

作りましょう 0.7

パラメタ方式フォントファミリ
校とプリティプリントのソース

Tsukurimashou 0.7

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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Volume X

U+A000 to U+10FFFF

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F7

tsuku-f9.mp

F9

tsuku-ff.mp

FF

tsuku-1f1.mp

1F1

tsuku-200.mp

200

tsuku-20a.mp

20A

tsuku-21c.mp

21C

tsuku-295.mp

295

tsuku-f17.mp

F17

tsuku-ff0.mp

FF0

tsuku-ff1.mp

FF1

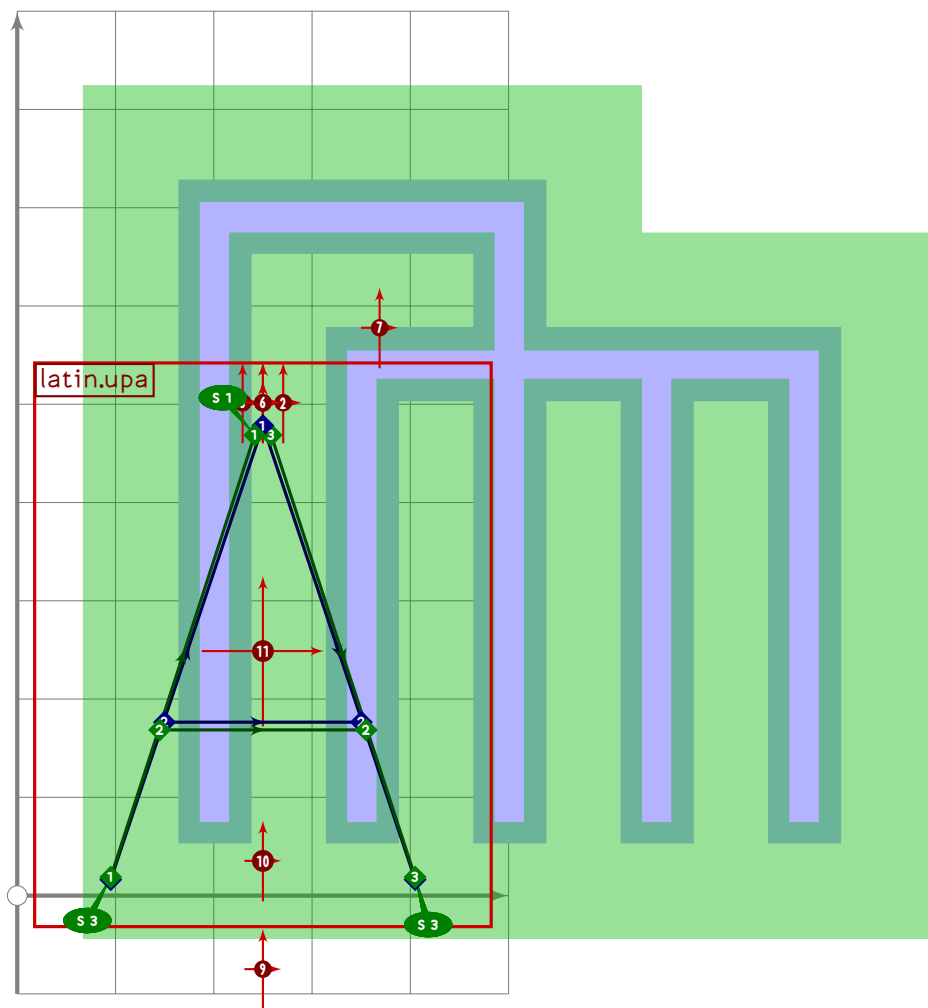
tsuku-f7.mp

F7

```
1 %
2 % Unicode page F7 (Adobe PUA) for Tsukurimashou
3 % Copyright (C) 2011, 2012 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
41 do_late_includes;
42
43 transform tsu_xf.sc;
44
45 if is_proportional:
46   latin_wide_sc_top:=0.4[latin_wide_xheight,latin_wide_top];
47   (0,latin_wide_low_h) transformed tsu_xf.sc = (120,latin_wide_low_h);
48   (1000,latin_wide_low_h) transformed tsu_xf.sc = (880,latin_wide_low_h);
49   (0,latin_wide_top) transformed tsu_xf.sc = (120,latin_wide_sc_top);
50 else:
51   latin_wide_sc_top=0.1[latin_wide_xheight,latin_wide_top];
52   (0,latin_wide_low_h) transformed tsu_xf.sc = (20,latin_wide_low_h);
53   (1000,latin_wide_low_h) transformed tsu_xf.sc = (980,latin_wide_low_h);
54   (0,latin_wide_top) transformed tsu_xf.sc = (20,latin_wide_sc_top);
55 fi;
56
57 _____
58
```

Latin Small Caps

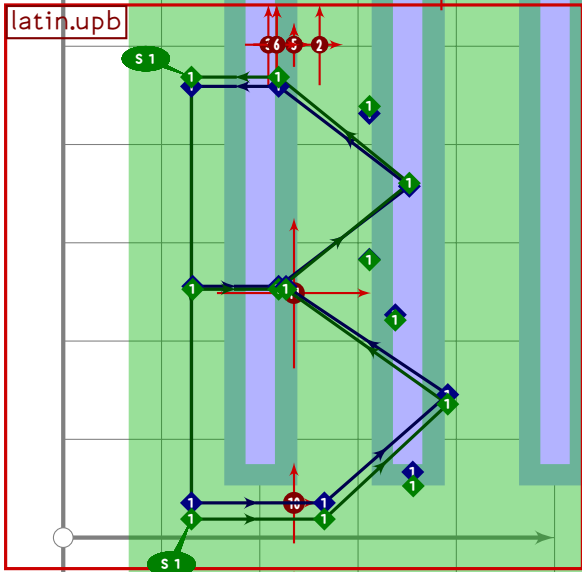
```
59 % LATIN SMALL CAPS
60
61 % WARNING changing rescale setting
62 tsu_rescale_half;
63 tsu_accent.up_default_anchors;
64
```



```

65 % A
66 begintsuglyph("a.sc";97);
67   tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upa))());
68   tsu_render;
69 endsuglyph;
70

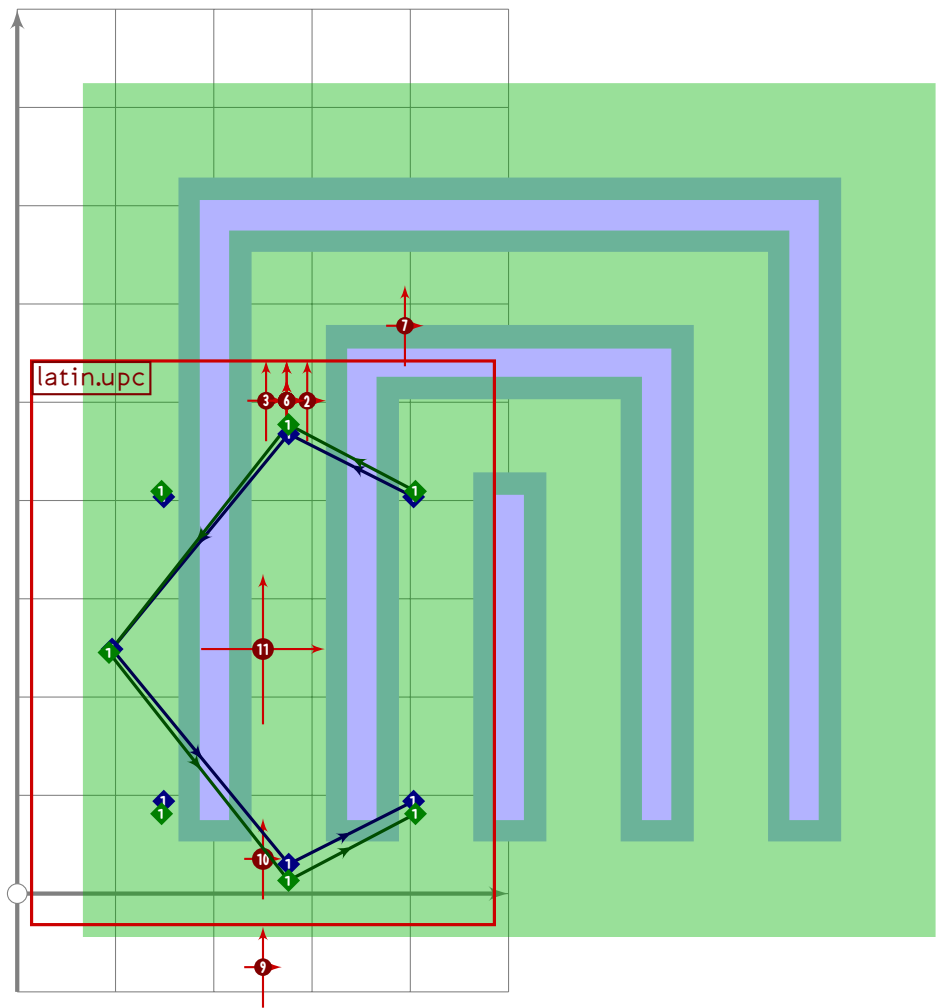
```

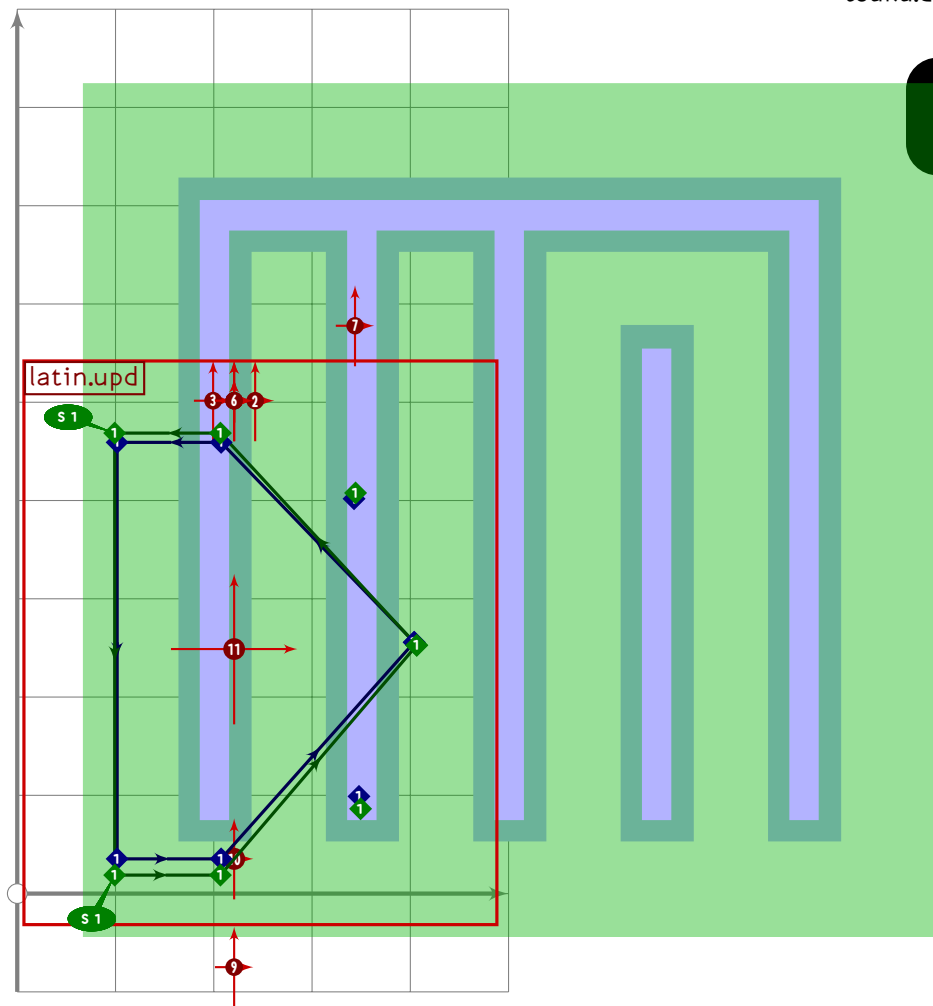
```

71 % B
72 begint Suglyph("b.sc";98);
73   tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upb))());
74   tsu_render;
75 endtsuglyph;
76

```



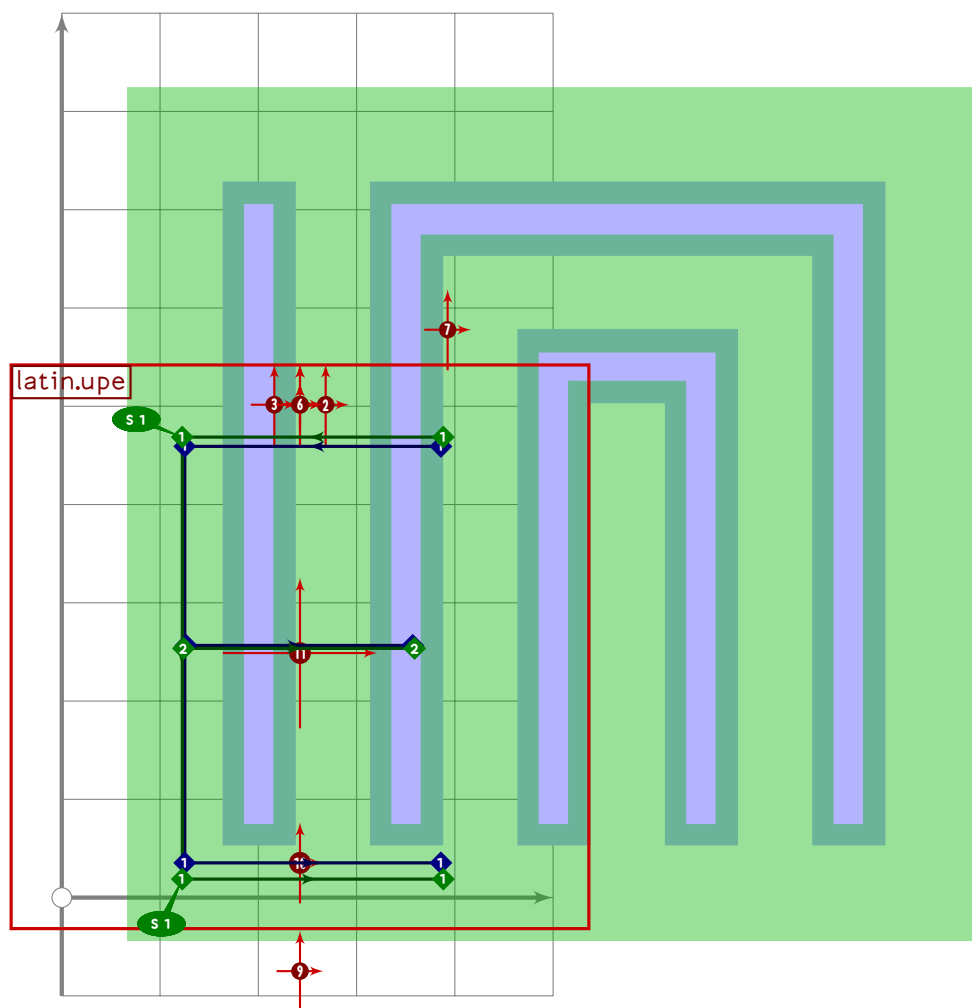
```
77 % C
78 begintsuglyph("c.sc";99);
79 tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upc))());
80 tsu_render;
81 endsuglyph;
82
```



```

83 % D
84 begintsuglyph("d.sc";100);
85   tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upd))());
86   tsu_render;
87 endtsuglyph;
88

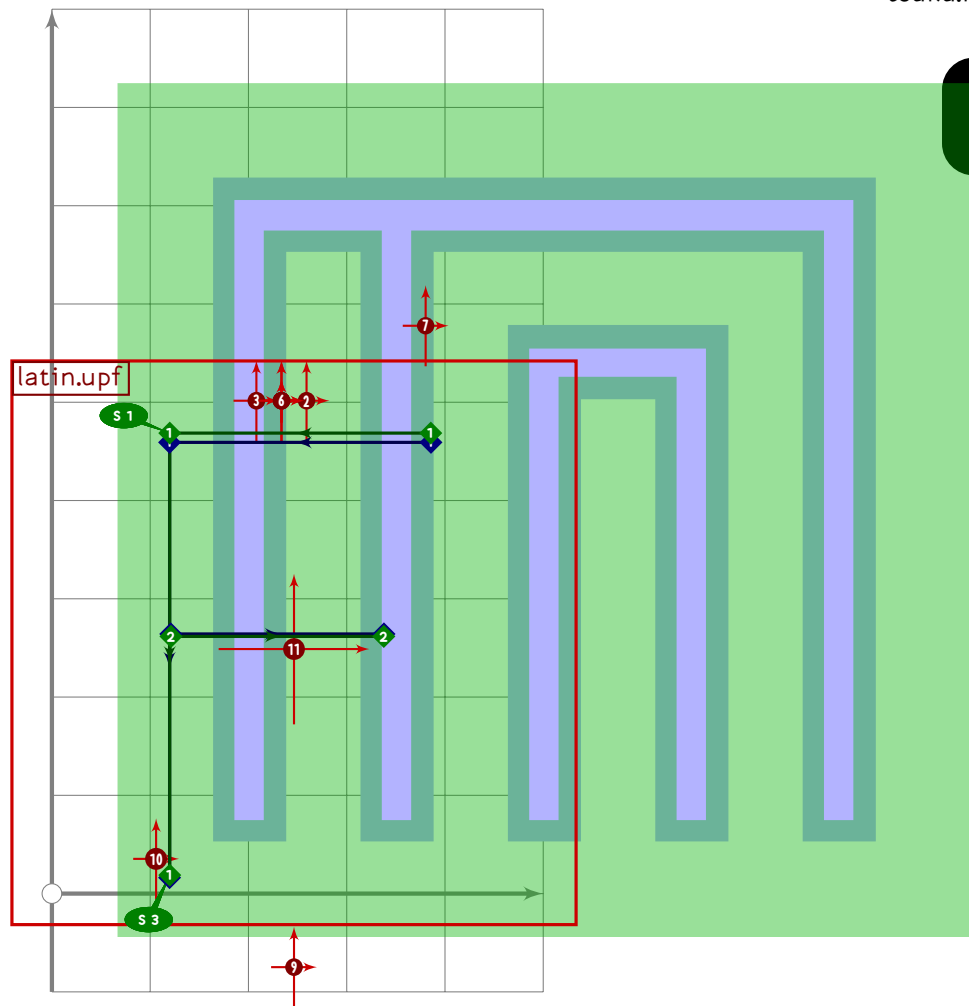
```



```

89 % E
90 begintsuglyph("e.sc",101);
91   tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.ue))());
92   tsu_render;
93 endsuglyph;
94

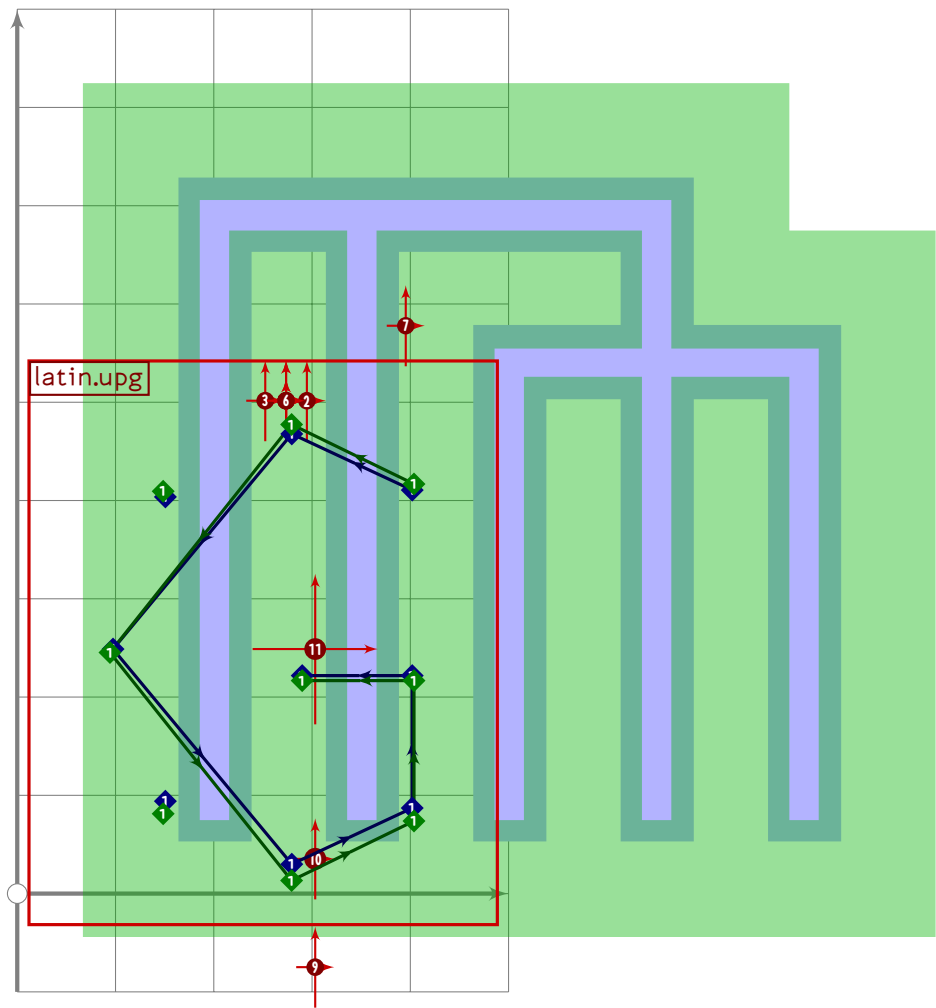
```



```

95 % F
96 begintsuglyph("f.sc";102);
97 tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upf))());
98 tsu_render;
99 endsuglyph;
100

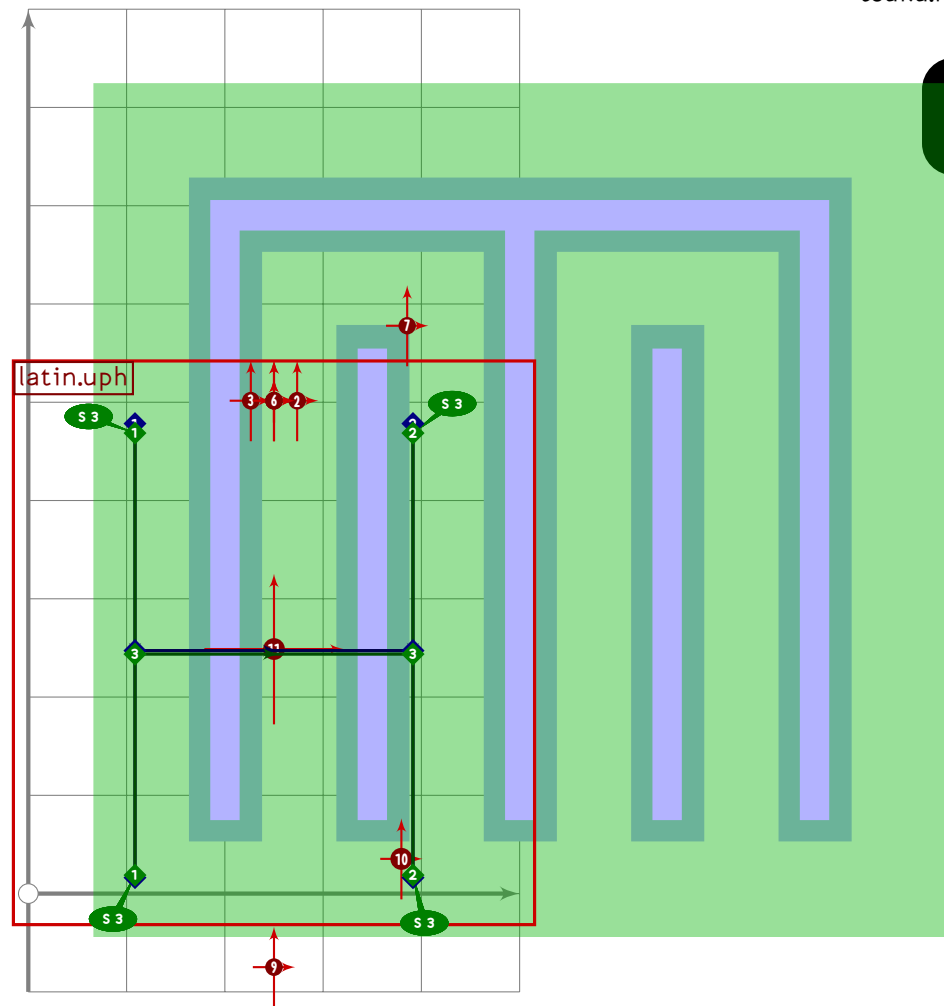
```



```

101 % G
102 begintsuglyph("g.sc";103);
103   tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upg))());
104   tsu_render;
105 endsuglyph;
106

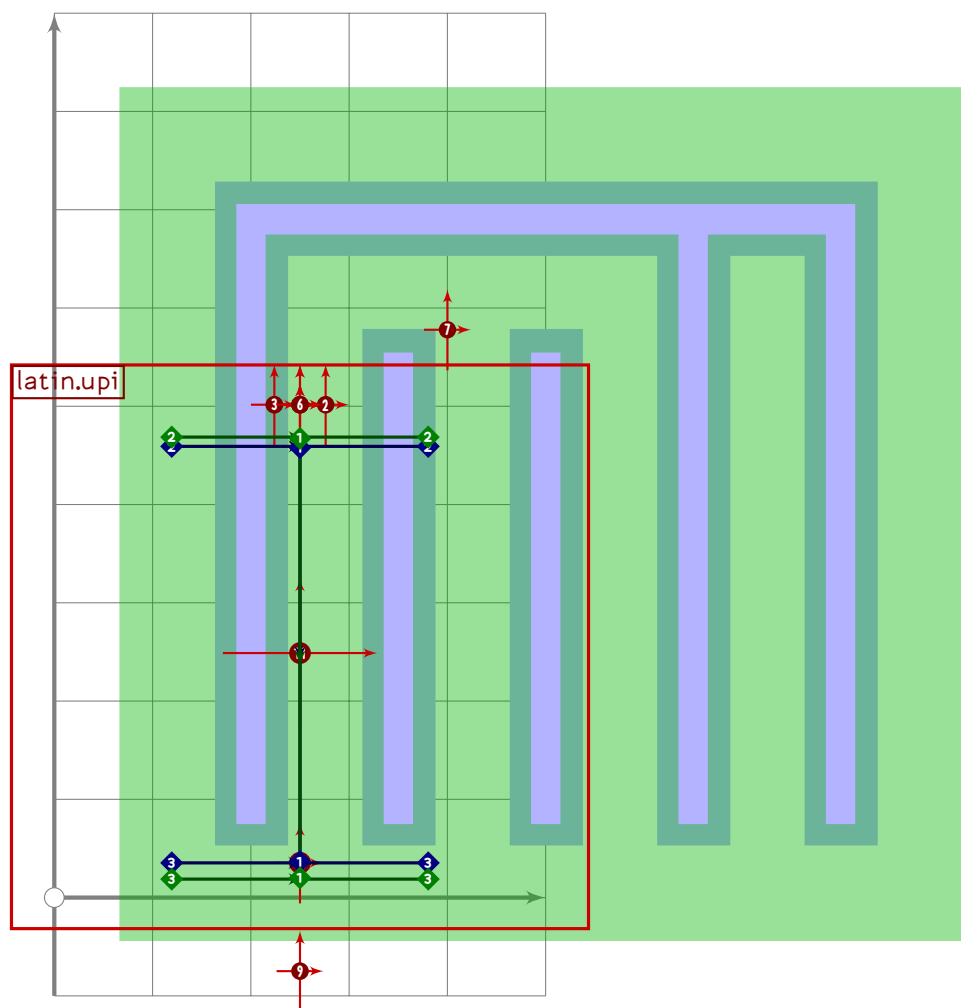
```



```

107 % H
108 begintsuglyph("h.sc",104);
109 tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.uph))());
110 tsu_render;
111 endsuglyph;
112

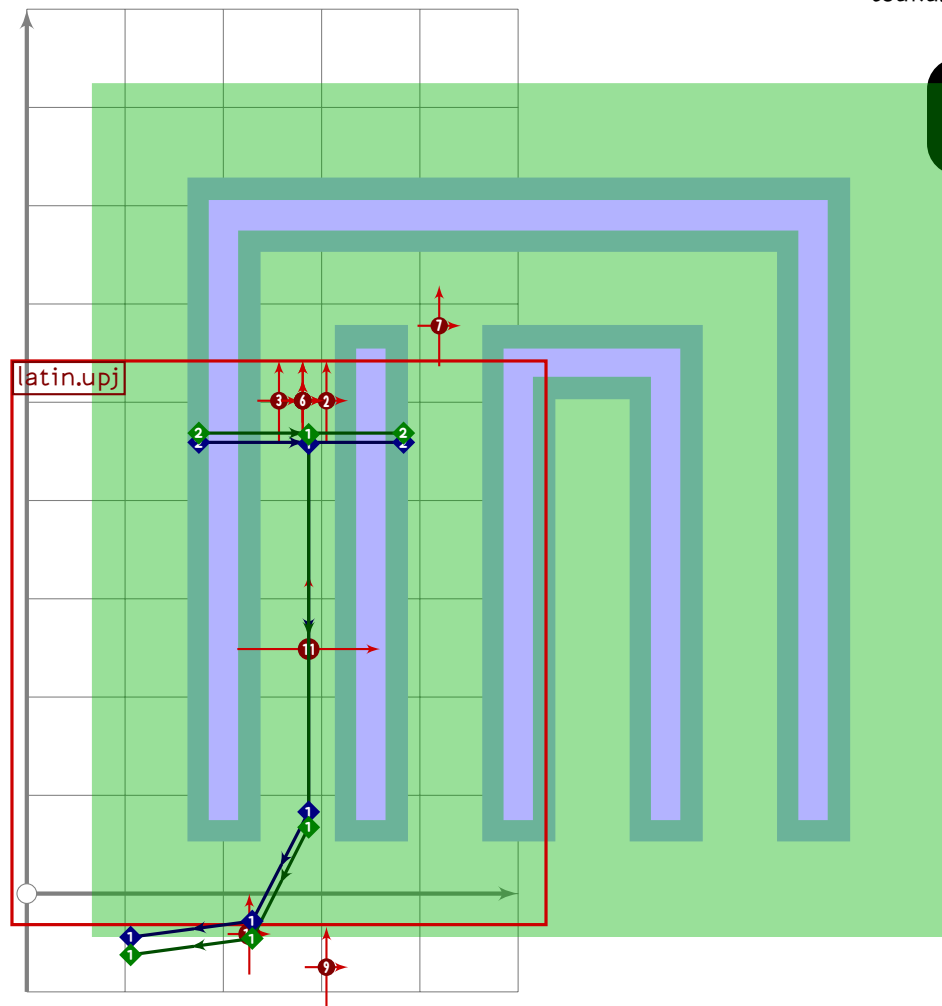
```



```

113 % I
114 begintsuglyph("i.sc";105);
115   tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upi))());
116   tsu_render;
117 endsuglyph;
118

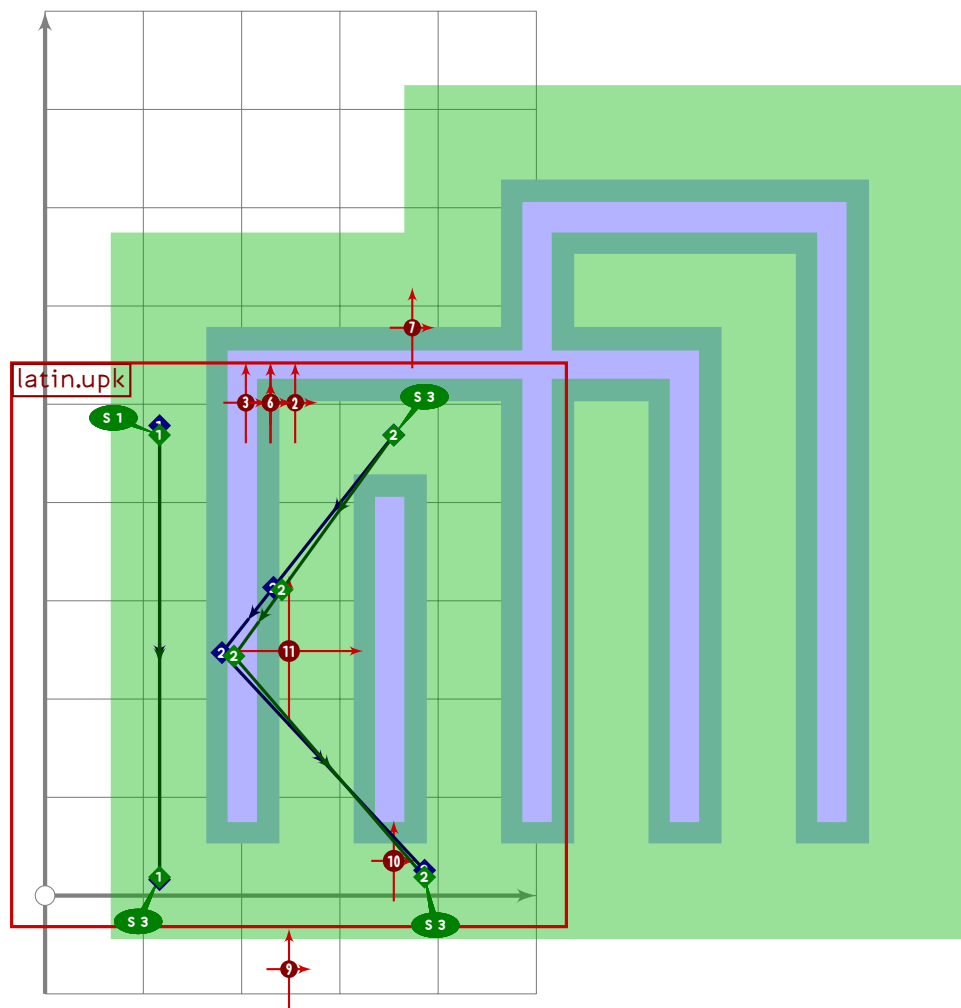
```

```

119 % J
120 begint Suglyph("j.sc";106);
121   tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upj))());
122   tsu_render;
123 endtsuglyph;
124

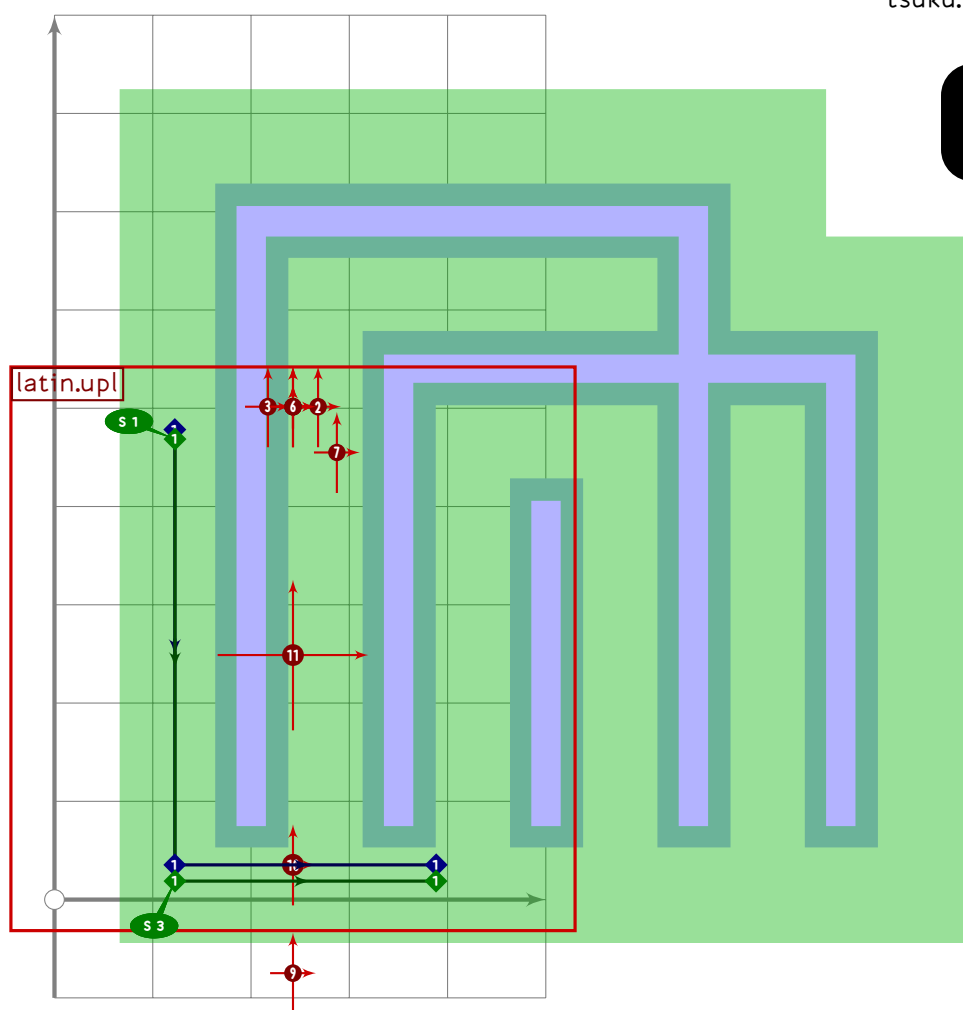
```



```

125 % K
126 beginsuglyph("k.sc",107);
127     tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upk))());
128     tsu_render;
129 endtsuglyph;
130

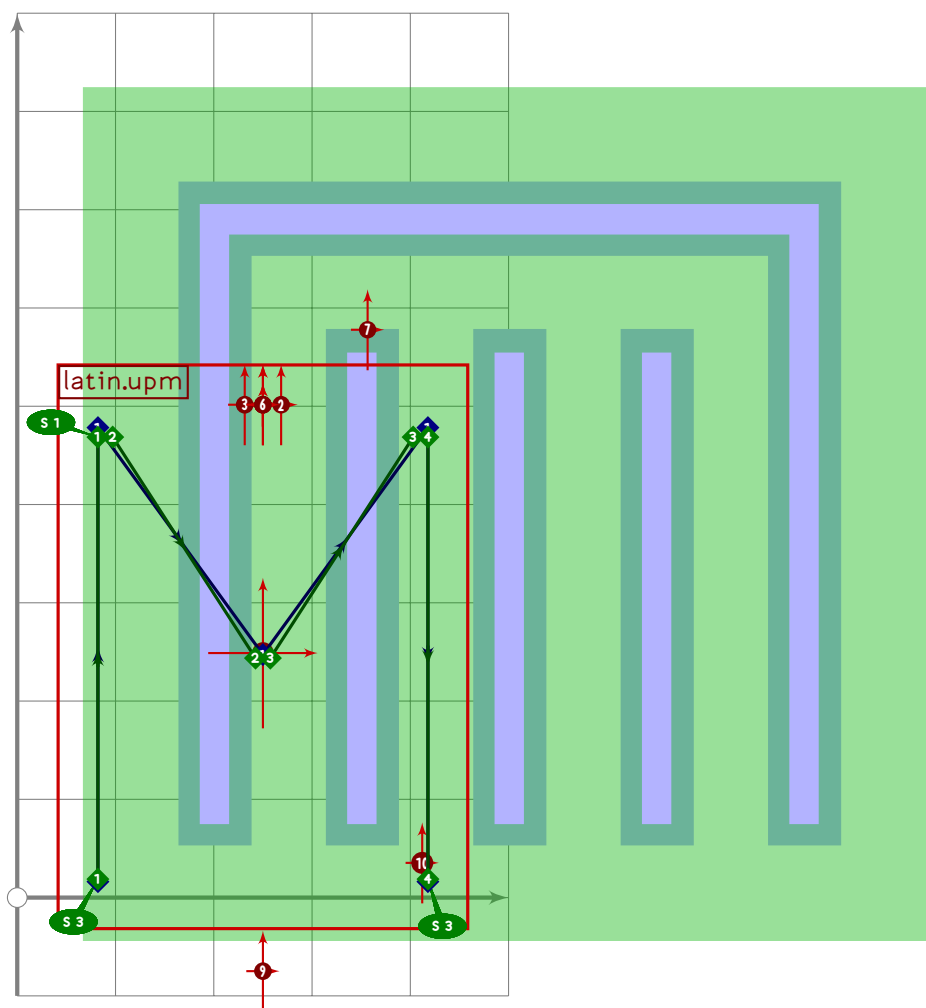
```



```

131 % L
132 begintsuglyph("l.sc";108);
133   tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upl))());
134   tsu_render;
135 endsuglyph;
136

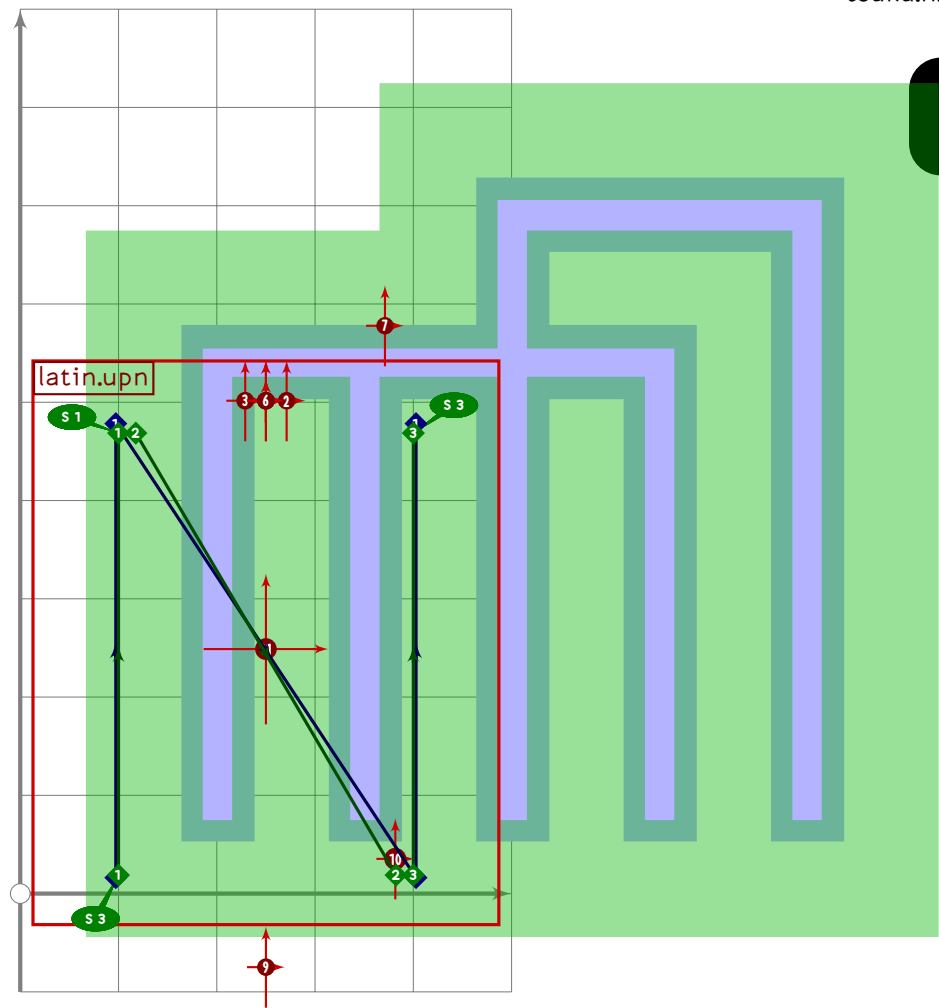
```



```

137 % M
138 begintsuglyph("m.sc",109);
139 tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upm))());
140 tsu_render;
141 endsuglyph;
142

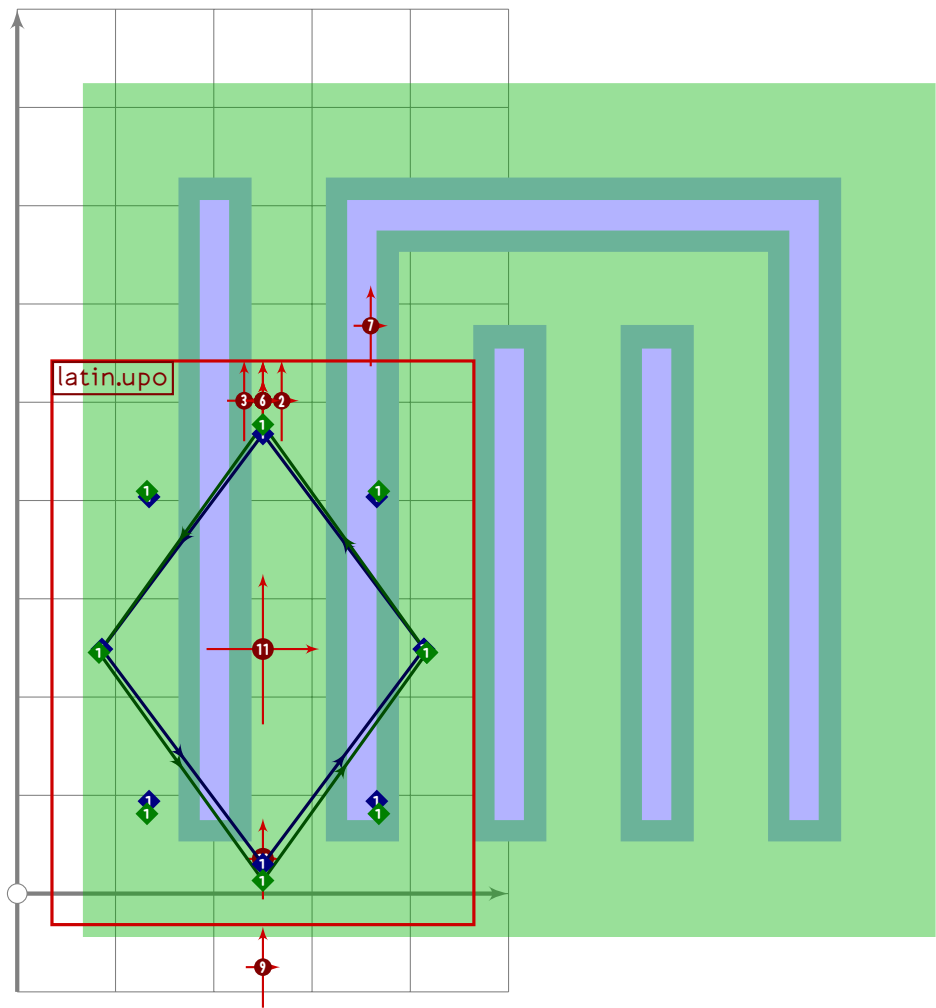
```



```

143 % N
144 begintsuglyph("n.sc",110);
145   tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upn))());
146   tsu_render;
147 endsuglyph;
148

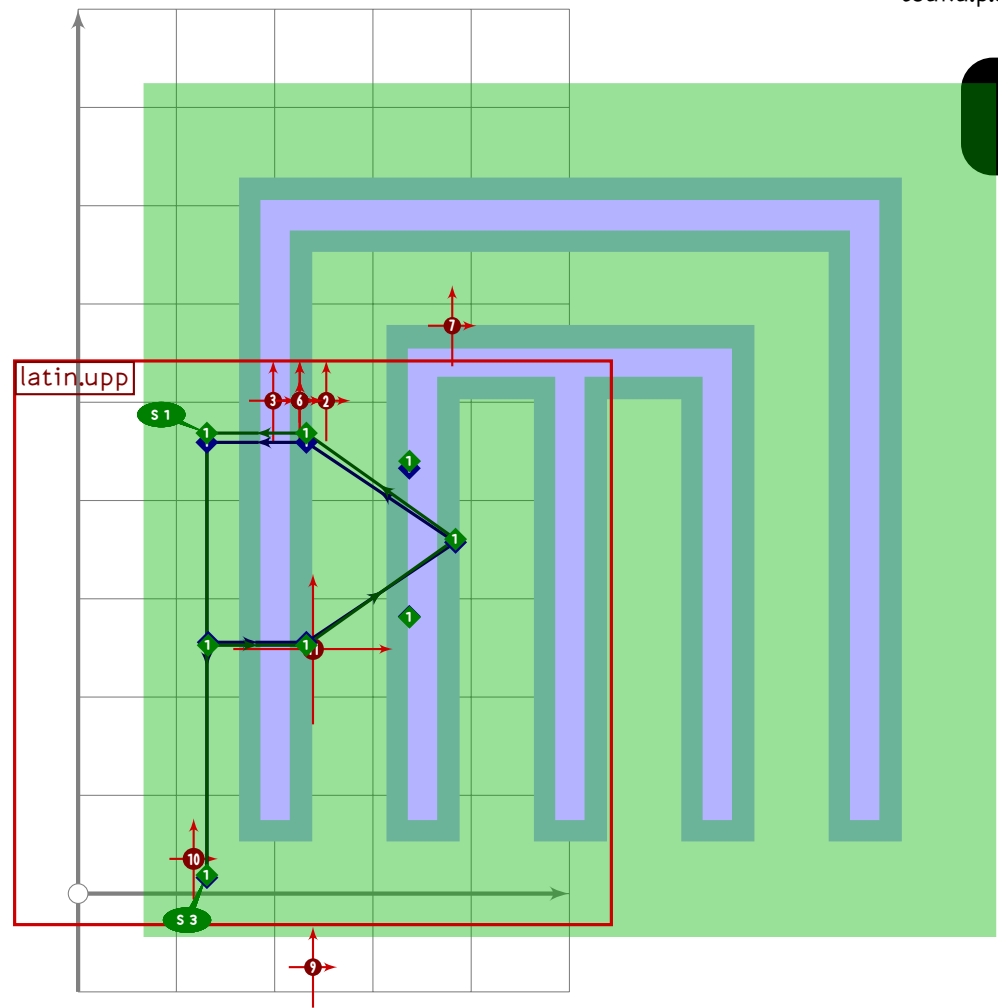
```



```

149 % O
150 begintsuglyph("o.sc";111);
151   tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upo))());
152   tsu_render;
153 endsuglyph;
154

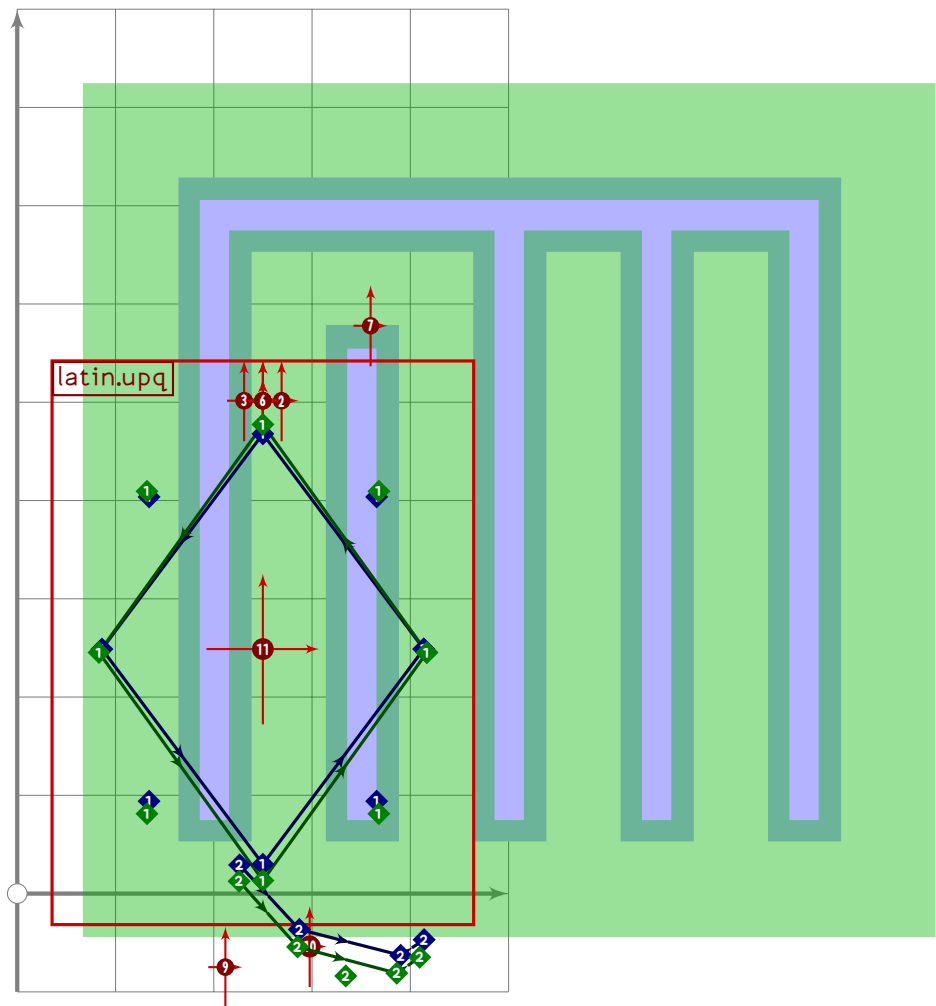
```



```

155 % P
156 begintsuglyph("p.sc",112);
157 tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upp))());
158 tsu_render;
159 endsuglyph;
160

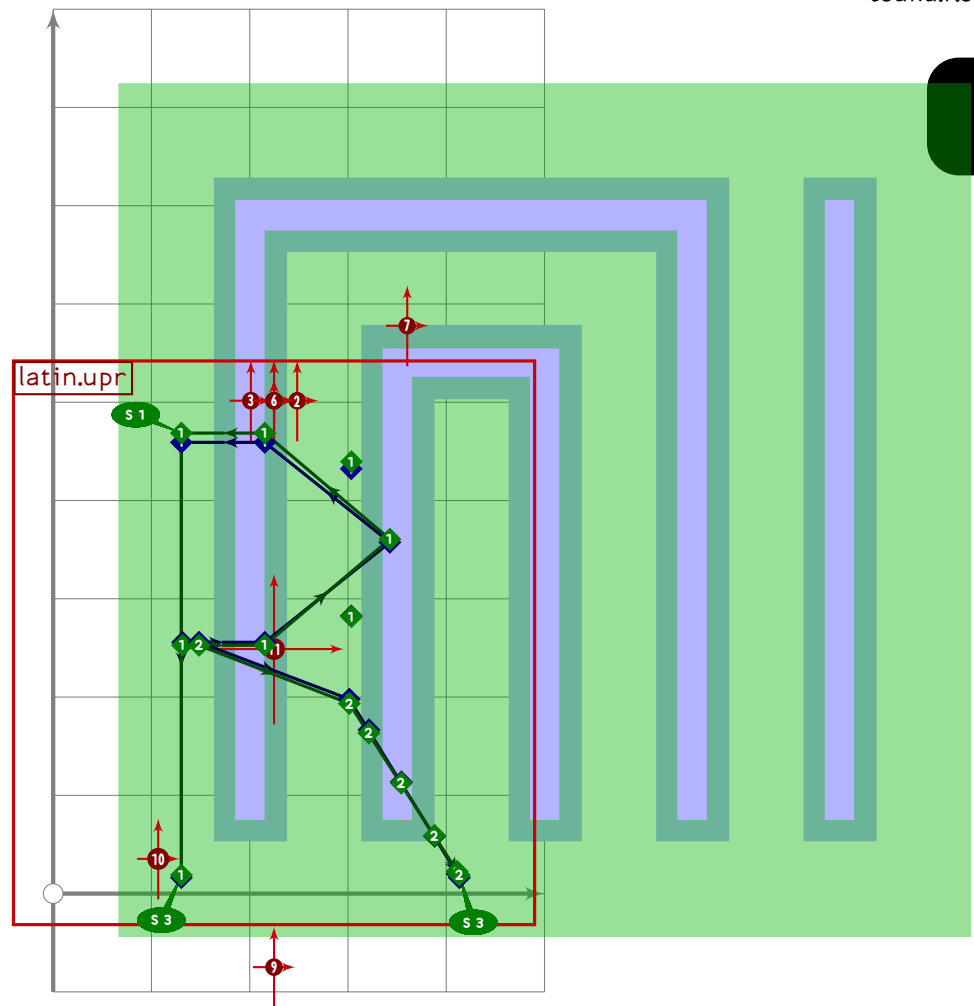
```



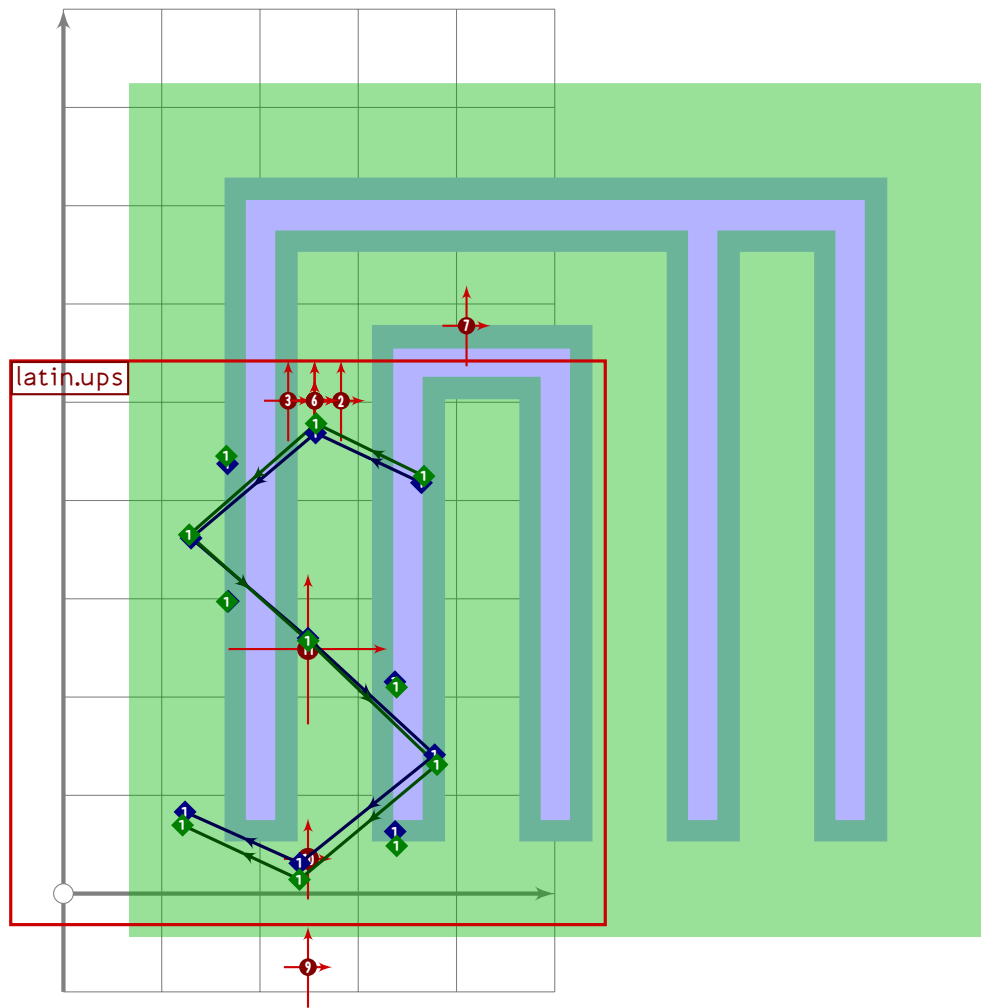
```

161 % Q
162 begintsuglyph("q.sc",113);
163   tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upq))());
164   tsu_render;
165 endsuglyph;
166

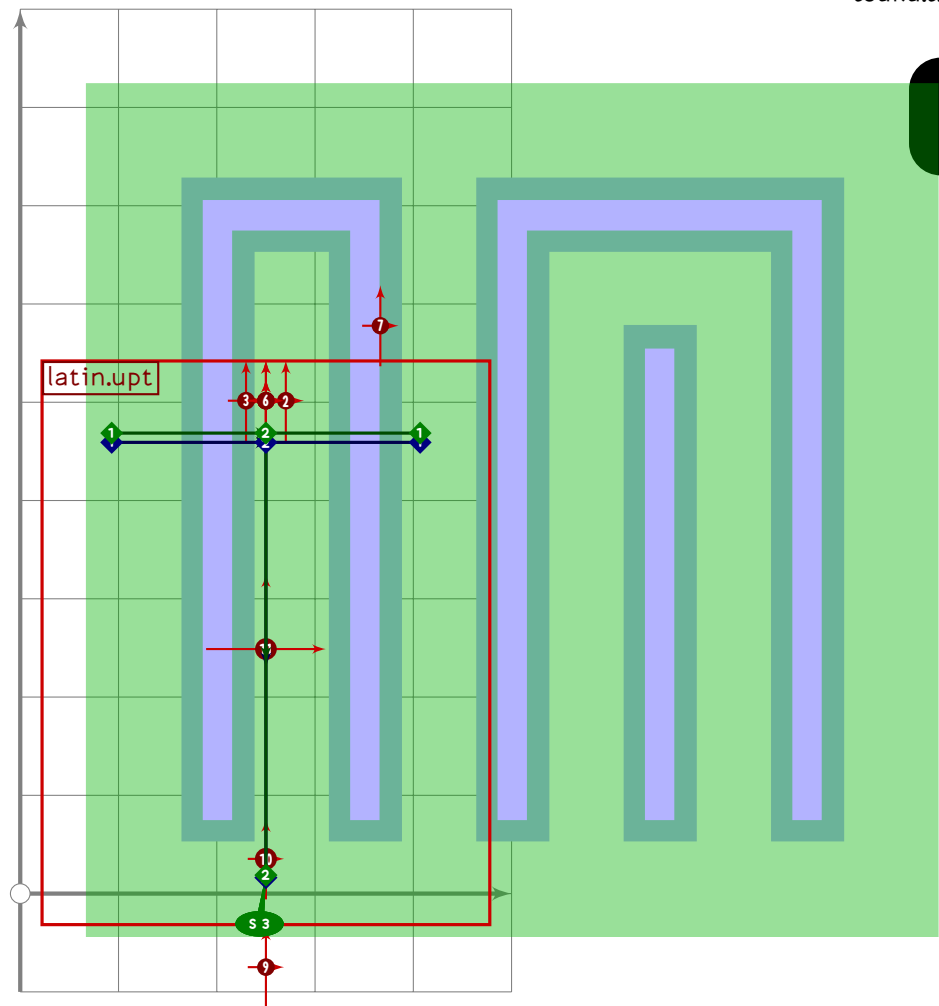
```

2907



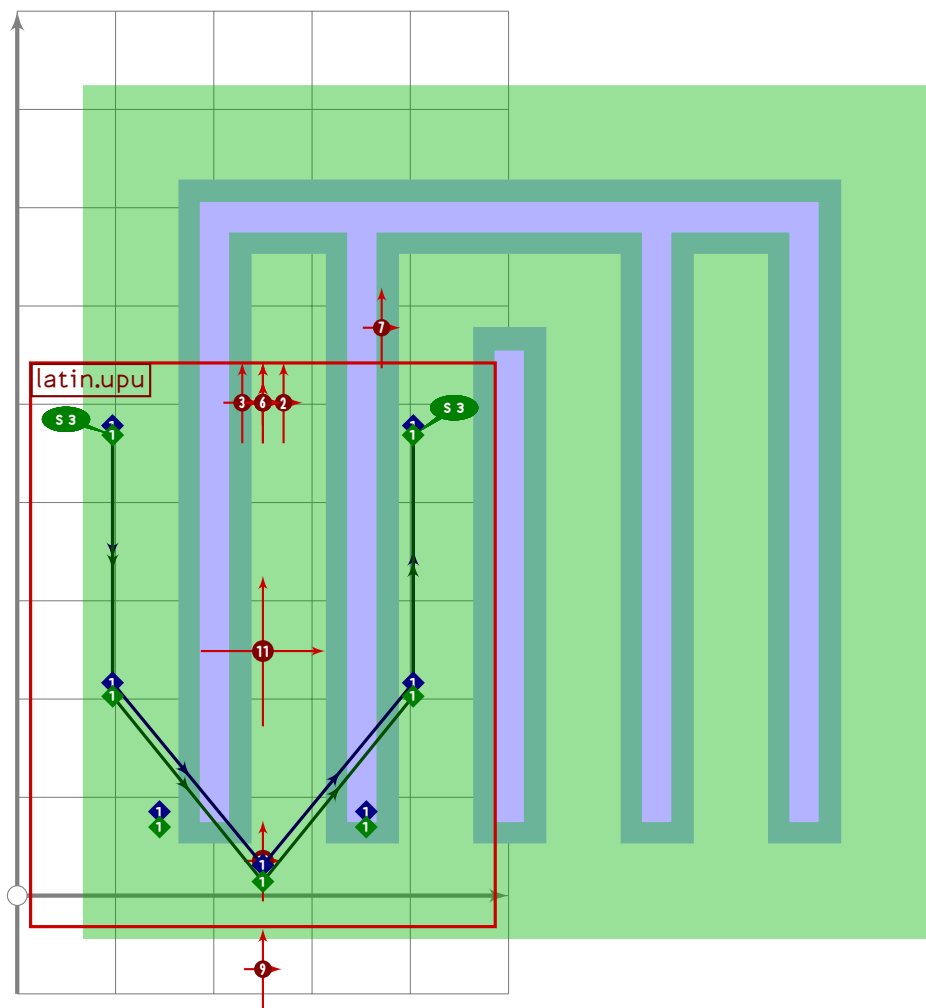
```
173 % S
174 begintsuglyph("s.sc",115);
175   tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.ups))());
176   tsu_render;
177 endsuglyph;
178
```



```

179 % T
180 begintsuglyph("t.sc",116);
181   tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upt))());
182   tsu_render;
183 endsuglyph;
184

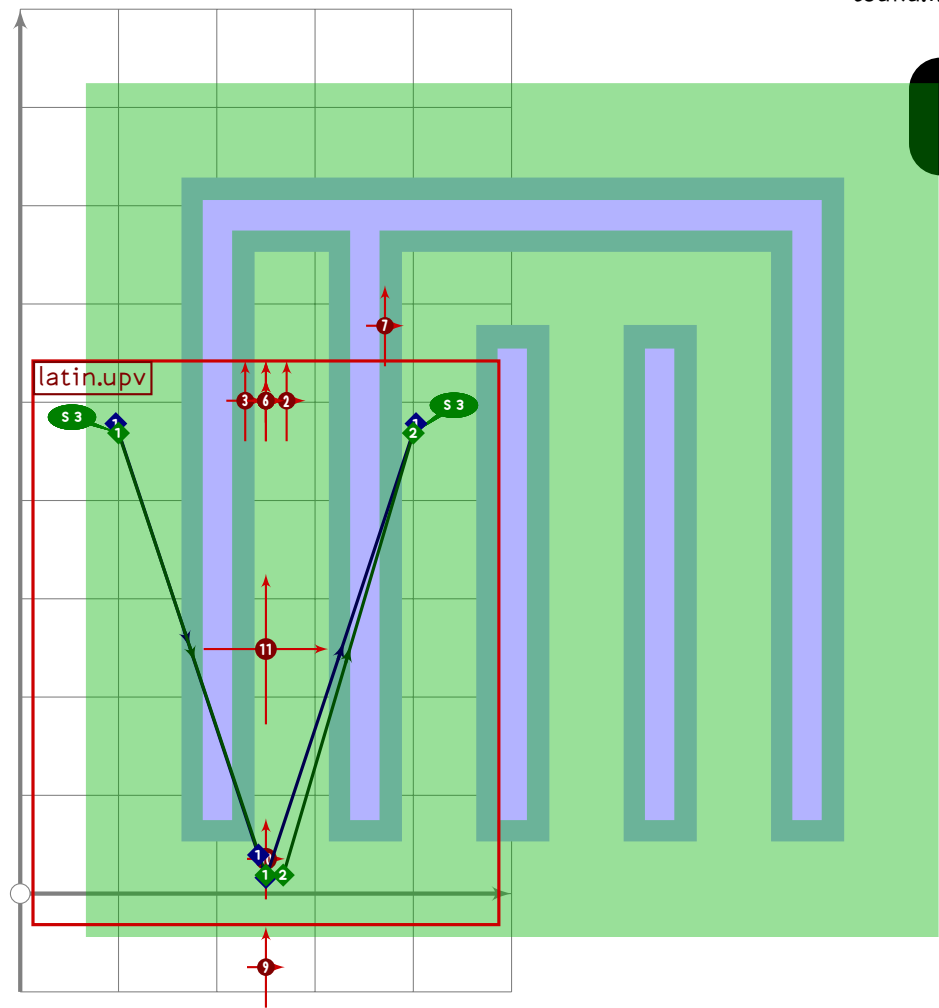
```



```

185 % U
186 begintsuglyph("u.sc";117);
187 tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upu))());
188 tsu_render;
189 endsuglyph;
190

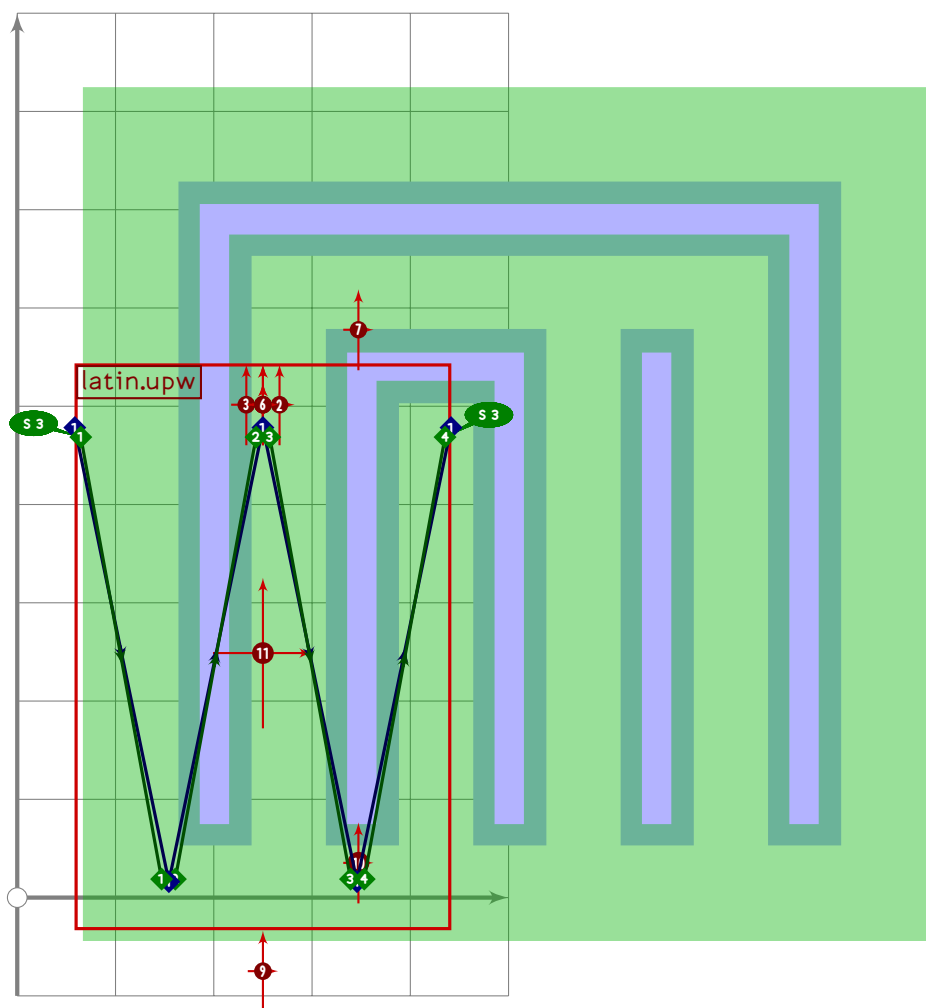
```



```

191 % V
192 begintsuglyph("v.sc",118);
193   tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upv))());
194   tsu_render;
195 endsuglyph;
196

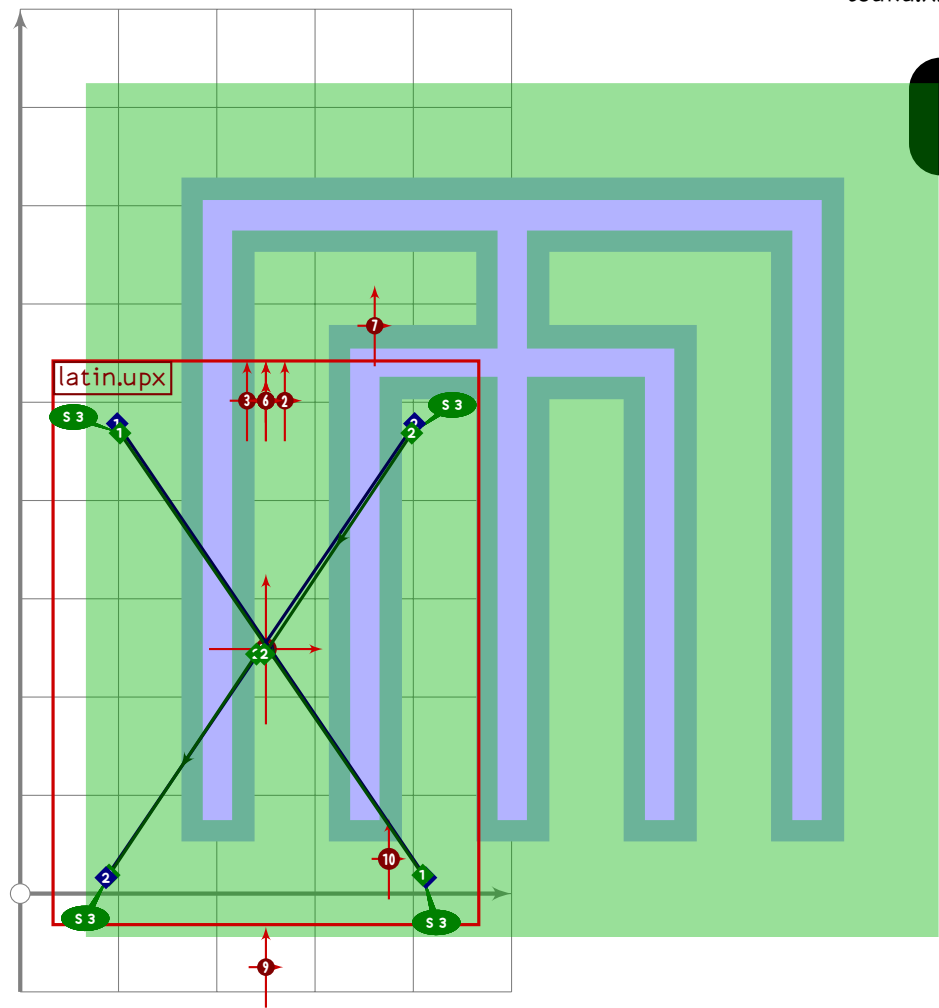
```



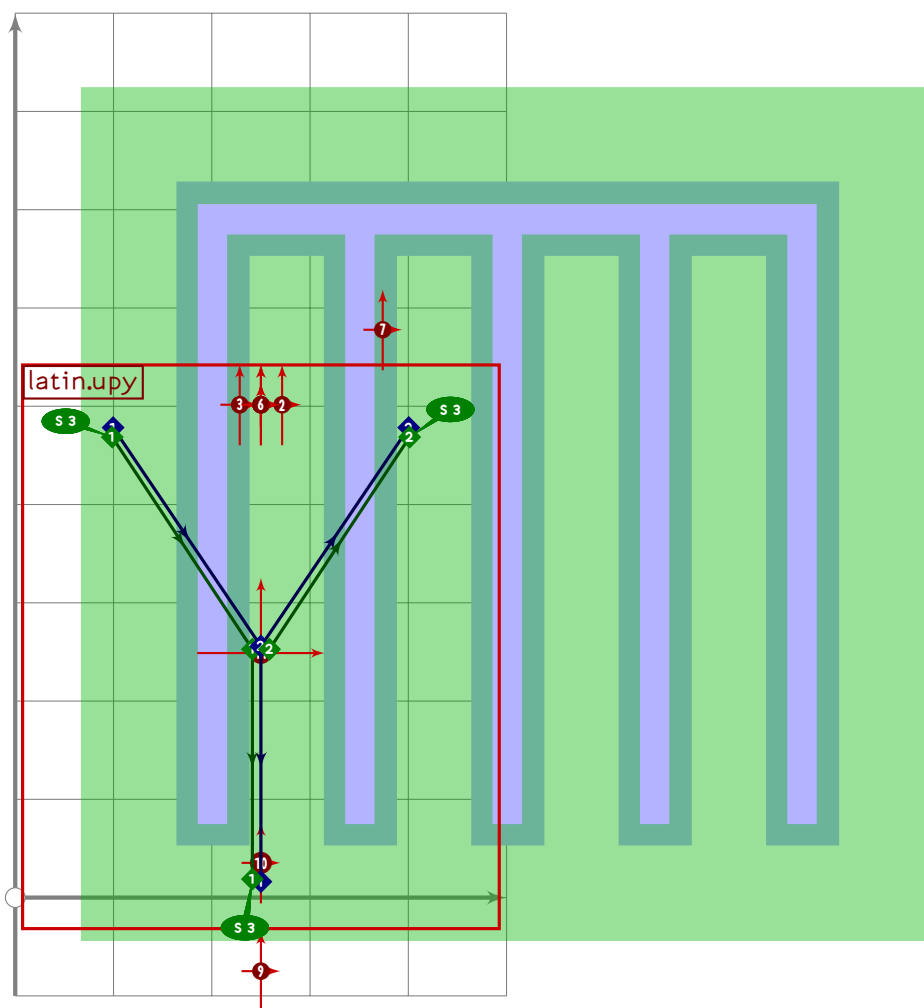
```

197 % W
198 begintsuglyph("w.sc",119);
199 tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upw))());
200 tsu_render;
201 endtsuglyph;
202

```



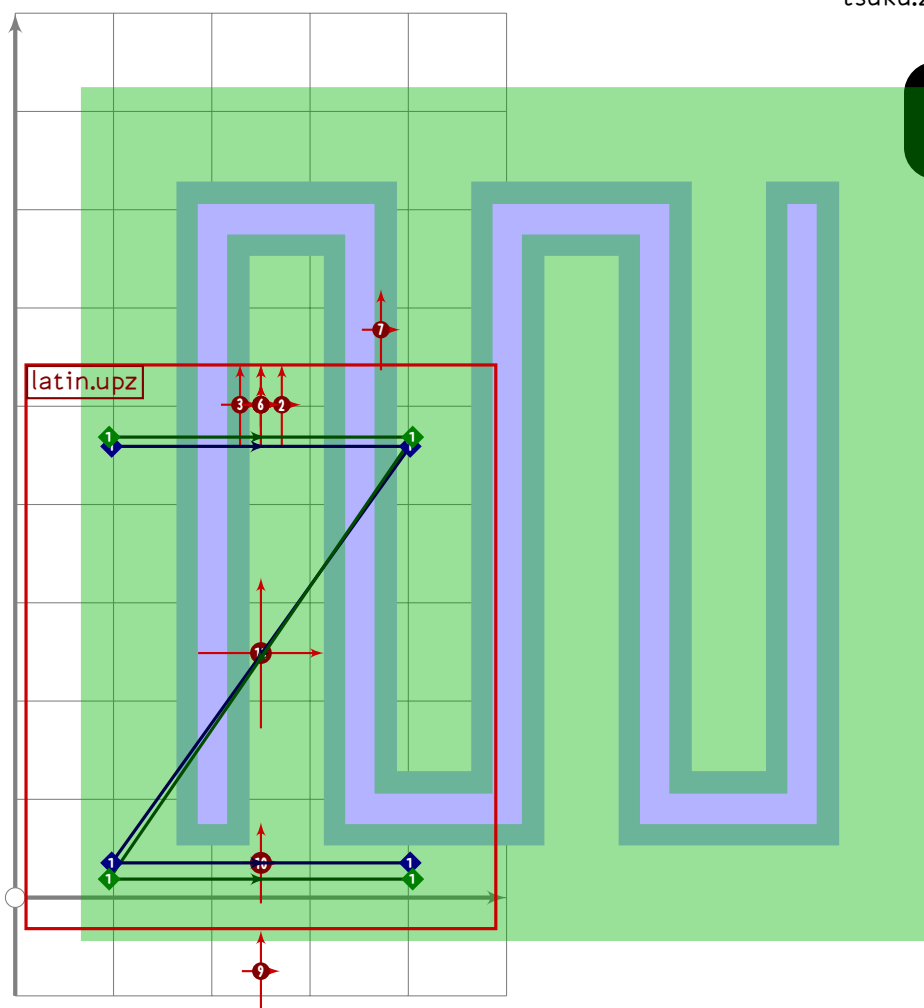
2913



```

209 % Y
210 begintsuglyph("y.sc";121);
211   tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upy))());
212   tsu_render;
213 endsuglyph;
214

```

```

215 % Z
216 begintsuglyph("z.sc",122);
217   tsu_xform(tsu_xf.sc)(tsu_accent.apply(tsu_accent.capital(latin.upz))());
218   tsu_render;
219 endsuglyph;
220
221 _____
222
223 endfont;
224
225 _____

```

tsuku-f9.mp

F9

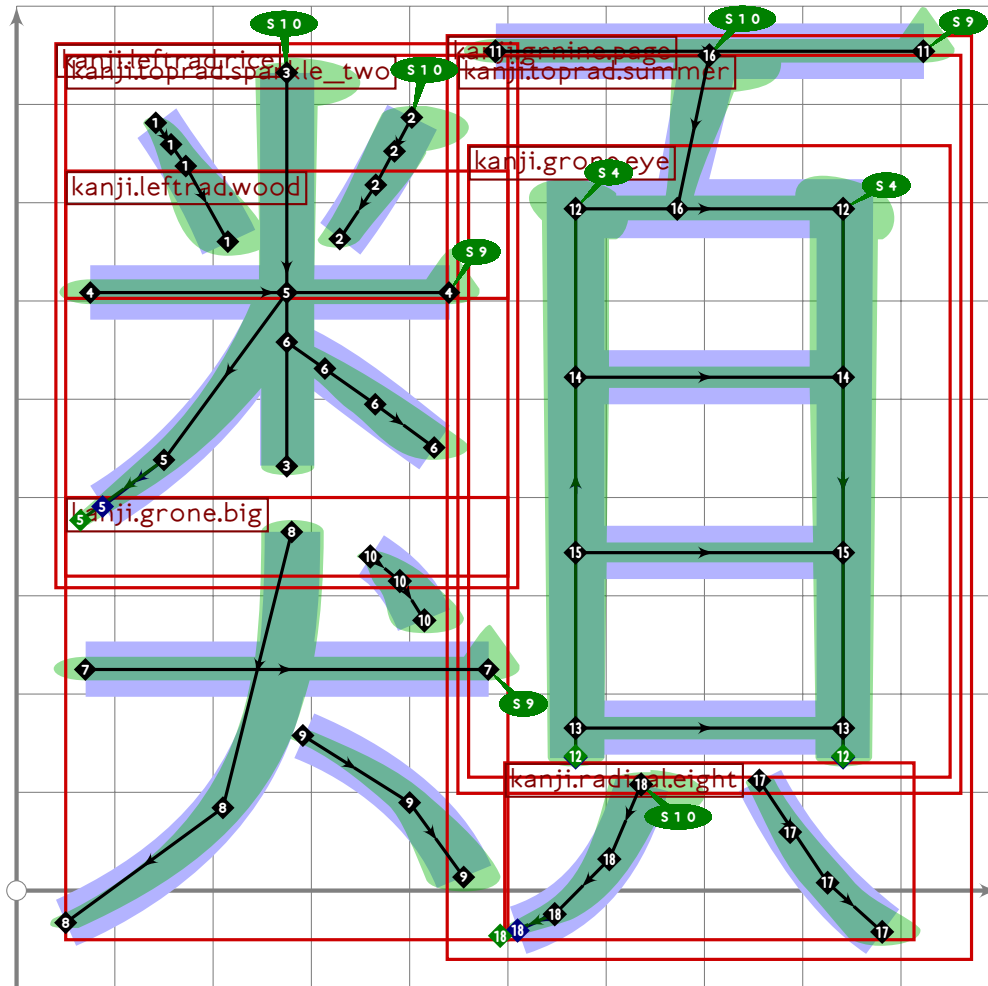
```
1 %
2 % Unicode page F9 (Han compatibility characters) for Tsukurimashou
3 % Copyright (C) 2013 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input buildkanji.mp;
37 input gradenine.mp;
38 input gradeone.mp;
39 input leftrad.mp;
40 input radical.mp;
41 input toprad.mp;
42
43 do_late_includes;
44
45 

---


46
```



F9

```

47 % standard form of U+985E except in Japan and Vietnam
48 begintsuglyph("uniF9D0";208);
49   build_kanji.level(build_kanji.lr(480,40)
50     (build_kanji.lift_skirt(200,40)(build_kanji.tb(360,80)
51       (kanji.leftrad.rice;
52         replace_stroke(-3)(subpath (0,0.8) of oldp))
53       (kanji.leftrad.big;
54         push_stroke((670,730)..(730,680)..(780,600),
55           (1,1)–(14,14)–(18,18))))))
56     (kanji.grnine.page));
57   tsu_render;
58 endtsuglyph;
59
60
61
62 endfont;
63
64

```

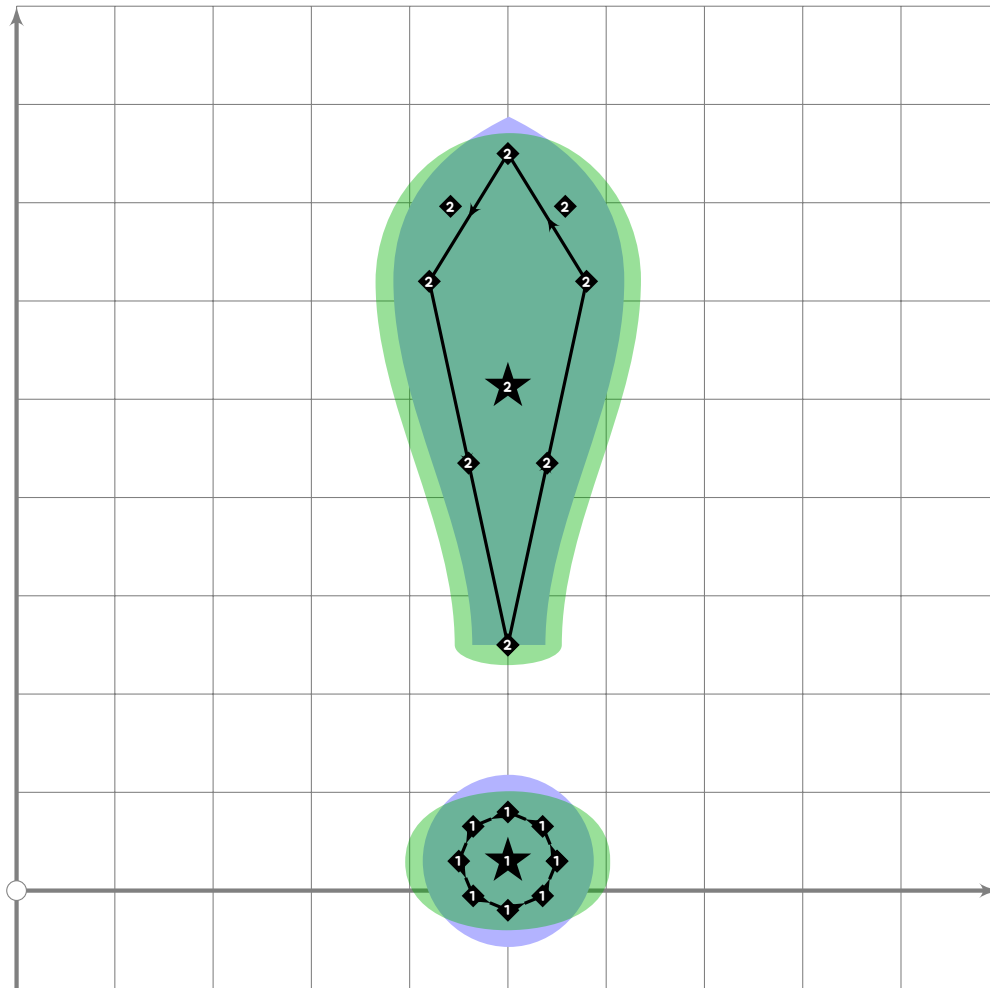
tsuku-ff.mp

FF

```
1 %
2 % Unicode page FF (Full-width and Half-width Forms) for Tsukurimashou
3 % Copyright (C) 2011, 2012 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 do_late_includes;
46
47 _____
48
```

Full-Width Forms

```
49 % FULL-WIDTH FORMS
50
51 % WARNING this code is substantially duplicated in tsuku-00; just
52 % enough differences to make sharing impractical
53
```



FF

```

54 % exclamation point
55 begintsuglyph("uniFF01",1);
56   if tsu_pbrush_size>=tsu_punct_size:
57     push_lcblob(fullcircle
58       xscaled (tsu_punct_size+tsu_pbrush_size)
59       yscaled (tsu_punct_size+tsu_pbrush_size*tsu_pbrush_shape)
60       rotated tsu_pbrush_angle
61       shifted (500,30));
62   else:
63     push_stroke(fullcircle scaled tsu_punct_size shifted (500,30),
64       (2,2)-(2,2)-(2,2)-(2,2)-cycle);
65     if tsu_pbrush_size>=3:
66       push_lcblob(get_stroke(0));
67     fi;
68   fi;
69
70   push_stroke((500,250){up}..(580,620){up}..{curl 1}(500,750){curl 1}..
71     (420,620){down}..{down}(500,250),
72     (2,2)-(2,2)-(2,2)-(2,2)-(2,2));
73
74   if tsu_pbrush_size>=30:

```

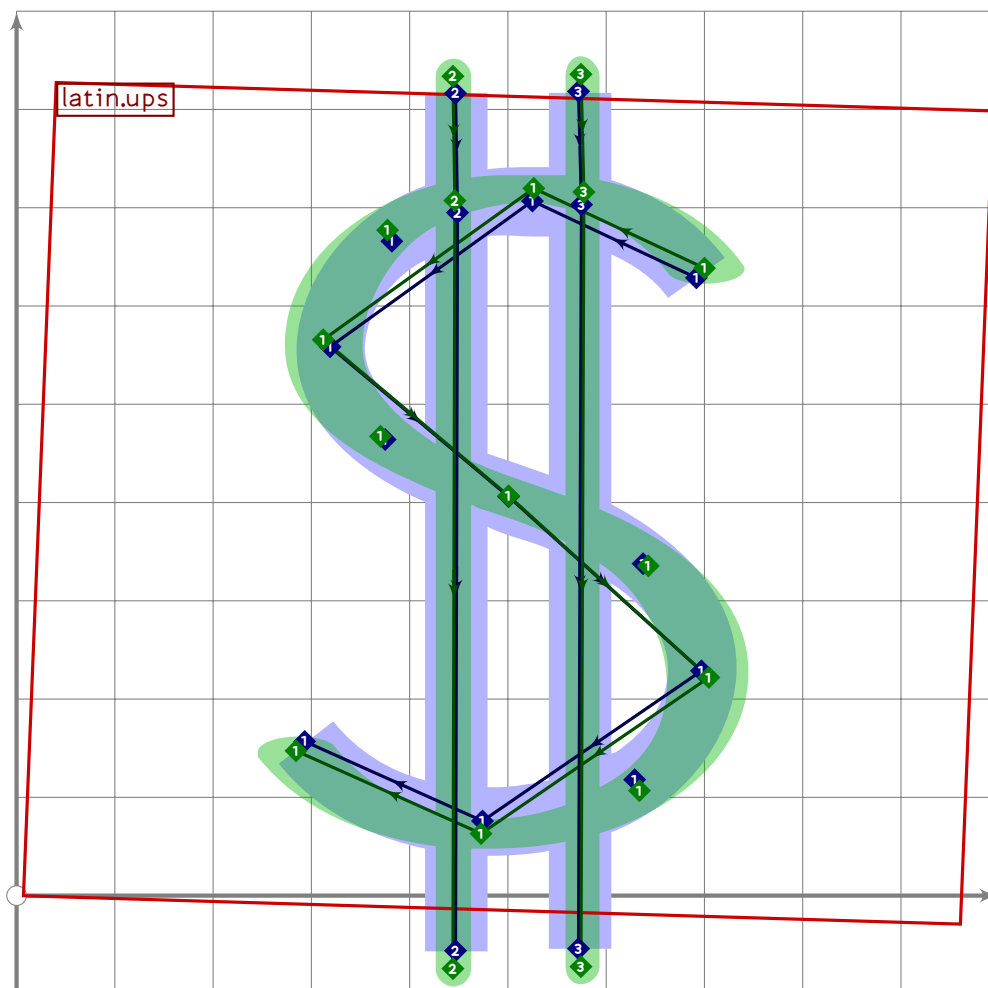
U+FF04
tsuku.uniFF04

```
75     push_lcblob((subpath (0,1,3,9) of get_strokep(0))-cycle);
76     fi;
77     tsu_render;
78 endtsuglyph;
79
80 % ASCII (neither left nor right) quotation mark
81 begintsuglyph("uniFF02";2);
82     punct.asciiquote;
83     tsu_render;
84 endtsuglyph;
85
86 % number sign
87 begintsuglyph("uniFF03";3);
88     punct.numbersign;
89     tsu_render;
90 endtsuglyph;
91
```

[see page 363]

[see page 386]

FF



```
92 % dollar sign
93 begintsuglyph("uniFF04";4);
94     tsu_xform(identity shifted -centre_pt
95         rotated -2 xyscaled (1.06,0.92) shifted centre_pt)(latin.ups);
```

```

96
97  numeric x[],y[];
98  x1=x2=0.38[xpart llcorner get_strokep(0),xpart lrcorner get_strokep(0)];
99  x3=x4=0.69[xpart llcorner get_strokep(0),xpart lrcorner get_strokep(0)];
100 y1=y3=1.12[latin_wide_low_r,latin_wide_high_r];
101 y2=y4=(-0.15)[latin_wide_low_r,latin_wide_high_r];
102
103 z5=(get_strokep(0) intersectionpoint (z1-z2))+(2,-1);
104 push_stroke((z1-z5-z2) shifted (0,1),
105   (2,2)-(2,2)-(2,2));
106 set_bosize(0,85);
107 set_boalternate(0);
108
109 z6=(get_strokep(-1) intersectionpoint (z3-z4))+(3,1);
110 push_stroke((z3-z6-z4) shifted (0,1),
111   (2,2)-(2,2)-(2,2));
112 set_bosize(0,85);
113 set_boalternate(0);
114
115 tsu__render;
116 endtsuglyph;
117
118 % percent
119 begintsuglyph("uniFF05";5);
120 punct.percent;
121 tsu__render;
122 endtsuglyph;
123
124 % ampersand
125 begintsuglyph("uniFF06";6);
126 punct.ampersand;
127 tsu__render;
128 endtsuglyph;
129

```

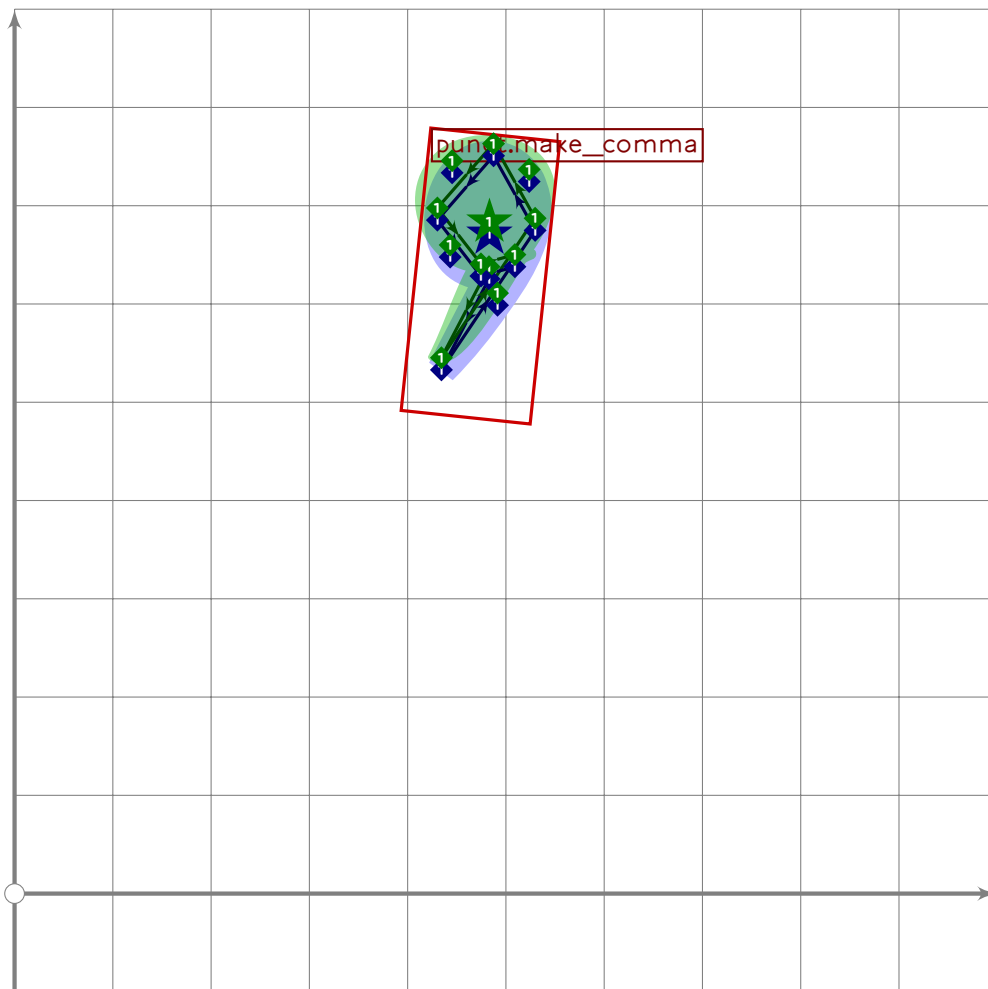
FF

[see page 390]

[see page 362]

U+FF07
tsuku.uniFF07

FF



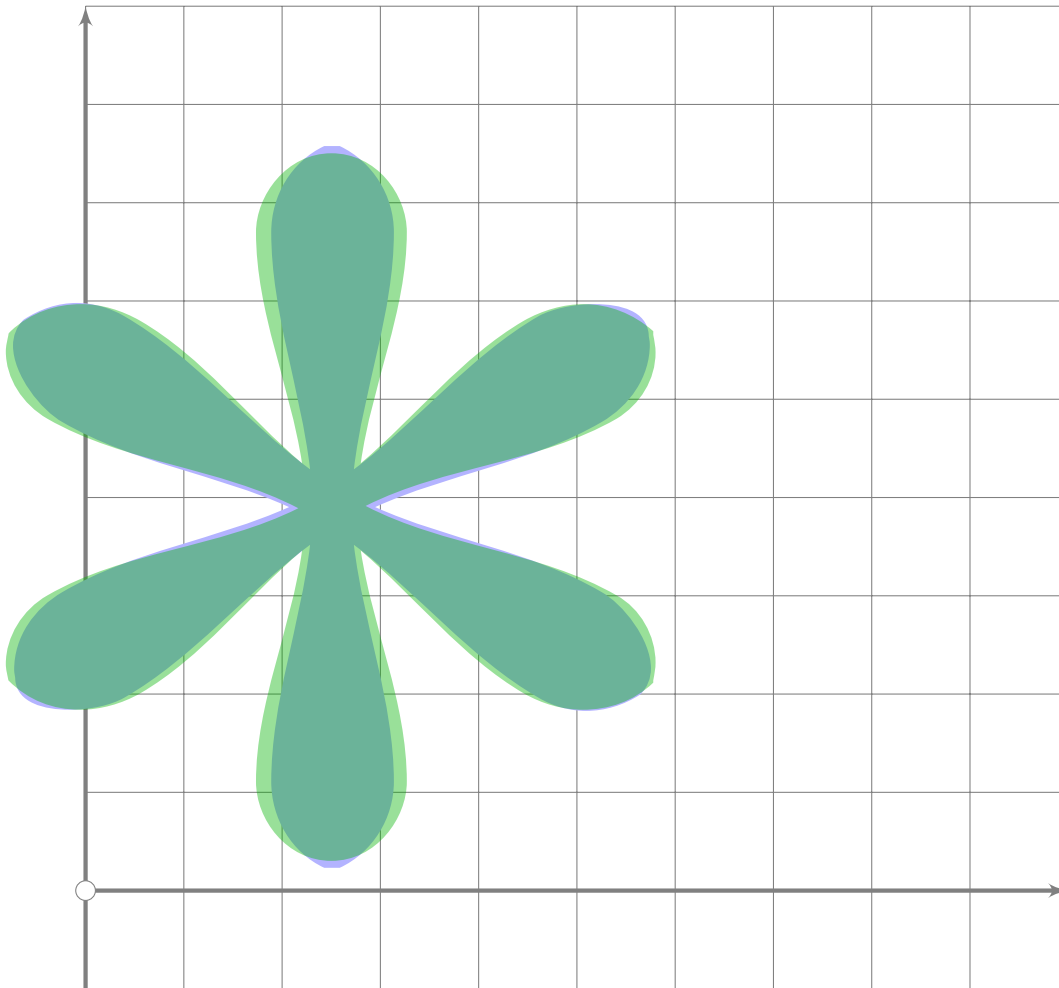
```

130 % apostrophe
131 begintsuglyph("uniFF07";7);
132 punct.make_comma((480,vmetric(0.94)),0);
133 tsu_render;
134 endtsuglyph;
135
136 % left and right parentheses
137 begintsuglyph("uniFF08";8);
138 punct.paren_left;
139 tsu_render;
140 endtsuglyph;
141 begintsuglyph("uniFF09";9);
142 punct.paren_right;
143 tsu_render;
144 endtsuglyph;
145

```

[see page 388]

[see page 389]



