

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 IV

U+0000 to U+2FFF

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00

tsuku-01.mp

01

tsuku-02.mp

02

tsuku-03.mp

03

tsuku-20.mp

20

tsuku-21.mp

21

tsuku-24.mp

24

tsuku-25.mp

25

tsuku-26.mp

26

tsuku-27.mp

27

tsuku-2e.mp

2E

tsuku-2f.mp

2F

tsuku-00.mp

00

```
1 %
2 % Unicode page 00 (ASCII/ISO Latin-1) 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 input numerals.mp;
41 input punct.mp;
42
43 do_late_includes;
44
45 

---

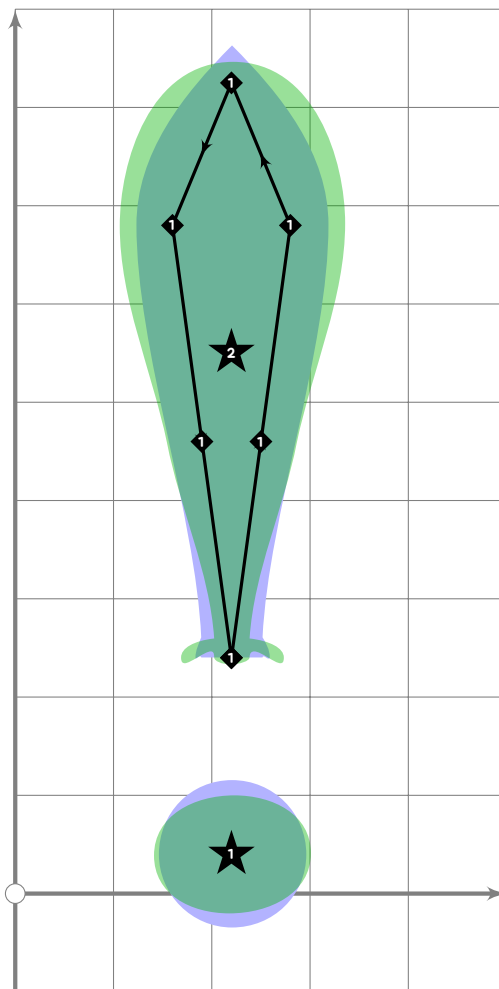

46
47 transform ascii_punct_xf;
48 if is_proportional:
49   ascii_punct_xf:=identity scaled (1.7*tsu_punct_size) shifted centre_pt;
50 else:
51   ascii_punct_xf:=
52     identity scaled (1.1*tsu_punct_size) shifted (250,latin_vcentre);
53 fi;
54
55 

---


56
```

Ascii

```
57 % ASCII
58
59 % WARNING this code is substantially duplicated in tsuku-ff; just
60 % enough differences to make sharing impractical
61
62 % exclamation point
63 tsu_rescale_native_narrow;
```



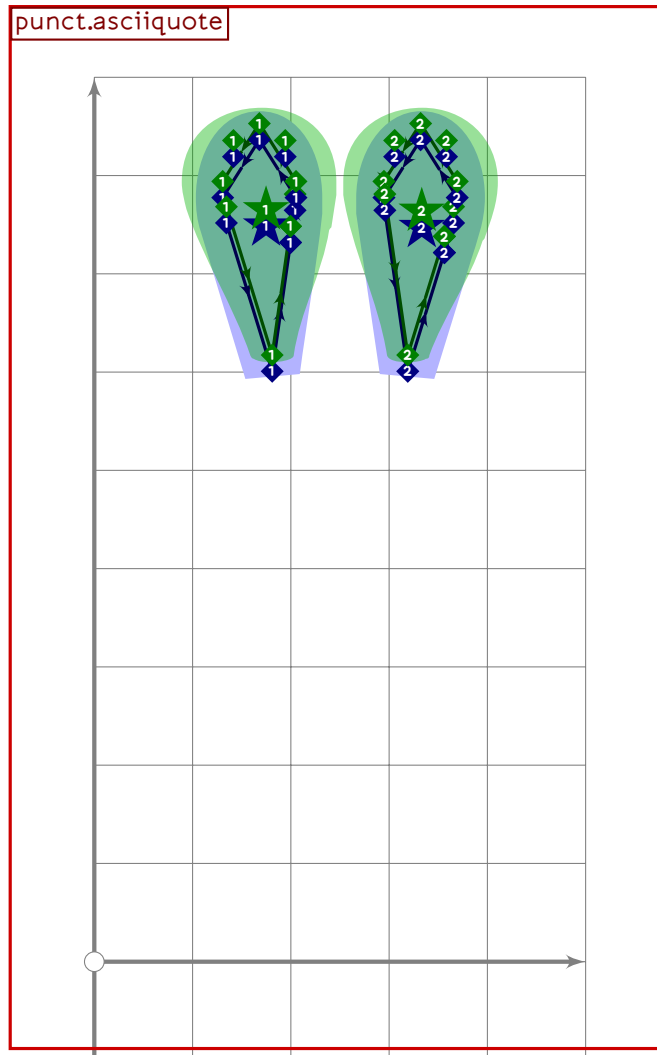
```

64 begint Suglyph("exclam";33);
65   if tsu_pbrush_size>=(tsu_punct_size*0.5):
66     push_lcblob(fullcircle
67       xscaled (tsu_punct_size+tsu_pbrush_size)
68       yscaled (tsu_punct_size+tsu_pbrush_size*tsu_pbrush_shape)
69       rotated tsu_pbrush_angle
70       shifted (220,40));
71   else:
72     push_stroke(fullcircle scaled tsu_punct_size shifted (220,40),
73       (2,2)-(2,2)-(2,2)-(2,2)-cycle);
74     push_lcblob(get_strokep(0));
75   fi;
76
77   push_stroke((220,240){up}..(280,680){up}..{curl 1}(220,825){curl 1}..
78     (160,680){down}..{down}(220,240),
79     (1,1)-(2,2)-(2,2)-(2,2)-(1,1));
80
81   if tsu_pbrush_size>=30:
82     push_lcblob((subpath (0,1,3.9) of get_strokep(0))-cycle);
83   fi;
84

```



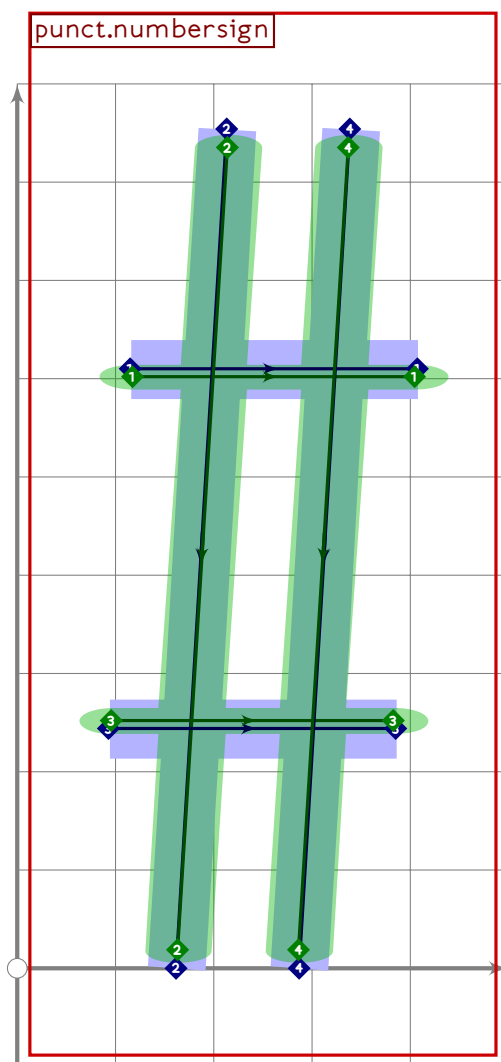
```
85     tsu_render;
86 endtsuglyph;
87 tsu_rescale_half;
88
```



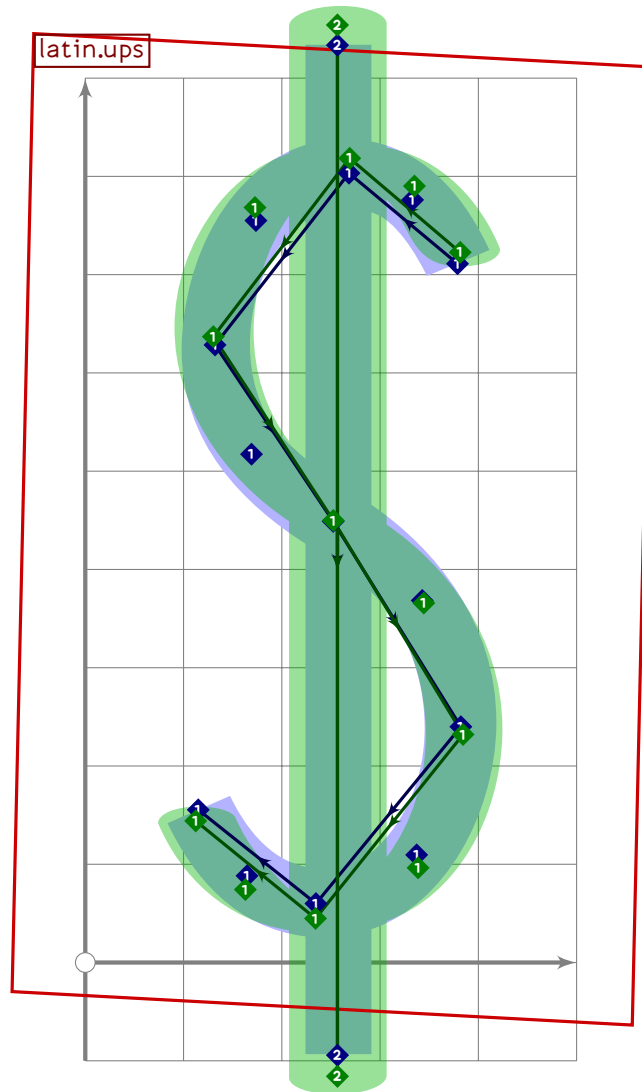
```
89 % ASCII (neither left nor right) quotation mark
90 begint Suglyph("quotedbl";34);
91     punct.asciiquote;
92     tsu_render;
93 endtsuglyph;
94
```

U+0023
tsuku.numbersign

00



```
95 % number sign
96 begintsuglyph("numbersign";35);
97   punct.numbersign;
98   tsu_render;
99 endtsuglyph;
100
```



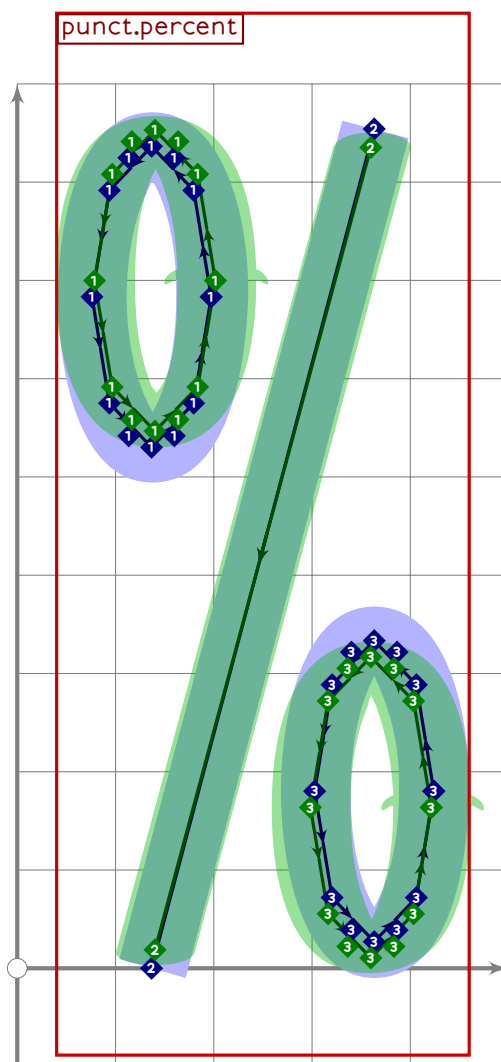
```

101 % dollar sign
102 beginsuglyph("dollar";36);
103   tsu_xform(identity shifted -centre_pt
104     rotated -2 xyscaled (1.06,0.92) shifted centre_pt)(latin.ups);
105
106   numeric x[],y[];
107   x1=x2=0.53[xpart llcorner get_strokep(0),xpart lrcorner get_strokep(0)];
108   y1=1.12[latin_wide_low_r,latin_wide_high_r];
109   y2=(-0.15)[latin_wide_low_r,latin_wide_high_r];
110
111   push_stroke(z1-z2,(2,2)-(2,2));
112   set_bosize(0,90);
113
114   tsu_render;
115   endtsuglyph;
116

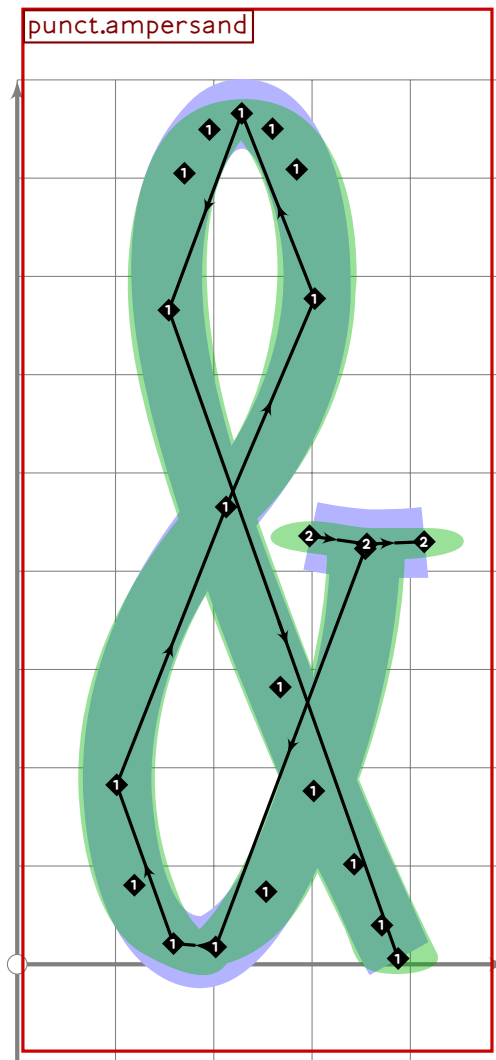
```

U+0025
tsuku.percent

00



```
117 % percent
118 beginsuglyph("percent";37);
119   punct.percent;
120   tsu_render;
121 endsuglyph;
122
```



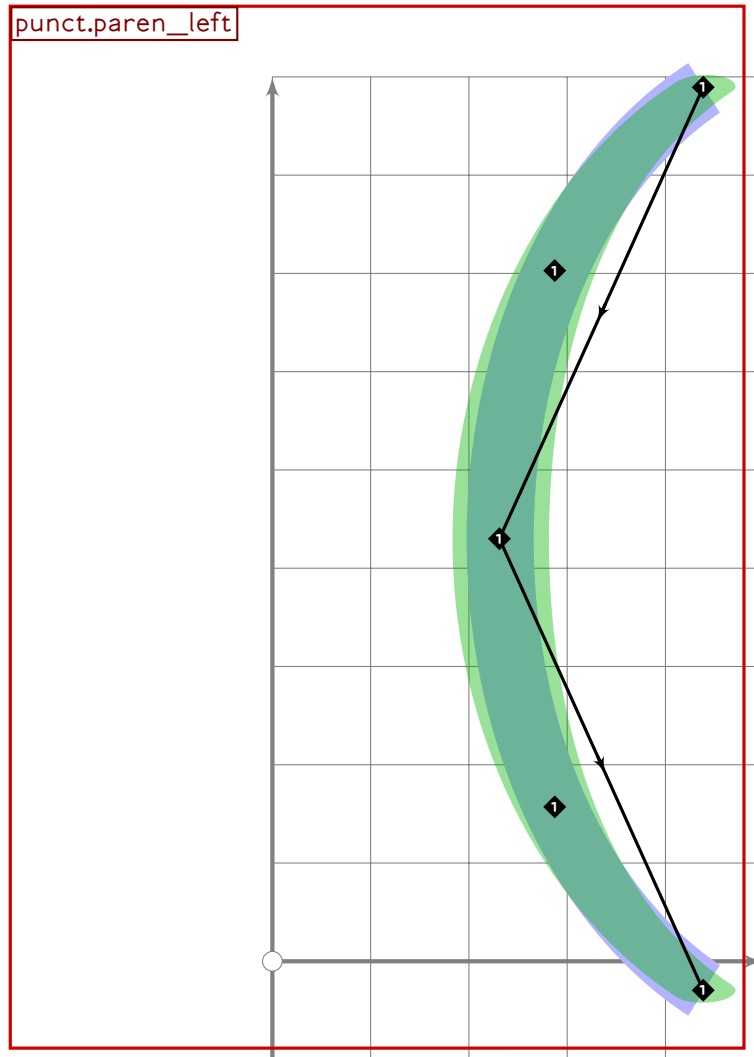
```
123 % ampersand
124 begintsuglyph("ampersand",38);
125   punct.ampersand;
126   tsu_render;
127 endtsuglyph;
128
```

U+0027
tsuku.quotesingle

00



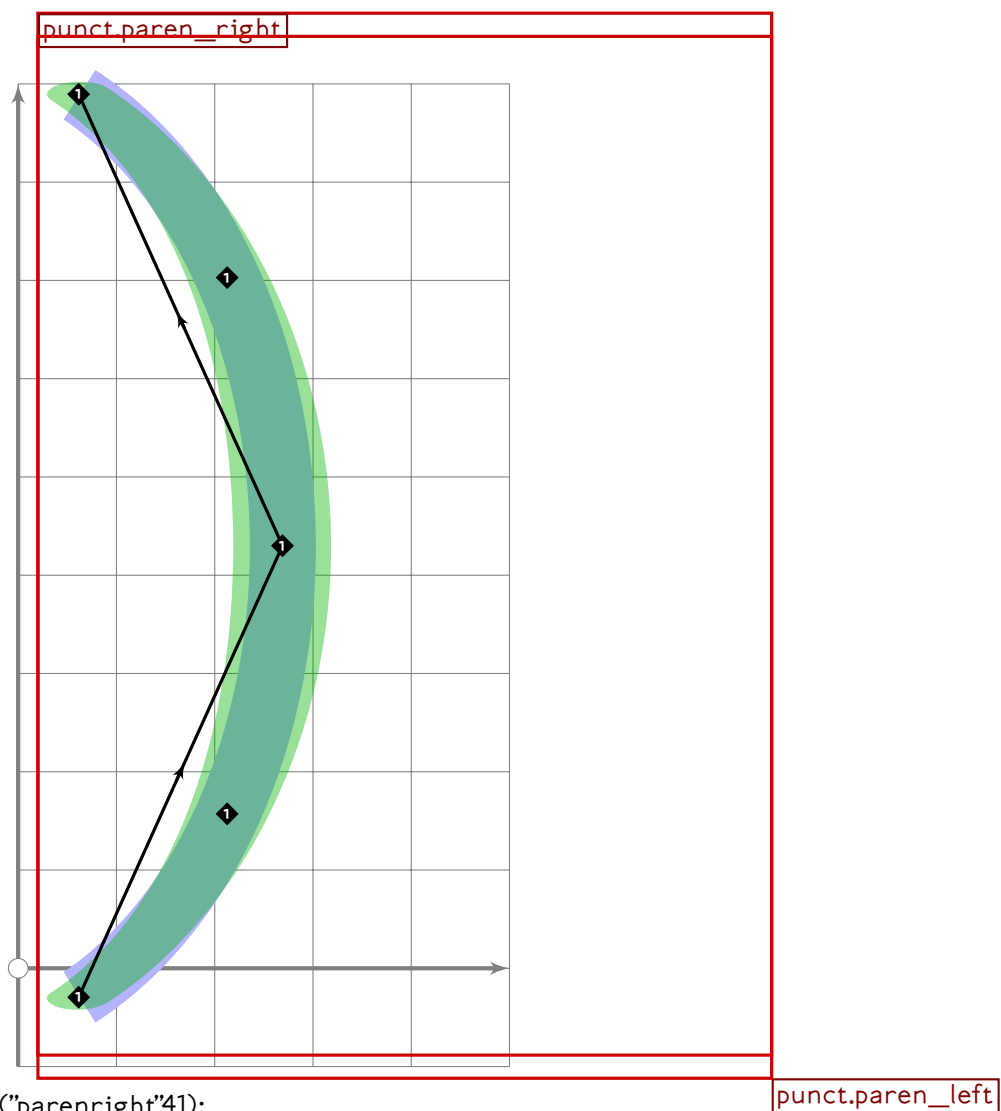
```
129 % apostrophe
130 begintsuglyph("quotesingle",39);
131   punct.make_comma((480,ymetric(0.94)),0);
132   tsu_render;
133 endtsuglyph;
134
```



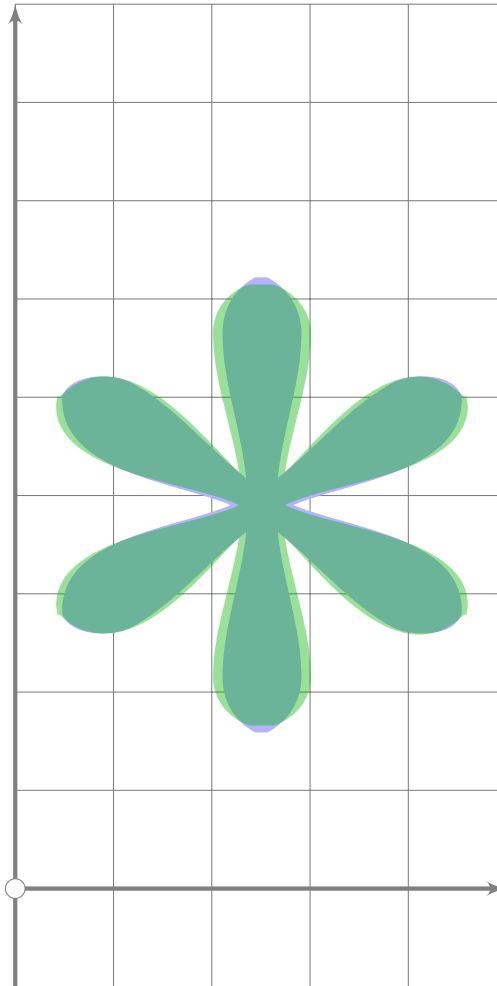
```
135 % left and right parentheses
136 beginsuglyph("parenleft";40);
137 punct.paren_left;
138 tsu_render;
139 endtsuglyph;
```

U+0029
tsuku.parenright

00



```
140 begintsuglyph("parenright";41);
141 punct.paren_right;
142 tsu_render;
143 endtsuglyph;
144
145 % WARNING changing rescale setting
146 tsu_rescale_native_conditional;
147
```

```

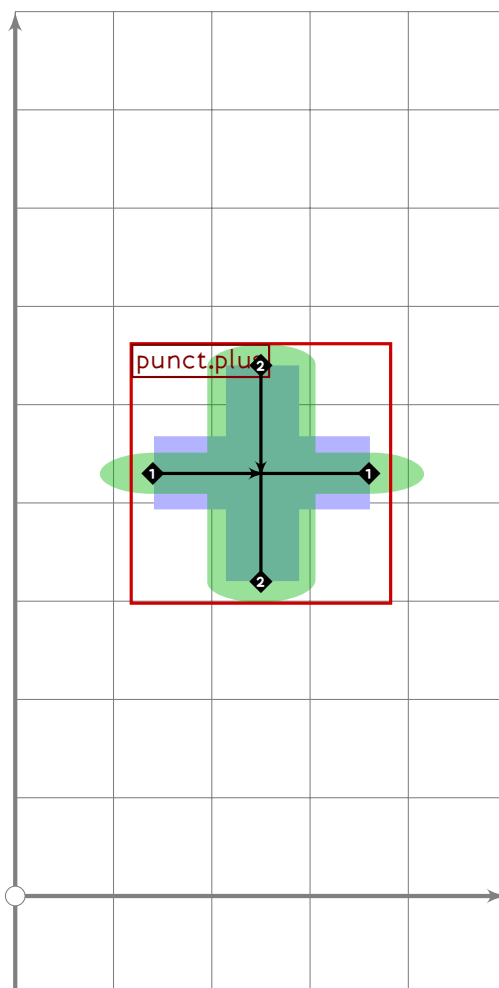
148 % asterisk
149 begintsuglyph("asterisk",42);
150   begingroup
151     save lobe,glyph,nlobes;
152     path lobe,glyph;
153     numeric nlobes;
154
155     lobe:=(1,0){up}..((1+tsu_brush_max)*tsu_punct_size/8,140){up}
156       ..{curl 1}{0,175}{curl 1}
157       ..(-(1+tsu_brush_max)*tsu_punct_size/8,140){down};
158     if rescale_slant>50:
159       lobe:=(lobe..(-1,0){down}..(0,-1)..cycle) scaled (tsu_punct_size/70);
160       nlobes:=5;
161     else:
162       lobe:=(lobe..(lobe rotated 180)..cycle) scaled (tsu_punct_size/80);
163       nlobes:=3;
164     fi;
165
166     default_nib:=fix_nib(35*tsu_brush_max,
167       35*tsu_brush_max*tsu_brush_shape,
168       tsu_brush_angle);

```

```

169
170     for i:=0 upto nlobes-1:
171         pen_stroke()(lobe rotated (i*360/nlobes)
172                     shifted (centre_pt+(-250,0))) (glyph);
173         dangerousFill glyph.r;
174     endfor;
175 endgroup;
176 endtsuglyph;
177

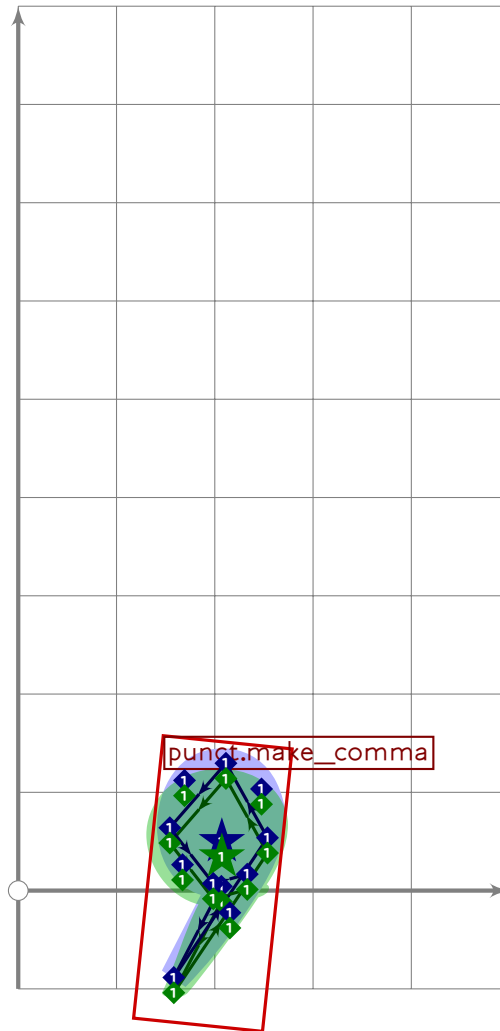
```



```

178 % plus
179 begintsuglyph("plus";43);
180 punct.plus(ascii_punct_xf);
181 tsu_render;
182 endtsuglyph;
183
184 % WARNING changing rescale setting
185 tsu_rescale_half;
186

```



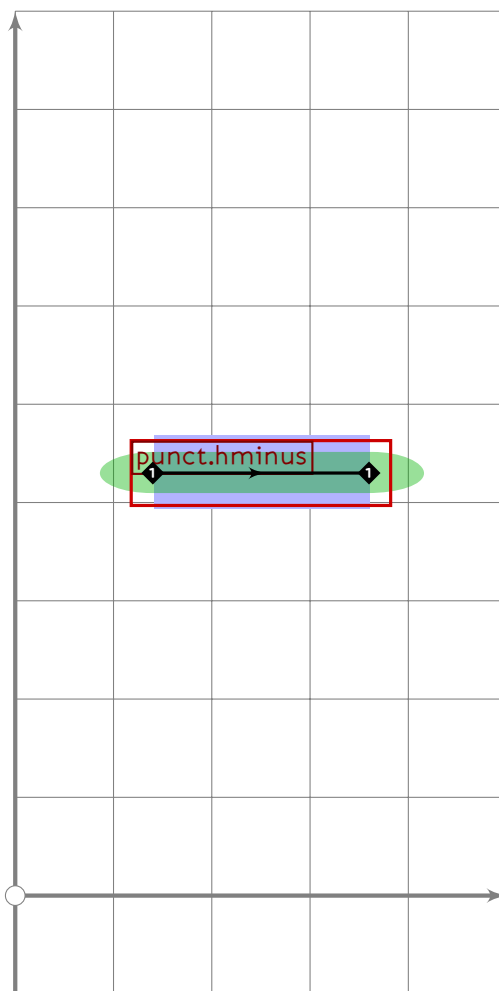
```

187 % comma
188 begintsuglyph("comma",44);
189 punct.make_comma((380,vmetric(0.03)),0);
190 tsu_render;
191 endtsuglyph;
192
193 % hyphen-minus
194 tsu_rescale_native_conditional;

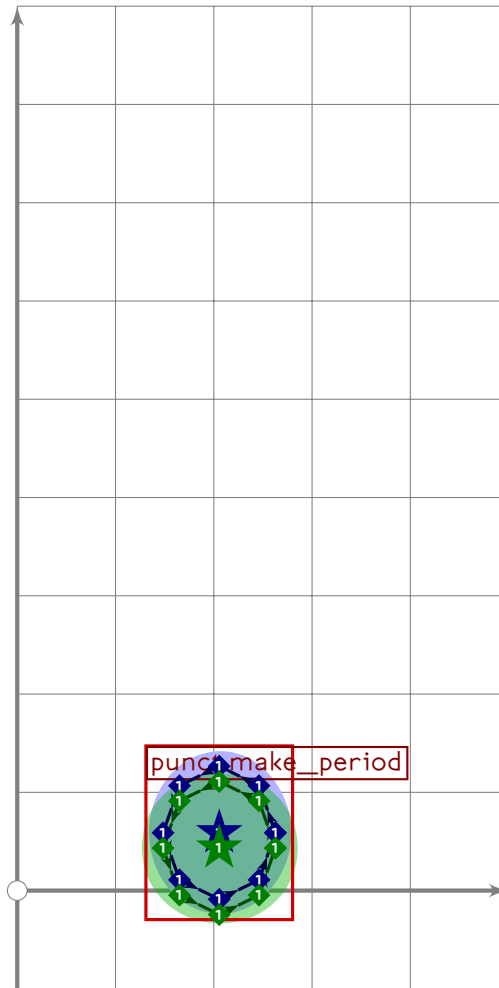
```

U+002D
tsuku.hyphen

00



```
195 beginsuglyph("hyphen"45);
196   punct.hminus(ascii_punct_xf);
197   tsu_render;
198 endtsuglyph;
199 tsu_rescale_half;
200
```



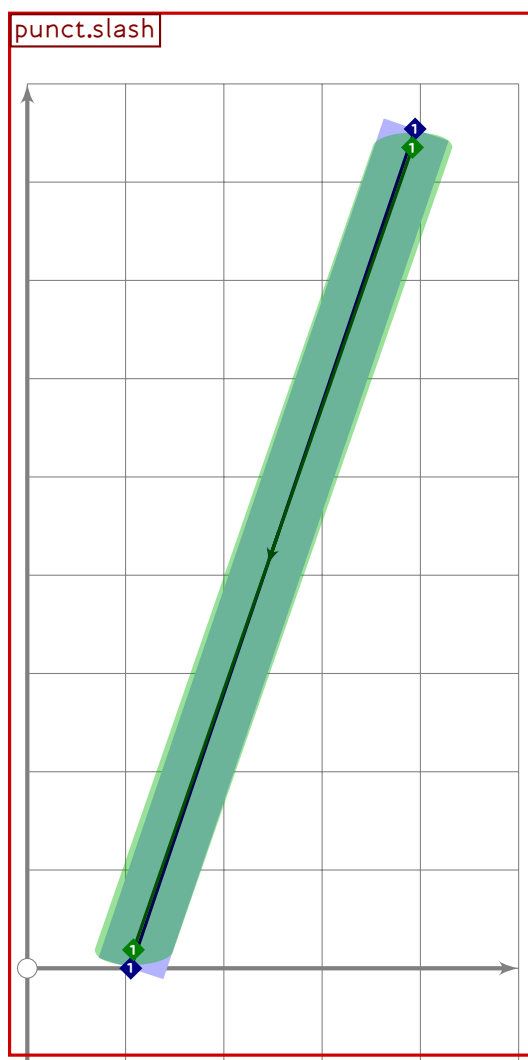
```

201 % period
202 beginsuglyph("period";46);
203 punct.make_period((380,vmetric(0.03)));
204 tsu_render;
205 endsuglyph;
206

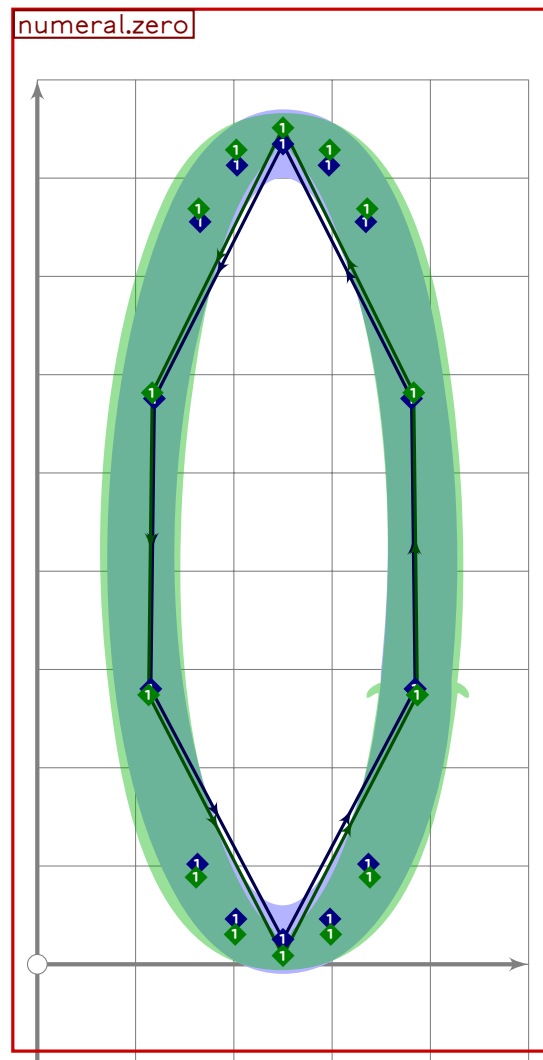
```

U+002F
tsuku.slash

00



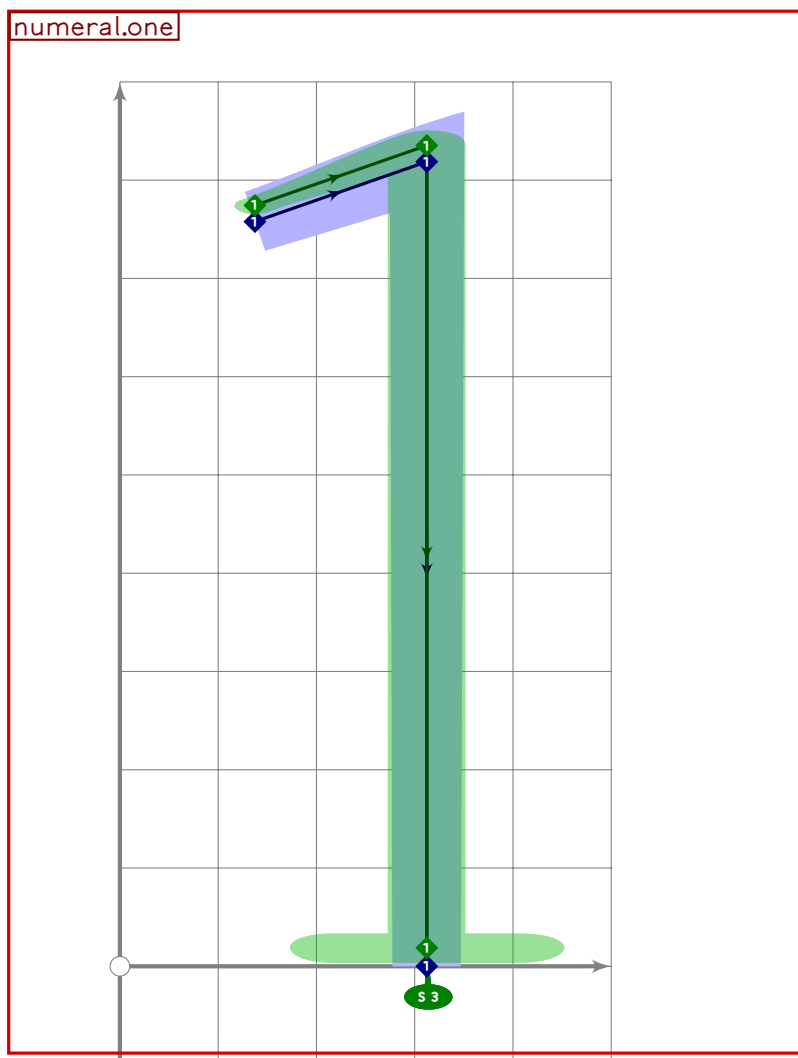
```
207 % slash
208 begintsuglyph("slash";47);
209   punct.slash;
210   tsu_render;
211 endtsuglyph;
212
```



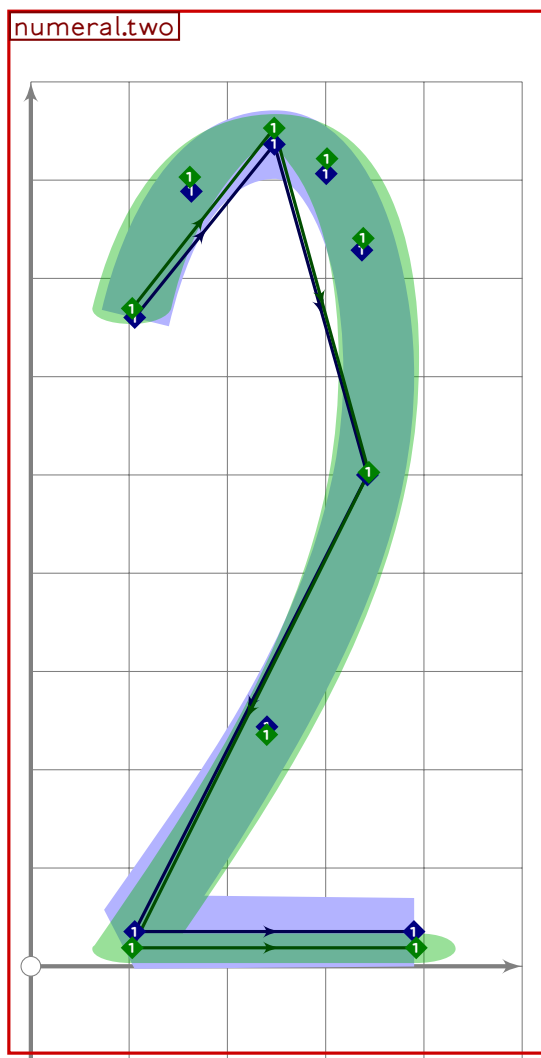
```

213 % 0
214 beginsuglyph("zero";48);
215   numeral.zero;
216   tsu_render;
217 endsuglyph;
218

```



```
219 % 1
220 beginsuglyph("one";49);
221   numeral.one;
222   tsu_render;
223 endsuglyph;
224
```

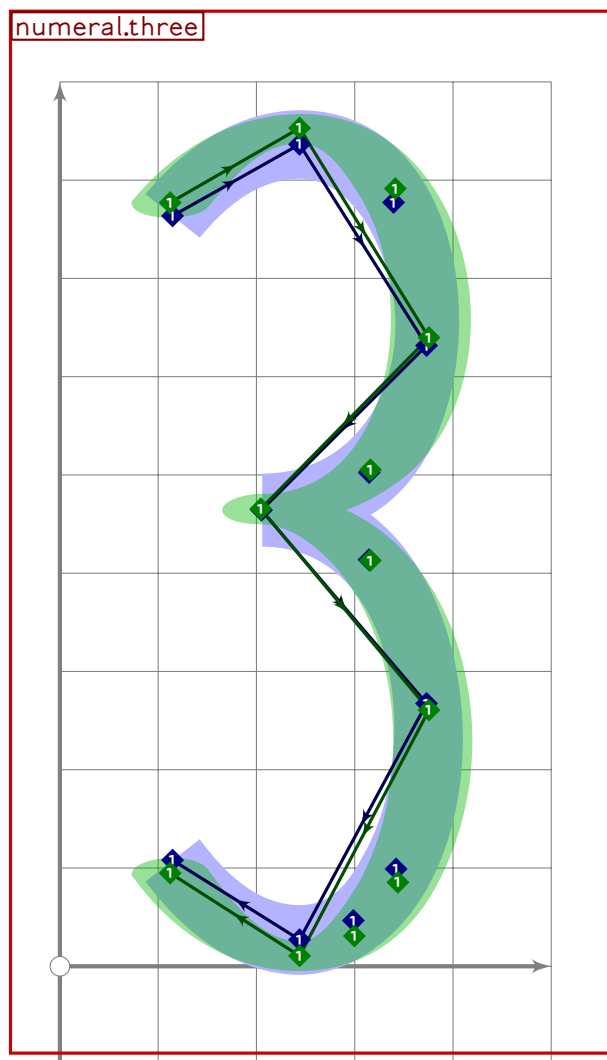
```

225 % 2
226 beginsuglyph("two";50);
227   numeral.two;
228   tsu_render;
229 endsuglyph;
230

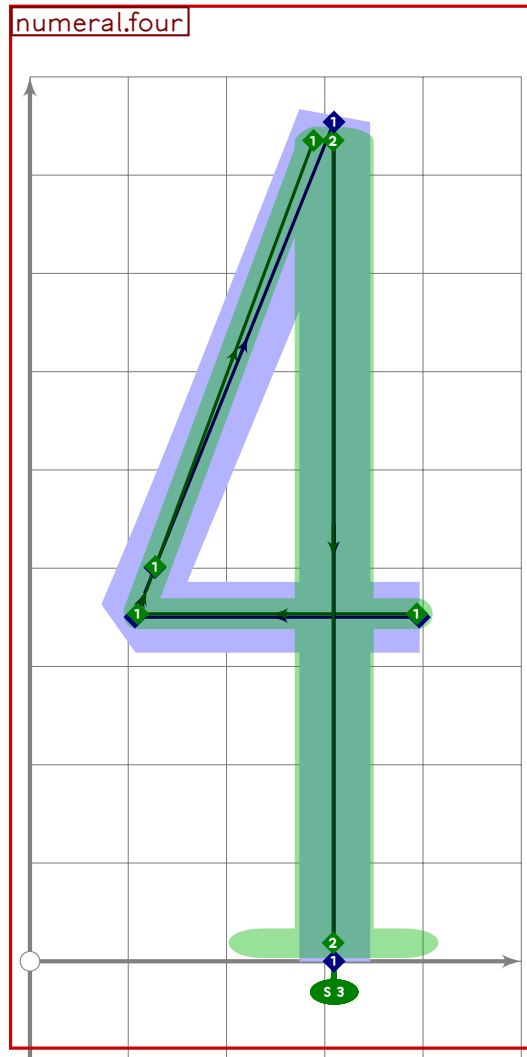
```

U+0033
tsuku.three

00



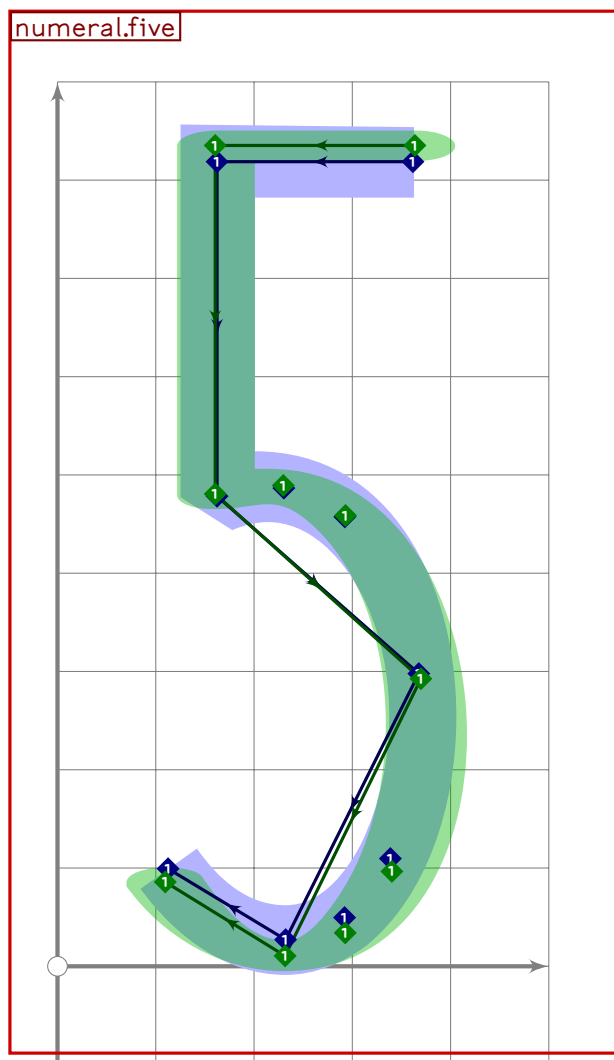
```
231 % 3
232 beginsuglyph("three",51);
233   numeral.three;
234   tsu_render;
235 endsuglyph;
236
```



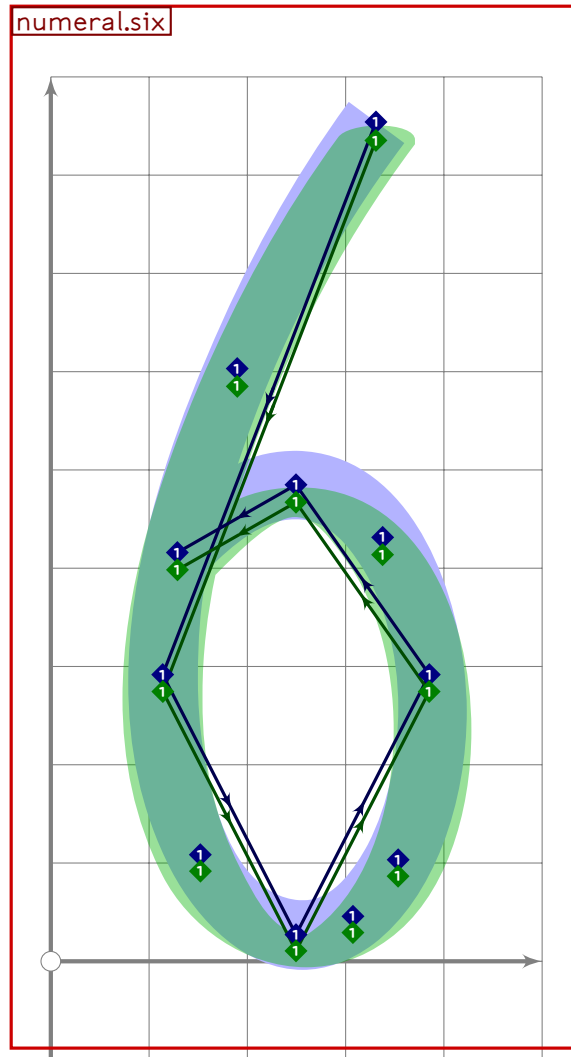
```
237 % 4
238 begintsuglyph("four";52);
239 numeral.four;
240 tsu_render;
241 endtsuglyph;
242
```

U+0035
tsuku.five

00



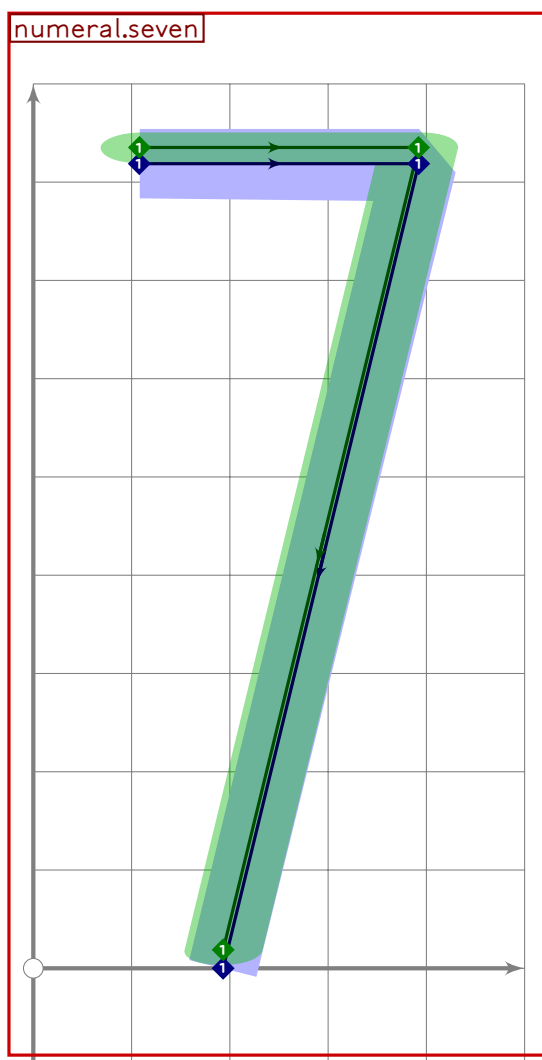
```
243 % 5
244 begintsuglyph("five",53);
245     numeral.five;
246     tsu_render;
247 endsuglyph;
248
```



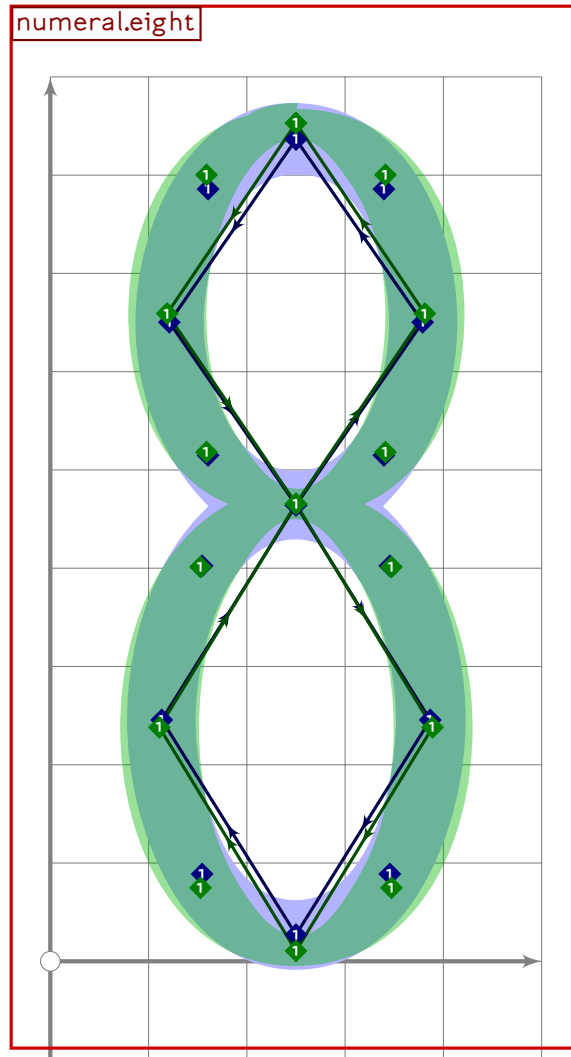
```
249 % 6
250 beginsuglyph("six",54);
251   numeral.six;
252   tsu_render;
253 endsuglyph;
254
```

U+0037
tsuku.seven

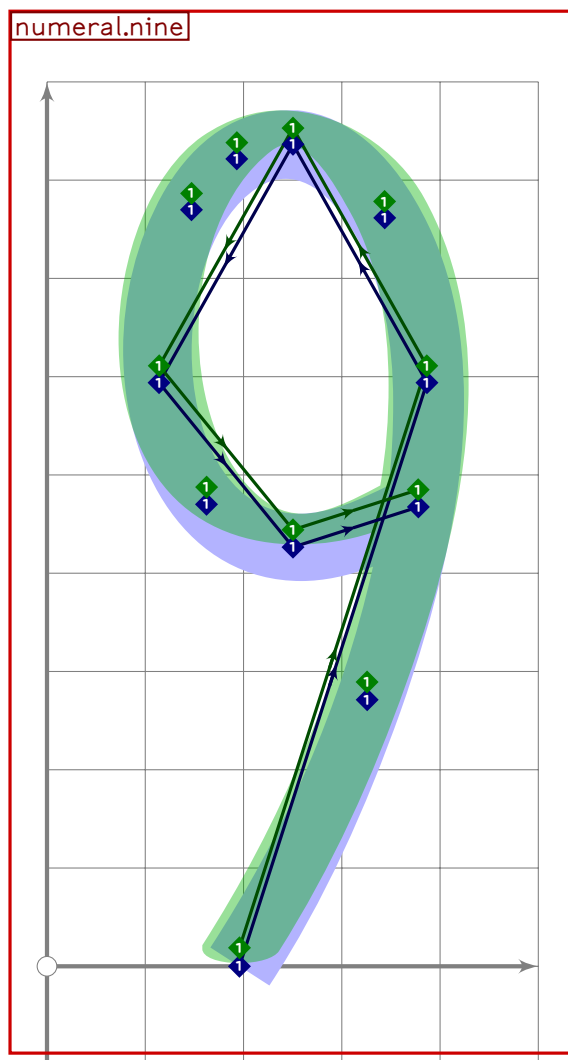
00



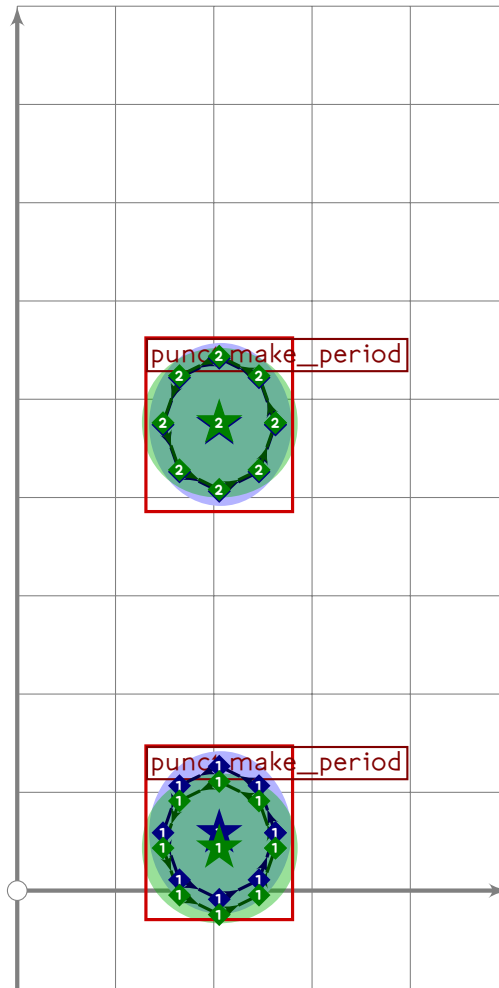
```
255 % 7
256 beginsuglyph("seven",55);
257  numeral.seven;
258  tsu_render;
259 endsuglyph;
260
```



```
261 % 8
262 begintsuglyph("eight",56);
263   numeral.eight;
264   tsu_render;
265 endtsuglyph;
266
```



```
267 % 9
268 begintsuglyph("nine",57);
269   numeral.nine;
270   tsu_render;
271 endtsuglyph;
272
```

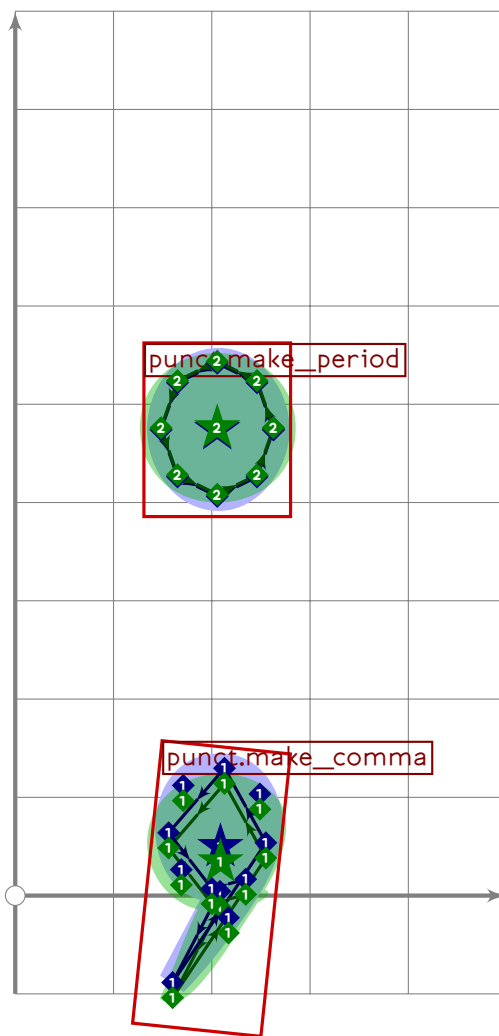
```

273 % colon
274 begintsuglyph("colon";58);
275   punct.make_period((380,vmetric(0.03)));
276   punct.make_period((380,vmetric(0.56)));
277   tsu_render;
278 endtsuglyph;
279

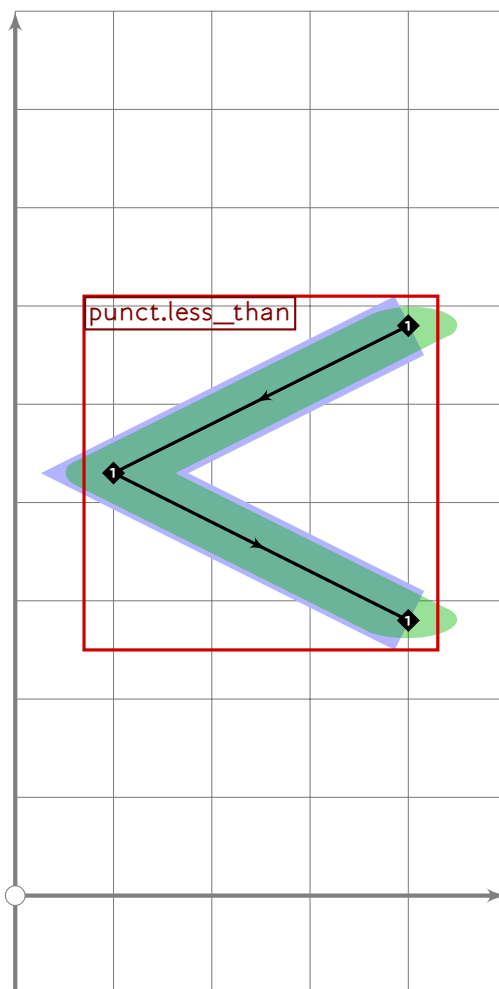
```

U+003B
tsuku.semicolon

00



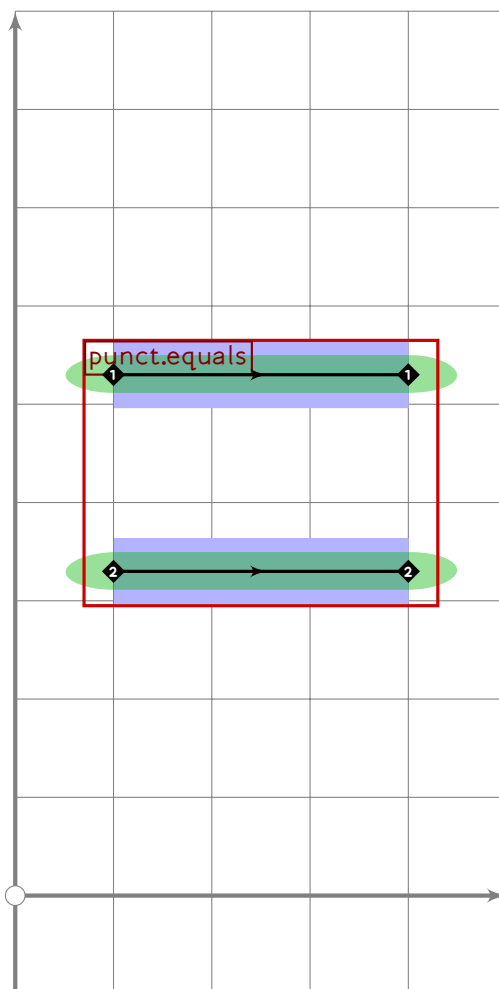
```
280 % semicolon
281 begintsuglyph("semicolon";59);
282 punct.make_comma((380,vmetric(0.03)),0);
283 punct.make_period((380,vmetric(0.56)));
284 tsu_render;
285 endsuglyph;
286
287 % WARNING, changing rescale setting
288 tsu_rescale_native_conditional;
289
```



```

290 % less than
291 begintsuglyph("less",60);
292   punct.less_than
293     (identity scaled (if is_proportional: 2.1 else: 1.5 fi*tsu_punct_size)
294       shifted (250,latin_vcentre));
295   tsu_render;
296 endtsuglyph;
297

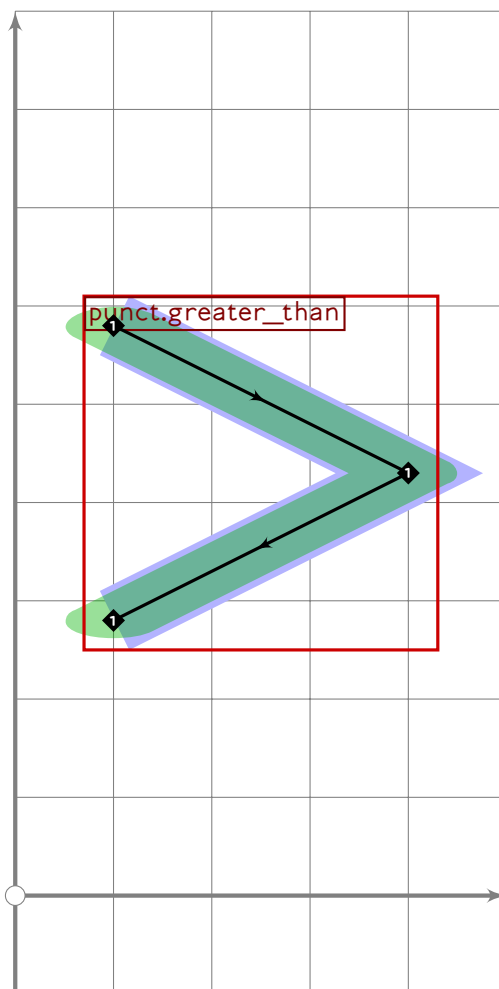
```



```

298 % equals
299 begintsuglyph("equals",61);
300 punct.equals
301     (identity scaled (if is_proportional: 2.1 else: 1.5 fi*tsu_punct_size)
302       shifted (250,latin_vcentre));
303 tsu_render;
304 endtsuglyph;
305

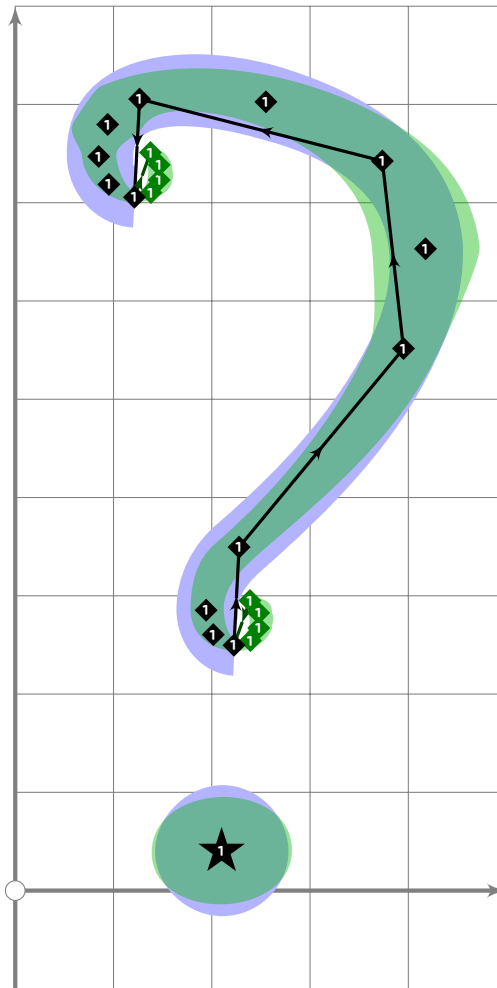
```



```

306 % greater than
307 begintsuglyph("greater",62);
308   punct.greater_than
309     (identity scaled (if is_proportional: 2.1 else: 1.5 fi*tsu_punct_size)
310       shifted (250,latin_vcentre));
311   tsu_render;
312 endtsuglyph;
313

```



```

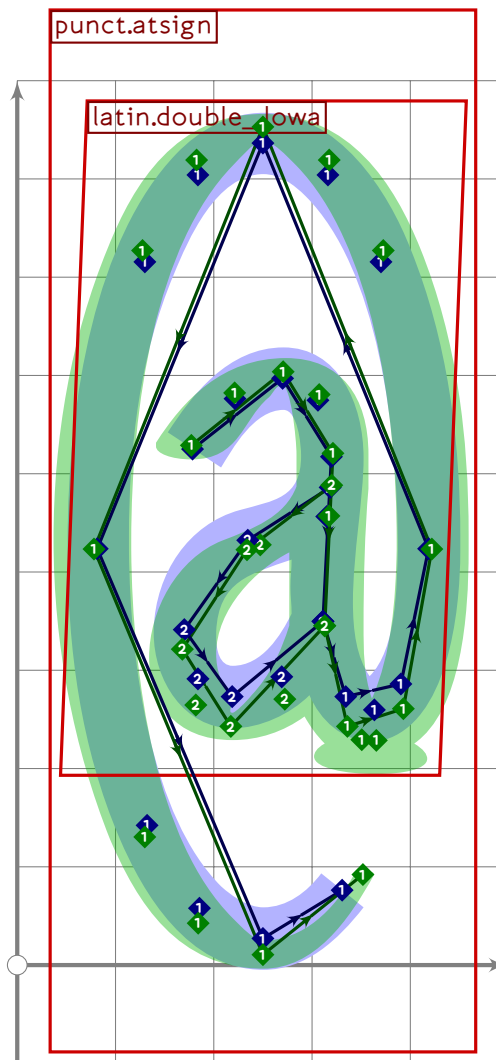
314 % question mark
315 begintsuglyph("question",63);
316     numeric r;
317     if tsu_pbrush_size>=(tsu_punct_size*0.5):
318         push_lcblob(fullcircle
319             xscaled ((tsu_punct_size+tsu_pbrush_size)*0.89)
320             yscaled ((tsu_punct_size+tsu_pbrush_size*tsu_pbrush_shape)*0.89)
321             rotated tsu_pbrush_angle
322             shifted (210,40));
323     else:
324         push_stroke(fullcircle scaled tsu_punct_size shifted (210,40),
325             (2,2)-(2,2)-(2,2)-(2,2));
326         if tsu_pbrush_size>=30:
327             push_lcblob(get_stroke(0));
328         fi;
329     fi;
330     r:=tsu_punct_size/2;
331
332     push_stroke((210,300){right}..(210,300-r){left}..
333         (210,300+r)..(210+2.5*r,750)..
334         tension 1.3..(210-2.5*r,750+r)..

```

```

335      (210-2.5*r,750-r){right}..
336      (210-2.5*r,750){left},
337      (0.8,0.8)-(1,1)-(2,2)-(2,2)-(2,2)-(2,2)-(1,1)-(0.8,0.8));
338      replace_strokep(0)(insert_nodes(oldp)(2.5) rotatedaround ((210,10),-3));
339
340      tsu_render;
341      endtsuglyph;
342
343      % WARNING, changing rescale setting
344      tsu_rescale_half;
345

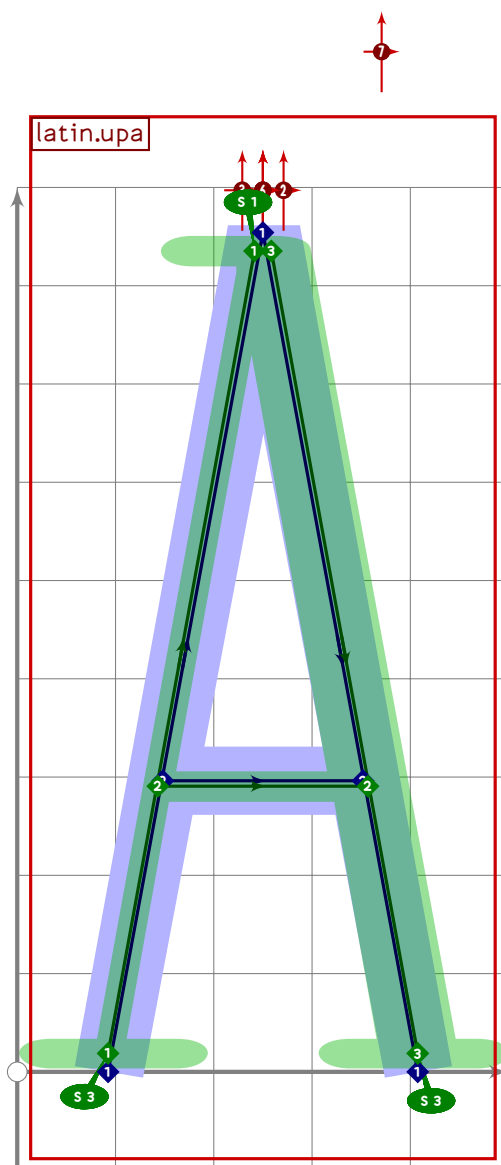
```



```

346 % commercial at
347 begint Suglyph("at",64);
348      punct.atsign;
349      tsu_render;
350      endtsuglyph;
351
352      tsu_accent.up_default_anchors;
353

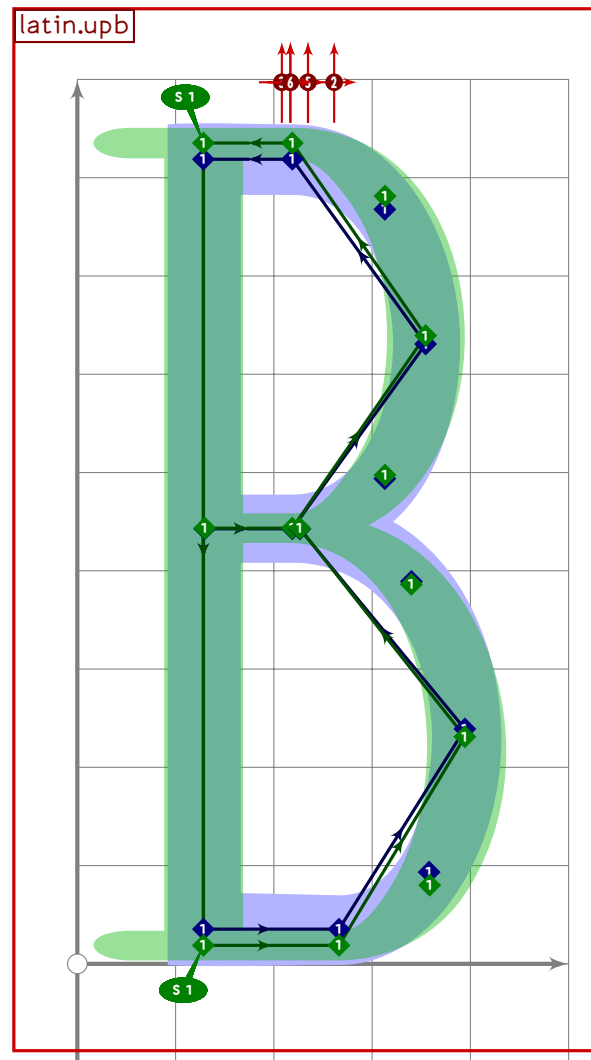
```



```

354 % A
355 begintsuglyph("A",65);
356 latin.upa;
357 tsu_render;
358 endtsuglyph;
359

```

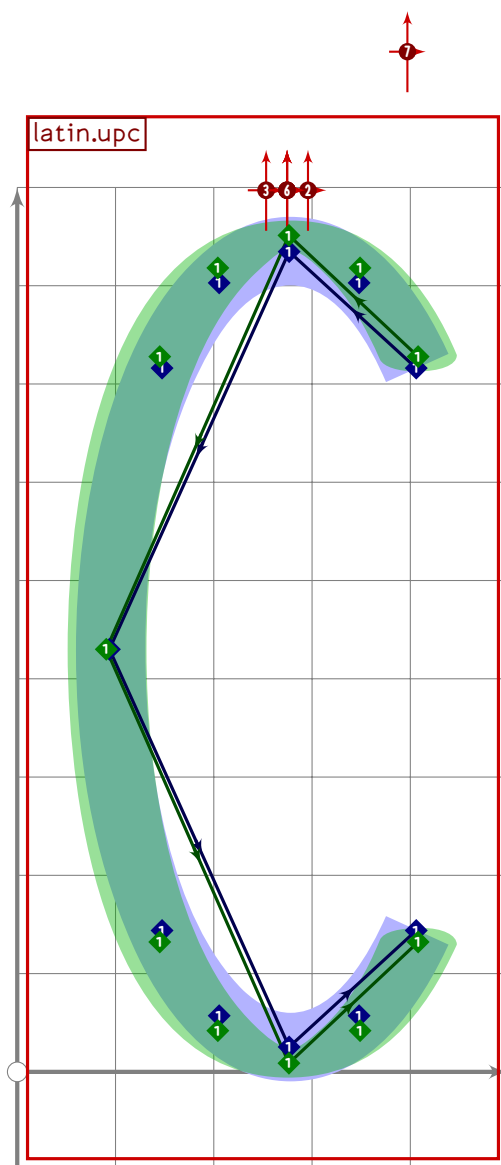
```

360 % B
361 begintsuglyph("B",66);
362 latin.upb;
363 tsu_render;
364 endtsuglyph;
365

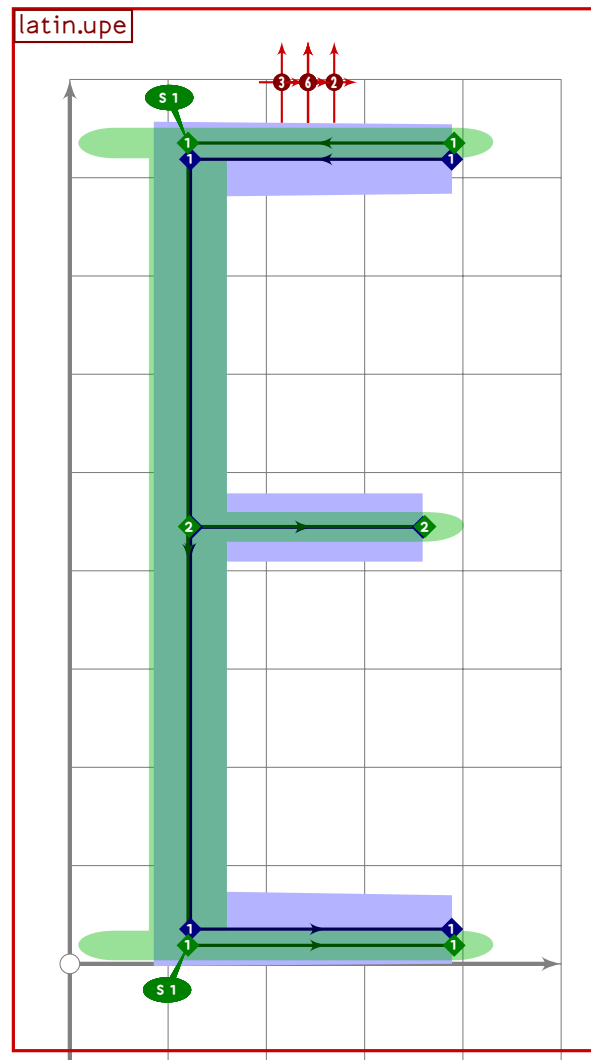
```

U+0043
tsuku.C

00



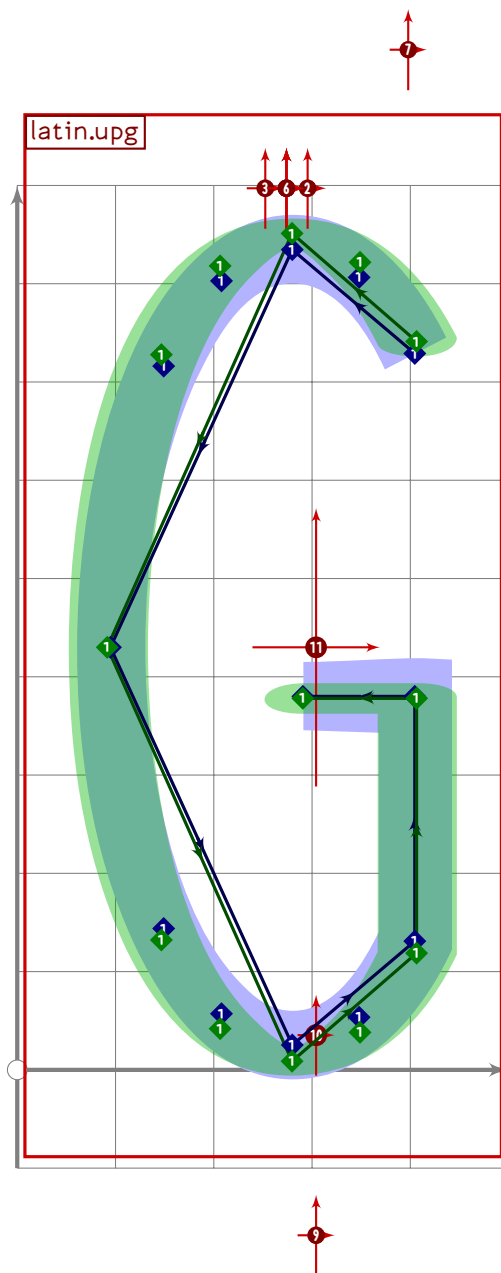
```
366 % C
367 begint Suglyph("C",67);
368 latin.upc;
369 tsu_render;
370 endtsuglyph;
371
```

```

378 % E
379 begint Suglyph("E",69);
380   latin. upe;
381   tsu_ render;
382 endt Suglyph;
383

```

```

390 % G
391 begintsuglyph("G";71);
392   latin.upg;
393   tsu_render;
394 endtsuglyph;
395

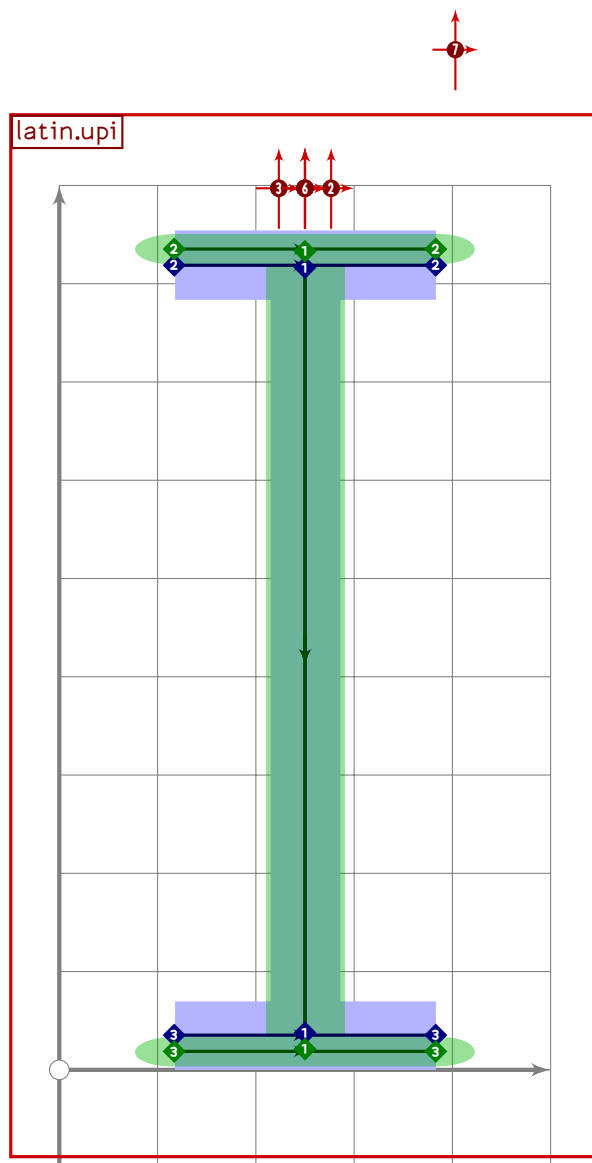
```



```

396 % H
397 begintsuglyph("H",72);
398   latin.uph;
399   tsu_render;
400 endsuglyph;
401

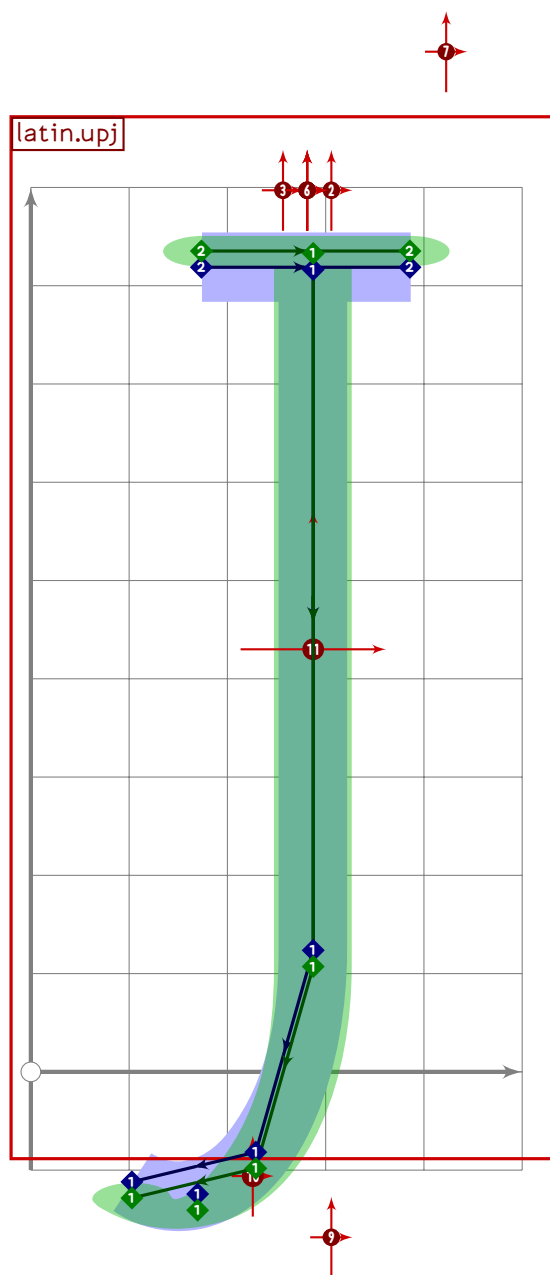
```



```

402 % I
403 begintsuglyph("I";73);
404 latin.upi;
405 tsu_render;
406 endtsuglyph;
407

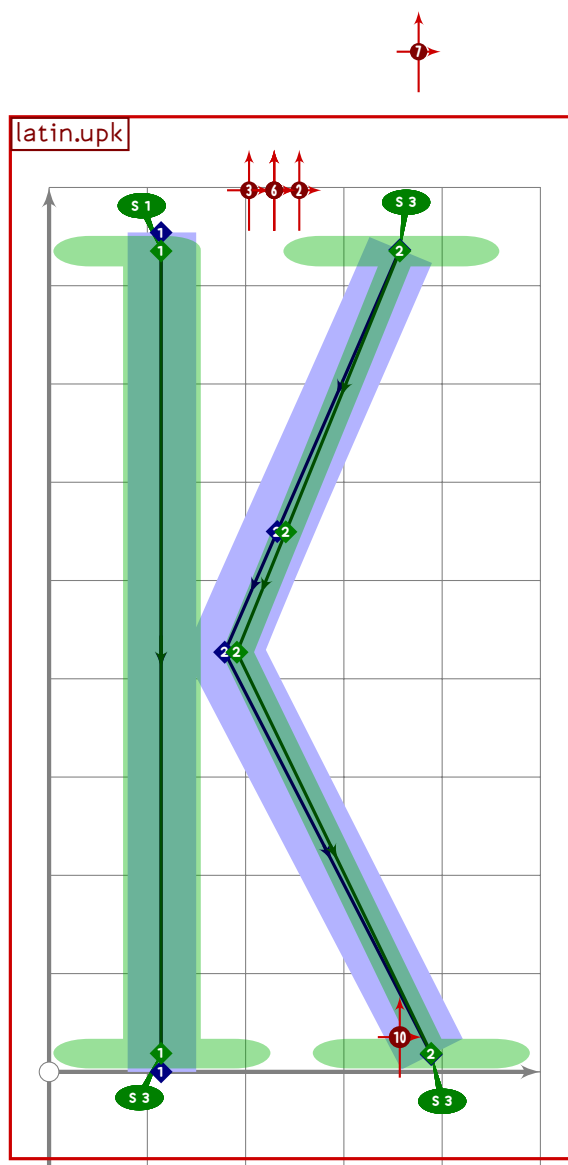
```

```

408 % J
409 begintsuglyph("J",74);
410 latin.upj;
411 tsu_render;
412 endtsuglyph;
413

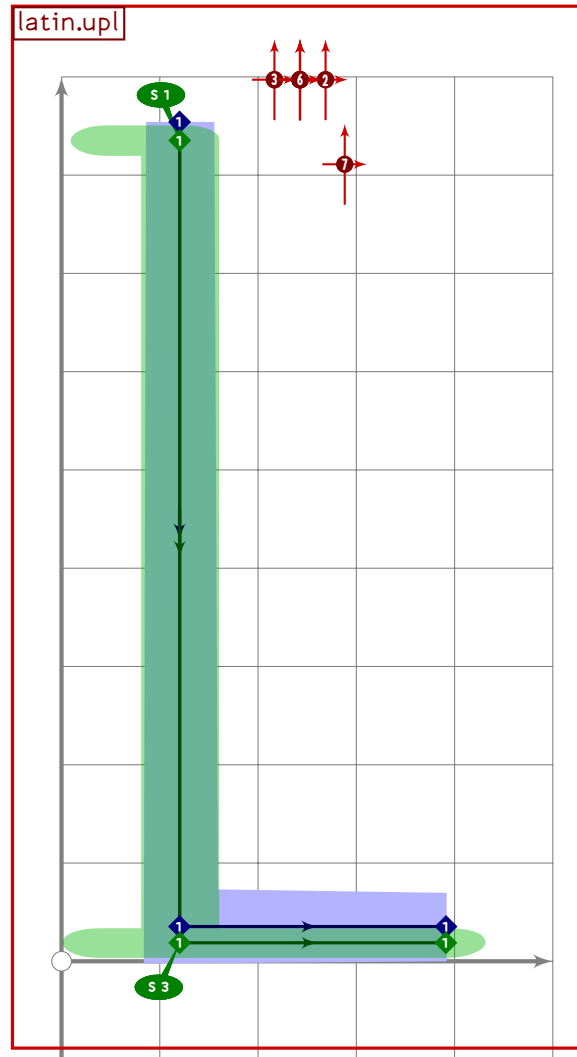
```



```

414 % K
415 begint Suglyph("K";75);
416 latin.upk;
417 tsu_render;
418 endtsuglyph;
419

```

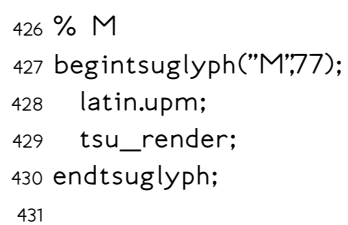


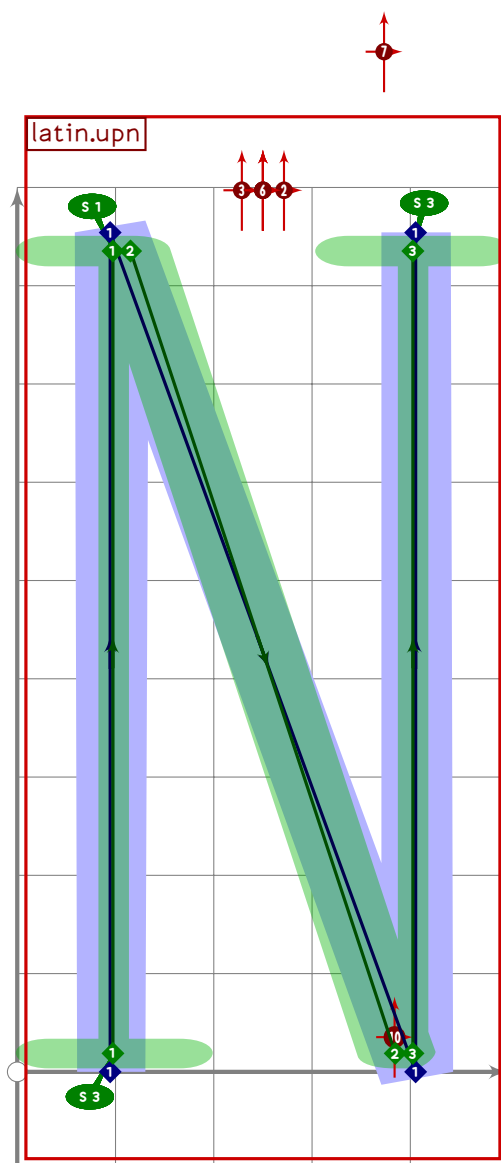
```

420 % L
421 begintsuglyph("L76);
422 latin.upl;
423 tsu_render;
424 endtsuglyph;
425

```

00

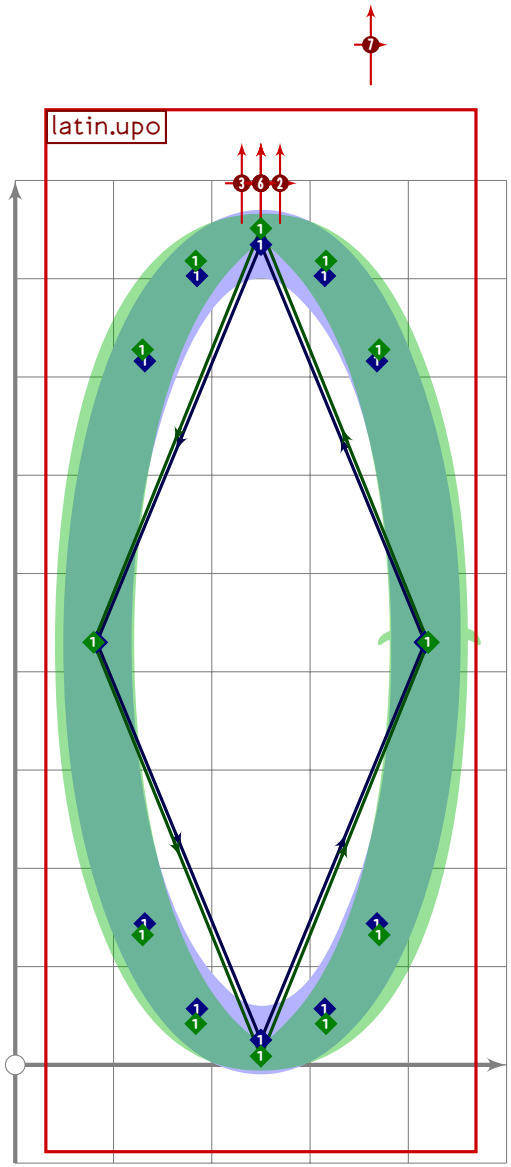




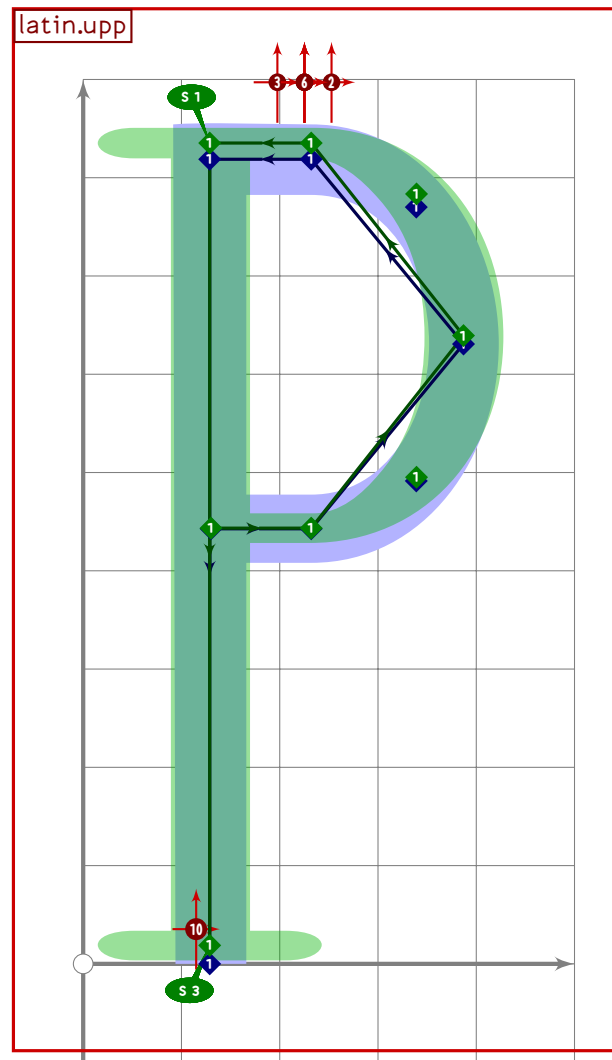
```

432 % N
433 begintsuglyph("N";78);
434 latin.upn;
435 tsu_render;
436 endtsuglyph;
437

```



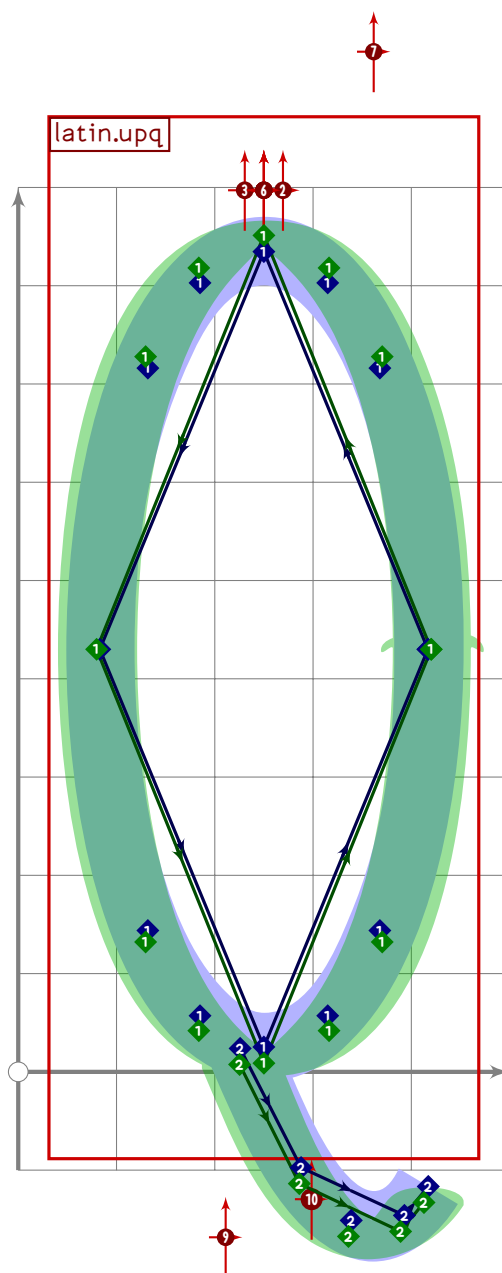
```
438 % O
439 begintsuglyph("O";79);
440 latin.upo;
441 tsu_render;
442 endtsuglyph;
443
```



```

444 % P
445 begintsuglyph("P";80);
446 latin.upp;
447 tsu_render;
448 endtsuglyph;
449

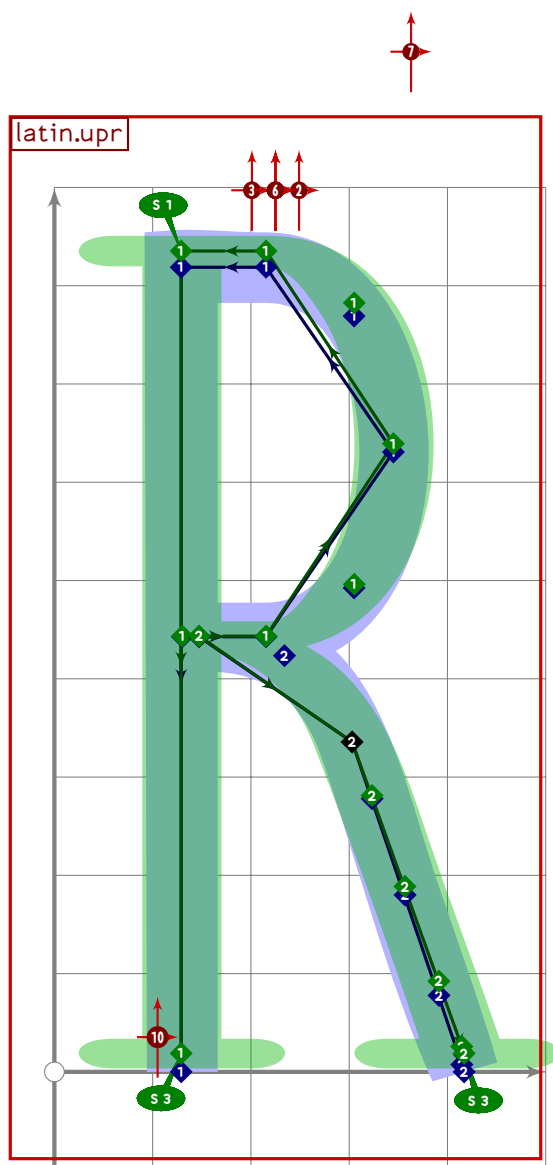
```



```

450 % Q
451 begintsuglyph("Q";81);
452 latin.upq;
453 tsu_render;
454 endtsuglyph;
455

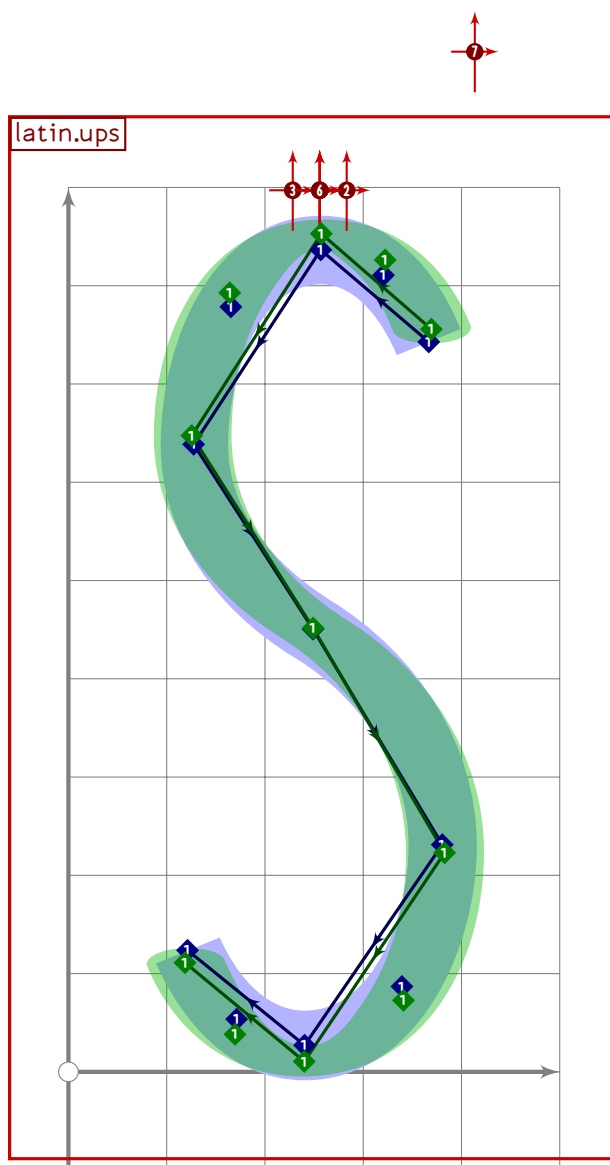
```

```

456 % R
457 begintsuglyph("R";82);
458   latin.upr;
459   tsu_render;
460 endtsuglyph;
461

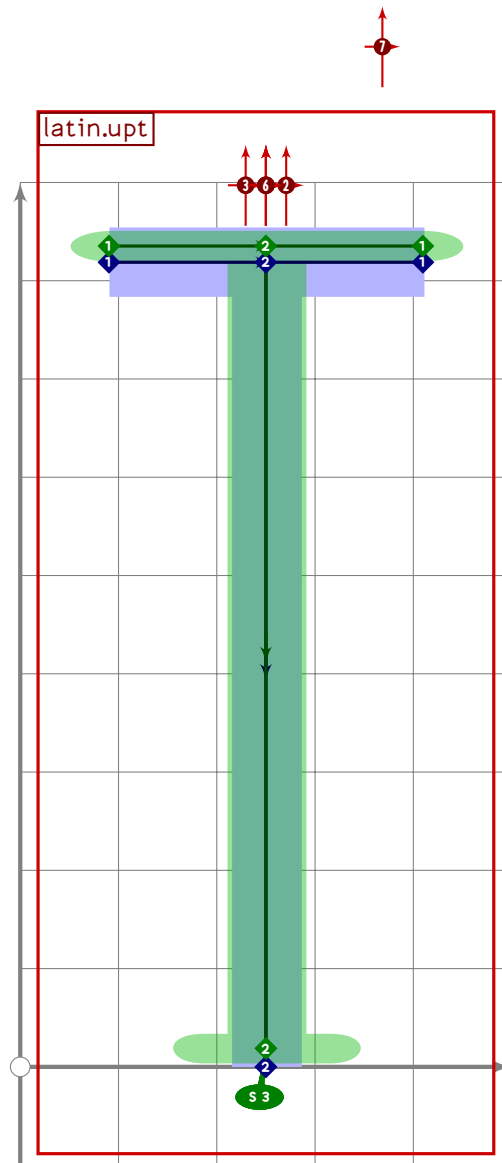
```



```

462 % S
463 begintsuglyph("S";83);
464   latin.ups;
465   tsu_render;
466 endtsuglyph;
467

```



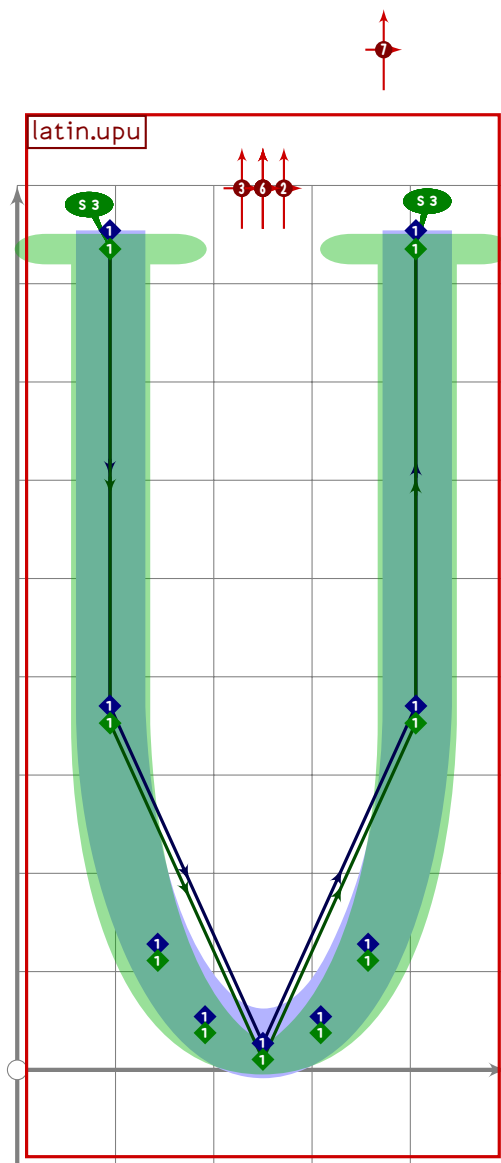
```

468 % T
469 begintsuglyph("T";84);
470 latin.upt;
471 tsu_render;
472 endtsuglyph;
473

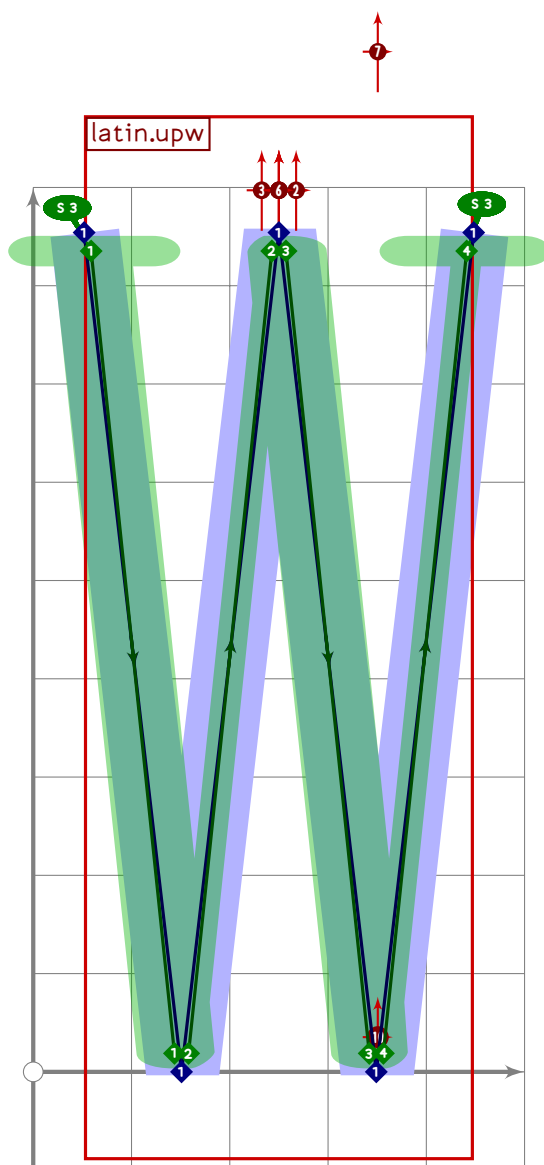
```

U+0055
tsuku.U

00



```
474 % U
475 begintsuglyph("U";85);
476 latin.upu;
477 tsu_render;
478 endtsuglyph;
479
```

```

486 % W
487 begintsuglyph("W";87);
488   latin.upw;
489   tsu_render;
490 endtsuglyph;
491

```



492 % X

```
493 begint Suglyph("X",88);
```

```
494     latin.upx;
```

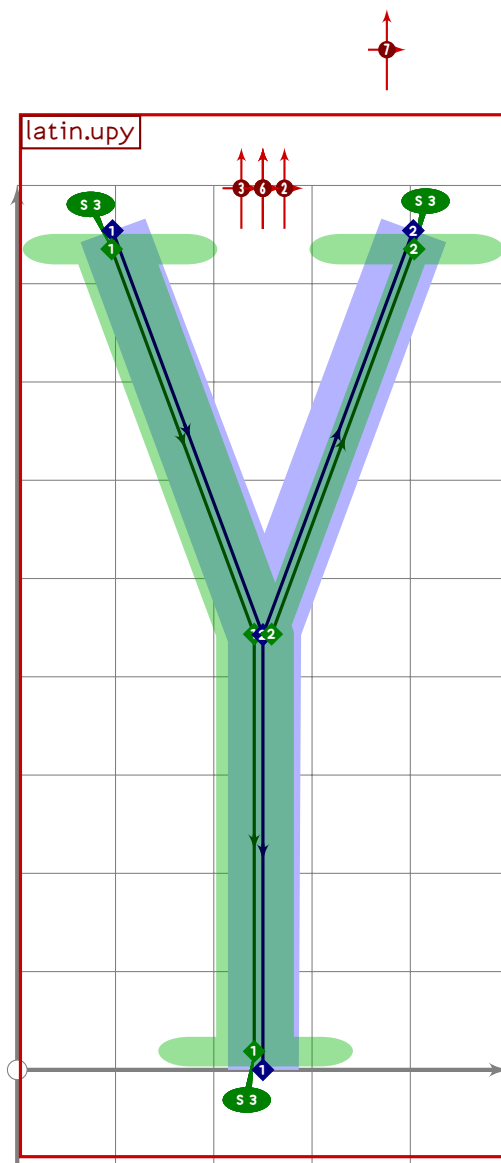
```
495     tsu_render;
```

```
496 endtsuglyph;
```

497

U+0059
tsuku.Y

00



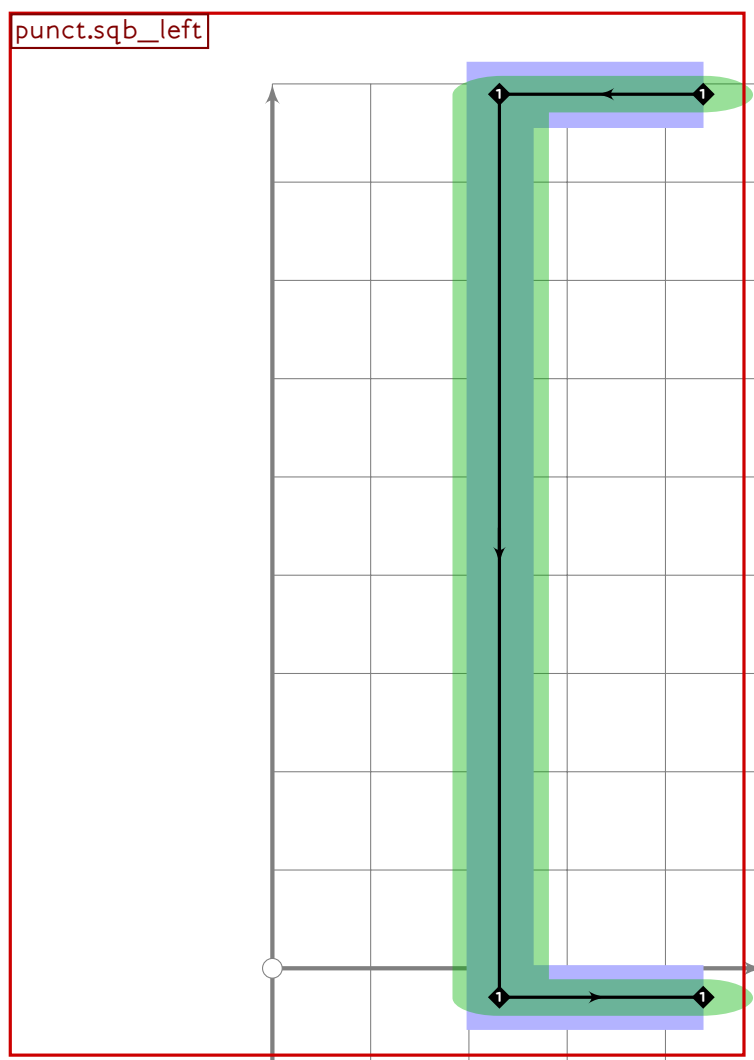
```
498 % Y
499 begintsuglyph("Y";89);
500 latin.upy;
501 tsu_render;
502 endtsuglyph;
503
```



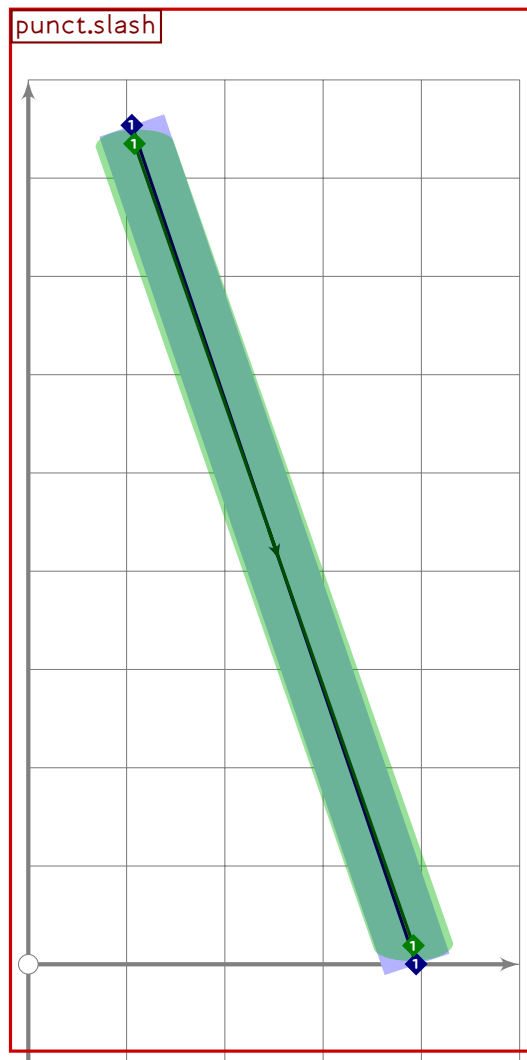

```
504 % Z
505 begintsuglyph("Z",90);
506     latin.upz;
507     tsu_render;
508 endtsuglyph;
509
510 tsu_accent.clear_default_anchors;
511
```

U+005B
tsuku.bracketleft

00



```
512 % left and right square brackets, backslash between
513 beginsuglyph("bracketleft";91);
514   punct.sqb_left;
515   tsu_render;
516 endsuglyph;
```



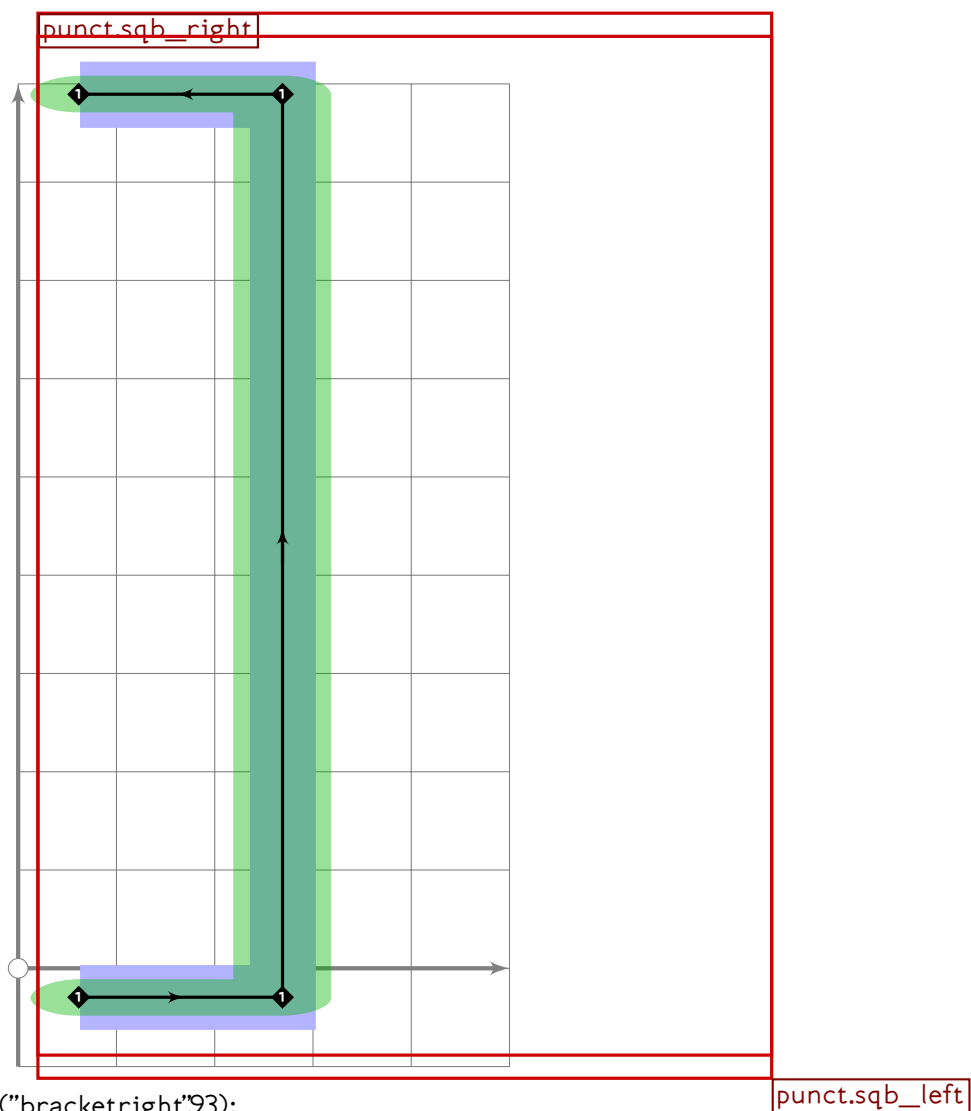
```

517 % backslash
518 begintsuglyph("backslash",92);
519 punct.slash;
520 replace_strokep(0)(oldp reflectedabout (centre_pt,(centre_pt+down)));
521 tsu_render;
522 endtsuglyph;

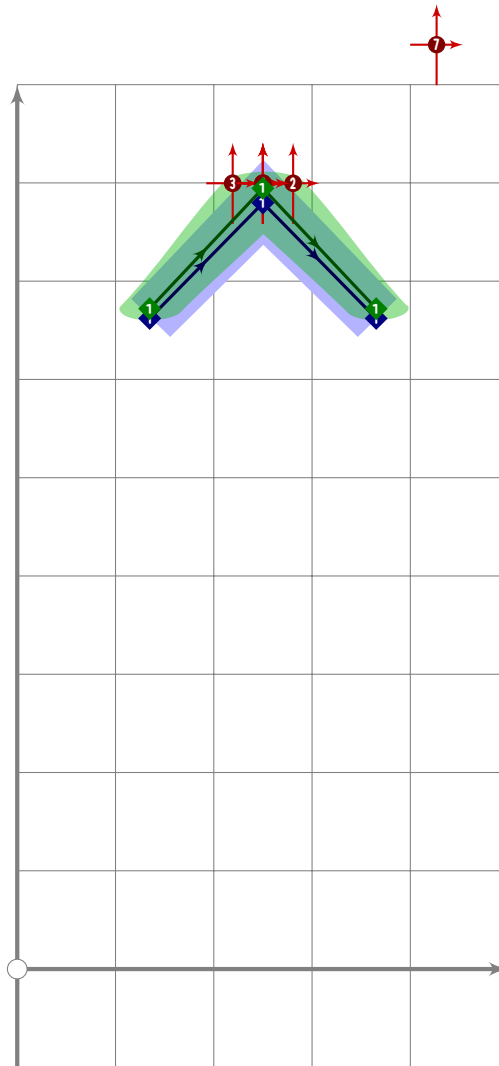
```

U+005D
tsuku.bracketright

00



```
523 begint Suglyph("bracketright";93);
524   punct.sqb_right;
525   tsu_render;
526 endtsuglyph;
527
```



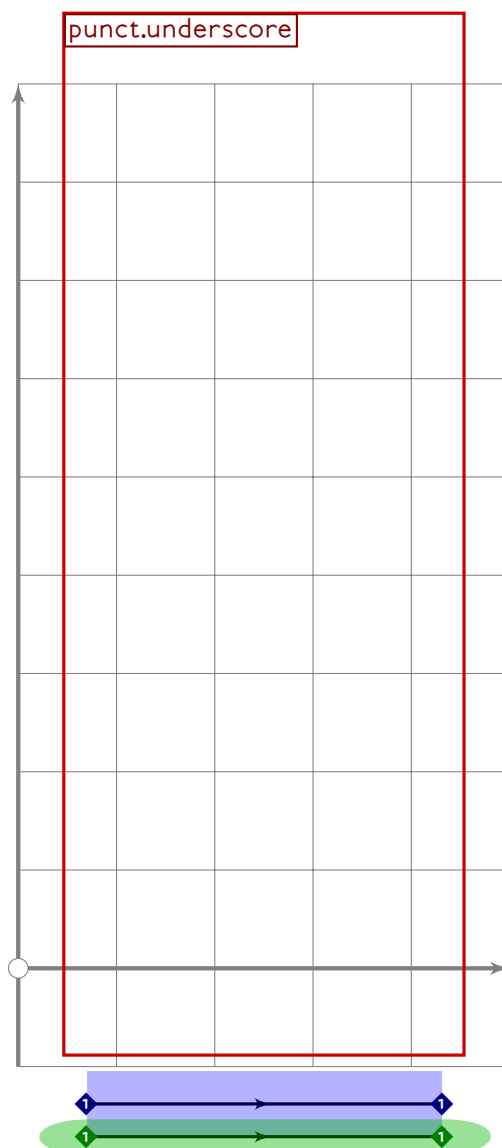
```

528 % circumflex accent/caret
529 begintsuglyph("asciicircum";94);
530   tsu_accent.circumflex;
531   tsu_render;
532 endtsuglyph;
533

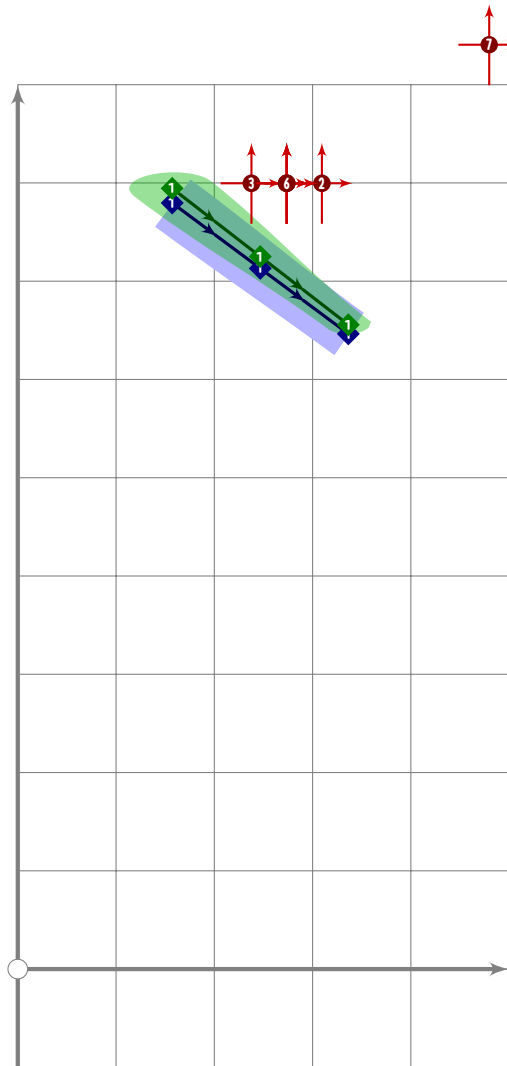
```

U+005F
tsuku.underscore

00



```
534 % underscore
535 beginsuglyph("underscore",95);
536 punct.underscore;
537 tsu_render;
538 endtsuglyph;
539
```

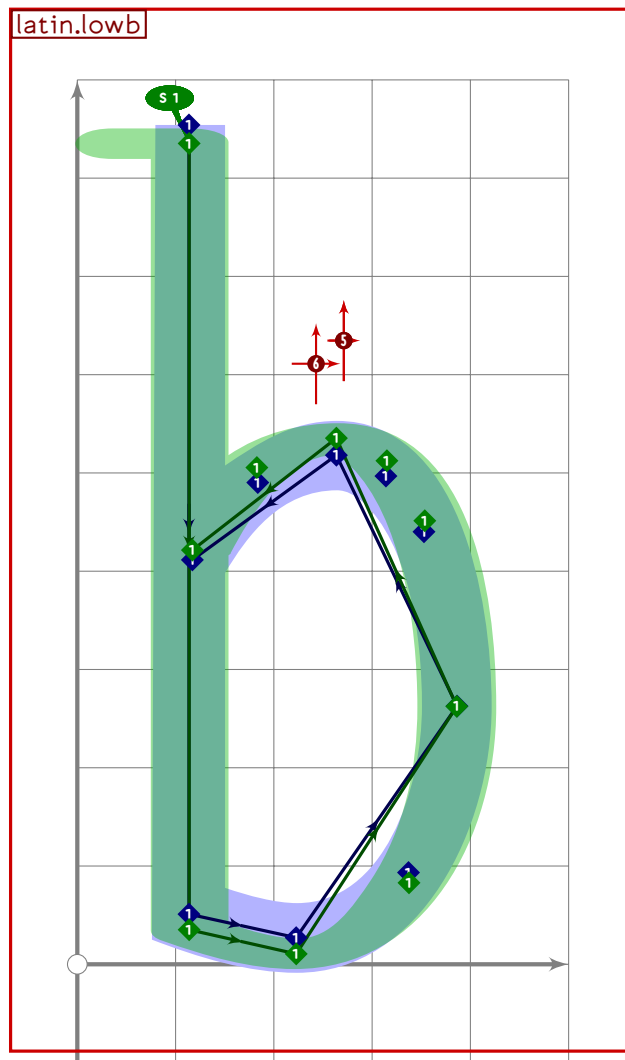


```

540 % grave accent
541 begintsuglyph("grave",96);
542   tsu_accent.grave;
543   tsu_render;
544 endtsuglyph;
545
546 % WARNING changing rescale setting
547 tsu_rescale_half_lc;
548
549 tsu_accent.low_default_anchors;
550

```

00



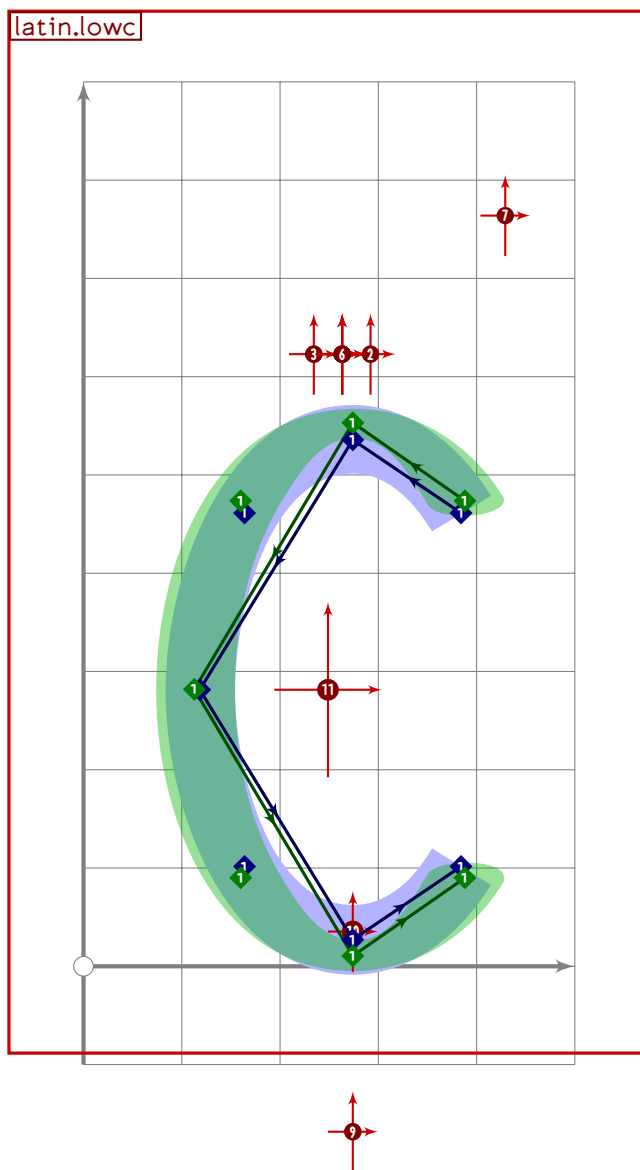
```

557 % b
558 begintsuglyph("b";98);
559   latin.lowb;
560   tsu_render;
561 endtsuglyph;
562

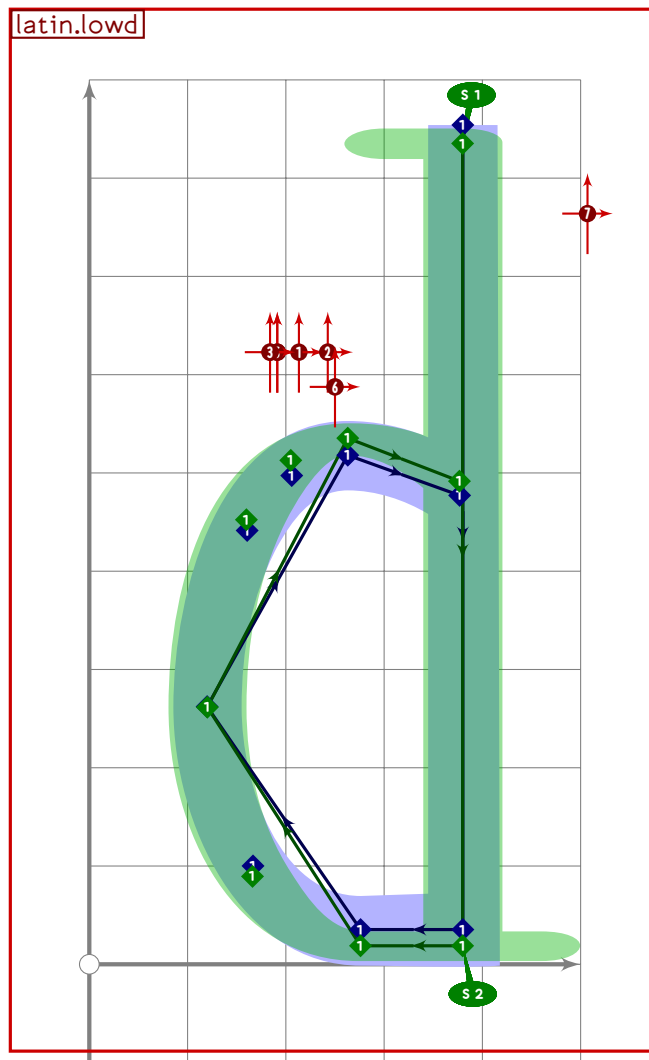
```

U+0063
tsuku.c

00



```
563 % c
564 beginsuglyph('c';99);
565   latin.lowc;
566   tsu_render;
567 endsuglyph;
568
```



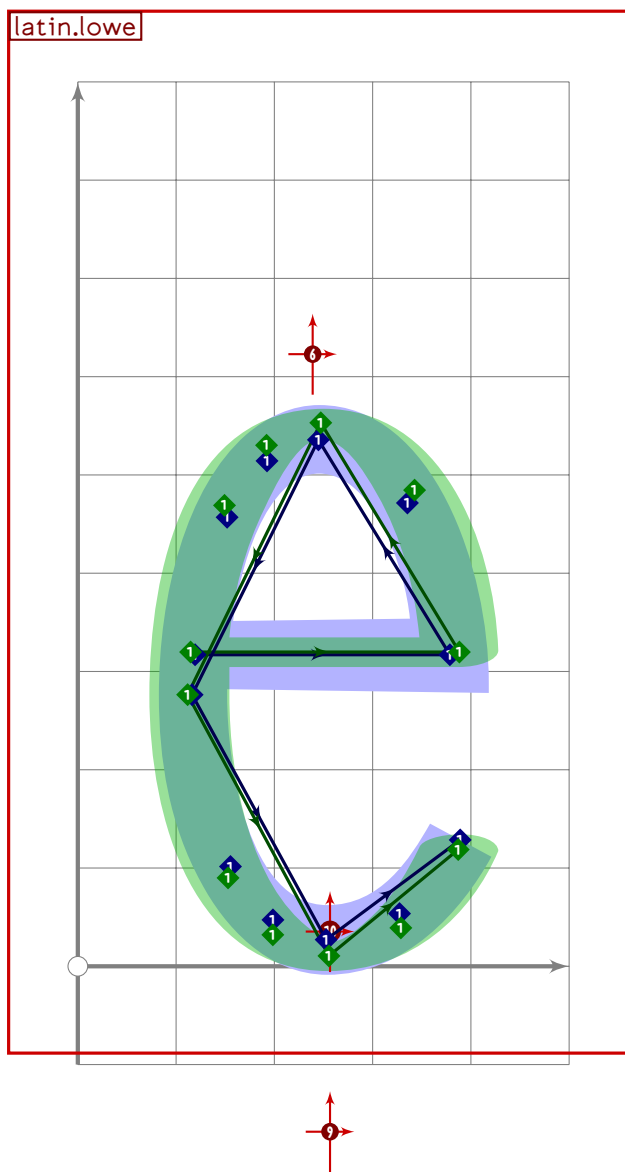
```

569 % d
570 begint Suglyph("d",100);
571   latin.lowd;
572   tsu_render;
573 endtsuglyph;
574

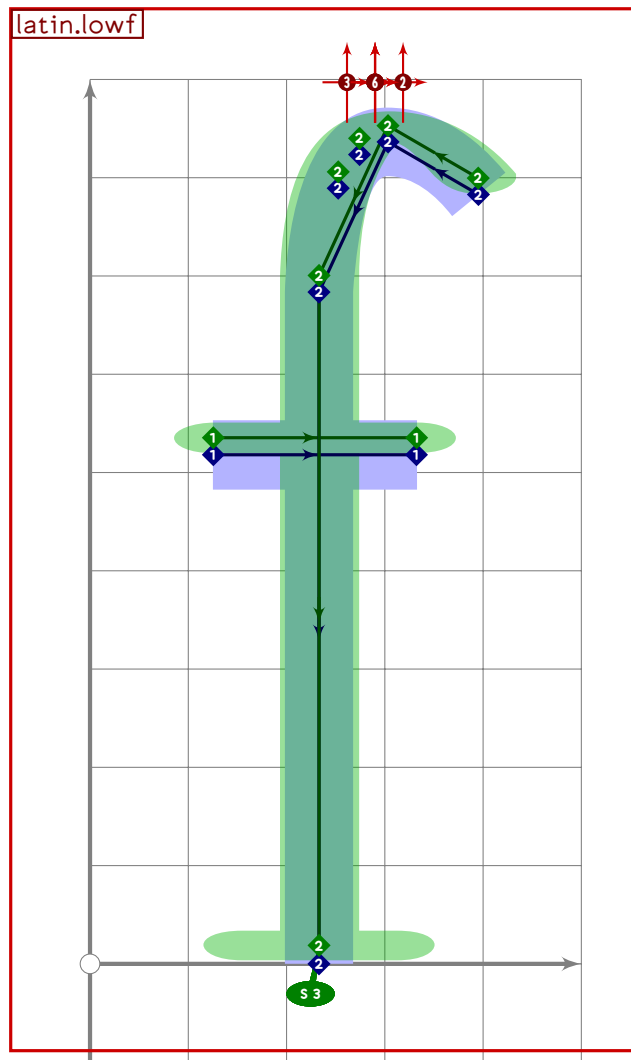
```

U+0065
tsuku.e

00



```
575 % e
576 begintsuglyph("e",101);
577 latin.lowe;
578 tsu_render;
579 endtsuglyph;
580
```



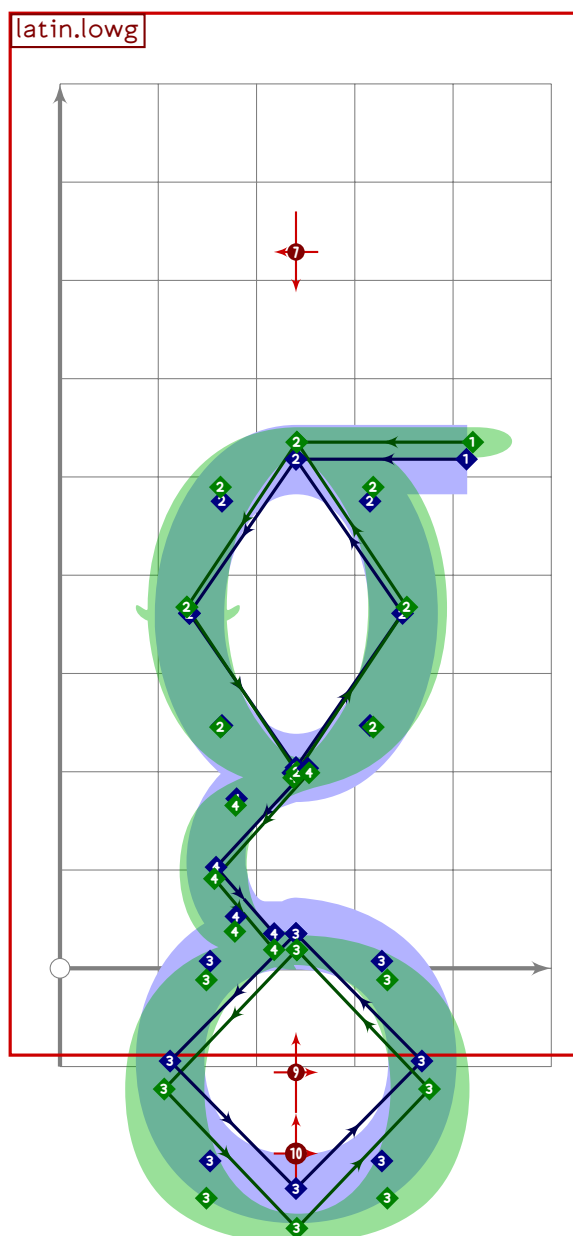
```

581 % f
582 begintsuglyph("f",102);
583 latin.lowf;
584 tsu_render;
585 endtsuglyph;
586

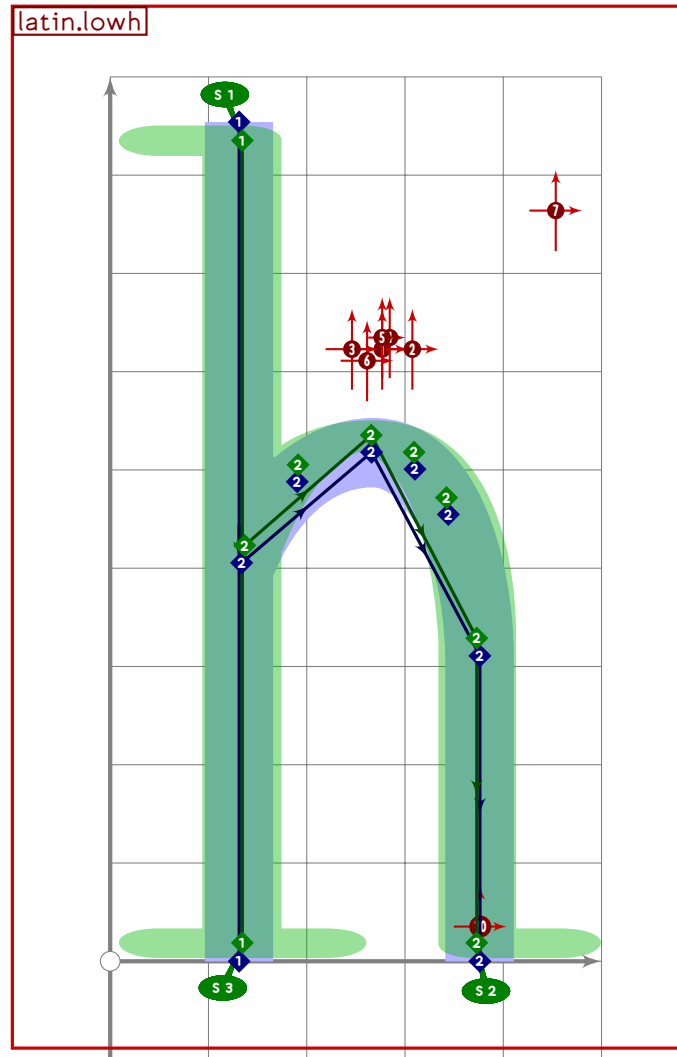
```

U+0067
tsuku.g

00



```
587 % g
588 begintsuglyph("g",103);
589 latin.lowg;
590 tsu_render;
591 endtsuglyph;
592
```

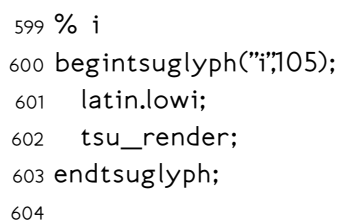


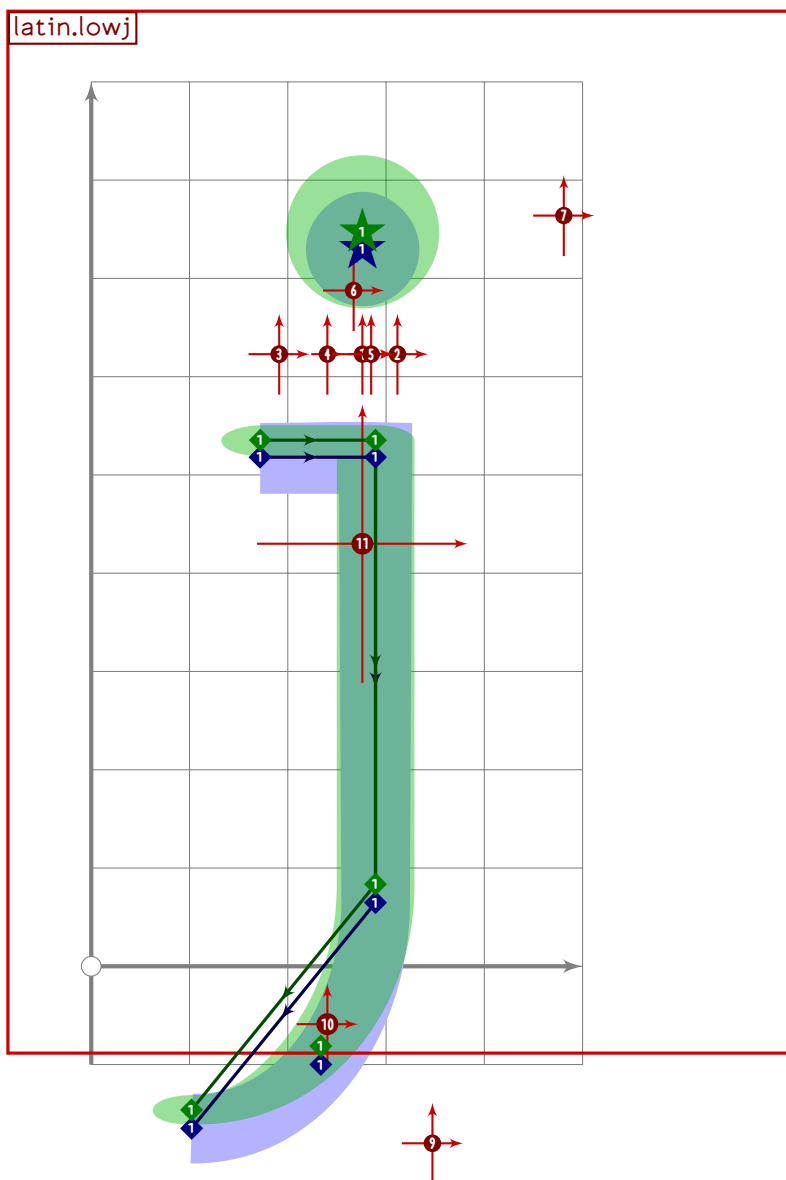
```

593 % h
594 begint Suglyph("h",104);
595   latin.lowh;
596   tsu_render;
597 endtsuglyph;
598

```

00

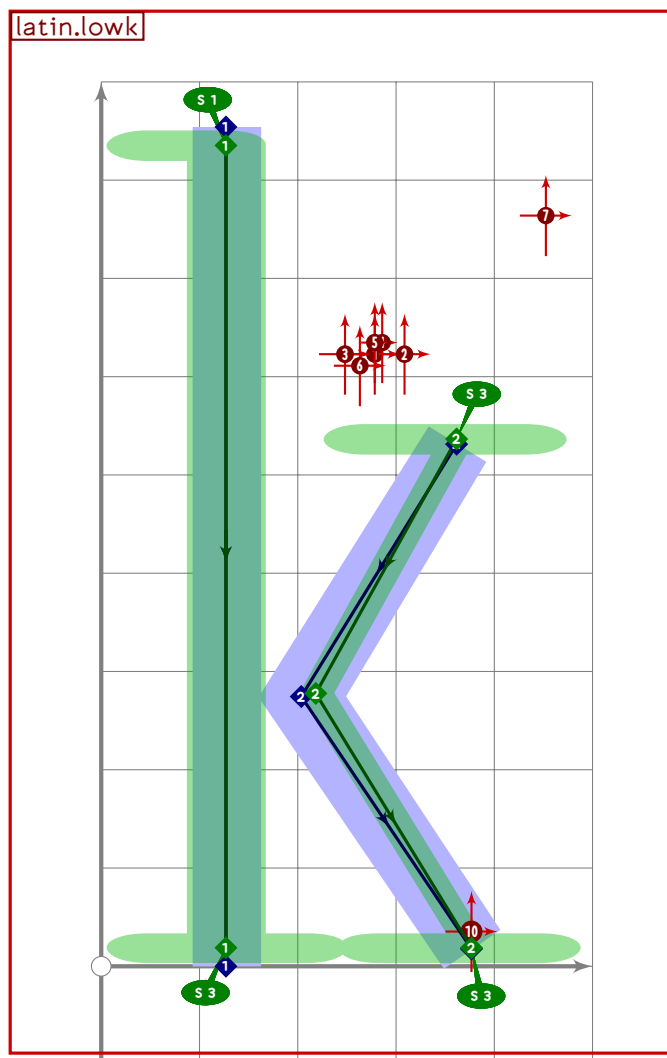




```

605 % j
606 begintsuglyph("j";106);
607 latin.lowj;
608 tsu_render;
609 endtsuglyph;
610

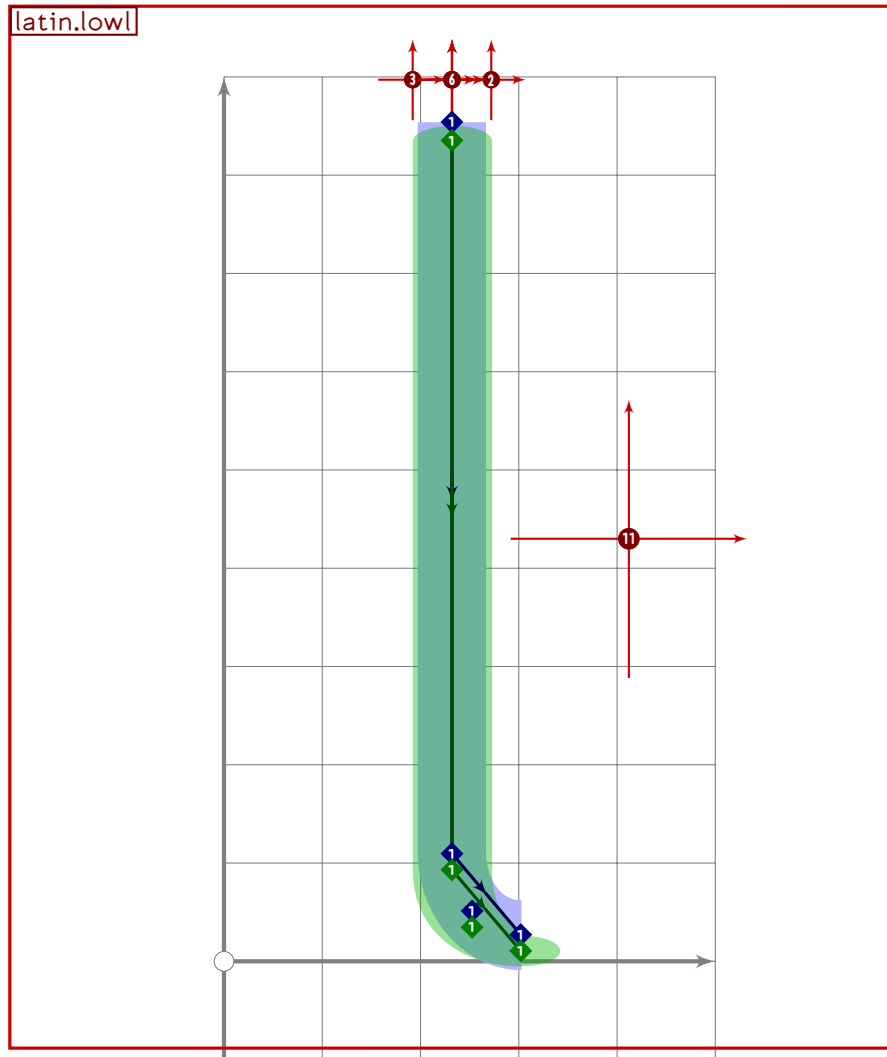
```



```

611 % k
612 begint Suglyph("k",107);
613   latin.lowk;
614   tsu_render;
615 endtsuglyph;
616

```



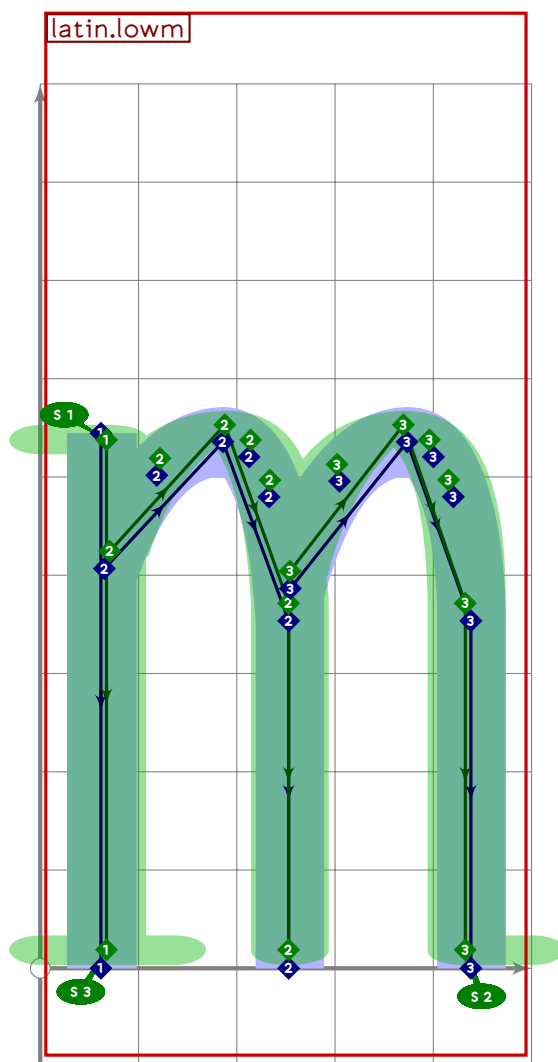
```

617 % l
618 beginsuglyph("l";108);
619   latin.lowl;
620   tsu_render;
621 endsuglyph;
622

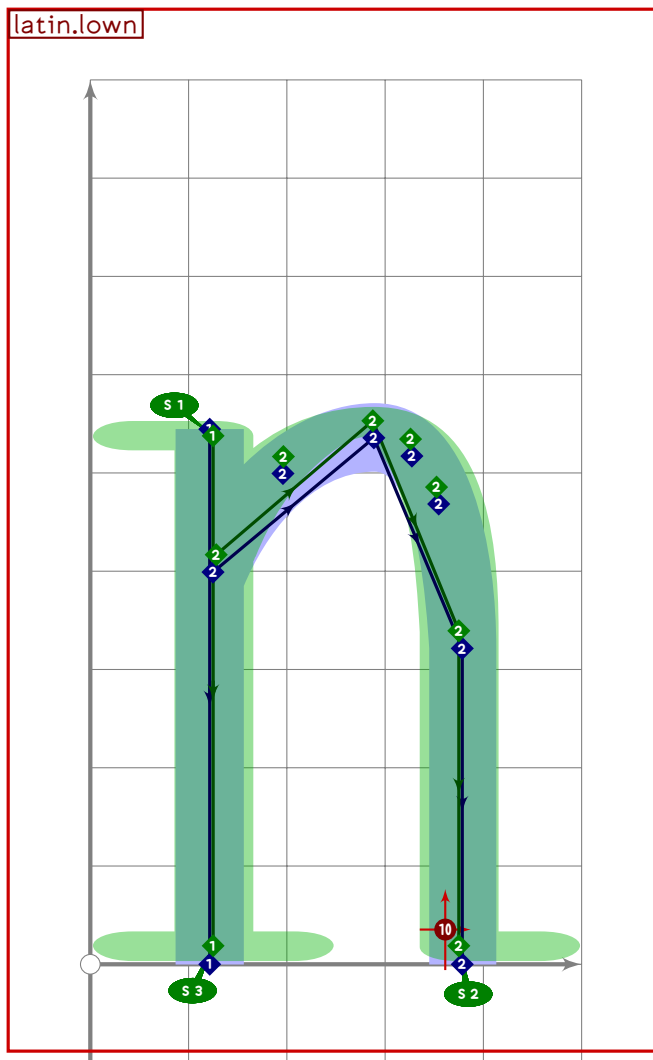
```

U+006D
tsuku.m

00



```
623 % m
624 beginsuglyph("m",109);
625   latin.lowm;
626   tsu_render;
627 endsuglyph;
628
```



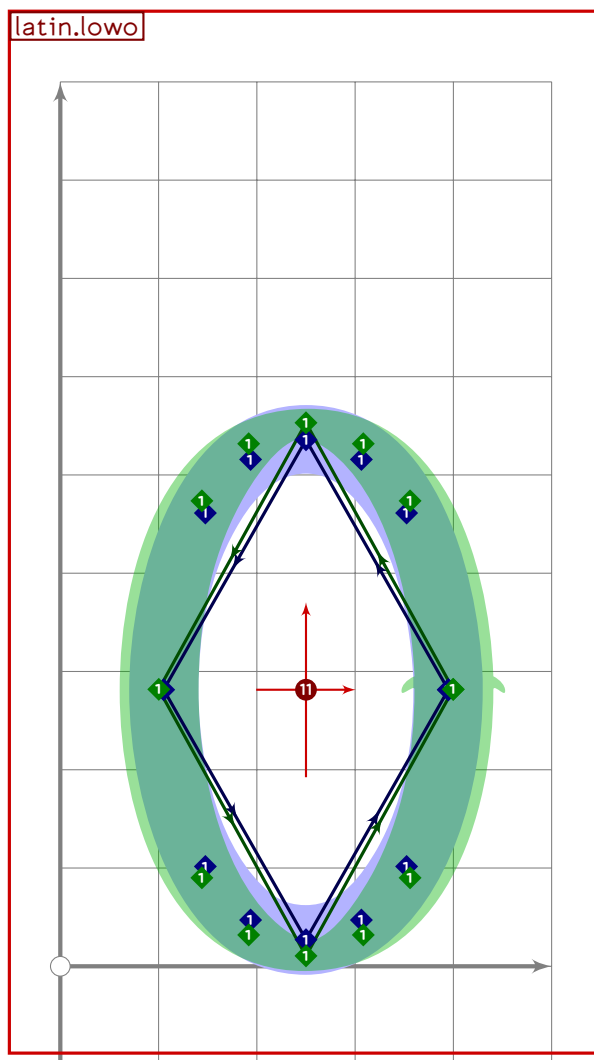
```

629 % n
630 beginsuglyph("n",110);
631   latin.lown;
632   tsu_render;
633 endsuglyph;
634

```

U+006F
tsuku.o

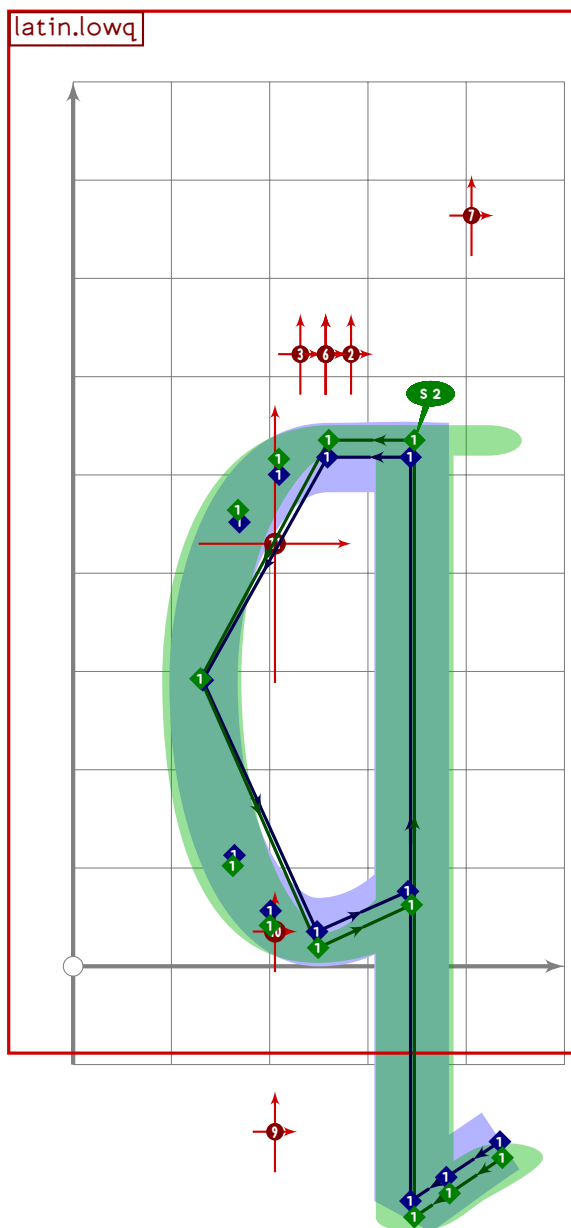
00



```
635 % o
636 beginsuglyph("o";111);
637   latin.lowo;
638   tsu_render;
639 endsuglyph;
640
```


U+0071
tsuku.q

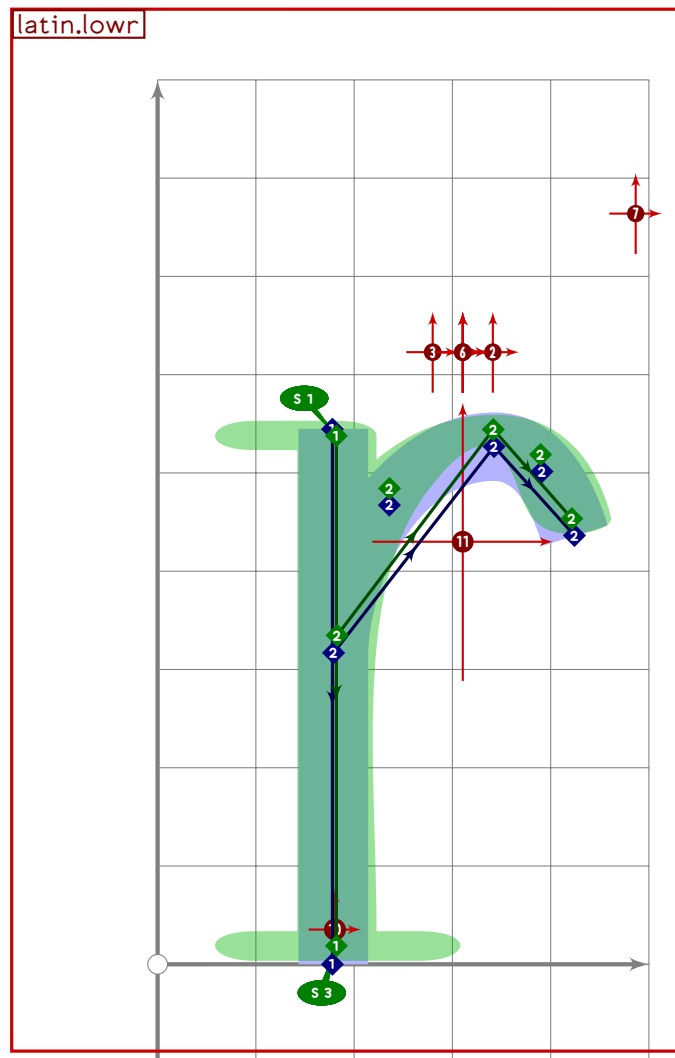
00



```

647 % q
648 begintsuglyph("q",113);
649   latin.lowq;
650   tsu_render;
651 endtsuglyph;
652

```

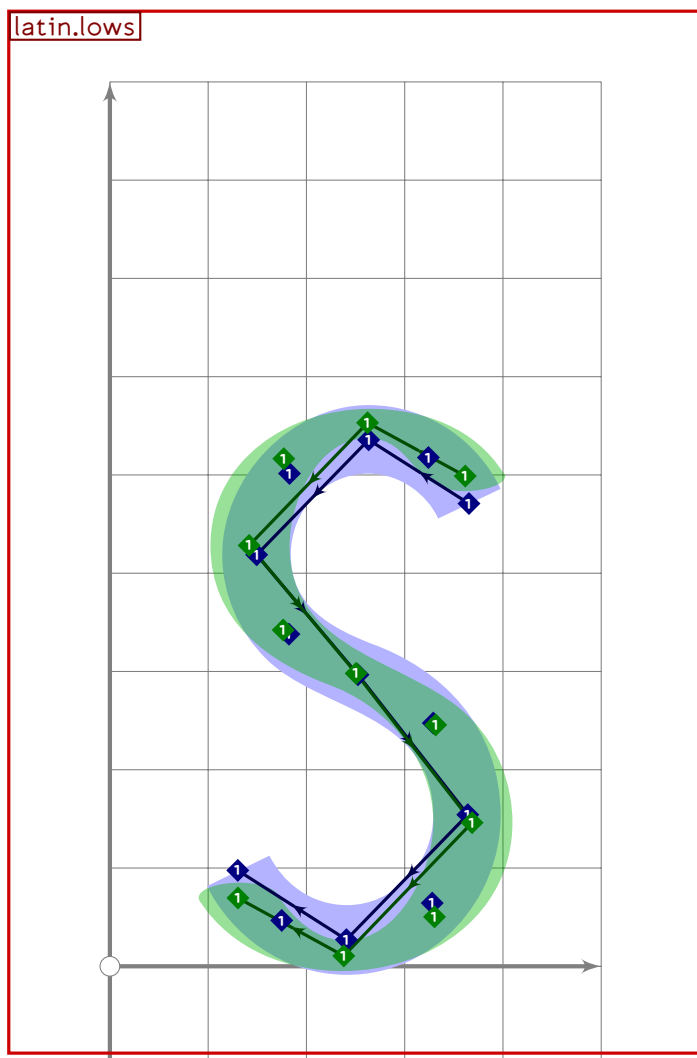
```

653 % r
654 beginsuglyph("r";114);
655   latin.lowr;
656   tsu_render;
657 endsuglyph;
658

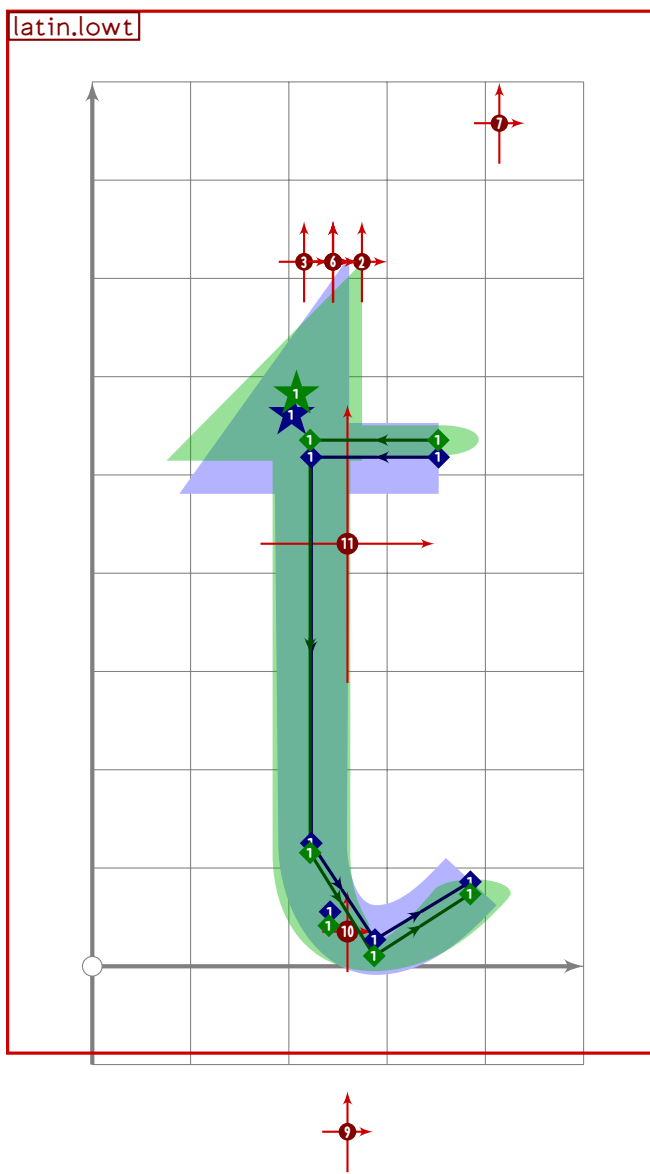
```

U+0073
tsuku.s

00



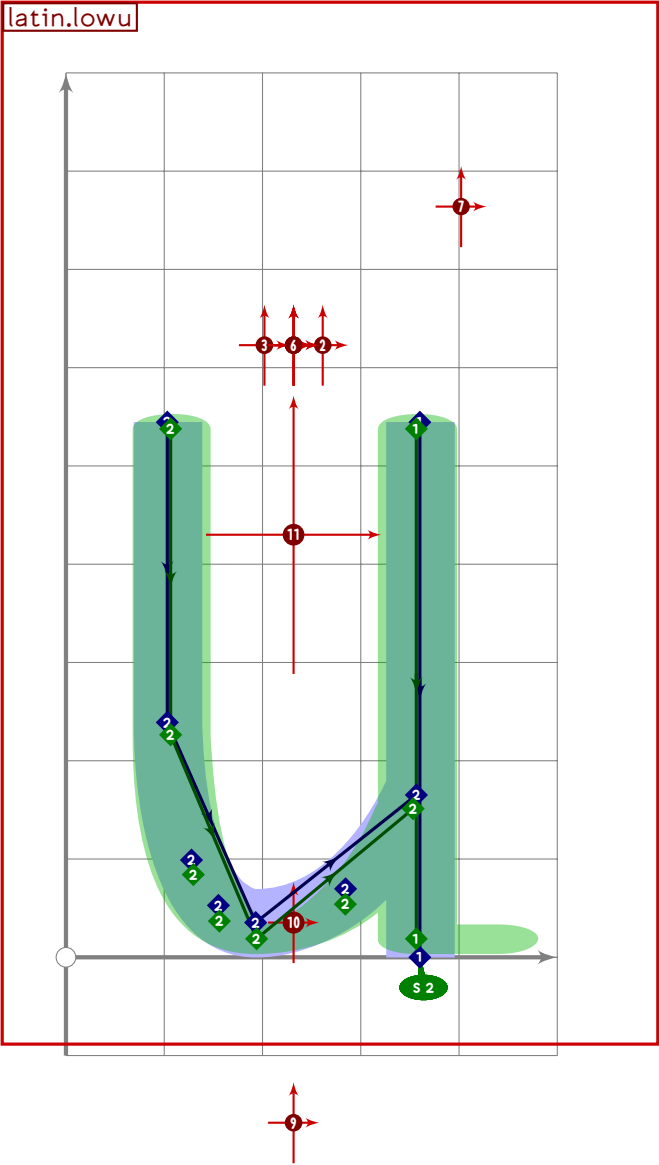
```
659 % s
660 beginsuglyph("s",115);
661   latin.lows;
662   tsu_render;
663 endsuglyph;
664
```



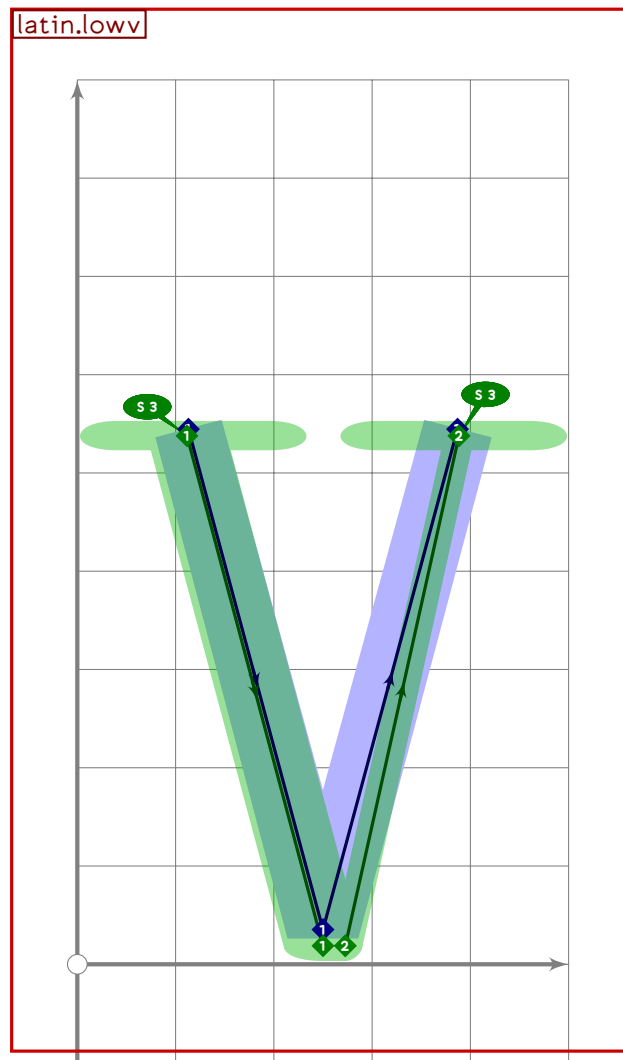
```

665 % t
666 begintsuglyph("t",116);
667   latin.lowt;
668   tsu_render;
669 endtsuglyph;
670

```



```
671 % u
672 begintsuglyph("u",117);
673 latin.lowu;
674 tsu_render;
675 endtsuglyph;
676
```



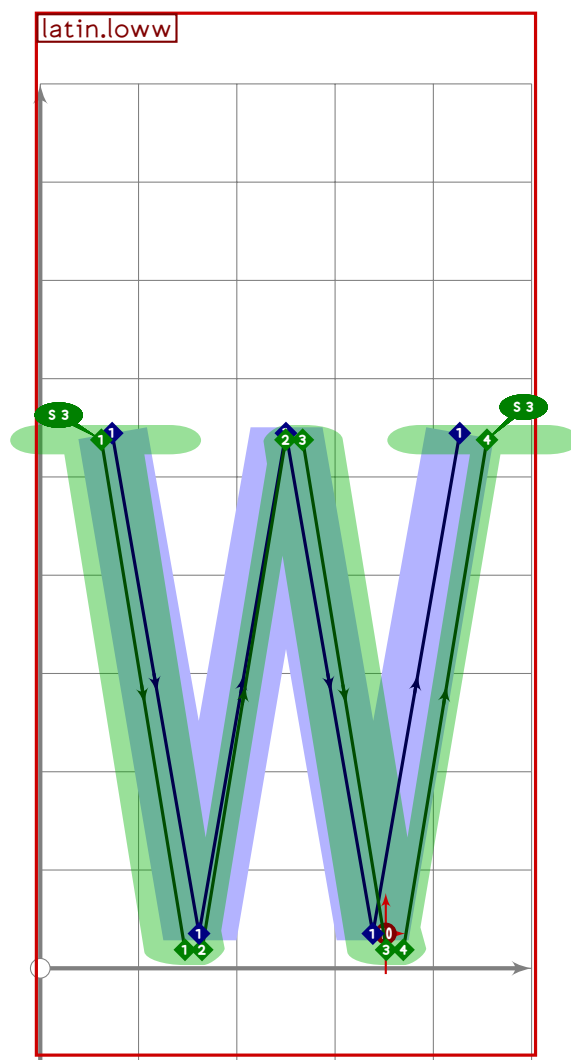
```

677 % v
678 beginsuglyph("v",118);
679   latin.lowv;
680   tsu_render;
681 endsuglyph;
682

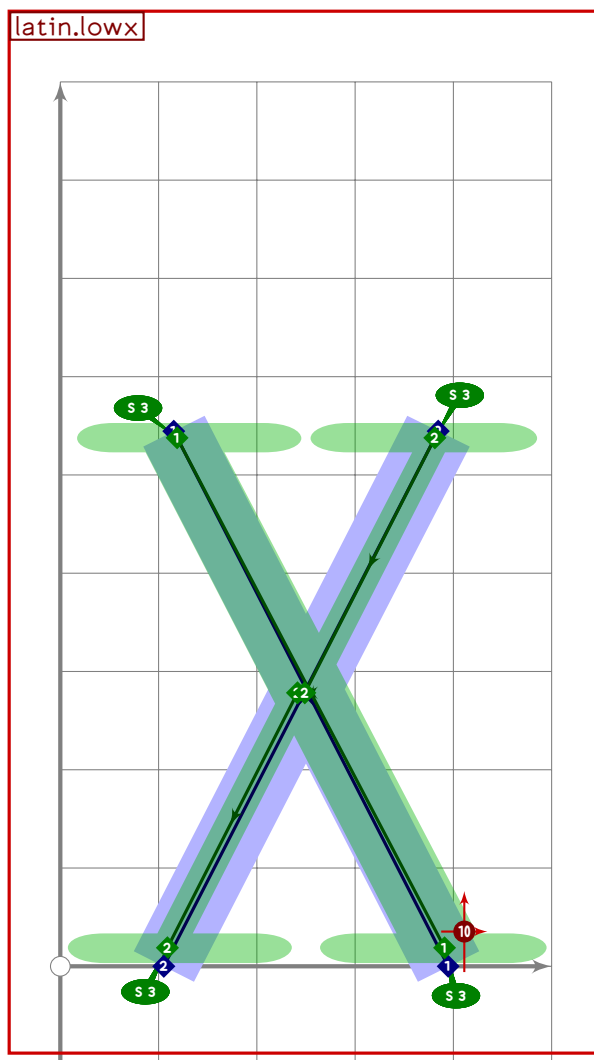
```

U+0077
tsuku.w

00



```
683 % w
684 beginsuglyph("w",119);
685   latin.loww;
686   tsu_render;
687 endsuglyph;
688
```



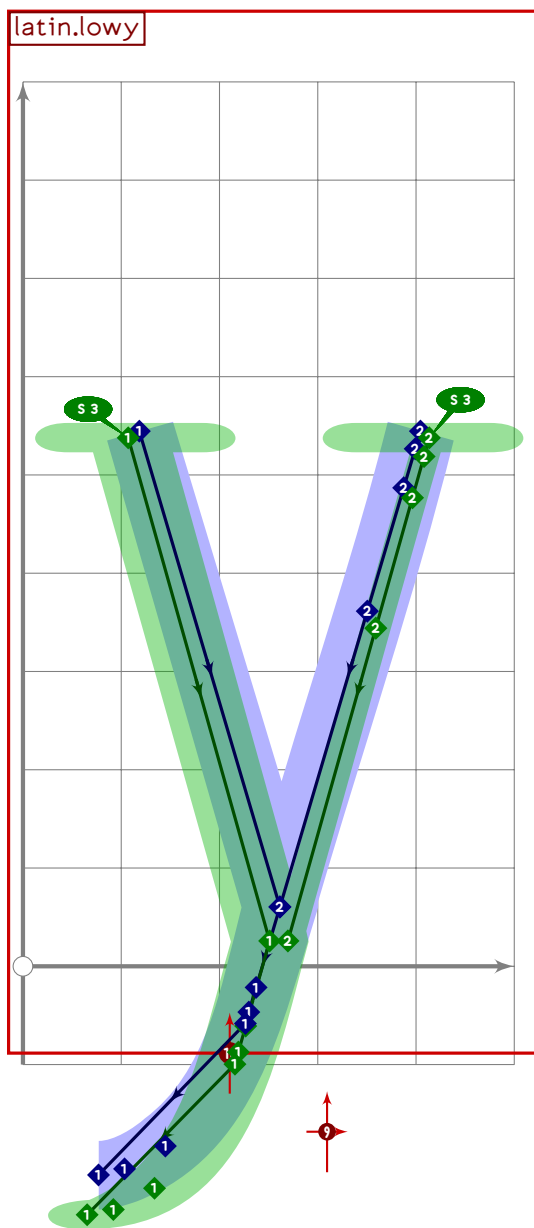
```

689 % x
690 beginsuglyph("x",120);
691   latin.lowx;
692   tsu_render;
693 endsuglyph;
694

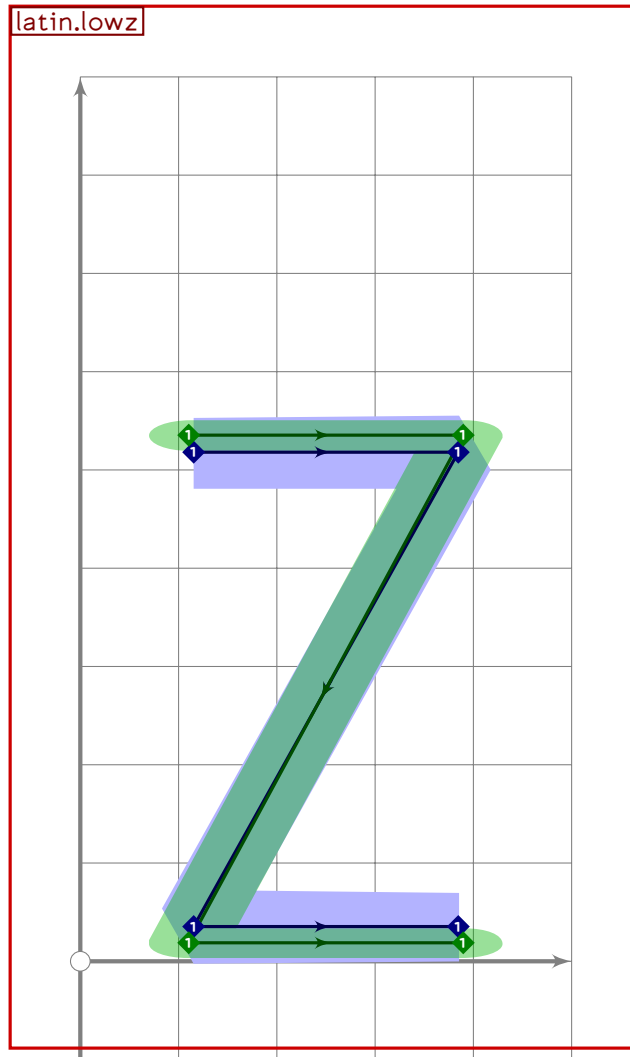
```

U+0079
tsuku.y

00



```
695 % y
696 begintsuglyph("y",121);
697   latin.lowy;
698   tsu_render;
699 endtsuglyph;
700
```

