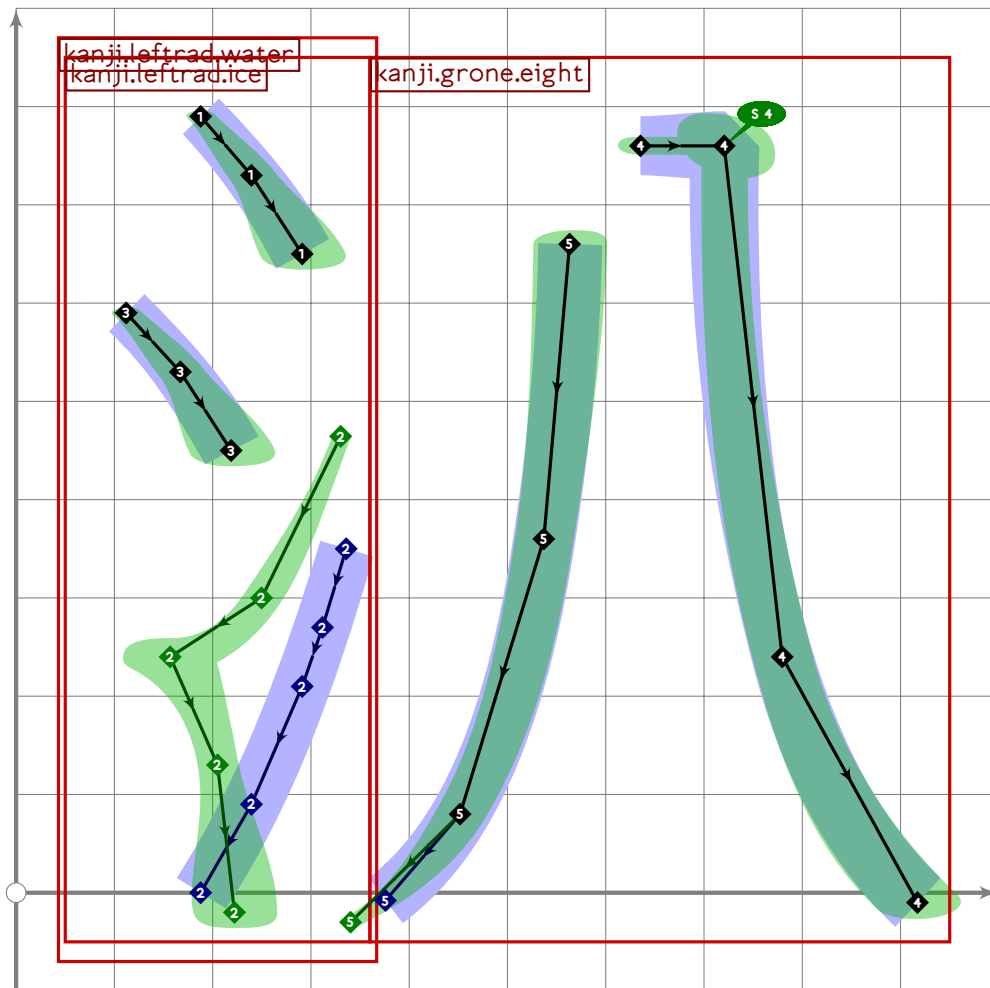
```

268 % extra
269 begintsuglyph("uni6C3F",63);
270 build_kanji.lr(360,0)
271 (tsu_curve.kanji.leftrad.water)
272 (tsu_curve.kanji.grone.nine);
273 tsu_render;
274 endtsuglyph;
275
276 % tei/migiwa "shore"
277 begintsuglyph("uni6C40",64);
278 tsu_curve.kanji.grnine.shore;
279 tsu_render;
280 endtsuglyph;
281
282 % juu/shiru "juice" or "soup"
283 begintsuglyph("uni6C41",65);
284 tsu_curve.kanji.greight.juice;
285 tsu_render;
286 endtsuglyph;
287

```

[see page 1413]

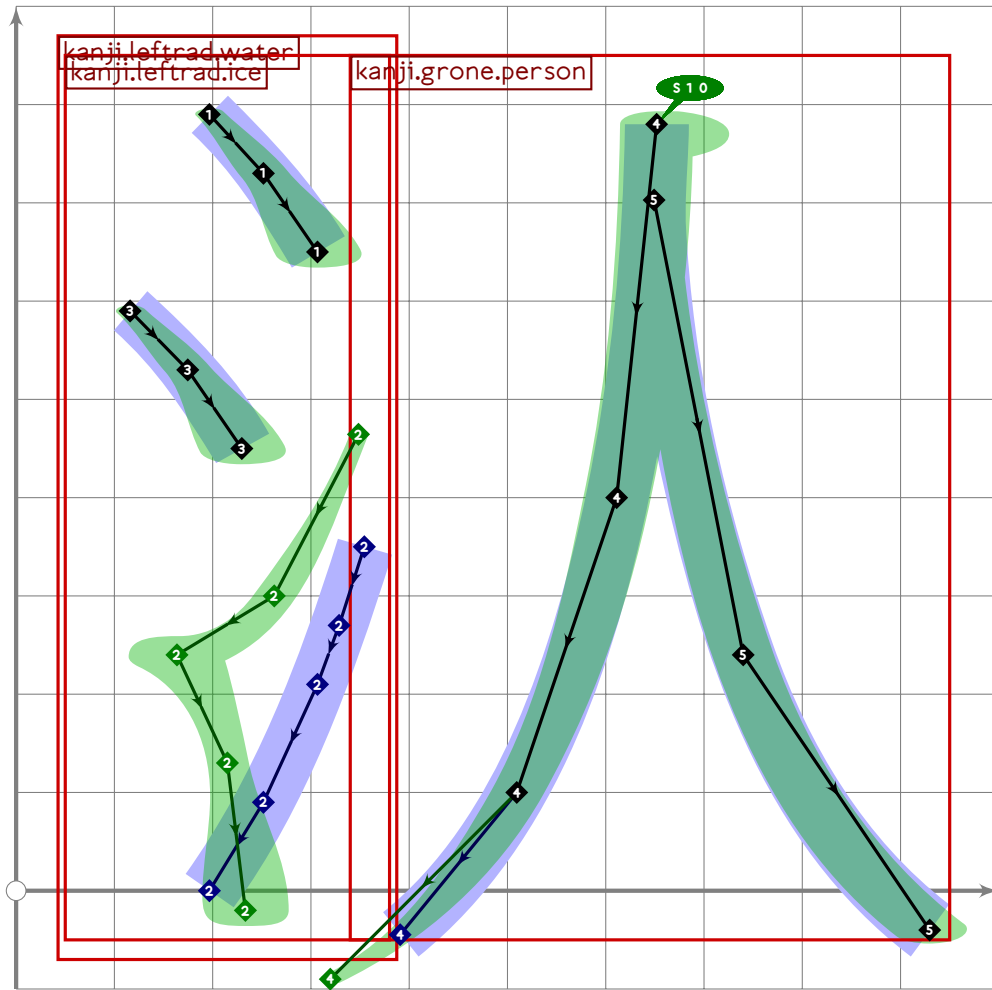
[see page 1411]



```

288 % extra
289 begint Suglyph("uni6C43",67);
290 build_kanji.lr(360,0)
291 (tsu_curve.kanji.leftrad.water)
292 (tsu_curve.kanji.grone.eight);
293 tsu_render;
294 endtsuglyph;
295

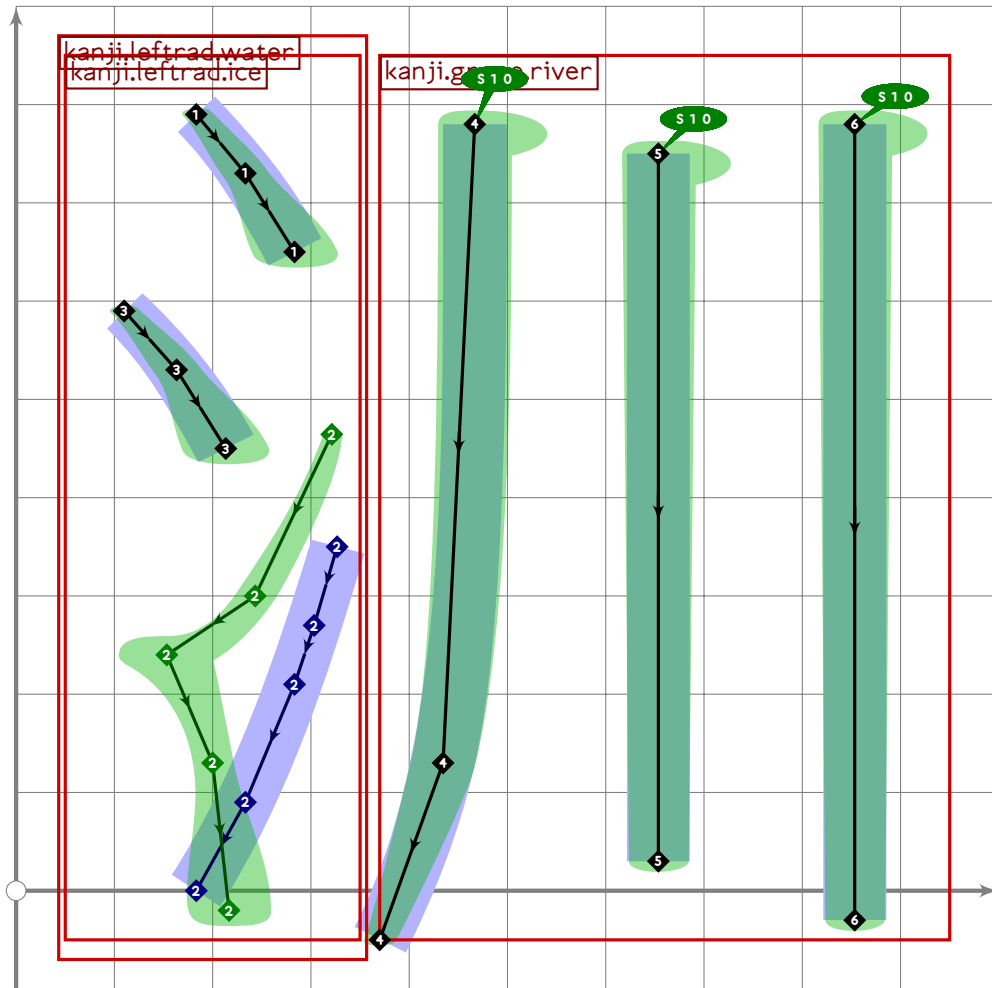
```



```

296 % extra
297 begint Suglyph("uni6C44",68);
298 build_kanji.lr(360,40)
299   (tsu_curve.kanji.leftrad.water)
300   (tsu_curve.kanji.grone.person);
301   tsu_render;
302 endsuglyph;
303

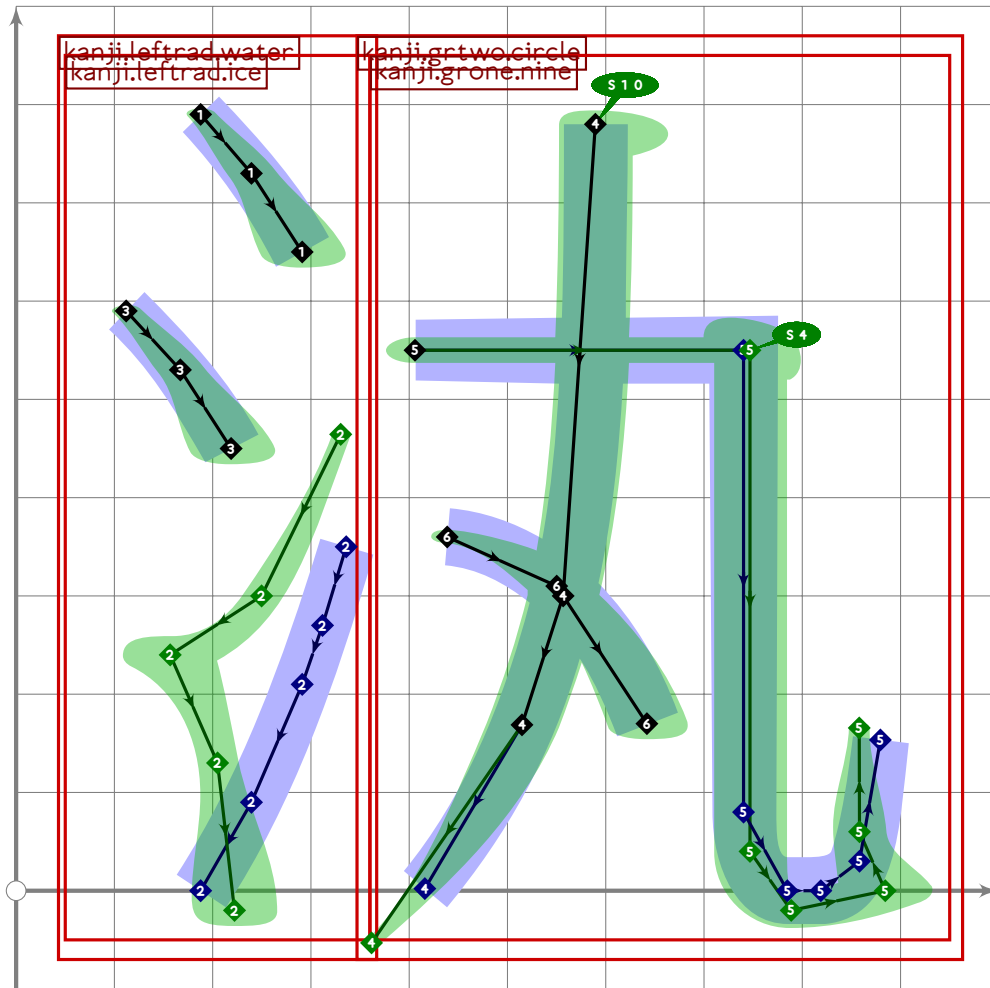
```



```

304 % extra
305 begint Suglyph("uni6C4C";76);
306 build_kanji.lr(360;20)
307   (tsu_curve.kanji.leftrad.water)
308   (tsu_curve.kanji.g.rone.river);
309   tsu_render;
310 endtsuglyph;
311

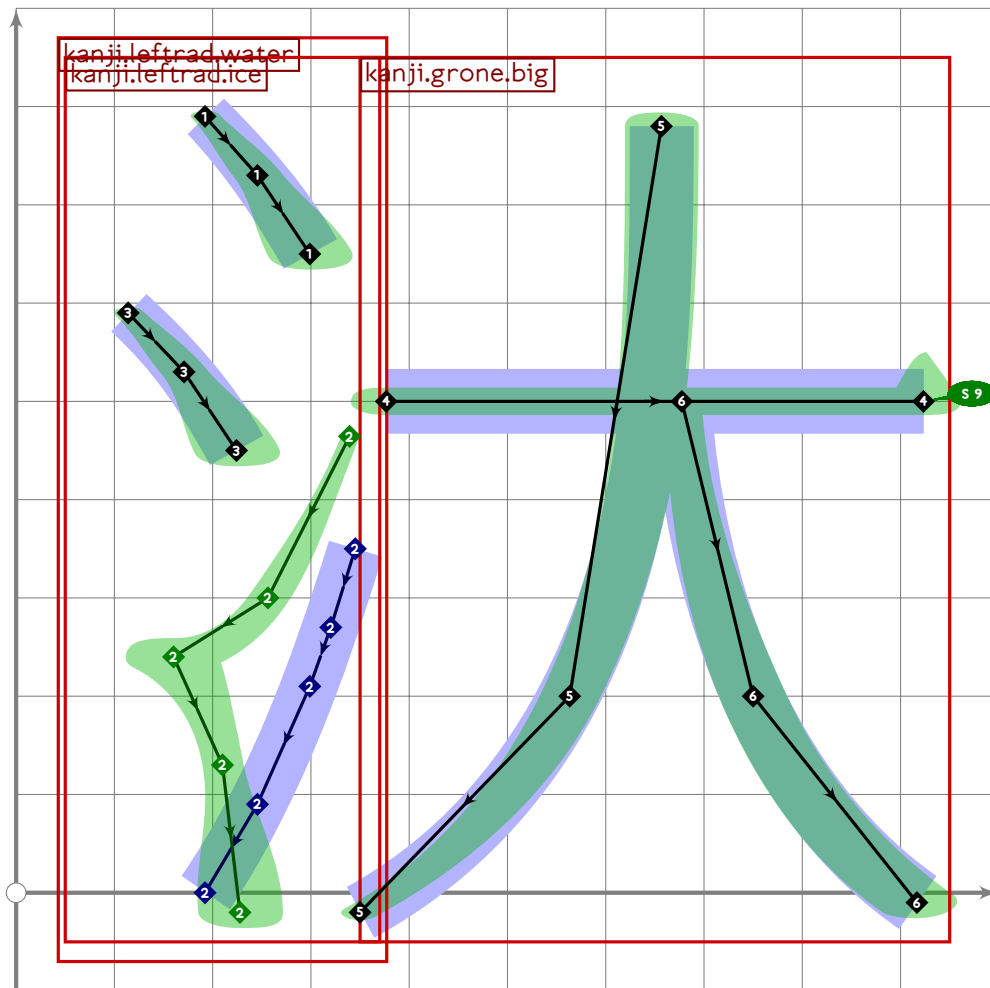
```



```

312 % extra
313 begint Suglyph("uni6C4D";77);
314 build_kanji.lr(360,0)
315   (tsu_curve.kanji.leftrad.water)
316   (tsu_curve.kanji.grtwo.circle);
317   tsu_render;
318   endtsuglyph;
319

```

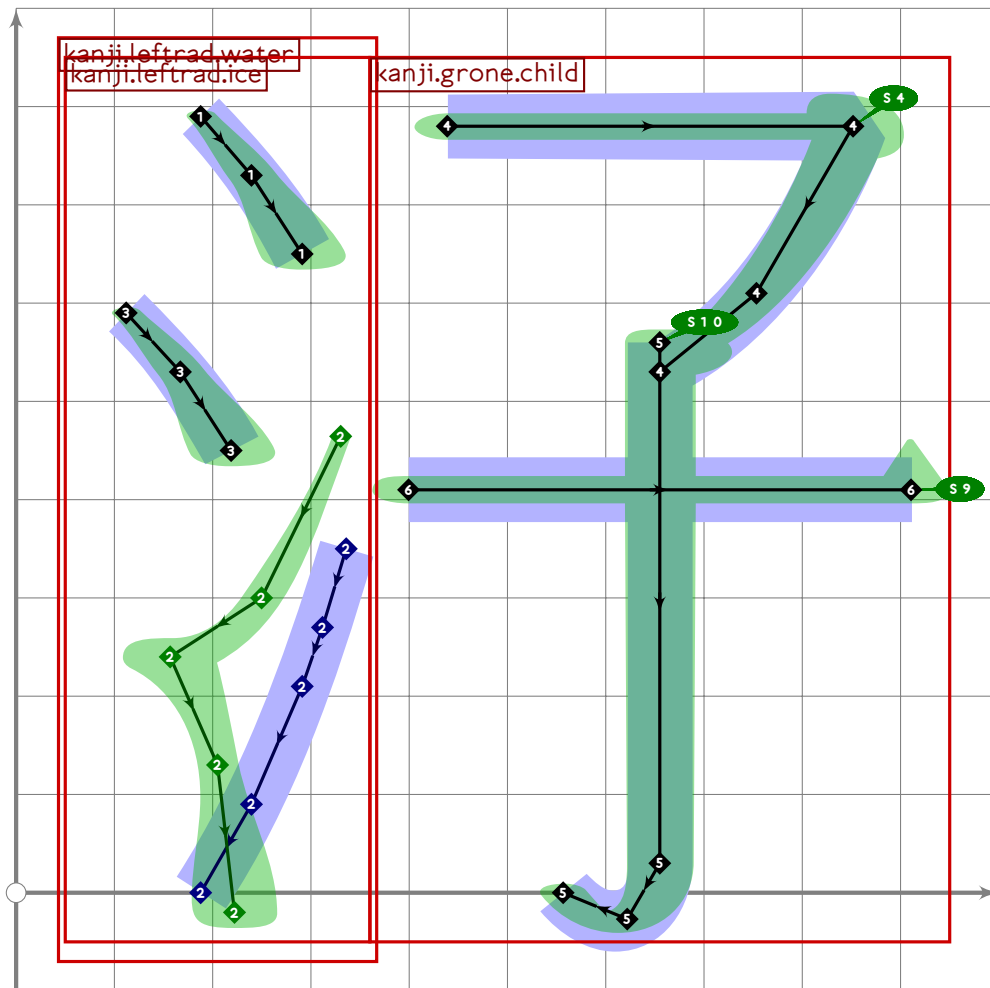


```

320 % extra
321 begintsuglyph("uni6C4F";79);
322 build_kanji.lr(360,20)
323   (tsu_curve.kanji.leftrad.water)
324   (tsu_curve.kanji.grone.big);
325   tsu_render;
326 endtsuglyph;
327
328 % seki/shio "tide"
329 begintsuglyph("uni6C50";80);
330   tsu_curve.kanji.gnrnine.tide;
331   tsu_render;
332 endtsuglyph;
333

```

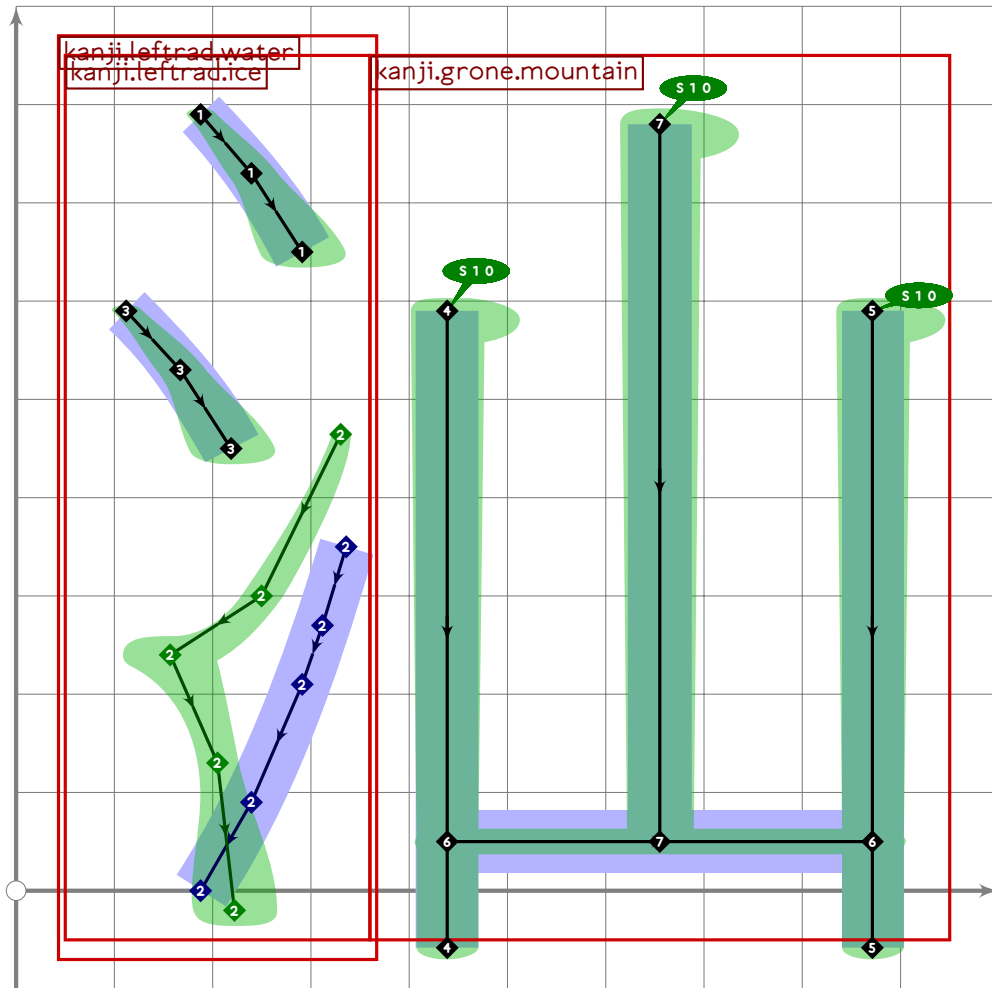
[see page 1415]



```

334 % extra
335 begint Suglyph("uni6C53",83);
336 build_kanji.lr(360,0)
337   (tsu_curve.kanji.leftrad.water)
338   (tsu_curve.kanji.grone.child);
339   tsu_render;
340 endsuglyph;
341

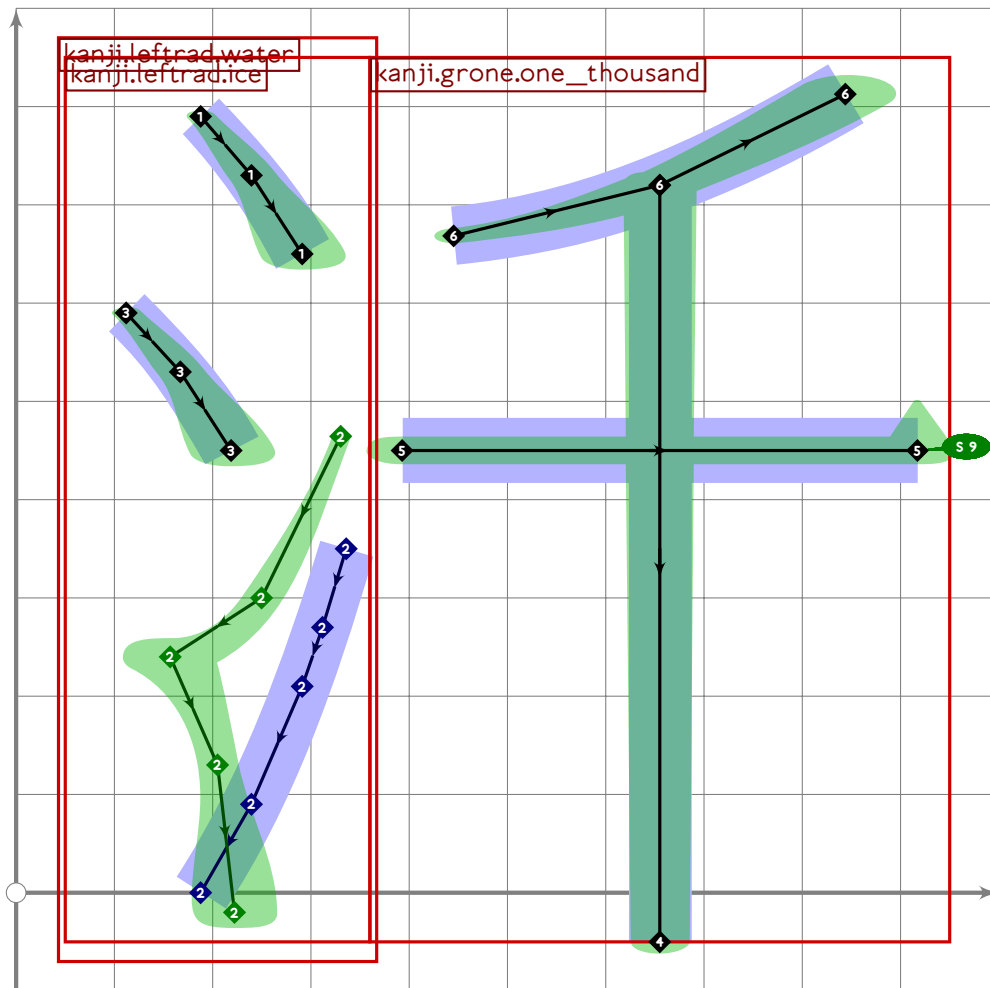
```



```

342 % extra "fish swimming"
343 beginsuglyph("uni6C55",85);
344 build_kanji.lr(360,0)
345   (tsu_curve.kanji.leftrad.water)
346   (tsu_curve.kanji.gro.ne.mountain);
347 tsu_render;
348 endsuglyph;
349

```



```

350 % extra
351 begintsuglyph("uni6C58",88);
352 build_kanji.lr(360,0)
353   (tsu_curve.kanji.leftrad.water)
354   (tsu_curve.kanji.grone.one_thousand);
355   tsu_render;
356 endtsuglyph;
357
358 % jo/nanji "thou"
359 begintsuglyph("uni6C5D",93);
360   tsu_curve.kanji.grnine.thou;
361   tsu_render;
362 endtsuglyph;
363
364 % kou/e "bay" ("e" in "Edo")
365 begintsuglyph("uni6C5F",95);
366   tsu_curve.kanji.greight.bay;
367   tsu_render;
368 endtsuglyph;
369
370 % chi/ike "pond"

```

[see page 1414]

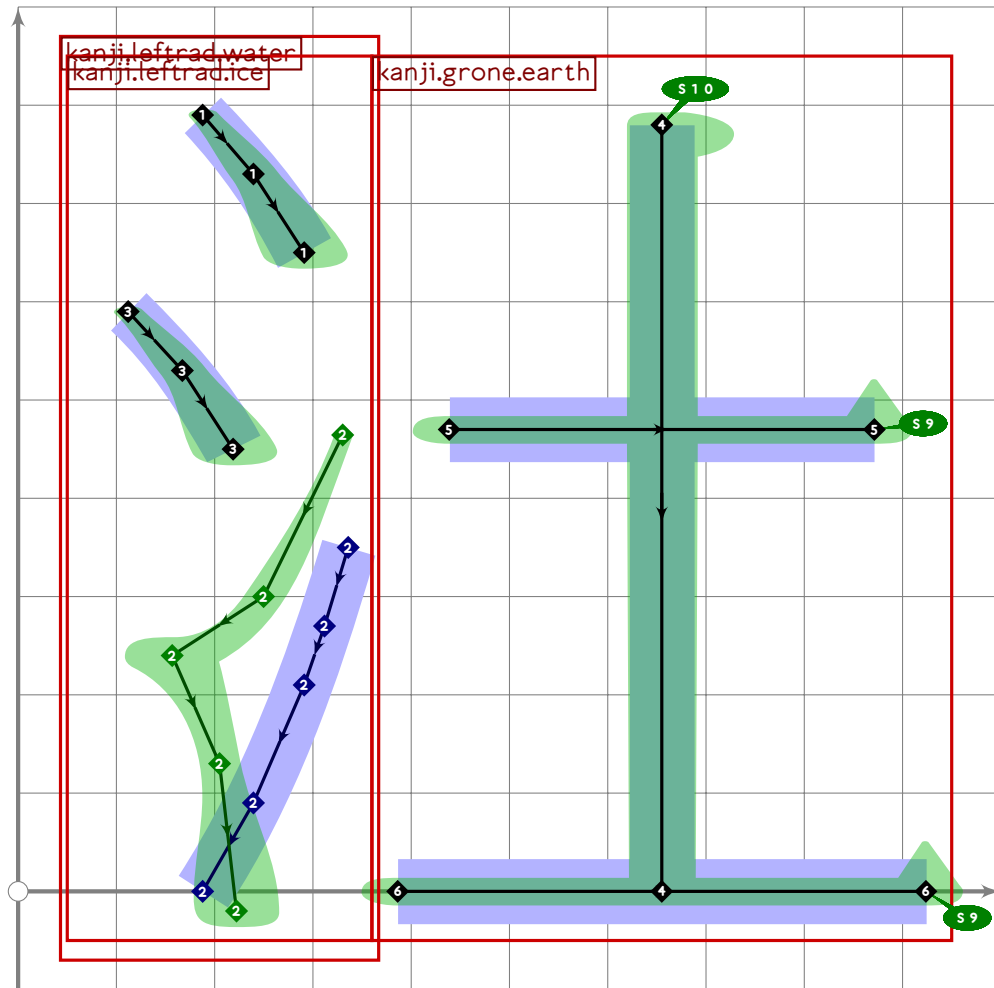
[see page 1409]


```

371 begint Suglyph("uni6C60";96);
372 tsu_curve.kanji.grtwo.pond;
373 tsu_render;
374 endtsuglyph;
375

```

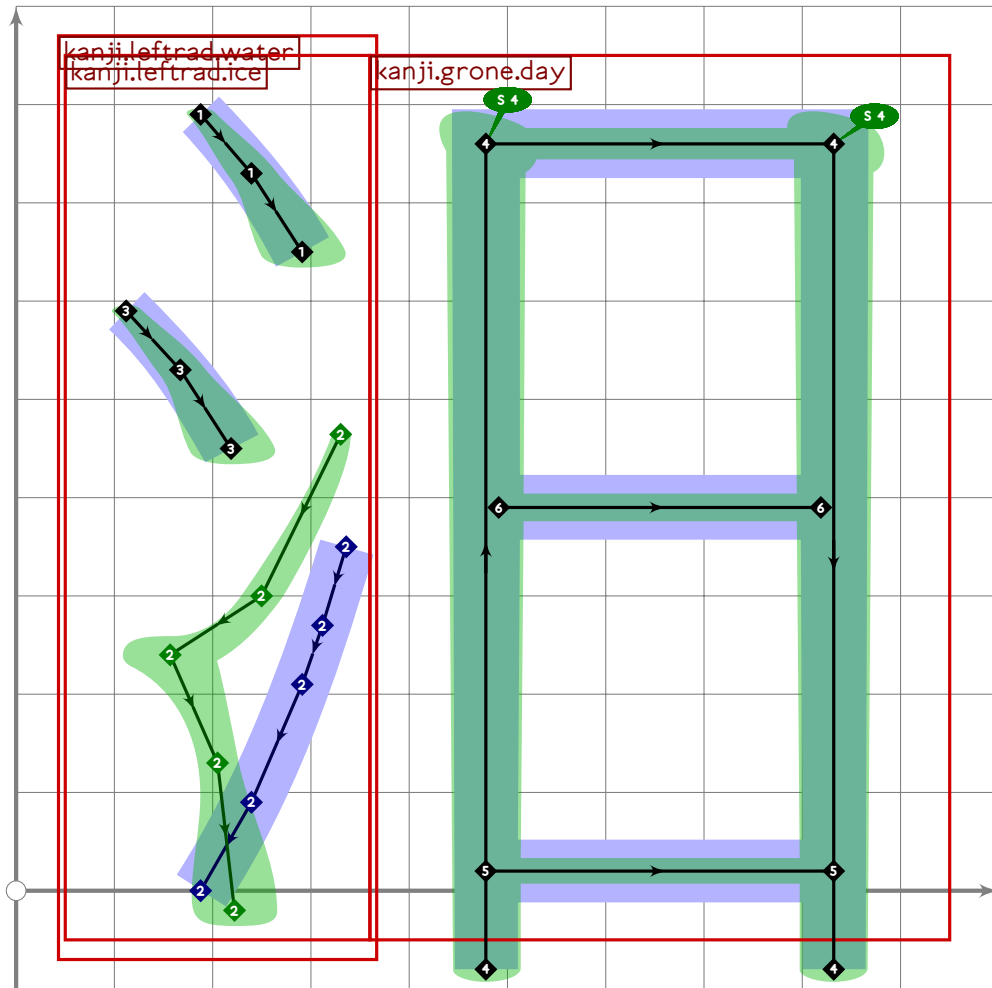
[see page 1406]



```

376 % extra
377 begint Suglyph("uni6C62";98);
378 build_kanji.lr(360,0)
379 (tsu_curve.kanji.leftrad.water)
380 (tsu_curve.kanji.grone.earth);
381 tsu_render;
382 endtsuglyph;
383

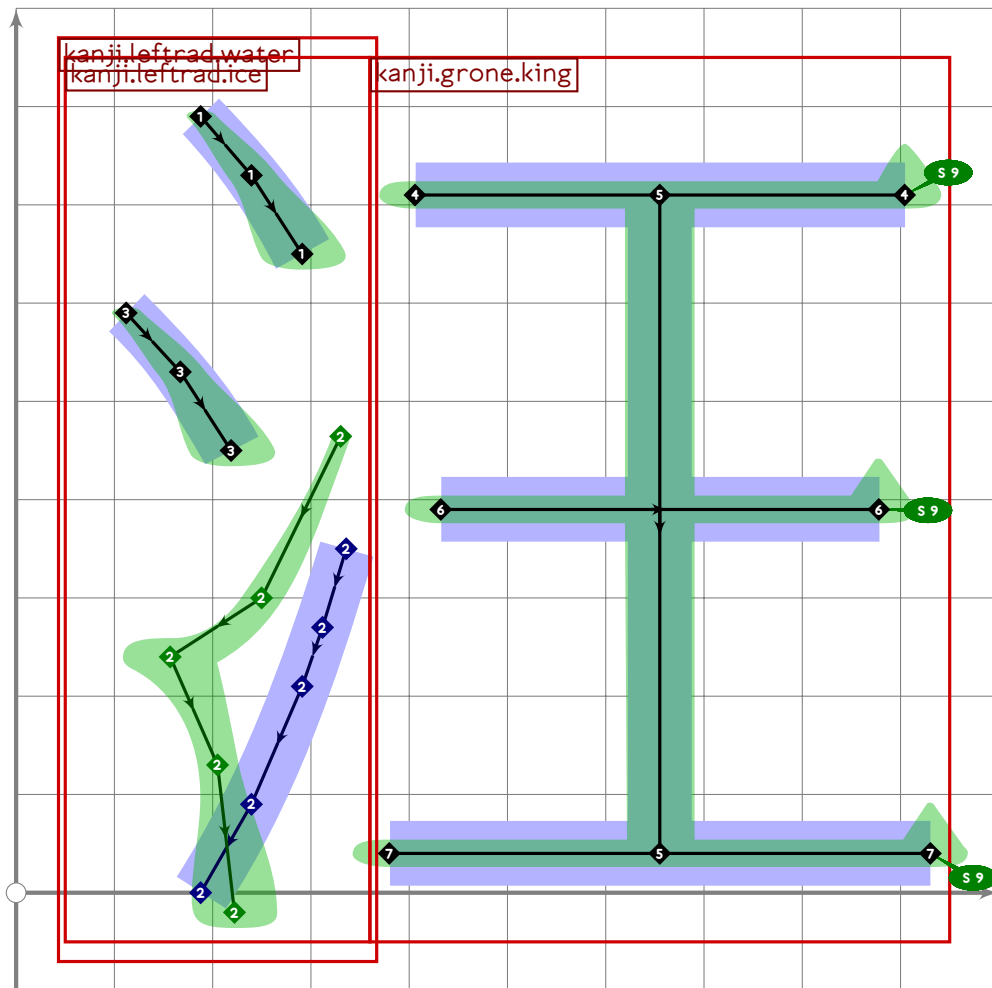
```



```

384 % extra
385 begint Suglyph("uni6C68",104);
386 build_kanji.lr(360,0)
387   (tsu_curve.kanji.leftrad.water)
388   (tsu_curve.kanji.grone.day);
389   tsu_render;
390 endtsuglyph;
391

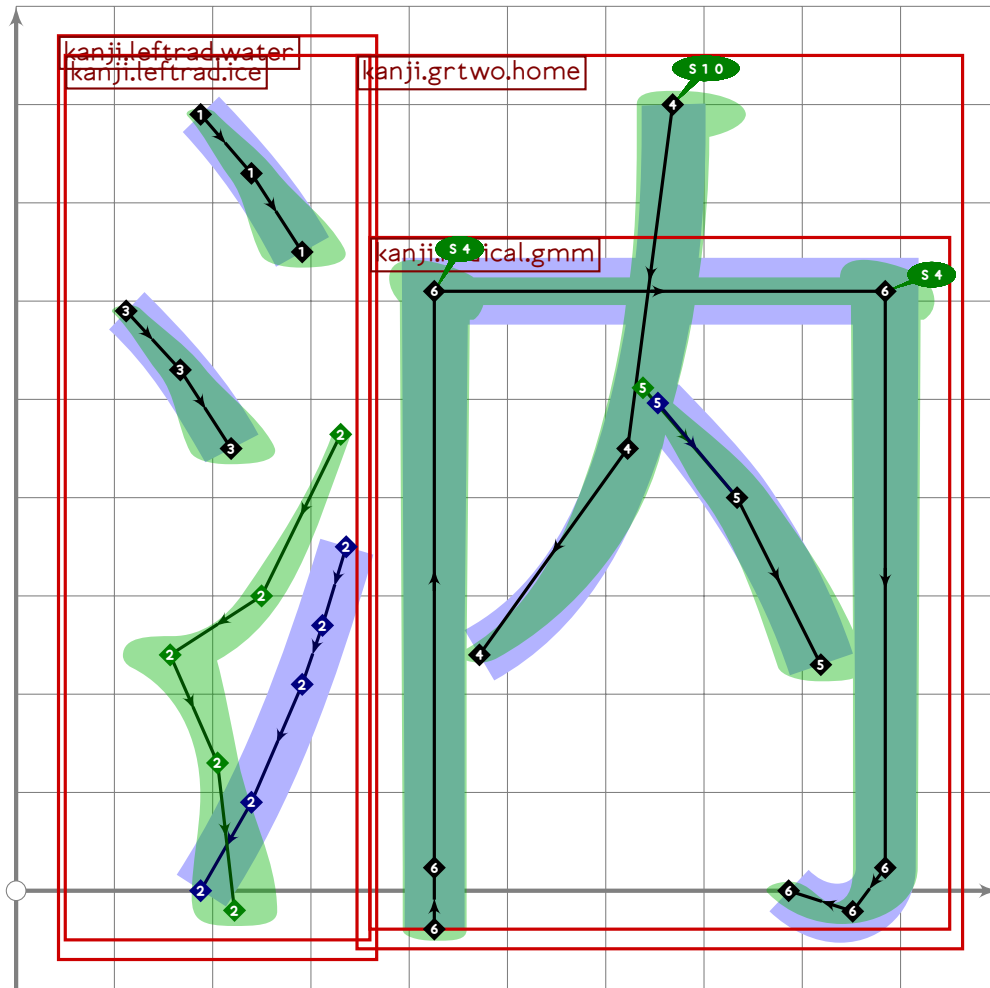
```



```

392 % extra
393 begint Suglyph("uni6C6A",106);
394 build_kanji.lr(360,0)
395   (tsu_curve.kanji.leftrad.water)
396   (tsu_curve.kanji.grone.king);
397 tsu_render;
398 endtsuglyph;
399

```

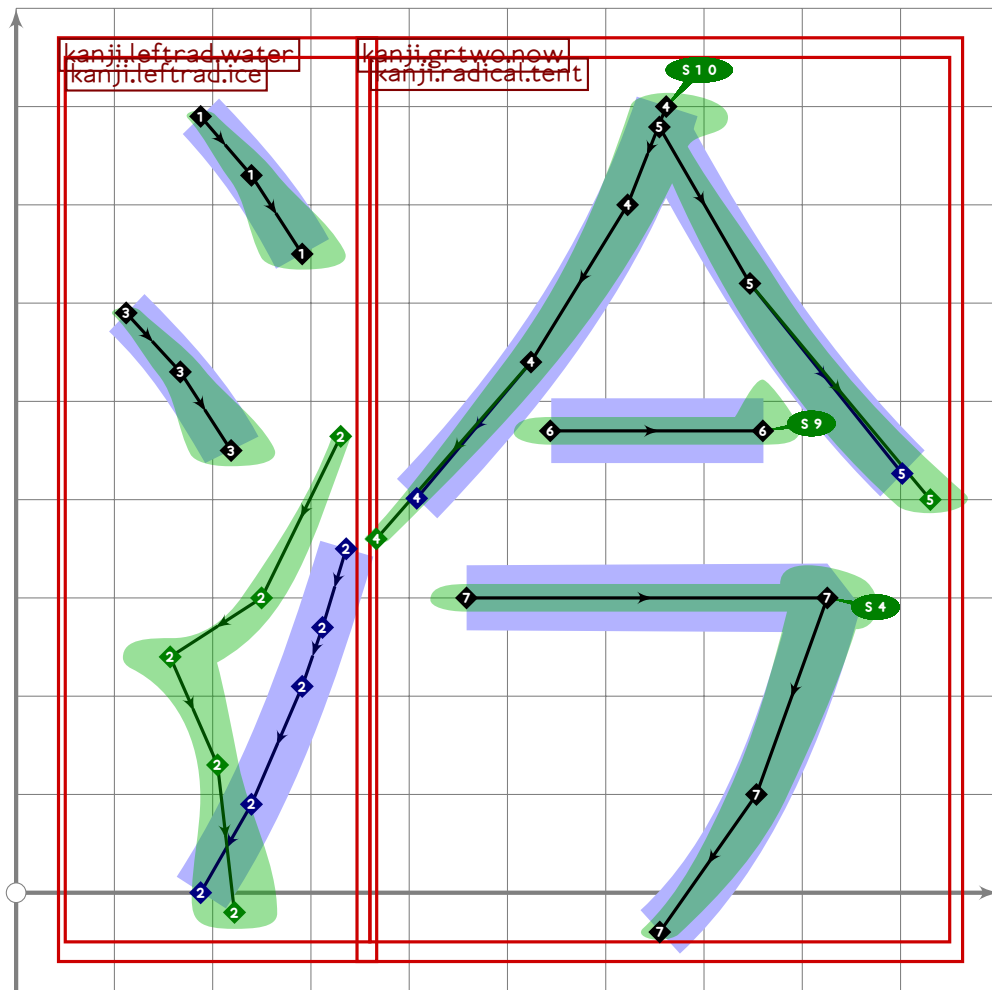


```

400 % extra
401 begintsuglyph("uni6C6D";109);
402 build_kanji.lr(360,0)
403   (tsu_curve.kanji.leftrad.water)
404   (tsu_curve.kanji.grtwo.home);
405   tsu_render;
406 endtsuglyph;
407
408 % ta/ogo "luxury"
409 begintsuglyph("uni6C70";112);
410   tsu_curve.kanji.gnnine.luxury;
411   tsu_render;
412 endtsuglyph;
413

```

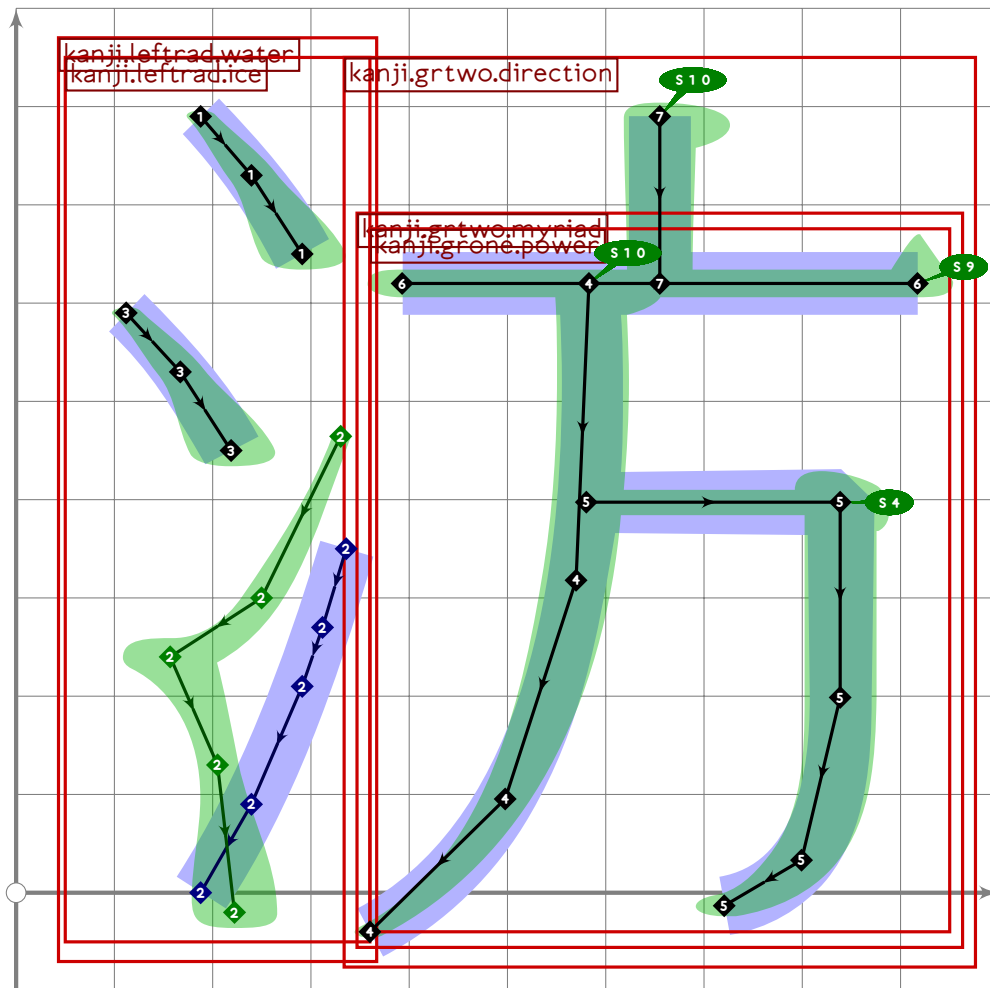
[see page 1412]



```

414 % extra
415 begint Suglyph("uni6C75",117);
416 build_kanji.lr(360,0)
417 (tsu_curve.kanji.leftrad.water)
418 (tsu_curve.kanji.grtwo.now);
419 tsu_render;
420 endsuglyph;
421

```

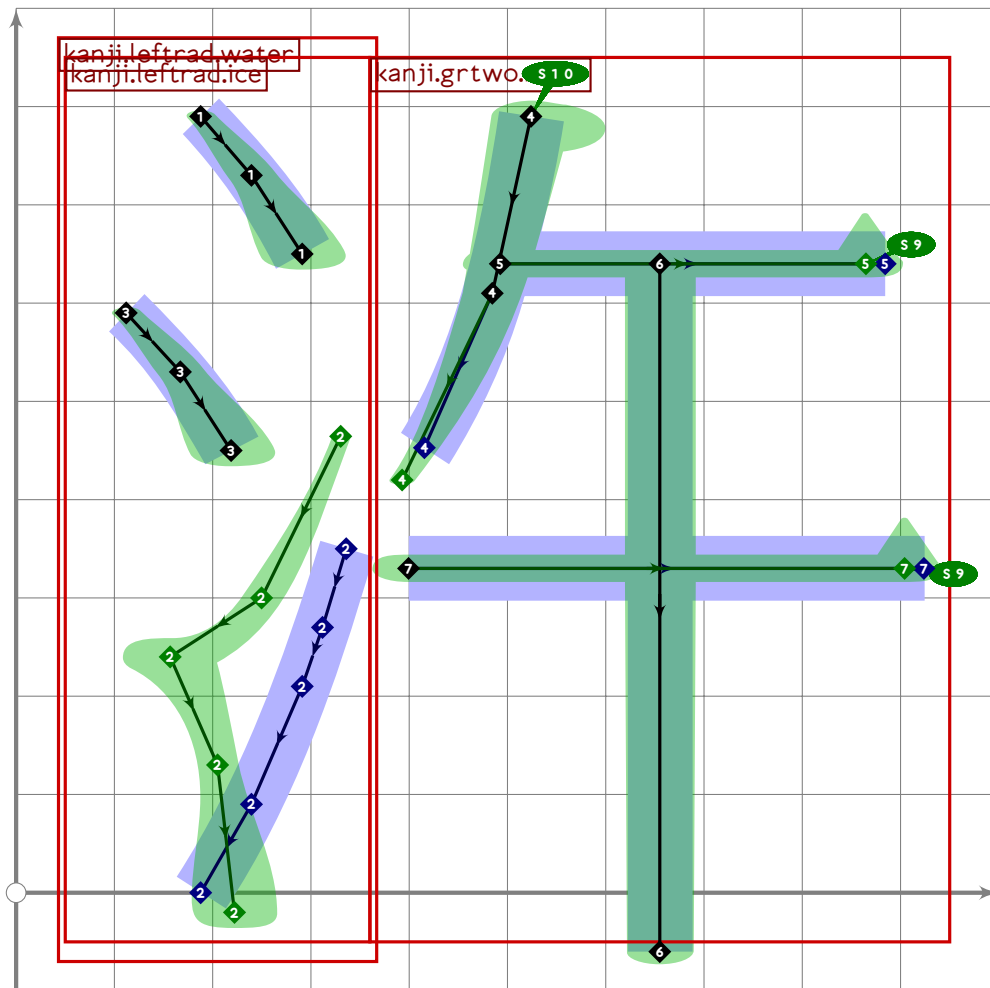


```

422 % extra
423 begintsuglyph("uni6C78",120);
424 build_kanji.lr(360,0)
425   (tsu_curve.kanji.leftrad.water)
426   (tsu_curve.kanji.grtwo.direction);
427   tsu_render;
428 endsuglyph;
429
430 % ketsu/ki "decide"
431 begintsuglyph("uni6C7A",122);
432   tsu_curve.kanji.grthree.decide;
433   tsu_render;
434 endsuglyph;
435

```

[see page 1408]

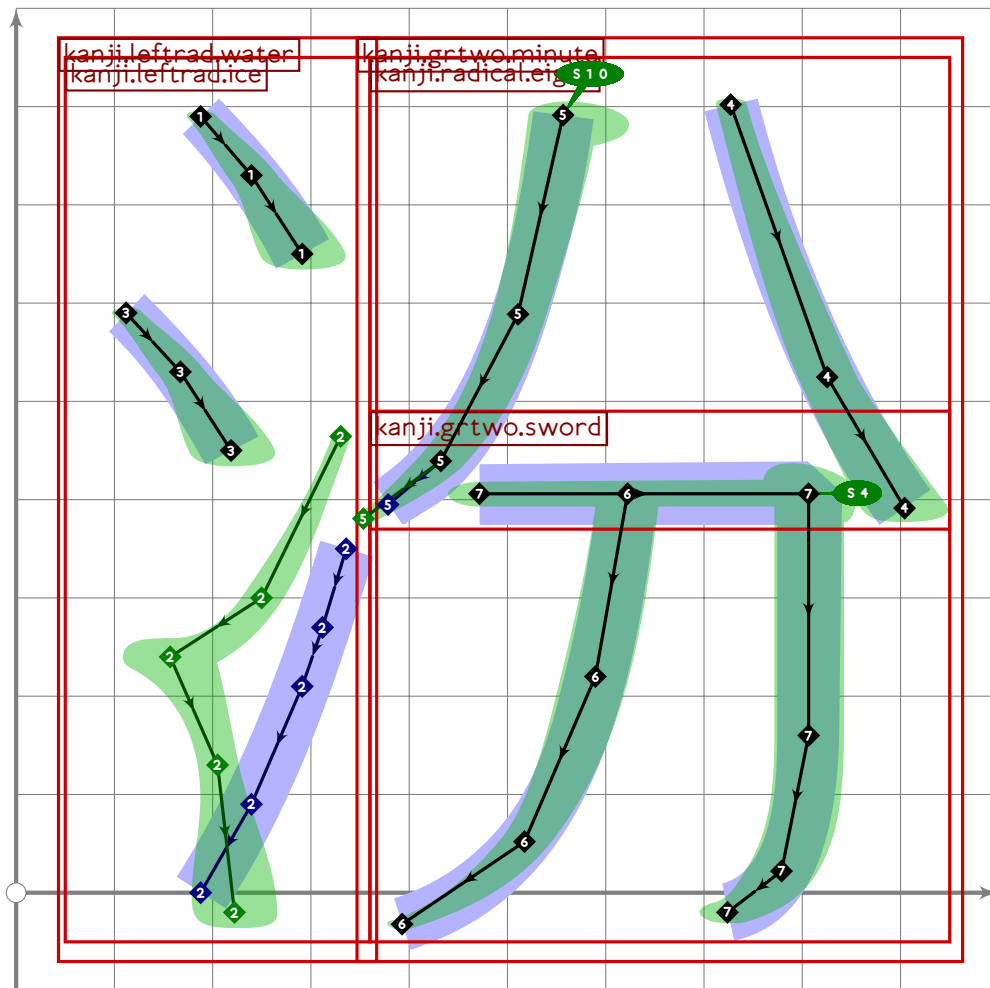


```

436 % extra
437 begintsuglyph("uni6C7B";123);
438 build_kanji.lr(360,0)
439 (tsu_curve.kanji.leftrad.water)
440 (tsu_curve.kanji.grtwo.noon);
441 tsu_render;
442 endtsuglyph;
443
444 % ki "steam"
445 begintsuglyph("uni6C7D";125);
446 tsu_curve.kanji.grtwo.steam;
447 tsu_render;
448 endtsuglyph;
449

```

[see page 1407]



```

450 % extra "name of a Chinese river"
451 begintsuglyph("uni6C7E";126);
452 build_kanji.lr(360,0)
453   (tsu_curve.kanji.leftrad.water)
454   (tsu_curve.kanji.grtwo.minute);
455   tsu_render;
456 endsuglyph;

```

```

457
458 % you/soso "fertility"
459 begintsuglyph("uni6C83";131);
460   tsu_curve.kanji.greight.fertility;
461   tsu_render;
462 endsuglyph;

```

[see page 1410]

```

463
464 % sen/izumi "spring" or "fountain" (not the season)
465 begintsuglyph("uni6CC9";201);
466   tsu_curve.kanji.grsix.fountain;
467   tsu_render;
468 endsuglyph;

```

[see page 445]

469
470

471

472 endfont;

473

474

tsuku-6d.mp

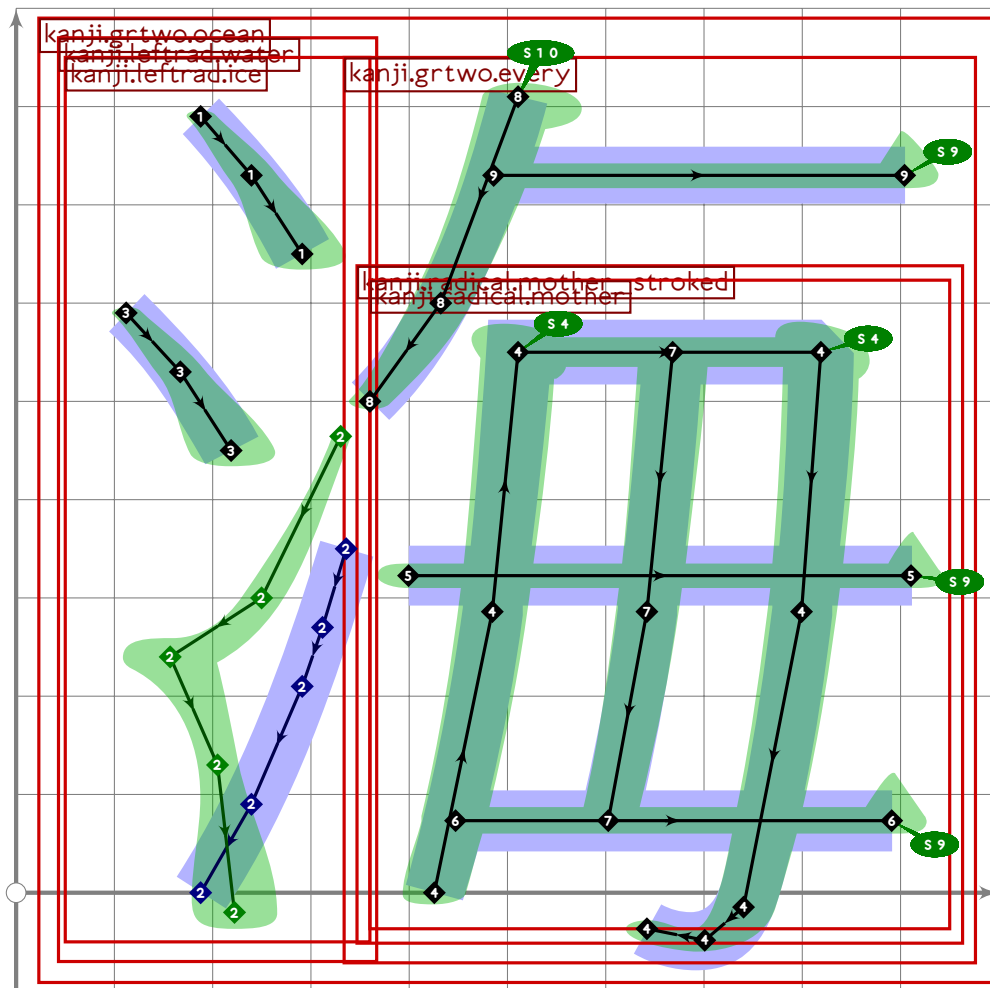
```
1 %
2 % Unicode page 6d (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradefive.mp;
38 input gradenine.mp;
39 input gradeone.mp;
40 input gradetwo.mp;
41 input leftrad.mp;
42 input radical.mp;
43
44 

---

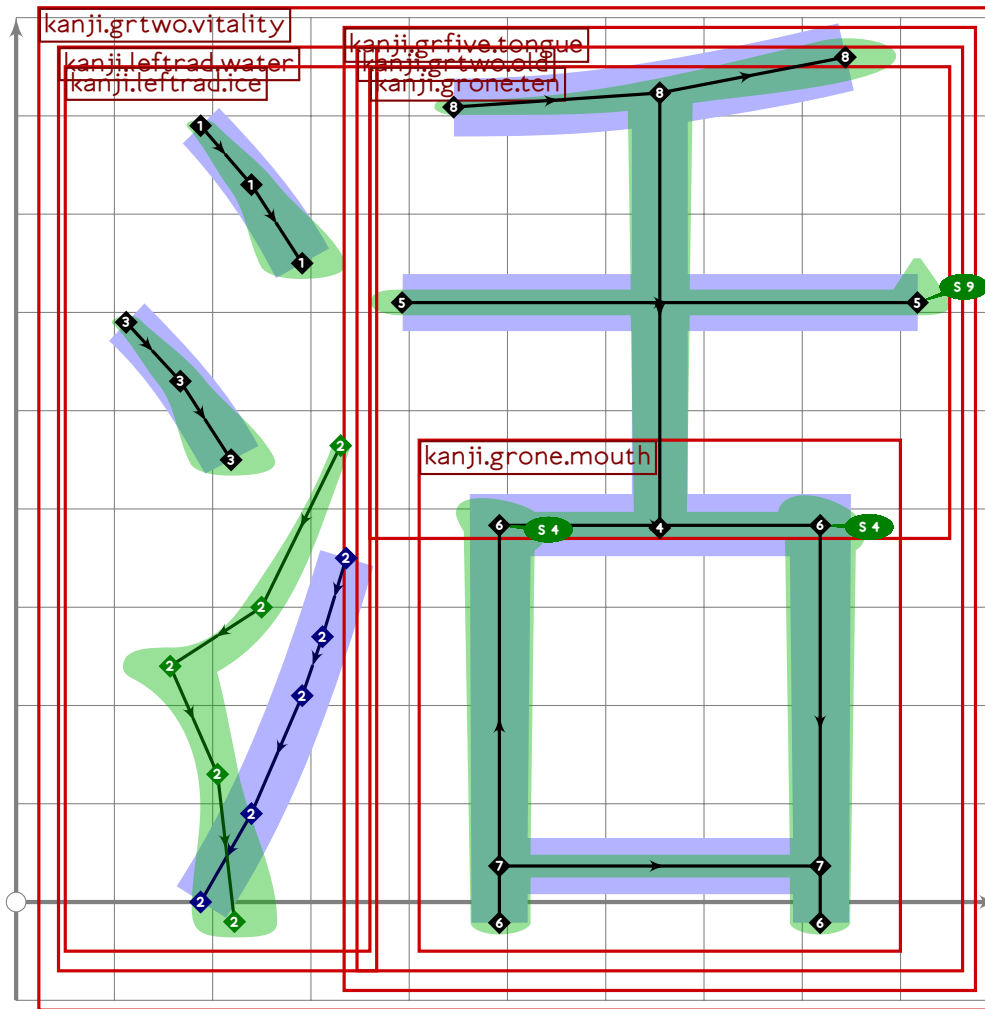

```



```

45
46 vardef tsu_curve.kanji.grtwo.ocean =
47   push_pbox_toexpand("kanji.grtwo.ocean");
48   build_kanji.lr(360,0)
49     (tsu_curve.kanji.leftrad.water)
50     (tsu_curve.kanji.grtwo.every);
51   expand_pbox;
52 enddef;

```



```

53
54 vardef tsu_curve.kanji.grtwo.vitality =
55   push_pbox_toexpand("kanji.grtwo.vitality");
56   build_kanji.lr(360,0)
57     (tsu_curve.kanji.leftrad.water)
58     (tsu_curve.kanji.grfive.tongue);
59   expand_pbox;
60 enddef;

```

```

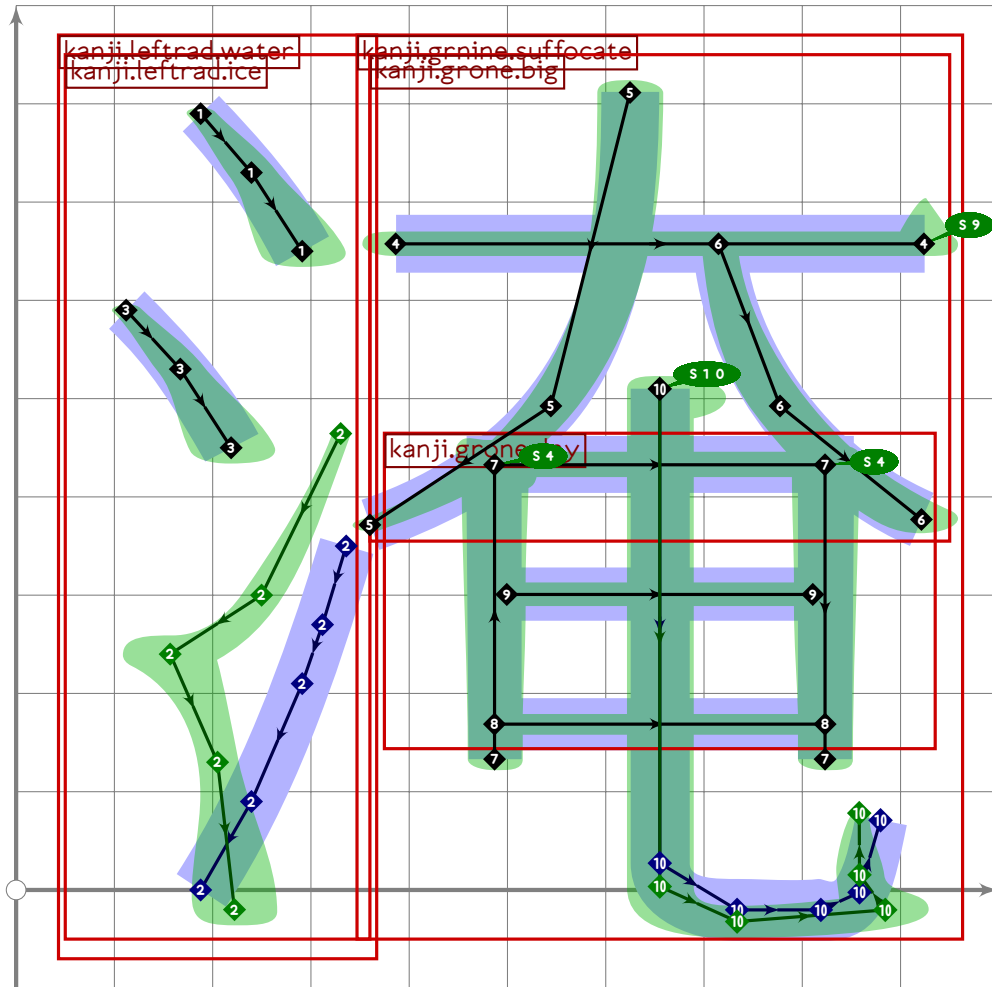
63
64 % katsu/i "correct"
65 begintsuglyph("uni6D3B";59); [see page 1444]
66   tsu_curve.kanji.grtwo.vitality;
67   tsu_render;
68 endtsuglyph;
69
70 % kai/umi "ocean"
71 begintsuglyph("uni6D77";119); [see page 1443]
72   tsu_curve.kanji.grtwo.ocean;

```

```

73 tsu_render;
74 endtsuglyph;
75

```



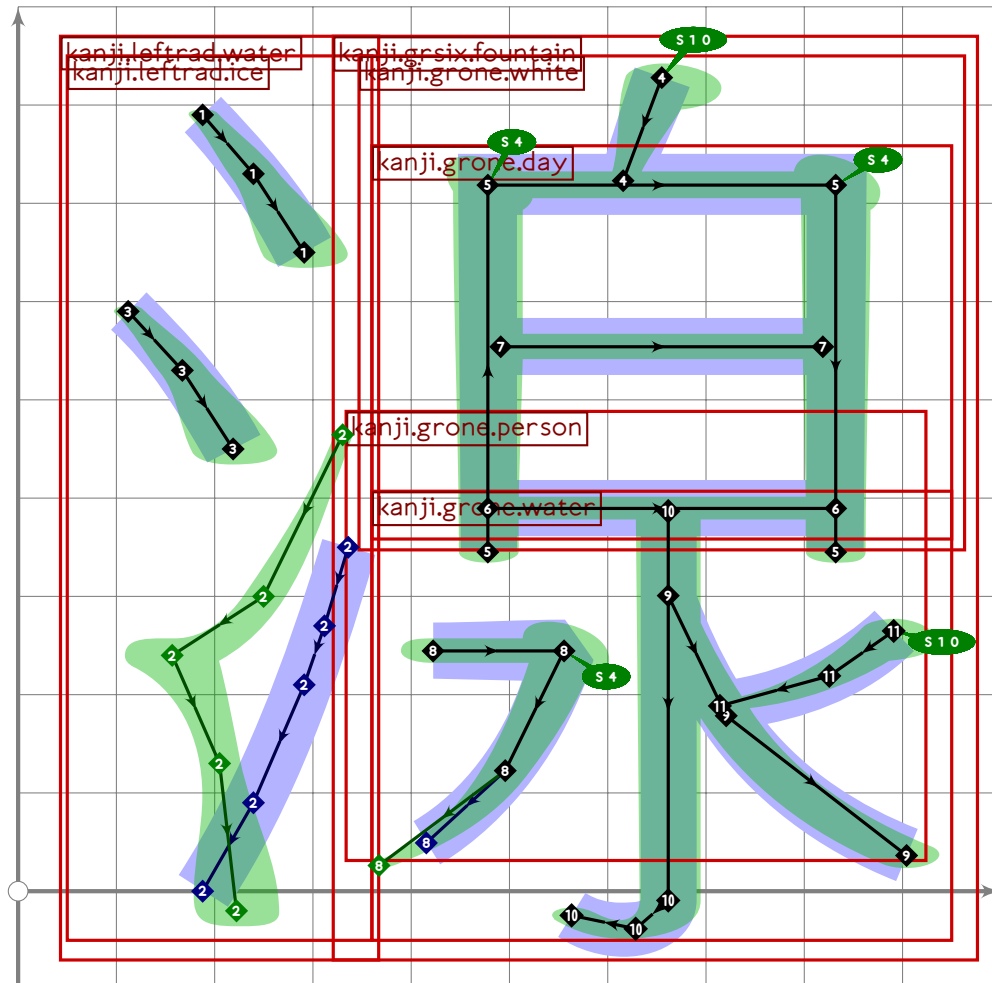
```

76 % extra en/i "soak" (in particular, making tea or coffee)
77 begintsuglyph("uni6DF9";249);
78 build_kanji.lr(360,0)
79   (tsu_curve.kanji.leftrad.water)
80   (tsu_curve.kanji.grnine.suffocate);
81 tsu_render;
82 endtsuglyph;
83
84 _____
85
86 endfont;
87
88 _____

```

tsuku-6e.mp

```
1 %  
2 % Unicode page 6e (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradeone.mp;  
38 input gradesix.mp;  
39 input leftrad.mp;  
40  
41 _____  
42
```



43 % extra

```
44 begintsuglyph("uni6E76";118);
45   build_kanji.lr(360,0)
46     (tsu_curve.kanji.leftrad.water)
47     (tsu_curve.kanji.grsix.fountain);
48   tsu_render;
49 endtsuglyph;
50
51 

---


52
53 endfont;
54
55 

---


```

tsuku-70.mp

```
1 %  
2 % Unicode page 70 (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %
```

```
5-29 [Standard copyright notice]
```

```
30
```

```
31
```

```
32
```

```
33 beginfont
```

```
34
```

```
35 % AUTODEPS
```

```
36 input bottomrad.mp;
```

```
37 input buildkanji.mp;
```

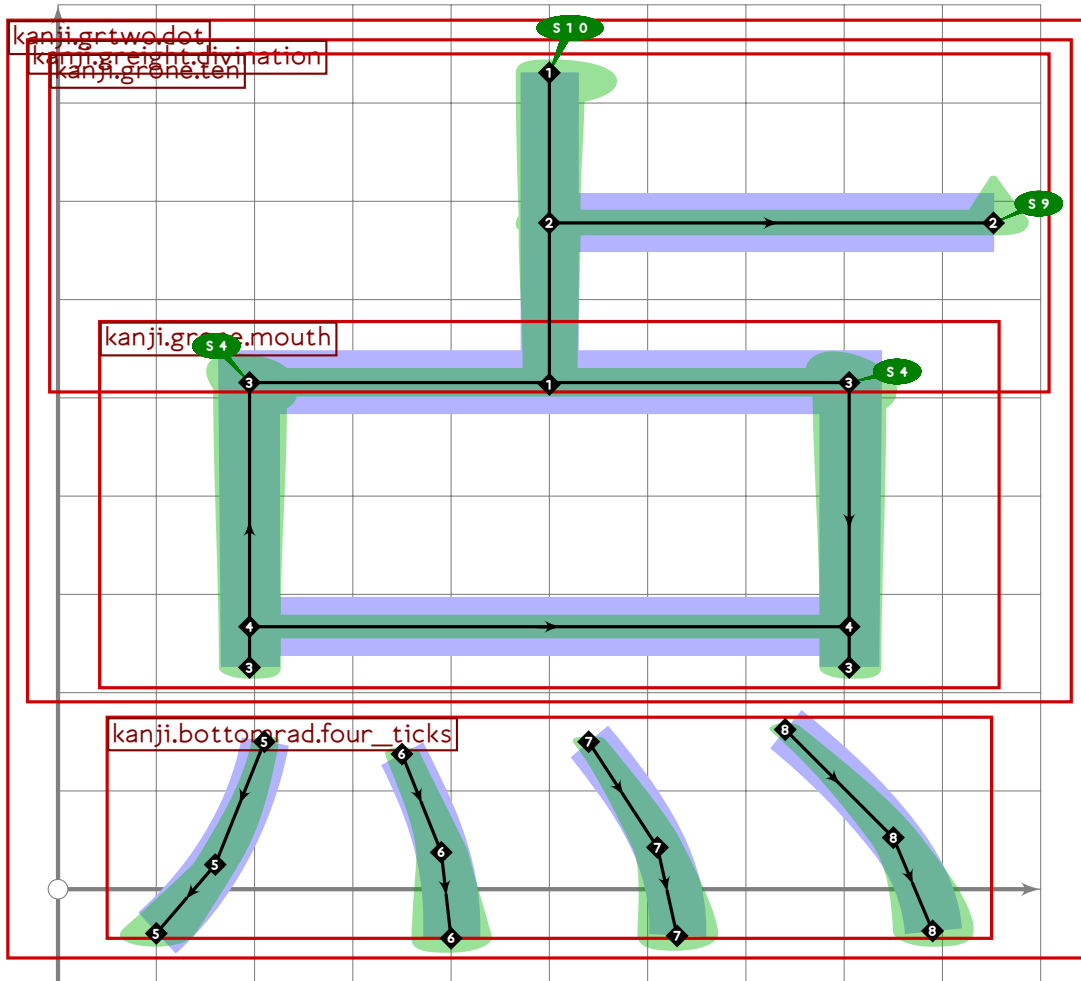
```
38 input gradeeight.mp;
```

```
39 input gradeone.mp;
```

```
40
```

```
41
```

```
42
```



```
43 % "point" is a reserved word
```



```

44 vardef tsu_curve.kanji.grtwo.dot =
45   push_pbox_toexpand("kanji.grtwo.dot");
46   build_kanji.tb(190,-30)
47     (build_kanji.sscale(xscaled 1.13)
48       (tsu_curve.kanji.greight.divination))
49     (tsu_curve.kanji.bottomrad.four_ticks);
50   expand_pbox;
51 enddef;
52
53 

---


54
55 % hi/ka "fire"
56 begintsuglyph("uni706B",107); [see page 353]
57   tsu_curve.kanji.grone.fire;
58   tsu_render;
59 endtsuglyph;
60
61 % ten/tsu "point"
62 begintsuglyph("uni70B9",185); [see page 1449]
63   tsu_curve.kanji.grtwo.dot;
64   tsu_render;
65 endtsuglyph;
66
67 

---


68
69 endfont;
70
71 

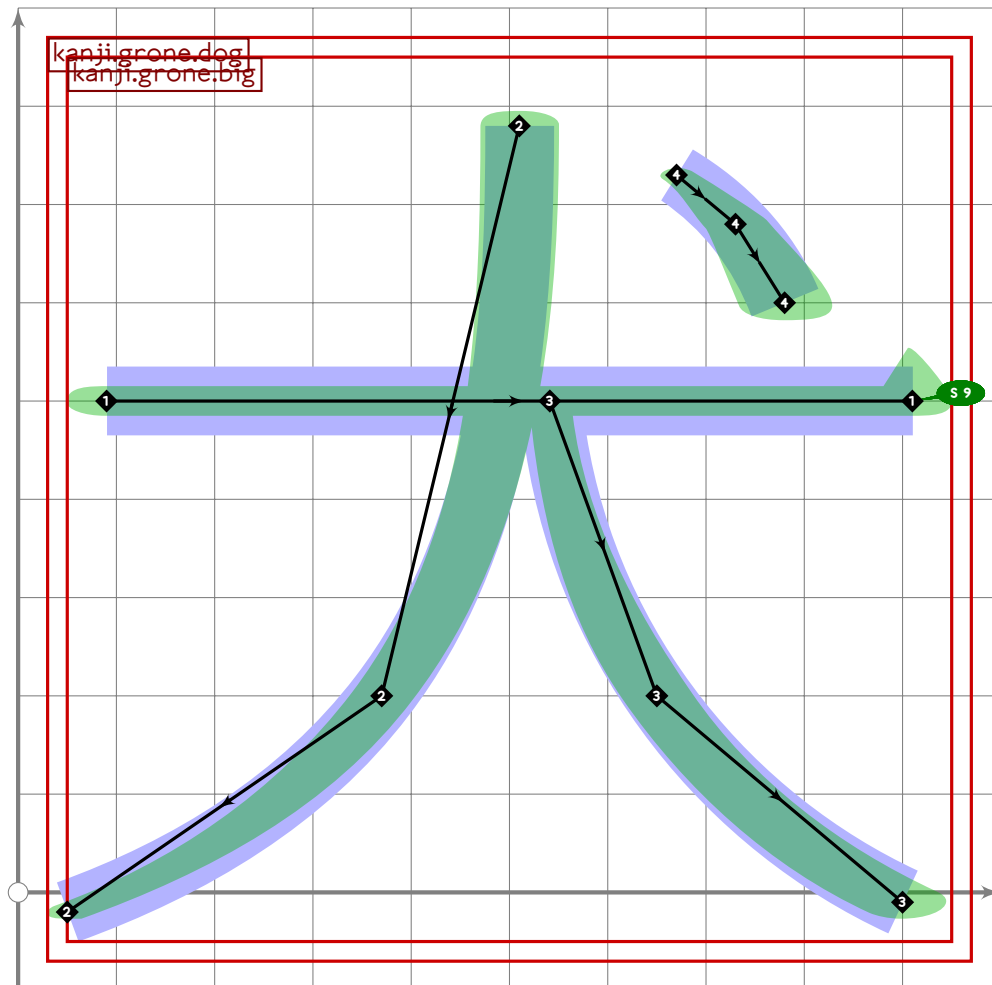
---



```

tsuku72.mp

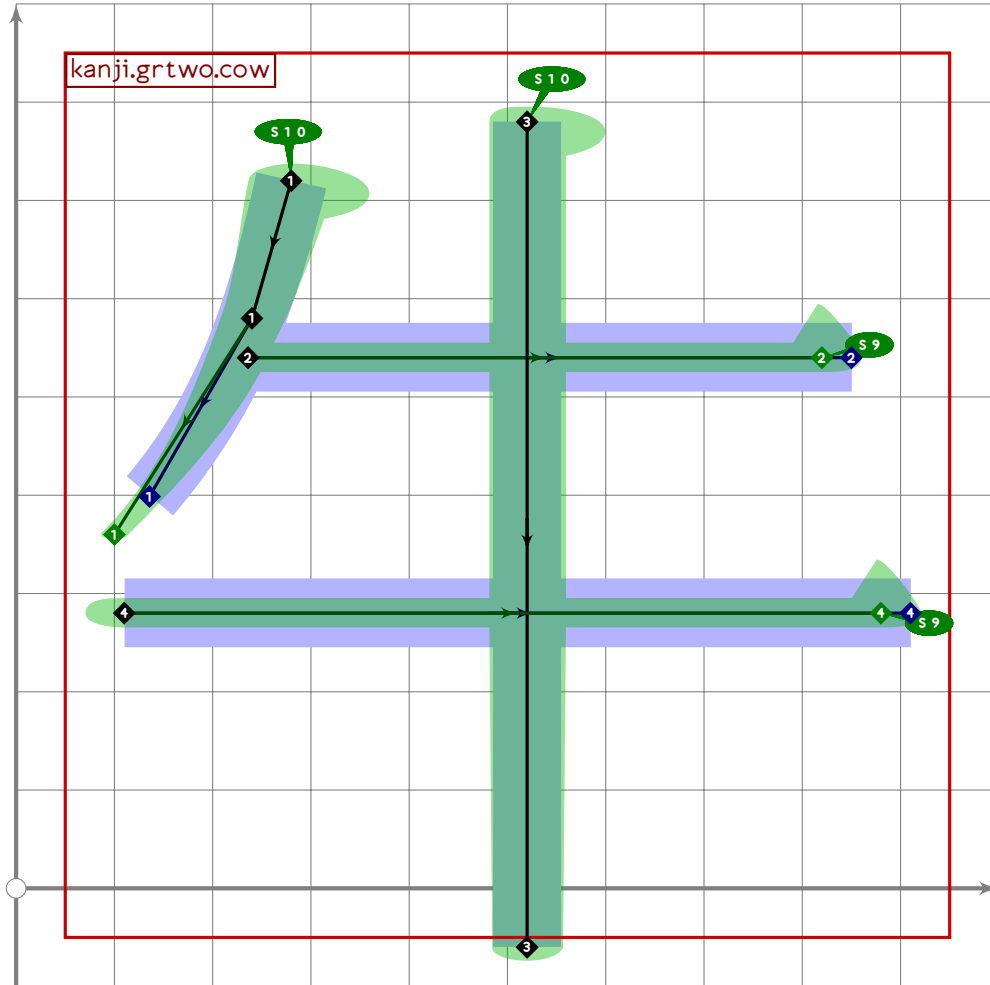
```
1 %  
2 % Unicode page 72 (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradenine.mp;  
38 input gradeone.mp;  
39 input gradethree.mp;  
40 input gradetwo.mp;  
41 input radical.mp;  
42  
43 _____
```



```

44
45 vardef tsu_curve.kanji.grone.dog =
46   push_pbox_toexpand("kanji.grone.dog");
47   tsu_curve.kanji.grone.big;
48   push_stroke((670,730)..(730,680)..(780,600),
49     (1,1)-(1.4,1.4)-(1.8,1.8));
50   expand_pbox;
51 enddef;
52
53

```



```

54
55 vardef tsu_curve.kanji.grtwo.cow =
56   push_pbox_toexpand("kanji.grtwo.cow");
57   push_stroke((280,720)..tension 1.2..(240,580)..(100,360),
58     (1.7,1.7)-(1.4,1.4)-(0.9,0.9));
59   set_boserif(0,0,10);
60   push_stroke((((0,540)-(1000,540)) intersectionpoint
61     get_stroke(0))*(12,0))-(850-30*mincho,540),
62     (1.6,1.6)-(1.6,1.6));
63   set_boserif(0,1,9);
64   push_stroke((520,780)-(520,-60),(1.6,1.6)-(1.5,1.5));

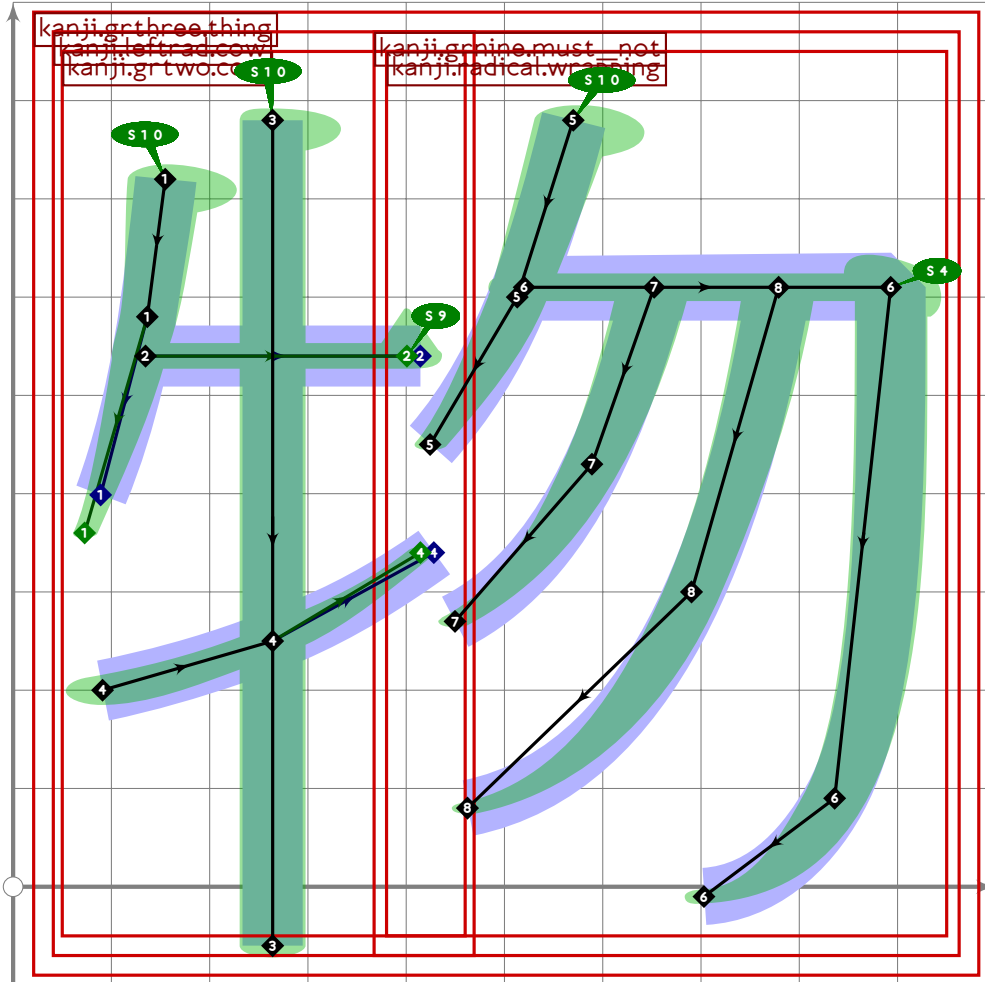
```

```

65 set_boserif(0,0,10);
66 push_stroke((110,280)-(910-30*mincho,280),(1.6,1.6)-(1.6,1.6));
67 set_boserif(0,1,9);
68 expand_pbox;
69 enddef;

```

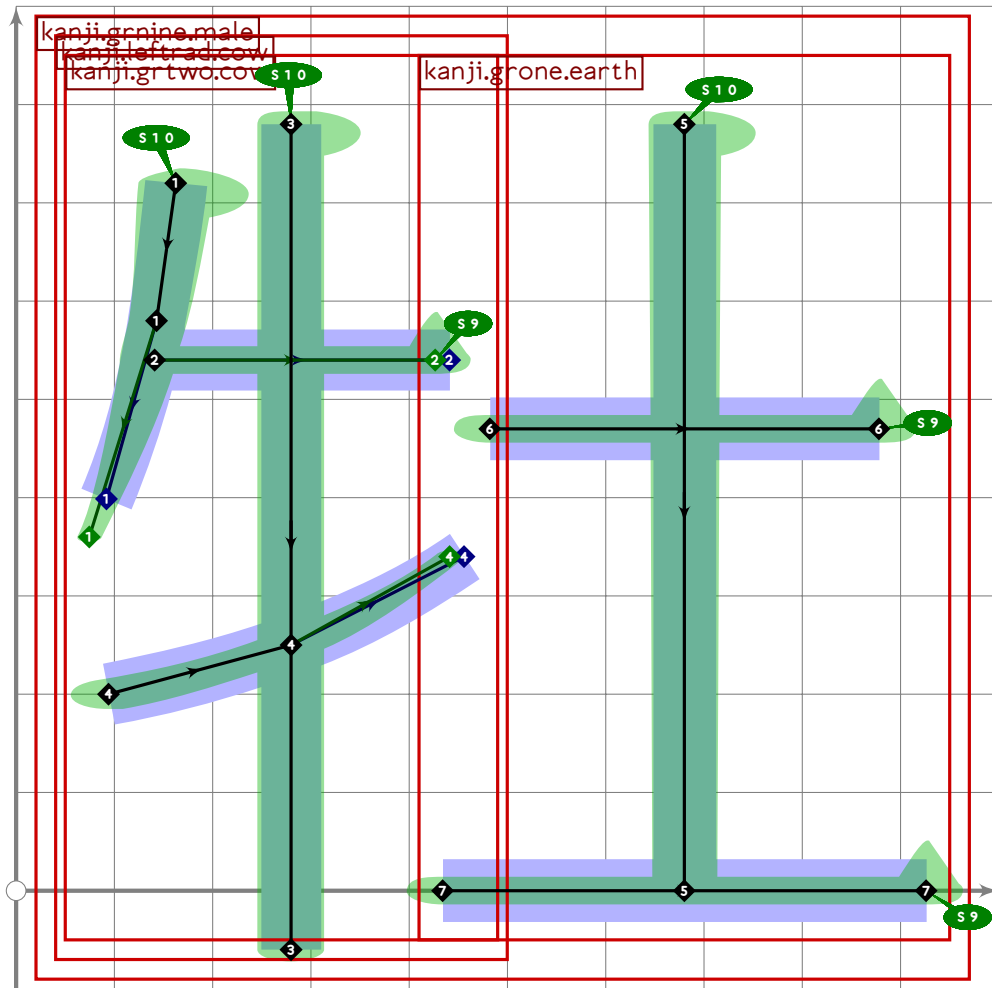
70
71



```

72
73 vardef tsu_curve.kanji.grthree.thing =
74   push_pbox_toexpand("kanji.grthree.thing");
75   build_kanji.lr(420,80)
76     (tsu_curve.kanji.leftrad.cow)
77     (tsu_curve.kanji.grnine.must_not);
78   expand_pbox;
79 enddef;
80
81

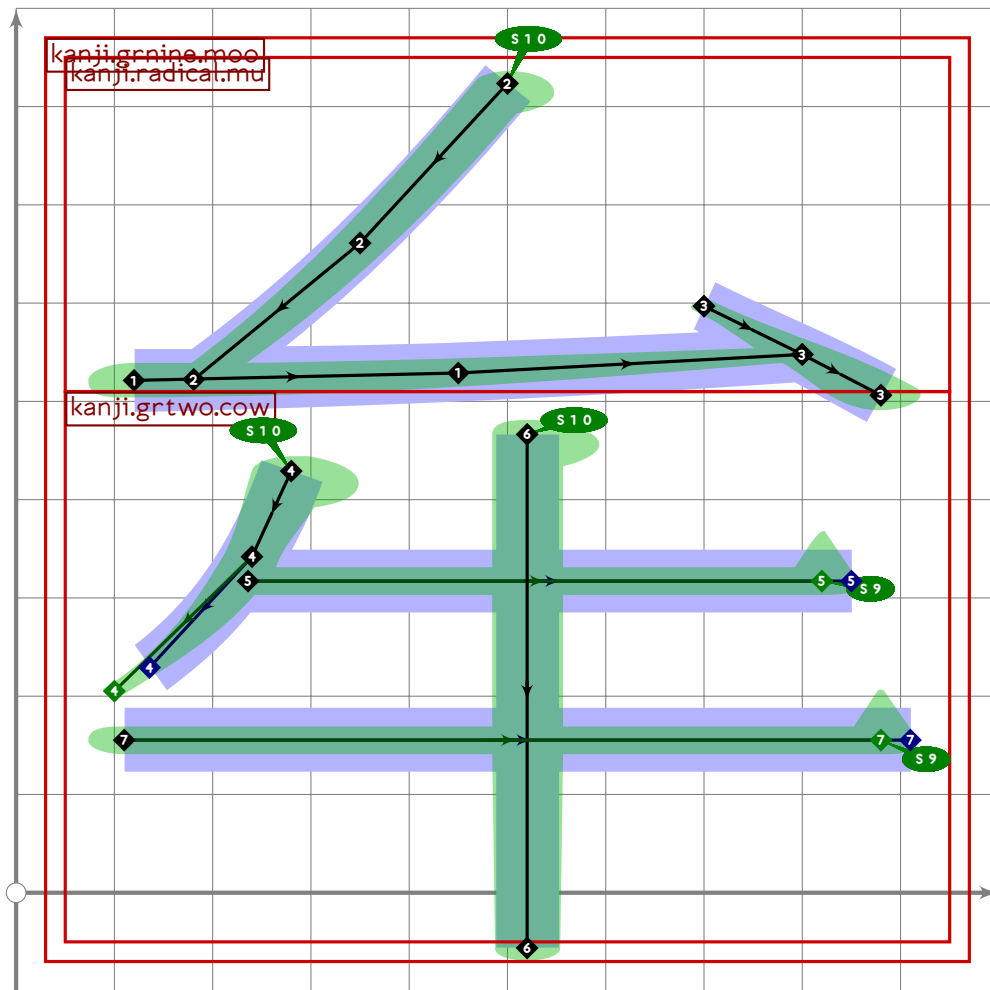
```



```

82
83 vardef tsu_curve.kanji.grnine.male =
84   push_pbox_toexpand("kanji.grnine.male");
85   build_kanji.lr(450,80)
86     (tsu_curve.kanji.leftrad.cow)
87     (tsu_curve.kanji.grone.earth);
88   expand_pbox;
89 enddef;

```



```

90
91 vardef tsu_curve.kanji.grnine.moo =
92   push_pbox_toexpand("kanji.grnine.moo");
93   build_kanji.tb(510,0)
94   (tsu_curve.kanji.radical.mu)
95   (tsu_curve.kanji.grtwo.cow);
96   expand_pbox;
97 enddef;
98
99
100
101 vardef tsu_curve.kanji.leftrad.cow =
102   push_pbox_toexpand("kanji.leftrad.cow");
103   tsu_curve.kanji.grtwo.cow;
104   replace_stroke(0)((140,200)..tension 1.2..(520,250)..(880-30*mincho,340));
105   replace_stroke(0)((1,7,1,7)-(1,5,1,5)-(1,1));
106   set_boserif(0,1,whatever);
107   expand_pbox;
108 enddef;
109
110

```

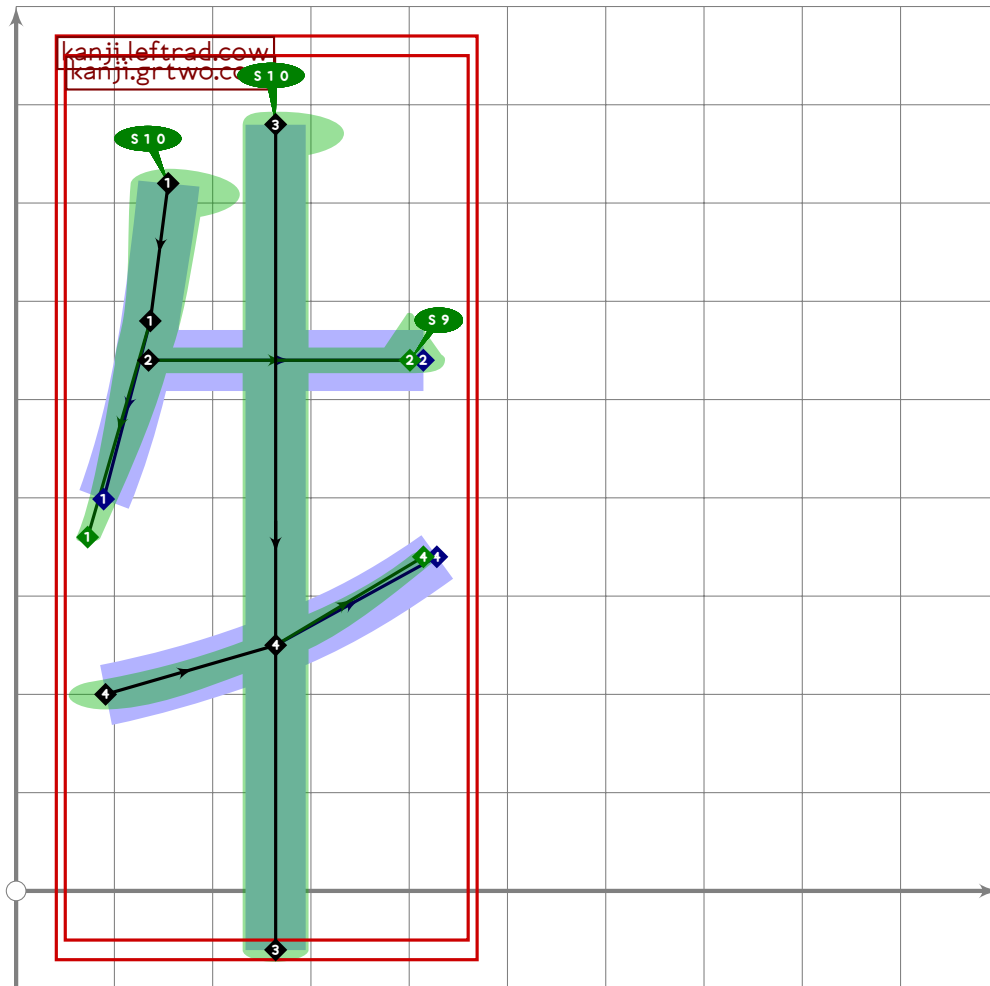
```

111
112 % chichi "father"
113 begintsuglyph("uni7236",54);
114   tsu_curve.kanji.grtwo.father;
115   tsu_render;
116 endtsuglyph;
117
118 % kyuu/ushi "cow"
119 begintsuglyph("uni725B",91);
120   tsu_curve.kanji.grtwo.cow;
121   tsu_render;
122 endtsuglyph;
123

```

[see page 400]

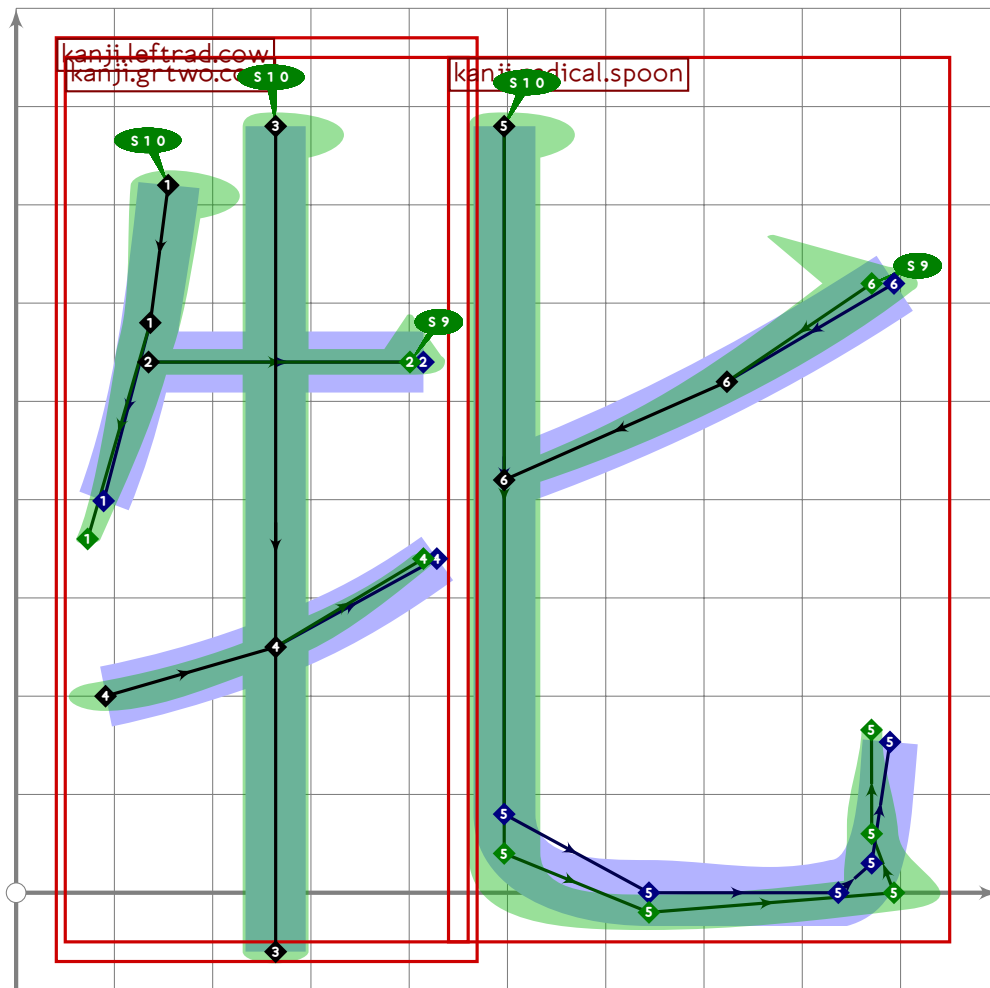
[see page 1451]



```

124 % naked cow radical
125 begintsuglyph("uni725C",92);
126   build_kanji.lr(450,20)(tsu_curve.kanji.leftrad.cow)();
127   tsu_render;
128 endtsuglyph;
129

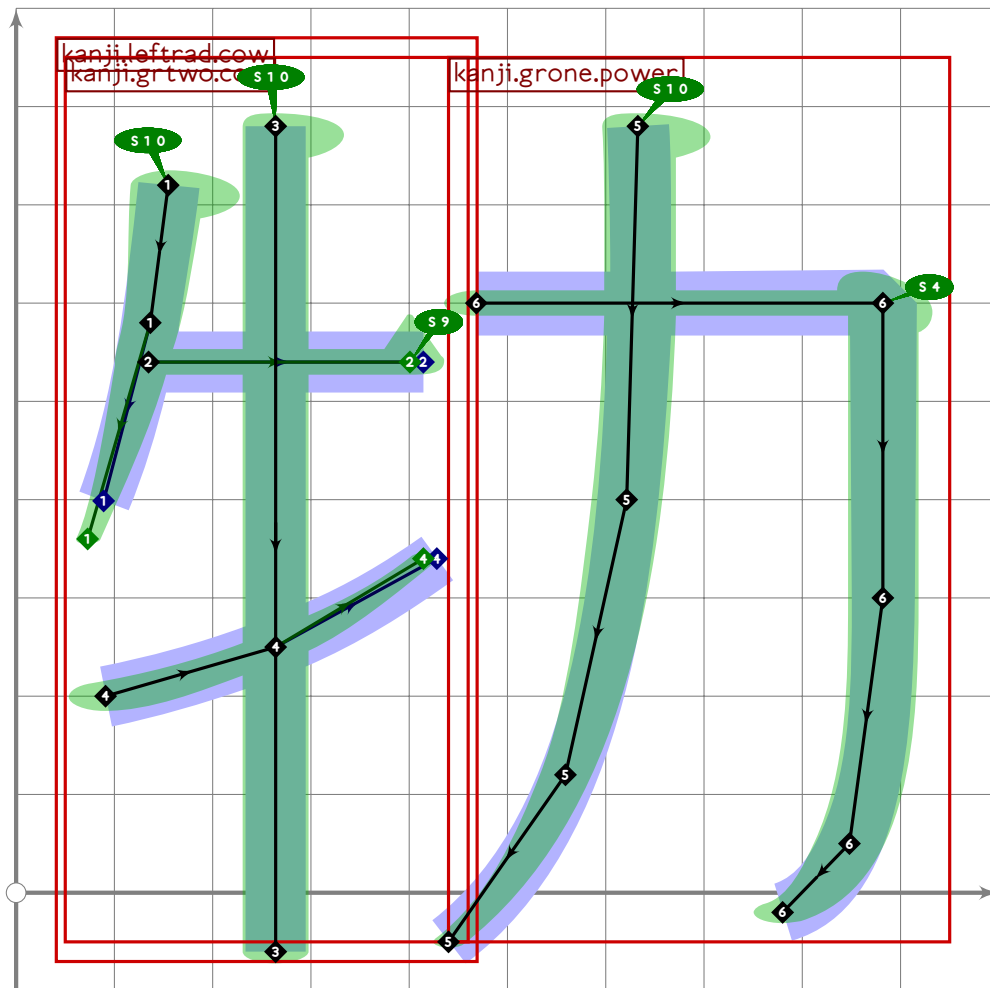
```



```

130 % extra "female"
131 begint Suglyph("uni725D";93);
132 build_kanji.lr(450,20)
133   (tsu_curve.kanji.leftrad.cow)
134   (tsu_curve.kanji.radical.spoon);
135   tsu_render;
136   endtsuglyph;
137

```

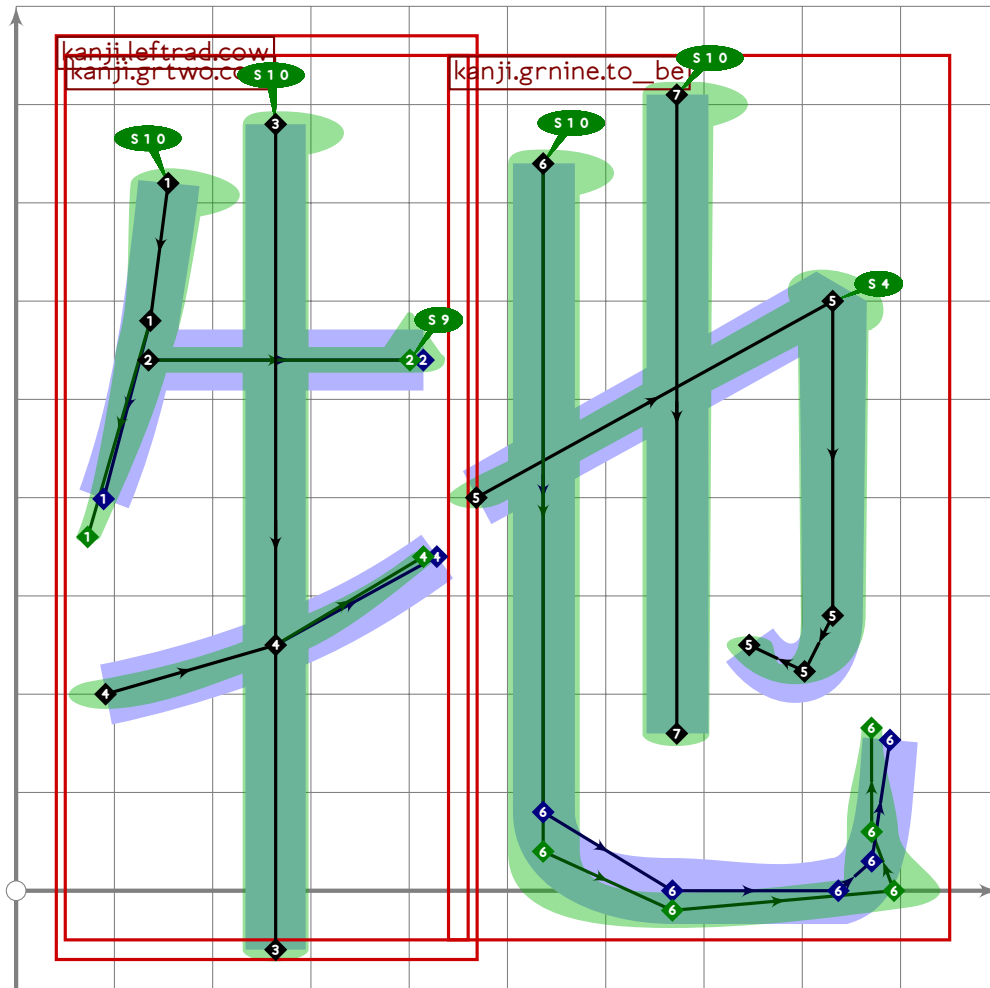



```

138 % extra
139 begintsuglyph("uni725E";94);
140 build_kanji.lr(450,20)
141   (tsu_curve.kanji.leftrad.cow)
142   (tsu_curve.kanji.grone.power);
143   tsu_render;
144 endsuglyph;
145
146 % bou/mu "moo (cow sound)"
147 begintsuglyph("uni725F";95);
148   tsu_curve.kanji.gnine.moo;
149   tsu_render;
150 endsuglyph;
151

```

[see page 1454]



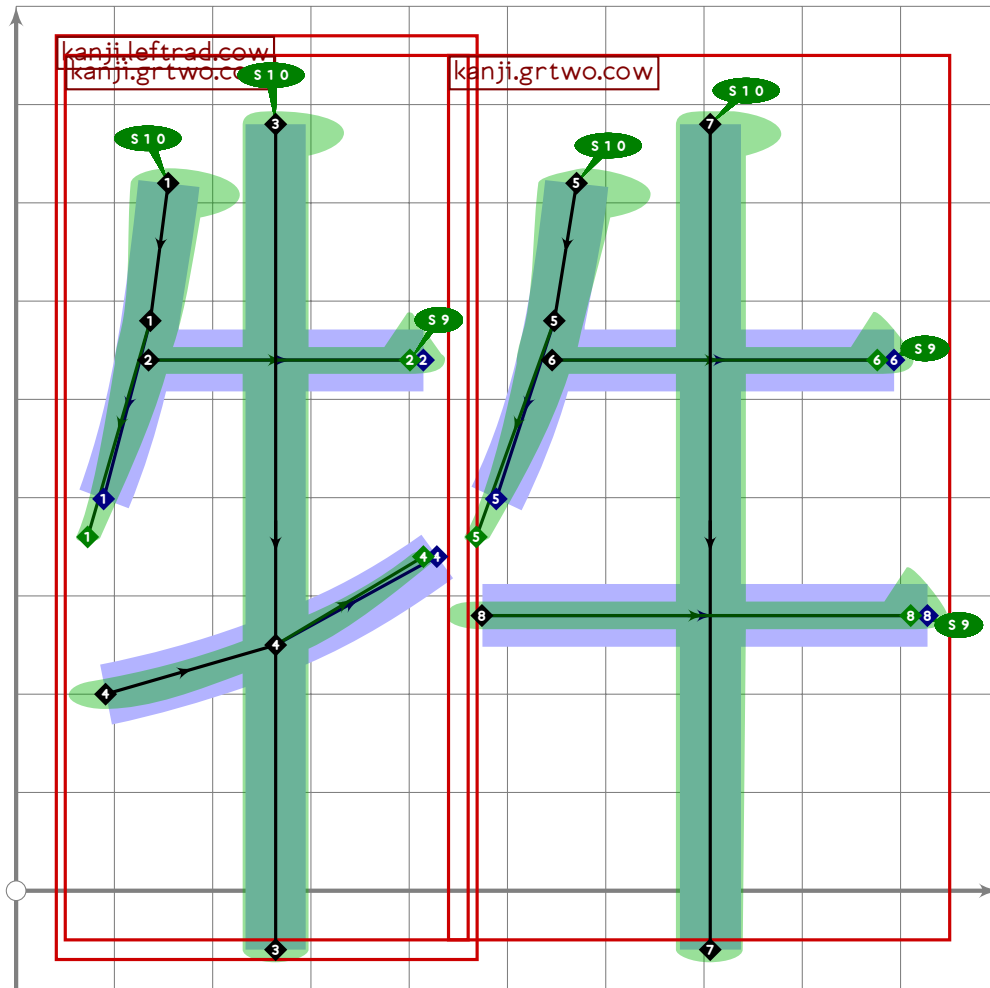
```

152 % extra
153 begintsuglyph("uni7260";96);
154   build_kanji.lr(450,20)
155     (tsu_curve.kanji.leftrad.cow)
156     (tsu_curve.kanji.grnine.to_be);
157   tsu_render;
158 endsuglyph;
159
160 % bo/osu "male (animal)"
161 begintsuglyph("uni7261";97);
162   tsu_curve.kanji.grnine.male;
163   tsu_render;
164 endsuglyph;
165
166 % butsu/mono "thing"
167 begintsuglyph("uni7269";105);
168   tsu_curve.kanji.grthree.thing;
169   tsu_render;
170 endsuglyph;
171

```

[see page 1453]

[see page 434]



```

172 % extra
173 begintsuglyph("uni726A";106);
174 build_kanji.lr(450,20)
175   (tsu_curve.kanji.leftrad.cow)
176   (tsu_curve.kanji.grtwo.cow);
177 tsu_render;
178 endsuglyph;
179
180 % inu "dog"
181 begintsuglyph("uni72AC";172);
182   tsu_curve.kanji.grone.dog;
183   tsu_render;
184 endsuglyph;
185
186 _____
187
188 endfont;
189
190 _____

```

[see page 1451]

tsuku73.mp

```
1 %
2 % Unicode page 73 (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input gradeone.mp;
37
38 

---


39
40 % gyoku/tama "ball" or "precious"
41 begintsuglyph("uni7389",137); [see page 337]
42 tsu_curve.kanji.grone.ball;
43 tsu_render;
44 endtsuglyph;
45
46 % ou "king"
47 begintsuglyph("uni738B",139); [see page 358]
48 tsu_curve.kanji.grone.king;
49 tsu_render;
50 endtsuglyph;
51
52 

---

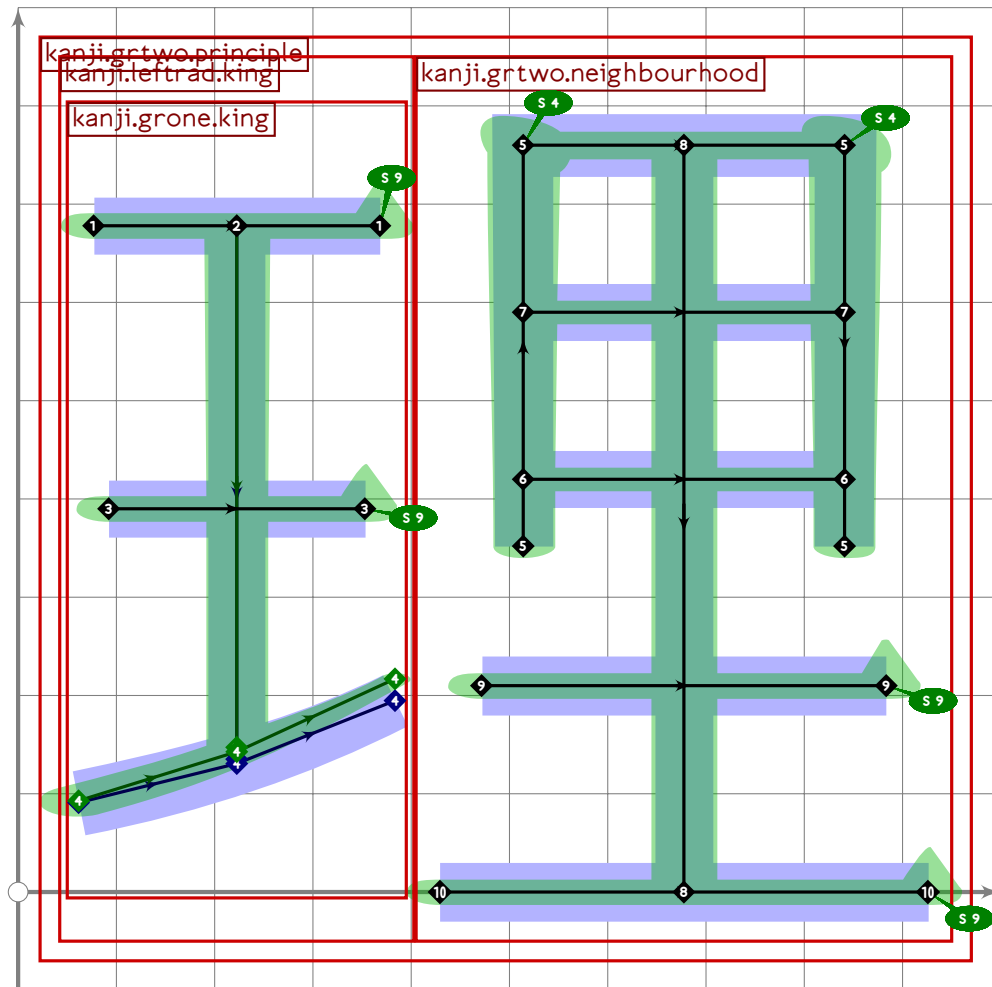

53
54 endfont;
55
56 

---


```

tsuku74.mp

```
1 %  
2 % Unicode page 74 (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradeone.mp;  
38 input gradetwo.mp;  
39 input leftrad.mp;  
40  
41 _____
```



```
42  
43 vardef tsu_curve.kanji.grtwo.principle =
```

```
44 push_pbox_toexpand("kanji.grtwo.principle");
45 build_kanji.lr(400,10)
46   (tsu_curve.kanji.leftrad.king)
47   (tsu_curve.kanji.grtwo.neighbourhood);
48 expand_pbox;
49 enddef;
50
51 

---


52
53 % ri/kotowari "principle"
54 begintsuglyph("uni7406",6); [see page 1461]
55   tsu_curve.kanji.grtwo.principle;
56   tsu_render;
57 endtsuglyph;
58
59 

---


60
61 endfont;
62
63 

---


```

Part V

U+7600 to U+9FFF

tsuku75.mp

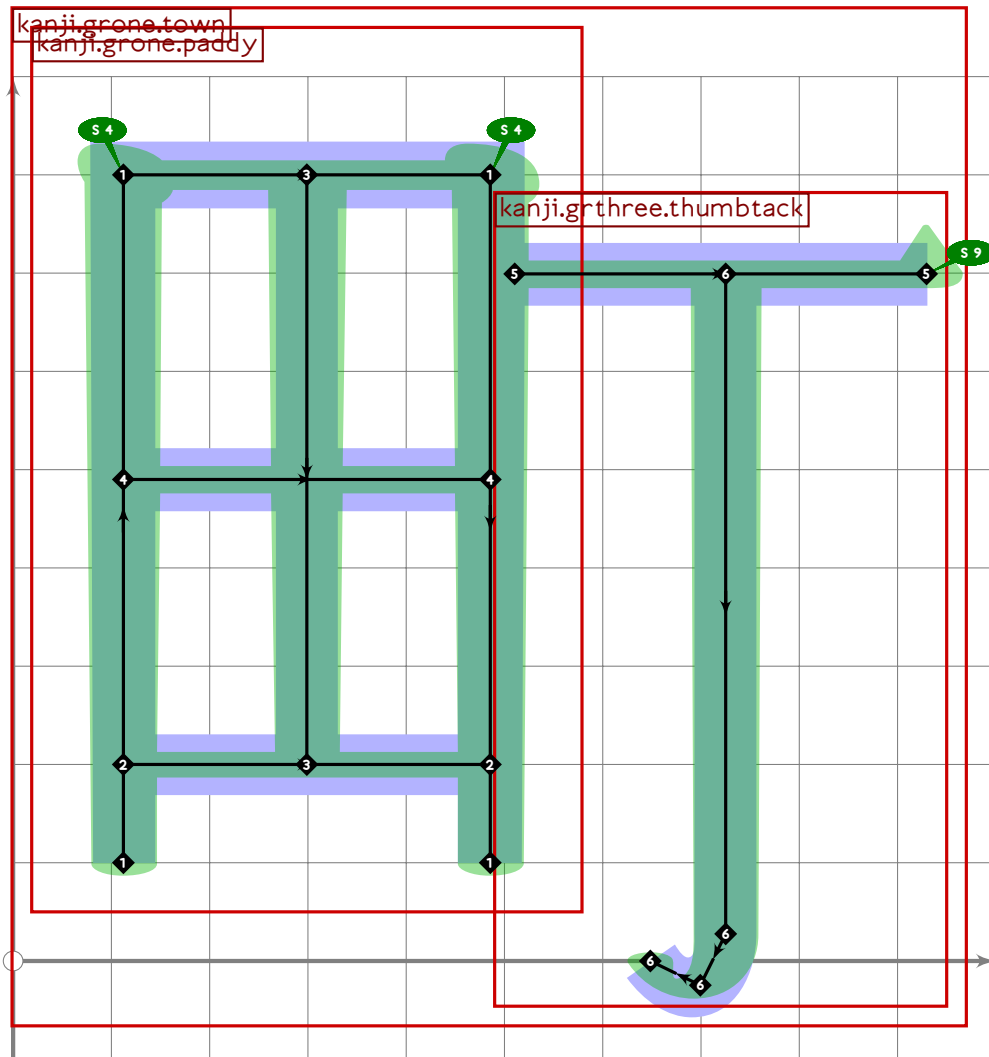
```
1 %
2 % Unicode page 75 (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradeone.mp;
38 input gradethree.mp;
39 input gradetwo.mp;
40 input radical.mp;
41 input rare.mp;
42 input toprad.mp;
43
44 

---

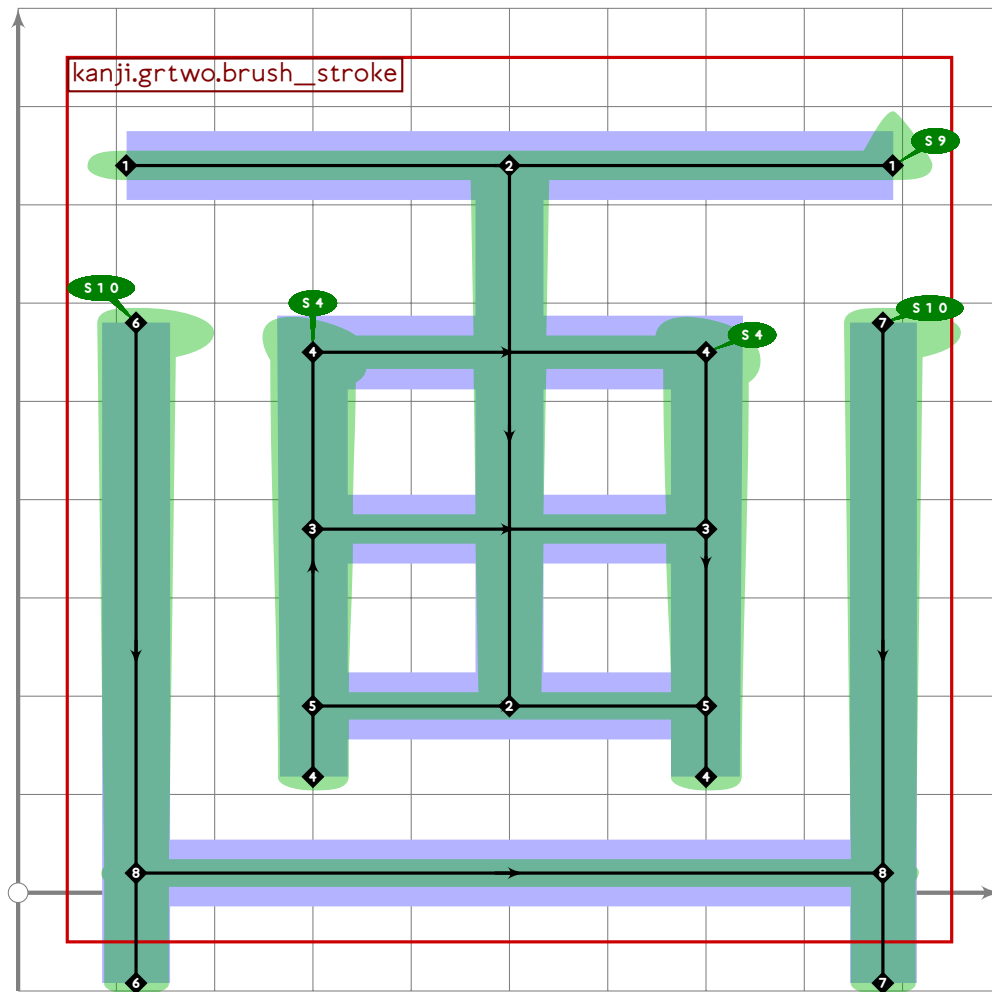

```



```

45
46 vardef tsu_curve.kanji.grone.town =
47   push_pbox_toexpand("kanji.grone.town");
48   build_kanji.level(build_kanji.lr(550,120)
49     (tsu_xform(identity shifted (-50,100))(tsu_curve.kanji.grone.paddy))
50     (tsu_xform(identity yscaled 0.92)
51       (tsu_curve.kanji.grthree.thumbtack)));
52   expand_pbox;
53 enddef;
54
55

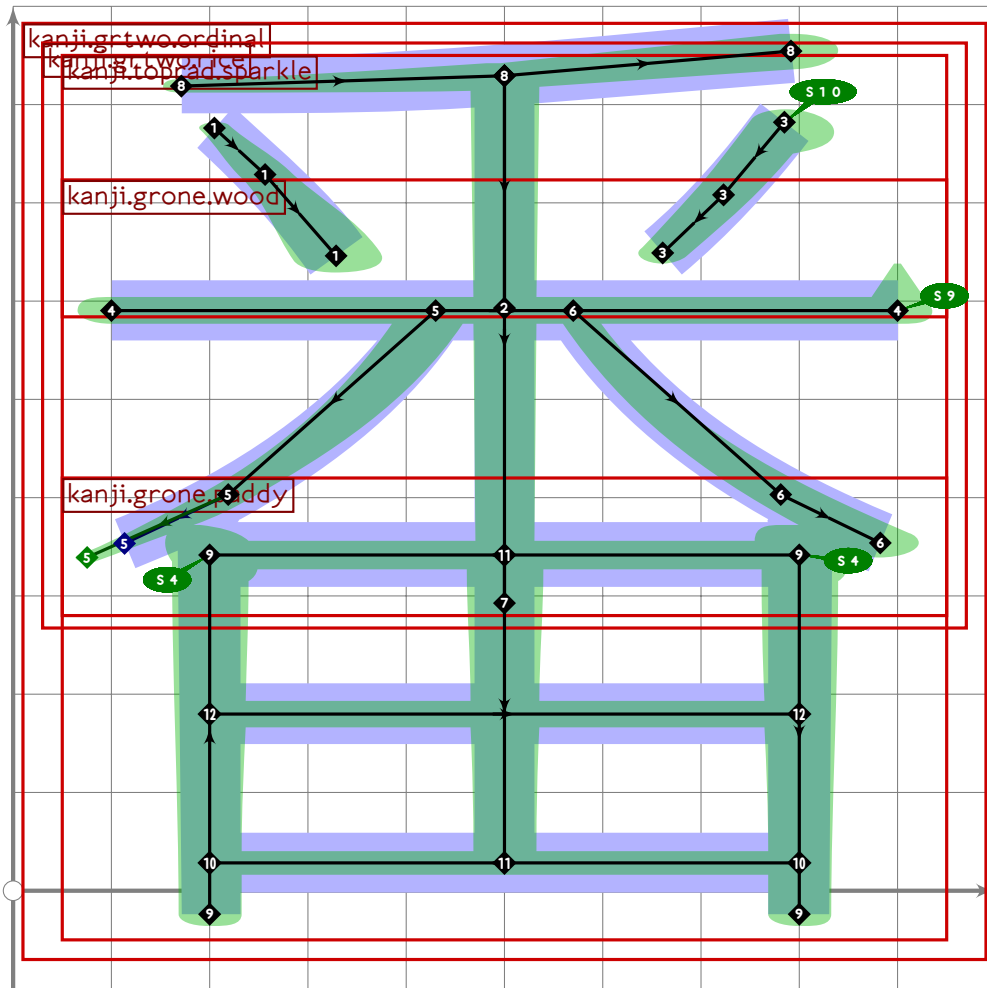
```



```

56
57 vardef tsu_curve.kanji.grtwo.brush_stroke =
58   push_pbox_toexpand("kanji.grtwo.brush_stroke");
59   push_stroke((110,740)-(890,740),(1.6,1.6)-(1.6,1.6));
60   set_boserif(0,1,9);
61   push_stroke((500,740)-(500,190),
62     (1.6,1.6)-(1.4,1.4));
63   push_stroke((300,370)-(700,370),
64     (1.6,1.6)-(1.6,1.6));
65   build_kanji.box((300,550),(700,190));
66   build_kanji.cup((120,580),(880,20));
67   expand_pbox;
68 enddef;

```



```

69
70 vardef tsu_curve.kanji.grt.two.ordinal =
71   push_pbox_toexpand("kanji.grt.two.ordinal");
72   build_kanji.level(build_kanji.tb(350,140)
73     (build_kanji.spread_legs(140)(build_kanji.add_beret(
74       tsu_curve.kanji.grt.two.rice)))
75     (tsu_curve.kanji.grone.paddy));
76   replace_strokep(-9)((point 0 of oldp)-(500,330+50*mincho));
77   expand_pbox;
78 enddef;
79

```

```

80
81
82 % sei/ki "life"
83 begint Suglyph("uni751F";31);
84   tsu_curve.kanji.grone.life;
85   tsu_render;
86 endsuglyph;
87
88 % you/mochi "job"
89 begint Suglyph("uni7528";40);

```

[see page 359]

[see page 403]

90 `tsu_curve.kanji.grtwo.job;`
 91 `tsu_render;`
 92 `endtsuglyph;`
 93
 94 % you "walled road"
 95 `begintsuglyph("uni752C",44);` [see page 468]
 96 `tsu_curve.kanji.rare.walled_road;`
 97 `tsu_render;`
 98 `endtsuglyph;`
 99
 100 % ta "rice paddy"
 101 `begintsuglyph("uni7530",48);` [see page 370]
 102 `tsu_curve.kanji.grone.paddy;`
 103 `tsu_render;`
 104 `endtsuglyph;`
 105
 106 % shin/mou "have the honour to," "monkey zodiac sign," etc.
 107 `begintsuglyph("uni7533",51);` [see page 433]
 108 `tsu_curve.kanji.grthree.have_honour;`
 109 `tsu_render;`
 110 `endtsuglyph;`
 111
 112 % otoko "man"
 113 `begintsuglyph("uni7537",55);` [see page 361]
 114 `tsu_curve.kanji.grone.man;`
 115 `tsu_render;`
 116 `endtsuglyph;`
 117
 118 % chuu/machi "town"
 119 `begintsuglyph("uni753A",58);` [see page 1466]
 120 `tsu_curve.kanji.grone.town;`
 121 `tsu_render;`
 122 `endtsuglyph;`
 123
 124 % ga/ega "brush stroke" (or "picture" but that is reserved)
 125 `begintsuglyph("uni753B",59);` [see page 1467]
 126 `tsu_curve.kanji.grtwo.brush_stroke;`
 127 `tsu_render;`
 128 `endtsuglyph;`
 129
 130 % ban/tsuga "ordinal number"
 131 `begintsuglyph("uni756A",106);` [see page 1468]
 132 `tsu_curve.kanji.grtwo.ordinal;`
 133 `tsu_render;`
 134 `endtsuglyph;`

135-136

137

138

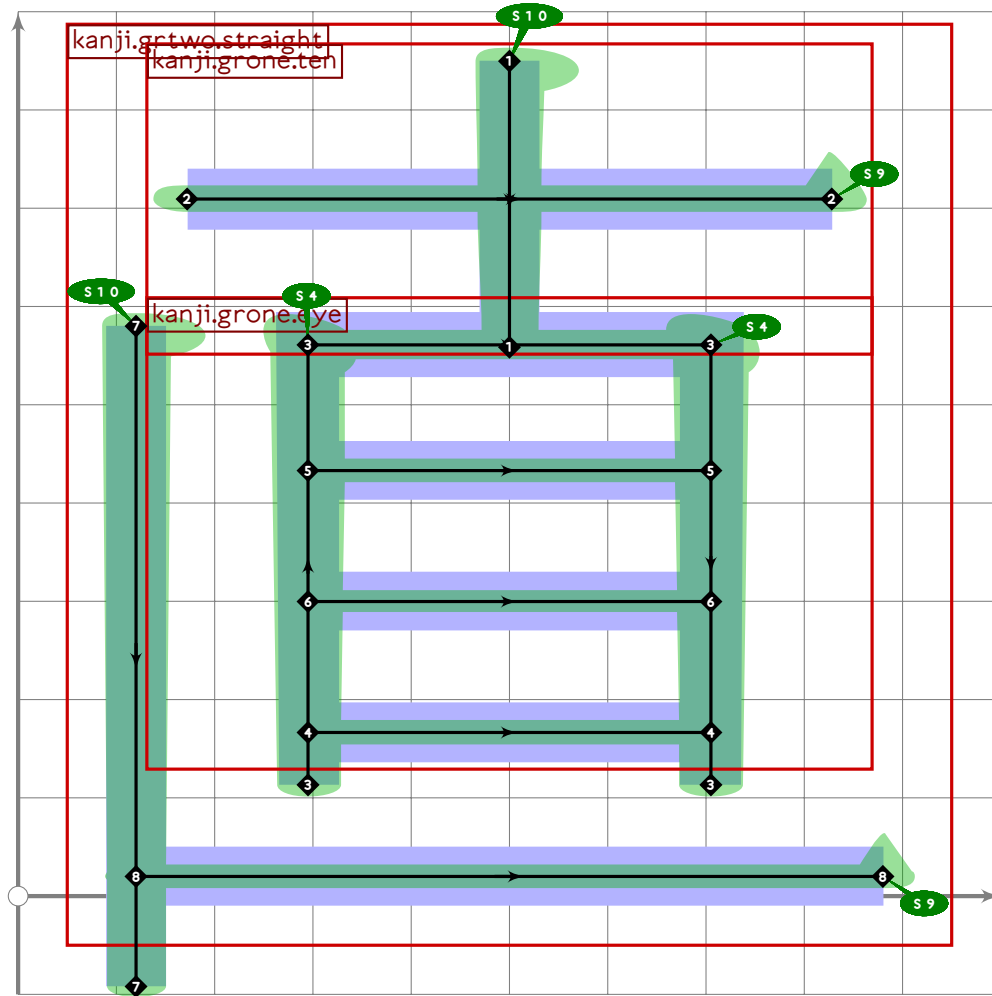
139 endfont;

140

141

tsuku76.mp

```
1 %  
2 % Unicode page 76 (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradeone.mp;  
38  
39 _____
```



```
40  
41 vardef tsu_curve.kanji.grtwo.straight =  
42   push_pbox_toexpand("kanji.grtwo.straight");  
43   build_kanji.level(  

```

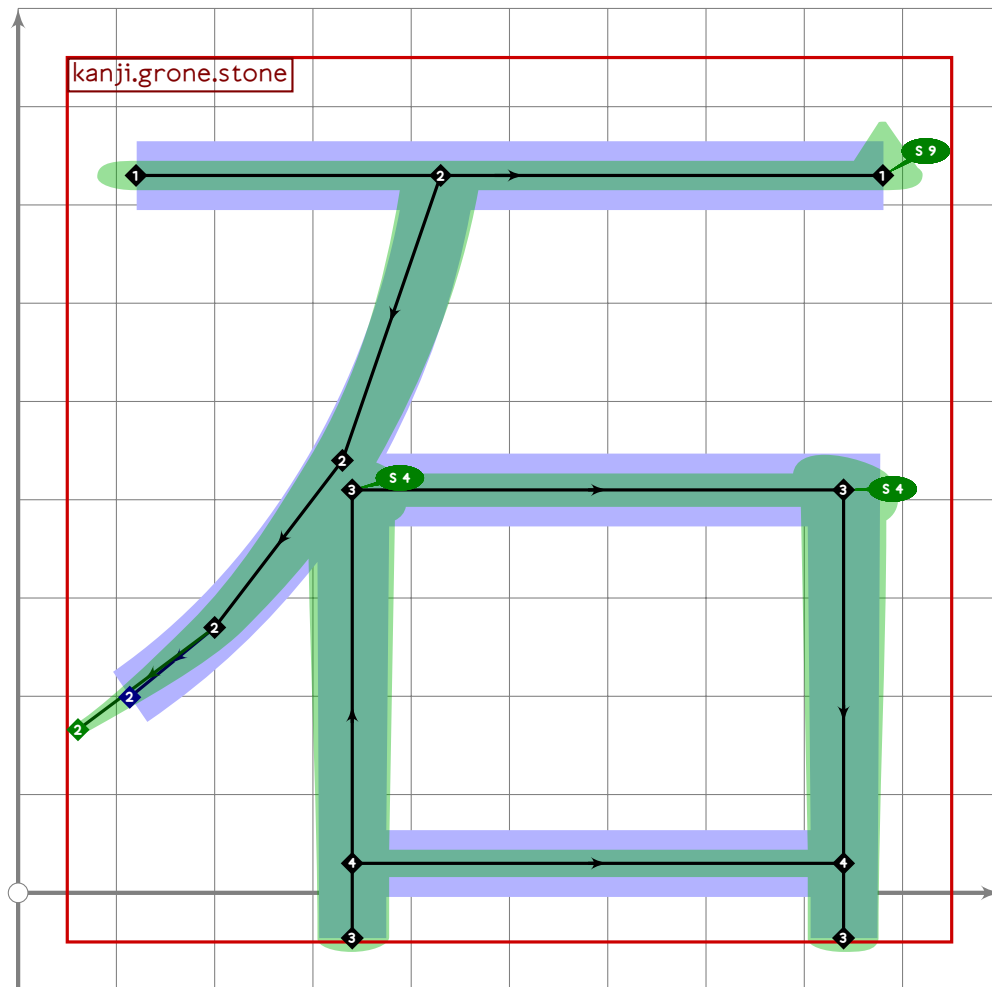
```

44     build_kanji.sscale(scaled 0.82 shifted (0,100))
45         (build_kanji.tb(500,70)
46             (tsu_curve.kanji.grone.ten)
47             (tsu_curve.kanji.grone.eye));
48     build_kanji.cup((120,580),(880,20));
49     set_bosize(-1,0);
50     set_boserif(0,1,9);
51 );
52 expand_pbox;
53 endif;
54
55 -----
56
57 % shiro "white"
58 begintsuglyph("uni767D";125); [see page 389]
59     tsu_curve.kanji.grone.white;
60     tsu_render;
61 endtsuglyph;
62
63 % hyako/momo "hundred"
64 begintsuglyph("uni767E";126); [see page 357]
65     tsu_curve.kanji.grone.hundred;
66     tsu_render;
67 endtsuglyph;
68
69 % moku/me "eye"
70 begintsuglyph("uni76EE";238); [see page 352]
71     tsu_curve.kanji.grone.eye;
72     tsu_render;
73 endtsuglyph;
74
75 % choku/nao multiply meanings including "straight" and "honesty"
76 % "The 'nao' in Naota is for honesty"
77 begintsuglyph("uni76F4";244); [see page 1471]
78     tsu_curve.kanji.grtwo.straight;
79     tsu_render;
80 endtsuglyph;
81
82 -----
83
84 endfont;
85
86 -----

```


tsuku77.mp

```
1 %  
2 % Unicode page 77 (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradefour.mp;  
38 input gradeone.mp;  
39  
40 _____
```

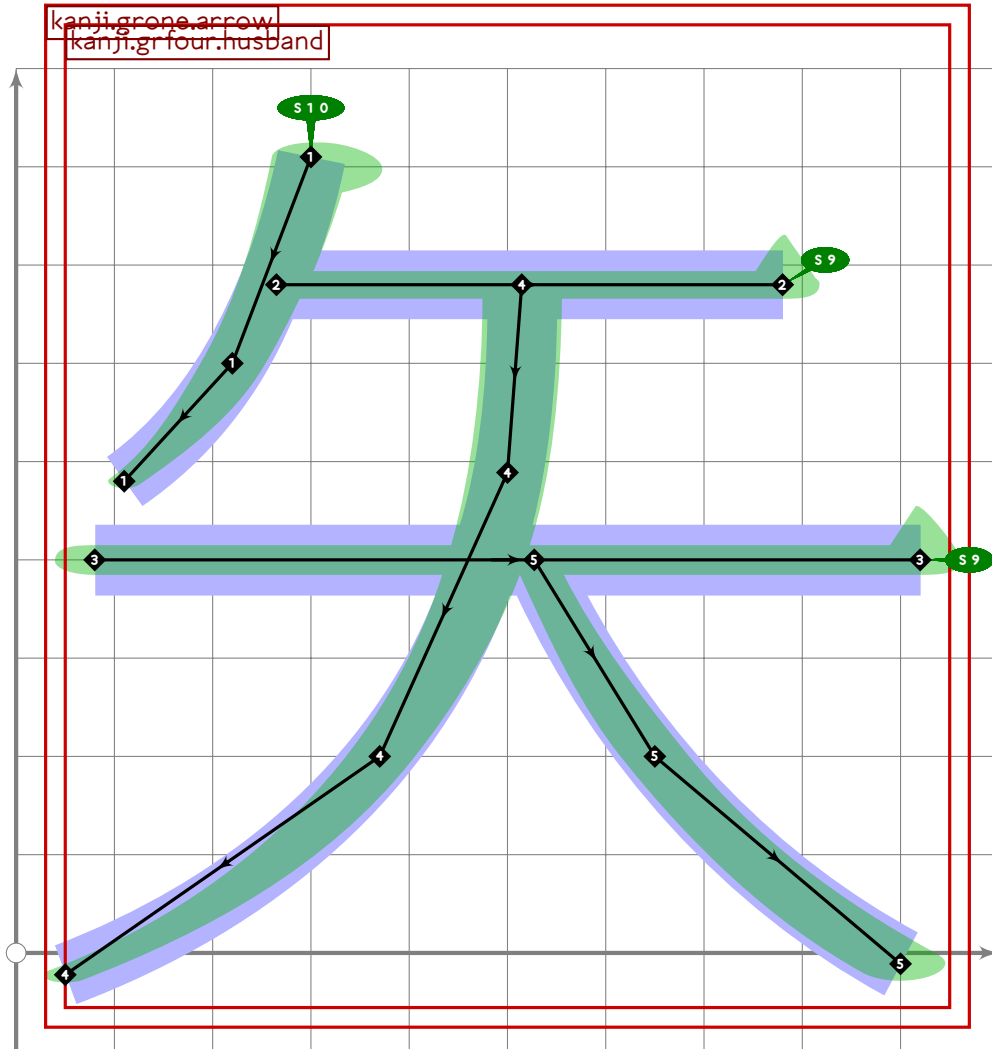


```
41  
42 vardef tsu_curve.kanji.grone.stone =  
43   push_pbox_toexpand("kanji.grone.stone");
```

```

44 push_stroke((120,730)..(880,730),(1.6,1.6)-(1.6,1.6));
45 set_boserif(0,1,9);
46 push_stroke((430,730)..(330,440)..(200,270)..(50,160),
47 (1.6,1.6)-(1.5,1.5)-(1.3,1.3)-(0.8,0.8));
48 build_kanji.box((340,410),(840,30));
49 expand_pbox;
50 enddef;
51
52

```



```

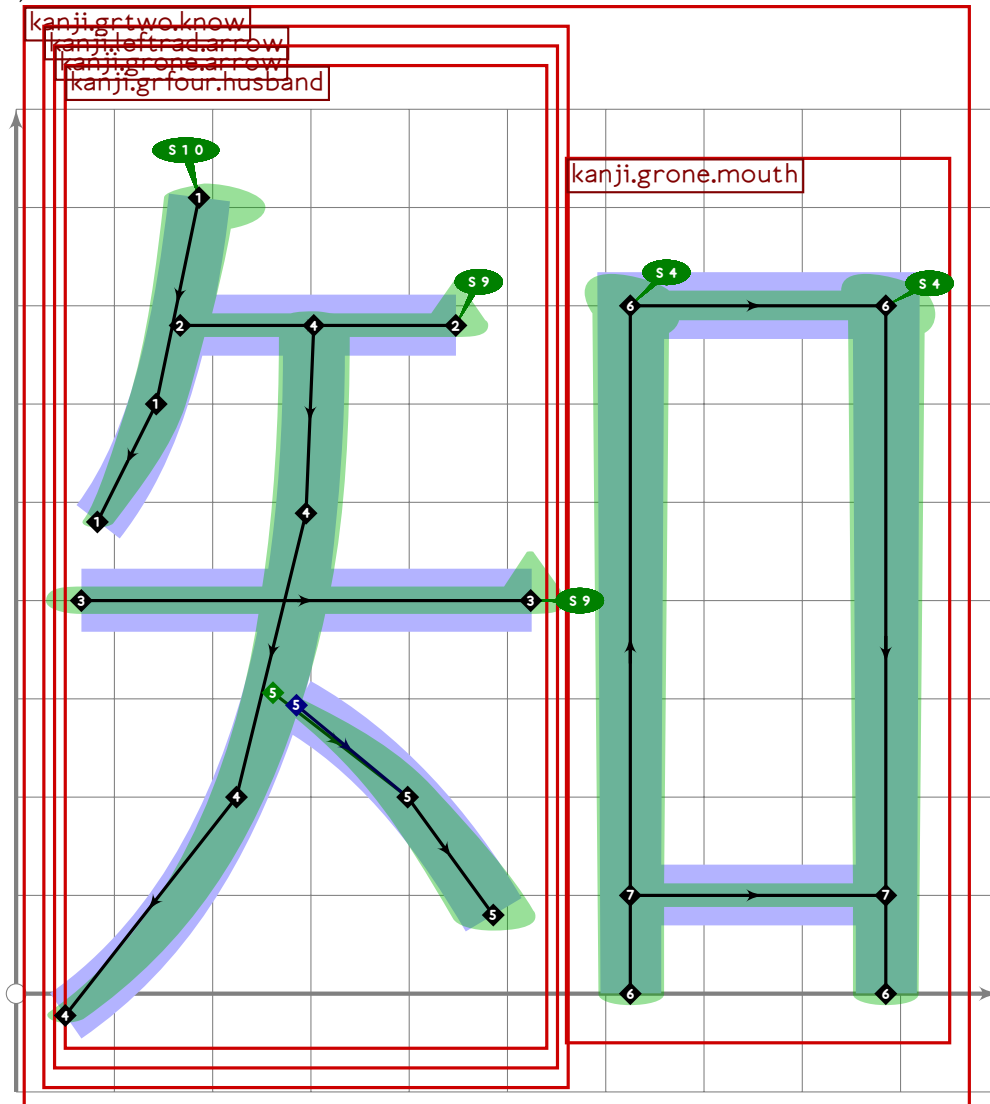
53
54 vardef tsu_curve.kanji.grtwo.arrow =
55 push_pbox_toexpand("kanji.grone.arrow");
56 push_stroke((300,810)..tension 1.2..(220,600)..(110,480),
57 (1.6,1.6)-(1.4,1.4)-(1,1));
58 set_boserif(0,0,10);
59 tsu_xform(identity yscaled (400/360))(tsu_curve.kanji.grfour.husband);
60 replace_stroke(-3)((100,680)-(780,680));
61 replace_stroke(-3)(subpath
62 (0.01*xpart (oldp intersectiontimes get_stroke(-4)),1) of oldp);

```

```

63 replace_stroke(-1)(subpath
64   (xpart (oldp intersectiontimes get_stroke(-3)),infinity) of oldp);
65 set_boserif(-1,0,whatever);
66 expand_pbox;
67 enddef;

```



```

68
69 vardef tsu_curve.kanji.grtwo.know =
70   push_pbox_toexpand("kanji.grtwo.know");
71   build_kanji.level(build_kanji.lr(550;20)
72     (tsu_curve.kanji.leftrad.arrow)
73     (tsu_curve.kanji.grone.mouth));
74   expand_pbox;
75 enddef;
76
77
78
79 vardef tsu_curve.kanji.leftrad.arrow =
80   push_pbox_toexpand("kanji.leftrad.arrow");

```

```

81 tsu_curve.kanji.grtwo.arrow;
82 replace_strokep(0)((point 1.6 of get_strokep(-1)).(690,200)..(850,80));
83 replace_strokeq(0)((0.9,0.9)-(1.5,1.5)-(1.8,1.8));
84 expand_pbox;
85 enddef;
86
87 

---


88
89 % shi/ya "arrow"
90 begintsuglyph("uni77E2",226); [see page 1474]
91 tsu_curve.kanji.grtwo.arrow;
92 tsu_render;
93 endtsuglyph;
94
95 % chi/shi "to know"
96 begintsuglyph("uni77E5",229); [see page 1475]
97 tsu_curve.kanji.grtwo.know;
98 tsu_render;
99 endtsuglyph;
100
101 % seki/ishi "stone"
102 begintsuglyph("uni77F3",243); [see page 1473]
103 tsu_curve.kanji.grone.stone;
104 tsu_render;
105 endtsuglyph;
106
107 

---


108
109 endfont;
110
111 

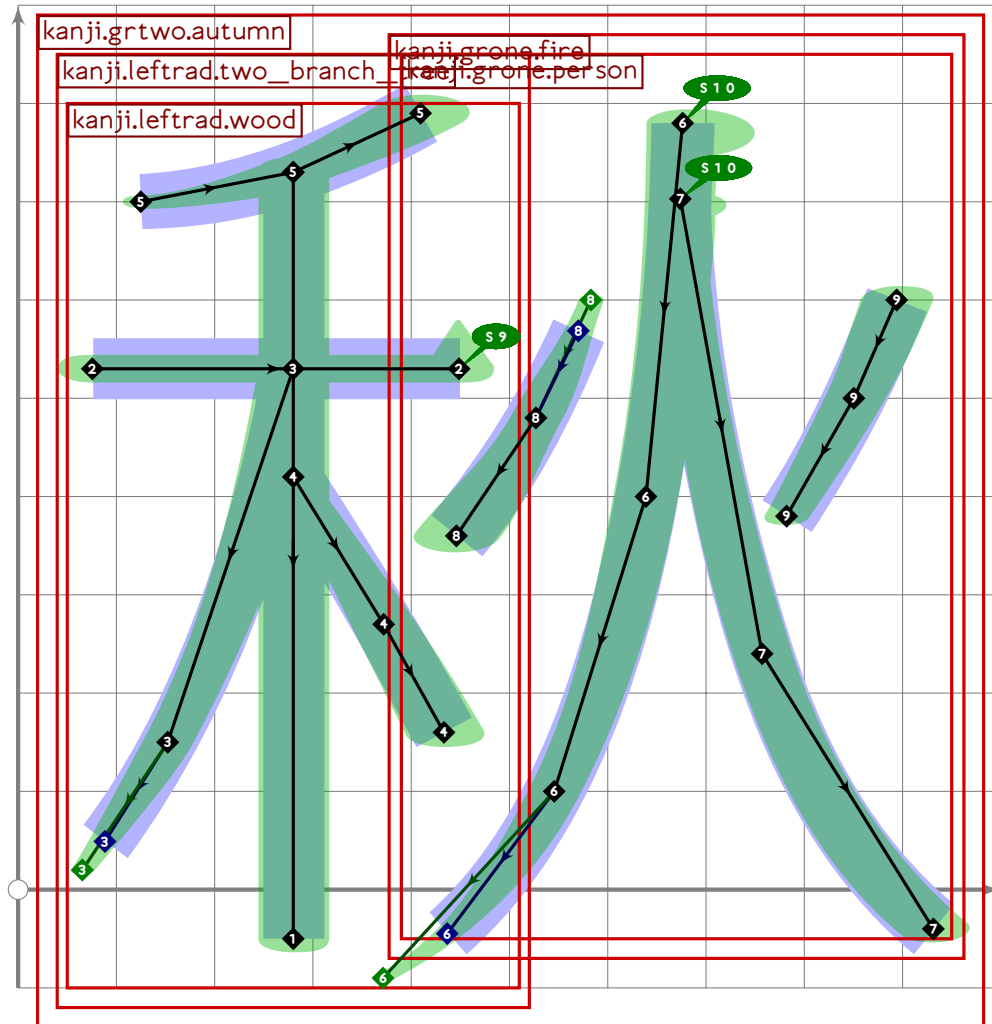
---



```

tsuku79.mp

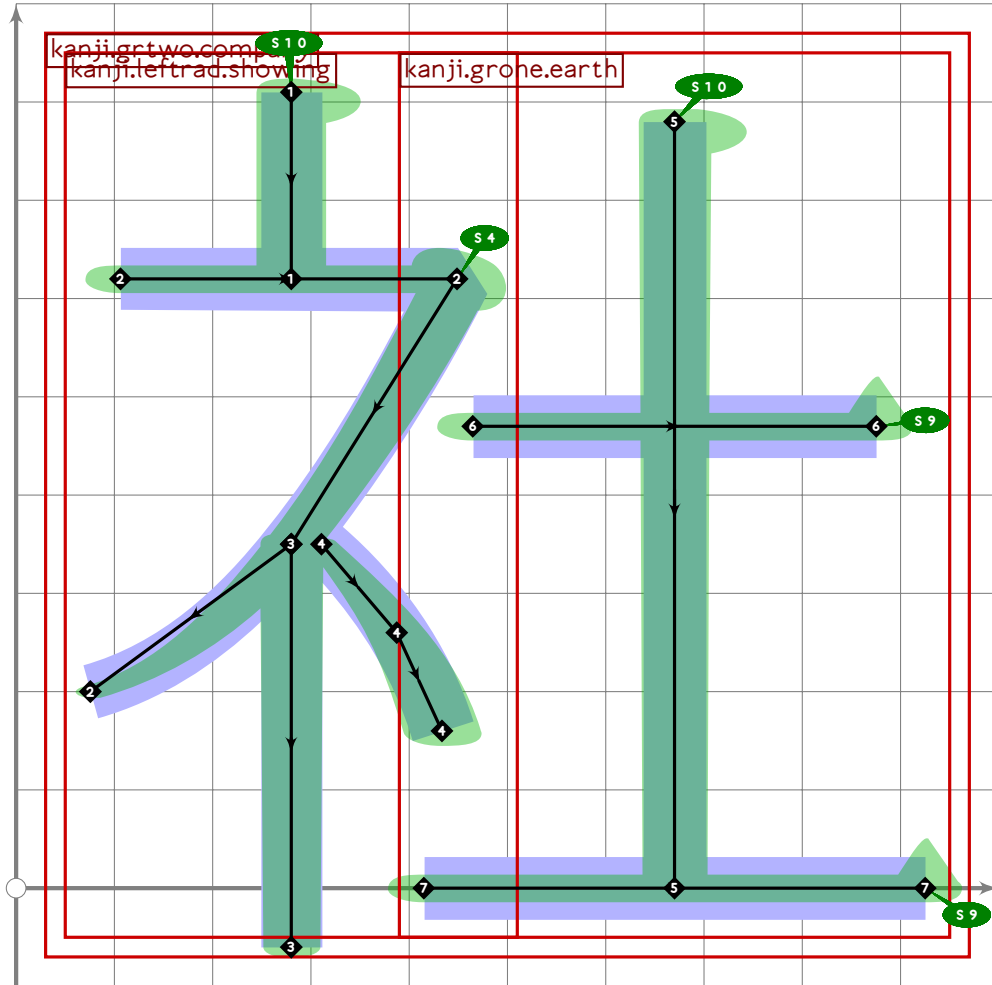
```
1 %  
2 % Unicode page 79 (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradeone.mp;  
38 input gradethree.mp;  
39 input leftrad.mp;  
40 input radical.mp;  
41  
42 _____
```



```

43
44 vardef tsu_curve.kanji.grtwo.autumn =
45   push_pbox_toexpand("kanji.grtwo.autumn");
46   build_kanji.lr(450,120)
47     (tsu_curve.kanji.leftrad.two_branch_tree)
48     (tsu_curve.kanji.grone.fire);
49   expand_pbox;
50 enddef;

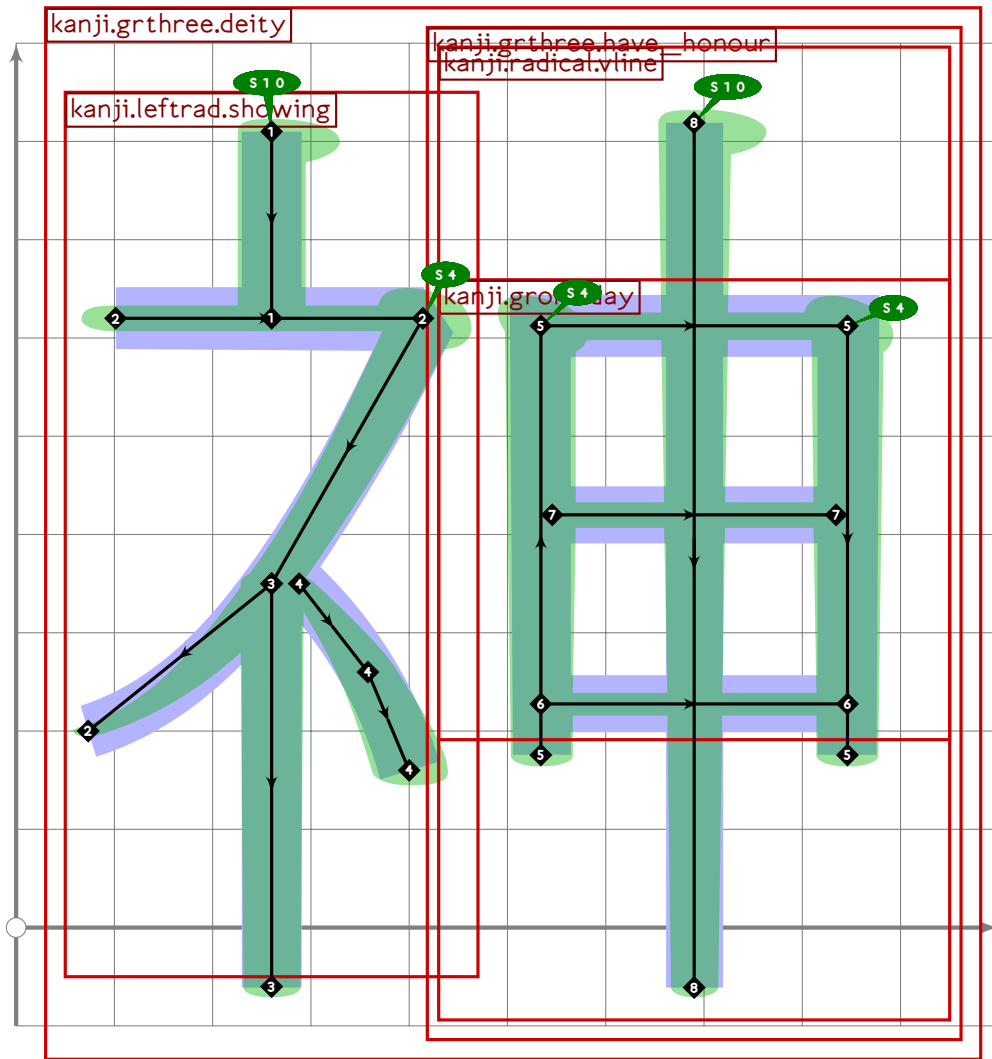
```



```

51
52 vardef tsu_curve.kanji.grtwo.company =
53   push_pbox_toexpand("kanji.grtwo.company");
54   build_kanji.lr(450,120)
55     (tsu_curve.kanji.leftrad.showing)
56     (tsu_curve.kanji.grone.earth);
57   expand_pbox;
58 enddef;
59
60

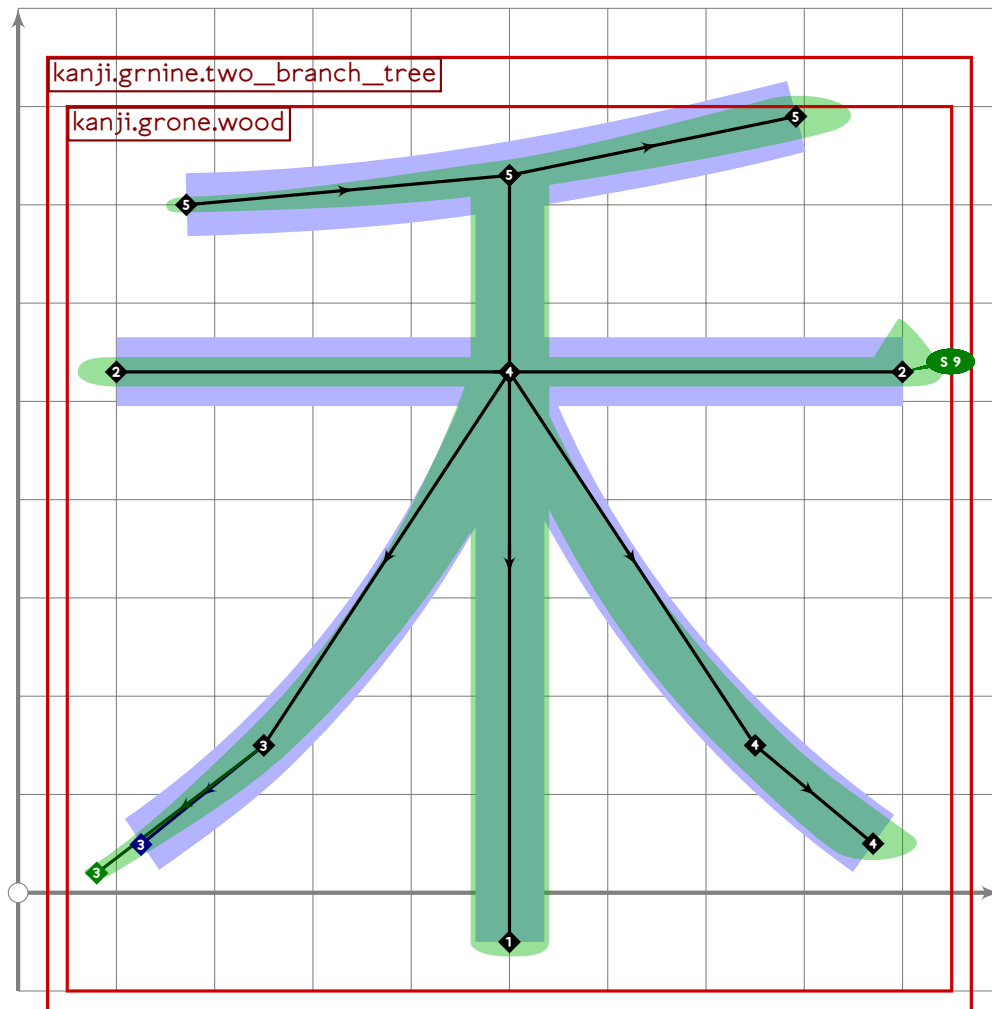
```



```

61
62 vardef tsu_curve.kanji.grthree.deity =
63   push_pbox_toexpand("kanji.grthree.deity");
64   build_kanji.lr(450,40)
65     (tsu_curve.kanji.leftrad.showing)
66     (tsu_curve.kanji.grthree.have_honour);
67   expand_pbox;
68 enddef;
69
70