FF

```

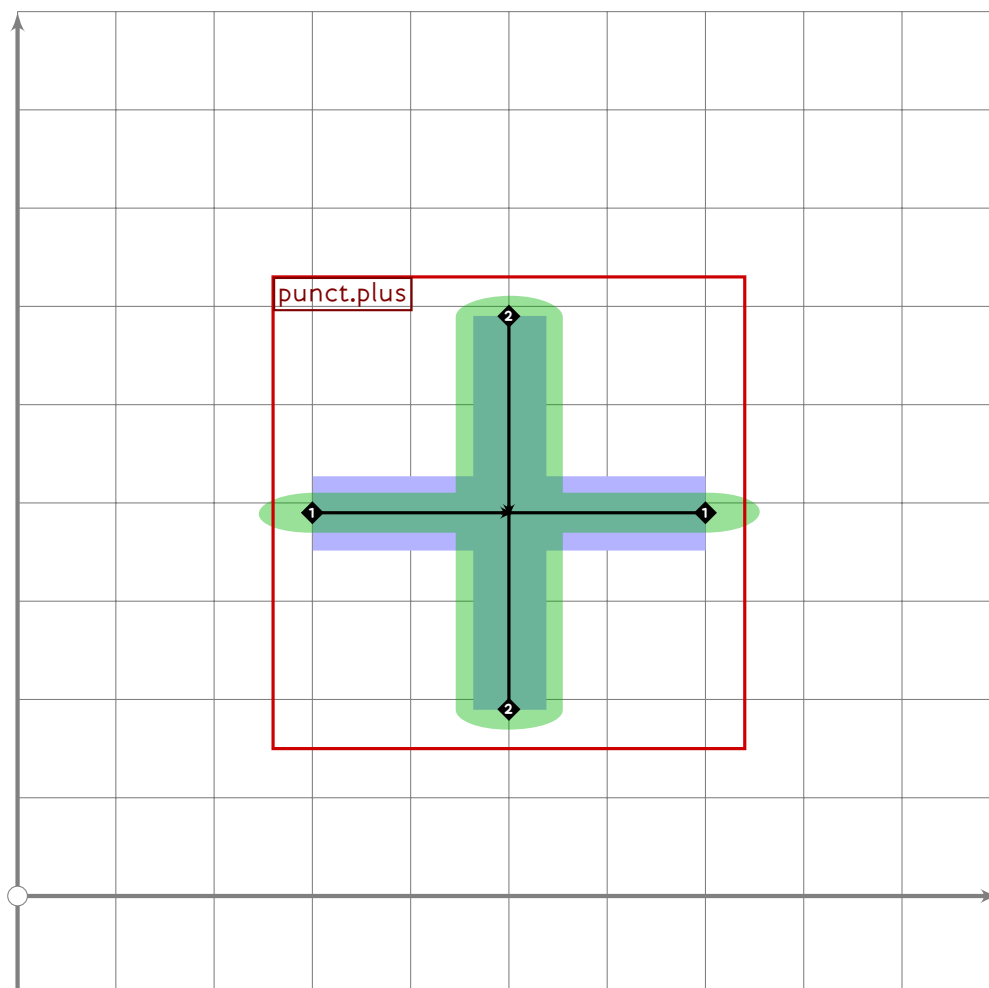
146 % asterisk
147 begint Suglyph("uniFF0A";10);
148   begingroup
149     save lobe, glyph, nlobes;
150     path lobe, glyph;
151     numeric nlobes;
152
153     lobe:=(1,0){up}..((1+tsu_brush_max)*tsu_punct_size/4,280){up}
154       ..{curl 1}{0,350}{curl 1}
155       ..(-(1+tsu_brush_max)*tsu_punct_size/4,280){down};
156     if rescale_slant>50:
157       lobe:=(lobe..(-1,0){down}..(0,-1)..cycle) scaled (tsu_punct_size/90);
158       nlobes:=5;
159     else:
160       lobe:=(lobe..(lobe rotated 180)..cycle) scaled (tsu_punct_size/100);
161       nlobes:=3;
162     fi;
163
164     default_nib:=fix_nib(50*tsu_brush_max,
165       50*tsu_brush_max*tsu_brush_shape,
166       tsu_brush_angle);

```

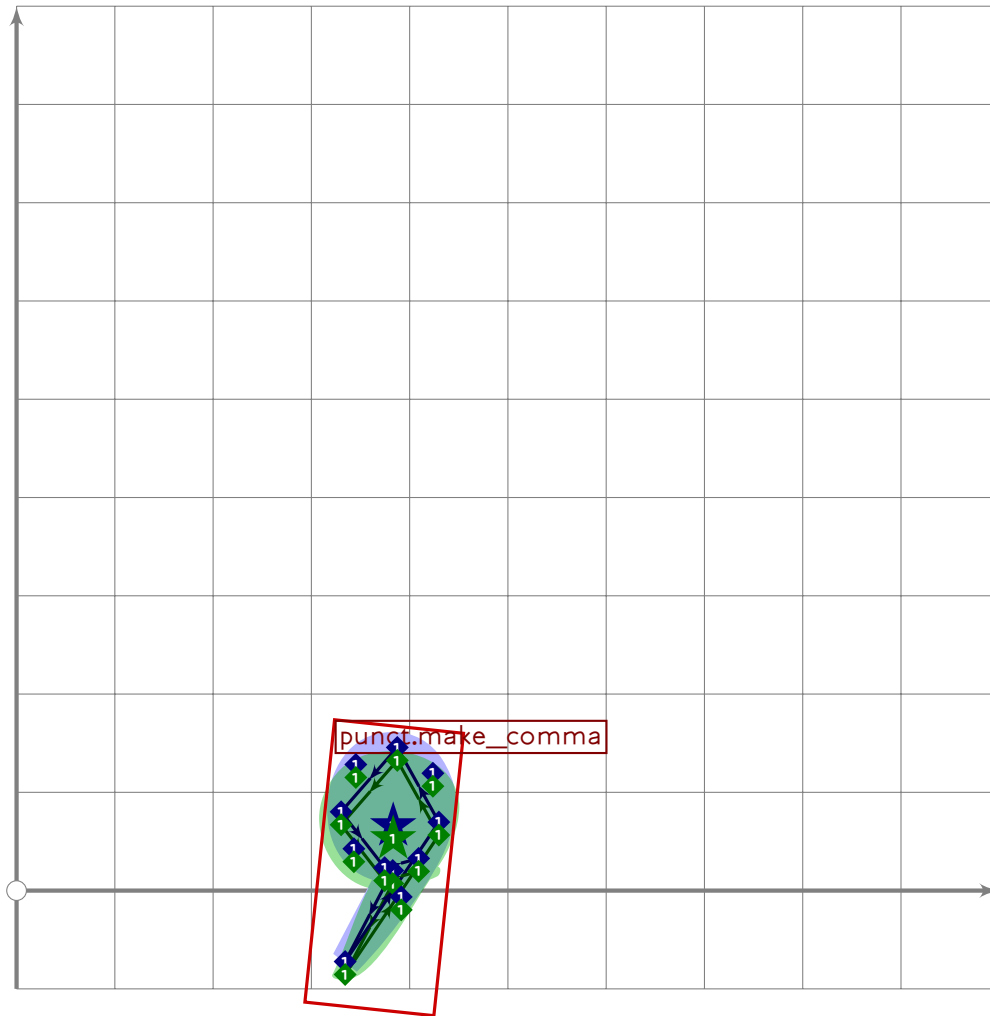
U+FF0B
tsuku.uniFF0B

```
167
168   for i:=0 upto nlobes-1:
169       pen_stroke()(lobe rotated (i*360/nlobes)
170                   shifted (centre_pt+(-250,0)))(glyph);
171       dangerousFill glyph.r;
172   endfor;
173 endgroup;
174 endtsuglyph;
175
```

FF



```
176 % plus
177 begint Suglyph("uniFF0B",11);
178   punct.plus
179   (identity scaled (2*tsu_punct_size) shifted centre_pt);
180   tsu_render;
181 endtsuglyph;
182
```



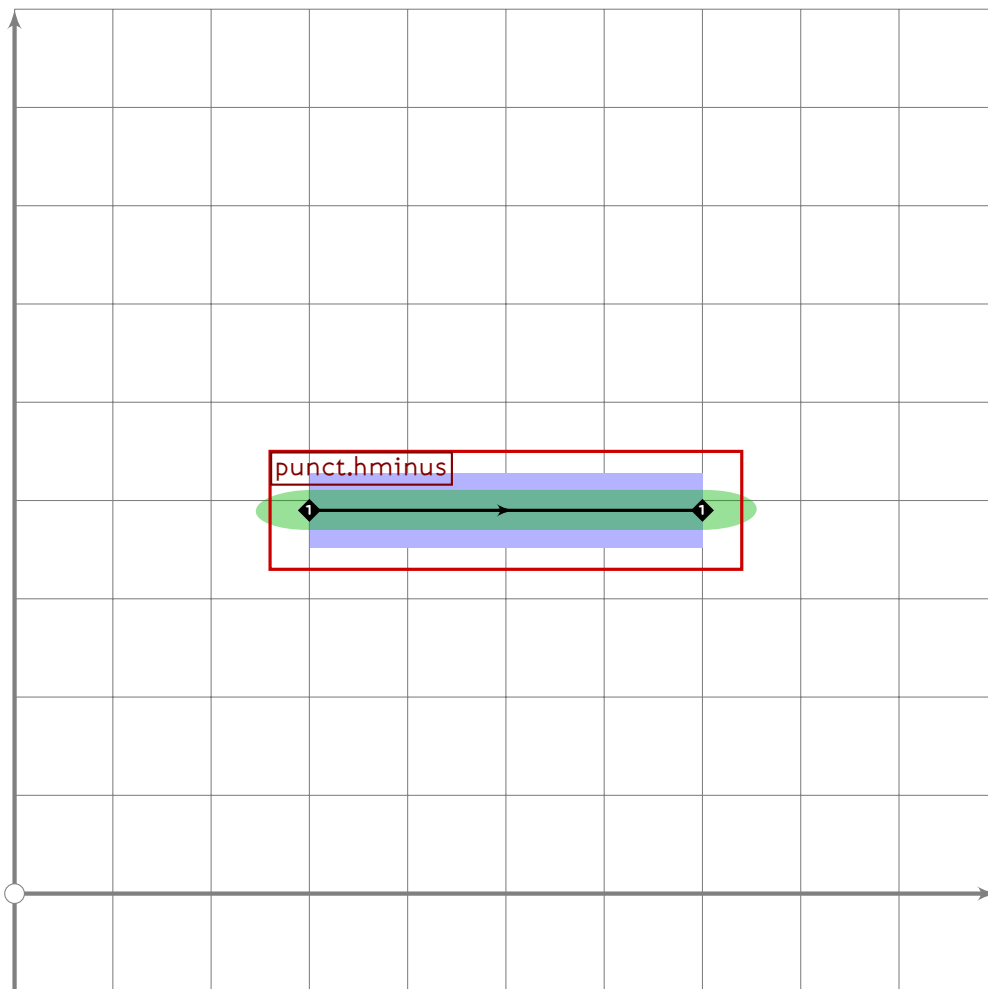
```

183 % comma
184 begintsuglyph("uniFF0C",12);
185   punct.make_comma((380,vmetric(0.03)),0);
186   tsu_render;
187 endtsuglyph;
188

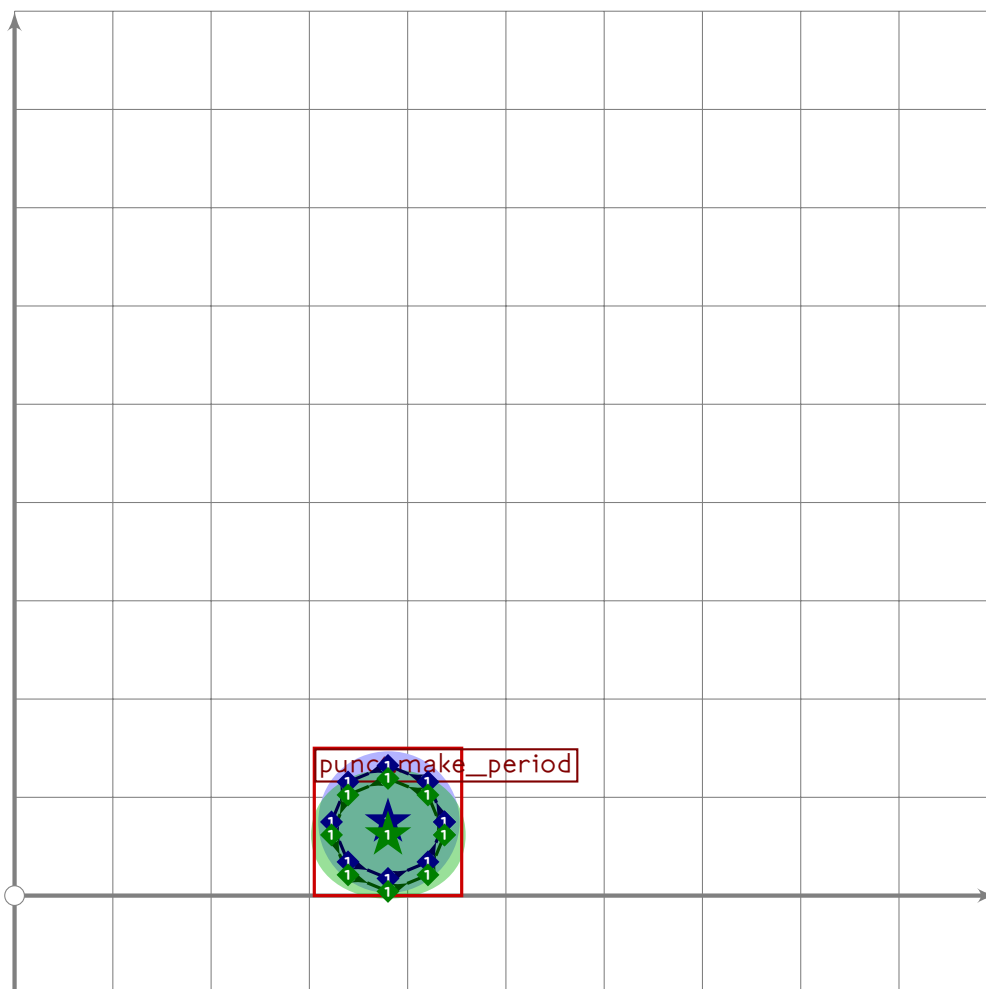
```

U+FF0D
tsuku.uniFF0D

FF



```
189 % hyphen-minus
190 beginsuglyph("uniFF0D";13);
191   punct.hminus
192     (identity scaled (2*tsu_punct_size) shifted centre_pt);
193   tsu_render;
194 endsuglyph;
195
```



FF

```

196 % period
197 begintsuglyph("uniFF0E";14);
198   punct.make_period((380,vmetric(0.03)));
199   tsu_render;
200 endtsuglyph;
201
202 % slash
203 begintsuglyph("uniFF0F";15);
204   punct.slash;
205   tsu_render;
206 endtsuglyph;
207
208 % 0
209 begintsuglyph("uniFF10";16);
210   numeral.zero;
211   tsu_render;
212 endtsuglyph;
213
214 % 1
215 begintsuglyph("uniFF11";17);
216   numeral.one;

```

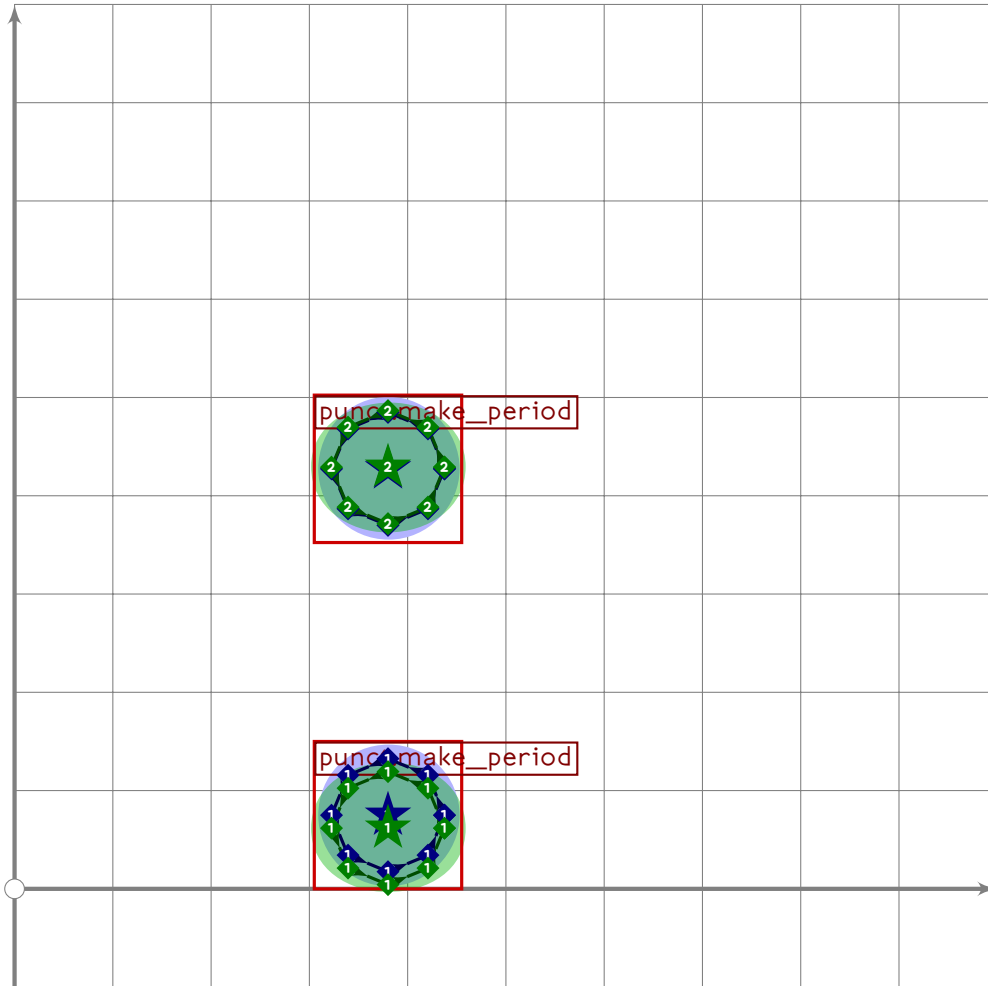
[see page 396]

[see page 339]

[see page 340]

```
217 tsu_render;
218 endtsuglyph;
219
220 % 2
221 begintsuglyph("uniFF12";18); [see page 341]
222 numeral.two;
223 tsu_render;
224 endtsuglyph;
225
226 % 3
227 begintsuglyph("uniFF13";19); [see page 342]
228 numeral.three;
229 tsu_render;
230 endtsuglyph;
231
232 % 4
233 begintsuglyph("uniFF14";20); [see page 343]
234 numeral.four;
235 tsu_render;
236 endtsuglyph;
237
238 % 5
239 begintsuglyph("uniFF15";21); [see page 344]
240 numeral.five;
241 tsu_render;
242 endtsuglyph;
243
244 % 6
245 begintsuglyph("uniFF16";22); [see page 345]
246 numeral.six;
247 tsu_render;
248 endtsuglyph;
249
250 % 7
251 begintsuglyph("uniFF17";23); [see page 346]
252 numeral.seven;
253 tsu_render;
254 endtsuglyph;
255
256 % 8
257 begintsuglyph("uniFF18";24); [see page 347]
258 numeral.eight;
259 tsu_render;
260 endtsuglyph;
261
262 % 9
263 begintsuglyph("uniFF19";25); [see page 348]
264 numeral.nine;
```

```
265 tsu_render;
266 endtsuglyph;
267
```

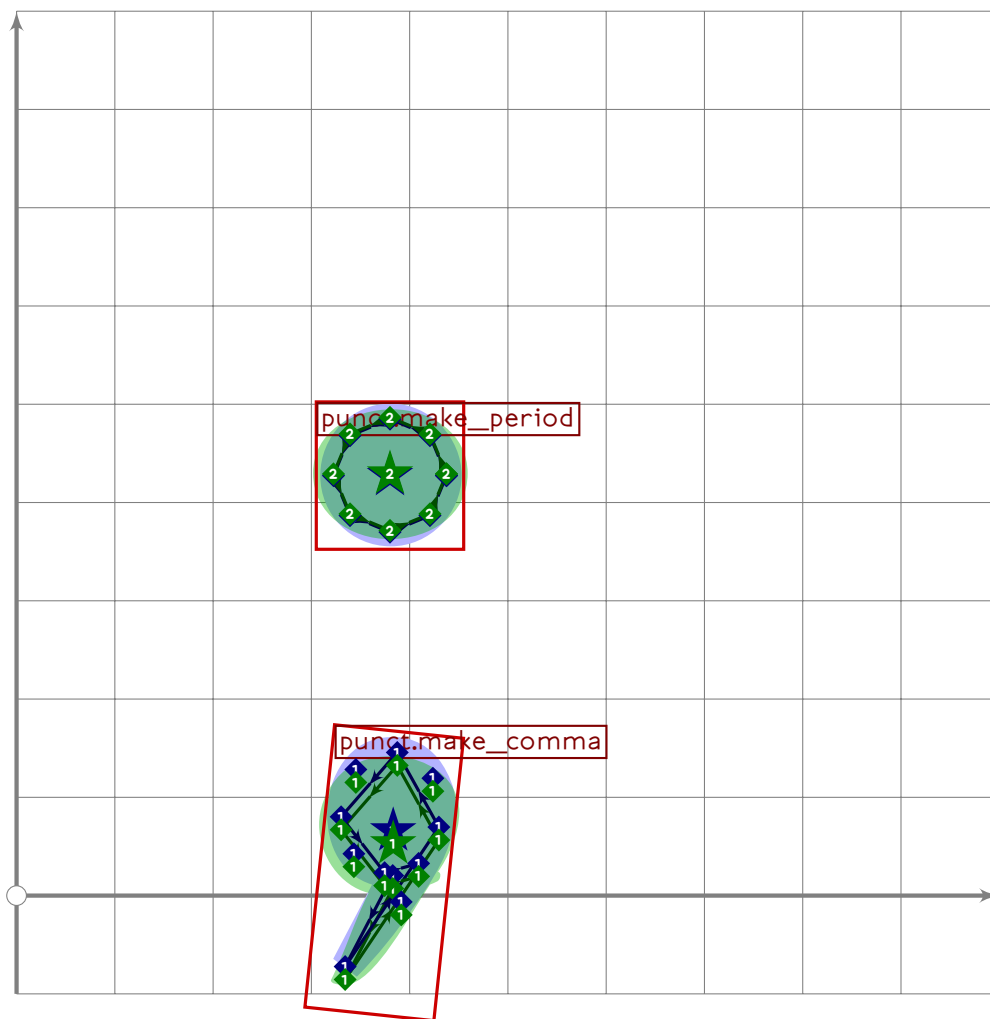


```
268 % colon
269 begint Suglyph("uniFF1A",26);
270 punct.make__period((380,vmetric(0.03)));
271 punct.make__period((380,vmetric(0.56)));
272 tsu_render;
273 endtsuglyph;
274
```

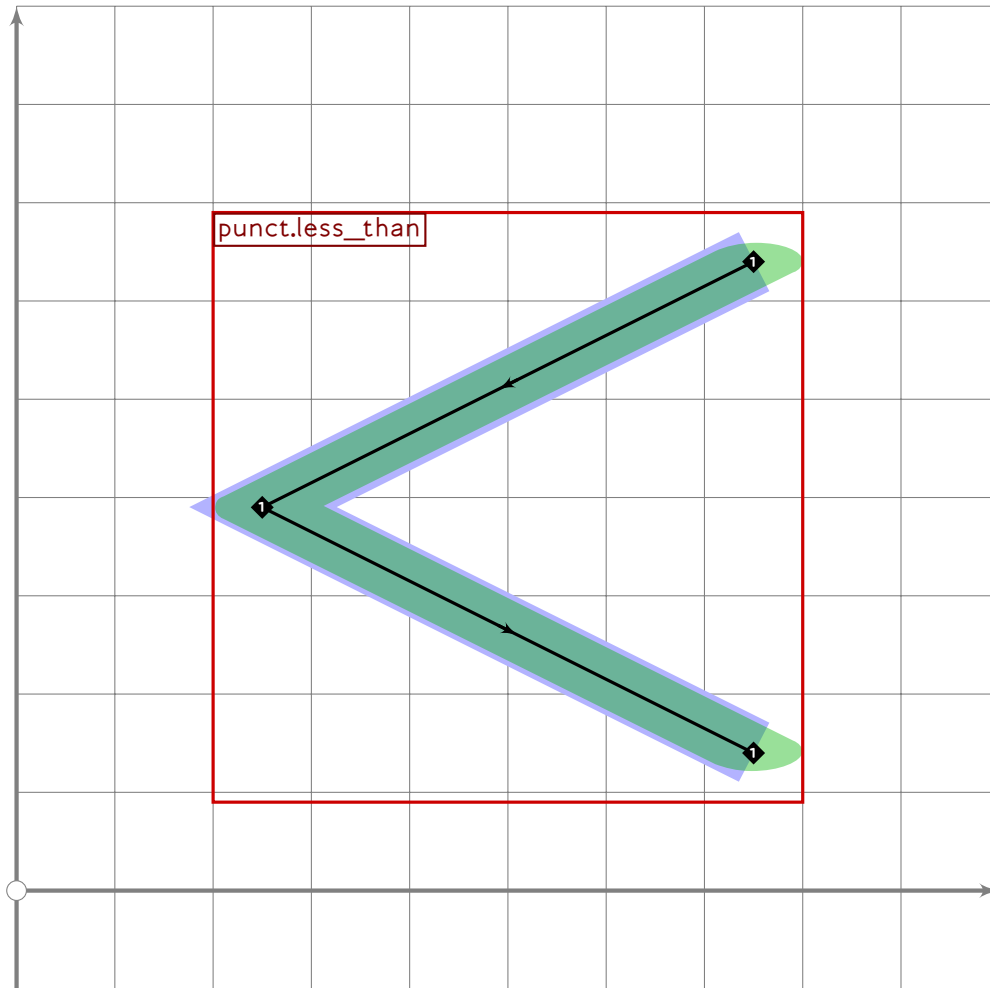
FF

U+FF1B
tsuku.uniFF1B

FF



```
275 % semicolon
276 begintsuglyph("uniFF1B";27);
277 punct.make_comma((380,vmetric(0.03)),0);
278 punct.make_period((380,vmetric(0.56)));
279 tsu_render;
280 endtsuglyph;
281
```

FF

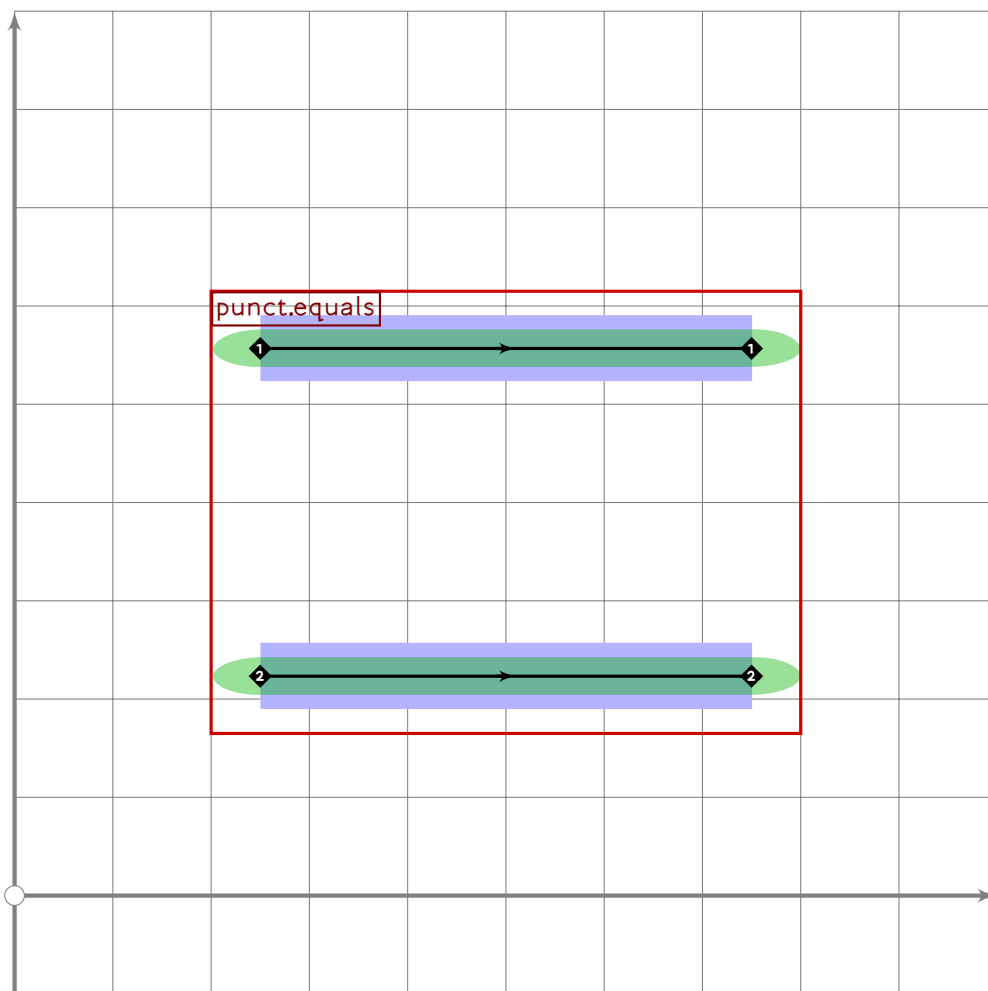
```

282 % less than
283 begintsuglyph("uniFF1C";28);
284 punct.less_than
285     (identity scaled (2.5*tsu_punct_size) shifted centre_pt);
286 tsu_render;
287 endtsuglyph;
288

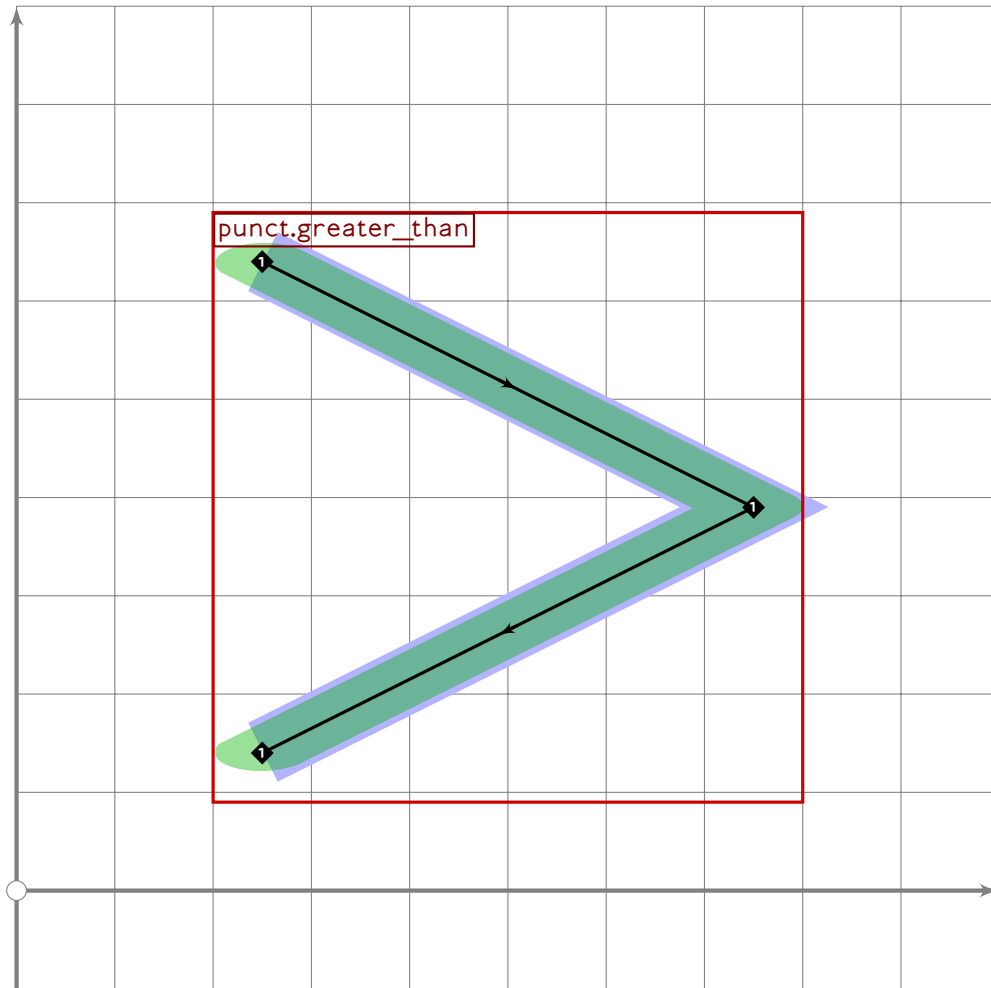
```

U+FF1D
tsuku.uniFF1D

FF



```
289 % equals
290 begintsuglyph("uniFF1D";29);
291 punct.equals
292     (identity scaled (2.5*tsu_punct_size) shifted centre_pt);
293 tsu_render;
294 endtsuglyph;
295
```



FF

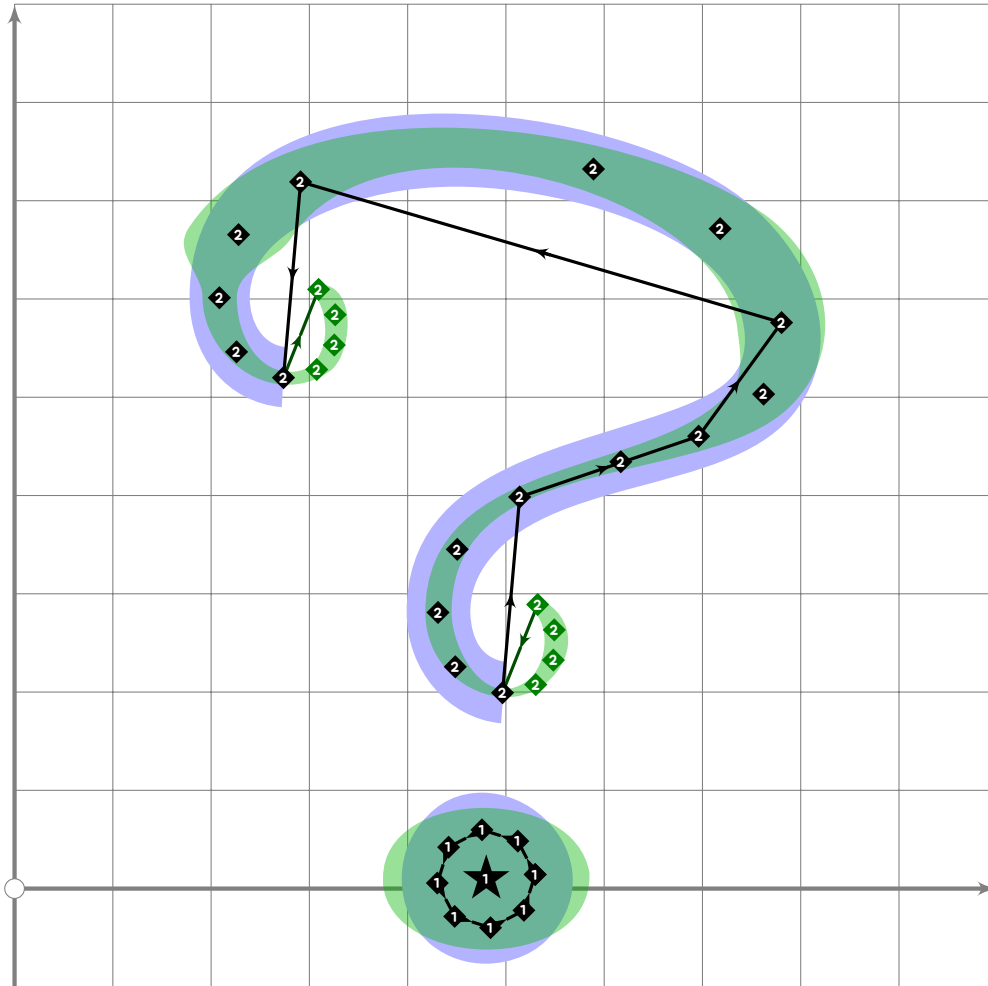
```

296 % greater than
297 begint Suglyph("uniFF1E",30);
298 punct.greater_than
299     (identity scaled (2.5*tsu_punct_size) shifted centre_pt);
300 tsu_render;
301 endtsuglyph;
302

```

U+FF1F
tsuku.uniFF1F

FF



```

303 % question mark
304 begintsuglyph("uniFF1F",31);
305     numeric r;
306     if tsu_pbrush_size>=tsu_punct_size:
307         push_lcblob(fullcircle
308             xscaled (tsu_punct_size+tsu_pbrush_size)
309             yscaled (tsu_punct_size+tsu_pbrush_size*tsu_pbrush_shape)
310             rotated tsu_pbrush_angle
311             shifted (480,10));
312         r:=tsu_pbrush_size;
313     else:
314         push_stroke(fullcircle scaled tsu_punct_size rotated 5 shifted (480,10),
315             (2,2)-(2,2)-(2,2)-(2,2)-cycle);
316         if tsu_pbrush_size>=30:
317             push_lcblob(get_stroke(0));
318         fi;
319         r:=tsu_punct_size;
320     fi;
321
322     push_stroke((480,300){right}..(480,300-r){left}..
323         (480,300+r)..(480+2.5*r,600)..

```

```

324     tension 1.3.(480-2.5*r,600+r)..
325     (480-2.5*r,600-r){right}..
326     (480-2.5*r,600){left},
327     (0.8,0.8)-(1,1)-(2,2)-(2,2)-(2,2)-(2,2)-(1,1)-(0.8,0.8));
328     replace_strokep(0)(insert_nodes(oldp)(2.5) rotatedaround ((480,10);-5));
329
330     tsu_render;
331 endtsuglyph;
332
333 % commercial at
334 begintsuglyph("uniFF20";32); [see page 365]
335     punct.at sign;
336     tsu_render;
337 endtsuglyph;
338
339 tsu_accent.up_default_anchors;
340
341 % A
342 begintsuglyph("uniFF21";33); [see page 250]
343     latin.upa;
344     tsu_render;
345 endtsuglyph;
346
347 % B
348 begintsuglyph("uniFF22";34); [see page 254]
349     latin.upb;
350     tsu_render;
351 endtsuglyph;
352
353 % C
354 begintsuglyph("uniFF23";35); [see page 255]
355     latin.upc;
356     tsu_render;
357 endtsuglyph;
358
359 % D
360 begintsuglyph("uniFF24";36); [see page 256]
361     latin.upd;
362     tsu_render;
363 endtsuglyph;
364
365 % E
366 begintsuglyph("uniFF25";37); [see page 259]
367     latin.upe;
368     tsu_render;
369 endtsuglyph;
370
371 % F

```

372	begintsuglyph("uniFF26";38);	[see page 260]
373	latin.upf;	
374	tsu_render;	
375	endtsuglyph;	
376		
377	% G	
378	begintsuglyph("uniFF27";39);	[see page 262]
379	latin.upg;	
380	tsu_render;	
381	endtsuglyph;	
382		
383	% H	
384	begintsuglyph("uniFF28";40);	[see page 263]
385	latin.uph;	
386	tsu_render;	
387	endtsuglyph;	
388		
389	% I	
390	begintsuglyph("uniFF29";41);	[see page 264]
391	latin.upi;	
392	tsu_render;	
393	endtsuglyph;	
394		
395	% J	
396	begintsuglyph("uniFF2A";42);	[see page 265]
397	latin.upj;	
398	tsu_render;	
399	endtsuglyph;	
400		
401	% K	
402	begintsuglyph("uniFF2B";43);	[see page 267]
403	latin.upk;	
404	tsu_render;	
405	endtsuglyph;	
406		
407	% L	
408	begintsuglyph("uniFF2C";44);	[see page 268]
409	latin.upl;	
410	tsu_render;	
411	endtsuglyph;	
412		
413	% M	
414	begintsuglyph("uniFF2D";45);	[see page 269]
415	latin.upm;	
416	tsu_render;	
417	endtsuglyph;	
418		
419	% N	

```

420 begintsuglyph("uniFF2E";46);
421   latin.upn;
422   tsu_render;
423 endtsuglyph;
424
425 % O
426 begintsuglyph("uniFF2F";47);
427   latin.upo;
428   tsu_render;
429 endtsuglyph;
430
431 % P
432 begintsuglyph("uniFF30";48);
433   latin.upp;
434   tsu_render;
435 endtsuglyph;
436
437 % Q
438 begintsuglyph("uniFF31";49);
439   latin.upq;
440   tsu_render;
441 endtsuglyph;
442
443 % R
444 begintsuglyph("uniFF32";50);
445   latin.upr;
446   tsu_render;
447 endtsuglyph;
448
449 % S
450 begintsuglyph("uniFF33";51);
451   latin.ups;
452   tsu_render;
453 endtsuglyph;
454
455 % T
456 begintsuglyph("uniFF34";52);
457   latin.upt;
458   tsu_render;
459 endtsuglyph;
460
461 % U
462 begintsuglyph("uniFF35";53);
463   latin.upu;
464   tsu_render;
465 endtsuglyph;
466
467 % V

```

[see page 271]

[see page 274]

[see page 277]

[see page 278]

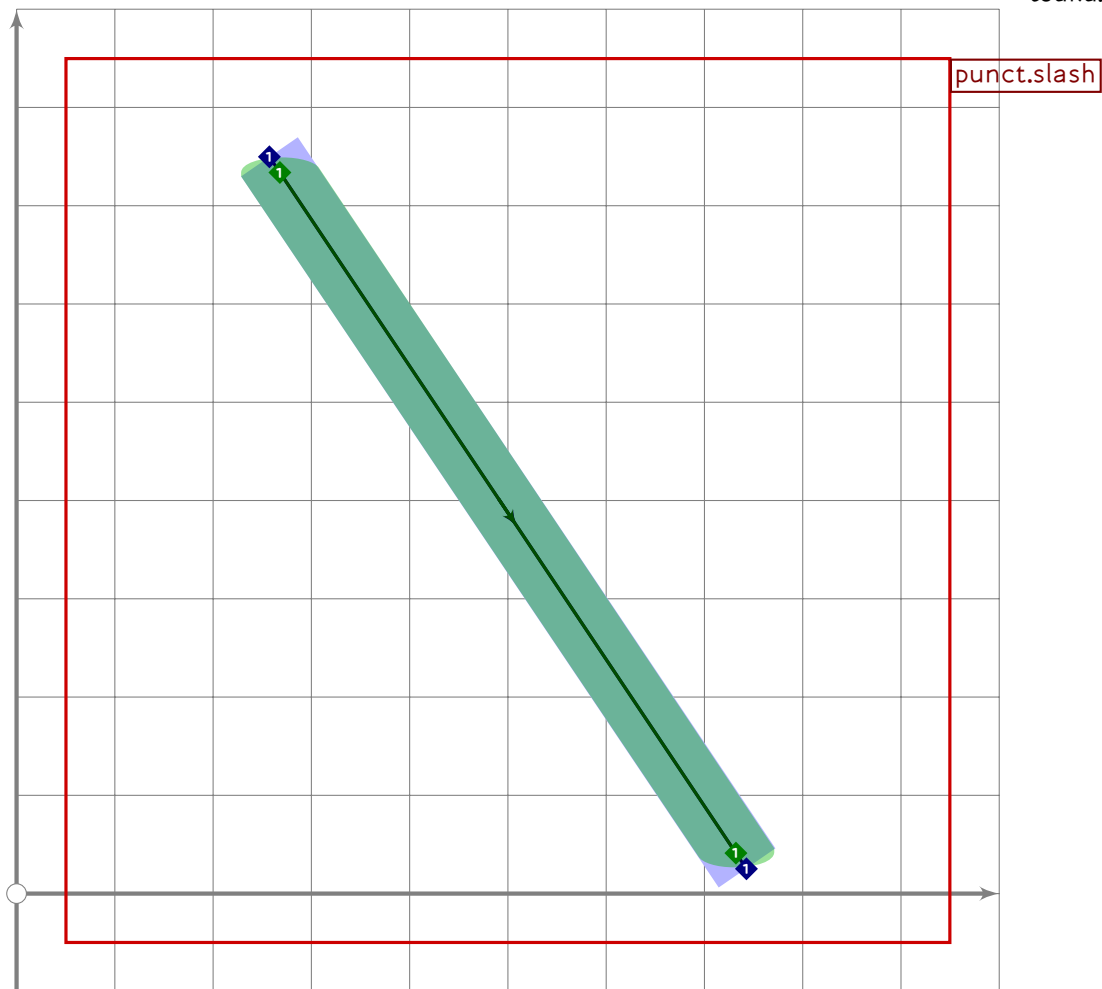
[see page 279]

[see page 280]

[see page 282]

[see page 284]

```
468 begintsuglyph("uniFF36";54); [see page 285]
469 latin.upv;
470 tsu_render;
471 endtsuglyph;
472
473 % W
474 begintsuglyph("uniFF37";55); [see page 286]
475 latin.upw;
476 tsu_render;
477 endtsuglyph;
478
479 % X
480 begintsuglyph("uniFF38";56); [see page 288]
481 latin.upx;
482 tsu_render;
483 endtsuglyph;
484
485 % Y
486 begintsuglyph("uniFF39";57); [see page 289]
487 latin.upy;
488 tsu_render;
489 endtsuglyph;
490
491 % Z
492 begintsuglyph("uniFF3A";58); [see page 291]
493 latin.upz;
494 tsu_render;
495 endtsuglyph;
496
497 tsu_accent.clear_default_anchors;
498
499 % left and right square brackets
500 begintsuglyph("uniFF3B";59); [see page 397]
501 punct.sqb_left;
502 tsu_render;
503 endtsuglyph;
```

FF

```

504 % backslash
505 begintsuglyph("uniFF3C";60);
506   tsu_xform(identity reflectedabout (centre_pt,(centre_pt+down)))
507   (punct.slash);
508   tsu_render;
509 endtsuglyph;
510 begintsuglyph("uniFF3D";61);
511   punct.sqb_right;
512   tsu_render;
513 endtsuglyph;
514
515 % circumflex/caret
516 begintsuglyph("uniFF3E";62);
517   tsu_accent.circumflex;
518   tsu_render;
519 endtsuglyph;
520
521 % underscore
522 begintsuglyph("uniFF3F";63);
523   punct.underscore;
524   tsu_render;

```

[see page 398]

[see page 103]

[see page 399]

```

525 endtsuglyph;
526
527 % grave accent
528 begintsuglyph("uniFF40",64); [see page 105]
529   tsu__accent.grave;
530   tsu__render;
531 endtsuglyph;
532
533 tsu__accent.low_default_anchors;
534
535 % a
536 begintsuglyph("uniFF41",65); [see page 293]
537   latin.lowa;
538   tsu__render;
539 endtsuglyph;
540
541 % b
542 begintsuglyph("uniFF42",66); [see page 296]
543   latin.lowb;
544   tsu__render;
545 endtsuglyph;
546
547 % c
548 begintsuglyph("uniFF43",67); [see page 297]
549   latin.lowc;
550   tsu__render;
551 endtsuglyph;
552
553 % d
554 begintsuglyph("uniFF44",68); [see page 298]
555   latin.lowd;
556   tsu__render;
557 endtsuglyph;
558
559 % e
560 begintsuglyph("uniFF45",69); [see page 299]
561   latin.lowe;
562   tsu__render;
563 endtsuglyph;
564
565 % f
566 begintsuglyph("uniFF46",70); [see page 304]
567   latin.lowf;
568   tsu__render;
569 endtsuglyph;
570
571 % g
572 begintsuglyph("uniFF47",71); [see page 305]

```

573	latin.lowg;	
574	tsu_render;	
575	endtsuglyph;	
576		
577	% h	
578	begintsuglyph("uniFF48",72);	[see page 307]
579	latin.lowh;	
580	tsu_render;	
581	endtsuglyph;	
582		
583	% i	
584	begintsuglyph("uniFF49",73);	[see page 308]
585	latin.lowi;	
586	tsu_render;	
587	endtsuglyph;	
588		
589	% j	
590	begintsuglyph("uniFF4A",74);	[see page 310]
591	latin.lowj;	
592	tsu_render;	
593	endtsuglyph;	
594		
595	% k	
596	begintsuglyph("uniFF4B",75);	[see page 312]
597	latin.lowk;	
598	tsu_render;	
599	endtsuglyph;	
600		
601	% l	
602	begintsuglyph("uniFF4C",76);	[see page 314]
603	latin.lowl;	
604	tsu_render;	
605	endtsuglyph;	
606		
607	% m	
608	begintsuglyph("uniFF4D",77);	[see page 315]
609	latin.lowm;	
610	tsu_render;	
611	endtsuglyph;	
612		
613	% n	
614	begintsuglyph("uniFF4E",78);	[see page 316]
615	latin.lown;	
616	tsu_render;	
617	endtsuglyph;	
618		
619	% o	
620	begintsuglyph("uniFF4F",79);	[see page 319]

```
621 latin.lowo;
622 tsu_render;
623 endtsuglyph;
624
625 % p
626 begintsuglyph("uniFF50";80); [see page 321]
627 latin.lowp;
628 tsu_render;
629 endtsuglyph;
630
631 % q
632 begintsuglyph("uniFF51";81); [see page 322]
633 latin.lowq;
634 tsu_render;
635 endtsuglyph;
636
637 % r
638 begintsuglyph("uniFF52";82); [see page 324]
639 latin.lowr;
640 tsu_render;
641 endtsuglyph;
642
643 % s
644 begintsuglyph("uniFF53";83); [see page 325]
645 latin.lows;
646 tsu_render;
647 endtsuglyph;
648
649 % t
650 begintsuglyph("uniFF54";84); [see page 328]
651 latin.lowt;
652 tsu_render;
653 endtsuglyph;
654
655 % u
656 begintsuglyph("uniFF55";85); [see page 331]
657 latin.lowu;
658 tsu_render;
659 endtsuglyph;
660
661 % v
662 begintsuglyph("uniFF56";86); [see page 332]
663 latin.lowv;
664 tsu_render;
665 endtsuglyph;
666
667 % w
668 begintsuglyph("uniFF57";87); [see page 333]
```

```

669 latin.loww;
670 tsu_render;
671 endtsuglyph;
672
673 % x
674 begintsuglyph("uniFF58";88); [see page 335]
675 latin.lowx;
676 tsu_render;
677 endtsuglyph;
678
679 % y
680 begintsuglyph("uniFF59";89); [see page 336]
681 latin.lowy;
682 tsu_render;
683 endtsuglyph;
684
685 % z
686 begintsuglyph("uniFF5A";90); [see page 338]
687 latin.lowz;
688 tsu_render;
689 endtsuglyph;
690
691 tsu_accent.clear_default_anchors;
692
693 % left and right square brackets, around vertical line
694 begintsuglyph("uniFF5B";91); [see page 366]
695 punct.brace_left;
696 tsu_render;
697 endtsuglyph;
698 begintsuglyph("uniFF5C";92); [see page 400]
699 punct.vline;
700 tsu_render;
701 endtsuglyph;
702 begintsuglyph("uniFF5D";93); [see page 367]
703 punct.brace_right;
704 tsu_render;
705 endtsuglyph;
706
707 % "fullwidth tilde" - identical to "wave dash"
708 begintsuglyph("uniFF5E";94); [see page 401]
709 punct.wavedash;
710 tsu_render;
711 endtsuglyph;
712
713 begingroup
714 save rescale_slant;
715 rescale_slant:=0;
716

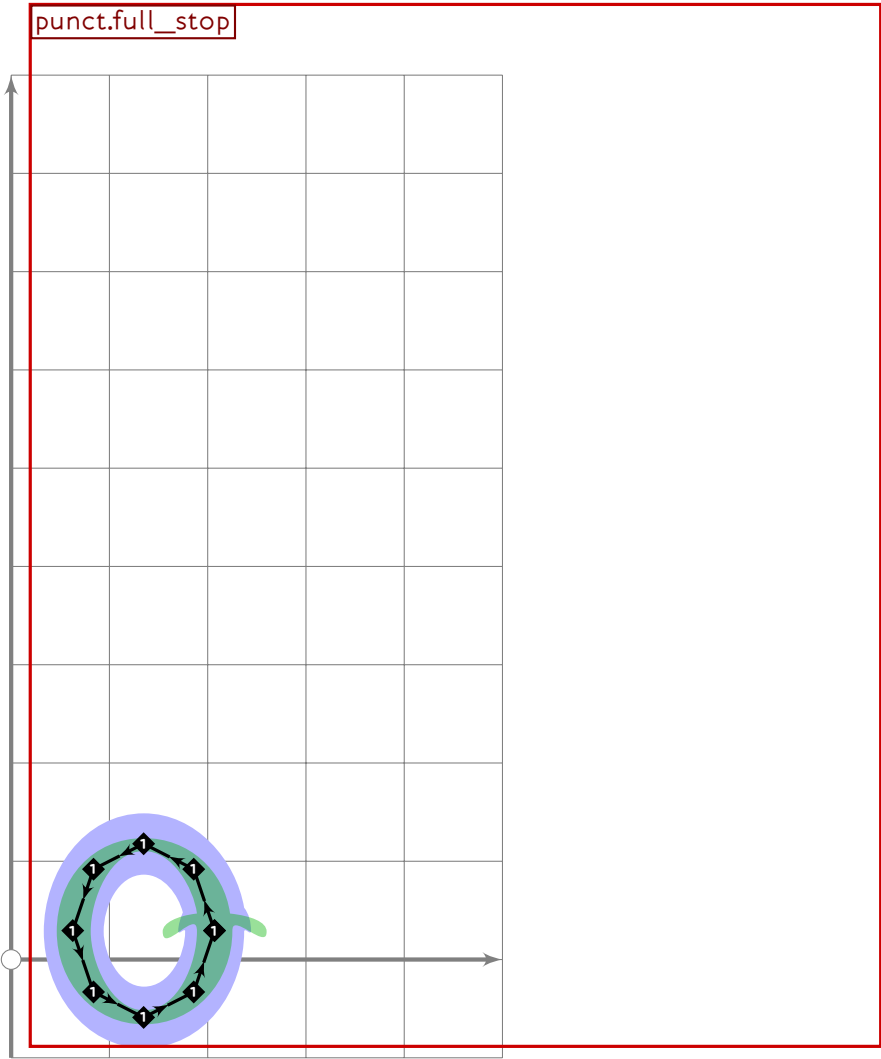
```

U+FF61
tsuku.uniFF61

```
717 % left and right white parentheses
718 begintsuglyph("uniFF5F";95); [see page 402]
719 punct.wparen_left;
720 tsu_render;
721 endtsuglyph;
722 begintsuglyph("uniFF60";96); [see page 403]
723 punct.wparen_right;
724 tsu_render;
725 endtsuglyph;
726
727
728
```

Half-Width Punctuation

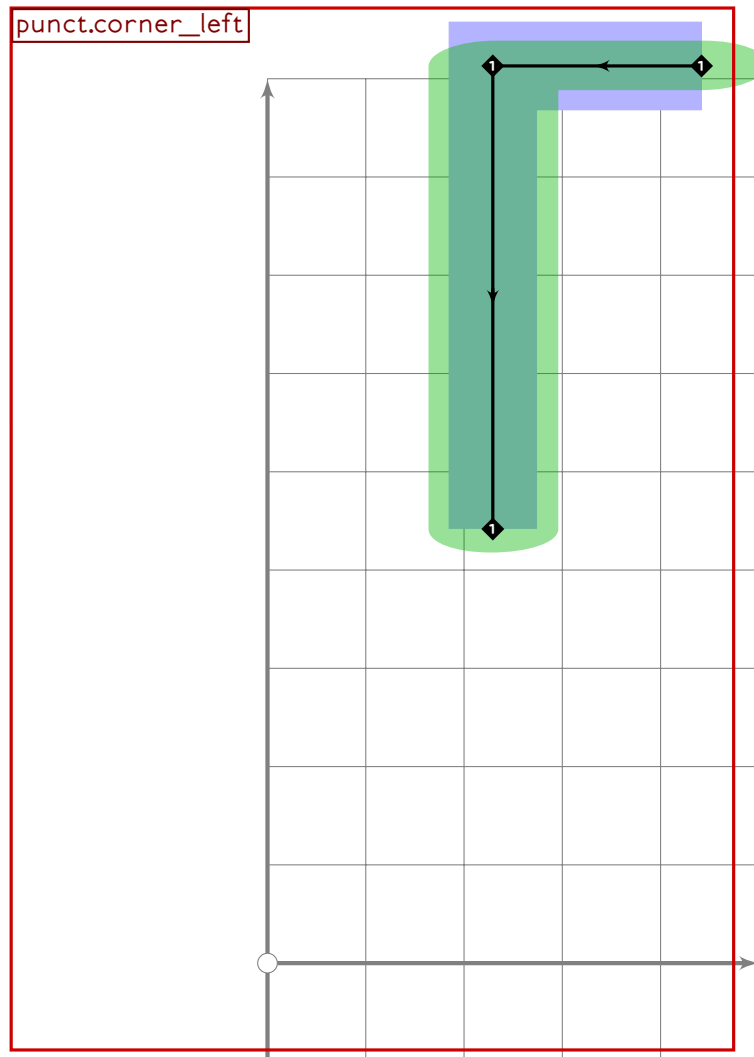
```
729 % HALF-WIDTH PUNCTUATION
730
731 % WARNING changing rescale setting
732 tsu_rescale_half;
733
```



```

734 % ideographic full stop
735 beginsuglyph("uniFF61";97);
736   punct.full_stop;
737   tsu_render;
738 endsuglyph;
739

```



```

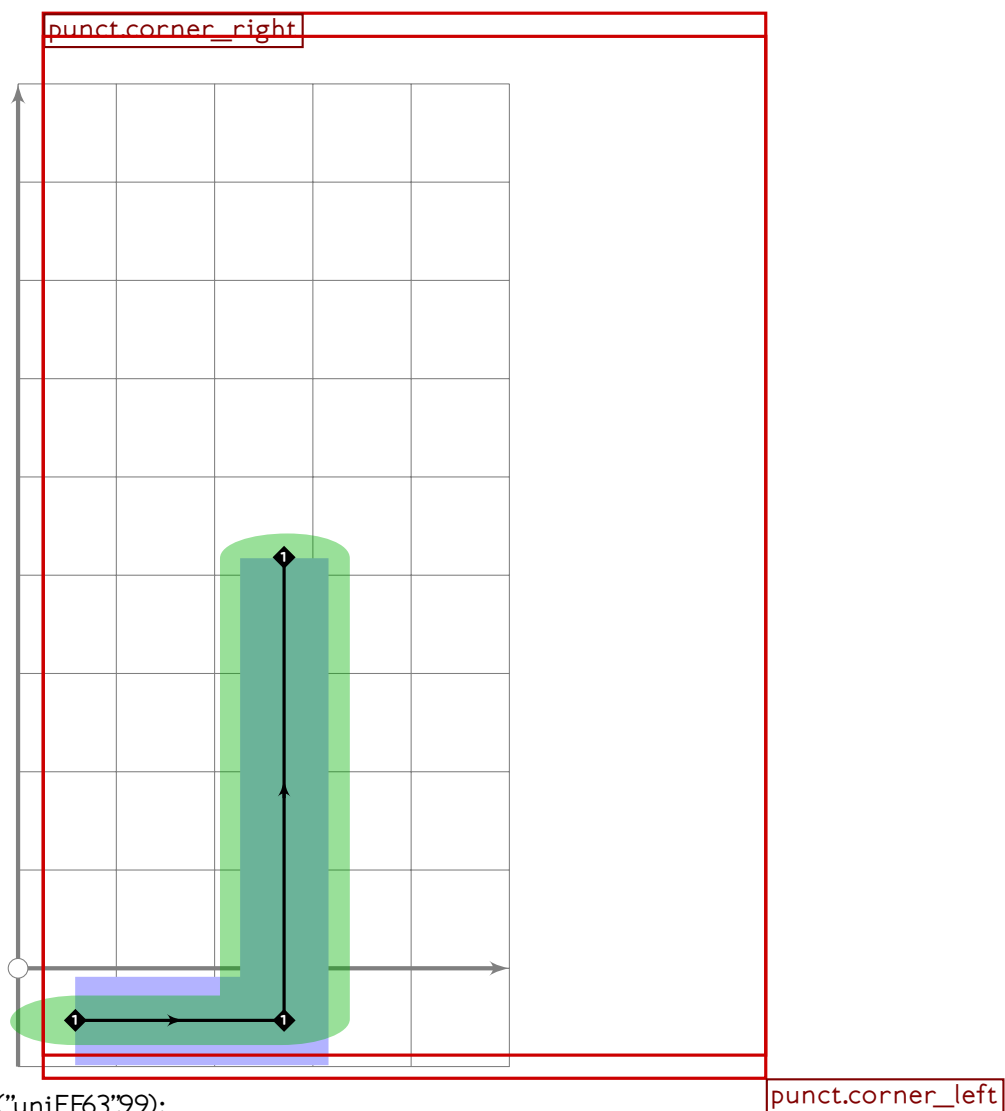
740 % left and right corner brackets
741 beginsuglyph("uniFF62";98);
742   punct.corner_left;
743   tsu_render;
744 endsuglyph;

```

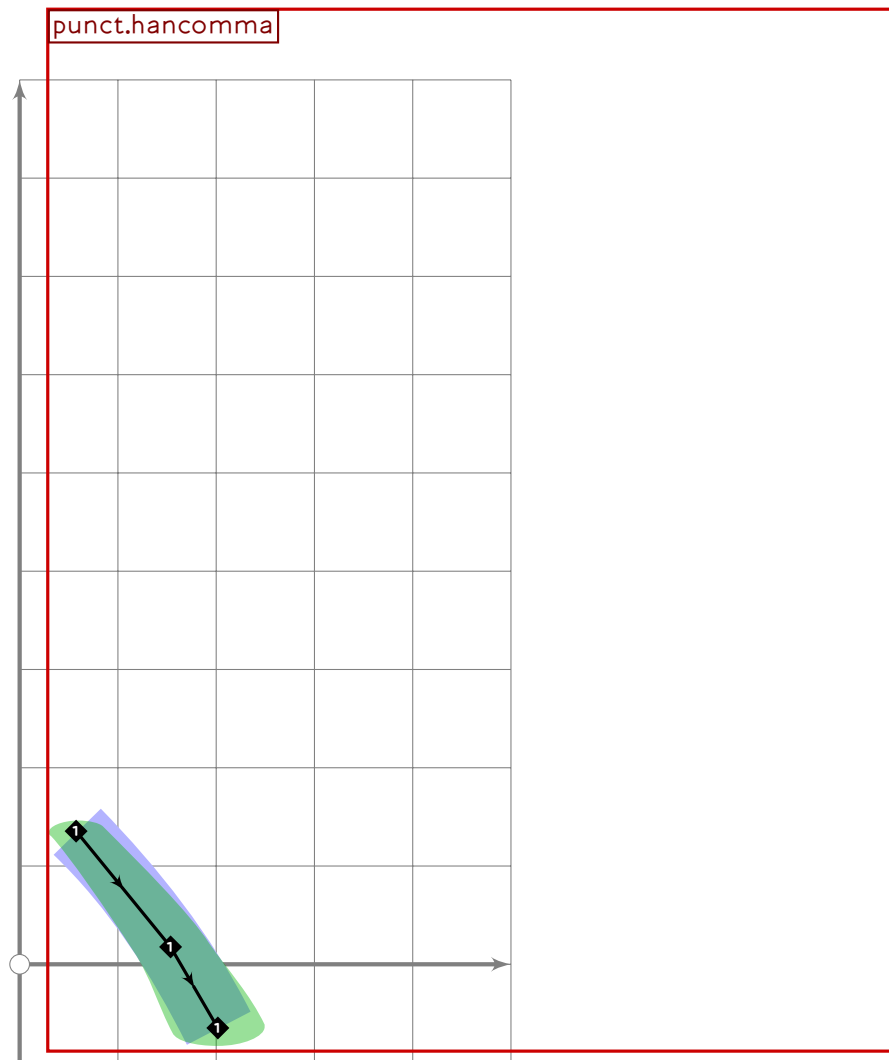
FF

U+FF63
tsuku.uniFF63

FF



```
745 begintsuglyph("uniFF63";99);  
746 punct.corner_right;  
747 tsu_render;  
748 endtsuglyph;  
749
```

FF

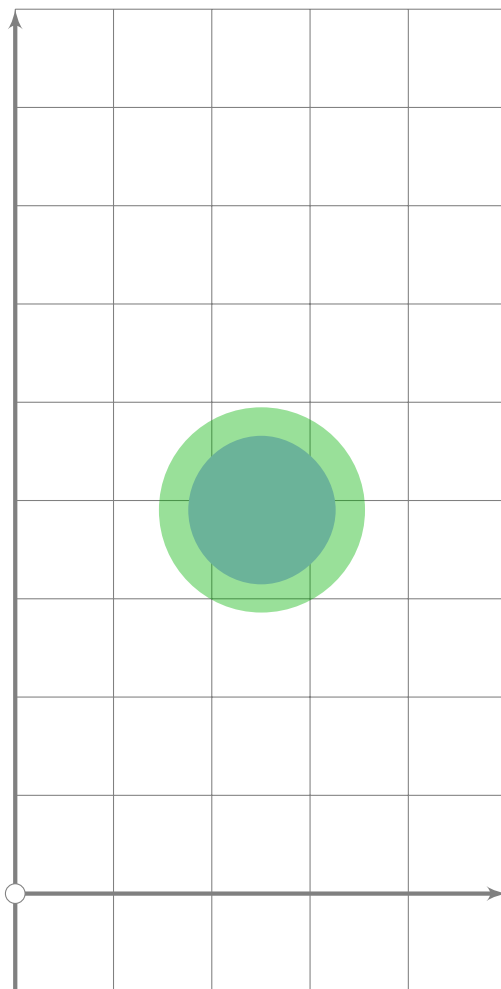
```
750 % ideographic comma
751 beginsuglyph("uniFF64",100);
752   punct.hancomma;
753   tsu_render;
754 endsuglyph;
755
756
757
```

Half-Width Katakana

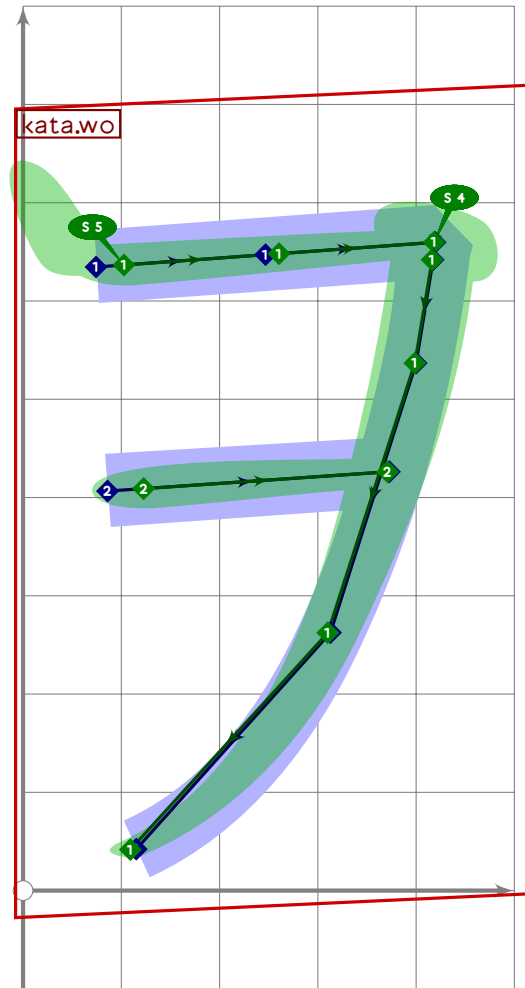
```
758 % HALF-WIDTH KATAKANA
759
760 % WARNING changing rescale setting
761 tsu_rescale_half_katakana;
762
```

U+FF65
tsuku.uniFF65

FF



```
763 % katakana middle dot
764 begintsuglyph("uniFF65",101);
765   Fill fullcircle scaled (200*tsu_brush_max) shifted (250,ypart centre_pt);
766 endtsuglyph;
767
```

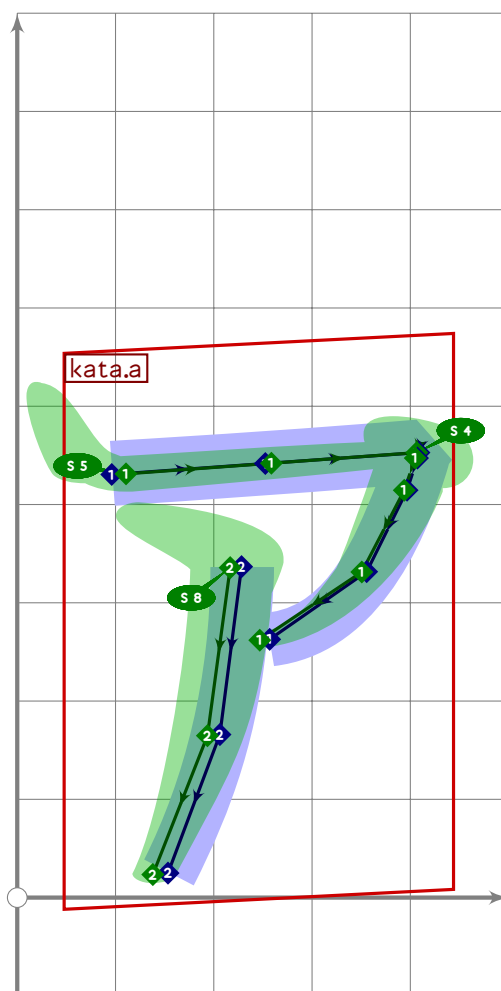


FF

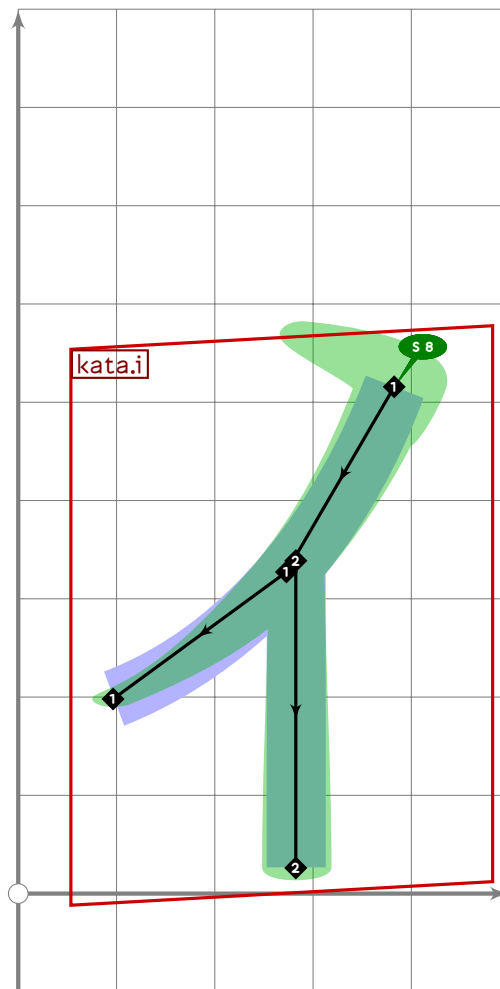
```
768 % katakana "wo"  
769 begintsuglyph("uniFF66",102);  
770 kata.wo;  
771 tsu_render;  
772 endtsuglyph;  
773
```

U+FF67
tsuku.uniFF67

FF



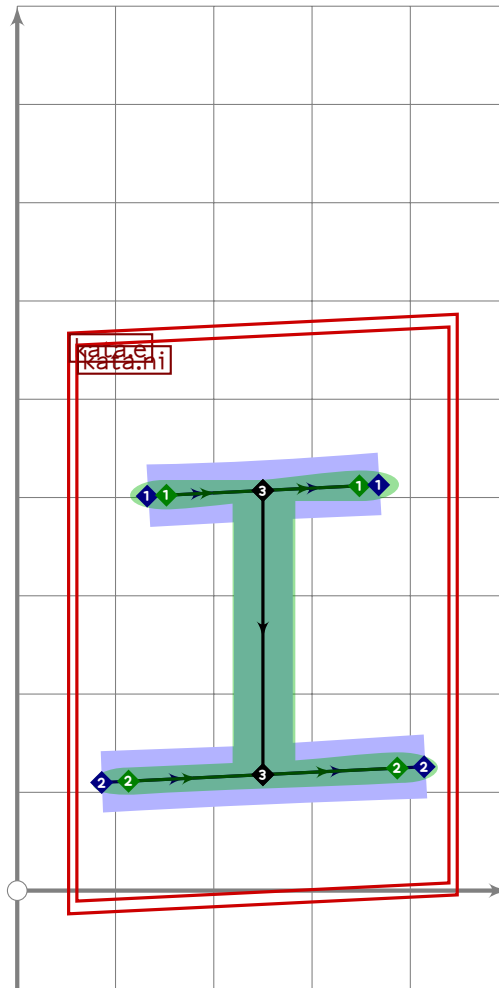
```
774 % katakana "small a"  
775 beginsuglyph("uniFF67",103);  
776 tsu_xform(tsu_xf.smallkana)(kata.a);  
777 tsu_render;  
778 endtsuglyph;  
779
```



FF

```
780 % katakana "small i"  
781 beginsuglyph("uniFF68",104);  
782   tsu_xform(tsu_xf.smallkana)(kata.i);  
783   tsu_render;  
784 endsuglyph;  
785
```

FF

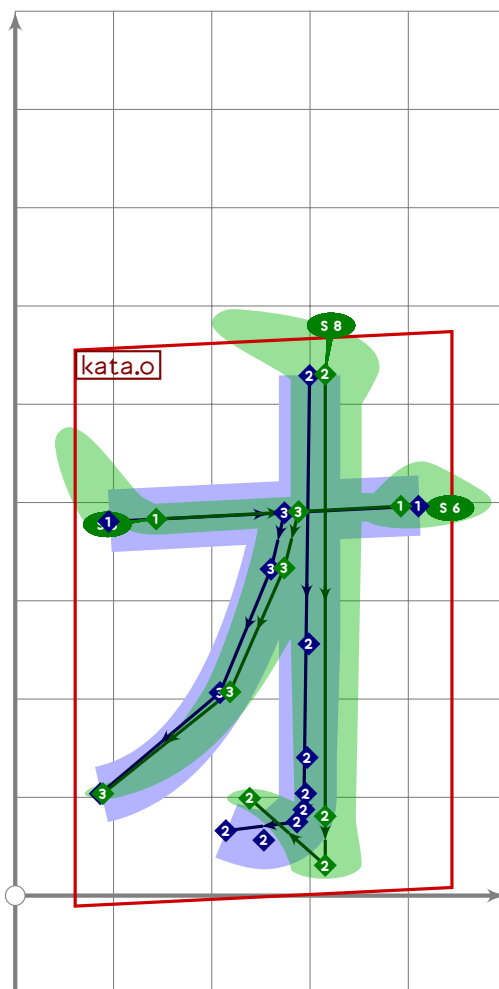


FF

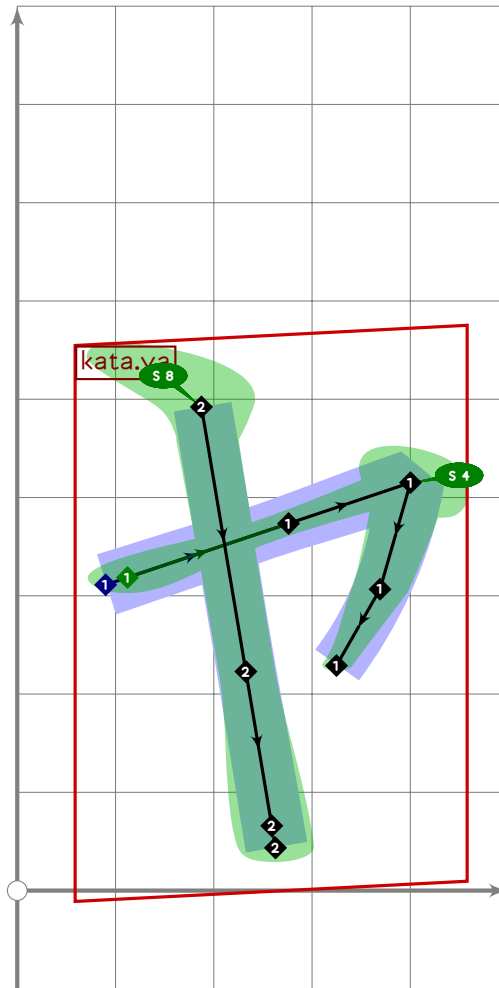
```
792 % katakana "small e"  
793 beginsuglyph("uniFF6A",106);  
794   tsu_xform(tsu_xf.smallkana)(kata.e);  
795   tsu_render;  
796 endsuglyph;  
797
```

U+FF6B
tsuku.uniFF6B

FF



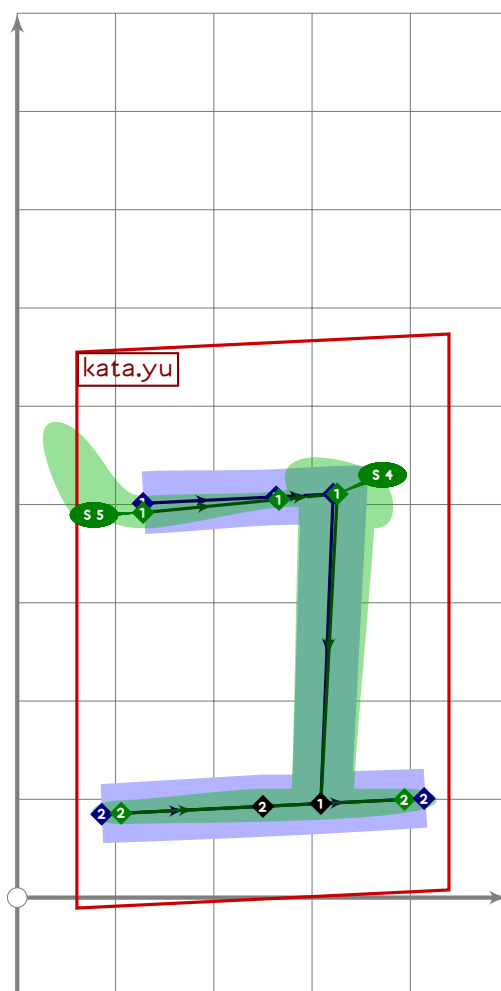
```
798 % katakana "small o"
799 beginsuglyph("uniFF6B",107);
800 tsu_xform(tsu_xf.smallkana)(kata.o);
801 tsu_render;
802 endsuglyph;
803
```

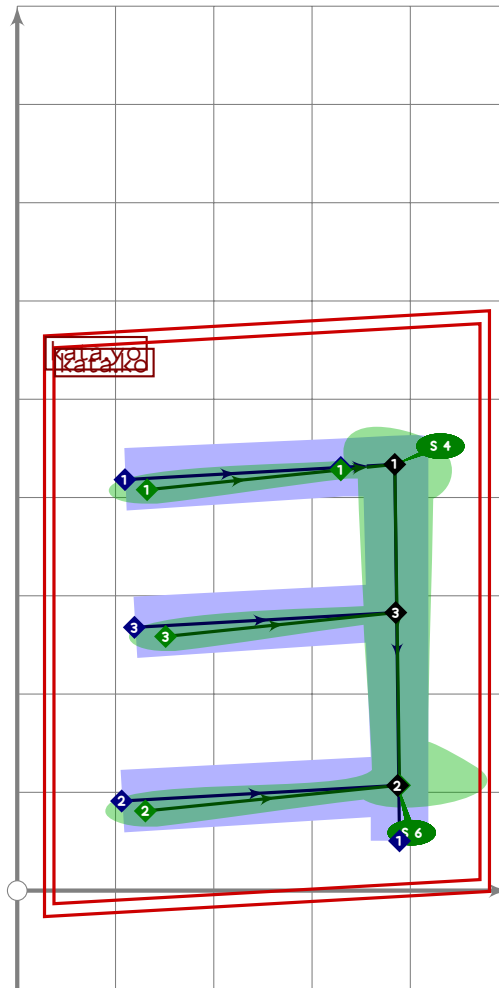
```
804 % katakana "small ya"
805 begint Suglyph("uniFF6C";108);
806   tsu_xform(tsu_xf.smallkana)(kata.ya);
807   tsu_render;
808 endtsuglyph;
809
```

U+FF6D
tsuku.uniFF6D

FF



```
810 % katakana "small yu"
811 beginsuglyph("uniFF6D";109);
812   tsu_xform(tsu_xf.smallkana)(kata.yu);
813   tsu_render;
814 endsuglyph;
815
```



FF

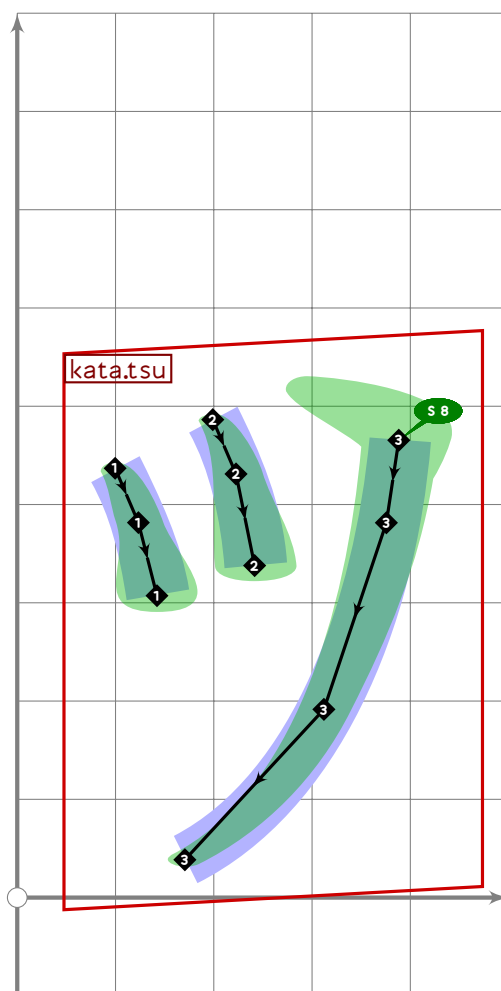
```

816 % katakana "small yo"
817 begintsuglyph("uniFF6E",110);
818   tsu_xform(tsu_xf.smallkana)(kata.yo);
819   tsu_render;
820 endtsuglyph;
821

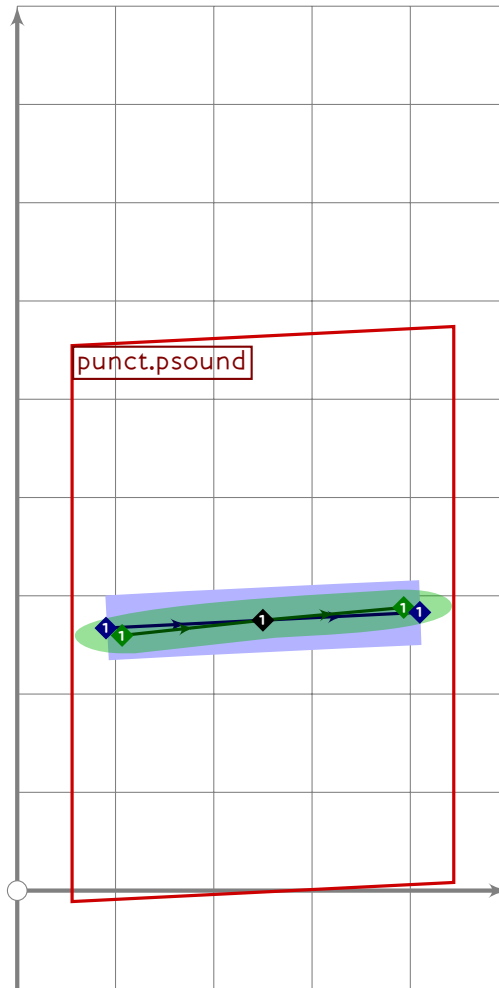
```

U+FF6F
tsuku.uniFF6F

FF



```
822 % katakana "small tsu"
823 beginsuglyph("uniFF6F",111);
824   tsu_xform(tsu_xf.smallkana)(kata.tsu);
825   tsu_render;
826 endsuglyph;
827
```

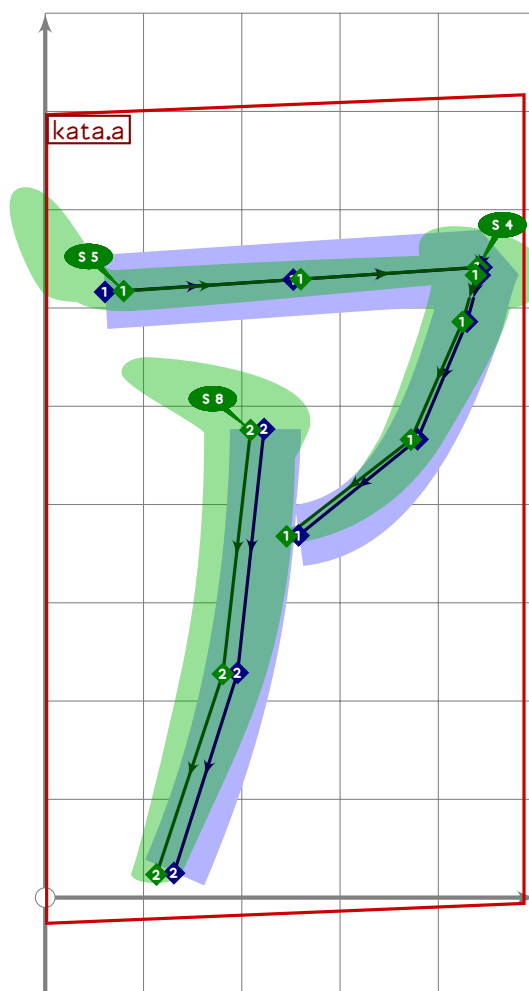


FF

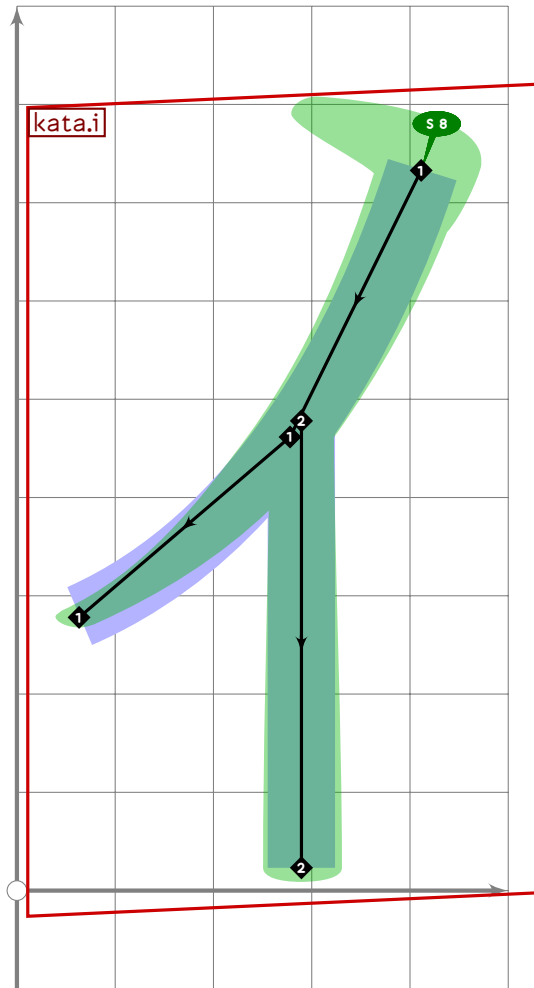
```
828 % hira/kata "prolonged sound mark"
829 beginsuglyph("uniFF70";112);
830 tsu_xform(tsu_xf.smallkana)(punct.psound);
831 tsu_render;
832 endsuglyph;
833
```

U+FF71
tsuku.uniFF71

FF



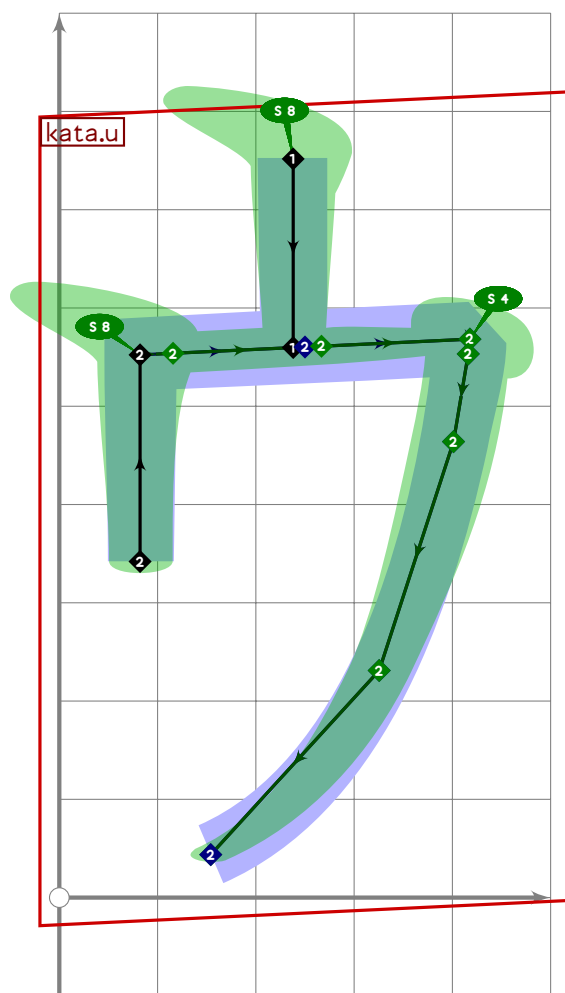
```
834 % katakana "a"  
835 begintsuglyph("uniFF71";113);  
836 kata.a;  
837 tsu_render;  
838 endtsuglyph;  
839
```



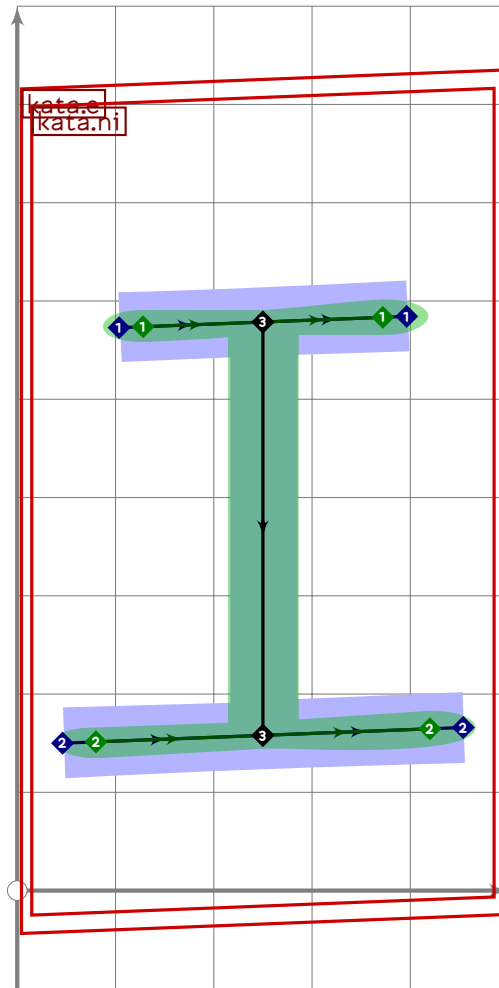
```
840 % katakana "i"  
841 begint Suglyph("uniFF72";114);  
842   kata.i;  
843   tsu_render;  
844 endtsuglyph;  
845
```

U+FF73
tsuku.uniFF73

FF



```
846 % katakana "u"  
847 begintsuglyph("uniFF73";115);  
848 kata.u;  
849 tsu_render;  
850 endtsuglyph;  
851
```

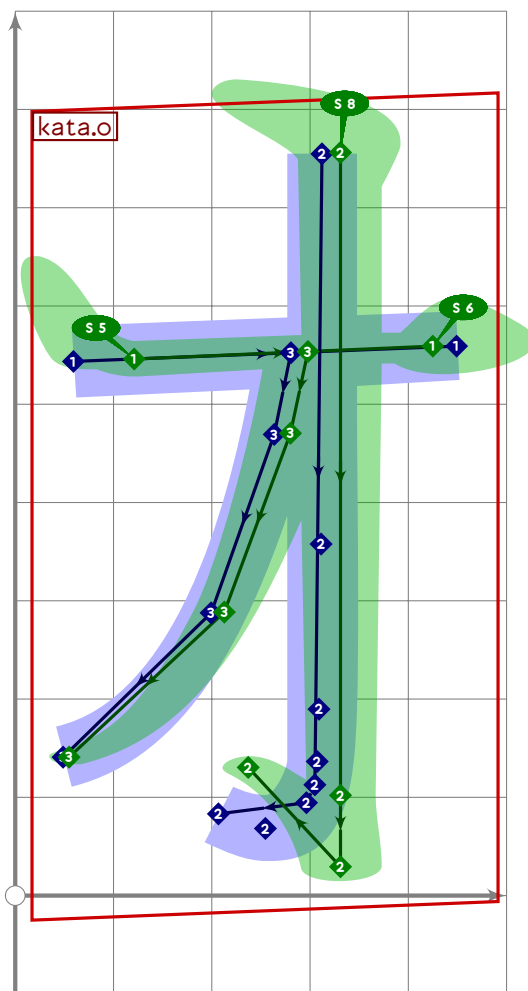



FF

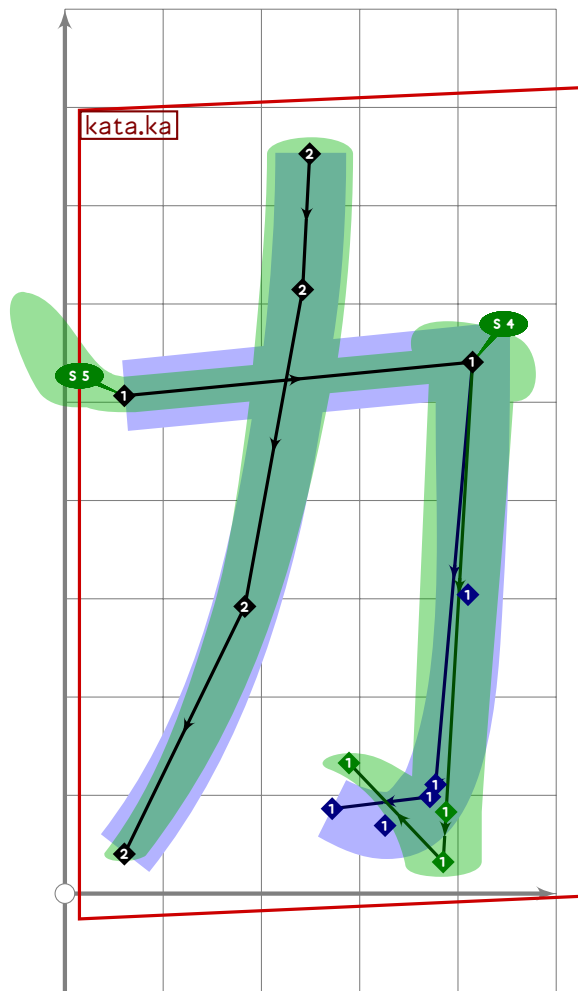
```
852 % katakana "e"  
853 begintsuglyph("uniFF74";116);  
854 kata.e;  
855 tsu_render;  
856 endtsuglyph;  
857
```

U+FF75
tsuku.uniFF75

FF



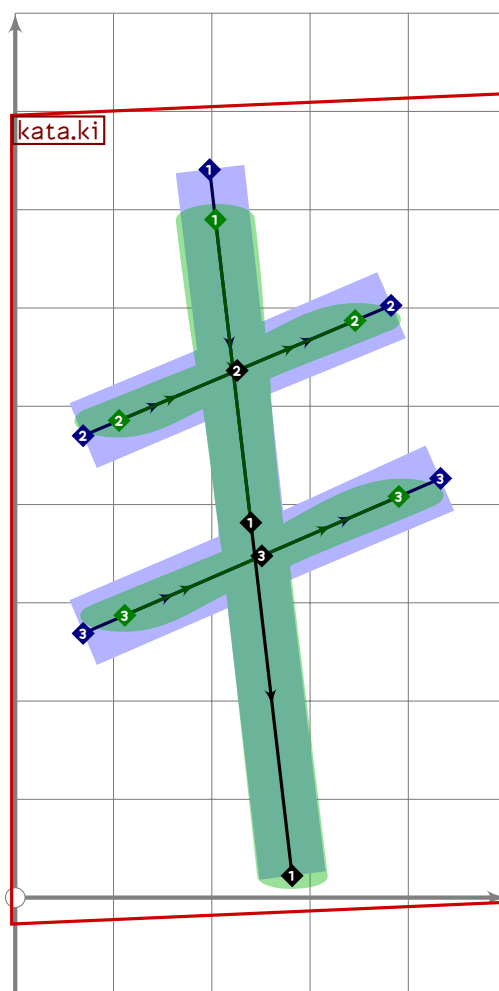
```
858 % katakana "o"  
859 begintsuglyph("uniFF75";117);  
860 kata.o;  
861 tsu_render;  
862 endtsuglyph;  
863
```



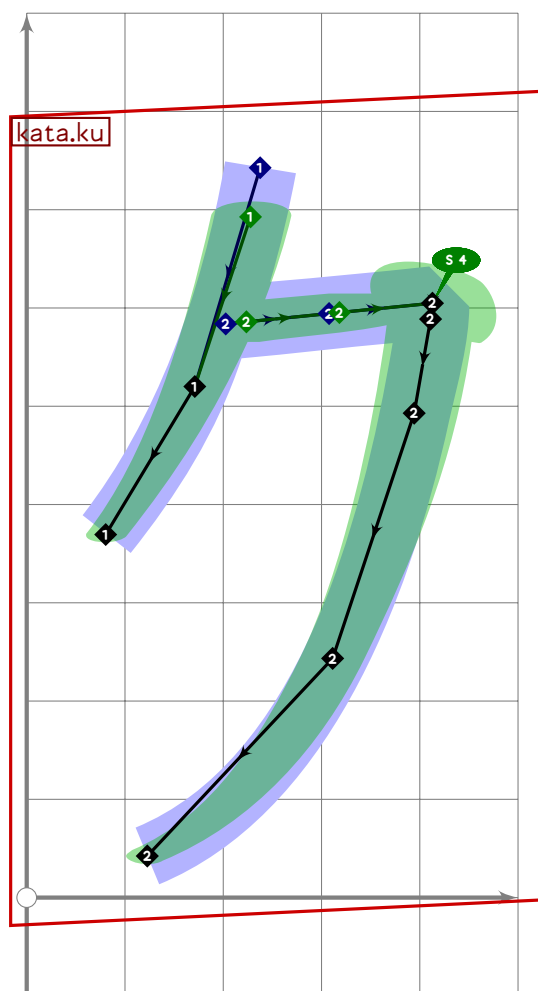
```
864 % katakana "ka"  
865 begint Suglyph("uniFF76",118);  
866   kata.ka;  
867   tsu_render;  
868 endtsuglyph;  
869
```

U+FF77
tsuku.uniFF77

FF



```
870 % katakana "ki"  
871 begintsuglyph("uniFF77";119);  
872   kata.ki;  
873   tsu_render;  
874 endtsuglyph;  
875
```



FF

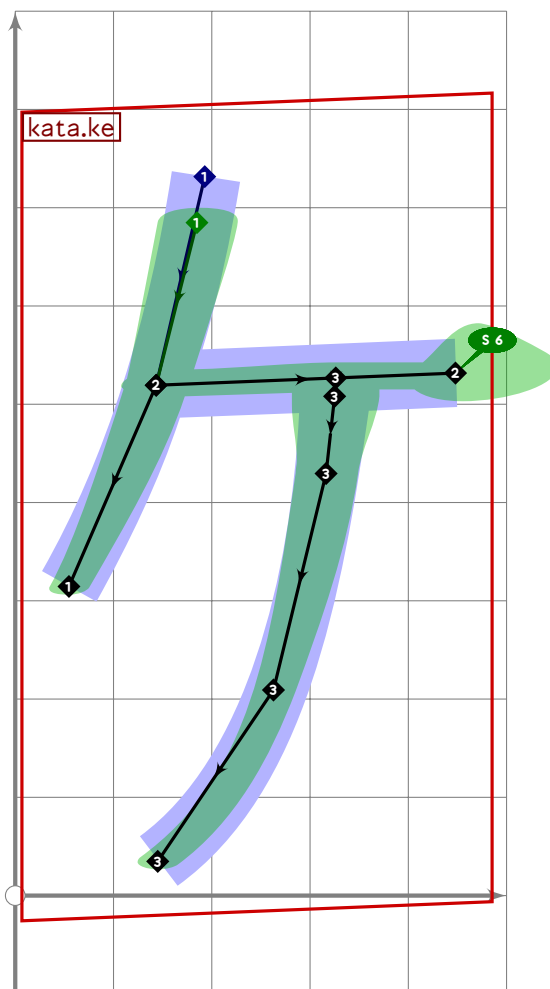
```

876 % katakana "ku"
877 begint Suglyph("uniFF78";120);
878   kata.ku;
879   tsu_render;
880 endtsuglyph;
881

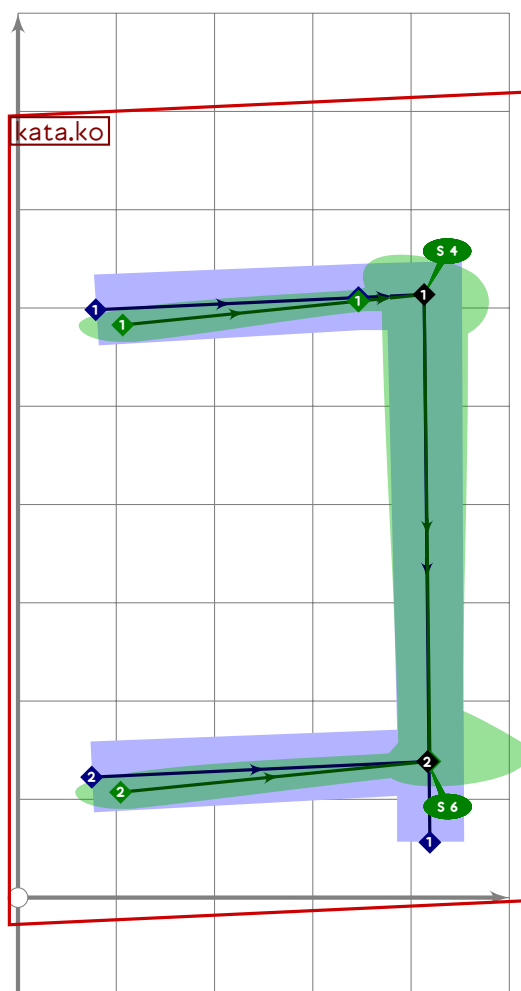
```

U+FF79
tsuku.uniFF79

FF



```
882 % katakana "ke"  
883 begintsuglyph("uniFF79",121);  
884 kata.ke;  
885 tsu_render;  
886 endtsuglyph;  
887
```



FF

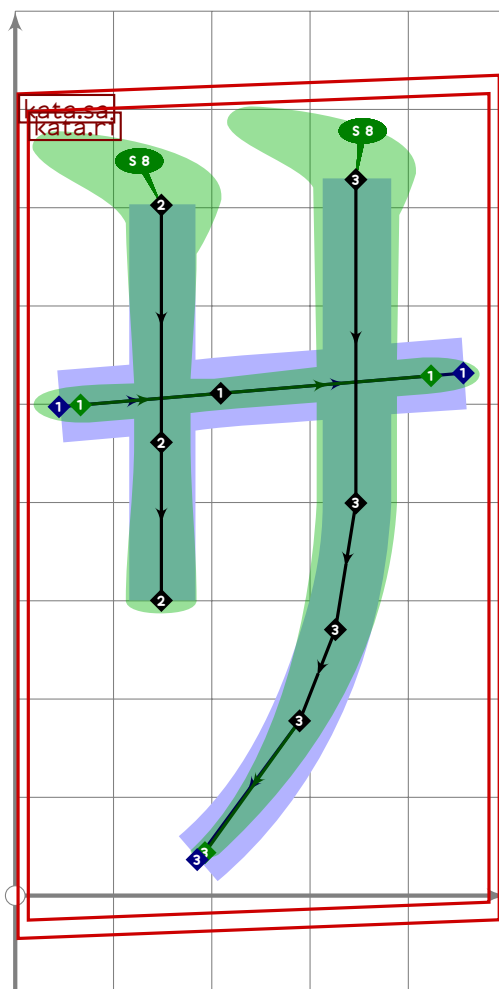
```

888 % katakana "ko"
889 begintsuglyph("uniFF7A",122);
890 kata.ko;
891 tsu_render;
892 endtsuglyph;
893

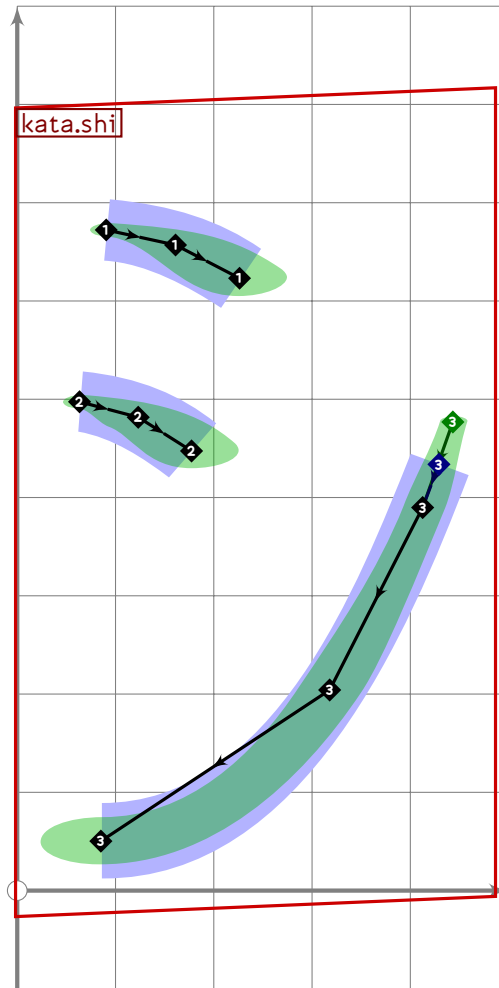
```