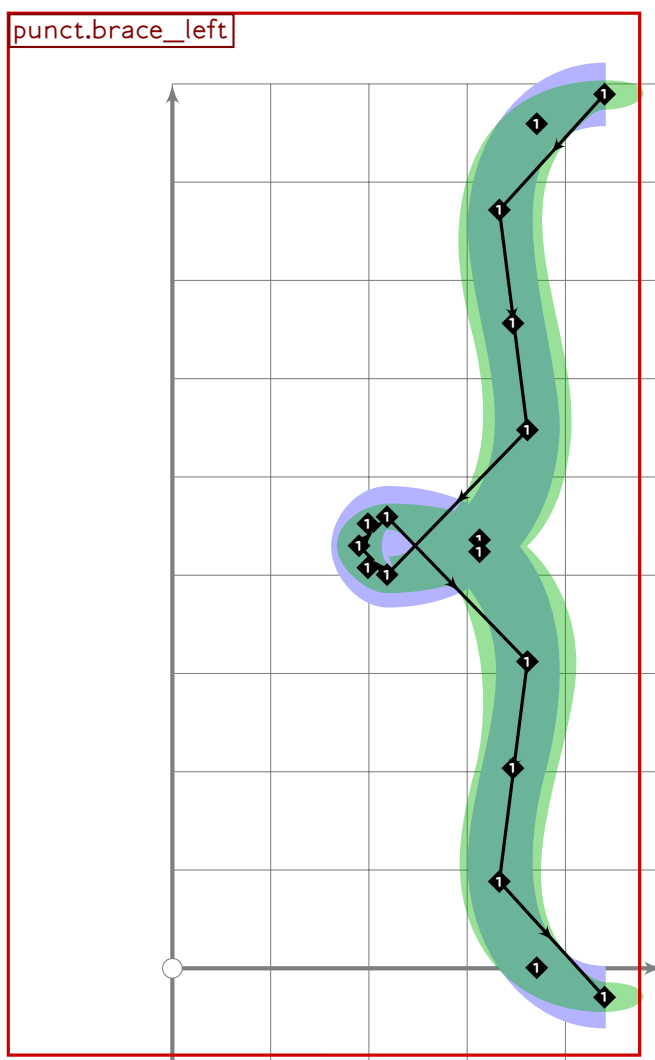
```

701 % z
702 begintsuglyph("z",122);
703   latin.lowz;
704   tsu_render;
705 endtsuglyph;
706
707 tsu_accent.clear_default_anchors;
708
709 % WARNING changing rescale setting
710 tsu_rescale_half;
711

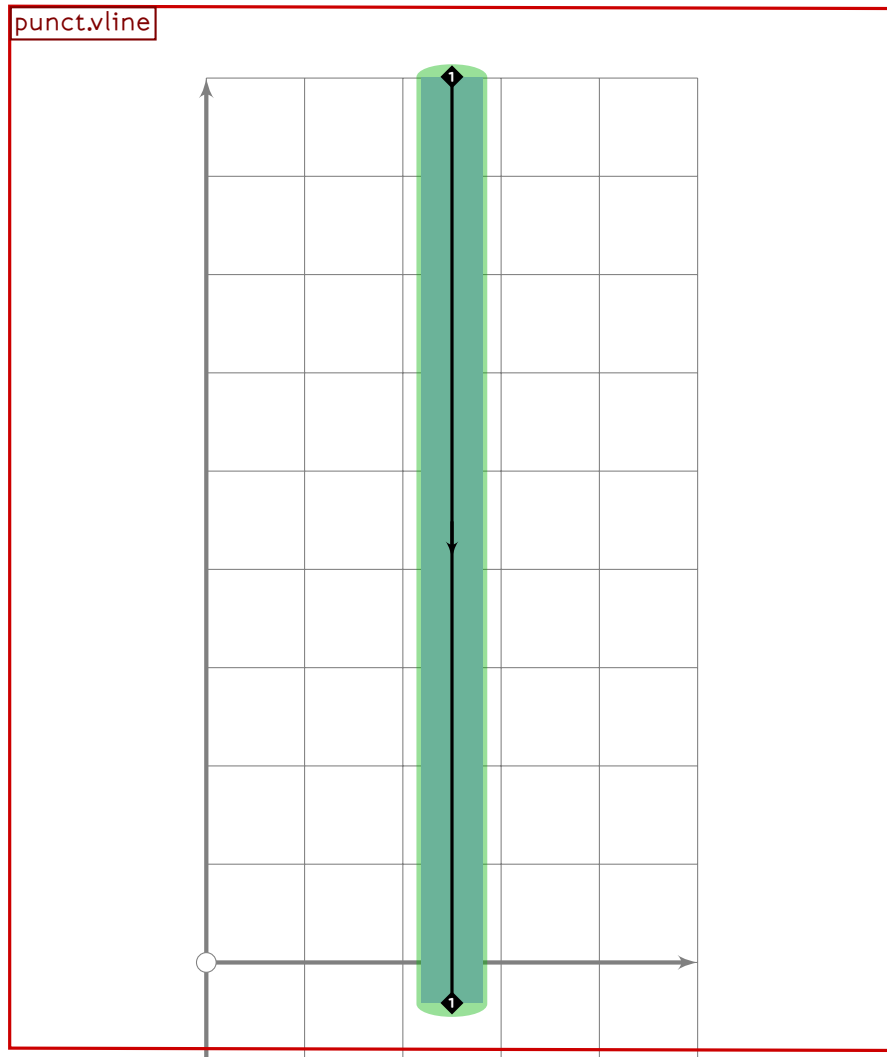
```

U+007B
tsuku.braceleft

00



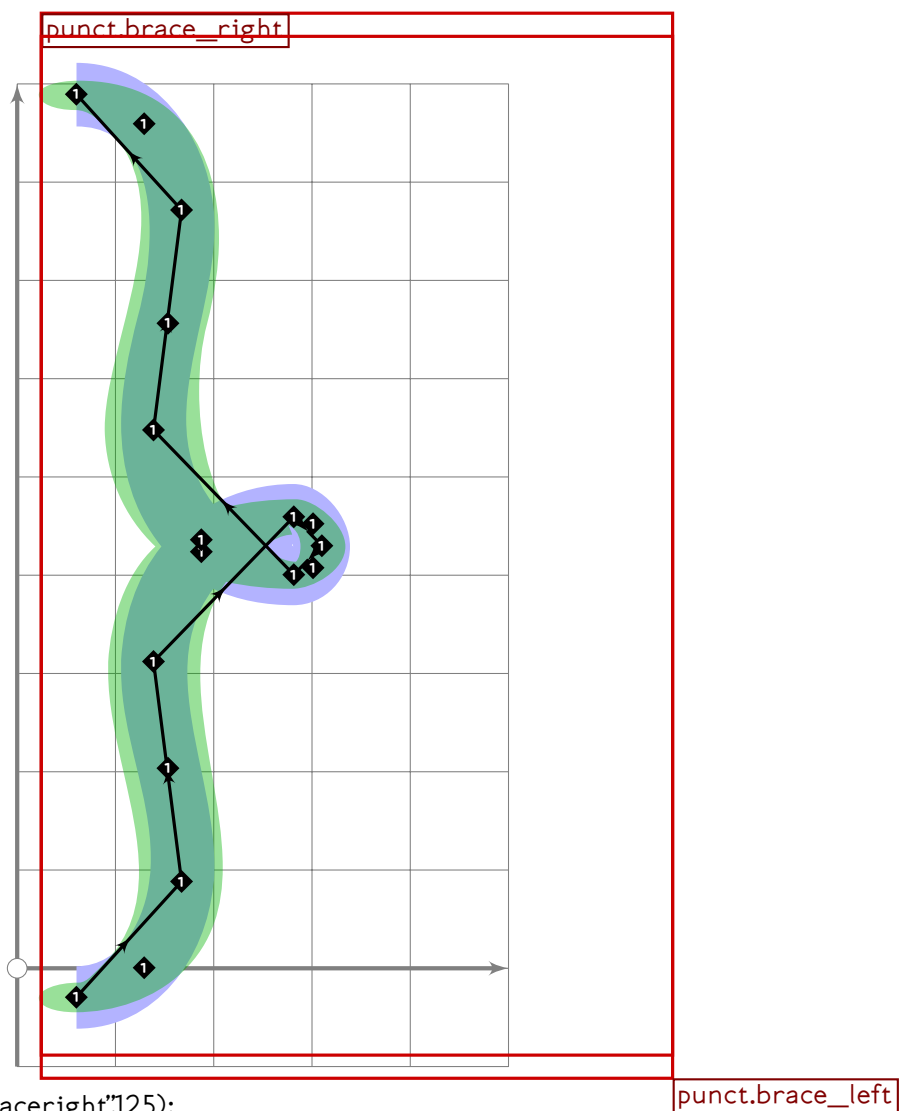
```
712 % left and right square brackets
713 beginsuglyph("braceleft";123);
714   punct.brace_left;
715   tsu_render;
716 endsuglyph;
```



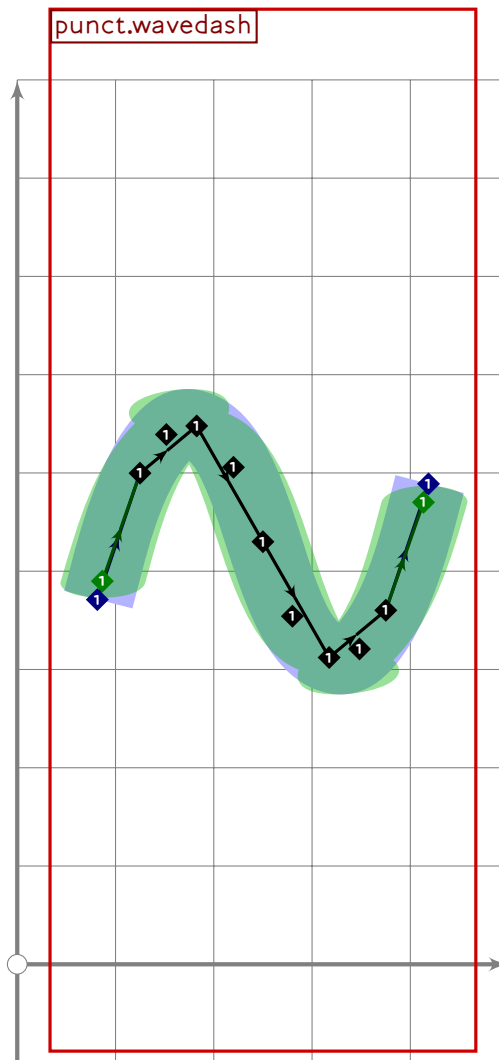
```
717 beginsuglyph("bar",124);  
718   punct.vline;  
719   tsu_render;  
720 endtsuglyph;
```

U+007D
tsuku.braceright

00



```
721 begint Suglyph("braceright",125);  
722   punct.brace_right;  
723   tsu_render;  
724 endtsuglyph;  
725
```



```

726 % "tilde" - rescaled "wave dash"
727 beginsuglyph("asciitilde",126);
728   punct.wavedash;
729   tsu_render;
730 endsuglyph;
731
732
733
734 % 007F through 009F are nonprinting control characters.
735 % 00A0 is a space, supplied by the make-font script later
736
737
738

```

Latin-1 Extra Characters

```

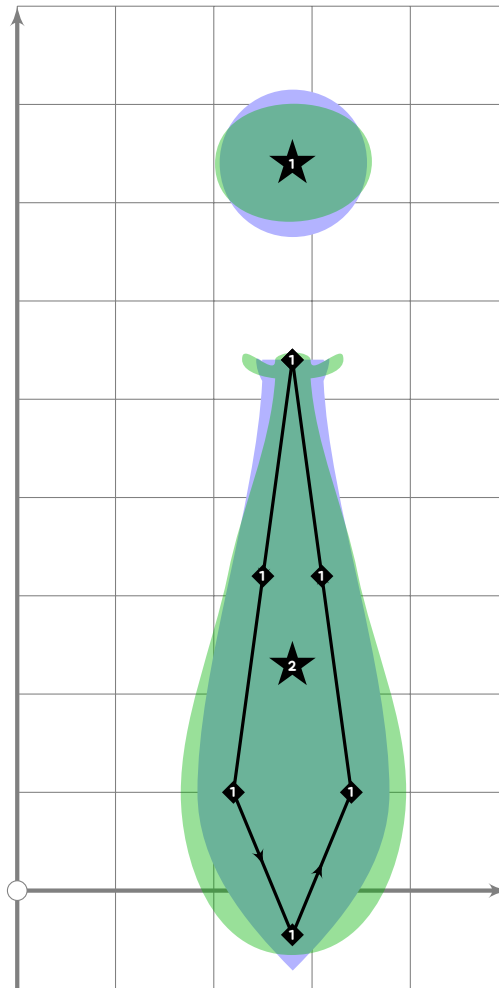
739 % LATIN-1 EXTRA CHARACTERS
740
741 transform tsu_xf.latin_one_super,tsu_xf.latin_one_circled,
742   tsu_xf.latin_one_cbound;

```

```

743
744 if is_proportional:
745     xypart tsu_xf.latin_one_super=yxpart tsu_xf.latin_one_super=0;
746     xxpart tsu_xf.latin_one_super=yy part tsu_xf.latin_one_super=0.65;
747     (500,latin_wide_xheight_r) transformed tsu_xf.latin_one_super=
748         (500,2*latin_vcentre);
749
750     xypart tsu_xf.latin_one_circled=yxpart tsu_xf.latin_one_circled=0;
751     xxpart tsu_xf.latin_one_circled=yy part tsu_xf.latin_one_circled=0.5;
752     centre_pt transformed tsu_xf.latin_one_circled=centre_pt;
753
754     tsu_xf.latin_one_cbound=identity scaled 225 shifted centre_pt;
755
756 else:
757     xypart tsu_xf.latin_one_super=yxpart tsu_xf.latin_one_super=0;
758     xxpart tsu_xf.latin_one_super=yy part tsu_xf.latin_one_super=0.55;
759     (500,latin_wide_xheight_r) transformed tsu_xf.latin_one_super=
760         (250,2*latin_vcentre);
761
762     xypart tsu_xf.latin_one_circled=yxpart tsu_xf.latin_one_circled=0;
763     xxpart tsu_xf.latin_one_circled=yy part tsu_xf.latin_one_circled=0.333;
764     centre_pt transformed tsu_xf.latin_one_circled=(250,latin_vcentre);
765
766     tsu_xf.latin_one_cbound=identity scaled 150 shifted (250,latin_vcentre);
767 fi;
768
769 % inverted exclamation point
770 tsu_rescale_native_narrow;

```



```

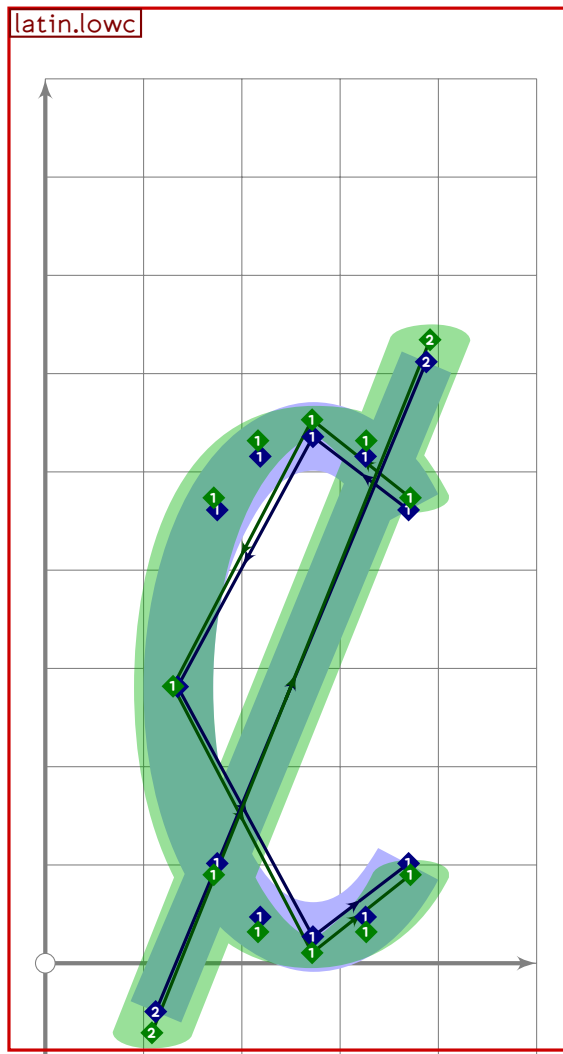
771 begint Suglyph("exclamdown",161);
772   if tsu_pbrush_size>=(tsu_punct_size*0.5):
773     push_lcblob(fullcircle
774       xscaled (tsu_punct_size+tsu_pbrush_size)
775       yscaled (tsu_punct_size+tsu_pbrush_size*tsu_pbrush_shape)
776       rotated tsu_pbrush_angle
777       shifted (220,40)
778       rotatedaround ((250,390),180));
779   else:
780     push_stroke(fullcircle
781       scaled tsu_punct_size
782       shifted (220,40)
783       rotatedaround ((250,390),180),
784       (2,2)-(2,2)-(2,2)-(2,2));
785     if tsu_pbrush_size>=30:
786       push_lcblob(get_stroke(0));
787     fi;
788   fi;
789
790   push_stroke(((220,240){up}..(280,680){up}..{curl 1}(220,825){curl 1}..
791     (160,680){down}..{down}(220,240))

```

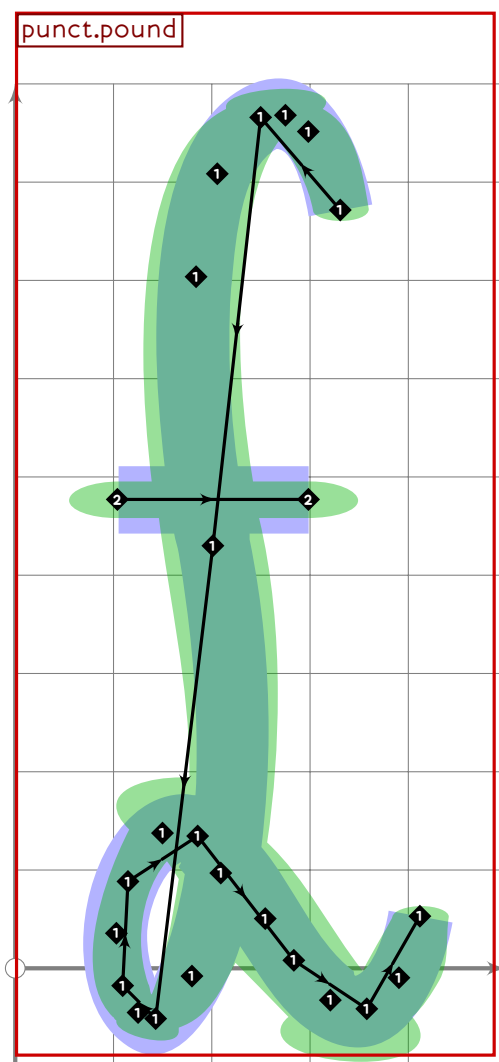
U+00A2
tsuku.cent

00

```
792     rotatedaround ((250,390),180),
793     (1,1)-(2,2)-(2,2)-(2,2)-(1,1));
794
795     if tsu_pbrush_size>=30:
796         push_lcblob((subpath (0,1,3,9) of get_strokep(0))-cycle);
797     fi;
798
799     tsu_render;
800 endtsuglyph;
801 tsu_rescale_half;
```



```
802
803 begint Suglyph("cent",162);
804 tsu_accent.apply(latin.lowc)(tsu_accent.slash);
805 tsu_render;
806 endtsuglyph;
```

```

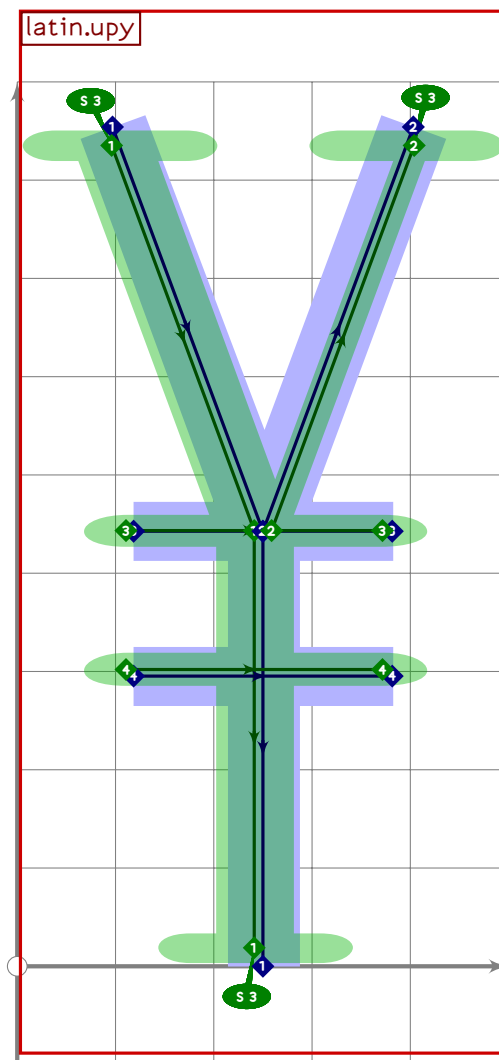
807
808 begintsuglyph("sterling",163);
809   punct.pound;
810   tsu_render;
811 endtsuglyph;
812
813 begintsuglyph("currency",164);
814   punct.currency;
815   tsu_render;
816 endtsuglyph;
817

```

[see page 372]

U+00A5
tsuku.yen

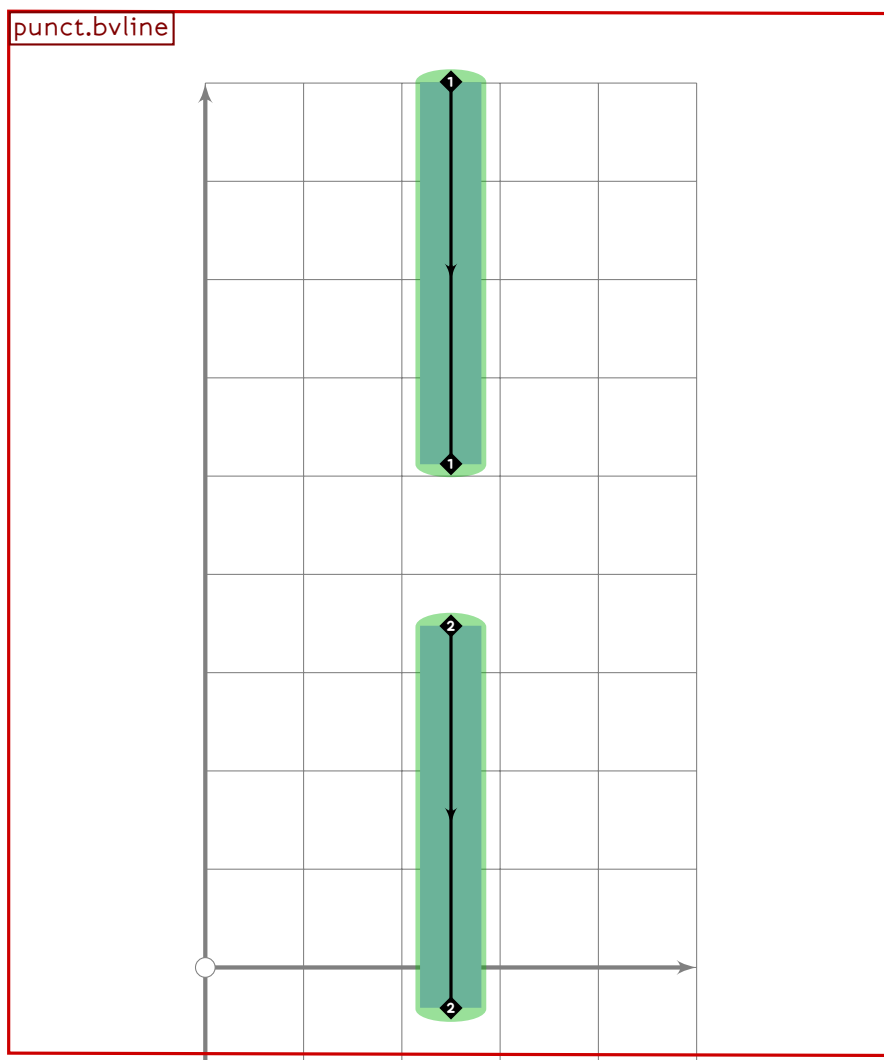
00



```

818 % yen sign
819 begint Suglyph("yen",165);
820 latin.upy;
821 push_stroke(((240,0)-(240,0)) shifted point 1 of get_stroke(-1),
822   (2,2)-(2,2));
823 set_bosize(0,80);
824 push_stroke(((240,0)-(240,0)) shifted point 1.333 of get_stroke(-2),
825   (2,2)-(2,2));
826 set_bosize(0,80);
827 tsu_render;
828 endtsuglyph;

```



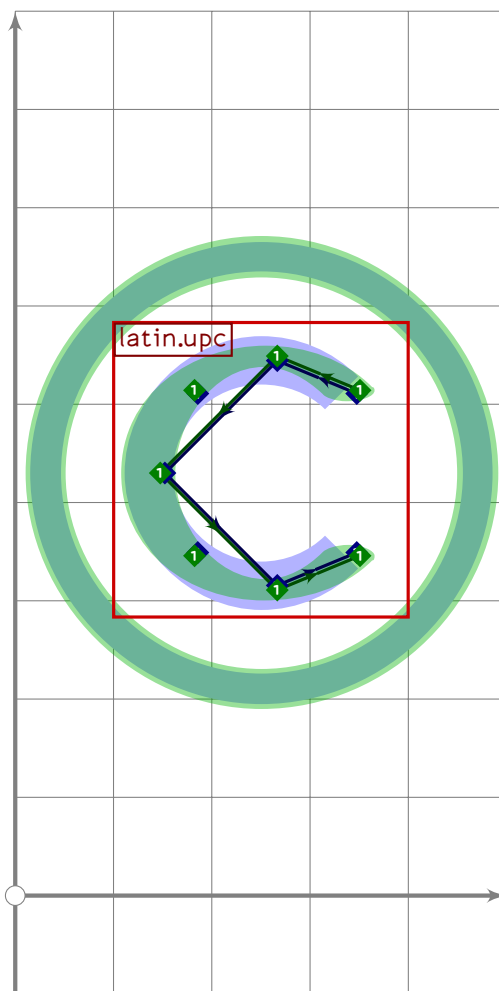
```

829
830 begintsuglyph("brokenbar";166);
831   punct.bvline;
832   tsu_render;
833 endtsuglyph;
834
835 begintsuglyph("section";167);
836   punct.section;
837   tsu_render;
838 endtsuglyph;
839
840 % naked umlaut
841 begintsuglyph("dieresis";168);
842   tsu_accent.umlaut;
843   tsu_render;
844 endtsuglyph;
845
846 % WARNING, setting rescale
847 tsu_rescale_native_conditional;

```

[see page 394]

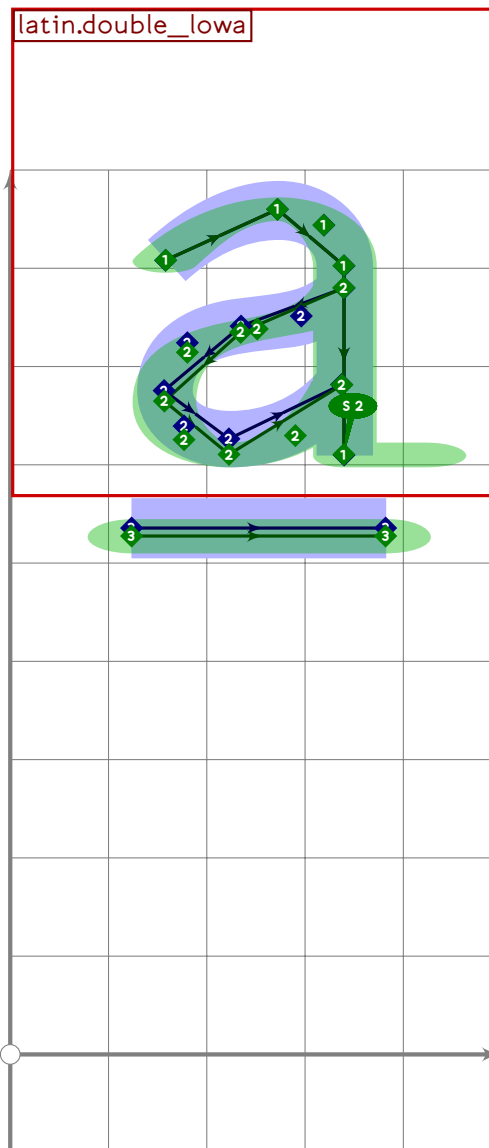
[see page 109]



```

848
849 begint Suglyph("copyright",169);
850   Fill fullcircle scaled (1320+120*tsu_brush_max) shifted centre_pt
851     transformed tsu_xf.latin_one_circled;
852   unFill reverse fullcircle scaled (1320-120*tsu_brush_max)
853     shifted centre_pt transformed tsu_xf.latin_one_circled;
854   tsu_xform(tsu_xf.latin_one_circled)(latin.upc);
855   tsu_render_in_circle(tsu_xf.latin_one_cbound);
856 endtsuglyph;

```



```

857
858 beginsuglyph("ordfeminine",170);
859   tsu_xform(tsu_xf.latin_one_super)(
860     latin.low_a;
861     push_stroke((270,-110)-(740,-110),(2,2)-(2,2));
862     set_bosize(0,get_bosize(-1));
863     tsu_render;
864 endtsuglyph;
865
866 % WARNING, changing rescale setting
867 tsu_rescale_half;
868
869 beginsuglyph("guillemotleft",171);
870   punct.guillemet_left;
871   tsu_render;
872 endtsuglyph;
873

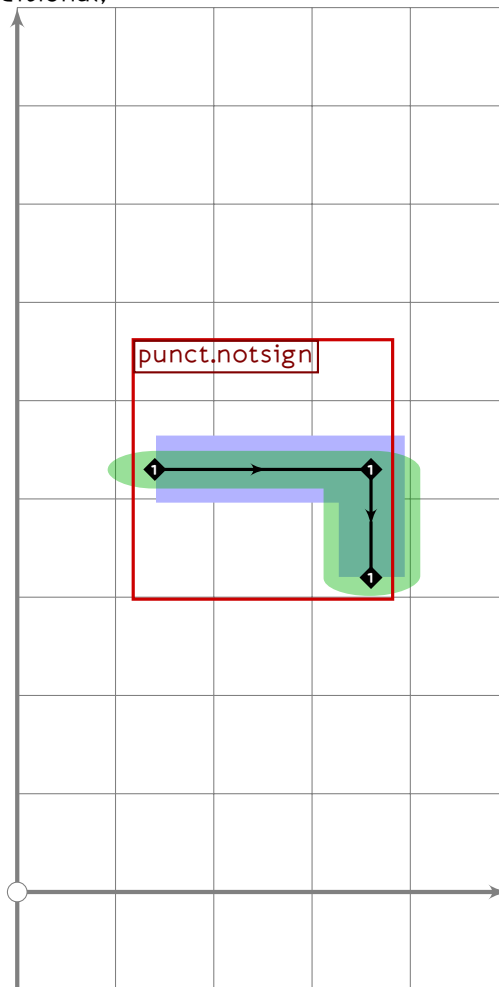
```

[see page 380]

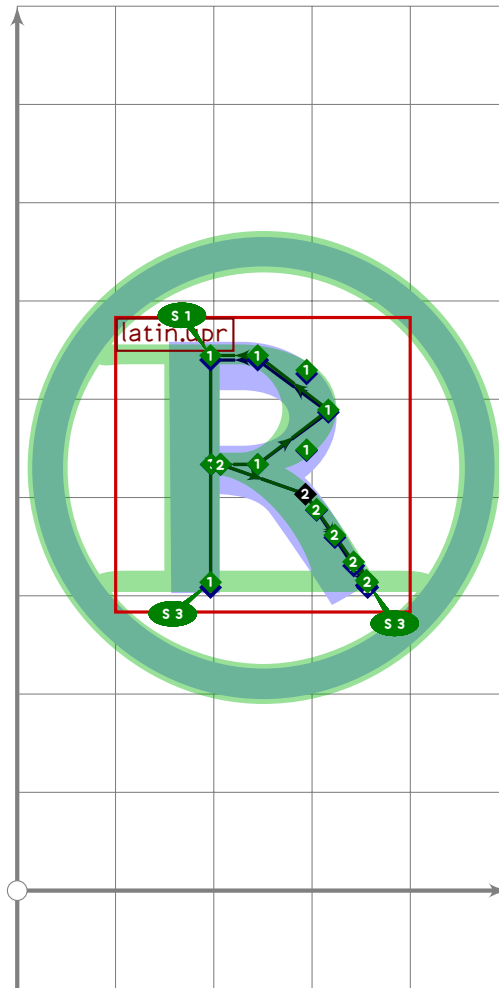
U+00AC
tsuku.logicalnot

```
874 % WARNING, setting rescale
875 tsu_rescale_native_conditional;
```

00



```
876
877 begint Suglyph("logicalnot",172);
878   punct.notsign(ascii_punct_xf);
879   tsu_render;
880 endtsuglyph;
881
882 % soft hyphen is a zero-width space and added by make-font script
```

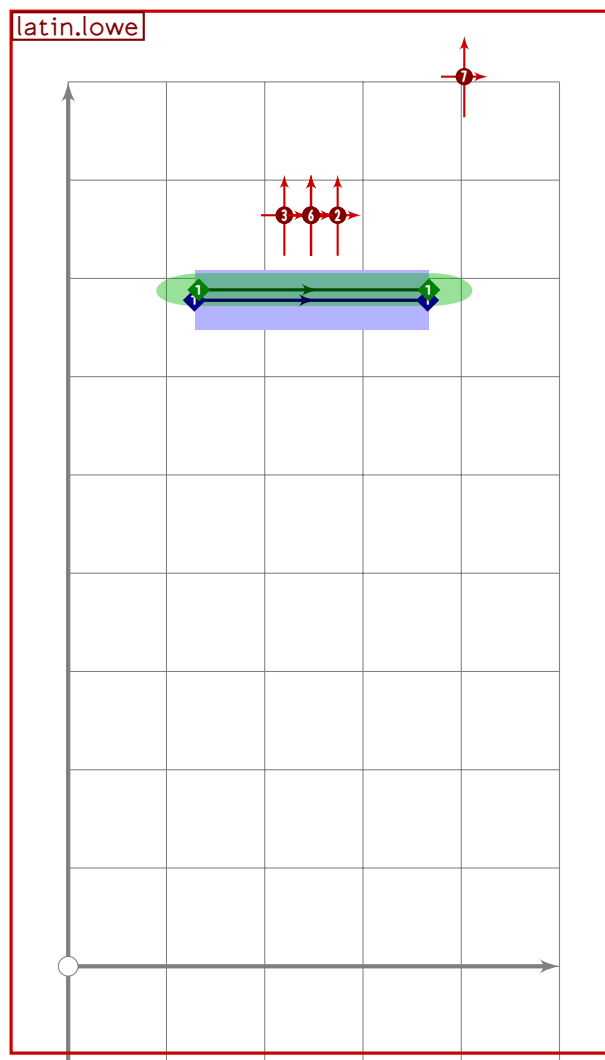


```

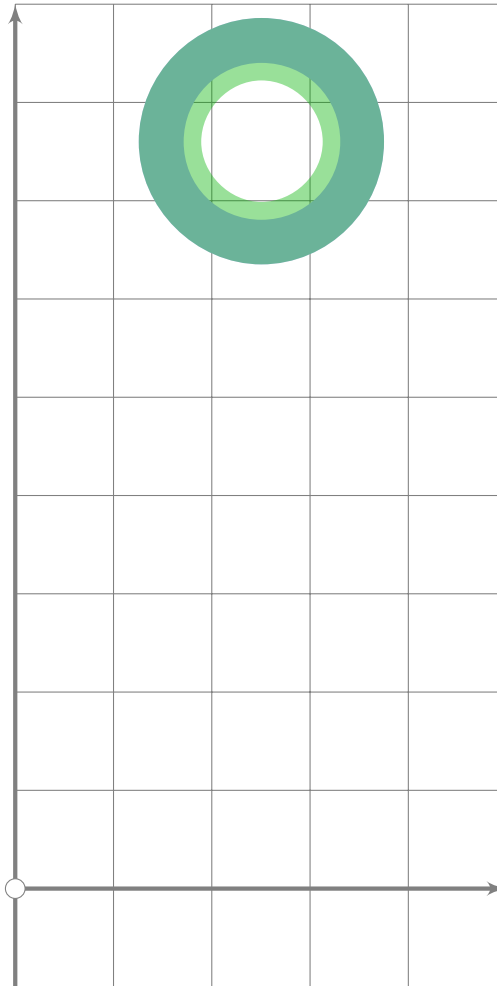
883
884 begint Suglyph("registered";174);
885   Fill fullcircle scaled (1320+120*tsu_brush_max) shifted centre_pt
886     transformed tsu_xf.latin_one_circled;
887   unFill reverse fullcircle scaled (1320-120*tsu_brush_max)
888     shifted centre_pt transformed tsu_xf.latin_one_circled;
889   tsu_xform(tsu_xf.latin_one_circled)(latin.upr);
890   tsu_render_in_circle(tsu_xf.latin_one_cbound);
891 endtsuglyph;
892
893 % WARNING, setting rescale
894 tsu_rescale_half;
895

```

00



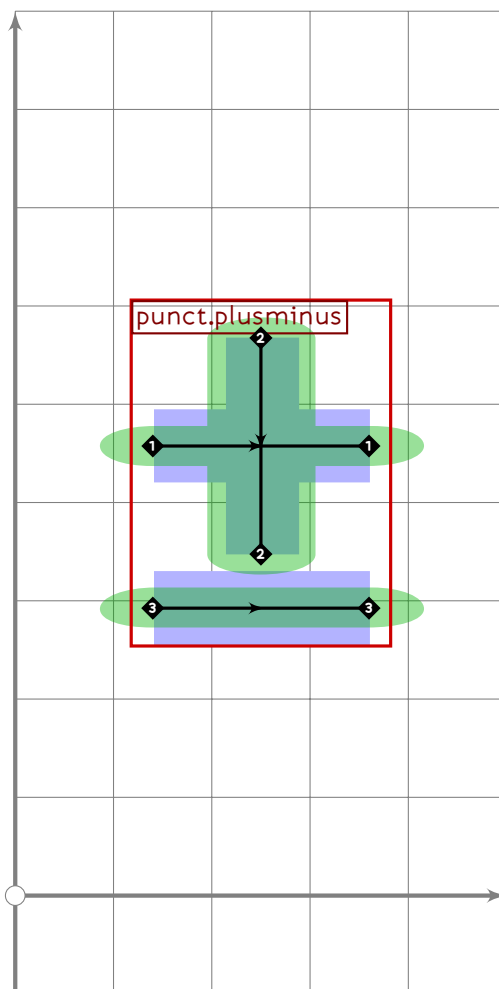
902



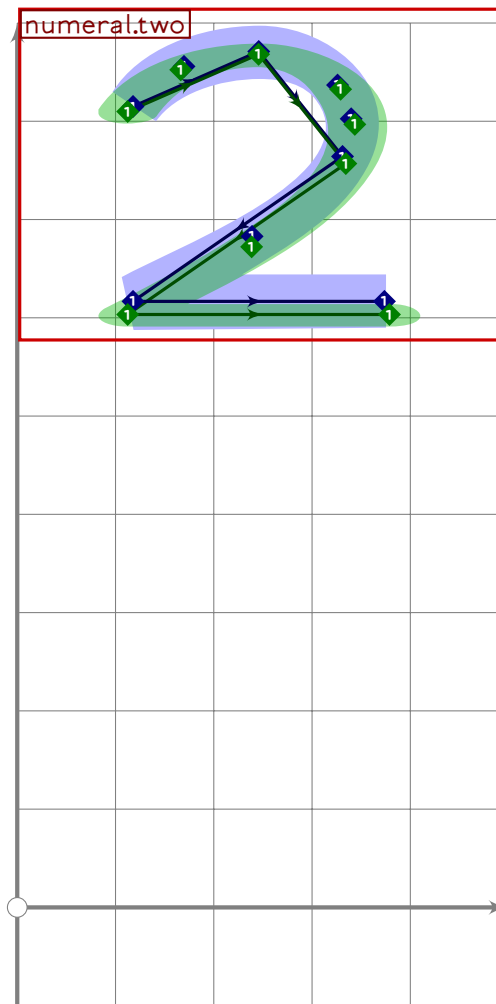
```
904
905 begintsuglyph("degree",176);
906   Fill fullcircle scaled (2.5*tsu_punct_size) shifted (250,760);
907   unFill reverse fullcircle
908     scaled (2.5*tsu_punct_size-120*tsu_brush_max) shifted (250,760);
909 endtsuglyph;
```

U+00B1
tsuku.plusminus

00



```
910
911 begint Suglyph("plusminus",177);
912   punct.plusminus(ascii_punct_xf);
913   tsu_render;
914 endtsuglyph;
```



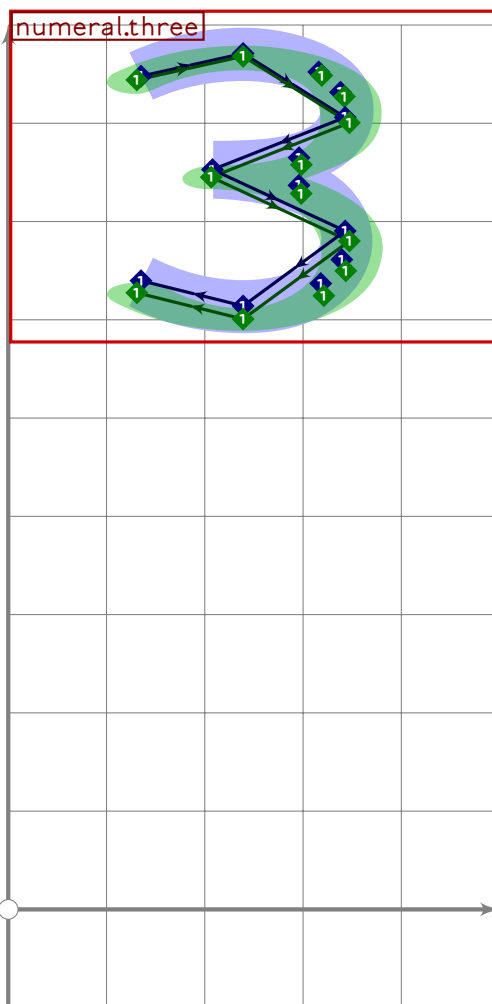
```

915
916 begint Suglyph("uni00B2";178);
917   tsu_xform(identity yscaled 0.68 transformed tsu_xf.latin_one_super)(
918     numeral.two);
919   tsu_render;
920 endtsuglyph;

```

U+00B3
tsuku.uni00B3

00



```
921
922 begintsuglyph("uni00B3";179);
923   tsu_xform(identity yscaled 0.68 transformed tsu_xf.latin_one_super)(
924     numeral.three);
925   tsu_render;
926 endtsuglyph;
927
928 % WARNING, changing rescale setting
929 tsu_rescale_half;
930
931 % naked acute
932 begintsuglyph("acute";180);
933   tsu_accent.acute;
934   tsu_render;
935 endtsuglyph;
936
937 % micro
938 begintsuglyph("mu";181);
939   punct.micro;
940   tsu_render;
941 endtsuglyph;
```

[see page 101]

[see page 383]

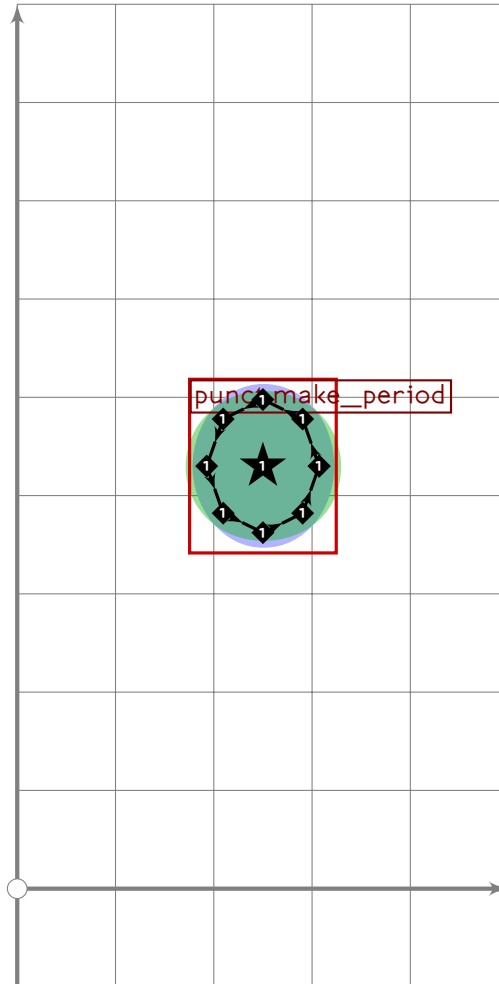
[see page 390]

00

```

942
943 % pilcrow
944 begint Suglyph("paragraph",182);
945   punct.pilcrow;
946   tsu_render;
947 endtsuglyph;
948

```



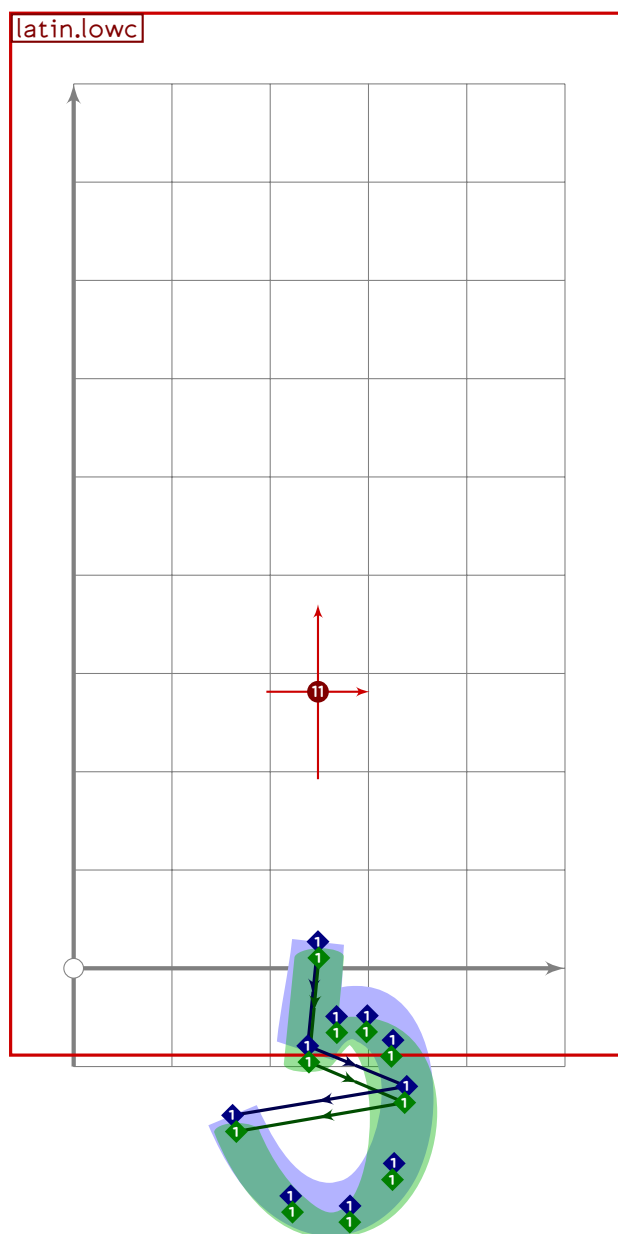
```

949 % period at centre
950 begint Suglyph("periodcentered",183);
951   punct.make__period(centre_pt);
952   tsu_render;
953 endtsuglyph;
954

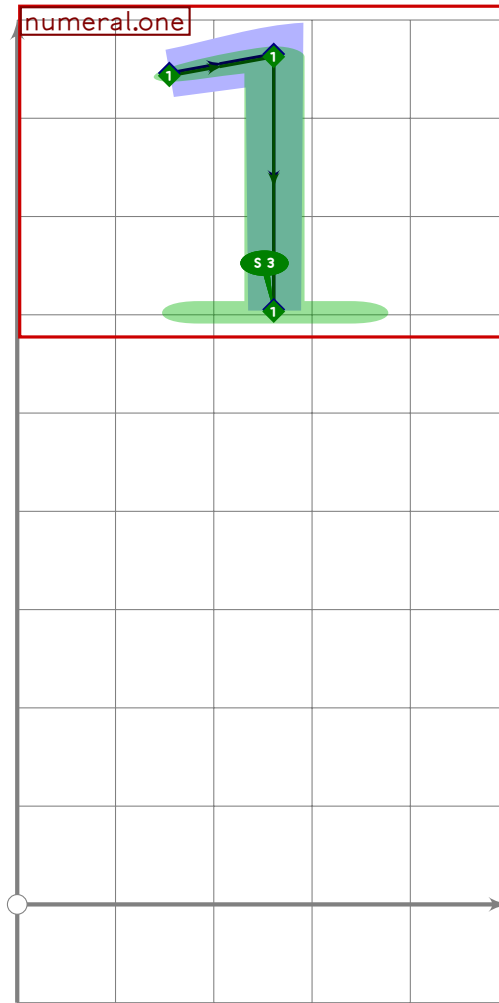
```

U+00B8
tsuku.cedilla

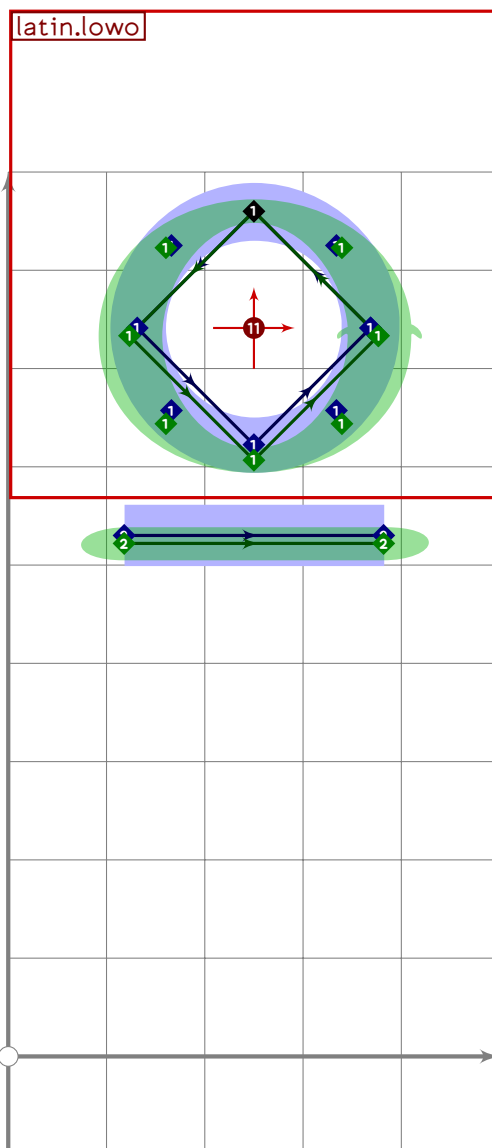
00



```
955 % naked cedilla
956 begintsuglyph("cedilla",184);
957   tsu_accent.apply(latin.lowc;set_bosize(0,0))(tsu_accent.cedilla);
958   tsu_render;
959 endtsuglyph;
960
961 % WARNING, changing rescale setting
962 tsu_rescale_native_conditional;
```



```
963
964 begintsuglyph("uni00B9";185);
965 tsu_xform(identity yscaled 0.68 transformed tsu_xf.latin_one_super)(
966   numeral.one);
967 tsu_render;
968 endtsuglyph;
```



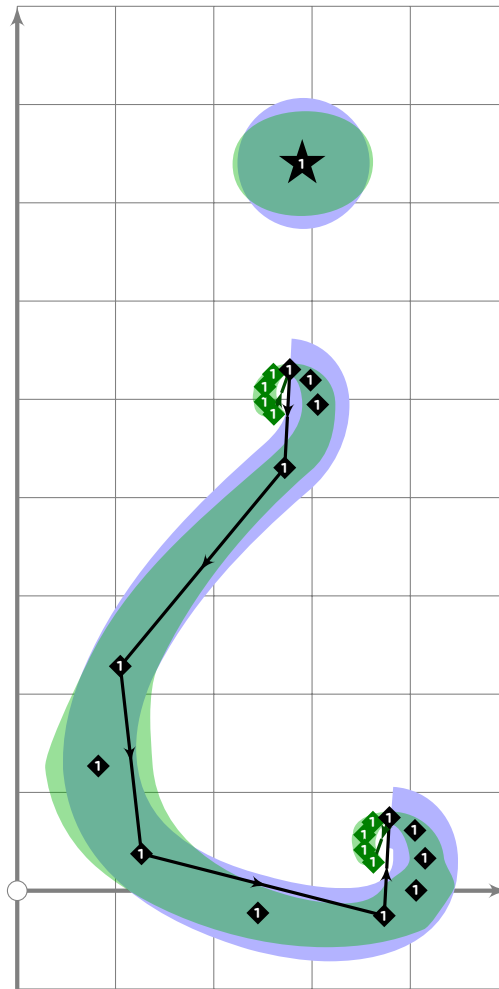
```

969
970 beginsuglyph("ordmasculine",186);
971   tsu_xform(tsu_xf.latin_one_super)(
972     latin.low0;
973     push_stroke((260,-120)-(740,-120),(2,2)-(2,2)));
974   tsu_render;
975 endtsuglyph;
976
977 % WARNING, changing rescale setting
978 tsu_rescale_half;
979
980 beginsuglyph("guillemotright",187);
981   punct.guillemet_right;
982   tsu_render;
983 endtsuglyph;
984
985 % WARNING, changing rescale setting

```

[see page 381]


```
986 tsu_rescale_native_conditional;
987
```



```
988 % question mark
989 begintsuglyph("questiondown",191);
990 if tsu_pbrush_size>=(tsu_punct_size*0.5):
991     push_lcblob(fullcircle
992         xscaled ((tsu_punct_size+tsu_pbrush_size)*0.89)
993         yscaled ((tsu_punct_size+tsu_pbrush_size*tsu_pbrush_shape)*0.89)
994         rotated tsu_pbrush_angle
995         shifted (210,40)
996         rotatedaround ((250,390),180));
997 else:
998     push_stroke(fullcircle scaled tsu_punct_size shifted (210,40)
999         rotatedaround ((250,390),180),
1000         (1,1)..(2,2)..(2,2)..(1,1));
1001     if tsu_pbrush_size>=30:
1002         push_lcblob(get_strokep(0));
1003     fi;
1004 fi;
1005 r:=tsu_punct_size/2;
1006
```

```

1007   push_stroke((210,300){right}..(210,300-r){left}..
1008           (210,300+r)..(210+2.5*r,750)..
1009           tension 1.3..(210-2.5*r,750+r)..
1010           (210-2.5*r,750-r){right}..
1011           (210-2.5*r,750){left},
1012           (0.8,0.8)-(1,1)-(2,2)-(2,2)-(2,2)-(2,2)-(1,1)-(0.8,0.8));
1013   replace_strokep(0)(insert_nodes(oldp)(2.5)
1014           rotatedaround ((210,10);-3) rotatedaround ((250,390),180));
1015
1016   tsu__render;
1017 endtsuglyph;
1018
1019 _____
1020

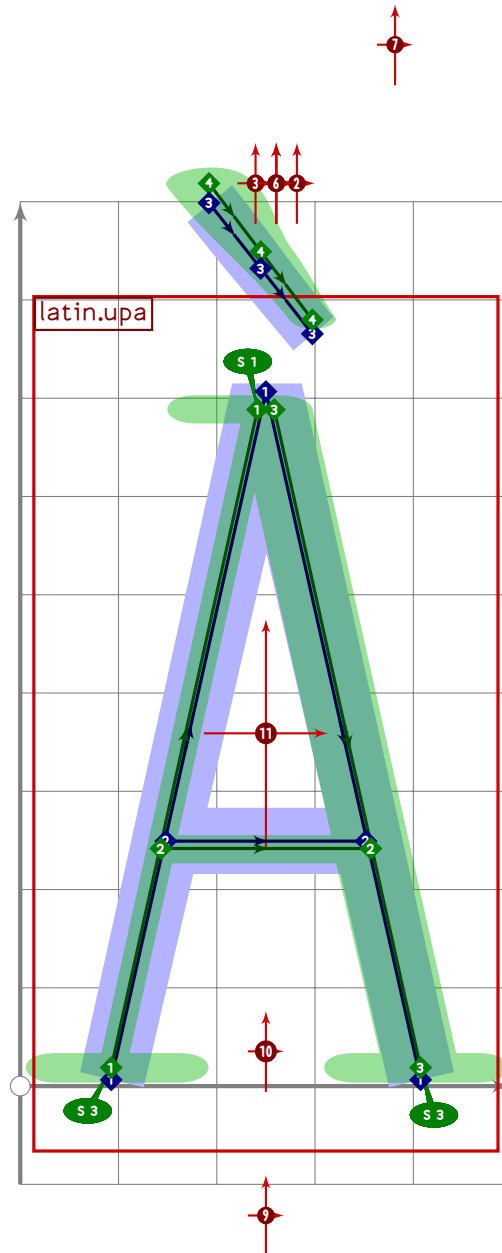
```

Accented Latin

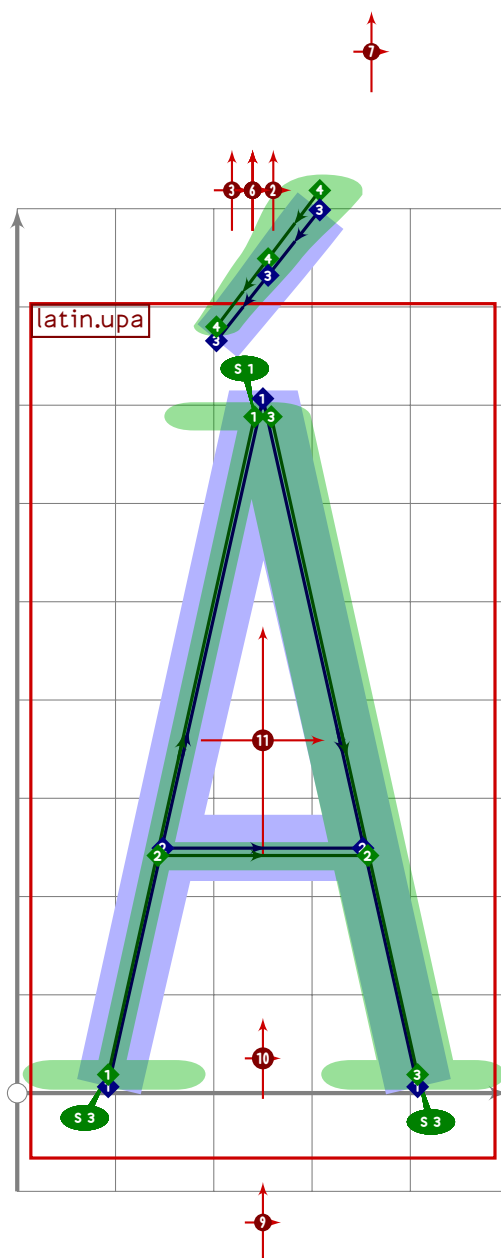
```

1021 % ACCENTED LATIN
1022
1023 % WARNING, setting rescale
1024 tsu__rescale_half;
1025 tsu__accent.up_default_anchors;
1026

```



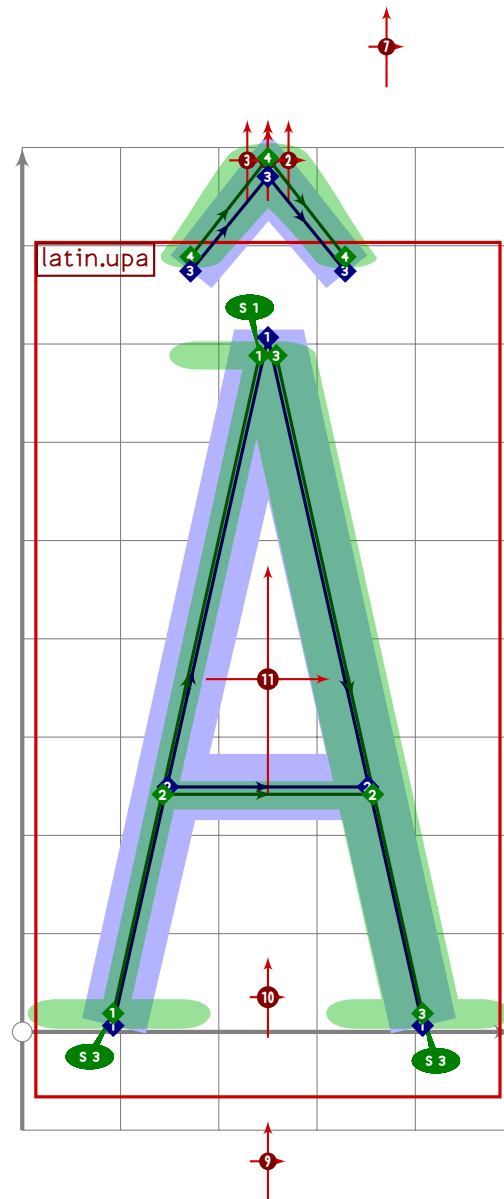
913



```

1033 % A with acute
1034 begintsuglyph("Aacute",193);
1035   tsu_accent.apply(tsu_accent.capital(latin.upa))(tsu_accent.acute);
1036   tsu_render;
1037 endtsuglyph;
1038

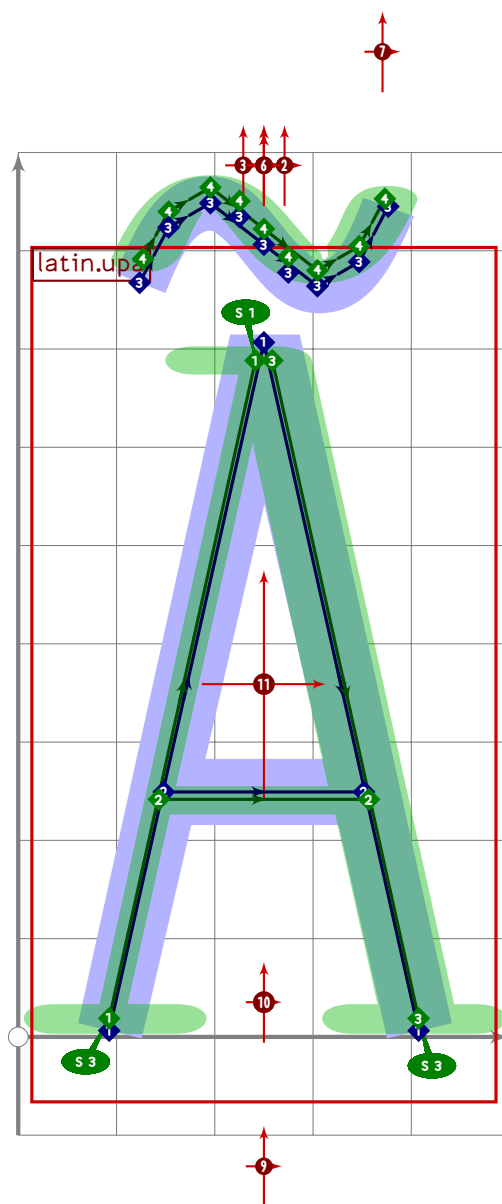
```



```

1039 % A with circumflex
1040 begintsuglyph("Acircumflex";194);
1041   tsu_accent.apply(tsu_accent.capital(latin.upa))(tsu_accent.circumflex);
1042   tsu_render;
1043 endtsuglyph;
1044

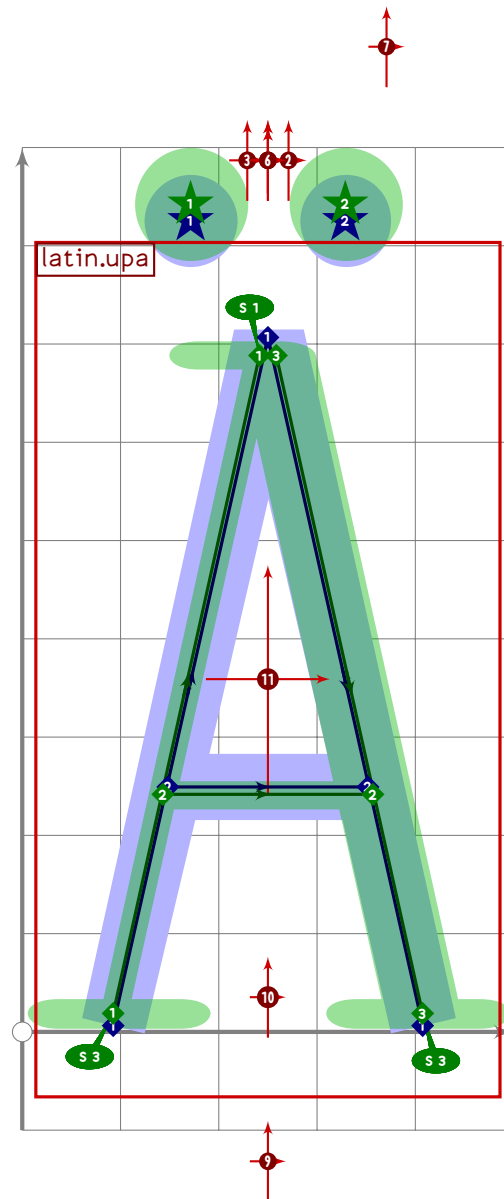
```



```

1045 % A with tilde
1046 begintsuglyph("Atilde",195);
1047   tsu_accent.apply(tsu_accent.capital(latin.upa))(tsu_accent.tilde);
1048   tsu_render;
1049 endtsuglyph;
1050

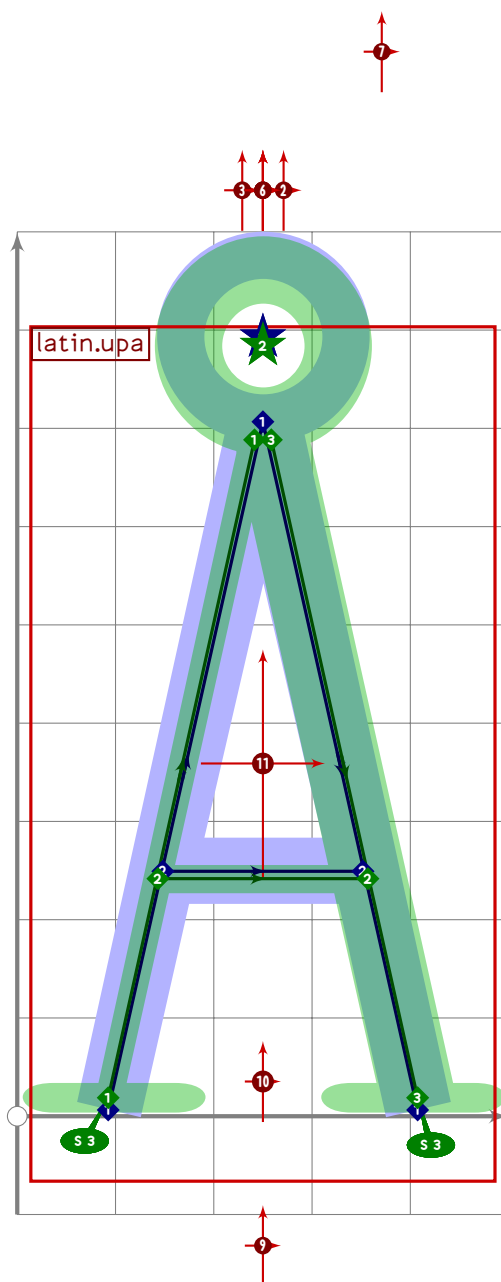
```



```

1051 % A with dieresis/umlaut
1052 begintsuglyph("Adieresis",196);
1053   tsu_accent.apply(tsu_accent.capital(latin.upa))(tsu_accent.umlaut);
1054   tsu_render;
1055 endtsuglyph;
1056

```



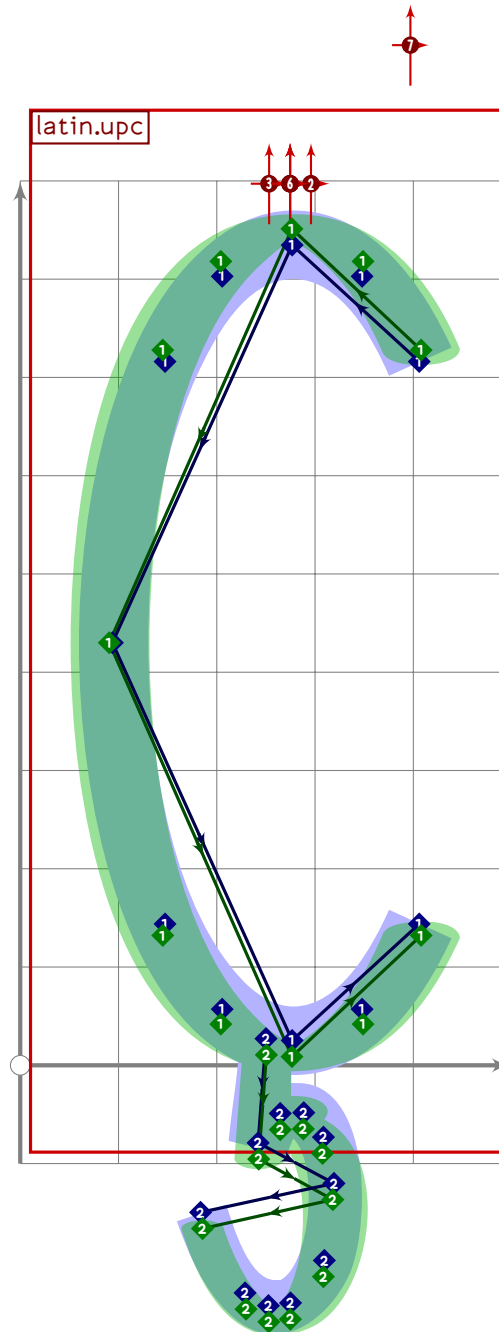
```

1057 % A with ring above
1058 begintsuglyph("Aring",197);
1059   tsu_accent.apply(tsu_accent.capital(latin.upa))(tsu_accent.ringabove);
1060   if do_alteration:
1061     set_boserif(-2,1,whatever);
1062   else:
1063     set_boserif(-1,1,whatever);
1064   fi;
1065   tsu_render;
1066 endtsuglyph;
1067
1068 % AE ligature
1069 begintsuglyph("AE",198);

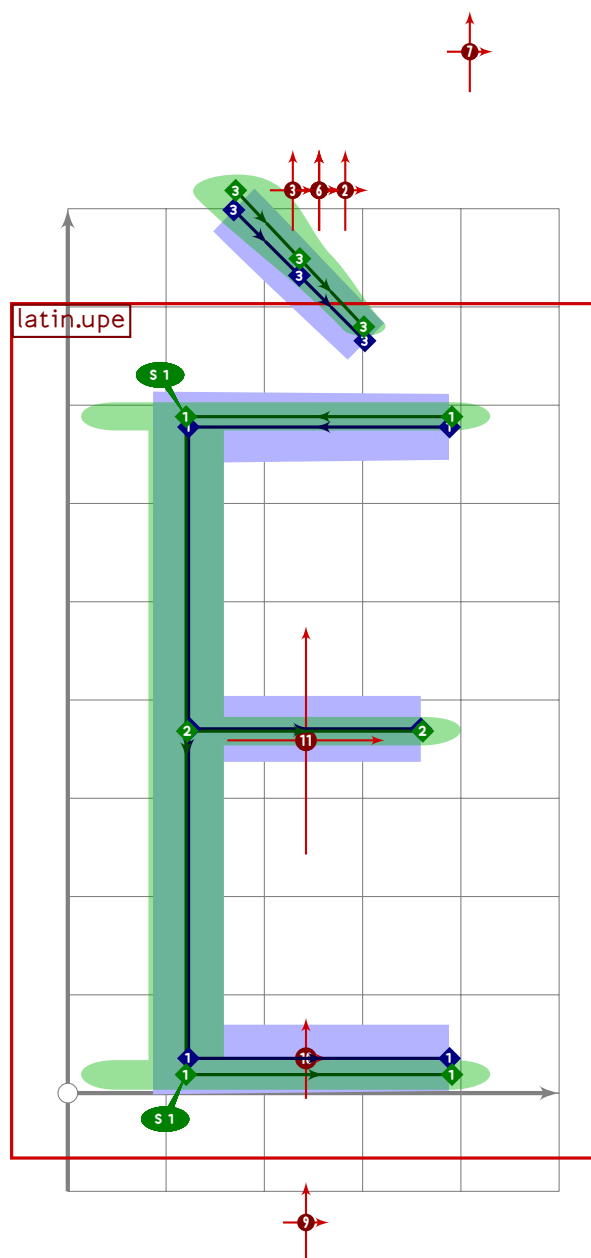
```

[see page 251]


```
1070 latin.upae;
1071 tsu_render;
1072 endtsuglyph;
1073
```



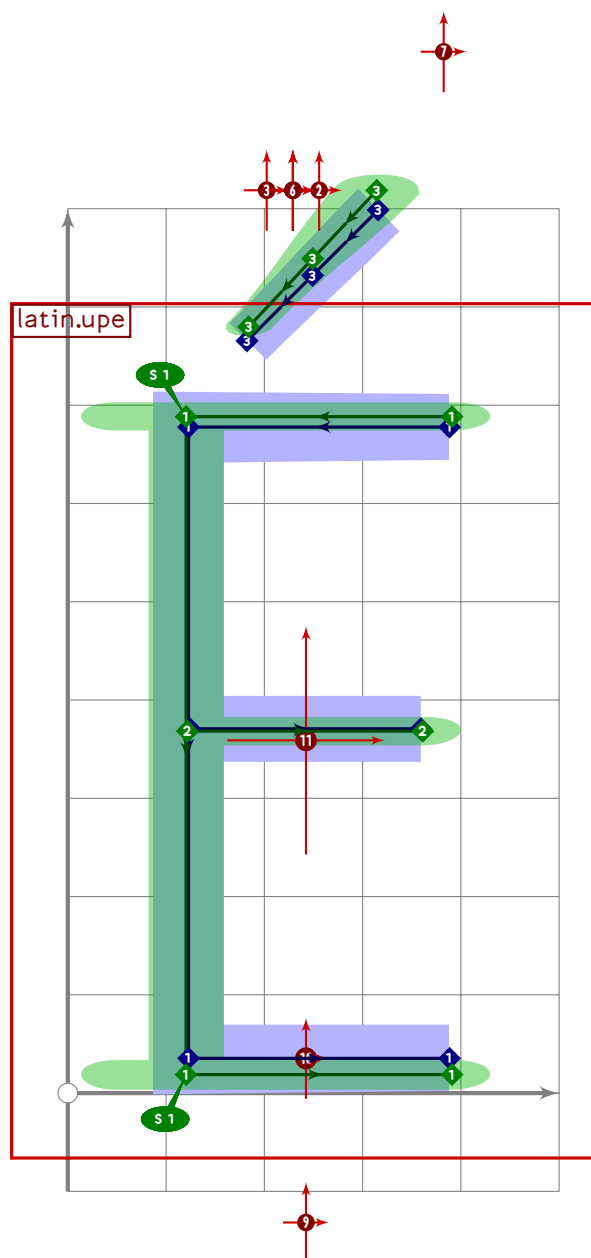
```
1074 % C with cedilla
1075 begint Suglyph("Ccedilla",199);
1076 tsu_accent.apply(latin.upc)(tsu_accent.cedilla);
1077 tsu_render;
1078 endtsuglyph;
1079
```



```

1080 % E with grave
1081 begintsuglyph("Egrave";200);
1082 tsu_accent.apply(tsu_accent.capital(latin.upe))(tsu_accent.grave);
1083 tsu_render;
1084 endtsuglyph;
1085

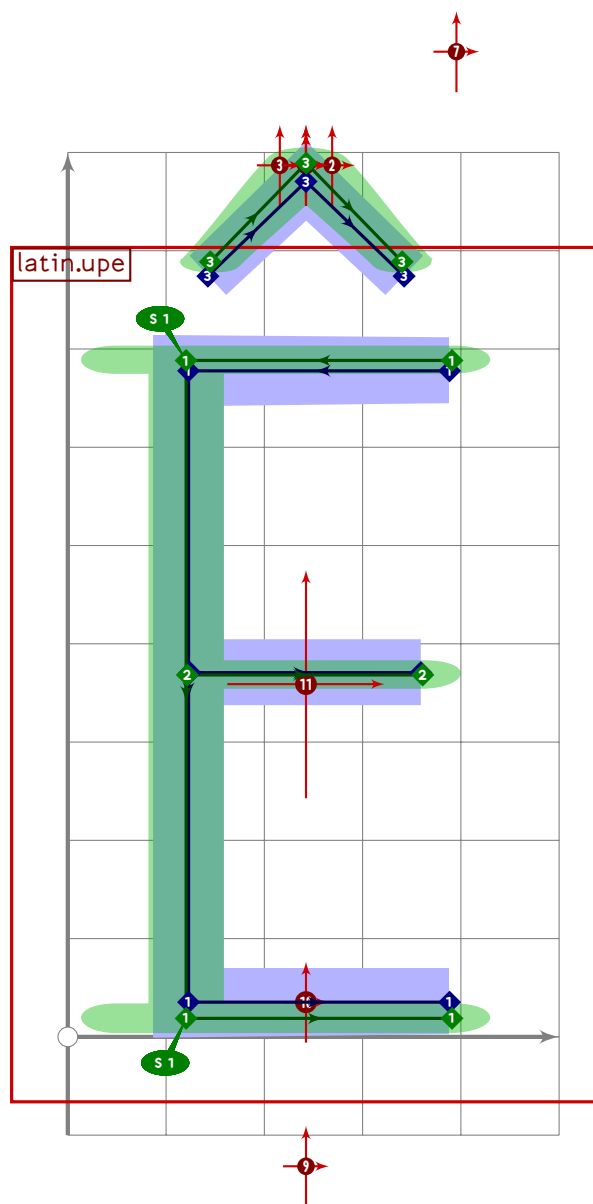
```



```

1086 % E with acute
1087 begintsuglyph("Eacute";201);
1088   tsu_accent.apply(tsu_accent.capital(latin.upe))(tsu_accent.acute);
1089   tsu_render;
1090 endtsuglyph;
1091

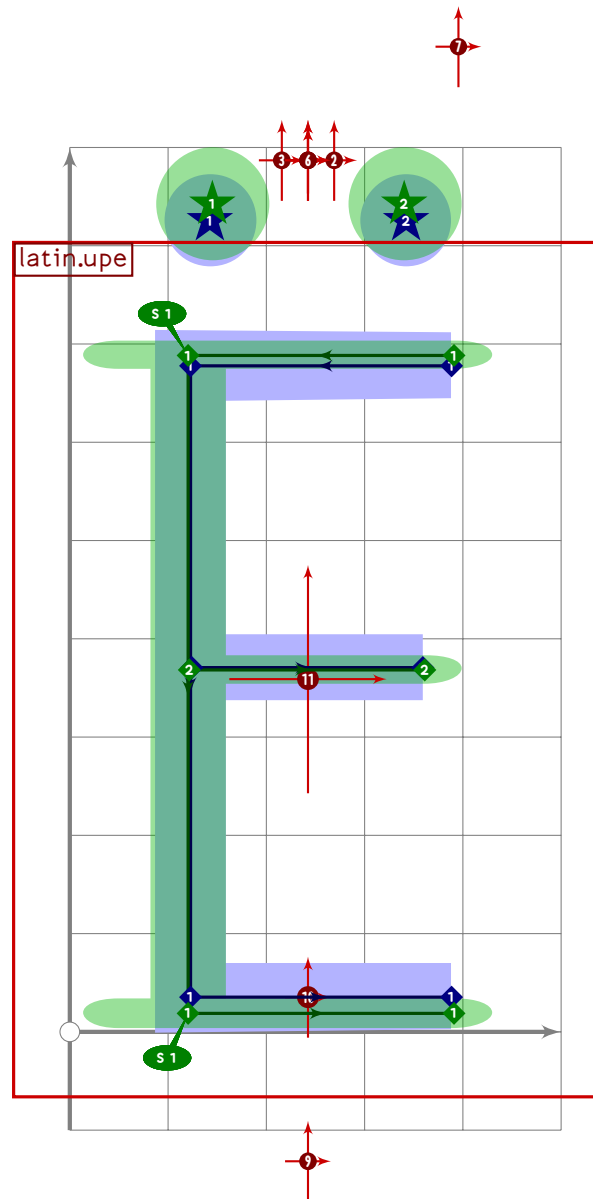
```



```

1092 % E with circumflex
1093 begint Suglyph("Ecircumflex";202);
1094   tsu_accent.apply(tsu_accent.capital(latin.upe))(tsu_accent.circumflex);
1095   tsu_render;
1096 endtsuglyph;
1097

```



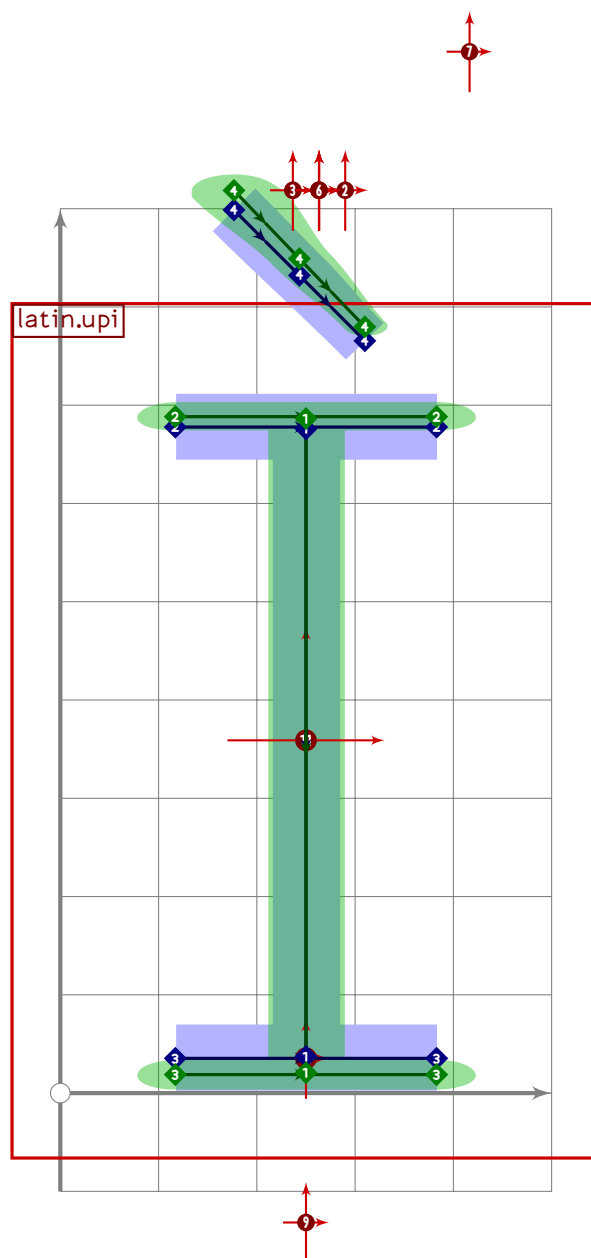
```

1098 % E with dieresis/umlaut
1099 begint Suglyph("Edieresis",203);
1100   tsu_accent.apply(tsu_accent.capital(latin.upe))(tsu_accent.umlaut);
1101   tsu_render;
1102 endtsuglyph;
1103

```

U+00CC
tsuku.Igrave

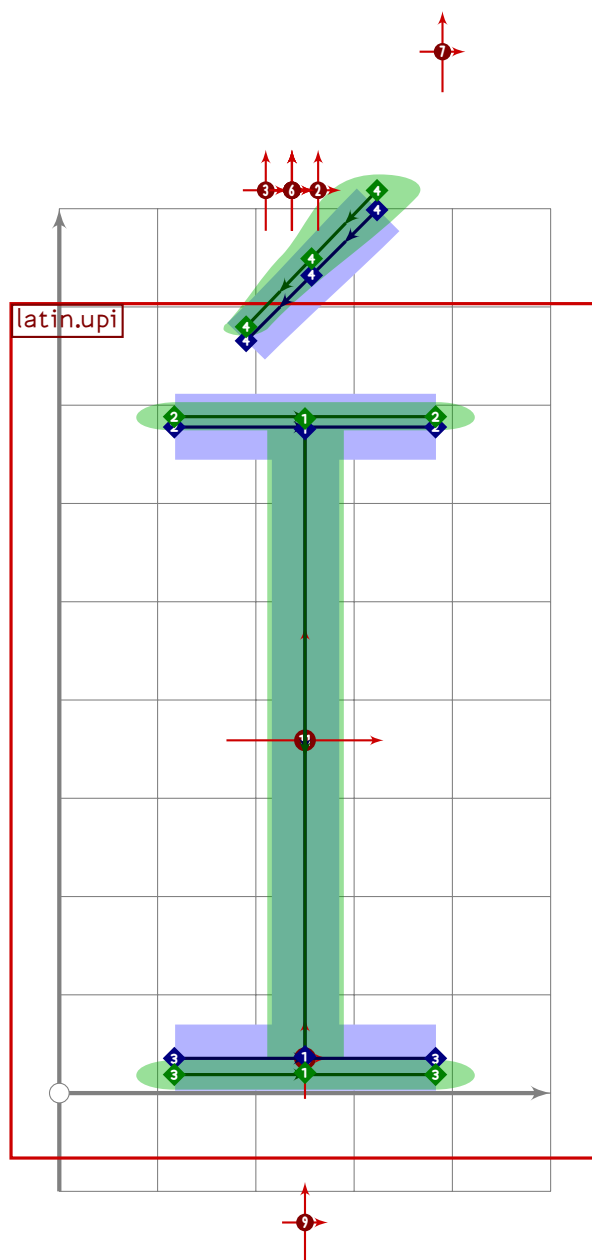
00



```

1104 % I with grave
1105 begintsuglyph("Igrave";204);
1106 tsu_accent.apply(tsu_accent.capital(latin.upi))(tsu_accent.grave);
1107 tsu_render;
1108 endtsuglyph;
1109

```

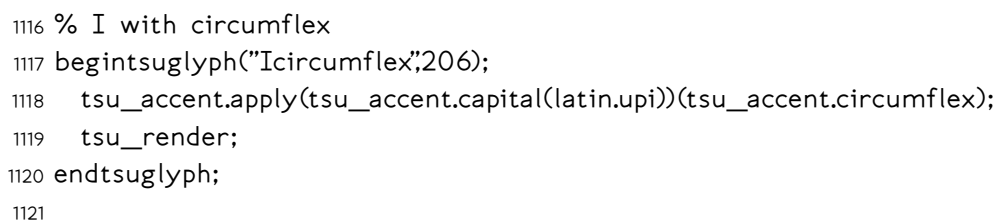


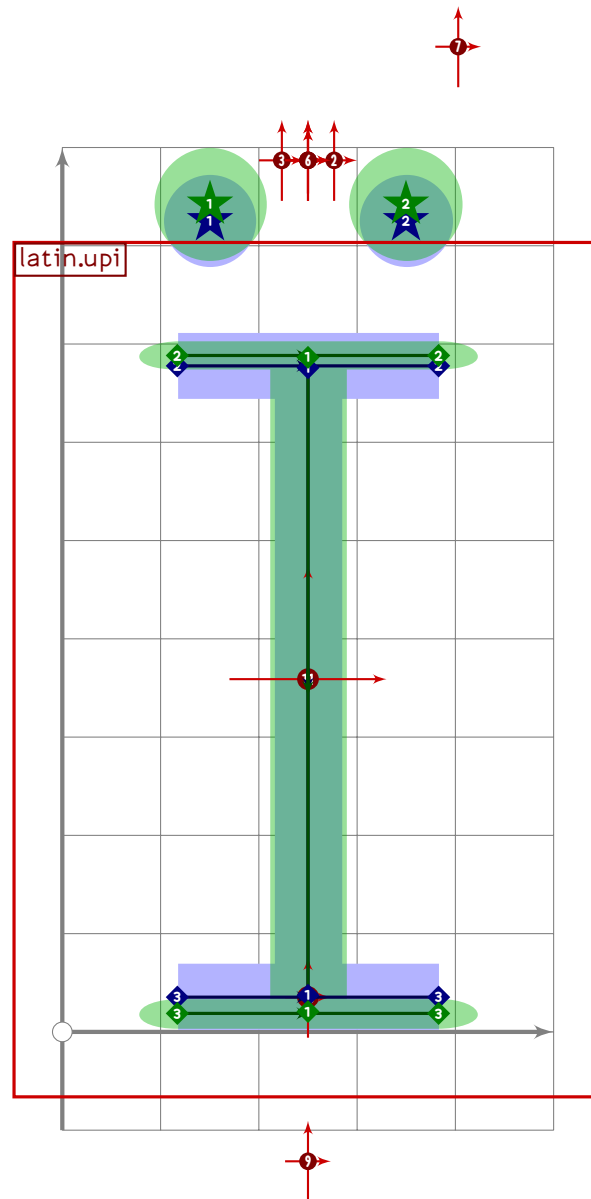
```

1110 % I with acute
1111 begintsuglyph("Iacute";205);
1112   tsu_accent.apply(tsu_accent.capital(latin.upi))(tsu_accent.acute);
1113   tsu_render;
1114 endtsuglyph;
1115

```

00



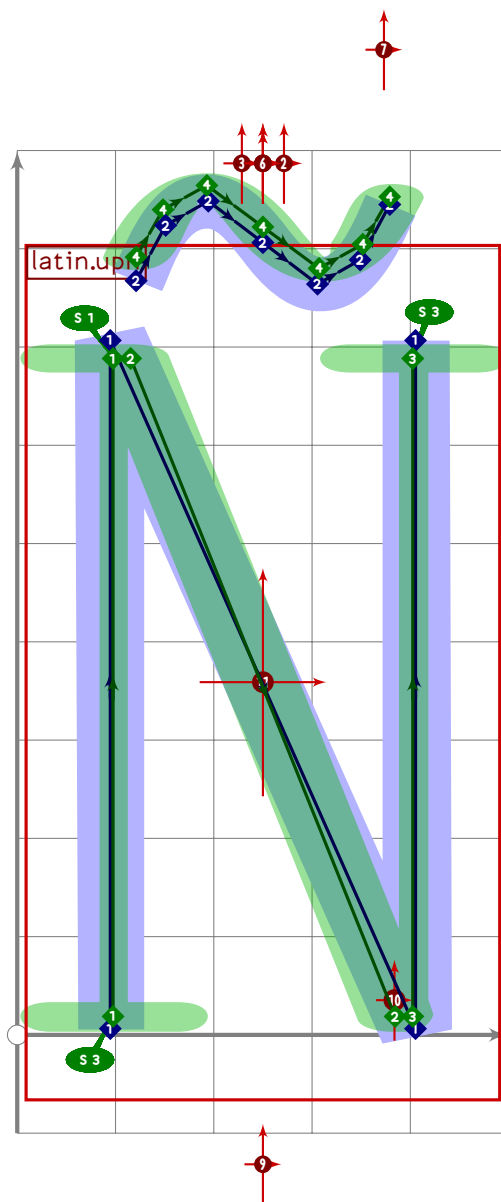


```

1122 % I with dieresis/umlaut
1123 begintsuglyph("Idieresis";207);
1124 tsu_accent.apply(tsu_accent.capital(latin.upi))(tsu_accent.umlaut);
1125 tsu_render;
1126 endtsuglyph;
1127
1128 % uppercase Icelandic Eth
1129 begintsuglyph("Eth";208);
1130 latin.upeth;
1131 tsu_render;
1132 endtsuglyph;
1133

```

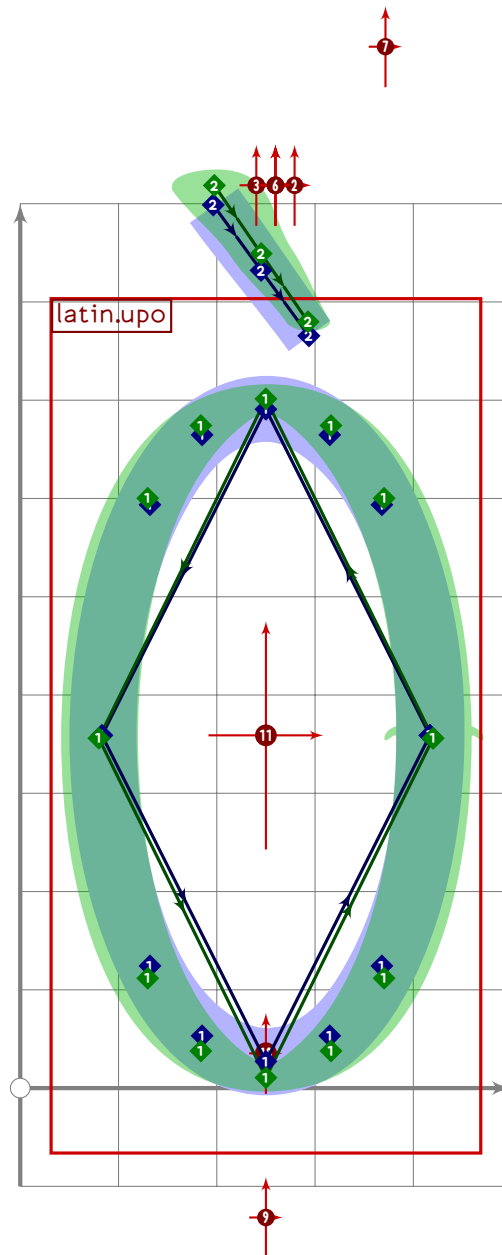
[see page 257]



```

1134 % N with tilde
1135 begintsuglyph("Ntilde",209);
1136   tsu_accent.apply(tsu_accent.capital(latin.upn))(tsu_accent.tilde);
1137   tsu_render;
1138 endtsuglyph;
1139

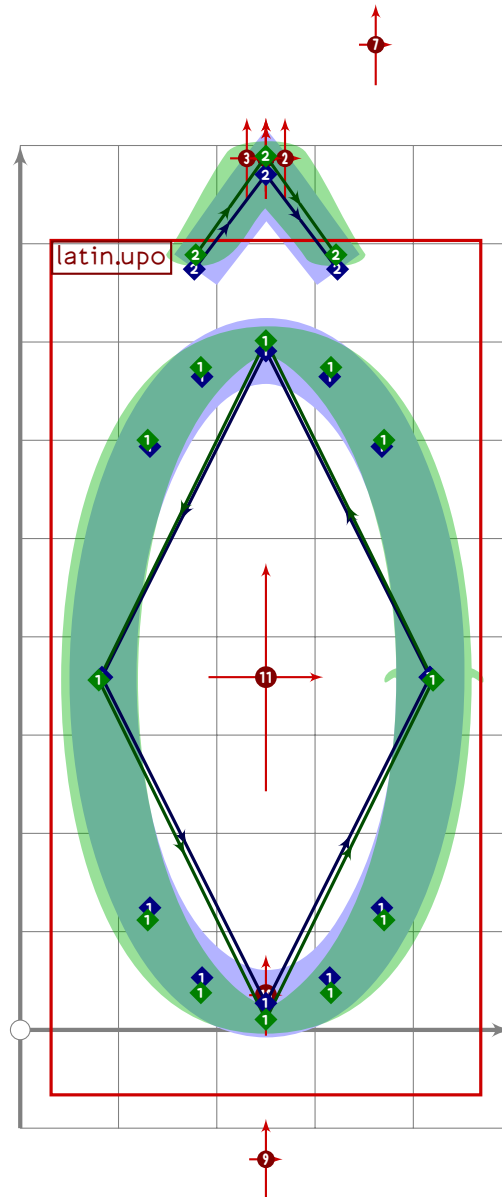
```



929



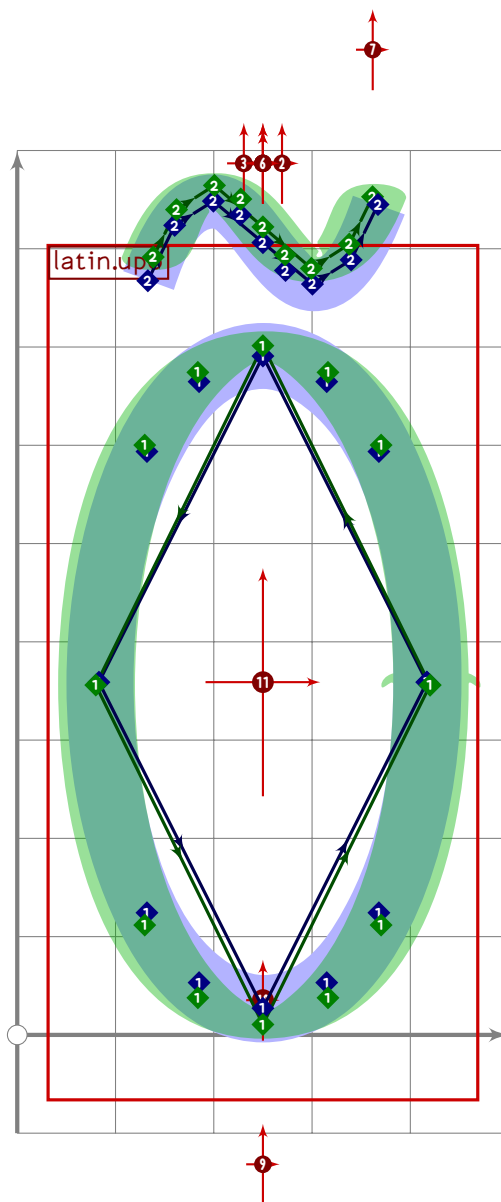
1151



```

1152 % O with circumflex
1153 begint Suglyph("Ocircumflex",212);
1154   tsu_accent.apply(tsu_accent.capital(latin.upo))(tsu_accent.circumflex);
1155   tsu_render;
1156 endtsuglyph;
1157

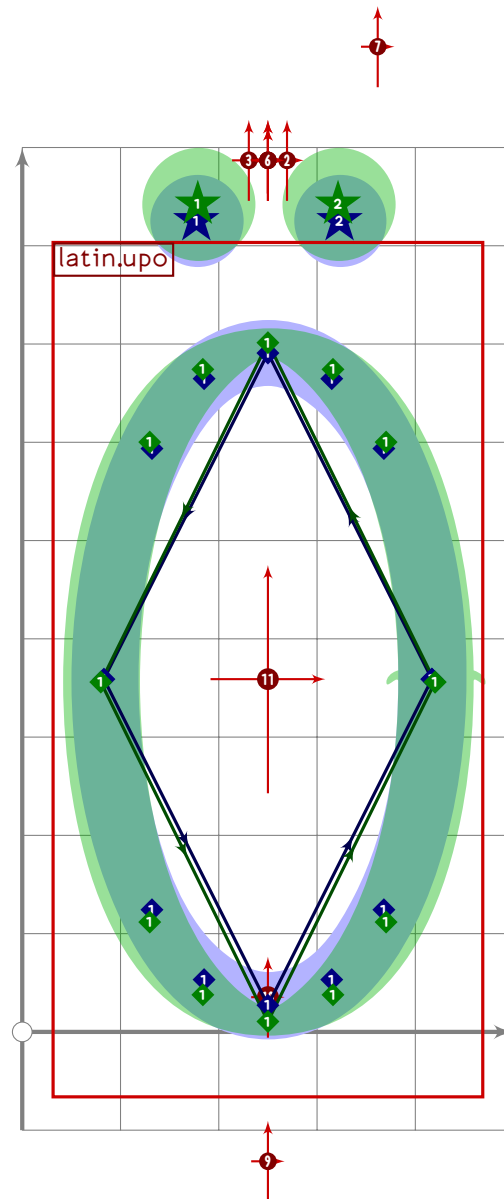
```



```

1158 % O with tilde
1159 begintsuglyph("Otilde",213);
1160   tsu_accent.apply(tsu_accent.capital(latin.upo))(tsu_accent.tilde);
1161   tsu_render;
1162 endtsuglyph;
1163

```



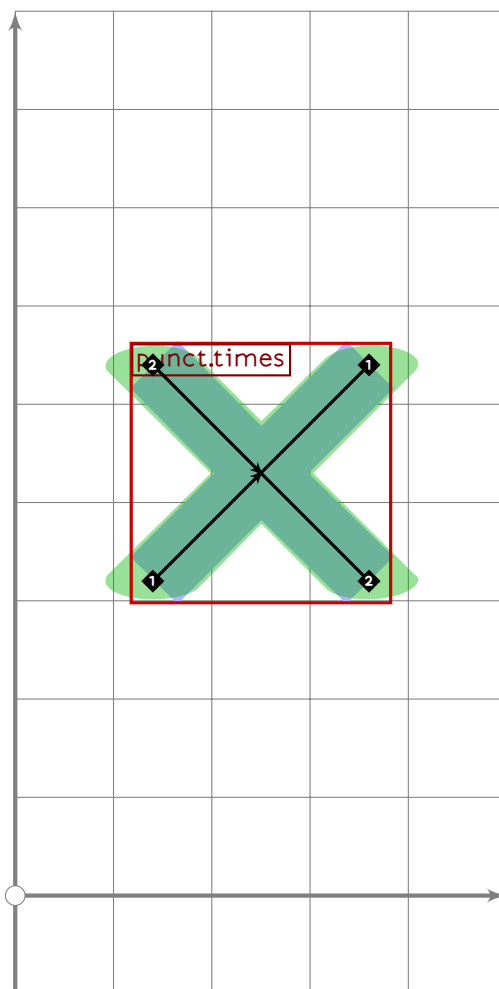
```

1164 % O with dieresis/umlaut
1165 begintsuglyph("Odieresis";214);
1166   tsu_accent.apply(tsu_accent.capital(latin.upo))(tsu_accent.umlaut);
1167   tsu_render;
1168 endtsuglyph;
1169
1170 % times
1171 tsu_accent.clear_default_anchors;
1172 tsu_rescale_native_conditional;

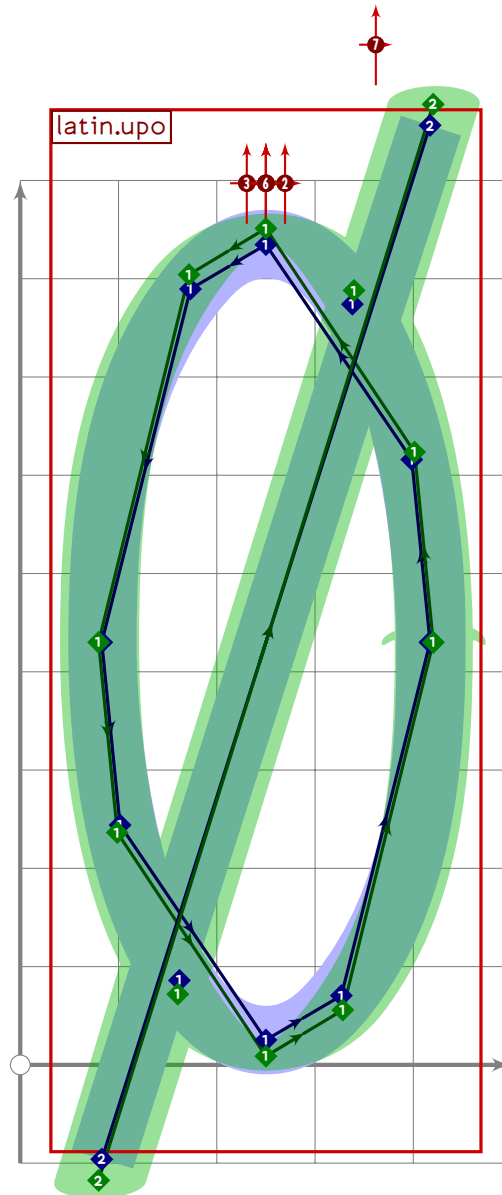
```

U+00D7
tsuku.multiply

00



```
1173 beginsuglyph("multiply";215);
1174   punct.times(ascii_punct_xf);
1175   tsu_render;
1176 endtsuglyph;
1177 tsu_rescale_half;
1178 tsu_accent.up_default_anchors;
1179
```

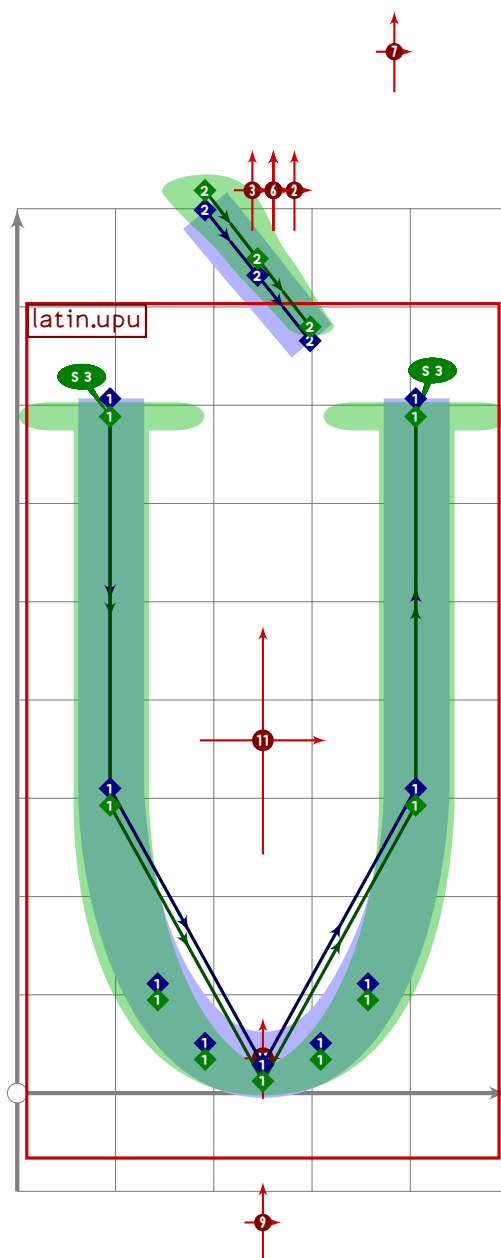
```

1180 % O with stroke
1181 begintsuglyph("Oslash";216);
1182   tsu_accent.apply(latin.upo)(tsu_accent.slash);
1183   replace_strokep(-1)(insert_nodes(oldp)(0.3,1.3,2.3,3.3));
1184   replace_strokeq(-1)(insert_nodes(oldq)(0.3,1.3,2.3,3.3));
1185   tsu_render;
1186 endtsuglyph;
1187

```

U+00D9
tsuku.Ugrave

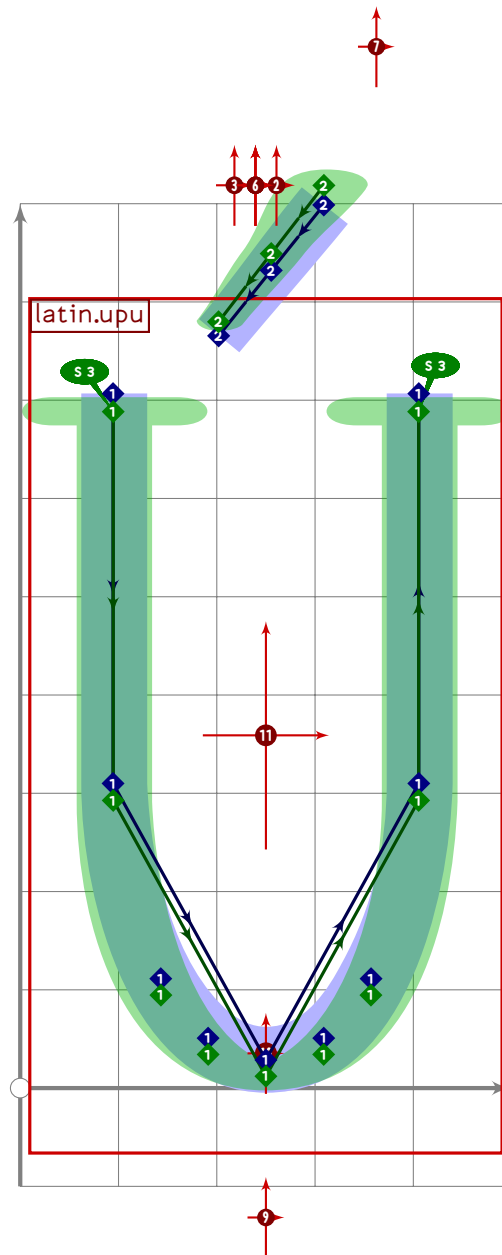
00



```

1188 % U with grave
1189 begintsuglyph("Ugrave";217);
1190 tsu_accent.apply(tsu_accent.capital(latin.upu))(tsu_accent.grave);
1191 tsu_render;
1192 endtsuglyph;
1193

```



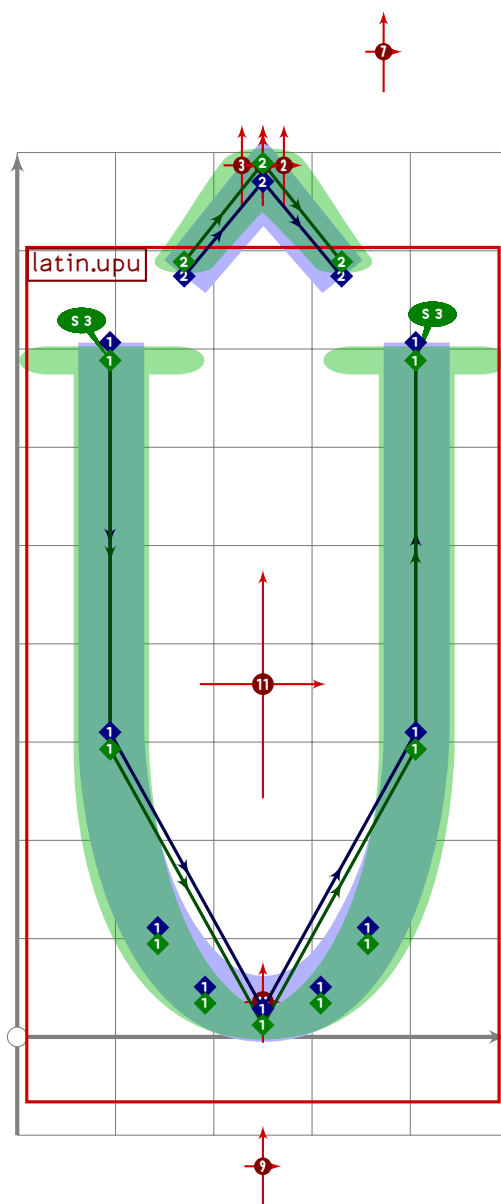
```

1194 % U with acute
1195 begintsuglyph("Uacute";218);
1196   tsu_accent.apply(tsu_accent.capital(latin.upu))(tsu_accent.acute);
1197   tsu_render;
1198 endtsuglyph;
1199

```

U+00DB
tsuku.Ucircumflex

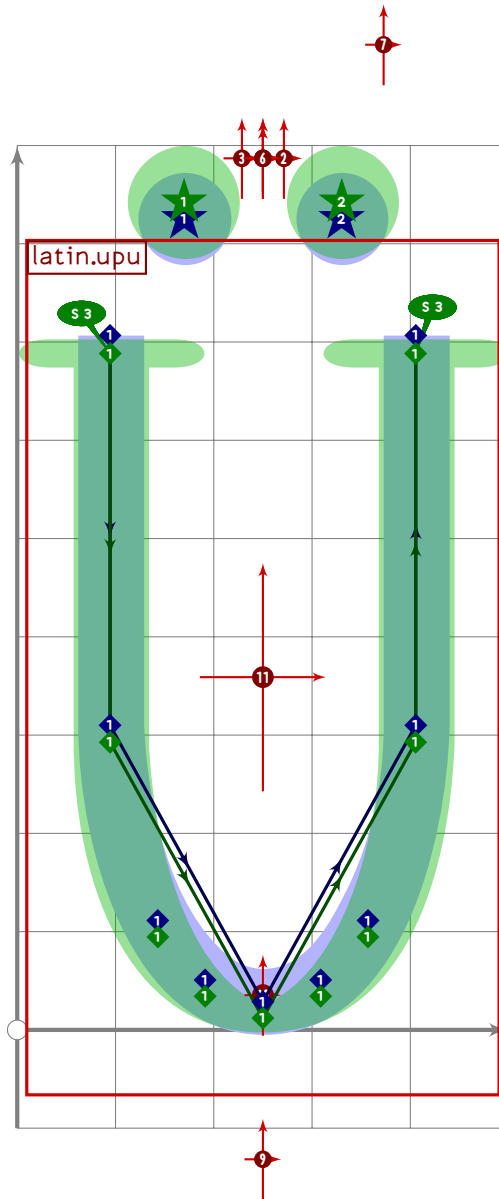
00



```

1200 % U with circumflex
1201 begint Suglyph("Ucircumflex",219);
1202   tsu_accent.apply(tsu_accent.capital(latin.upu))(tsu_accent.circumflex);
1203   tsu_render;
1204 endtsuglyph;
1205

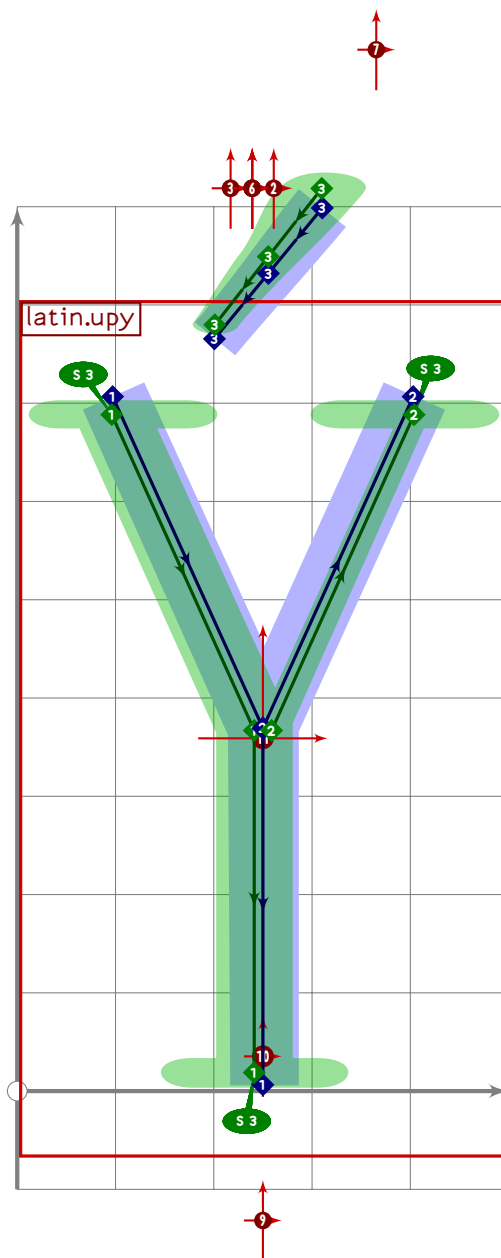
```



```

1206 % U with dieresis/umlaut
1207 begintsuglyph("Udieresis";220);
1208   tsu_accent.apply(tsu_accent.capital(latin.upu))(tsu_accent.umlaut);
1209   tsu_render;
1210 endtsuglyph;
1211

```



```

1212 % Y with acute
1213 begintsuglyph("Yacute";221);
1214   tsu_accent.apply(tsu_accent.capital(latin.upy))(tsu_accent.acute);
1215   tsu_render;
1216 endtsuglyph;
1217
1218 % uppercase Thorn
1219 begintsuglyph("Thorn";222);
1220   latin.upthorn;
1221   tsu_render;
1222 endtsuglyph;
1223
1224 tsu_accent.low_default_anchors;
1225

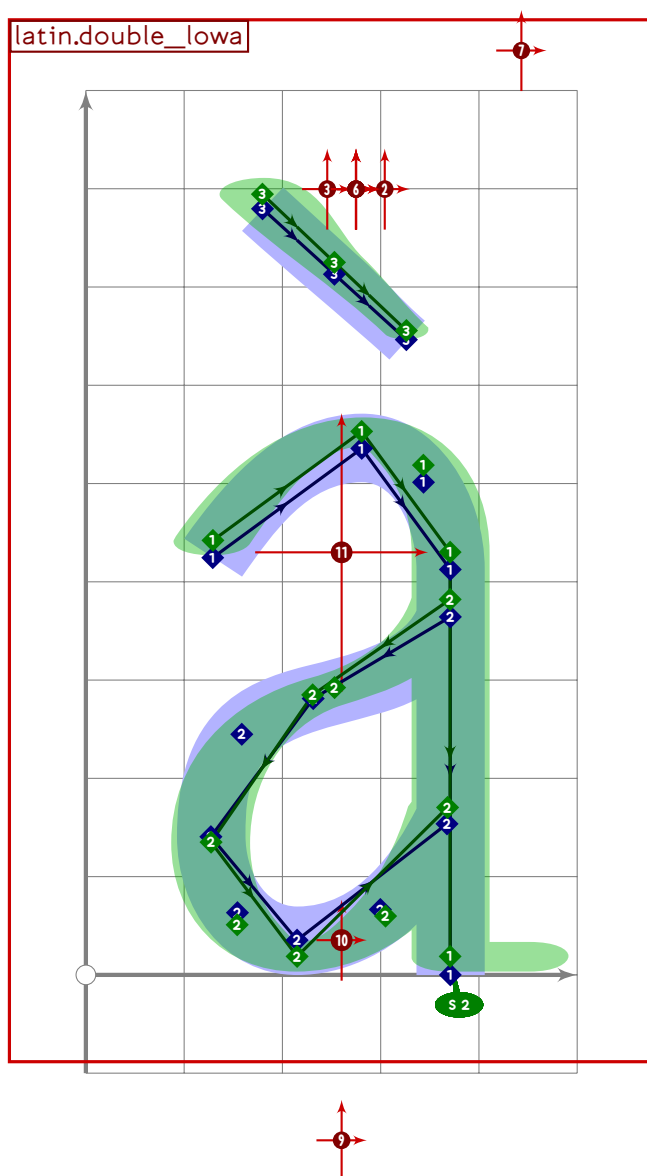
```

[see page 282]

[see page 300]

00

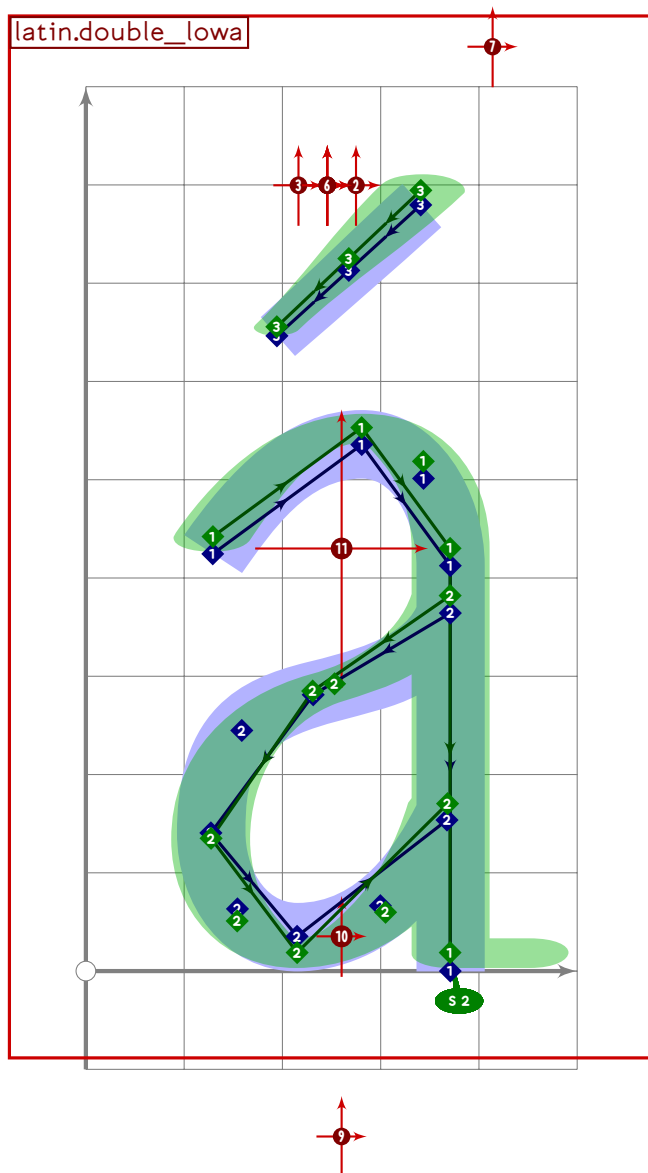
```
1226 % eszett
1227 begintsuglyph("germandbls",223);
1228 latin.loweszett;
1229 tsu_render;
1230 endtsuglyph;
1231
```



```
1232 % a with grave
1233 begintsuglyph("agrave",224);
1234 tsu_accent.apply(latin.owa)(tsu_accent.grave);
1235 tsu_render;
1236 endtsuglyph;
1237
```

U+00E1
tsuku.acute

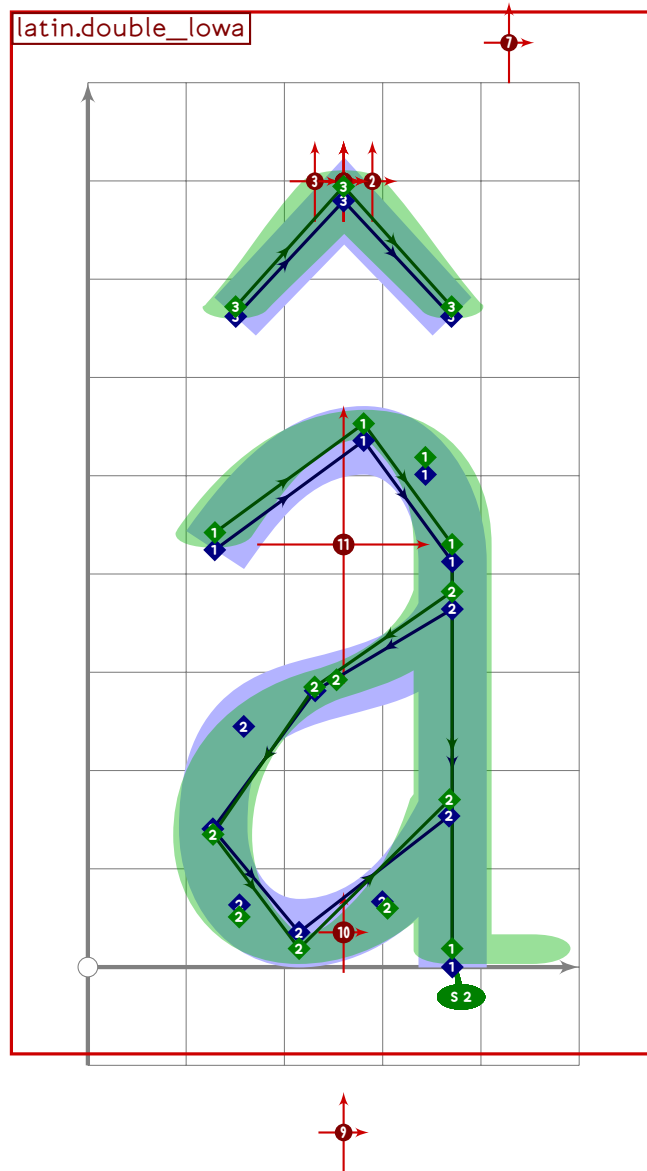
00



```

1238 % a with acute
1239 begintsuglyph("acute";225);
1240   tsu_accent.apply(latin.low_a)(tsu_accent.acute);
1241   tsu_render;
1242 endtsuglyph;
1243

```

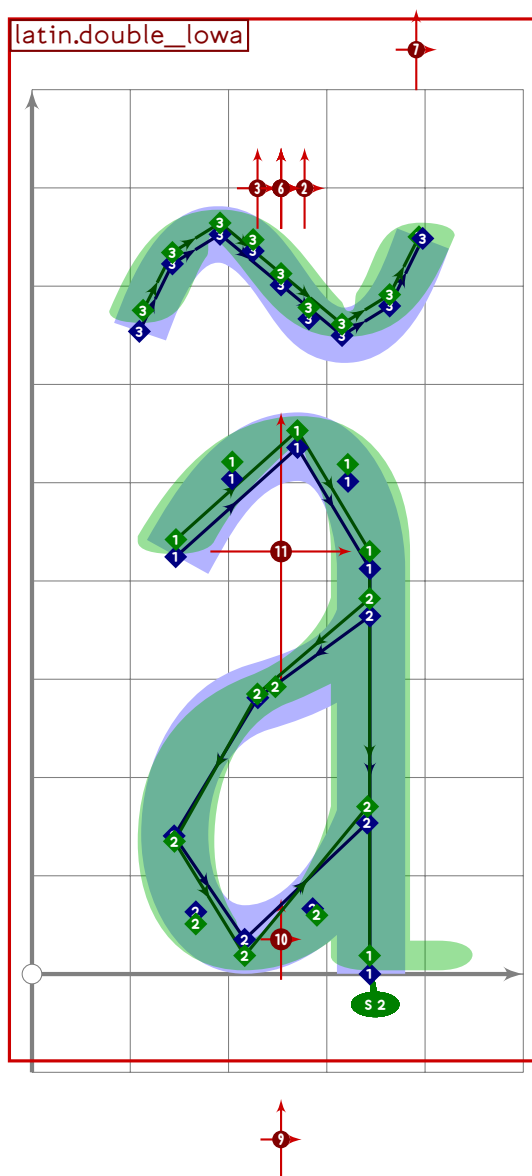
```

1244 % a with circumflex
1245 begint Suglyph("acircumflex";226);
1246   tsu_accent.apply(latin.lowa)(tsu_accent.circumflex);
1247   tsu_render;
1248 endtsuglyph;
1249

```

U+00E3
tsuku.atilde

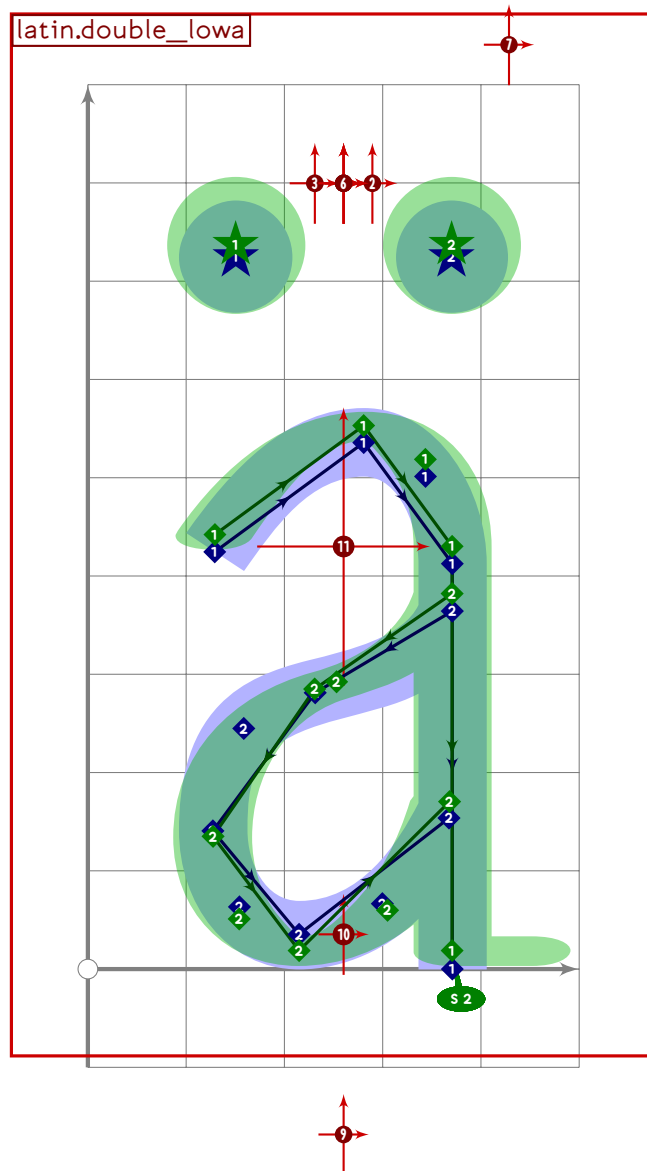
00



```

1250 % a with tilde
1251 begintsuglyph("atilde";227);
1252   tsu_accent.apply(latin.low_a)(tsu_accent.tilde);
1253   tsu_render;
1254 endtsuglyph;
1255

```



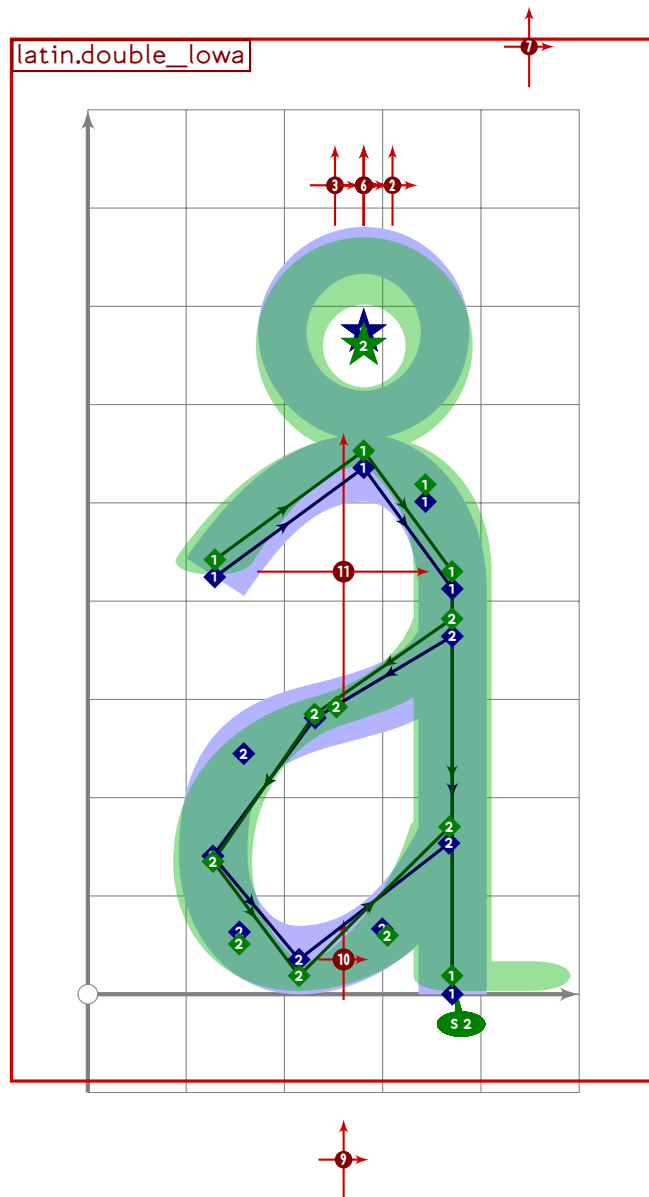
```

1256 % a with dieresis/umlaut
1257 begintsuglyph("adieresis";228);
1258   tsu_accent.apply(latin.lowa)(tsu_accent.umlaut);
1259   tsu_render;
1260 endtsuglyph;
1261

```

U+00E5
tsuku.aring

00

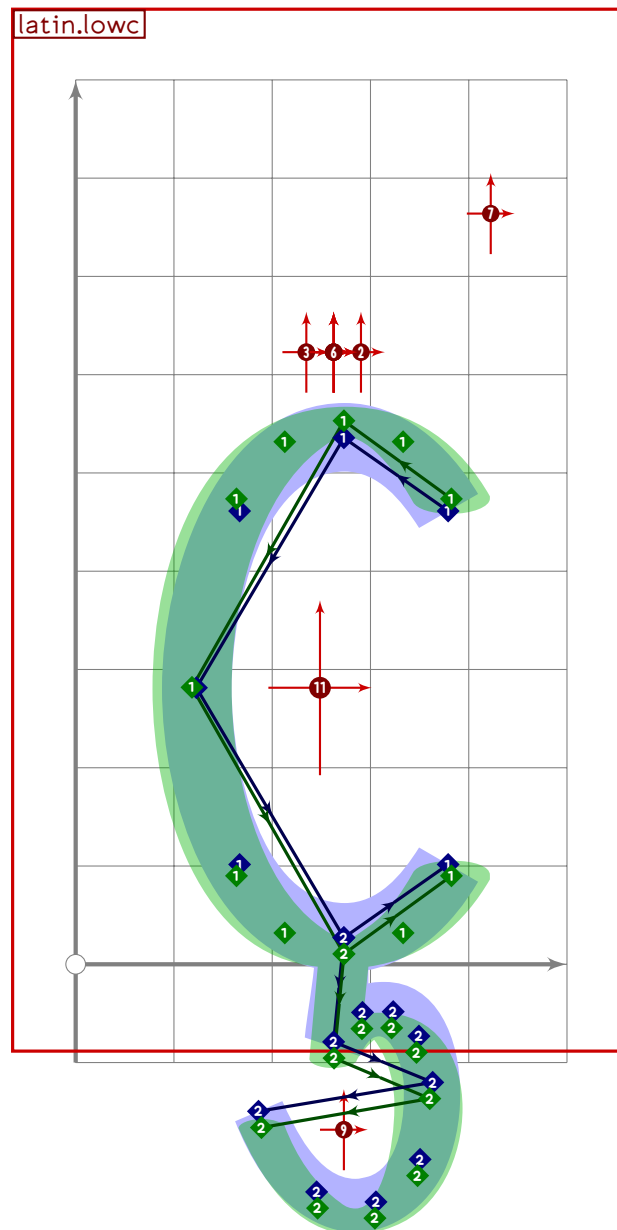


```

1262 % a with ring above
1263 begintsuglyph("aring",229);
1264   tsu_accent.apply(latin.low_a)(tsu_accent.ringabove);
1265   tsu_render;
1266 endtsuglyph;
1267
1268 % ae ligature
1269 begintsuglyph("ae",230);
1270   latin.low_ae;
1271   tsu_render;
1272 endtsuglyph;
1273

```

[see page 293]



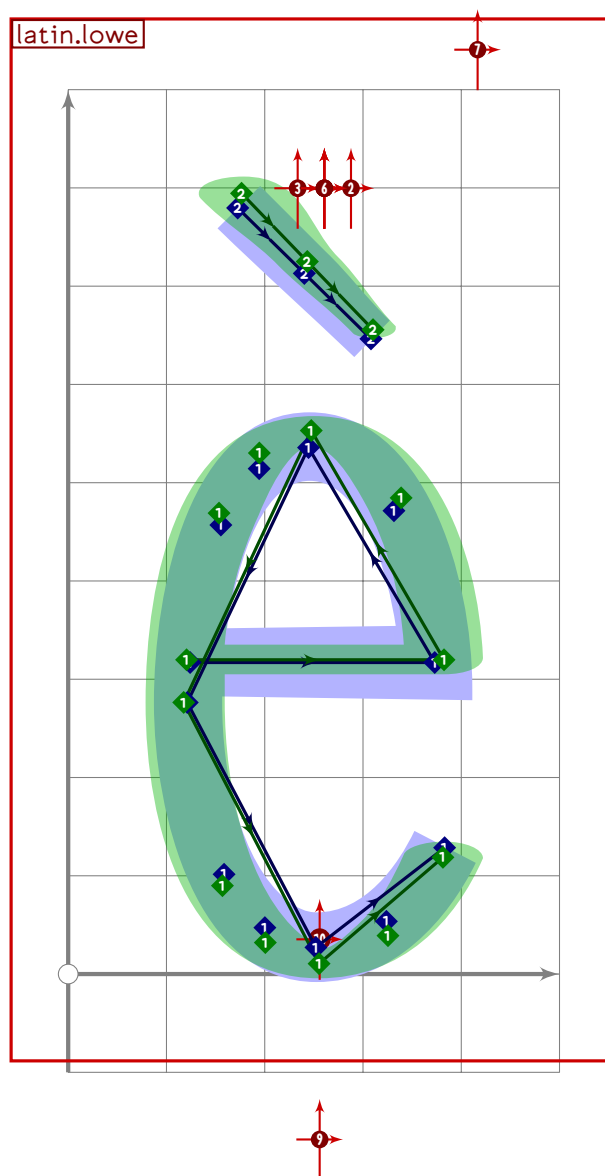
```

1274 % c with cedilla
1275 begintsuglyph("ccedilla";231);
1276   tsu_accent.apply(latin.lowc)(tsu_accent.cedilla);
1277   tsu_render;
1278 endtsuglyph;
1279

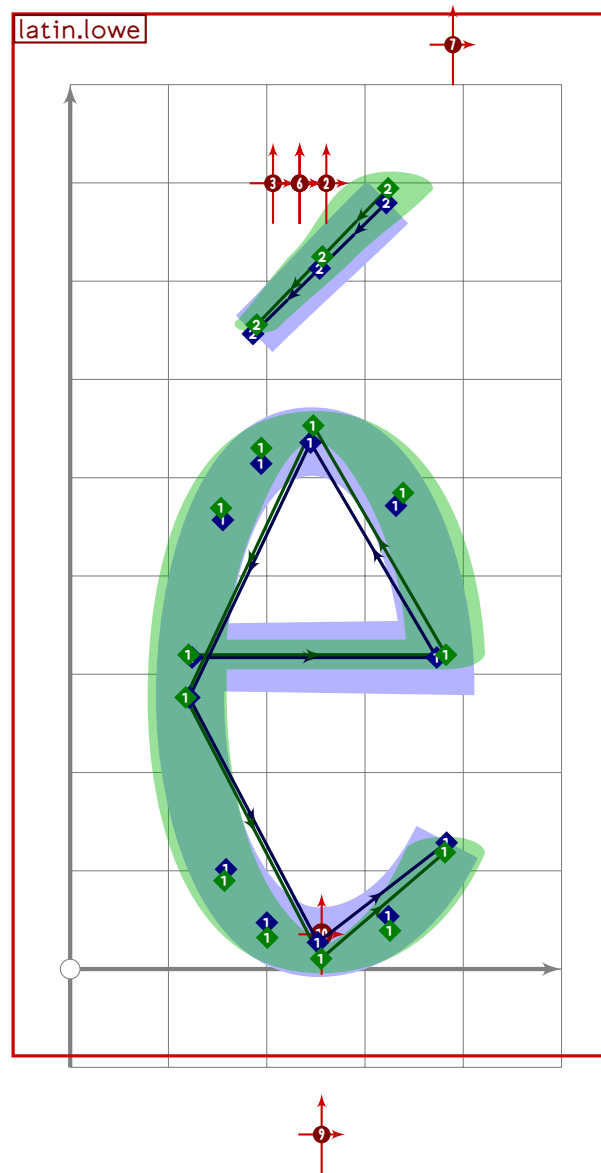
```

U+00E8
tsuku.egrave

00



```
1280 % e with grave
1281 begintsuglyph("egrave";232);
1282   tsu_accent.apply(latin.lowe)(tsu_accent.grave);
1283   tsu_render;
1284 endtsuglyph;
1285
```



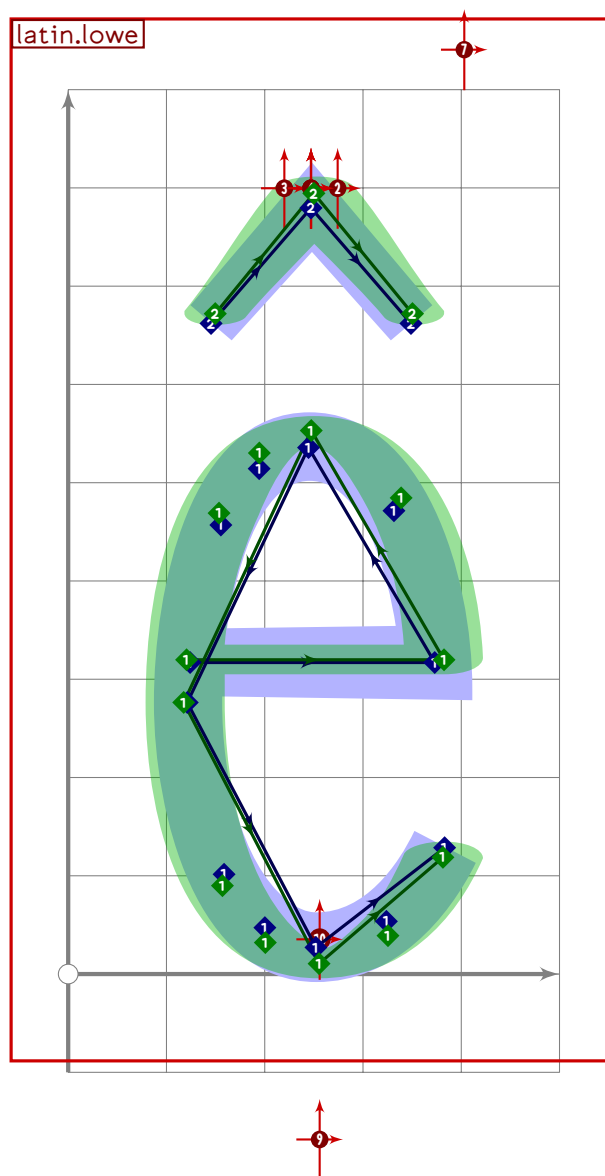
```

1286 % e with acute
1287 begintsuglyph("eacute";233);
1288   tsu_accent.apply(latin.lowe)(tsu_accent.acute);
1289   tsu_render;
1290 endtsuglyph;
1291

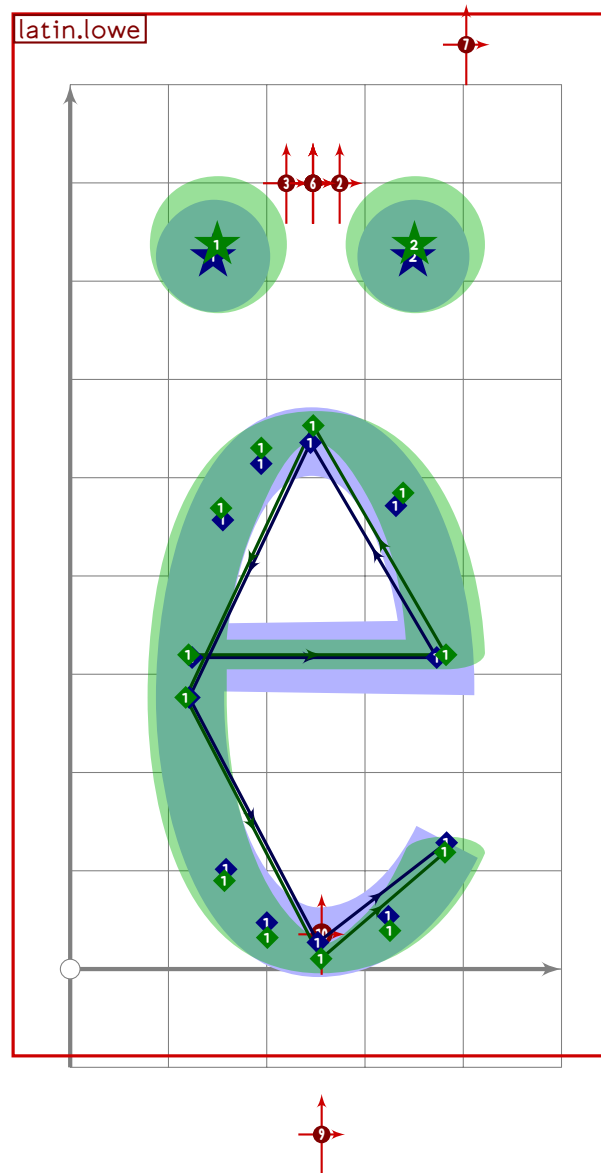
```

U+00EA
tsuku.ecircumflex

00



```
1292 % e with circumflex
1293 begintsuglyph("ecircumflex";234);
1294   tsu_accent.apply(latin.lowe)(tsu_accent.circumflex);
1295   tsu_render;
1296 endtsuglyph;
1297
```

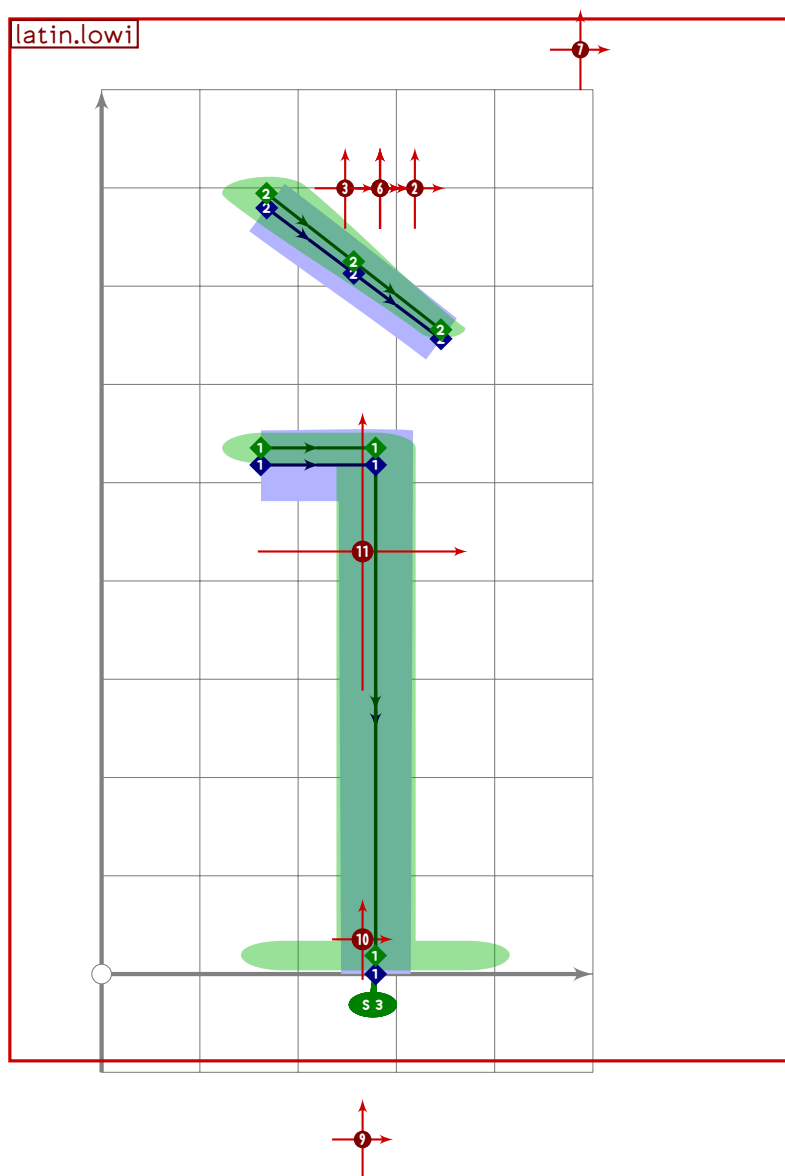
```

1298 % e with dieresis/umlaut
1299 begintsuglyph("edieresis";235);
1300   tsu_accent.apply(latin.lowe)(tsu_accent.umlaut);
1301   tsu_render;
1302 endtsuglyph;
1303

```

U+00EC
tsuku.igrave

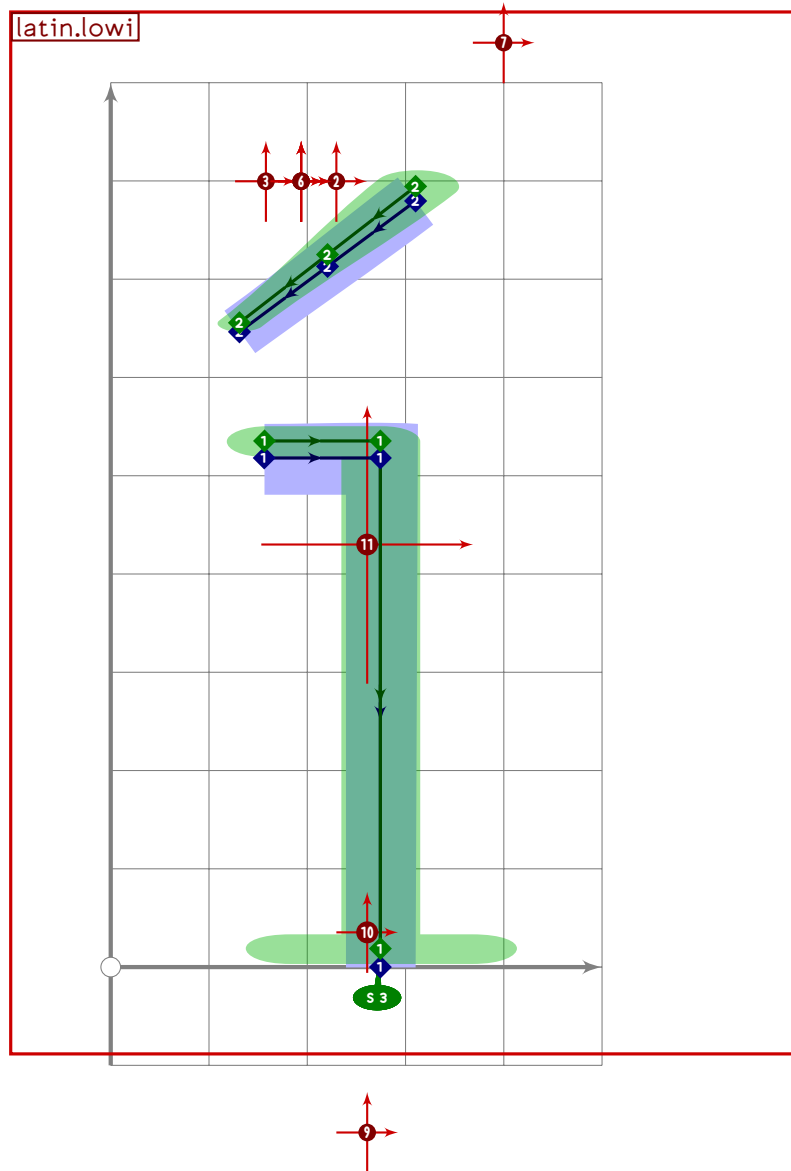
00



```

1304 % i with grave
1305 begintsuglyph("igrave";236);
1306   tsu_accent.apply(
1307     tsu_xform(identity shifted (70,0))(latin.lowi;
1308       tsu_accent.shift_anchors(true)((0,0)));
1309   pop_lcblob;
1310   )(tsu_accent.grave);
1311   tsu_render;
1312 endsuglyph;
1313

```

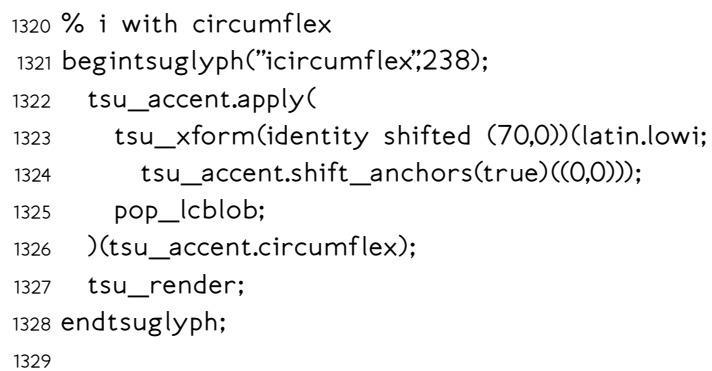


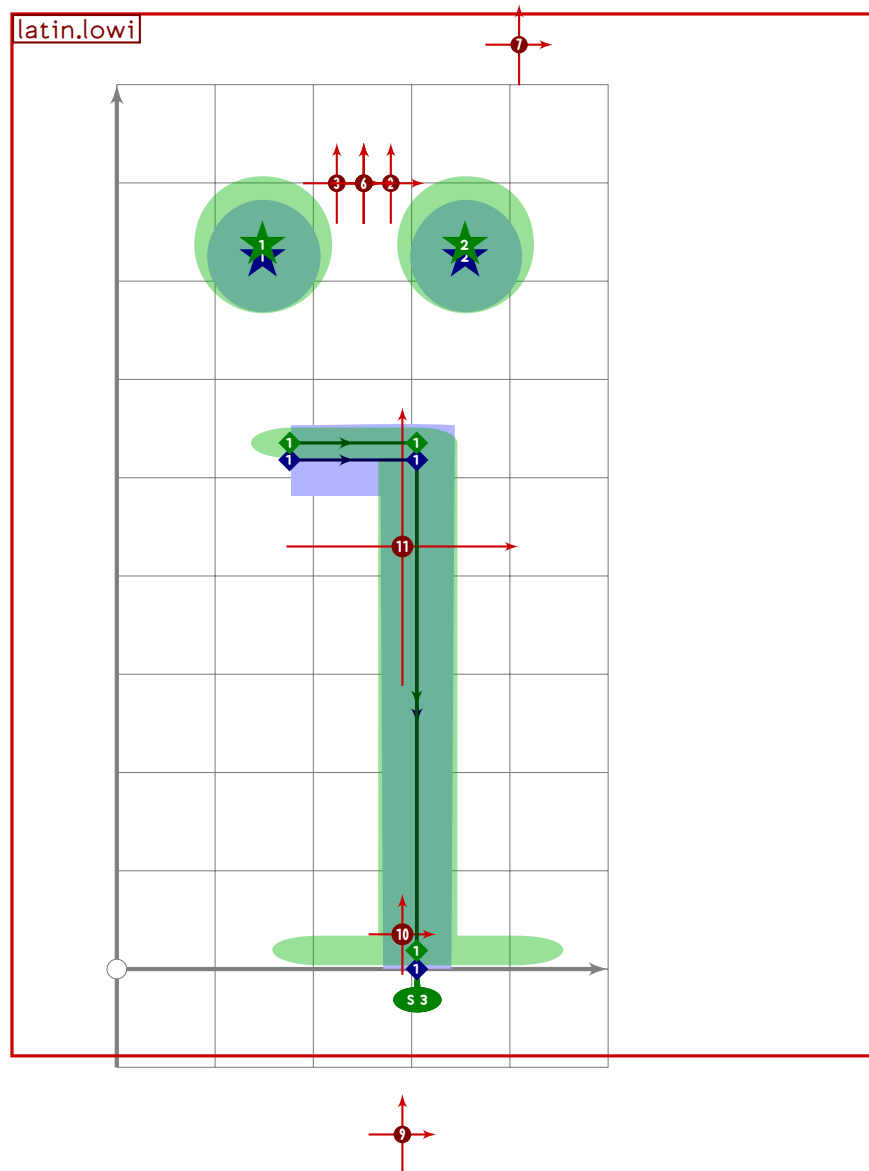
```

1314 % i with acute
1315 begintsuglyph("iacute";237);
1316   tsu_accent.apply(latin.lowi;pop_lcblob)(tsu_accent.acute);
1317   tsu_render;
1318 endtsuglyph;
1319

```

00





```

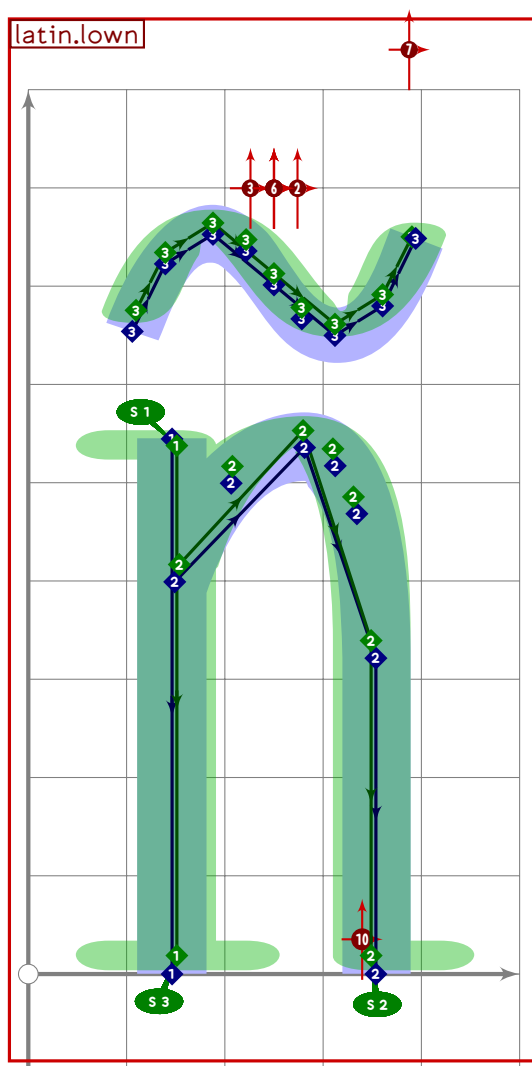
1330 % i with dieresis/umlaut
1331 begintsuglyph("idieresis";239);
1332   tsu_accent.apply(
1333     tsu_xform(identity shifted (70,0))(latin.lowi;
1334       tsu_accent.shift_anchors(true)((0,0)));
1335     pop_lcblob;
1336   )(tsu_accent.umlaut);
1337   tsu_render;
1338 endtsuglyph;
1339
1340 % lowercase Icelandic eth
1341 begintsuglyph("eth";240);
1342   latin.loweth;
1343   tsu_render;
1344 endtsuglyph;
1345

```

[see page 301]

U+00F1
tsuku.ntilde

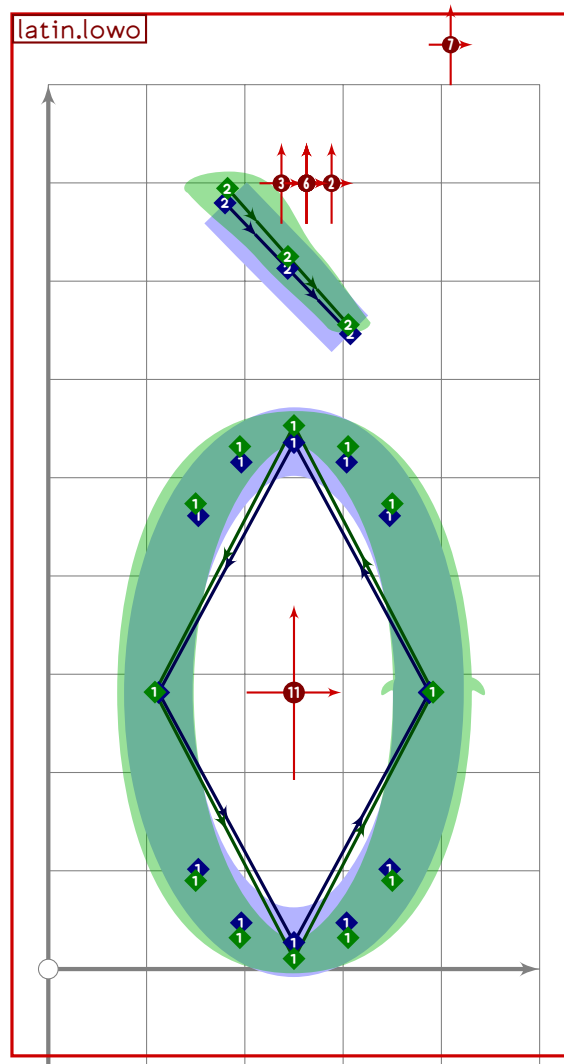
00



```

1346 % n with tilde
1347 begintsuglyph("ntilde",241);
1348 tsu_accent.apply(latin.low n)(tsu_accent.tilde);
1349 tsu_render;
1350 endsuglyph;
1351

```



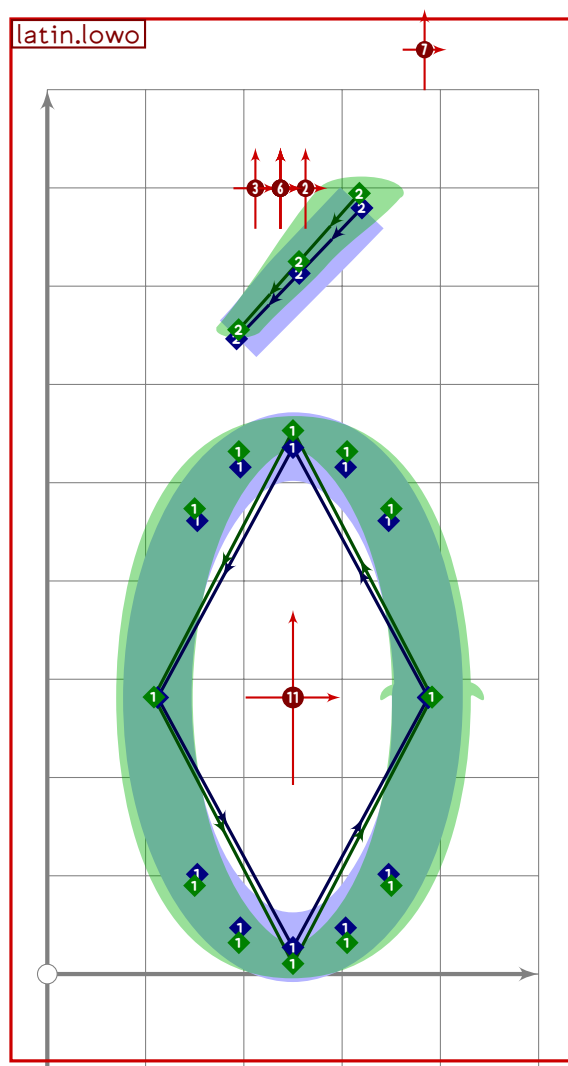
```

1352 % o with grave
1353 begintsuglyph("ograve";242);
1354   tsu_accent.apply(latin.low)(tsu_accent.grave);
1355   tsu_render;
1356 endtsuglyph;
1357

```

U+00F3
tsuku.oacute

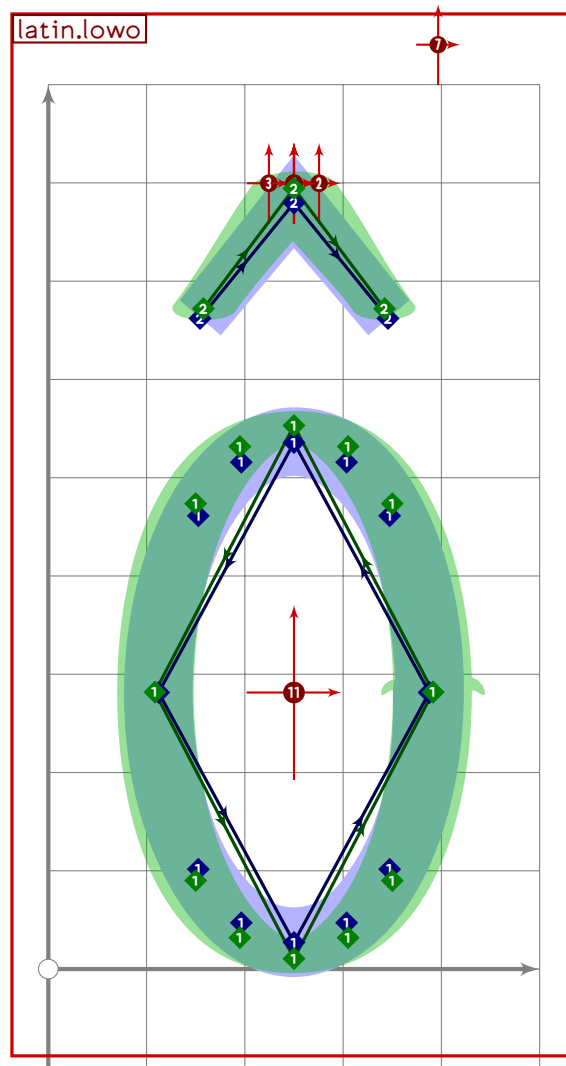
00



```

1358 % o with acute
1359 begintsuglyph("oacute";243);
1360 tsu_accent.apply(latin.low)(tsu_accent.acute);
1361 tsu_render;
1362 endtsuglyph;
1363

```

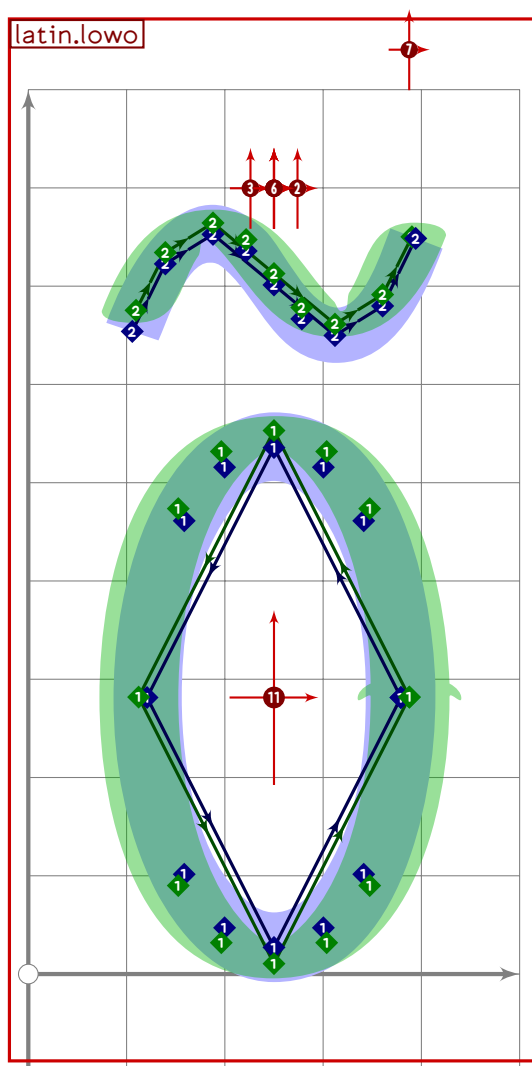
```

1364 % o with circumflex
1365 begintsuglyph("bcircumflex";244);
1366   tsu_accent.apply(latin.low o)(tsu_accent.circumflex);
1367   tsu_render;
1368 endtsuglyph;
1369

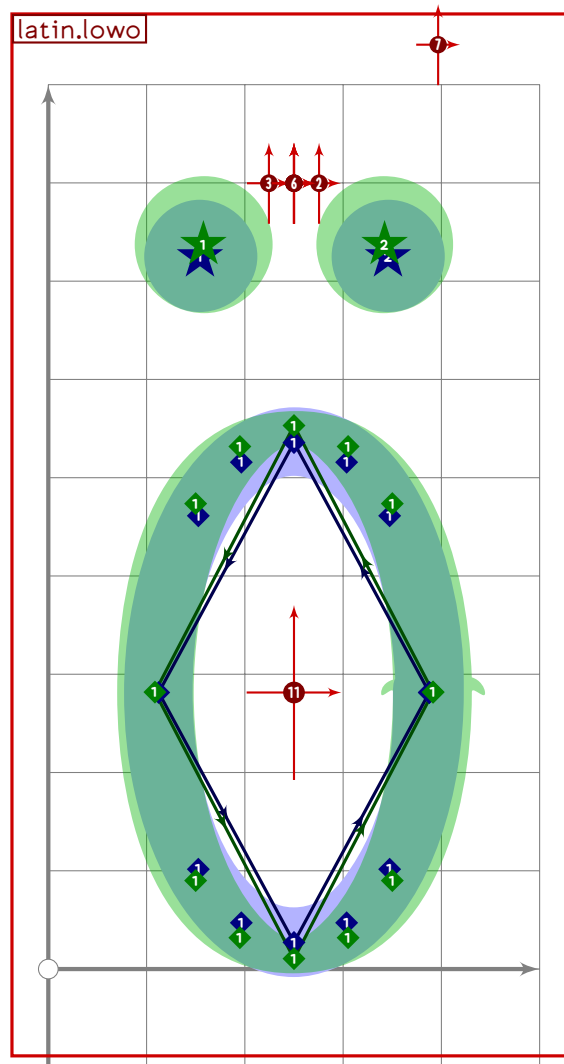
```

U+00F5
tsuku.otilde

00



```
1370 % o with tilde
1371 beginsuglyph("otilde",245);
1372 tsu_accent.apply(latin.lowo)(tsu_accent.tilde);
1373 tsu_render;
1374 endsuglyph;
1375
```



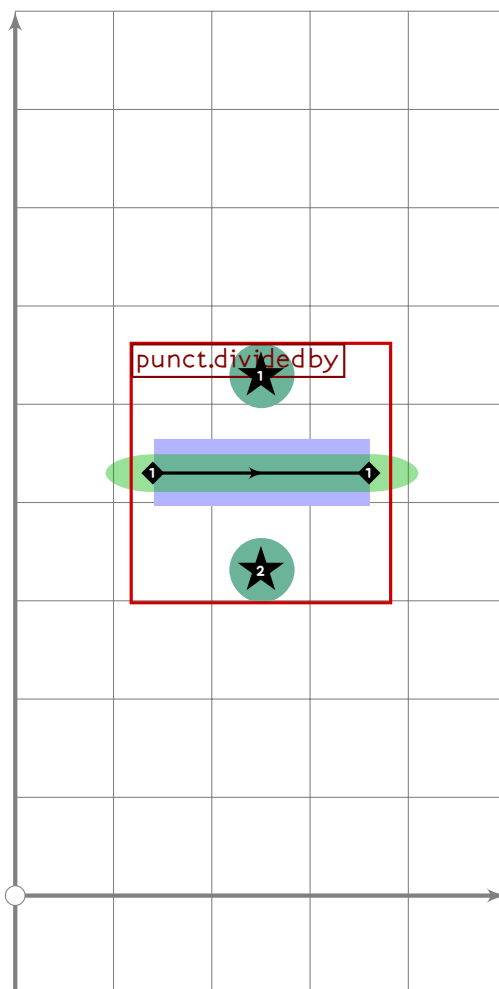
```

1376 % o with dieresis/umlaut
1377 begintsuglyph("odieresis";246);
1378 tsu_accent.apply(latin.low)(tsu_accent.umlaut);
1379 tsu_render;
1380 endsuglyph;
1381
1382 % division sign
1383 tsu_accent.clear_default_anchors;
1384 tsu_rescale_native_conditional;

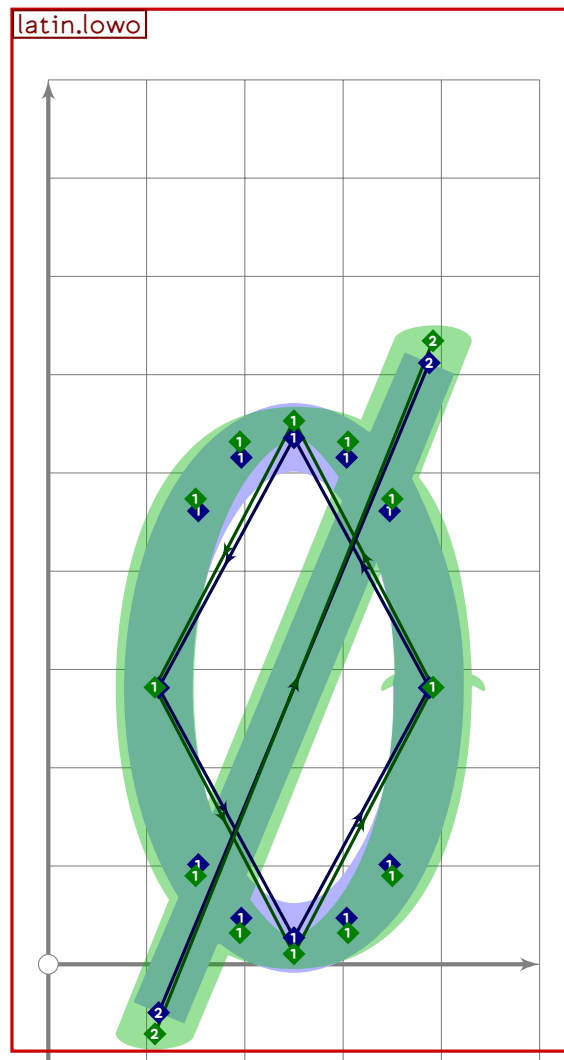
```

U+00F7
tsuku.divide

00



```
1385 beginsuglyph("divide";247);
1386   punct.dividedby(ascii_punct_xf);
1387   tsu_render;
1388 endtsuglyph;
1389 tsu_rescale_half;
1390 tsu_accent.low_default_anchors;
1391
```



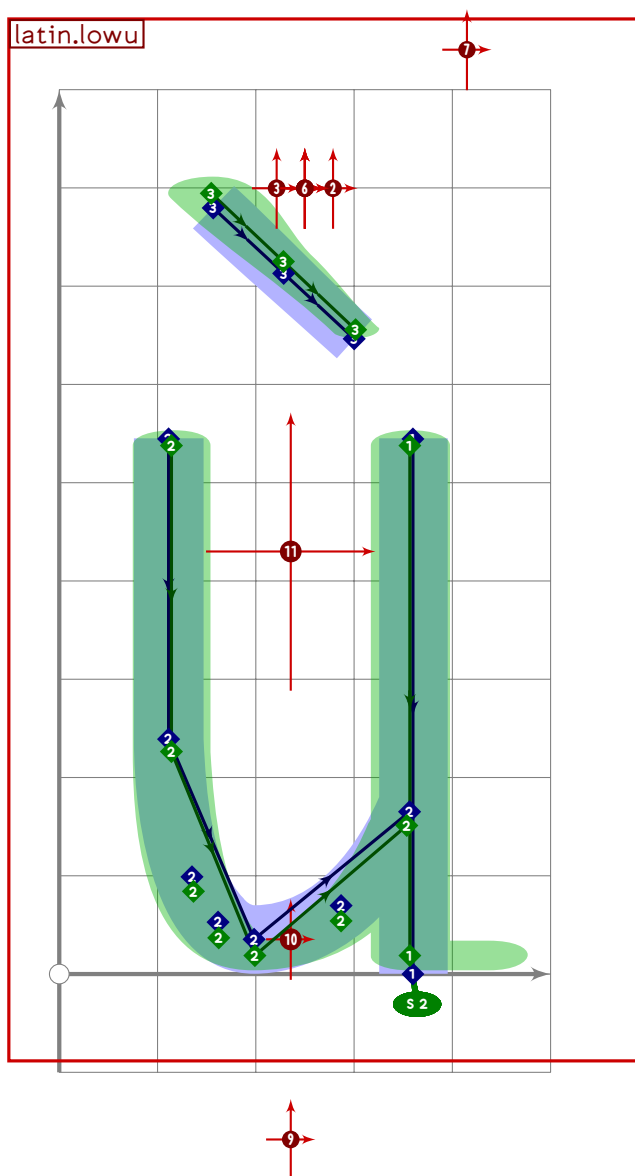
```

1392 % o with stroke
1393 begintsuglyph("oslash";248);
1394   tsu_accent.apply(latin.low o)(tsu_accent.slash);
1395   tsu_render;
1396 endtsuglyph;
1397

```

U+00F9
tsuku.ugrave

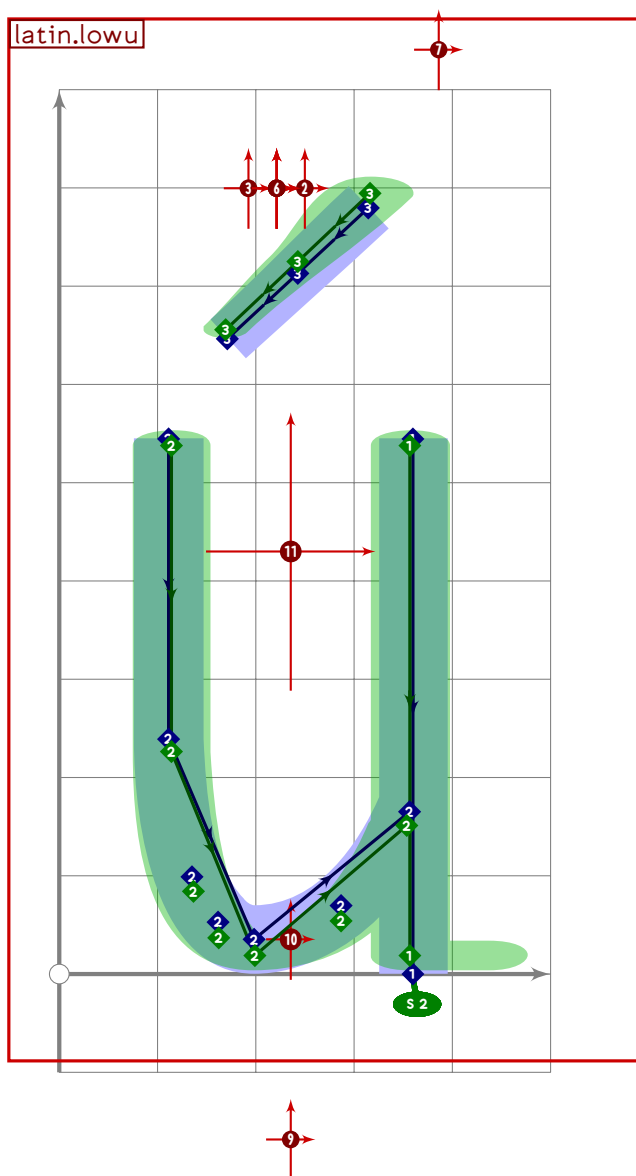
00



```

1398 % u with grave
1399 begint Suglyph("ugrave";249);
1400   tsu_accent.apply(latin.lowu)(tsu_accent.grave);
1401   tsu_render;
1402 endtsuglyph;
1403

```



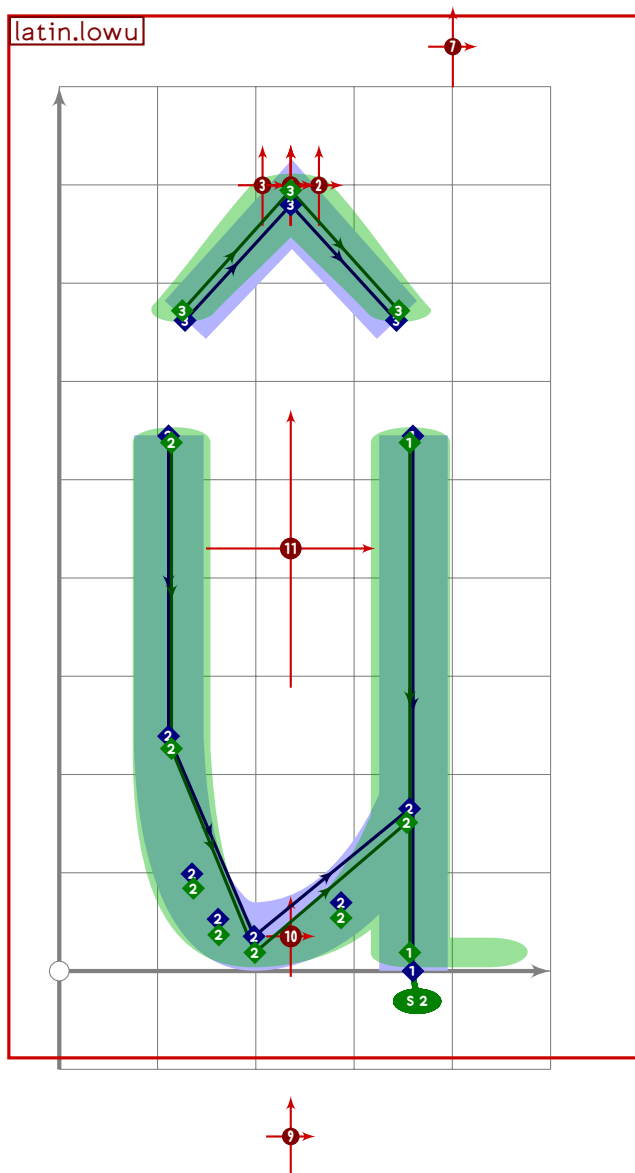
```

1404 % u with acute
1405 begintsuglyph("uacute";250);
1406   tsu_accent.apply(latin.lowu)(tsu_accent.acute);
1407   tsu_render;
1408 endtsuglyph;
1409

```

U+00FB
tsuku.ucircumflex

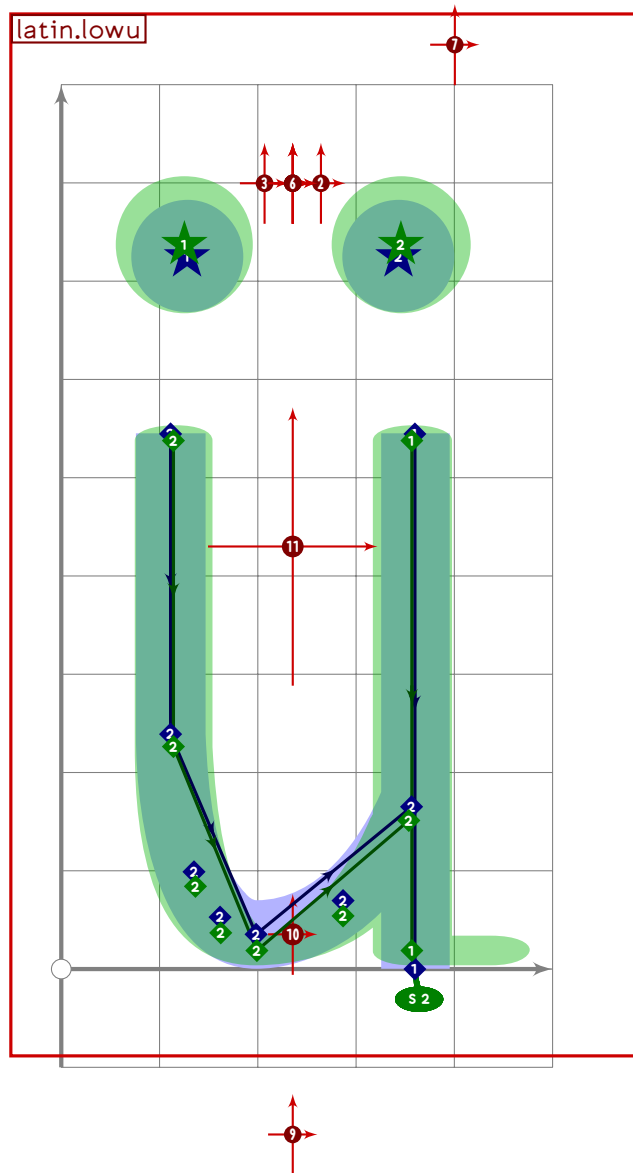
00



```

1410 % u with circumflex
1411 begintsuglyph("ucircumflex";251);
1412   tsu_accent.apply(latin.lowu)(tsu_accent.circumflex);
1413   tsu_render;
1414 endtsuglyph;
1415