```



```

71
72 vardef tsu_curve.kanji.grnine.two_branch_tree =
73   push_pbox_toexpand("kanji.grnine.two_branch_tree");
74   tsu_xform(identity shifted (0;50))
75     (build_kanji.add_beret(tsu_curve.kanji.grnone.wood));
76   expand_pbox;
77 enddef;

```

78

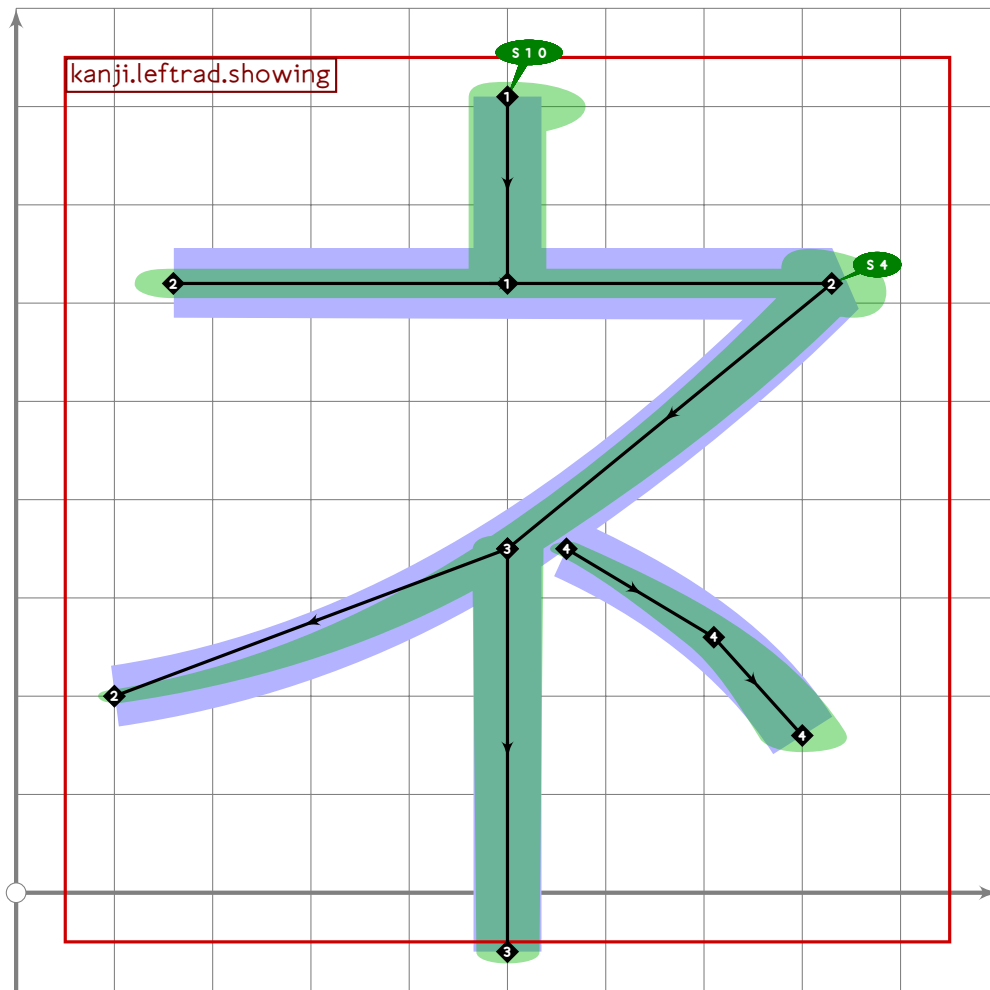
79

80

```

81 vardef tsu_curve.kanji.leftrad.two_branch_tree =
82   push_pbox_toexpand("kanji.leftrad.two_branch_tree");
83   tsu_xform(identity shifted (0;50))
84     (build_kanji.add_beret(tsu_curve.kanji.leftrad.wood));
85   expand_pbox;
86 enddef;

```

```

87
88 vardef tsu_curve.kanji.leftrad.showing =
89   push_pbox_toexpand("kanji.leftrad.showing");
90   push_stroke((500,810)-(500,620),(1.6,1.6)-(1.57,1.57));
91   set_boserif(0,0,10);
92   push_stroke((160,620)-(830,620)..tension 1.2..
93     (500,350)..(100,200),
94     (1.6,1.6)-(1.6,1.6)-(1.4,1.4)-(1,1));
95   set_botip(0,1,0);
96   set_boserif(0,1,4);
97   push_stroke((500,350)-(500,-60),(1.5,1.5)-(1.4,1.4));
98   push_stroke((560,350)..tension 1.2..(710,260)..(800,160),
99     (1,1)-(1.4,1.4)-(1.7,1.7));
100  expand_pbox;
101  enddef;
102
103
104
105 % "showing" radical (simple, more popular form)
106 begint Suglyph("uni793B",59);
107   tsu_curve.kanji.leftrad.showing;

```

[see page 1481]

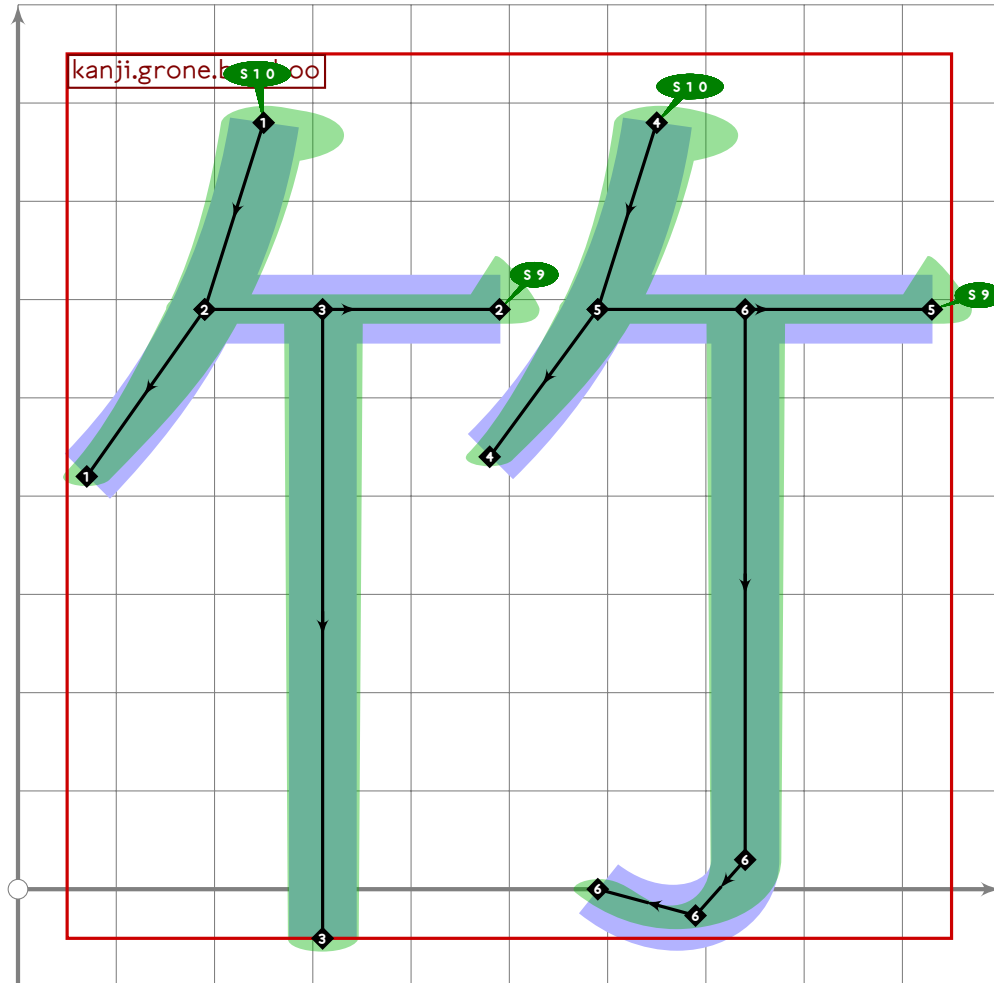
```

108 tsu_render;
109 endtsuglyph;
110
111 % sha/yashiro "company"
112 begintsuglyph("uni793E";62); [see page 1478]
113 tsu_curve.kanji.grtwo.company;
114 tsu_render;
115 endtsuglyph;
116
117 % shin/kami "deity"
118 begintsuglyph("uni795E";94); [see page 1479]
119 tsu_curve.kanji.grthree.deity;
120 tsu_render;
121 endtsuglyph;
122
123 % ka/ine little meaning by itself, called "two-branch tree" as a radical
124 begintsuglyph("uni79BE";190); [see page 1480]
125 tsu_curve.kanji.grnine.two_branch_tree;
126 tsu_render;
127 endtsuglyph;
128
129 % shuu/aki "autumn"
130 begintsuglyph("uni79CB";203); [see page 1478]
131 tsu_curve.kanji.grtwo.autumn;
132 tsu_render;
133 endtsuglyph;
134
135 _____
136
137 endfont;
138
139 _____

```

tsuku7a.mp

```
1 %  
2 % Unicode page 7a (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradeone.mp;  
38 input gradetwo.mp;  
39 input radical.mp;  
40 input toprad.mp;  
41  
42 _____
```

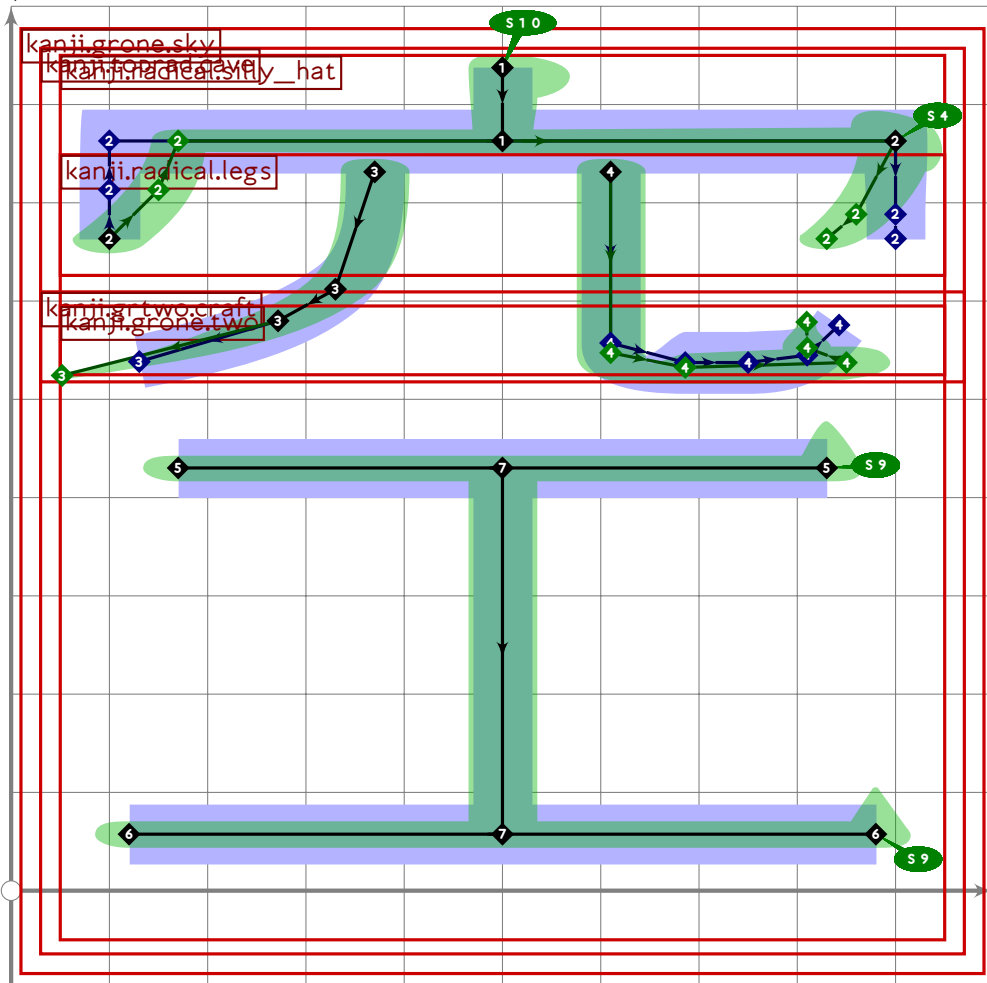


43

```

44 vardef tsu_curve.kanji.grone.bamboo =
45   push_pbox_toexpand("kanji.grone.bamboo");
46   push_stroke((250,780)..(190,590)..(70,420),
47     (1.7,1.7)-(1.6,1.6)-(1.2,1.2));
48   set_boserif(0,0,10);
49   push_stroke((190,590)-(490,590),
50     (1.6,1.6)-(1.6,1.6));
51   set_boserif(0,1,9);
52   push_stroke((310,590)-(310,-50),
53     (1.6,1.6)-(1.5,1.5));
54   push_stroke((650,780)..(590,590)..(480,440),
55     (1.7,1.7)-(1.6,1.6)-(1.2,1.2));
56   set_boserif(0,0,10);
57   push_stroke((590,590)-(930,590),
58     (1.6,1.6)-(1.6,1.6));
59   set_boserif(0,1,9);
60   push_stroke((740,590),
61     (1.6,1.6));
62   build_kanji.add_jtail(0);
63   expand_pbox;
64 enddef;

```



```

65
66 vardef tsu_curve.kanji.grone.sky =
67   push_pbox_toexpand("kanji.grone.sky");
68   build_kanji.level(build_kanji.tb(560,70)
69     (tsu_curve.kanji.toprad.cave)
70     (tsu_curve.kanji.grtwo.craft));
71   expand_pbox;
72 enddef;
73
74 

---


75
76 % kara/sora "sky"
77 begintsuglyph("uni7A7A",122); [see page 1485]
78   tsu_curve.kanji.grone.sky;
79   tsu_render;
80 endtsuglyph;
81
82 % ta "stand up"
83 begintsuglyph("uni7ACB",203); [see page 380]
84   tsu_curve.kanji.grone.stand_up;
85   tsu_render;
86 endtsuglyph;
87
88 % chiku/take "bamboo"
89 begintsuglyph("uni7AF9",249); [see page 1484]
90   tsu_curve.kanji.grone.bamboo;
91   tsu_render;
92 endtsuglyph;
93
94 

---


95
96 endfont;
97
98 

---



```

tsuku7b.mp

```
1 %
2 % Unicode page 7b (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---

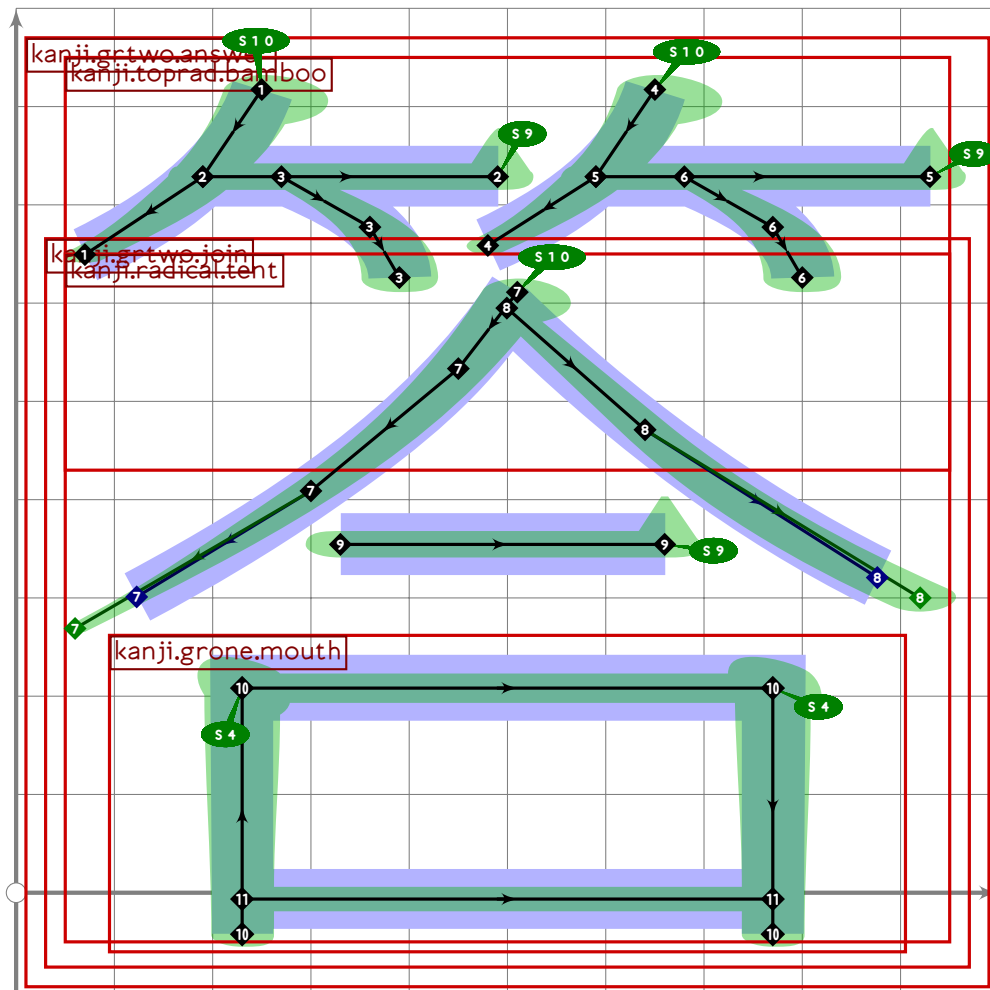

32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradeone.mp;
38 input gradetwo.mp;
39 input radical.mp;
40
41 

---


42
43 vardef tsu_curve.kanji.toprad.bamboo =
44   push_pbox_toexpand("kanji.toprad.bamboo");
45   push_stroke((250,780)..(190,590)..(70,420),
46     (1.7,1.7)-(1.6,1.6)-(1.2,1.2));
47   set_boserif(0,0,10);
48   push_stroke((190,590)-(490,590),(1.6,1.6)-(1.6,1.6));
49   set_boserif(0,1,9);
50   push_stroke((270,590)..tension 1.2..(360,480)..(390,370),
51     (1.1,1.1)-(1.5,1.5)-(1.7,1.7));
52   push_stroke((650,780)..(590,590)..(480,440),
53     (1.7,1.7)-(1.6,1.6)-(1.2,1.2));
54   set_boserif(0,0,10);
55   push_stroke((590,590)-(930,590),(1.6,1.6)-(1.6,1.6));
56   set_boserif(0,1,9);
57   push_stroke((680,590)..tension 1.2..(770,480)..(800,370),
58     (1.1,1.1)-(1.5,1.5)-(1.7,1.7));
59   expand_pbox;
60 enddef;
61
62 

---

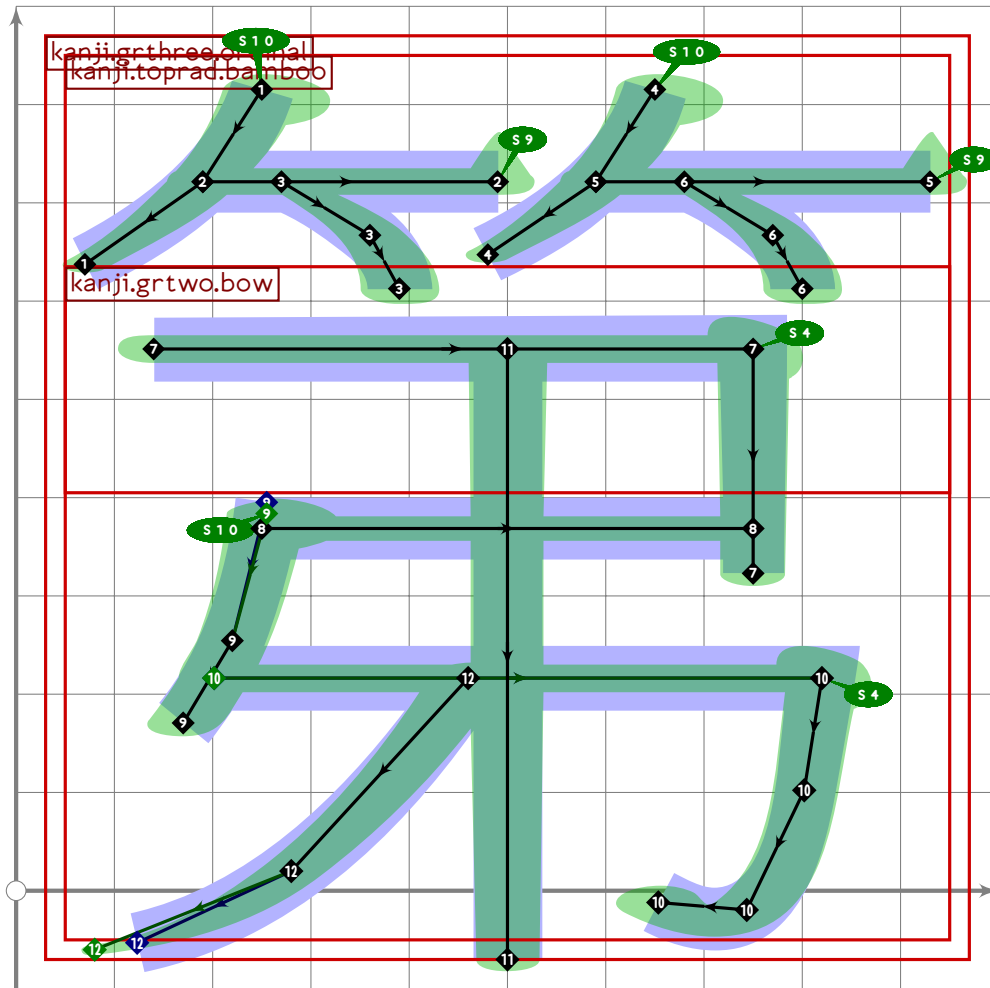

```



```

63
64 vardef tsu_curve.kanji.grtwo.answer =
65   push_pbox_toexpand("kanji.grtwo.answer");
66   build_kanji.level(build_kanji.tb(540,220)
67     (tsu_curve.kanji.toprad.bamboo)
68     (tsu_curve.kanji.grtwo.join));
69   expand_pbox;
70 enddef;
71
72

```



```

73
74 vardef tsu_curve.kanji.grthree.ordinal =
75   push_pbox_toexpand("kanji.grthree.ordinal");
76   build_kanji.level(build_kanji.tb(520,230)
77     (tsu_curve.kanji.toprad.bamboo)
78     (tsu_curve.kanji.grtwo.bow));
79   push_stroke((500,y part point 0 of get_stroke(-3))-(500,70),
80     (1.6,1.6)-(1.4,1.4));
81   replace_stroke(-1)((point 0 of oldp)-
82     ((subpath (1,infinity) of oldp)
83       shifted (-820,0) xscaled 0.45 shifted (820,0)));
84   push_stroke(((get_stroke(0) intersectionpoint get_stroke(-1))*(-40,0)..
85     tension 1.2..(280,20)..(80,60),
86     (1.6,1.6)-(1.4,1.4)-(0.9,0.9));
87   expand_pbox;
88 enddef;

```

89
90

```

91
92 % dai "ordinal number"
93 begint Suglyph("uni7B2C",44);

```

[see page 1488]


```
94  tsu_curve.kanji.grthree.ordinal;
95  tsu_render;
96  endtsuglyph;
97
98  % tou/kota "answer"
99  begintsuglyph("uni7B54",84);           [see page 1487]
100  tsu_curve.kanji.grtwo.answer;
101  tsu_render;
102  endtsuglyph;
103
104  _____
105
106  endfont;
107
108  _____
```

tsuku7c.mp

```
1 %
2 % Unicode page 7c (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradeone.mp;
38 input gradetwo.mp;
39 input radical.mp;
40 input toprad.mp;
41
42 

---


43
44 % bei/kome "rice", also "USA" and "metre"
45 begintsuglyph("uni7C73";115); [see page 423]
46 tsu_curve.kanji.grtwo.rice;
47 tsu_render;
48 endtsuglyph;
49
50 % shi/ito "thread"
51 begintsuglyph("uni7CF8";248); [see page 382]
52 tsu_curve.kanji.grone.thread;
53 tsu_render;
54 endtsuglyph;
55
56 

---

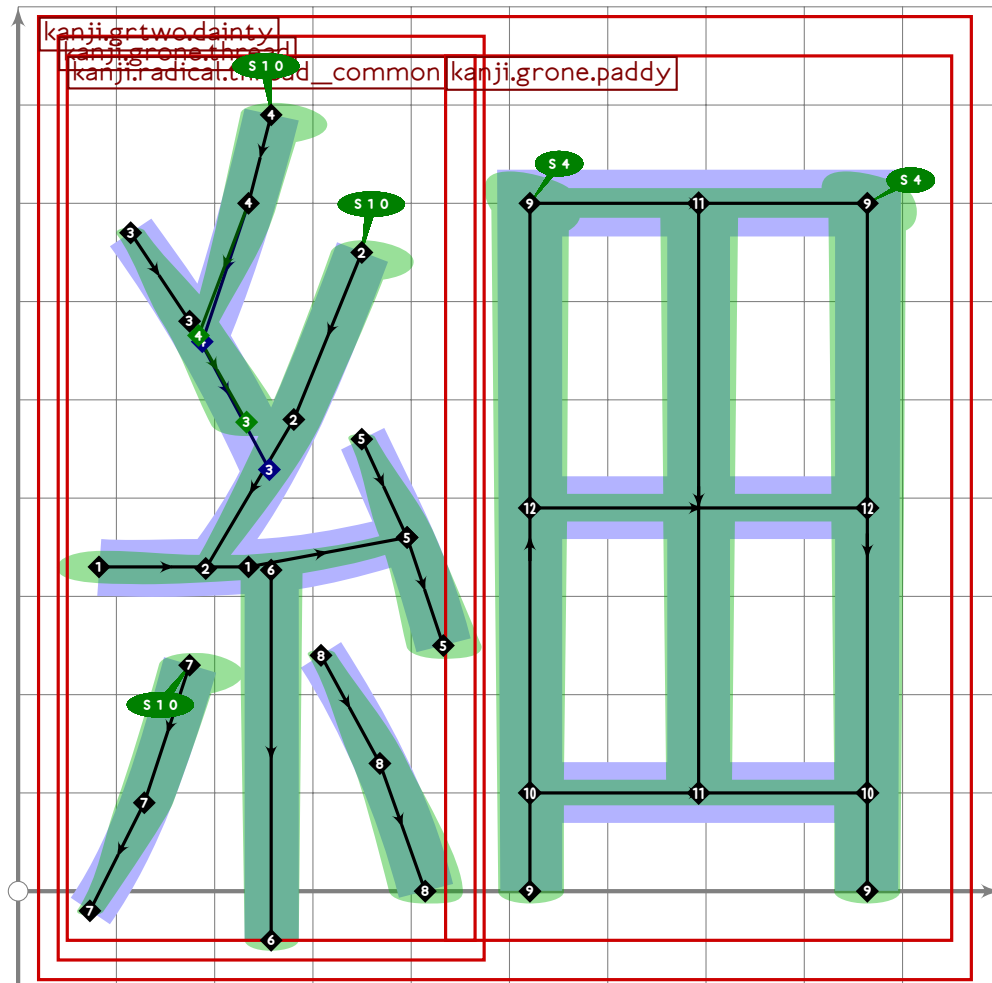

57
58 endfont;
59
60 

---


```

tsuku7d.mp

```
1 %  
2 % Unicode page 7d (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradeone.mp;  
38 input gradesix.mp;  
39 input gradetwo.mp;  
40 input radical.mp;  
41  
42 _____
```

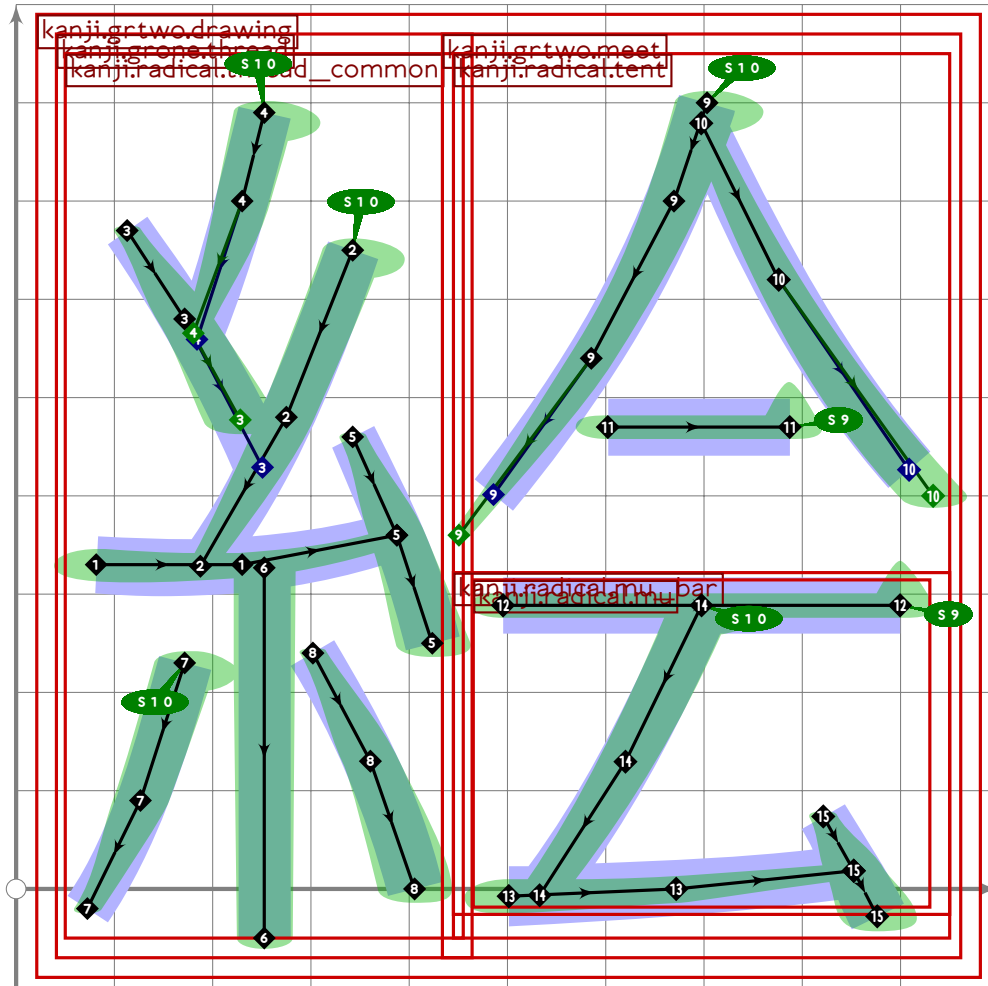


43

```

44 vardef tsu_curve.kanji.grtwo.dainty =
45   push_pbox_toexpand("kanji.grtwo.dainty");
46   build_kanji.lr(450,30)
47   (tsu_curve.kanji.grone.thread)
48   (tsu_curve.kanji.grone.paddy);
49   expand_pbox;
50 enddef;
51

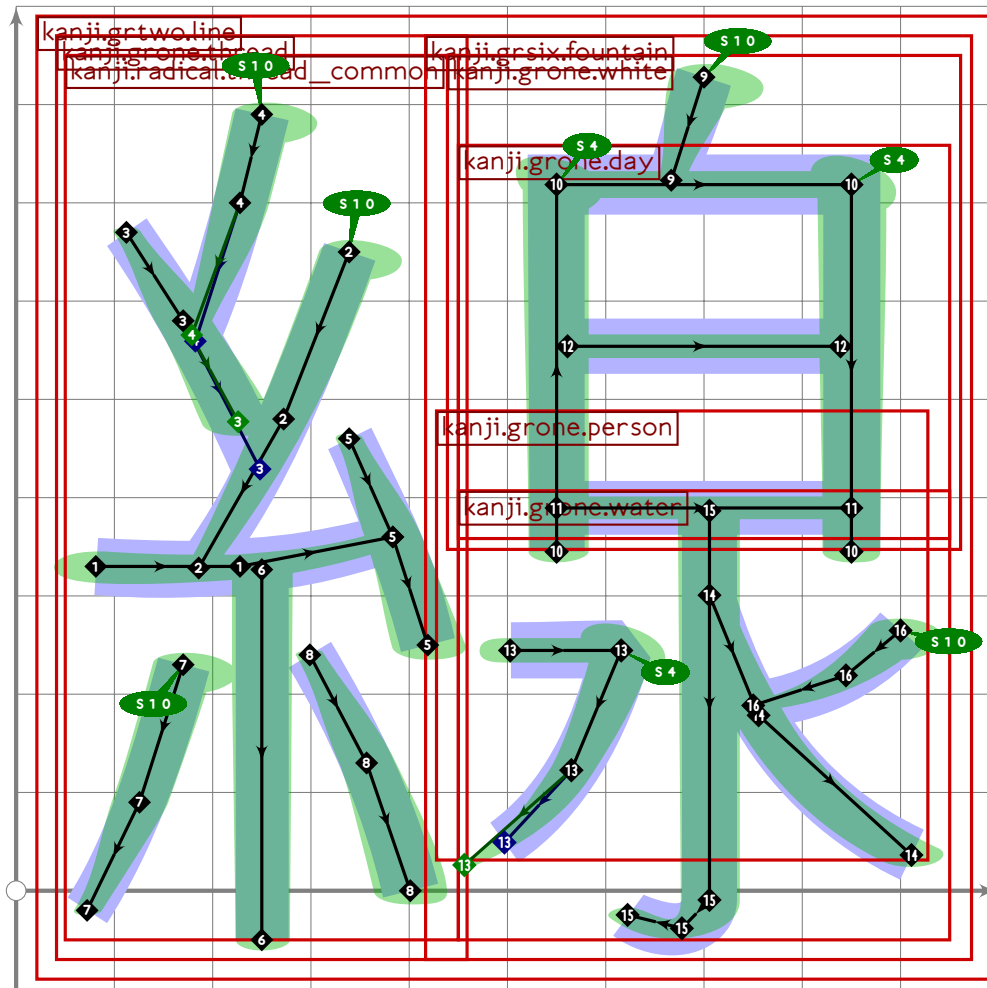
```



```

52 % "picture" is a reserved word
53 vardef tsu_curve.kanji.grtwo.drawing =
54   push_pbox_toexpand("kanji.grtwo.drawing");
55   build_kanji.lr(450,10)
56   (tsu_curve.kanji.grone.thread)
57   (tsu_curve.kanji.grtwo.meet);
58   expand_pbox;
59 enddef;

```



```

60
61 vardef tsu_curve.kanji.grtwo.line =
62   push_pbox_toexpand("kanji.grtwo.line");
63   build_kanji.lr(450,0)
64   (tsu_curve.kanji.grone.thread)
65   (tsu_curve.kanji.grsix.fountain);
66   expand_pbox;
67 enddef;

```

```

68
69
70
71 % dai/hoso "dainty"
72 begintsuglyph("uni7D30";48); [see page 1492]
73   tsu_curve.kanji.grtwo.dainty;
74   tsu_render;
75 endtsuglyph;
76
77 % kai/e "picture"
78 begintsuglyph("uni7D75";117); [see page 1492]
79   tsu_curve.kanji.grtwo.drawing;
80   tsu_render;

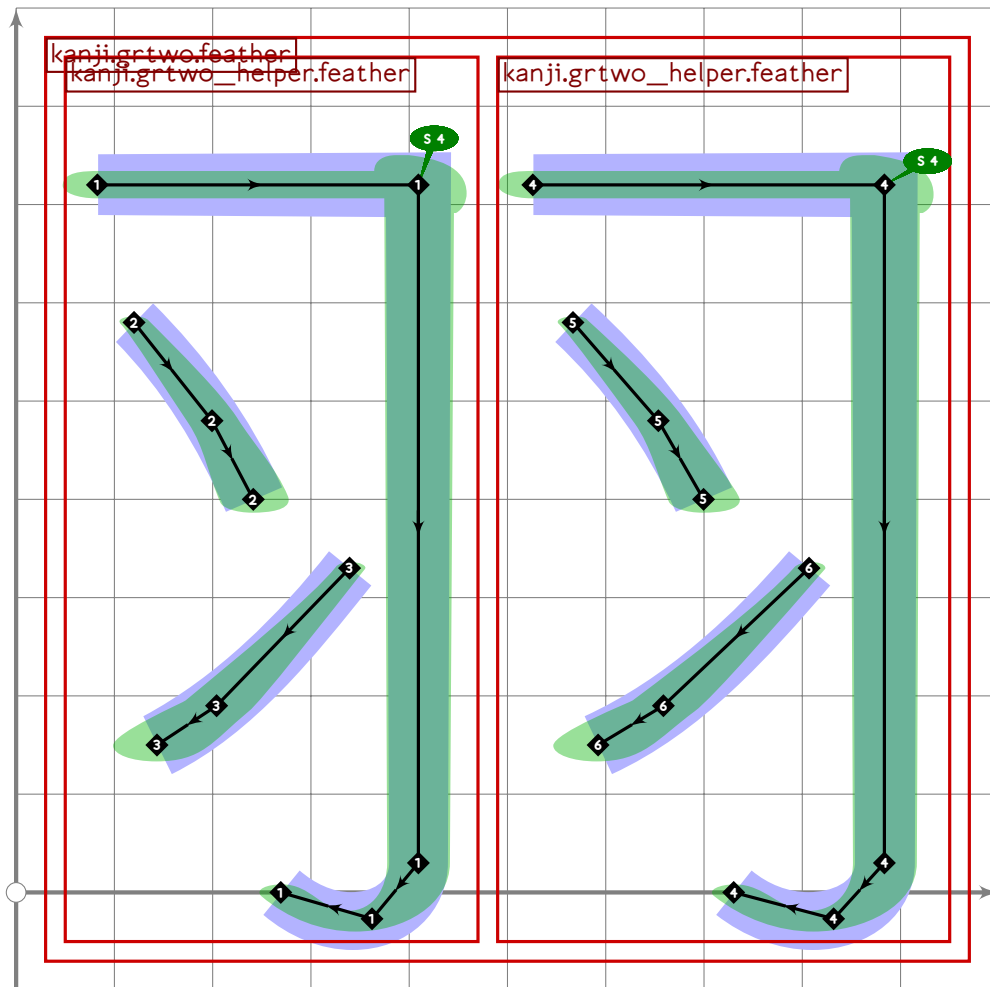
```

```
81 endtsuglyph;  
82  
83 % sen/suji "line" (geometric, rail, telephone)  
84 begint Suglyph("uni7DDA",218);  
85   tsu_curve.kanji.grtwo.line;  
86   tsu_render;  
87 endtsuglyph;  
88  
89 _____  
90  
91 endfont;  
92  
93 _____
```

[see page 1493]

tsuku-7f.mp

```
1 %  
2 % Unicode page 7f (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37  
38 _____
```



```
39  
40 vardef tsu_curve.kanji.grtwo.feather =  
41   push_pbox_toexpand("kanji.grtwo.feather");  
42   build_kanji.lr(480,-20)  
43     (tsu_curve.kanji.grtwo_helper.feather)
```

```

44     (tsu_curve.kanji.grtwo_helper.feather);
45     expand_pbox;
46 enddef;
47
48 vardef tsu_curve.kanji.grtwo_helper.feather =
49     push_pbox_toexpand("kanji.grtwo_helper.feather");
50     push_stroke((60,720)-(410,720),(1.6,1.6)-(1.6,1.6));
51     build_kanji.add_jtail(0);
52     replace_strokep(0)(oldp xscaled 2);
53     set_botip(0,1,1);
54     set_boserif(0,1,4);
55     push_stroke((200,580)..tension 1.2..(370,480)..(460,400),
56     (1,1)-(1.3,1.3)-(1.6,1.6));
57     push_stroke((670,330)..tension 1.2..(380,190)..(250,150),
58     (1,1)-(1.6,1.6)-(1.9,1.9));
59     expand_pbox;
60 enddef;
61
62 -----
63
64 % u/hane "feather"
65 begintsuglyph("uni7FBD",189); [see page 1495]
66     tsu_curve.kanji.grtwo.feather;
67     tsu_render;
68 endtsuglyph;
69
70 -----
71
72 endfont;
73
74 -----

```


tsuku-80.mp

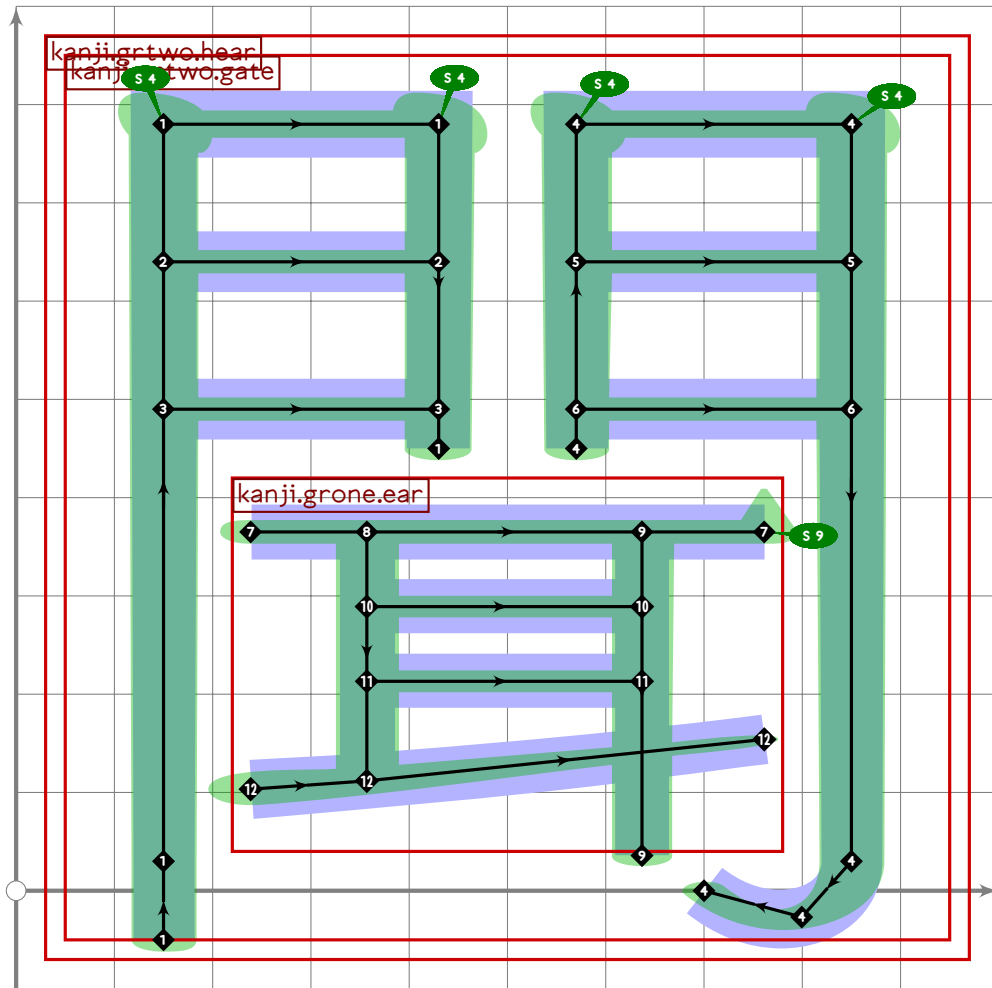
```
1 %
2 % Unicode page 80 (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input bottomrad.mp;
37 input buildkanji.mp;
38 input gradeeight.mp;
39 input gradeone.mp;
40 input gradetwo.mp;
41 input radical.mp;
42 input toprad.mp;
43
44 

---

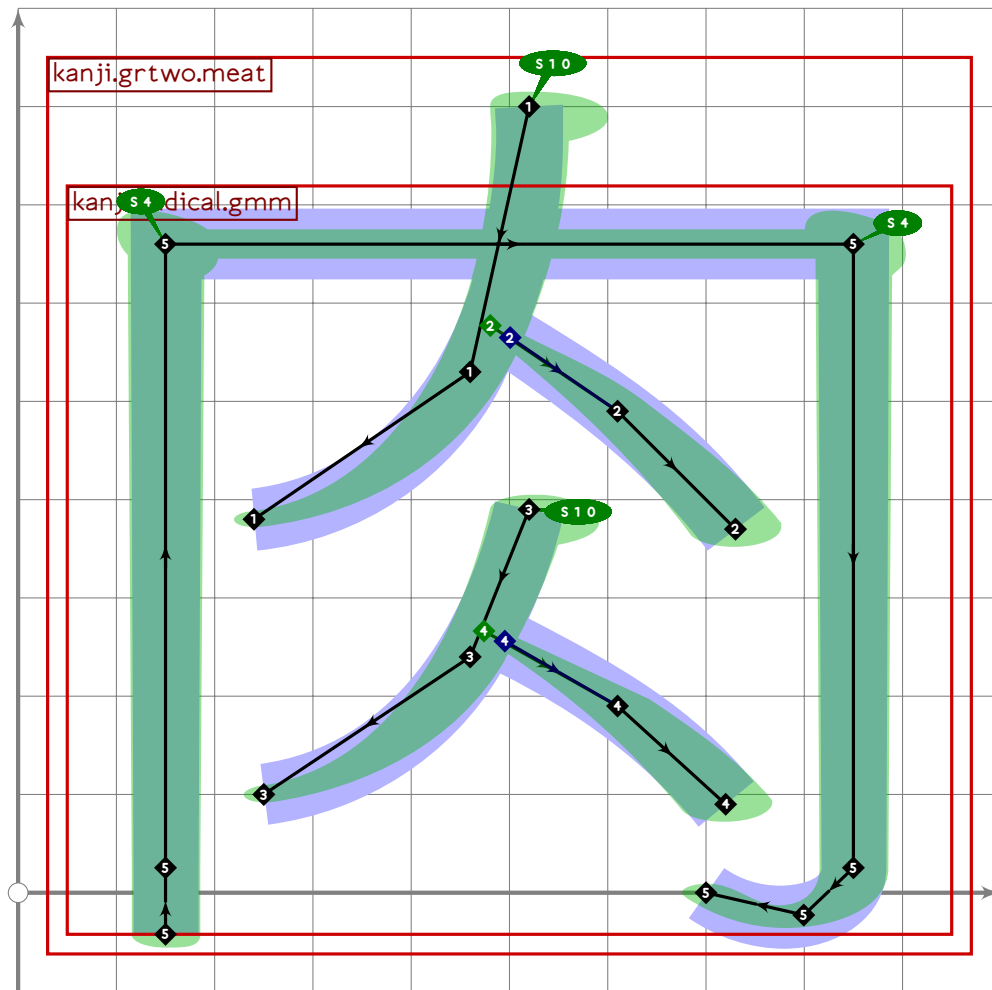

```



```

45
46 vardef tsu_curve.kanji.grtwo.hear =
47   push_pbox_toexpand("kanji.grtwo.hear");
48   build_kanji.gate_enclose(tsu_curve.kanji.grone.ear);
49   expand_pbox;
50 enddef;

```



```

51
52 vardef tsu_curve.kanji.grtwo.meat =
53   push_pbox_toexpand("kanji.grtwo.meat");
54   push_stroke((520,800)..tension 1.2..(460,530)..(240,380),
55     (1.6,1.6)-(1.5,1.5)-(1.1,1.1));
56   set_boserif(0,0,10);
57   push_stroke((point 0.8 of get_strokep(0))..tension 1.2..(610,490)..(730,370),
58     (0.9,0.9)-(1.5,1.5)-(1.8,1.8));
59   push_stroke((520,390)..tension 1.2..(460,240)..(250,100),
60     (1.6,1.6)-(1.5,1.5)-(1.1,1.1));
61   set_boserif(0,0,10);
62   push_stroke((point 0.8 of get_strokep(0))..tension 1.2..(610,190)..(720,90),
63     (0.9,0.9)-(1.5,1.5)-(1.8,1.8));
64   tsu_xform(identity yscaled (660/780))(tsu_curve.kanji.radical.gmm);
65   expand_pbox;
66 enddef;
67
68
69
70 % ken/mi "ear"
71 begint Suglyph("uni8033",51);

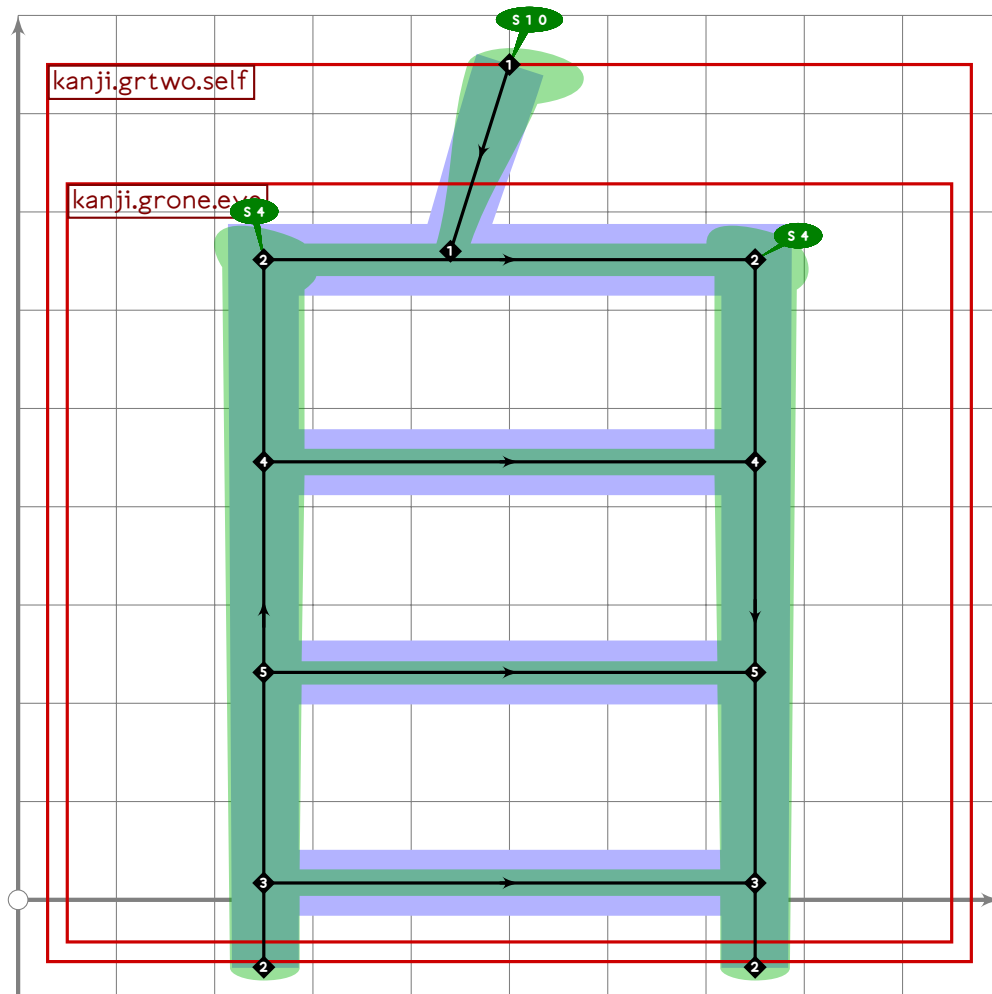
```

[see page 347]

```
72 tsu_curve.kanji.grone.ear;
73 tsu_render;
74 endtsuglyph;
75
76 % bun/ki "hear"
77 begintsuglyph("uni805E";94); [see page 1498]
78 tsu_curve.kanji.grtwo.hear;
79 tsu_render;
80 endtsuglyph;
81
82 % brush radical
83 begintsuglyph("uni807F";127); [see page 318]
84 tsu_curve.kanji.radical.brush;
85 tsu_render;
86 endtsuglyph;
87
88 % niku "meat"
89 begintsuglyph("uni8089";137); [see page 1499]
90 tsu_curve.kanji.grtwo.meat;
91 tsu_render;
92 endtsuglyph;
93
94 % shou/ayaka "resemblance"
95 begintsuglyph("uni8096";150); [see page 451]
96 tsu_curve.kanji.greight.resemblance;
97 tsu_render;
98 endtsuglyph;
99
100 _____
101
102 endfont;
103
104 _____
```

tsuku81.mp

```
1 %
2 % Unicode page 81 (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 _____
32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradeone.mp;
38 input gradesix.mp;
39
40 _____
```

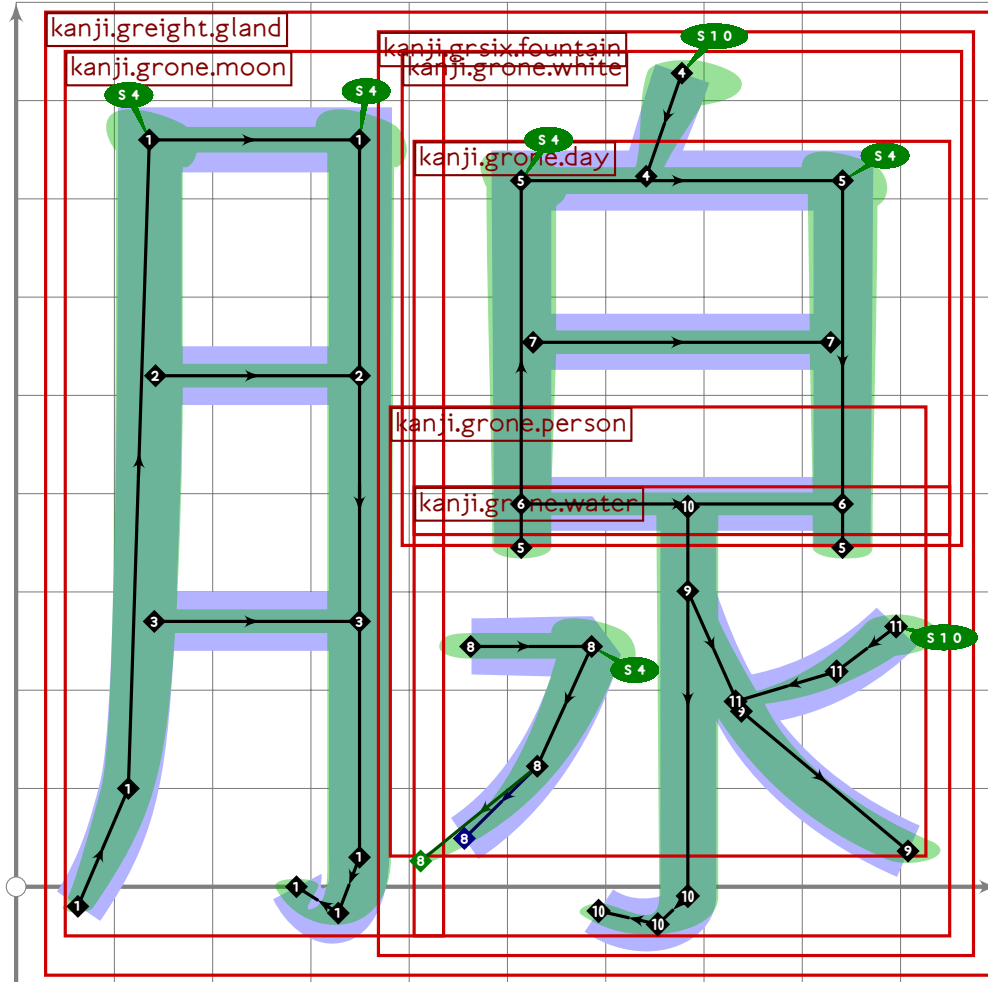


```
41
42 vardef tsu_curve.kanji.grtwo.self =
43   push_pbox_toexpand("kanji.grtwo.self");
```

```

44 push_stroke((500,850)-(440,660),(1,71,7)-(1,1));
45 set_bosserif(0,0,10);
46 tsu_xform(identity yscaled (660/770))(tsu_curve.kanji.grone.eyeye);
47 expand_pbox;
48 enddef;
49
50

```



```

51
52 vardef tsu_curve.kanji.greight.gland =
53   push_pbox_toexpand("kanji.greight.gland");
54   build_kanji.lr(420,30)
55     (tsu_curve.kanji.grone.moon)
56     (tsu_curve.kanji.grsix.fountain);
57   expand_pbox;
58 enddef;
59
60
61
62 % sen "gland"
63 begint Suglyph("uni817A",122);
64 tsu_curve.kanji.greight.gland;

```

[see page 1502]

```
65 tsu_render;
66 endtsuglyph;
67
68 % ji as in jibun "self"
69 begintsuglyph("uni81EA",234);
70 tsu_curve.kanji.grtwo.self;
71 tsu_render;
72 endtsuglyph;
73
74 _____
75
76 endfont;
77
78 _____
```

[see page 1501]

tsuku-82.mp

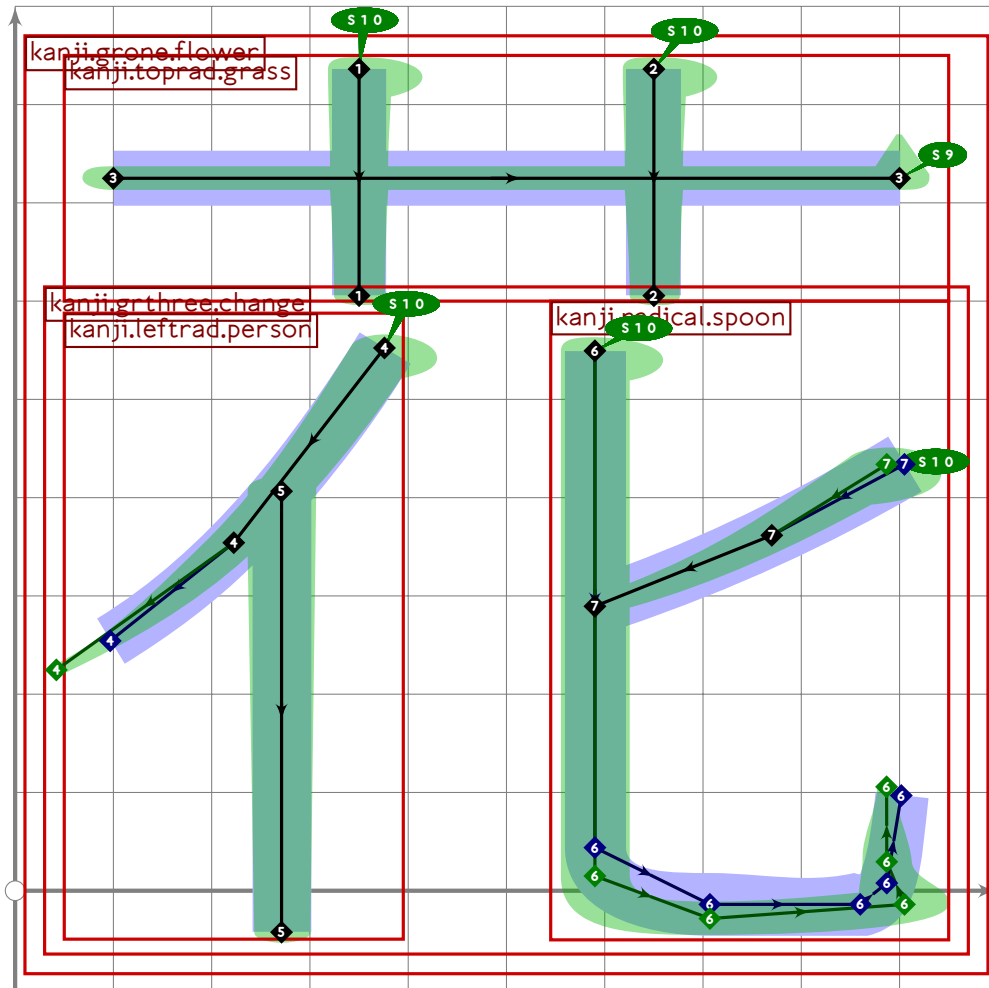
```
1 %
2 % Unicode page 82 (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradeeight.mp;
38 input gradefive.mp;
39 input gradefour.mp;
40 input gradeone.mp;
41 input gradethree.mp;
42 input gradetwo.mp;
43 input leftrad.mp;
44 input radical.mp;
45 input rare.mp;
46 input toprad.mp;
47
48 

---

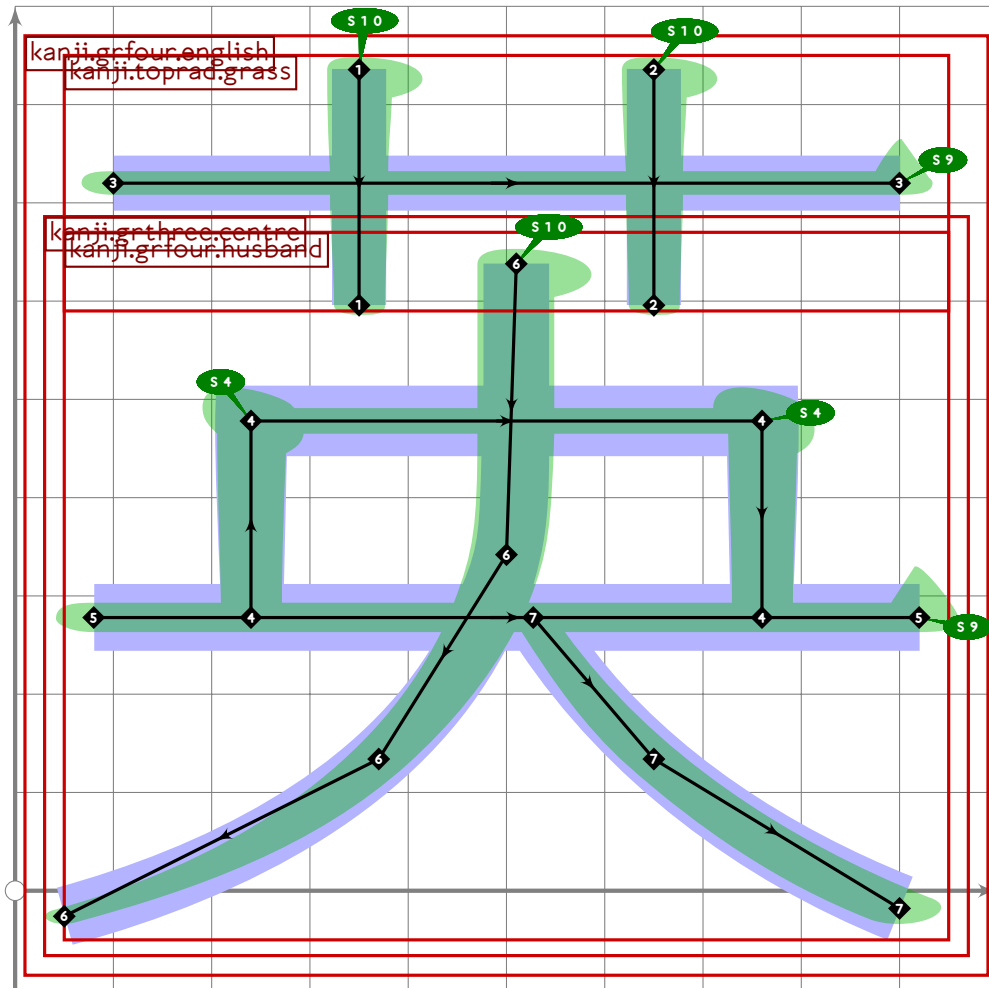

```

```

49
50 vardef tsu_curve.kanji.grone.flower =
51   push_pbox_toexpand("kanji.grone.flower");
52   build_kanji.tb(600,0)
53     (tsu_curve.kanji.toprad.grass)
54     (tsu_curve.kanji.grthree.change);
55   expand_pbox;
56 enddef;
57
58

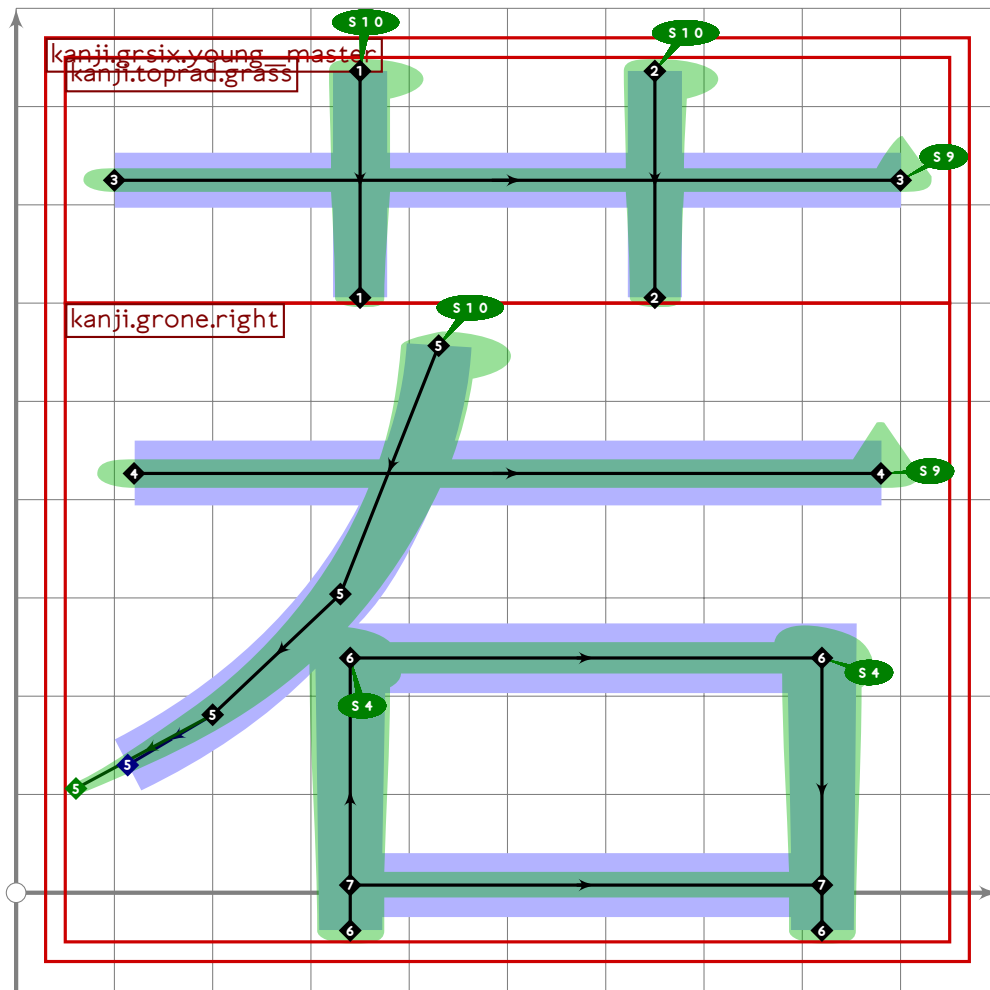
```



```

59
60 vardef tsu_curve.kanji.grfour.english =
61   push_pbox_toexpand("kanji.grfour.english");
62   build_kanji.tb(630,80)
63     (tsu_curve.kanji.toprad.grass)
64     (tsu_curve.kanji.grthreecentre);
65   expand_pbox;
66 enddef;
67
68

```



```

69
70 vardef tsu_curve.kanji.grsix.young_master =
71   push_pbox_toexpand("kanji.grsix.young_master");
72   build_kanji.tb(600,0)
73     (tsu_curve.kanji.toprad.grass)
74     (tsu_curve.kanji.grone.right);
75   expand_pbox;
76 enddef;

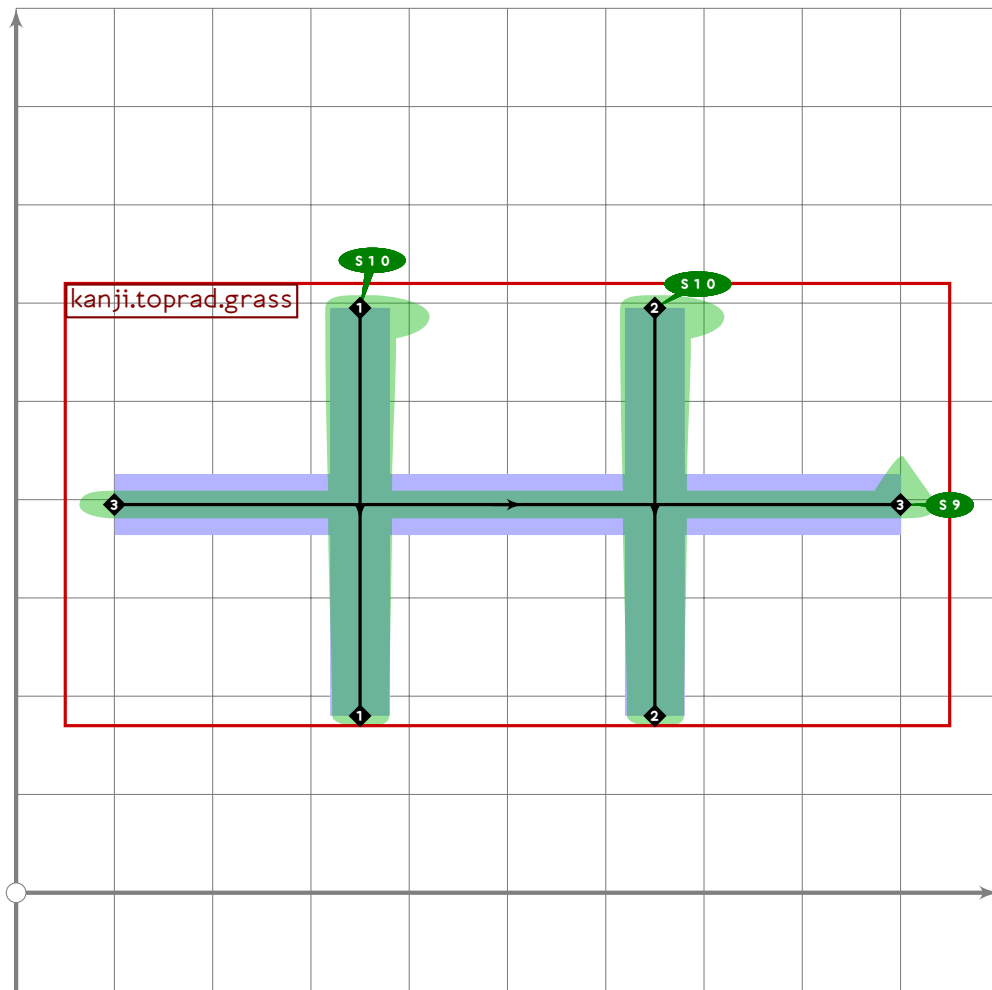
```

```

77
78
79
80 % zetsu/shita "tongue"
81 begint Suglyph("uni820C",12);
82   tsu_curve.kanji.grfive.tongue;
83   tsu_render;
84 endtsuglyph;
85

```

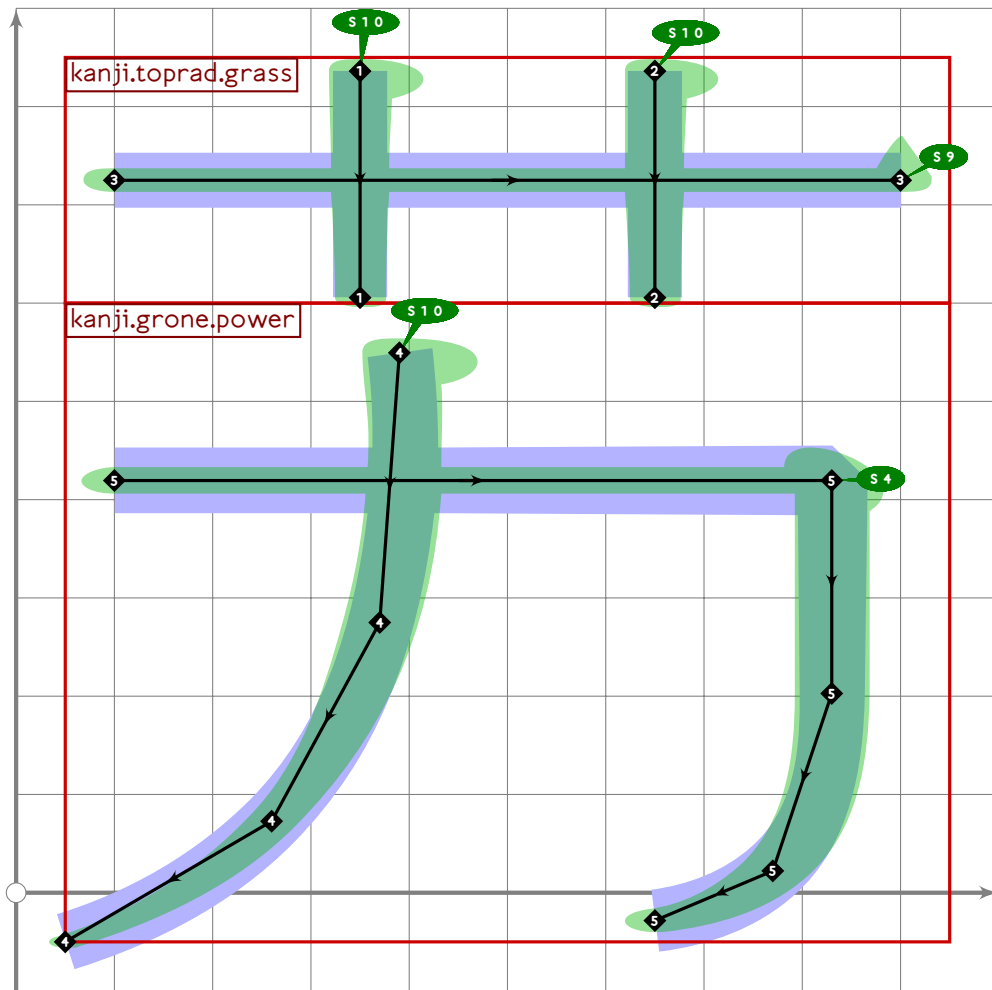
[see page 442]



```

86 % extra "naked grass radical"
87 begint Suglyph("uni8279";121);
88 build_kanji.sscale(yscaled 0.5)(tsu_curve.kanji.toprad.grass);
89 tsu_render;
90 endtsuglyph;
91

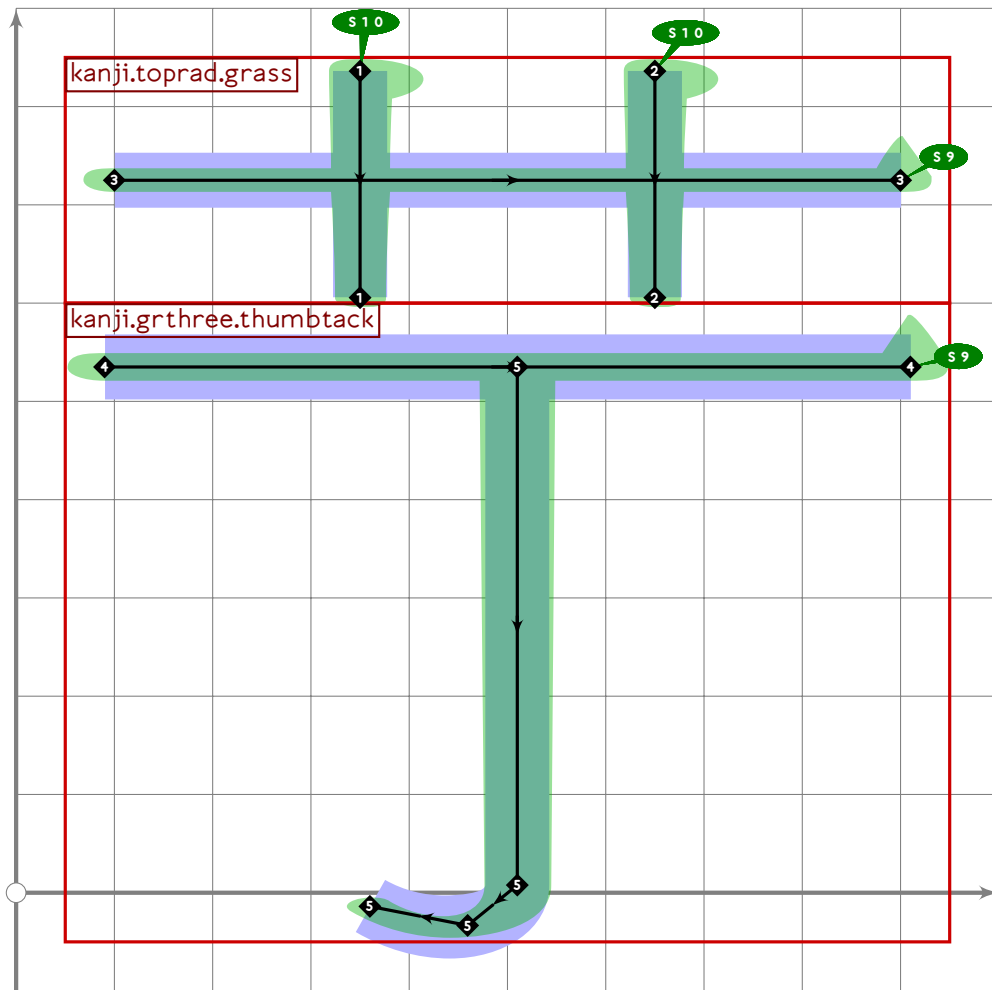
```



```

92 % extra
93 begint Suglyph("uni827B",123);
94 build_kanji.tb(600,0)
95   (tsu_curve.kanji.toprad.grass)
96   (tsu_curve.kanji.grone.power);
97   tsu_render;
98   endtsuglyph;
99

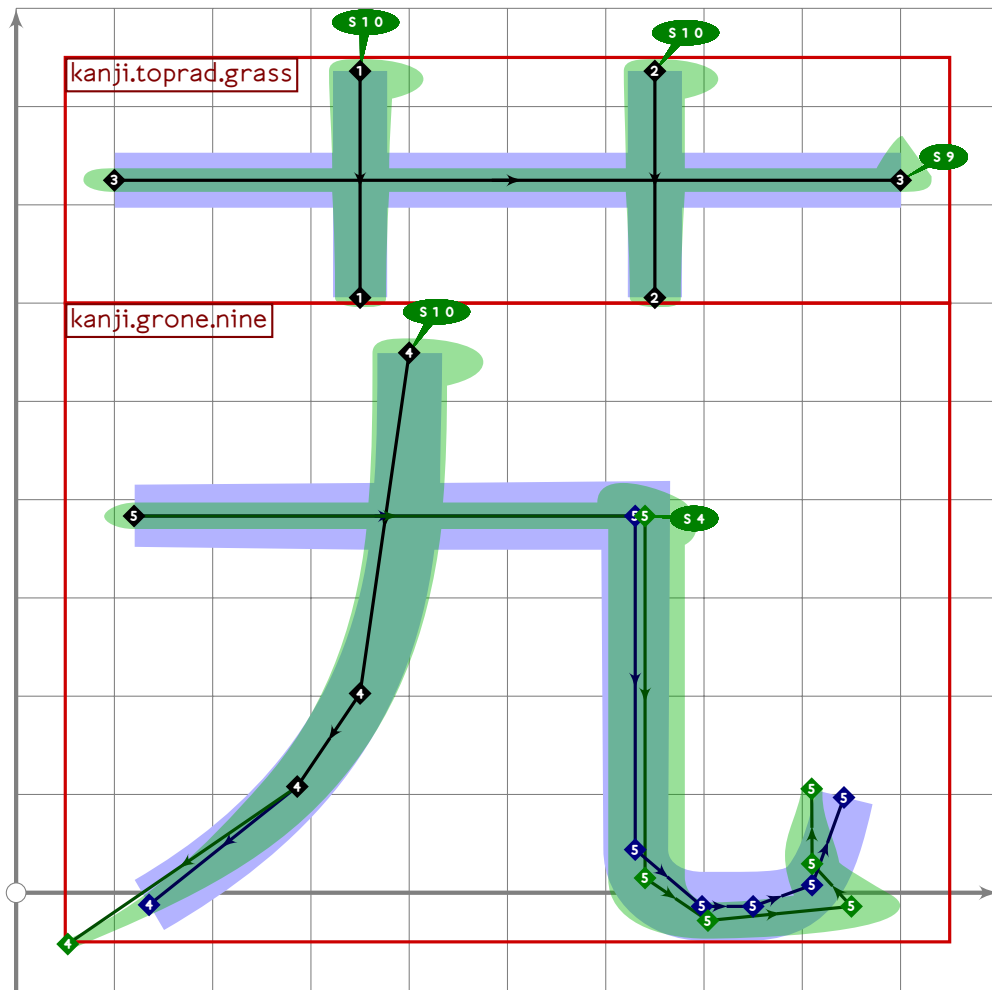
```



```

100 % extra
101 begint Suglyph("uni827C",124);
102 build_kanji.tb(600,0)
103   (tsu_curve.kanji.toprad.grass)
104   (tsu_curve.kanji.grthree.thumbtack);
105   tsu_render;
106 endsuglyph;
107

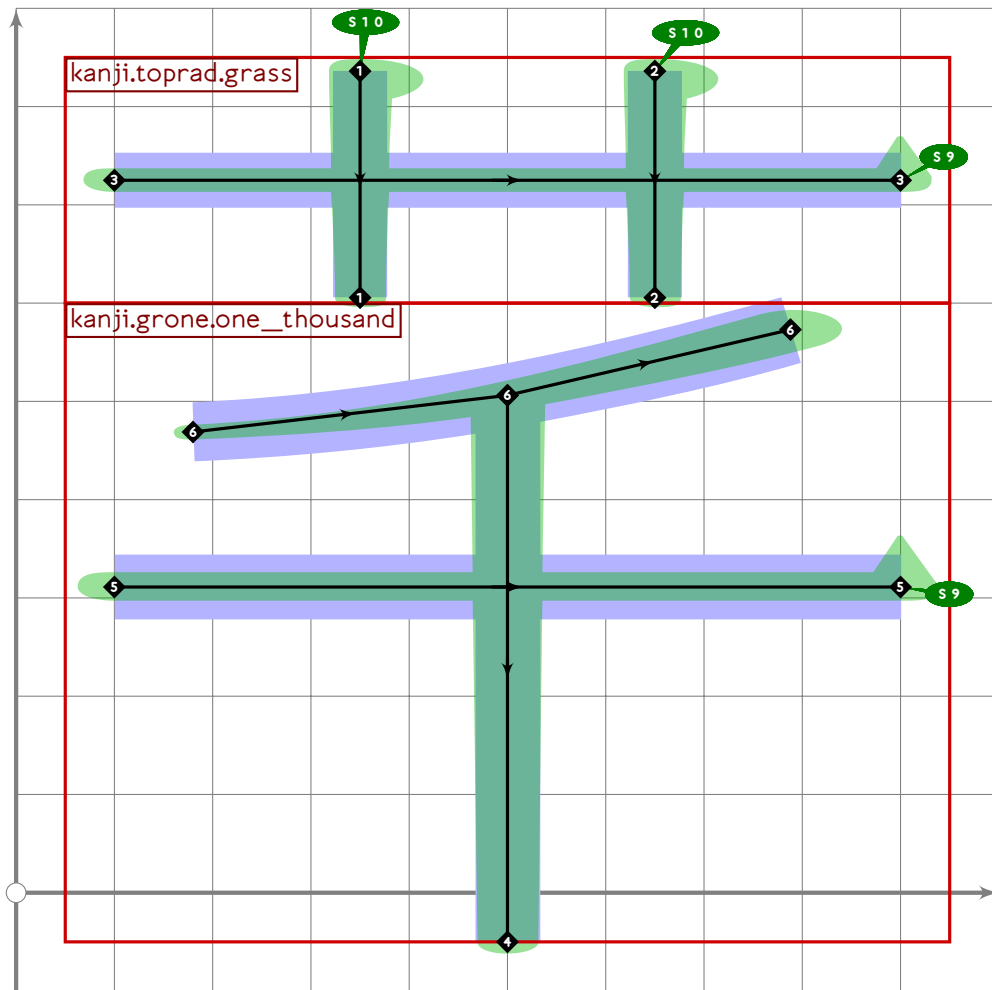
```



```

108 % extra
109 begint Suglyph("uni827D",125);
110 build_kanji.tb(600,0)
111   (tsu_curve.kanji.toprad.grass)
112   (tsu_curve.kanji.grone.nine);
113   tsu_render;
114   endtsuglyph;
115

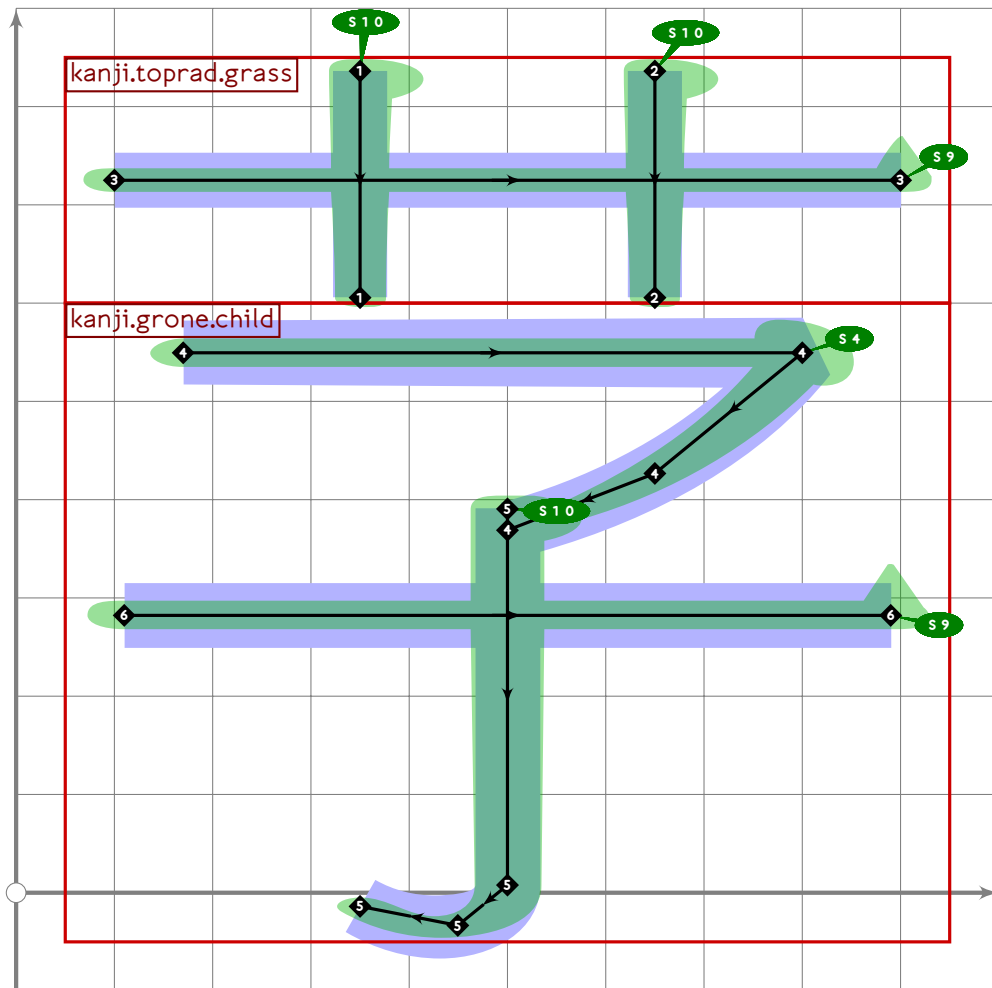
```

```

124 % extra
125 begint Suglyph("uni828A",138);
126 build_kanji.tb(600,0)
127   (tsu_curve.kanji.toprad.grass)
128   (tsu_curve.kanji.grone.one_thousand);
129   tsu_render;
130 endtsuglyph;
131

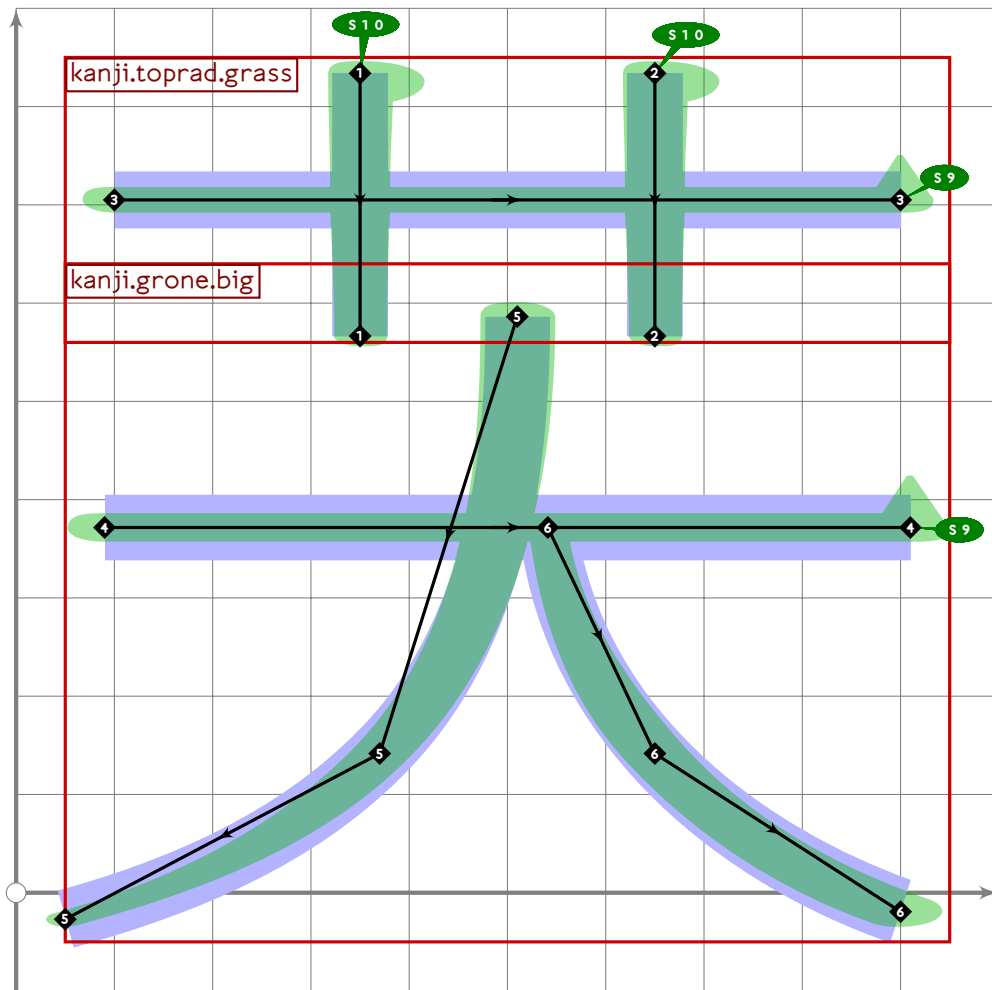
```



```

132 % extra
133 begint Suglyph("uni8293";147);
134 build_kanji.tb(600,0)
135   (tsu_curve.kanji.toprad.grass)
136   (tsu_curve.kanji.grone.child);
137   tsu_render;
138   endtsuglyph;
139

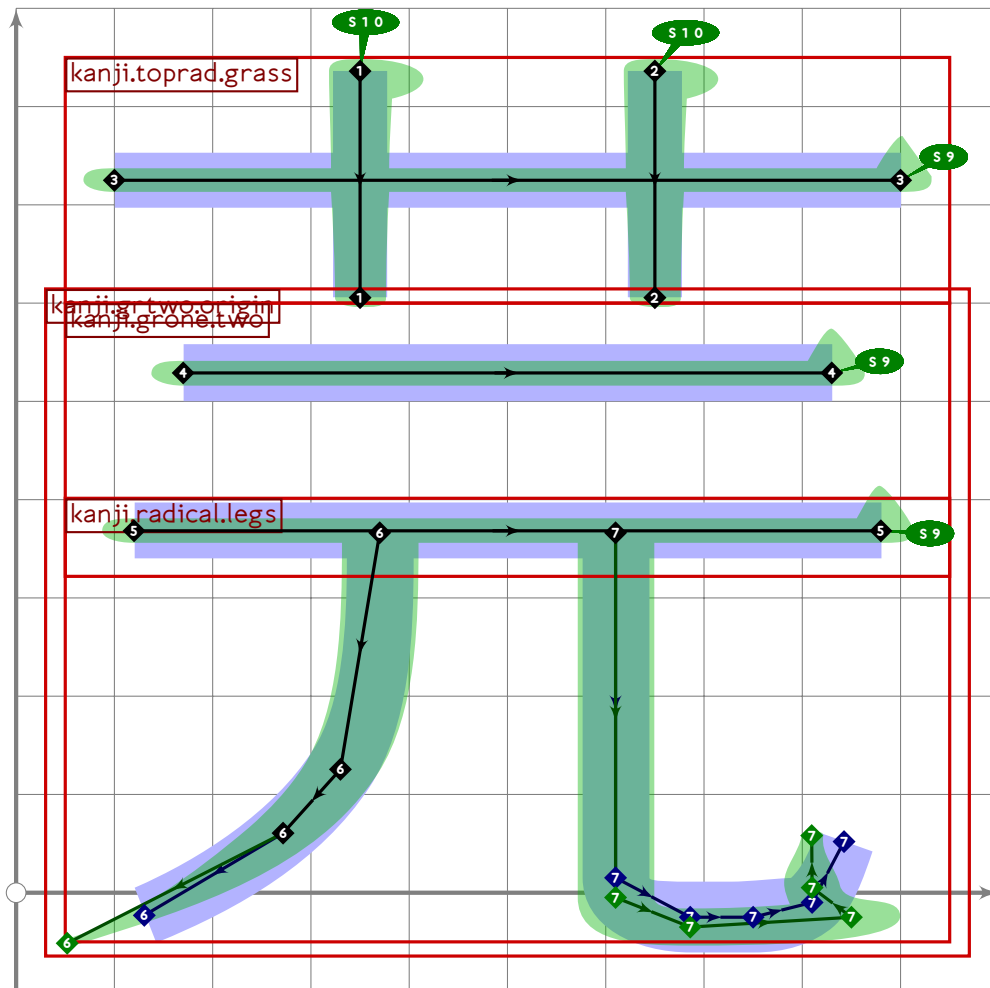
```



```

140 % extra
141 begint Suglyph("uni8296",150);
142 build_kanji.tb(600,80)
143   (tsu_curve.kanji.toprad.grass)
144   (tsu_curve.kanji.grone.big);
145   tsu_render;
146 endsuglyph;
147

```

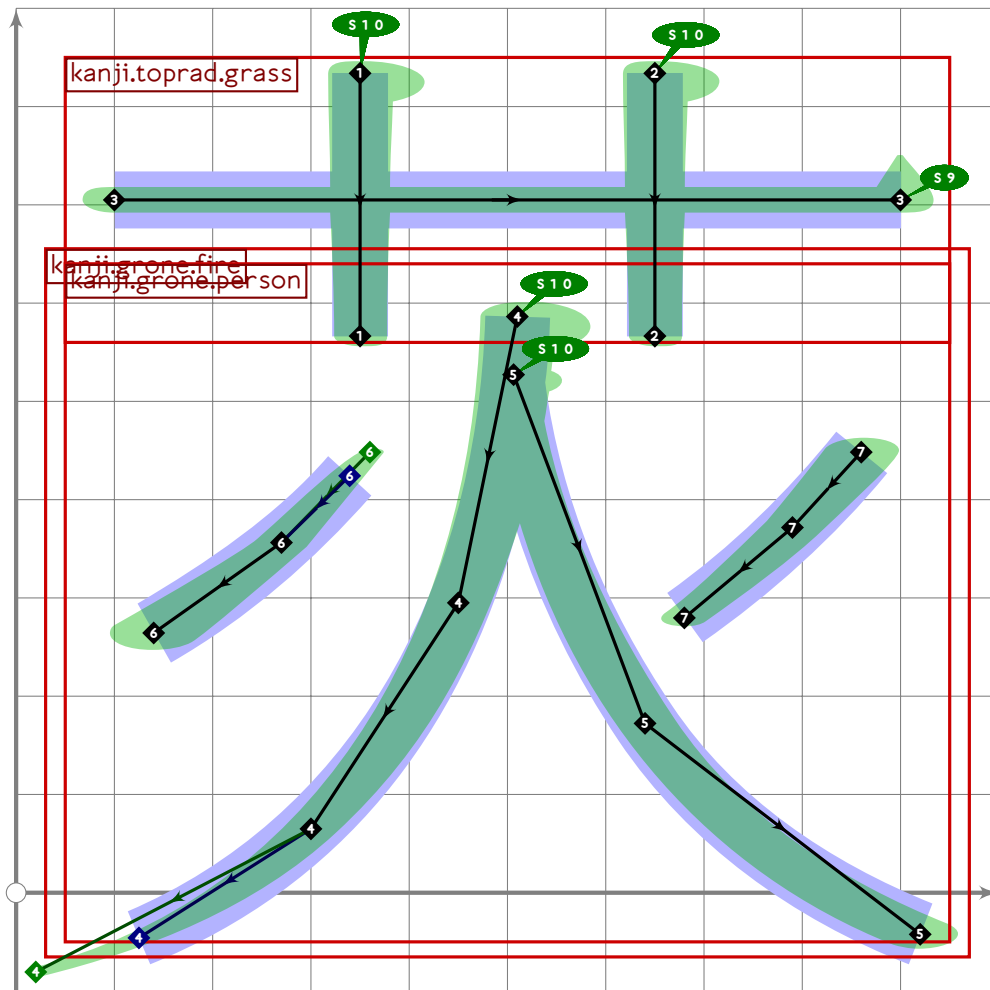


```

148 % extra
149 begint Suglyph("uni82AB",171);
150 build_kanji.tb(600,0)
151   (tsu_curve.kanji.toprad.grass)
152   (tsu_curve.kanji.grtwo.origin);
153   tsu_render;
154 endtsuglyph;
155
156 % hana "flower"
157 begint Suglyph("uni82B1",177);
158   tsu_curve.kanji.grone.flower;
159   tsu_render;
160 endtsuglyph;
161

```

[see page 1505]

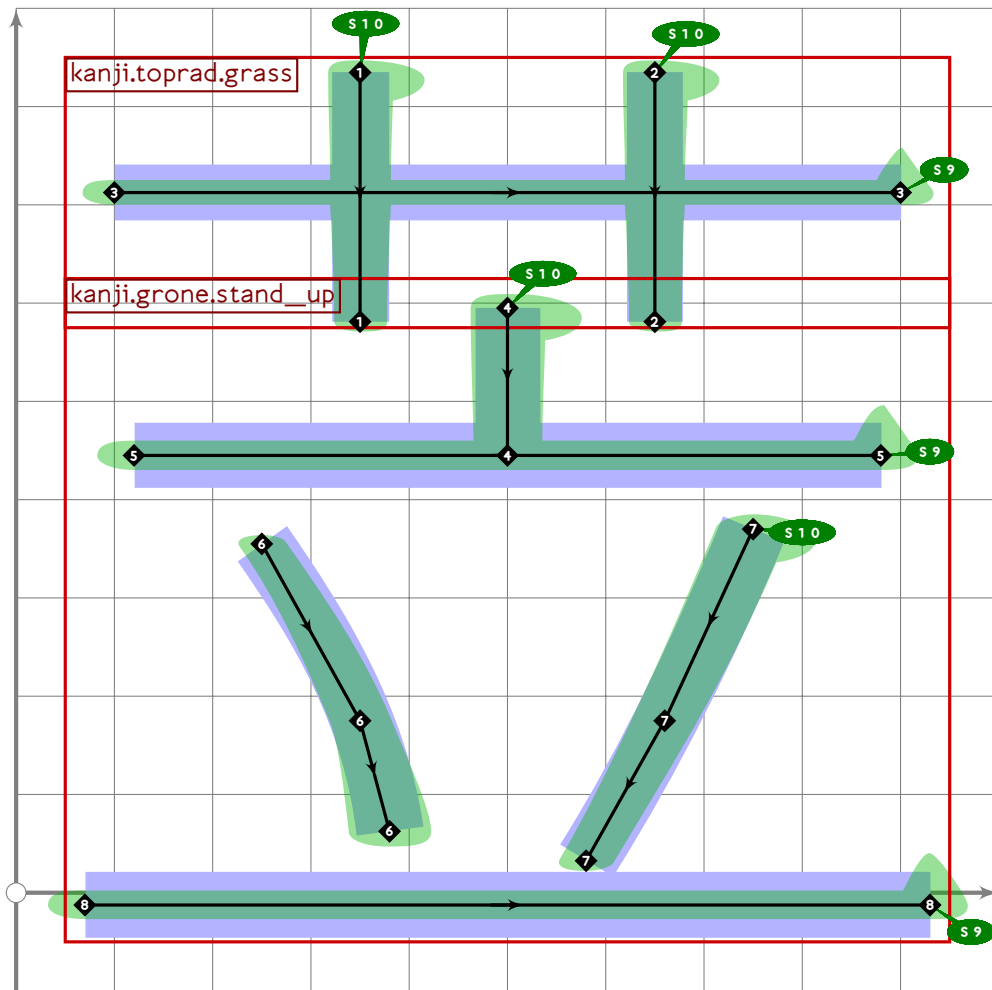


```

162 % extra
163 begint Suglyph("uni82C2",194);
164 build_kanji.tb(600,80)
165   (tsu_curve.kanji.toprad.grass)
166   (tsu_curve.kanji.grone.fire);
167   tsu_render;
168 endtsuglyph;
169
170 % byo/nae "rice seedling"
171 begint Suglyph("uni82D7",215);
172   tsu_curve.kanji.greight.seedling;
173   tsu_render;
174 endtsuglyph;
175

```

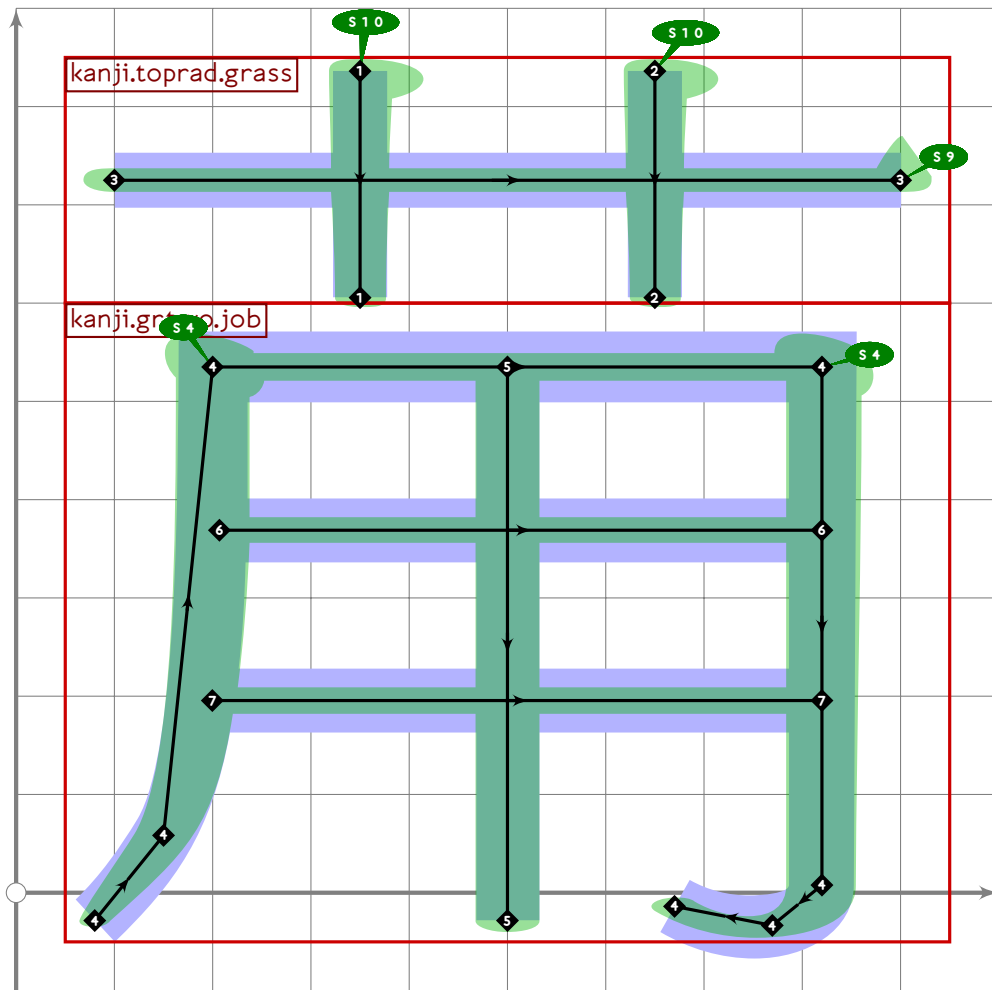
[see page 452]



```

176 % extra
177 begint Suglyph("uni82D9",217);
178 build_kanji.tb(600,50)
179   (tsu_curve.kanji.toprad.grass)
180   (tsu_curve.kanji.grone.stand_up);
181   tsu_render;
182   endtsuglyph;
183

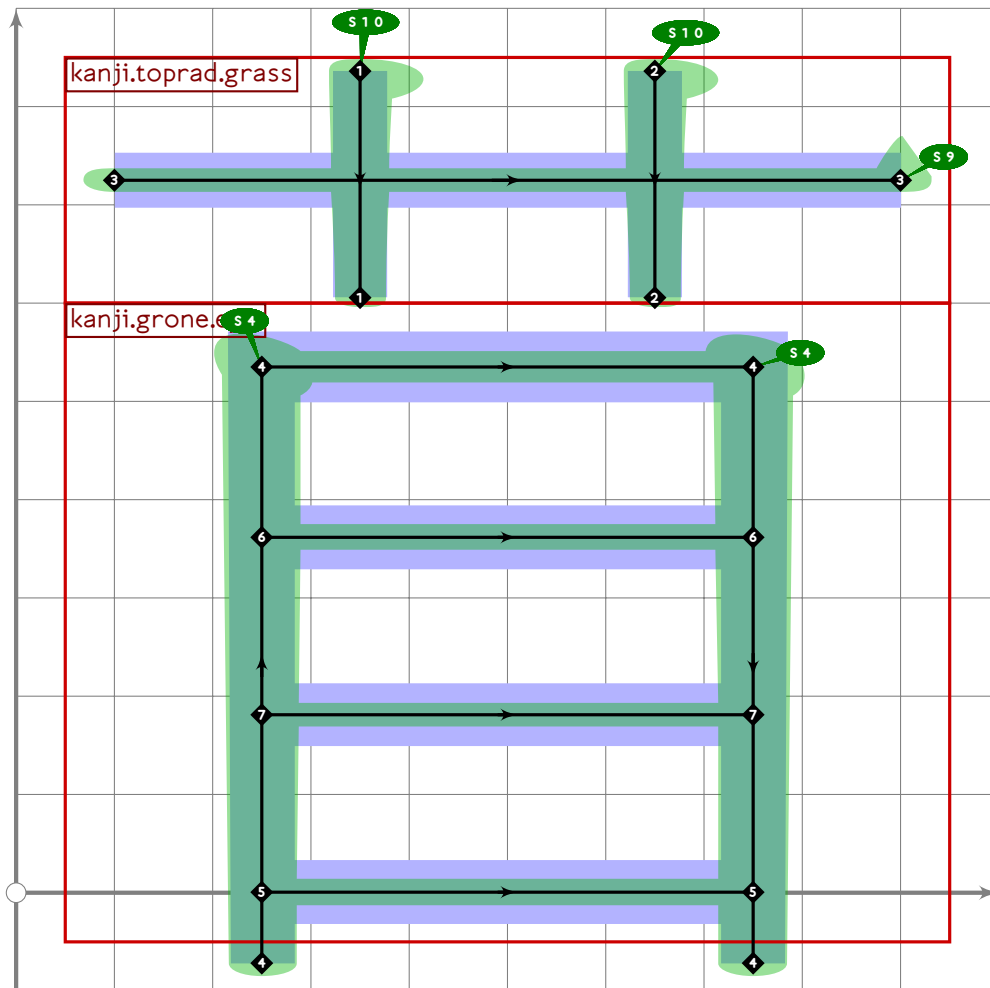
```



```

184 % extra
185 begint Suglyph("uni82DA",218);
186 build_kanji.tb(600,0)
187   (tsu_curve.kanji.toprad.grass)
188   (tsu_curve.kanji.grtwo.job);
189   tsu_render;
190 endtsuglyph;
191

```

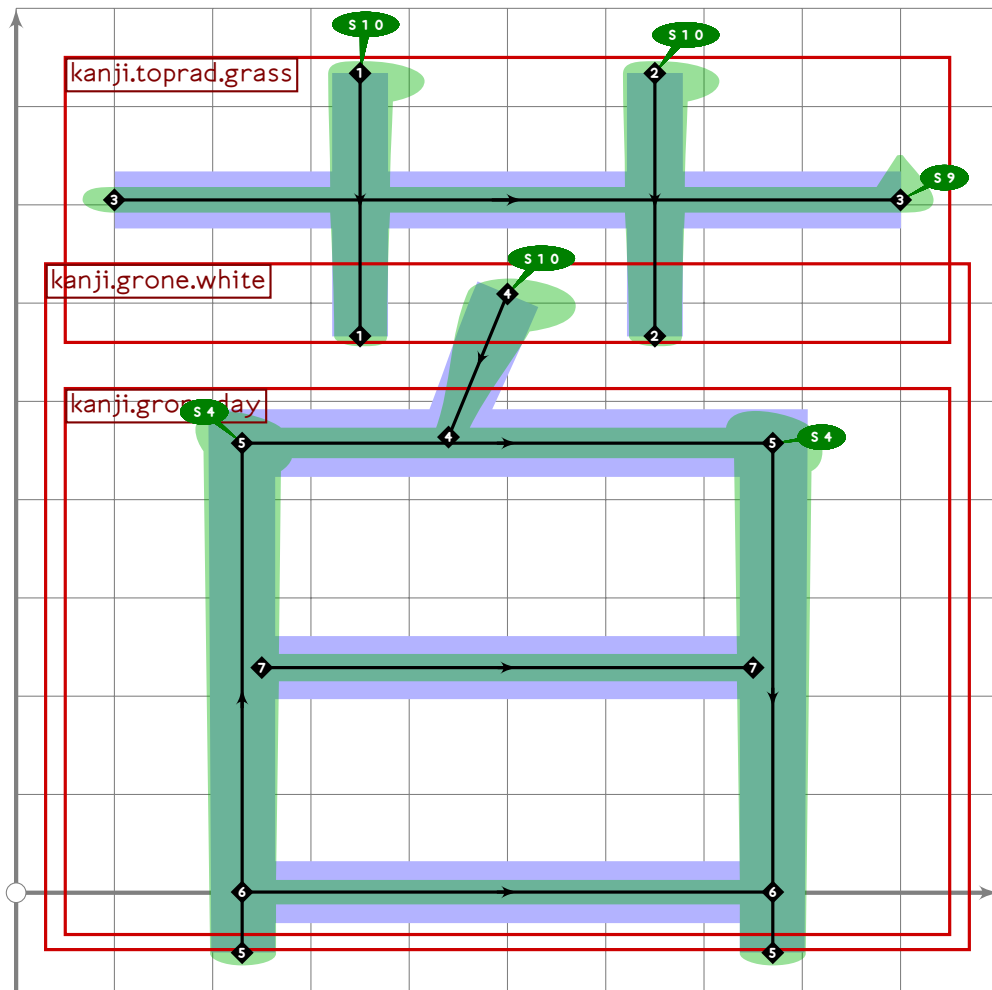


```

192 % extra
193 begint Suglyph("uni82DC",220);
194 build_kanji.tb(600,0)
195   (tsu_curve.kanji.toprad.grass)
196   (tsu_curve.kanji.grone.eye);
197   tsu_render;
198 endtsuglyph;
199
200 % waka "young master"
201 begint Suglyph("uni82E5",229);
202   tsu_curve.kanji.grsix.young_master;
203   tsu_render;
204 endtsuglyph;
205

```

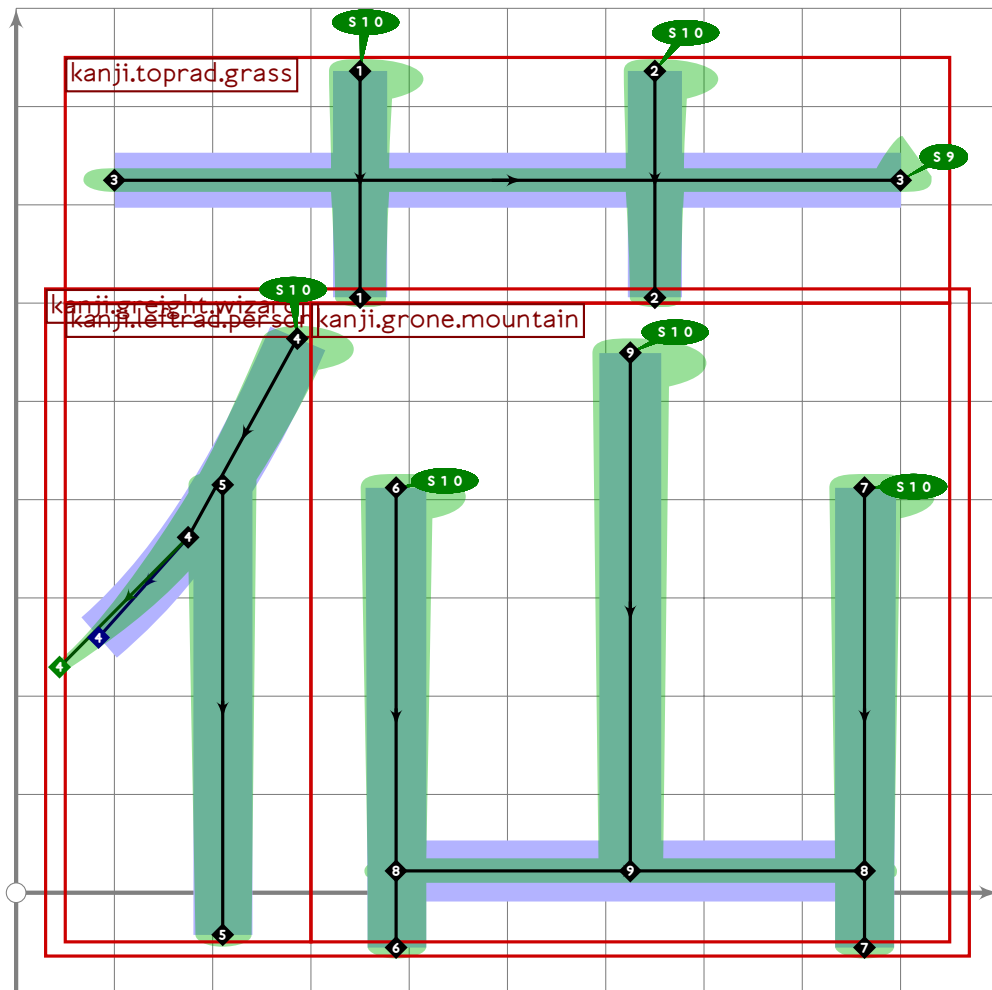
[see page 1507]



```

206 % extra
207 begint Suglyph("uni82E9";233);
208 build_kanji.tb(600,80)
209 (tsu_curve.kanji.toprad.grass)
210 (tsu_curve.kanji.grone.white);
211 tsu_render;
212 endtsuglyph;
213

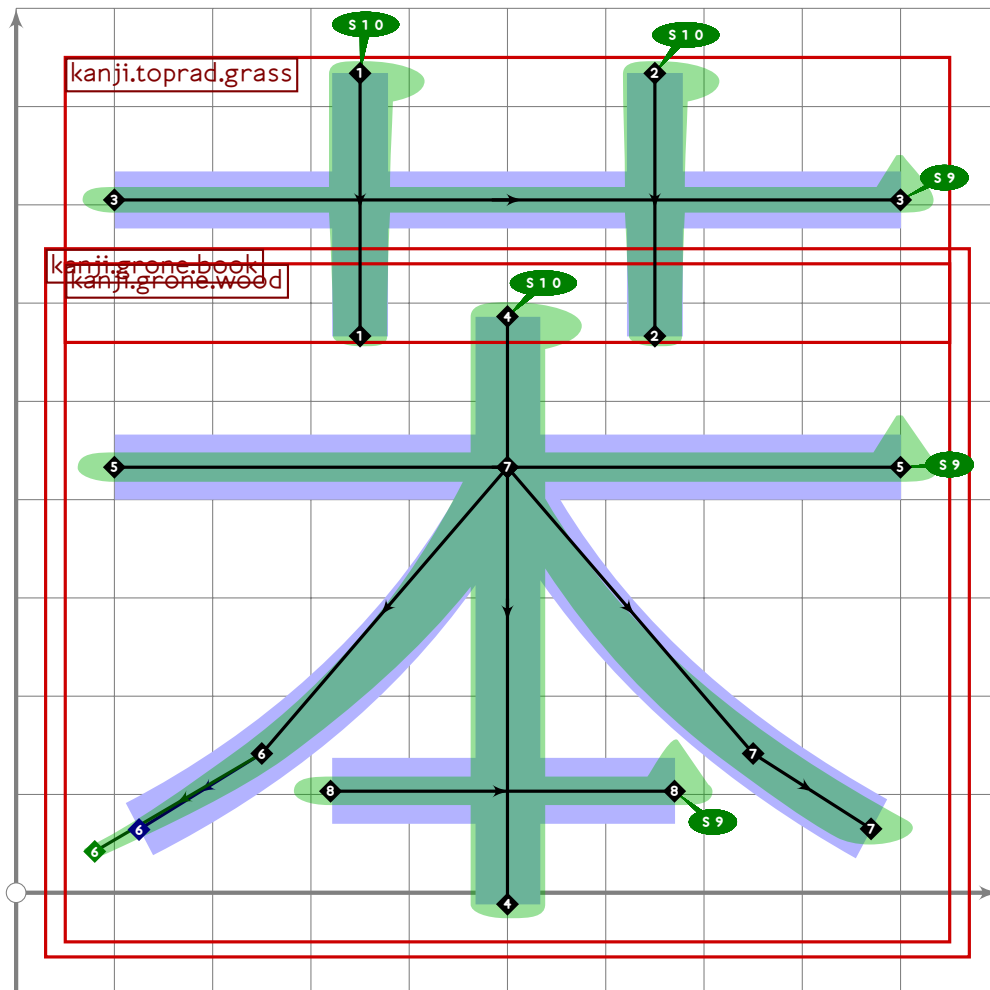
```



```

214 % extra
215 begint Suglyph("uni82EE",238);
216   build_kanji.tb(600,0)
217     (tsu_curve.kanji.toprad.grass)
218     (tsu_curve.kanji.greight.wizard);
219   tsu_render;
220 endsuglyph;
221

```

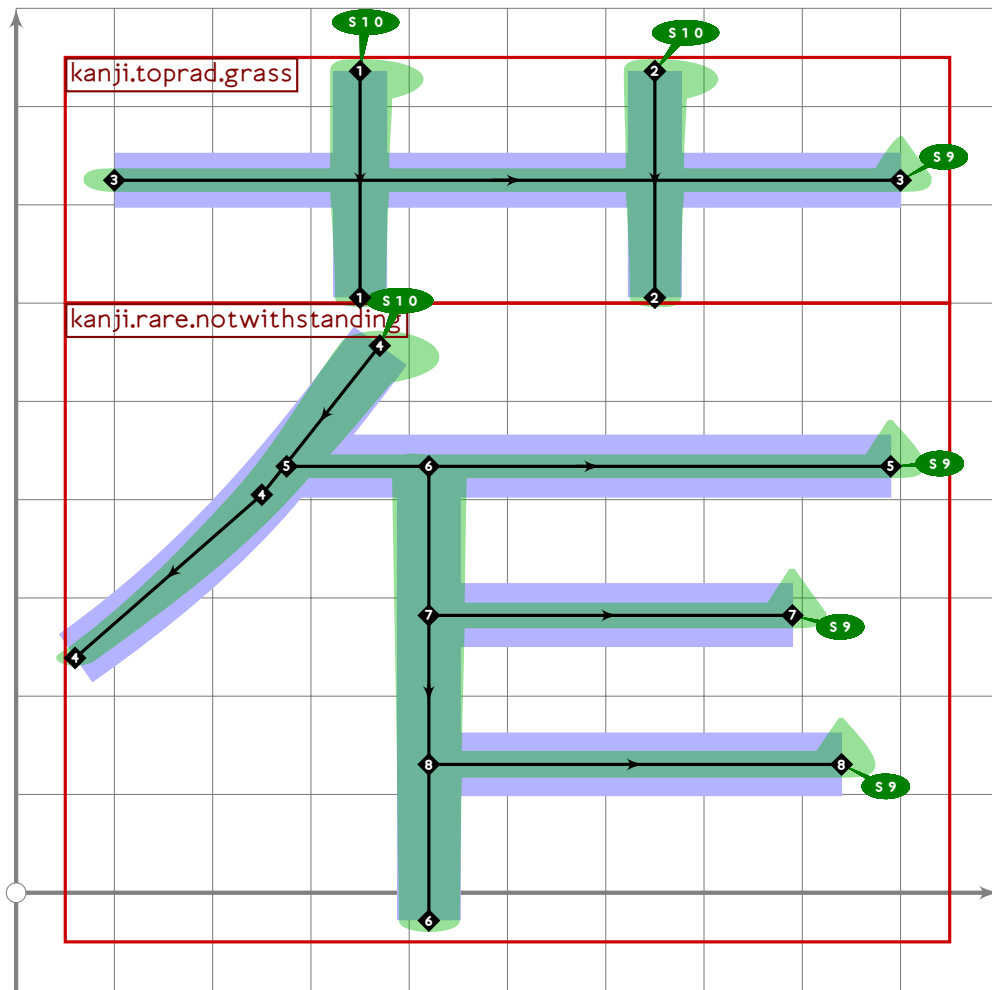


```

222 % extra
223 begint Suglyph("uni82EF",239);
224 build_kanji.tb(600,80)
225   (tsu_curve.kanji.toprad.grass)
226   (tsu_curve.kanji.grone.book);
227   tsu_render;
228 endtsuglyph;
229
230 % ei "English"
231 begint Suglyph("uni82F1",241);
232   tsu_curve.kanji.grfour.english;
233   tsu_render;
234 endtsuglyph;
235

```

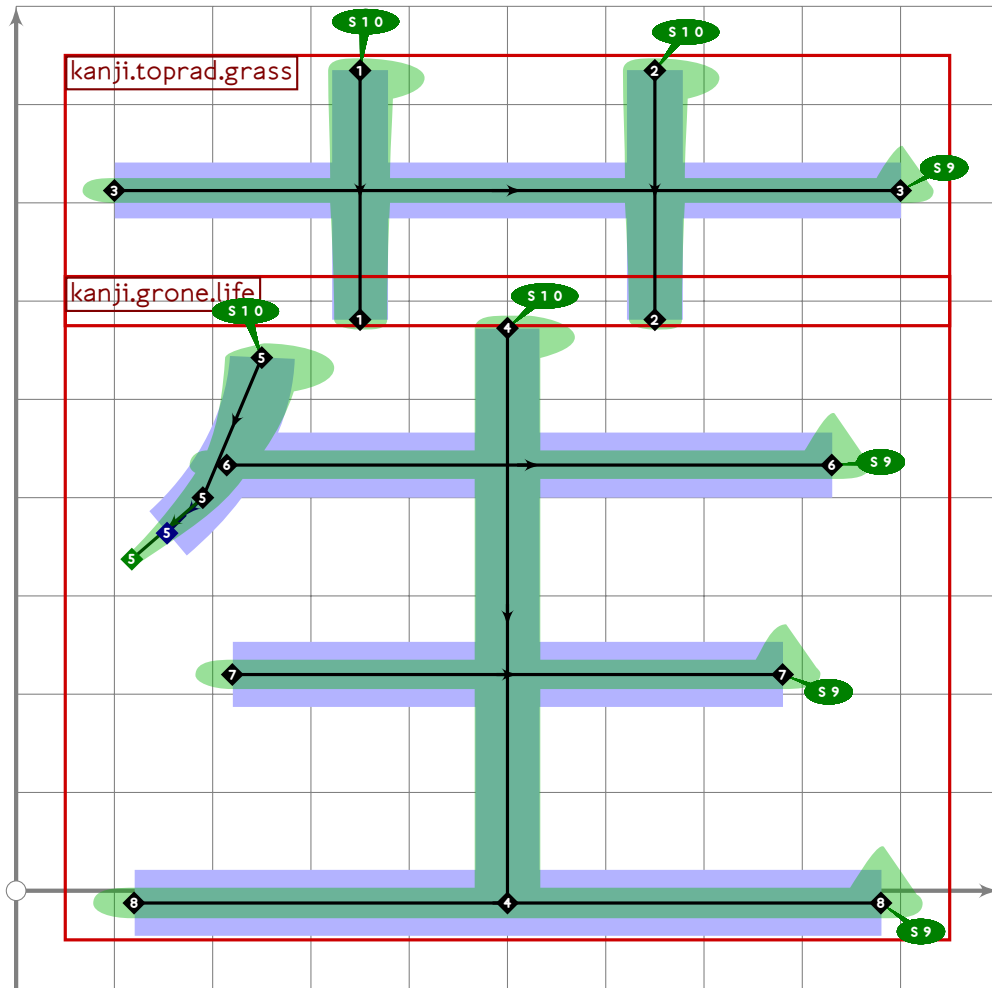
[see page 1506]



```

236 % extra
237 begint Suglyph("uni82F2",242);
238 build_kanji.tb(600,0)
239 (tsu_curve.kanji.toprad.grass)
240 (tsu_curve.kanji.rare.notwithstanding);
241 tsu_render;
242 endtsuglyph;
243

```



```

244 % extra
245 begint Suglyph("uni82FC",252);
246 build_kanji.tb(600,50)
247   (tsu_curve.kanji.toprad.grass)
248   (tsu_curve.kanji.grone.life);
249   tsu_render;
250 endsuglyph;
251
252 _____
253
254 endfont;
255
256 _____

```

tsuku-83.mp

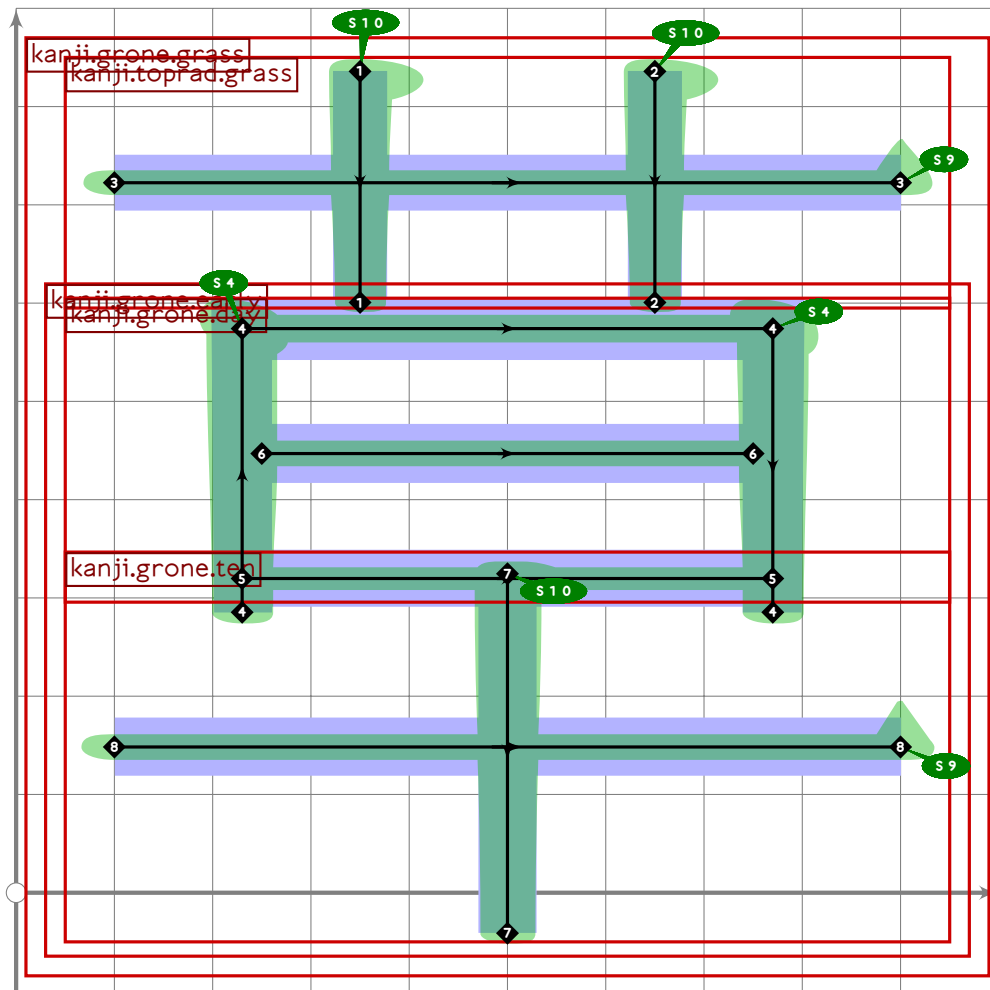
```
1 %
2 % Unicode page 83 (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradenine.mp;
38 input gradeone.mp;
39 input gradetwo.mp;
40 input leftrad.mp;
41 input radical.mp;
42 input toprad.mp;
43
44 

---

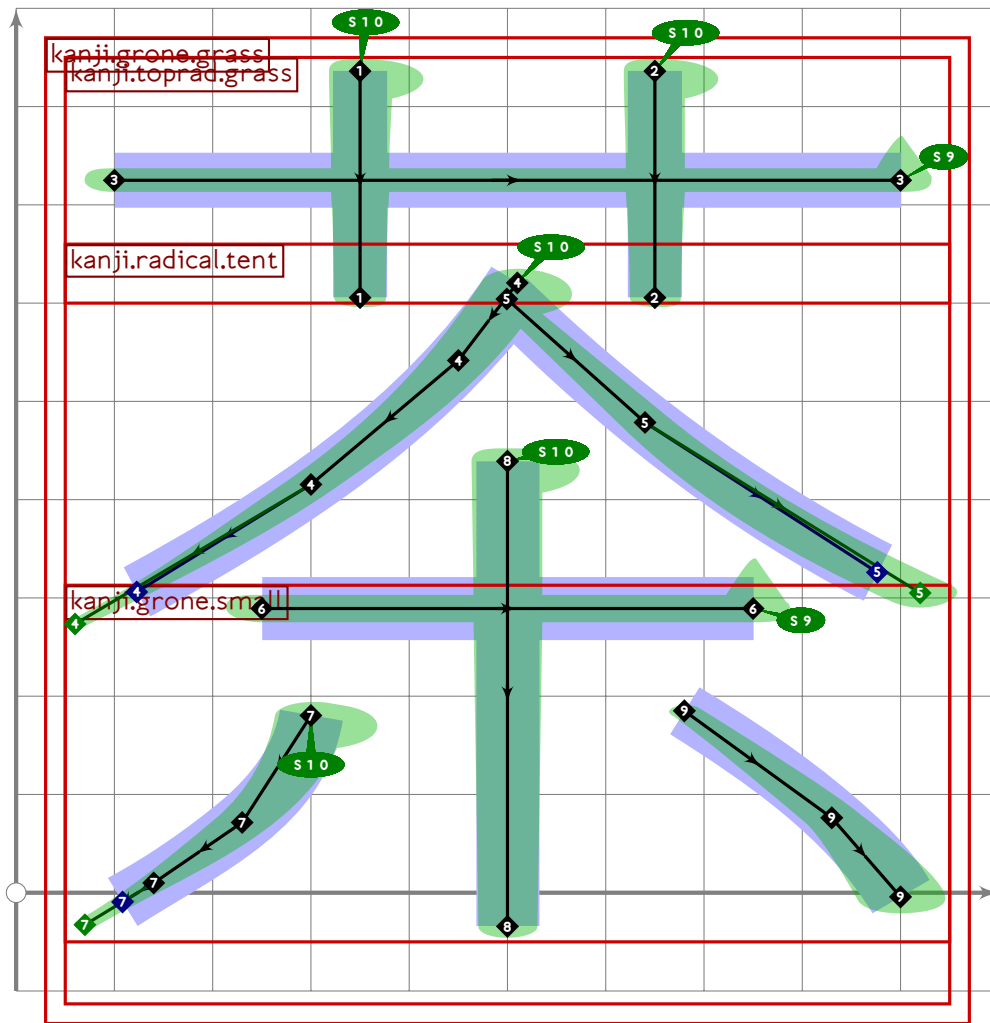

```



```

45
46 vardef tsu_curve.kanji.grone.grass =
47   push_pbox_toexpand("kanji.grone.grass");
48   build_kanji.tb(600,10)
49     (tsu_curve.kanji.toprad.grass)
50     (tsu_curve.kanji.grone.early);
51   expand_pbox;
52 enddef;
53
54

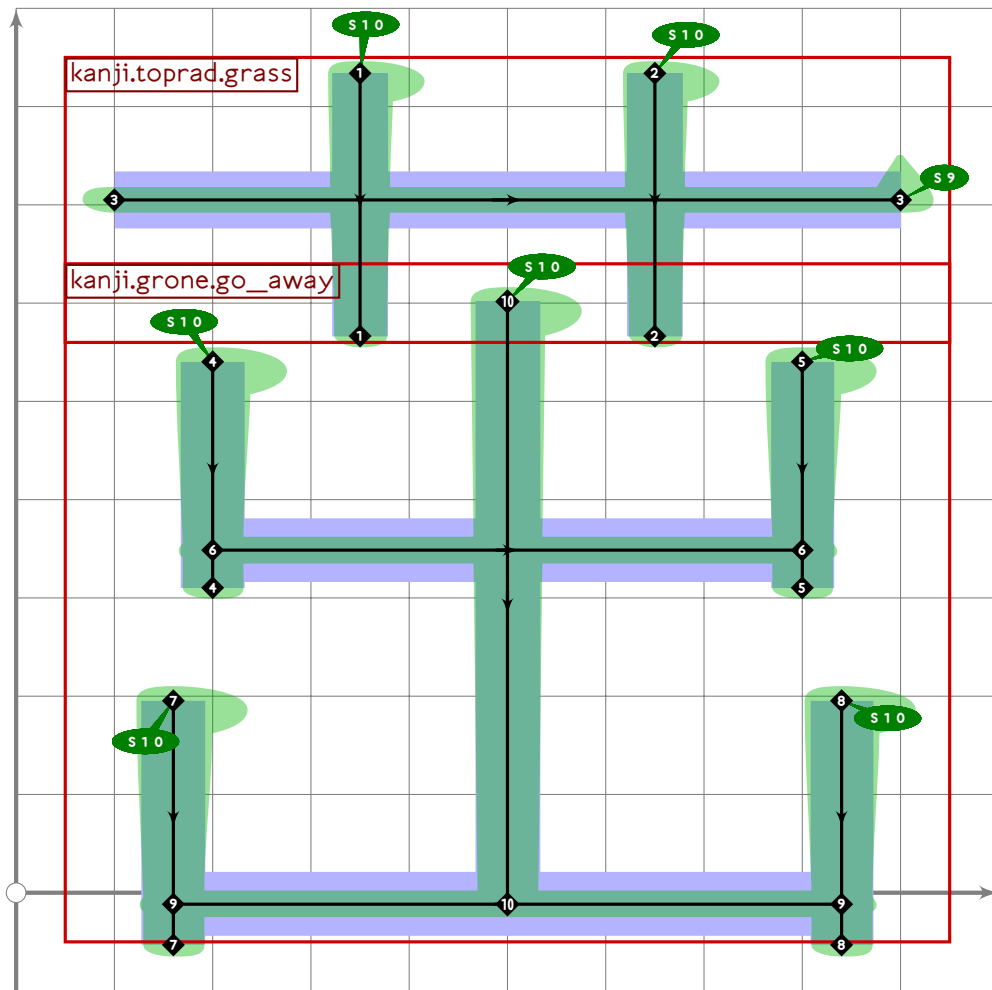
```



```

55
56 vardef tsu_curve.kanji.grtwo.tea =
57   push_pbox_toexpand("kanji.grone.grass");
58   build_kanji.tb(630,60)
59     (tsu_curve.kanji.toprad.grass)
60     (build_kanji.level(
61       tsu_curve.kanji.radical.tent;
62       replace_strokep(0)((250,380)-(750,380));
63       tsu_xform(identity yscaled 0.6 shifted (0,-100))
64       (tsu_curve.kanji.grone.small);
65       replace_strokep(-1)((500,570)-(500,30));
66       replace_strokeq(-1)((1.6,1.6)-(1.4,1.4));
67     ));
68   expand_pbox;
69 enddef;
70
71
72

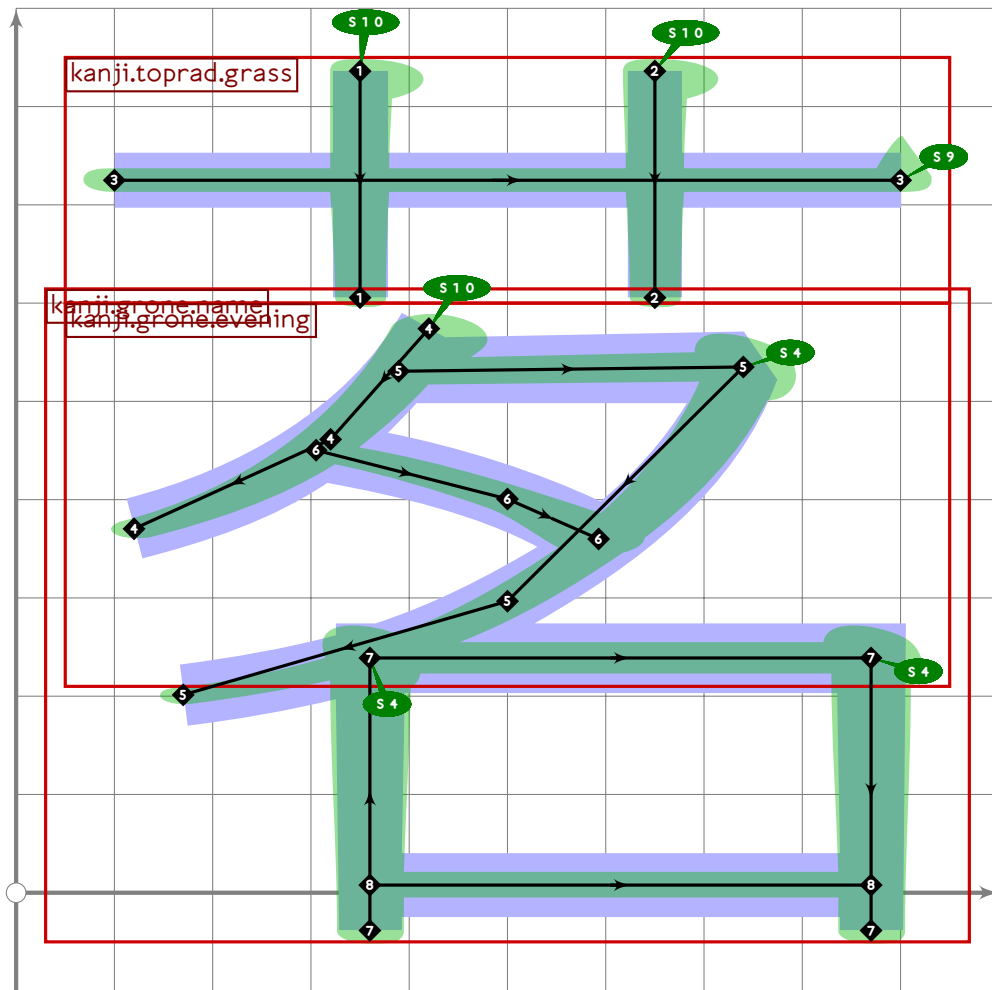
```

```

73 % extra
74 begint Suglyph("uni8301";1);
75 build_kanji.tb(600,80)
76   (tsu_curve.kanji.toprad.grass)
77   (tsu_curve.kanji.grone.go_away);
78   tsu_render;
79 endtsuglyph;
80

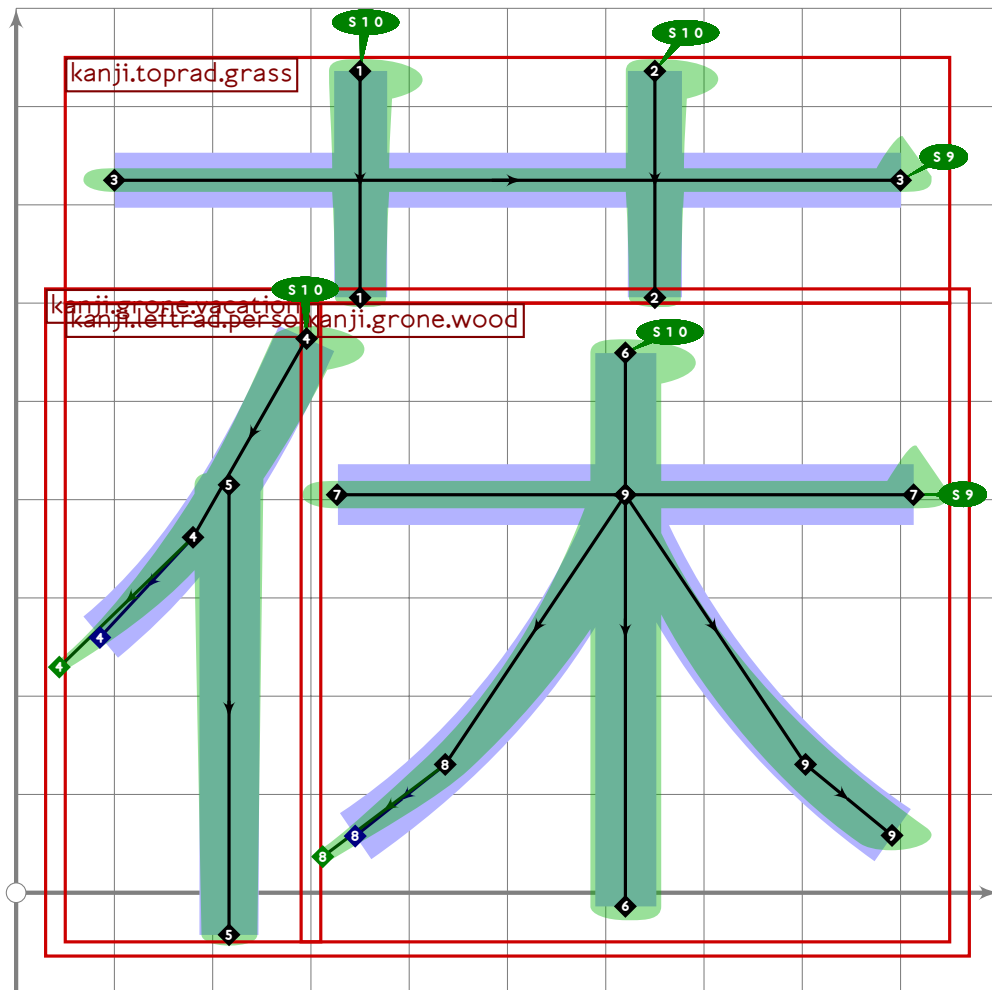
```



```

81 % myou/cha "tea"
82 begint Suglyph("uni8317";23);
83 build_kanji.tb(600,0)
84   (tsu_curve.kanji.toprad.grass)
85   (tsu_curve.kanji.grone.name);
86   tsu_render;
87   endtsuglyph;
88

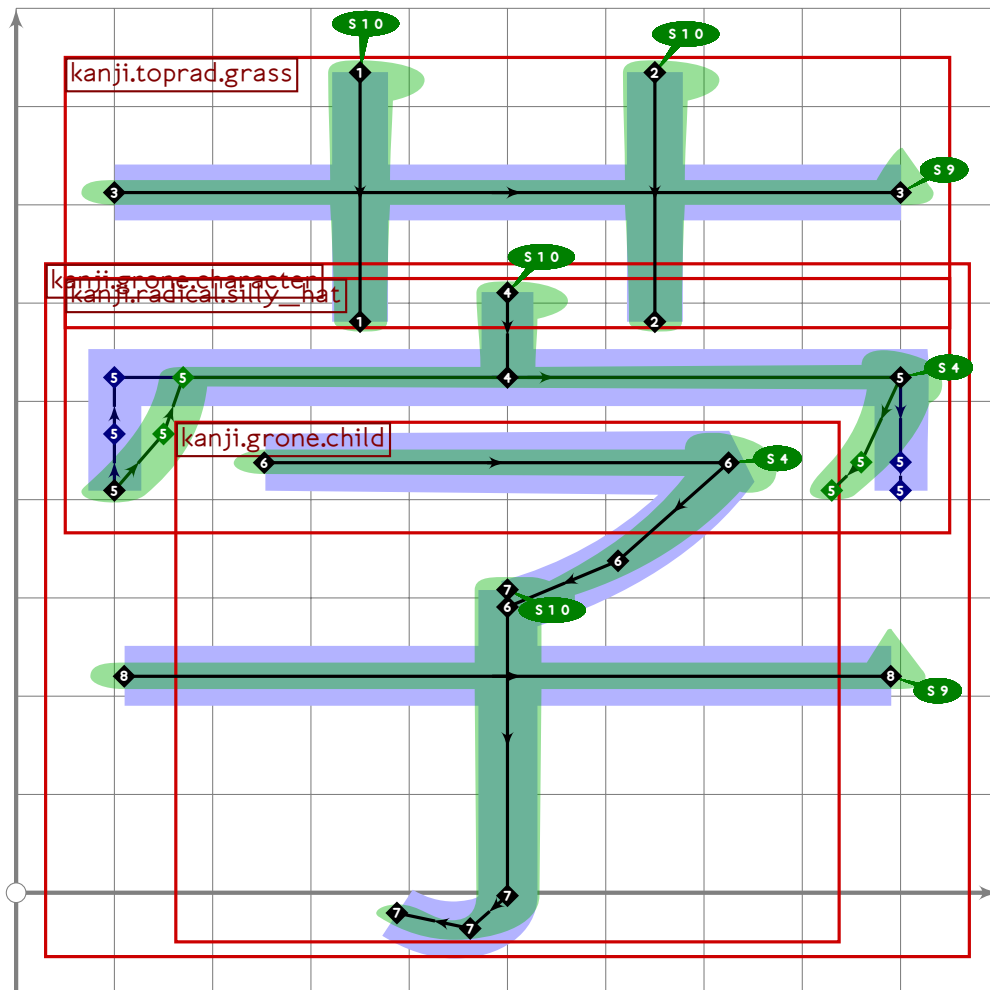
```



```

89 % extra
90 begint Suglyph("uni8320",32);
91 build_kanji.tb(600,0)
92   (tsu_curve.kanji.toprad.grass)
93   (tsu_curve.kanji.grone.vacation);
94   tsu_render;
95   endtsuglyph;
96

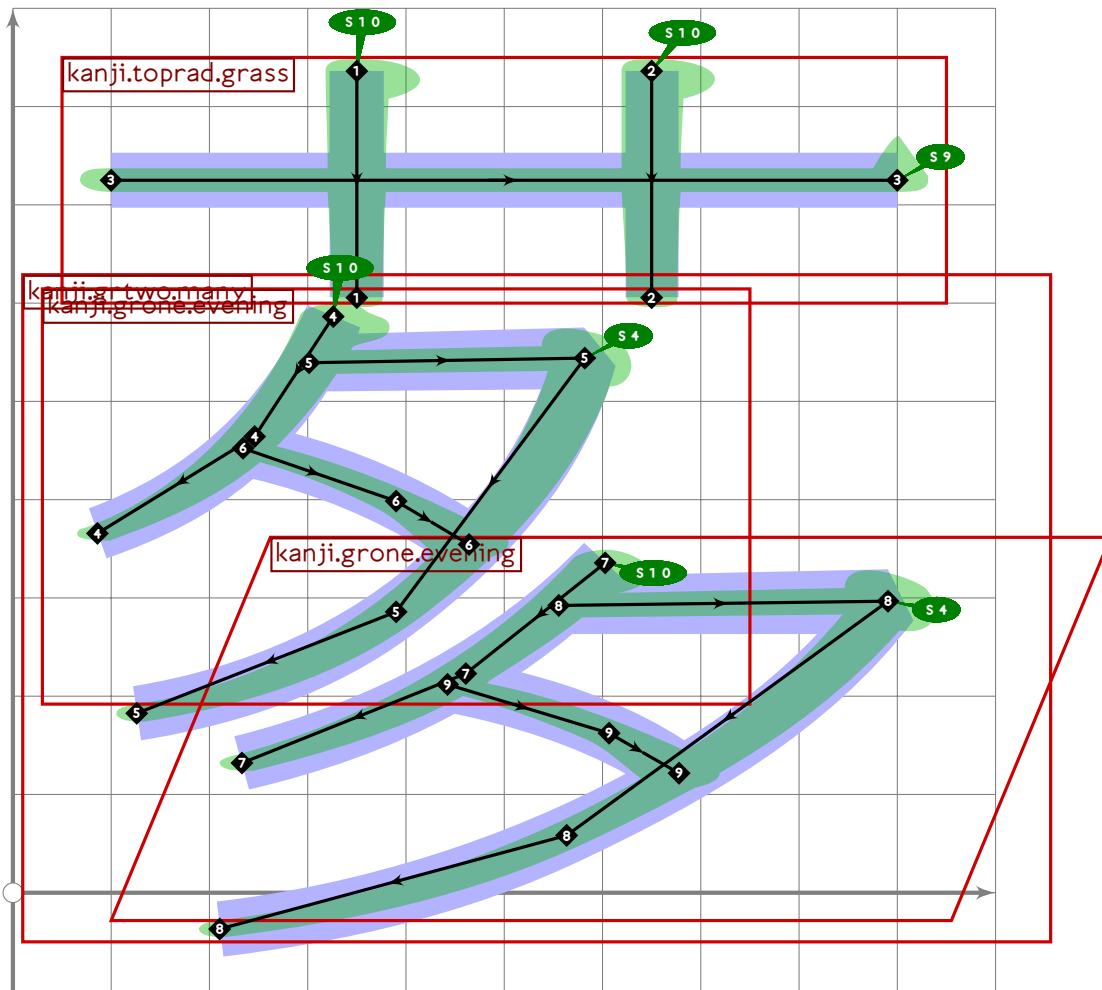
```



```

97 % extra
98 begint Suglyph("uni8321",33);
99 build_kanji.tb(600,50)
100 (tsu_curve.kanji.toprad.grass)
101 (tsu_curve.kanji.grone.character);
102 tsu_render;
103 endtsuglyph;
104

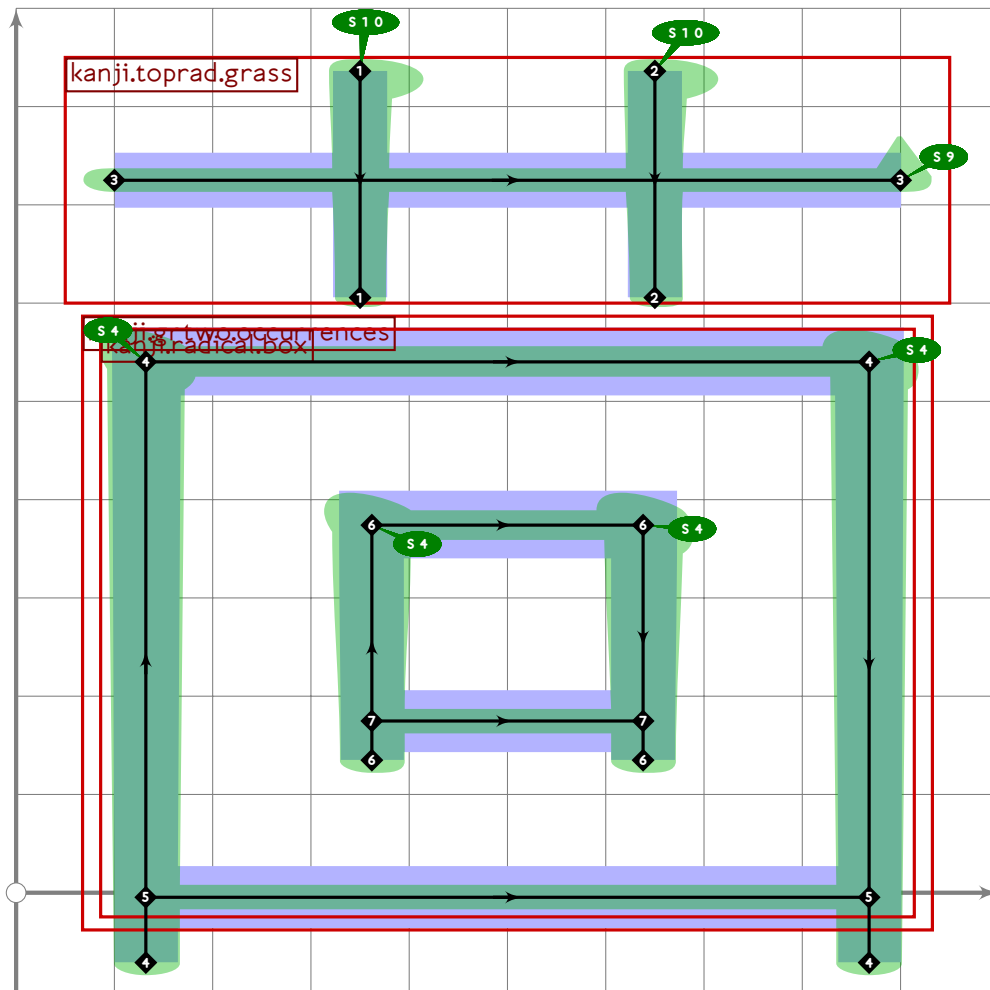
```



```

105 % extra
106 begint Suglyph("uni8324",36);
107 build_kanji.tb(600,0)
108 (tsu_curve.kanji.toprad.grass)
109 (tsu_curve.kanji.gtwo.many);
110 tsu_render;
111 endtsuglyph;
112