U+FF7B
tsuku.uniFF7B

FF



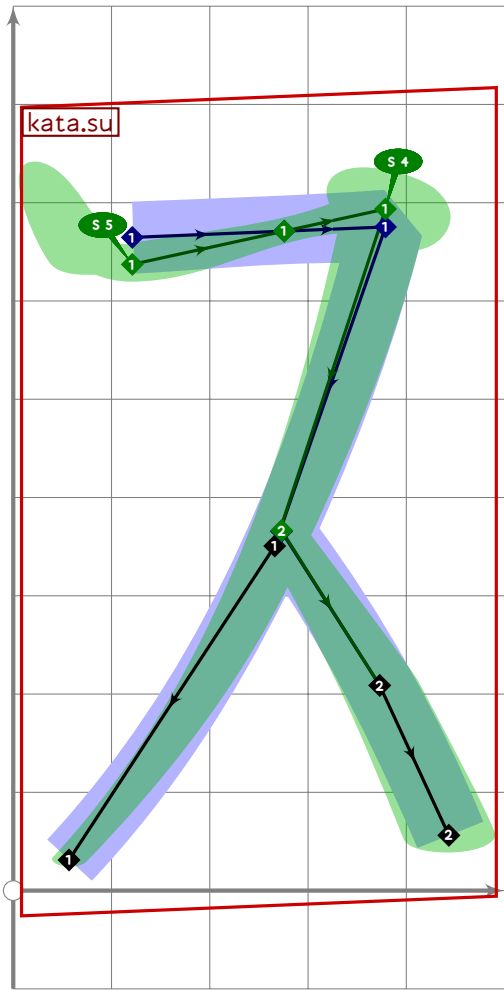
```
894 % katakana "sa"  
895 begintsuglyph("uniFF7B",123);  
896   kata.sa;  
897   tsu_render;  
898 endtsuglyph;  
899
```

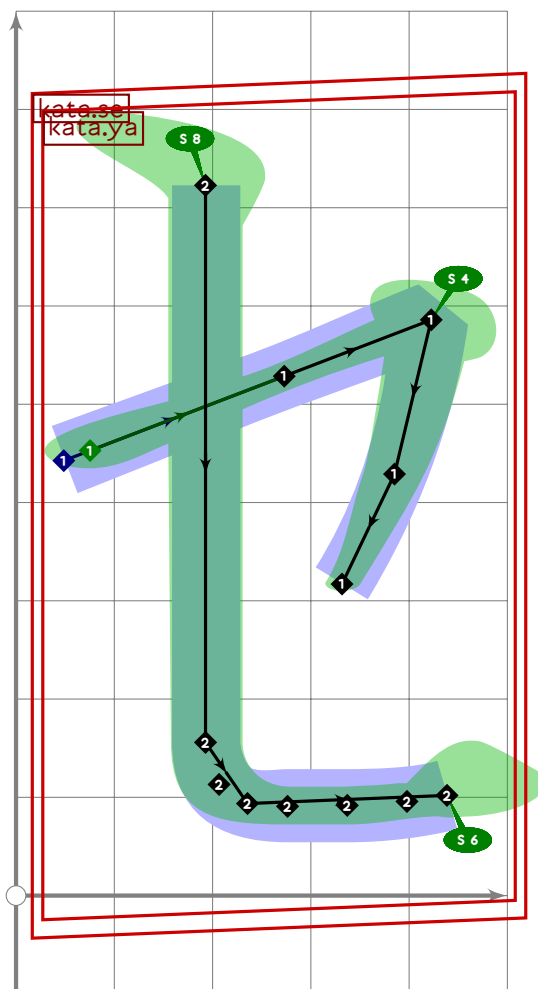
```
900 % katakana "shi"  
901 begint Suglyph("uniFF7C";124);  
902   kata.shi;  
903   tsu_render;  
904 endtsuglyph;  
905
```

U+FF7D
tsuku.uniFF7D

FF



```
906 % katakana "su"  
907 begint Suglyph("uniFF7D";125);  
908   kata.su;  
909   tsu_render;  
910 endtsuglyph;  
911
```



FF

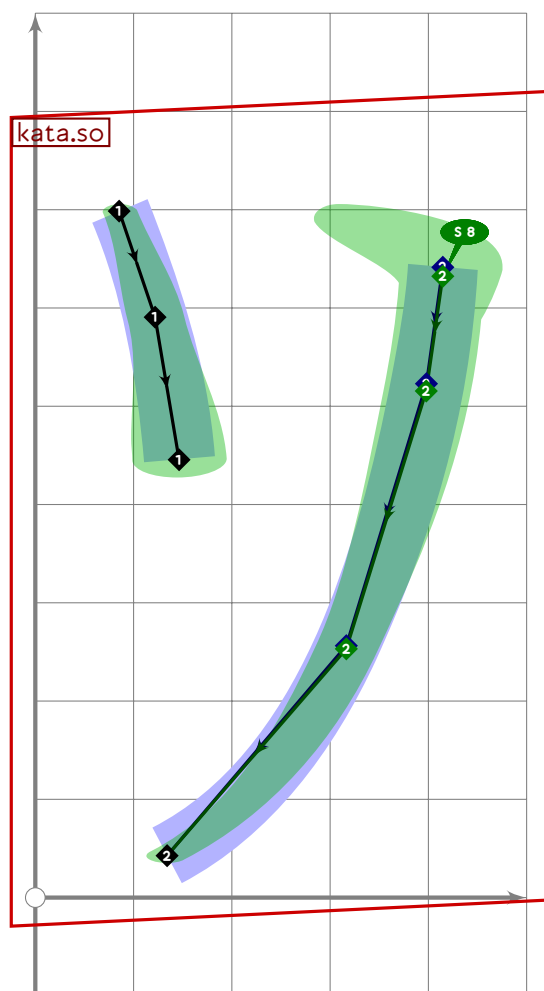
```

912 % katakana "se"
913 begint Suglyph("uniFF7E";126);
914   kata.se;
915   tsu_render;
916 endtsuglyph;
917

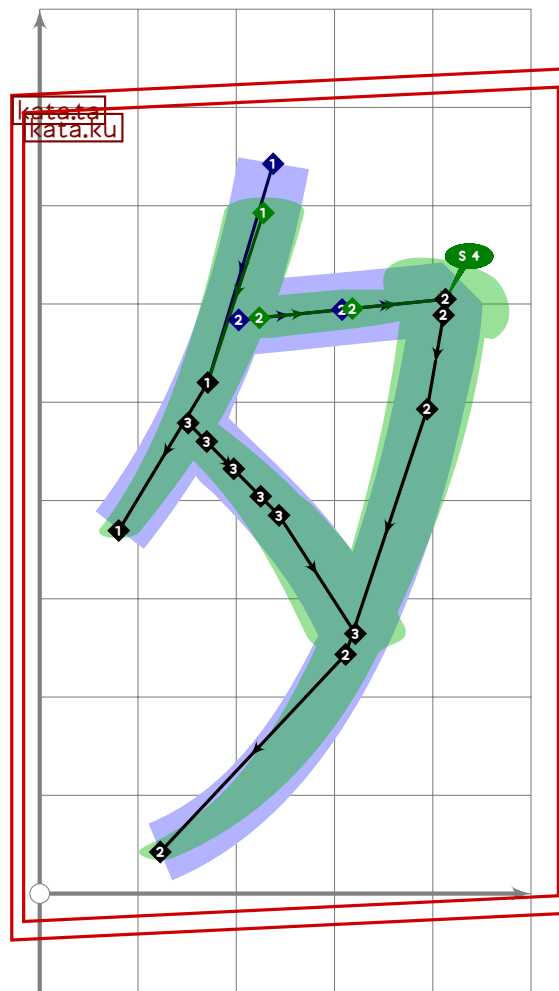
```

U+FF7F
tsuku.uniFF7F

FF



```
918 % katakana "so"  
919 begintsuglyph("uniFF7F";127);  
920 kata.so;  
921 tsu_render;  
922 endtsuglyph;  
923
```



FF

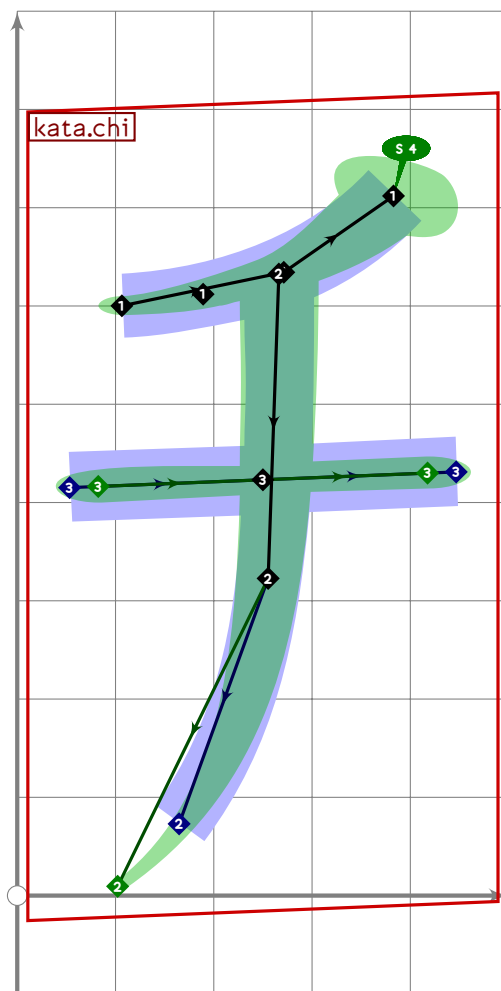
```

924 % katakana "ta"
925 begintsuglyph("uniFF80";128);
926   kata.ta;
927   tsu_render;
928 endtsuglyph;
929

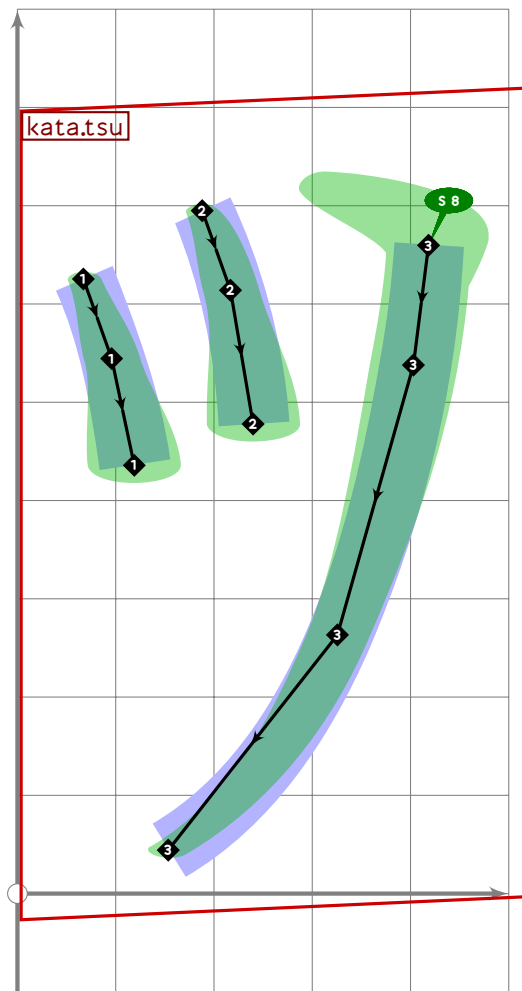
```

U+FF81
tsuku.uniFF81

FF



```
930 % katakana "chi"  
931 begint Suglyph("uniFF81";129);  
932 kata.chi;  
933 tsu_render;  
934 endtsuglyph;  
935
```

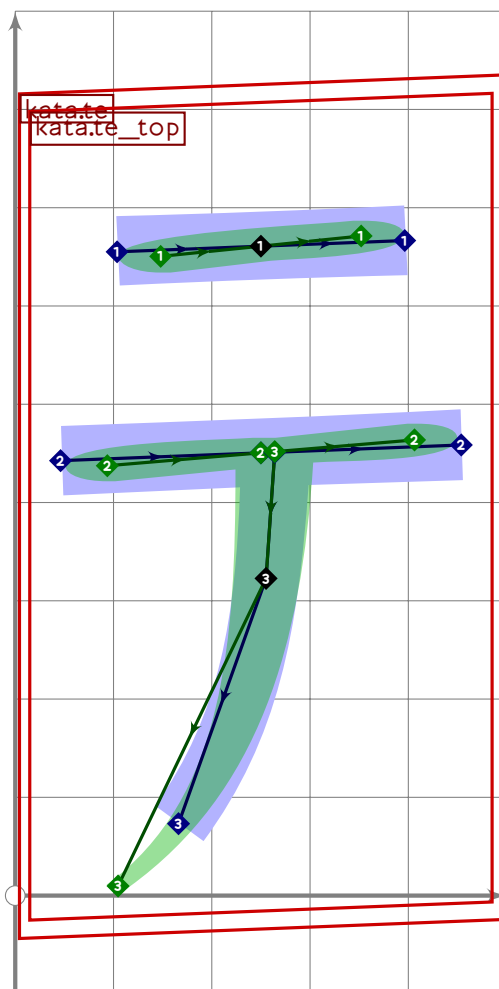


```
936 % katakana "tsu"  
937 begint Suglyph("uniFF82";130);  
938 kata.tsu;  
939 tsu_render;  
940 endtsuglyph;  
941
```

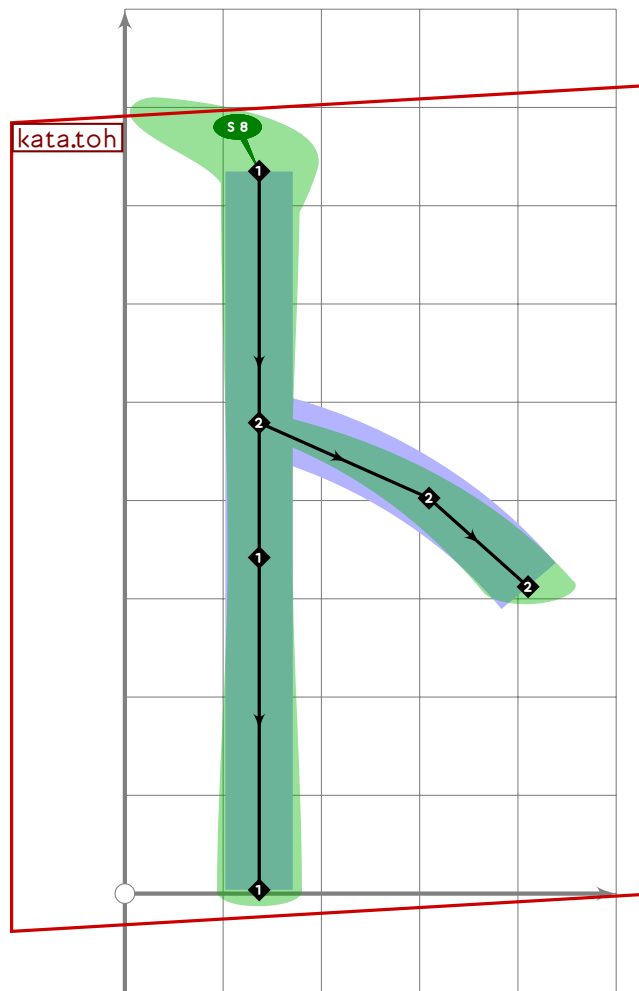
FF

U+FF83
tsuku.uniFF83

FF



```
942 % katakana "te"  
943 beginsuglyph("uniFF83";131);  
944 kata.te;  
945 tsu_render;  
946 endsuglyph;  
947
```

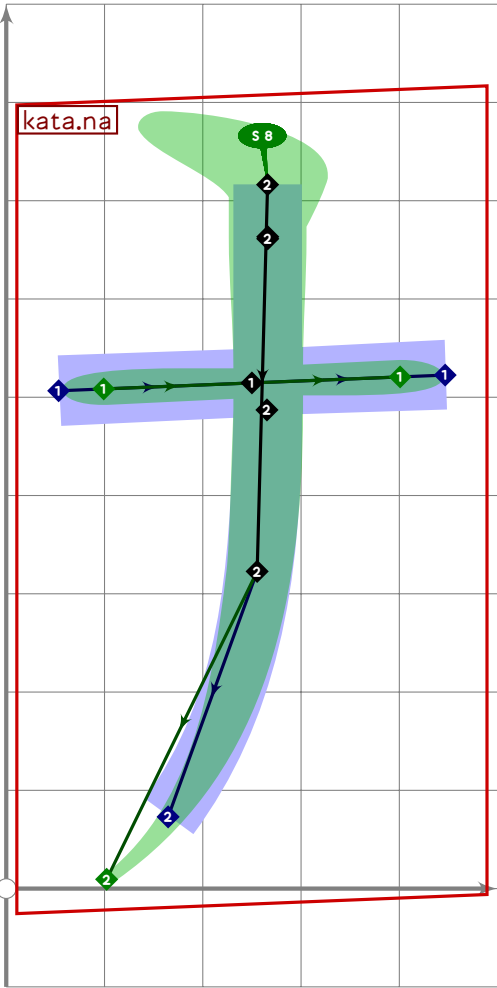



FF

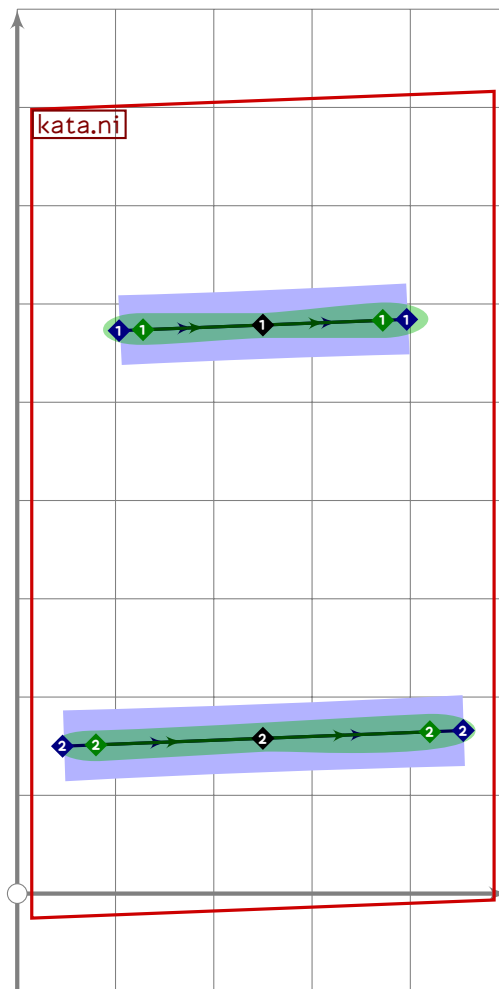
```
948 % katakana "to"
949 begint Suglyph("uniFF84";132);
950   kata.toh;
951   tsu_render;
952 endtsuglyph;
953
```

U+FF85
tsuku.uniFF85

FF



```
954 % katakana "na"  
955 begint Suglyph("uniFF85",133);  
956   kata.na;  
957   tsu_render;  
958 endtsuglyph;  
959
```

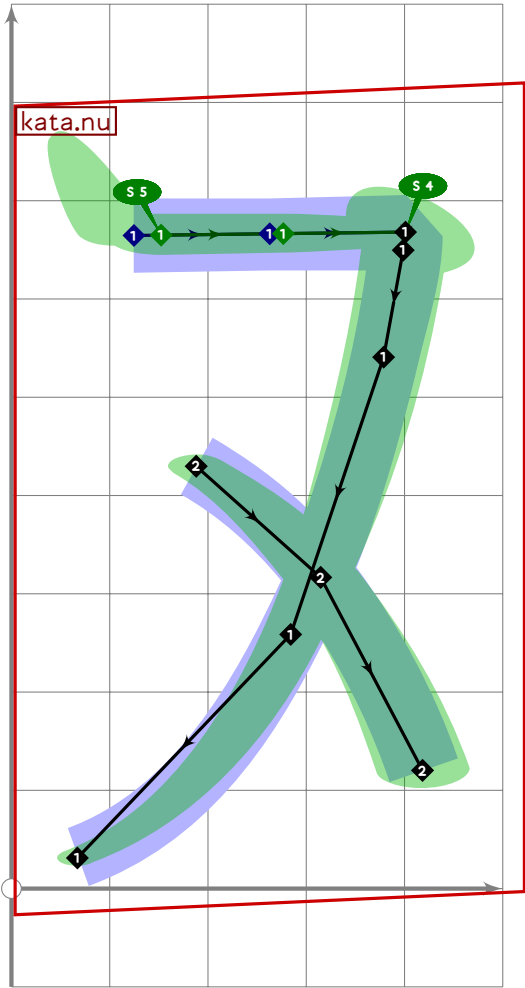


FF

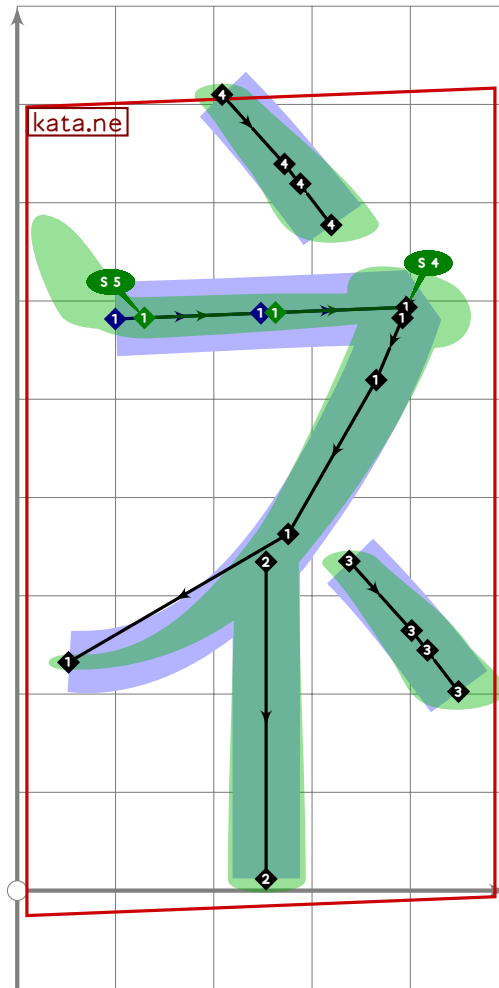
```
960 % katakana "ni"  
961 begint Suglyph("uniFF86",134);  
962   kata.ni;  
963   tsu_render;  
964 endtsuglyph;  
965
```

U+FF87
tsuku.uniFF87

FF



```
966 % katakana "nu"  
967 begint Suglyph("uniFF87";135);  
968   kata.nu;  
969   tsu_render;  
970 endtsuglyph;  
971
```



FF

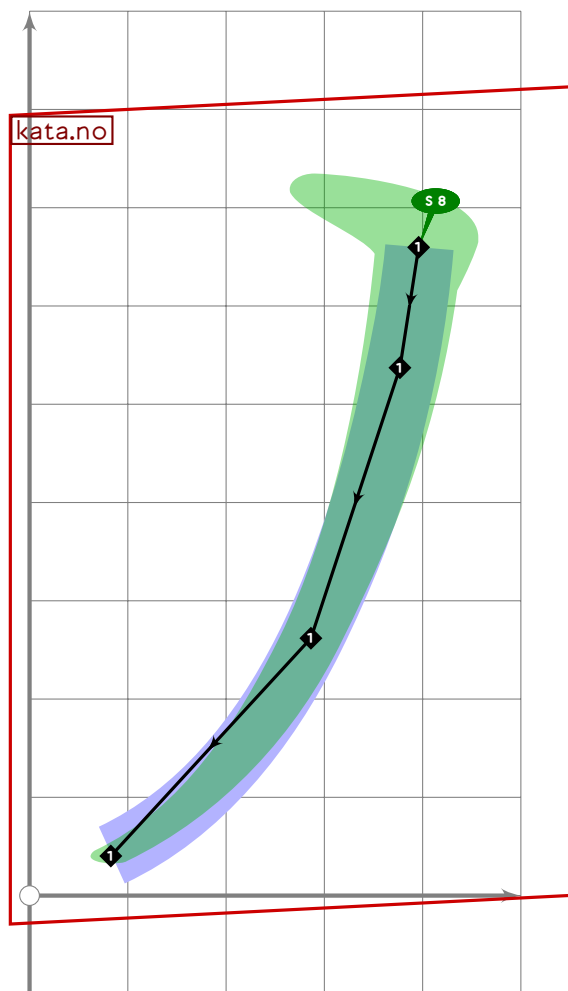
```

972 % katakana "ne"
973 begint Suglyph("uniFF88",136);
974   kata.ne;
975   tsu_render;
976 endtsuglyph;
977

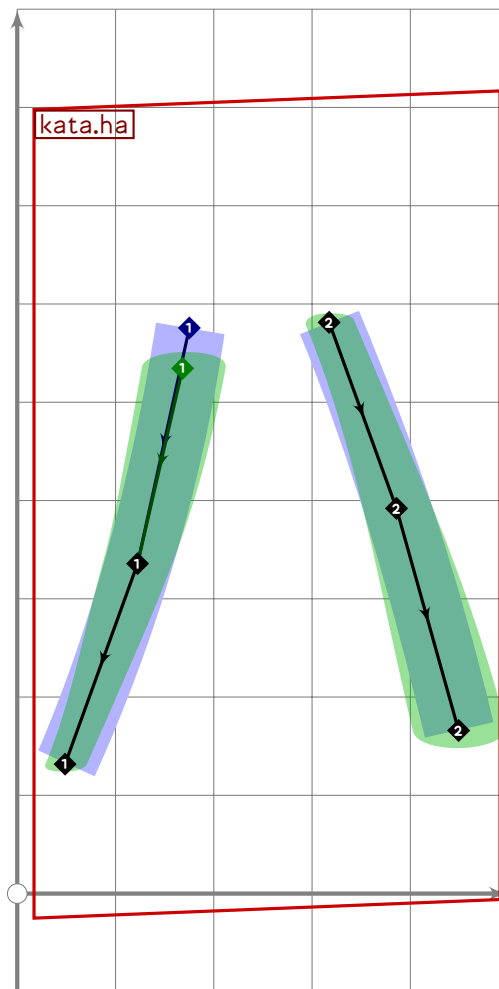
```

U+FF89
tsuku.uniFF89

FF



```
978 % katakana "no"  
979 begintsuglyph("uniFF89";137);  
980 kata.no;  
981 tsu_render;  
982 endtsuglyph;  
983
```

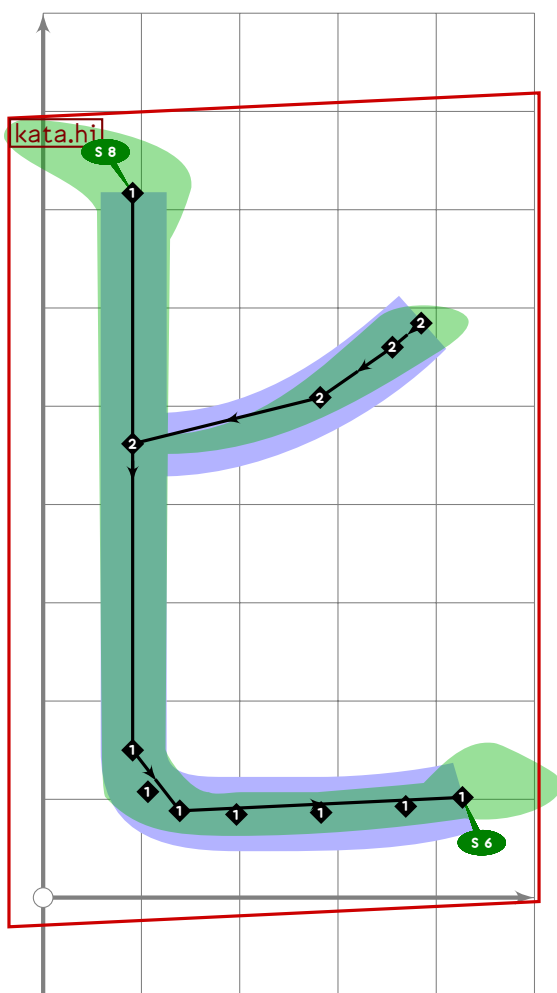


```
984 % katakana "ha"  
985 begint Suglyph("uniFF8A",138);  
986 kata.ha;  
987 tsu_render;  
988 endtsuglyph;  
989
```

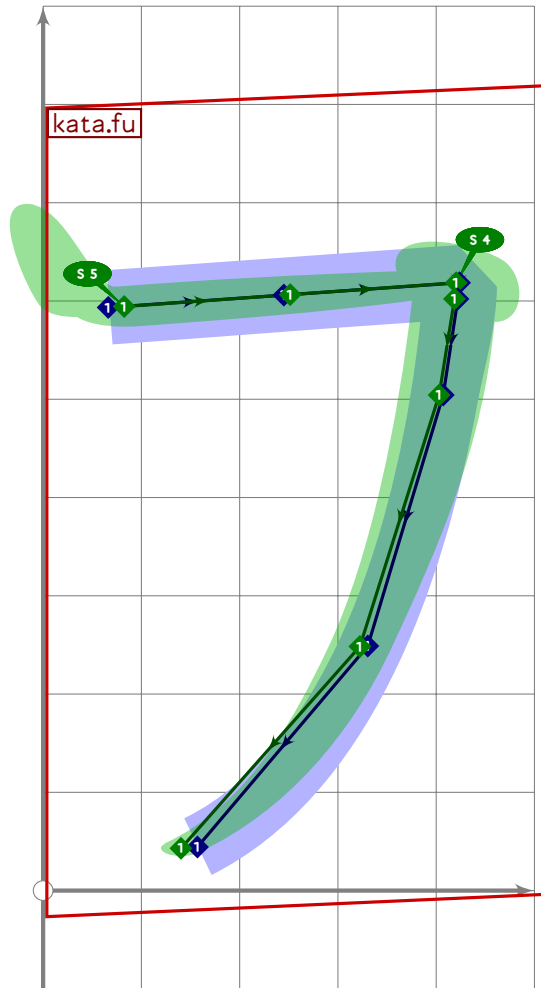
FF

U+FF8B
tsuku.uniFF8B

FF



```
990 % katakana "hi"  
991 begintsuglyph("uniFF8B",139);  
992   kata.hi;  
993   tsu_render;  
994 endtsuglyph;  
995
```

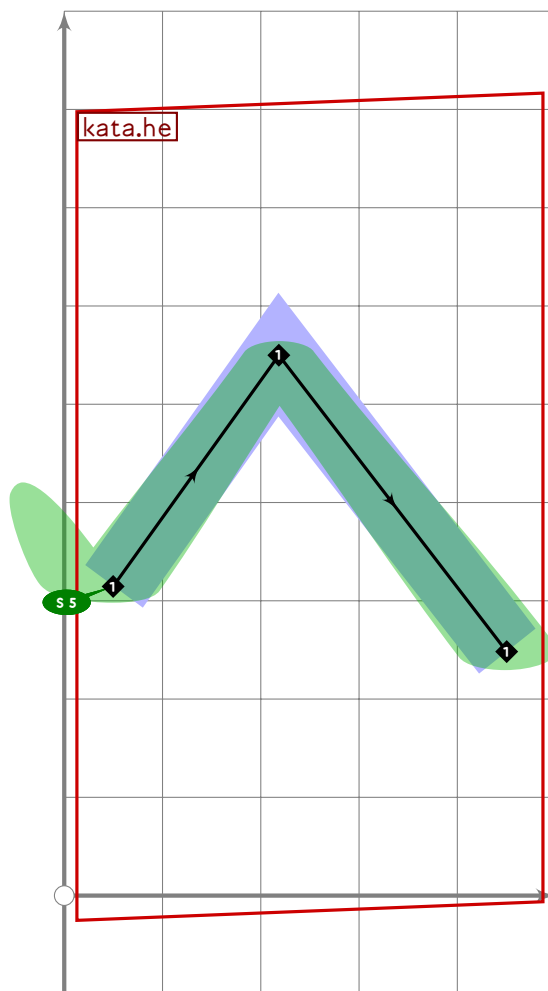



FF

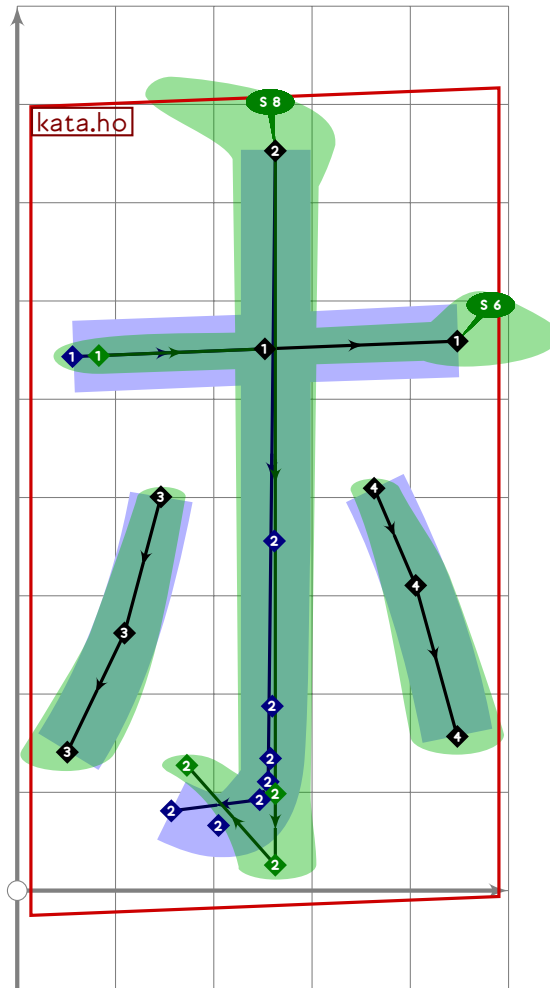
```
996 % katakana "fu"
997 begint Suglyph("uniFF8C";140);
998 kata.fu;
999 tsu_render;
1000 endtsuglyph;
1001
```

U+FF8D
tsuku.uniFF8D

FF



```
1002 % katakana "he"  
1003 begint Suglyph("uniFF8D";141);  
1004 kata.he;  
1005 tsu_render;  
1006 endtsuglyph;  
1007
```



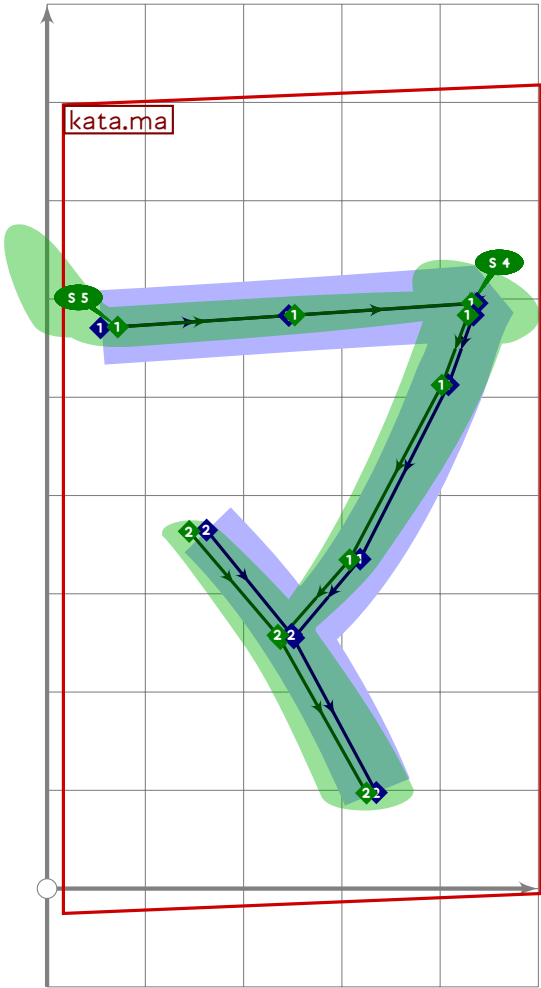
```

1008 % katakana "ho"
1009 begintsuglyph("uniFF8E";142);
1010   kata.ho;
1011   tsu_render;
1012 endtsuglyph;
1013

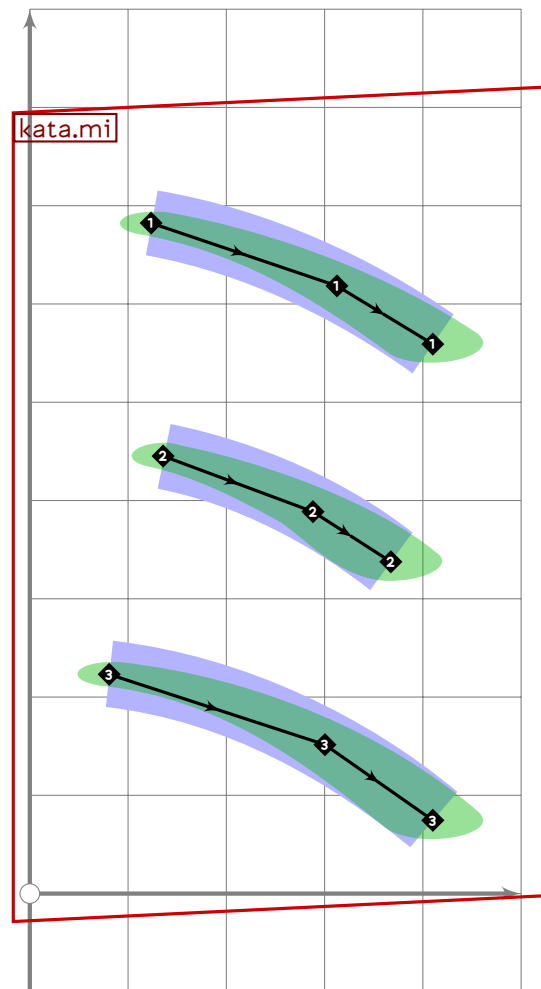
```

U+FF8F
tsuku.uniFF8F

FF



```
1014 % katakana "ma"  
1015 begint Suglyph("uniFF8F";143);  
1016   kata.ma;  
1017   tsu_render;  
1018 endtsuglyph;  
1019
```

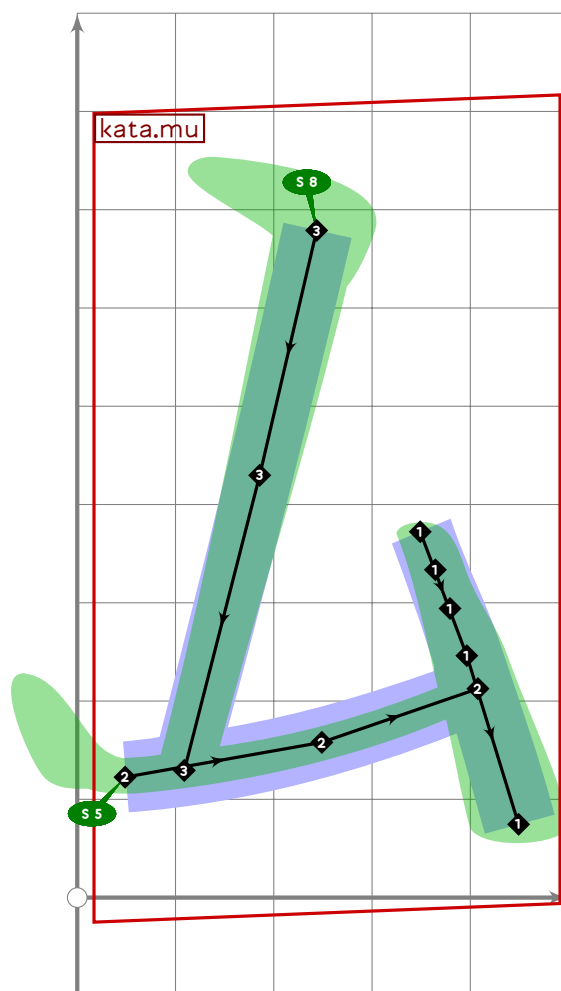


FF

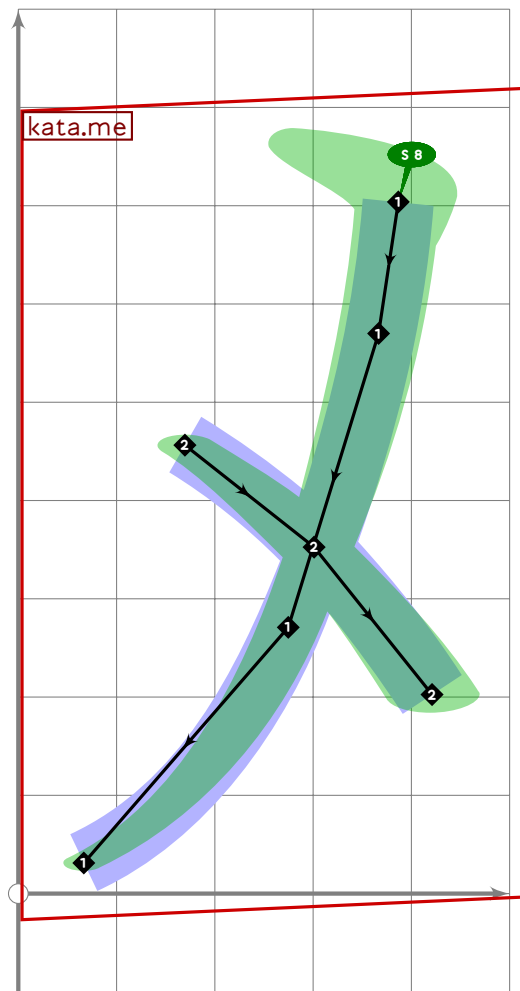
```
1020 % katakana "mi"  
1021 begintsuglyph("uniFF90";144);  
1022   kata.mi;  
1023   tsu_render;  
1024 endsuglyph;  
1025
```

U+FF91
tsuku.uniFF91

FF



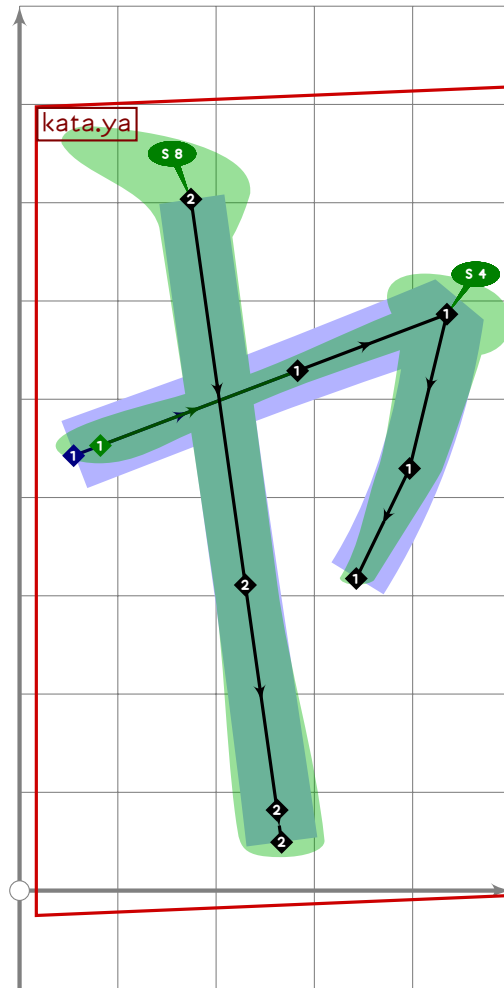
```
1026 % katakana "mu"  
1027 begintsuglyph("uniFF91",145);  
1028   kata.mu;  
1029   tsu_render;  
1030 endtsuglyph;  
1031
```



FF

```
1032 % katakana "me"  
1033 begint Suglyph("uniFF92",146);  
1034   kata.me;  
1035   tsu_render;  
1036 endtsuglyph;  
1037
```

FF

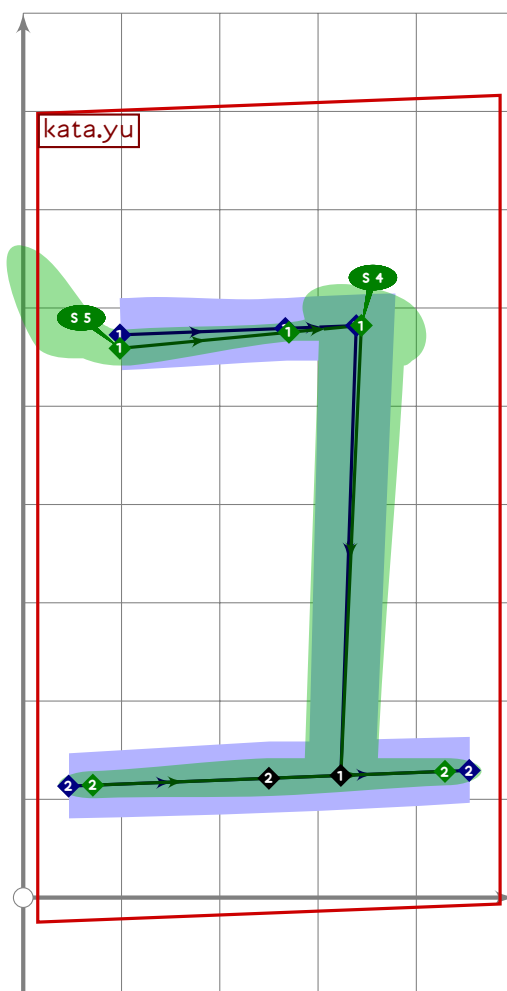


```
1044 % katakana "ya"  
1045 begintsuglyph("uniFF94";148);  
1046   kata.ya;  
1047   tsu_render;  
1048 endtsuglyph;  
1049
```

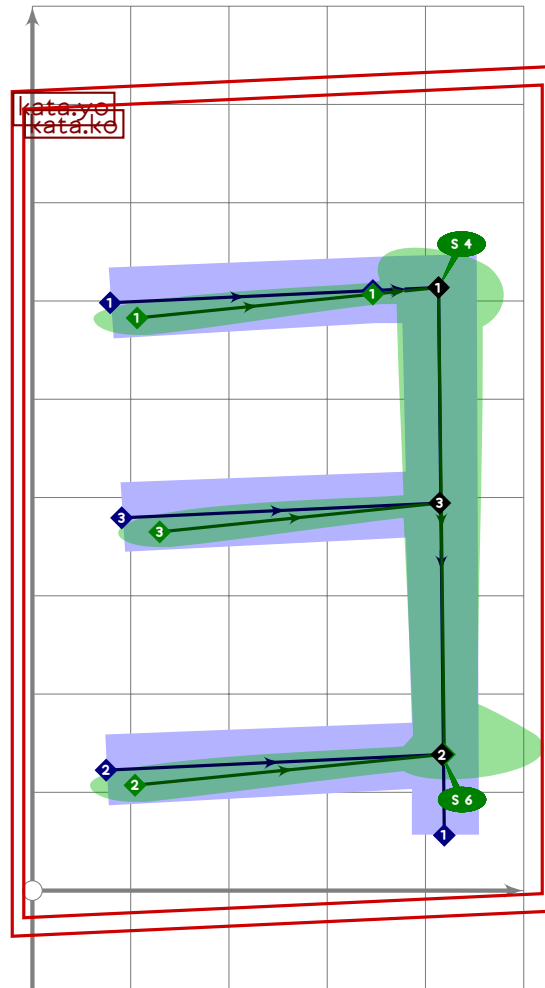
FF

U+FF95
tsuku.uniFF95

FF



```
1050 % katakana "yu"  
1051 begintsuglyph("uniFF95",149);  
1052   kata.yu;  
1053   tsu_render;  
1054 endtsuglyph;  
1055
```

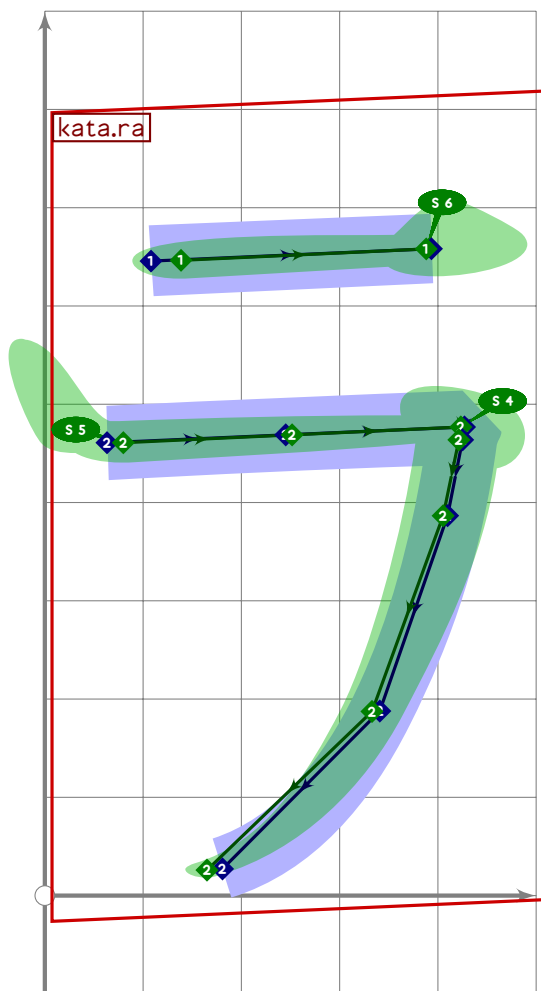


FF

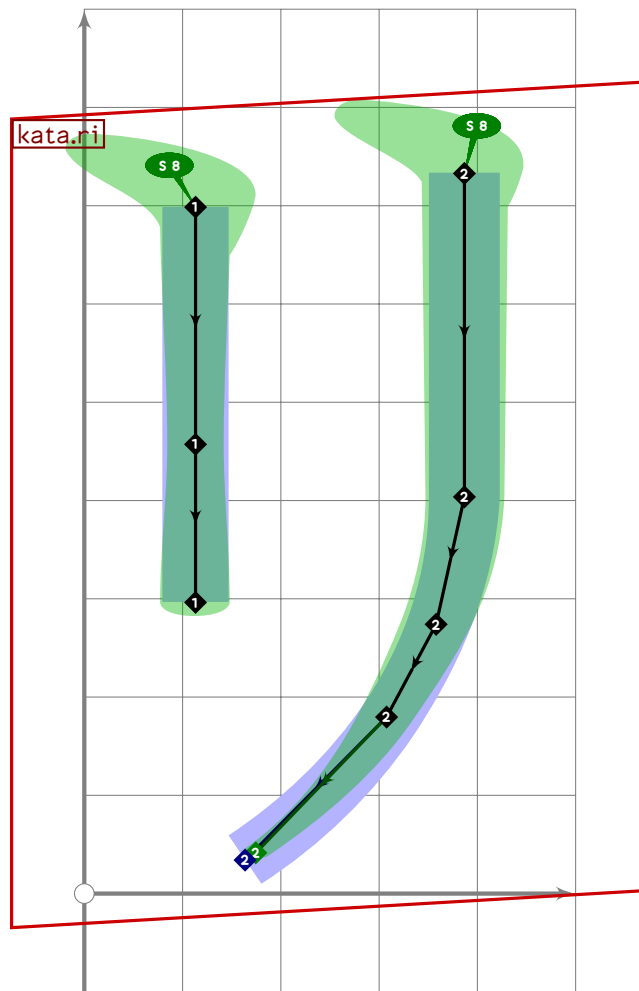
```
1056 % katakana "yo"  
1057 begintsuglyph("uniFF96",150);  
1058   kata.yo;  
1059   tsu_render;  
1060 endtsuglyph;  
1061
```

U+FF97
tsuku.uniFF97

FF



```
1062 % katakana "ra"
1063 begintsuglyph("uniFF97",151);
1064   kata.ra;
1065   tsu_render;
1066 endtsuglyph;
1067
```

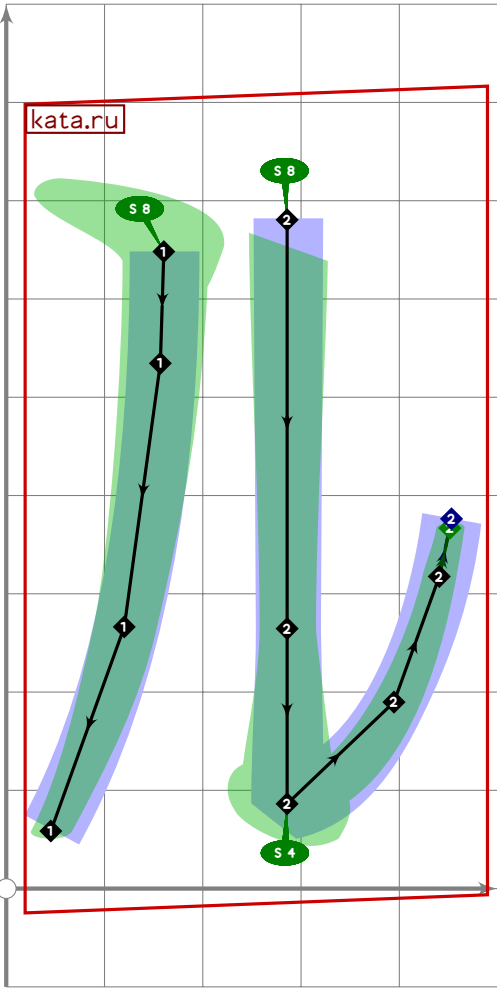


FF

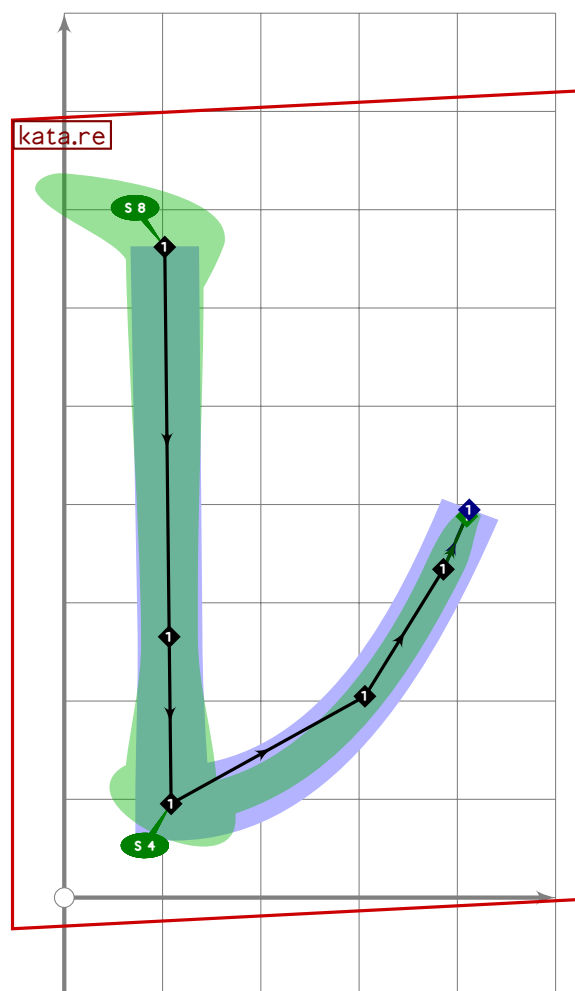
```
1068 % katakana "ri"  
1069 begintsuglyph("uniFF98",152);  
1070 kata.ri;  
1071 tsu_render;  
1072 endtsuglyph;  
1073
```

U+FF99
tsuku.uniFF99

FF



```
1074 % katakana "ru"  
1075 begint Suglyph("uniFF99",153);  
1076   kata.ru;  
1077   tsu_render;  
1078 endtsuglyph;  
1079
```

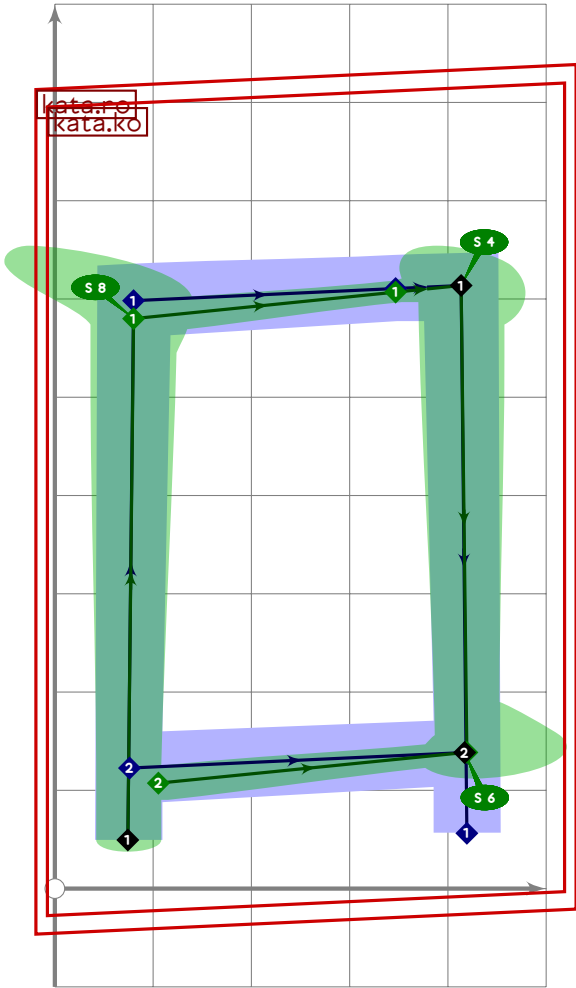


FF

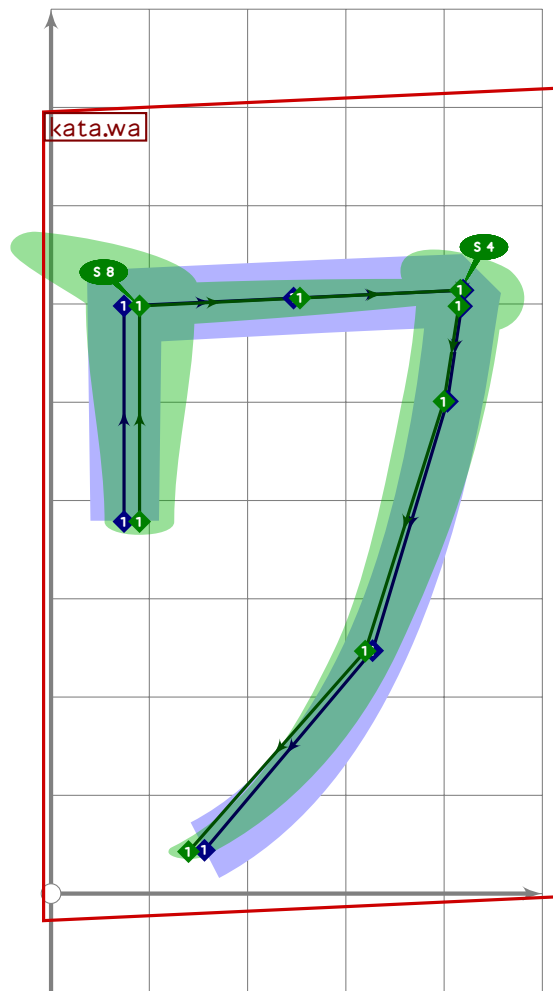
```
1080 % katakana "re"  
1081 begint Suglyph("uniFF9A",154);  
1082   kata.re;  
1083   tsu_render;  
1084 endtsuglyph;  
1085
```

U+FF9B
tsuku.uniFF9B

FF



```
1086 % katakana "ro"
1087 begintsuglyph("uniFF9B";155);
1088   kata.ro;
1089   tsu_render;
1090 endtsuglyph;
1091
```

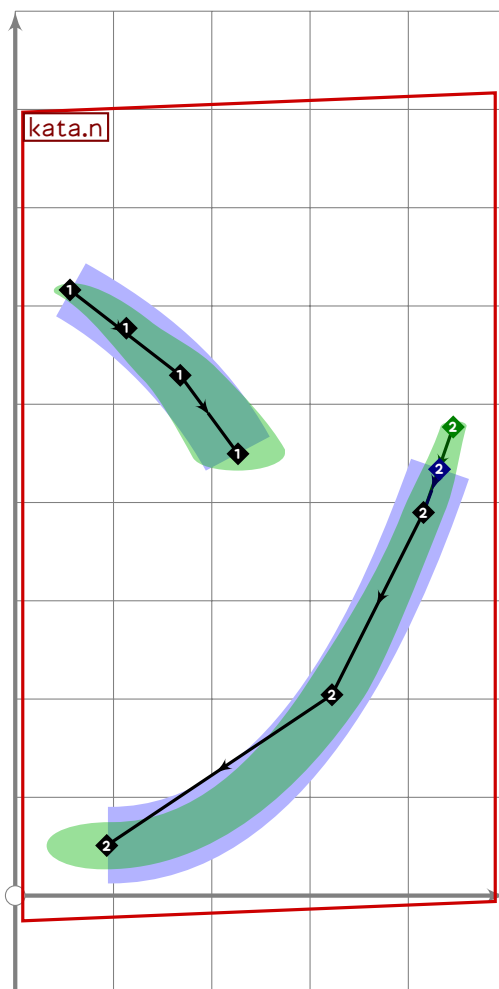



FF

```
1092 % katakana "wa"  
1093 begintsuglyph("uniFF9C";156);  
1094 kata.wa;  
1095 tsu_render;  
1096 endtsuglyph;  
1097
```

U+FF9D
tsuku.uniFF9D

FF



```
1098 % katakana "n"
1099 begint Suglyph("uniFF9D";157);
1100   kata.n;
1101   tsu_render;
1102 endtsuglyph;
1103
1104 % WARNING changing rescale setting
1105 tsu_rescale_native_zero;
1106
```



FF

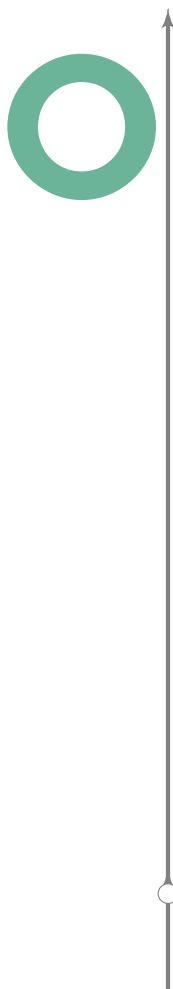
```

1107 % combining dakuten
1108 begintsuglyph("uniFF9E";158);
1109     dakuten(identity
1110         scaled 0.8 rotated 25 shifted (-130,780) xscaled 0.7);
1111     tsu_render;
1112 endtsuglyph;
1113

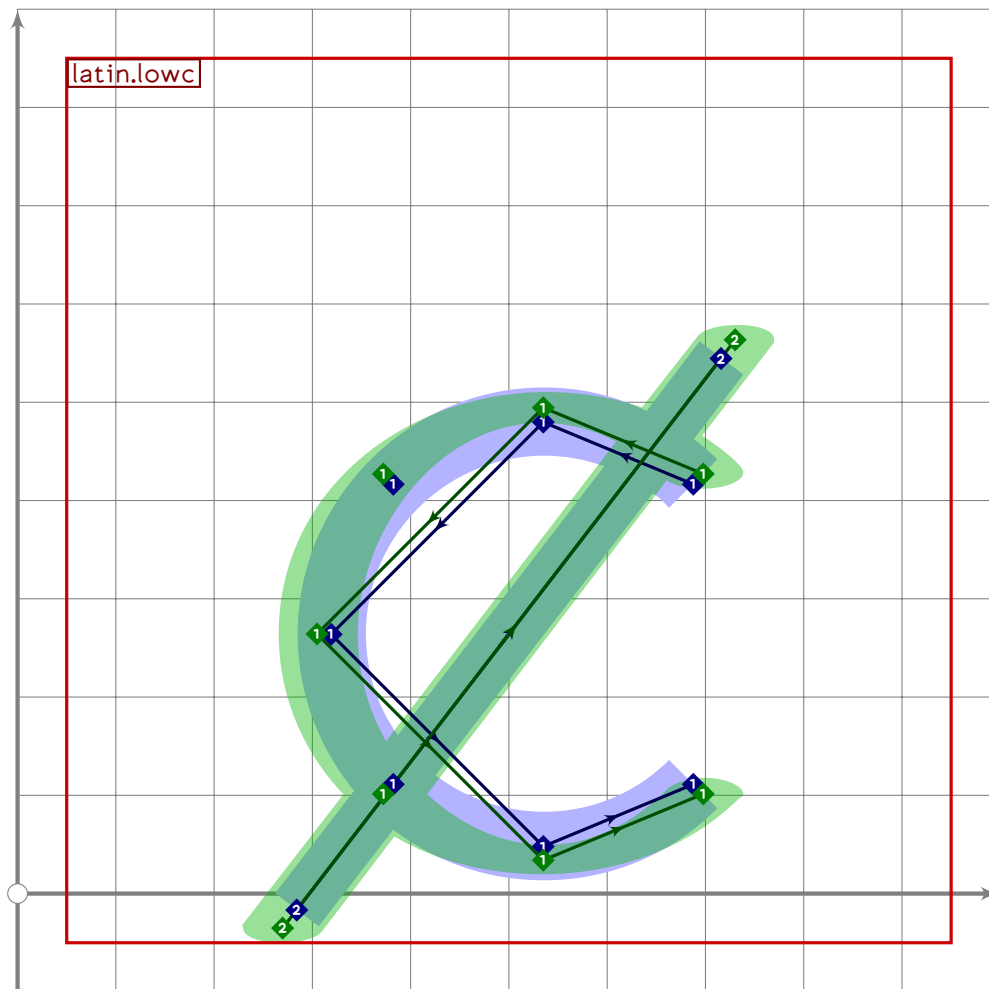
```

U+FF9F
tsuku.uniFF9F

FF



```
1114 % combining handakuten
1115 begintsuglyph("uniFF9F";159);
1116   Fill fullcircle scaled (handakuten_outer*0.75) shifted (-90,780);
1117   unFill reverse fullcircle scaled (handakuten_inner*0.75) shifted (-90,780);
1118 endsuglyph;
1119
1120 endgroup;
1121
1122 % WARNING changing rescale setting
1123 tsu_rescale_full;
```



FF

```

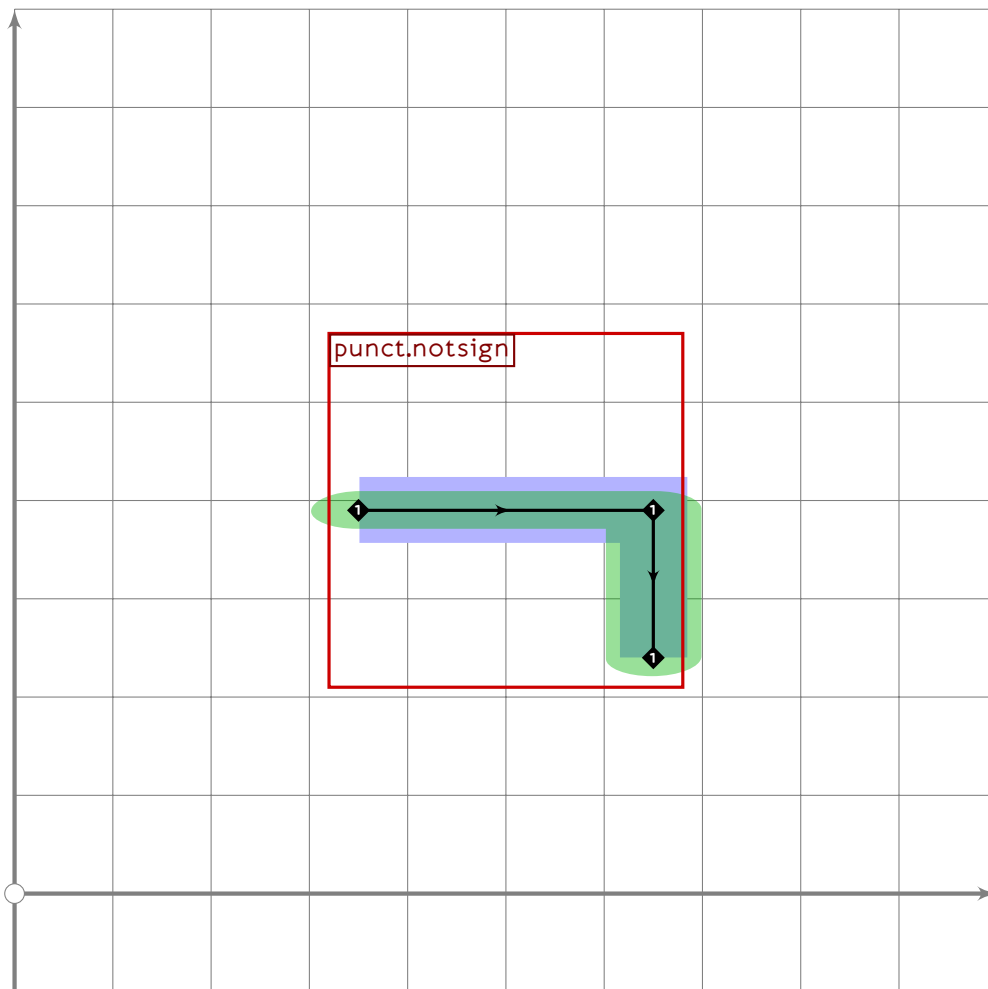
1124
1125 begintsuglyph("uniFFE0";224);
1126   tsu_accent.apply(latin.lowc)(tsu_accent.slash);
1127   tsu_render;
1128 endtsuglyph;
1129
1130 begintsuglyph("uniFFE1";225);
1131   punct.pound;
1132   tsu_render;
1133 endtsuglyph;

```

[see page 393]

U+FFE2
tsuku.uniFFE2

FF



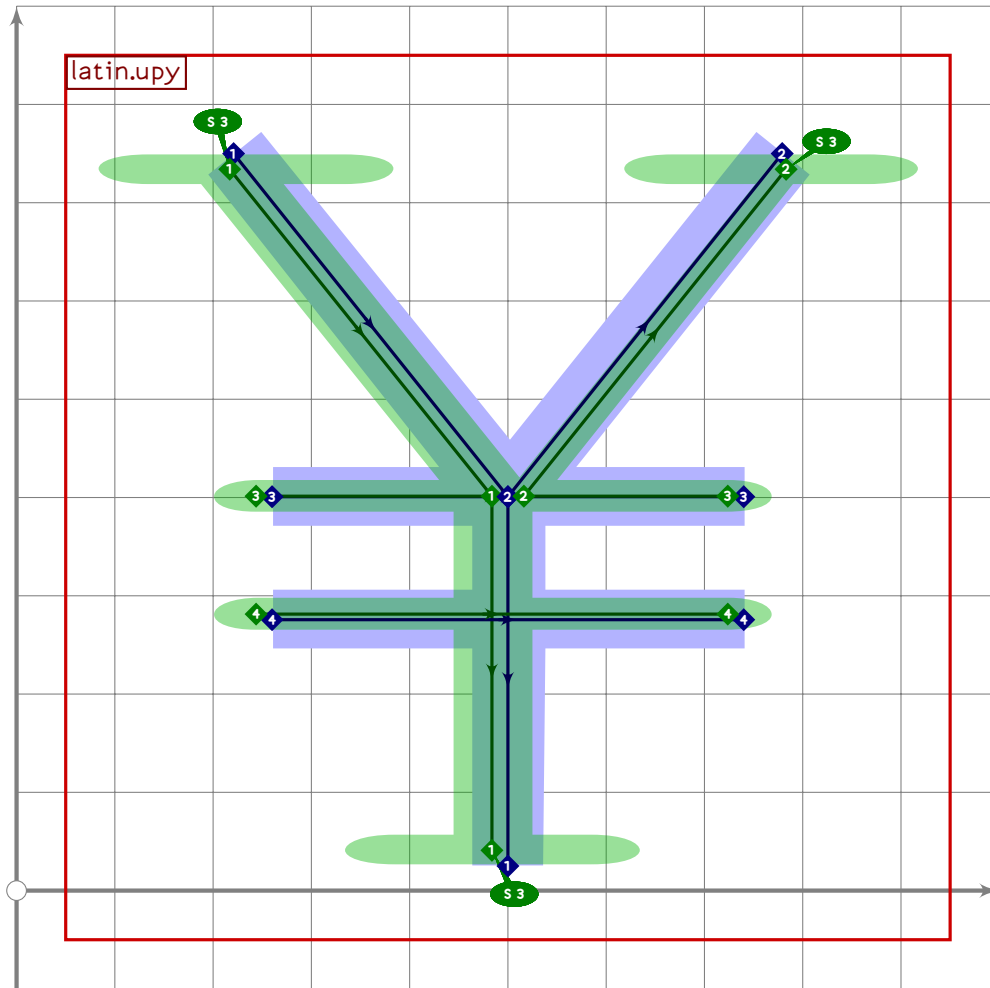
```

1134
1135 begintsuglyph("uniFFE2";226);
1136   punct.notsign
1137     (identity scaled (1.5*tsu_punct_size) shifted centre_pt);
1138   tsu_render;
1139 endtsuglyph;
1140
1141 begintsuglyph("uniFFE3";227);
1142   tsu_accent.macron;
1143   tsu_render;
1144 endtsuglyph;
1145
1146 begintsuglyph("uniFFE4";228);
1147   punct.bvline;
1148   tsu_render;
1149 endtsuglyph;

```

[see page 107]

[see page 368]



FF

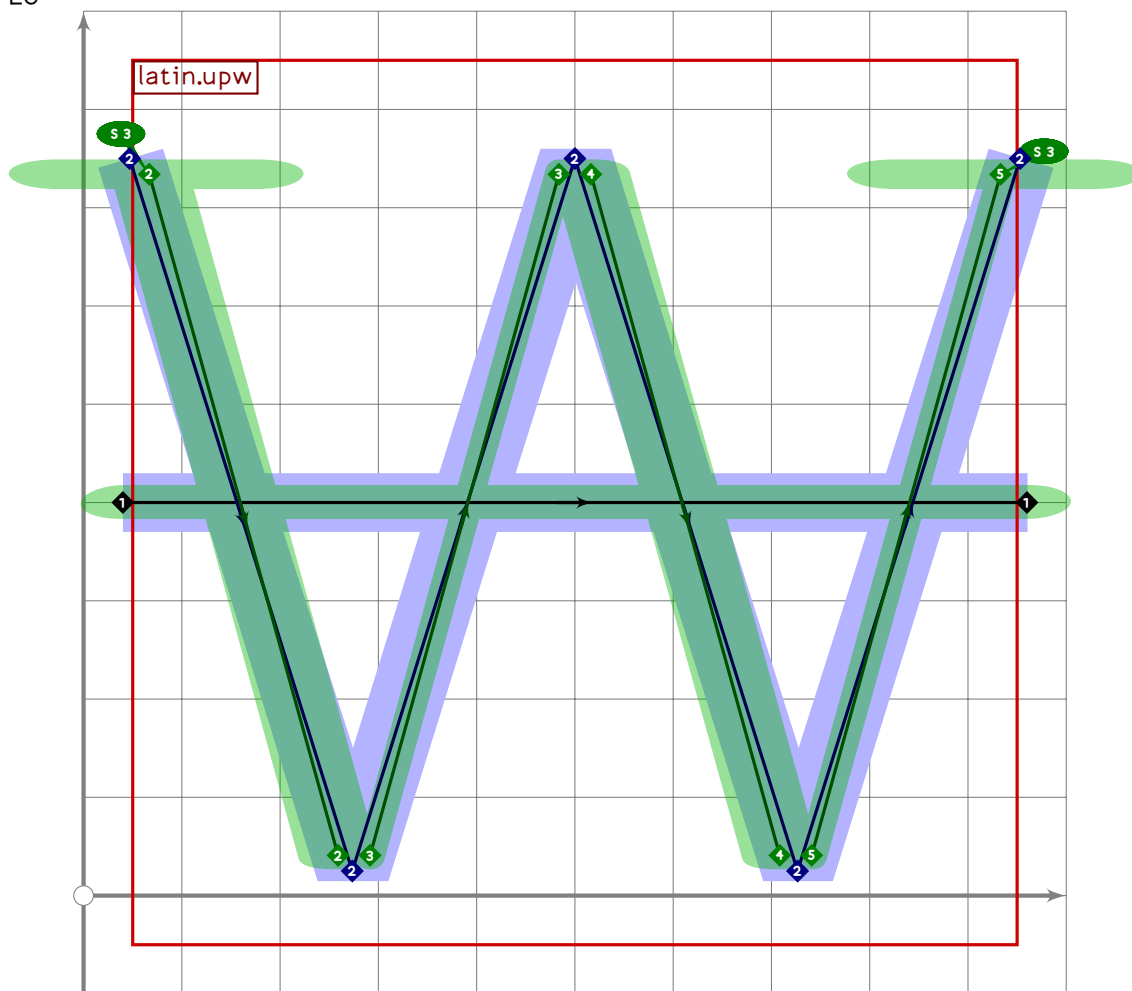
```

1150
1151 begintsuglyph("uniFFE5",229);
1152 latin.upy;
1153 push_stroke(((240,0)-(240,0)) shifted point 1 of get_strokep(-1),
1154 (2,2)-(2,2));
1155 set_bosize(0,80);
1156 push_stroke(((240,0)-(240,0)) shifted point 1.333 of get_strokep(-2),
1157 (2,2)-(2,2));
1158 set_bosize(0,80);
1159 tsu_render;
1160 endtsuglyph;

```

U+FFE6
tsuku.uniFFE6

FF



```

1161
1162 begint Suglyph("uniFFE6",230);
1163   push_stroke((40,400)-(960,400),(2,2)-(2,2));
1164   set_bosize(0,80);
1165   latin.upw;
1166   tsu_render;
1167 endtsuglyph;
1168
1169
1170
1171 endfont;
1172
1173

```


tsuku-1f1.mp

```
1 %
2 % Unicode page 1F1 (Enclosed Supplement) for Tsukurimashou
3 % Copyright (C) 2011, 2012 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
41 do_late_includes;
42
43 _____
44
```

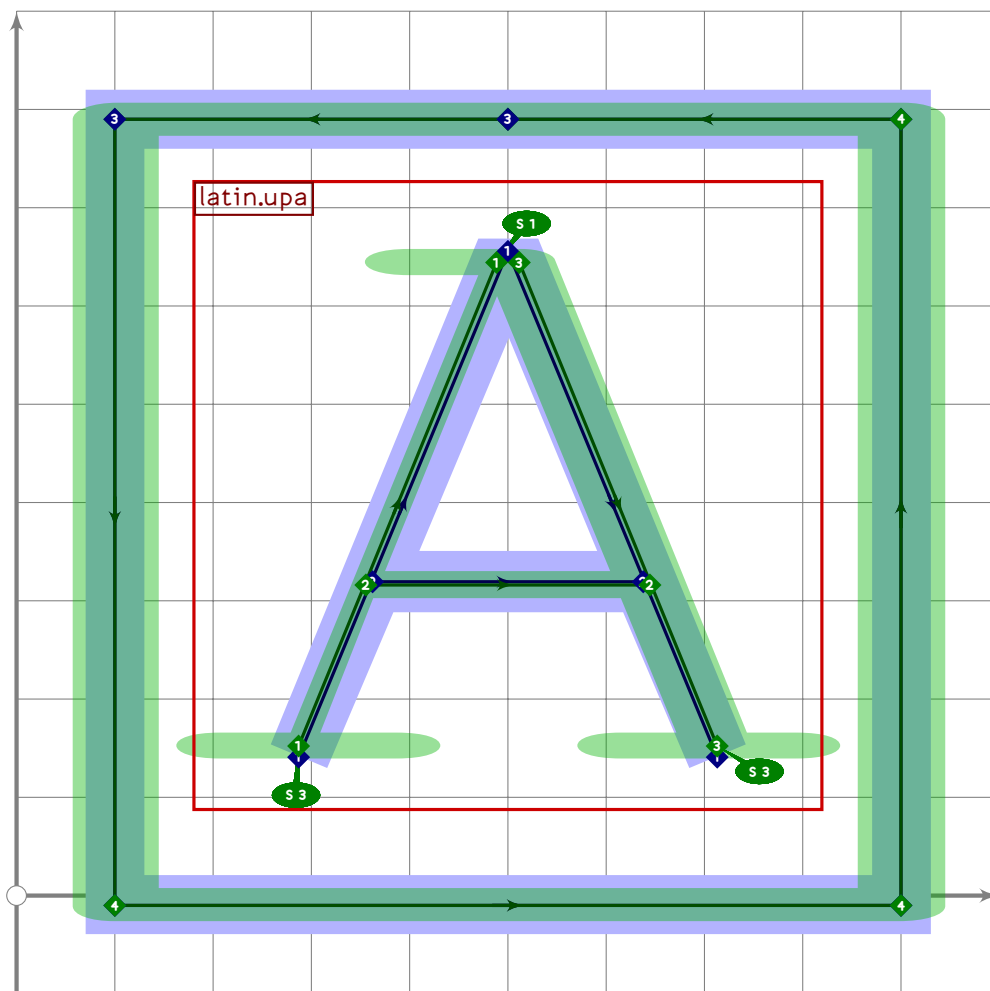
1F1

Squared Latin

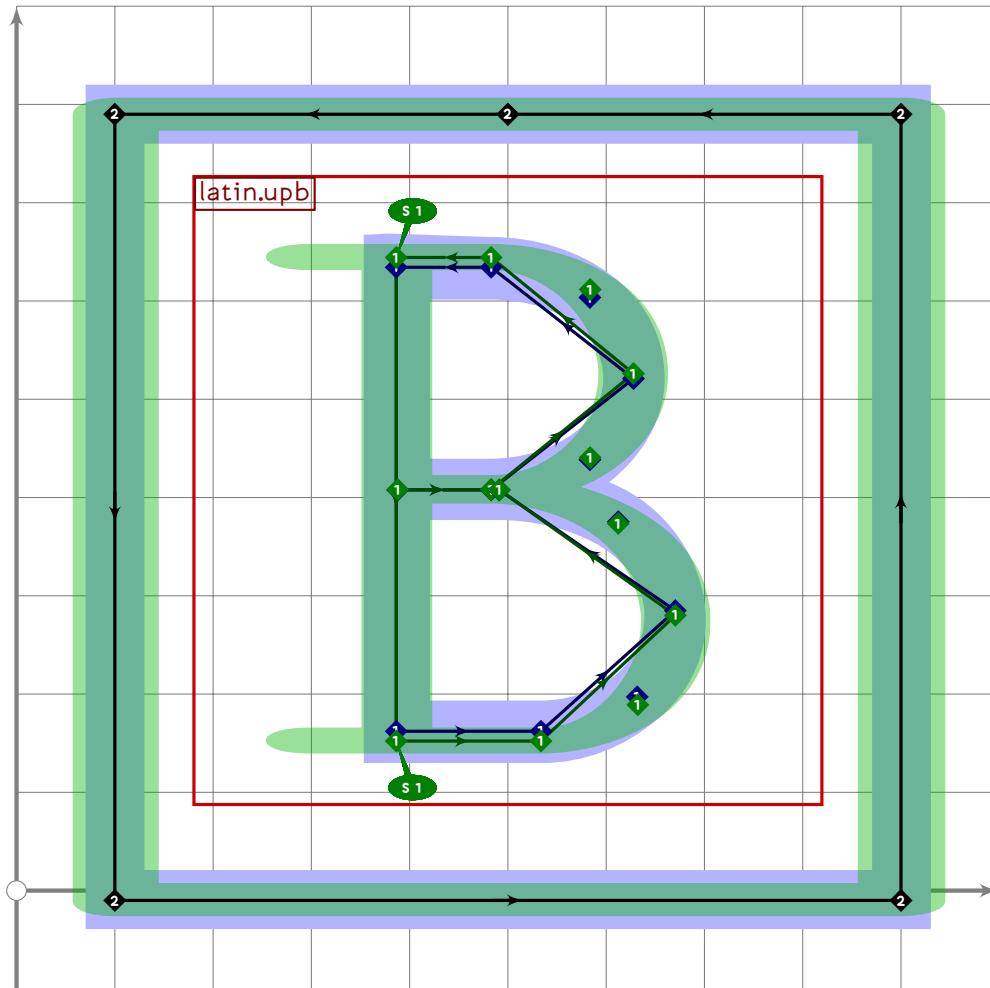
```
45 % SQUARED LATIN
46
```

U+1F130
tsuku.u1F130

1F1



```
47 % A
48 beginsuglyph("u1F130";48);
49 square.single(latin.upa);
50 tsu_render;
51 endsuglyph;
52
```



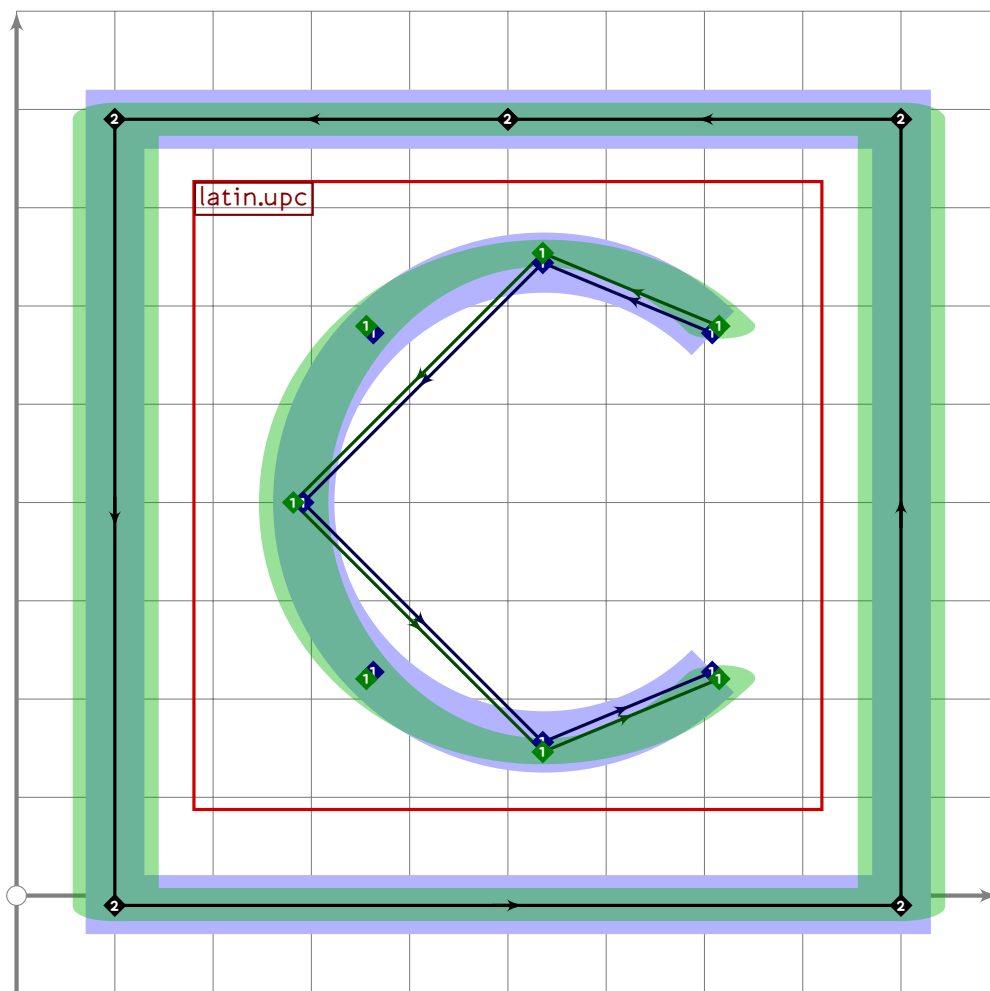
1F1

```

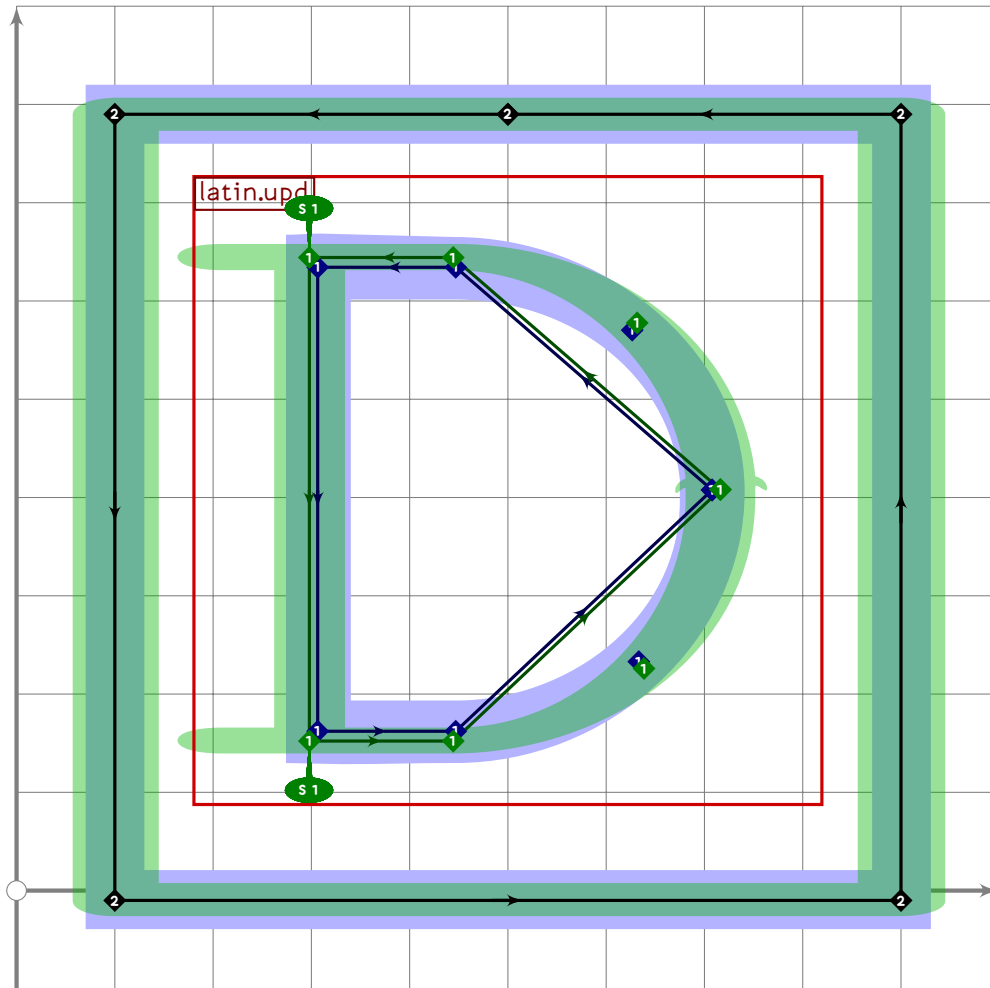
53 % B
54 begintsuglyph("u1F131";49);
55   square.single(latin.upb);
56   tsu_render;
57 endsuglyph;
58

```

1F1



3014



1F1

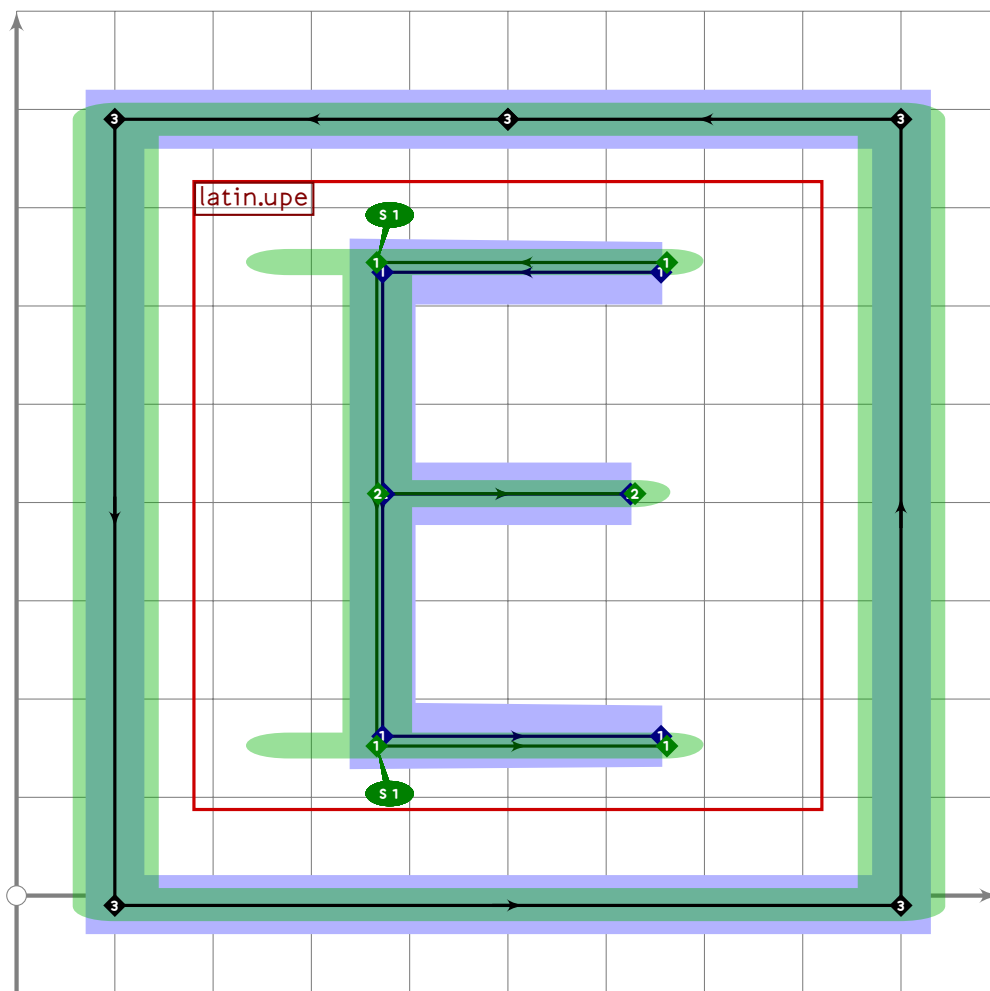
```

65 % D
66 begint Suglyph("u1F133";51);
67   square.single(latin.upd);
68   tsu_render;
69 endtsuglyph;
70

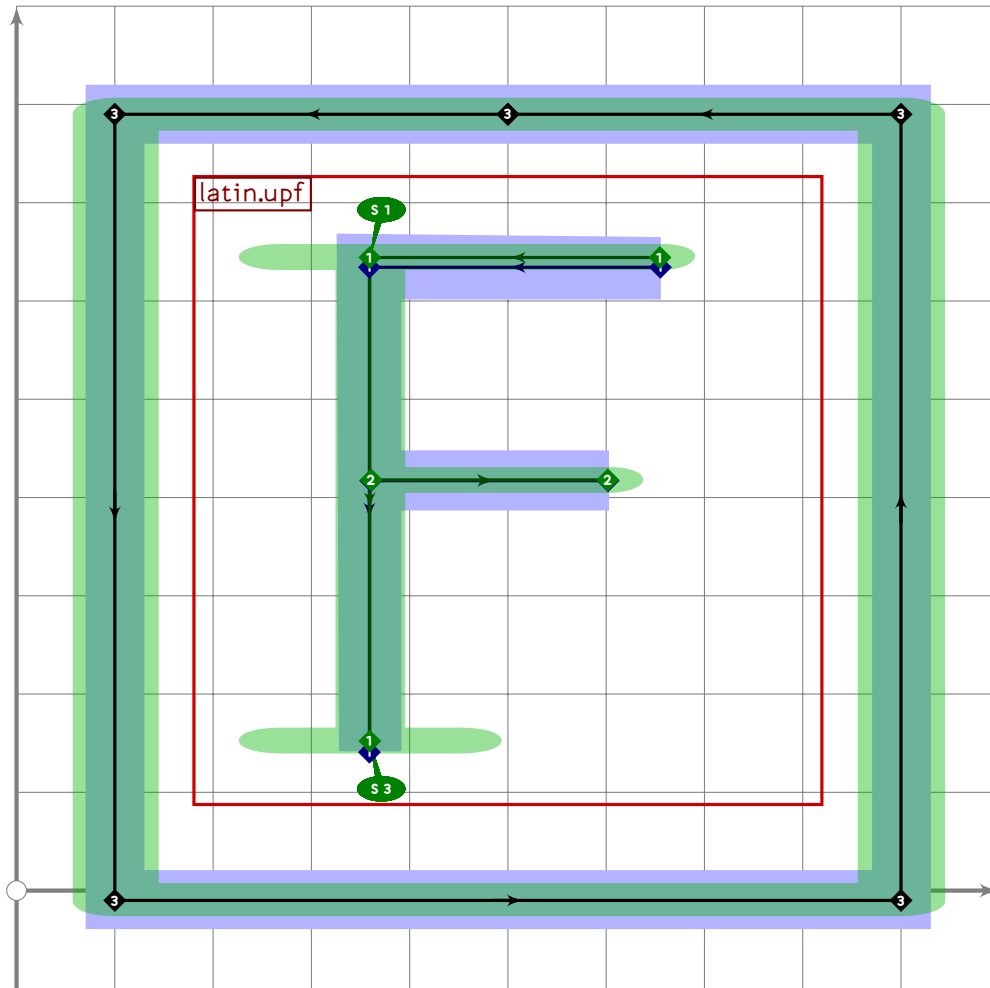
```

U+1F134
tsuku.u1F134

1F1



```
71 % E
72 begintsuglyph("u1F134";52);
73   square.single(latin.upe);
74   tsu_render;
75 endsuglyph;
76
```



1F1

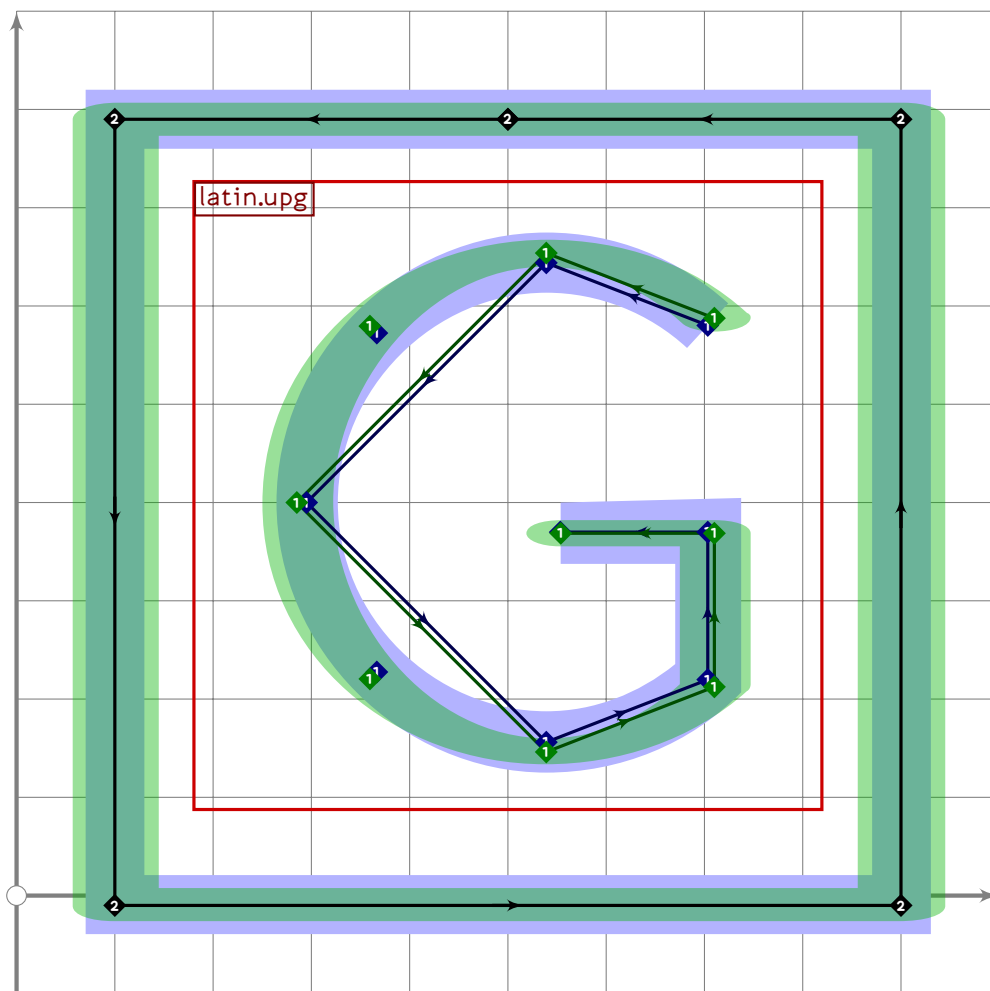
```

77 % F
78 begint Suglyph("u1F135";53);
79   square.single(latin.upf);
80   tsu_render;
81 endtsuglyph;
82

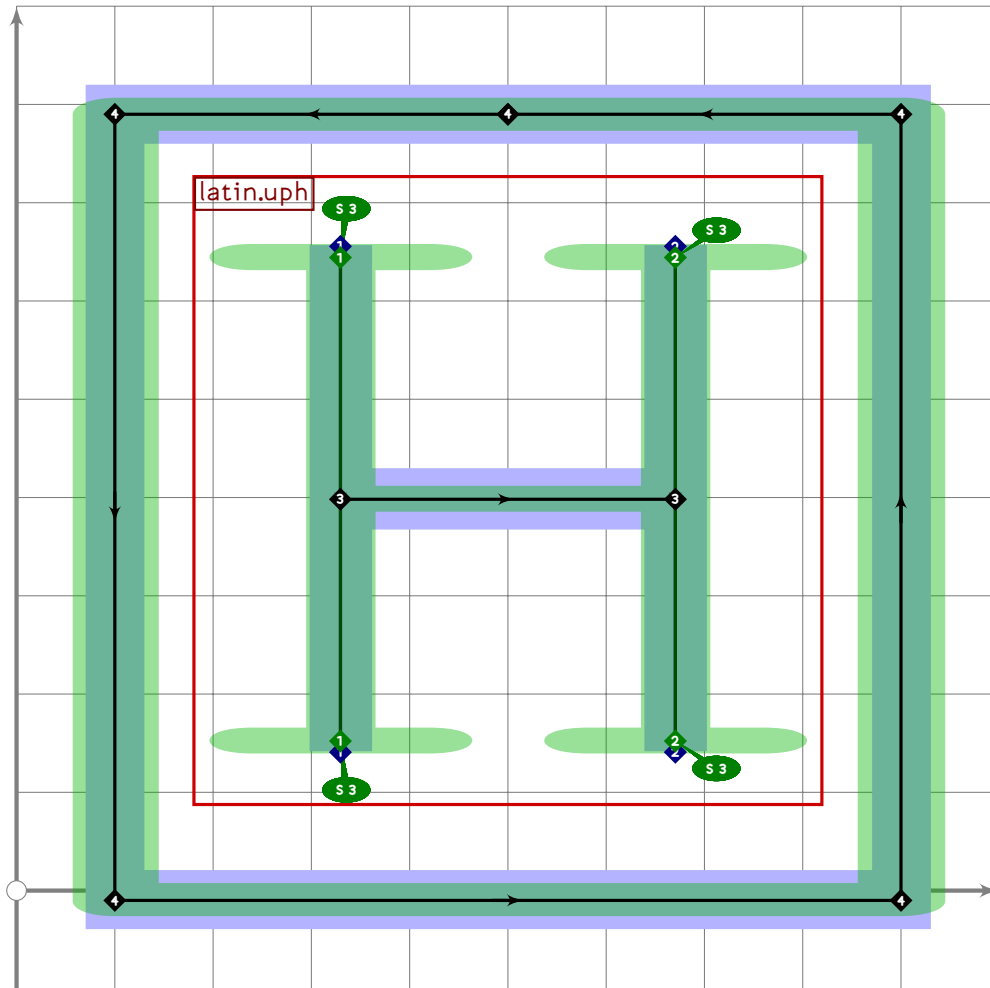
```