```

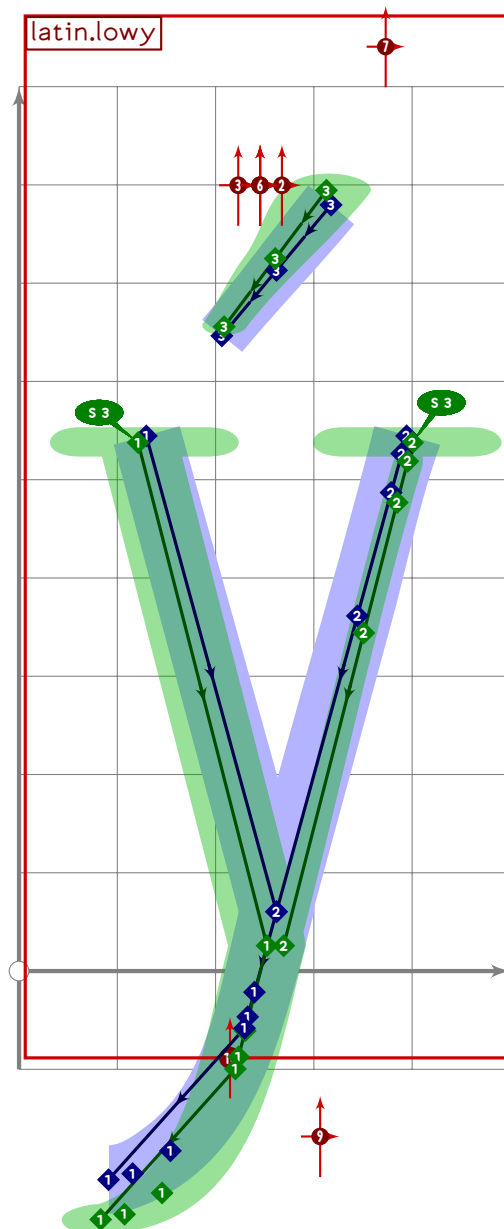
```

1416 % u with dieresis/umlaut
1417 begintsuglyph("udieresis";252);
1418   tsu_accent.apply(latin.lowu)(tsu_accent.umlaut);
1419   tsu_render;
1420 endtsuglyph;
1421

```

U+00FD
tsuku.yacute

00

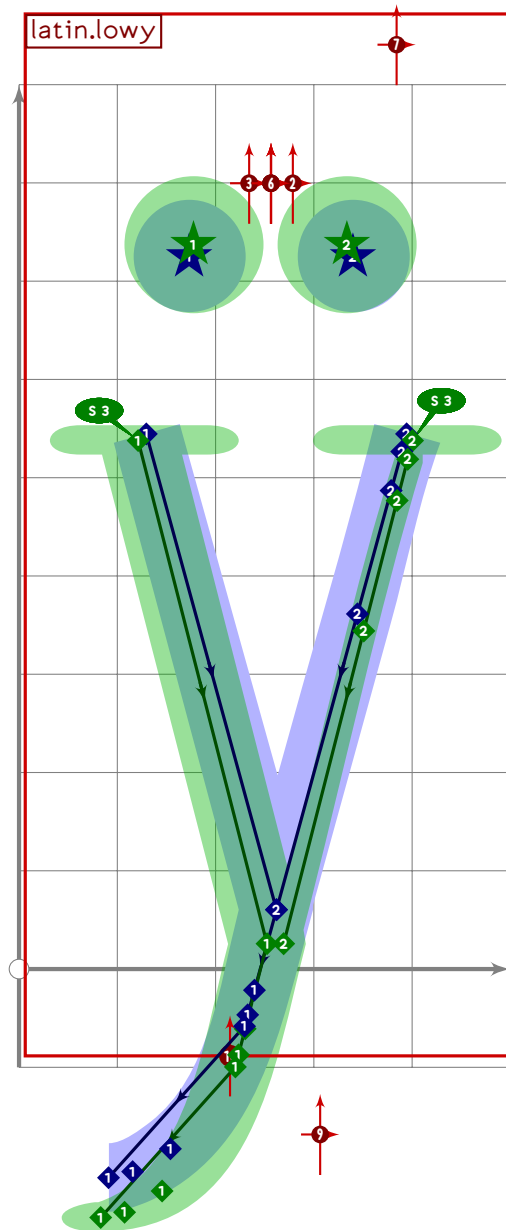


```

1422 % y with acute
1423 begintsuglyph("yacute";253);
1424   tsu_accent.apply(latin.lowy)(tsu_accent.acute);
1425   tsu_render;
1426 endtsuglyph;
1427
1428 % thorn
1429 begintsuglyph("thorn";254);
1430   latin.lowthorn;
1431   tsu_render;
1432 endtsuglyph;
1433

```

[see page 329]



```

1434 % y with dieresis/umlaut
1435 begintsuglyph("ydieresis";255);
1436 tsu_accent.apply(latin.lowy)(tsu_accent.umlaut);
1437 tsu_render;
1438 endtsuglyph;
1439
1440
1441
1442 endfont;
1443
1444

```

tsuku-01.mp

01

```
1 %
2 % Unicode page 01 (Latin Extended A) for Tsukurimashou
3 % Copyright (C) 2011, 2012 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---

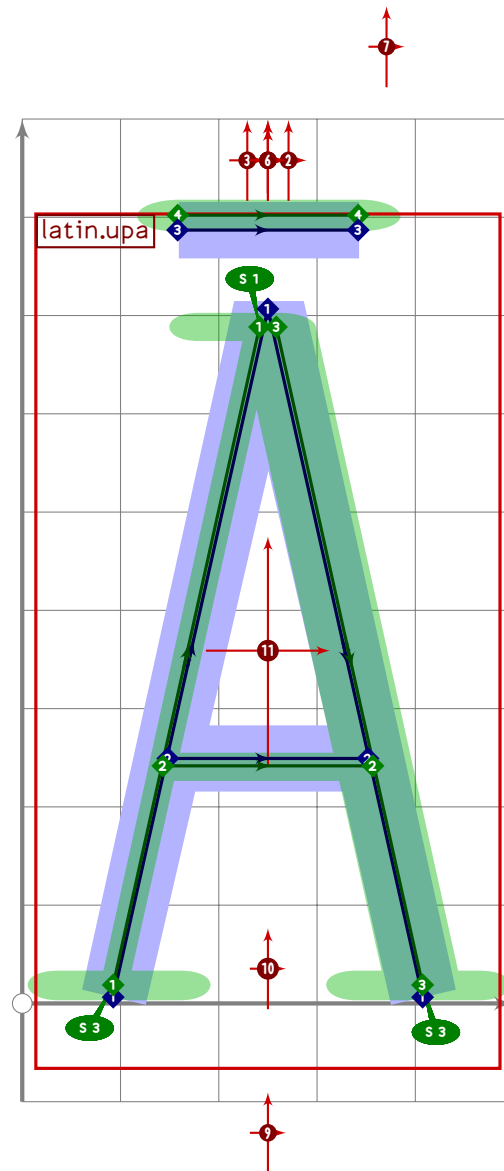

32
33 beginfont
34
35 input latin-intro.mp;
36
37 % AUTODEPS
38 input accent.mp;
39 input latin.mp;
40 input ogonek.mp;
41 input punct.mp;
42
43 do_late_includes;
44
45 

---


46
```

Latin Extended A Uppercase

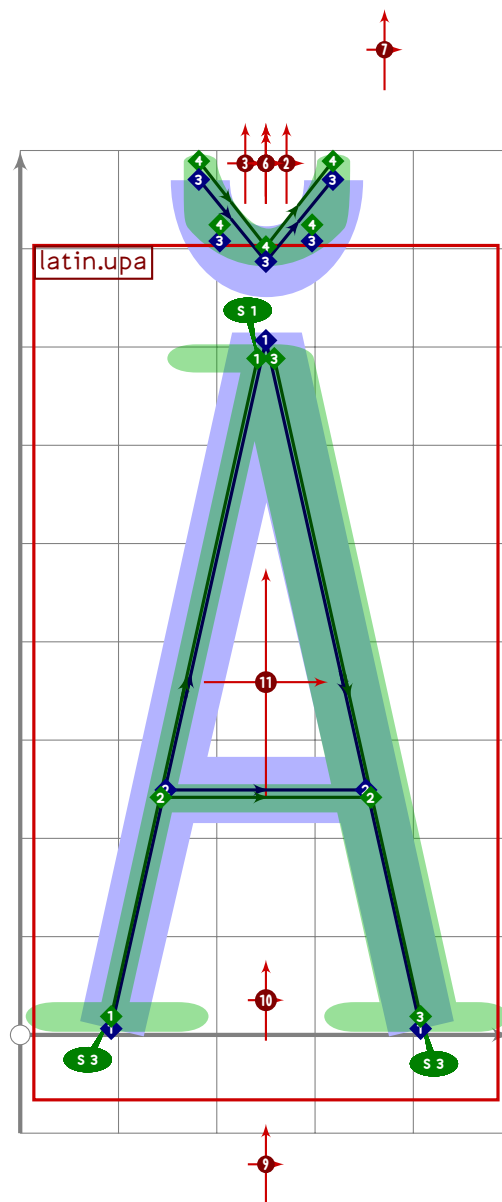
```
47 % LATIN EXTENDED A UPPERCASE
48
49 % note we define these out of code point sequence in order to simplify
50 % default accent anchor definitions
51
52 tsu_rescale_half;
53 sp:=0;
54 tsu_accent.up_default_anchors;
55
```



```

56 % A with macron
57 begintsuglyph("Amacron",0);
58   tsu_accent.apply(tsu_accent.capital(latin.upa))(tsu_accent.macron);
59   tsu_render;
60 endtsuglyph;
61

```

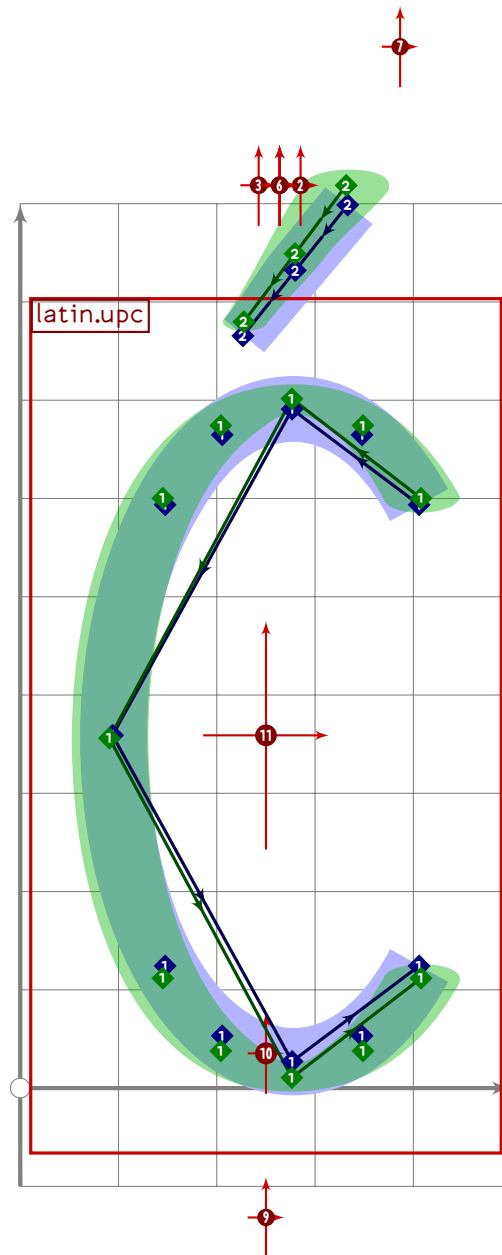


```

62 % A with breve
63 begintsuglyph("Abreve";2);
64 tsu_accent.apply(tsu_accent.capital(latin.upa))(tsu_accent.breve);
65 tsu_render;
66 endtsuglyph;
67
68 % A with ogonek
69 begintsuglyph("Aogonek";4);
70 latin.upaogonek;
71 tsu_render;
72 endtsuglyph;
73

```

[see page 350]

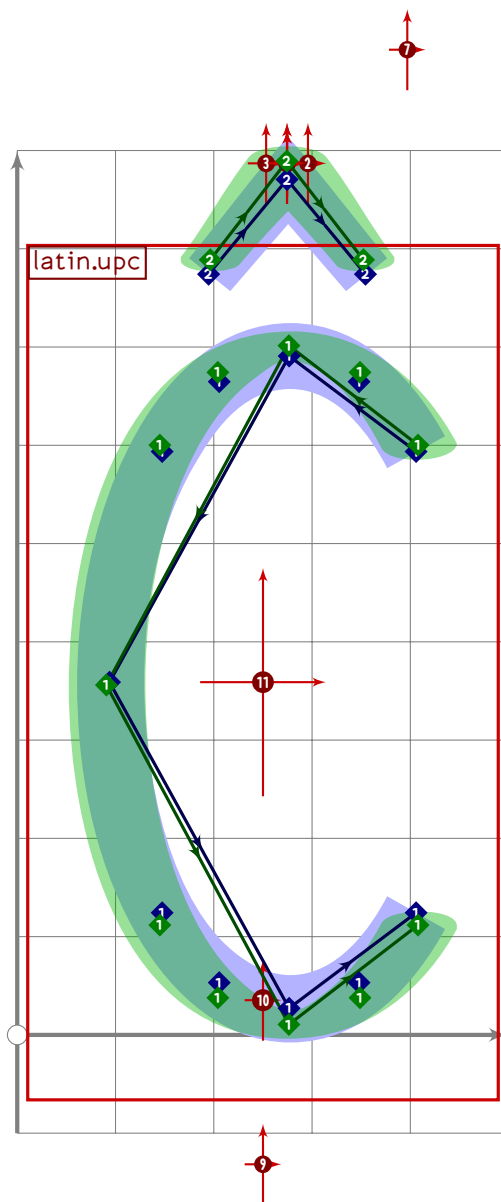


```

74 % C with acute
75 begintsuglyph("Cacute";6);
76 tsu_accent.apply(tsu_accent.capital(latin.upc))(tsu_accent.acute);
77 tsu_render;
78 endtsuglyph;
79

```

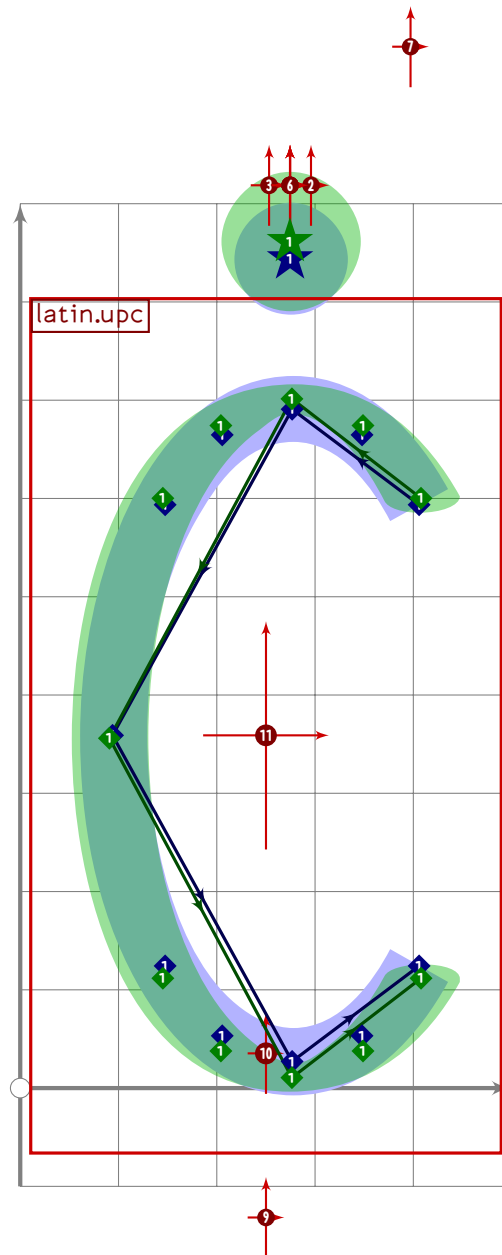
01



```

80 % C with circumflex
81 beginsuglyph("Ccircumflex";8);
82 tsu_accent.apply(tsu_accent.capital(latin.upc))(tsu_accent.circumflex);
83 tsu_render;
84 endtsuglyph;
85

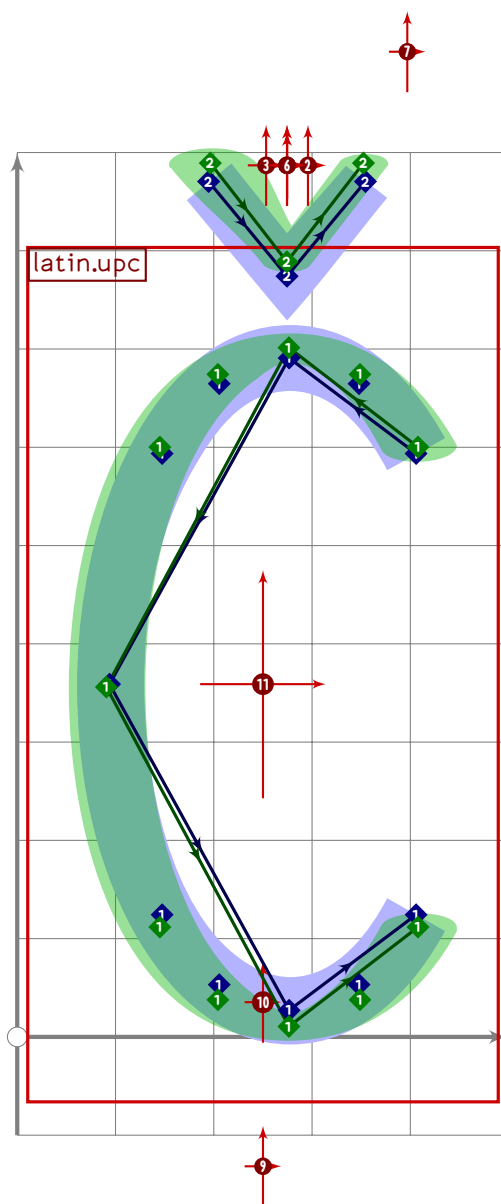
```

```

86 % C with dot above
87 begint Suglyph("Cdotaccent";10);
88   tsu_accent.apply(tsu_accent.capital(latin.upc))(tsu_accent.dotabove);
89   tsu_render;
90 endtsuglyph;
91

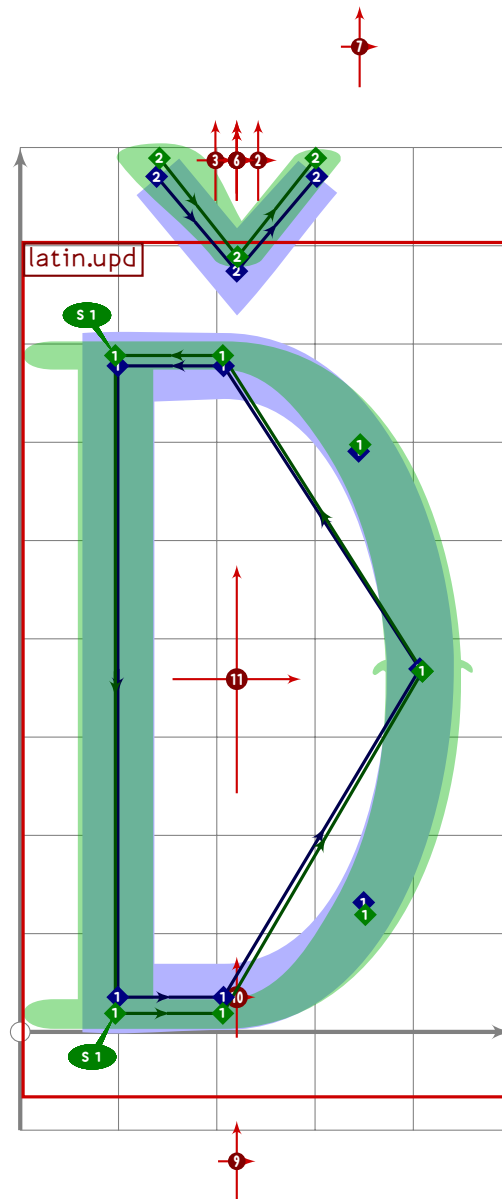
```



```

92 % C with caron
93 beginsuglyph("Ccaron",12);
94   tsu_accent.apply(tsu_accent.capital(latin.upc))(tsu_accent.caron);
95   tsu_render;
96 endtsuglyph;
97

```

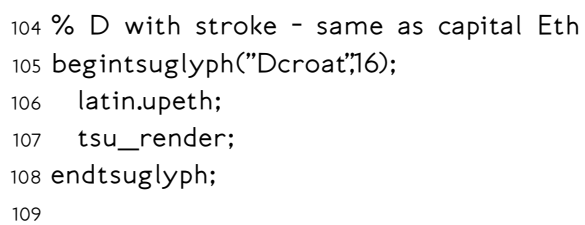


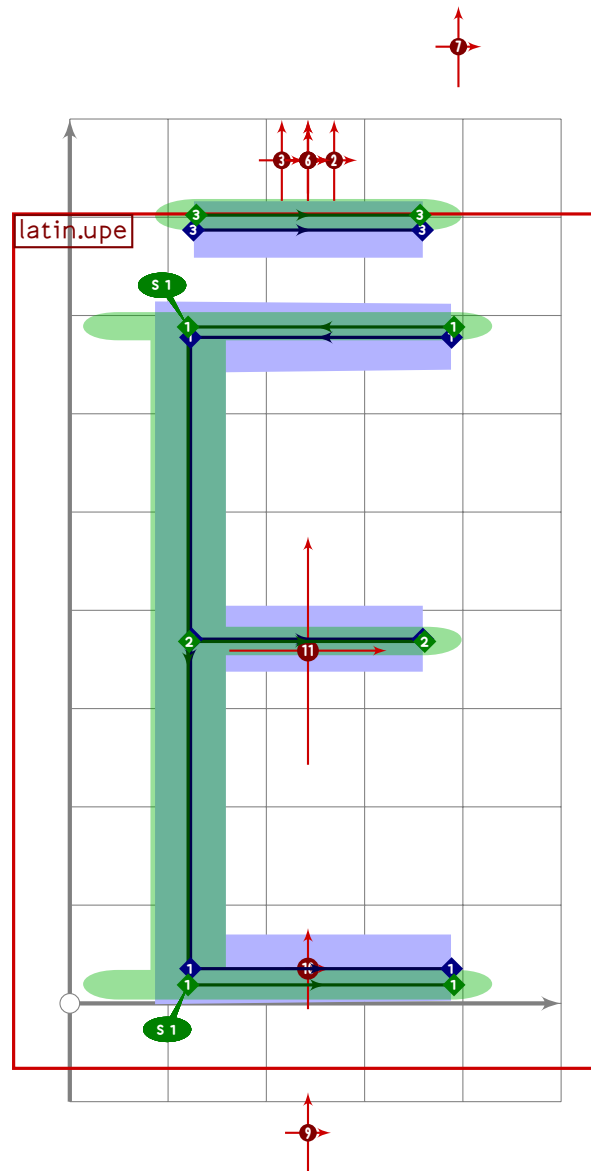
```

98 % D with caron
99 begintsuglyph("Dcaron",14);
100 tsu_accent.apply(tsu_accent.capital(latin.upd))(tsu_accent.caron);
101 tsu_render;
102 endtsuglyph;
103

```

01



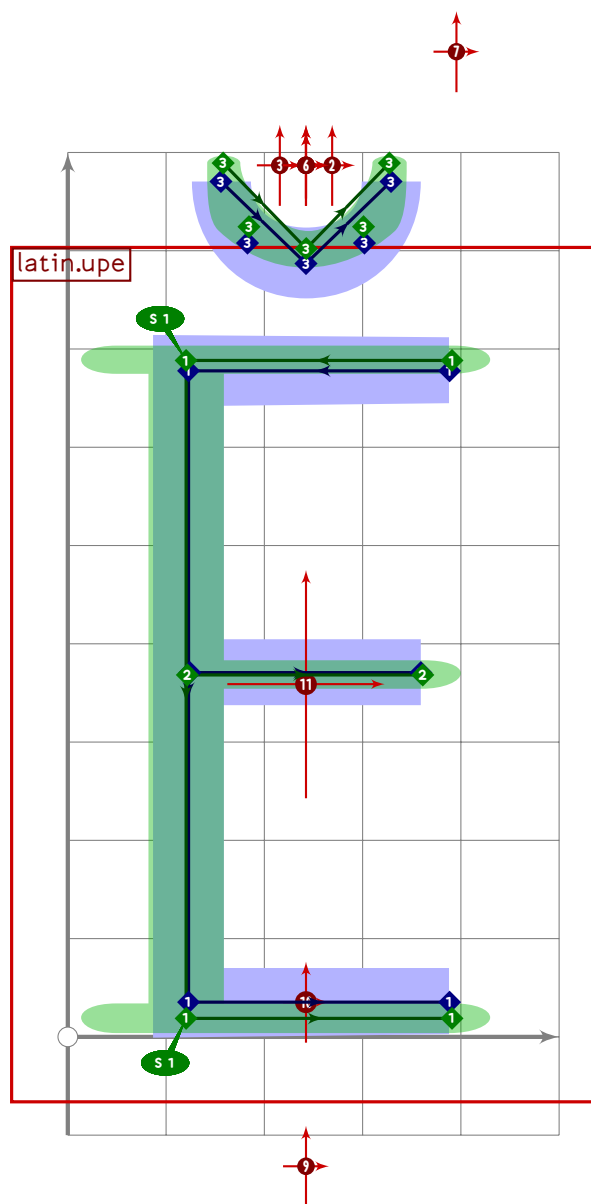


01

```

110 % E with macron
111 begintsuglyph("Emacron",18);
112   tsu_accent.apply(tsu_accent.capital(latin.upe))(tsu_accent.macron);
113   tsu_render;
114 endtsuglyph;
115

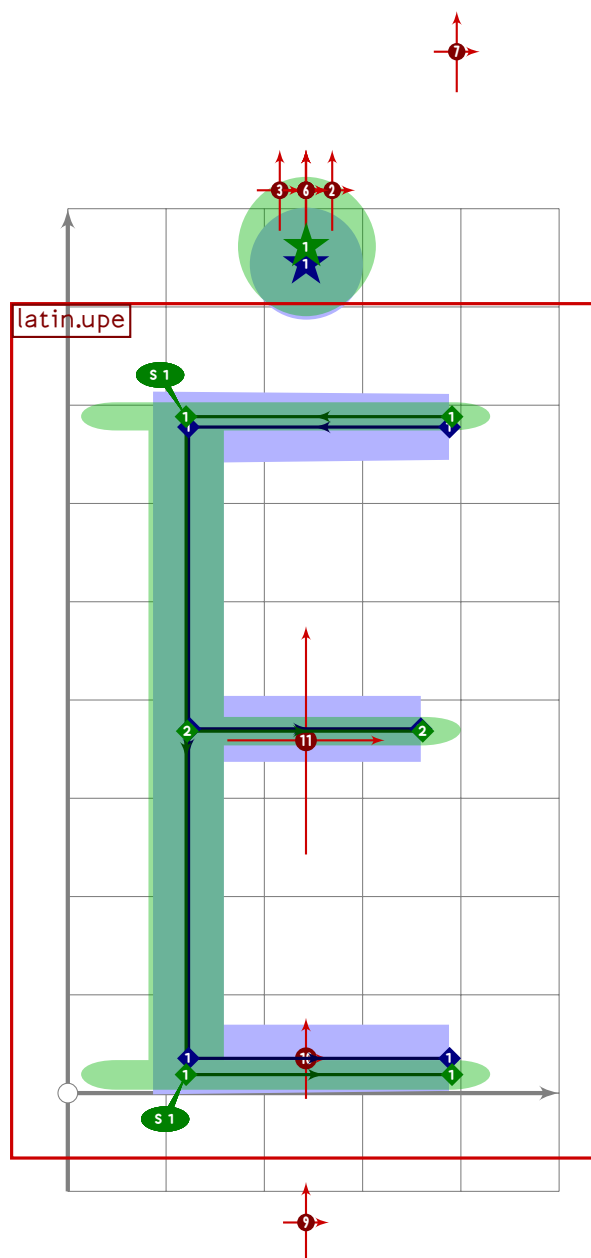
```



```

116 % E with breve
117 begintsuglyph("Ebreve";20);
118   tsu_accent.apply(tsu_accent.capital(latin.upe))(tsu_accent.breve);
119   tsu_render;
120 endtsuglyph;
121

```



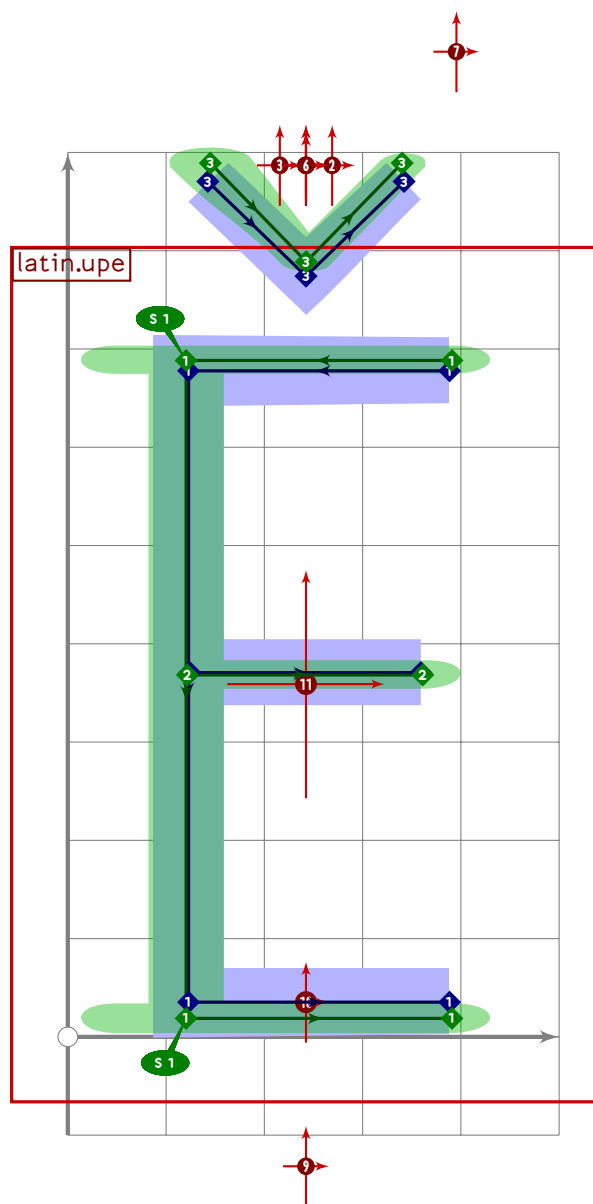
```

122 % E with dot
123 begintsuglyph("Edotaccent";22);
124   tsu_accent.apply(tsu_accent.capital(latin.upe))(tsu_accent.dotabove);
125   tsu_render;
126 endtsuglyph;
127
128 % E with ogonek
129 begintsuglyph("Eogonek";24);
130   latin.upeogonek;
131   tsu_render;
132 endtsuglyph;
133

```

[see page 351]

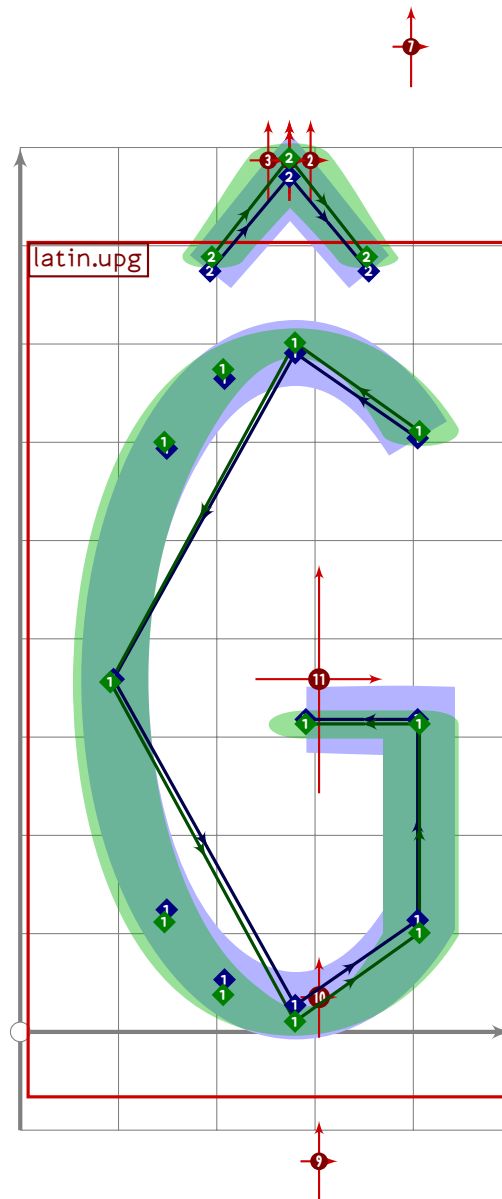
01



```

134 % E with caron
135 begint Suglyph("Ecaron";26);
136   tsu_accent.apply(tsu_accent.capital(latin.upe))(tsu_accent.caron);
137   tsu_render;
138 endtsuglyph;
139

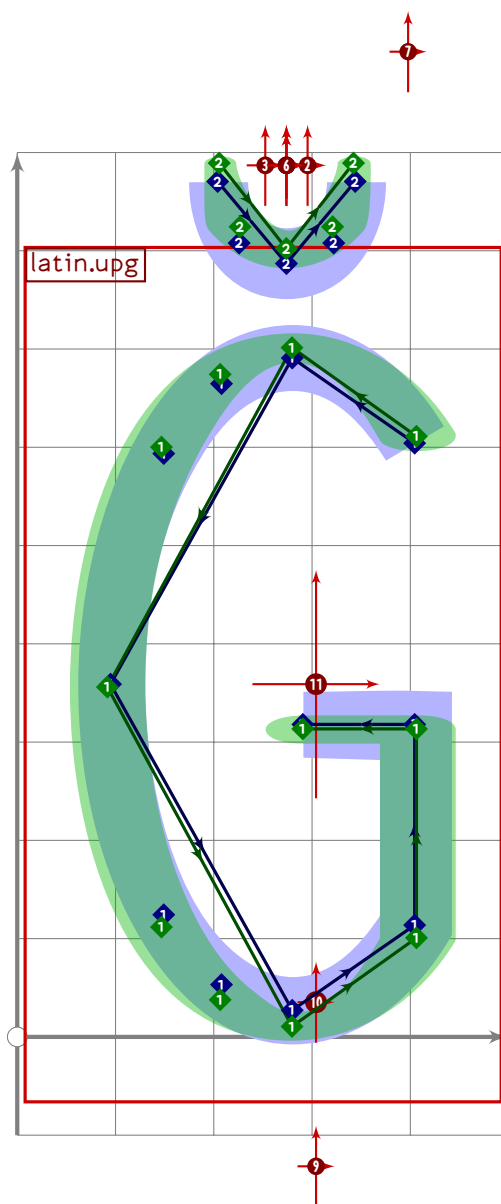
```

```

140 % G with circumflex
141 begintsuglyph("Gcircumflex";28);
142   tsu_accent.apply(tsu_accent.capital(latin.upg))(tsu_accent.circumflex);
143   tsu_render;
144 endtsuglyph;
145

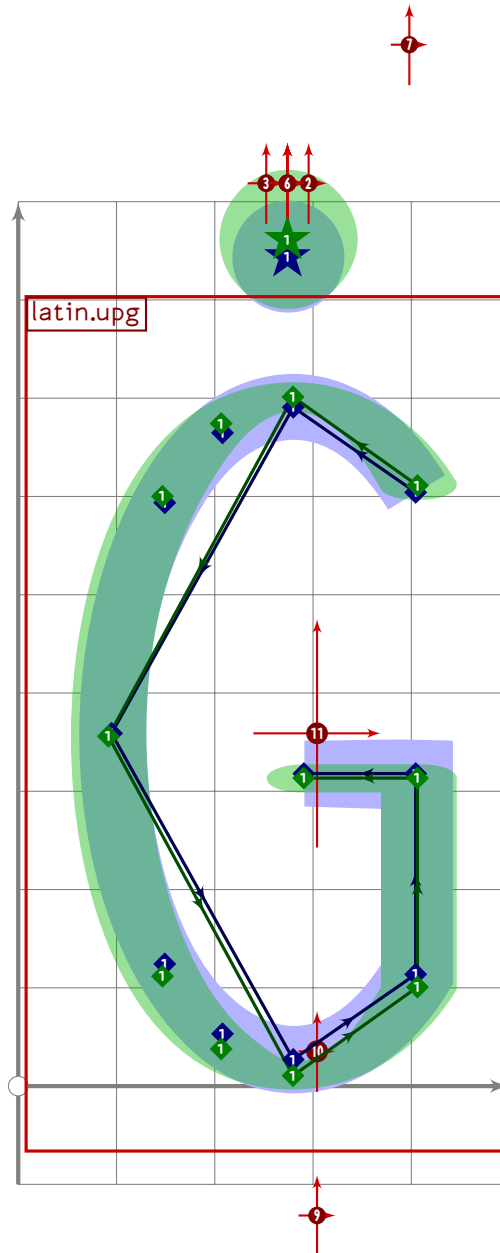
```



```

146 % G with breve
147 begintsuglyph("Gbreve";30);
148   tsu_accent.apply(tsu_accent.capital(latin.upg))(tsu_accent.breve);
149   tsu_render;
150 endtsuglyph;
151

```

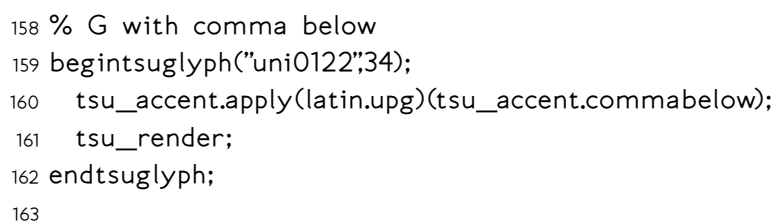


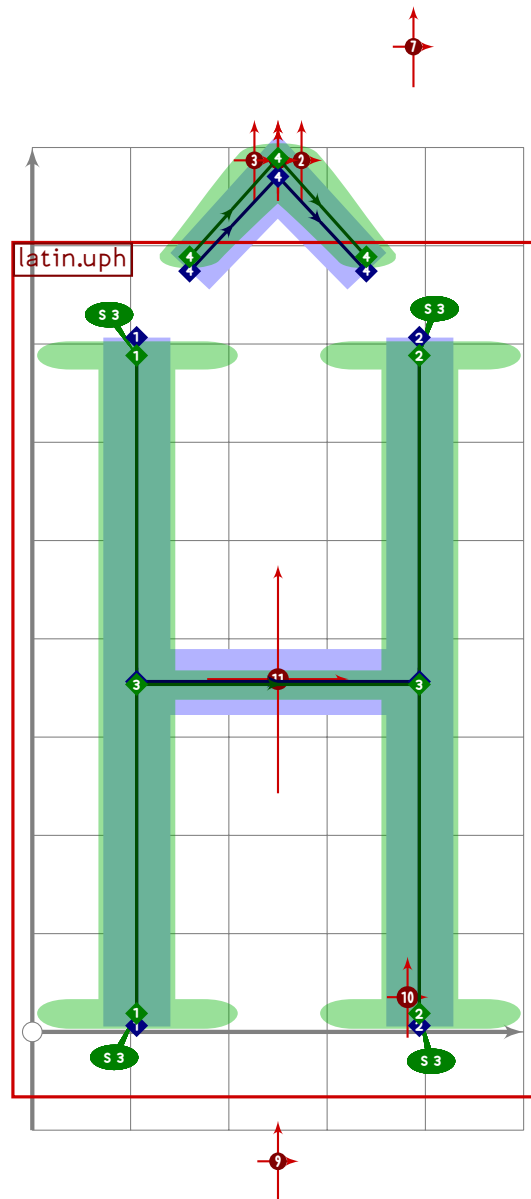
```

152 % G with dot
153 begintsuglyph("Gdotaccent";32);
154   tsu_accent.apply(tsu_accent.capital(latin.upg))(tsu_accent.dotabove);
155   tsu_render;
156 endtsuglyph;
157

```

01

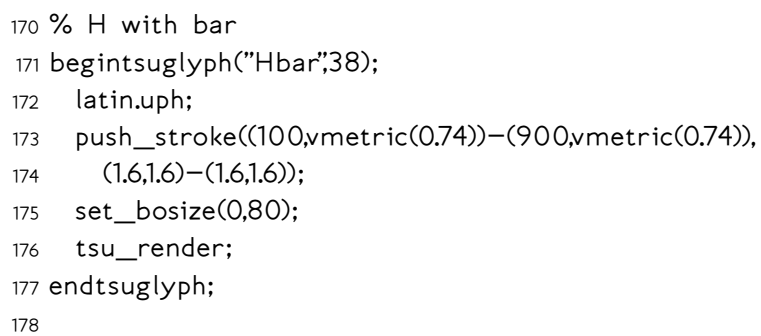


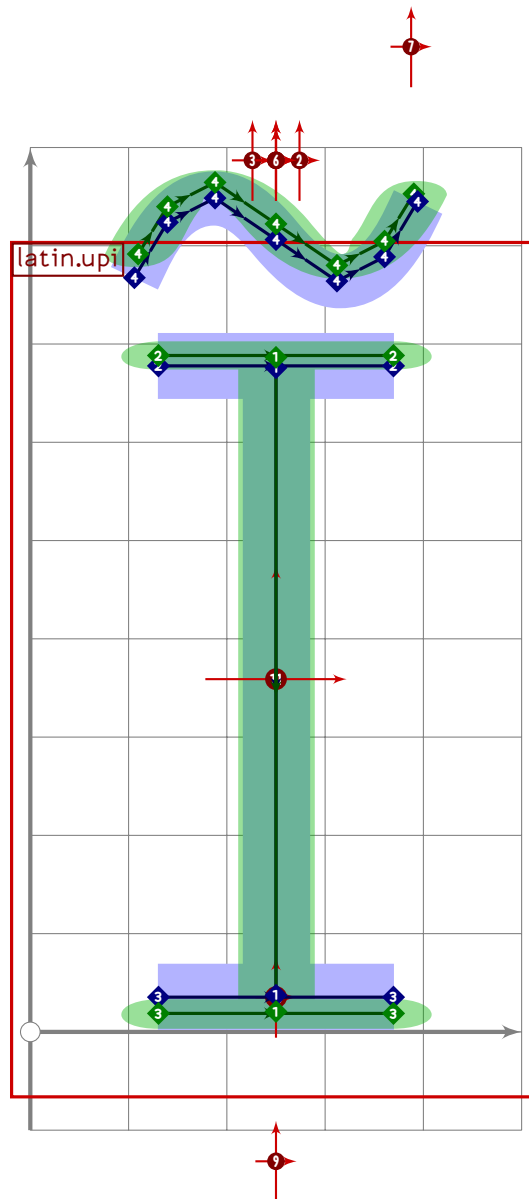


```

164 % H with circumflex
165 begint Suglyph("Hcircumflex",36);
166   tsu_accent.apply(tsu_accent.capital(latin.uph))(tsu_accent.circumflex);
167   tsu_render;
168 endtsuglyph;
169

```



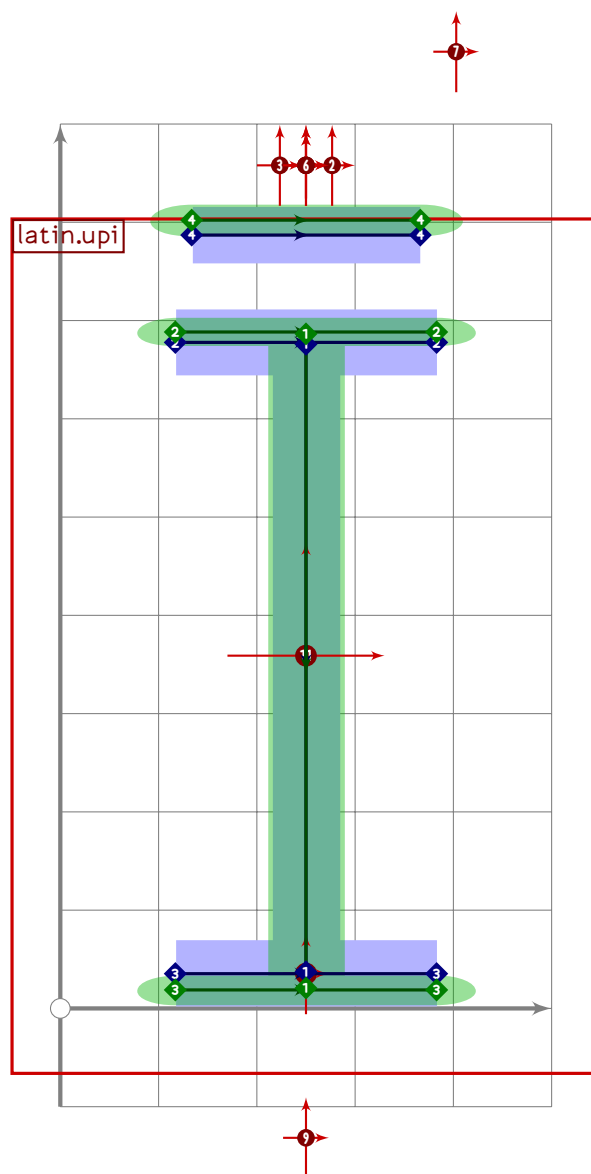


```

179 % I with tilde
180 begintsuglyph("Itildẽ";40);
181   tsu_accent.apply(tsu_accent.capital(latin.upi))(tsu_accent.tilde);
182   tsu_render;
183 endtsuglyph;
184

```

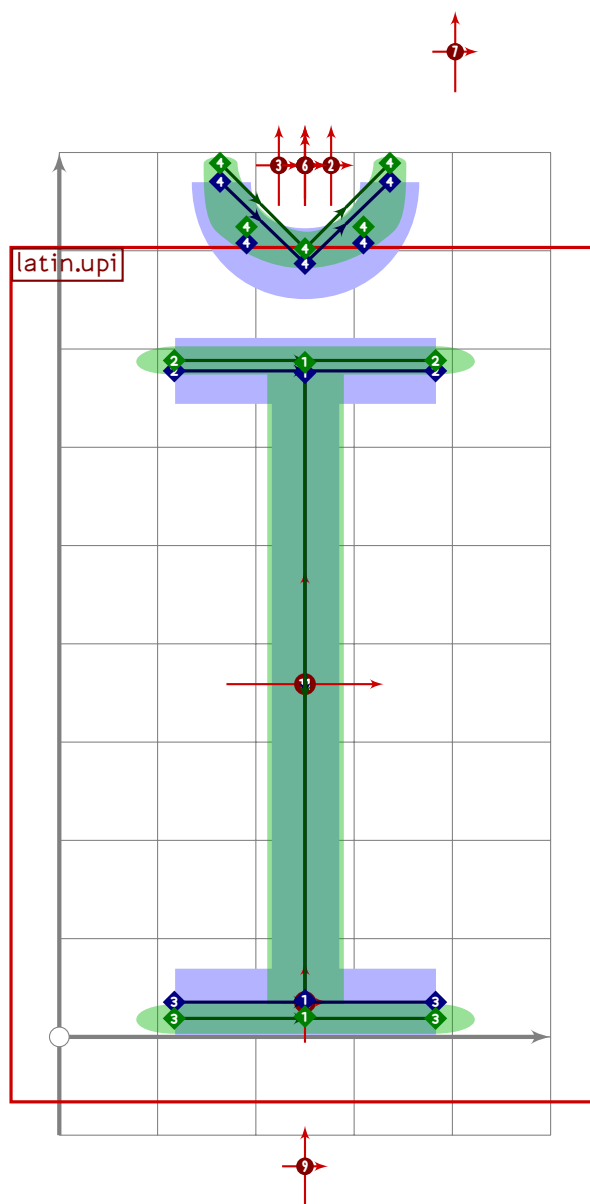
01



```

185 % I with macron
186 begintsuglyph("Imacron";42);
187   tsu_accent.apply(tsu_accent.capital(latin.upi))(tsu_accent.macron);
188   tsu_render;
189 endsuglyph;
190

```

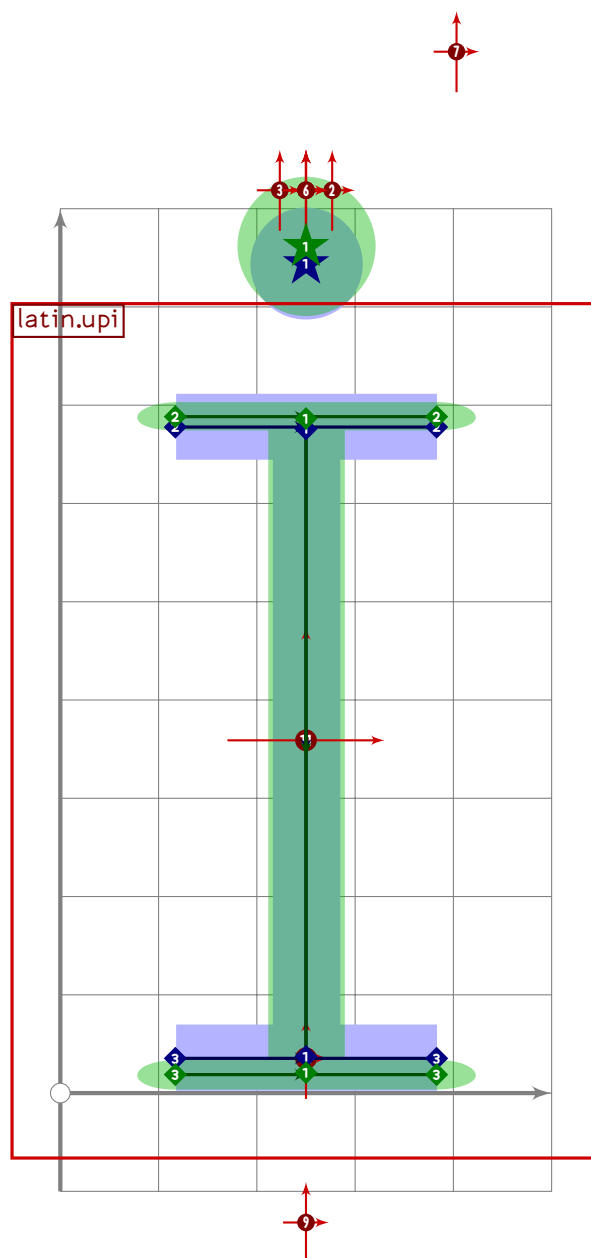
```

191 % I with breve
192 begintsuglyph("Ibreve";44);
193   tsu_accent.apply(tsu_accent.capital(latin.upi))(tsu_accent.breve);
194   tsu_render;
195 endtsuglyph;
196
197 % I with ogonek
198 begintsuglyph("Iogonek";46);
199   latin.upiogonek;
200   tsu_render;
201 endtsuglyph;
202

```

[see page 352]

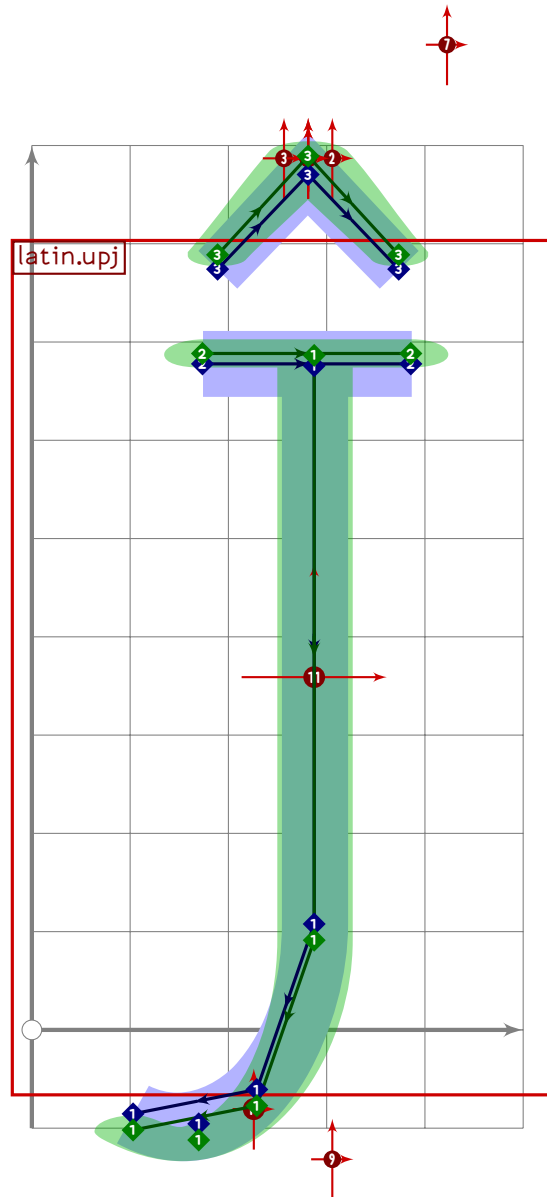
01



```

203 % I with dot
204 begintsuglyph("Idotaccent"48);
205   tsu_accent.apply(tsu_accent.capital(latin.upi))(tsu_accent.dotabove);
206   tsu_render;
207 endtsuglyph;
208

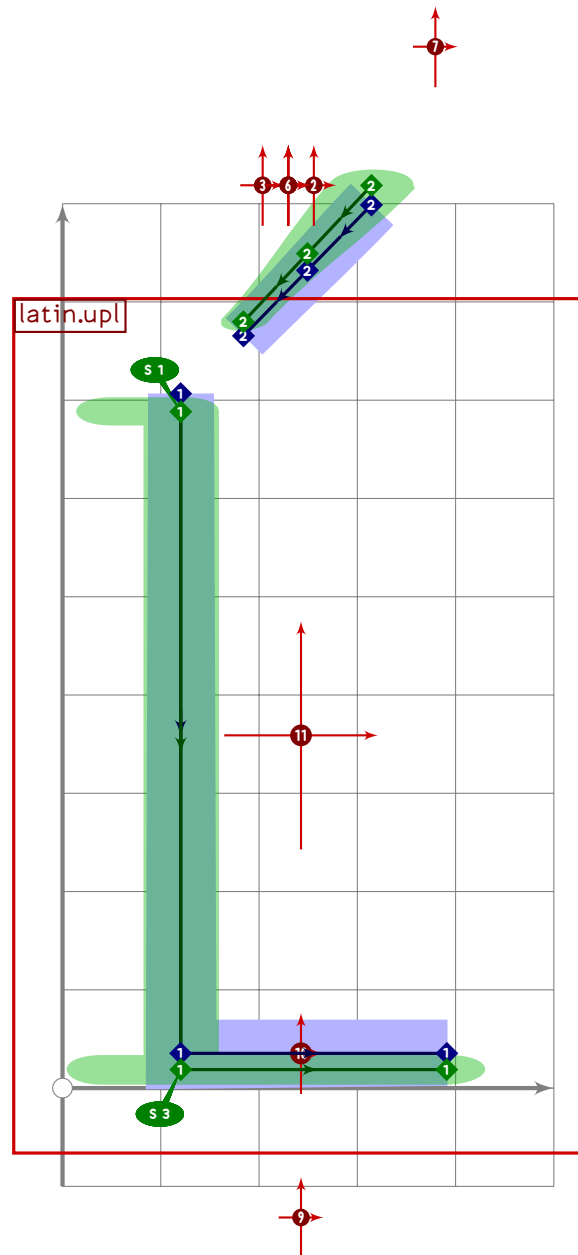
```



```

209 % J with circumflex
210 begint Suglyph("Jcircumflex";52);
211   tsu_accent.apply(tsu_accent.capital(latin.upj))(tsu_accent.circumflex);
212   tsu_render;
213 endtsuglyph;
214

```

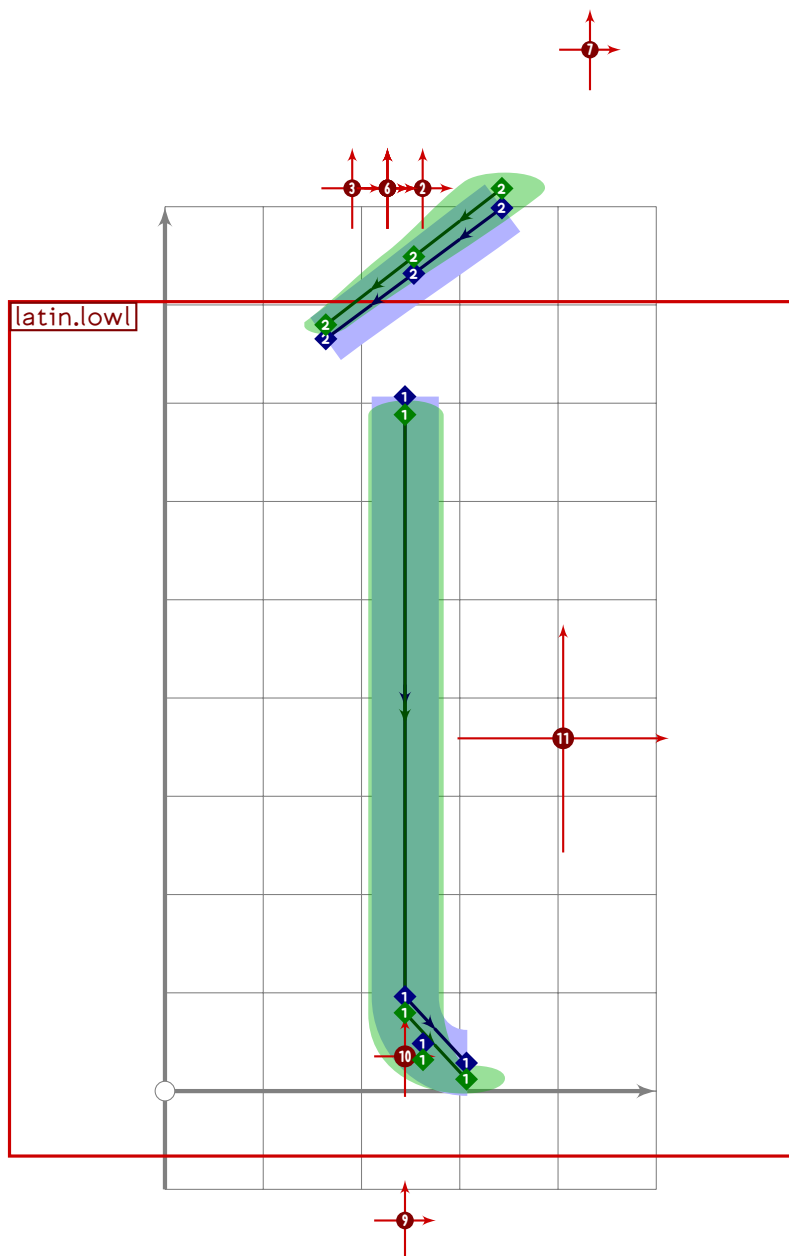



```

221 % L with acute
222 begintsuglyph("Lacute";57);
223   tsu_accent.apply(tsu_accent.capital(latin.upl))(tsu_accent.acute);
224   tsu_render;
225 endtsuglyph;
226

```

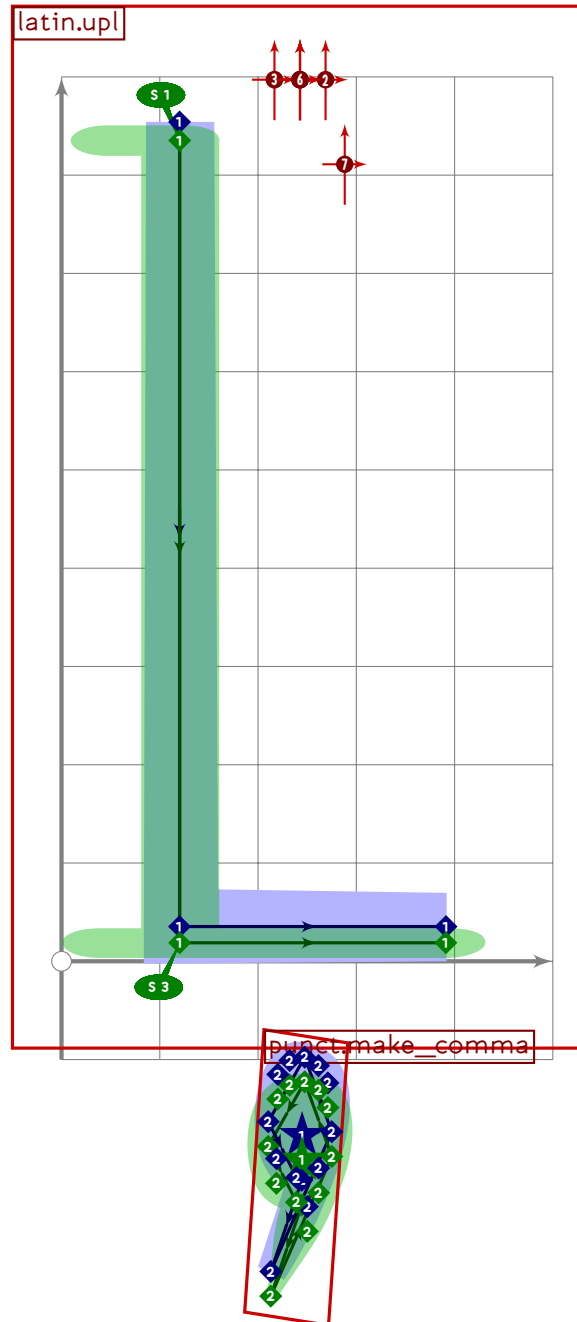
01



```

227 % l with acute
228 begintsuglyph("lacute",58);
229   tsu_accent.apply(tsu_accent.capital(latin.lowl))(tsu_accent.acute);
230   tsu_render;
231 endtsuglyph;
232

```



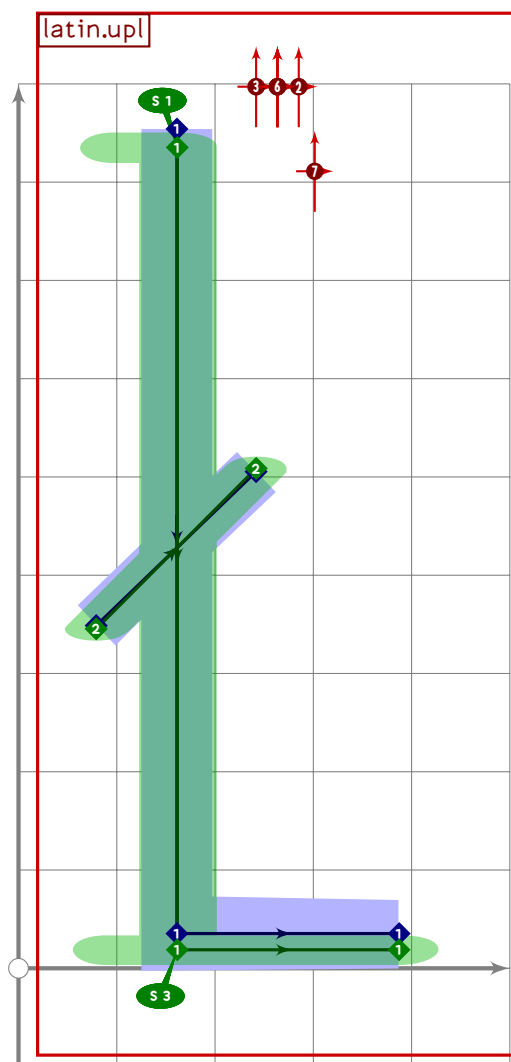
```

233 % L with comma below
234 begint Suglyph("uni013B";59);
235   tsu_accent.apply(latin.upl)(tsu_accent.commabelow);
236   tsu_render;
237 endtsuglyph;
238

```

U+0141
tsuku.Lslash

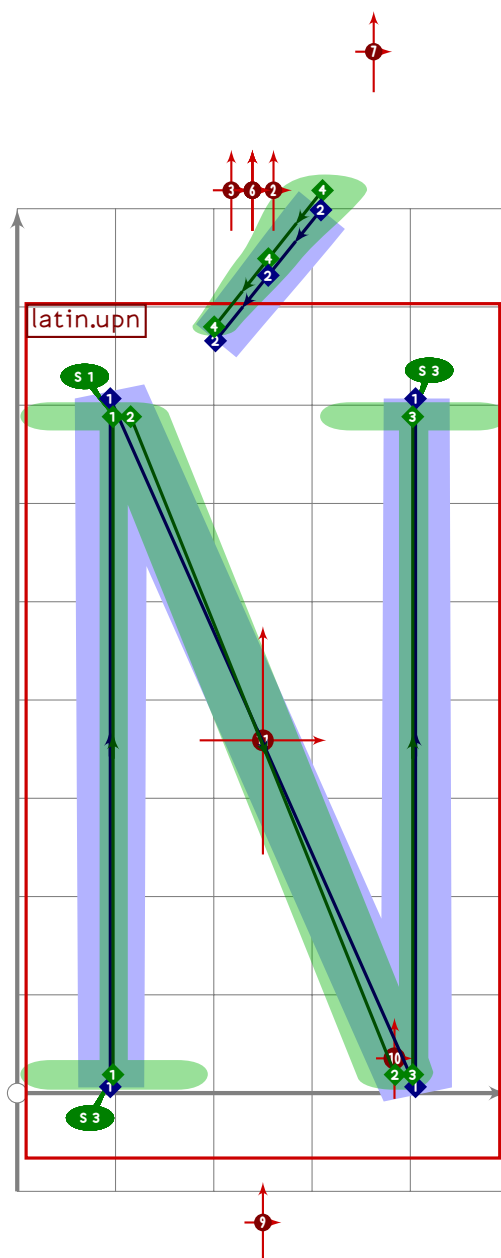
01



```

239 % L with slash
240 begint Suglyph("Lslash",65);
241   latin.upl;
242   push_stroke((160,vmetric(0.40))-(460,vmetric(0.60)),
243     (1.6,1.6)-(1.6,1.6));
244   set_bosize(0,80);
245   tsu_render;
246 endtsuglyph;
247

```

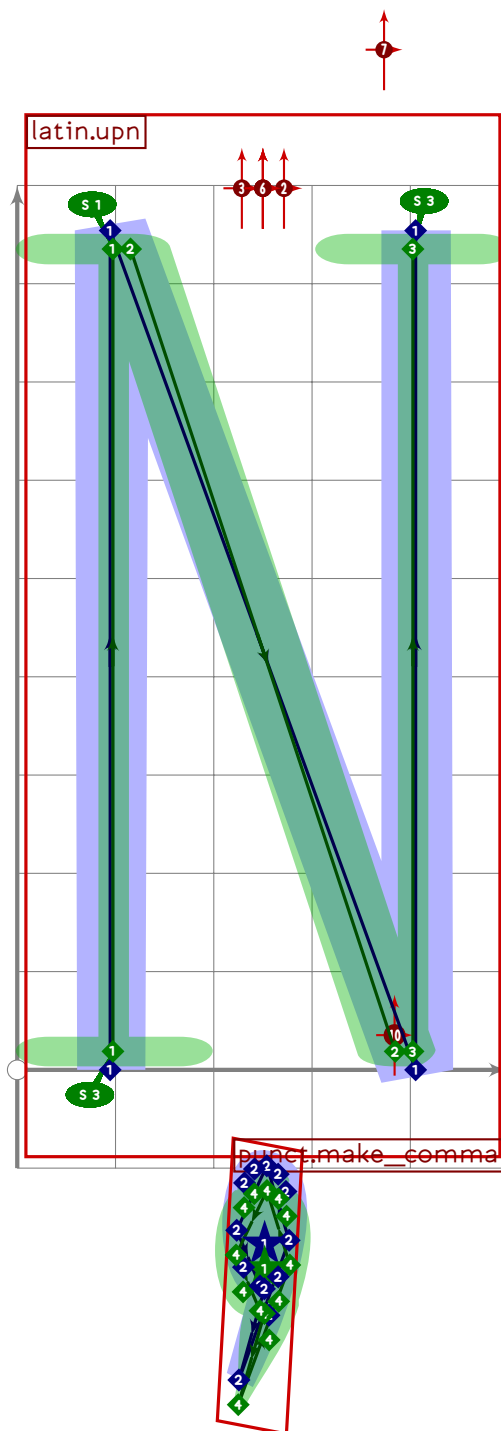



```

248 % N with acute
249 begintsuglyph("Nacute",67);
250   tsu_accent.apply(tsu_accent.capital(latin.upn))(tsu_accent.acute);
251   tsu_render;
252 endtsuglyph;
253

```

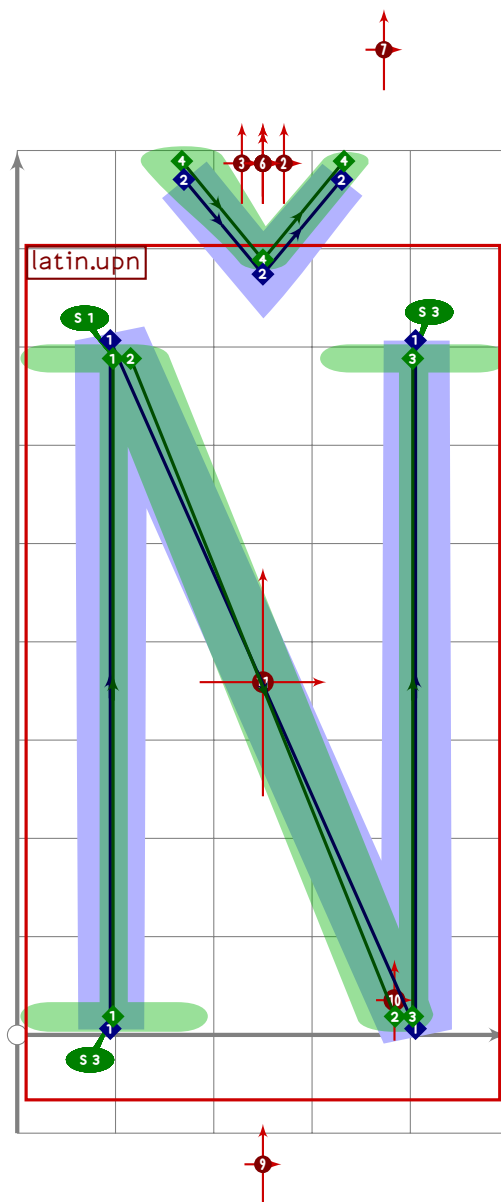
01



```

254 % N with comma below
255 begintsuglyph("uni0145",69);
256 tsu_accent.apply(latin.upn)(tsu_accent.commabelow);
257 tsu_render;
258 endtsuglyph;
259

```

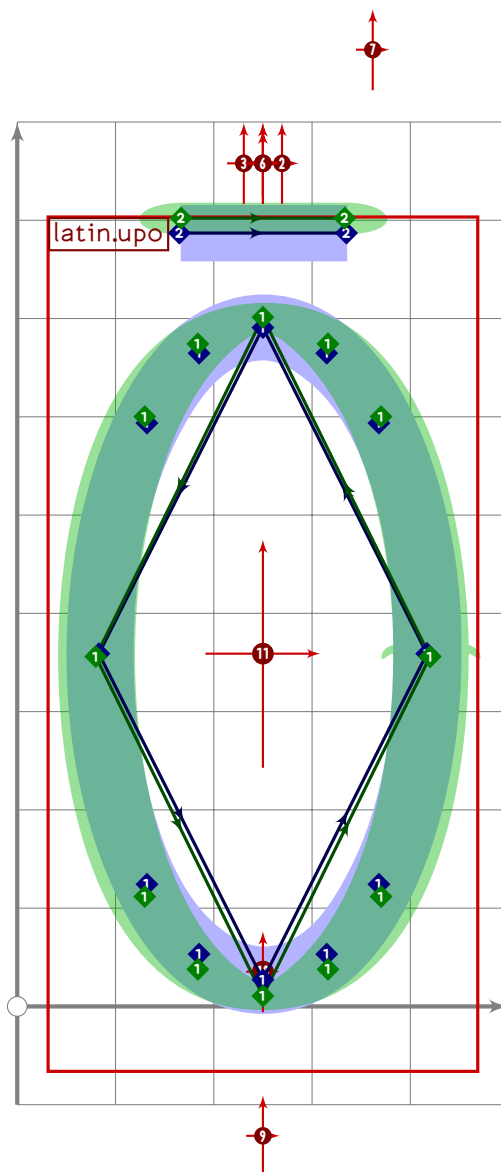


```

260 % N with caron
261 begintsuglyph("Ncaron";71);
262 tsu_accent.apply(tsu_accent.capital(latin.upn))(tsu_accent.caron);
263 tsu_render;
264 endtsuglyph;
265
266 % uppercase Eng
267 begintsuglyph("Eng";74);
268 latin.upeng;
269 tsu_render;
270 endtsuglyph;
271

```

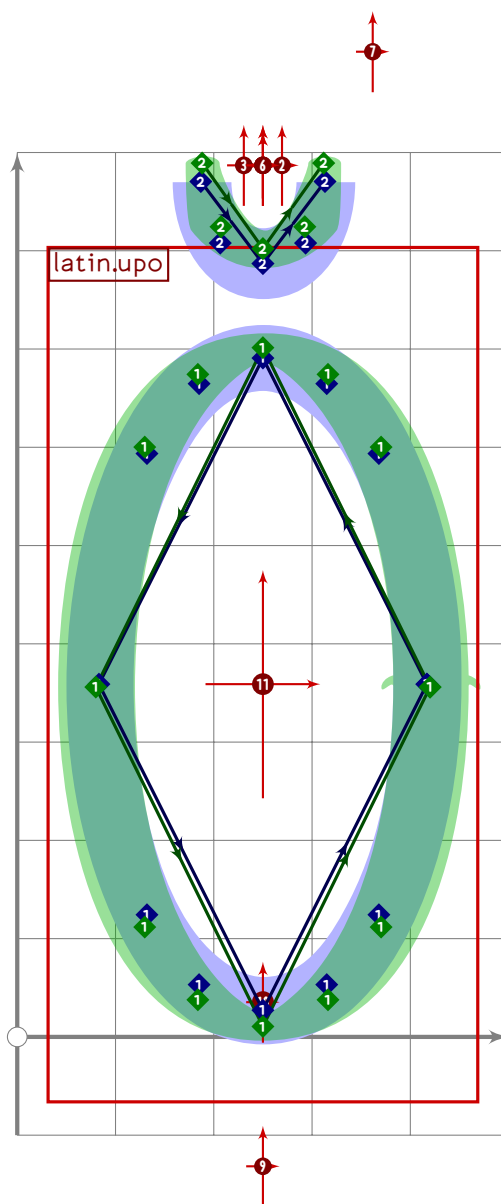
[see page 272]



```

272 % O with macron
273 beginsuglyph("Omacron";76);
274   tsu_accent.apply(tsu_accent.capital(latin.upo))(tsu_accent.macron);
275   tsu_render;
276 endsuglyph;
277

```

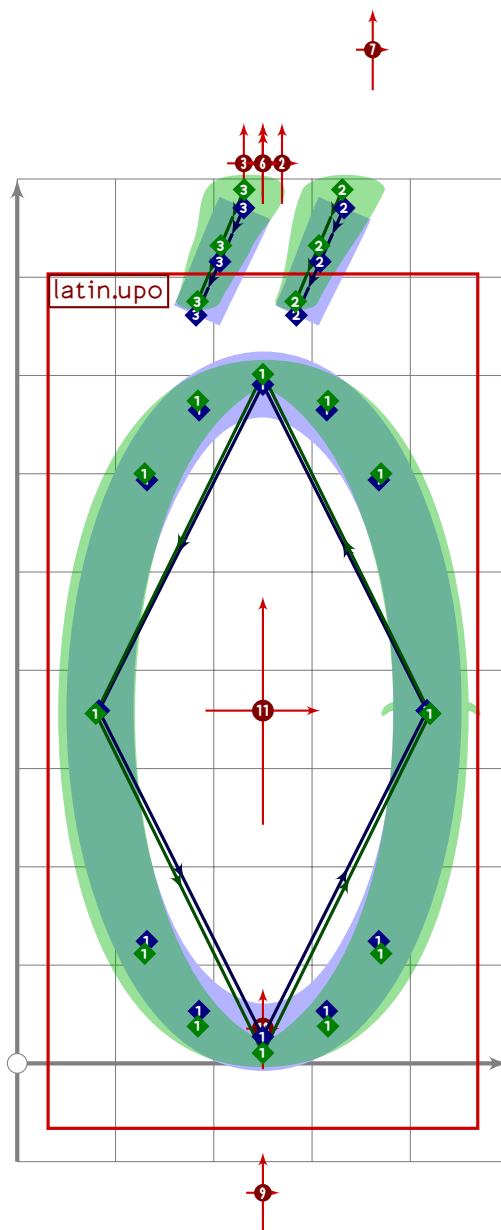


```

278 % O with breve
279 begintsuglyph("Obreve",78);
280   tsu_accent.apply(tsu_accent.capital(latin.upo))(tsu_accent.breve);
281   tsu_render;
282 endtsuglyph;
283

```

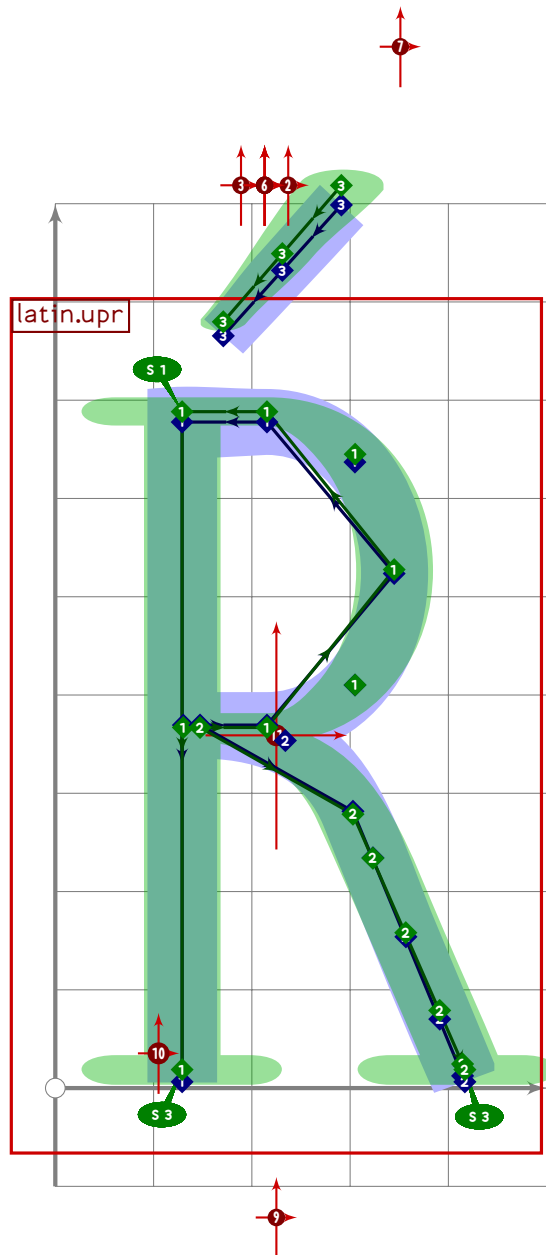
01



```

284 % O with Hunarian umlaut
285 begintsuglyph("Öhungarumlaut";80);
286 tsu_accent.apply(tsu_accent.capital(latin.upo))(tsu_accent.hungarian_umlaut);
287 tsu_render;
288 endtsuglyph;
289

```

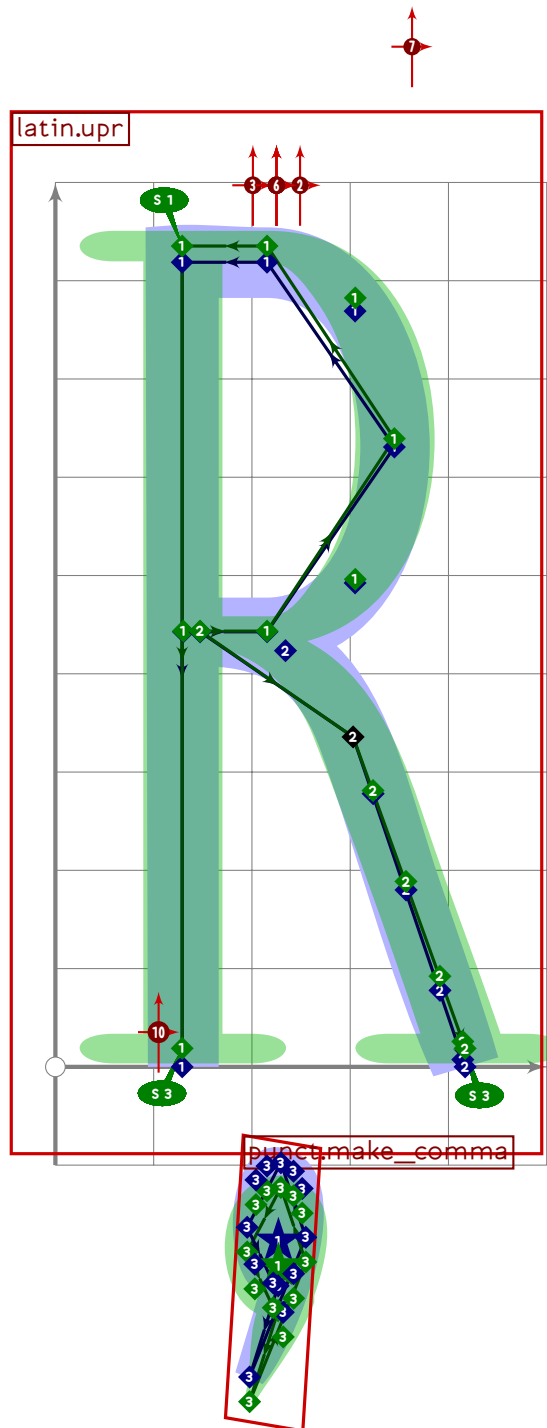


```

290 % R with acute
291 begintsuglyph("Racute";84);
292   tsu_accent.apply(tsu_accent.capital(latin.upr))(tsu_accent.acute);
293   tsu_render;
294 endtsuglyph;
295

```

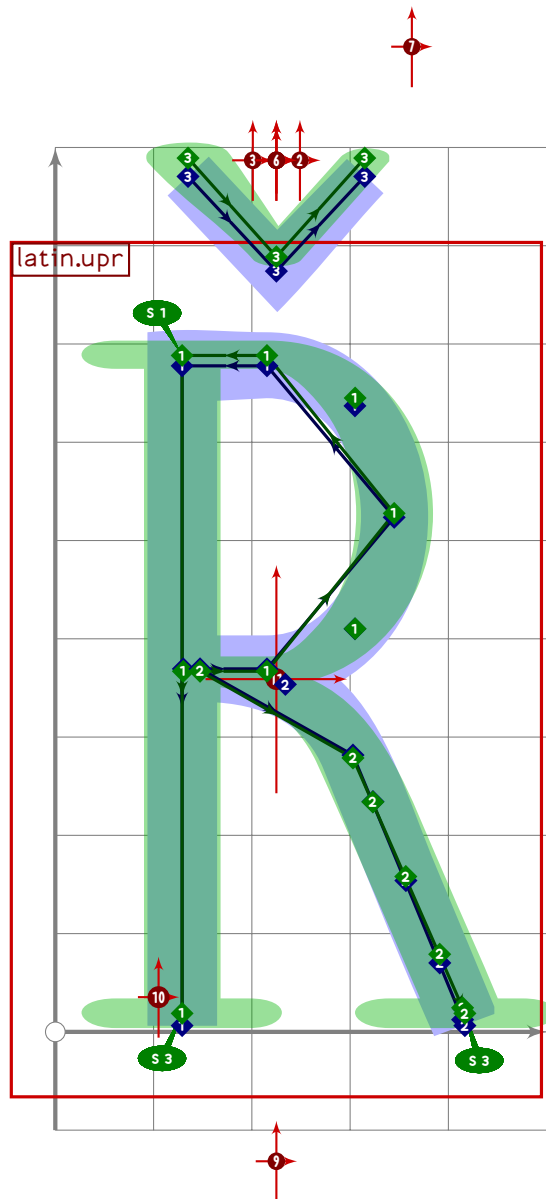
01



```

296 % R with comma below
297 begintsuglyph("uni0156",86);
298   tsu_accent.apply(latin.upr)(tsu_accent.commabelow);
299   tsu_render;
300 endtsuglyph;
301

```

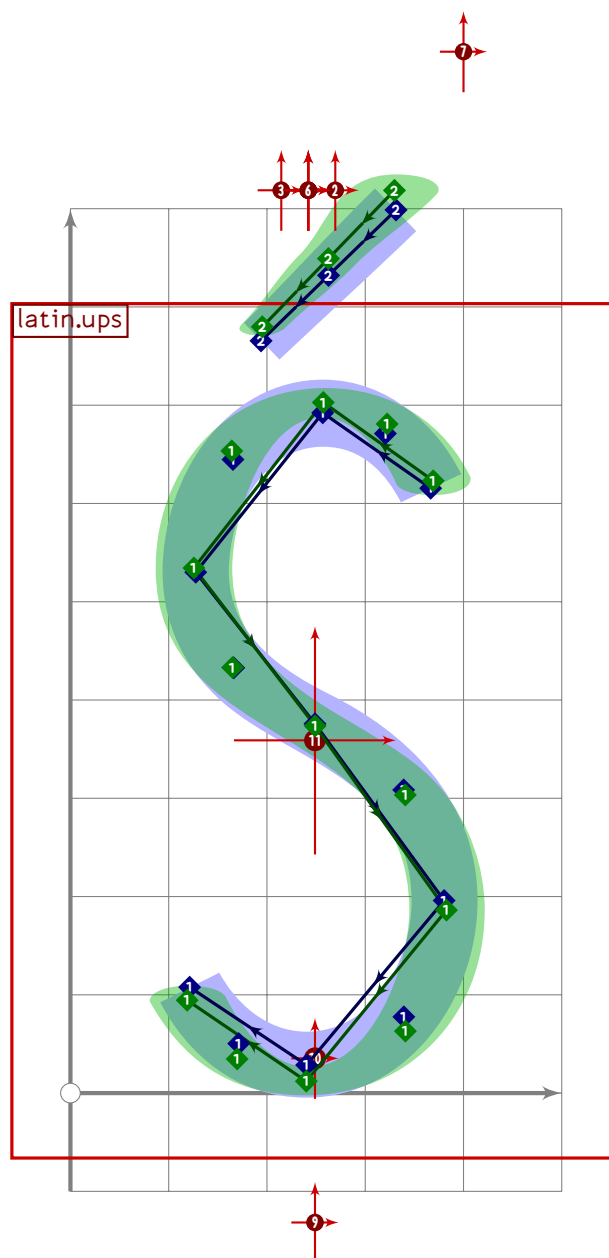



```

302 % R with caron
303 begintsuglyph("Rcaron";88);
304   tsu_accent.apply(tsu_accent.capital(latin.upr))(tsu_accent.caron);
305   tsu_render;
306 endtsuglyph;
307

```

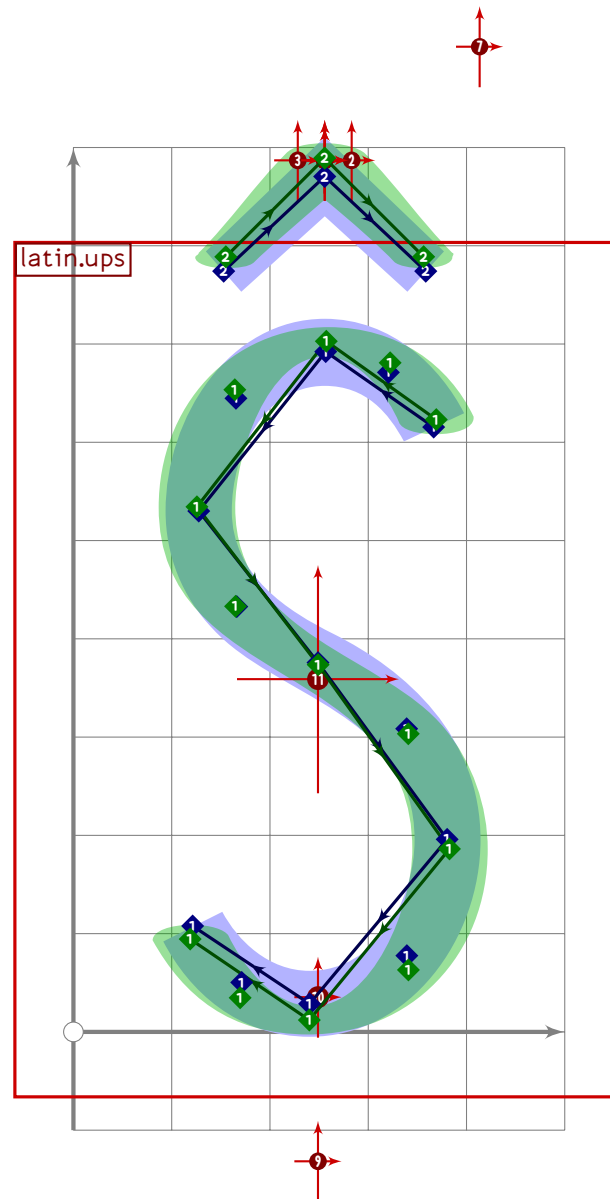
01



```

308 % S with acute
309 begint Suglyph("Sacute";90);
310   tsu_accent.apply(tsu_accent.capital(latin.ups))(tsu_accent.acute);
311   tsu_render;
312 endtsuglyph;
313

```

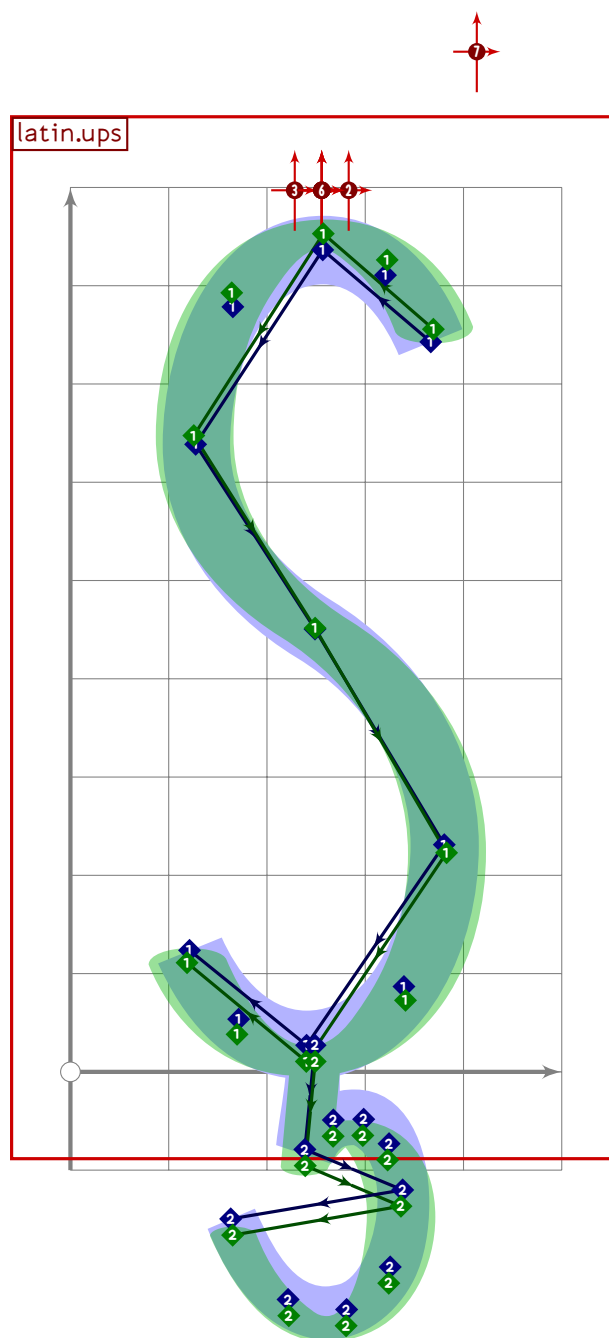


```

314 % S with circumflex
315 begint Suglyph("Scircumflex";92);
316   tsu_accent.apply(tsu_accent.capital(latin.ups))(tsu_accent.circumflex);
317   tsu_render;
318 endtsuglyph;
319

```

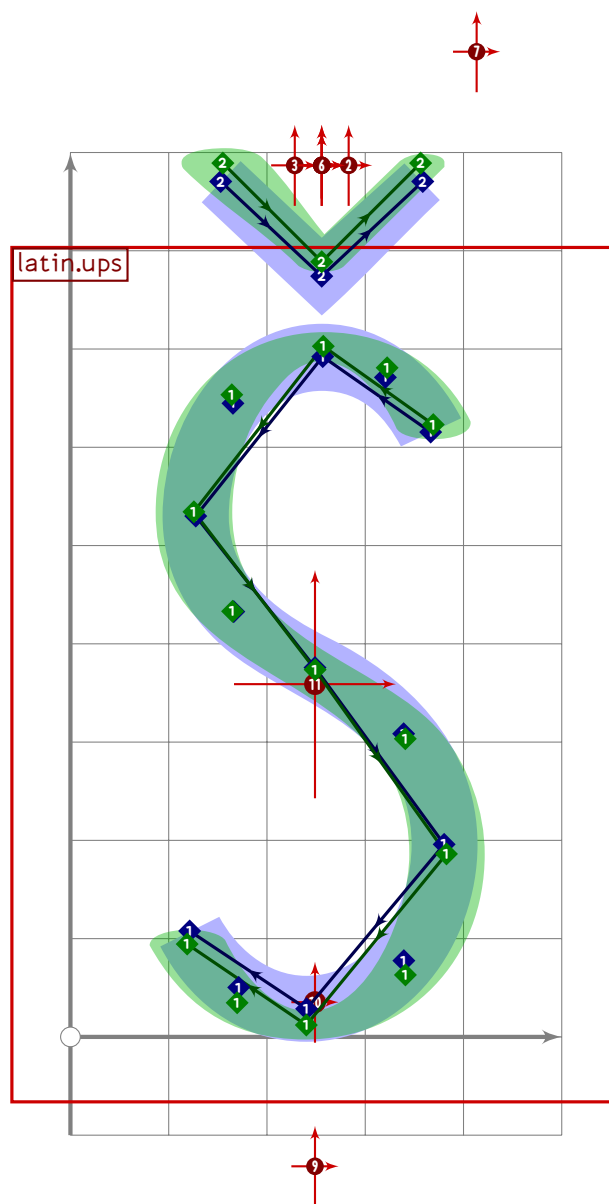
01



```

320 % S with cedilla
321 begintsuglyph("Scedilla";94);
322   tsu_accent.apply(latin.ups)(tsu_accent.cedilla);
323   tsu_render;
324 endtsuglyph;
325

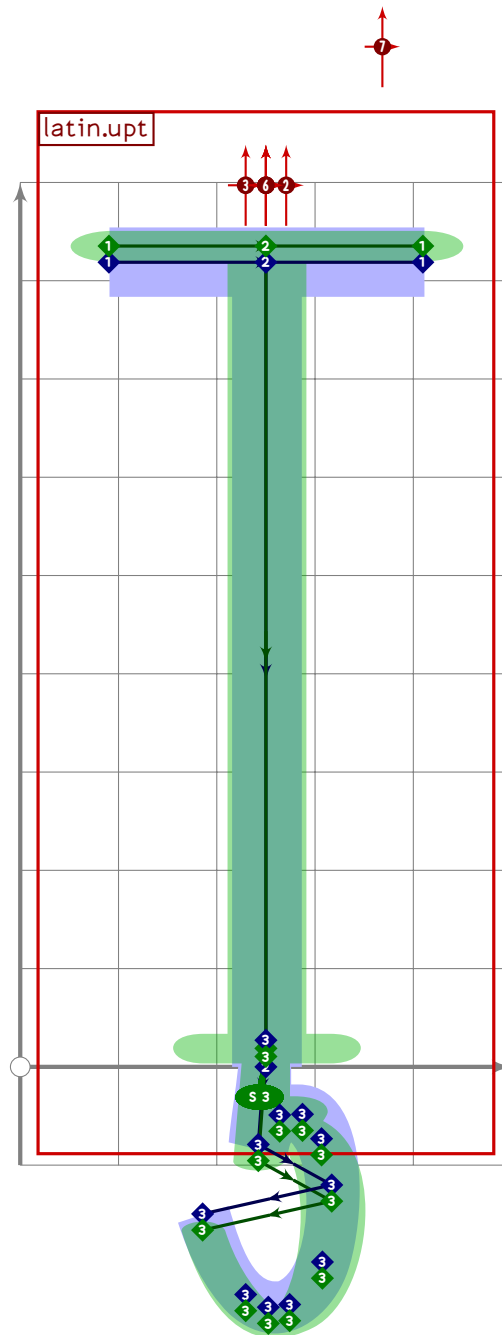
```



```

326 % S with caron
327 begintsuglyph("Scaron",96);
328   tsu_accent.apply(tsu_accent.capital(latin.ups))(tsu_accent.caron);
329   tsu_render;
330 endtsuglyph;
331

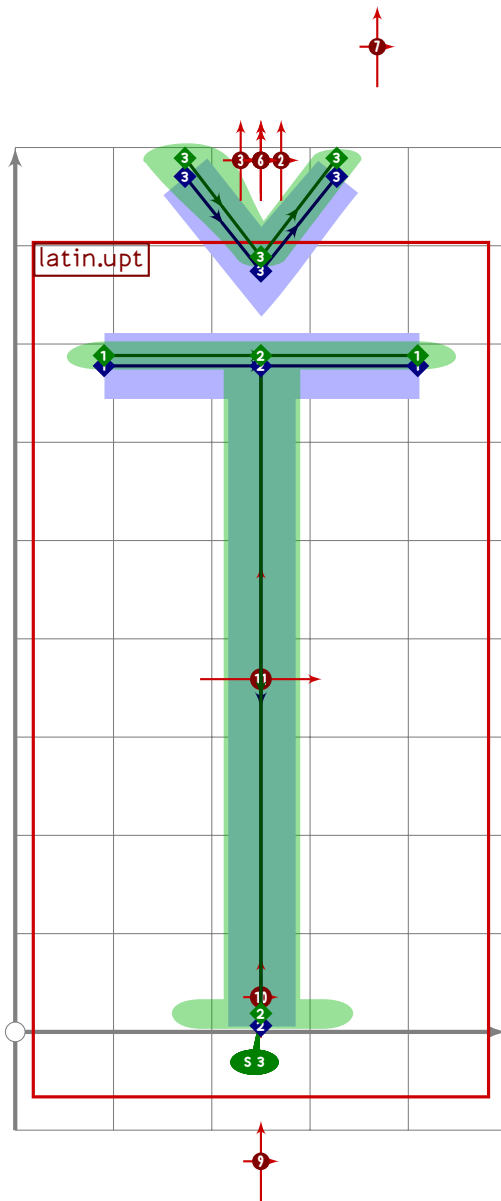
```



```

332 % T with cedilla [sic]
333 begint Suglyph("uni0162";98);
334   tsu_accent.apply(latin.upt)(tsu_accent.cedilla);
335   tsu_render;
336 endtsuglyph;
337

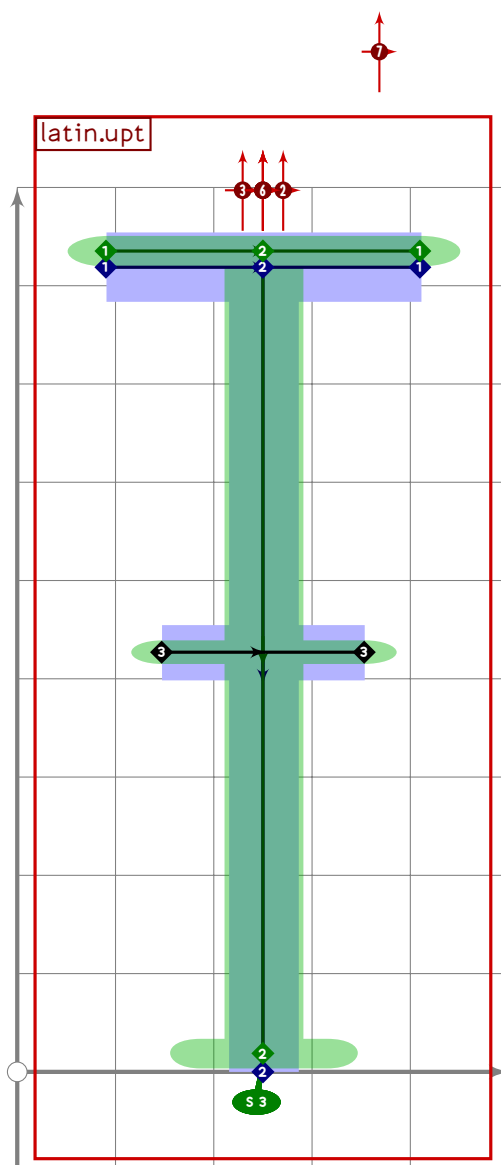
```



```

338 % T with caron
339 begintsuglyph("Tcaron",100);
340   tsu_accent.apply(tsu_accent.capital(latin.upt))(tsu_accent.caron);
341   tsu_render;
342 endtsuglyph;
343

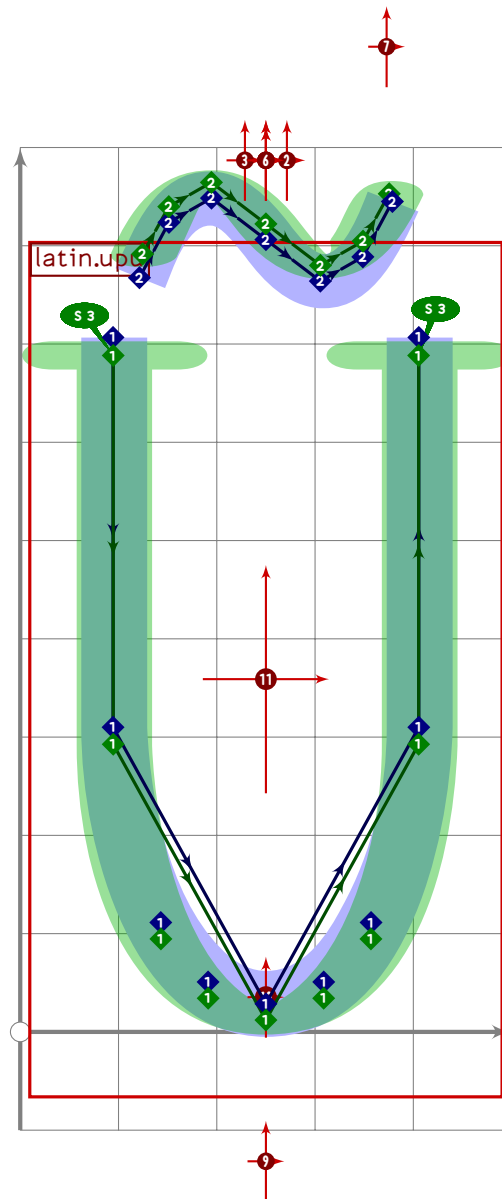
```



```

344 % T with bar
345 begintsuglyph("Tbar",102);
346 latin.upt;
347 push_stroke(((300,ymetric(0.5))-(700,ymetric(0.5)),
348   (1.6,1.6)-(1.6,1.6));
349 set_bosize(0,80);
350 tsu_render;
351 endsuglyph;
352

```

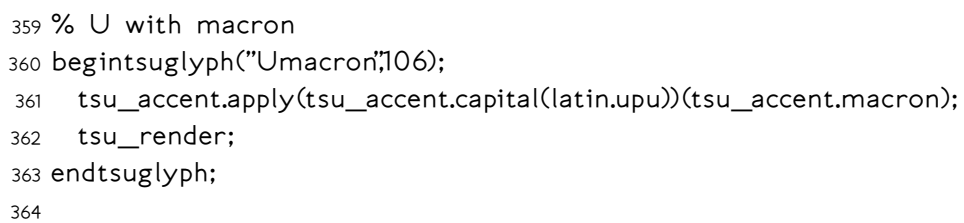



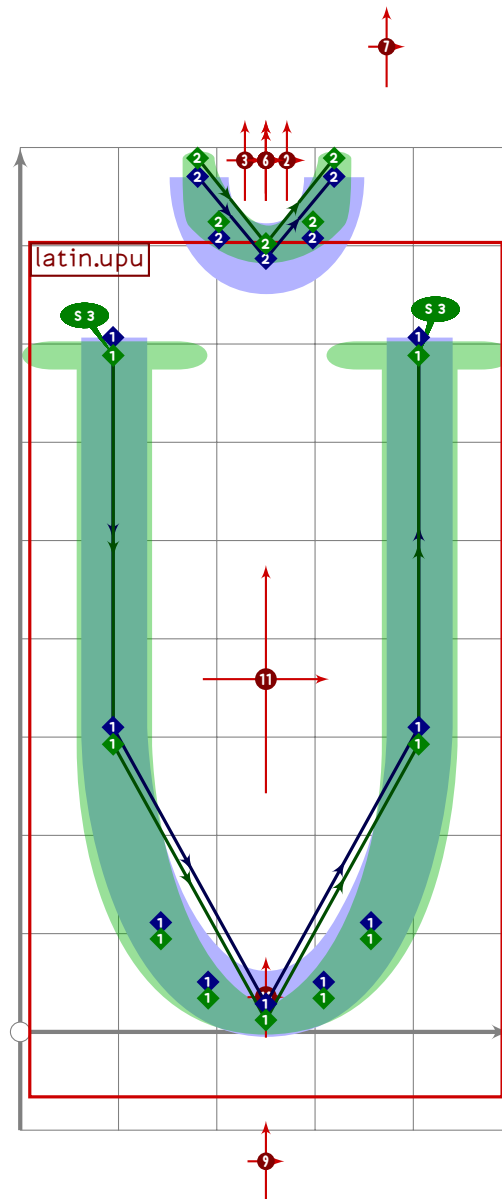
```

353 % U with tilde
354 begintsuglyph("Utilde",104);
355     tsu_accent.apply(tsu_accent.capital(latin.upu))(tsu_accent.tilde);
356     tsu_render;
357 endtsuglyph;
358

```

01

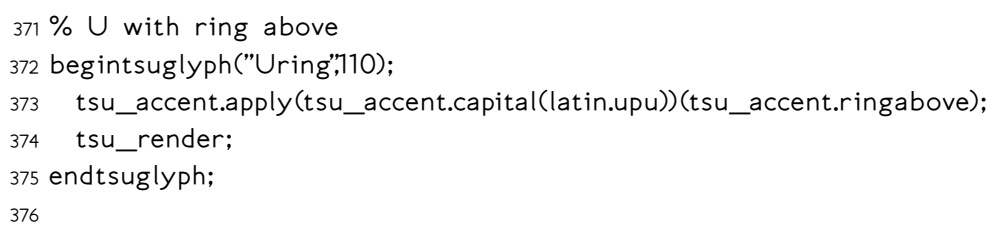


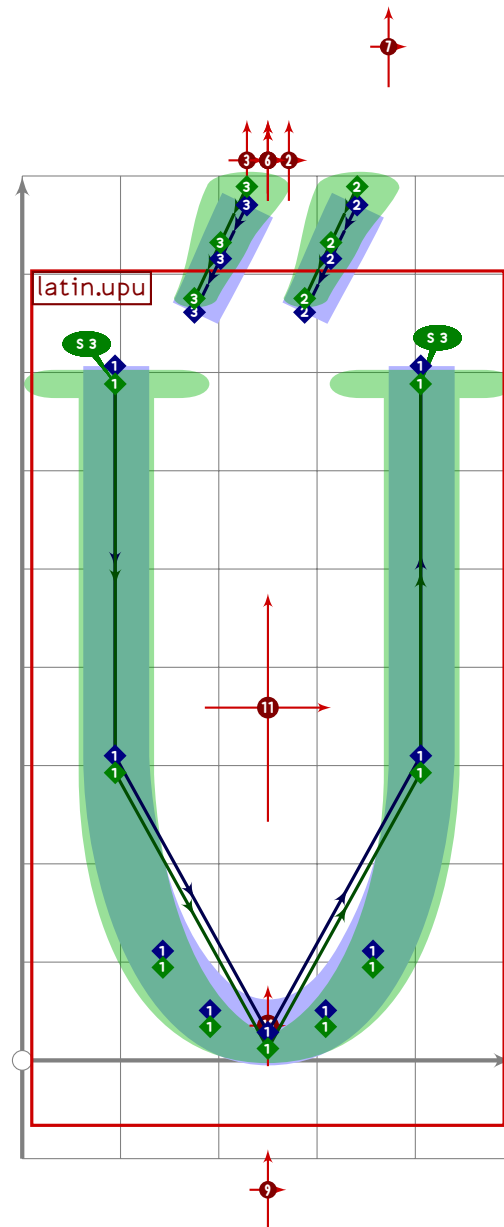


```

365 % U with breve
366 begintsuglyph("Ubreve",108);
367   tsu_accent.apply(tsu_accent.capital(latin.upu))(tsu_accent.breve);
368   tsu_render;
369 endtsuglyph;
370

```





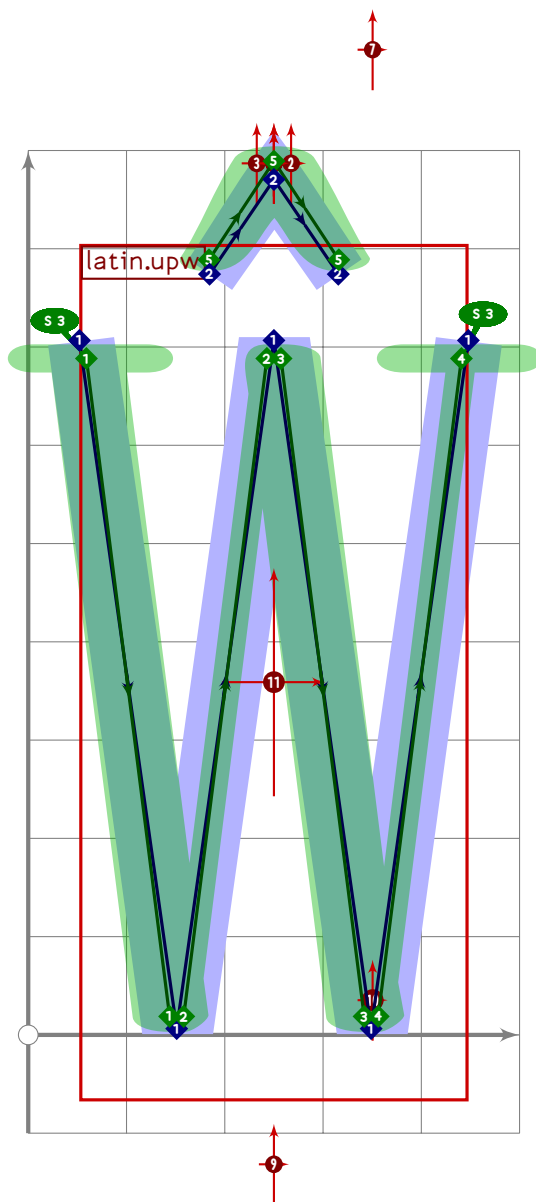
```

377 % U with Hungarian umlaut
378 begintsuglyph("Uhungarumlaut",112);
379 tsu_accent.apply(tsu_accent.capital(latin.upu))(tsu_accent.hungarian_umlaut);
380 tsu_render;
381 endtsuglyph;
382
383 % U with ogonek
384 begintsuglyph("Uogonek",114);
385 latin.upuogonek;
386 tsu_render;
387 endtsuglyph;
388

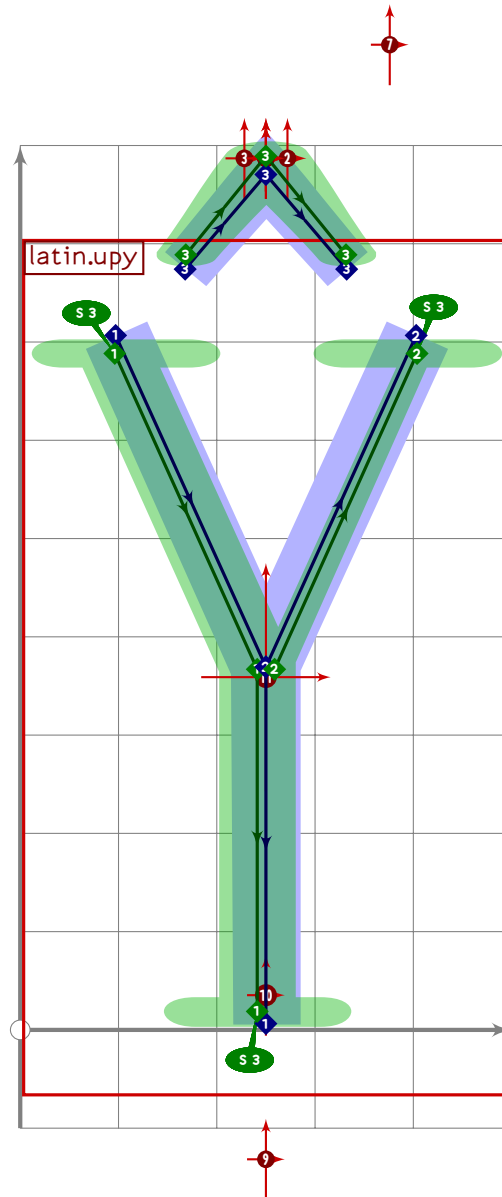
```

[see page 354]

01



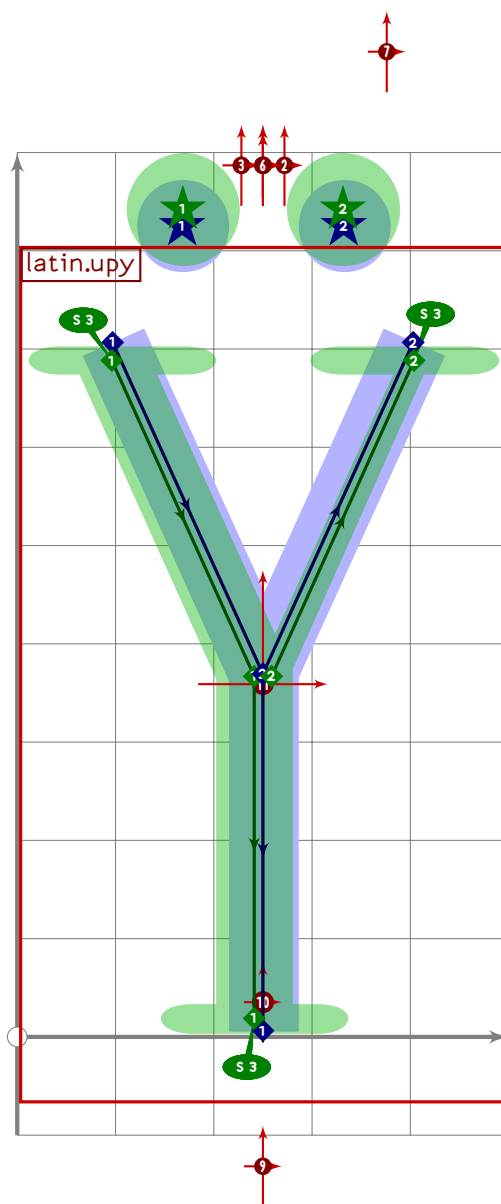
1020



```

395 % Y with circumflex
396 beginsuglyph("Ycircumflex";118);
397   tsu_accent.apply(tsu_accent.capital(latin.upy))(tsu_accent.circumflex);
398   tsu_render;
399 endsuglyph;
400

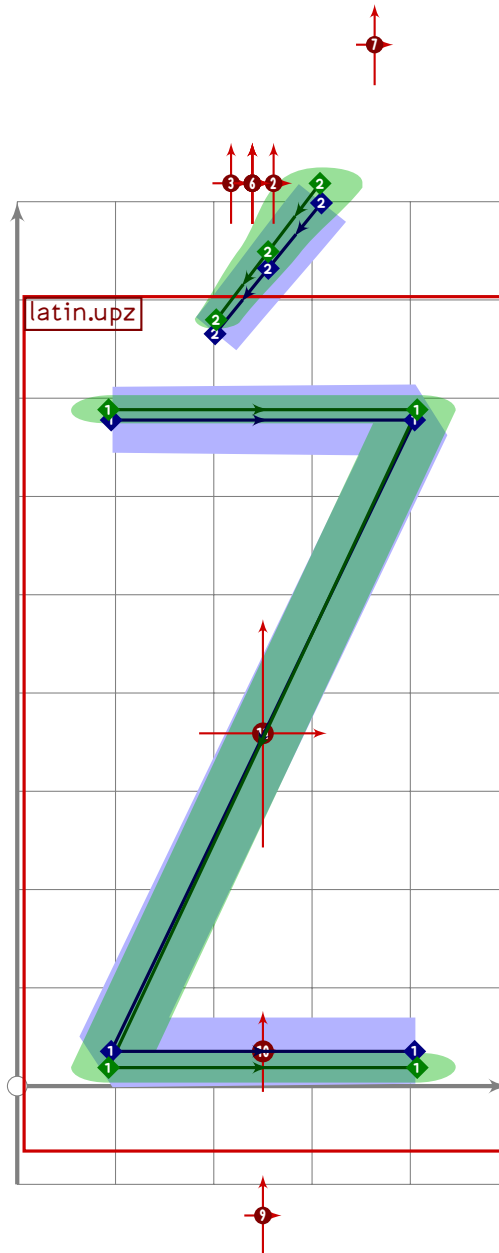
```



```

401 % Y with umlaut/dieresis
402 begintsuglyph("Ydieresis",120);
403   tsu_accent.apply(tsu_accent.capital(latin.upy))(tsu_accent.umlaut);
404   tsu_render;
405 endtsuglyph;
406

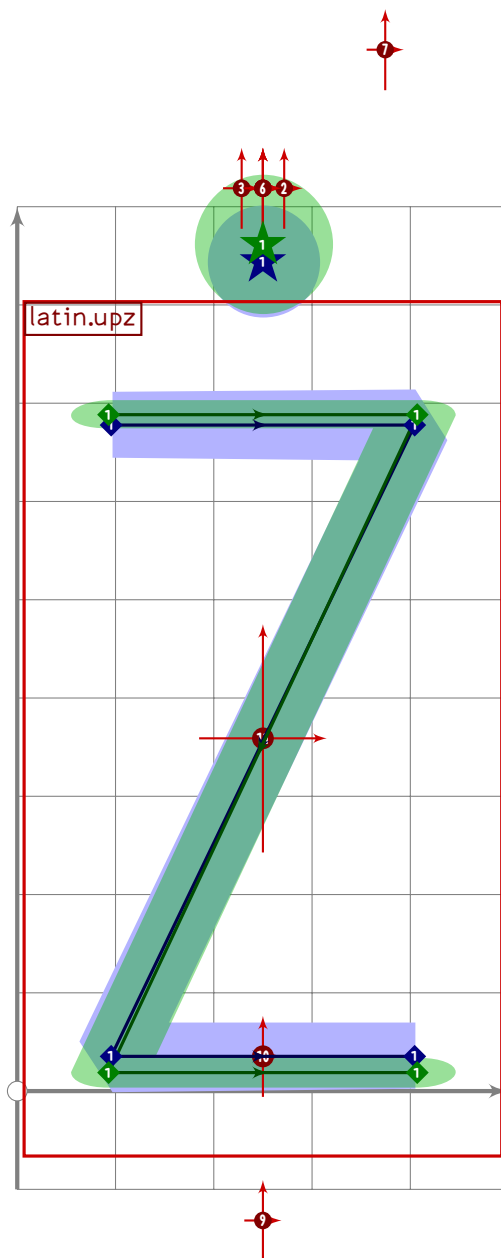
```

```

407 % Z with acute
408 begintsuglyph("Zacute";121);
409   tsu_accent.apply(tsu_accent.capital(latin.upz))(tsu_accent.acute);
410   tsu_render;
411 endtsuglyph;
412

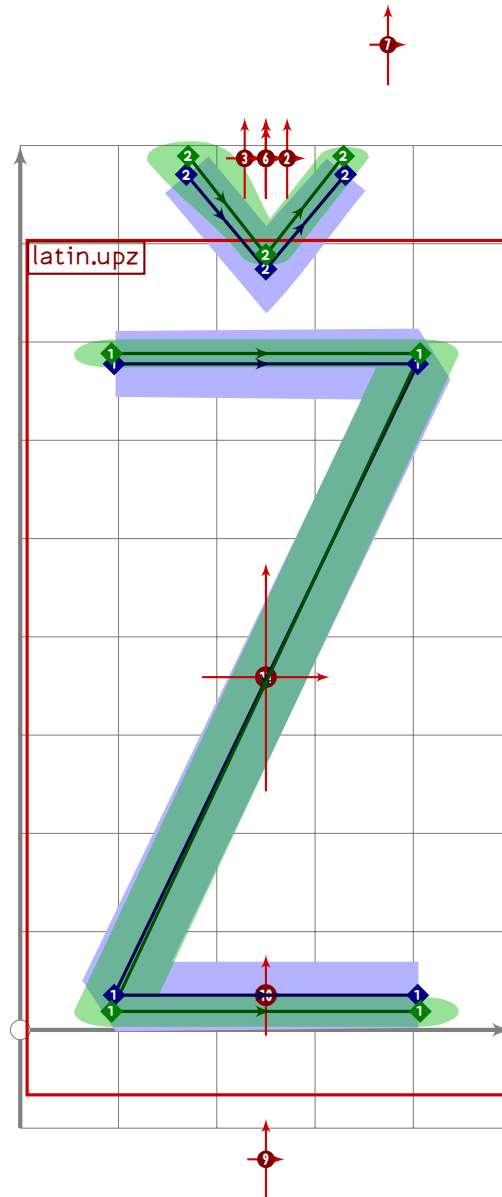
```



```

413 % Z with dot
414 begintsuglyph("Zdotaccent",123);
415   tsu_accent.apply(tsu_accent.capital(latin.upz))(tsu_accent.dotabove);
416   tsu_render;
417 endtsuglyph;
418

```



```

419 % Z with caron
420 begintsuglyph("Zcaron",125);
421   tsu_accent.apply(tsu_accent.capital(latin.upz))(tsu_accent.caron);
422   tsu_render;
423 endtsuglyph;
424
425
426

```

Latin Extended A Lowercase

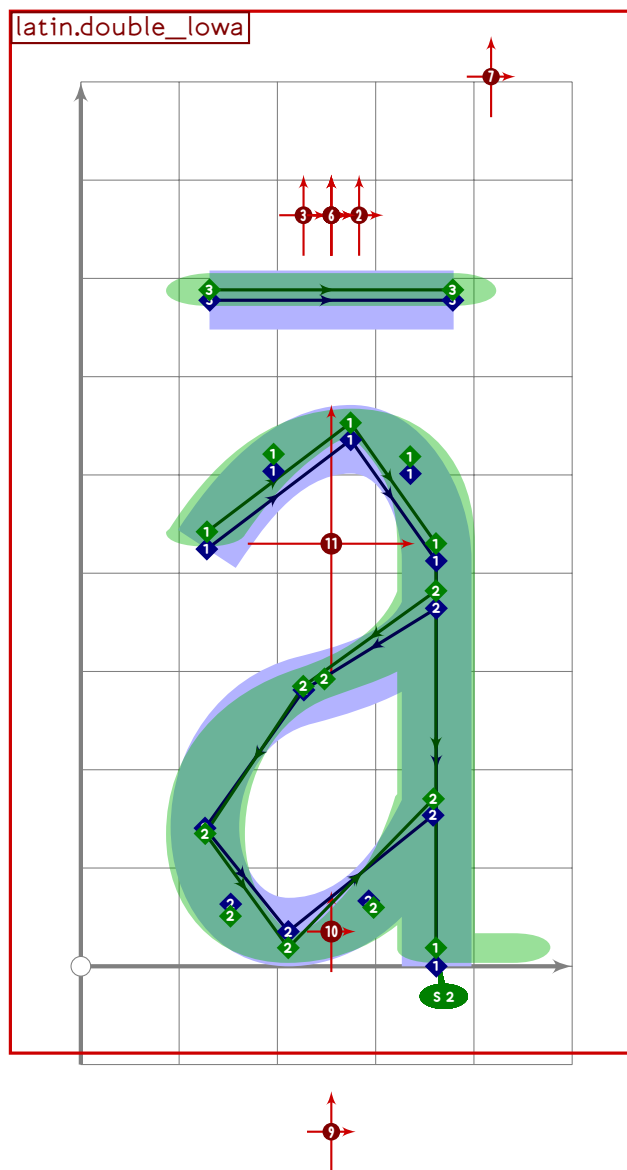
```

427 % LATIN EXTENDED A LOWERCASE
428
429 tsu_accent.low_default_anchors;
430

```

U+0101
tsuku.amacron

01



```

431 % a with macron
432 begintsuglyph("amacron",1);
433   tsu_accent.apply(latin.low_a)(tsu_accent.macron);
434   tsu_render;
435 endsuglyph;
436

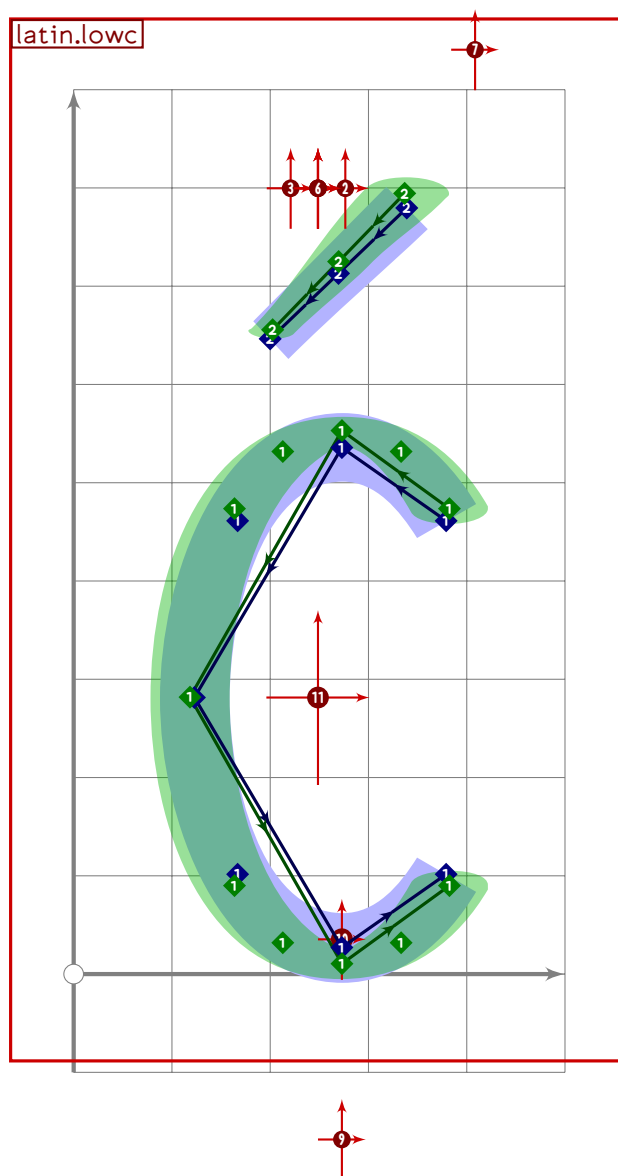
```



[see page 356]

U+0107
tsuku.cacute

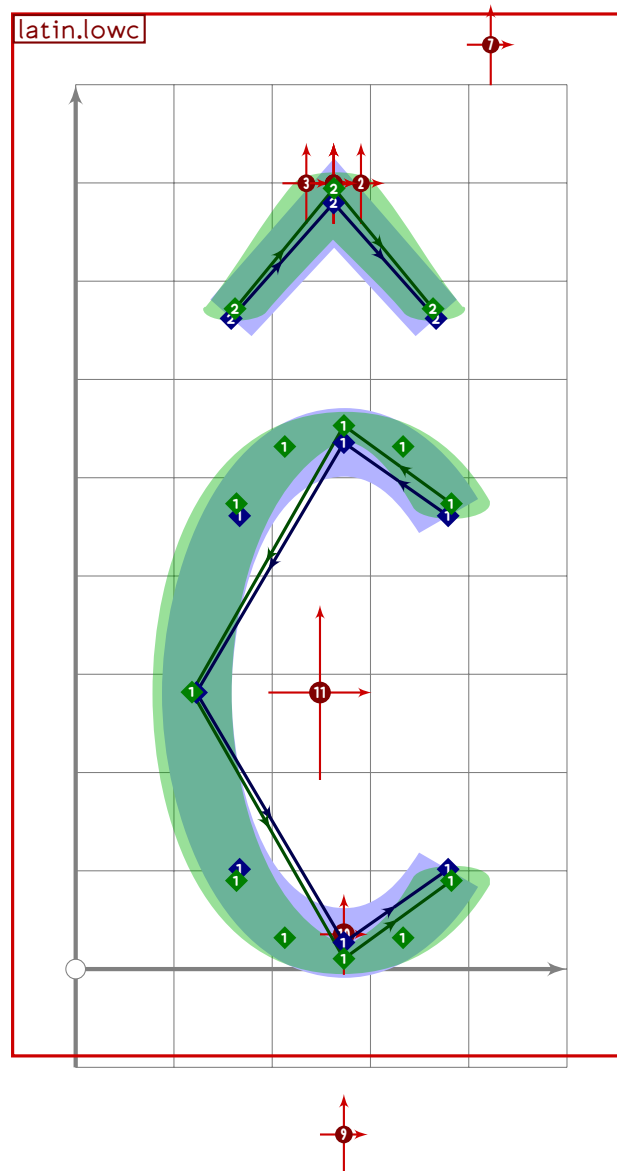
01



```

449 % c with acute
450 begint Suglyph("cacute",7);
451   tsu_accent.apply(latin.lowc)(tsu_accent.acute);
452   tsu_render;
453 endtsuglyph;
454

```



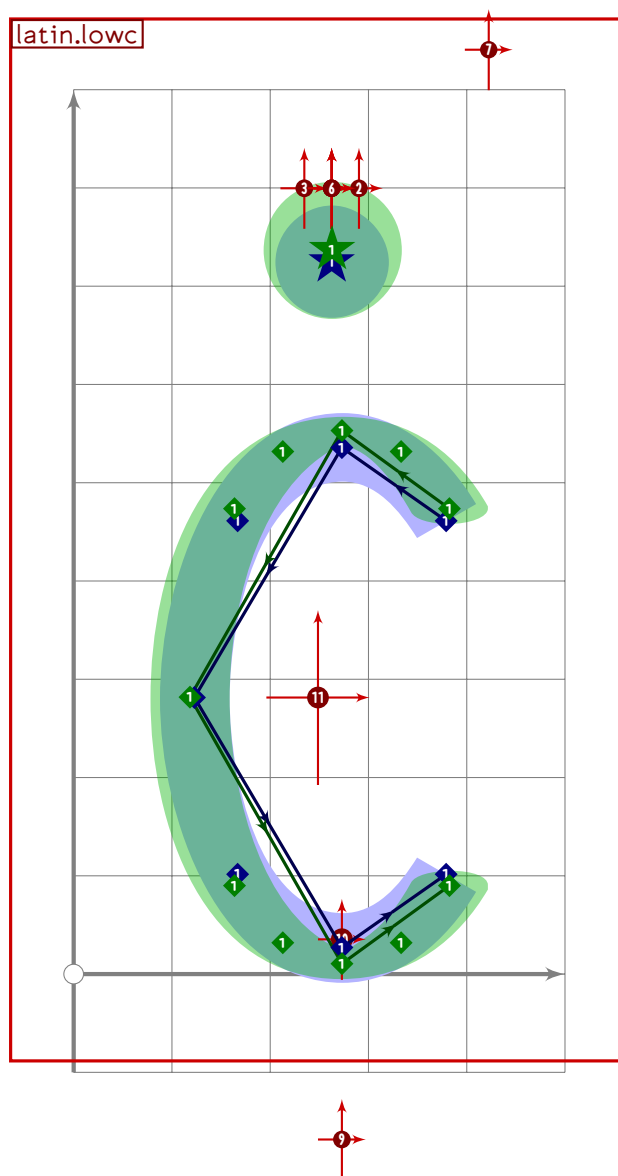
```

455 % c with circumflex
456 begint Suglyph("ccircumflex";9);
457   tsu_accent.apply(latin.lowc)(tsu_accent.circumflex);
458   tsu_render;
459 endtsuglyph;
460

```

U+010B
tsuku.cdottaccent

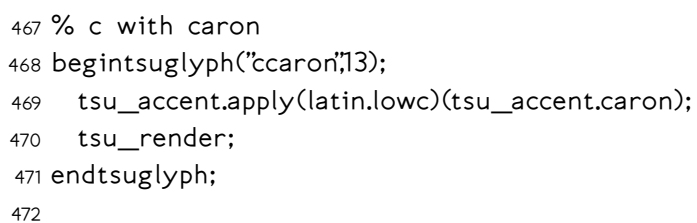
01



```

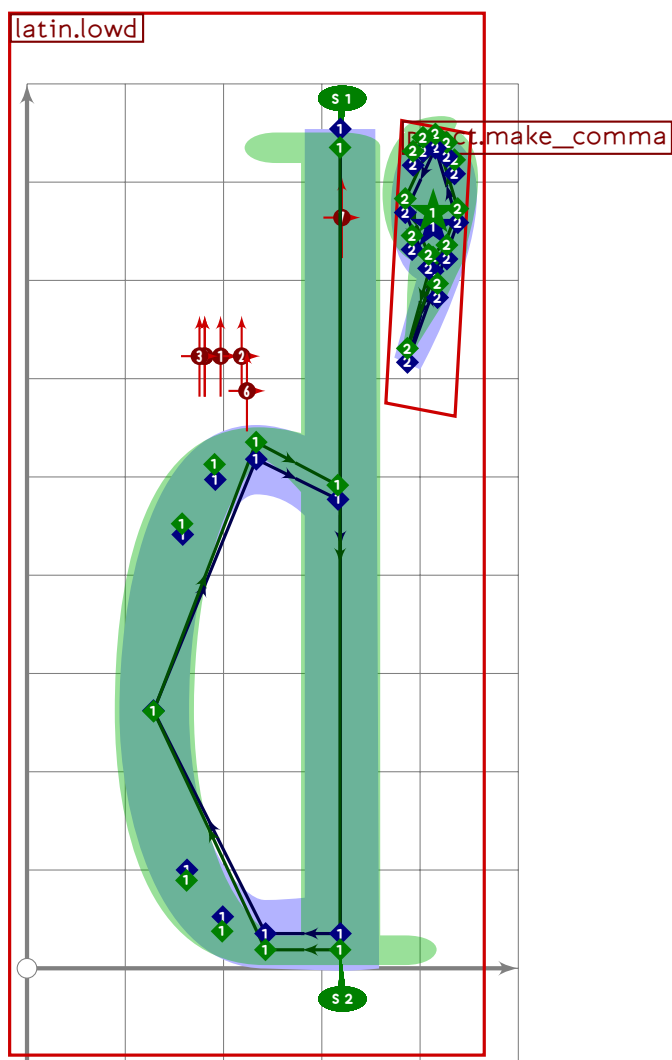
461 % c with dot above
462 begint Suglyph("cdottaccent";11);
463   tsu_accent.apply(latin.lowc)(tsu_accent.dotabove);
464   tsu_render;
465 endtsuglyph;
466

```

U+010F
tsuku.dcaron

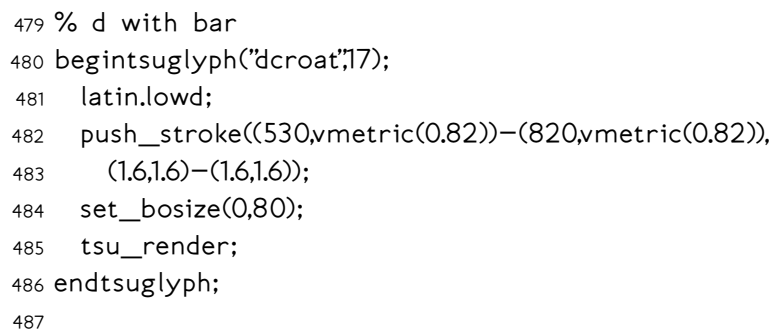
01



```

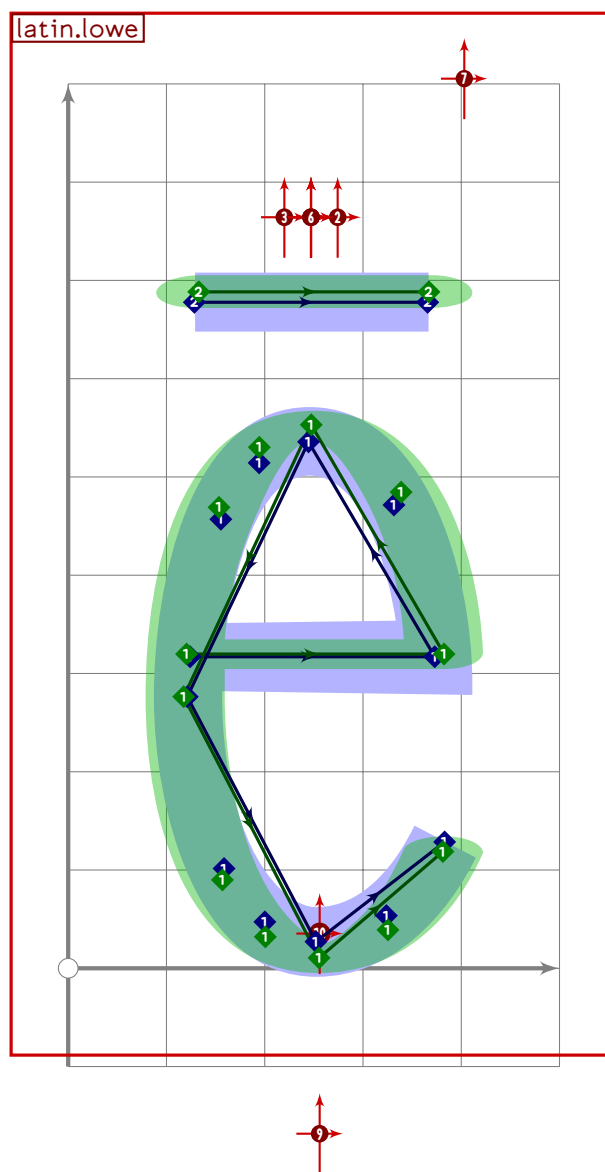
473 % d with caron apostrophe
474 begintsuglyph("dcaron",15);
475   tsu_accent.apply(latin.lowd)(tsu_accent.caron_comma);
476   tsu_render;
477 endtsuglyph;
478

```

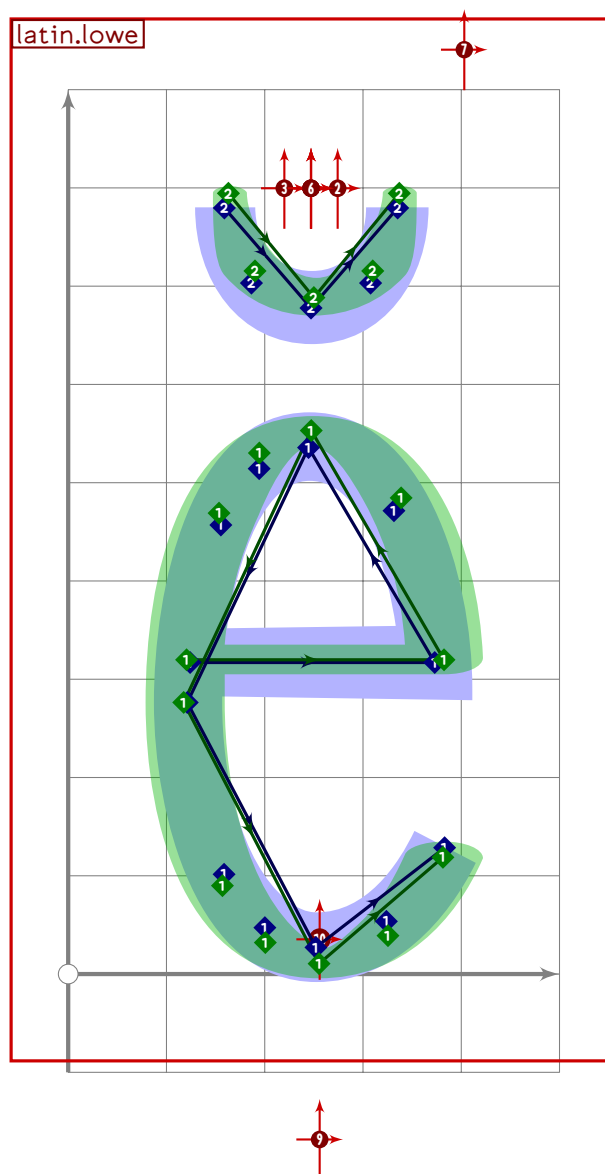


U+0113
tsuku.Emacron

01



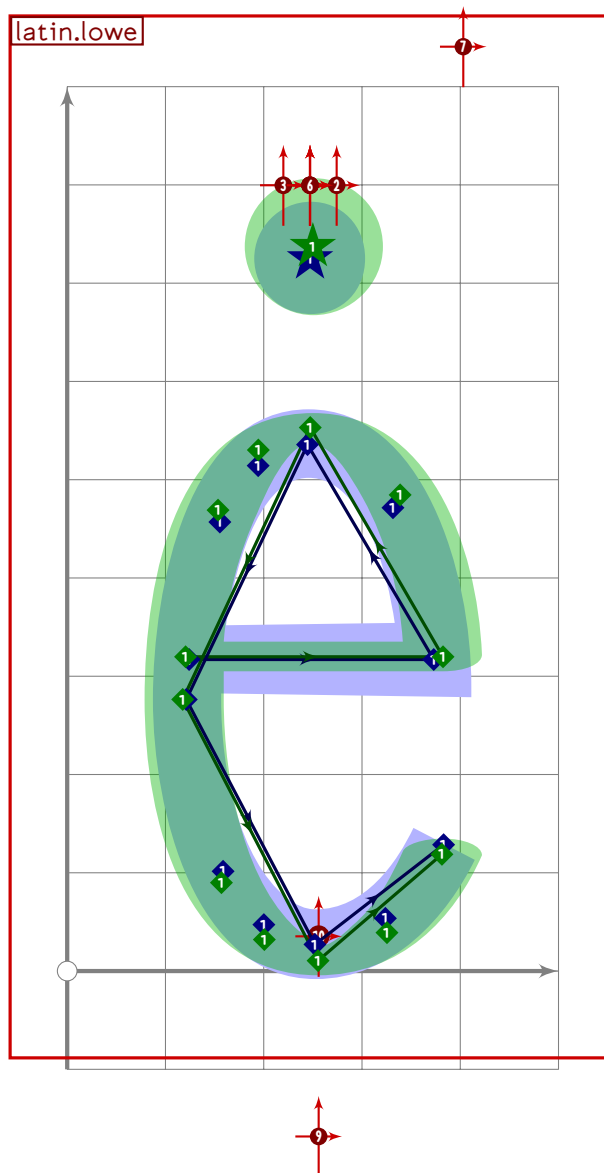
```
488 % e with macron
489 begintsuglyph("emacron",19);
490 tsu_accent.apply(latin.lowe)(tsu_accent.macron);
491 tsu_render;
492 endtsuglyph;
493
```



```

494 % e with breve
495 begintsuglyph("ebreve";21);
496   tsu_accent.apply(latin.lowe)(tsu_accent.breve);
497   tsu_render;
498 endtsuglyph;
499

```

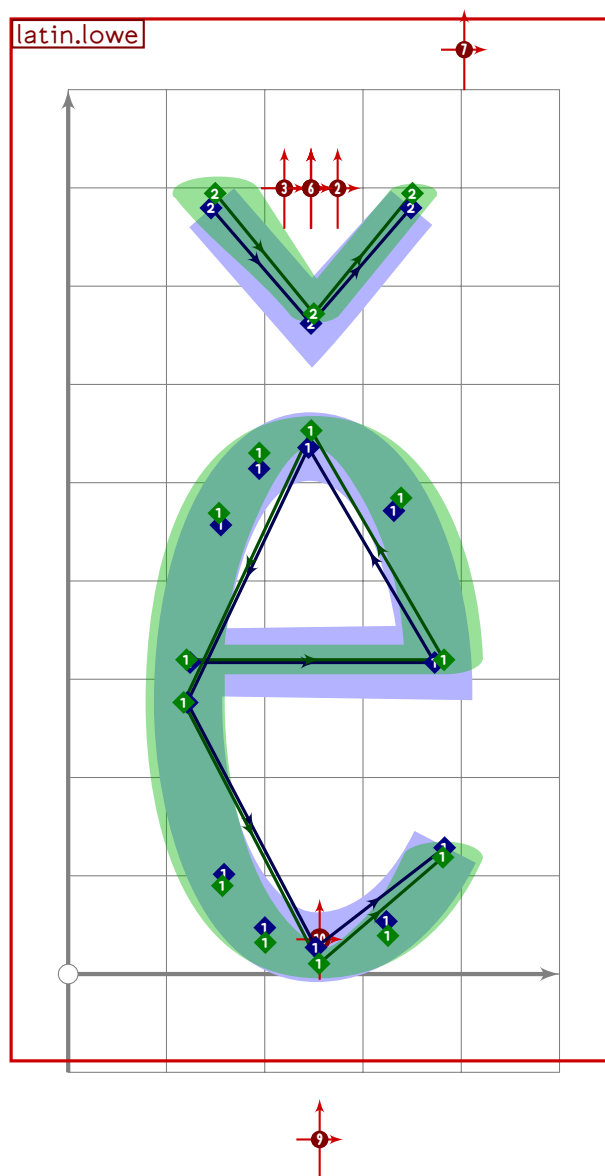


```

500 % e with dot
501 begintsuglyph("edotaccent";23);
502   tsu_accent.apply(latin.lowe)(tsu_accent.dotabove);
503   tsu_render;
504 endtsuglyph;
505
506 % e with ogonek
507 begintsuglyph("eogonek";25);
508   latin.loweogonek;
509   tsu_render;
510 endtsuglyph;
511

```

[see page 357]



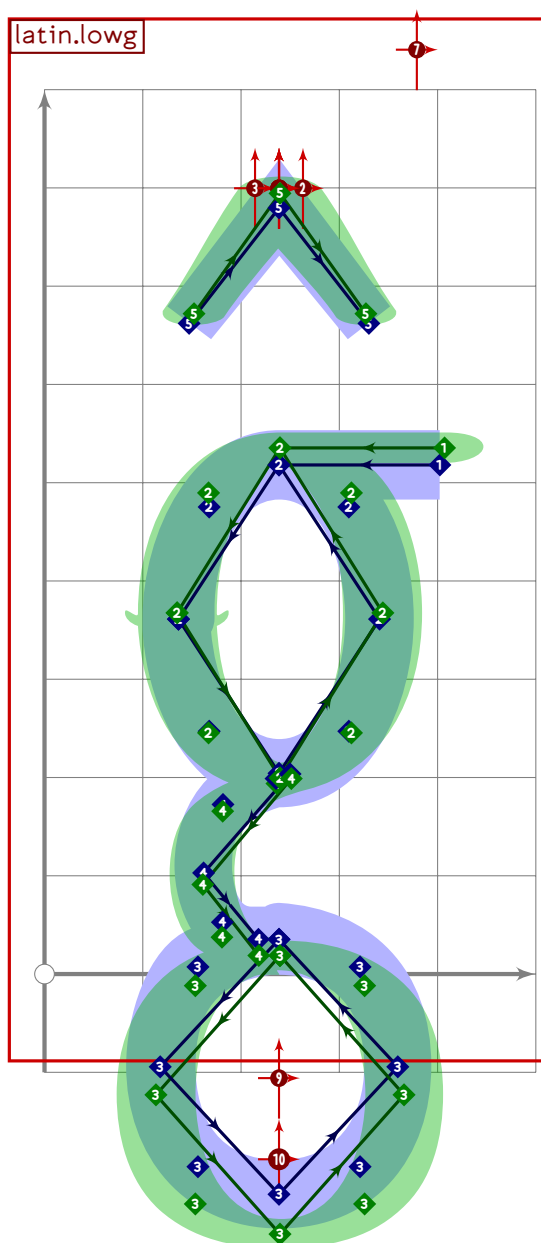
```

512 % e with caron
513 begintsuglyph("ecaron";27);
514   tsu_accent.apply(latin.lowe)(tsu_accent.caron);
515   tsu_render;
516 endtsuglyph;
517

```

U+011D
tsuku.gcircumflex

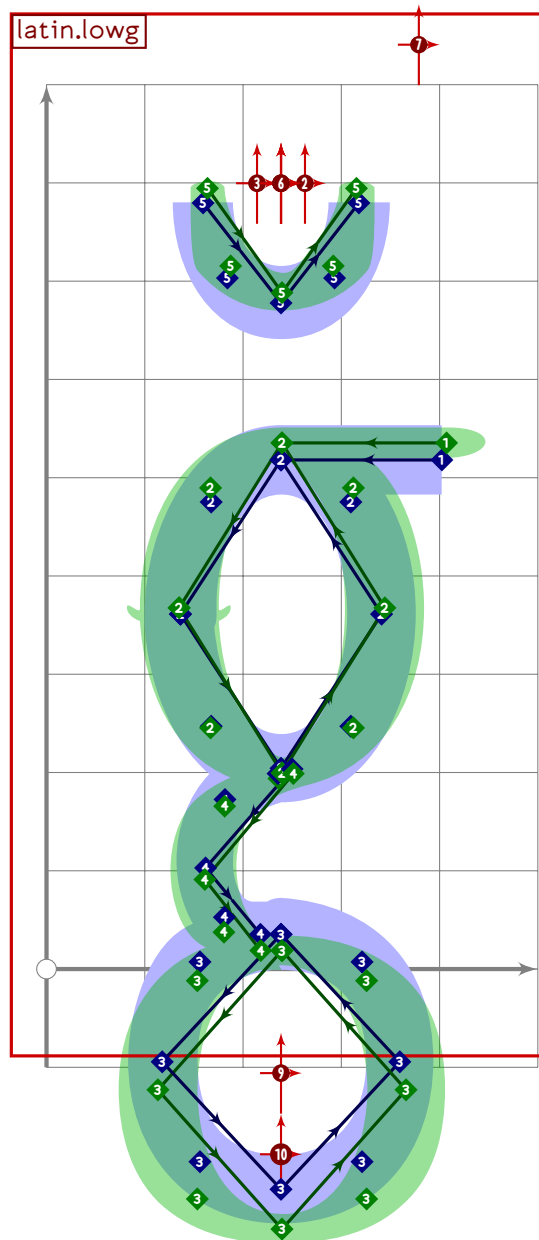
01



```

518 % g with circumflex
519 begintsuglyph("gcircumflex";29);
520 tsu_accent.apply(latin.lowg)(tsu_accent.circumflex);
521 tsu_render;
522 endsuglyph;
523

```

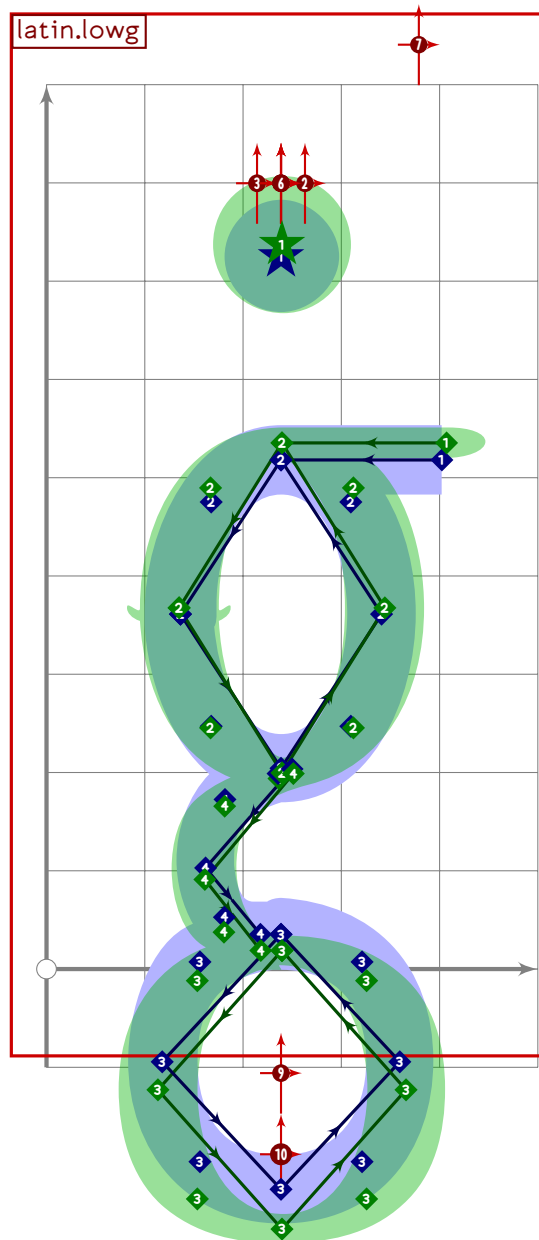
```

524 % g with breve
525 begintsuglyph("gbreve";31);
526 tsu_accent.apply(latin.lowg)(tsu_accent.breve);
527 tsu_render;
528 endtsuglyph;
529

```

U+0121
tsuku.gdotaccent

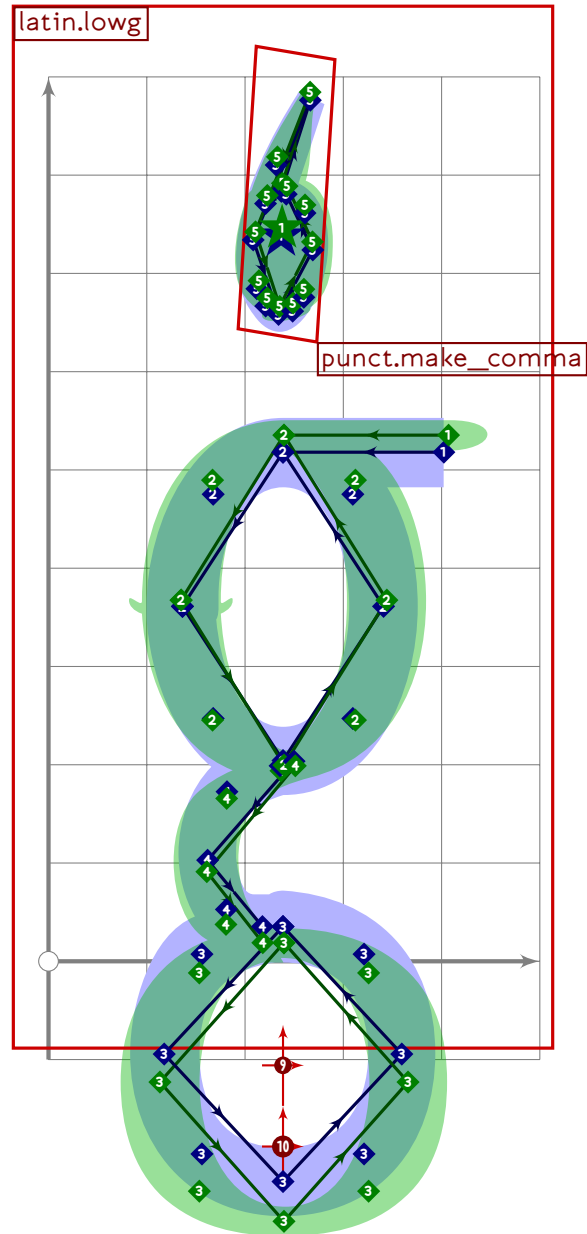
01



```

530 % g with dot
531 begintsuglyph("gdotaccent";33);
532   tsu_accent.apply(latin.lowg)(tsu_accent.dotabove);
533   tsu_render;
534 endtsuglyph;
535

```



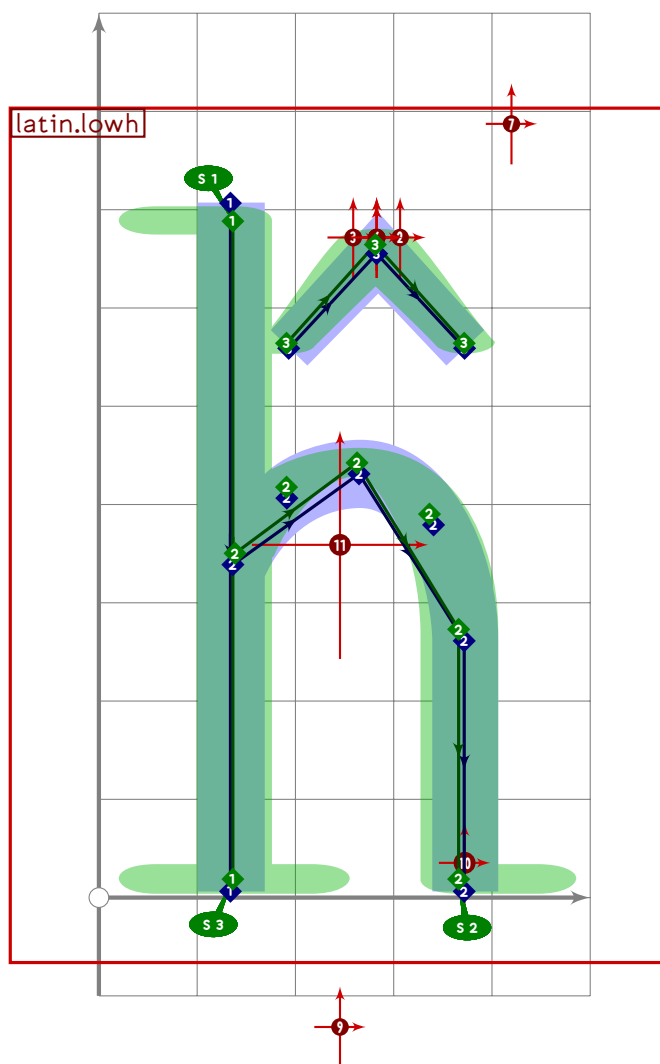
```

536 % g with comma upside-down above
537 begintsuglyph("uni0123";35);
538 tsu_accent.apply(latin.lowg)(tsu_accent.caron_comma);
539 tsu_render;
540 endtsuglyph;
541

```

U+0125
tsuku.hcircumflex

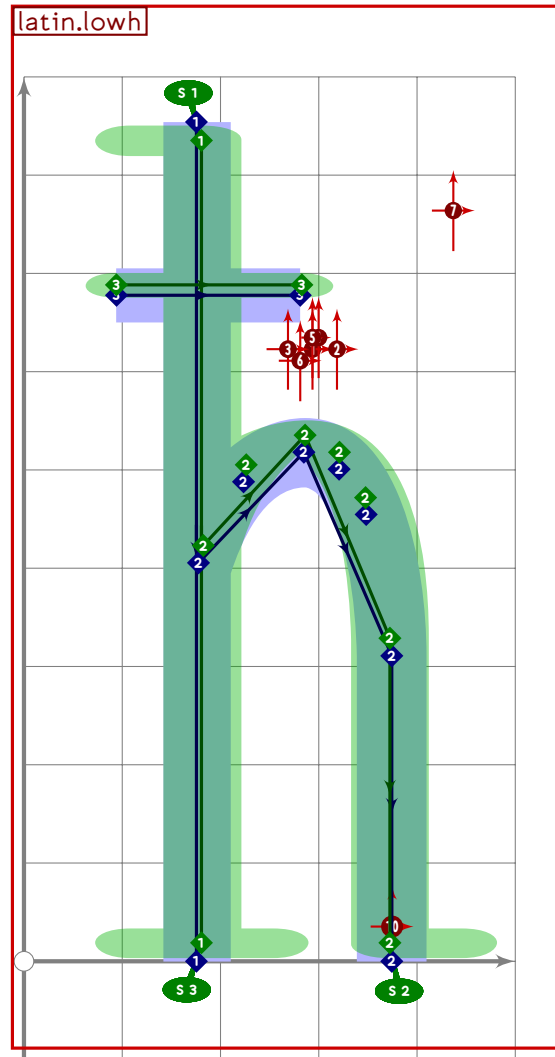
01



```

542 % h with circumflex
543 beginsuglyph("hcircumflex",37);
544   tsu_accent.apply(tsu_accent.capital(latin.lowh))(tsu_accent.circumflex);
545   tsu_render;
546 endsuglyph;
547

```

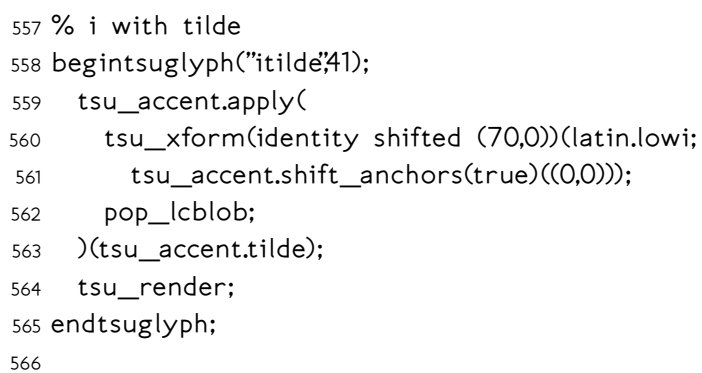


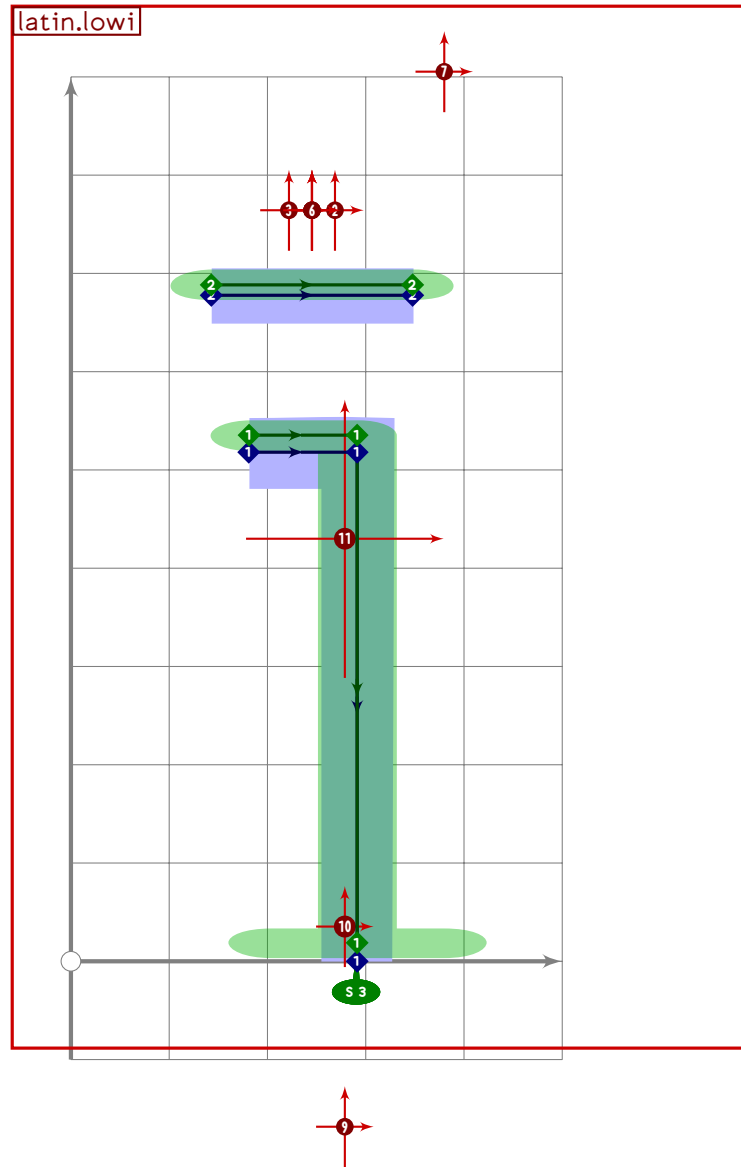
```

548 % h with bar
549 begint Suglyph("hbar",39);
550   latin.lowh;
551   push_stroke((220,ymetric(0.82))-(520,ymetric(0.82)),
552     (1.6,1.6)-(1.6,1.6));
553   set_bosize(0,80);
554   tsu_render;
555 endtsuglyph;
556

```

01





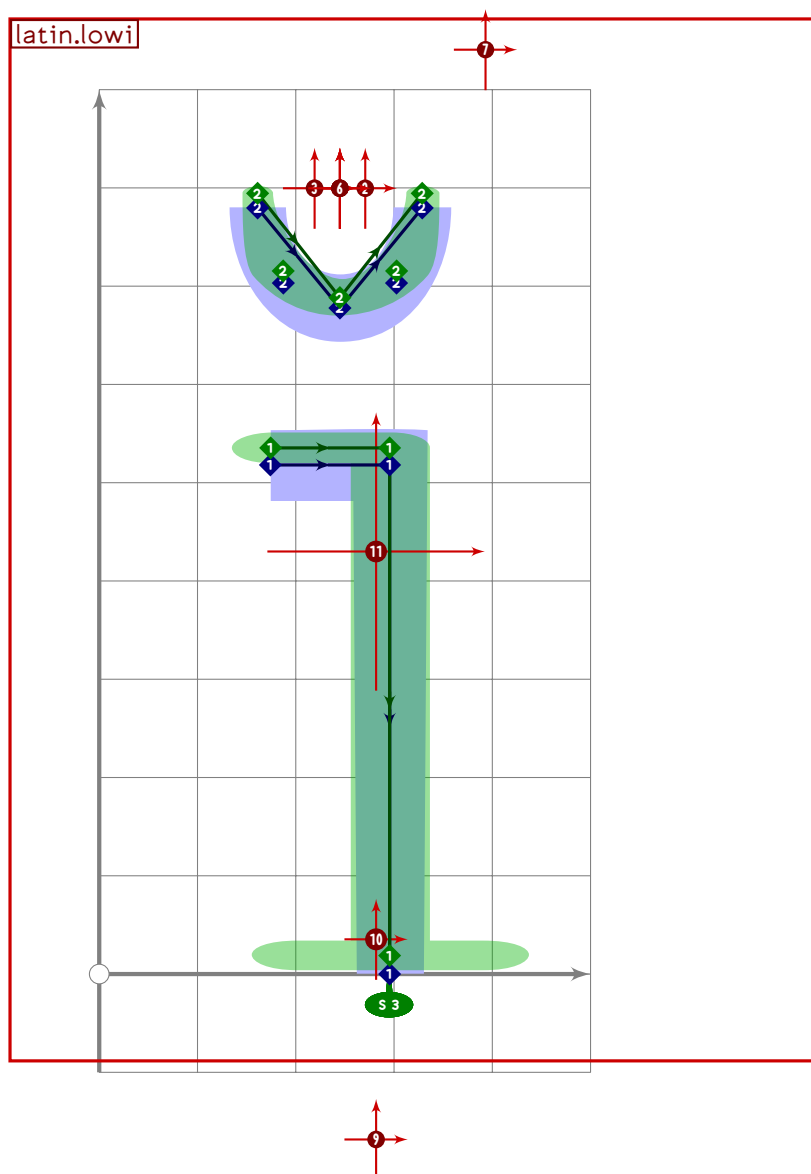
```

567 % i with macron
568 begintsuglyph("imacron",43);
569   tsu_accent.apply(
570     tsu_xform(identity shifted (70,0))(latin.lowi;
571       tsu_accent.shift_anchors(true)((0,0)));
572     pop_lcblob;
573   )(tsu_accent.macron);
574   tsu_render;
575 endtsuglyph;
576

```

U+012D
tsuku.ibreve

01

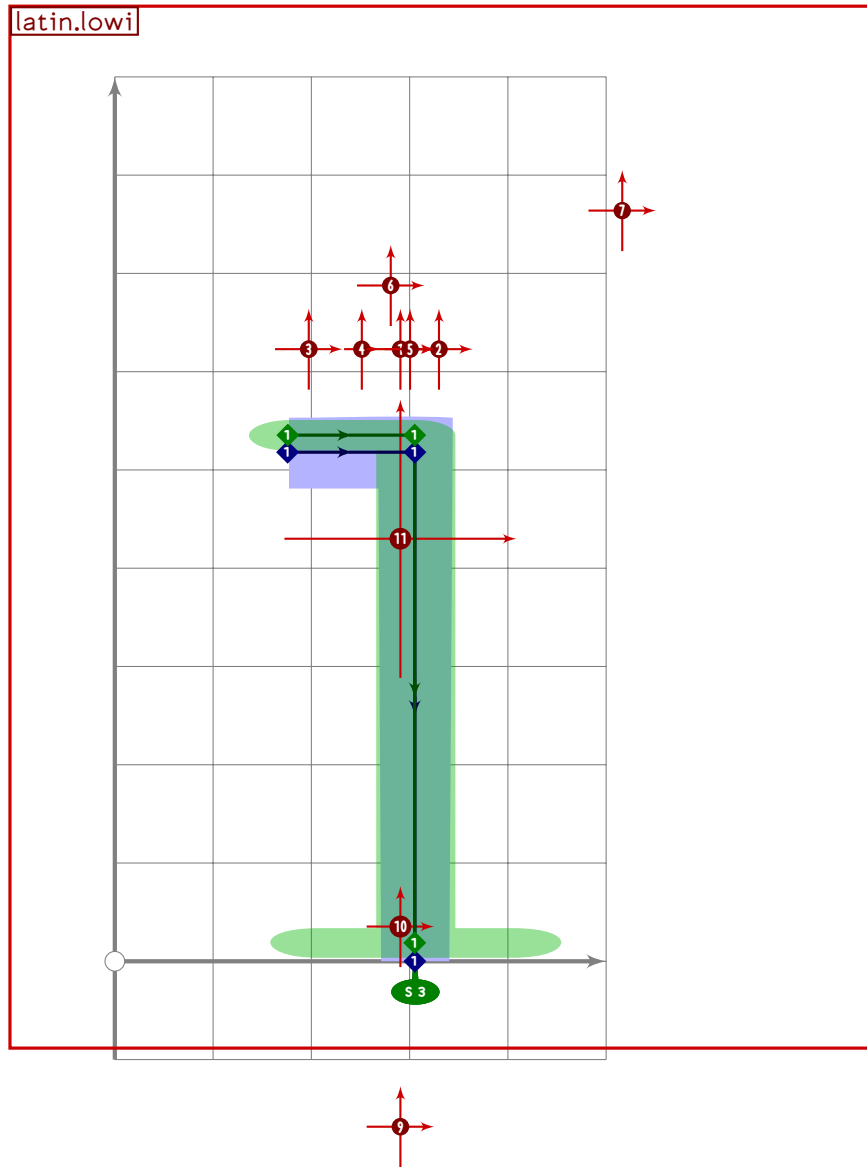


```

577 % i with breve
578 begintsuglyph("ibreve";45);
579   tsu_accent.apply(
580     tsu_xform(identity shifted (70,0))(latin.lowi;
581       tsu_accent.shift_anchors(true)((0,0)));
582     pop_lcblob;
583   )(tsu_accent.breve);
584   tsu_render;
585 endtsuglyph;
586
587 % i with ogonek
588 begintsuglyph("iogonek";47);
589   latin.lowiogonek;
590   tsu_render;
591 endtsuglyph;
592

```

[see page 358]



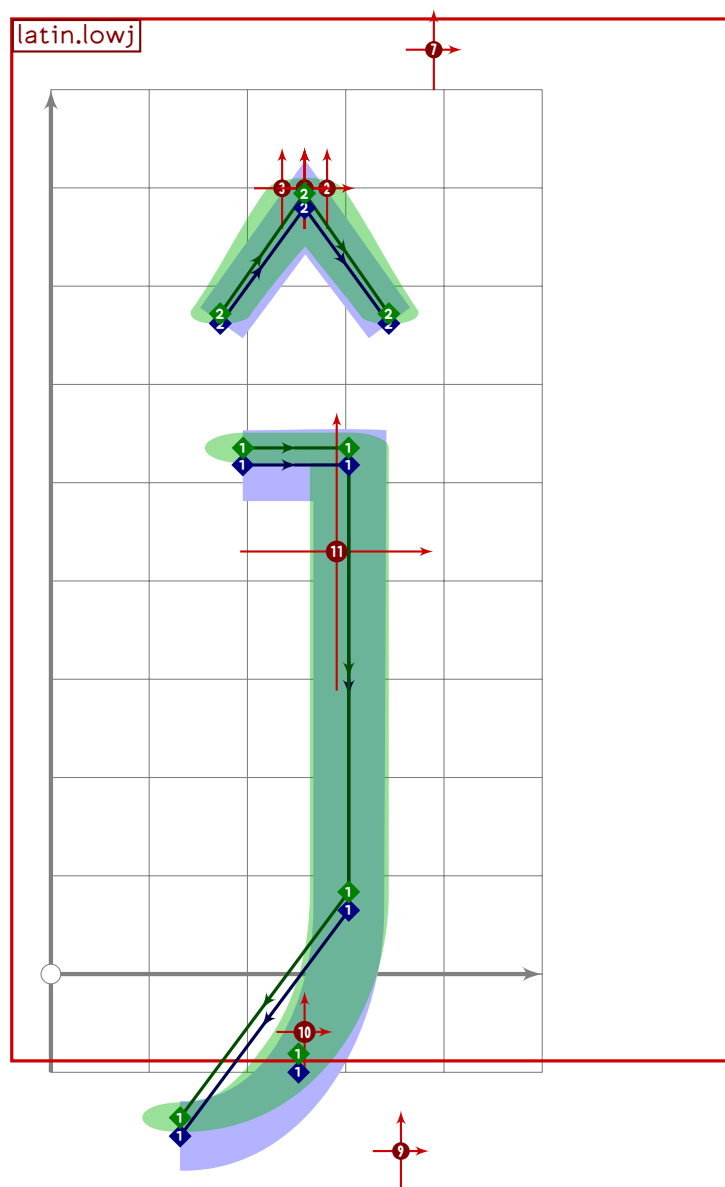
```

593 % i without dot
594 begintsuglyph("dotlessi",49);
595   tsu_xform(identity shifted (70,0))(latin.lowi;
596     tsu_accent.shift_anchors(true)((0,0)));
597   pop_lcblob;
598   tsu_render;
599 endtsuglyph;
600