```

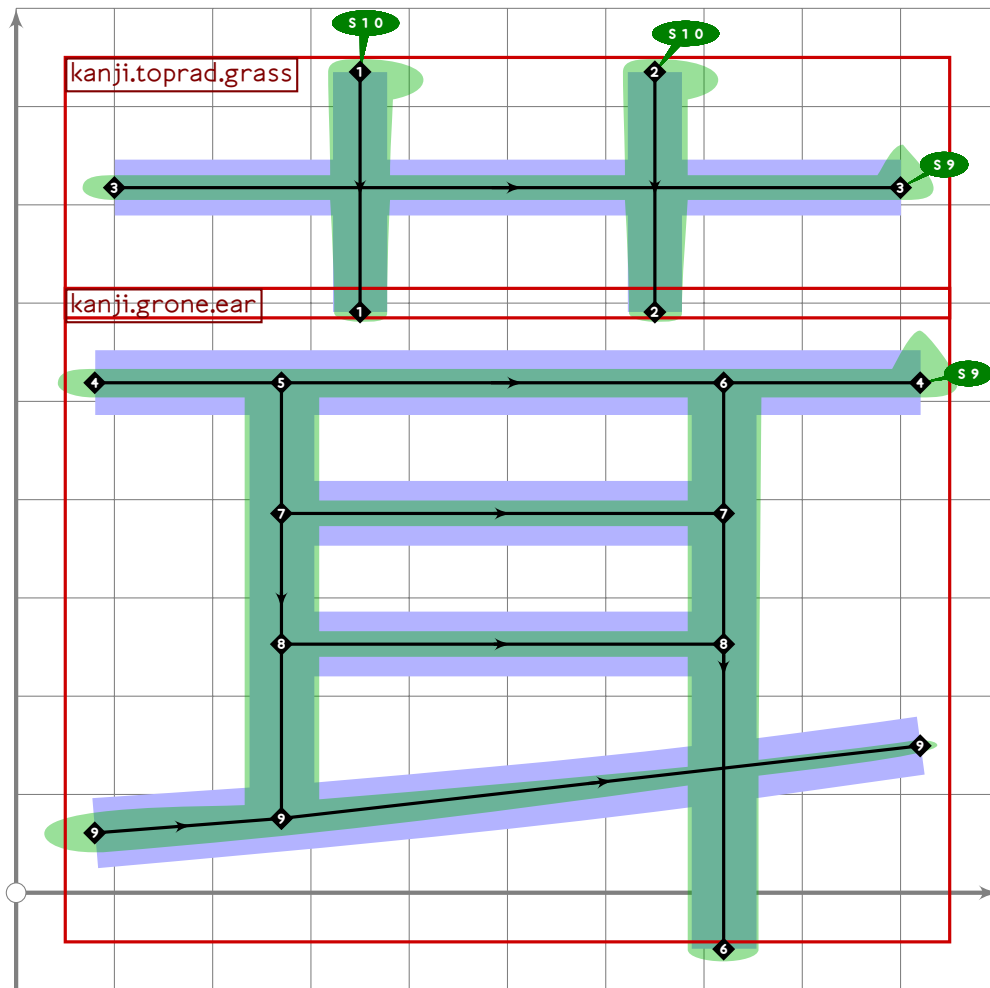


```

113 % extra
114 begintsuglyph("uni8334",52);
115 build_kanji.tb(600,0)
116 (tsu_curve.kanji.toprad.grass)
117 (build_kanji.sscale(scaled 0.92)(tsu_curve.kanji.grtwo.occurrences));
118 tsu_render;
119 endtsuglyph;
120
121 % cha/sa "tea"
122 begintsuglyph("uni8336",54);
123 tsu_curve.kanji.grtwo.tea;
124 tsu_render;
125 endtsuglyph;
126

```

[see page 1528]

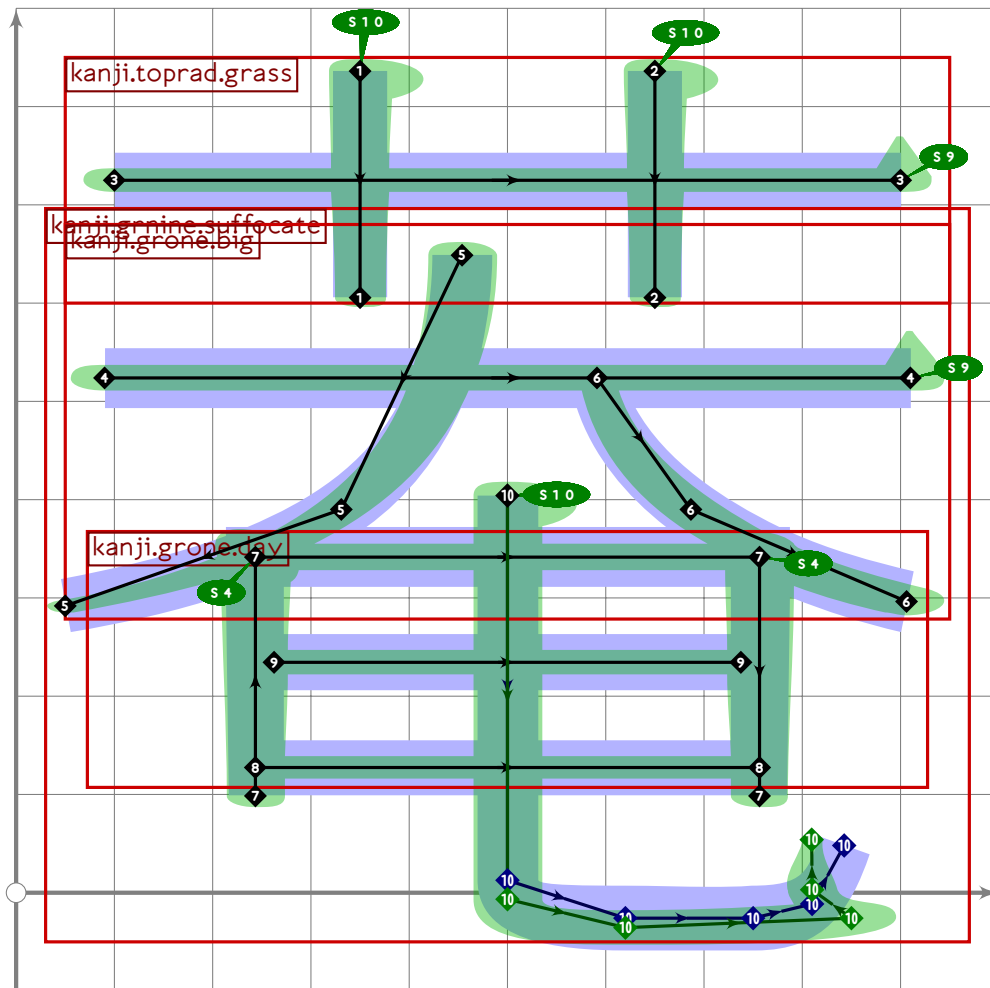


```

127 % extra
128 begint Suglyph("uni8338",56);
129 build_kanji.tb(600,30)
130   (tsu_curve.kanji.toprad.grass)
131   (tsu_curve.kanji.grone.ear);
132   tsu_render;
133 endtsuglyph;
134
135 % sou/kusa "grass"
136 begint Suglyph("uni8349",73);
137   tsu_curve.kanji.grone.grass;
138   tsu_render;
139 endtsuglyph;
140

```

[see page 1527]



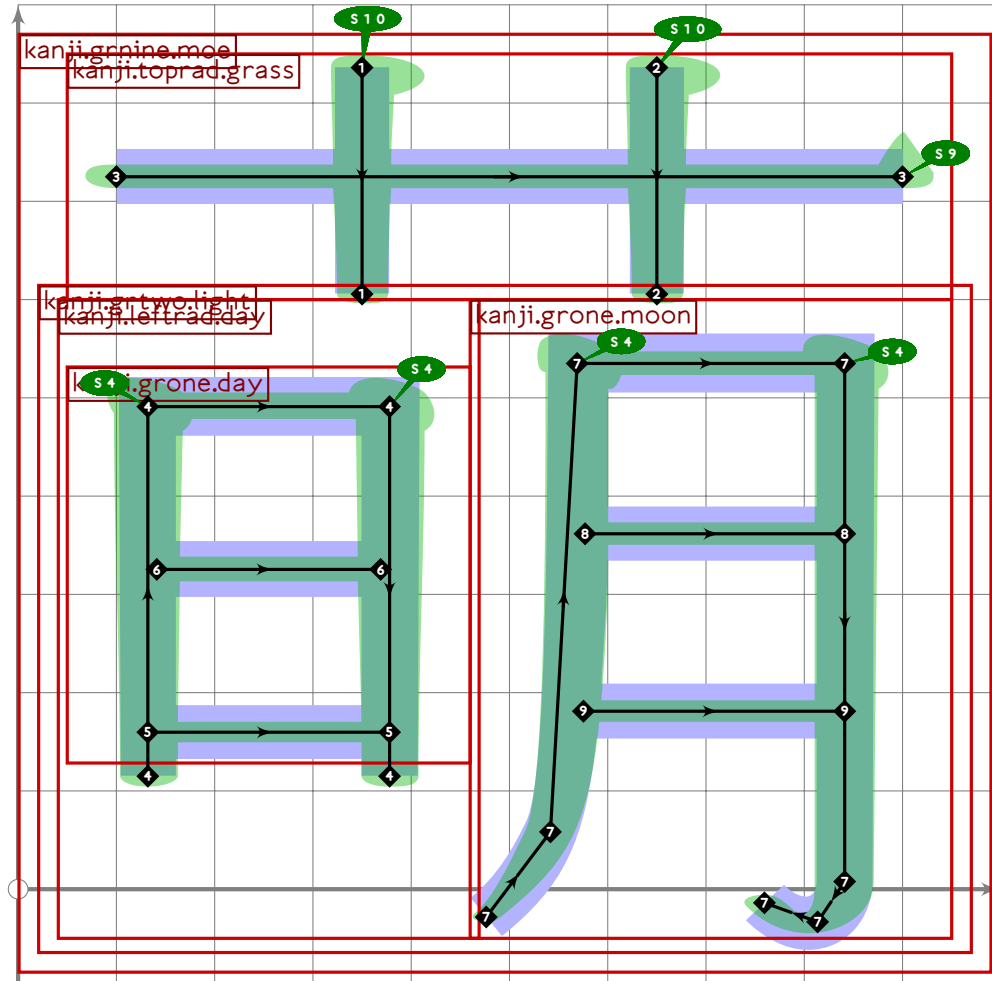
```

141 % extra an/iori "hermitage"
142 begint Suglyph("uni83F4",244);
143 build_kanji.tb(640,80)
144   (tsu_curve.kanji.toprad.grass)
145   (tsu_curve.kanji.gnine.suffocate);
146   tsu_render;
147 endtsuglyph;
148
149 _____
150
151 endfont;
152
153 _____

```


tsuku-84.mp

```
1 %  
2 % Unicode page 84 (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradeone.mp;  
38 input gradetwo.mp;  
39 input leftrad.mp;  
40 input topfad.mp;  
41  
42 _____
```



43

```
44 vardef tsu_curve.kanji.grnine.moe =
45   push_pbox_toexpand("kanji.grnine.moe");
46   build_kanji.tb(600,0)
47     (tsu_curve.kanji.toprad.grass)
48     (tsu_curve.kanji.grtwo.light);
49   expand_pbox;
50 enddef;
51
52 

---


53
54 % moe (untranslatable)
55 begintsuglyph("uni840C",12); [see page 1538]
56   tsu_curve.kanji.grnine.moe;
57   tsu_render;
58 endtsuglyph;
59
60 

---


61
62 endfont;
63
64 

---


```

tsuku-86.mp

```
1 %
2 % Unicode page 86 (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradeone.mp;
38
39 

---


40
41 % mushi "bug"
42 begintsuglyph("uni866B";107); [see page 341]
43   tsu_curve.kanji.grone.bug;
44   tsu_render;
45 endtsuglyph;
46
47 

---

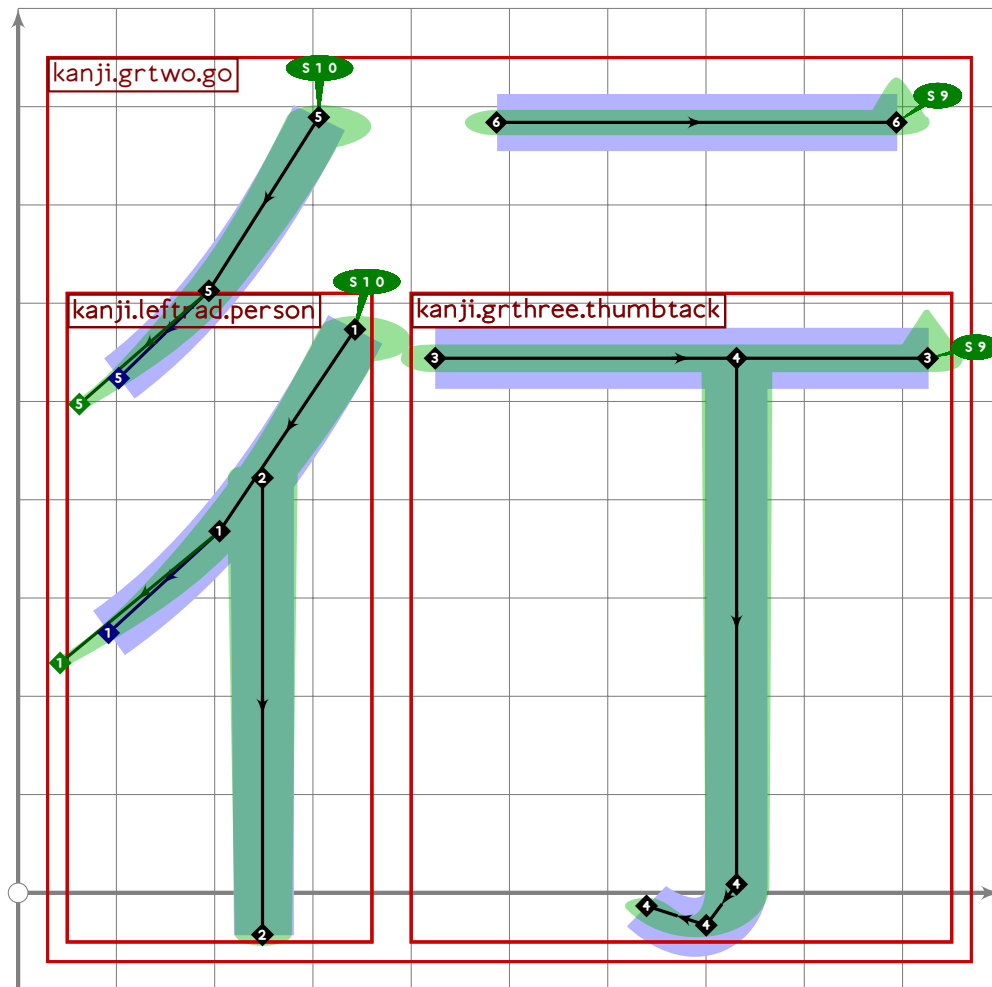

48
49 endfont;
50
51 

---


```

tsuku-88.mp

```
1 %  
2 % Unicode page 88 (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradethree.mp;  
38 input leftrad.mp;  
39  
40 _____
```



```
41  
42 vardef tsu_curve.kanji.grtwo.go =  
43   push_pbox_toexpand("kanji.grtwo.go");
```

```
44 build_kanji.harmonic(240,0.86,50)
45   (build_kanji.level(build_kanji.lr(380,-40)
46     (tsu_curve.kanji.leftrad.person)
47     (tsu_curve.kanji.grthree.thumbtack)));
48 replace_strokep(-4)(oldp shifted (50,0));
49 expand_pbox;
50 enddef;
51
52 

---


53
54 % kou/i(ku) "go"
55 begintsuglyph("uni884C",76); [see page 1540]
56   tsu_curve.kanji.grtwo.go;
57   tsu_render;
58 endtsuglyph;
59
60 

---


61
62 endfont;
63
64 

---

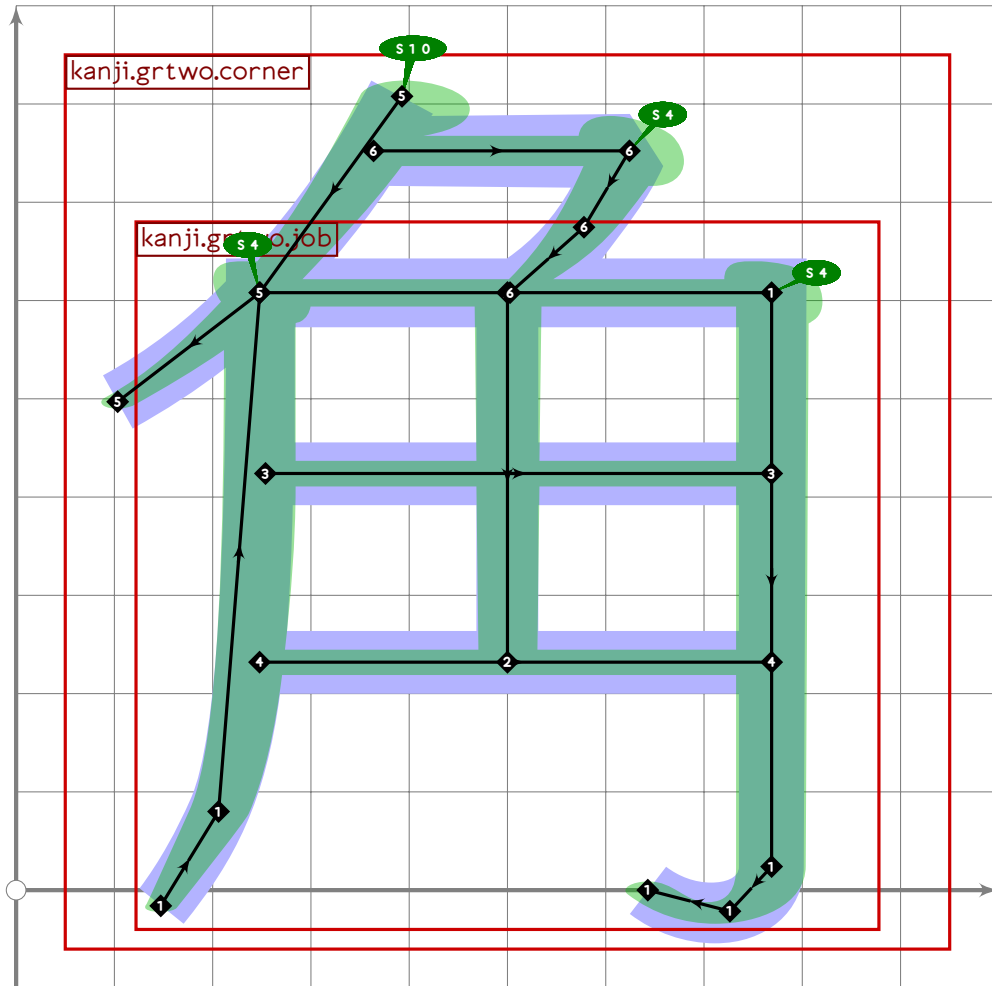

```



```

44 vardef tsu_curve.kanji.grone.see =
45   push_pbox_toexpand("kanji.grone.see");
46   build_kanji.level(build_kanji.tb(300,70)
47     (tsu_curve.kanji.grone.eye)
48     (tsu_curve.kanji.radical.legs));
49   expand_pbox;
50 enddef;
51
52

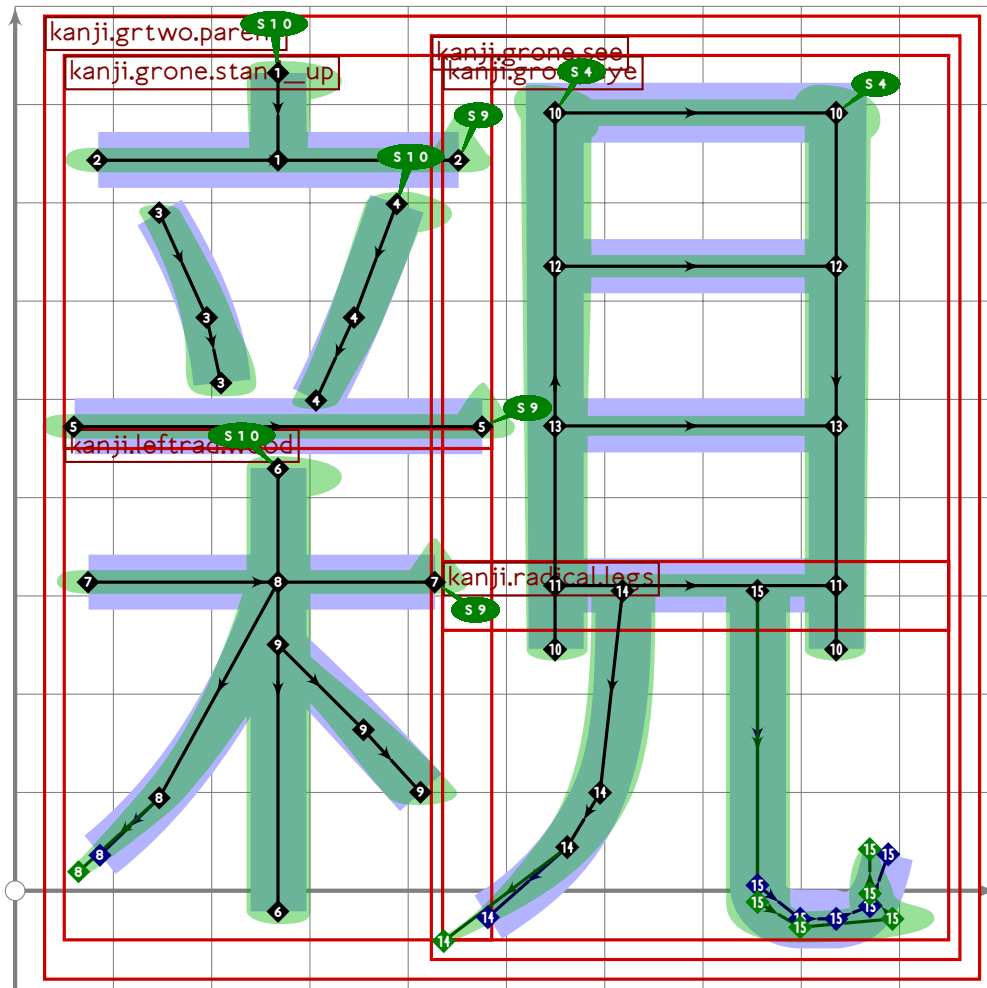
```



```

53
54 vardef tsu_curve.kanji.grtwo.corner =
55   push_pbox_toexpand("kanji.grtwo.corner");
56   build_kanji.attach_fishhook(0.8)(
57     build_kanji.sscale(xscaled 0.84)(tsu_curve.kanji.grtwo.job);
58     replace_strokep(-2)((500,760)-(500,290)));
59   expand_pbox;
60 enddef;

```



```

61
62 vardef tsu_curve.kanji.grtwo.parent =
63   push_pbox_toexpand("kanji.grtwo.parent");
64   build_kanji.level(build_kanji.lr(460,50)
65     (build_kanji.tb(460,20)
66       (tsu_curve.kanji.grone.stand_up)
67       (tsu_curve.kanji.leftrad.wood))
68     (tsu_curve.kanji.grone.see));
69   expand_pbox;
70 enddef;

```

71

72

73

```

74 % ken/mi "see"
75 begint Suglyph("uni898B";139);
76   tsu_curve.kanji.grone.see;
77   tsu_render;
78 endsuglyph;

```

[see page 1543]

79

```

80 % shin/oya/shita "parent"
81 begint Suglyph("uni89AA";170);

```

[see page 1544]


```
82  tsu_curve.kanji.grtwo.parent;
83  tsu_render;
84  endtsuglyph;
85
86  % kaku/kado "corner"
87  begintsuglyph("uni89D2",210); [see page 1543]
88  tsu_curve.kanji.grtwo.corner;
89  tsu_render;
90  endtsuglyph;
91
92  _____
93
94  endfont;
95
96  _____
```

tsuku-8a.mp

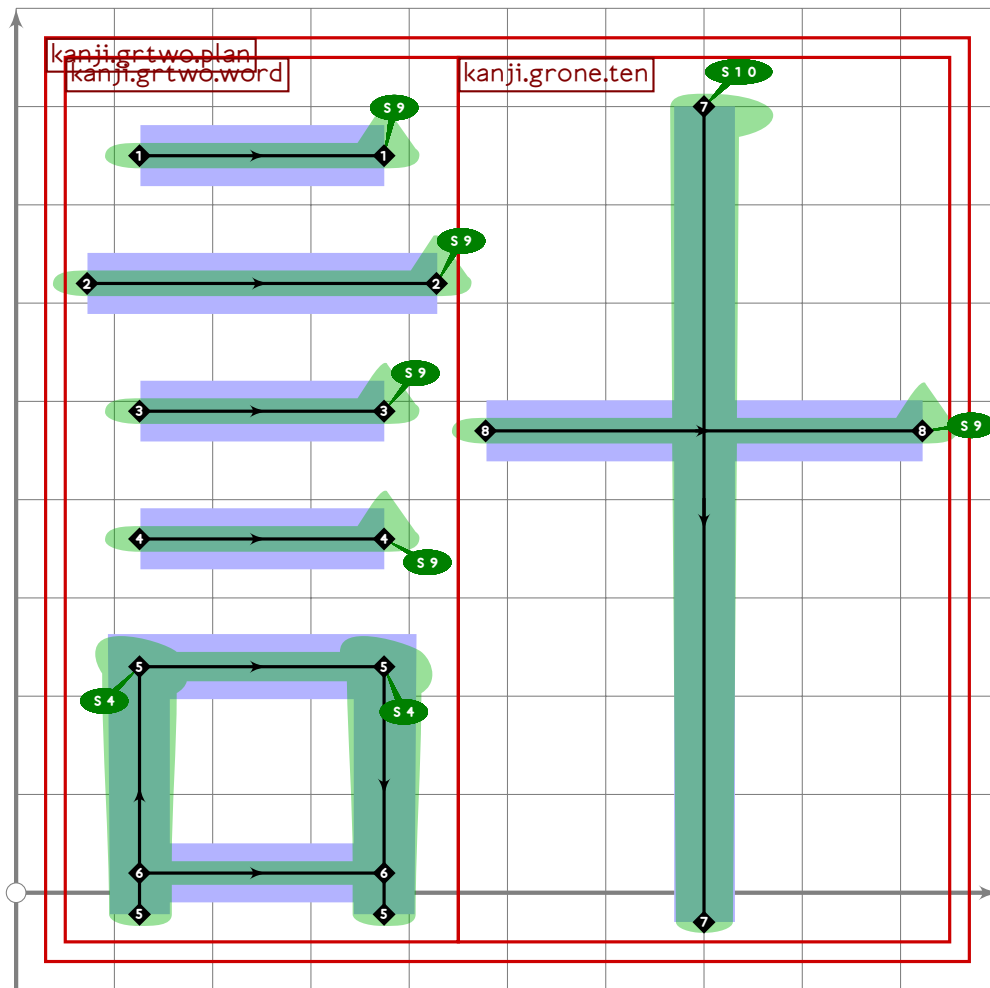
```
1 %
2 % Unicode page 8a (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradeeight.mp;
38 input gradefive.mp;
39 input gradefour.mp;
40 input gradenine.mp;
41 input gradeone.mp;
42 input gradesix.mp;
43 input gradethree.mp;
44 input gradetwo.mp;
45 input leftrad.mp;
46 input radical.mp;
47 input rare.mp;
48
49 

---

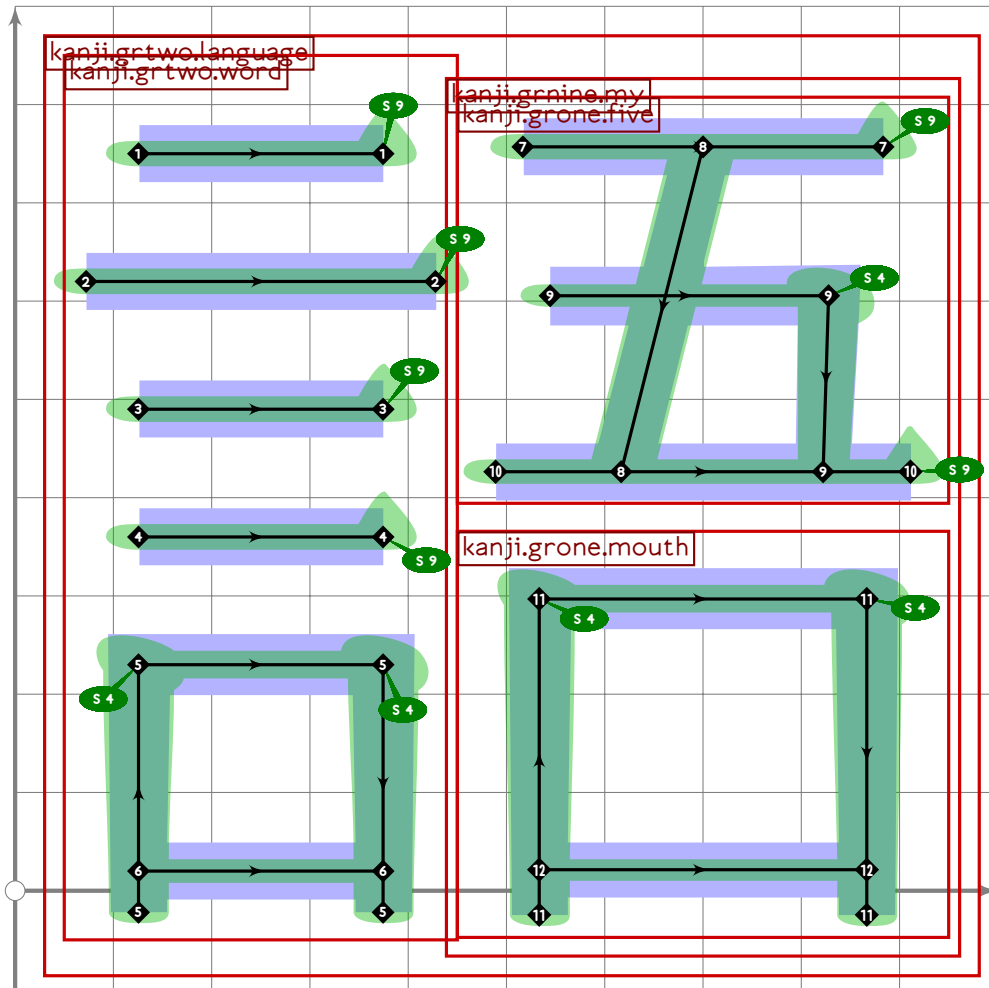

```



```

50
51 vardef tsu_curve.kanji.grtwo.plan =
52   push_pbox_toexpand("kanji.grtwo.plan");
53   build_kanji.level(build_kanji.lr(450,0)
54     (tsu_curve.kanji.grtwo.word)
55     (tsu_curve.kanji.grone.ten;
56       replace_strokep(0)(oldp shifted (0,70))));
57   expand_pbox;
58 enddef;

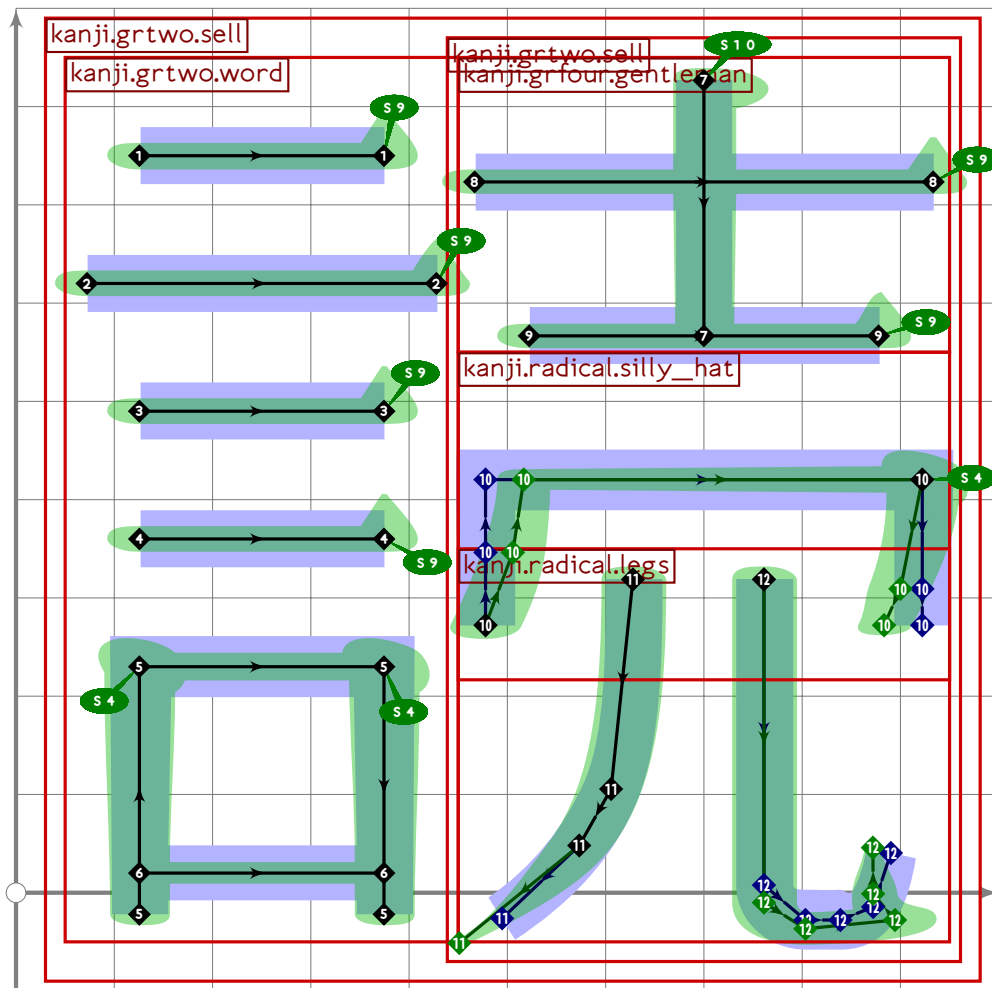
```



```

59
60 vardef tsu_curve.kanji.grtwo.language =
61   push_pbox_toexpand("kanji.grtwo.language");
62   build_kanji.level(build_kanji.lr(450,0)
63     (tsu_curve.kanji.grtwo.word)
64     (tsu_xform(identity yscaled 0.95)
65       (tsu_curve.kanji.grnine.my)));
66   expand_pbox;
67 enddef;

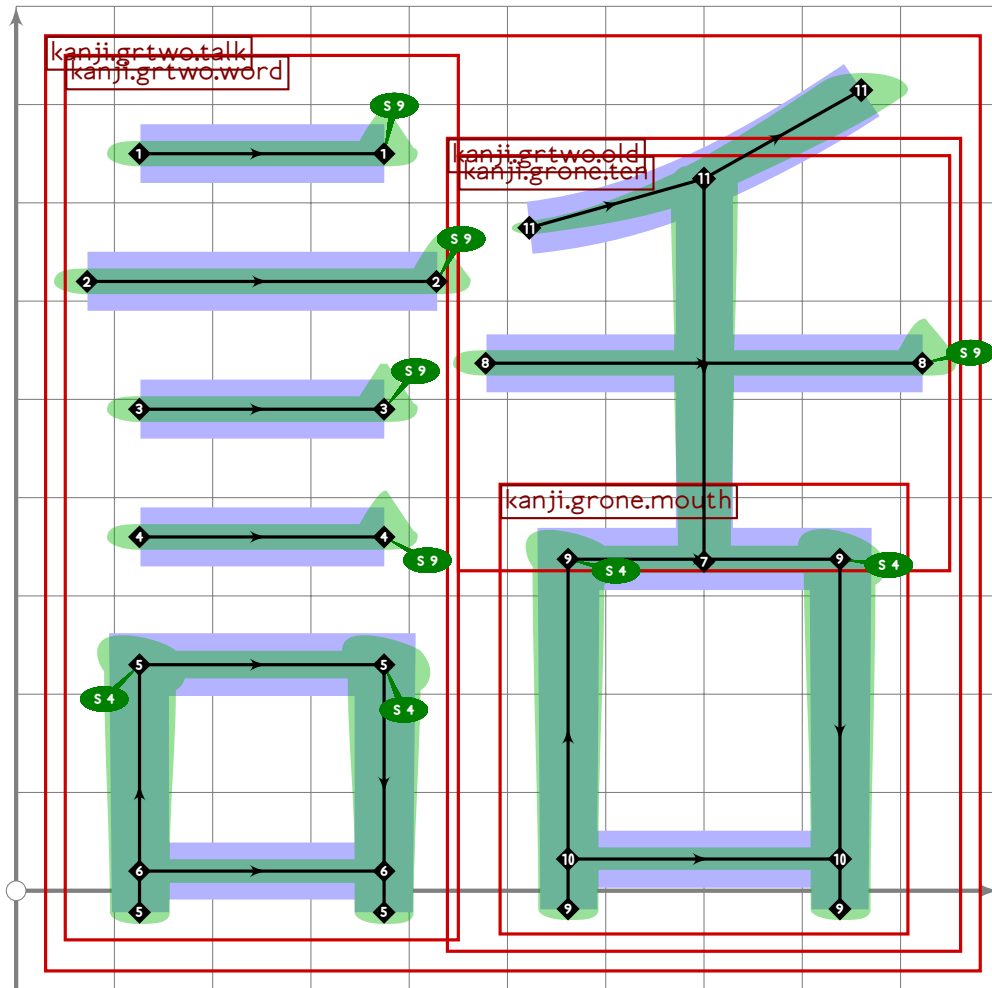
```



```

68
69 vardef tsu_curve.kanji.grtwo.read =
70   push_pbox_toexpand("kanji.grtwo.sell");
71   build_kanji.level(build_kanji.lr(450,0)
72     (tsu_curve.kanji.grtwo.word)
73     (tsu_curve.kanji.grtwo.sell));
74   expand_pbox;
75 enddef;

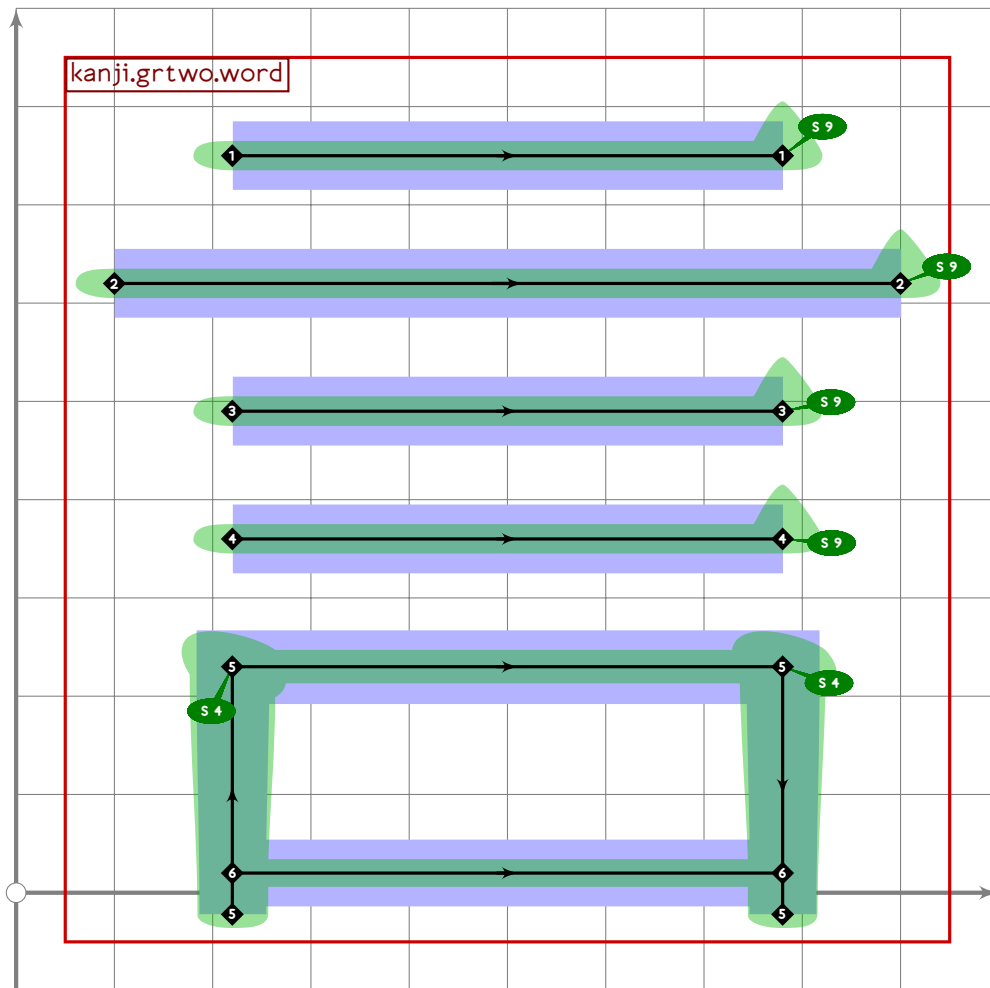
```



```

76
77 vardef tsu_curve.kanji.grtwo.talk =
78   push_pbox_toexpand("kanji.grtwo.talk");
79   build_kanji.level(build_kanji.lr(450,0)
80     (tsu_curve.kanji.grtwo.word)
81     (build_kanji.add_beret(tsu_xform(identity yscaled 0.88)
82       (tsu_curve.kanji.grtwo.old))));
83   expand_pbox;
84 enddef;

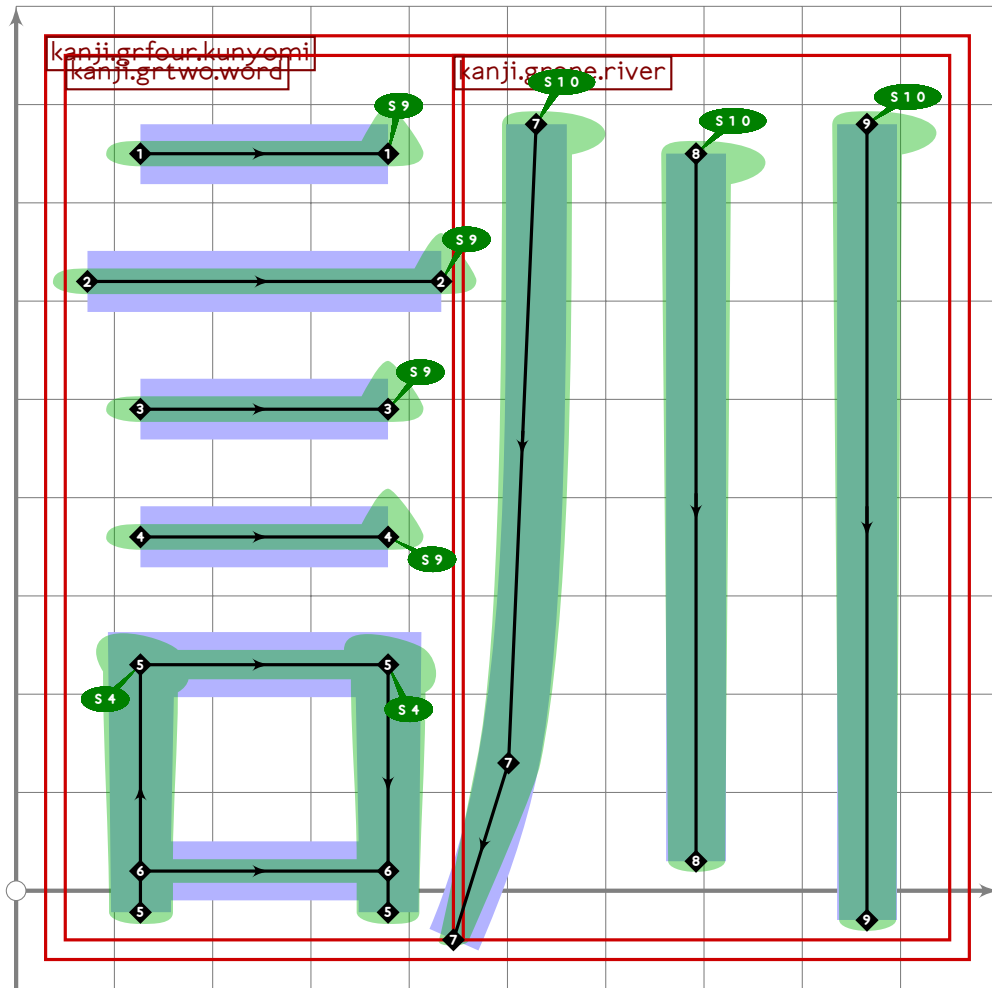
```



```

85
86 vardef tsu_curve.kanji.grtwo.word =
87   push_pbox_toexpand("kanji.grtwo.word");
88   push_stroke((220,750)-(780,750),(1.6,1.6)-(1.6,1.6));
89   set_boserif(0,1,9);
90   push_stroke((100,620)-(900,620),(1.6,1.6)-(1.6,1.6));
91   set_boserif(0,1,9);
92   push_stroke((220,490)-(780,490),(1.6,1.6)-(1.6,1.6));
93   set_boserif(0,1,9);
94   push_stroke((220,360)-(780,360),(1.6,1.6)-(1.6,1.6));
95   set_boserif(0,1,9);
96   build_kanji.box((220,230),(780,20));
97   expand_pbox;
98 enddef;
99
100

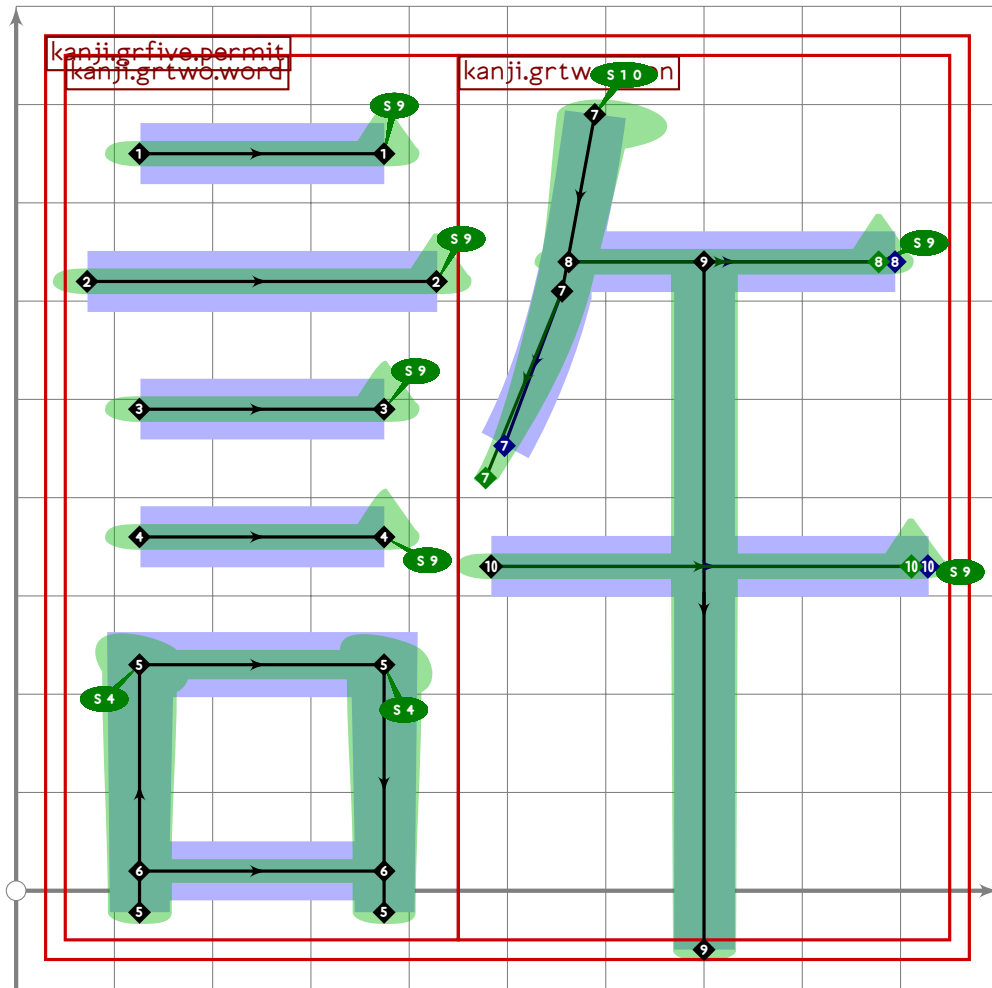
```



```

101
102 vardef tsu_curve.kanji.grfour.kunyomi =
103   push_pbox_toexpand("kanji.grfour.kunyomi");
104   build_kanji.level(build_kanji.lr(450,10)
105     (tsu_curve.kanji.grtwo.word)
106     (tsu_curve.kanji.grone.river));
107   expand_pbox;
108 enddef;
109
110

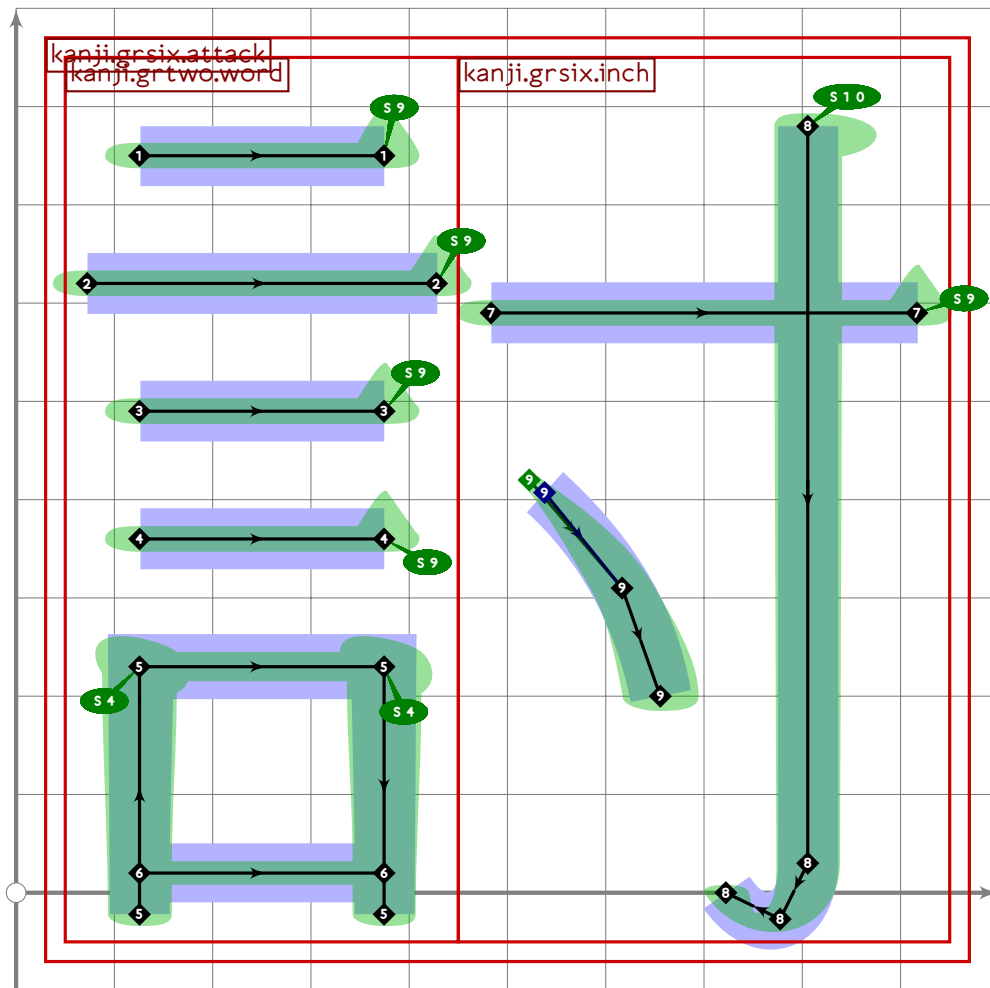
```

```

111
112 vardef tsu_curve.kanji.grfive.permit =
113   push_pbox_toexpand("kanji.grfive.permit");
114   build_kanji.level(build_kanji.lr(450,0)
115     (tsu_curve.kanji.grtwo.word)
116     (tsu_curve.kanji.grtwo.noon));
117   expand_pbox;
118 enddef;
119
120

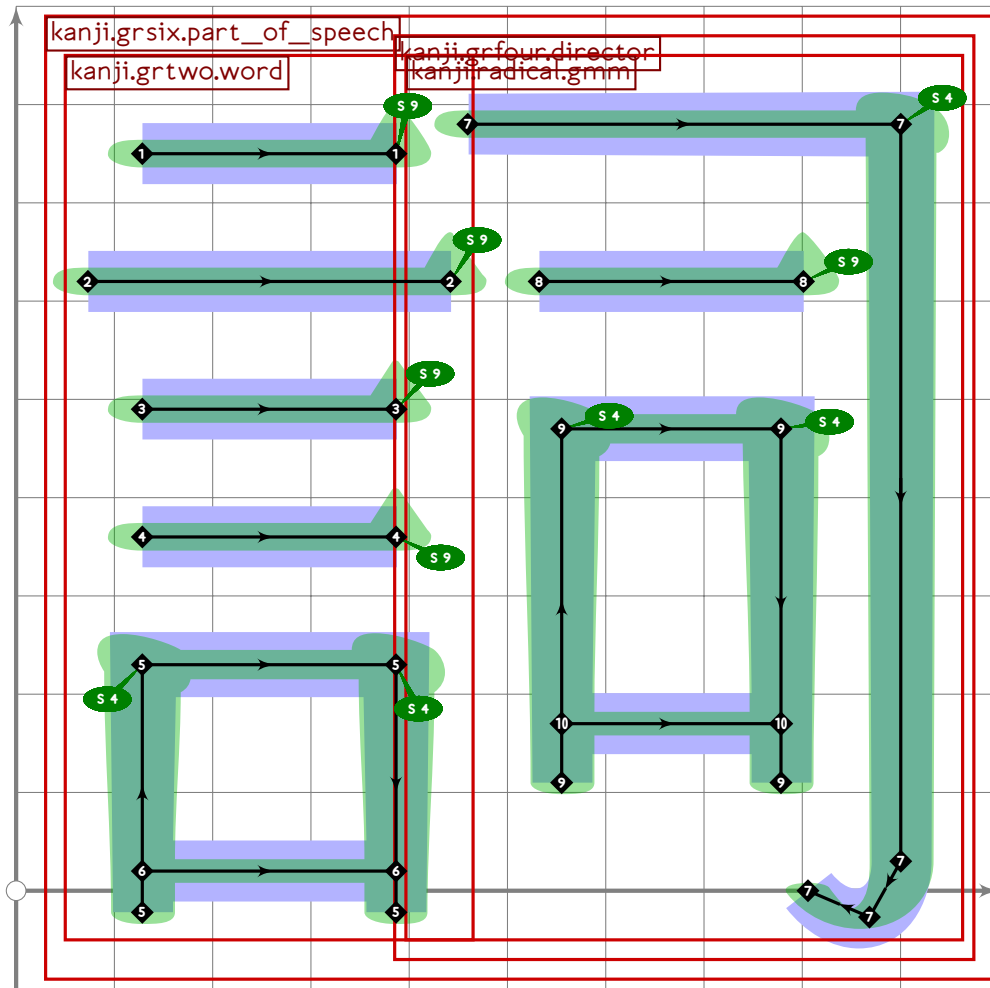
```



```

121
122 vardef tsu_curve.kanji.grsix.attack =
123   push_pbox_toexpand("kanji.grsix.attack");
124   build_kanji.level(build_kanji.lr(450,0)
125     (tsu_curve.kanji.grtwo.word)
126     (tsu_curve.kanji.grsix.inch));
127   expand_pbox;
128 enddef;

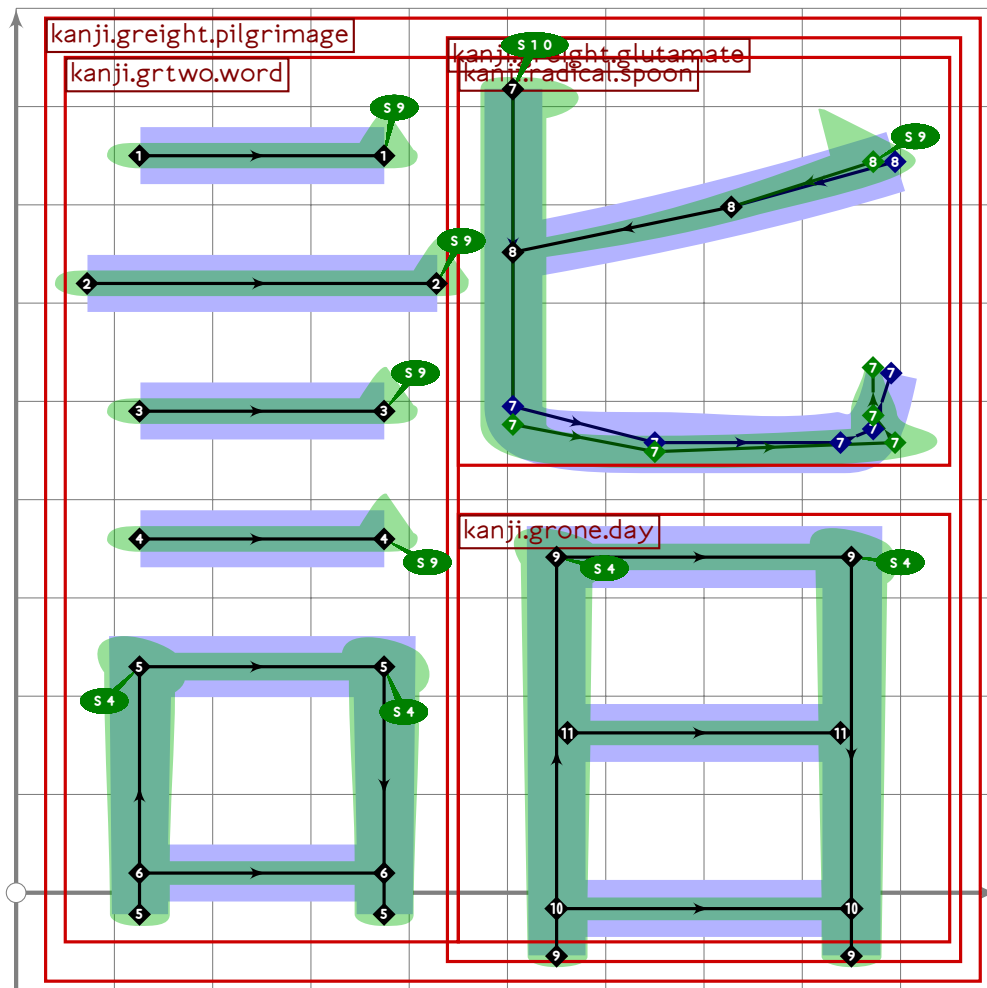
```



```

129
130 vardef tsu_curve.kanji.grsix.part_of_speech =
131   push_pbox_toexpand("kanji.grsix.part_of_speech");
132   build_kanji.level(build_kanji.lr(450,30)
133     (tsu_curve.kanji.grtwo.word)
134     (tsu_curve.kanji.grfour.director));
135   expand_pbox;
136 enddef;
137
138

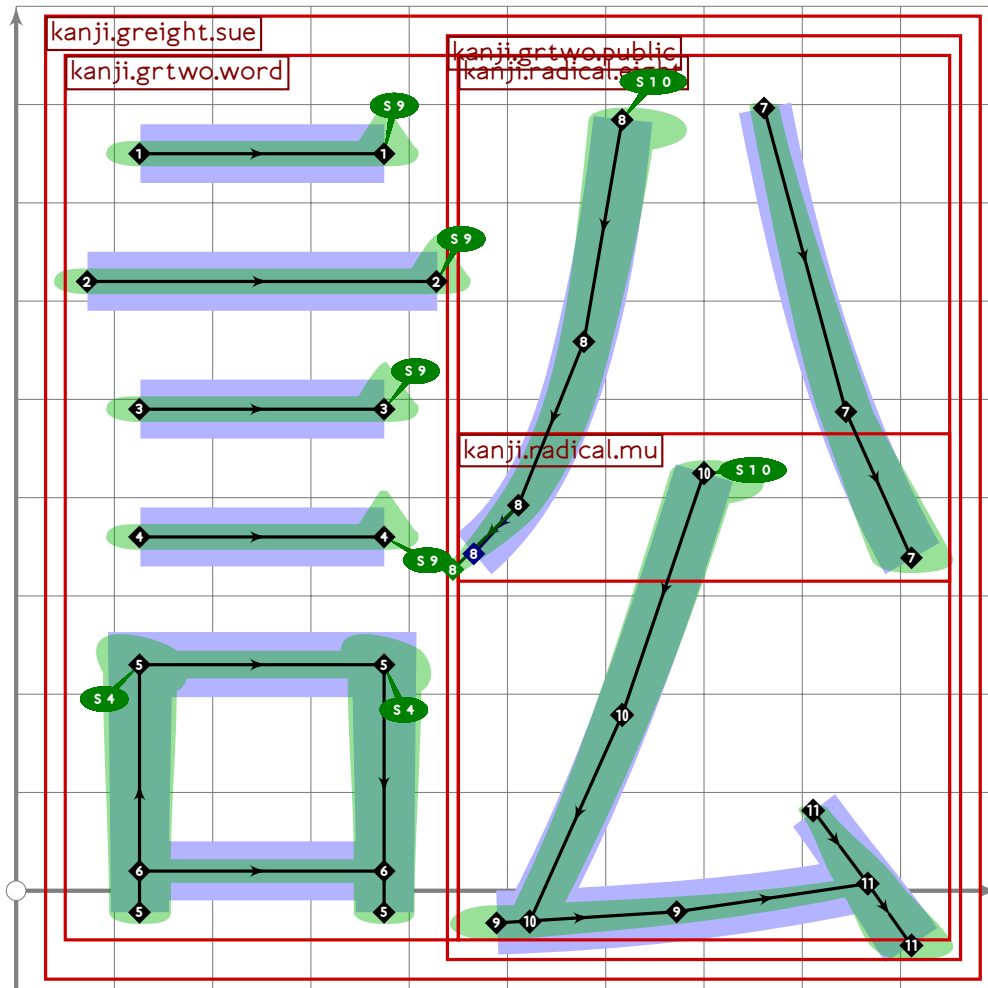
```

```

147
148 vardef tsu_curve.kanji.greight.pilgrimage =
149   push_pbox_toexpand("kanji.greight.pilgrimage");
150   build_kanji.level(build_kanji.lr(450,0)
151     (tsu_curve.kanji.grtwo.word)
152     (tsu_curve.kanji.greight.glutamate));
153   expand_pbox;
154 enddef;
155
156 vardef tsu_curve.kanji.greight.revise =
157   push_pbox_toexpand("kanji.greight.revise");
158   build_kanji.level(build_kanji.lr(450,0)
159     (tsu_curve.kanji.grtwo.word)
160     (tsu_curve.kanji.grthree.thumbtack));
161   expand_pbox;
162 enddef;

```

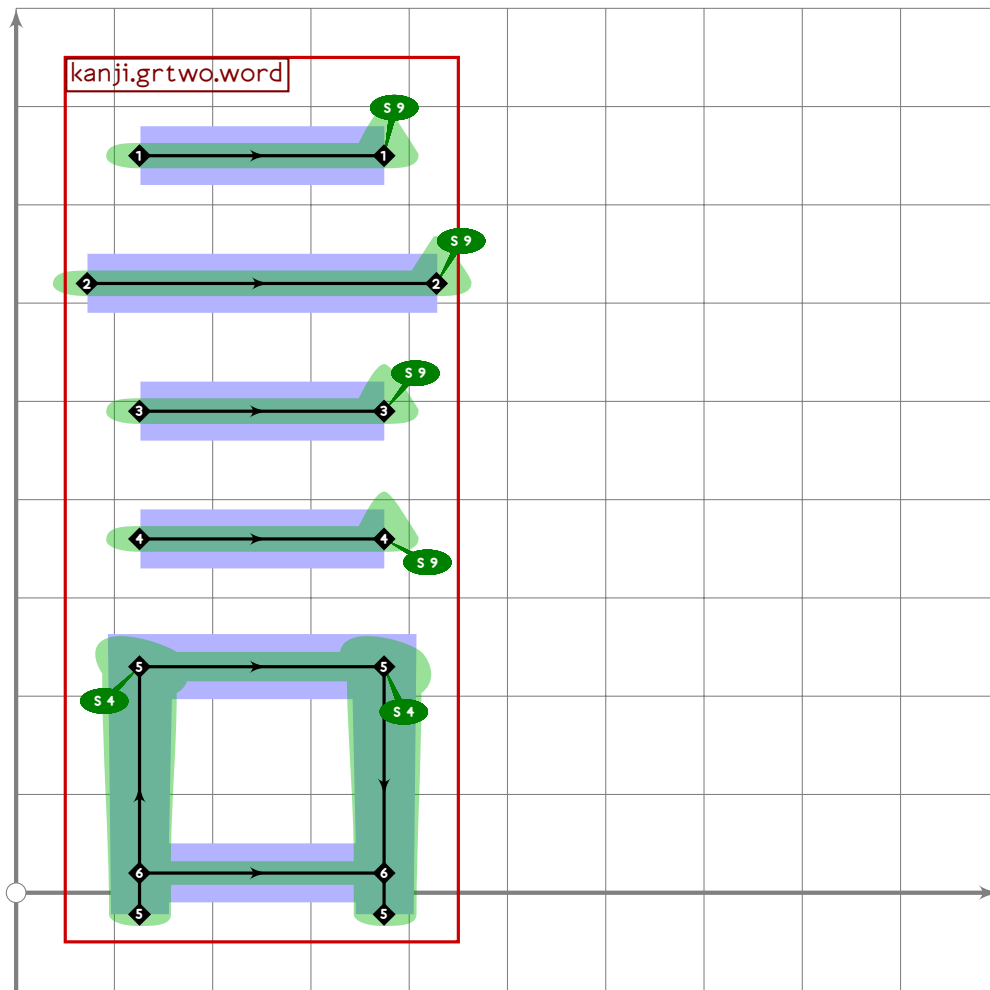


```

163
164 vardef tsu_curve.kanji.greight.sue =
165   push_pbox_toexpand("kanji.greight.sue");
166   build_kanji.level(build_kanji.lr(450,0)
167     (tsu_curve.kanji.grtwo.word)
168     (tsu_curve.kanji.grtwo.public));
169   expand_pbox;
170 enddef;
171
172
173
174 % gen/i "word"
175 begintsuglyph("uni8A00",0);
176   tsu_curve.kanji.grtwo.word;
177   tsu_render;
178 endtsuglyph;
179

```

[see page 1551]

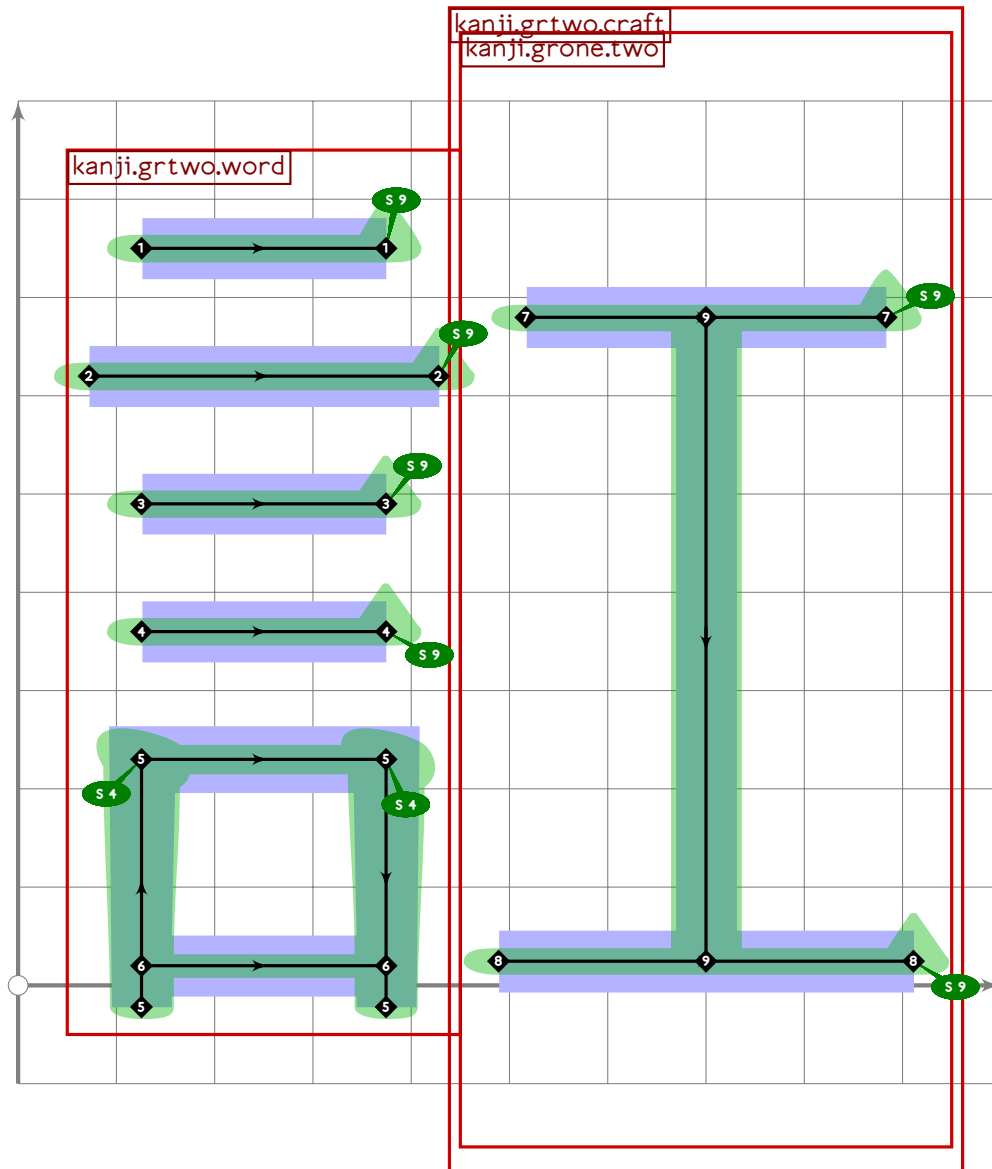


```

180 % extra (word left radical)
181 begintsuglyph("uni8A01";1);
182 build_kanji.lr(450,0)
183   (tsu_curve.kanji.grtwo.word)
184   ();
185   tsu_render;
186 endtsuglyph;
187
188 % kei/haka "plan"
189 begintsuglyph("uni8A08";8);
190   tsu_curve.kanji.grtwo.plan;
191   tsu_render;
192 endtsuglyph;
193

```

[see page 1547]



```

194 % extra: kou "become confused"
195 \begin{suglyph}{uni8A0C}{12};
196 \build_kanji.level(\build_kanji.lr(450,0)
197   (\tsu_curve.kanji.grtwo.word)
198   (\build_kanji.sscale(\yscaled 1.26)(\tsu_curve.kanji.grtwo.craft)));
199 \tsu_render;
200 \end{suglyph};
201
202 % tou/u "attack"
203 \begin{suglyph}{uni8A0E}{14};
204 \tsu_curve.kanji.grsix.attack;
205 \tsu_render;
206 \end{suglyph};
207
208 % kun "native Japanese kanji pronunciation"
209 % of course "kun" is the "on" reading of this kanji, don't be silly

```

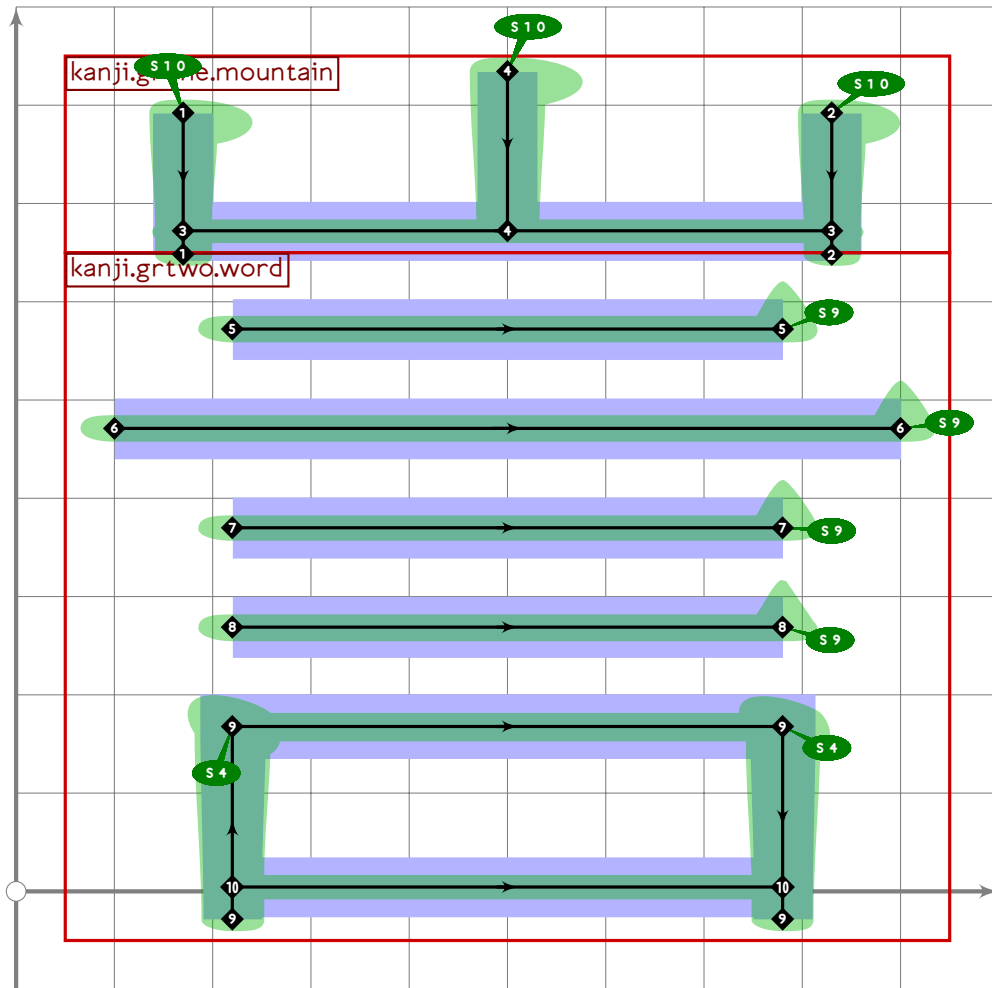
[see page 1554]


```

210 begint Suglyph("uni8A13";19);
211 tsu_curve.kanji.grfour.kunyomi;
212 tsu_render;
213 endsuglyph;
214

```

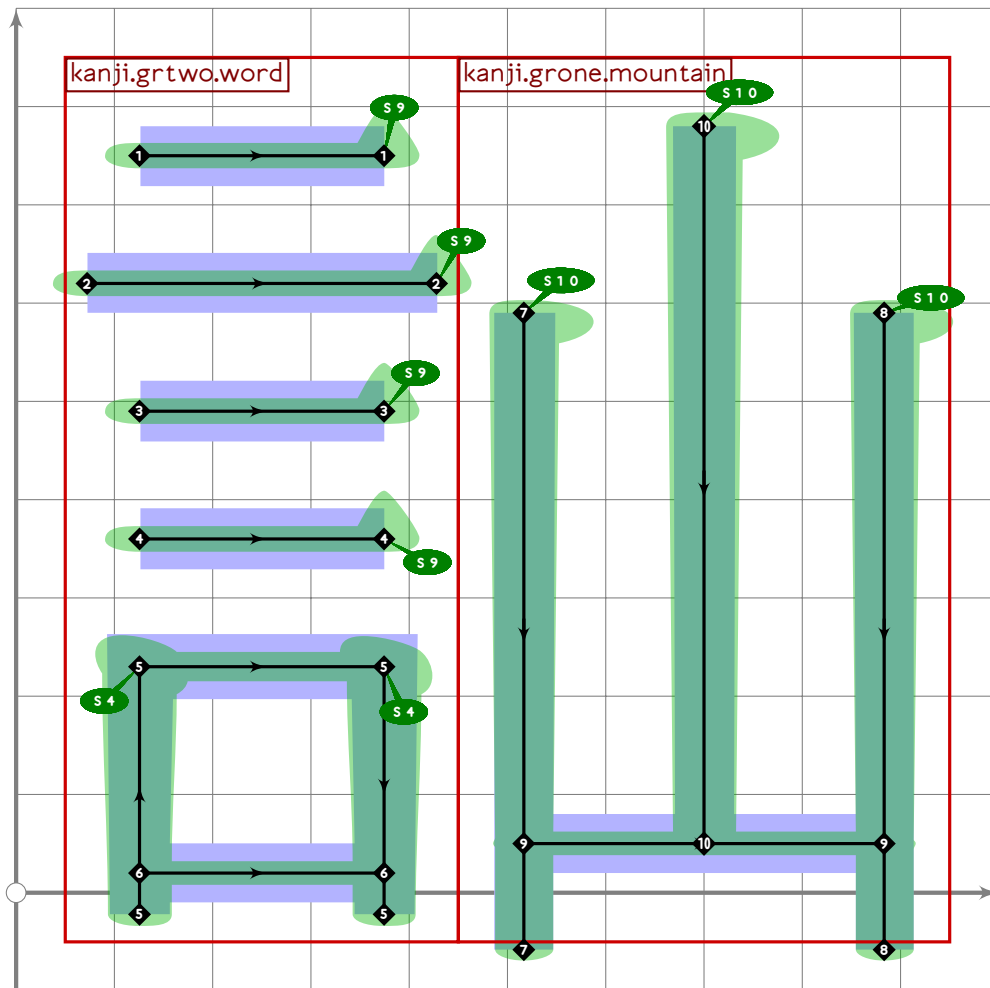
[see page 1552]



```

215 % extra
216 begint Suglyph("uni8A14";20);
217 build_kanji.level(build_kanji.tb(650,0)
218   (tsu_curve.kanji.grone.mountain)
219   (tsu_curve.kanji.grtwo.word));
220 tsu_render;
221 endsuglyph;
222

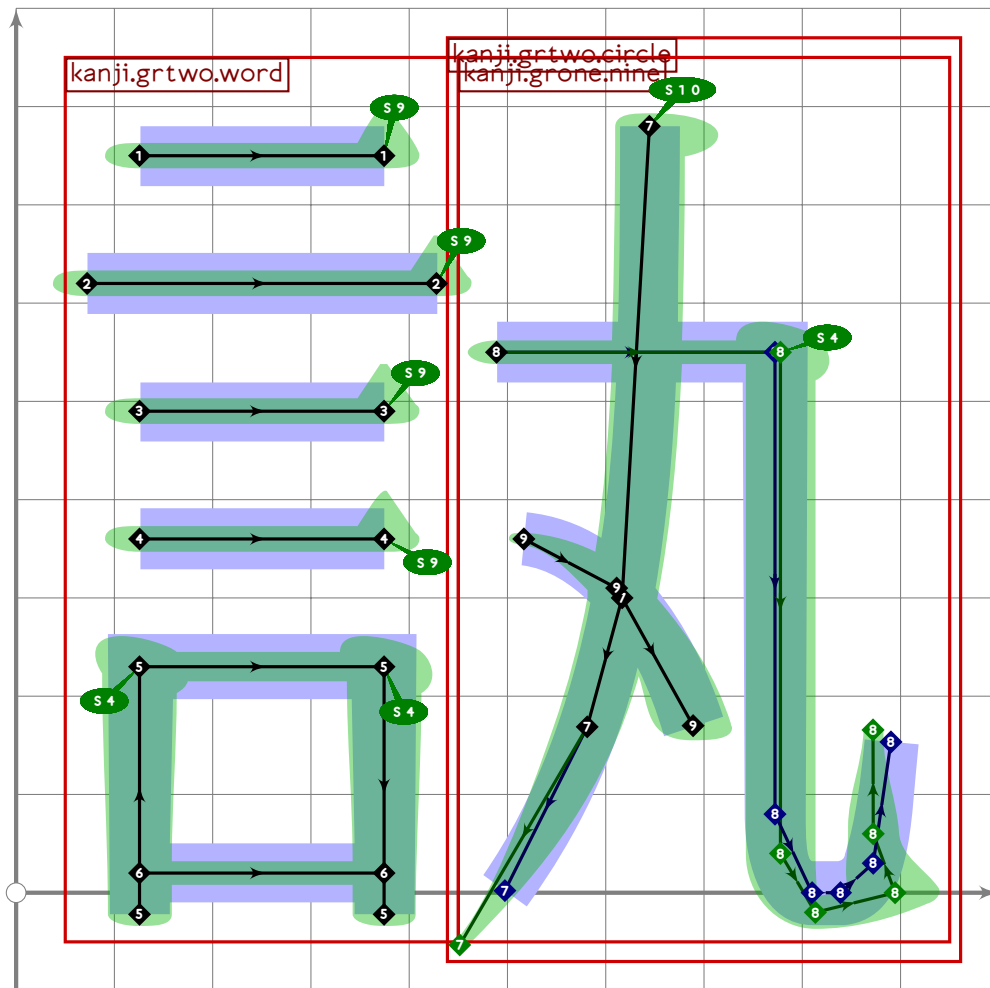
```



```

223 % extra
224 begint Suglyph("uni8A15",21);
225 build_kanji.level(build_kanji.lr(450,0)
226   (tsu_curve.kanji.grtwo.word)
227   (tsu_curve.kanji.grone.mountain));
228 tsu_render;
229 endsuglyph;
230

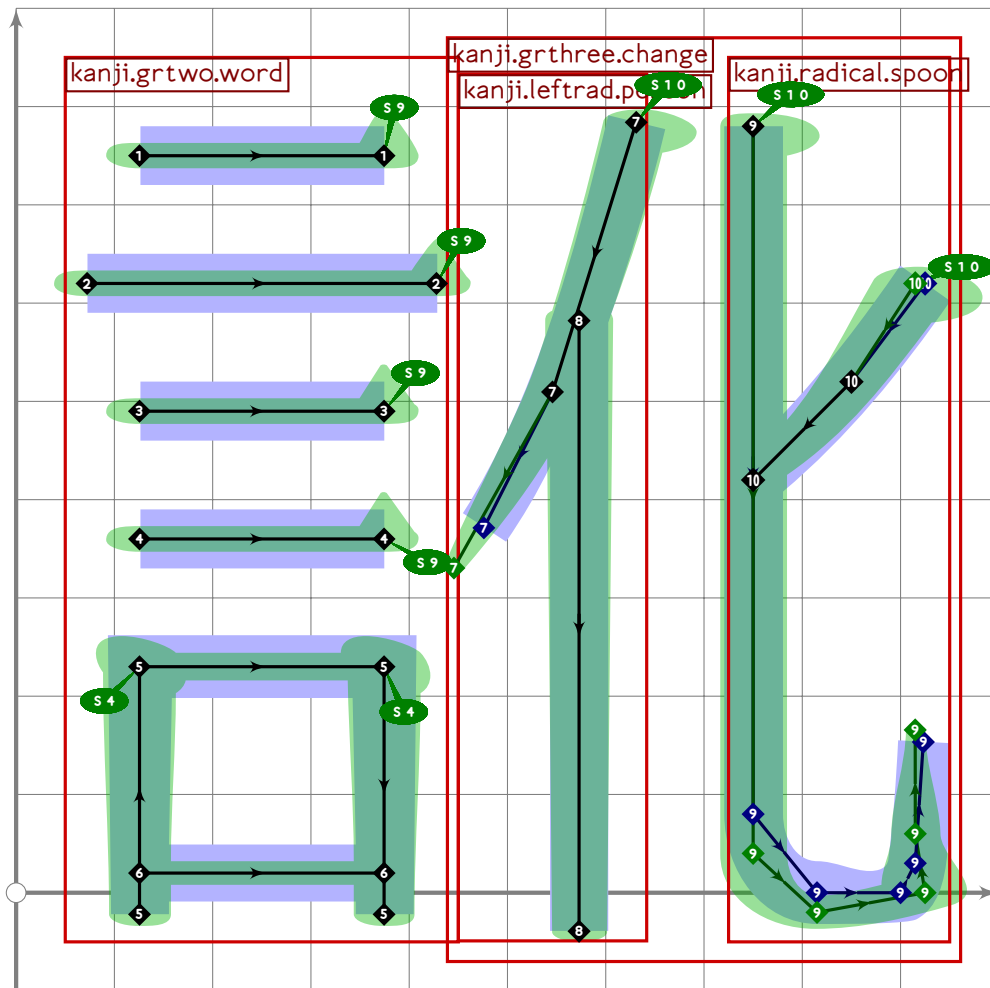
```



```

231 % extra
232 begint Suglyph("uni8A19";25);
233 build_kanji.level(build_kanji.l(450,0)
234   (tsu_curve.kanji.grtwo.word)
235   (tsu_curve.kanji.grtwo.circle));
236 tsu_render;
237 endsuglyph;
238

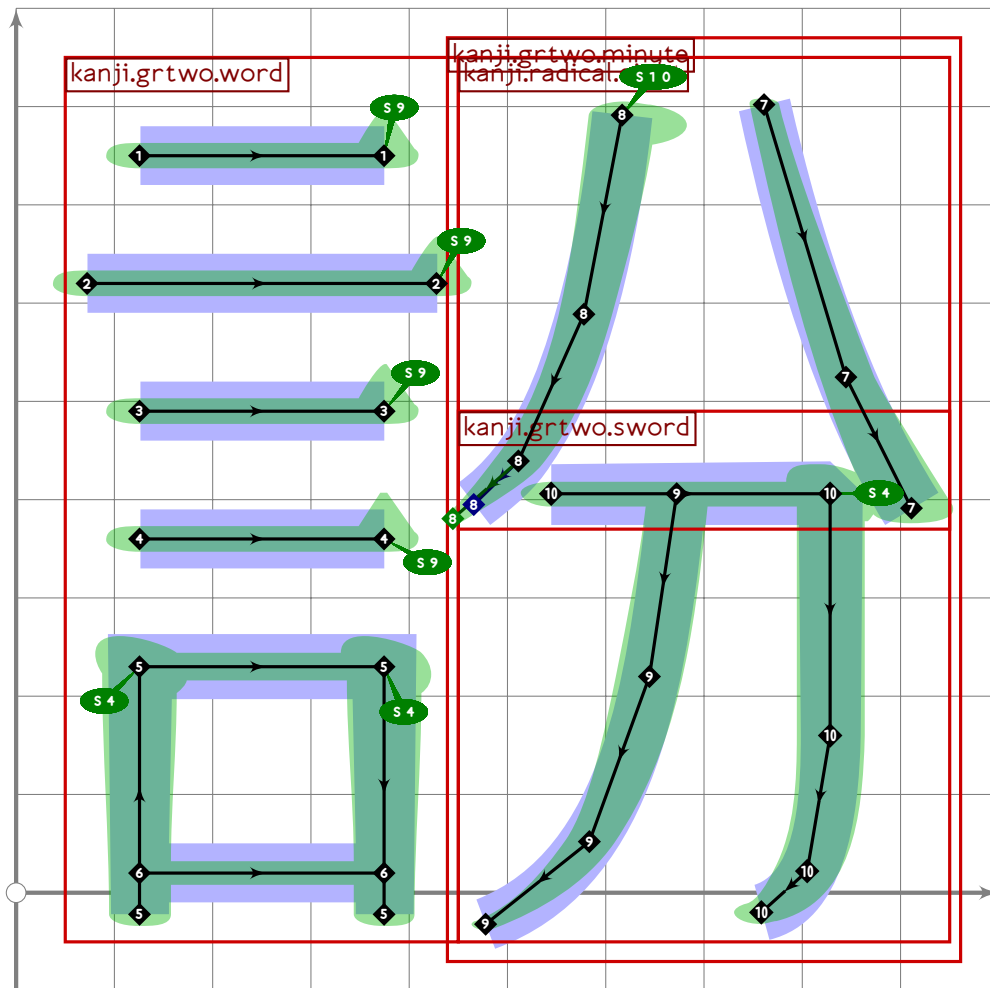
```



```

239 % ka/nama "accent (speech)"
240 begint Suglyph("uni8A1B";27);
241 build_kanji.level(build_kanji.l(450,0)
242   (tsu_curve.kanji.grtwo.word)
243   (tsu_curve.kanji.grthree.change));
244 tsu_render;
245 endsuglyph;
246

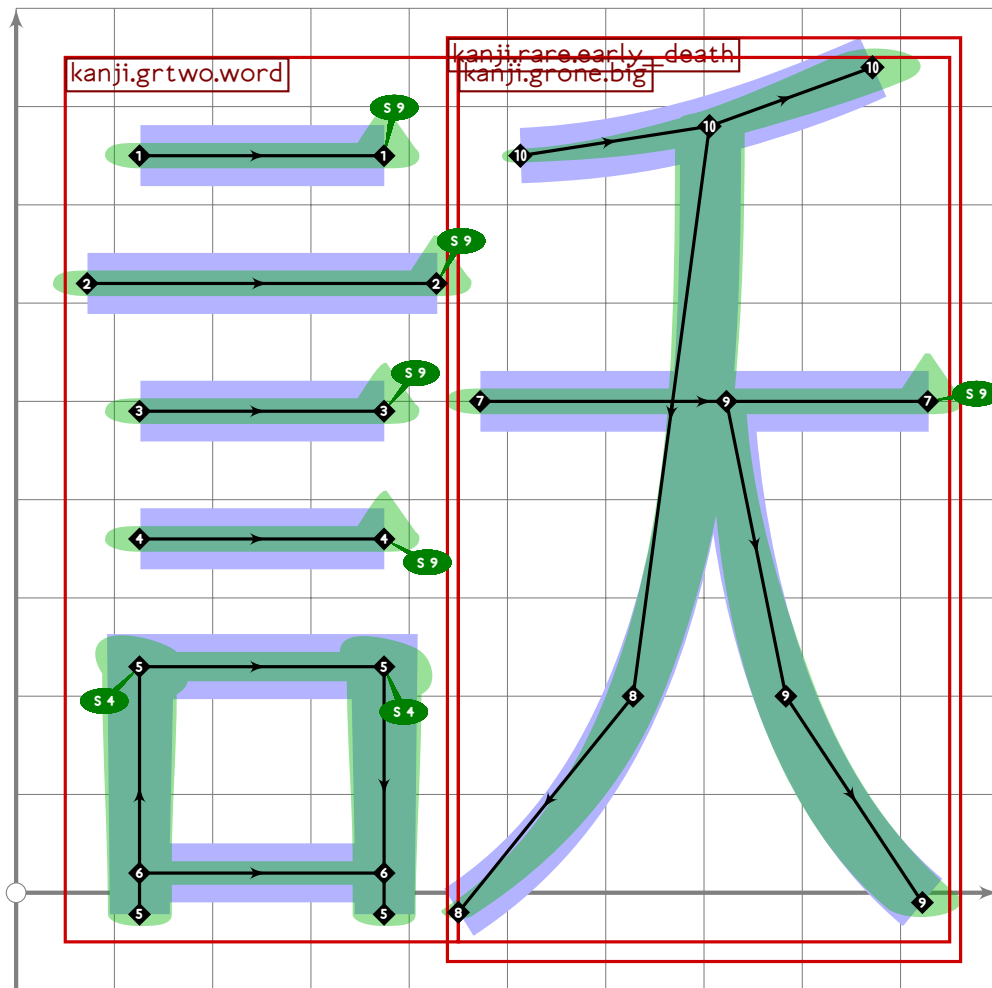
```



```

247 % extra
248 begint Suglyph("uni8A1C",28);
249 build_kanji.level(build_kanji.l(450,0)
250   (tsu_curve.kanji.grtwo.word)
251   (tsu_curve.kanji.grtwo.minute));
252 tsu_render;
253 endsuglyph;
254

```

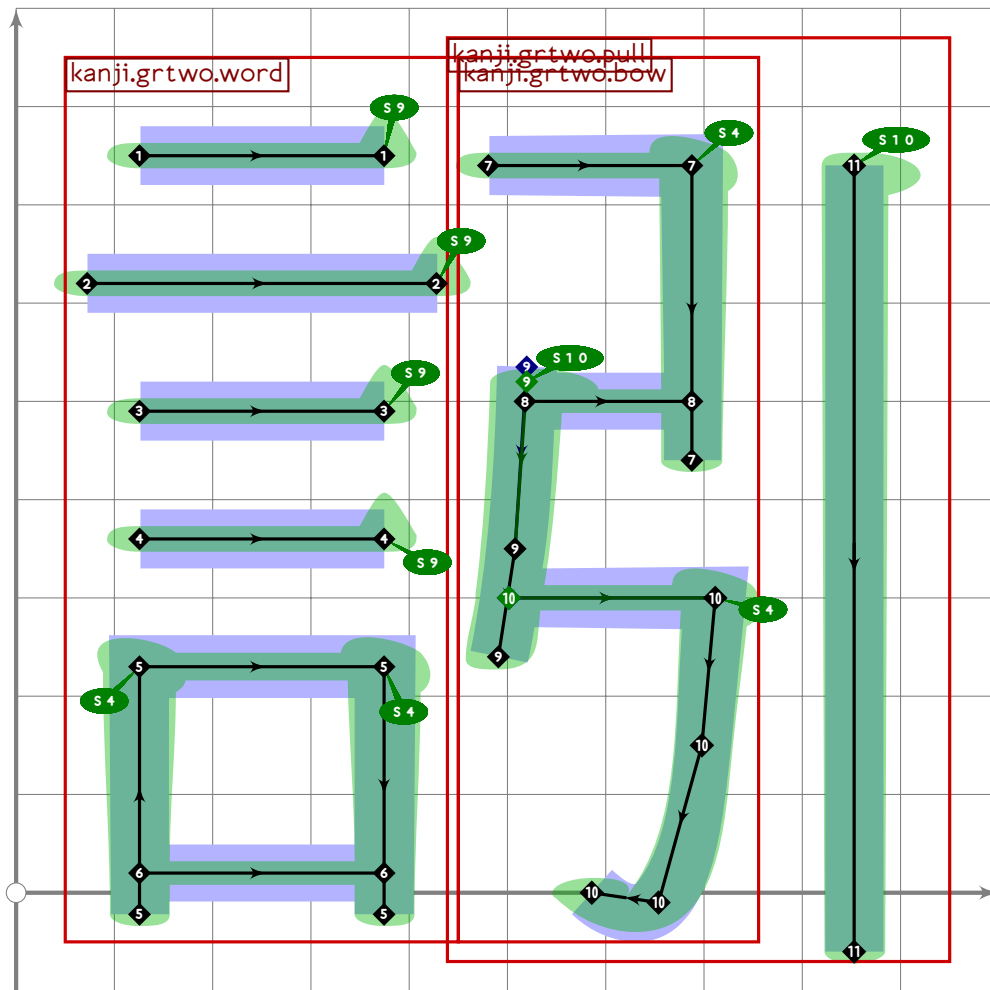


```

255 % extra
256 begint Suglyph("uni8A1E",30);
257 build_kanji.level(build_kanji.lr(450,0)
258   (tsu_curve.kanji.grtwo.word)
259   (tsu_curve.kanji.rare.early_death));
260 tsu_render;
261 endsuglyph;
262
263 % shou "sue"
264 begint Suglyph("uni8A1F",31);
265 tsu_curve.kanji.greight.sue;
266 tsu_render;
267 endsuglyph;
268

```

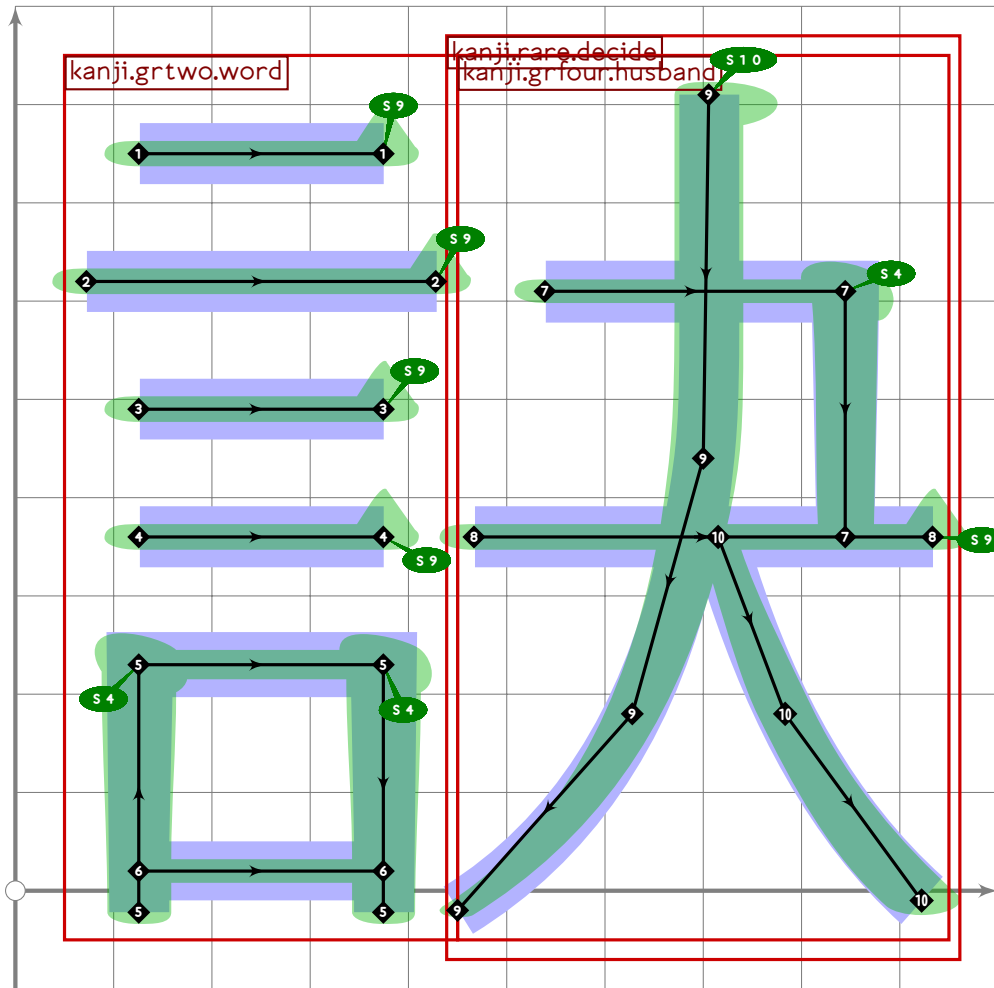
[see page 1558]



```

269 % extra
270 begint Suglyph("uni8A20",32);
271 build_kanji.level(build_kanji.l(450,0)
272   (tsu_curve.kanji.grtwo.word)
273   (tsu_curve.kanji.grtwo.pull));
274 tsu_render;
275 endsuglyph;
276

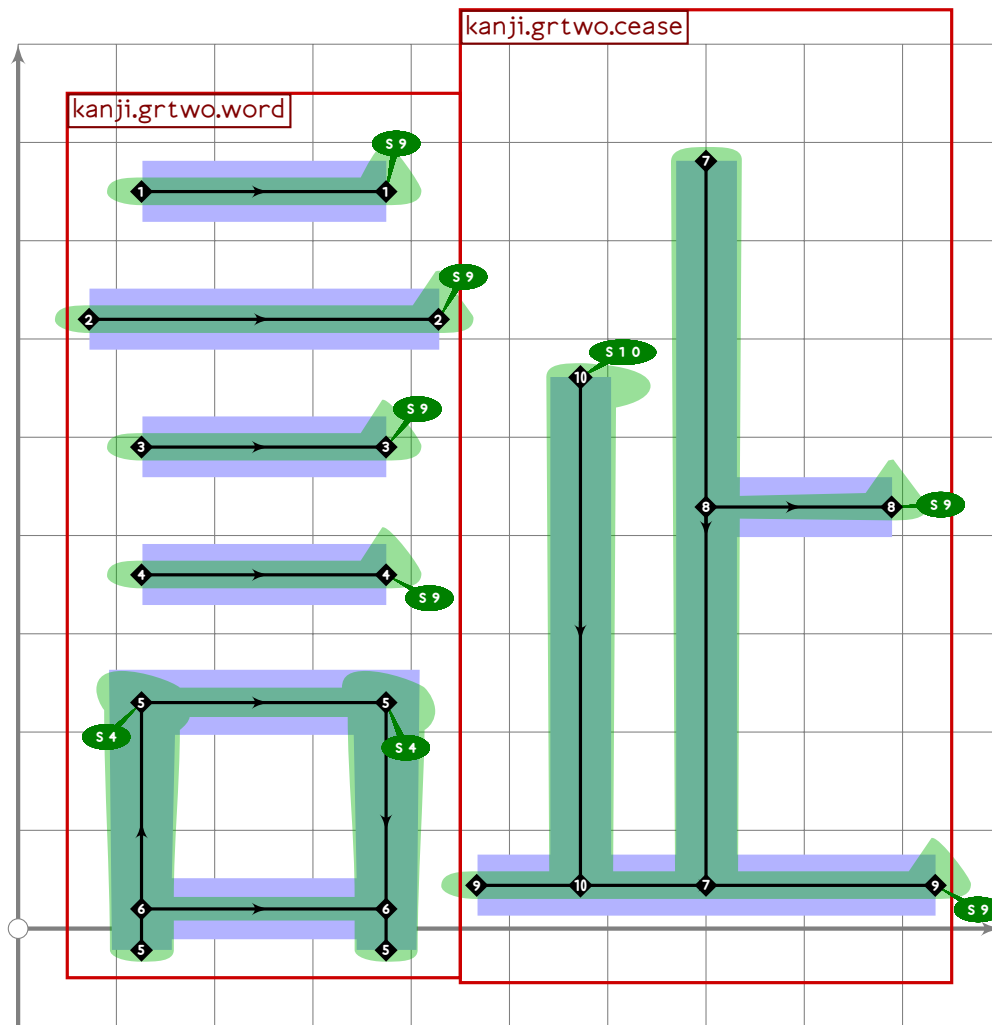
```

```

285 % extra: separation
286 begint Suglyph("uni8A23",35);
287 build_kanji.level(build_kanji.l(450,0)
288   (tsu_curve.kanji.grtwo.word)
289   (tsu_curve.kanji.rare.decide));
290 tsu_render;
291 endsuglyph;
292

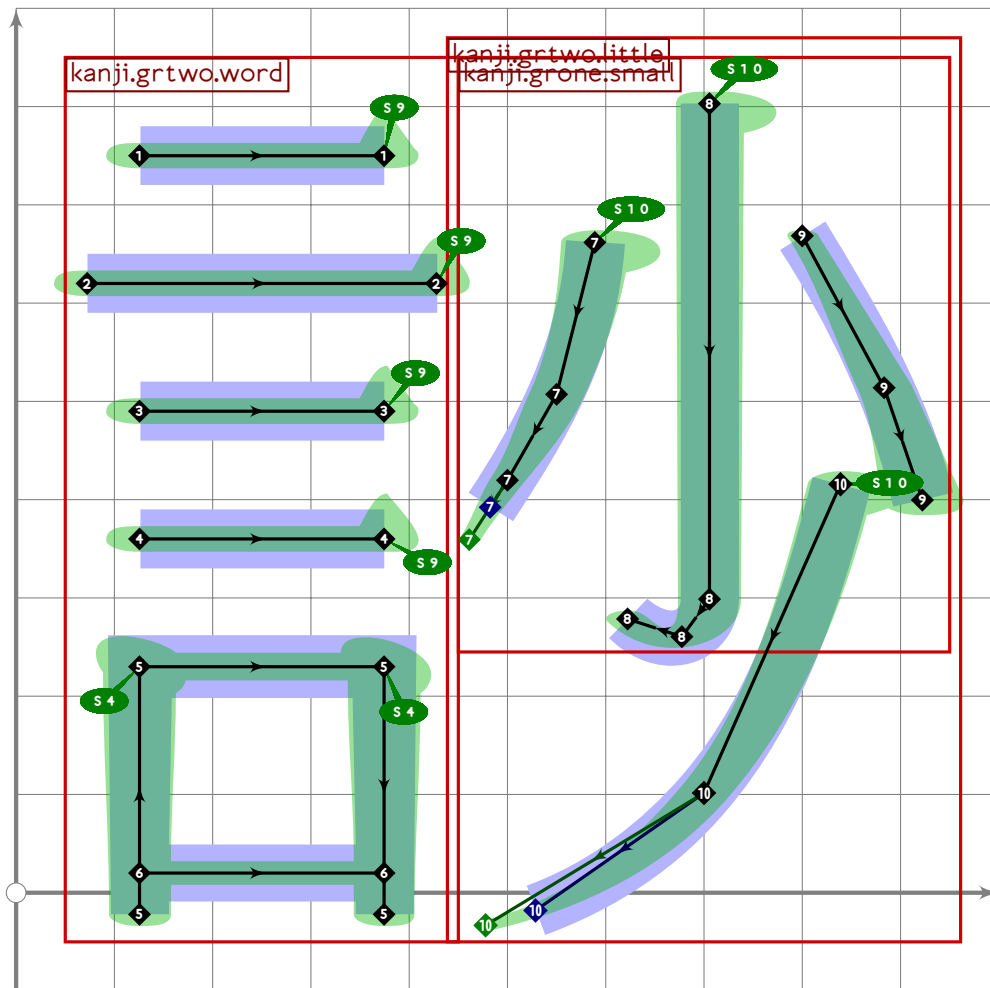
```



```

293 % extra
294 begint Suglyph("uni8A28";40);
295 build_kanji.level(build_kanji.lr(450,0)
296   (tsu_curve.kanji.grtwo.word)
297   (tsu_xform(identity yscaled 1.1)(tsu_curve.kanji.grtwo.cease)));
298 tsu_render;
299 endtsuglyph;
300

```

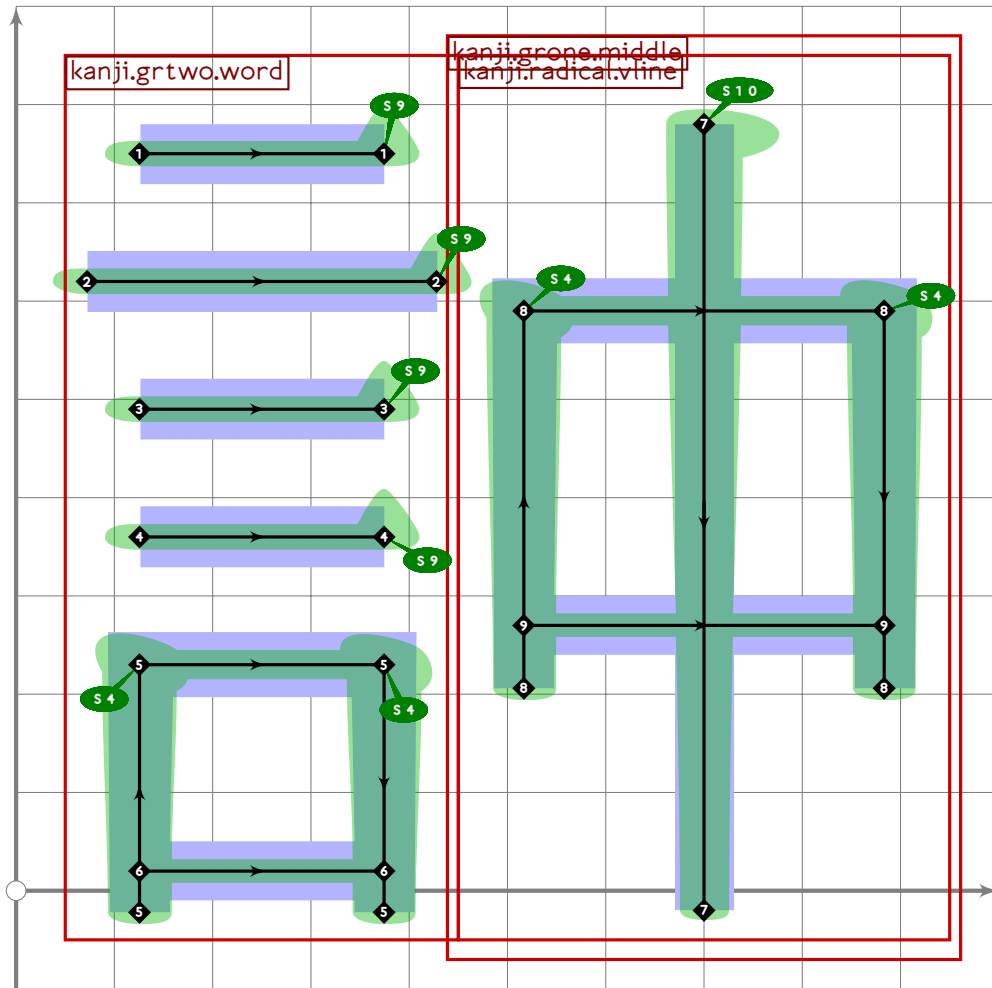


```

301 % extra
302 beginsuglyph("uni8A2C",44);
303 build_kanji.level(build_kanji.lr(450,0)
304   (tsu_curve.kanji.grtwo.word)
305   (tsu_curve.kanji.grtwo.little));
306 tsu_render;
307 endsuglyph;
308
309 % kyo/yuru "permit" (forgive)
310 beginsuglyph("uni8A31",49);
311 tsu_curve.kanji.grfive.permit;
312 tsu_render;
313 endsuglyph;
314

```

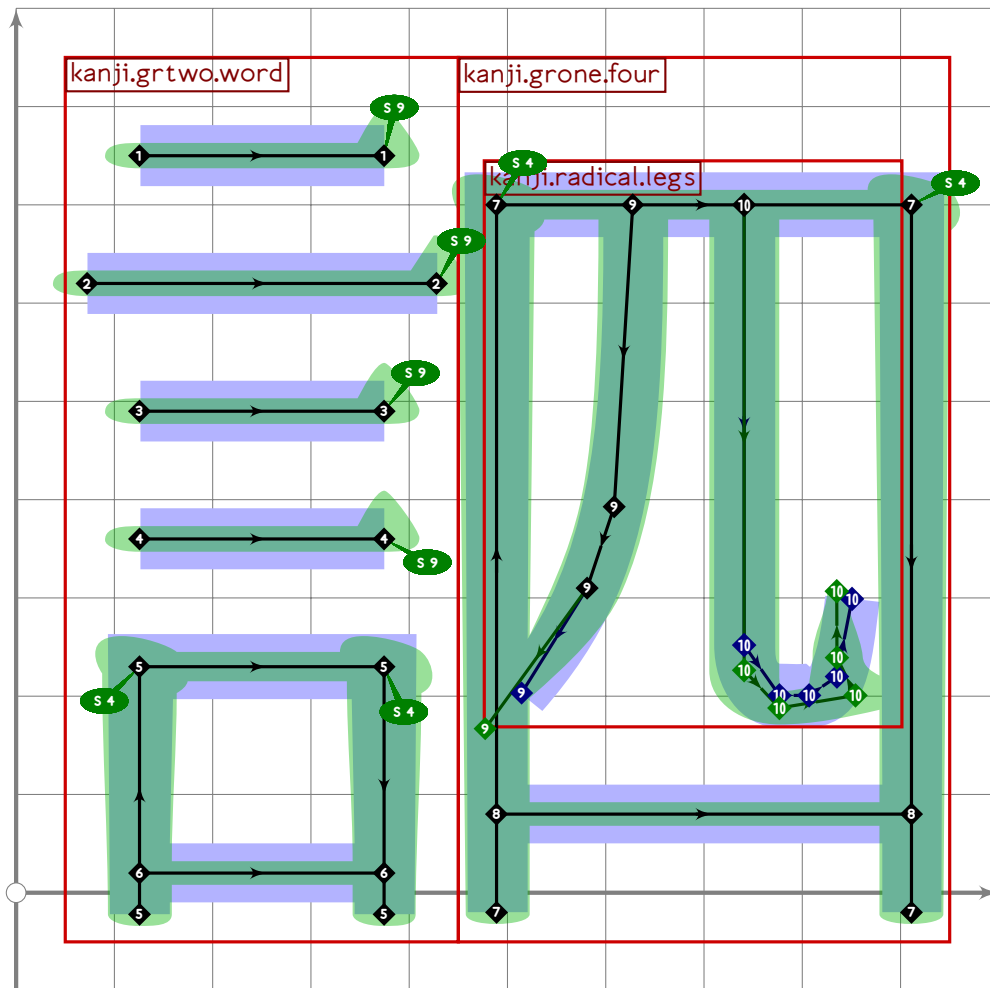
[see page 1553]



```

315 % extra
316 begint Suglyph("uni8A32",50);
317 build_kanji.level(build_kanji.lr(450,0)
318   (tsu_curve.kanji.grtwo.word)
319   (tsu_curve.kanji.grone.middle));
320 tsu_render;
321 endsuglyph;
322

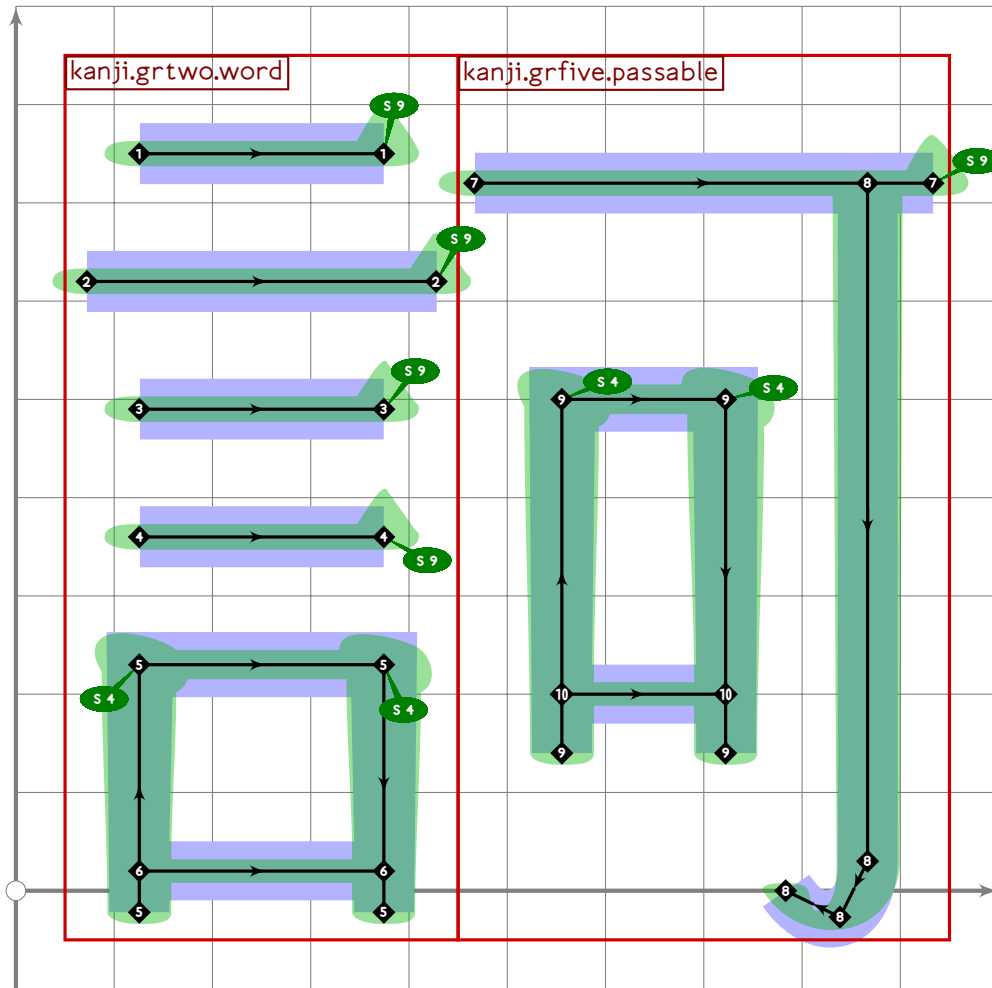
```



```

323 % extra
324 begintuglyph("uni8A35",53);
325 build_kanji.level(build_kanji.lr(450,0)
326   (tsu_curve.kanji.grtwo.word)
327   (tsu_curve.kanji.grone.four));
328 tsu_render;
329 endtuglyph;
330

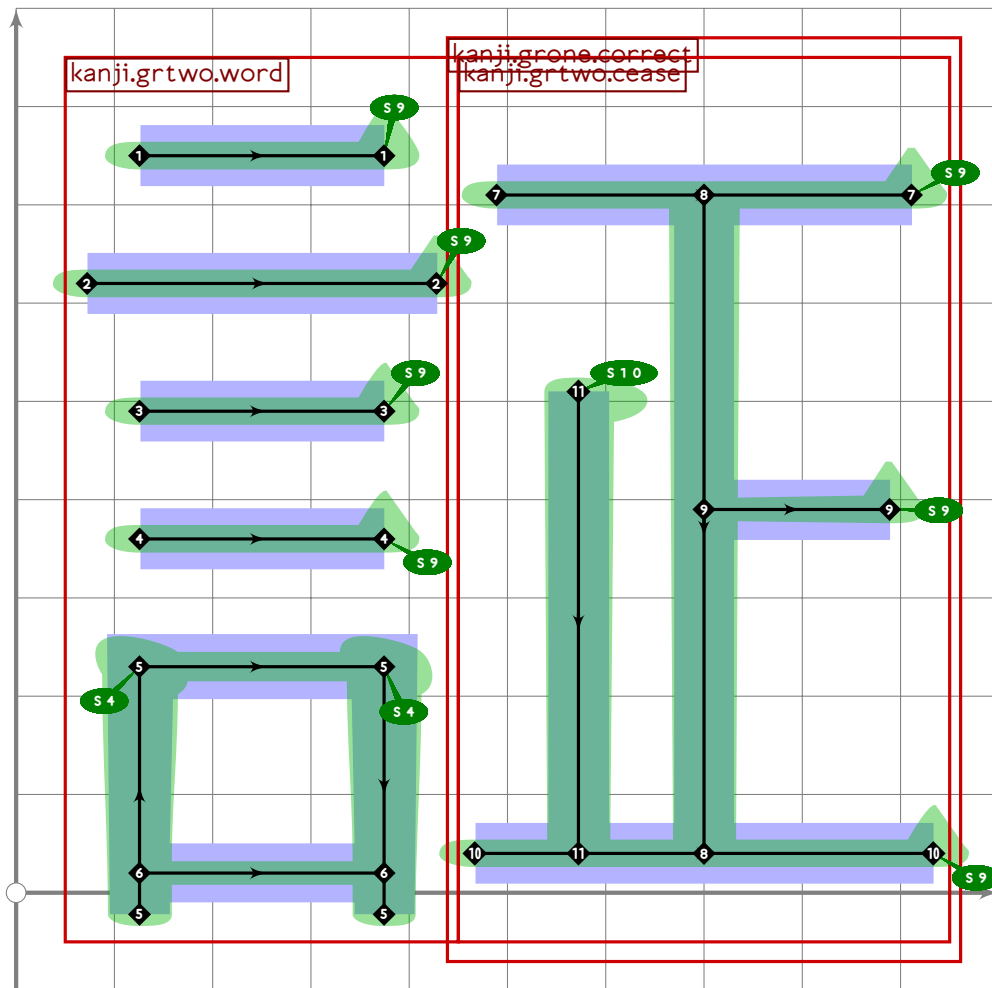
```



```

331 % extra
332 begint Suglyph("uni8A36",54);
333   build_kanji.level(build_kanji.lr(450,0)
334     (tsu_curve.kanji.grtwo.word)
335     (tsu_curve.kanji.grfive.passable));
336   tsu_render;
337   endtsuglyph;
338

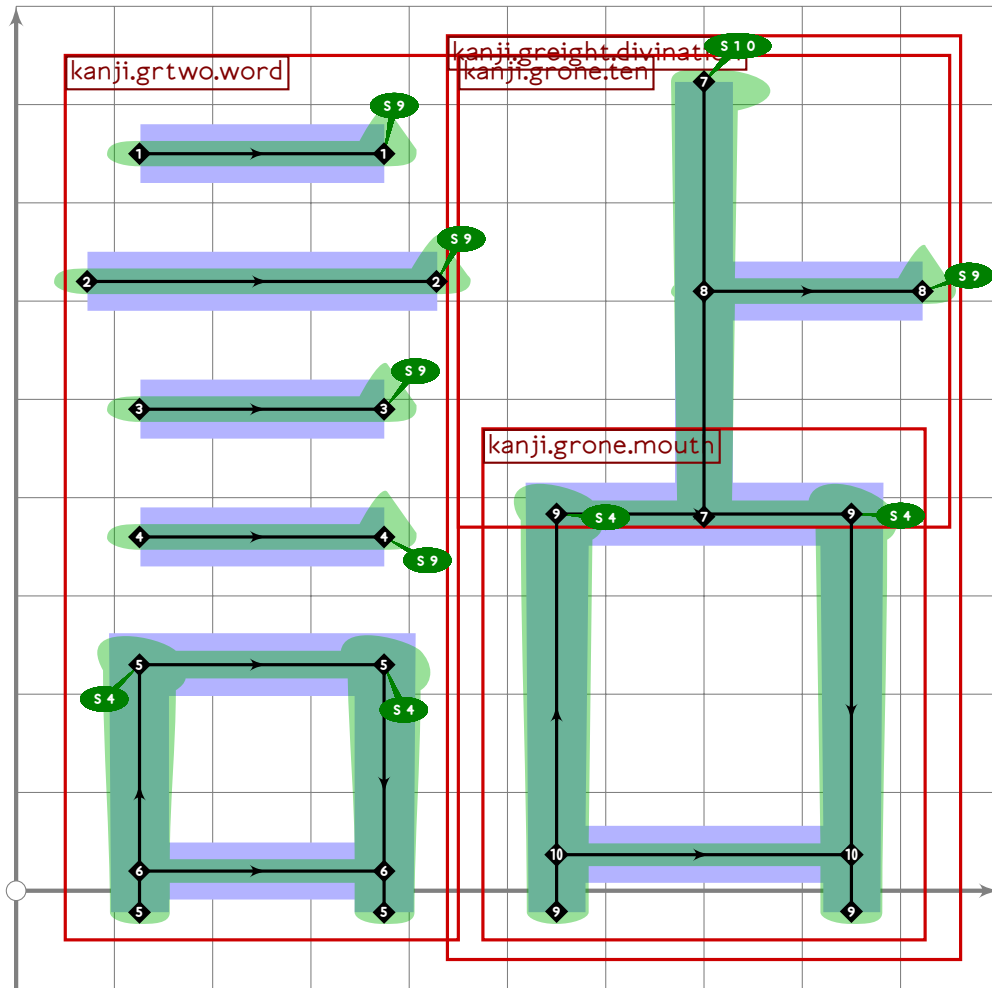
```



```

339 % extra
340 begint Suglyph("uni8A3C",60);
341 build_kanji.level(build_kanji.lr(450,0)
342   (tsu_curve.kanji.grtwo.word)
343   (tsu_curve.kanji.grtwo.correct));
344 tsu_render;
345 endsuglyph;
346

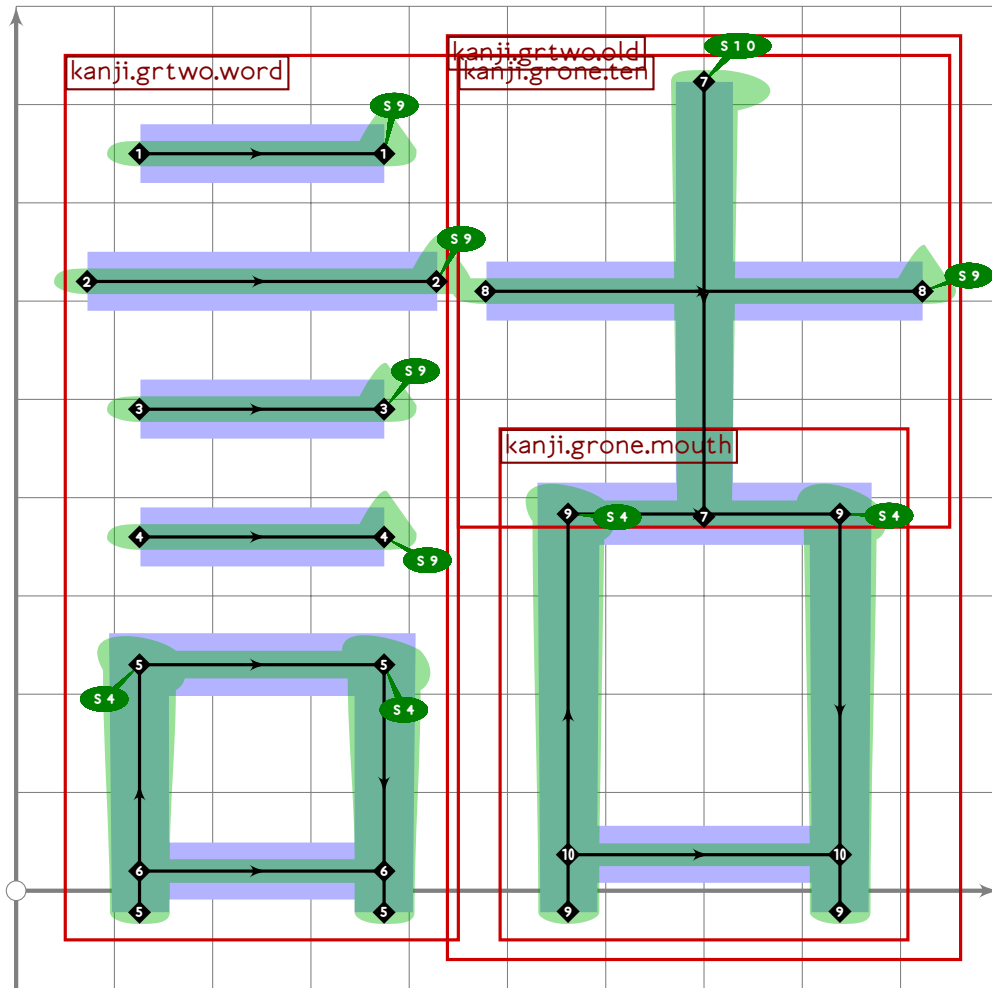
```



```

347 % extra
348 begintuglyph("uni8A40",64);
349 build_kanji.level(build_kanji.lr(450,0)
350   (tsu_curve.kanji.grtwo.word)
351   (tsu_curve.kanji.greight.divination));
352 tsu_render;
353 endtsuglyph;
354

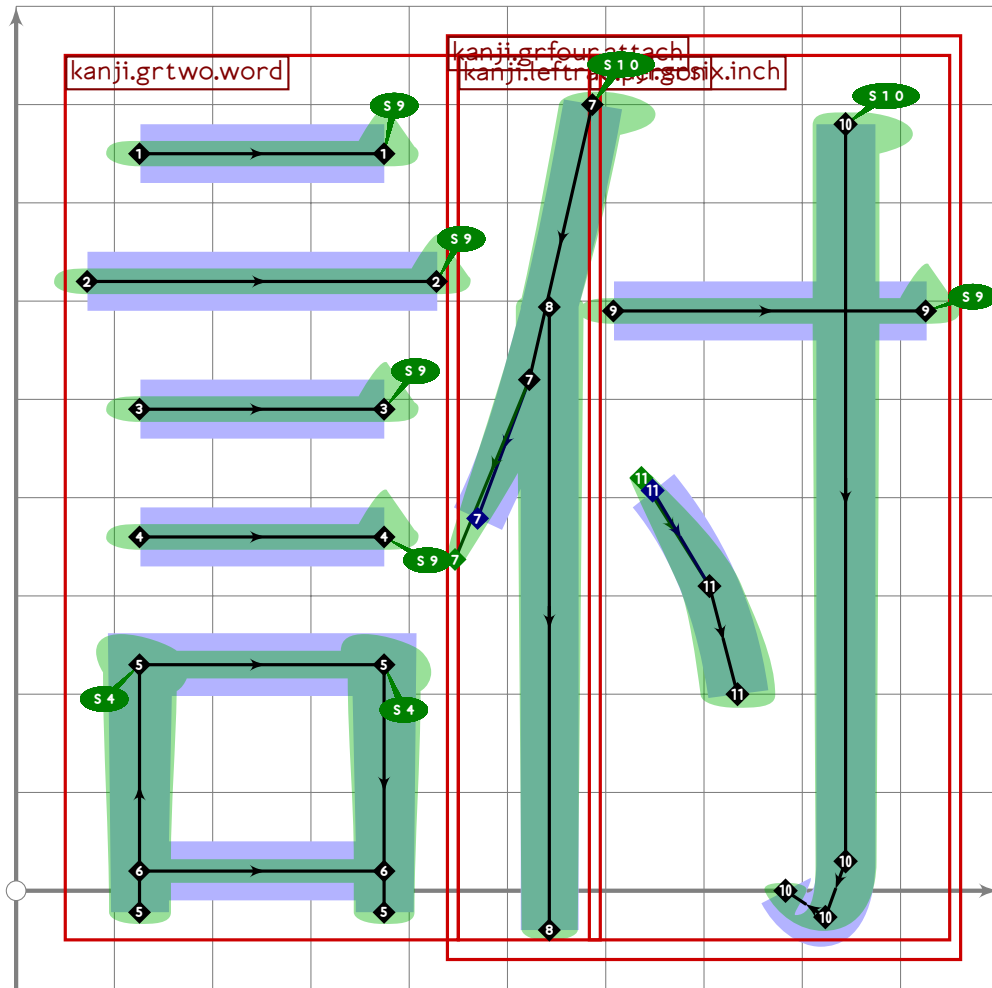
```

```

355 % extra
356 begint Suglyph("uni8A41",65);
357 build_kanji.level(build_kanji.lr(450,0)
358   (tsu_curve.kanji.grtwo.word)
359   (tsu_curve.kanji.grtwo.old));
360 tsu_render;
361 endsuglyph;
362

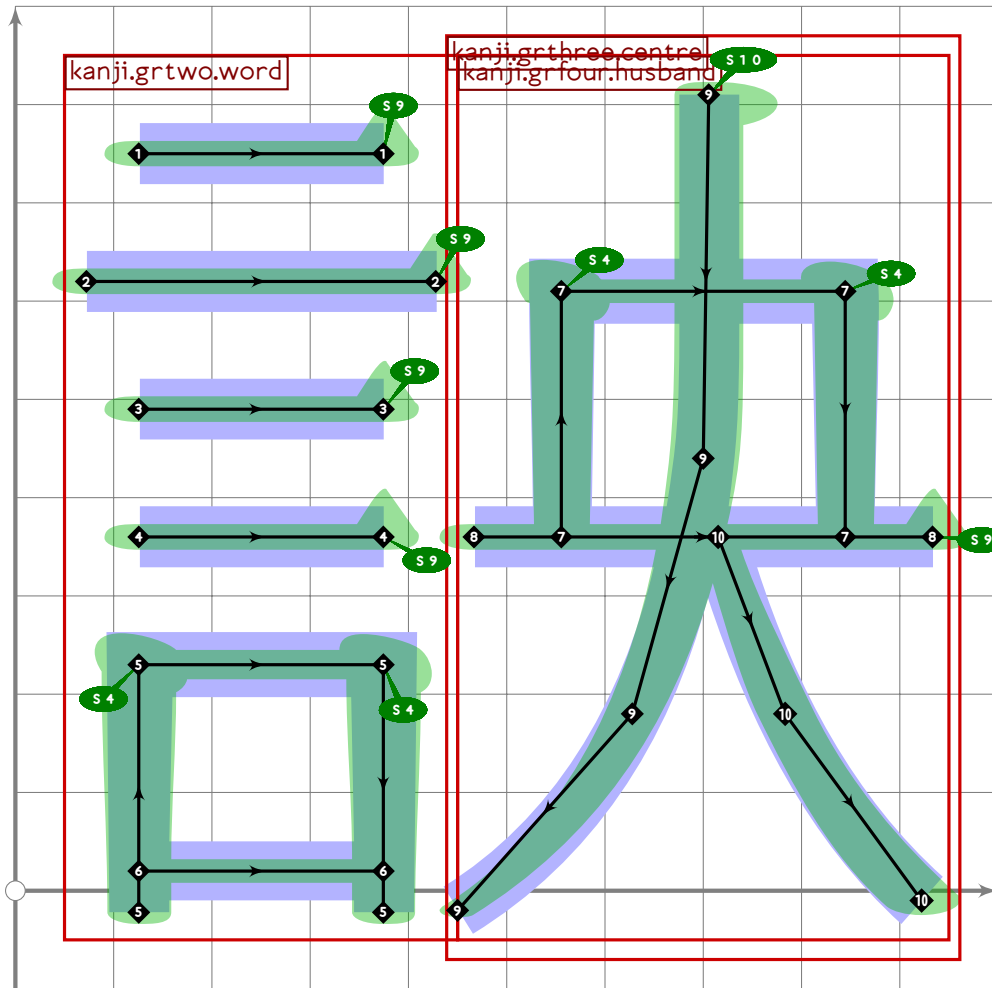
```



```

363 % extra
364 begint Suglyph("uni8A42",66);
365 build_kanji.level(build_kanji.lr(450,0)
366   (tsu_curve.kanji.grtwo.word)
367   (tsu_curve.kanji.grfour.attach));
368 tsu_render;
369 endsuglyph;
370

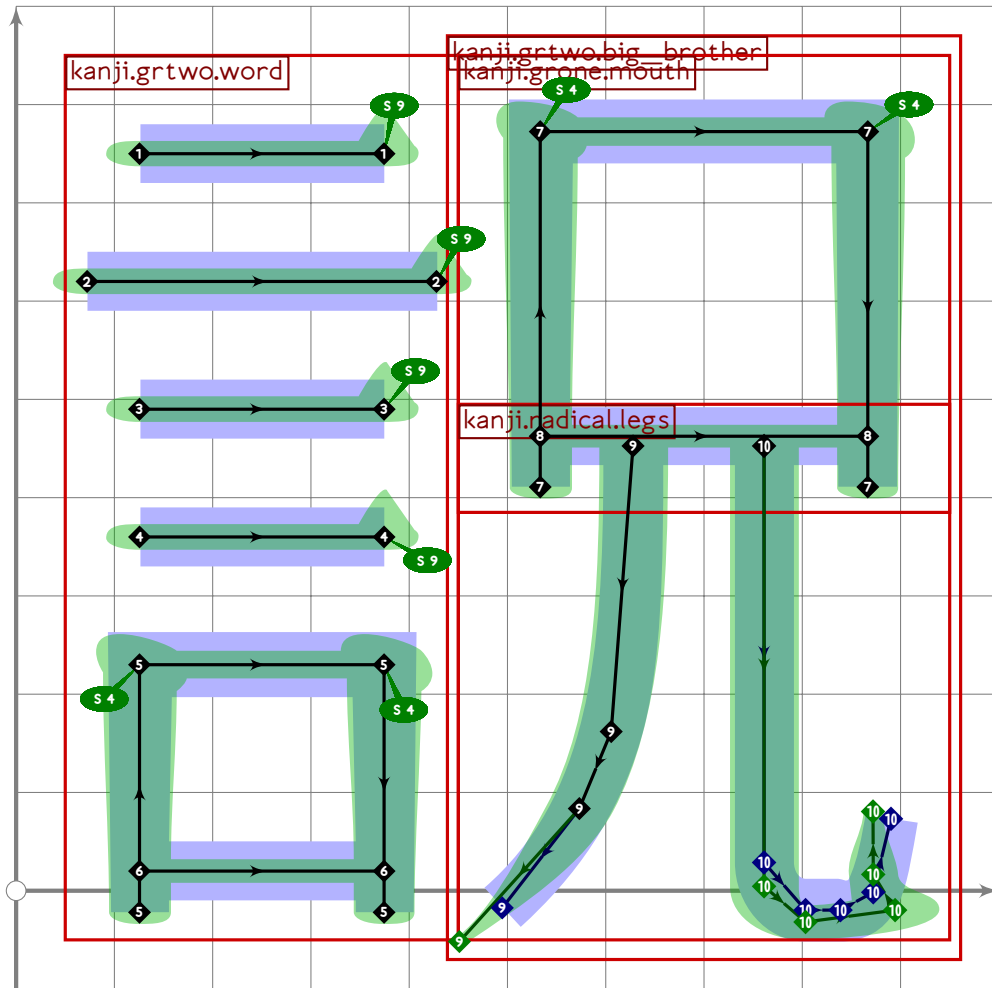
```



```

371 % extra
372 begint Suglyph("uni8A47";71);
373 build_kanji.level(build_kanji.l(450,0)
374   (tsu_curve.kanji.grtwo.word)
375   (tsu_curve.kanji.grthreecentre));
376 tsu_render;
377 endsuglyph;
378

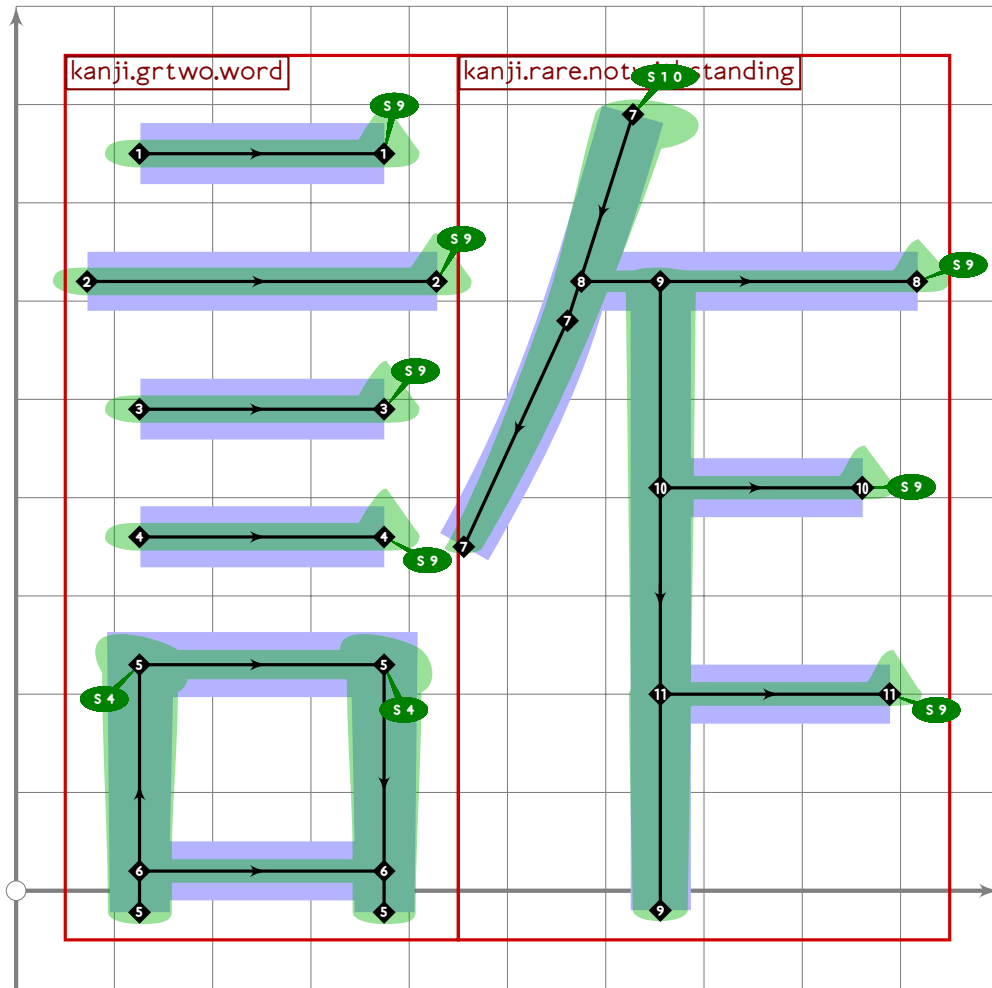
```



```

379 % extra
380 begint Suglyph("uni8A4B";75);
381 build_kanji.level(build_kanji.l(450,0)
382   (tsu_curve.kanji.grtwo.word)
383   (tsu_curve.kanji.grtwo.big_brother));
384 tsu_render;
385 endsuglyph;
386

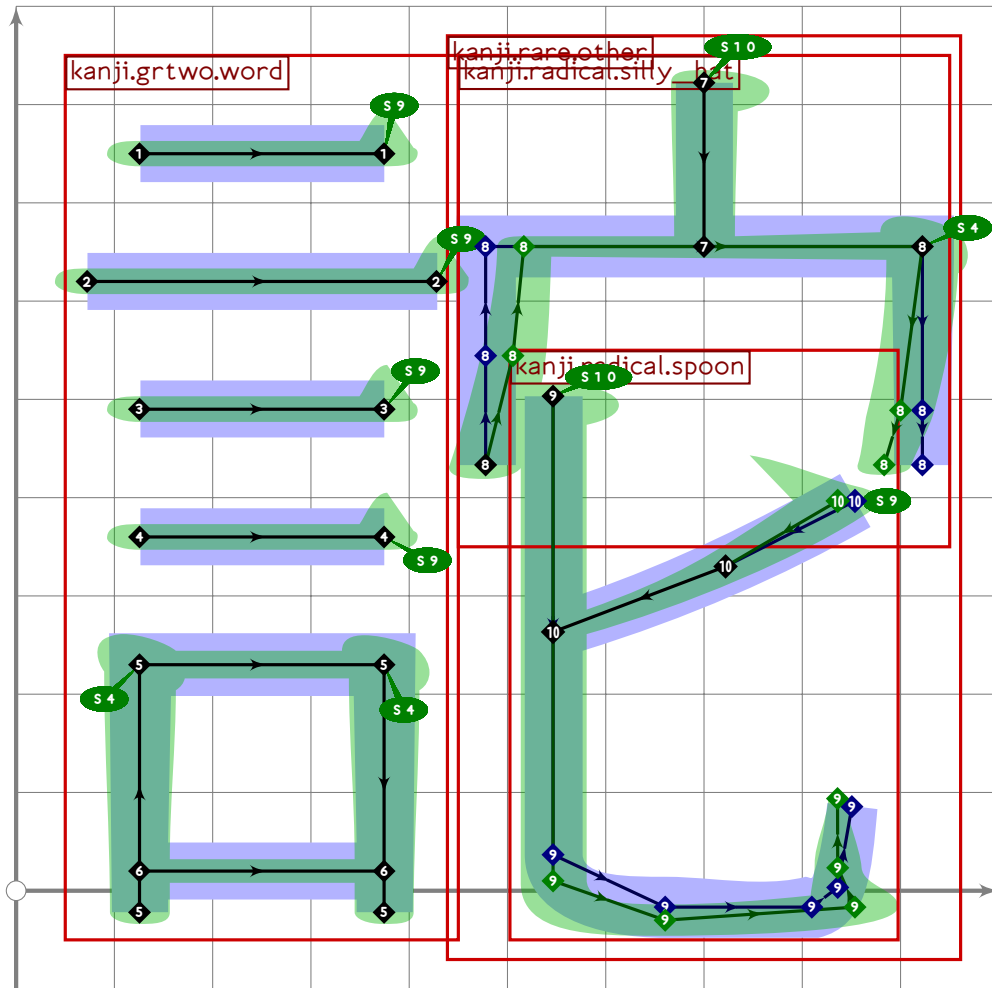
```



```

387 % extra
388 begint Suglyph("uni8A50",80);
389 build_kanji.level(build_kanji.l(450,0)
390   (tsu_curve.kanji.grtwo.word)
391   (tsu_curve.kanji.rare.notwithstanding));
392 tsu_render;
393 endsuglyph;
394

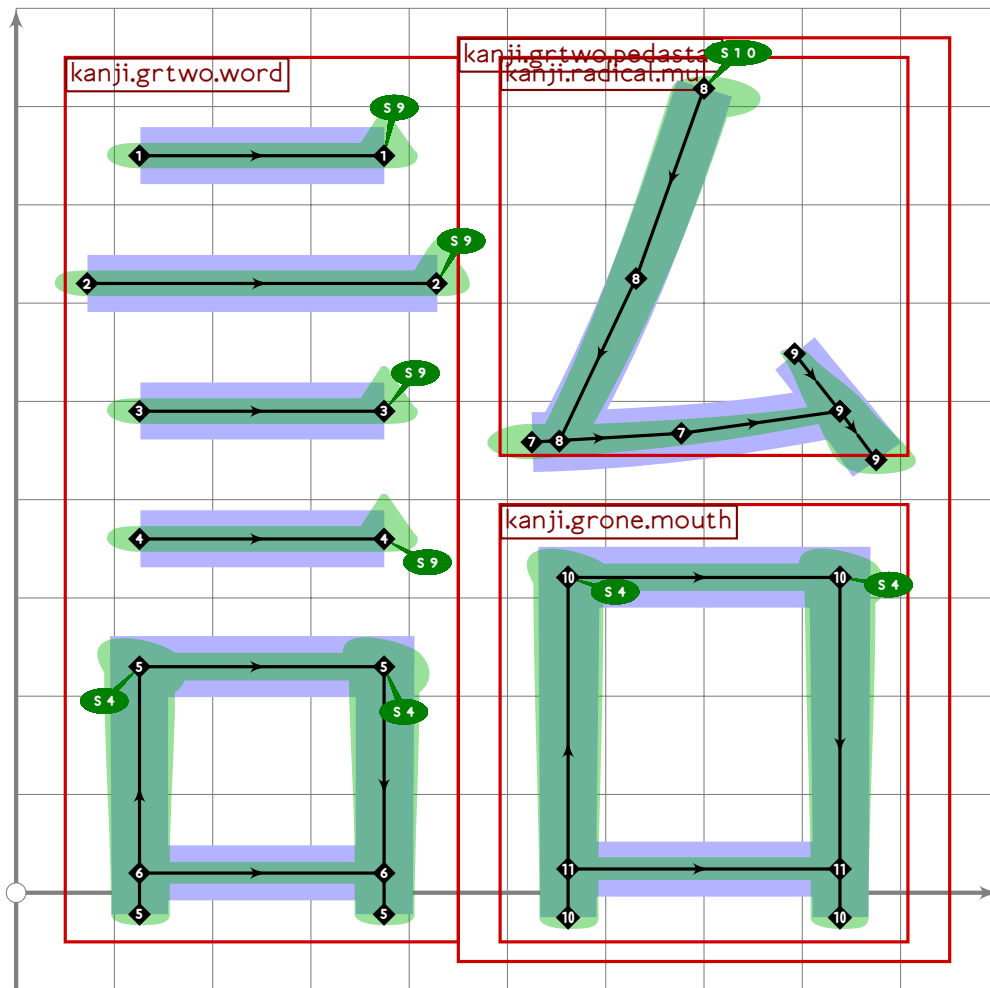
```



```

395 % extra
396 begint Suglyph("uni8A51";81);
397 build_kanji.level(build_kanji.l(450,0)
398   (tsu_curve.kanji.grtwo.word)
399   (tsu_curve.kanji.rare.other));
400 tsu_render;
401 endsuglyph;
402

```

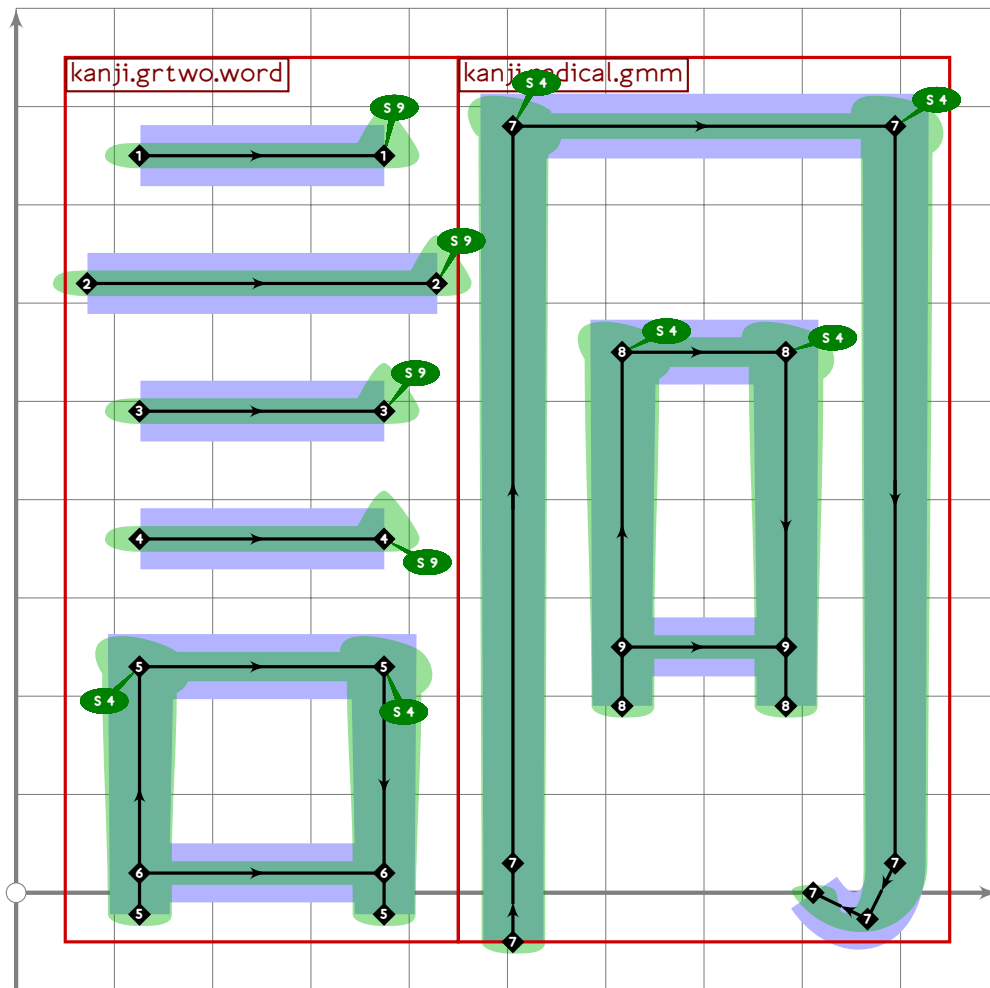


```

403 % extra
404 begintsuglyph("uni8A52",82);
405 build_kanji.level(build_kanji.lr(450,0)
406   (tsu_curve.kanji.grtwo.word)
407   (tsu_curve.kanji.grtwo.pedastal));
408 tsu_render;
409 endsuglyph;
410
411 % shou/mikotonori "imperial edict"
412 begintsuglyph("uni8A54",84);
413 tsu_curve.kanji.greight.edict;
414 tsu_render;
415 endsuglyph;
416

```

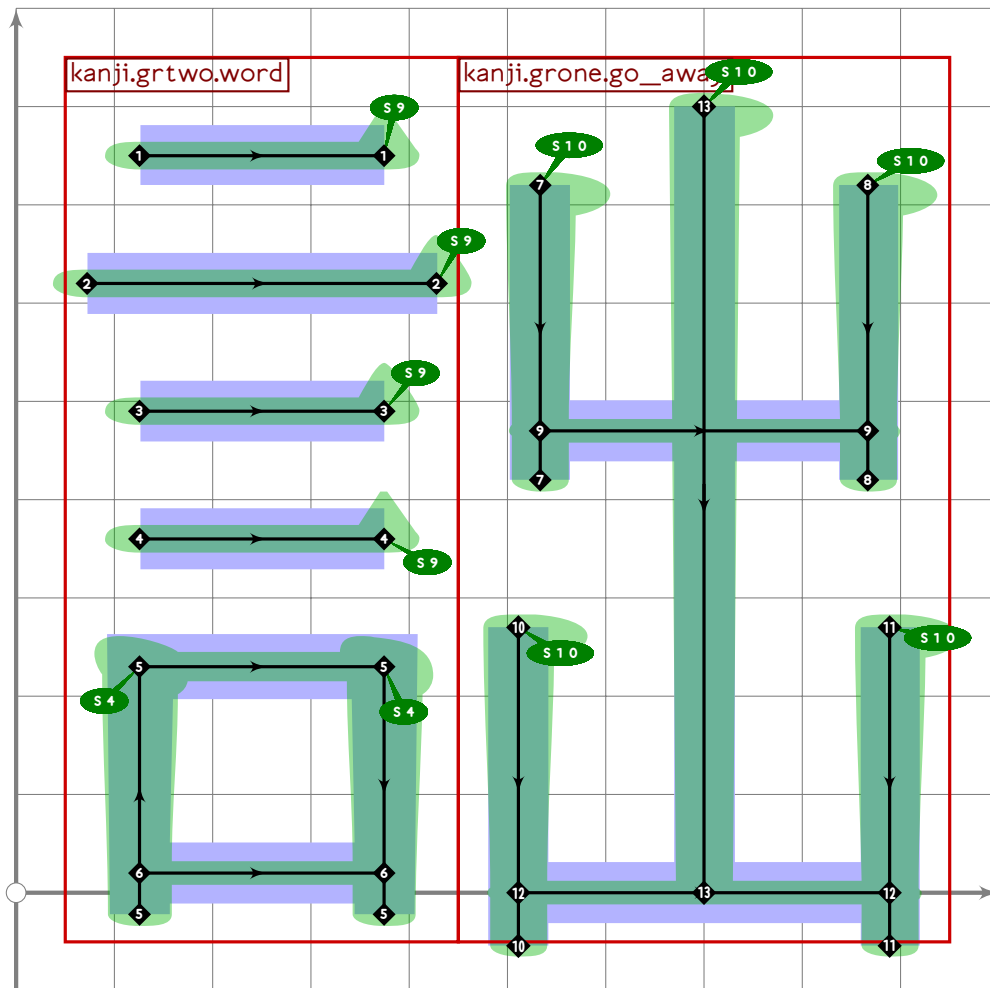
[see page 1556]



```

417 % extra
418 begint Suglyph("uni8A57",87);
419 build_kanji.level(build_kanji.lr(450,0)
420   (tsu_curve.kanji.grtwo.word)
421   (tsu_curve.kanji.radical.gmm;
422     build_kanji.box((350,550),(650,250));));
423 tsu_render;
424 endtsuglyph;
425

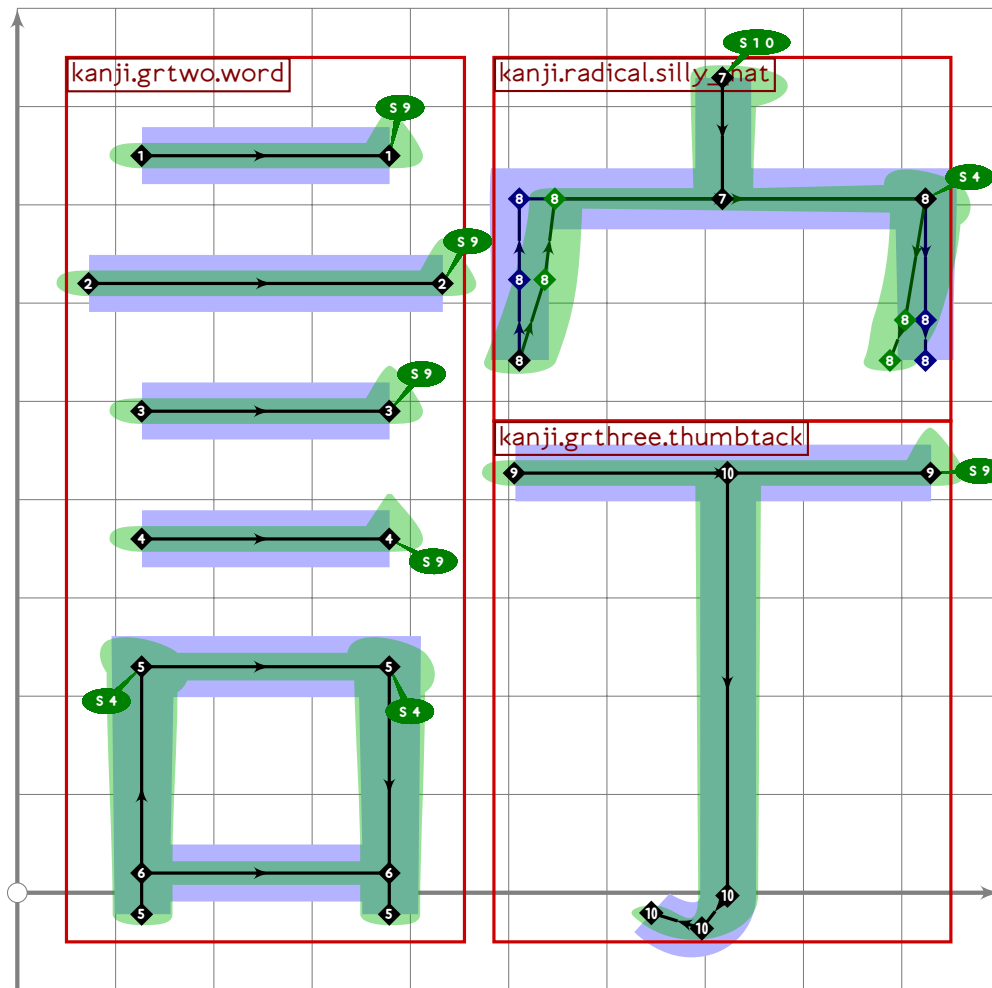
```

```

426 % extra
427 begint Suglyph("uni8A58",88);
428   build_kanji.level(build_kanji.lr(450,0)
429     (tsu_curve.kanji.grtwo.word)
430     (tsu_curve.kanji.grone.go_away));
431   tsu_render;
432 endsuglyph;
433

```



```

434 % extra
435 begintsuglyph("uni8A5D";93);
436 build_kanji.level(build_kanji.lr(470,30)
437   (tsu_curve.kanji.grtwo.word)
438   (build_kanji.tb(480,0)
439     (tsu_curve.kanji.radical.silly_hat)
440     (tsu_curve.kanji.grthree.thumbtack)));
441 tsu_render;
442 endtsuglyph;
443
444 % shi "part of speech"
445 begintsuglyph("uni8A5E";94);
446 tsu_curve.kanji.grsix.part_of_speech;
447 tsu_render;
448 endtsuglyph;
449
450 % kei/mou "pilgrimage"
451 begintsuglyph("uni8A63";99);
452 tsu_curve.kanji.greight.pilgrimage;
453 tsu_render;
454 endtsuglyph;

```

[see page 1555]