U+1F136
tsuku.u1F136

1F1



```
83 % G
84 begintsuglyph("u1F136",54);
85   square.single(latin.upg);
86   tsu_render;
87 endtsuglyph;
88
```

1F1

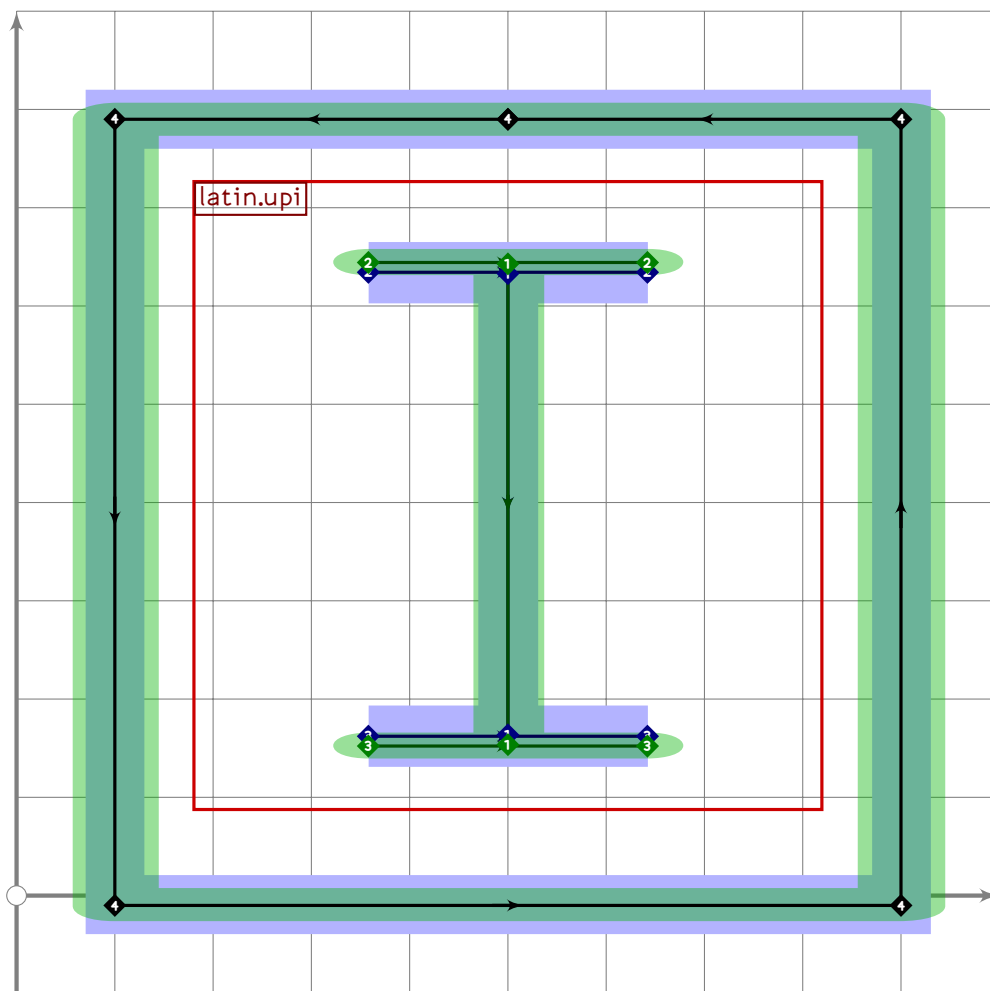
```

89 % H
90 begintuglyph("u1F137";55);
91   square.single(latin.uph);
92   tsu_render;
93 endtsuglyph;
94

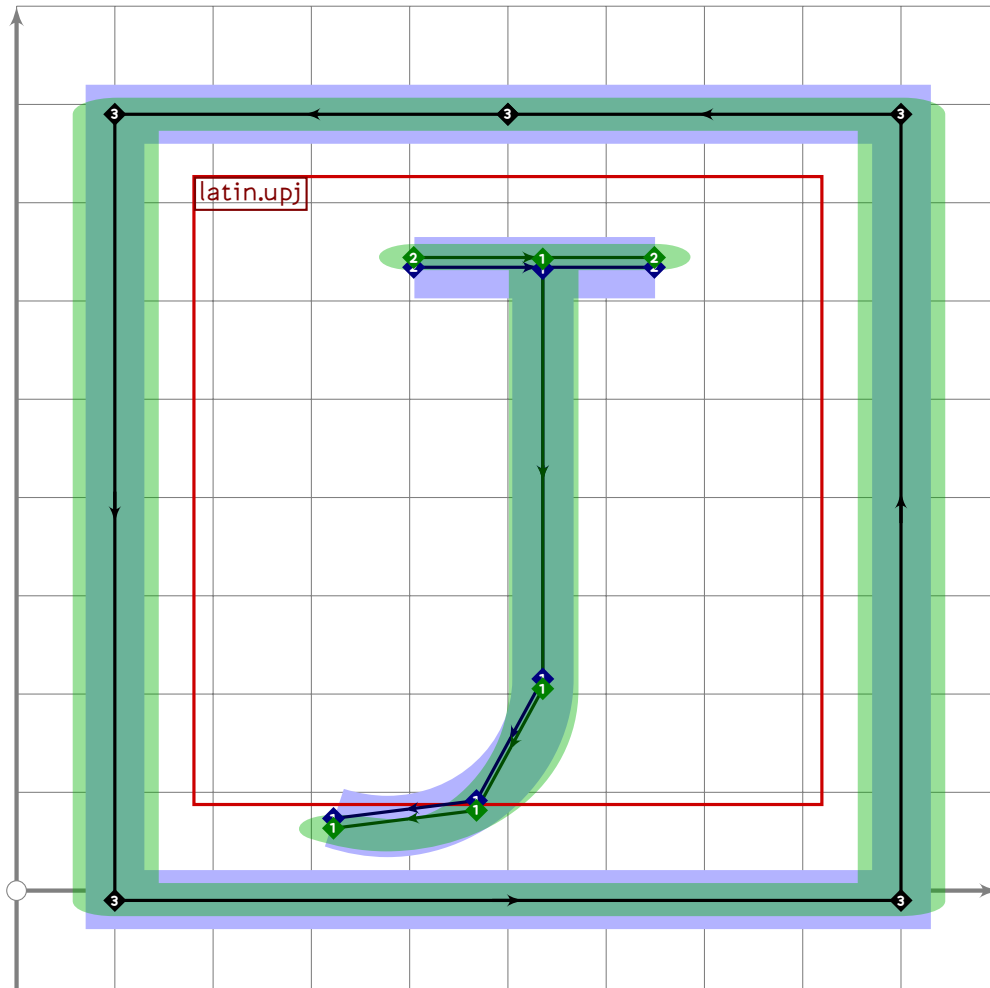
```

U+1F138
tsuku.u1F138

1F1



```
95 % I
96 begintsuglyph("u1F138",56);
97   square.single(latin.upi);
98   tsu_render;
99 endsuglyph;
100
```



1F1

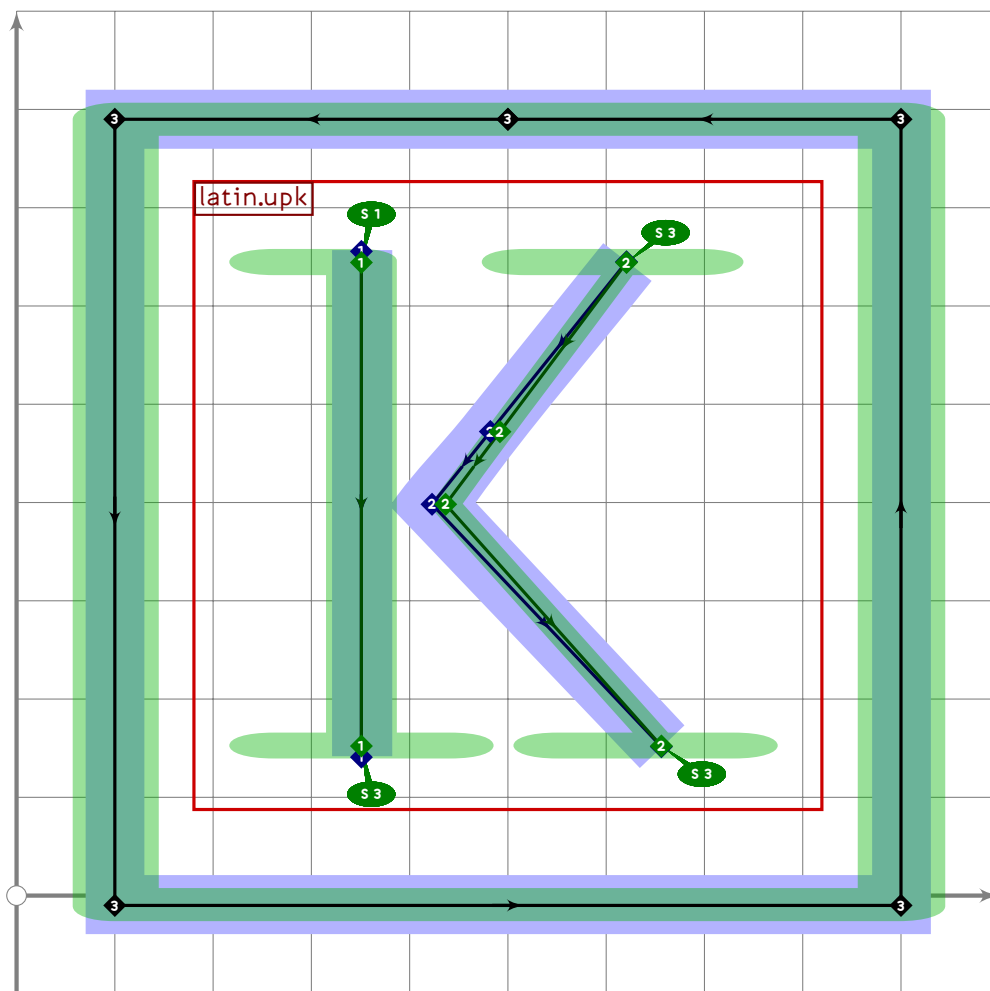
```

101 % J
102 begintsuglyph("u1F139";57);
103   square.single(latin.upj);
104   tsu_render;
105 endtsuglyph;
106

```

U+1F13A
tsuku.u1F13A

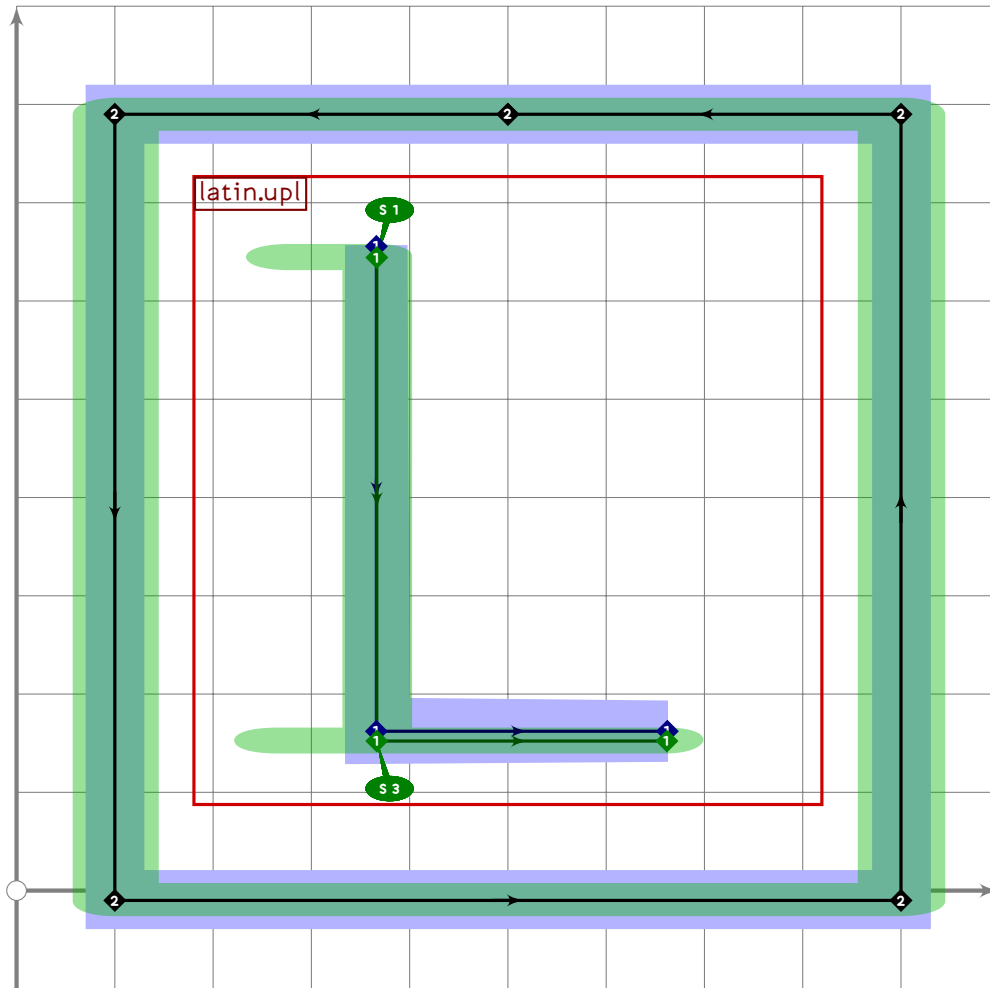
1F1



```

107 % K
108 begintuglyph("u1F13A",58);
109 square.single(latin.upk);
110 tsu_render;
111 endtsuglyph;
112

```



1F1

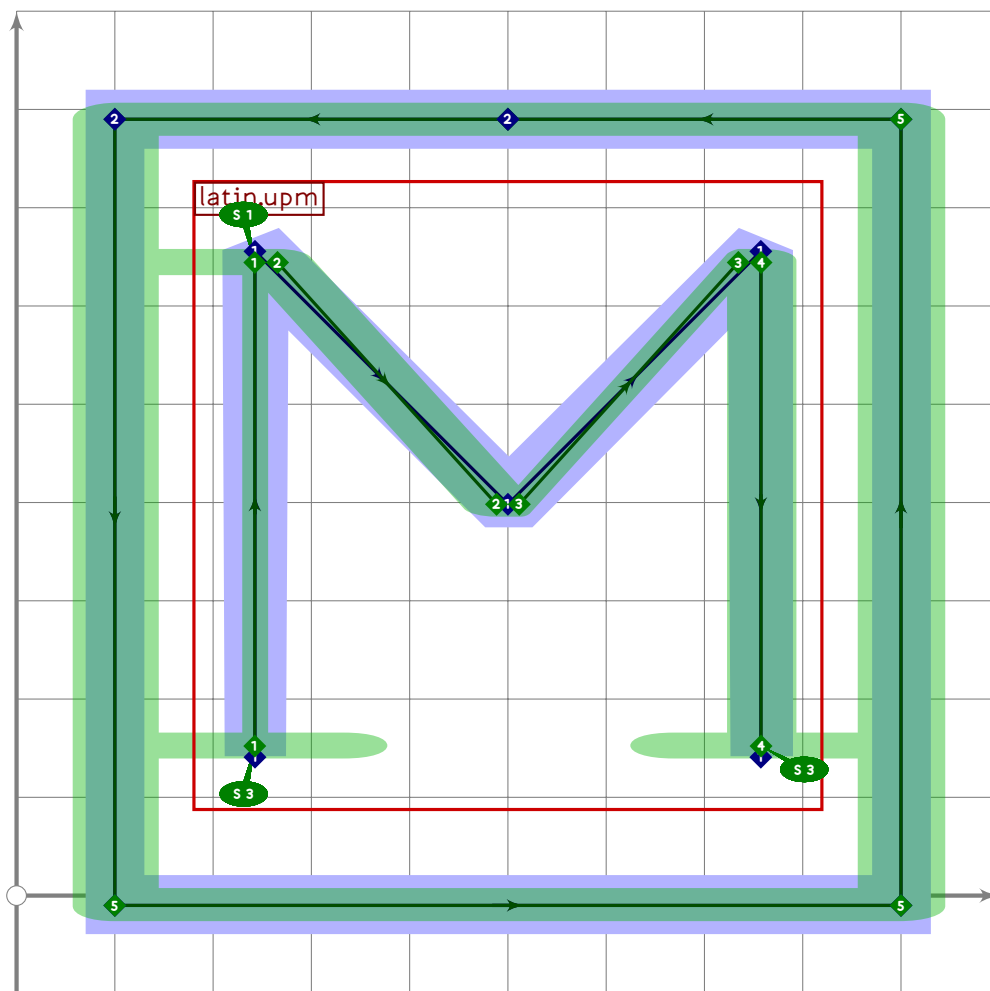
```

113 % L
114 begint Suglyph("u1F13B",59);
115   square.single(latin.upl);
116   tsu_render;
117 endtsuglyph;
118

```

U+1F13C
tsuku.u1F13C

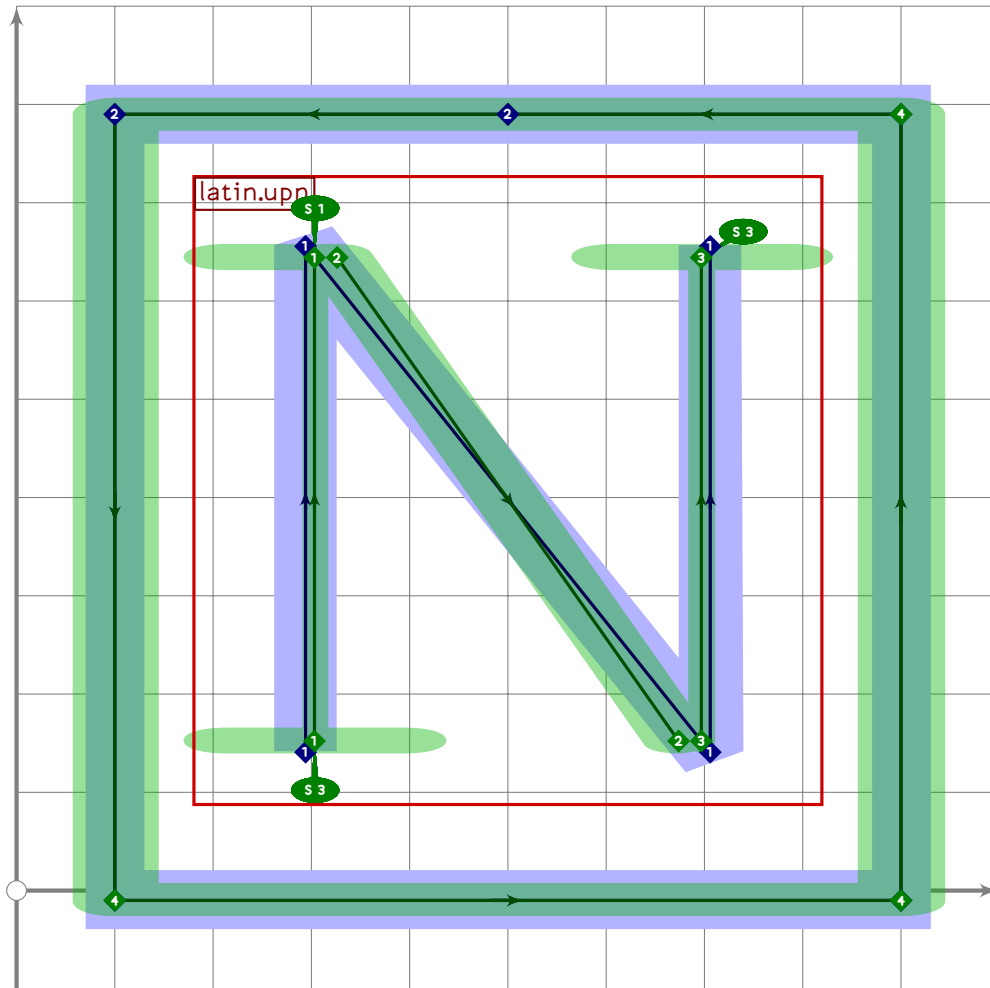
1F1



```

119 % M
120 begintsuglyph("u1F13C",60);
121   square.single(latin.upm);
122   tsu_render;
123 endtsuglyph;
124

```



1F1

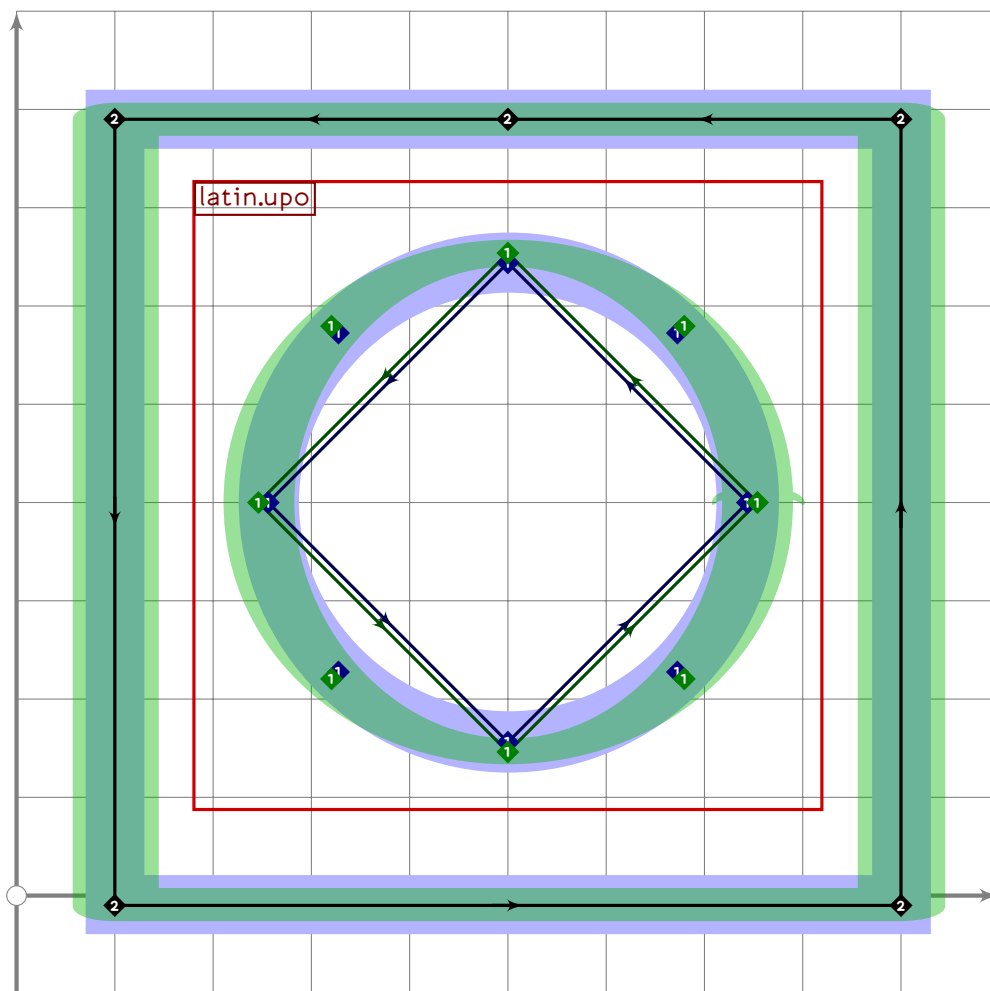
```

125 % N
126 begintsuglyph("u1F13D",61);
127   square.single(latin.upn);
128   tsu_render;
129 endtsuglyph;
130

```

U+1F13E
tsuku.u1F13E

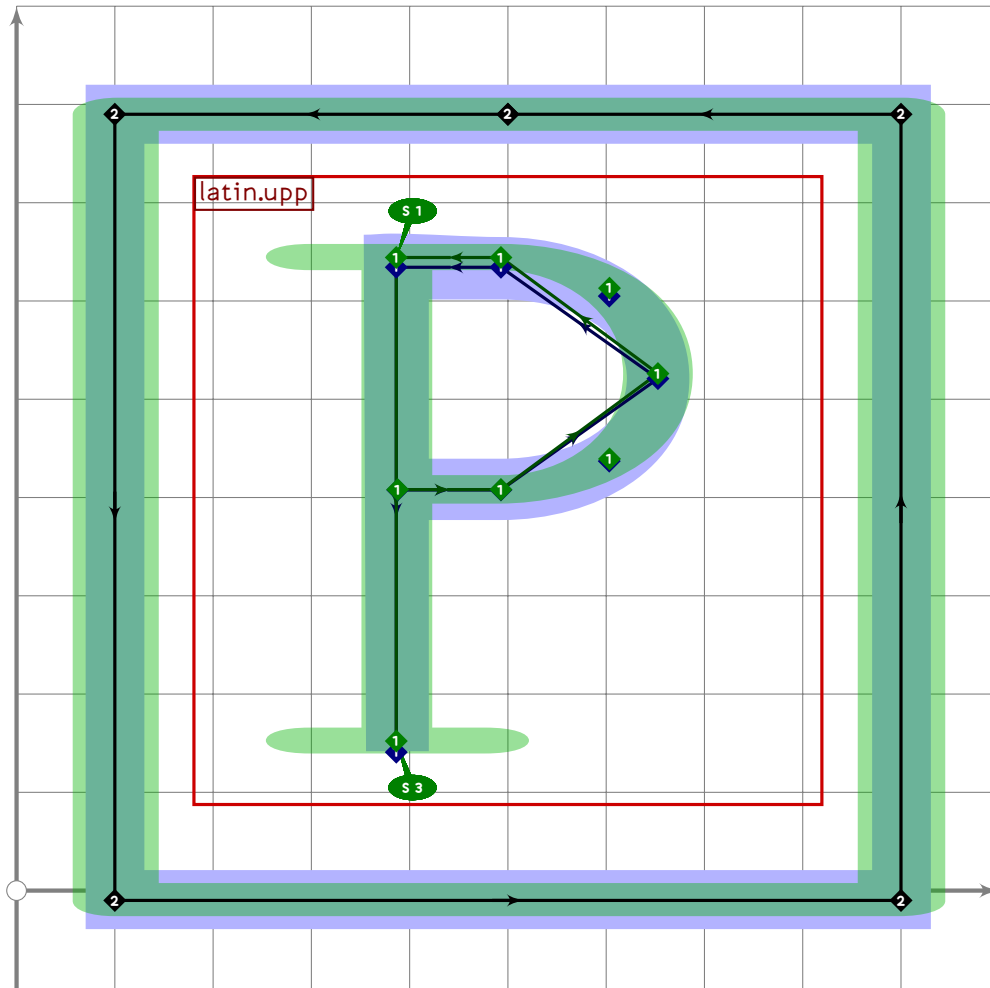
1F1



```

131 % O
132 begintsuglyph("u1F13E",62);
133   square.single(latin.upo);
134   tsu_render;
135 endtsuglyph;
136

```

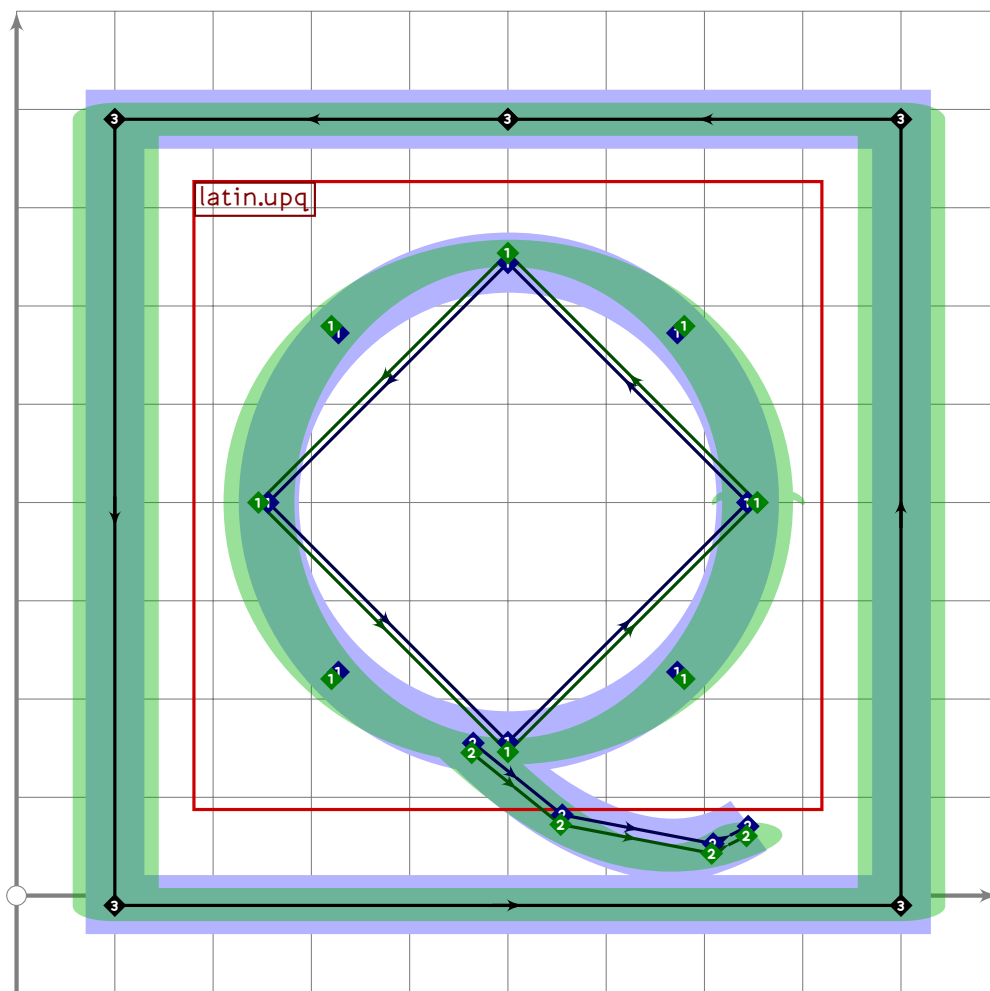
1F1

```

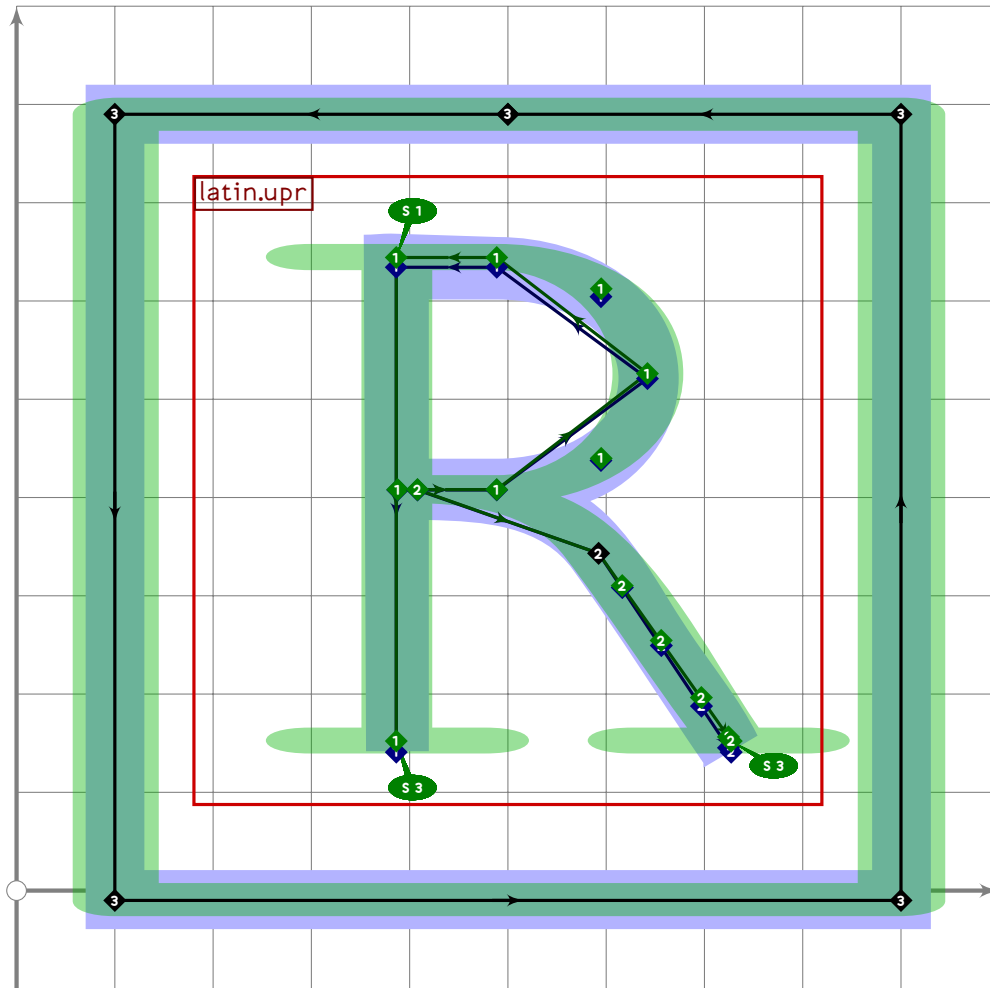
137 % P
138 begintsuglyph("u1F13F",63);
139 square.single(latin.upp);
140 tsu_render;
141 endsuglyph;
142

```

1F1



3028



1F1

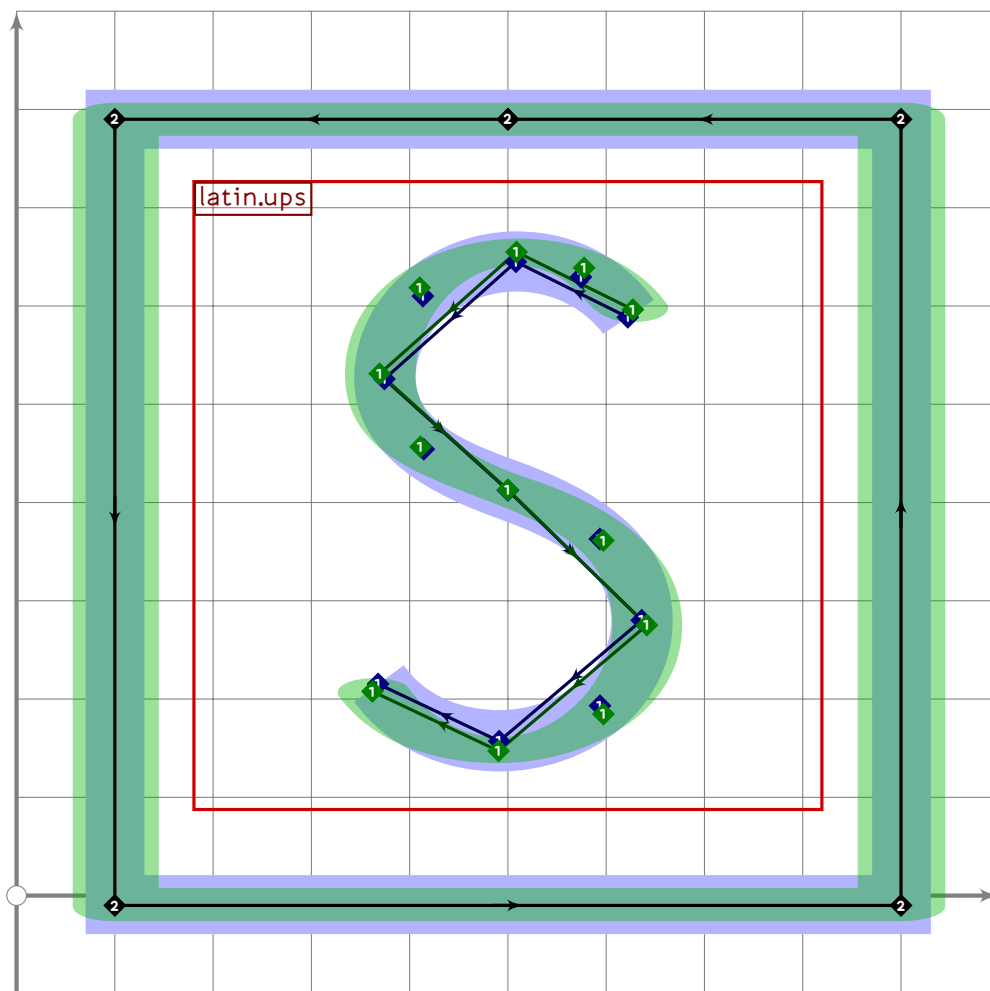
```

149 % R
150 begintsuglyph("u1F141",65);
151   square.single(latin.upr);
152   tsu_render;
153 endtsuglyph;
154

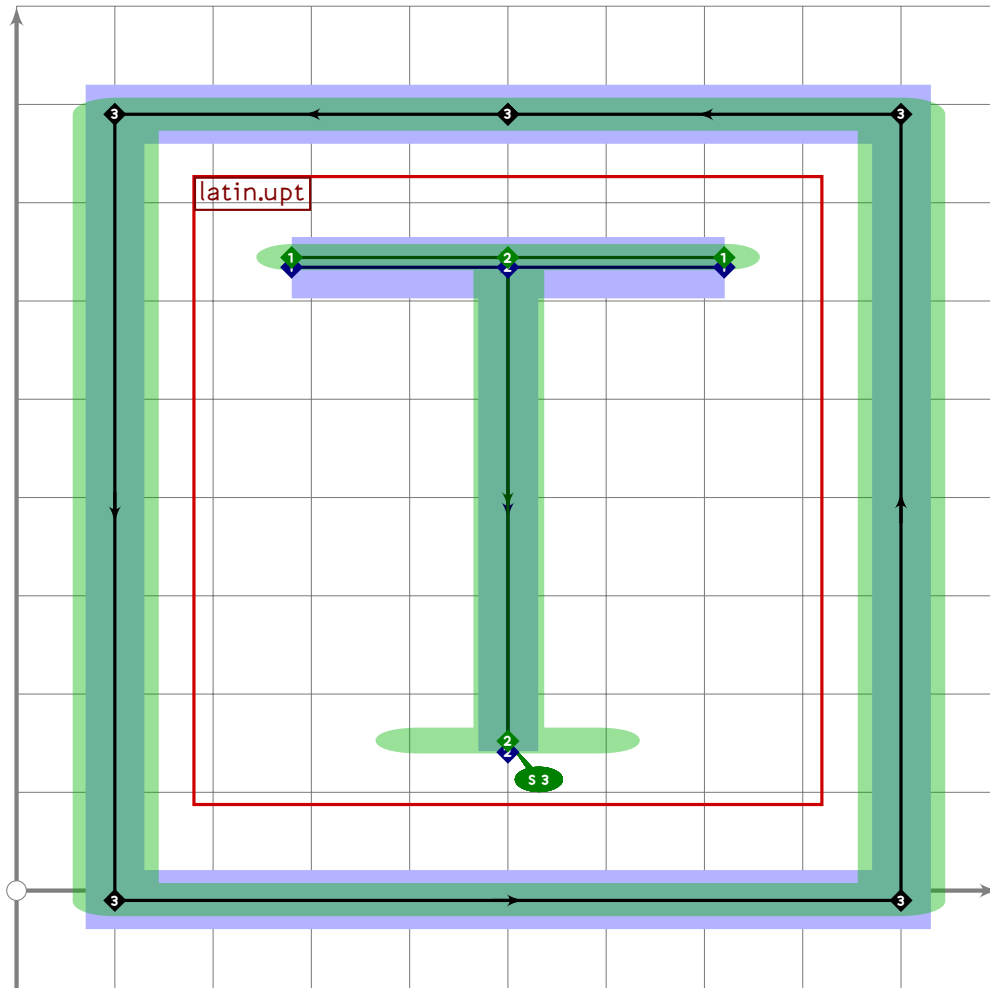
```

U+1F142
tsuku.u1F142

1F1



```
155 % S
156 begintsuglyph("u1F142",66);
157   square.single(latin.ups);
158   tsu_render;
159 endtsuglyph;
160
```



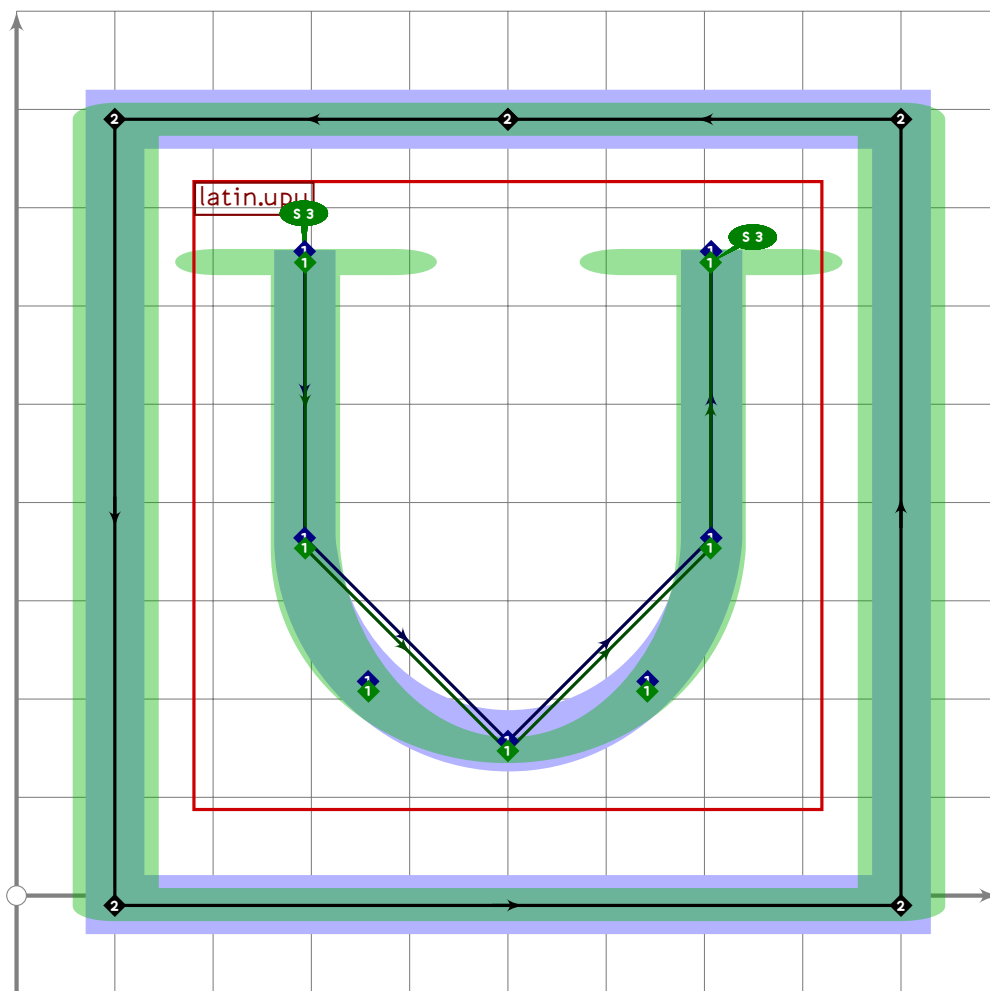
1F1

```

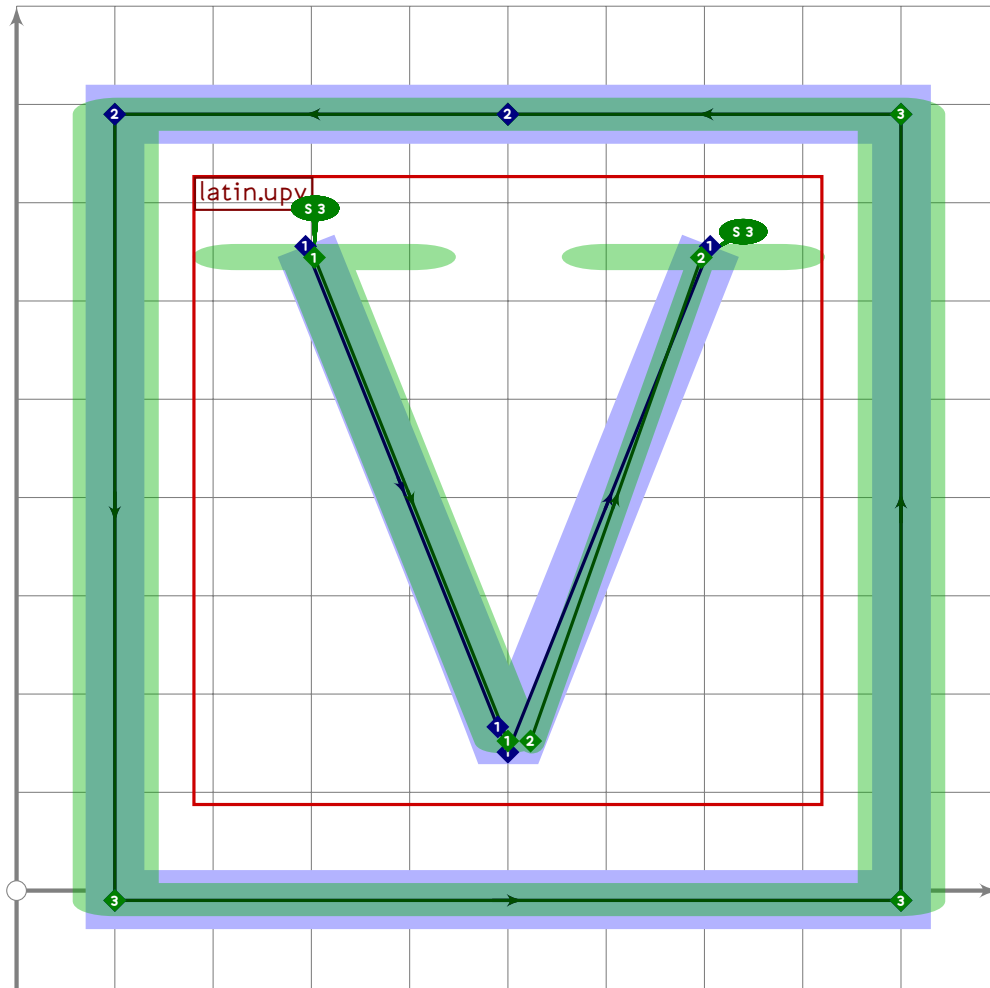
161 % T
162 begintsuglyph("u1F143",67);
163   square.single(latin.upt);
164   tsu_render;
165 endsuglyph;
166

```

1F1



3032



1F1

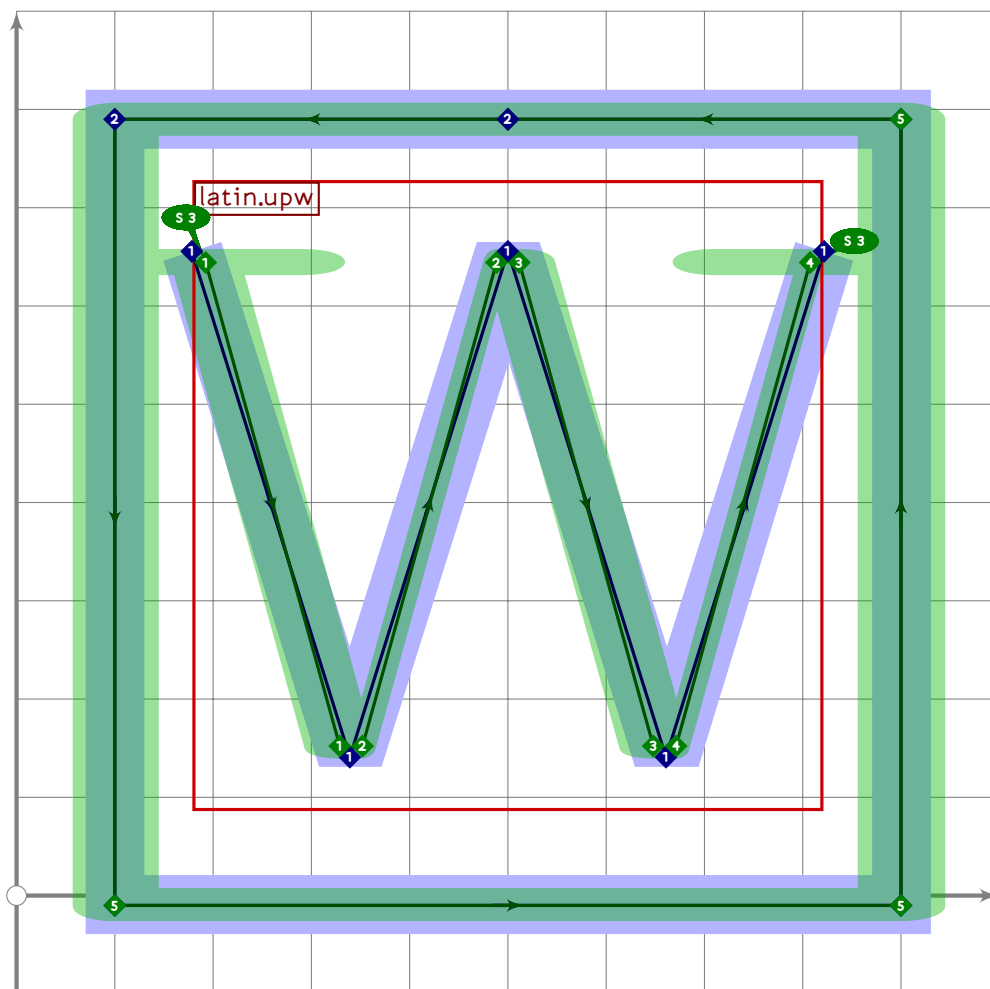
```

173 % V
174 begintsuglyph("u1F145",69);
175   square.single(latin.upv);
176   tsu_render;
177 endsuglyph;
178

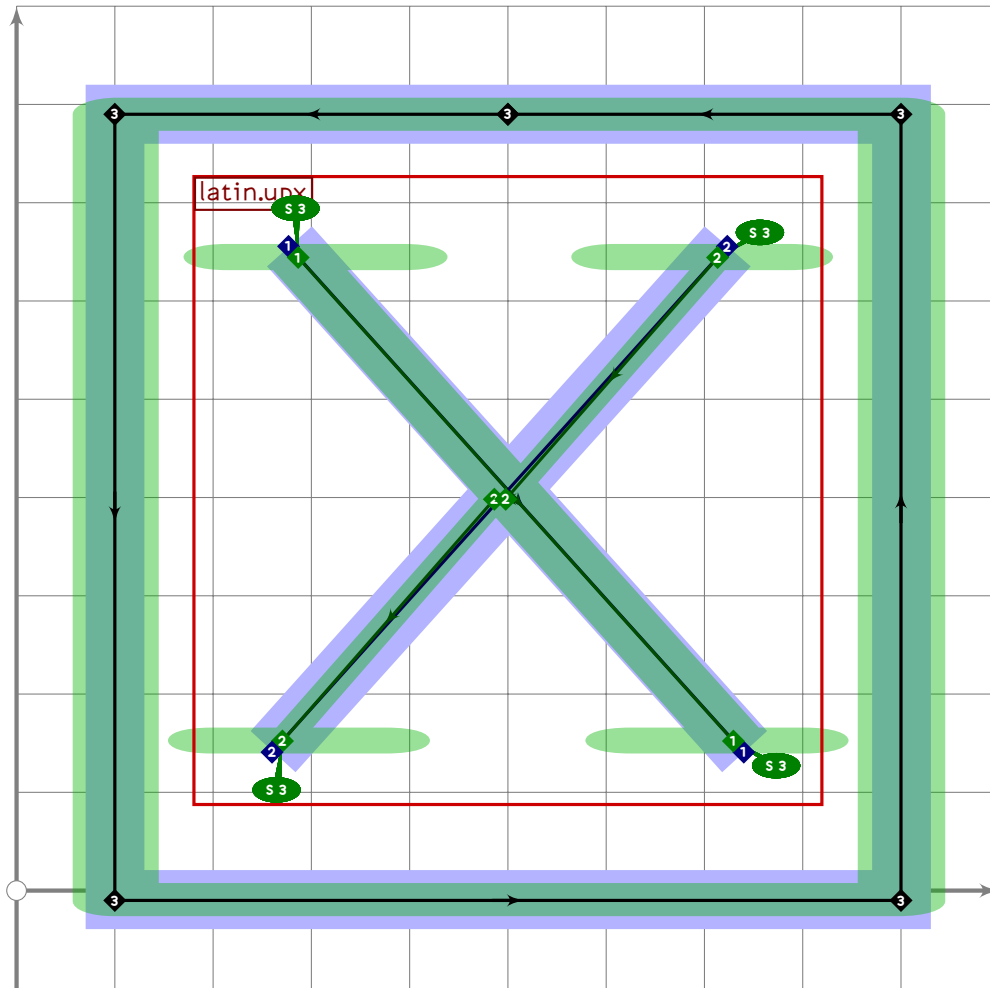
```

U+1F146
tsuku.u1F146

1F1



```
179 % W
180 beginsuglyph("u1F146;70);
181 square.single(latin.upw);
182 tsu_render;
183 endsuglyph;
184
```

1F1

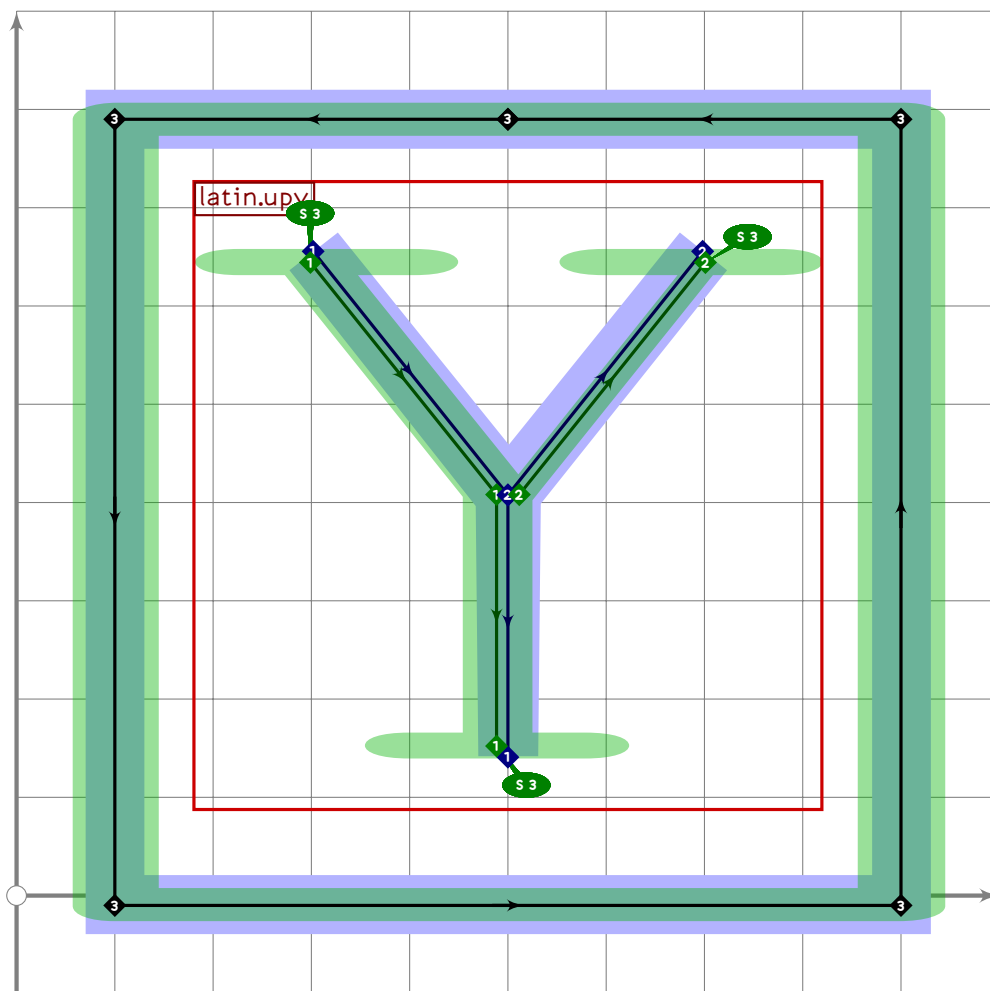
```

185 % X
186 begintsuglyph("u1F147";71);
187   square.single(latin.upx);
188   tsu_render;
189 endtsuglyph;
190

```

U+1F148
tsuku.u1F148

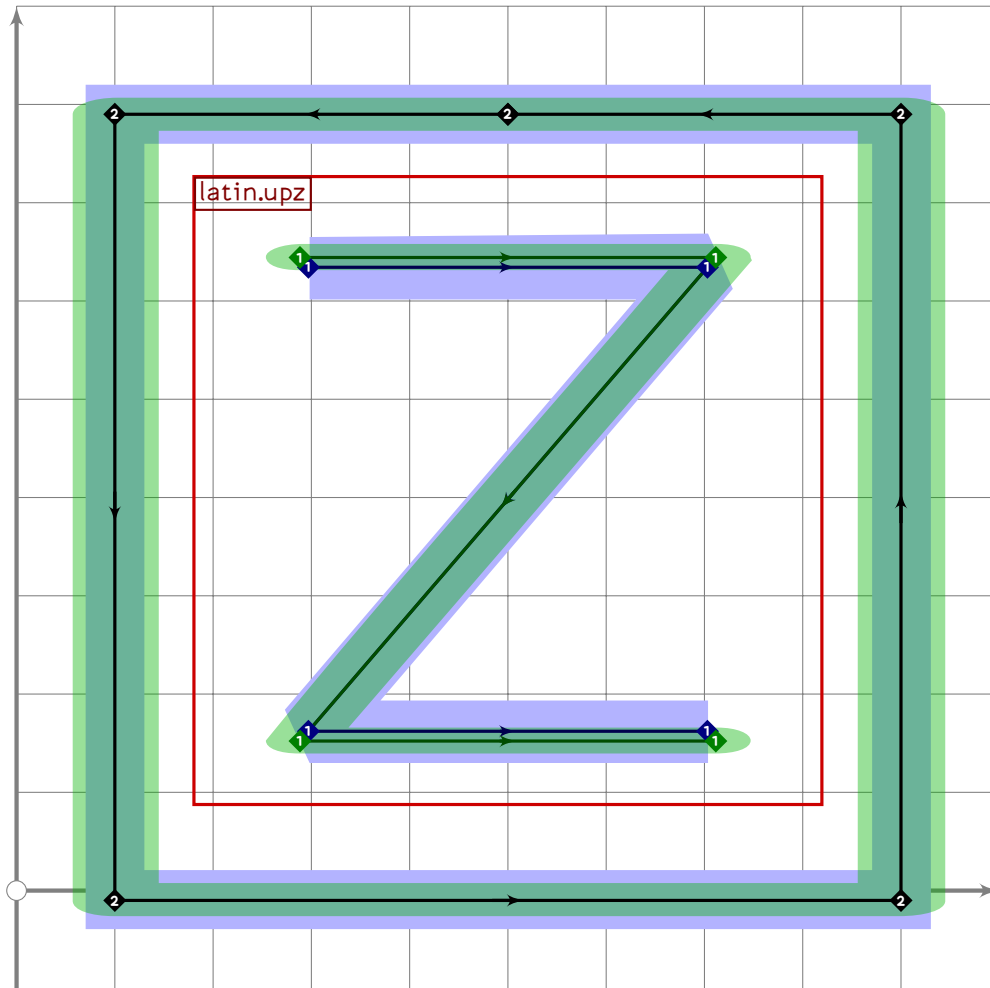
1F1



```

191 % Y
192 begintsuglyph("u1F148";72);
193   square.single(latin.upy);
194   tsu_render;
195 endsuglyph;
196

```



1F1

```

197 % Z
198 begintsuglyph("u1F149";73);
199   square.single(latin.upz);
200   tsu_render;
201 endtsuglyph;
202
203
204
```

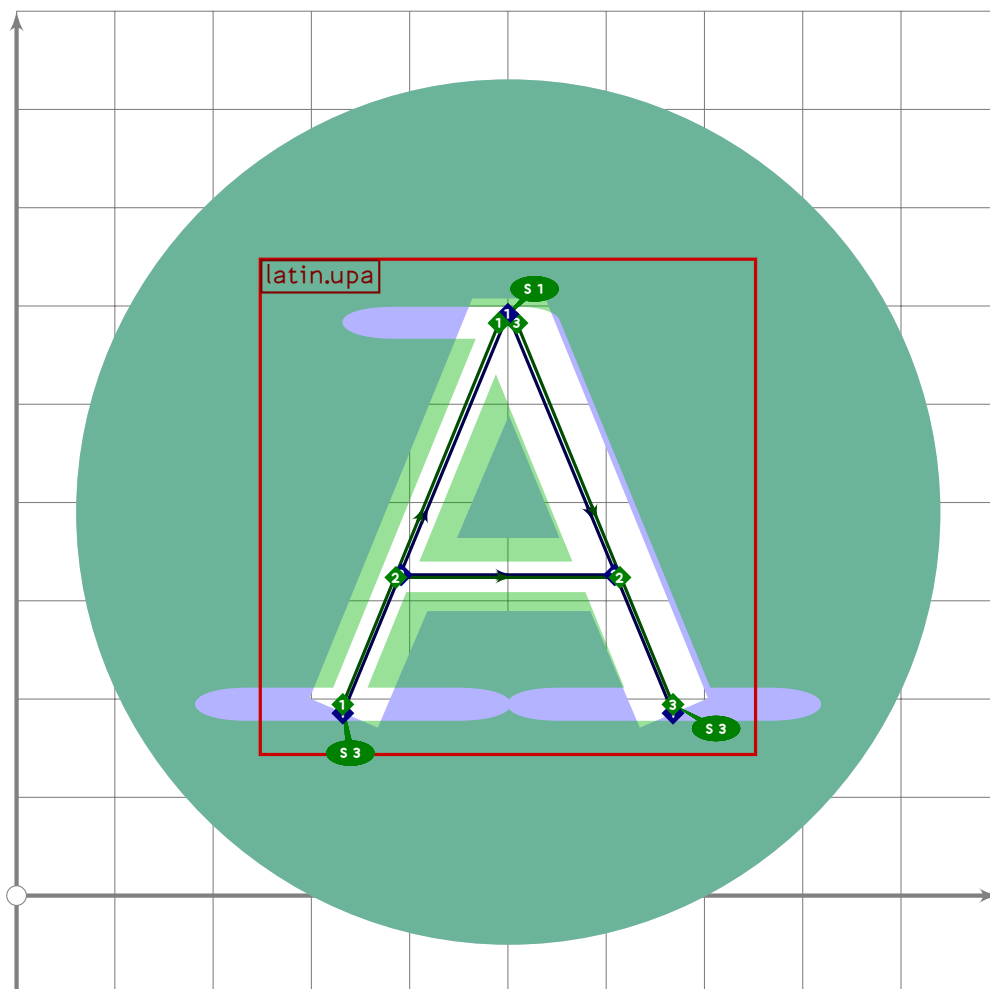
Inverse Circled Latin

```

205 % INVERSE CIRCLED LATIN
206
```

U+1F150
tsuku.u1F150

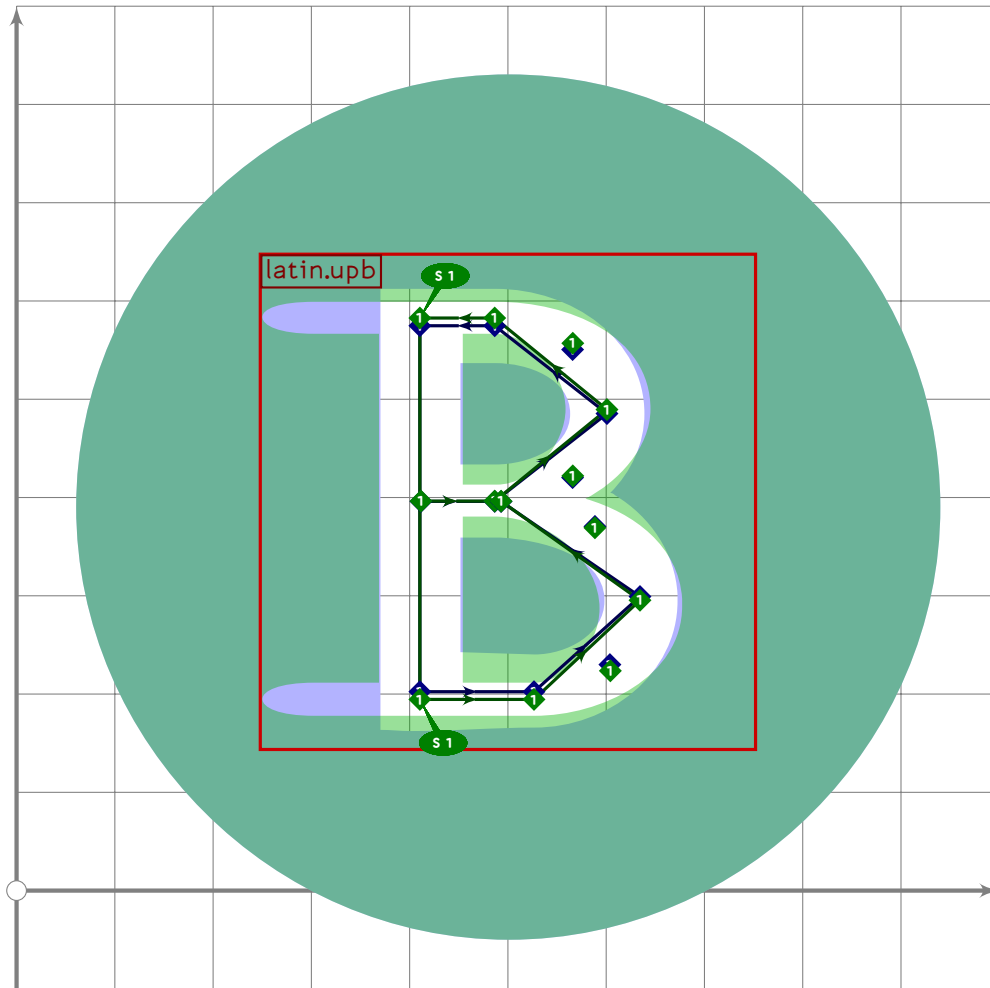
1F1



```

207 % A
208 % BACKGROUND 25CF
209 begintsuglyph("u1F150";80);
210   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upa);
211   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
212   tsu_render;
213 endtsuglyph;
214

```



1F1

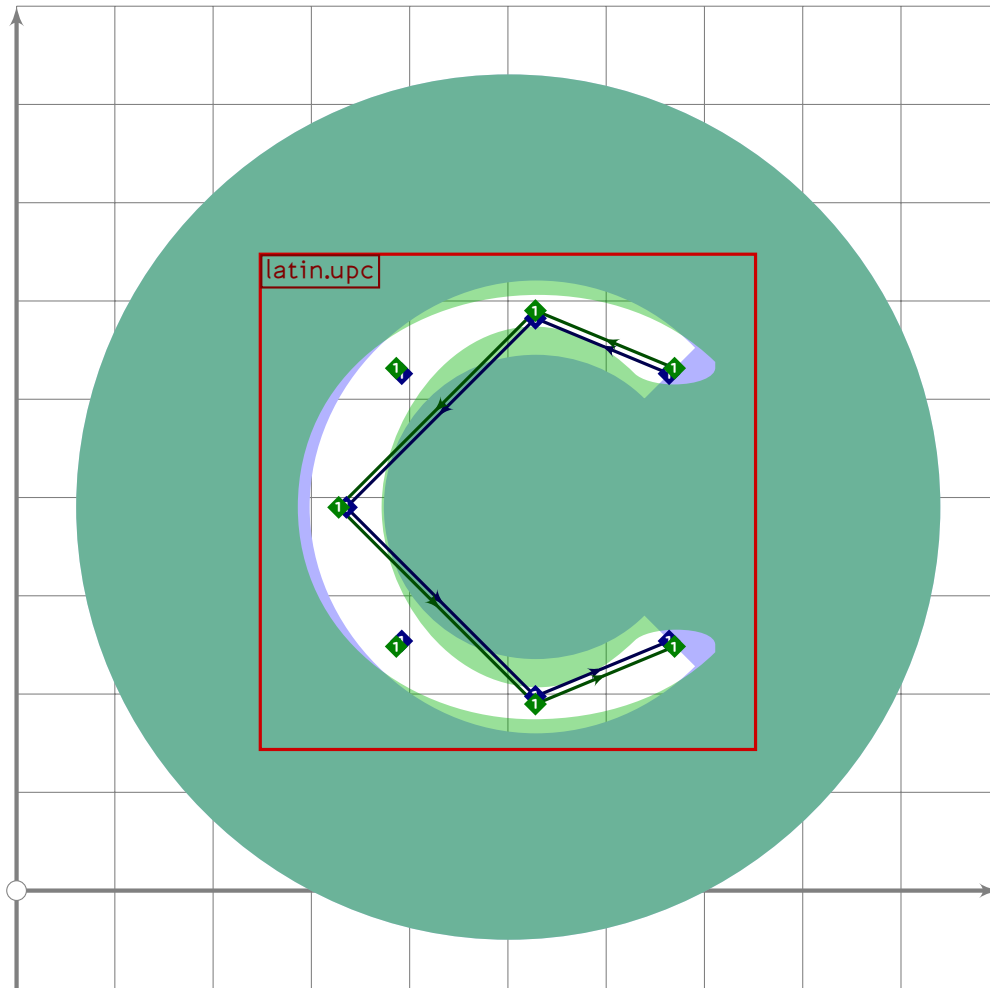
```

215 % B
216 % BACKGROUND 25CF
217 begintsuglyph("u1F151";81);
218   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upb);
219   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
220   tsu_render;
221 endtsuglyph;
222

```

U+1F152
tsuku.u1F152

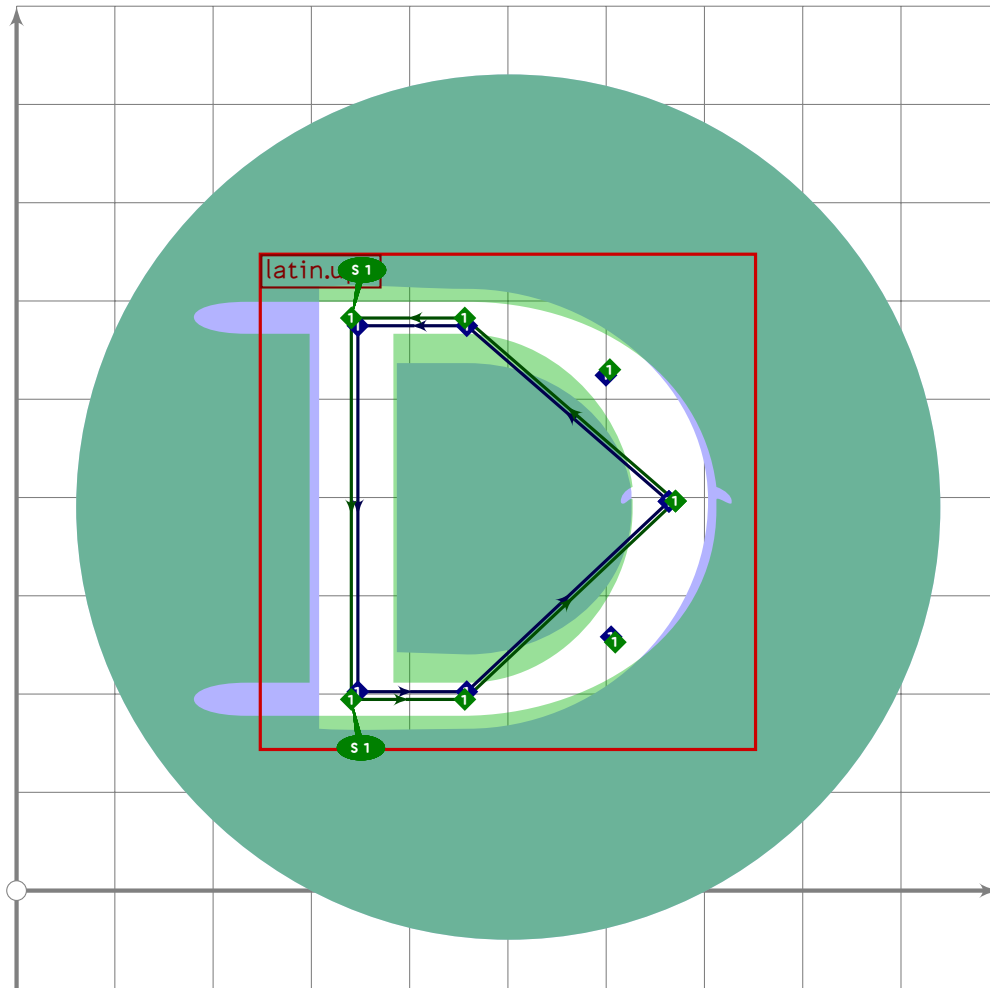
1F1



```

223 % C
224 % BACKGROUND 25CF
225 begint Suglyph("u1F152";82);
226   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upc);
227   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
228   tsu_render;
229 endtsuglyph;
230

```



1F1

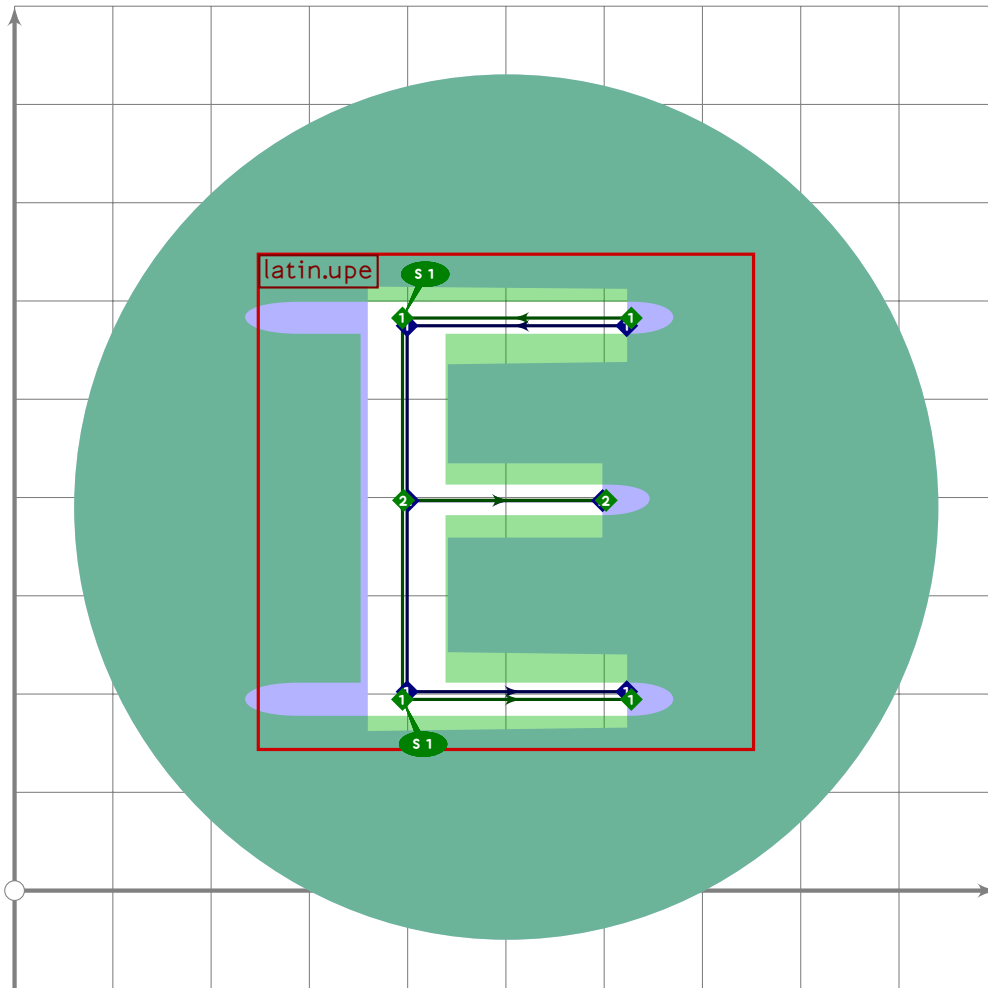
```

231 % D
232 % BACKGROUND 25CF
233 begintsuglyph("u1F153";83);
234 tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upd);
235 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
236 tsu_render;
237 endtsuglyph;
238

```

U+1F154
tsuku.u1F154

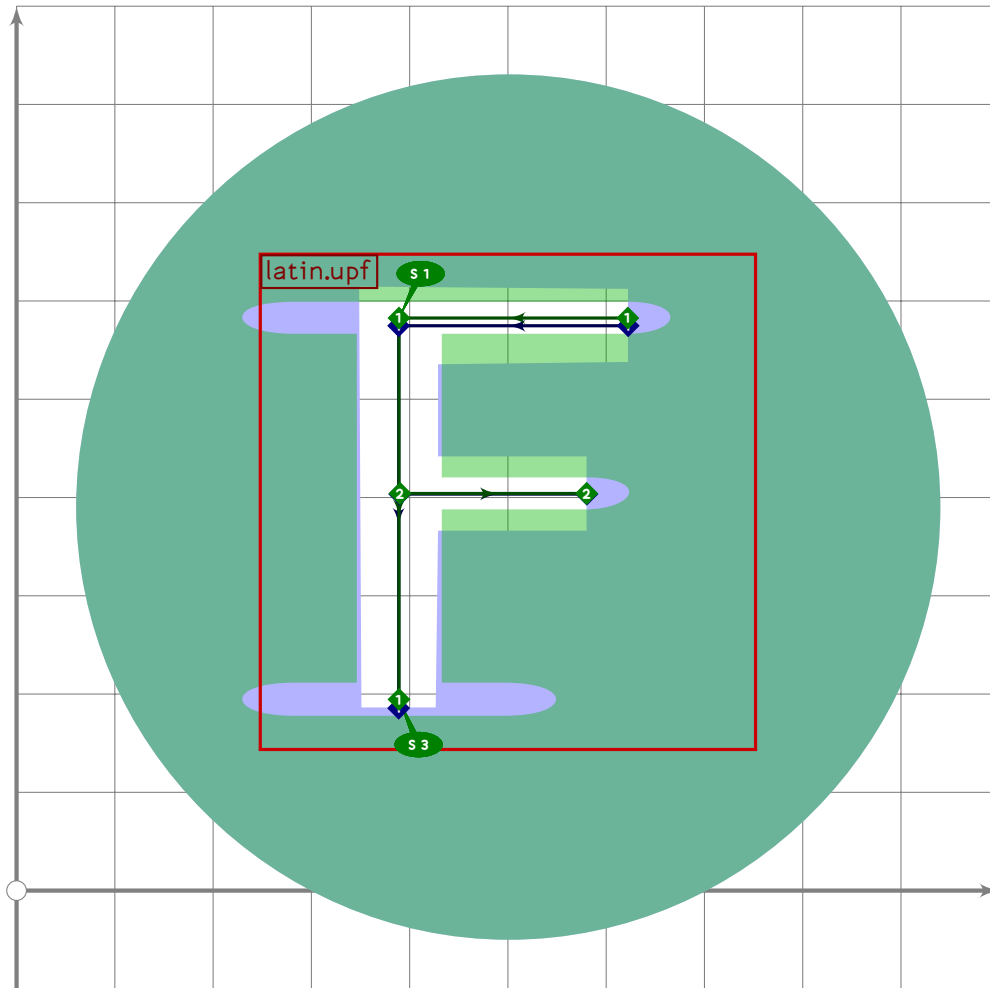
1F1



```

239 % E
240 % BACKGROUND 25CF
241 begint Suglyph("u1F154";84);
242   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upe);
243   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
244   tsu_render;
245 endtsuglyph;
246

```

1F1

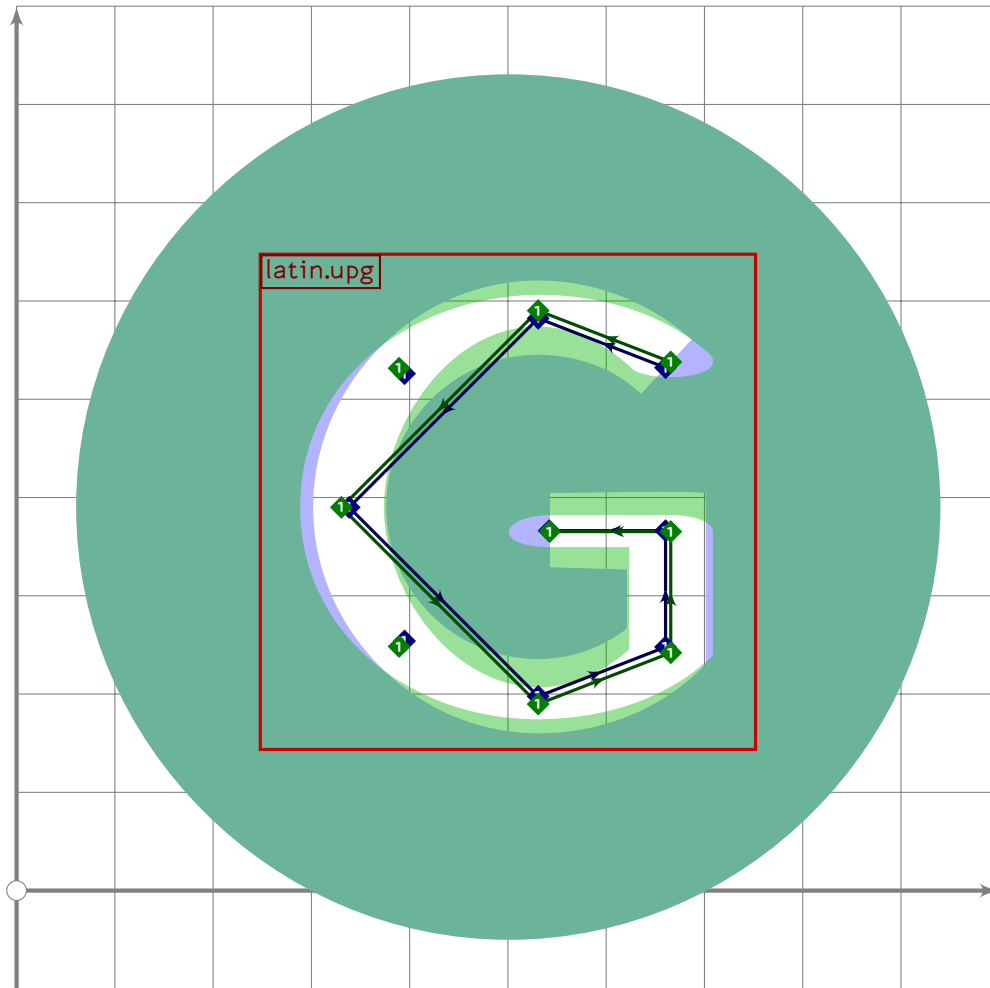
```

247 % F
248 % BACKGROUND 25CF
249 begintsuglyph("u1F155";85);
250 tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upf);
251 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
252 tsu_render;
253 endtsuglyph;
254

```

U+1F156
tsuku.u1F156

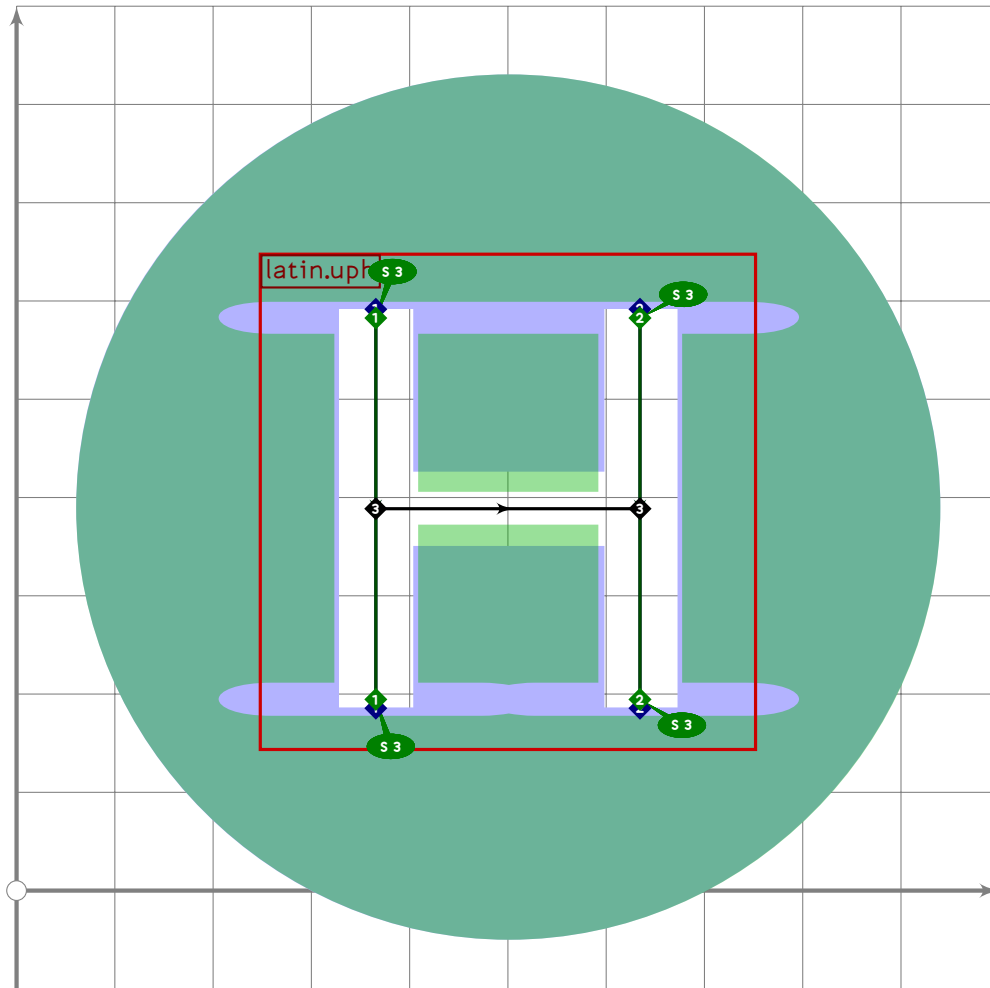
1F1



```

255 % G
256 % BACKGROUND 25CF
257 begint Suglyph("u1F156";86);
258   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upg);
259   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
260   tsu_render;
261 endtsuglyph;
262

```



1F1

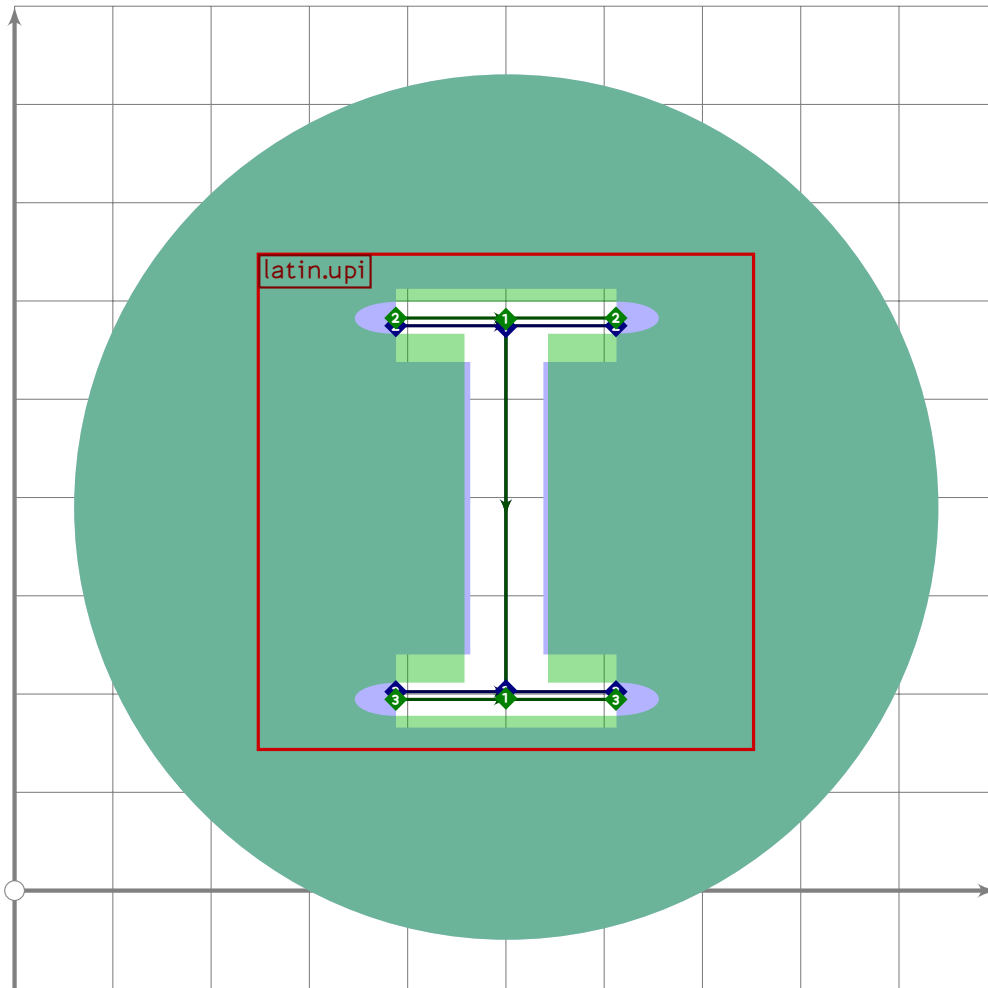
```

263 % H
264 % BACKGROUND 25CF
265 begint Suglyph("u1F157";87);
266   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.uph);
267   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
268   tsu_render;
269 endtsuglyph;
270

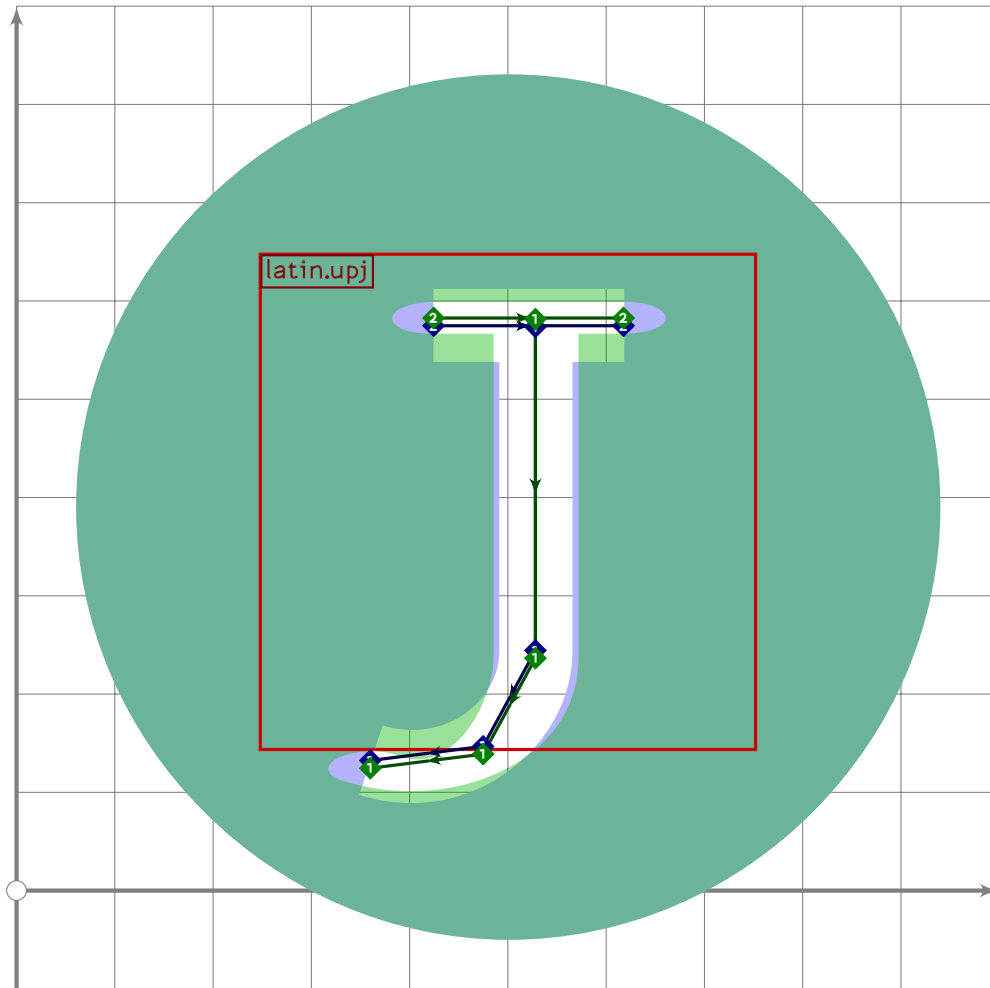
```

U+1F158
tsuku.u1F158

1F1



```
271 % I
272 % BACKGROUND 25CF
273 begint Suglyph("u1F158",88);
274   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upi);
275   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
276   tsu_render;
277 endtsuglyph;
278
```



1F1

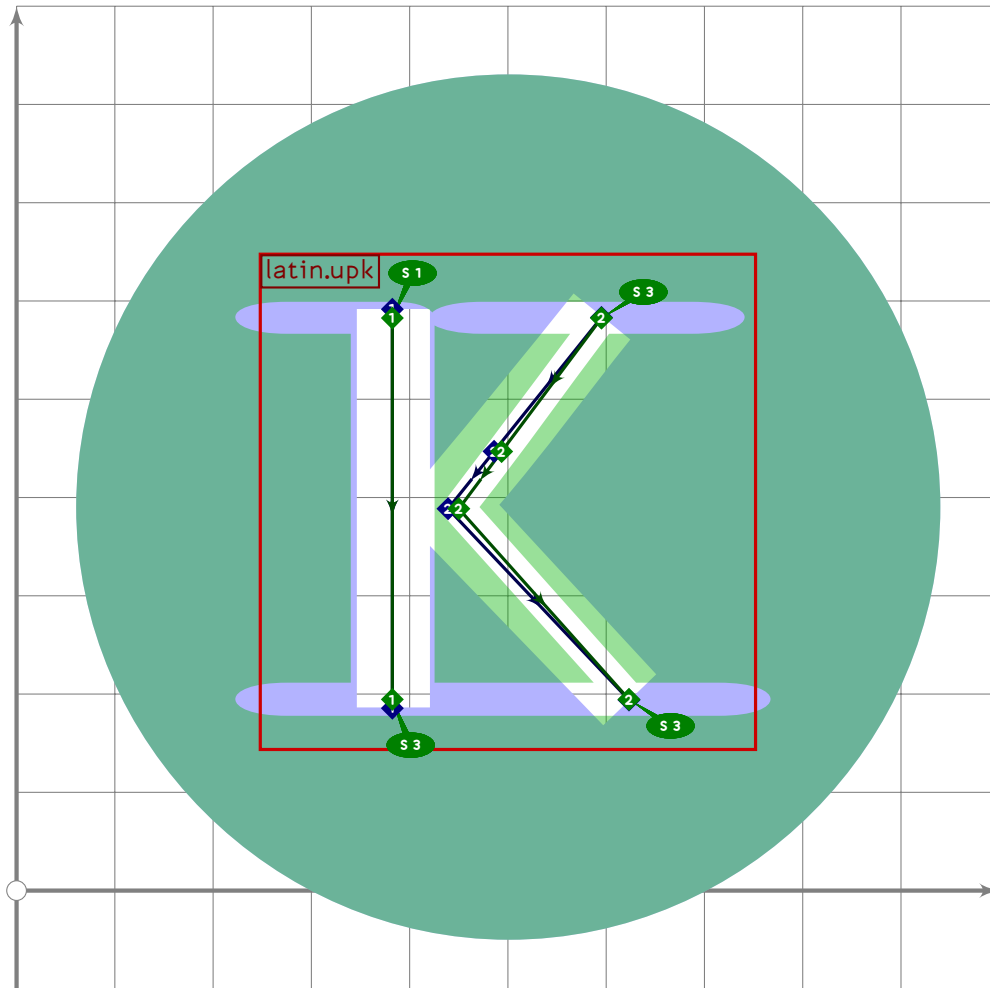
```

279 % J
280 % BACKGROUND 25CF
281 begint Suglyph("u1F159";89);
282   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upj);
283   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
284   tsu_render;
285 endtsuglyph;
286

```

U+1F15A
tsuku.u1F15A

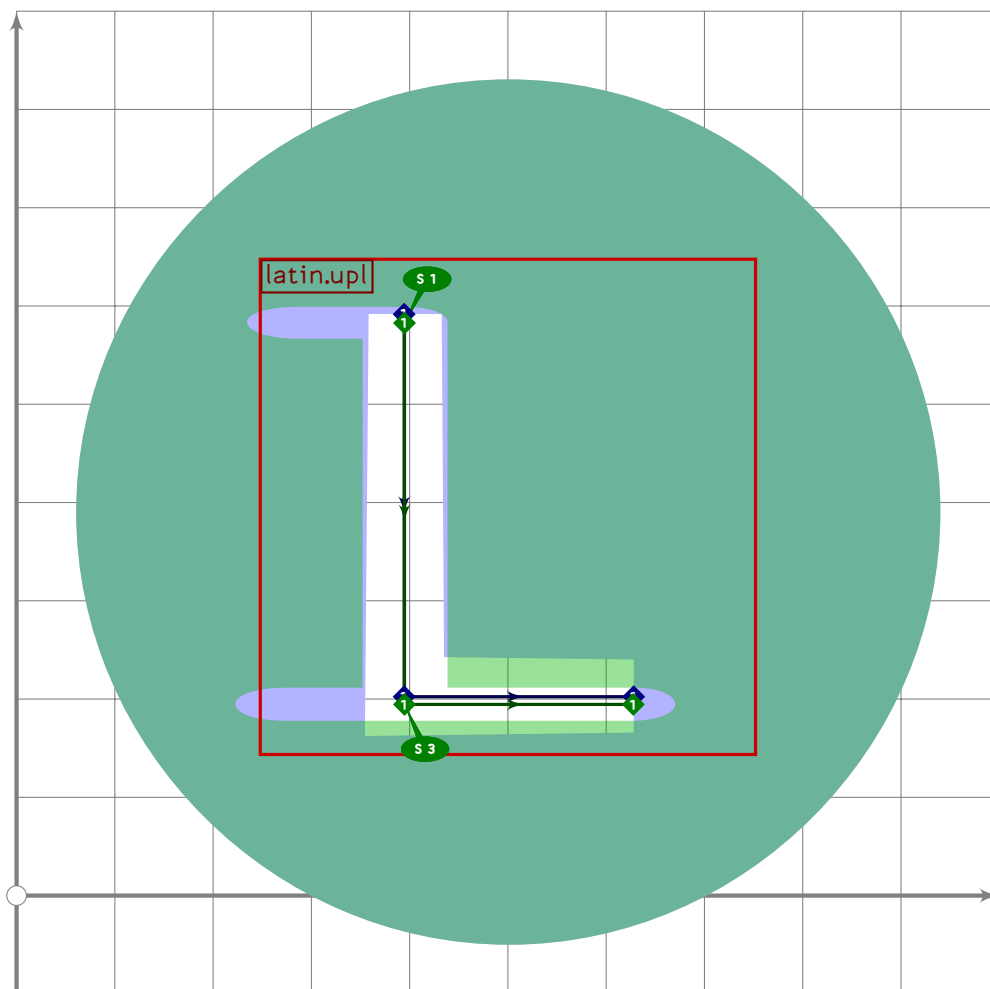
1F1



```

287 % K
288 % BACKGROUND 25CF
289 begint Suglyph("u1F15A";90);
290   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upk);
291   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
292   tsu_render;
293 endtsuglyph;
294

```



1F1

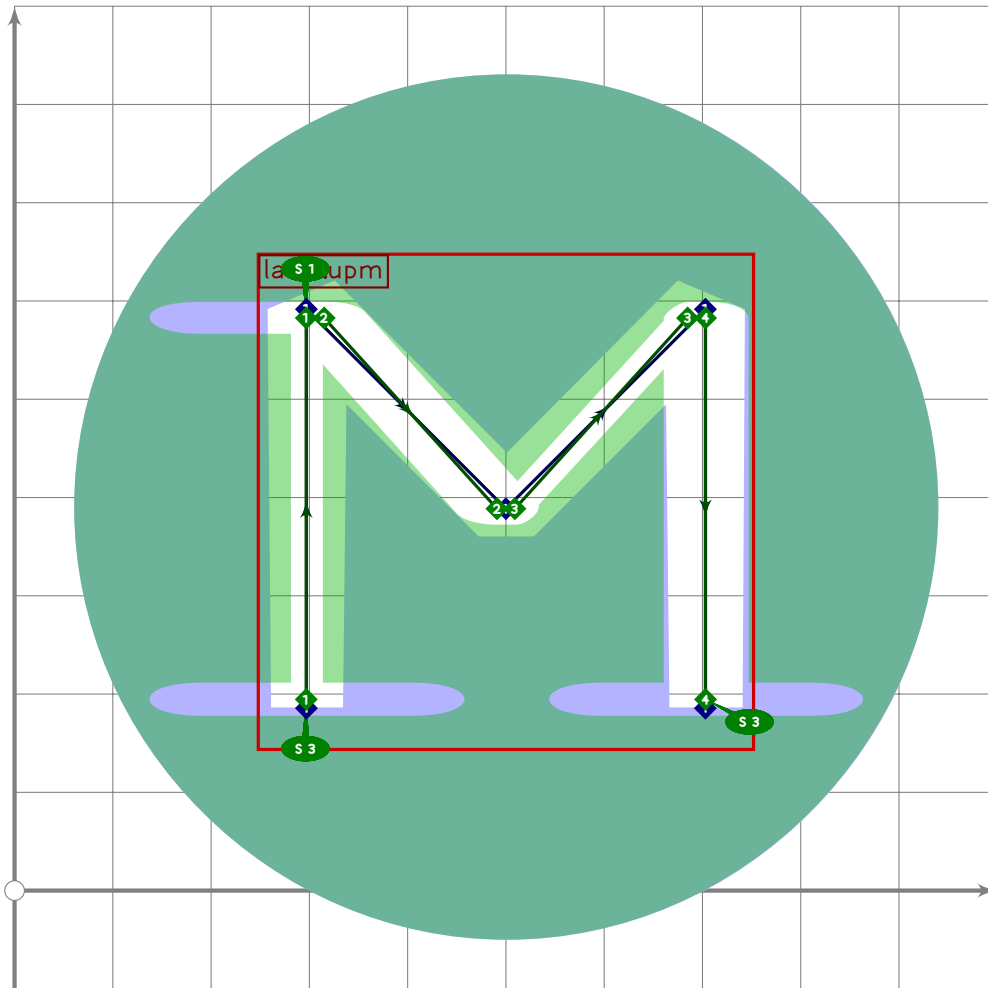
```

295 % L
296 % BACKGROUND 25CF
297 begintsuglyph("u1F15B";91);
298 tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upl);
299 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
300 tsu_render;
301 endtsuglyph;
302