```

U+0135
tsuku.jcircumflex

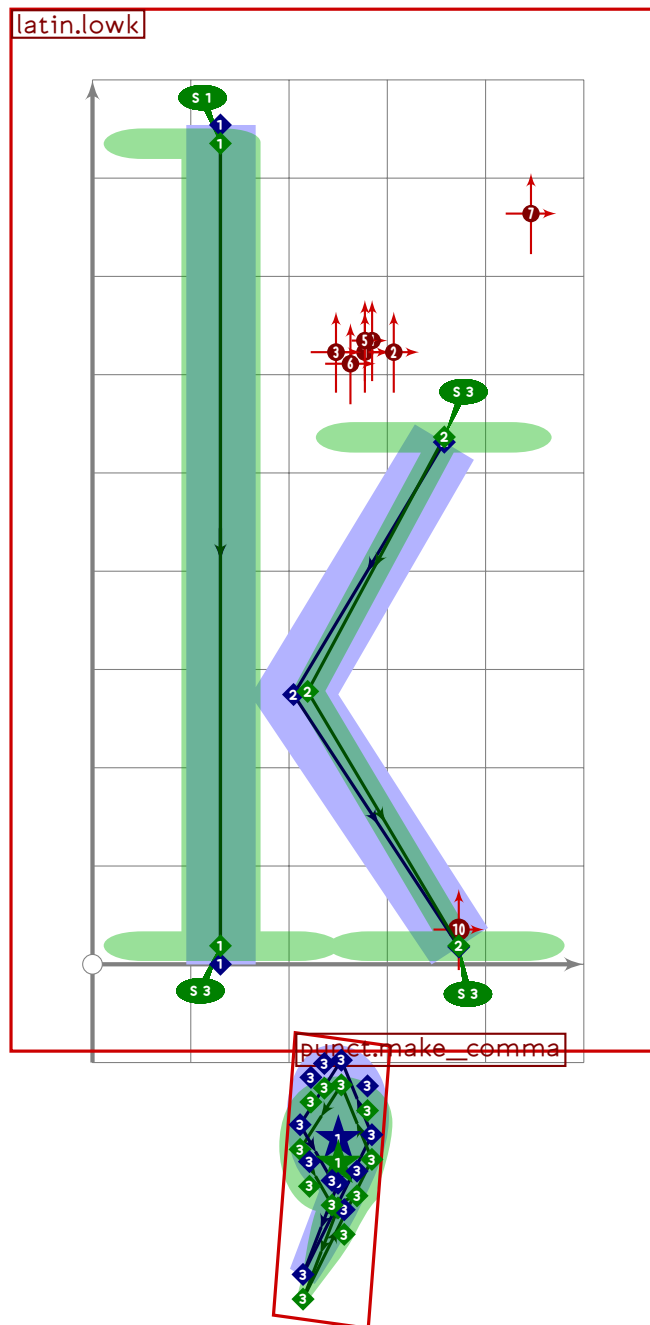
01



```

601 % j with circumflex
602 begintsuglyph("jcircumflex";53);
603   tsu_accent.apply(
604     tsu_xform(identity shifted (70,0))(latin.lowj;
605       tsu_accent.shift_anchors(true)((0,0)));
606     pop_lcblob;
607   )(tsu_accent.circumflex);
608   tsu_render;
609 endtsuglyph;
610

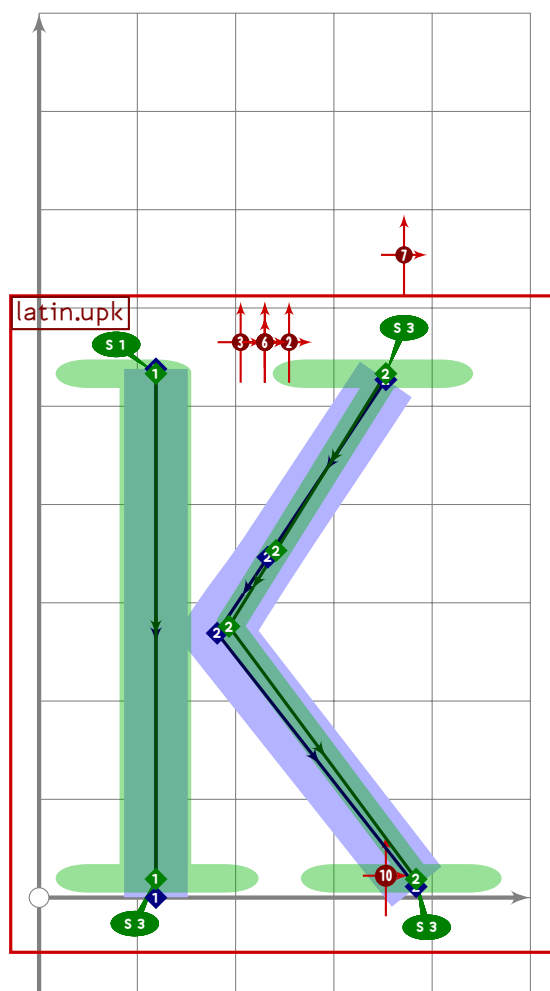
```



```

611 % k with comma below
612 begint Suglyph("uni0137";55);
613   tsu_accent.apply(latin.lowk)(tsu_accent.commabelow);
614   tsu_render;
615 endtsuglyph;
616

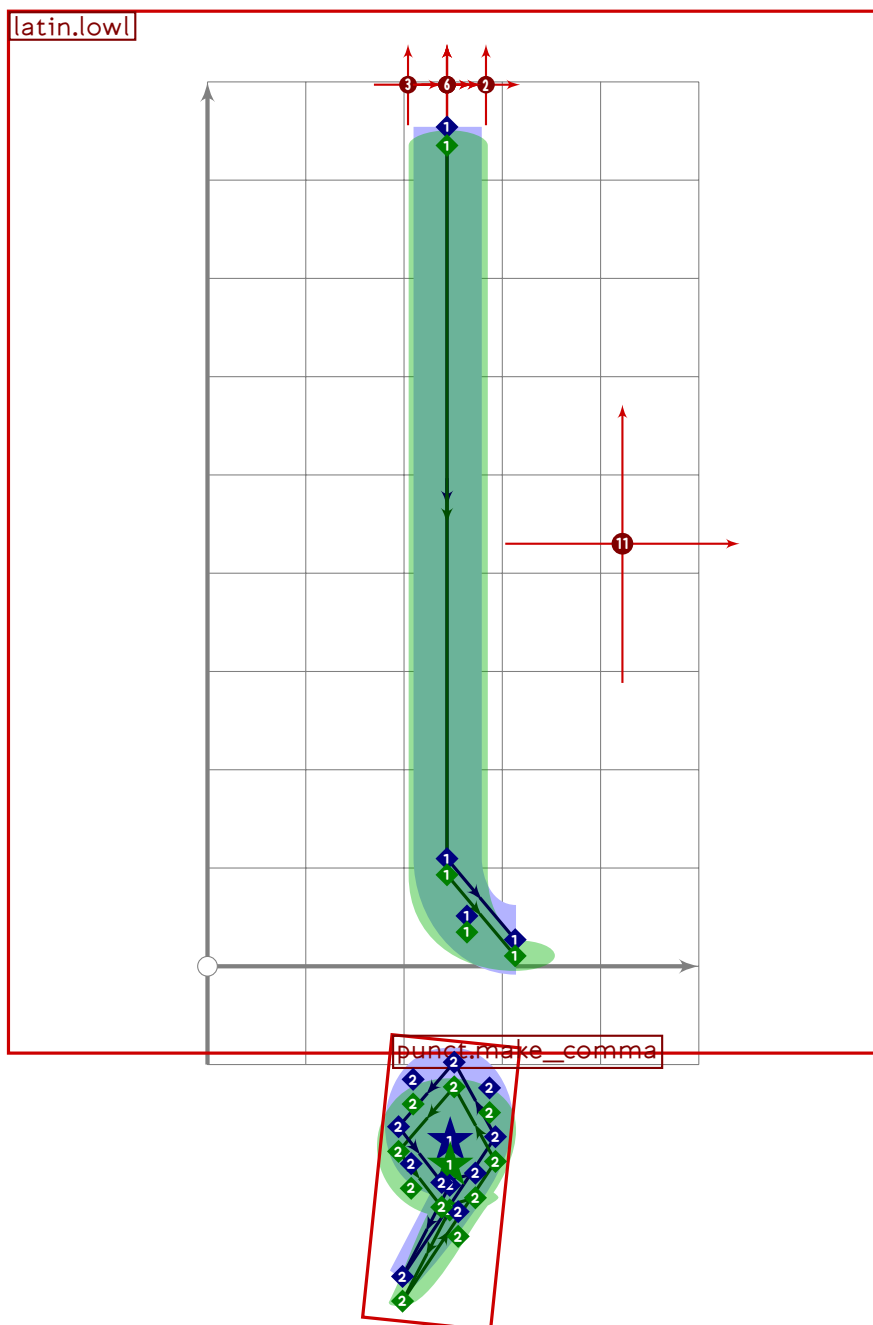
```



```

617 % Greenlandic k, which I'm interpreting as a squashed K
618 begintsuglyph("kgreenlandic";56);
619   tsu_xform(identity shifted (-500,latin_wide_low_v) xyscaled (0.92,0.63)
620     shifted (500,latin_wide_low_v))(latin.upk);
621   tsu_render;
622 endtsuglyph;
623

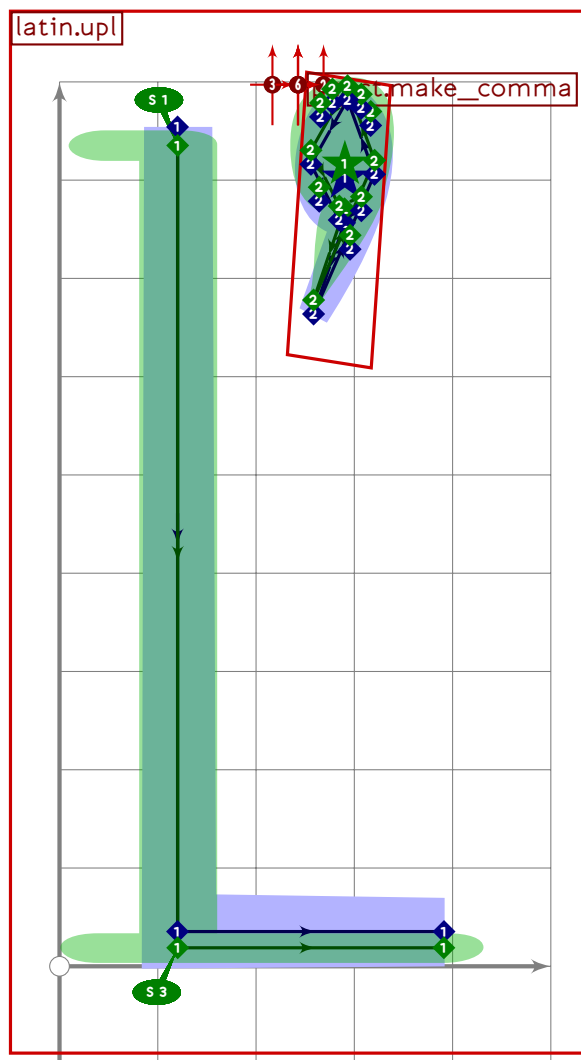
```



```

624 % l with comma below
625 begintsuglyph("uni013C";60);
626 tsu_accent.apply(latin.lowl)(tsu_accent.commabelow);
627 tsu_render;
628 endtsuglyph;
629

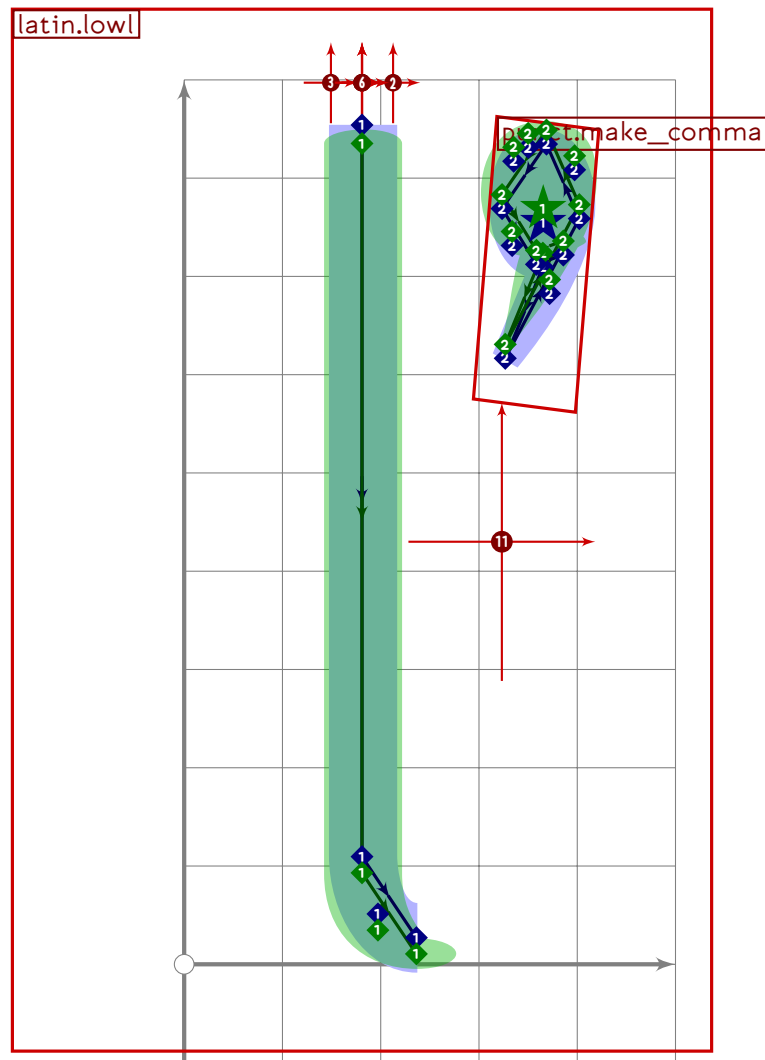
```



```

630 % L with apostrophe caron
631 begintsuglyph("Lcaron",61);
632   tsu_accent.apply(latin.upl)(tsu_accent.caron_comma);
633   tsu_render;
634 endtsuglyph;
635

```

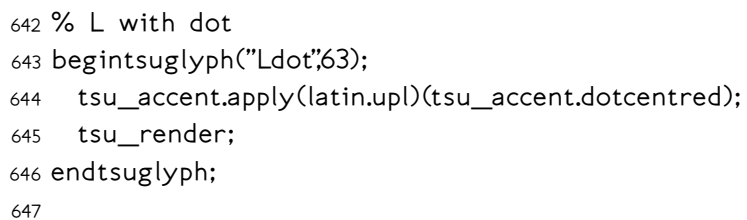


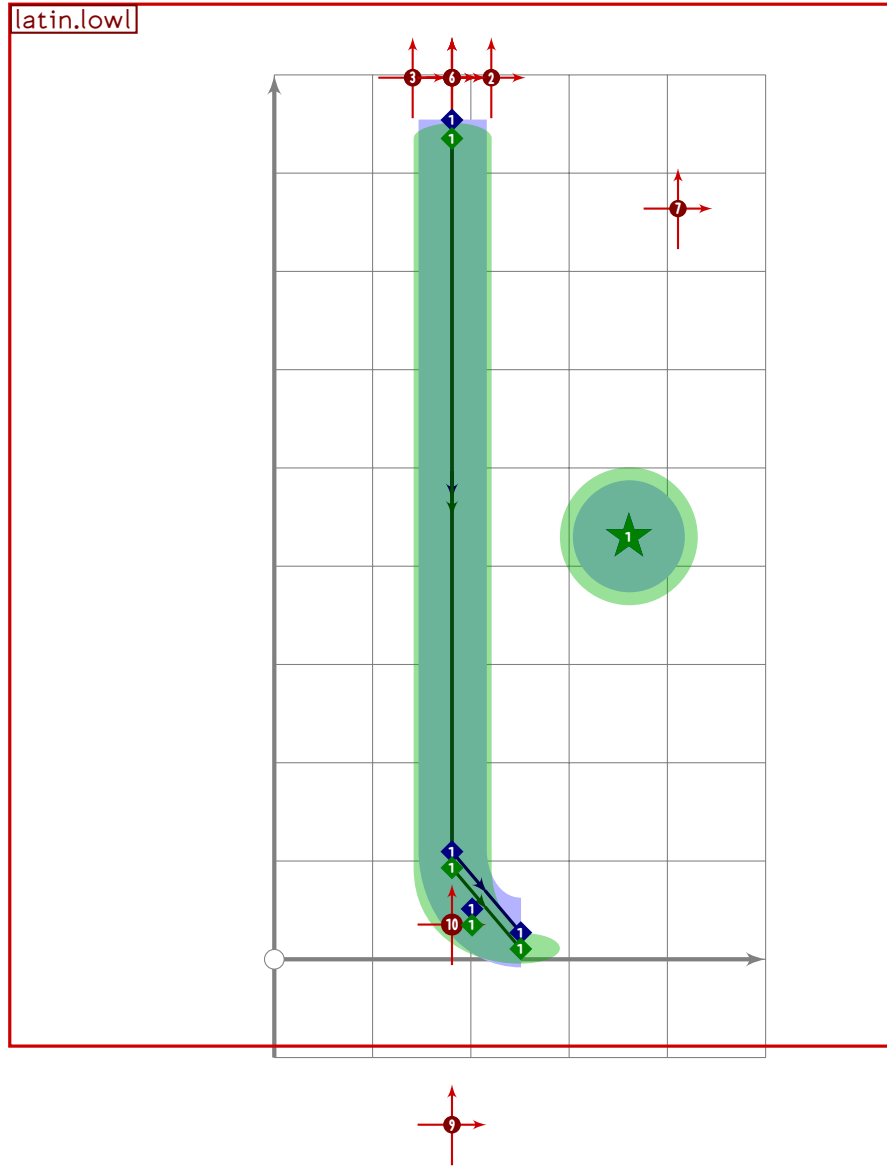
```

636 % l with apostrophe caron
637 begintsuglyph("lcaron",62);
638   tsu_accent.apply(latin.lowl)(tsu_accent.caron_comma);
639   tsu_render;
640 endtsuglyph;
641

```

01





01

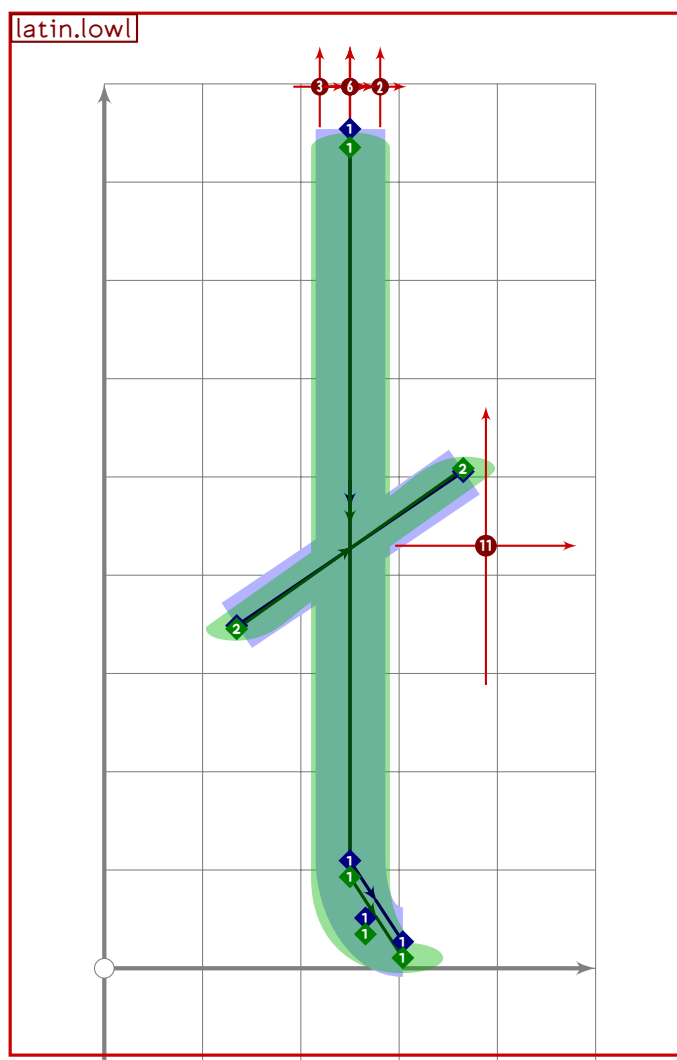
```

648 % l with dot
649 begintsuglyph("ldot",64);
650 tsu_accent.apply(tsu_xform(identity shifted (-120,0))
651   (latin.lowl;
652     tsu_accent.shift_anchors(true)((0,0)))(tsu_accent.dotcentred);
653 tsu_render;
654 endtsuglyph;
655

```

U+0142
tsuku.lslash

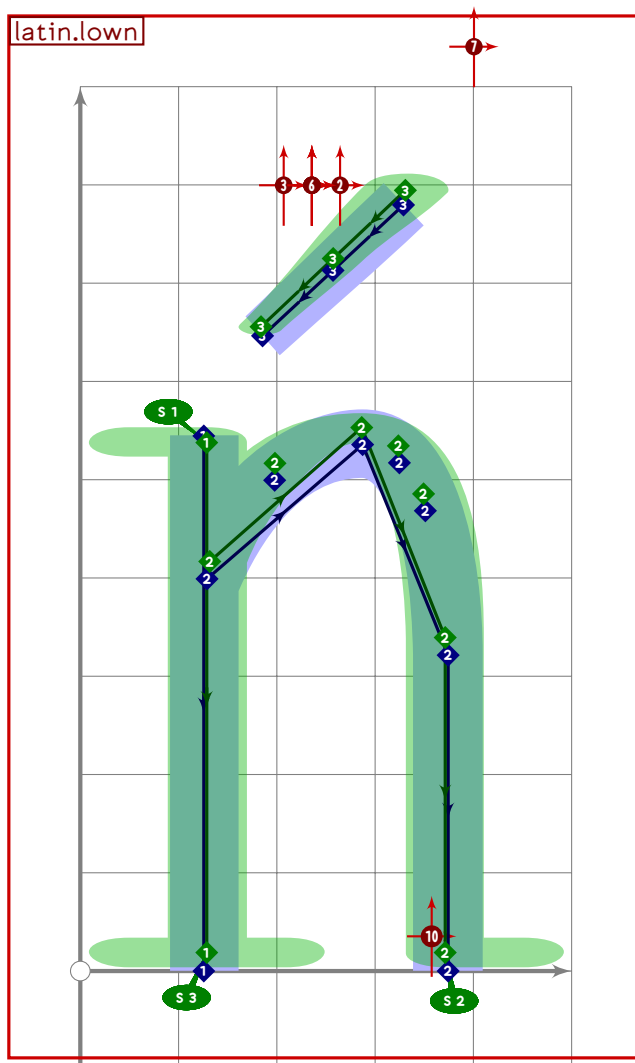
01



```

656 % l with slash
657 begint Suglyph("lslash",66);
658   latin.lowl;
659   push_stroke((350,ymetric(0.40))-(650,ymetric(0.60)),
660     (1.6,1.6)-(1.6,1.6));
661   set_bosize(0,80);
662   tsu_render;
663 endtsuglyph;
664

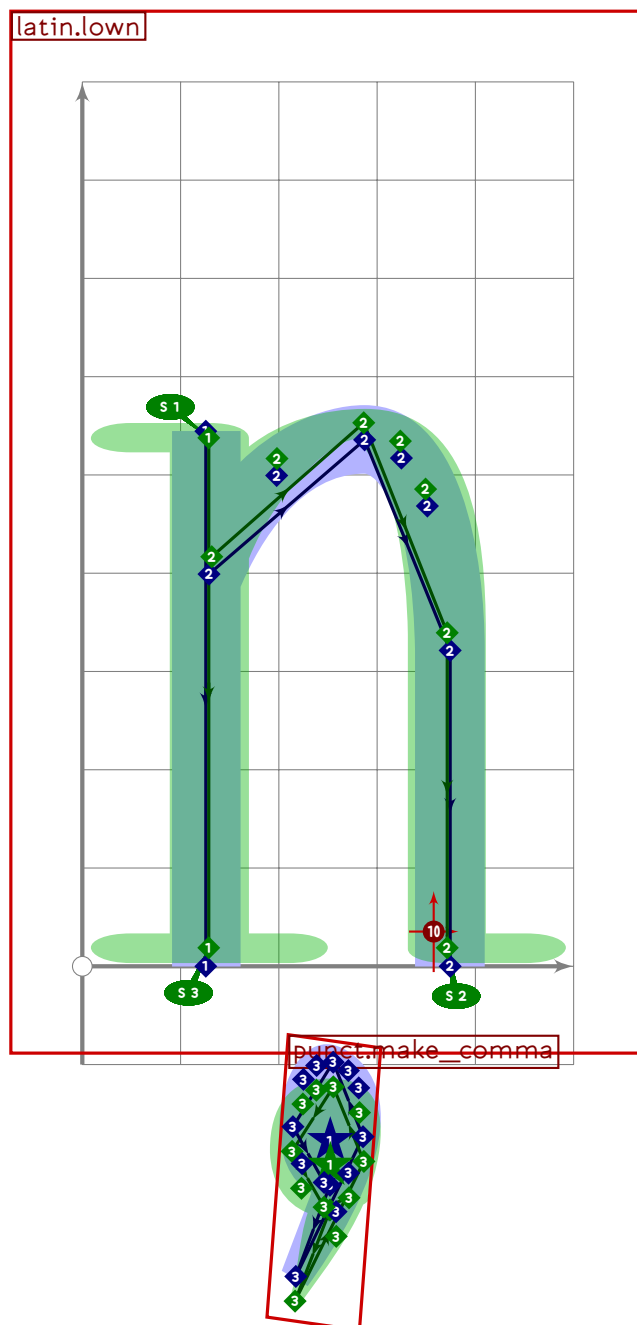
```



```

665 % n with acute
666 begint Suglyph("nacute",68);
667   tsu_accent.apply(latin.lown)(tsu_accent.acute);
668   tsu_render;
669 endtsuglyph;
670

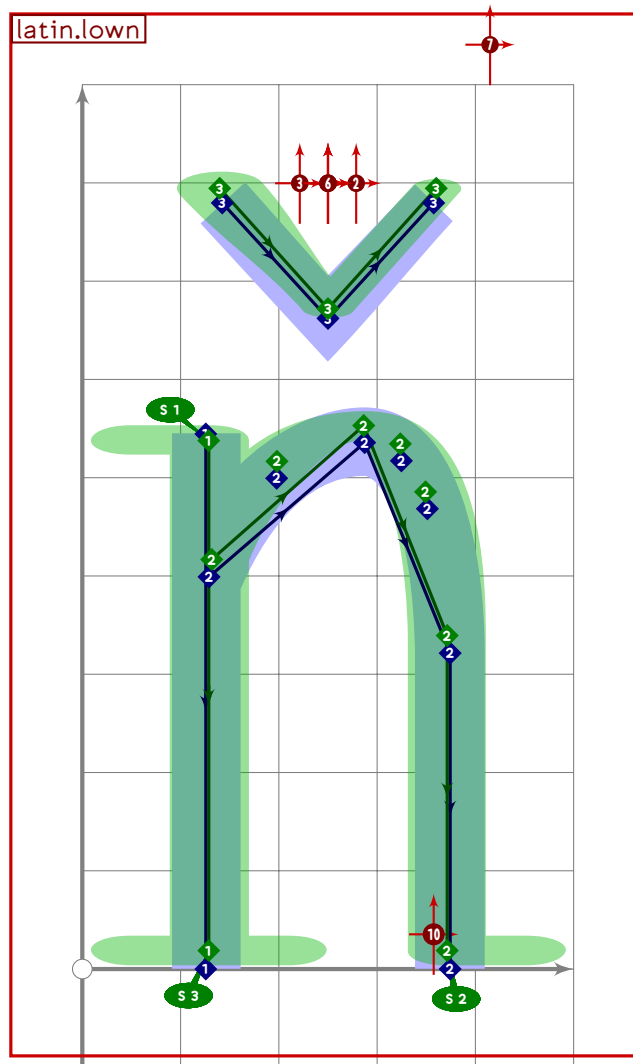
```



```

671 % n with comma below
672 begintsuglyph("uni0146;70);
673 tsu_accent.apply(latin.lown)(tsu_accent.commabelow);
674 tsu_render;
675 endtsuglyph;
676

```



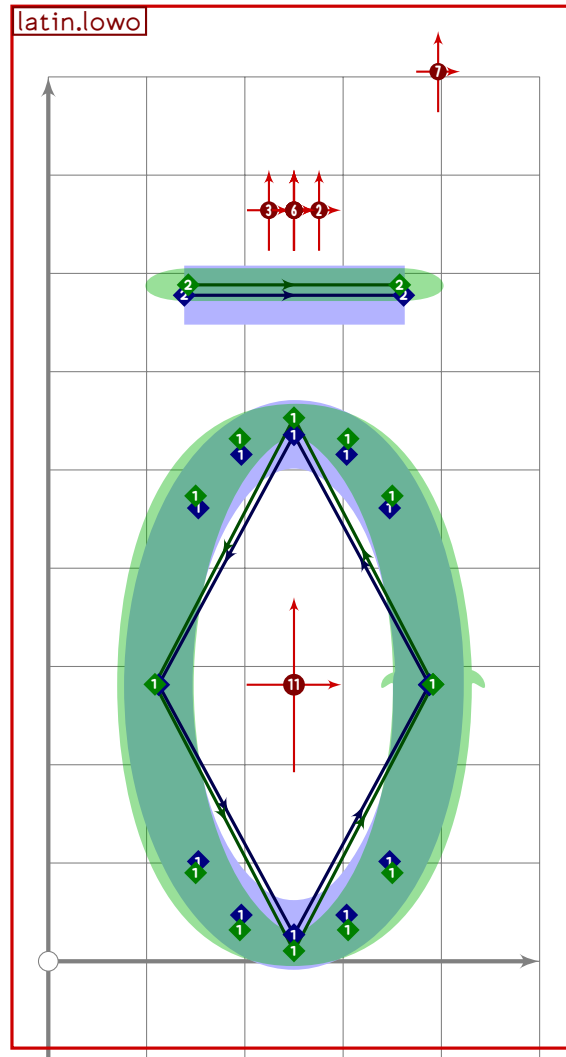
```

677 % n with caron
678 begintsuglyph("ncaron",72);
679 tsu_accent.apply(latin.lown)(tsu_accent.caron);
680 tsu_render;
681 endtsuglyph;
682

```



[see page 317]



01

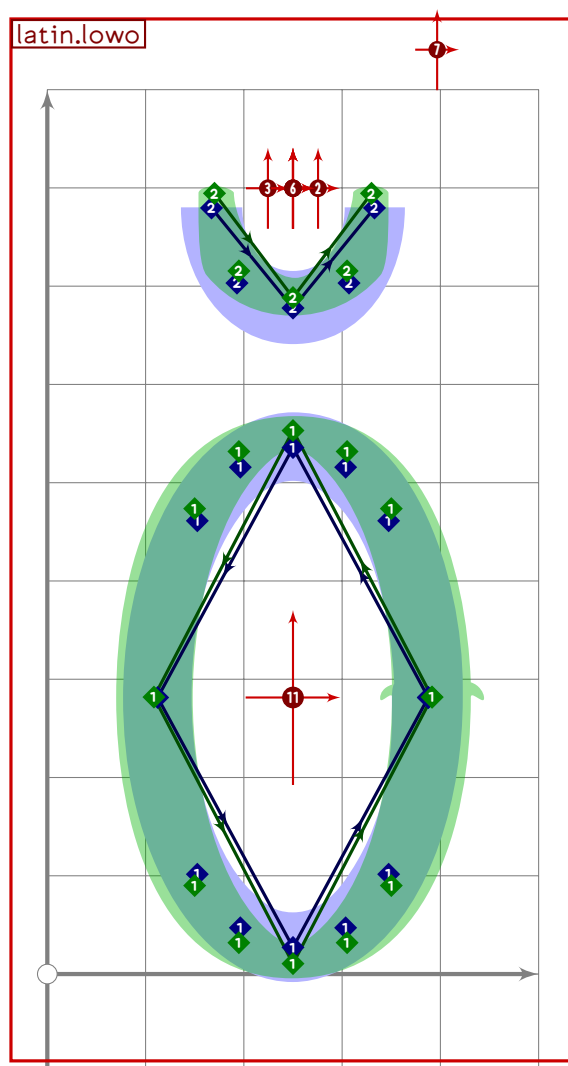
```

697 % o with macron
698 begintsuglyph("omacron",77);
699   tsu_accent.apply(latin.lowo)(tsu_accent.macron);
700   tsu_render;
701 endtsuglyph;
702

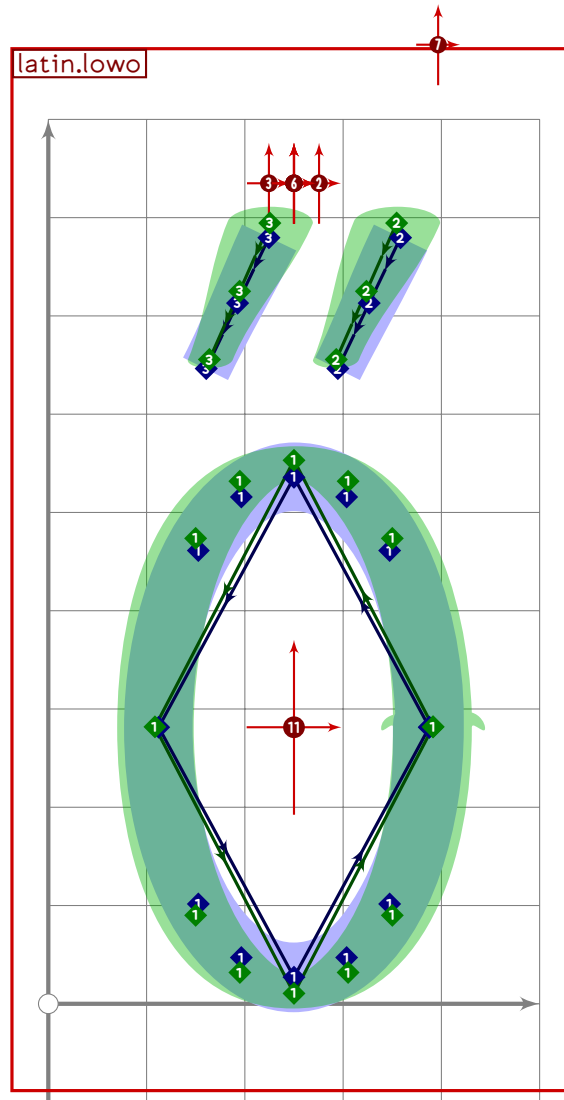
```

U+014F
tsuku.obreve

01



```
703 % o with breve
704 begintsuglyph("obreve",79);
705 tsu_accent.apply(latin.low)(tsu_accent.breve);
706 tsu_render;
707 endtsuglyph;
708
```

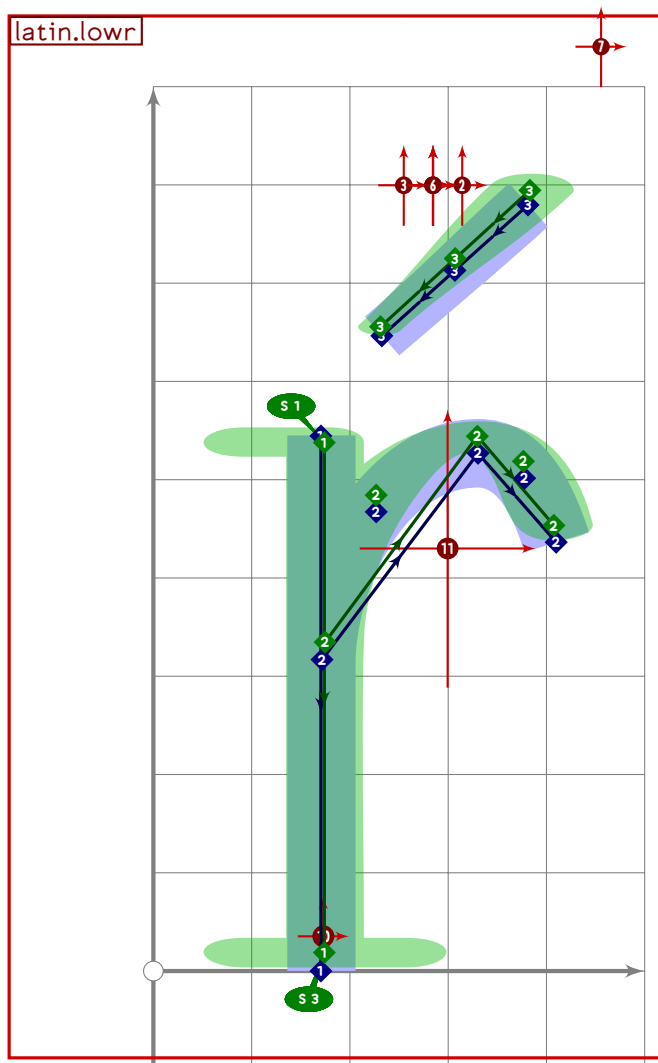
```

709 % o with hungarian umlaut
710 begint Suglyph("ohungarumlaut",81);
711   tsu_accent.apply(latin.lowo)(tsu_accent.hungarian_umlaut);
712   tsu_render;
713 endtsuglyph;
714

```

U+0155
tsuku.racute

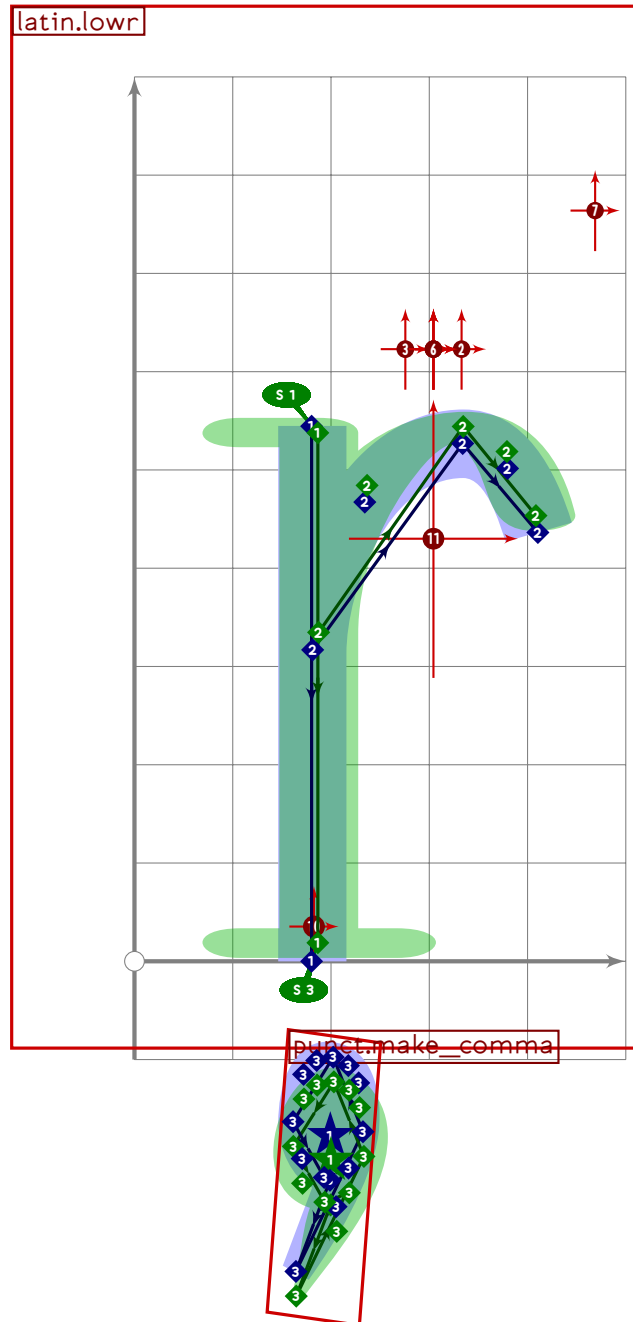
01



```

715 % r with acute
716 begint Suglyph("racute";85);
717   tsu_accent.apply(latin.lowr)(tsu_accent.acute);
718   tsu_render;
719 endtsuglyph;
720

```



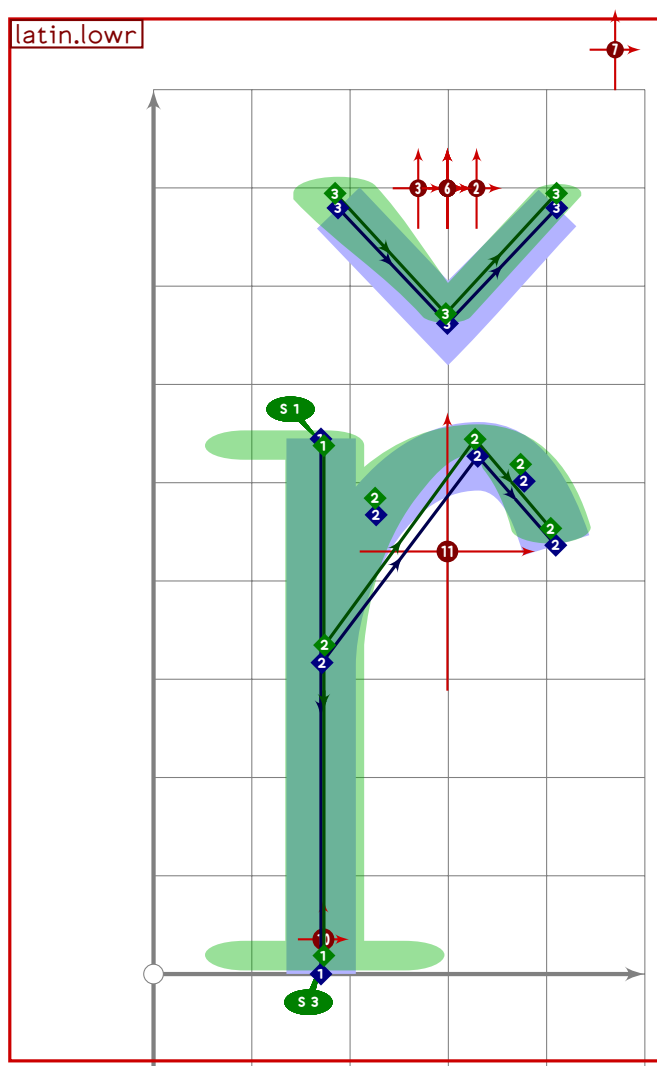
```

721 % r with comma below
722 begintsuglyph("uni0157";87);
723 tsu_accent.apply(latin.lowr)(tsu_accent.commabelow);
724 tsu_render;
725 endtsuglyph;
726

```

U+0159
tsuku.rcaron

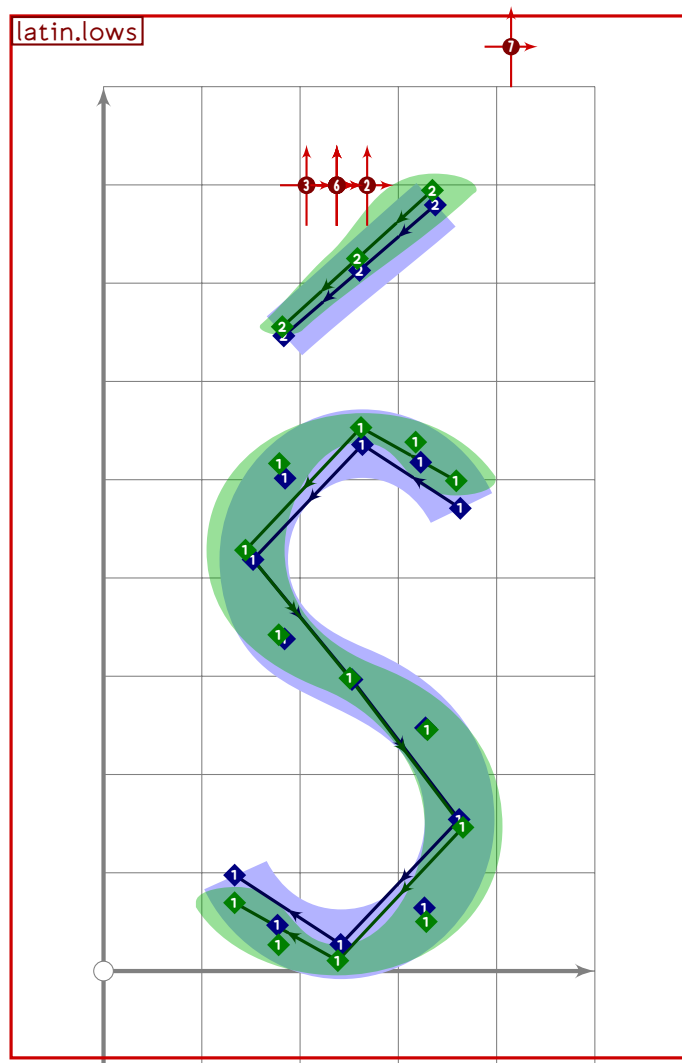
01



```

727 % r with caron
728 begintsuglyph("rcaron";89);
729   tsu_accent.apply(latin.lowr)(tsu_accent.caron);
730   tsu_render;
731 endtsuglyph;
732

```



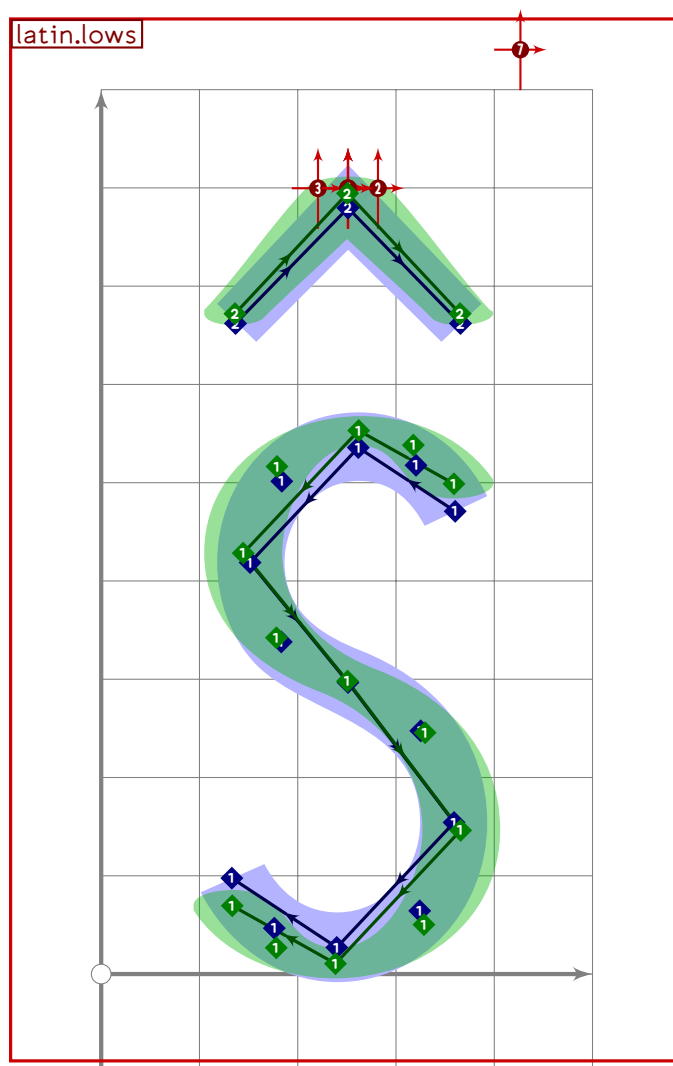
```

733 % s with acute
734 begintsuglyph("sacute",91);
735   tsu_accent.apply(latin.lows)(tsu_accent.acute);
736   tsu_render;
737 endtsuglyph;
738

```

U+015D
tsuku.scircumflex

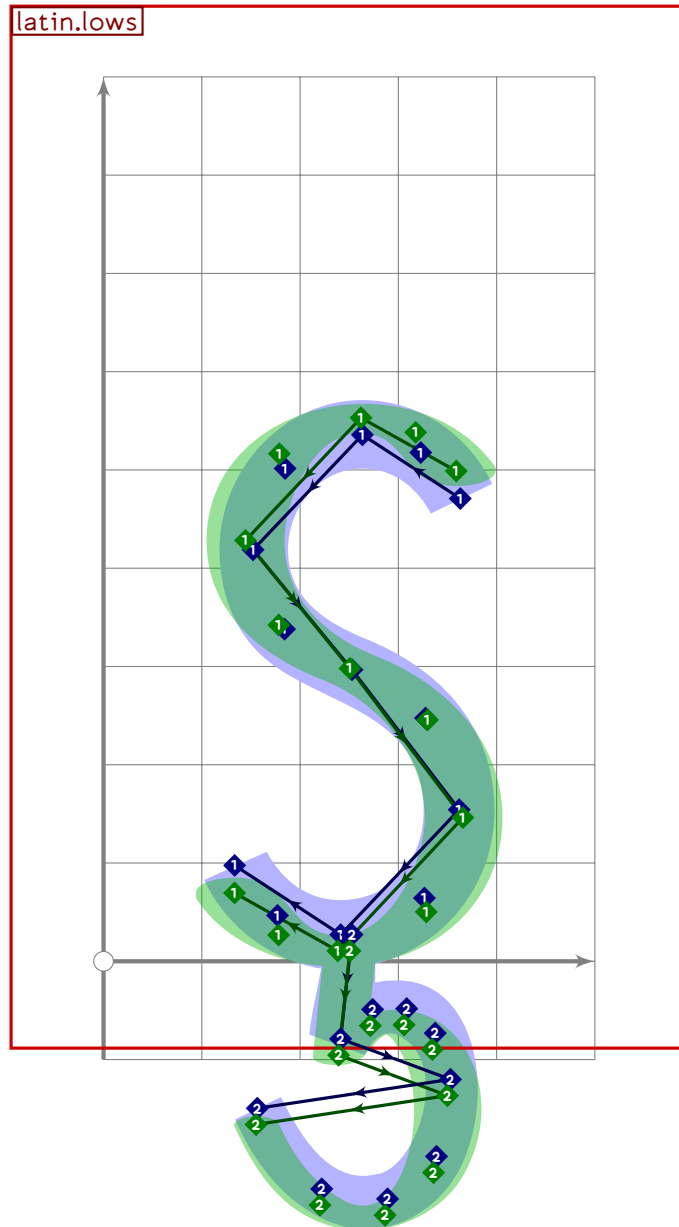
01



```

739 % s with circumflex
740 begintsuglyph("scircumflex",93);
741 tsu_accent.apply(latin.lows)(tsu_accent.circumflex);
742 tsu_render;
743 endtsuglyph;
744

```



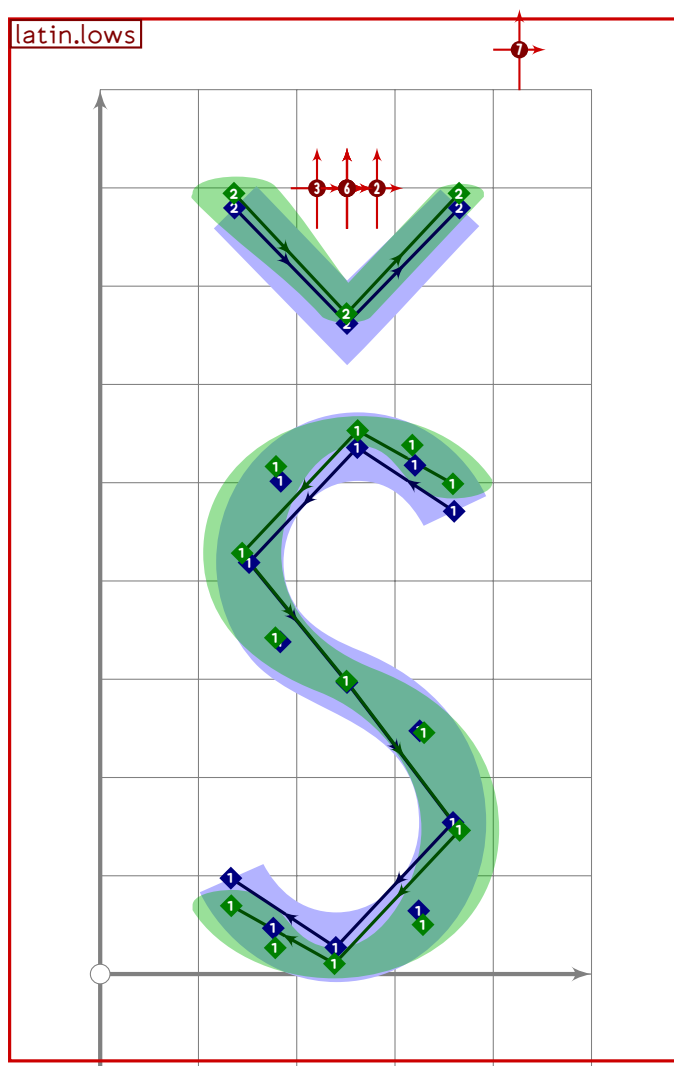
```

745 % s with cedilla
746 begintsuglyph("scedilla";95);
747   tsu_accent.apply(latin.lows)(tsu_accent.cedilla);
748   tsu_render;
749 endtsuglyph;
750

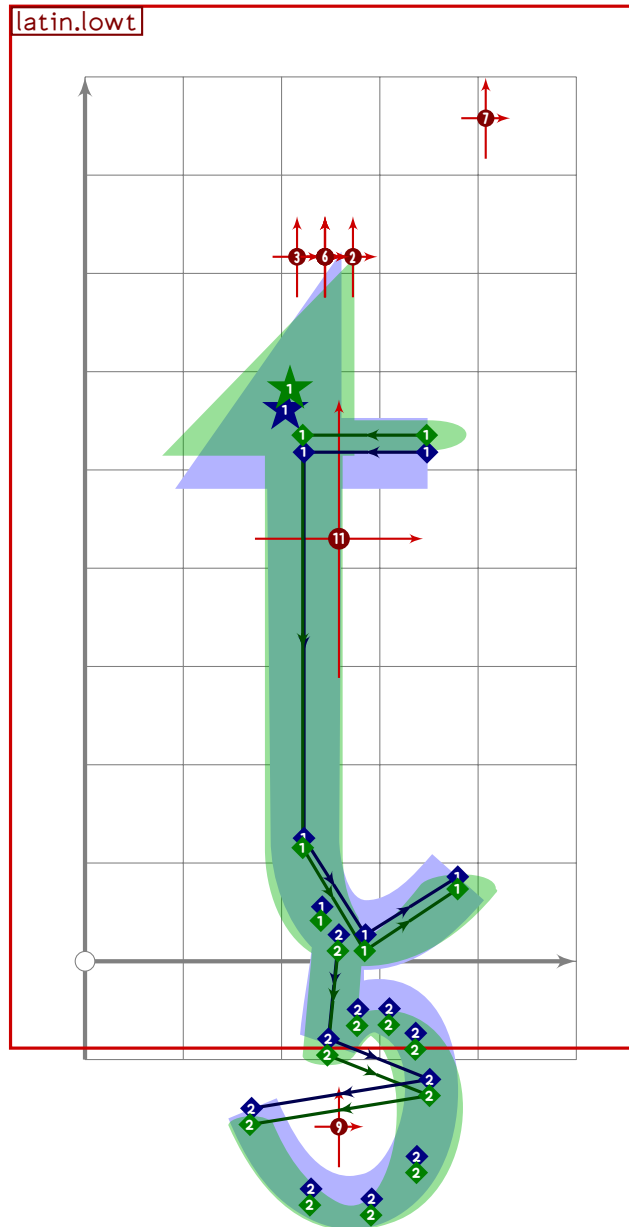
```

U+0161
tsuku.scaron

01



```
751 % s with caron
752 begintsuglyph("scaron";97);
753 tsu_accent.apply(latin.lows)(tsu_accent.caron);
754 tsu_render;
755 endtsuglyph;
756
```

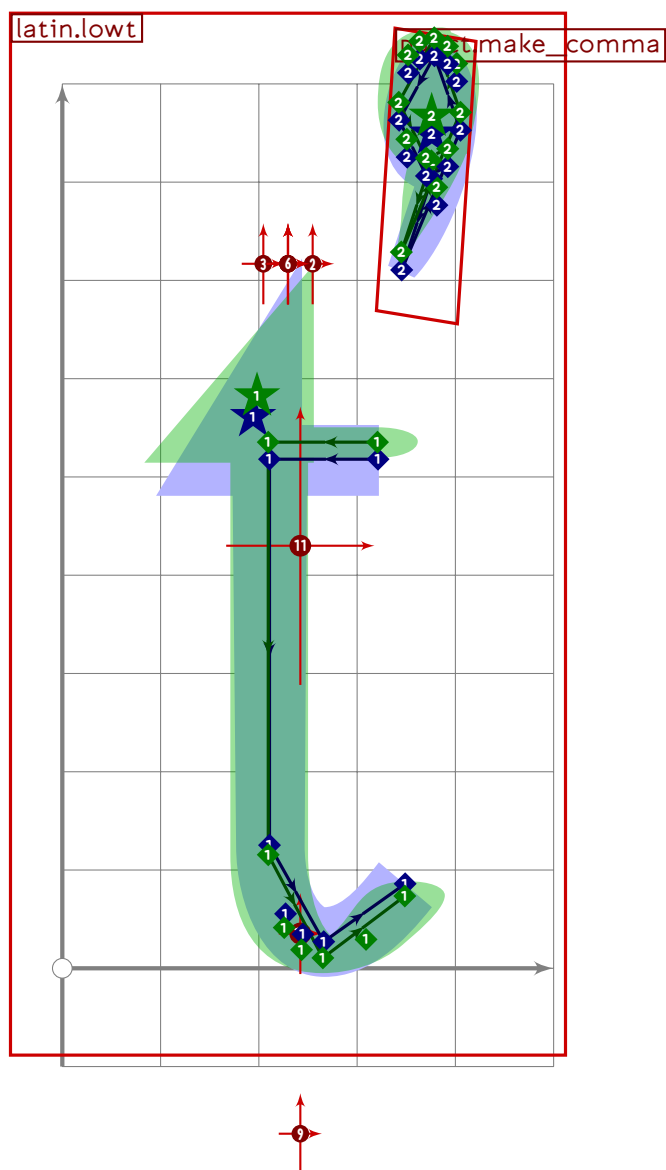
```

757 % t with cedilla [sic]
758 begintsuglyph("uni0163;99);
759   tsu_accent.apply(latin.lowt)(tsu_accent.cedilla);
760   tsu_render;
761 endtsuglyph;
762

```

U+0165
tsuku.tcaron

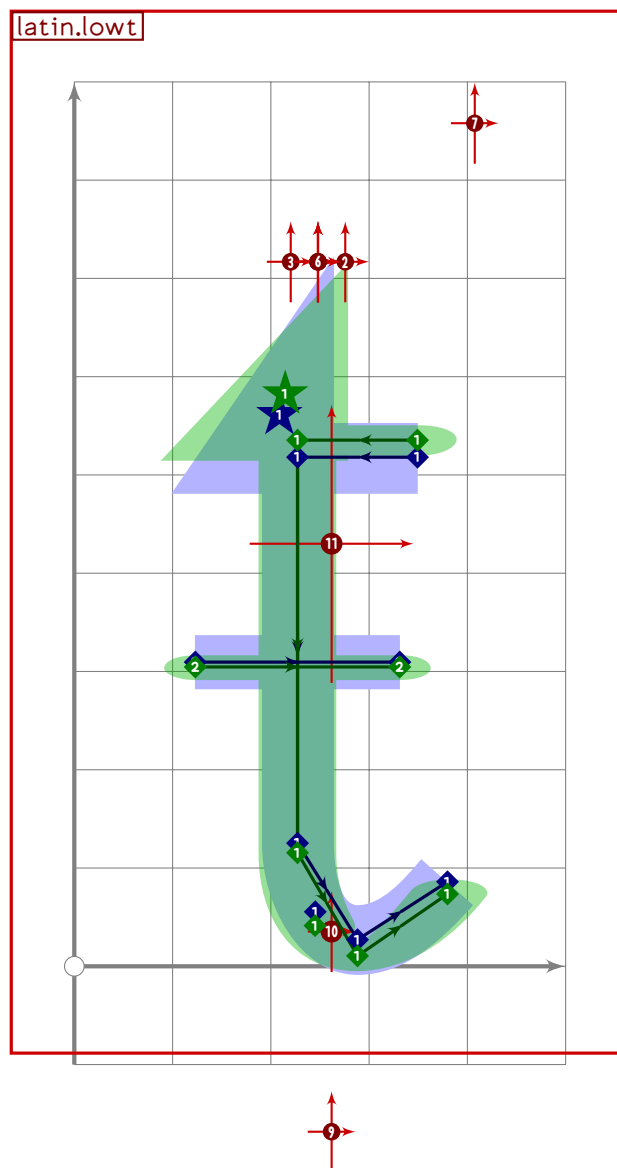
01



```

763 % t with apostrophe caron
764 begintsuglyph("tcaron",101);
765   tsu_accent.apply(latin.lowt)(tsu_accent.caron_comma);
766   tsu_render;
767 endtsuglyph;
768

```

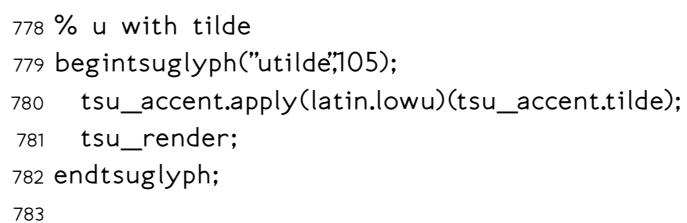


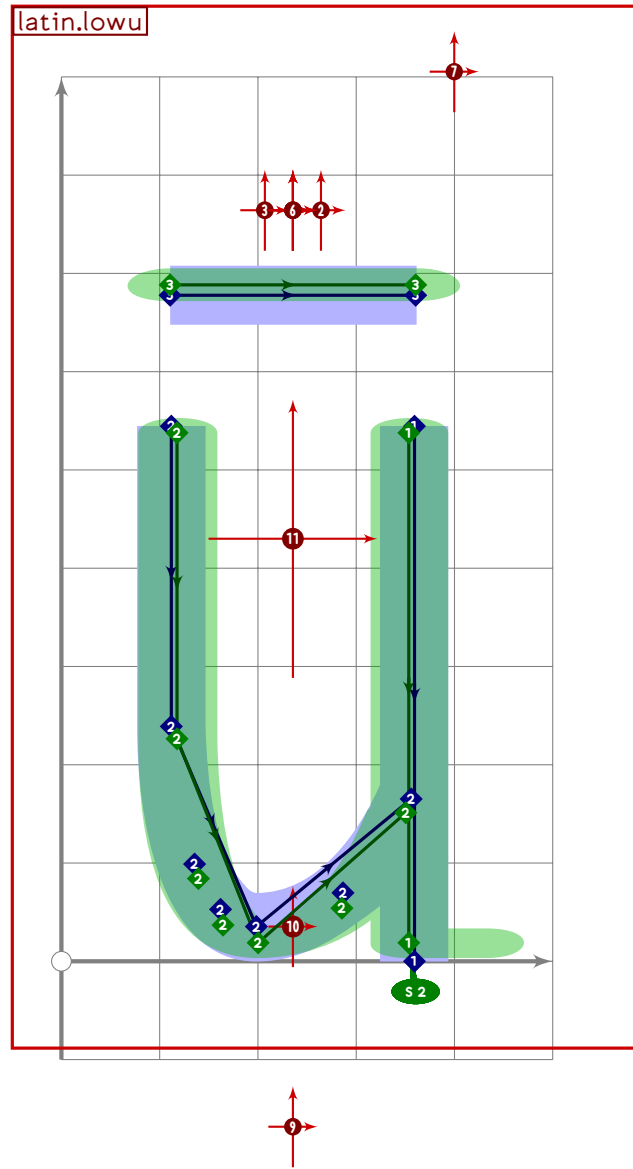
```

769 % t with bar
770 beginsuglyph("tbar";103);
771 latin.lowt;
772 push_stroke(((320,vmetric(0.35))-(620,vmetric(0.35)),
773   (1.6,1.6)-(1.6,1.6));
774 set_bosize(0,80);
775 tsu_render;
776 endsuglyph;
777

```

01





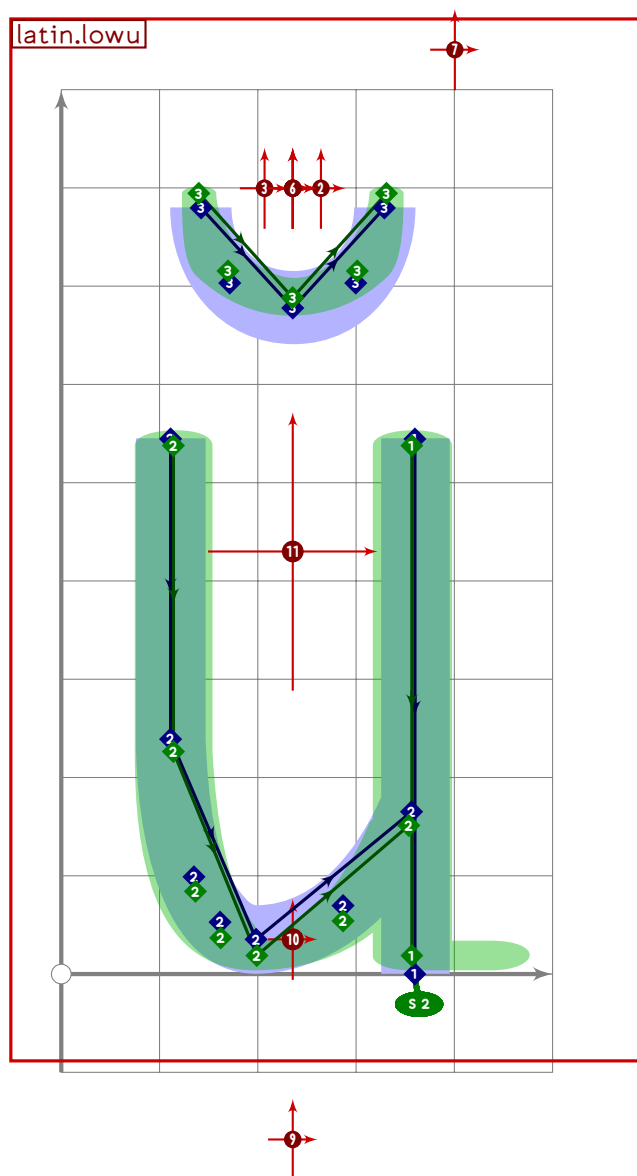
```

784 % u with macron
785 begintsuglyph("umacron",107);
786 tsu_accent.apply(latin.lowu)(tsu_accent.macron);
787 tsu_render;
788 endtsuglyph;
789

```

U+016D
tsuku.ubreve

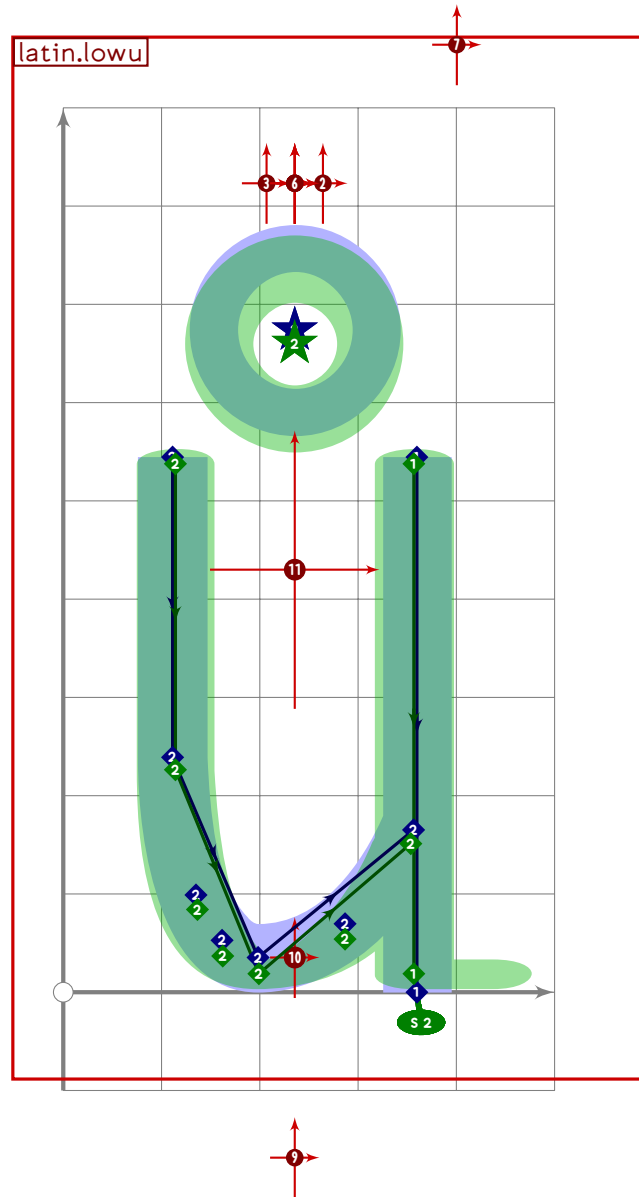
01



```

790 % u with breve
791 begintsuglyph("ubreve",109);
792   tsu_accent.apply(latin.lowu)(tsu_accent.breve);
793   tsu_render;
794 endtsuglyph;
795

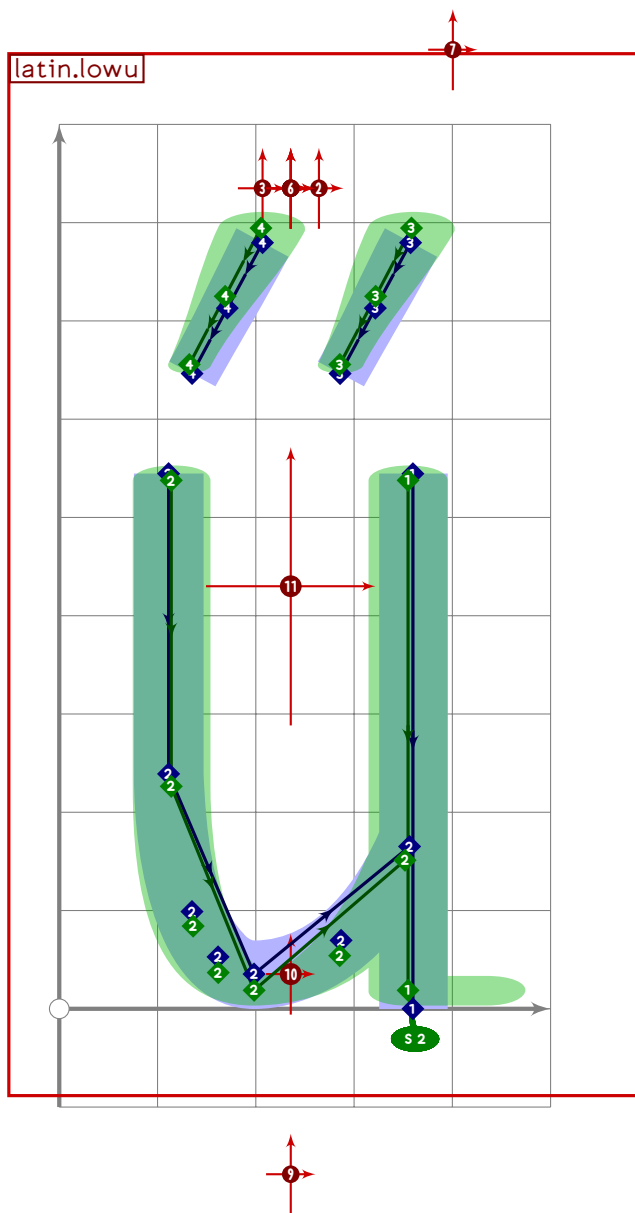
```



```

796 % u with ring above
797 begintsuglyph("uring",111);
798   tsu_accent.apply(latin.lowu)(tsu_accent.ringabove);
799   tsu_render;
800 endtsuglyph;
801

```

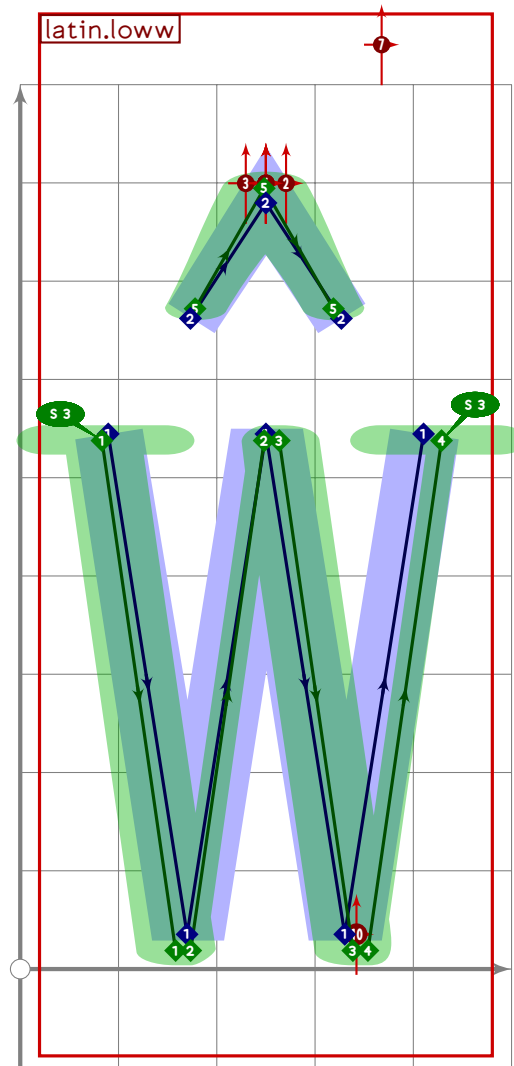


```

802 % u with Hungarian umlaut
803 begintsuglyph("uhungarumlaut";113);
804   tsu_accent.apply(latin.lowu)(tsu_accent.hungarian_umlaut);
805   tsu_render;
806 endtsuglyph;
807
808 % u with ogonek
809 begintsuglyph("uogonek";115);
810   latin.lowuogonek;
811   tsu_render;
812 endtsuglyph;
813

```

[see page 360]



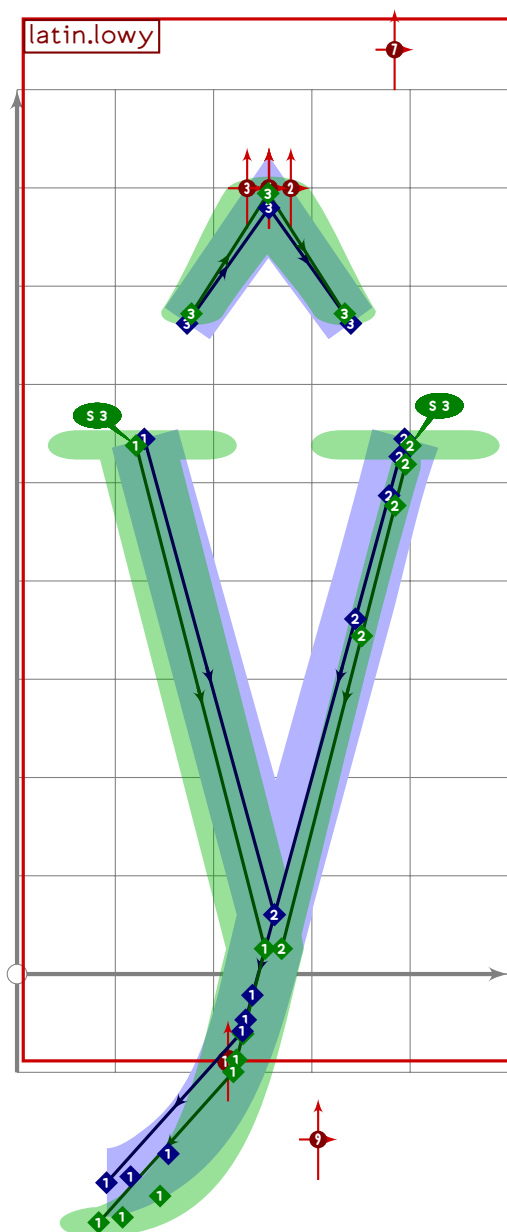
```

814 % w with circumflex
815 begintsuglyph("wcircumflex",117);
816 tsu_accent.apply(latin.loww)(tsu_accent.circumflex);
817 tsu_render;
818 endtsuglyph;
819

```

U+0177
tsuku.ycircumflex

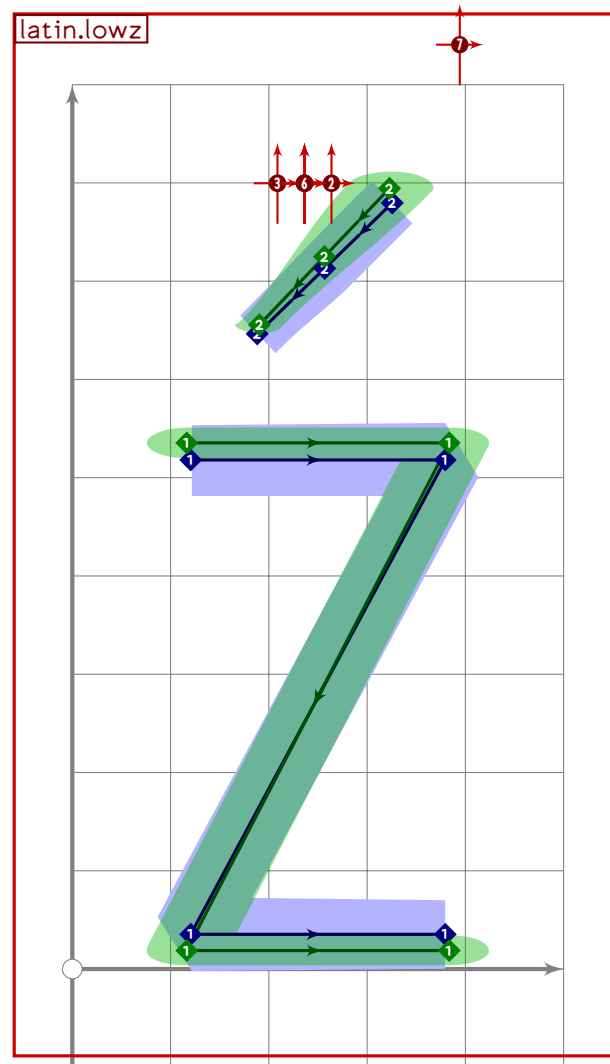
01



```

820 % y with circumflex
821 begintsuglyph("ycircumflex",119);
822   tsu_accent.apply(latin.lowy)(tsu_accent.circumflex);
823   tsu_render;
824 endtsuglyph;
825

```



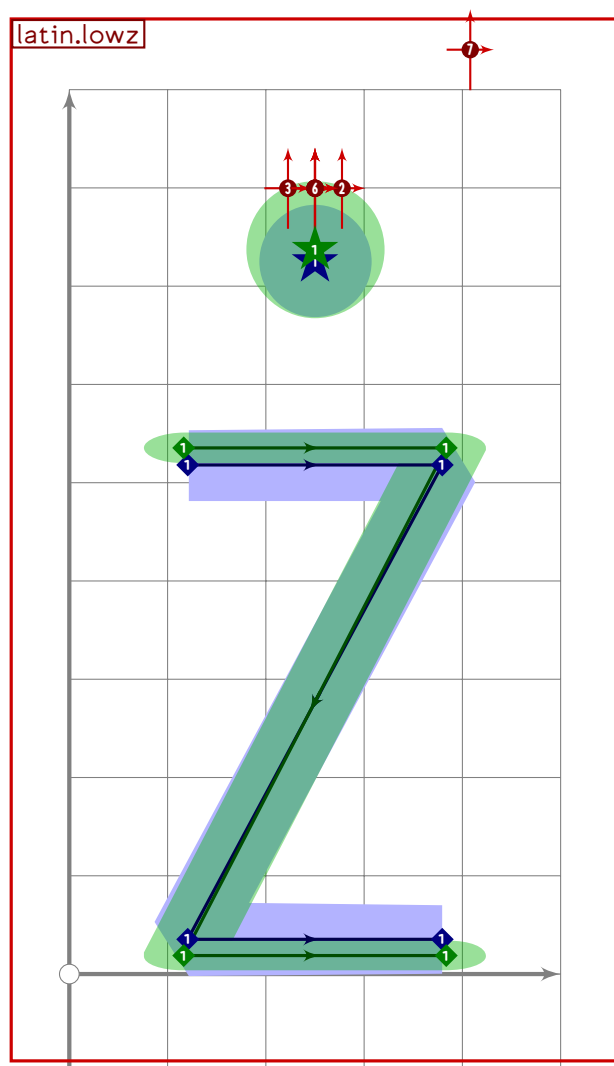
```

826 % z with acute
827 begintsuglyph("zacute",122);
828   tsu_accent.apply(latin.lowz)(tsu_accent.acute);
829   tsu_render;
830 endtsuglyph;
831

```

U+017C
tsuku.zdotaccent

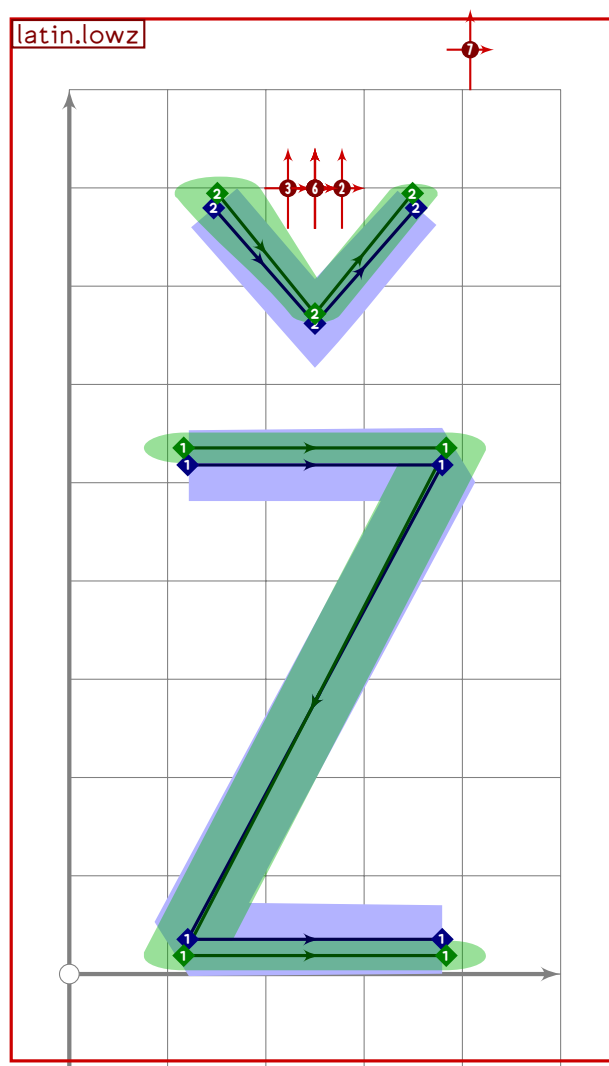
01



```

832 % z with dot
833 begintsuglyph("zdotaccent",124);
834 tsu_accent.apply(latin.lowz)(tsu_accent.dotabove);
835 tsu_render;
836 endtsuglyph;
837

```



```

838 % z with caron
839 begintsuglyph("zcaron";126);
840 tsu_accent.apply(latin.lowz)(tsu_accent.caron);
841 tsu_render;
842 endtsuglyph;
843
844 % long s
845 begintsuglyph("longs";127);
846 latin.lowlongs;
847 tsu_render;
848 endtsuglyph;
849
850
851

```

[see page 326]

Latin Extended A Other

```

852 % LATIN EXTENDED A OTHER
853
854 tsu_accent.clear_default_anchors;

```

```
855
856 % Dutch IJ ligature
857 begintsuglyph("IJ",50); [see page 265]
858 latin.upij;
859 tsu_render;
860 endtsuglyph;
861
862 % Dutch ij ligature
863 begintsuglyph("ij",51); [see page 310]
864 latin.lowij;
865 tsu_render;
866 endtsuglyph;
867
868 % OE ligature
869 begintsuglyph("OE",82); [see page 274]
870 latin.upoe;
871 tsu_render;
872 endtsuglyph;
873
874 % oe ligature
875 begintsuglyph("oe",83); [see page 319]
876 latin.lowoe;
877 tsu_render;
878 endtsuglyph;
879
880 _____
881
882 endfont;
883
884 _____
```

tsuku-02.mp

```
1 %
2 % Unicode page 02 (Spacing Modifier Letters) for Tsukurimashou
3 % Copyright (C) 2011, 2012, 2013 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 input latin-intro.mp;
36
37 % AUTODEPS
38 input accent.mp;
39 input latin.mp;
40 input ogonek.mp;
41
42 do_late_includes;
43
44 

---


45
```

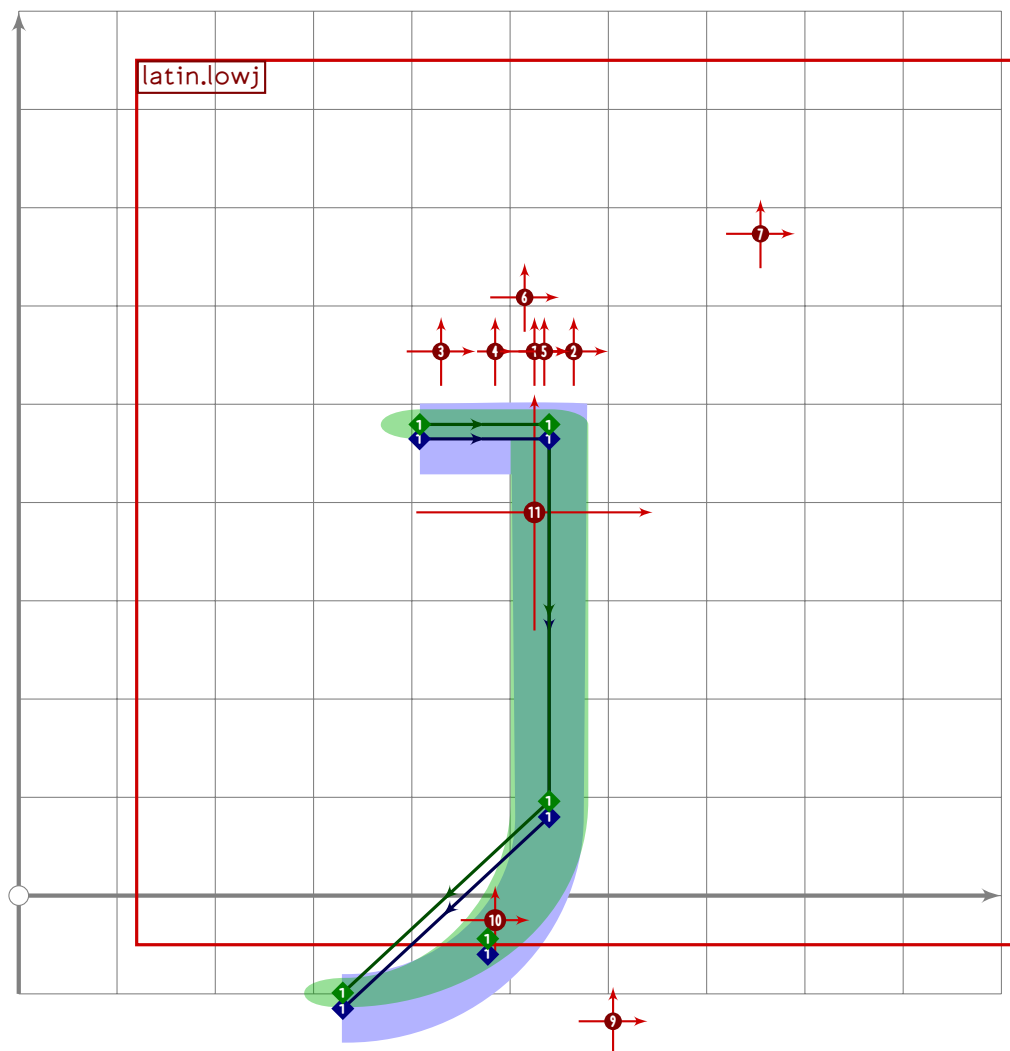
02

Latin Extended B

```
46 % LATIN EXTENDED B
47
48 tsu_accent.low_default_anchors;
49
```

U+0237
tsuku.uni0237

02



```

50 % j without dot
51 begintsuglyph("uni0237";55);
52   tsu_xform(identity shifted (70,0))(latin.lowj;
53     tsu_accent.shift_anchors(true)((0,0)));
54   pop_lcblob;
55   tsu_render;
56 endtsuglyph;
57
58 tsu_accent.clear_default_anchors;
59
60
61

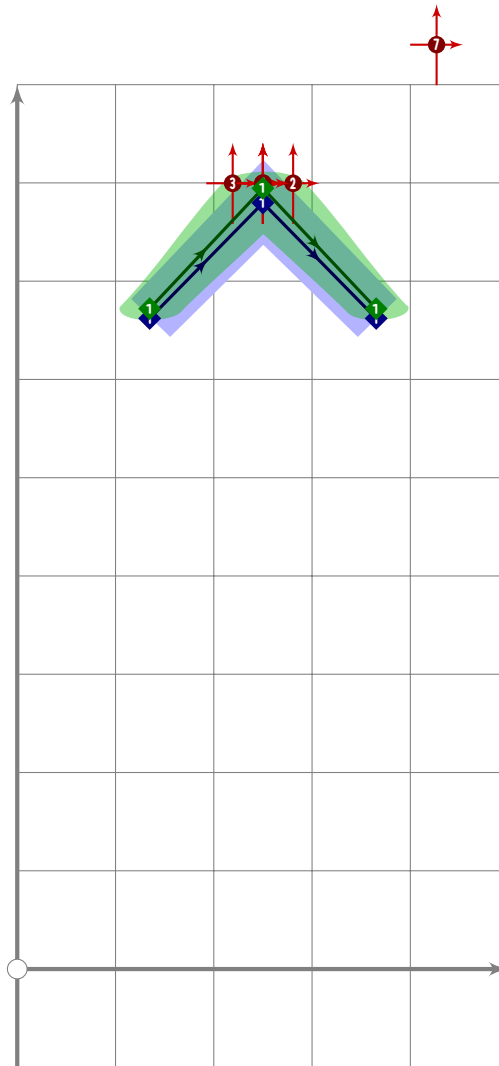
```

Spacing Modifier Letters

```

62 % SPACING MODIFIER LETTERS
63
64 tsu_rescale_half;
65

```

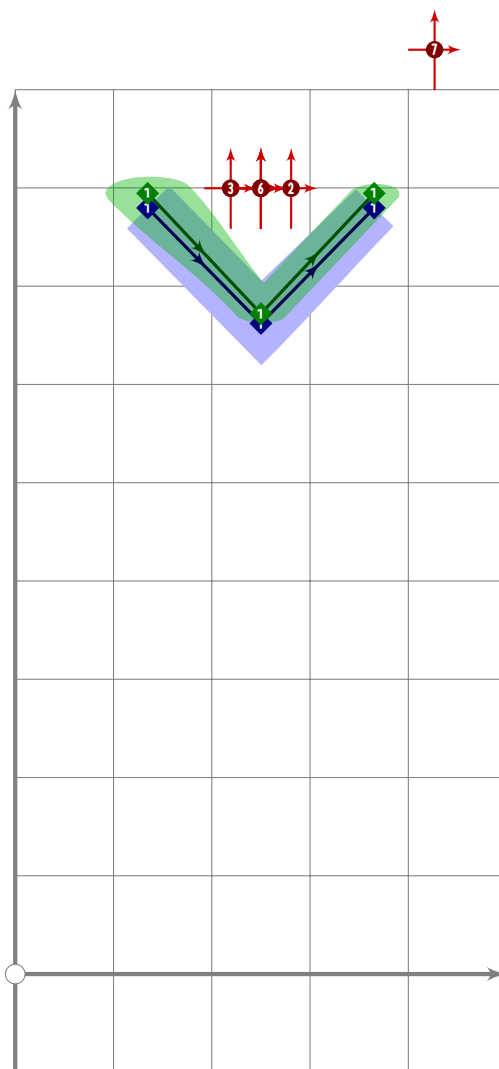
```

66 % circumflex accent
67 begint Suglyph("circumflex",198);
68   tsu_accent.apply()(tsu_accent.circumflex);
69   tsu_render;
70 endtsuglyph;
71

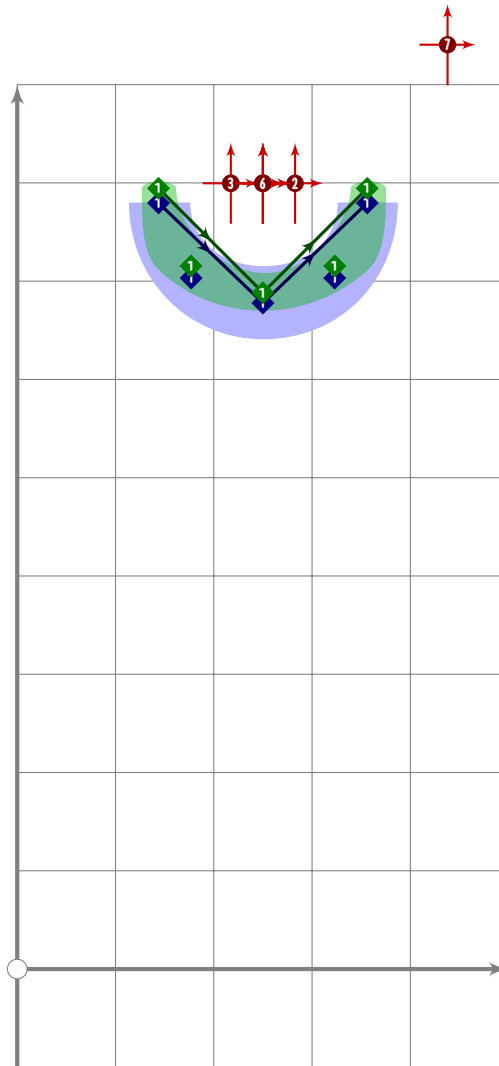
```

U+02C7
tsuku.caron

02



```
72 % caron
73 beginsuglyph("caron",199);
74 tsu_accent.apply()(tsu_accent.caron);
75 tsu_render;
76 endsuglyph;
77
```



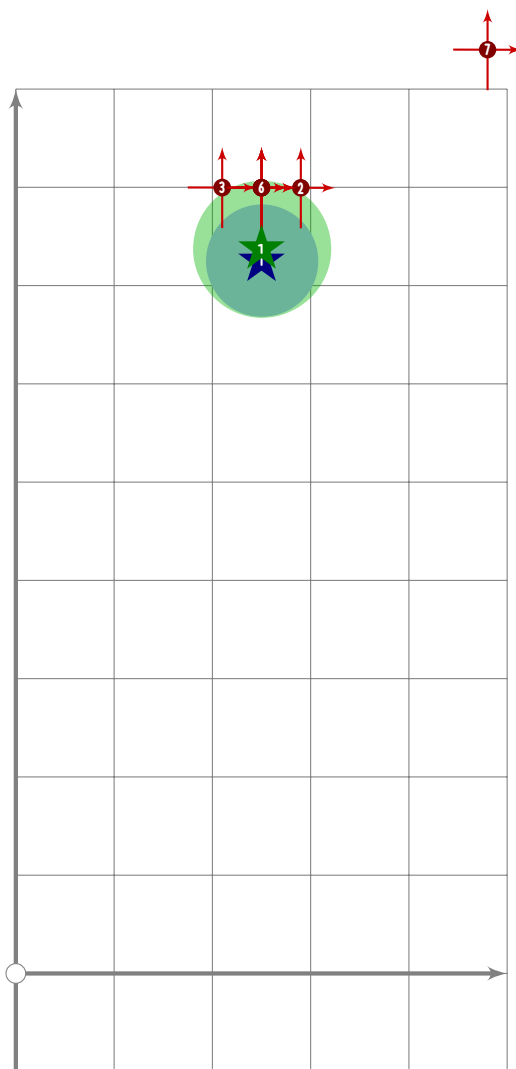
```

78 % breve
79 beginsuglyph("breve";216);
80 tsu_accent.apply()(tsu_accent.breve);
81 tsu_render;
82 endsuglyph;
83

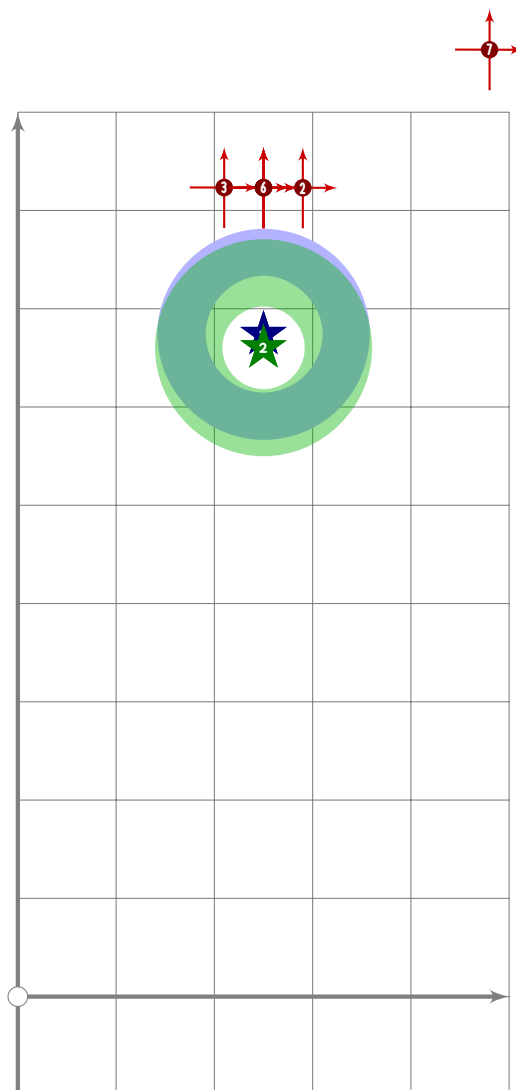
```

U+02D9
tsuku.dotaccent

02



```
84 % dot above
85 beginsuglyph("dotaccent";217);
86 tsu_accent.apply()(tsu_accent.dotabove);
87 tsu_render;
88 endsuglyph;
89
```



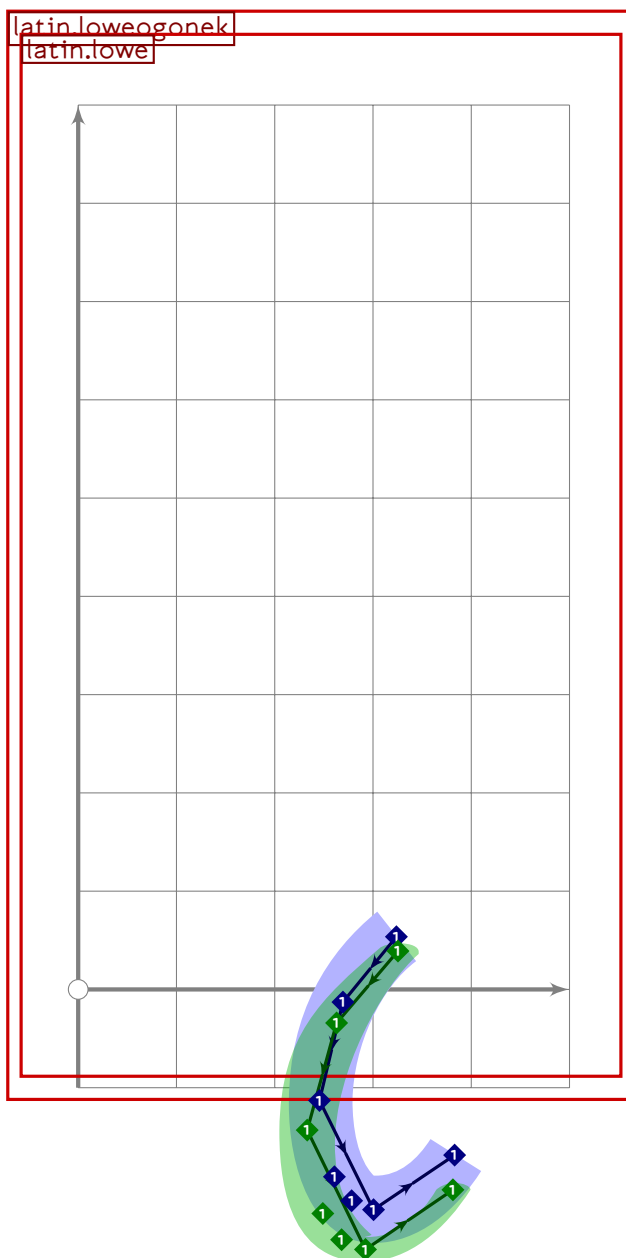
```

90 % ring above
91 begintsuglyph("ring";218);
92   tsu_accent.apply()(tsu_accent.ringabove);
93   tsu_render;
94 endtsuglyph;
95

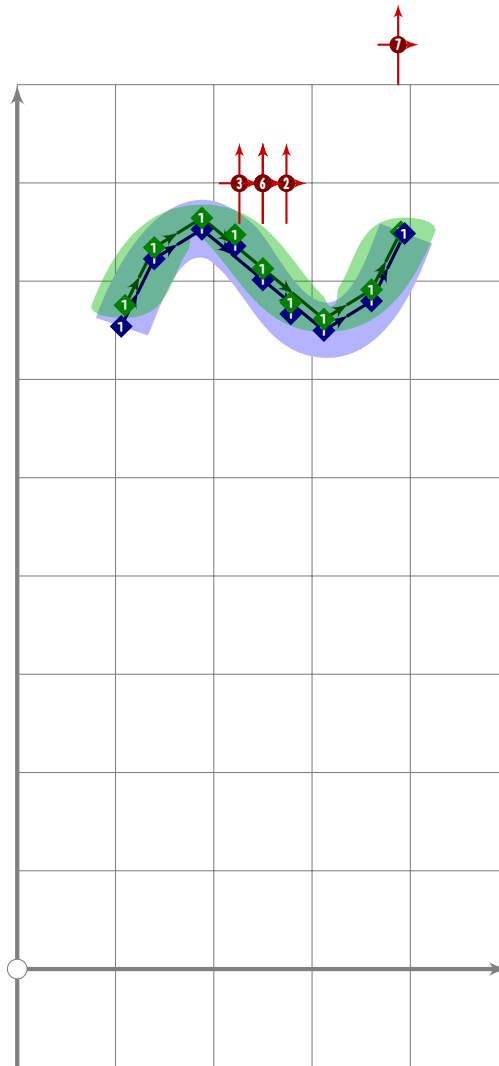
```

U+02DB
tsuku.ogonek

02



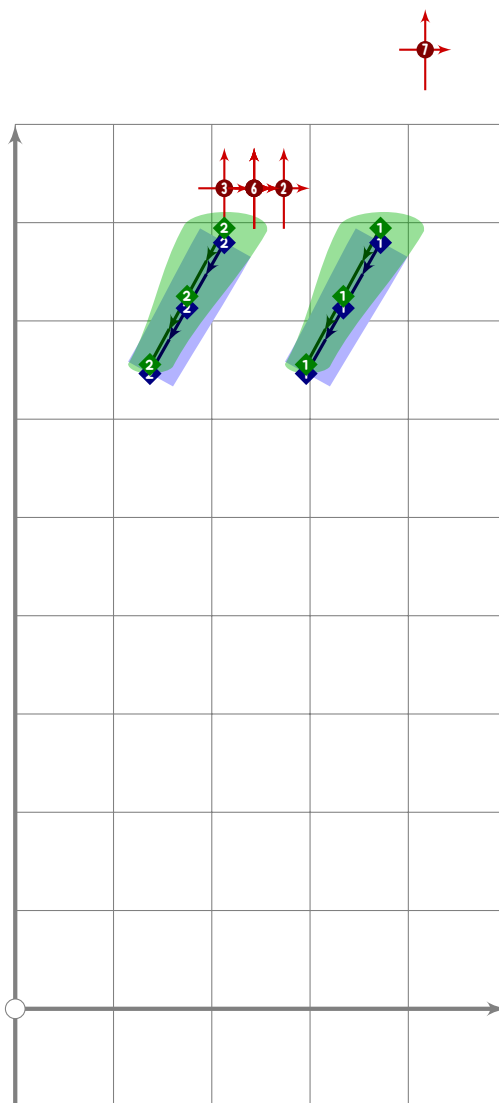
```
96 % ogonek
97 begintsuglyph("ogonek";219);
98 latin.loweogonek;
99 set_bosize(-1,0);
100 tsu_render;
101 endtsuglyph;
102
```



```

103 % small tilde
104 begintsuglyph("tilde";220);
105   tsu_accent.apply()(tsu_accent.tilde);
106   tsu_render;
107 endtsuglyph;
108

```



```

109 % double acute accent
110 begint Suglyph("hungarumlaut";221);
111   tsu_accent.apply()(tsu_accent.hungarian_umlaut);
112   tsu_render;
113 endtsuglyph;
114
115 _____
116
117 endfont;
118
119 _____

```


tsuku-03.mp

```
1 %
2 % Unicode page 03 (Combining Diacritical Marks) for Tsukurimashou
3 % Copyright (C) 2011, 2012, 2013 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 punct.mp;
40
41 do_late_includes;
42
43 

---

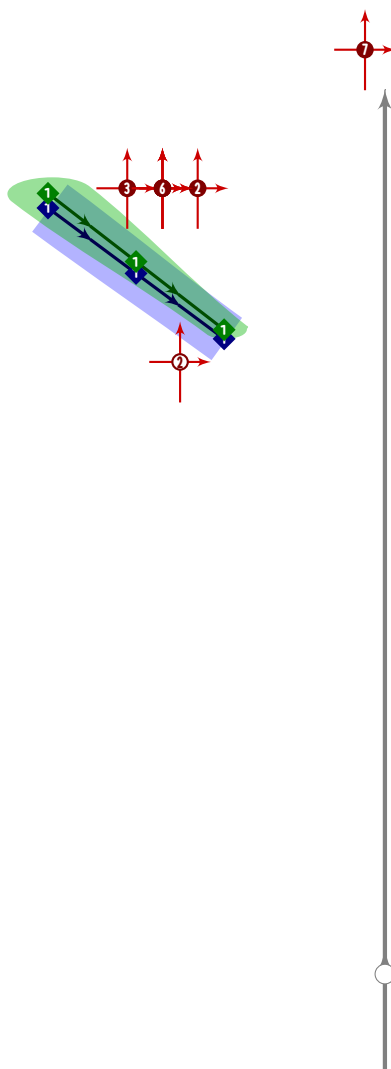

44
```

03

Combining Diacritical Marks

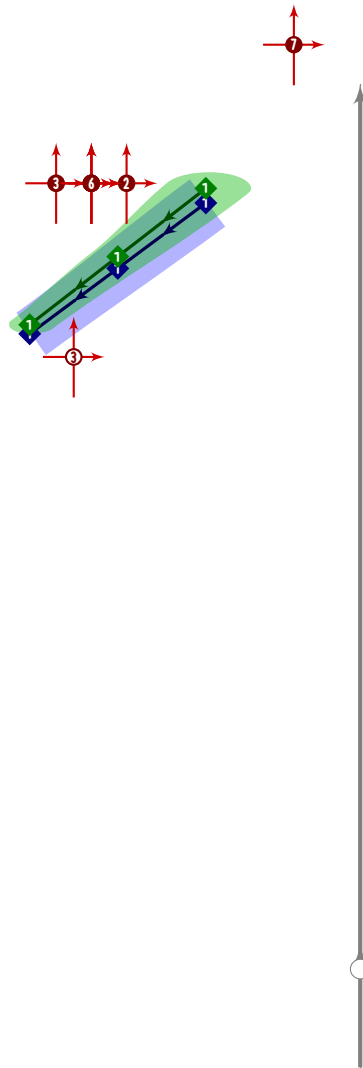
```
45 % COMBINING DIACRITICAL MARKS
46
47 tsu_rescale_combining_accent;
48
```

U+0300
tsuku.gravecomb

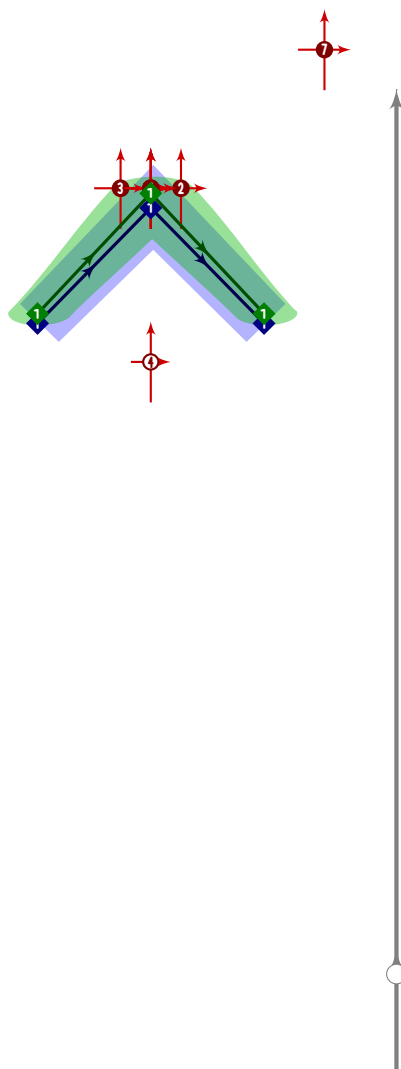


03

```
49 % grave accent
50 begintsuglyph("gravecomb";0);
51   tsu_accent.apply()(tsu_accent.grave);
52   push_anchor(-anc_grave,accent_default[anc_grave]);
53   tsu_render;
54 endtsuglyph;
55
```

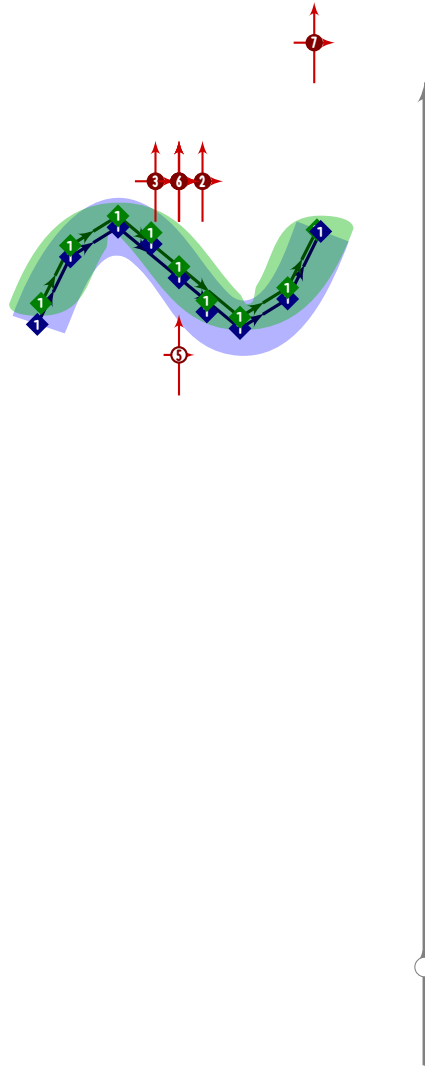


```
56 % acute accent
57 begintsuglyph("acutecomb",1);
58 tsu_accent.apply()(tsu_accent.acute);
59 push_anchor(-anc_acute,accent_default[anc_acute]);
60 tsu_render;
61 endtsuglyph;
62
```

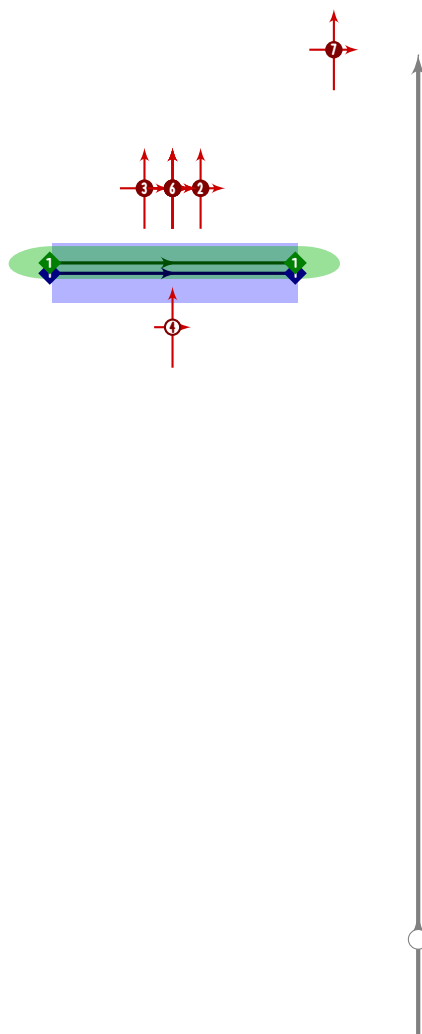


03

```
63 % circumflex accent
64 begintsuglyph("uni0302";2);
65   tsu_accent.apply()(tsu_accent.circumflex);
66   push_anchor(-anc_wide,accent_default[anc_wide]);
67   tsu_render;
68 endtsuglyph;
69
```

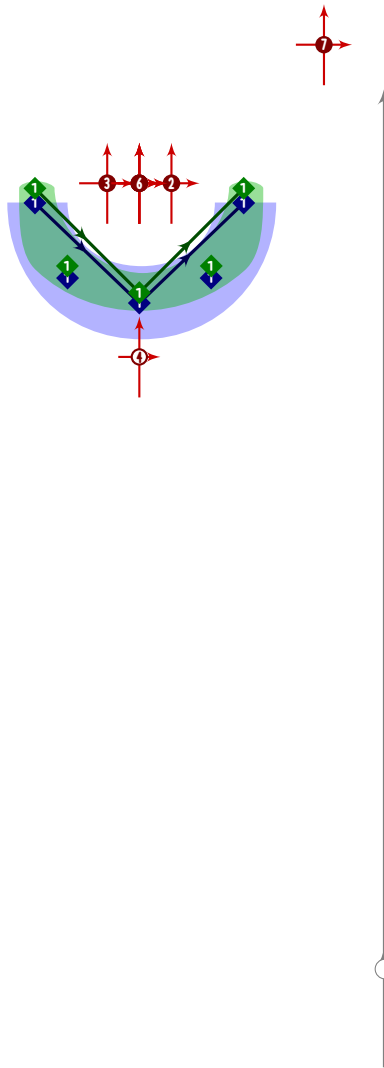


```
70 % tilde accent
71 begint Suglyph("tildecomb;3);
72 tsu_accent.apply()(tsu_accent.tilde);
73 push_anchor(-anc_tilde,accent_default[anc_tilde]);
74 tsu_render;
75 endtsuglyph;
76
```



03

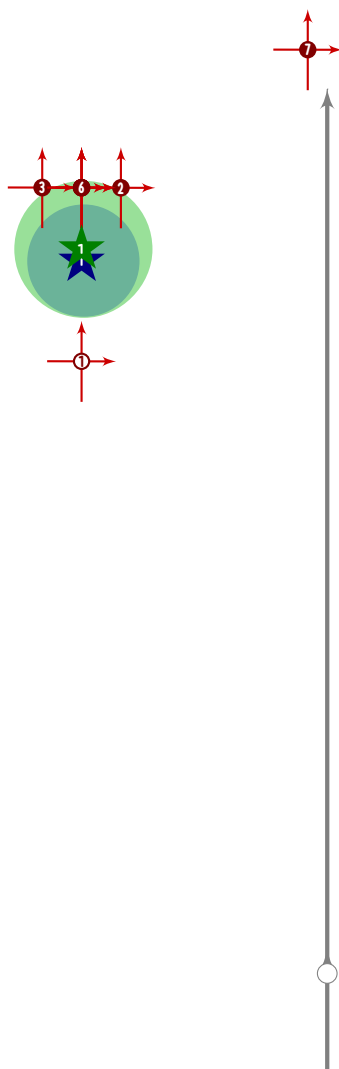
```
77 % macron
78 begint Suglyph("uni0304"4);
79   tsu_accent.apply()(tsu_accent.macron);
80   push_anchor(-anc_wide,accent_default[anc_wide]);
81   tsu_render;
82 endtsuglyph;
83
```



```

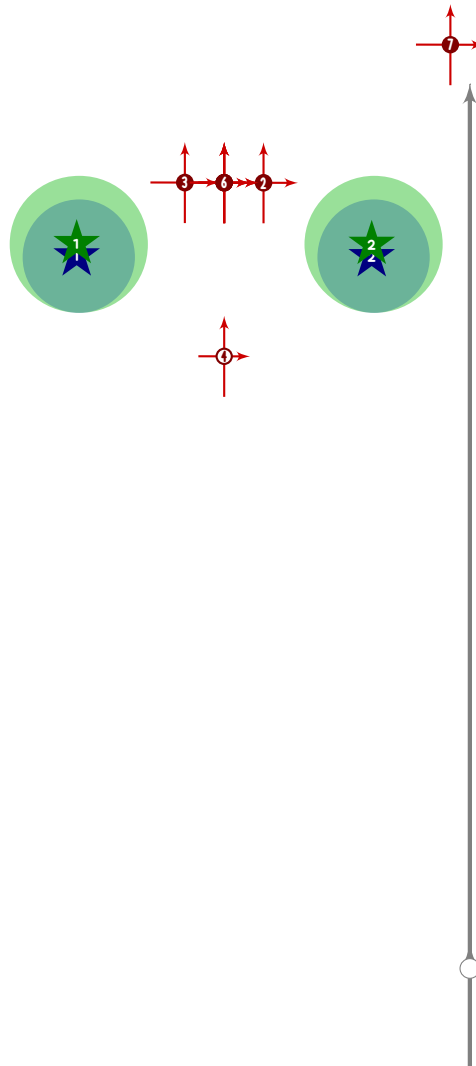
84 % breve
85 begintsuglyph("uni0306",6);
86   tsu_accent.apply()(tsu_accent.breve);
87   push_anchor(-anc_wide,accent_default[anc_wide]);
88   tsu_render;
89 endtsuglyph;
90

```



03

```
91 % dot above
92 begint Suglyph("uni0307";7);
93   tsu_accent.apply()(tsu_accent.dotabove);
94   push_anchor(-anc_upper,accent_default[anc_upper]);
95   tsu_render;
96 endtsuglyph;
97
```

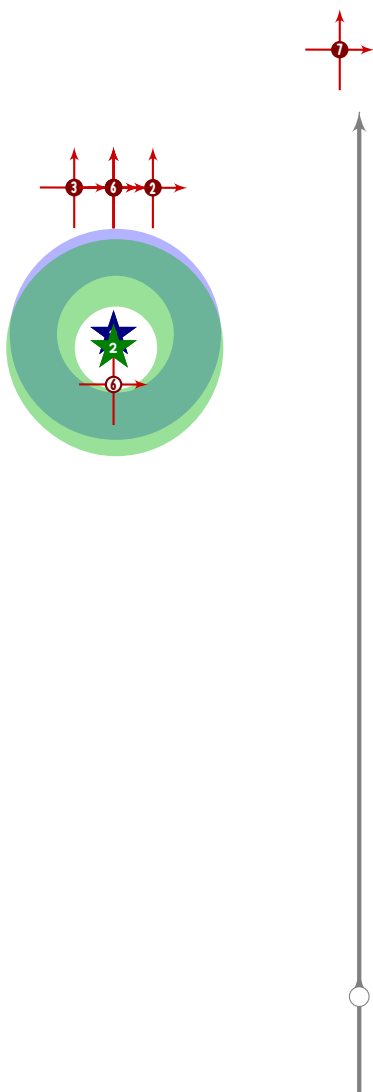



```

98 % umlaut/diaeresis
99 begintsuglyph("uni0308";8);
100 tsu_accent.apply()(tsu_accent.umlaut);
101 push_anchor(-anc_wide,accent_default[anc_wide]);
102 tsu_render;
103 endtsuglyph;
104
105 % 0309;hookabovecomb;COMBINING HOOK ABOVE
106

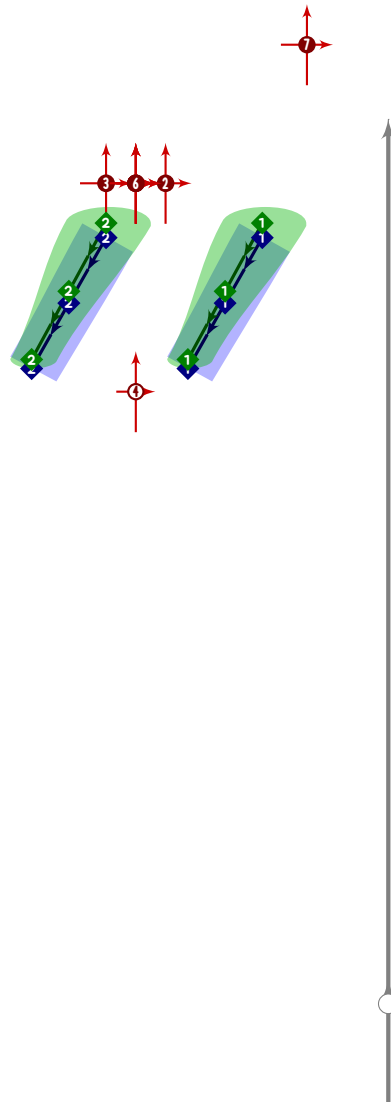
```

U+030A
tsuku.uni030A



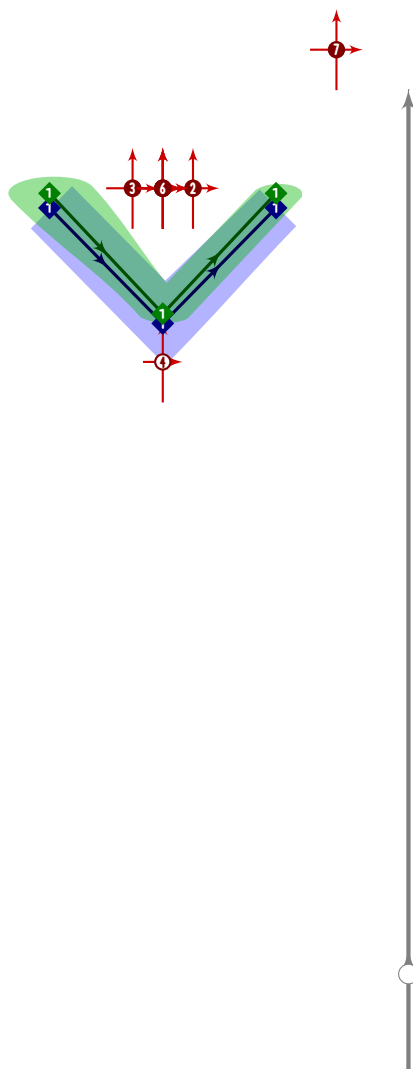
03

```
107 % ring above
108 begint Suglyph("uni030A";10);
109   tsu_accent.apply()(tsu_accent.ringabove);
110   push_anchor(-anc_ring,accent_default[anc_ring]);
111   tsu_render;
112 endtsuglyph;
113
```



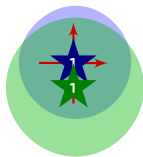
```
114 % double acute/hungarian umlaut
115 begintsuglyph("uni030B",11);
116 tsu_accent.apply()(tsu_accent.hungarian_umlaut);
117 push_anchor(-anc_wide,accent_default[anc_wide]);
118 tsu_render;
119 endtsuglyph;
120
```

U+030C
tsuku.uni030C



03

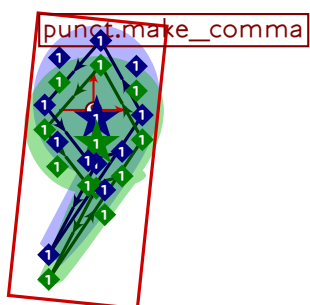
```
121 % caron/hacek
122 beginsuglyph("uni030C",12);
123   tsu_accent.apply()(tsu_accent.caron);
124   push_anchor(-anc_wide,accent_default[anc_wide]);
125   tsu_render;
126 endsuglyph;
127
```



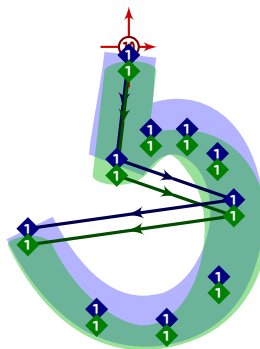
```
128 % dot below
129 beginsuglyph("dotbelowcomb";35);
130 tsu_accent.apply()(tsu_accent.dotbelow);
131 push_anchor(-anc_lower,accent_default[anc_lower]);
132 tsu_render;
133 endsuglyph;
134
```

U+0326
tsuku.uni0326

03



```
135 % comma below
136 begintsuglyph("uni0326";38);
137   tsu_accent.apply()(tsu_accent.commabelow);
138   push_anchor(-anc_lower,accent_default[anc_lower]);
139   tsu_render;
140 endtsuglyph;
141
```



```

142 % cedilla
143 beginTsuglyph("uni0327",39);
144   tsu_accent.apply()(tsu_accent.cedilla);
145   push_anchor(-anc_lower_connect,accent_default[anc_lower_connect]);
146   tsu_render;
147 endTsuglyph;
148
149 _____
150
151 endfont;
152
153 _____

```

tsuku-20.mp

```
1 %
2 % Unicode page 20 (Punctuation) 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 punct.mp;
39
40 do_late_includes;
41
42 

---

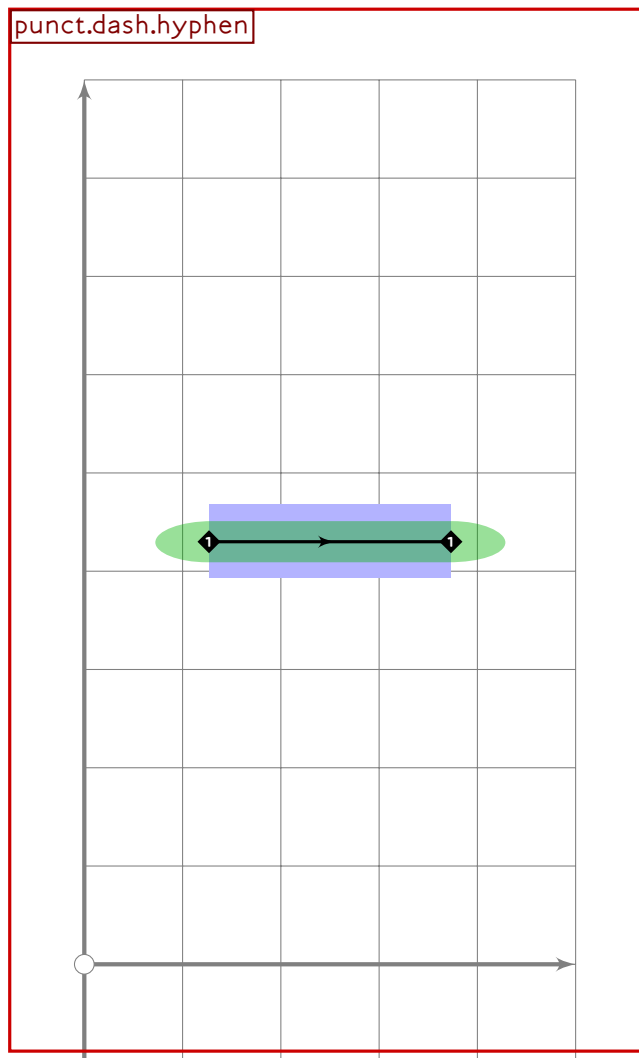

43
```

20

General Punctuation

```
44 % GENERAL PUNCTUATION
45
46 % WARNING changing rescale setting
47 tsu_rescale_half;
48
49 % hyphen
50 begintsuglyph("uni2010",16);
51   punct.dash.hyphen;
52   tsu_render;
53 endtsuglyph;
54
```

[see page 376]

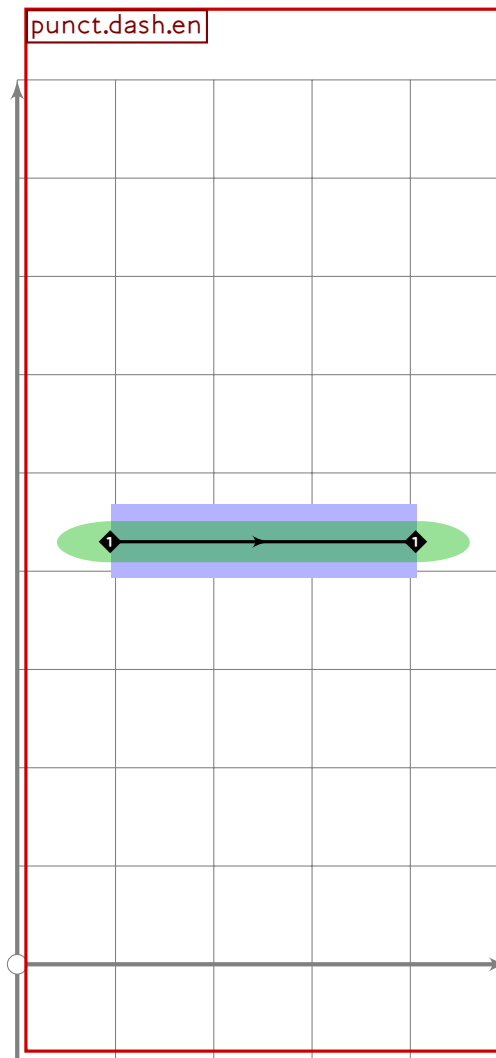


```

55 % non-breaking hyphen
56 begintsuglyph("uni2011";17);
57   punct.dash.hyphen;
58   tsu_render;
59 endtsuglyph;
60
61 % figure dash
62 begintsuglyph("figuredash";18);
63   punct.dash.en;
64   tsu_render;
65 endtsuglyph;
66

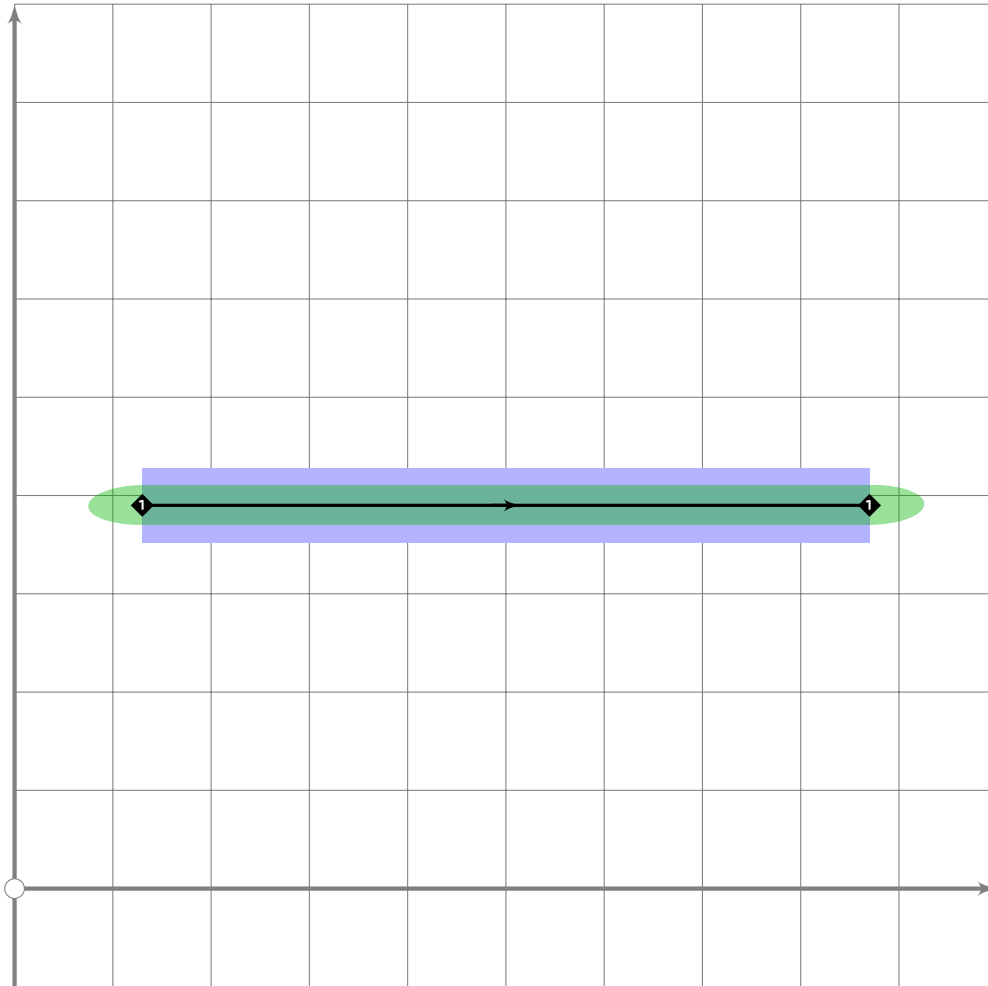
```

[see page 375]



```
67 % en dash
68 begintsuglyph("endash",19);
69   punct.dash.en;
70   tsu_render;
71 endtsuglyph;
72
73 % WARNING changing rescale setting
74 tsu_rescale_full;
75
76 % em dash
77 begintsuglyph("emdash",20);
78   punct.dash.em;
79   tsu_render;
80 endtsuglyph;
81
```

[see page 374]

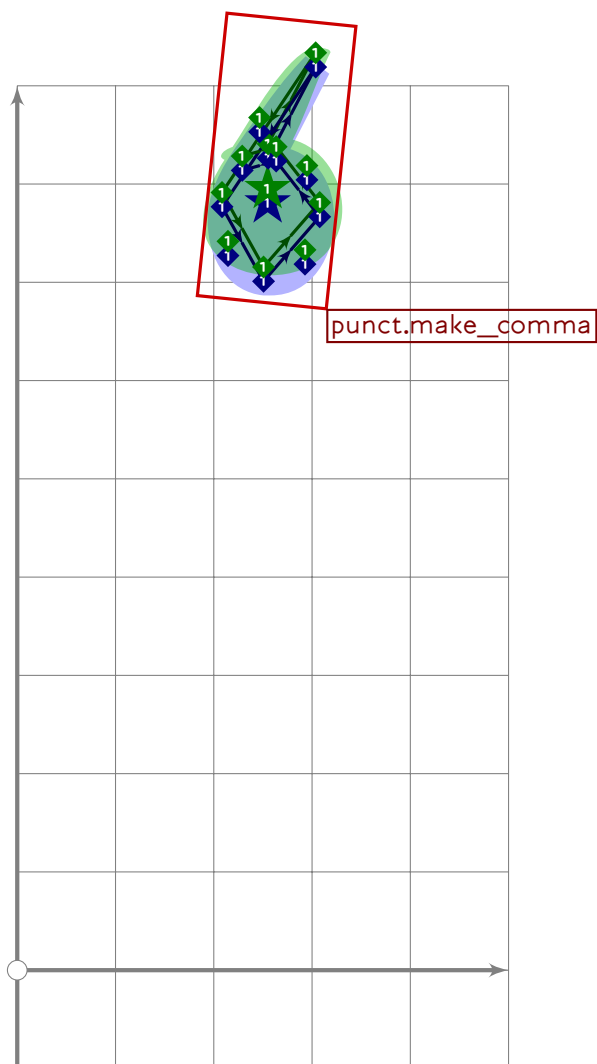


```

82 % horizontal bar
83 begintsuglyph("uni2015",21);
84   push_stroke((130,390)-(870,390),(2,2)-(2,2));
85   tsu_render;
86 endtsuglyph;
87
88 % WARNING changing rescale setting
89 tsu_rescale_half;
90

```

U+2018
tsuku.quoteleft

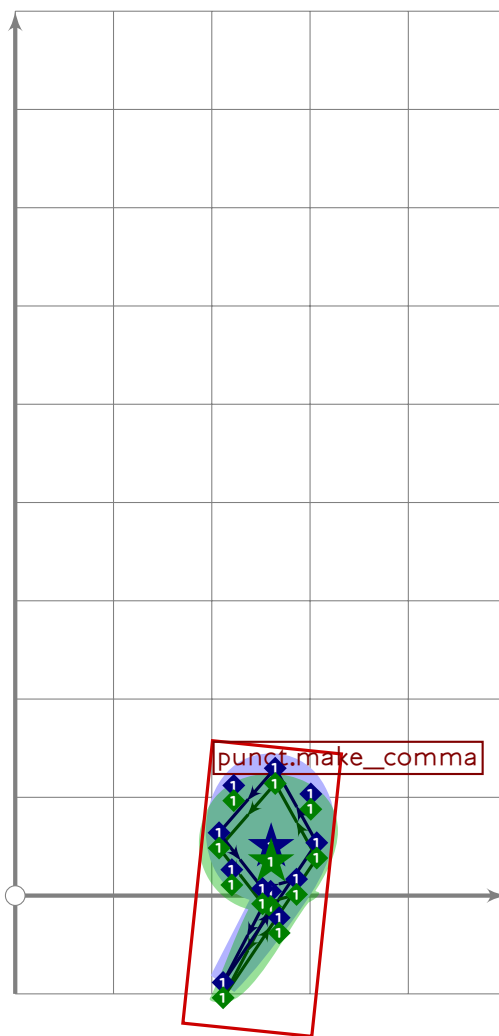


20

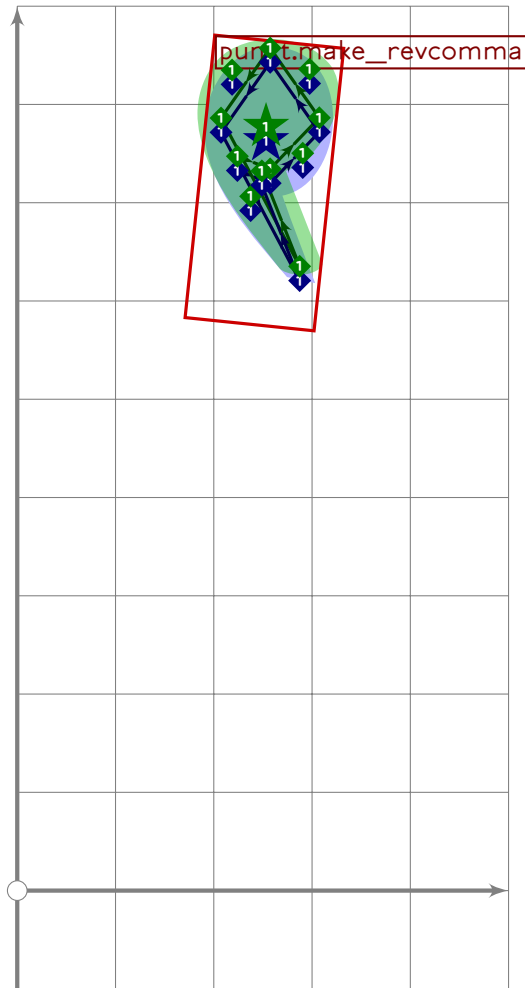
```
91 % high-6
92 begintsuglyph("quoteleft";24);
93   punct.make_comma((520,vmetric(0.94)),180);
94   tsu_render;
95 endtsuglyph;
96
```



```
97 % high-9
98 beginsuglyph("quoteright";25);
99   punct.make_comma((480,ymetric(0.94)),0);
100   tsu_render;
101 endsuglyph;
102
```

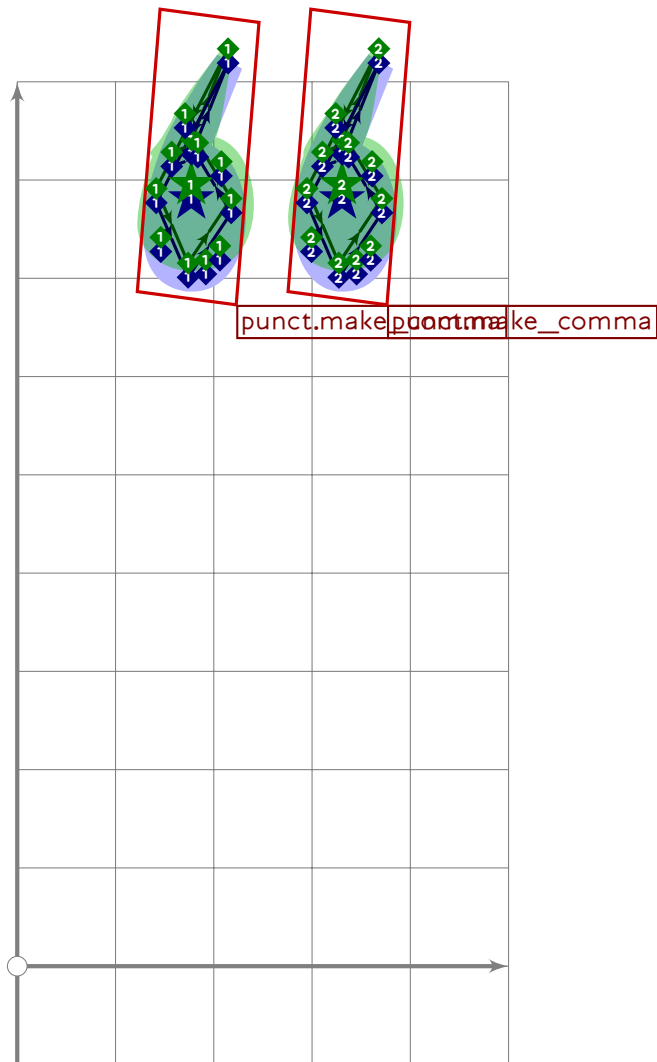


```
103 % low-9
104 begintsuglyph("quotesinglbase",26);
105   punct.make_comma((520,vmetric(0.03)),0);
106   tsu_render;
107 endtsuglyph;
108
```



```
109 % high-rev-9
110 begintsuglyph("quotereversed";27);
111   punct.make_revcomma((520,vmetric(0.94)),0);
112   tsu_render;
113 endtsuglyph;
114
```

U+201C
tsuku.quotedblleft

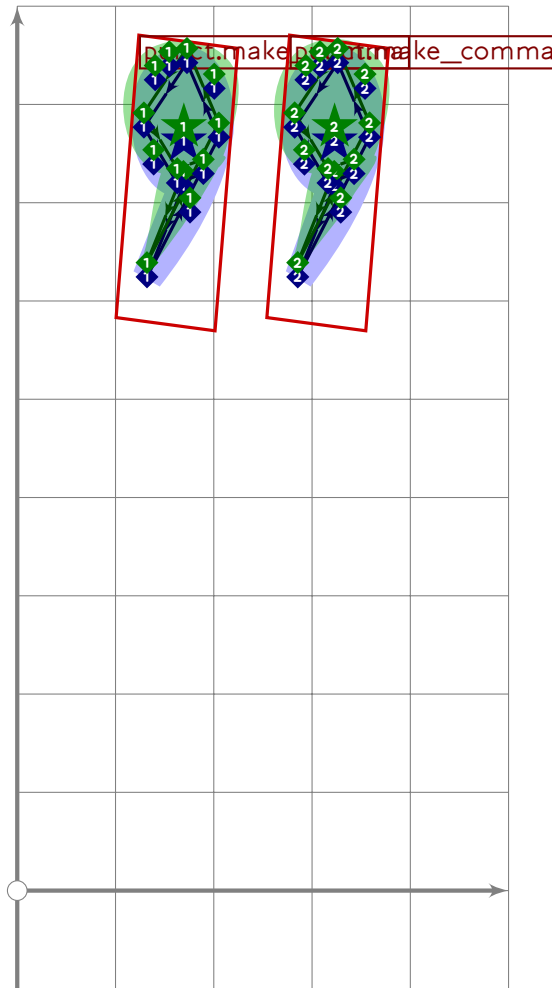


20

```

115 % high-66
116 begintsuglyph("quotedblleft";28);
117   punct.make_comma((520-tsu_punct_size,vmetric(0.94)),180);
118   punct.make_comma((520+tsu_punct_size,vmetric(0.94)),180);
119   tsu_render;
120 endsuglyph;
121

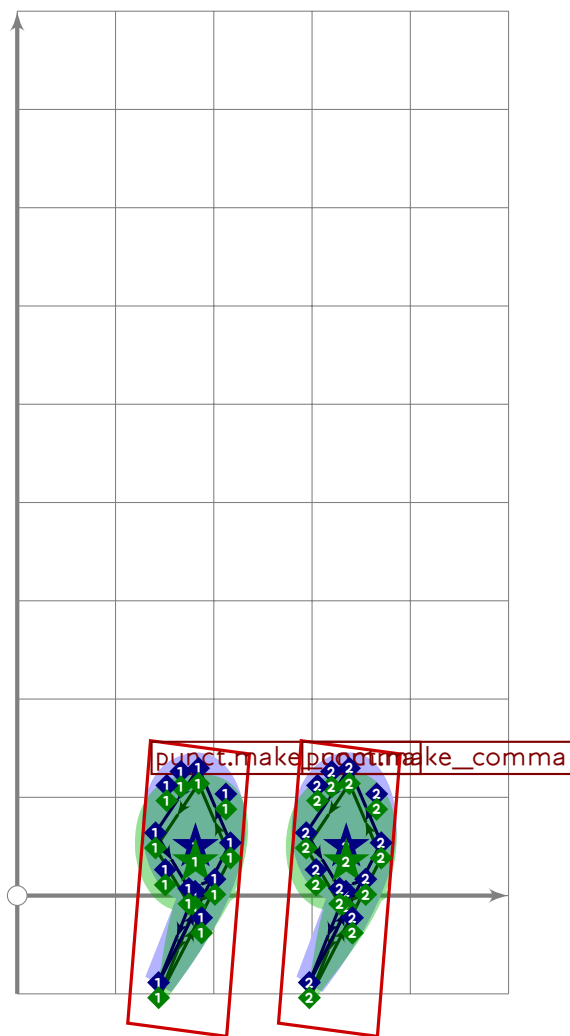
```

```

122 % high-99
123 beginsuglyph("quotedblright";29);
124   punct.make_comma((480-tsu_punct_size,vmetric(0.94)),0);
125   punct.make_comma((480+tsu_punct_size,vmetric(0.94)),0);
126   tsu_render;
127 endsuglyph;
128

```



```

129 % low-99
130 begintsuglyph("quotedblbase";30);
131 punct.make_comma((520-tsu_punct_size,vmetric(0.03)),0);
132 punct.make_comma((520+tsu_punct_size,vmetric(0.03)),0);
133 tsu_render;
134 endtsuglyph;
135

```



```

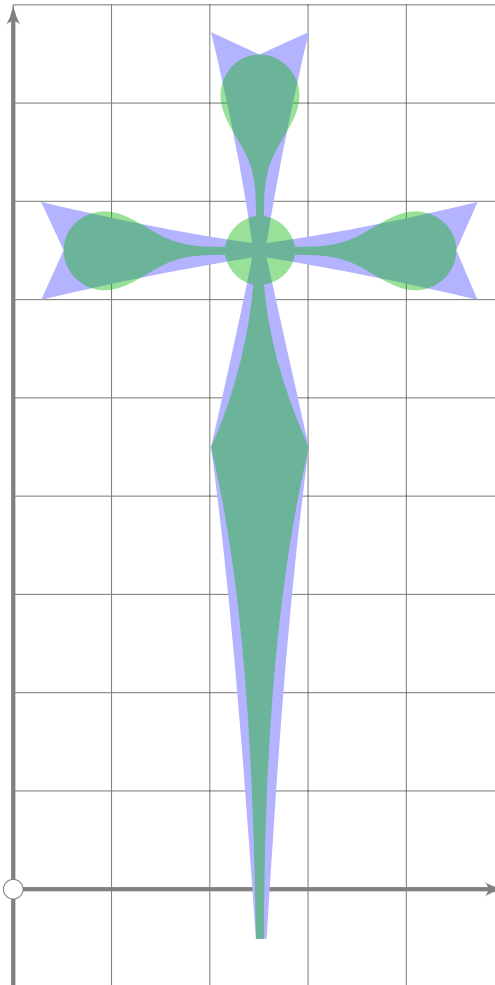
136 % high-rev-99
137 begint Suglyph("quotedblreversed";31);
138 punct.make_revcomma((520-tsu_punct_size,vmetric(0.94)),0);
139 punct.make_revcomma((520+tsu_punct_size,vmetric(0.94)),0);
140 tsu_render;
141 endtsuglyph;
142
143 % WARNING changing rescale setting
144 tsu_rescale_native_narrow;
145
146 vardef dagger_spur =
147   if sharp_corners:
148     dagger_x:=(tsu_punct_size-60)*1.25;
149     if dagger_x<12: dagger_x:=15; fi;
150     (4,mincho*30){curl 0}..
151     (0.5[(0,mincho*20),(dagger_x,222-mincho*72)]+mincho*(-7,4))..
152     {curl 1}(dagger_x,222-mincho*72)-(0,200)-
153     (-dagger_x,222-mincho*72){curl 1}..
154     (0.5[(0,mincho*20),(-dagger_x,222-mincho*72)]+mincho*(7,4))..
155     {curl 0}(-4,mincho*30)-cycle
156   else:

```

U+2020

tsuku.dagger

```
157 dagger_x:=tsu_punct_size-60;
158 if dagger_x<12: dagger_x:=15; fi;
159 (4,mincho*30){curl 0}..
160 (0.5[(0,mincho*20),(dagger_x,160)]+mincho*(-74))..
161 (dagger_x,160)..(0,200)..(-dagger_x,160)..
162 (0.5[(0,mincho*20),(-dagger_x,160)]+mincho*(74))..
163 {curl 0}(-4,mincho*30)-cycle
164 fi
165 enddef;
166
```

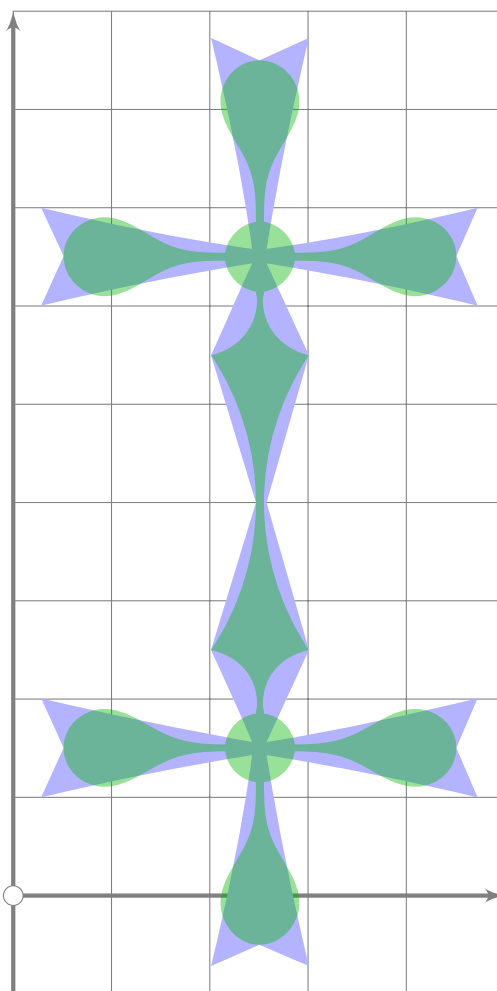


```
167 % dagger
168 begintsuglyph("dagger",32);
169 begingroup
170 save tsx;
171 transform tsx;
172
173 tsx:=tsu_slant_xform;
174
175 dangerousFill (dagger_spur rotated 90 shifted (250,650)
176 transformed tsx);
177 dangerousFill (dagger_spur shifted (250,650)
```

```

178     transformed tsx);
179     dangerousFill (dagger_spur rotated -90 shifted (250,650)
180     transformed tsx);
181     dangerousFill (fullcircle scaled (20+mincho*50) shifted (250,650)
182     transformed tsx);
183
184     x1=x5=246;
185     x3=250-(tsu_punct_size-60)*1.25;
186     x2=x4=0.5[x1,x3];
187     x6=x10=500-x1;
188     x7=x9=500-x2;
189     x8=500-x3;
190     x11=x12=0.4[250,x3];
191     x13=x14=500-x11;
192
193     y1=y10=650;
194     y2=y9=550;
195     y3=y8=450;
196     y4=y7=250;
197     y5=y6=-50;
198     y11=y14=535;
199     y12=y13=280;
200
201     dangerousFill (interpath(mincho,
202     z1-z2-z3-z4-z5-z6-z7-z8-z9-z10-cycle,
203     z1{curl 1}..z11.{curl 1}z3{curl 1}..z12.{curl 0}z5-
204     z6{curl 0}..z13.{curl 1}z8{curl 1}..z14.{curl 1}z10-cycle)
205     transformed tsx);
206 endgroup;
207 endtsuglyph;
208

```



```

209 % double dagger
210 begintsuglyph("daggerdbl",33);
211 begingroup
212   save x,y,tsx;
213   numeric x[],y[];
214   transform tsx;
215
216   tsx:=tsu_slant_xform;
217
218   dangerousFill (dagger_spur rotated 90 shifted (250,650)
219     transformed tsx);
220   dangerousFill (dagger_spur shifted (250,650)
221     transformed tsx);
222   dangerousFill (dagger_spur rotated -90 shifted (250,650)
223     transformed tsx);
224   dangerousFill (fullcircle scaled (20*mincho*50) shifted (250,650)
225     transformed tsx);
226   dangerousFill (dagger_spur rotated -90 shifted (250,150)
227     transformed tsx);
228   dangerousFill (dagger_spur rotated 180 shifted (250,150)
229     transformed tsx);

```

```

230     dangerousFill (dagger_spur rotated 90 shifted (250,150)
231         transformed tsx);
232     dangerousFill (fullcircle scaled (20*mincho*50) shifted (250,150)
233         transformed tsx);
234
235     x1=x4=x7=246;
236     x3=x5=250-(tsu_punct_size-60)*1.25;
237     x2=x6=0.5[x1,x3];
238     x8=x11=x14=500-x1;
239     x9=x13=500-x2;
240     x10=x12=500-x3;
241
242     y1=y14=650-mincho*30;
243     y3=y12=550;
244     y2=y13=0.5[y1,y3];
245     y4=y11=400;
246     y5=y10=800-y3;
247     y6=y9=800-y2;
248     y7=y8=800-y1;
249
250     x15=x16=x2+7*mincho;
251     x17=x18=500-x15;
252
253     y15=y18=y2-20*mincho;
254     y16=y17=800-y15;
255
256     dangerousFill (interpath(mincho,
257         z1-z2-z3-z4-z5-z6-z7-z8-z9-z10-z11-z12-z13-z14-cycle,
258         z1{curl 1}..z15.{curl 1}z3{curl 1}..z4..
259         {curl 1}z5{curl 1}..z16.{curl 1}z7-
260         z8{curl 1}..z17.{curl 1}z10{curl 1}..z11..
261         {curl 1}z12{curl 1}..z18.{curl 1}z14-cycle)
262         transformed tsx);
263     endgroup;
264 endtsuglyph;
265
266 % WARNING changing rescale setting
267 tsu_rescale_full;
268
269 % euro symbol
270 begint Suglyph("Euro";172);
271     punct.euro;
272     tsu_render;
273 endtsuglyph;
274
275
276
277 endfont;

```

[see page 378]

278

279

tsuku-21.mp

```
1 %
2 % Unicode page 21 (Symbols) for Tsukurimashou
3 % Copyright (C) 2011, 2012 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---

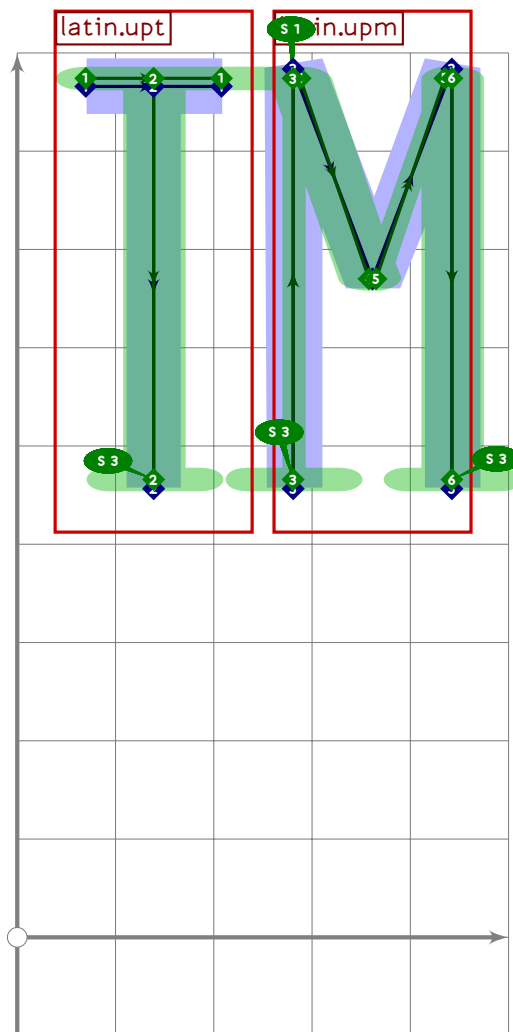

32
33 beginfont
34
35 input latin-intro.mp;
36
37 % AUTODEPS
38 input latin.mp;
39 input punct.mp;
40
41 do_late_includes;
42
43 

---


44
```

Symbols Required By Mes-1

```
45 % SYMBOLS REQUIRED BY MES-1
46
47 % WARNING changing rescale setting
48 tsu_rescale_half;
49
```



```

50 % trademark symbol
51 begintsuglyph("trademark";34);
52 tsu_xform(identity scaled 0.5 shifted (0,400))(latin.upt);
53 numeric x[],y[];
54 tsu_xform(identity scaled 0.5 shifted (500,400))(latin.upm);
55 tsu_render;
56 endtsuglyph;
57
58 % ohm (resistance unit) symbol
59 begintsuglyph("uni2126";38);
60 punct.ohm;
61 tsu_render;
62 endtsuglyph;
63
64 % Note: 0x5B through 0x5E, which are x/8 fractions, are assembled by the
65 % assemble-font script
66
67 % WARNING changing rescale setting
68 tsu_rescale_full;
69

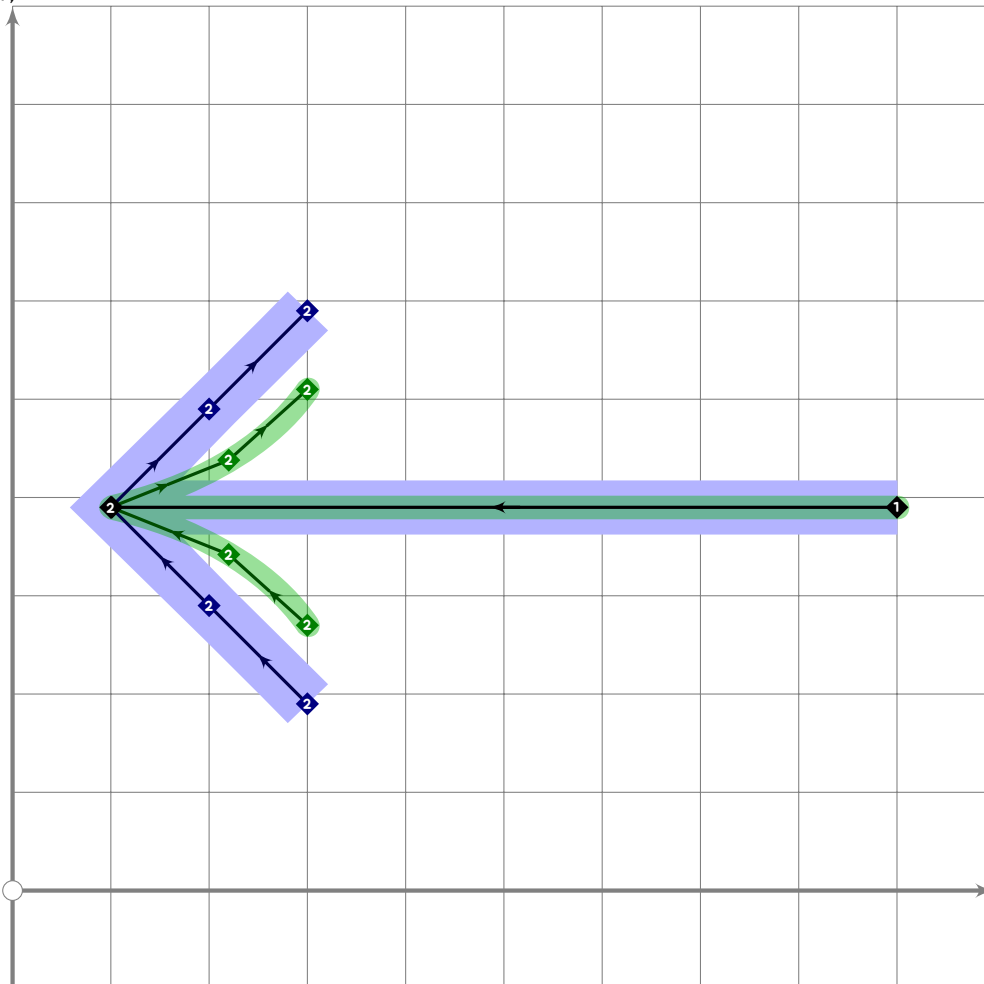
```

[see page 386]

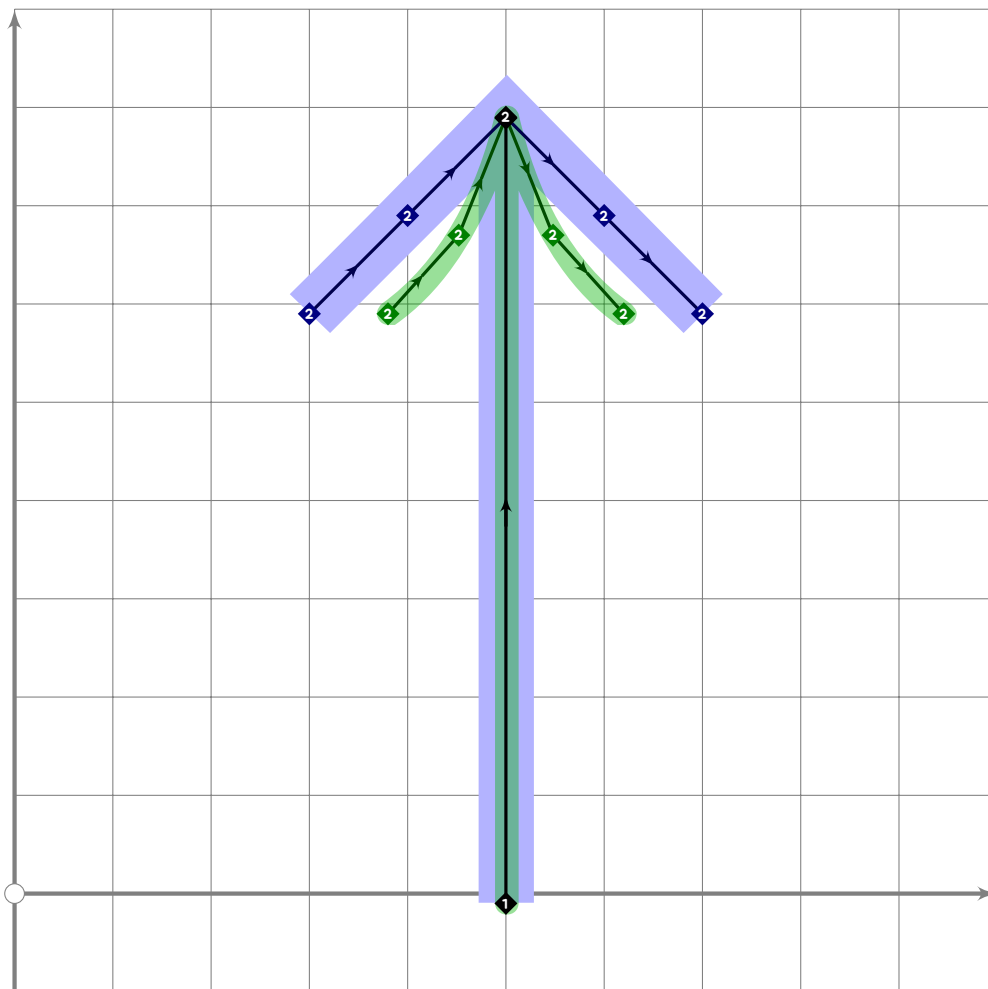
```

86
87 begint Suglyph("arrowleft";144);
88   arrow(180);
89   tsu_render;
90 endtsuglyph;

```

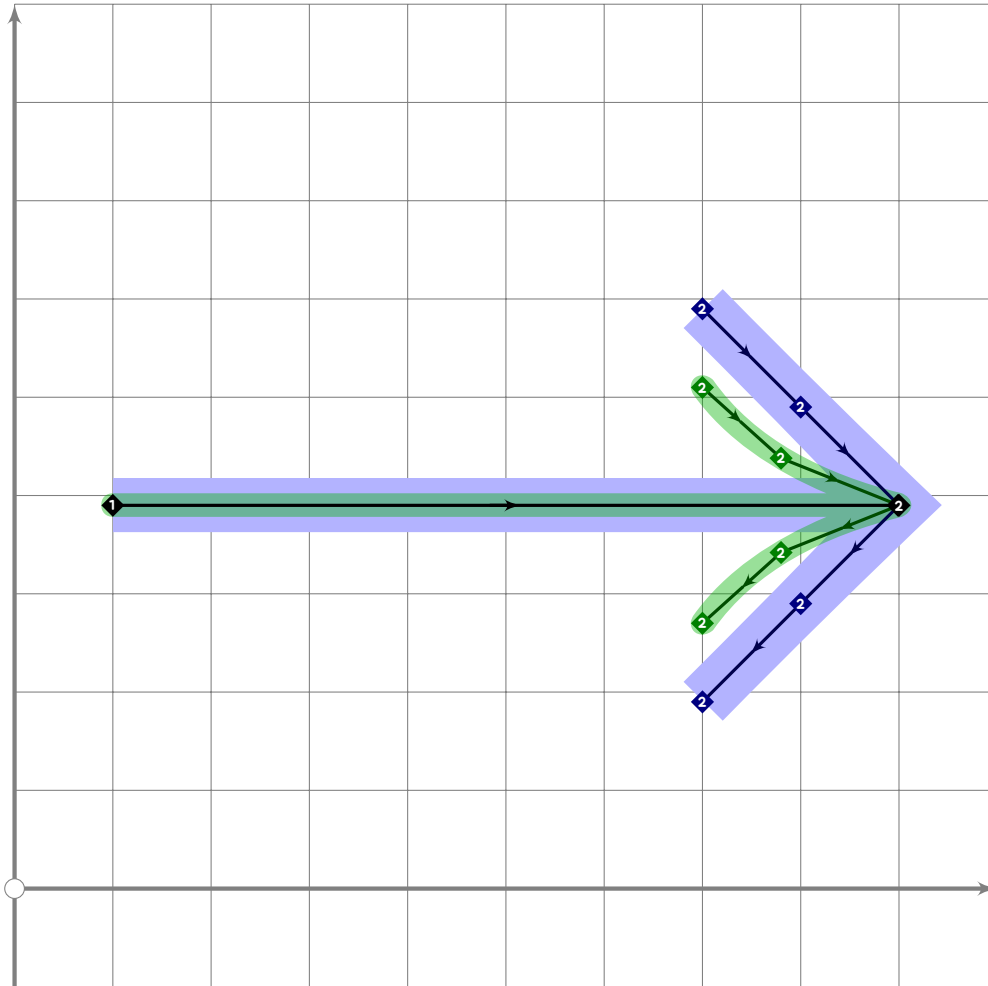


U+2191
tsuku.arrowup



21

```
91  
92 begintsuglyph("arrowup",145);  
93   arrow(90);  
94   tsu_render;  
95 endtsuglyph;
```

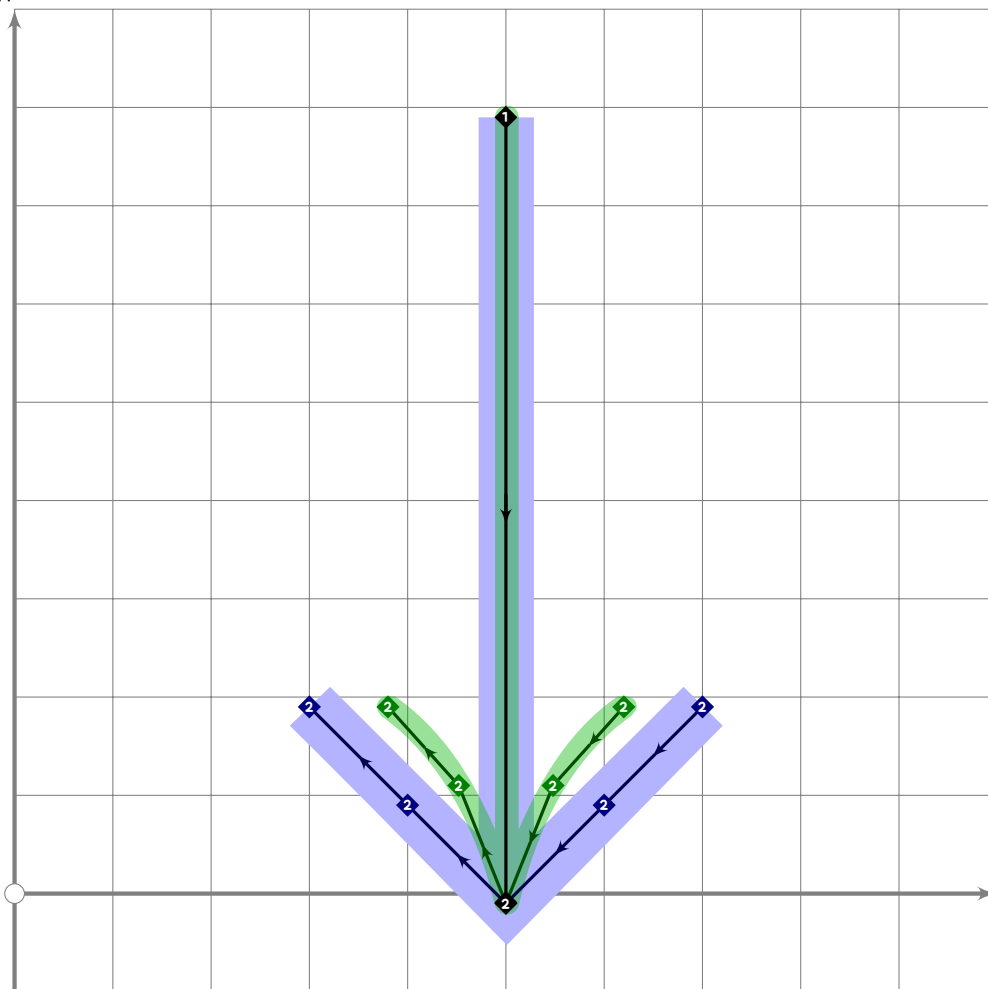


```

96
97 begintsuglyph("arrowright",146);
98   arrow(0);
99   tsu_render;
100 endtsuglyph;

```

U+2193
tsuku.arrowdown



21

```
101
102 begint Suglyph("arrowdown",147);
103   arrow(270);
104   tsu_render;
105 endtsuglyph;
106
107 _____
108
109 endfont;
110
111 _____
```

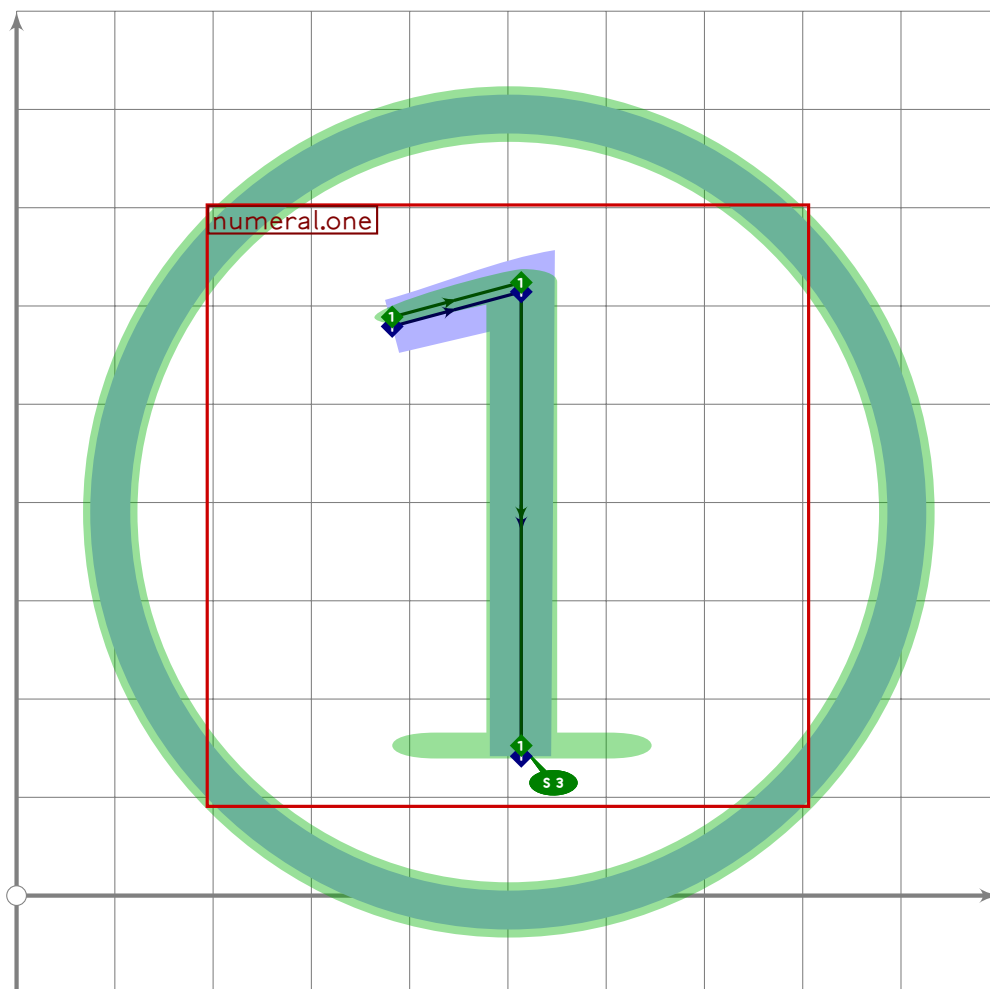
tsuku-24.mp

```
1 %
2 % Unicode page 24 (Enclosed Numerics) 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 input numerals.mp;
41
42 do_late_includes;
43
44
45
```

Circled Numerals

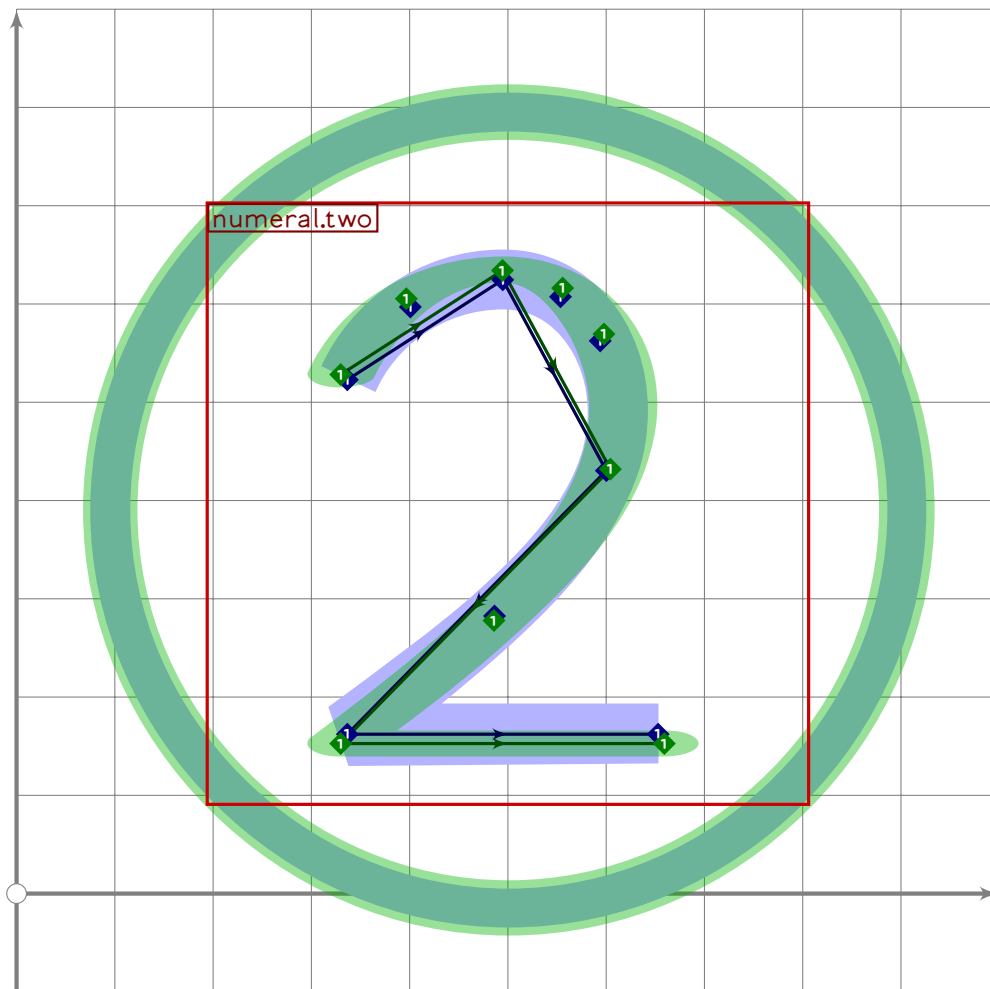
```
46 % CIRCLED NUMERALS
47
```

U+2460
tsuku.uni2460



24

```
48 % 1
49 begintuglyph("uni2460";96);
50   circle.single;
51   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.one);
52   tsu_render;
53 endtuglyph;
54
```

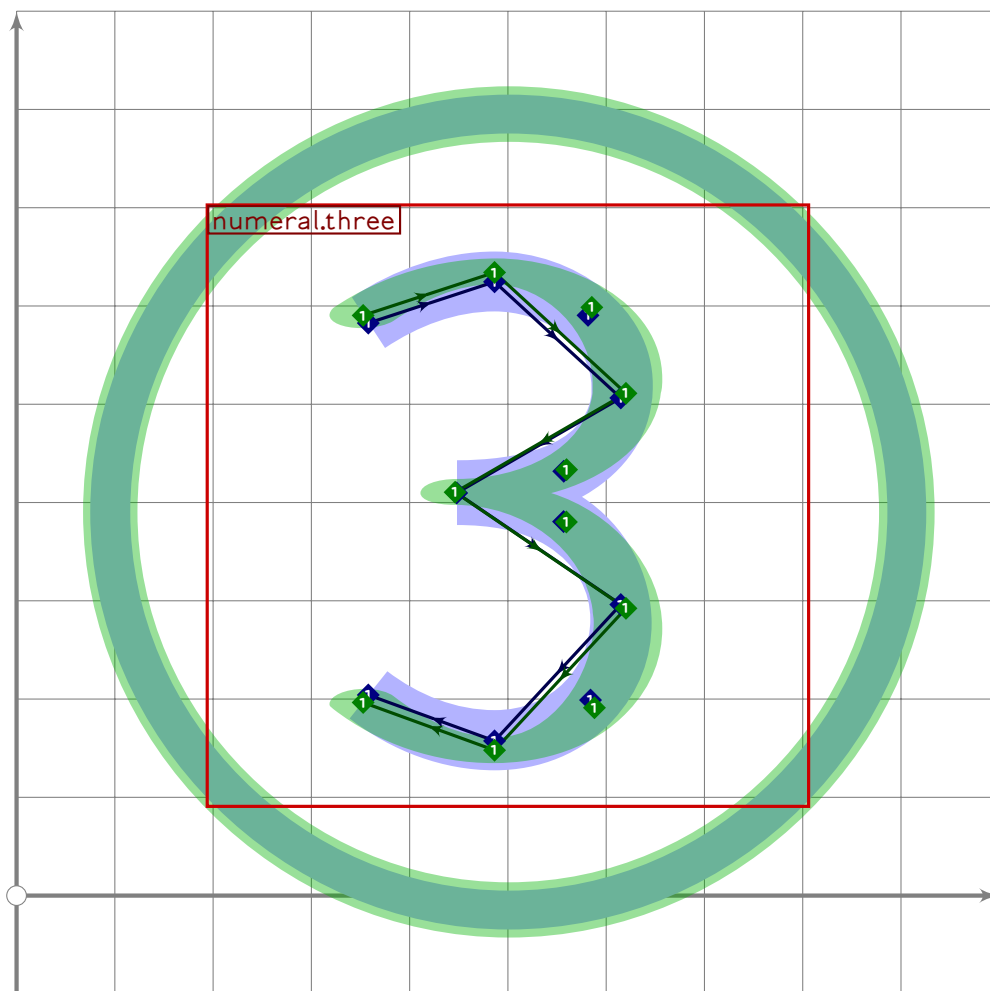



```

55 % 2
56 begintsuglyph("uni2461";97);
57   circle.single;
58   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.two);
59   tsu_render;
60 endtsuglyph;
61

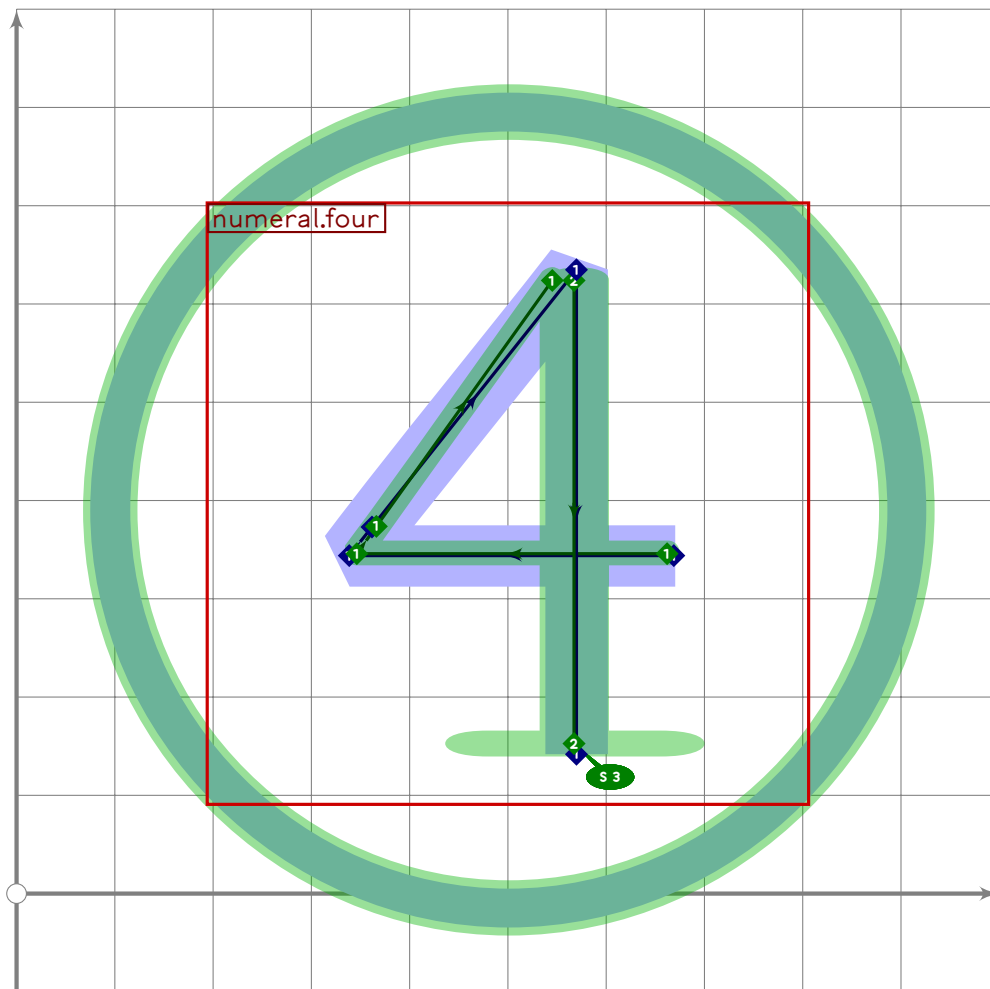
```

U+2462
tsuku.uni2462



24

```
62 % 3
63 begintsuglyph("uni2462'98);
64   circle.single;
65   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.three);
66   tsu_render;
67 endtsuglyph;
68
```