[see page 1557]

```
455
456 % wa/hana "talk"
457 begintsuglyph("uni8A71";113); [see page 1550]
458 tsu_curve.kanji.grtwo.talk;
459 tsu_render;
460 endtsuglyph;
461
462 % go/kata "language"
463 begintsuglyph("uni8A9E";158); [see page 1548]
464 tsu_curve.kanji.grtwo.language;
465 tsu_render;
466 endtsuglyph;
467
468 % goku/yo "read"
469 begintsuglyph("uni8AAD";173); [see page 1549]
470 tsu_curve.kanji.grtwo.read;
471 tsu_render;
472 endtsuglyph;
473
474 

---

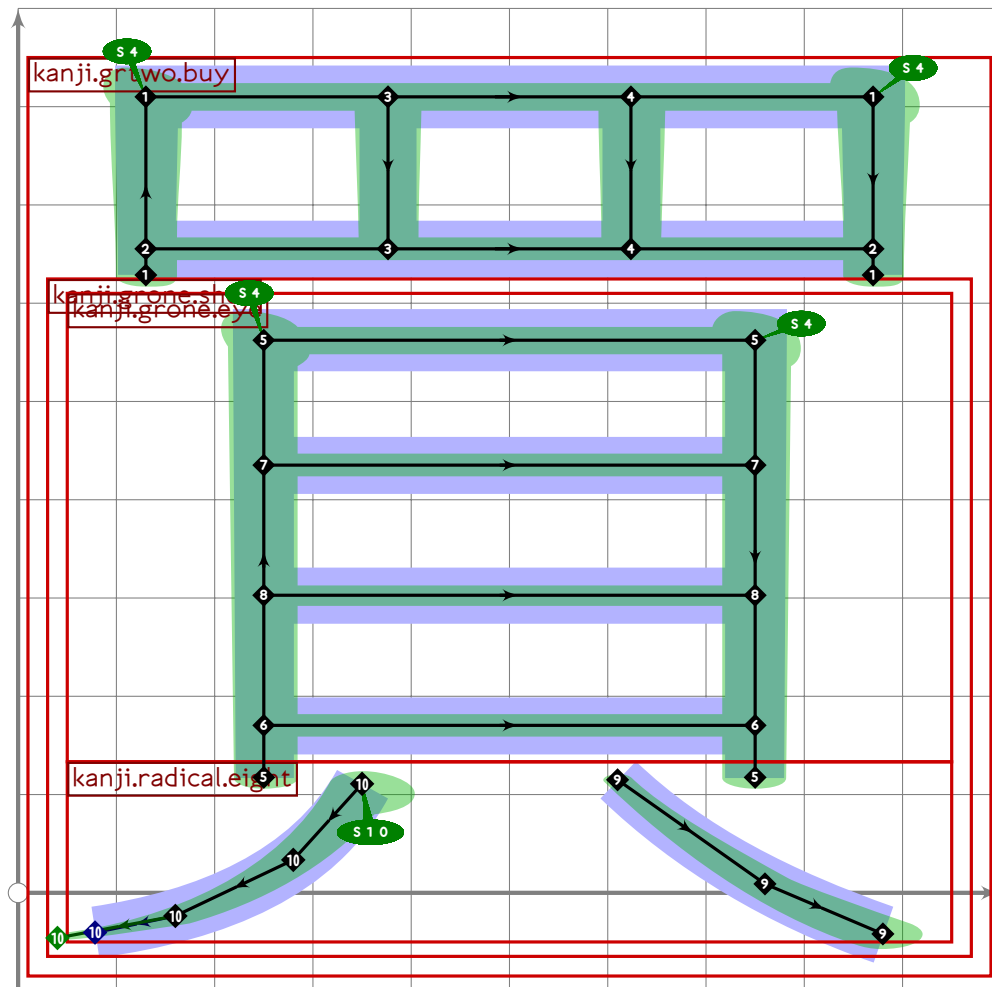

475
476 endfont;
477
478 

---


```

tsuku-8c.mp

```
1 %  
2 % Unicode page 8c (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradeone.mp;  
38 input radical.mp;  
39  
40 _____
```

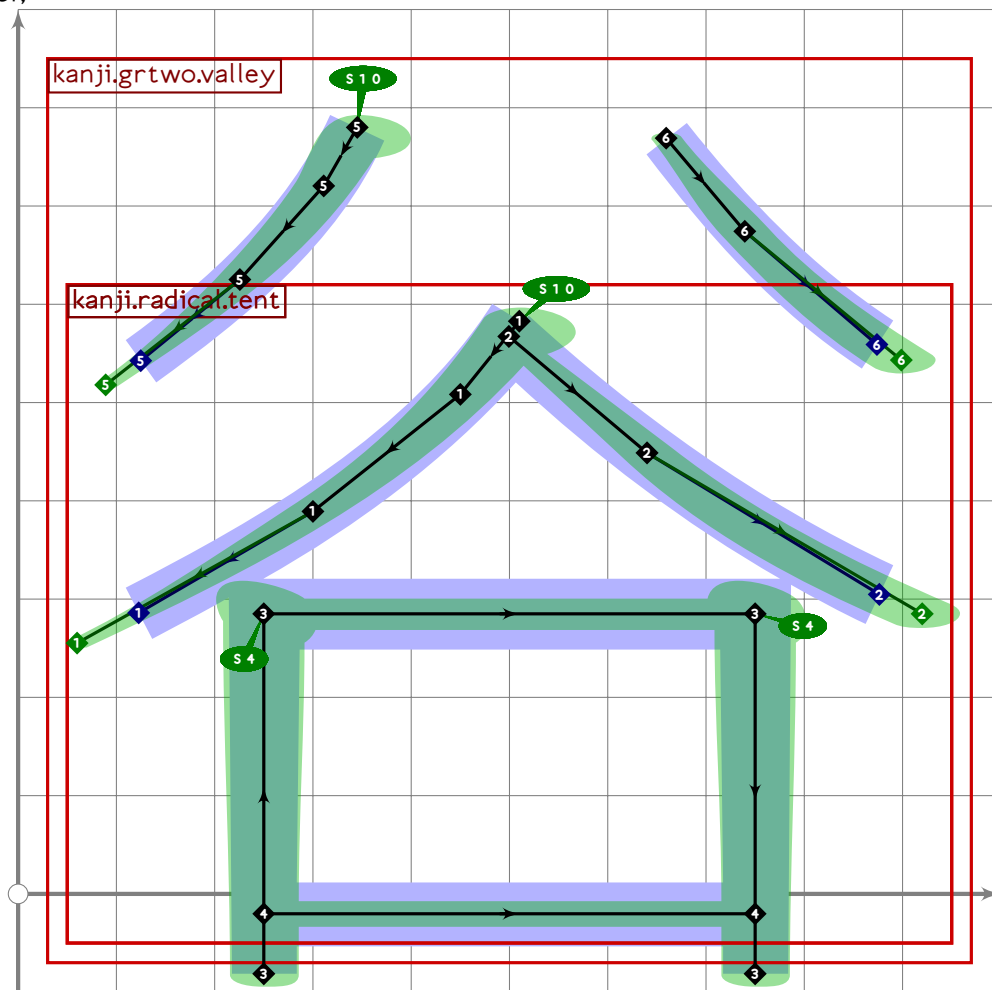


```
41  
42 vardef tsu_curve.kanji.grtwo.buy =  
43   push_pbox_toexpand("kanji.grtwo.buy");
```

```

44 build_kanji.level(build_kanji.tb(610,0)
45   (begingroup
46     save x,y;
47     numeric x[],y[];
48     x1=x5=130;
49     x2=x6=0.333[x1,x4];
50     x3=x7=0.667[x1,x4];
51     x4=x8=1000-x1;
52     y1=y2=y3=y4=700;
53     y5=y6=y7=y8=120;
54     build_kanji.box(z1,z8);
55     push_stroke(z2-z6,(1.6,1.6)-(1.5,1.5));
56     push_stroke(z3-z7,(1.6,1.6)-(1.5,1.5));
57   endgroup)
58   (tsu_curve.kanji.grone.shell));
59   expand_pbox;
60 enddef;

```



```

61
62 vardef tsu_curve.kanji.grtwo.valley =
63   push_pbox_toexpand("kanji.grtwo.valley");
64   build_kanji.harmonic(230,0.8,260)(build_kanji.level(

```

```

65     tsu_curve.kanji.radical.tent;
66     set_bosize(0,0);
67     build_kanji.box((250,400),(750,-10));
68 ));
69 expand_pbox;
70 enddef;
71
72 

---


73
74 % koku/tani "valley"
75 begintsuglyph("uni8C37",55); [see page 1589]
76     tsu_curve.kanji.grtwo.valley;
77     tsu_render;
78 endtsuglyph;
79
80 % inoko "pig" radical
81 begintsuglyph("uni8C55",85); [see page 325]
82     tsu_curve.kanji.radical.pig;
83     tsu_render;
84 endtsuglyph;
85
86 % bai/kai "shellfish"
87 begintsuglyph("uni8C9D",157); [see page 377]
88     tsu_curve.kanji.grone.shell;
89     tsu_render;
90 endtsuglyph;
91
92 % gai/ka "buy"
93 begintsuglyph("uni8CB7",183); [see page 1588]
94     tsu_curve.kanji.grtwo.buy;
95     tsu_render;
96 endtsuglyph;
97
98 

---


99
100 endfont;
101
102 

---



```

tsuku-8d.mp

```
1 %  
2 % Unicode page 8d (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %
```

```
5-29 [Standard copyright notice]
```

```
30
```

```
31
```

```
32
```

```
33 beginfont
```

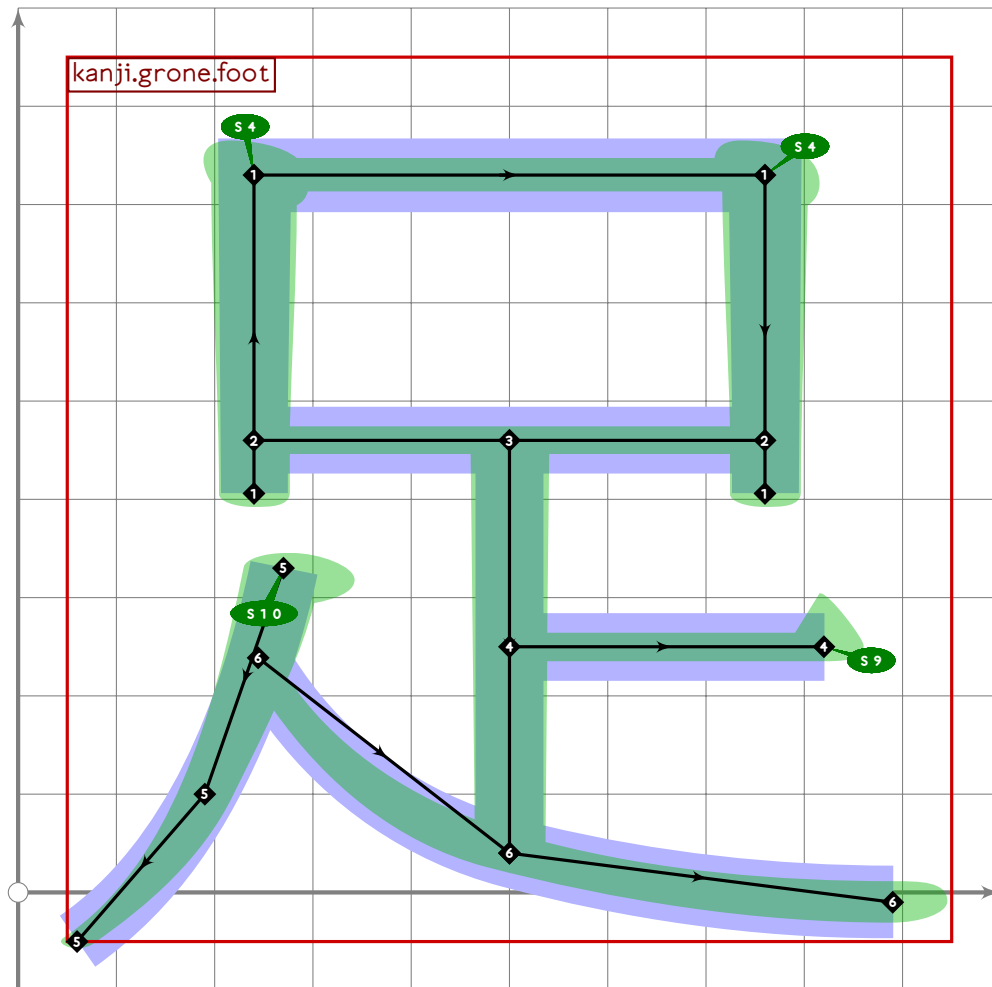
```
34
```

```
35 % AUTODEPS
```

```
36 input buildkanji.mp;
```

```
37
```

```
38
```



```
39
```

```
40 vardef tsu_curve.kanji.grone.foot =
```

```
41 push_pbox_toexpand("kanji.grone.foot");
```

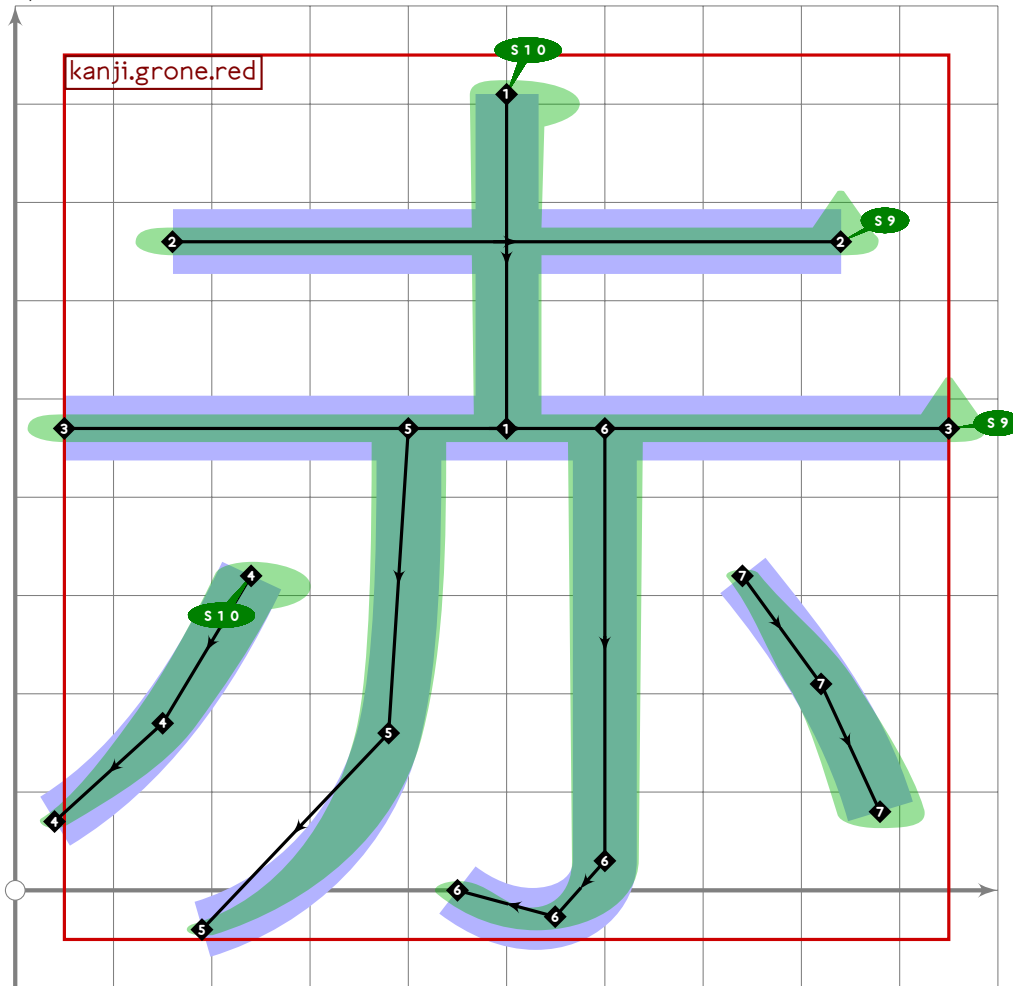
```
42 build_kanji.box((240,730),(760,460));
```

```
43 push_stroke((500,460)-(500,40),(1.6,1.6)-(1.5,1.5));
```

```

44 push_stroke((500,250)-(820,250),(1.5,1.5)-(1.6,1.6));
45 set_boserif(0,1,9);
46 push_stroke((270,330)..tension 1.3..(190,100)..(60,-50),
47   (1.6,1.6)-(1.3,1.3)-(1,1));
48 set_boserif(0,0,10);
49 push_stroke((point 0.4 of get_strokep(0))..(500,40)..tension 1.5..(890,10),
50   (1,1)-(1.7,1.7)-(2,2));
51 expand_pbox;
52 enddef;

```



```

53
54 vardef tsu_curve.kanji.grone.red =
55   push_pbox_toexpand("kanji.grone.red");
56   push_stroke((500,810)-(500,470),(1.6,1.6)-(1.5,1.5));
57   set_boserif(0,0,10);
58   push_stroke((160,660)-(840,660),(1.6,1.6)-(1.6,1.6));
59   set_boserif(0,1,9);
60   push_stroke((50,470)-(950,470),(1.6,1.6)-(1.6,1.6));
61   set_boserif(0,1,9);
62   push_stroke((240,320)..tension 1.3..(150,170)..(40,70),
63     (1.6,1.6)-(1.5,1.5)-(1,1));
64   set_boserif(0,0,10);

```



```

65 push_stroke((400,470){down}..tension 1.3..(380,160)..(190,-40),
66   (1.6,1.6)-(1.5,1.5)-(1,1));
67 push_stroke((600,470),(1.6,1.6));
68 build_kanji.add_jtail(0);
69 push_stroke((740,320)..tension 1.3..(820,210)..(880,80),
70   (1,1)-(1.5,1.5)-(1.8,1.8));
71 for i=-6 upto 0: set_bosize(i,94); endfor;
72 expand_pbox;
73 enddef;
74
75 

---


76
77 % aka/seki "red"
78 begintsuglyph("uni8D64";100); [see page 1592]
79 tsu_curve.kanji.grone.red;
80 tsu_render;
81 endtsuglyph;
82
83 % ashi/soku "foot"
84 begintsuglyph("uni8DB3";179); [see page 1591]
85 tsu_curve.kanji.grone.foot;
86 tsu_render;
87 endtsuglyph;
88
89 

---


90
91 endfont;
92
93 

---



```

tsuku-8e.mp

```
1 %
2 % Unicode page 8e (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradeone.mp;
38
39 

---


40
41 % kuruma "car/wheel"
42 begintsuglyph("uni8ECA";202); [see page 388]
43   tsu_curve.kanji.grone.wheel;
44   tsu_render;
45 endtsuglyph;
46
47 

---

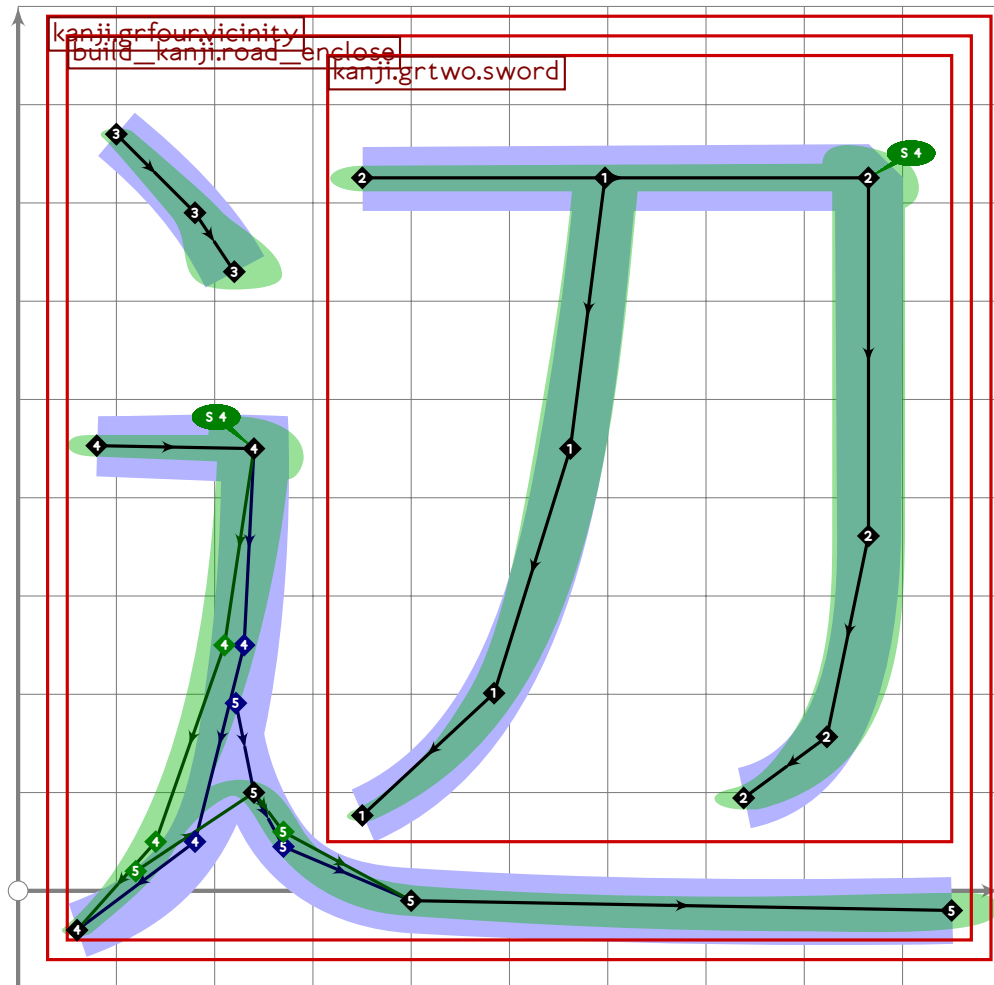

48
49 endfont;
50
51 

---


```

tsukur8f.mp

```
1 %  
2 % Unicode page 8f (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradeone.mp;  
38 input gradetwo.mp;  
39  
40 _____
```

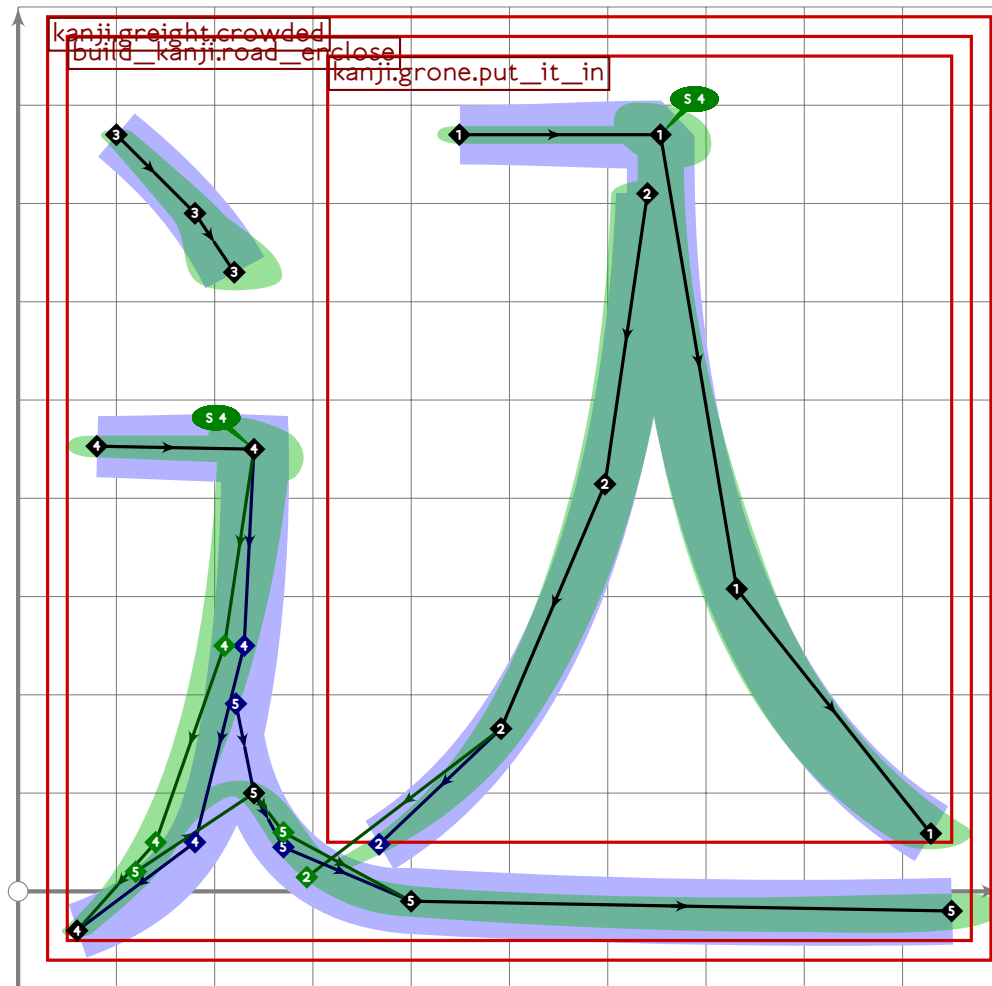


```
41  
42 vardef tsu_curve.kanji.grfour.vicinity =  
43   push_pbox_toexpand("kanji.grfour.vicinity");
```

```

44 build_kanji.road_enclose(tsu_curve.kanji.grtwo.sword);
45 expand_pbox;
46 enddef;
47
48

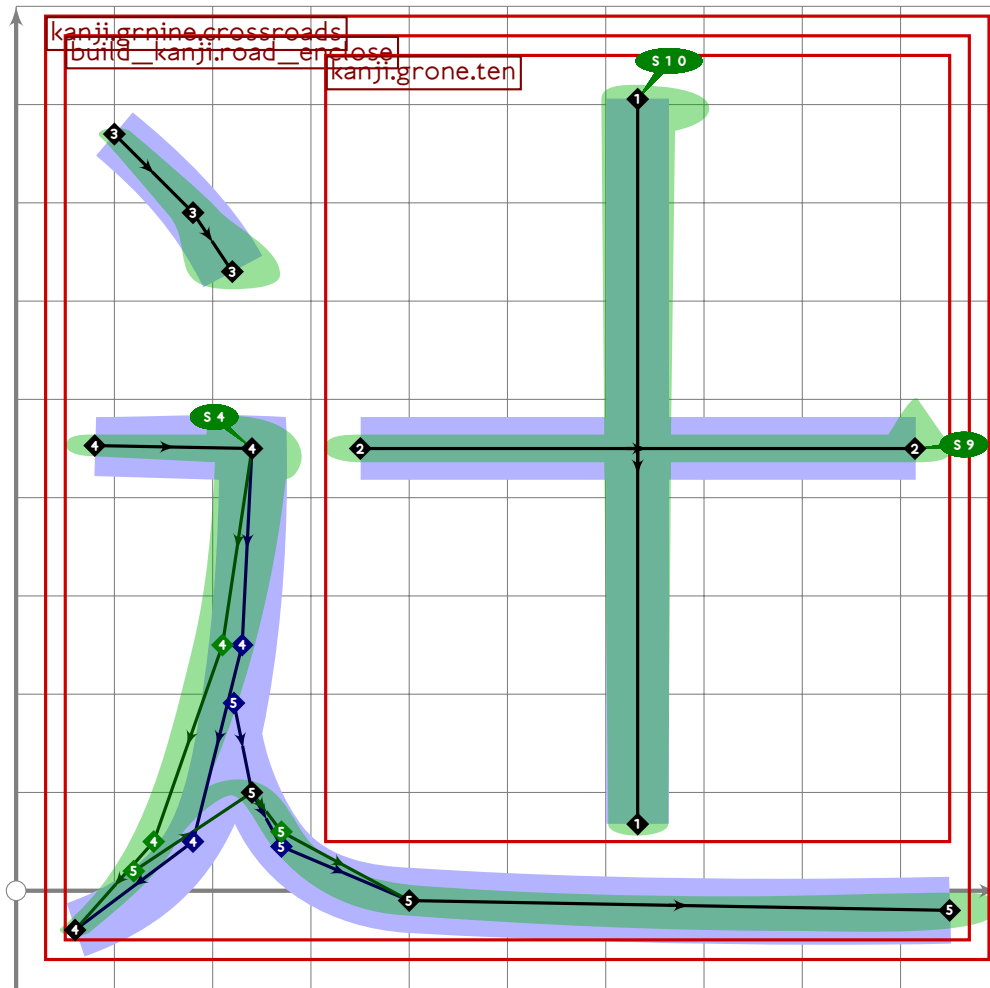
```



```

49
50 vardef tsu_curve.kanji.greight.crowded =
51   push_pbox_toexpand("kanji.greight.crowded");
52   build_kanji.road_enclose(tsu_curve.kanji.grone.put_it_in);
53   expand_pbox;
54 enddef;
55
56

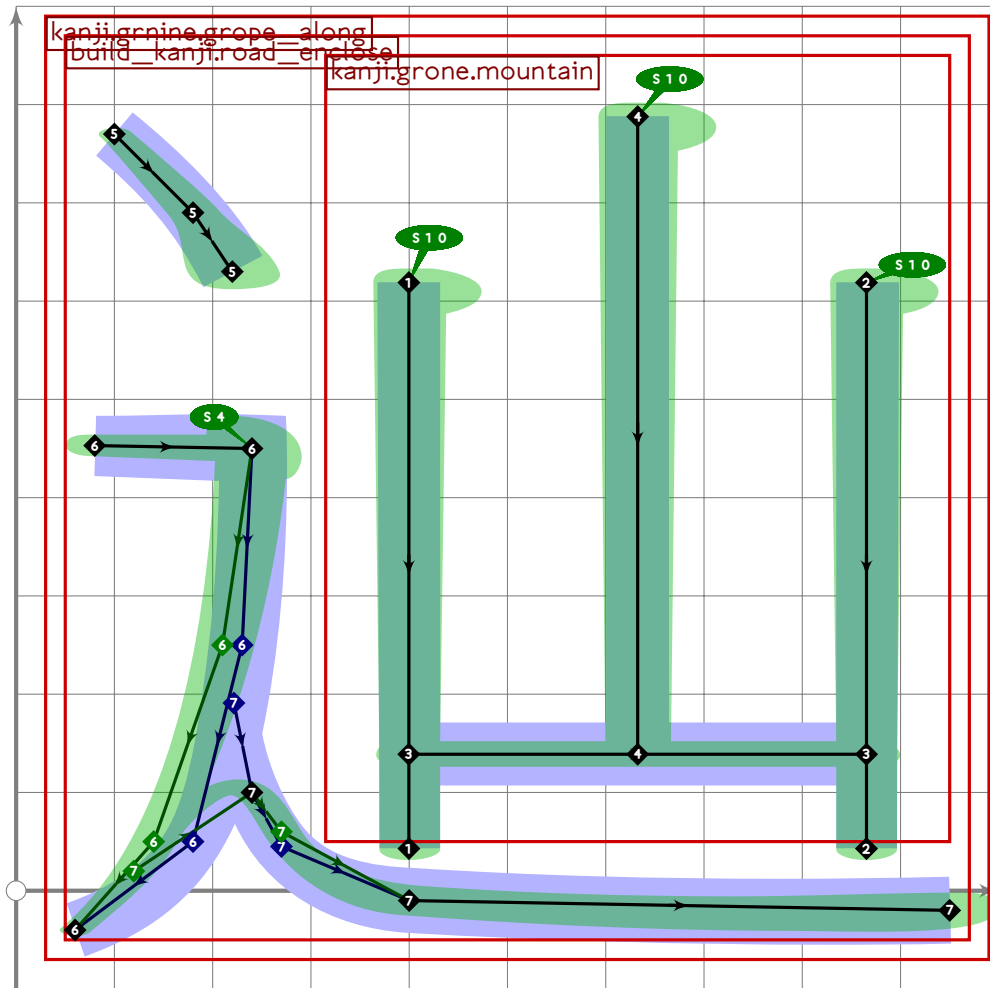
```



```

57
58 vardef tsu_curve.kanji.grnine.crossroads =
59   push_pbox_toexpand("kanji.grnine.crossroads");
60   build_kanji.road_enclose(tsu_curve.kanji.grone.ten);
61   expand_pbox;
62 enddef;

```



```

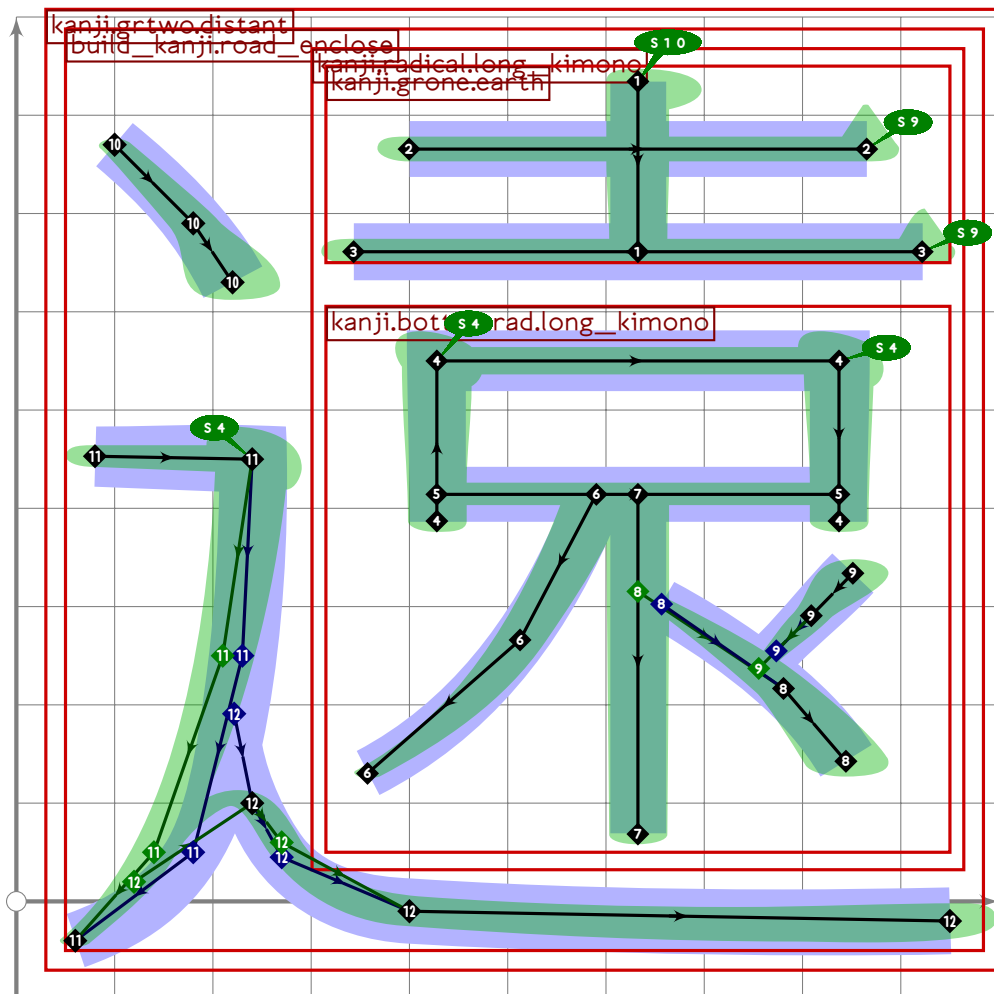
63
64 vardef tsu_curve.kanji.grnine.grope_along =
65   push_pbox_toexpand("kanji.grnine.grope_along");
66   build_kanji.road_enclose(tsu_curve.kanji.grone.mountain);
67   expand_pbox;
68 enddef;
69
70 _____
71
72 % hen/ata "vicinity"
73 begintsuglyph("uni8FBA",186); [see page 1595]
74   tsu_curve.kanji.grfour.vicinity;
75   tsu_render;
76 endtsuglyph;
77
78 % tsuji "crossroads"
79 begintsuglyph("uni8FBB",187); [see page 1597]
80   tsu_curve.kanji.grnine.crossroads;
81   tsu_render;
82 endtsuglyph;
83

```

```
84 % ko "crowded"
85  beginstuglyph("uni8FBC",188); [see page 1596]
86  tsu_curve.kanji.greight.crowded;
87  tsu_render;
88  endstuglyph;
89
90 % ten/tado "grope along"
91  beginstuglyph("uni8FBF",191); [see page 1598]
92  tsu_curve.kanji.grnine.grope_along;
93  tsu_render;
94  endstuglyph;
95
96 _____
97
98 endfont;
99
100 _____
```

tsuku-90.mp

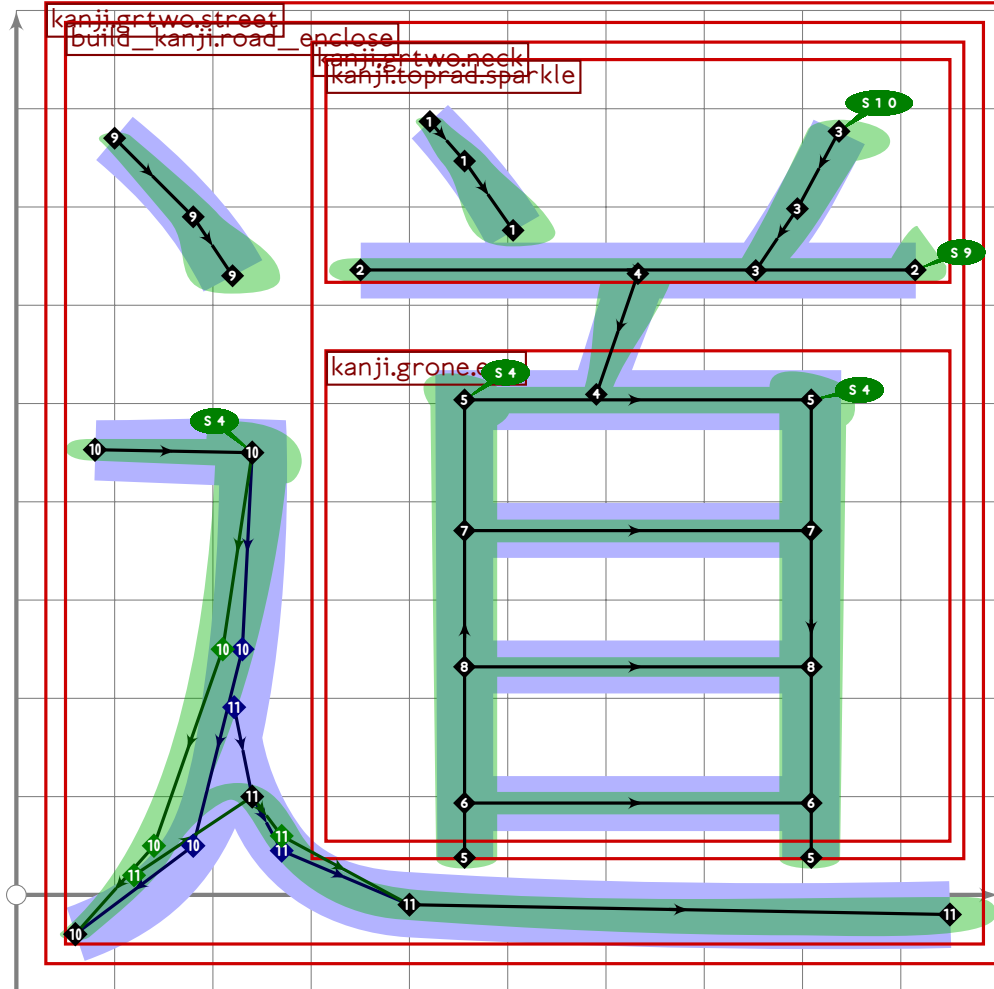
```
1 %  
2 % Unicode page 90 (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradeone.mp;  
38 input gradetwo.mp;  
39 input radical.mp;  
40 input rare.mp;  
41 input toprad.mp;  
42  
43 _____
```




```

44
45 vardef tsu_curve.kanji.grtwo.distant =
46   push_pbox_toexpand("kanji.grtwo.distant");
47   build_kanji.road_enclose(tsu_curve.kanji.radical.long_kimono);
48   expand_pbox;
49 enddef;

```



```

50
51 vardef tsu_curve.kanji.grtwo.street =
52   push_pbox_toexpand("kanji.grtwo.street");
53   build_kanji.road_enclose(tsu_curve.kanji.grtwo.neck);
54   expand_pbox;
55 enddef;

```



```
77 % en/too "distant"  
78 begintsuglyph("uni9060";96);  
79 tsu_curve.kanji.grtwo.distant;  
80 tsu_render;  
81 endtsuglyph;  
82  
83 

---

  
84  
85 endfont;  
86  
87 

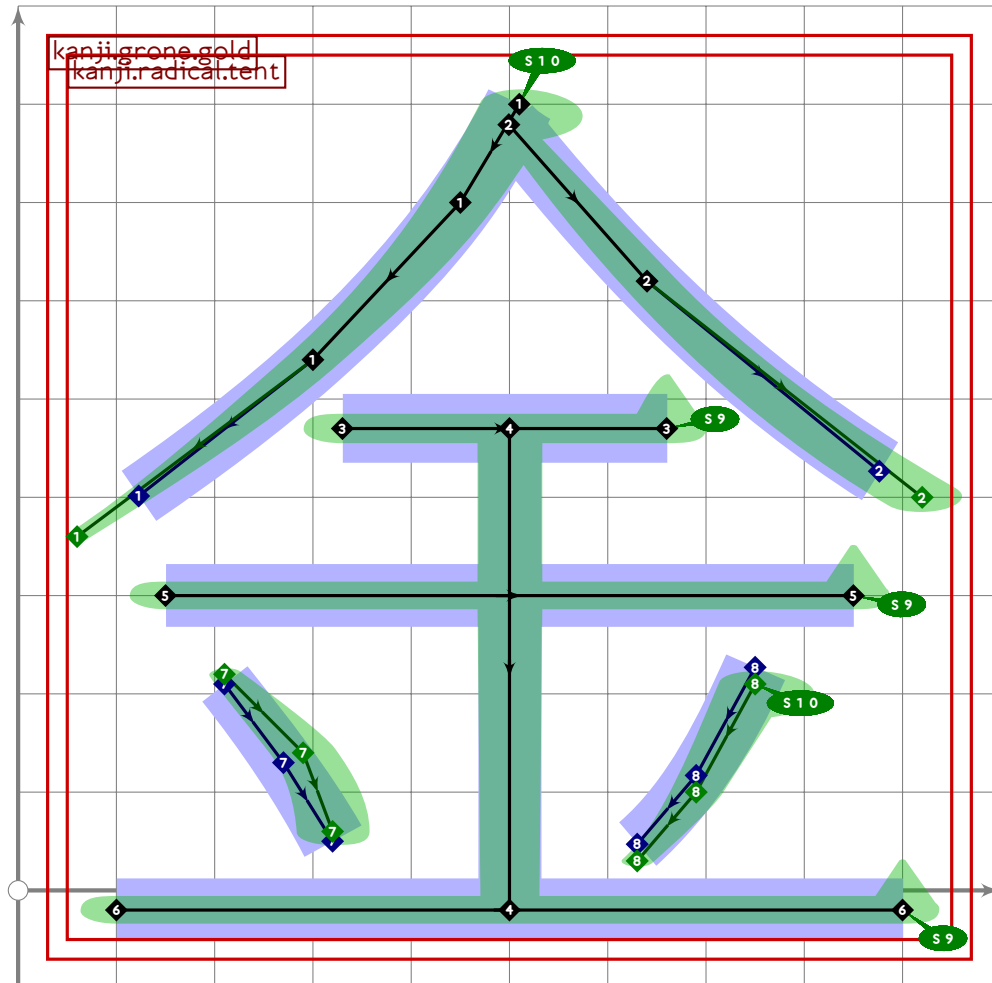
---


```

[see page 1601]

tsuku91.mp

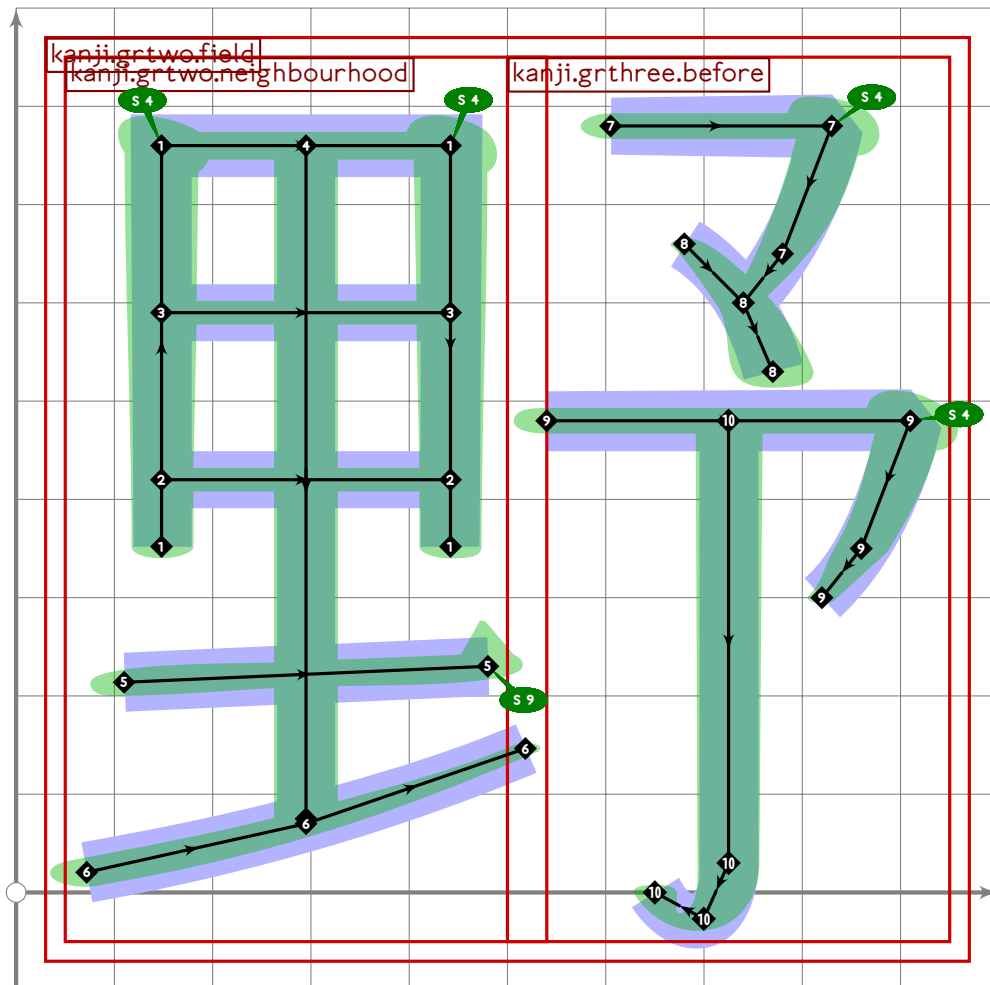
```
1 %  
2 % Unicode page 91 (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradeone.mp;  
38 input gradethree.mp;  
39 input gradetwo.mp;  
40 input radical.mp;  
41 input toprad.mp;  
42  
43 _____
```



```

44
45 vardef tsu_curve.kanji.grone.gold =
46   push_pbox_toexpand("kanji.grone.gold");
47   tsu_curve.kanji.radical.tent;
48   push_stroke((500,470)-(500,-20),(1.5,1.5)-(1.4,1.4));
49   push_stroke((150,300)-(850,300),(1.6,1.6)-(1.6,1.6));
50   set_bosertif(0,1,9);
51   push_stroke((100,-20)-(900,-20),(1.6,1.6)-(1.6,1.6));
52   set_bosertif(0,1,9);
53   push_stroke(((210,220)..tension 1.3..(270*20*mincho,140)..(320,60))
54     shifted ((1-mincho)*10*down),
55     (1,1)-(1.5,1.5)-(1.6,1.6));
56   push_stroke(((750,210)..tension 1.3..(690,100)..(630,30))
57     shifted ((1-mincho)*17*up),
58     (1.6,1.6)-(1.3,1.3)-(1,1));
59   set_bosertif(0,0,10);
60   for i=-4 upto 0: set_bosize(i,93); endfor;
61   expand_pbox;
62 enddef;
63
64

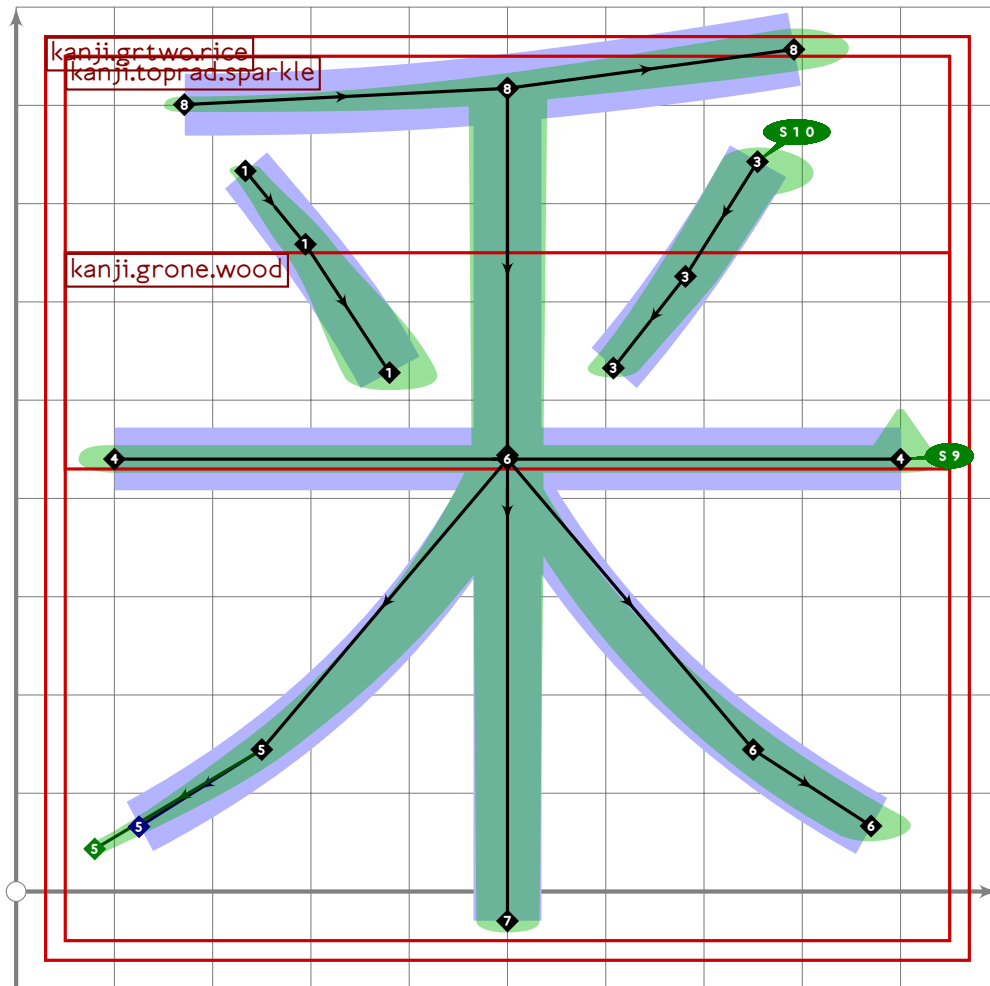
```



```

65
66 vardef tsu_curve.kanji.grtwo.field =
67   push_pbox_toexpand("kanji.grtwo.field");
68   build_kanji.level(build_kanji.lr(520,40)
69     (build_kanji.lift_skirt(250,150)(tsu_curve.kanji.grtwo.neighbourhood))
70     (tsu_curve.kanji.grthree.before));
71   expand_pbox;
72 enddef;
73
74
75

```



```

76 % han/irodori "separate" or "divide" but mostly "topped rice radical"
77 begintsuglyph("uni91C6",198);
78   build_kanji.add_beret(tsu_curve.kanji.grtwo.rice);
79   tsu_render;
80 endtsuglyph;
81
82 % ri/sato, multiple meanings including 3.929km and "neighbourhood"
83 begintsuglyph("uni91CC",204);
84   tsu_curve.kanji.grtwo.neighbourhood;
85   tsu_render;

```

[see page 414]

```
86 endtsuglyph;
87
88 % ya/no "field"
89 begintsuglyph("uni91CE",206); [see page 1262]
90 tsu_curve.kanji.grtwo.field;
91 tsu_render;
92 endtsuglyph;
93
94 % kane/kin "gold"
95 begintsuglyph("uni91D1",209); [see page 1605]
96 tsu_curve.kanji.grone.gold;
97 tsu_render;
98 endtsuglyph;
99
100 

---


101
102 endfont;
103
104 

---


```

tsuku-95.mp

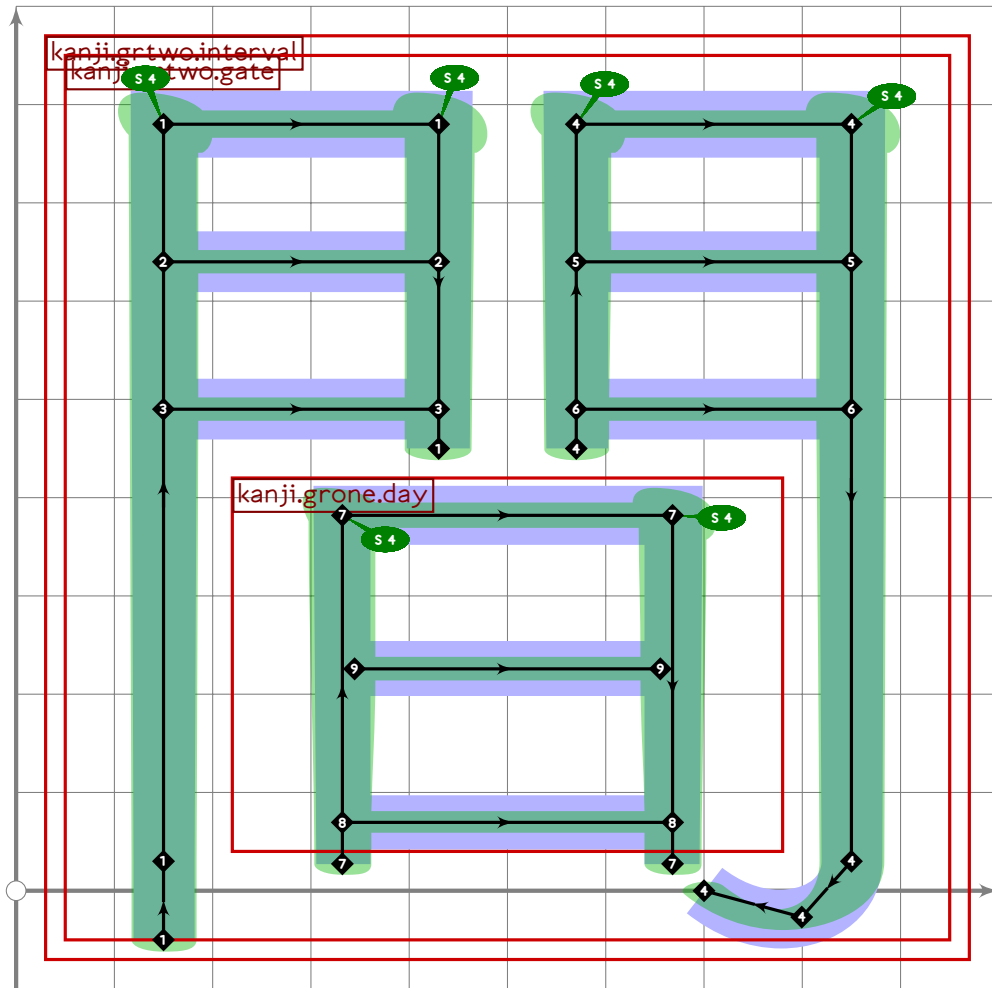
```
1 %
2 % Unicode page 95 (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradenine.mp;
38 input gradeone.mp;
39 input gradesix.mp;
40 input gradethree.mp;
41 input gradetwo.mp;
42 input radical.mp;
43
44 

---

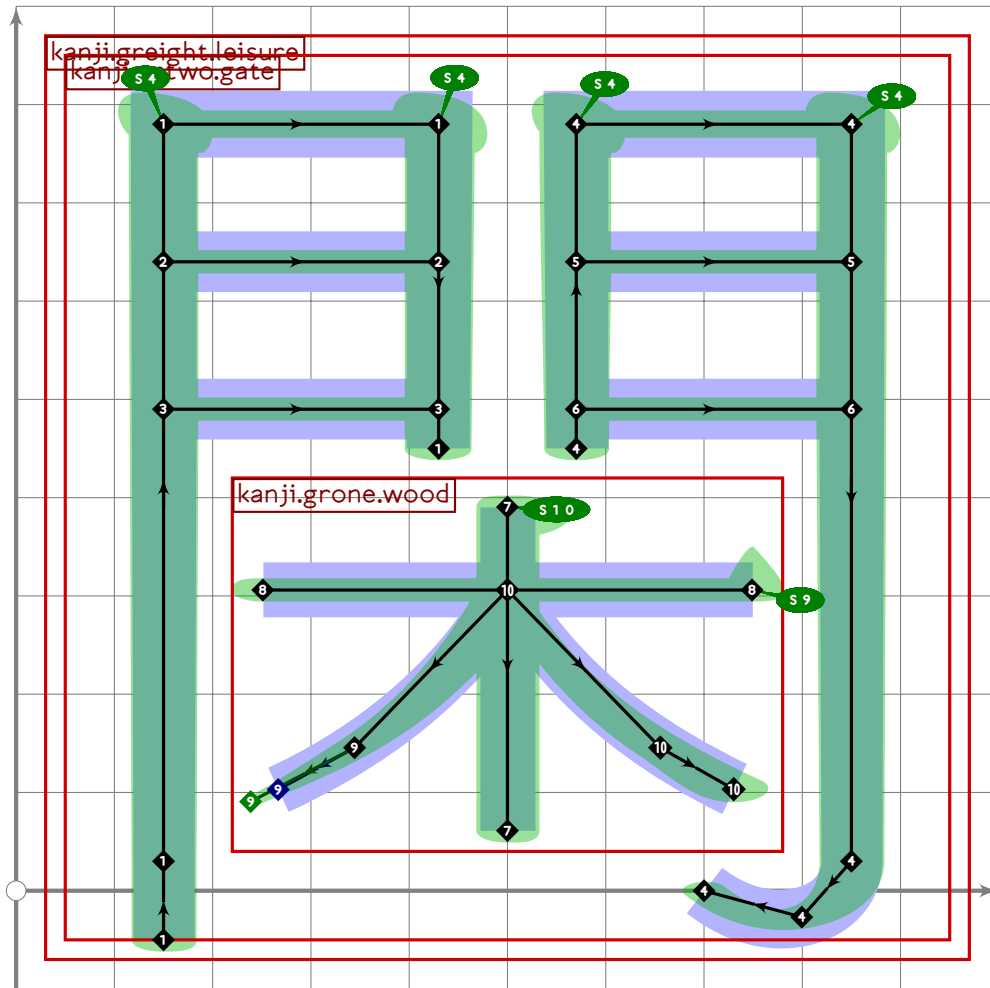

```

```

45
46 vardef tsu_curve.kanji.grtwo.interval =
47   push_pbox_toexpand("kanji.grtwo.interval");
48   build_kanji.gate_enclose(tsu_curve.kanji.grone.day);
49   expand_pbox;
50 enddef;
51
52

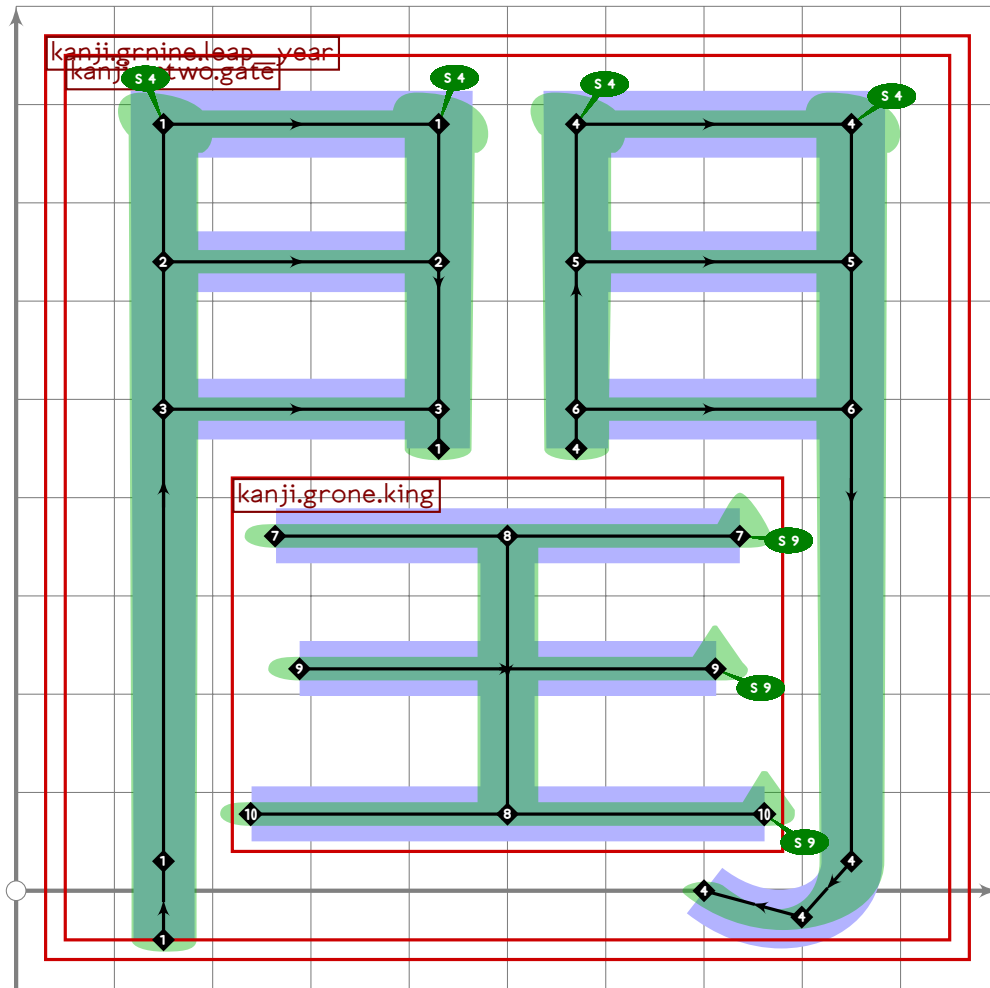
```



```

53
54 vardef tsu_curve.kanji.greight.leisure =
55   push_pbox_toexpand("kanji.greight.leisure");
56   build_kanji.gate_enclose(tsu_curve.kanji.grone.wood);
57   expand_pbox;
58 enddef;
59
60

```

```

67
68 vardef tsu_curve.kanji.grnine.leap_year =
69   push_pbox_toexpand("kanji.grnine.leap_year");
70   build_kanji.gate_enclose(tsu_curve.kanji.grone.king);
71   expand_pbox;
72 enddef;

```

73

74

75

76 % mon/kado "gate"

77 begintsuglyph("uni9580",128);

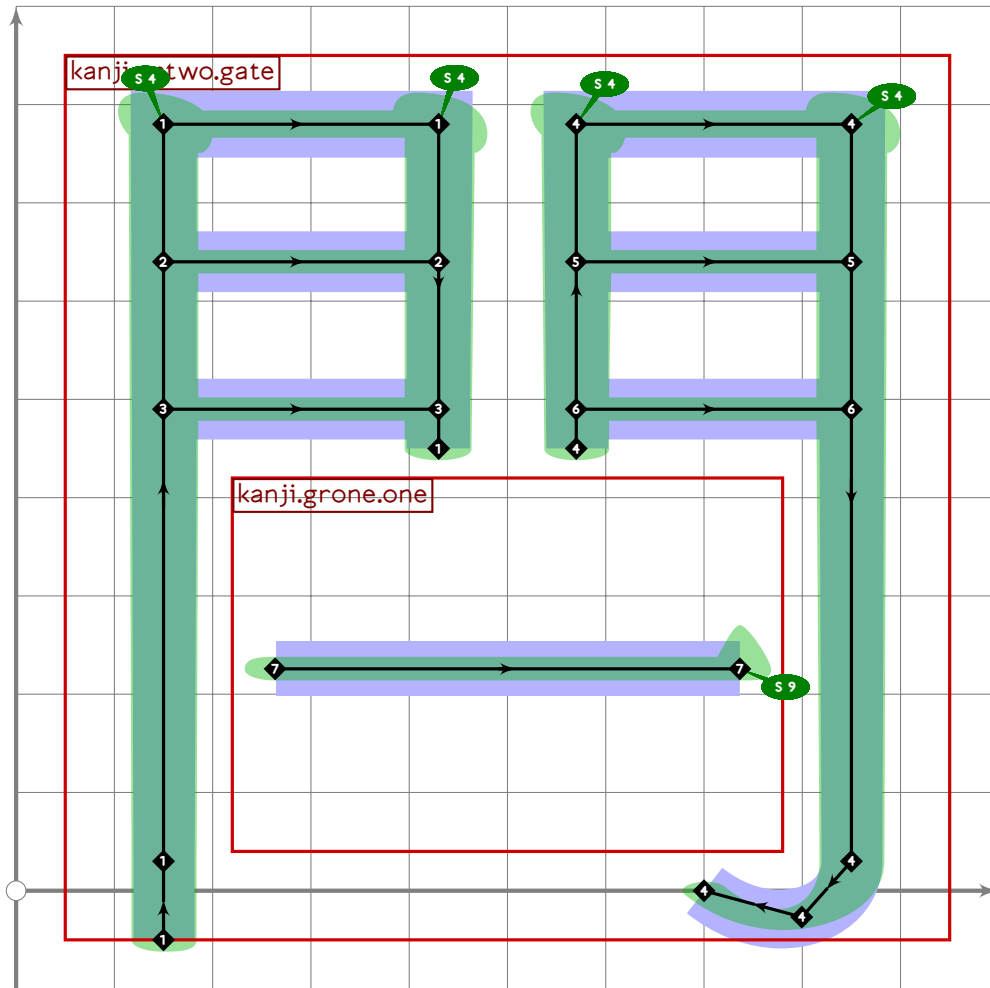
[see page 401]

78 tsu_curve.kanji.grtwo.gate;

79 tsu_render;

80 endtsuglyph;

81

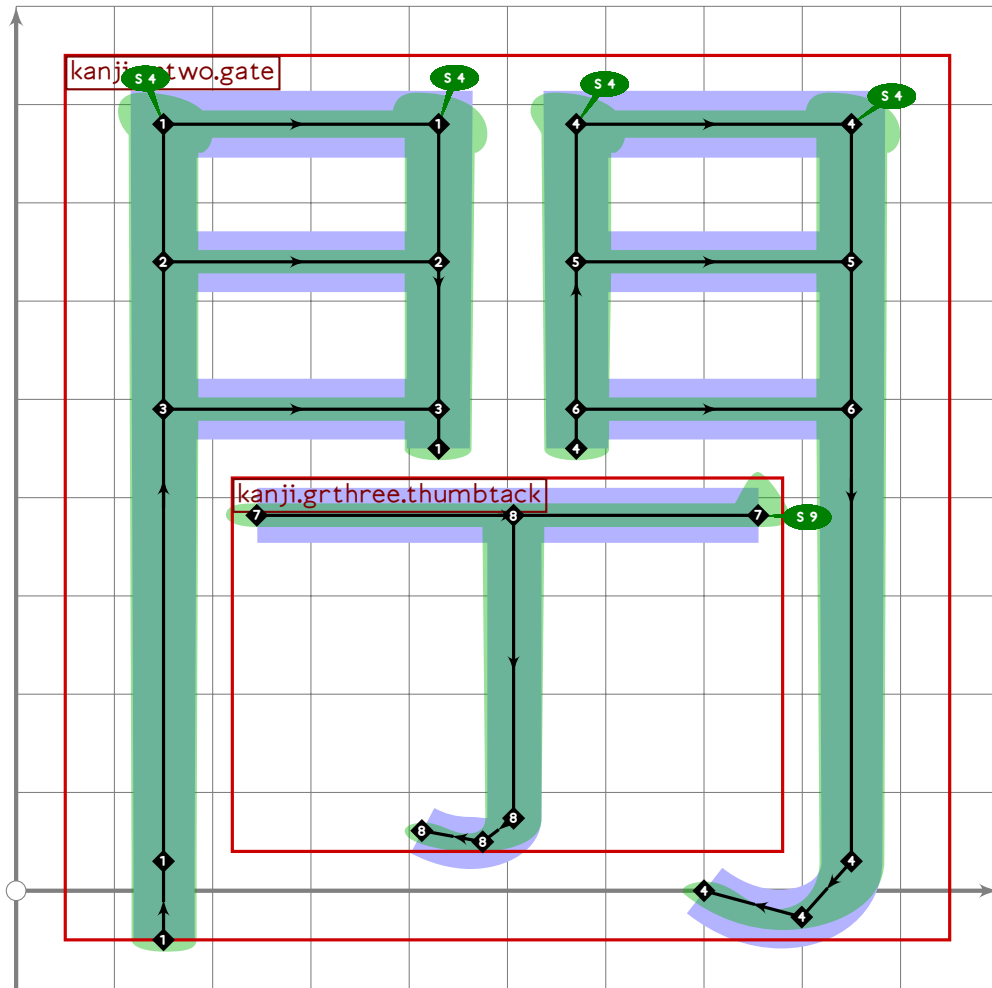


```

82 % extra
83 begintsuglyph("uni9582",130);
84 build_kanji.gate_enclose(tsu_curve.kanji.grone.one);
85 tsu_render;
86 endtsuglyph;
87
88 % sen/hirame "brandish"
89 begintsuglyph("uni9583",131);
90 tsu_curve.kanji.grnine.brandish;
91 tsu_render;
92 endtsuglyph;
93

```

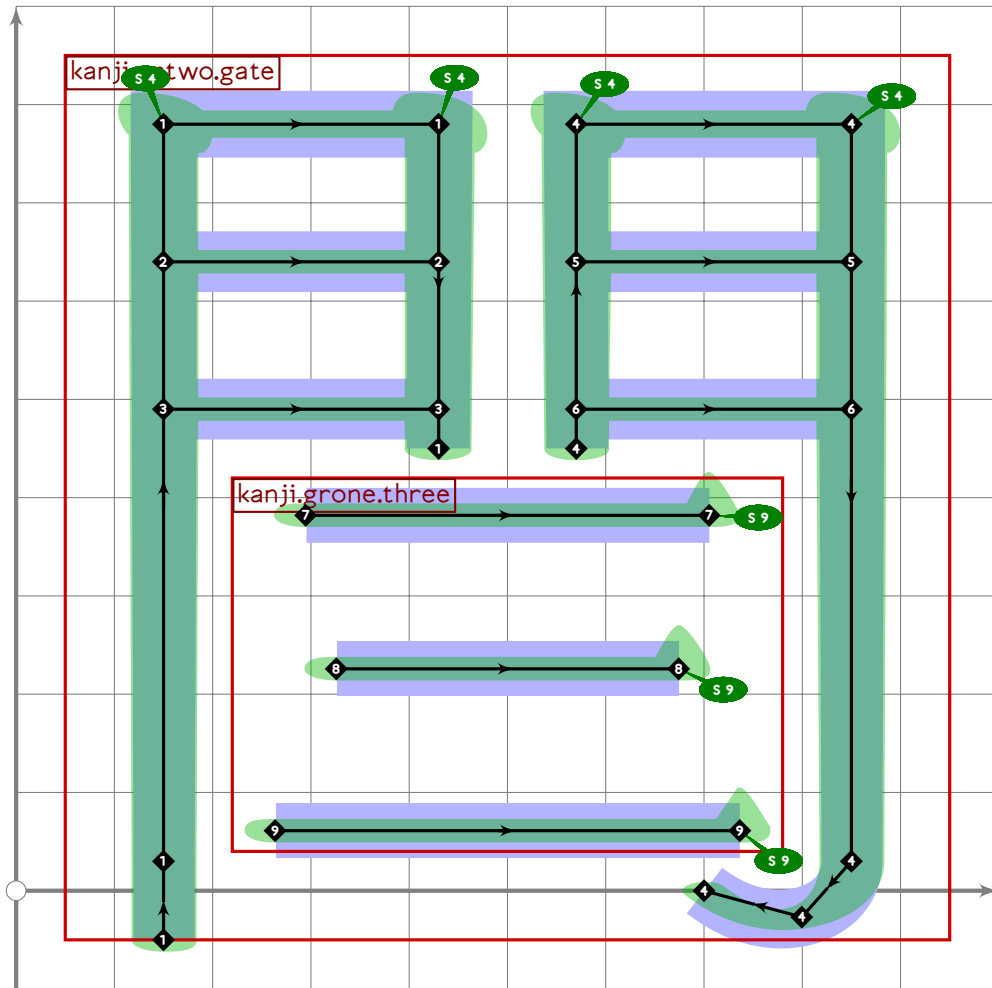
[see page 1611]



```

94 % extra
95 begint Suglyph("uni9585";133);
96 build_kanji.gate_enclose(tsu_curve.kanji.grthree.thumbtack);
97 tsu_render;
98 endtsuglyph;
99

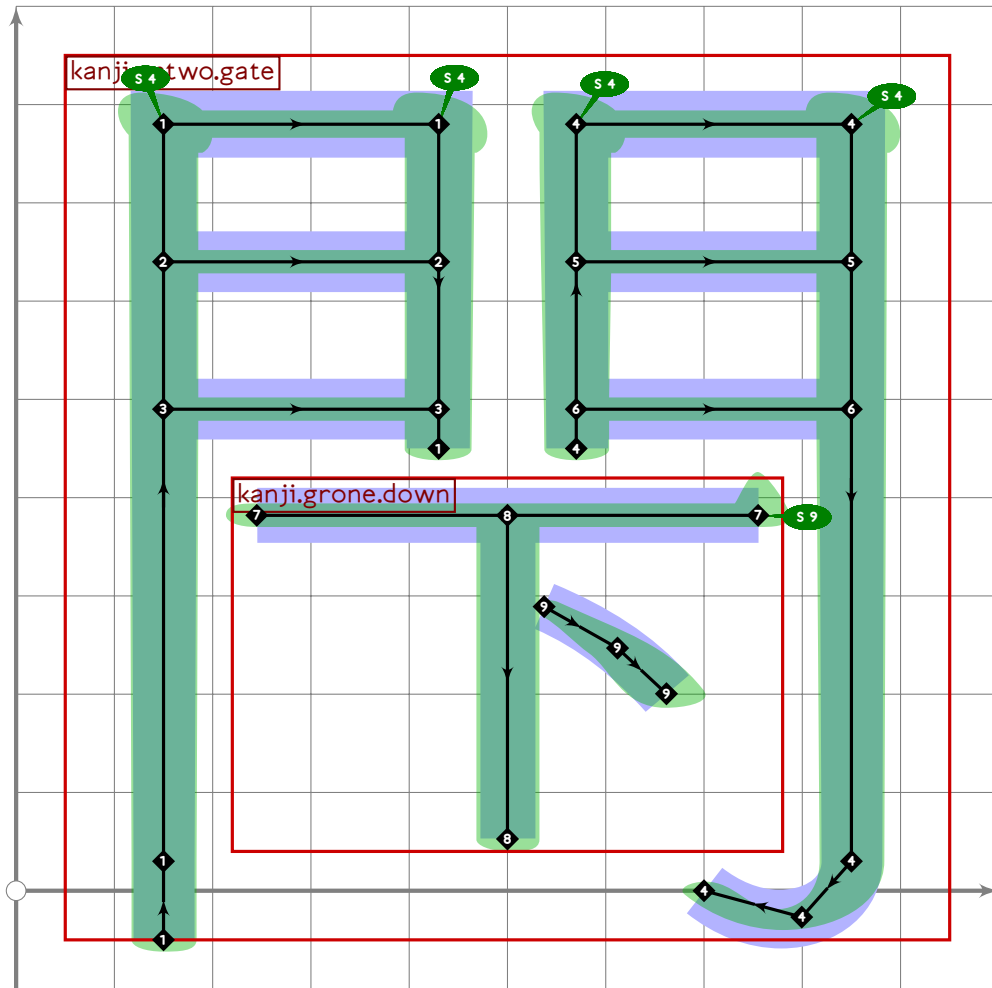
```



```

100 % extra
101 begint Suglyph("uni9586";134);
102 build_kanji.gate_enclose(tsu_curve.kanji.gro.ne.three);
103 tsu_render;
104 endtsuglyph;
105

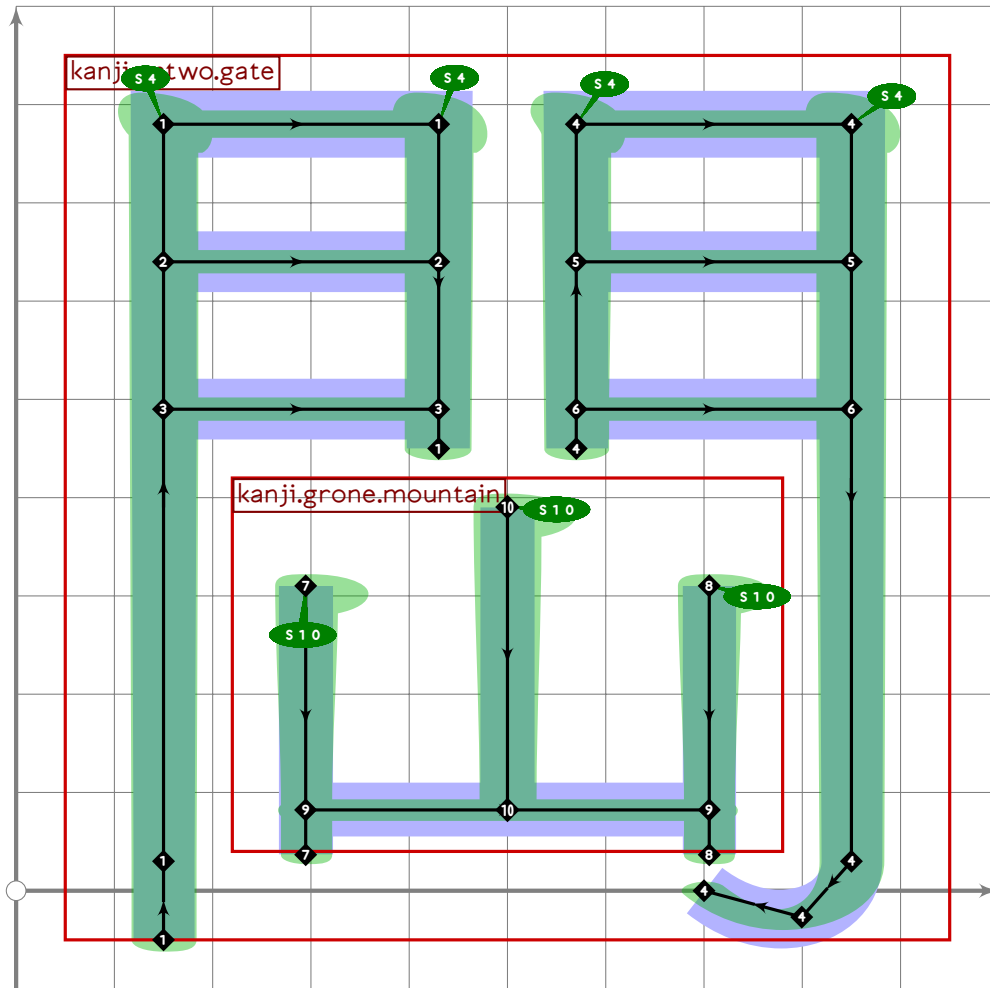
```



```

106 % hei/to "block up"
107 begint Suglyph("uni9587";135);
108   build_kanji.gate_enclose(tsu_curve.kanji.gro.ne.down);
109   tsu_render;
110   endtsuglyph;
111

```

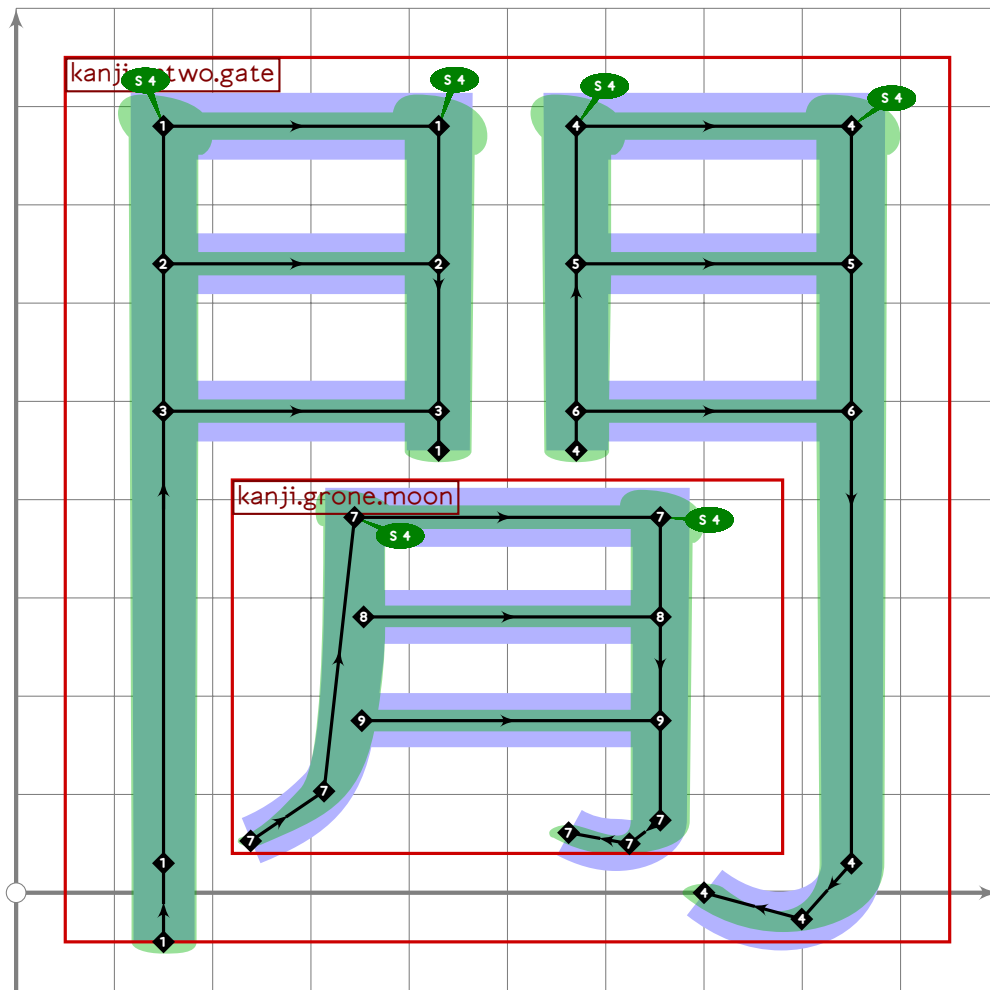
```

112 % tsuka "choke"
113 begintsuglyph("uni958A",138);
114 build_kanji.gate_enclose(tsu_curve.kanji.grone.mountain);
115 tsu_render;
116 endtsuglyph;
117
118 % jun/uruu "leap year"
119 begintsuglyph("uni958F",143);
120 tsu_curve.kanji.grnine.leap_year;
121 tsu_render;
122 endtsuglyph;
123
124 % kan/hima "leisure"
125 begintsuglyph("uni9591",145);
126 tsu_curve.kanji.greight.leisure;
127 tsu_render;
128 endtsuglyph;
129

```

[see page 1612]

[see page 1610]

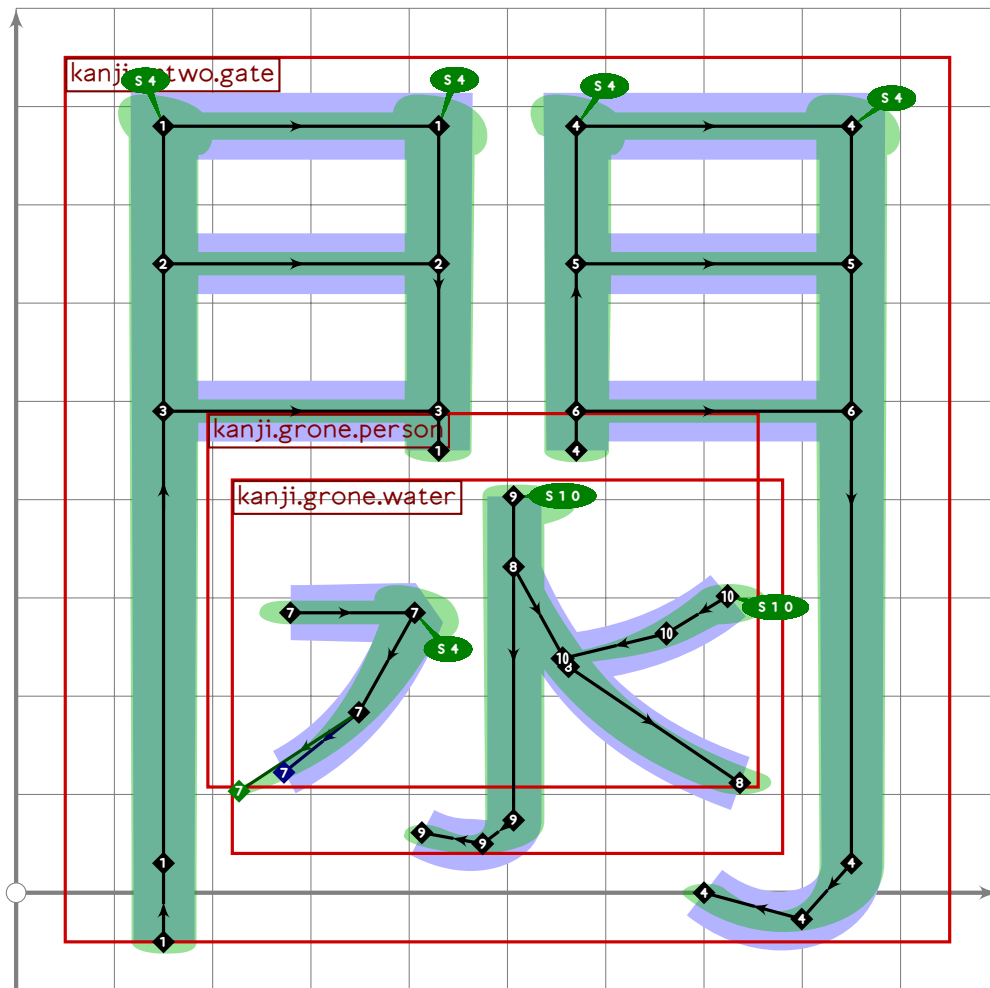


```

130 % extra
131 begintsuglyph("uni9592";146);
132 build_kanji.gate_enclose(tsu_curve.kanji.grone.moon);
133 tsu_render;
134 endsuglyph;
135
136 % kan/aida "interval"
137 begintsuglyph("uni9593";147);
138 tsu_curve.kanji.grtwo.interval;
139 tsu_render;
140 endsuglyph;
141

```

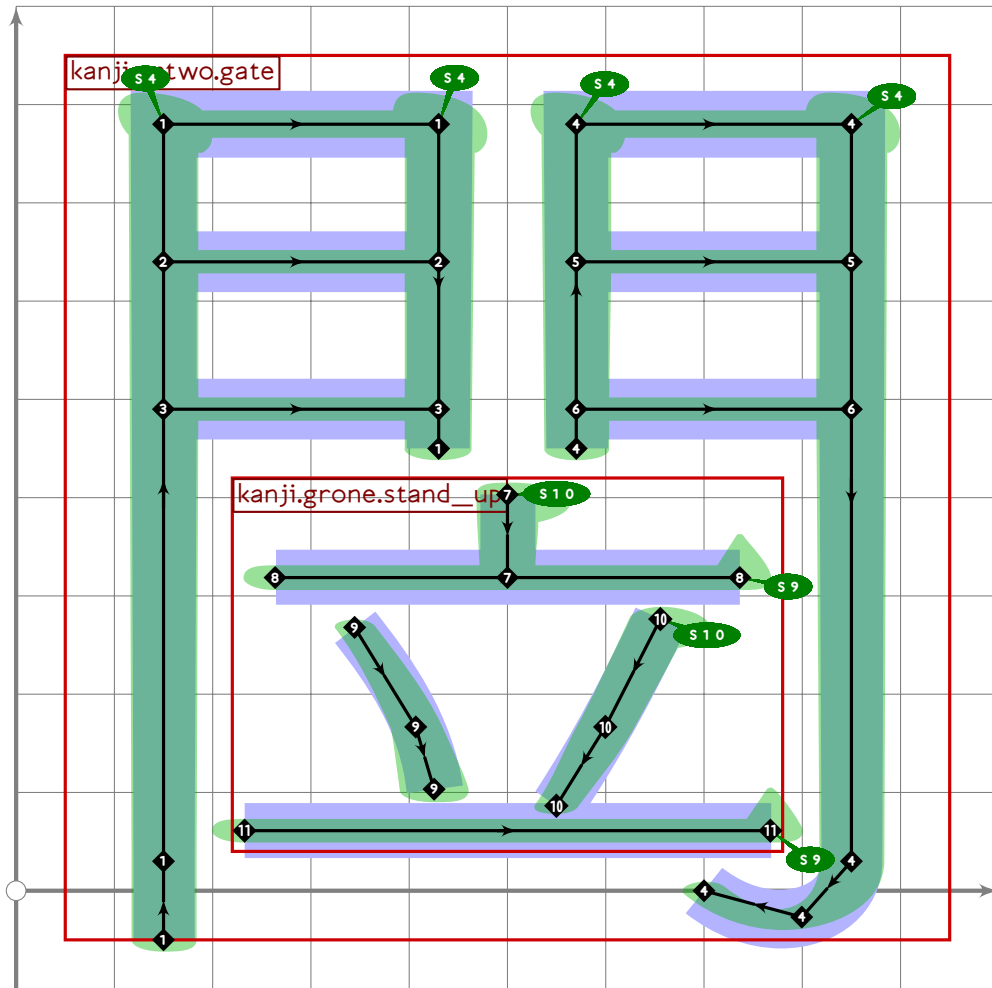
[see page 1609]



```

142 % extra
143 begint Suglyph("uni9596";150);
144 build_kanji.gate_enclose(tsu_curve.kanji.grone.water);
145 tsu_render;
146 endtsuglyph;
147

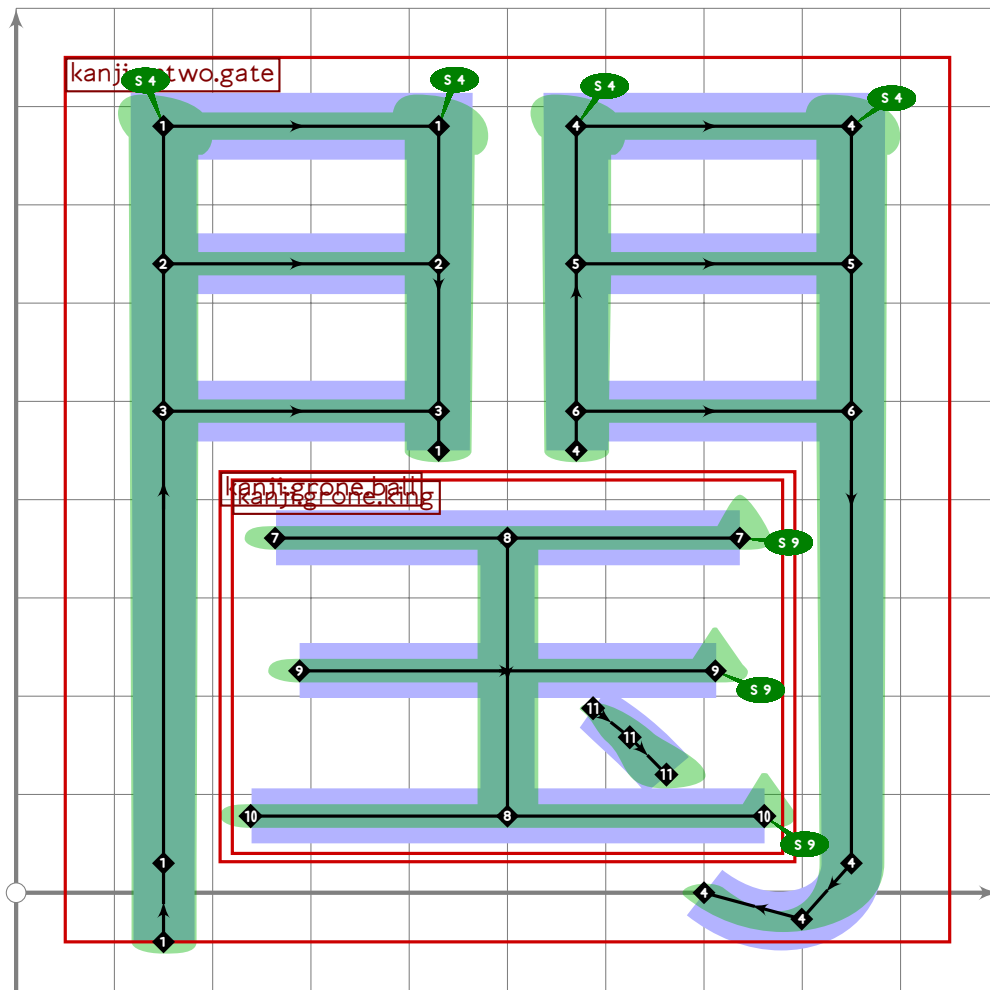
```



```

148 % extra
149 begint Suglyph("uni959A";154);
150   build_kanji.gate_enclose(tsu_curve.kanji.grone.stand_up);
151   tsu_render;
152   endtsuglyph;
153

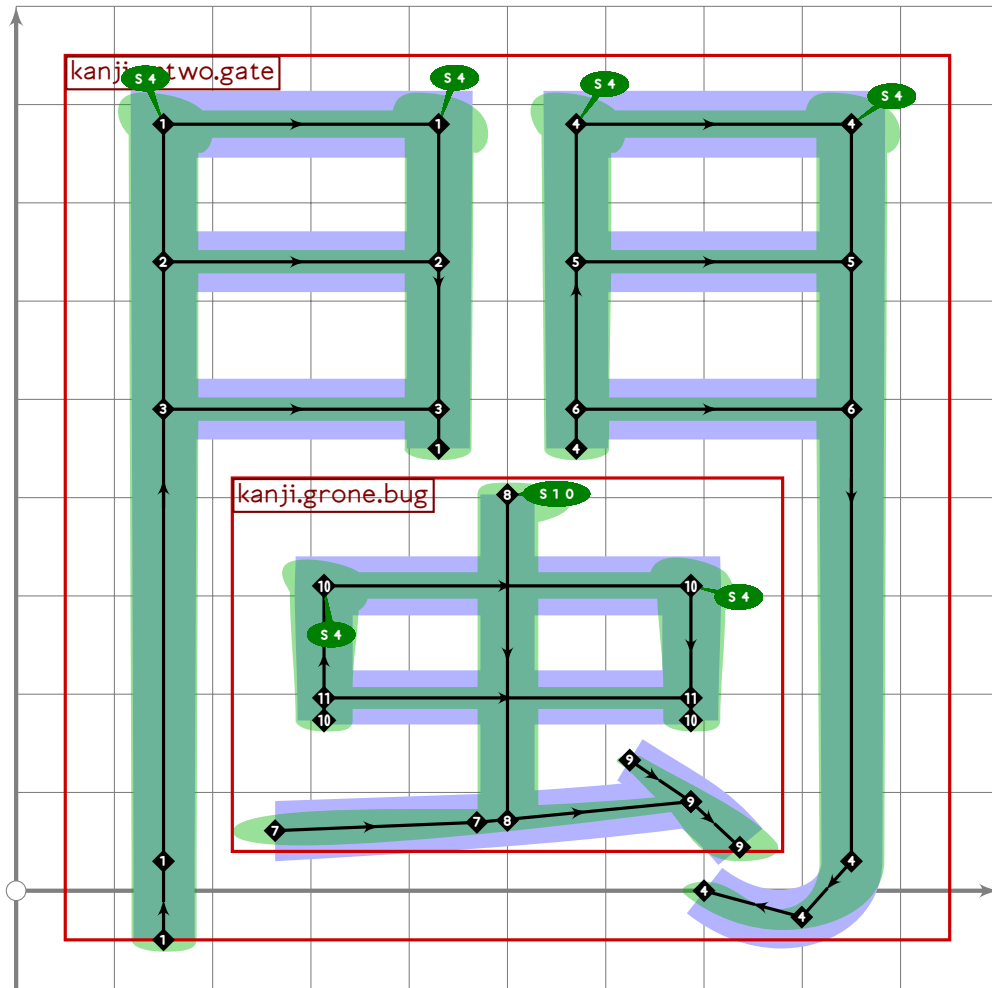
```



```

154 % extra
155 beginsuglyph("uni95A0",160);
156 build_kanji.gate_enclose(tsu_curve.kanji.grone.ball);
157 tsu_render;
158 endsuglyph;
159

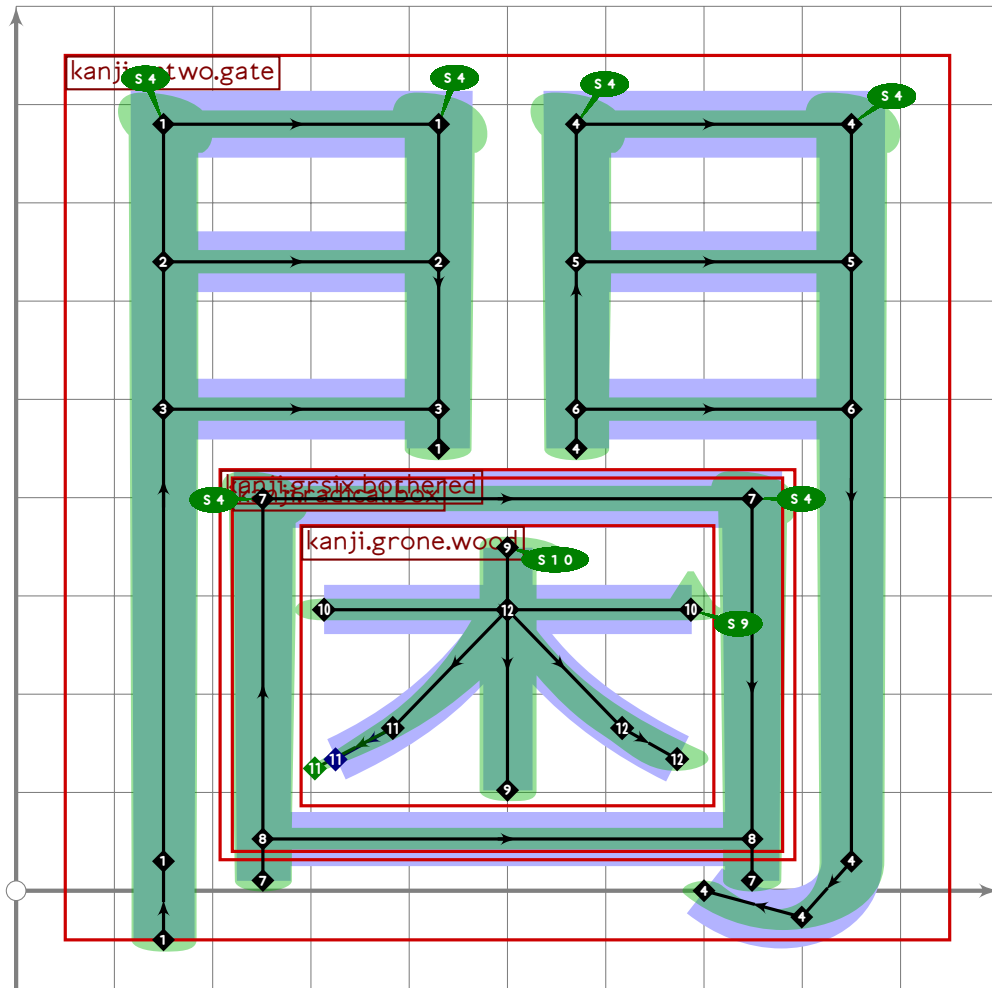
```



```

160 % extra
161 begintuglyph("uni95A9",169);
162 build_kanji.gate_enclose(tsu_curve.kanji.grone.bug);
163 tsu_render;
164 endtuglyph;
165

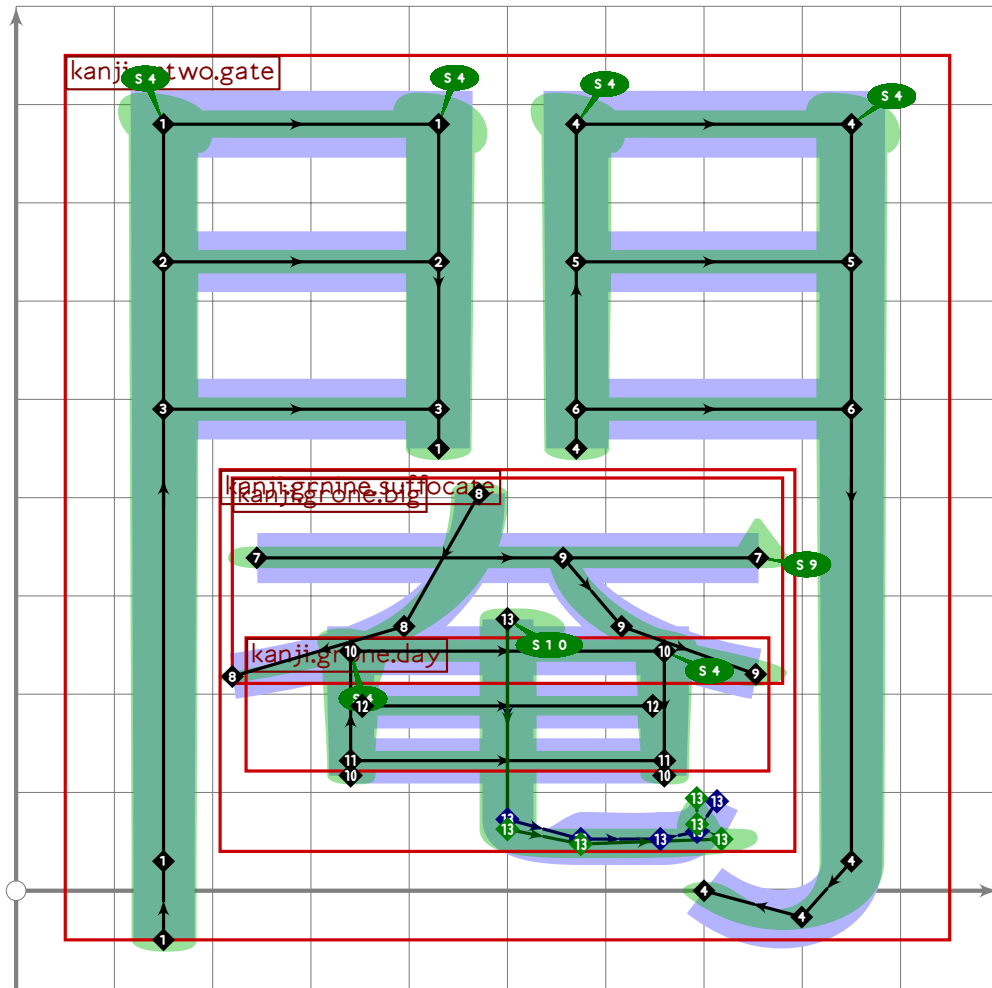
```



```

166 % extra
167 begint Suglyph("uni95AB",171);
168 build_kanji.gate_enclose(tsu_curve.kanji.grsix.bothered);
169 tsu_render;
170 endtsuglyph;
171

```



```

172 % extra en/an/oo "eunuch"
173 begint Suglyph("uni95B9";185);
174 build_kanji.gate_enclose(tsu_curve.kanji.gnine.suffocate);
175 tsu_render;
176 endsuglyph;
177
178 -----
179
180 endfont;
181
182 -----

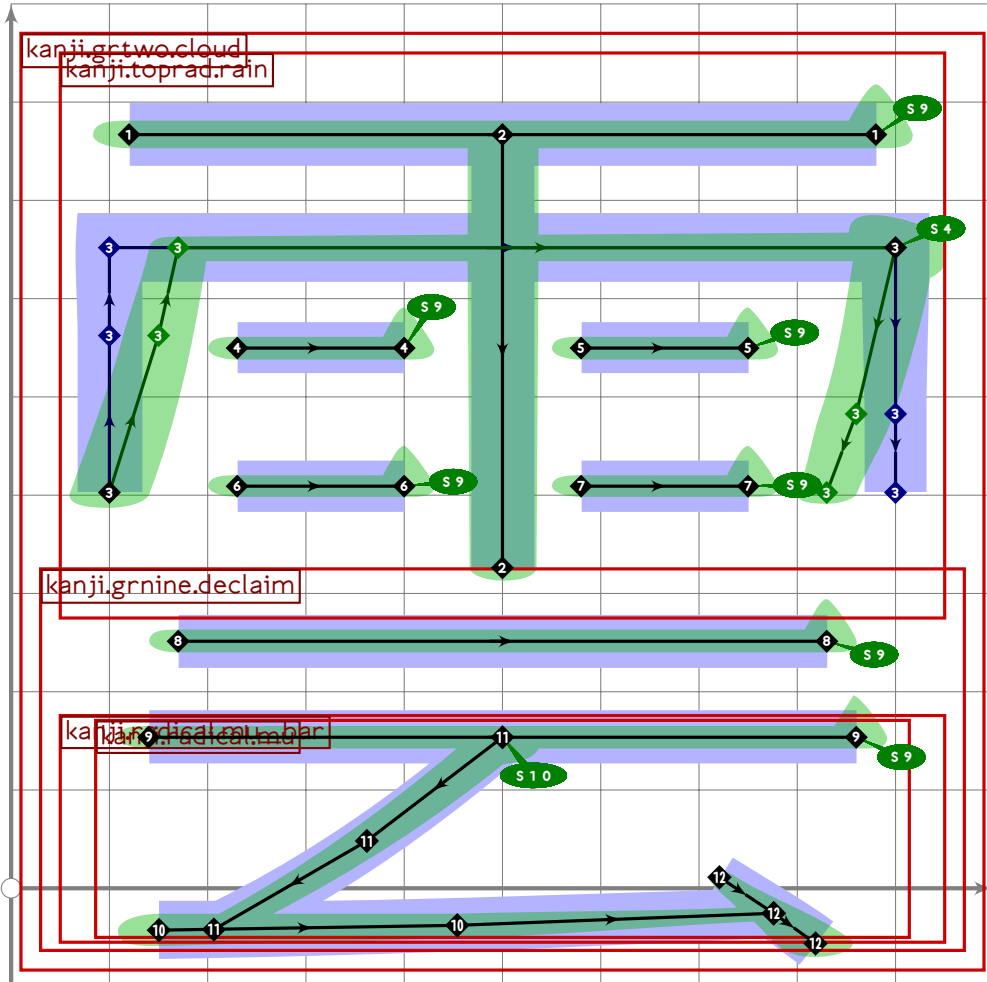
```



```

44 push_pbox_toexpand("kanji.grone.rain");
45 build_kanji.level(
46   push_stroke((80,720)-(920,720),(1.6,1.6)-(1.6,1.6));
47   set_boserif(0,1,9);
48   push_stroke((500,720)-(500,10),(1.6,1.6)-(1.5,1.5));
49   tsu_xform(identity yscaled (540/780))(tsu_curve.kanji.radical.gmm);
50   push_stroke((250,430)..tension 1.2..(310,390*13*mincho)..(380,320),
51     (1,1)-(1.4,1.4)-(1.7,1.7));
52   set_bosize(0,80);
53   push_stroke(get_strokep(0) shifted (350,0),get_strokeq(0));
54   set_bosize(0,80);
55   push_stroke(get_strokep(-1) shifted (0,220),get_strokeq(-1));
56   set_bosize(0,80);
57   push_stroke(get_strokep(-2) shifted (350,220),get_strokeq(-2));
58   set_bosize(0,80);
59 );
60 expand_pbox;
61 endif;
62
63

```

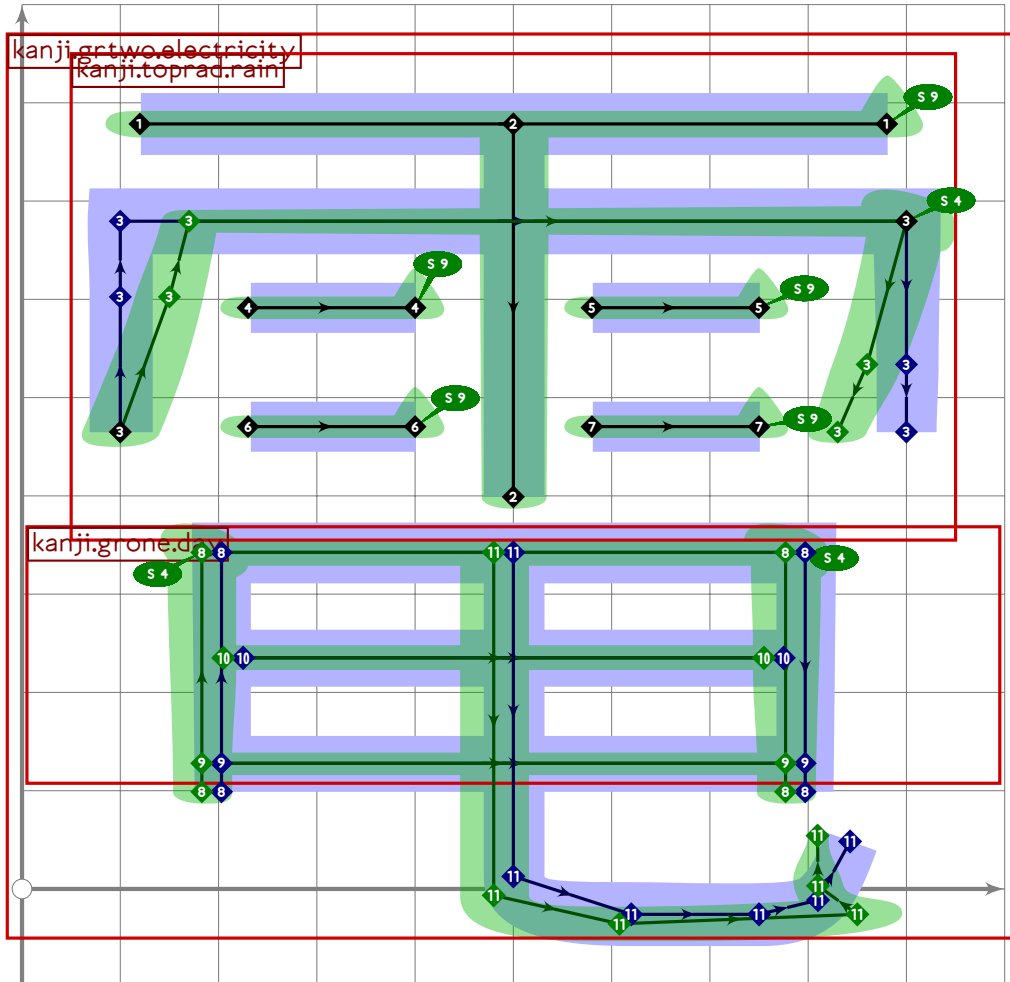


64

```

65 vardef tsu_curve.kanji.grtwo.cloud =
66   push_pbox_toexpand("kanji.grtwo.cloud");
67   build_kanji.tb(300,50)
68     (tsu_curve.kanji.toprad.rain)
69     (tsu_curve.kanji.grnine.declaim);
70   expand_pbox;
71 enddef;

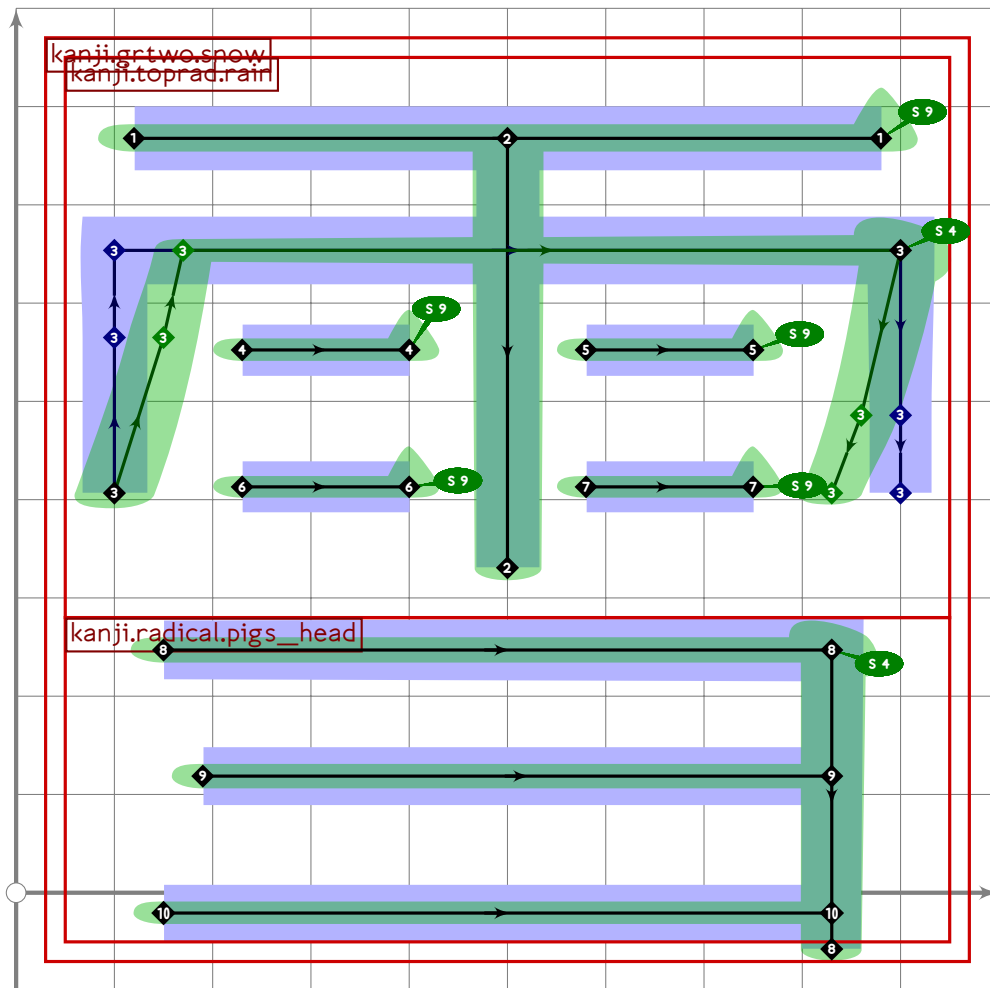
```



```

72
73 vardef tsu_curve.kanji.grtwo.electricity =
74   push_pbox_toexpand("kanji.grtwo.electricity");
75   build_kanji.tb(370,30)
76     (tsu_curve.kanji.toprad.rain)
77     (build_kanji.sscale(xyscaled (1.1,0.6) shifted (-20*mincho,150))
78       (tsu_curve.kanji.grone.day);
79     push_stroke((point 1.5 of get_stroke(-2)),(1.6,1.6));
80     build_kanji.add_ltail(0);
81   expand_pbox;
82 enddef;

```



```

83
84 vardef tsu_curve.kanji.grtwo.snow =
85   push_pbox_toexpand("kanji.grtwo.snow");
86   build_kanji.tb(280,0)
87     (tsu_curve.kanji.toprad.rain)
88     (tsu_curve.kanji.radical.pigs_head);
89   expand_pbox;
90 enddef;
91
92
93
94 vardef tsu_curve.kanji.toprad.rain =
95   push_pbox_toexpand("kanji.toprad.rain");
96   push_stroke((120,720)-(880,720),(1.6,1.6)-(1.6,1.6));
97   set_boserif(0,1,9);
98   push_stroke((500,720)-(500,30),(1.6,1.6)-(1.5,1.5));
99   push_stroke((100,150)..(100+50*mincho,400)..(100+70*mincho,540)-
100     (900,540)..(900-40*mincho,275)..(900-70*mincho,150),
101     (1.7,1.7)-(1.6,1.6)-(1.4,1.4)-
102     (1.7,1.7)-(1.6,1.6)-(1.4,1.4));
103   set_botip(0,2,1);

```

```

104 set_botip(0,3,1);
105 set_boserif(0,3,4);
106 push_stroke((230,380)..(400,380),(1.6,1.6)-(1.6,1.6));
107 set_boserif(0,1,9);
108 set_bosize(0,80);
109 push_stroke(get_strokep(0) shifted (350,0),get_strokeq(0));
110 set_boserif(0,1,9);
111 set_bosize(0,80);
112 push_stroke(get_strokep(-1) shifted (0,-220),get_strokeq(-1));
113 set_boserif(0,1,9);
114 set_bosize(0,80);
115 push_stroke(get_strokep(-2) shifted (350,-220),get_strokeq(-2));
116 set_boserif(0,1,9);
117 set_bosize(0,80);
118 expand_pbox;
119 enddef;
120
121 

---


122
123 % u/ame "rain"
124 begintsuglyph("uni96E8",232); [see page 1625]
125 tsu_curve.kanji.grone.rain;
126 tsu_render;
127 endtsuglyph;
128
129 % satsu/yuki "snow"
130 begintsuglyph("uni96EA",234); [see page 1628]
131 tsu_curve.kanji.grtwo.snow;
132 tsu_render;
133 endtsuglyph;
134
135 % un/kumo "cloud"
136 begintsuglyph("uni96F2",242); [see page 1627]
137 tsu_curve.kanji.grtwo.cloud;
138 tsu_render;
139 endtsuglyph;
140
141 % den "electricity"
142 begintsuglyph("uni96FB",251); [see page 1627]
143 tsu_curve.kanji.grtwo.electricity;
144 tsu_render;
145 endtsuglyph;
146
147 

---


148
149 endfont;
150
151 

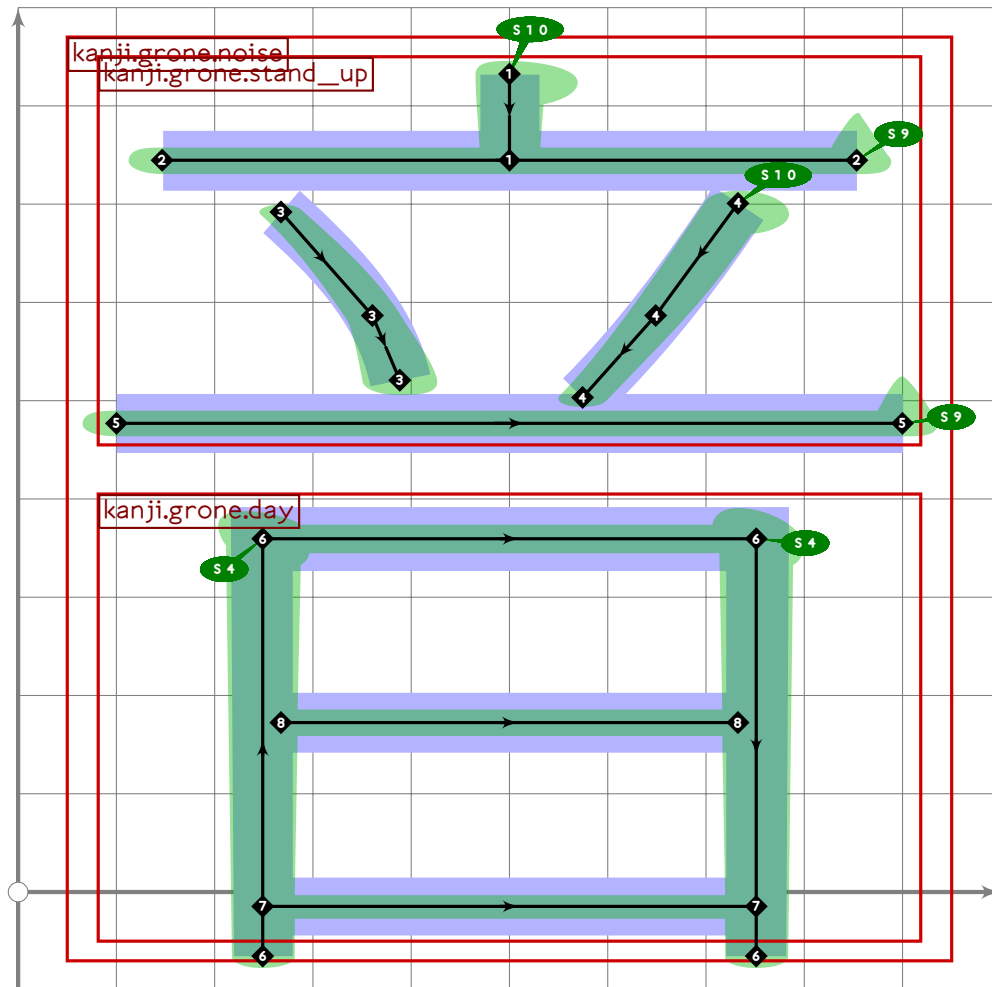
---



```

tsuku97.mp

```
1 %  
2 % Unicode page 97 (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input bottomrad.mp;  
37 input buildkanji.mp;  
38 input gradeone.mp;  
39 input toprad.mp;  
40  
41 _____
```



```
42  
43 vardef tsu_curve.kanji.grone.noise =
```

```

44 push_pbox_toexpand("kanji.grone.noise");
45 build_kanji.level(build_kanji.sscale(xscaled 0.93)(
46   build_kanji.tb(430,-50)
47   (tsu_curve.kanji.grone.stand_up)
48   (tsu_curve.kanji.grone.day)));
49 expand_pbox;
50 enddef;
51
52 

---


53
54 % ao "blue"
55 begintsuglyph("uni9752",82); [see page 339]
56   tsu_curve.kanji.grone.blue;
57   tsu_render;
58 endtsuglyph;
59
60 % oto/on "noise"
61 begintsuglyph("uni97F3",243); [see page 1630]
62   tsu_curve.kanji.grone.noise;
63   tsu_render;
64 endtsuglyph;
65
66 

---


67
68 endfont;
69
70 

---



```

tsuku-99.mp

```
1 %
2 % Unicode page 99 (Kanji) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradeone.mp;
38 input gradetwo.mp;
39 input toprad.mp;
40
41 

---


42
43 % shu/kubi "neck"
44 begintsuglyph\("uni9996";150\); [see page 413]
45 tsu\_curve.kanji.grtwo.neck;
46 tsu\_render;
47 endtsuglyph;
48
49 

---

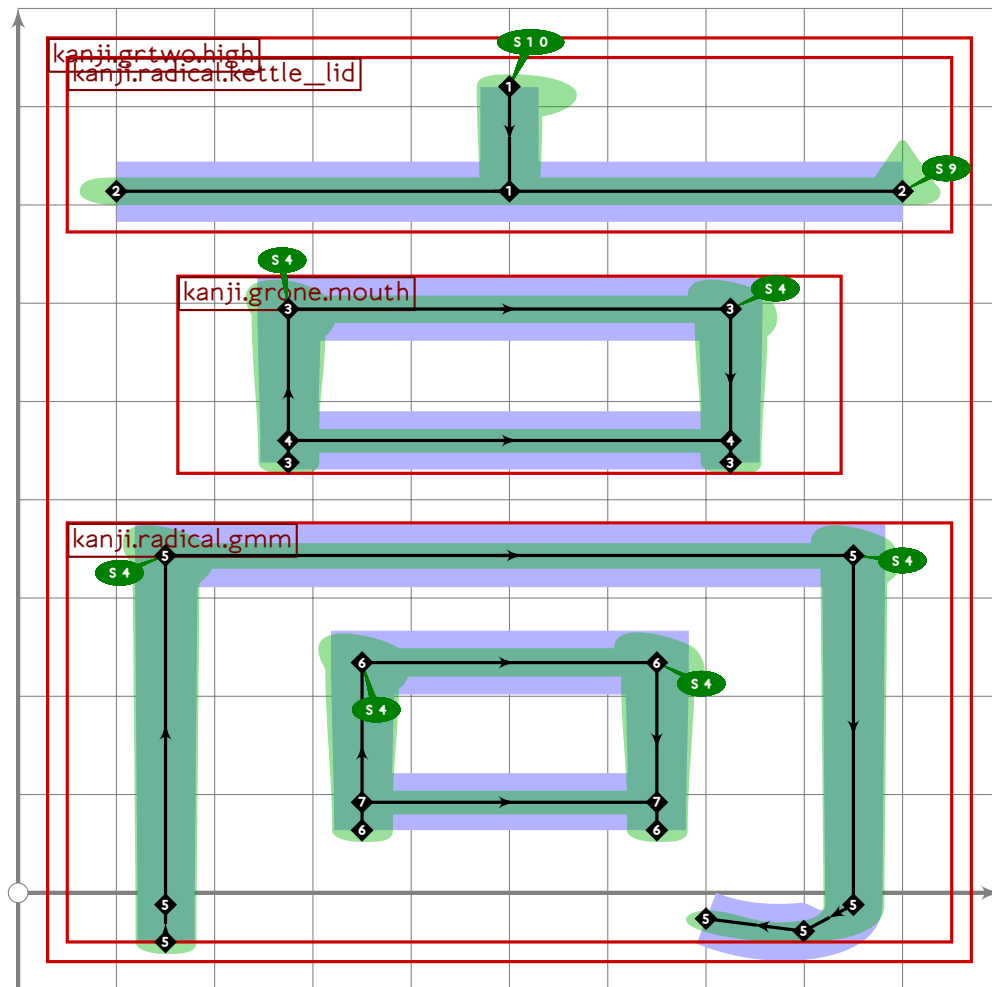

50
51 endfont;
52
53 

---


```


tsuku-9a.mp

```
1 %  
2 % Unicode page 9a (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input buildkanji.mp;  
37 input gradeone.mp;  
38 input radical.mp;  
39  
40 _____
```



```
41  
42 vardef tsu_curve.kanji.grtwo.high =  
43   push_pbox_toexpand("kanji.grtwo.high");
```

```
44 build_kanji.level(build_kanji.tb(650,-45)
45   (tsu_curve.kanji.radical.kettle_lid)
46   (build_kanji.tb(550;67)
47     (build_kanji.sscale(xscaled 0.75)(tsu_curve.kanji.grone.mouth))
48     (tsu_curve.kanji.radical.gmm;
49       build_kanji.box((350,550),(650,250));
50     ));
51 expand_pbox;
52 enddef;
53
54 

---


55
56 % kou/taka "high"
57 begintuglyph("uni9AD8",216); [see page 1633]
58   tsu_curve.kanji.grtwo.high;
59   tsu_render;
60 endtuglyph;
61
62 

---

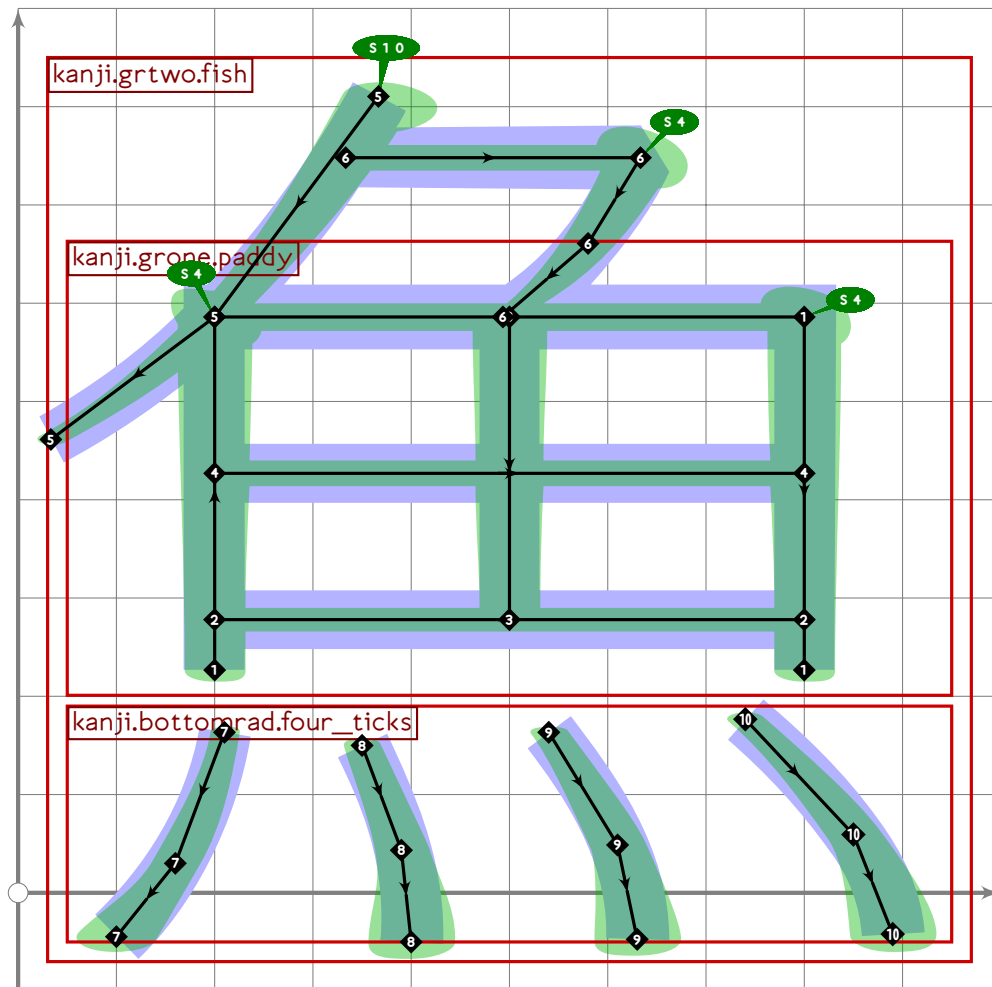

63
64 endfont;
65
66 

---


```

tsuku-9b.mp

```
1 %  
2 % Unicode page 9b (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input bottomrad.mp;  
37 input buildkanji.mp;  
38 input gradeone.mp;  
39  
40 _____
```



```
41  
42 vardef tsu_curve.kanji.grtwo.fish =  
43   push_pbox_toexpand("kanji.grtwo.fish");
```

```
44 build_kanji.level(build_kanji.tb(190,0)
45   (build_kanji.attach_fishhook(0.7)(tsu_curve.kanji.grone.paddy))
46   (tsu_curve.kanji.bottomrad.four_ticks));
47   expand_pbox;
48 enddef;
49
50 

---


51
52 % gyo/sakana "fish"
53 begintsuglyph("uni9B5A";90); [see page 1635]
54   tsu_curve.kanji.grtwo.fish;
55   tsu_render;
56 endtsuglyph;
57
58 

---

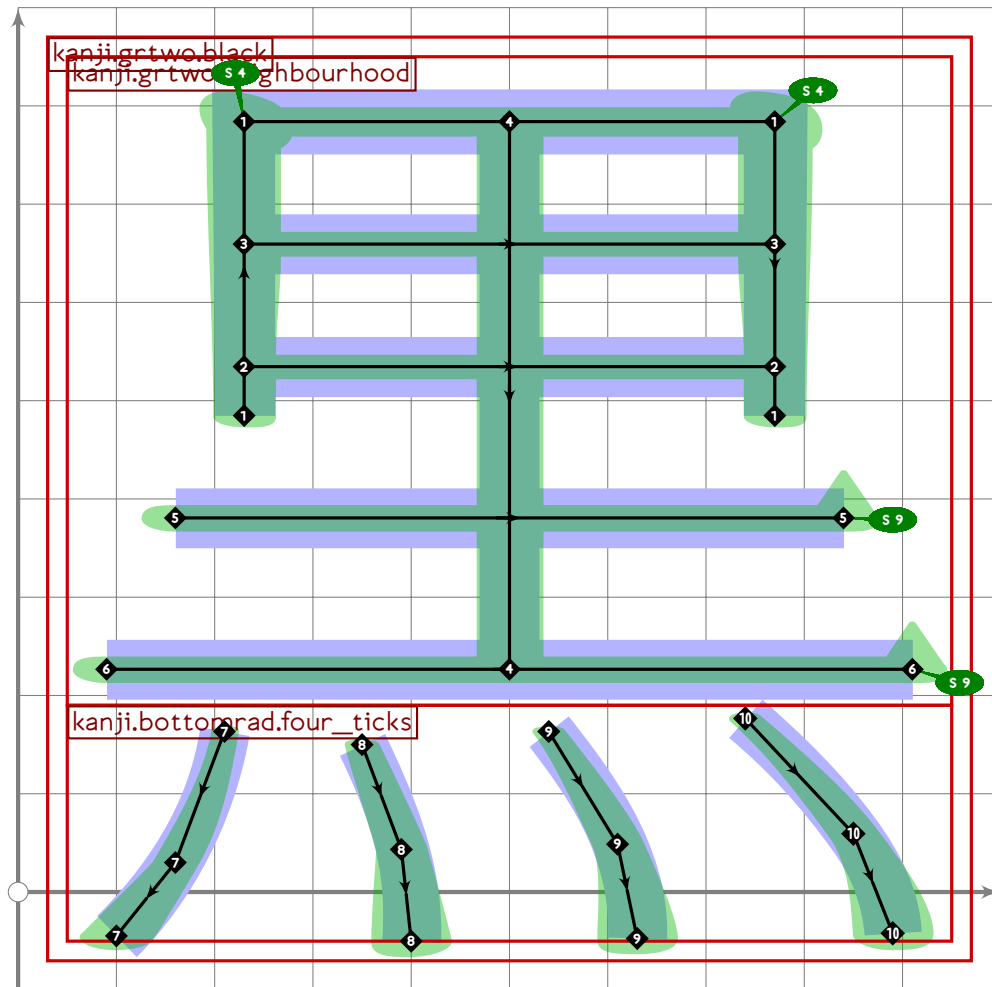

59
60 endfont;
61
62 

---


```

tsuku-9e.mp

```
1 %  
2 % Unicode page 9e (Kanji) for Tsukurimashou  
3 % Copyright (C) 2011 Matthew Skala  
4 %  
5-29 [Standard copyright notice]  
30  
31 _____  
32  
33 beginfont  
34  
35 % AUTODEPS  
36 input bottomrad.mp;  
37 input buildkanji.mp;  
38 input gradetwo.mp;  
39 input radical.mp;  
40  
41 _____
```

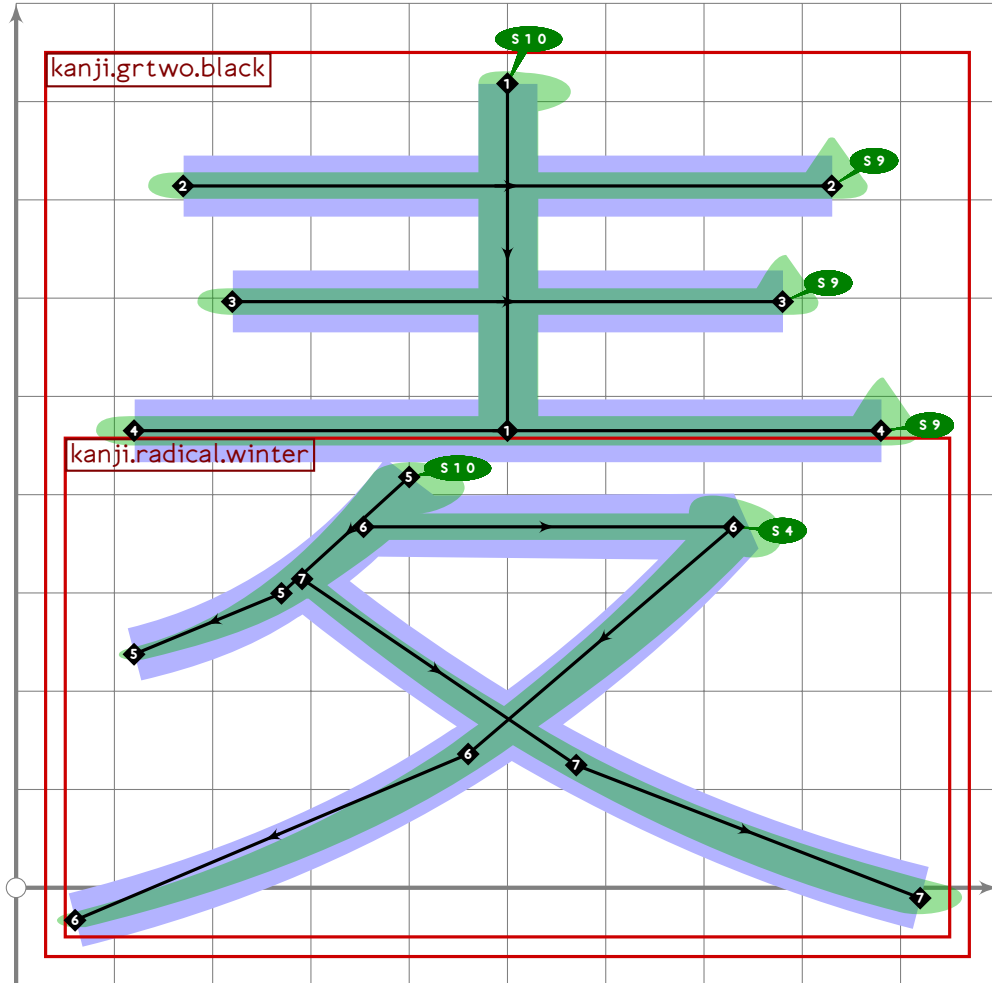


```
42  
43 vardef tsu_curve.kanji.grtwo.black =
```

```

44 push_pbox_toexpand("kanji.grtwo.black");
45 build_kanji.tb(190,0)
46 (tsu_curve.kanji.grtwo.neighbourhood)
47 (tsu_curve.kanji.bottomrad.four_ticks);
48 expand_pbox;
49 endif;

```



```

50
51 vardef tsu_curve.kanji.grtwo.wheat =
52 push_pbox_toexpand("kanji.grtwo.black");
53 build_kanji.level(build_kanji.tb(450,15)
54 (push_stroke((500,780)-(500,0),
55 (1.5,1.5)-(1.4,1.4));
56 set_boserif(0,0,10);
57 push_stroke((170,550)-(830,550),
58 (1.6,1.6)-(1.6,1.6));
59 set_boserif(0,1,9);
60 push_stroke((220,290)-(780,290),
61 (1.6,1.6)-(1.6,1.6));
62 set_boserif(0,1,9);
63 push_stroke((120,0)-(880,0),
64 (1.7,1.7)-(1.7,1.7));

```

```
65     set_boserif(0,1,9))
66     (tsu_curve.kanji.radical.winter));
67     expand_pbox;
68 enddef;
69
70 

---


71
72 % baku/mugi "wheat"
73 begintsuglyph("uni9EA6",166); [see page 1638]
74     tsu_curve.kanji.grtwo.wheat;
75     tsu_render;
76 endtsuglyph;
77
78 % koku/kuro "black"
79 begintsuglyph("uni9ED2",210); [see page 1637]
80     tsu_curve.kanji.grtwo.black;
81     tsu_render;
82 endtsuglyph;
83
84 

---


85
86 endfont;
87
88 

---


```


Part VI

U+A000 to U+10FFFF

tsukuf7.mp

```
1 %
2 % Unicode page F7 (Adobe PUA) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---

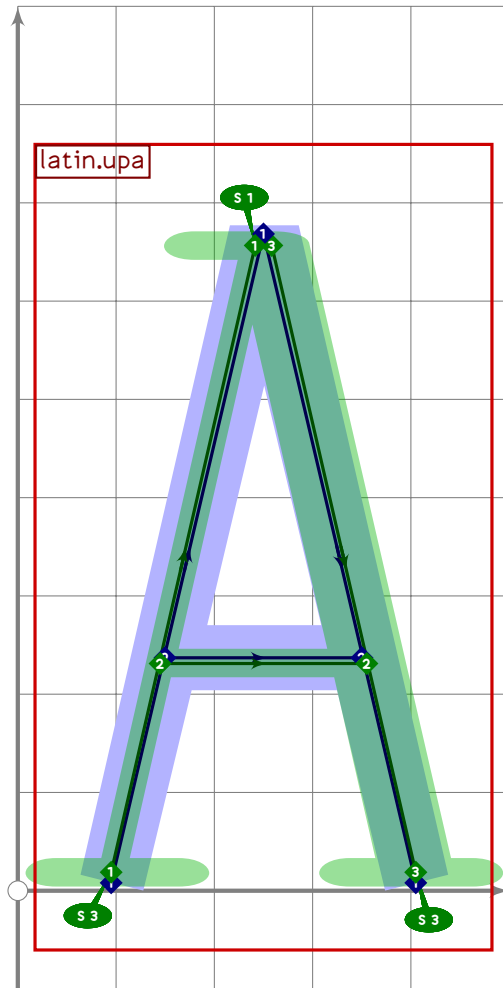

32
33 beginfont
34
35 input latin-intro.mp;
36
37 % AUTODEPS
38 input latin.mp;
39
40 latin_wide_sc_top:=0.4[latin_wide_xheight,latin_wide_top];
41
42 transform tsu_xf.sc;
43
44 (0,latin_wide_low_h) transformed tsu_xf.sc = (20,latin_wide_low_h);
45 (1000,latin_wide_low_h) transformed tsu_xf.sc = (980,latin_wide_low_h);
46 (0,latin_wide_top) transformed tsu_xf.sc = (20,latin_wide_sc_top);
47
48 

---

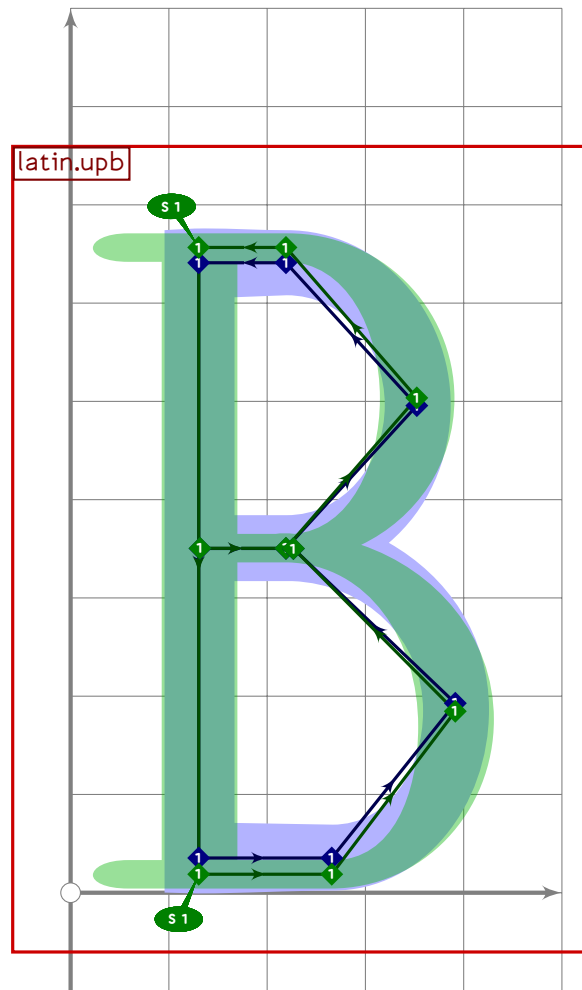

49
```

Latin Small Caps

```
50 % LATIN SMALL CAPS
51
52 % WARNING changing rescale setting
53 tsu_rescale_half;
54
```



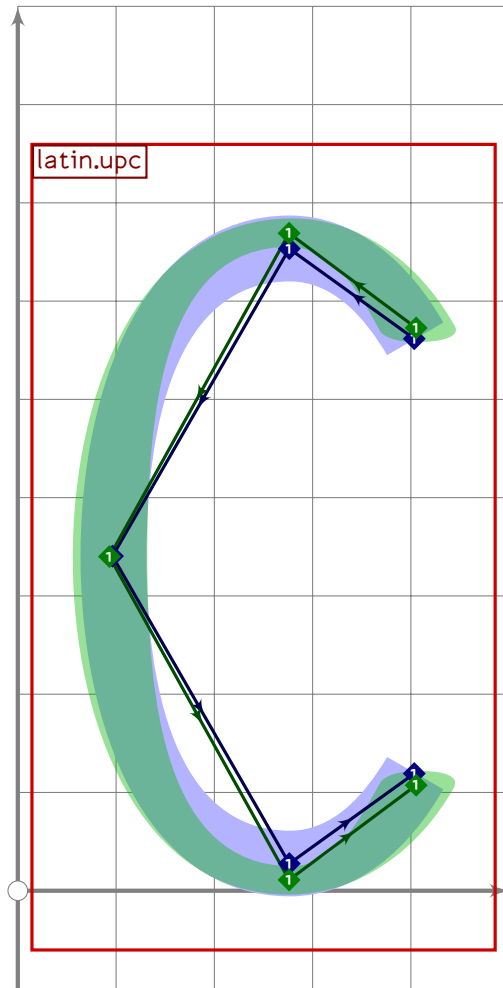
```
55 % A
56 begintuglyph("uniF761";97);
57 tsu_xform(tsu_xf.sc)(tsu_curve.latin.upa);
58 tsu_render;
59 endtuglyph;
60
```



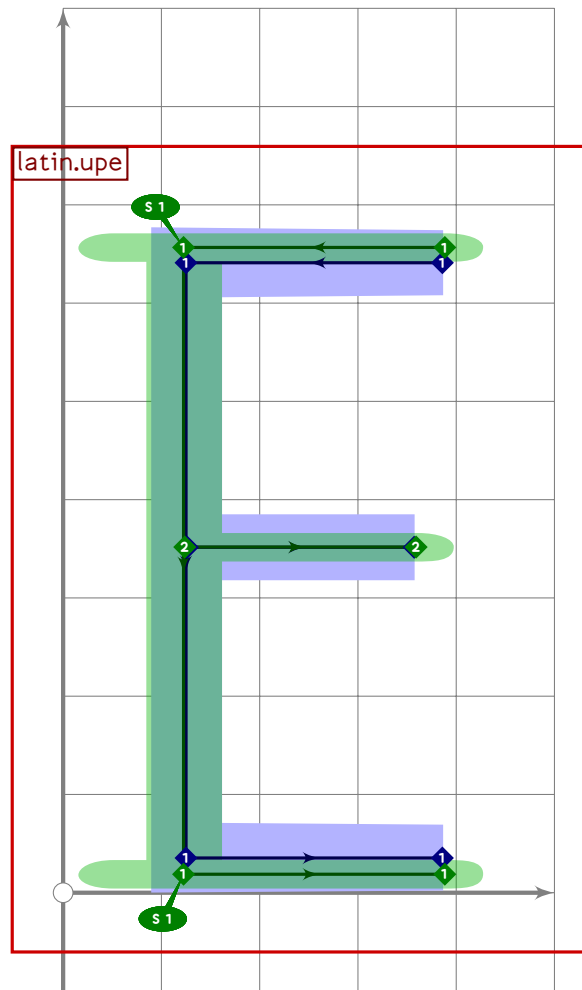
```

61 % B
62 begint Suglyph("uniF762";98);
63   tsu_xform(tsu_xf.sc)(tsu_curve.latin.upb);
64   tsu_render;
65 endtsuglyph;
66

```



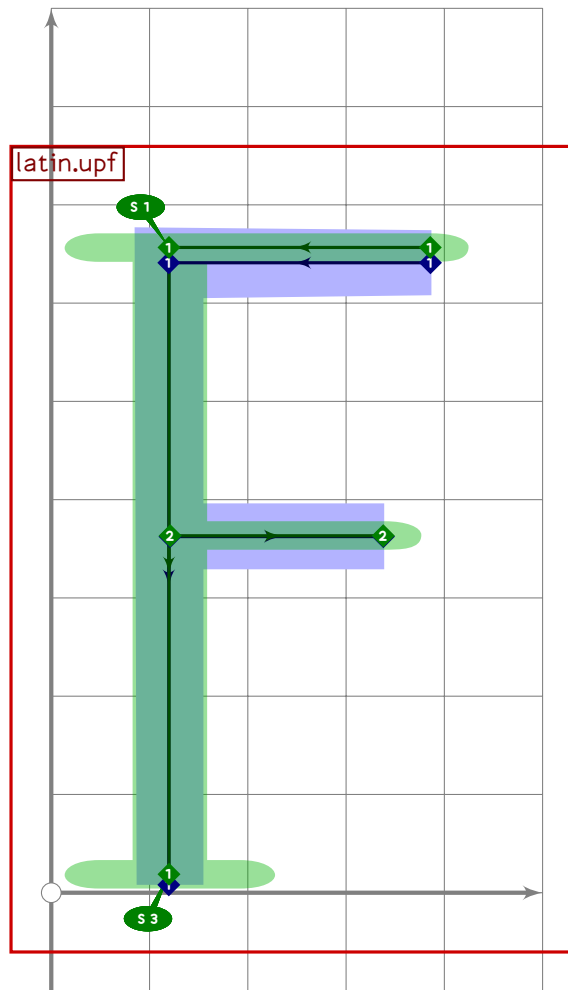
```
67 % C
68 beginsuglyph("uniF763";99);
69 tsu_xform(tsu_xf.sc)(tsu_curve.latin.upc);
70 tsu_render;
71 endsuglyph;
72
```

```

79 % E
80 begint Suglyph("uniF765";101);
81   tsu_xform(tsu_xf.sc)(tsu_curve.latin.upe);
82   tsu_render;
83   endtsuglyph;
84

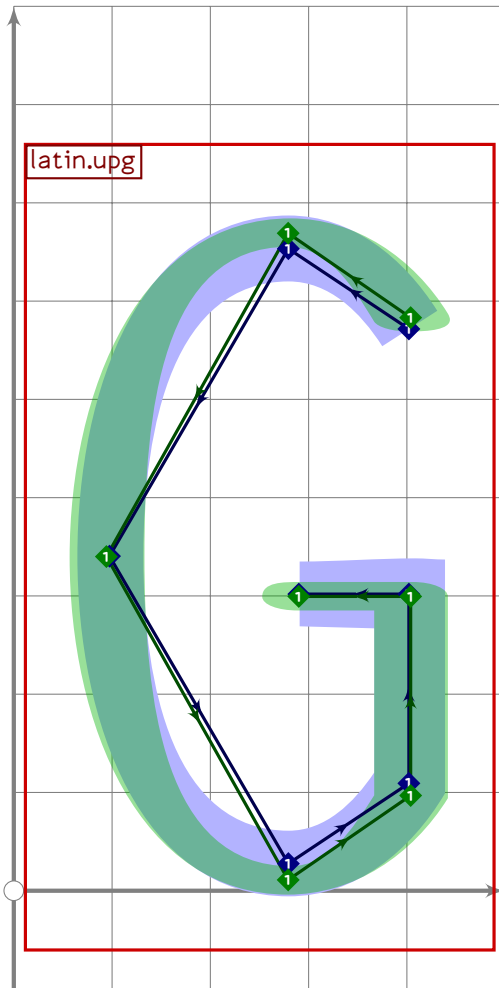
```

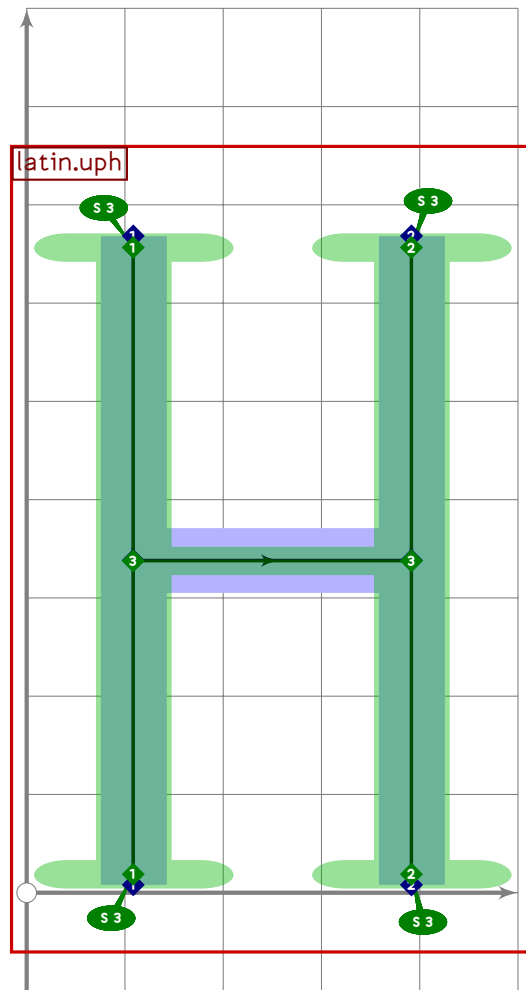
```

85 % F
86 begint Suglyph("uniF766";102);
87 tsu_xform(tsu_xf.sc)(tsu_curve.latin.upf);
88 tsu_render;
89 endtsuglyph;
90