```

U+1F15C
tsuku.u1F15C

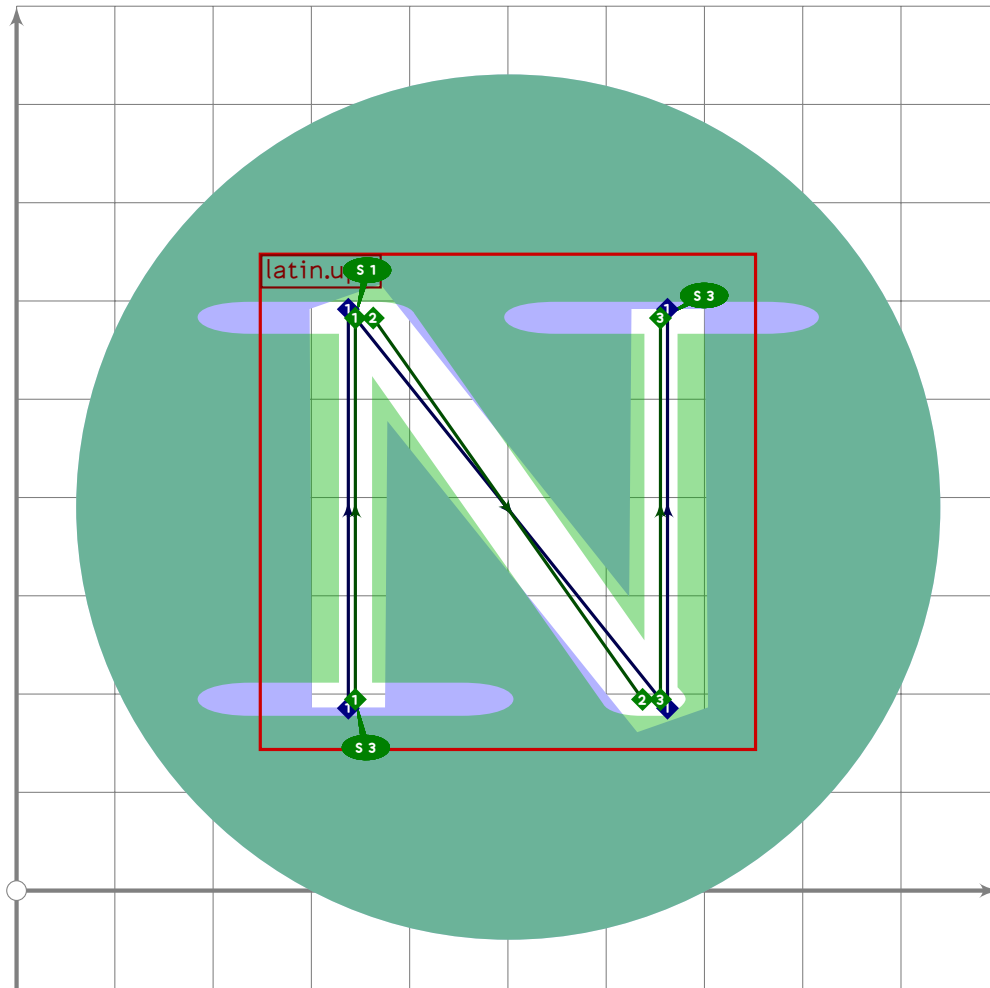
1F1



```

303 % M
304 % BACKGROUND 25CF
305 begintsuglyph("u1F15C";92);
306 tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upm);
307 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
308 tsu_render;
309 endtsuglyph;
310

```

1F1

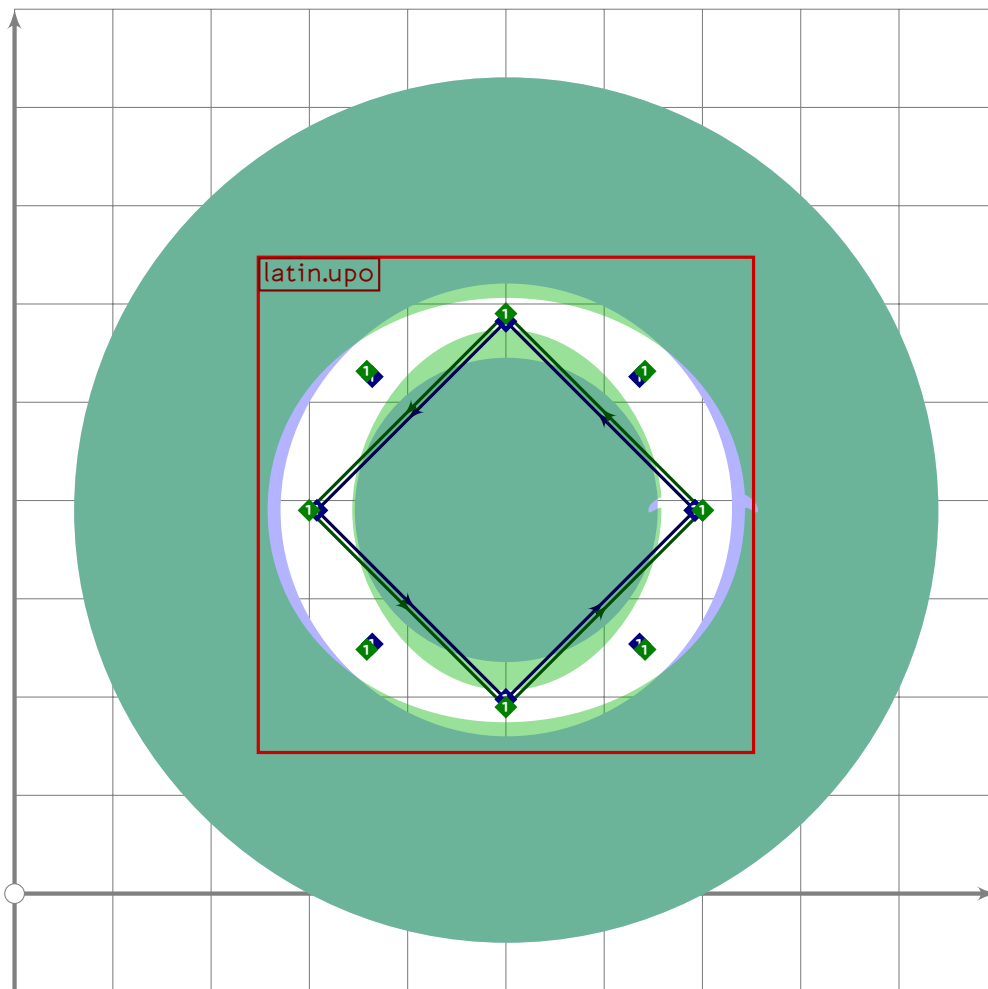
```

311 % N
312 % BACKGROUND 25CF
313 begint Suglyph("u1F15D";93);
314   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upn);
315   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
316   tsu_render;
317 endtsuglyph;
318

```

U+1F15E
tsuku.u1F15E

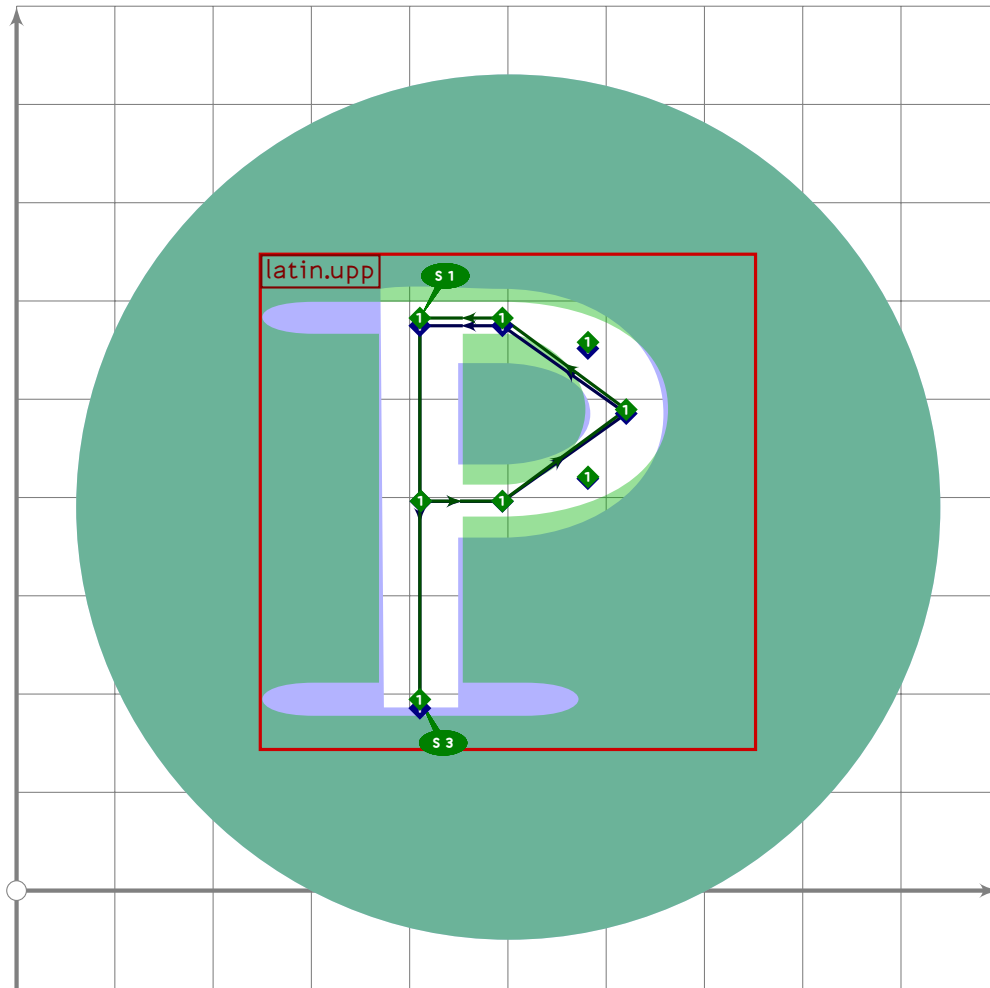
1F1



```

319 % O
320 % BACKGROUND 25CF
321 begint Suglyph("u1F15E";94);
322   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upo);
323   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
324   tsu_render;
325 endtsuglyph;
326

```



1F1

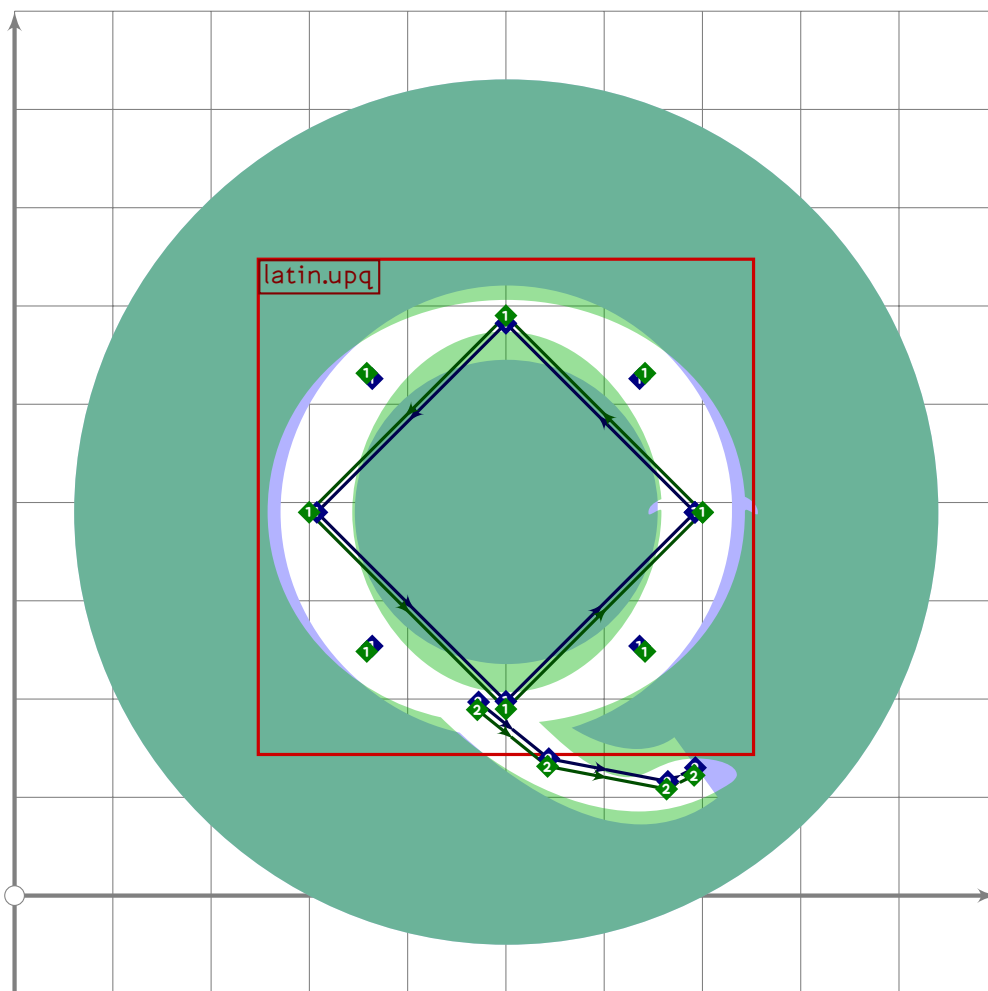
```

327 % P
328 % BACKGROUND 25CF
329 begint Suglyph("u1F15F";95);
330   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upp);
331   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
332   tsu_render;
333 endtsuglyph;
334

```

U+1F160
tsuku.u1F160

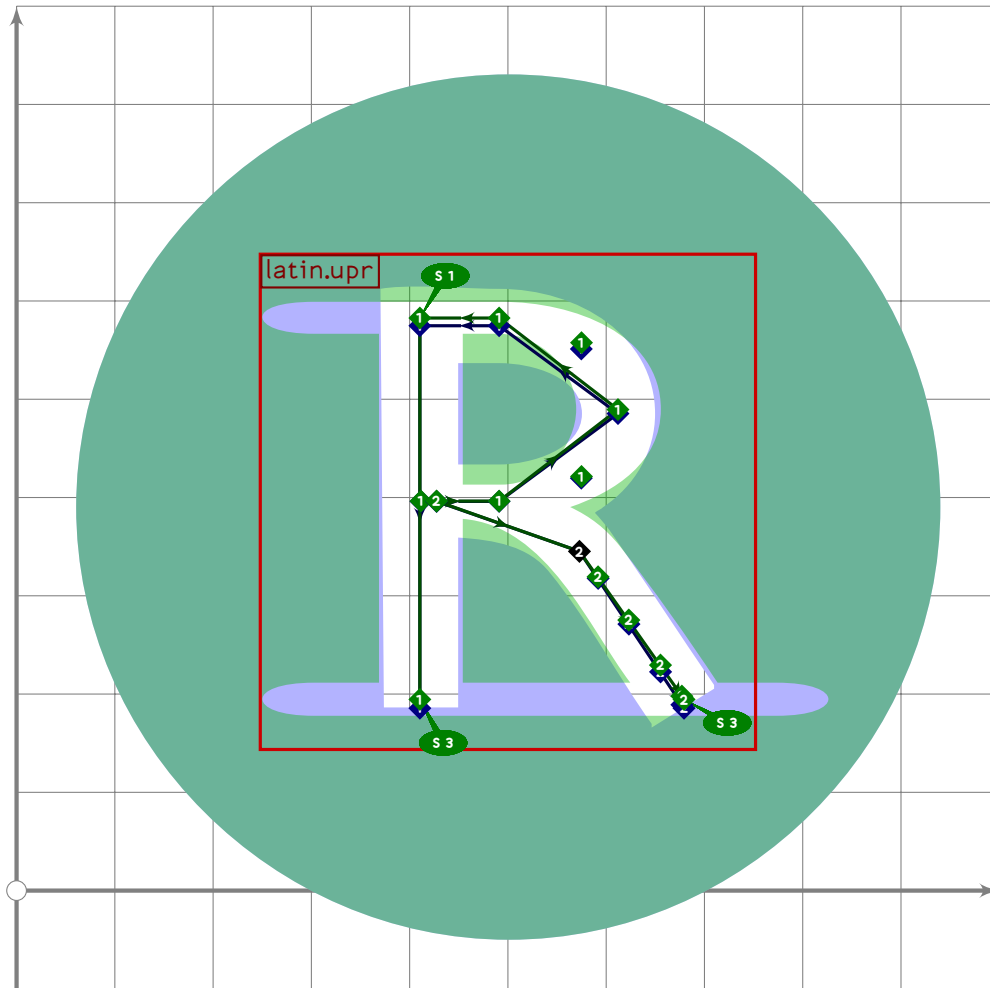
1F1



```

335 % Q
336 % BACKGROUND 25CF
337 begint Suglyph("u1F160";96);
338   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upq);
339   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
340   tsu_render;
341 endtsuglyph;
342

```



1F1

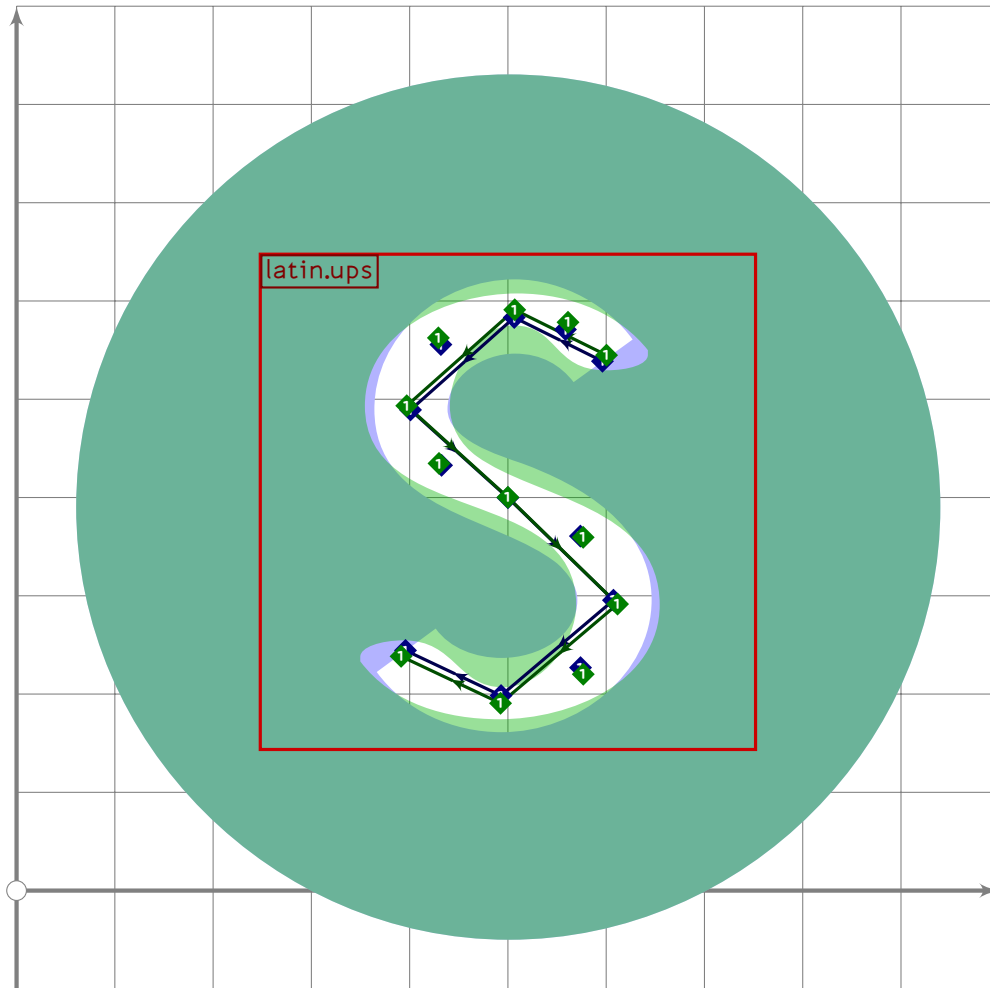
```

343 % R
344 % BACKGROUND 25CF
345 begint Suglyph("u1F161";97);
346   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upr);
347   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
348   tsu_render;
349 endtsuglyph;
350

```

U+1F162
tsuku.u1F162

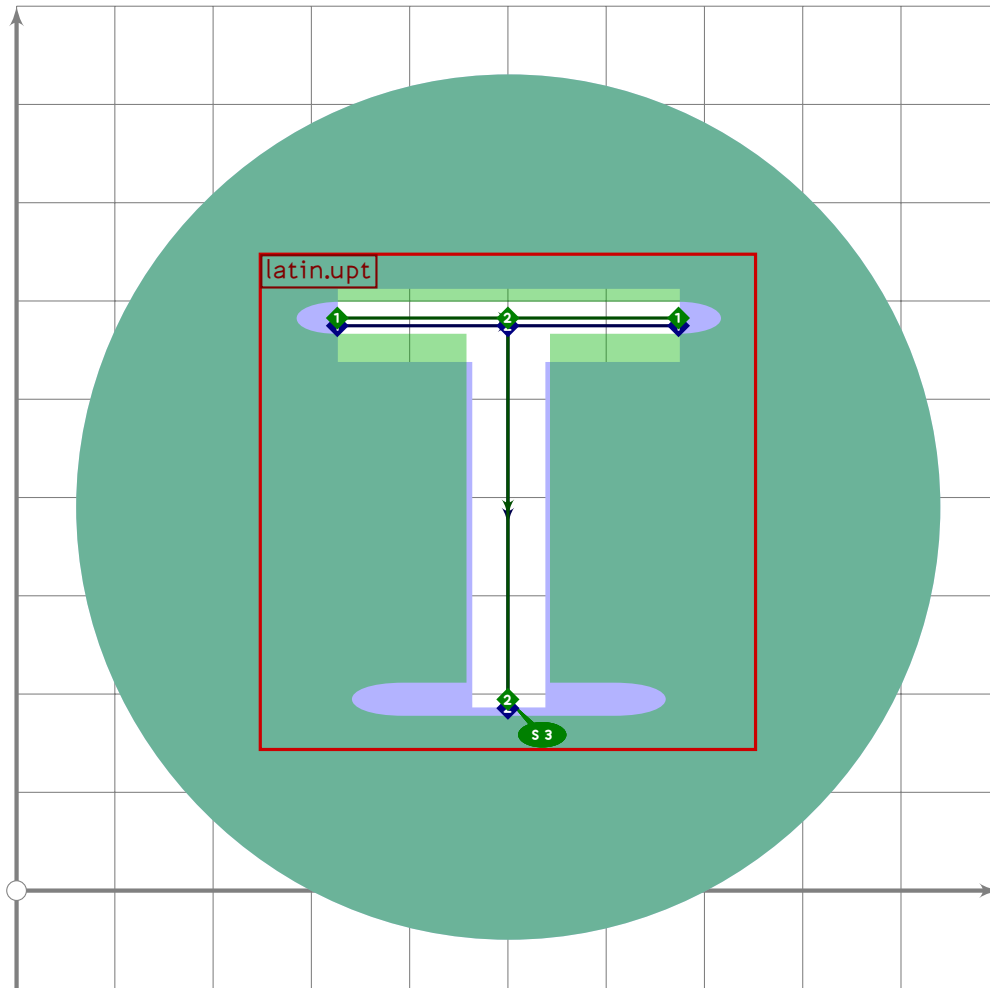
1F1



```

351 % S
352 % BACKGROUND 25CF
353 begint Suglyph("u1F162";98);
354   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.ups);
355   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
356   tsu_render;
357 endtsuglyph;
358

```



1F1

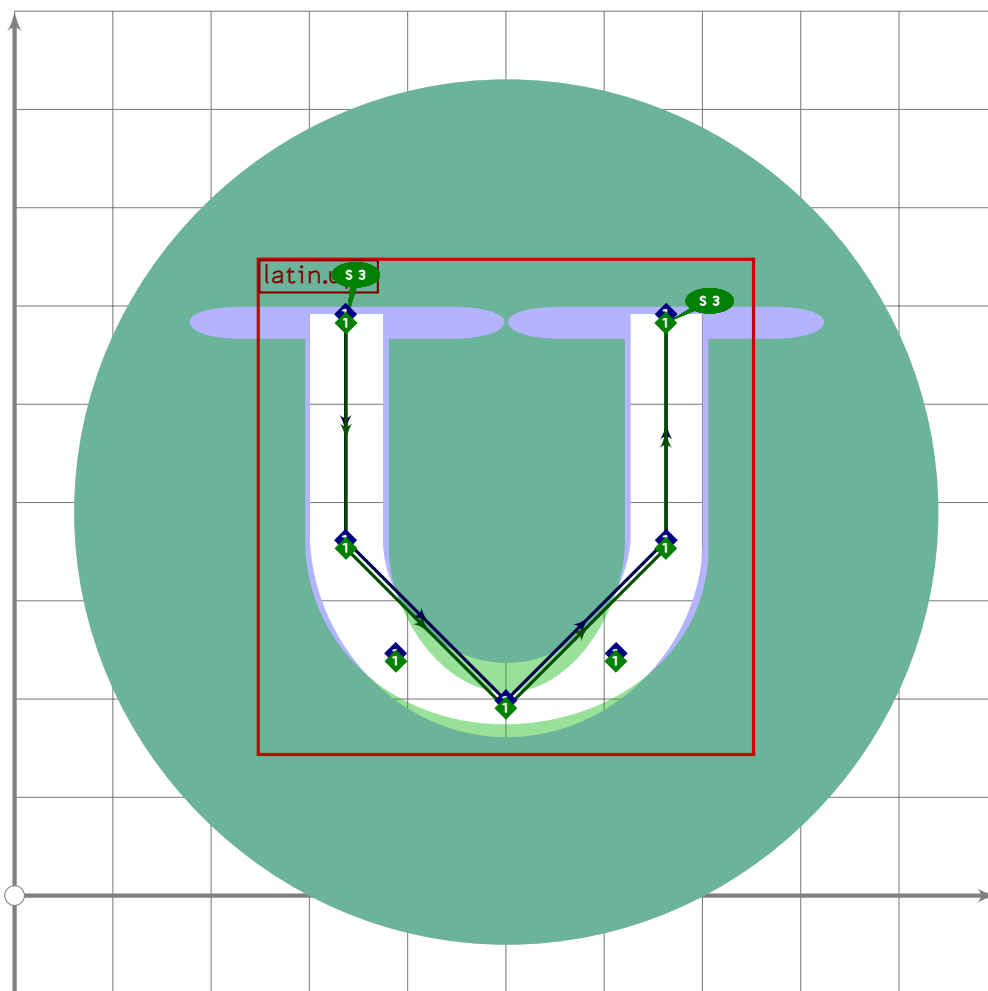
```

359 % T
360 % BACKGROUND 25CF
361 begintsuglyph("u1F163";99);
362 tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upt);
363 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
364 tsu_render;
365 endtsuglyph;
366

```

U+1F164
tsuku.u1F164

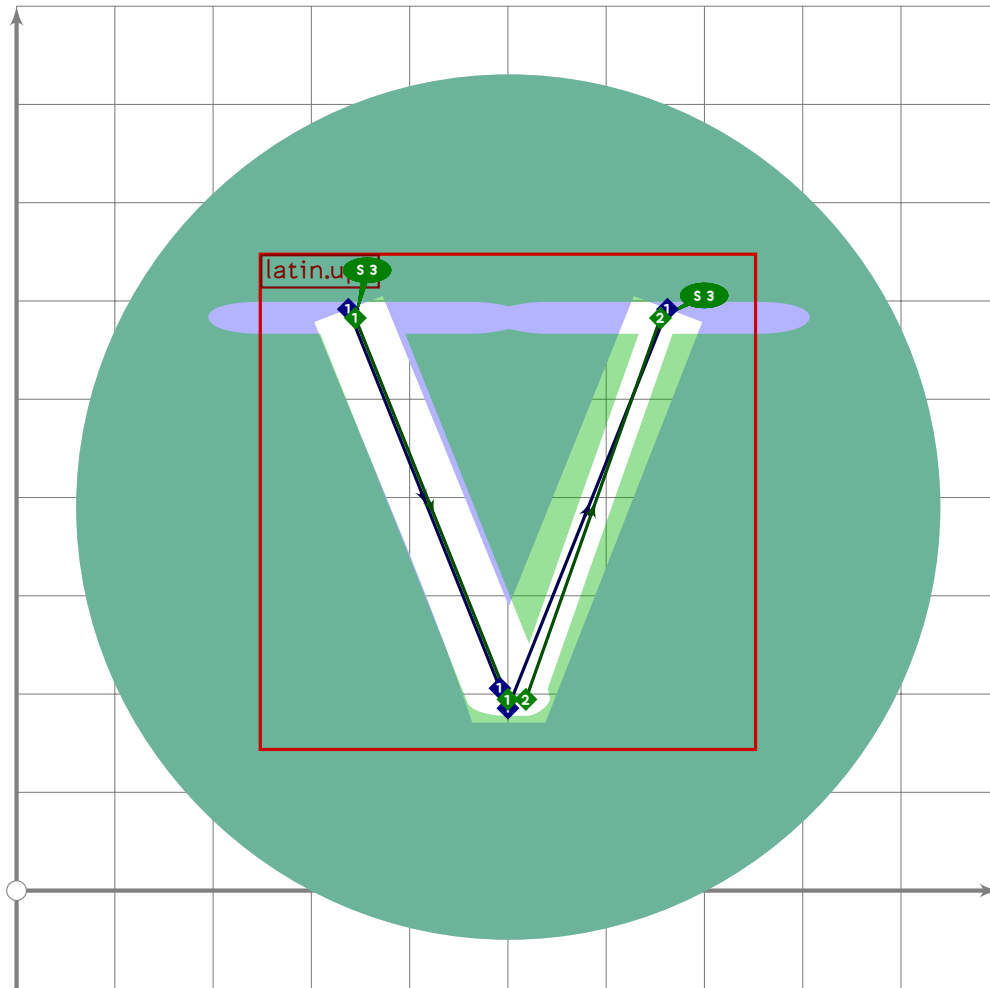
1F1



```

367 % U
368 % BACKGROUND 25CF
369 begint Suglyph("u1F164",100);
370 tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upu);
371 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
372 tsu_render;
373 endtsuglyph;
374

```

1F1

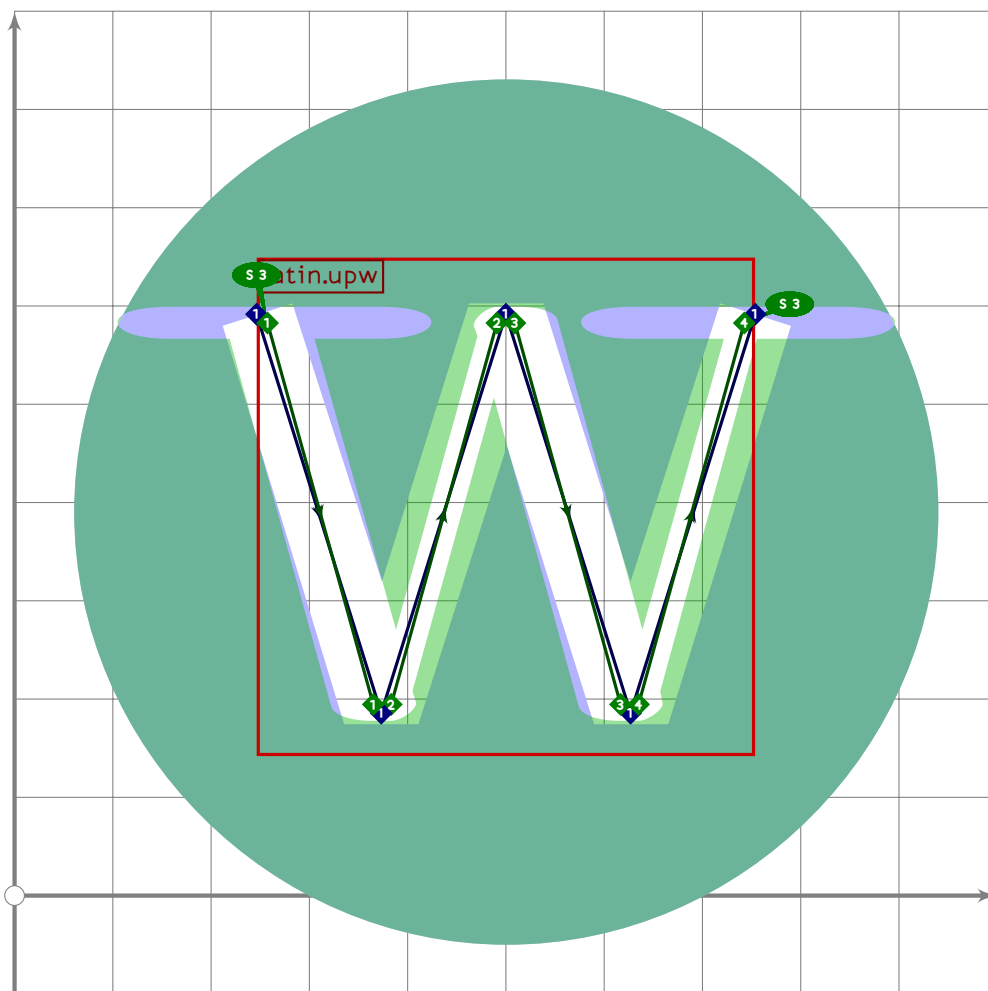
```

375 % V
376 % BACKGROUND 25CF
377 begint Suglyph("u1F165",101);
378   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upv);
379   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
380   tsu_render;
381 endtsuglyph;
382

```

U+1F166
tsuku.u1F166

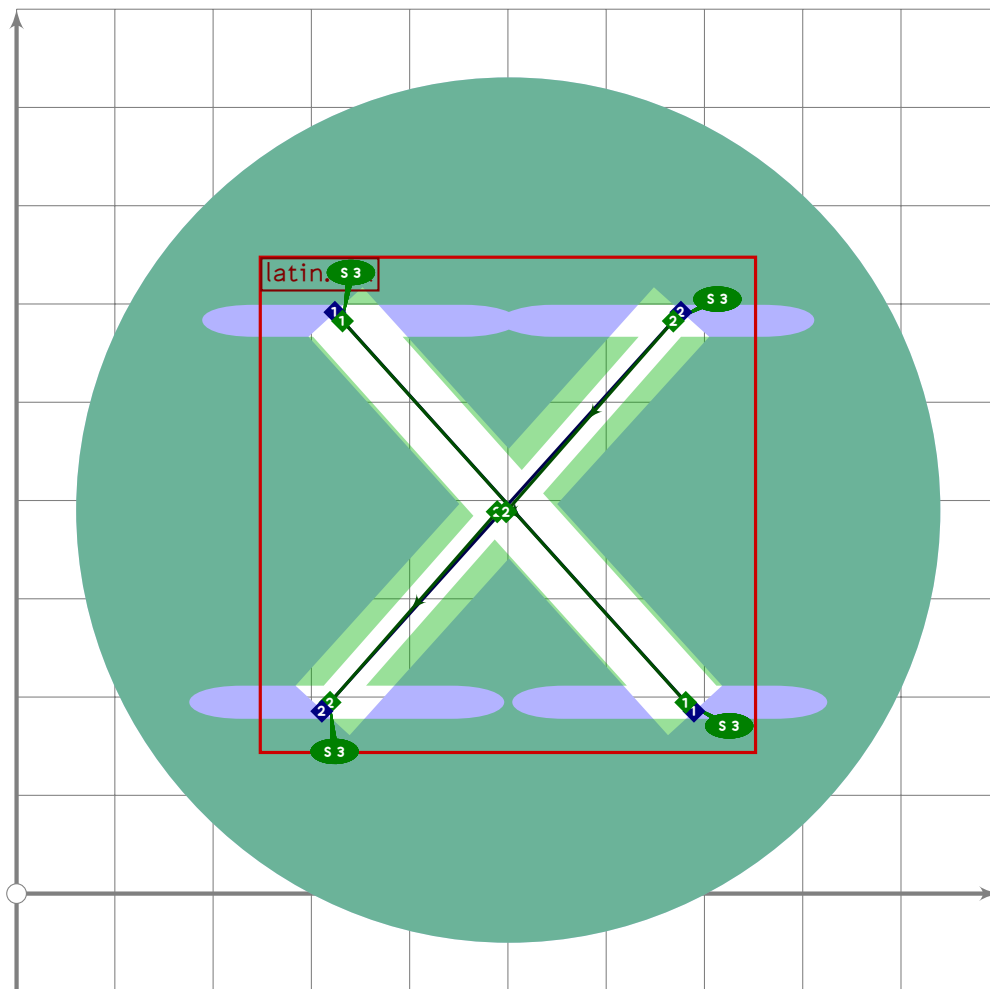
1F1



```

383 % W
384 % BACKGROUND 25CF
385 begint Suglyph("u1F166",102);
386   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upw);
387   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
388   tsu_render;
389 endtsuglyph;
390

```



1F1

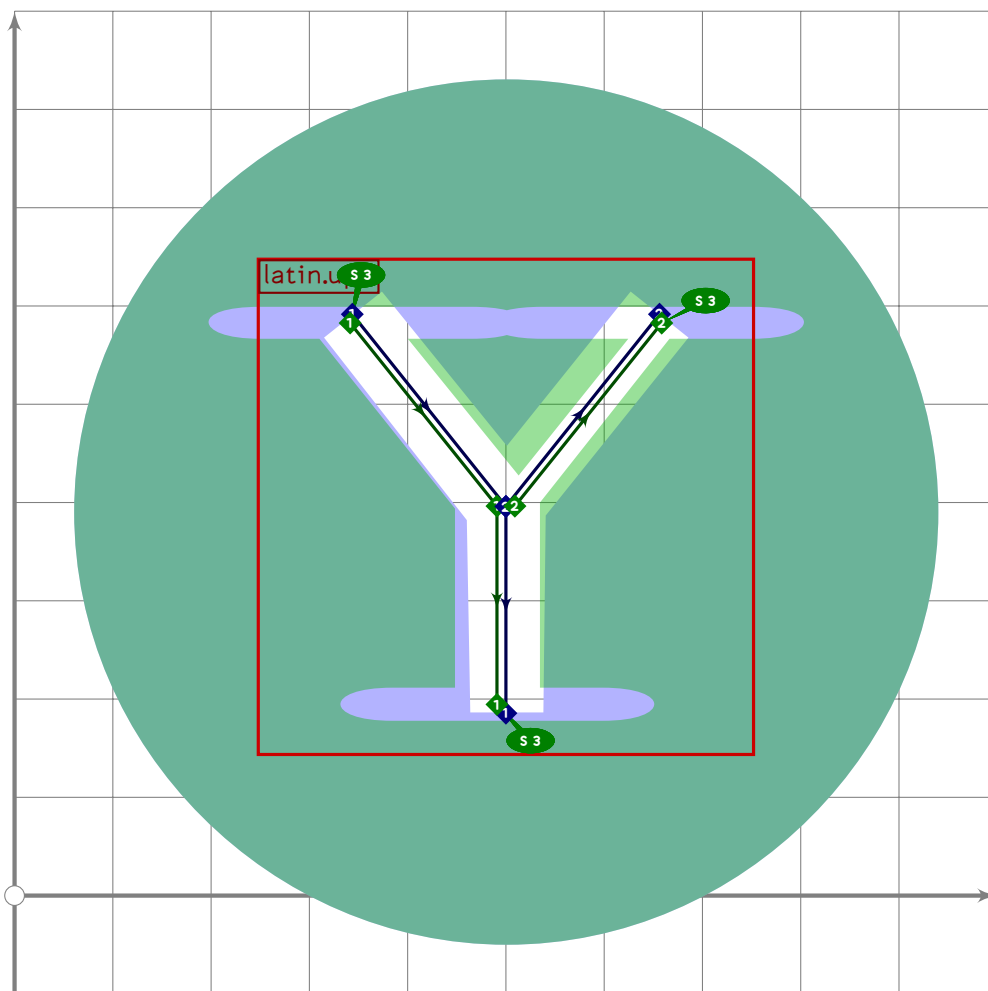
```

391 % X
392 % BACKGROUND 25CF
393 begintsuglyph("u1F167",103);
394   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upx);
395   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
396   tsu_render;
397 endtsuglyph;
398

```

U+1F168
tsuku.u1F168

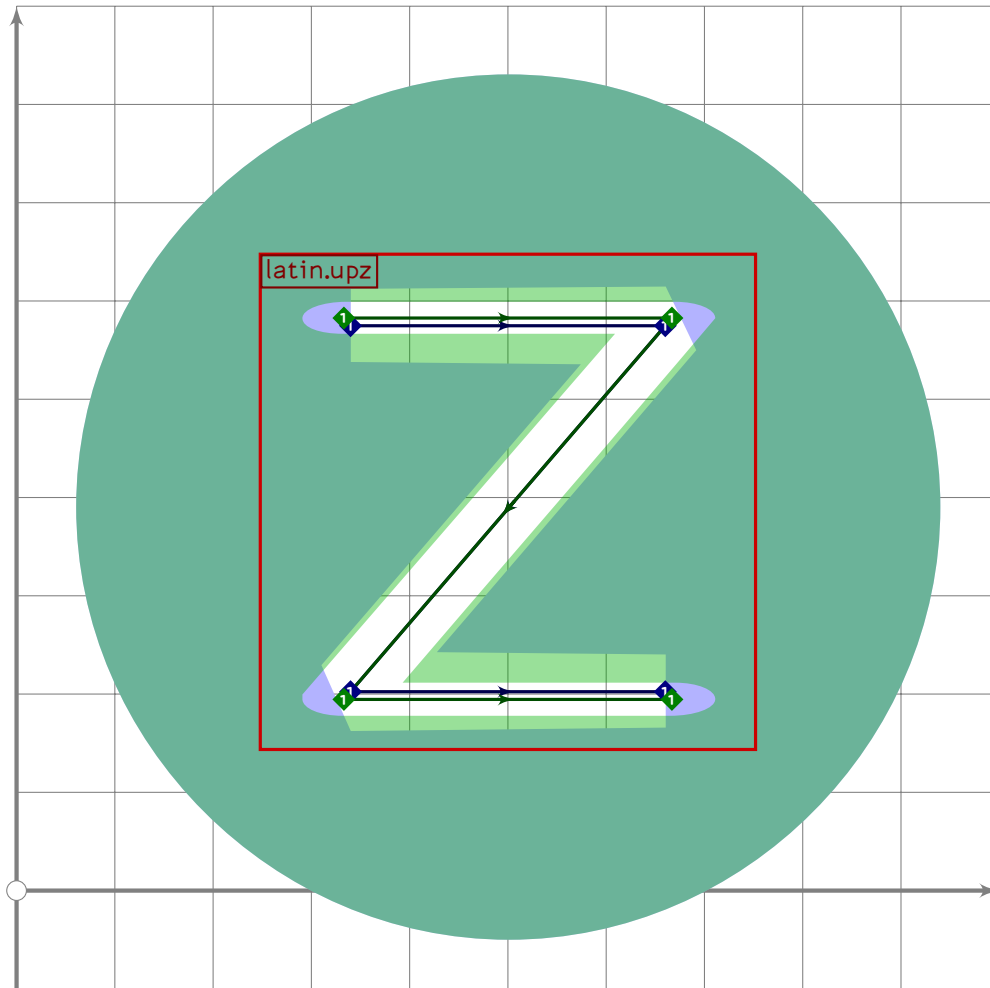
1F1



```

399 % Y
400 % BACKGROUND 25CF
401 begint Suglyph("u1F168",104);
402   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upy);
403   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
404   tsu_render;
405 endtsuglyph;
406

```



1F1

```

407 % Z
408 % BACKGROUND 25CF
409 begintsuglyph("u1F169",105);
410   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upz);
411   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
412   tsu_render;
413 endtsuglyph;
414
415
416

```

Inverse Squared Latin

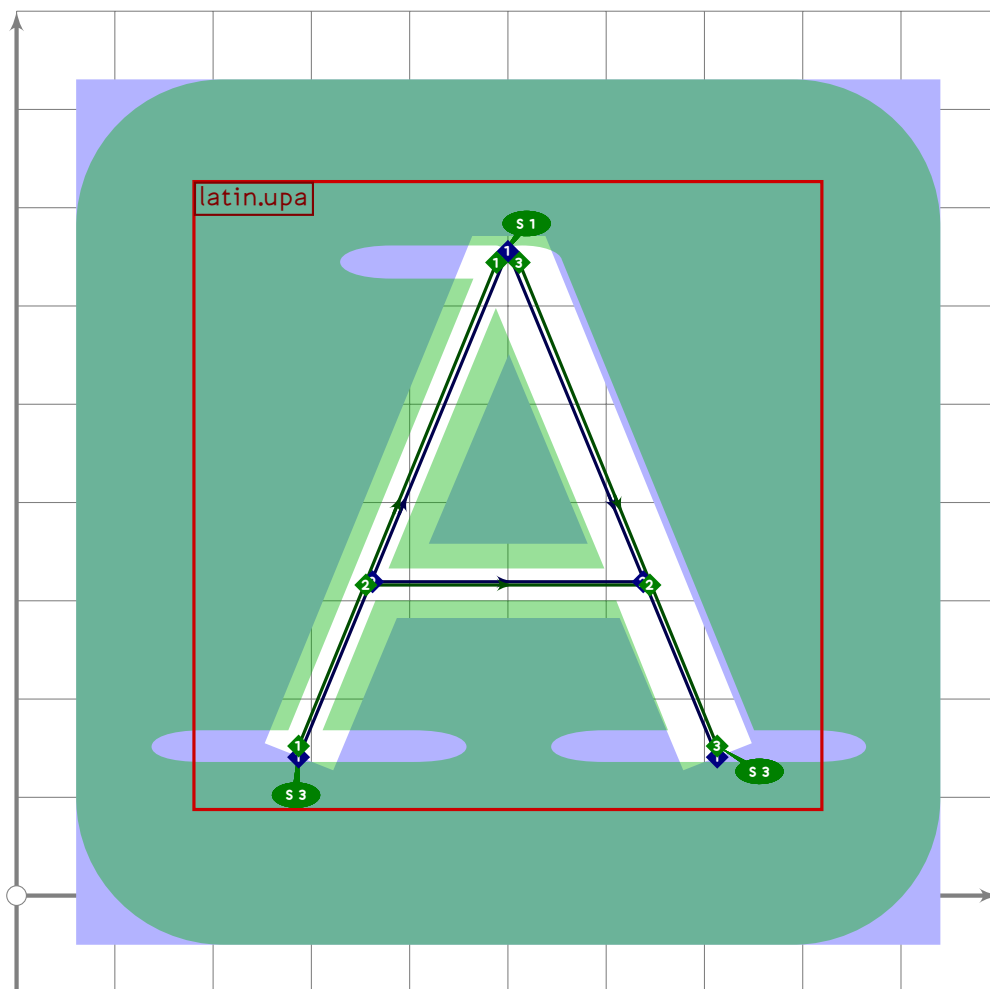
```

417 % INVERSE SQUARED LATIN
418

```

U+1F170
tsuku.u1F170

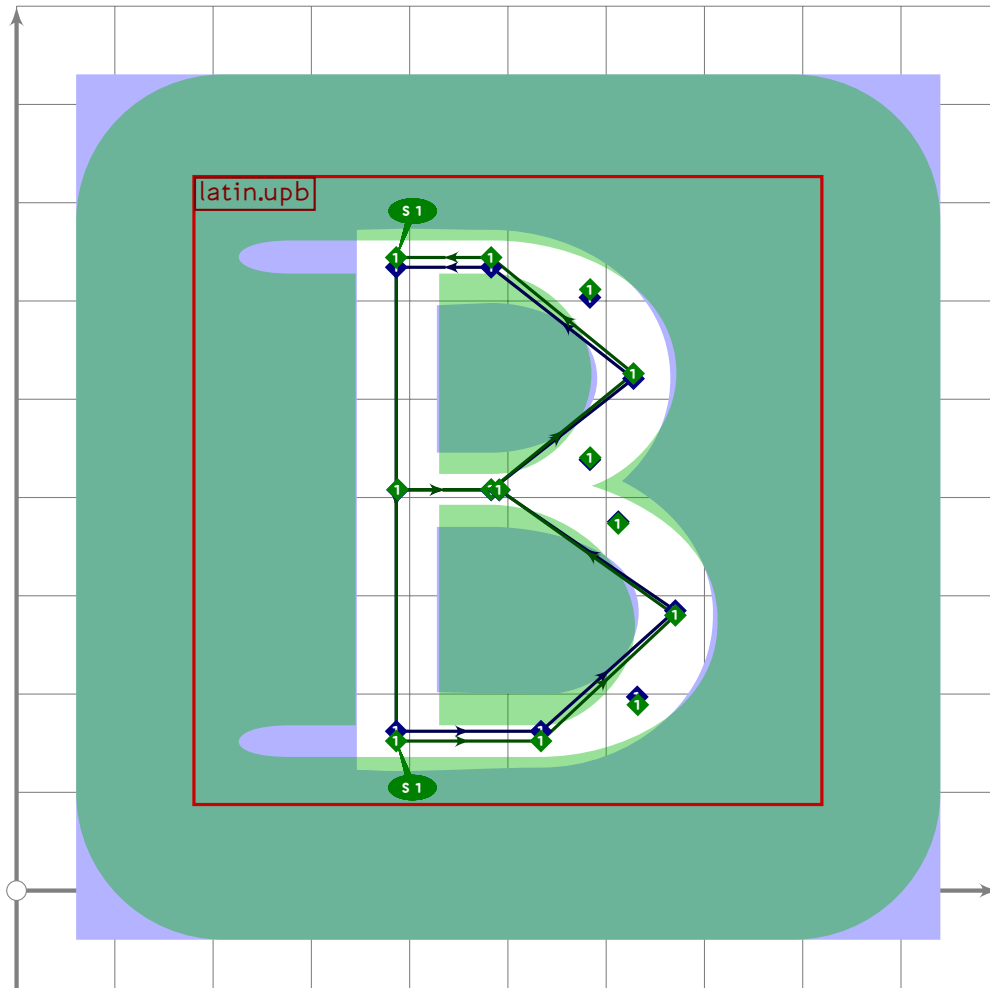
1F1



```

419 % A
420 % BACKGROUND F1712
421 begint Suglyph("u1F170",112);
422   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upa);
423   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
424   tsu_render;
425 endtsuglyph;
426

```



1F1

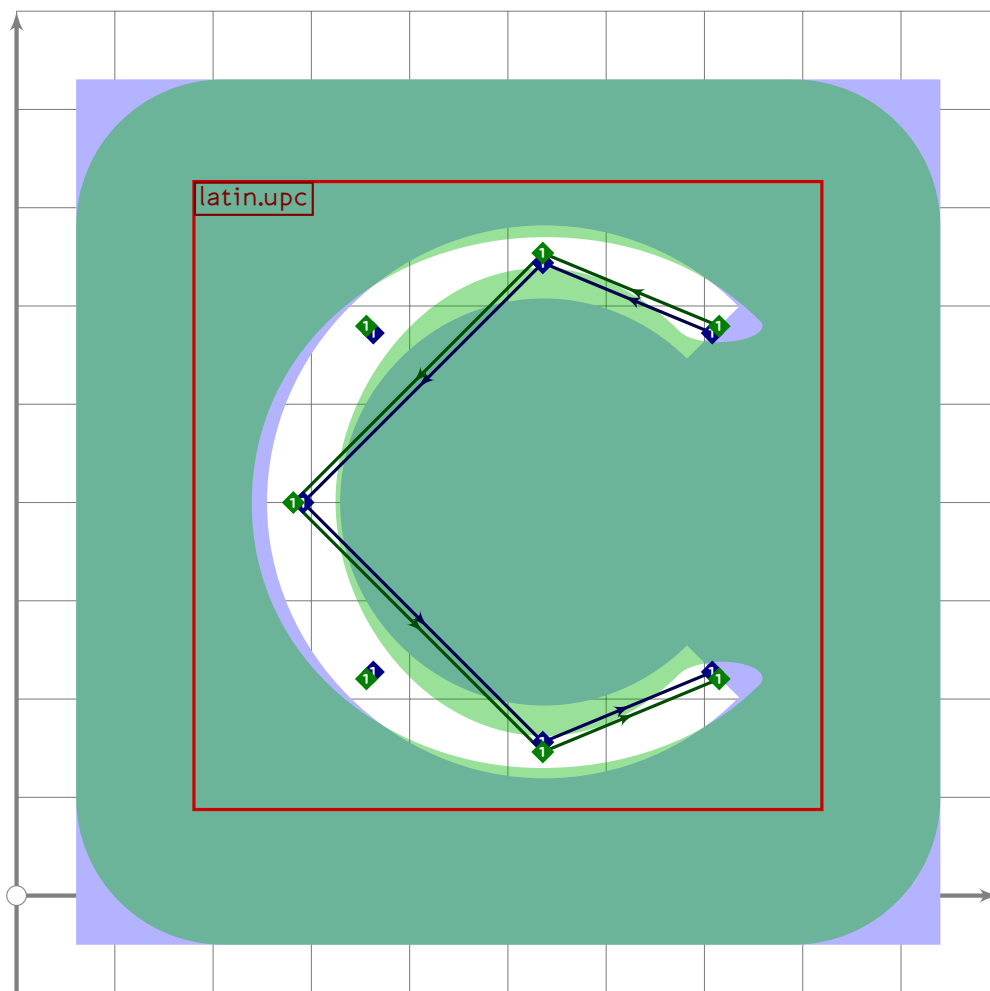
```

427 % B
428 % BACKGROUND F1712
429 begint Suglyph("u1F171";113);
430   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upb);
431   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
432   tsu_render;
433 endtsuglyph;
434

```

U+1F172
tsuku.u1F172

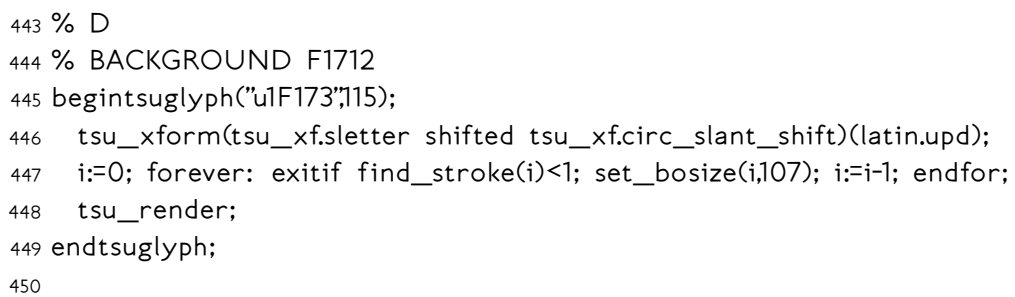
1F1



```

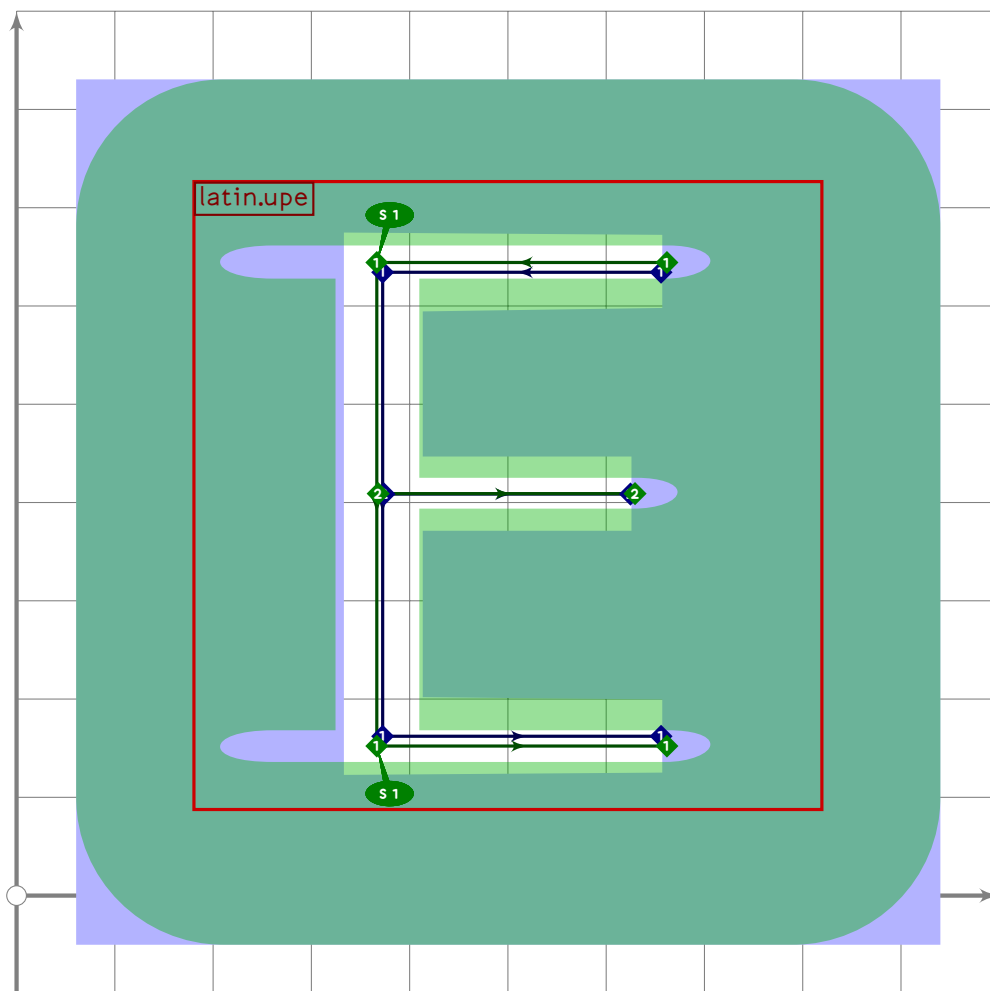
435 % C
436 % BACKGROUND F1712
437 begint Suglyph("u1F172",114);
438   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upc);
439   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
440   tsu_render;
441 endtsuglyph;
442

```

U+1F174
tsuku.u1F174

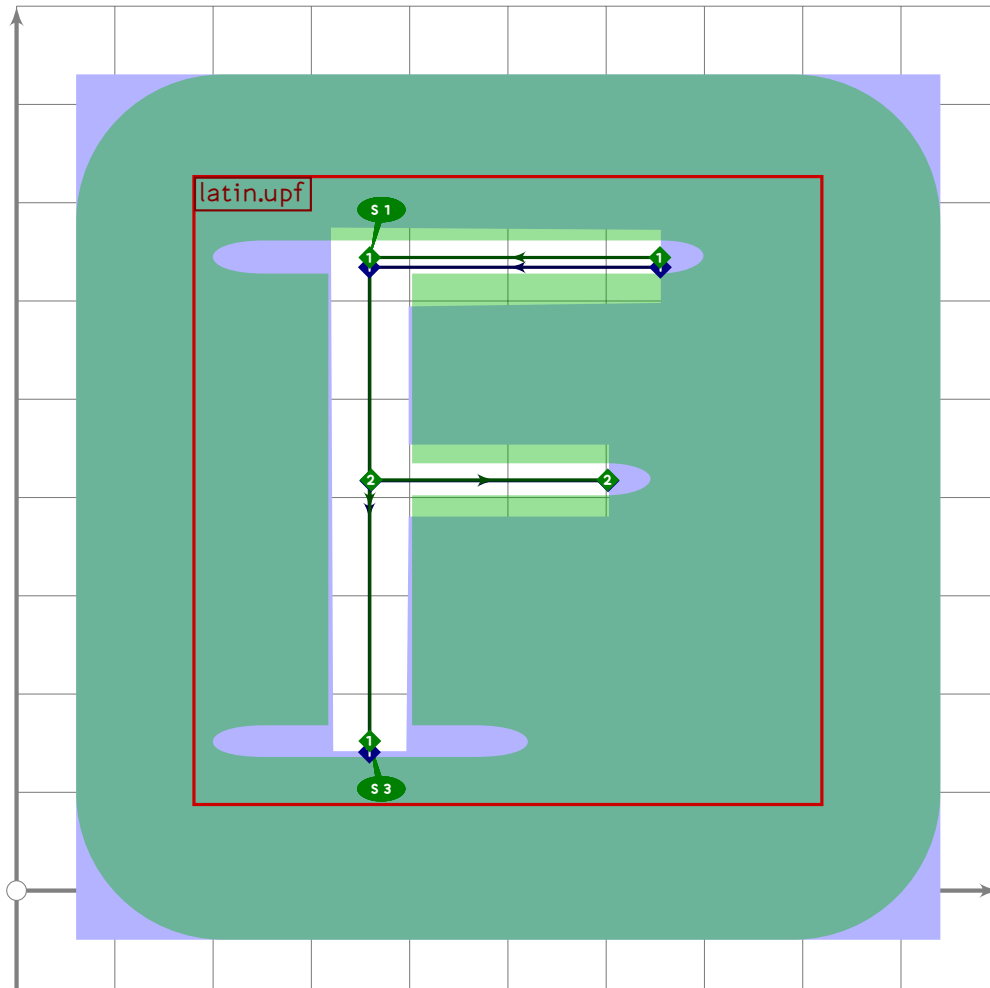
1F1



```

451 % E
452 % BACKGROUND F1712
453 begint Suglyph("u1F174",116);
454   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upe);
455   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
456   tsu_render;
457 endtsuglyph;
458

```



1F1

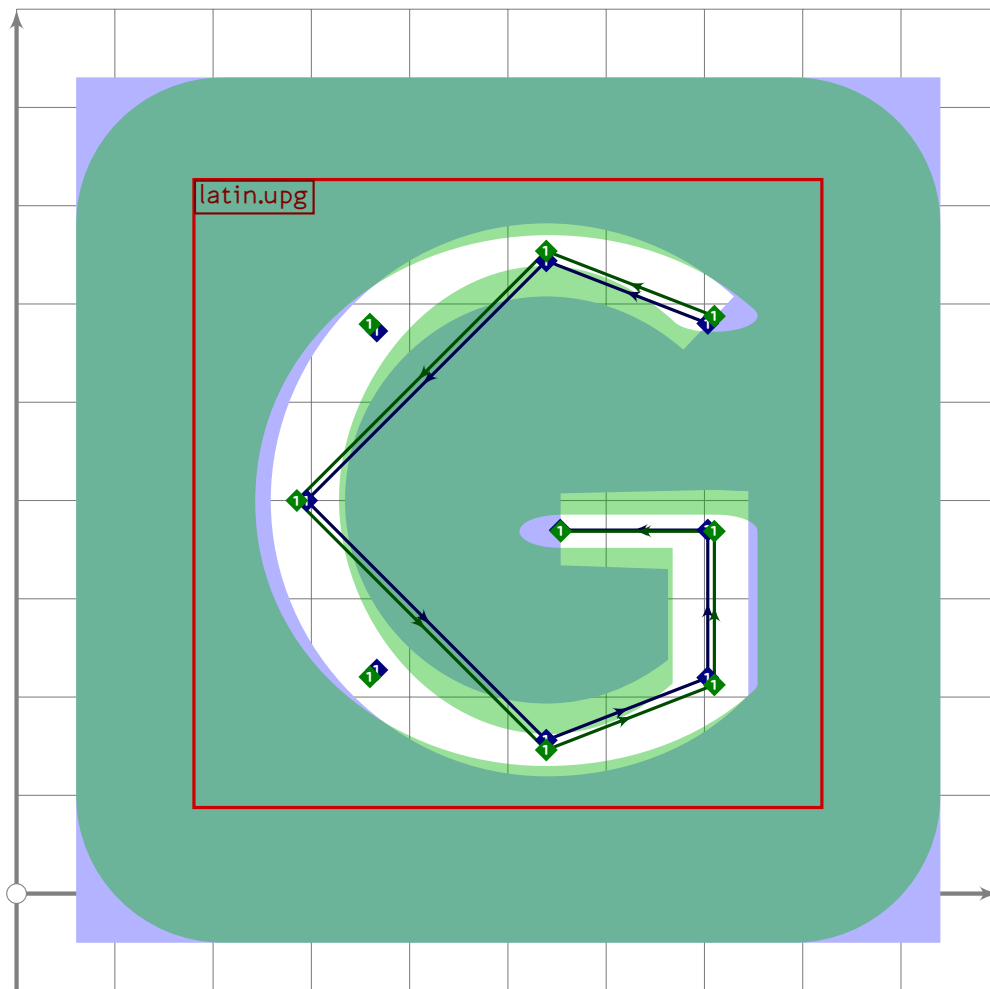
```

459 % F
460 % BACKGROUND F1712
461 begint Suglyph("u1F175",117);
462   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upf);
463   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
464   tsu_render;
465 endtsuglyph;
466

```

U+1F176
tsuku.u1F176

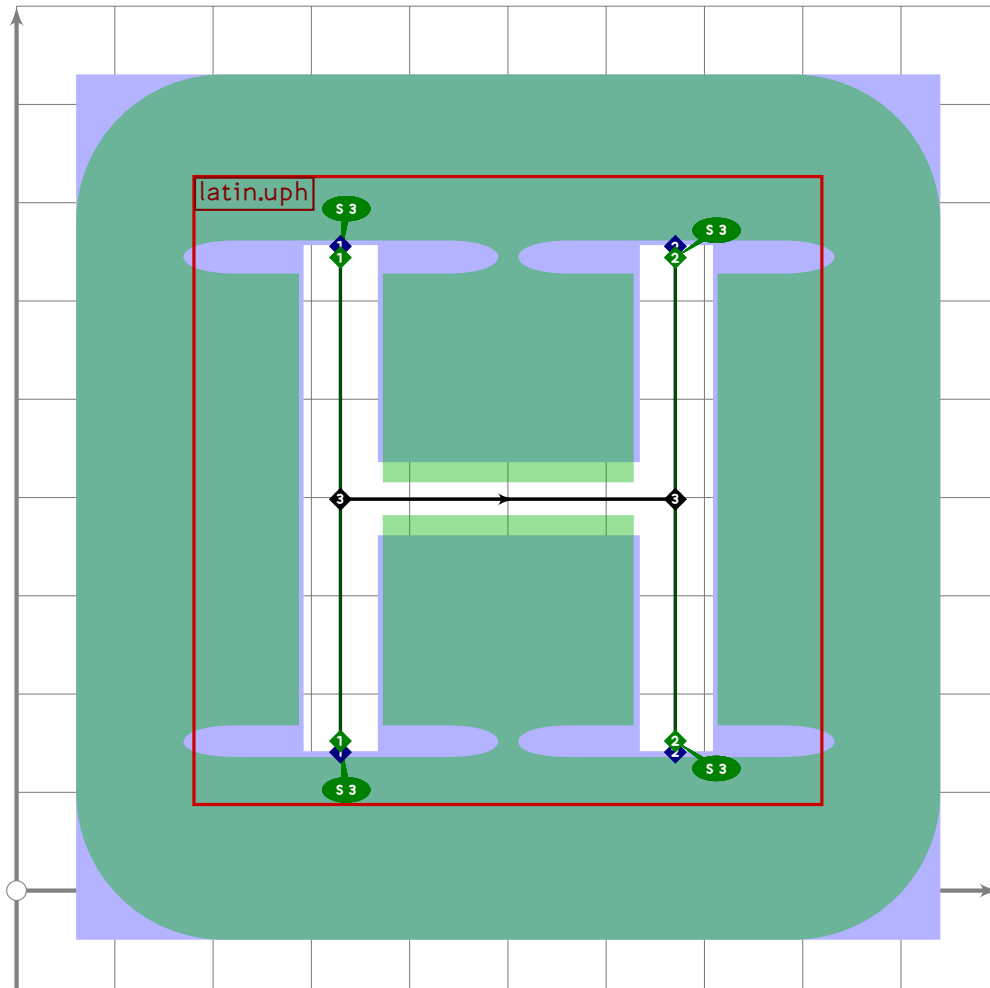
1F1



```

467 % G
468 % BACKGROUND F1712
469 begint Suglyph("u1F176",118);
470   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upg);
471   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
472   tsu_render;
473 endtsuglyph;
474

```



1F1

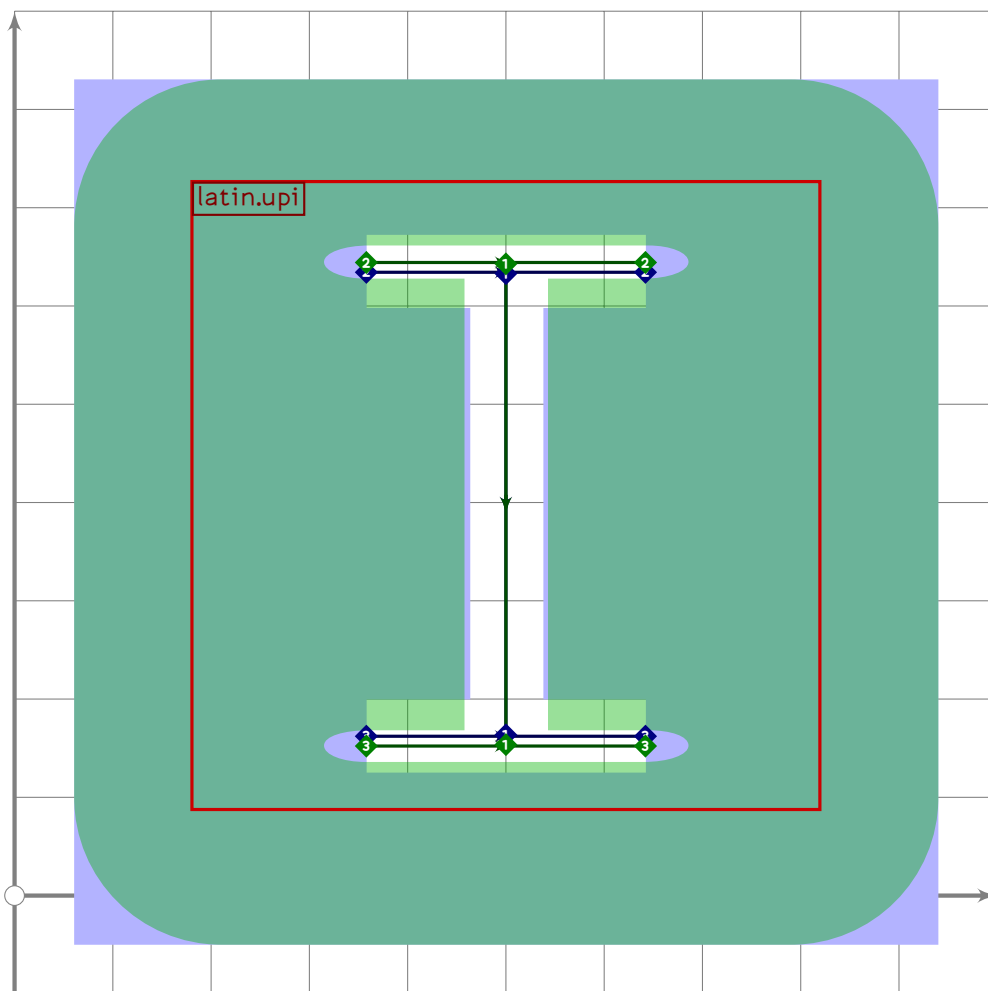
```

475 % H
476 % BACKGROUND F1712
477 begintsuglyph("u1F177",119);
478   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.uph);
479   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
480   tsu_render;
481 endtsuglyph;
482

```

U+1F178
tsuku.u1F178

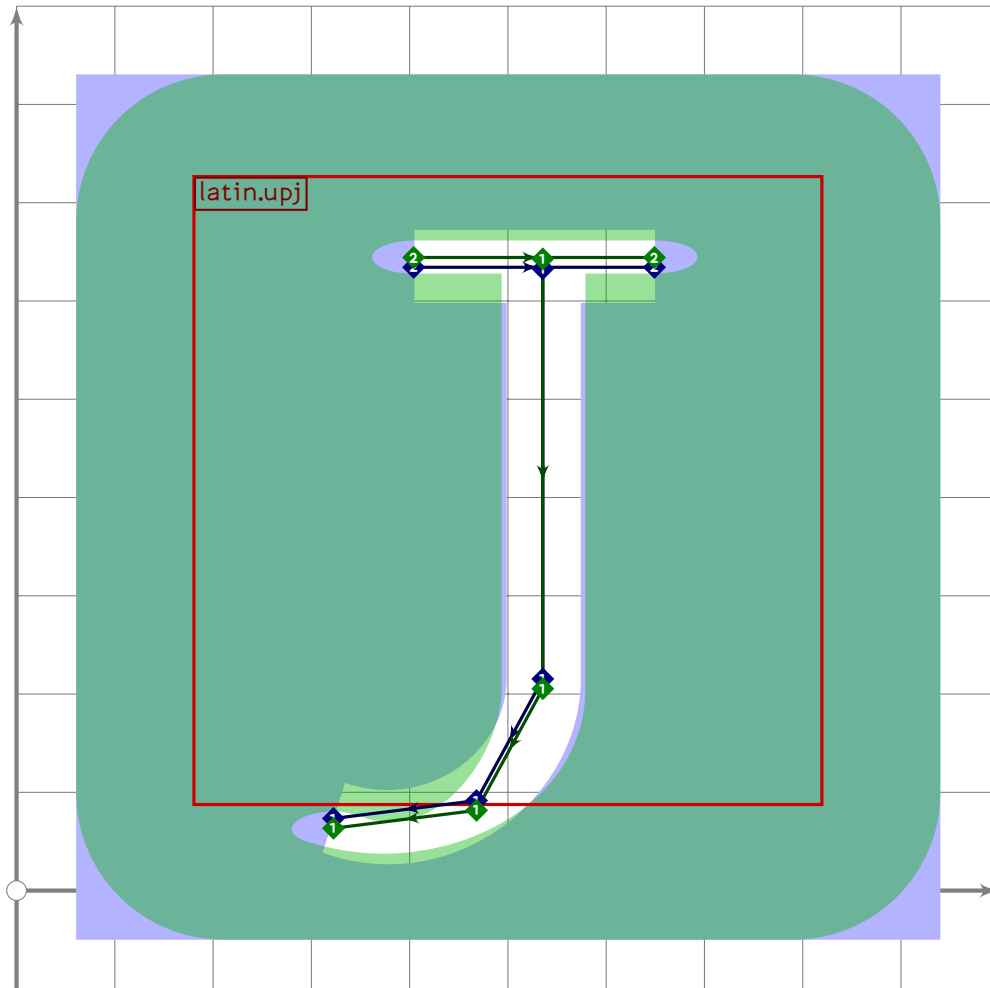
1F1



```

483 % I
484 % BACKGROUND F1712
485 begint Suglyph("u1F178",120);
486   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upi);
487   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
488   tsu_render;
489 endtsuglyph;
490

```



1F1

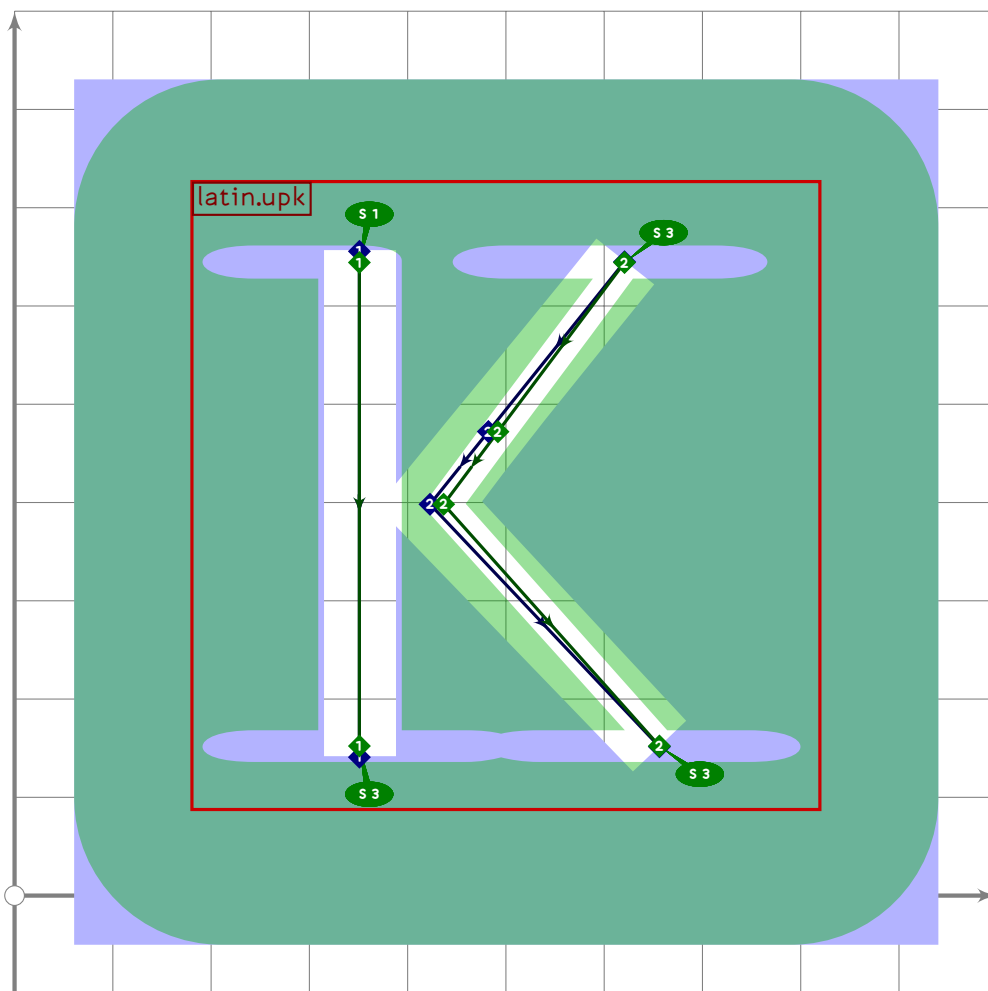
```

491 % J
492 % BACKGROUND F1712
493 begint Suglyph("u1F179",121);
494   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upj);
495   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
496   tsu_render;
497 endtsuglyph;
498

```

U+1F17A
tsuku.u1F17A

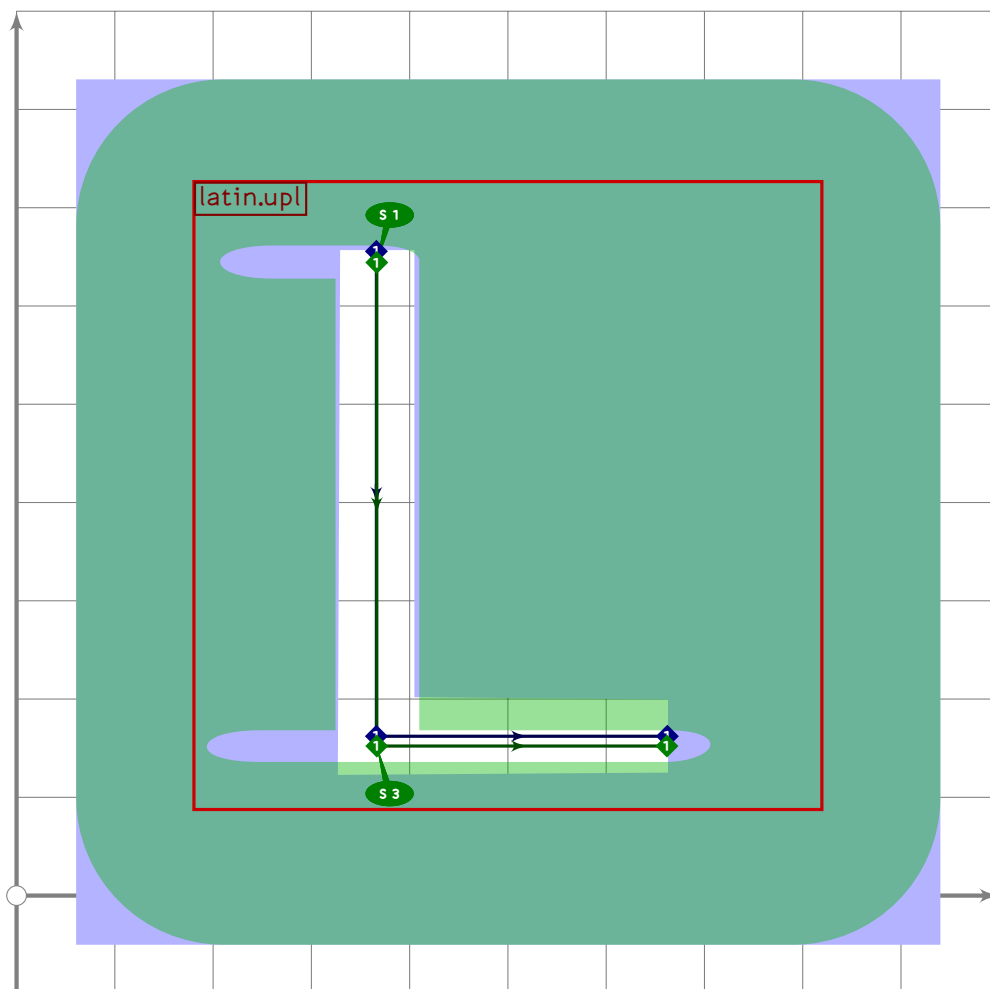
1F1



```

499 % K
500 % BACKGROUND F1712
501 begint Suglyph("u1F17A",122);
502   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upk);
503   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
504   tsu_render;
505 endtsuglyph;
506

```

1F1

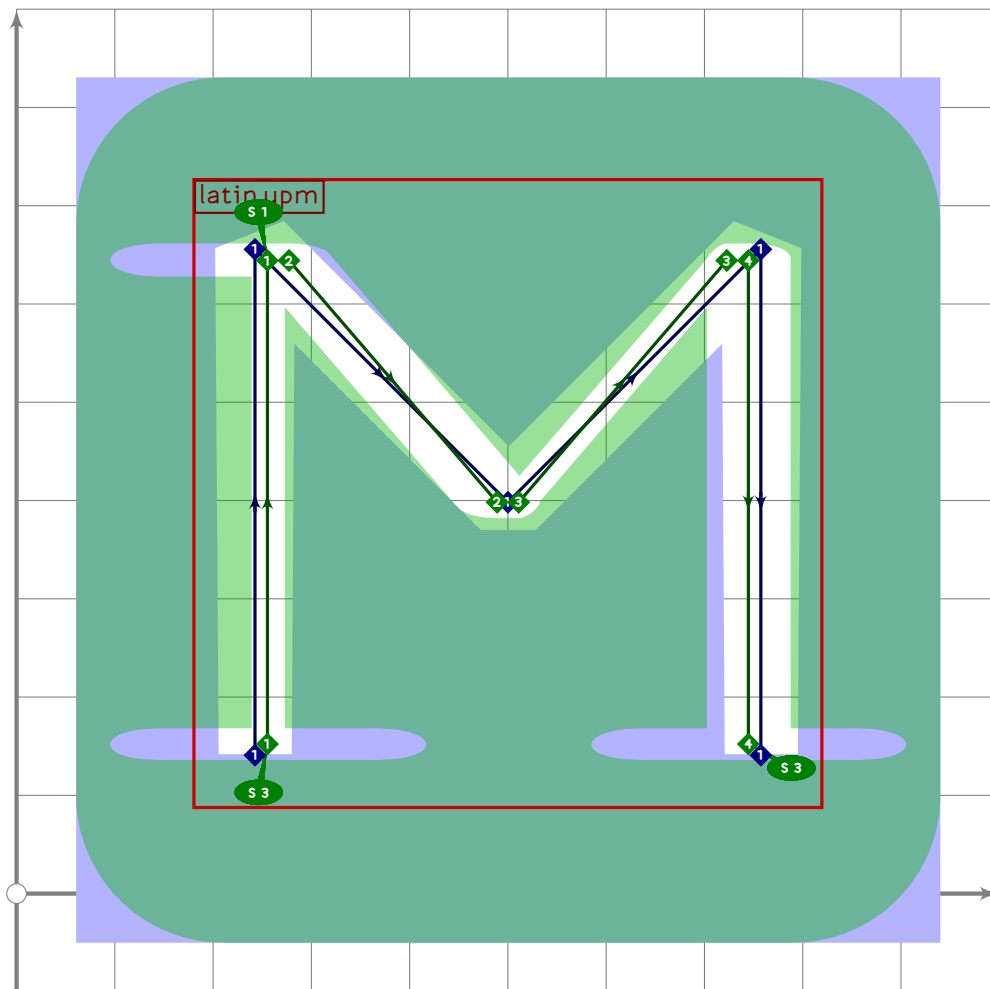
```

507 % L
508 % BACKGROUND F1712
509 begintsuglyph("u1F17B",123);
510 tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upl);
511 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
512 tsu_render;
513 endtsuglyph;
514

```

U+1F17C
tsuku.u1F17C

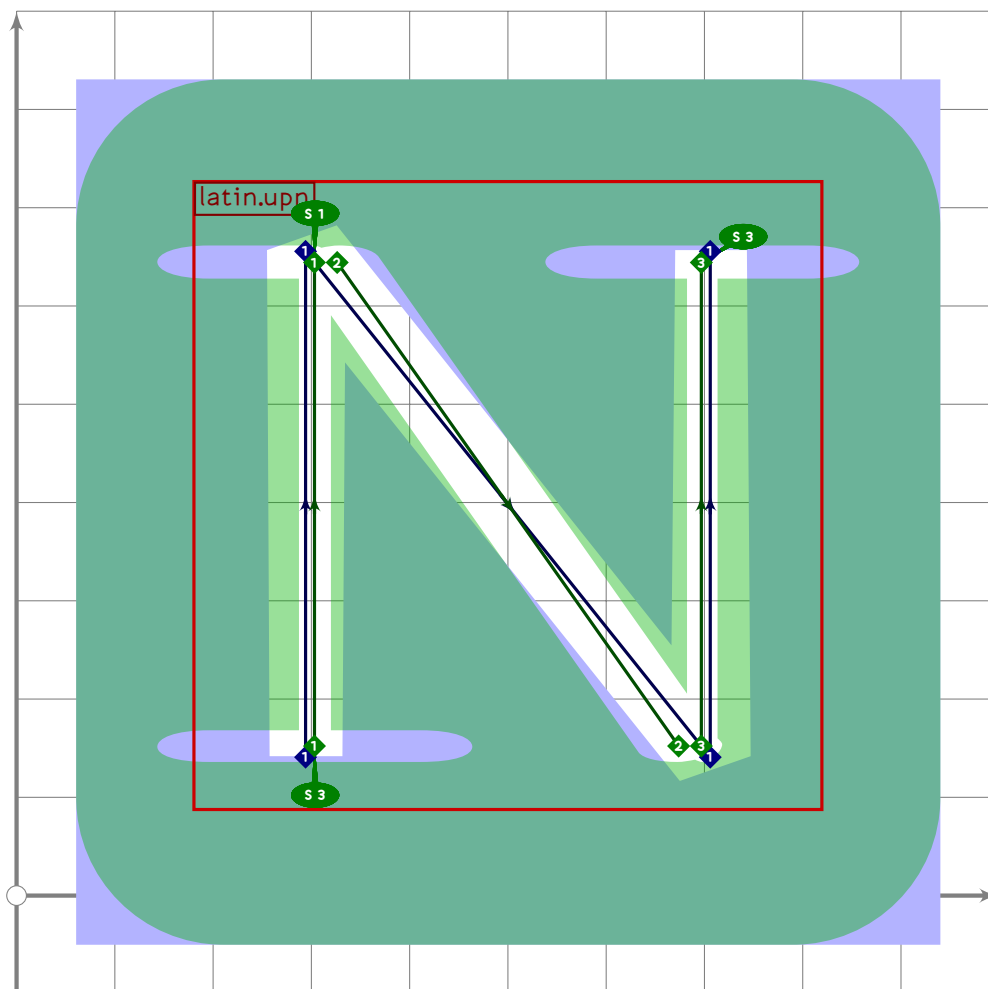
1F1



```

515 % M
516 % BACKGROUND F1712
517 begintsuglyph("u1F17C";124);
518 if do_alteration:
519     tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift
520         shifted -centre_pt xscaled 0.95 shifted centre_pt)(latin.upm);
521 else:
522     tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upm);
523 fi;
524 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
525 tsu_render;
526 endtsuglyph;
527

```



1F1

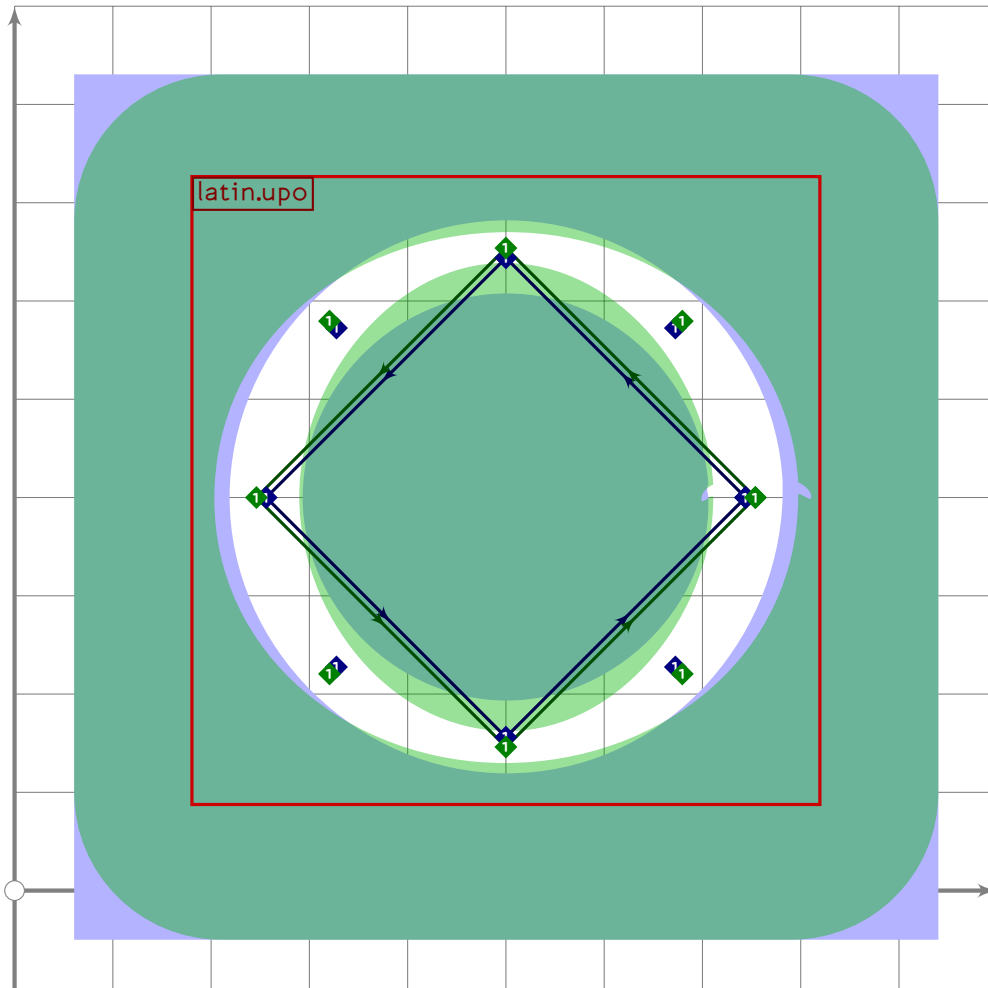
```

528 % N
529 % BACKGROUND F1712
530 begint Suglyph("u1F17D",125);
531   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upn);
532   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
533   tsu_render;
534 endtsuglyph;
535

```

U+1F17E
tsuku.u1F17E

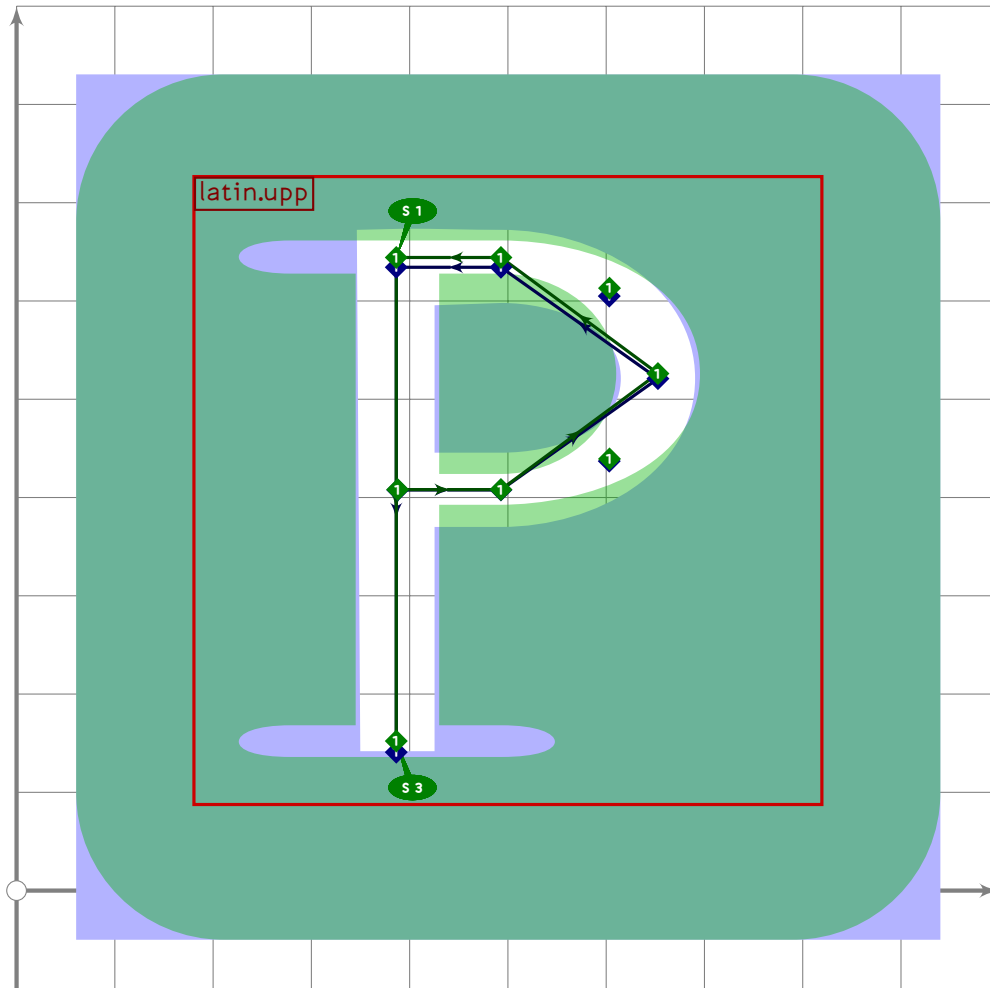
1F1



```

536 % O
537 % BACKGROUND F1712
538 begintsuglyph("u1F17E",126);
539   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upo);
540   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
541   tsu_render;
542 endtsuglyph;
543

```



1F1

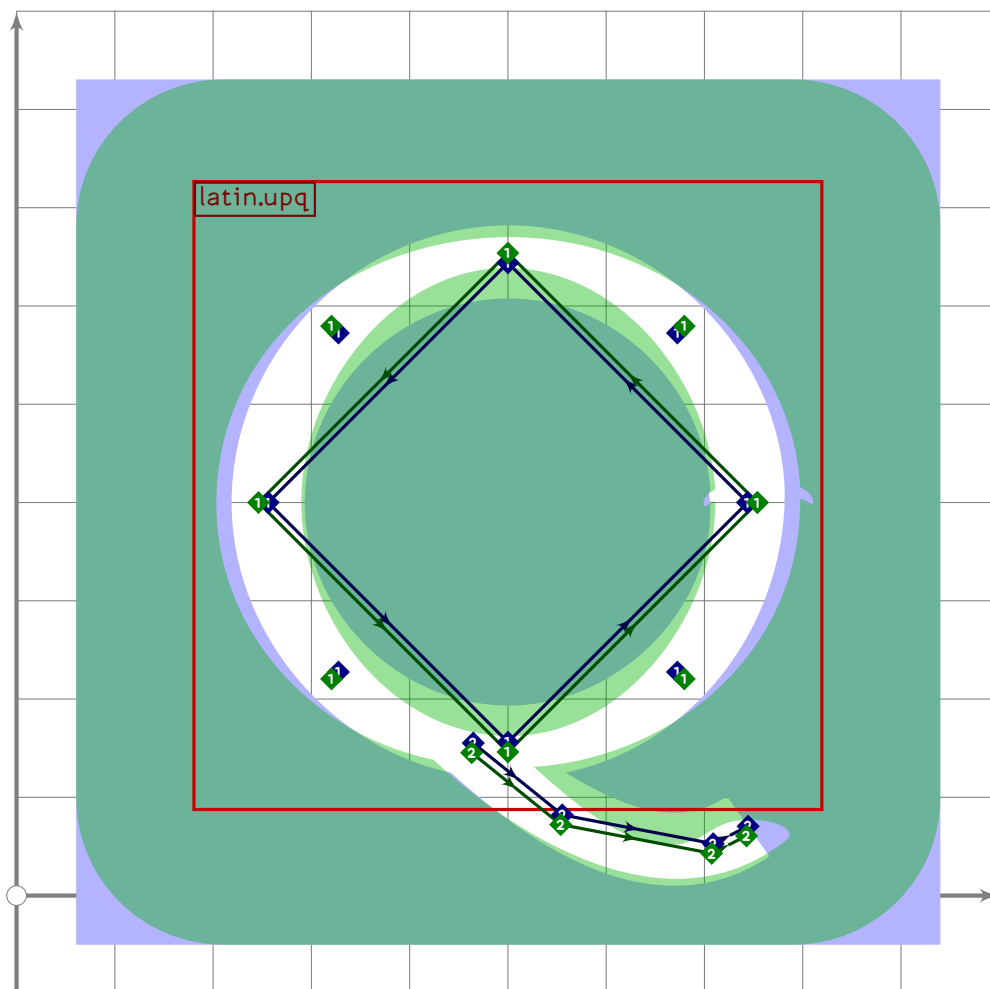
```

544 % P
545 % BACKGROUND F1712
546 begint Suglyph("u1F17F",127);
547 tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upp);
548 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
549 tsu_render;
550 endtsuglyph;
551

```

U+1F180
tsuku.u1F180

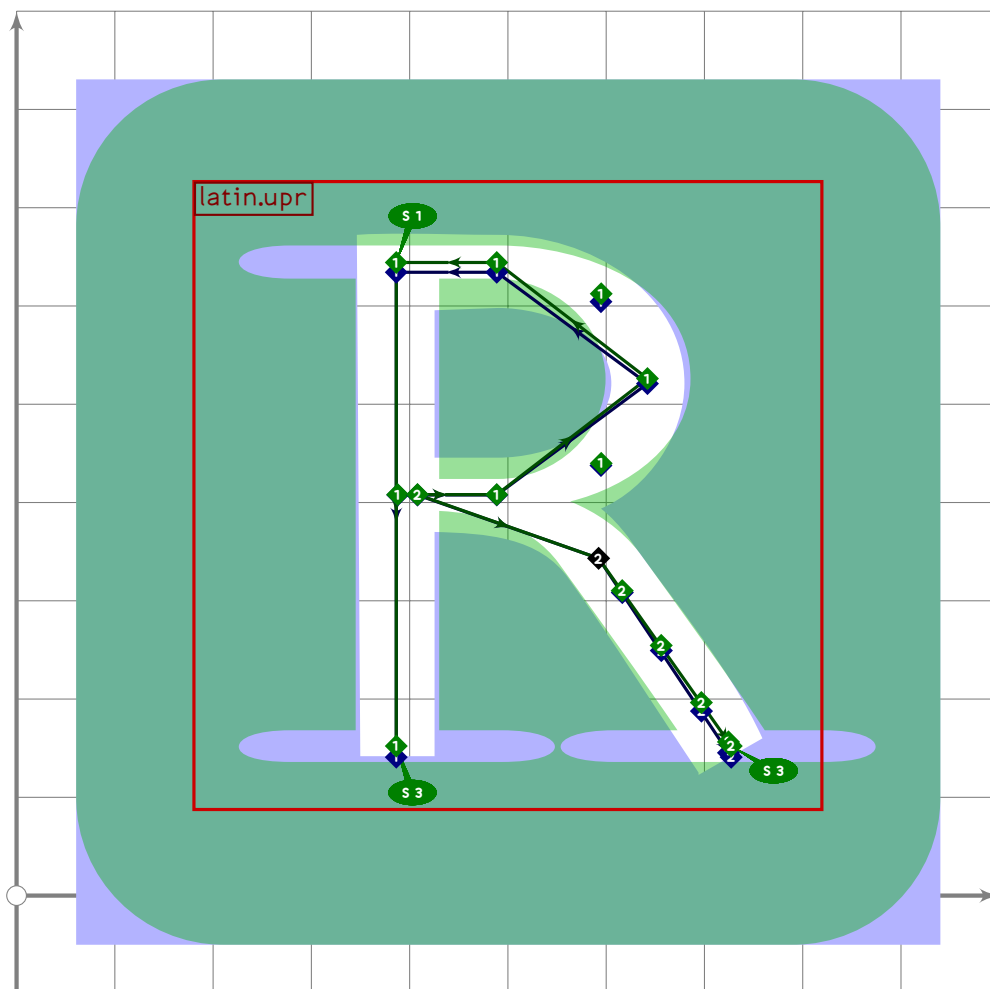
1F1



```

552 % Q
553 % BACKGROUND F1712
554 begint Suglyph("u1F180",128);
555   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upq);
556   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
557   tsu_render;
558 endtsuglyph;
559