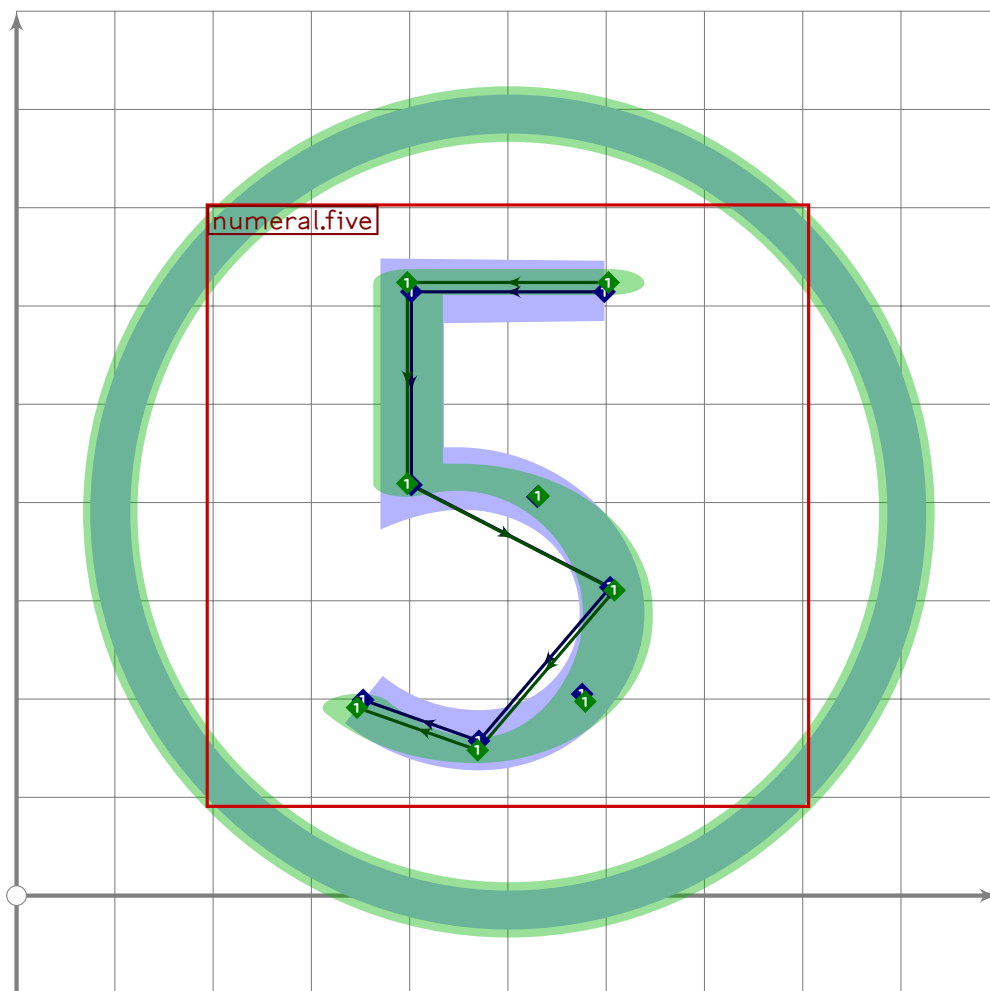


```

69 % 4
70 begintuglyph("uni2463",99);
71   circle.single;
72   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.four);
73   tsu_render;
74 endtuglyph;
75

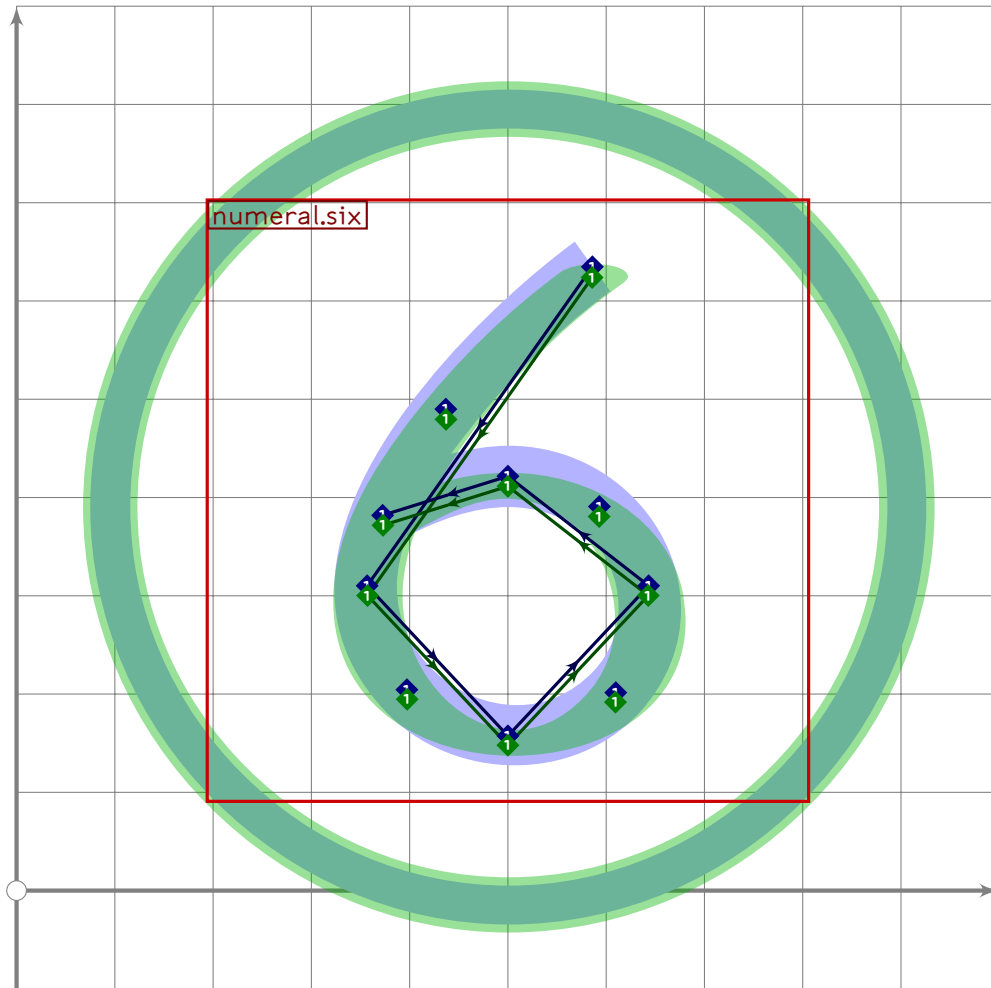
```

U+2464
tsuku.uni2464



24

```
76 % 5
77 begint Suglyph("uni2464";100);
78   circle.single;
79   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.five);
80   tsu_render;
81 endtsuglyph;
82
```

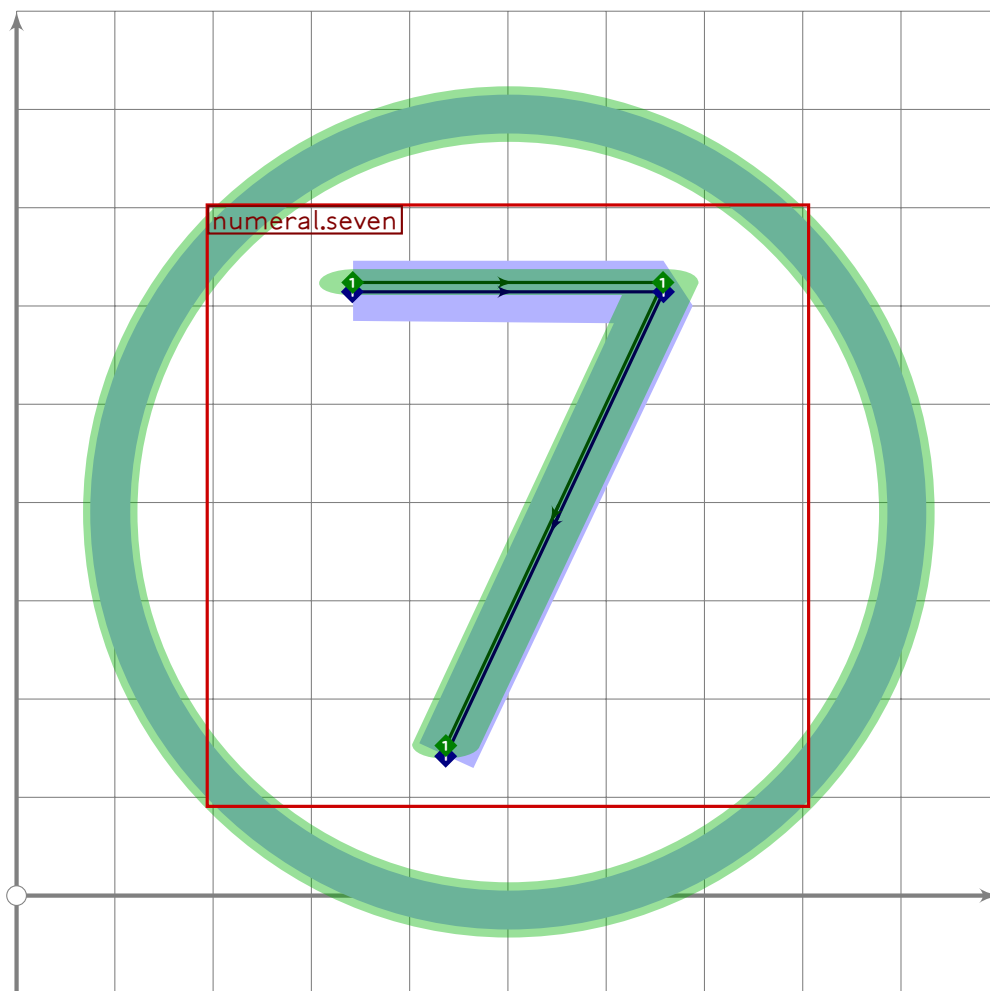


```

83 % 6
84 begint Suglyph("uni2465",101);
85   circle.single;
86   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.six);
87   tsu_render;
88 endtsuglyph;
89

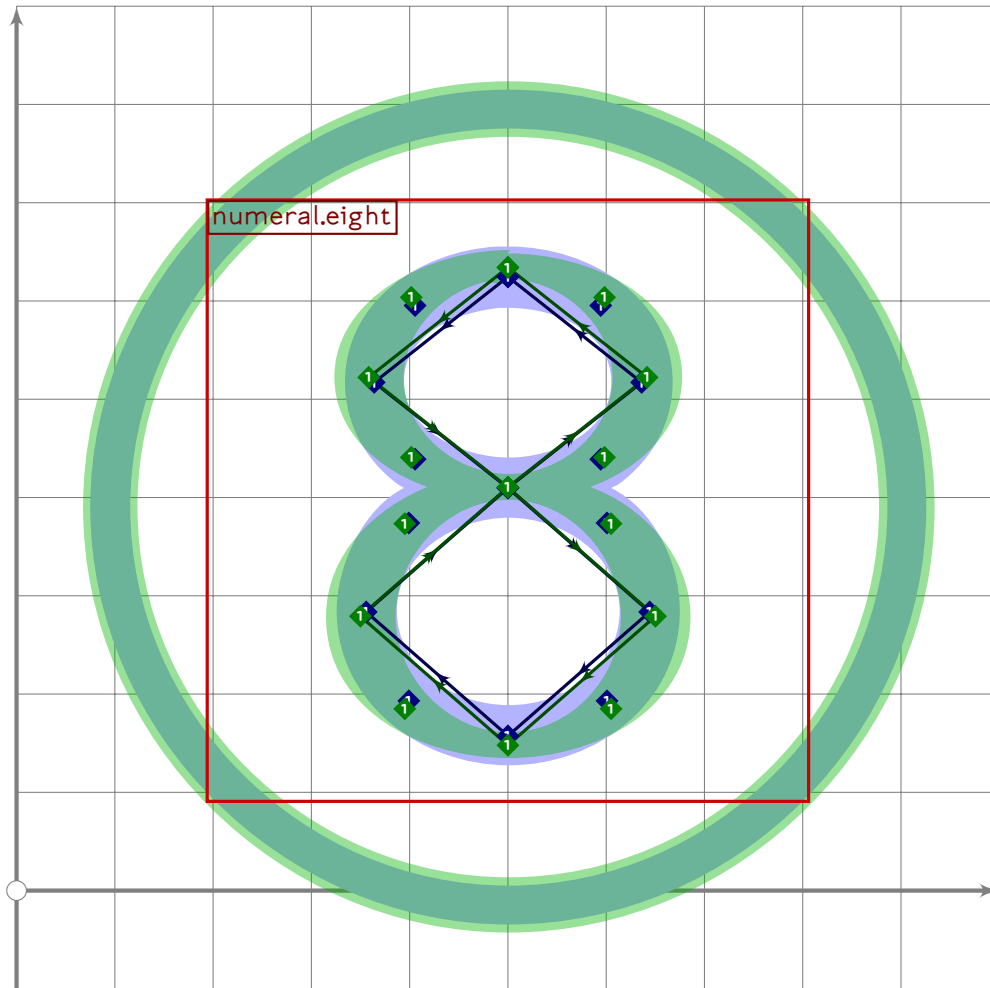
```

U+2466
tsuku.uni2466



24

```
90 % 7
91 begint Suglyph("uni2466",102);
92   circle.single;
93   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.seven);
94   tsu_render;
95 endtsuglyph;
96
```

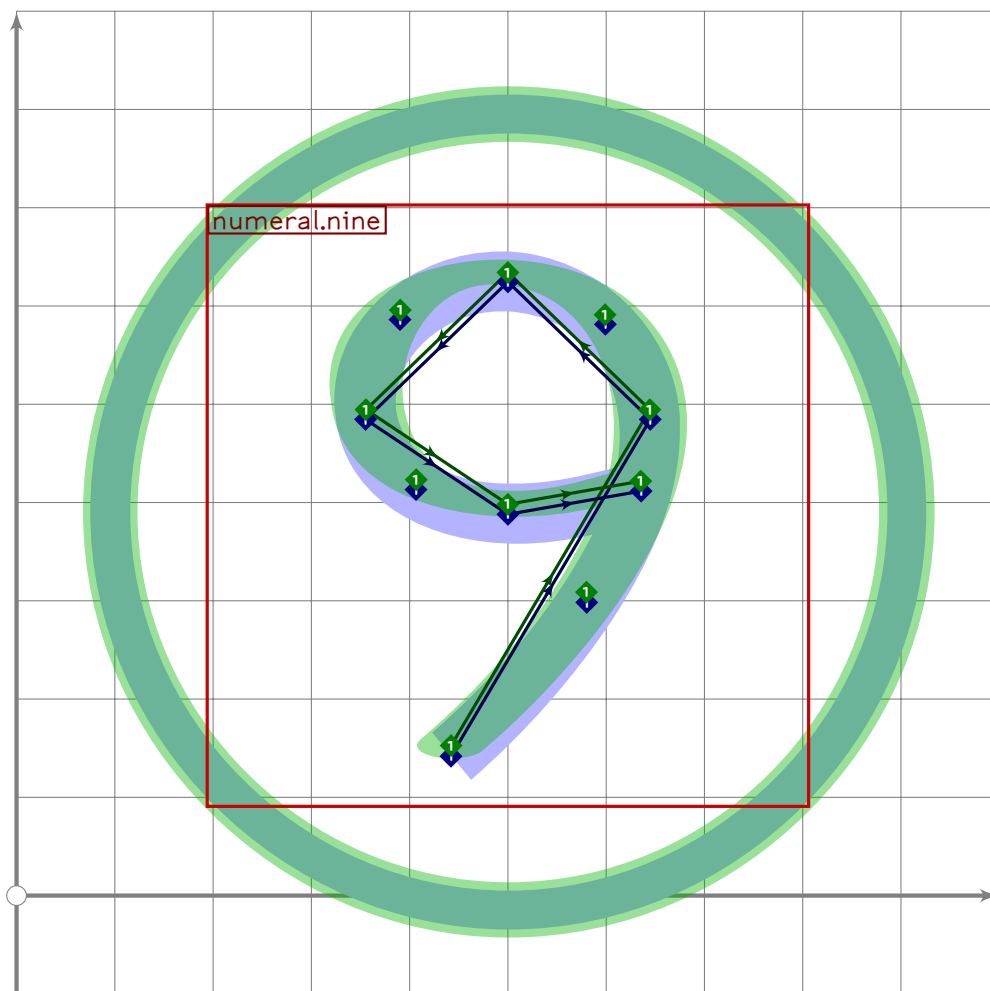


```

97 % 8
98 begintsuglyph("uni2467",103);
99   circle.single;
100   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.eight);
101   tsu_render;
102 endtsuglyph;
103

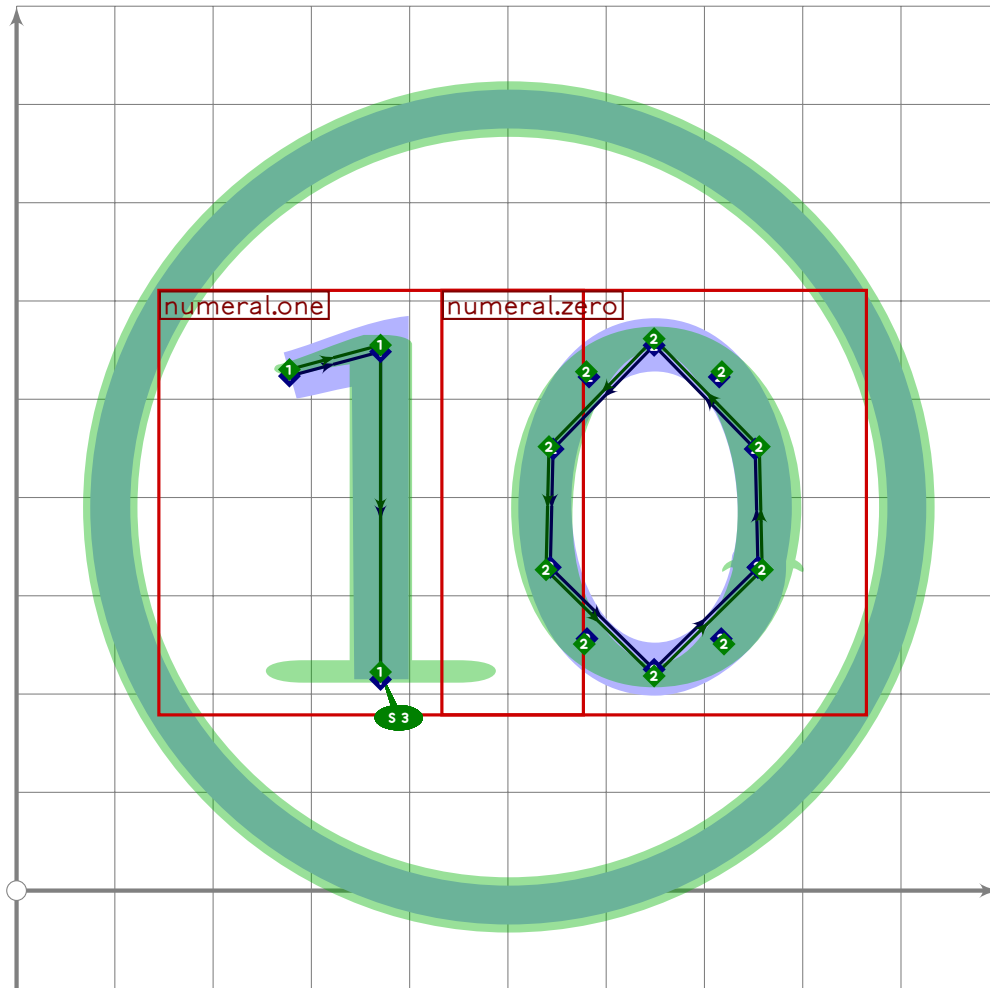
```

U+2468
tsuku.uni2468



24

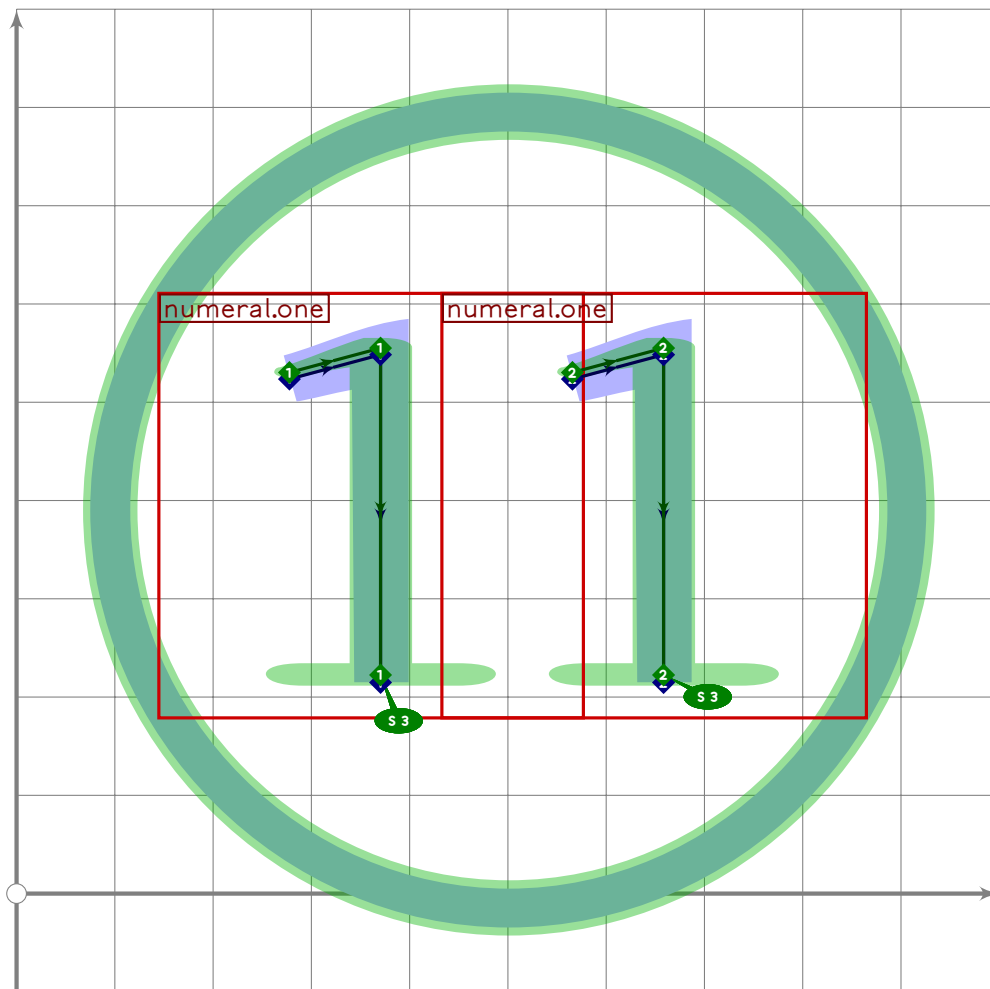
```
104 % 9
105 begint Suglyph("uni2468";104);
106   circle.single;
107   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.nine);
108   tsu_render;
109 endtsuglyph;
110
```

```

111 % 10
112 begint Suglyph("uni2469",105);
113   circle.single;
114   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
115   numeric x[],y[];
116   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.zero);
117   tsu_render;
118 endtsuglyph;
119

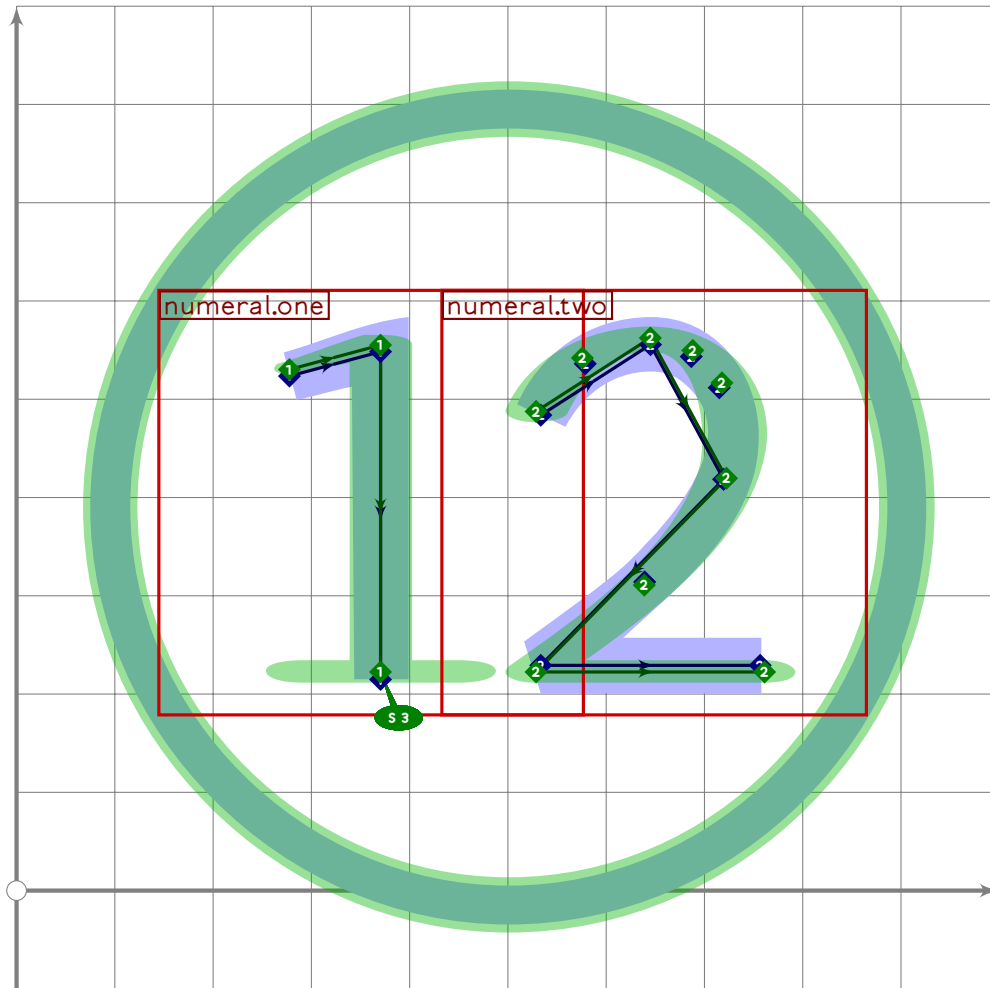
```



```

120 % 11
121 begint Suglyph("uni246A";106);
122   circle.single;
123   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
124   numeric x[],y[];
125   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.one);
126   tsu_render;
127 endtsuglyph;
128

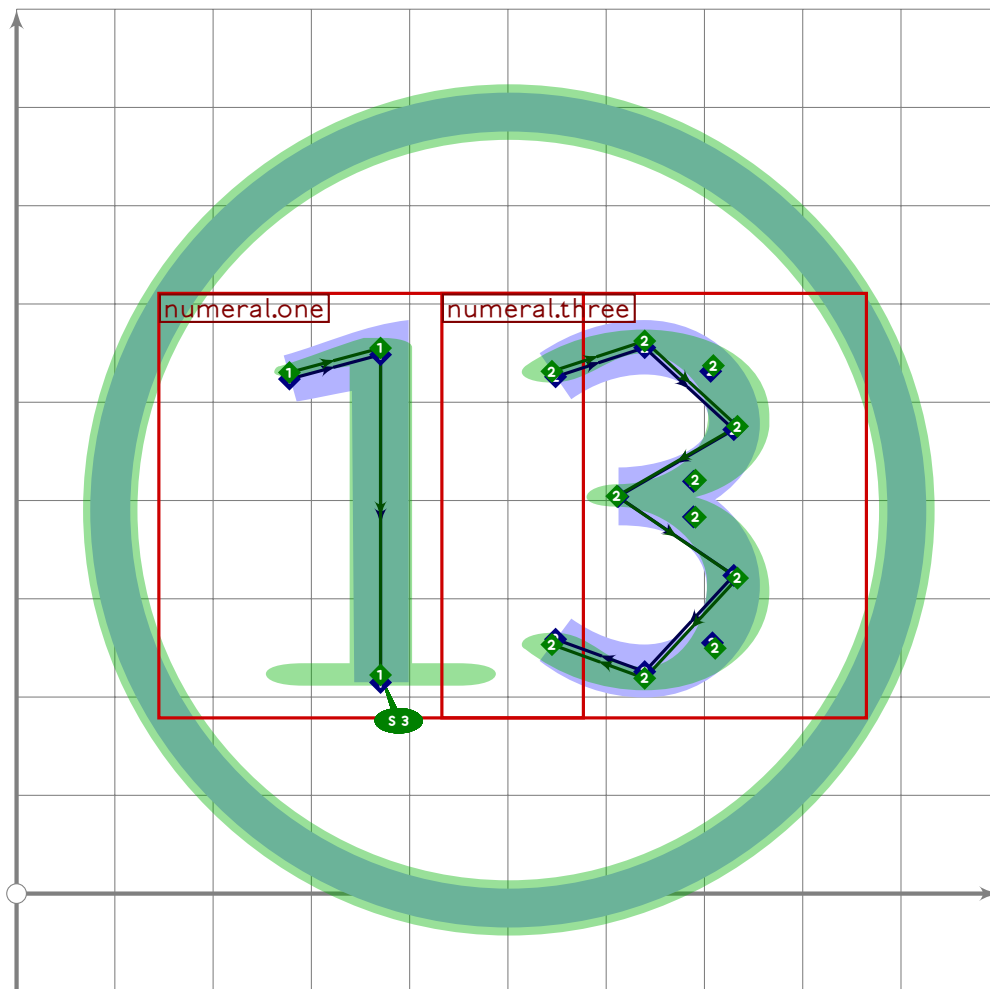
```



```

129 % 12
130 begint Suglyph("uni246B",107);
131   circle.single;
132   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
133   numeric x[],y[];
134   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.two);
135   tsu_render;
136 endtsuglyph;
137

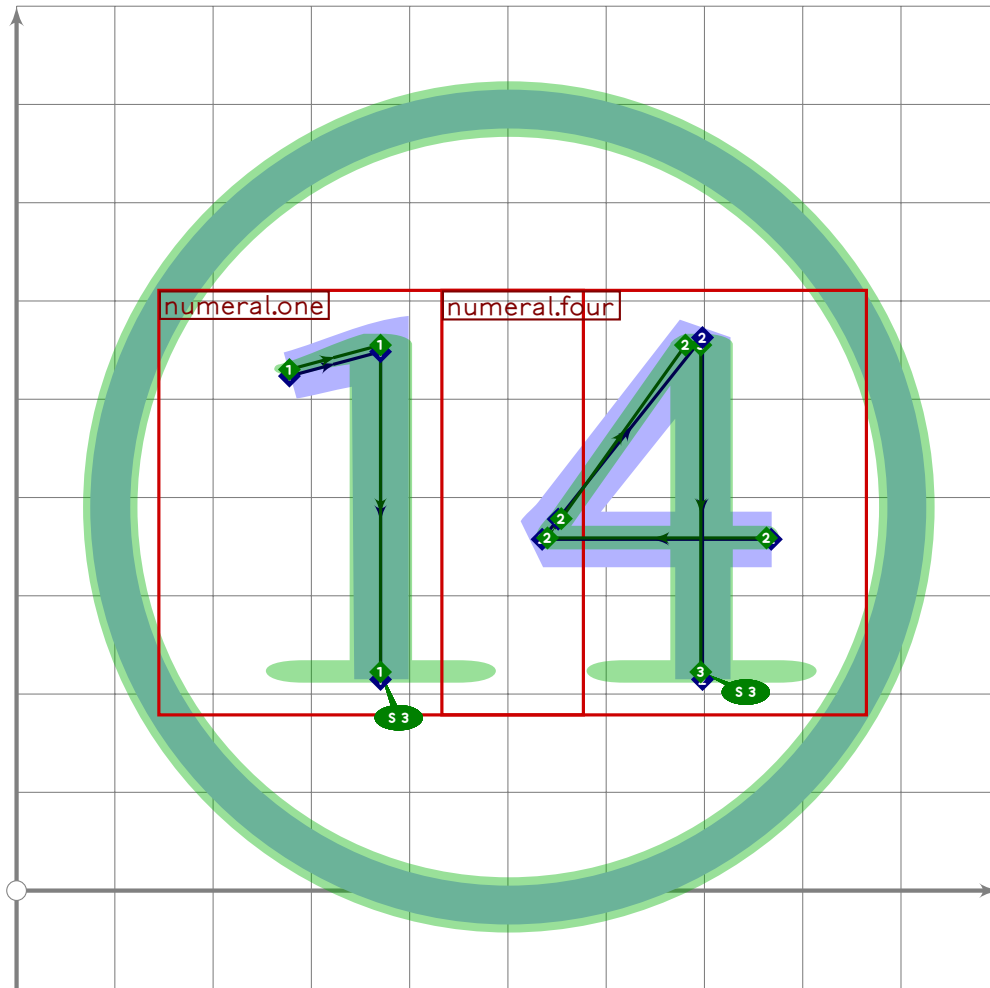
```



```

138 % 13
139 beginsuglyph("uni246C";108);
140 circle.single;
141 tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
142 numeric x[],y[];
143 tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.three);
144 tsu_render;
145 endtsuglyph;
146

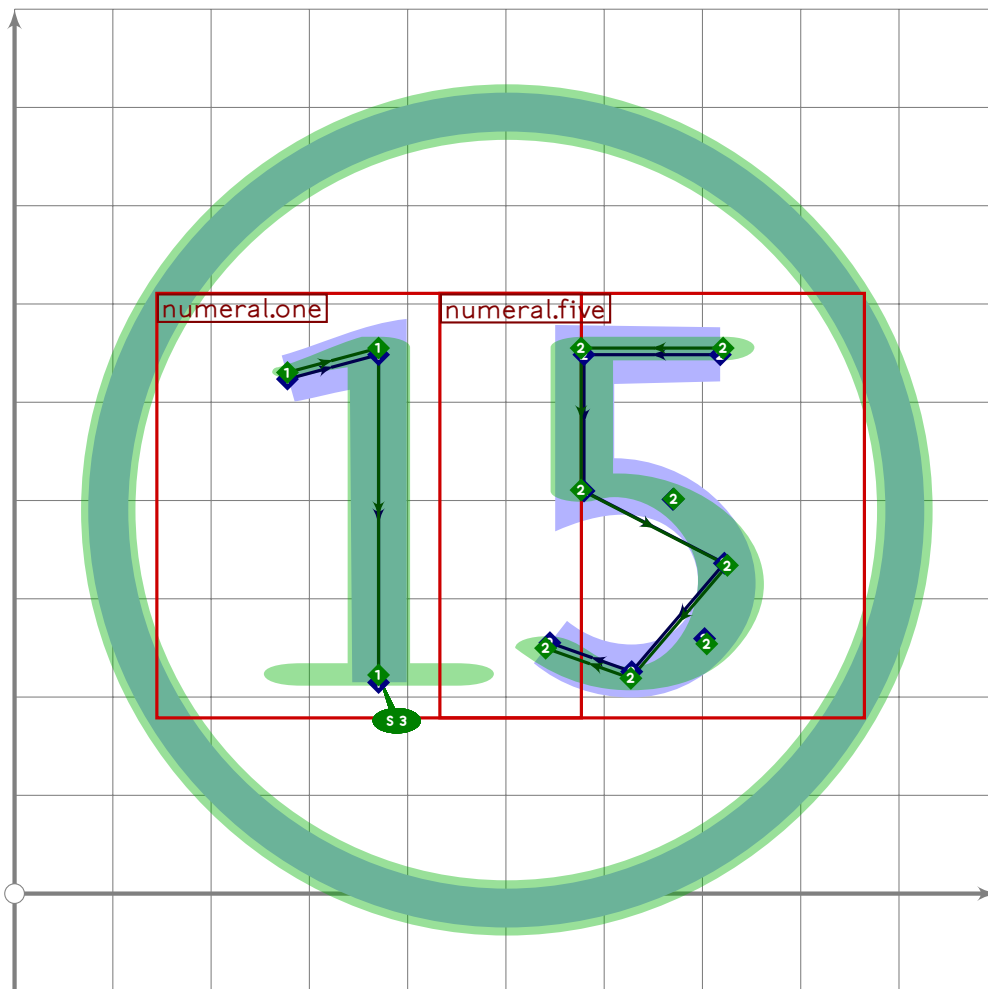
```



```

147 % 14
148 begint Suglyph("uni246D";109);
149   circle.single;
150   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
151   numeric x[],y[];
152   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.four);
153   tsu_render;
154 endtsuglyph;
155

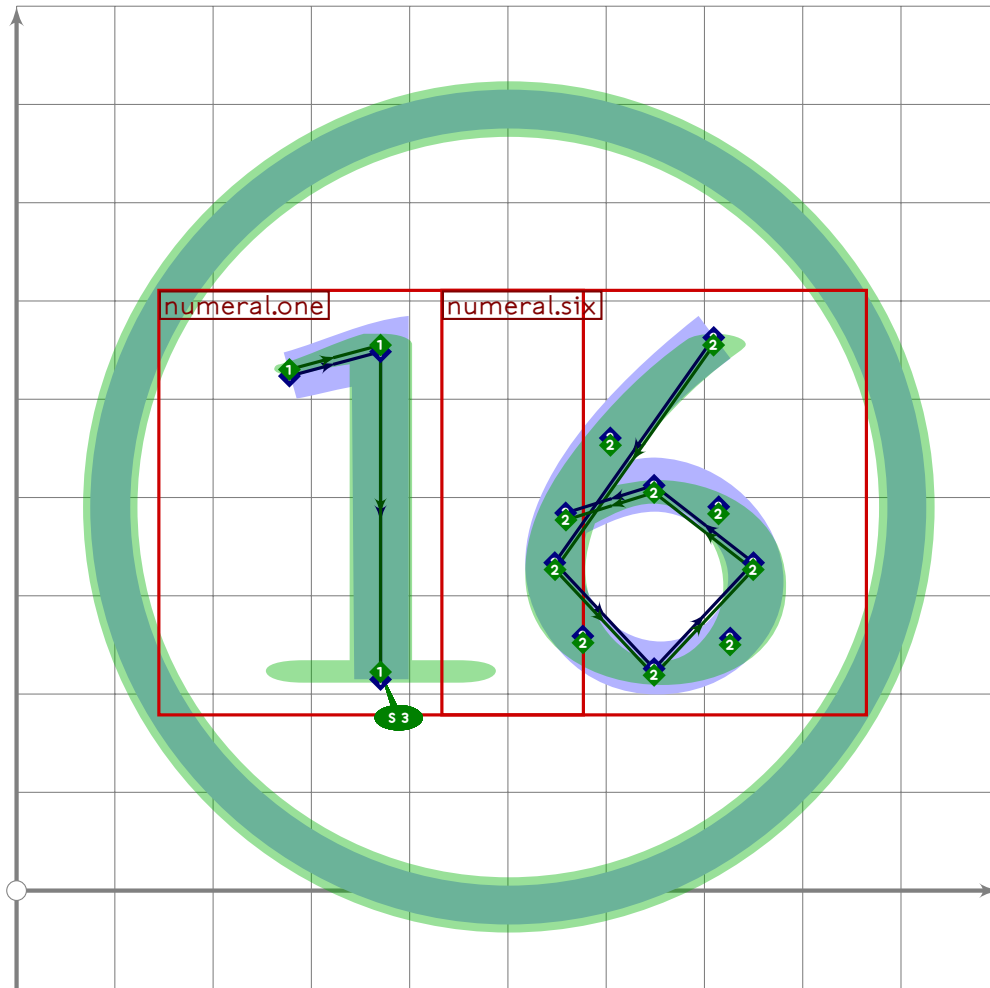
```



```

156 % 15
157 begint Suglyph("uni246E";110);
158   circle.single;
159   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
160   numeric x[],y[];
161   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.five);
162   tsu_render;
163 endtsuglyph;
164

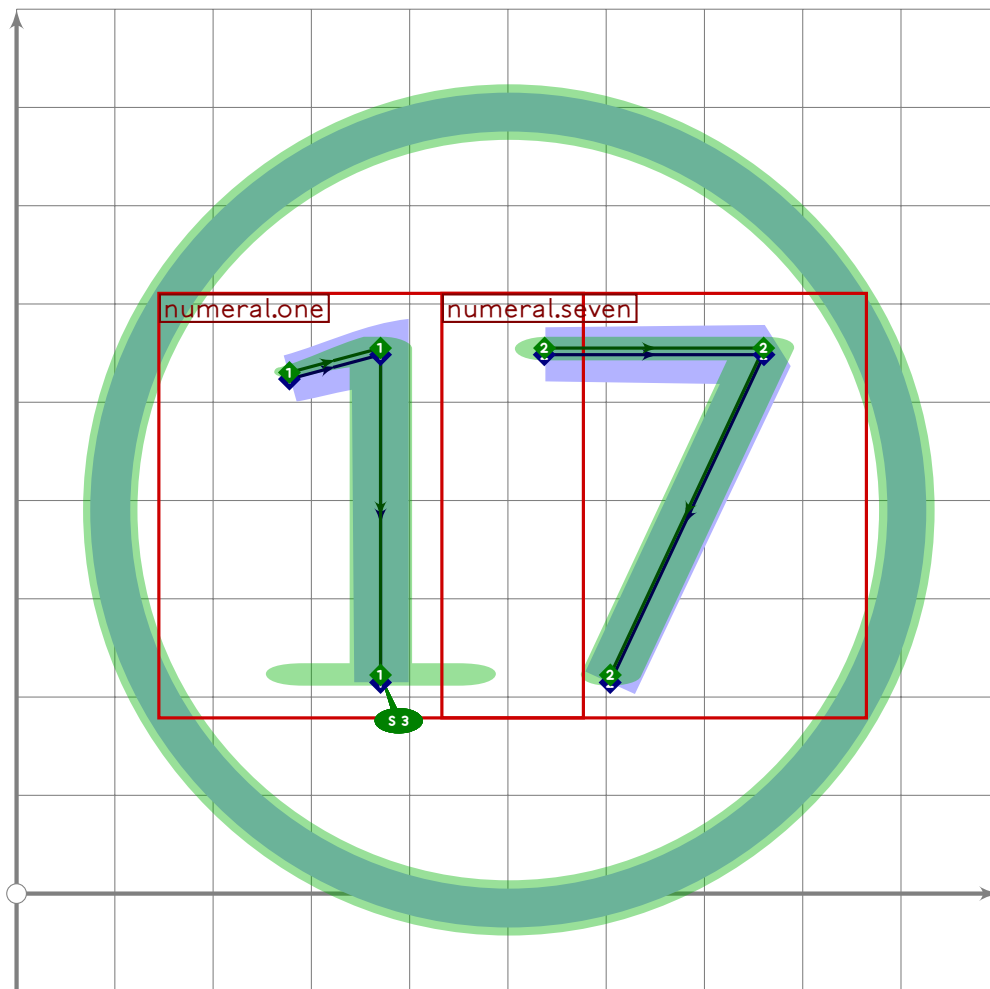
```



```

165 % 16
166 begintuglyph("uni246F";11);
167   circle.single;
168   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
169   numeric x[],y[];
170   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.six);
171   tsu_render;
172 endtsuglyph;
173

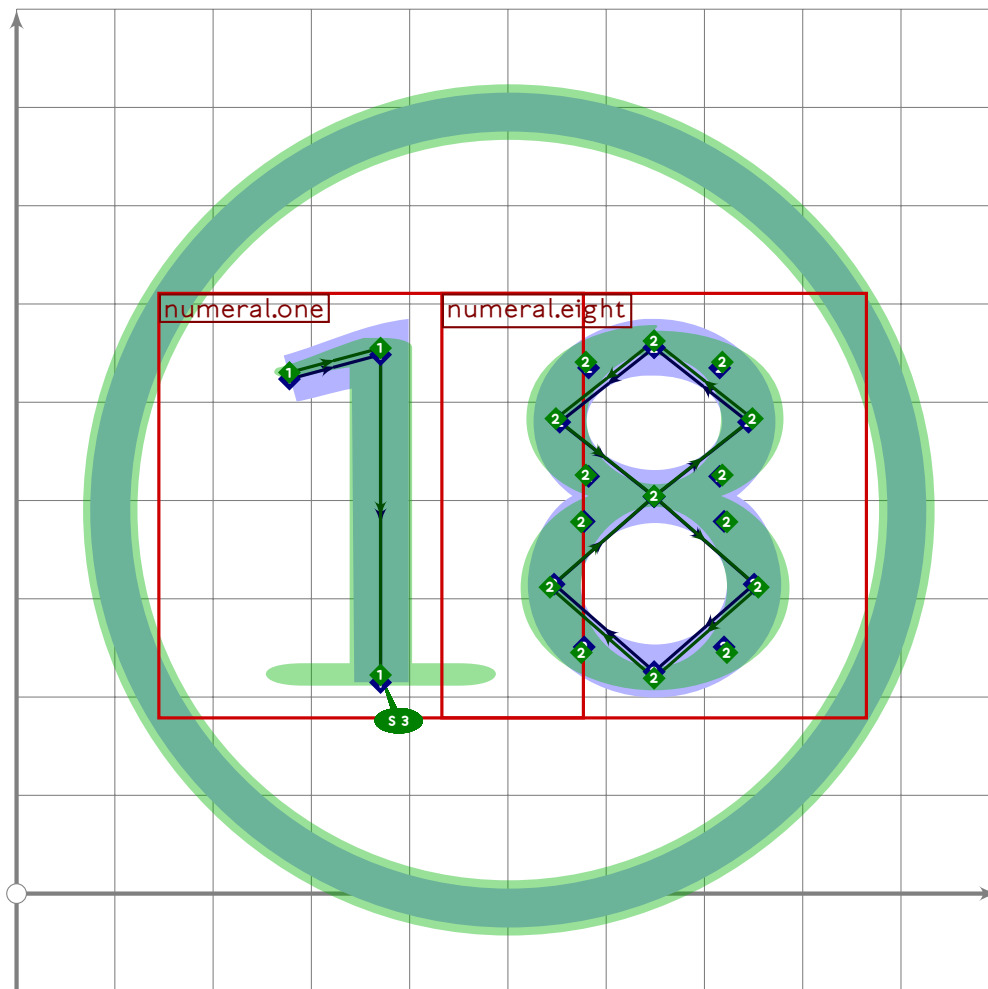
```



```

174 % 17
175 begint Suglyph("uni2470",112);
176   circle.single;
177   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
178   numeric x[],y[];
179   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.seven);
180   tsu_render;
181 endtsuglyph;
182

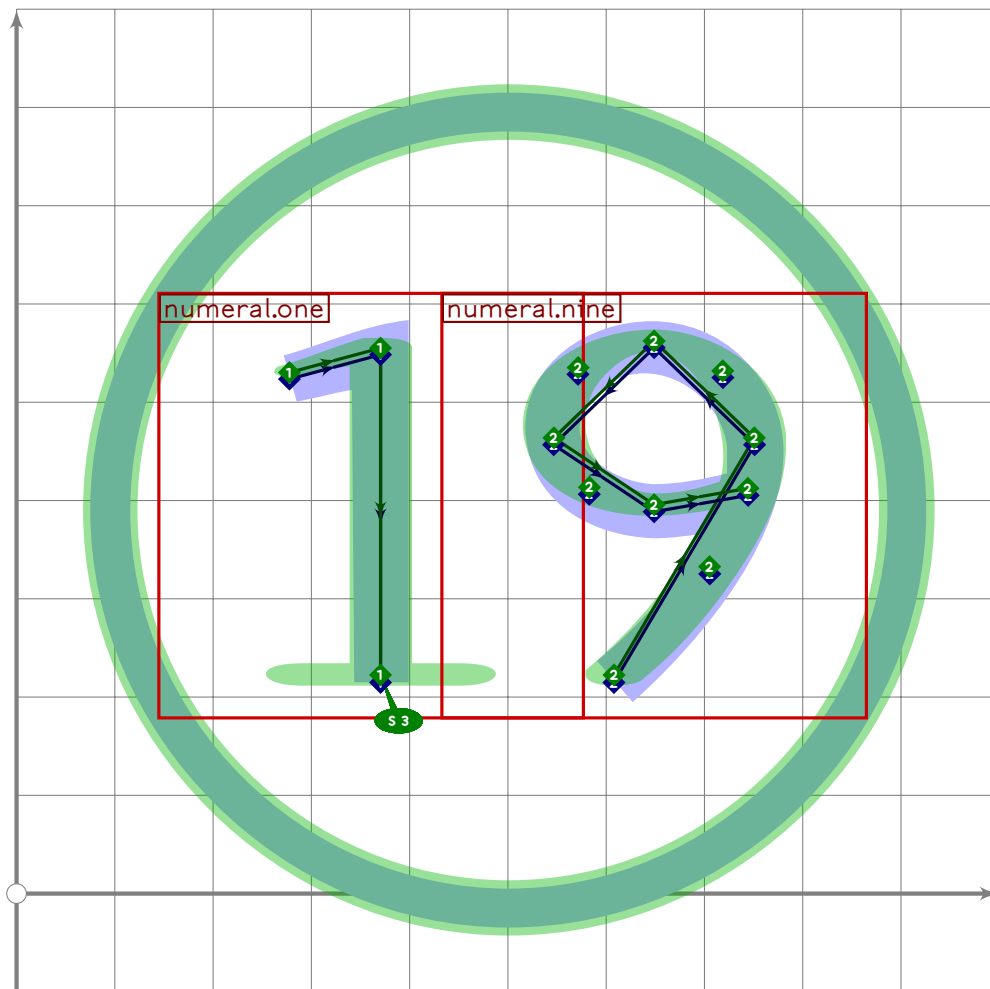
```

```

183 % 18
184 beginsuglyph("uni2471",113);
185   circle.single;
186   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
187   numeric x[],y[];
188   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.eight);
189   tsu_render;
190 endtsuglyph;
191

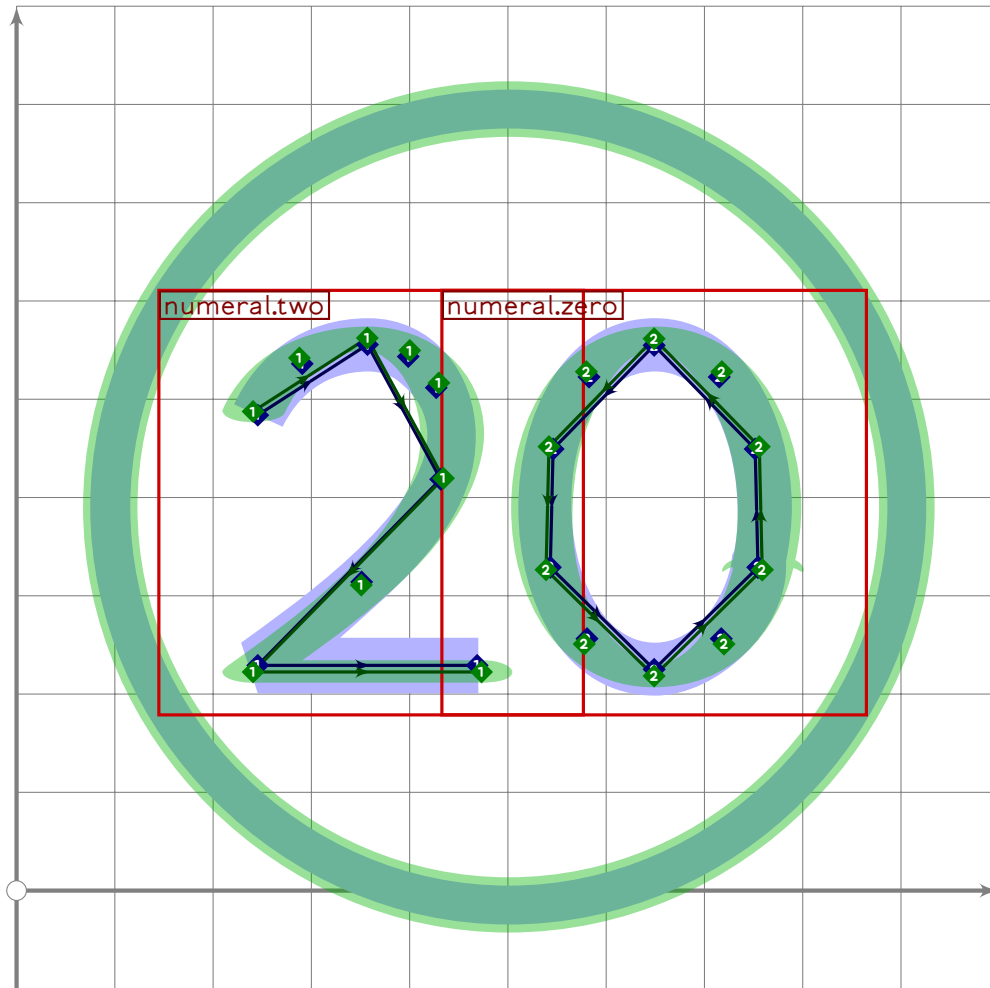
```



```

192 % 19
193 begint Suglyph("uni2472",114);
194   circle.single;
195   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
196   numeric x[],y[];
197   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.nine);
198   tsu_render;
199 endtsuglyph;
200

```



```

201 % 20
202 begintsuglyph("uni2473",115);
203   circle.single;
204   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.two);
205   numeric x[],y[];
206   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.zero);
207   tsu_render;
208 endtsuglyph;
209
210
211

```

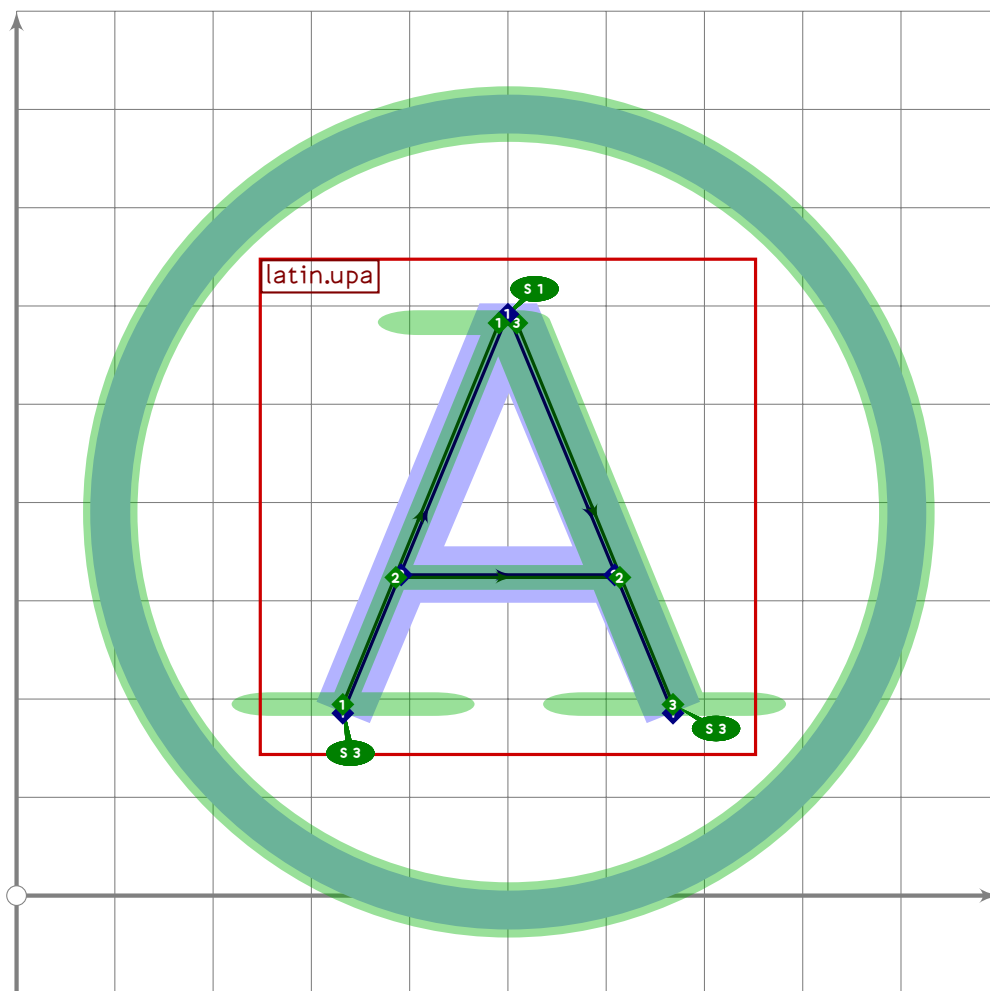
Circled Latin And Zero

```

212 % CIRCLED LATIN AND ZERO
213

```

U+24B6
tsuku.uni24B6

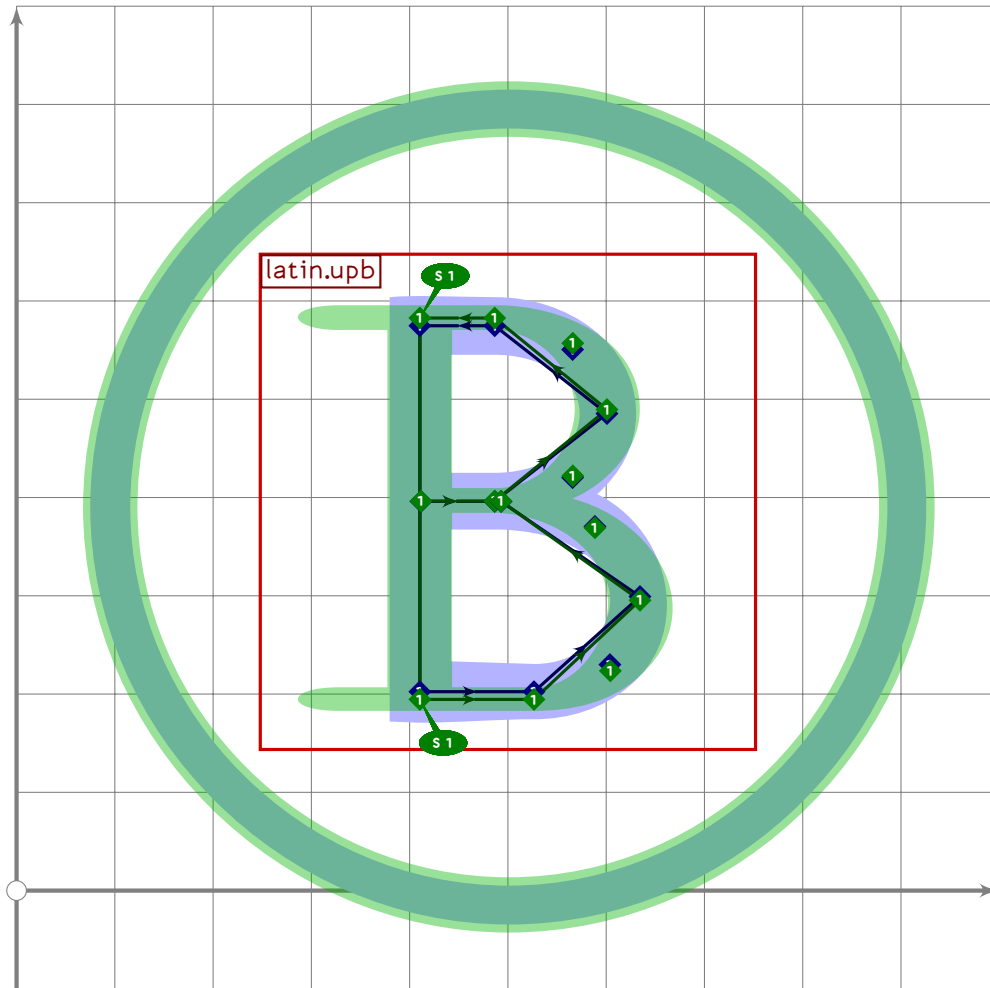


24

```

214 % A
215 begint Suglyph("uni24B6",182);
216   circle.single;
217   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upa);
218   tsu_render;
219 endtsuglyph;
220

```

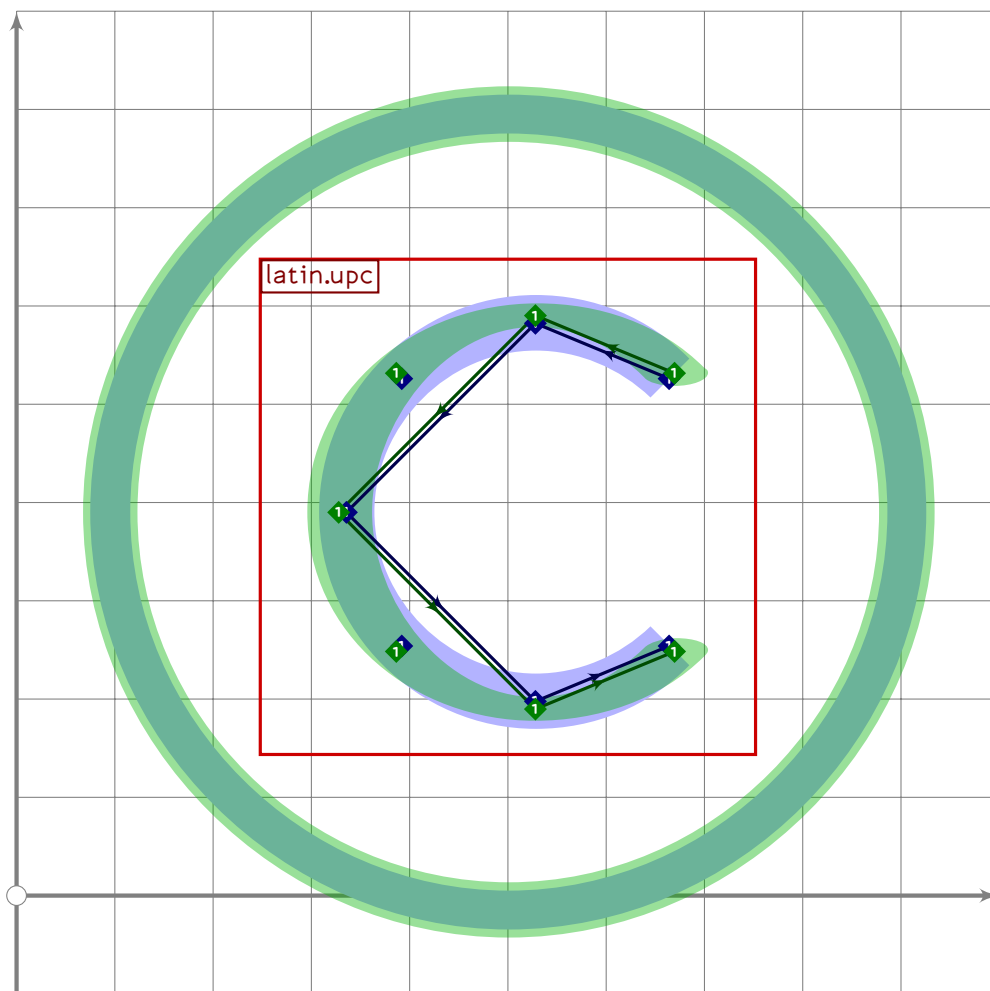


```

221 % B
222 beginsuglyph("uni24B7",183);
223   circle.single;
224   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upb);
225   tsu_render;
226 endtsuglyph;
227

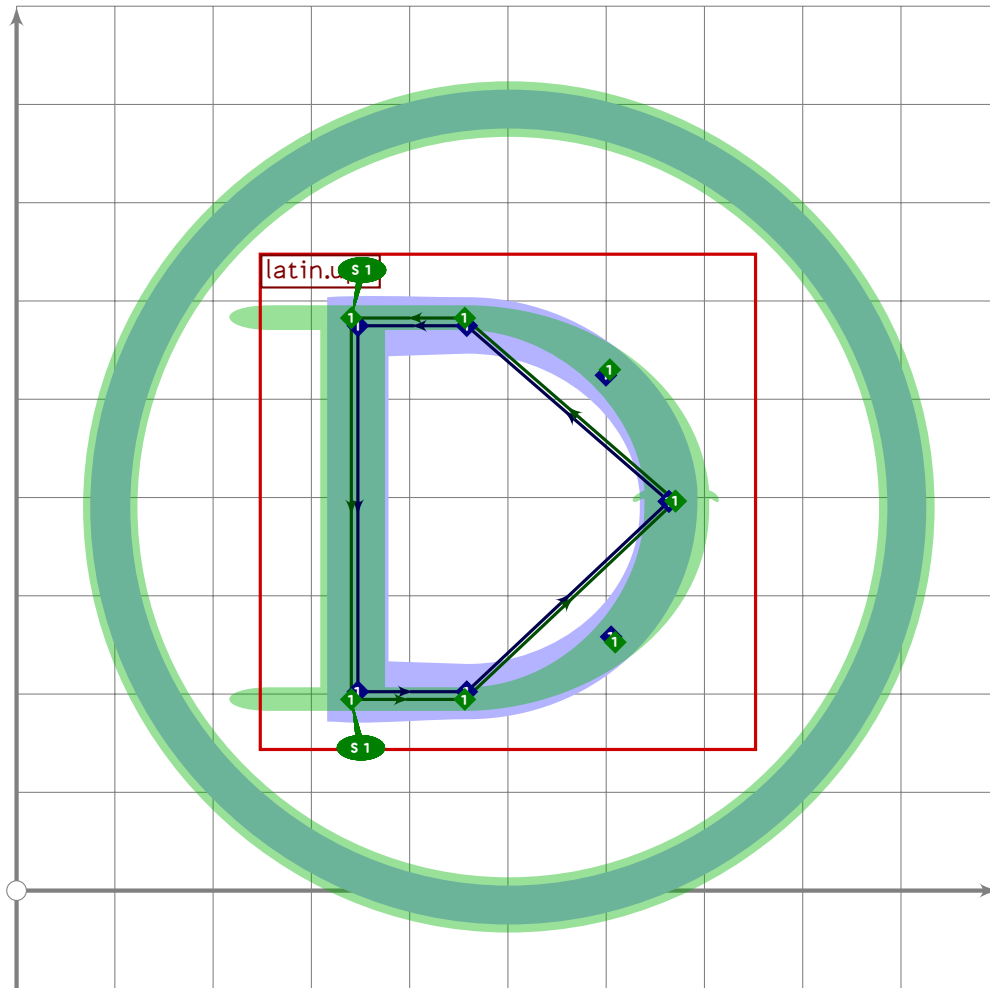
```

U+24B8
tsuku.uni24B8



24

```
228 % C
229 beginsuglyph("uni24B8",184);
230   circle.single;
231   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upc);
232   tsu_render;
233 endsuglyph;
234
```

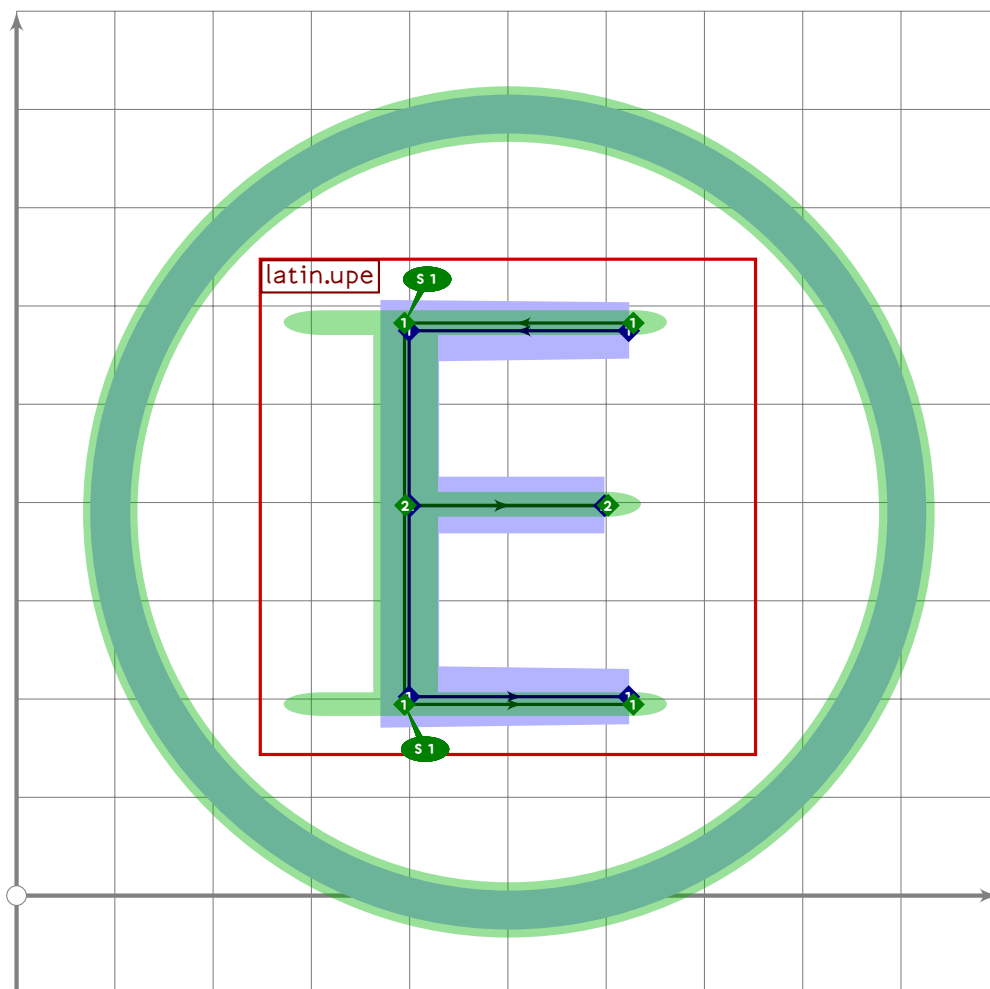


```

235 % D
236 begint Suglyph("uni24B9",185);
237   circle.single;
238   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upd);
239   tsu_render;
240 endtsuglyph;
241

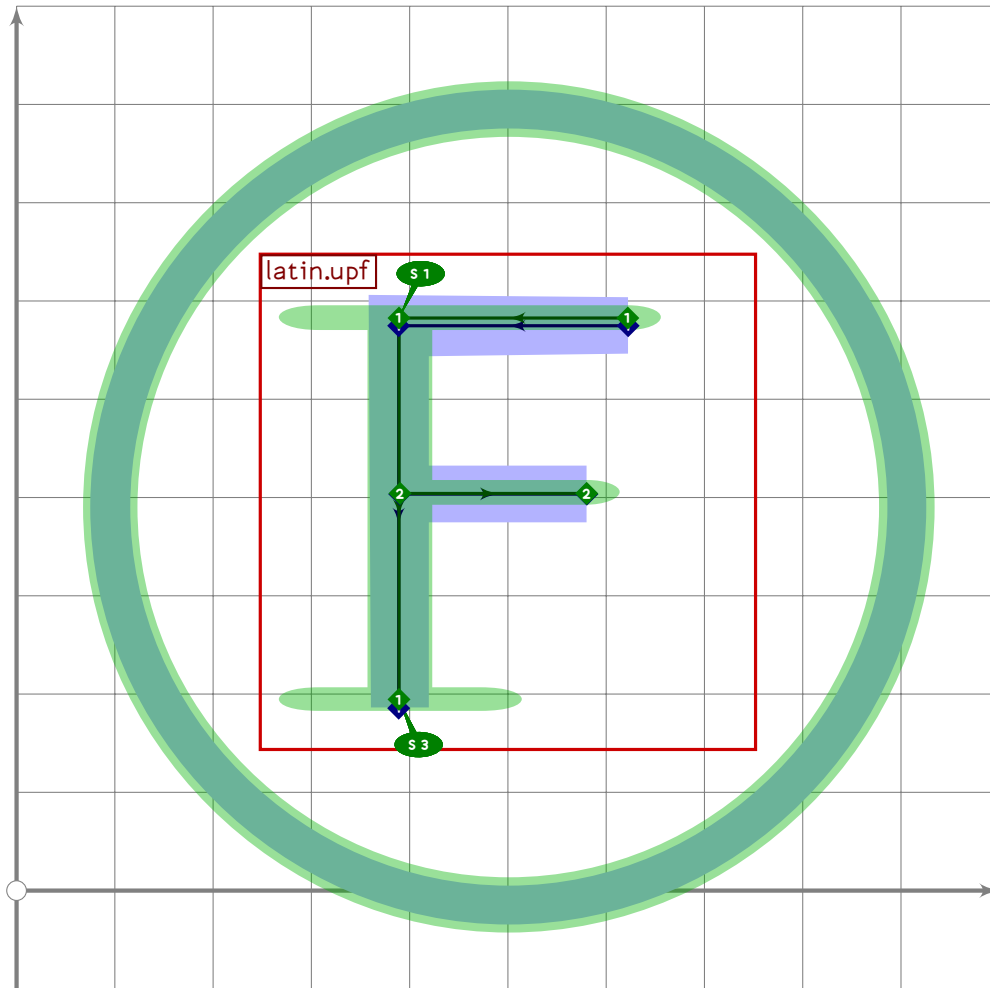
```

U+24BA
tsuku.uni24BA



24

```
242 % E
243 begint Suglyph("uni24BA",186);
244   circle.single;
245   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upe);
246   tsu_render;
247 endtsuglyph;
248
```

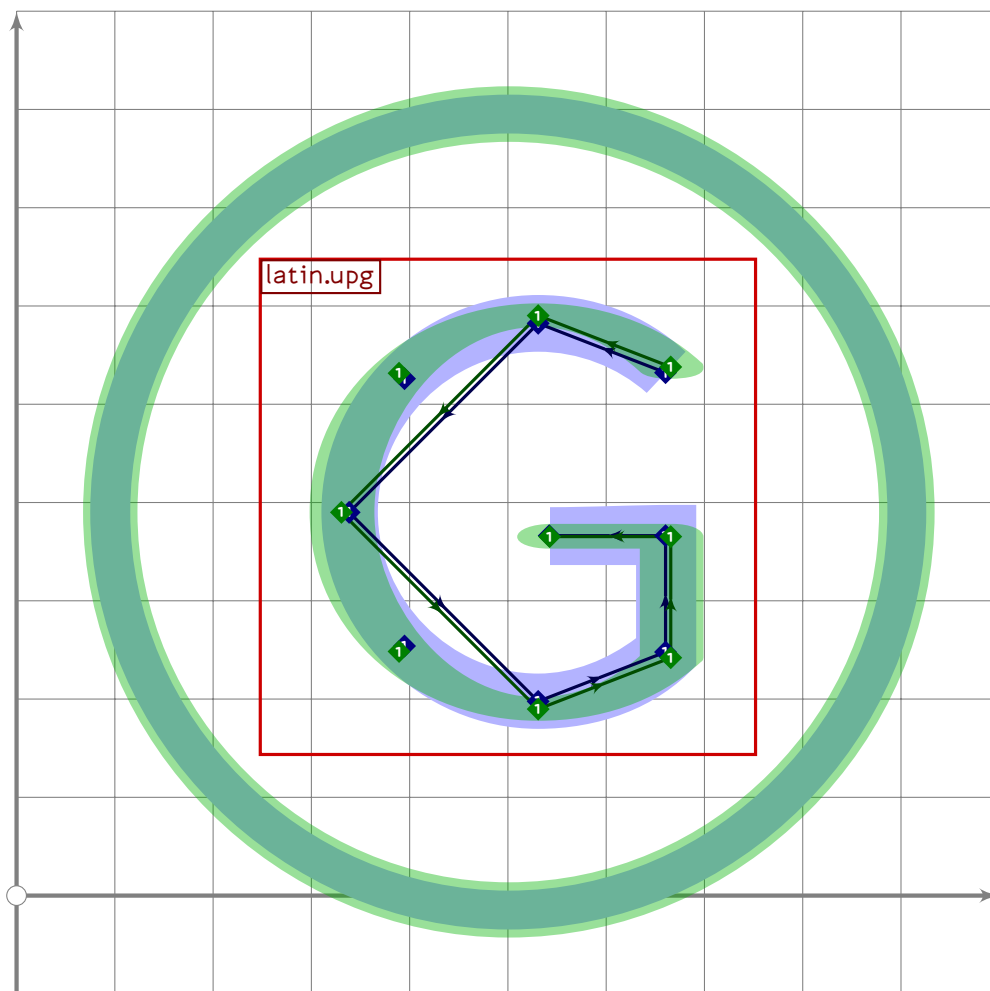



```

249 % F
250 begint Suglyph("uni24BB",187);
251   circle.single;
252   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upf);
253   tsu_render;
254 endtsuglyph;
255

```

U+24BC
tsuku.uni24BC

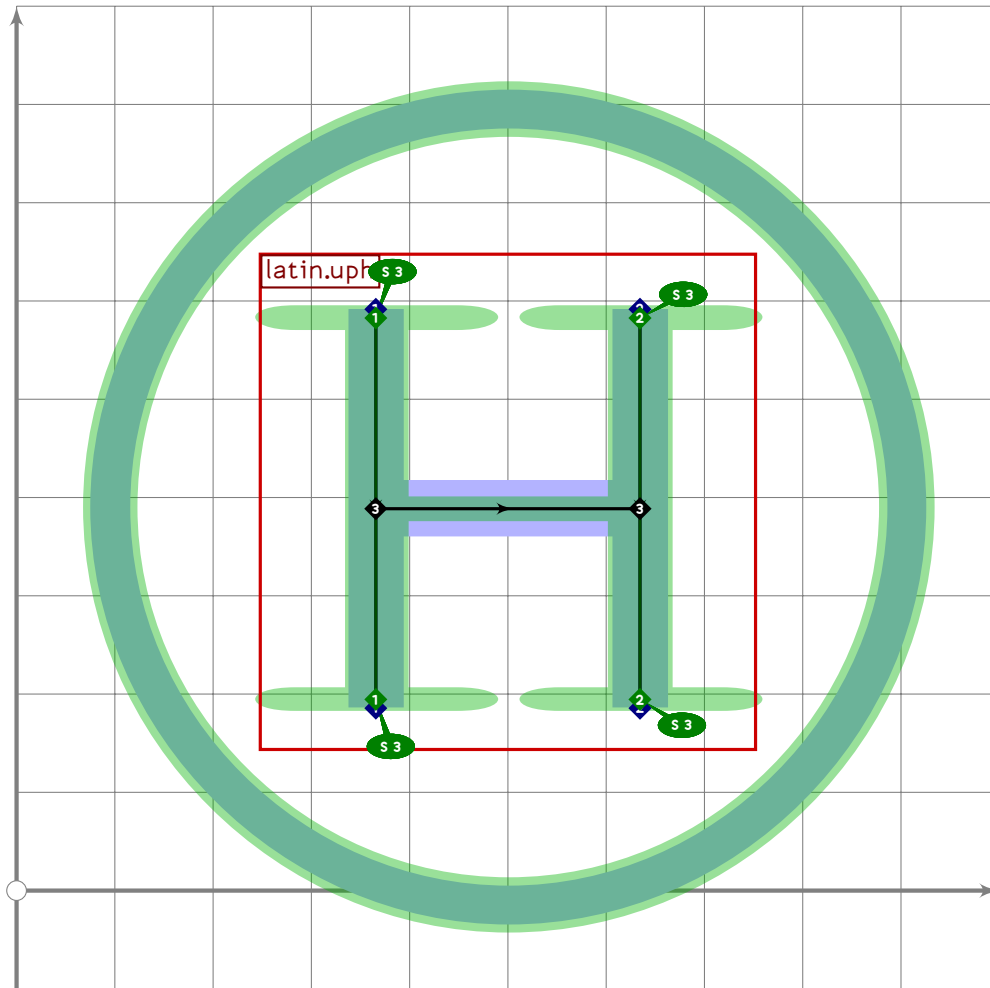


24

```

256 % G
257 begint Suglyph("uni24BC";188);
258   circle.single;
259   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upg);
260   tsu_render;
261 endtsuglyph;
262

```

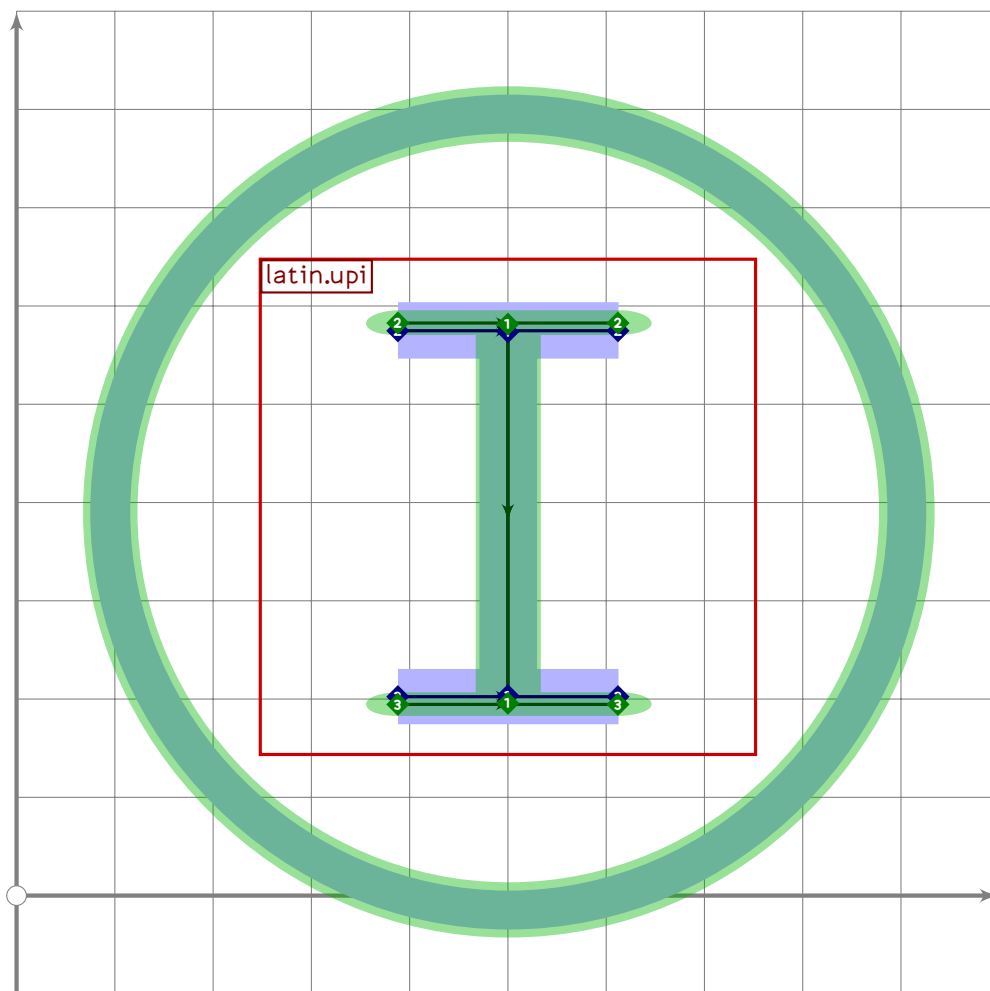


```

263 % H
264 begint Suglyph("uni24BD";189);
265   circle.single;
266   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.uph);
267   tsu_render;
268 endtsuglyph;
269

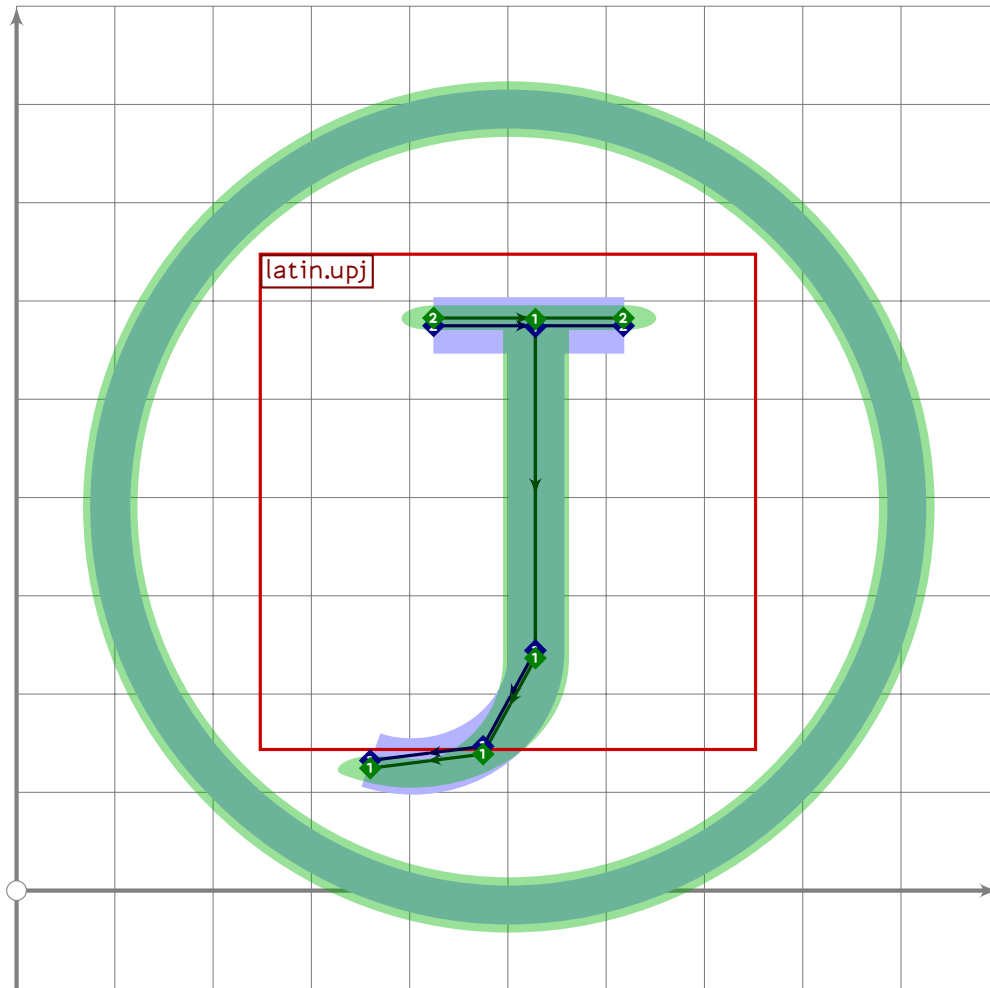
```

U+24BE
tsuku.uni24BE



24

```
270 % I
271 begintsuglyph("uni24BE";190);
272   circle.single;
273   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upi);
274   tsu_render;
275 endtsuglyph;
276
```

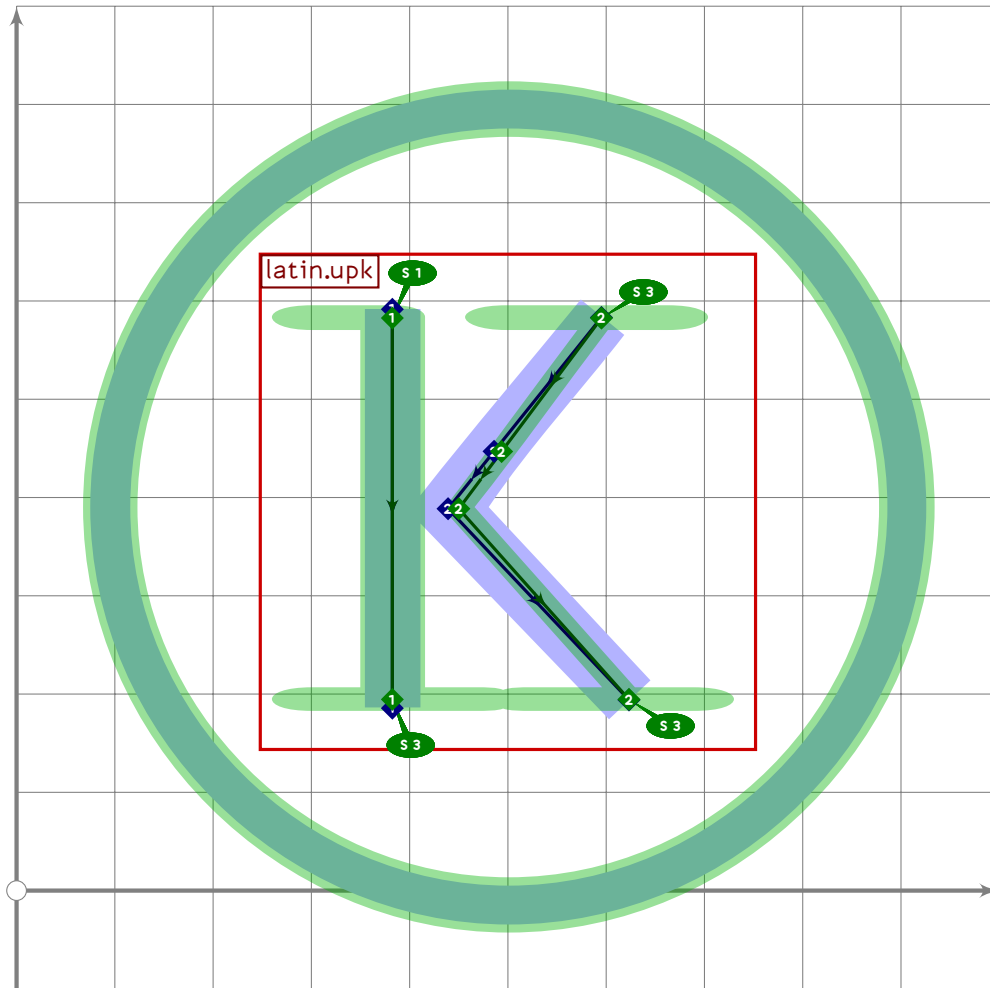


```

277 % J
278 begint Suglyph("uni24BF";191);
279   circle.single;
280   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upj);
281   tsu_render;
282 endtsuglyph;
283

```

U+24C0
tsuku.uni24C0

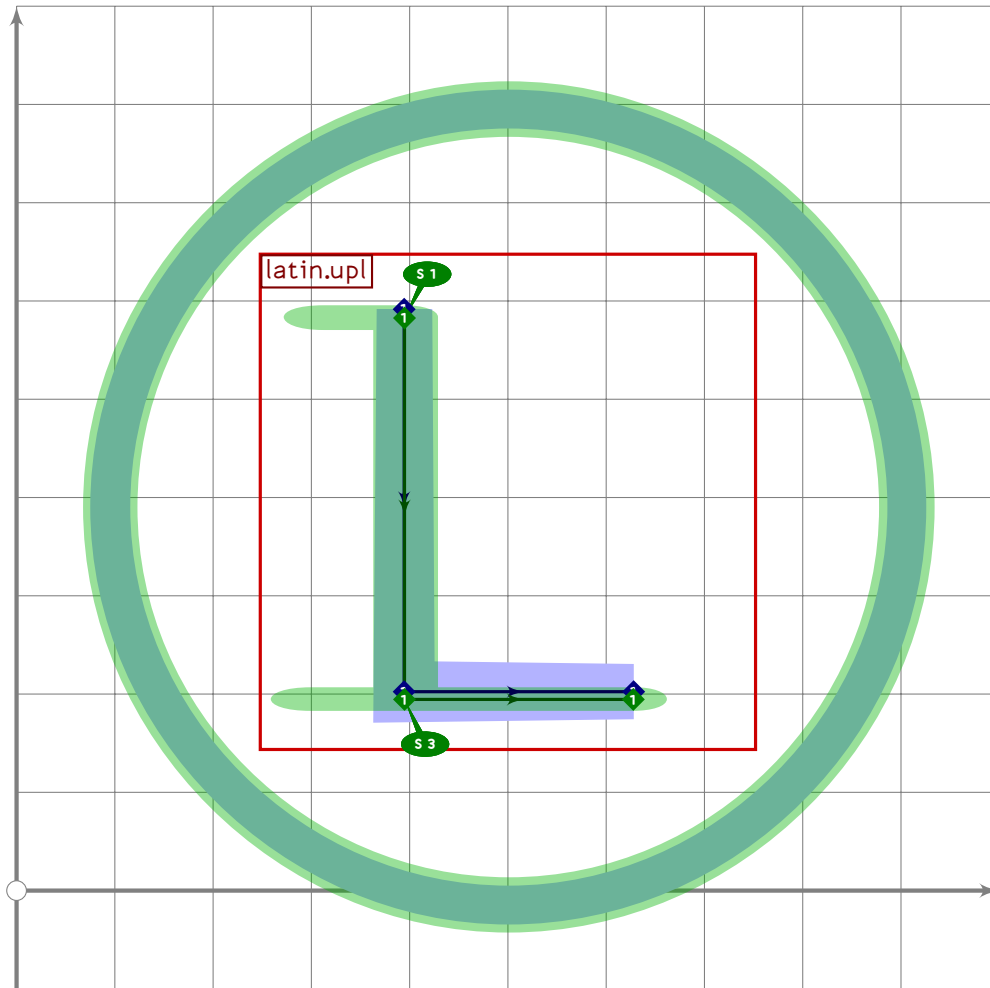


24

```

284 % K
285 begint Suglyph("uni24C0";192);
286   circle.single;
287   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upk);
288   tsu_render;
289 endtsuglyph;
290

```

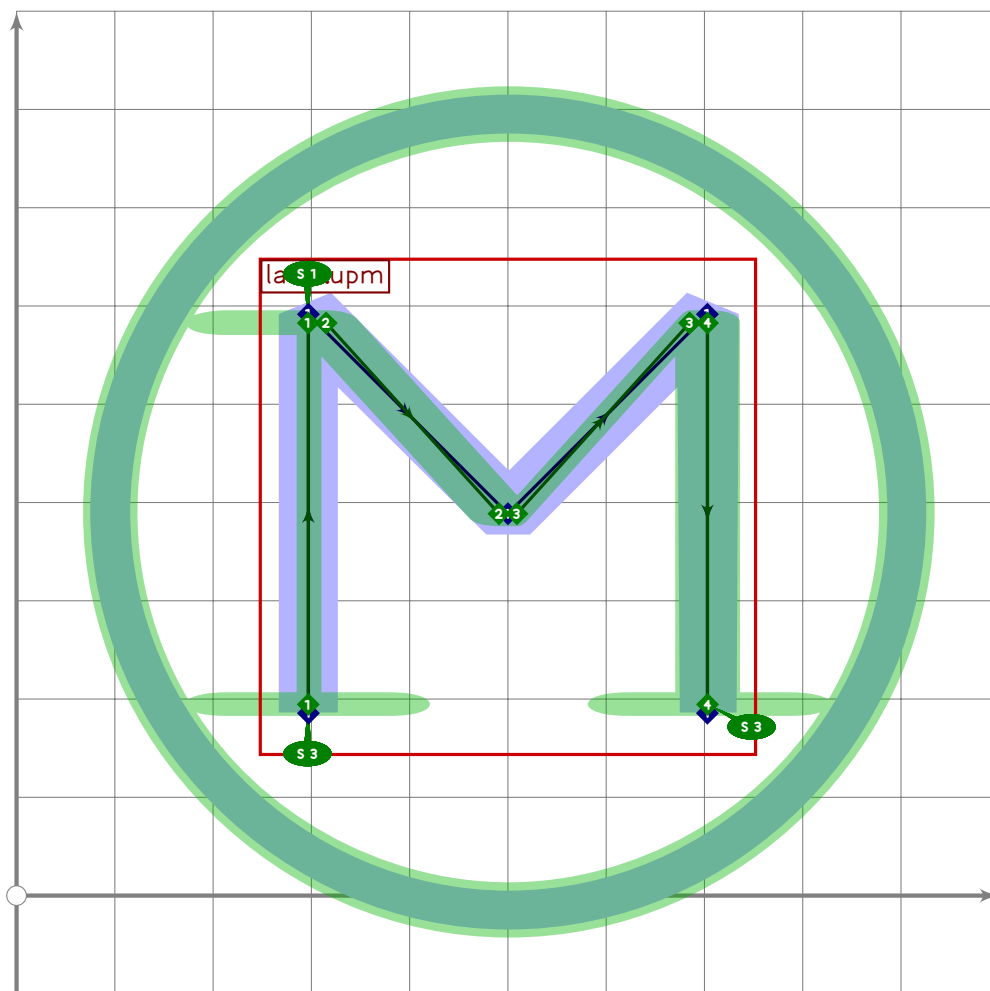


```

291 % L
292 begintsuglyph("uni24C1",193);
293   circle.single;
294   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upl);
295   tsu_render;
296 endtsuglyph;
297

```

U+24C2
tsuku.uni24C2

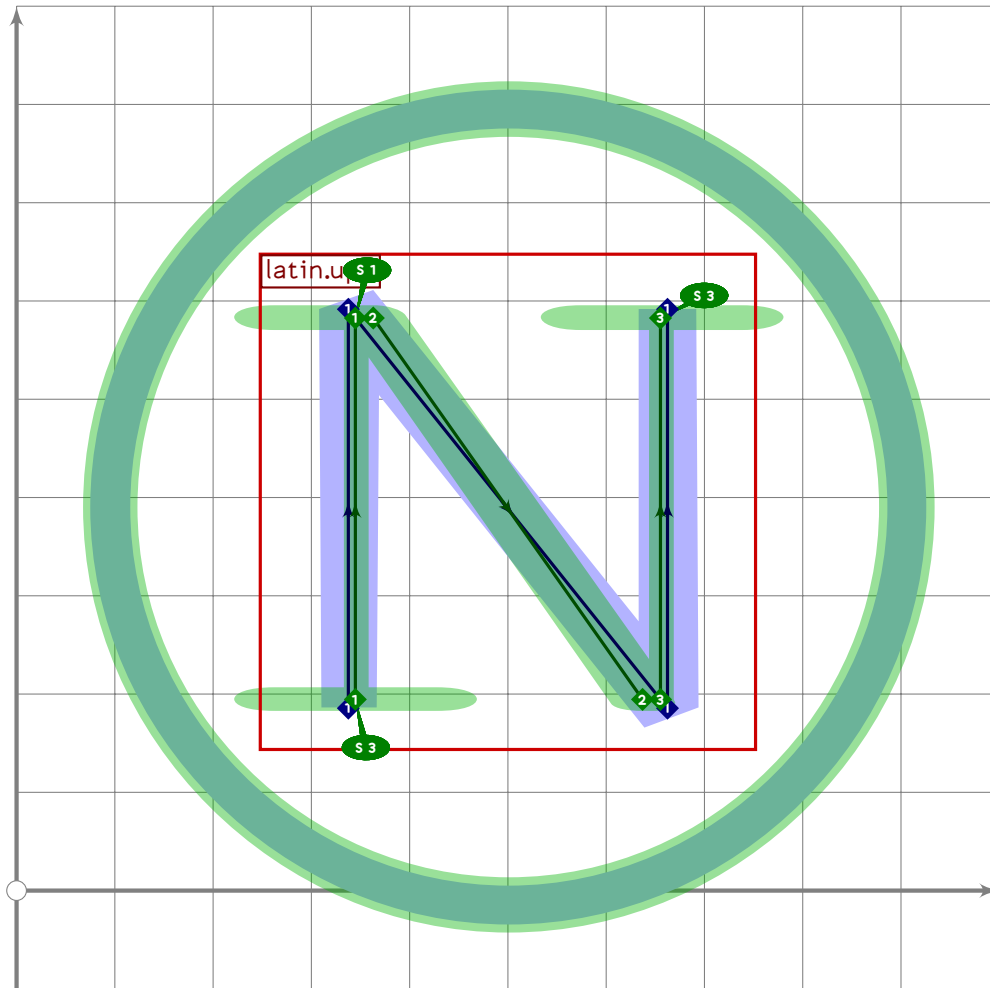


24

```

298 % M
299 begintuglyph("uni24C2";194);
300   circle.single;
301   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upm);
302   tsu_render;
303 endtuglyph;
304

```

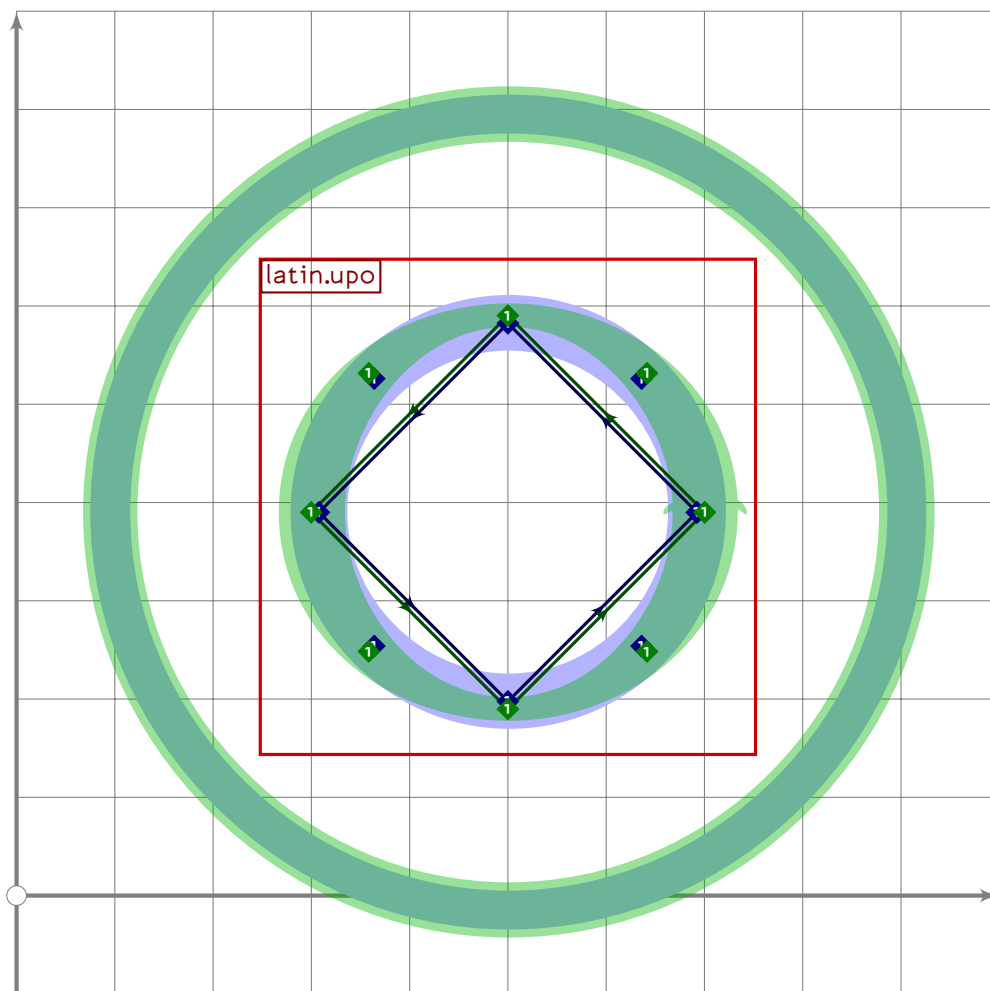



```

305 % N
306 begintuglyph("uni24C3";195);
307   circle.single;
308   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upn);
309   tsu_render;
310 endtuglyph;
311

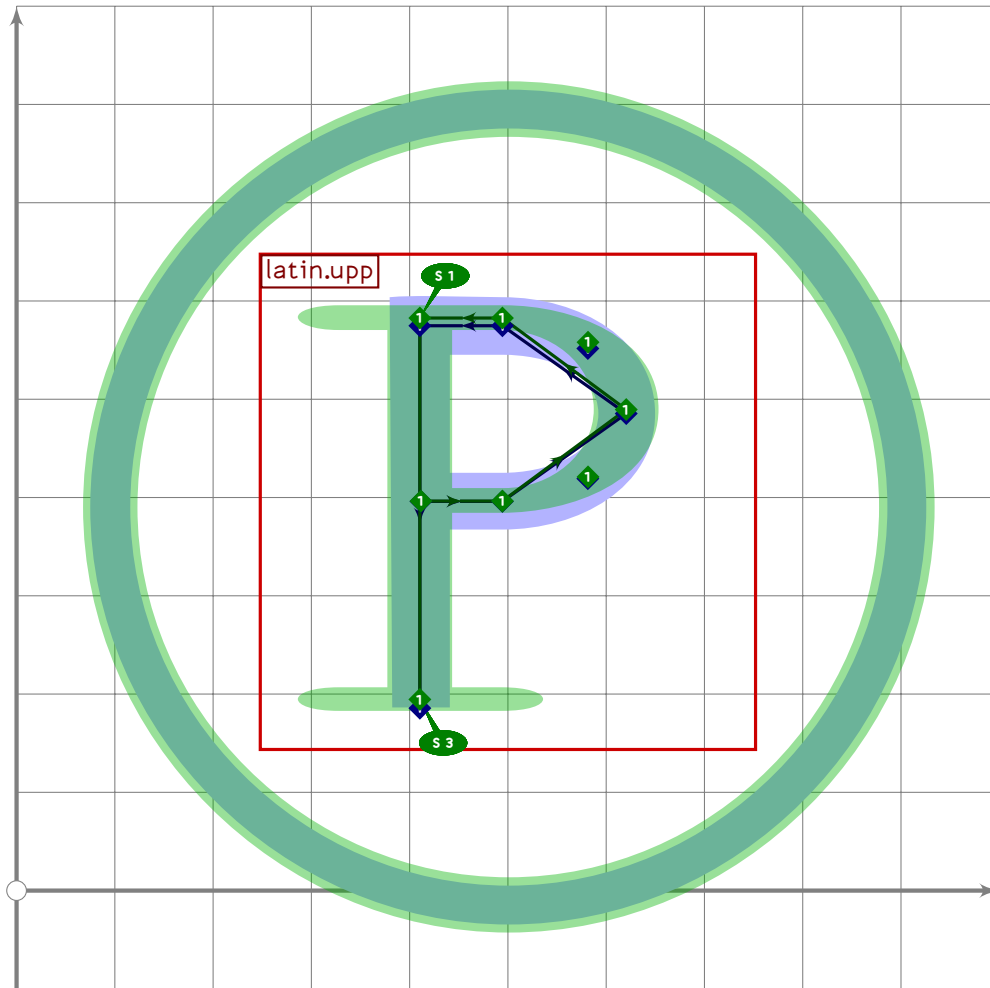
```

U+24C4
tsuku.uni24C4



24

```
312 % O
313 begint Suglyph("uni24C4";196);
314   circle.single;
315   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upo);
316   tsu_render;
317 endtsuglyph;
318
```

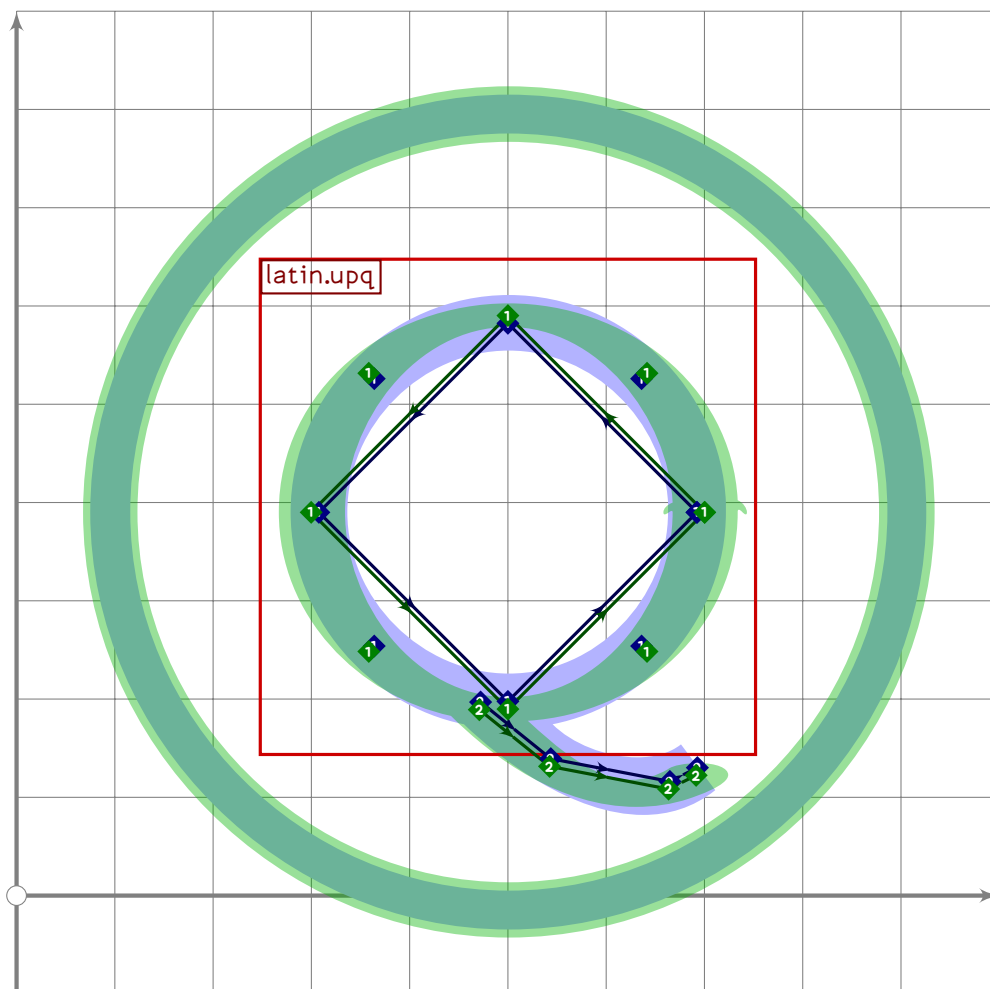


```

319 % P
320 begint Suglyph("uni24C5";197);
321   circle.single;
322   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upp);
323   tsu_render;
324 endtsuglyph;
325

```

U+24C6
tsuku.uni24C6

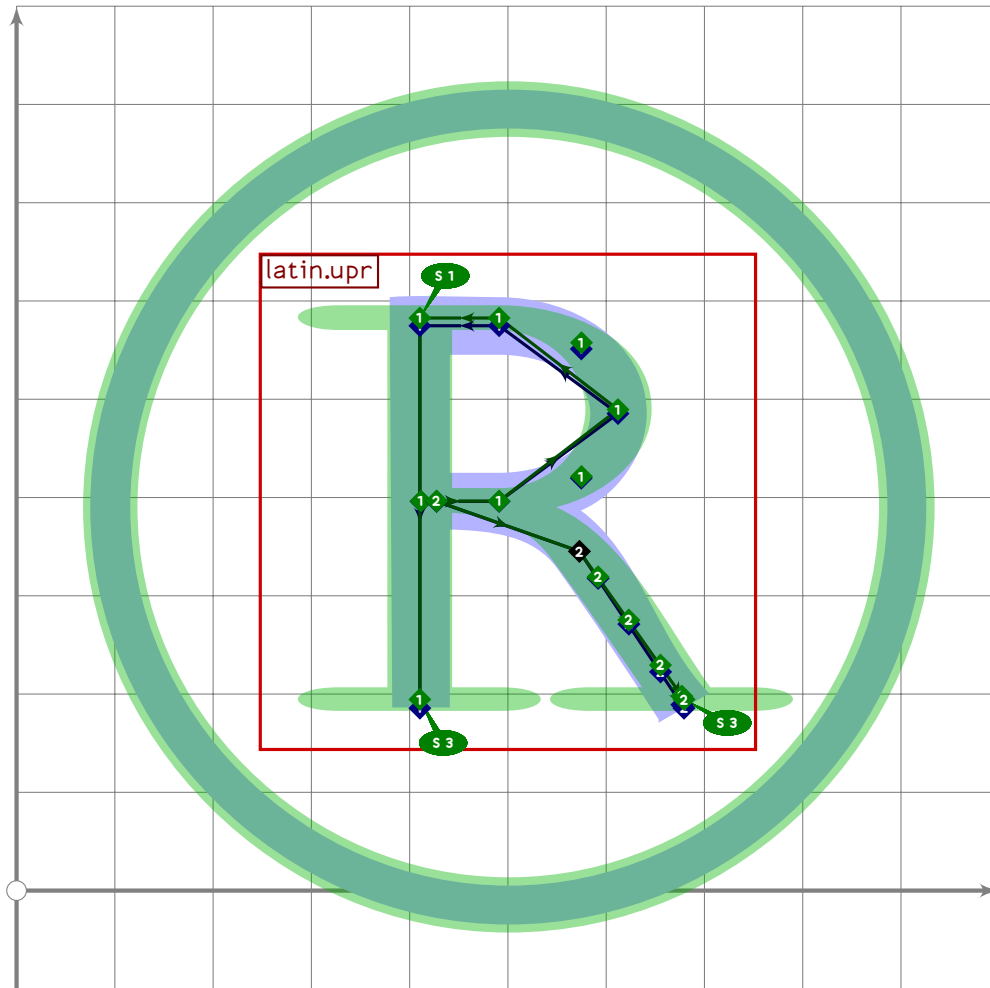


24

```

326 % Q
327 begintsuglyph("uni24C6";198);
328   circle.single;
329   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upq);
330   tsu_render;
331 endtsuglyph;
332

```

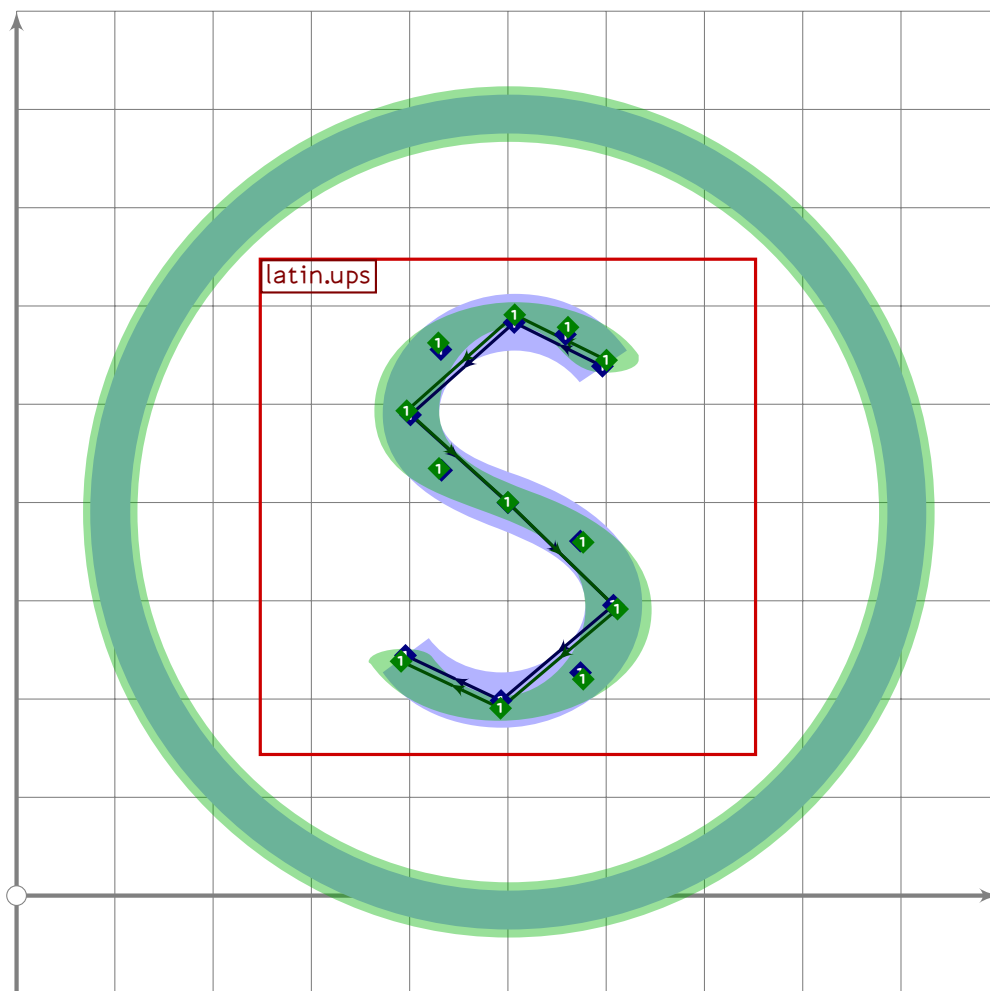


```

333 % R
334 begint Suglyph("uni24C7";199);
335   circle.single;
336   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upr);
337   tsu_render;
338 endtsuglyph;
339

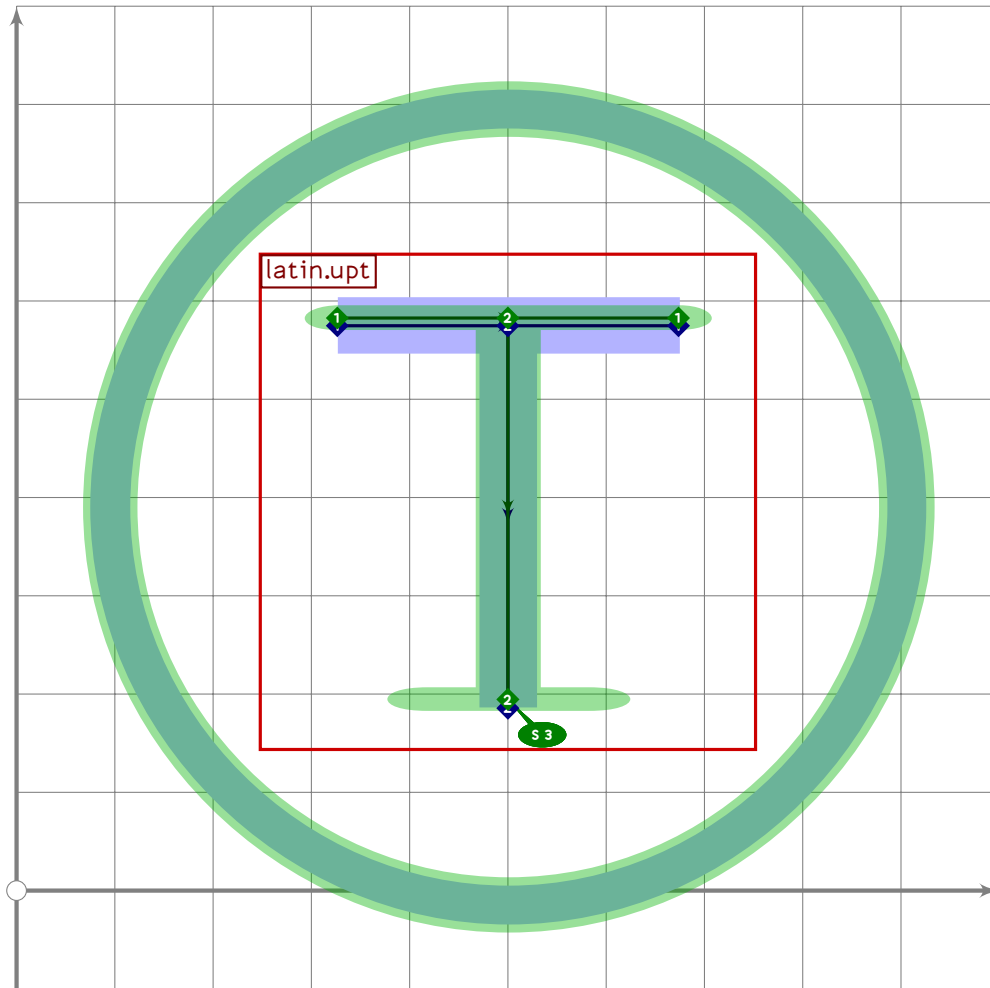
```

U+24C8
tsuku.uni24C8



24

```
340 % S
341 begint Suglyph("uni24C8";200);
342   circle.single;
343   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.ups);
344   tsu_render;
345 endtsuglyph;
346
```

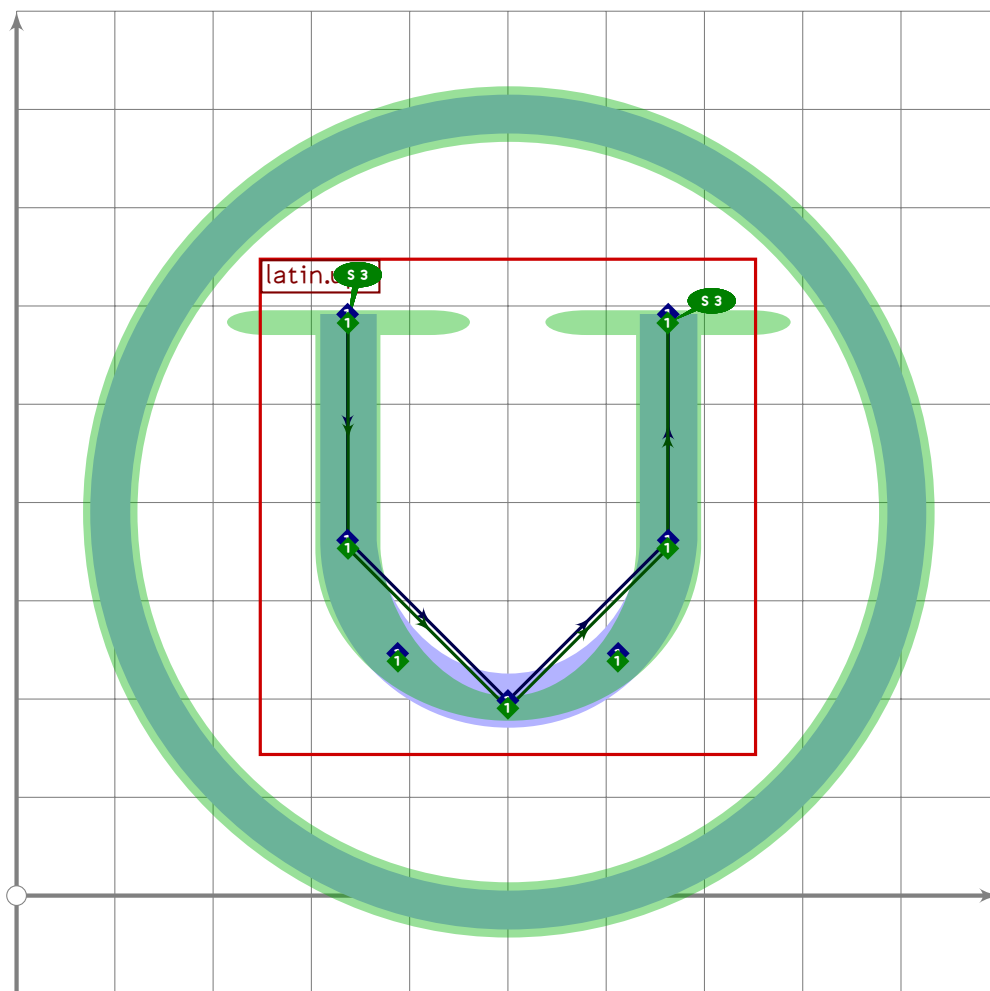


```

347 % T
348 begint Suglyph("uni24C9";201);
349   circle.single;
350   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upt);
351   tsu_render;
352 endtsuglyph;
353

```

U+24CA
tsuku.uni24CA

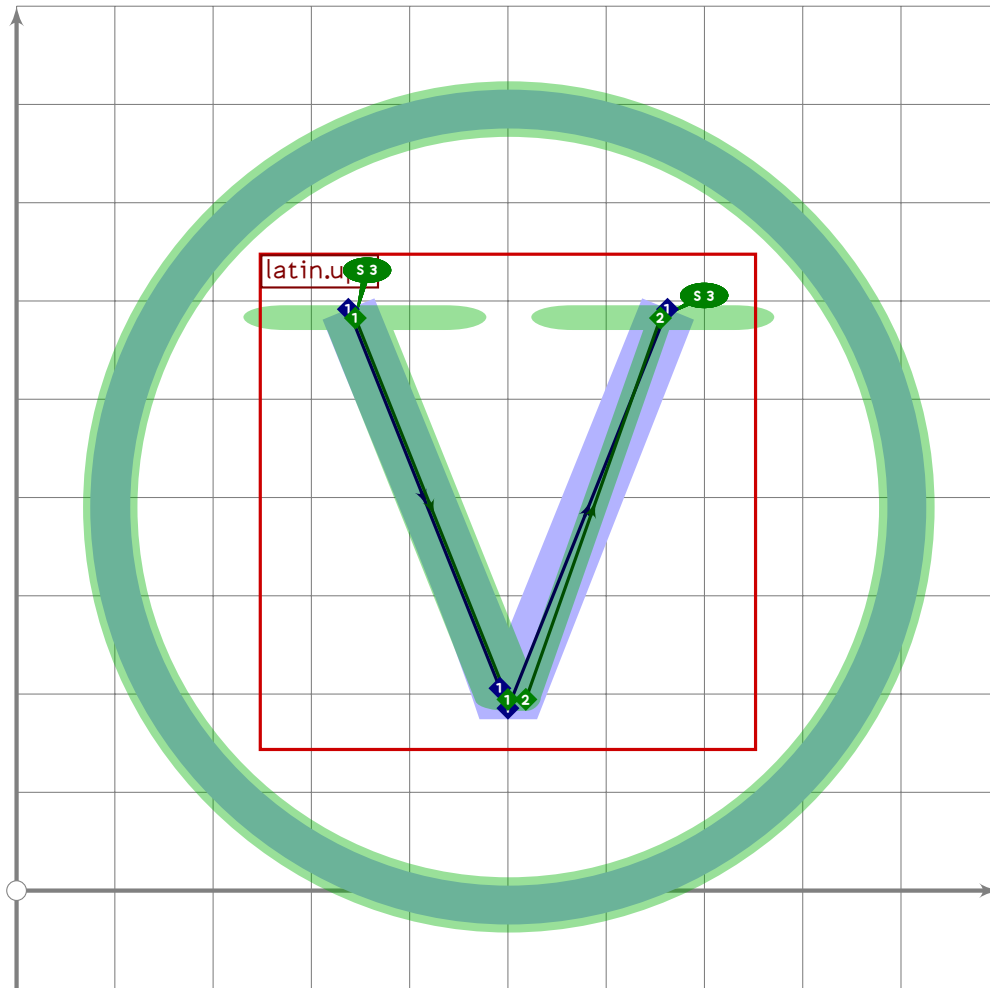


24

```

354 % U
355 begint Suglyph("uni24CA";202);
356   circle.single;
357   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upu);
358   tsu_render;
359 endtsuglyph;
360

```

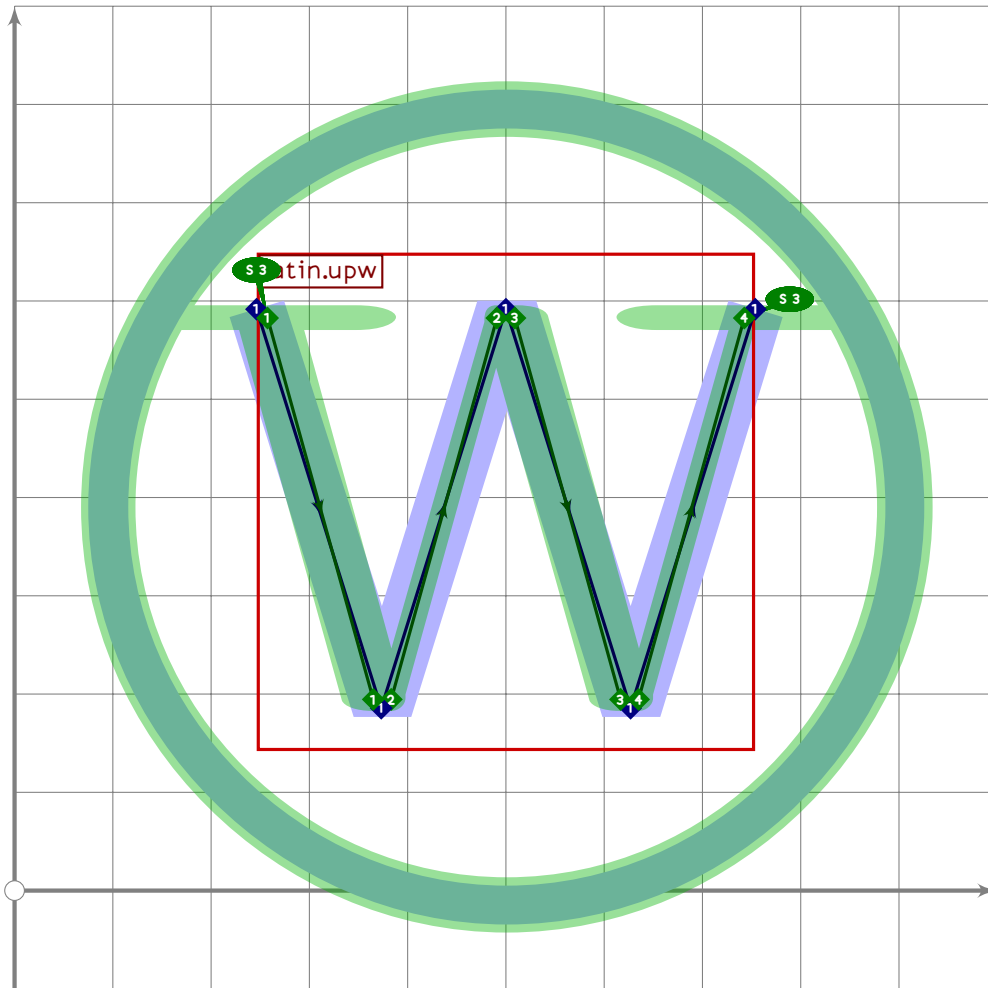



```

361 % V
362 begint Suglyph("uni24CB";203);
363   circle.single;
364   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upv);
365   tsu_render;
366 endtsuglyph;
367

```

U+24CC
tsuku.uni24CC

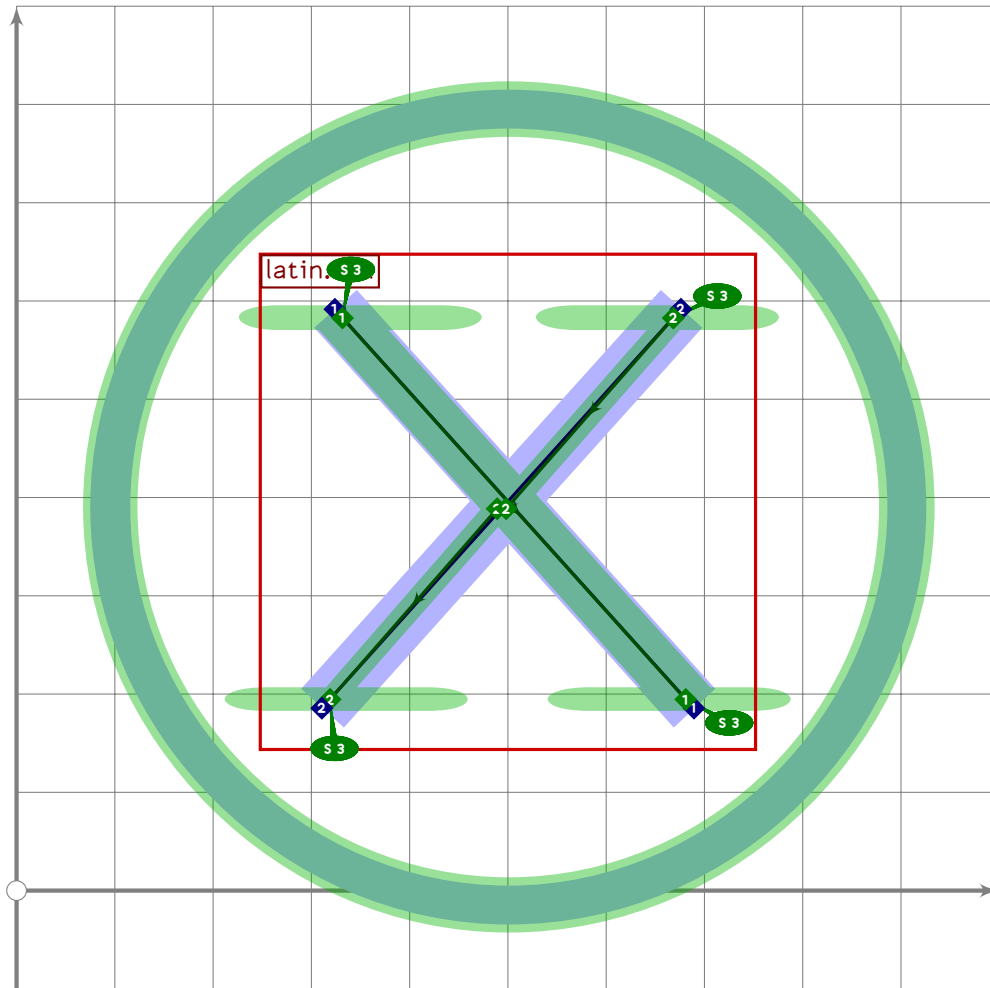


24

```

368 % W
369 begintsuglyph("uni24CC";204);
370   circle.single;
371   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upw);
372   tsu_render;
373 endtsuglyph;
374

```

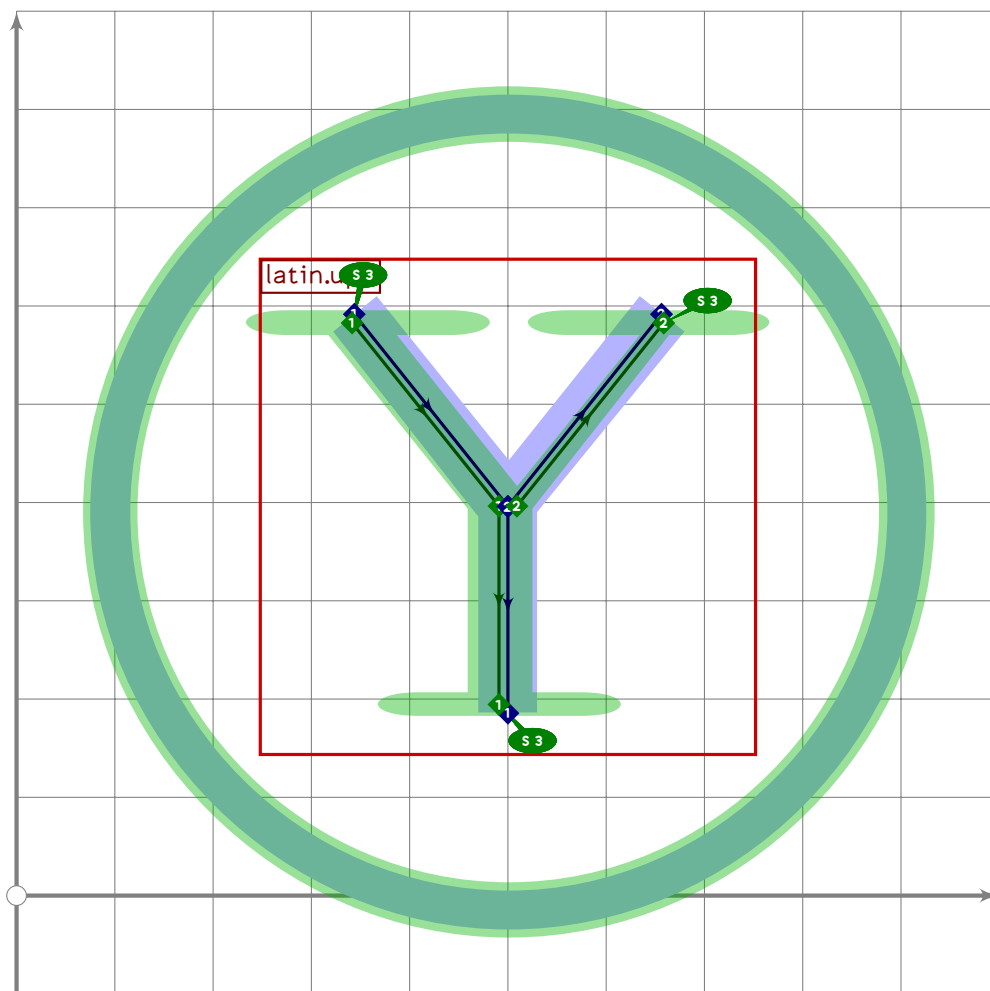


```

375 % X
376 begint Suglyph("uni24CD";205);
377   circle.single;
378   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upx);
379   tsu_render;
380 endtsuglyph;
381

```

U+24CE
tsuku.uni24CE

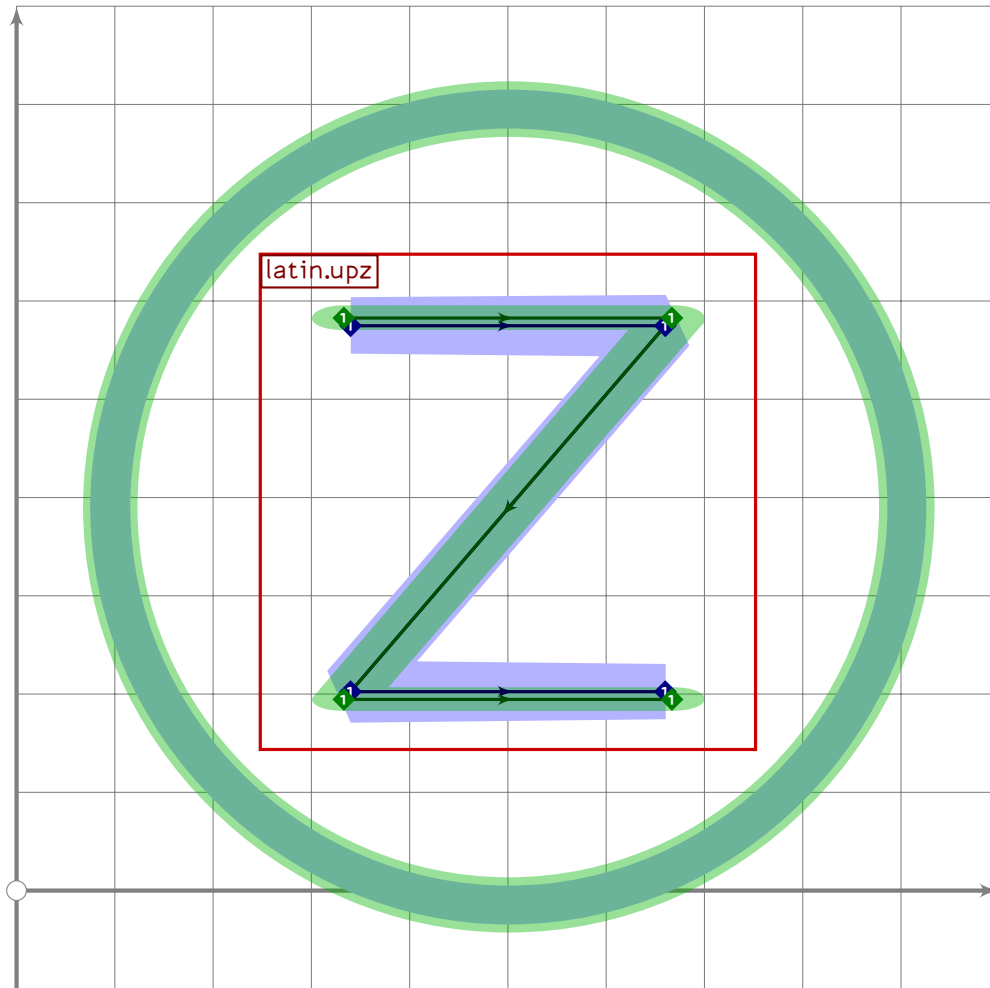


24

```

382 % Y
383 begint Suglyph("uni24CE";206);
384   circle.single;
385   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upy);
386   tsu_render;
387 endtsuglyph;
388

```

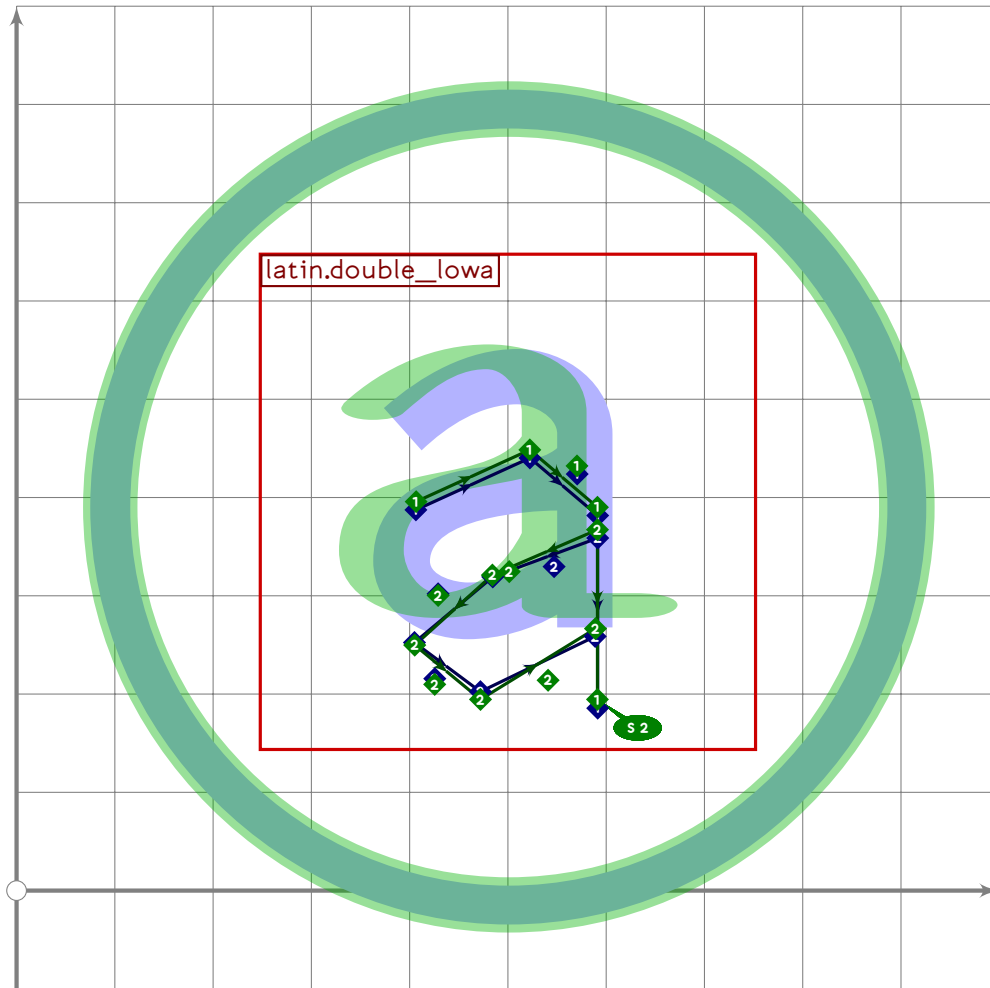


```

389 % Z
390 begint Suglyph("uni24CF";207);
391   circle.single;
392   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.upz);
393   tsu_render;
394 endtsuglyph;
395

```

U+24D0
tsuku.uni24D0

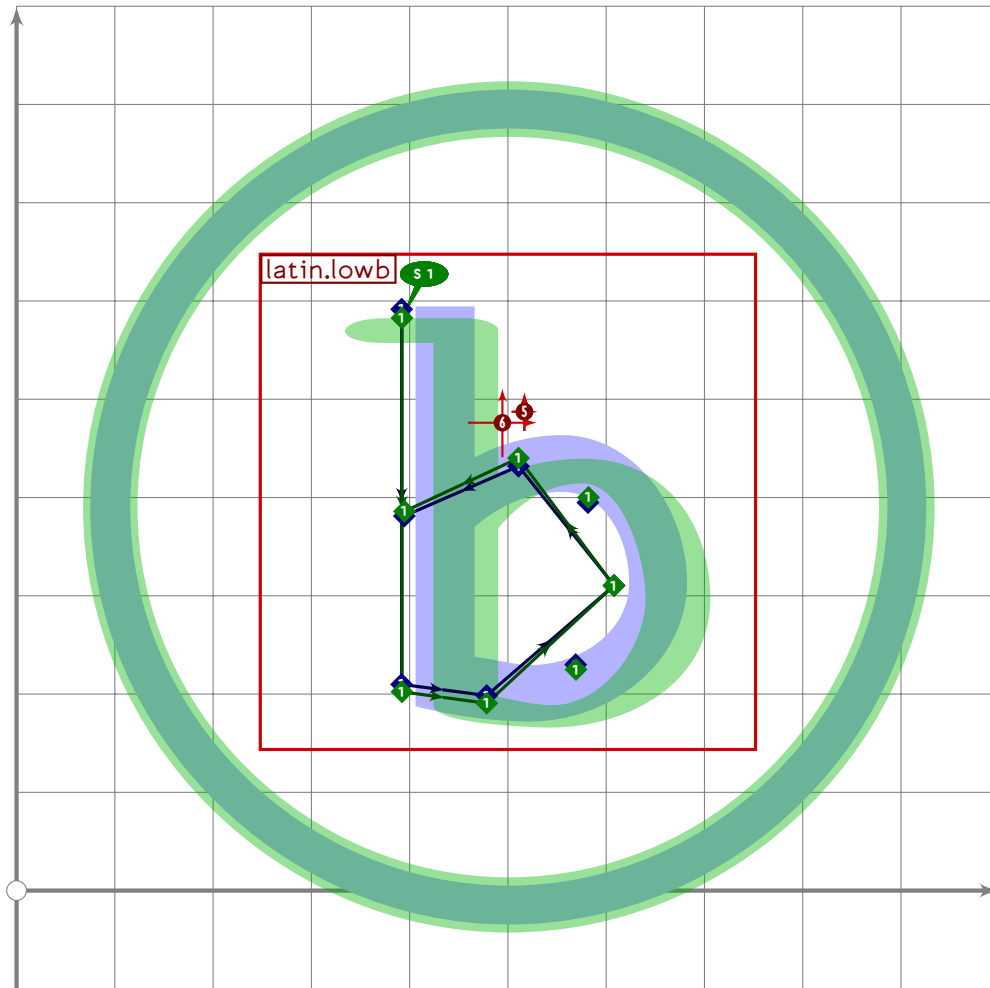


24

```

396 % a
397 begintuglyph("uni24D0";208);
398   circle.single;
399   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowa);
400   tsu_render_in_circle(tsu_xf.cbound);
401 endtuglyph;
402

```

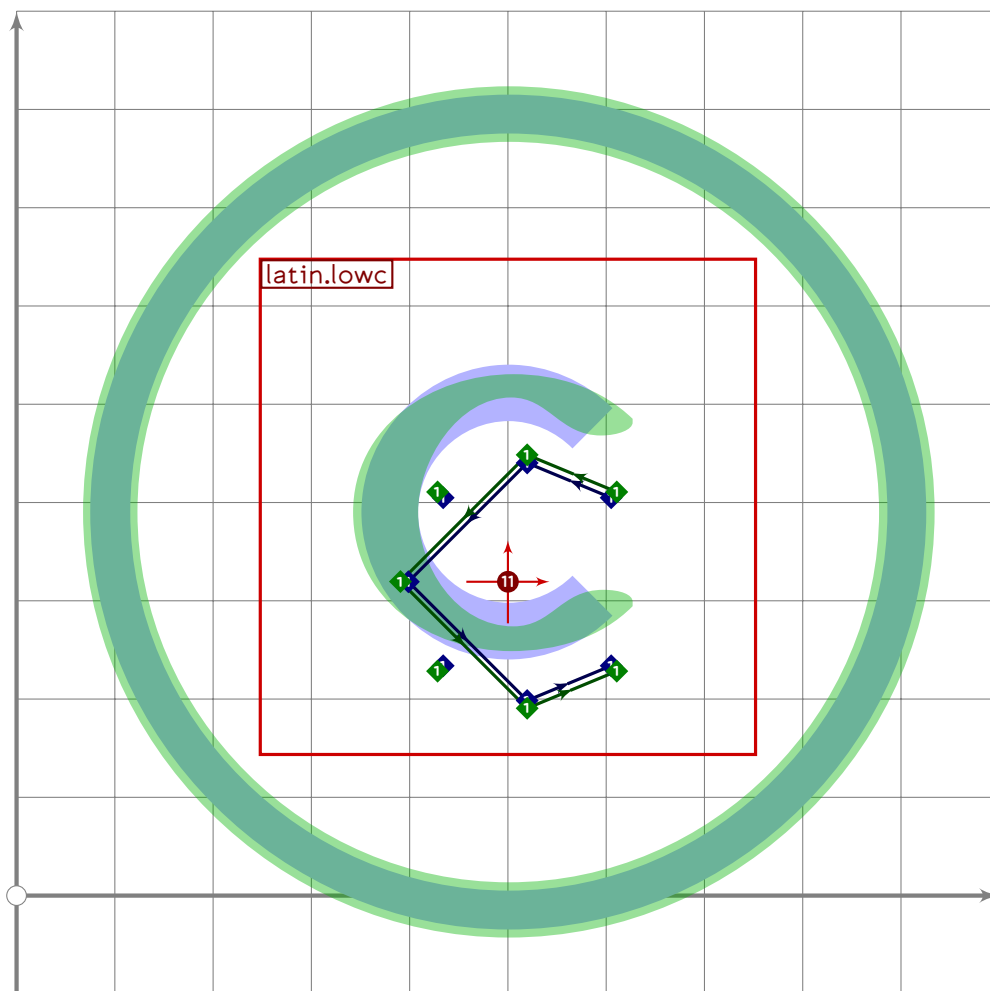


```

403 % b
404 begint Suglyph("uni24D1";209);
405   circle.single;
406   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowb);
407   tsu_render_in_circle(tsu_xf.cbound);
408 endtsuglyph;
409

```

U+24D2
tsuku.uni24D2

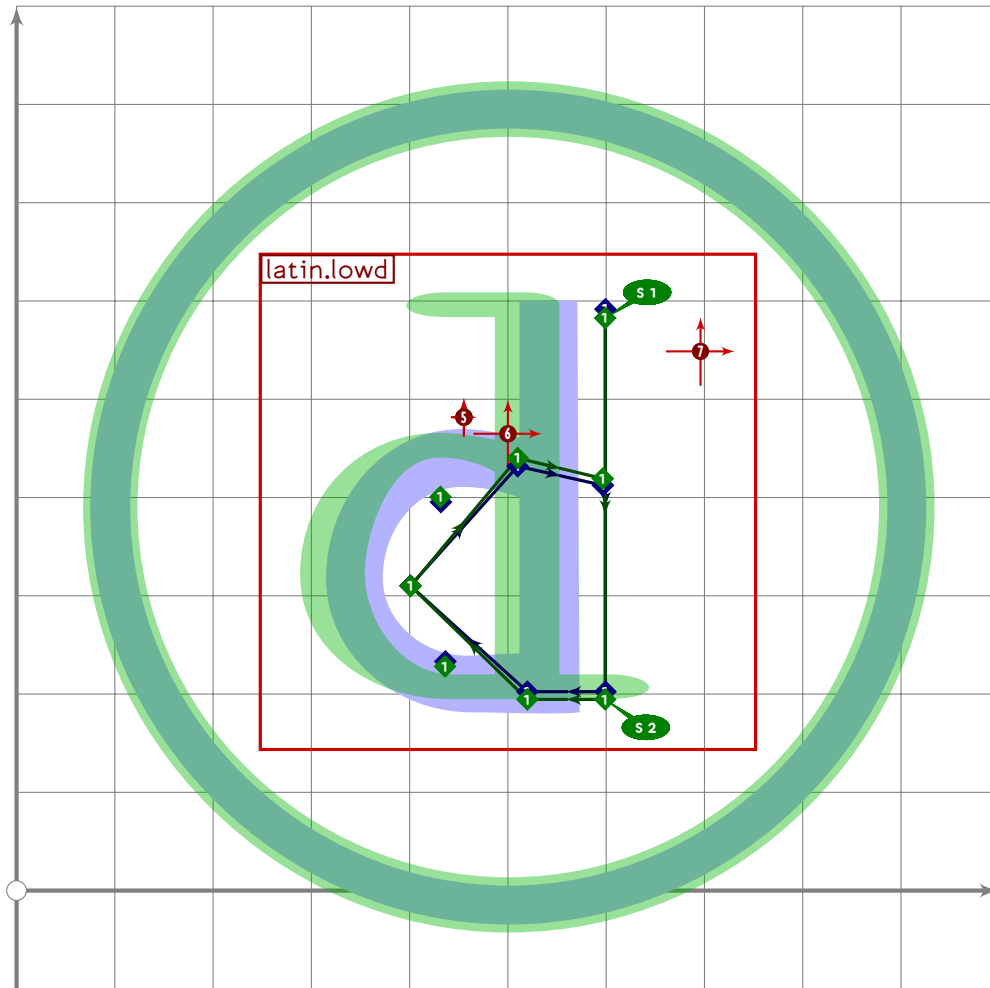


24

```

410 % c
411 begint Suglyph("uni24D2";210);
412   circle.single;
413   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowc);
414   tsu_render_in_circle(tsu_xf.cbound);
415 endtsuglyph;
416

```

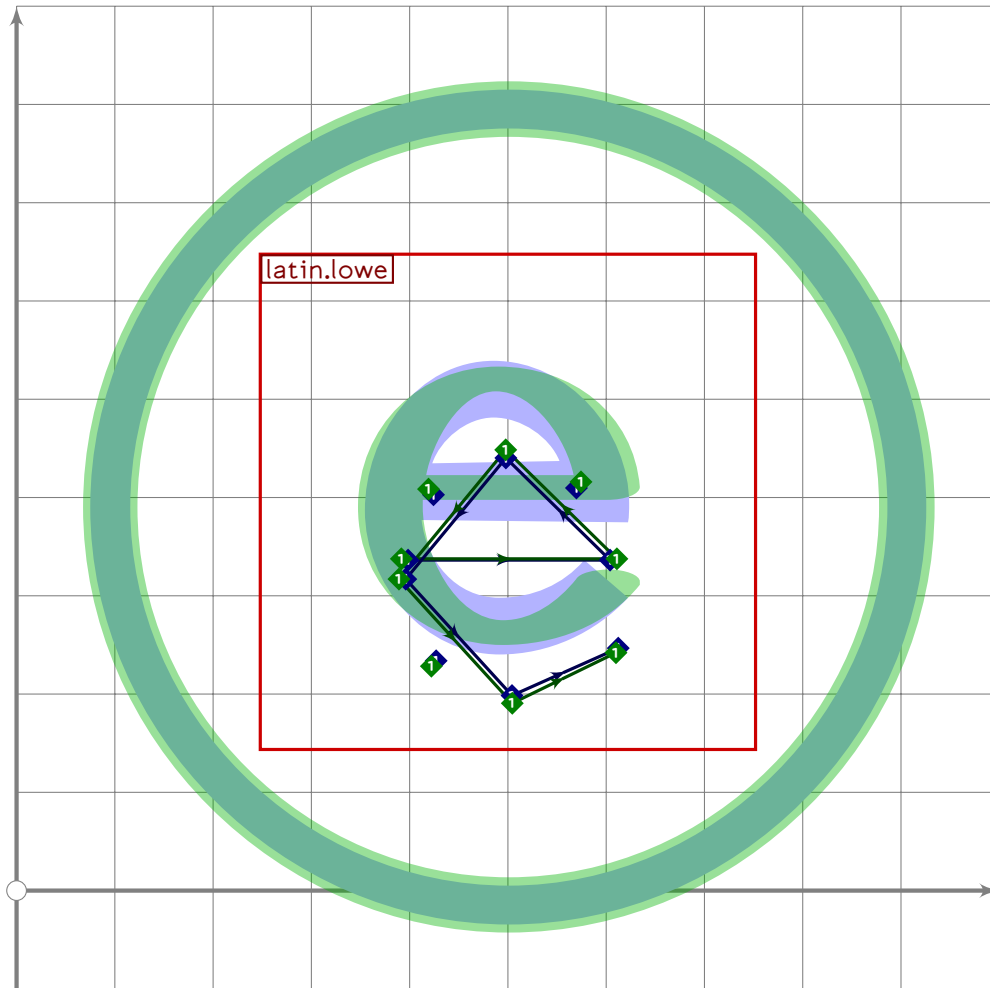



```

417 % d
418 begint Suglyph("uni24D3";211);
419   circle.single;
420   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowd);
421   tsu_render_in_circle(tsu_xf.cbound);
422 endtsuglyph;
423

```

U+24D4
tsuku.uni24D4

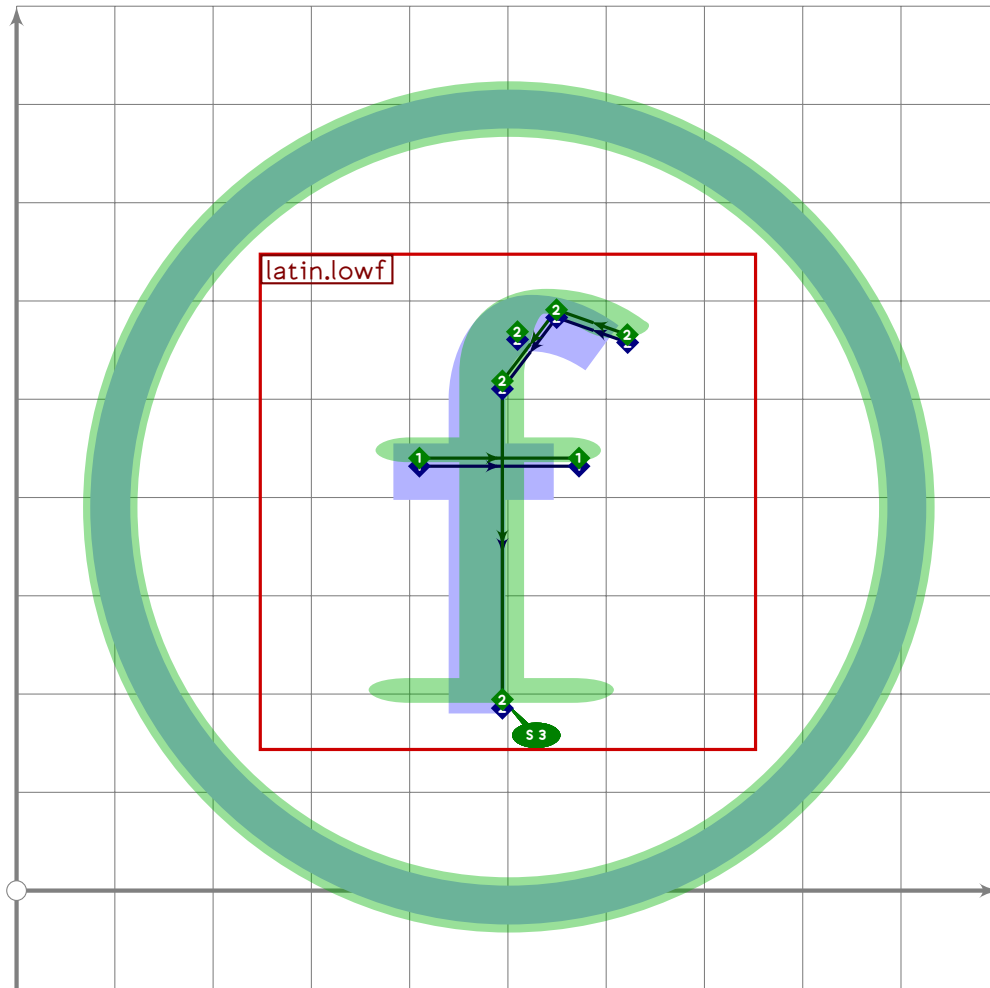


24

```

424 % e
425 begint Suglyph("uni24D4";212);
426   circle.single;
427   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowe);
428   tsu_render_in_circle(tsu_xf.cbound);
429 endtsuglyph;
430

```

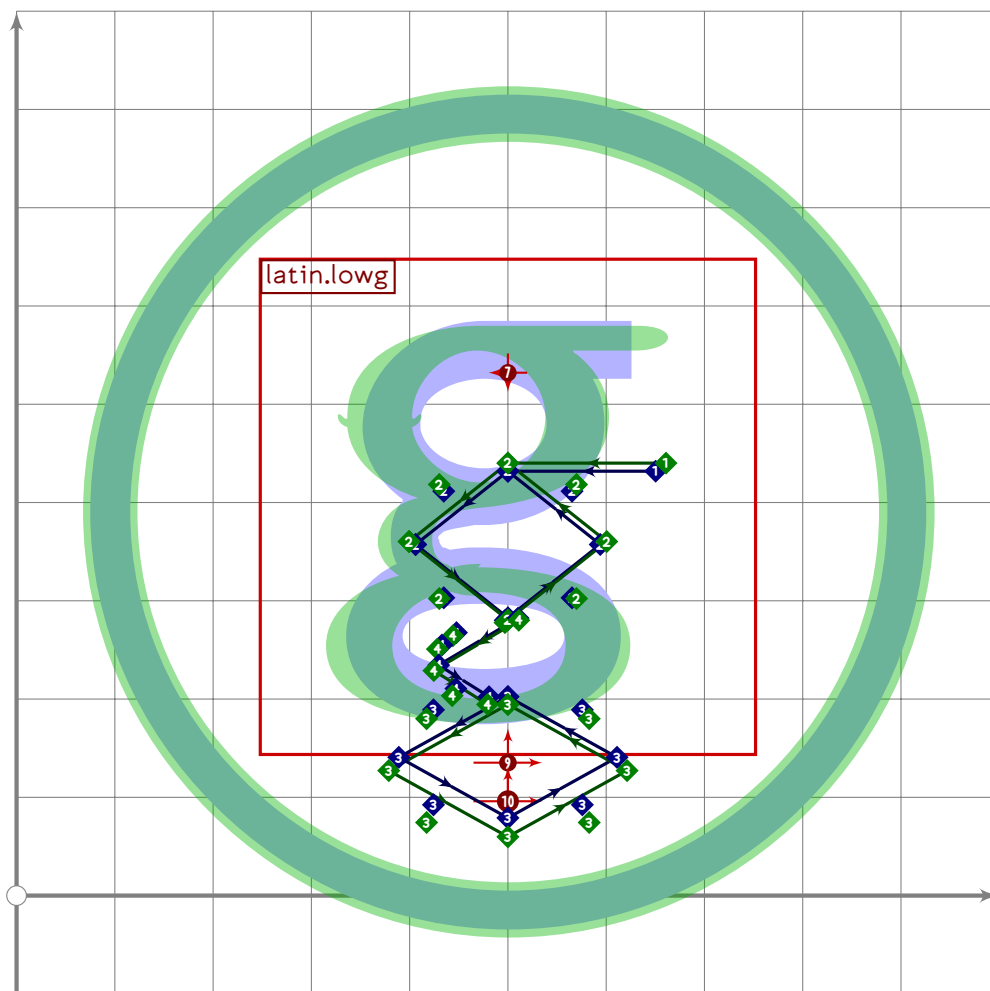


```

431 % f
432 begint Suglyph("uni24D5";213);
433   circle.single;
434   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowf);
435   tsu_render_in_circle(tsu_xf.cbound);
436 endtsuglyph;
437

```

U+24D6
tsuku.uni24D6

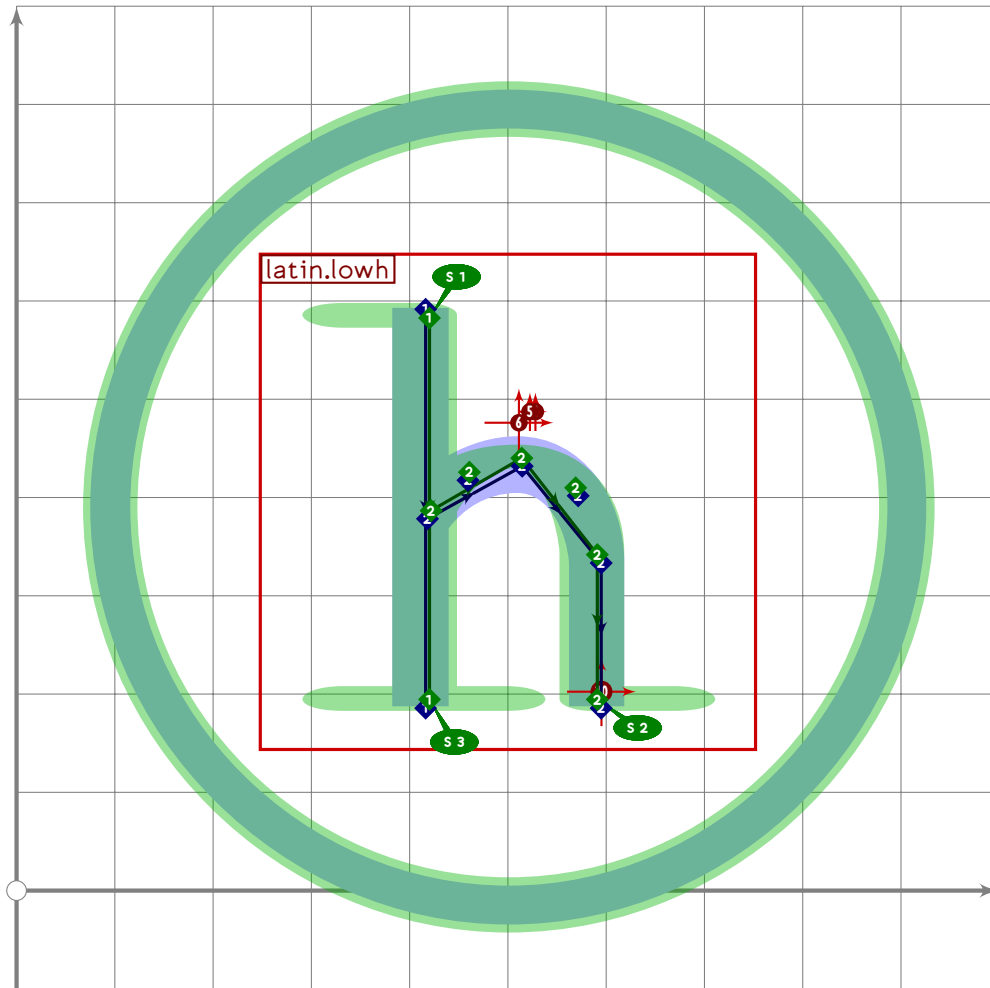


24

```

438 % g
439 begintsuglyph("uni24D6";214);
440   circle.single;
441   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowg);
442   tsu_render_in_circle(tsu_xf.cbound);
443 endtsuglyph;
444

```

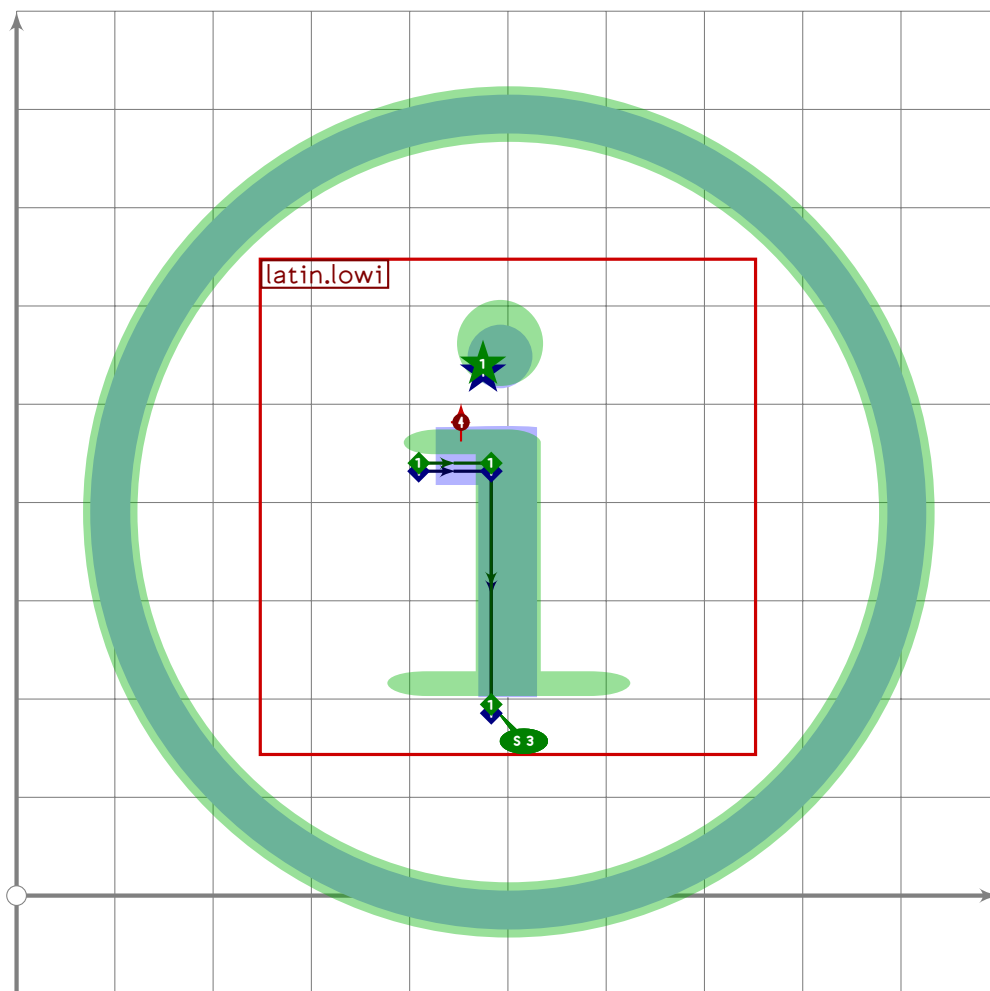


```

445 % h
446 begint Suglyph("uni24D7";215);
447   circle.single;
448   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowh);
449   tsu_render_in_circle(tsu_xf.cbound);
450 endtsuglyph;
451

```

U+24D8
tsuku.uni24D8

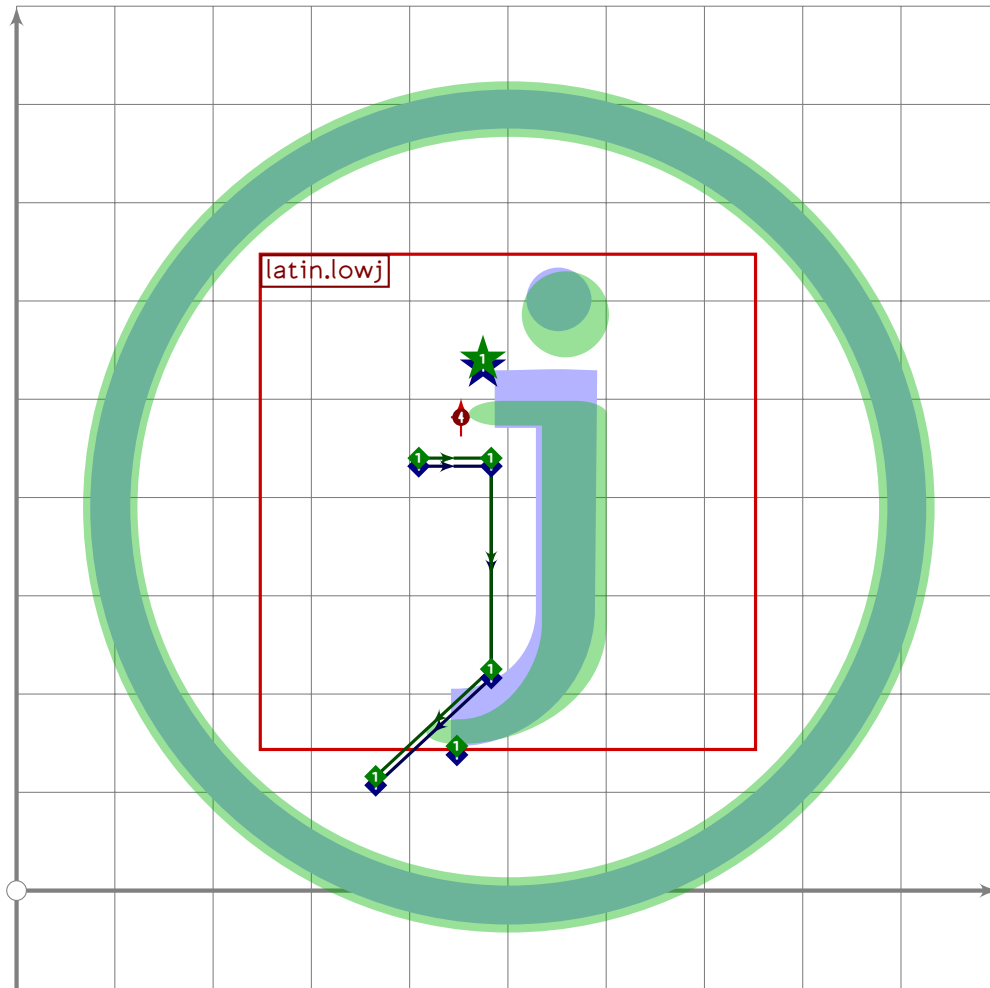


24

```

452 % i
453 beginsuglyph("uni24D8";216);
454   circle.single;
455   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowi);
456   tsu_render_in_circle(tsu_xf.cbound);
457 endsuglyph;
458

```

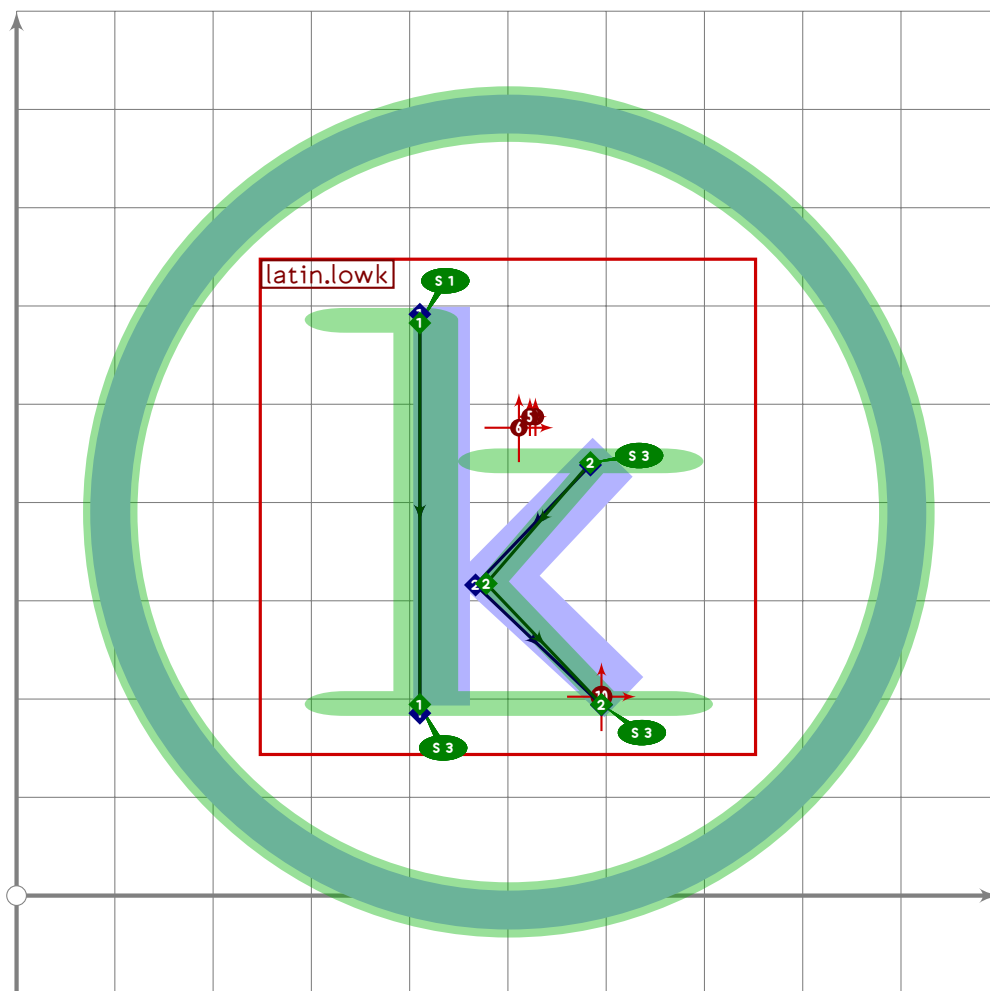


```

459 % j
460 begint Suglyph("uni24D9";217);
461   circle.single;
462   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowj);
463   tsu_render_in_circle(tsu_xf.cbound);
464 endtsuglyph;
465

```

U+24DA
tsuku.uni24DA

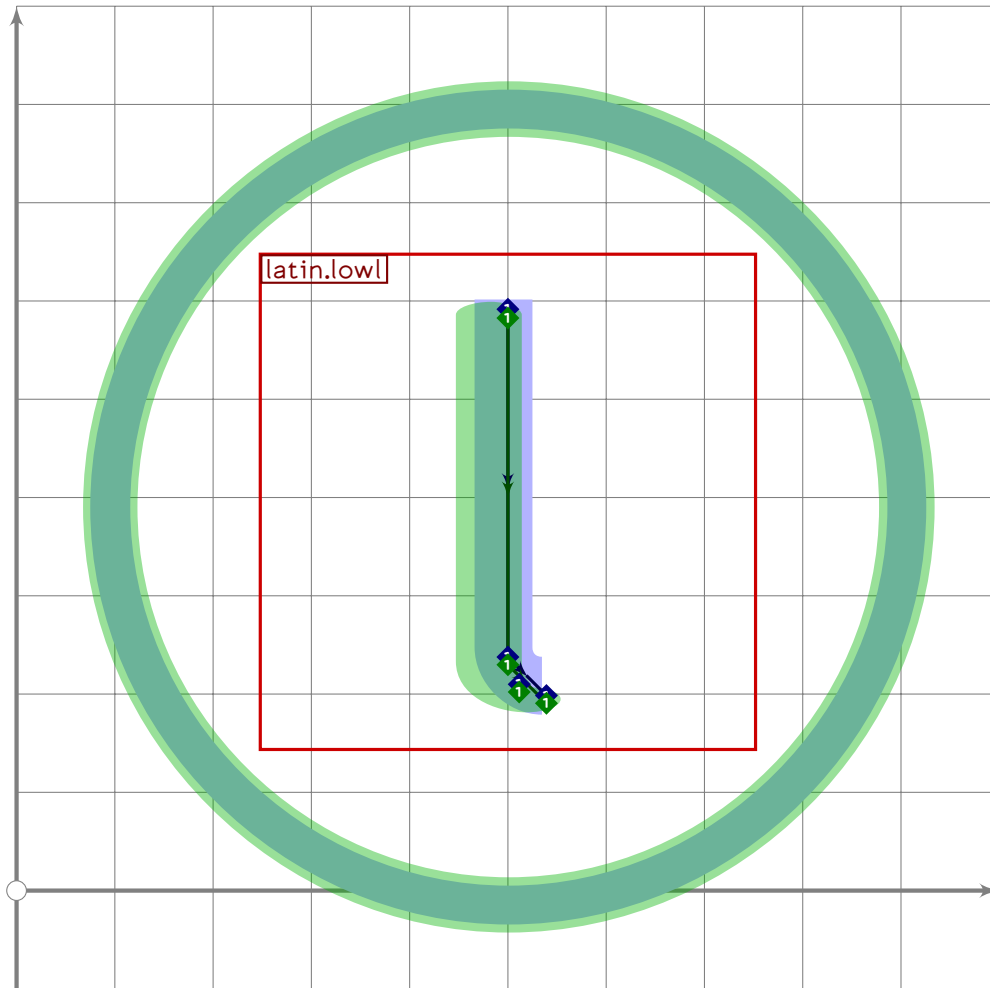


24

```

466 % k
467 begintuglyph("uni24DA";218);
468   circle.single;
469   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowk);
470   tsu_render_in_circle(tsu_xf.cbound);
471 endtuglyph;
472

```

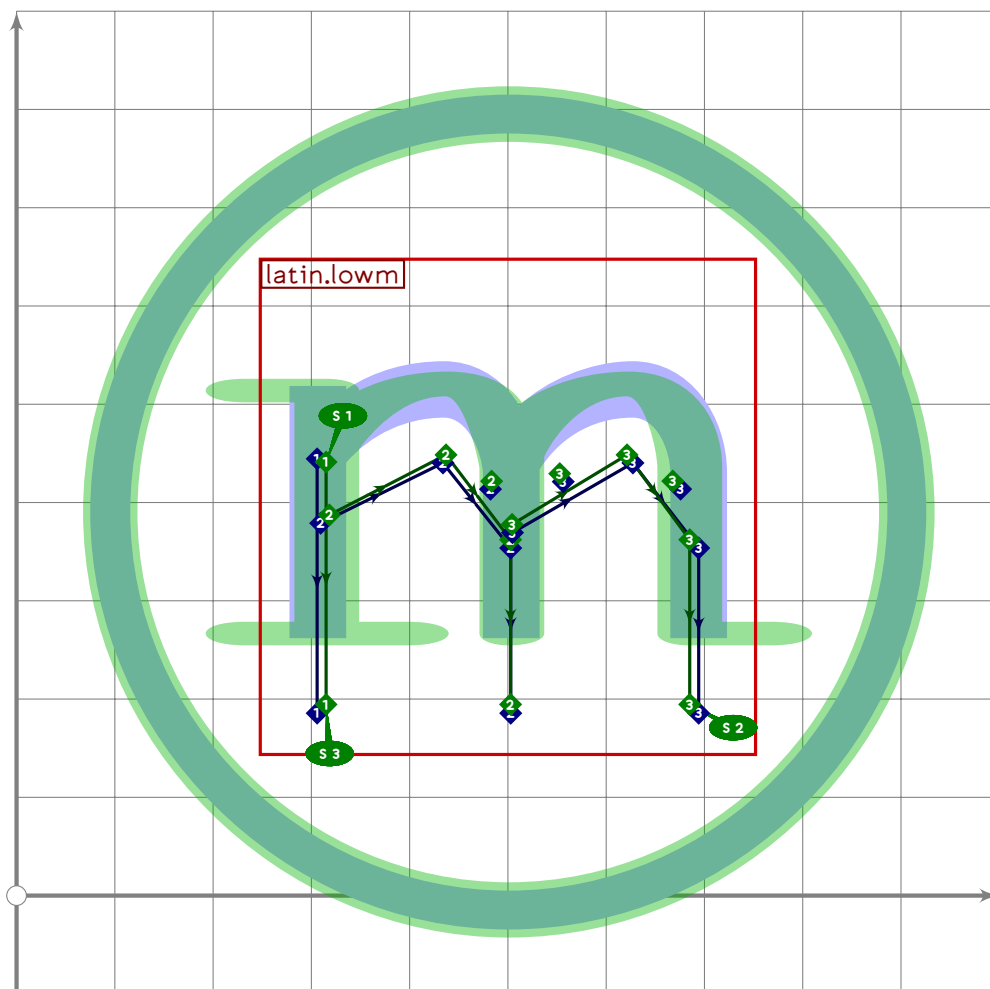



```

473 % l
474 begint Suglyph("uni24DB";219);
475   circle.single;
476   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowl);
477   tsu_render_in_circle(tsu_xf.cbound);
478 endtsuglyph;
479