```



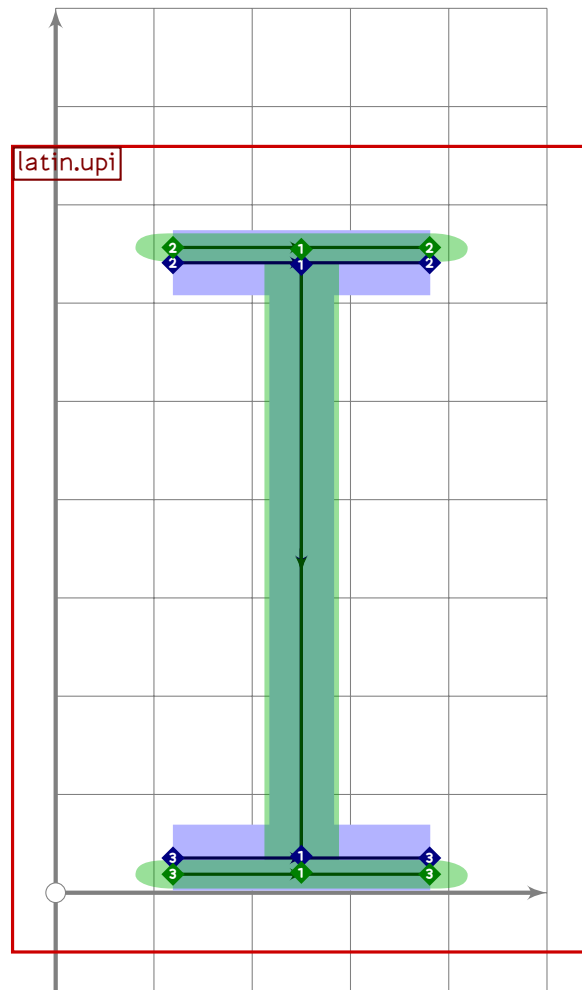
```
91 % G
92 begintsuglyph("uniF767";103);
93 tsu_xform(tsu_xf.sc)(tsu_curve.latin.upg);
94 tsu_render;
95 endtsuglyph;
96
```



```

97 % H
98 begint Suglyph("uniF768",104);
99   tsu_xform(tsu_xf.sc)(tsu_curve.latin.uph);
100   tsu_render;
101   endtsuglyph;
102

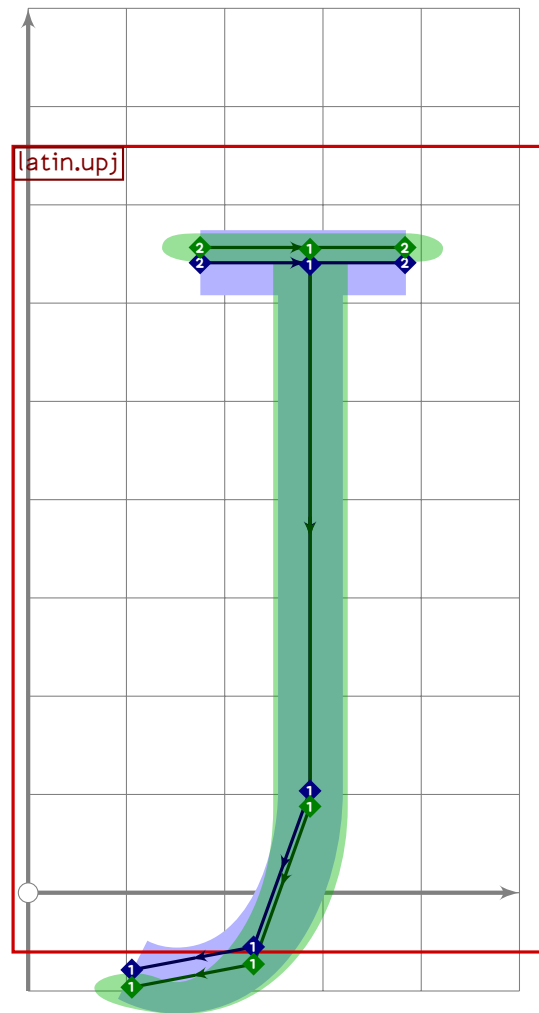
```



```

103 % I
104 begint Suglyph("uniF769";105);
105   tsu_xform(tsu_xf.sc)(tsu_curve.latin.upi);
106   tsu_render;
107 endtsuglyph;
108

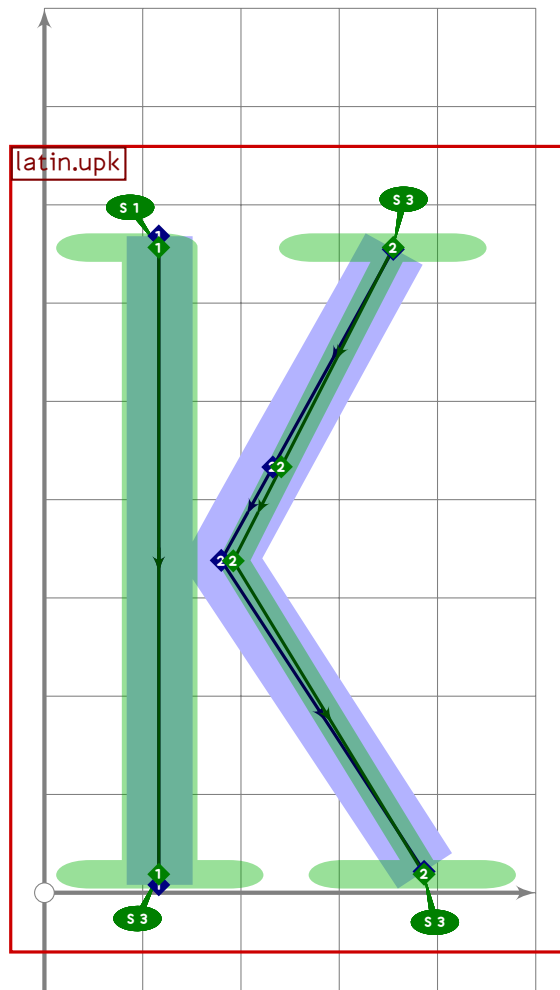
```



```

109 % J
110 beginsuglyph("uniF76A";106);
111 tsu_xform(tsu_xf.sc)(tsu_curve.latin.upj);
112 tsu_render;
113 endsuglyph;
114

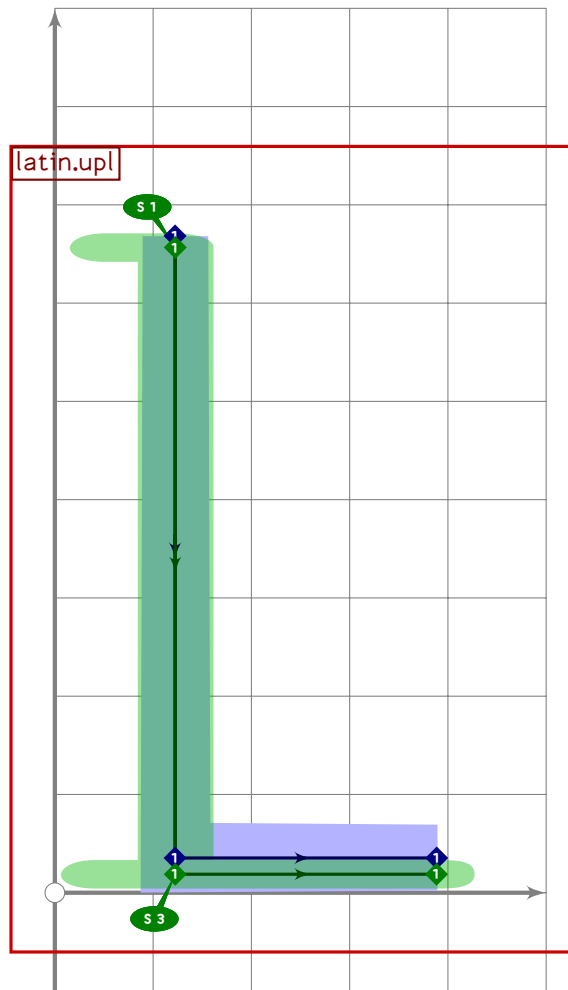
```



```

115 % K
116 beginsuglyph("uniF76B";107);
117 tsu_xform(tsu_xf.sc)(tsu_curve.latin.upk);
118 tsu_render;
119 endsuglyph;
120

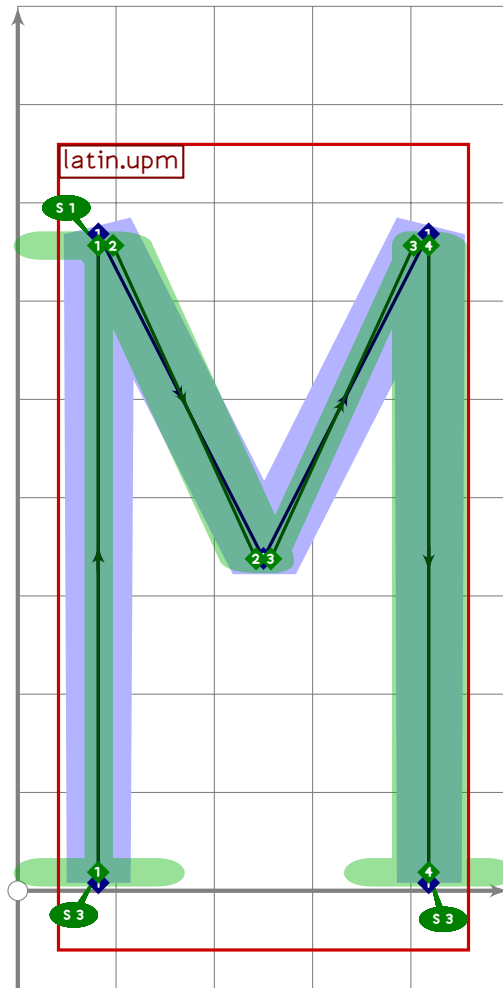
```



```

121 % L
122 begint Suglyph("uniF76C",108);
123   tsu_xform(tsu_xf.sc)(tsu_curve.latin.upl);
124   tsu_render;
125 endtsuglyph;
126

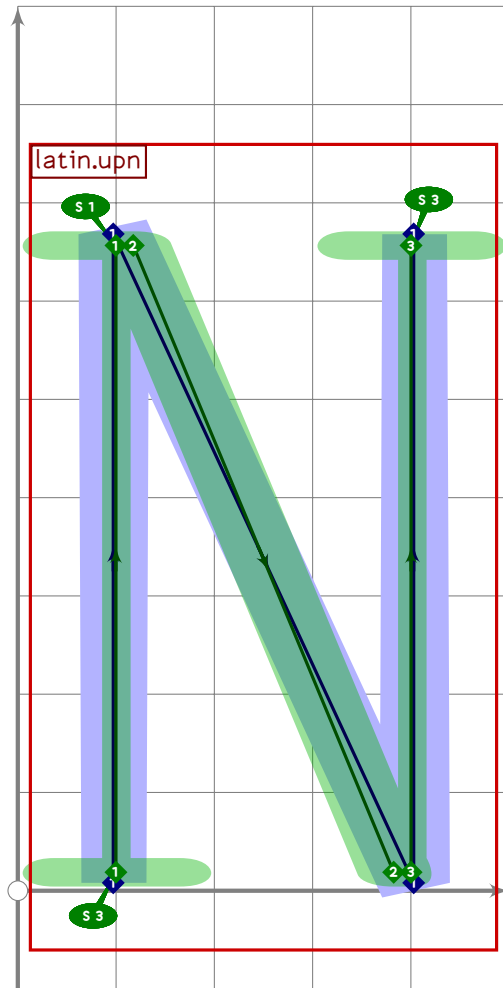
```



```

127 % M
128 begintuglyph("uniF76D",109);
129 tsu_xform(tsu_xf.sc)(tsu_curve.latin.upm);
130 tsu_render;
131 endtuglyph;
132

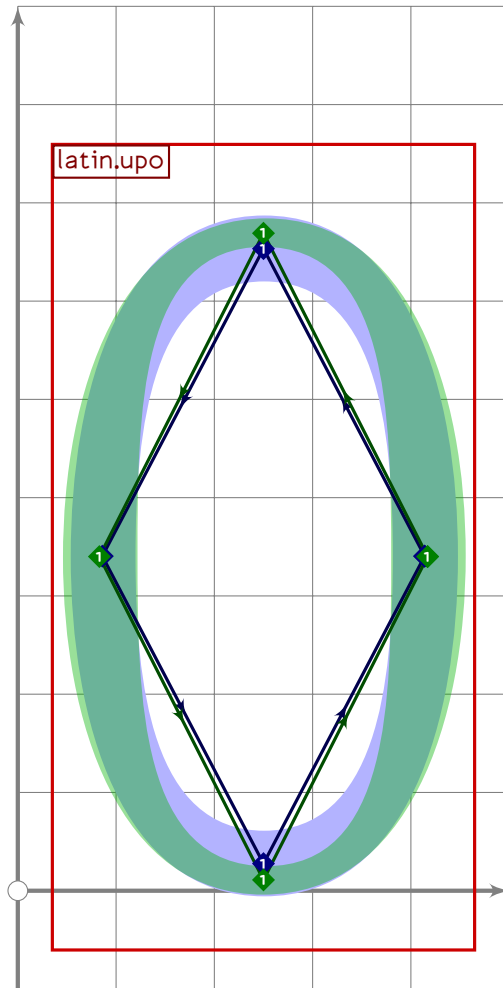
```

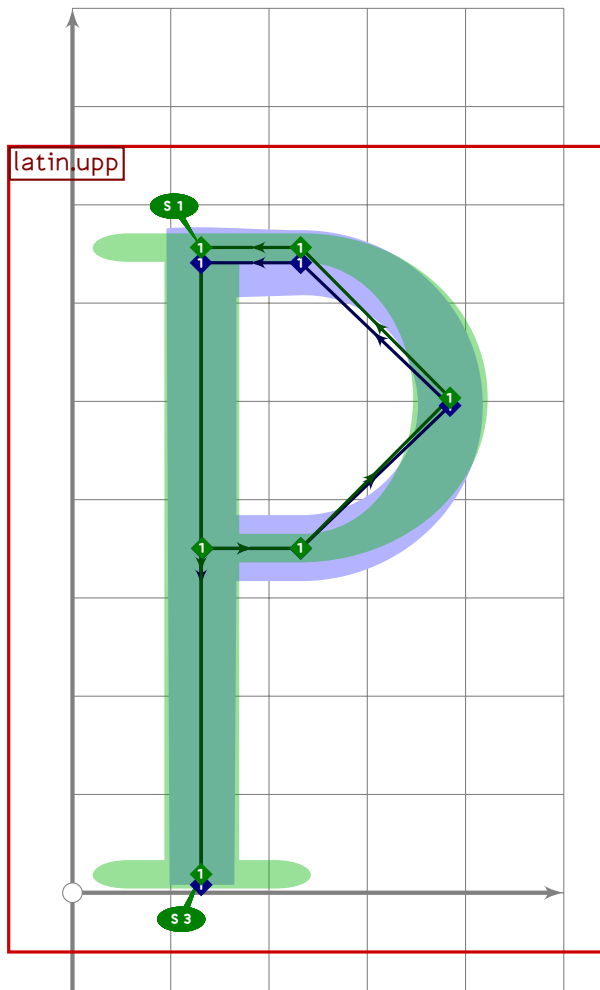
```

133 % N
134 beginsuglyph("uniF76E";110);
135 tsu_xform(tsu_xf.sc)(tsu_curve.latin.upn);
136 tsu_render;
137 endsuglyph;
138

```



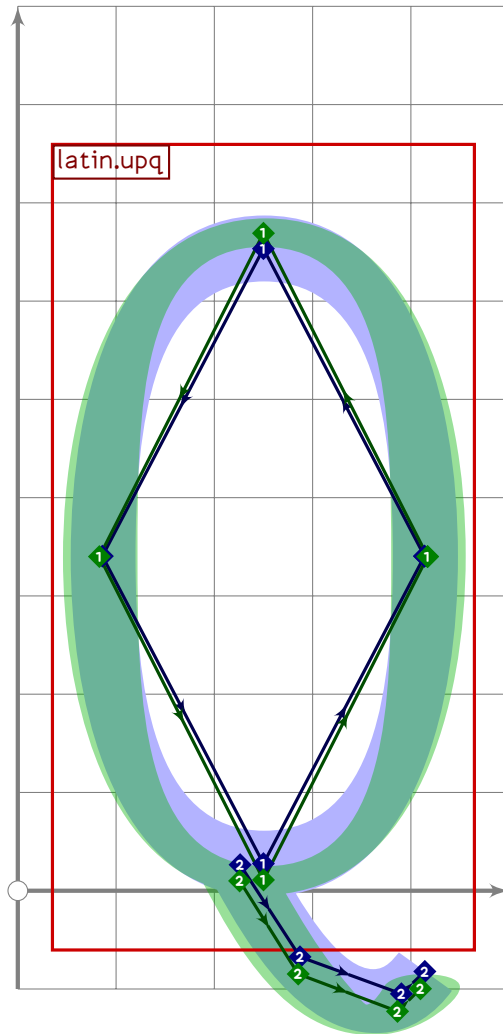
```
139 % O
140 beginsuglyph("uniF76F",111);
141 tsu_xform(tsu_xf.sc)(tsu_curve.latin.upo);
142 tsu_render;
143 endsuglyph;
144
```



```

145 % P
146 begint Suglyph("uniF770",112);
147 tsu_xform(tsu_xf.sc)(tsu_curve.latin.upp);
148 tsu_render;
149 endtsuglyph;
150

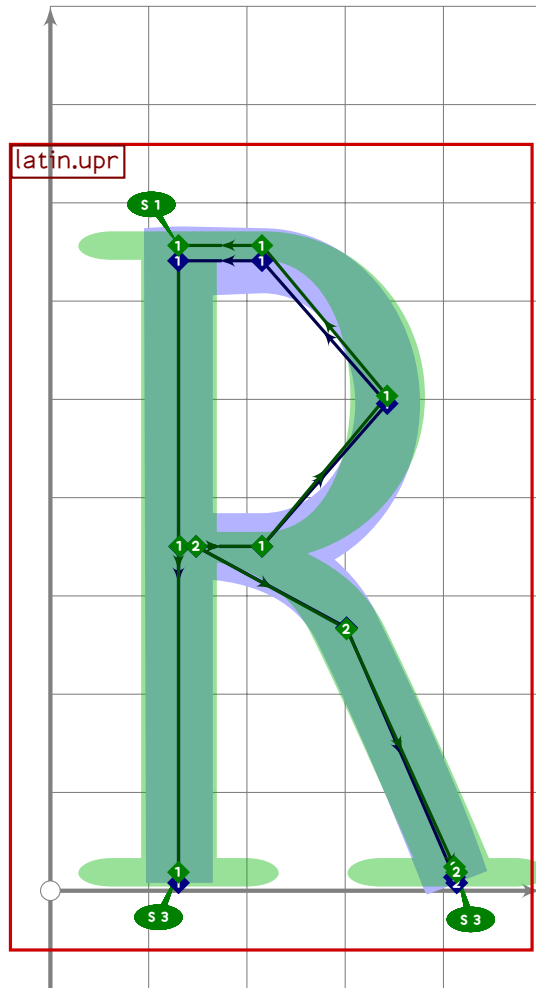
```



```

151 % Q
152 beginsuglyph("uniF771";113);
153   tsu_xform(tsu_xf.sc)(tsu_curve.latin.upq);
154   tsu_render;
155 endsuglyph;
156

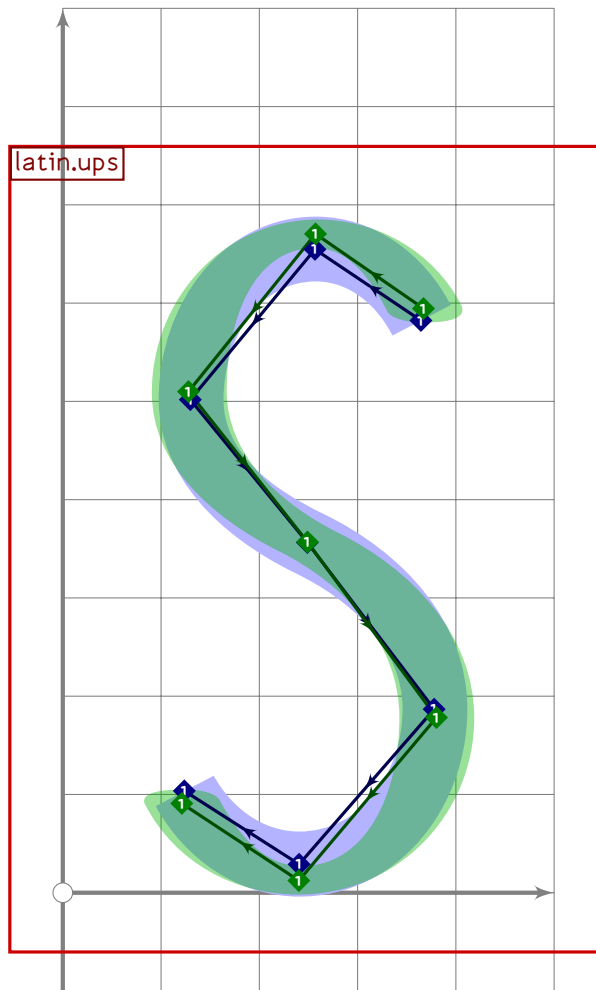
```



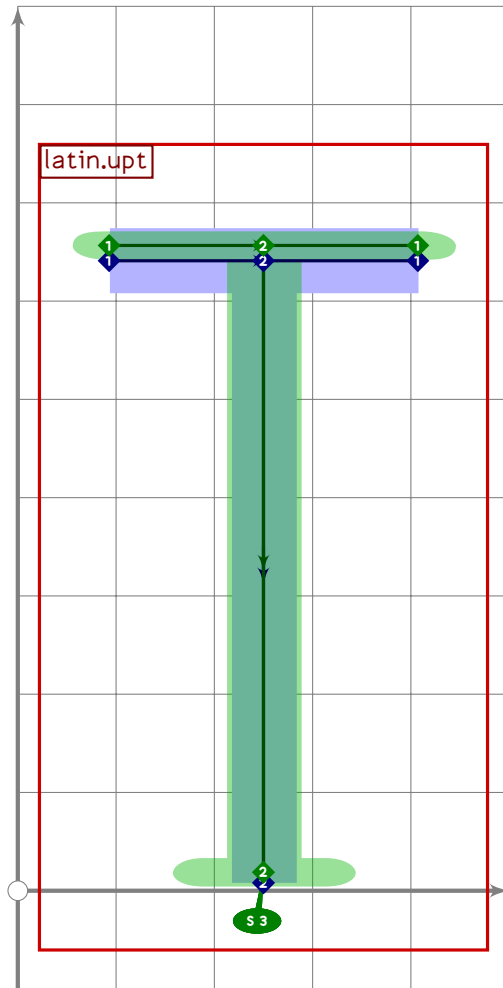
```

157 % R
158 begint Suglyph("uniF772",114);
159   tsu_xform(tsu_xf.sc)(tsu_curve.latin.upr);
160   tsu_render;
161   endtsuglyph;
162

```



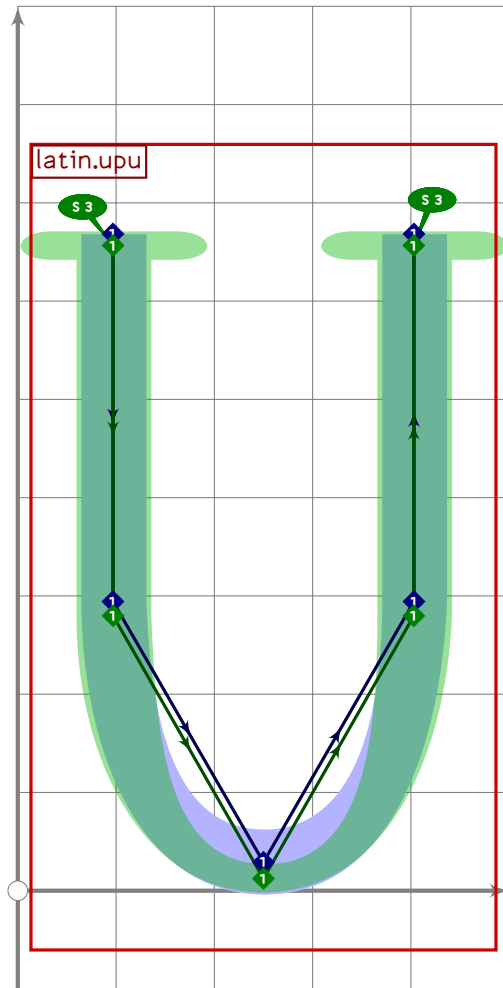
```
163 % S
164 begintsuglyph("uniF773";115);
165 tsu_xform(tsu_xf.sc)(tsu_curve.latin.ups);
166 tsu_render;
167 endtsuglyph;
168
```



```

169 % T
170 begint Suglyph("uniF774";116);
171 tsu_xform(tsu_xf.sc)(tsu_curve.latin.upt);
172 tsu_render;
173 endtsuglyph;
174

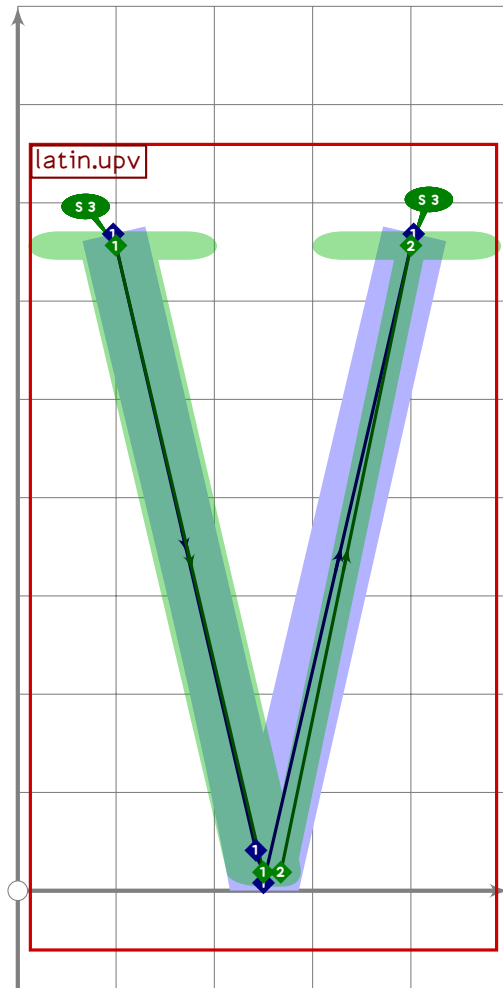
```



```

175 % U
176 begint Suglyph("uniF775";117);
177   tsu_xform(tsu_xf.sc)(tsu_curve.latin.upu);
178   tsu_render;
179 endtsuglyph;
180

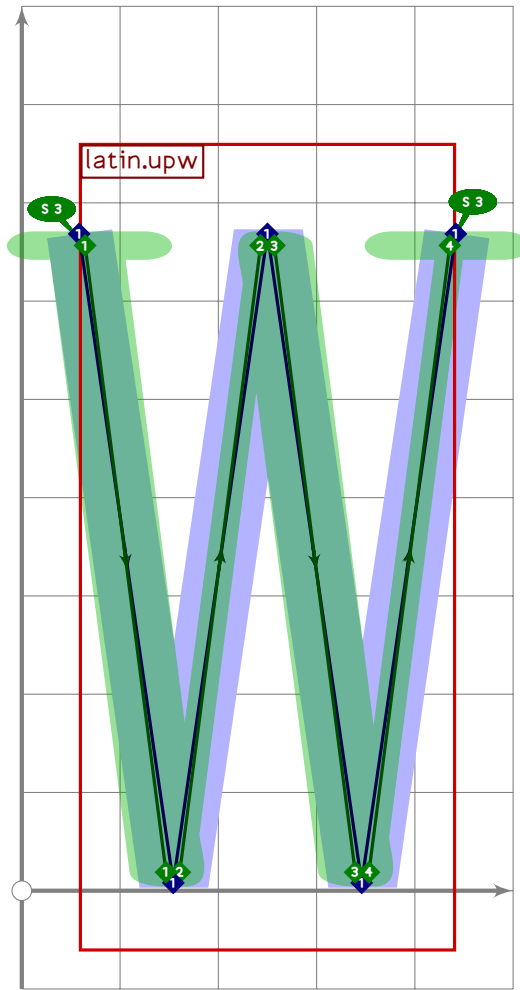
```

```

181 % V
182 begint Suglyph("uniF776";118);
183   tsu_xform(tsu_xf.sc)(tsu_curve.latin.upv);
184   tsu_render;
185 endtsuglyph;
186

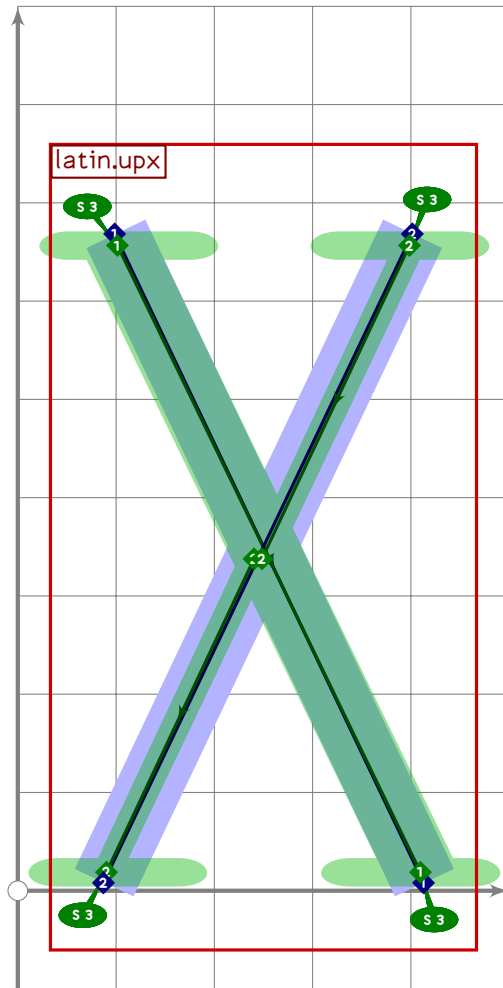
```



```

187 % W
188 beginsuglyph("uniF777",119);
189 tsu_xform(tsu_xf.sc)(tsu_curve.latin.upw);
190 tsu_render;
191 endsuglyph;
192

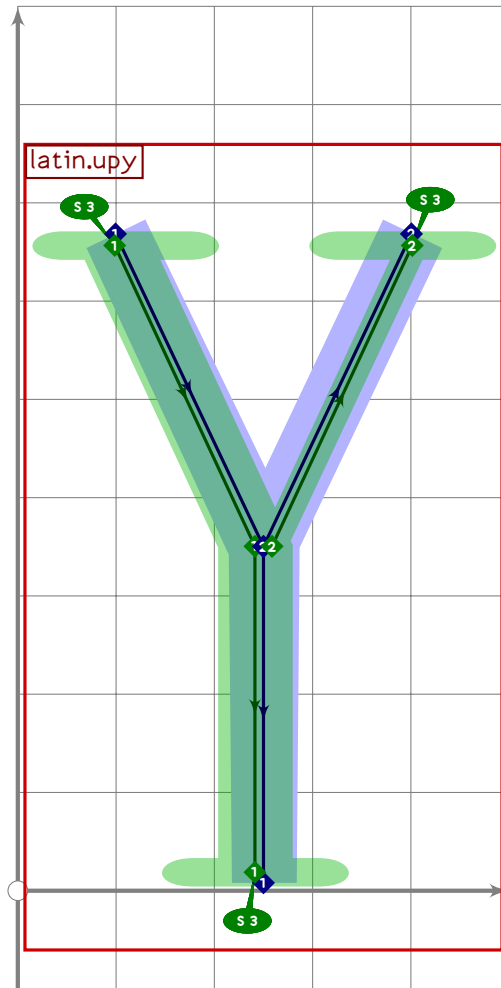
```



```

193 % X
194 beginsuglyph("uniF778",120);
195 tsu_xform(tsu_xf.sc)(tsu_curve.latin.upx);
196 tsu_render;
197 endsuglyph;
198

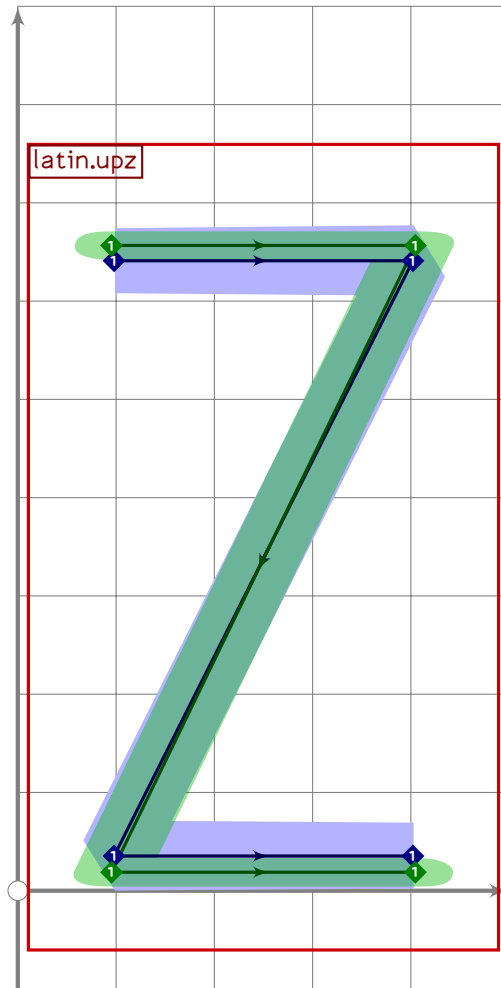
```



```

199 % Y
200 begint Suglyph("uniF779";121);
201 tsu_xform(tsu_xf.sc)(tsu_curve.latin.upy);
202 tsu_render;
203 endtsuglyph;
204

```



```
205 % Z
206 begint Suglyph("uniF77A";122);
207   tsu_xform(tsu_xf.sc)(tsu_curve.latin.upz);
208   tsu_render;
209 endsuglyph;
210
211 _____
212
213 endfont;
214
215 _____
```

tsuku-ff.mp

```
1 %
2 % Unicode page FF (Full-width and Half-width Forms) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---

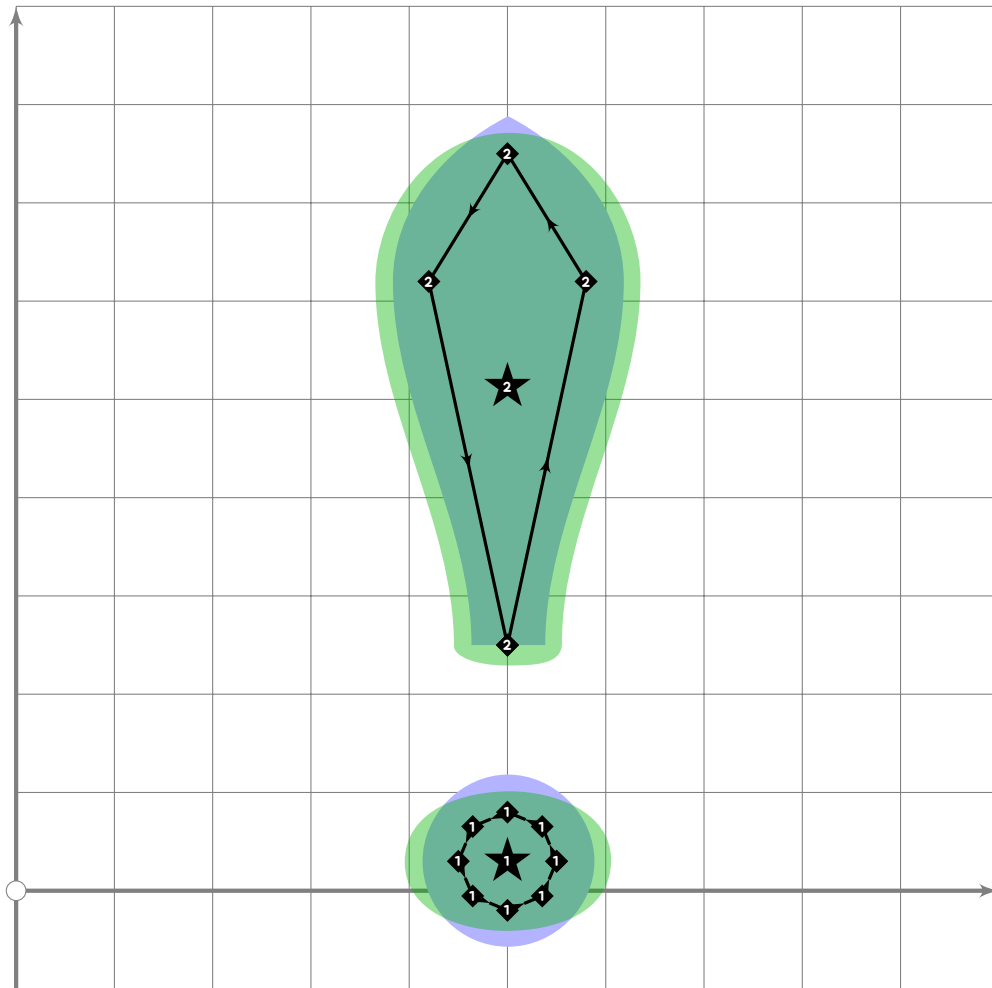

32
33 beginfont
34
35 input latin-intro.mp;
36
37 % AUTODEPS
38 input accent.mp;
39 input dakuten.mp;
40 input katakana.mp;
41 input latin.mp;
42 input numerals.mp;
43 input punct.mp;
44
45 

---


46
```

Full-Width Forms

```
47 % FULL-WIDTH FORMS
48
49 % WARNING this code is substantially duplicated in tsuku-00; just
50 % enough differences to make sharing impractical
51
```



```

52 % exclamation point
53 begintsuglyph("uniFF01";1);
54   if tsu_pbrush_size>=tsu_punct_size:
55     push_lcblob(fullcircle
56       xscaled (tsu_punct_size*tsu_pbrush_size)
57       yscaled (tsu_punct_size*tsu_pbrush_size*tsu_pbrush_shape)
58       rotated tsu_pbrush_angle
59       shifted (500,30));
60   else:
61     push_stroke(fullcircle scaled tsu_punct_size shifted (500,30),
62       (2,2)-(2,2)-(2,2)-(2,2)-cycle);
63     if tsu_pbrush_size>=3:
64       push_lcblob(get_strokep(0));
65     fi;
66   fi;
67
68   push_stroke((500,250){up}..(580,620){up}..{curl 1}(500,750){curl 1}..
69     (420,620){down}..{down}(500,250),
70     (2,2)-(2,2)-(2,2)-(2,2)-(2,2));
71
72   if tsu_pbrush_size>=30:

```

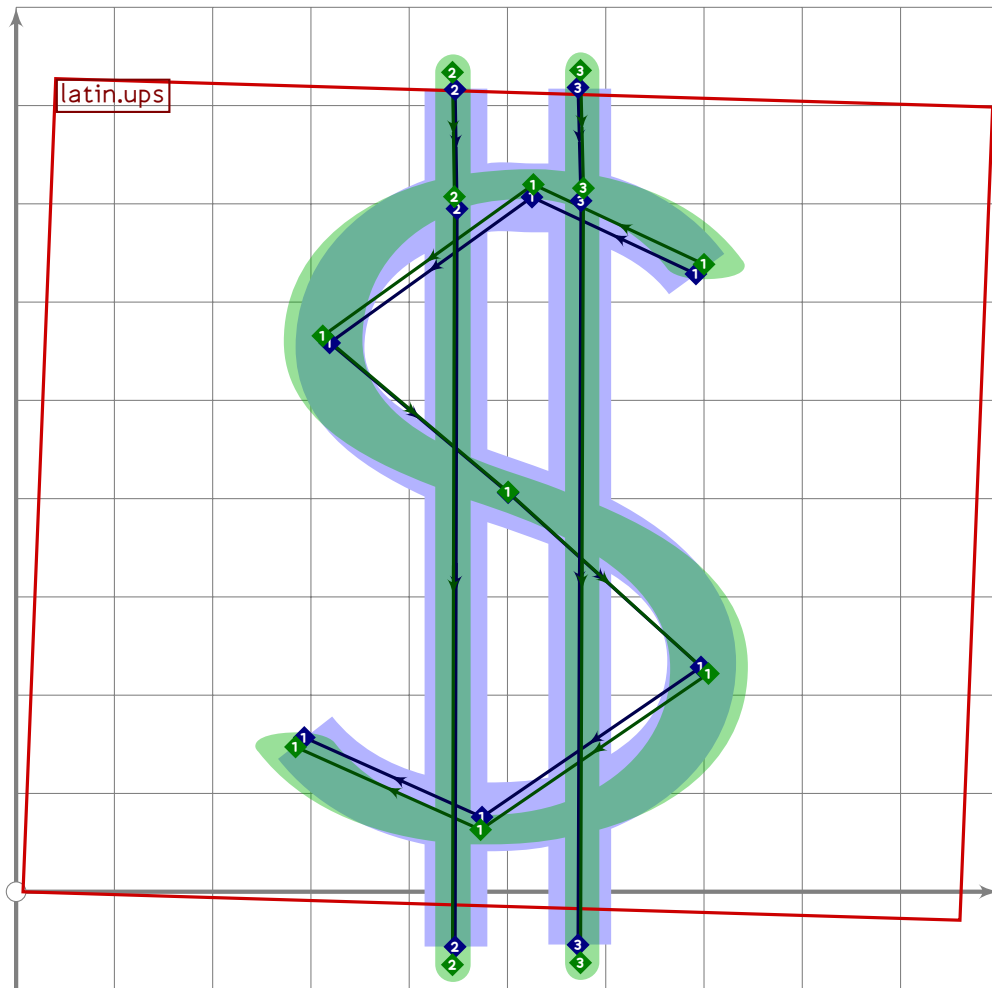
```

73     push_lcblob((subpath (0,1,3,9) of get_stroke(0))-cycle);
74     fi;
75     tsu_render;
76 endtsuglyph;
77
78 % ASCII (neither left nor right) quotation mark
79 begint Suglyph("uniFF02",2);
80 tsu_curve.punct.asciiquote;
81 tsu_render;
82 endtsuglyph;
83
84 % number sign
85 begint Suglyph("uniFF03",3);
86 tsu_curve.punct.numbersign;
87 tsu_render;
88 endtsuglyph;
89

```

[see page 258]

[see page 281]



```

90 % dollar sign
91 begint Suglyph("uniFF04",4);
92 tsu_xform(identity shifted -centre_pt
93     rotated -2 xyscaled (1.06,0.92) shifted centre_pt)(tsu_curve.latin.ups);

```



```

94
95 numeric x[],y[];
96 x1=x2=0.38[xpart llcorner get_strokep(0),xpart lrcorner get_strokep(0)];
97 x3=x4=0.69[xpart llcorner get_strokep(0),xpart lrcorner get_strokep(0)];
98 y1=y3=1.12[latin_wide_low_r,latin_wide_high_r];
99 y2=y4=(-0.15)[latin_wide_low_r,latin_wide_high_r];
100
101 z5=(get_strokep(0) intersectionpoint (z1-z2))*(2,-1);
102 push_stroke((z1-z5-z2) shifted (0,-1),
103   (2,2)-(2,2)-(2,2));
104 set_bosize(0,85);
105 set_boalternate(0);
106
107 z6=(get_strokep(-1) intersectionpoint (z3-z4))*(3,1);
108 push_stroke((z3-z6-z4) shifted (0,1),
109   (2,2)-(2,2)-(2,2));
110 set_bosize(0,85);
111 set_boalternate(0);
112
113 tsu_render;
114 endtsuglyph;
115
116 % percent
117 begintsuglyph("uniFF05",5); [see page 285]
118 tsu_curve.punct.percent;
119 tsu_render;
120 endtsuglyph;
121
122 % ampersand
123 begintsuglyph("uniFF06",6); [see page 257]
124 tsu_curve.punct.ampersand;
125 tsu_render;
126 endtsuglyph;
127

```



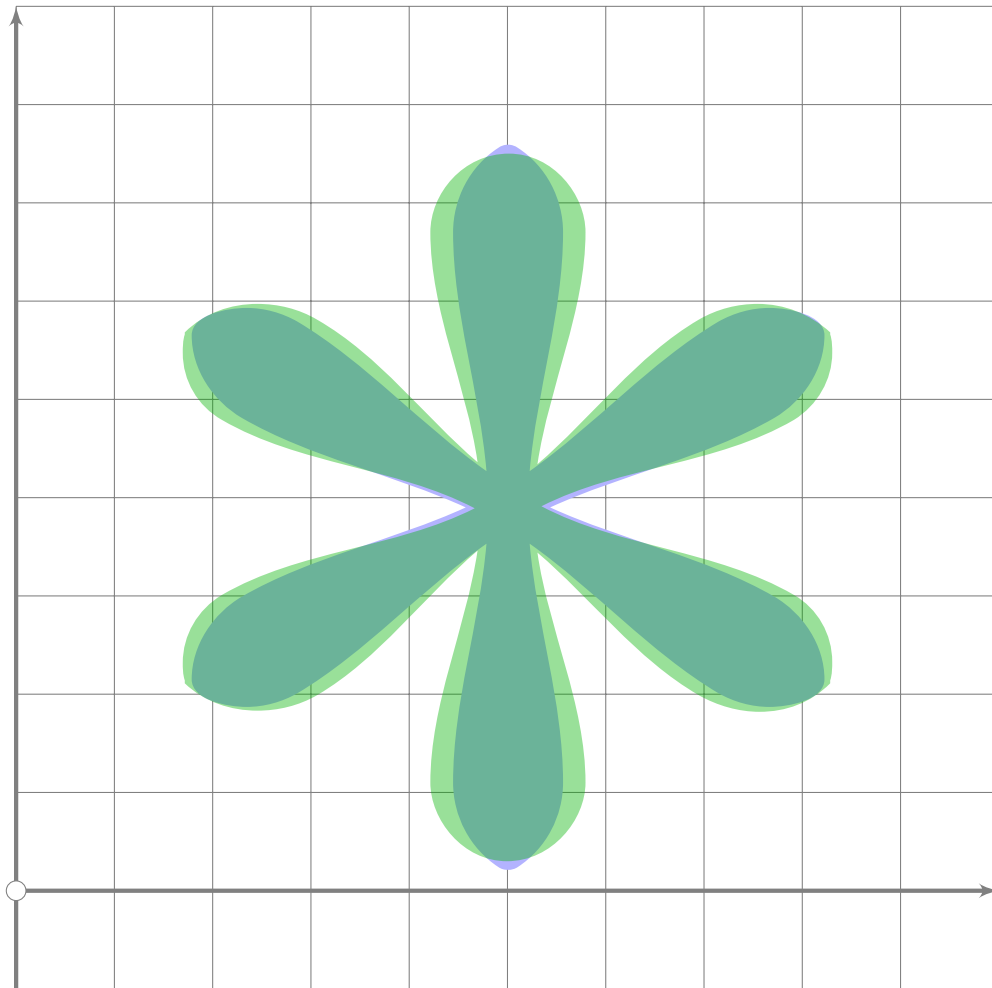
```

128 % apostrophe
129 begintsuglyph("uniFF07",7);
130 tsu_curve.punct.make_comma((480,vmetric(0.94)),0);
131 tsu_render;
132 endsuglyph;
133
134 % left and right parentheses
135 begintsuglyph("uniFF08",8);
136 tsu_curve.punct.paren_left;
137 tsu_render;
138 endsuglyph;
139 begintsuglyph("uniFF09",9);
140 tsu_curve.punct.paren_right;
141 tsu_render;
142 endsuglyph;
143

```

[see page 283]

[see page 284]

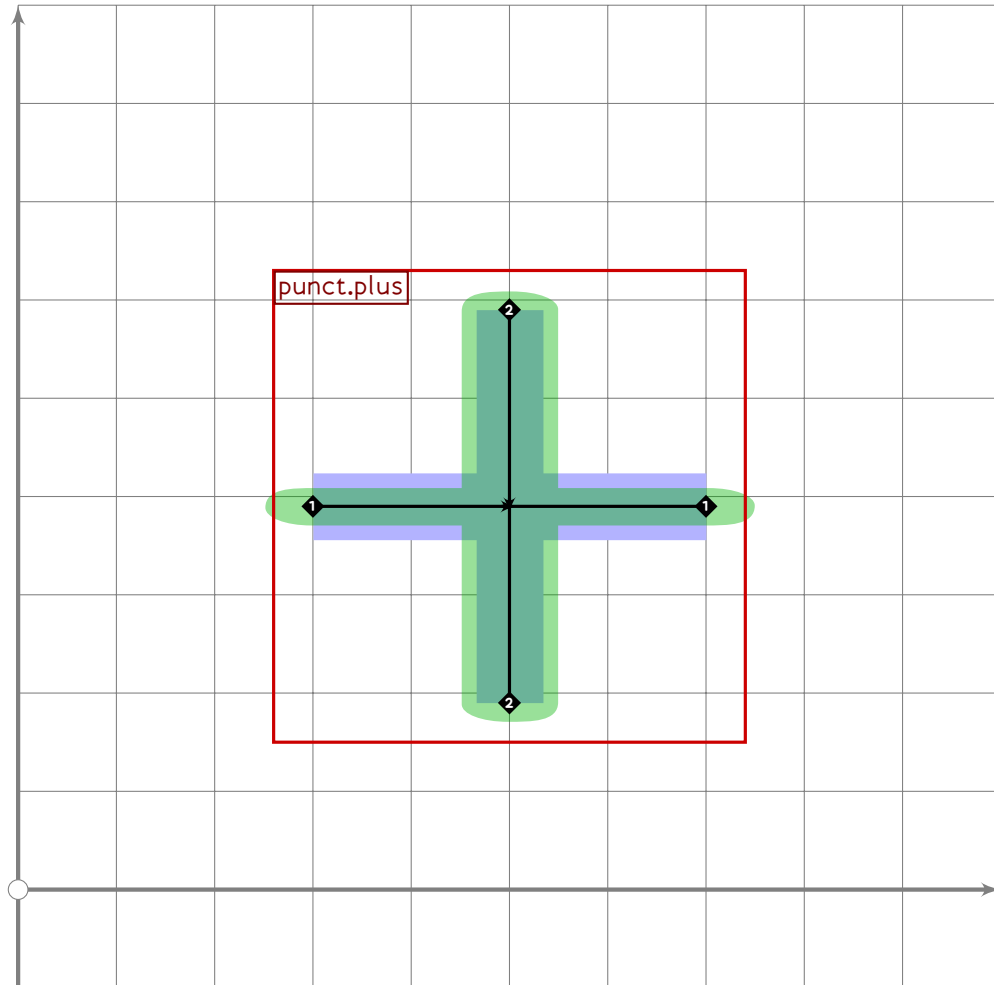


```

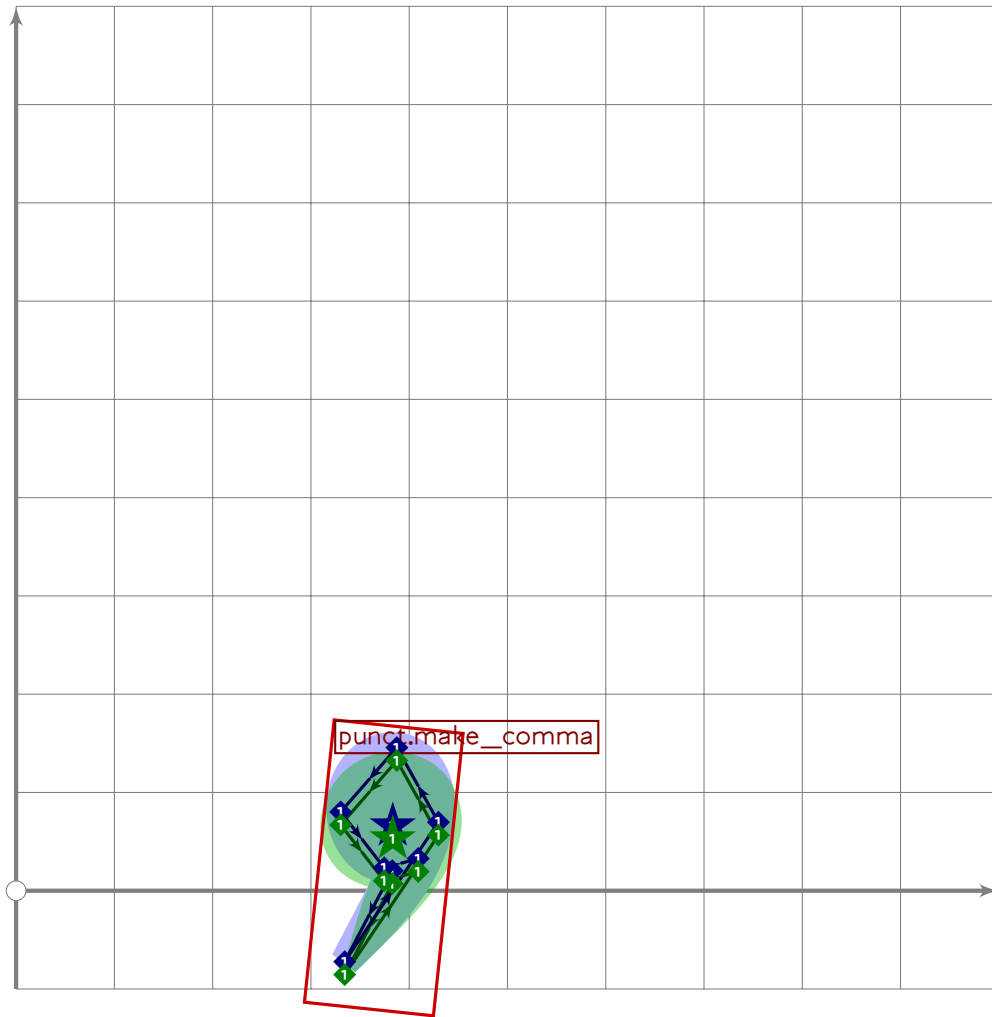
144 % asterisk
145 begintsuglyph("uniFF0A",10);
146   begingroup
147     path lobe,glyph[];
148
149     lobe:=(1,0){up}..(tsu_brush_max*tsu_punct_size/2,280){up}
150       ..{curl 1}(0,350){curl 1}..(-tsu_brush_max*tsu_punct_size/2,280){down};
151     lobe:=(lobe..(lobe rotated 180)..cycle) scaled (tsu_punct_size/100);
152
153     default_nib:=fix_nib(50*tsu_brush_max,
154       50*tsu_brush_max*tsu_brush_shape,
155       tsu_brush_angle);
156     pen_stroke()(lobe shifted centre_pt)(glyph1);
157     pen_stroke()(lobe rotated 60 shifted centre_pt)(glyph2);
158     pen_stroke()(lobe rotated 120 shifted centre_pt)(glyph3);
159
160     dangerousFill glyph1.r;
161     dangerousFill glyph2.r;
162     dangerousFill glyph3.r;
163   endgroup;
164 endtsuglyph;

```

165



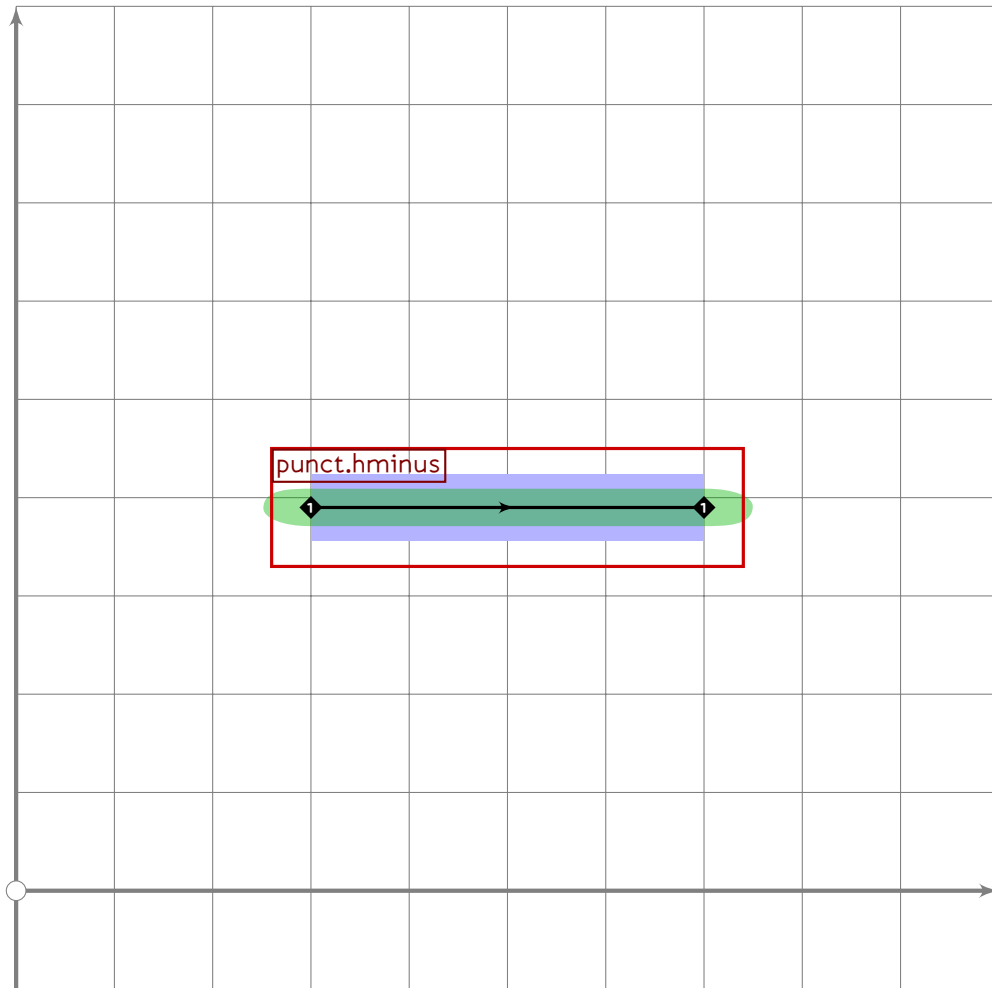
```
166 % plus
167 beginsuglyph("uniFF0B";11);
168   tsu_curve.punct.plus
169     (identity scaled (2*tsu_punct_size) shifted centre_pt);
170   tsu_render;
171 endsuglyph;
172
```



```

173 % comma
174 begintsuglyph("uniFFOC",12);
175 tsu_curve.punct.make_comma((380,vmetric(0.03)),0);
176 tsu_render;
177 endtsuglyph;
178

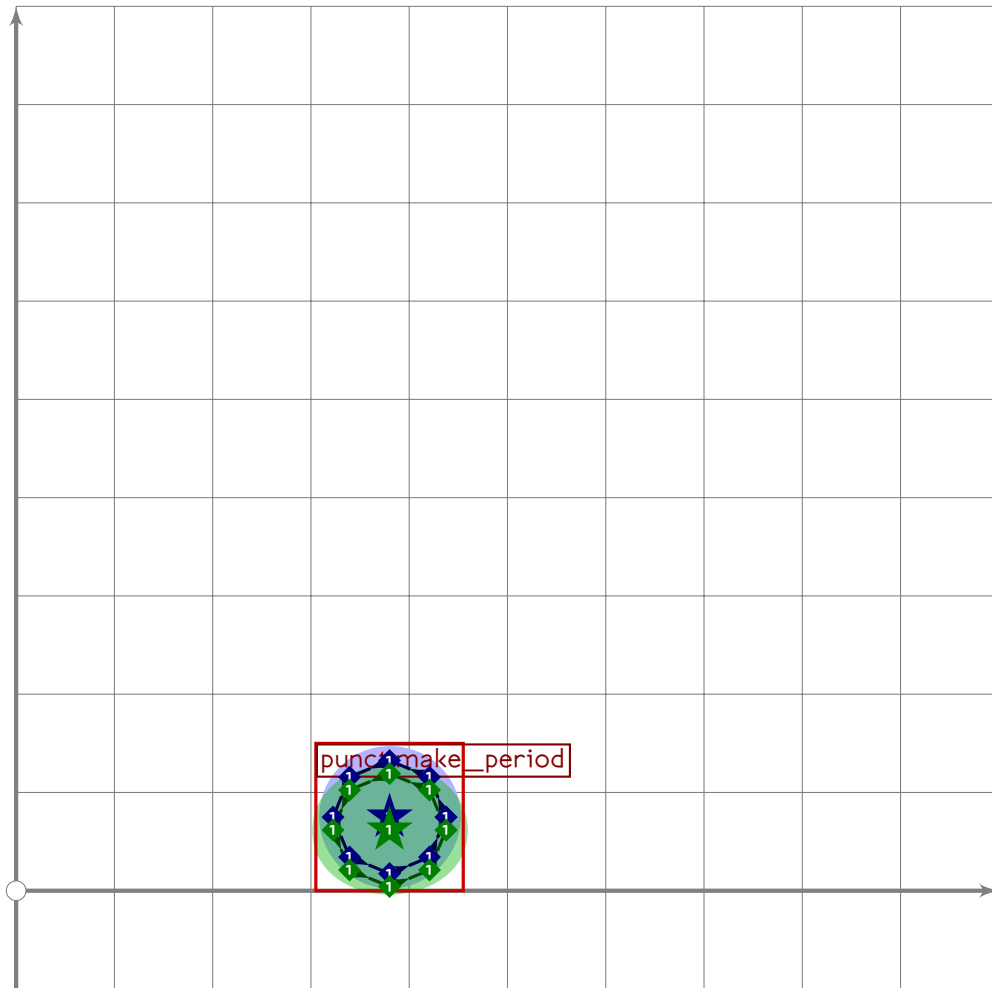
```



```

179 % hyphen-minus
180 begintsuglyph("uniFF0D",13);
181 tsu_curve.punct.hminus
182   (identity scaled (2*tsu_punct_size) shifted centre_pt);
183 tsu_render;
184 endtsuglyph;
185

```



```

186 % period
187 begint Suglyph("uniFF0E";14);
188   tsu_curve.punct.make_period((380,vmetric(0.03)));
189   tsu_render;
190 endtsuglyph;
191
192 % slash
193 begint Suglyph("uniFF0F";15);
194   tsu_curve.punct.slash;
195   tsu_render;
196 endtsuglyph;
197
198 % 0
199 begint Suglyph("uniFF10";16);
200   tsu_curve.numeral.zero;
201   tsu_render;
202 endtsuglyph;
203
204 % 1
205 begint Suglyph("uniFF11";17);
206   tsu_curve.numeral.one;

```

[see page 291]

[see page 229]

[see page 230]

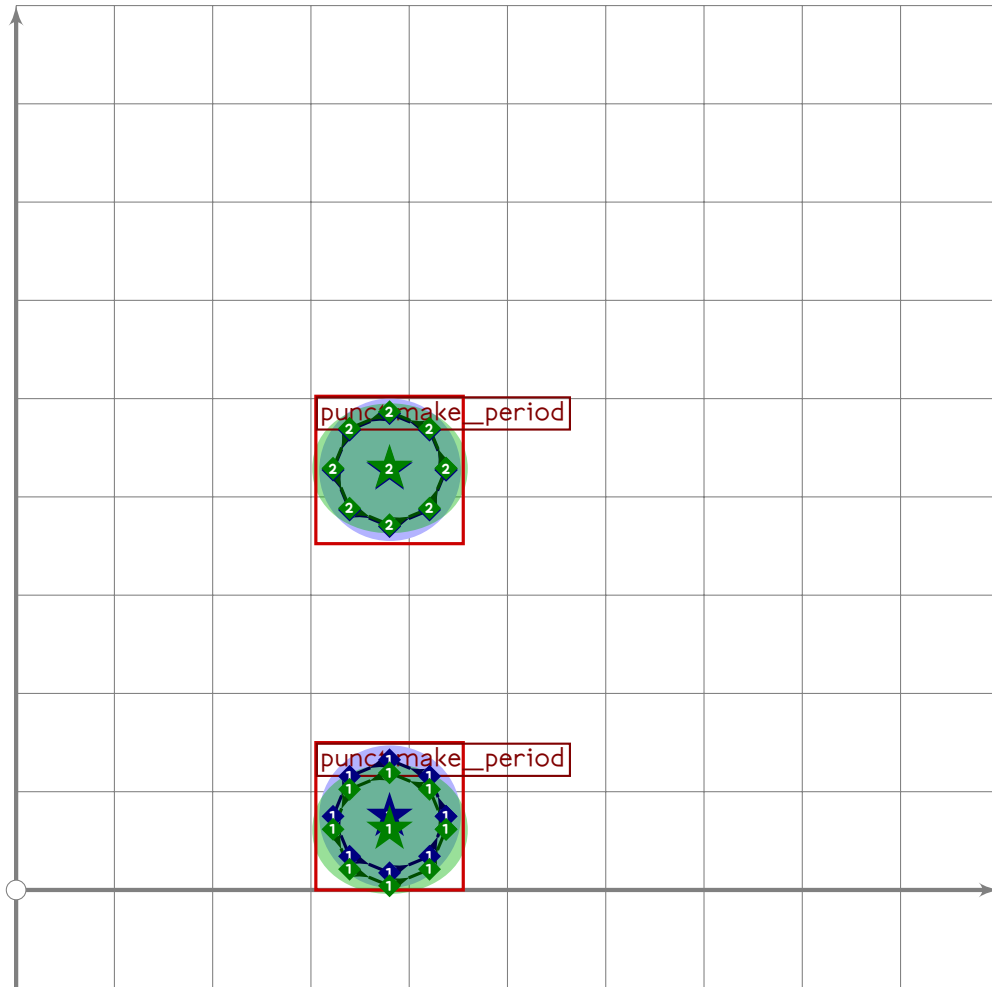
```
207 tsu_render;
208 endtsuglyph;
209
210 % 2
211 begintsuglyph("uniFF12";18); [see page 231]
212 tsu_curve.numeral.two;
213 tsu_render;
214 endtsuglyph;
215
216 % 3
217 begintsuglyph("uniFF13";19); [see page 232]
218 tsu_curve.numeral.three;
219 tsu_render;
220 endtsuglyph;
221
222 % 4
223 begintsuglyph("uniFF14";20); [see page 233]
224 tsu_curve.numeral.four;
225 tsu_render;
226 endtsuglyph;
227
228 % 5
229 begintsuglyph("uniFF15";21); [see page 234]
230 tsu_curve.numeral.five;
231 tsu_render;
232 endtsuglyph;
233
234 % 6
235 begintsuglyph("uniFF16";22); [see page 235]
236 tsu_curve.numeral.six;
237 tsu_render;
238 endtsuglyph;
239
240 % 7
241 begintsuglyph("uniFF17";23); [see page 236]
242 tsu_curve.numeral.seven;
243 tsu_render;
244 endtsuglyph;
245
246 % 8
247 begintsuglyph("uniFF18";24); [see page 237]
248 tsu_curve.numeral.eight;
249 tsu_render;
250 endtsuglyph;
251
252 % 9
253 begintsuglyph("uniFF19";25); [see page 238]
254 tsu_curve.numeral.nine;
```



```

255 tsu_render;
256 endtsuglyph;
257

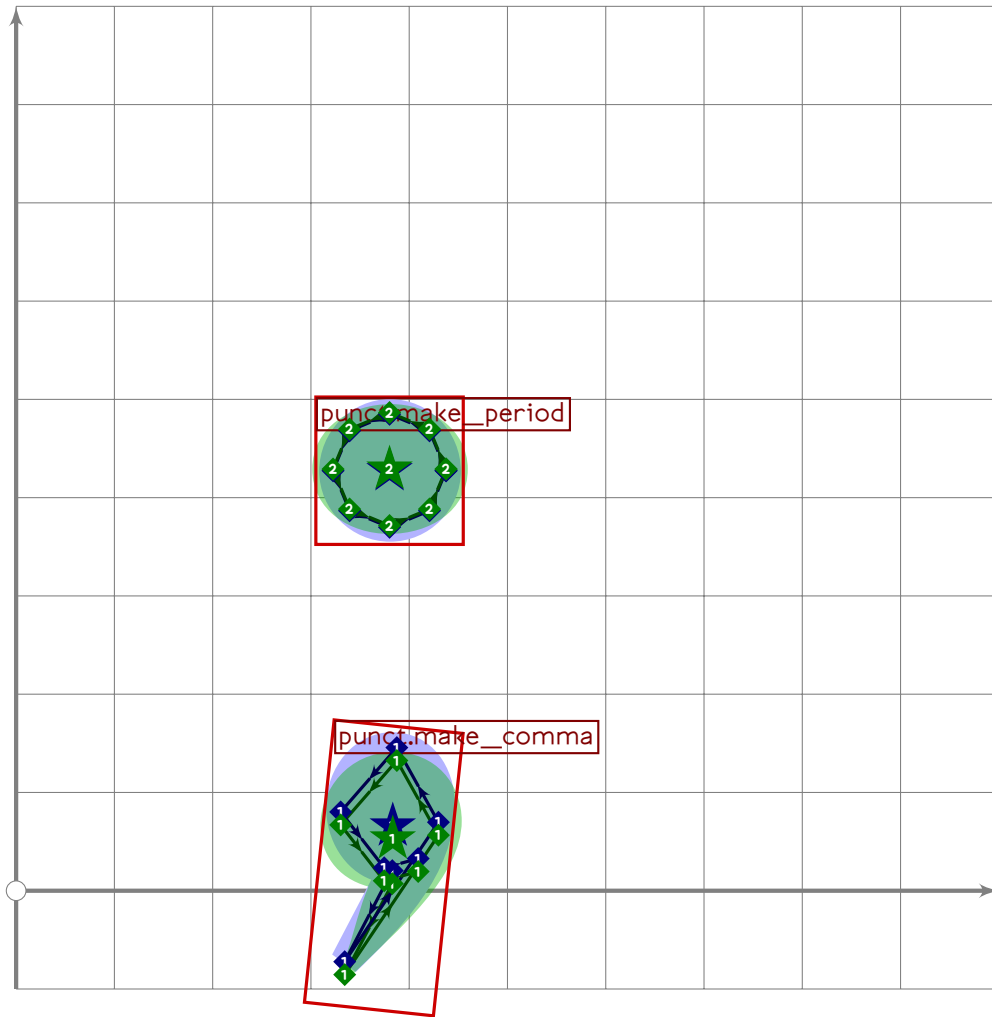
```



```

258 % colon
259 begint Suglyph("uniFF1A";26);
260 tsu_curve.punct.make_period((380,vmetric(0.03)));
261 tsu_curve.punct.make_period((380,vmetric(0.56)));
262 tsu_render;
263 endtsuglyph;
264

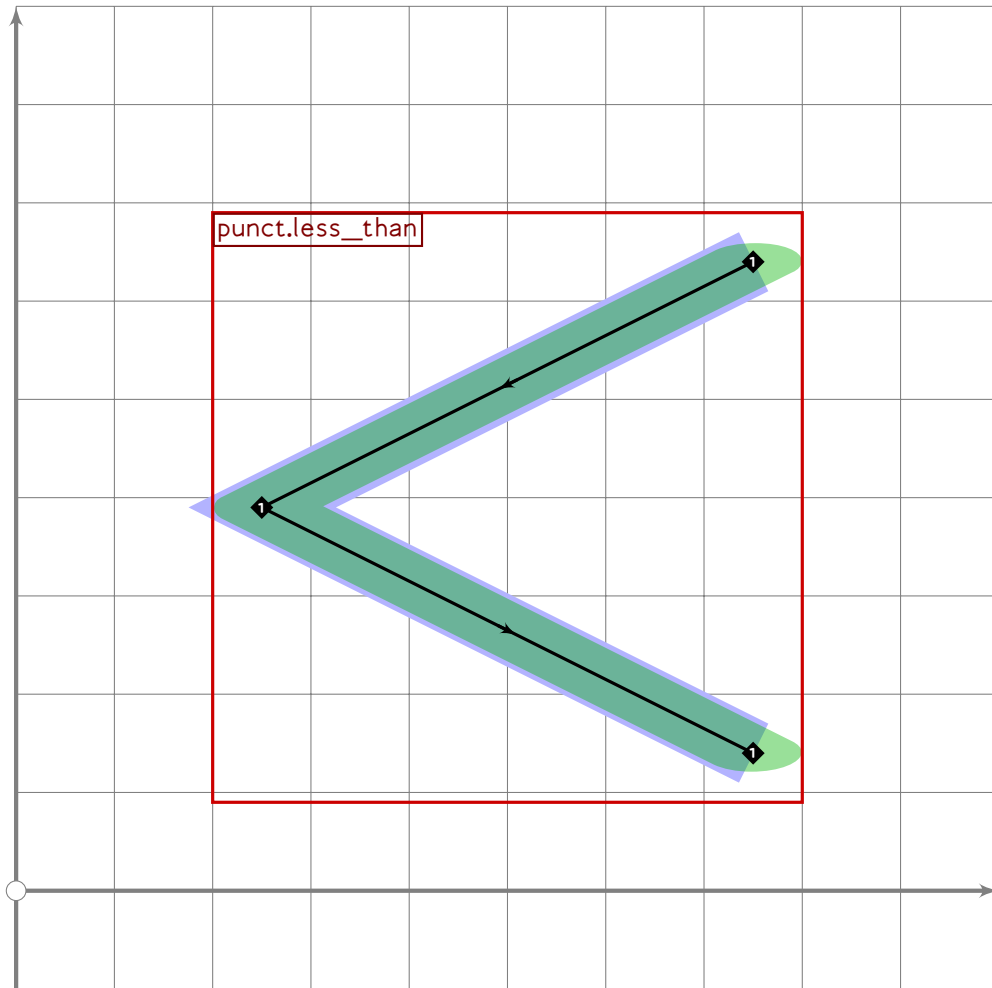
```



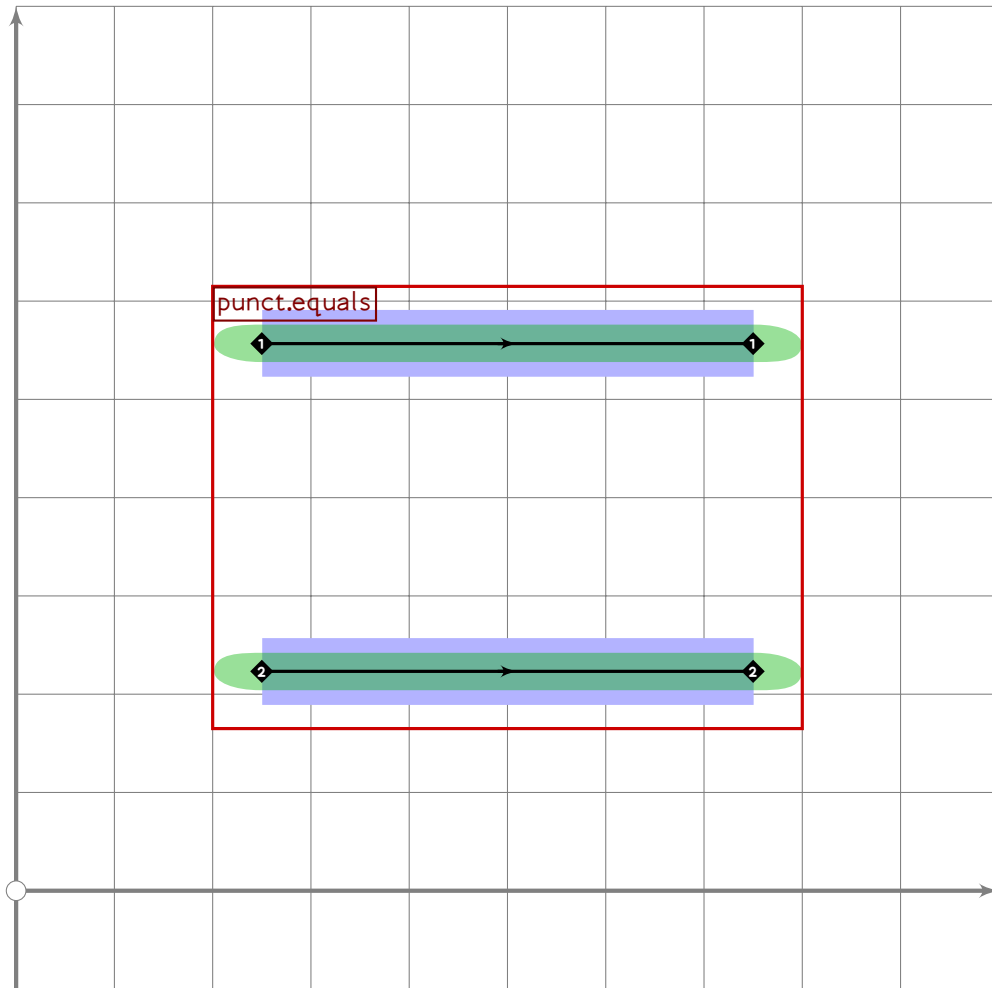
```

265 % semicolon
266 begint Suglyph("uniFF1B",27);
267 tsu_curve.punct.make_comma((380,vmetric(0.03)),0);
268 tsu_curve.punct.make_period((380,vmetric(0.56)));
269 tsu_render;
270 endsuglyph;
271

```



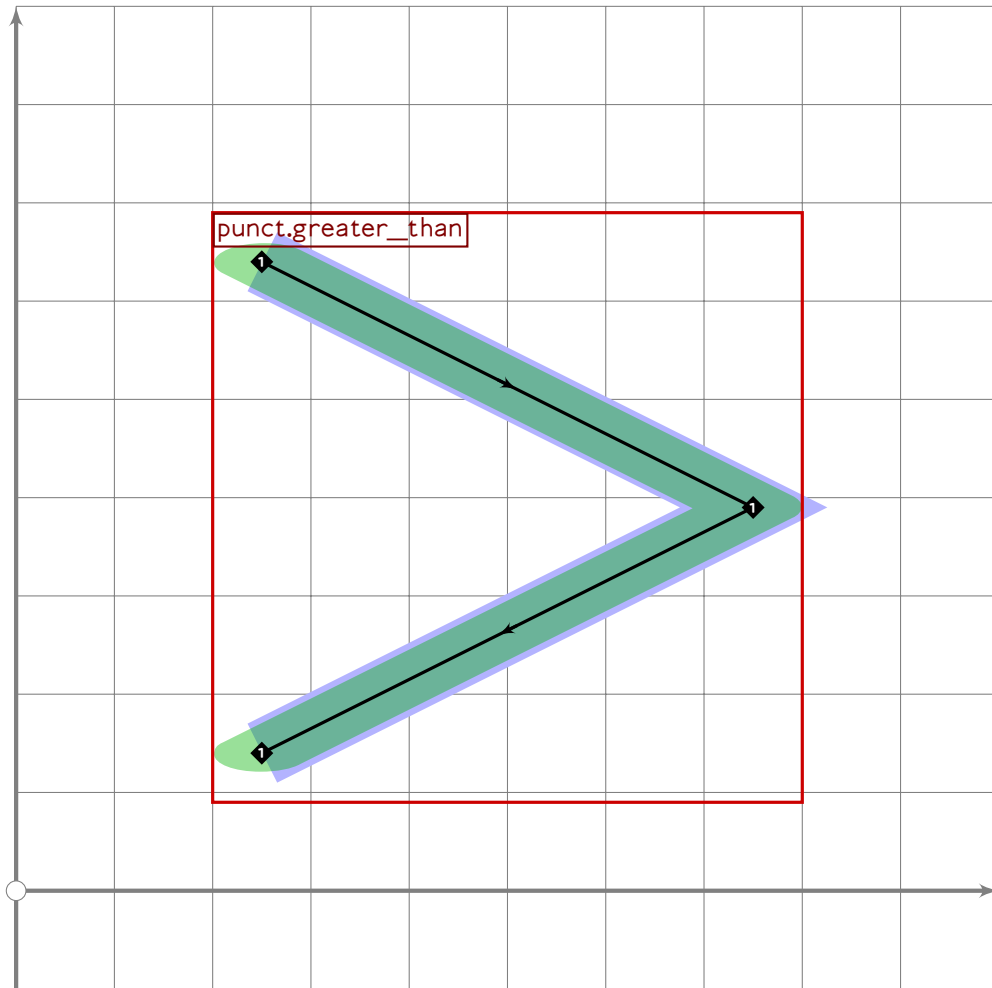
```
272 % less than
273 begint Suglyph("uniFF1C";28);
274 tsu_curve.punct.less_than
275   (identity scaled (2.5*tsu_punct_size) shifted centre_pt);
276 tsu_render;
277 endtsuglyph;
278
```



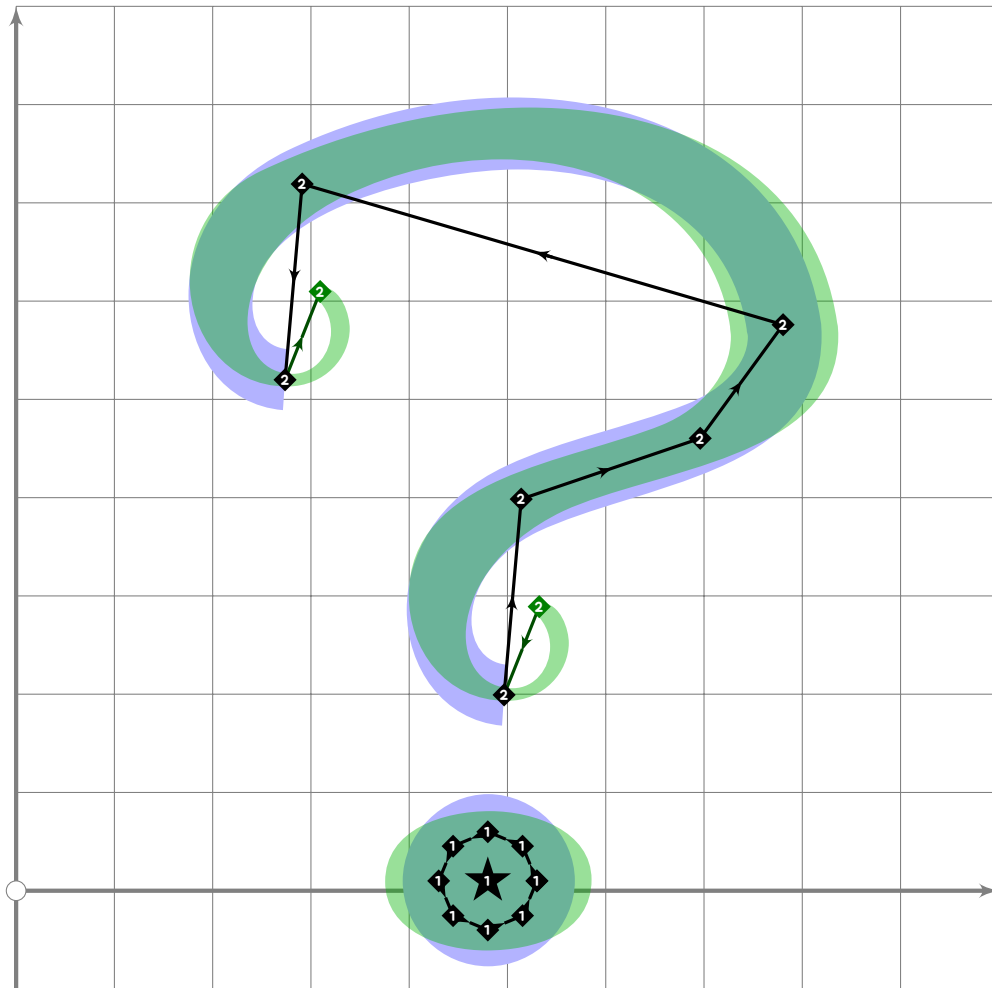
```

279 % equals
280 begint Suglyph("uniFF1D";29);
281   tsu_curve.punct.equals
282   (identity scaled (2.5*tsu_punct_size) shifted centre_pt);
283   tsu_render;
284 endsuglyph;
285

```



```
286 % greater than
287 begint Suglyph("uniFF1E",30);
288   tsu_curve.punct.greater_than
289   (identity scaled (2.5*tsu_punct_size) shifted centre_pt);
290   tsu_render;
291 endsuglyph;
292
```



```

293 % question mark
294 begintsuglyph("uniFF1F",31);
295     numeric r;
296     if tsu_pbrush_size>=tsu_punct_size:
297         push_lcblob(fullcircle
298             xscaled (tsu_punct_size*tsu_pbrush_size)
299             yscaled (tsu_punct_size*tsu_pbrush_size*tsu_pbrush_shape)
300             rotated tsu_pbrush_angle
301             shifted (480,10));
302         r:=tsu_pbrush_size;
303     else:
304         push_stroke(fullcircle scaled tsu_punct_size shifted (480,10),
305             (2,2)-(2,2)-(2,2)-(2,2)-cycle);
306         if tsu_pbrush_size>=30:
307             push_lcblob(get_strokep(0));
308         fi;
309         r:=tsu_punct_size;
310     fi;
311
312     push_stroke((480,300){right}..(480,300-r){left}..
313         (480,300+r)..(480*2.5*r,600)..

```

```

314     tension 1.3..(480-2.5*r,600*r)..
315     (480-2.5*r,600-r){right}..
316     (480-2.5*r,600){left},
317     (0.8,0.8)-(1,1)-(2,2)-(2,2)-(2,2)-(2,2)-(1,1)-(0.8,0.8));
318     replace_strokep(0)(insert_nodes(oldp)(2.5) rotatedaround ((480,10);-5));
319
320     tsu_render;
321 endtsuglyph;
322
323 % commercial at
324     begintsuglyph("uniFF20",32); [see page 260]
325     tsu_curve.punct.atsign;
326     tsu_render;
327 endtsuglyph;
328
329 % A
330     begintsuglyph("uniFF21",33); [see page 152]
331     tsu_curve.latin.upa;
332     tsu_render;
333 endtsuglyph;
334
335 % B
336     begintsuglyph("uniFF22",34); [see page 155]
337     tsu_curve.latin.upb;
338     tsu_render;
339 endtsuglyph;
340
341 % C
342     begintsuglyph("uniFF23",35); [see page 157]
343     tsu_curve.latin.upc;
344     tsu_render;
345 endtsuglyph;
346
347 % D
348     begintsuglyph("uniFF24",36); [see page 157]
349     tsu_curve.latin.upd;
350     tsu_render;
351 endtsuglyph;
352
353 % E
354     begintsuglyph("uniFF25",37); [see page 159]
355     tsu_curve.latin.upe;
356     tsu_render;
357 endtsuglyph;
358
359 % F
360     begintsuglyph("uniFF26",38); [see page 160]
361     tsu_curve.latin.upf;

```

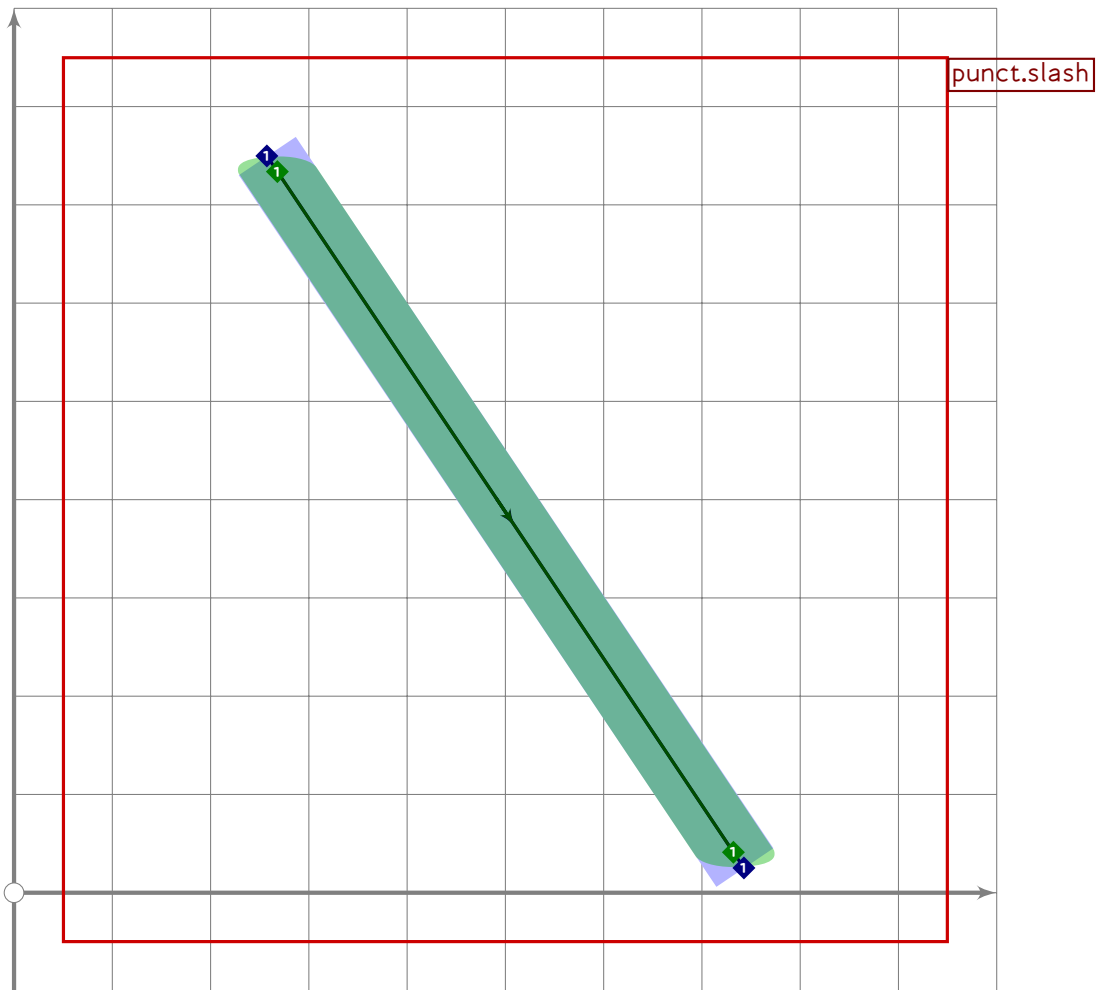
```

362  tsu_render;
363  endtsuglyph;
364
365  % G
366  begintsuglyph("uniFF27",39); [see page 161]
367  tsu_curve.latin.upg;
368  tsu_render;
369  endtsuglyph;
370
371  % H
372  begintsuglyph("uniFF28",40); [see page 162]
373  tsu_curve.latin.uph;
374  tsu_render;
375  endtsuglyph;
376
377  % I
378  begintsuglyph("uniFF29",41); [see page 163]
379  tsu_curve.latin.upi;
380  tsu_render;
381  endtsuglyph;
382
383  % J
384  begintsuglyph("uniFF2A",42); [see page 164]
385  tsu_curve.latin.upj;
386  tsu_render;
387  endtsuglyph;
388
389  % K
390  begintsuglyph("uniFF2B",43); [see page 166]
391  tsu_curve.latin.upk;
392  tsu_render;
393  endtsuglyph;
394
395  % L
396  begintsuglyph("uniFF2C",44); [see page 167]
397  tsu_curve.latin.upl;
398  tsu_render;
399  endtsuglyph;
400
401  % M
402  begintsuglyph("uniFF2D",45); [see page 168]
403  tsu_curve.latin.upm;
404  tsu_render;
405  endtsuglyph;
406
407  % N
408  begintsuglyph("uniFF2E",46); [see page 170]
409  tsu_curve.latin.upn;

```


410 `tsu_render;`
411 `endtsuglyph;`
412
413 `% O`
414 `begintsuglyph("uniFF2F",47);` [see page 172]
415 `tsu_curve.latin.upo;`
416 `tsu_render;`
417 `endtsuglyph;`
418
419 `% P`
420 `begintsuglyph("uniFF30",48);` [see page 174]
421 `tsu_curve.latin.upp;`
422 `tsu_render;`
423 `endtsuglyph;`
424
425 `% Q`
426 `begintsuglyph("uniFF31",49);` [see page 175]
427 `tsu_curve.latin.upq;`
428 `tsu_render;`
429 `endtsuglyph;`
430
431 `% R`
432 `begintsuglyph("uniFF32",50);` [see page 176]
433 `tsu_curve.latin.upr;`
434 `tsu_render;`
435 `endtsuglyph;`
436
437 `% S`
438 `begintsuglyph("uniFF33",51);` [see page 177]
439 `tsu_curve.latin.ups;`
440 `tsu_render;`
441 `endtsuglyph;`
442
443 `% T`
444 `begintsuglyph("uniFF34",52);` [see page 178]
445 `tsu_curve.latin.upt;`
446 `tsu_render;`
447 `endtsuglyph;`
448
449 `% U`
450 `begintsuglyph("uniFF35",53);` [see page 180]
451 `tsu_curve.latin.upu;`
452 `tsu_render;`
453 `endtsuglyph;`
454
455 `% V`
456 `begintsuglyph("uniFF36",54);` [see page 181]
457 `tsu_curve.latin.upv;`

```
458 tsu_render;
459 endtsuglyph;
460
461 % W
462 begintsuglyph("uniFF37",55); [see page 182]
463 tsu_curve.latin.upw;
464 tsu_render;
465 endtsuglyph;
466
467 % X
468 begintsuglyph("uniFF38",56); [see page 184]
469 tsu_curve.latin.upx;
470 tsu_render;
471 endtsuglyph;
472
473 % Y
474 begintsuglyph("uniFF39",57); [see page 185]
475 tsu_curve.latin.upy;
476 tsu_render;
477 endtsuglyph;
478
479 % Z
480 begintsuglyph("uniFF3A",58); [see page 186]
481 tsu_curve.latin.upz;
482 tsu_render;
483 endtsuglyph;
484
485 % left and right square brackets
486 begintsuglyph("uniFF3B",59); [see page 292]
487 tsu_curve.punct.sqb_left;
488 tsu_render;
489 endtsuglyph;
```

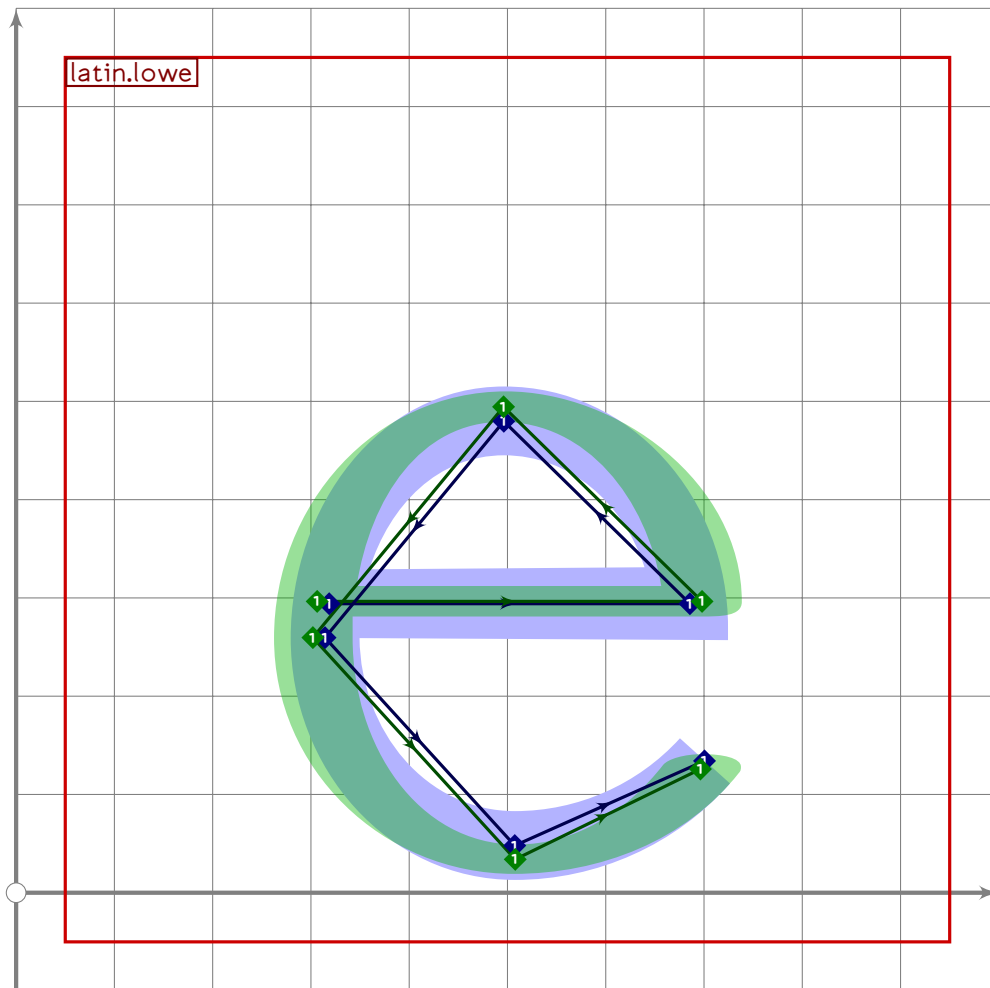


```

490 % backslash
491 beginsuglyph("uniFF3C",60);
492   tsu_xform(identity reflectedabout (centre_pt,(centre_pt*down)))
493   (tsu_curve.punct.slash);
494   tsu_render;
495 endsuglyph;
496 beginsuglyph("uniFF3D",61);
497   tsu_curve.punct.sqb_right;
498   tsu_render;
499 endsuglyph;
500

```

[see page 293]

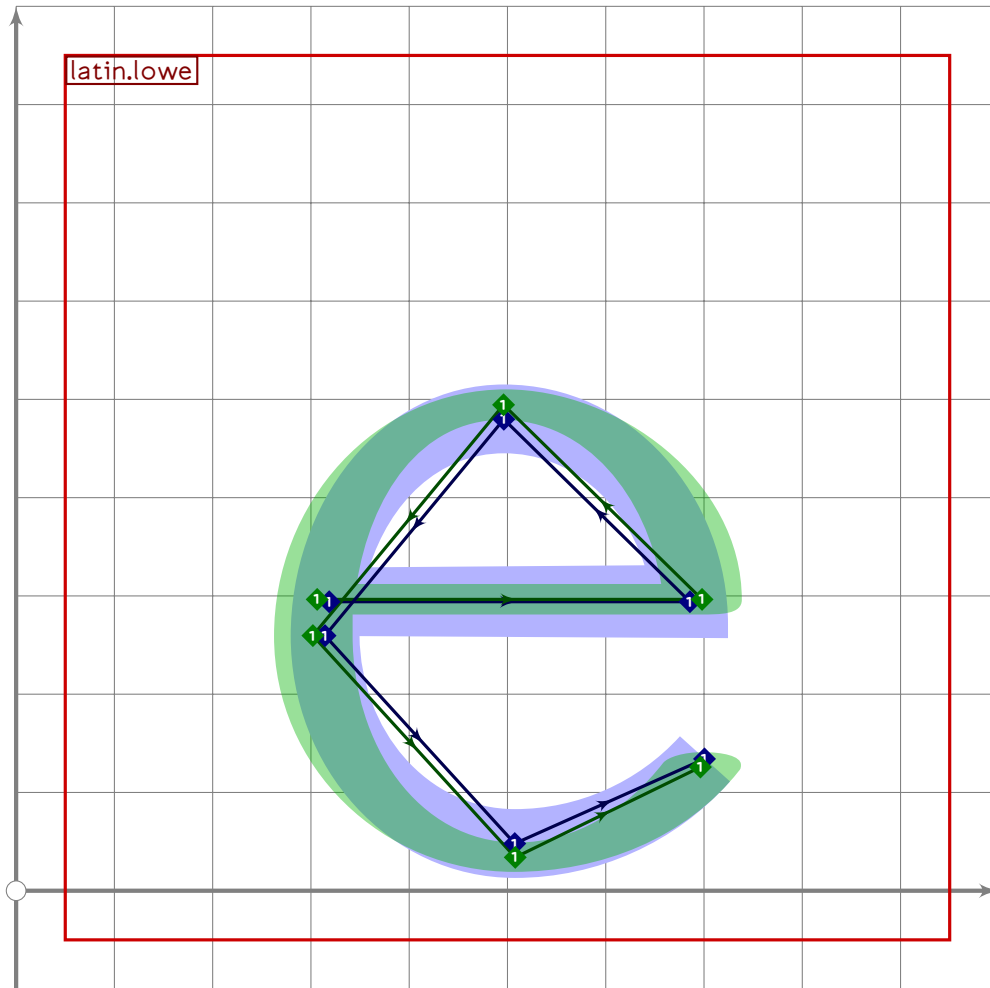


```

501 % circumflex/caret
502 beginsuglyph("uniFF3E",62);
503   tsu_accent.circumflex(tsu_curve.latin.lowe);
504   set_bosize(0,0);
505   tsu_render;
506 endsuglyph;
507
508 % underscore
509 beginsuglyph("uniFF3F",63);
510   tsu_curve.punct.underscore;
511   tsu_render;
512 endsuglyph;
513

```

[see page 294]



```

514 % grave accent
515 begintsuglyph("uniFF40",64);
516   tsu_accent.grave(tsu_curve.latin.lowe);
517   set_bosize(0,0);
518   tsu_render;
519 endtsuglyph;

```

520

```

521 % a
522 begintsuglyph("uniFF41",65);
523   tsu_curve.latin.lowa;
524   tsu_render;
525 endtsuglyph;

```

[see page 187]

526

```

527 % b
528 begintsuglyph("uniFF42",66);
529   tsu_curve.latin.lowb;
530   tsu_render;
531 endtsuglyph;

```

[see page 190]

532

```

533 % c
534 begintsuglyph("uniFF43",67);

```

[see page 191]

535 `tsu_curve.latin.lowc;`
536 `tsu_render;`
537 `endtsuglyph;`
538
539 `% d`
540 `begintsuglyph("uniFF44",68);` [see page 192]
541 `tsu_curve.latin.lowd;`
542 `tsu_render;`
543 `endtsuglyph;`
544
545 `% e`
546 `begintsuglyph("uniFF45",69);` [see page 193]
547 `tsu_curve.latin.lowe;`
548 `tsu_render;`
549 `endtsuglyph;`
550
551 `% f`
552 `begintsuglyph("uniFF46",70);` [see page 197]
553 `tsu_curve.latin.lowf;`
554 `tsu_render;`
555 `endtsuglyph;`
556
557 `% g`
558 `begintsuglyph("uniFF47",71);` [see page 198]
559 `tsu_curve.latin.lowg;`
560 `tsu_render;`
561 `endtsuglyph;`
562
563 `% h`
564 `begintsuglyph("uniFF48",72);` [see page 199]
565 `tsu_curve.latin.lowh;`
566 `tsu_render;`
567 `endtsuglyph;`
568
569 `% i`
570 `begintsuglyph("uniFF49",73);` [see page 201]
571 `tsu_curve.latin.lowi;`
572 `tsu_render;`
573 `endtsuglyph;`
574
575 `% j`
576 `begintsuglyph("uniFF4A",74);` [see page 202]
577 `tsu_curve.latin.lowj;`
578 `tsu_render;`
579 `endtsuglyph;`
580
581 `% k`
582 `begintsuglyph("uniFF4B",75);` [see page 204]

583 `tsu_curve.latin.lowk;`
584 `tsu_render;`
585 `endsuglyph;`
586
587 `% l`
588 `begintsuglyph("uniFF4C";76);` [see page 205]
589 `tsu_curve.latin.lowl;`
590 `tsu_render;`
591 `endsuglyph;`
592
593 `% m`
594 `begintsuglyph("uniFF4D";77);` [see page 206]
595 `tsu_curve.latin.lowm;`
596 `tsu_render;`
597 `endsuglyph;`
598
599 `% n`
600 `begintsuglyph("uniFF4E";78);` [see page 207]
601 `tsu_curve.latin.lown;`
602 `tsu_render;`
603 `endsuglyph;`
604
605 `% o`
606 `begintsuglyph("uniFF4F";79);` [see page 210]
607 `tsu_curve.latin.lowo;`
608 `tsu_render;`
609 `endsuglyph;`
610
611 `% p`
612 `begintsuglyph("uniFF50";80);` [see page 212]
613 `tsu_curve.latin.lowp;`
614 `tsu_render;`
615 `endsuglyph;`
616
617 `% q`
618 `begintsuglyph("uniFF51";81);` [see page 213]
619 `tsu_curve.latin.lowq;`
620 `tsu_render;`
621 `endsuglyph;`
622
623 `% r`
624 `begintsuglyph("uniFF52";82);` [see page 214]
625 `tsu_curve.latin.lowr;`
626 `tsu_render;`
627 `endsuglyph;`
628
629 `% s`
630 `begintsuglyph("uniFF53";83);` [see page 215]

631 `tsu_curve.latin.lows;`
632 `tsu_render;`
633 `endsuglyph;`
634
635 `% t`
636 `begintsuglyph("uniFF54",84);` [see page 218]
637 `tsu_curve.latin.lowt;`
638 `tsu_render;`
639 `endsuglyph;`
640
641 `% u`
642 `begintsuglyph("uniFF55",85);` [see page 221]
643 `tsu_curve.latin.lowu;`
644 `tsu_render;`
645 `endsuglyph;`
646
647 `% v`
648 `begintsuglyph("uniFF56",86);` [see page 222]
649 `tsu_curve.latin.lowv;`
650 `tsu_render;`
651 `endsuglyph;`
652
653 `% w`
654 `begintsuglyph("uniFF57",87);` [see page 223]
655 `tsu_curve.latin.loww;`
656 `tsu_render;`
657 `endsuglyph;`
658
659 `% x`
660 `begintsuglyph("uniFF58",88);` [see page 225]
661 `tsu_curve.latin.lowx;`
662 `tsu_render;`
663 `endsuglyph;`
664
665 `% y`
666 `begintsuglyph("uniFF59",89);` [see page 226]
667 `tsu_curve.latin.lowy;`
668 `tsu_render;`
669 `endsuglyph;`
670
671 `% z`
672 `begintsuglyph("uniFF5A",90);` [see page 228]
673 `tsu_curve.latin.lowz;`
674 `tsu_render;`
675 `endsuglyph;`
676
677 `% left and right square brackets, around vertical line`
678 `begintsuglyph("uniFF5B",91);` [see page 261]


```

679  tsu_curve.punct.brace_left;
680  tsu_render;
681  endtsuglyph;
682  begintsuglyph("uniFF5C";92); [see page 295]
683  tsu_curve.punct.vline;
684  tsu_render;
685  endtsuglyph;
686  begintsuglyph("uniFF5D";93); [see page 262]
687  tsu_curve.punct.brace_right;
688  tsu_render;
689  endtsuglyph;
690
691  % "fullwidth tilde" - identical to "wave dash"
692  begintsuglyph("uniFF5E";94); [see page 296]
693  tsu_curve.punct.wavedash;
694  tsu_render;
695  endtsuglyph;
696
697  % left and right white parentheses
698  begintsuglyph("uniFF5F";95); [see page 297]
699  tsu_curve.punct.wparen_left;
700  tsu_render;
701  endtsuglyph;
702  begintsuglyph("uniFF60";96); [see page 298]
703  tsu_curve.punct.wparen_right;
704  tsu_render;
705  endtsuglyph;
706
707  _____
708

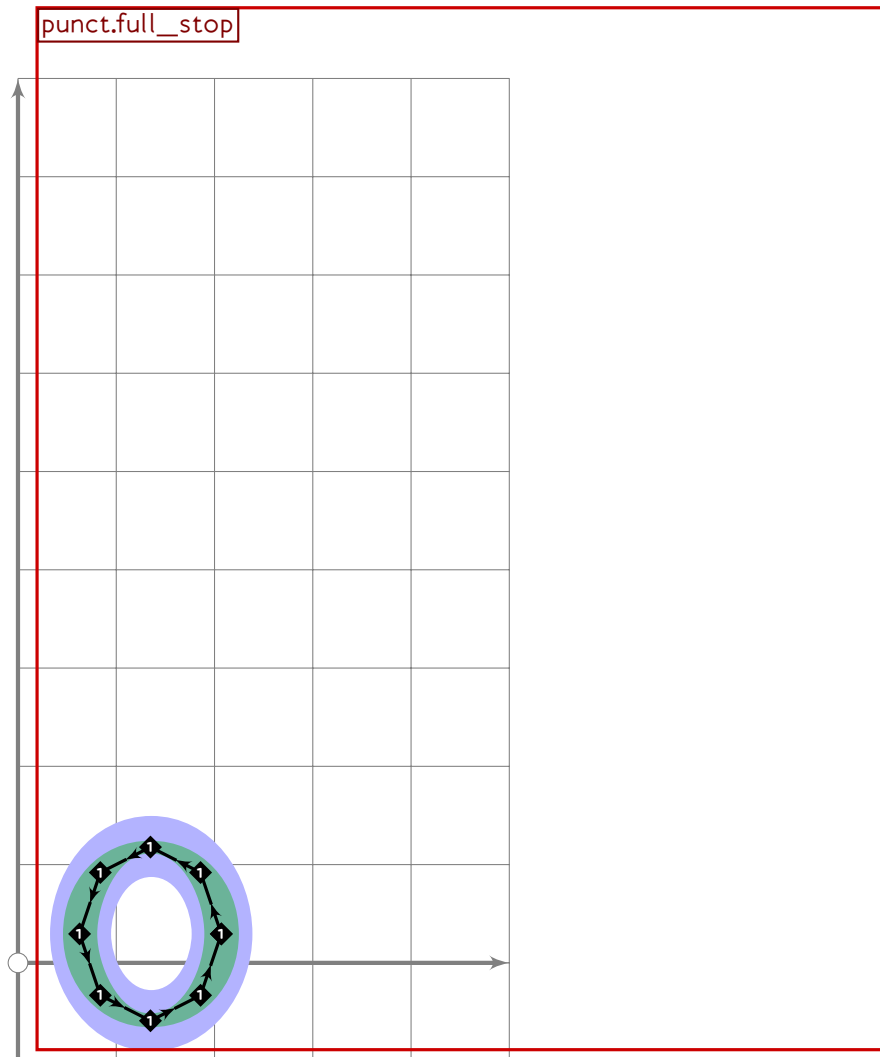
```

Half-Width Punctuation

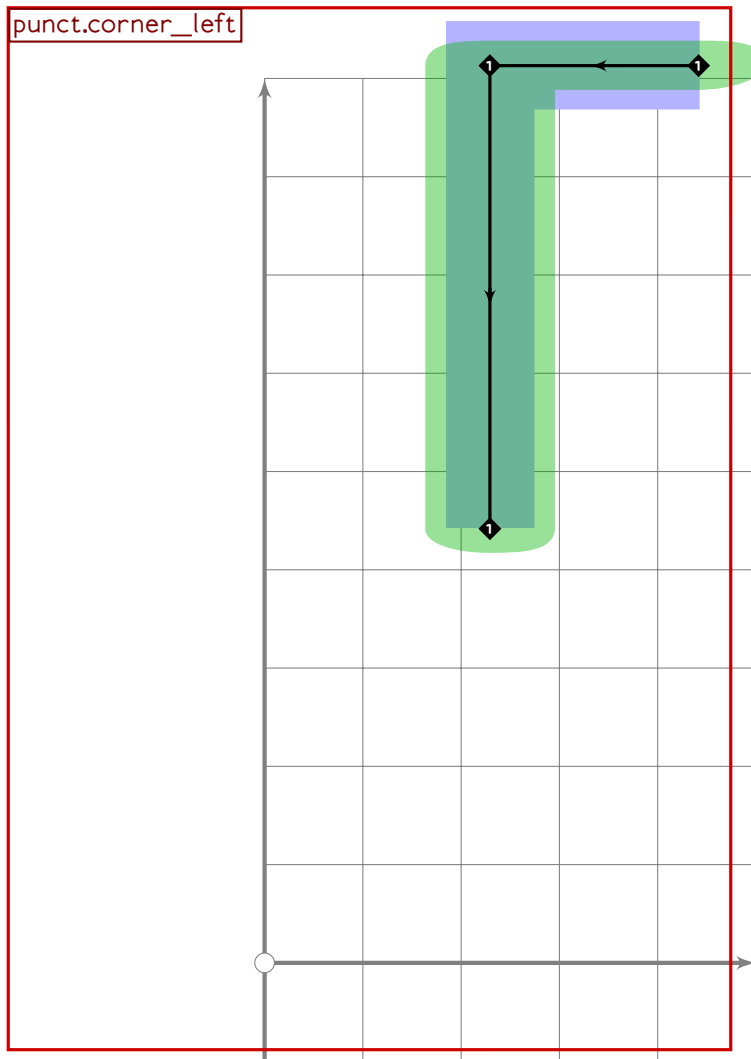
```

709  % HALF-WIDTH PUNCTUATION
710
711  % WARNING changing rescale setting
712  tsu_rescale_half;
713

```



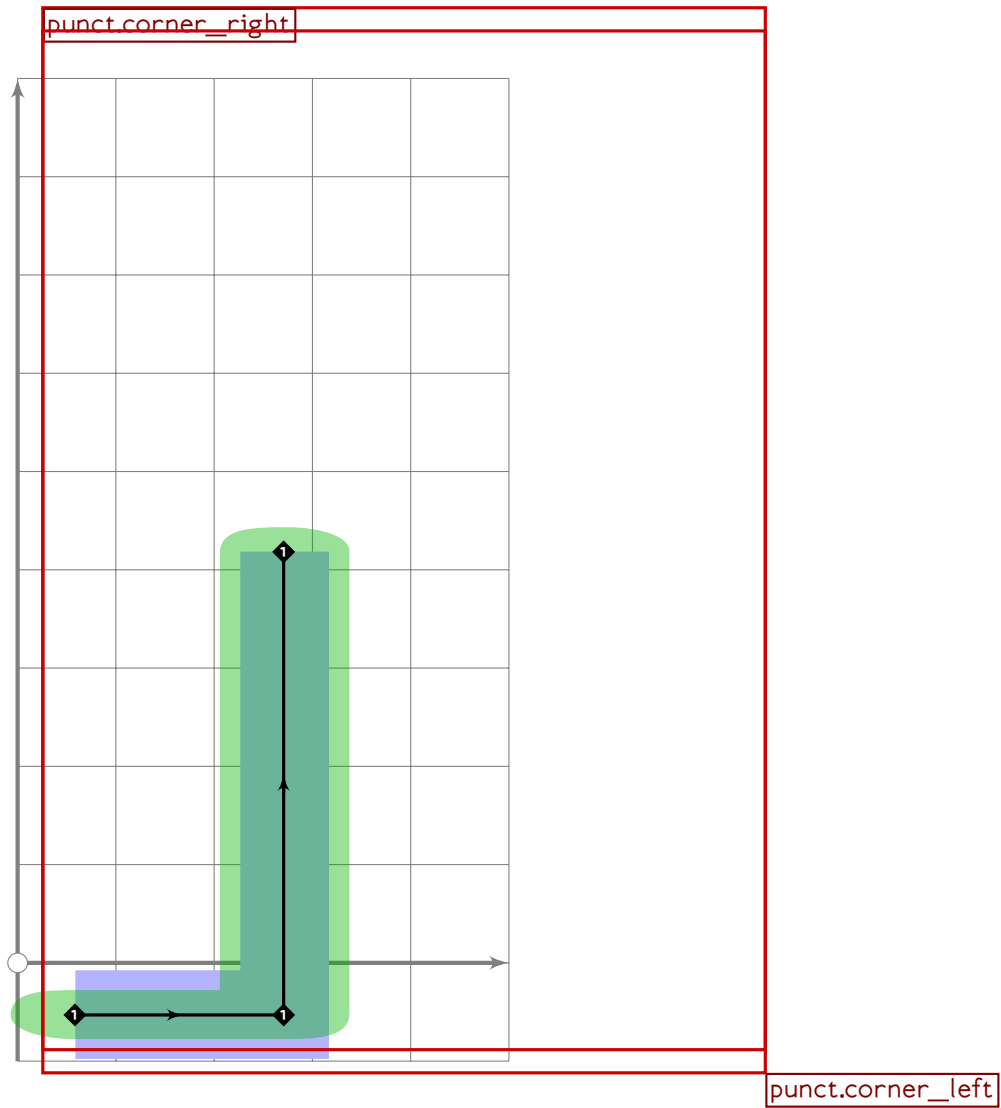
```
714 % ideographic full stop  
715 begintsuglyph("uniFF61";97);  
716 tsu_curve.punct.full_stop;  
717 tsu_render;  
718 endsuglyph;  
719
```



```

720 % left and right corner brackets
721 begintsuglyph("uniFF62",98);
722 tsu_curve.punct.corner_left;
723 tsu_render;
724 endsuglyph;

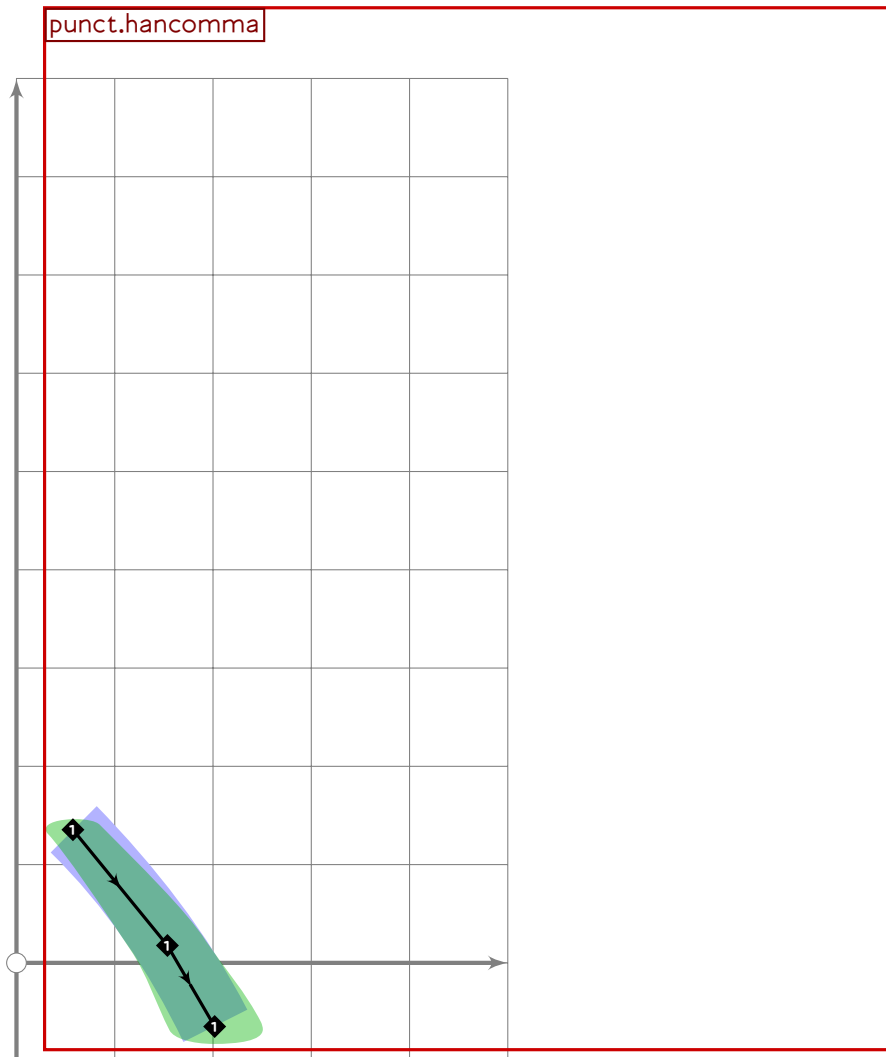
```



```

725 begintuglyph("uniFF63";99);
726   tsu_curve.punct.corner_right;
727   tsu_render;
728 endtuglyph;
729

```



```

730 % ideographic comma
731 begint Suglyph("uniFF64",100);
732   tsu_curve.punct.hancomma;
733   tsu_render;
734 endsuglyph;
735
736 _____
737

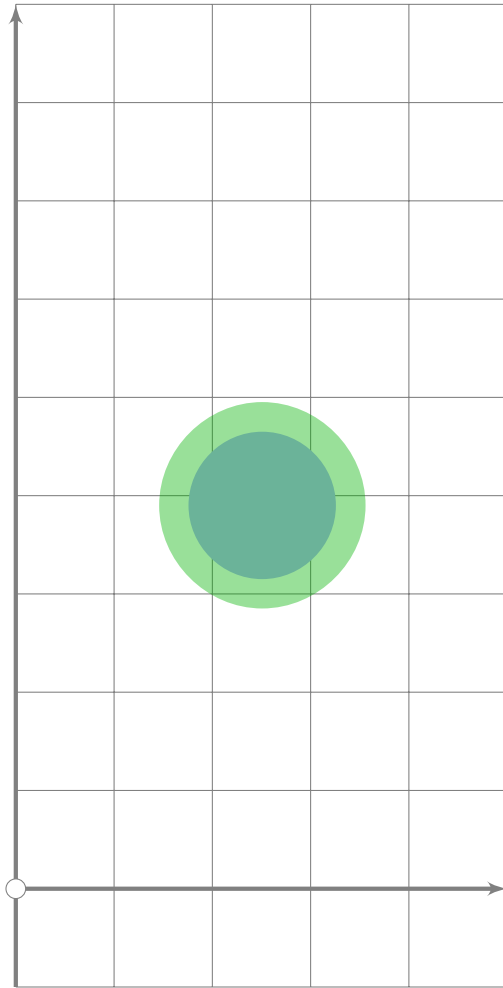
```

Half-Width Katakana

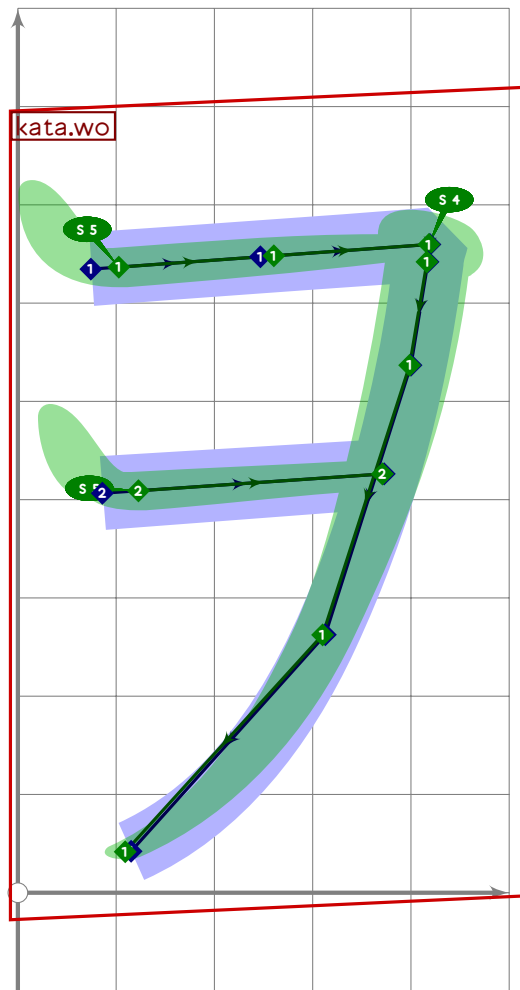
```

738 % HALF-WIDTH KATAKANA
739
740 % WARNING changing rescale setting
741 tsu_rescale_half_katakana;
742

```



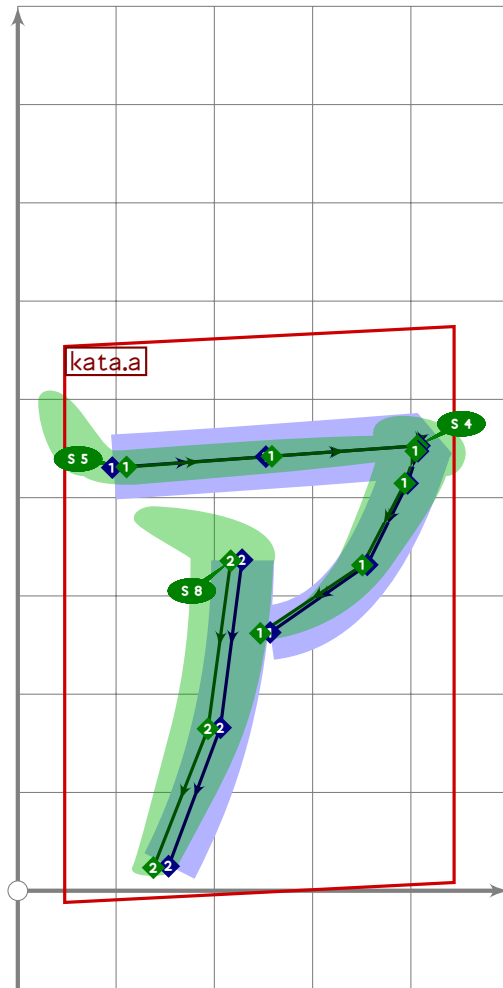
```
743 % katakana middle dot
744 begintsuglyph("uniFF65";101);
745   Fill fullcircle scaled (200*tsu_brush_max) shifted (250,ypart centre_pt);
746 endsuglyph;
747
```



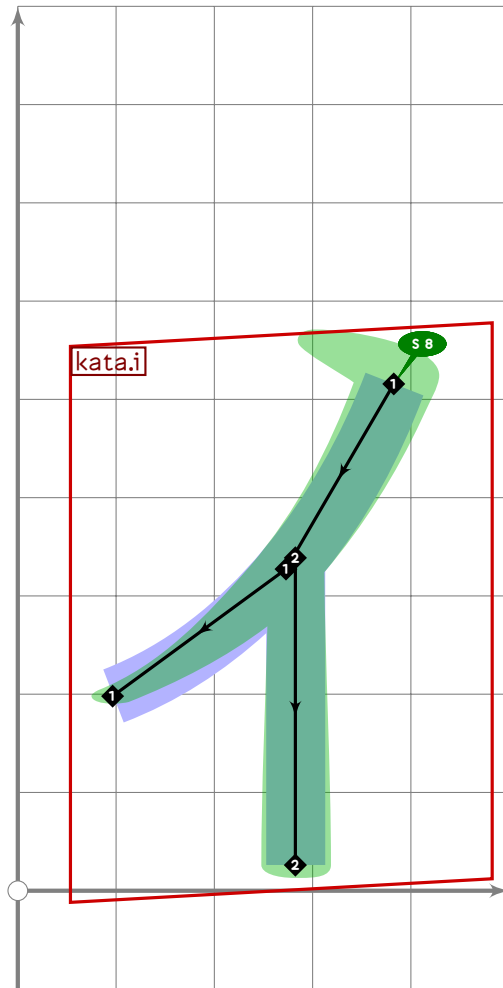
```

748 % katakana "wo"
749 beginsuglyph("uniFF66";102);
750 tsu_curve.kata.wo;
751 tsu_render;
752 endsuglyph;
753

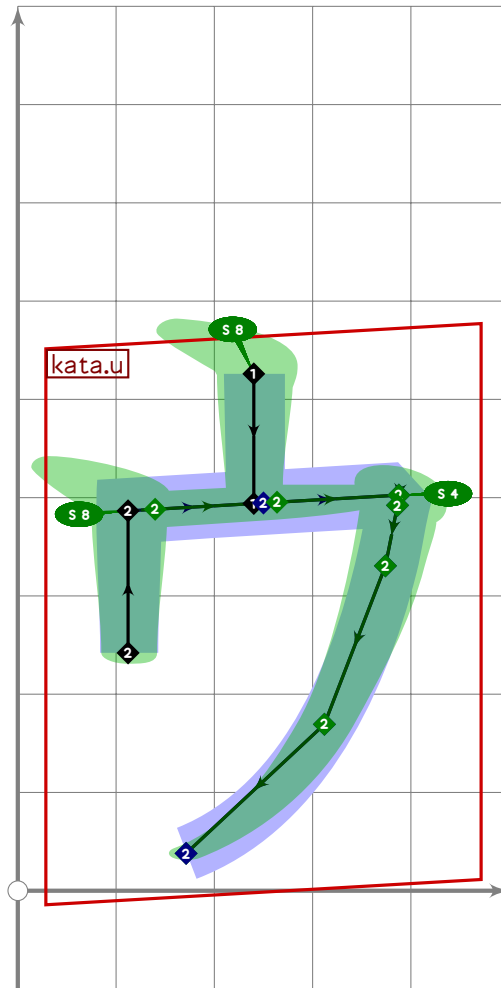
```



```
754 % katakana "small a"  
755 begintsuglyph("uniFF67";103);  
756 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.a);  
757 tsu_render;  
758 endtsuglyph;  
759
```

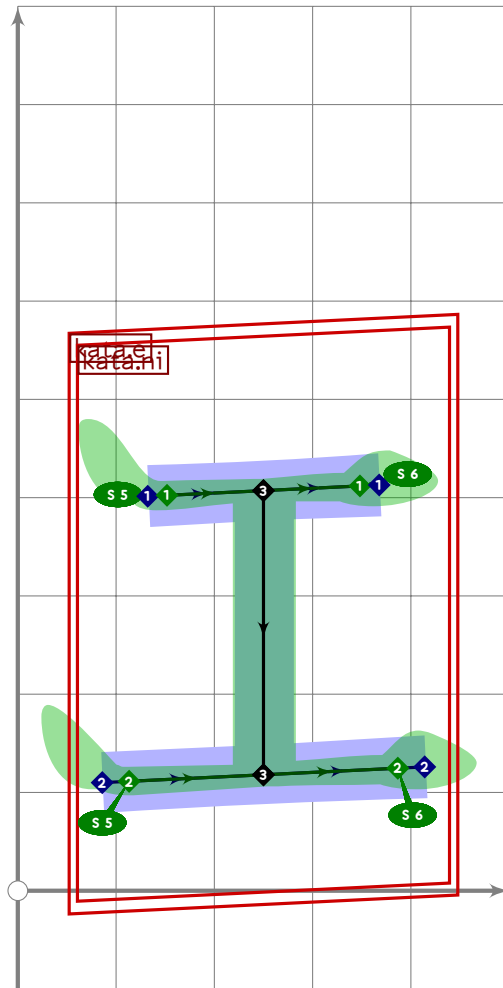
```
760 % katakana "small i"  
761 begintsuglyph("uniFF68",104);  
762 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.i);  
763 tsu_render;  
764 endtsuglyph;  
765
```



```

766 % katakana "small u"
767 beginsuglyph("uniFF69";105);
768 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.u);
769 tsu_render;
770 endsuglyph;
771

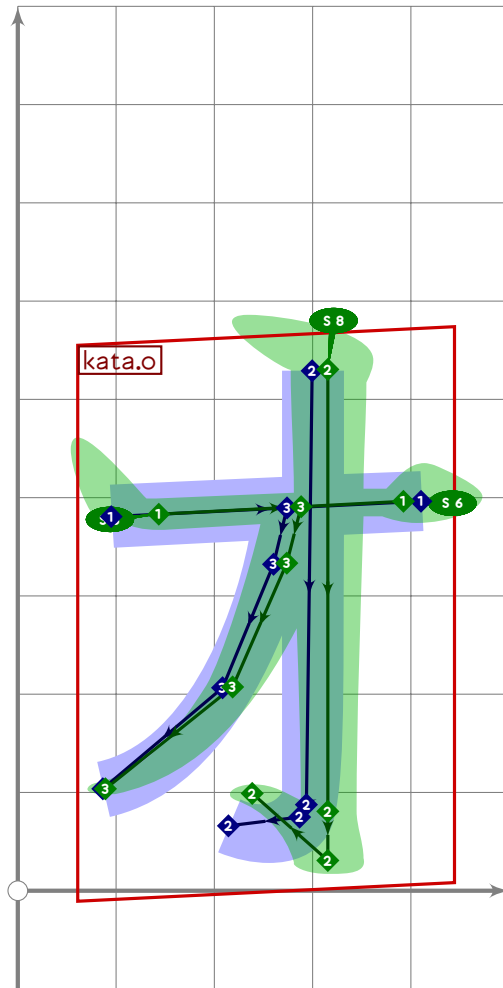
```



```

772 % katakana "small e"
773 beginsuglyph("uniFF6A",106);
774 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.e);
775 tsu_render;
776 endsuglyph;
777

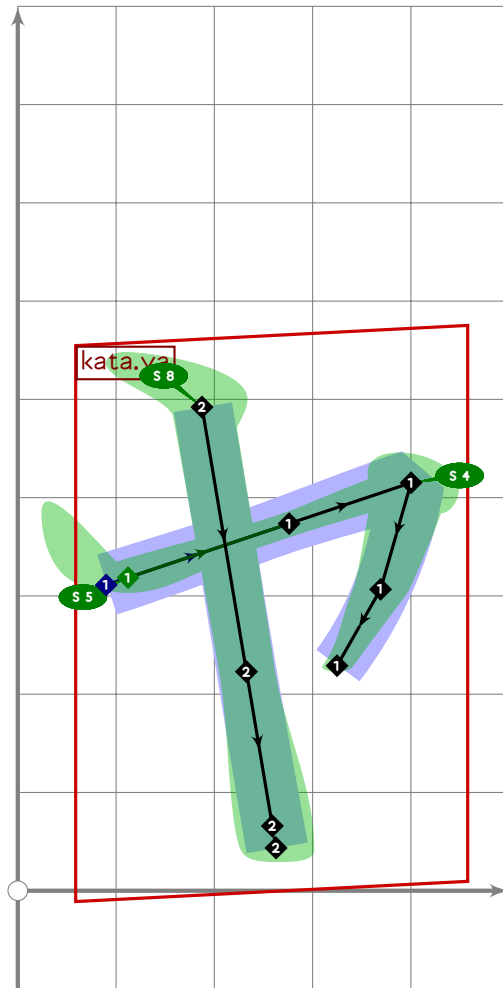
```



```

778 % katakana "small o"
779 beginsuglyph("uniFF6B";107);
780 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.o);
781 tsu_render;
782 endsuglyph;
783

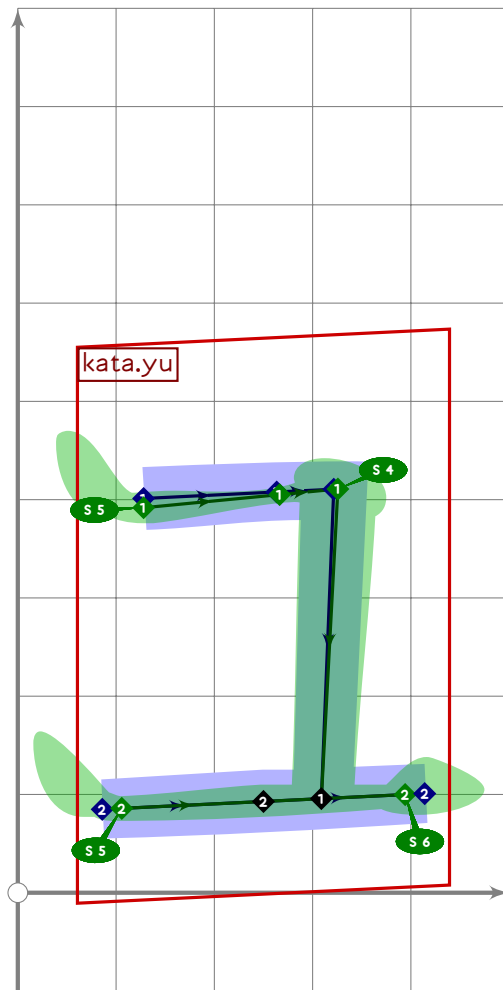
```



```

784 % katakana "small ya"
785 begintsuglyph("uniFF6C",108);
786 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.ya);
787 tsu_render;
788 endtsuglyph;
789

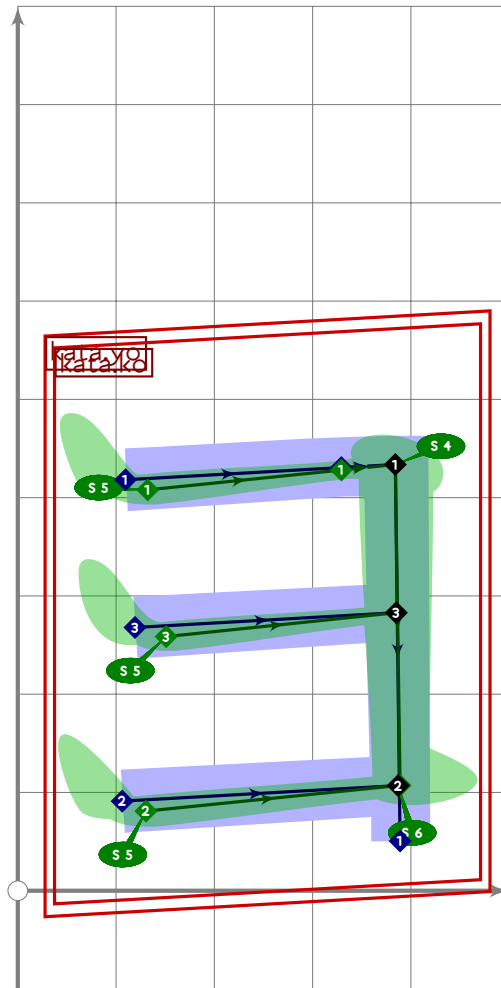
```



```

790 % katakana "small yu"
791 begint Suglyph("uniFF6D",109);
792 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.yu);
793 tsu_render;
794 endtsuglyph;
795

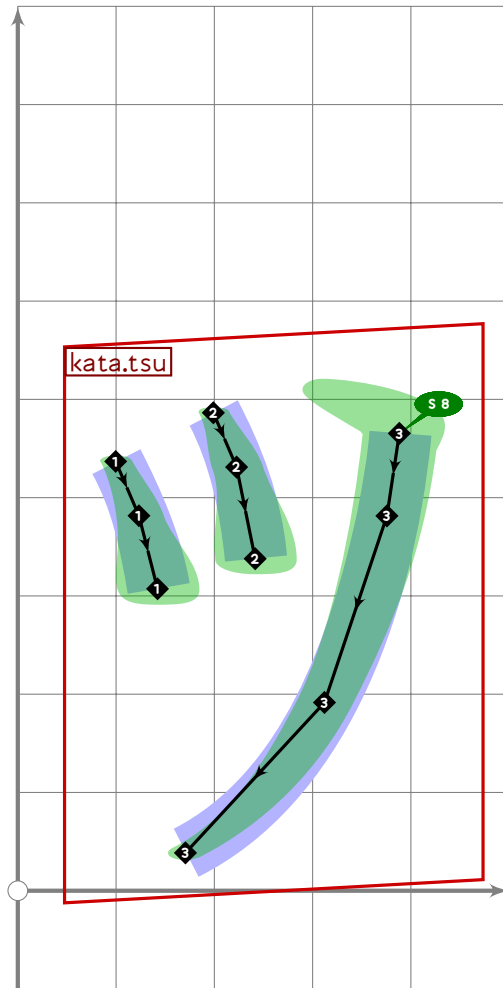
```



```

796 % katakana "small yo"
797 begint Suglyph("uniFF6E",110);
798 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.yo);
799 tsu_render;
800 endtsuglyph;
801

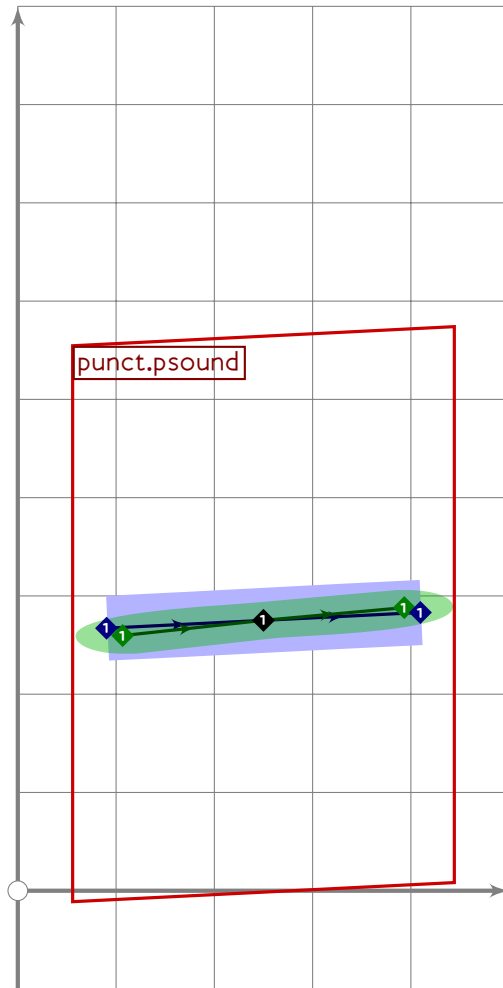
```



```

802 % katakana "small tsu"
803 begintsuglyph("uniFF6F";111);
804 tsu_xform(tsu_xf.smallkana)(tsu_curve.kata.tsu);
805 tsu_render;
806 endtsuglyph;
807

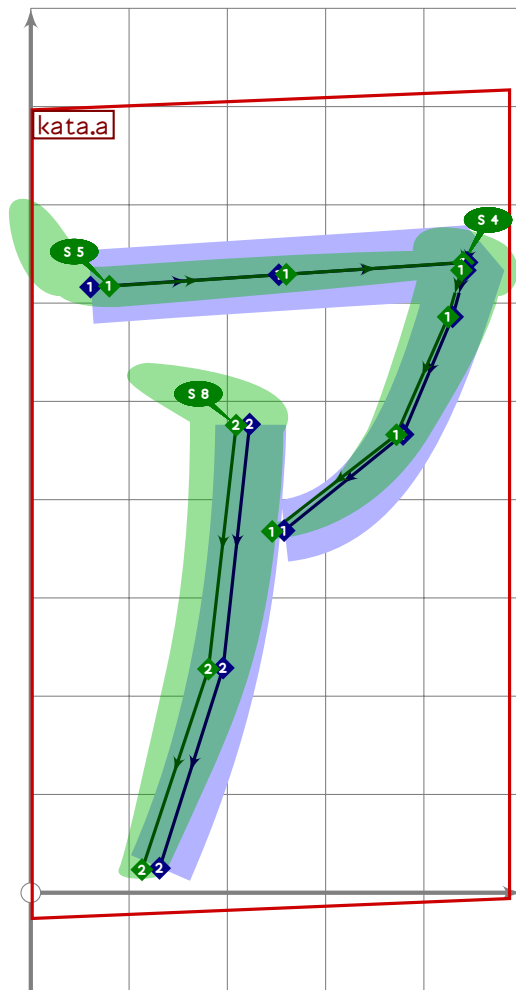
```

```

808 % hira/kata "prolonged sound mark"
809 begintsuglyph("uniFF70",112);
810 tsu_xform(tsu_xf.smallkana)(tsu_curve.punct.psound);
811 tsu_render;
812 endtsuglyph;
813

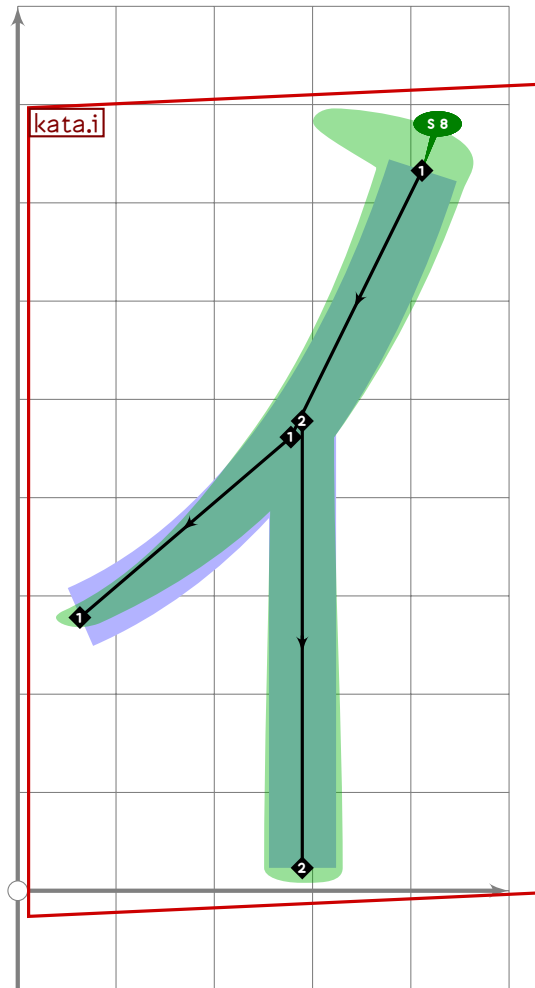
```



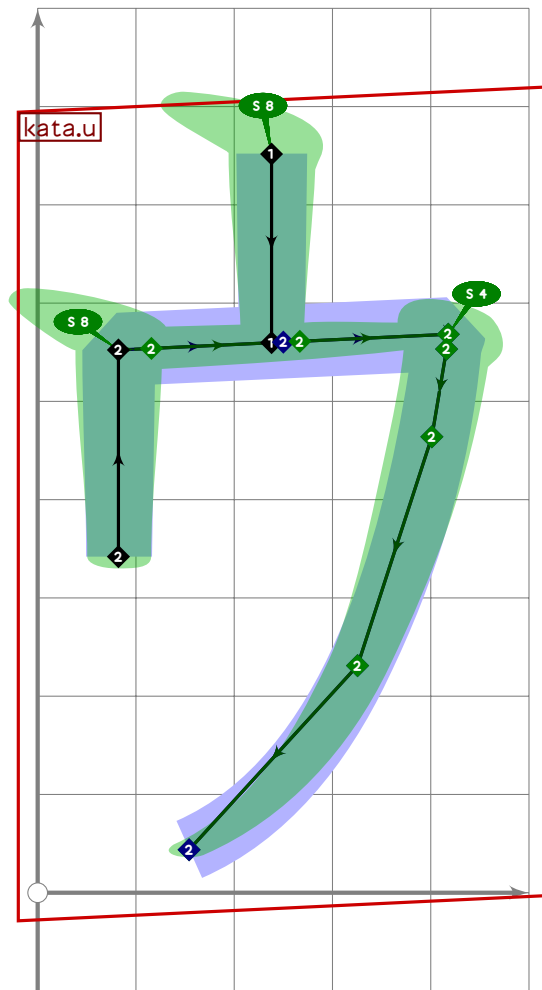
```

814 % katakana "a"
815 begintsuglyph("uniFF71";113);
816 tsu_curve.kata.a;
817 tsu_render;
818 endsuglyph;
819

```



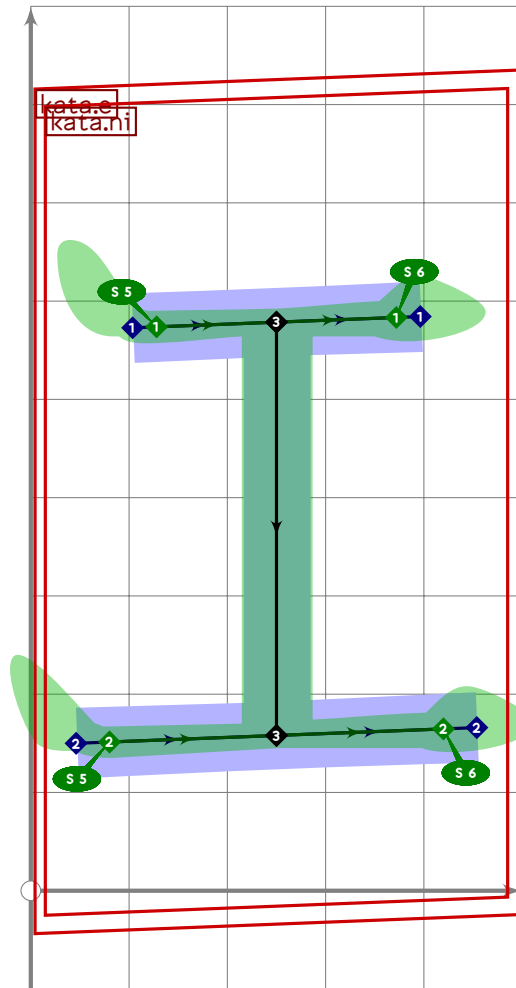
```
820 % katakana "i"  
821 begintsuglyph("uniFF72",114);  
822 tsu_curve.kata.i;  
823 tsu_render;  
824 endtsuglyph;  
825
```



```

826 % katakana "u"
827 begint Suglyph("uniFF73";115);
828   tsu_curve.kata.u;
829   tsu_render;
830 endtsuglyph;
831

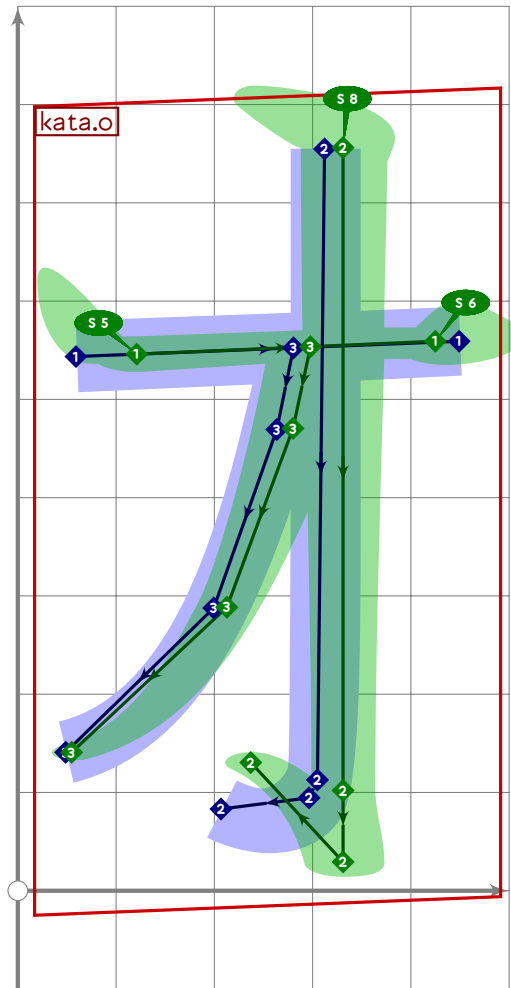
```



```

832 % katakana "e"
833 beginsuglyph("uniFF74",116);
834 tsu_curve.kata.e;
835 tsu_render;
836 endsuglyph;
837

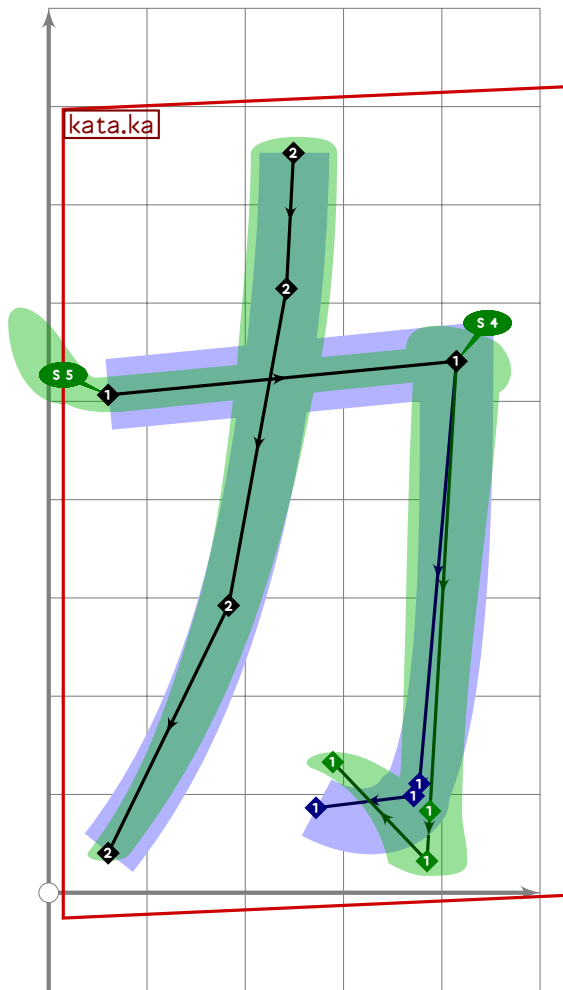
```



```

838 % katakana "o"
839 begintsuglyph("uniFF75";117);
840 tsu_curve.kata.o;
841 tsu_render;
842 endtsuglyph;
843

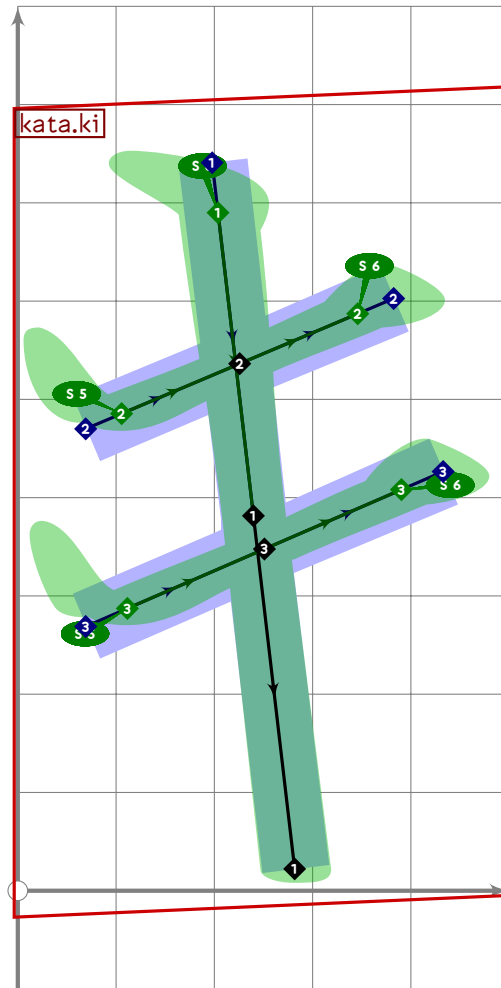
```



```

844 % katakana "ka"
845 begint Suglyph("uniFF76";118);
846 tsu_curve.kata.ka;
847 tsu_render;
848 endtsuglyph;
849

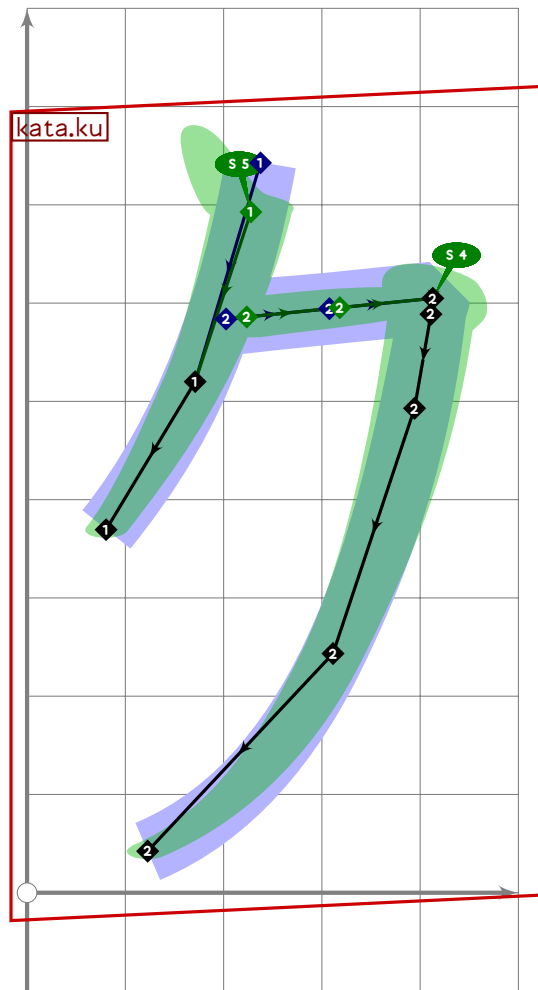
```



```

850 % katakana "ki"
851 begintsuglyph("uniFF77",119);
852 tsu_curve.kata.ki;
853 tsu_render;
854 endsuglyph;
855

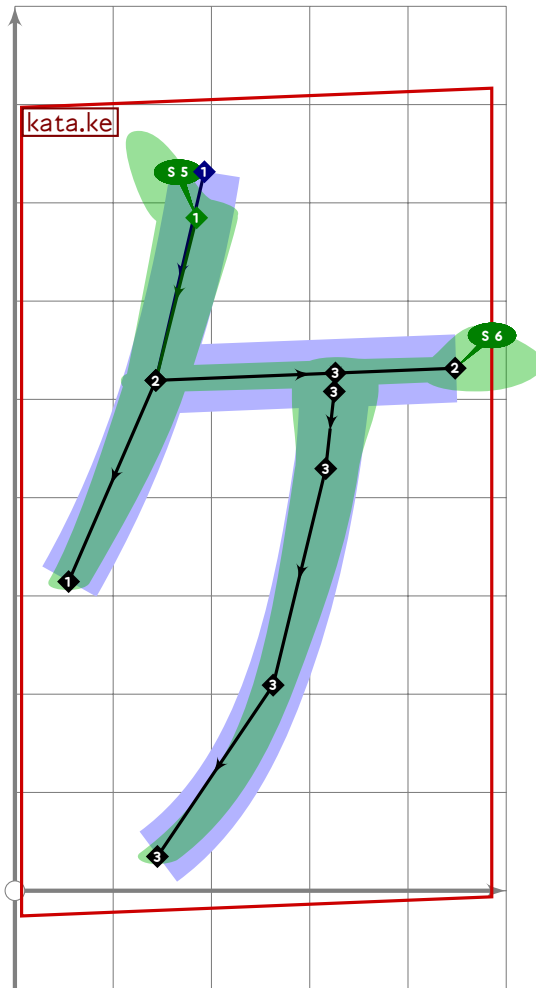
```

```

856 % katakana "ku"
857 begint Suglyph("uniFF78",120);
858 tsu_curve.kata.ku;
859 tsu_render;
860 endtsuglyph;
861

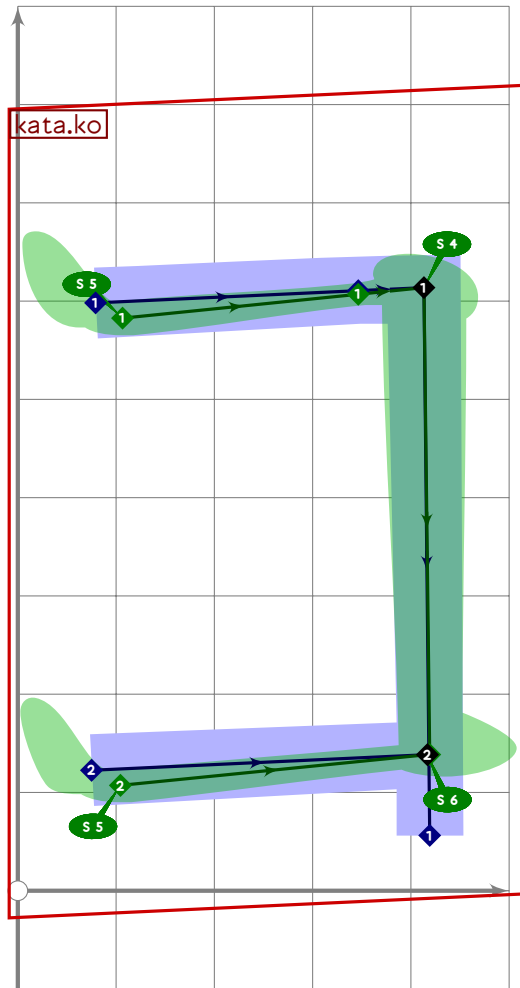
```



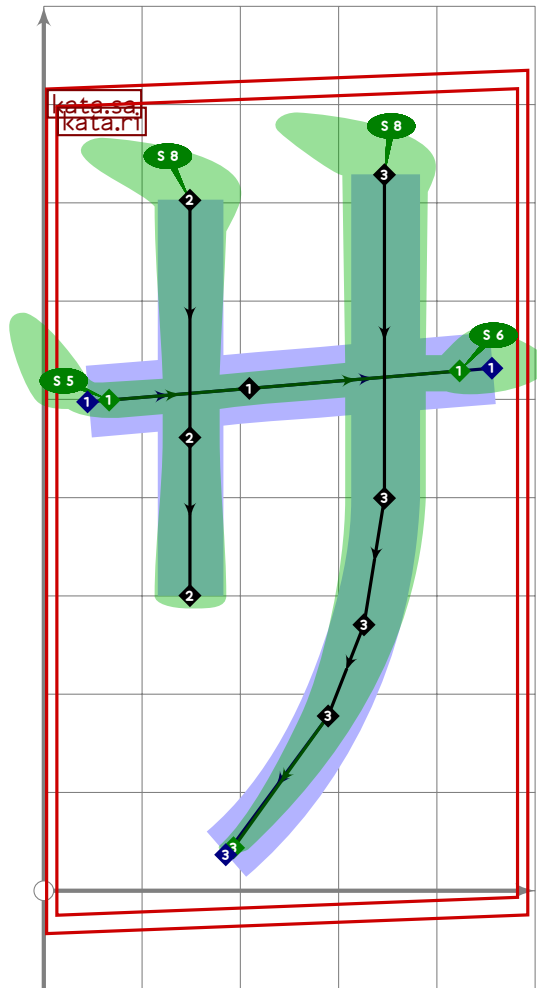
```

862 % katakana "ke"
863 begintsuglyph("uniFF79";121);
864 tsu_curve.kata.ke;
865 tsu_render;
866 endtsuglyph;
867

```



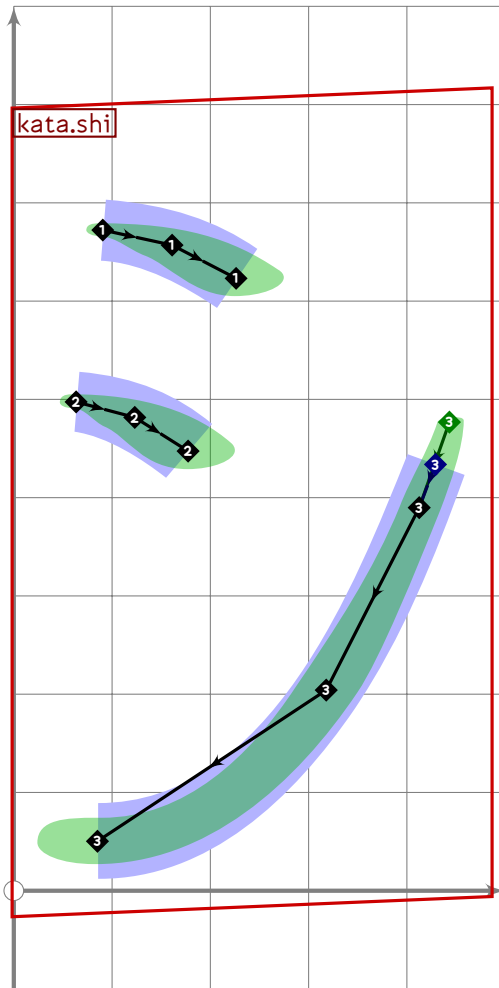
```
868 % katakana "ko"  
869 begintsuglyph("uniFF7A";122);  
870 tsu_curve.kata.ko;  
871 tsu_render;  
872 endsuglyph;  
873
```



```

874 % katakana "sa"
875 begintsuglyph("uniFF7B",123);
876 tsu_curve.kata.sa;
877 tsu_render;
878 endsuglyph;
879

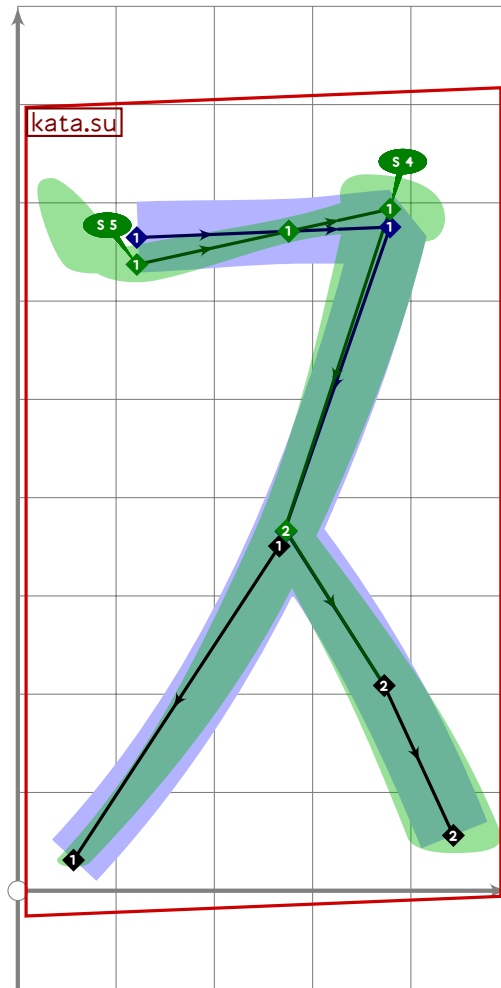
```