```



1F1

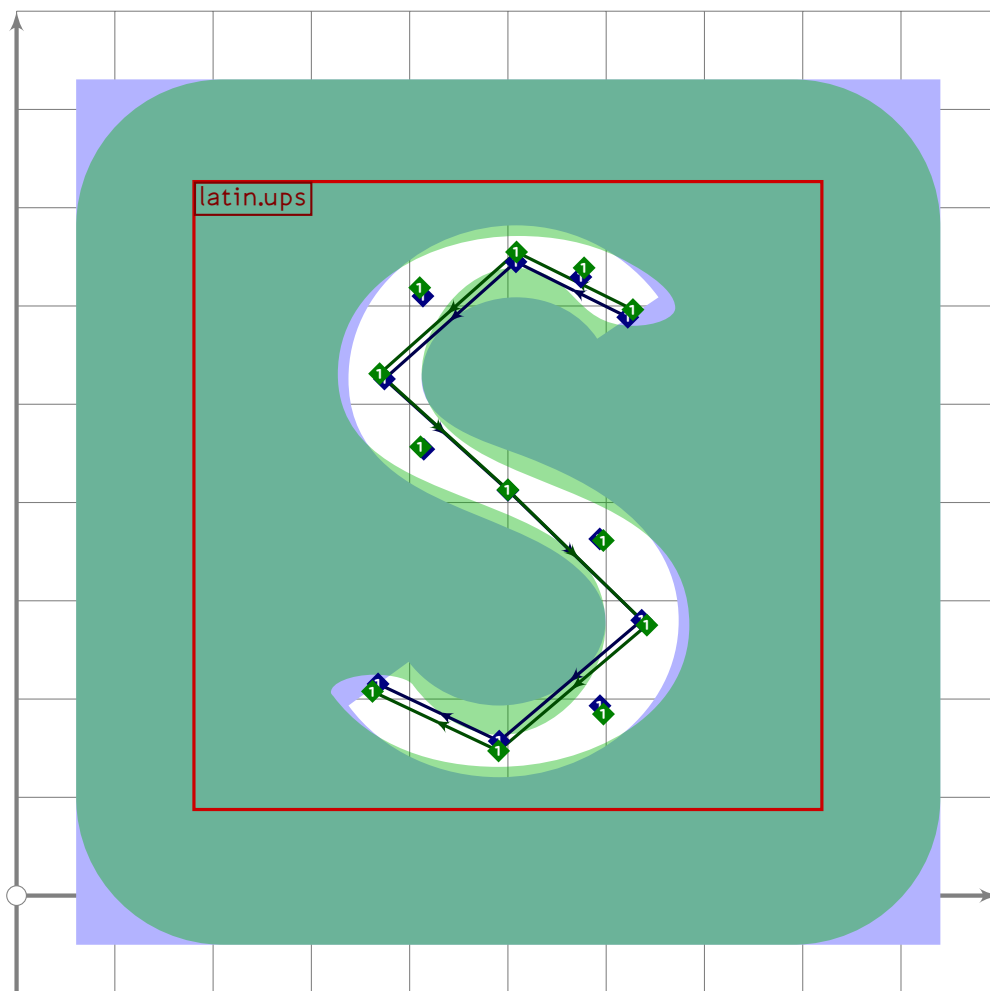
```

560 % R
561 % BACKGROUND F1712
562 begint Suglyph("u1F181",129);
563   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upr);
564   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
565   tsu_render;
566 endtsuglyph;
567

```

U+1F182
tsuku.u1F182

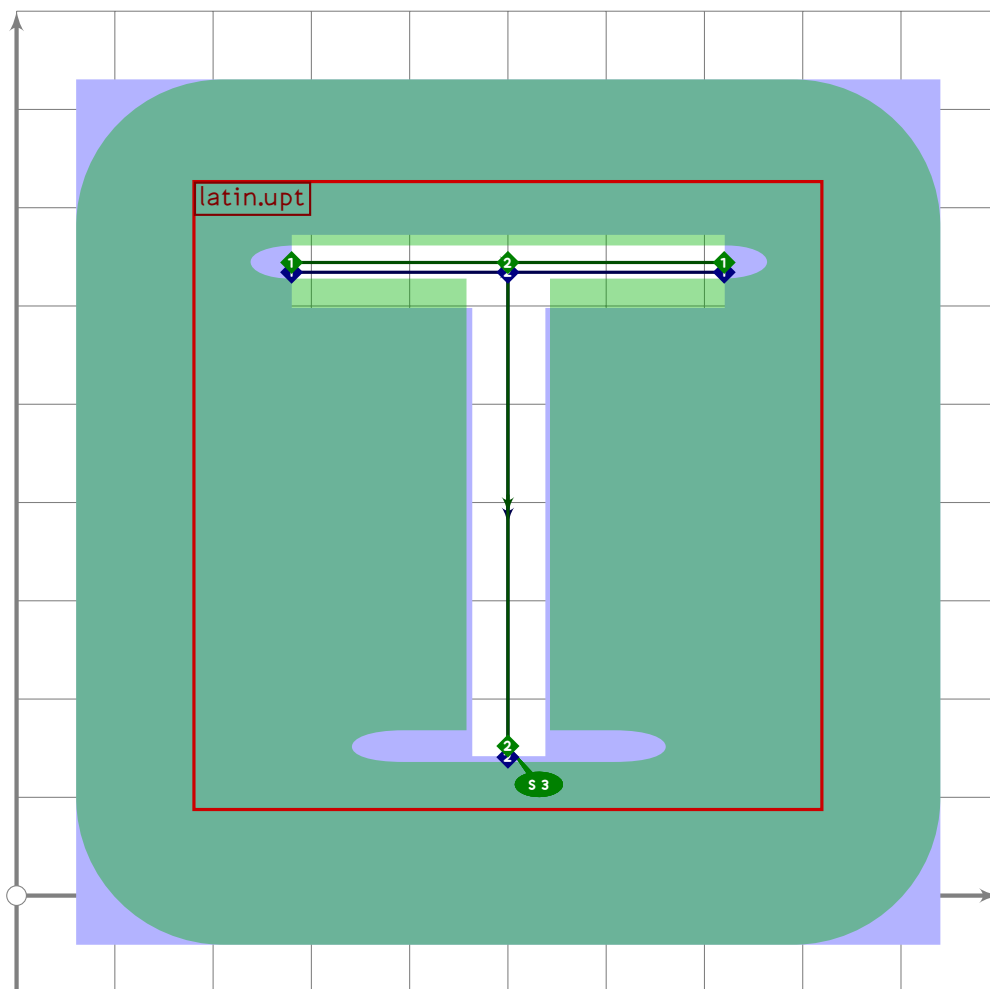
1F1



```

568 % S
569 % BACKGROUND F1712
570 begint Suglyph("u1F182",130);
571   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.ups);
572   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
573   tsu_render;
574 endtsuglyph;
575

```

1F1

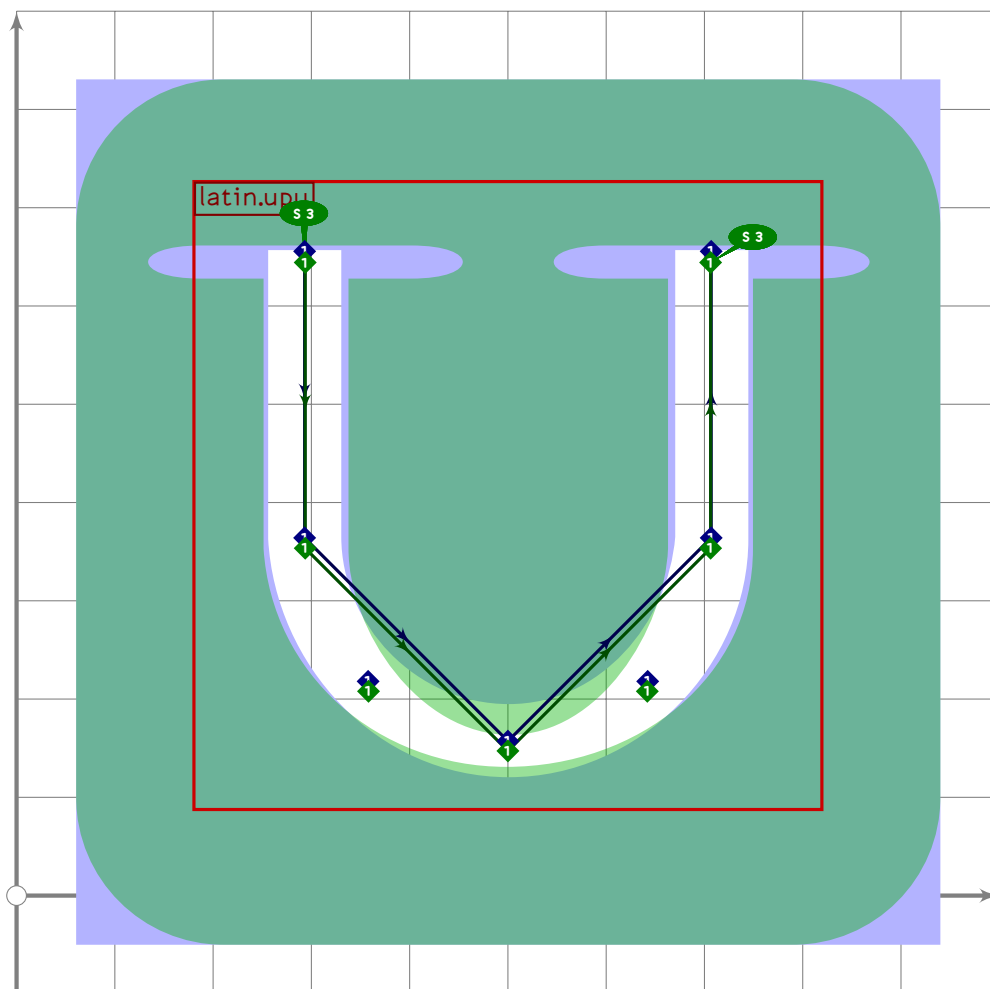
```

576 % T
577 % BACKGROUND F1712
578 begintsuglyph("u1F183",131);
579   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upt);
580   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
581   tsu_render;
582 endtsuglyph;
583

```

U+1F184
tsuku.u1F184

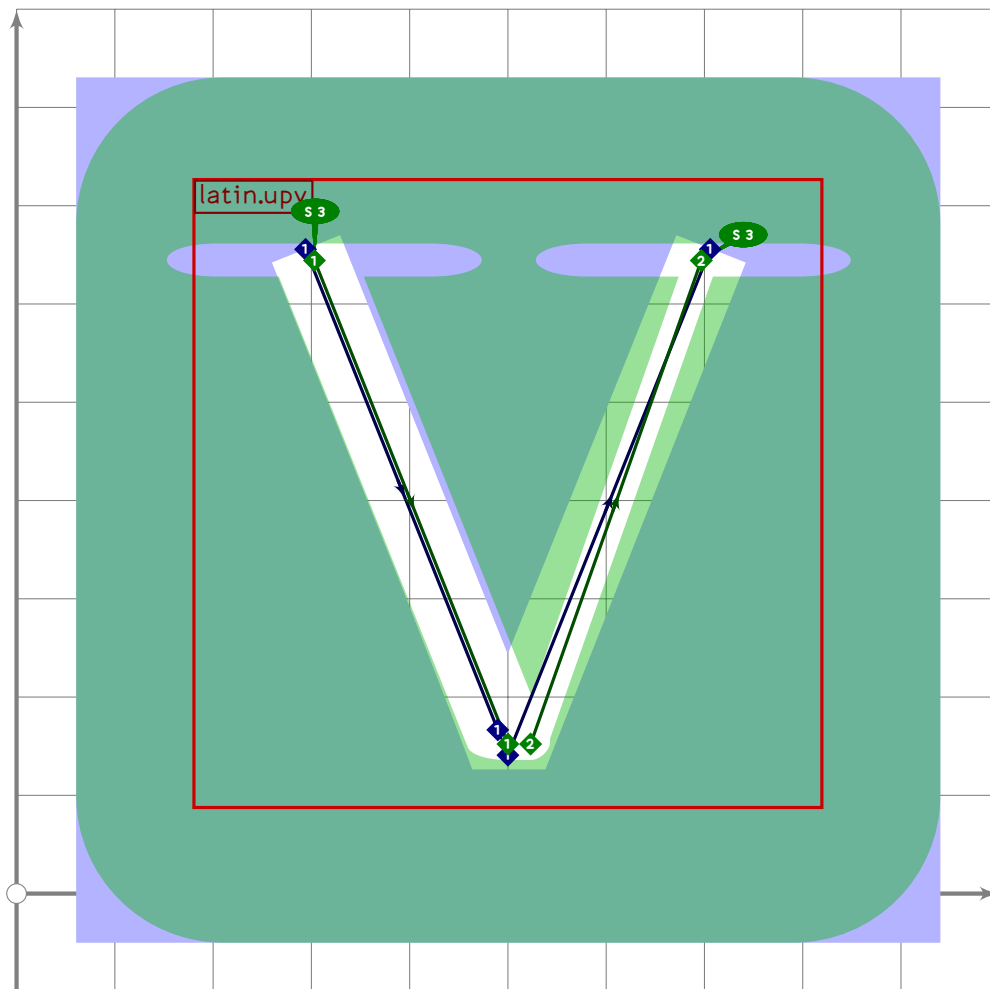
1F1



```

584 % U
585 % BACKGROUND F1712
586 begint Suglyph("u1F184",132);
587 tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upu);
588 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
589 tsu_render;
590 endtsuglyph;
591

```



1F1

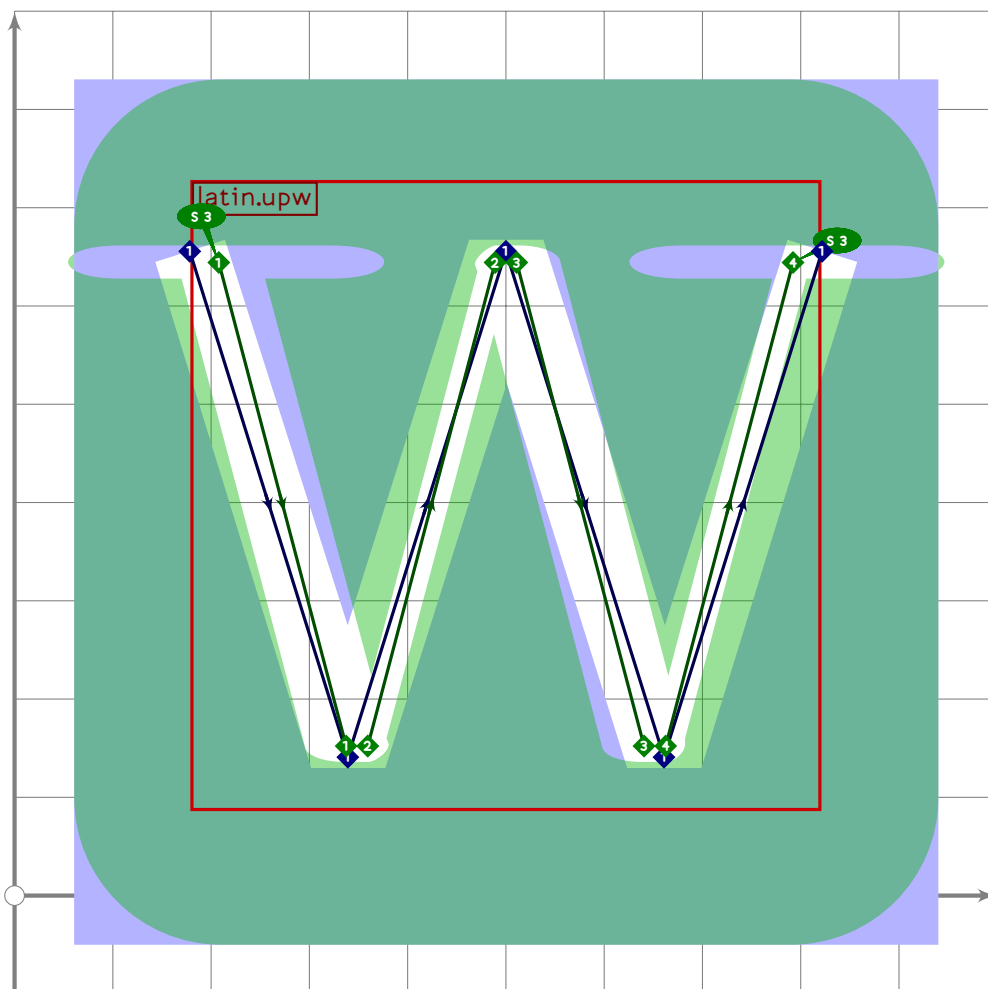
```

592 % V
593 % BACKGROUND F1712
594 begint Suglyph("u1F185",133);
595   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upv);
596   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
597   tsu_render;
598 endtsuglyph;
599

```

U+1F186
tsuku.u1F186

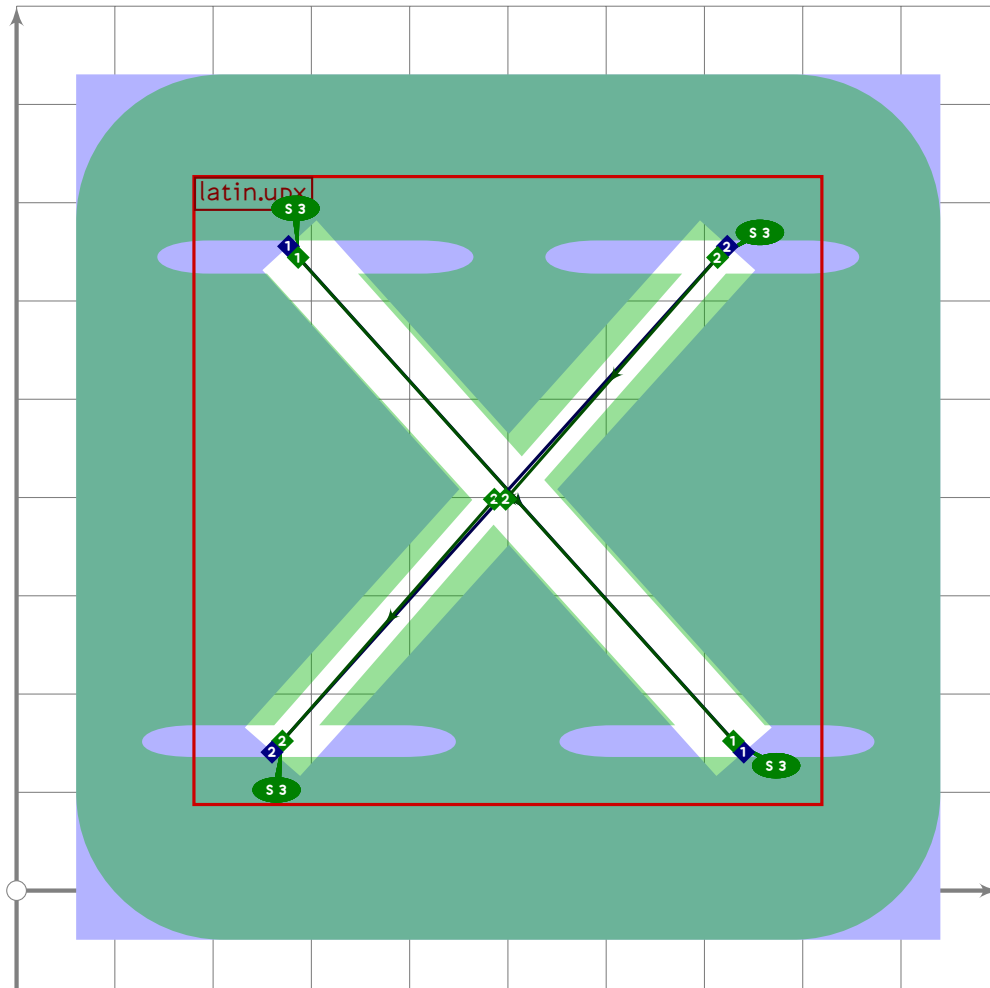
1F1



```

600 % W
601 % BACKGROUND F1712
602 begint Suglyph("u1F186",134);
603 if do_alteration:
604     tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift
605         shifted -centre_pt xscaled 0.95 shifted centre_pt)(latin.upw);
606 else:
607     tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upw);
608 fi;
609 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
610 tsu_render;
611 endtsuglyph;
612

```



1F1

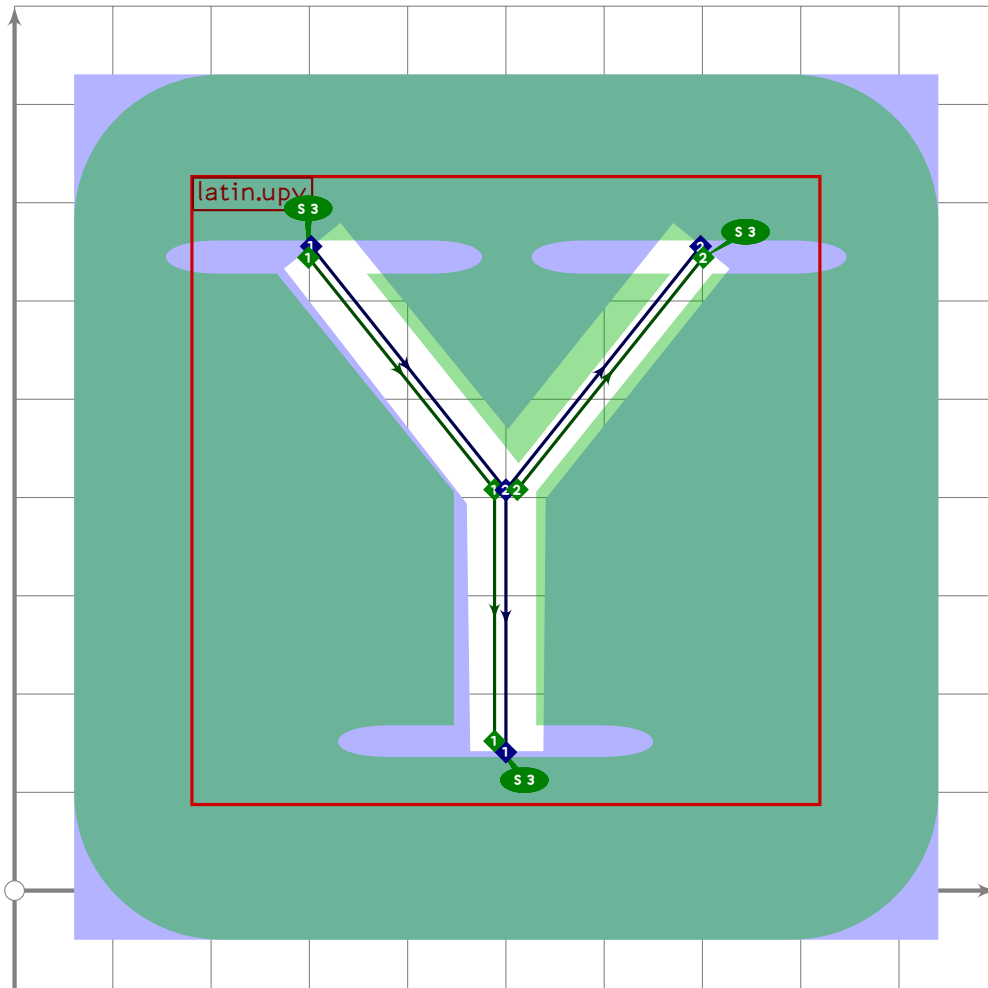
```

613 % X
614 % BACKGROUND F1712
615 begintsuglyph("u1F187",135);
616   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upx);
617   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
618   tsu_render;
619 endtsuglyph;
620

```

U+1F188
tsuku.u1F188

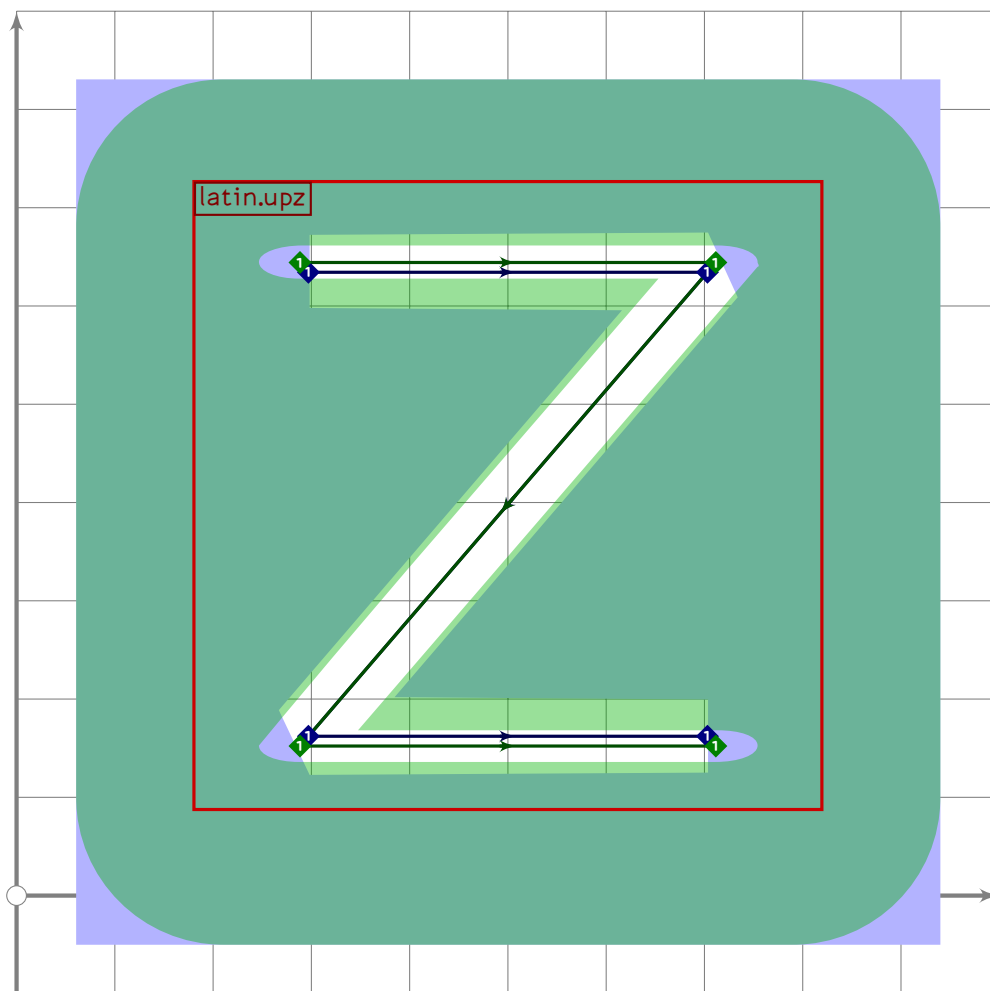
1F1



```

621 % Y
622 % BACKGROUND F1712
623 begintsuglyph("u1F188",136);
624   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upy);
625   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
626   tsu_render;
627 endtsuglyph;
628

```



1F1

```

629 % Z
630 % BACKGROUND F1712
631 begint Suglyph("u1F189",137);
632   tsu_xform(tsu_xf.sletter shifted tsu_xf.circ_slant_shift)(latin.upz);
633   i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,107); i:=i-1; endfor;
634   tsu_render;
635 endtsuglyph;
636
637
638
639 endfont;
640
641

```

tsuku-200.mp

```
1 %
2 % Unicode page 200 (Kanji) for Tsukurimashou
3 % Copyright (C) 2012, 2013 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 input rare.mp;
39
40 do_late_includes;
41
42 

---


43
44 % "branch"
45 begintsuglyph("u200A2",162); [see page 804]
46   kanji.rare.branch;
47   tsu_render;
48 endtsuglyph;
49
50 % dui "mound"
51 begintsuglyph("u200A4",164); [see page 827]
52   kanji.rare.mound;
53   tsu_render;
54 endtsuglyph;
55
56 

---


57
58 endfont;
59
60 

---


```


tsuku-20a.mp

```
1 %
2 % Unicode page 20A (Kanji) for Tsukurimashou
3 % Copyright (C) 2013 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 rare.mp;
41
42 do_late_includes;
43
44 _____
45
46 % neede for grfour.history
47 begintsuglyph("u20A75";117);
48   kanji.rare.history_inside;
49   tsu_render;
50 endtsuglyph;
51
52 _____
53
54 endfont;
55
56 _____
```

[see page 820]

20A

tsuku-21c.mp

```
1 %
2 % Unicode page 21C (Kanji) for Tsukurimashou
3 % Copyright (C) 2012 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 radical.mp;
39 input rare.mp;
40
41 do_late_includes;
42
43 

---


44
45 % "ancient form of 'pig' radical" needed for grfour.print
46 begint Suglyph("u21C2F";47); [see page 798]
47   kanji.rare.ancient_pig;
48   tsu_render;
49 endtsuglyph;
50
51 

---


52
53 endfont;
54
55 

---


```

tsuku-295.mp

```
1 %
2 % Unicode page 295 (Kanji) for Tsukurimashou
3 % Copyright (C) 2013 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 leftrad.mp;
41 input radical.mp;
42 input toprad.mp;
43
44 do_late_includes;
45
46 _____
47
48 % specifically Japanese/Vietnamese form of U+985E for languages in which
49 % the standard form looks like U+F9D0
50 begintsuglyph("u29516";22); [see page 617]
51   kanji.grfour.genus;
52   tsu_render;
53 endtsuglyph;
54
55 _____
56
57 endfont;
58
59 _____
```

tsuku-f17.mp

```
1 %
2 % Unicode page F17 (Tsukurimashou-specific extensions) for Tsukurimashou
3 % Copyright (C) 2011, 2012 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 genjimon.mp;
42 input gradeone.mp;
43 input iching.mp;
44 input katakana.mp;
45 input latin.mp;
46 input leftrad.mp;
47
48 do_late_includes;
49
50 

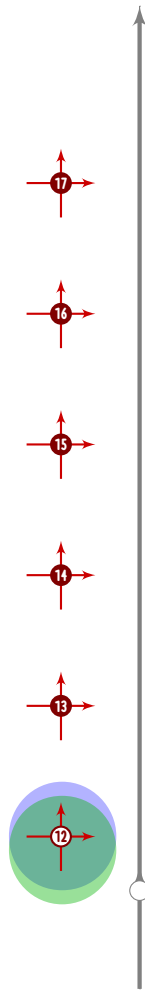
---


51
```

Combining Dots For I Ching

F17

```
52 % COMBINING DOTS FOR I CHING
53
54 % WARNING changing rescale setting
55 tsu_rescale_native_zero;
56
57 vardef make_iching_anchors(expr lnum,lmax) =
58   for i:=1 upto lmax:
59     push_anchor(if i=lnum: -1 else: 1 fi*anc_iching_line(i),
60       identity shifted (((1,i) transformed iching_xform)
61         +(1000-iching.size)*0.25*right+1000*left));
62   endfor;
63 enddef;
```

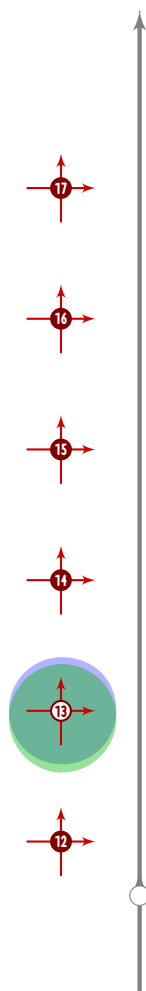


```

64
65 begint Suglyph("ichingdot1.6",1);
66   Fill iching.dot(1,6) shifted (-1000,0);
67   make_iching_anchors(1,6);
68   tsu_render;
69 endtsuglyph;

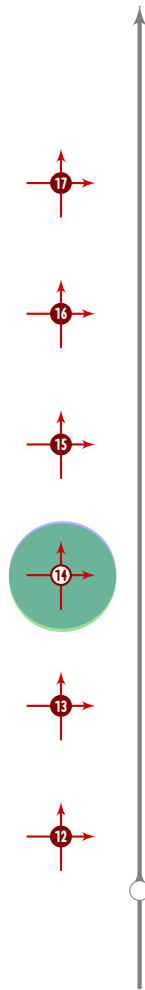
```

U+F1702
tsuku.ichingdot2.6



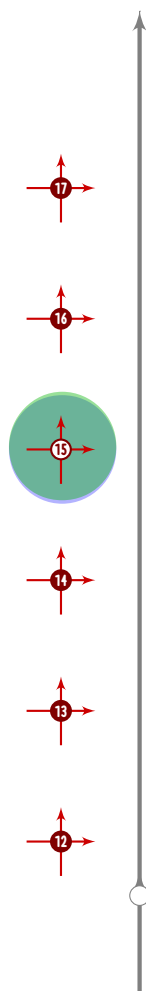
```
70
71 begint Suglyph("ichingdot2.6";2);
72   Fill iching.dot(2,6) shifted (-1000,0);
73   make_iching_anchors(2,6);
74   tsu_render;
75 endtsuglyph;
```

F17



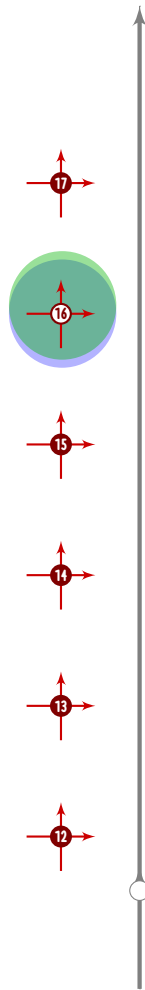
```
76
77 begintsuglyph("ichingdot3.6";3);
78   Fill iching.dot(3,6) shifted (-1000,0);
79   make_iching_anchors(3,6);
80   tsu_render;
81 endtsuglyph;
```

U+F1704
tsuku.ichingdot4.6



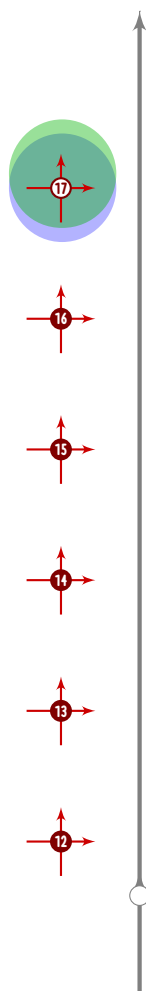
```
82
83 begint Suglyph("ichingdot4.6";4);
84   Fill iching.dot(4,6) shifted (-1000,0);
85   make_iching_anchors(4,6);
86   tsu_render;
87 endtsuglyph;
```

F17

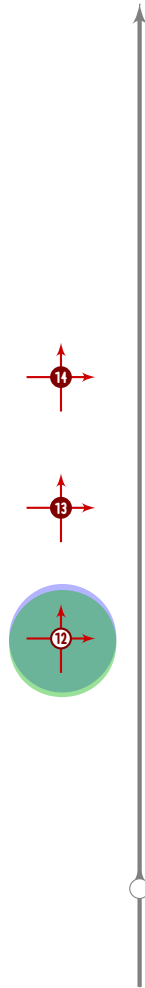


```
88
89 begintsuglyph("ichingdot5.6";5);
90   Fill iching.dot(5,6) shifted (-1000,0);
91   make_iching_anchors(5,6);
92   tsu_render;
93 endtsuglyph;
```

U+F1706
tsuku.ichingdot6.6

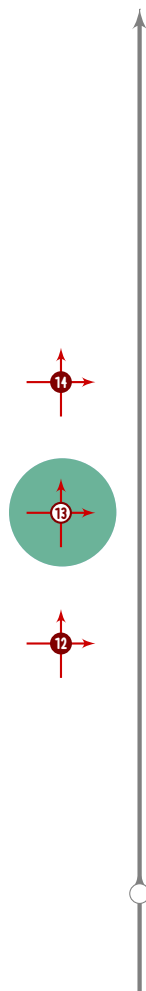


```
94  
95 begint Suglyph("ichingdot6.6",6);  
96   Fill iching.dot(6,6) shifted (-1000,0);  
97   make_iching_anchors(6,6);  
98   tsu_render;  
99 endtsuglyph;
```

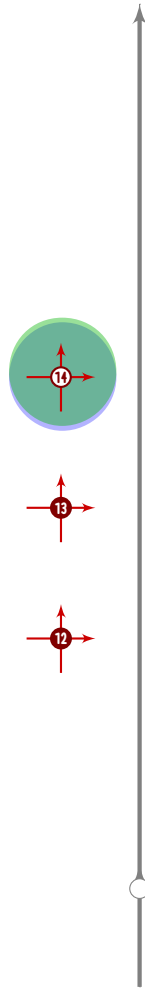


```
100
101 begintsuglyph("ichingdot1.3";7);
102   Fill iching.dot(1,3) shifted (-1000,0);
103   make_iching_anchors(1,3);
104   tsu_render;
105 endtsuglyph;
```

U+F1708
tsuku.ichingdot2.3



```
106
107 beginsuglyph("ichingdot2.3";8);
108   Fill iching.dot(2,3) shifted (-1000,0);
109   make_iching_anchors(2,3);
110   tsu_render;
111 endsuglyph;
```



```

112
113 begintsuglyph("ichingdot3.3";9);
114   Fill iching.dot(3,3) shifted (-1000,0);
115   make_iching_anchors(3,3);
116   tsu_render;
117 endtsuglyph;
118
119 % WARNING changing rescale setting
120 tsu_rescale_full;
121
122
123

```

F17

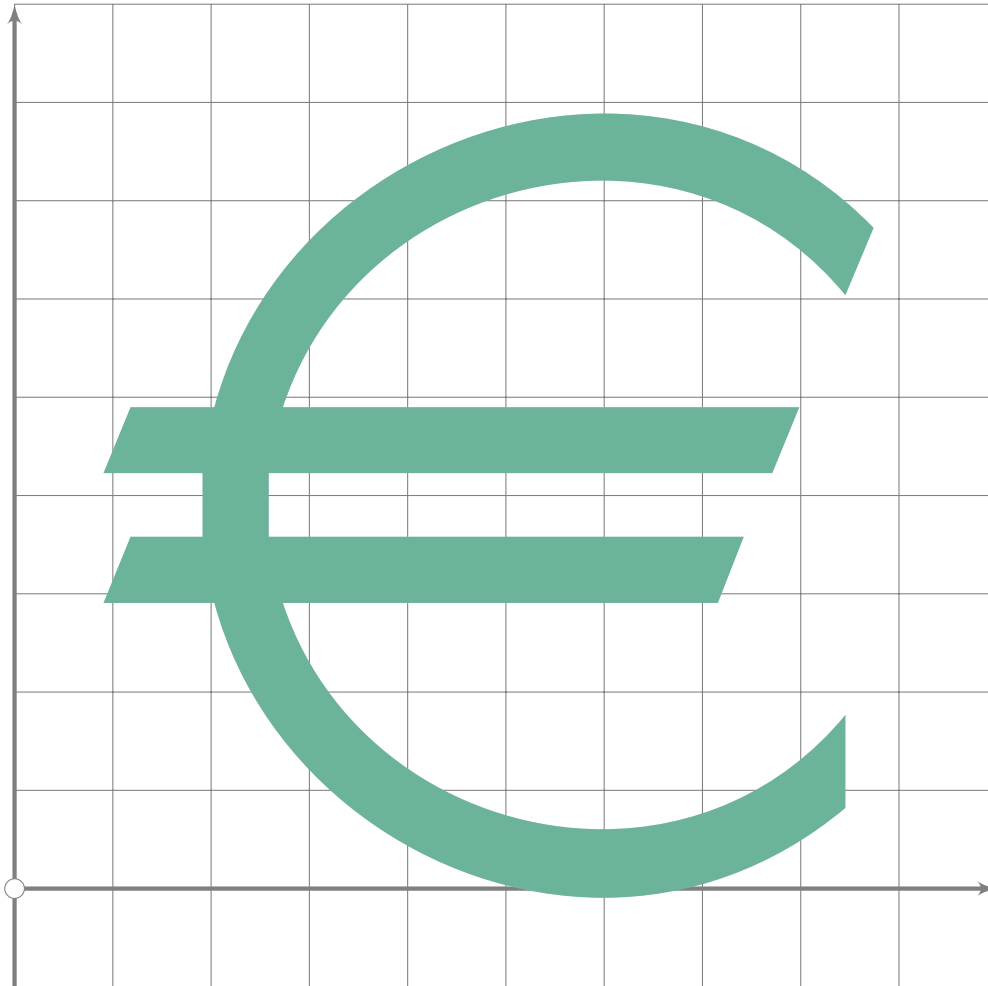
Miscellaneous

```

124 % MISCELLANEOUS
125
126 begingroup
127 save rescale_slant;
128 rescale_slant:=0;

```

U+F1710
tsuku.Euro.official



```

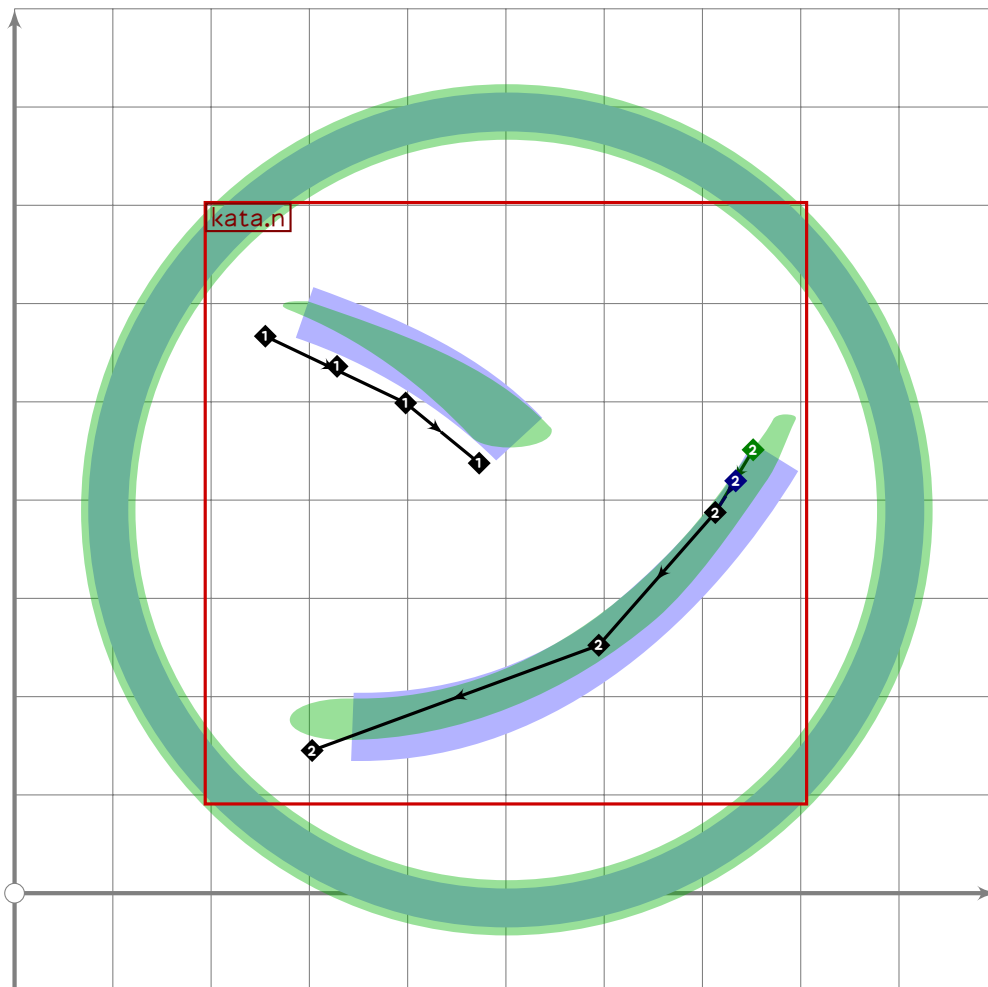
129
130 begintsuglyph("Euro.official",16);
131 z25=(fullcircle scaled 10) intersectionpoint ((0,0)-(10*dir 40));
132 z11=(0,-6);
133
134 z1=(0,6);
135 z2=(fullcircle scaled 12) intersectionpoint ((-10,1.5)-(0,1.5));
136 y3=y2;
137 z3-z4=whatever*(z25-z11);
138 z4=(-7.5,0.5);
139 z5=(fullcircle scaled 12) intersectionpoint ((-10,0.5)-(0,0.5));
140 z6=(-6,0);
141 z7=(fullcircle scaled 12) intersectionpoint ((-10,-0.5)-(0,-0.5));
142 y8=y7;
143 z8-z9=whatever*(z25-z11);
144 z9=(-7.5,-1.5);
145 z10=(fullcircle scaled 12) intersectionpoint ((-10,-1.5)-(0,-1.5));
146 z13=(fullcircle scaled 10) intersectionpoint ((0,0)-(10*dir 320));
147 z12=(fullcircle scaled 12) intersectionpoint (z13-(z13+(0,-3)));
148 z14=(0,-5);
149 z15=(fullcircle scaled 10) intersectionpoint ((-10,-1.5)-(0,-1.5));

```

```

150 y16=-1.5;
151 z16=whatever[z11,z25];
152 y17=-0.5;
153 z17=whatever[z11,z25];
154 z18=(fullcircle scaled 10) intersectionpoint ((-10,-0.5)-(0,-0.5));
155 z19=(-5,0);
156 z20=(fullcircle scaled 10) intersectionpoint ((-10,0.5)-(0,0.5));
157 y21=0.5;
158 z21=whatever[z11,z25];
159 y22=1.5;
160 z22=whatever[z11,z25];
161 z23=(fullcircle scaled 10) intersectionpoint ((-10,1.5)-(0,1.5));
162 z24=(0,5);
163 z26=(fullcircle scaled 12) intersectionpoint (z11-1.5[z11,z25]);
164 path euro;
165 euro=z1..z2-z3-z4-z5..z6..z7-z8-z9-z10..z11..z12-z13..
166 z14..z15-z16-z17-z18..z19..z20-z21-z22-z23..z24..z25-z26..cycle;
167 dangerousFill euro scaled (400/6) shifted (centre_pt+90*right);
168 endtsuglyph;
169

```

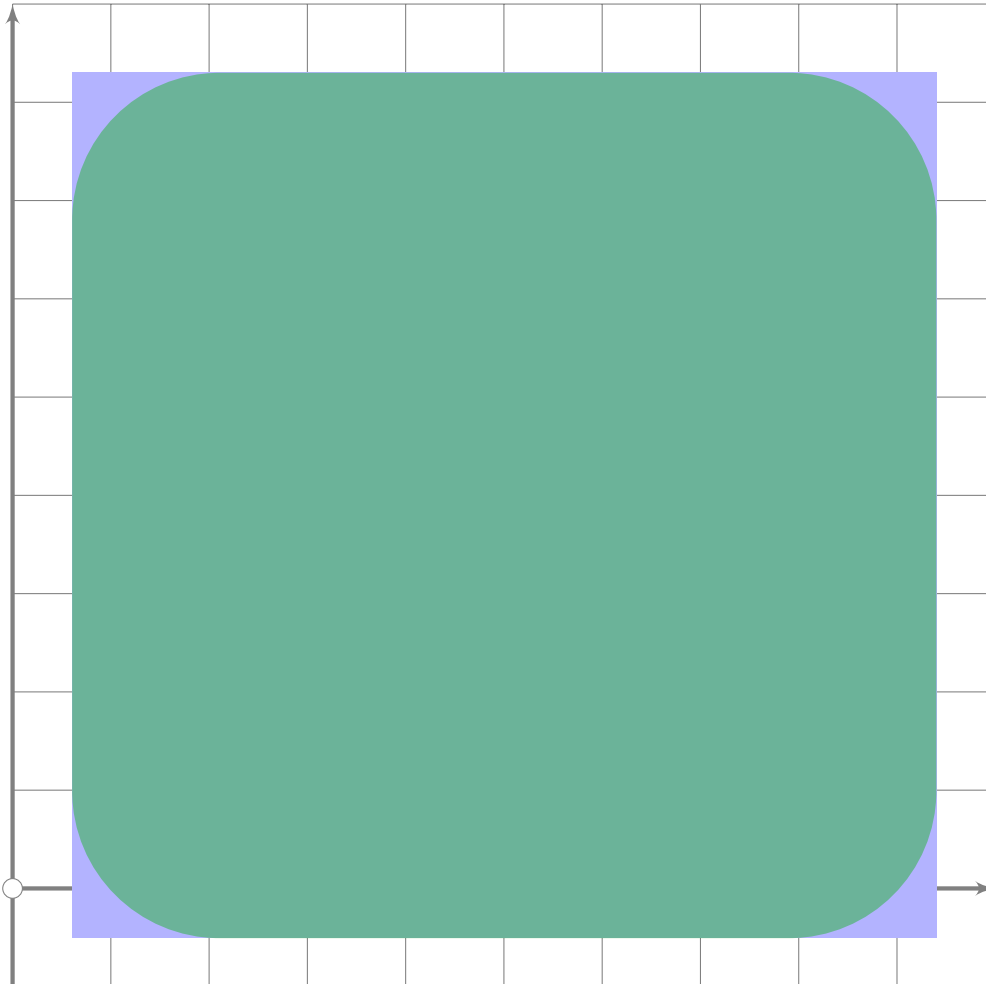


170 % circled "katakana n"

U+F1712

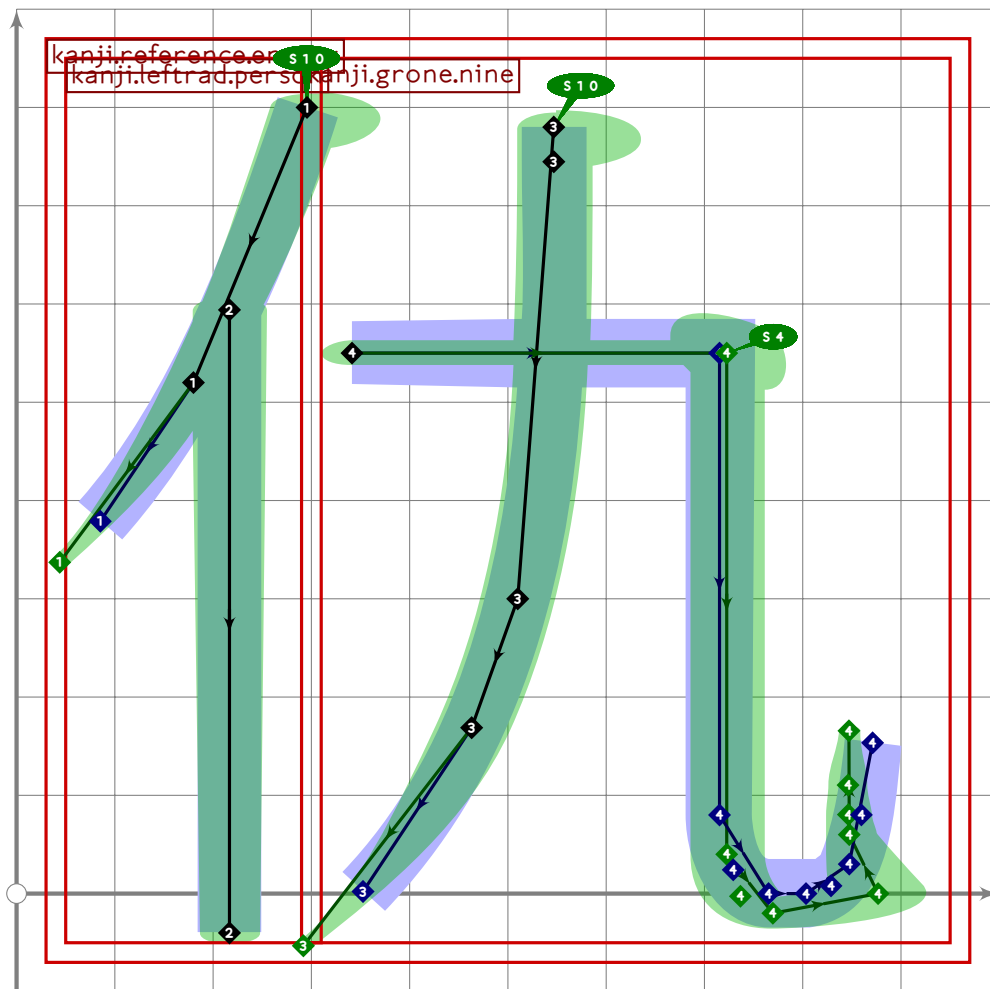
tsuku.squarebackground

```
171 begintsuglyph("uF1711",17);
172   circle.single;
173   tsu_xform(tsu_xf.circled)(kata.n);
174   tsu_render_in_circle(tsu_xf.cbound);
175 endsuglyph;
176
```



```
177 % background for use with enclosed alpha
178 begintsuglyph("squarebackground",18);
179   if sharp_corners:
180     dangerousFill (60,830)-(60,50)-(940,50)-(940,830)-cycle;
181   else:
182     path crnp;
183     crnp:=(60+1.5*tsu_punct_size,830){left}..
184       {down}(60,830-1.5*tsu_punct_size);
185     dangerousFill crnp-
186       (crnp rotatedaround (centre_pt,90))-
187       (crnp rotatedaround (centre_pt,180))-
188       (crnp rotatedaround (centre_pt,270))-cycle;
189   fi;
190 endsuglyph;
191
```

F17

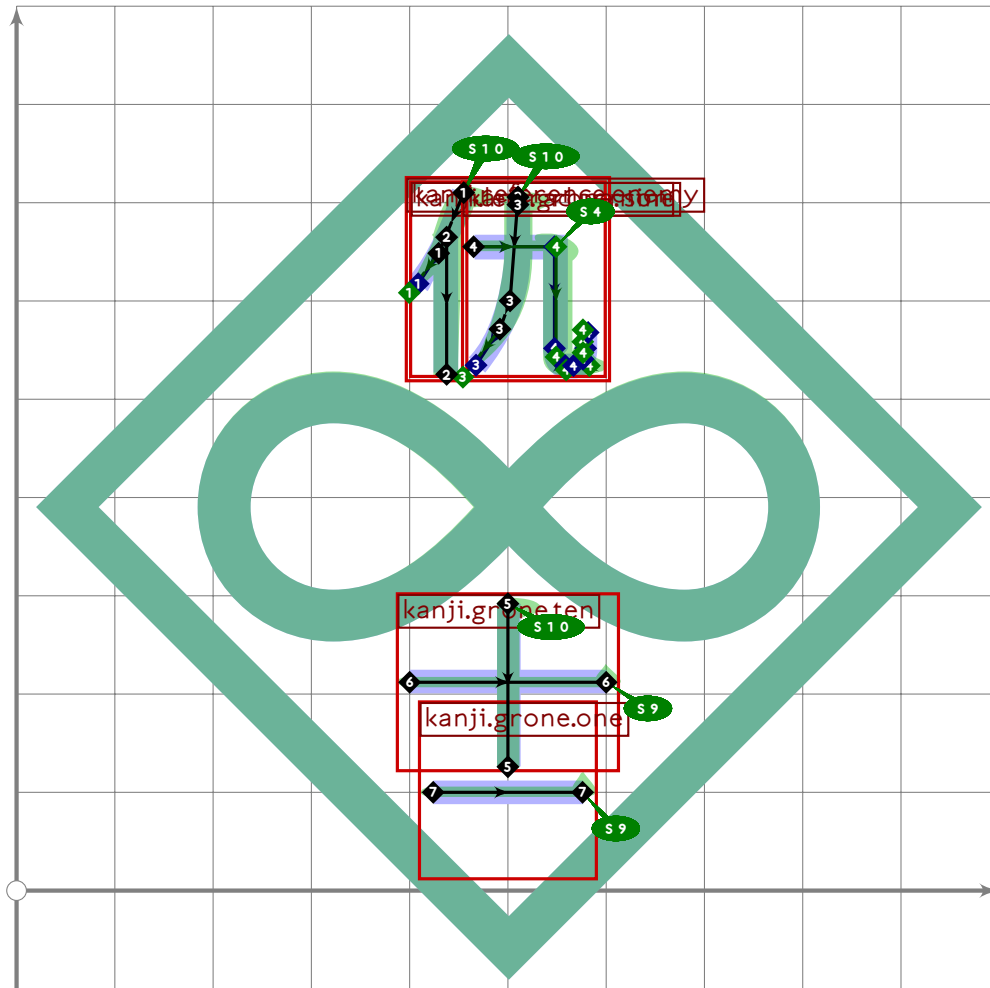


```

192 % Individual Eleven
193 vardef kanji.reference.enemy =
194   push_pbox_toexpand("kanji.reference.enemy");
195   build_kanji.lr(300,20)
196     (kanji.leftrad.person)
197     (kanji.grone.nine);
198   expand_pbox;
199 enddef;

```

U+F1713
tsuku.individueleven



```

200 beginsuglyph("individualeven",19);
201   numeric x[],y[];
202   z3=z7=centre_pt;
203   z3-z1=z5-z3;
204   z3-z2=z4-z3;
205   z3-z8=z6-z3;
206   y1=y3;
207   y2=y6;
208   x2=x8;
209   y2-y1=x2-x1;
210   x3-x1=290;
211   x2-x1=111;
212   save default_nib;
213   path default_nib;
214   path iepa,iepb;
215   default_nib:=fix_nib(53,53,0);
216   pen_stroke()(z1{up}..z2{right}..z3..z4{right}..{up}z5)(iepa);
217   dangerousFill iepa;
218   % do this in between the halves of the infinity, to work around a bug
219   dangerousFill unitsquare shifted (-0.5,-0.5) scaled 680
220   rotated 45 shifted centre_pt;

```

```

221 dangerousFill reverse unitsquare shifted (-0.5,-0.5) scaled 590
222   rotated 45 shifted centre_pt;
223 pen_stroke()(z5{up}..z6{left}..z7..z8{left}..{up}z1)(iepb);
224 dangerousFill iepb;
225 build_kanji.sscale(scaled 0.22 shifted (0,230))
226   (kanji.reference.enemy);
227 build_kanji.sscale(xyscaled (0.25,0.20) shifted (0,-180))
228   (kanji.grone.ten);
229 build_kanji.sscale(scaled 0.20 shifted (0,290))
230   (kanji.grone.one);
231 i:=0; forever: exitif find_stroke(i)<1; set_bosize(i,35); i:=i-1; endfor;
232 tsu_render;
233 endtsuglyph;
234
235
236

```

Tomoe Ornaments

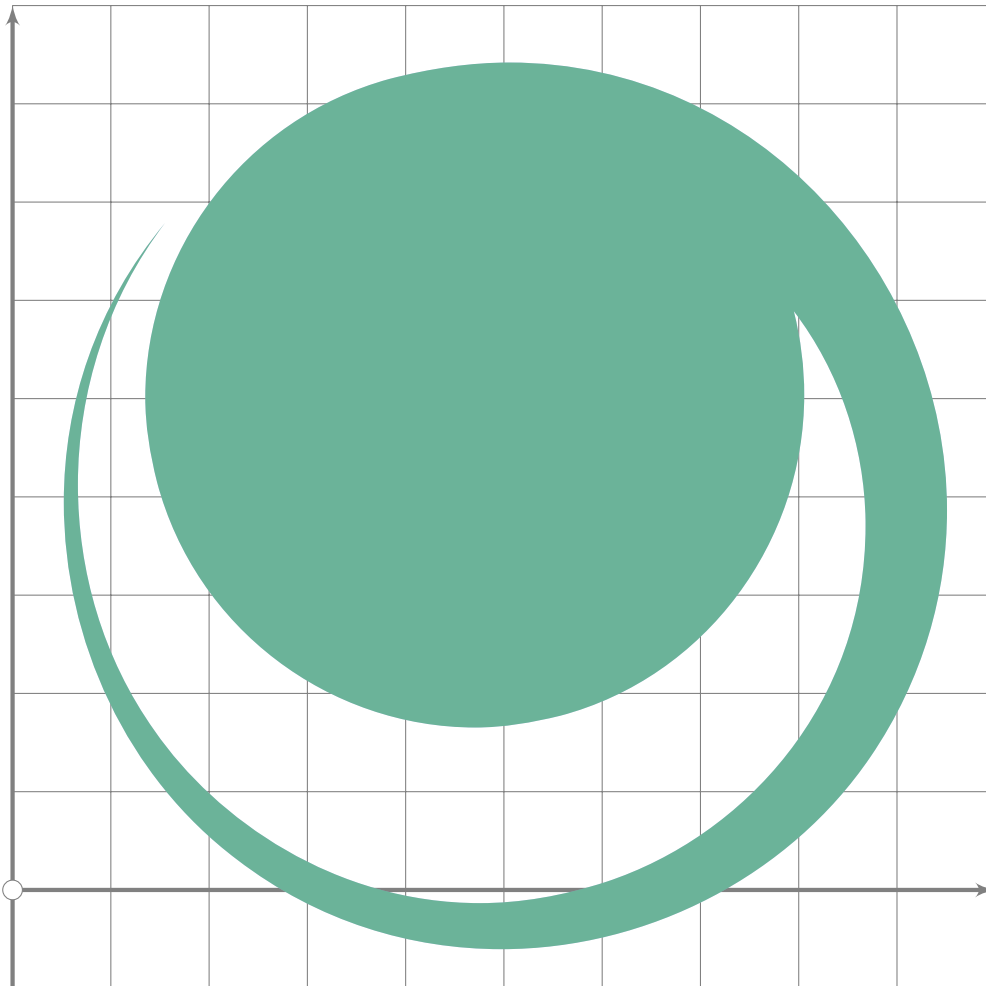
```

237 % TOMOE ORNAMENTS
238
239 vardef spiral_interpolate(expr start_cart,end_cart,ckpts,loops) =
240   begingroup
241     pair start_pol,end_pol,inter_pol;
242
243     start_pol:=(abs(start_cart),angle(start_cart));
244     end_pol:=(abs(end_cart),angle(end_cart));
245     if (ypart start_pol)-(ypart end_pol)>180:
246       start_pol:=start_pol+(0,360);
247     fi;
248     if (ypart end_pol)-(ypart start_pol)>180:
249       end_pol:=end_pol+(0,360);
250     fi;
251     end_pol:=end_pol+(0,360*loops);
252     for i=1 upto ckpts:
253       begingroup
254         inter_pol:=(i/(ckpts+1))[start_pol,end_pol];
255         ((dir ypart inter_pol)*xpart inter_pol)
256       endgroup
257     if i<ckpts: .. fi
258   endfor
259 endgroup
260 enddef;
261
262 vardef make_tomoe(expr k,ir,or,hr,phase,
263   tail_start,tail_advance,ckpts,do_flip) =
264   begingroup
265     path tomoe;

```

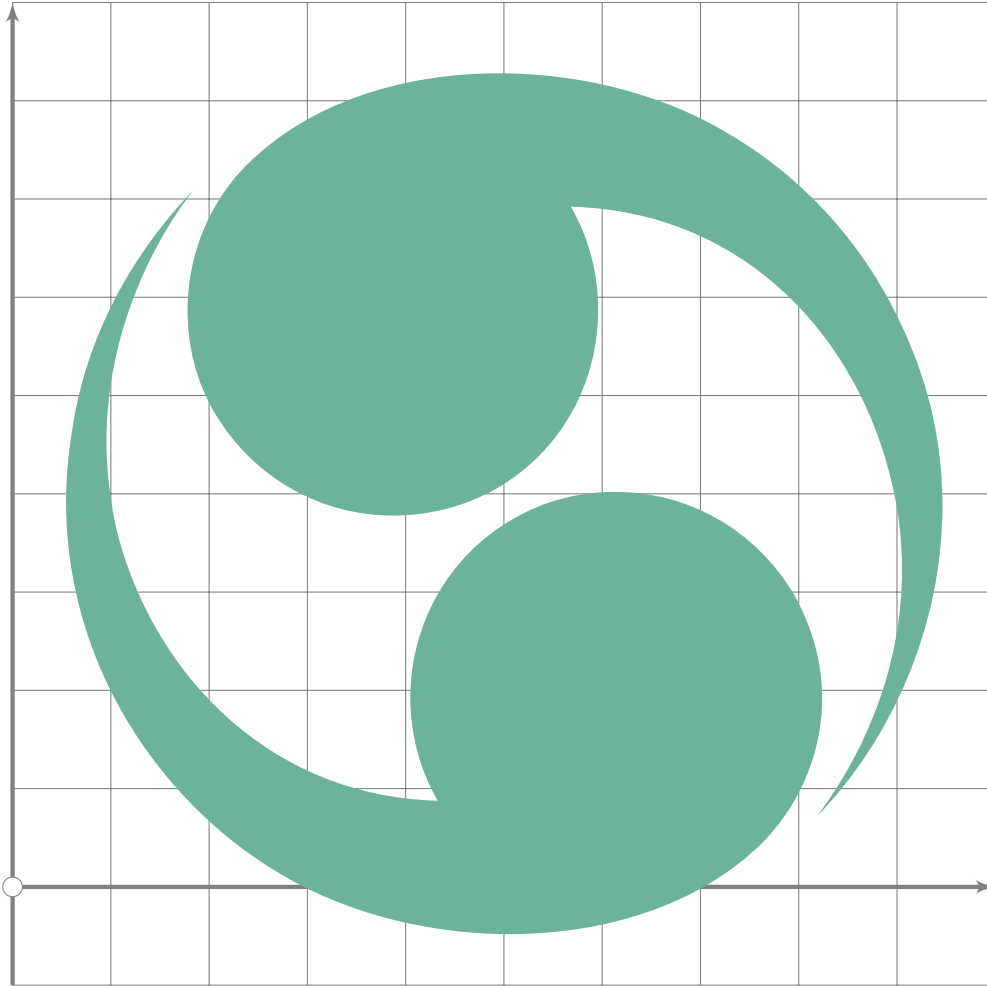
U+F1731
tsuku.tomoe1

```
266 pair tail_tip;
267
268 loops:=if k=1: 1 else: 0 fi;
269 tail_tip:=(dir (tail_advance-360/k))*or;
270 tomoe:=(subpath (tail_start/90,3) of (right..up..left..down..cycle))
271   scaled hr shifted (ir+hr,0);
272 tomoe:=tomoe{curl 1}..
273   spiral_interpolate(point infinity of tomoe,tail_tip,ckpts,-loops)..
274   {curl 1}tail_tip{curl 1}..
275   spiral_interpolate(tail_tip,point 0 of tomoe,ckpts,loops)..cycle;
276
277 if do_flip: tomoe:=tomoe xscaled -1; fi;
278
279 for i=1 upto k:
280   dangerousFill tomoe rotated (phase+i*360/k) shifted centre_pt;
281   endfor;
282 endgroup;
283 enddef;
284
```



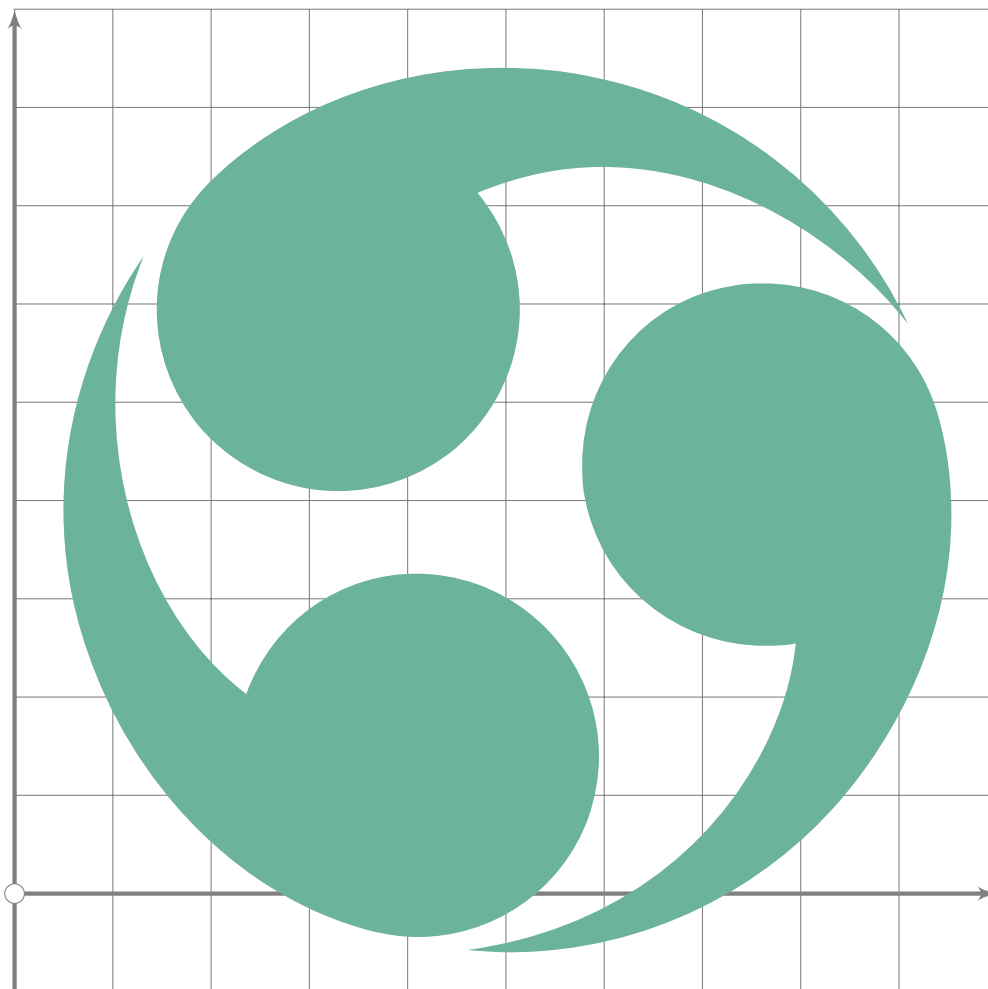
```
285 % hitotsudomoe ornament
286 begintsuglyph("tomoe1",49);
```

```
287  make_tomoe(1,-219450,335,105,0,35,6,false);  
288  endtsuglyph;  
289
```

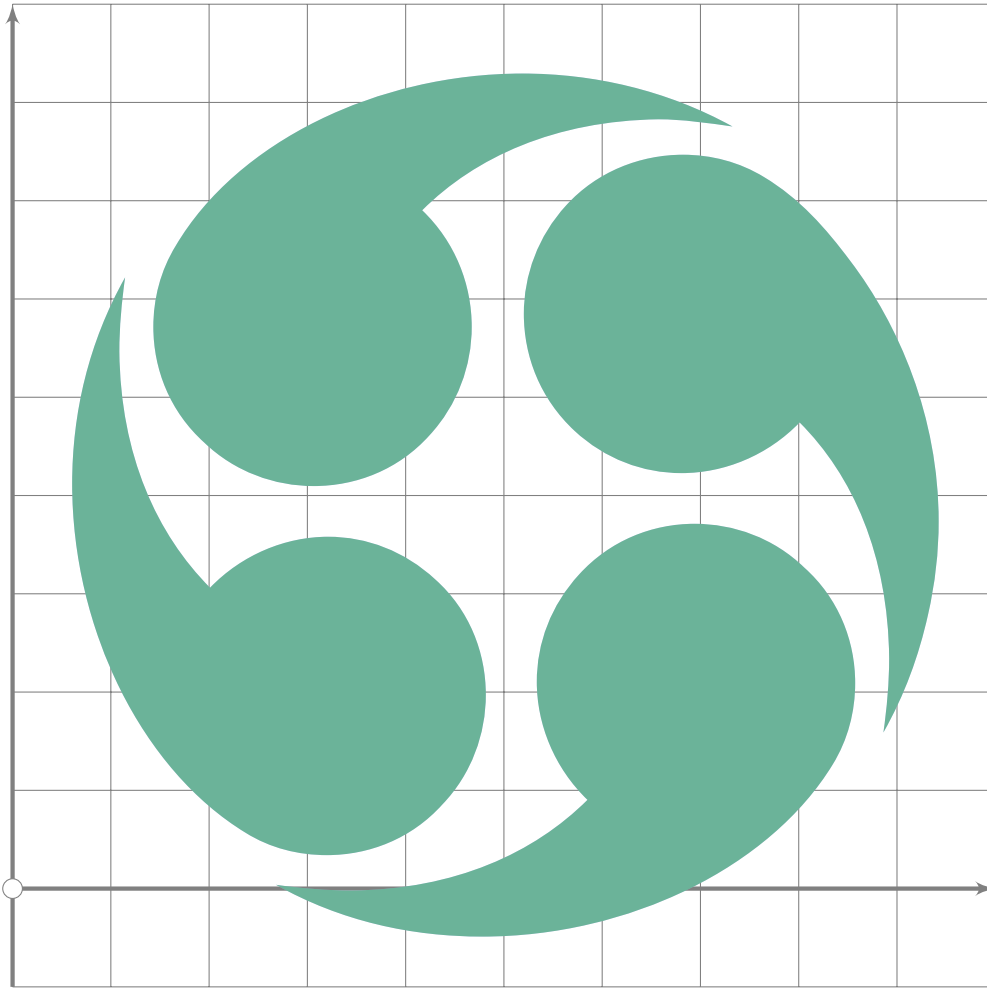


```
290 % futatsudomoe ornament  
291 begint Suglyph("tomoe2",50);  
292  make_tomoe(2,17450,210,120,15,154,false);  
293 endtsuglyph;  
294
```

U+F1733
tsuku.tomoe3

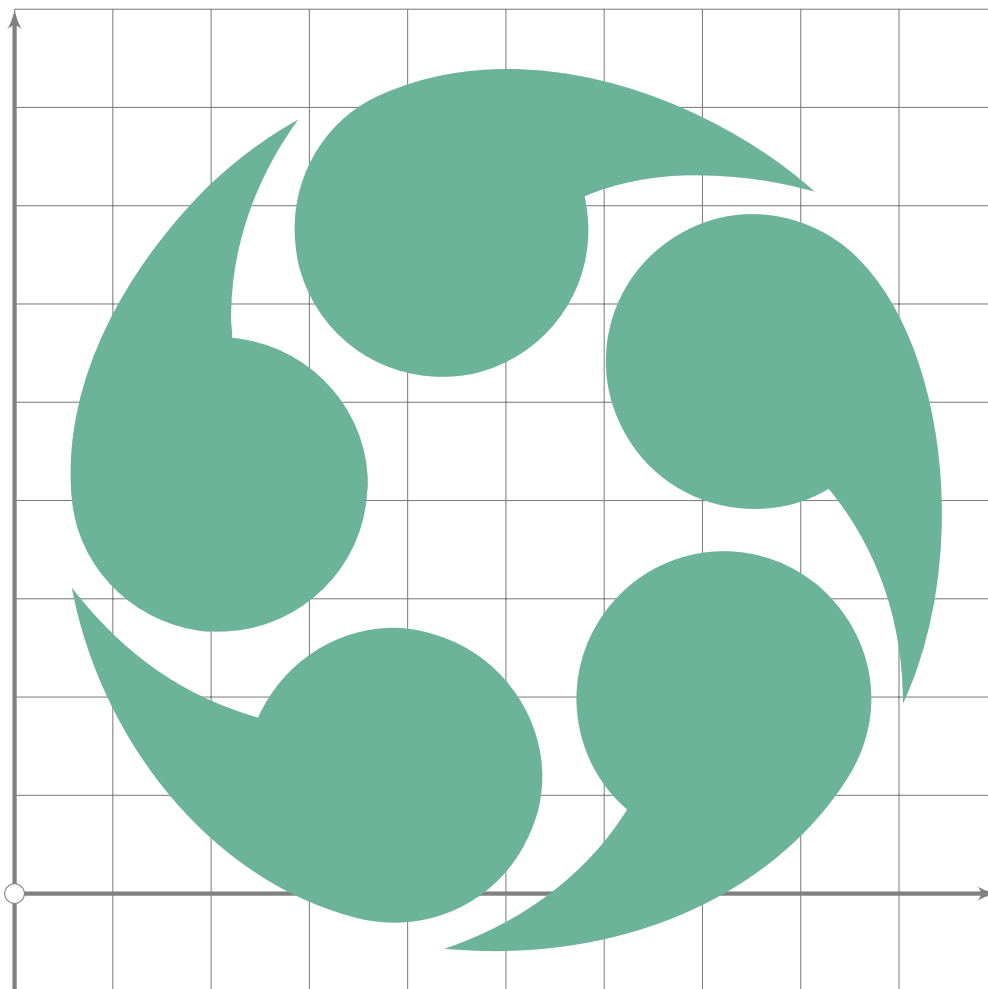


```
295 % mitsudomoe ornament
296 begintsuglyph("tomoe3",51);
297   make_tomoe(3,81,450,185,130,5,15,3,false);
298 endtsuglyph;
299
```

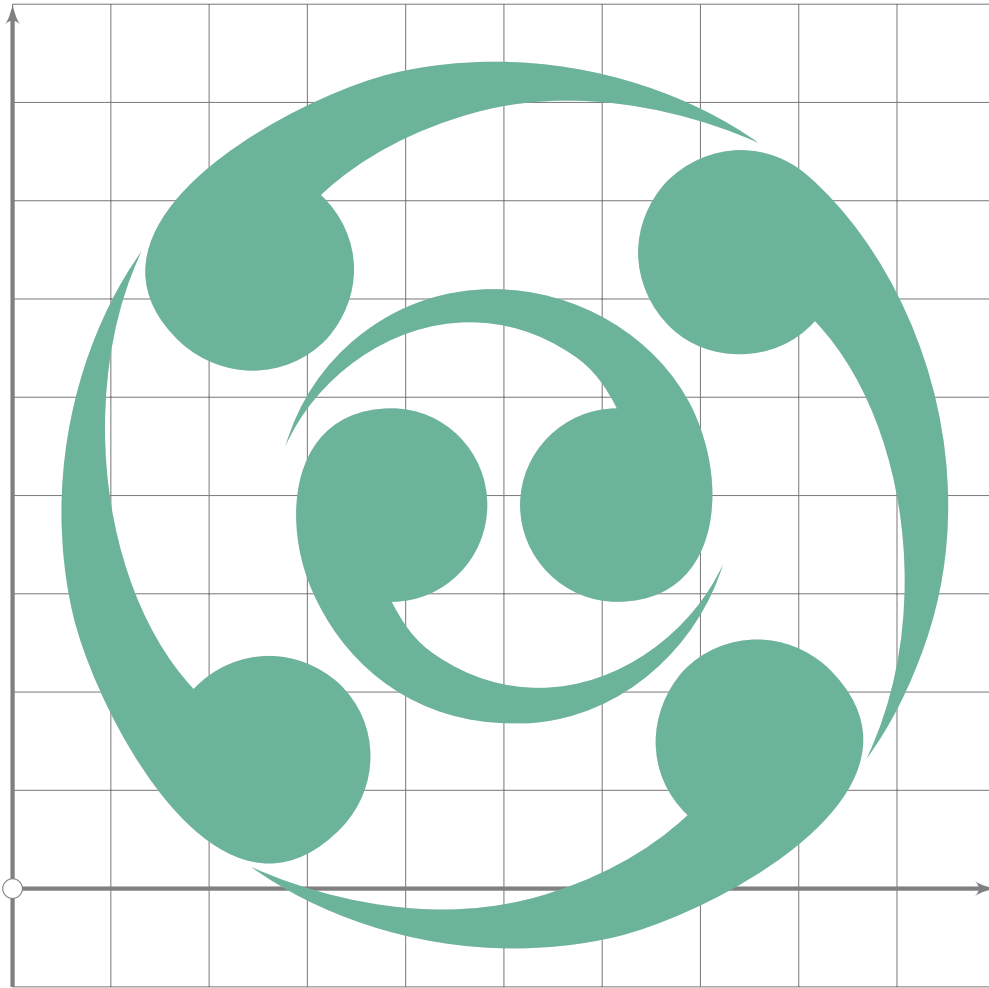


```
300 % yotsudomoe ornament
301 beginsuglyph("tomoe4",52);
302   make_tomoe(4,104,450,162,47,12,12,4,false);
303 endsuglyph;
304
```

U+F1735
tsuku.tomoe5

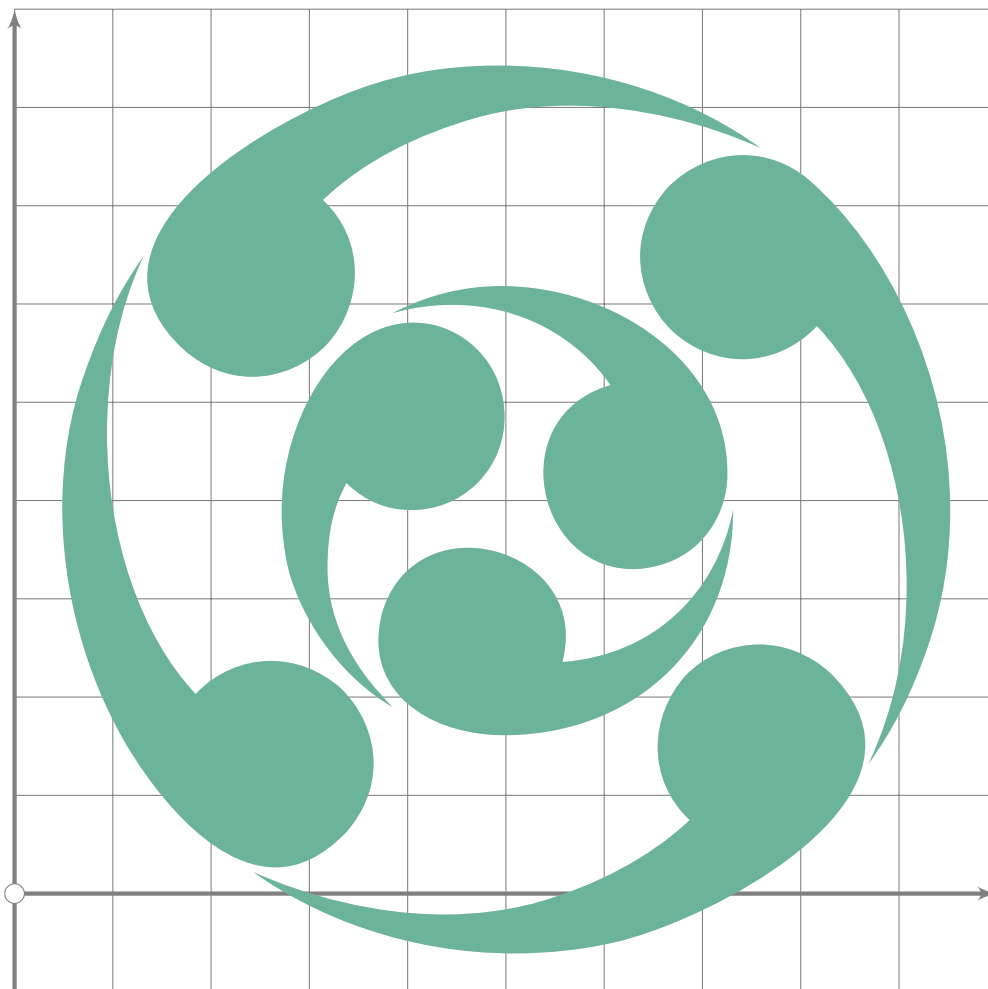


```
305 % 5-tsudomoe ornament
306 beginsuglyph("tomoe5",53);
307   make_tomoe(5,143,450,150,31,10,15,3,false);
308 endtsuglyph;
309
```

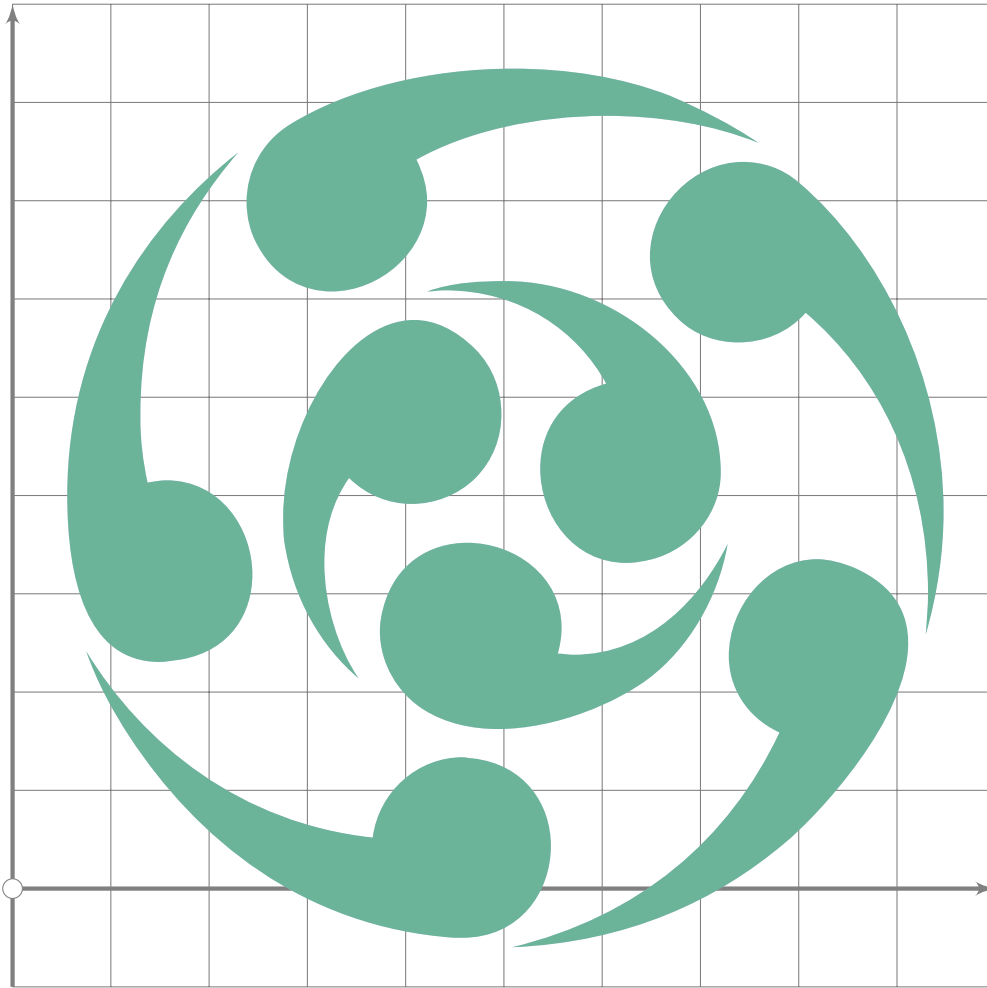



```
310 % 6-tsudomoe ornament
311 begintsuglyph("tomoe6",54);
312   make_tomoe(4,248,450,104,47,2,8,4,false);
313   make_tomoe(2,17,231,98,0,15,15,4,true);
314 endsuglyph;
315
```

U+F1737
tsuku.tomoe7



```
316 % 7-tsudomoe ornament
317 beginsuglyph("tomoe7",55);
318   make_tomoe(4,248,450,104,47,2,8,4,false);
319   make_tomoe(3,40,231,95,75,15,15,4,true);
320 endsuglyph;
321
```



```

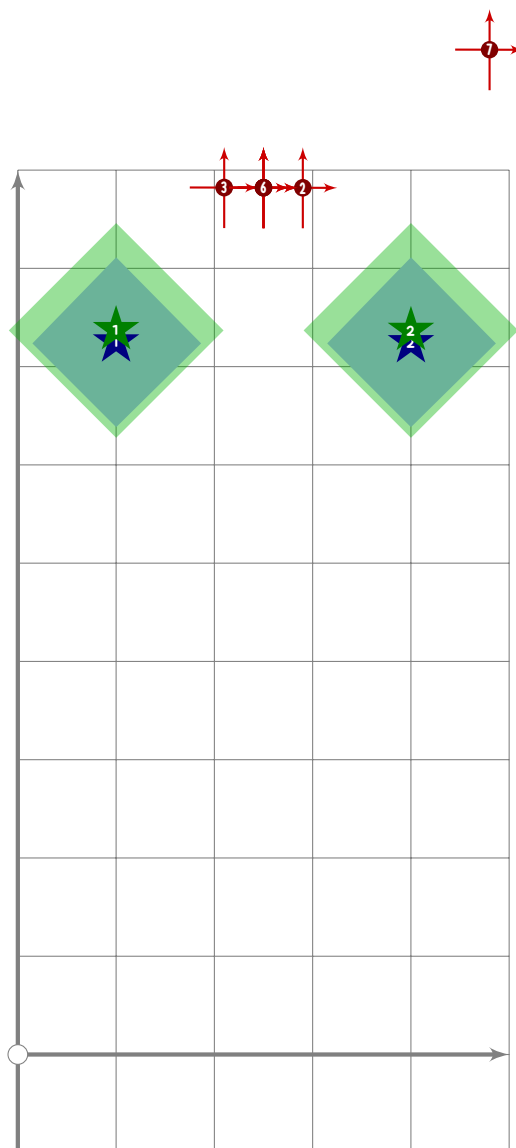
322 % 8-tsudomoe ornament
323 begintsuglyph("tomoe8",56);
324   make_tomoe(5,260,450,92,47,2,8,4,false);
325   make_tomoe(3,40,231,92,75,15,25,4,true);
326 endsuglyph;
327
328 endgroup;
329
330
331
```

F17

Heavy Metal Umlaut

```

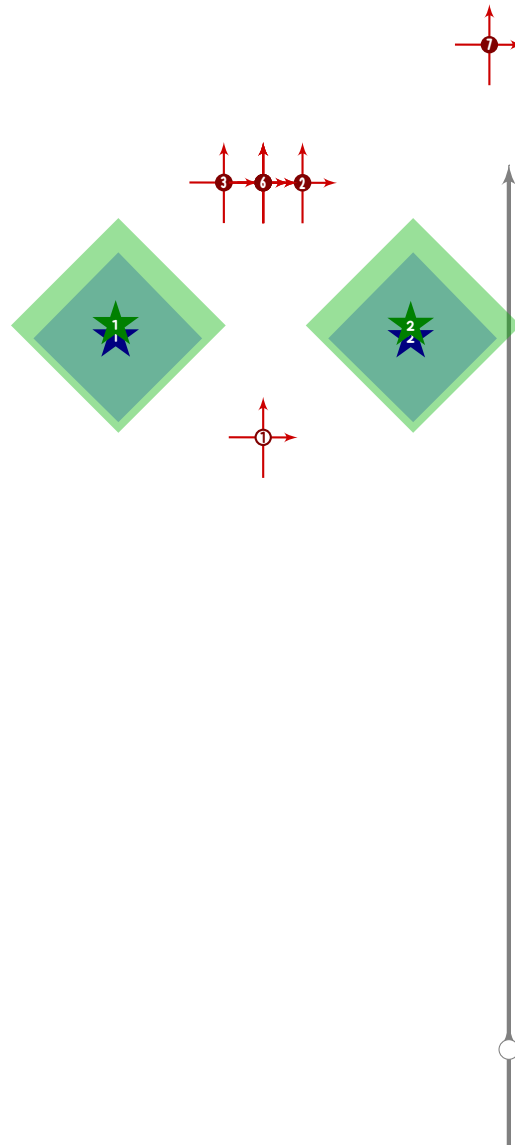
332 % HEAVY METAL UMLAUT
333
334 % WARNING, setting rescale
335 tsu_rescale_half;
336
```



```

337 % naked heavy metal umlaut
338 begintsuglyph("dieresis.hmu",64);
339   tsu_accent.apply()(tsu_accent.heavy_metal_umlaut);
340   tsu_render;
341 endsuglyph;
342
343 % WARNING, setting rescale
344 tsu_rescale_combining_accent;
345

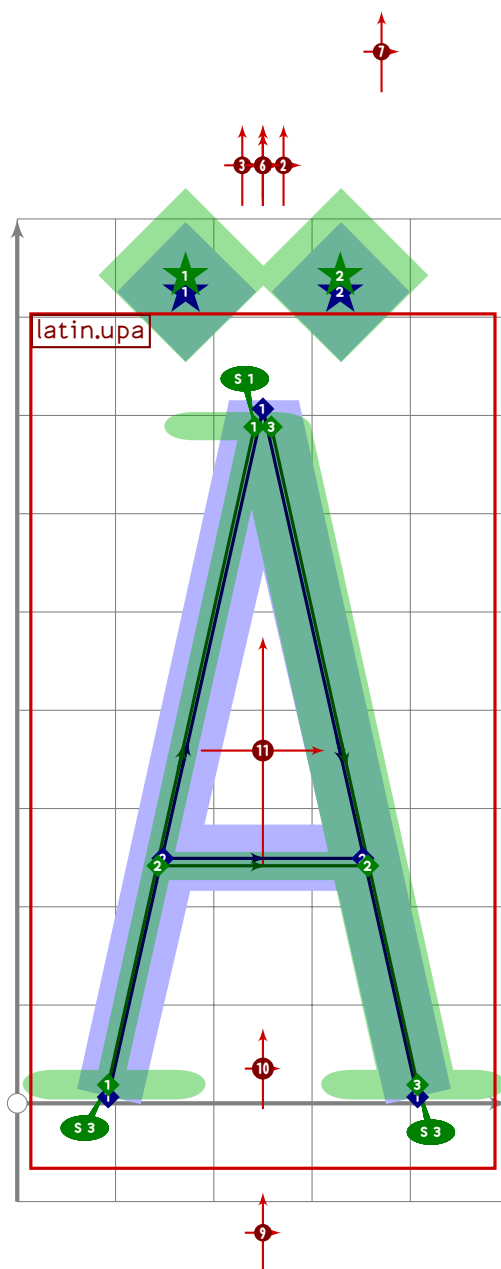
```



```

346 % combining heavy metal umlaut
347 begint Suglyph("uni0308.hmu",65);
348   tsu_accent.apply()(tsu_accent.heavy_metal_umlaut);
349   push_anchor(-anc_upper,accent_default[anc_upper]);
350   tsu_render;
351 endtsuglyph;
352
353 % WARNING, setting rescale
354 tsu_rescale_half;
355
356 tsu_accent.up_default_anchors;
357

```

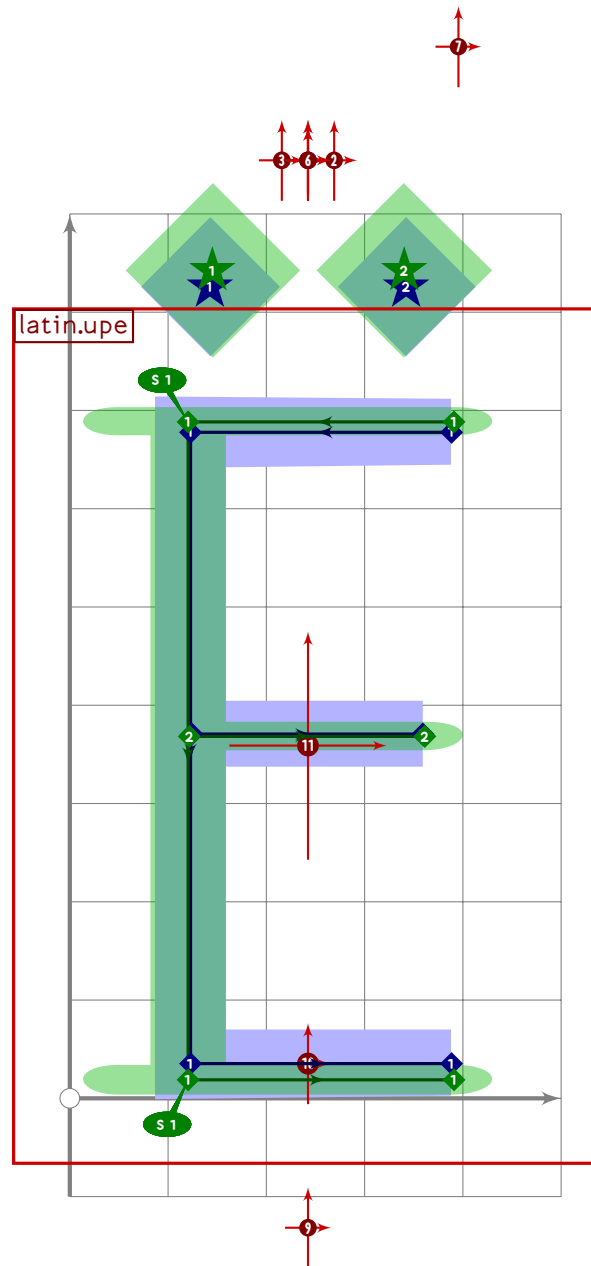


F17

```

358 % A with heavy metal umlaut
359 begintsuglyph("Adieresis.hmu",66);
360 tsu_accent.apply(tsu_accent.capital(latin.upa))
361     (tsu_accent.heavy_metal_umlaut);
362 tsu_render;
363 endsuglyph;
364

```



```

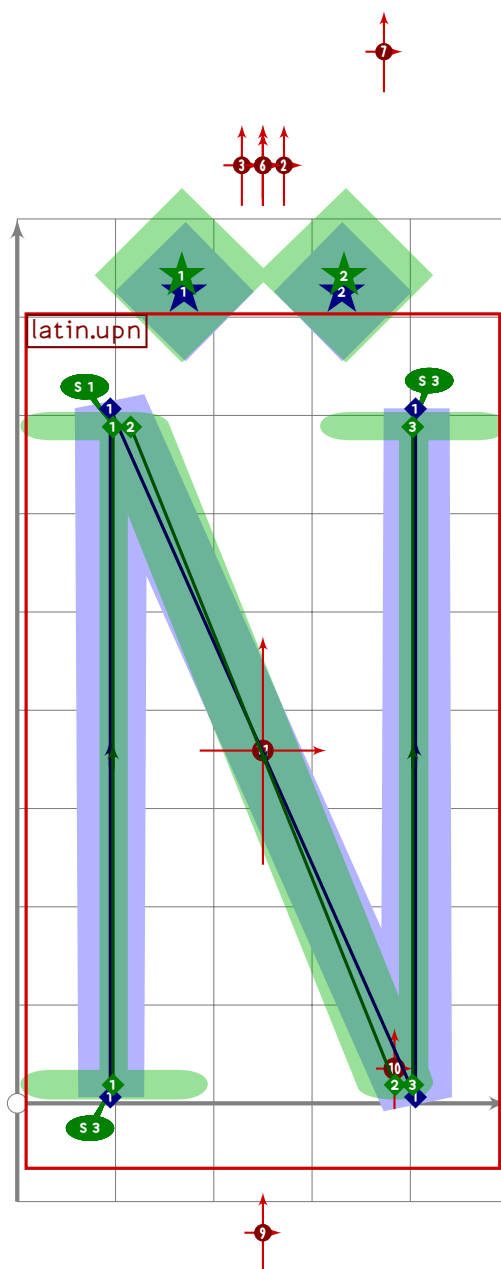
365 % E with heavy metal umlaut
366 begintsuglyph("Edieresis.hmu",67);
367   tsu_accent.apply(tsu_accent.capital(latin.upe))
368     (tsu_accent.heavy_metal_umlaut);
369   tsu_render;
370 endtsuglyph;
371

```

```

372 % I with heavy metal umlaut
373 begintsuglyph("Idieresis.hmu";68);
374   tsu_accent.apply(tsu_accent.capital(latin.upi))
375     (tsu_accent.heavy_metal_umlaut);
376   tsu_render;
377 endtsuglyph;
378

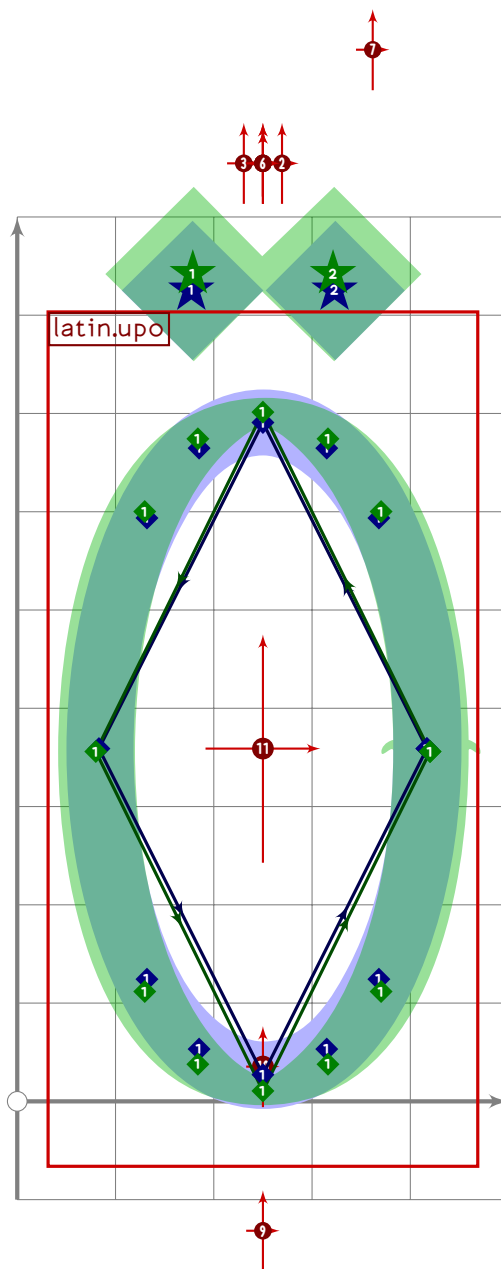
```

```

379 % N with heavy metal umlaut
380 begintsuglyph("Ndieresis.hmu";69);
381   tsu_accent.apply(tsu_accent.capital(latin.upn))
382     (tsu_accent.heavy_metal_umlaut);
383   tsu_render;
384 endsuglyph;
385

```

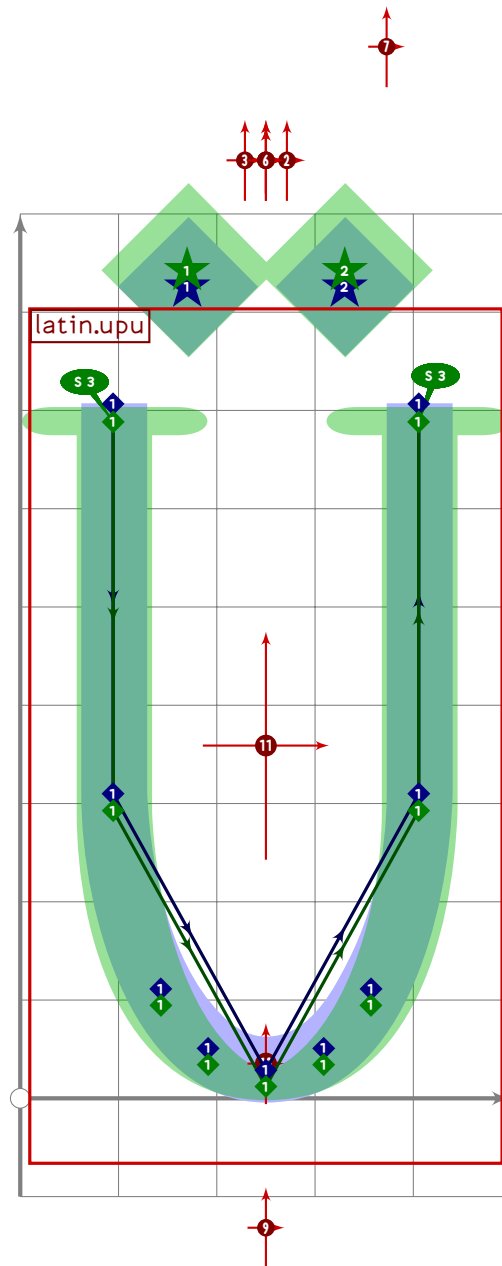


F17

```

386 % O with heavy metal umlaut
387 begintsuglyph("Odieresis.hmu";70);
388   tsu_accent.apply(tsu_accent.capital(latin.upo))
389     (tsu_accent.heavy_metal_umlaut);
390   tsu_render;
391 endsuglyph;
392

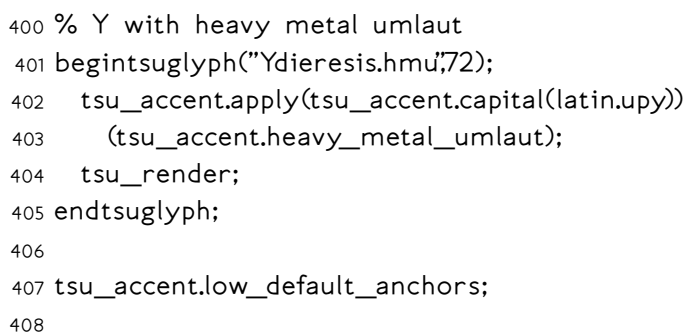
```