```

U+24DC
tsuku.uni24DC

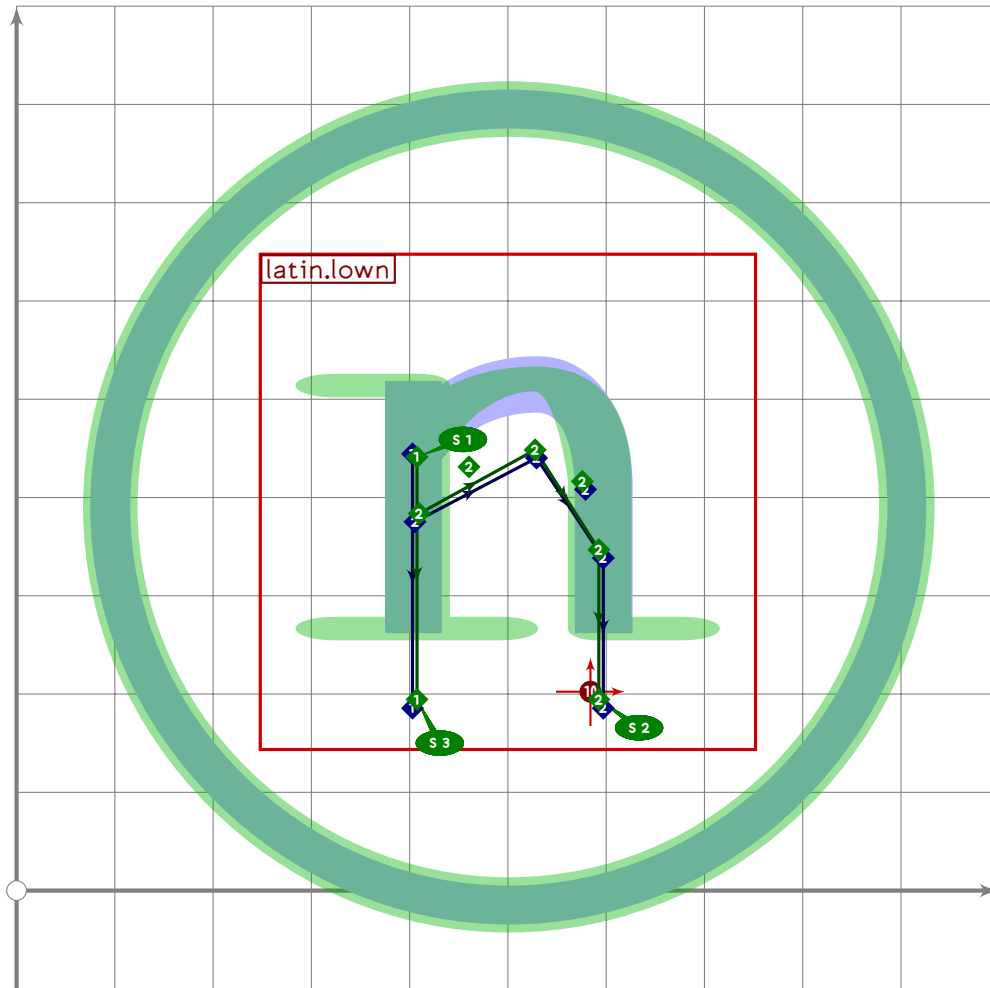


24

```

480 % m
481 begint Suglyph("uni24DC";220);
482   circle.single;
483   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowm);
484   tsu_render_in_circle(tsu_xf.cbound);
485 endtsuglyph;
486

```

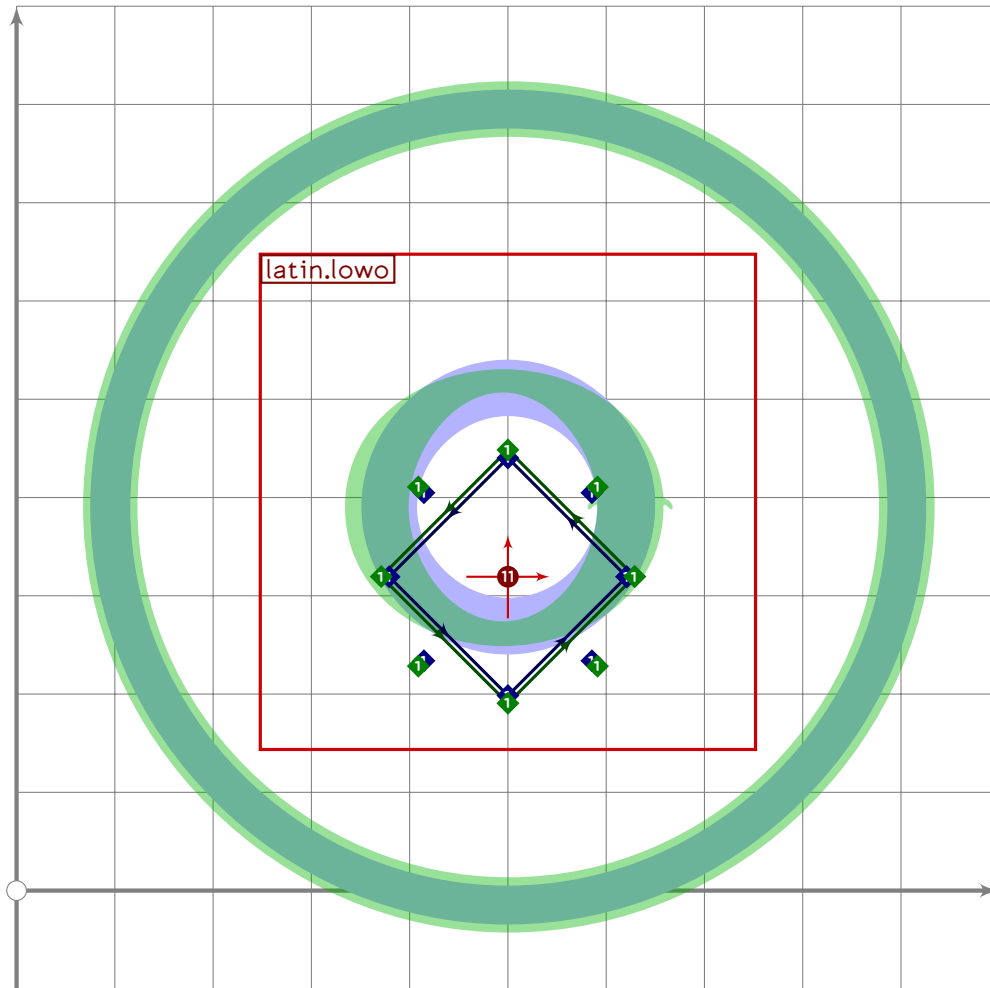


```

487 % n
488 begintsuglyph("uni24DD";221);
489   circle.single;
490   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lown);
491   tsu_render_in_circle(tsu_xf.cbound);
492 endtsuglyph;
493

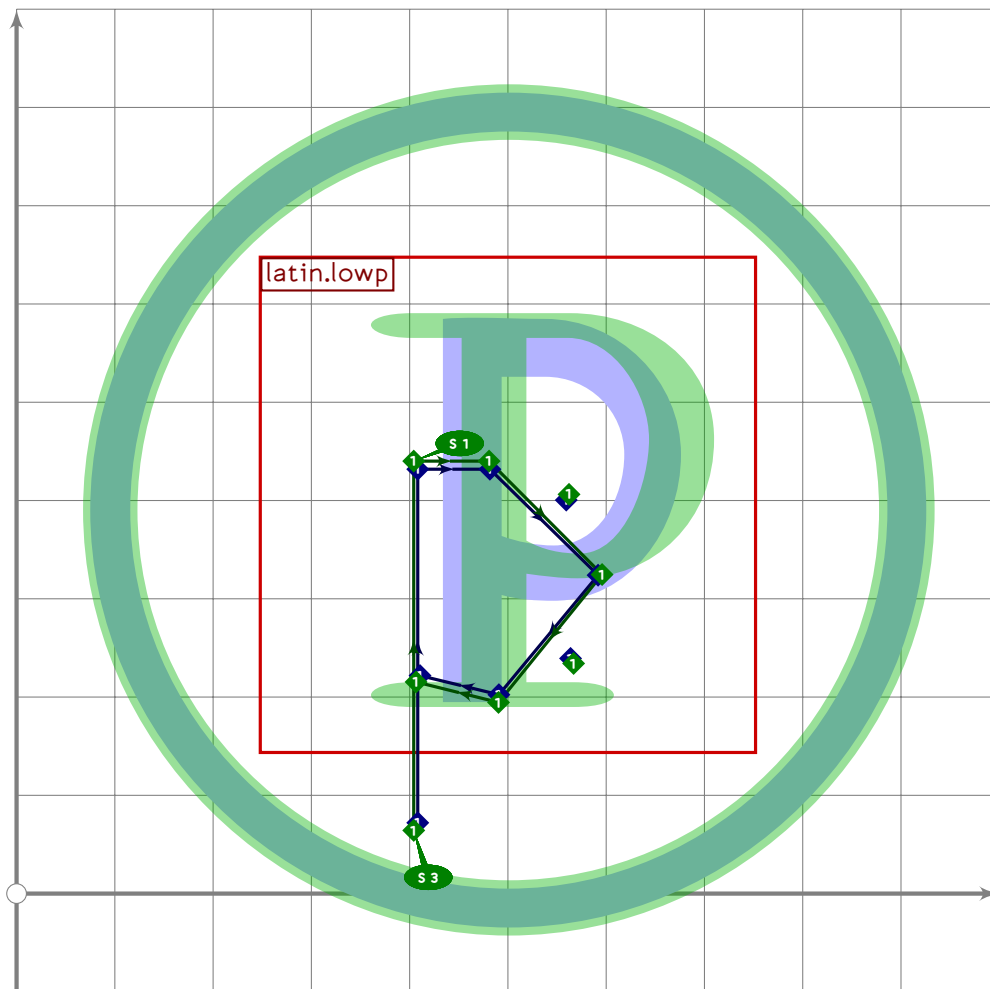
```

U+24DE
tsuku.uni24DE



24

```
494 % o
495 begint Suglyph("uni24DE";222);
496   circle.single;
497   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowo);
498   tsu_render_in_circle(tsu_xf.cbound);
499 endtsuglyph;
500
```

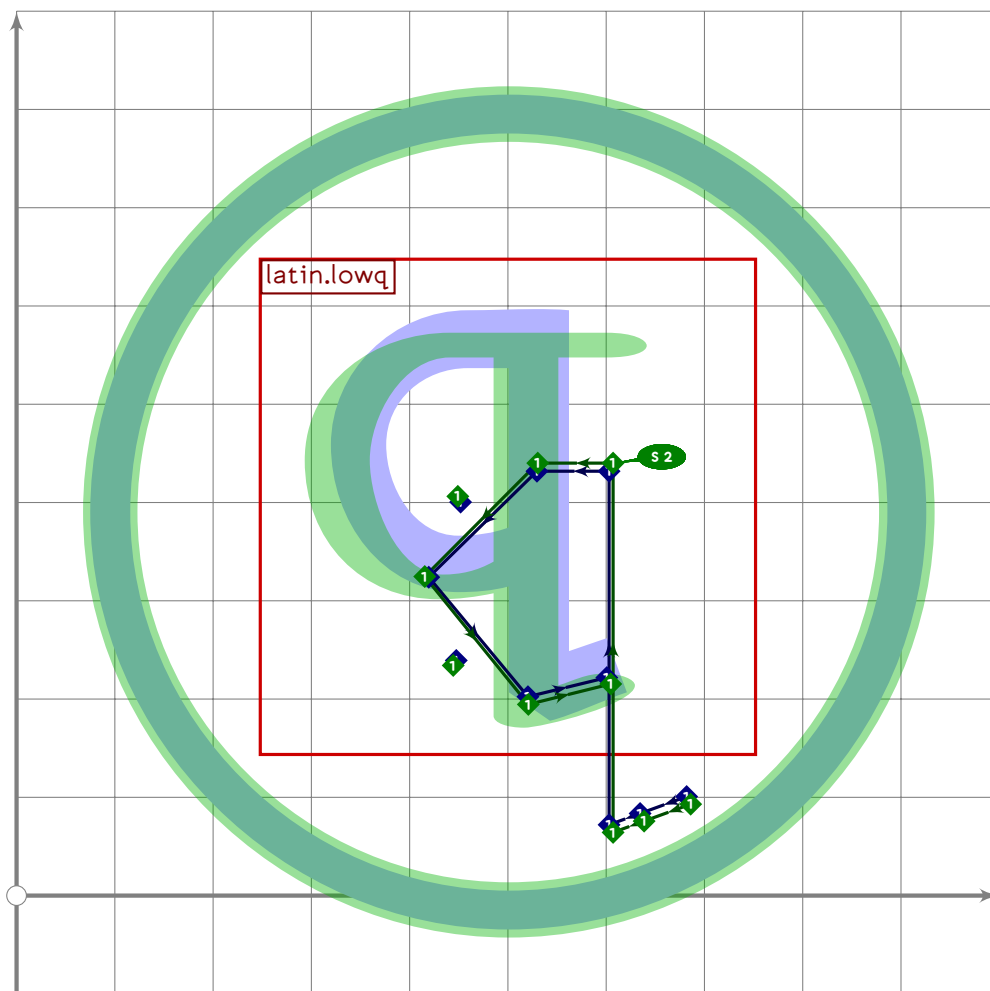


```

501 % p
502 begint Suglyph("uni24DF";223);
503   circle.single;
504   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowp);
505   tsu_render_in_circle(tsu_xf.cbound);
506 endtsuglyph;
507

```

U+24E0
tsuku.uni24E0

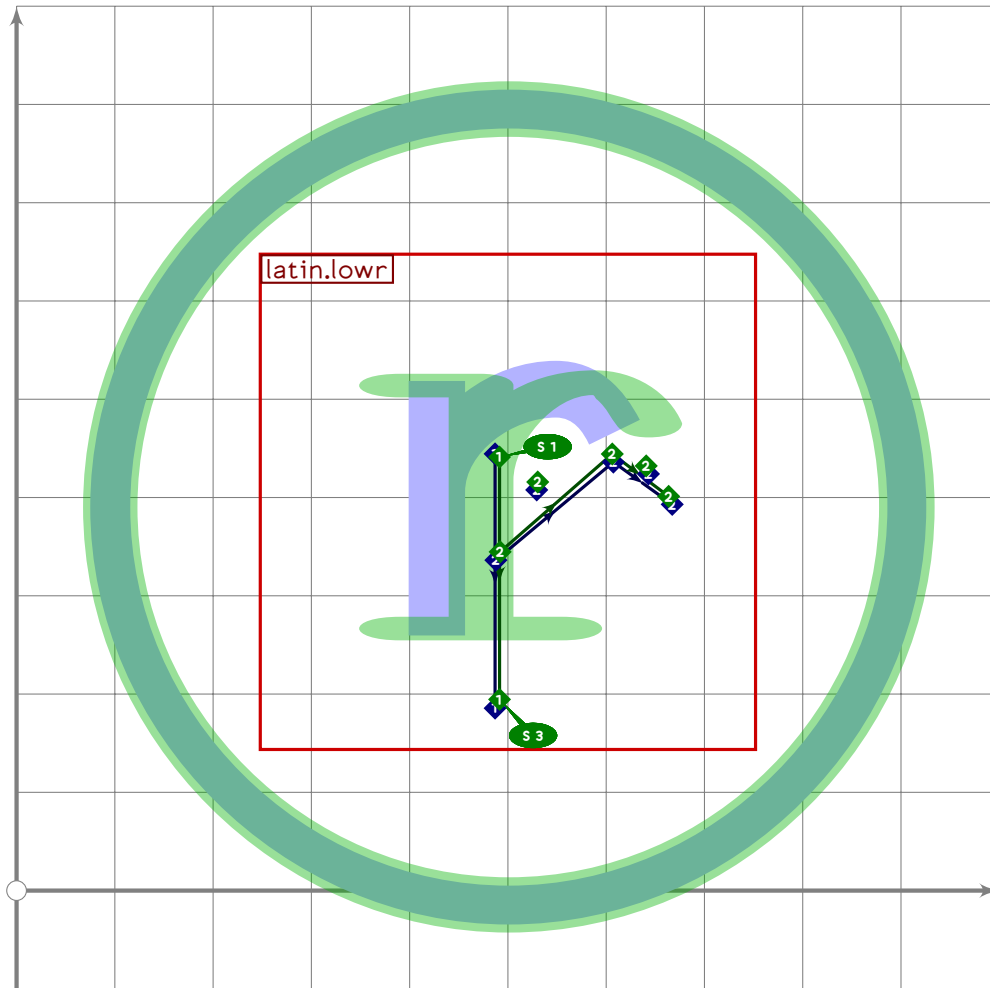


24

```

508 % q
509 begintsuglyph("uni24E0";224);
510   circle.single;
511   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowq);
512   tsu_render_in_circle(tsu_xf.cbound);
513 endtsuglyph;
514

```

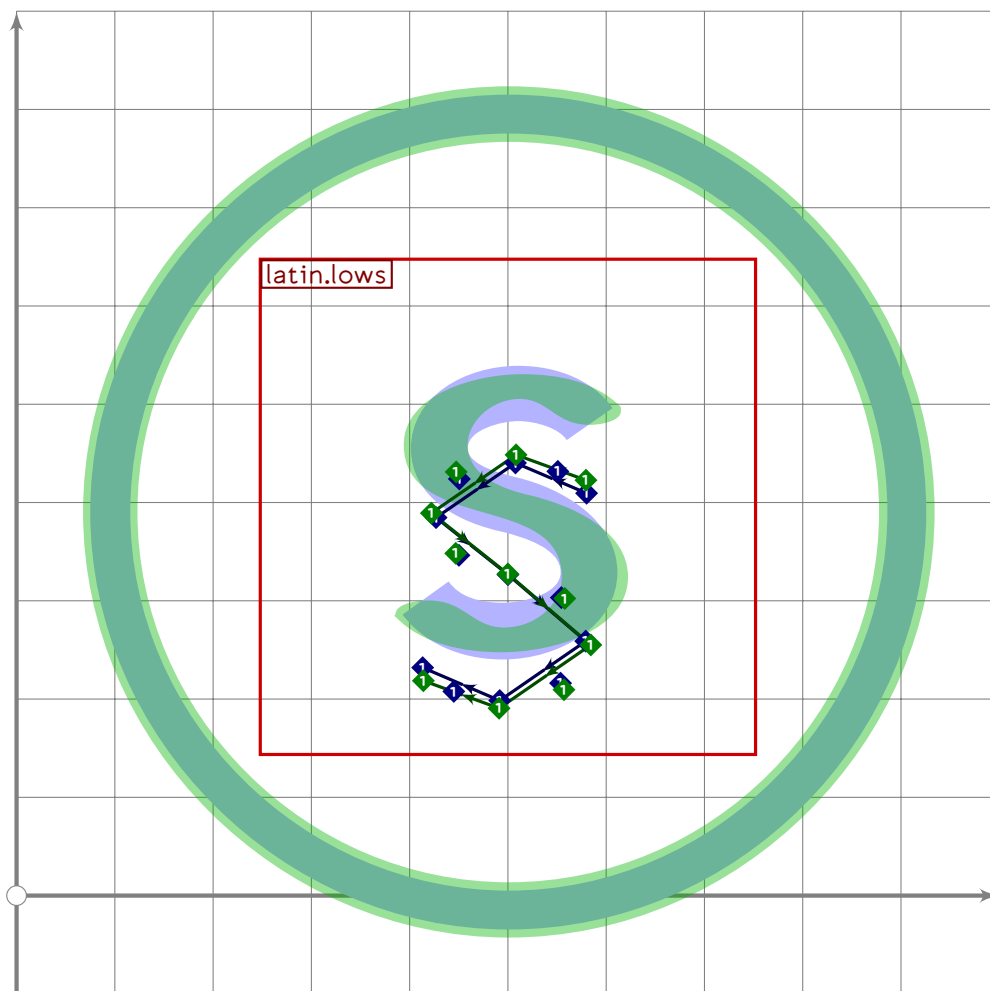


```

515 % r
516 begint Suglyph("uni24E1";225);
517   circle.single;
518   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowr);
519   tsu_render_in_circle(tsu_xf.cbound);
520 endtsuglyph;
521

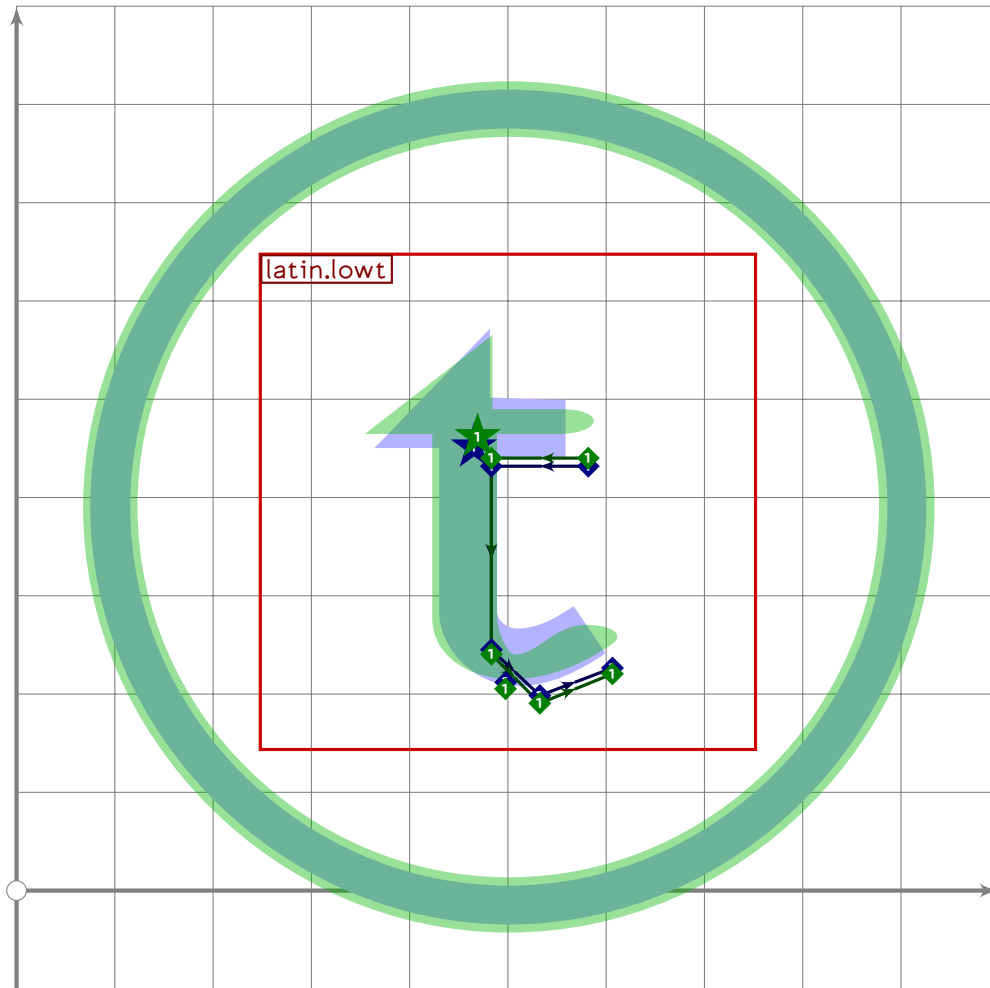
```

U+24E2
tsuku.uni24E2



24

```
522 % s
523 begint Suglyph("uni24E2";226);
524   circle.single;
525   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lows);
526   tsu_render_in_circle(tsu_xf.cbound);
527 endtsuglyph;
528
```

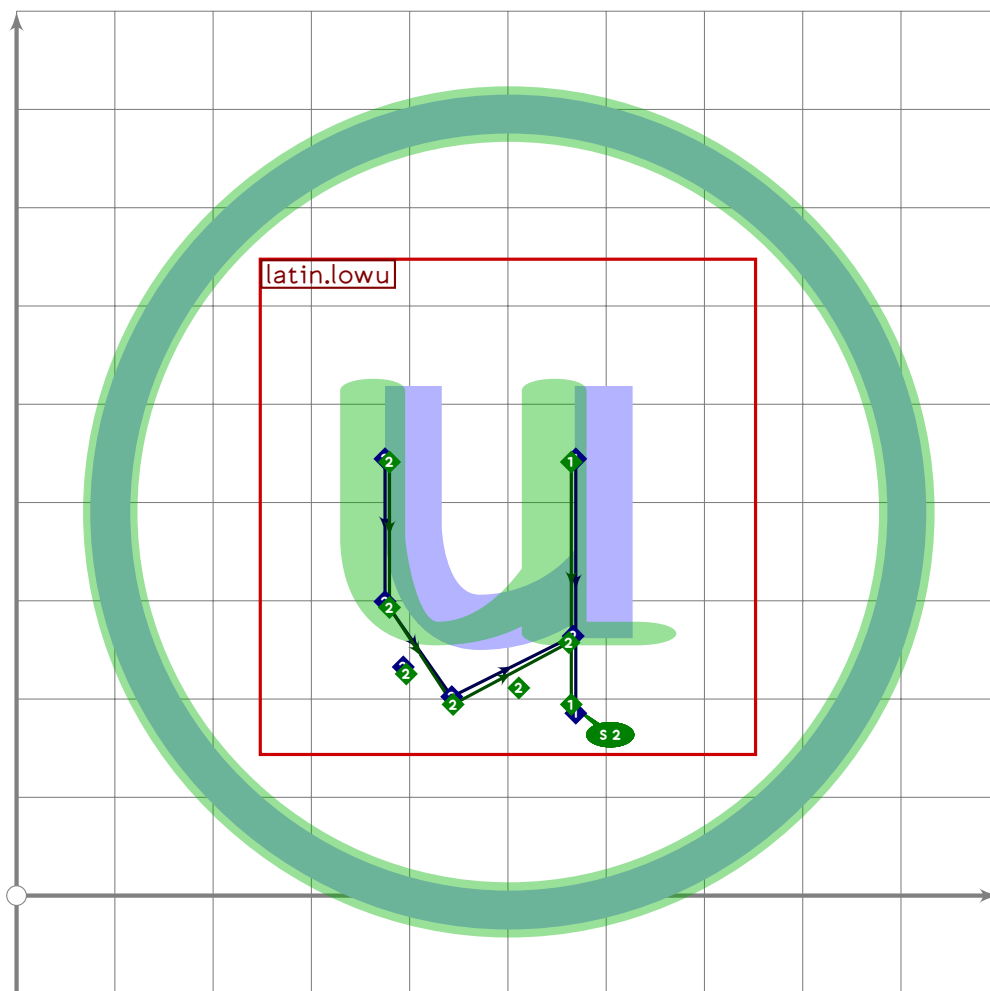



```

529 % t
530 begint Suglyph("uni24E3",227);
531   circle.single;
532   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowt);
533   tsu_render_in_circle(tsu_xf.cbound);
534 endtsuglyph;
535

```

U+24E4
tsuku.uni24E4

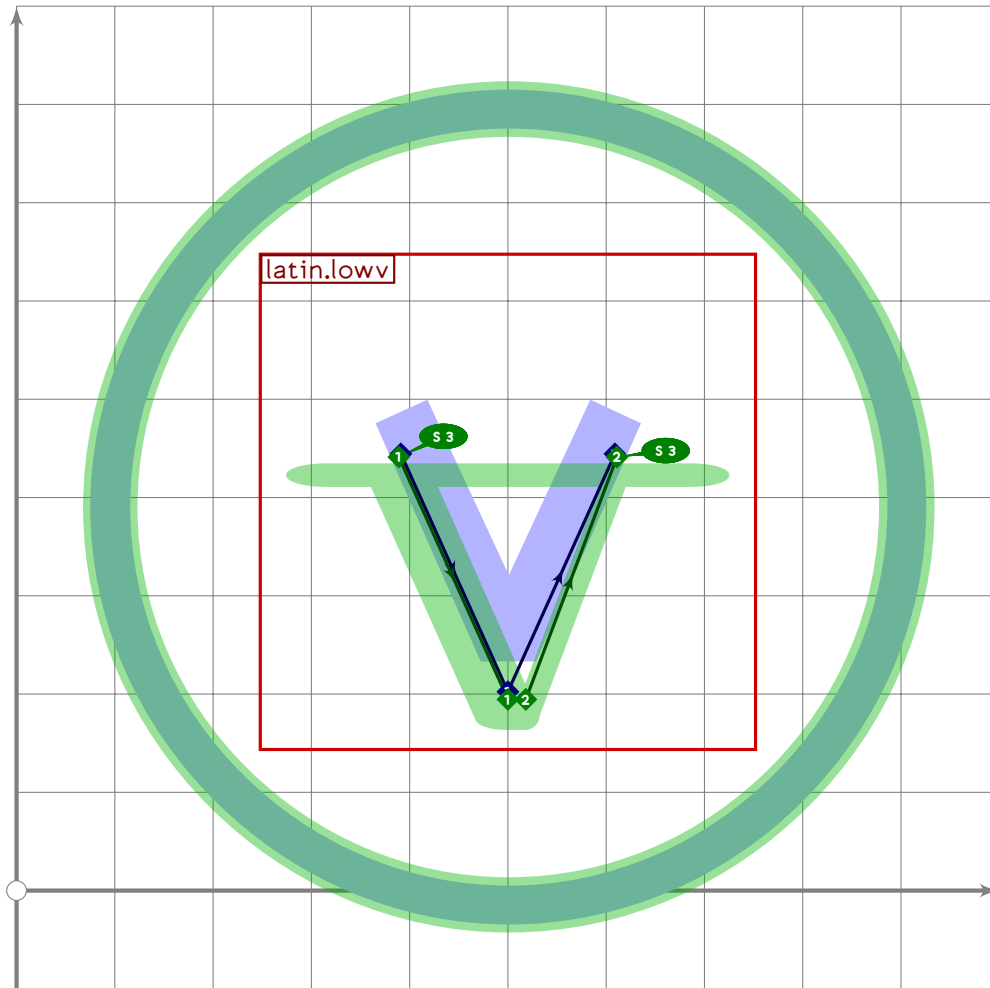


24

```

536 % u
537 begint Suglyph("uni24E4",228);
538   circle.single;
539   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowu);
540   tsu_render_in_circle(tsu_xf.cbound);
541 endtsuglyph;
542

```

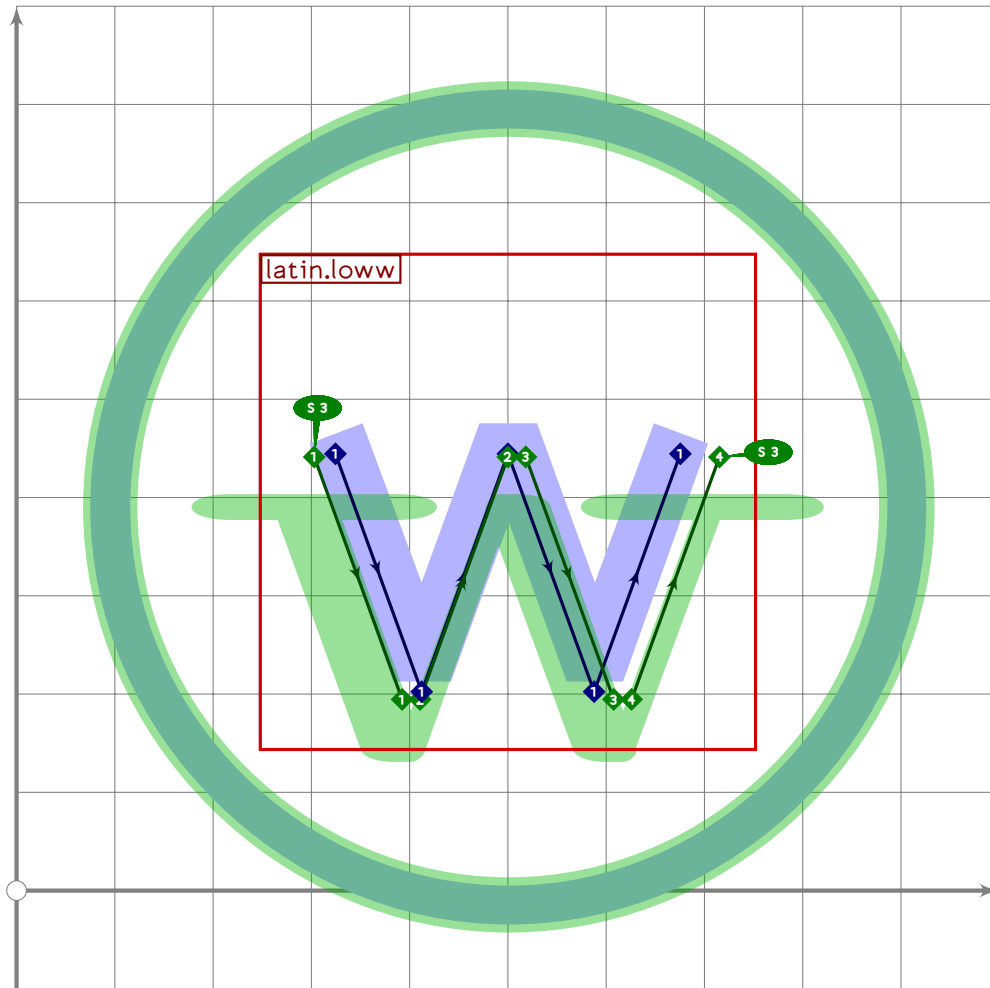


```

543 % v
544 begint Suglyph("uni24E5",229);
545   circle.single;
546   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowv);
547   tsu_render_in_circle(tsu_xf.cbound);
548 endtsuglyph;
549

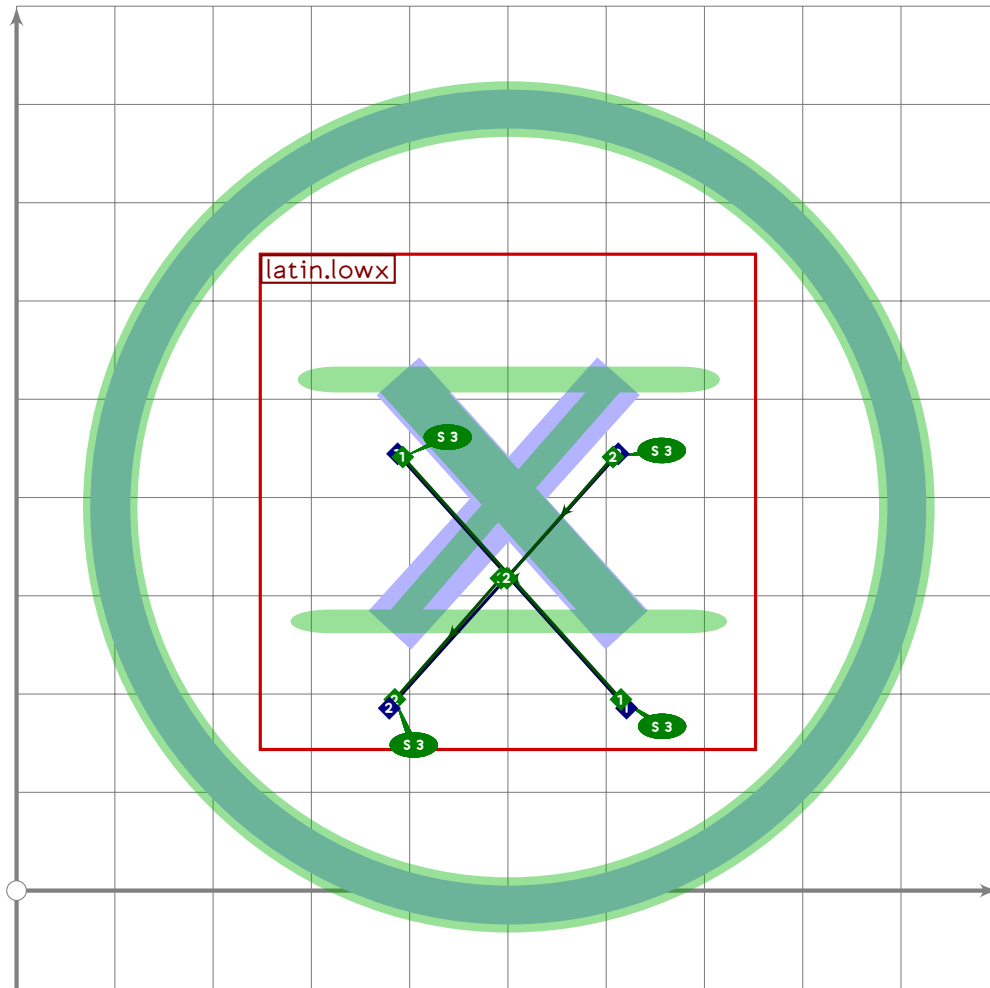
```

U+24E6
tsuku.uni24E6



24

```
550 % w
551 begint Suglyph("uni24E6";230);
552   circle.single;
553   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.loww);
554   tsu_render_in_circle(tsu_xf.cbound);
555 endtsuglyph;
556
```

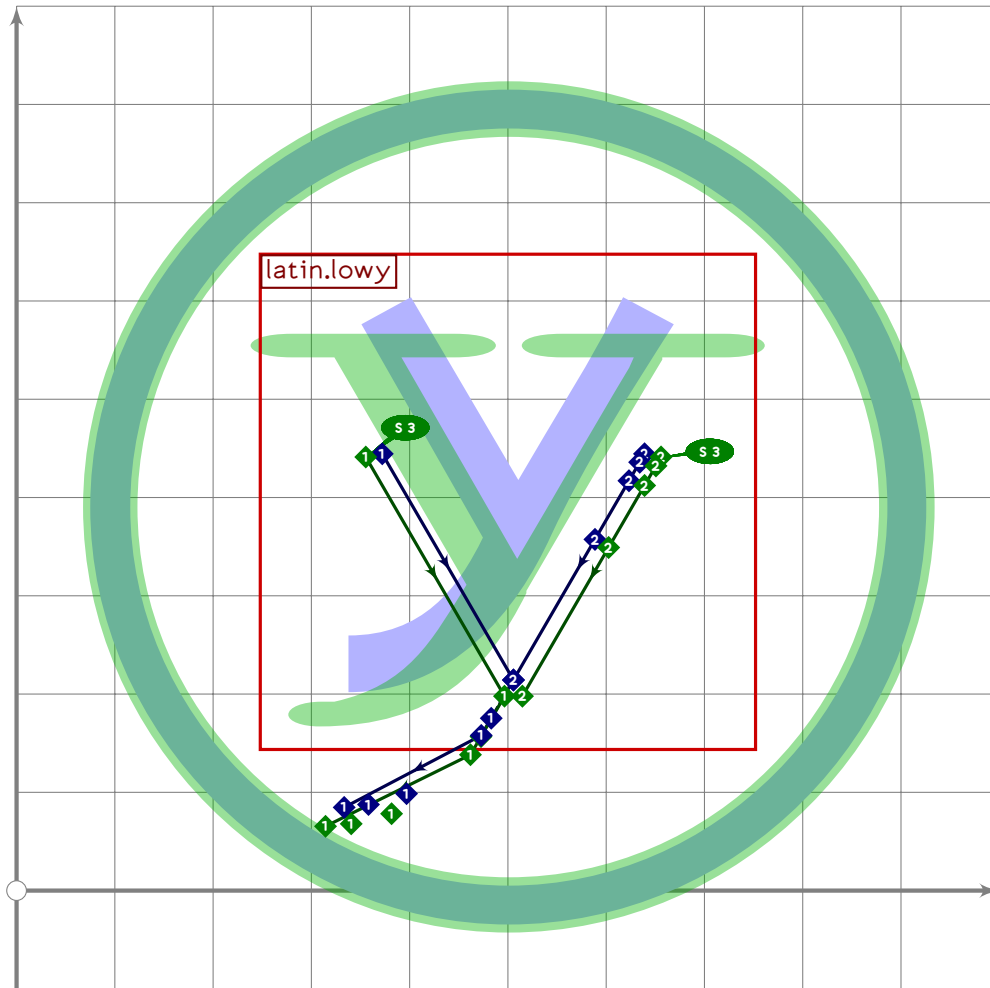


```

557 % x
558 begintsuglyph("uni24E7";231);
559   circle.single;
560   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowx);
561   tsu_render_in_circle(tsu_xf.cbound);
562 endtsuglyph;
563

```

U+24E8
tsuku.uni24E8

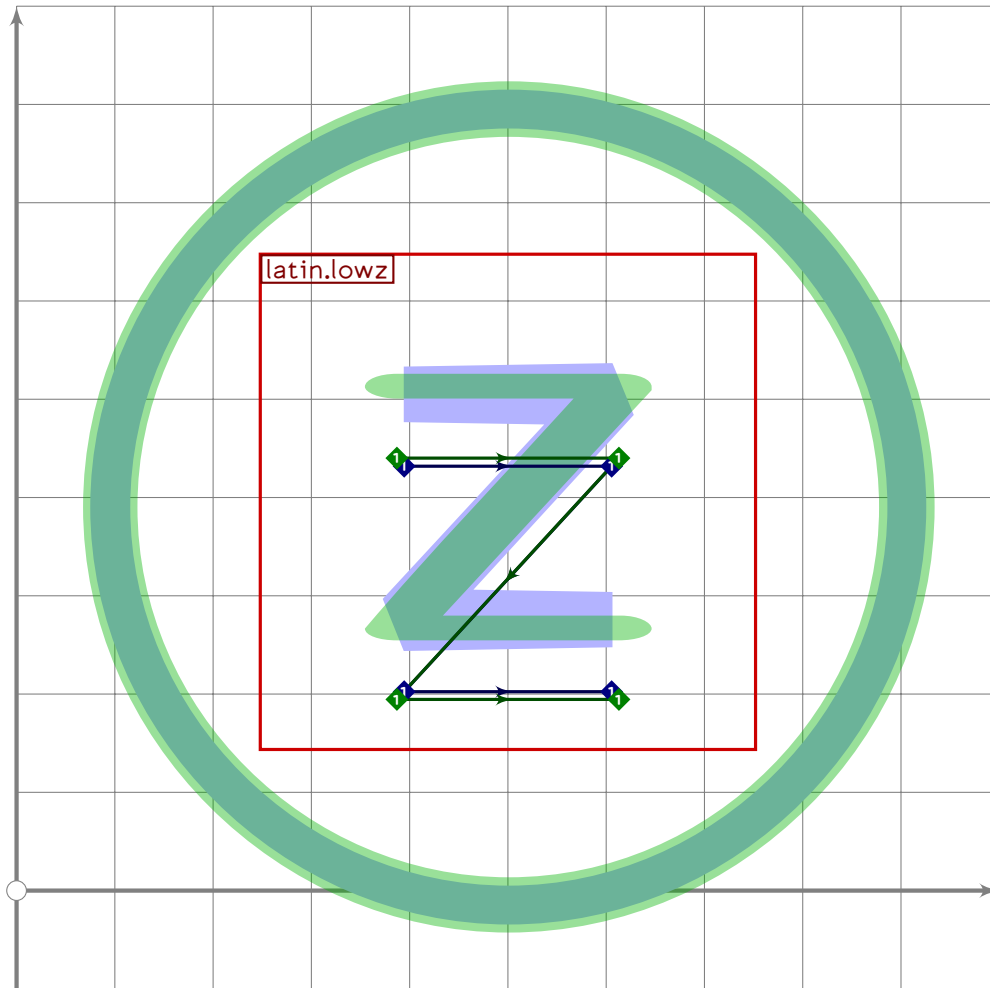


24

```

564 % y
565 begint Suglyph("uni24E8",232);
566   circle.single;
567   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowy);
568   tsu_render_in_circle(tsu_xf.cbound);
569 endtsuglyph;
570

```

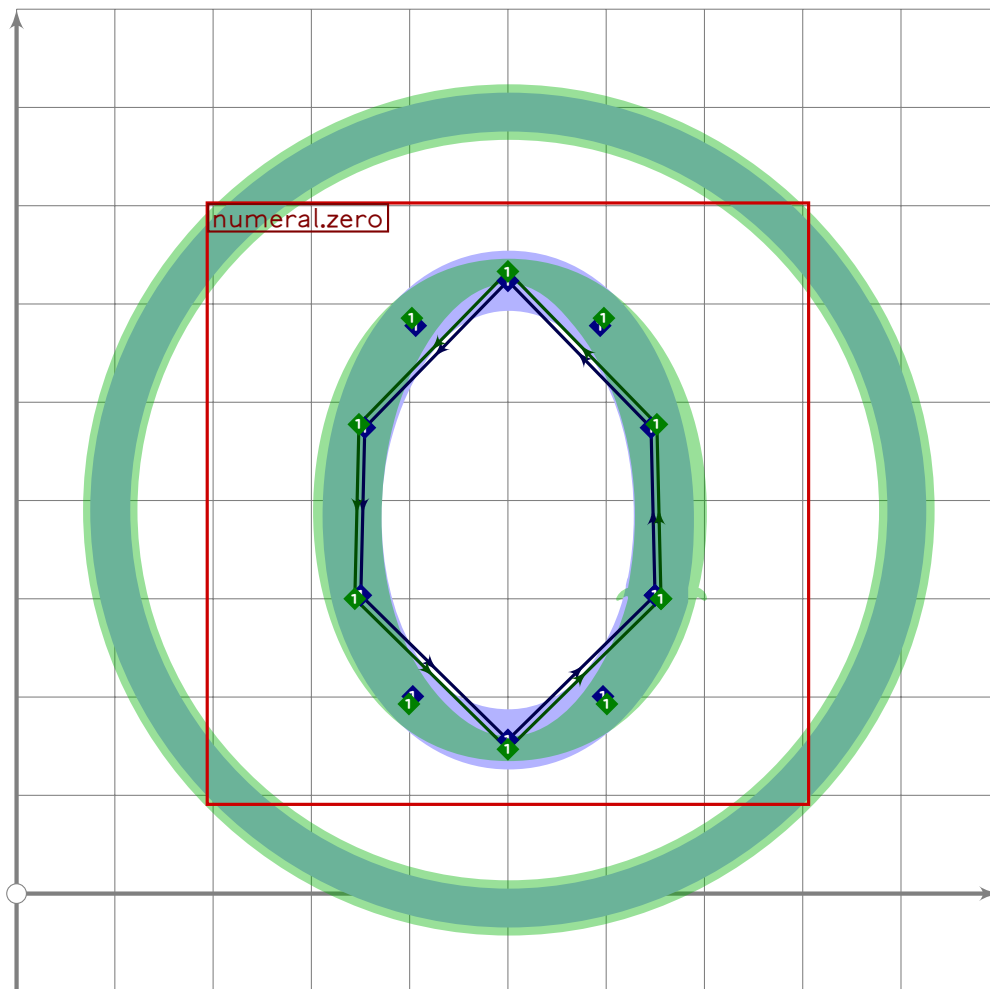


```

571 % z
572 begint Suglyph("uni24E9",233);
573   circle.single;
574   tsu_xform(tsu_xf.cletter shifted tsu_xf.circ_slant_shift)(latin.lowz);
575   tsu_render_in_circle(tsu_xf.cbound);
576 endtsuglyph;
577

```

U+24EA
tsuku.uni24EA

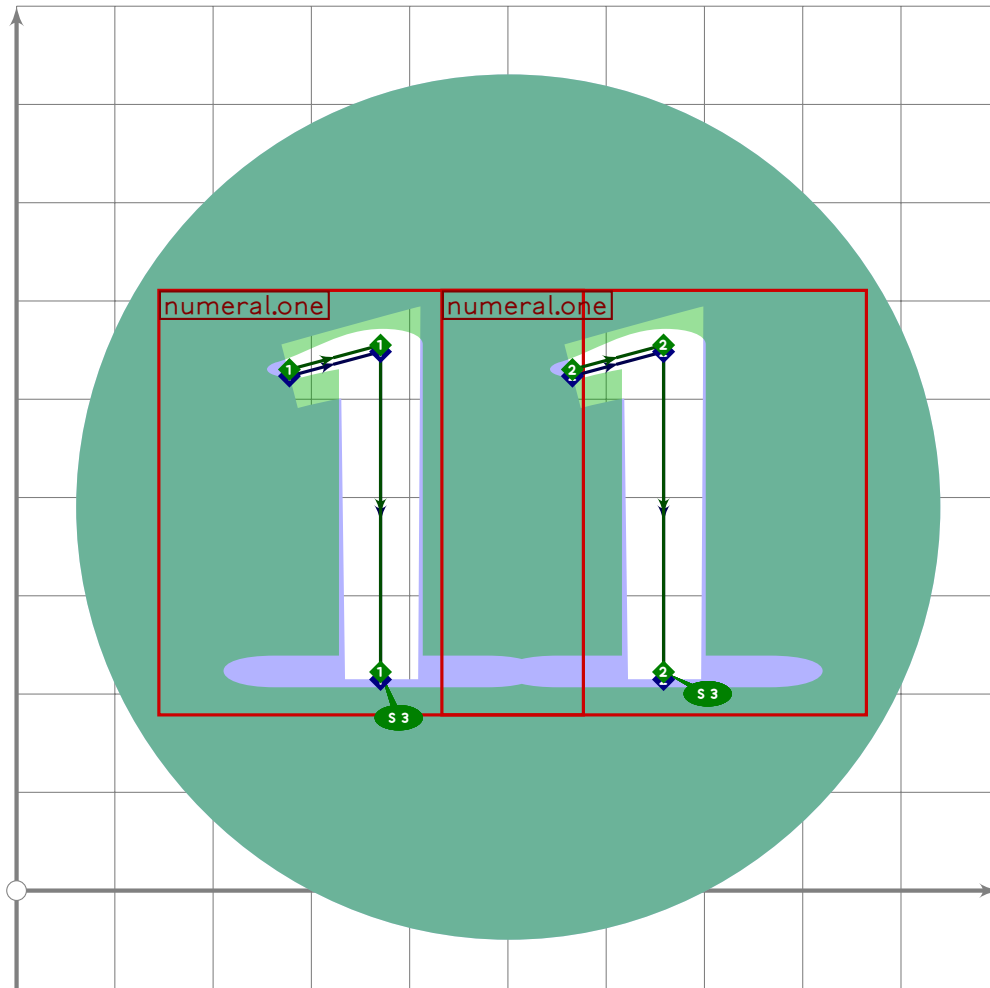


24

```
578 % 0
579 begintsuglyph("uni24EA";234);
580   circle.single;
581   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.zero);
582   tsu_render;
583 endtsuglyph;
584
585
586
```

Inverted Circled Numerals

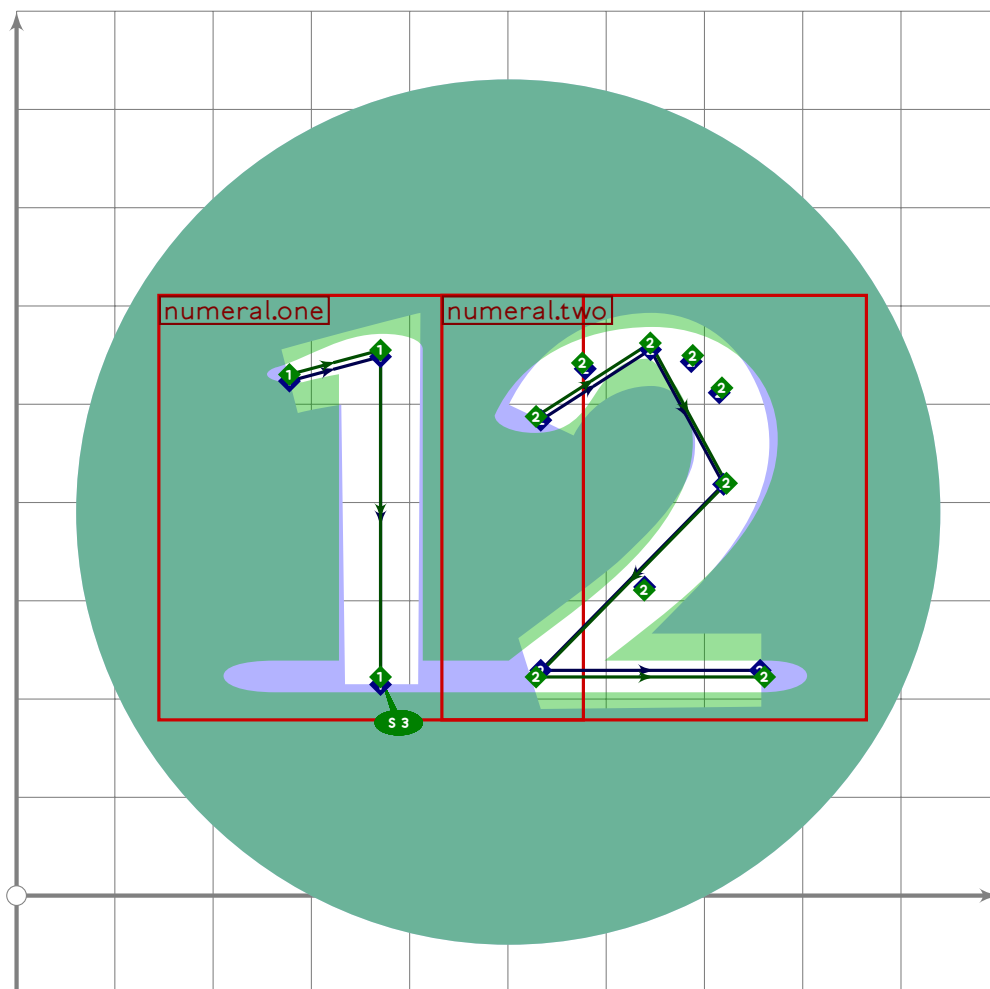
```
587 % INVERTED CIRCLED NUMERALS
588
```

```

589 % 11
590 % BACKGROUND 25CF
591 begint Suglyph("uni24EB";235);
592   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
593   numeric x[],y[];
594   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.one);
595   i:=0; forever: exitif find_stroke(i)<1;
596     set_bosize(i,107); i:=i-1; endfor;
597   tsu_render;
598 endtsuglyph;
599

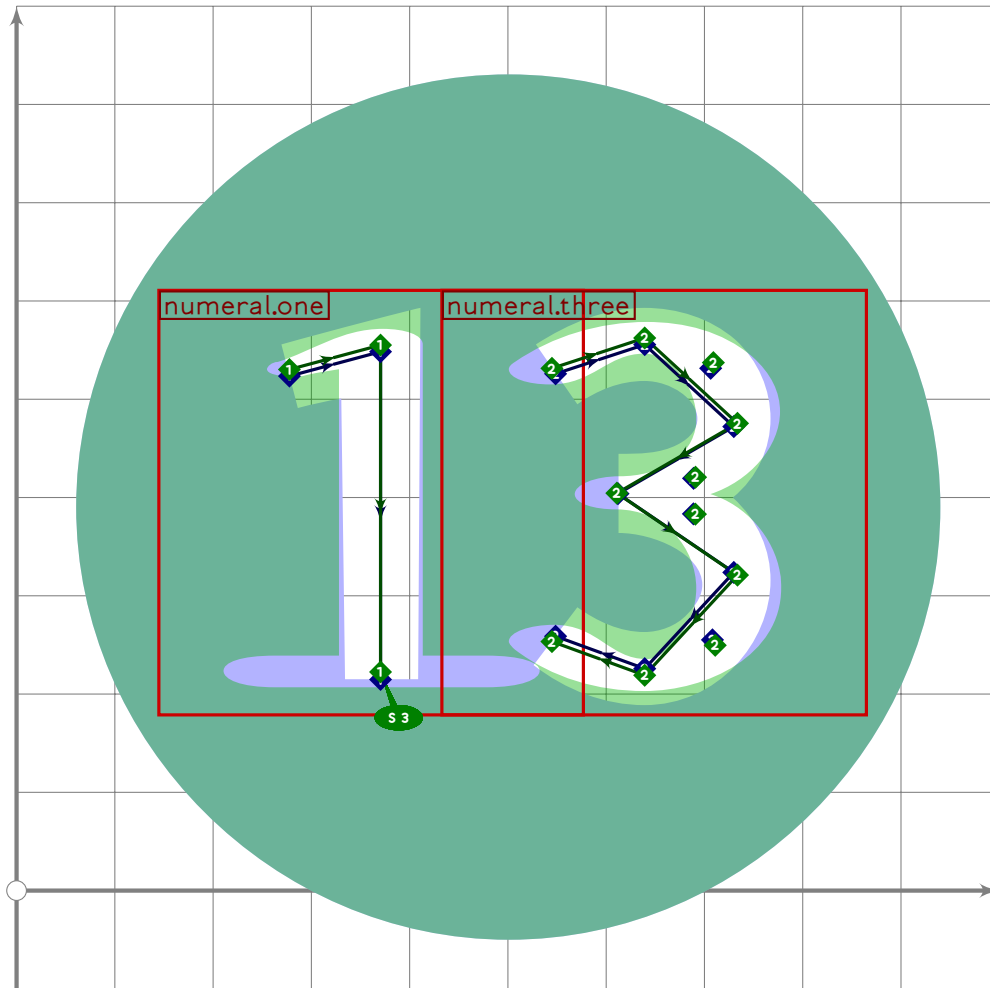
```



```

600 % 12
601 % BACKGROUND 25CF
602 begint Suglyph("uni24EC";236);
603   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
604   numeric x[],y[];
605   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.two);
606   i:=0; forever: exitif find_stroke(i)<1;
607     set_bosize(i,107); i:=i-1; endfor;
608   tsu_render;
609 endtsuglyph;
610

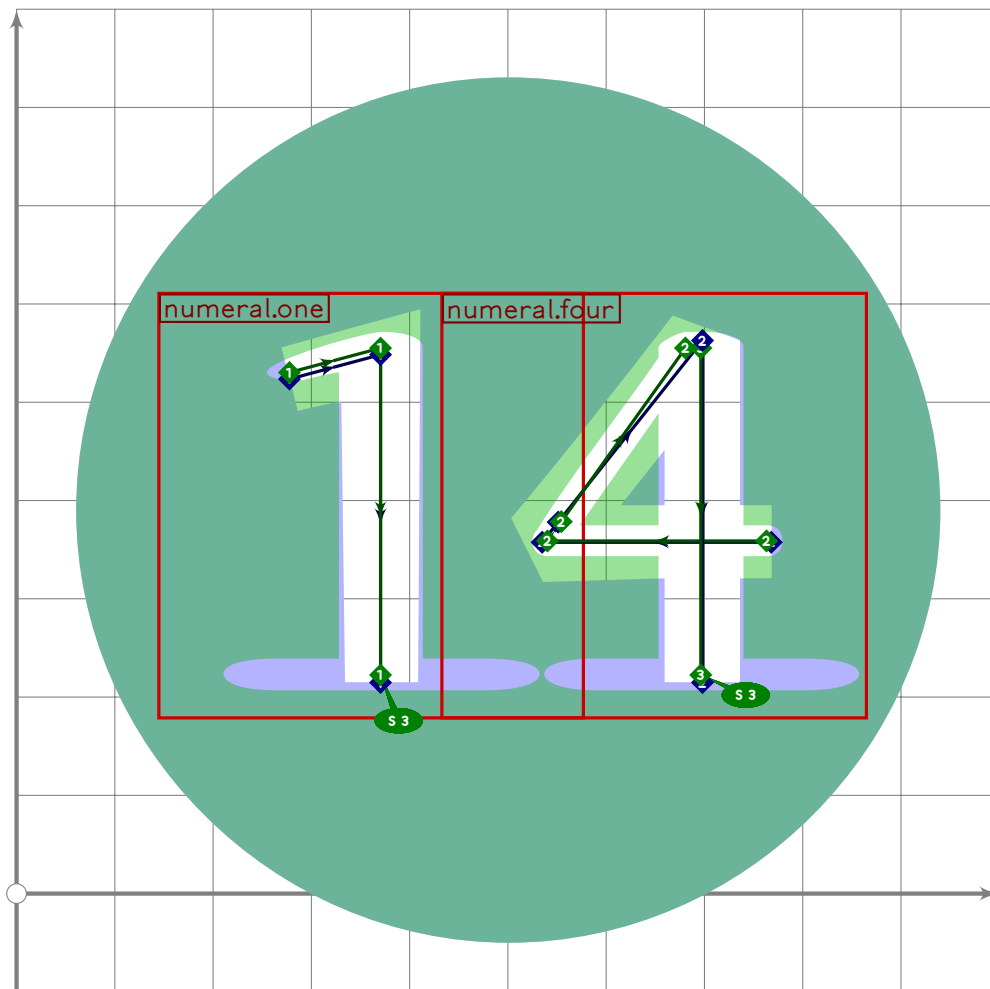
```



```

611 % 13
612 % BACKGROUND 25CF
613 begint Suglyph("uni24ED";237);
614   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
615   numeric x[],y[];
616   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.three);
617   i:=0; forever: exitif find_stroke(i)<1;
618     set_bosize(i,107); i:=i-1; endfor;
619   tsu_render;
620 endtsuglyph;
621

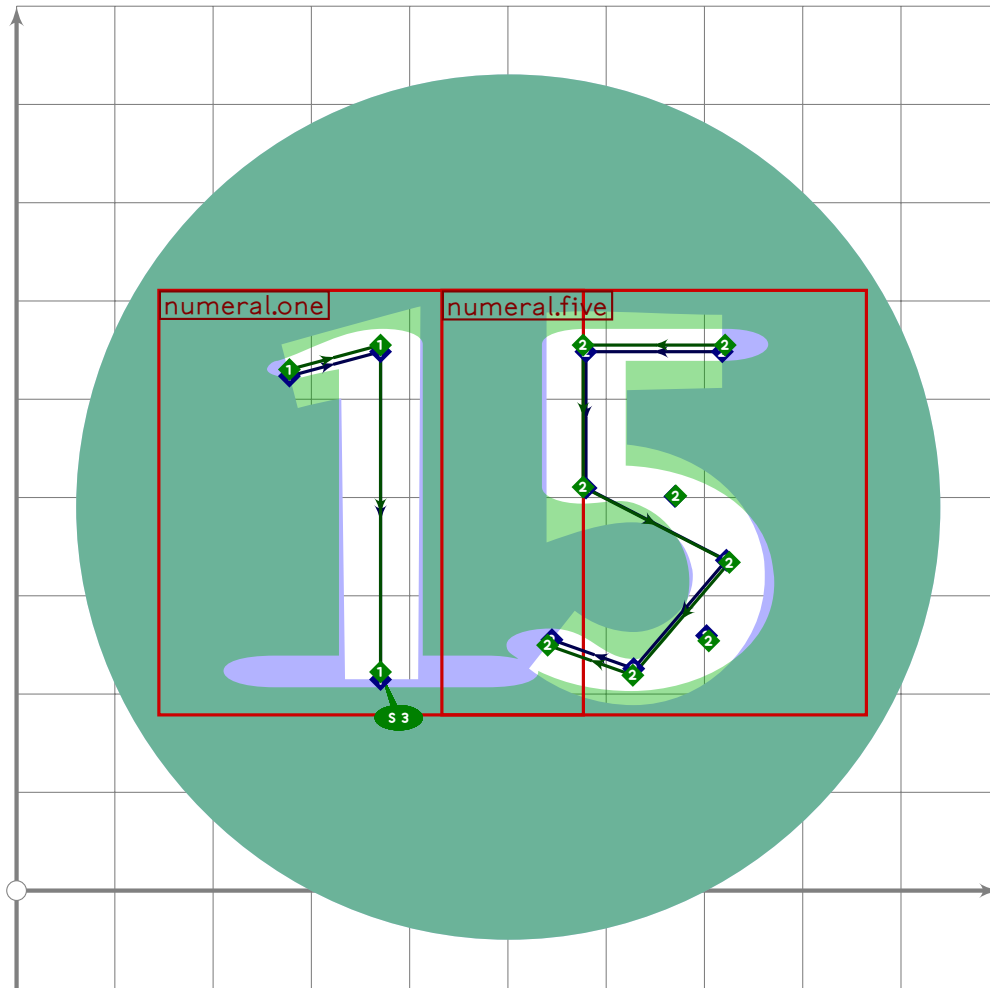
```



```

622 % 14
623 % BACKGROUND 25CF
624 begint Suglyph("uni24EE";238);
625   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
626   numeric x[],y[];
627   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.four);
628   i:=0; forever: exitif find_stroke(i)<1;
629     set_bosize(i,107); i:=i-1; endfor;
630   tsu_render;
631 endtsuglyph;
632

```

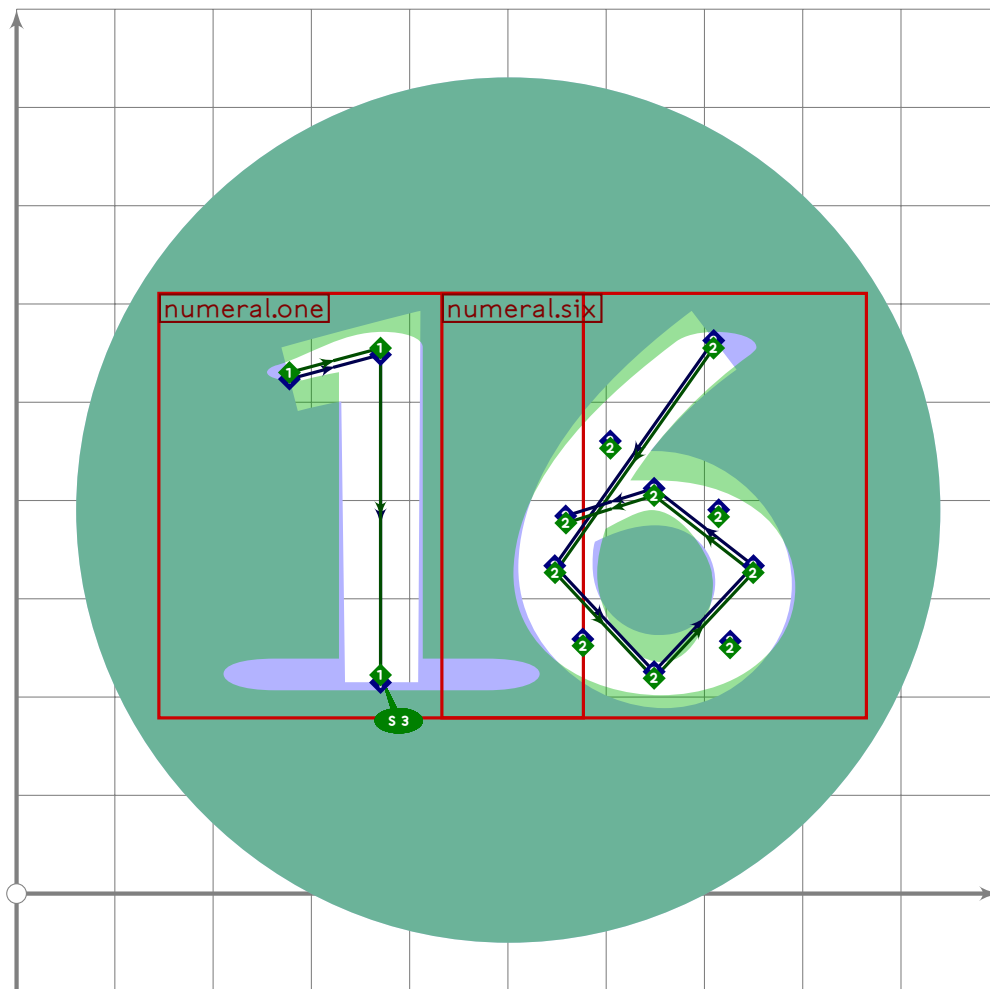


```

633 % 15
634 % BACKGROUND 25CF
635 begint Suglyph("uni24EF";239);
636   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
637   numeric x[],y[];
638   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.five);
639   i:=0; forever: exitif find_stroke(i)<1;
640     set_bosize(i,107); i:=i+1; endfor;
641   tsu_render;
642 endtsuglyph;
643

```

U+24F0
tsuku.uni24F0

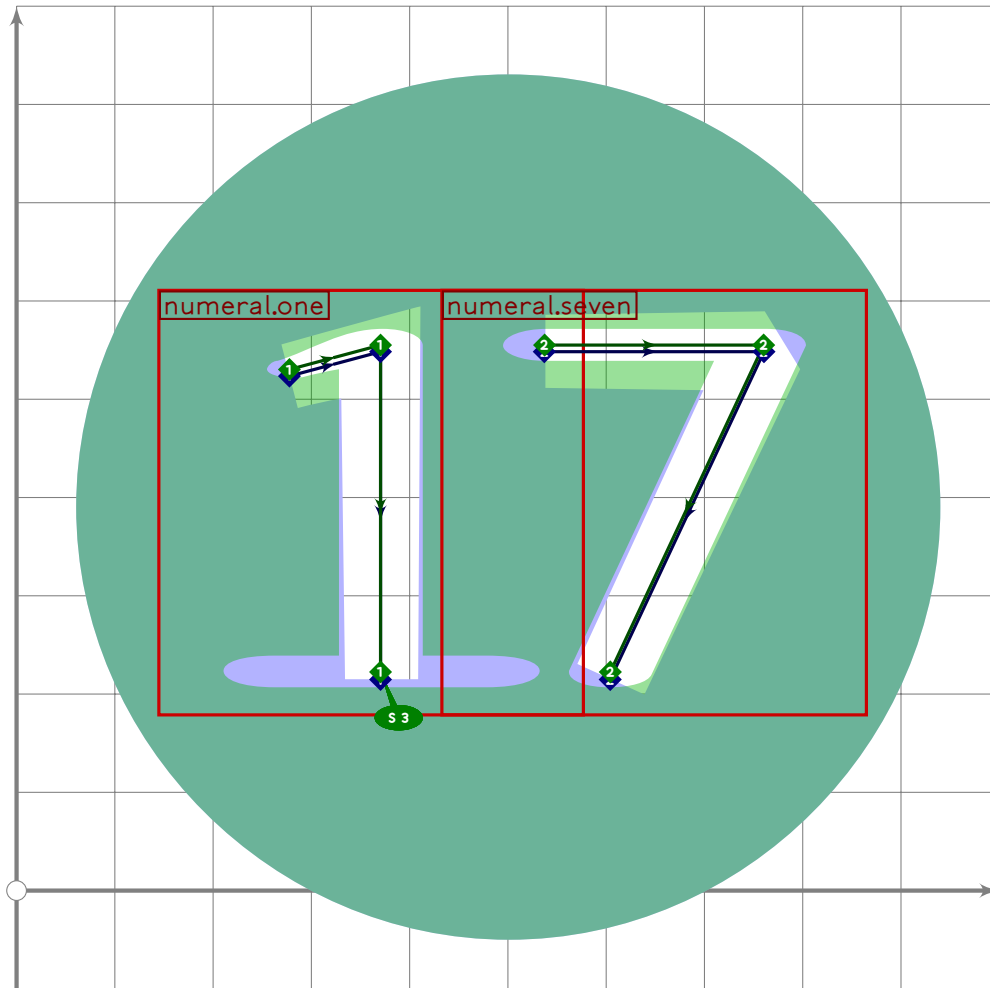


24

```

644 % 16
645 % BACKGROUND 25CF
646 begint Suglyph("uni24F0";240);
647   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
648   numeric x[],y[];
649   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.six);
650   i:=0; forever: exitif find_stroke(i)<1;
651     set_bosize(i,107); i:=i-1; endfor;
652   tsu_render;
653 endtsuglyph;
654

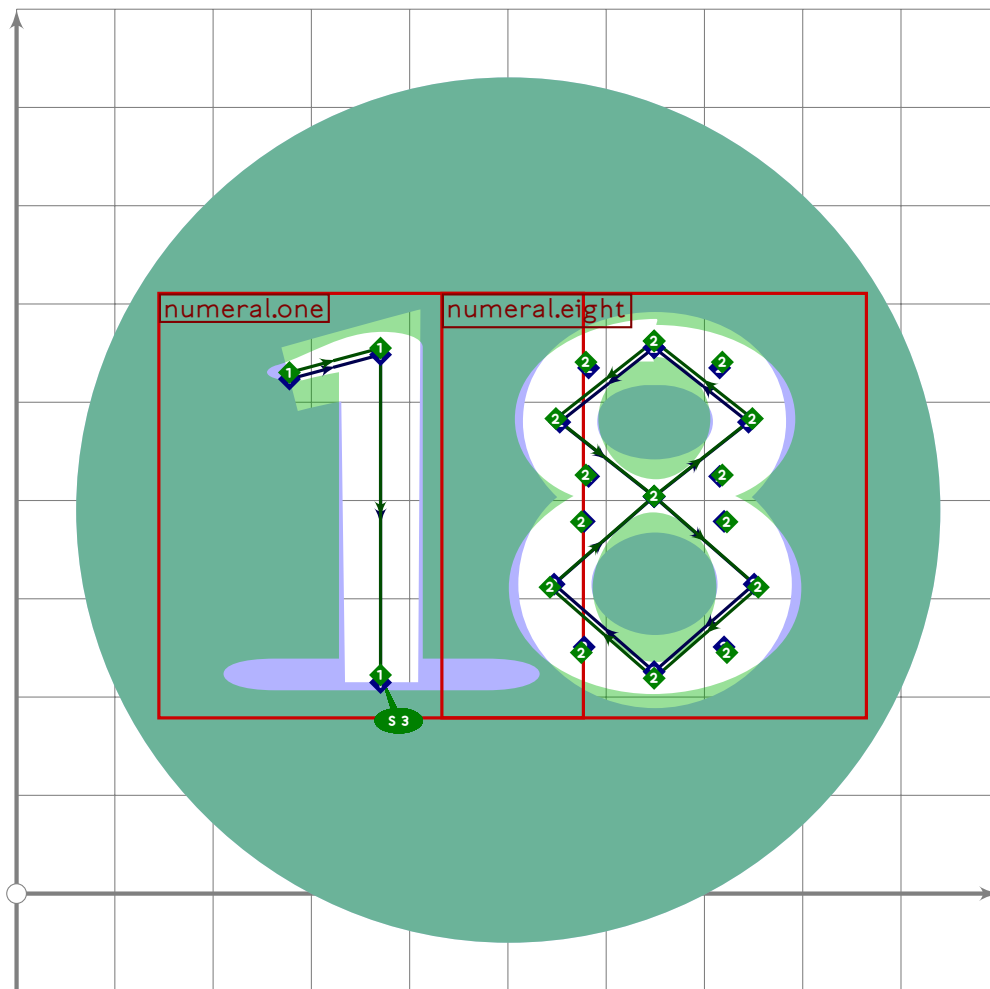
```



```

655 % 17
656 % BACKGROUND 25CF
657 begint Suglyph("uni24F1",241);
658   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
659   numeric x[],y[];
660   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.seven);
661   i:=0; forever: exitif find_stroke(i)<1;
662     set_bosize(i,107); i:=i-1; endfor;
663   tsu_render;
664 endtsuglyph;
665

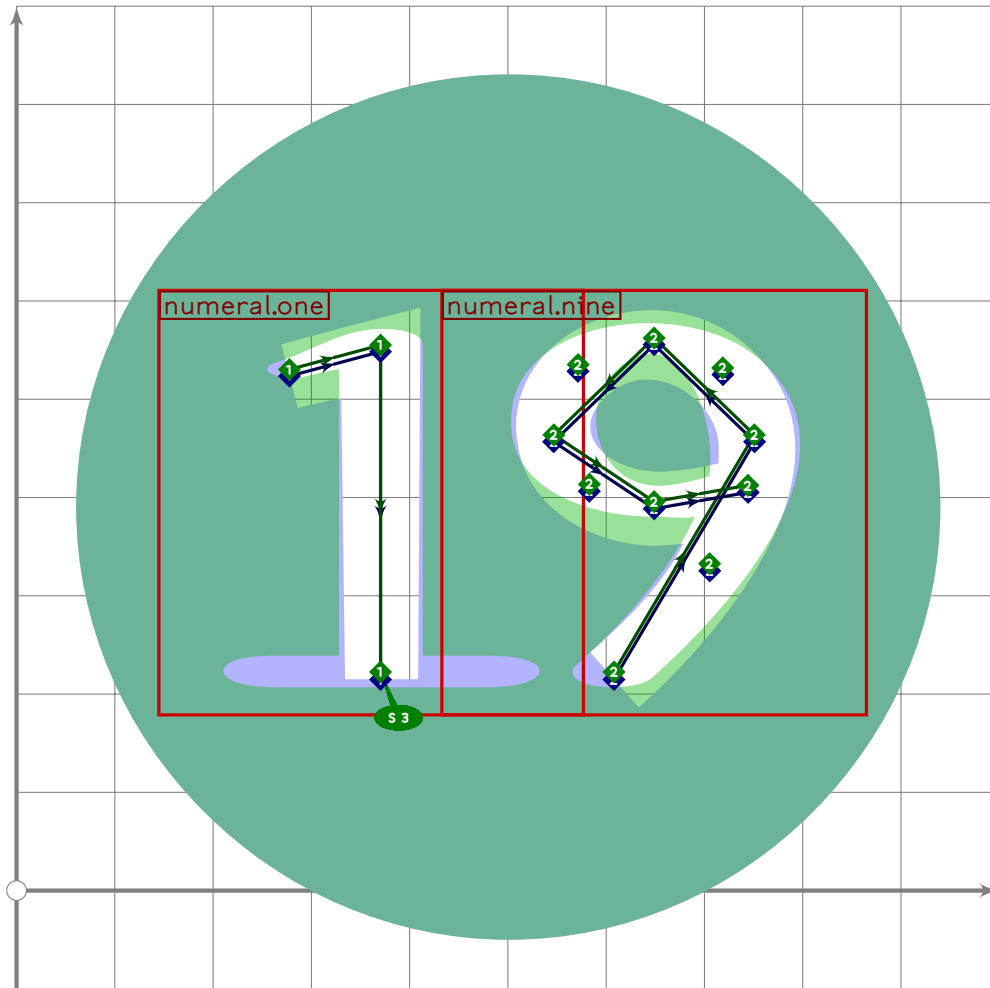
```



```

666 % 18
667 % BACKGROUND 25CF
668 begint Suglyph("uni24F2";242);
669   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
670   numeric x[],y[];
671   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.eight);
672   i:=0; forever: exitif find_stroke(i)<1;
673     set_bosize(i,107); i:=i-1; endfor;
674   tsu_render;
675 endtsuglyph;
676

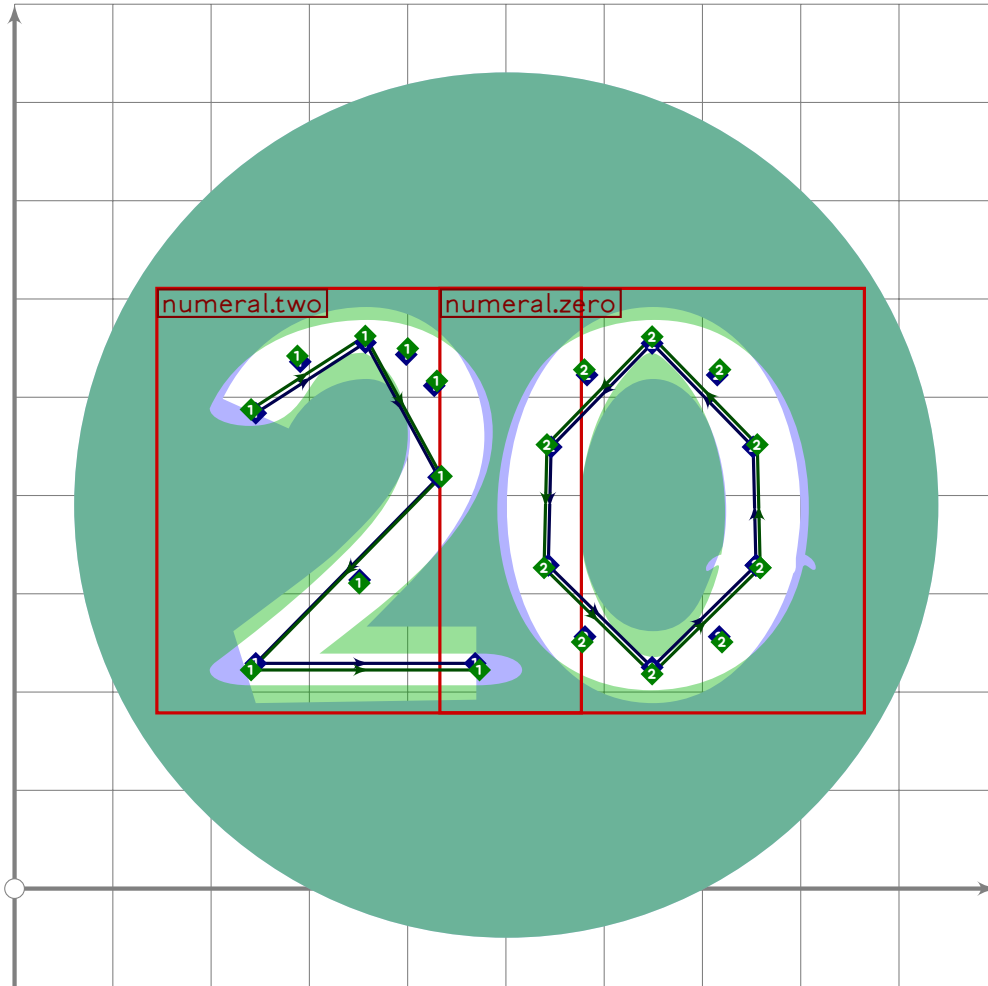
```

```

677 % 19
678 % BACKGROUND 25CF
679 begint Suglyph("uni24F3";243);
680   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
681   numeric x[],y[];
682   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.nine);
683   i:=0; forever: exitif find_stroke(i)<1;
684     set_bosize(i,107); i:=i-1; endfor;
685   tsu_render;
686 endtsuglyph;
687

```



```

688 % 20
689 % BACKGROUND 25CF
690 begint Suglyph("uni24F4",244);
691   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.two);
692   numeric x[],y[];
693   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.zero);
694   i:=0; forever: exitif find_stroke(i)<1;
695     set_bosize(i,107); i:=i-1; endfor;
696   tsu_render;
697 endtsuglyph;
698
699
700

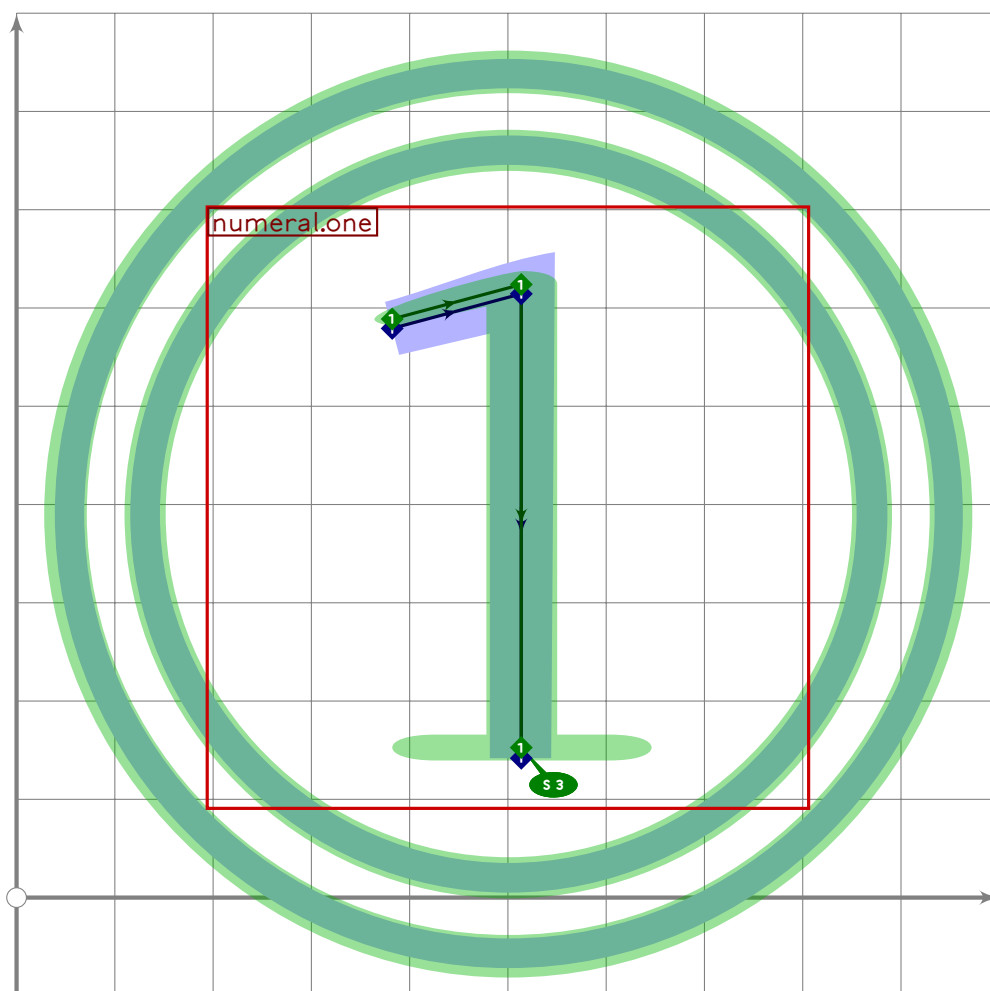
```

Doubly Circled Numerals

```

701 % DOUBLY CIRCLED NUMERALS
702

```

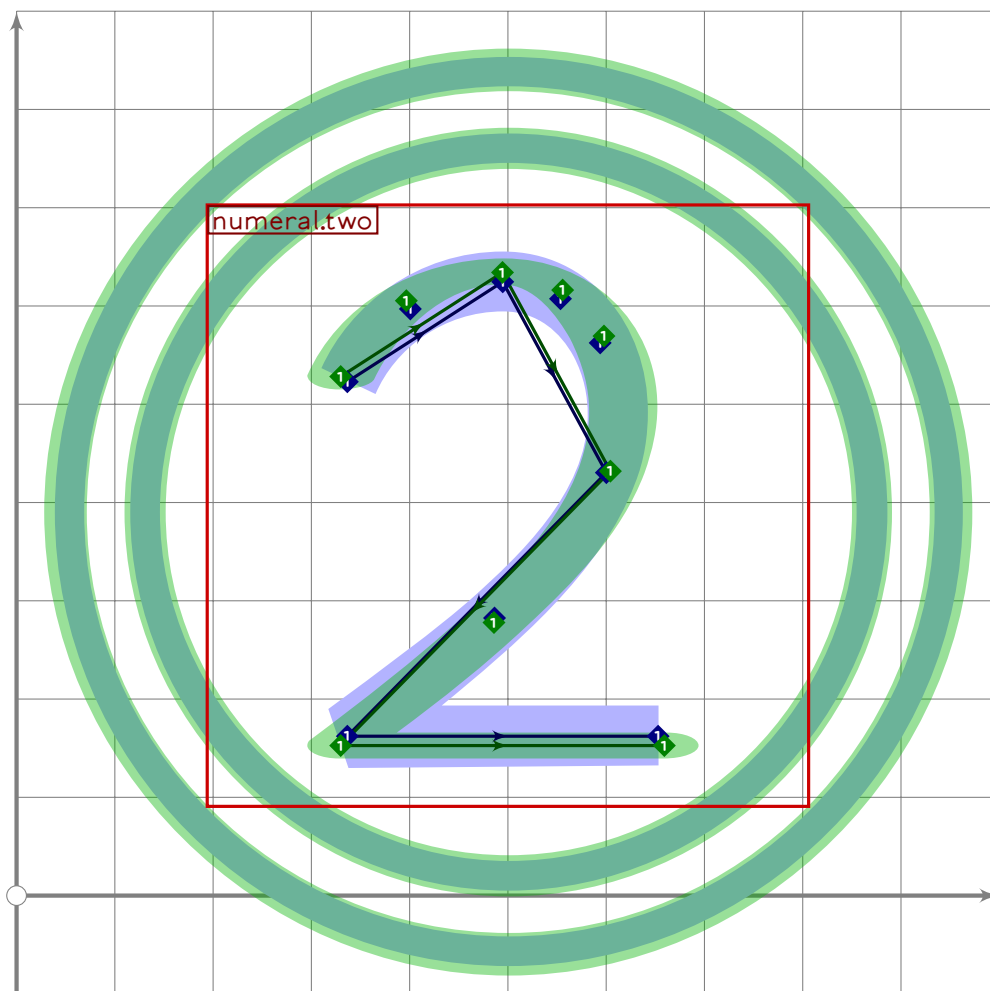


```

703 % 1
704 begint Suglyph("uni24F5",245);
705   circle.double;
706   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.one);
707   tsu_render;
708 endtsuglyph;
709

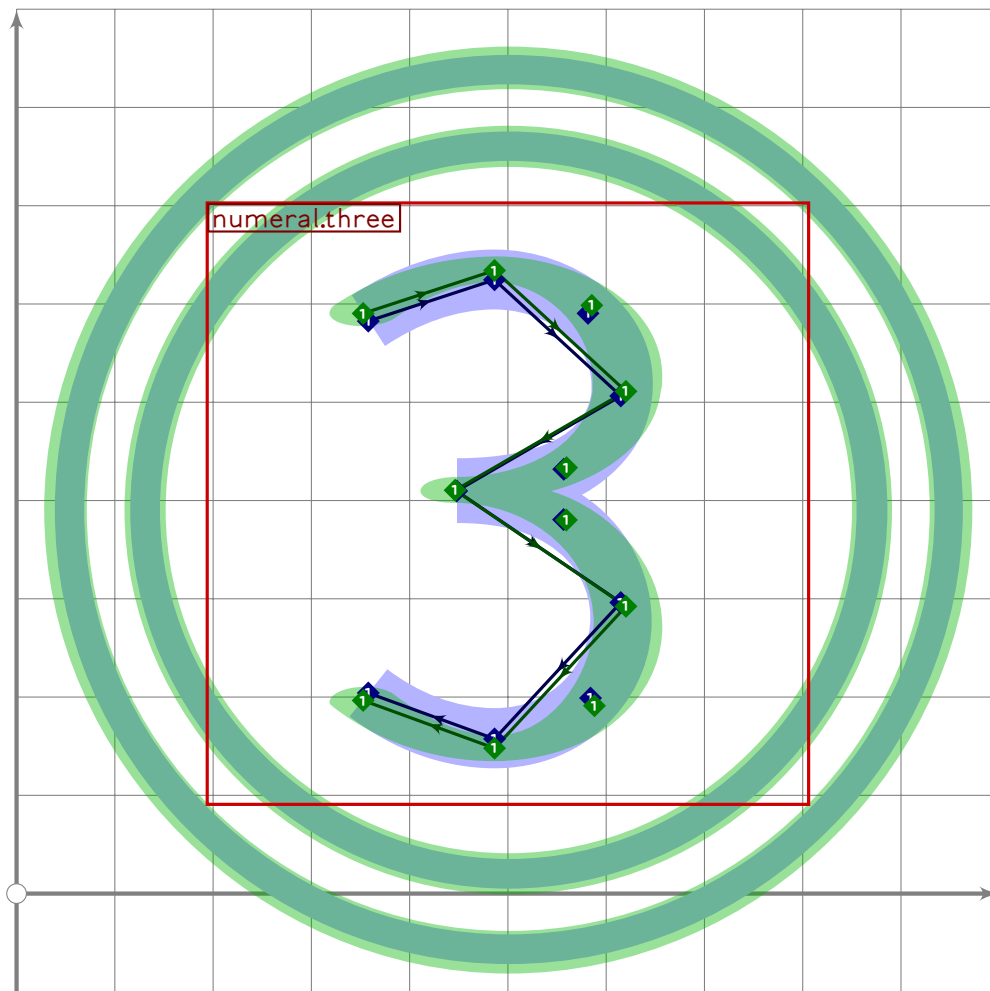
```

U+24F6
tsuku.uni24F6



24

```
710 % 2
711 begintsuglyph("uni24F6";246);
712   circle.double;
713   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.two);
714   tsu_render;
715 endtsuglyph;
716
```

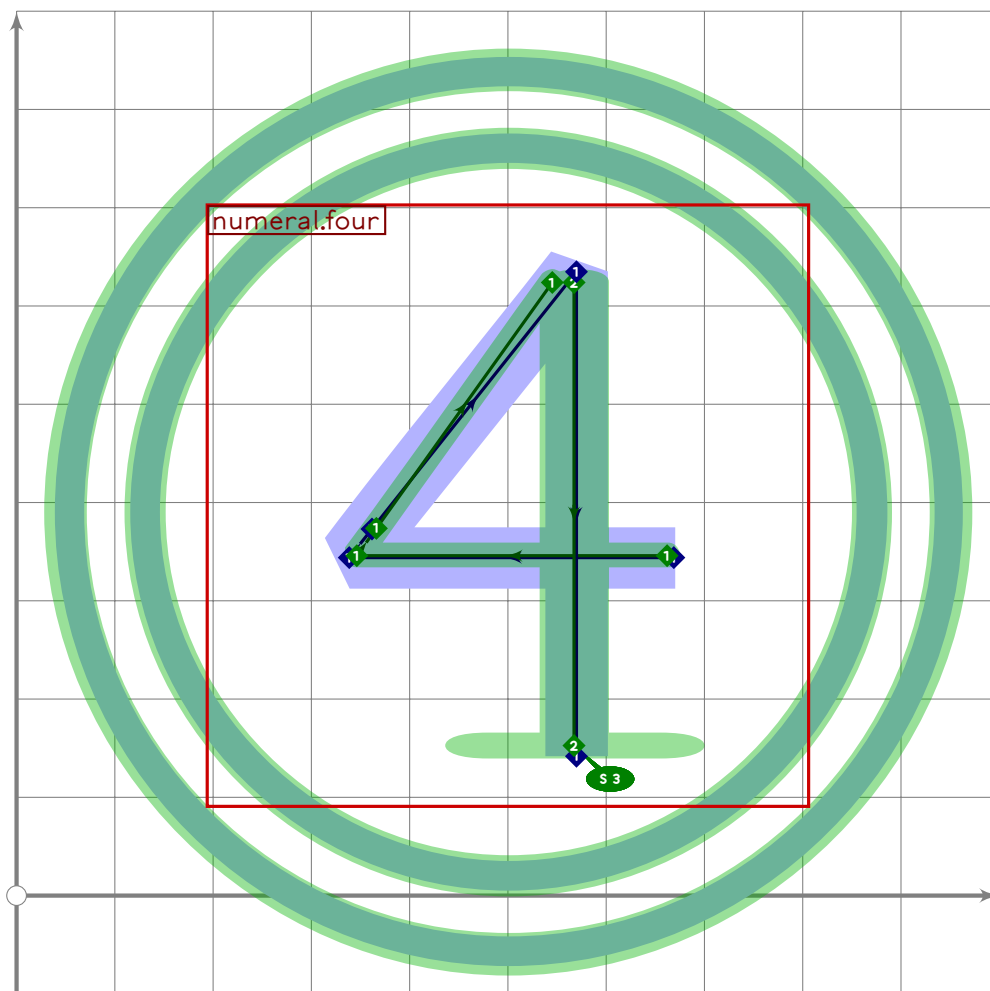


```

717 % 3
718 begintsuglyph("uni24F7";247);
719   circle.double;
720   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.three);
721   tsu_render;
722 endtsuglyph;
723

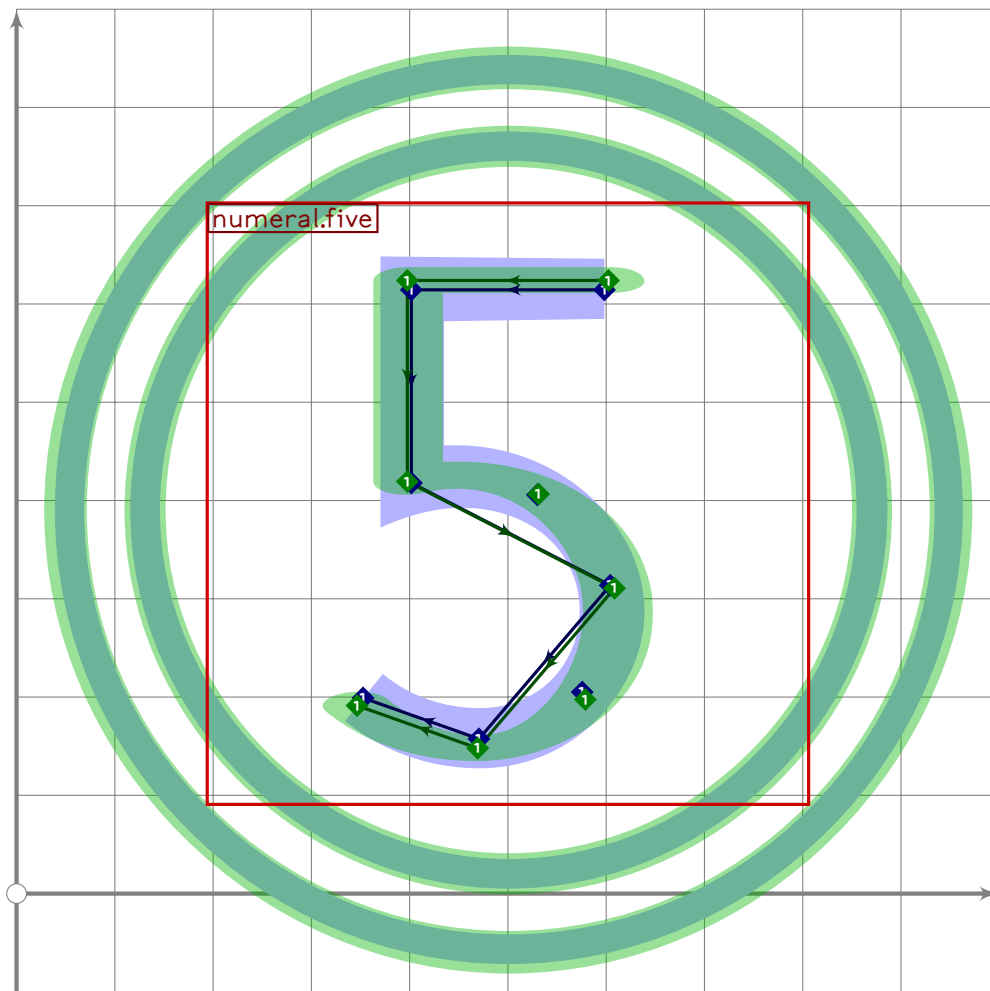
```

U+24F8
tsuku.uni24F8



24

```
724 % 4
725 begint Suglyph("uni24F8",248);
726   circle.double;
727   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.four);
728   tsu_render;
729 endtsuglyph;
730
```

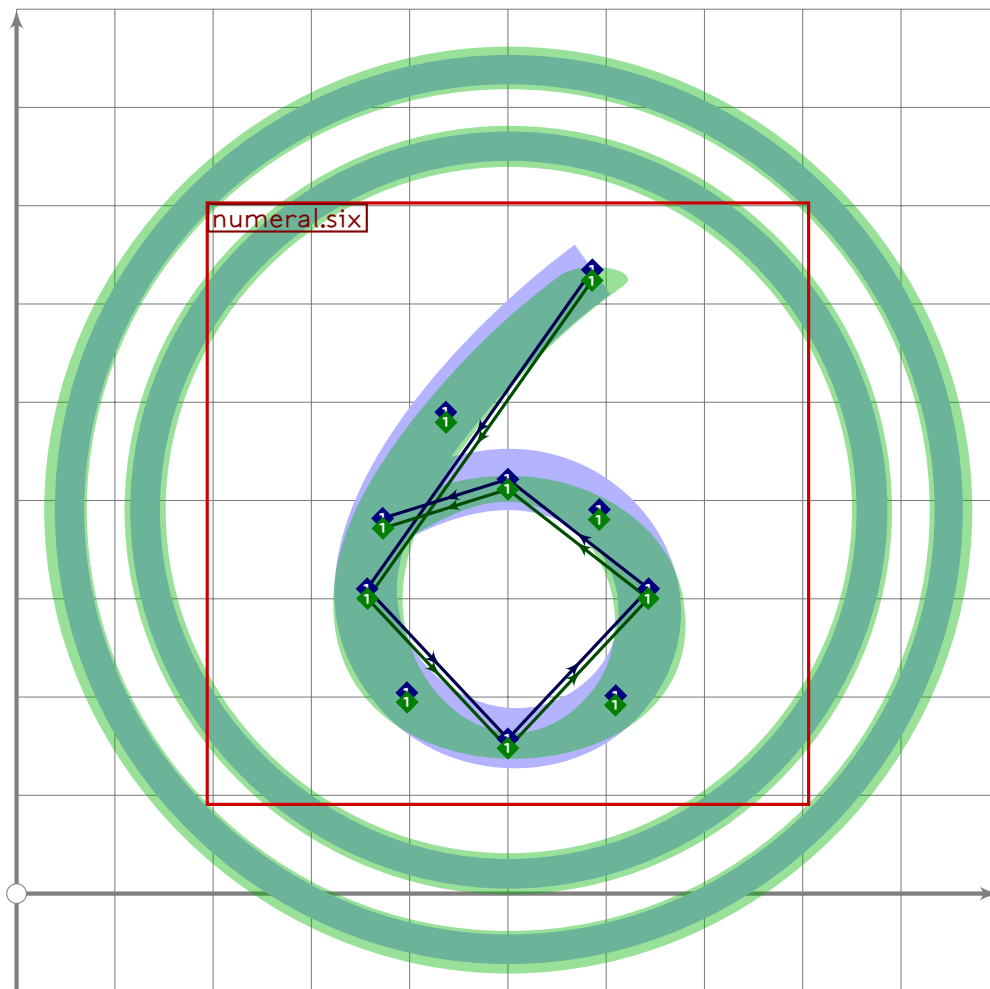


```

731 % 5
732 begint Suglyph("uni24F9",249);
733   circle.double;
734   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.five);
735   tsu_render;
736 endtsuglyph;
737

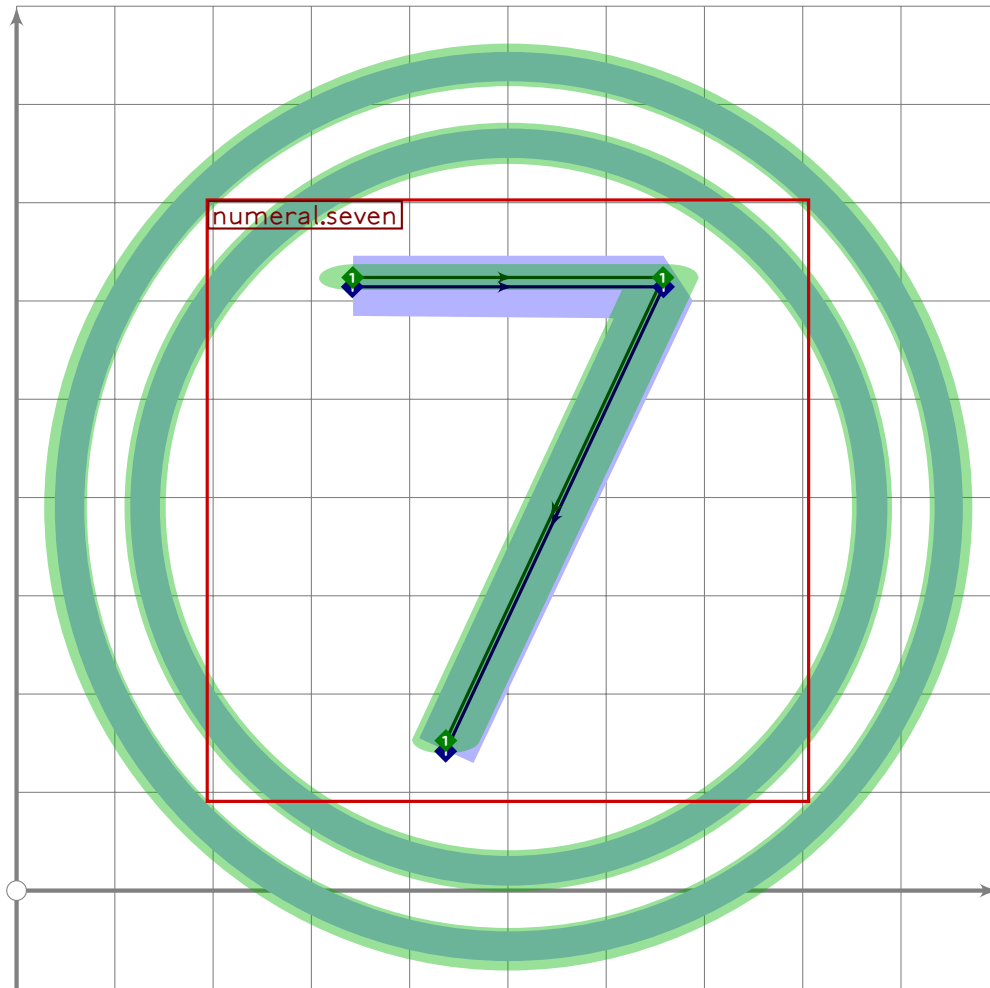
```

U+24FA
tsuku.uni24FA



24

```
738 % 6
739 begint Suglyph("uni24FA";250);
740   circle.double;
741   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.six);
742   tsu_render;
743 endtsuglyph;
744
```

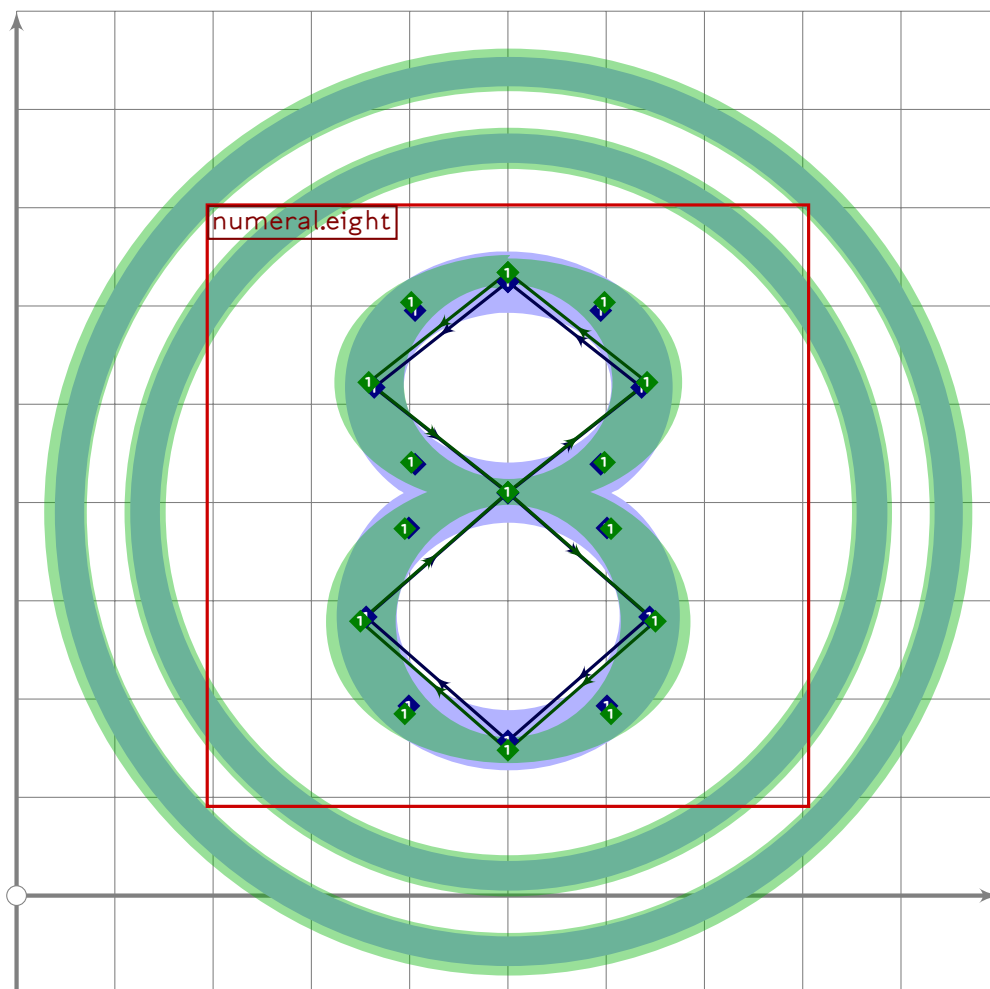



```

745 % 7
746 begintsuglyph("uni24FB",251);
747   circle.double;
748   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.seven);
749   tsu_render;
750 endtsuglyph;
751

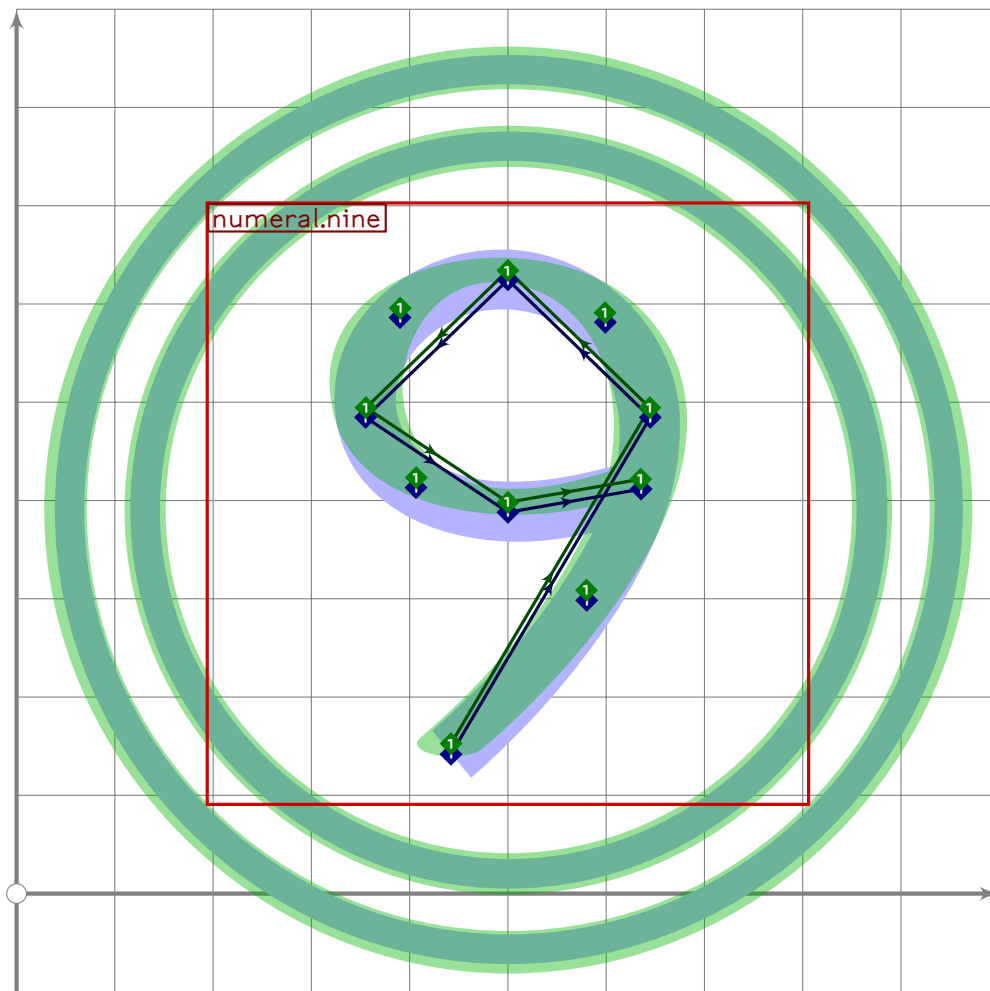
```

U+24FC
tsuku.uni24FC



24

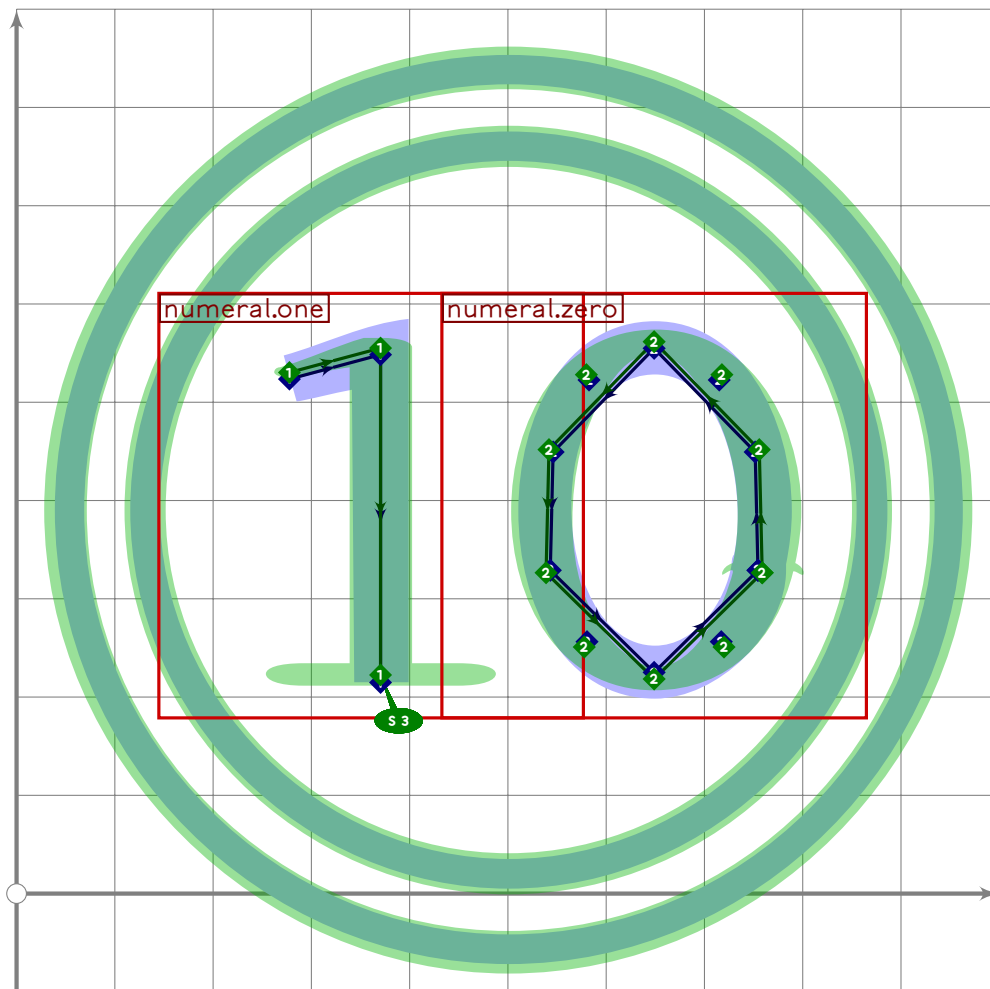
```
752 % 8
753 begint Suglyph("uni24FC";252);
754   circle.double;
755   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.eight);
756   tsu_render;
757 endtsuglyph;
758
```



```

759 % 9
760 beginsuglyph("uni24FD";253);
761   circle.double;
762   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.nine);
763   tsu_render;
764 endtsuglyph;
765

```



```

766 % 10
767 begintsuglyph("uni24FE";254);
768   circle.double;
769   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
770   numeric x[],y[];
771   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.zero);
772   tsu_render;
773 endtsuglyph;
774
775
776

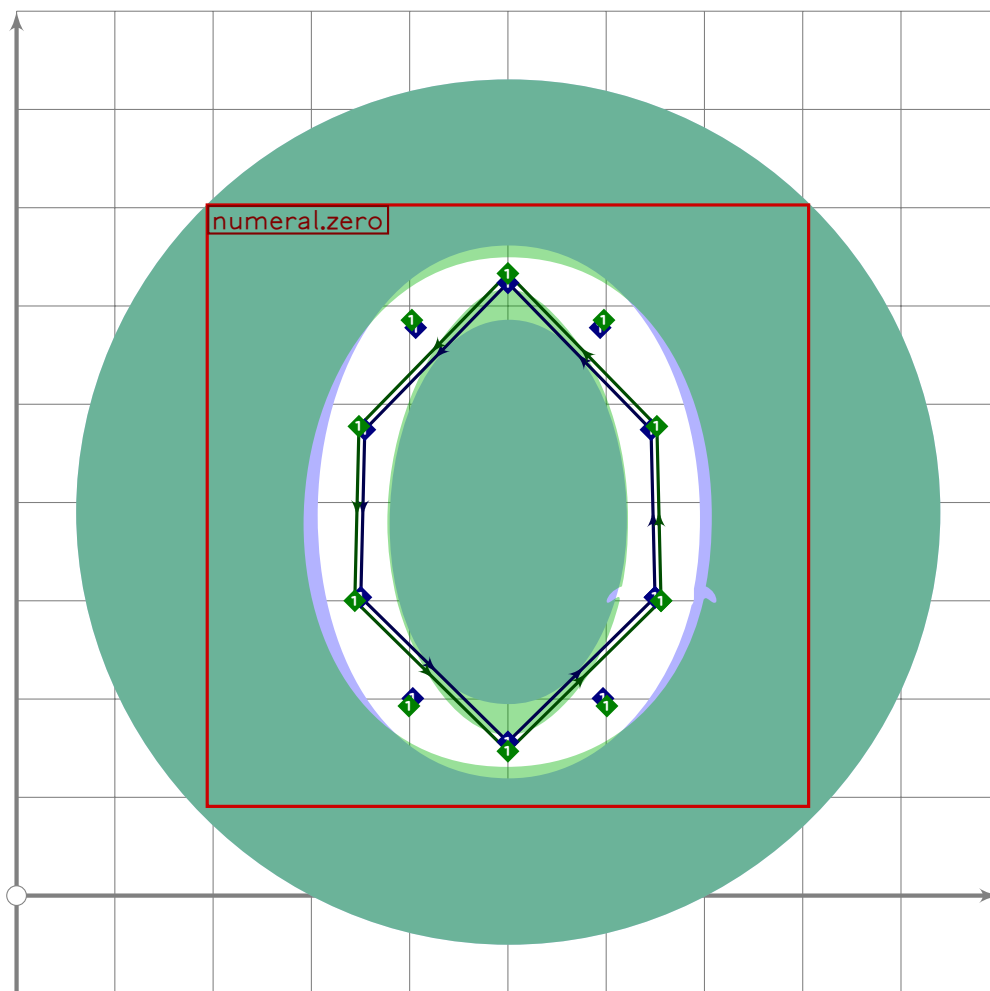
```

One More Inverted Circled Numeral

```

777 % ONE MORE INVERTED CIRCLED NUMERAL
778

```



```

779 % 9
780 % BACKGROUND 25CF
781 begint Suglyph("uni24FF";255);
782   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.zero);
783   i:=0; forever: exitif find_stroke(i)<1;
784     set_bosize(i,107); i:=i-1; endfor;
785   tsu_render;
786 endtsuglyph;
787
788
789
790 endfont;
791
792

```

tsuku-25.mp

```
1 %
2 % Unicode page 25 (Geometric Shapes) for Tsukurimashou
3 % Copyright (C) 2011, 2012 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---

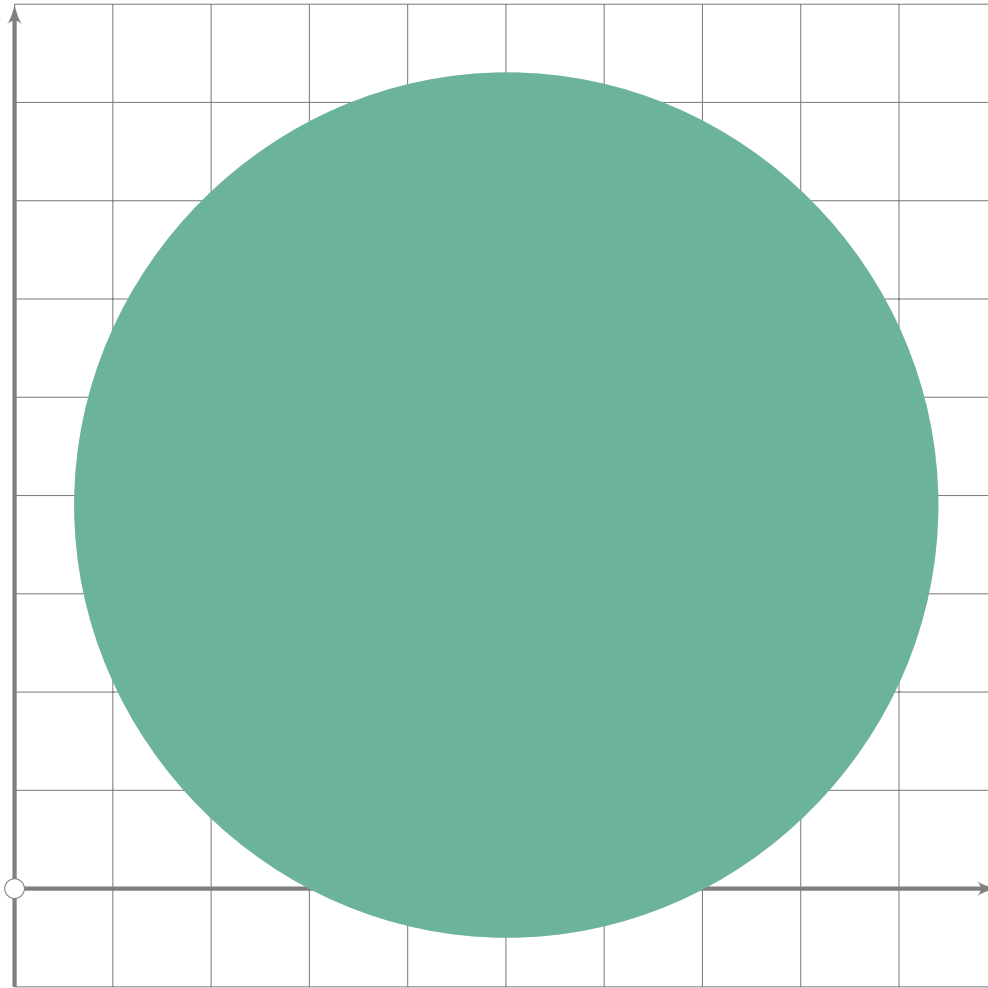

32
33 beginfont
34
35 % AUTODEPS
36
37 do_late_includes;
38
39 

---


40
```

Geometric Shapes

```
41 % GEOMETRIC SHAPES
42
```



```

43 % black circle - used as background for inverted dingbats
44 begintsuglyph("uni25CF";207);
45   Fill fullcircle scaled 880 shifted centre_pt;
46 endtsuglyph;
47
48 _____
49
50 endfont;
51
52 _____

```

tsuku-26.mp

```
1 %
2 % Unicode page 26 (Misc. Symbols) for Tsukurimashou
3 % Copyright (C) 2011, 2012 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---

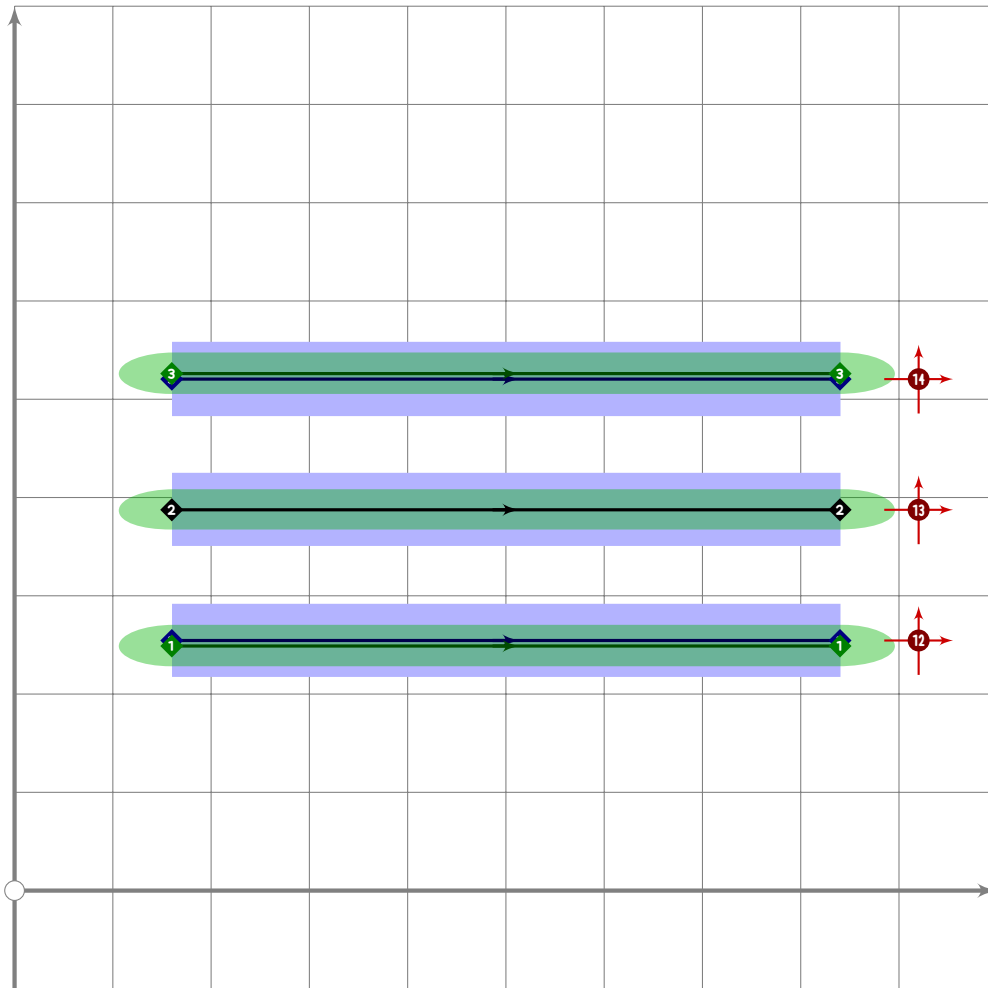

32
33 beginfont
34
35 input latin-intro.mp;
36
37 % AUTODEPS
38 input iching.mp;
39
40 do_late_includes;
41
42 

---


43
```

I Ching

44 % I CHING

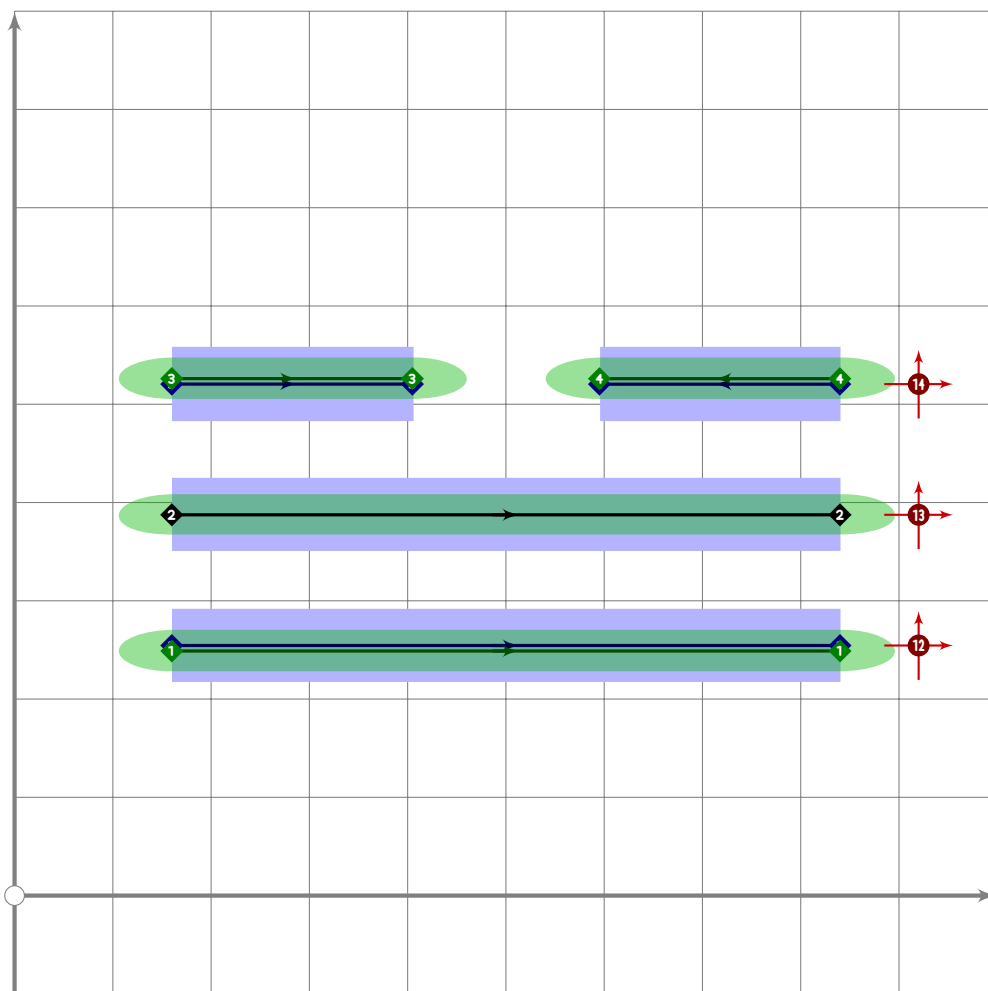


```

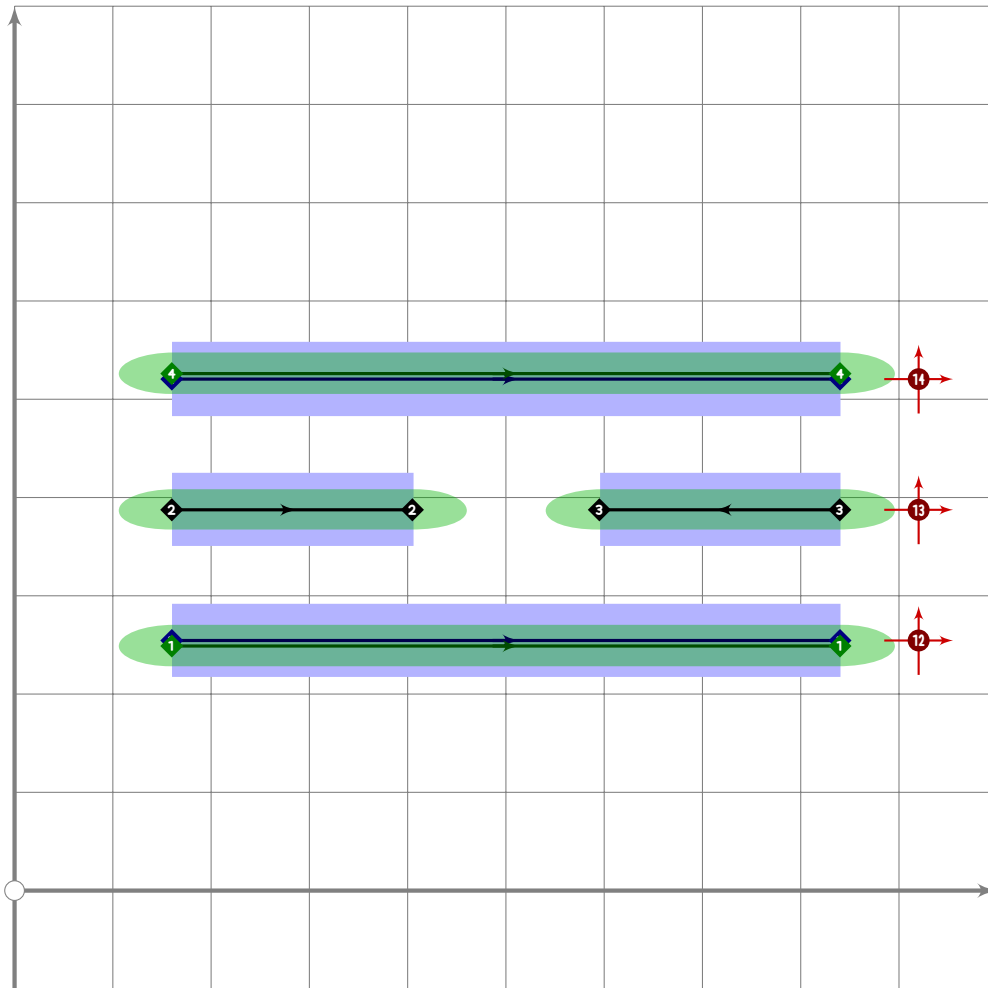
45
46 begint Suglyph("ichingtri1";48);
47   iching.line(1,3,1);
48   iching.line(2,3,1);
49   iching.line(3,3,1);
50   tsu_render;
51 endtsuglyph;

```

U+2631
tsuku.ichingtri2



```
52
53 begint Suglyph("ichingtri2";49);
54   iching.line(1,3,1);
55   iching.line(2,3,1);
56   iching.line(3,3,0);
57   tsu_render;
58 endtsuglyph;
```

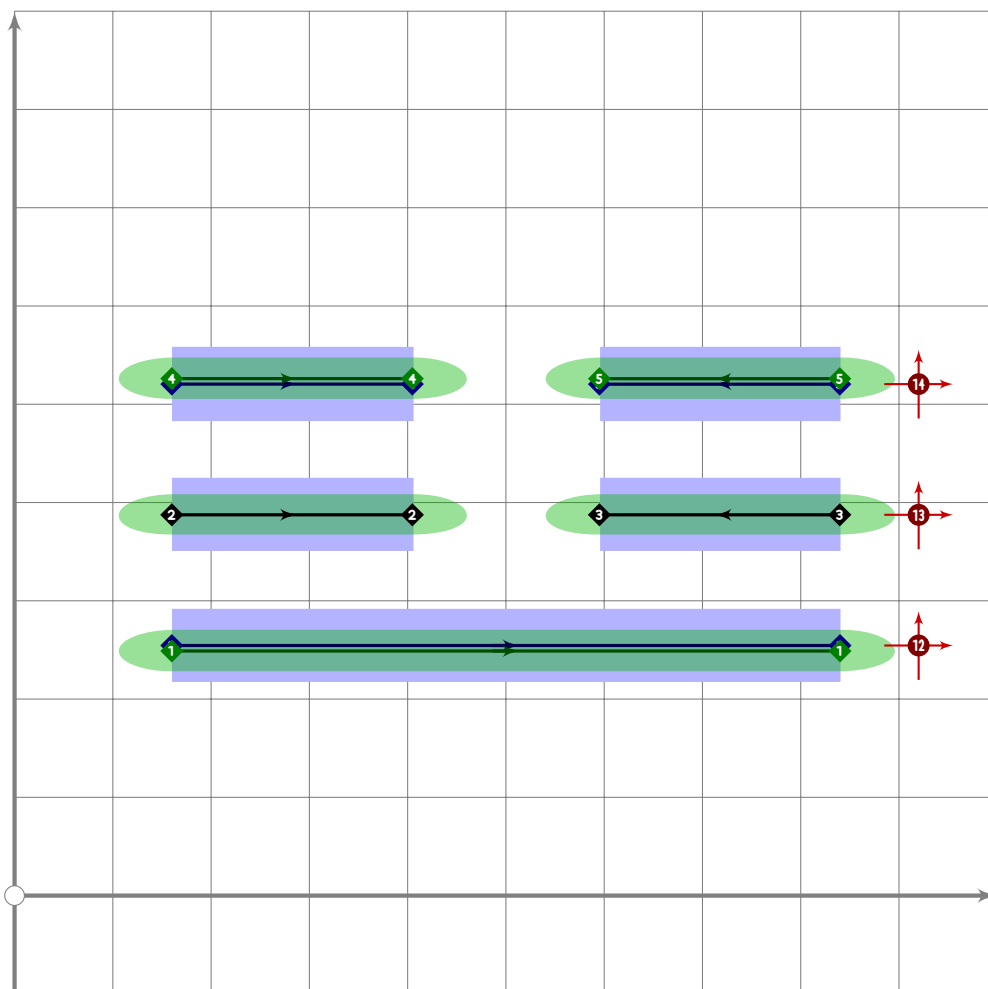


```

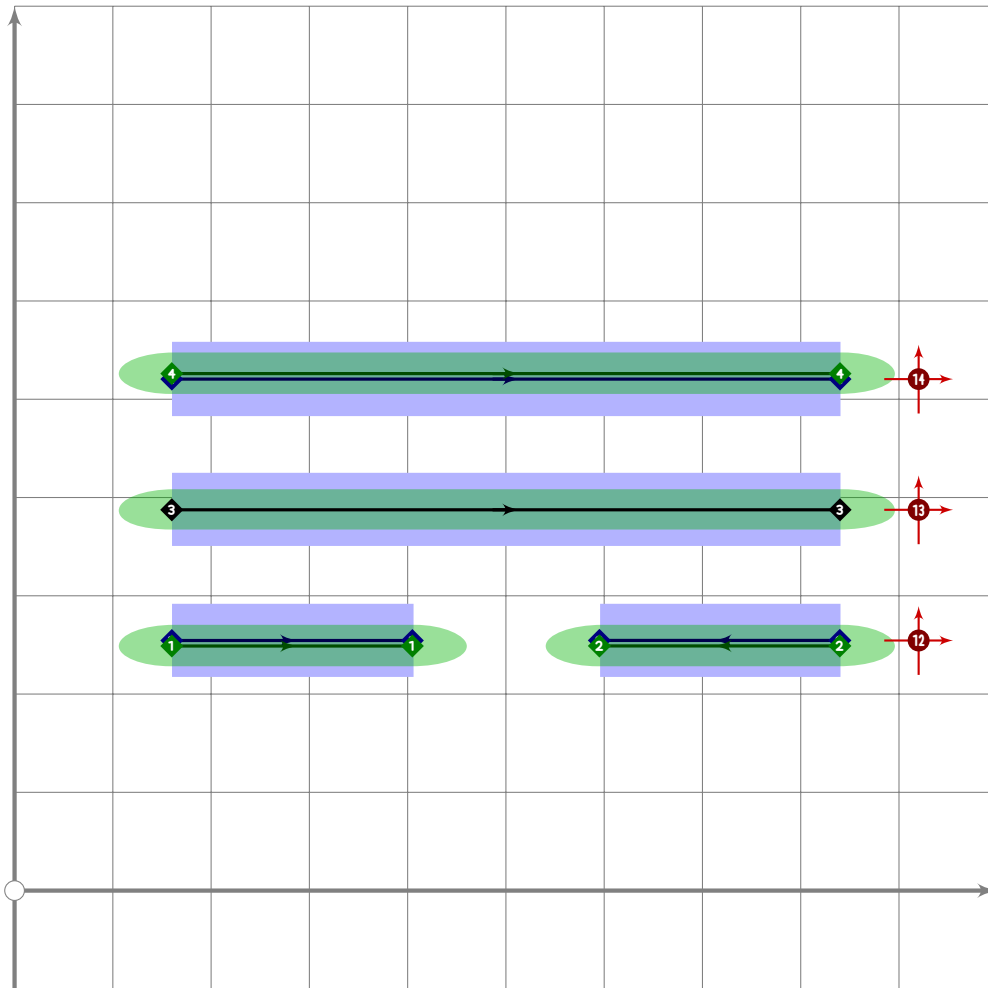
59
60 beginsuglyph("ichingtri3",50);
61   iching.line(1,3,1);
62   iching.line(2,3,0);
63   iching.line(3,3,1);
64   tsu_render;
65 endsuglyph;

```

U+2633
tsuku.ichingtri4



```
66  
67 begintsuglyph("ichingtri4";51);  
68   iching.line(1,3,1);  
69   iching.line(2,3,0);  
70   iching.line(3,3,0);  
71   tsu_render;  
72 endsuglyph;
```

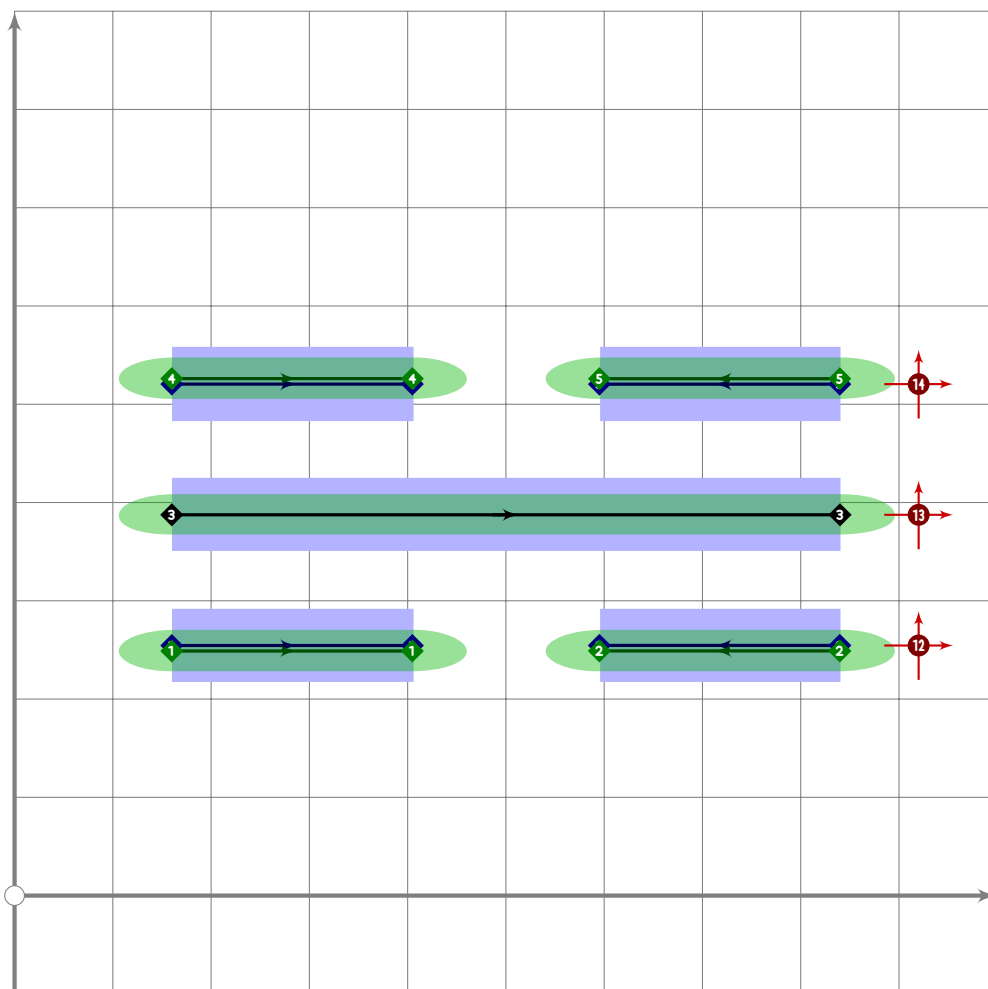


```

73
74 begintsuglyph("ichingtri5";52);
75   iching.line(1,3,0);
76   iching.line(2,3,1);
77   iching.line(3,3,1);
78   tsu_render;
79 endsuglyph;

```

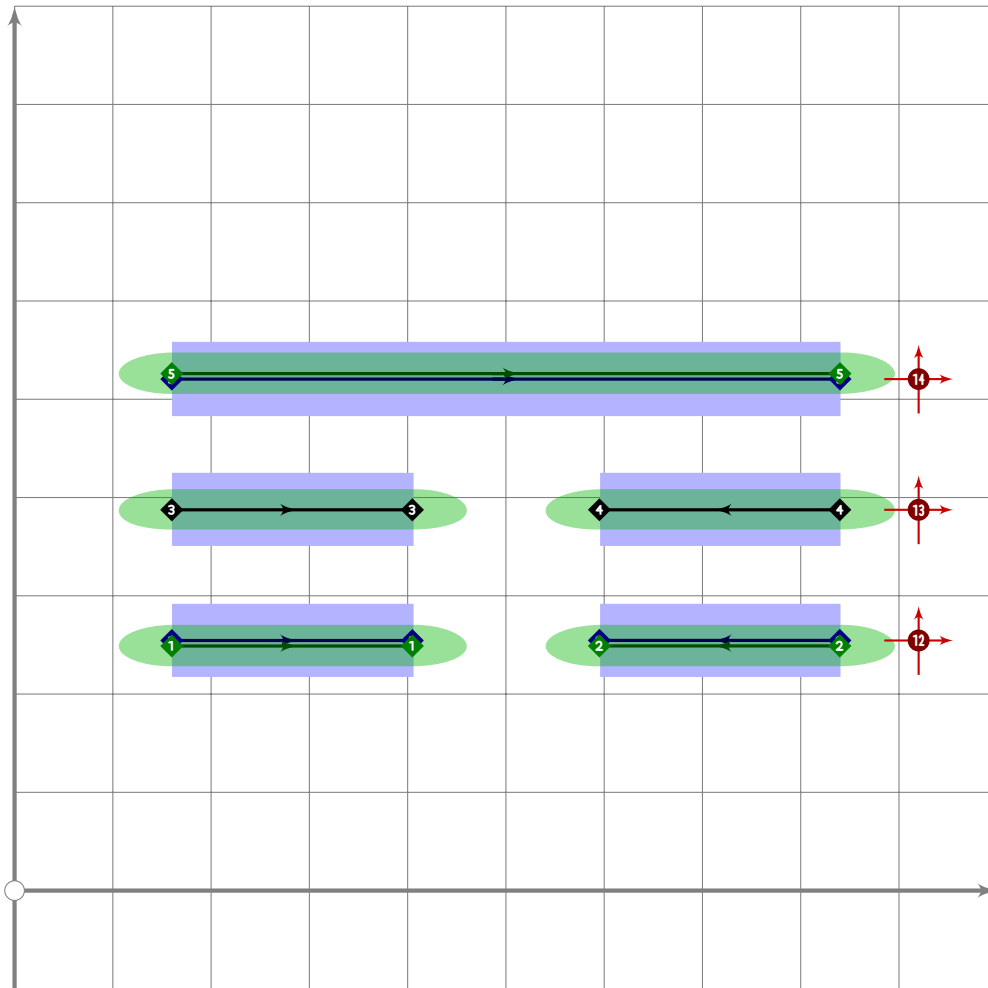
U+2635
tsuku.ichingtri6



```

80
81 begint Suglyph("ichingtri6",53);
82   iching.line(1,3,0);
83   iching.line(2,3,1);
84   iching.line(3,3,0);
85   tsu_render;
86 endtsuglyph;

```

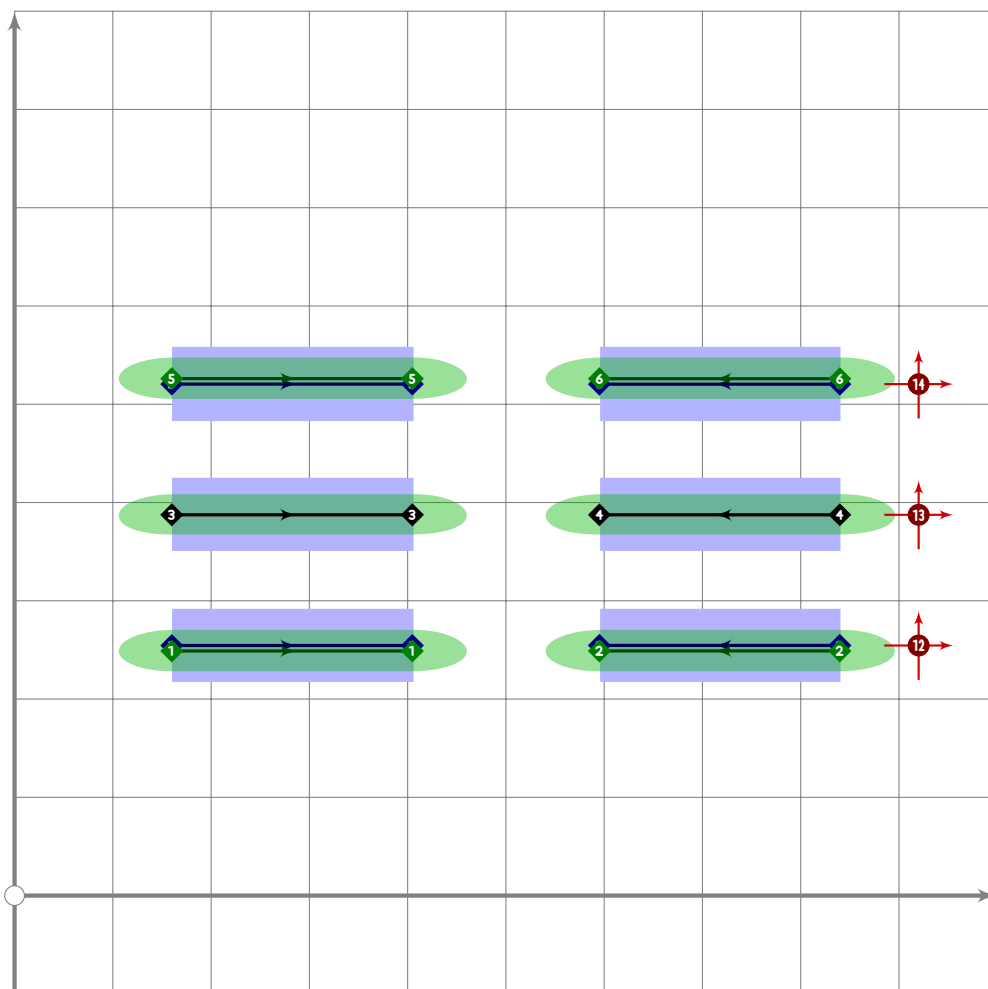


```

87
88 begint Suglyph("ichingtri7",54);
89   iching.line(1,3,0);
90   iching.line(2,3,0);
91   iching.line(3,3,1);
92   tsu_render;
93 endtsuglyph;

```

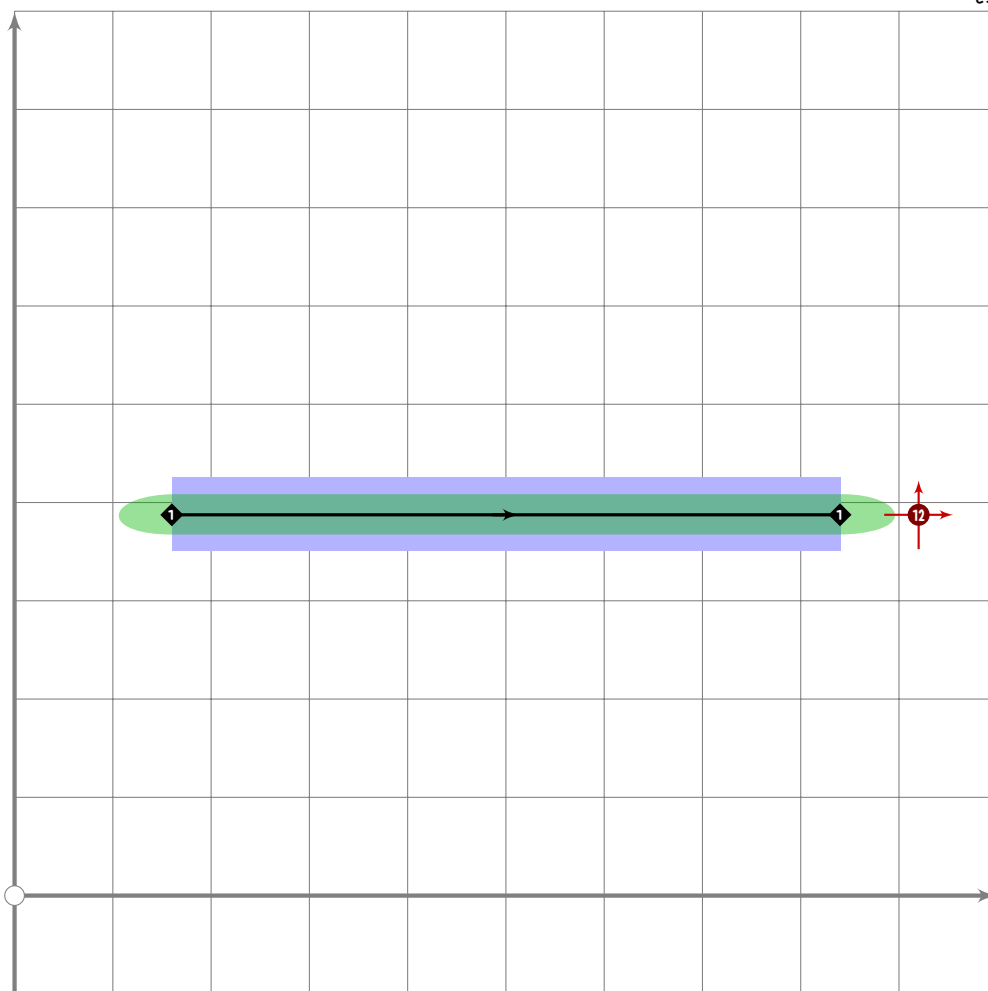
U+2637
tsuku.ichingtri8



```

94
95 begintsuglyph("ichingtri8",55);
96   iching.line(1,3,0);
97   iching.line(2,3,0);
98   iching.line(3,3,0);
99   tsu_render;
100 endtsuglyph;

```

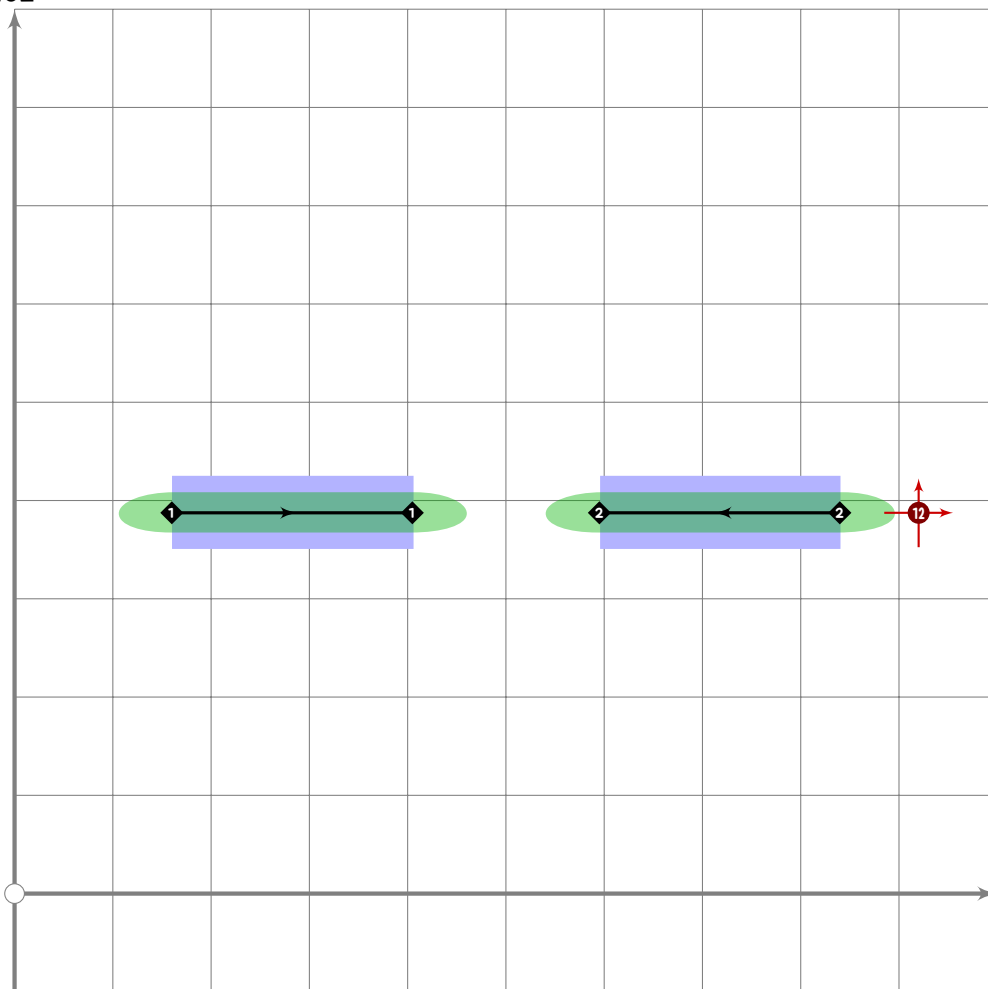



```

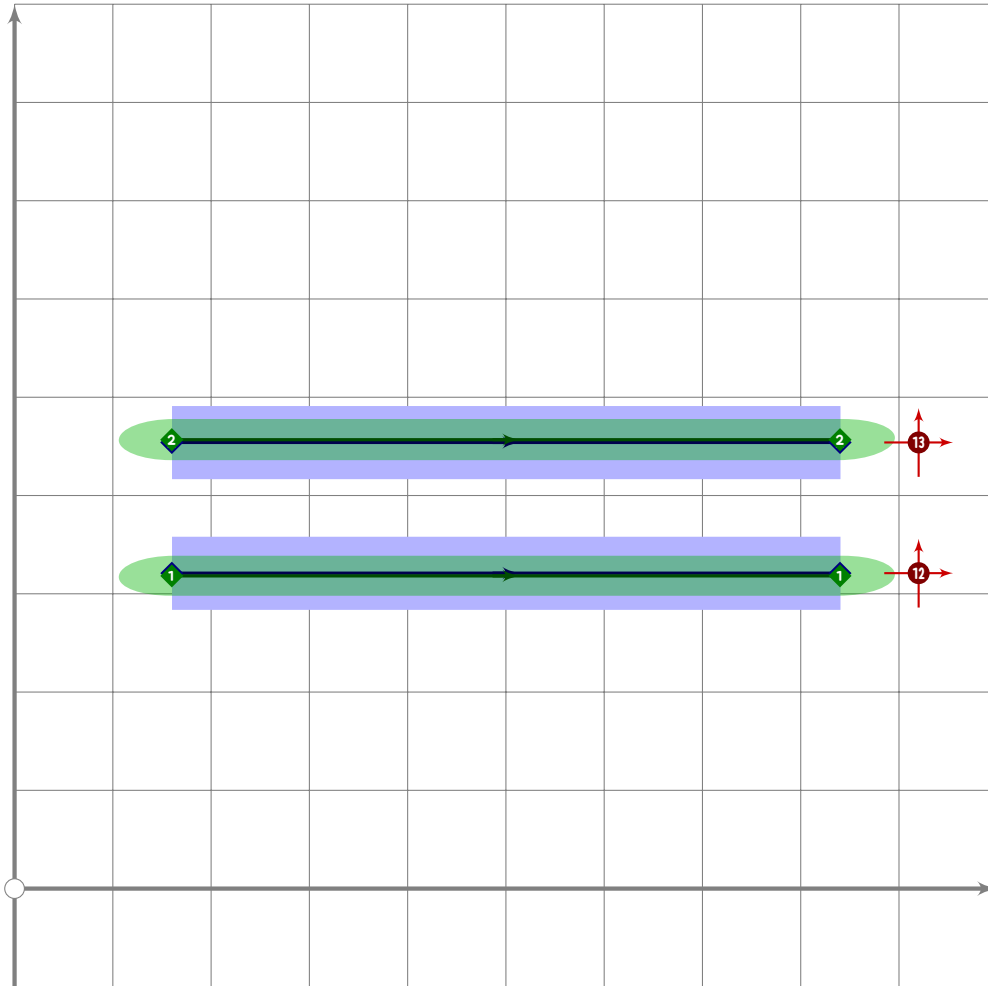
101
102 beginsuglyph("ichingmono1",138);
103   iching.line(1,1,1);
104   tsu_render;
105 endsuglyph;

```

U+268B
tsuku.ichingmono2



```
106
107 begint Suglyph("ichingmono2";139);
108   iching.line(1,1,0);
109   tsu_render;
110 endtsuglyph;
```

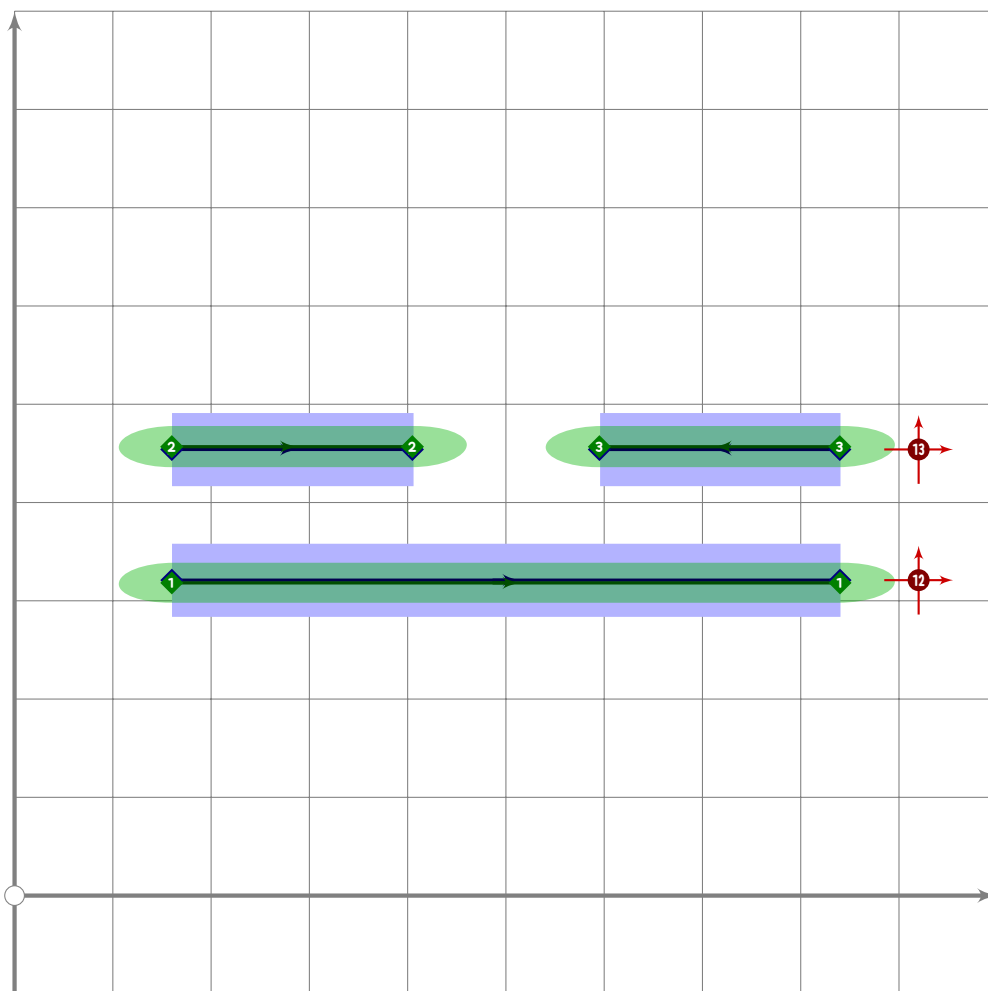


```

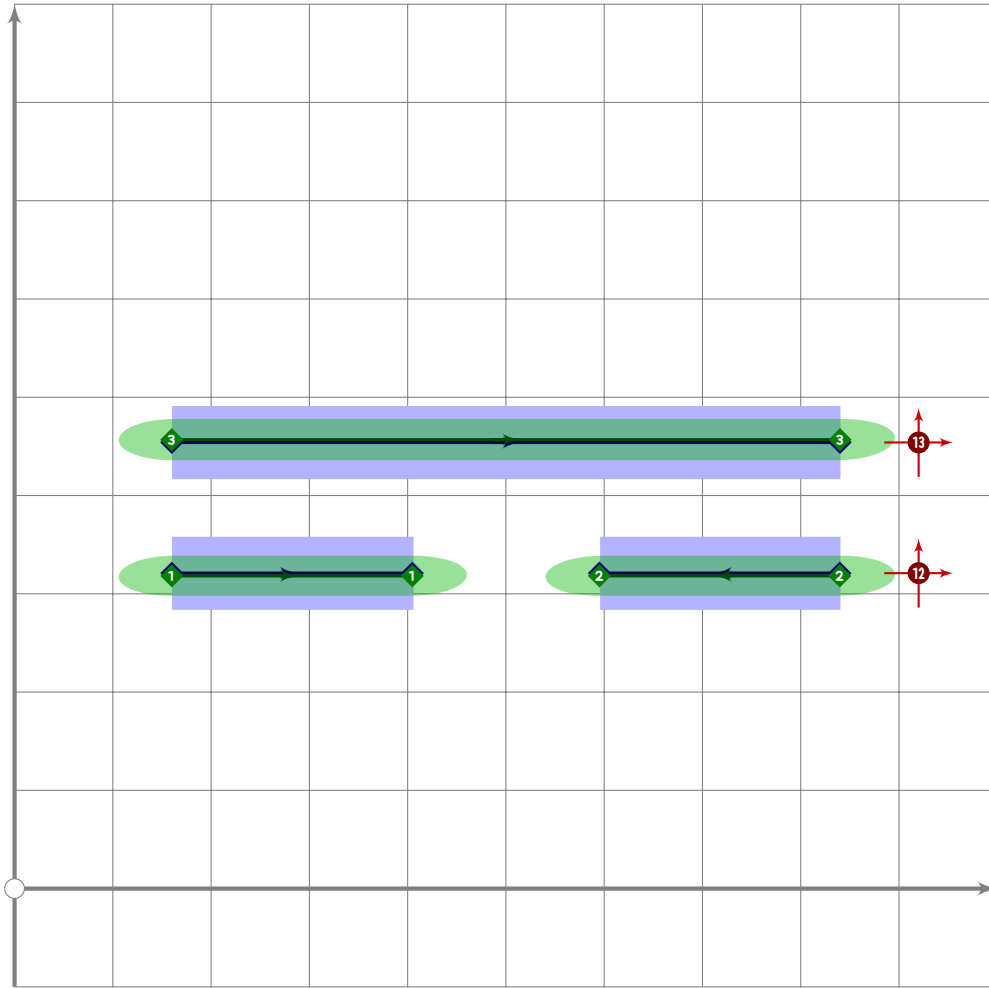
111
112 begint Suglyph("ichingdi1",140);
113   iching.line(1,2,1);
114   iching.line(2,2,1);
115   tsu_render;
116 endtsuglyph;

```

U+268D
tsuku.ichingdi2



```
117
118 begint Suglyph("ichingdi2",141);
119   iching.line(1,2,1);
120   iching.line(2,2,0);
121   tsu_render;
122 endtsuglyph;
```

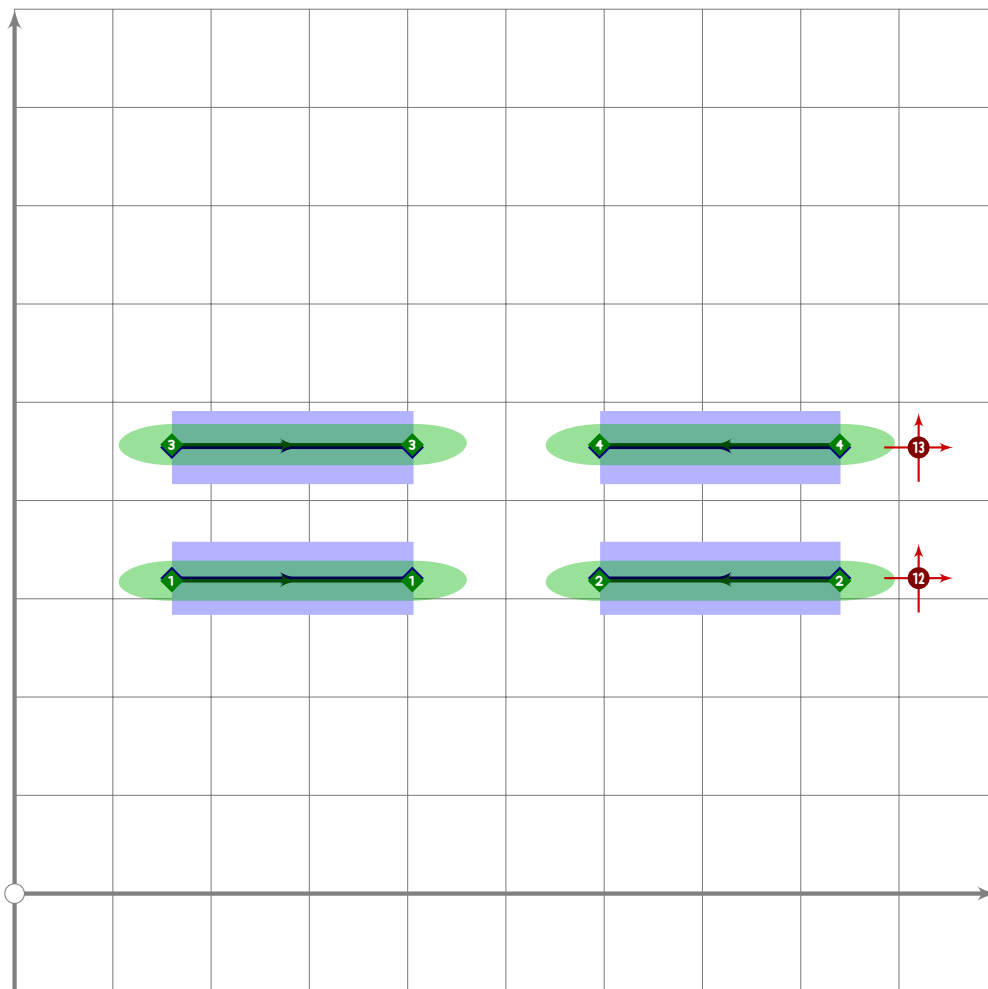


```

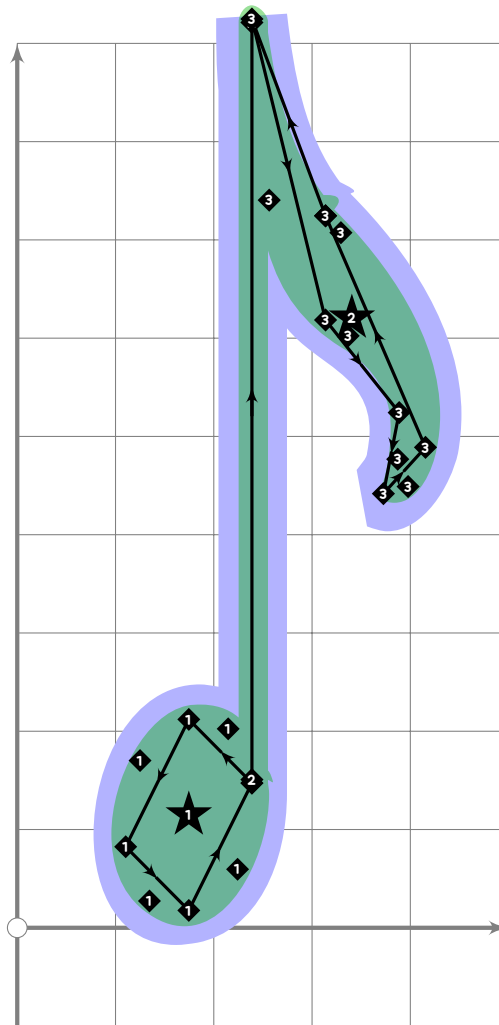
123
124 begintsuglyph("ichingdi3",142);
125   iching.line(1,2,0);
126   iching.line(2,2,1);
127   tsu_render;
128 endtsuglyph;

```

U+268F
tsuku.ichingdi4



```
129
130 begint Suglyph("ichingdi4",143);
131   iching.line(1,2,0);
132   iching.line(2,2,0);
133   tsu_render;
134 endtsuglyph;
135
136
137
138 % musical eighth note, required for MES-1
139 tsu_rescale_half;
```



```

140 beginsuglyph("musicalnote";106);
141  push_stroke((500,150)..(380,205)..(260,95)..(380,40)..cycle,
142    (1.6,1.6)-(1.4,1.4)-(1.4,1.4)-(1.4,1.4)-cycle);
143  set_boalternate(0);
144  push_stroke((500,153)-(500,807),(1.6,1.6)-(1.6,1.6));
145  set_boalternate(0);
146  push_stroke((640,640)..{curl 1}(500,810){down}..(640,550)..(780,470)..
147    {curl 1}(750,400){curl 1}..(830,440)..cycle,
148    (1.3,1.3)-(1.6,1.6)-(1.3,1.3)-(1.3,1.3)-(1,1)-(1.3,1.3));
149  set_botip(0,1,0);
150  set_botip(0,4,0);
151  set_boalternate(0);
152  if tsu_pbrush_size>=30:
153    push_lcblob(get_stroke(-2));
154    push_lcblob(get_stroke(0));
155  fi;
156  tsu_render;
157 endtsuglyph;
158
159

```

160

161 endfont;

162

163

tsuku-27.mp

```
1 %
2 % Unicode page 27 (Zapfian Dingbats) for Tsukurimashou
3 % Copyright (C) 2011, 2012 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---

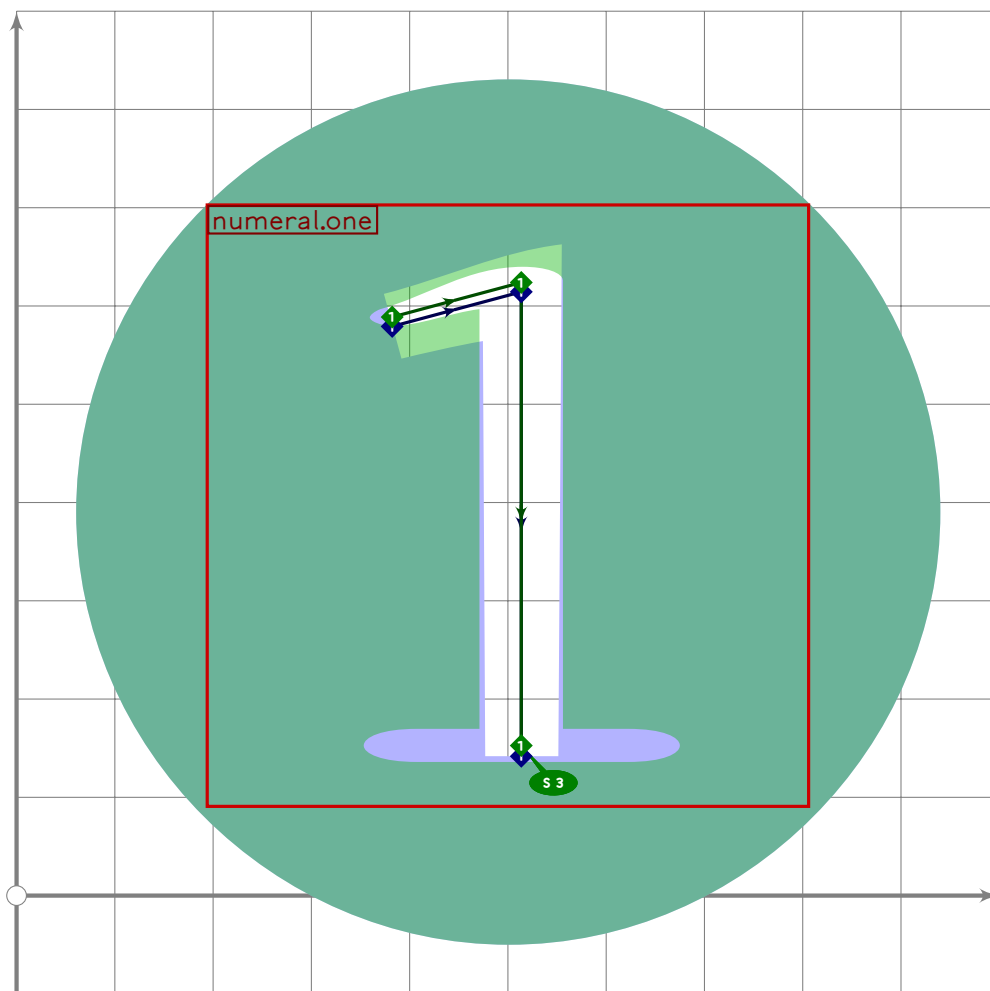

32
33 beginfont
34
35 input latin-intro.mp;
36
37 % AUTODEPS
38 input enclosed.mp;
39 input numerals.mp;
40
41 do_late_includes;
42
43 

---


44
```