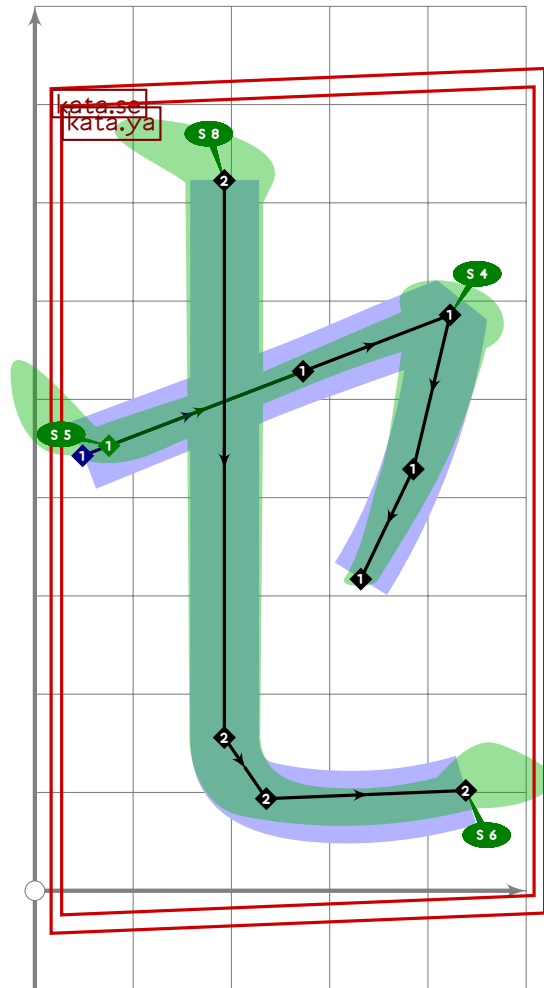
```

880 % katakana "shi"
881 begint Suglyph("\uniFF7C",124);
882 tsu_curve.kata.shi;
883 tsu_render;
884 endtsuglyph;
885

```



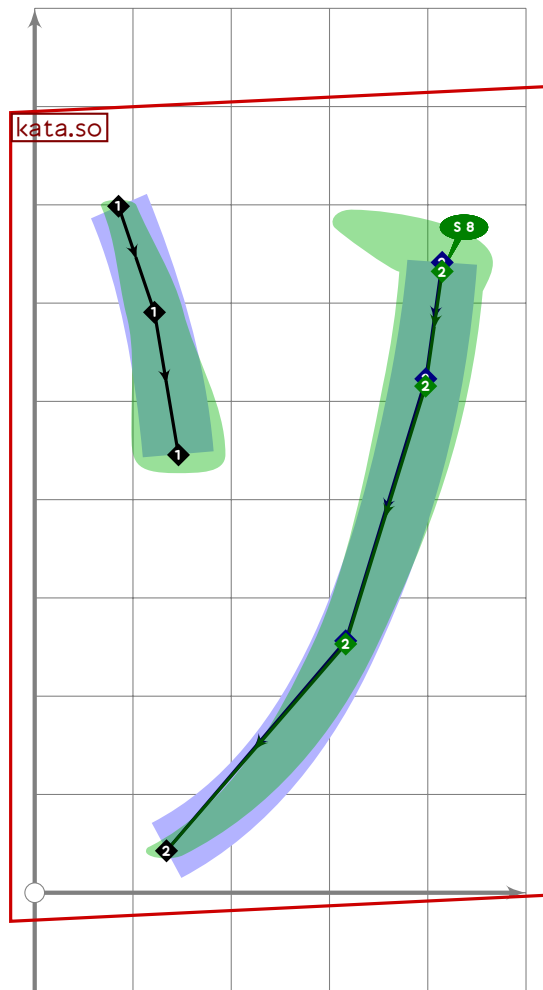
```
886 % katakana "su"  
887 begintsuglyph("uniFF7D";125);  
888 tsu_curve.kata.su;  
889 tsu_render;  
890 endtsuglyph;  
891
```



```

892 % katakana "se"
893 begintsuglyph("uniFF7E",126);
894 tsu_curve.kata.se;
895 tsu_render;
896 endtsuglyph;
897

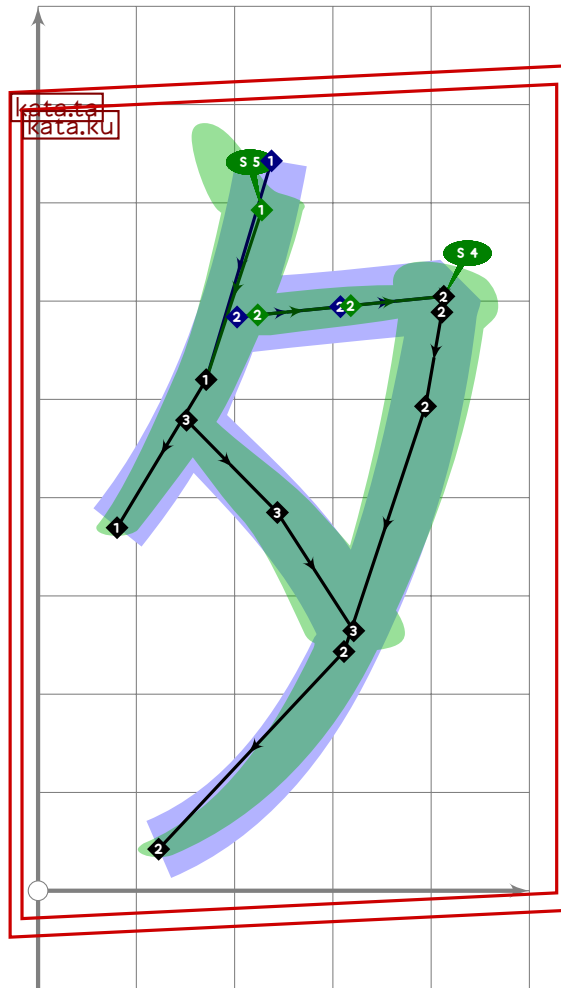
```



```

898 % katakana "so"
899 begintsuglyph("uniFF7F",127);
900 tsu_curve.kata.so;
901 tsu_render;
902 endsuglyph;
903

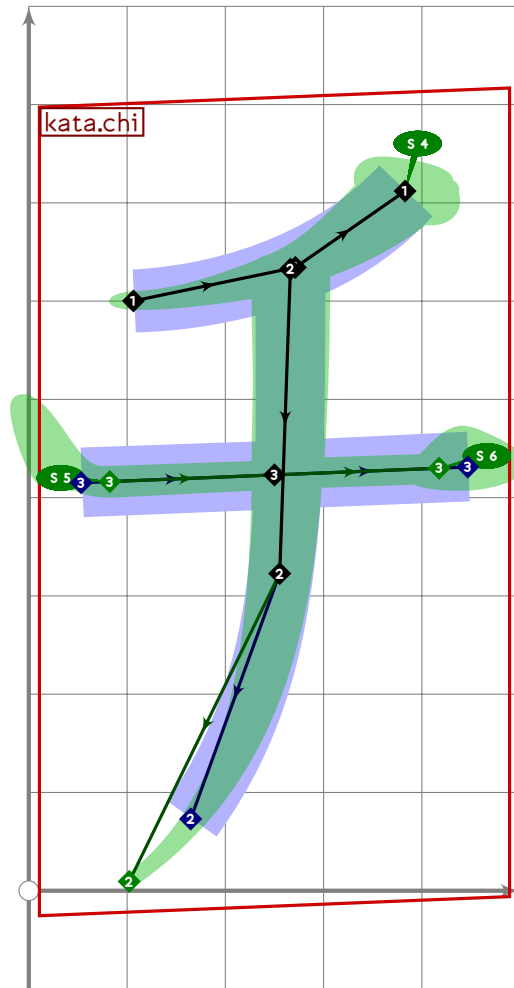
```

```

904 % katakana "ta"
905 beginsuglyph("uniFF80",128);
906 tsu_curve.kata.ta;
907 tsu_render;
908 endsuglyph;
909

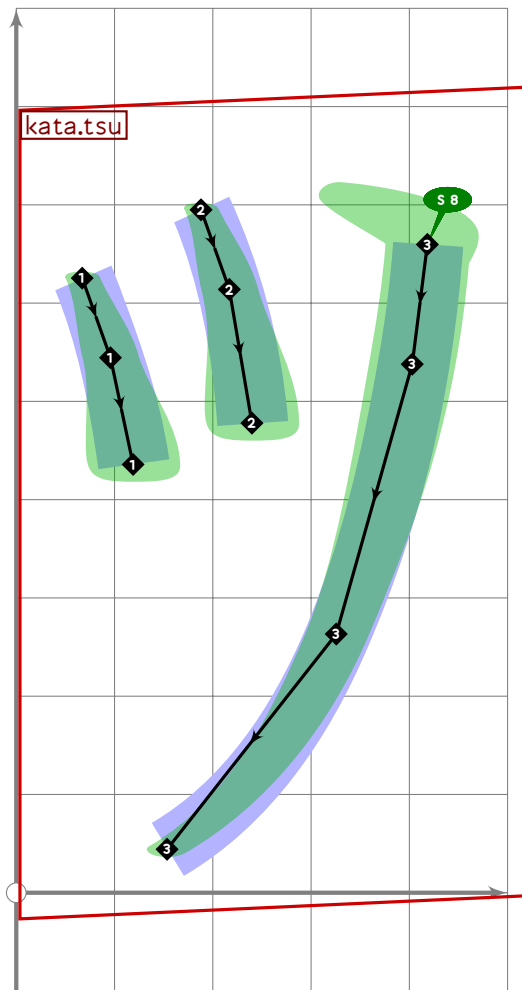
```



```

910 % katakana "chi"
911 begint Suglyph("uniFF81";129);
912   tsu_curve.kata.chi;
913   tsu_render;
914 endtsuglyph;
915

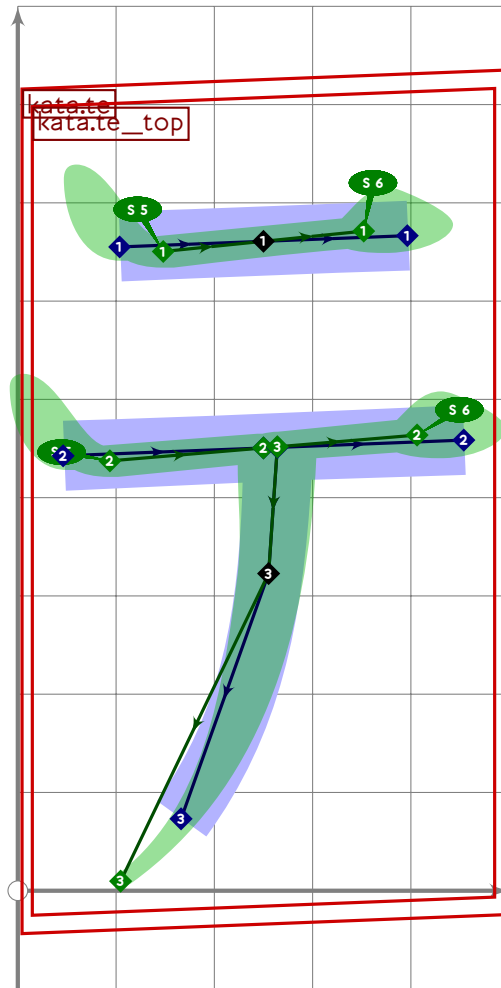
```



```

916 % katakana "tsu"
917 begintsuglyph("uniFF82",130);
918 tsu_curve.kata.tsu;
919 tsu_render;
920 endtsuglyph;
921

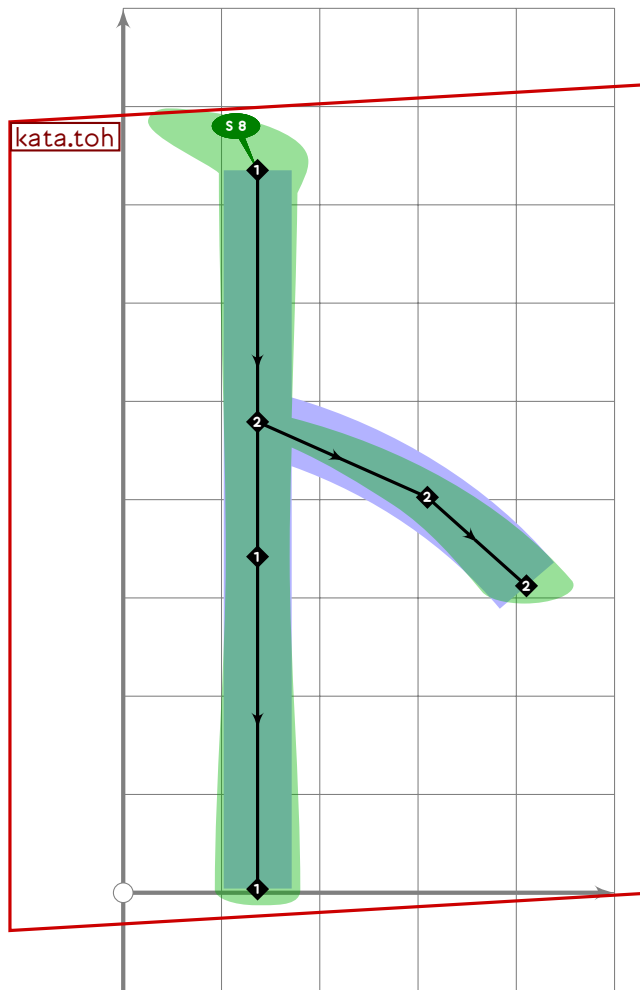
```



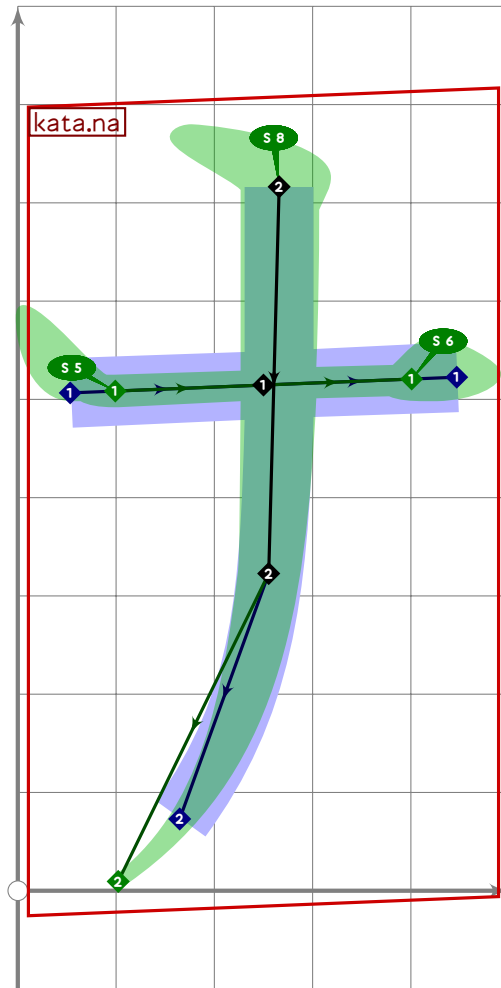
```

922 % katakana "te"
923 beginsuglyph("uniFF83",131);
924 tsu_curve.kata.te;
925 tsu_render;
926 endsuglyph;
927

```



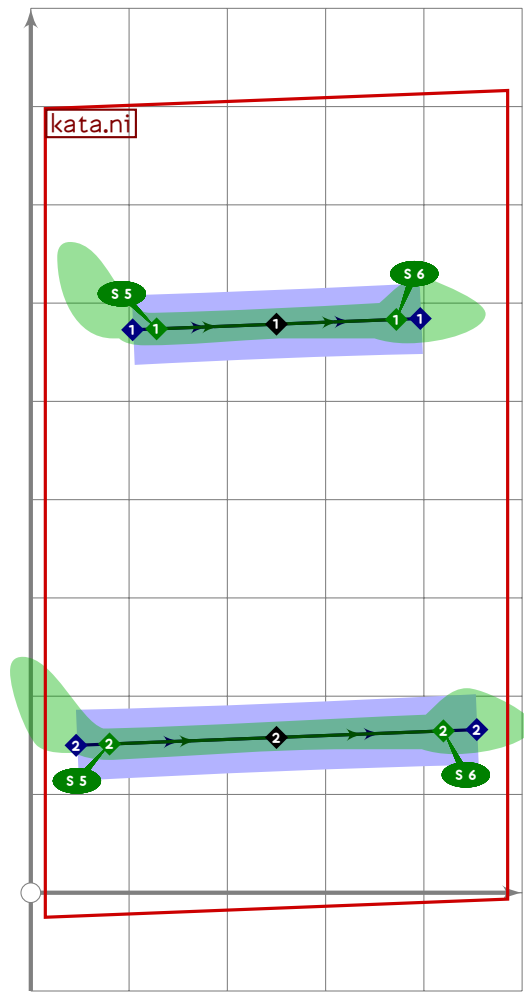
```
928 % katakana "to"  
929 beginsuglyph("uniFF84",132);  
930 tsu_curve.kata.toh;  
931 tsu_render;  
932 endsuglyph;  
933
```



```

934 % katakana "na"
935 begint Suglyph("uniFF85",133);
936 tsu_curve.kata.na;
937 tsu_render;
938 endtsuglyph;
939

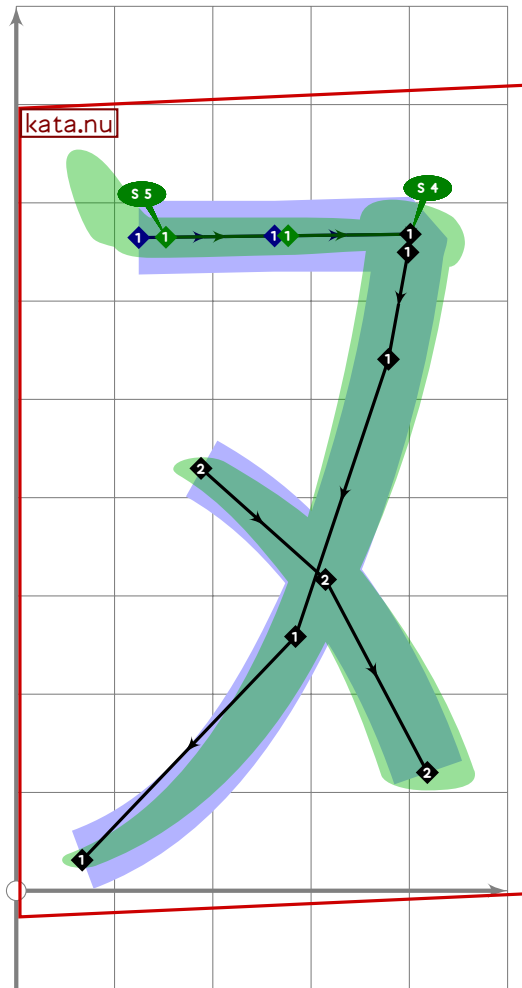
```



```

940 % katakana "ni"
941 begintsuglyph("uniFF86",134);
942 tsu_curve.kata.ni;
943 tsu_render;
944 endsuglyph;
945

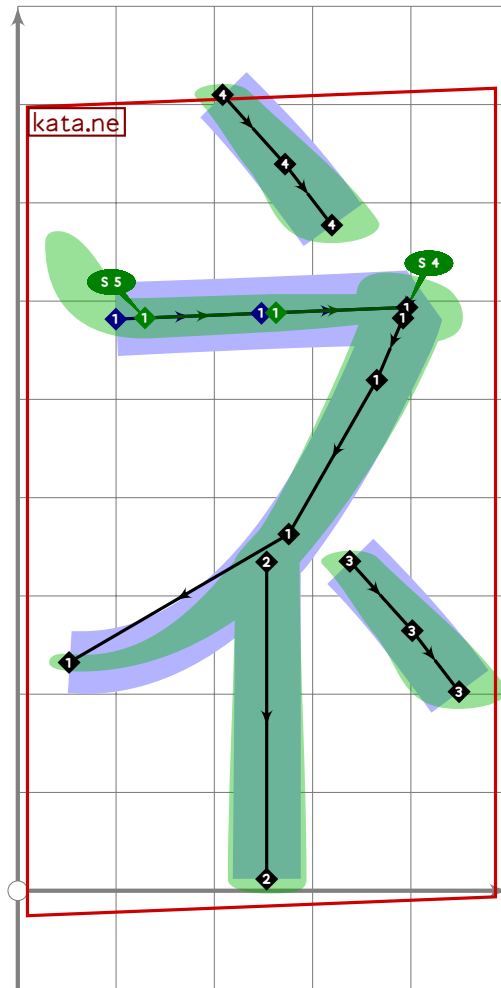
```



```

946 % katakana "nu"
947 beginsuglyph("uniFF87",135);
948   tsu_curve.kata.nu;
949   tsu_render;
950 endsuglyph;
951

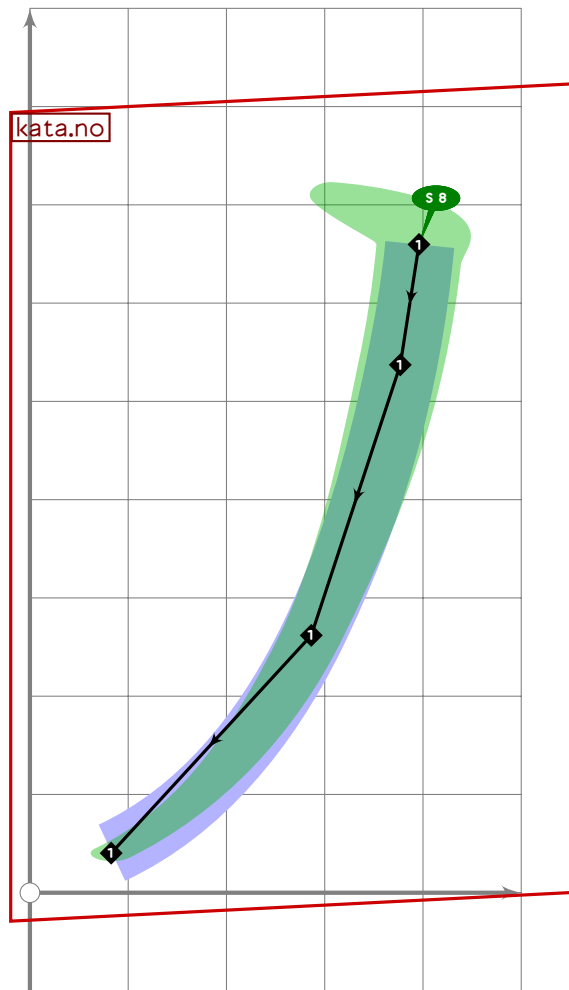
```

```

952 % katakana "ne"
953 begintsuglyph("uniFF88",136);
954 tsu_curve.kata.ne;
955 tsu_render;
956 endtsuglyph;
957

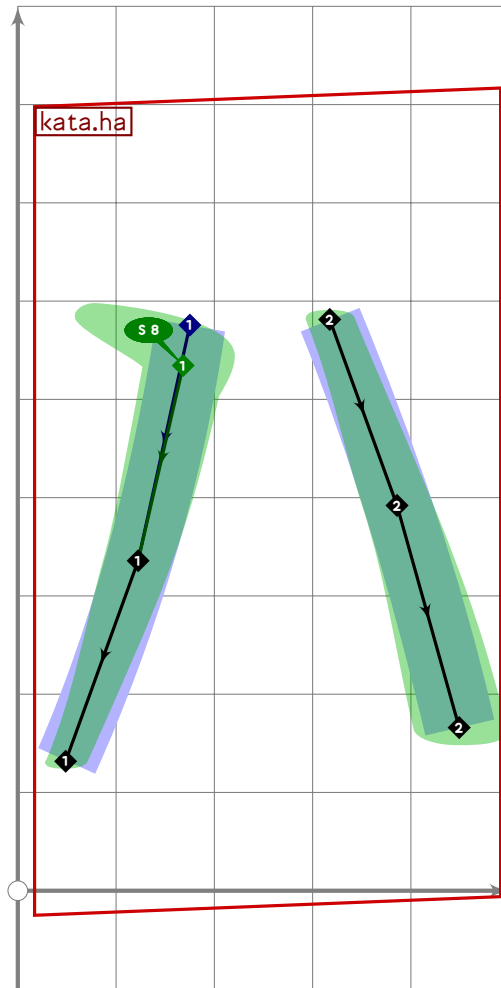
```



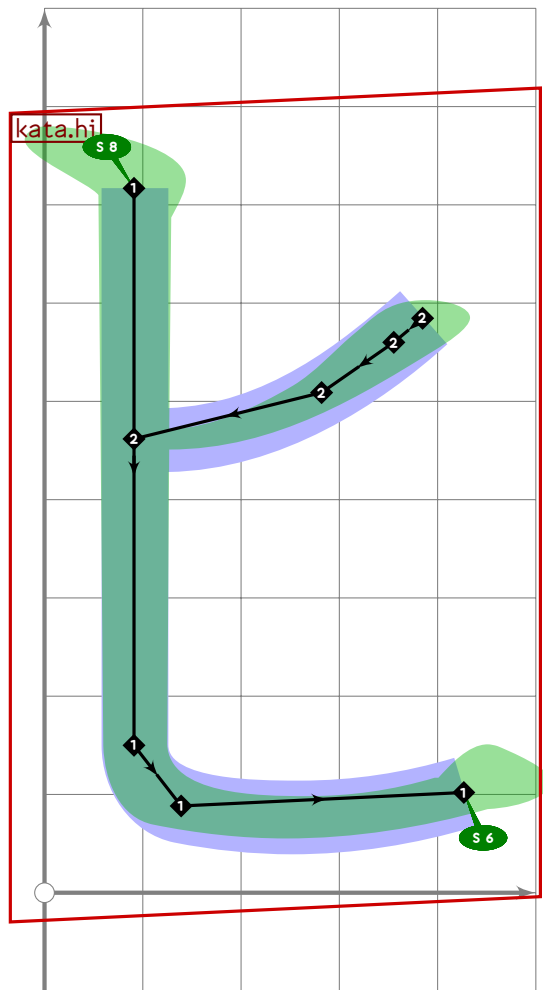
```

958 % katakana "no"
959 begintsuglyph("uniFF89",137);
960 tsu_curve.kata.no;
961 tsu_render;
962 endtsuglyph;
963

```



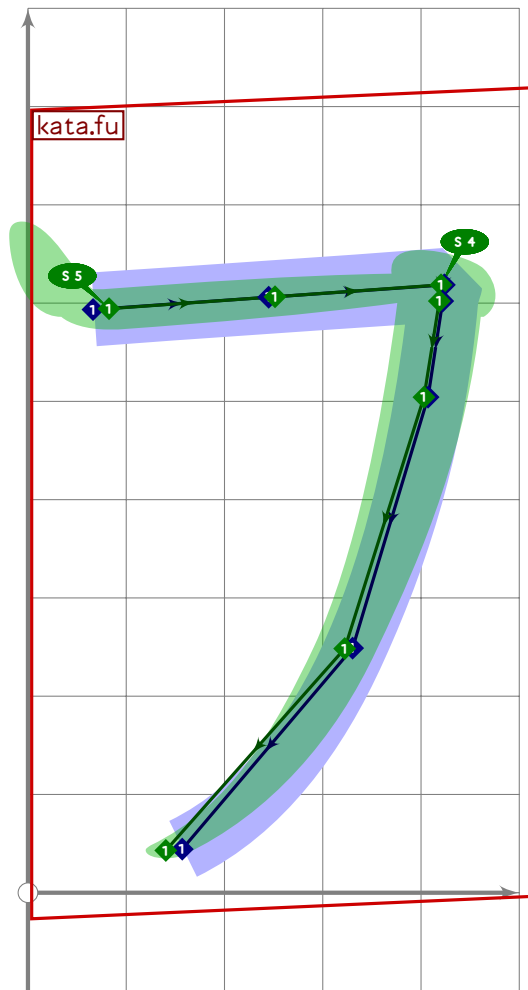
```
964 % katakana "ha"  
965 begintsuglyph("uniFF8A",138);  
966 tsu_curve.kata.ha;  
967 tsu_render;  
968 endsuglyph;  
969
```



```

970 % katakana "hi"
971 begintsuglyph("uniFF8B",139);
972 tsu_curve.kata.hi;
973 tsu_render;
974 endtsuglyph;
975

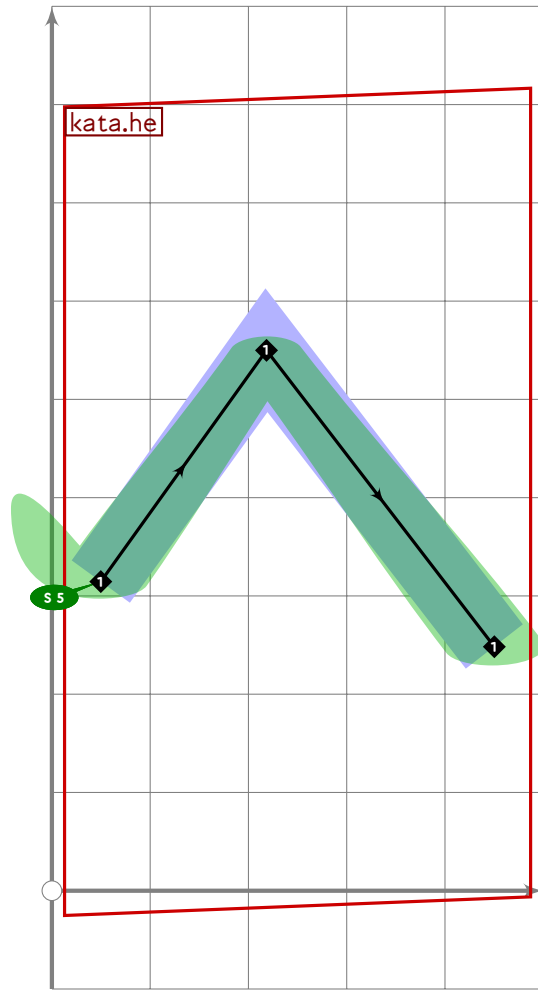
```



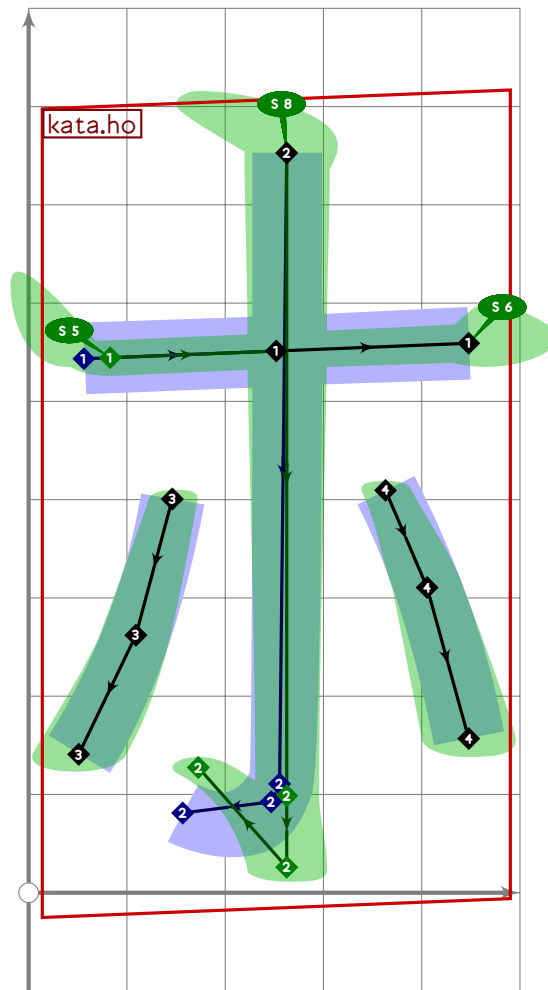
```

976 % katakana "fu"
977 begint Suglyph("uniFF8C",140);
978   tsu_curve.kata.fu;
979   tsu_render;
980 endtsuglyph;
981

```



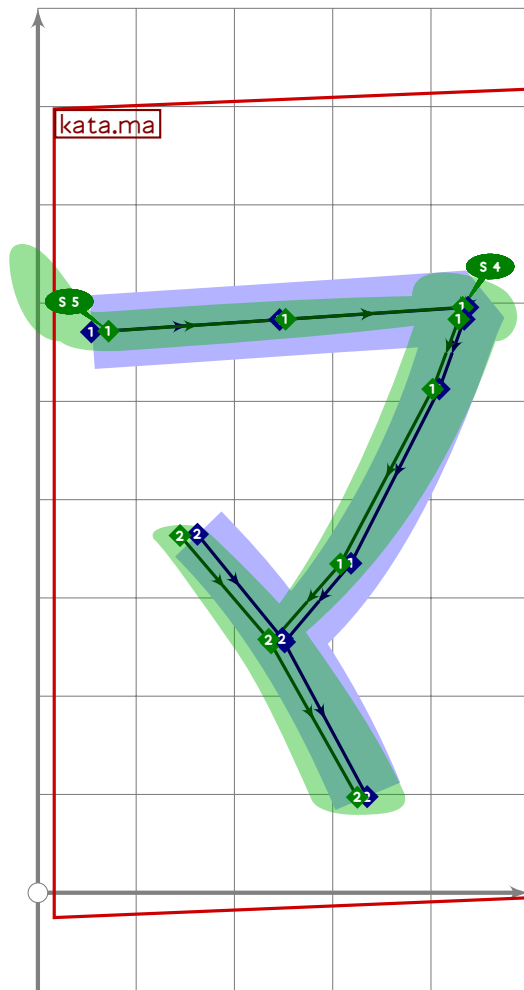
```
982 % katakana "he"  
983 beginsuglyph("uniFF8D",141);  
984 tsu_curve.kata.he;  
985 tsu_render;  
986 endsuglyph;  
987
```



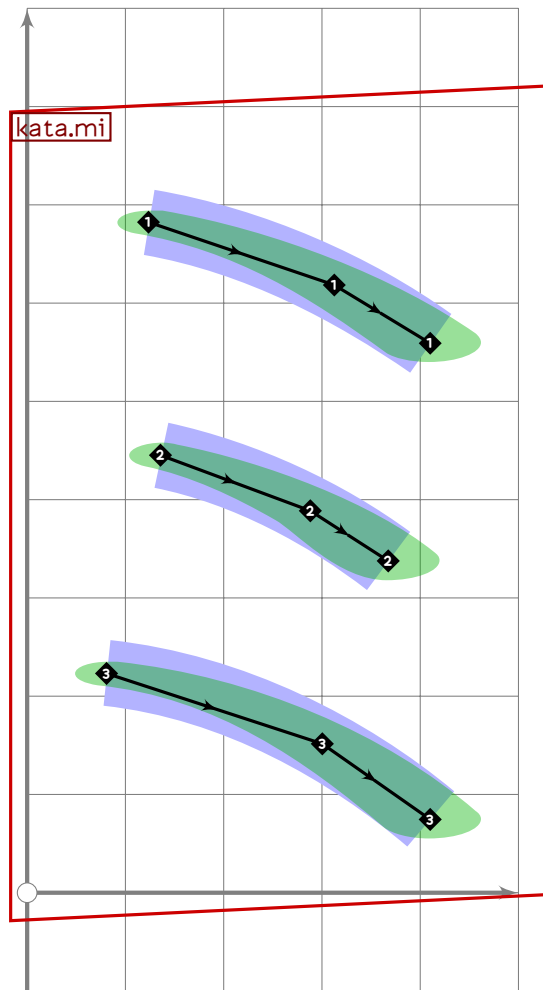
```

988 % katakana "ho"
989 begint Suglyph("uniFF8E",142);
990 tsu_curve.kata.ho;
991 tsu_render;
992 endtsuglyph;
993

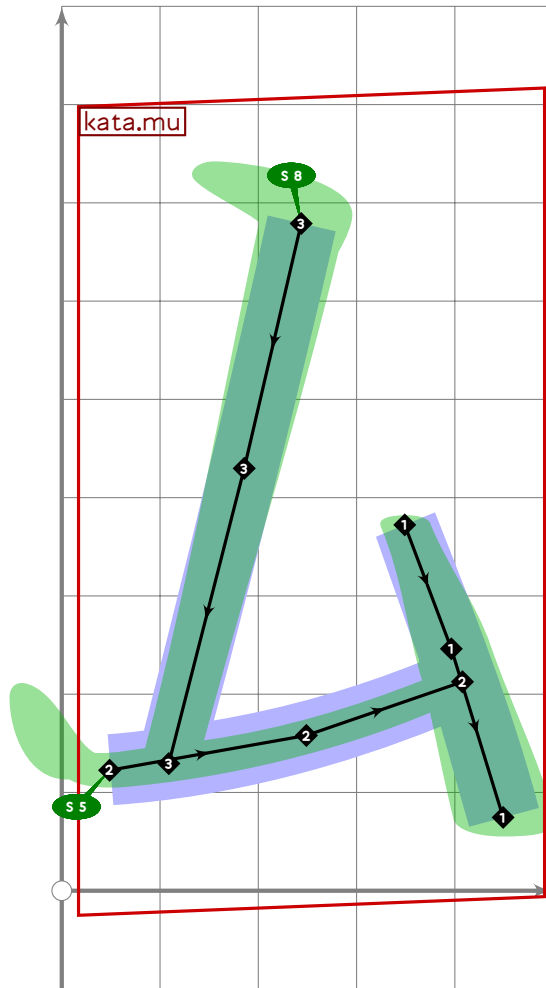
```



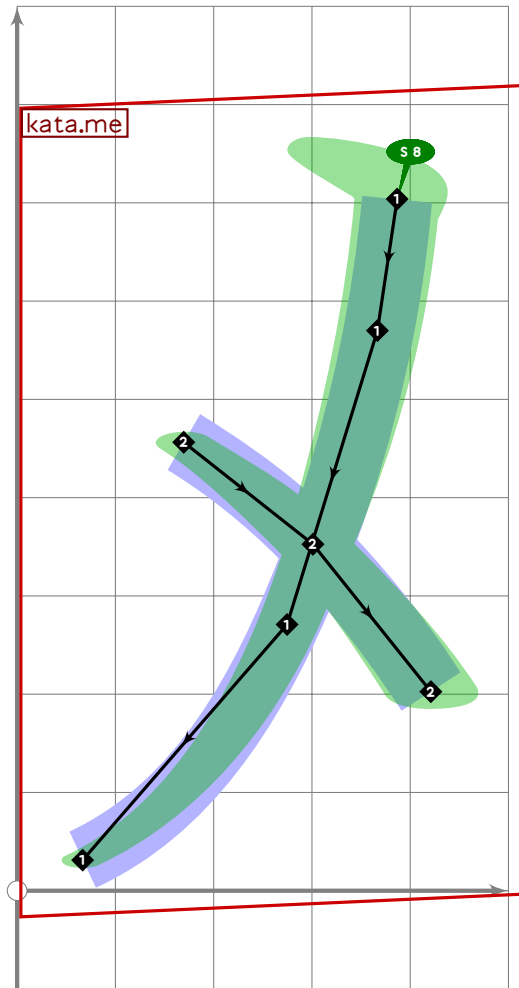
```
994 % katakana "ma"  
995 begintsuglyph("uniFF8F",143);  
996 tsu_curve.kata.ma;  
997 tsu_render;  
998 endtsuglyph;  
999
```

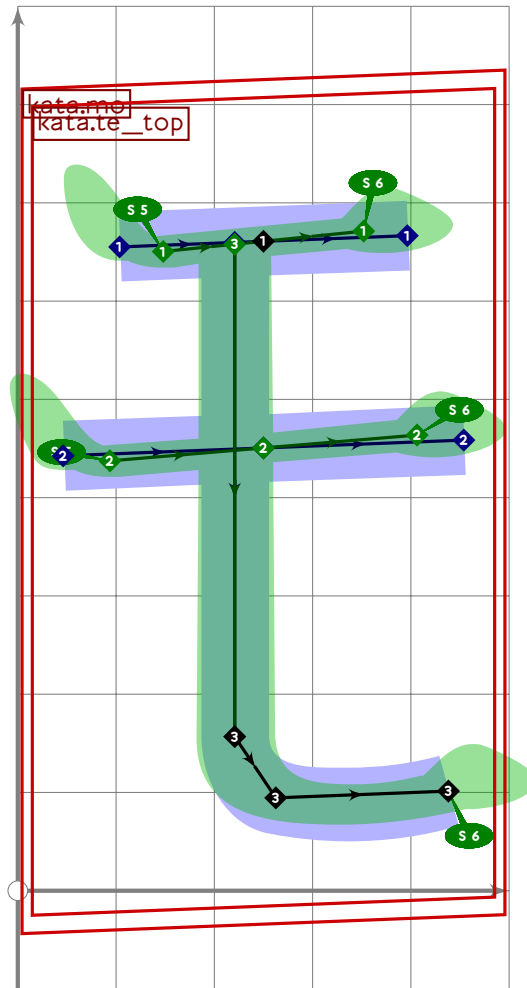
```
1000 % katakana "mi"  
1001 begintsuglyph("uniFF90",144);  
1002 tsu_curve.kata.mi;  
1003 tsu_render;  
1004 endtsuglyph;  
1005
```



```
1006 % katakana "mu"  
1007 begintsuglyph("uniFF91";145);  
1008 tsu_curve.kata.mu;  
1009 tsu_render;  
1010 endtsuglyph;  
1011
```



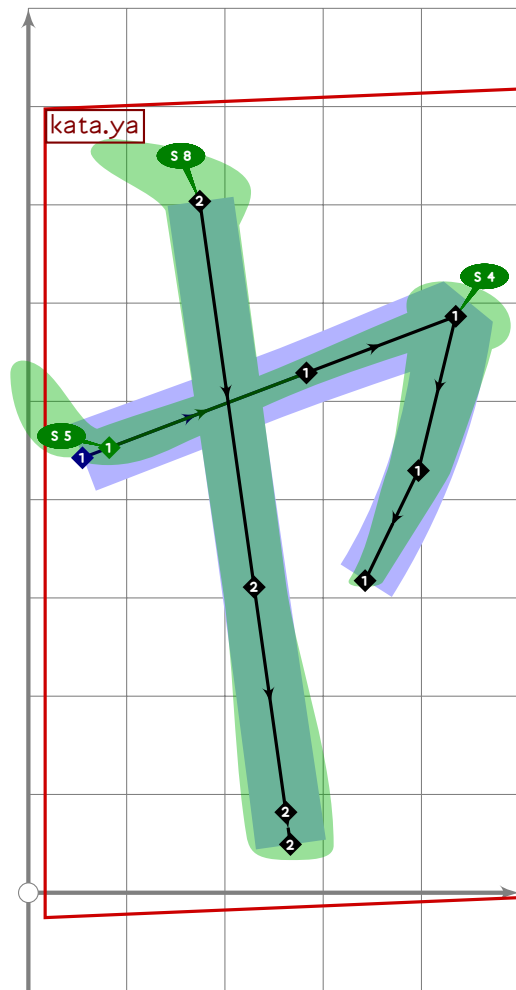
```
1012 % katakana "me"  
1013 begintsuglyph("uniFF92";146);  
1014 tsu_curve.kata.me;  
1015 tsu_render;  
1016 endtsuglyph;  
1017
```



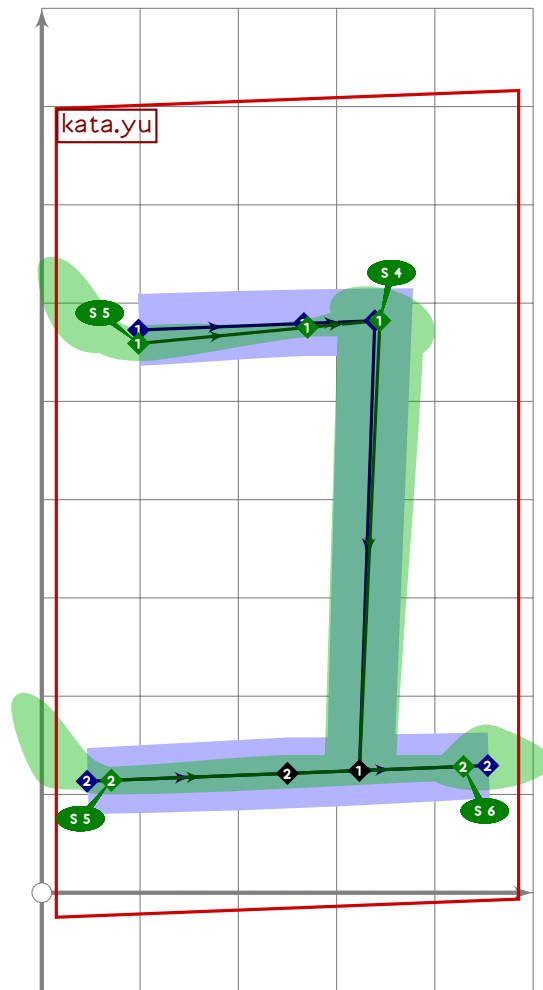
```

1018 % katakana "mo"
1019 begintsuglyph("uniFF93";147);
1020 tsu_curve.kata.mo;
1021 tsu_render;
1022 endsuglyph;
1023

```



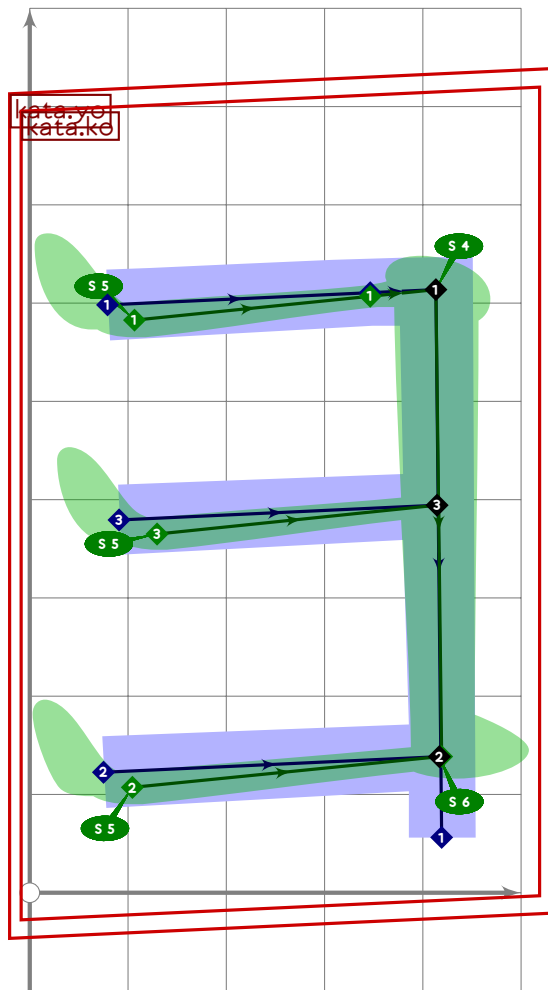
```
1024 % katakana "ya"  
1025 begintsuglyph("uniFF94",148);  
1026 tsu_curve.kata.ya;  
1027 tsu_render;  
1028 endtsuglyph;  
1029
```



```

1030 % katakana "yu"
1031 begintsuglyph("uniFF95";149);
1032 tsu_curve.kata.yu;
1033 tsu_render;
1034 endsuglyph;
1035

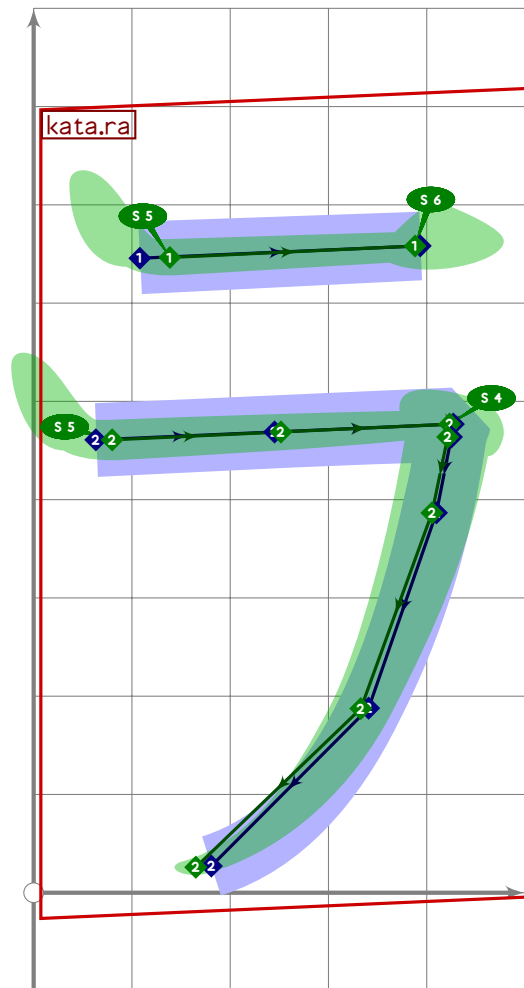
```



```

1036 % katakana "yo"
1037 beginsuglyph("uniFF96";150);
1038   tsu_curve.kata.yo;
1039   tsu_render;
1040 endsuglyph;
1041

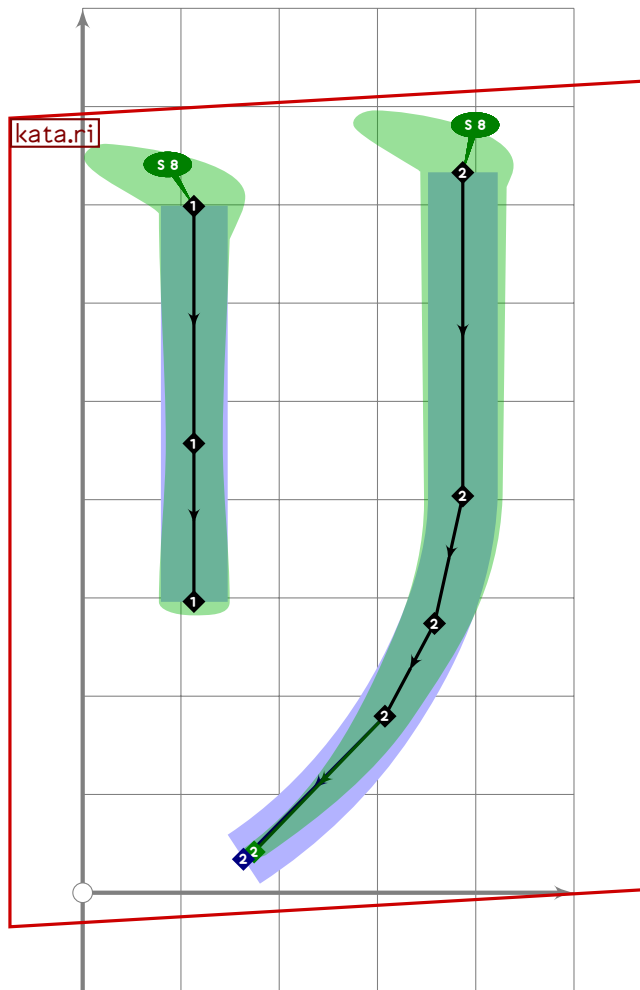
```



```

1042 % katakana "ra"
1043 begintsuglyph("uniFF97";151);
1044 tsu_curve.kata.ra;
1045 tsu_render;
1046 endtsuglyph;
1047

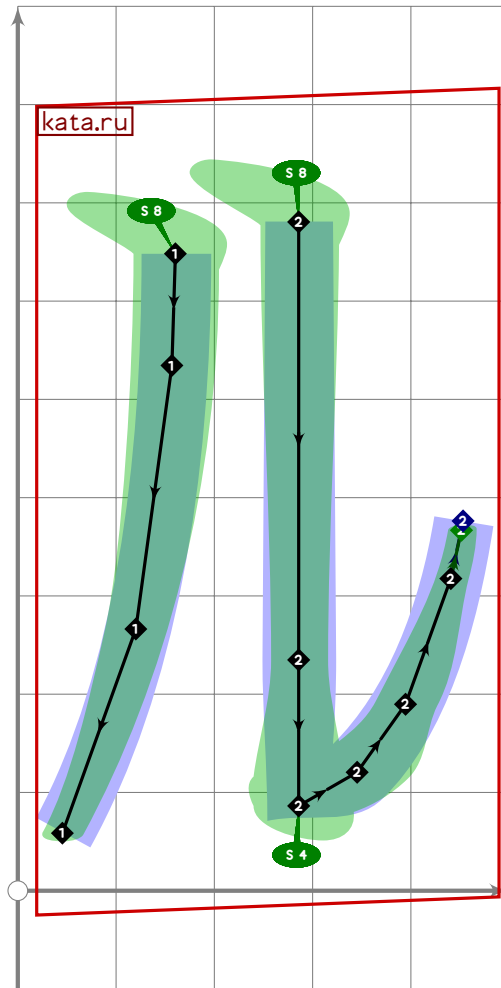
```

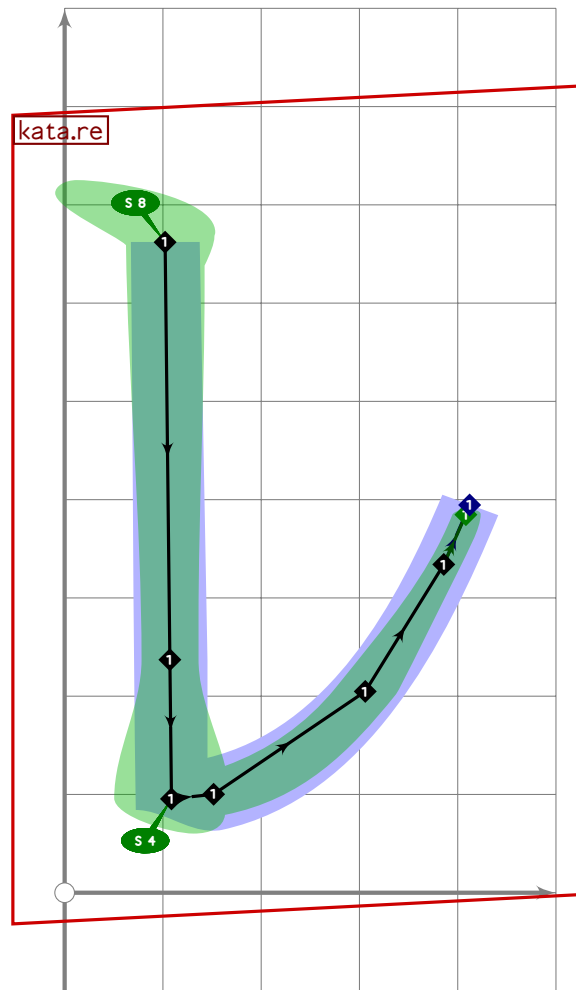
```

1048 % katakana "ri"
1049 begintsuglyph("uniFF98",152);
1050 tsu_curve.kata.ri;
1051 tsu_render;
1052 endsuglyph;
1053

```



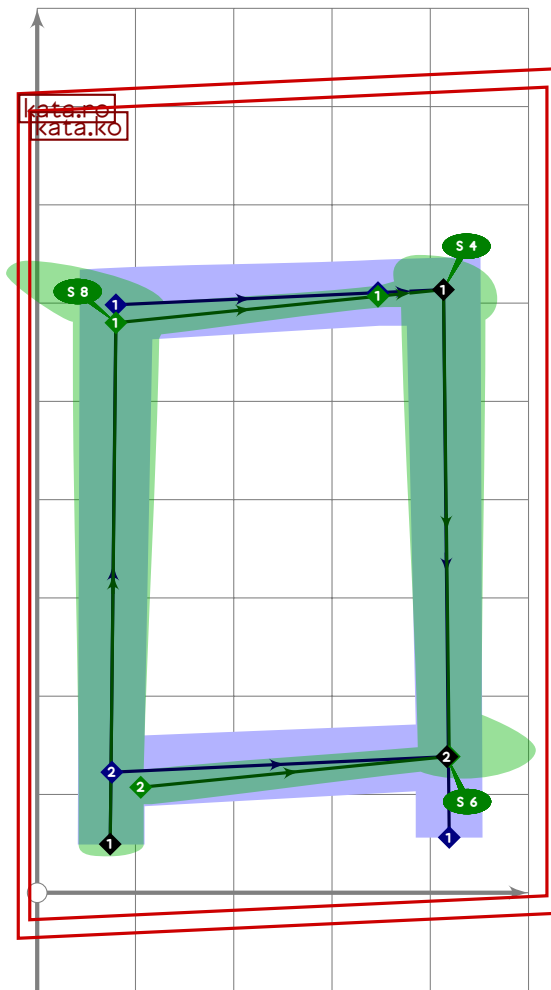
```
1054 % katakana "ru"  
1055 begintsuglyph("uniFF99";153);  
1056 tsu_curve.kata.ru;  
1057 tsu_render;  
1058 endsuglyph;  
1059
```



```

1060 % katakana "re"
1061 begintsuglyph("uniFF9A";154);
1062 tsu_curve.kata.re;
1063 tsu_render;
1064 endsuglyph;
1065

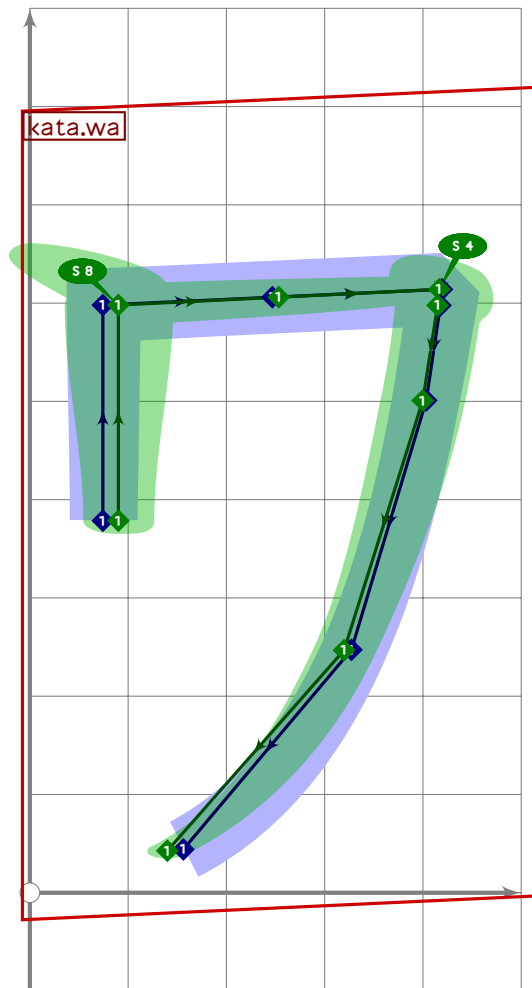
```



```

1066 % katakana "ro"
1067 begintsuglyph("uniFF9B",155);
1068 tsu_curve.kata.ro;
1069 tsu_render;
1070 endsuglyph;
1071

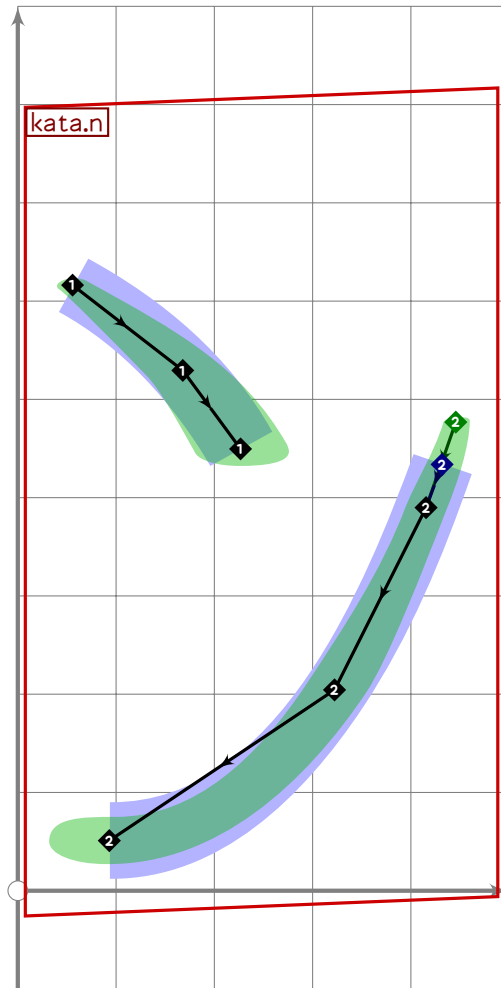
```



```

1072 % katakana "wa"
1073 begintsuglyph("uniFF9C";156);
1074 tsu_curve.kata.wa;
1075 tsu_render;
1076 endtsuglyph;
1077

```



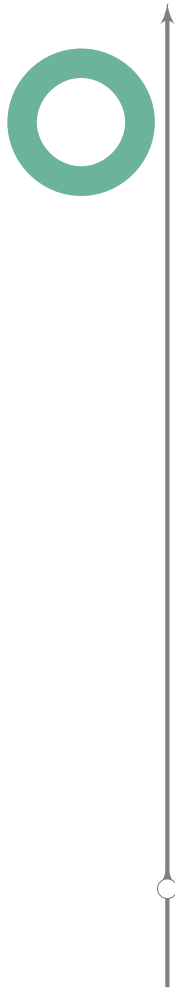
```

1078 % katakana "n"
1079 begintsuglyph("uniFF9D";157);
1080 tsu_curve.kata.n;
1081 tsu_render;
1082 endsuglyph;
1083
1084 % WARNING changing rescale setting
1085 tsu_rescale_native_zero;
1086

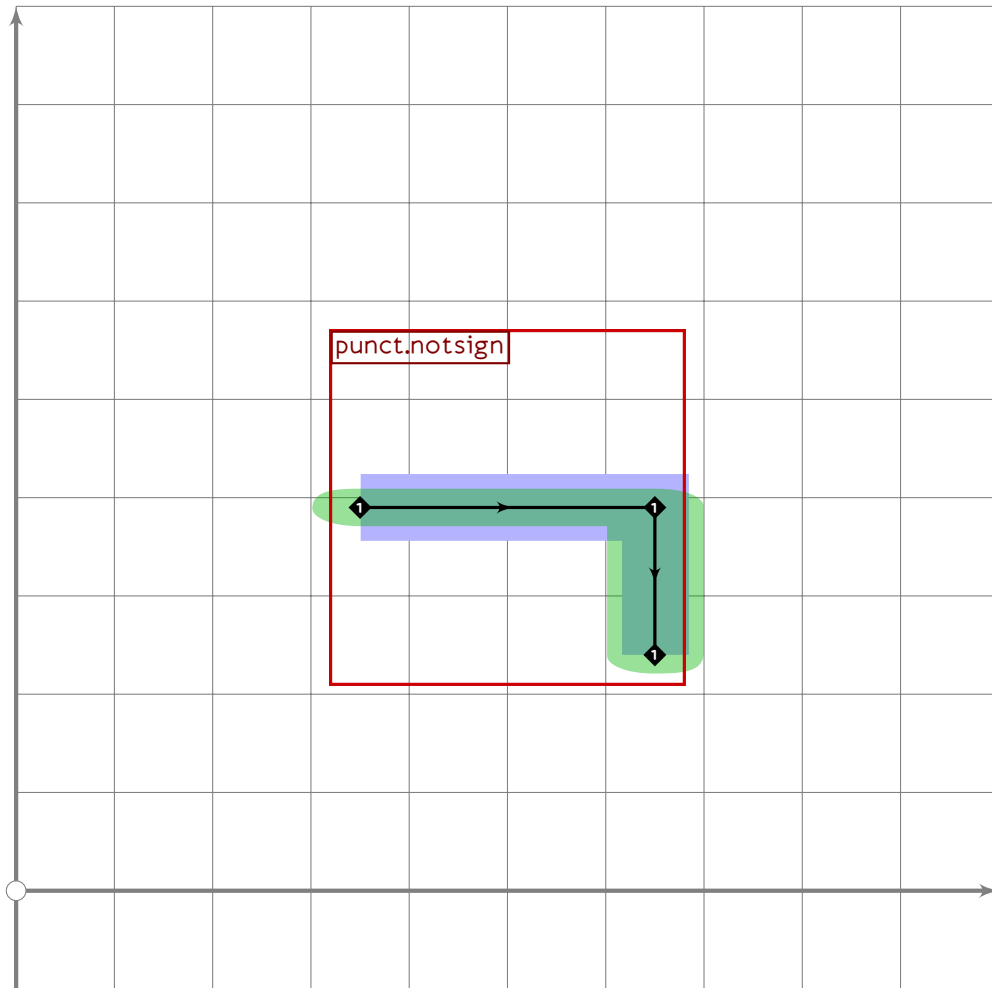
```



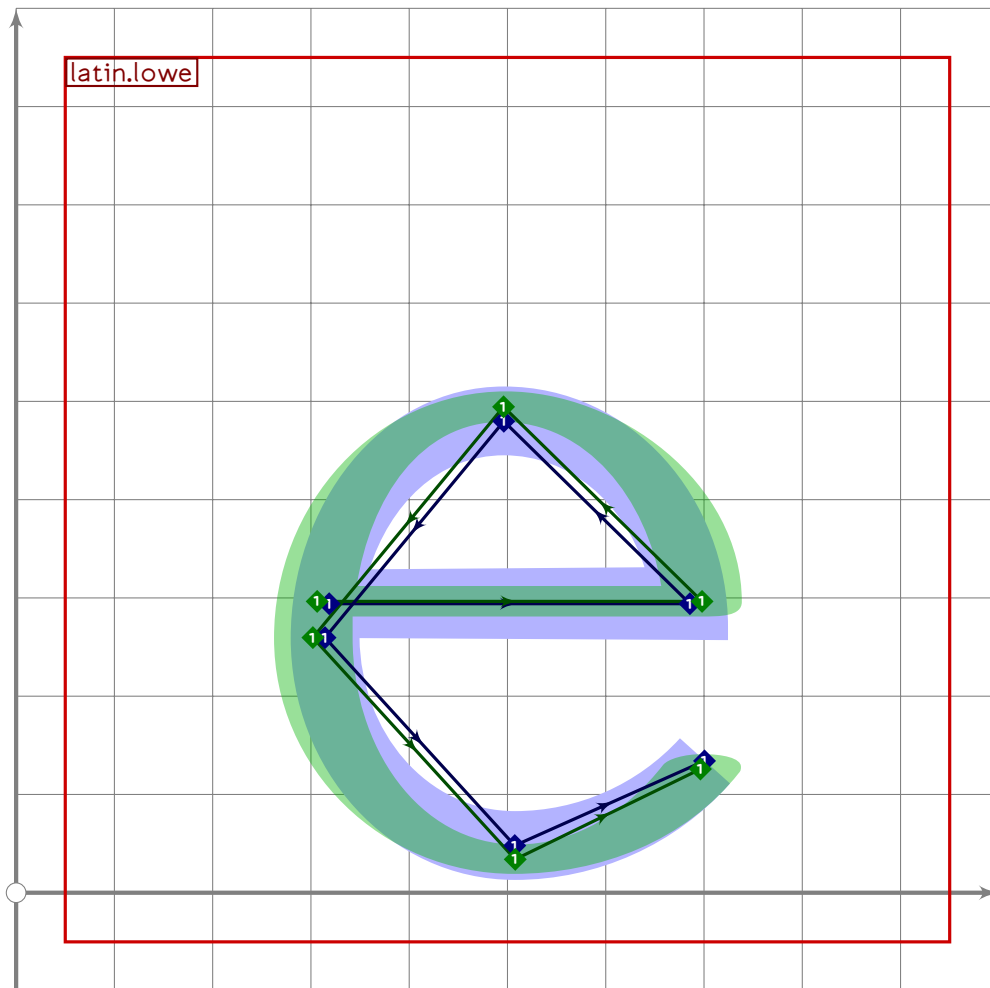
```
1087 % combining dakuten
1088 begintsuglyph("uniFF9E",158);
1089 tsu_curve.dakuten(identity
1090     scaled 0.8 rotated 25 shifted (-130,780) xscaled 0.7);
1091 tsu_render;
1092 endsuglyph;
1093
```



```
1094 % combining handakuten
1095 begintsuglyph("uniFF9F",159);
1096   Fill fullcircle scaled (handakuten_outer*0.75) shifted (-90,780);
1097   unFill reverse fullcircle scaled (handakuten_inner*0.75) shifted (-90,780);
1098 endsuglyph;
1099
1100 % WARNING changing rescale setting
1101 tsu_rescale_full;
```

```
1112  
1113 begintsuglyph("uniFFE2",226);  
1114 tsu_curve.punct.notsign  
1115     (identity scaled (1.5*tsu_punct_size) shifted centre_pt);  
1116 tsu_render;  
1117 endsuglyph;
```

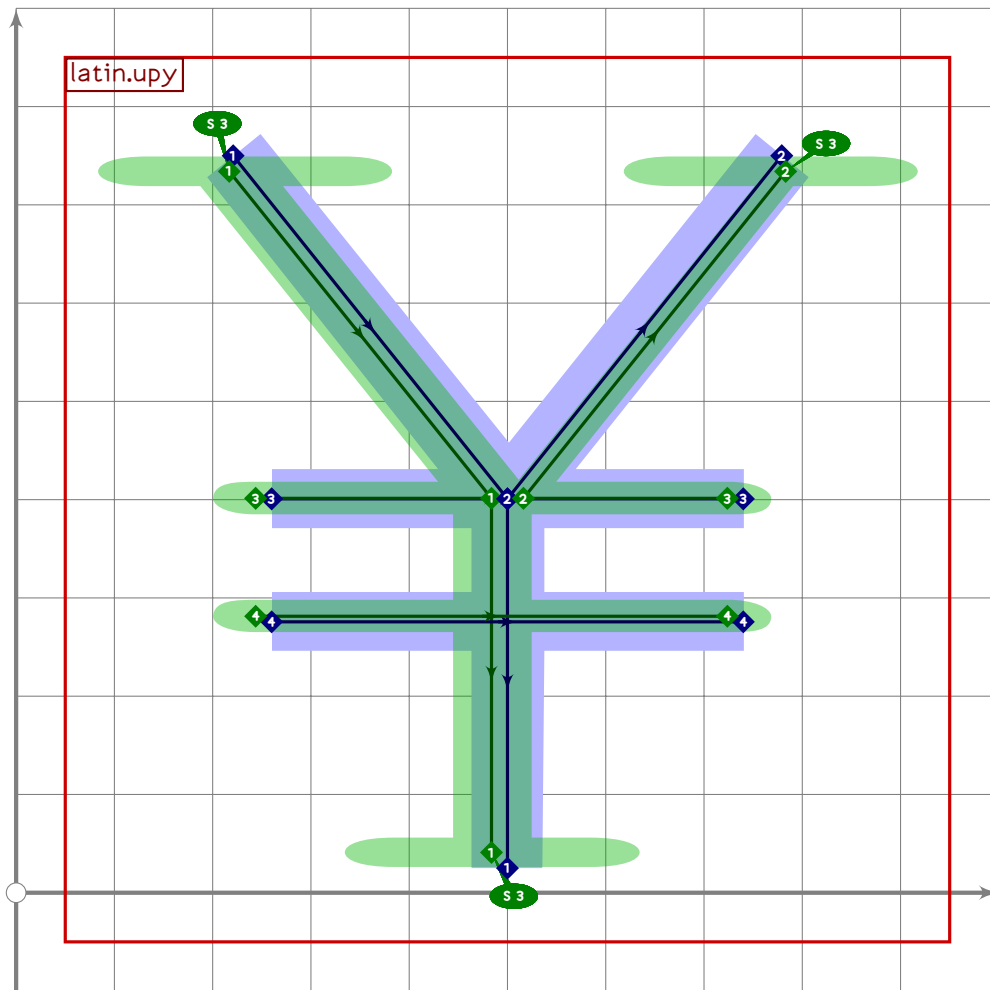


```

1118
1119 begintsuglyph("uniFFE3",227);
1120 tsu_accent.macron(tsu_curve.latin.lowe);
1121 set_bosize(0,0);
1122 tsu_render;
1123 endsuglyph;
1124
1125 begintsuglyph("uniFFE4",228);
1126 tsu_curve.punct.bvline;
1127 tsu_render;
1128 endsuglyph;

```

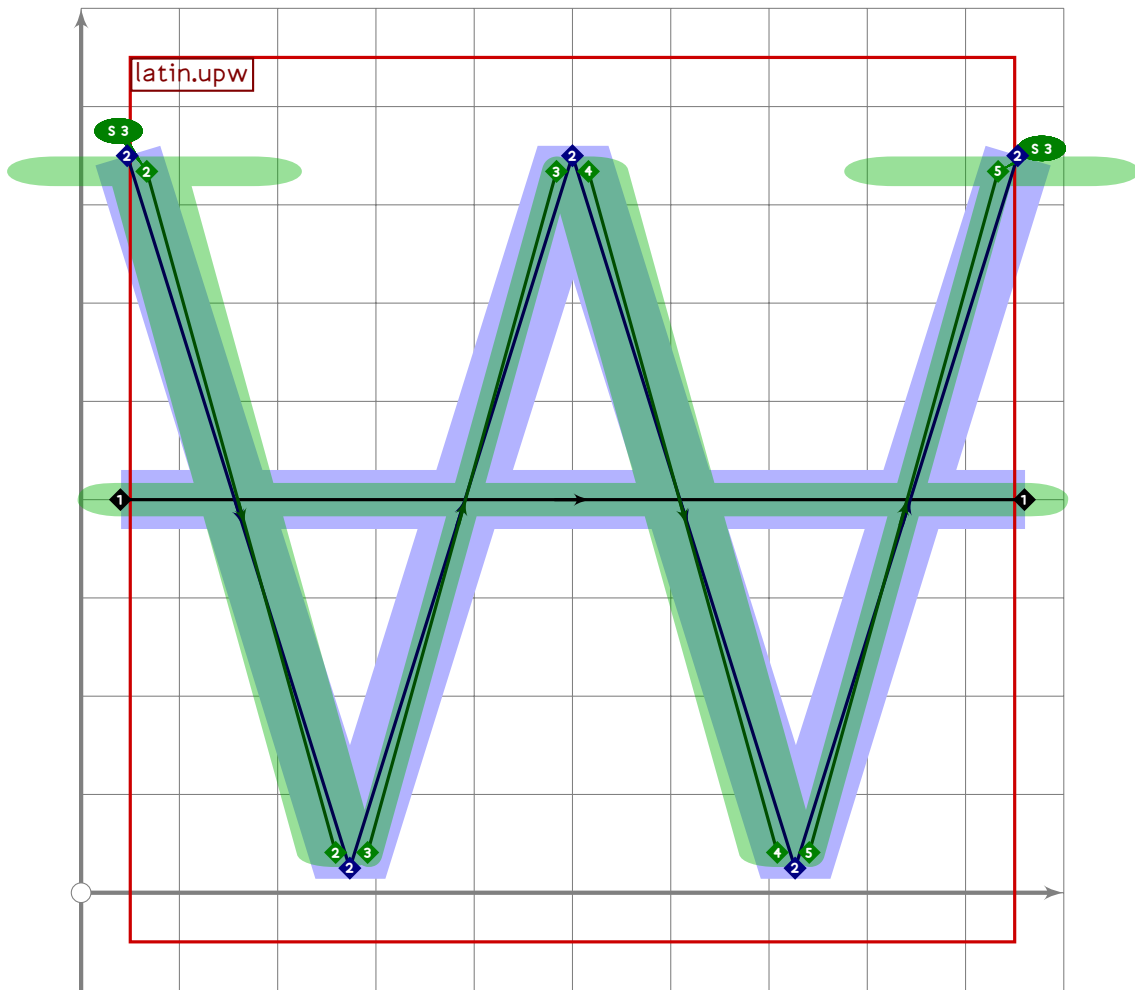
[see page 263]



```

1129
1130 begintsuglyph("uniFFE5";229);
1131 tsu_curve.latin.upy;
1132 push_stroke(((-240,0)-(240,0)) shifted point 1 of get_strokep(-1),
1133   (2,2)-(2,2));
1134 set_bosize(0,80);
1135 push_stroke(((-240,0)-(240,0)) shifted point 1.333 of get_strokep(-2),
1136   (2,2)-(2,2));
1137 set_bosize(0,80);
1138 tsu_render;
1139 endtsuglyph;

```



```

1140
1141 begintsuglyph("uniFFE6";230);
1142 push_stroke((40,400)-(960,400),(2,2)-(2,2));
1143 set_bsize(0,80);
1144 tsu_curve.latin.upw;
1145 tsu_render;
1146 endtsuglyph;
1147
1148 _____
1149
1150 endfont;
1151
1152 _____

```

tsuku-1f1.mp

```
1 % Unicode page 1F1 (Enclosed Supplement) for Tsukurimashou
2 % Copyright (C) 2011 Matthew Skala
3 %
4-28 [Standard copyright notice]
29
30 

---

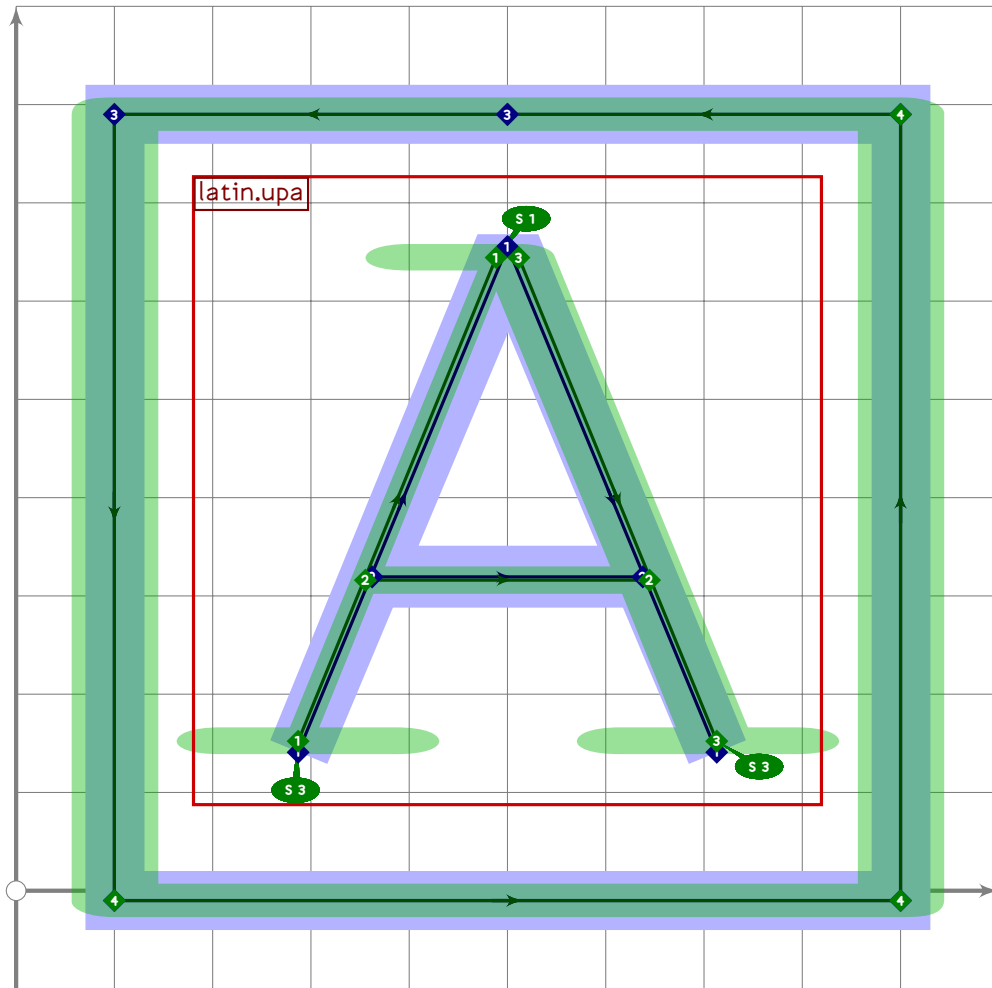

31
32 beginfont
33
34 input latin-intro.mp;
35
36 % AUTODEPS
37 input enclosed.mp;
38 input latin.mp;
39
40 

---


41
```

Squared Latin

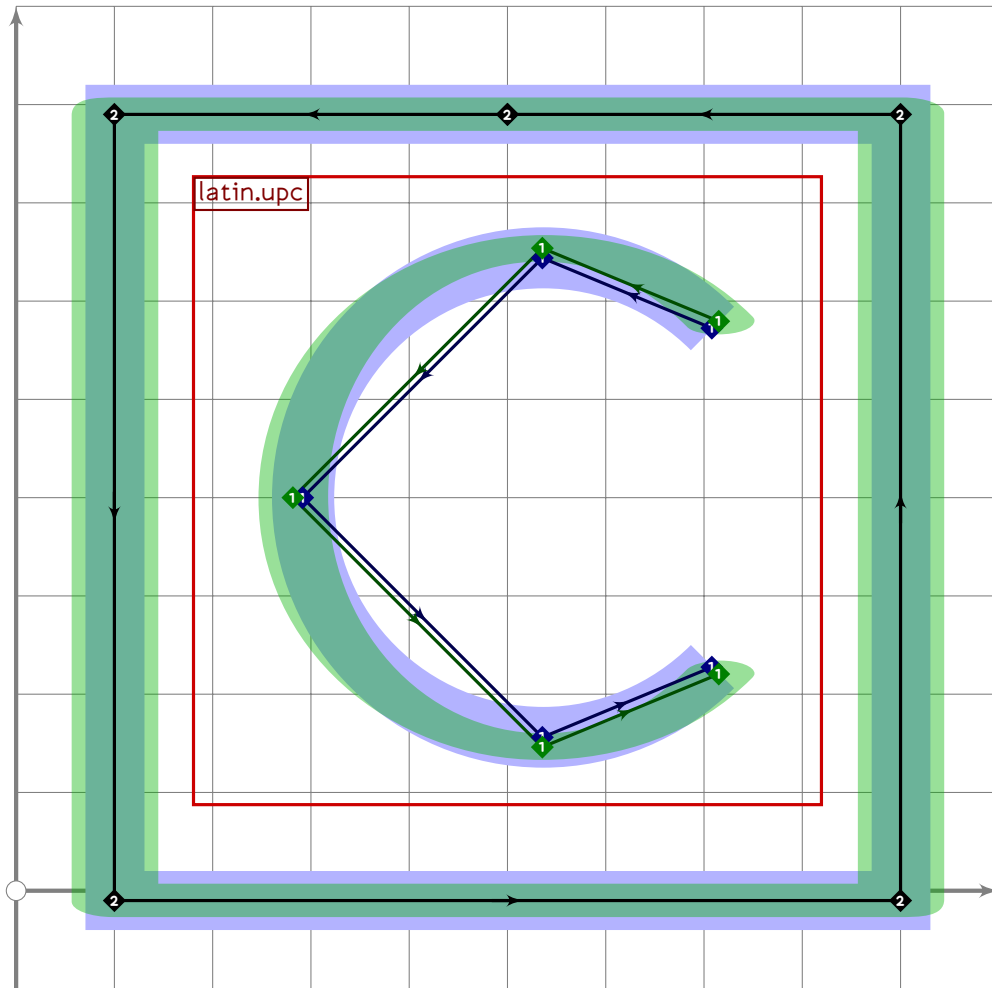
```
42 % SQUARED LATIN
43
```



```

44 % A
45 beginsuglyph("u1F130";48);
46   tsu_curve.square.single(tsu_curve.latin.upa);
47   tsu_render;
48 endsuglyph;
49

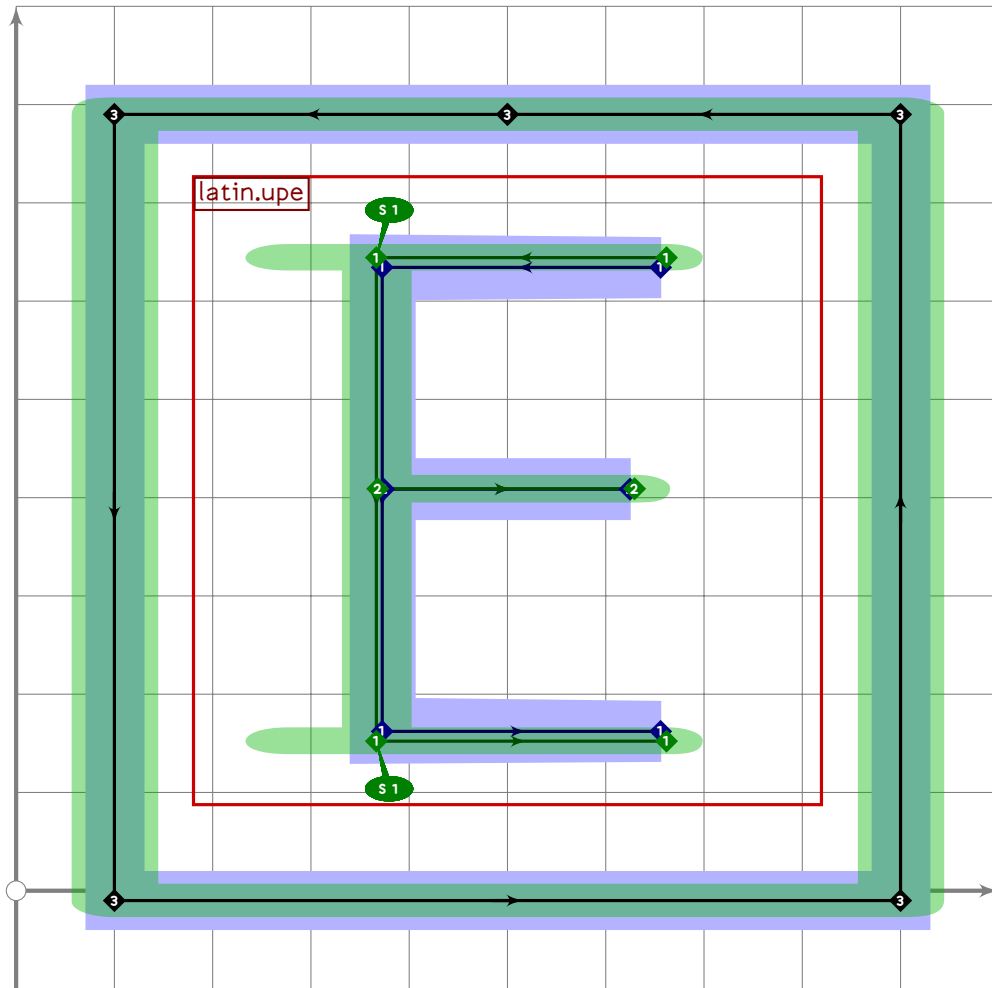
```

```

56 % C
57 begint Suglyph("u1F132";50);
58   tsu_curve.square.single(tsu_curve.latin.upc);
59   tsu_render;
60 endsuglyph;
61

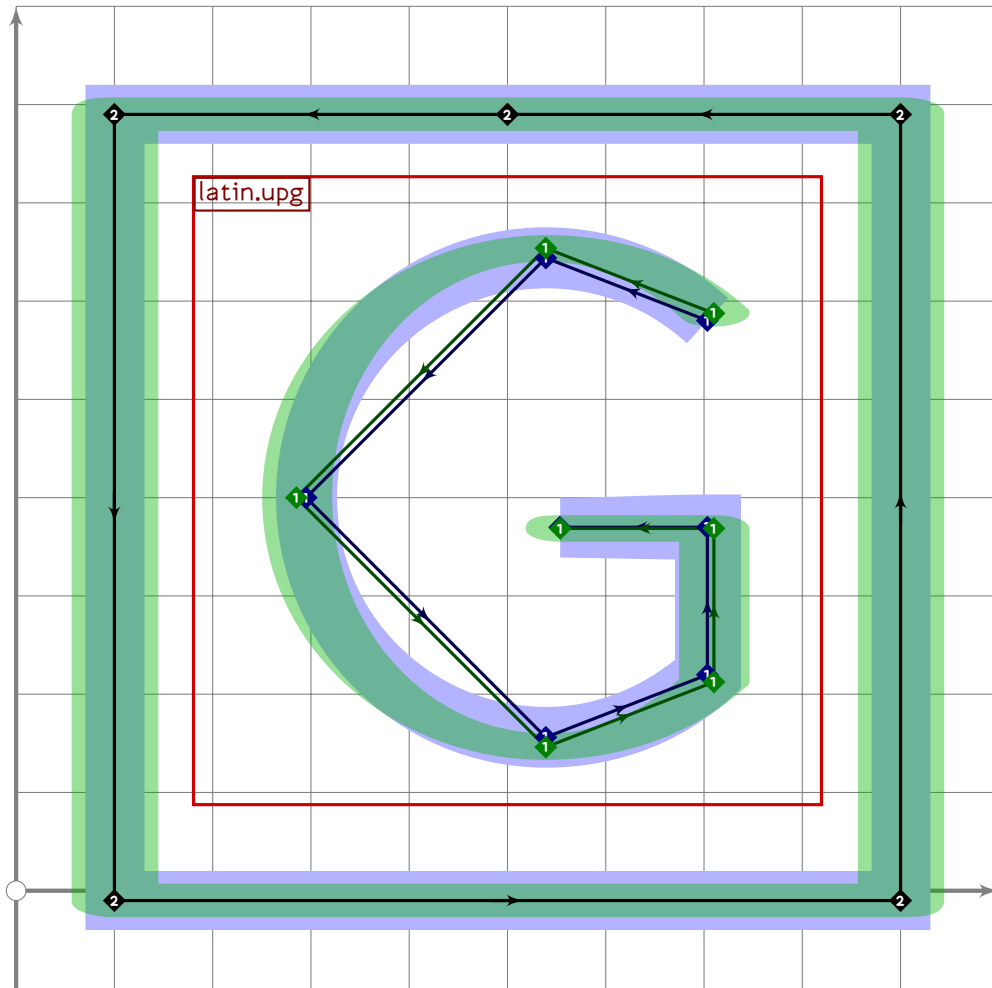
```

```

68 % E
69 begint Suglyph("u1F134",52);
70 tsu_curve.square.single(tsu_curve.latin.upe);
71 tsu_render;
72 endsuglyph;
73

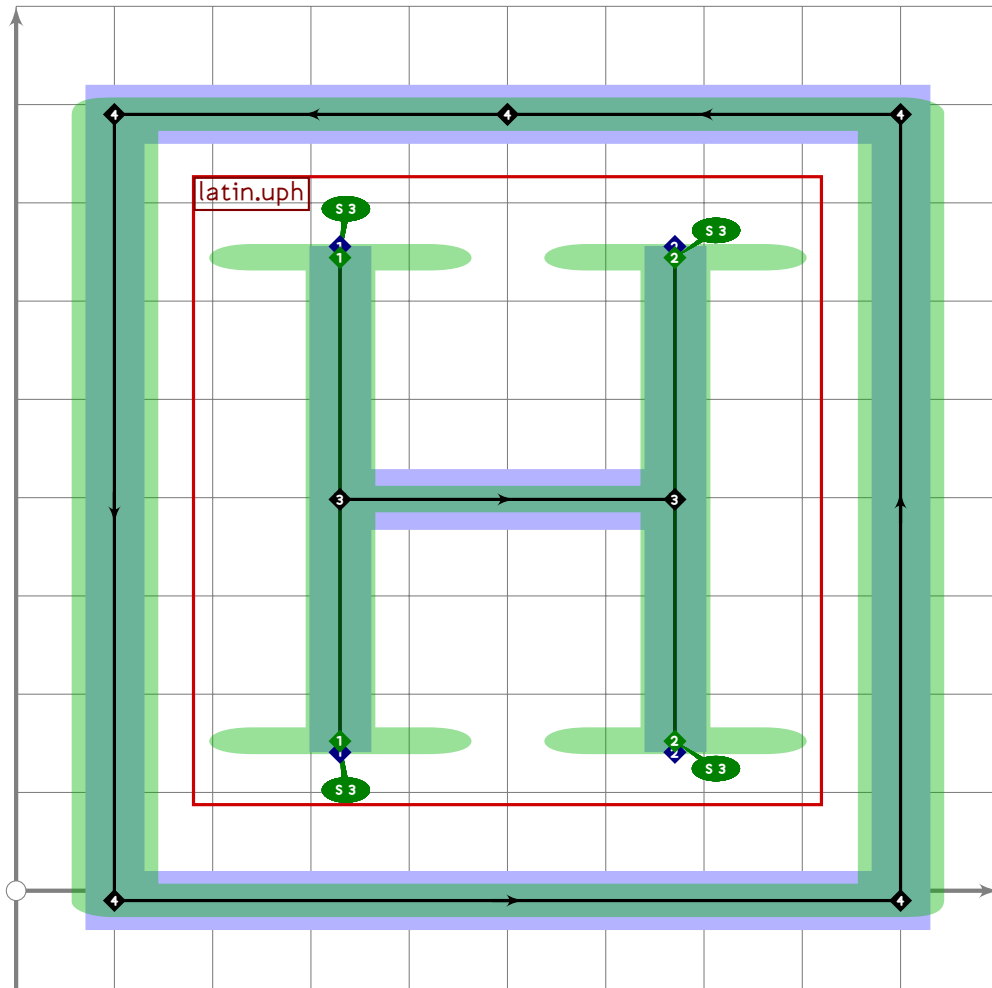
```

```

80 % G
81 begint Suglyph("u1F136",54);
82 tsu_curve.square.single(tsu_curve.latin.upg);
83 tsu_render;
84 endsuglyph;
85

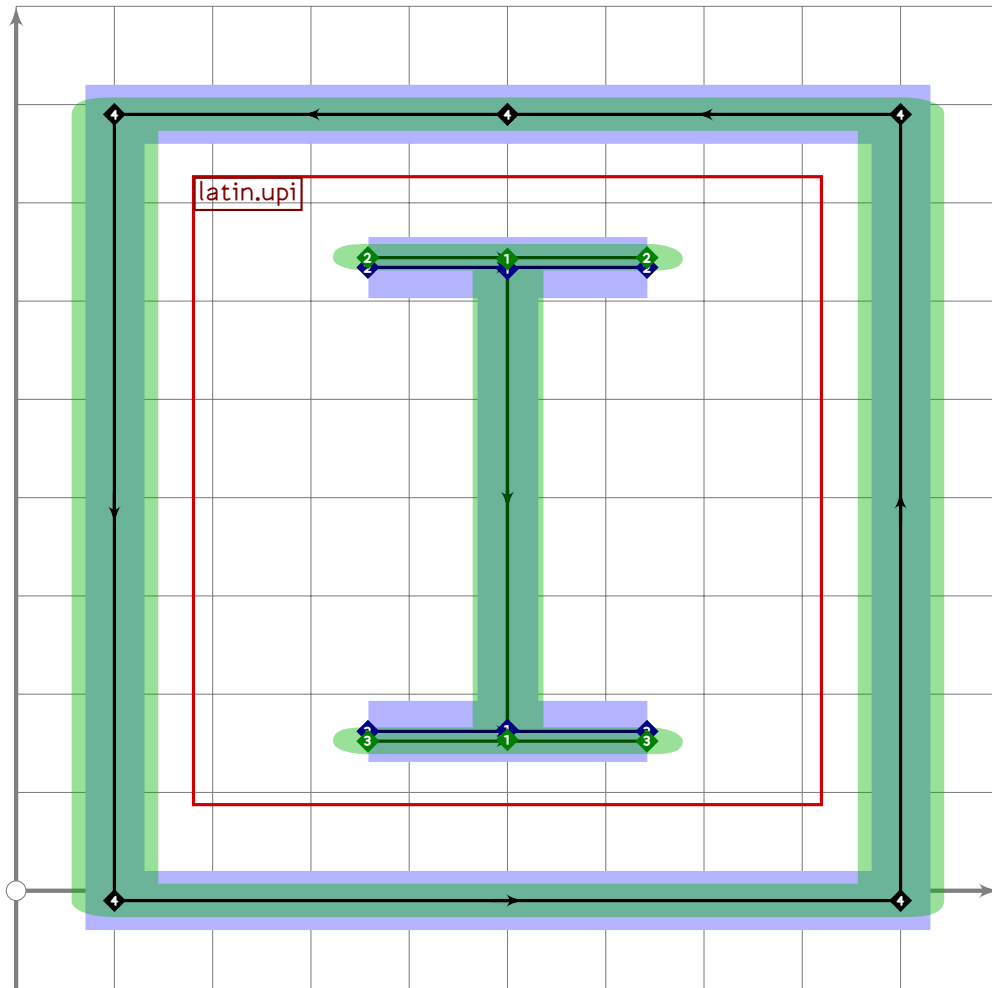
```



```

86 % H
87 begint Suglyph("u1F137",55);
88   tsu_curve.square.single(tsu_curve.latin.uph);
89   tsu_render;
90 endtsuglyph;
91

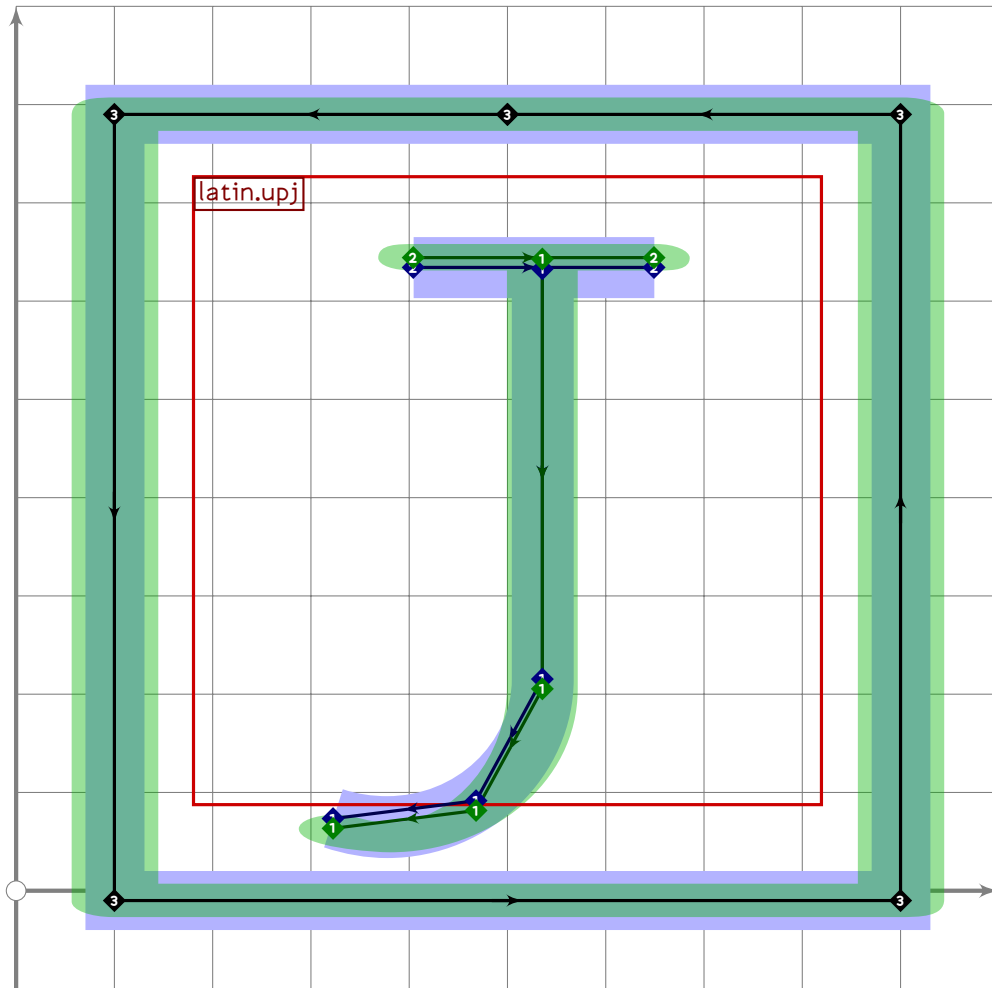
```



```

92 % I
93 beginsuglyph("u1F138",56);
94   tsu_curve.square.single(tsu_curve.latin.upi);
95   tsu_render;
96 endsuglyph;
97

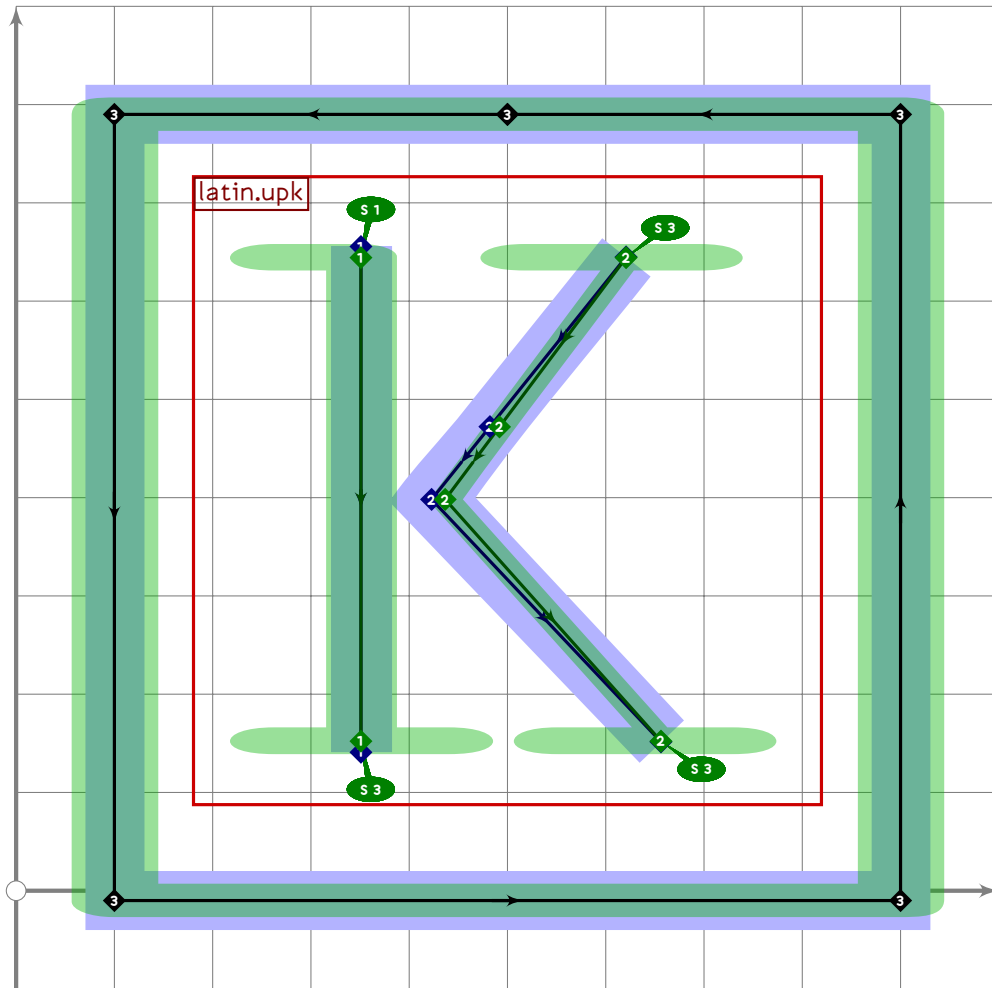
```



```

98 % J
99 begint Suglyph("u1F139",57);
100 tsu_curve.square.single(tsu_curve.latin.upj);
101 tsu_render;
102 endsuglyph;
103

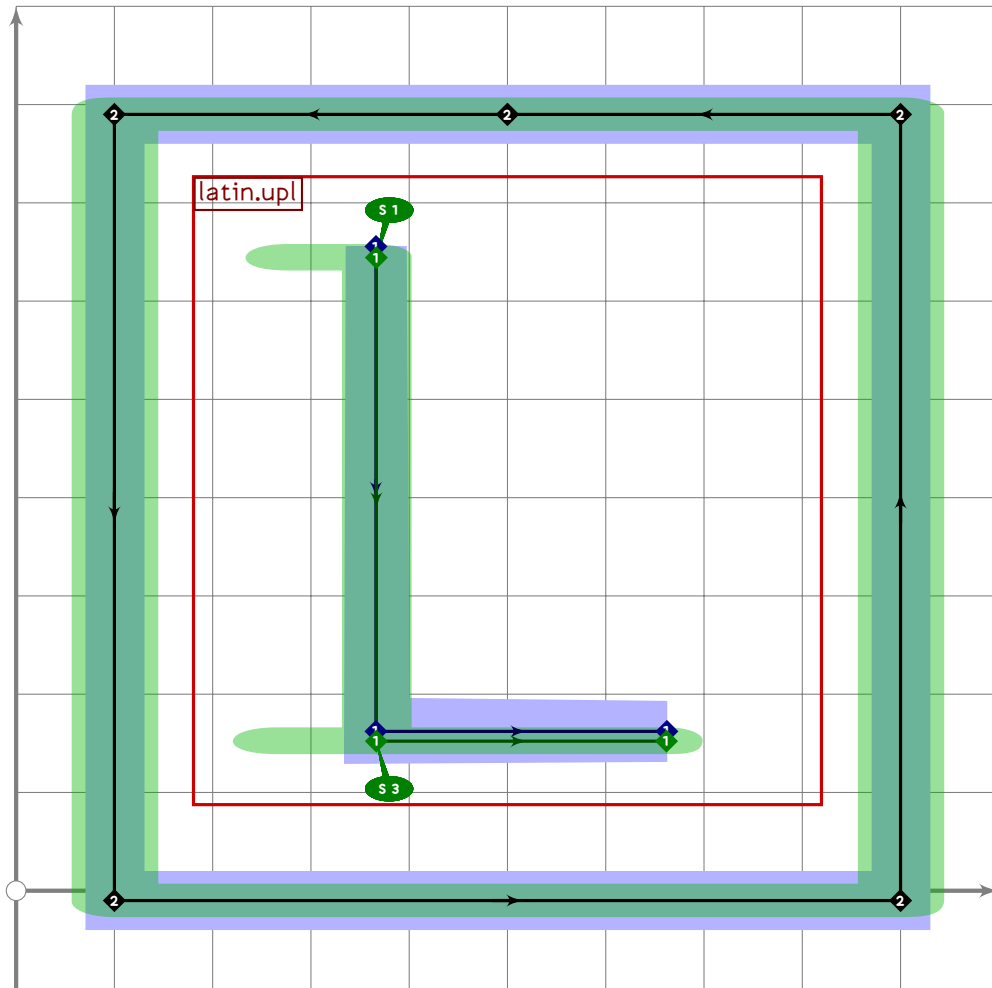
```

```

104 % K
105 beginsuglyph("u1F13A",58);
106   tsu_curve.square.single(tsu_curve.latin.upk);
107   tsu_render;
108 endsuglyph;
109

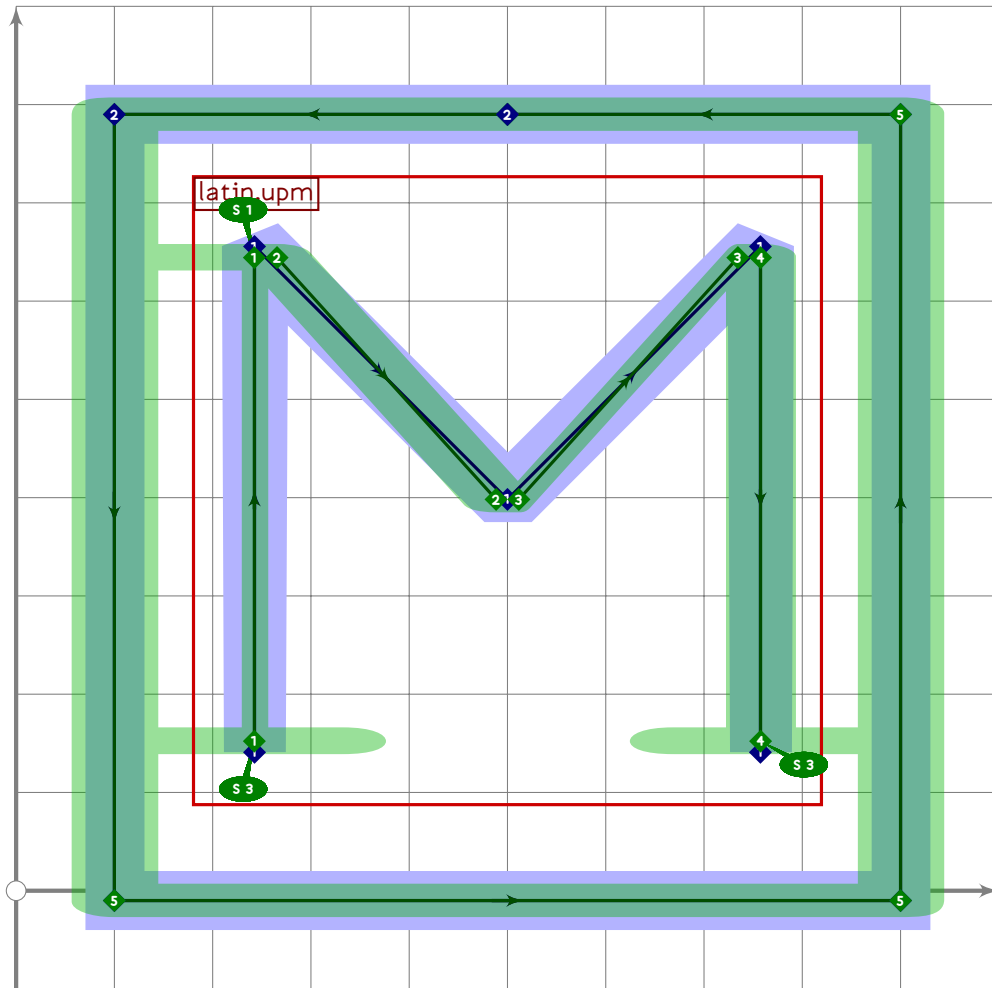
```



```

110 % L
111 begint Suglyph("u1F13B",59);
112   tsu_curve.square.single(tsu_curve.latin.upl);
113   tsu_render;
114 endtsuglyph;
115

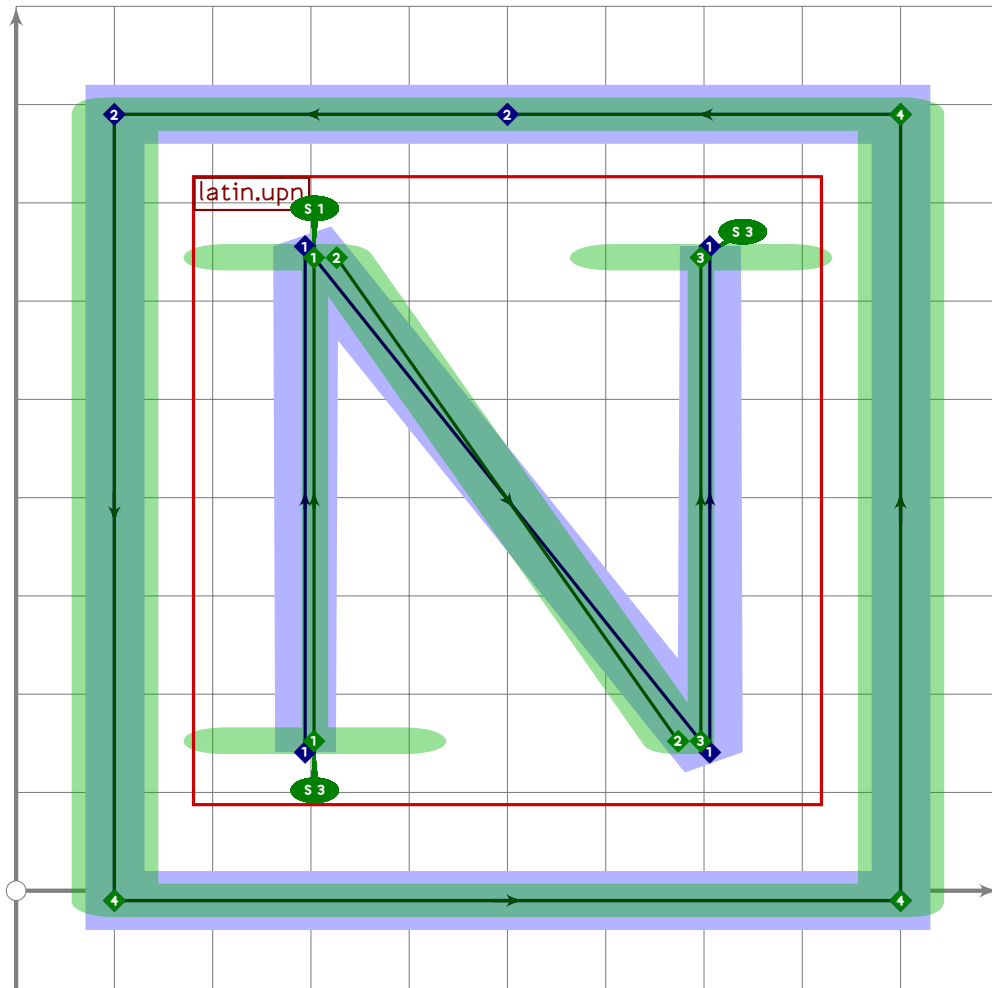
```



```

116 % M
117 begint Suglyph("u1F13C",60);
118   tsu_curve.square.single(tsu_curve.latin.upm);
119   tsu_render;
120 endsuglyph;
121

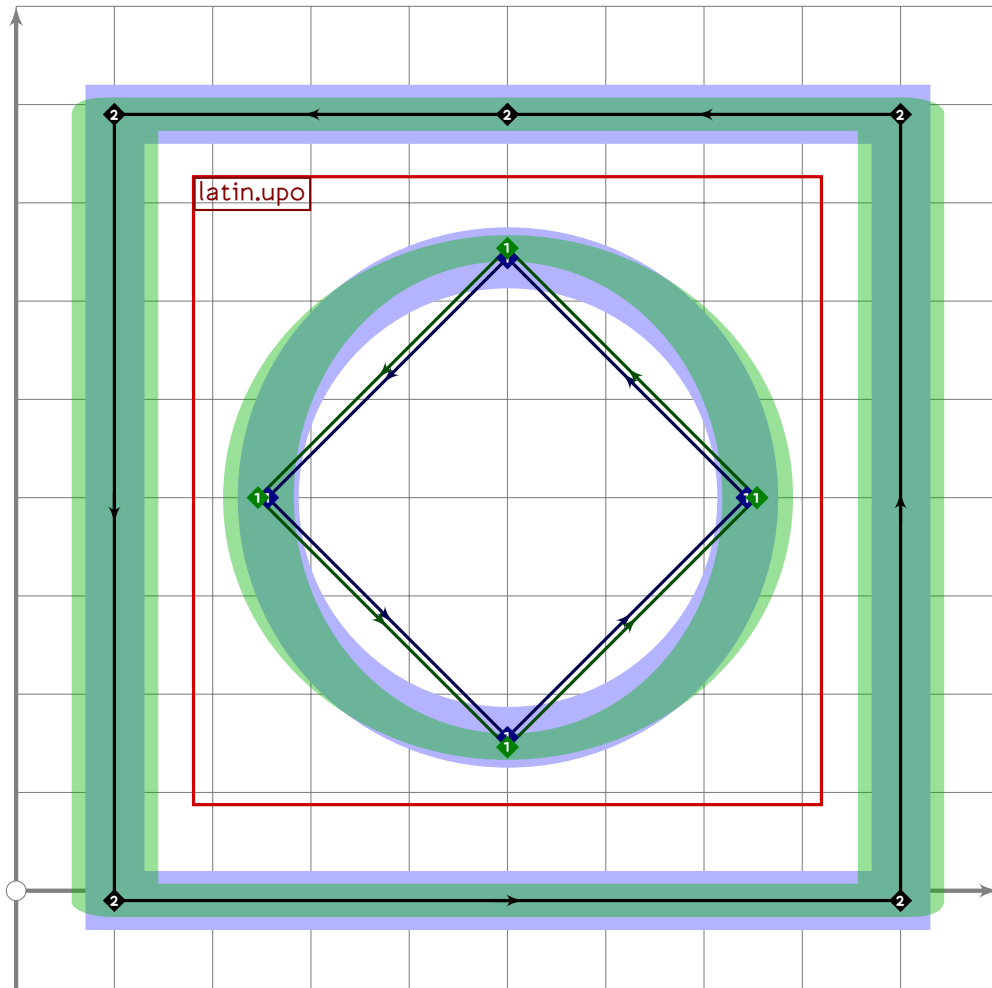
```



```

122 % N
123 beginsuglyph("u1F13D",61);
124   tsu_curve.square.single(tsu_curve.latin.upn);
125   tsu_render;
126 endsuglyph;
127

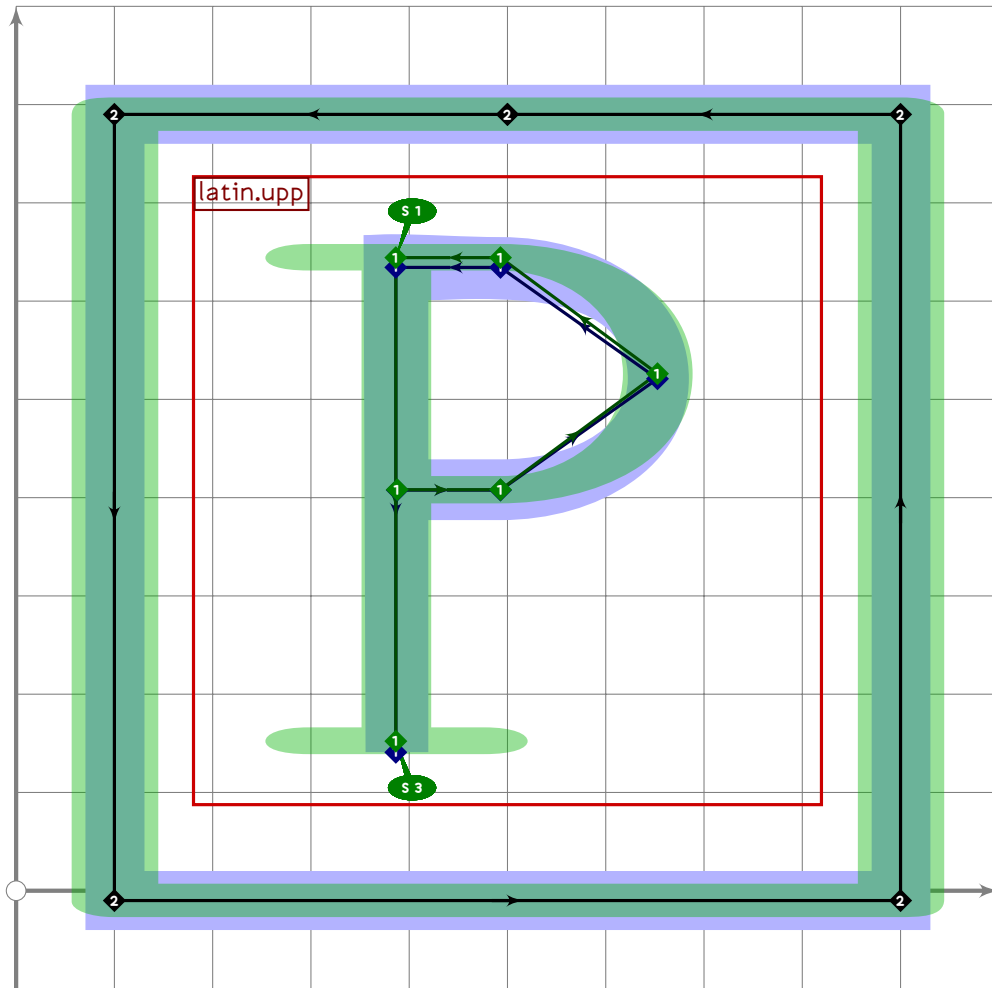
```



```

128 % O
129 beginsuglyph("u1F13E",62);
130   tsu_curve.square.single(tsu_curve.latin.upo);
131   tsu_render;
132 endsuglyph;
133

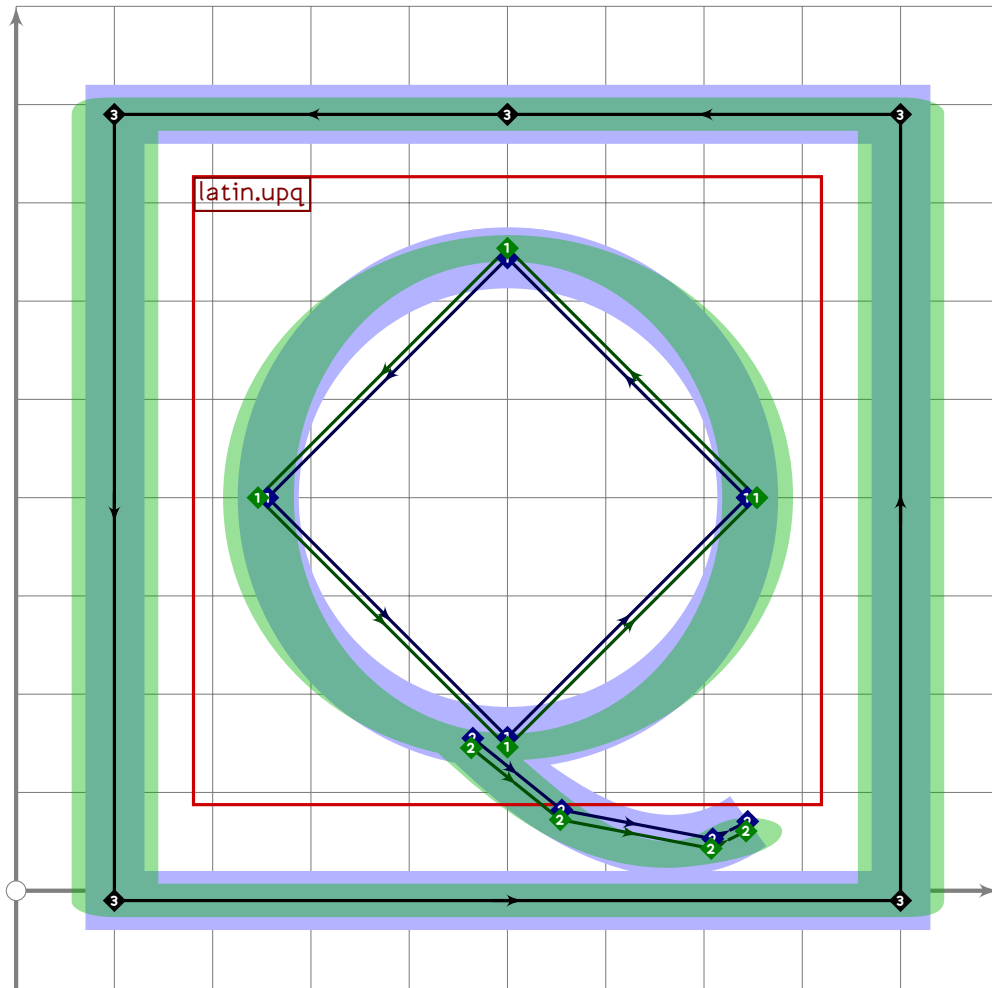
```



```

134 % P
135 begint Suglyph("u1F13F",63);
136   tsu_curve.square.single(tsu_curve.latin.upp);
137   tsu_render;
138   endtsuglyph;
139

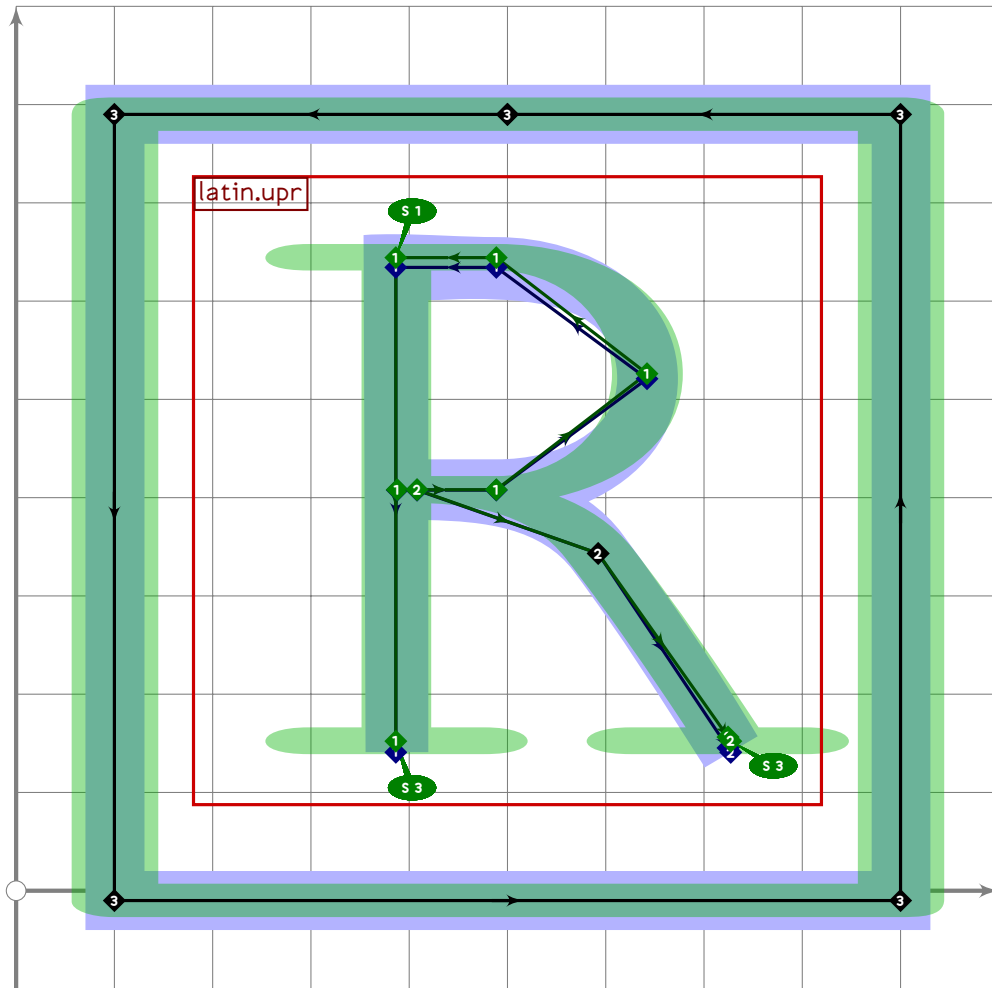
```



```

140 % Q
141 begint Suglyph("u1F140";64);
142   tsu_curve.square.single(tsu_curve.latin.upq);
143   tsu_render;
144 endtsuglyph;
145

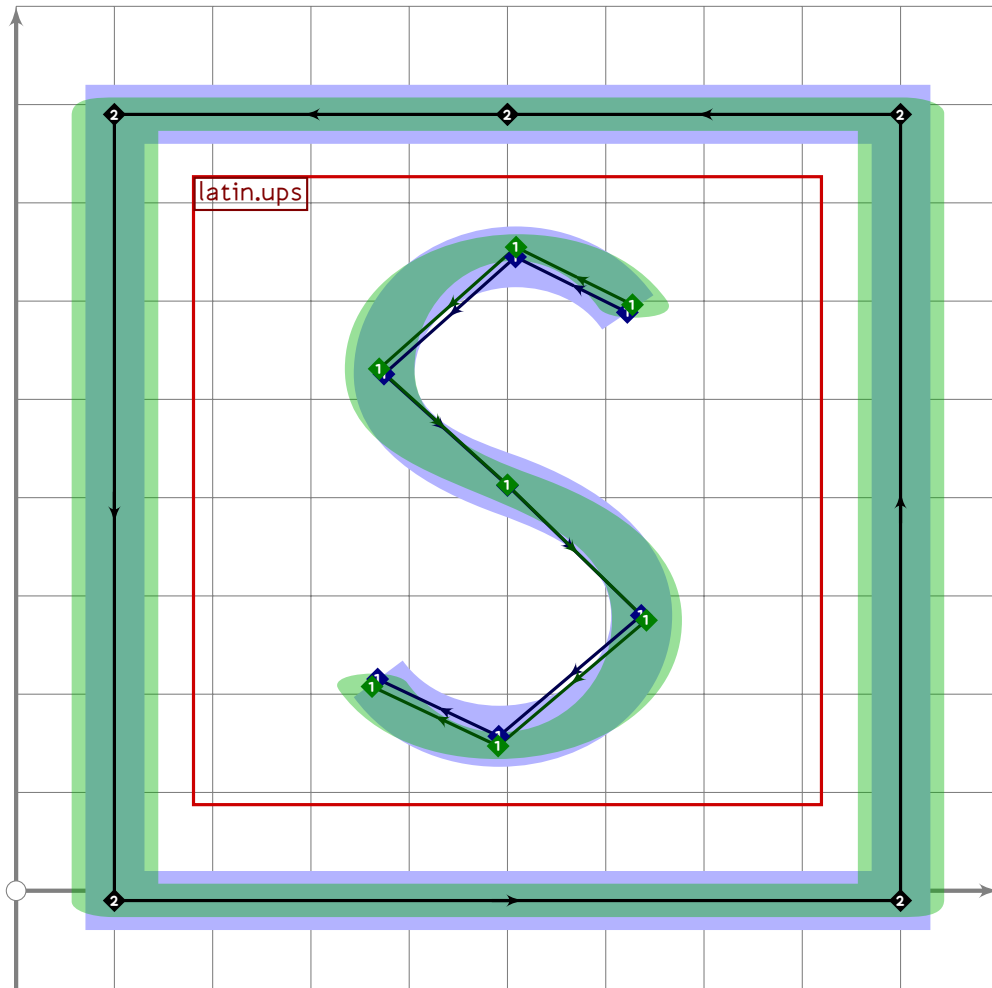
```



```

146 % R
147 begint Suglyph("u1F141",65);
148   tsu_curve.square.single(tsu_curve.latin.upr);
149   tsu_render;
150 endsuglyph;
151

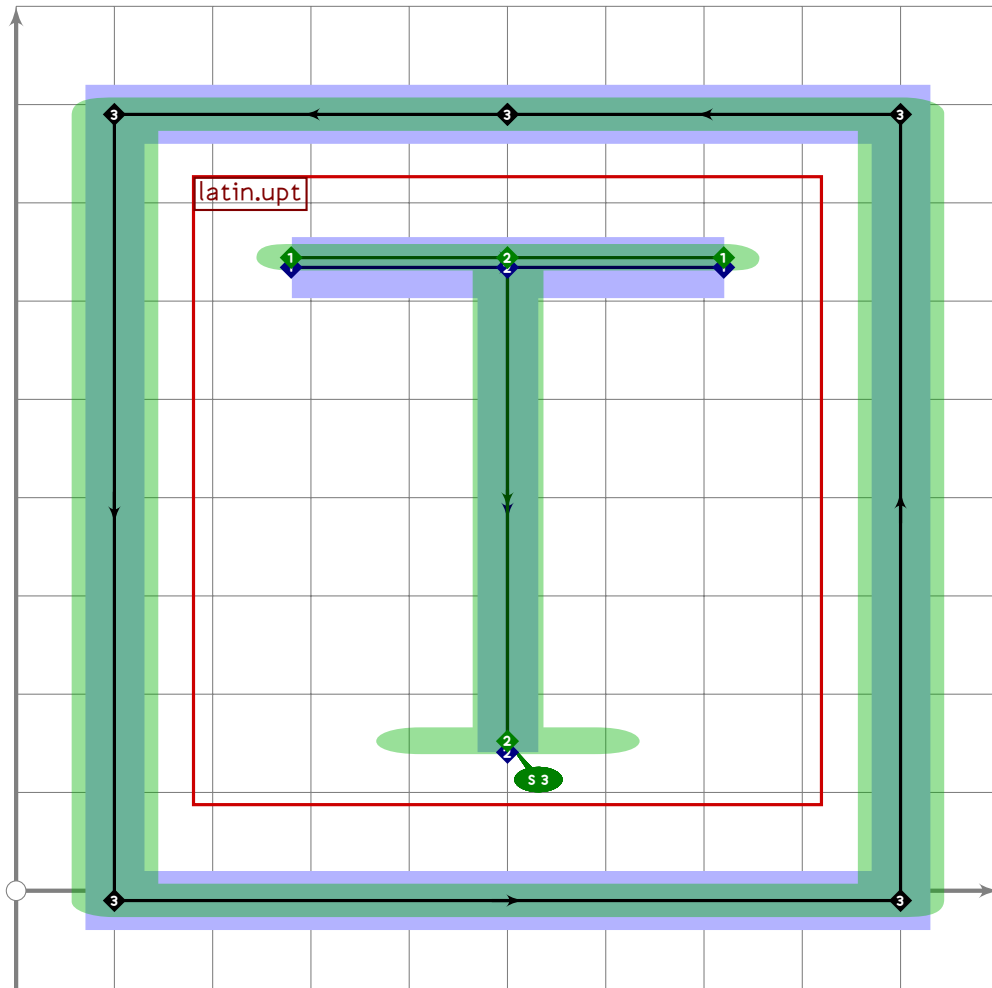
```

```

152 % S
153 begint Suglyph("u1F142";66);
154   tsu_curve.square.single(tsu_curve.latin.ups);
155   tsu_render;
156 endsuglyph;
157

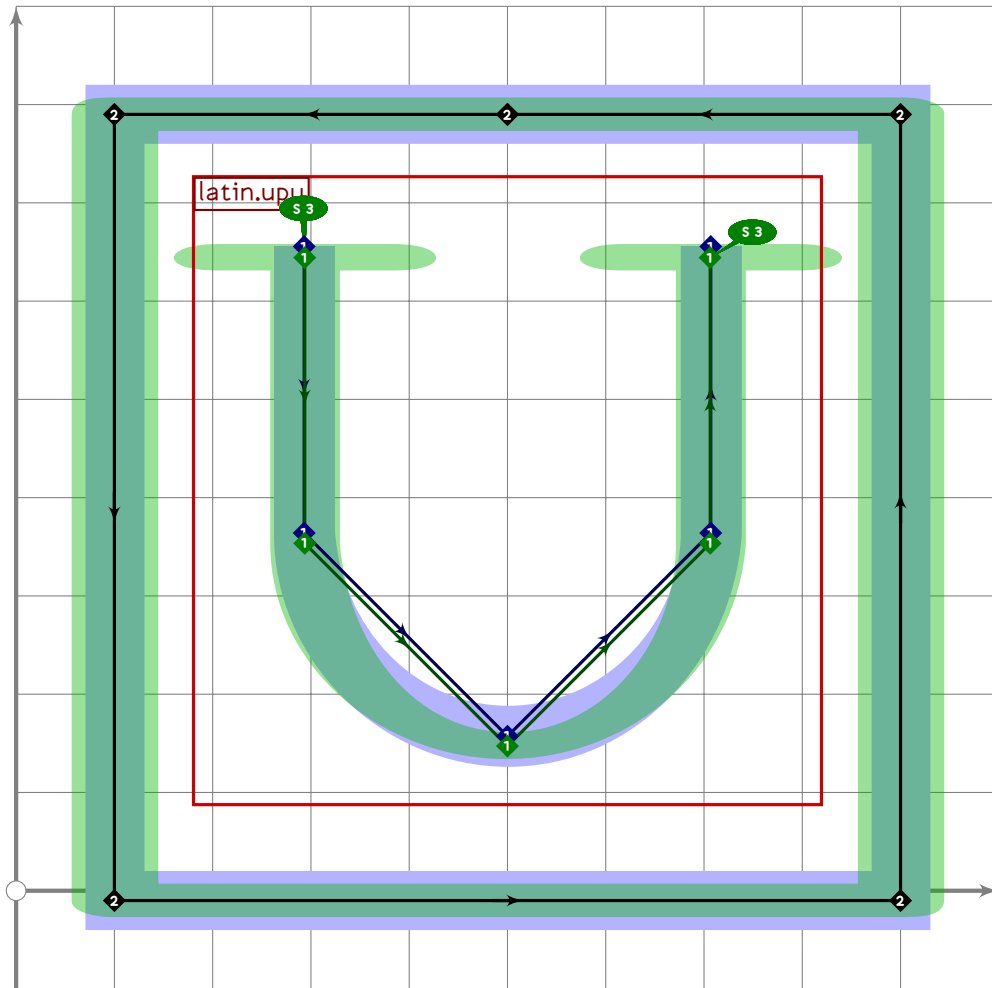
```



```

158 % T
159 begint Suglyph("u1F143",67);
160 tsu_curve.square.single(tsu_curve.latin.upt);
161 tsu_render;
162 endsuglyph;
163

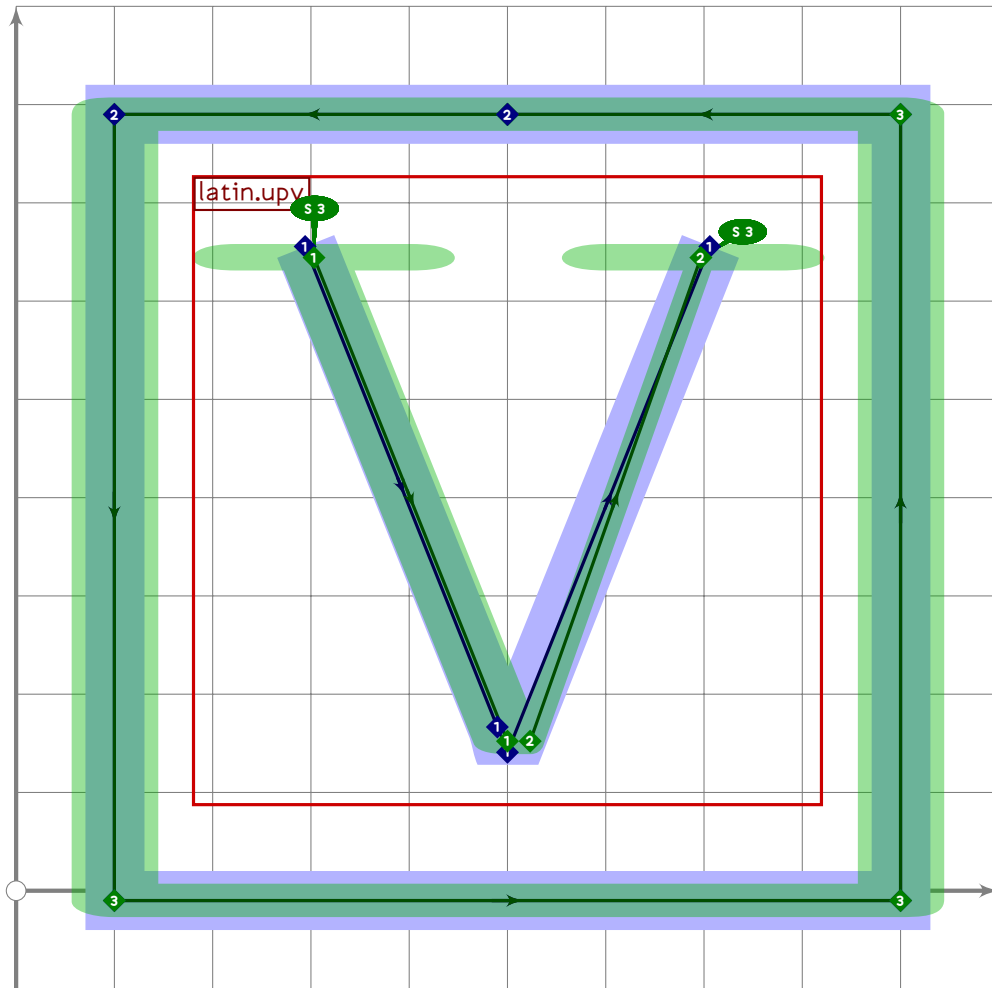
```



```

164 % U
165 begint Suglyph("u1F144";68);
166   tsu_curve.square.single(tsu_curve.latin.upu);
167   tsu_render;
168 endsuglyph;
169

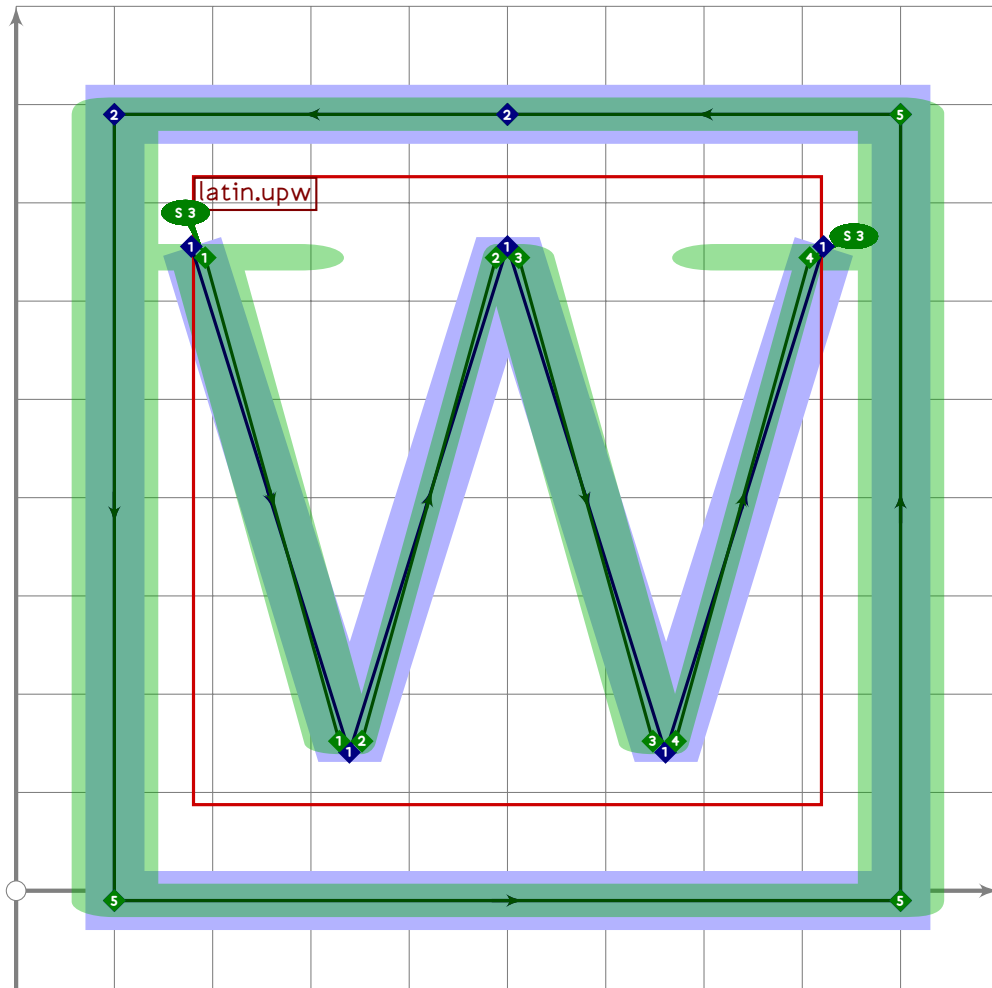
```



```

170 % V
171 begint Suglyph("u1F145",69);
172   tsu_curve.square.single(tsu_curve.latin.upv);
173   tsu_render;
174 endtsuglyph;
175

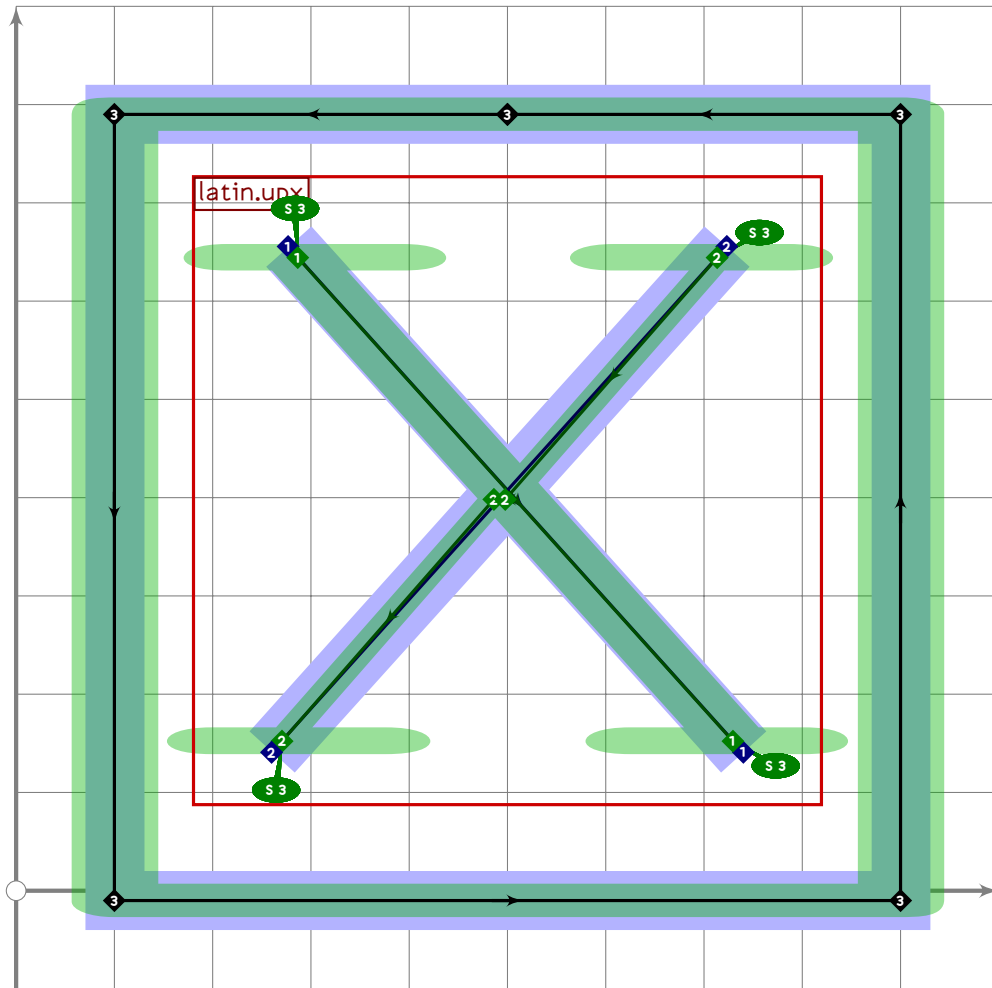
```



```

176 % W
177 beginsuglyph("u1F146";70);
178   tsu_curve.square.single(tsu_curve.latin.upw);
179   tsu_render;
180 endsuglyph;
181

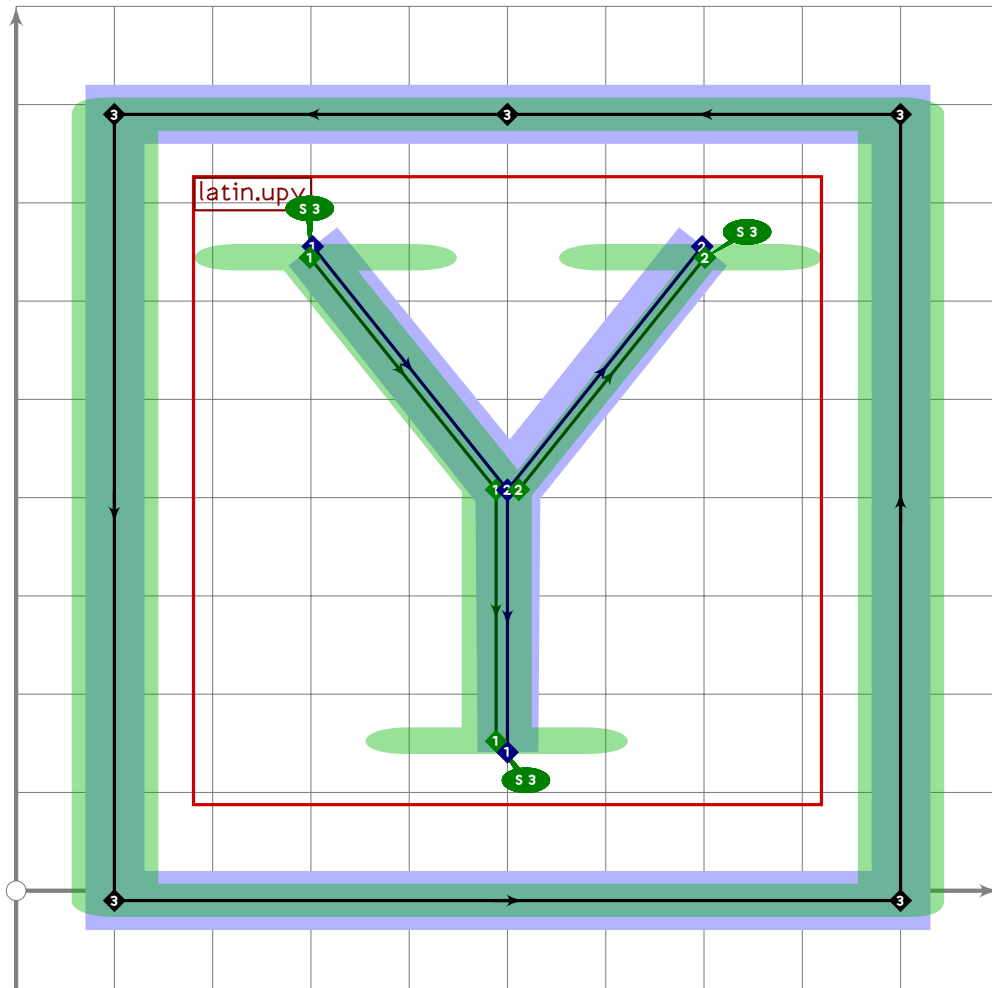
```



```

182 % X
183 beginsuglyph("u1F147";71);
184   tsu_curve.square.single(tsu_curve.latin.upx);
185   tsu_render;
186 endsuglyph;
187

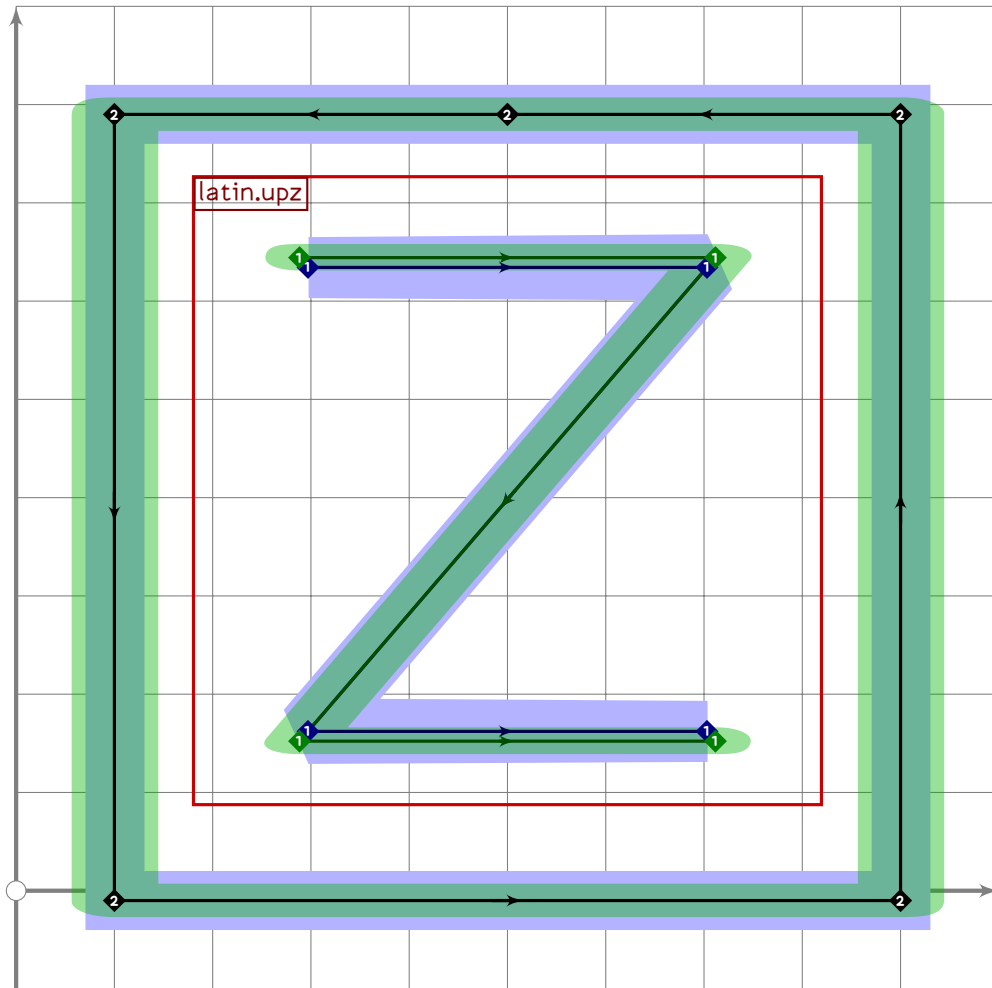
```



```

188 % Y
189 begint Suglyph("u1F148";72);
190 tsu_curve.square.single(tsu_curve.latin.upy);
191 tsu_render;
192 endsuglyph;
193

```



```

194 % Z
195 begint Suglyph("u1F149";73);
196   tsu_curve.square.single(tsu_curve.latin.upz);
197   tsu_render;
198 endsuglyph;
199
200
201

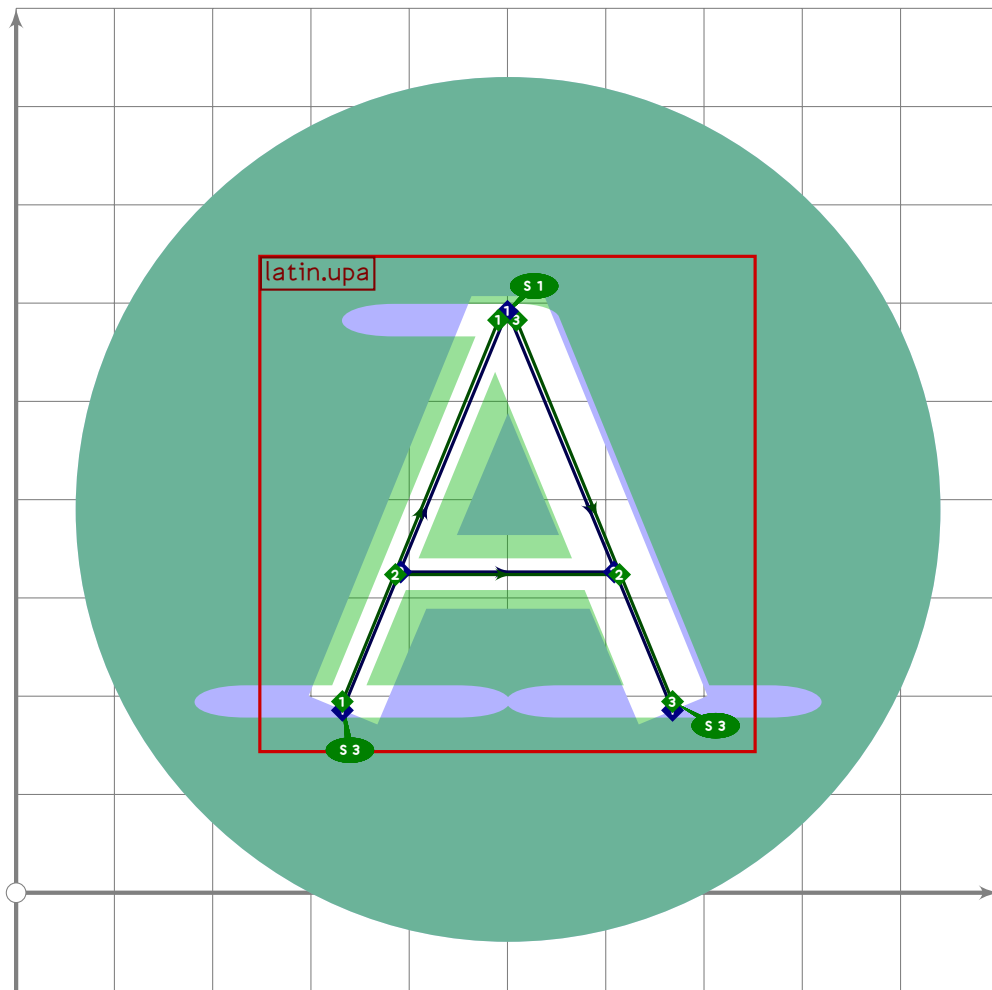
```