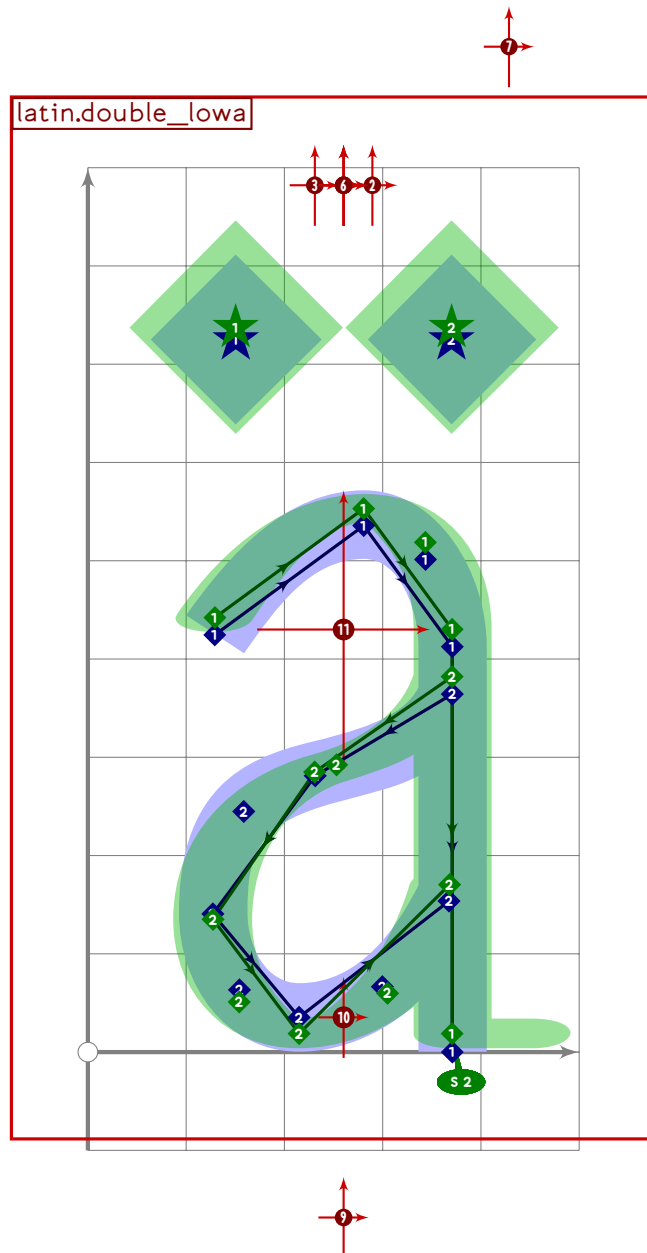


```

393 % U with heavy metal umlaut
394 begintsuglyph("Udieresis.hmu",71);
395   tsu_accent.apply(tsu_accent.capital(latin.upu))
396     (tsu_accent.heavy_metal_umlaut);
397   tsu_render;
398 endtsuglyph;
399

```

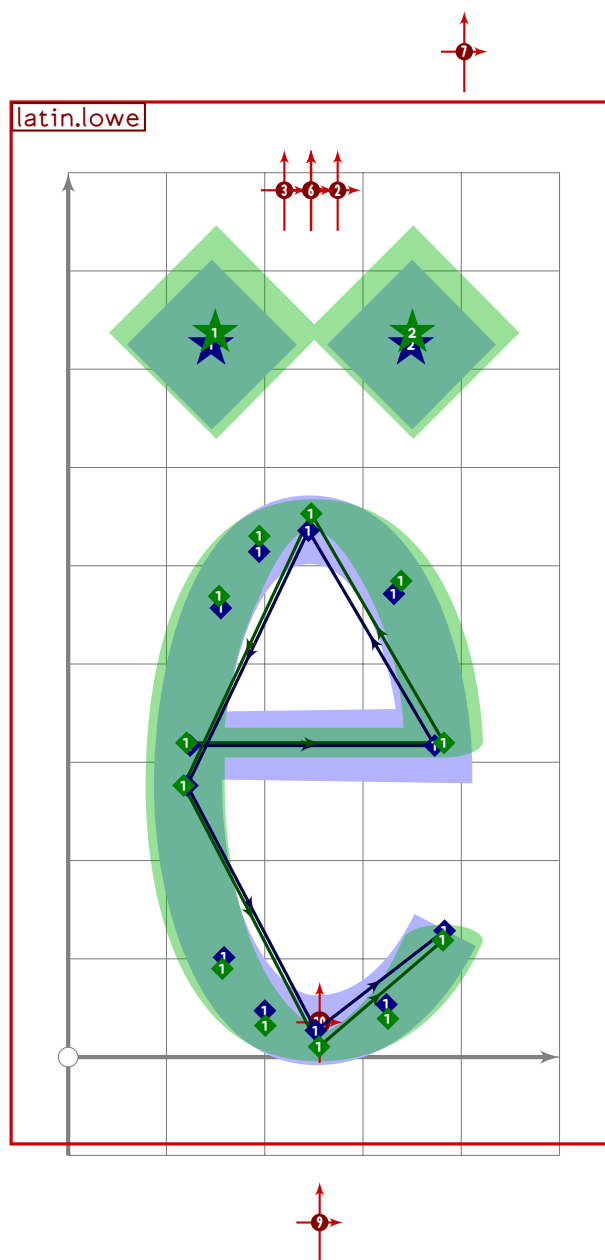




```

409 % a with heavy metal umlaut
410 begintsuglyph("adieresis.hmu",73);
411   tsu_accent.apply(latin.low_a)(tsu_accent.heavy_metal_umlaut);
412   tsu_render;
413 endtsuglyph;
414

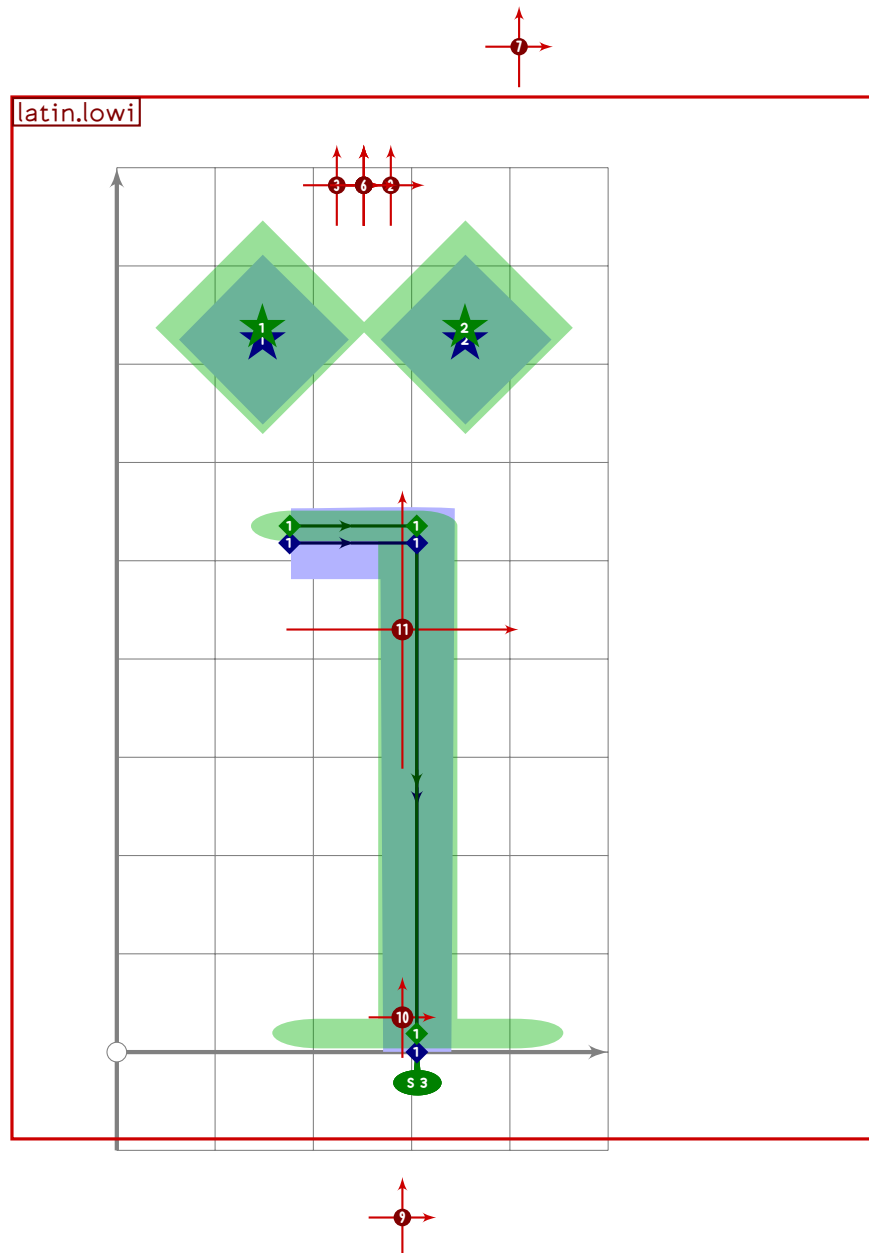
```



```

415 % e with heavy metal umlaut
416 begintsuglyph("edieresis.hmu",74);
417   tsu_accent.apply(latin.lowe)(tsu_accent.heavy_metal_umlaut);
418   tsu_render;
419 endtsuglyph;
420

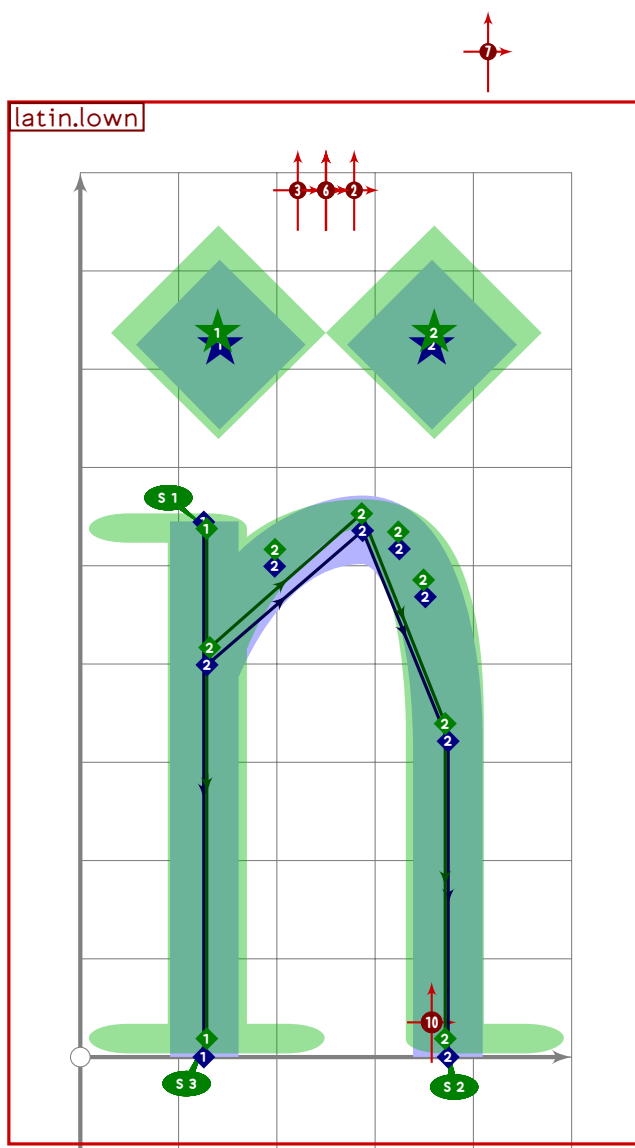
```



```

421 % i with heavy metal umlaut
422 begintsuglyph("idieresis.hmu";75);
423   tsu_accent.apply(
424     tsu_xform(identity shifted (70,0))(latin.lowi;
425       tsu_accent.shift_anchors(true)((0,0)));
426     pop_lcblob;
427   )(tsu_accent.heavy_metal_umlaut);
428   tsu_render;
429 endsuglyph;
430

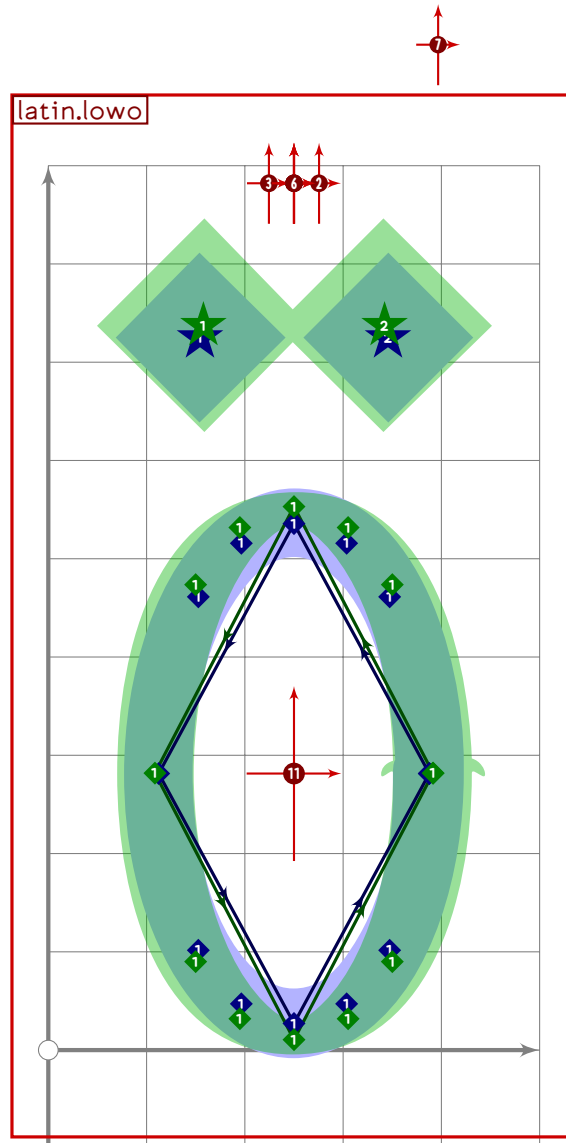
```



```

431 % n with heavy metal umlaut
432 beginsuglyph("ndieresis.hmu";76);
433   tsu_accent.apply(latin.lown)(tsu_accent.heavy_metal_umlaut);
434   tsu_render;
435 endsuglyph;
436

```

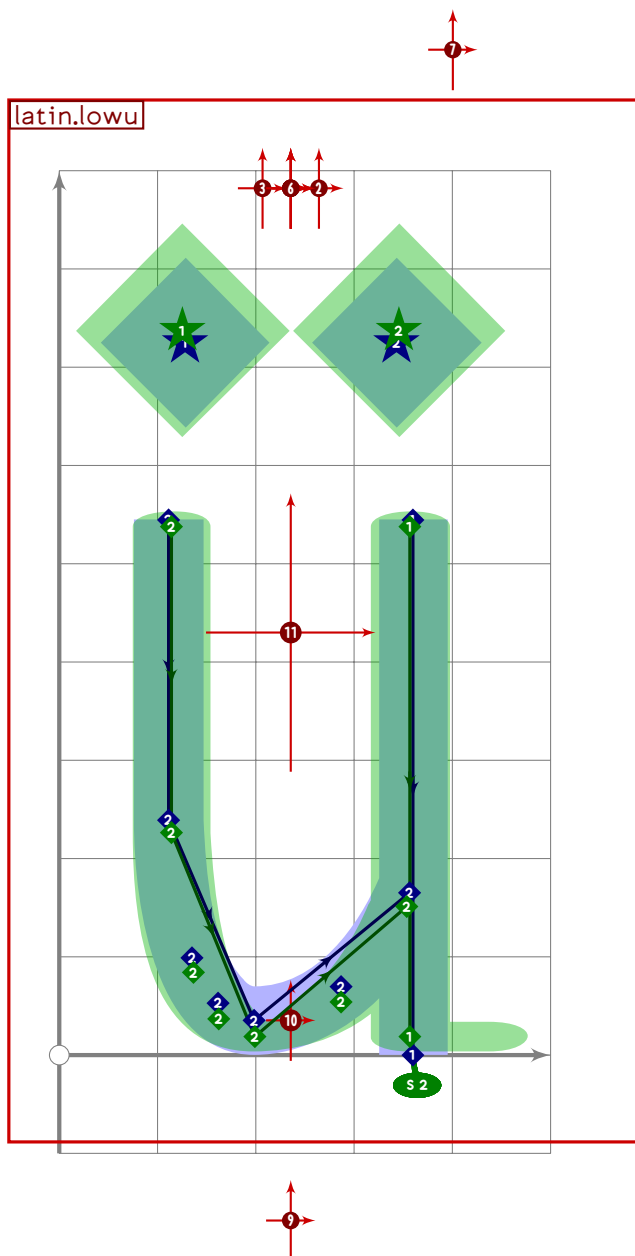



```

437 % o with heavy metal umlaut
438 begintsuglyph("odieresis.hmu";77);
439   tsu_accent.apply(latin.lowo)(tsu_accent.heavy_metal_umlaut);
440   tsu_render;
441 endsuglyph;
442

```

U+F174E
tsuku.udieresis.hmu

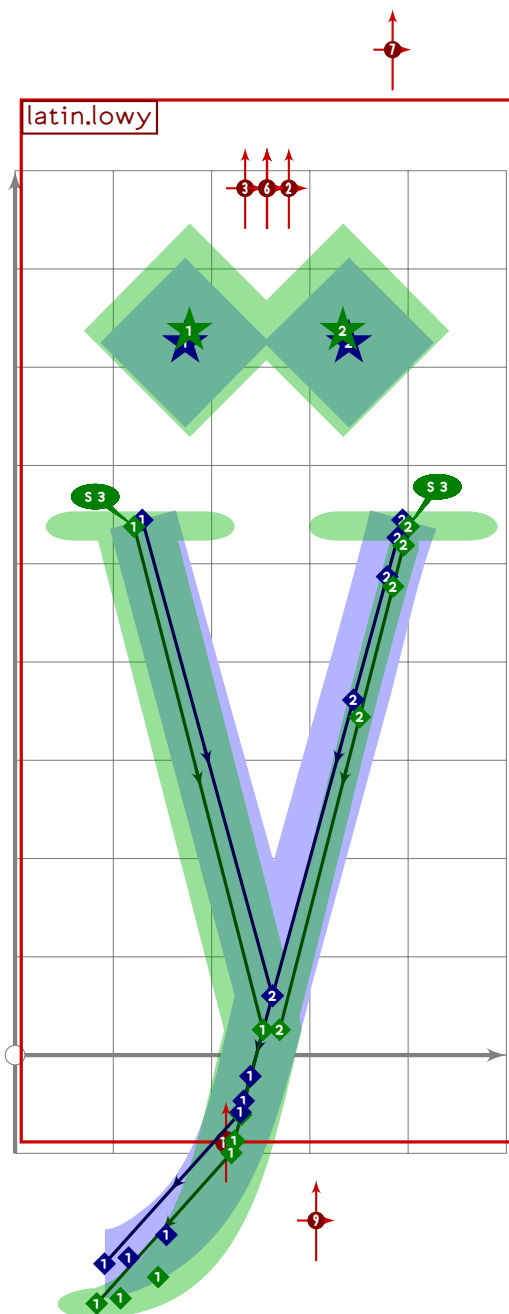


```

443 % u with heavy metal umlaut
444 begintsuglyph("udieresis.hmu";78);
445   tsu_accent.apply(latin.lowu)(tsu_accent.heavy_metal_umlaut);
446   tsu_render;
447 endtsuglyph;
448

```

F17



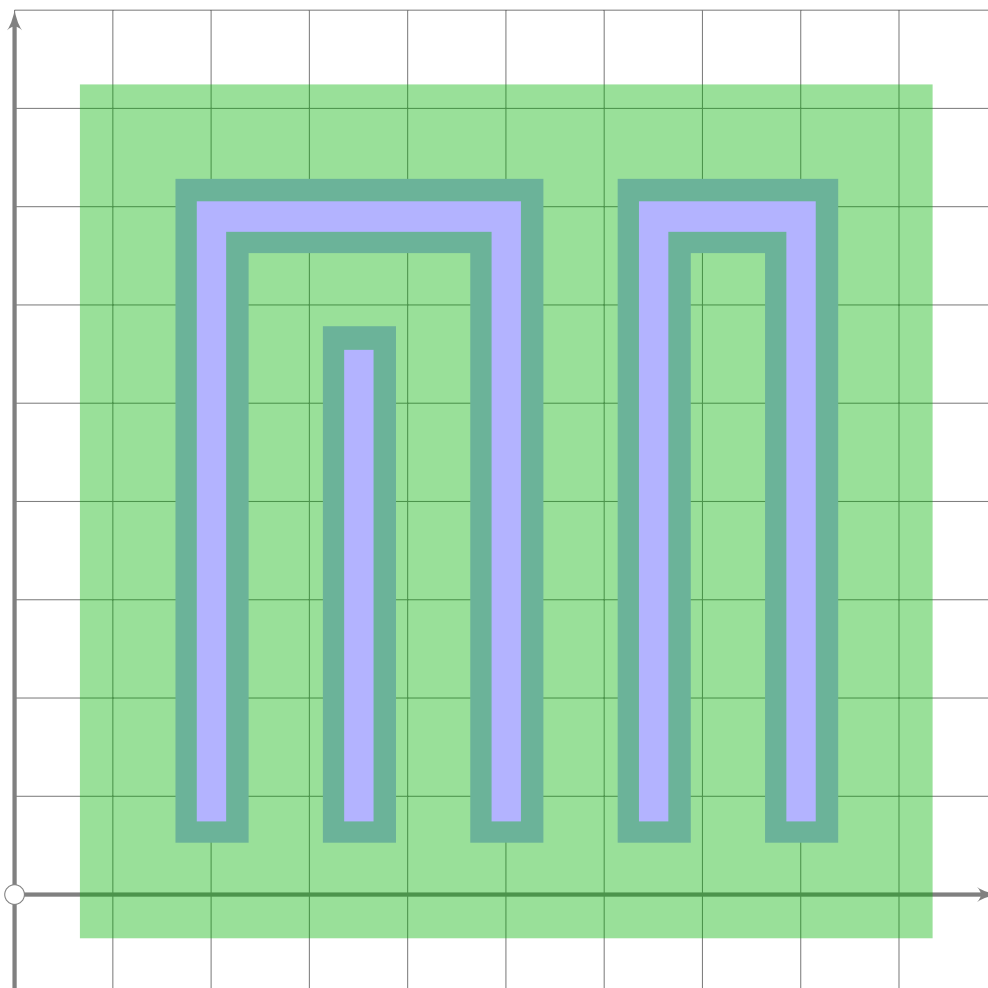
```

449 % y with heavy metal umlaut
450 begintsuglyph("ydieresis.hmu";79);
451   tsu_accent.apply(latin.lowy)(tsu_accent.heavy_metal_umlaut);
452   tsu_render;
453 endtsuglyph;
454
455 tsu_accent.clear_default_anchors;
456
457
458

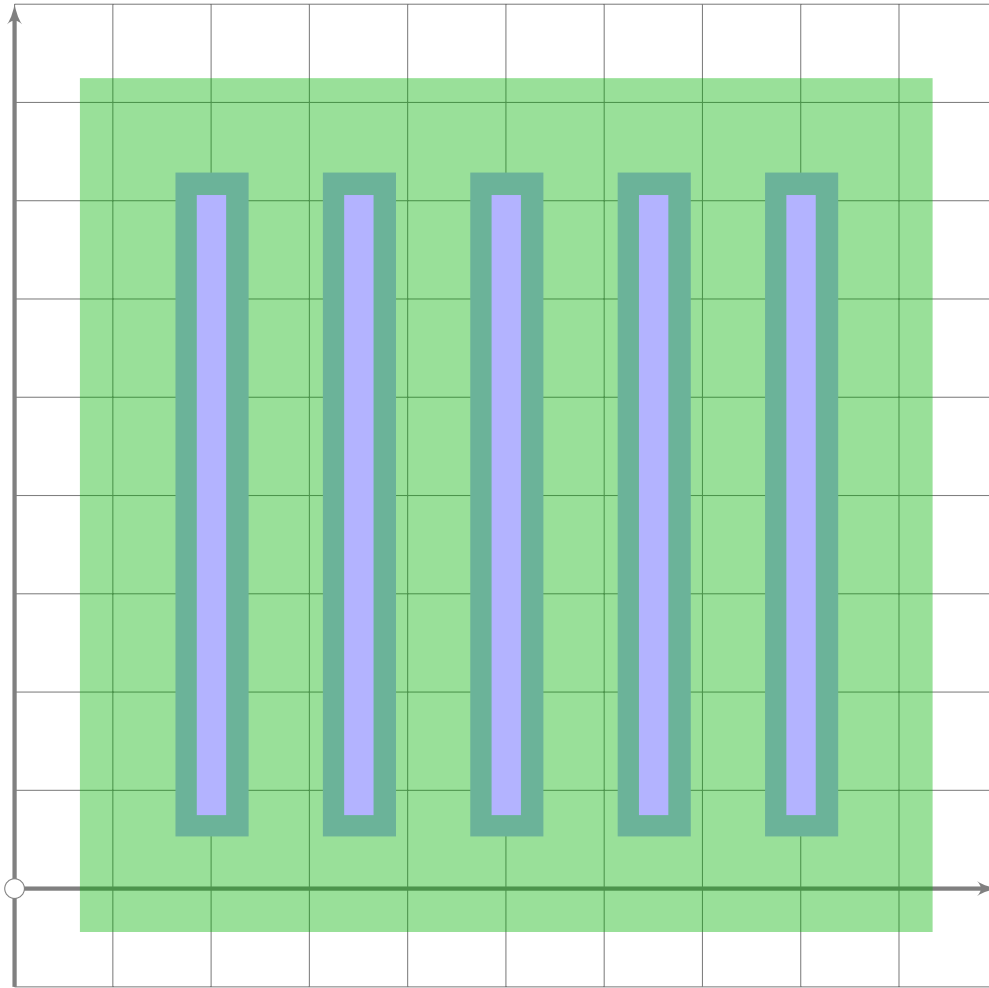
```

Genjimon

```
459 % GENJIMON
460
461 begingroup
462 save rescale_slant;
463 rescale_slant:=0;
464
465 % WARNING, setting rescale
466 tsu_rescale_full;
467
468 input genjimon.mp;
469
```

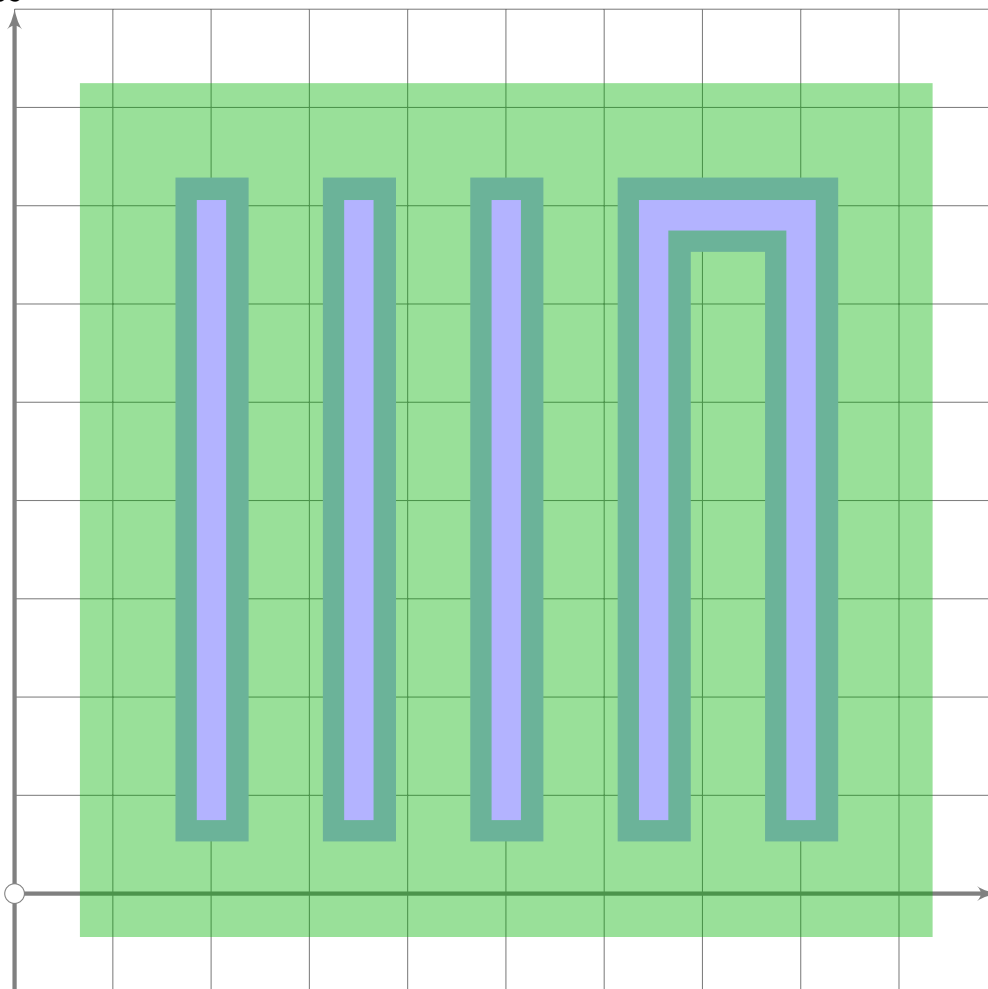


```
470 % #1 Kiritsubo
471 begintsuglyph("genjimon01",193);
472   genjimon.kiritsubo;
473 endsuglyph;
474
```

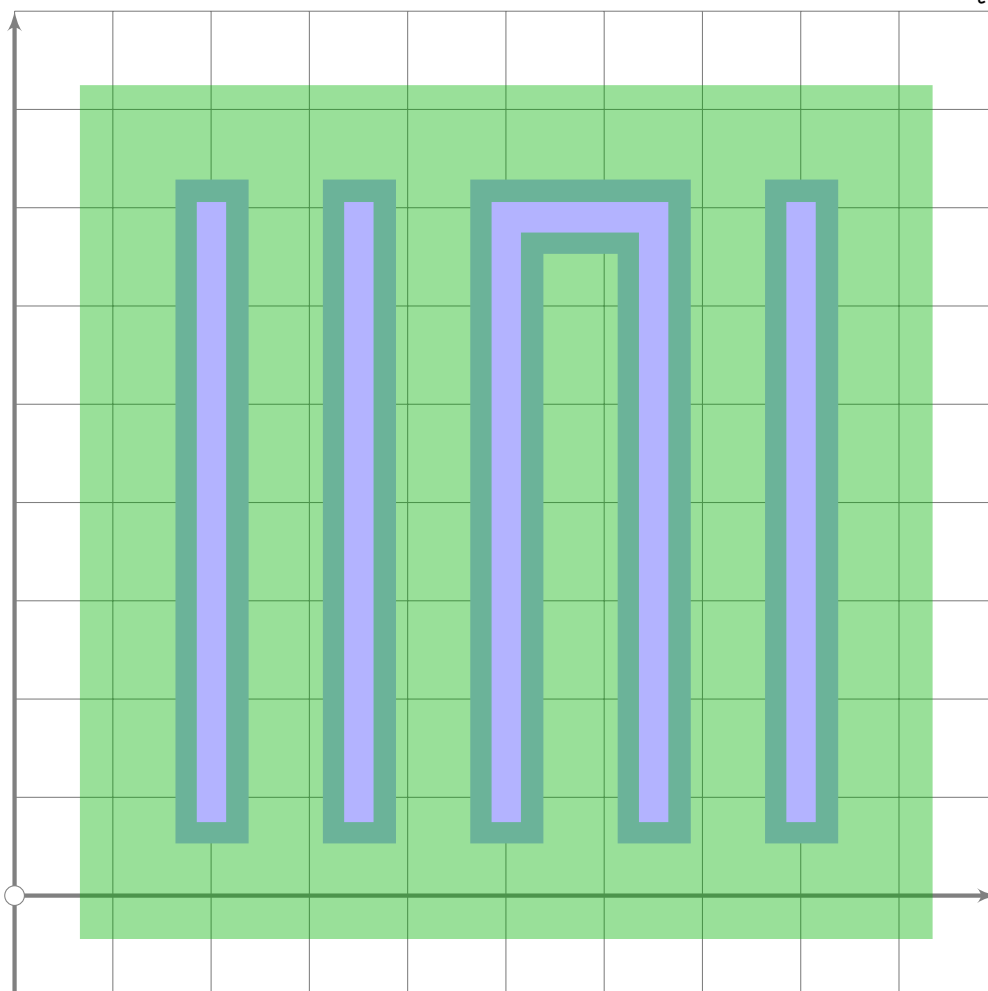


```
475 % #2 Hahakigi
476 begintsuglyph("genjimon02";194);
477   genjimon.hahakigi;
478 endtsuglyph;
479
```

U+F17C3
tsuku.genjimon03

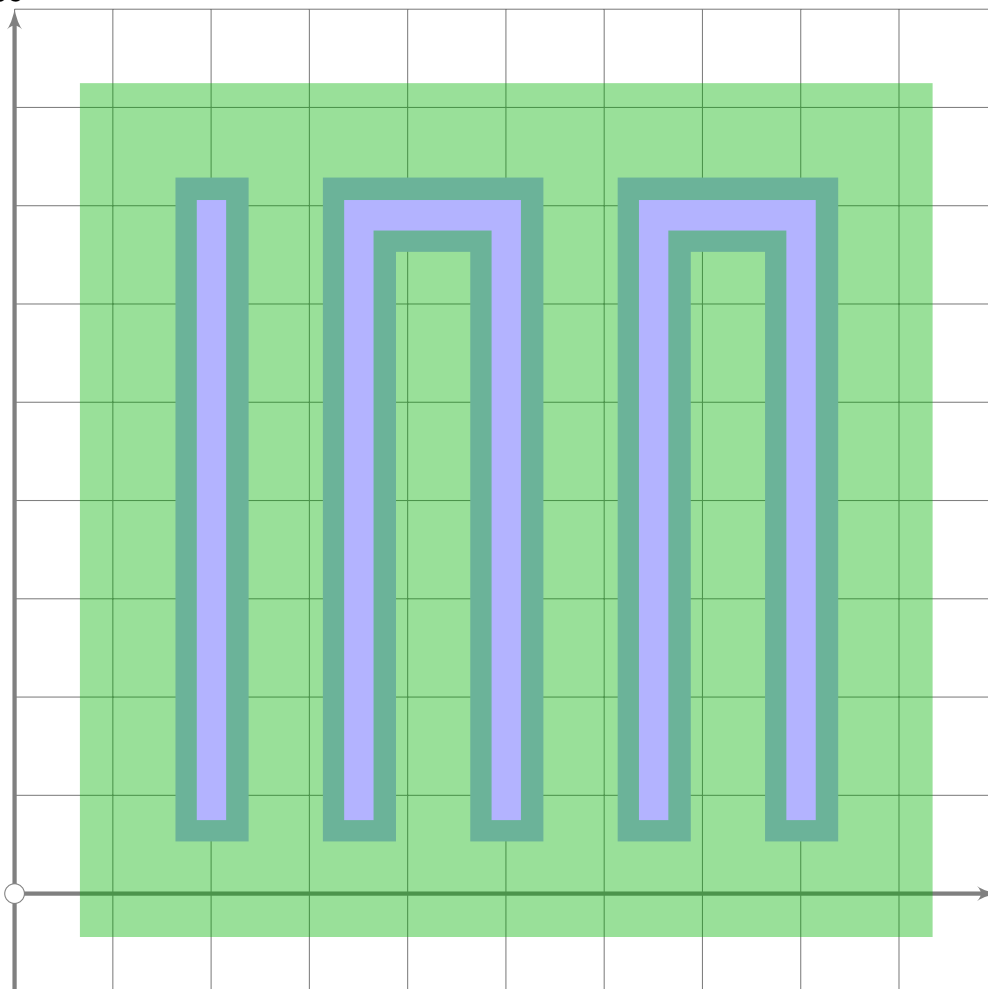


```
480 % #3 Utsusemi
481 beginsuglyph("genjimon03",195);
482   genjimon.utsusemi;
483 endsuglyph;
484
```

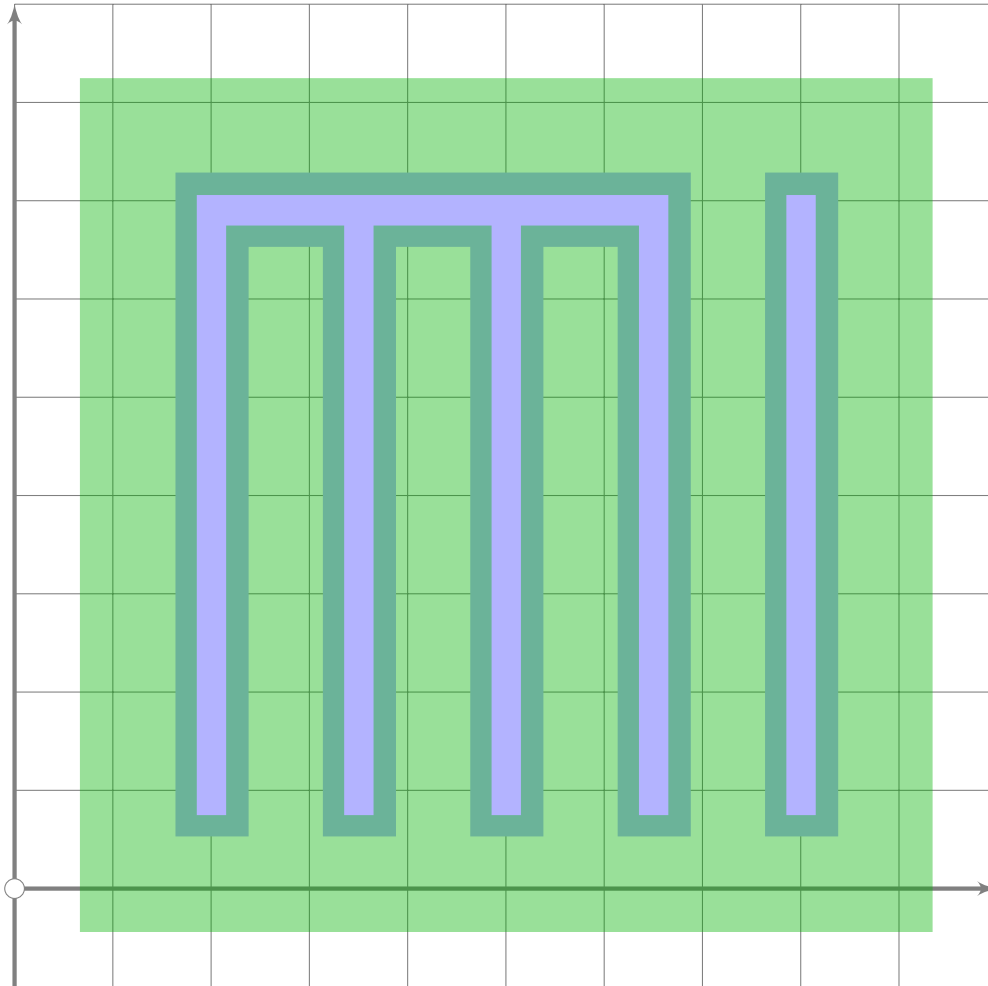


```
485 % #4 Yuugao
486 beginsuglyph("genjimon04",196);
487   genjimon.yuugao;
488 endsuglyph;
489
```

U+F17C5
tsuku.genjimon05

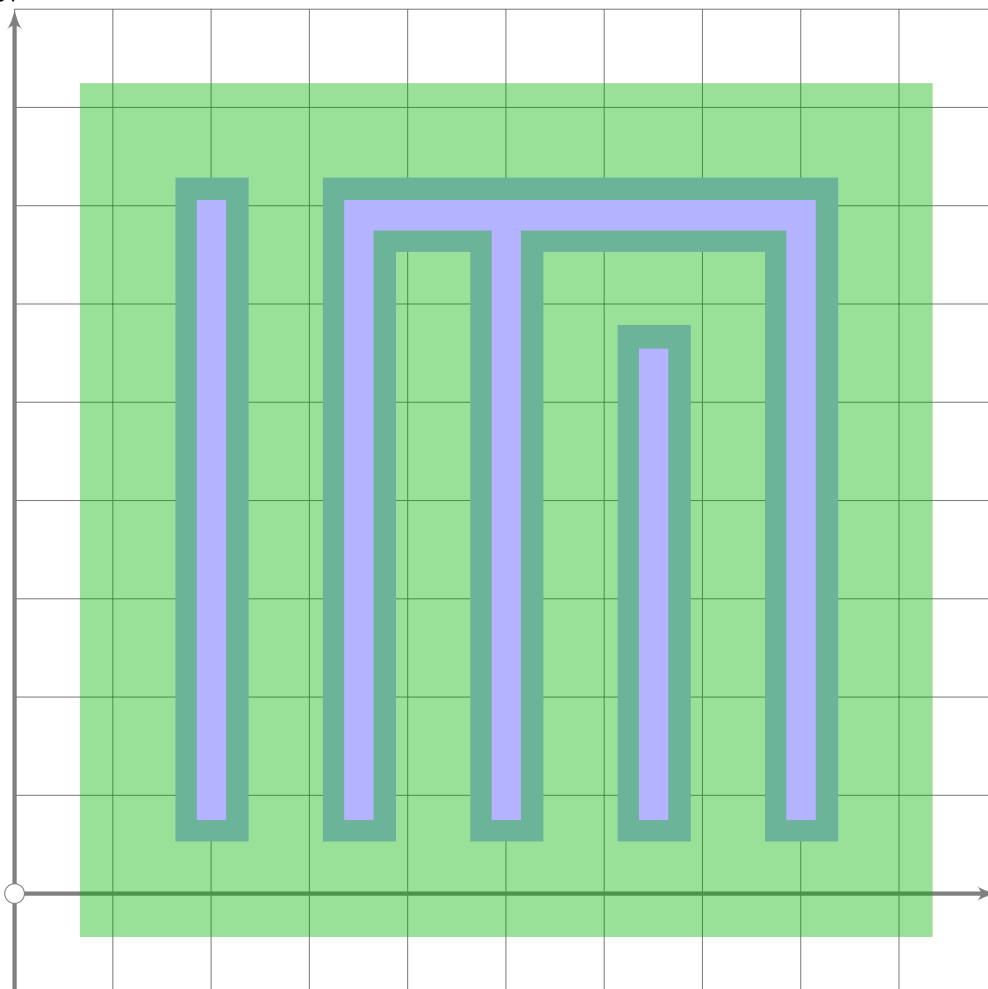


```
490 % #5 Wakamurasaki
491 begintsuglyph("genjimon05";197);
492   genjimon.wakamurasaki;
493 endtsuglyph;
494
```

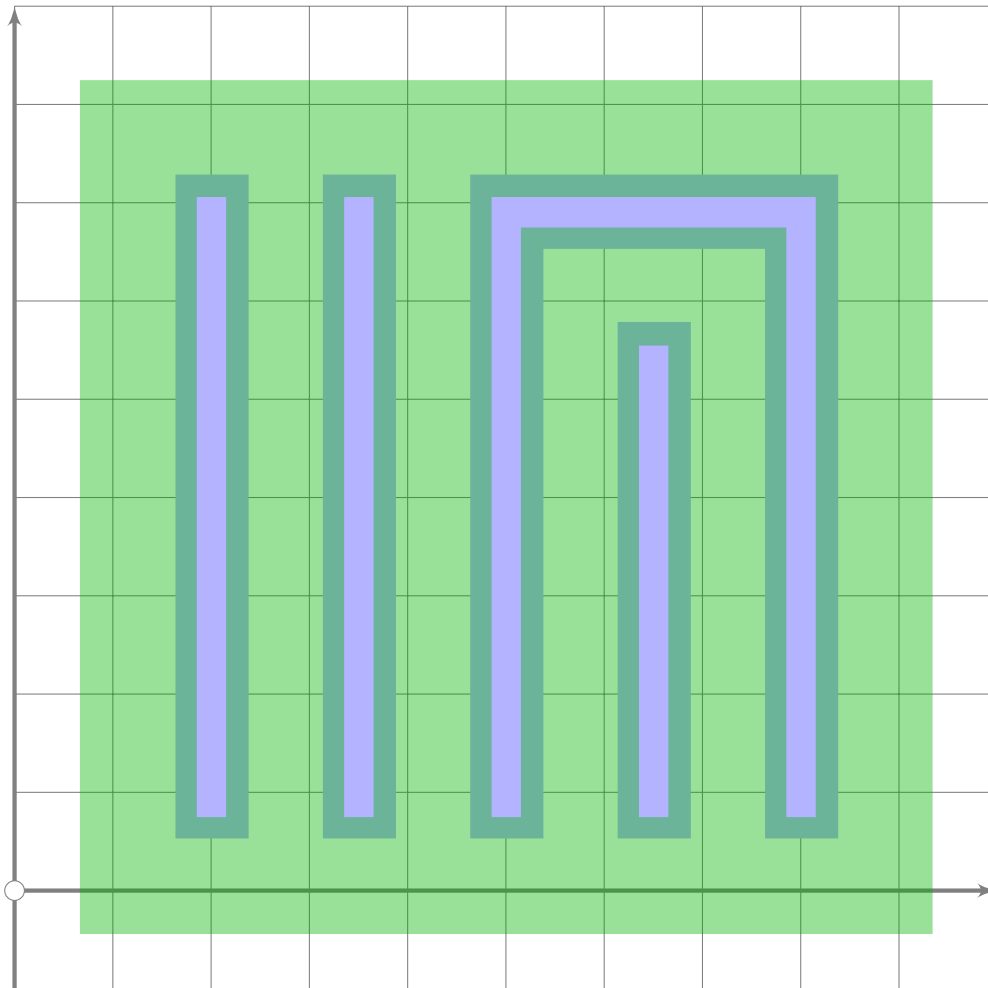



```
495 % #6 Suetsumuhana
496 begintsuglyph("genjimon06",198);
497   genjimon.suetsumuhana;
498 endtsuglyph;
499
```

U+F17C7
tsuku.genjimon07

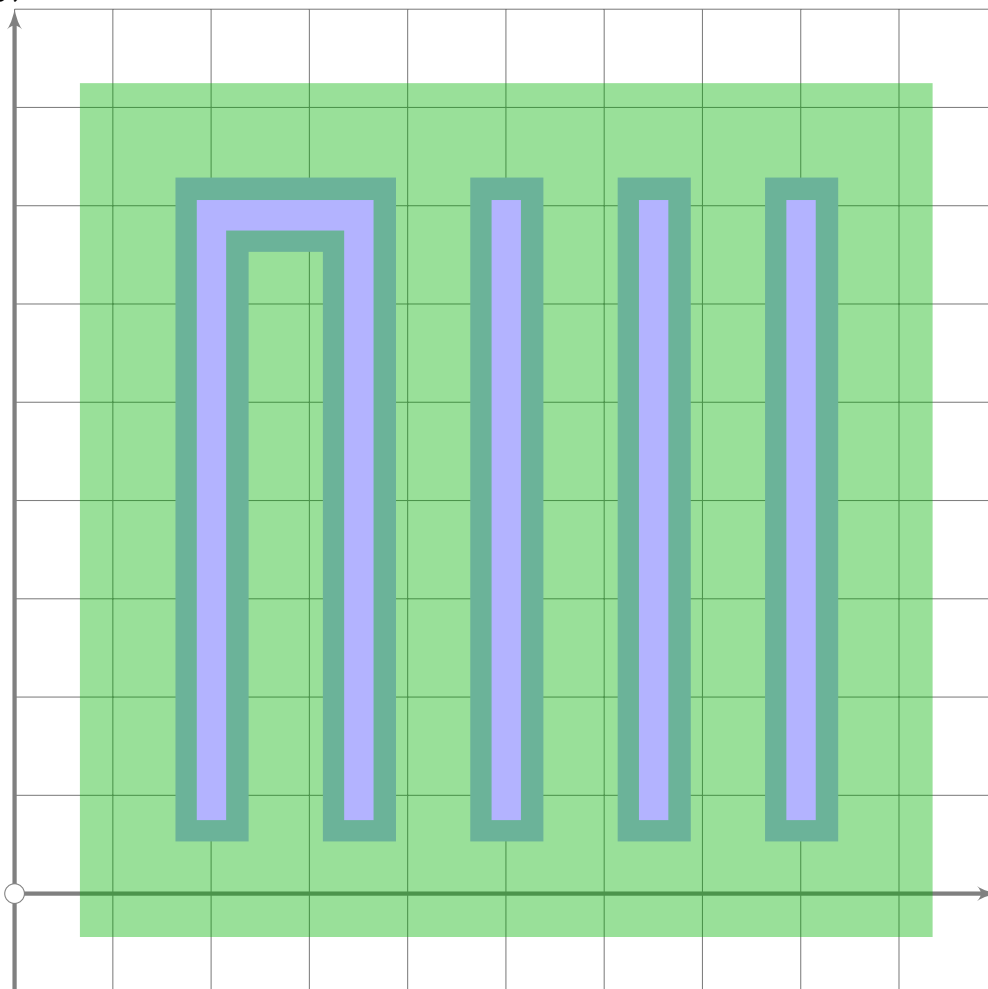


```
500 % #7 Momiji no Ga
501 begintsuglyph("genjimon07";199);
502   genjimon.momiji_no_ga;
503 endtsuglyph;
504
```

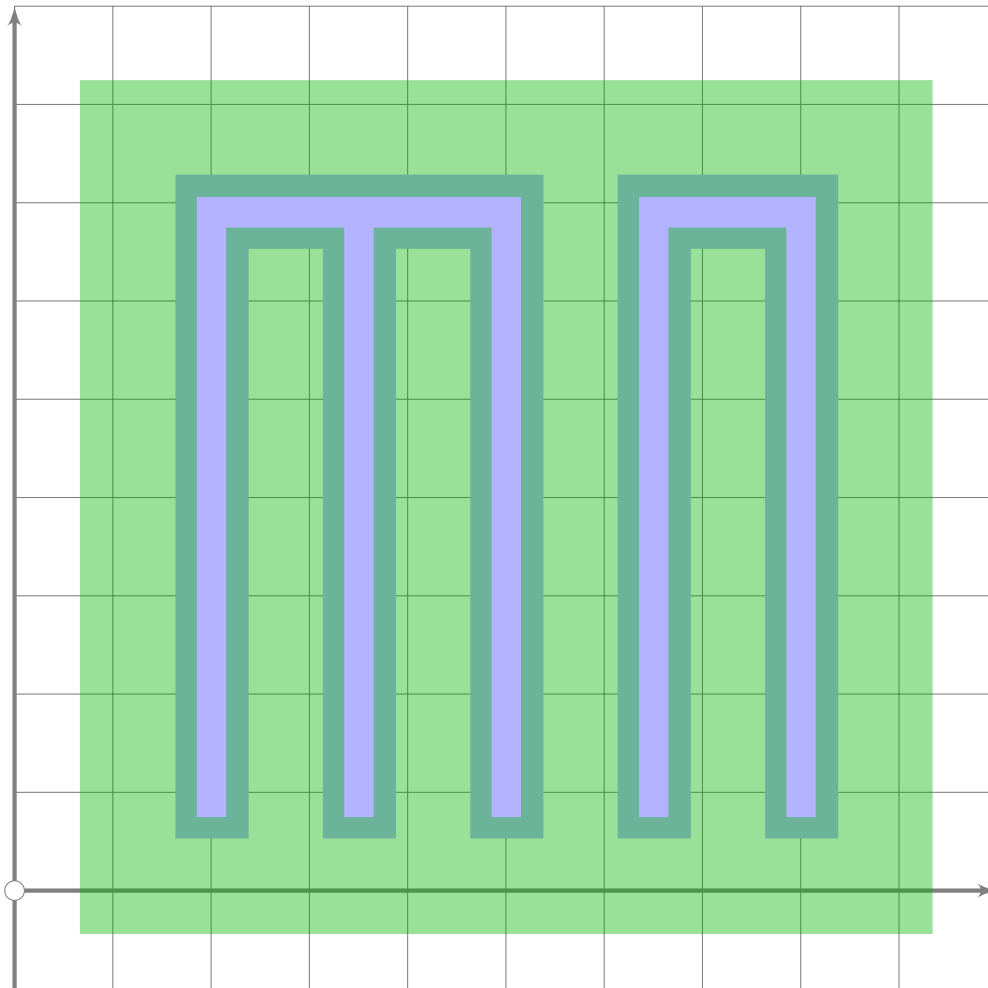


```
505 % #8 Hana no En
506 beginsuglyph("genjimon08";200);
507   genjimon.hana_no_en;
508 endsuglyph;
509
```

U+F17C9
tsuku.genjimon09

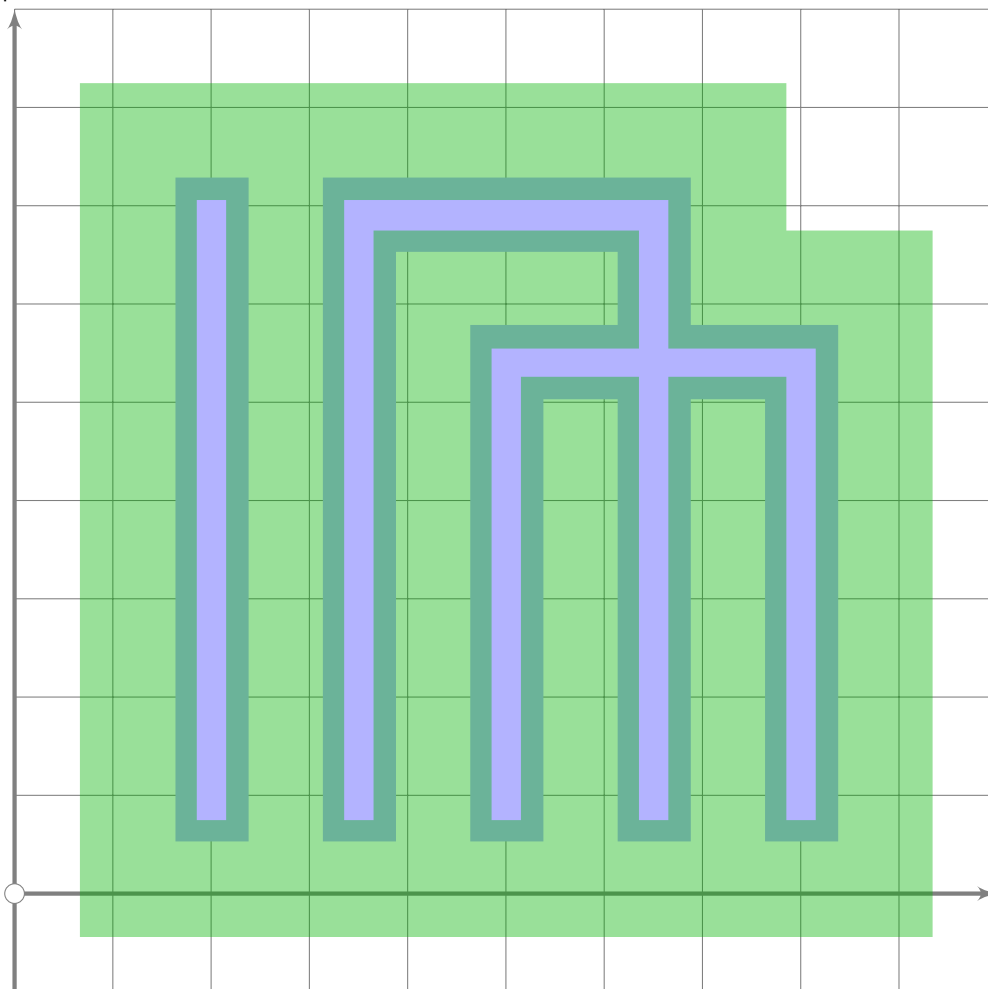


```
510 % #9 Aoi
511 beginsuglyph("genjimon09";201);
512   genjimon.aoi;
513 endsuglyph;
514
```

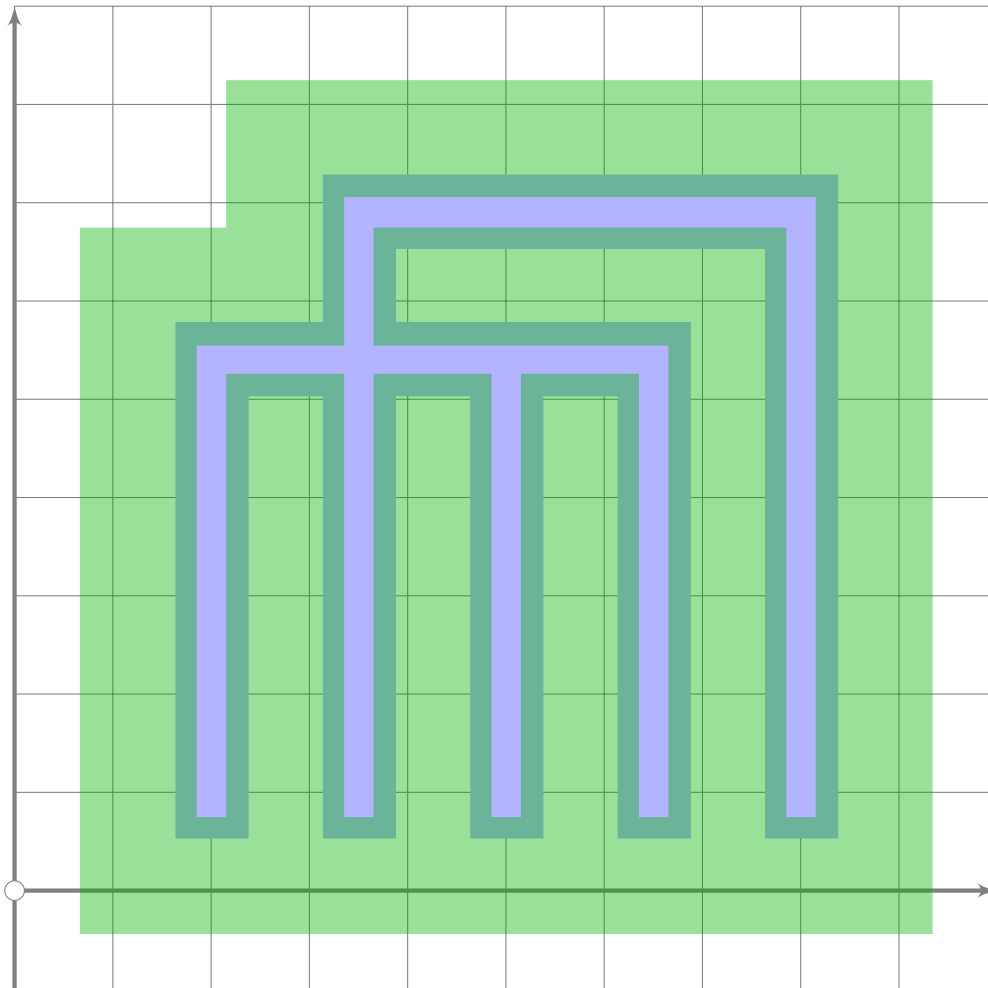


```
515 % #10 Sakaki
516 begintsuglyph("genjimon10",202);
517   genjimon.sakaki;
518 endtsuglyph;
519
```

U+F17CB
tsuku.genjimon11

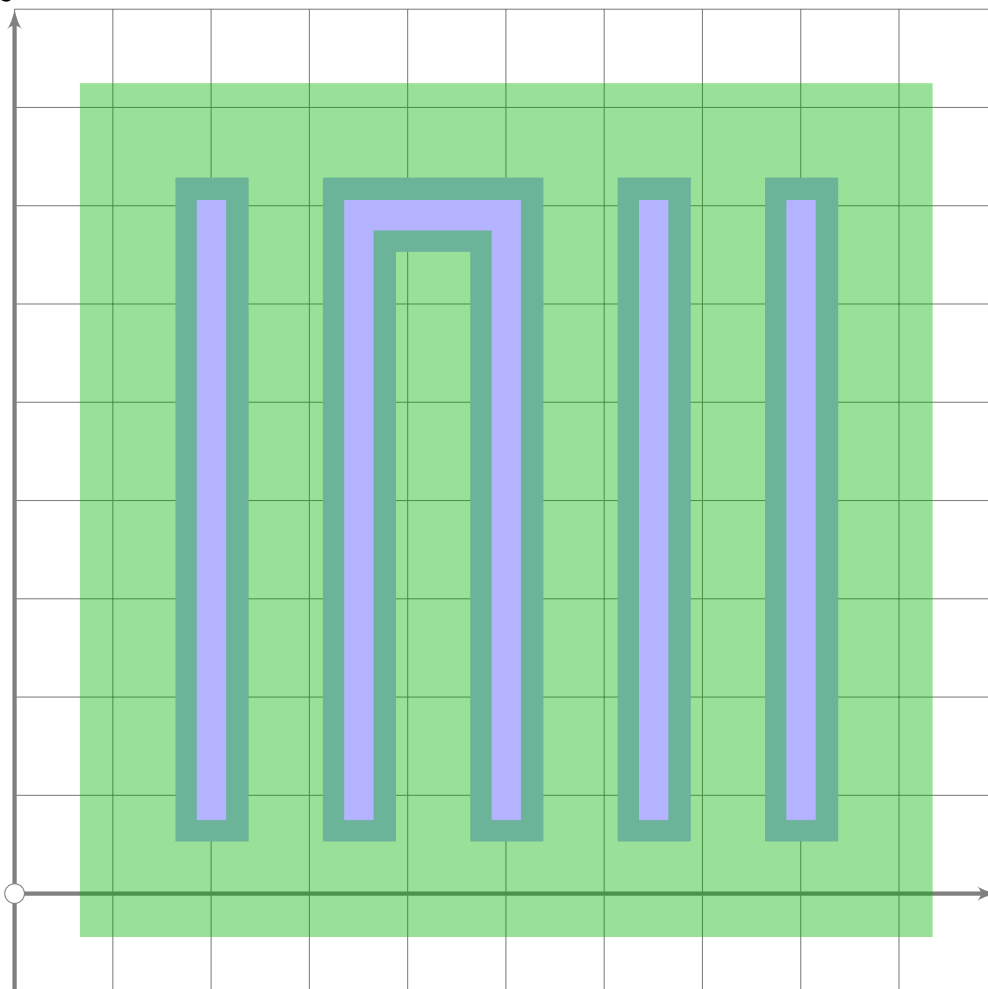


```
520 % #11 Hana Chiru Sato
521 begintsuglyph("genjimon11";203);
522   genjimon.hana_chiru_sato;
523 endtsuglyph;
524
```

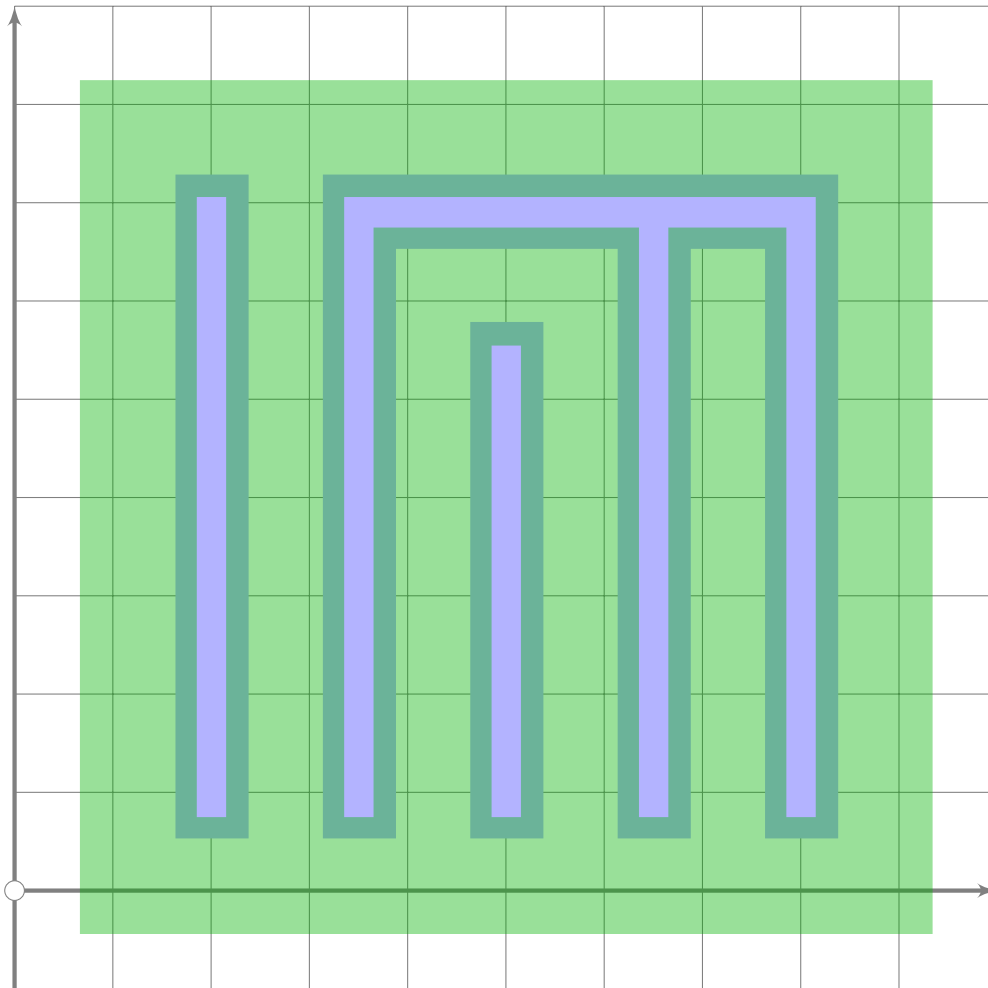


```
525 % #12 Suma
526 beginsuglyph("genjimon12",204);
527   genjimon.suma;
528 endsuglyph;
529
```

U+F17CD
tsuku.genjimon13

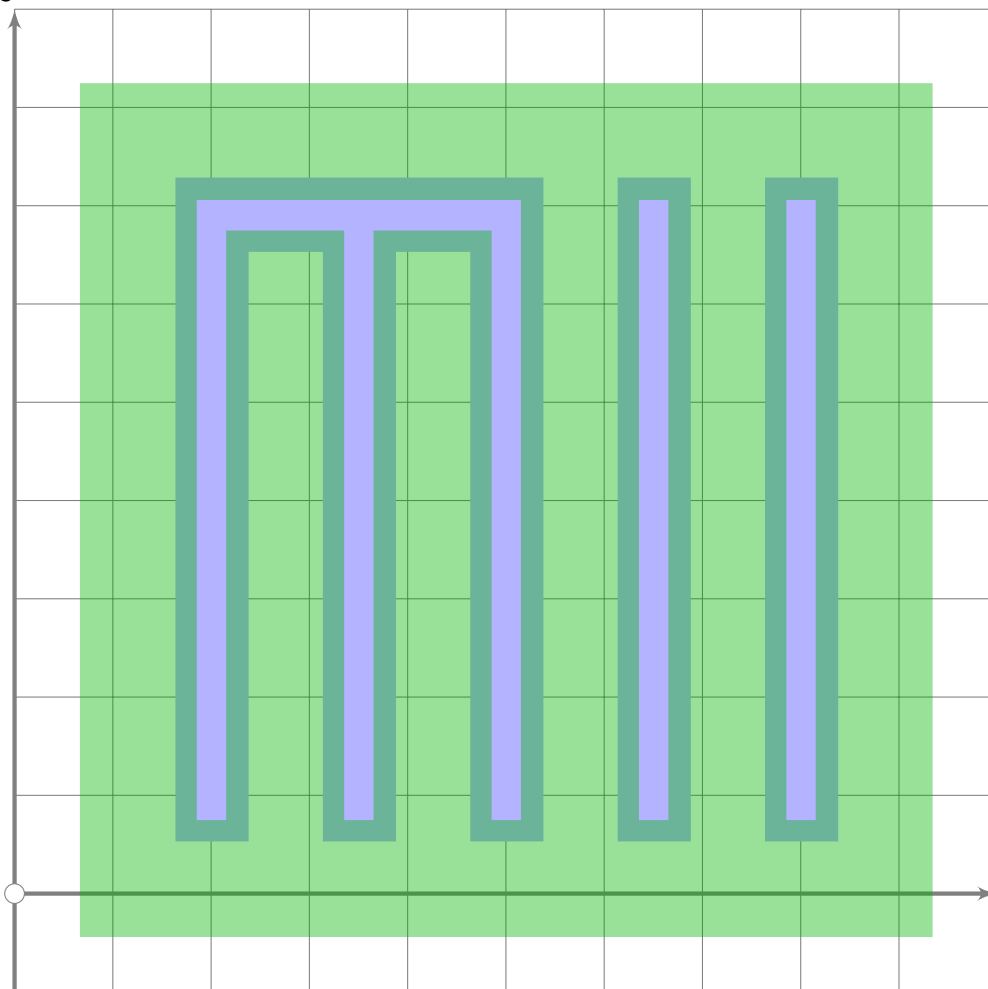


```
530 % #13 Akashi
531 begintsuglyph("genjimon13";205);
532   genjimon.akashi;
533 endtsuglyph;
534
```

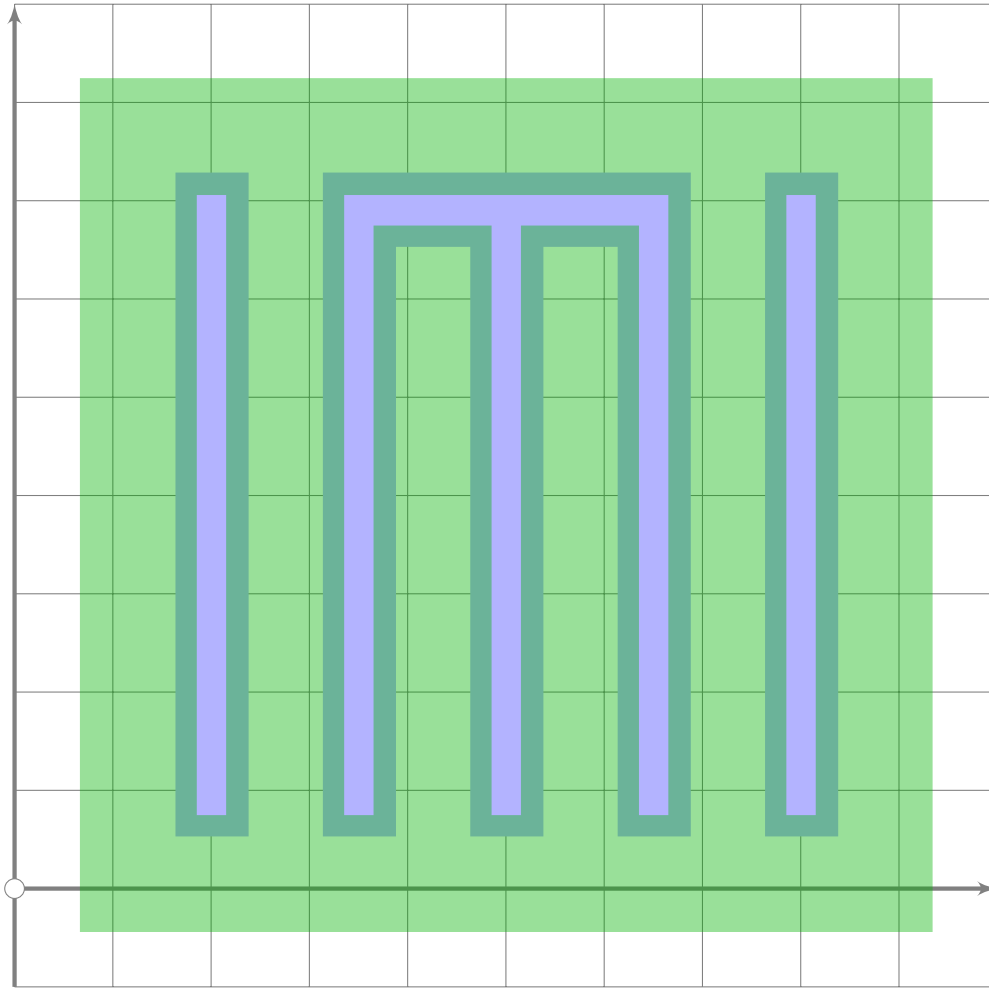



```
535 % #14 Miotsukushi
536 beginsuglyph("genjimon14";206);
537   genjimon.miotsukushi;
538 endsuglyph;
539
```

U+F17CF
tsuku.genjimon15

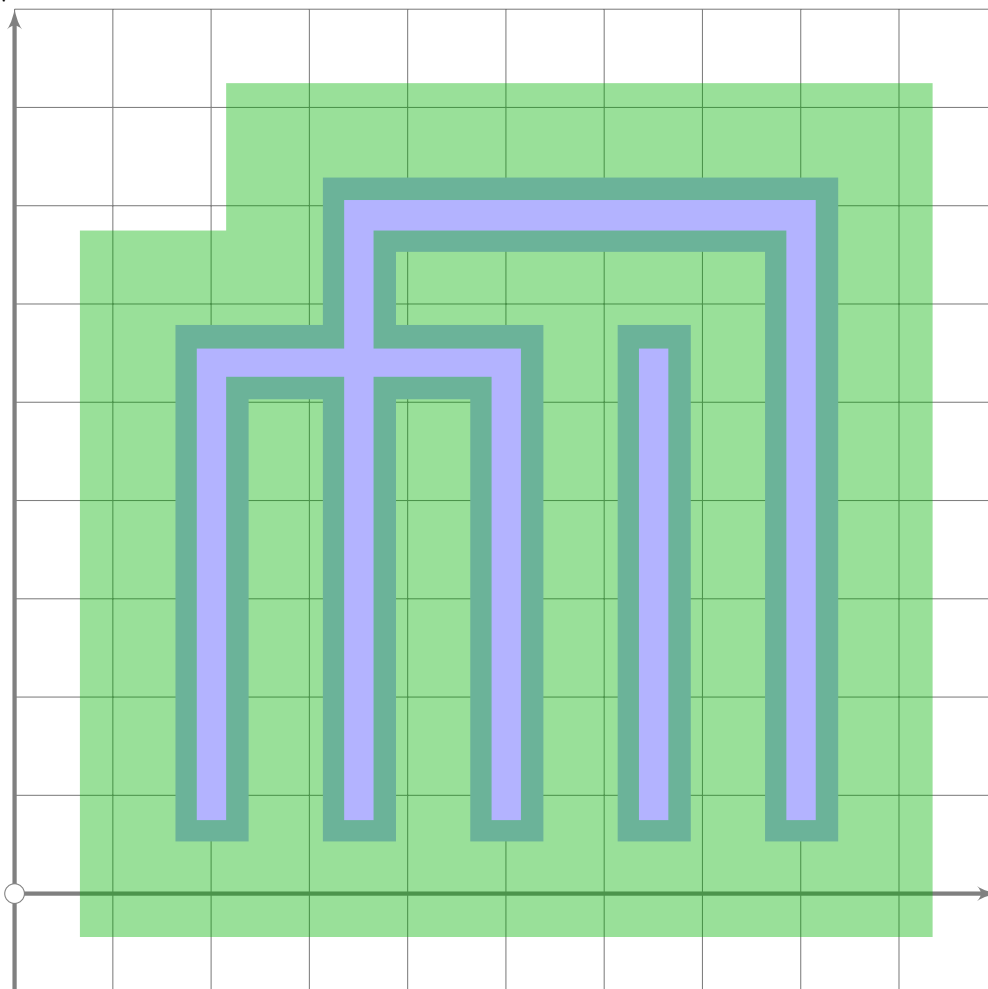


```
540 % #15 Yomogyuu
541 begintsuglyph("genjimon15";207);
542   genjimon.yomogyuu;
543 endtsuglyph;
544
```

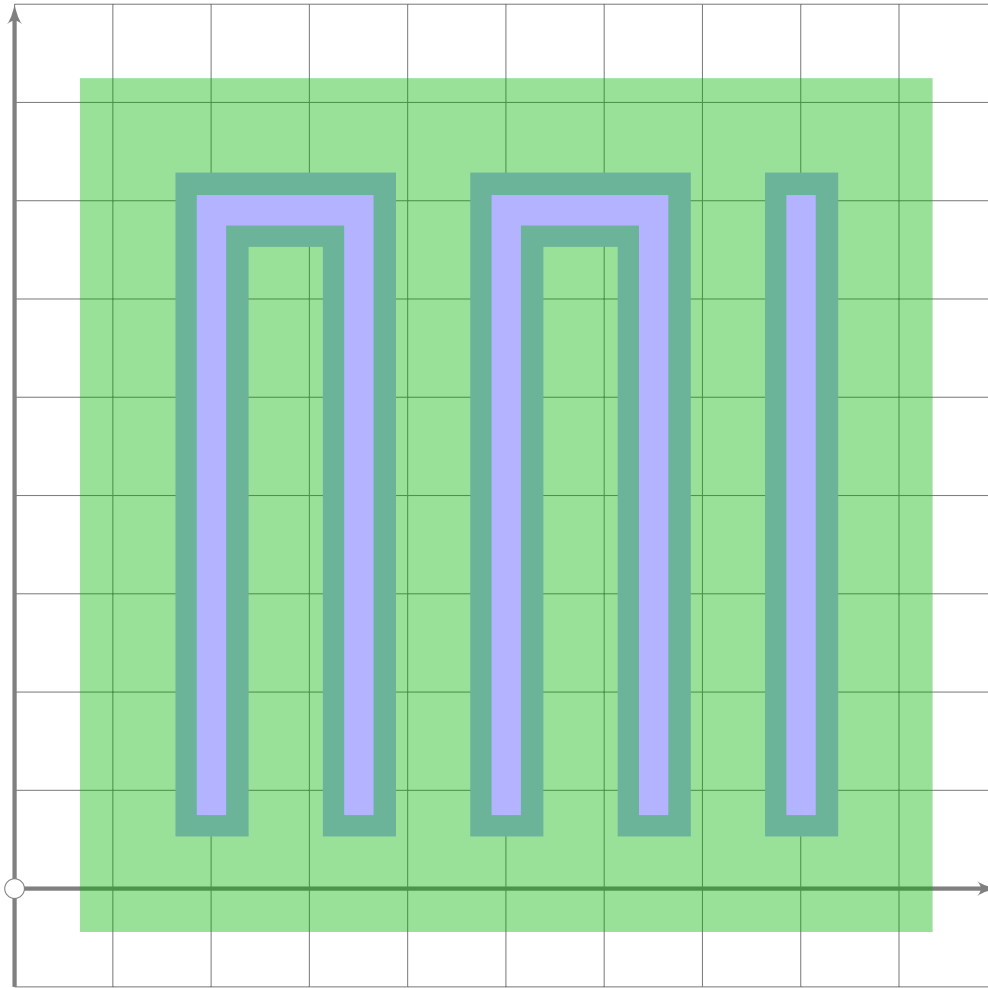


```
545 % #16 Sekiya
546 begintsuglyph("genjimon16";208);
547   genjimon.sekiya;
548 endtsuglyph;
549
```

U+F17D1
tsuku.genjimon17

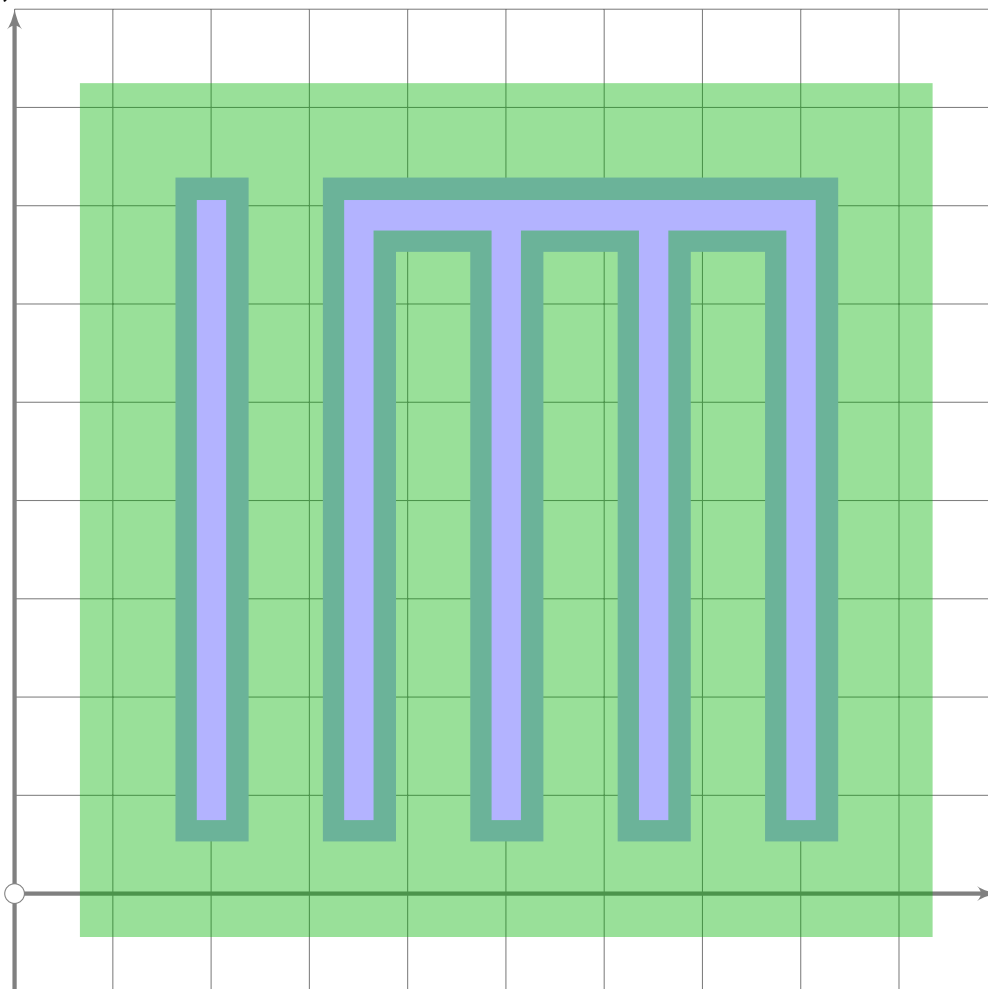


```
550 % #17 Eawase
551 begint Suglyph("genjimon17",209);
552   genjimon.eawase;
553 endtsuglyph;
554
```

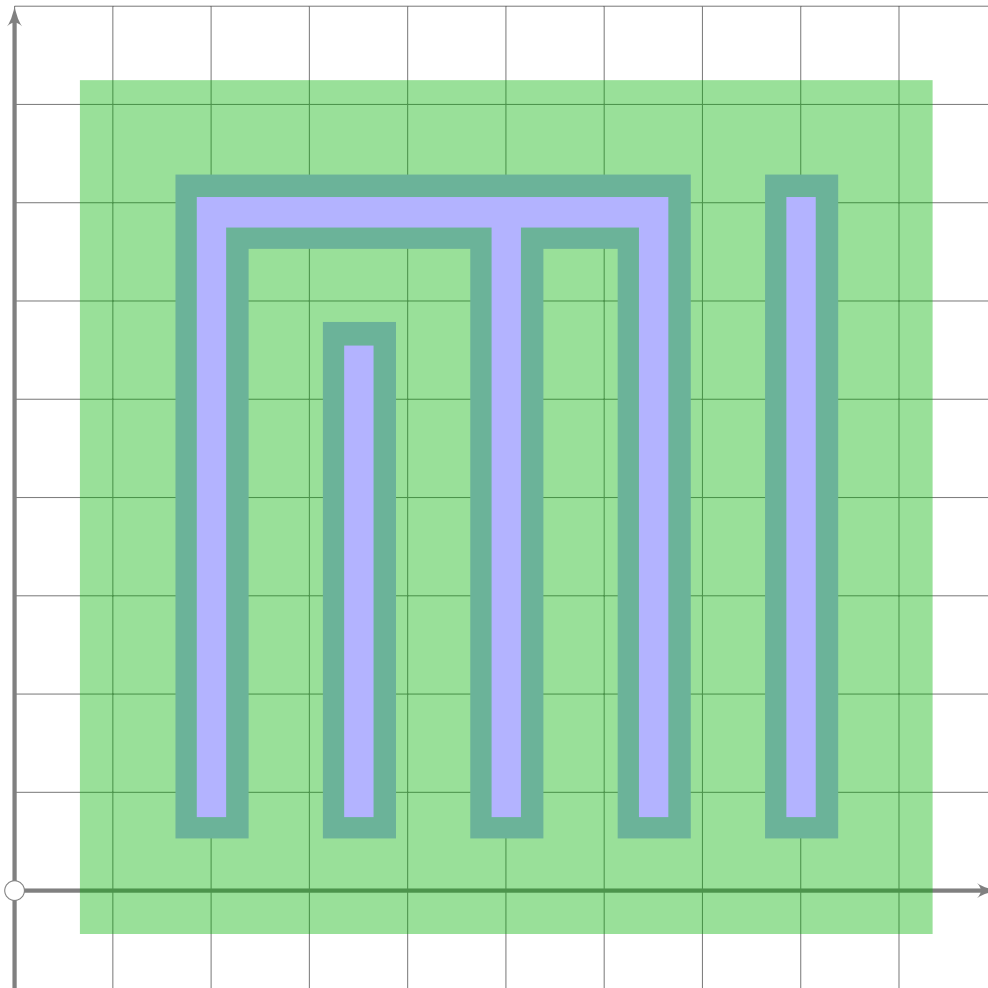


```
555 % #18 Matsukaze
556 beginsuglyph("genjimon18";210);
557   genjimon.matsukaze;
558 endsuglyph;
559
```

U+F17D3
tsuku.genjimon19

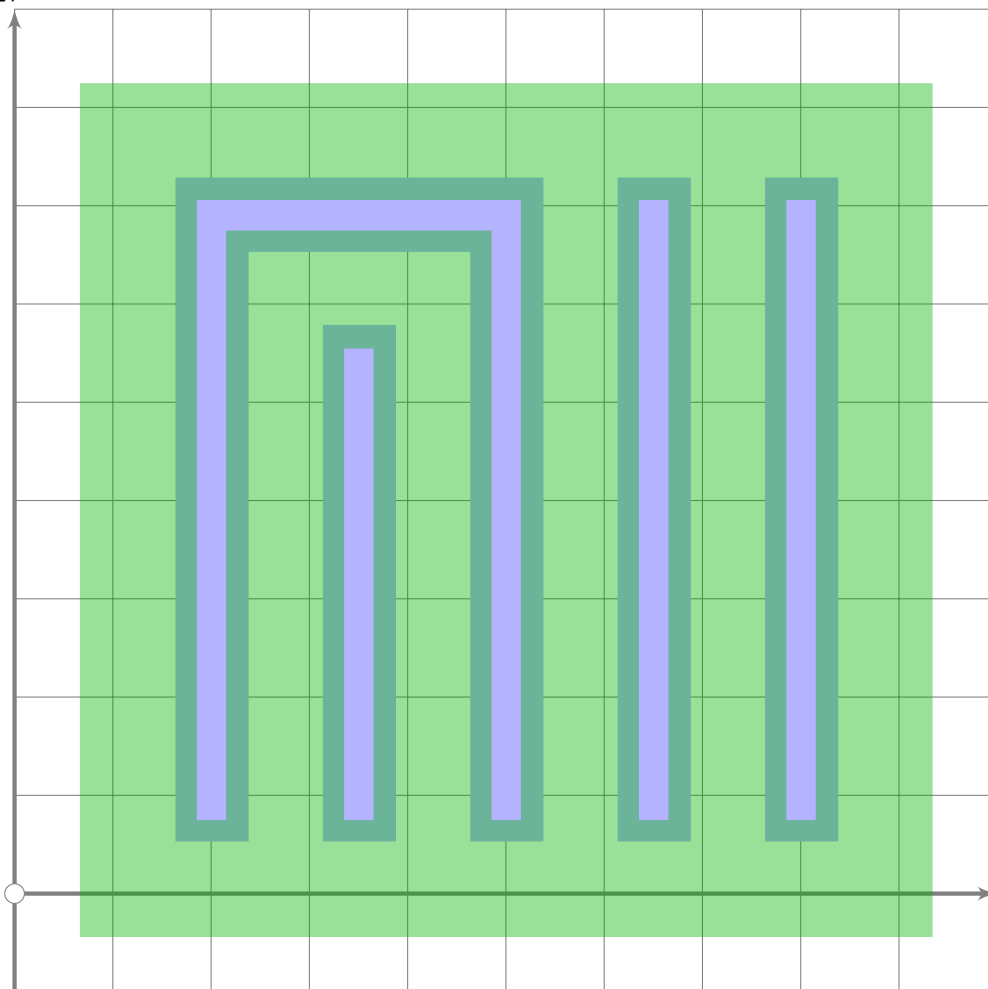


```
560 % #19 Usugumo
561 begintsuglyph("genjimon19";211);
562   genjimon.usugumo;
563 endtsuglyph;
564
```

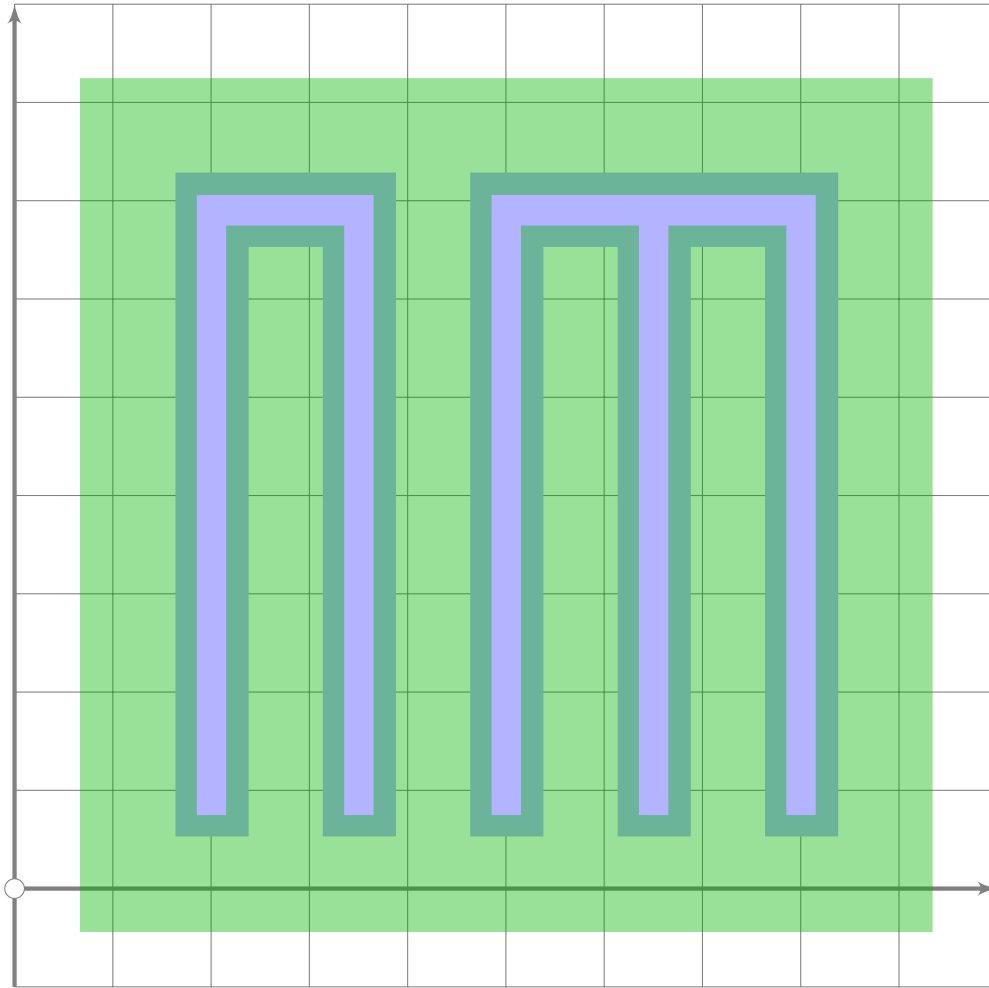


```
565 % #20 Asagao
566 begint Suglyph("genjimon20";212);
567   genjimon.asagao;
568 endts Suglyph;
569
```

U+F17D5
tsuku.genjimon21

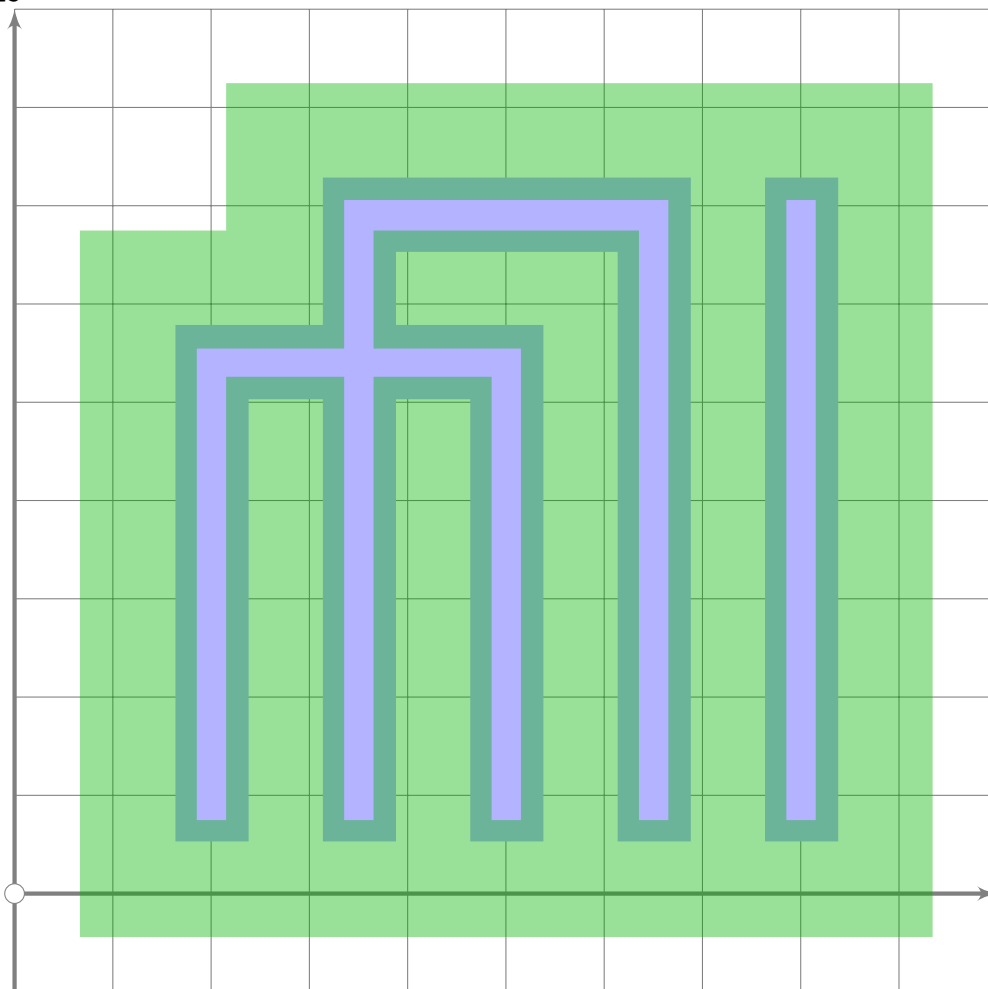


```
570 % #21 Otome
571 beginsuglyph("genjimon21",213);
572   genjimon.otome;
573 endsuglyph;
574
```

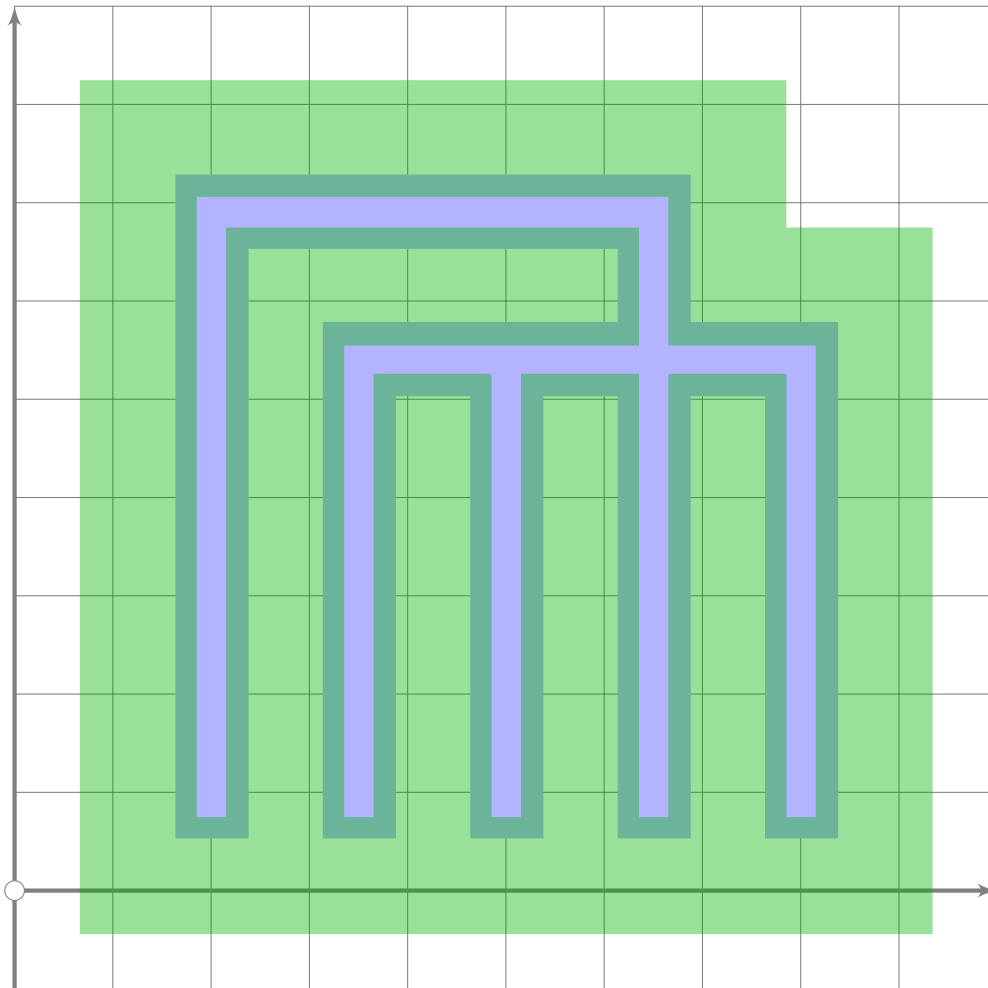



```
575 % #22 Tamakazura
576 beginsuglyph("genjimon22";214);
577   genjimon.tamakazura;
578 endsuglyph;
579
```

U+F17D7
tsuku.genjimon23

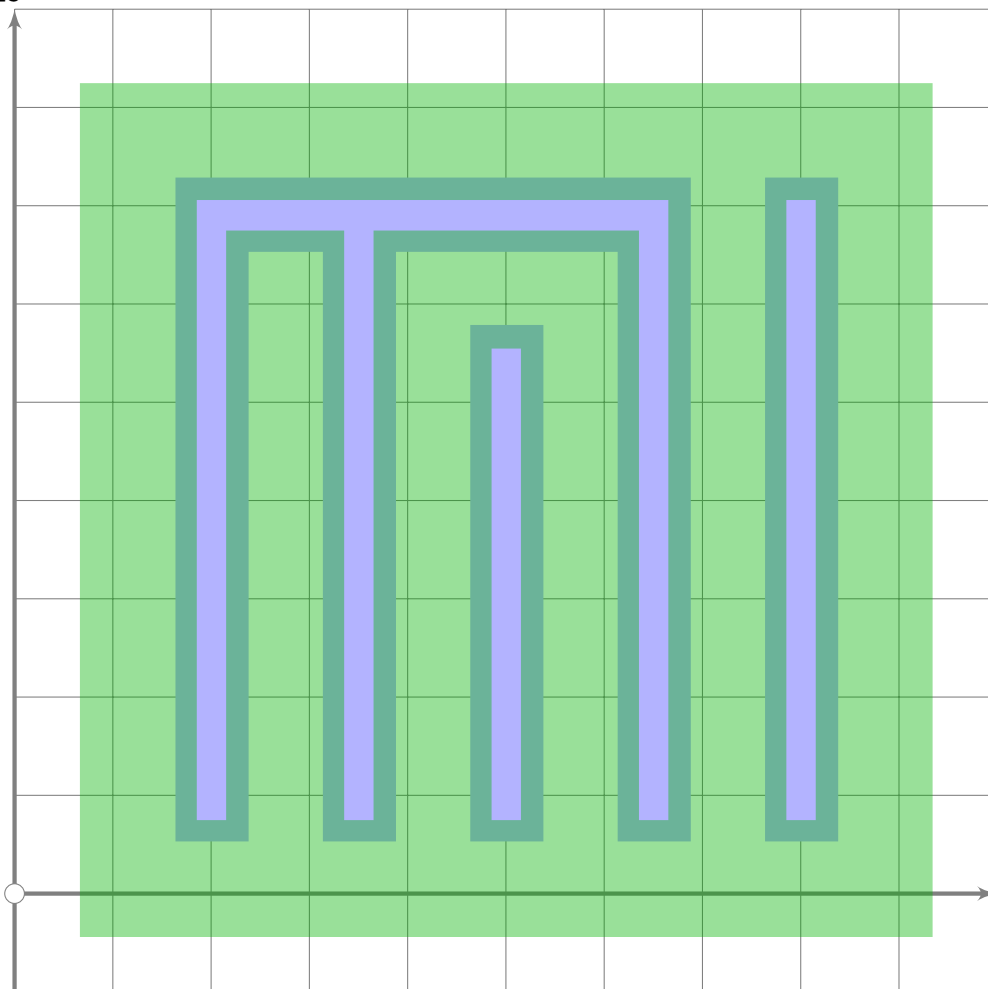


```
580 % #23 Hatsune
581 begint Suglyph("genjimon23",215);
582   genjimon.hatsune;
583 endtsuglyph;
584
```