Inverted Circled Numerals

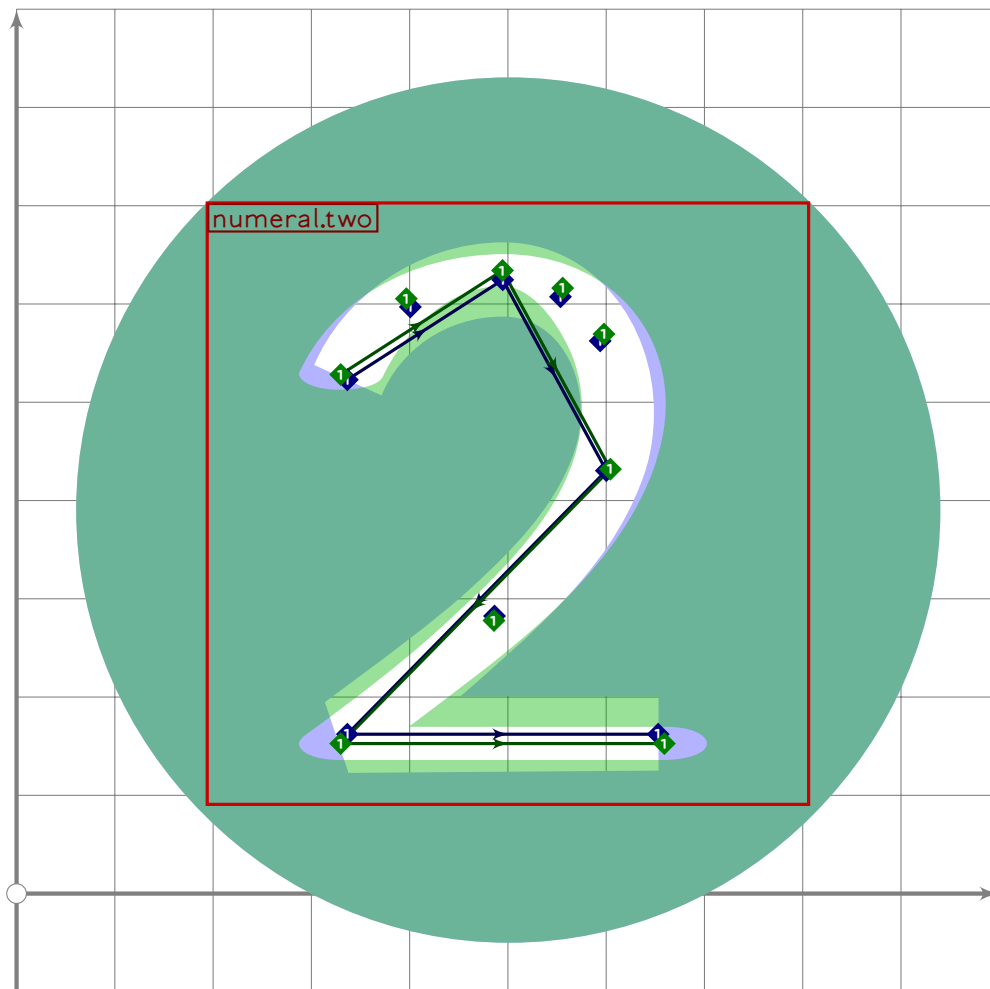
```
45 % INVERTED CIRCLED NUMERALS
46
```



```

47 % 1
48 % BACKGROUND 25CF
49 begint Suglyph("uni2776",118);
50 tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.one);
51 i:=0; forever: exitif find_stroke(i)<1;
52   set_bosize(i,107); i:=i-1; endfor;
53 tsu_render;
54 endtsuglyph;
55

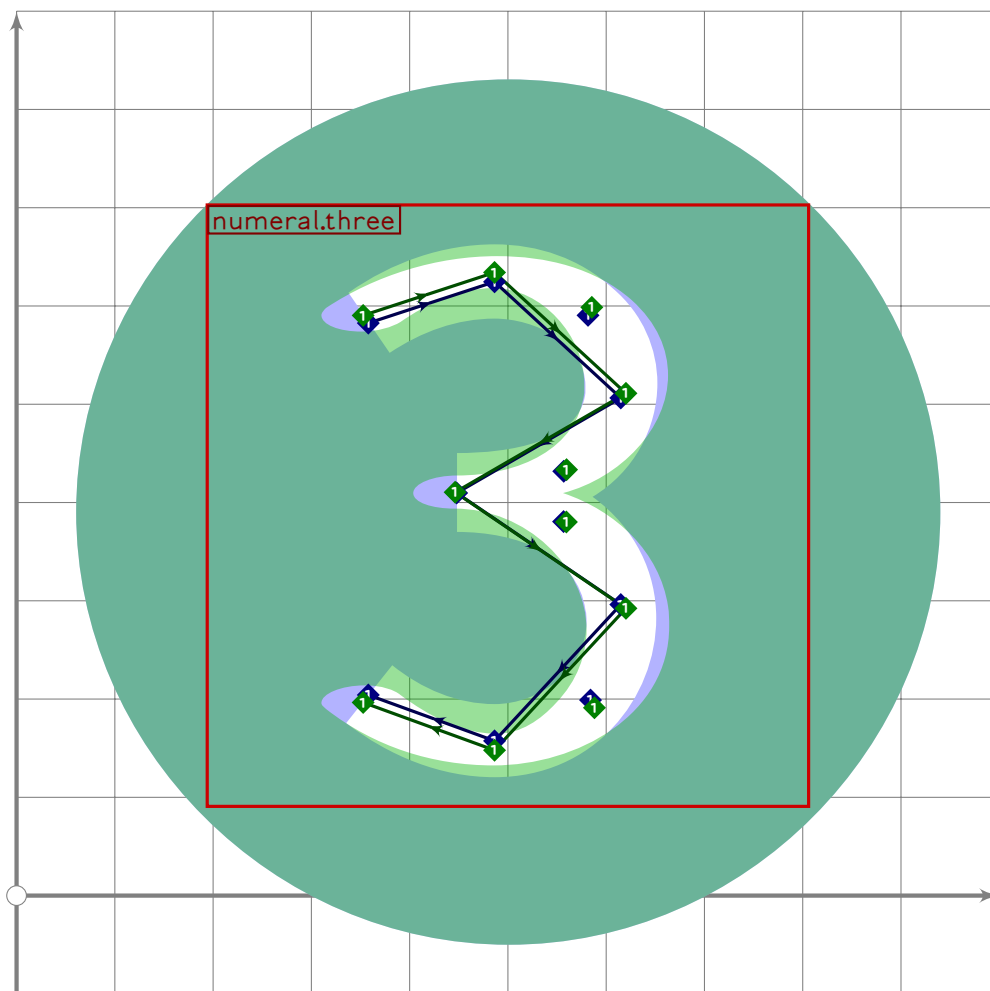
```



```

56 % 2
57 % BACKGROUND 25CF
58 begint Suglyph("uni2777";119);
59   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.two);
60   i:=0; forever: exitif find_stroke(i)<1;
61     set_bosize(i,107); i:=i-1; endfor;
62   tsu_render;
63 endtsuglyph;
64

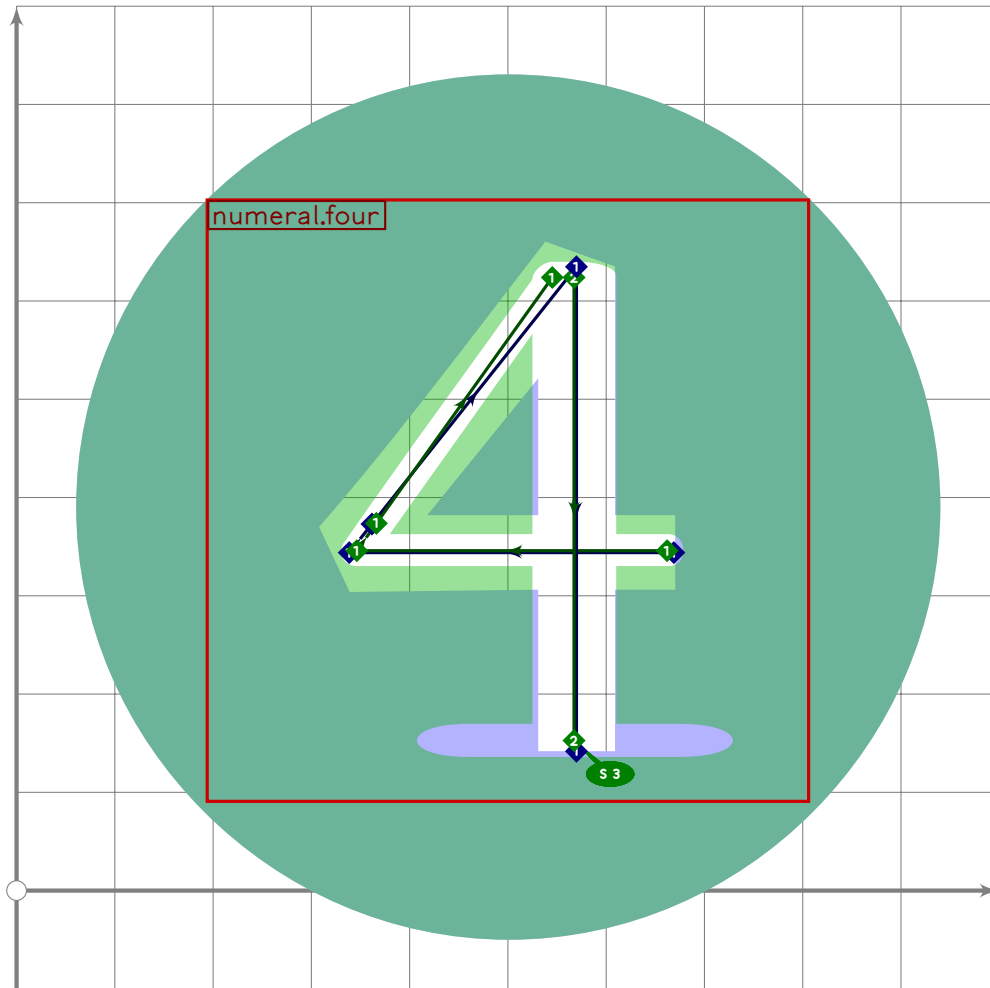
```



```

65 % 3
66 % BACKGROUND 25CF
67 begint Suglyph("uni2778";120);
68   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.three);
69   i:=0; forever: exitif find_stroke(i)<1;
70     set_bosize(i,107); i:=i-1; endfor;
71   tsu_render;
72 endtsuglyph;
73

```

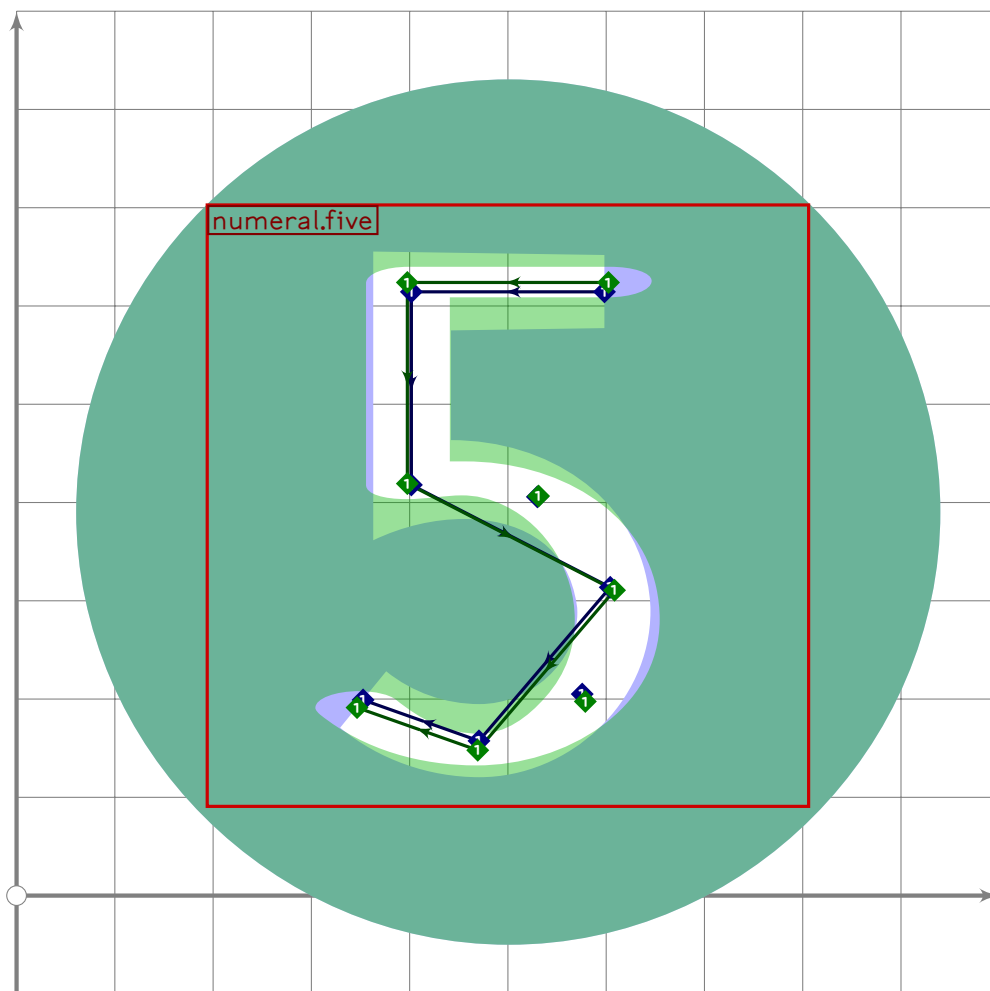


```

74 % 4
75 % BACKGROUND 25CF
76 begint Suglyph("uni2779";121);
77   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.four);
78   i:=0; forever: exitif find_stroke(i)<1;
79     set_bosize(i,107); i:=i-1; endfor;
80   tsu_render;
81 endtsuglyph;
82

```

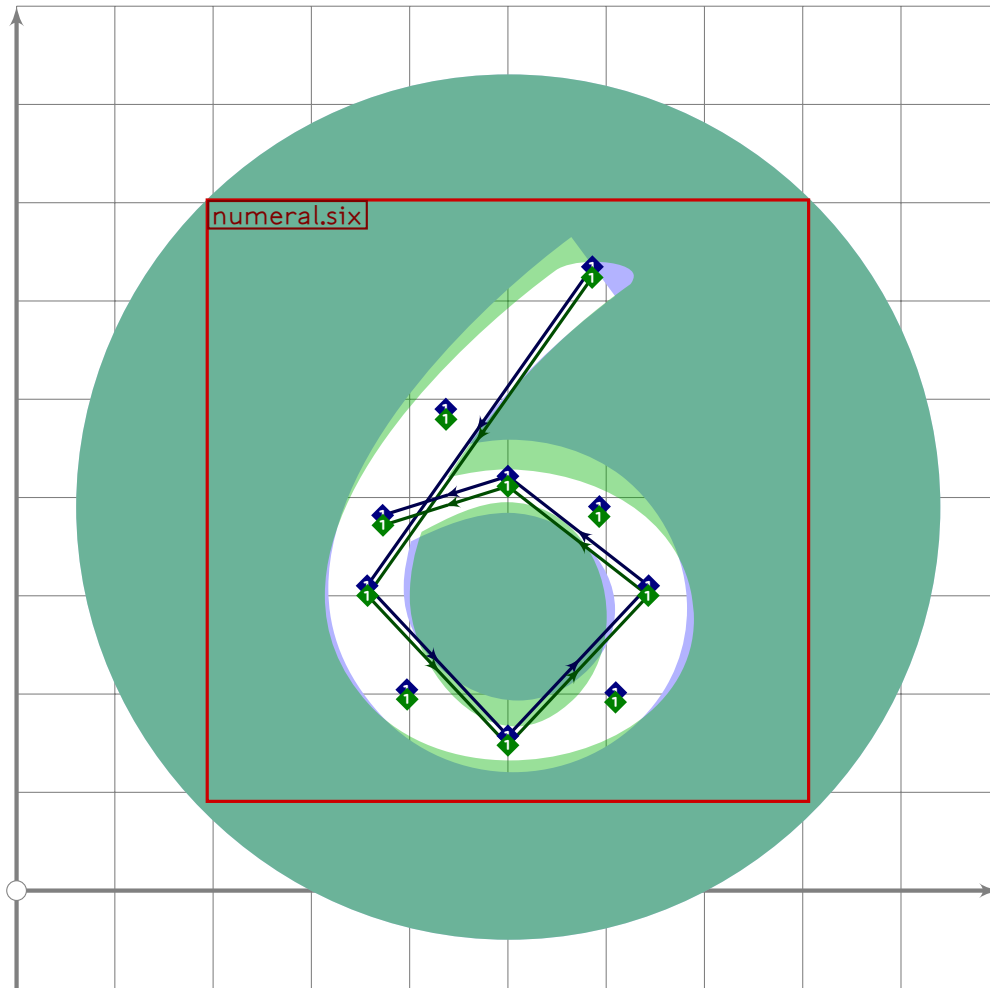
U+277A
tsuku.uni277A



```

83 % 5
84 % BACKGROUND 25CF
85 begint Suglyph("uni277A",122);
86   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.five);
87   i:=0; forever: exitif find_stroke(i)<1;
88     set_bosize(i,107); i:=i-1; endfor;
89   tsu_render;
90 endtsuglyph;
91

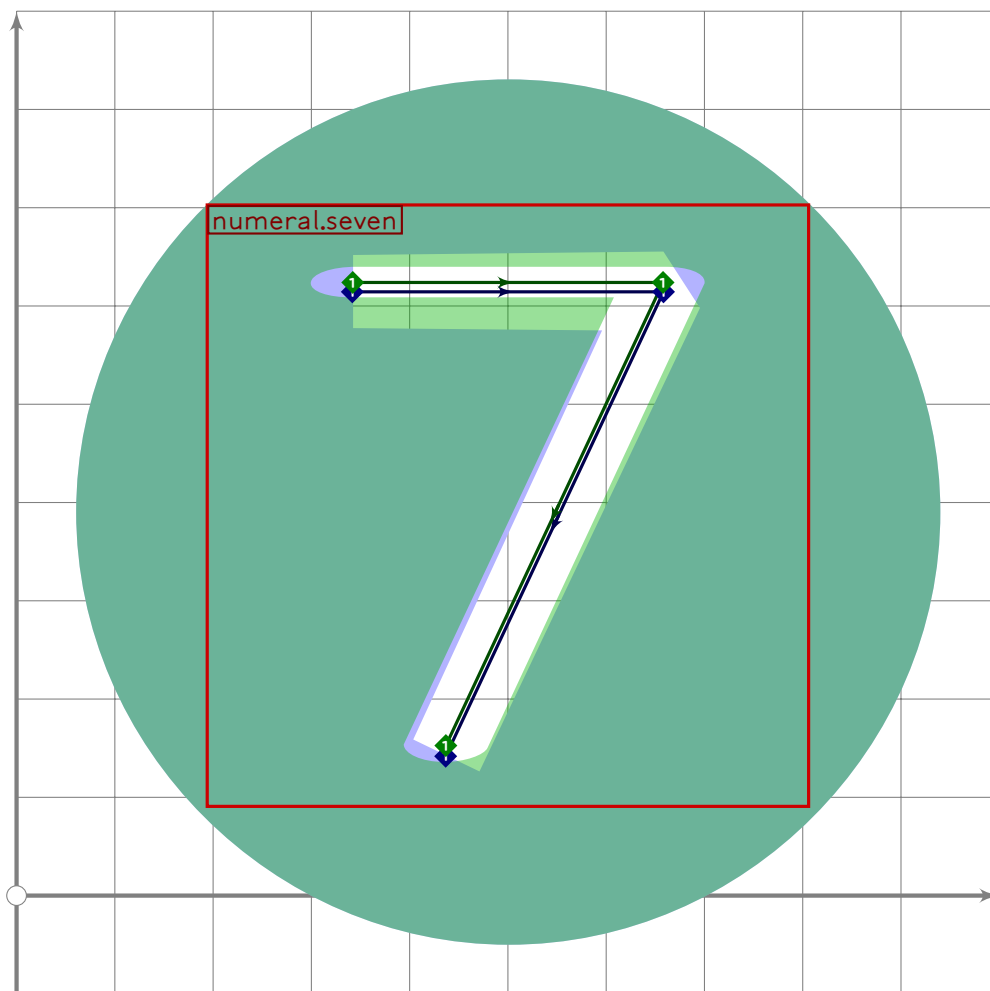
```



```

92 % 6
93 % BACKGROUND 25CF
94 begint Suglyph("uni277B";123);
95   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.six);
96   i:=0; forever: exitif find_stroke(i)<1;
97     set_bosize(i,107); i:=i-1; endfor;
98   tsu_render;
99 endtsuglyph;
100

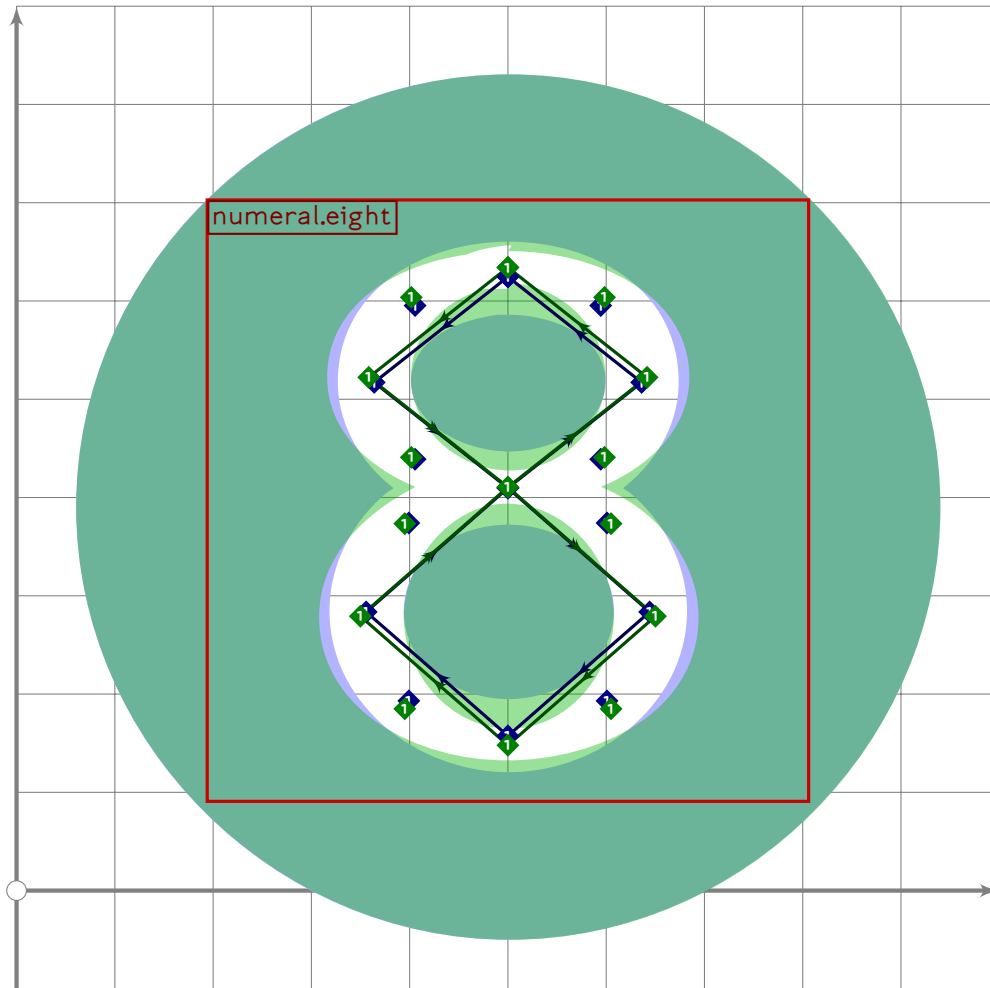
```



```

101 % 7
102 % BACKGROUND 25CF
103 begint Suglyph("uni277C";124);
104   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.seven);
105   i:=0; forever: exitif find_stroke(i)<1;
106     set_bosize(i,107); i:=i-1; endfor;
107   tsu_render;
108 endtsuglyph;
109

```

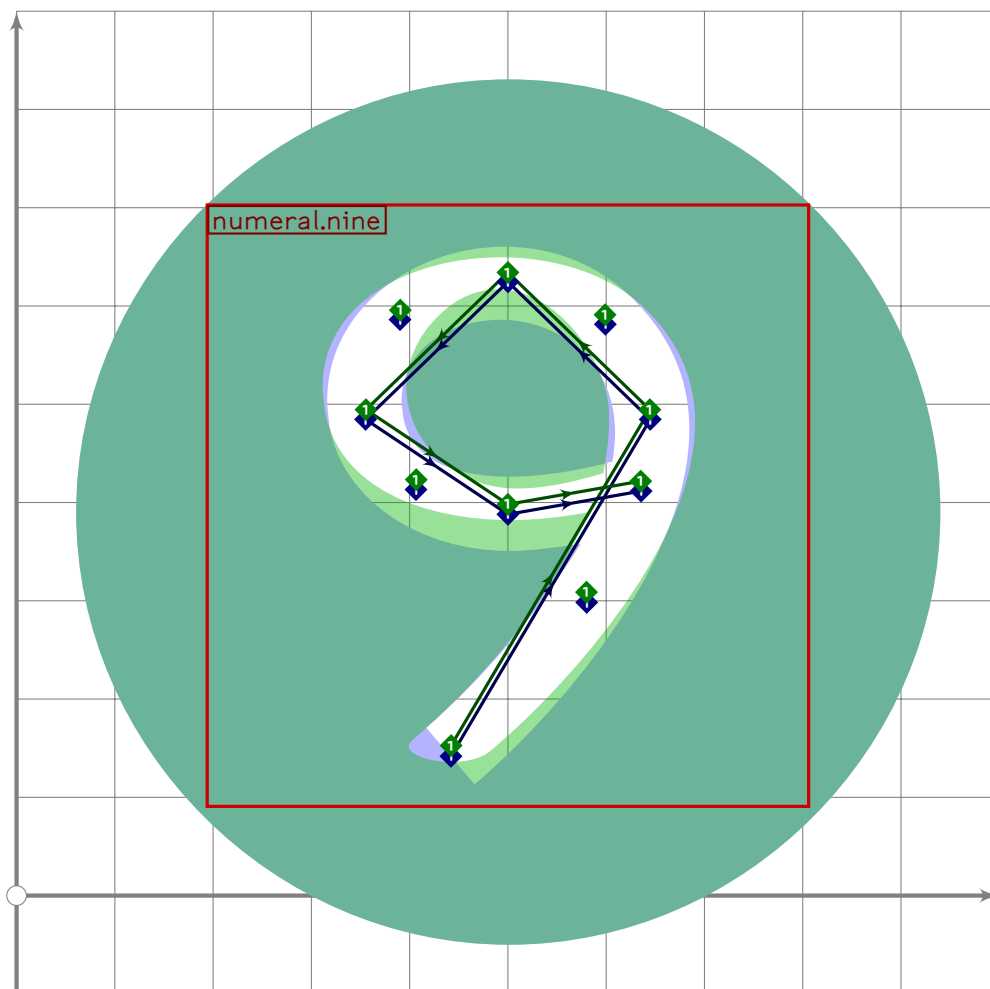



```

110 % 8
111 % BACKGROUND 25CF
112 begintsuglyph("uni277D";125);
113   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.eight);
114   i:=0; forever: exitif find_stroke(i)<1;
115     set_bosize(i,107); i:=i-1; endfor;
116   tsu_render;
117 endtsuglyph;
118

```

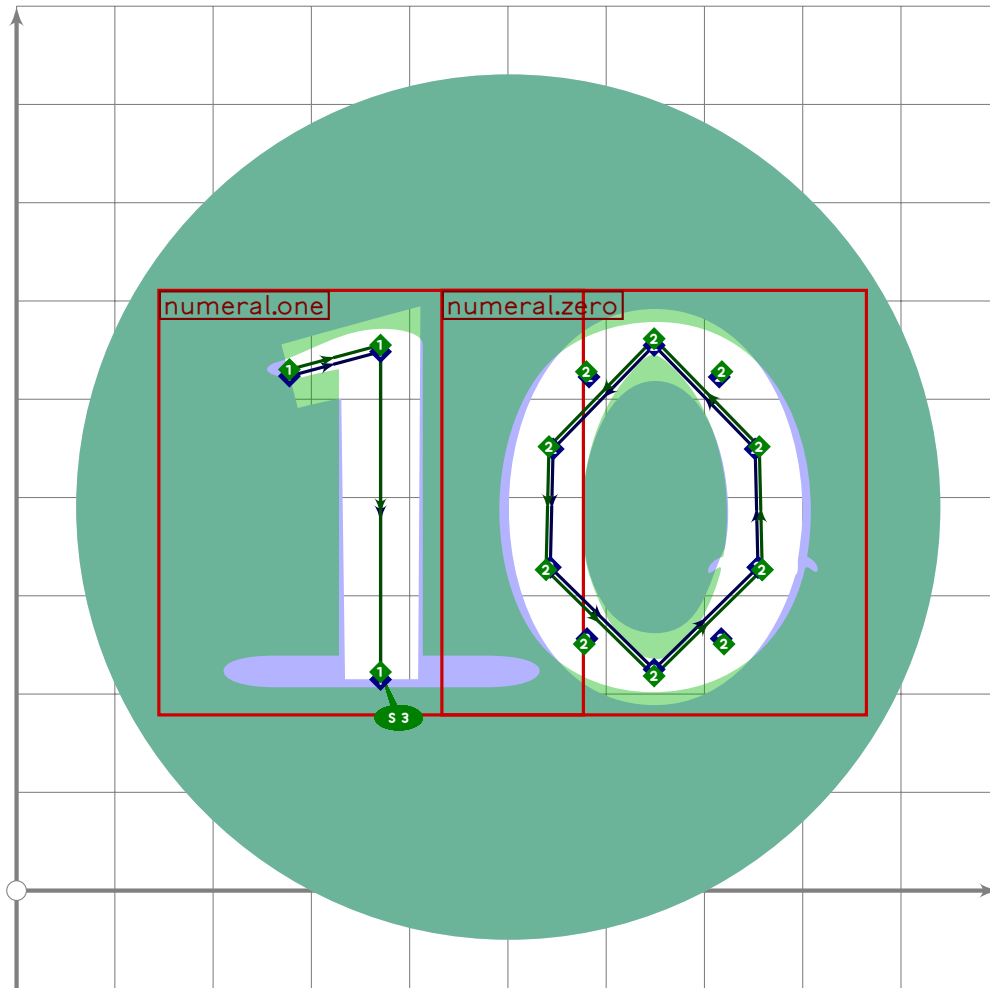
U+277E
tsuku.uni277E



```

119 % 9
120 % BACKGROUND 25CF
121 begint Suglyph("uni277E";126);
122   tsu_xform(tsu_xf.circled shifted tsu_xf.circ_slant_shift)(numeral.nine);
123   i:=0; forever: exitif find_stroke(i)<1;
124     set_bosize(i,107); i:=i-1; endfor;
125   tsu_render;
126 endtsuglyph;
127

```



```

128 % 10
129 % BACKGROUND 25CF
130 begintsuglyph("uni277F";127);
131   tsu_xform(tsu_xf.ctwo.left shifted tsu_xf.circ_slant_shift)(numeral.one);
132   numeric x[],y[];
133   tsu_xform(tsu_xf.ctwo.right shifted tsu_xf.circ_slant_shift)(numeral.zero);
134   i:=0; forever: exitif find_stroke(i)<1;
135     set_bosize(i,107); i:=i-1; endfor;
136   tsu_render;
137 endtsuglyph;
138
139
140
141 endfont;
142
143

```

tsuku-2e.mp

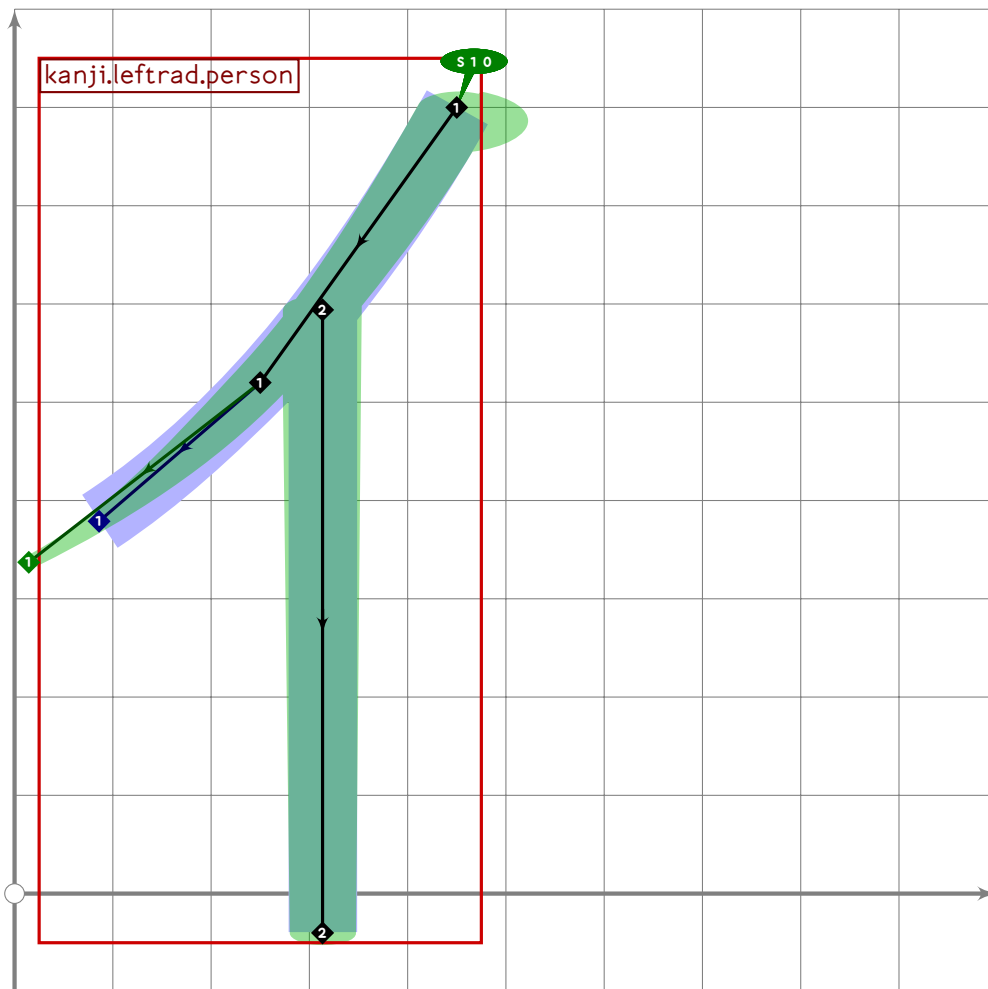
```
1 %
2 % Unicode page 2E (Radicals Supplement) for Tsukurimashou
3 % Copyright (C) 2012 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input bottomrad.mp;
37 input buildkanji.mp;
38 input gradefive.mp;
39 input gradefour.mp;
40 input gradenine.mp;
41 input gradeone.mp;
42 input gradethree.mp;
43 input gradetwo.mp;
44 input leftrad.mp;
45 input radical.mp;
46 input rightrad.mp;
47 input toprad.mp;
48
49 do_late_includes;
50
51 

---


52
```

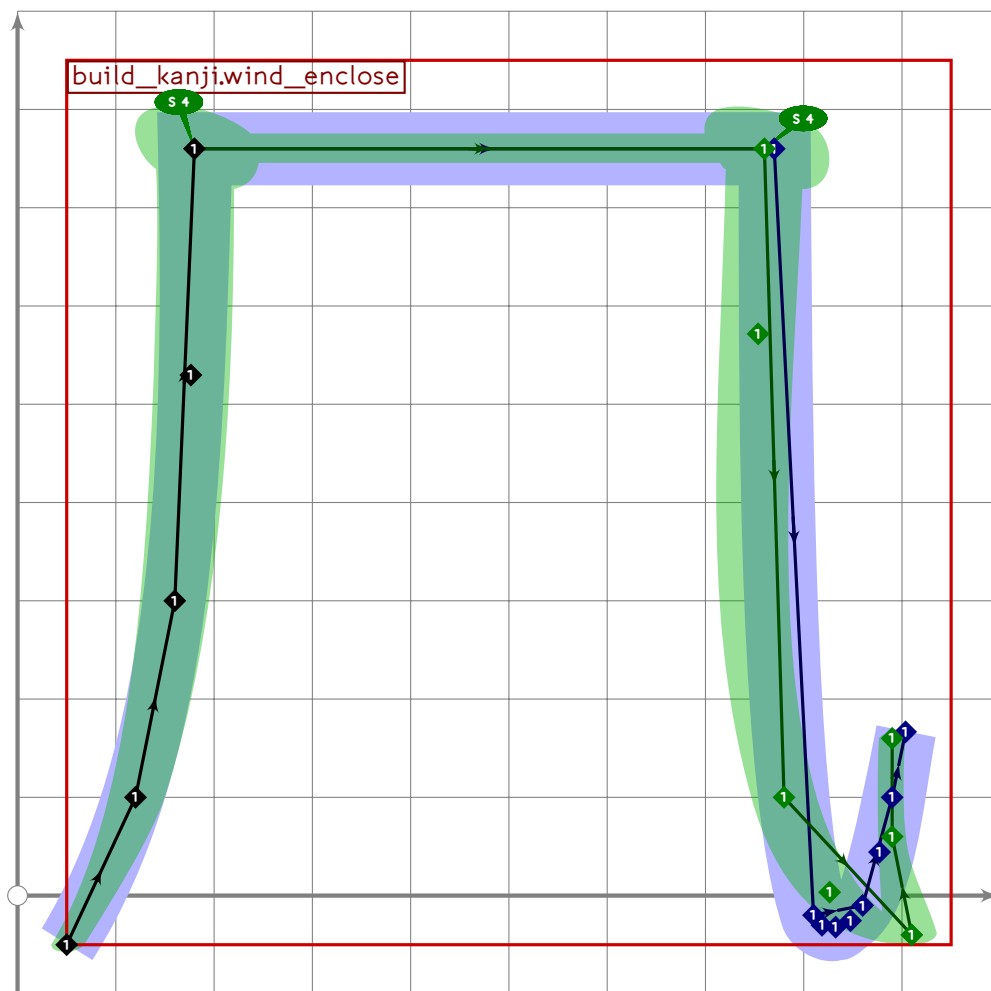


```

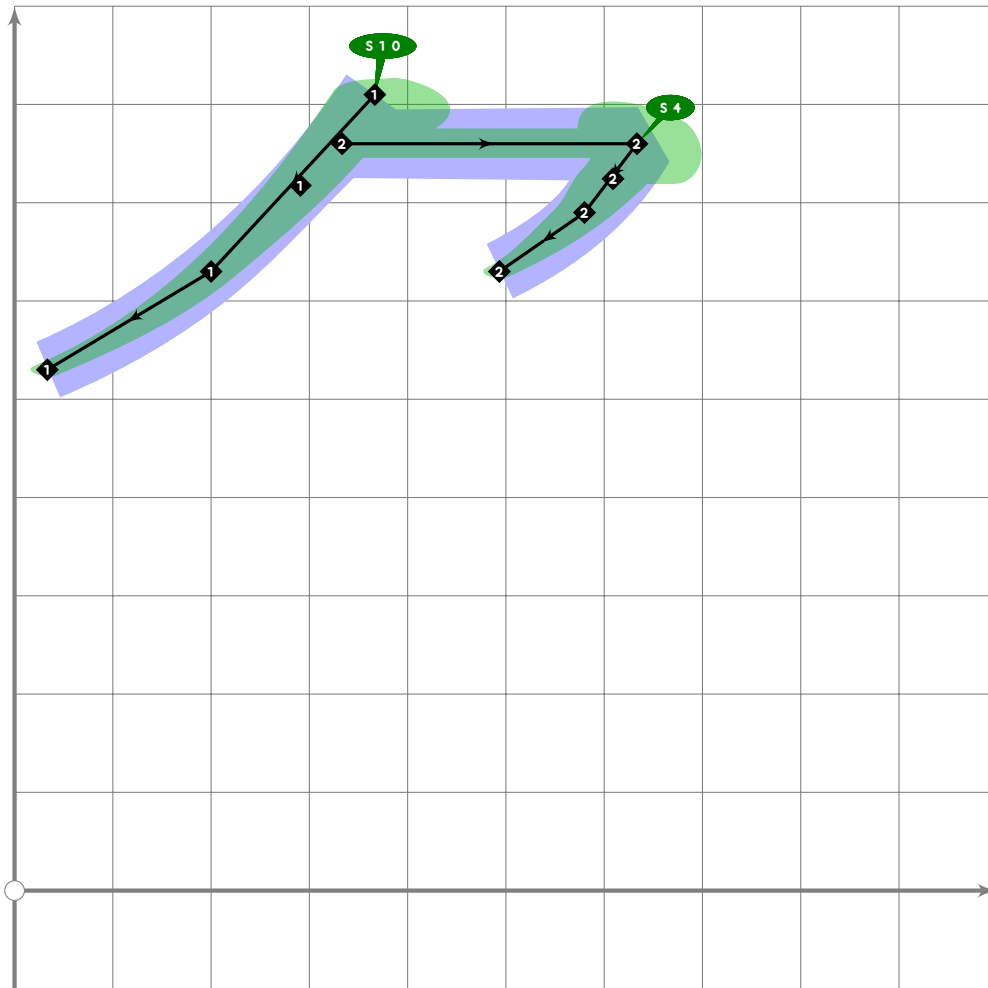
55 % hito/jin "person" as radical
56 begintsuglyph("uni2E85",133);
57   tsu_xform(identity xscaled 0.5)(kanji.leftrad.person);
58   tsu_render;
59 endtsuglyph;
60

```

U+2E87
tsuku.uni2E87



```
61 % Unicode calls it "table"  
62 begintsuglyph("uni2E87";135);  
63   build_kanji.wind_enclose();  
64   tsu_render;  
65 endsuglyph;  
66
```

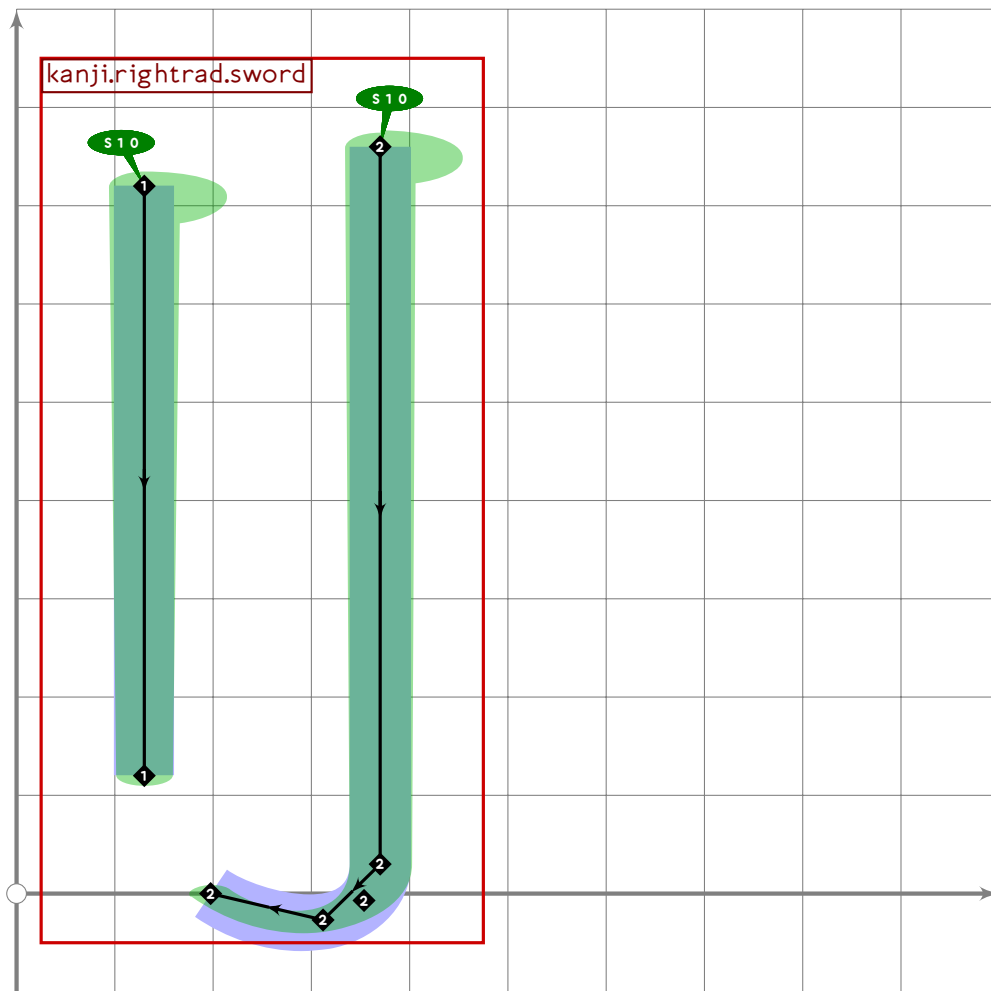


```

67 % Unicode calls it "knife one"
68 begintsuglyph("uni2E88";136);
69   build_kanji.attach_fishhook(0.8)(
70     perl_structure:=perl_structure&"eids._2";
71     push_stroke((200,0)-(200,800)-(800,800),
72       (1.5,1.5)-(1.6,1.6)-(1.6,1.6));
73     set_bosize(0,0));
74   tsu_render;
75 endtsuglyph;
76

```

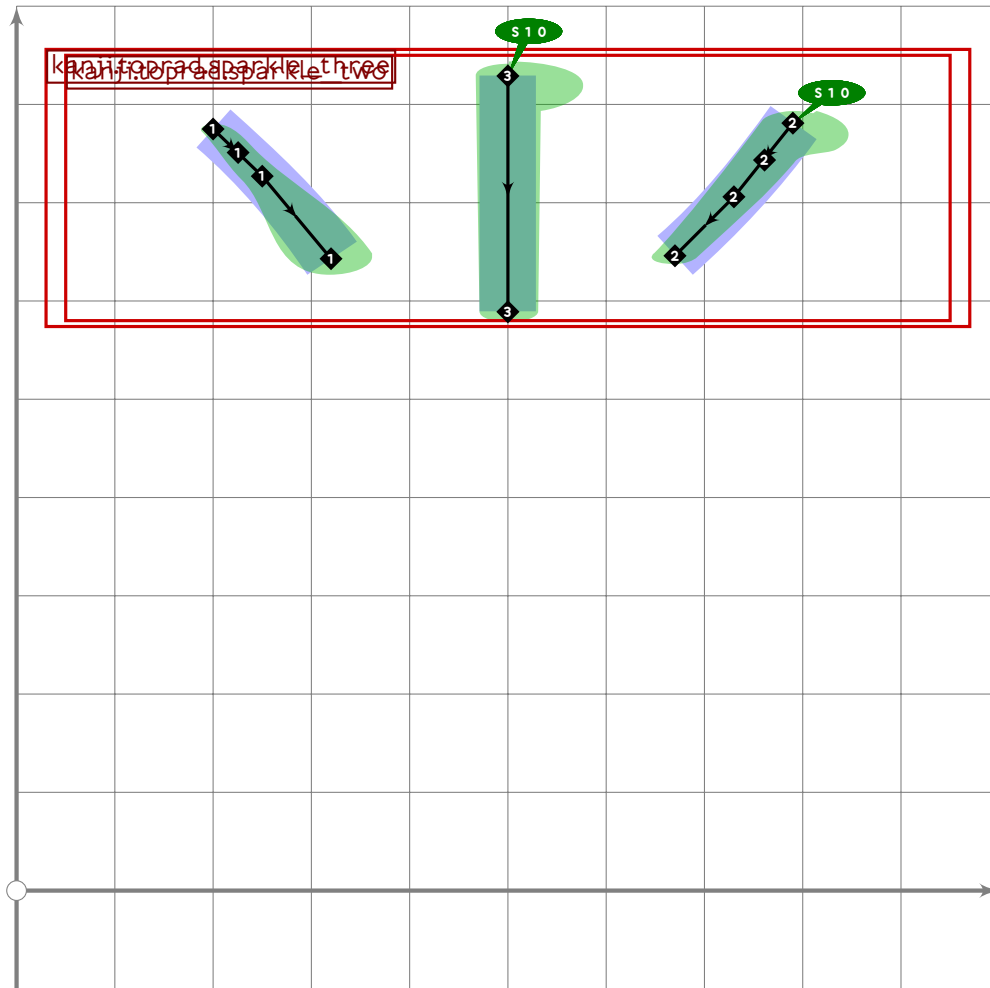
U+2E89
tsuku.uni2E89



```

77 % tou "sword radical"
78 begintsuglyph("uni2E89",137);
79   tsu_xform(identity xscaled 0.5)(kanji.rightrad.sword);
80   tsu_render;
81 endtsuglyph;
82

```

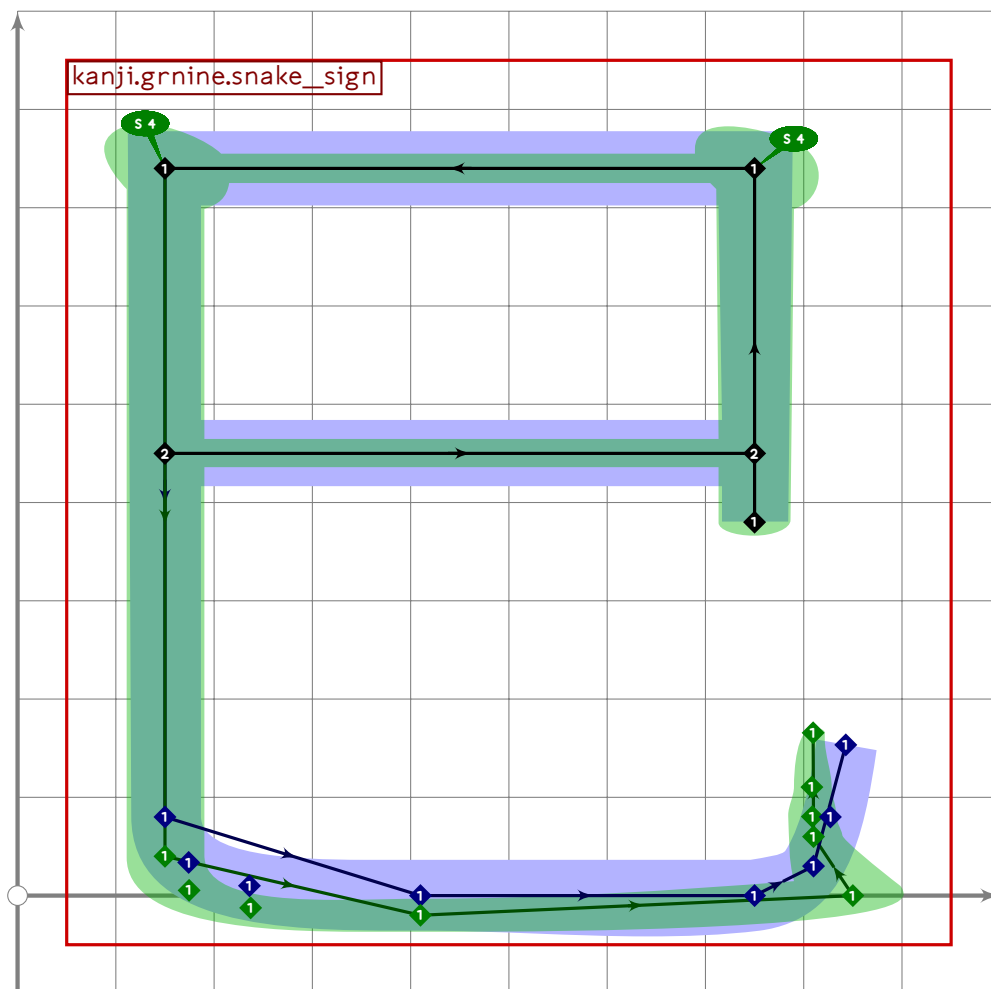



```

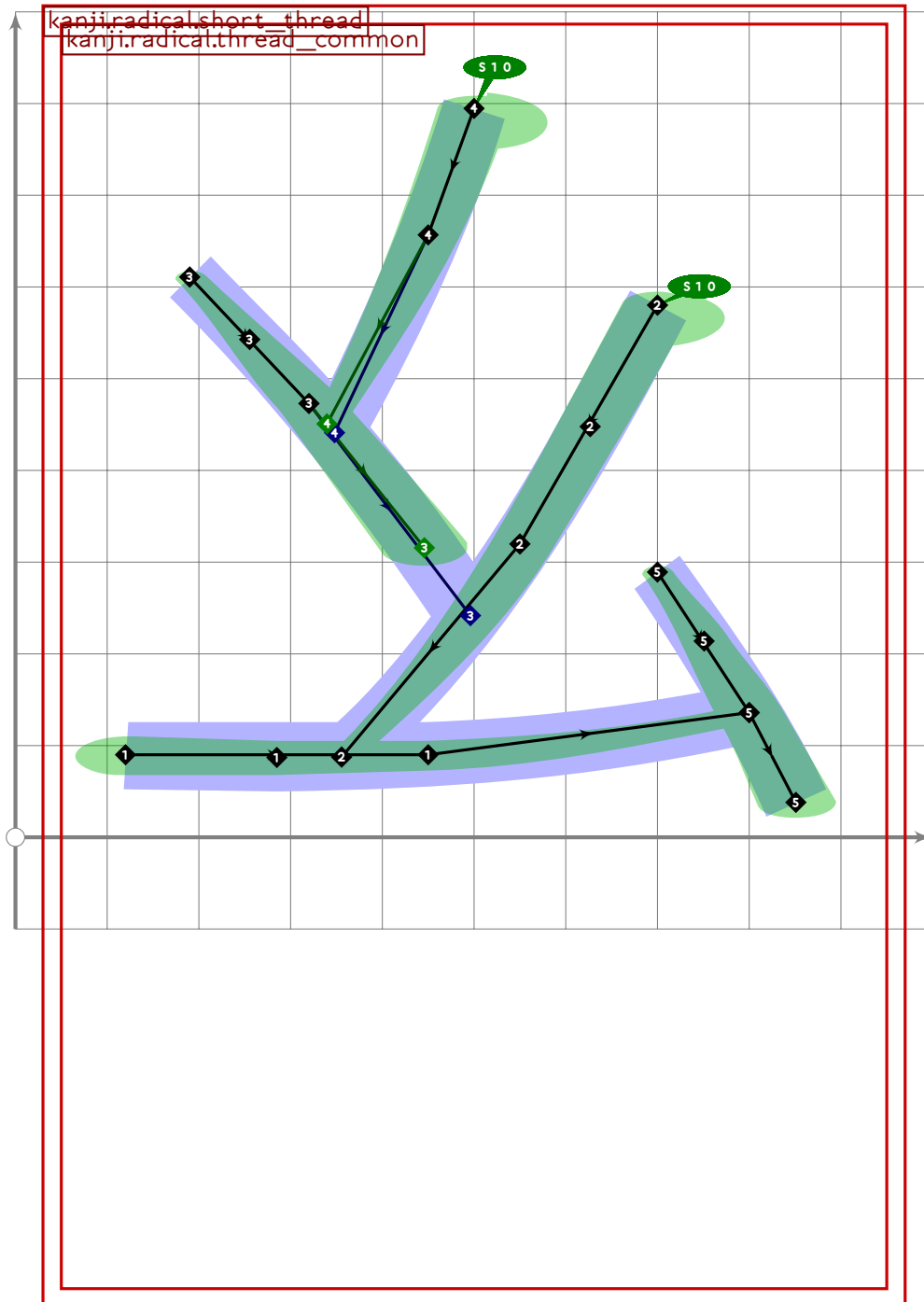
83 % Unicode calls it "small one"
84 begintsuglyph("uni2E8C",140);
85   build_kanji.tb(620,80)
86     (kanji.toprad.sparkle_three)
87   ();
88   tsu_render;
89 endtsuglyph;
90

```

U+2E92
tsuku.uni2E92



```
91 % shi/mi "snake zodiac sign"  
92 begintsuglyph("uni2E92";146);  
93   kanji.grnine.snake_sign;  
94   tsu_render;  
95 endtsuglyph;  
96
```

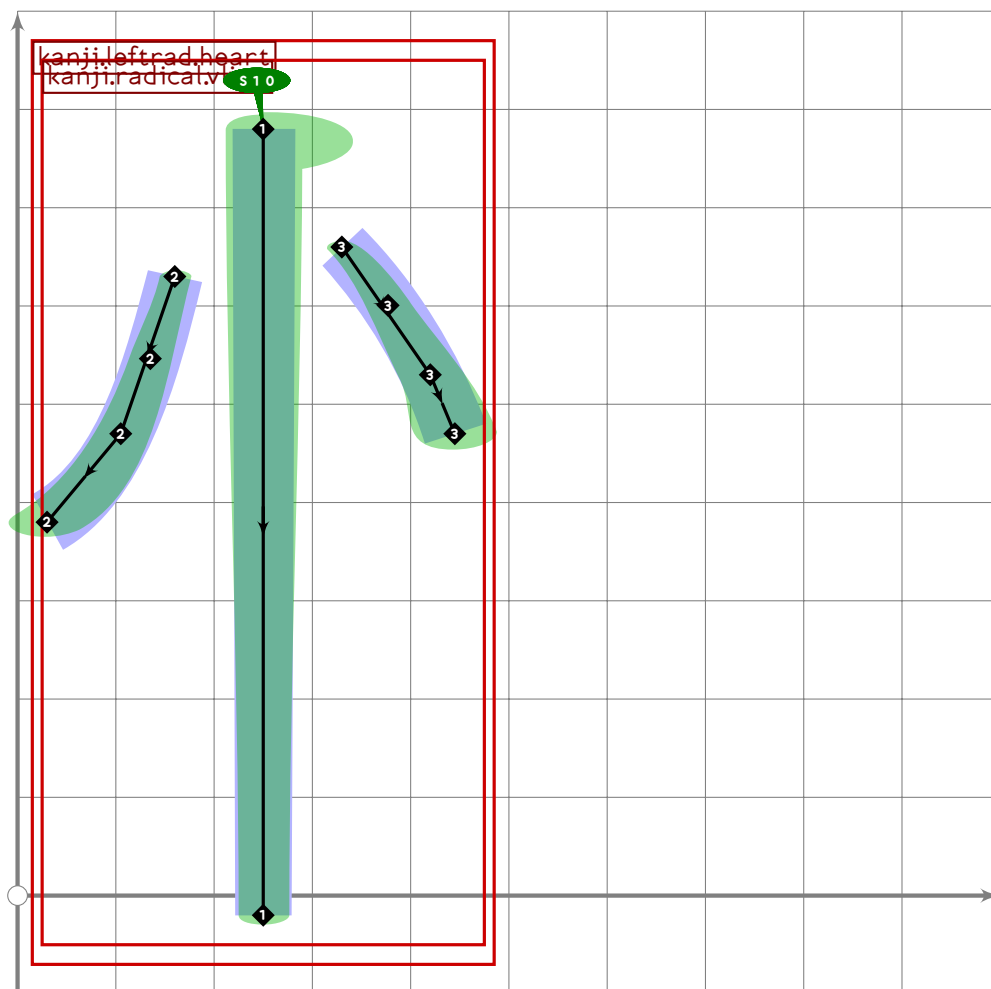


```

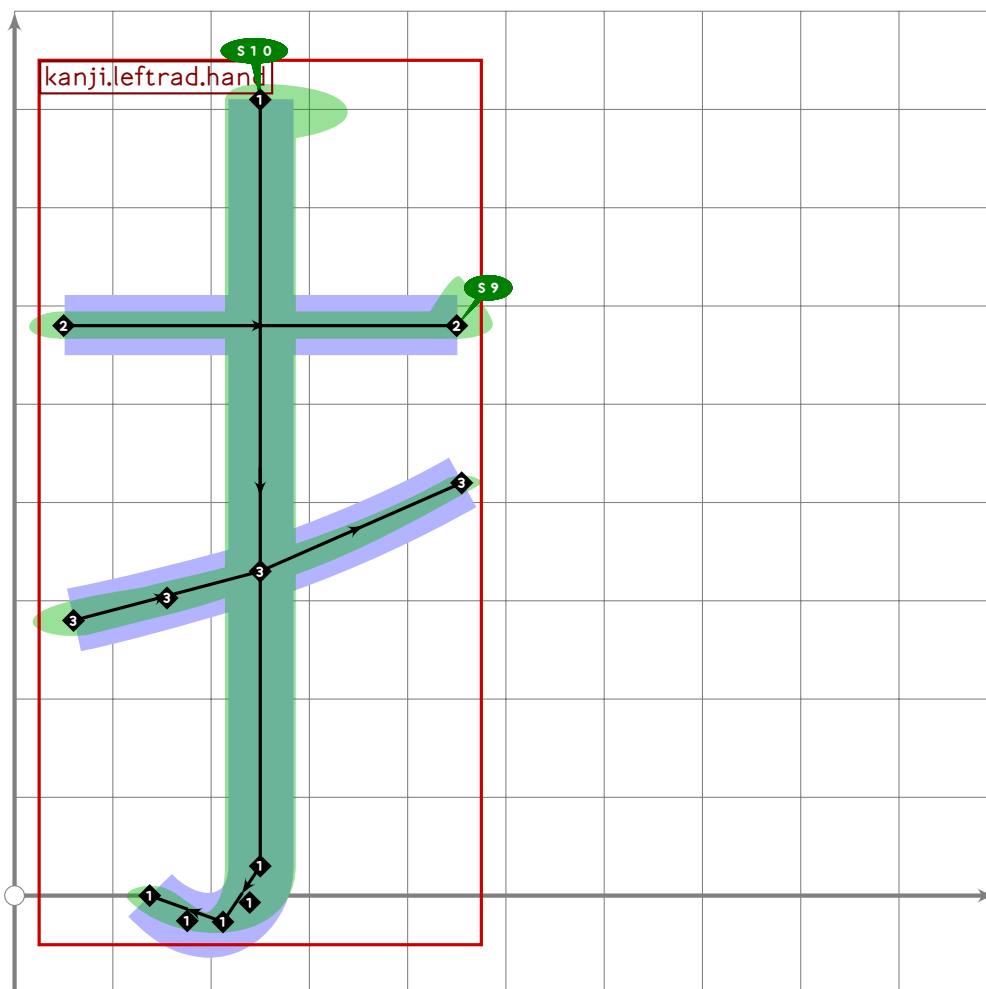
97 % you/chiisai "short thread radical"
98 begint Suglyph("uni2E93";147);
99   kanji.radical.short_thread;
100   tsu_render;
101 endtsuglyph;
102

```

U+2E96
tsuku.uni2E96



```
103 % left radical version of "heart"  
104 begintsuglyph("uni2E96",150);  
105   tsu_xform(identity xscaled 0.5)(kanji.leftrad.heart);  
106   tsu_render;  
107 endtsuglyph;  
108
```



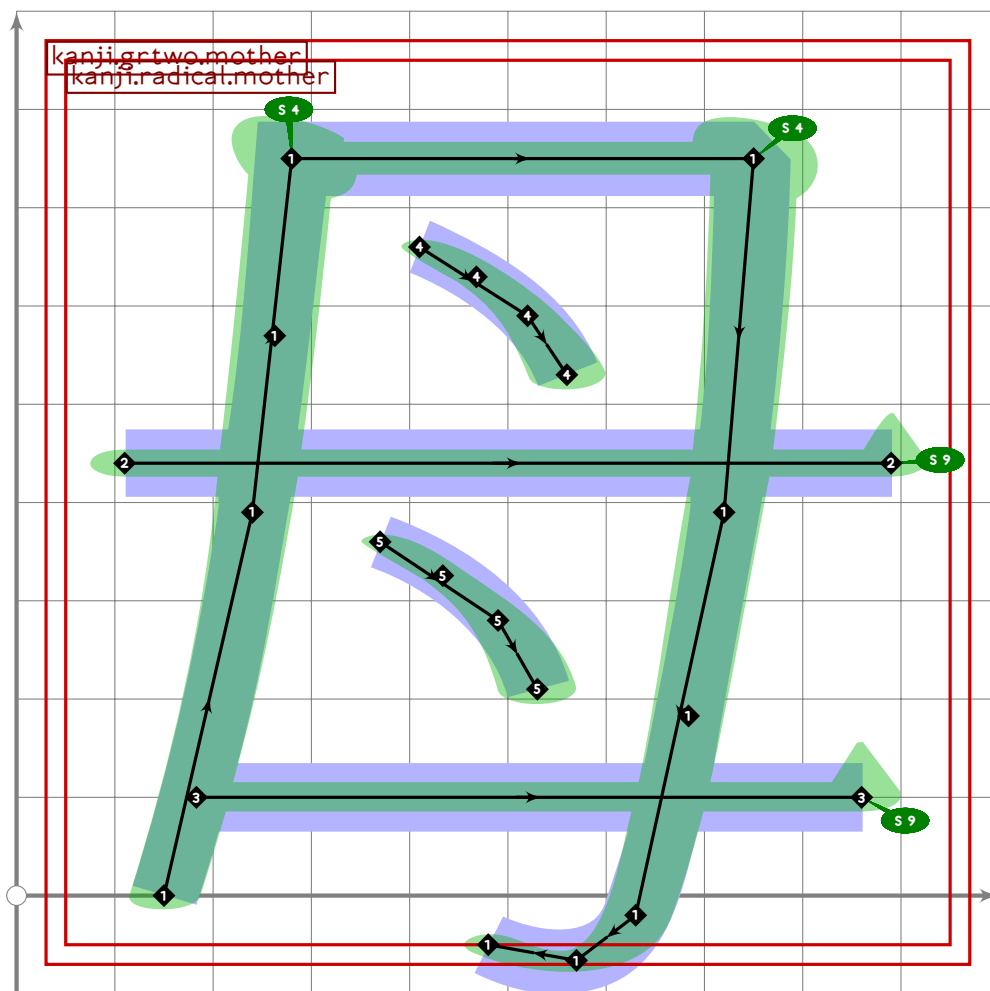
```

109 % hand radical
110 beginsuglyph("uni2E98";152);
111   tsu_xform(identity xscaled 0.5)(kanji.leftrad.hand);
112   tsu_render;
113 endsuglyph;
114
115 % special form with straight left side
116 beginsuglyph("uni2E9D";157);
117   kanji.bottomrad.moon;
118   tsu_render;
119 endsuglyph;
120

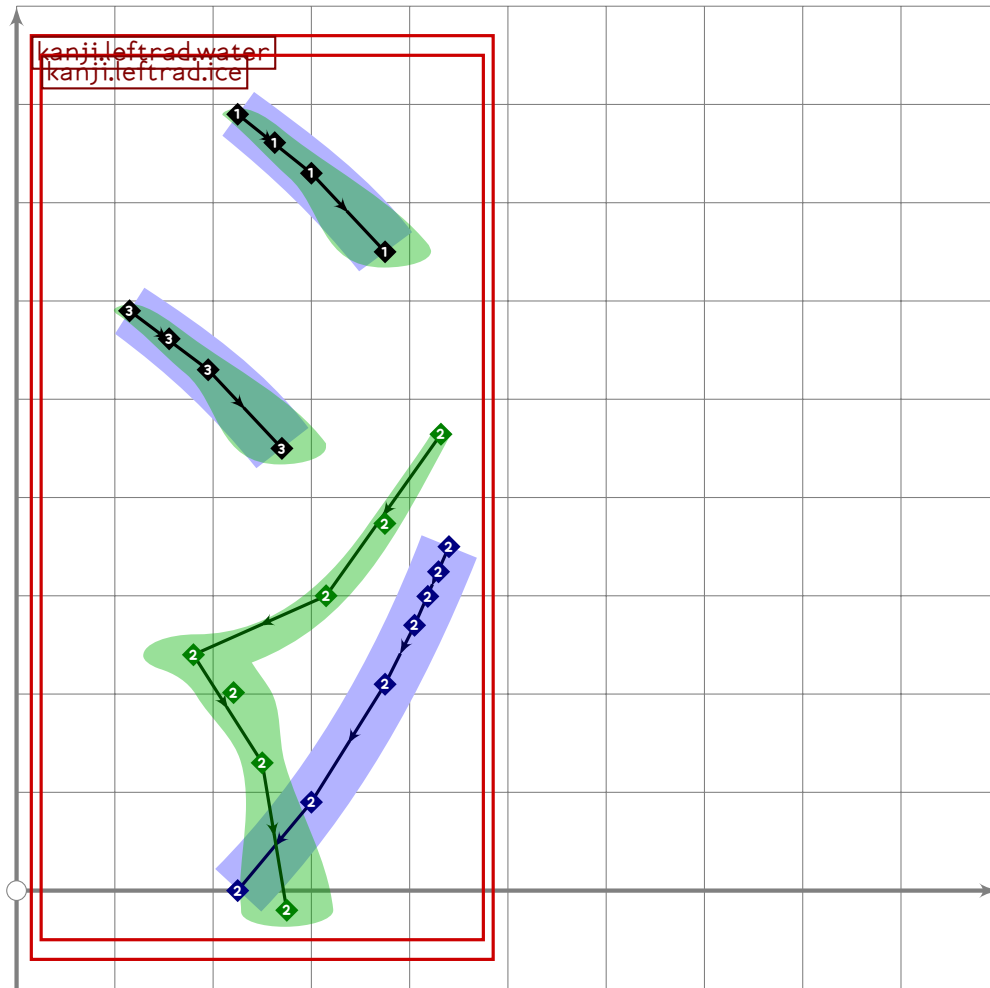
```

[see page 645]

U+2E9F
tsuku.uni2E9F



```
121 % bo/haha "mother"  
122 beginsuglyph("uni2E9F";159);  
123   kanji.grtwo.mother;  
124   tsu_render;  
125 endsuglyph;  
126
```

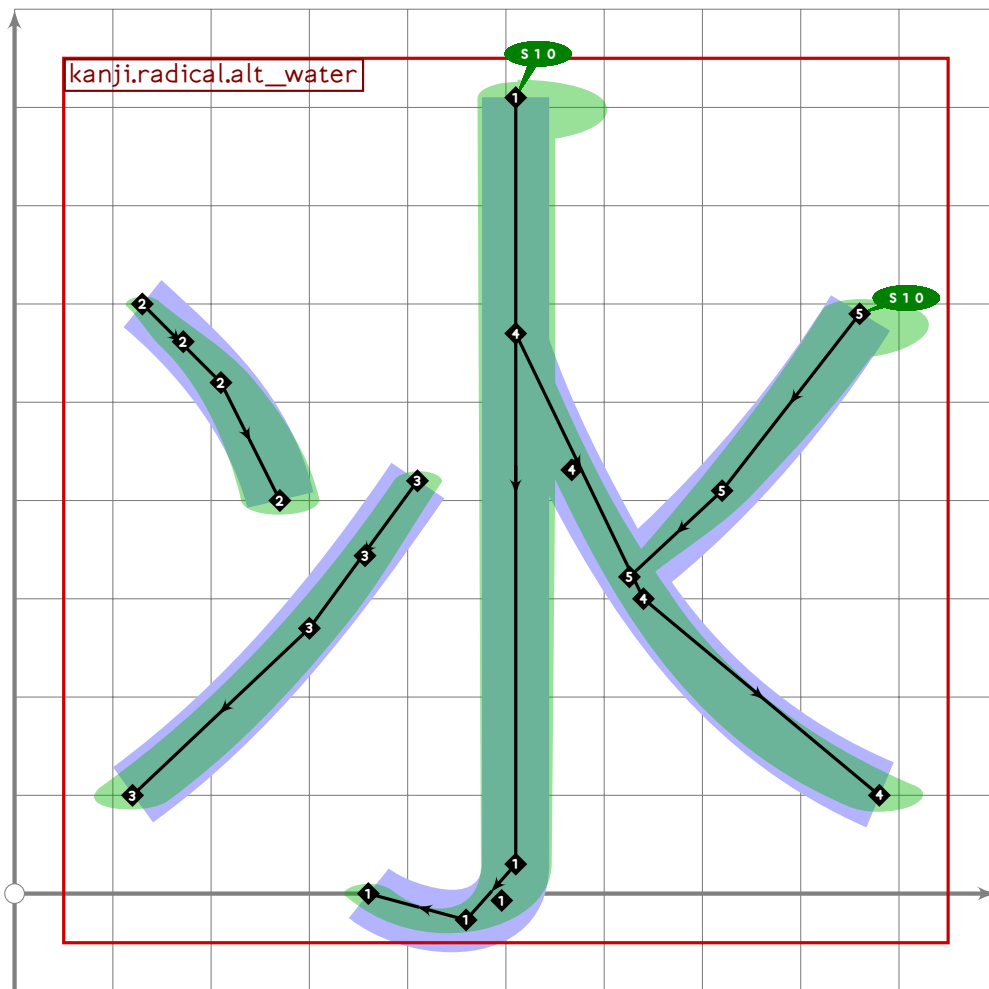


```

127 % extra "water side radical"
128 begintsuglyph("uni2EA1";161);
129 tsu_xform(identity xscaled 0.5)(kanji.leftrad.water);
130 tsu_render;
131 endtsuglyph;
132

```

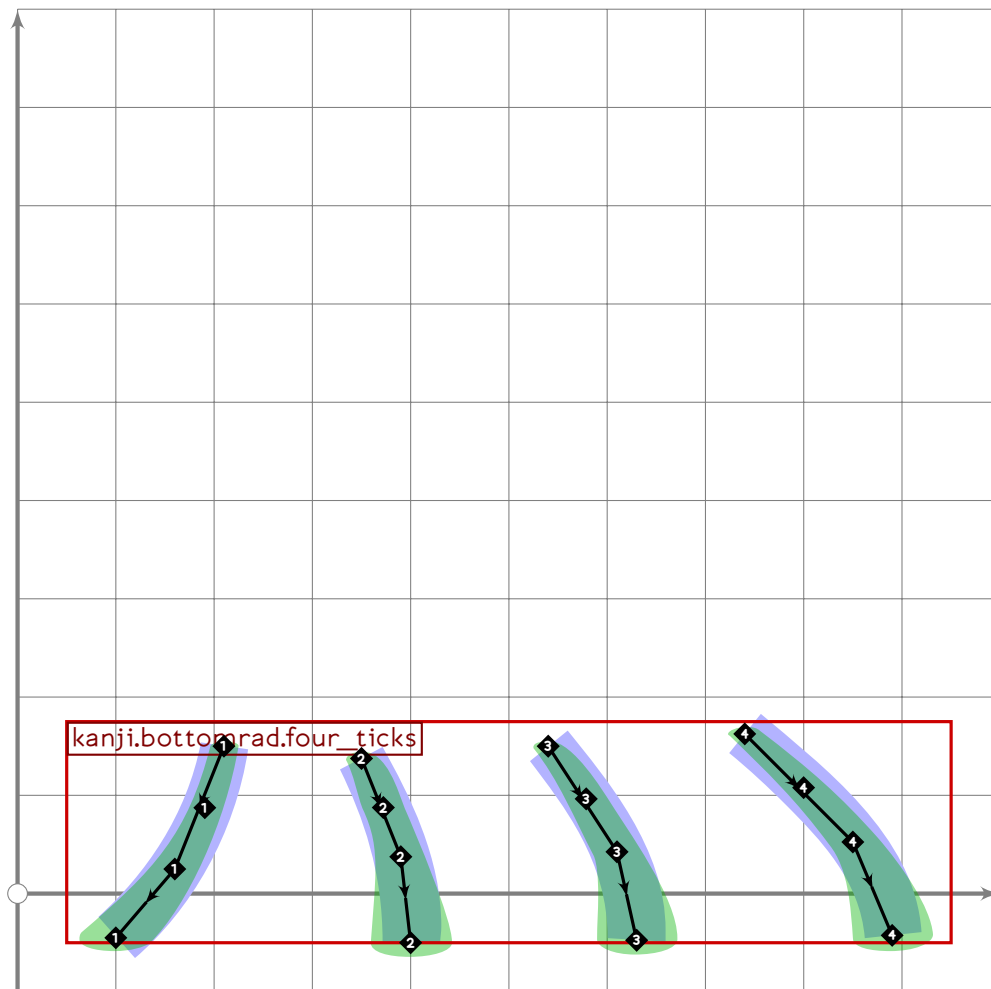
U+2EA2
tsuku.uni2EA2



```

133 % water radical variant
134 begintsuglyph("uni2EA2",162);
135   kanji.radical.alt_water;
136   tsu__render;
137 endtsuglyph;
138

```

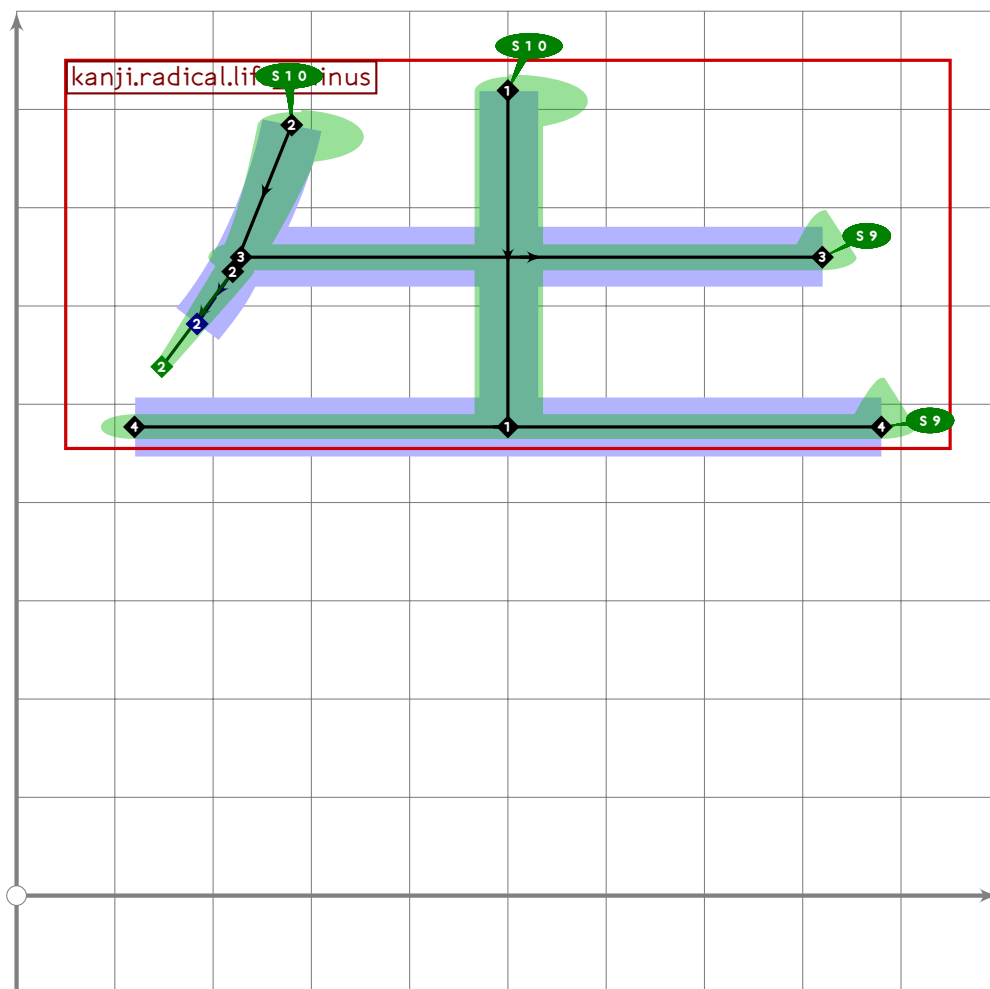



```

139 % Unicode calls it "fire"
140 begintsuglyph("uni2EA3";163);
141   build_kanji.tb(190,-30)
142   ()
143   (kanji.bottomrad.four_ticks);
144   tsu_render;
145 endtsuglyph;
146

```

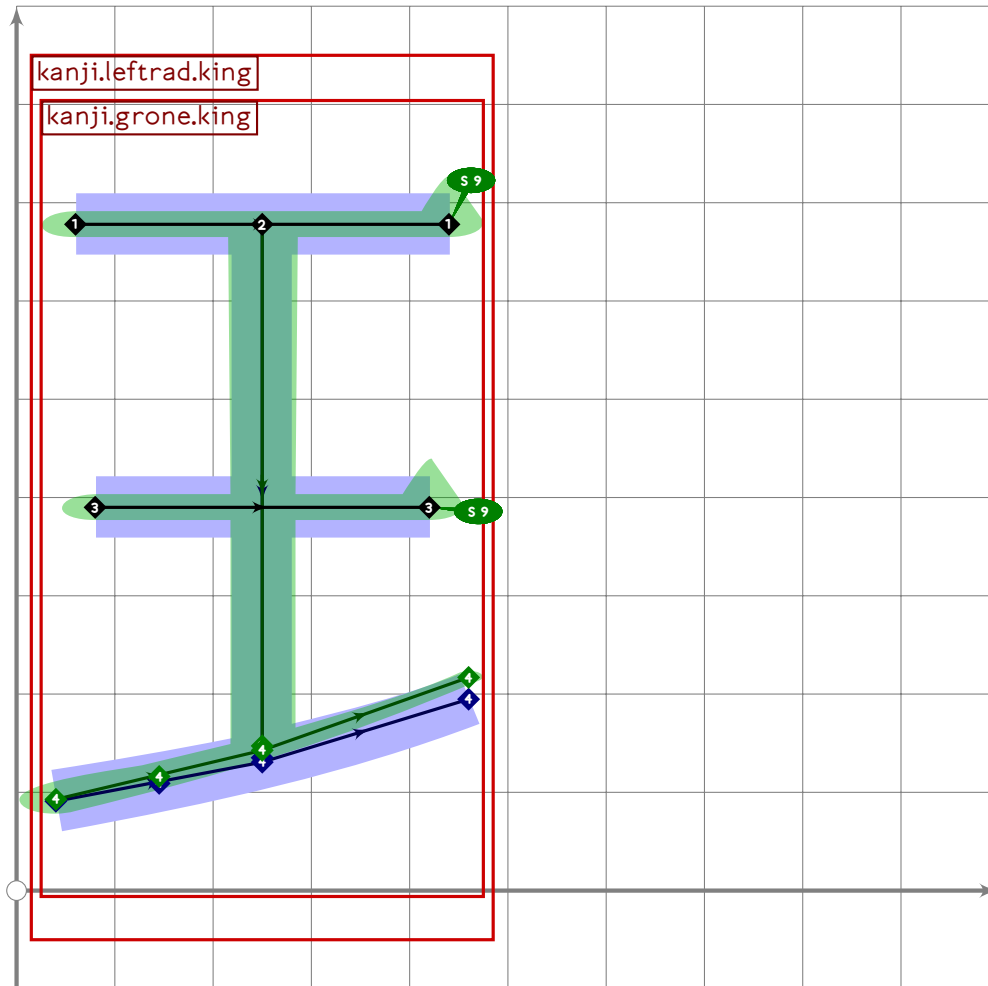
U+2EA7
tsuku.uni2EA7



```

147 % Unicode calls it "cow"
148 begintsuglyph("uni2EA7",167);
149   build_kanji.tb(440,-30)
150     (kanji.radical.life_minus)
151   ();
152   tsu_render;
153 endtsuglyph;
154

```

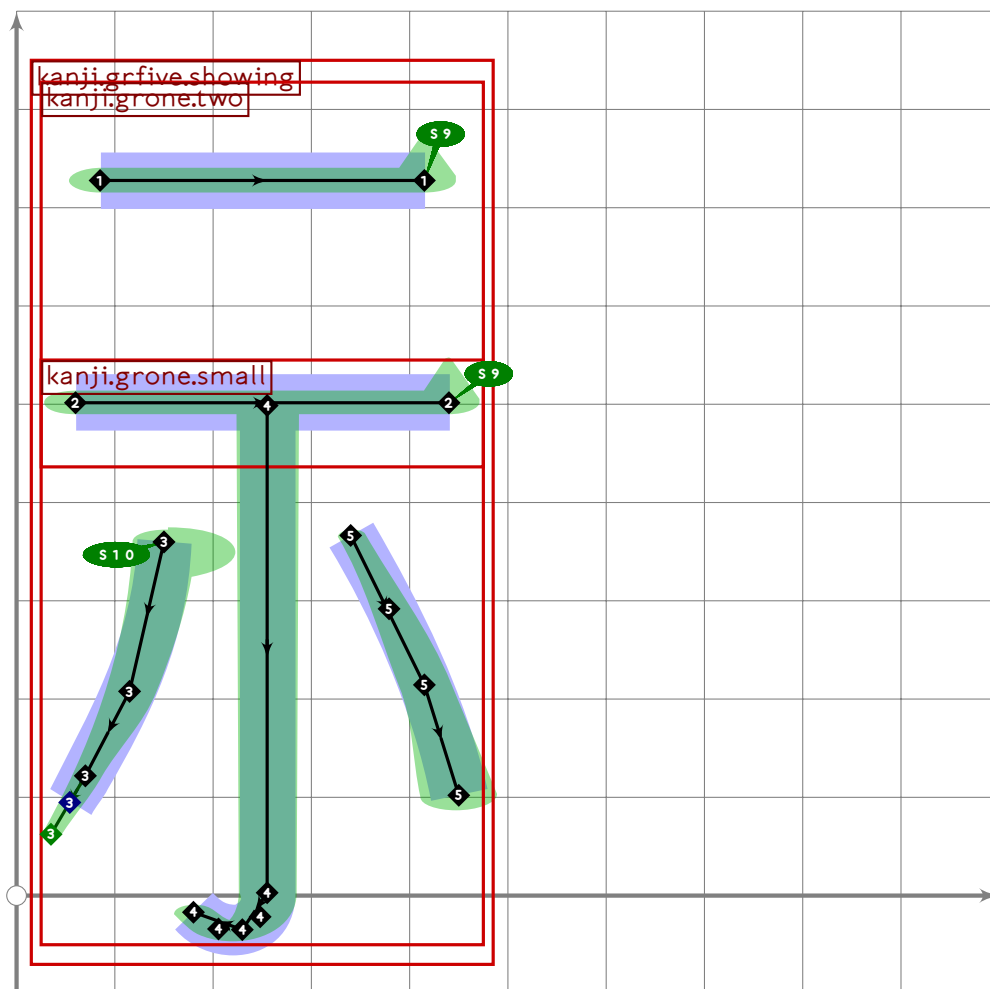


```

155 % Unicode calls it "jade"
156 begintsuglyph("uni2EA9";169);
157   tsu_xform(identity xscaled 0.5)(kanji.leftrad.king);
158   tsu_render;
159 endtsuglyph;
160

```

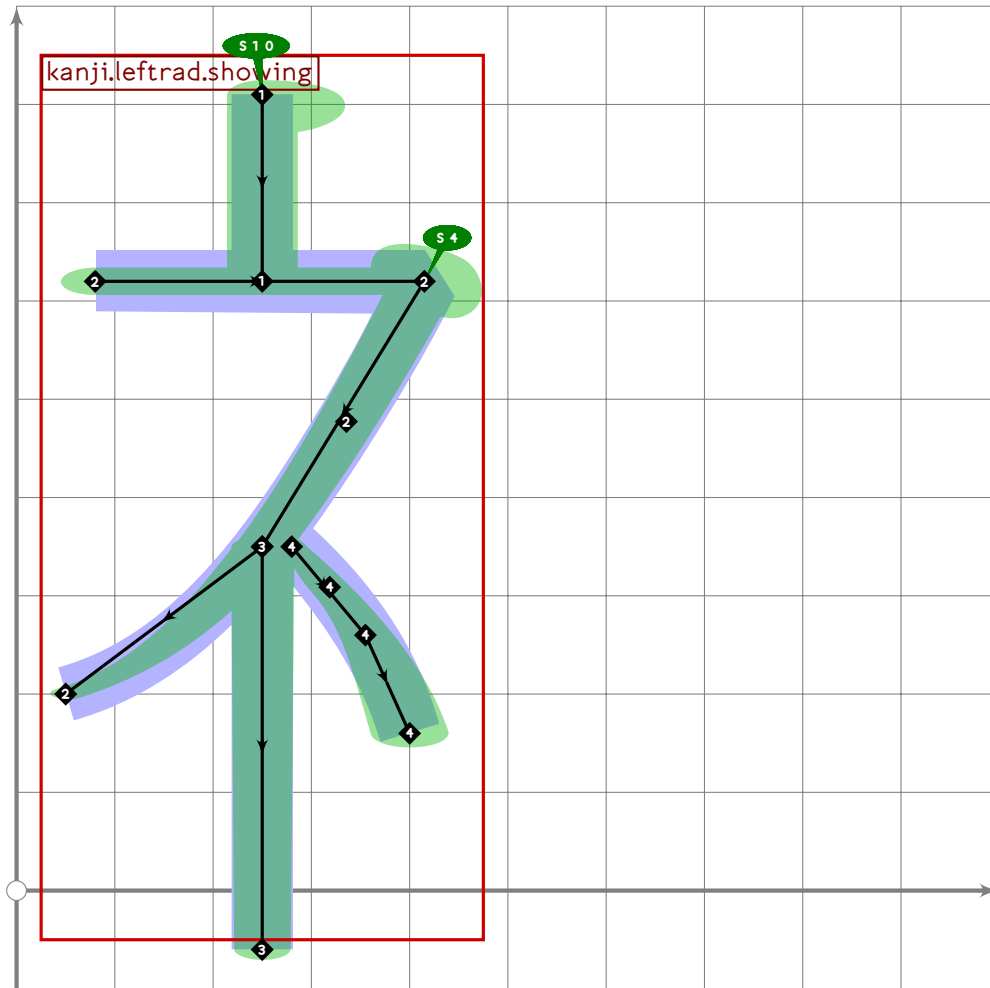
U+2EAC
tsuku.uni2EAC



```

161 % Unicode calls it "spirit one"
162 begintsuglyph("uni2EAC",172);
163   tsu_xform(identity xscaled 0.5)(kanji.grfive.showing);
164   tsu_render;
165 endtsuglyph;
166

```

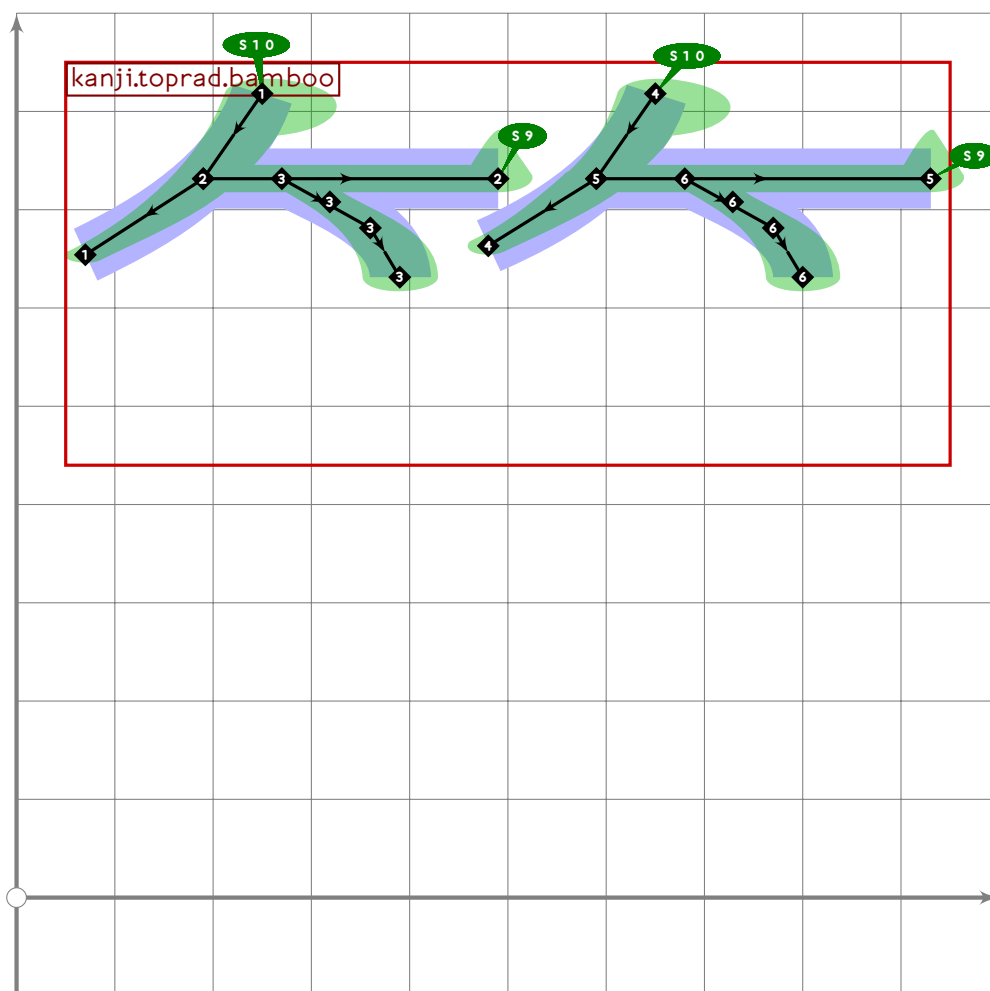


```

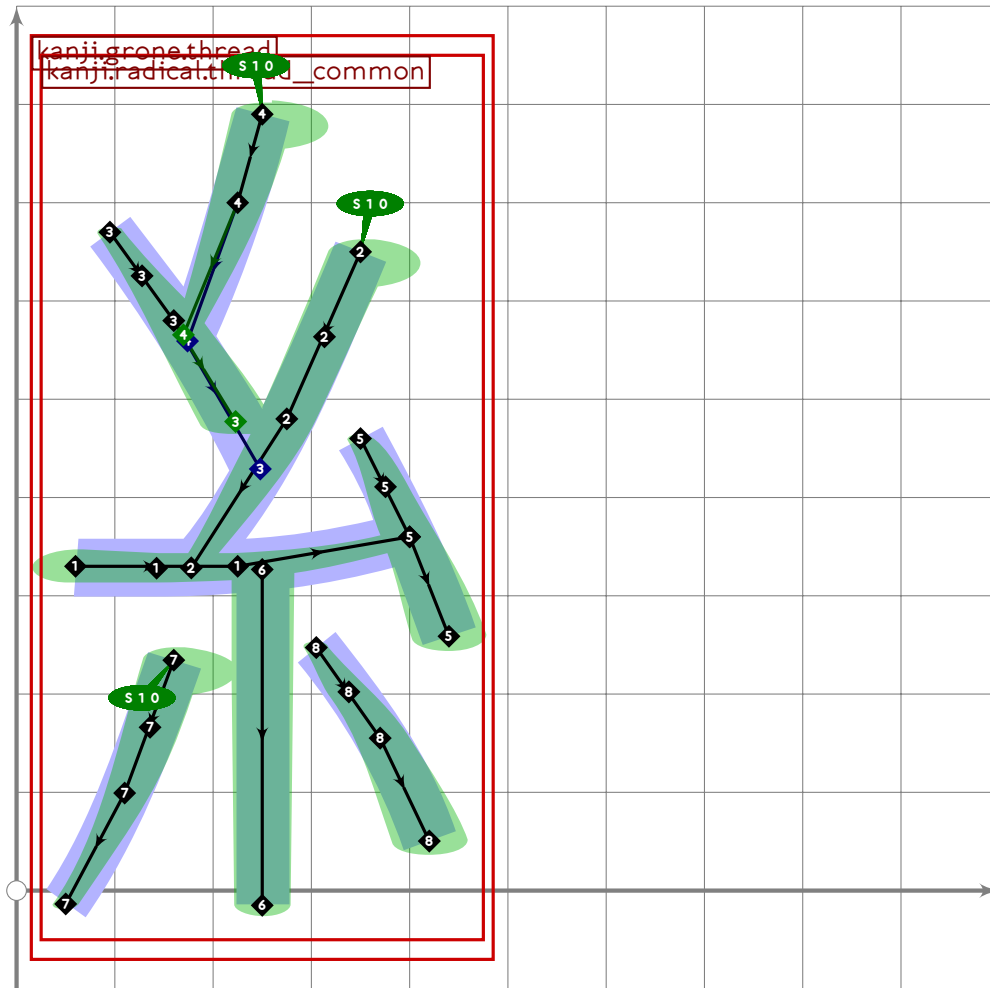
167 % Unicode calls it "spirit two"
168 begintsuglyph("uni2EAD";173);
169 tsu_xform(identity xscaled 0.5)(kanji.leftrad.showing);
170 tsu_render;
171 endtsuglyph;
172

```

U+2EAE
tsuku.uni2EAE



```
173 % "bamboo" top radical
174 begintsuglyph("uni2EAE",174);
175   build_kanji.tb(540,200)
176     (kanji.toprad.bamboo)
177     ();
178   tsu_render;
179 endtsuglyph;
180
```

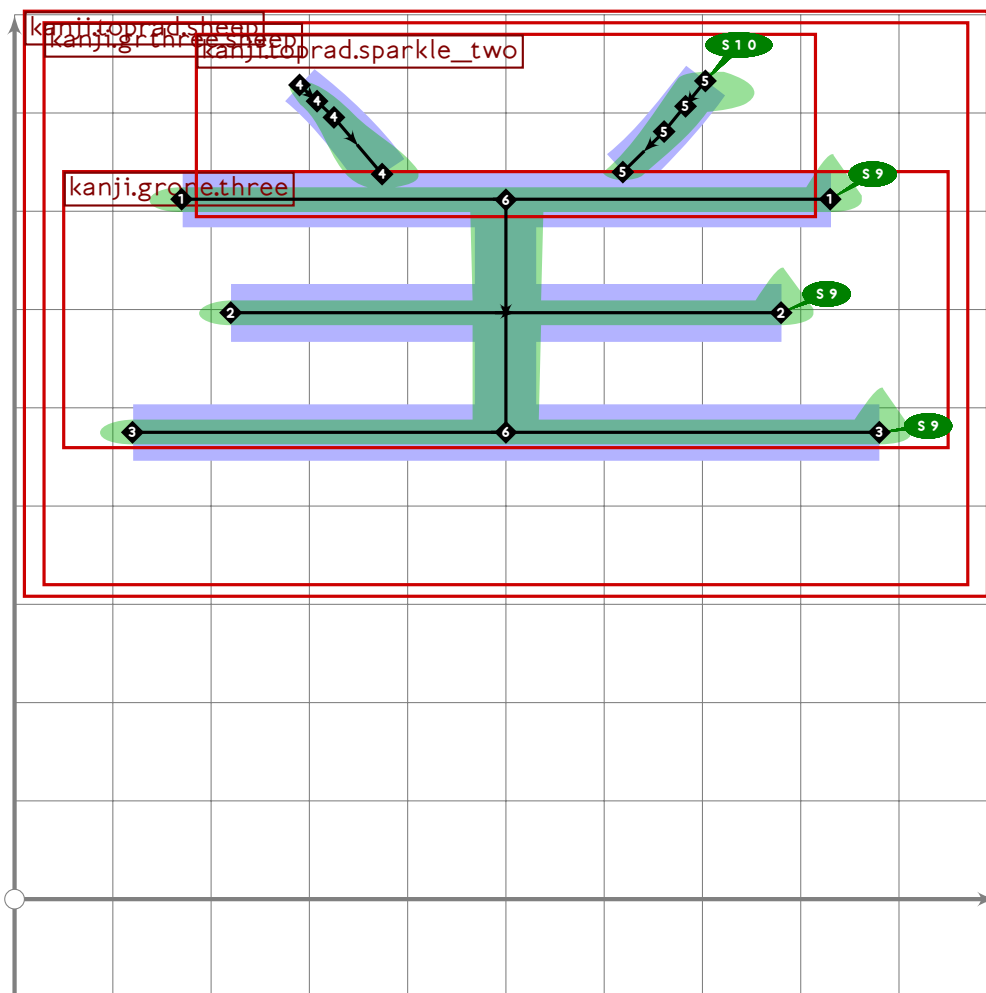


```

181 % Unicode calls it "silk"
182 begintsuglyph("uni2EAF";175);
183   tsu_xform(identity xscaled 0.5)
184     (build_kanji.lift_skirt(300,60)(kanji.grone.thread));
185   tsu_render;
186 endtsuglyph;
187

```

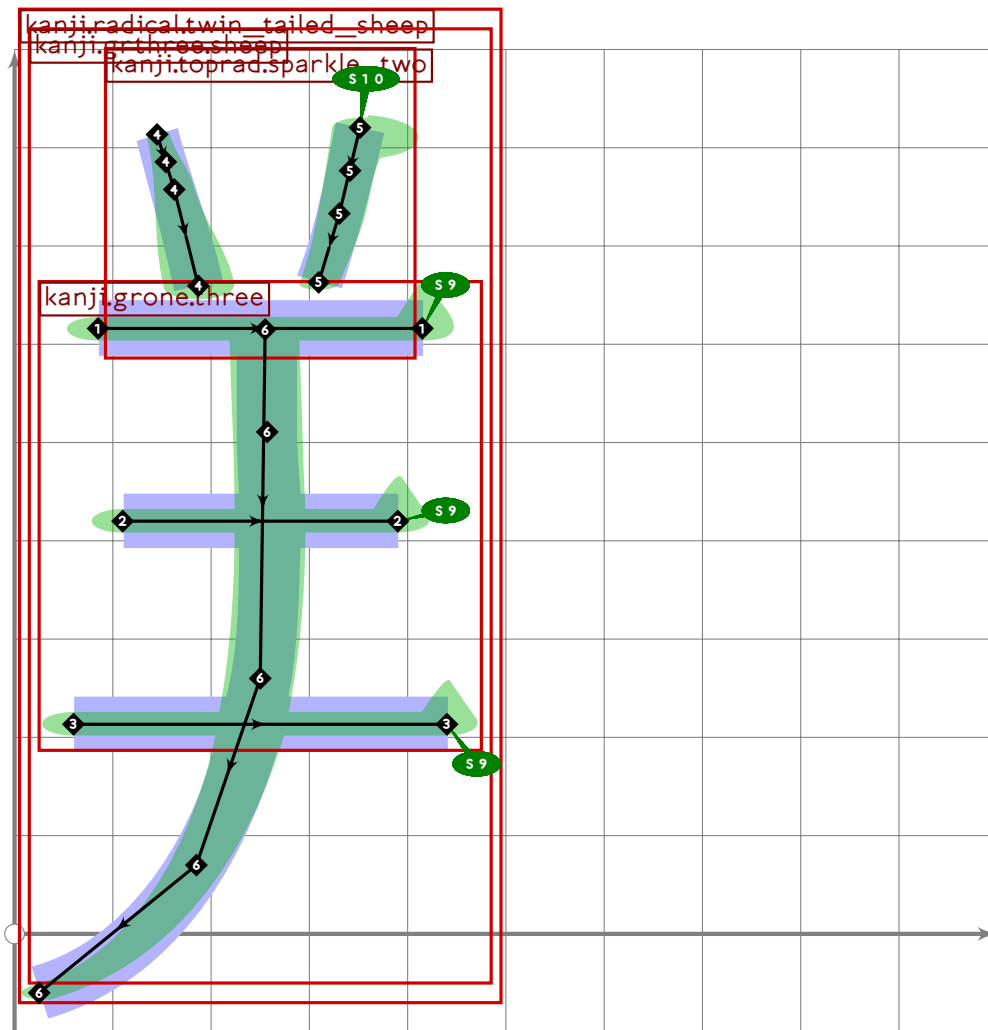
U+2EB7
tsuku.uni2EB7



```

188 % "sheep" (ram) top radical
189 begintsuglyph("uni2EB7",183);
190   build_kanji.tb(420,200)
191     (kanji.toprad.sheep)
192   ();
193   tsu_render;
194 endtsuglyph;
195

```

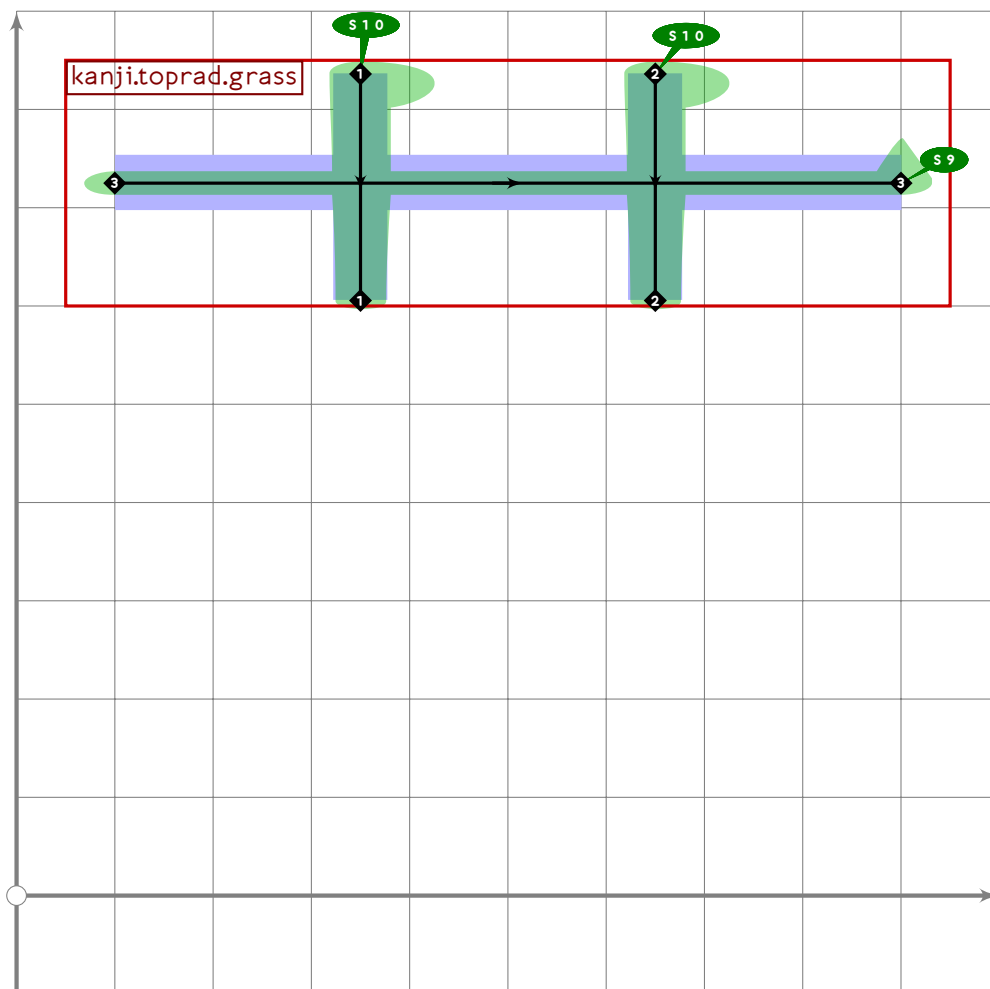



```

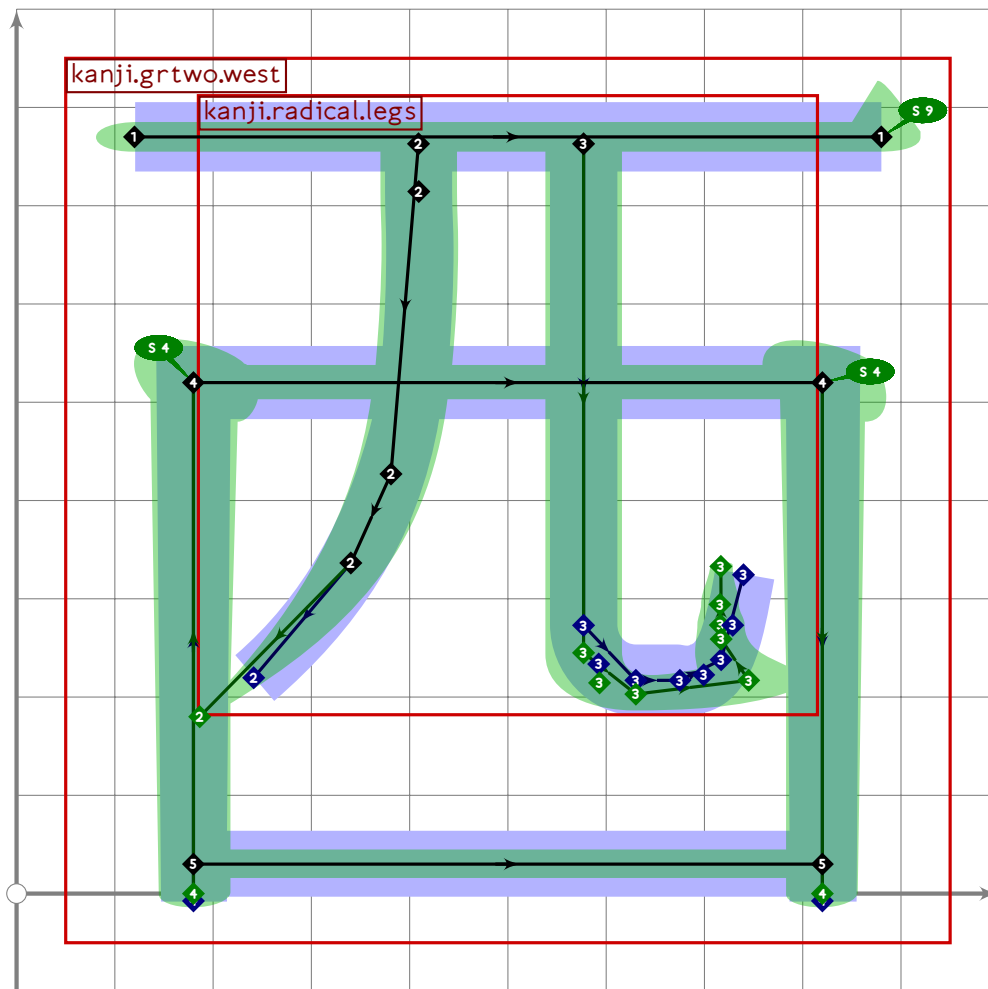
196 % "sheep" left-side radical
197 begintsuglyph("uni2EB8",184);
198   tsu_xform(identity xscaled 0.5)
199     (kanji.radical.twin_tailed_sheep;
200       pop_stroke);
201   tsu_render;
202 endtsuglyph;
203

```

U+2EBE
tsuku.uni2EBE



```
204 % Japanese form of "grass" top radical
205 begintsuglyph("uni2EBE";190);
206   build_kanji.tb(600,0)
207     (kanji.toprad.grass)
208   ();
209   tsu_render;
210 endtsuglyph;
211
```

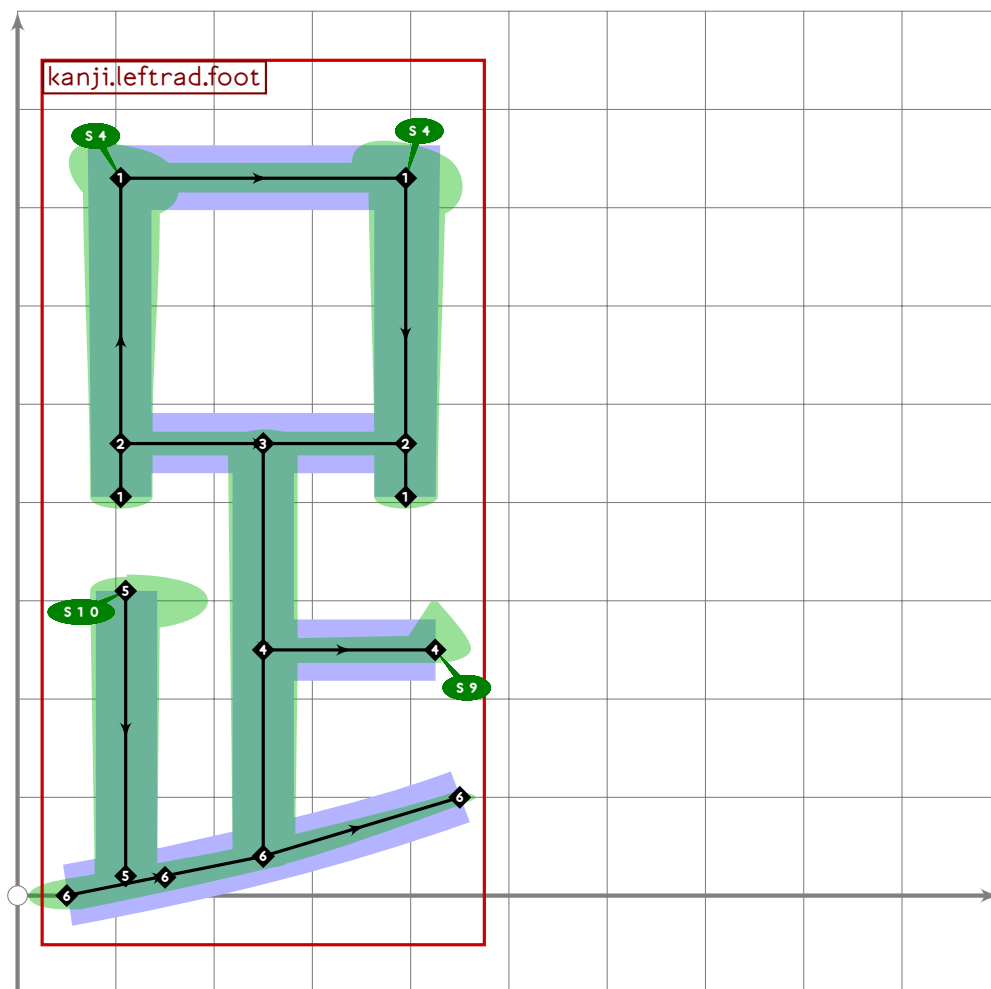


```

212 % sai/nishi "West" or "Spain"
213 begintuglyph("uni2EC4";196);
214   kanji.grtwo.west;
215   tsu_render;
216 endtsuglyph;
217

```

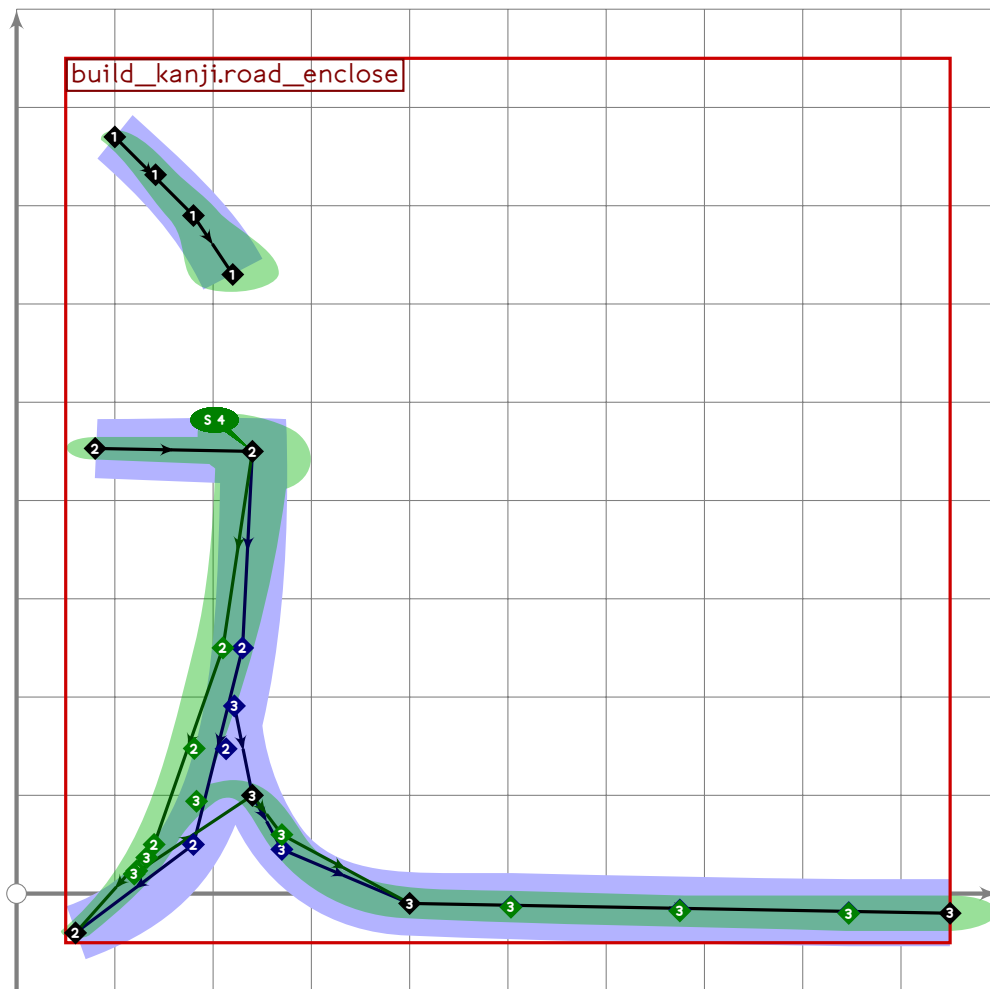
U+2ECA
tsuku.uni2ECA



```

218 % foot radical
219 begintsuglyph("uni2ECA";202);
220 tsu_xform(identity xscaled 0.5)(kanji.leftrad.foot);
221 tsu_render;
222 endtsuglyph;
223

```

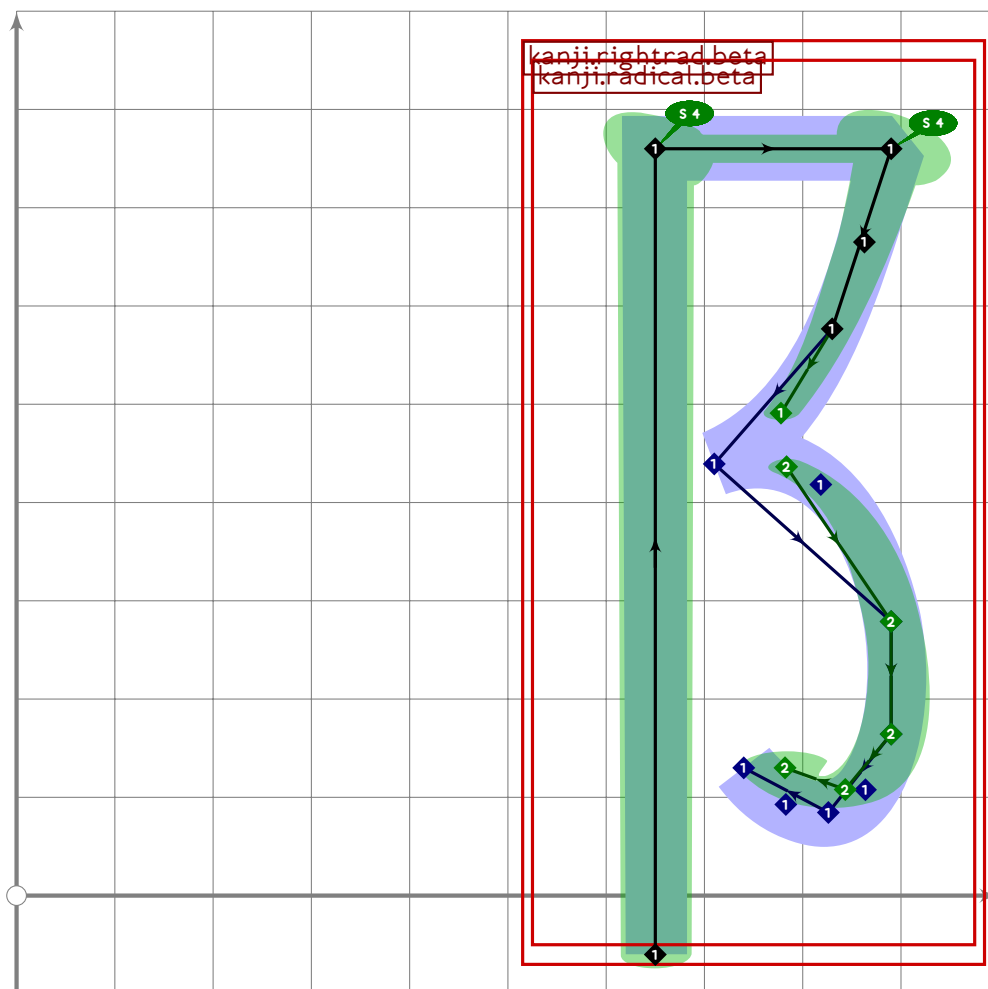


```

224 % Unicode calls it "simplified walk"
225 begintsuglyph("uni2ECC";204);
226   build_kanji.road_enclose();
227   tsu_render;
228 endtsuglyph;
229

```

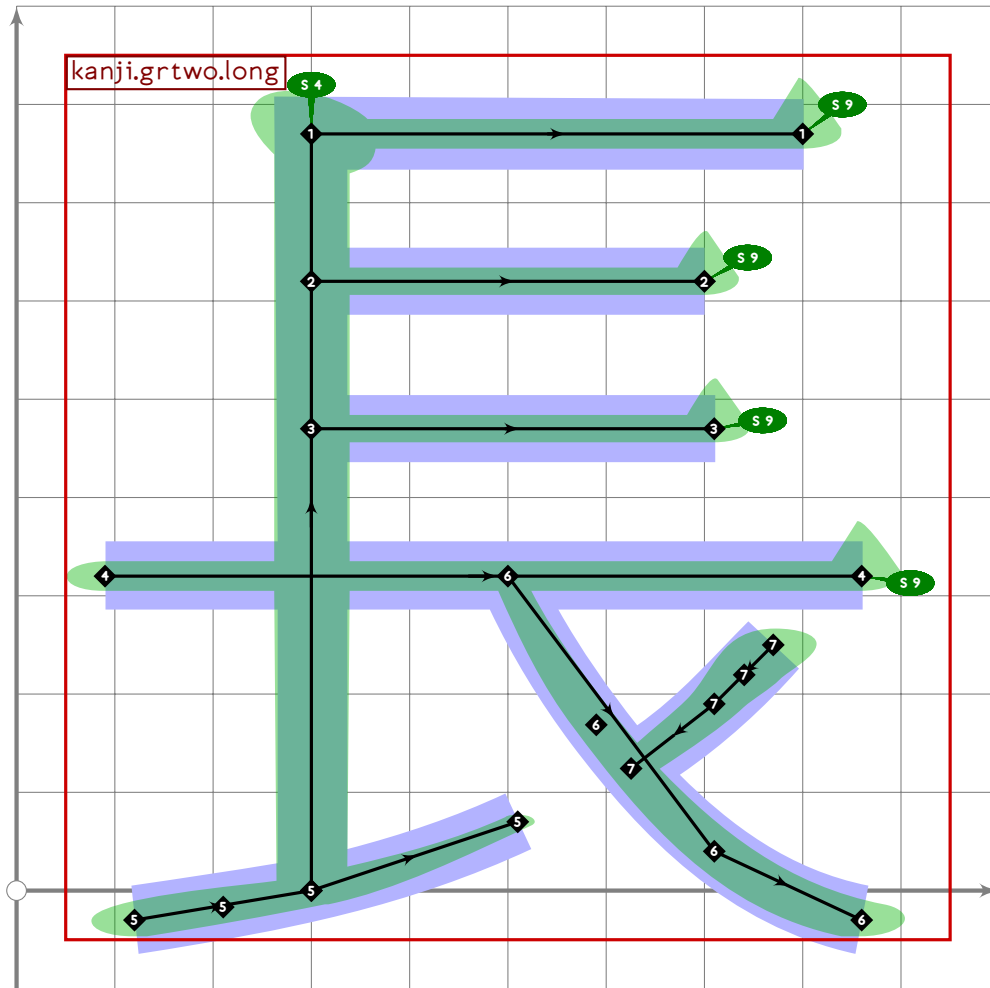
U+2ECF
tsuku.uni2ECF



```

230 % Unicode calls it "city"
231 begintsuglyph("uni2ECF";207);
232   tsu_xform(identity xscaled 0.5 shifted (500,0))
233     (kanji.rightrad.beta);
234   tsu_render;
235 endtsuglyph;
236

```

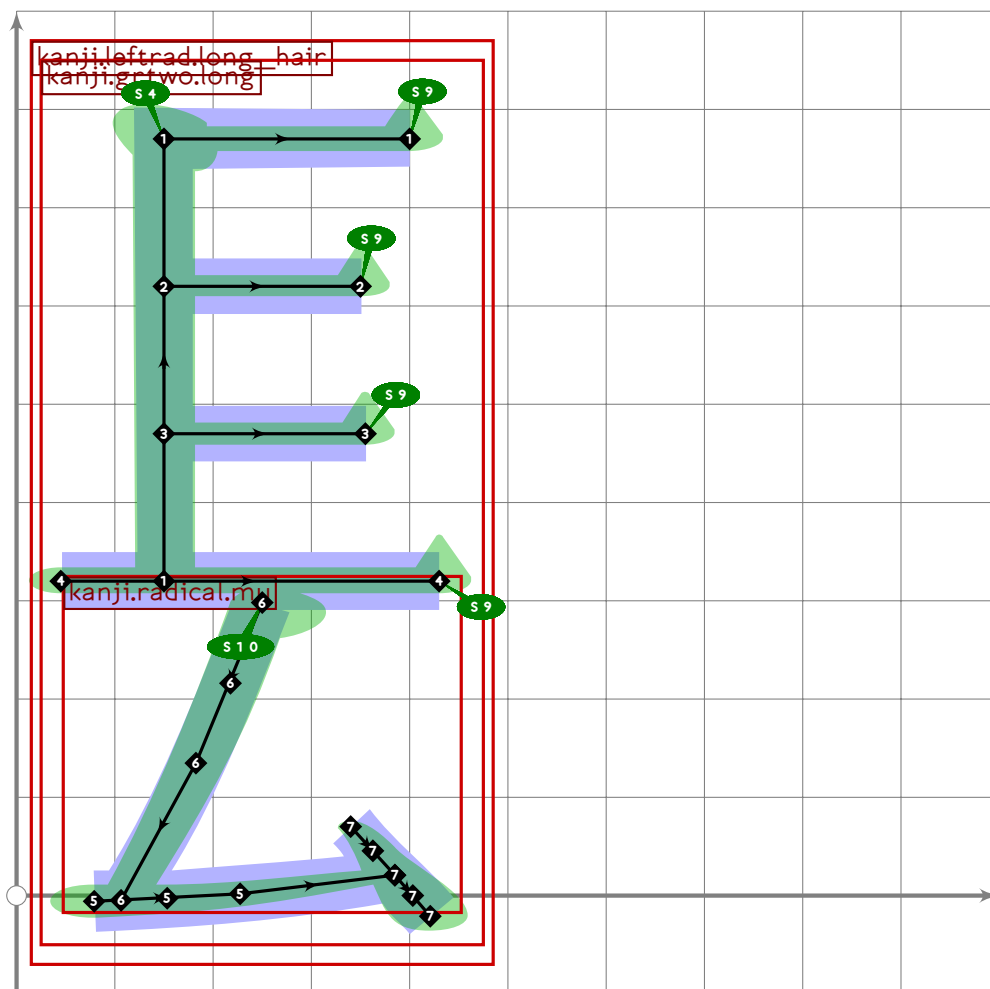


```

237 % chou/naga "long"
238 begintsuglyph("uni2ED1";209);
239   kanji.grtwo.long;
240   tsu_render;
241 endtsuglyph;
242

```

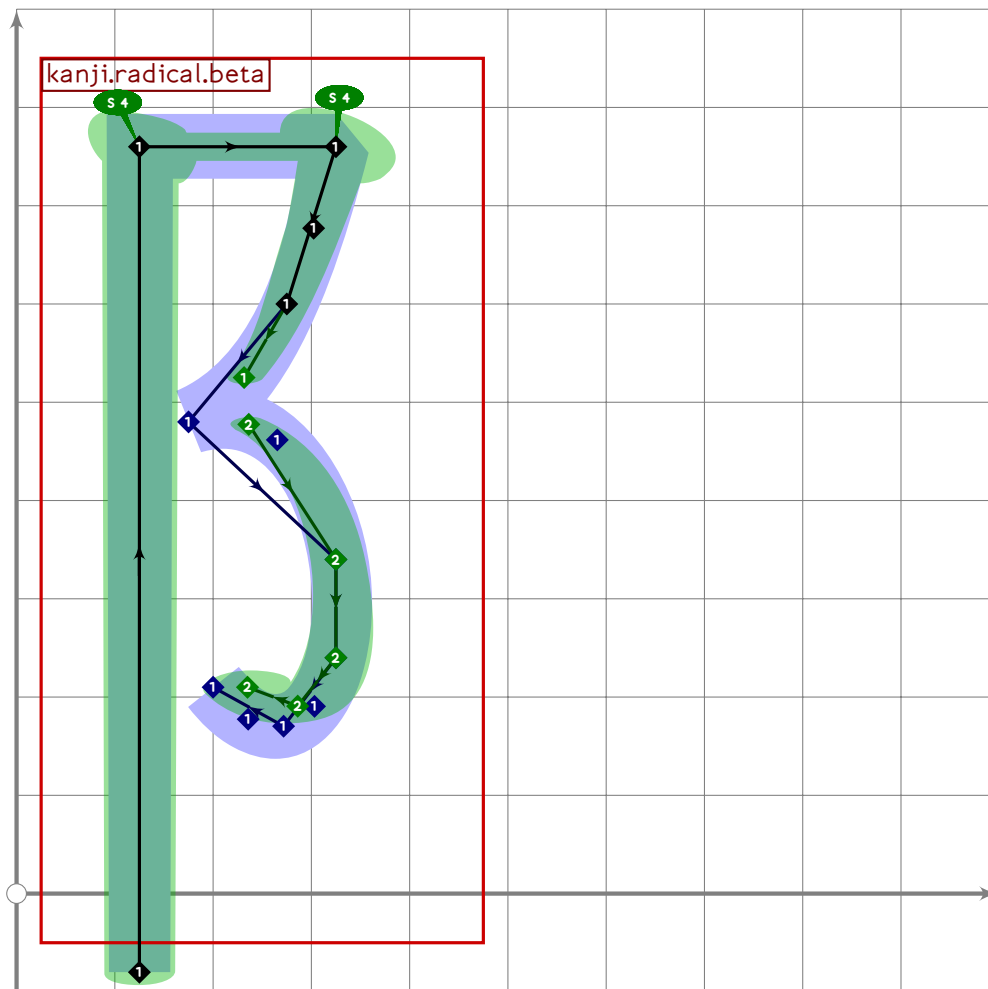
U+2ED2
tsuku.uni2ED2



```

243 % Unicode calls it "long two"
244 begintsuglyph("uni2ED2";210);
245   tsu_xform(identity xscaled 0.5)(kanji.leftrad.long_hair);
246   tsu_render;
247 endtsuglyph;
248

```

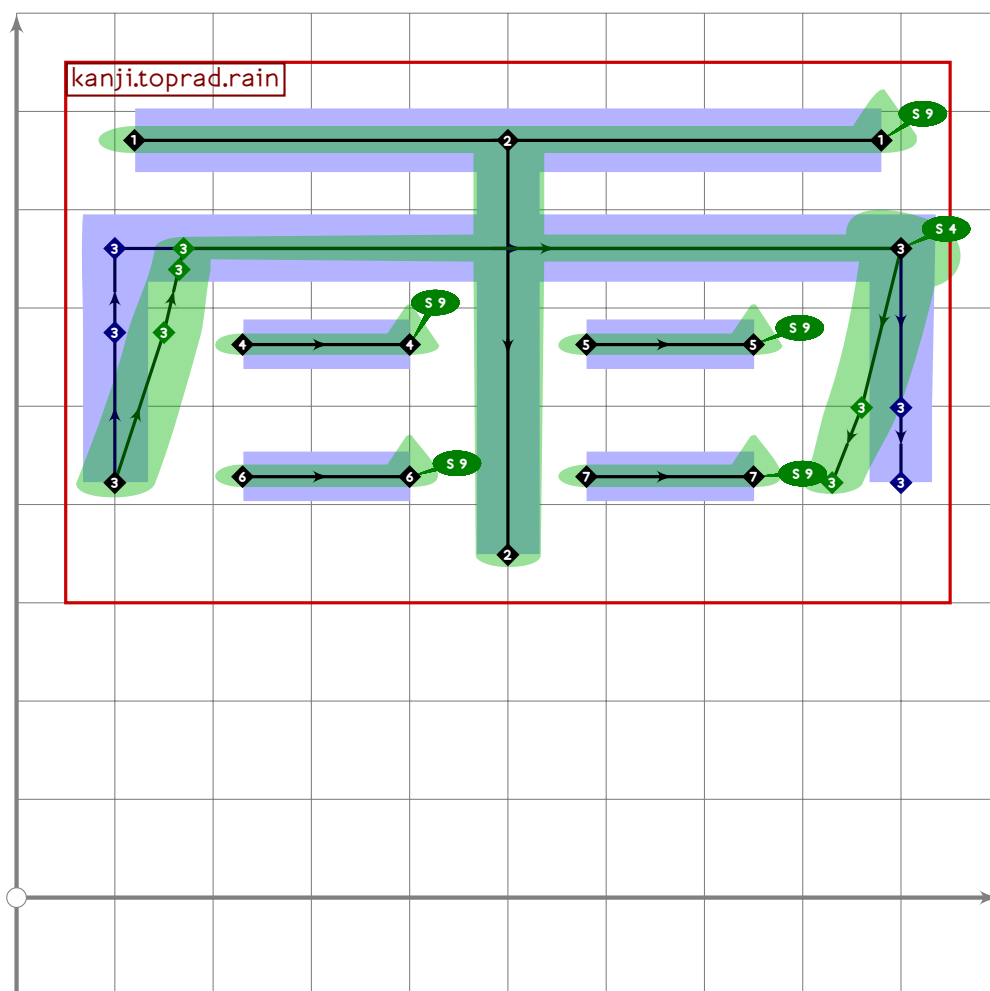



```

249 % Unicode calls it "mound two"
250 begintsuglyph("uni2ED6";214);
251   tsu_xform(identity xscaled 0.5)
252     (kanji.radical.beta);
253   tsu_render;
254 endtsuglyph;
255

```

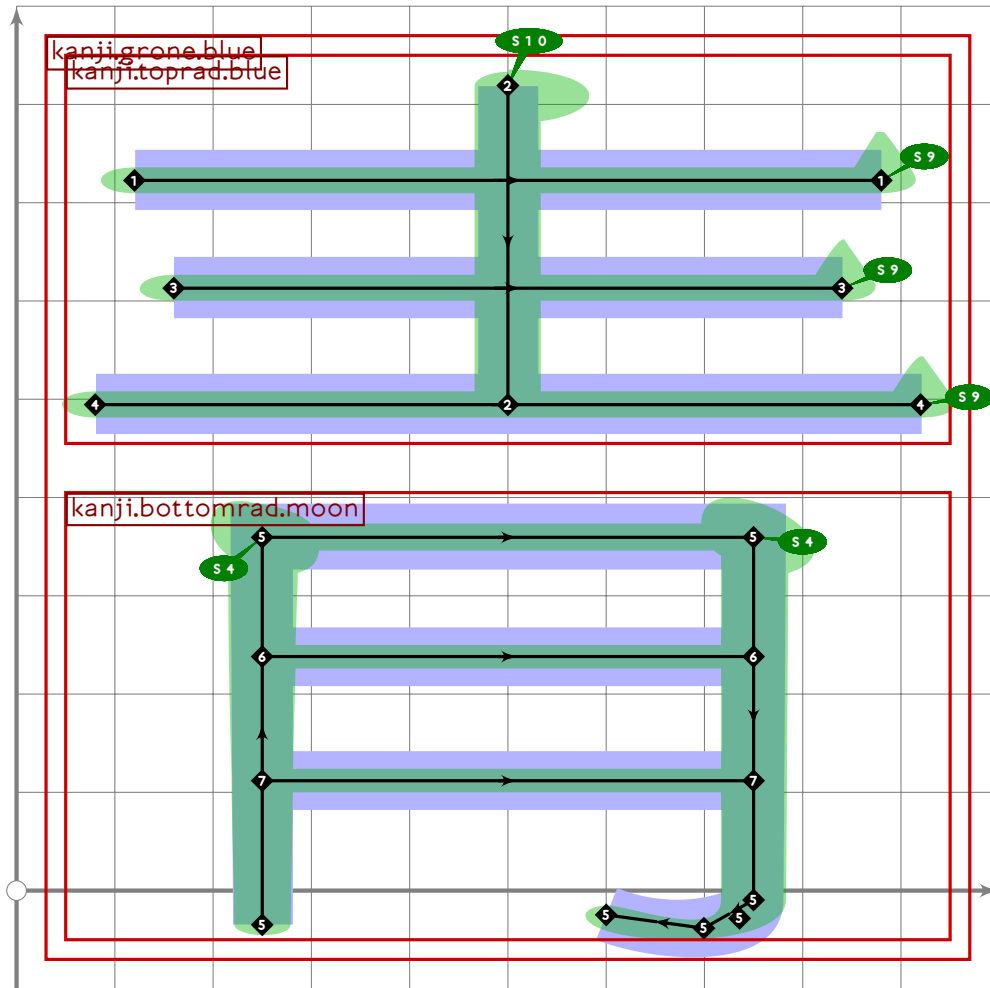
U+2ED7
tsuku.uni2ED7



```

256 % "rain" top radical
257 begintsuglyph("uni2ED7";215);
258   build_kanji.tb(300,0)
259     (kanji.toprad.rain)
260   ();
261   tsu_render;
262 endtsuglyph;
263

```

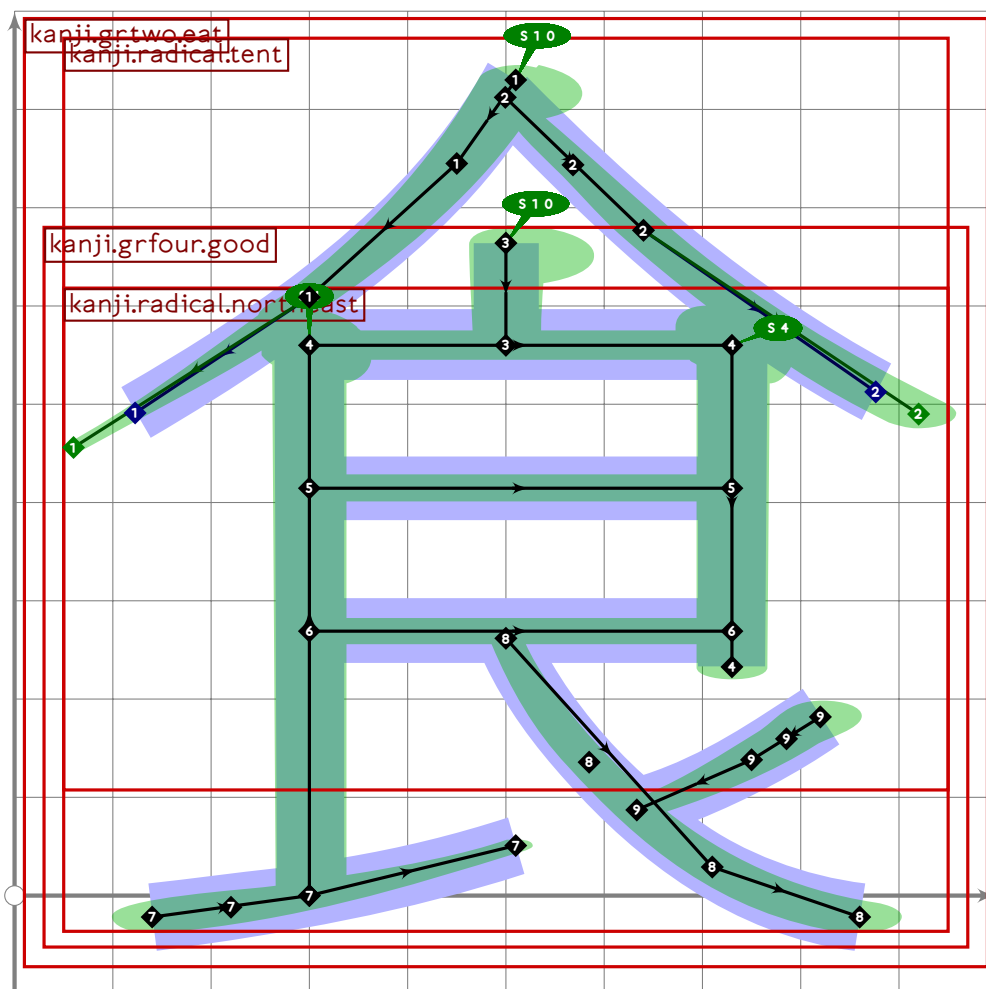


```

264 % ao "blue"
265 begintsuglyph("uni2ED8";216);
266   kanji.grone.blue;
267   tsu_render;
268 endtsuglyph;
269

```

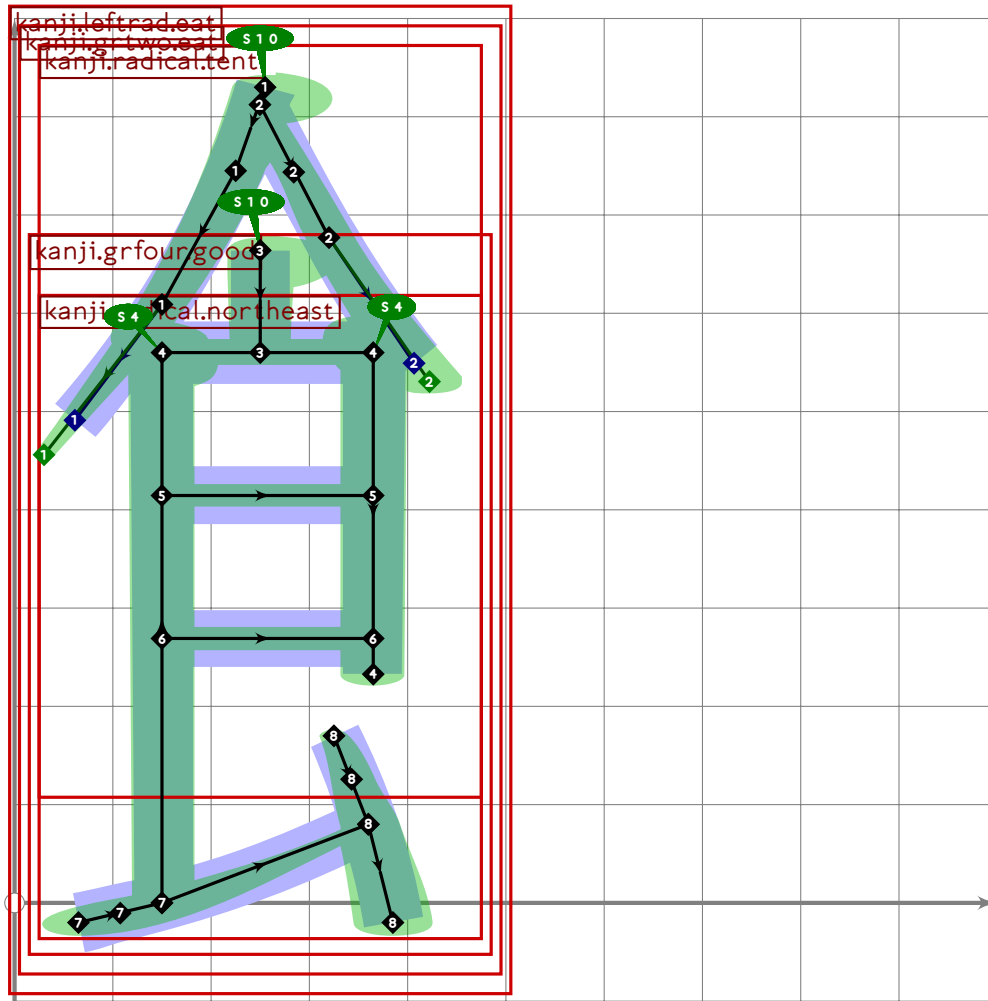
U+2EDD
tsuku.uni2EDD



```

270 % shoku/ta "eat"
271 begintsuglyph("uni2EDD",221);
272   kanji.grtwo.eat;
273   tsu_render;
274 endtsuglyph;
275

```

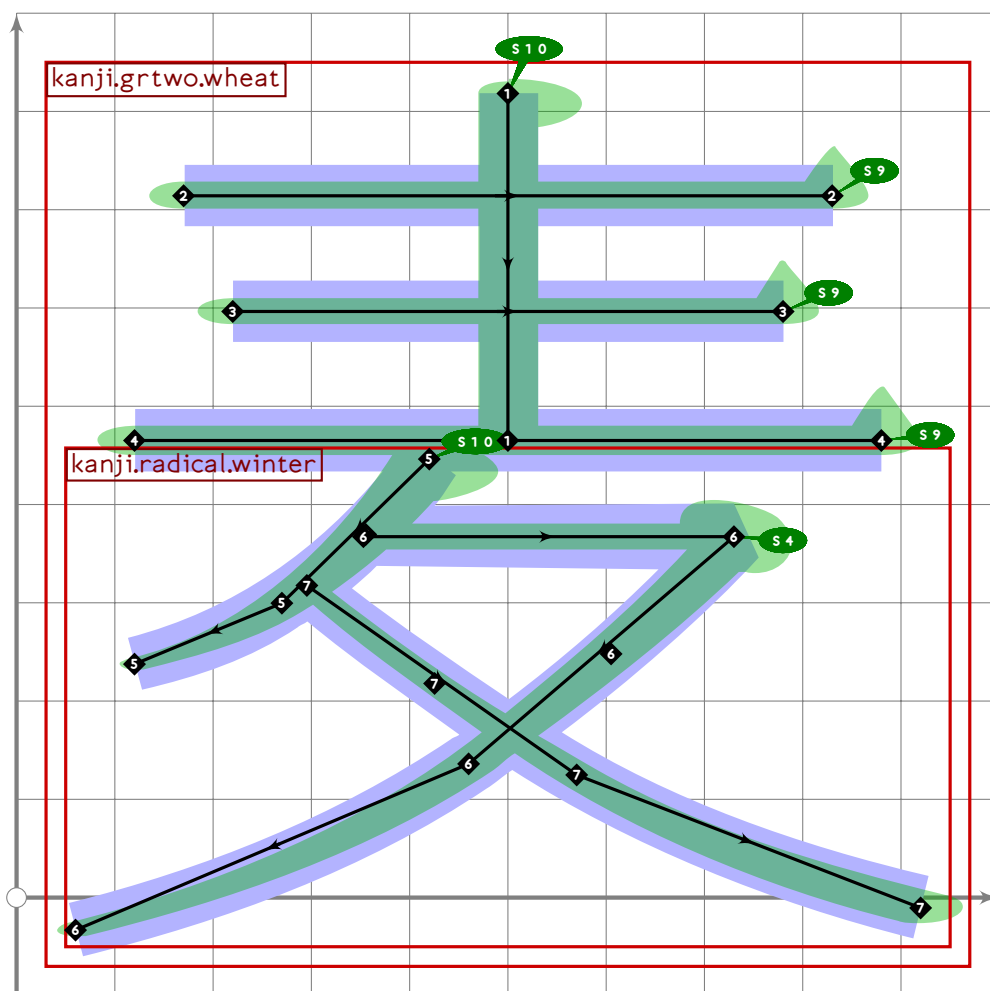


```

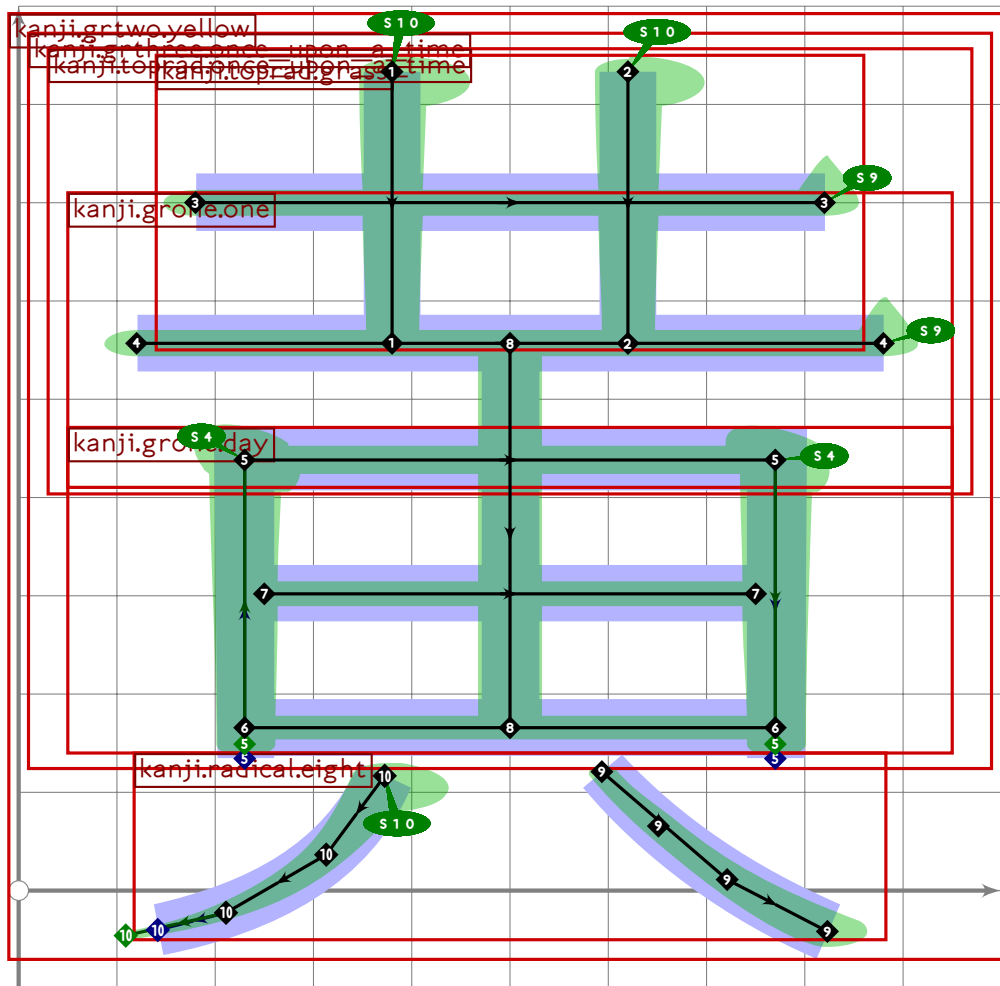
276 % simplified "eat" for use as radical
277 begintsuglyph("uni2EDF";223);
278   tsu_xform(identity xscaled 0.5)(kanji.leftrad.eat);
279   tsu_render;
280 endtsuglyph;
281

```

U+2EE8
tsuku.uni2EE8



```
282 % baku/mugi "wheat"  
283 begintsuglyph("uni2EE8";232);  
284   kanji.grtwo.wheat;  
285   tsu_render;  
286 endtsuglyph;  
287
```

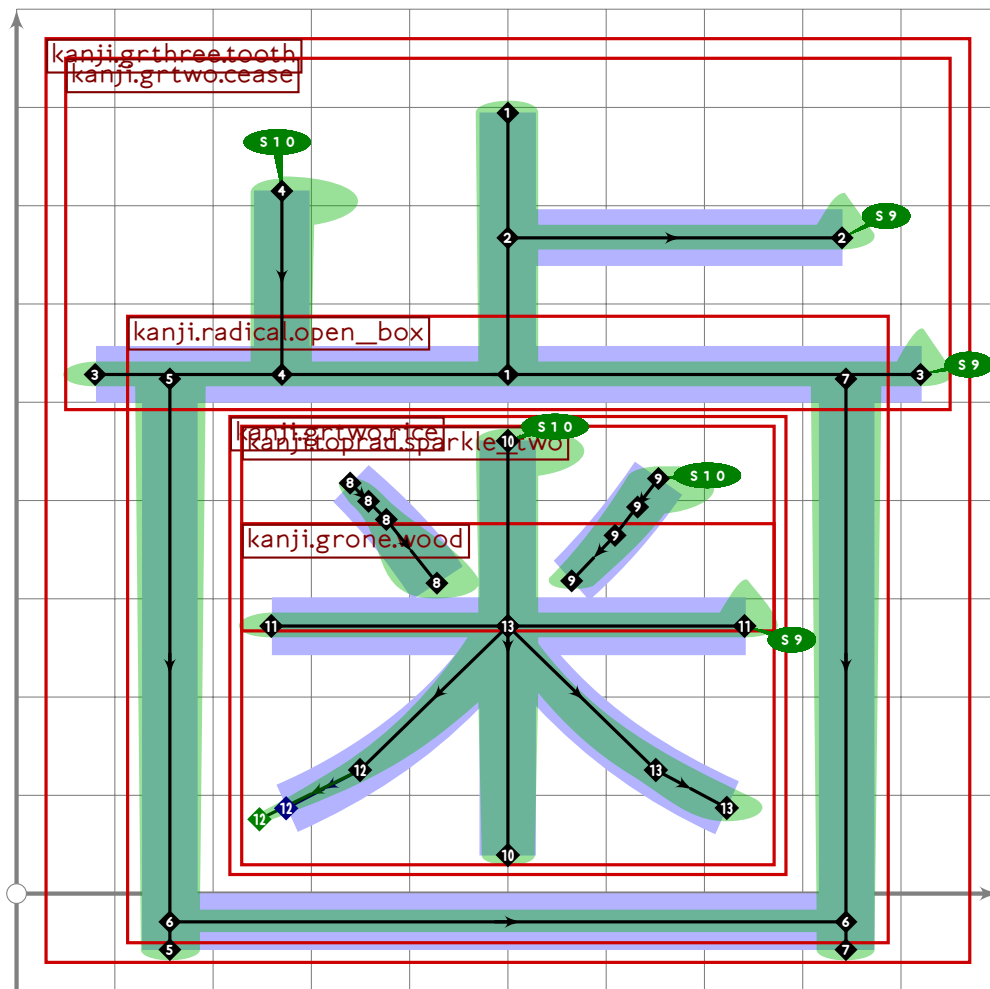


```

288 % kou/ki "yellow"
289 begintsuglyph("uni2EE9";233);
290   kanji.grtwo.yellow;
291   tsu_render;
292 endtsuglyph;
293

```

U+2EED
tsuku.uni2EED



```

294 % shi/ha "tooth"
295 begintsuglyph("uni2EED";237);
296   kanji.grthree.tooth;
297   tsu_render;
298 endsuglyph;
299
300 _____
301
302 endfont;
303
304 _____

```


tsuku-2f.mp

```
1 %
2 % Unicode page 2F (Radicals and IDCs) for Tsukurimashou
3 % Copyright (C) 2011, 2012 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 

---


32
33 beginfont
34
35 % AUTODEPS
36 input bottomrad.mp;
37 input buildkanji.mp;
38 input gradeeight.mp;
39 input gradefive.mp;
40 input gradefour.mp;
41 input gradenine.mp;
42 input gradeone.mp;
43 input gradesix.mp;
44 input gradethree.mp;
45 input gradetwo.mp;
46 input leftrad.mp;
47 input radical.mp;
48 input rightrad.mp;
49 input toprad.mp;
50
51 do_late_includes;
52
53 

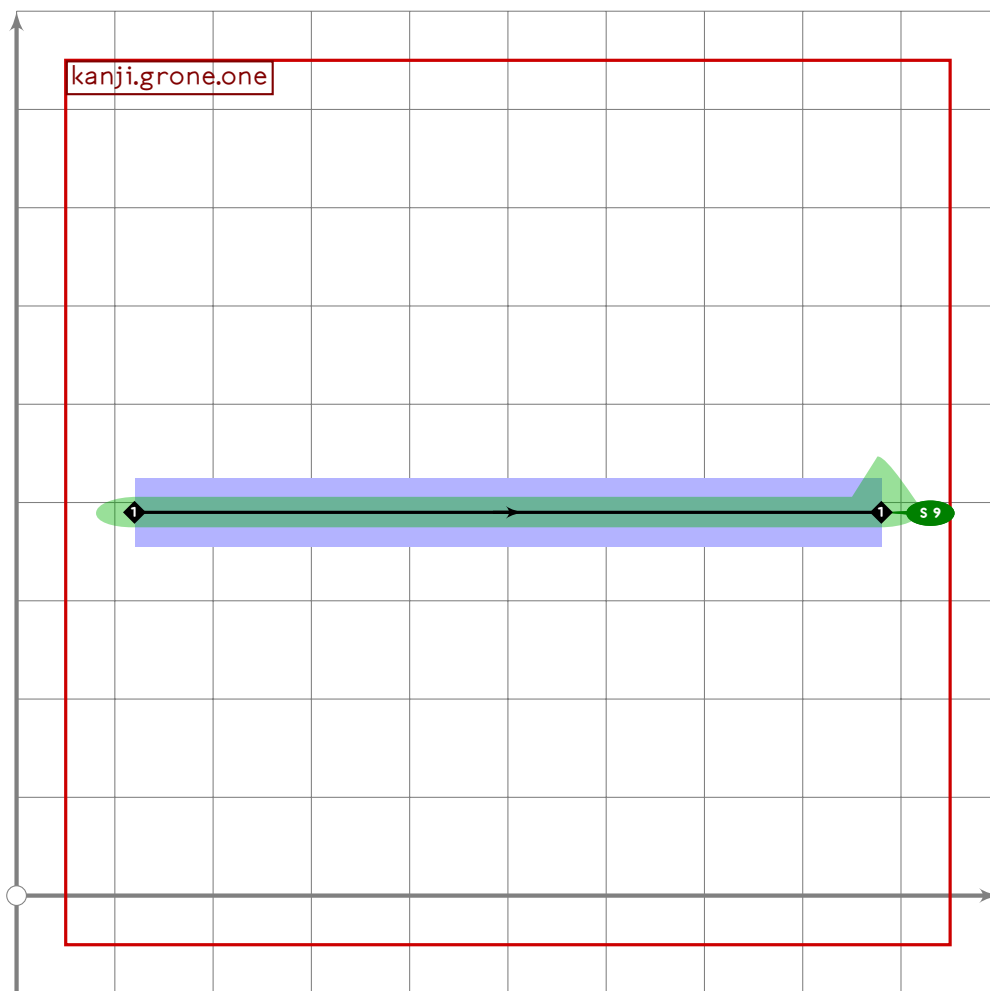
---


54
```

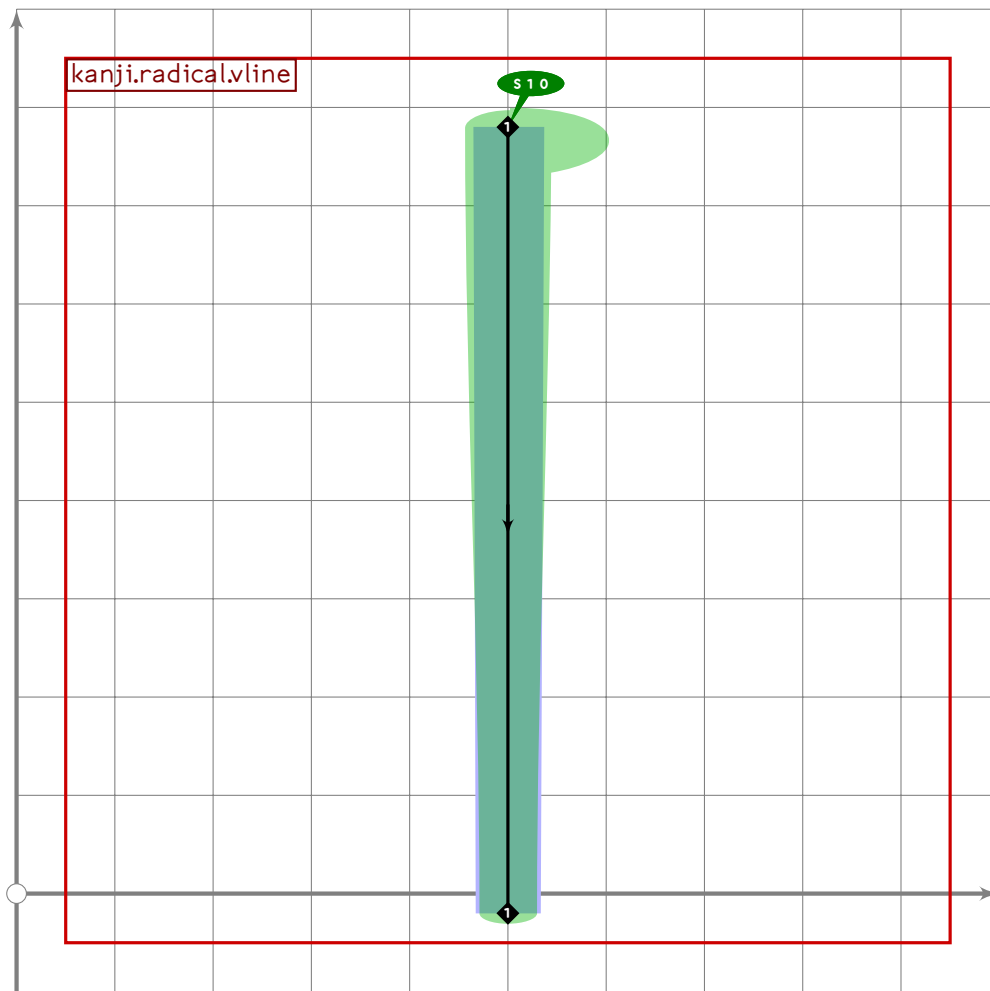
Kangxi Radicals

```
55 % KANGXI RADICALS
56
```

U+2F00
tsuku.uni2F00



```
57 % ichi/hito "one"  
58 begintsuglyph("uni2F00";0);  
59   kanji.grone.one;  
60   tsu_render;  
61 endtsuglyph;  
62
```

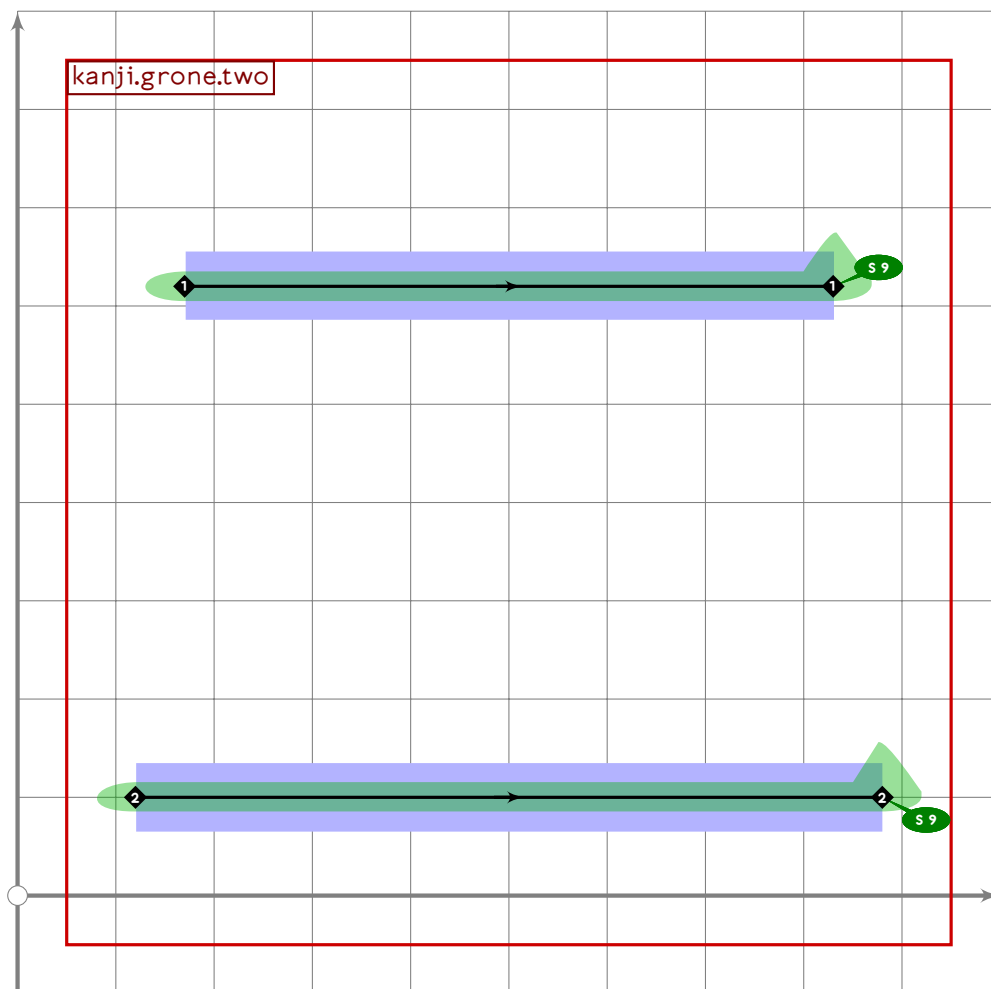


```

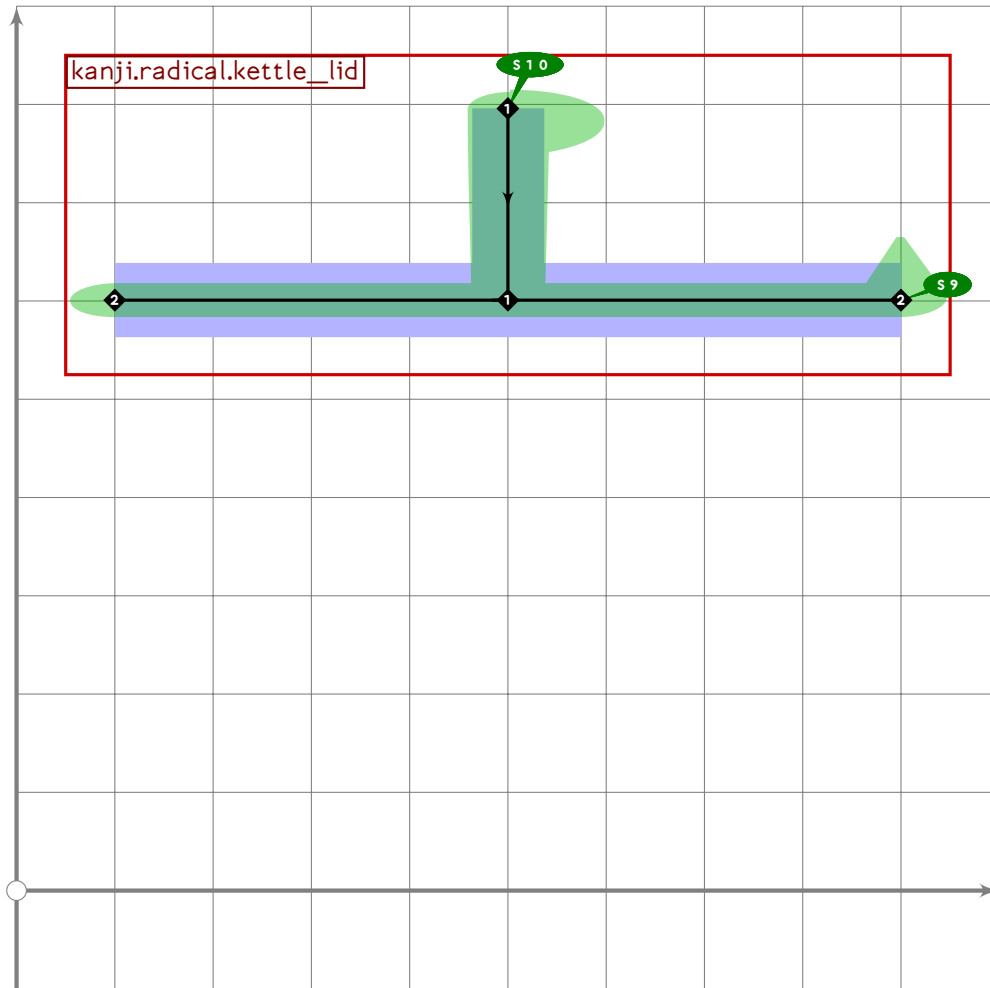
63 % extra "vertical line"
64 begintsuglyph("uni2F01";1);
65   kanji.radical.vline;
66   tsu_render;
67 endtsuglyph;
68

```

U+2F06
tsuku.uni2F06



```
69 % ni/futa "two"  
70 begintsuglyph("uni2F06",6);  
71   kanji.grone.two;  
72   tsu_render;  
73 endtsuglyph;  
74
```

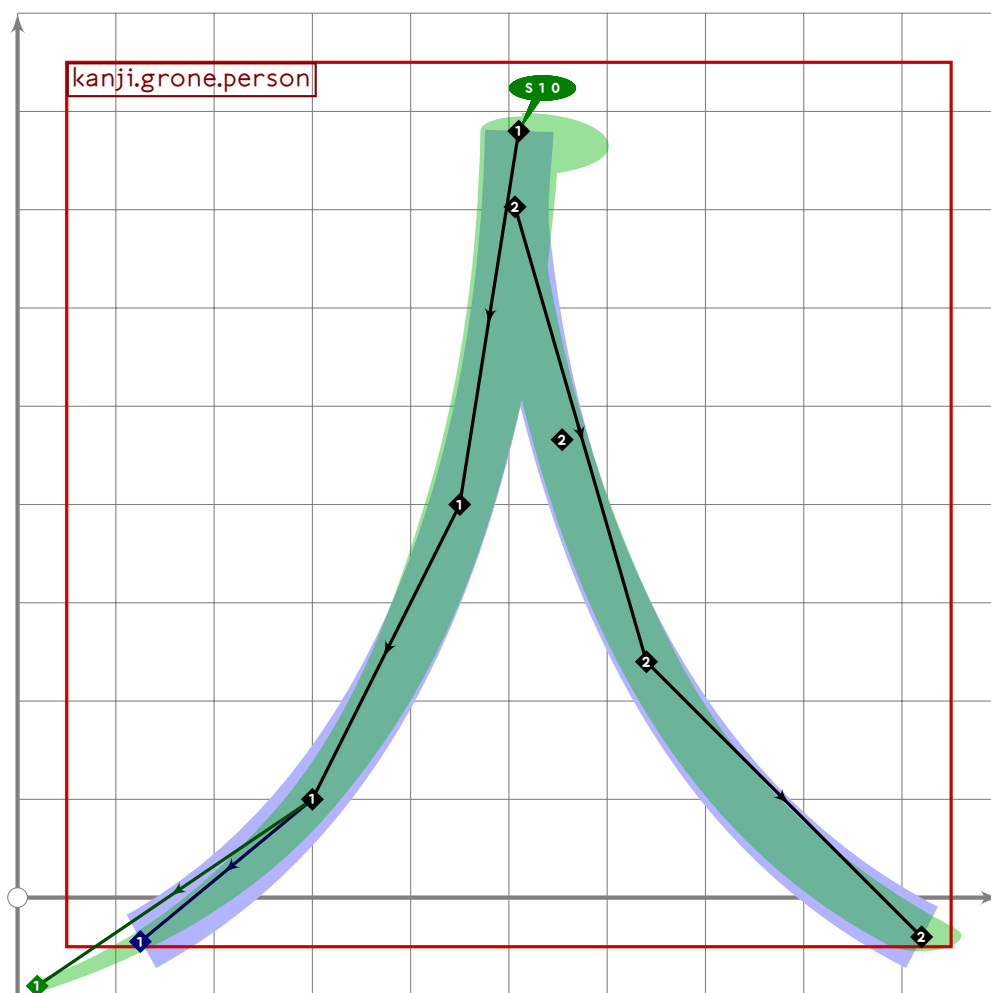


```

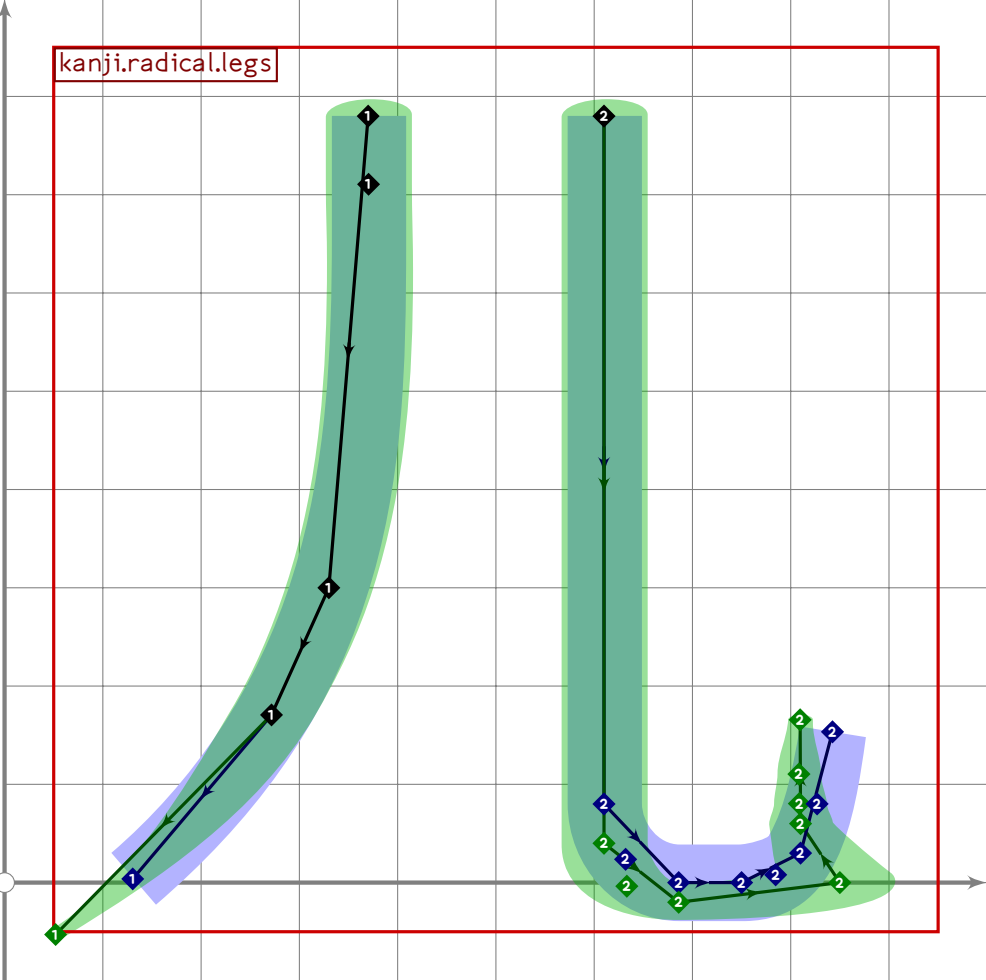
75 % "kettle lid radical"
76 begintsuglyph("uni2F07";7);
77   build_kanji.tb(500,-50)
78     (kanji.radical.kettle_lid)
79     ();
80   tsu_render;
81 endtsuglyph;
82

```

U+2F08
tsuku.uni2F08



```
83 % hito/jin "person"  
84 begintsuglyph("uni2F08";8);  
85   kanji.grone.person;  
86   tsu_render;  
87 endtsuglyph;  
88
```

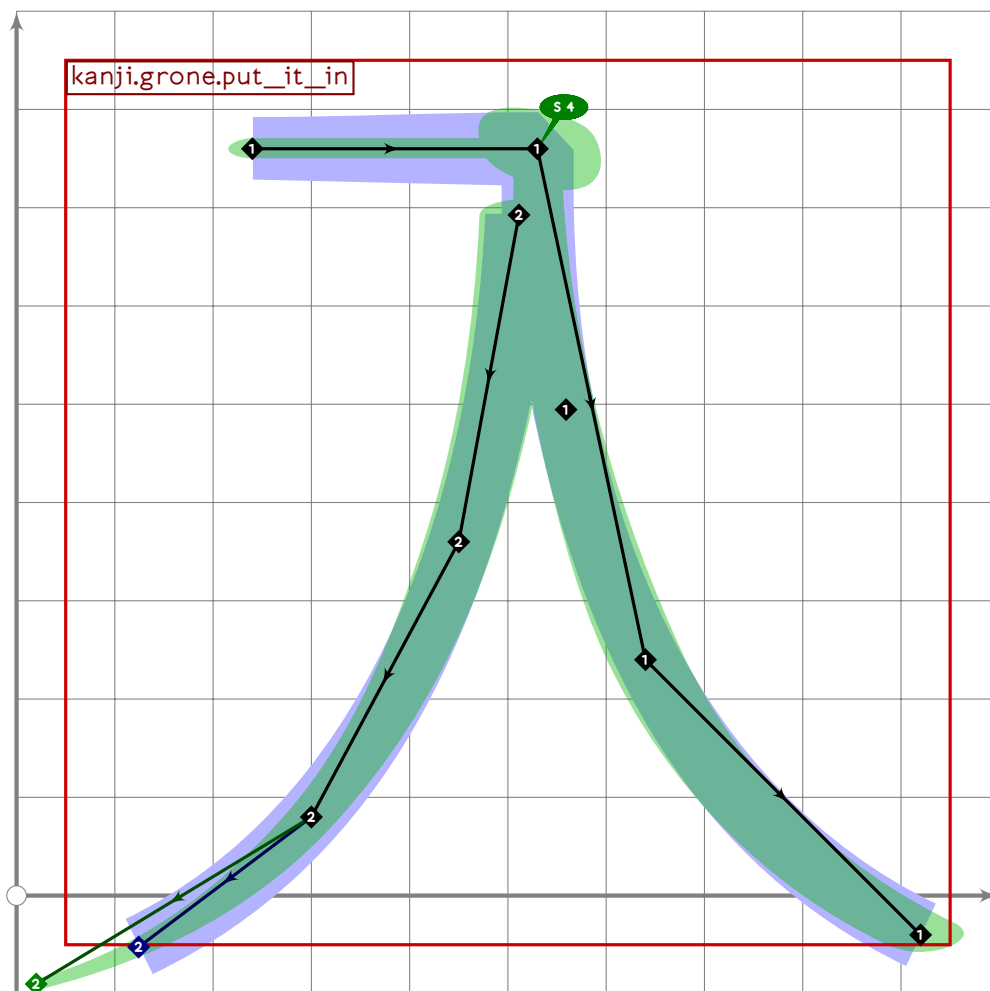


```

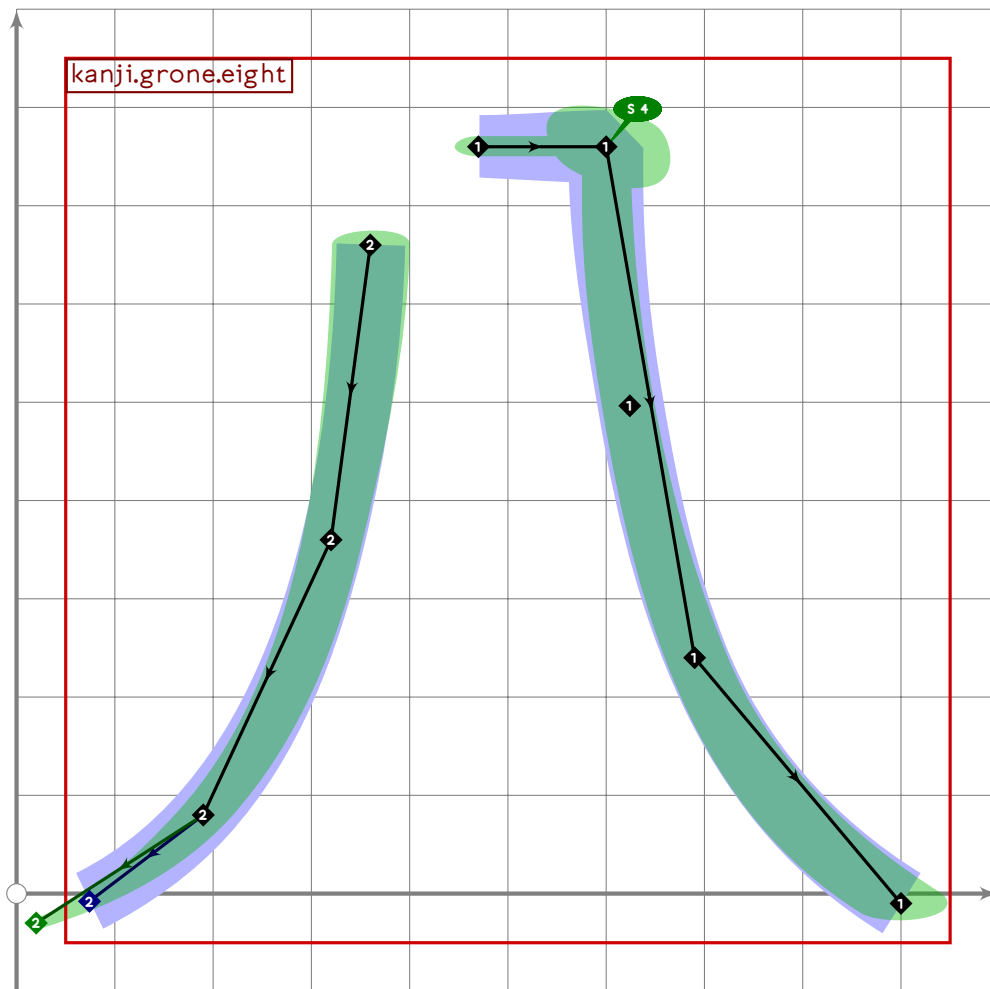
89 % legs radical
90 begintsuglyph("uni2F09";9);
91   kanji.radical.legs;
92   tsu_render;
93 endsuglyph;
94

```

U+2F0A
tsuku.uni2F0A



```
95 % hai/i "put it in"
96 beginsuglyph("uni2F0A";10);
97   kanji.grone.put_it_in;
98   tsu_render;
99 endsuglyph;
100
```

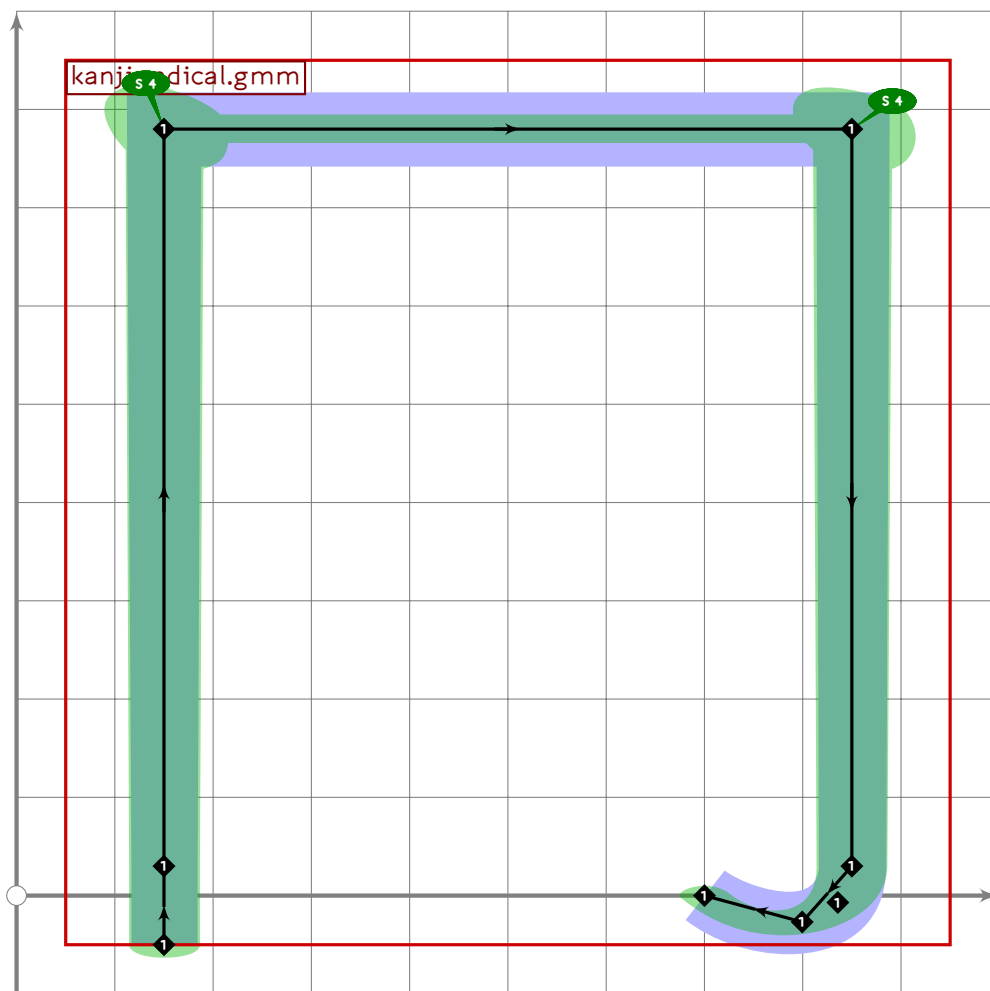



```

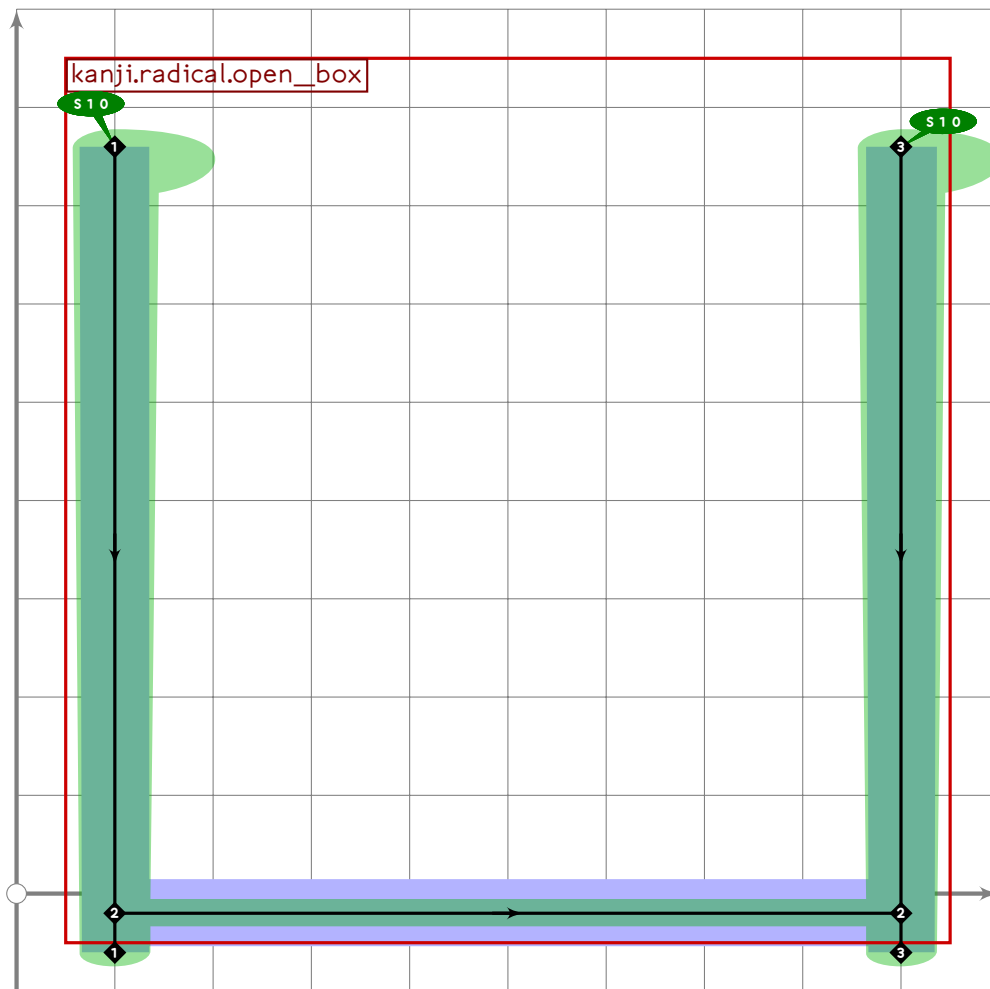
101 % hachi/ya "eight"
102 begintsuglyph("uni2F0B";11);
103   kanji.grone.eight;
104   tsu_render;
105 endtsuglyph;
106