Inverse Circled Latin

```

202 % INVERSE CIRCLED LATIN
203

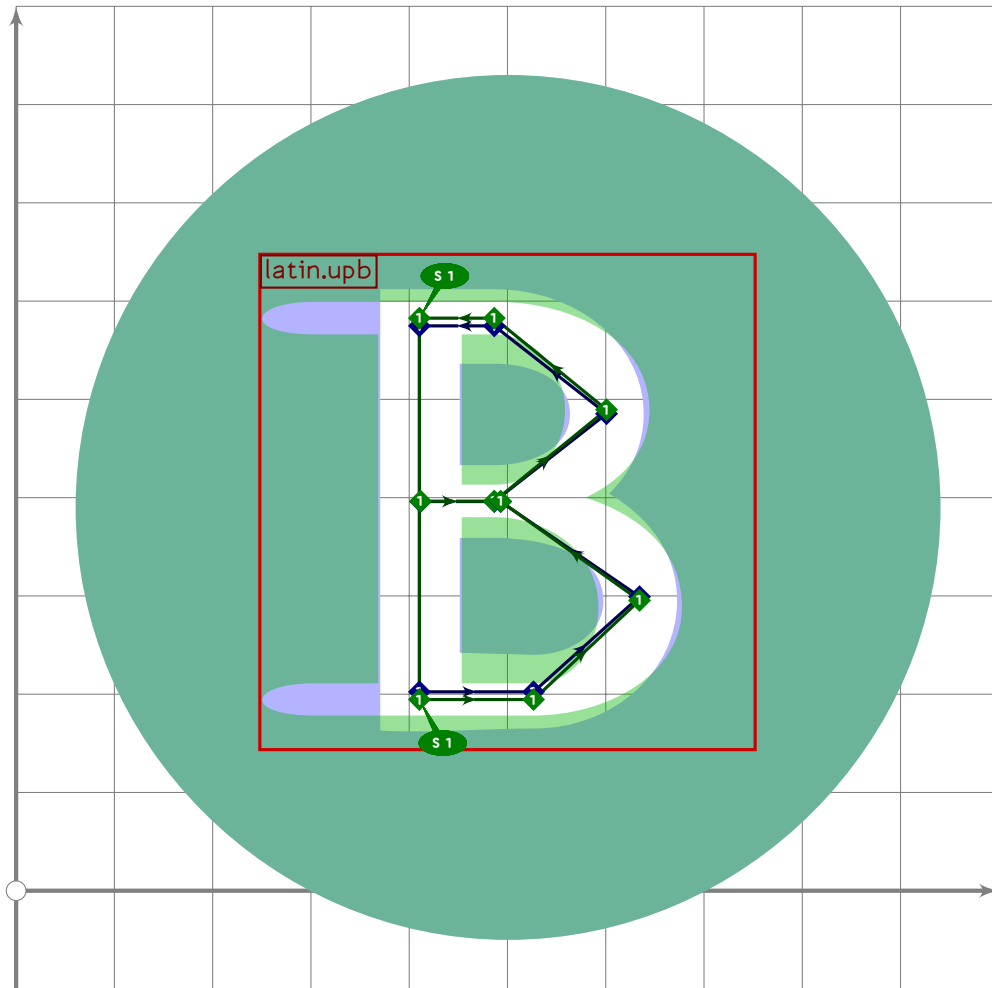
```

```

204 % A
205 % BACKGROUND 25CF
206 begint Suglyph("u1F150";80);
207 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upa);
208 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
209 tsu_render;
210 endtsuglyph;
211

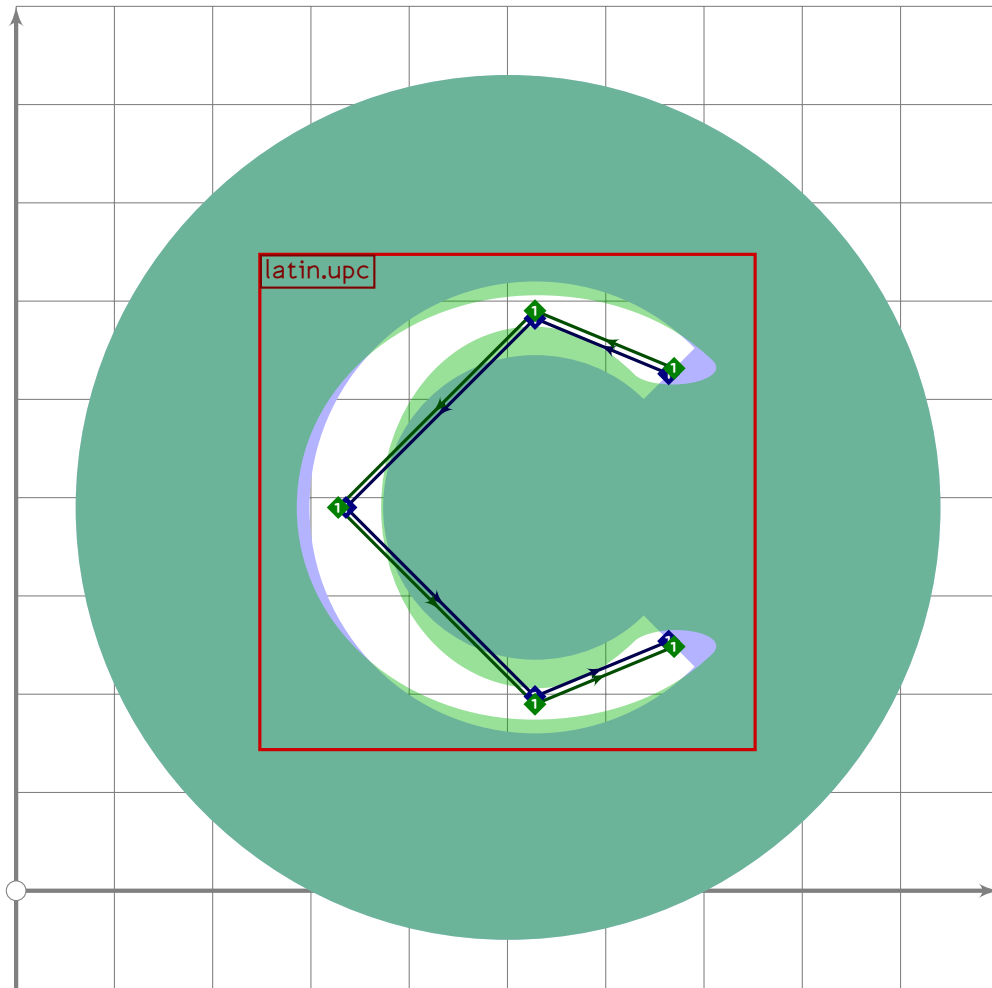
```



```

212 % B
213 % BACKGROUND 25CF
214 begint Suglyph("u1F151";81);
215   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upb);
216   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
217   tsu_render;
218 endtsuglyph;
219

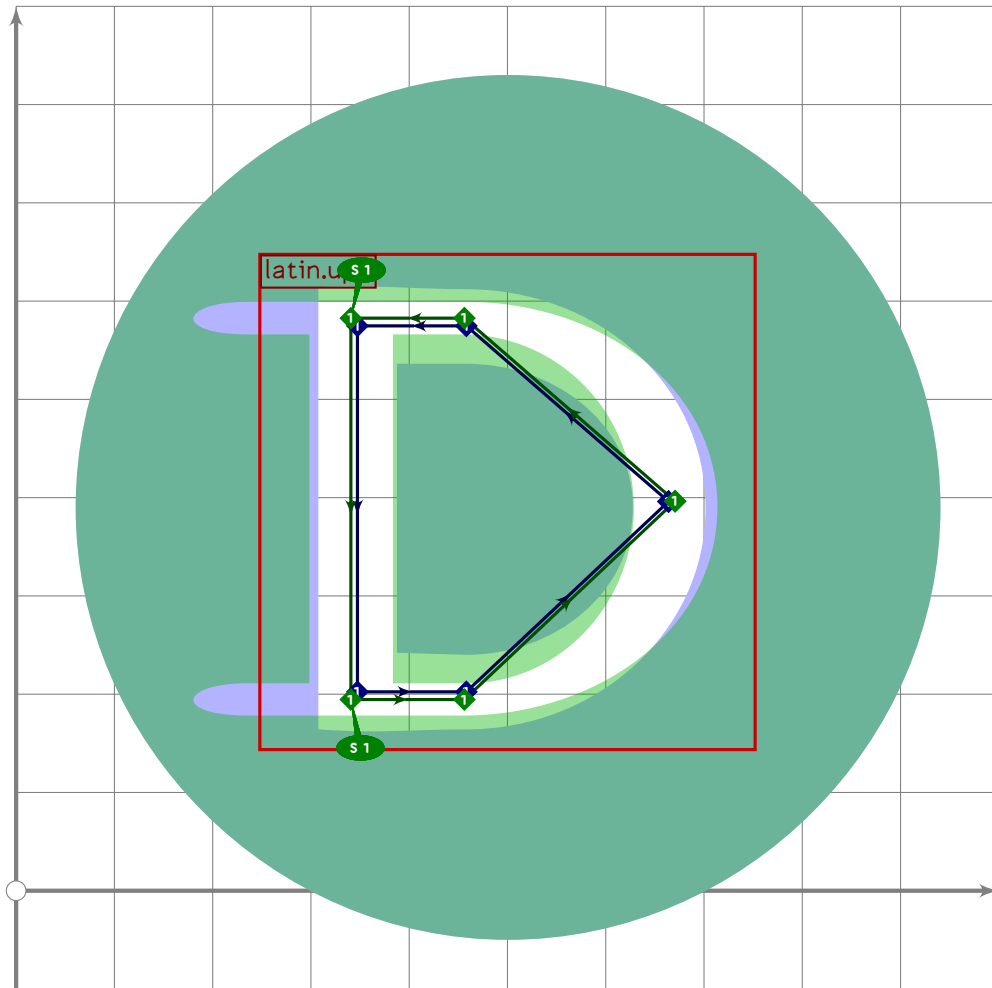
```



```

220 % C
221 % BACKGROUND 25CF
222 begint Suglyph("u1F152";82);
223   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upc);
224   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
225   tsu_render;
226 endtsuglyph;
227

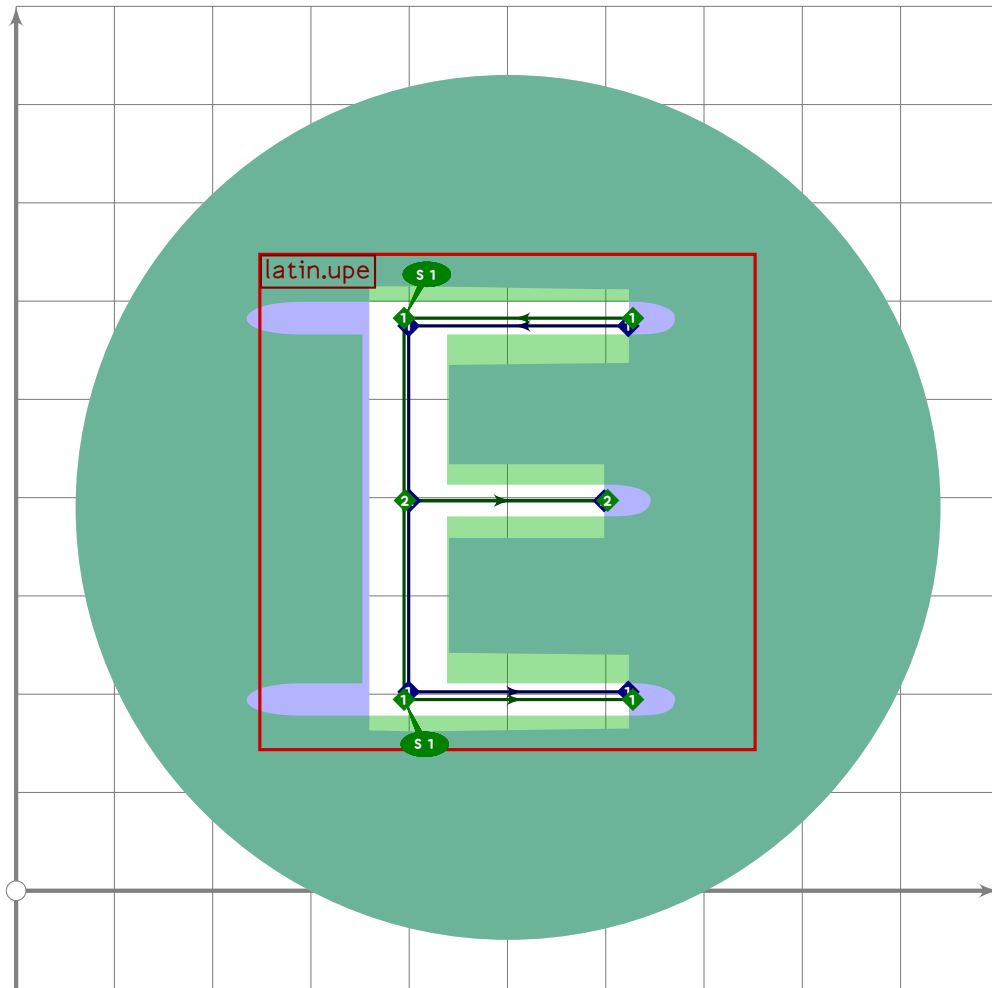
```



```

228 % D
229 % BACKGROUND 25CF
230 begint Suglyph("u1F153";83);
231 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upd);
232 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
233 tsu_render;
234 endtsuglyph;
235

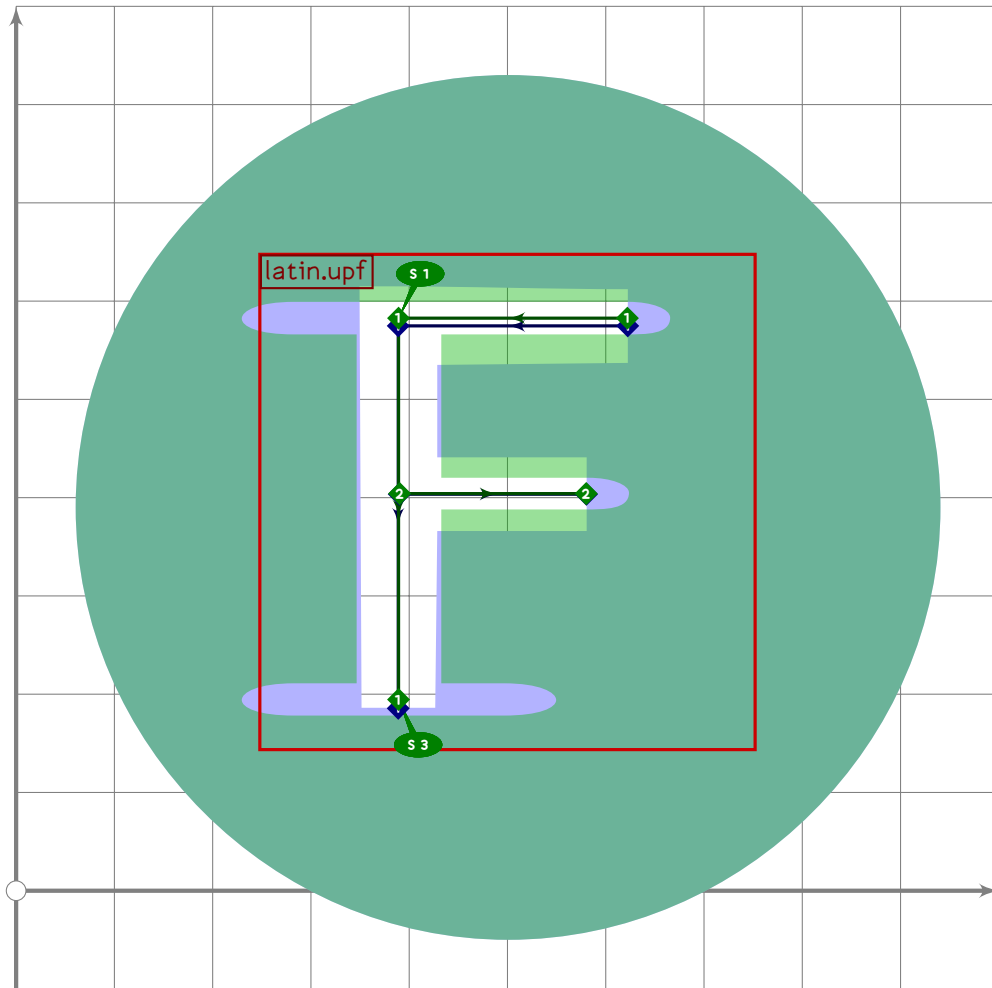
```



```

236 % E
237 % BACKGROUND 25CF
238 begint Suglyph("u1F154";84);
239 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upe);
240 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
241 tsu_render;
242 endtsuglyph;
243

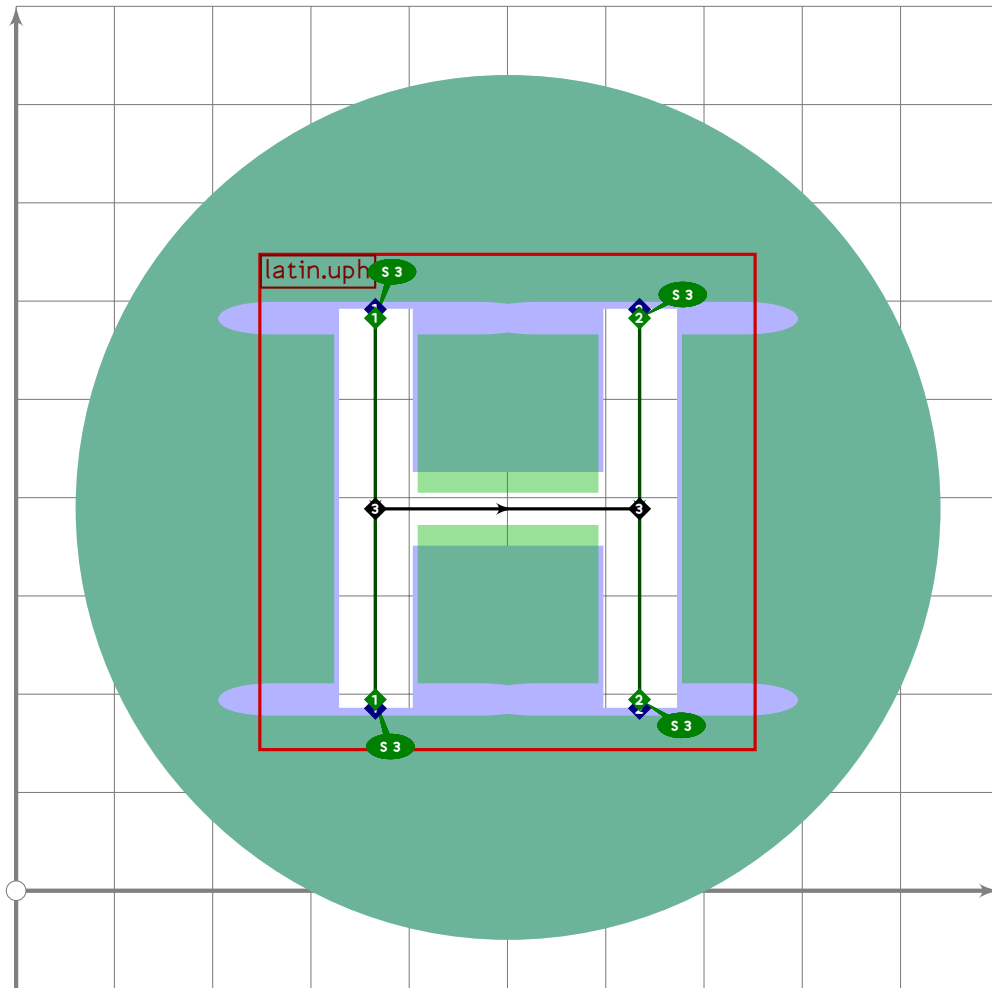
```



```

244 % F
245 % BACKGROUND 25CF
246 begint Suglyph("u1F155";85);
247 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upf);
248 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
249 tsu_render;
250 endtsuglyph;
251

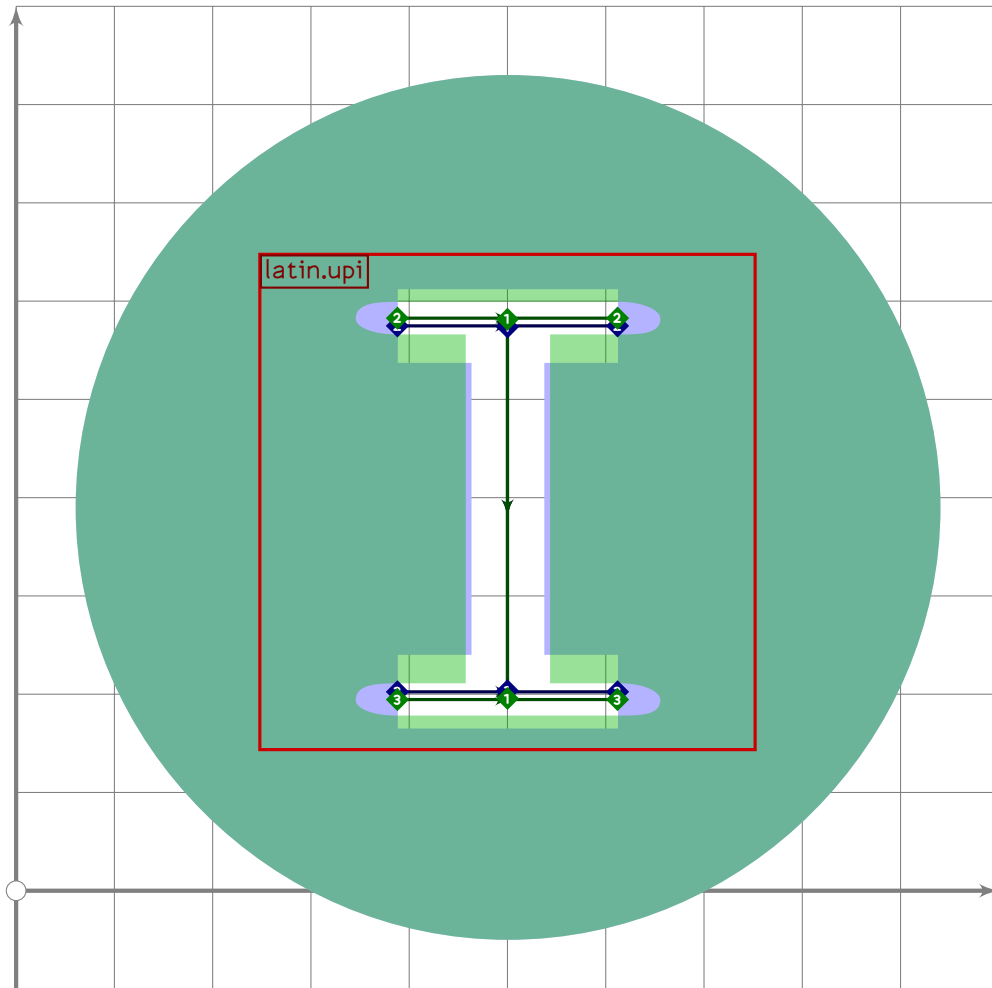
```

```

260 % H
261 % BACKGROUND 25CF
262 begint Suglyph("u1F157";87);
263   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.uph);
264   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
265   tsu_render;
266 endtsuglyph;
267

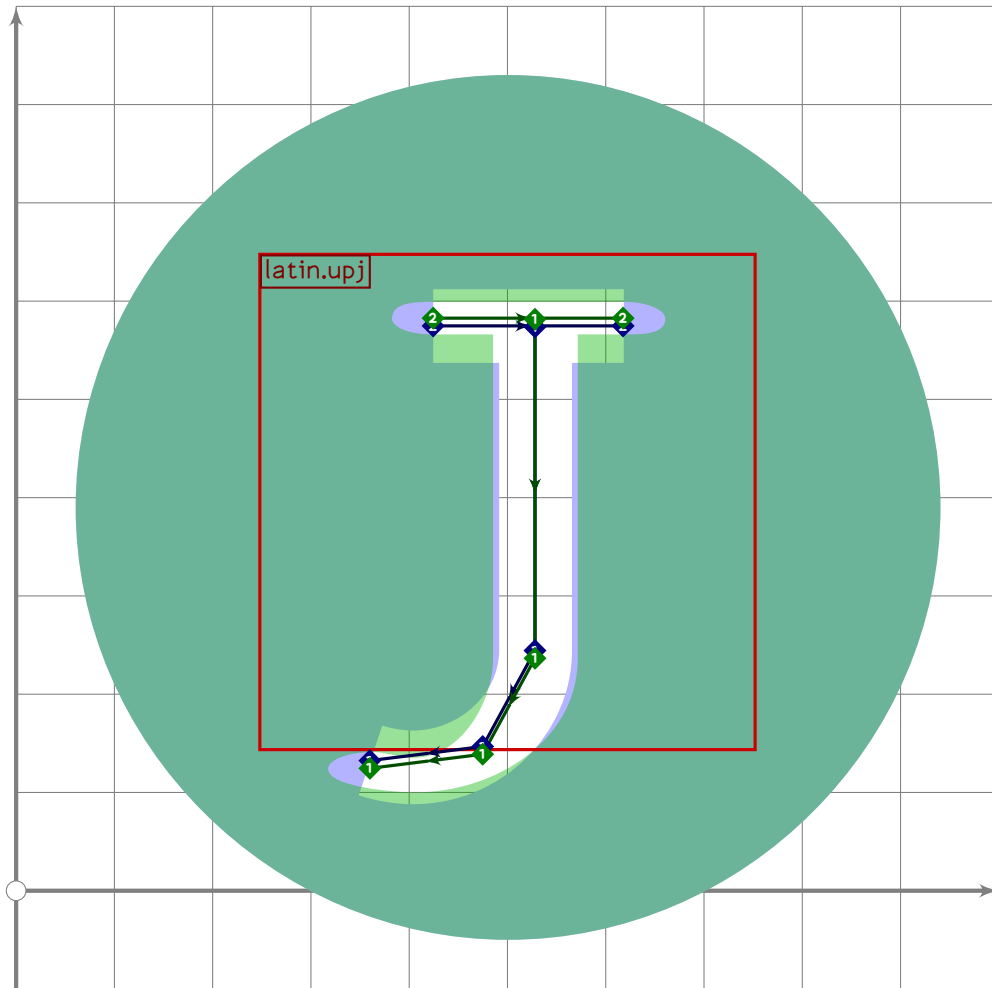
```

```

268 % I
269 % BACKGROUND 25CF
270 begint Suglyph("u1F158";88);
271 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upi);
272 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
273 tsu_render;
274 endtsuglyph;
275

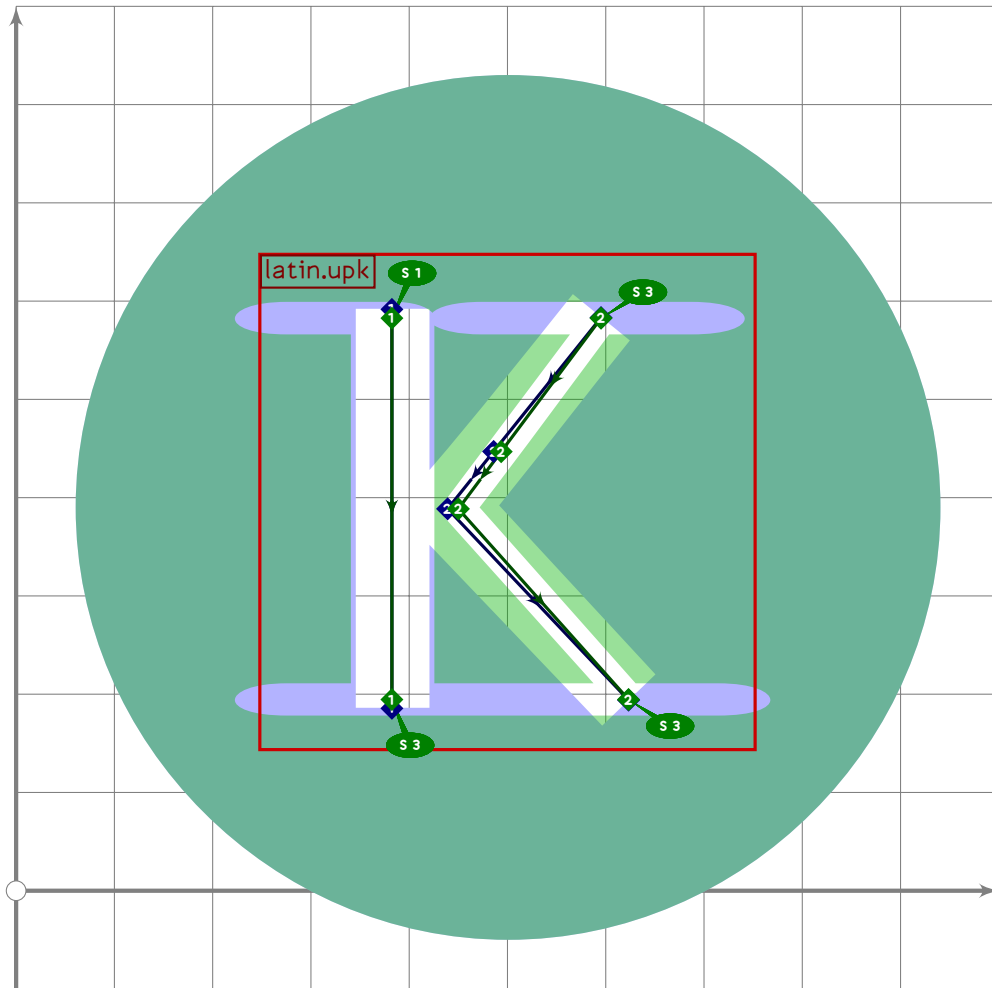
```



```

276 % J
277 % BACKGROUND 25CF
278 beginsuglyph("u1F159";89);
279 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upj);
280 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
281 tsu_render;
282 endsuglyph;
283

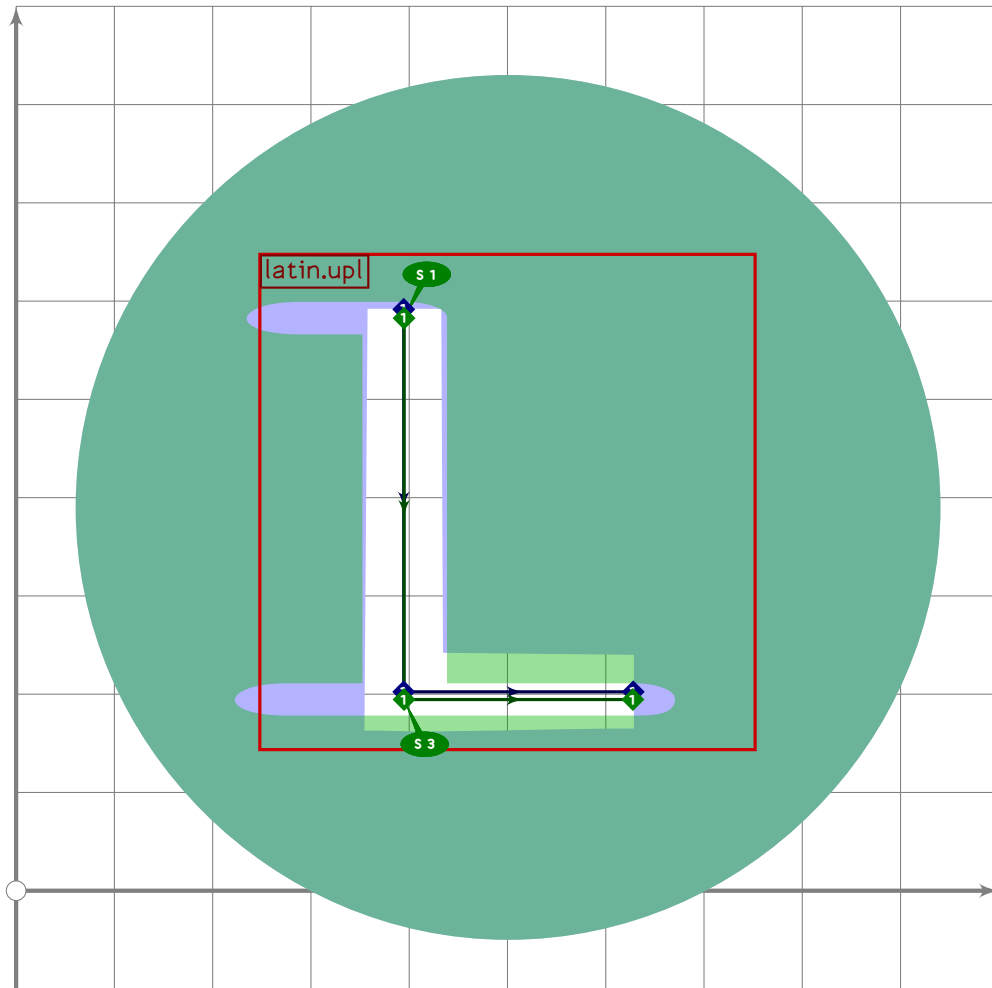
```



```

284 % K
285 % BACKGROUND 25CF
286 begint Suglyph("u1F15A";90);
287 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upk);
288 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
289 tsu_render;
290 endtsuglyph;
291

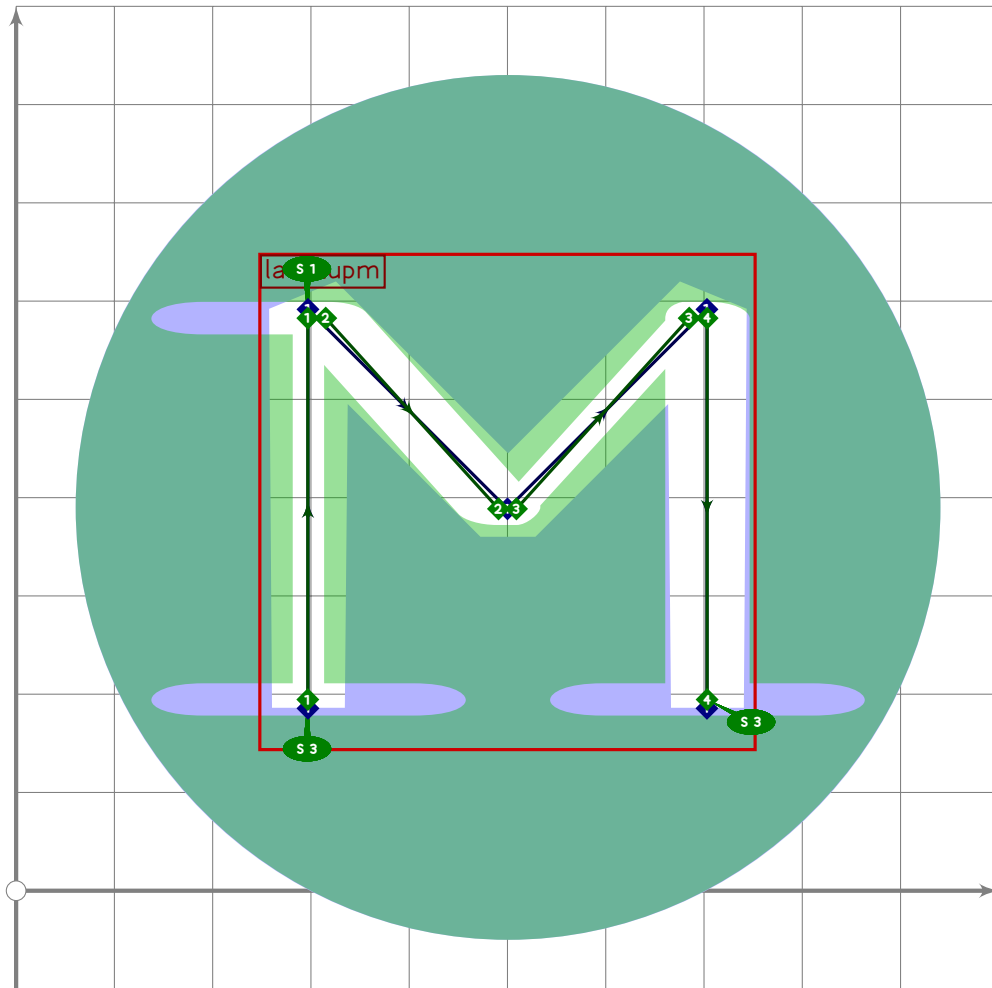
```



```

292 % L
293 % BACKGROUND 25CF
294 begint Suglyph("u1F15B";91);
295   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upl);
296   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
297   tsu_render;
298 endtsuglyph;
299

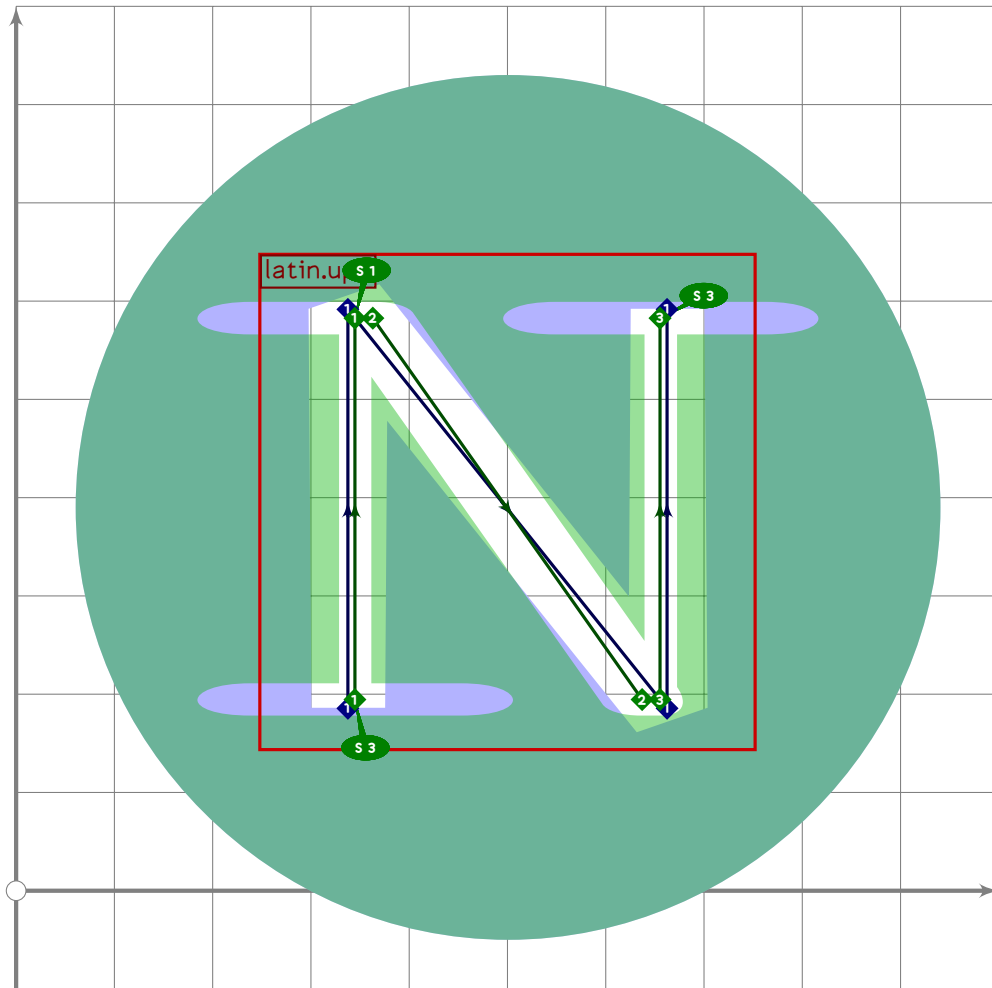
```



```

300 % M
301 % BACKGROUND 25CF
302 begint Suglyph("u1F15C";92);
303 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upm);
304 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
305 tsu_render;
306 endtsuglyph;
307

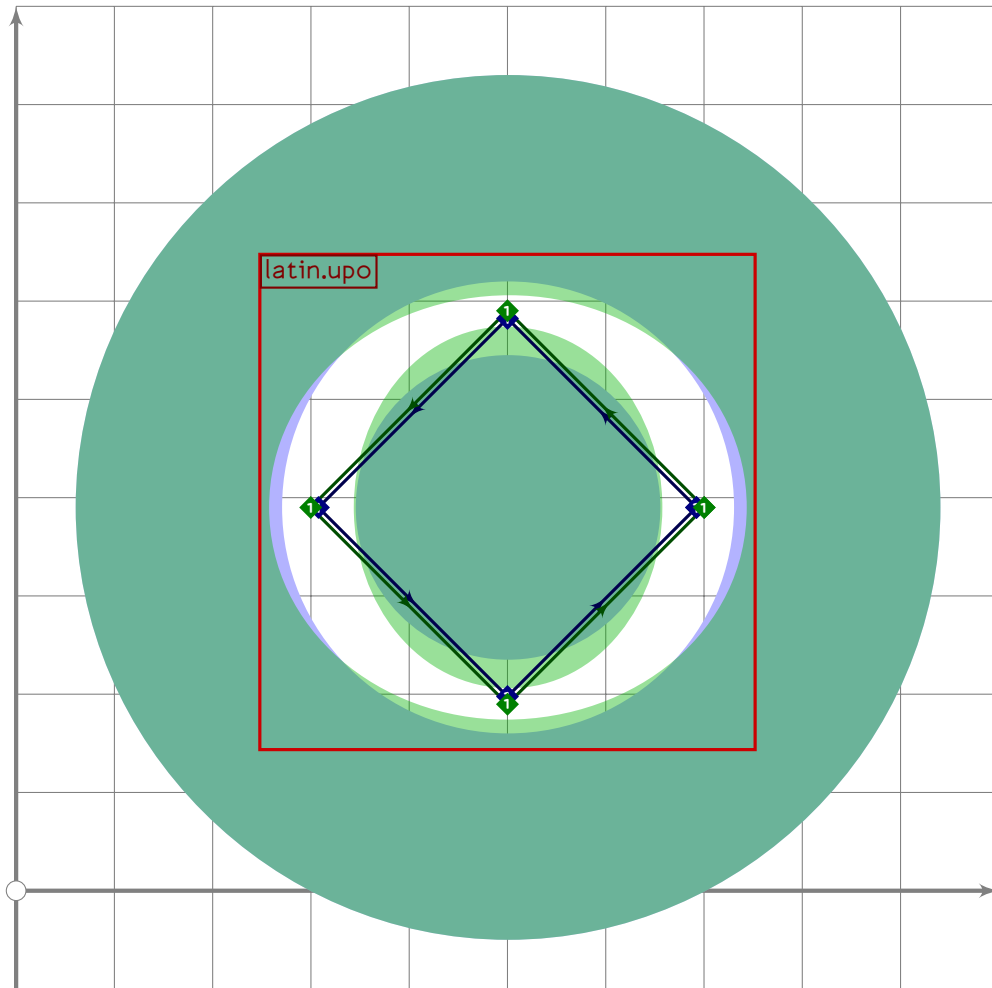
```



```

308 % N
309 % BACKGROUND 25CF
310 begint Suglyph("u1F15D",93);
311 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upn);
312 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
313 tsu_render;
314 endtsuglyph;
315

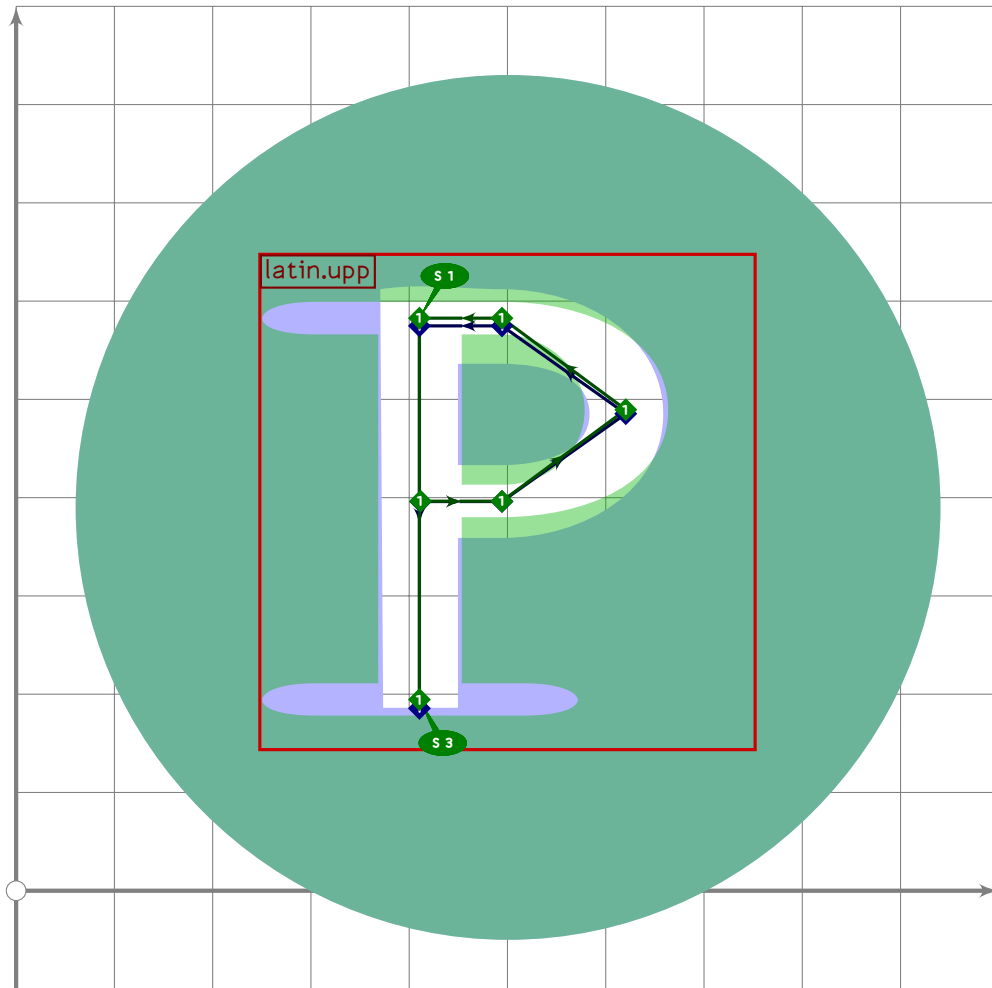
```



```

316 % O
317 % BACKGROUND 25CF
318 begint Suglyph("u1F15E";94);
319 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upo);
320 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
321 tsu_render;
322 endtsuglyph;
323

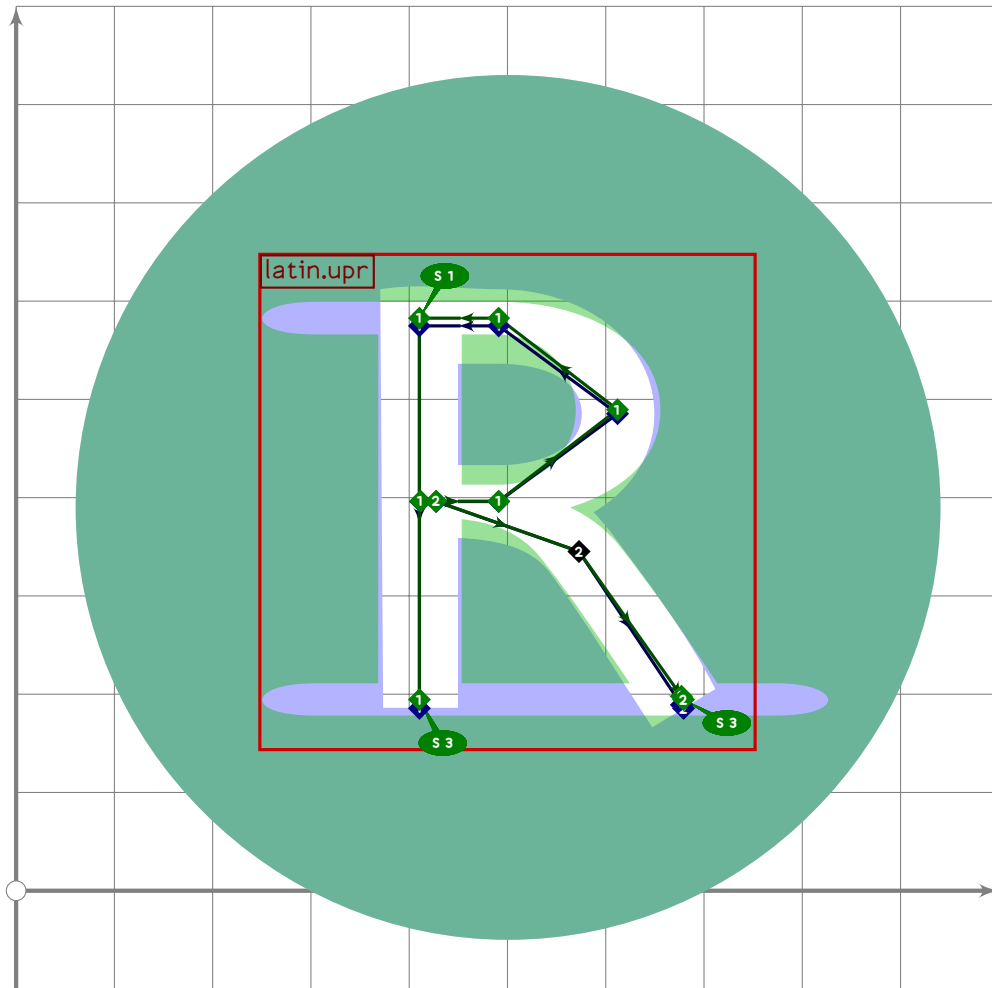
```



```

324 % P
325 % BACKGROUND 25CF
326 begint Suglyph("u1F15F";95);
327 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upp);
328 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
329 tsu_render;
330 endtsuglyph;
331

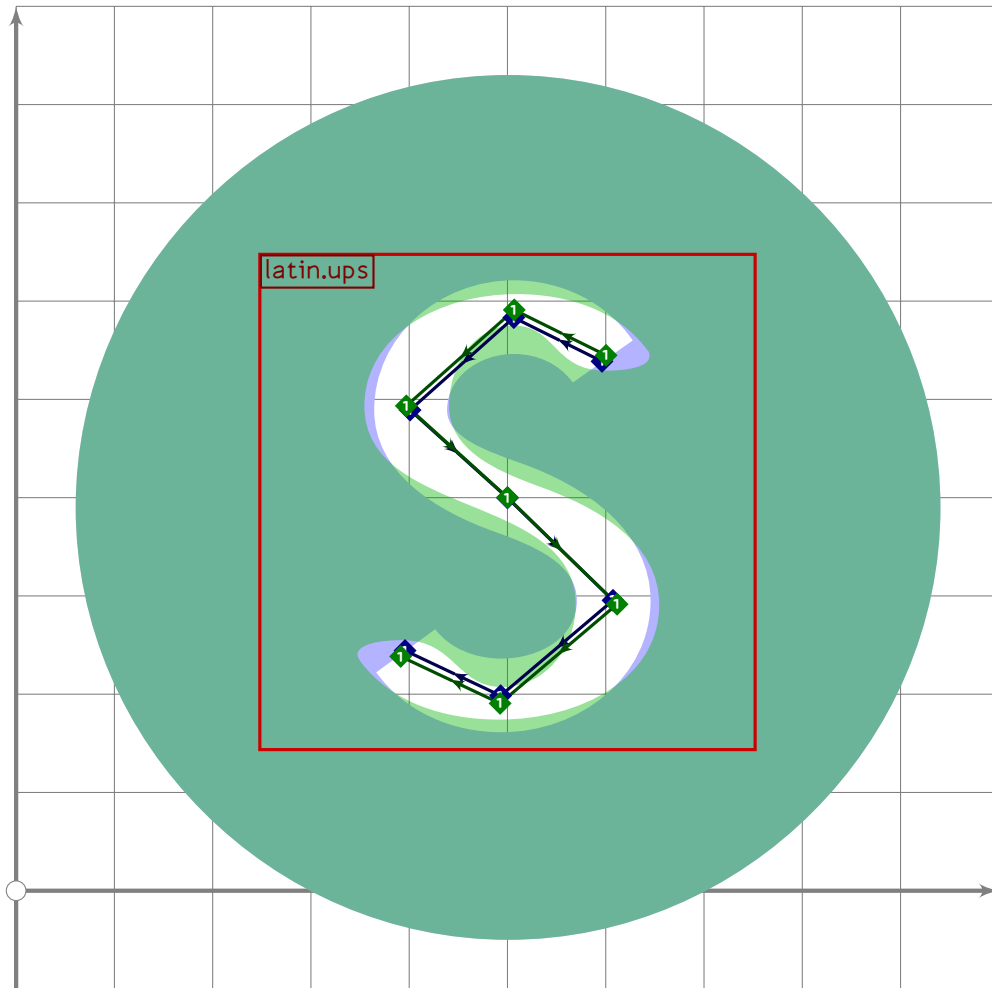
```

```

340 % R
341 % BACKGROUND 25CF
342 begint Suglyph("u1F161";97);
343   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upr);
344   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
345   tsu_render;
346 endtsuglyph;
347

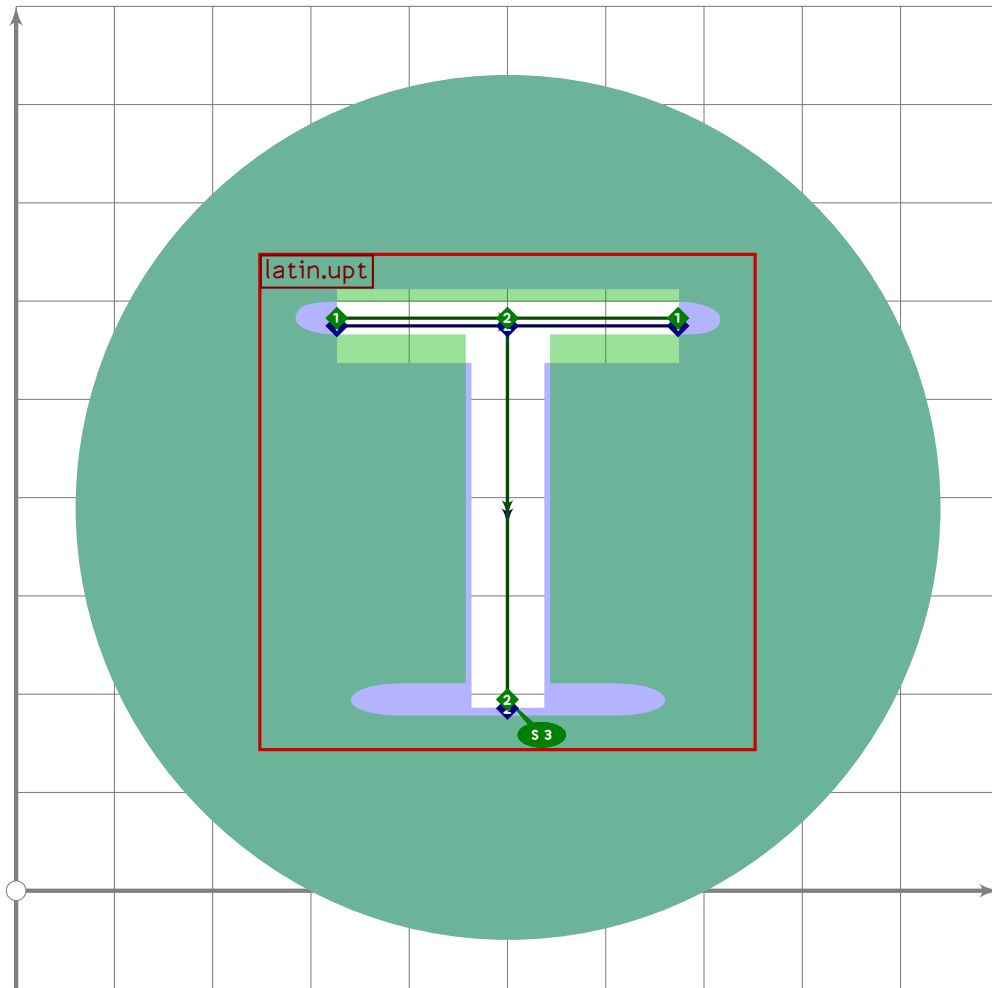
```



```

348 % S
349 % BACKGROUND 25CF
350 begint Suglyph("u1F162";98);
351   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.ups);
352   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
353   tsu_render;
354 endtsuglyph;
355

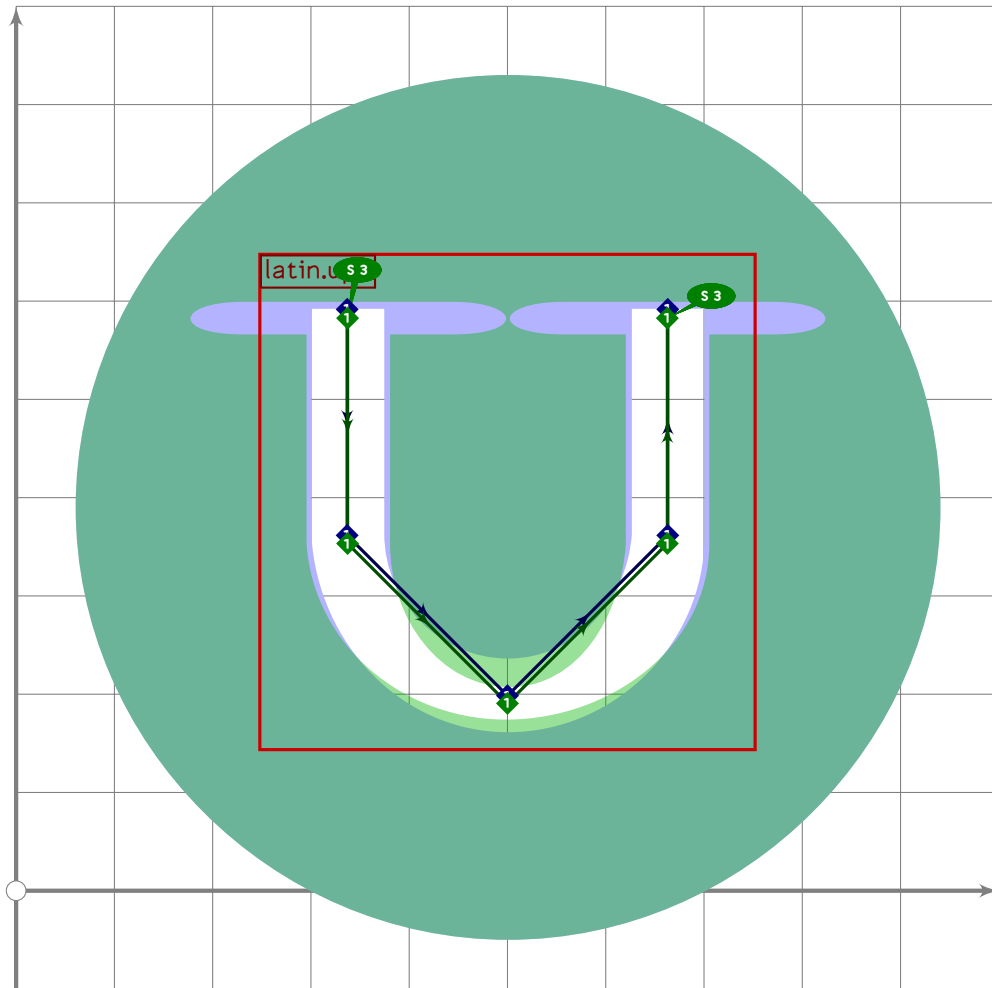
```



```

356 % T
357 % BACKGROUND 25CF
358 begint Suglyph("u1F163";99);
359 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upt);
360 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
361 tsu_render;
362 endtsuglyph;
363

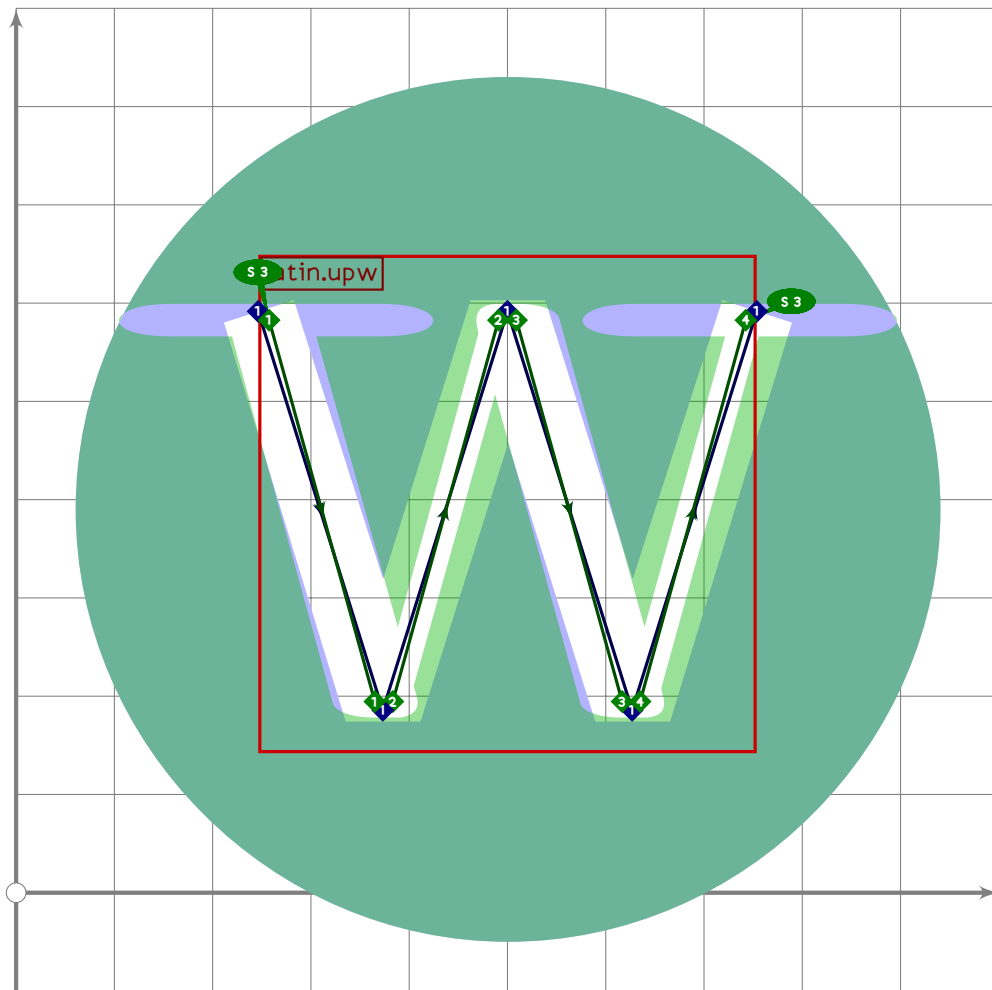
```



```

364 % U
365 % BACKGROUND 25CF
366 begint Suglyph("u1F164";100);
367 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upu);
368 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
369 tsu_render;
370 endtsuglyph;
371

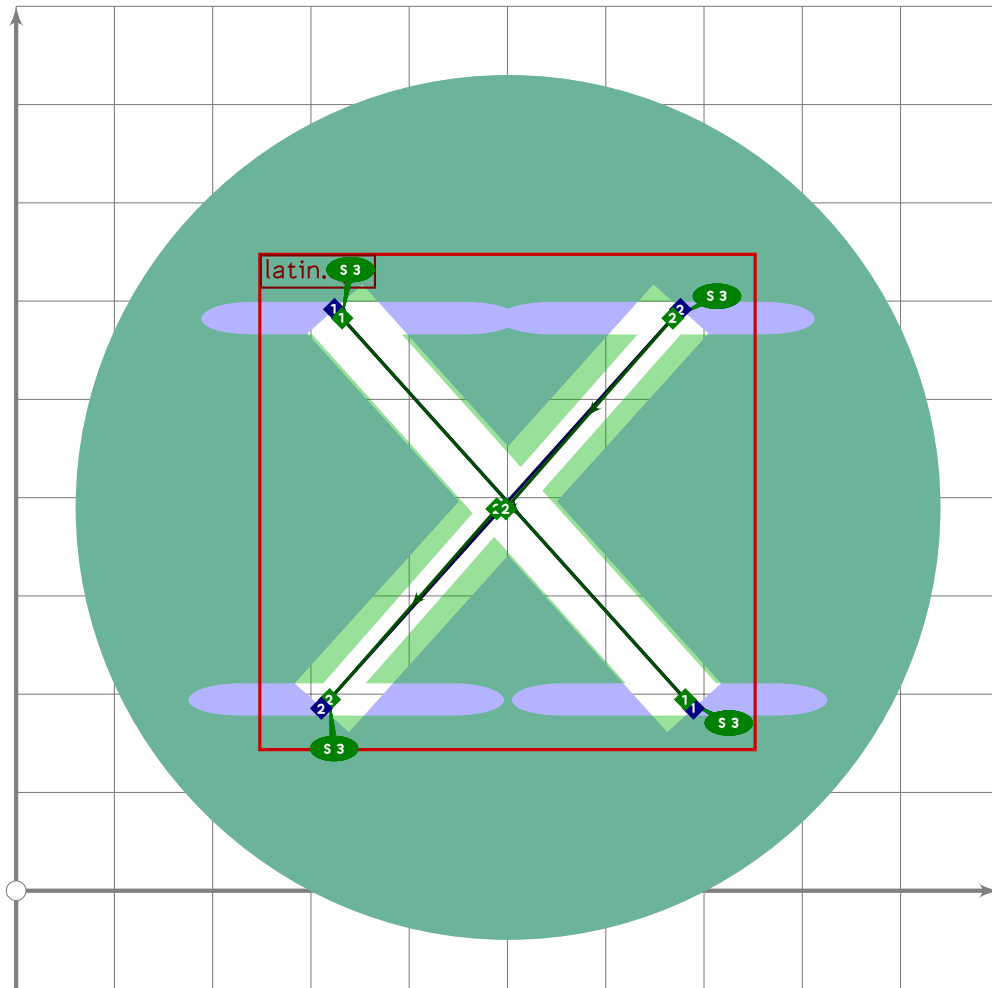
```

```

380 % W
381 % BACKGROUND 25CF
382 beginsuglyph("u1F166";102);
383 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upw);
384 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
385 tsu_render;
386 endsuglyph;
387

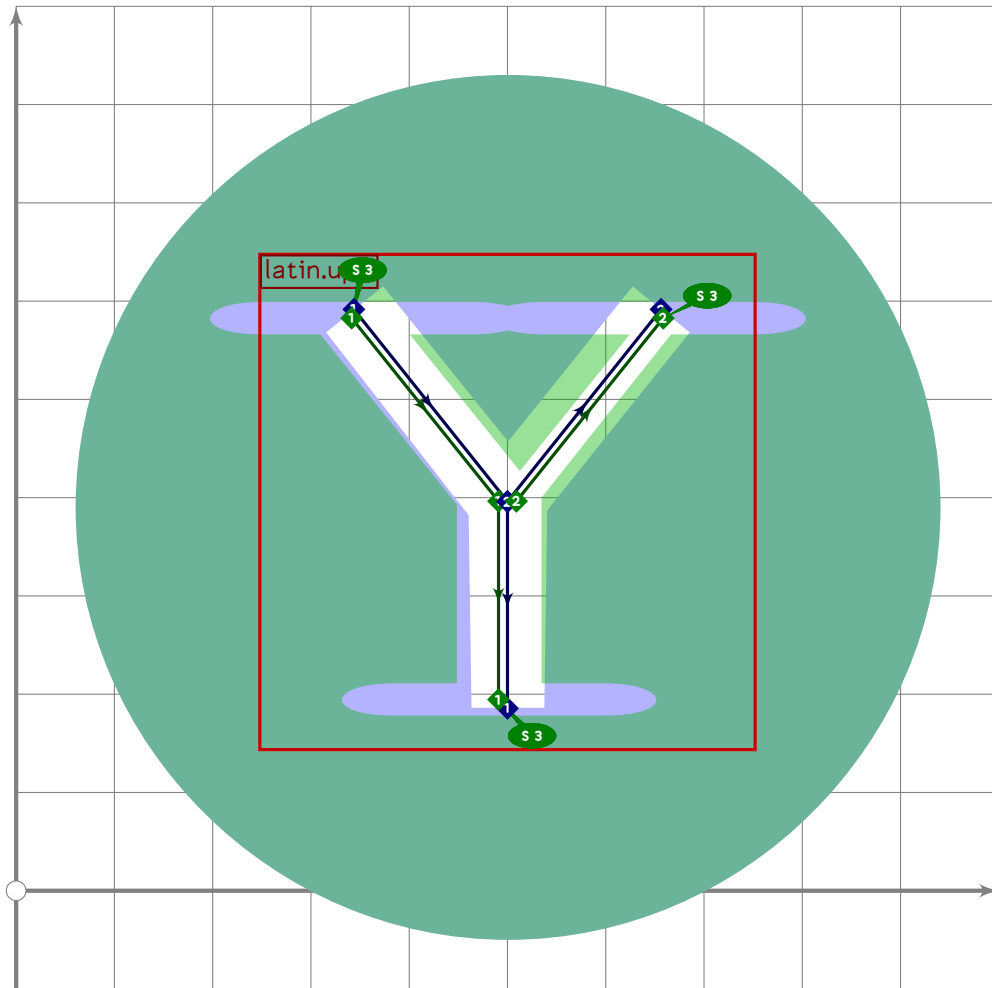
```



```

388 % X
389 % BACKGROUND 25CF
390 begint Suglyph("u1F167";103);
391   tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upx);
392   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
393   tsu_render;
394 endtsuglyph;
395

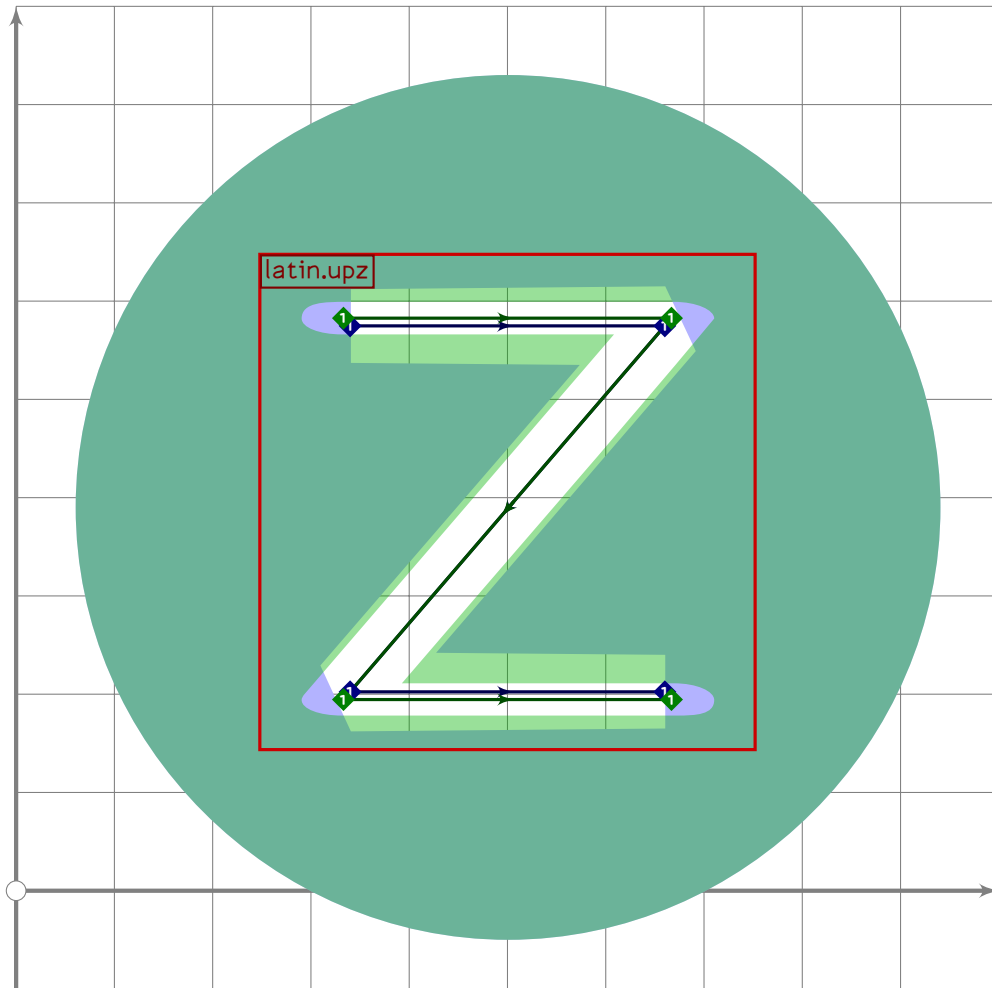
```

```

396 % Y
397 % BACKGROUND 25CF
398 beginsuglyph("u1F168";104);
399 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upy);
400 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
401 tsu_render;
402 endsuglyph;
403

```



```

404 % Z
405 % BACKGROUND 25CF
406 begint Suglyph("u1F169";105);
407 tsu_xform(tsu_xf.cletter)(tsu_curve.latin.upz);
408 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
409 tsu_render;
410 endtsuglyph;
411
412
413

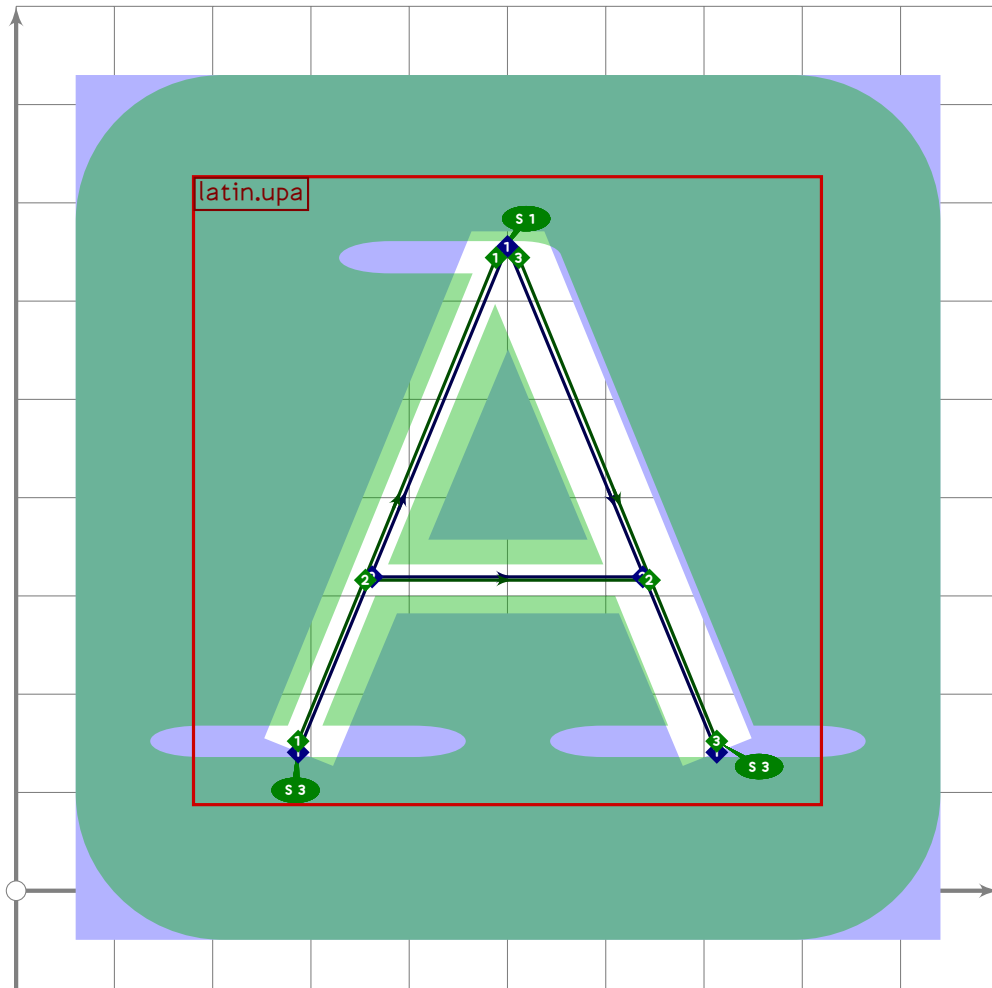
```

Inverse Squared Latin

```

414 % INVERSE SQUARED LATIN
415

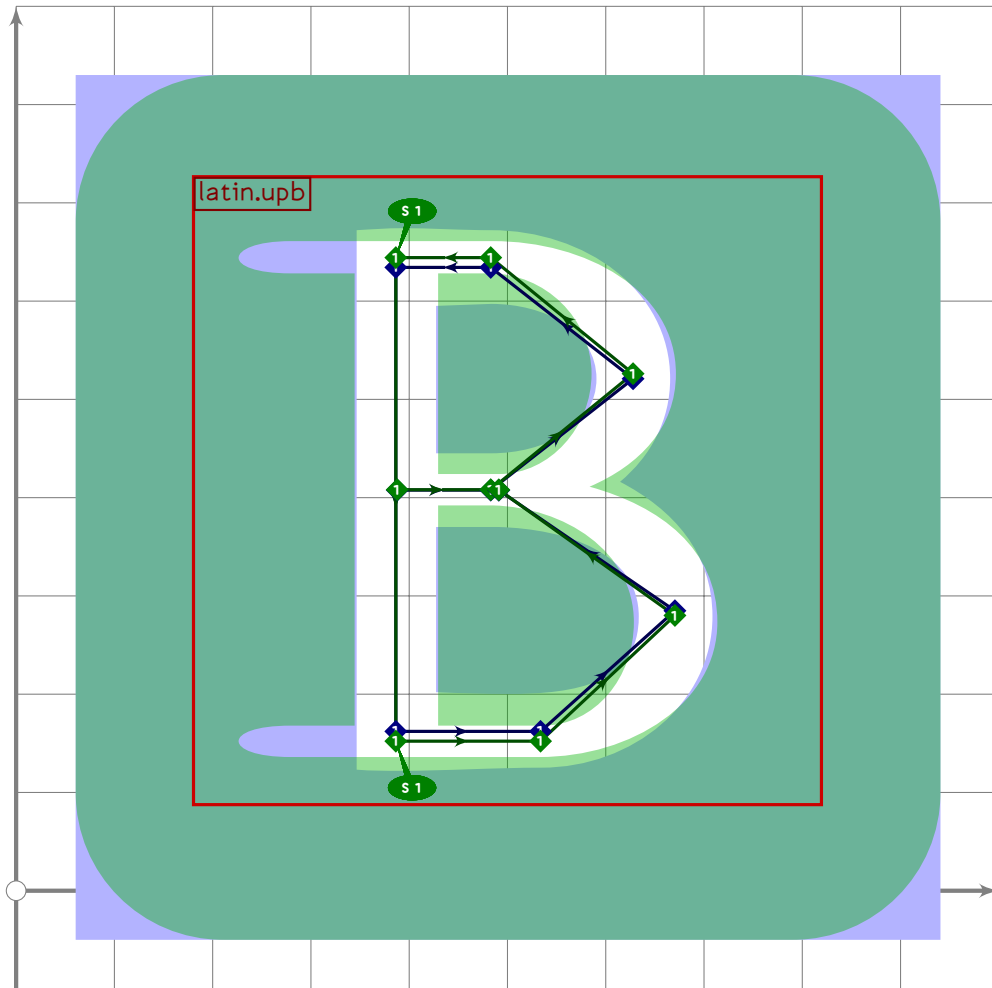
```



```

416 % A
417 % BACKGROUND F1712
418 begintsuglyph("u1F170";112);
419 tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upa);
420 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
421 tsu_render;
422 endsuglyph;
423

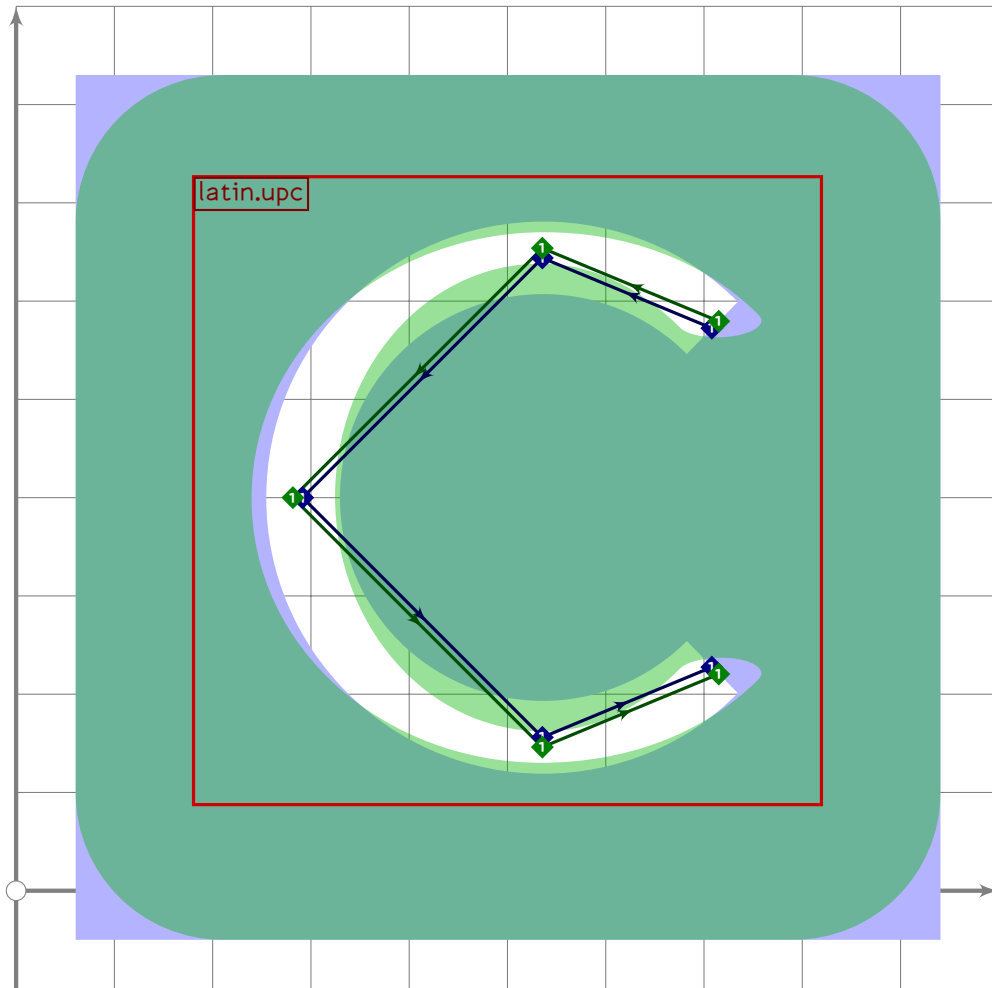
```



```

424 % B
425 % BACKGROUND F1712
426 begint Suglyph("u1F171";113);
427 tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upb);
428 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
429 tsu_render;
430 endtsuglyph;
431

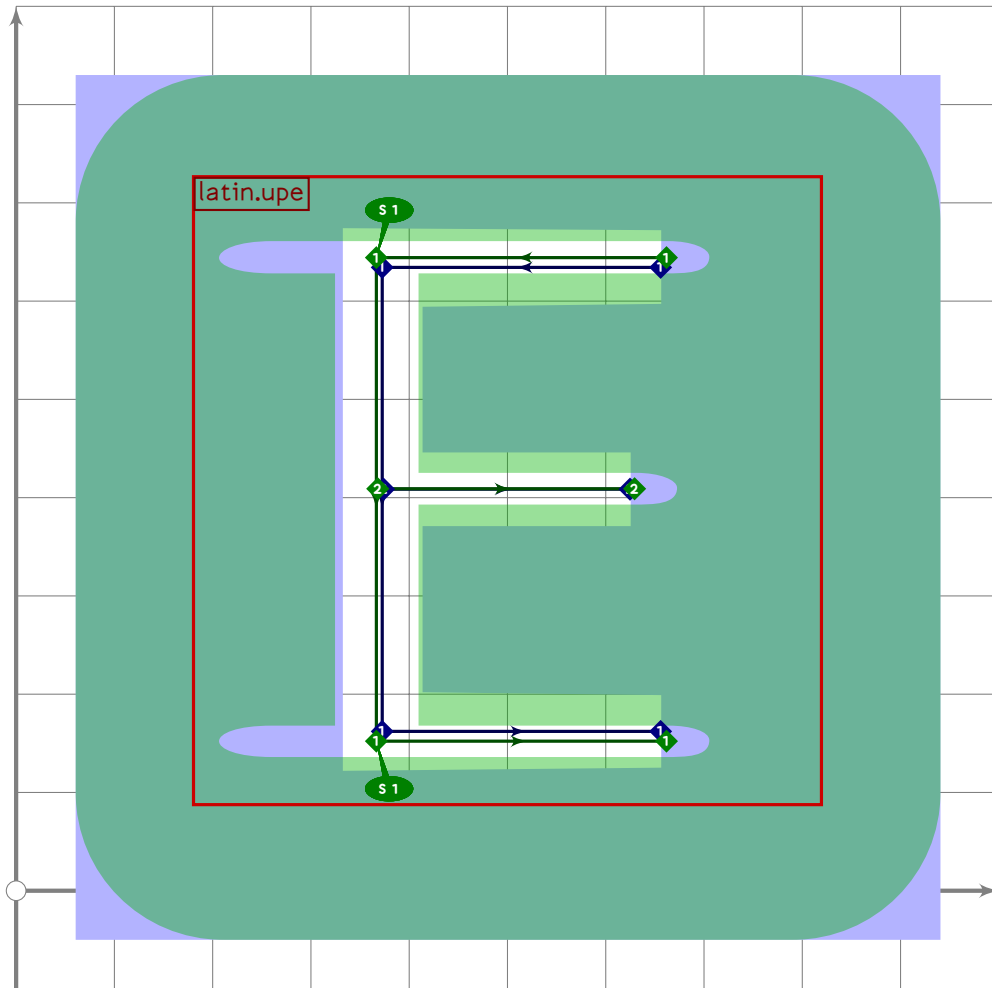
```



```

432 % C
433 % BACKGROUND F1712
434 begint Suglyph("u1F172";114);
435   tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upc);
436   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
437   tsu_render;
438 endtsuglyph;
439

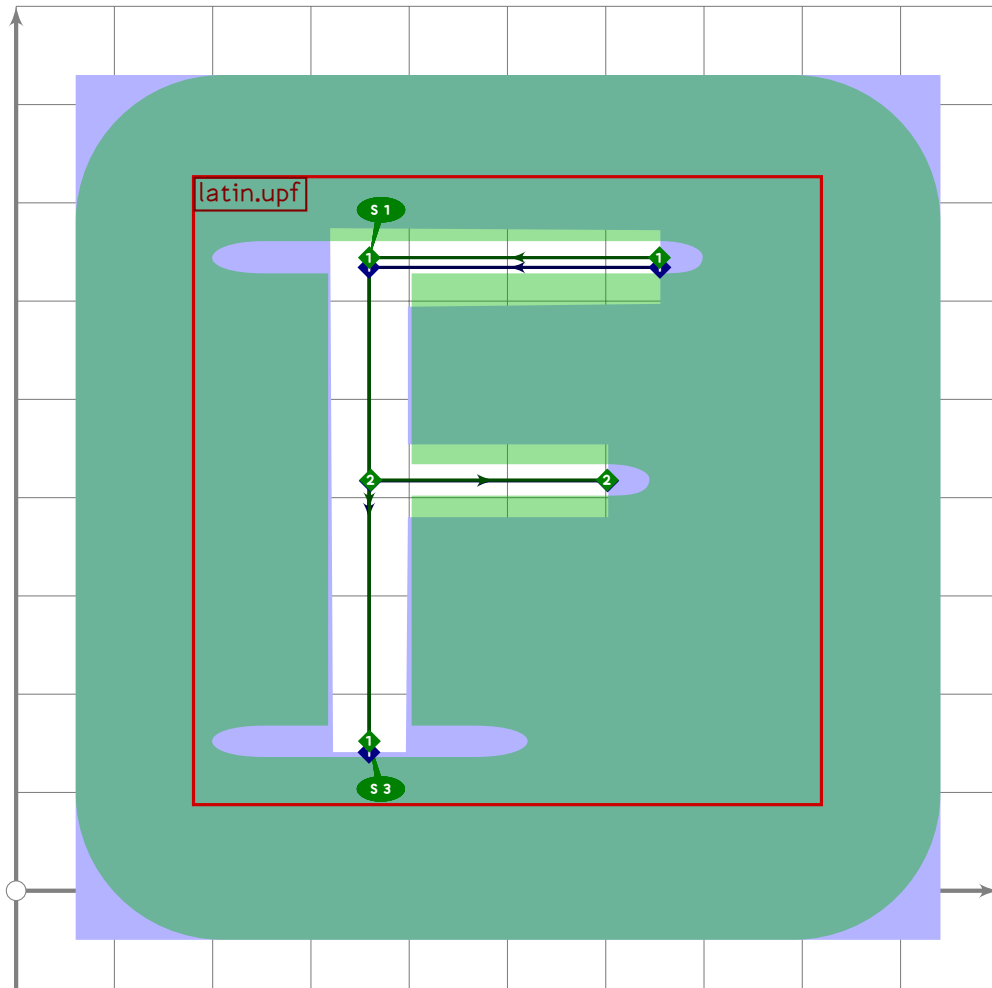
```

```

448 % E
449 % BACKGROUND F1712
450 begint Suglyph("u1F174";116);
451   tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upe);
452   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
453   tsu_render;
454 endtsuglyph;
455

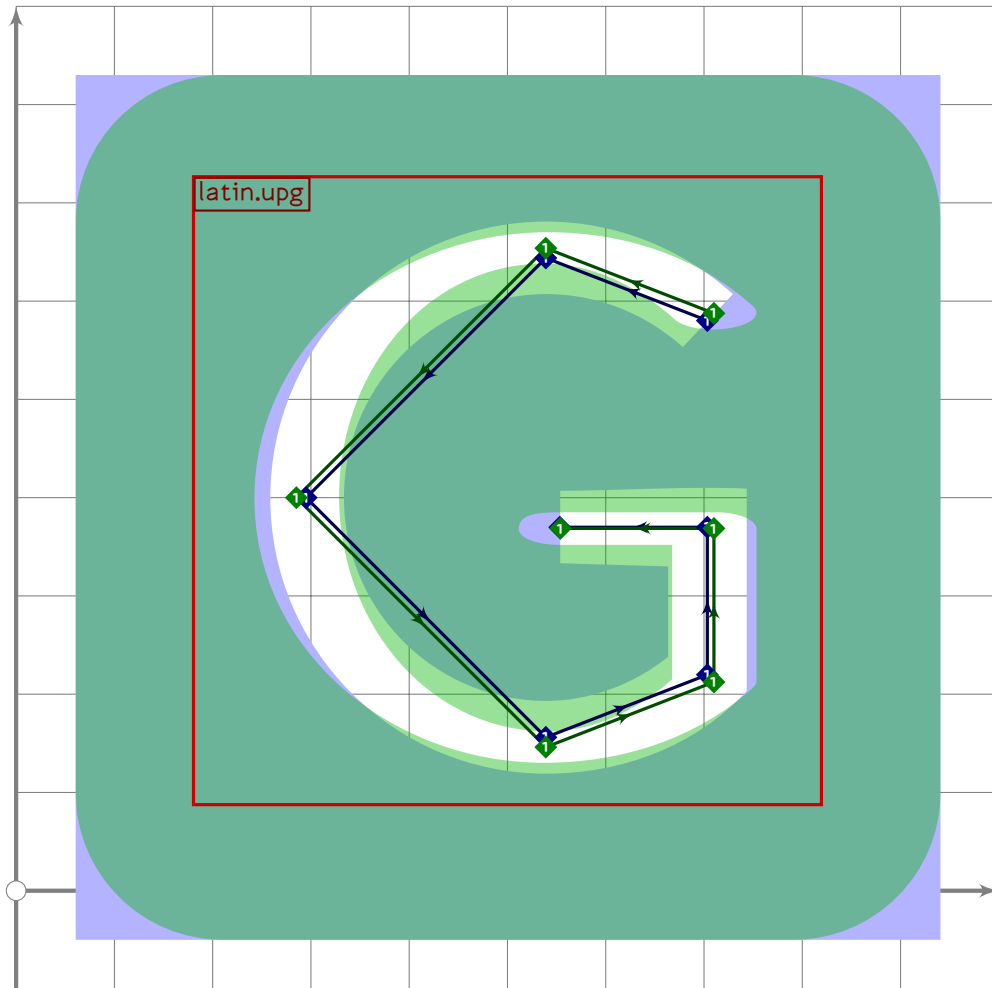
```



```

456 % F
457 % BACKGROUND F1712
458 begint Suglyph("u1F175";117);
459 tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upf);
460 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
461 tsu_render;
462 endtsuglyph;
463

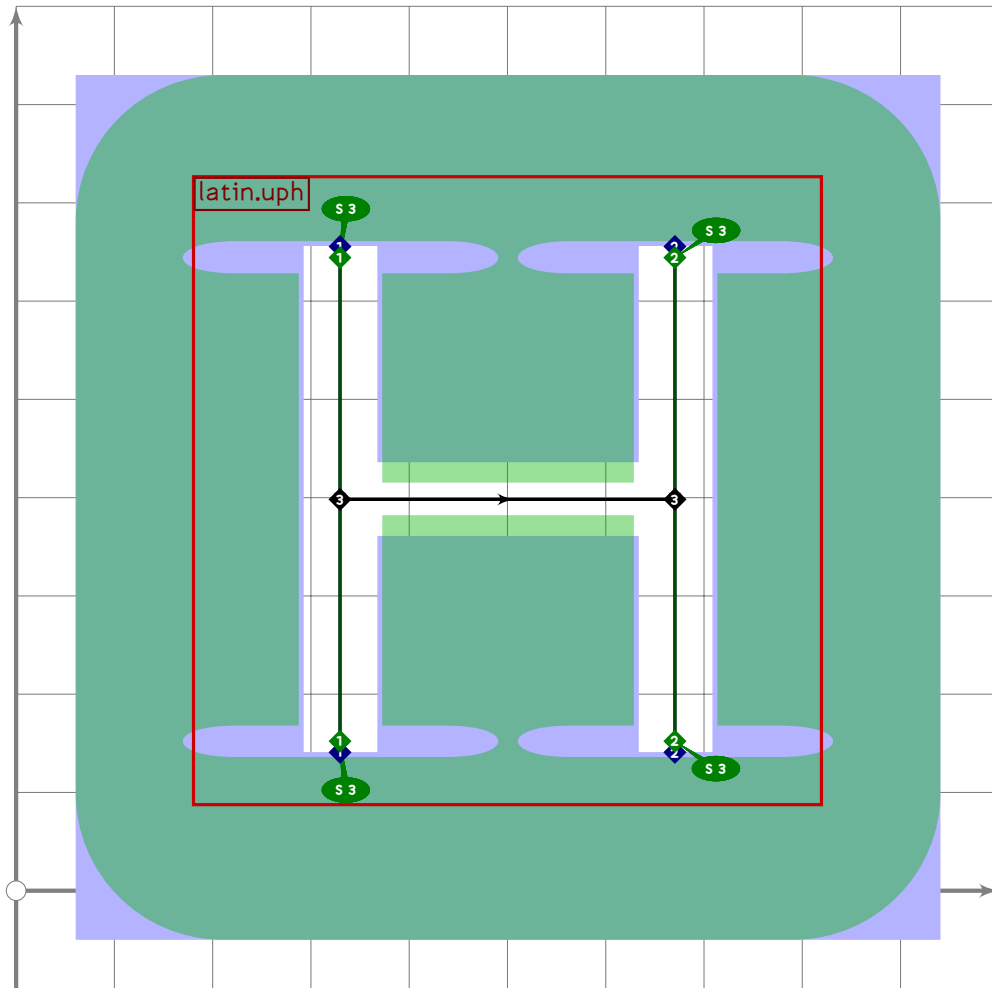
```

```

464 % G
465 % BACKGROUND F1712
466 begint Suglyph("u1F176";118);
467 tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upg);
468 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
469 tsu_render;
470 endtsuglyph;
471

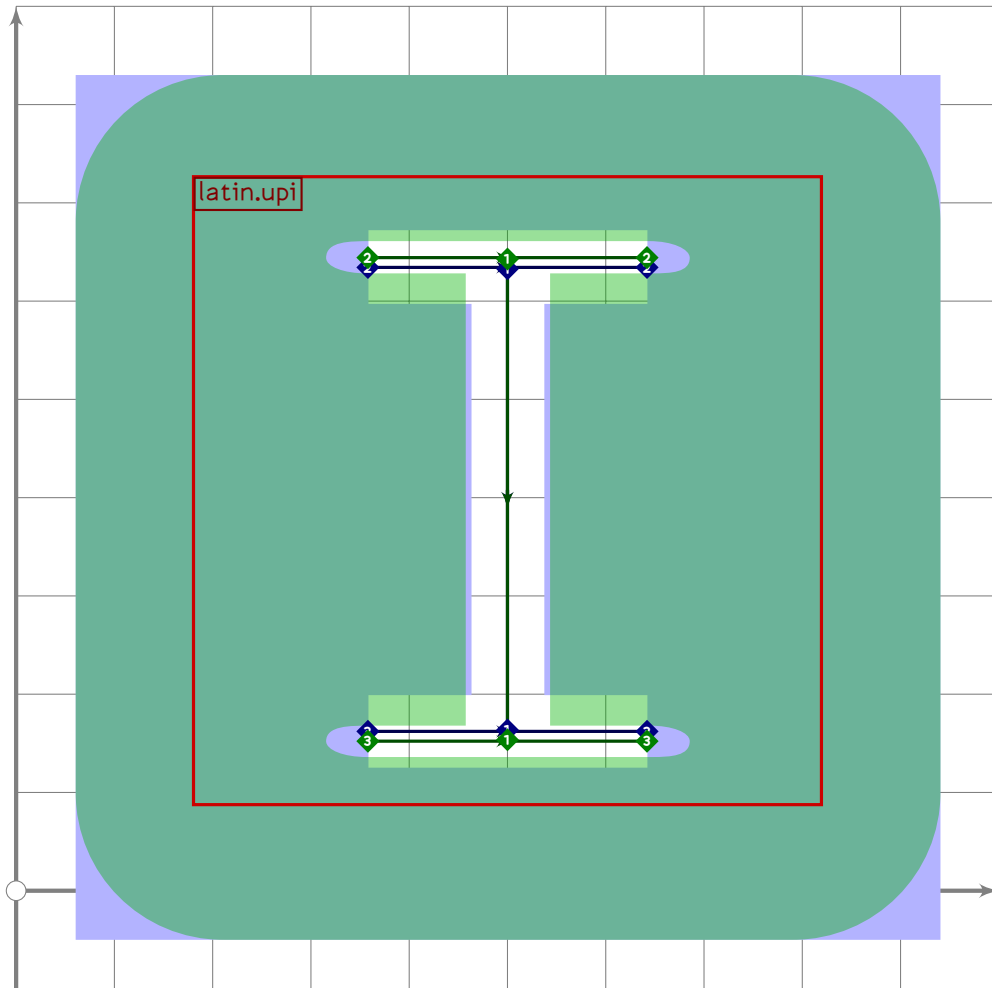
```



```

472 % H
473 % BACKGROUND F1712
474 begint Suglyph("u1F177";119);
475 tsu_xform(tsu_xf.sletter)(tsu_curve.latin.uph);
476 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
477 tsu_render;
478 endtsuglyph;
479

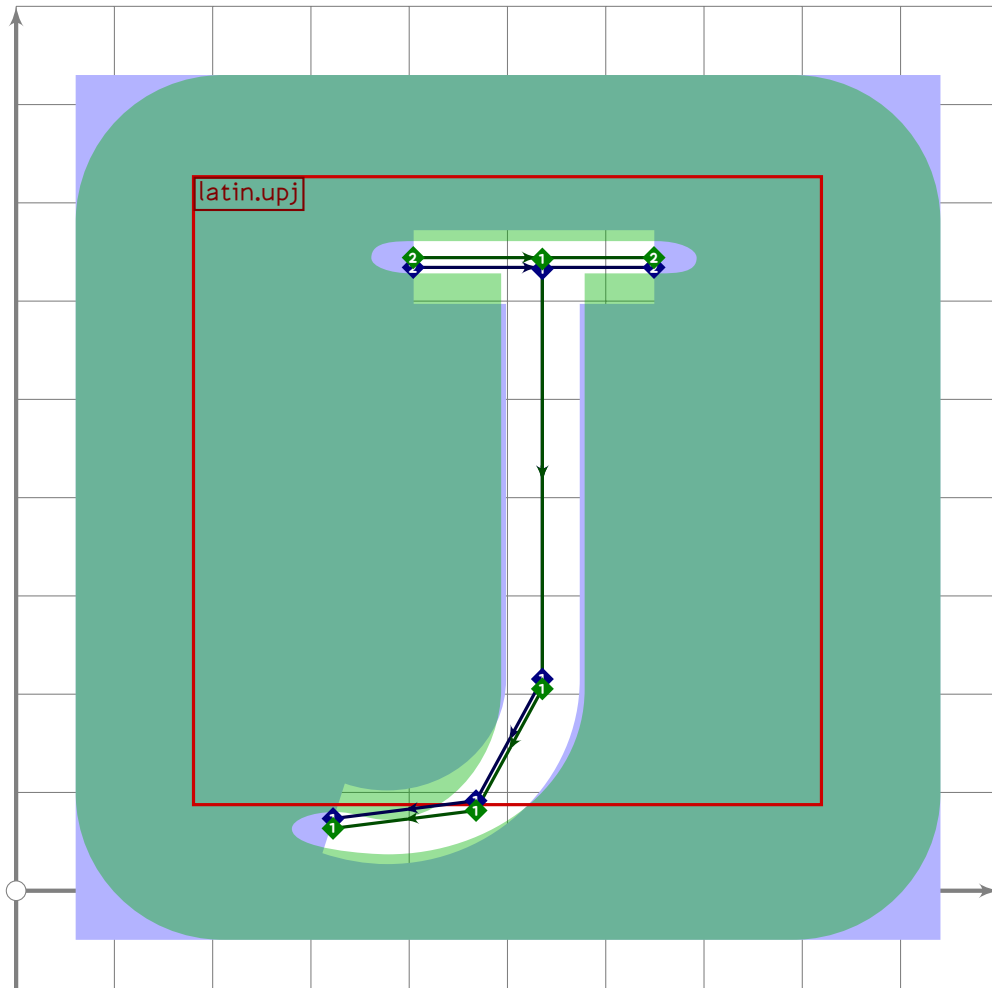
```



```

480 % I
481 % BACKGROUND F1712
482 begint Suglyph("u1F178";120);
483 tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upi);
484 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
485 tsu_render;
486 endtsuglyph;
487

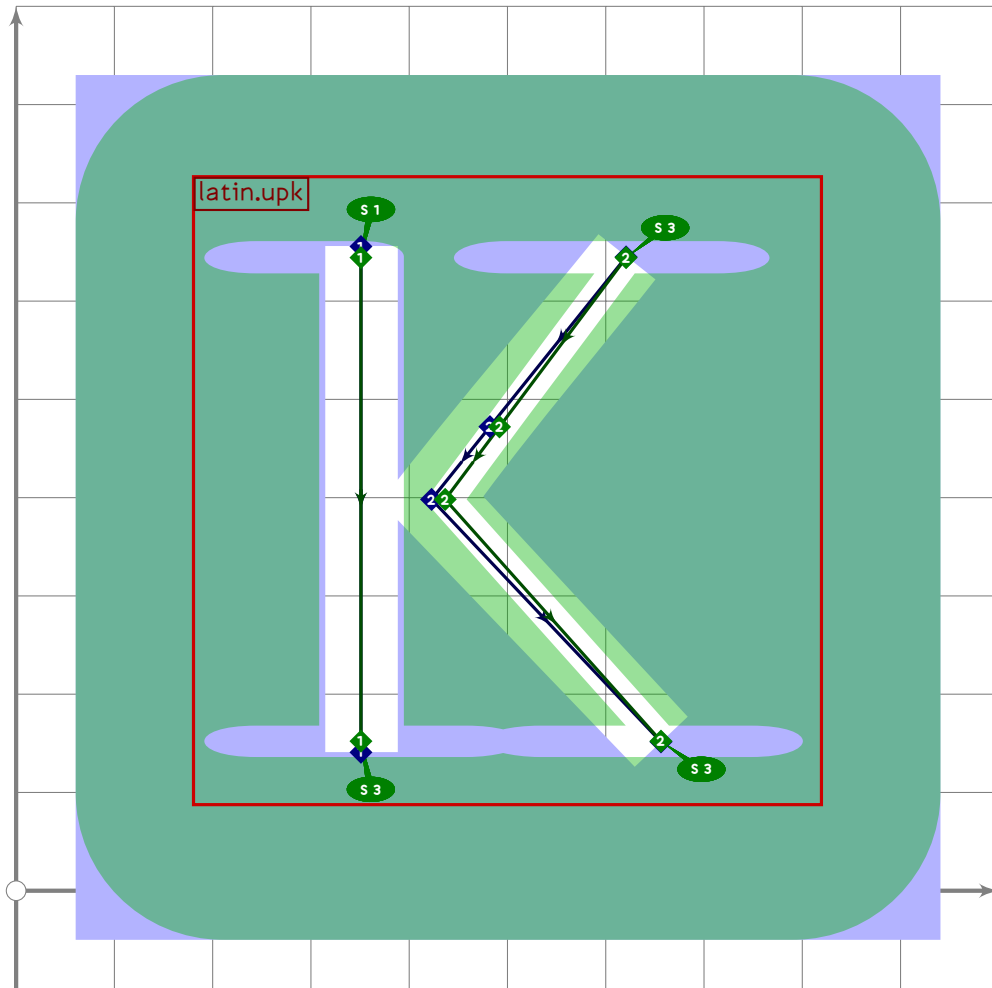
```



```

488 % J
489 % BACKGROUND F1712
490 begint Suglyph("u1F179";121);
491   tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upj);
492   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
493   tsu_render;
494 endtsuglyph;
495

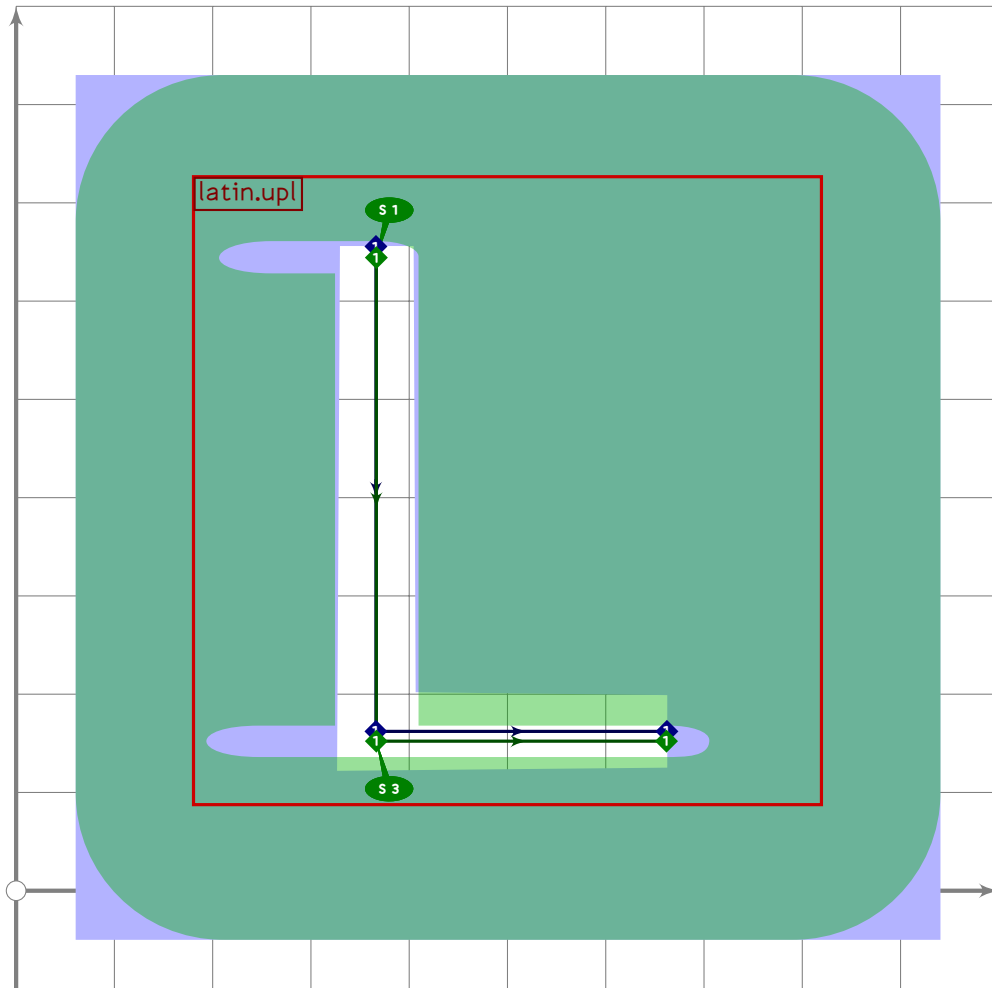
```



```

496 % K
497 % BACKGROUND F1712
498 begint Suglyph("u1F17A";122);
499 tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upk);
500 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
501 tsu_render;
502 endtsuglyph;
503

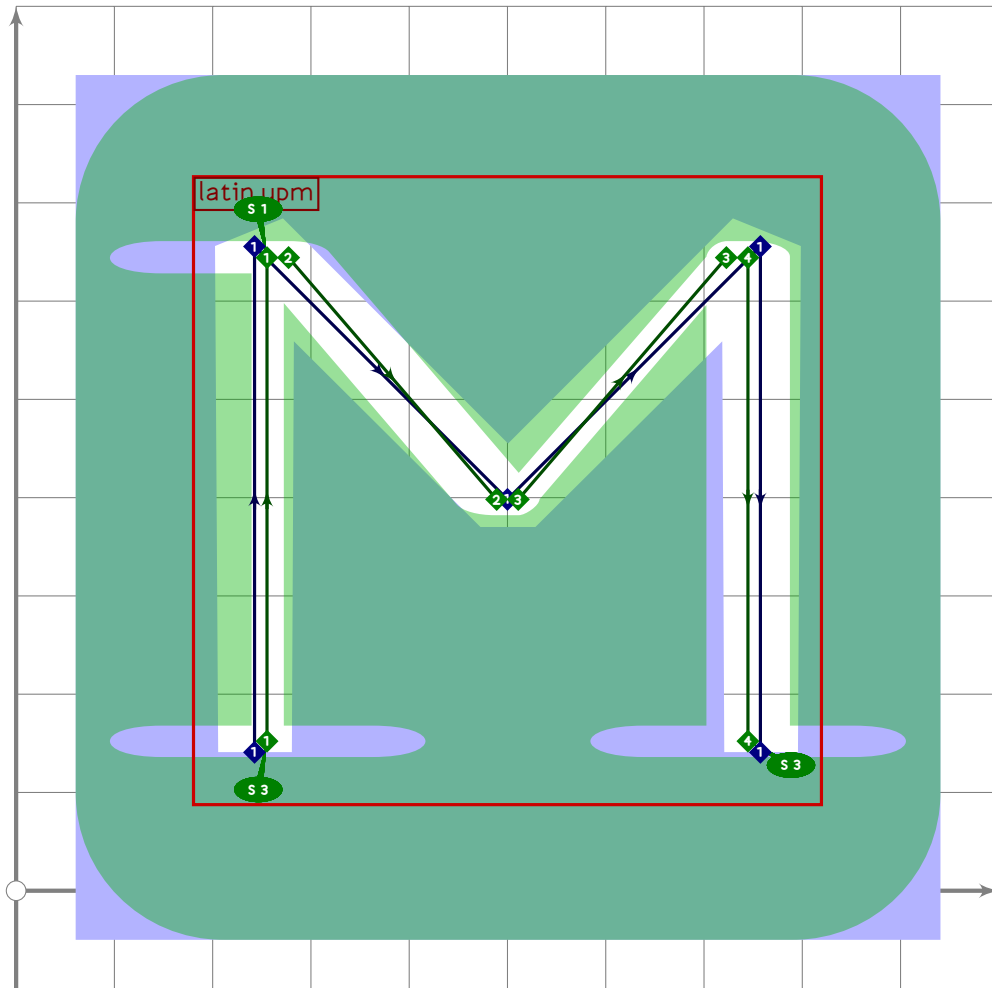
```



```

504 % L
505 % BACKGROUND F1712
506 begint Suglyph("u1F17B";123);
507 tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upl);
508 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
509 tsu_render;
510 endtsuglyph;
511

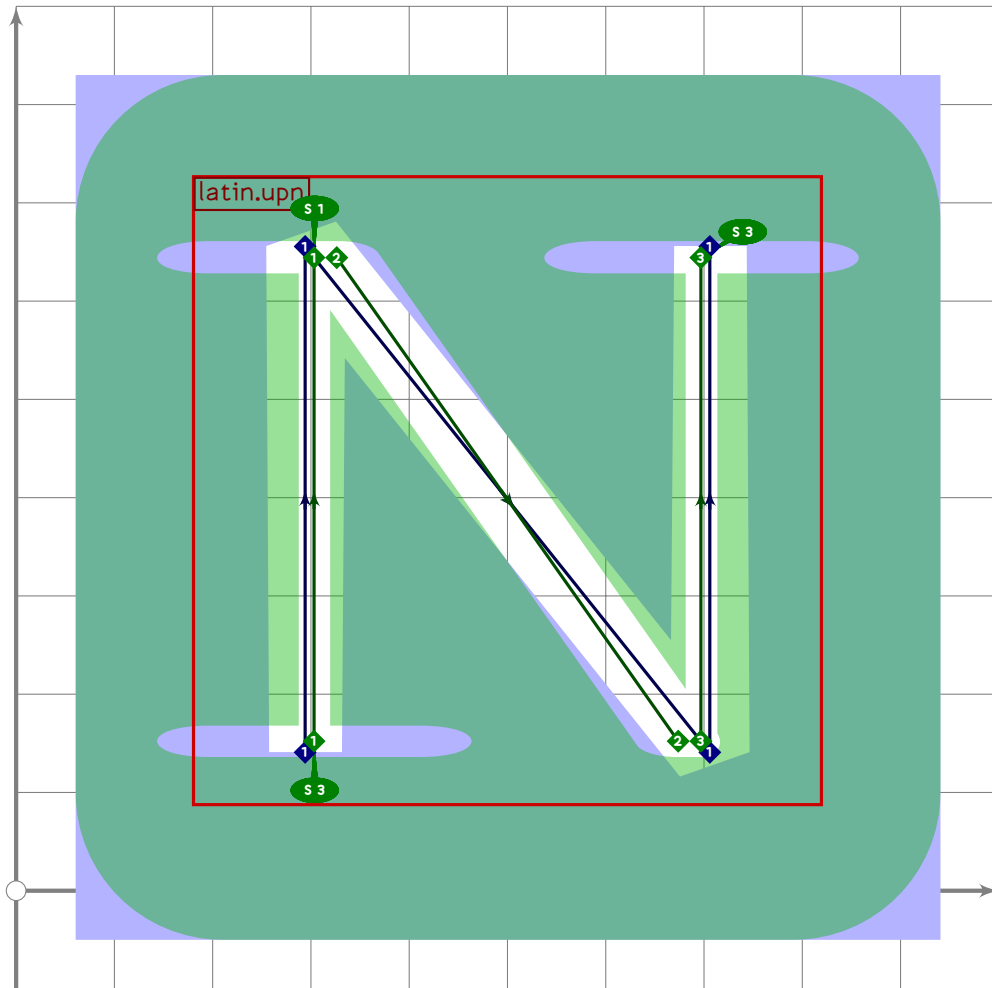
```



```

512 % M
513 % BACKGROUND F1712
514 begint Suglyph("u1F17C",124);
515 if do_alteration:
516     tsu_xform(tsu_xf.sletter
517         shifted -centre_pt xscaled 0.95 shifted centre_pt)(tsu_curve.latin.upm);
518 else:
519     tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upm);
520 fi;
521 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i+1; endfor;
522 tsu_render;
523 endtsuglyph;
524

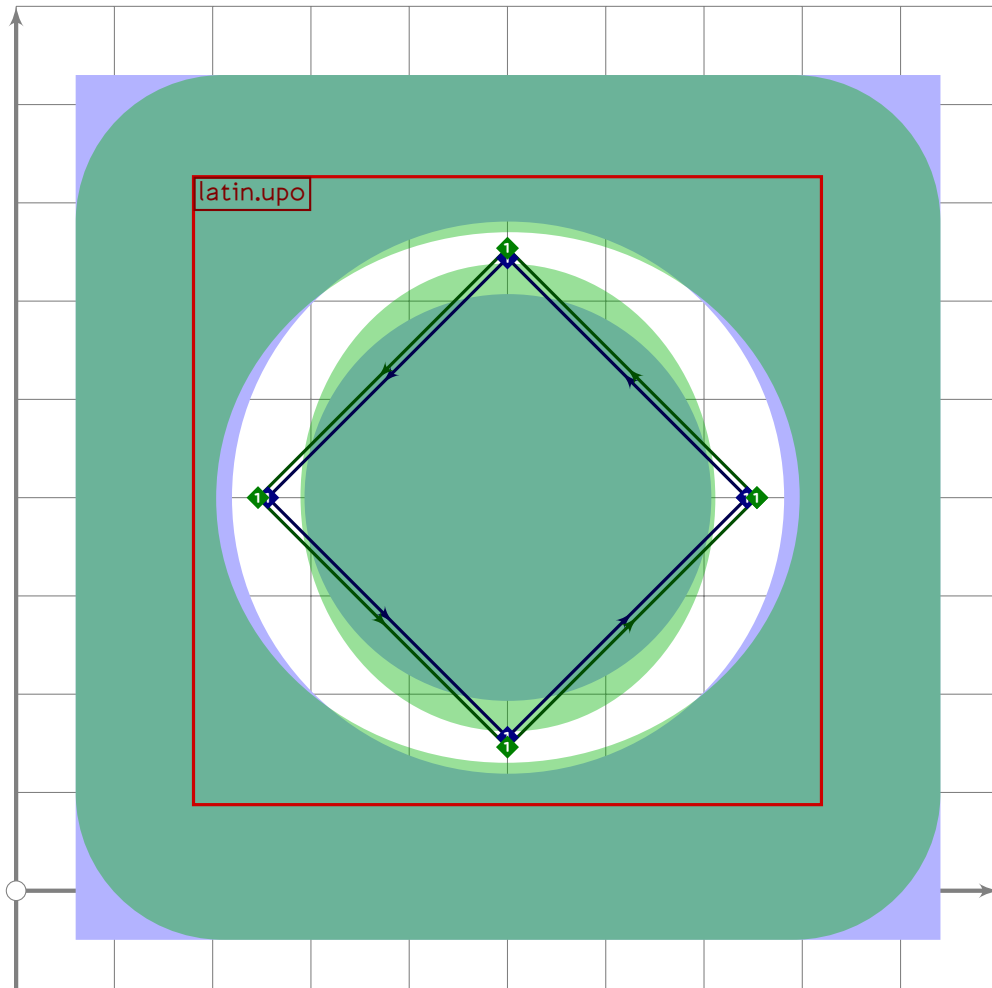
```



```

525 % N
526 % BACKGROUND F1712
527 begint Suglyph("u1F17D",125);
528   tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upn);
529   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
530   tsu_render;
531 endtsuglyph;
532

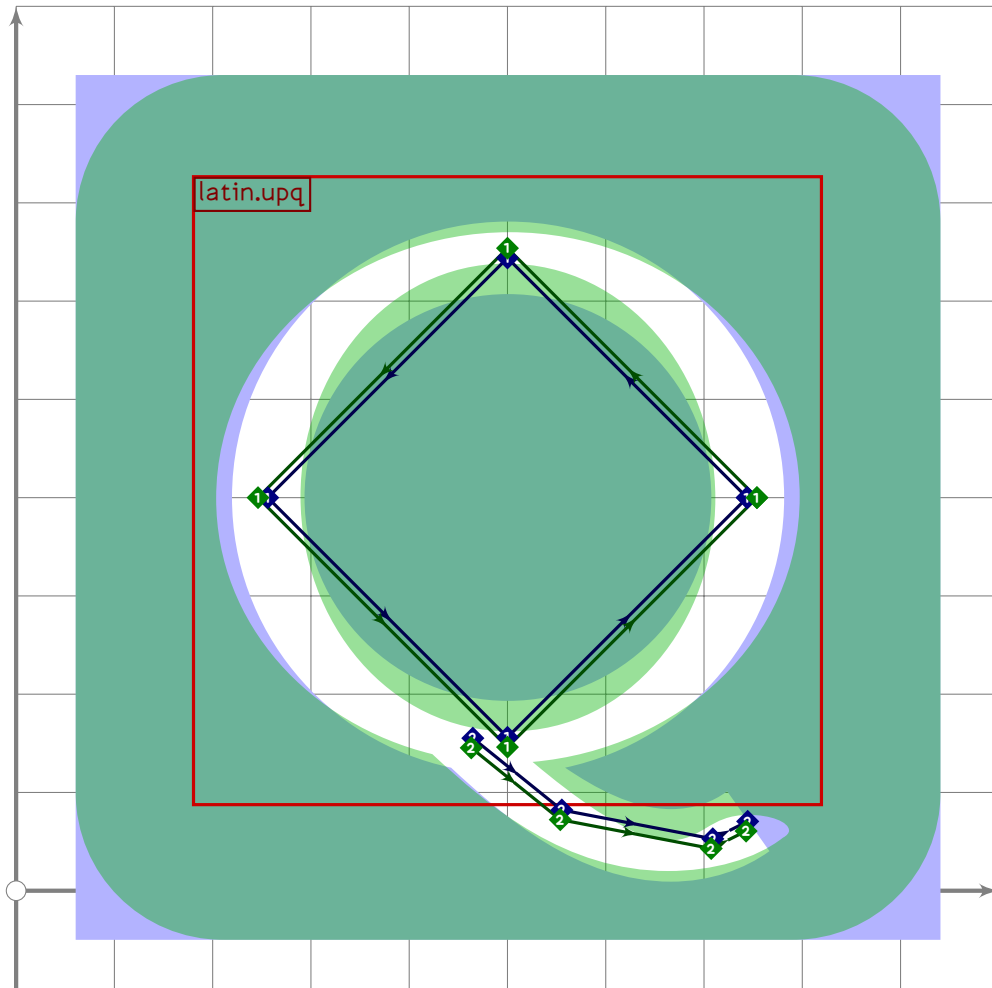
```

```

533 % O
534 % BACKGROUND F1712
535 beginsuglyph("u1F17E";126);
536 tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upo);
537 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
538 tsu_render;
539 endsuglyph;
540

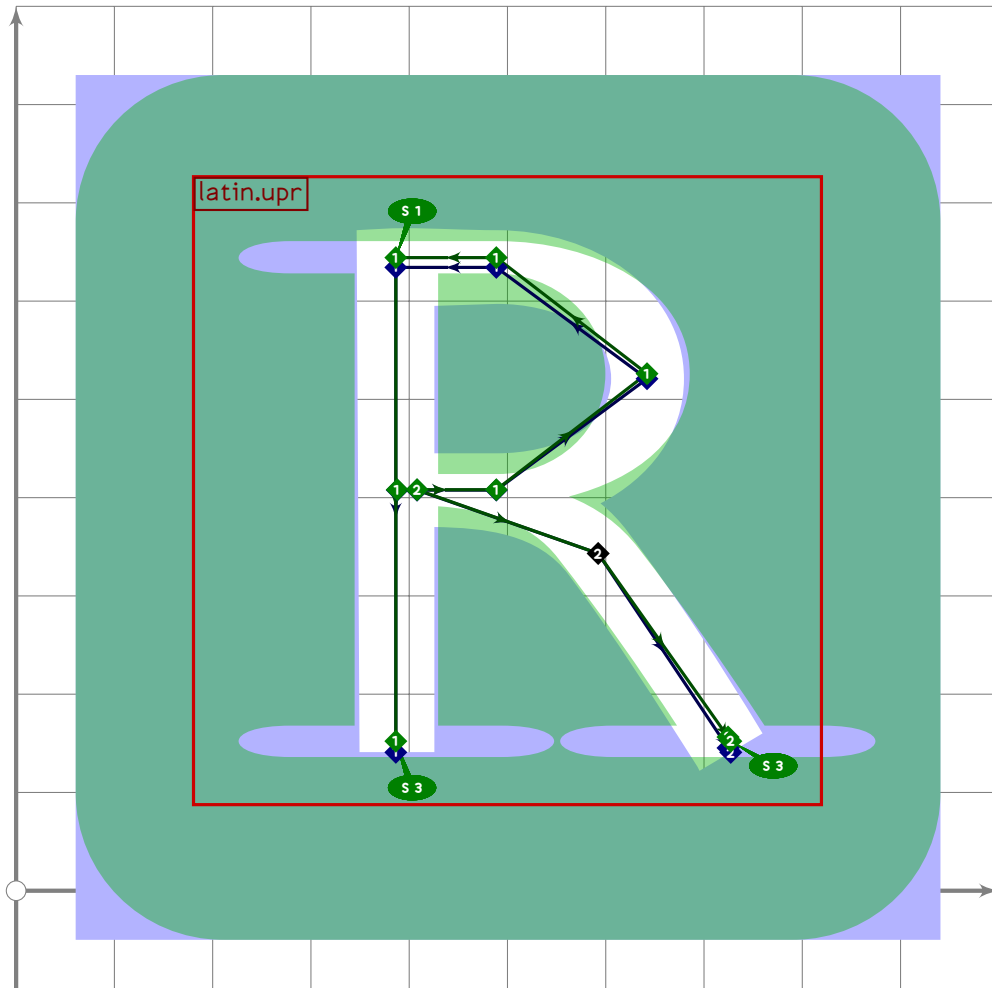
```

```

549 % Q
550 % BACKGROUND F1712
551 begint Suglyph("u1F180",128);
552   tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upq);
553   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
554   tsu_render;
555 endtsuglyph;
556

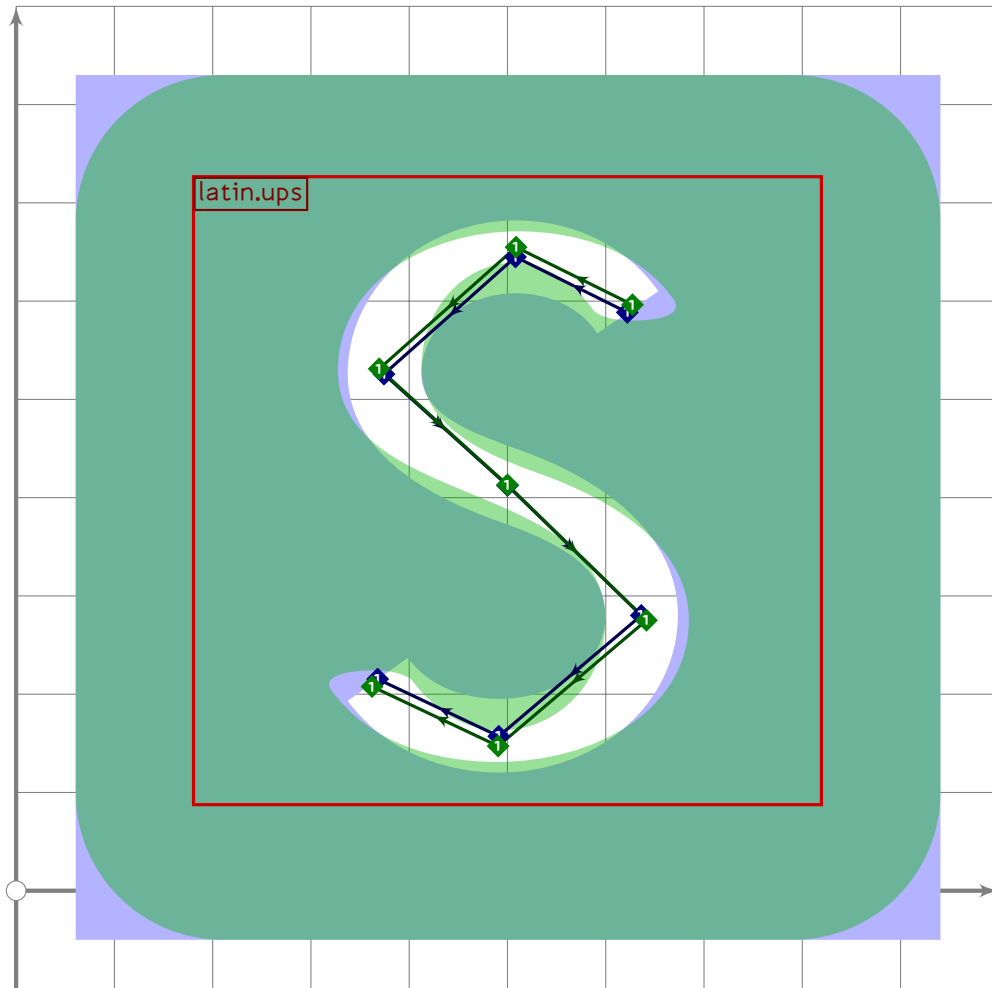
```



```

557 % R
558 % BACKGROUND F1712
559 begint Suglyph("u1F181";129);
560 tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upr);
561 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
562 tsu_render;
563 endtsuglyph;
564

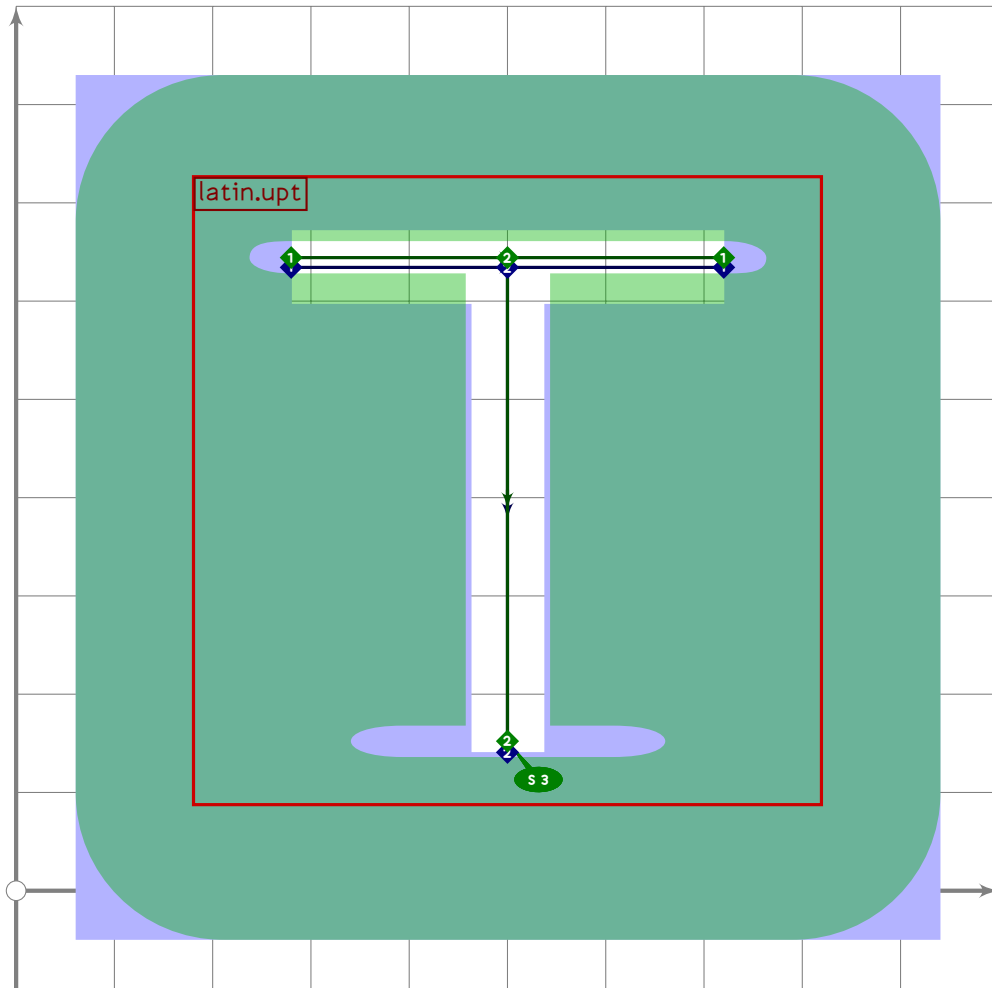
```



```

565 % S
566 % BACKGROUND F1712
567 begint Suglyph("u1F182";130);
568   tsu_xform(tsu_xf.sletter)(tsu_curve.latin.ups);
569   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
570   tsu_render;
571 endtsuglyph;
572

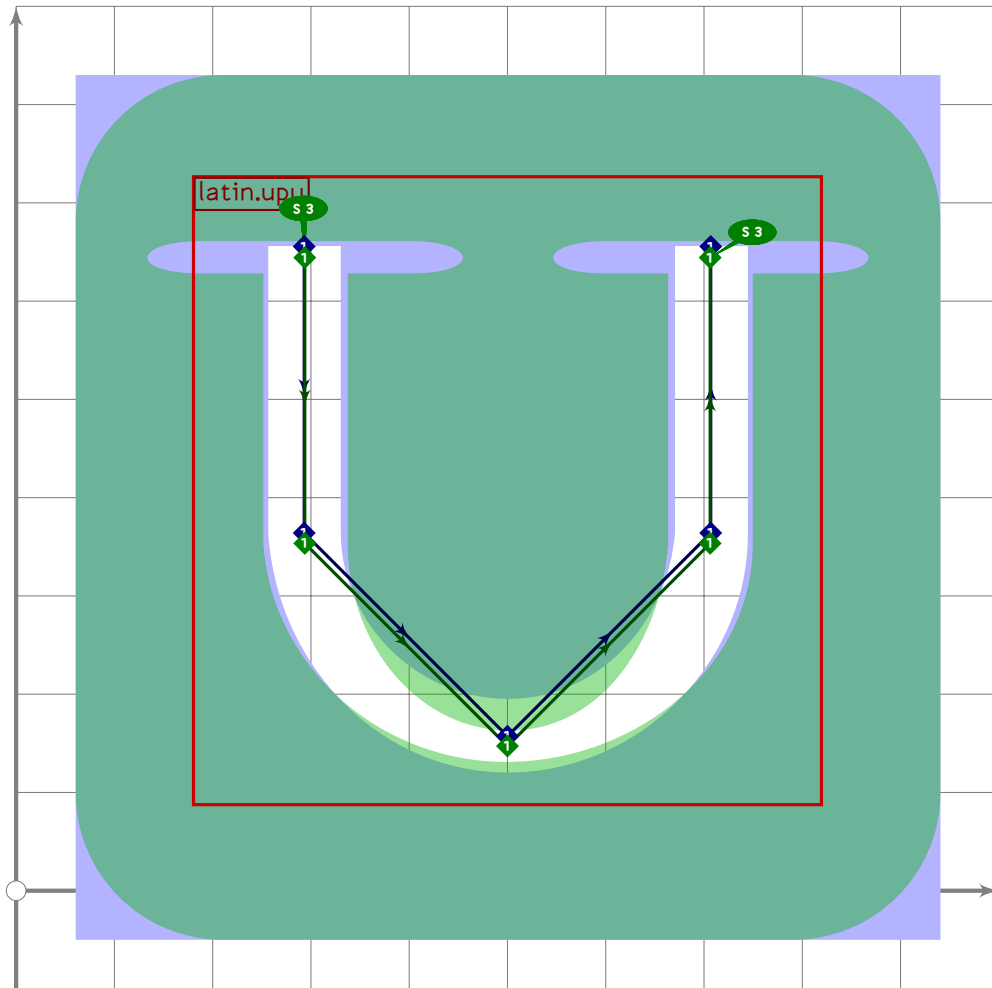
```



```

573 % T
574 % BACKGROUND F1712
575 begint Suglyph("u1F183";131);
576 tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upt);
577 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
578 tsu_render;
579 endtsuglyph;
580

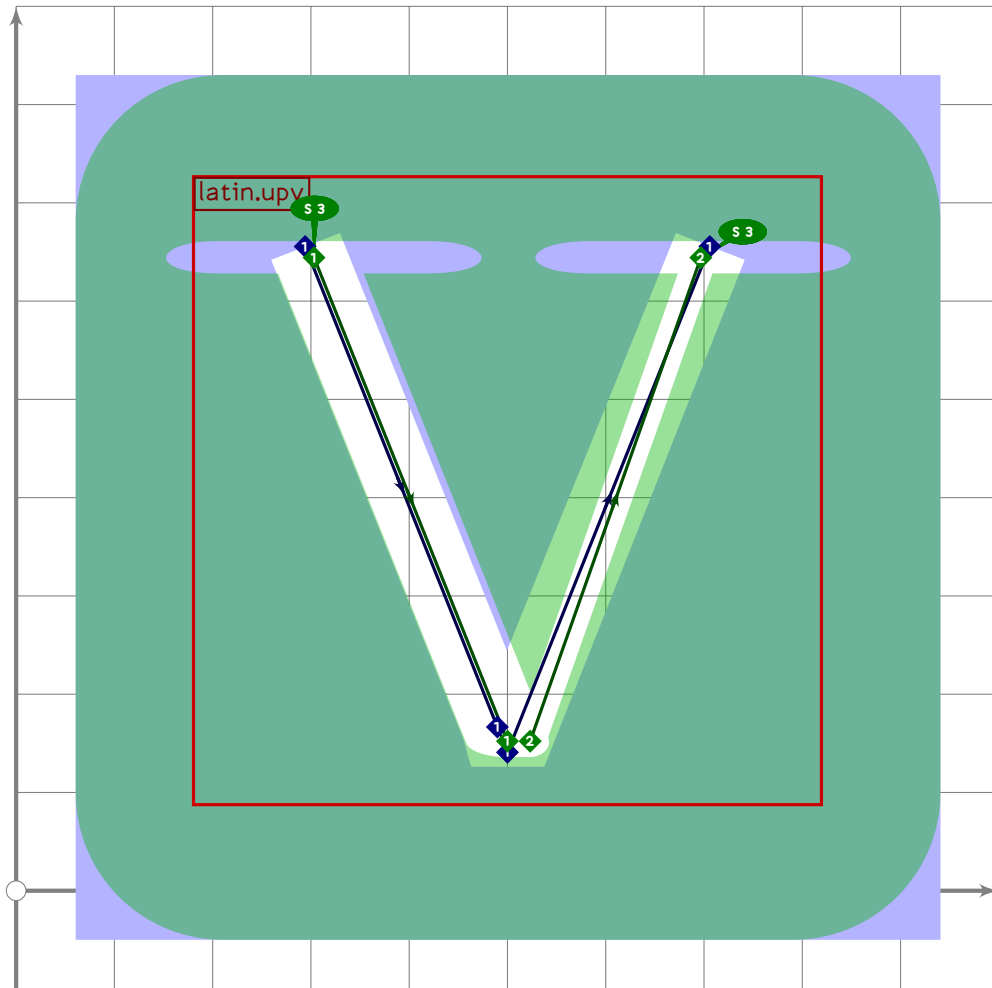
```



```

581 % U
582 % BACKGROUND F1712
583 beginsuglyph("u1F184";132);
584 tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upu);
585 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
586 tsu_render;
587 endsuglyph;
588

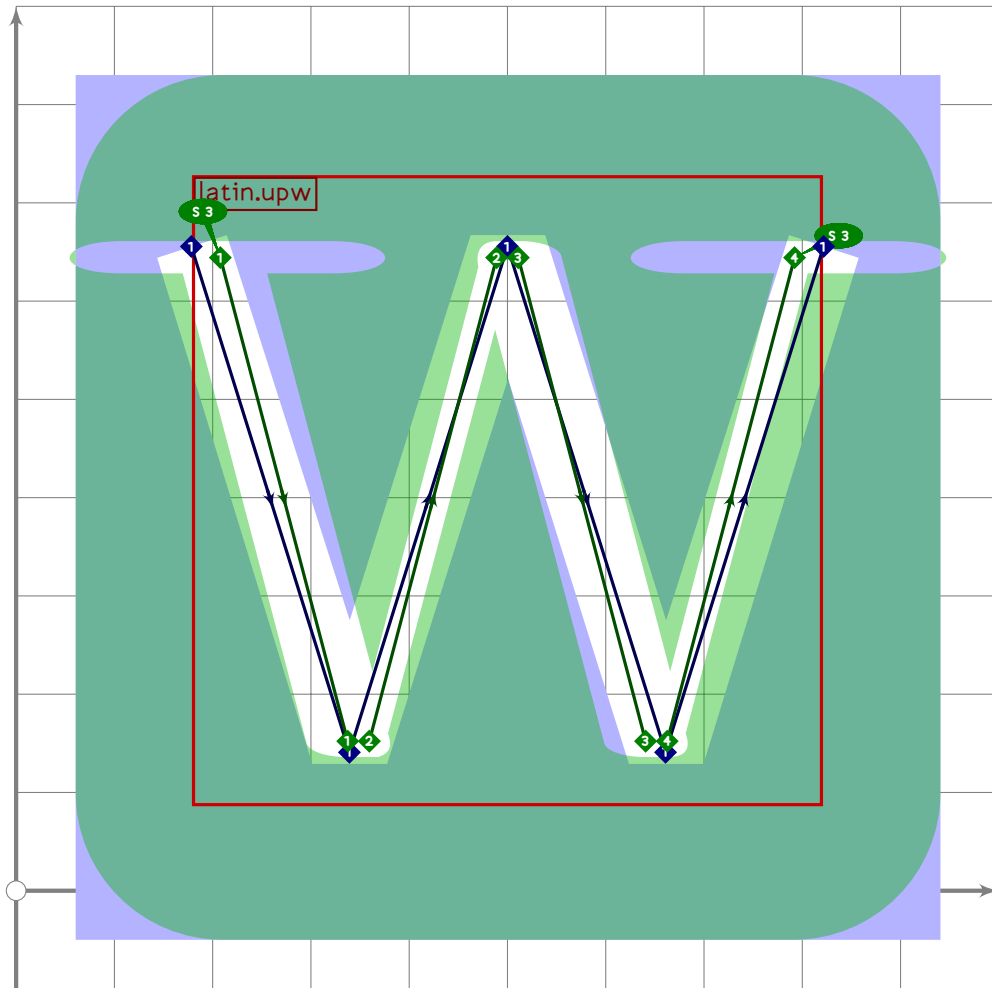
```



```

589 % V
590 % BACKGROUND F1712
591 begint Suglyph("u1F185";133);
592 tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upv);
593 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
594 tsu_render;
595 endtsuglyph;
596

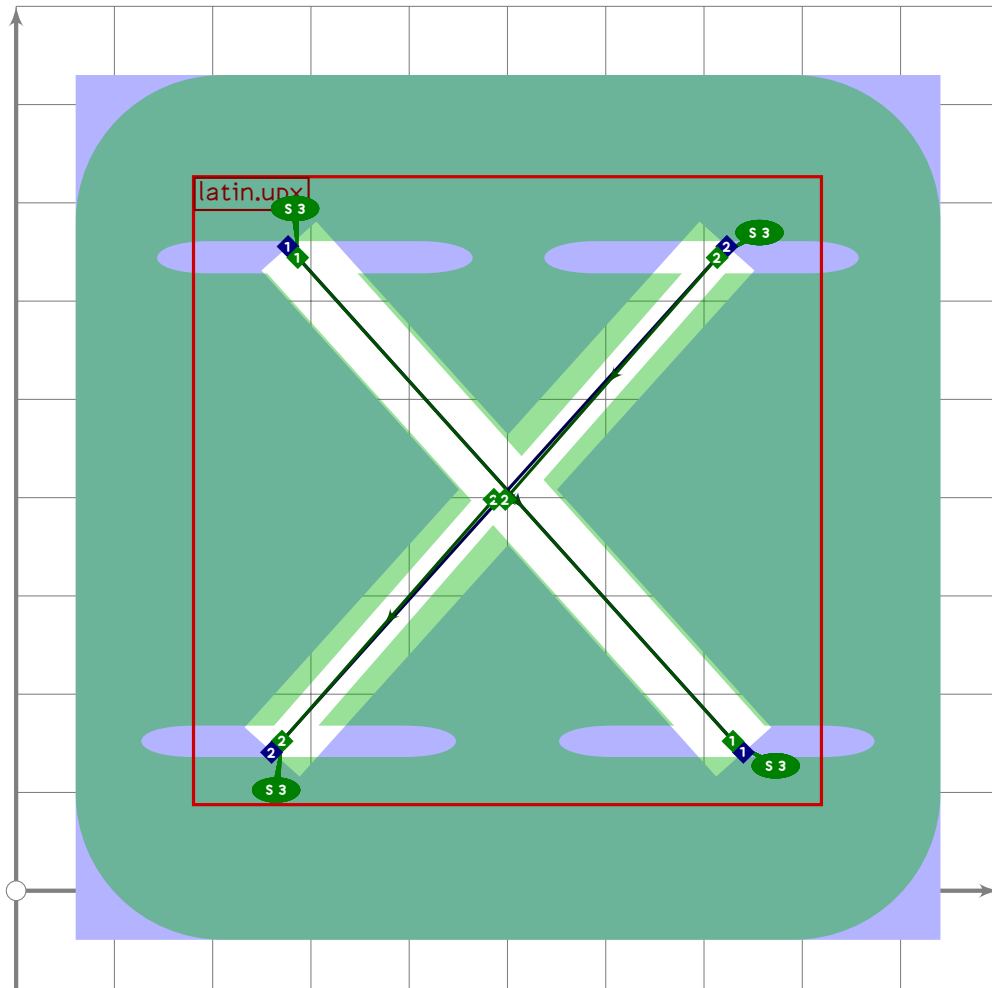
```

```

597 % W
598 % BACKGROUND F1712
599 begint Suglyph("u1F186";134);
600 if do_alteration:
601     tsu_xform(tsu_xf.sletter
602         shifted -centre_pt xscaled 0.95 shifted centre_pt)(tsu_curve.latin.upw);
603 else:
604     tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upw);
605 fi;
606 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i+1; endfor;
607 tsu_render;
608 endtsuglyph;
609

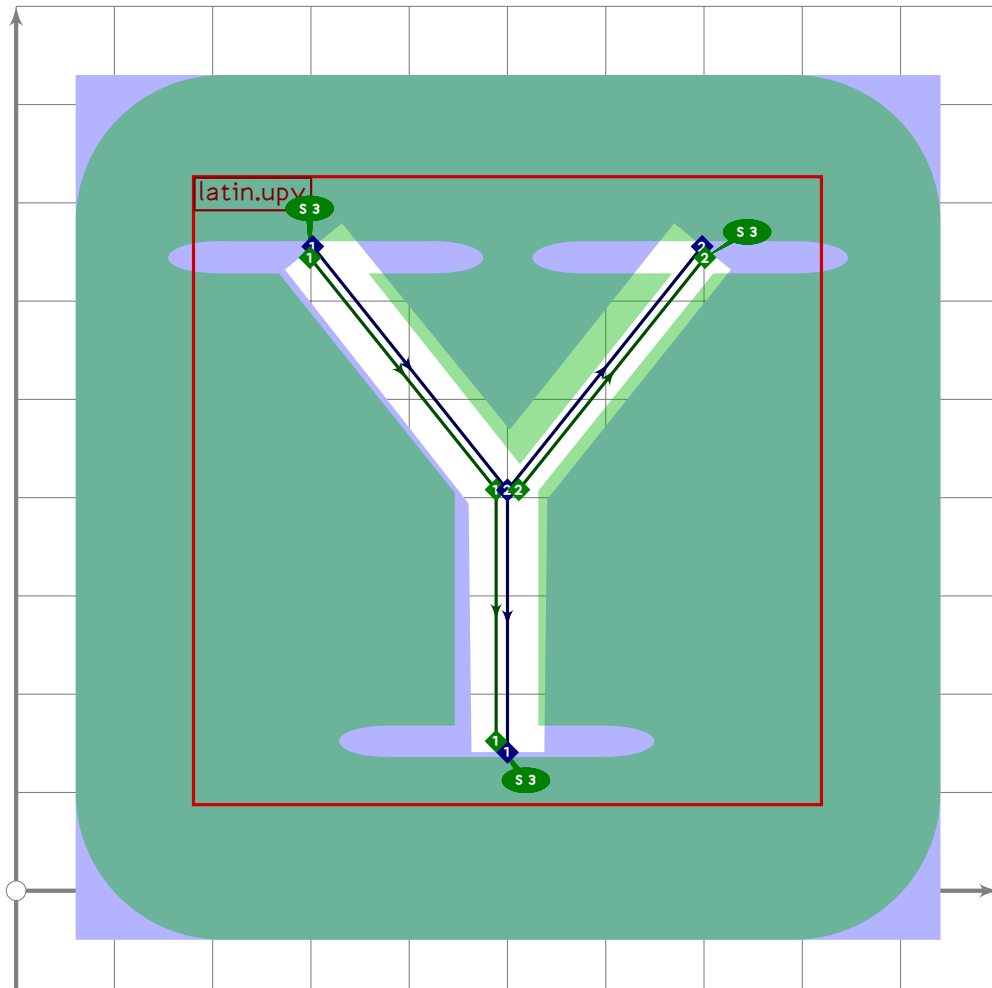
```



```

610 % X
611 % BACKGROUND F1712
612 begint Suglyph("u1F187";135);
613   tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upx);
614   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
615   tsu_render;
616 endtsuglyph;
617

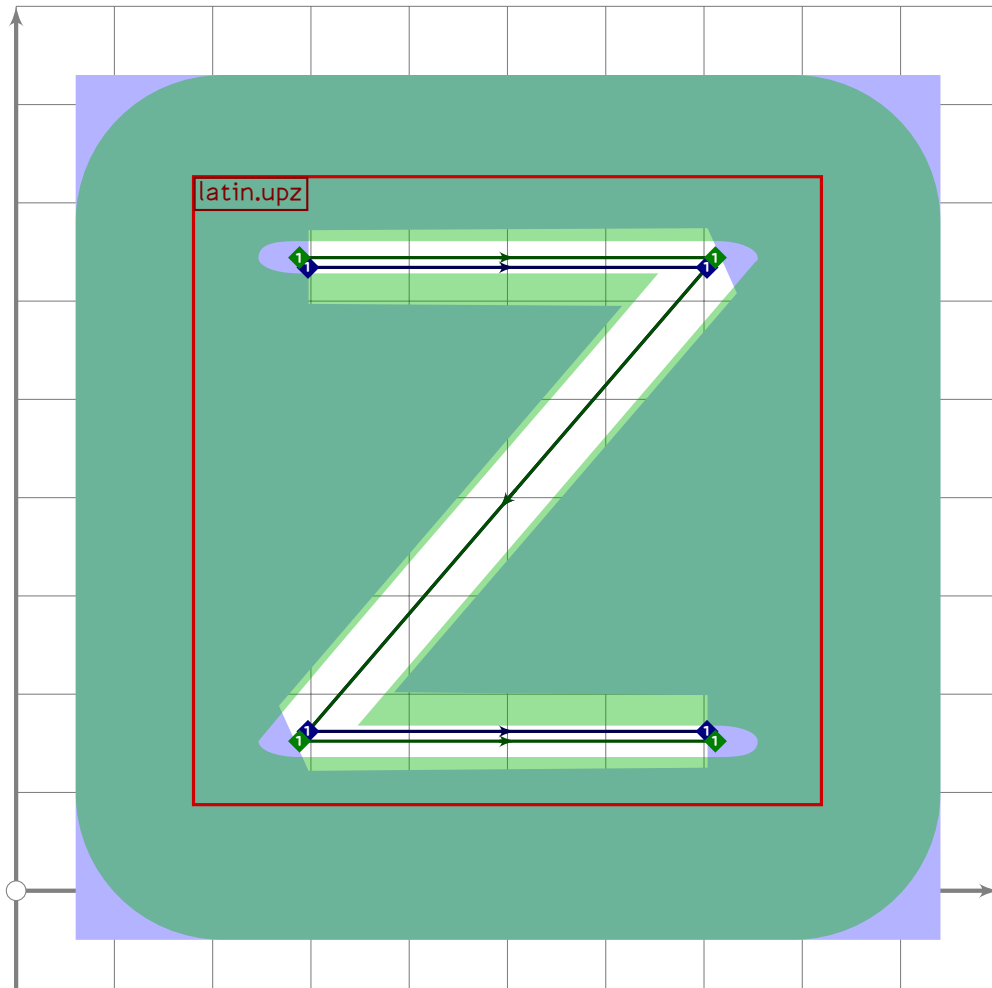
```



```

618 % Y
619 % BACKGROUND F1712
620 begintsuglyph("u1F188",136);
621 tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upy);
622 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
623 tsu_render;
624 endsuglyph;
625

```



```

626 % Z
627 % BACKGROUND F1712
628 begint Suglyph("u1F189";137);
629 tsu_xform(tsu_xf.sletter)(tsu_curve.latin.upz);
630 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
631 tsu_render;
632 endtsuglyph;
633
634
635
636 endfont;
637
638

```

tsuku-f17.mp

```
1 %
2 % Unicode page F17 (Tsukurimashou-specific extensions) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 input latin-intro.mp;
36
37 % AUTODEPS
38 input accent.mp;
39 input buildkanji.mp;
40 input enclosed.mp;
41 input gradeone.mp;
42 input iching.mp;
43 input katakana.mp;
44 input latin.mp;
45 input leftrad.mp;
46
47 

---


48
```

Combining Dots For I Ching

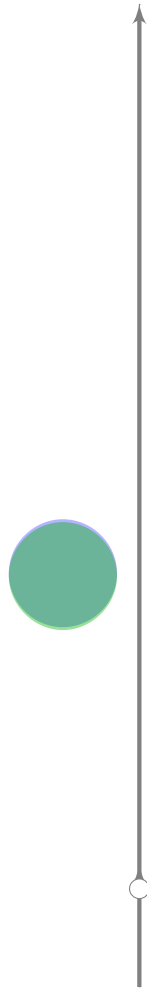
```
49 % COMBINING DOTS FOR I CHING
50
51 % WARNING changing rescale setting
52 tsu_rescale_native_zero;
```



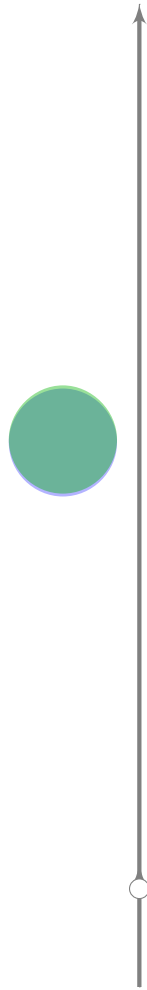
```
53  
54 begintsuglyph("ichingdot1.6";1);  
55 Fill tsu_curve.iching.dot(1,6) shifted (-1000,0);  
56 endsuglyph;
```



```
57  
58 begintsuglyph("ichingdot2.6",2);  
59 Fill tsu_curve.iching.dot(2,6) shifted (-1000,0);  
60 endsuglyph;
```



```
61  
62 begintsuglyph("ichingdot3.6",3);  
63 Fill tsu_curve.iching.dot(3,6) shifted (-1000,0);  
64 endsuglyph;
```

```
65  
66 begintsuglyph("ichingdot4.6",4);  
67 Fill tsu_curve.iching.dot(4,6) shifted (-1000,0);  
68 endsuglyph;
```



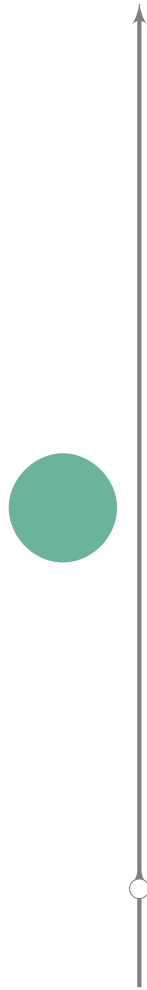
```
69  
70 begintsuglyph("ichingdot5.6",5);  
71 Fill tsu_curve.iching.dot(5,6) shifted (-1000,0);  
72 endsuglyph;
```



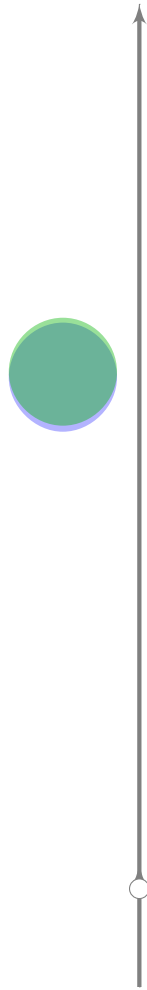
```
73  
74 begintsuglyph("ichingdot6.6",6);  
75 Fill tsu_curve.iching.dot(6,6) shifted (-1000,0);  
76 endsuglyph;
```



```
77  
78 begintsuglyph("ichingdot1.3",7);  
79 Fill tsu_curve.iching.dot(1,3) shifted (-1000,0);  
80 endsuglyph;
```



```
81  
82 begintsuglyph("ichingdot2.3",8);  
83 Fill tsu_curve.iching.dot(2,3) shifted (-1000,0);  
84 endsuglyph;
```



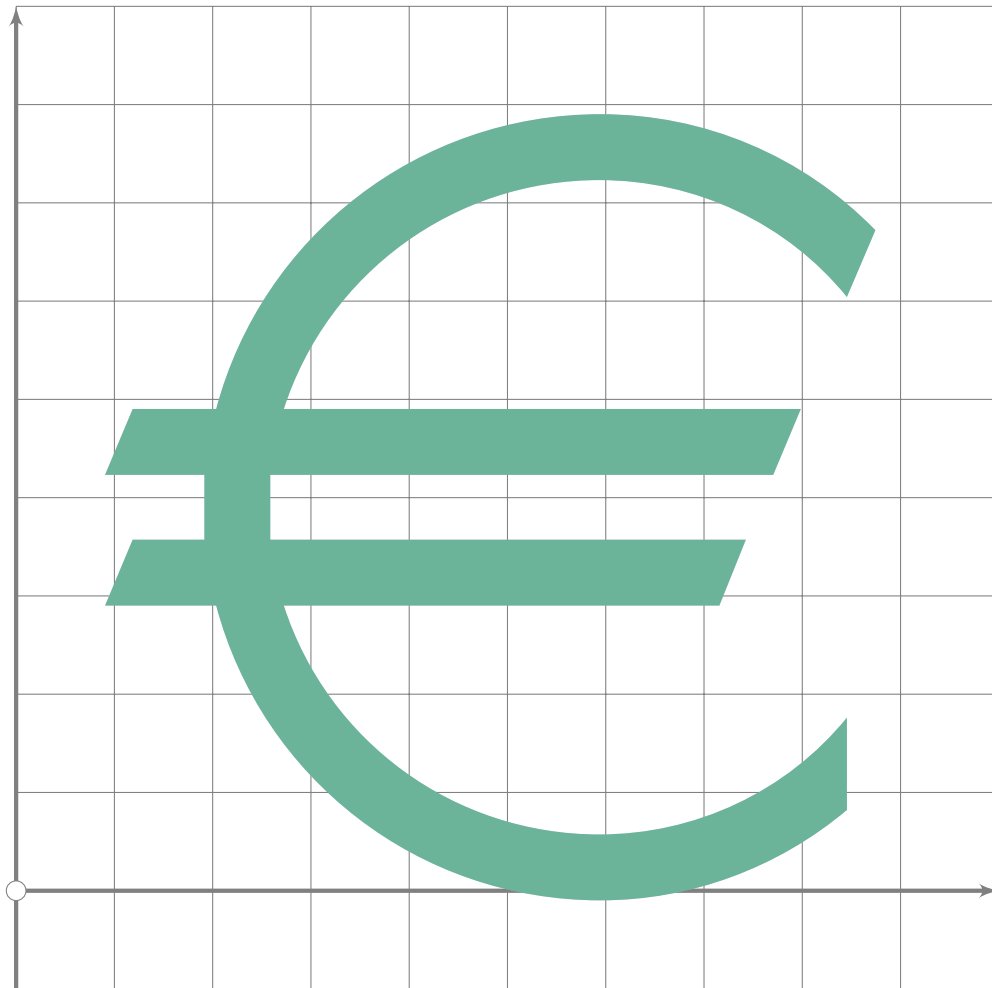
```
85
86 begintsuglyph("ichingdot3.3";9);
87 Fill tsu_curve.iching.dot(3,3) shifted (-1000,0);
88 endsuglyph;
89
90 % WARNING changing rescale setting
91 tsu_rescale_full;
92
93 

---


94
```