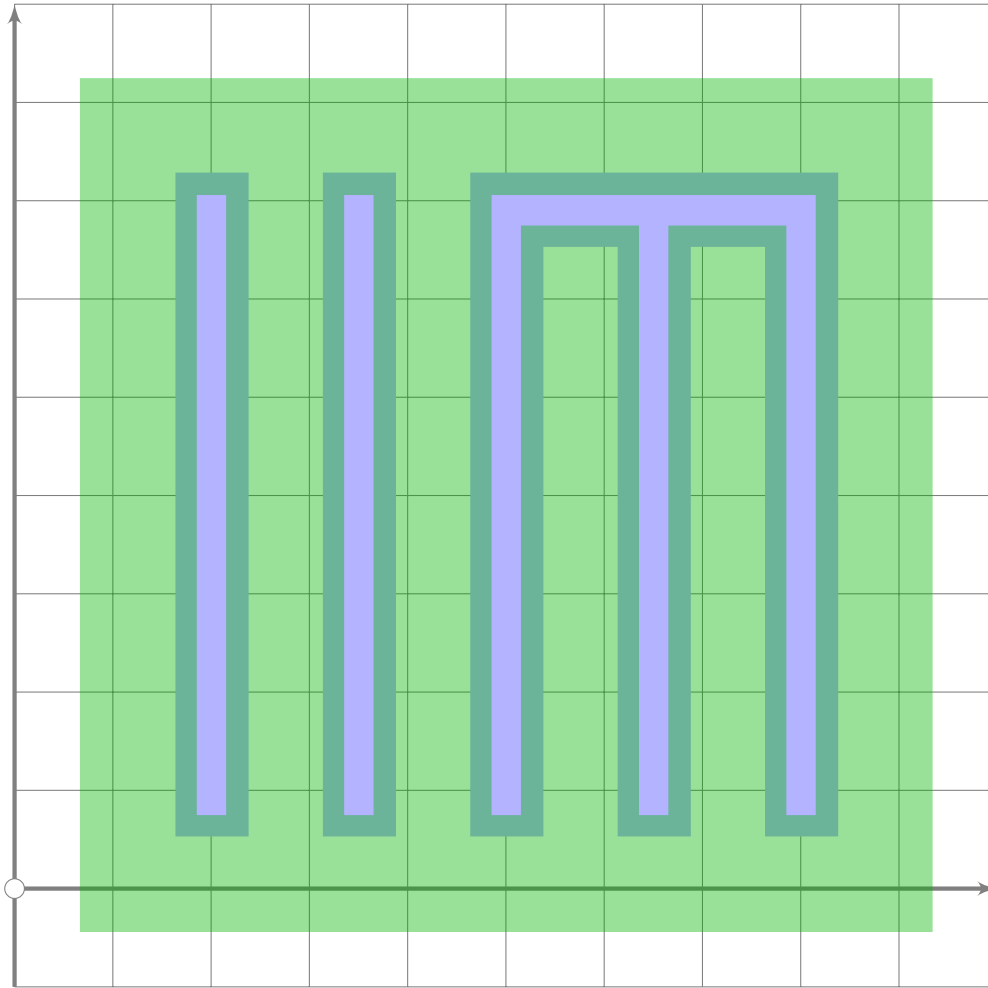


```
585 % #24 Kochou
586 begintsuglyph("genjimon24",216);
587   genjimon.kochou;
588 endtsuglyph;
589
```

U+F17D9
tsuku.genjimon25

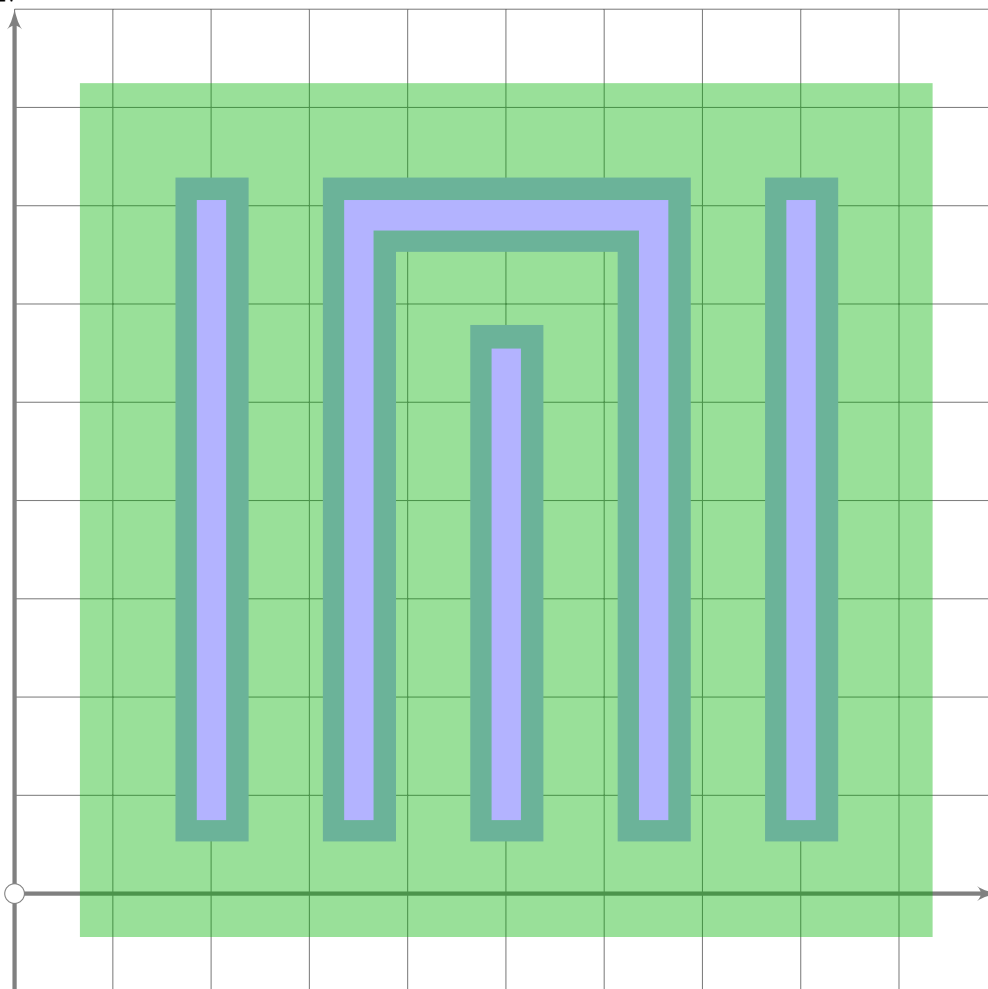


```
590 % #25 Hotaru
591 begintsuglyph("genjimon25",217);
592   genjimon.hotaru;
593 endtsuglyph;
594
```

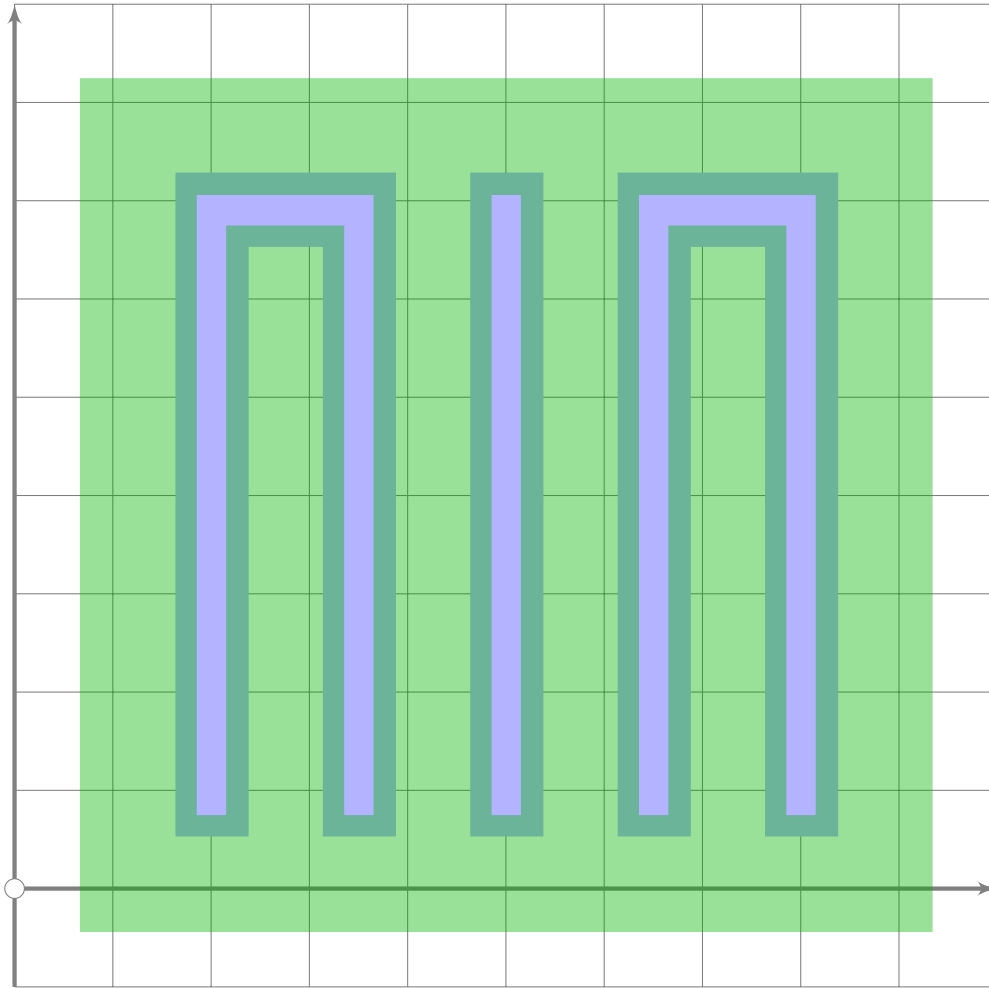


```
595 % #26 Tokonatsu
596 beginsuglyph("genjimon26",218);
597   genjimon.tokonatsu;
598 endsuglyph;
599
```

U+F17DB
tsuku.genjimon27

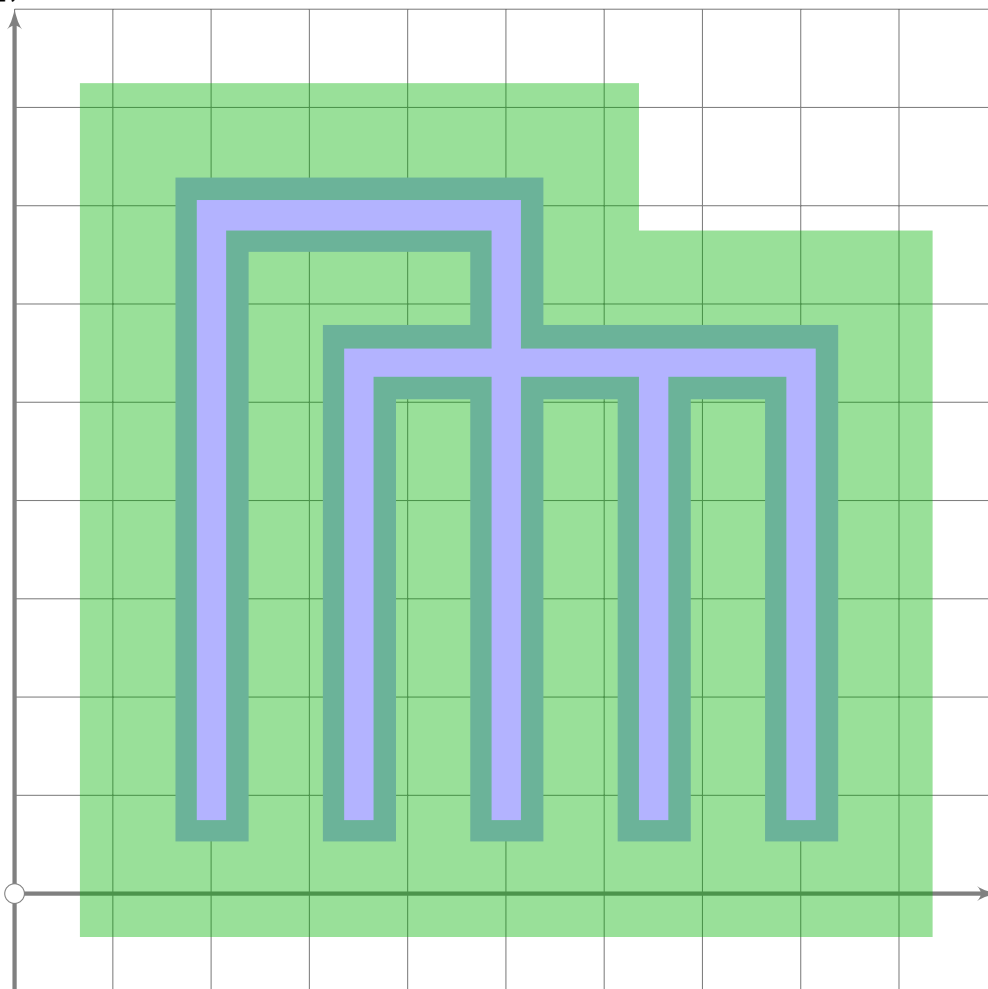


```
600 % #27 Kagaribi
601 begintsuglyph("genjimon27";219);
602   genjimon.kagaribi;
603 endtsuglyph;
604
```

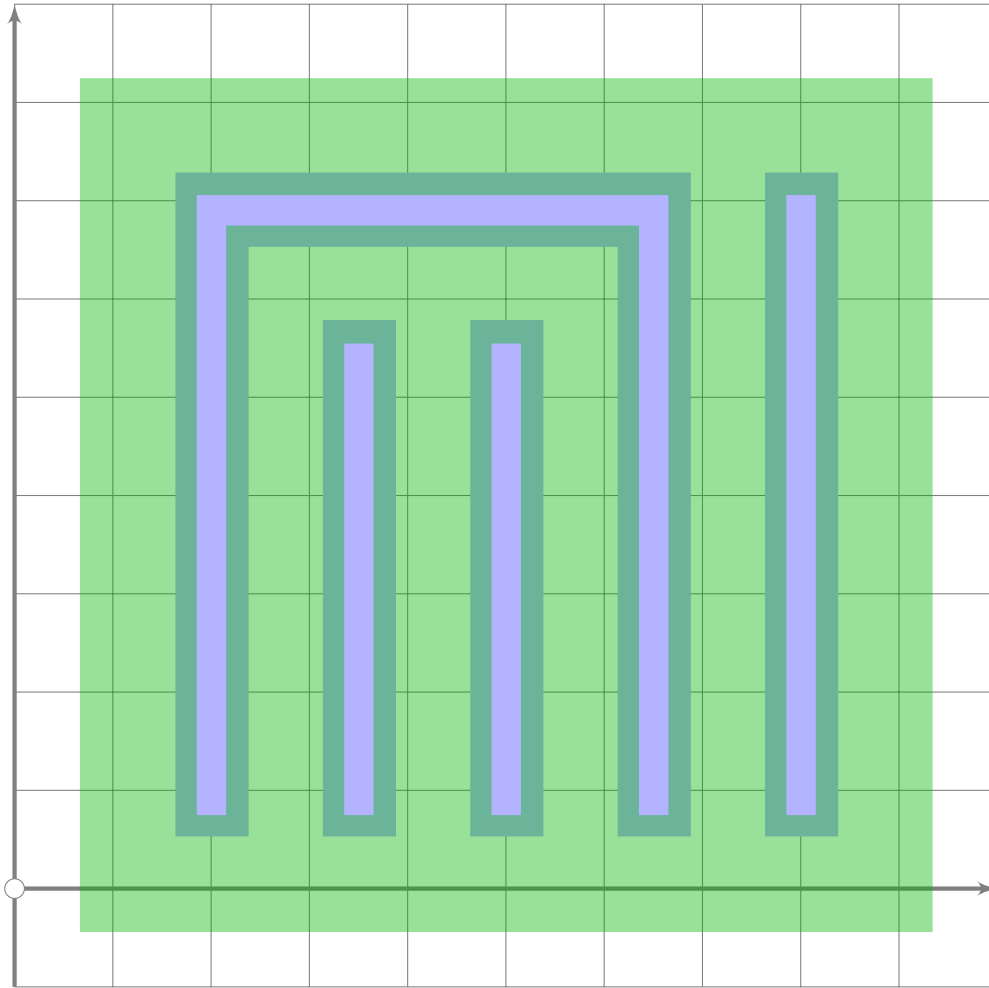


```
605 % #28 Nowaki
606 beginsuglyph("genjimon28",220);
607   genjimon.nowaki;
608 endsuglyph;
609
```

U+F17DD
tsuku.genjimon29

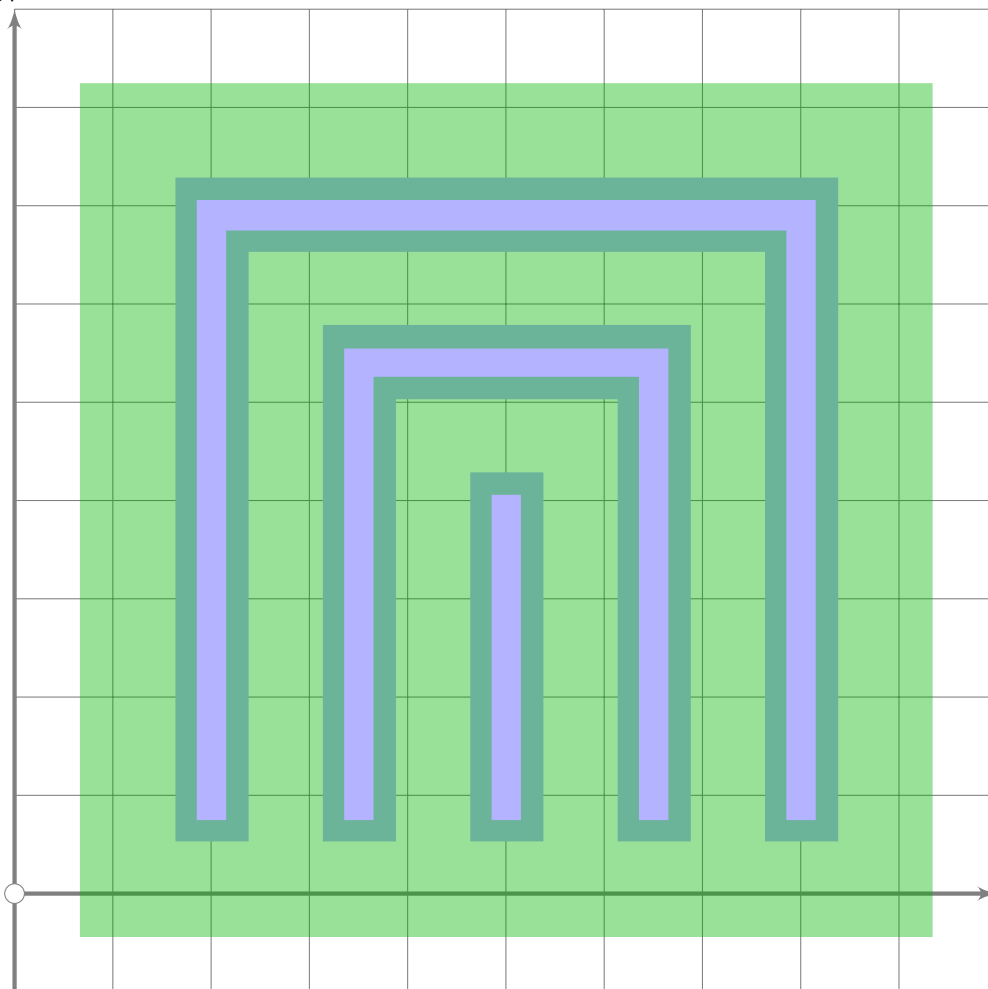


```
610 % #29 Miyuki
611 begint Suglyph("genjimon29";221);
612   genjimon.miyuki;
613 endt Suglyph;
614
```

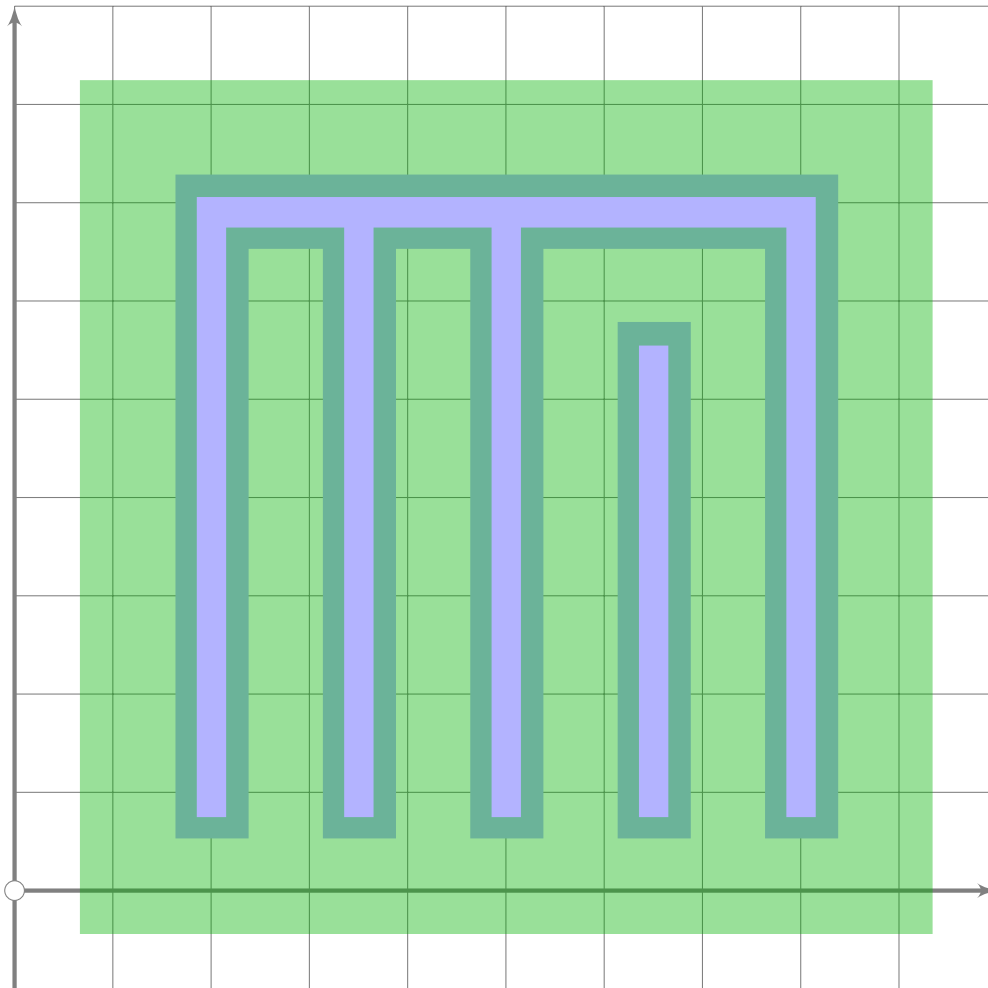



```
615 % #30 Fujibakama
616 begintsuglyph("genjimon30";222);
617   genjimon.fujibakama;
618 endtsuglyph;
619
```

U+F17DF
tsuku.genjimon31

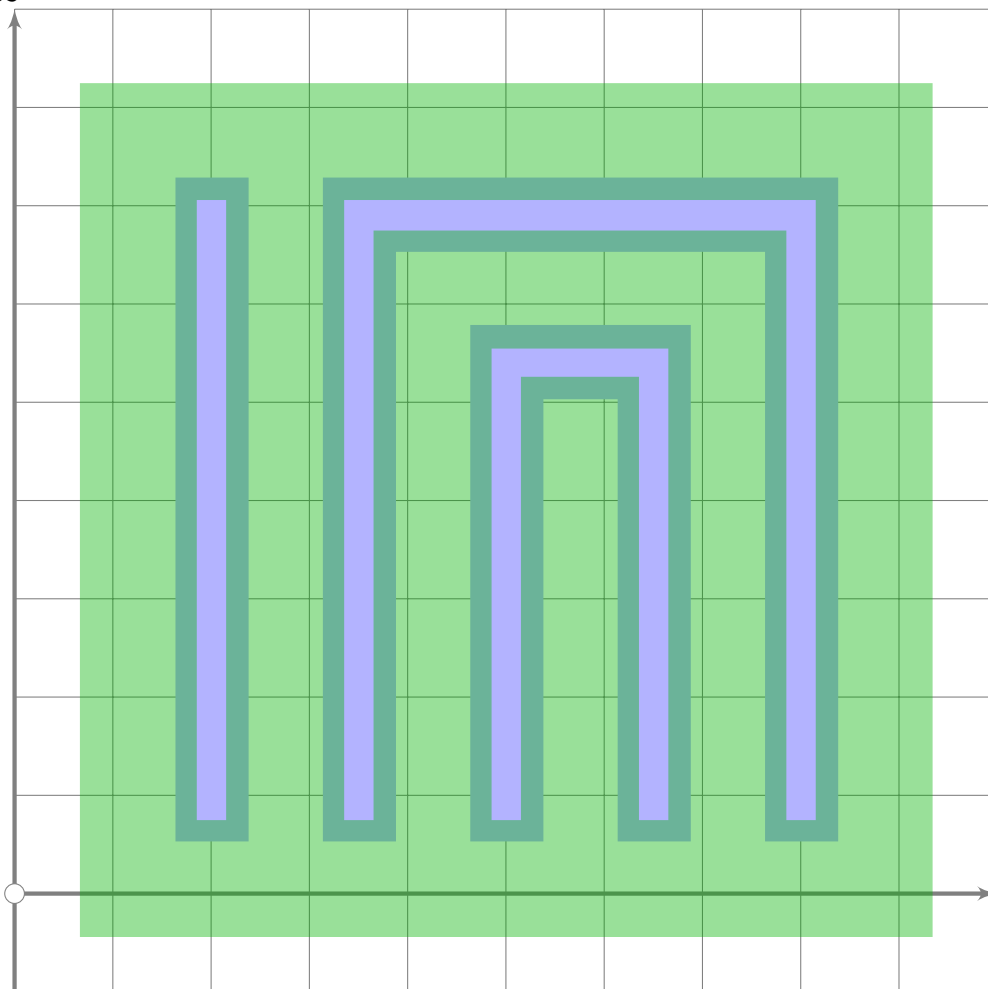


```
620 % #31 Makibashira
621 begintsuglyph("genjimon31",223);
622   genjimon.makibashira;
623 endtsuglyph;
624
```

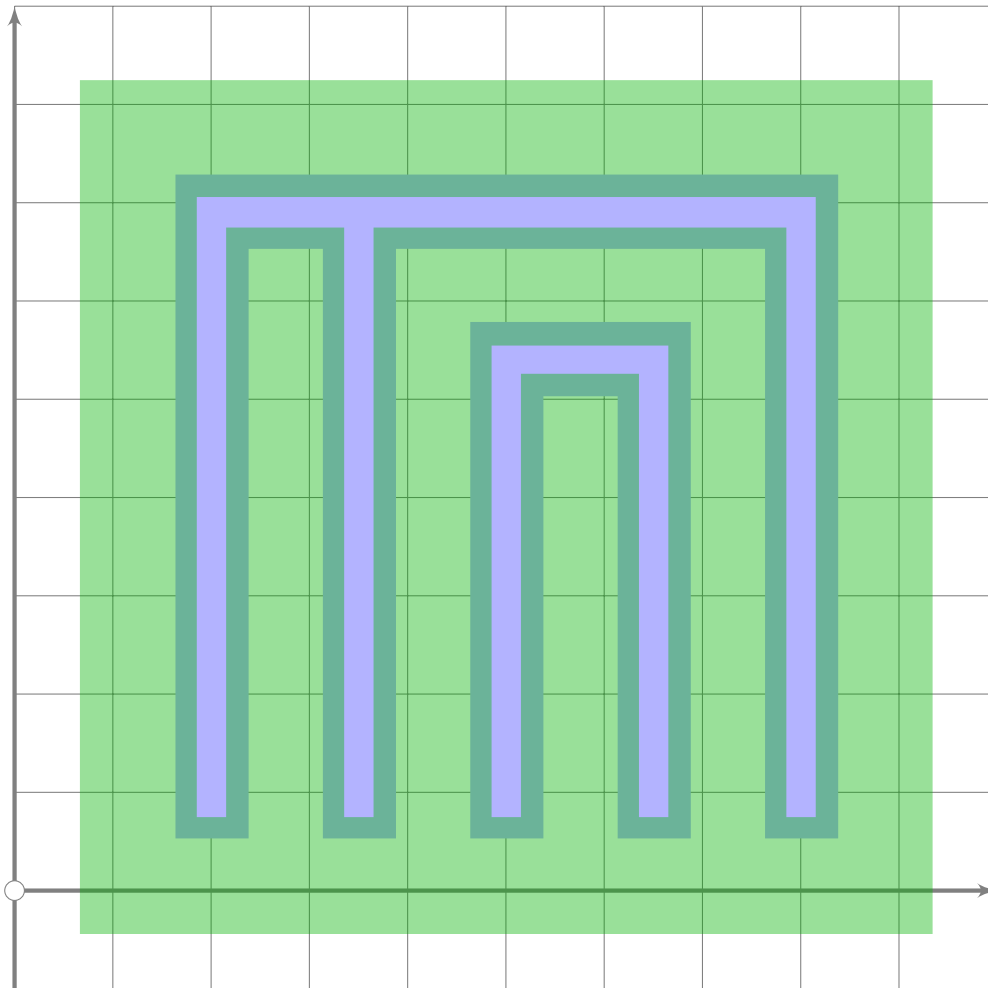


```
625 % #32 Umegae
626 begint Suglyph("genjimon32",224);
627   genjimon.umegae;
628 endts Suglyph;
629
```

U+F17E1
tsuku.genjimon33

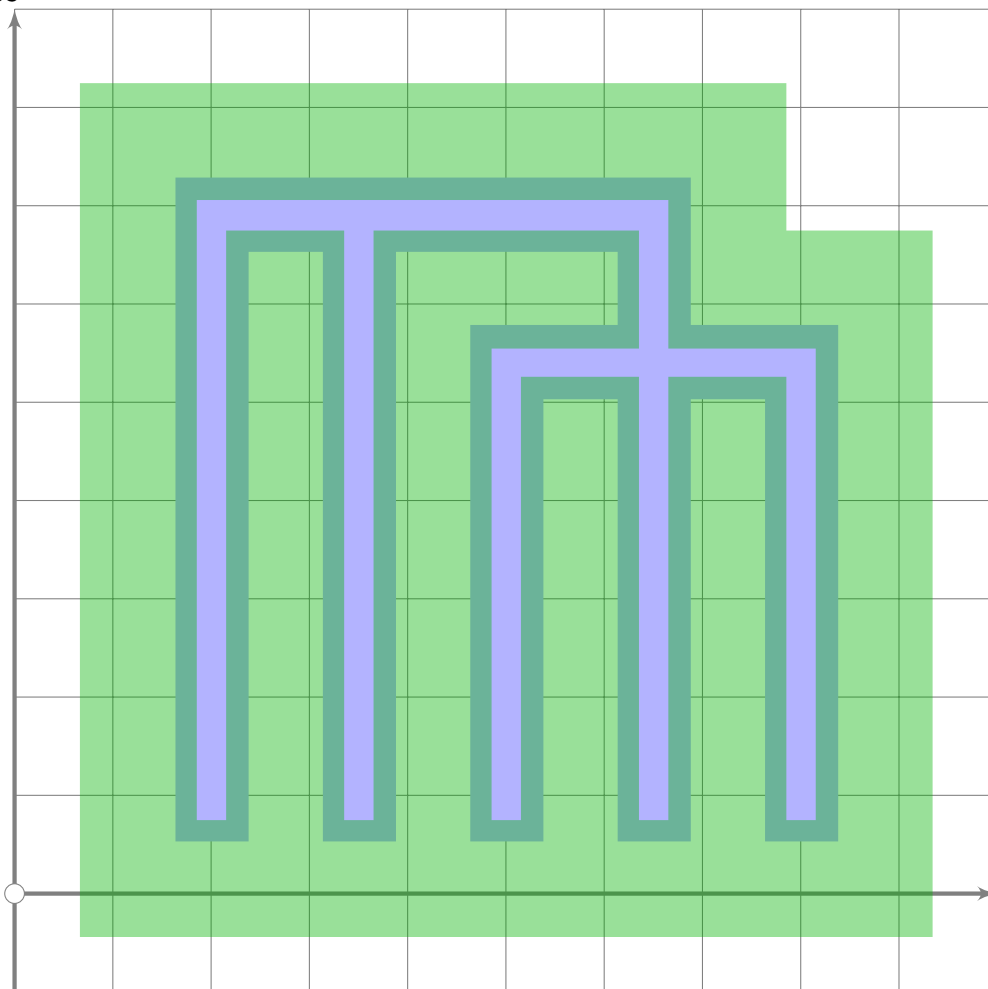


```
630 % #33 Fuji no Uraba
631 begintsuglyph("genjimon33",225);
632   genjimon.fuji_no_uraba;
633 endtsuglyph;
634
```

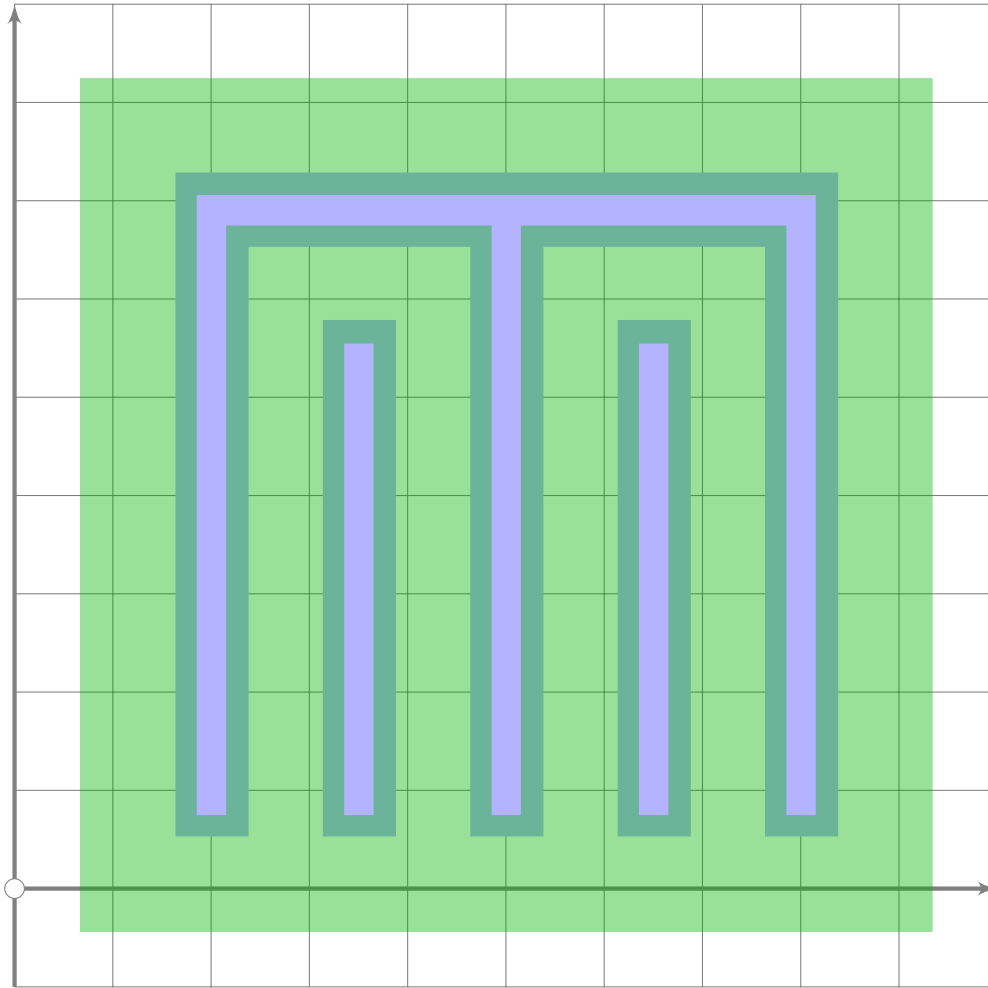


```
635 % #34 Wakana no Jou
636 begint Suglyph("genjimon34",226);
637     genjimon.wakana_no_jou;
638 endts Suglyph;
639
```

U+F17E3
tsuku.genjimon35

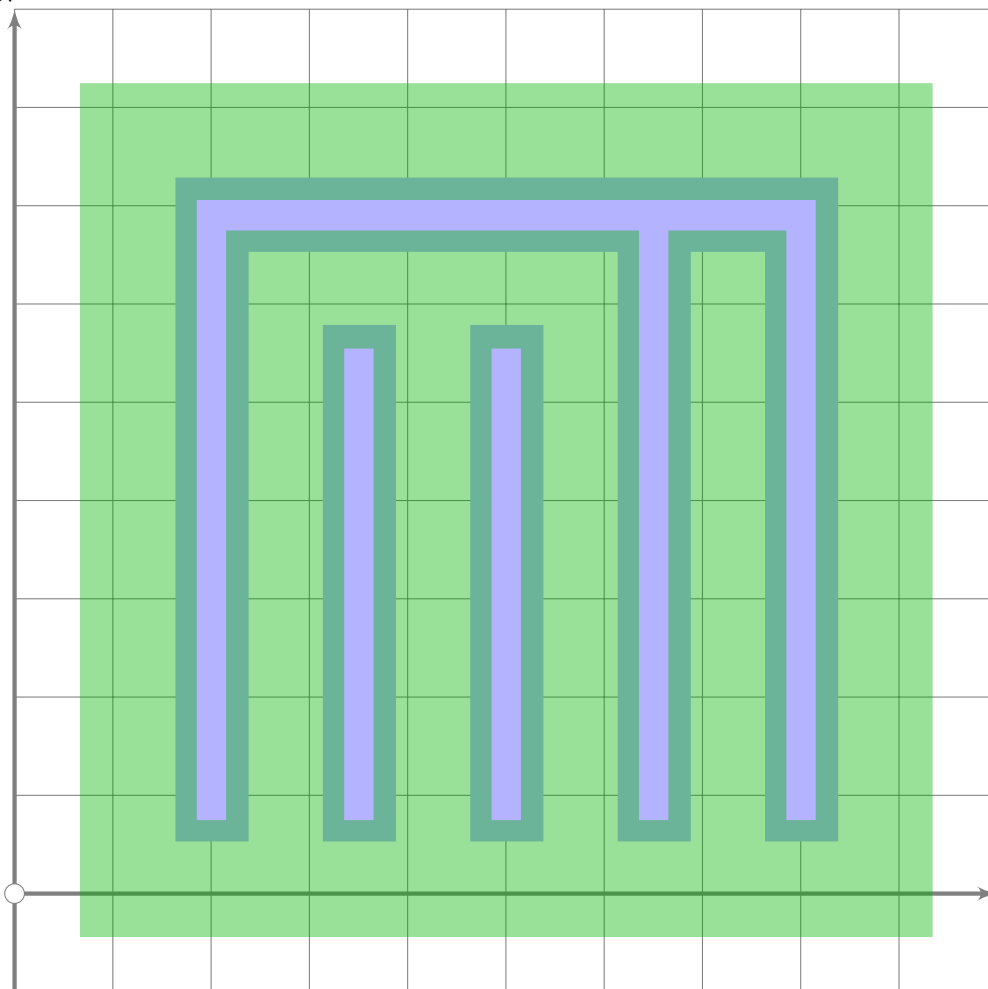


```
640 % #35 Wakana no Ge
641 begint Suglyph("genjimon35";227);
642   genjimon.wakana_no_ge;
643 endts Suglyph;
644
```

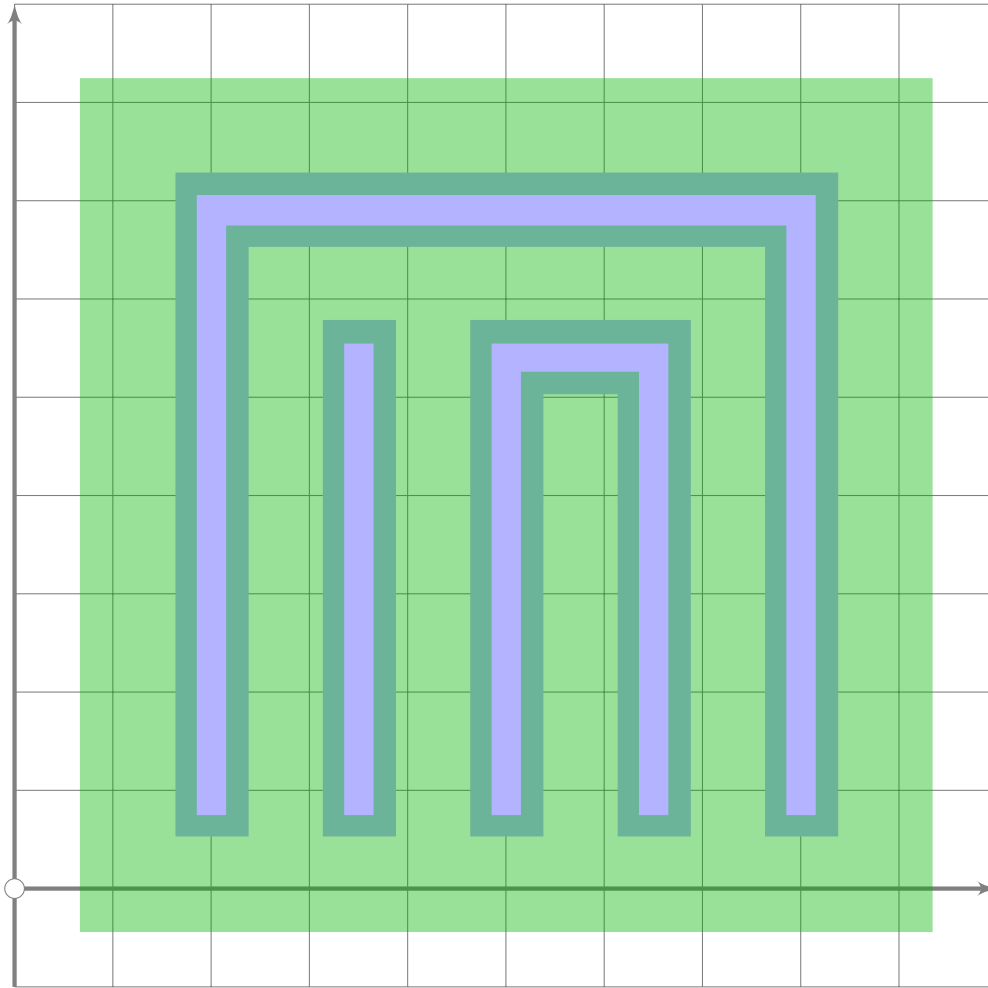


```
645 % #36 Kashiwagi
646 begintsuglyph("genjimon36",228);
647   genjimon.kashiwagi;
648 endtsuglyph;
649
```

U+F17E5
tsuku.genjimon37

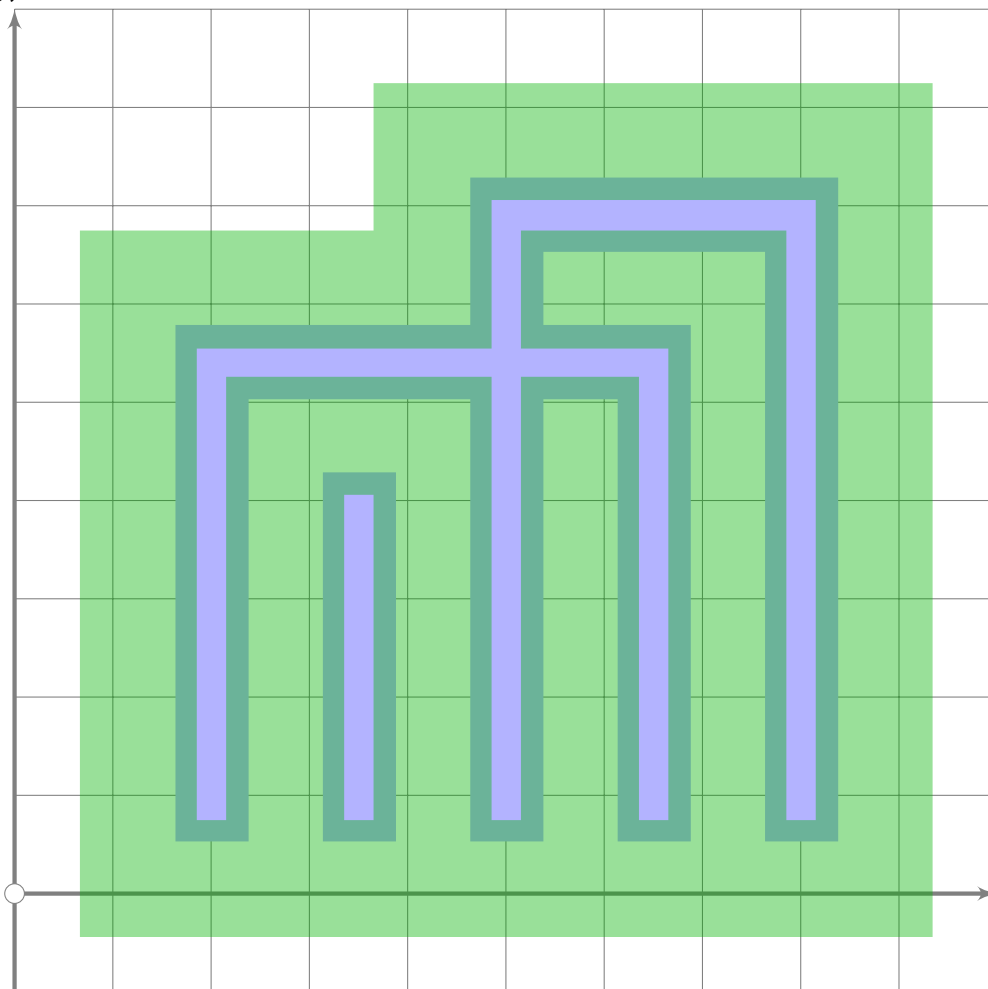


```
650 % #37 Yokobue
651 begintsuglyph("genjimon37",229);
652   genjimon.yokobue;
653 endtsuglyph;
654
```

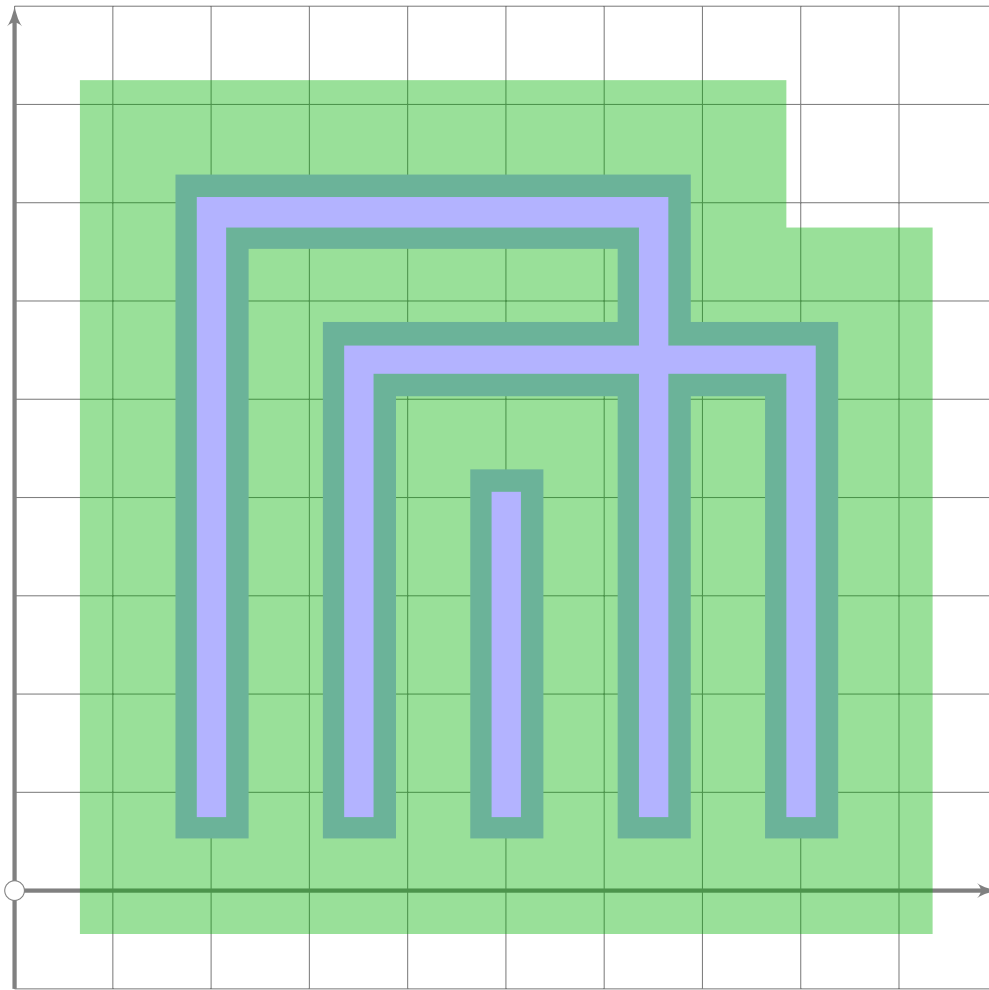



```
655 % #38 Suzumushi
656 begintsuglyph("genjimon38",230);
657   genjimon.suzumushi;
658 endtsuglyph;
659
```

U+F17E7
tsuku.genjimon39

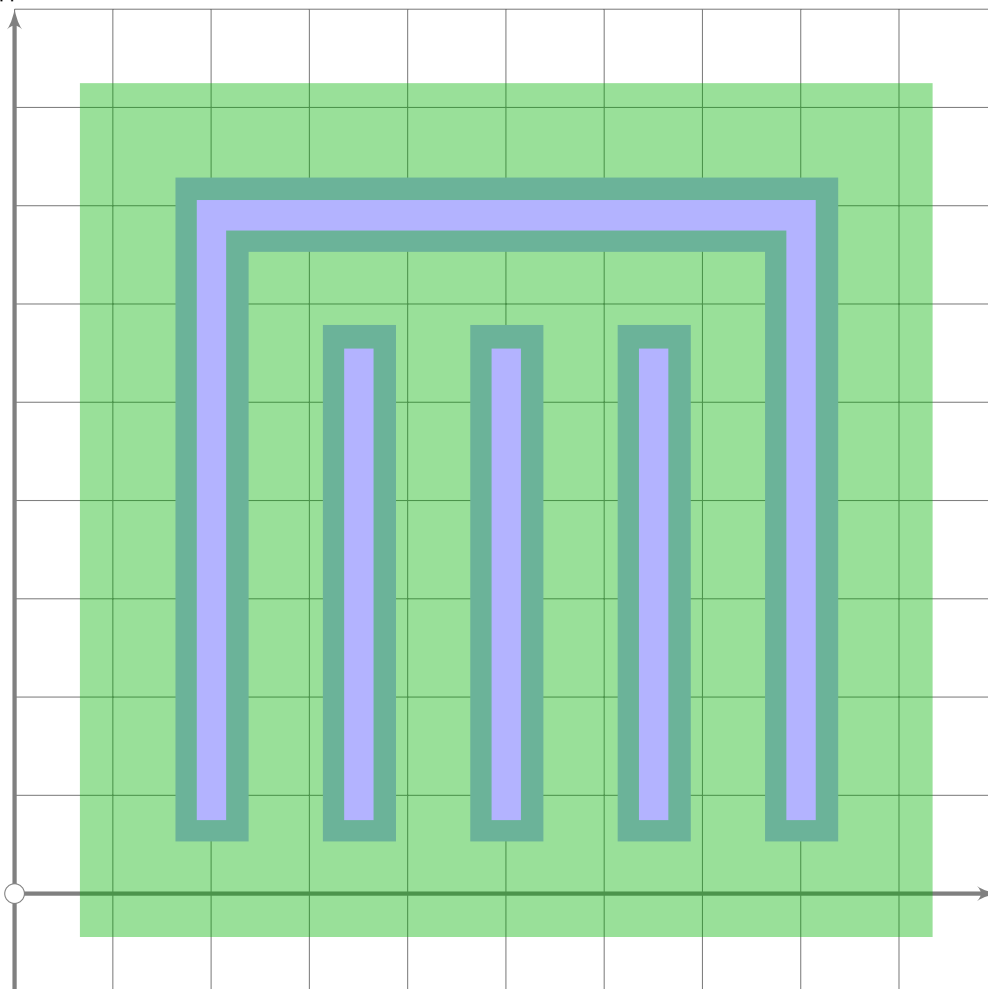


```
660 % #39 Yuugiri
661 begintsuglyph("genjimon39",231);
662   genjimon.yuugiri;
663 endtsuglyph;
664
```

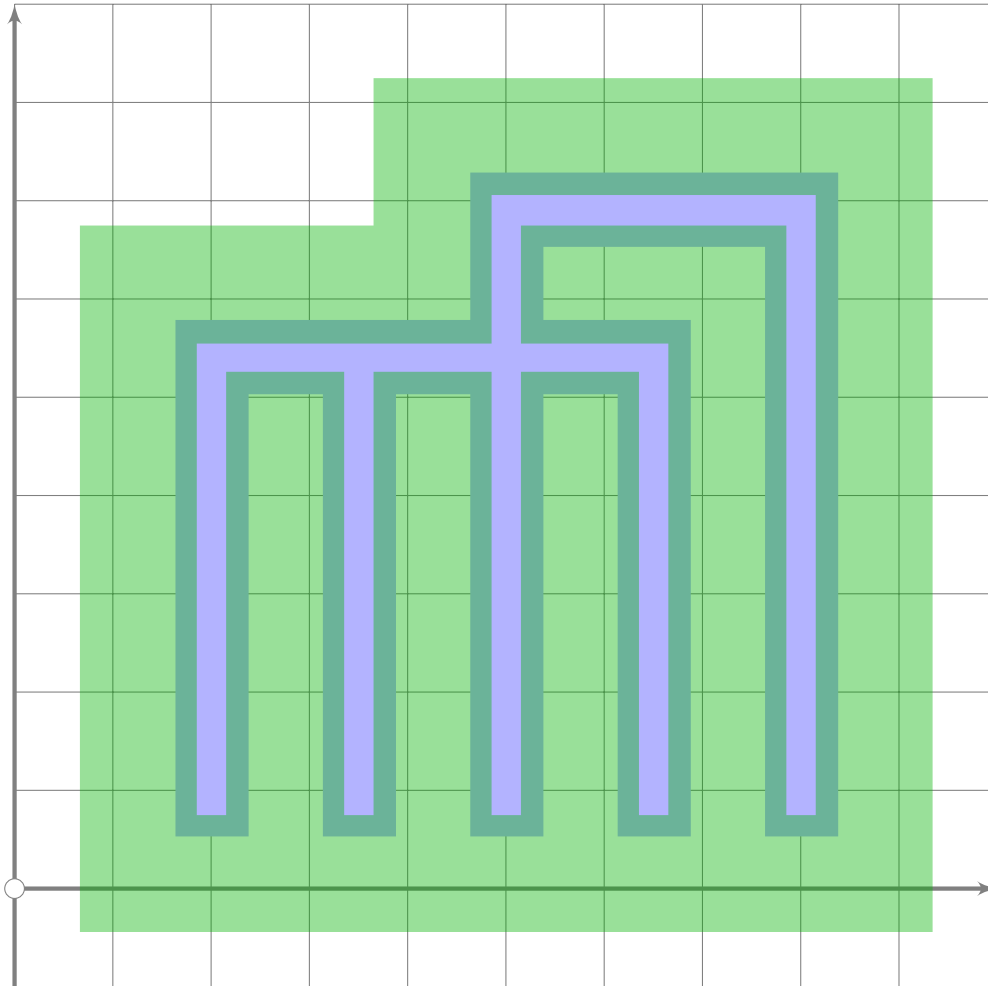


```
665 % #40 Minori
666 begintsuglyph("genjimon40",232);
667     genjimon.minori;
668 endsuglyph;
669
```

U+F17E9
tsuku.genjimon41

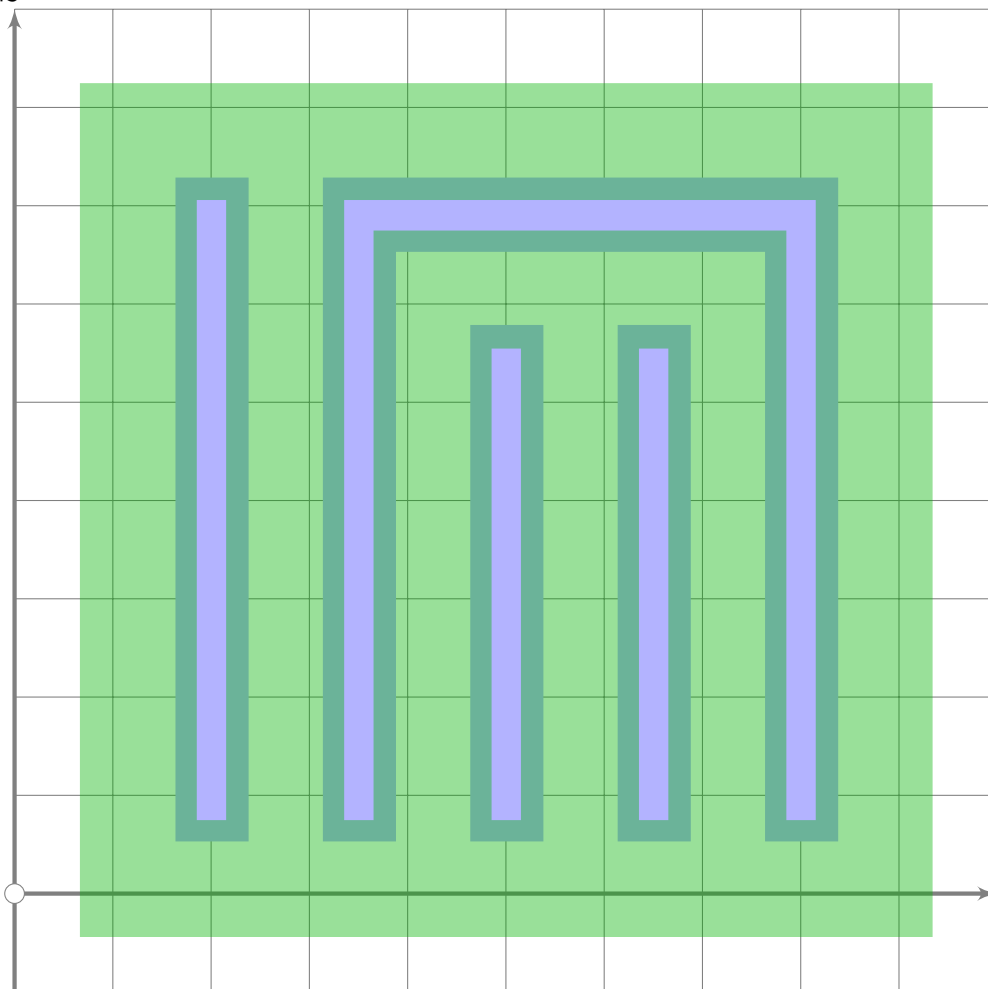


```
670 % #41 Maboroshi
671 begintsuglyph("genjimon41",233);
672   genjimon.maboroshi;
673 endsuglyph;
674
```

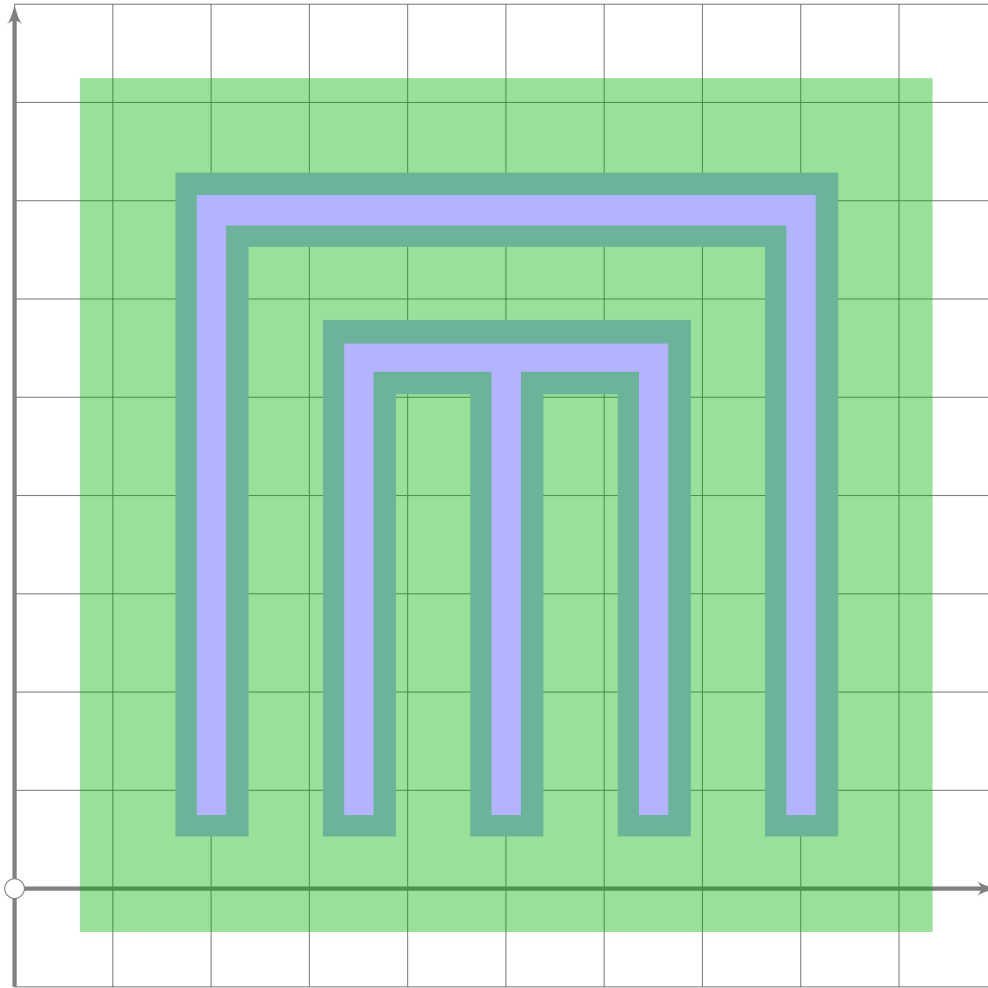


```
675 % #42 Ninounomiya
676 begintsuglyph("genjimon42";234);
677   genjimon.ninounomiya;
678 endtsuglyph;
679
```

U+F17EB
tsuku.genjimon43

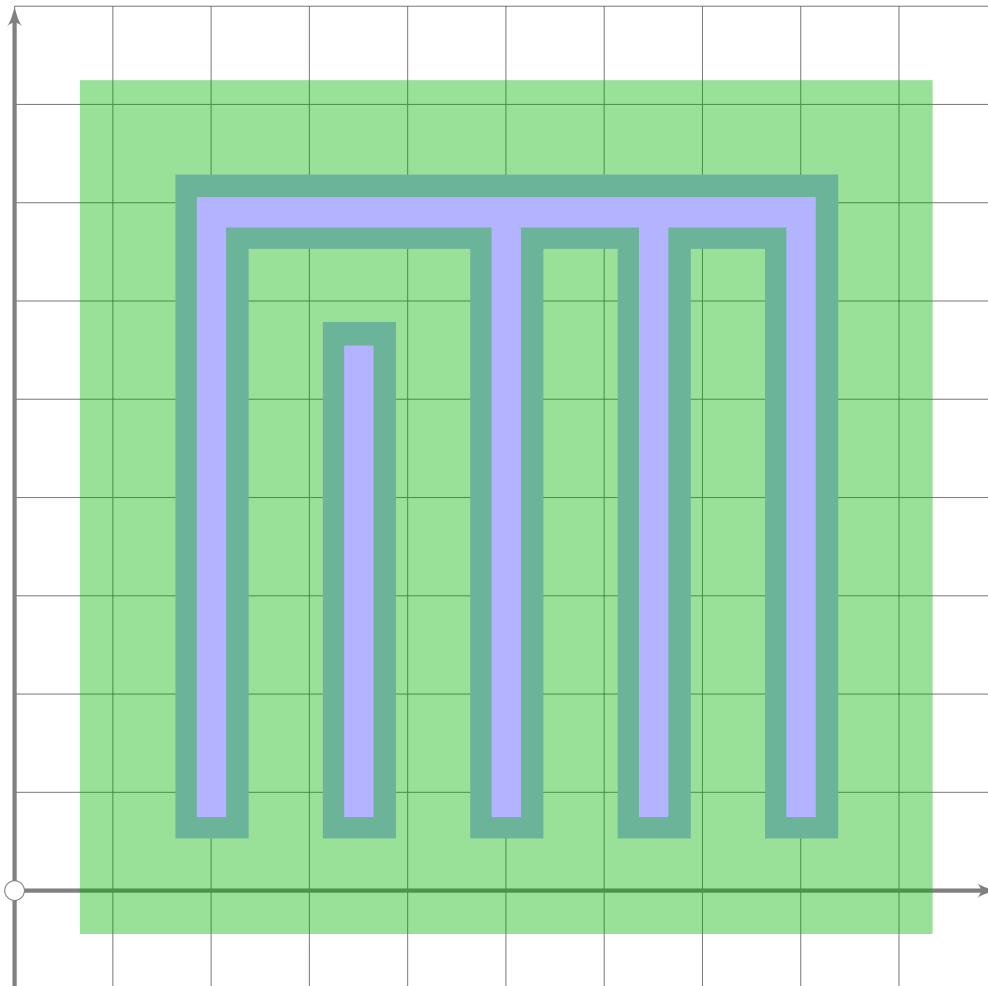


```
680 % #43 Koubai
681 begintsuglyph("genjimon43",235);
682   genjimon.koubai;
683 endtsuglyph;
684
```

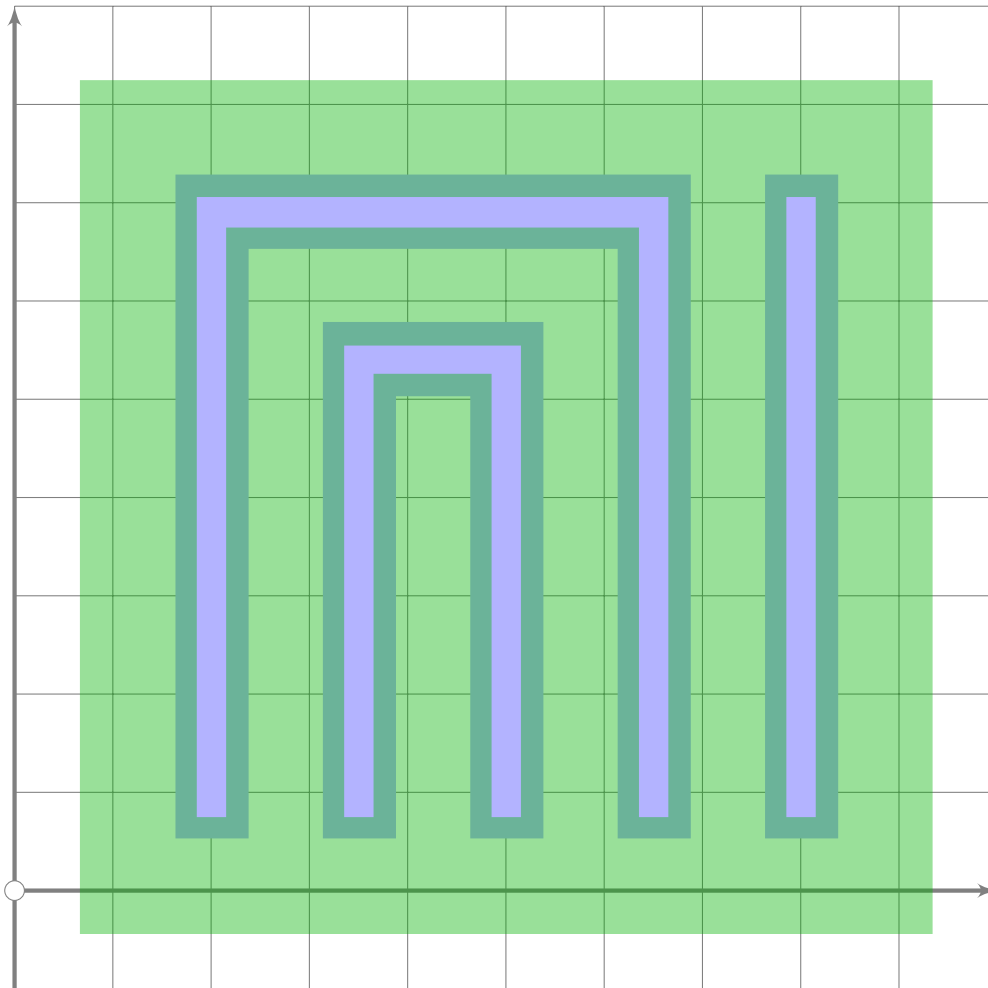


```
685 % #44 Takegawa
686 begintsuglyph("genjimon44";236);
687   genjimon.takegawa;
688 endtsuglyph;
689
```

U+F17ED
tsuku.genjimon45



```
690 % #45 Hashihime
691 begint Suglyph("genjimon45",237);
692   genjimon.hashihime;
693 endt Suglyph;
694
```

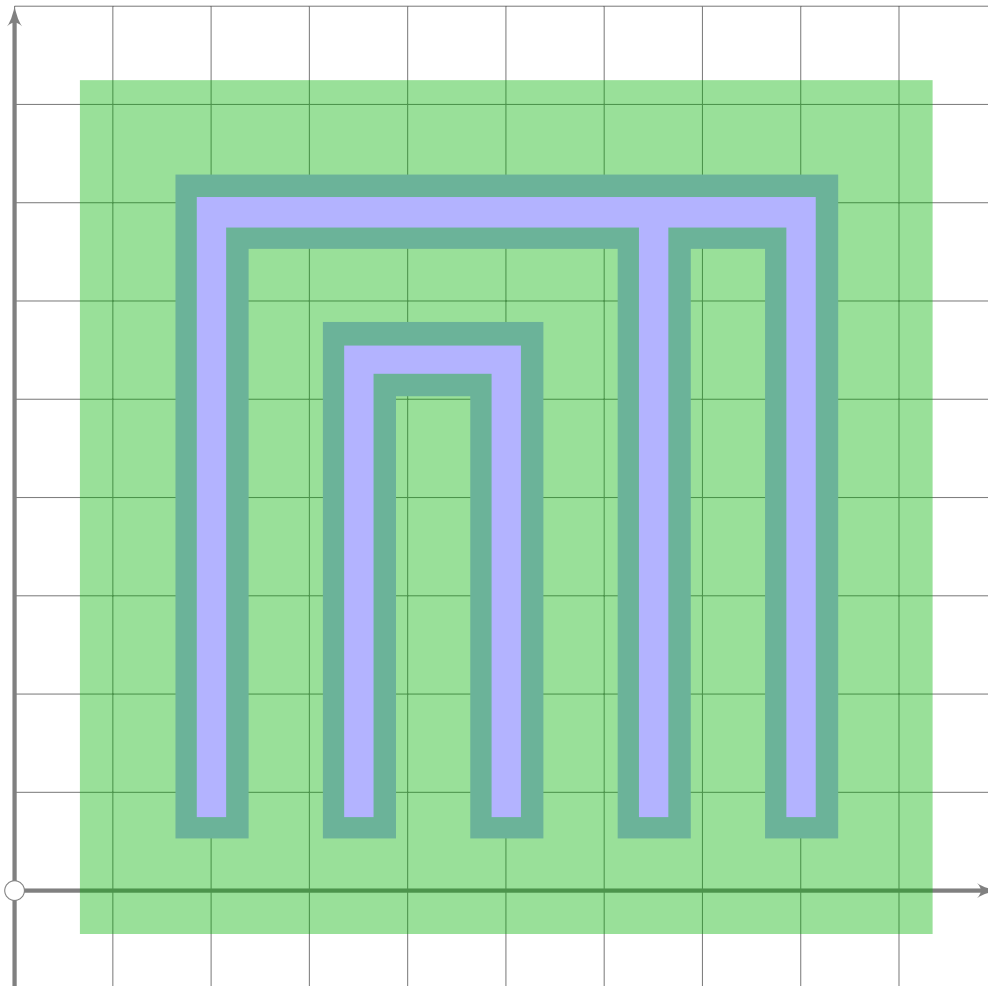



```

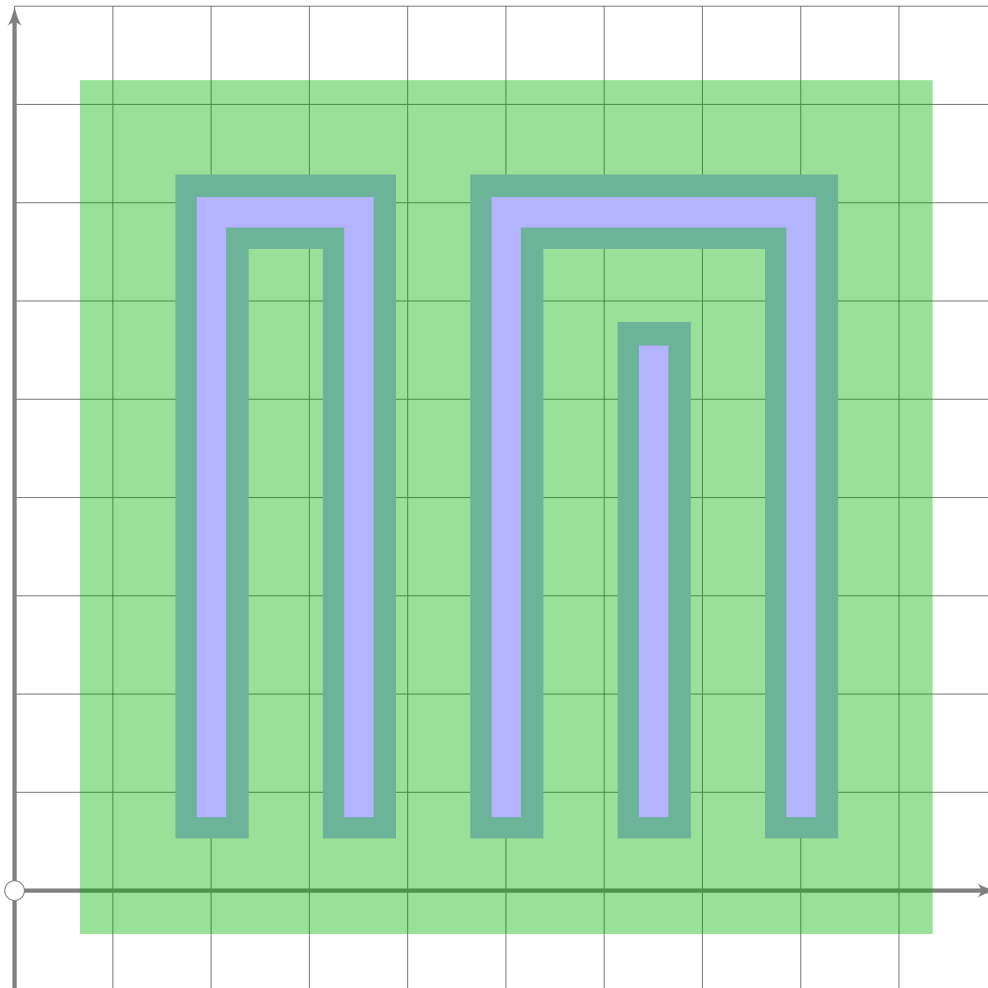
695 % #46 Shii ga Moto
696 begint Suglyph("genjimon46",238);
697     genjimon.shii_ga_moto;
698 endts Suglyph;
699

```

U+F17EF
tsuku.genjimon47

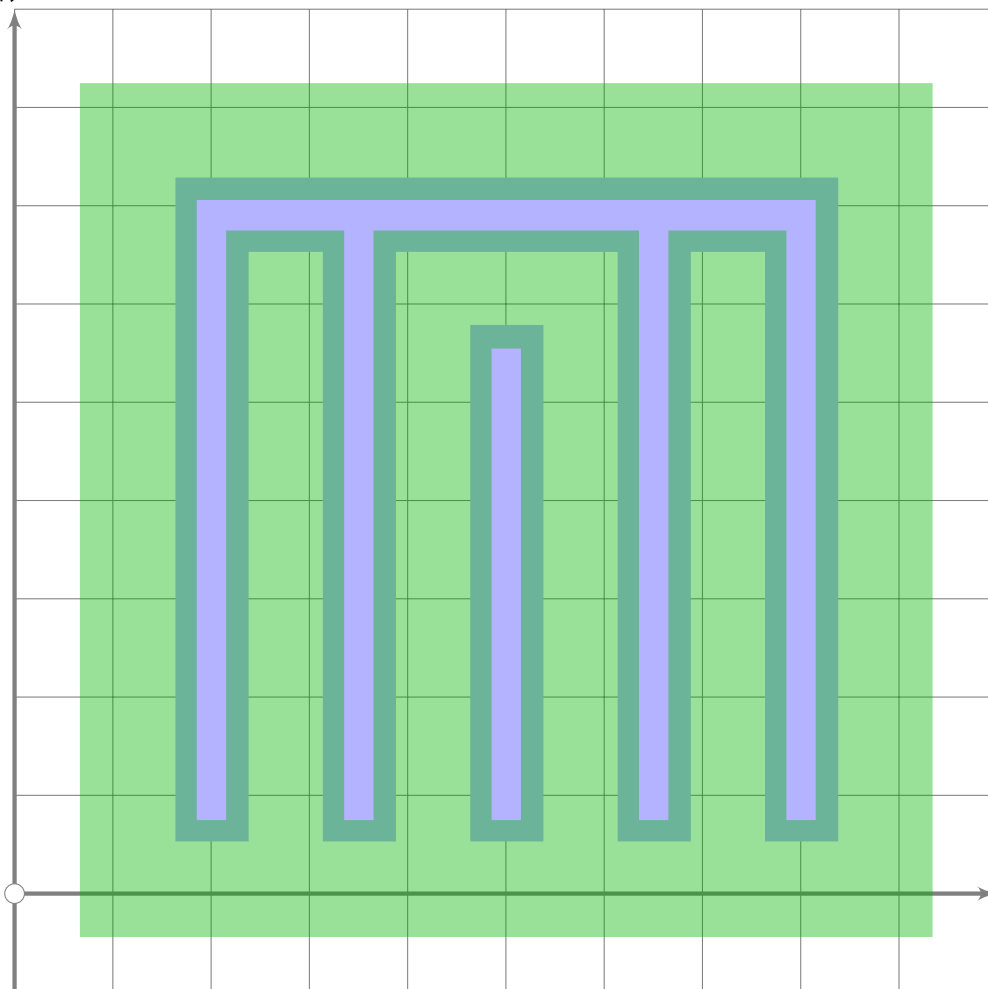


```
700 % #47 Agemaki
701 begint Suglyph("genjimon47";239);
702   genjimon.agemaki;
703 endts Suglyph;
704
```



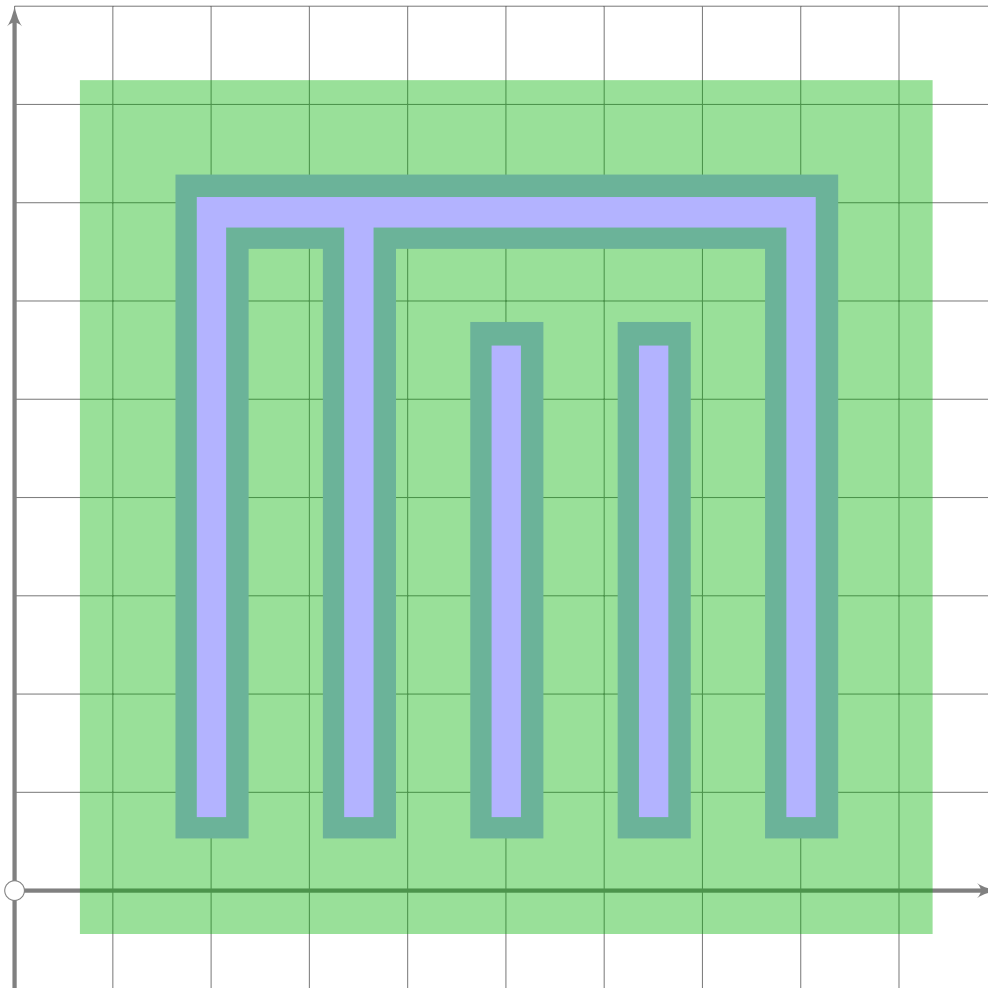
```
705 % #48 Sawarabi
706 begint Suglyph("genjimon48",240);
707   genjimon.sawarabi;
708 endtsuglyph;
709
```

U+F17F1
tsuku.genjimon49



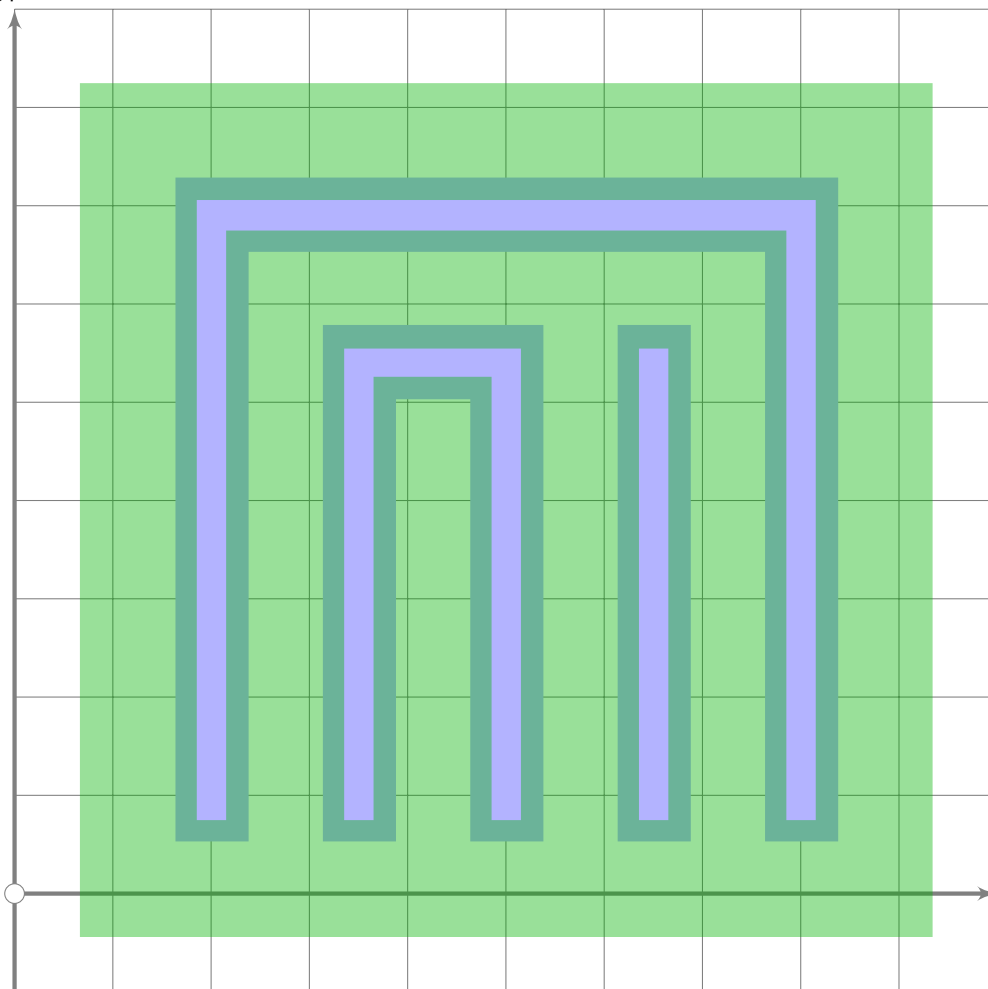
```
710 % #49 Yadorigi
711 begintsuglyph("genjimon49",241);
712   genjimon.yadorigi;
713 endtsuglyph;
714
```

F17

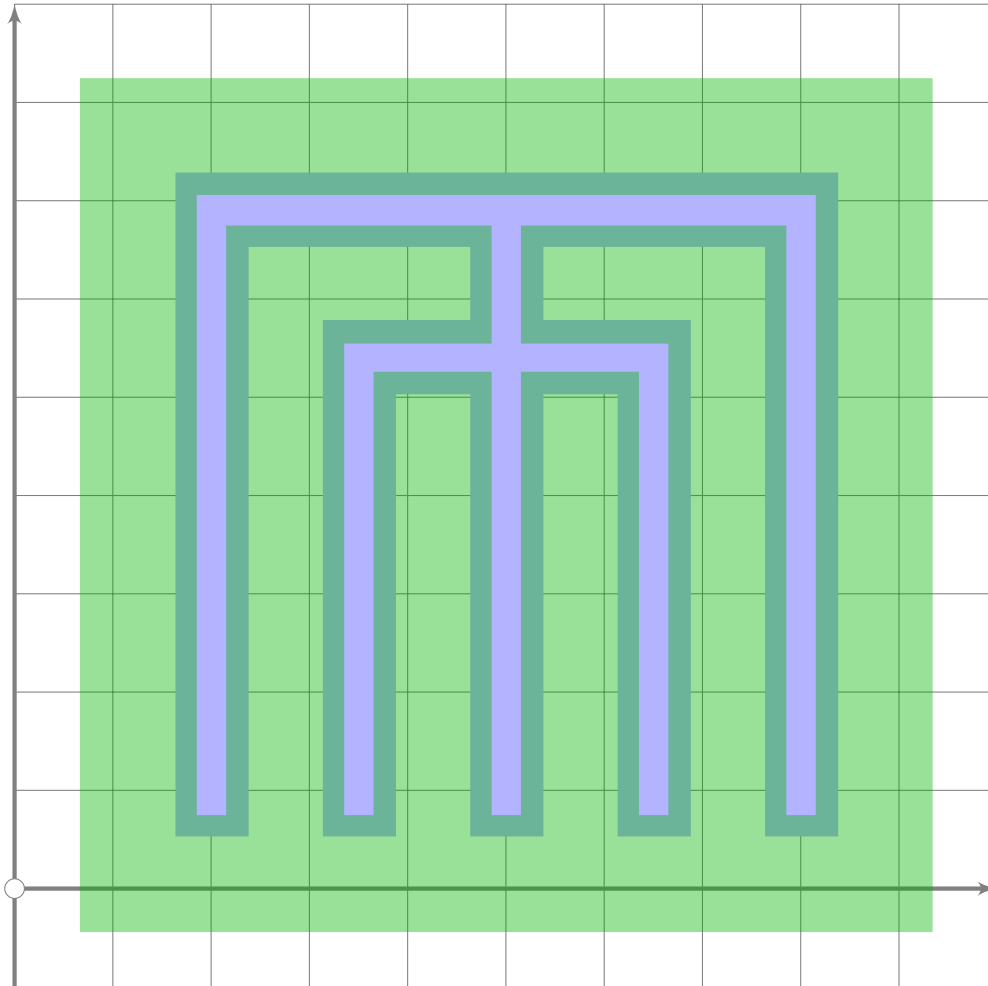


```
715 % #50 Azumaya
716 begintsuglyph("genjimon50";242);
717   genjimon.azumaya;
718 endtsuglyph;
719
```

tsuku.genjimon51

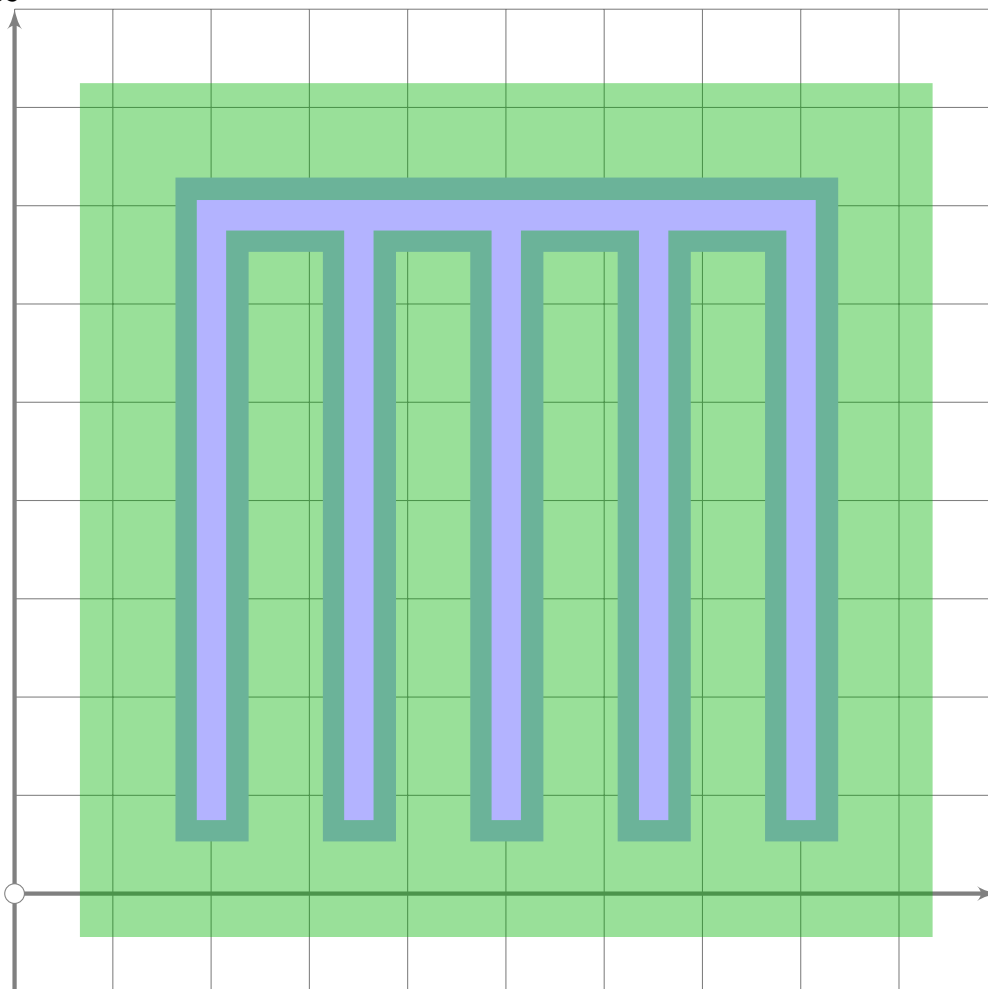


```
720 % #51 Ukifune
721 beginsuglyph("genjimon51",243);
722   genjimon.ukifune;
723 endsuglyph;
724
```



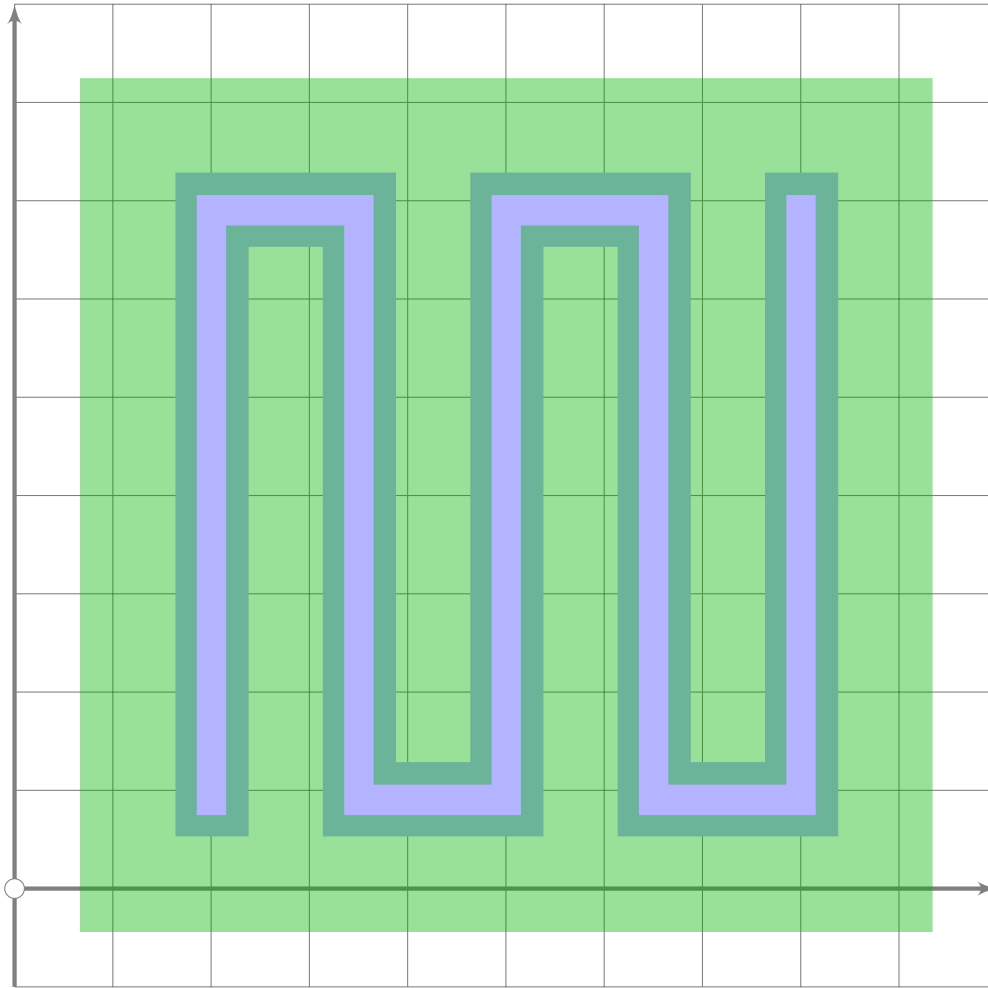
```
725 % #52 Kagerou
726 beginsuglyph("genjimon52",244);
727   genjimon.kagerou;
728 endsuglyph;
729
```

U+F17F5
tsuku.genjimon53



```
730 % #53 Tenarai  
731 begintsuglyph("genjimon53",245);  
732   genjimon.tenarai;  
733 endtsuglyph;  
734
```

F17



```

735 % #54 Yume no Ukihashi
736 begintsuglyph("genjimon54",246);
737   genjimon.yume_no_uhashi;
738 endtsuglyph;
739
740 endgroup;
741
742
743
744 endfont;
745
746

```

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;

```



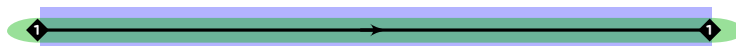
```

84
85 begint Suglyph("fraction.1");
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);

```

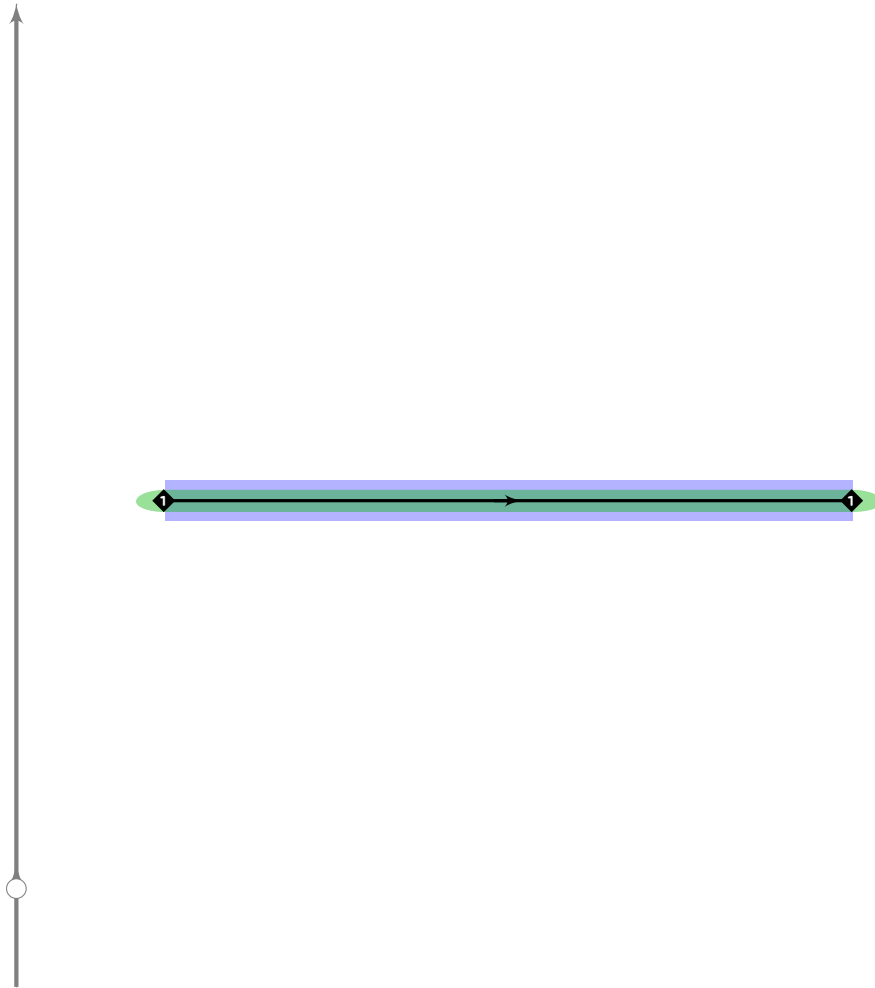
U+FF002
tsuku.fraction.2

```
90  tsu_render;  
91  endtsuglyph;
```



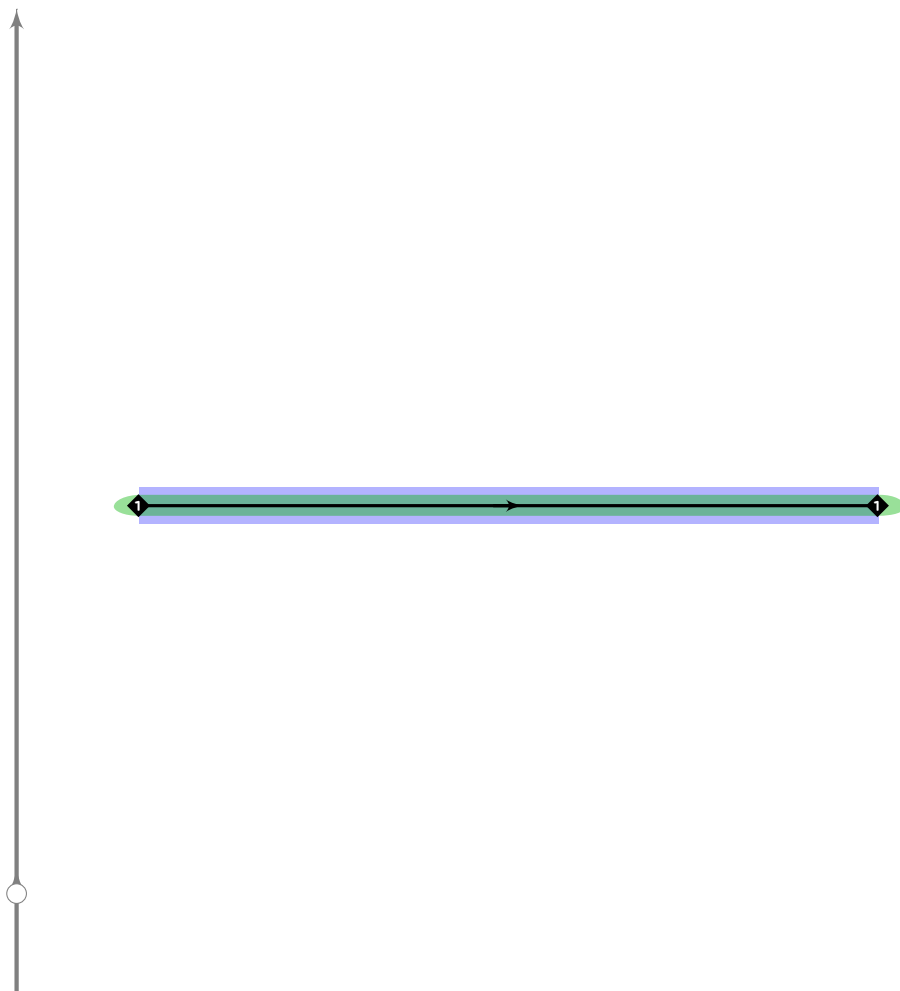
```
92  
93  begint Suglyph("fraction.2",2);  
94  push_stroke(((0.07)[(frac.two.x1,frac.two.y3),(frac.two.x3,frac.two.y3)])  
95    -(1.07[(frac.two.x1,frac.two.y3),(frac.two.x3,frac.two.y3)]),  
96    (2,2)-(2,2));  
97  set_bosize(0,60);  
98  tsu_render;  
99  endtsuglyph;
```

FF0

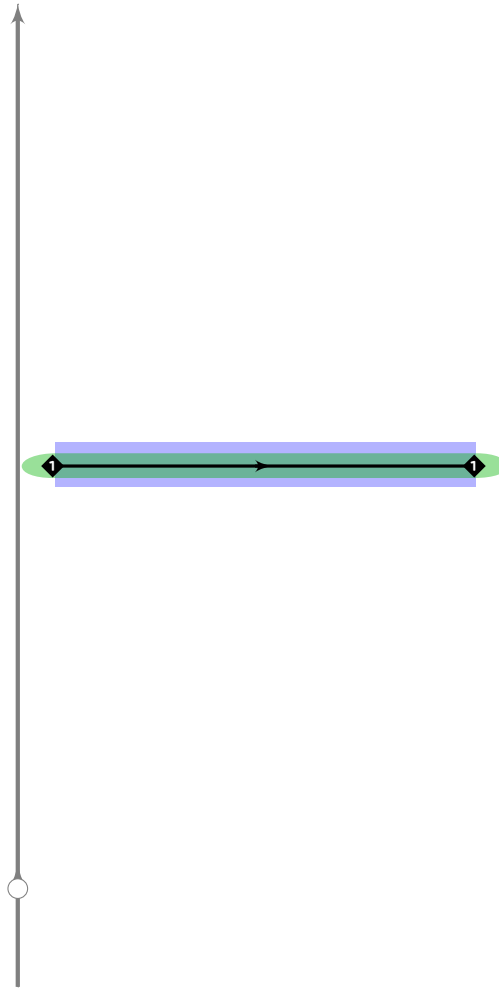


```
100
101 begint Suglyph("fraction.3",3);
102   push_stroke((frac.three.x1,frac.three.y3)-(frac.three.x4,frac.three.y3),
103     (2,2)-(2,2));
104   set_bosize(0,55);
105   tsu_render;
106 endtsuglyph;
```

U+FF004
tsuku.fraction.4



```
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
127 make_digit_set(nxf2,"0","2");
128 make_digit_set(nxf3,"0","3");
129
130 make_digit_set(nxf4,"0","4");
131 make_digit_set(nxf5,"0","5");
132 make_digit_set(nxf6,"0","6");
133
134 make_digit_set(nxf7,"0","7");
135 make_digit_set(nxf8,"0","8");

```

```
136 make_digit_set(nxf9,"0","9");
137 make_digit_set(nxf10,"0","a");
138
139 make_digit_set(nxf11,"0","b");
140
141 _____
142
143 endfont;
144
145 _____
```


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 _____

```