Miscellaneous

```
95 % MISCELLANEOUS
```



```

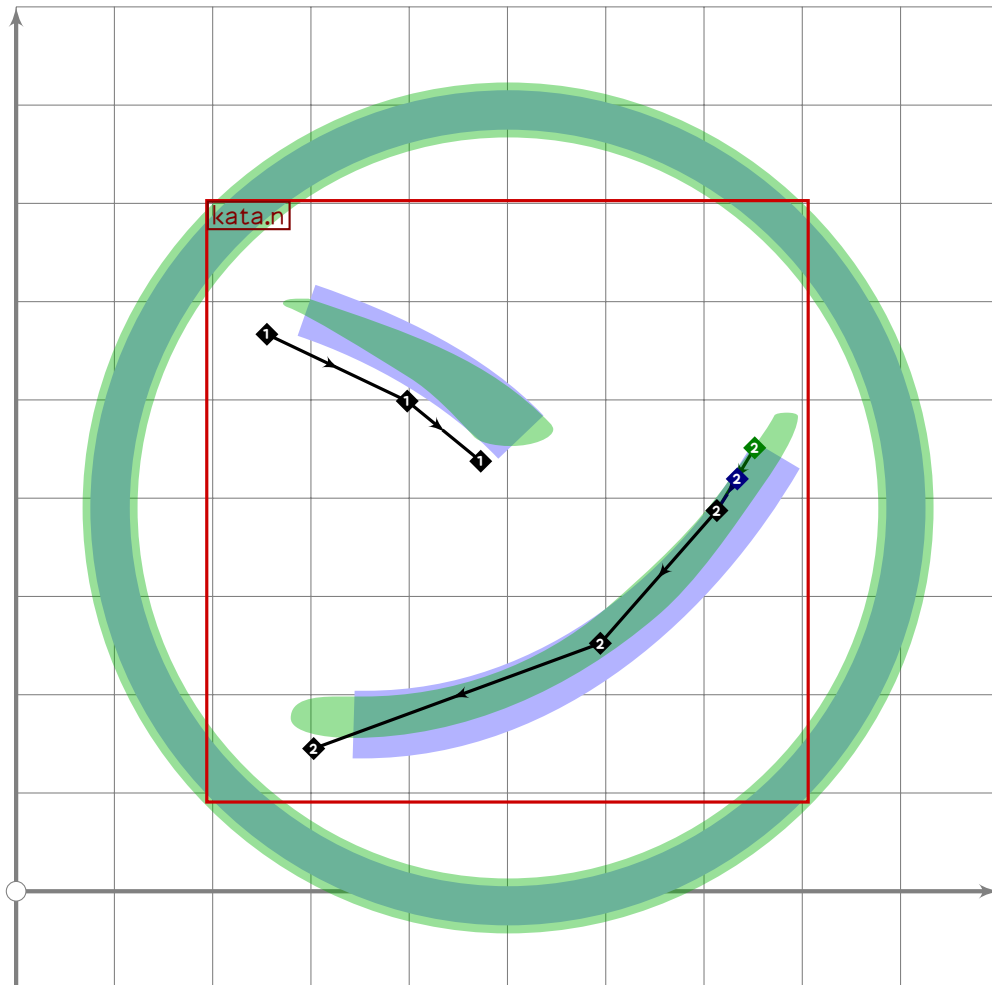
96
97 begintsuglyph("Euro.official",16);
98 z25=(fullcircle scaled 10) intersectionpoint ((0,0)-(10*dir 40));
99 z11=(0;6);
100
101 z1=(0,6);
102 z2=(fullcircle scaled 12) intersectionpoint ((-10,1.5)-(0,1.5));
103 y3=y2;
104 z3-z4=whatever*(z25-z11);
105 z4=(-7.5,0.5);
106 z5=(fullcircle scaled 12) intersectionpoint ((-10,0.5)-(0,0.5));
107 z6=(-6,0);
108 z7=(fullcircle scaled 12) intersectionpoint ((-10,-0.5)-(0,-0.5));
109 y8=y7;
110 z8-z9=whatever*(z25-z11);
111 z9=(-7.5,-1.5);
112 z10=(fullcircle scaled 12) intersectionpoint ((-10,-1.5)-(0,-1.5));
113 z13=(fullcircle scaled 10) intersectionpoint ((0,0)-(10*dir 320));
114 z12=(fullcircle scaled 12) intersectionpoint (z13-(z13*(0;-3)));
115 z14=(0;5);
116 z15=(fullcircle scaled 10) intersectionpoint ((-10,1.5)-(0,1.5));

```

```

117 y16=-1.5;
118 z16=whatever[z11,z25];
119 y17=-0.5;
120 z17=whatever[z11,z25];
121 z18=(fullcircle scaled 10) intersectionpoint ((-10,-0.5)-(0,-0.5));
122 z19=(-5,0);
123 z20=(fullcircle scaled 10) intersectionpoint ((-10,0.5)-(0,0.5));
124 y21=0.5;
125 z21=whatever[z11,z25];
126 y22=1.5;
127 z22=whatever[z11,z25];
128 z23=(fullcircle scaled 10) intersectionpoint ((-10,1.5)-(0,1.5));
129 z24=(0,5);
130 z26=(fullcircle scaled 12) intersectionpoint (z11-1.5[z11,z25]);
131 path euro;
132 euro:=z1..z2-z3-z4-z5..z6..z7-z8-z9-z10..z11..z12-z13..
133   z14..z15-z16-z17-z18..z19..z20-z21-z22-z23..z24..z25-z26..cycle;
134 dangerousFill euro scaled (400/6) shifted (centre_pt*90*right);
135 endtsuglyph;
136

```



```

137 % circled "katakana n"

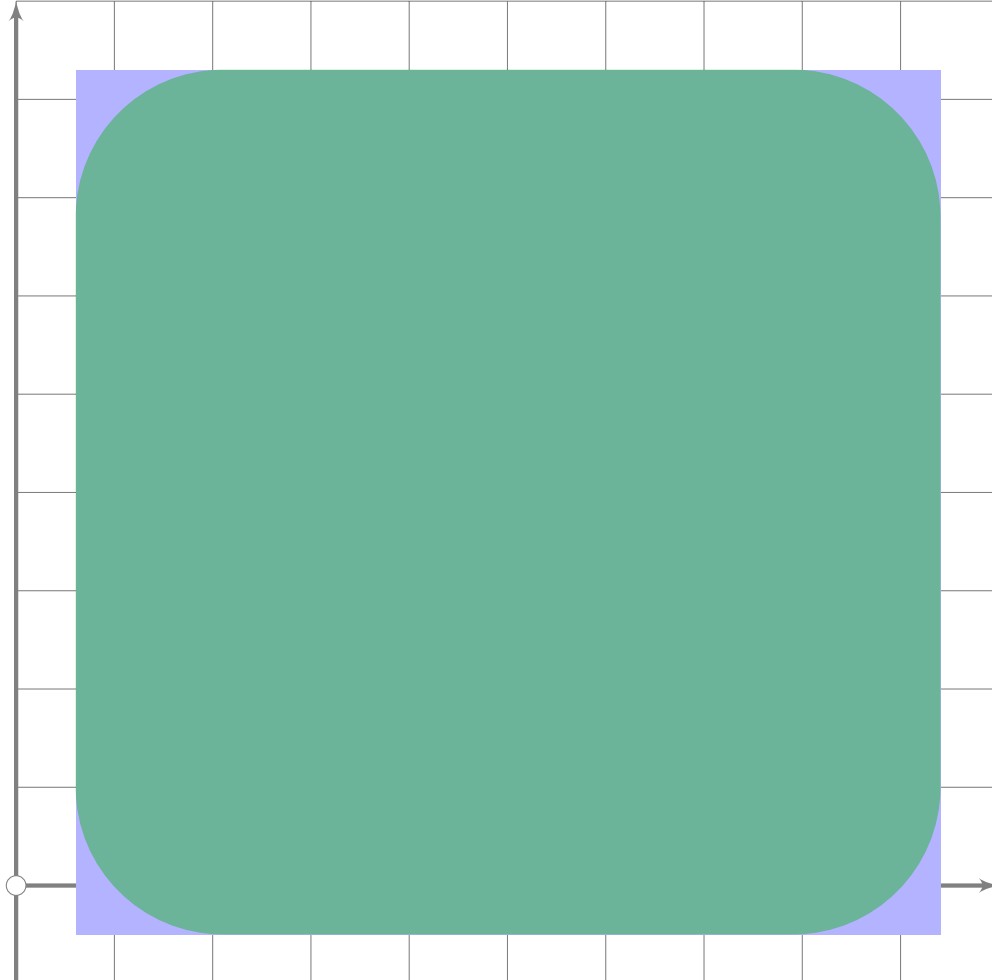
```



```

138 begintsuglyph("uF1711";17);
139 tsu_curve.circle.single;
140 tsu_xform(tsu_xf.circled)(tsu_curve.kata.n);
141 tsu_render_in_circle(tsu_xf.cbound);
142 endsuglyph;
143

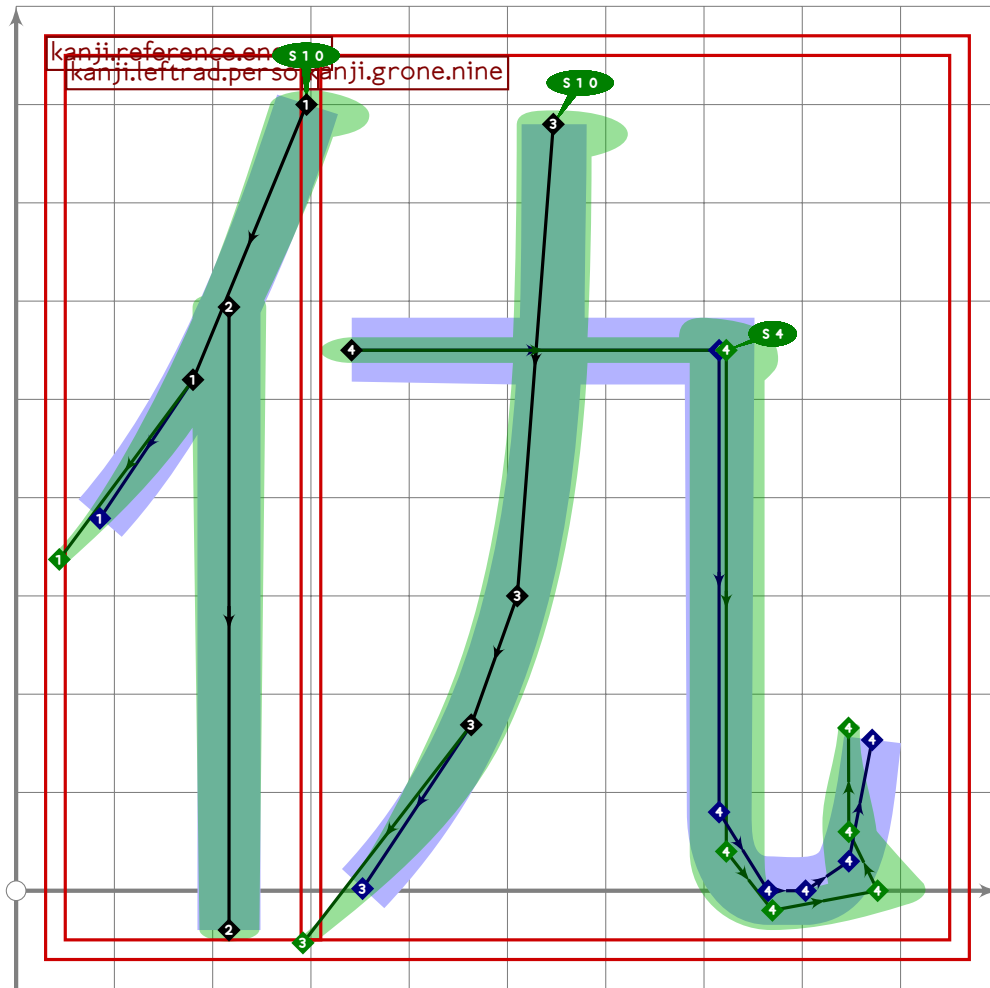
```



```

144 % background for use with enclosed alpha
145 begintsuglyph("squarebackground";18);
146 if sharp_corners:
147     dangerousFill (60,830)-(60,50)-(940,50)-(940,830)-cycle;
148 else:
149     path crnp;
150     crnp:=(60*1.5*tsu_punct_size,830){left}..
151         {down}(60,830-1.5*tsu_punct_size);
152     dangerousFill crnp-
153         (crnp rotatedaround (centre_pt,90))-
154         (crnp rotatedaround (centre_pt,180))-
155         (crnp rotatedaround (centre_pt,270))-cycle;
156 fi;
157 endsuglyph;
158

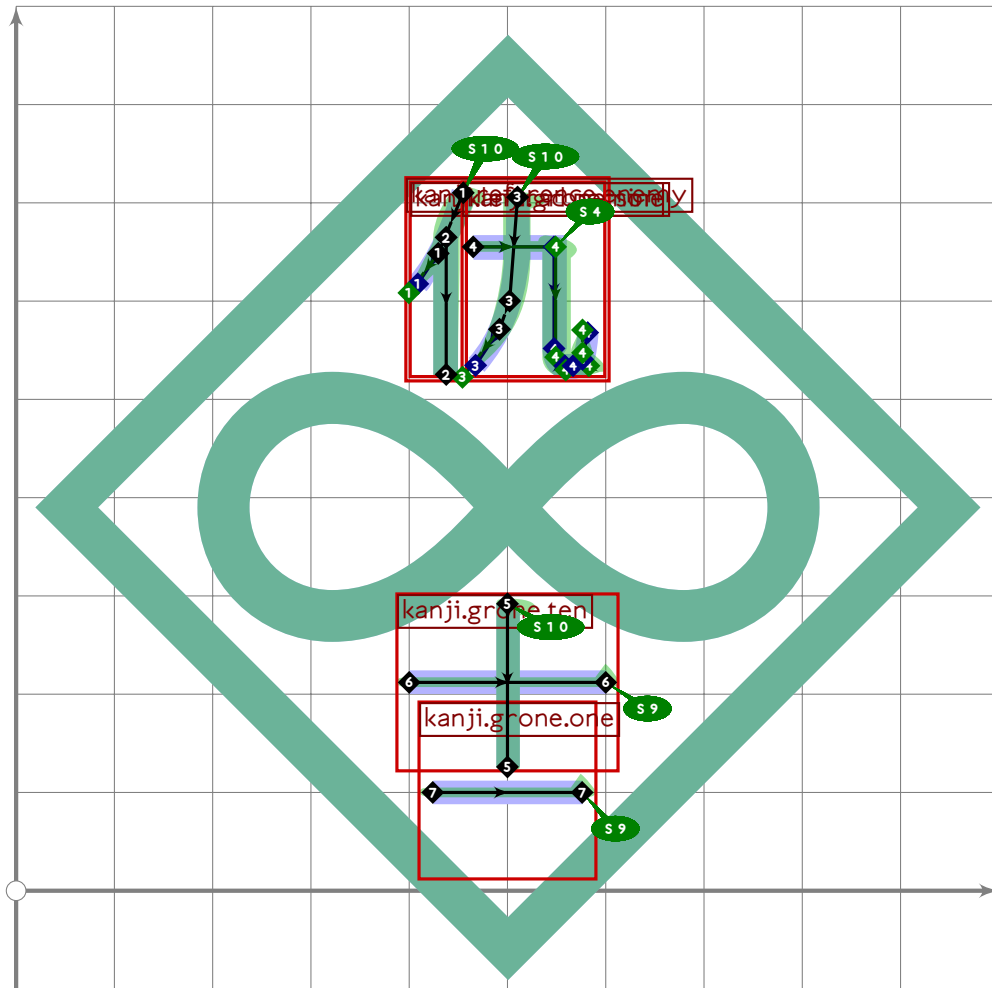
```



```

159 % Individual Eleven
160 vardef tsu_curve.kanji.reference.enemy =
161   push_pbox_toexpand("kanji.reference.enemy");
162   build_kanji.lr(300,20)
163     (tsu_curve.kanji.leftrad.person)
164     (tsu_curve.kanji.grone.nine);
165   expand_pbox;
166 enddef;

```



```

167 begint Suglyph("individualeleven",19);
168 numeric x[],y[];
169 z3=z7=centre_pt;
170 z3-z1=z5-z3;
171 z3-z2=z4-z3;
172 z3-z8=z6-z3;
173 y1=y3;
174 y2=y6;
175 x2=x8;
176 y2-y1=x2-x1;
177 x3-x1=290;
178 x2-x1=111;
179 save default_nib;
180 path default_nib;
181 path iepa,iepb;
182 default_nib:=fix_nib(53,53,0);
183 pen_stroke(z1{up}..z2{right}..z3..z4{right}..{up}z5)(iepa);
184 dangerousFill iepa;
185 % do this in between the halves of the infinity, to work around a bug
186 dangerousFill unitsquare shifted (-0.5,-0.5) scaled 680
187 rotated 45 shifted centre_pt;

```

```

188 dangerousFill reverse unitsquare shifted (-0.5,-0.5) scaled 590
189   rotated 45 shifted centre_pt;
190 pen_stroke()(z5{up}..z6{left}..z7..z8{left}..{up}z1)(iepb);
191 dangerousFill iepb;
192 build_kanji.sscale(scaled 0.22 shifted (0,230))
193   (tsu_curve.kanji.reference.enemy);
194 build_kanji.sscale(xyscaled (0.25,0.20) shifted (0,180))
195   (tsu_curve.kanji.grone.ten);
196 build_kanji.sscale(scaled 0.20 shifted (0,-290))
197   (tsu_curve.kanji.grone.one);
198 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,35); i:=i-1; endfor;
199 tsu_render;
200 endtsuglyph;
201
202
203

```

Tomoe Ornaments

```

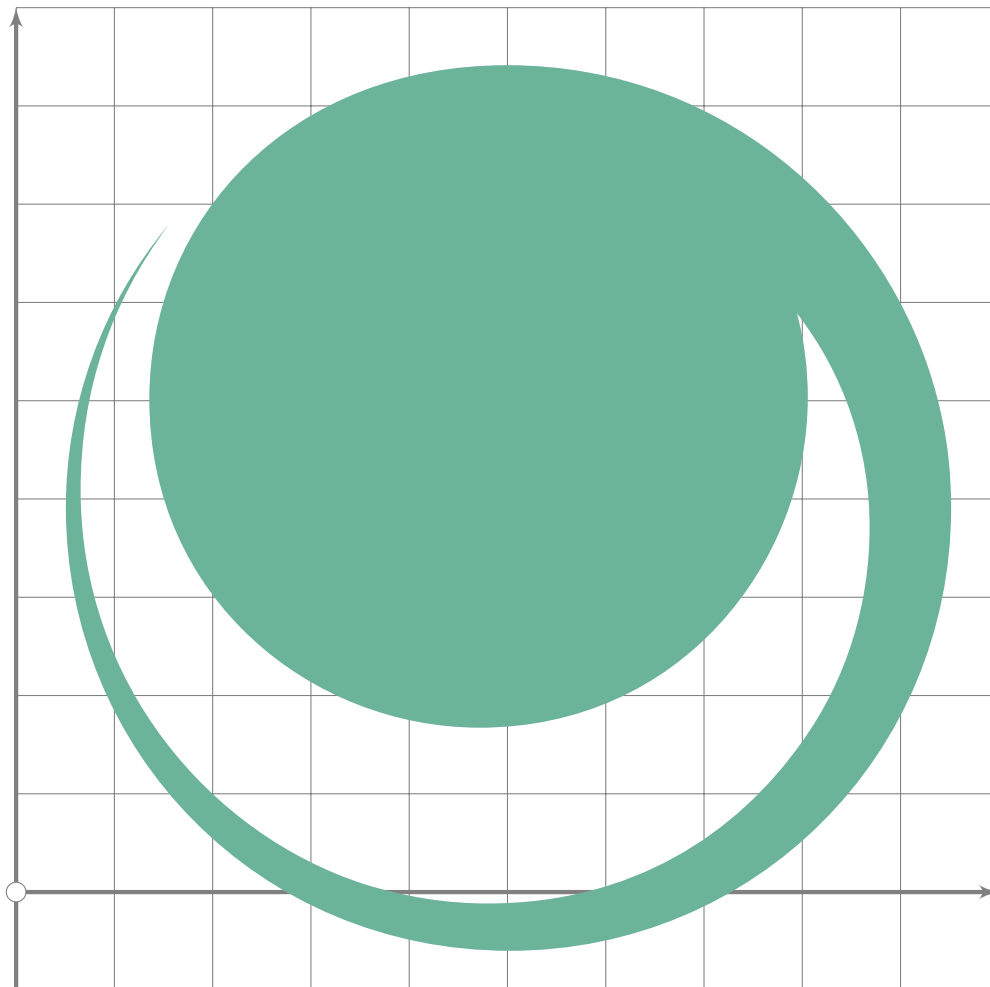
204 % TOMOE ORNAMENTS
205
206 vardef spiral_interpolate(expr start_cart,end_cart,ckpts,loops) =
207   begingroup
208     pair start_pol,end_pol,inter_pol;
209
210     start_pol:=(abs(start_cart),angle(start_cart));
211     end_pol:=(abs(end_cart),angle(end_cart));
212     if (ypart start_pol)-(ypart end_pol)>180:
213       start_pol:=start_pol*(0,360);
214     fi;
215     if (ypart end_pol)-(ypart start_pol)>180:
216       end_pol:=end_pol*(0,360);
217     fi;
218     end_pol:=end_pol*(0,360*loops);
219     for i=1 upto ckpts:
220       begingroup
221         inter_pol:=(i/(ckpts*1))[start_pol,end_pol];
222         ((dir ypart inter_pol)*xpart inter_pol)
223       endgroup
224       if i<ckpts: .. fi
225     endfor
226   endgroup
227 enddef;
228
229 vardef make_tomoe(expr k,ir,or,hr,phase,
230   tail_start,tail_advance,ckpts,do_flip) =
231   begingroup
232     path tomoe;

```

```

233 pair tail_tip;
234
235 loops:=if k=1: 1 else: 0 fi;
236 tail_tip:=(dir (tail_advance-360/k))*or;
237 tomoe:=(subpath (tail_start/90,3) of (right..up..left..down..cycle))
238   scaled hr shifted (ir*hr,0);
239 tomoe:=tomoe{curl 1}..
240   spiral_interpolate(point infinity of tomoe,tail_tip,ckpts,-loops)..
241   {curl 1}tail_tip{curl 1}..
242   spiral_interpolate(tail_tip,point 0 of tomoe,ckpts,loops)..cycle;
243
244 if do_flip: tomoe:=tomoe xscaled -1; fi;
245
246 for i=1 upto k:
247   dangerousFill tomoe rotated (phase*i*360/k) shifted centre_pt;
248 endfor;
249 endgroup;
250 enddef;
251

```

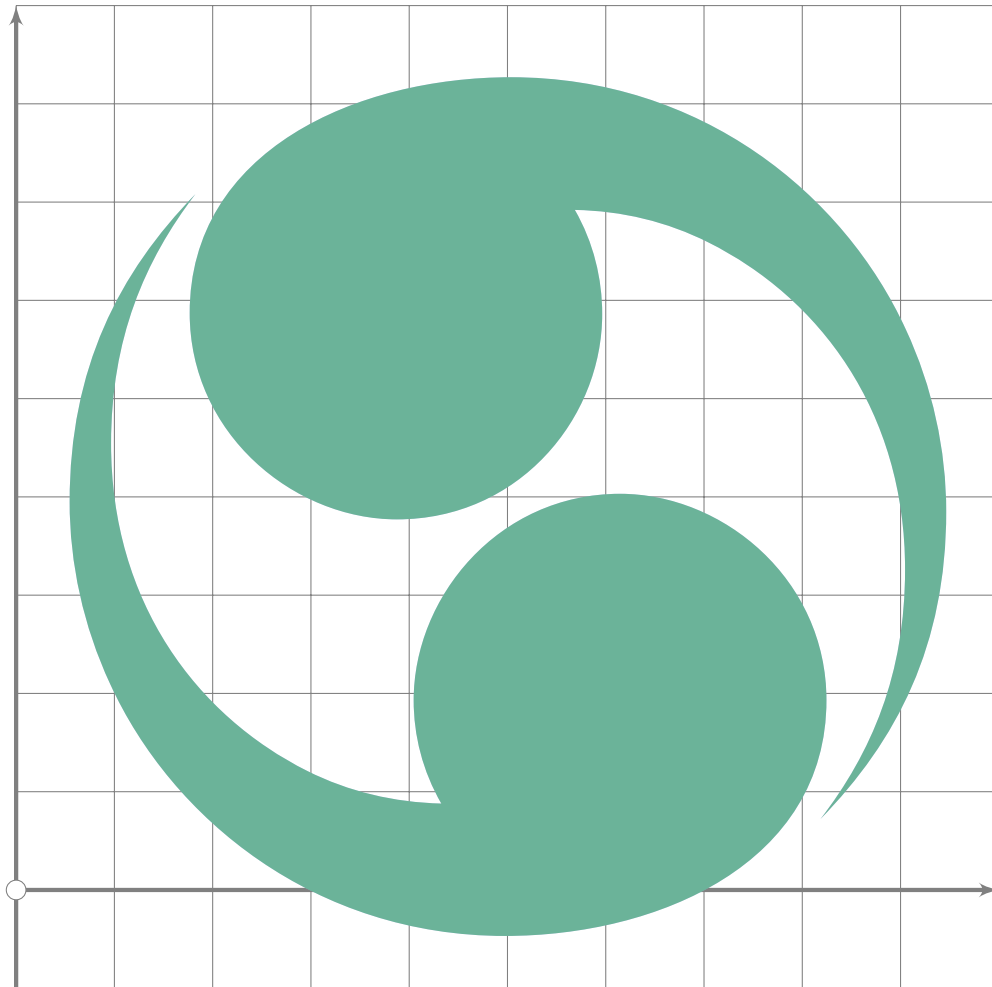


```

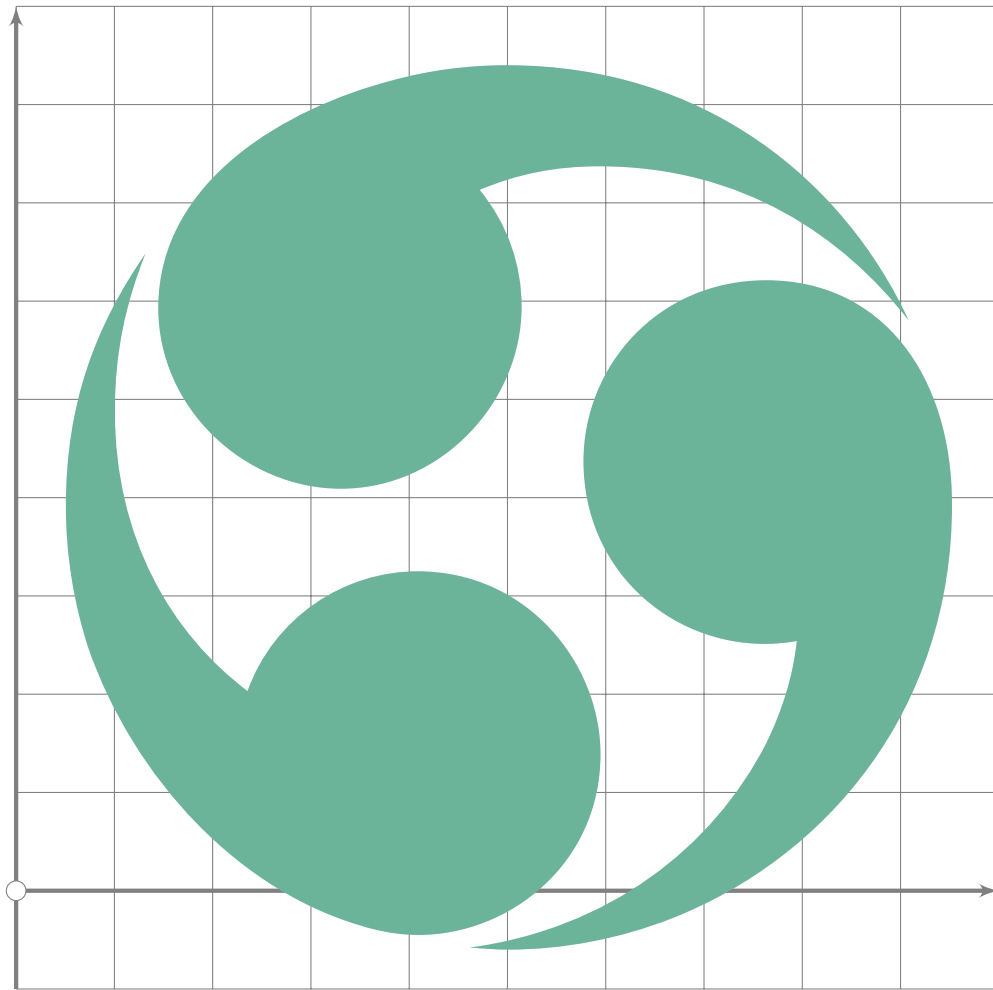
252 % hitotsudomoe ornament
253 begintsuglyph("tomoel",49);

```

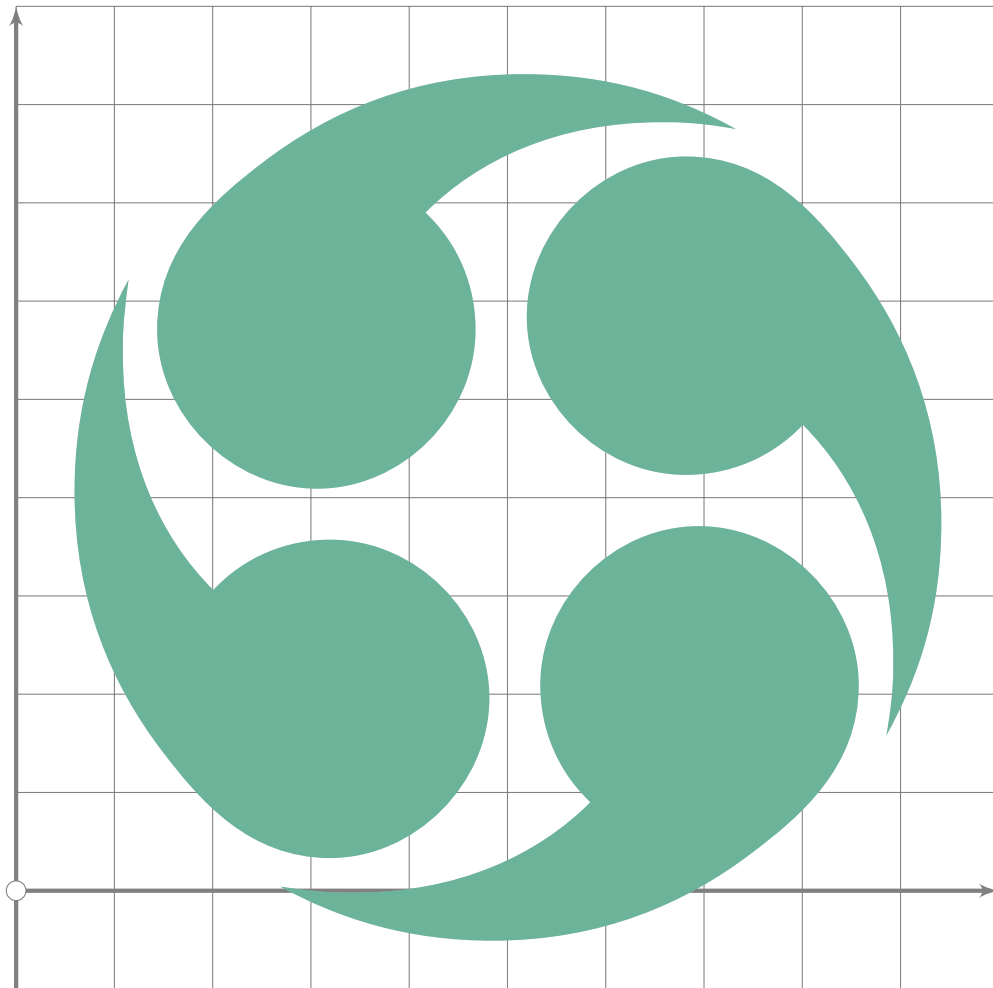
```
254 make_tomoe(1,-219,450,335,105,0,35,6,false);  
255 endsuglyph;  
256
```



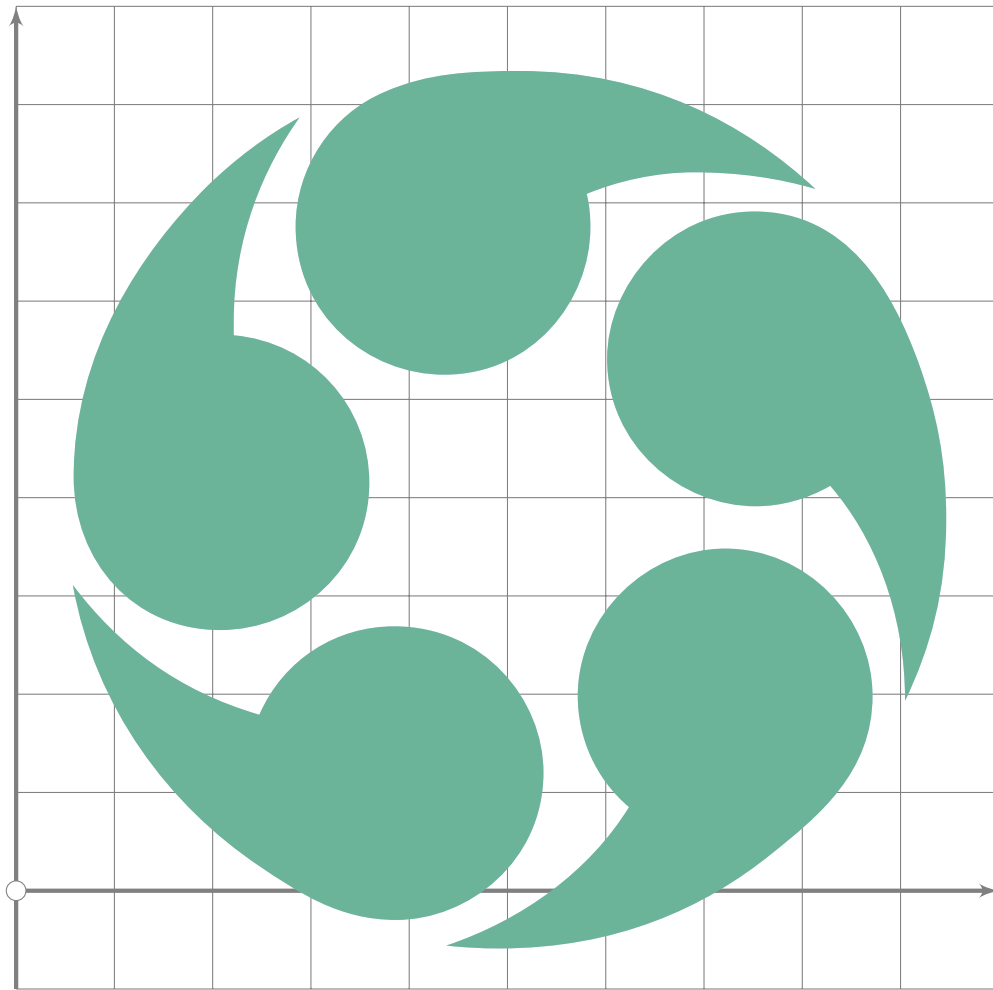
```
257 % futatsudomoe ornament  
258 beginsuglyph("tomoe2",50);  
259 make_tomoe(2,17,450,210,120,15,15,4,false);  
260 endsuglyph;  
261
```



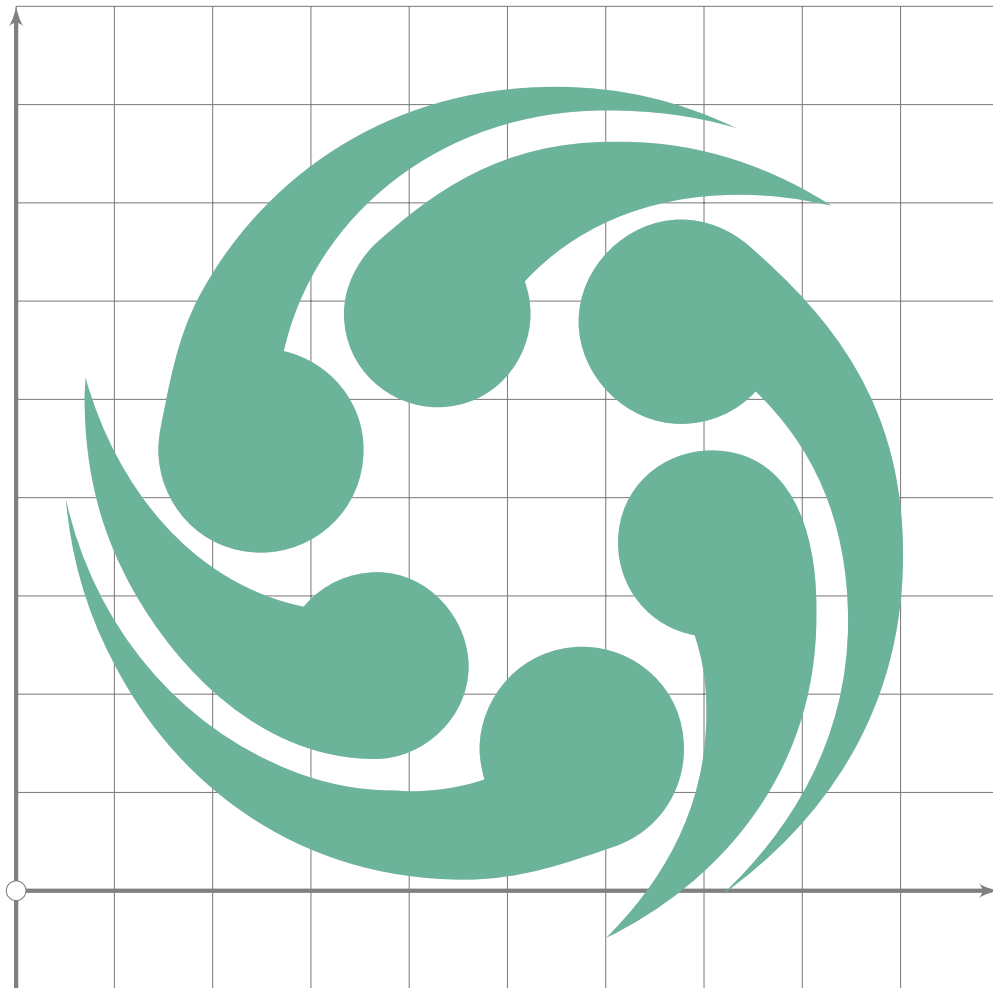
```
262 % mitsudomoe ornament
263 begintsuglyph("tomoe3",51);
264 make_tomoe(3,81,450,185,130,5,15,3,false);
265 endsuglyph;
266
```



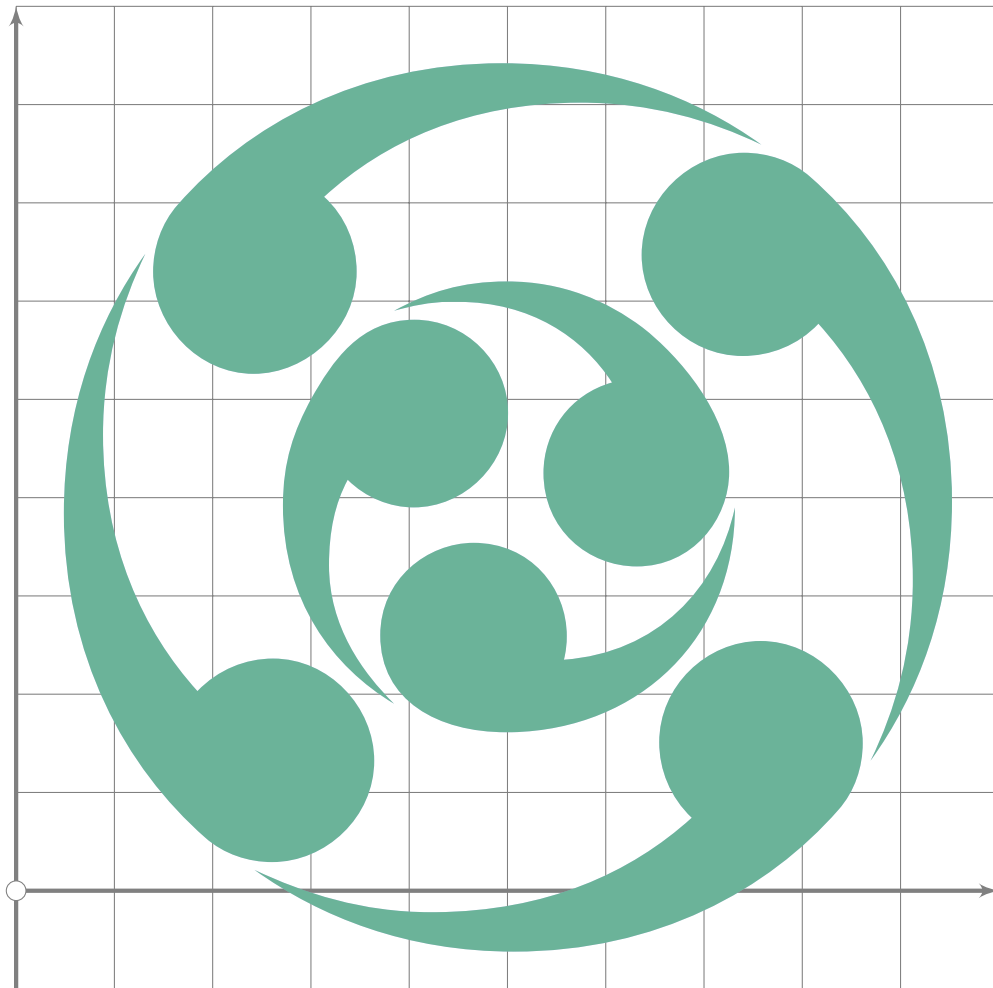
```
267 % yotsudomoe ornament
268 begintsuglyph("tomoe4",52);
269 make_tomoe(4,104,450,162,47,12,12,4,false);
270 endsuglyph;
271
```

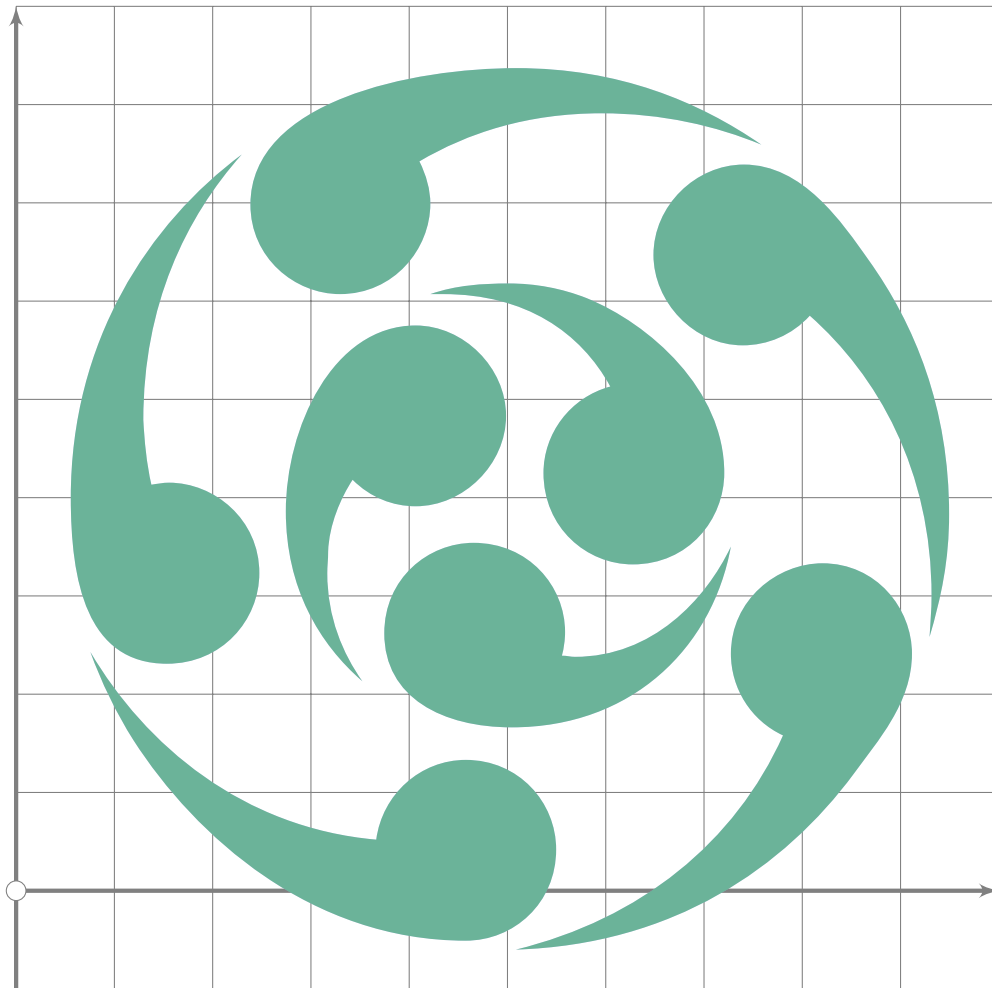
```
272 % 5-tsumomoe ornament
273 begintsuglyph("tomoe5",53);
274 make_tomoe(5,143,450,150,31,10,15,3,false);
275 endsuglyph;
276
```



```
277 % 6-tsudomoe ornament
278 begintsuglyph("tomoe6",54);
279 make_tomoe(3,154,450,104,47,2,12,4,false);
280 make_tomoe(3,115,450,95,110,22,53,4,false);
281 endsuglyph;
282
```



```
283 % 7-tsudomoe ornament
284 begintsuglyph("tomoe7",55);
285 make_tomoe(4,248,450,104,47,2,8,4,false);
286 make_tomoe(3,40,231,95,75,15,15,4,true);
287 endsuglyph;
288
```



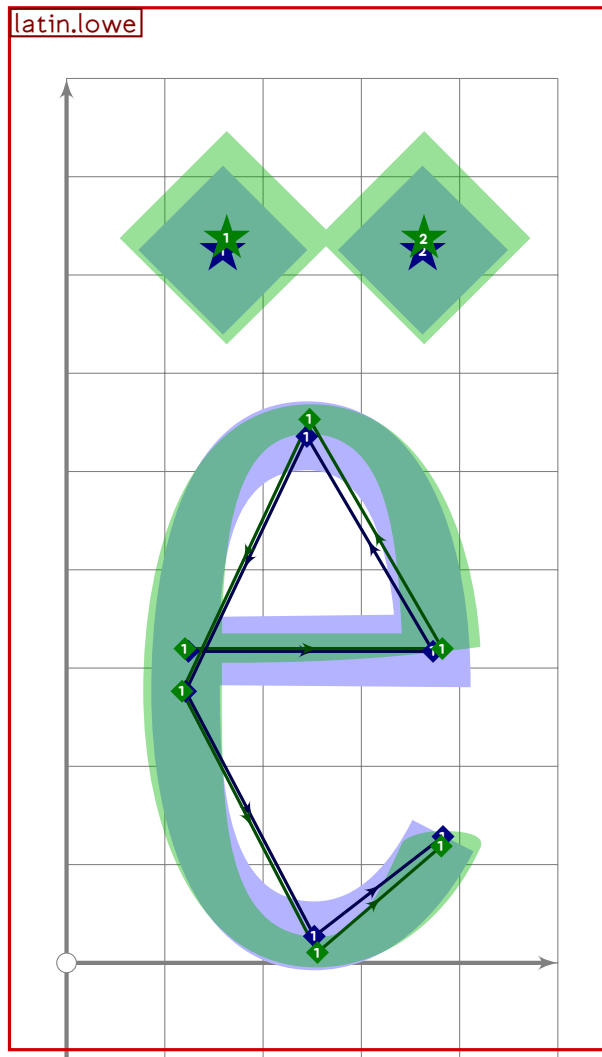
```
289 % 8-tsudomoe ornament
290 begintsuglyph("tomoe8",56);
291 make_tomoe(5,260,450,92,47,2,8,4,false);
292 make_tomoe(3,40,231,92,75,15,25,4,true);
293 endtsuglyph;
294
295 

---


296
```

Heavy Metal Umlaut

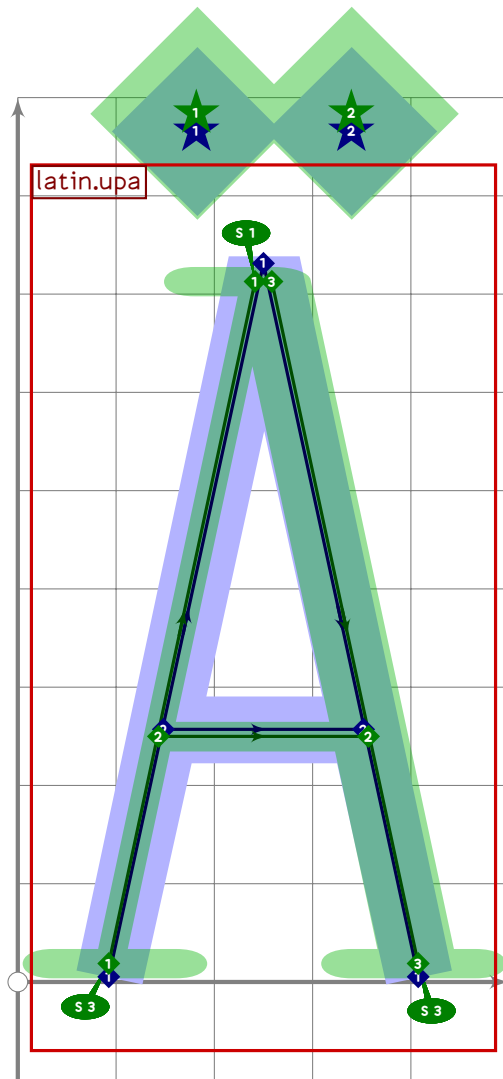
```
297 % HEAVY METAL UMLAUT
298
299 % WARNING, setting rescale
300 tsu_rescale_half;
301
```



```

302 % naked heavy metal umlaut (use an invisible e to get spacing right)
303 begintsuglyph("dieresis.hmu",64);
304 tsu_accent.heavy_metal_umlaut(tsu_curve.latin.lowe);
305 bo_size:=0;
306 tsu_render;
307 endsuglyph;
308

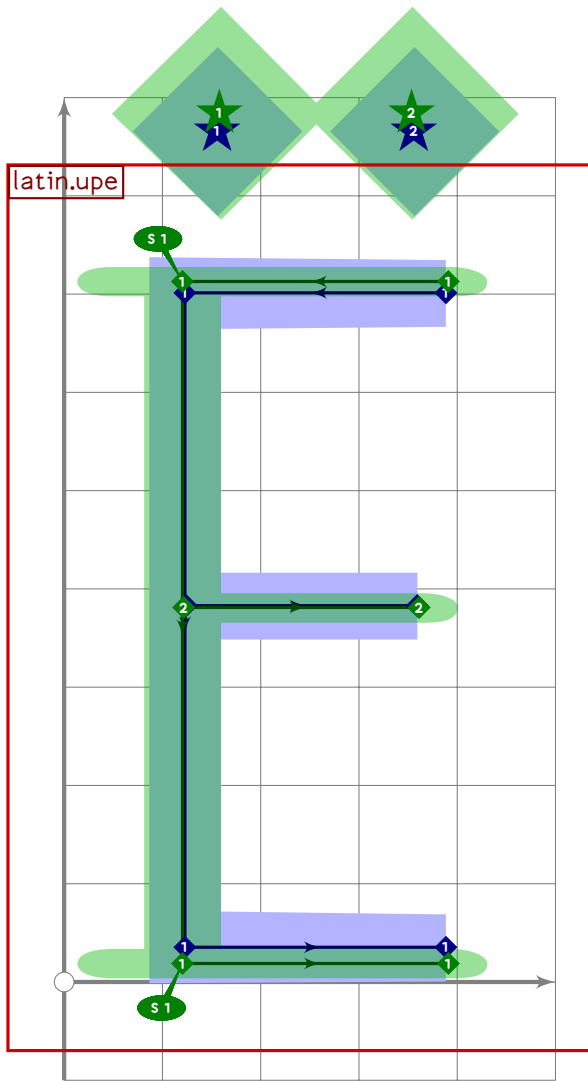
```



```

309 % A with heavy metal umlaut
310 begint Suglyph("Adieresis.hmu",65);
311   tsu_accent.capital(heavy_metal_umlaut)(tsu_curve.latin.upa);
312   tsu_render;
313 endsuglyph;
314

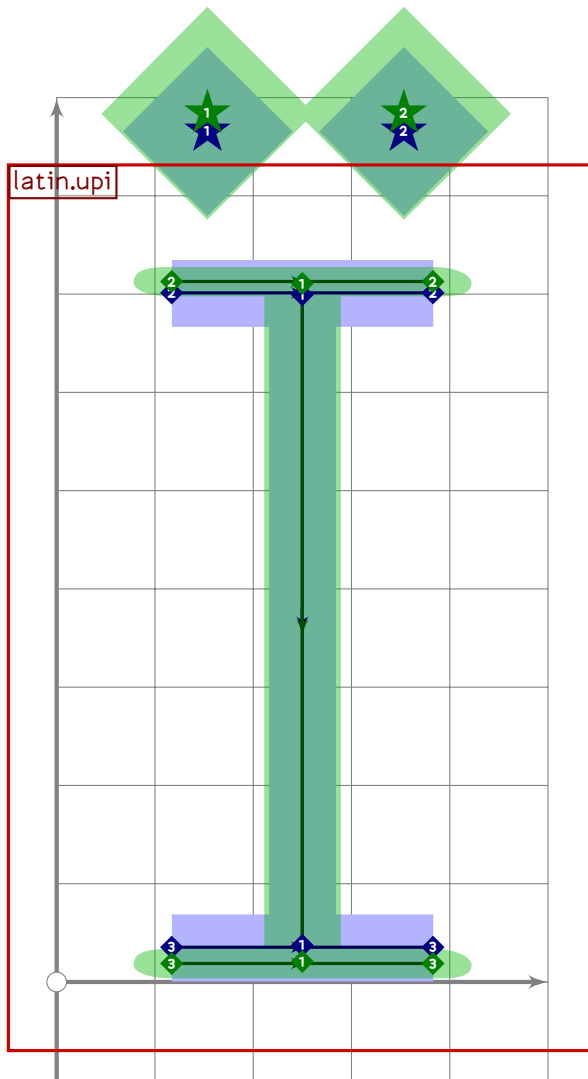
```



```

315 % E with heavy metal umlaut
316 begintsuglyph("Edieresis.hmu",66);
317 tsu_accent.capital(heavy_metal_umlaut)(tsu_curve.latin.upe);
318 tsu_render;
319 endsuglyph;
320

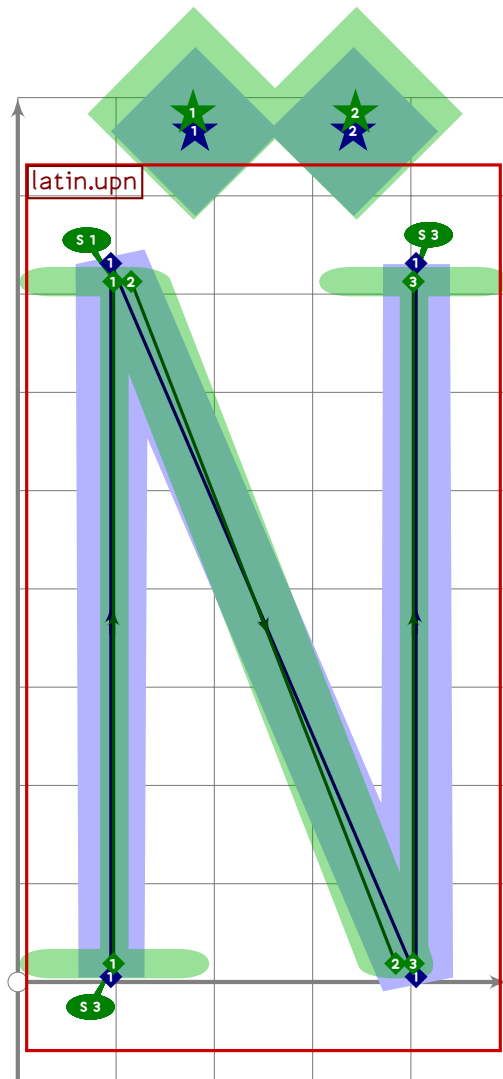
```



```

321 % I with heavy metal umlaut
322 begintsuglyph("Idieresis.hmu",67);
323 tsu_accent.capital(heavy_metal_umlaut)(tsu_curve.latin.upi);
324 replace_lcblob(-1)(oldblob shifted (-15,0));
325 replace_lcblob(0)(oldblob shifted (-15,0));
326 tsu_render;
327 endsuglyph;
328

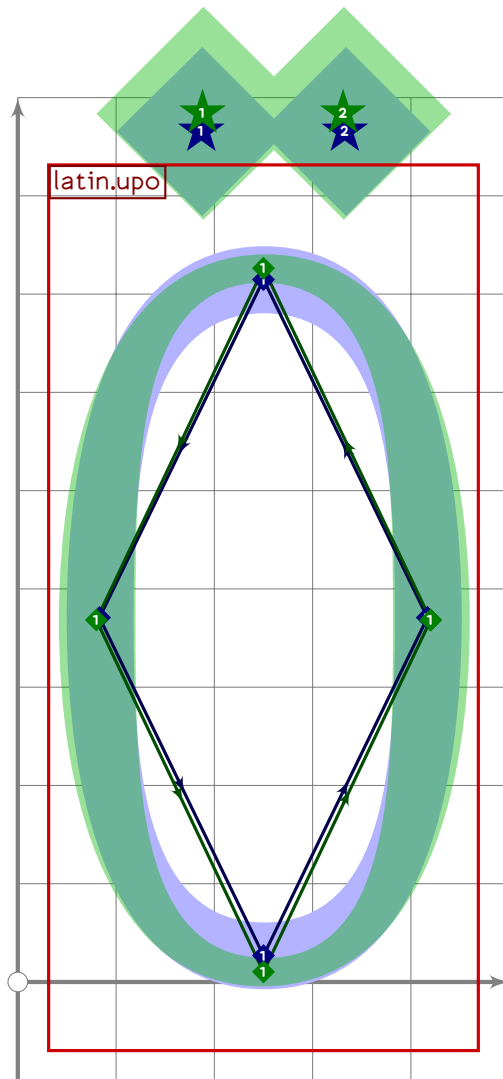
```

```

329 % N with heavy metal umlaut
330 beginsuglyph("Ndieresis.hmu",68);
331 tsu_accent.capital(heavy_metal_umlaut)(tsu_curve.latin.upn);
332 tsu_render;
333 endsuglyph;
334

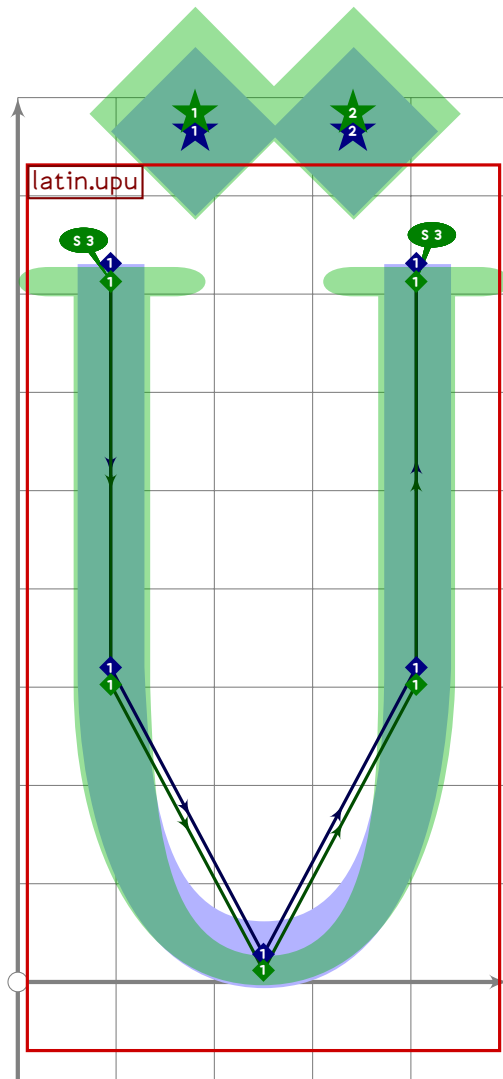
```



```

335 % O with heavy metal umlaut
336 begintsuglyph("Odieresis.hmu",69);
337 tsu_accent.capital(heavy_metal_umlaut)(tsu_curve.latin.upo);
338 tsu_render;
339 endsuglyph;
340

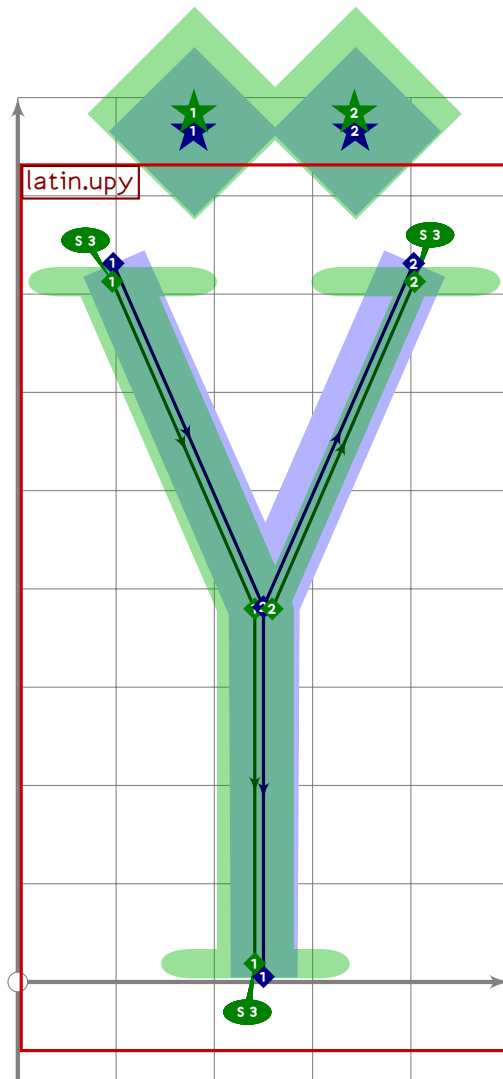
```



```

341 % U with heavy metal umlaut
342 begint Suglyph("Udieresis.hmu",70);
343   tsu_accent.capital(heavy_metal_umlaut)(tsu_curve.latin.upu);
344   tsu_render;
345 endsuglyph;
346

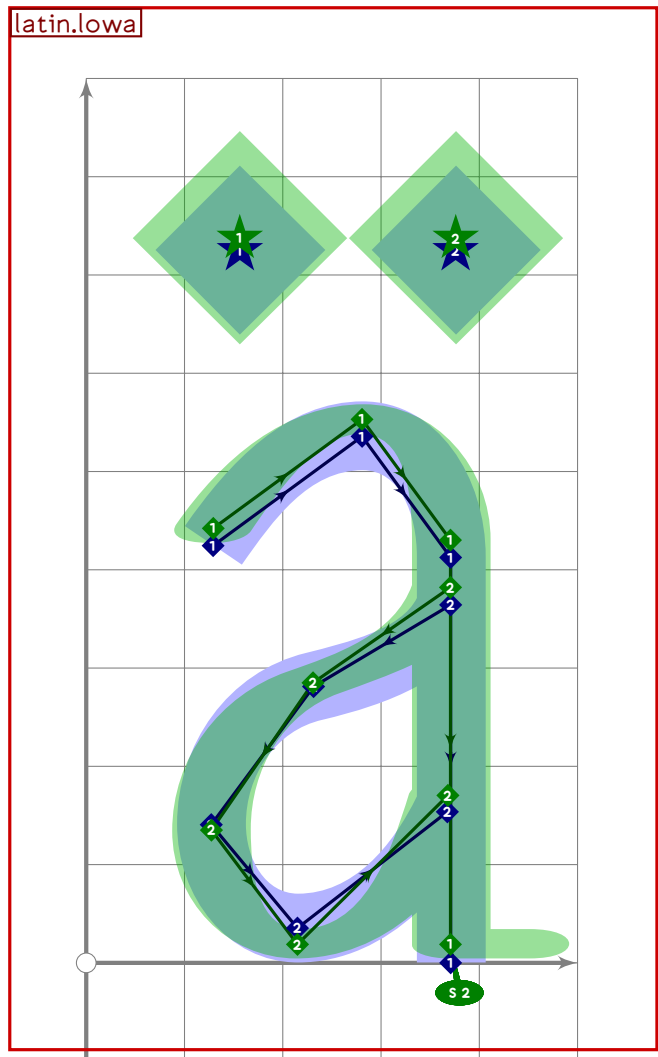
```



```

347 % Y with heavy metal umlaut
348 begintsuglyph("Ydieresis.hmu",71);
349 tsu_accent.capital(heavy_metal_umlaut)(tsu_curve.latin.upy);
350 tsu_render;
351 endsuglyph;
352

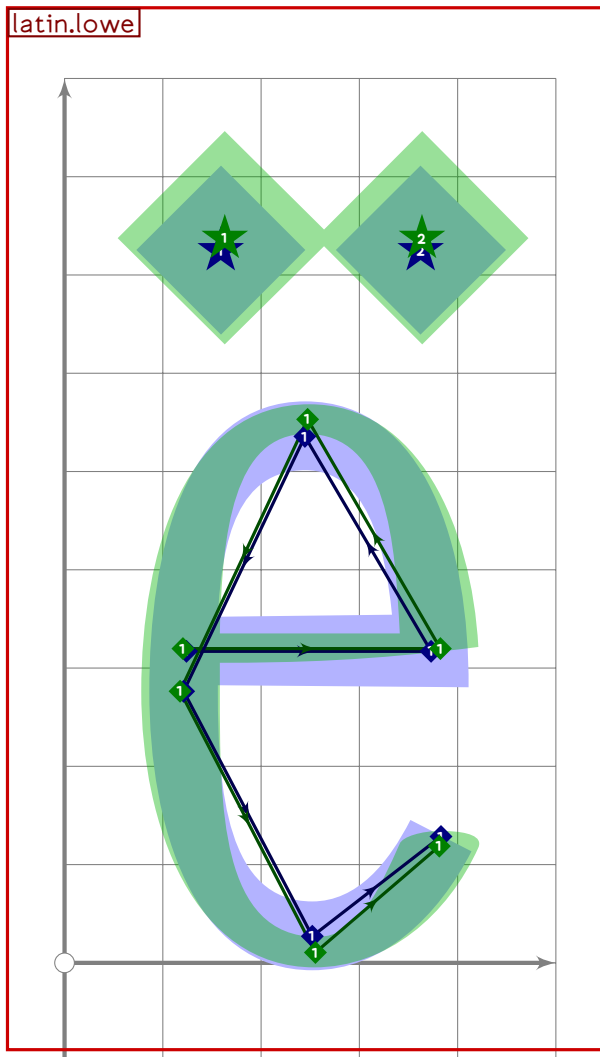
```



```

353 % a with heavy metal umlaut
354 beginsuglyph("adieresis.hmu",72);
355   tsu_accent.heavy_metal_umlaut(tsu_curve.latin.lowa);
356   tsu_render;
357 endsuglyph;
358

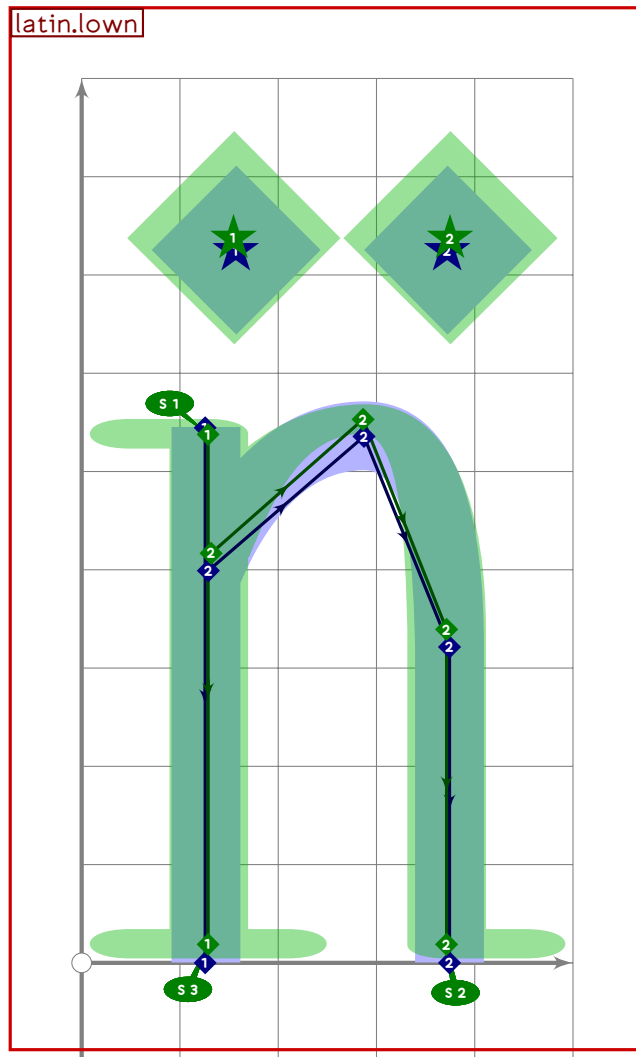
```



```

359 % e with heavy metal umlaut
360 begintsuglyph("edieresis.hmu",73);
361   tsu_accent.heavy_metal_umlaut(tsu_curve.latin.lowe);
362   tsu_render;
363 endsuglyph;
364

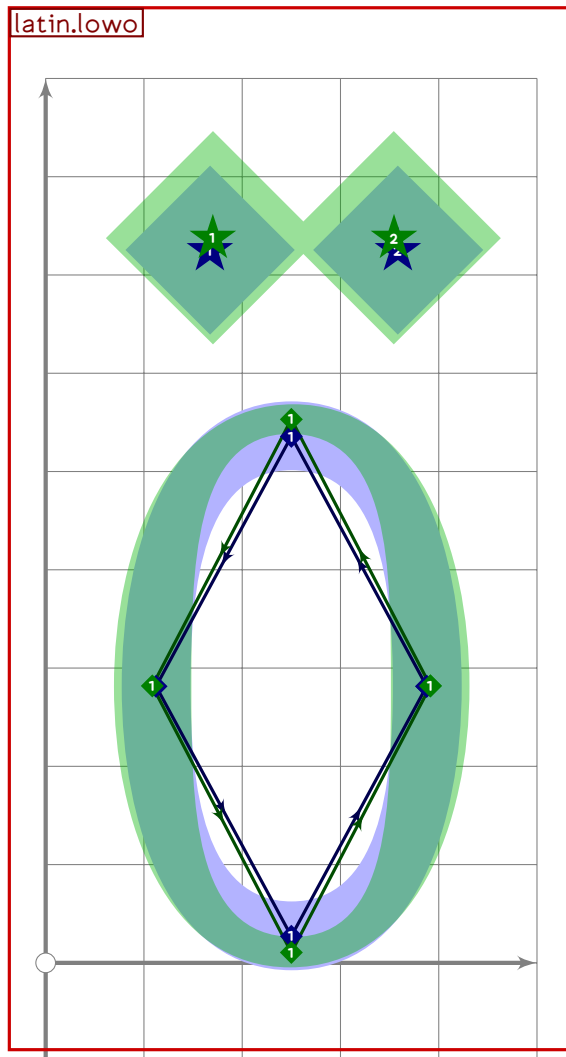
```

```

377 % n with heavy metal umlaut
378 begintsuglyph("ndieresis.hmu";75);
379 tsu_accent.heavy_metal_umlaut(tsu_curve.latin.lown);
380 tsu_render;
381 endsuglyph;
382

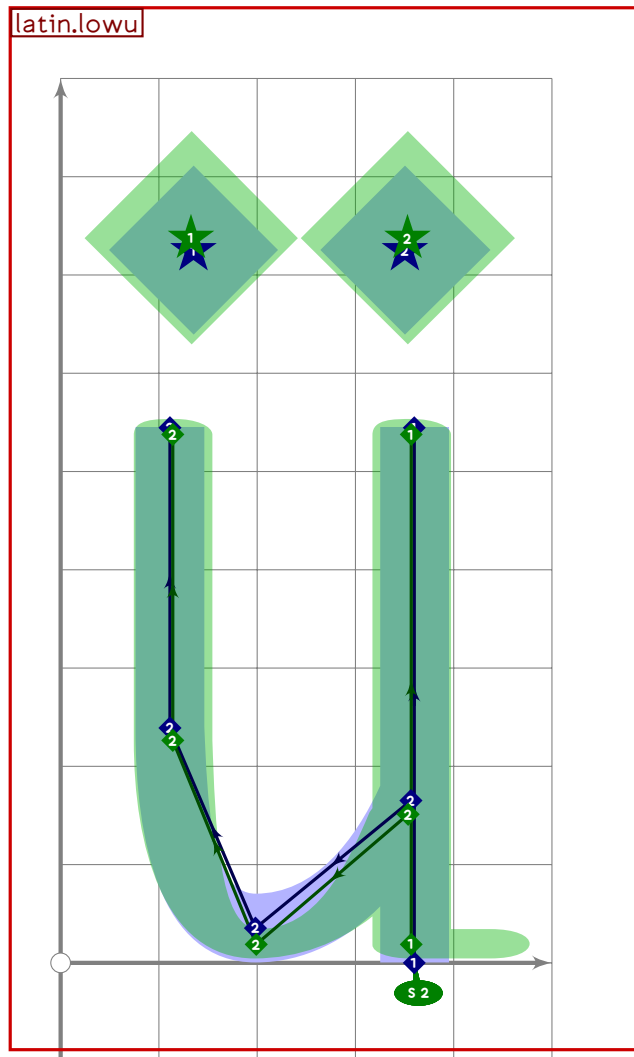
```

```

383 % o with heavy metal umlaut
384 beginsuglyph("odieresis.hmu";76);
385   tsu_accent.heavy_metal_umlaut(tsu_curve.latin.low);
386   tsu_render;
387 endsuglyph;
388

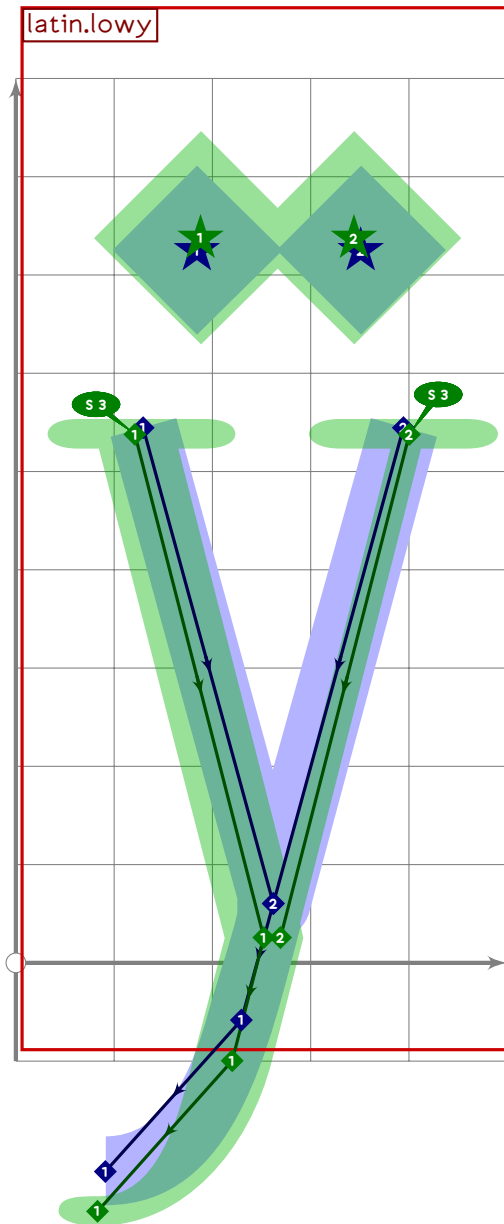
```



```

389 % u with heavy metal umlaut
390 begint Suglyph("udieresis.hmu",77);
391   tsu_accent.heavy_metal_umlaut(tsu_curve.latin.lowu);
392   replace_lcblob(-1)(oldblob shifted (-60,0));
393   replace_lcblob(0)(oldblob shifted (-60,0));
394   tsu_render;
395 endtsuglyph;
396

```



```

397 % y with heavy metal umlaut
398 begint Suglyph("ydieresis.hmu",78);
399   tsu_accent.heavy_metal_umlaut(tsu_curve.latin.lowy);
400   tsu_render;
401 endtsuglyph;
402
403
404

```

Genji-Mon

```

405 % GENJI-MON
406
407 % WARNING, setting rescale
408 tsu_rescale_full;

```

```

409
410 genji_grid:=150;
411 if unknown genji_hw:
412   genji_hw:=tsu_brush_max/1.5;
413   if genji_hw>0.85: genji_hw:=0.85; fi;
414 fi;
415 if genji_outline: genji_hw:=1-genji_hw; fi;
416
417 vardef dflt_genji_coords =
418   transform genji_coords;
419   genji_coords=identity scaled genji_grid shifted (whatever,whatever);
420   (3,3) transformed genji_coords=centre_pt;
421 enddef;
422
423 % gb(x) - start a line at the bottom in file x
424 % gf(y) - go forward, to or from rank y
425 % gs(k) - go sideways k steps
426 % ge - end a line (at top or bottom)
427 % gt - end a line (T junction)
428 % gx - end a line and start a new one (X junction)
429 % gr - turn to right
430 % gl - turn to left (only used for Yume no Ukihashi)
431 % gbk(l,r) - draw background with l/r squares removed at upper left, right
432 % gp(i,r) - build a simple "spike" in index 1, to rank r
433 % gj(s,e) - build a simple "jumper" from s to e
434
435 vardef gb(expr a) =
436   dflt_genji_coords;
437   genji_coords:=identity scaled 0.5 shifted (a,1) transformed genji_coords;
438   path genji_path;
439   genji_path:=((-genji_hw,1)-(-genji_hw,genji_hw)-
440     (genji_hw,genji_hw)-(genji_hw,1)) transformed genji_coords;
441   path genji_spine;
442   genji_spine:=(0,0) transformed genji_coords;
443   genji_coords:=identity shifted (0,2) transformed genji_coords;
444 enddef;
445
446 vardef gf(expr a) =
447   gs(4-a);
448 enddef;
449
450 vardef gs(expr a) =
451   genji_path:=((-genji_hw,2*a-1) transformed genji_coords)-
452     genji_path-
453     ((genji_hw,2*a-1) transformed genji_coords);
454   genji_coords:=identity shifted (0,2*a) transformed genji_coords;
455 enddef;
456

```

```

457 vardef ge =
458   genji_path:=((-genji_hw,genji_hw) transformed genji_coords)-
459     genji_path-
460     ((genji_hw,genji_hw) transformed genji_coords)-
461     cycle;
462   if genji_outline:
463     unFill reverse genji_path;
464   else:
465     Fill genji_path;
466   fi;
467   genji_spine:=genji_spine-((0,0) transformed genji_coords);
468   if unknown gsp: gsp:=1; fi;
469   write ("SEGMENT "&(decimal gsp)&" 0 "&(decimal length genji_spine))
470     to "proof.prf";
471   for i=0 upto length genji_spine:
472     write ("POINT "&(decimal gsp)&" "&(decimal i)&" "&
473       (decimal xpart point i of genji_spine)&" "&
474       (decimal ypart point i of genji_spine)) to "proof.prf";
475   endfor;
476   gsp:=gsp+1;
477 enddef;
478
479 vardef gt =
480   genji_path:=((-genji_hw,genji_hw) transformed genji_coords)-
481     genji_path-
482     ((genji_hw,genji_hw) transformed genji_coords)-
483     cycle;
484   if genji_outline:
485     unFill reverse genji_path;
486   else:
487     Fill genji_path;
488   fi;
489   genji_spine:=genji_spine-((0,1) transformed genji_coords);
490   if unknown gsp: gsp:=1; fi;
491   write ("SEGMENT "&(decimal gsp)&" 0 "&(decimal length genji_spine))
492     to "proof.prf";
493   for i=0 upto length genji_spine:
494     write ("POINT "&(decimal gsp)&" "&(decimal i)&" "&
495       (decimal xpart point i of genji_spine)&" "&
496       (decimal ypart point i of genji_spine)) to "proof.prf";
497   endfor;
498   gsp:=gsp+1;
499 enddef;
500
501 vardef gx =
502   gt;
503   genji_path:=((-genji_hw,1)-(-genji_hw,genji_hw)-
504     (genji_hw,genji_hw)-(genji_hw,1)) transformed genji_coords;

```

```

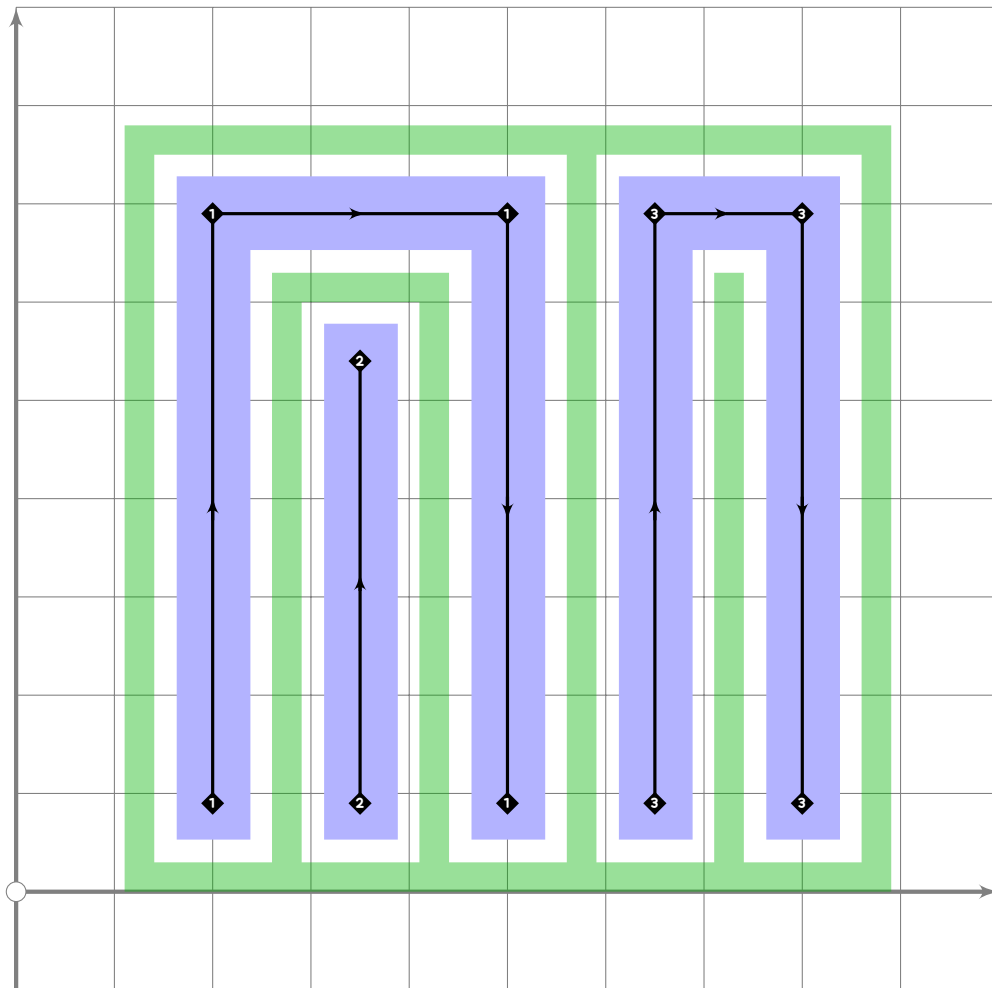
505 genji_spine:=(0,1) transformed genji_coords;
506 genji_coords:=identity shifted (0,2) transformed genji_coords;
507 enddef;
508
509 vardef gr =
510   genji_path:=((1,genji_hw) transformed genji_coords)-
511     ((-genji_hw,genji_hw) transformed genji_coords)-
512     genji_path-
513     ((genji_hw,genji_hw) transformed genji_coords)-
514     ((1,genji_hw) transformed genji_coords);
515   genji_spine:=genji_spine-((0,0) transformed genji_coords);
516   genji_coords:=identity shifted (0,2) rotated -90 transformed genji_coords;
517 enddef;
518
519 vardef gl =
520   genji_path:=((-1,genji_hw) transformed genji_coords)-
521     ((-genji_hw,genji_hw) transformed genji_coords)-
522     genji_path-
523     ((genji_hw,genji_hw) transformed genji_coords)-
524     ((-1,genji_hw) transformed genji_coords);
525   genji_spine:=genji_spine-((0,0) transformed genji_coords);
526   genji_coords:=identity shifted (0,2) rotated 90 transformed genji_coords;
527 enddef;
528
529 vardef gbk(expr lcut,rcut) =
530   if genji_outline:
531     path genji_path;
532     genji_path:=(genji_hw/2,genji_hw/2)-(6*genji_hw/2,genji_hw/2)-
533       if rcut>0:
534         (6*genji_hw/2,5*genji_hw/2)-
535         (6*genji_hw/2-rcut,5*genji_hw/2)-
536         (6*genji_hw/2-rcut,6*genji_hw/2)-
537       else:
538         (6*genji_hw/2,6*genji_hw/2)-
539       fi
540     if lcut>0:
541       (genji_hw/2*lcut,6*genji_hw/2)-
542       (genji_hw/2*lcut,5*genji_hw/2)-
543       (genji_hw/2,5*genji_hw/2)-
544     else:
545       (genji_hw/2,6*genji_hw/2)-
546     fi
547     cycle;
548     dflt_genji_coords;
549     Fill genji_path transformed genji_coords;
550   fi;
551 enddef;
552

```

```

553 vardef gp(expr i,r) =
554   gb(i);gf(r);ge;
555 enddef;
556
557 vardef gj(expr si,ei) =
558   gb(si);gf(1);gr;if ei>si-1:gs(ei-si-1);fi;gr;gf(1);ge;
559 enddef;
560
561 vardef gtt(expr a,b) =
562   gb(a);gf(b);gt;
563 enddef;
564

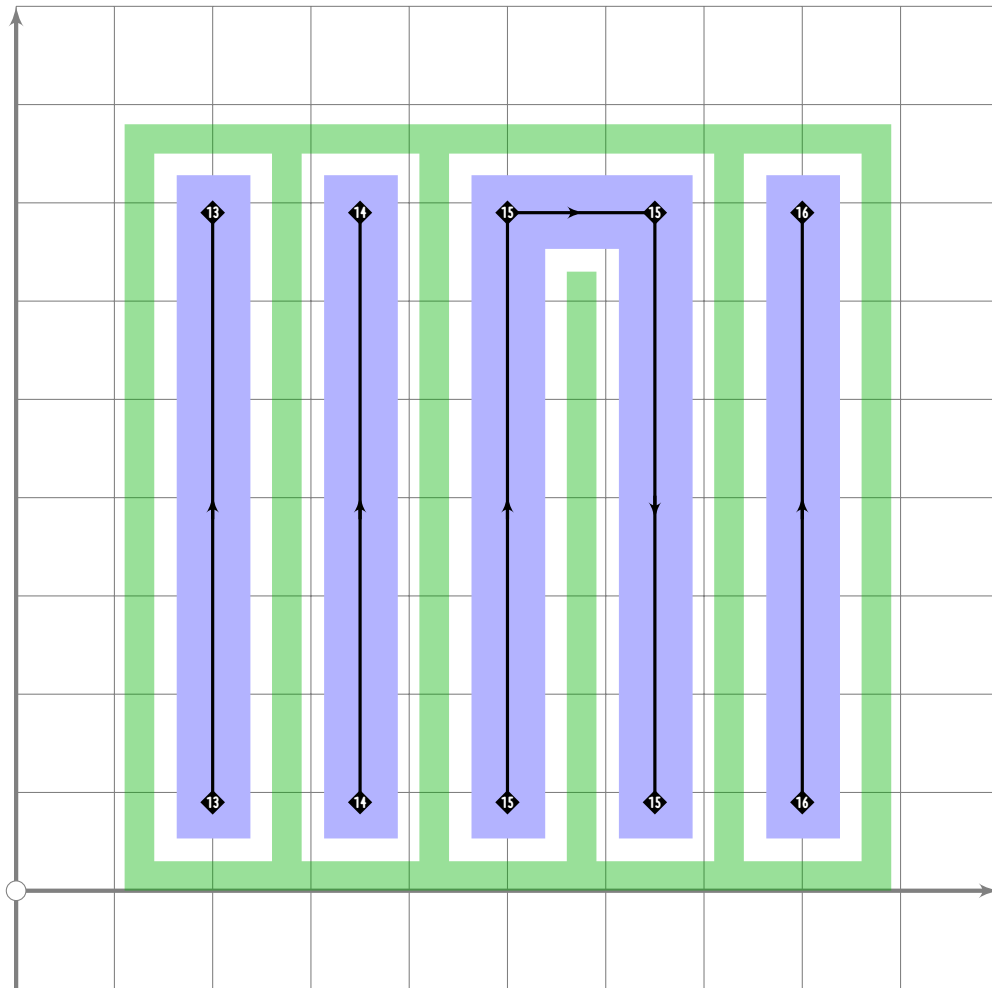
```



```

565 % #1 Kiritsubo
566 begint Suglyph("genjimon01",193);
567   gbk(0,0);
568   gj(1,3);
569   gp(2,2);
570   gj(4,5);
571 endtsuglyph;
572

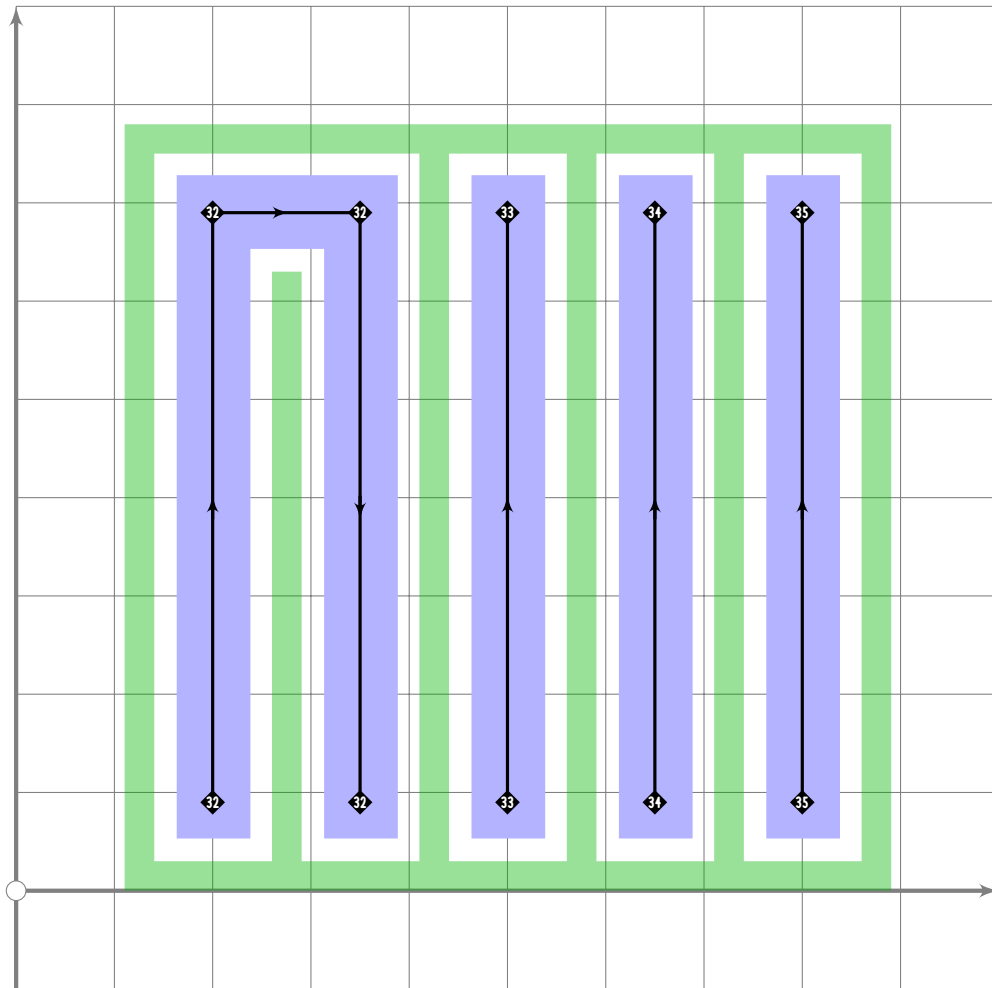
```

```

592 % #4 Yuugao
593 begint Suglyph("genjimon04",196);
594 gbk(0,0);
595 gp(1,1);
596 gp(2,1);
597 gj(3,4);
598 gp(5,1);
599 endtsuglyph;
600

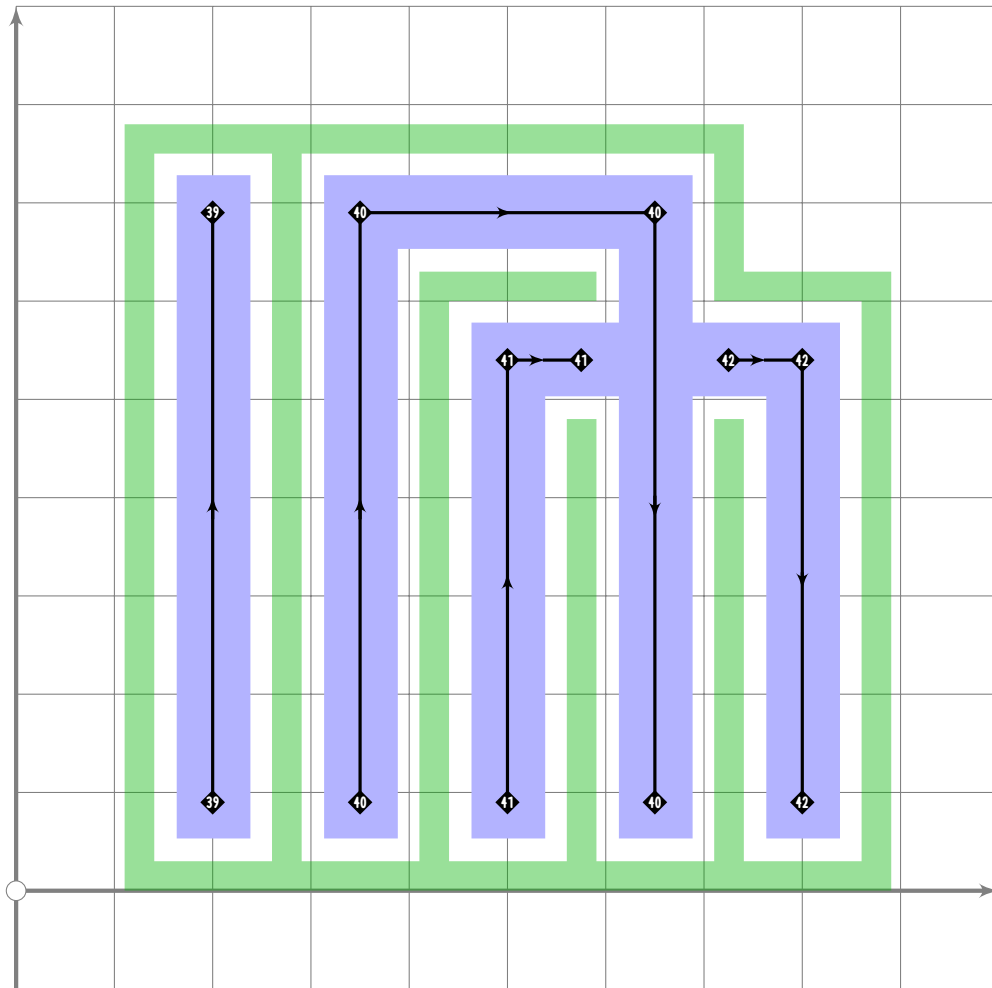
```

```

636 % #9 Aoi
637 begint Suglyph("genjimon09",201);
638 gbk(0,0);
639 gj(1,2);
640 gp(3,1);
641 gp(4,1);
642 gp(5,1);
643 endtsuglyph;
644

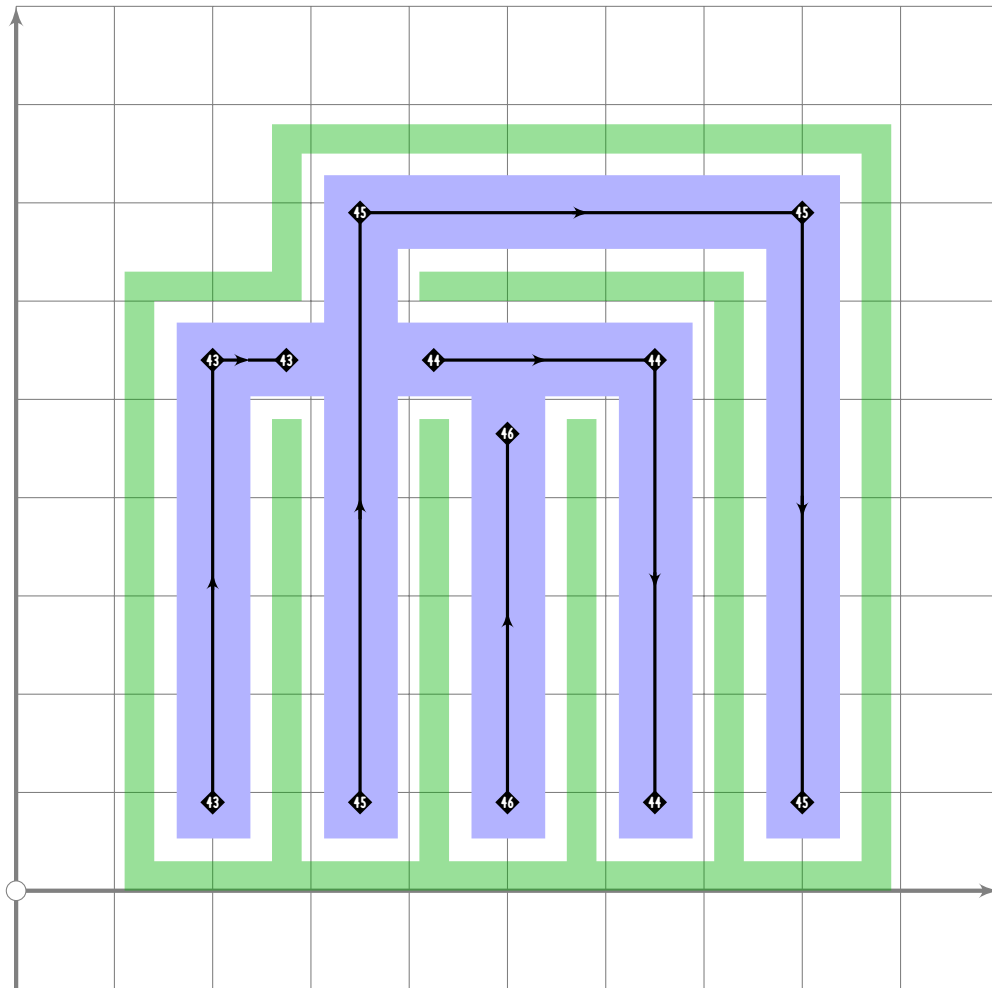
```

```

653 % #11 Hana Chiru Sato
654 begintsuglyph("genjimon11",203);
655 gbk(0,1);
656 gp(1,1);
657 gj(2,4);
658 gb(3);gf(2);gr;gx;gr;gf(2);ge;
659 endsuglyph;
660

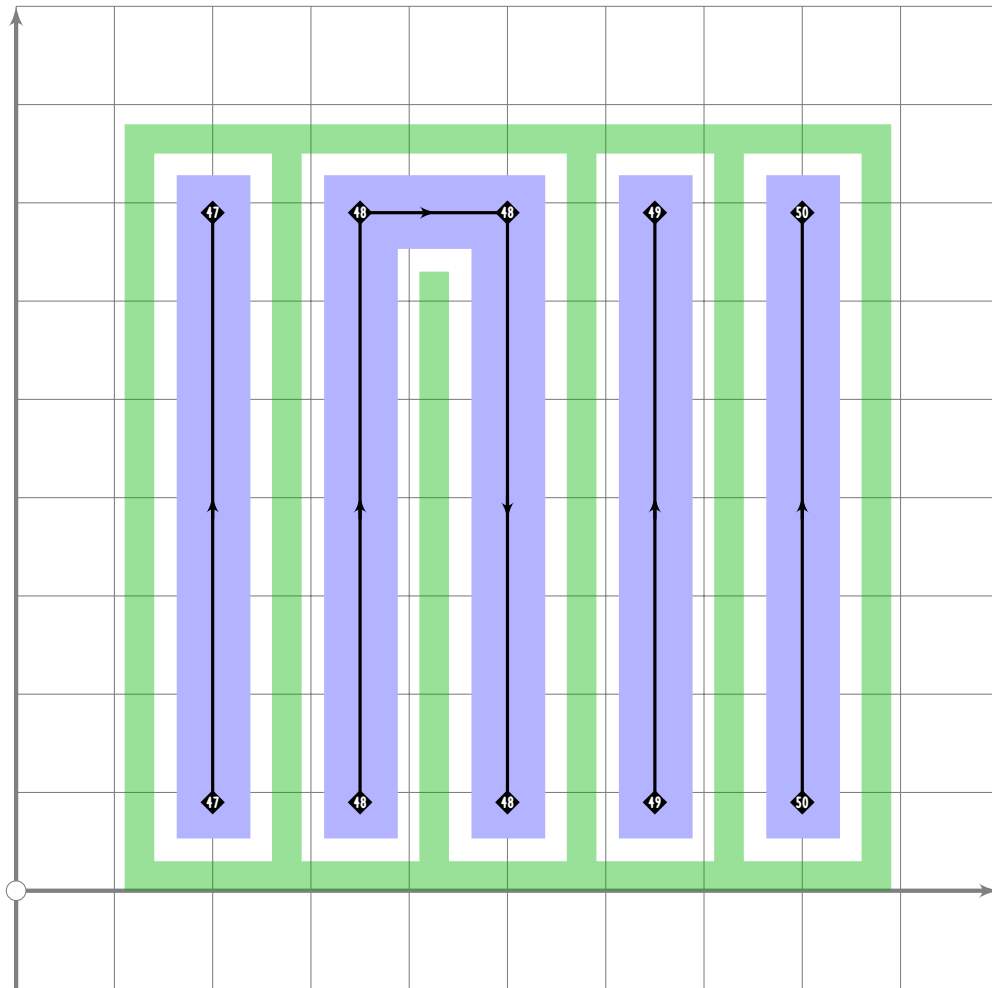
```



```

661 % #12 Suma
662 beginsuglyph("genjimon12",204);
663 gbk(1,0);
664 gb(1);gf(2);gr;gx;gs(1);gr;gf(2);ge;
665 gj(2,5);
666 gtt(3,2);
667 endsuglyph;
668

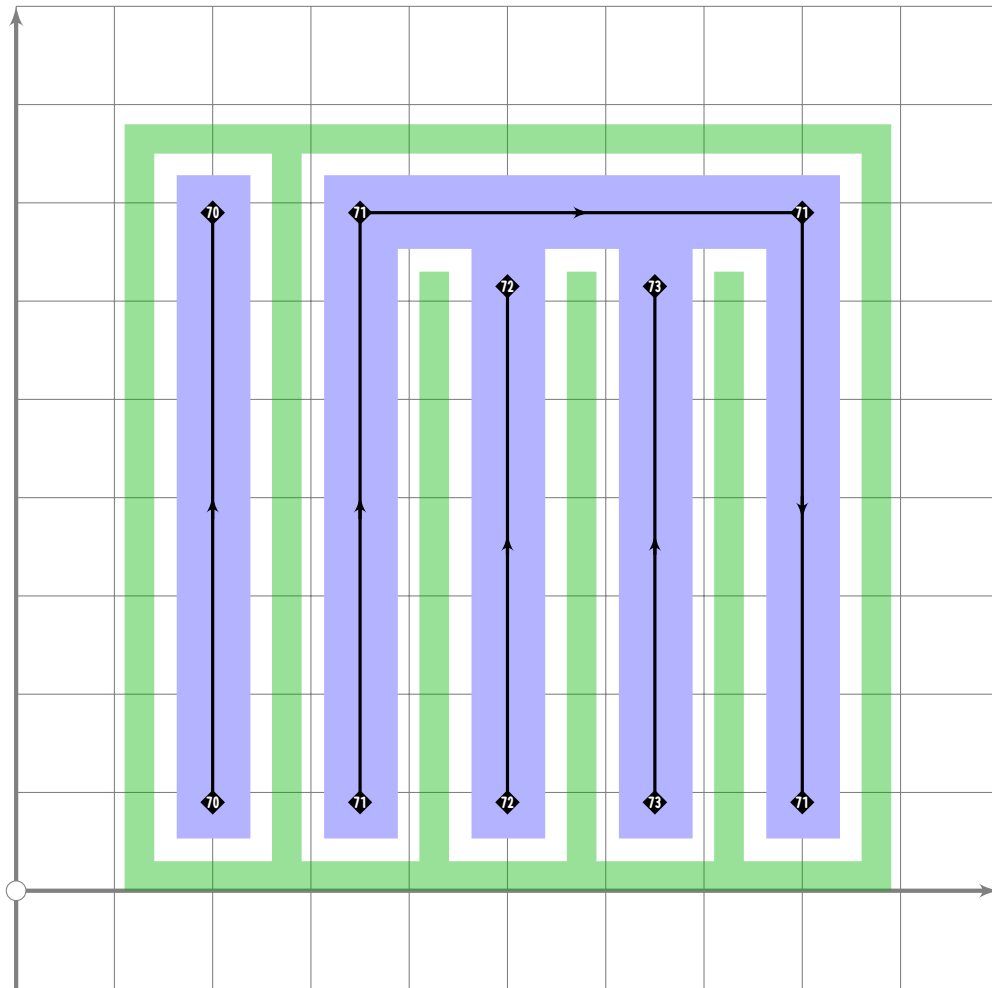
```



```

669 % #13 Akashi
670 begint Suglyph("genjimon13",205);
671 gbk(0,0);
672 gp(1,1);
673 gj(2,3);
674 gp(4,1);
675 gp(5,1);
676 endtsuglyph;
677

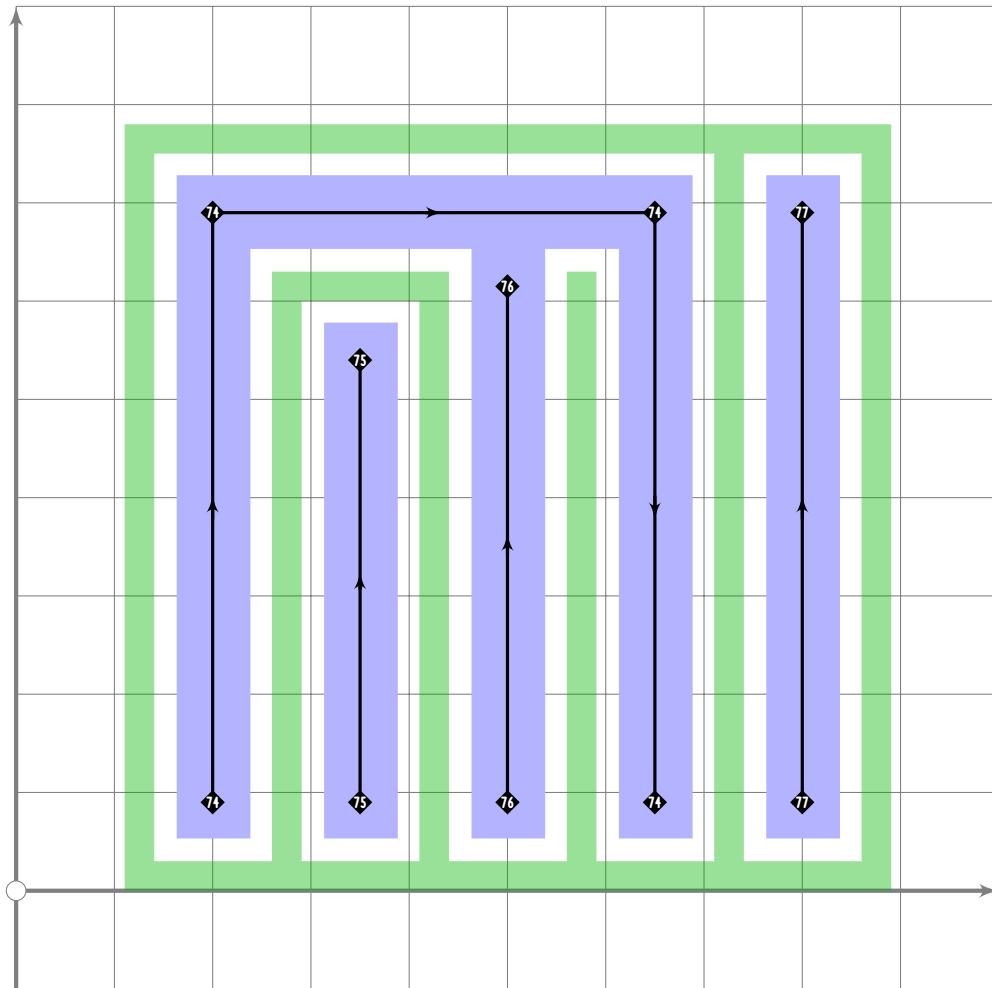
```

```

721 % #19 Usugumo
722 beginsuglyph("genjimon19";211);
723 gbk(0,0);
724 gp(1,1);
725 gj(2,5);
726 gtt(3,1);
727 gtt(4,1);
728 endsuglyph;
729

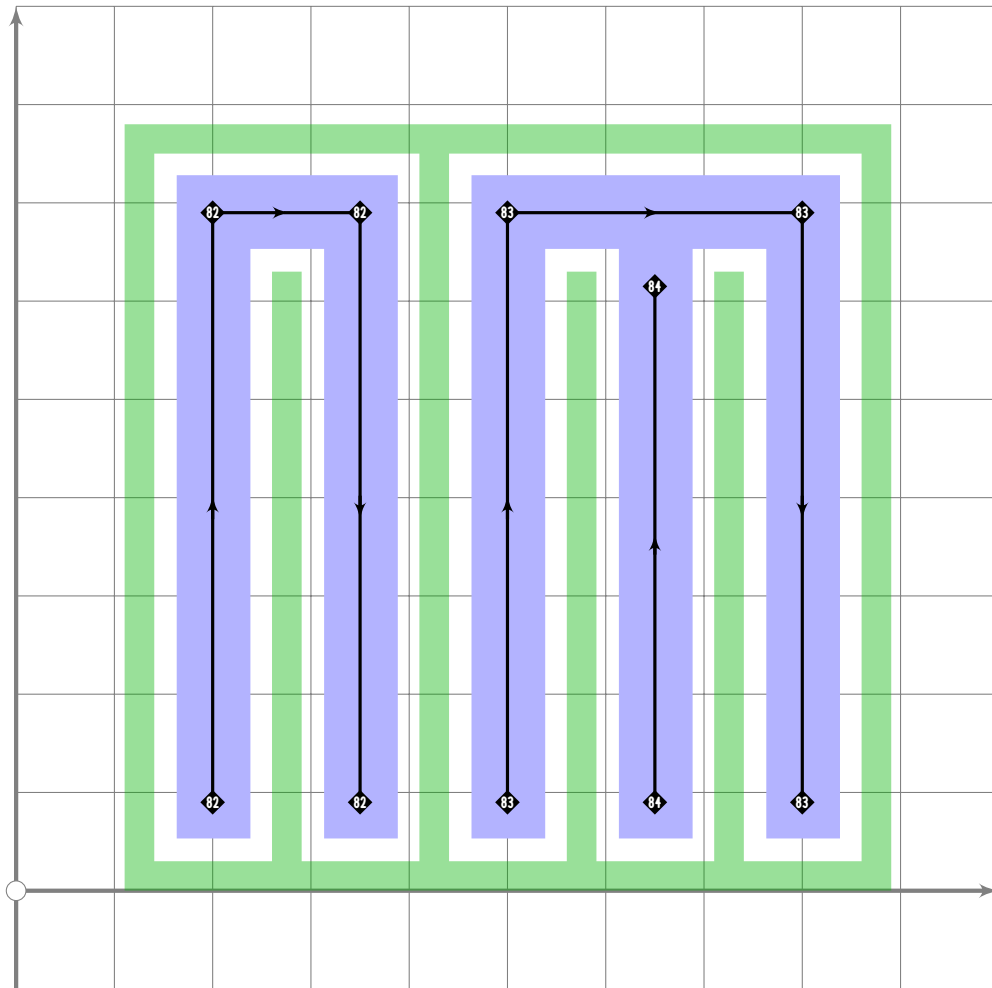
```



```

730 % #20 Asagao
731 begint Suglyph("genjimon20",212);
732 gbk(0,0);
733 gj(1,4);
734 gp(2,2);
735 gtt(3,1);
736 gp(5,1);
737 endtsuglyph;
738

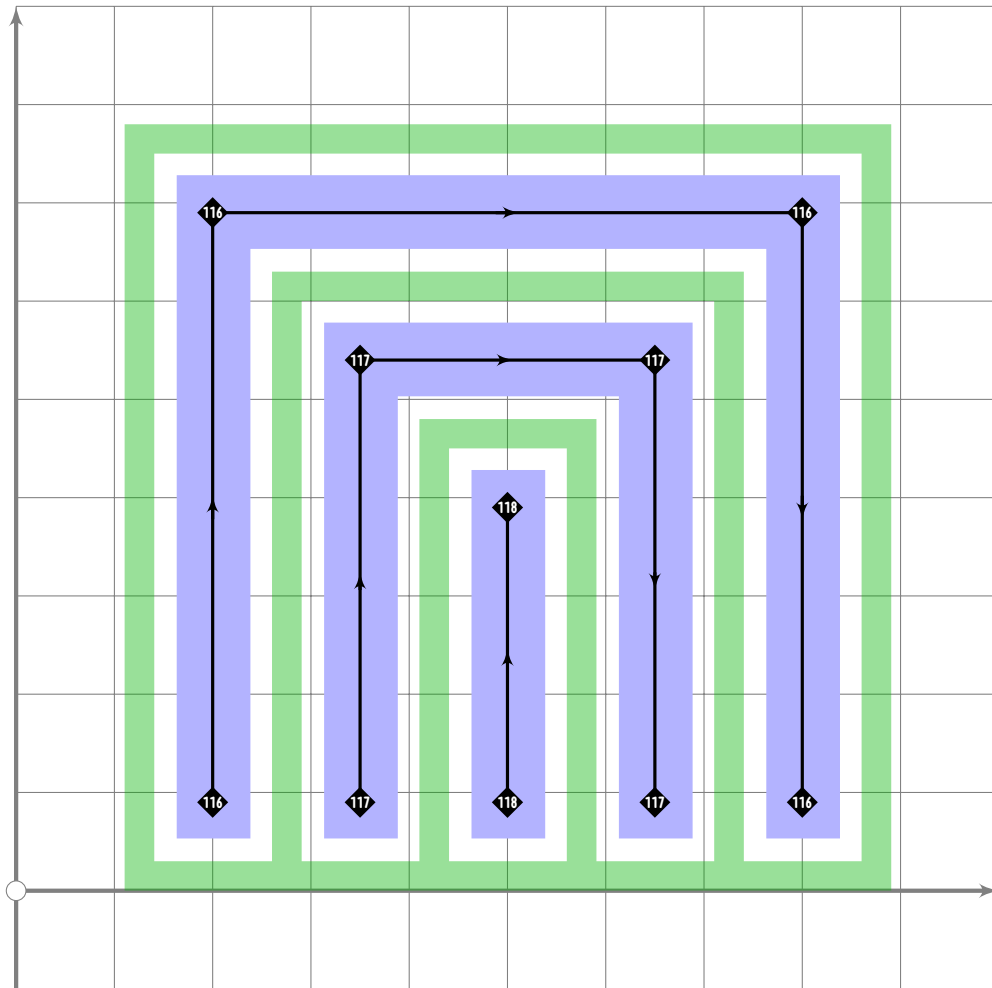
```

```

748 % #22 Tamakazura
749 begintsuglyph("genjimon22",214);
750 gbk(0,0);
751 gj(1,2);
752 gj(3,5);
753 gtt(4,1);
754 endsuglyph;
755

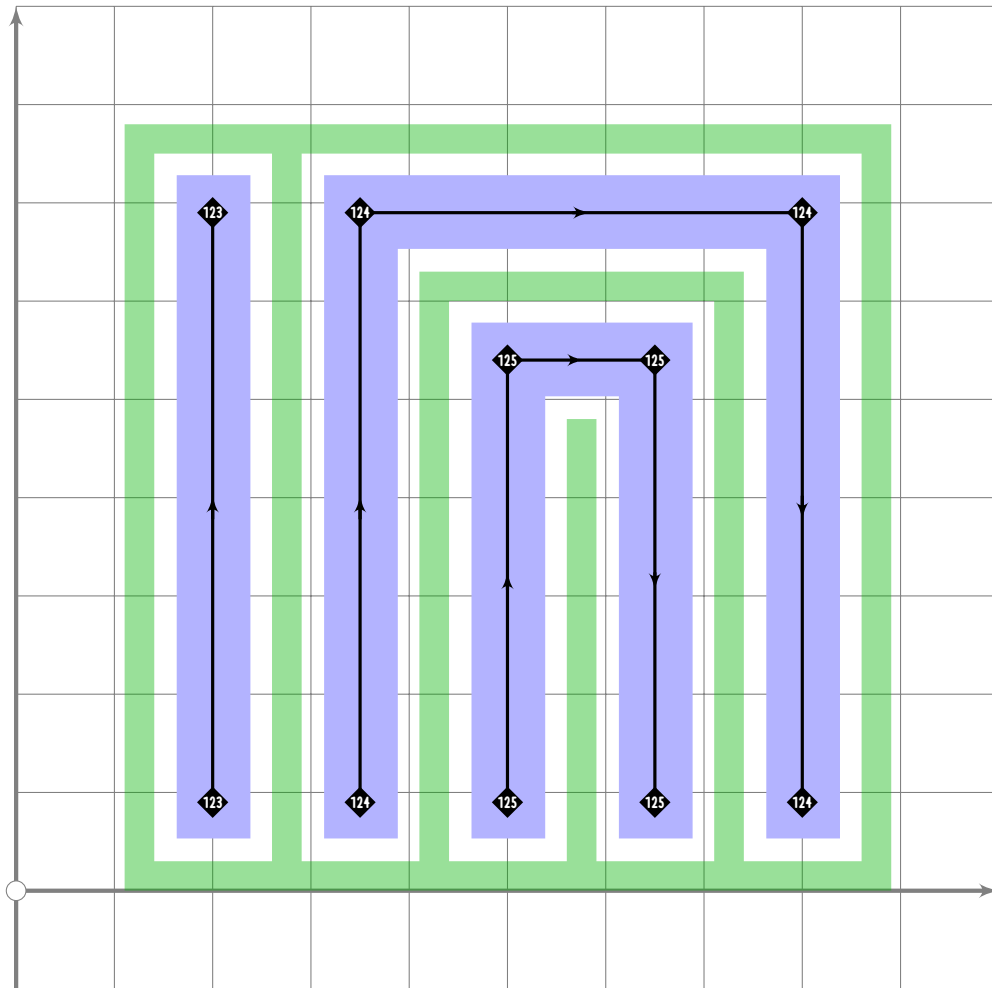
```

```

824 % #31 Makibashira
825 begint Suglyph("genjimon31",223);
826 gbk(0,0);
827 gj(1,5);
828 gb(2);gf(2);gr;gs(1);gr;gf(2);ge;
829 gp(3,3);
830 endtsuglyph;
831

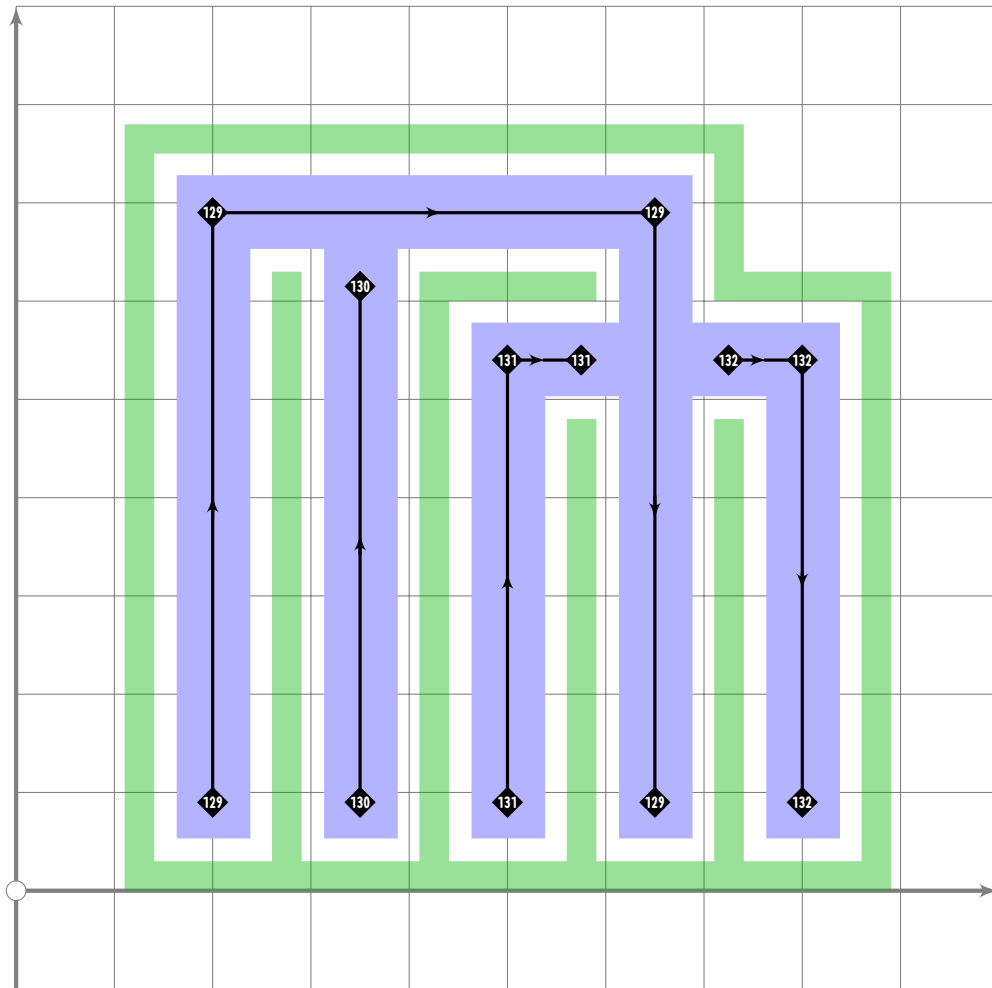
```

```

841 % #33 Fuji no Uraba
842 begintsuglyph("genjimon33";225);
843 gbk(0,0);
844 gp(1,1);
845 gj(2,5);
846 gb(3);gf(2);gr;gr;gf(2);ge;
847 endsuglyph;
848

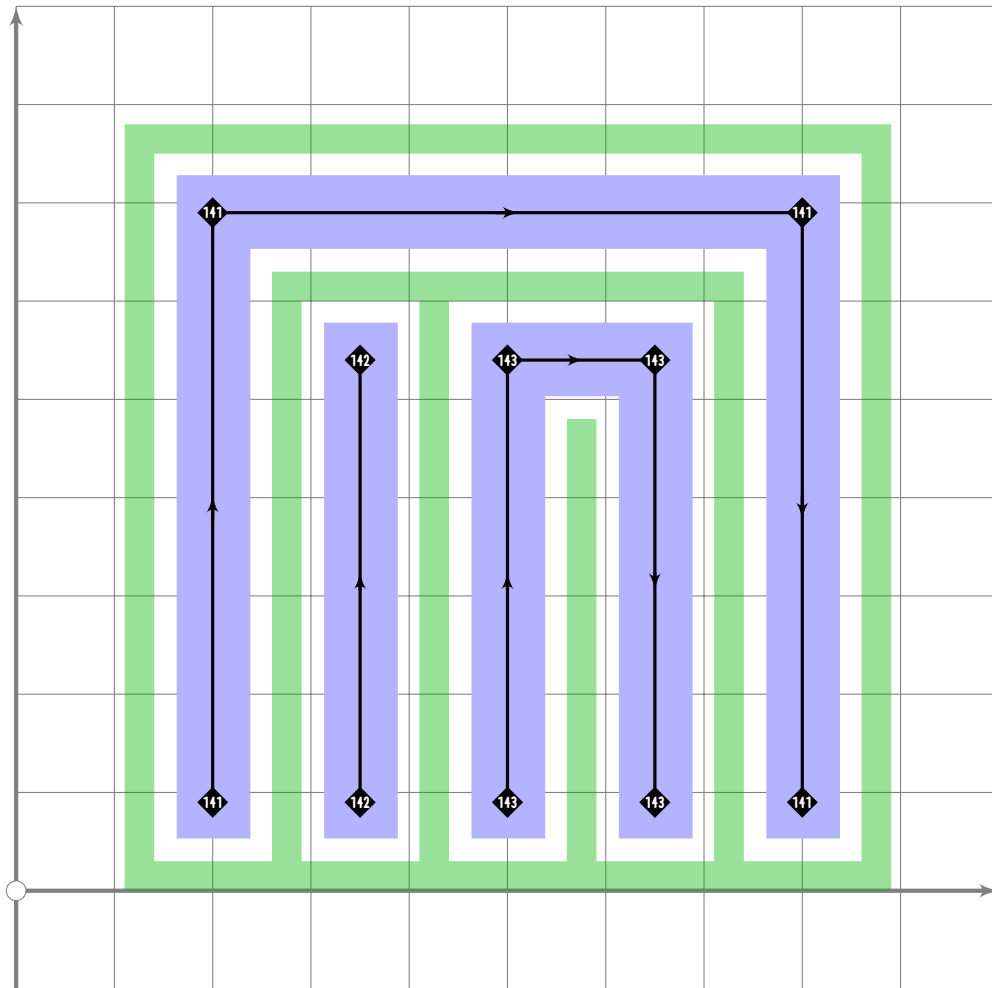
```

```

857 % #35 Wakana no Ge
858 begintsuglyph("genjimon35";227);
859 gbk(0,1);
860 gj(1,4);
861 gtt(2,1);
862 gb(3);gf(2);gr;gx;gr;gf(2);ge;
863 endsuglyph;
864

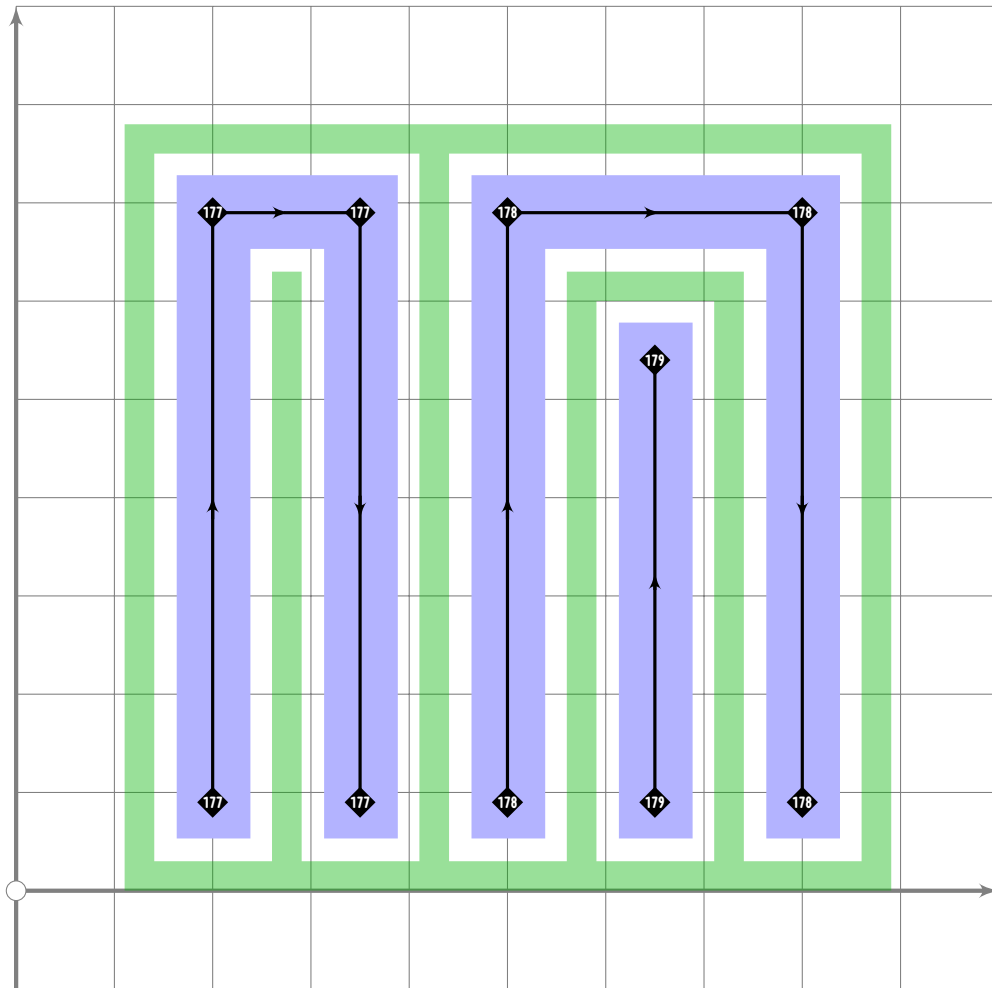
```

```

883 % #38 Suzumushi
884 begintsuglyph("genjimon38",230);
885 gbk(0,0);
886 gj(1,5);
887 gp(2,2);
888 gb(3);gf(2);gr;gr;gf(2);ge;
889 endsuglyph;
890

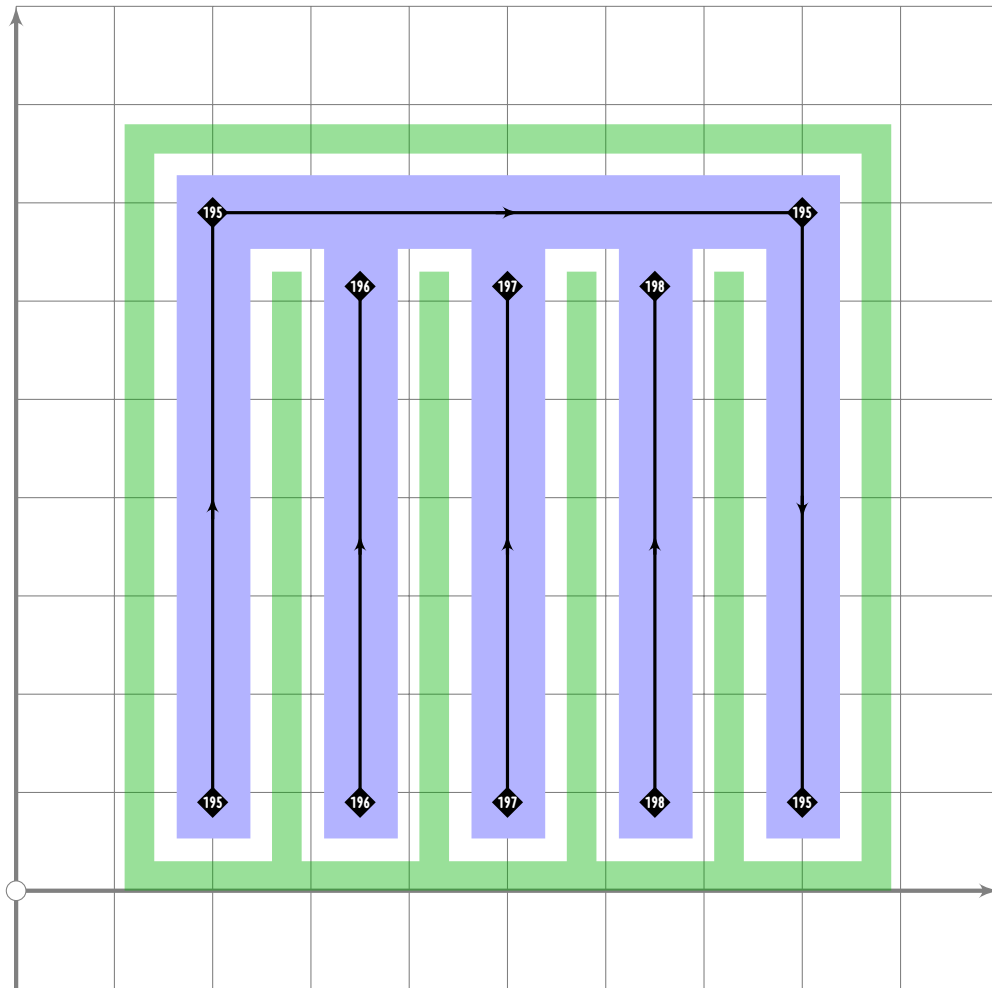
```

```

966 % #48 Sawarabi
967 begint Suglyph("genjimon48",240);
968 gbk(0,0);
969 gj(1,2);
970 gj(3,5);
971 gp(4,2);
972 endsuglyph;
973

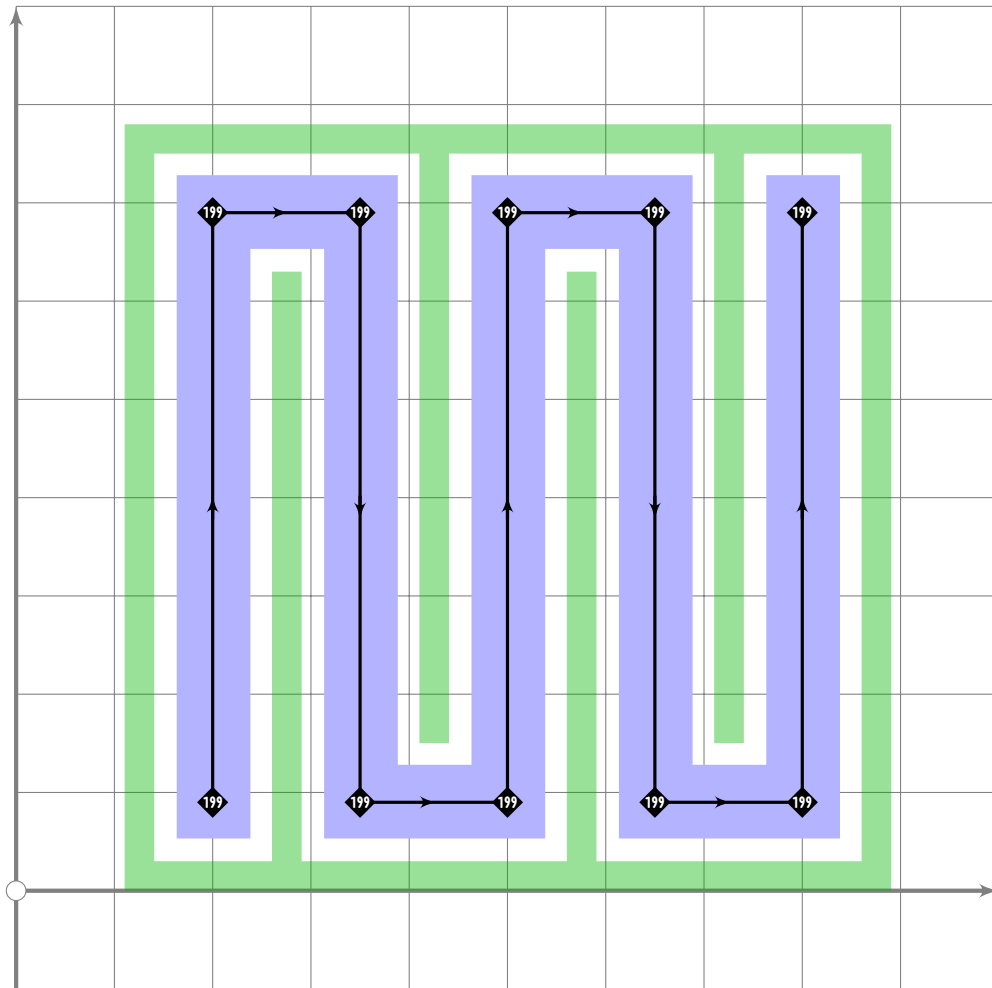
```

```

1008 % #53 Tenarai
1009 begintsuglyph("genjimon53";245);
1010 gbk(0,0);
1011 gj(1,5);
1012 gtt(2,1);
1013 gtt(3,1);
1014 gtt(4,1);
1015 endsuglyph;
1016

```



```

1017 % #54 Yumi no Ukihashi
1018 begintsuglyph("genjimon54",246);
1019 gbk(0,0);
1020 gb(1);gf(1);gr;gr;gf(1);gl;gl;gf(1);gr;gr;gf(1);gl;gl;gf(1);ge;
1021 endsuglyph;
1022
1023 _____
1024
1025 endfont;
1026
1027 _____

```

tsuku-ff0.mp

```
1 %
2 % Unicode page FF0 (Fraction Numerators) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 input latin-intro.mp;
36 input numerals.mp;
37 input frac-intro.mp;
38
39 

---


40
```

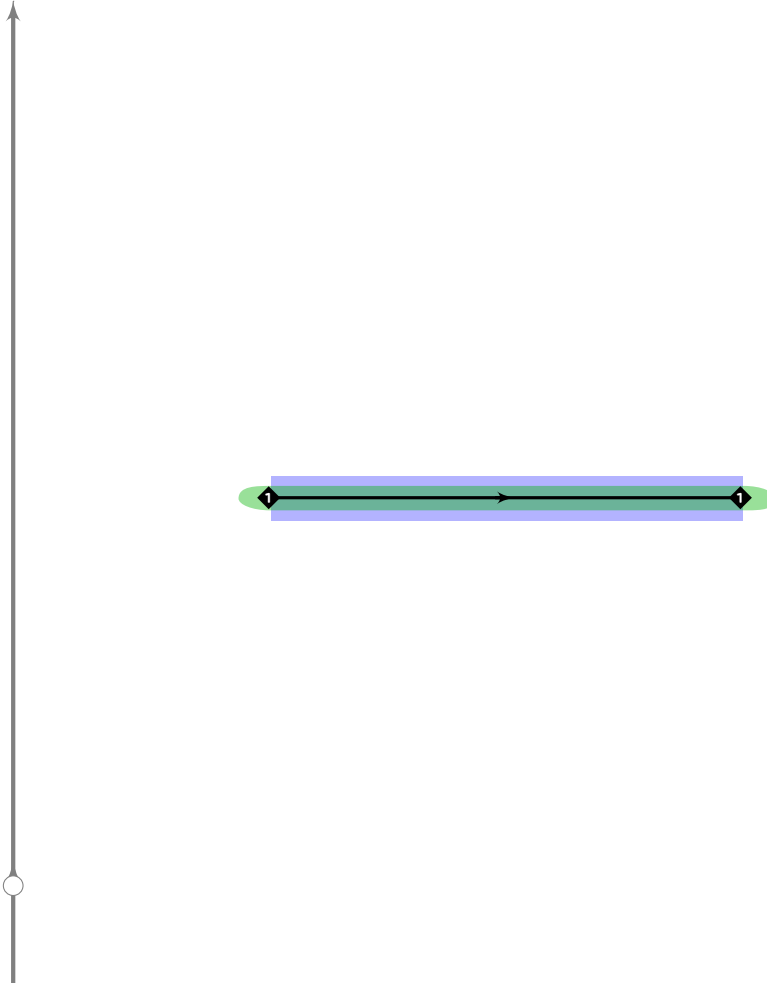
Fraction Numerators

```
41 % FRACTION NUMERATORS
42
43 transform nxf[];
44
45 (frac.in.x1,frac.in.y1) transformed nxf1=(frac.one.x1,frac.one.y4);
46 (frac.in.x2,frac.in.y1) transformed nxf1=(frac.one.x2,frac.one.y4);
47 (frac.in.x1,frac.in.y2) transformed nxf1=(frac.one.x1,frac.one.y5);
48
49 (frac.in.x1,frac.in.y1) transformed nxf2=(frac.two.x1,frac.two.y4);
50 (frac.in.x2,frac.in.y1) transformed nxf2=(frac.two.x2,frac.two.y4);
51 (frac.in.x1,frac.in.y2) transformed nxf2=(frac.two.x1,frac.two.y5);
52 (frac.in.x1,frac.in.y1) transformed nxf3=(frac.two.x2,frac.two.y4);
53 (frac.in.x2,frac.in.y1) transformed nxf3=(frac.two.x3,frac.two.y4);
54 (frac.in.x1,frac.in.y2) transformed nxf3=(frac.two.x2,frac.two.y5);
55
56 (frac.in.x1,frac.in.y1) transformed nxf4=(frac.three.x1,frac.three.y4);
57 (frac.in.x2,frac.in.y1) transformed nxf4=(frac.three.x2,frac.three.y4);
58 (frac.in.x1,frac.in.y2) transformed nxf4=(frac.three.x1,frac.three.y5);
59 (frac.in.x1,frac.in.y1) transformed nxf5=(frac.three.x2,frac.three.y4);
60 (frac.in.x2,frac.in.y1) transformed nxf5=(frac.three.x3,frac.three.y4);
61 (frac.in.x1,frac.in.y2) transformed nxf5=(frac.three.x2,frac.three.y5);
62 (frac.in.x1,frac.in.y1) transformed nxf6=(frac.three.x3,frac.three.y4);
63 (frac.in.x2,frac.in.y1) transformed nxf6=(frac.three.x4,frac.three.y4);
64 (frac.in.x1,frac.in.y2) transformed nxf6=(frac.three.x3,frac.three.y5);
65
66 (frac.in.x1,frac.in.y1) transformed nxf7=(frac.four.x1,frac.four.y4);
67 (frac.in.x2,frac.in.y1) transformed nxf7=(frac.four.x2,frac.four.y4);
68 (frac.in.x1,frac.in.y2) transformed nxf7=(frac.four.x1,frac.four.y5);
```

```

69 (frac.in.x1,frac.in.y1) transformed nxf8=(frac.four.x2,frac.four.y4);
70 (frac.in.x2,frac.in.y1) transformed nxf8=(frac.four.x3,frac.four.y4);
71 (frac.in.x1,frac.in.y2) transformed nxf8=(frac.four.x2,frac.four.y5);
72 (frac.in.x1,frac.in.y1) transformed nxf9=(frac.four.x3,frac.four.y4);
73 (frac.in.x2,frac.in.y1) transformed nxf9=(frac.four.x4,frac.four.y4);
74 (frac.in.x1,frac.in.y2) transformed nxf9=(frac.four.x3,frac.four.y5);
75 (frac.in.x1,frac.in.y1) transformed nxf10=(frac.four.x4,frac.four.y4);
76 (frac.in.x2,frac.in.y1) transformed nxf10=(frac.four.x5,frac.four.y4);
77 (frac.in.x1,frac.in.y2) transformed nxf10=(frac.four.x4,frac.four.y5);
78
79 (frac.in.x1,frac.in.y1) transformed nxf11=(frac.half.x1,frac.half.y4);
80 (frac.in.x2,frac.in.y1) transformed nxf11=(frac.half.x2,frac.half.y4);
81 (frac.in.x1,frac.in.y2) transformed nxf11=(frac.half.x1,frac.half.y5);
82
83 tsu_rescale_native_zero;

```

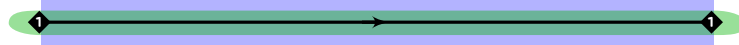


```

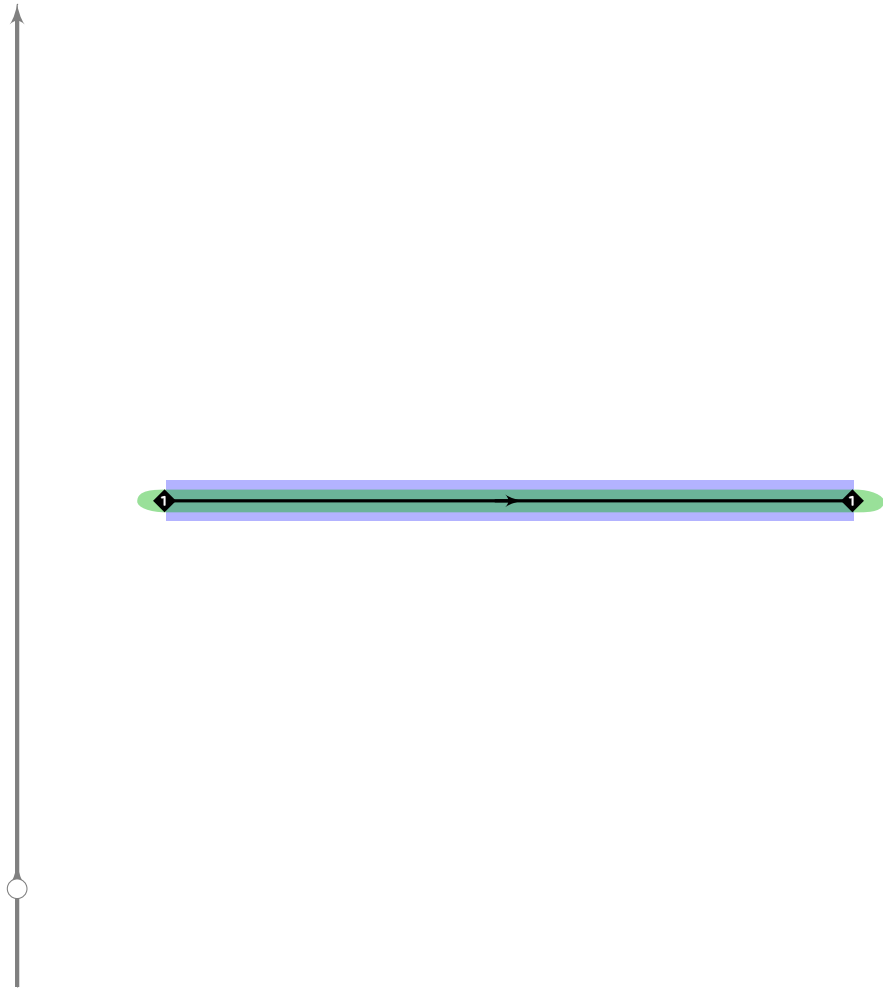
84
85 begint Suglyph("fraction.1",1);
86 push_stroke(((0.25)[(frac.one.x1,frac.one.y3),(frac.one.x2,frac.one.y3)])
87   -(1.25[(frac.one.x1,frac.one.y3),(frac.one.x2,frac.one.y3)]),
88   (2,2)-(2,2));
89 set_bosize(0,60);

```

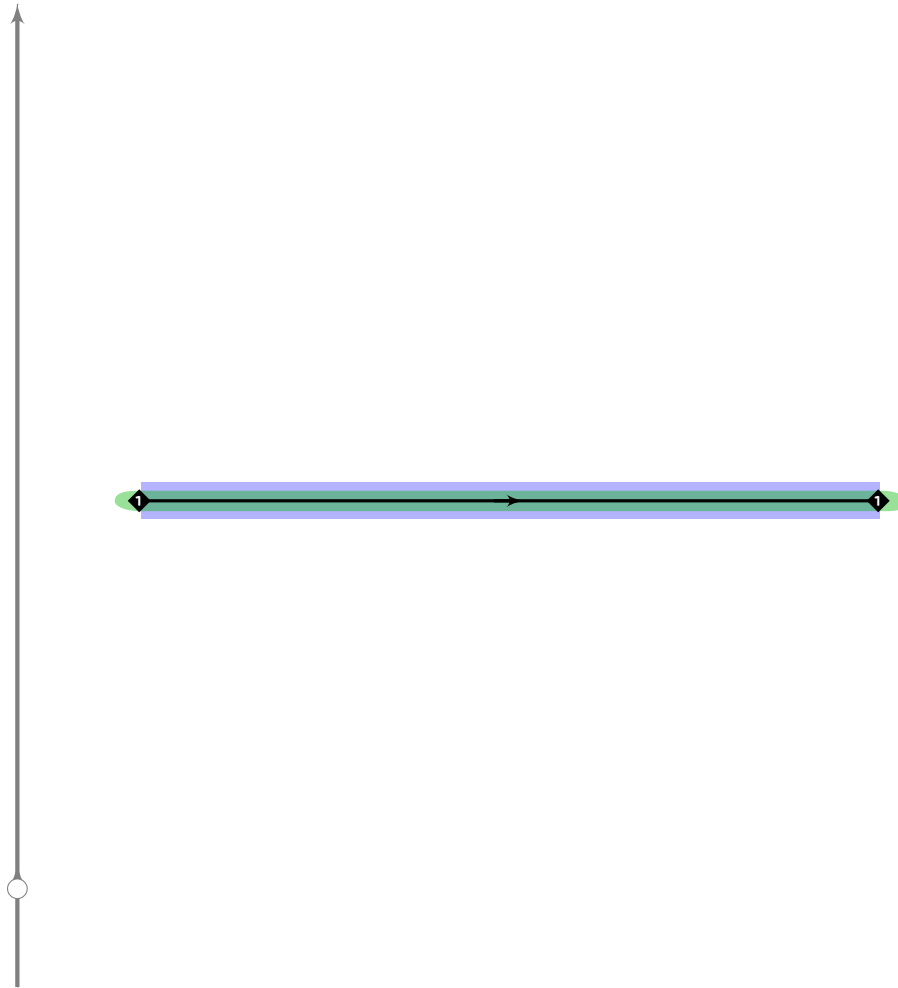
```
90 tsu_render;  
91 endtsuglyph;
```



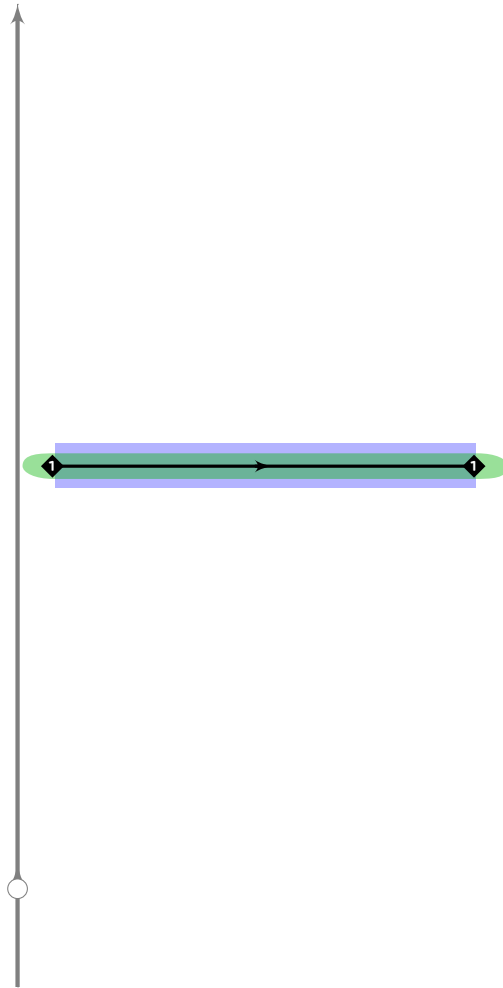
```
92  
93 begintsuglyph("fraction.2",2);  
94 push_stroke(((-0.07)[(frac.two.x1,frac.two.y3),(frac.two.x3,frac.two.y3)])  
95   -(1.07[(frac.two.x1,frac.two.y3),(frac.two.x3,frac.two.y3)]),  
96   (2,2)-(2,2));  
97 set_bsize(0,60);  
98 tsu_render;  
99 endtsuglyph;
```



```
100  
101 begintsuglyph("fraction.3",3);  
102 push_stroke((frac.three.x1,frac.three.y3)-(frac.three.x4,frac.three.y3),  
103   (2,2)-(2,2));  
104 set_bosize(0,55);  
105 tsu_render;  
106 endtsuglyph;
```

```
107
108 begintsuglyph("fraction.4",4);
109 push_stroke((0.03[(frac.four.x1,frac.four.y3),(frac.four.x5,frac.four.y3)])
110             -(0.97[(frac.four.x1,frac.four.y3),(frac.four.x5,frac.four.y3)]),
111             (2,2)-(2,2));
112 set_bosize(0,50);
113 tsu_render;
114 endtsuglyph;
```



```

115
116 begintsuglyph("fraction.latn",5);
117 push_stroke(
118     ((-0.15)[(frac.half.x1,frac.half.y3),(frac.half.x2,frac.half.y3]])
119     -(1.15[(frac.half.x1,frac.half.y3),(frac.half.x2,frac.half.y3)]),
120     (2,2)-(2,2));
121 set_bosize(0,60);
122 tsu_render;
123 endtsuglyph;
124
125 make_digit_set(nxf1,"0","1");
126 make_digit_set(nxf2,"0","2");
127 make_digit_set(nxf3,"0","3");
128 make_digit_set(nxf4,"0","4");
129 make_digit_set(nxf5,"0","5");
130 make_digit_set(nxf6,"0","6");
131 make_digit_set(nxf7,"0","7");
132 make_digit_set(nxf8,"0","8");
133 make_digit_set(nxf9,"0","9");
134 make_digit_set(nxf10,"0","a");
135 make_digit_set(nxf11,"0","b");

```

136

137

138

139 **endfont;**

140

141

tsuku-ff1.mp

```
1 %
2 % Unicode page FF1 (Fraction Denominators) for Tsukurimashou
3 % Copyright (C) 2011 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 input latin-intro.mp;
36 input numerals.mp;
37 input frac-intro.mp;
38
39 

---


40
```

Fraction Denominators

```
41 % FRACTION DENOMINATORS
42
43 transform nxf[];
44
45 (frac.in.x1,frac.in.y1) transformed nxf1=(frac.one.x1,frac.one.y1);
46 (frac.in.x2,frac.in.y1) transformed nxf1=(frac.one.x2,frac.one.y1);
47 (frac.in.x1,frac.in.y2) transformed nxf1=(frac.one.x1,frac.one.y2);
48
49 (frac.in.x1,frac.in.y1) transformed nxf2=(frac.two.x1,frac.two.y1);
50 (frac.in.x2,frac.in.y1) transformed nxf2=(frac.two.x2,frac.two.y1);
51 (frac.in.x1,frac.in.y2) transformed nxf2=(frac.two.x1,frac.two.y2);
52 (frac.in.x1,frac.in.y1) transformed nxf3=(frac.two.x2,frac.two.y1);
53 (frac.in.x2,frac.in.y1) transformed nxf3=(frac.two.x3,frac.two.y1);
54 (frac.in.x1,frac.in.y2) transformed nxf3=(frac.two.x2,frac.two.y2);
55
56 (frac.in.x1,frac.in.y1) transformed nxf4=(frac.three.x1,frac.three.y1);
57 (frac.in.x2,frac.in.y1) transformed nxf4=(frac.three.x2,frac.three.y1);
58 (frac.in.x1,frac.in.y2) transformed nxf4=(frac.three.x1,frac.three.y2);
59 (frac.in.x1,frac.in.y1) transformed nxf5=(frac.three.x2,frac.three.y1);
60 (frac.in.x2,frac.in.y1) transformed nxf5=(frac.three.x3,frac.three.y1);
61 (frac.in.x1,frac.in.y2) transformed nxf5=(frac.three.x2,frac.three.y2);
62 (frac.in.x1,frac.in.y1) transformed nxf6=(frac.three.x3,frac.three.y1);
63 (frac.in.x2,frac.in.y1) transformed nxf6=(frac.three.x4,frac.three.y1);
64 (frac.in.x1,frac.in.y2) transformed nxf6=(frac.three.x3,frac.three.y2);
65
66 (frac.in.x1,frac.in.y1) transformed nxf7=(frac.four.x1,frac.four.y1);
67 (frac.in.x2,frac.in.y1) transformed nxf7=(frac.four.x2,frac.four.y1);
68 (frac.in.x1,frac.in.y2) transformed nxf7=(frac.four.x1,frac.four.y2);
```

```

69 (frac.in.x1,frac.in.y1) transformed nxf8=(frac.four.x2,frac.four.y1);
70 (frac.in.x2,frac.in.y1) transformed nxf8=(frac.four.x3,frac.four.y1);
71 (frac.in.x1,frac.in.y2) transformed nxf8=(frac.four.x2,frac.four.y2);
72 (frac.in.x1,frac.in.y1) transformed nxf9=(frac.four.x3,frac.four.y1);
73 (frac.in.x2,frac.in.y1) transformed nxf9=(frac.four.x4,frac.four.y1);
74 (frac.in.x1,frac.in.y2) transformed nxf9=(frac.four.x3,frac.four.y2);
75 (frac.in.x1,frac.in.y1) transformed nxf10=(frac.four.x4,frac.four.y1);
76 (frac.in.x2,frac.in.y1) transformed nxf10=(frac.four.x5,frac.four.y1);
77 (frac.in.x1,frac.in.y2) transformed nxf10=(frac.four.x4,frac.four.y2);
78
79 (frac.in.x1,frac.in.y1) transformed nxf11=(frac.half.x1,frac.half.y1);
80 (frac.in.x2,frac.in.y1) transformed nxf11=(frac.half.x2,frac.half.y1);
81 (frac.in.x1,frac.in.y2) transformed nxf11=(frac.half.x1,frac.half.y2);
82
83 tsu_rescale_full;
84 make_digit_set(nxf1,"1","1");
85
86 tsu_rescale_native_zero;
87 make_digit_set(nxf2,"1","2");
88 tsu_rescale_full;
89 make_digit_set(nxf3,"1","3");
90
91 tsu_rescale_native_zero;
92 make_digit_set(nxf4,"1","4");
93 make_digit_set(nxf5,"1","5");
94 tsu_rescale_full;
95 make_digit_set(nxf6,"1","6");
96
97 tsu_rescale_native_zero;
98 make_digit_set(nxf7,"1","7");
99 make_digit_set(nxf8,"1","8");
100 make_digit_set(nxf9,"1","9");
101 tsu_rescale_full;
102 make_digit_set(nxf10,"1","a");
103
104 tsu_rescale_native_narrow;
105 make_digit_set(nxf11,"1","b");
106
107 _____
108
109 endfont;
110
111 _____

```