```

U+2F0C
tsuku.uni2F0C

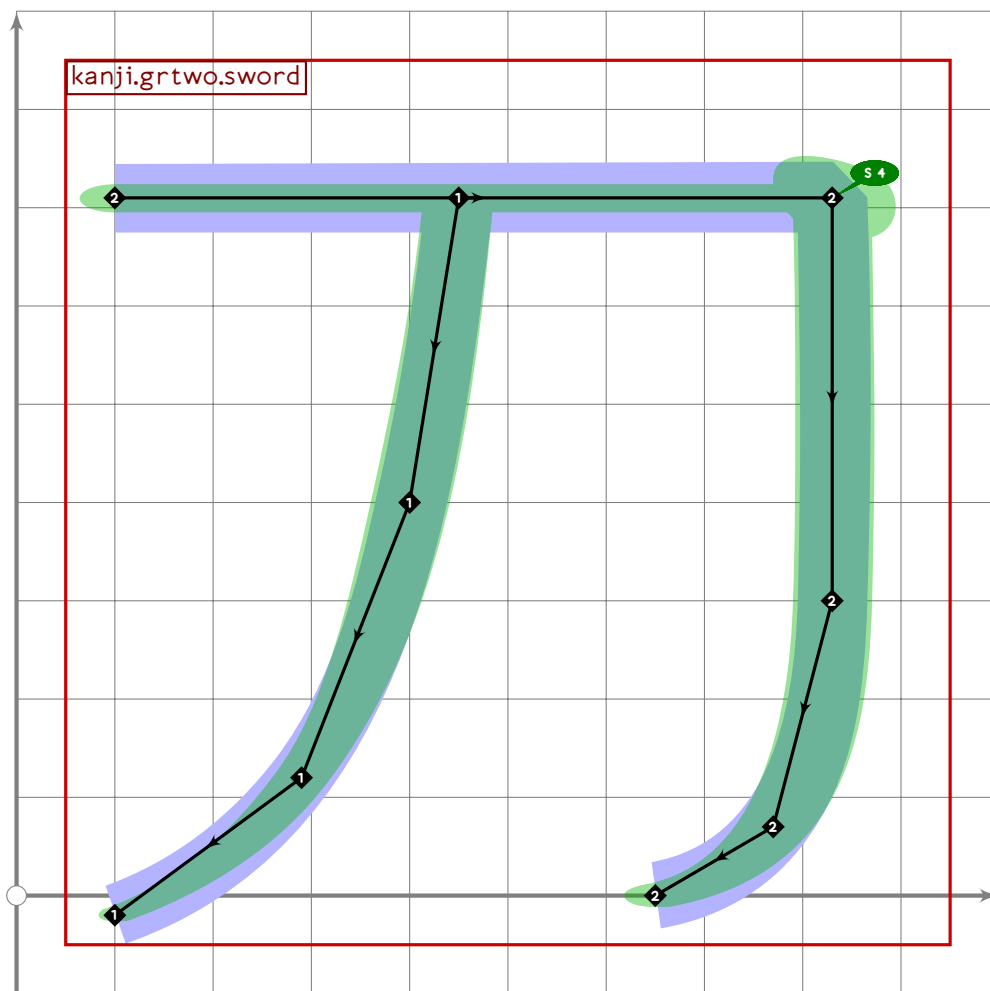


```
107 % George Michael's Moustache
108 begintsuglyph("uni2F0C",12);
109   kanji.radical.gmm;
110   tsu_render;
111 endtsuglyph;
112
```

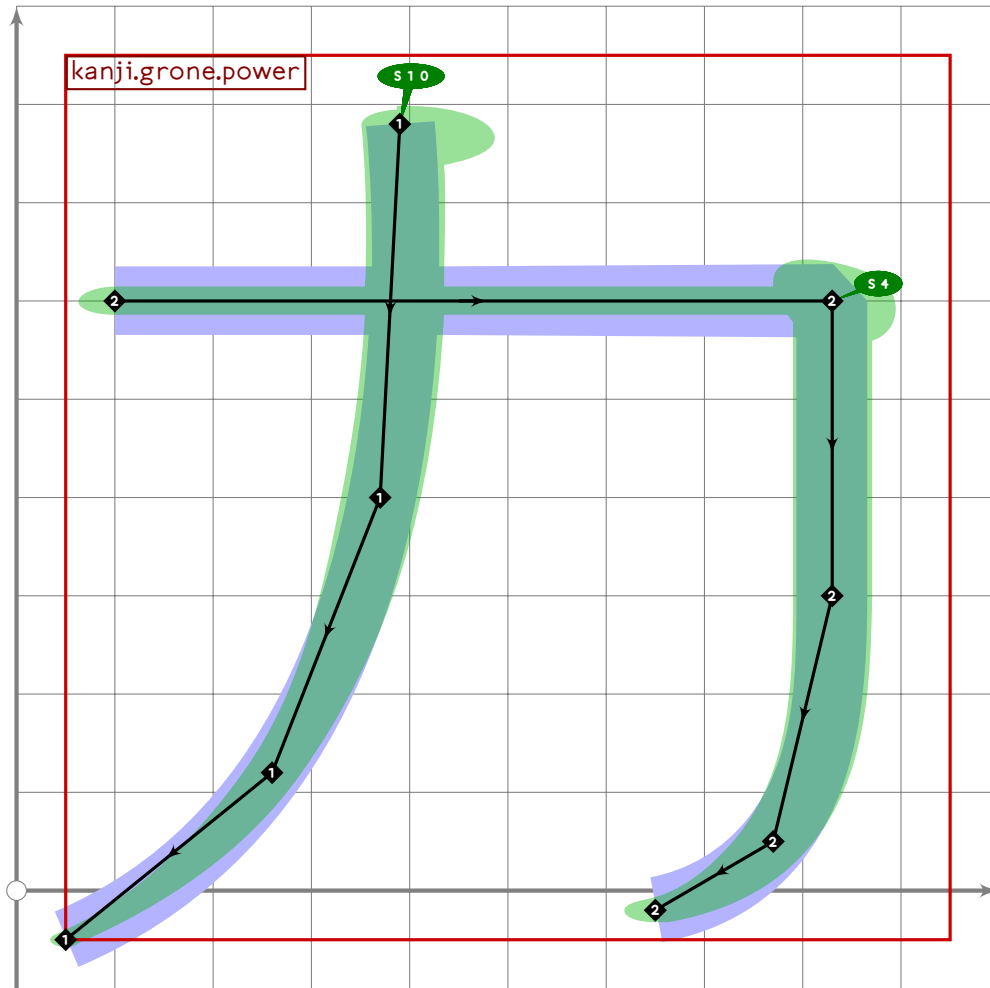


```
113 % kan "open box radical"  
114 begintsuglyph("uni2F10",16);  
115   kanji.radical.open_box;  
116   tsu_render;  
117 endtsuglyph;  
118
```

U+2F11
tsuku.uni2F11



```
119 % tou/katana "sword"  
120 beginsuglyph("uni2F11";17);  
121   kanji.grtwo.sword;  
122   tsu_render;  
123 endsuglyph;  
124
```

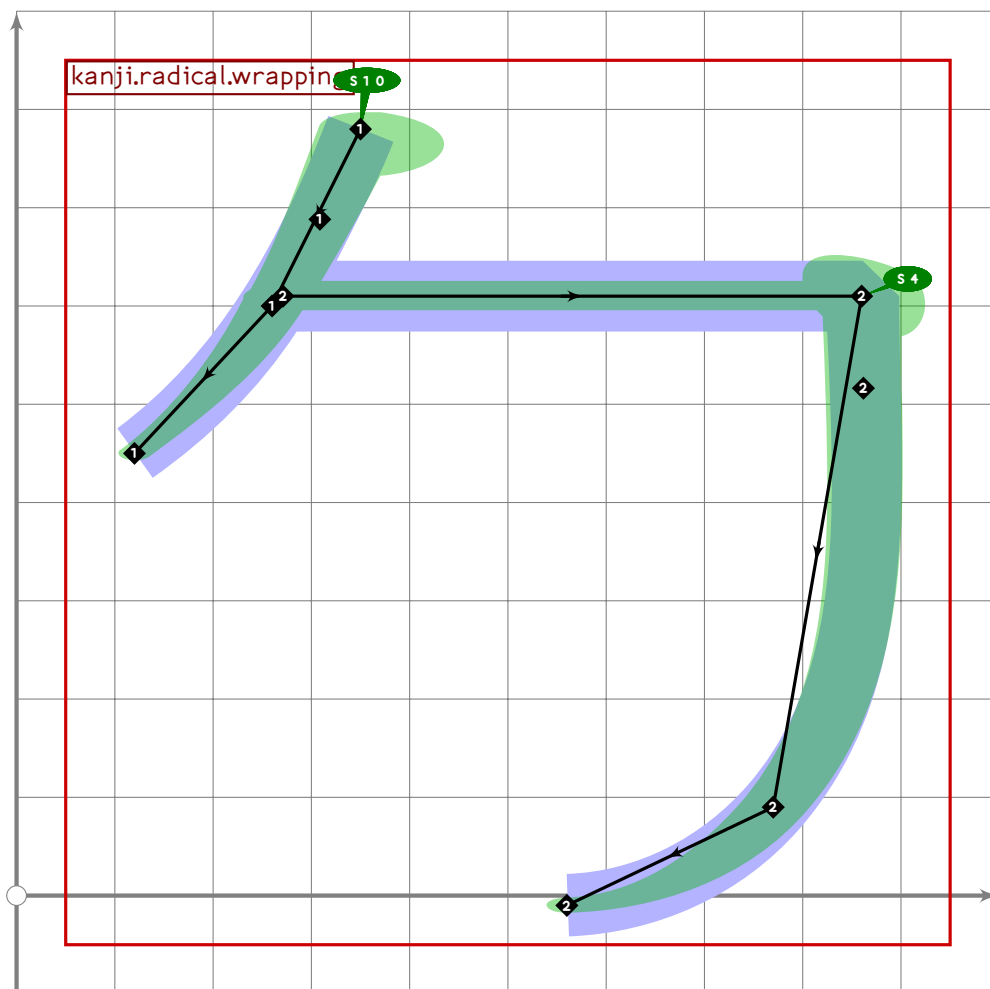


```

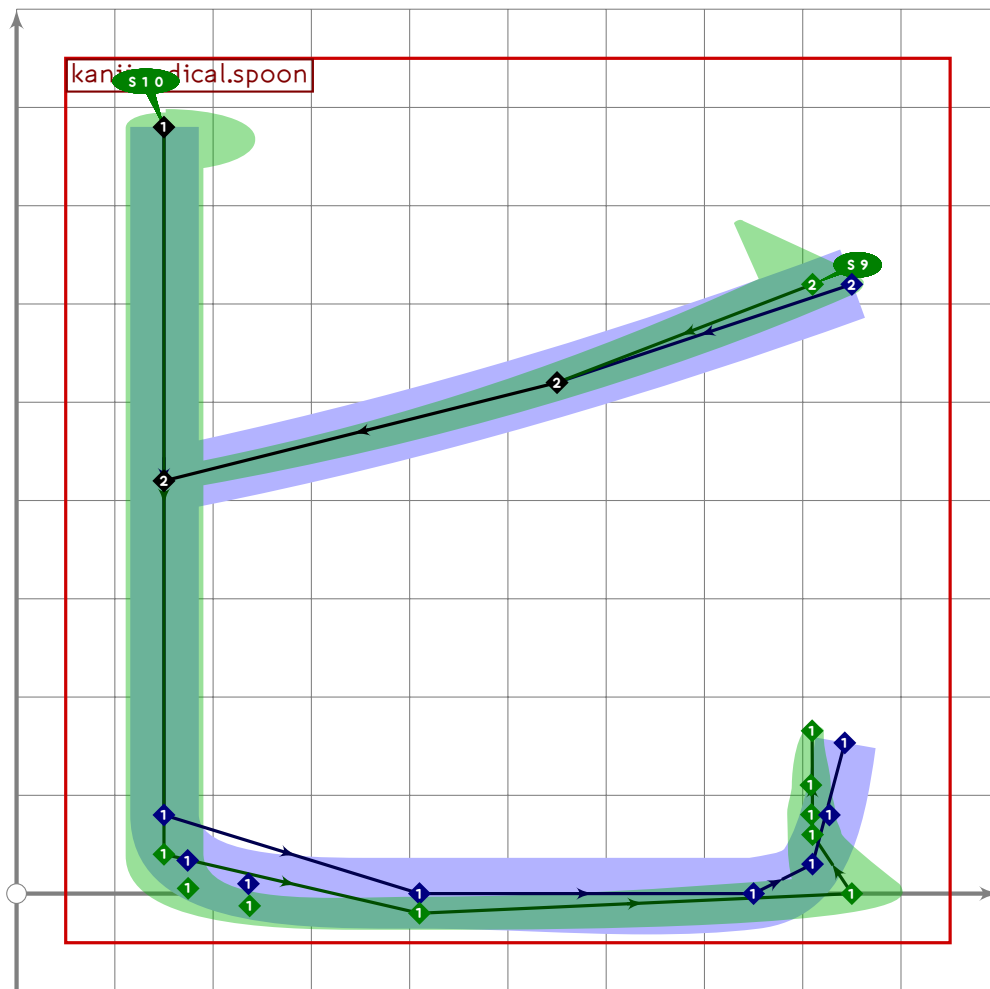
125 % ryoku "power", as in Koizumi Itsuki has teh "chounouryoku"
126 begintsuglyph("uni2F12",18);
127   kanji.grone.power;
128   tsu_render;
129 endtsuglyph;
130

```

U+2F13
tsuku.uni2F13



```
131 % hou/tsutsu "wrapping radical"  
132 beginsuglyph("uni2F13",19);  
133   kanji.radical.wrapping;  
134   tsu_render;  
135 endsuglyph;  
136
```

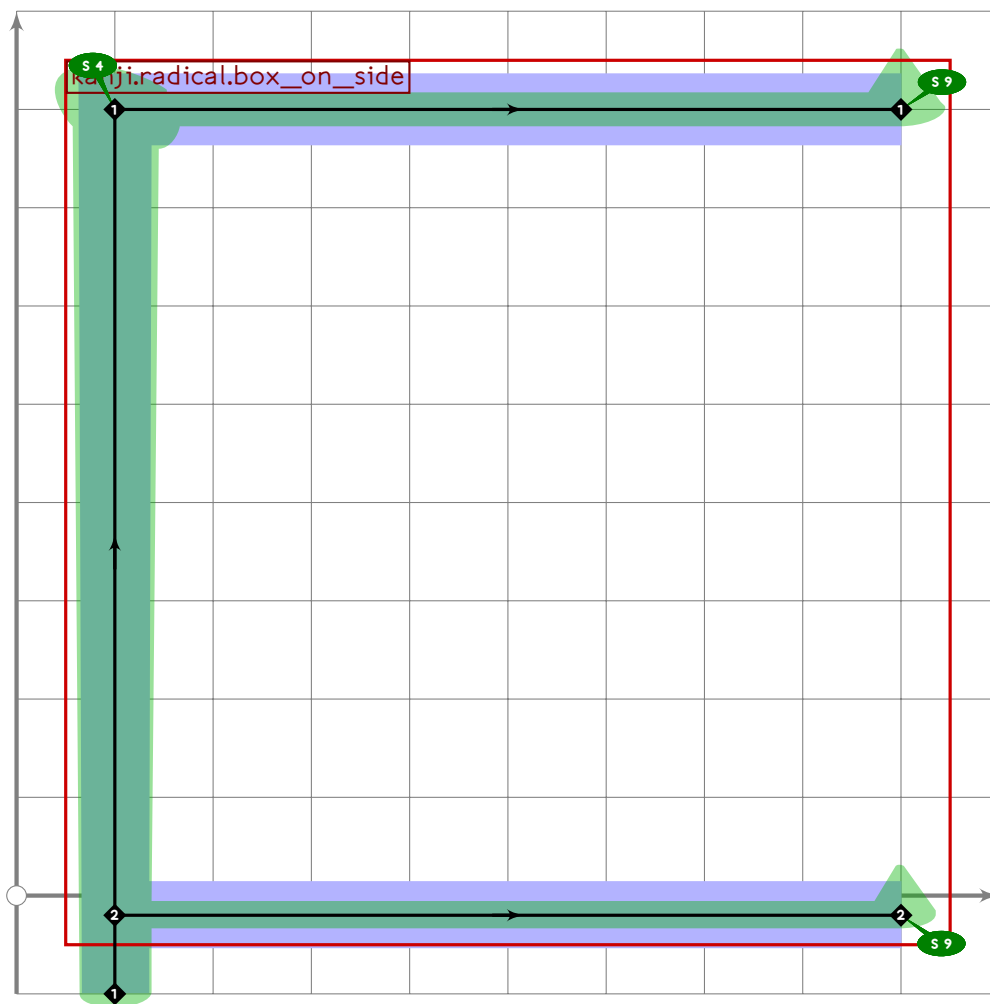


```

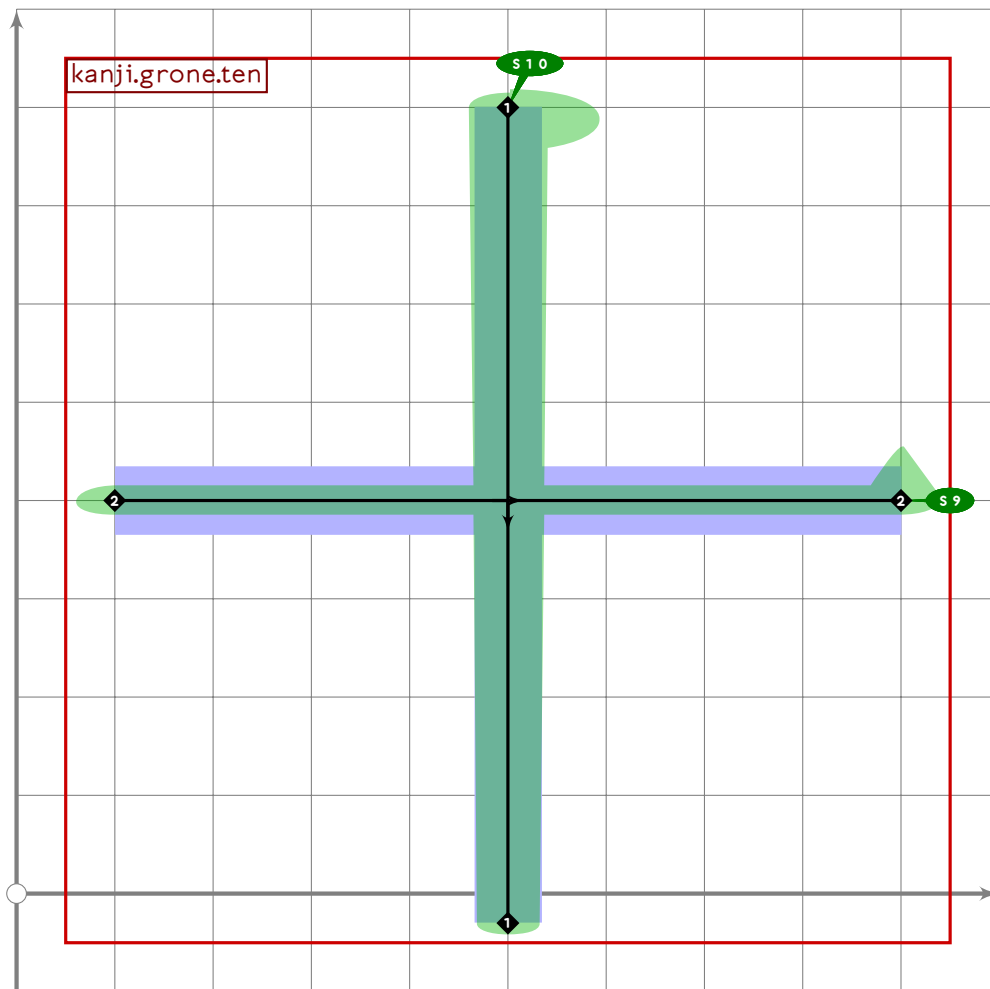
137 % hi/saji "spoon"
138 begintsuglyph("uni2F14";20);
139   kanji.radical.spoon;
140   tsu_render;
141 endtsuglyph;
142

```

U+2F15
tsuku.uni2F15



```
143 % hou/hakogamae "box on side radical"
144 beginsuglyph("uni2F15";21);
145   kanji.radical.box_on_side;
146   tsu_render;
147 endsuglyph;
148
```

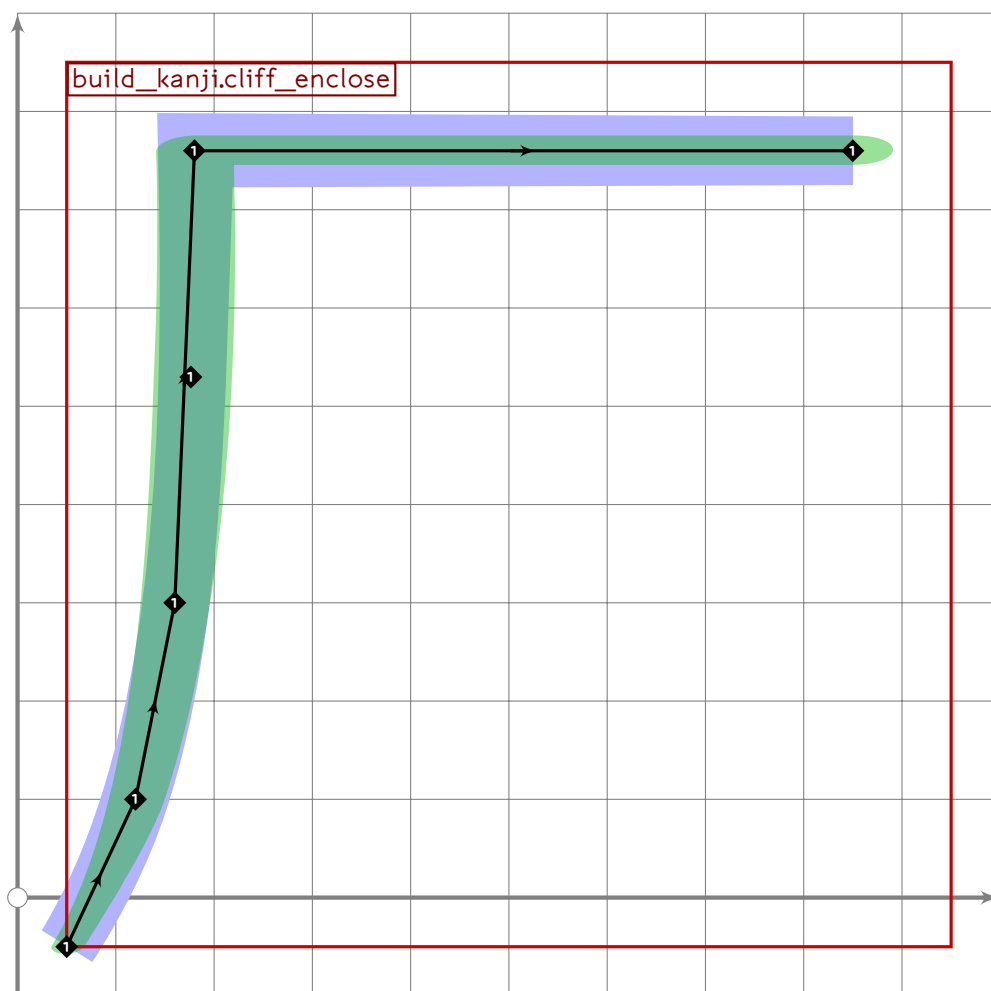



```

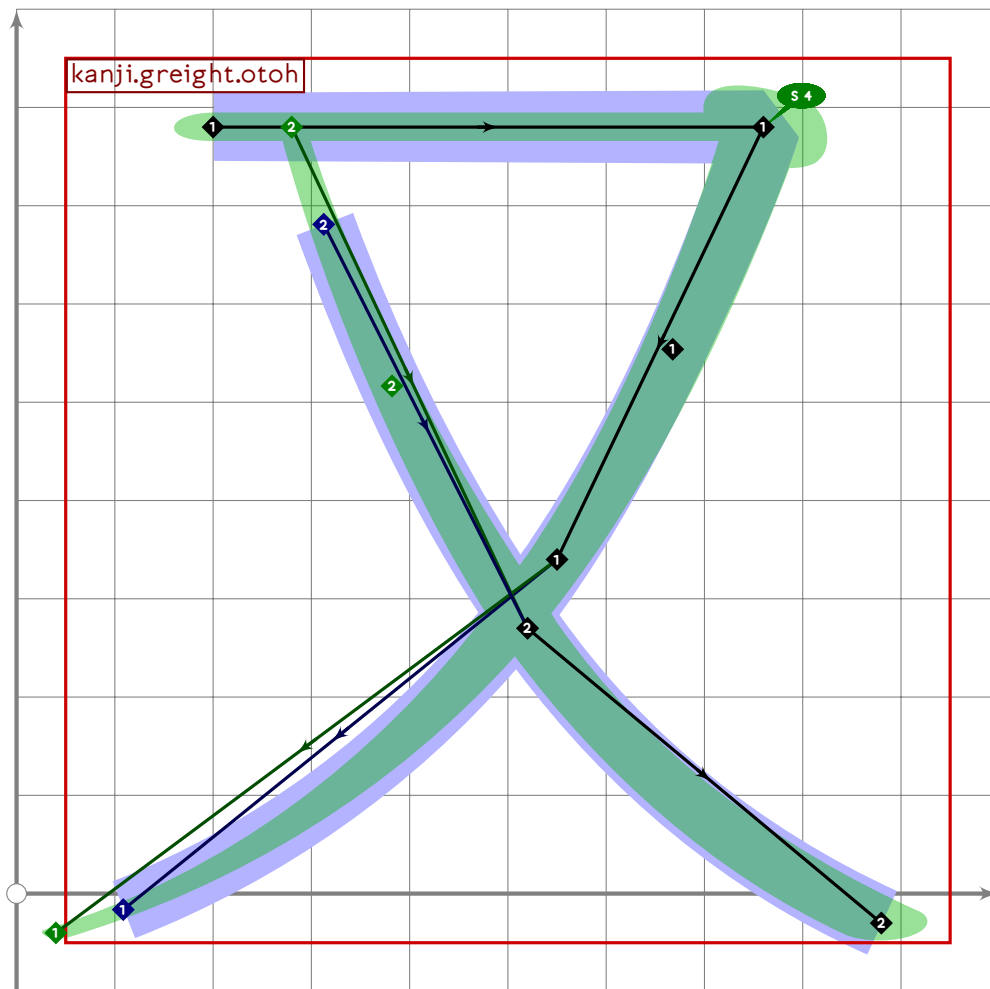
149 % juu/too "ten"
150 begintsuglyph("uni2F17";23);
151   kanji.grone.ten;
152   tsu_render;
153 endtsuglyph;
154

```

U+2F1A
tsuku.uni2F1A



```
155 % karigane "cliff radical"  
156 begintsuglyph("uni2F1A",26);  
157   build_kanji.cliff_enclose();  
158   tsu_render;  
159 endtsuglyph;  
160
```

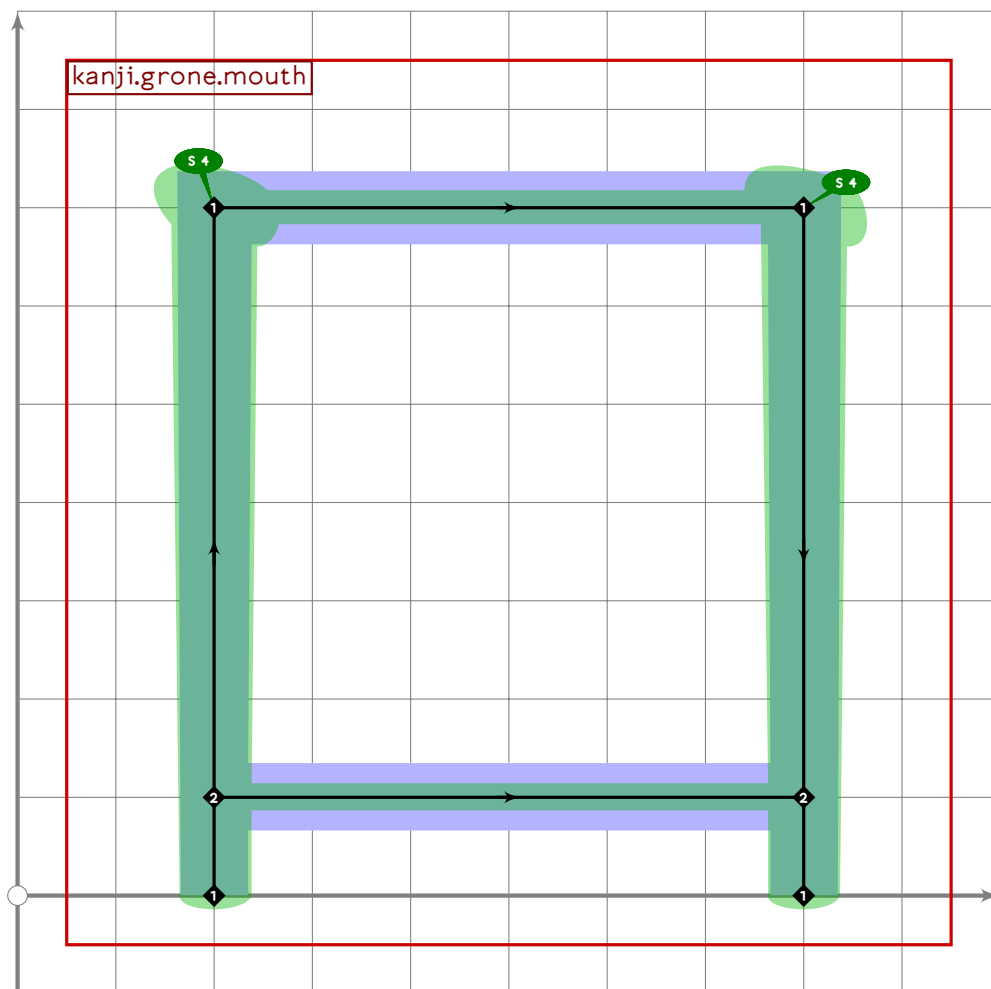


```

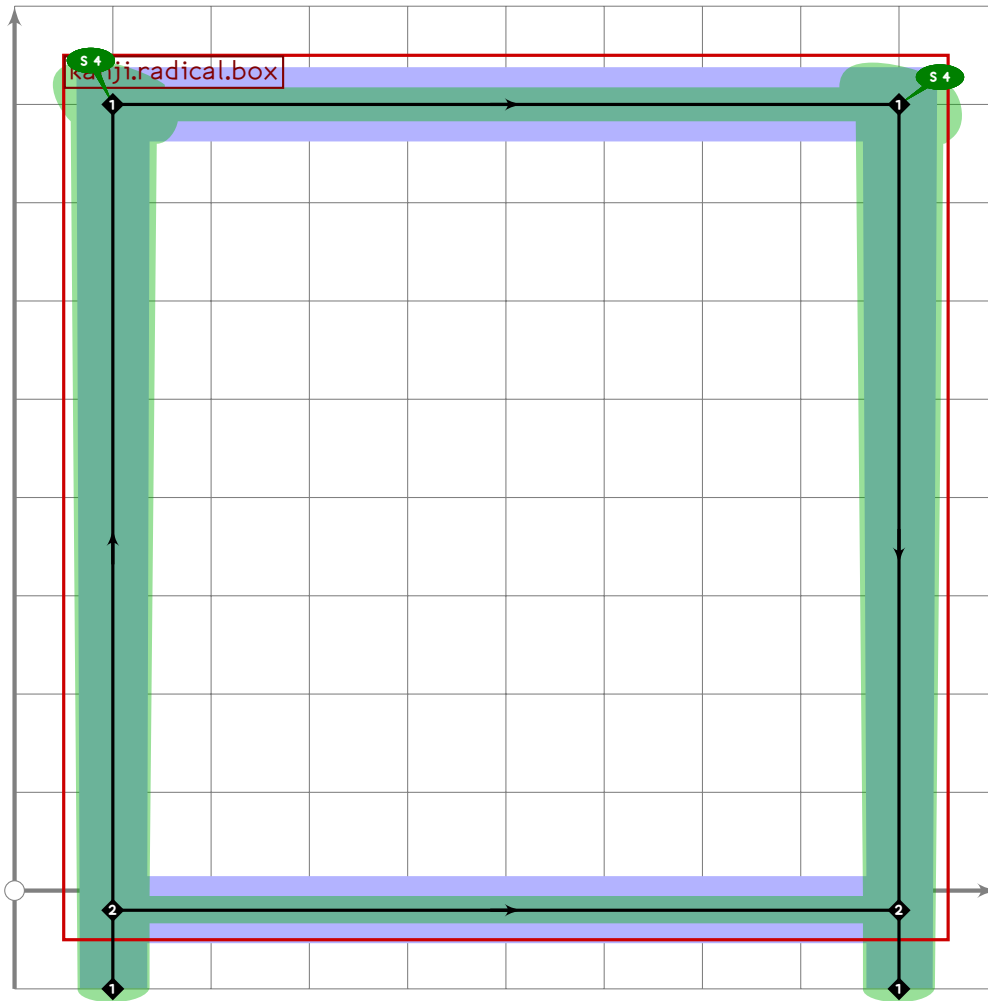
161 % yuu/mata "on the other hand"
162 begintsuglyph("uni2F1C";28);
163   kanji.greight.otoh;
164   tsu_render;
165 endtsuglyph;
166

```

U+2F1D
tsuku.uni2F1D

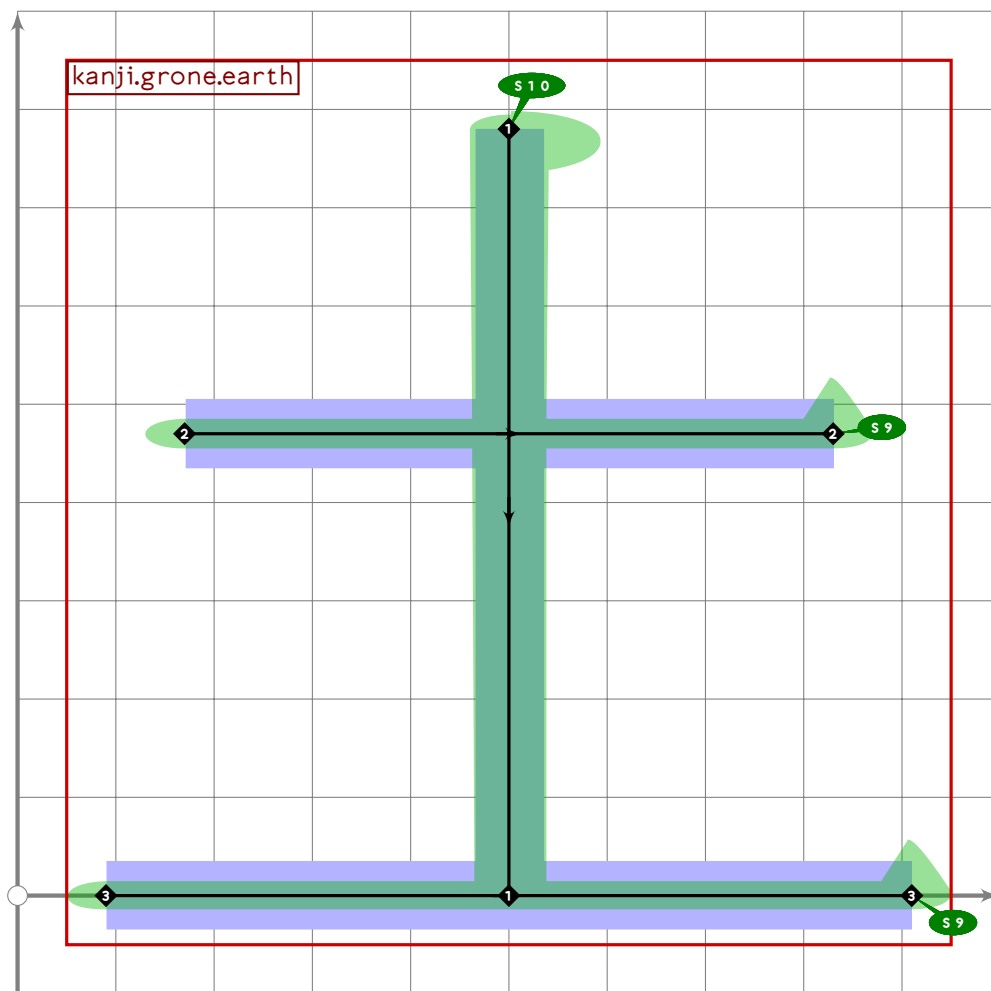


```
167 % kou/kuchi "mouth"  
168 begintsuglyph("uni2F1D";29);  
169   kanji.grone.mouth;  
170   tsu_render;  
171 endtsuglyph;  
172
```

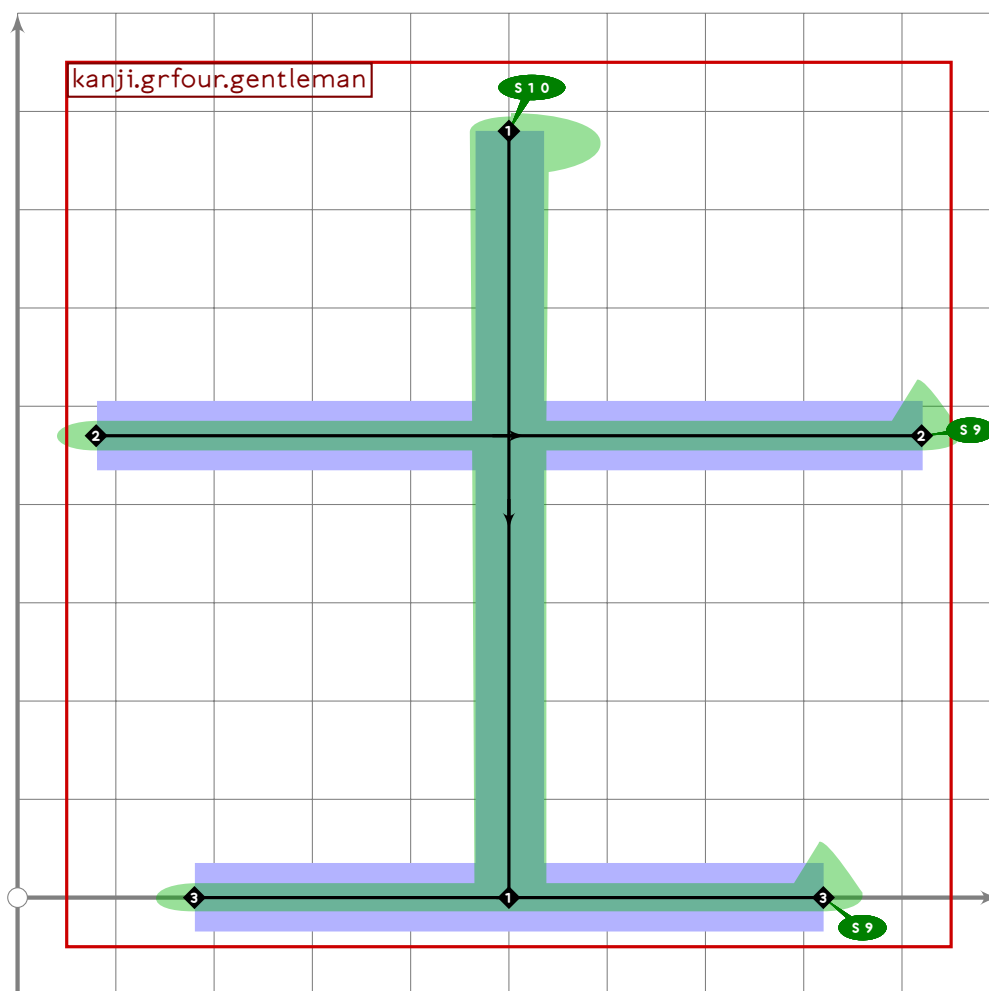


```
173 % box radical
174 beginsuglyph("uni2F1E";30);
175   kanji.radical.box;
176   tsu_render;
177 endtsuglyph;
178
```

U+2F1F
tsuku.uni2F1F



```
179 % tsuchi/do "earth"  
180 beginsuglyph("uni2F1F",31);  
181   kanji.grone.earth;  
182   tsu_render;  
183 endsuglyph;  
184
```

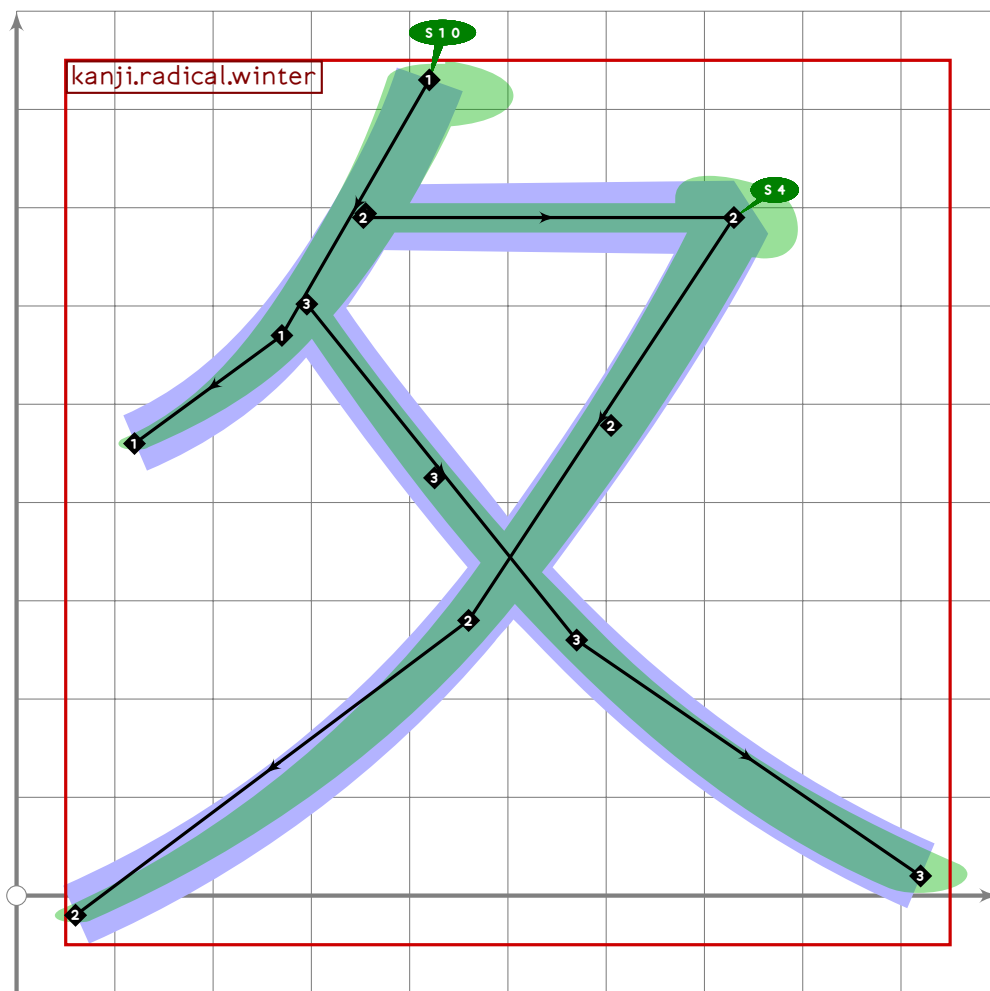


```

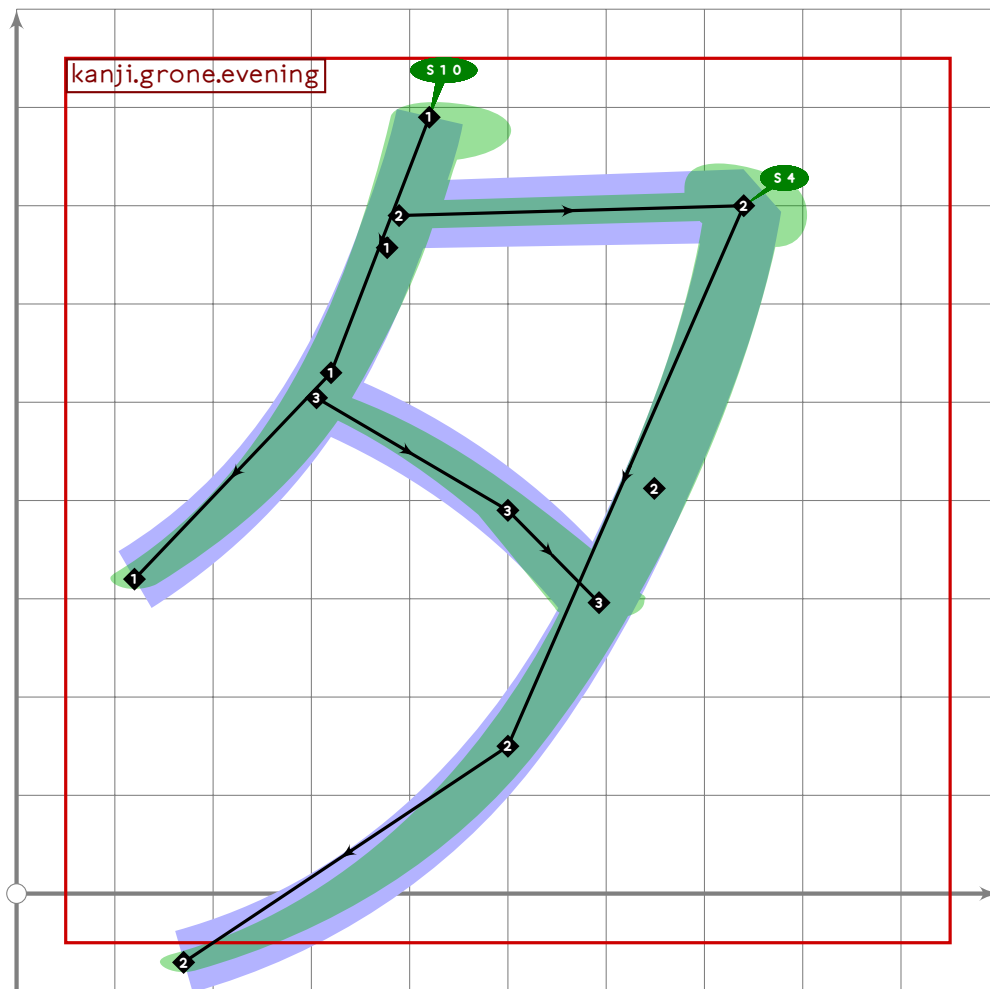
185 % shi "gentleman" ("samurai" radical)
186 begintsuglyph("uni2F20";32);
187   kanji.grfour.gentleman;
188   tsu_render;
189 endtsuglyph;
190

```

U+2F21
tsuku.uni2F21



```
191 % chi/shuu "winter radical"  
192 begintsuglyph("uni2F21";33);  
193   kanji.radical.winter;  
194   tsu_render;  
195 endsuglyph;  
196
```

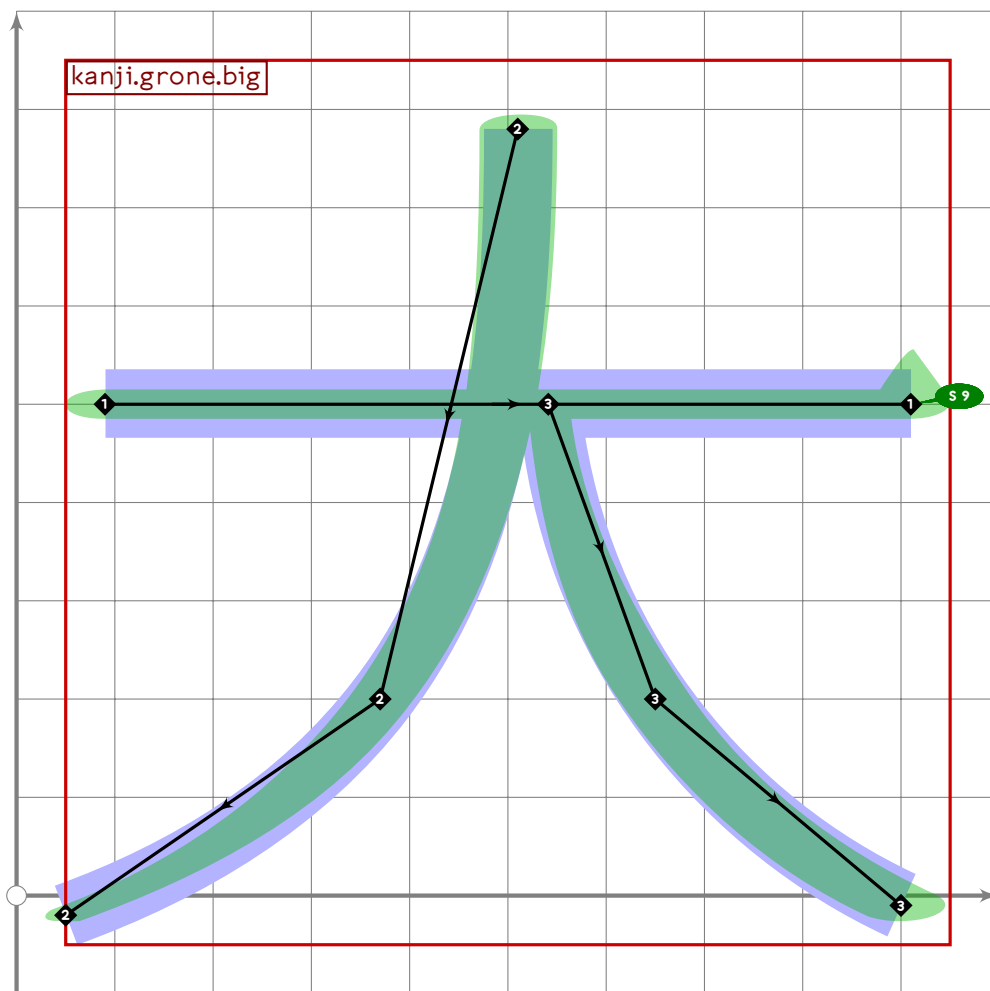



```

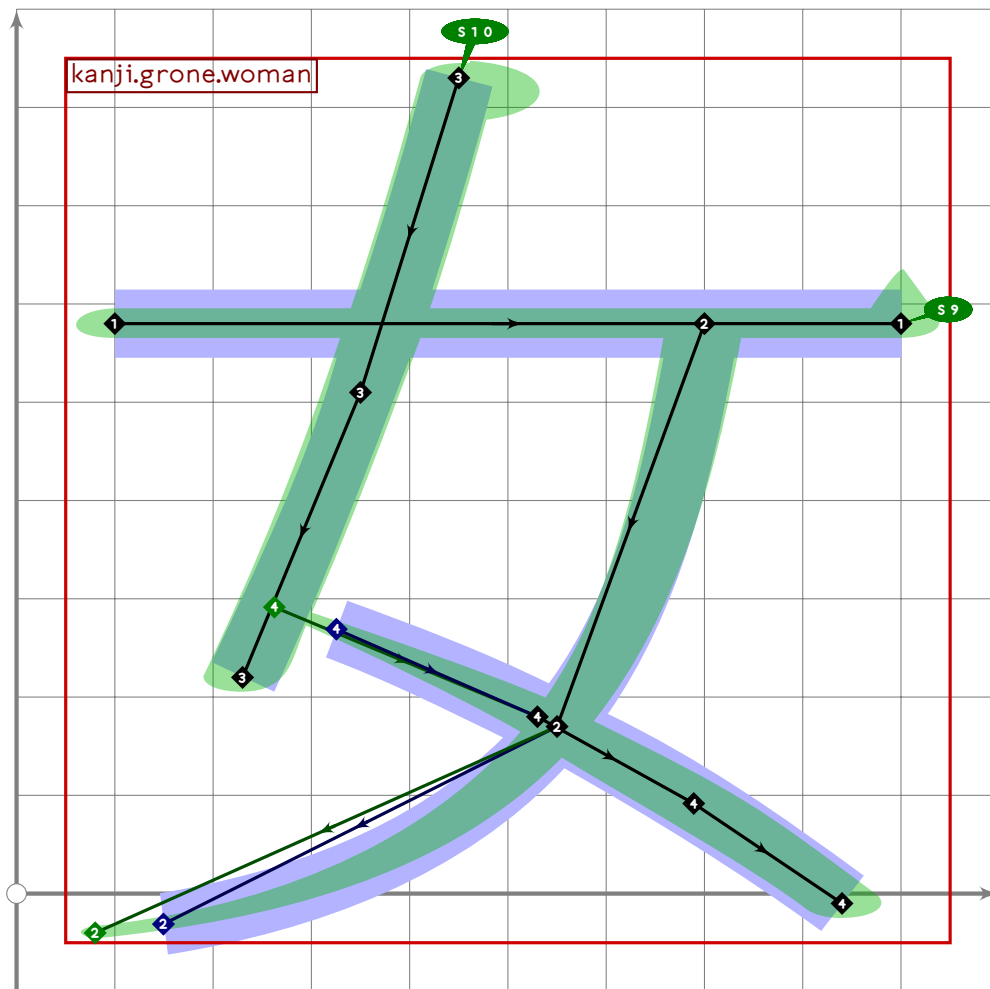
197 % yuu/seki "evening"
198 begintsuglyph("uni2F23";35);
199   kanji.grone.evening;
200   tsu_render;
201 endtsuglyph;
202

```

U+2F24
tsuku.uni2F24



```
203 % dai/oo "big"  
204 begintsuglyph("uni2F24",36);  
205   kanji.grone.big;  
206   tsu_render;  
207 endtsuglyph;  
208
```

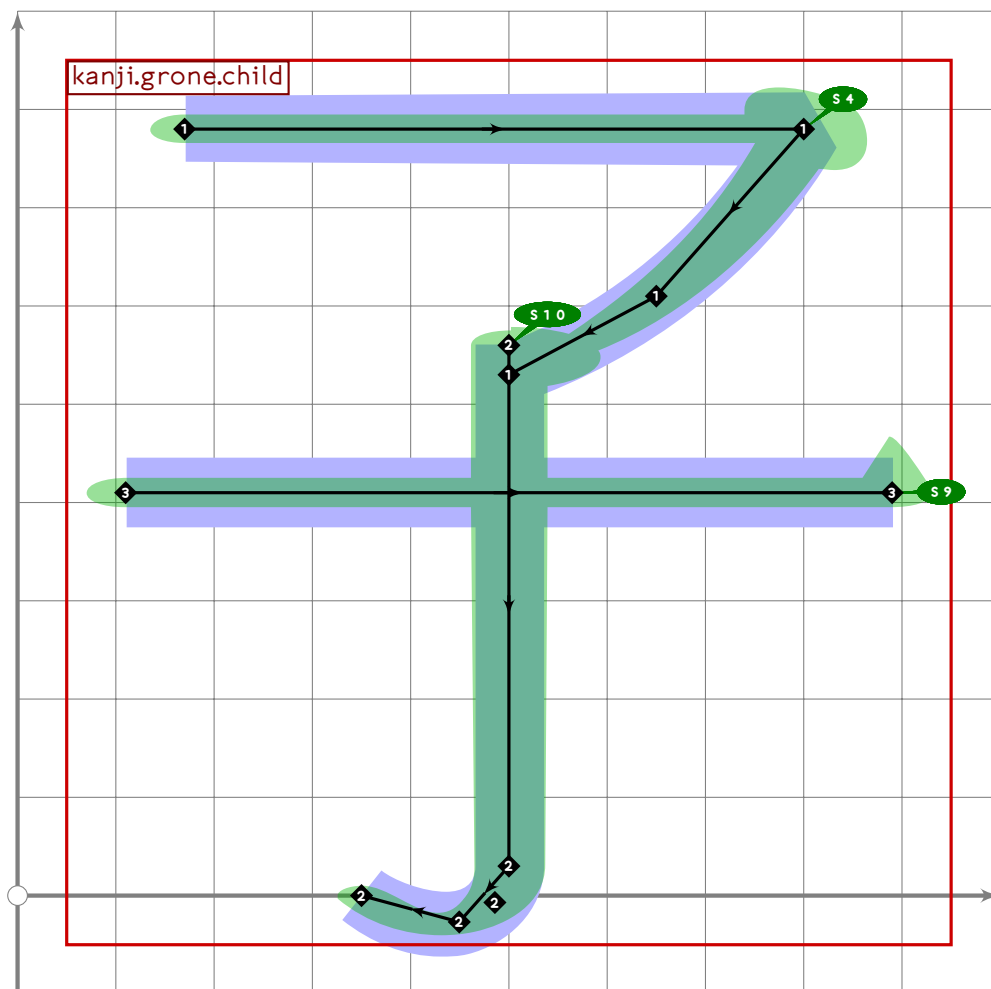


```

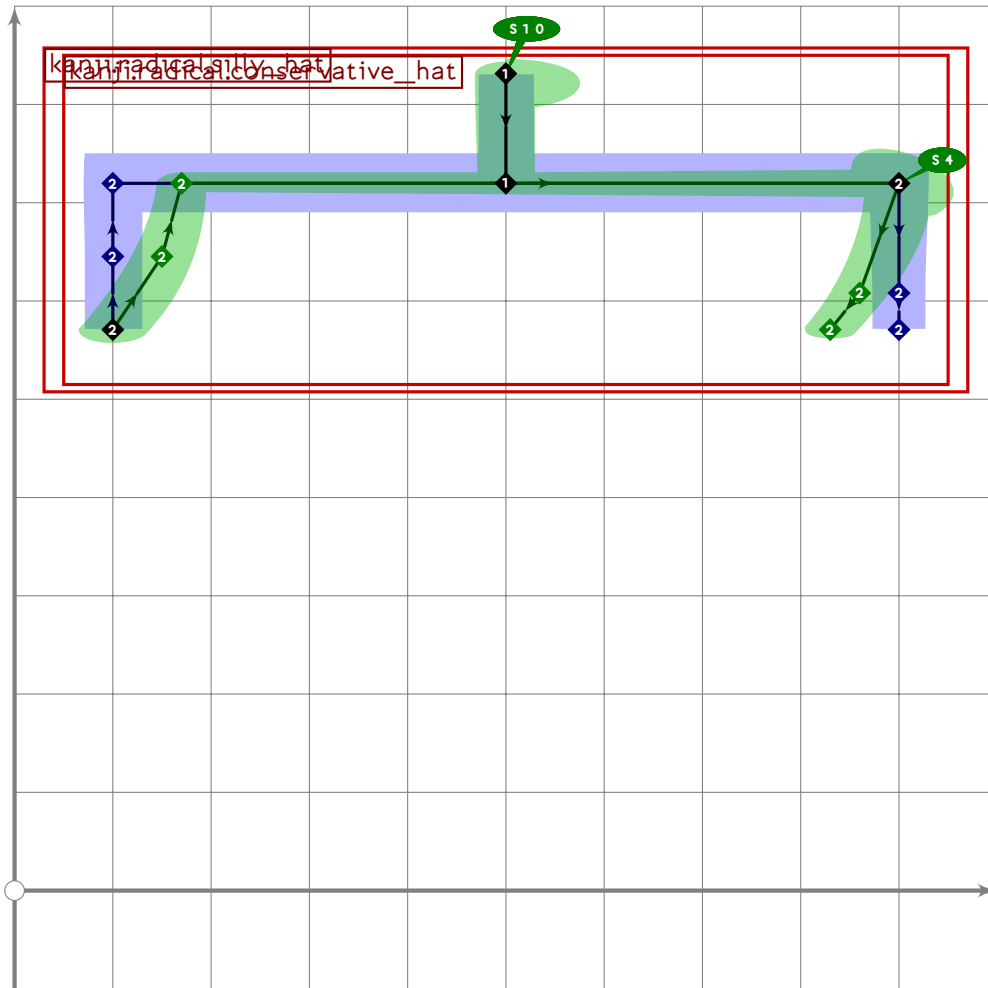
209 % jo/onna "woman"
210 begintsuglyph("uni2F25";37);
211   kanji.grone.woman;
212   tsu_render;
213 endtsuglyph;
214

```

U+2F26
tsuku.uni2F26



```
215 % ko "child"  
216 begintsuglyph("uni2F26",38);  
217   kanji.grone.child;  
218   tsu_render;  
219 endtsuglyph;  
220
```

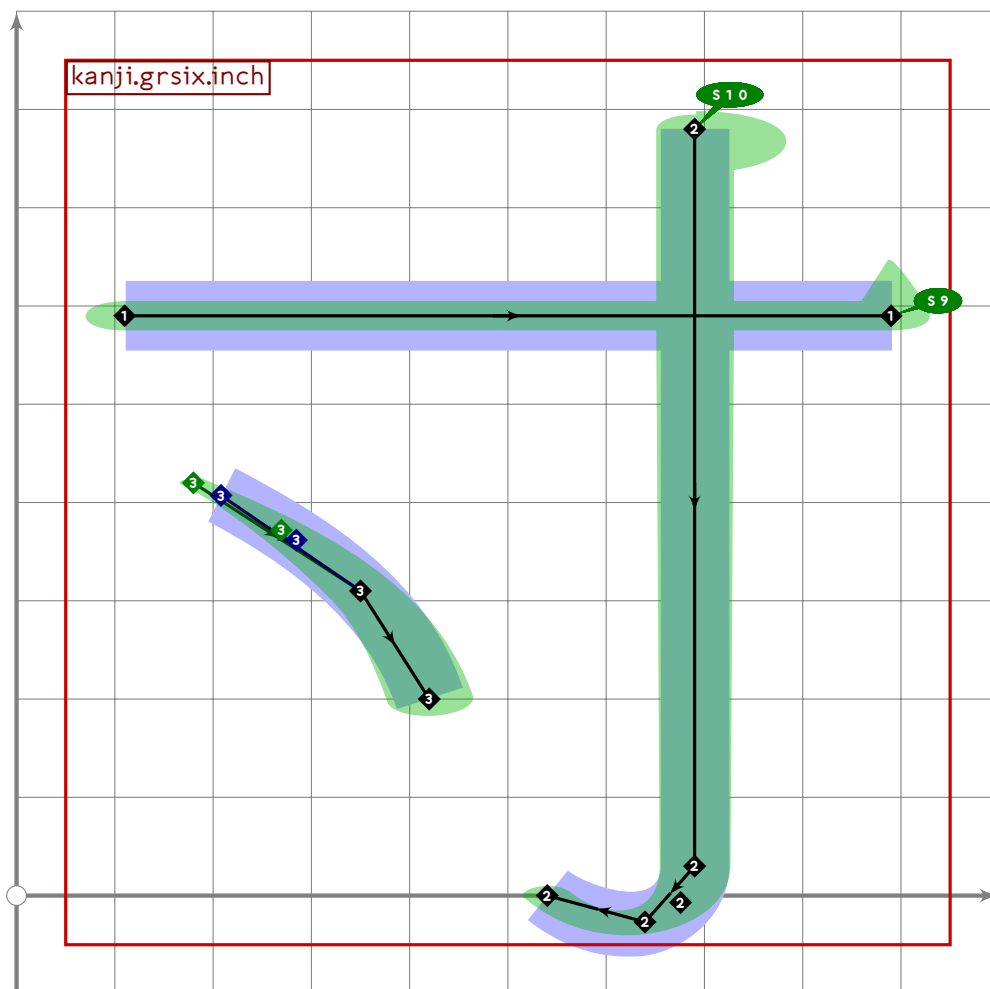


```

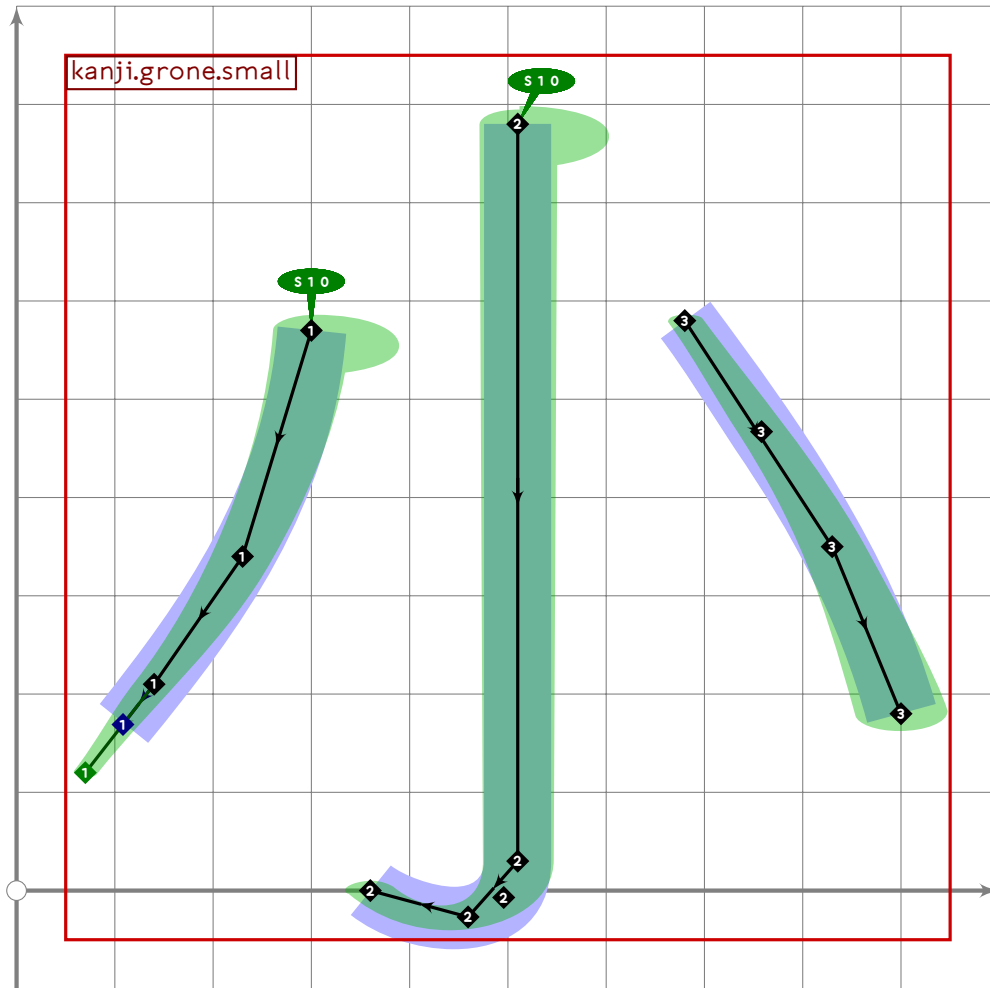
221 % silly hat radical
222 begintsuglyph("uni2F27";39);
223   build_kanji.tb(500,30)
224     (kanji.radical.silly_hat)
225   ();
226   tsu_render;
227 endtsuglyph;
228

```

U+2F28
tsuku.uni2F28



```
229 % su/miki "inch"; also often a radical
230 begintsuglyph("uni2F28";40);
231   kanji.grsix.inch;
232   tsu_render;
233 endtsuglyph;
234
```

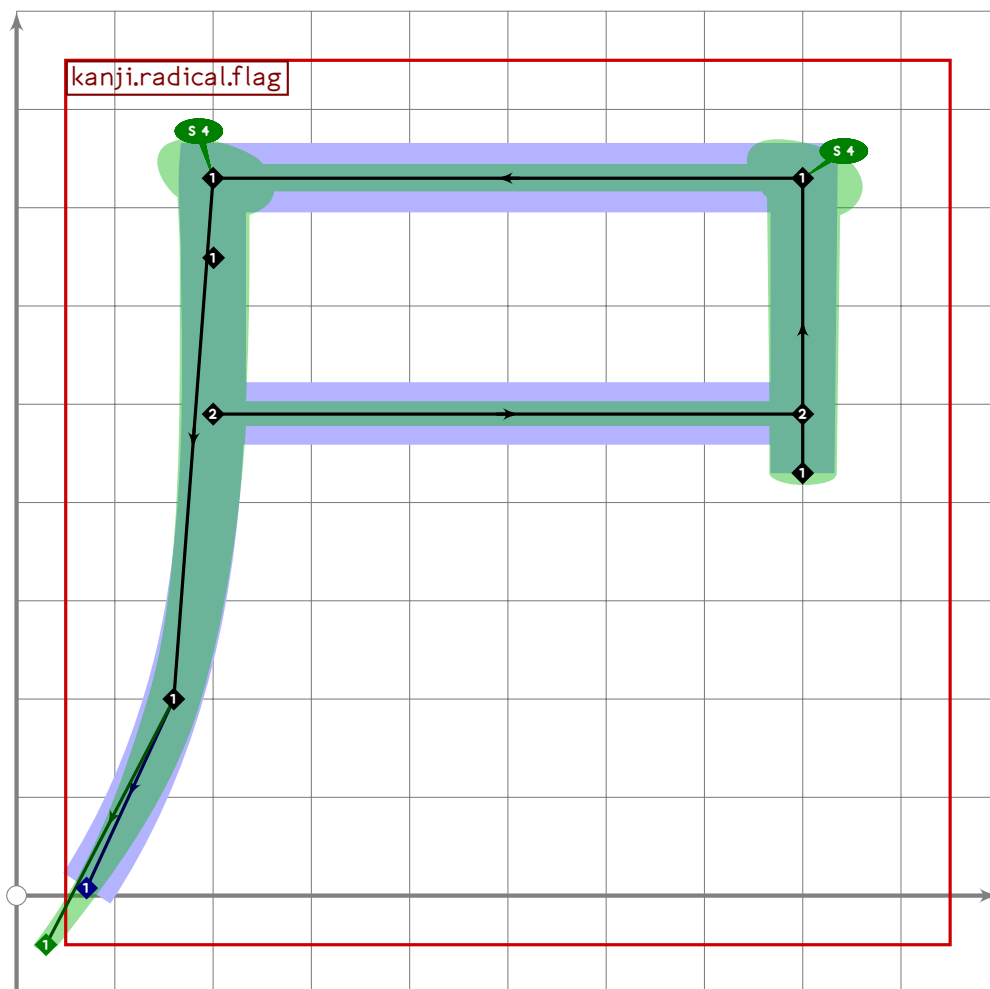


```

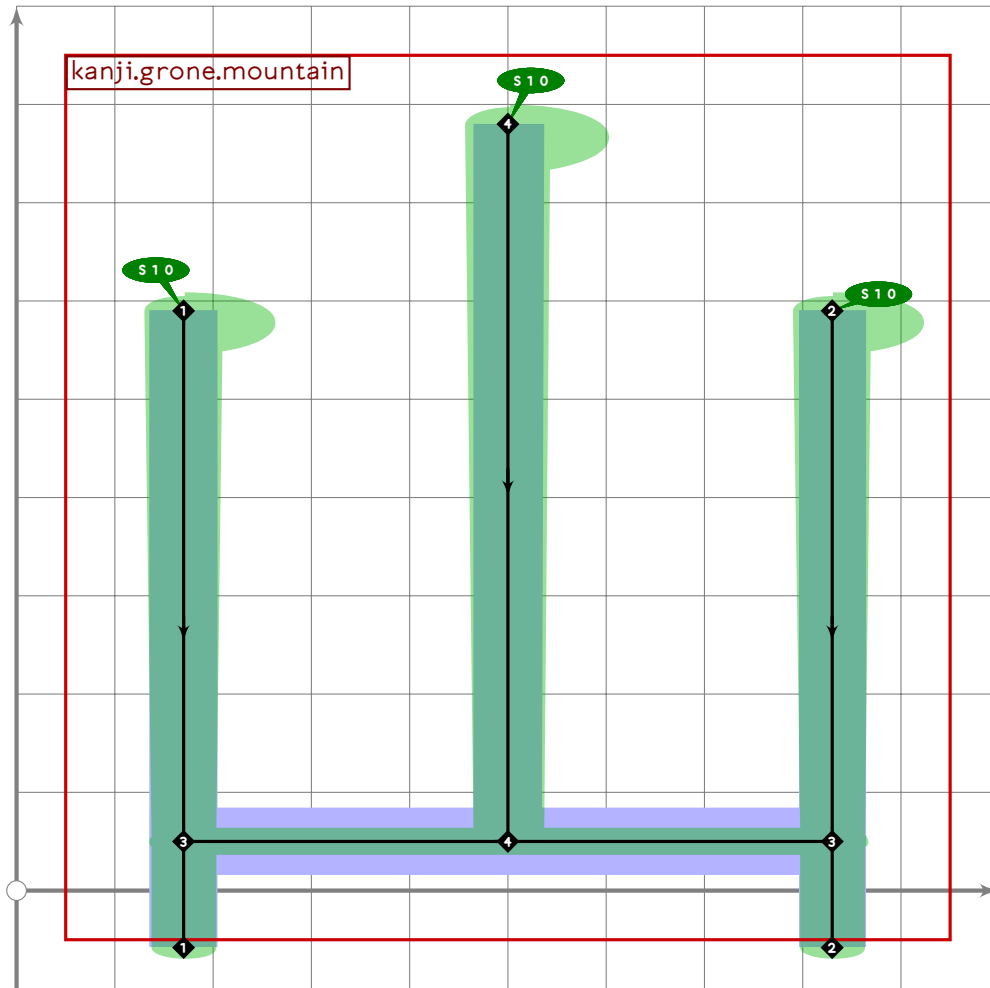
235 % shuu/chii "small"
236 begintsuglyph("uni2F29";41);
237   kanji.grone.small;
238   tsu_render;
239 endtsuglyph;
240

```

U+2F2B
tsuku.uni2F2B

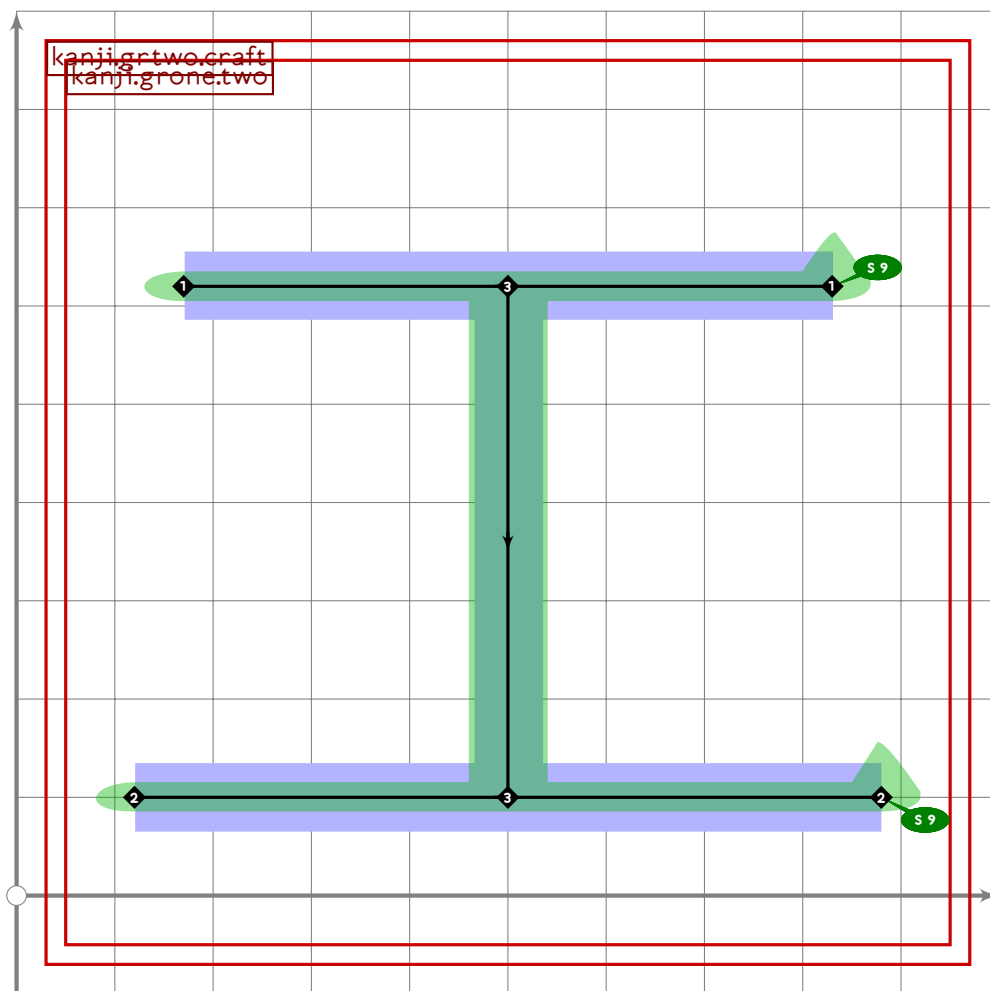


```
241 % shi/katashiro "corpse" or "flag radial"
242 begintsuglyph("uni2F2B";43);
243   kanji.radical.flag;
244   tsu_render;
245 endtsuglyph;
246
```

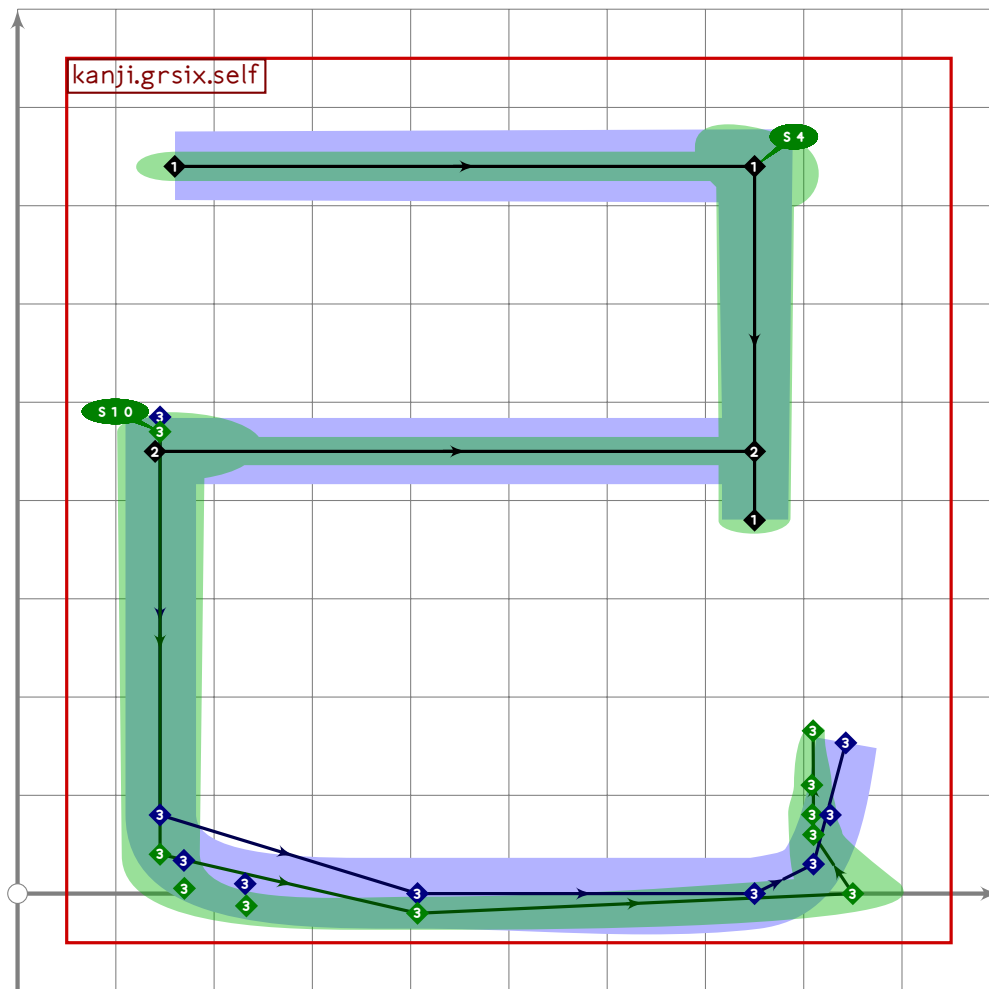



```
247 % yama/san "mountain"  
248 begintsuglyph("uni2F2D";45);  
249   kanji.grone.mountain;  
250   tsu_render;  
251 endtsuglyph;  
252
```

U+2F2F
tsuku.uni2F2F



```
253 % takumi "craft"  
254 begintsuglyph("uni2F2F";47);  
255   kanji.grtwo.craft;  
256   tsu_render;  
257 endtsuglyph;  
258
```

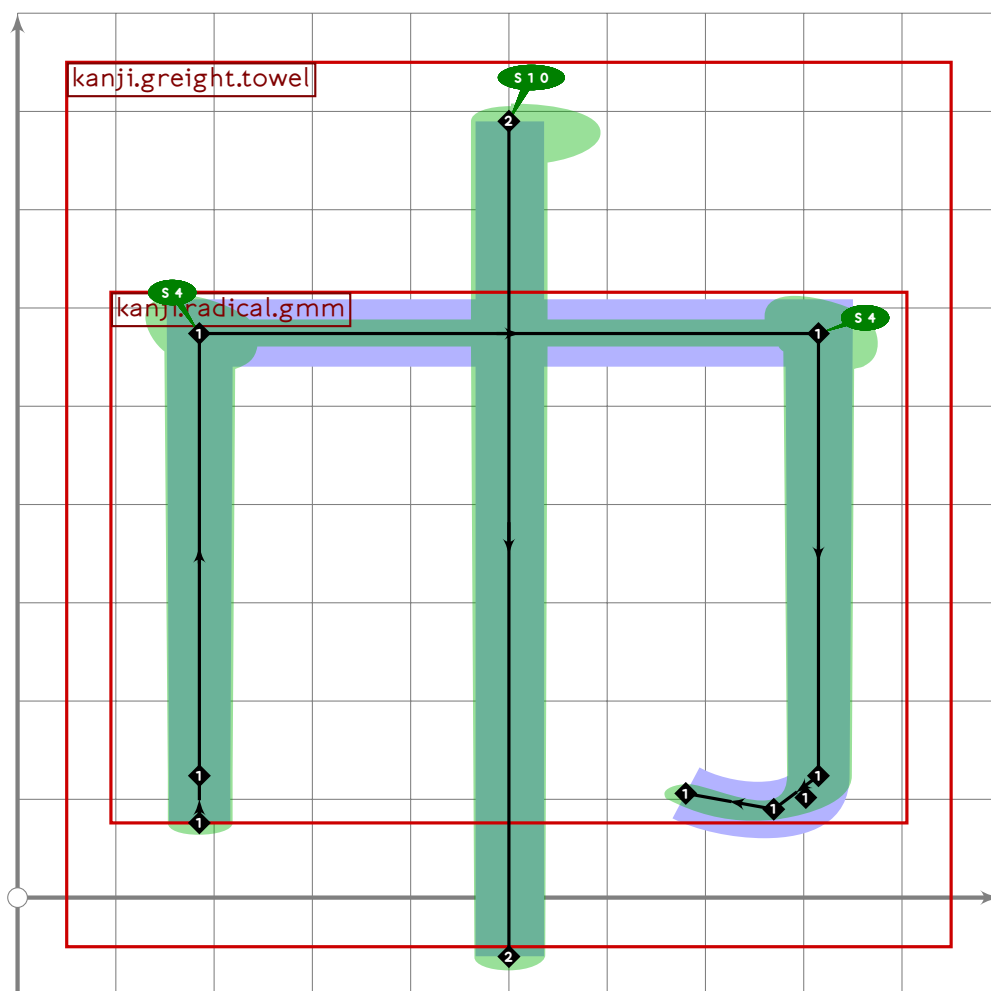


```

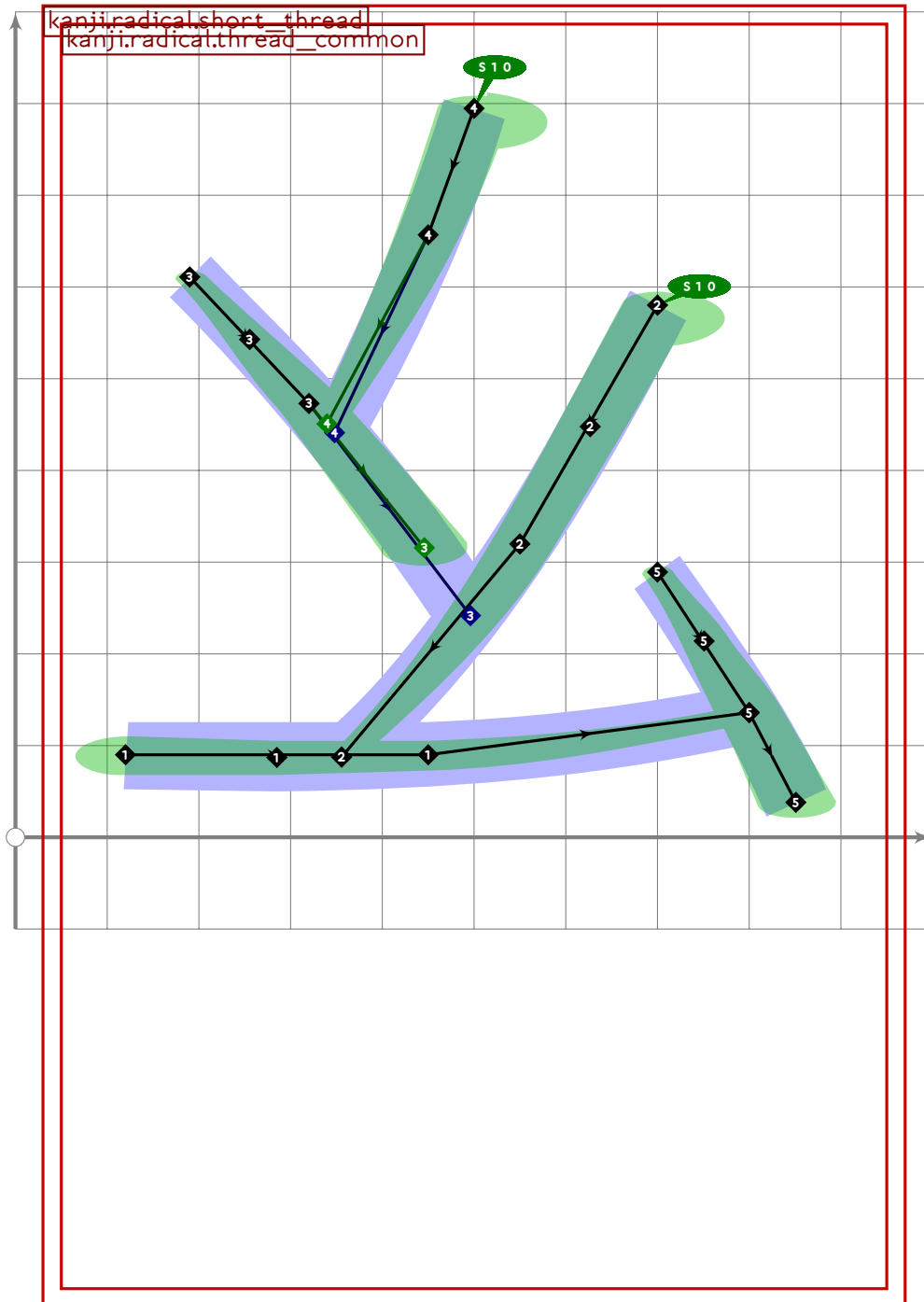
259 % ko/ki "self" (dict. says also "snake" but almost no words use it that way)
260 beginsuglyph("uni2F30";48);
261   kanji.grsix.self;
262   tsu_render;
263 endsuglyph;
264

```

U+2F31
tsuku.uni2F31



```
265 % kin/oo/ha "towel" or "hanging scroll"
266 begintsuglyph("uni2F31";49);
267   kanji.greight.towel;
268   tsu_render;
269 endtsuglyph;
270
```

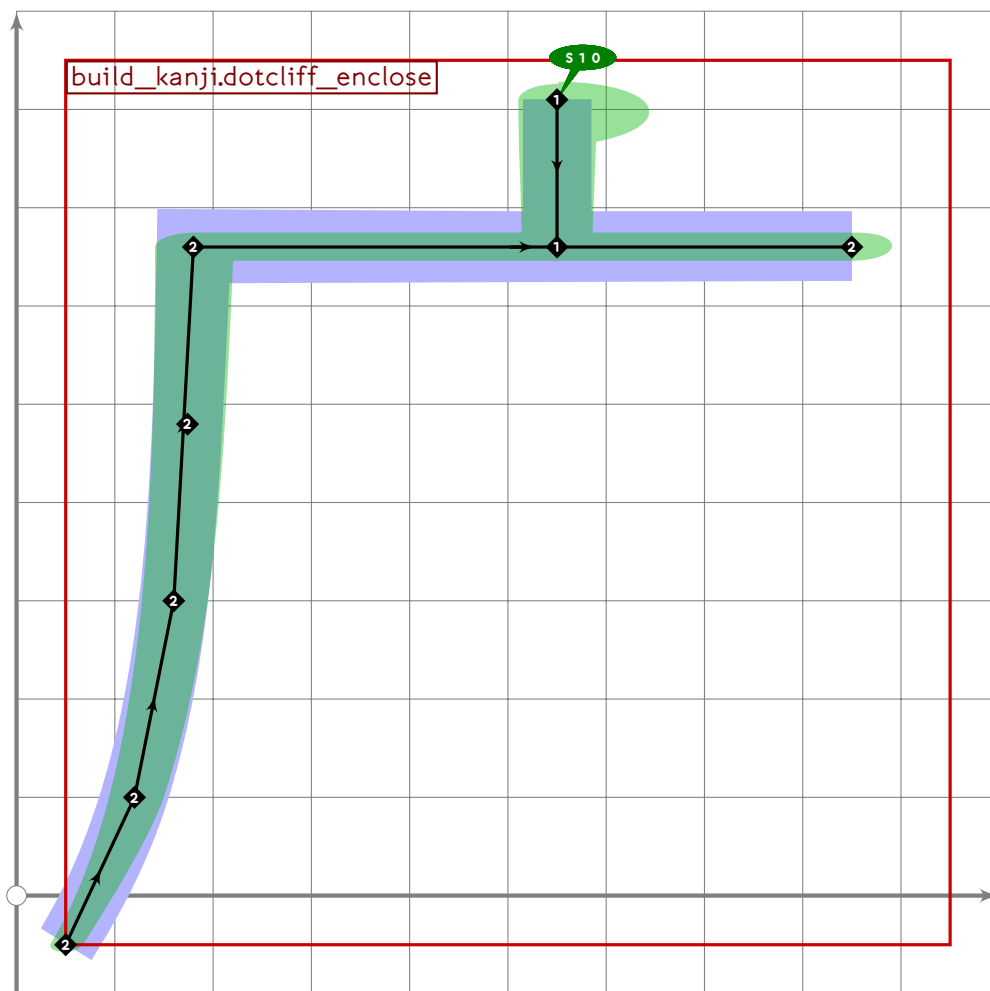


```

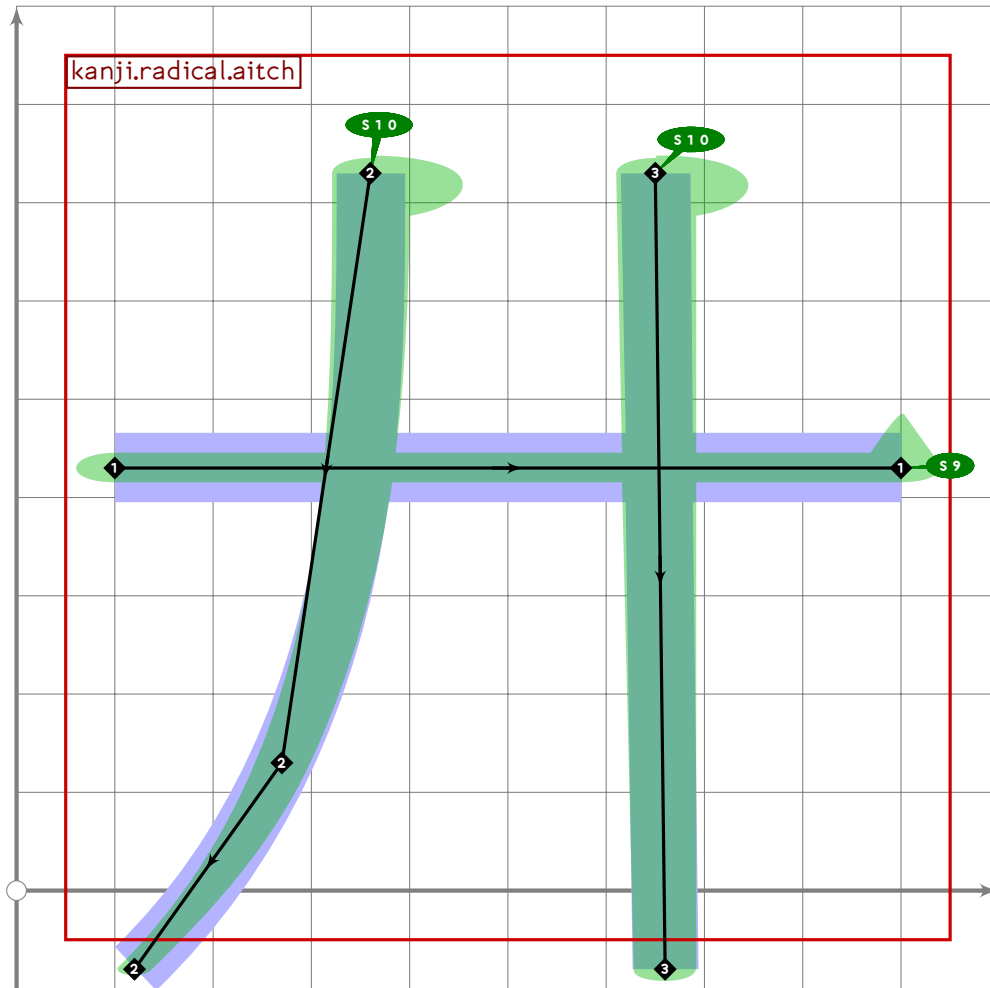
271 % you/chiisai "short thread radical"
272 begintsuglyph("uni2F33";51);
273   kanji.radical.short_thread;
274   tsu_render;
275 endtsuglyph;
276

```

U+2F34
tsuku.uni2F34



```
277 % madare "dotted cliff radical"
278 begintsuglyph("uni2F34";52);
279   build_kanji.dotcliff_enclose();
280   tsu_render;
281 endtsuglyph;
282
```

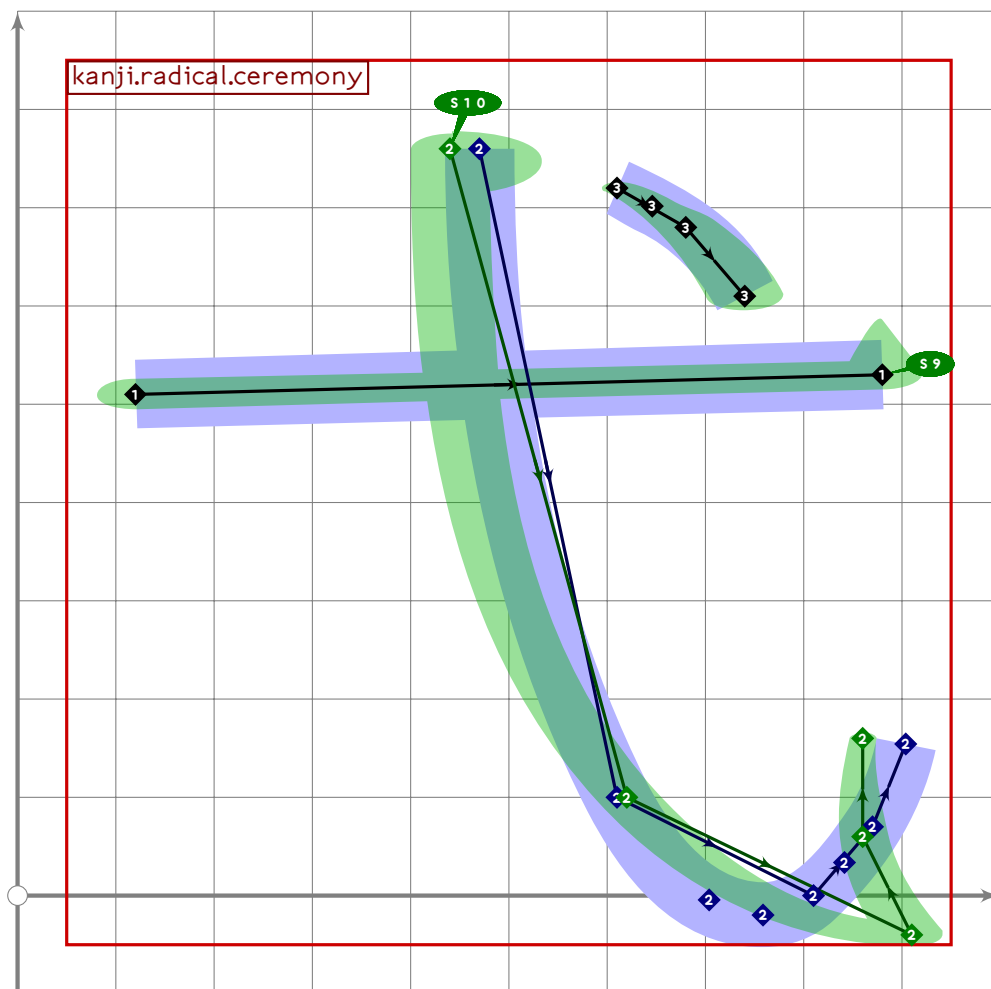


```

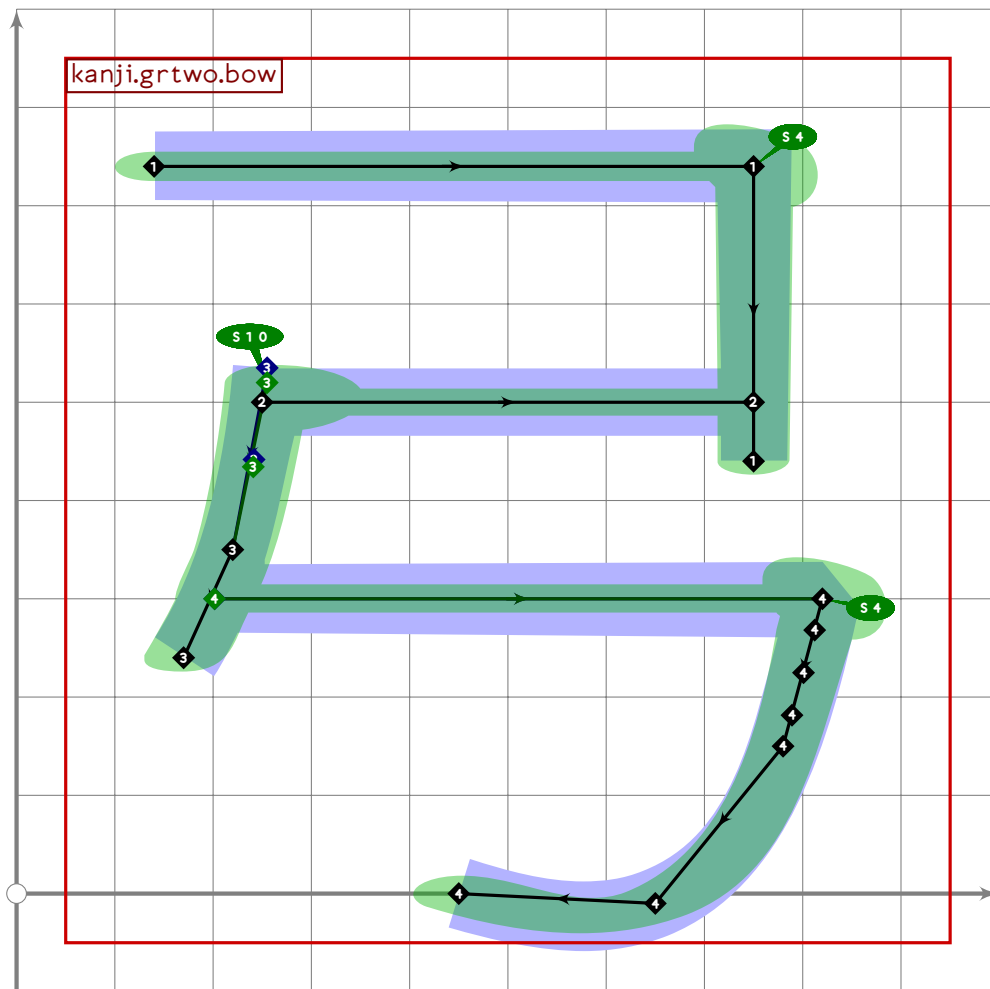
283 % extra
284 begintsuglyph("uni2F36",54);
285   kanji.radical.aitch;
286   tsu_render;
287 endtsuglyph;
288

```

U+2F37
tsuku.uni2F37



```
289 % yoku/iguromi "ceremony radical"
290 begintsuglyph("uni2F37";55);
291   kanji.radical.ceremony;
292   tsu_render;
293 endtsuglyph;
294
```

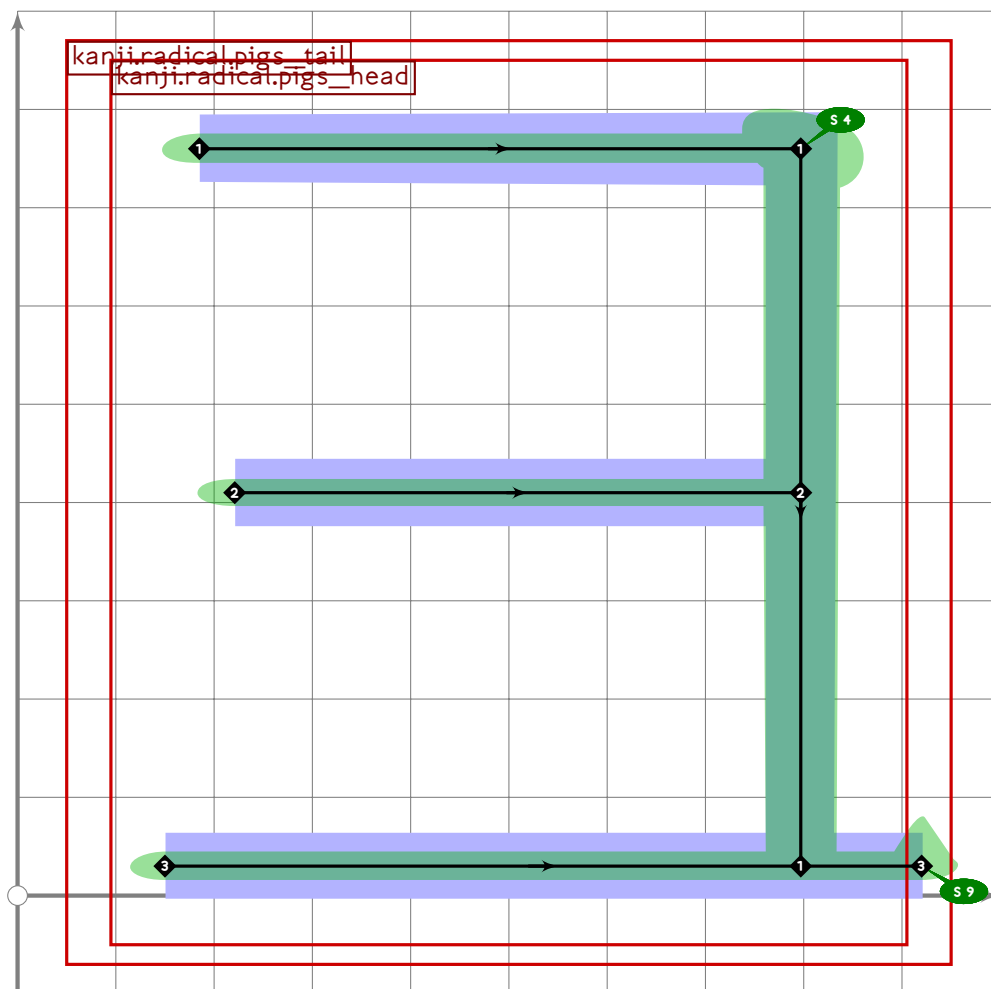



```

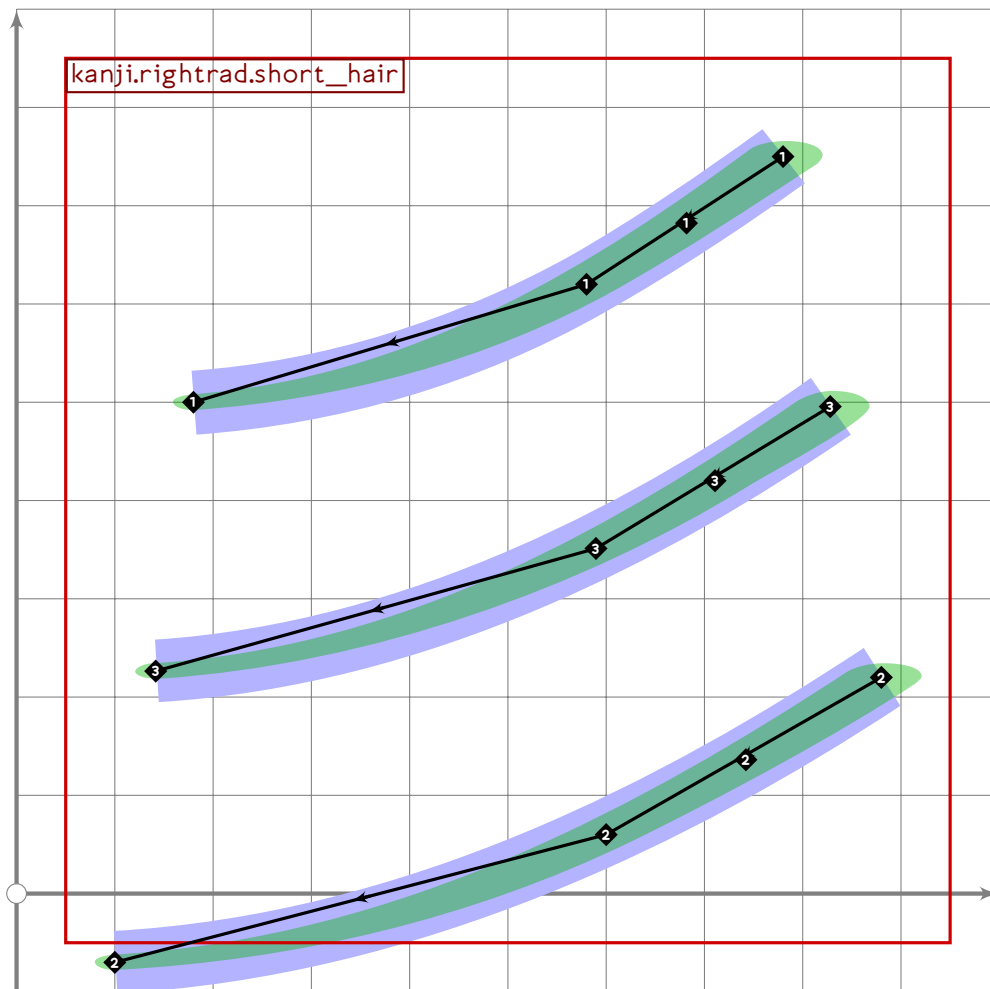
295 % kyuuyumi "bow" (projectile weapon)
296 begintsuglyph("uni2F38",56);
297   kanji.grtwo.bow;
298   tsu_render;
299 endtsuglyph;
300

```

U+2F39
tsuku.uni2F39



```
301 % needed for lots of other things, rare by itself
302 beginsuglyph("uni2F39";57);
303   kanji.radical.pigs_tail;
304   tsu_render;
305 endsuglyph;
306
```

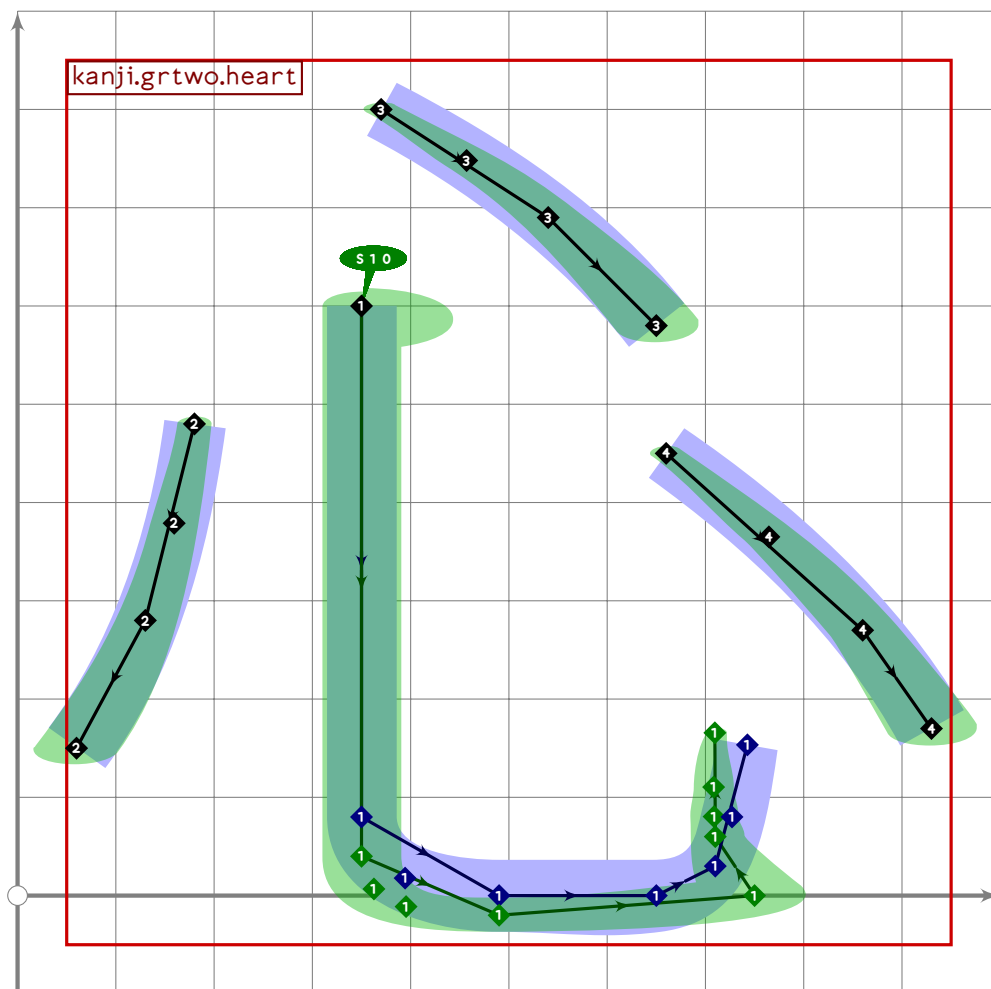


```

307 % san "short hair radical"
308 begintsuglyph("uni2F3A";58);
309   kanji.rightrad.short_hair;
310   tsu_render;
311 endtsuglyph;
312

```

U+2F3C
tsuku.uni2F3C



```

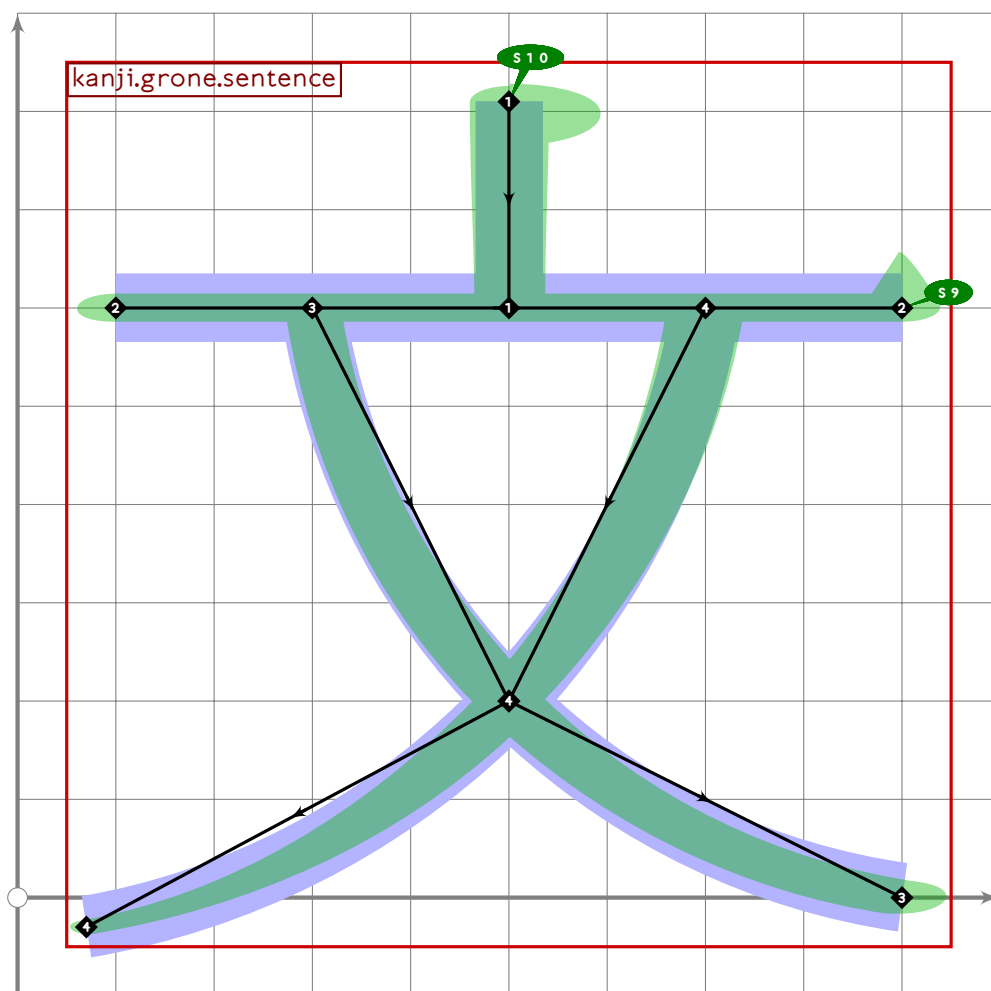
313 % shin/kokoro "heart"
314 begintsuglyph("uni2F3C";60);
315   kanji.grtwo.heart;
316   tsu_render;
317 endtsuglyph;
318

```

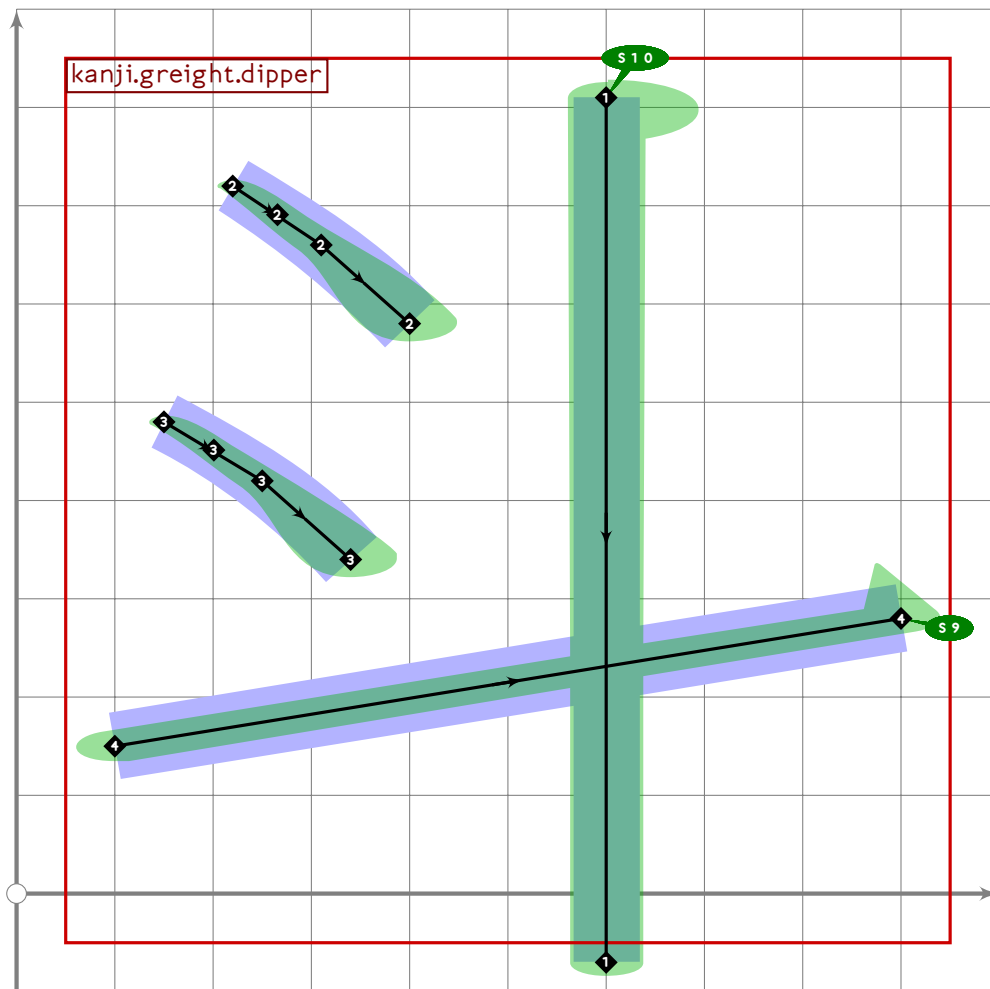


324

U+2F42
tsuku.uni2F42



```
325 % bun/fumi "sentence"  
326 begintsuglyph("uni2F42",66);  
327   kanji.grone.sentence;  
328   tsu_render;  
329 endtsuglyph;  
330
```

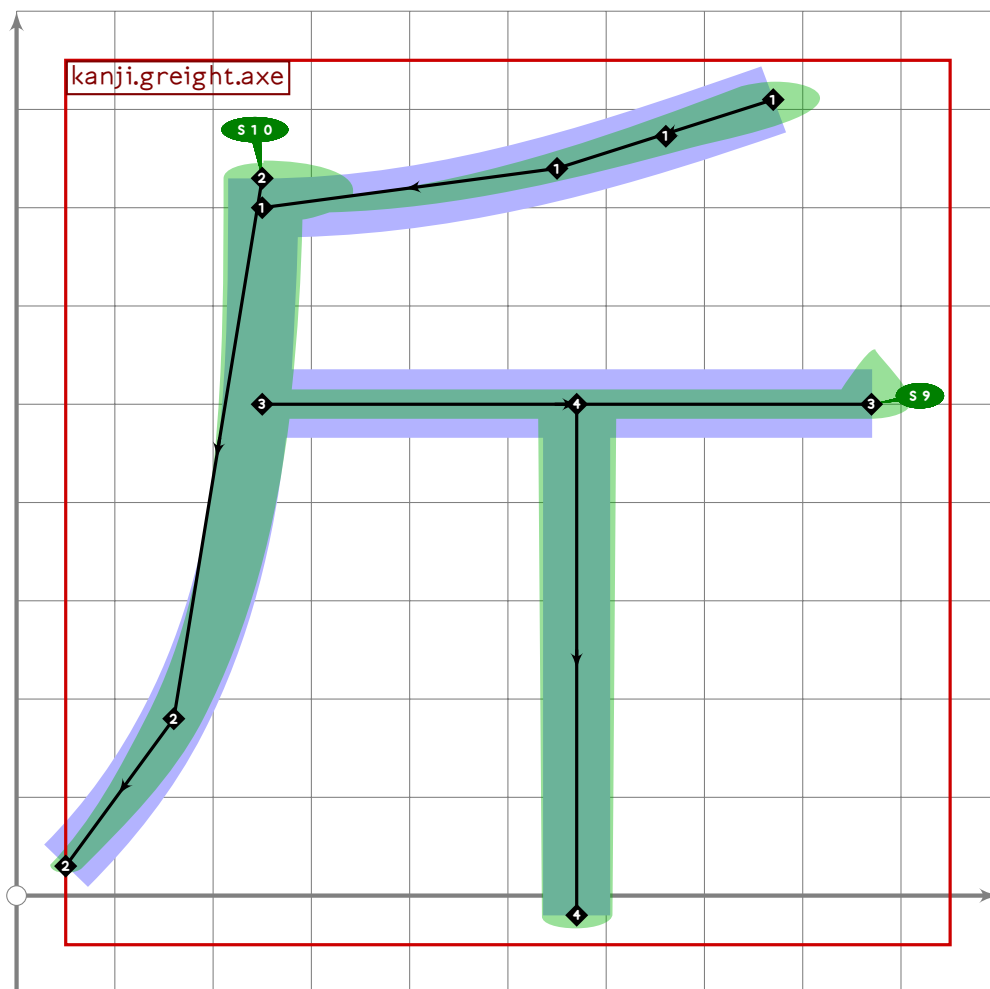


```

331 % to/masu "dipper"
332 begintsuglyph("uni2F43",67);
333   kanji.greight.dipper;
334   tsu_render;
335 endtsuglyph;
336

```

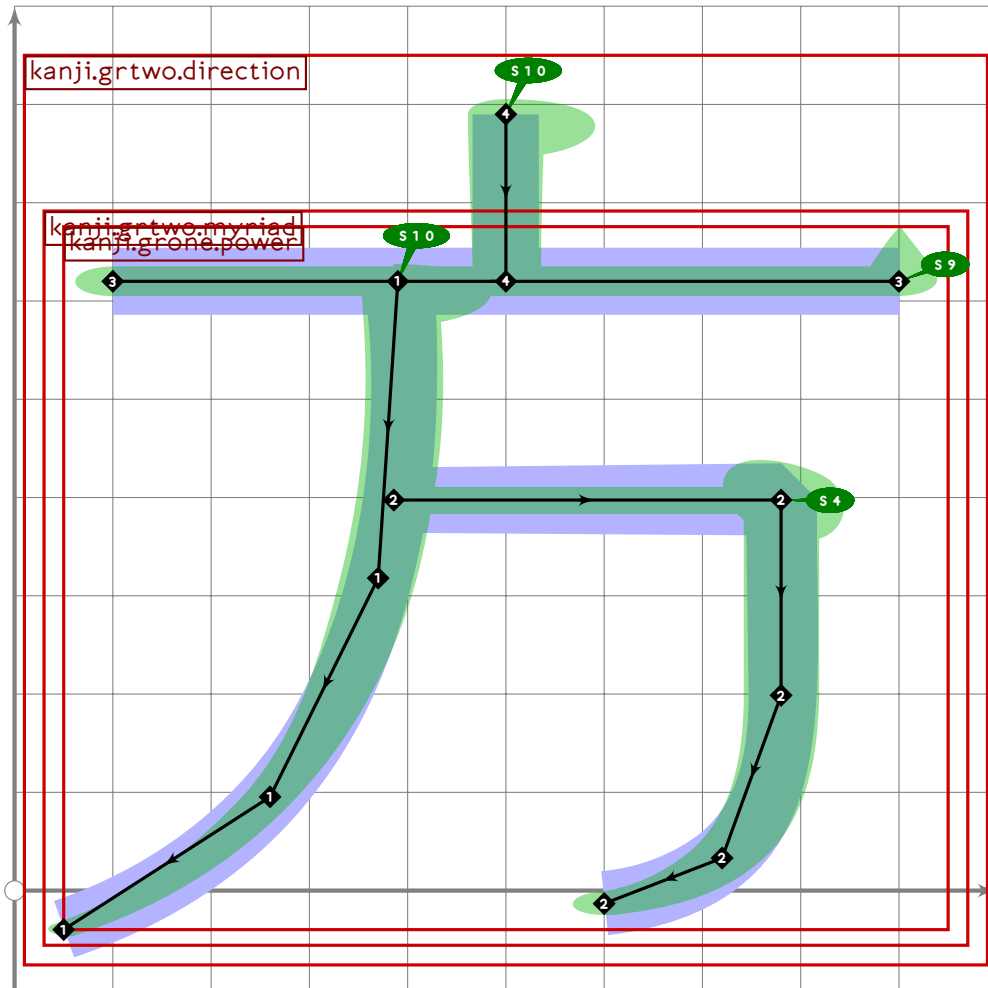
U+2F44
tsuku.uni2F44



```

337 % kin/ono "axe"
338 begintsuglyph("uni2F44";68);
339   kanji.greight.axe;
340   tsu_render;
341 endtsuglyph;
342

```

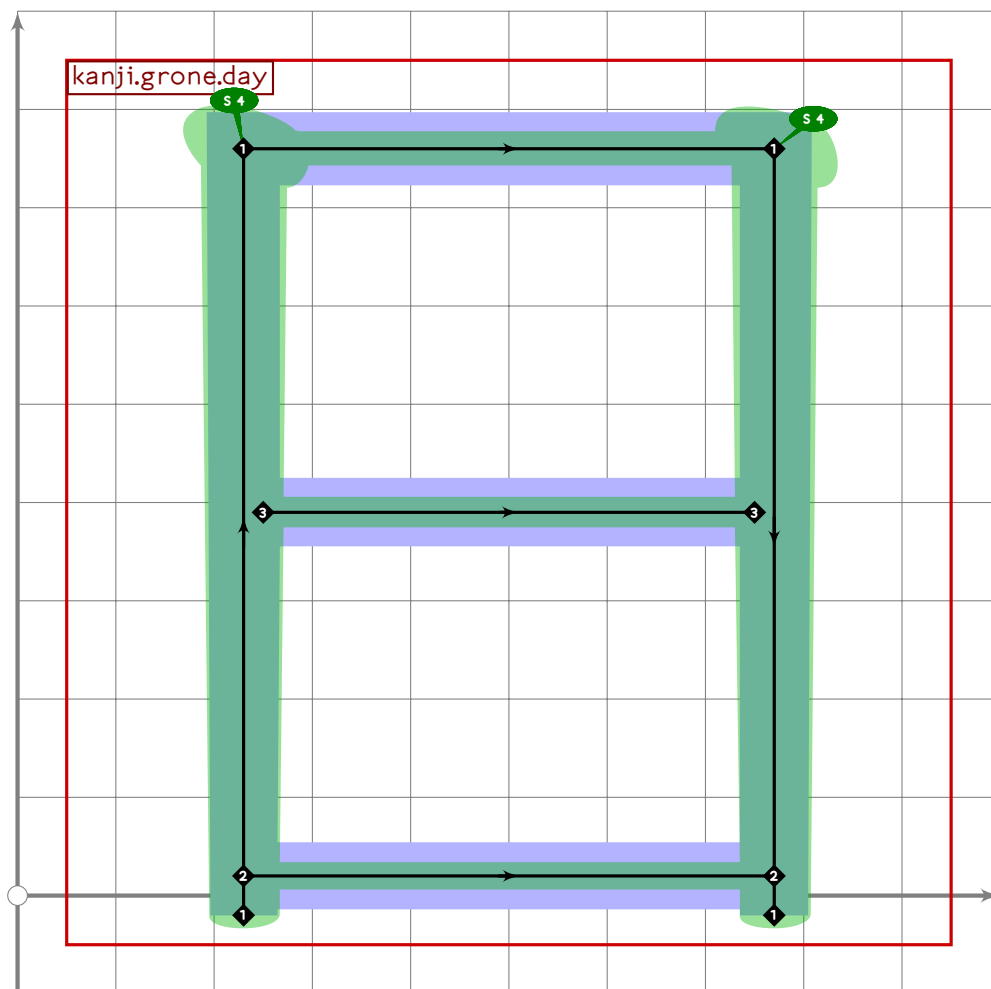



```

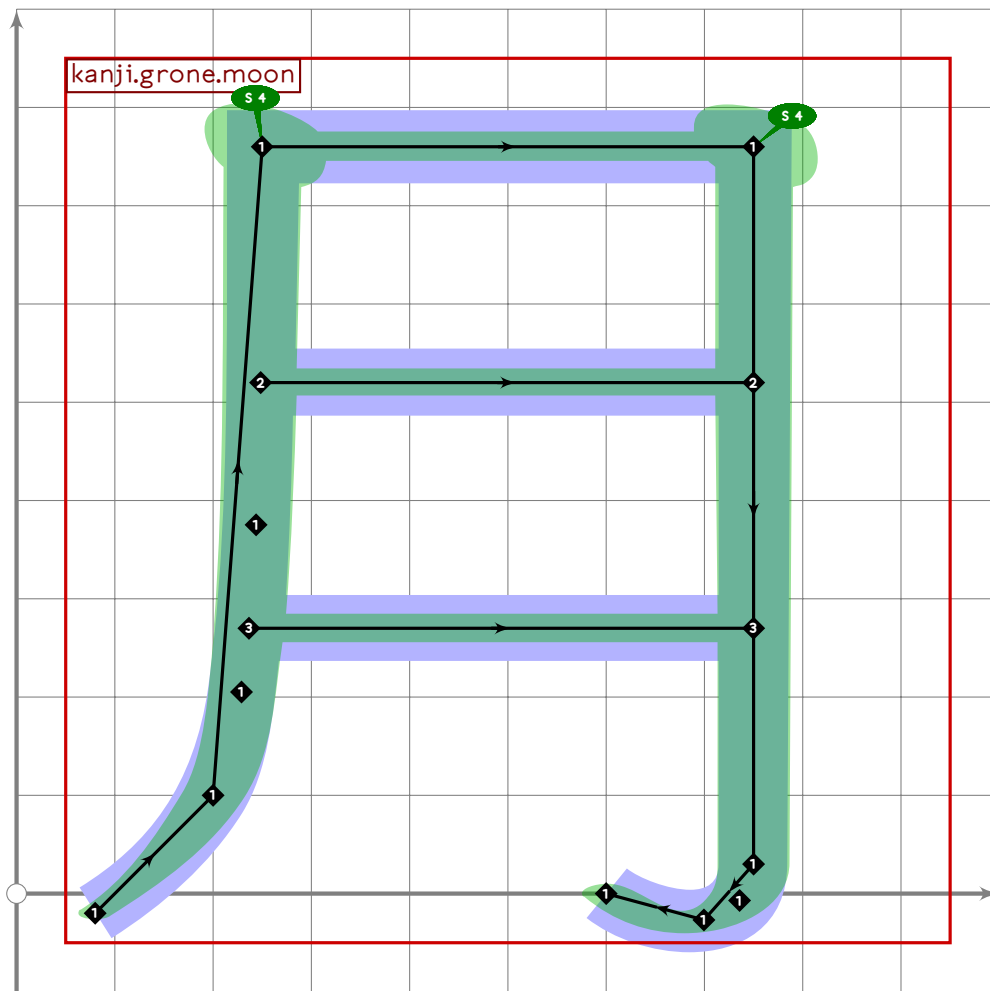
343 % hou/kata "direction" or "how to do it"
344 beginsuglyph("uni2F45",69);
345   kanji.grtvo.direction;
346   tsu_render;
347 endsuglyph;
348

```

U+2F47
tsuku.uni2F47

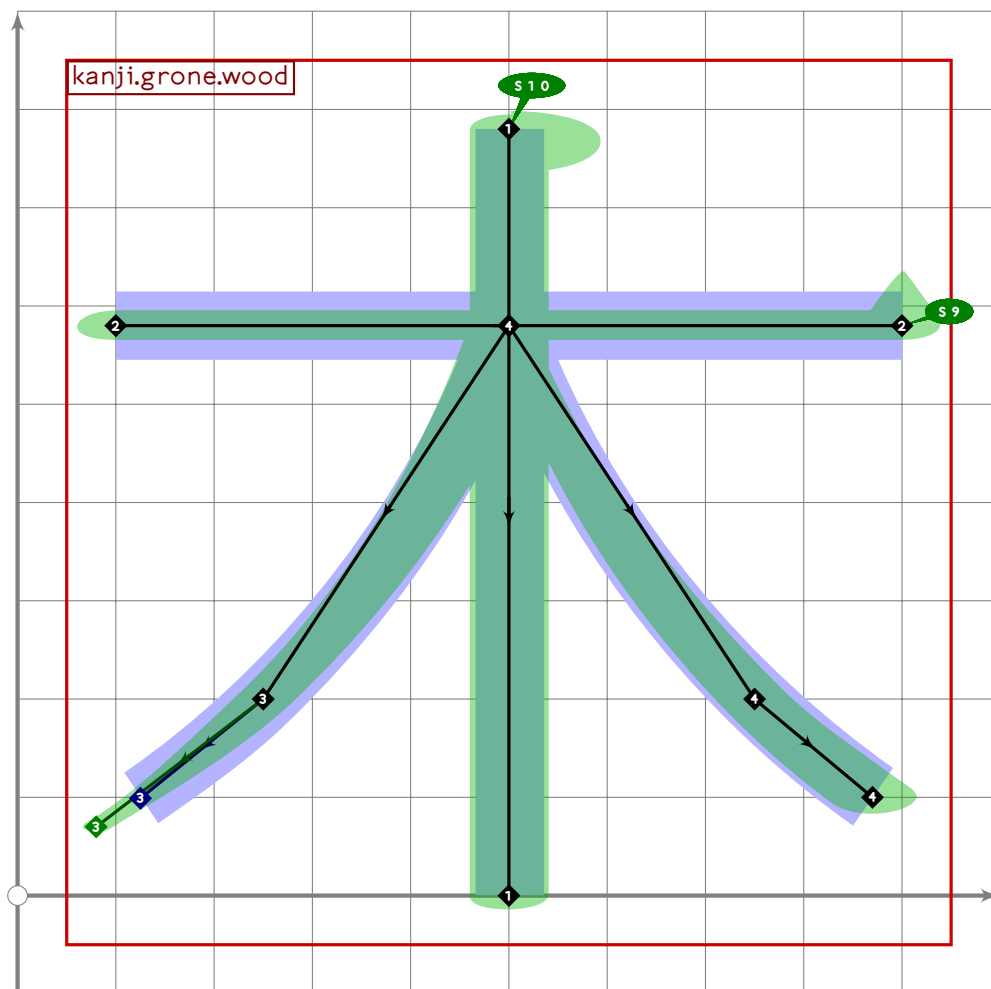


```
349 % hi/nichi "day"  
350 begintsuglyph("uni2F47";71);  
351   kanji.grone.day;  
352   tsu_render;  
353 endtsuglyph;  
354
```

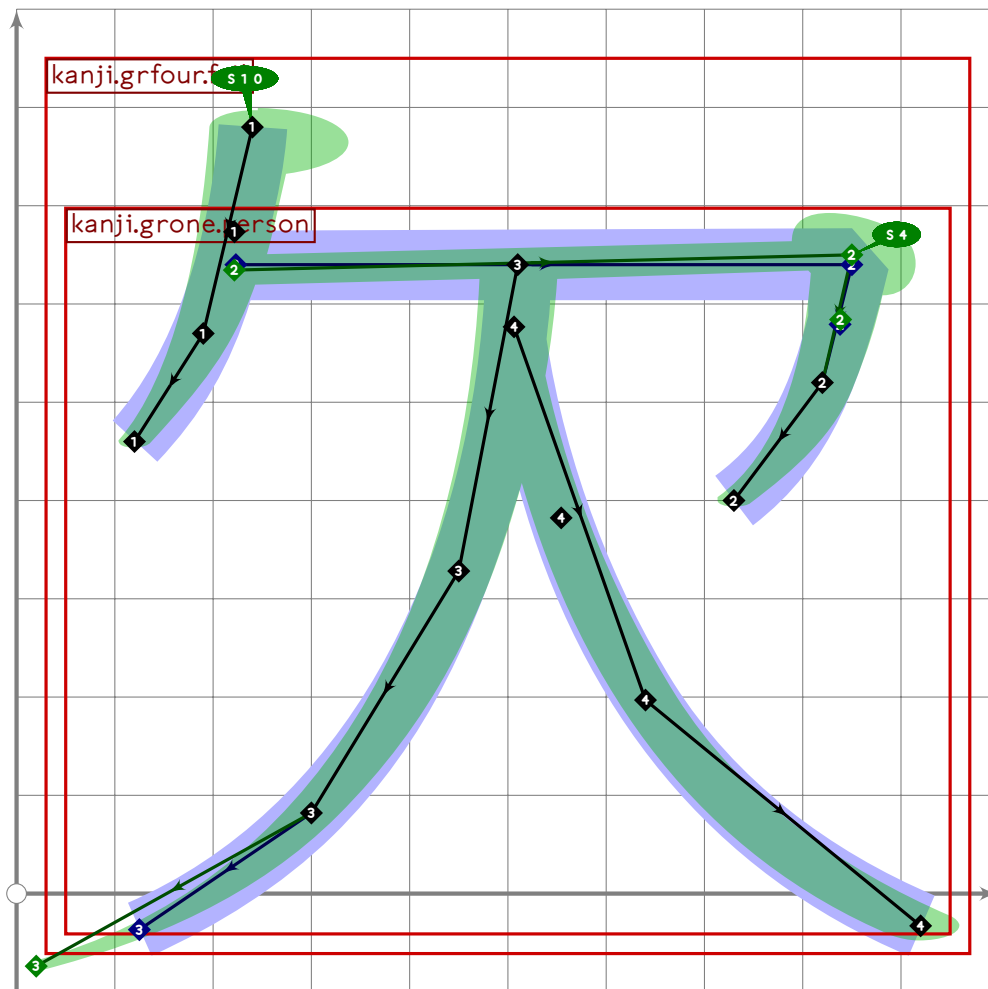


```
355 % tsuki/getsu "moon"
356 begintsuglyph("uni2F49",73);
357   kanji.grone.moon;
358   tsu_render;
359 endtsuglyph;
360
```

U+2F4A
tsuku.uni2F4A



```
361 % ki "wood"
362 begintsuglyph("uni2F4A",74);
363   kanji.grone.wood;
364   tsu_render;
365 endtsuglyph;
366
```

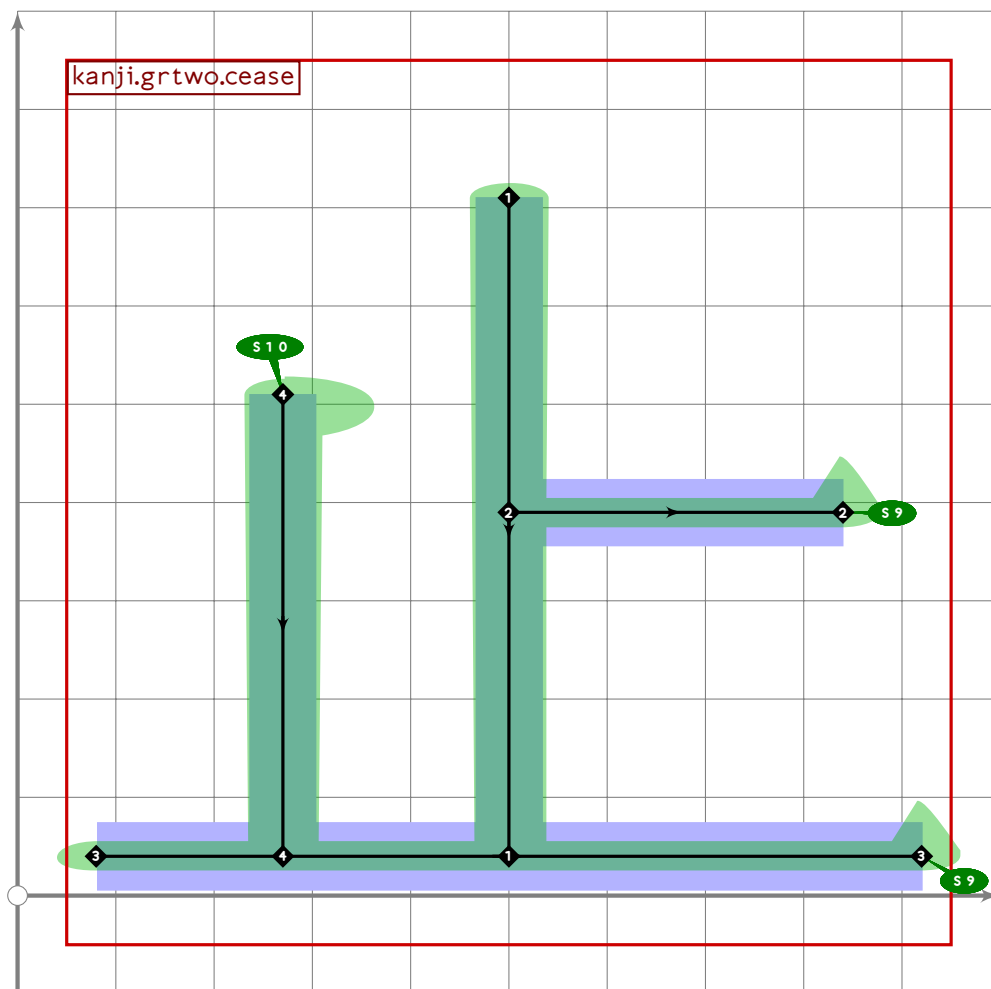


```

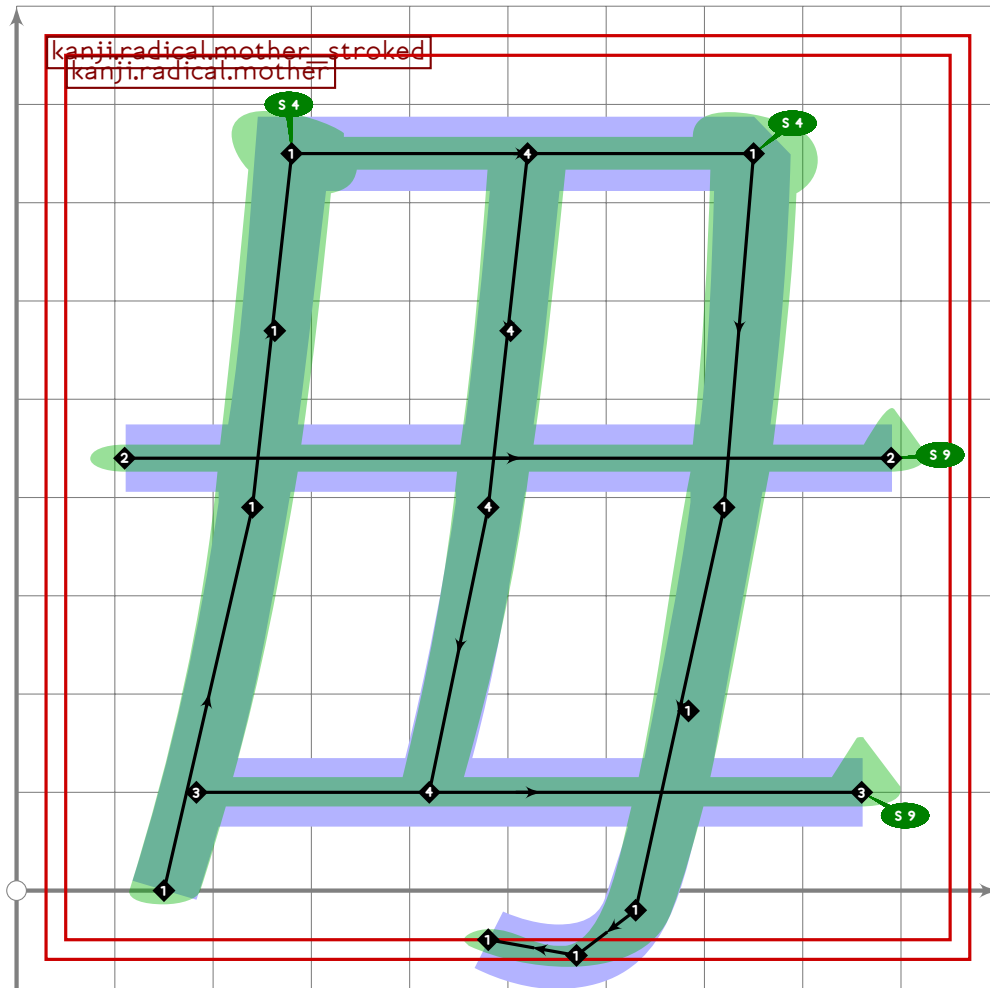
367 % ketsu/ka/akubi "fail" or "yawn"
368 begintsuglyph("uni2F4B";75);
369 kanji.grfour.fail;
370 tsu_render;
371 endtsuglyph;
372

```

U+2F4C
tsuku.uni2F4C



```
373 % shi/toma "stop"  
374 begintsuglyph("uni2F4C";76);  
375   kanji.grtwo.cease;  
376   tsu_render;  
377 endtsuglyph;  
378
```

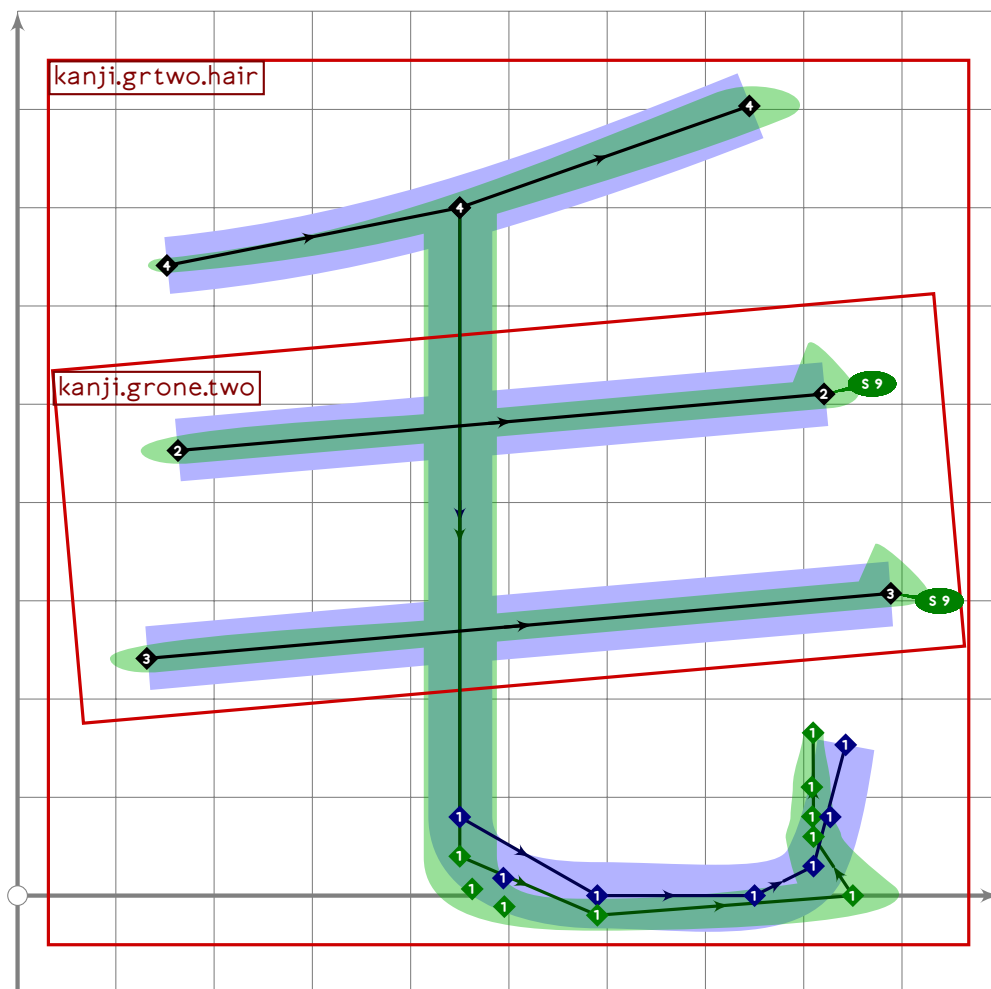


```

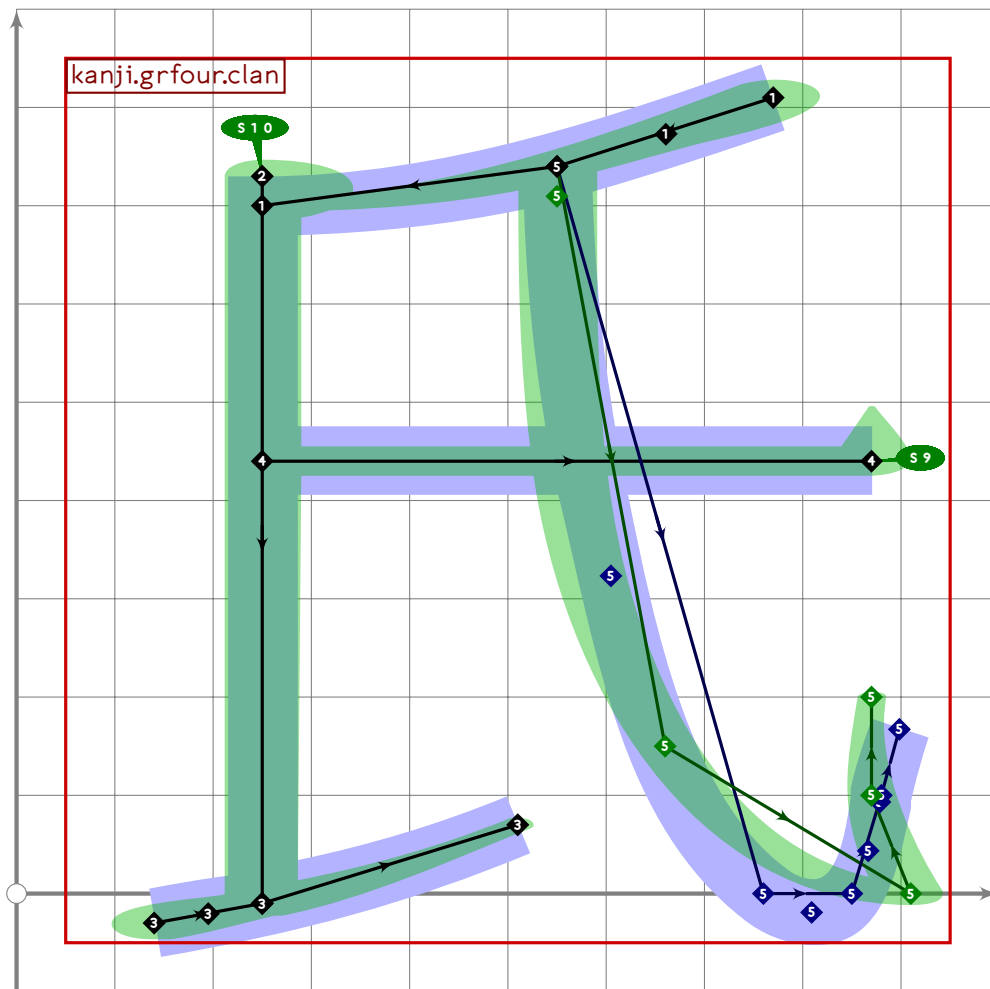
379 % extra: mother radical, stroked version
380 begintsuglyph("uni2F4F";79);
381   kanji.radical.mother_stroked;
382   tsu_render;
383 endtsuglyph;
384

```

U+2F51
tsuku.uni2F51



```
385 % mou/ke "hair"  
386 begintsuglyph("uni2F51";81);  
387   kanji.grtwo.hair;  
388   tsu_render;  
389 endtsuglyph;  
390
```

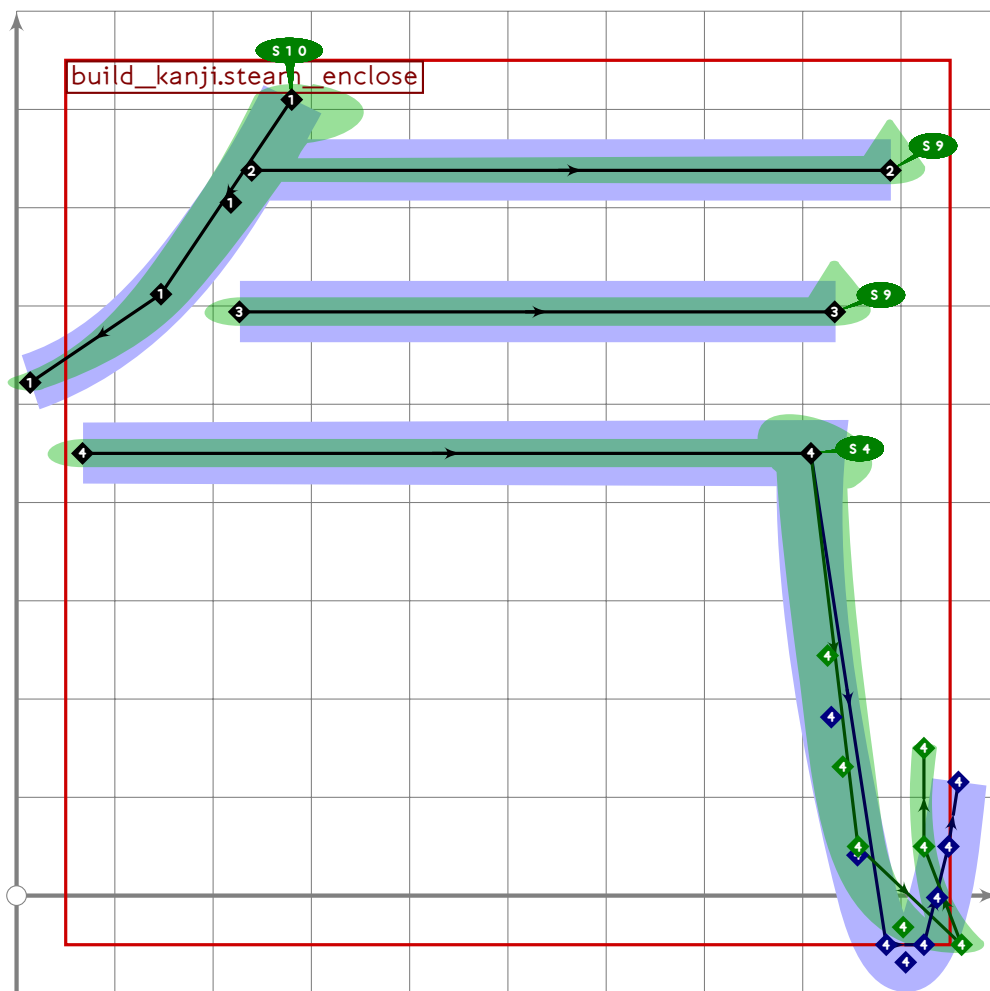



```

391 % shi/uji "clan"
392 begintsuglyph("uni2F52";82);
393   kanji.grfour.clan;
394   tsu_render;
395 endtsuglyph;
396

```

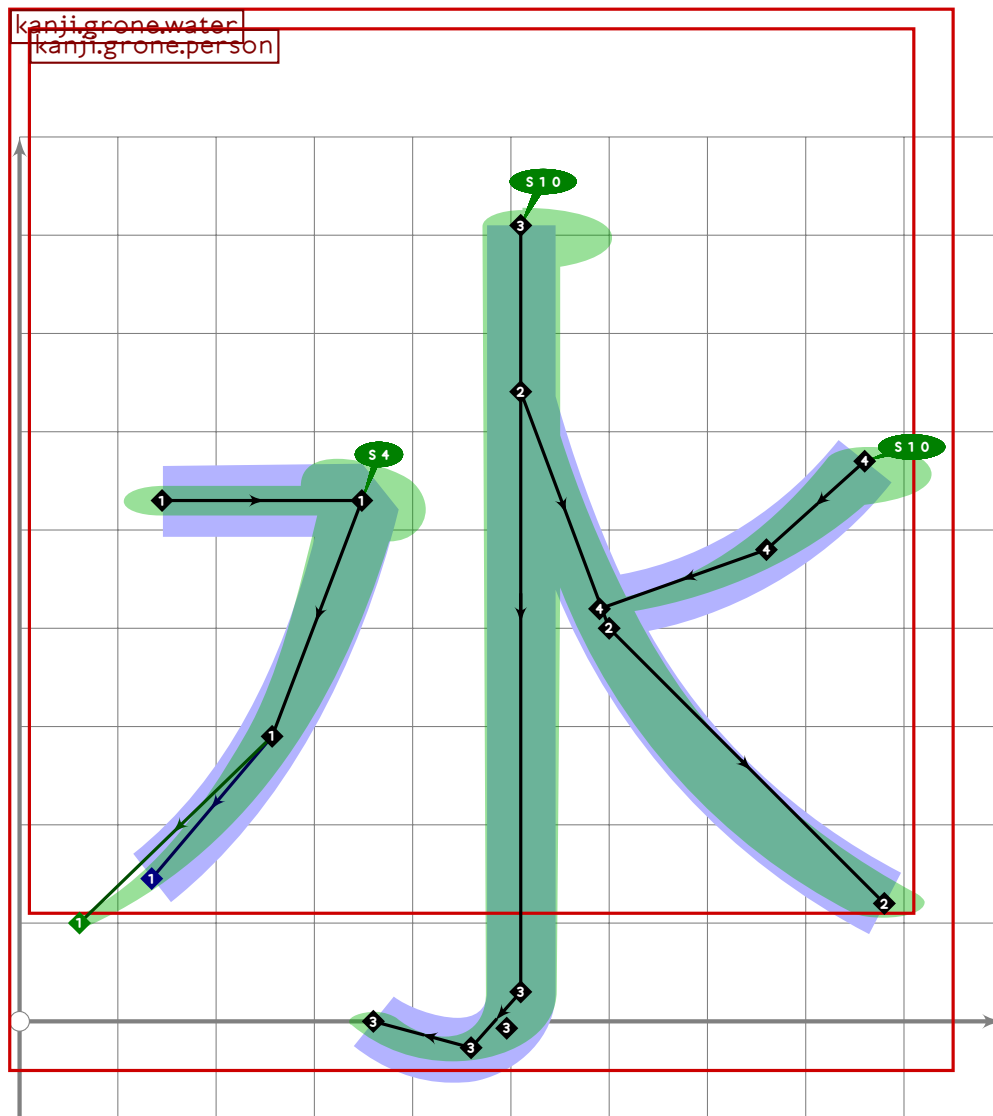
U+2F53
tsuku.uni2F53



```

397 % sei/tada/machi "correct"
398 begintsuglyph("uni2F53";83);
399   build_kanji.steam_enclose((700,400))();
400   tsu_render;
401 endtsuglyph;
402

```

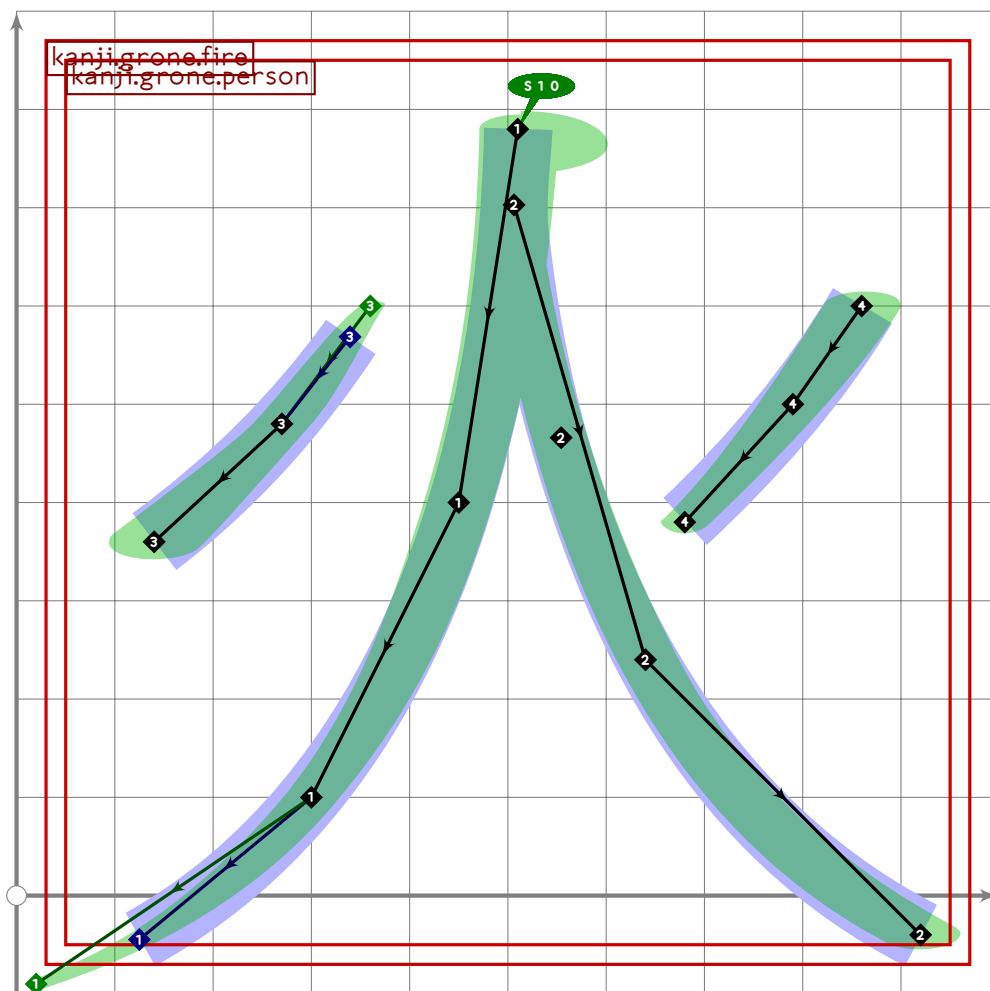


```

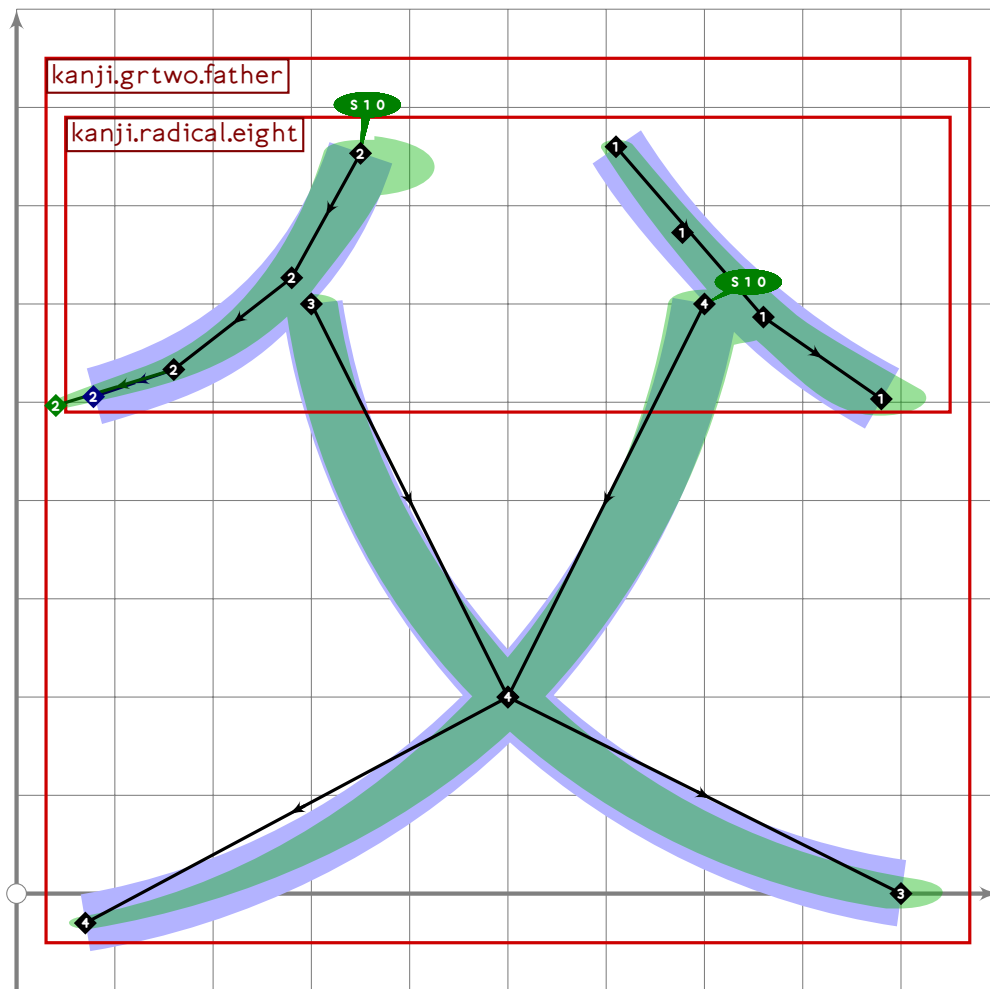
403 % sui/mizu "water"
404 begintsuglyph("uni2F54";84);
405   kanji.grone.water;
406   tsu_render;
407 endtsuglyph;
408

```

U+2F55
tsuku.uni2F55



```
409 % hi/ka "fire"  
410 begintsuglyph("uni2F55";85);  
411   kanji.grone.fire;  
412   tsu_render;  
413 endsuglyph;  
414
```

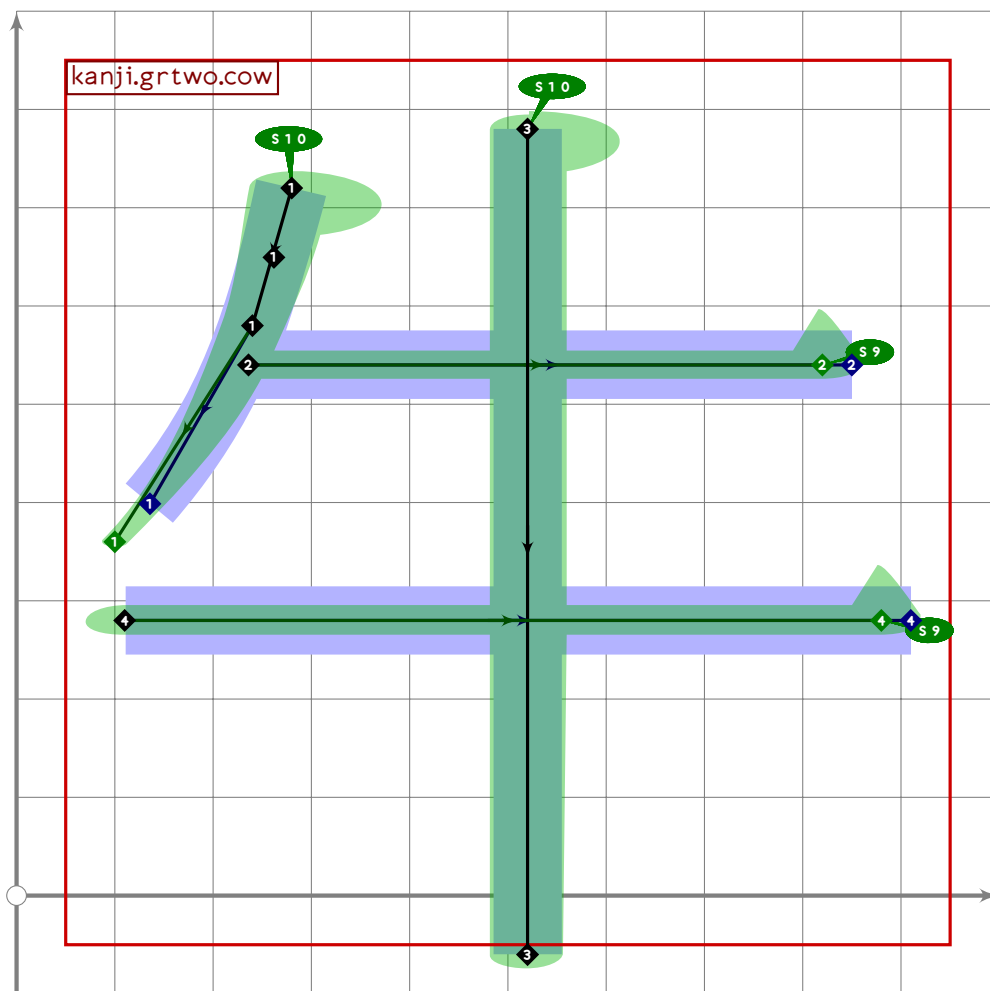


```

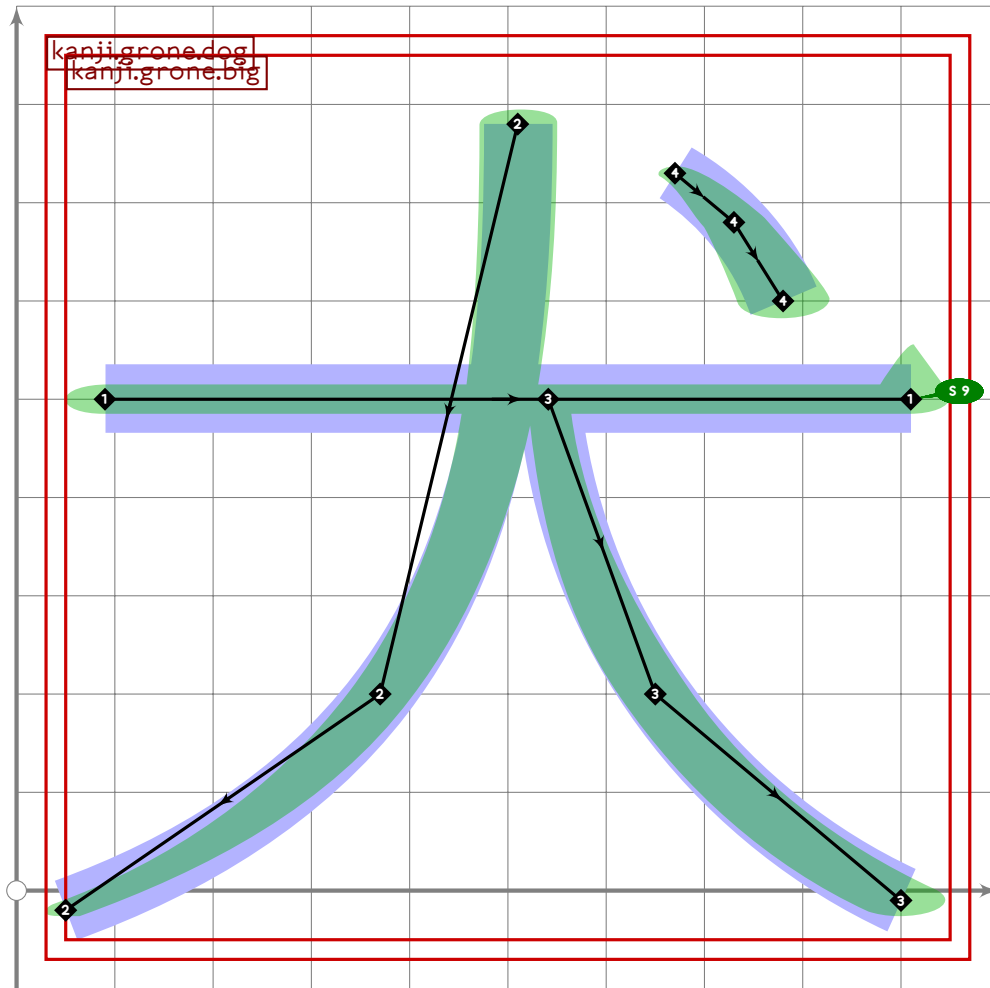
415 % chichi "father"
416 begintsuglyph("uni2F57";87);
417   kanji.grtwo.father;
418   tsu_render;
419 endtsuglyph;
420

```

U+2F5C
tsuku.uni2F5C



```
421 % kyu/ushi "cow"
422 begintsuglyph("uni2F5C";92);
423   kanji.grtwo.cow;
424   tsu_render;
425 endtsuglyph;
426
```

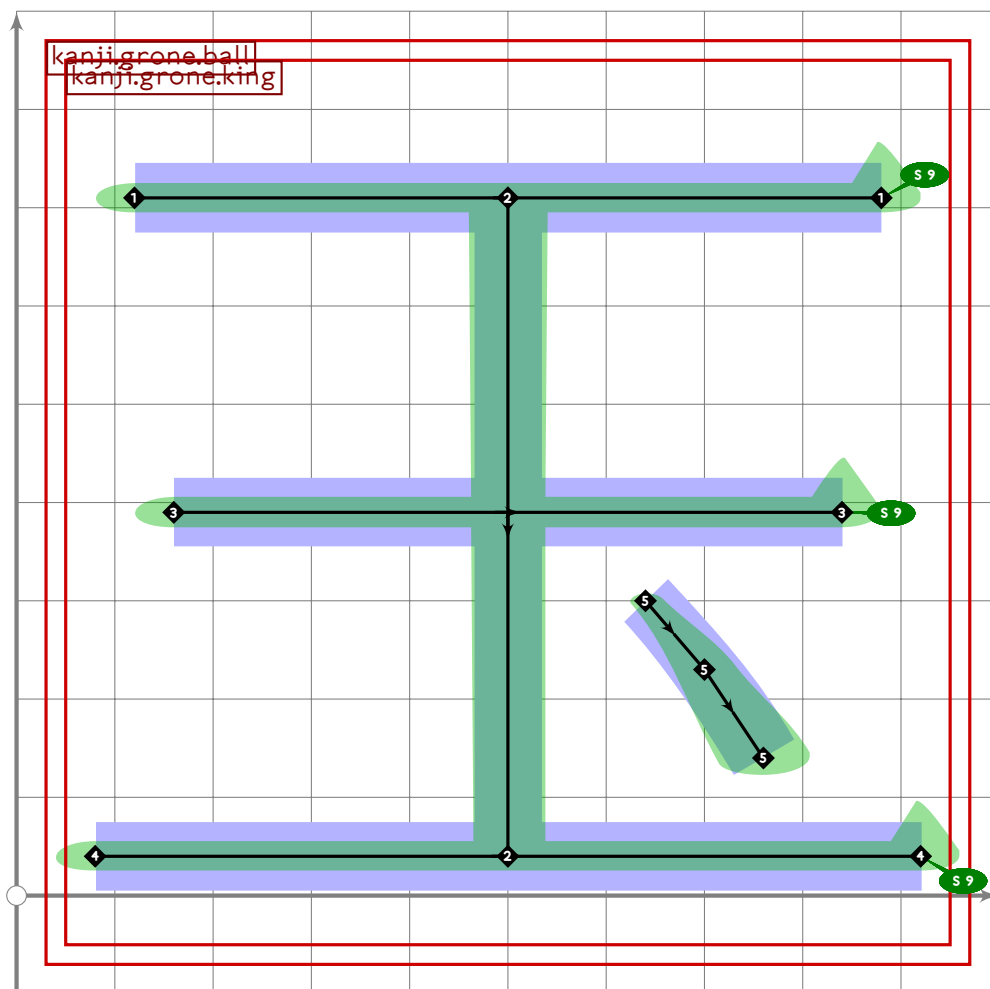


```

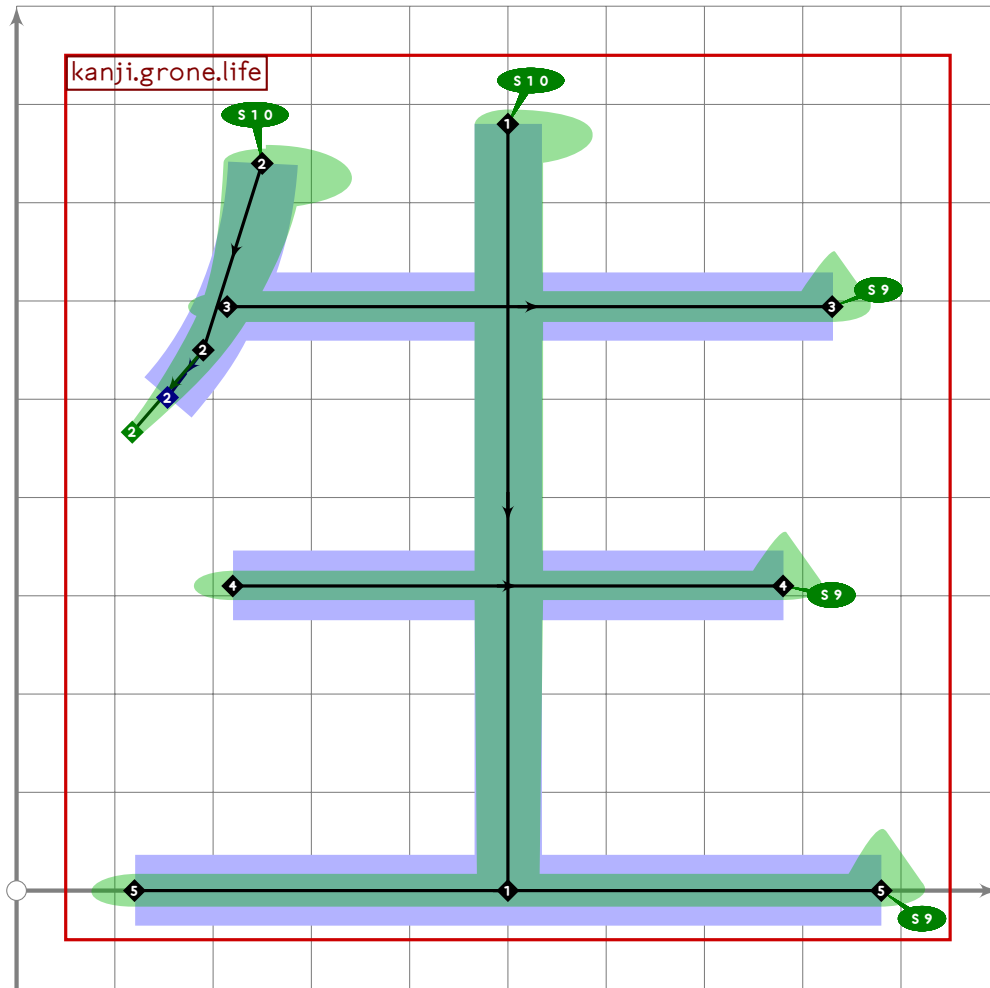
427 % inu "dog"
428 begintsuglyph("uni2F5D";93);
429   kanji.grone.dog;
430   tsu_render;
431 endtsuglyph;
432

```

U+2F5F
tsuku.uni2F5F



```
433 % gyoku/tama "ball" or "precious"  
434 begintsuglyph("uni2F5F";95);  
435   kanji.grone.ball;  
436   tsu_render;  
437 endtsuglyph;  
438
```

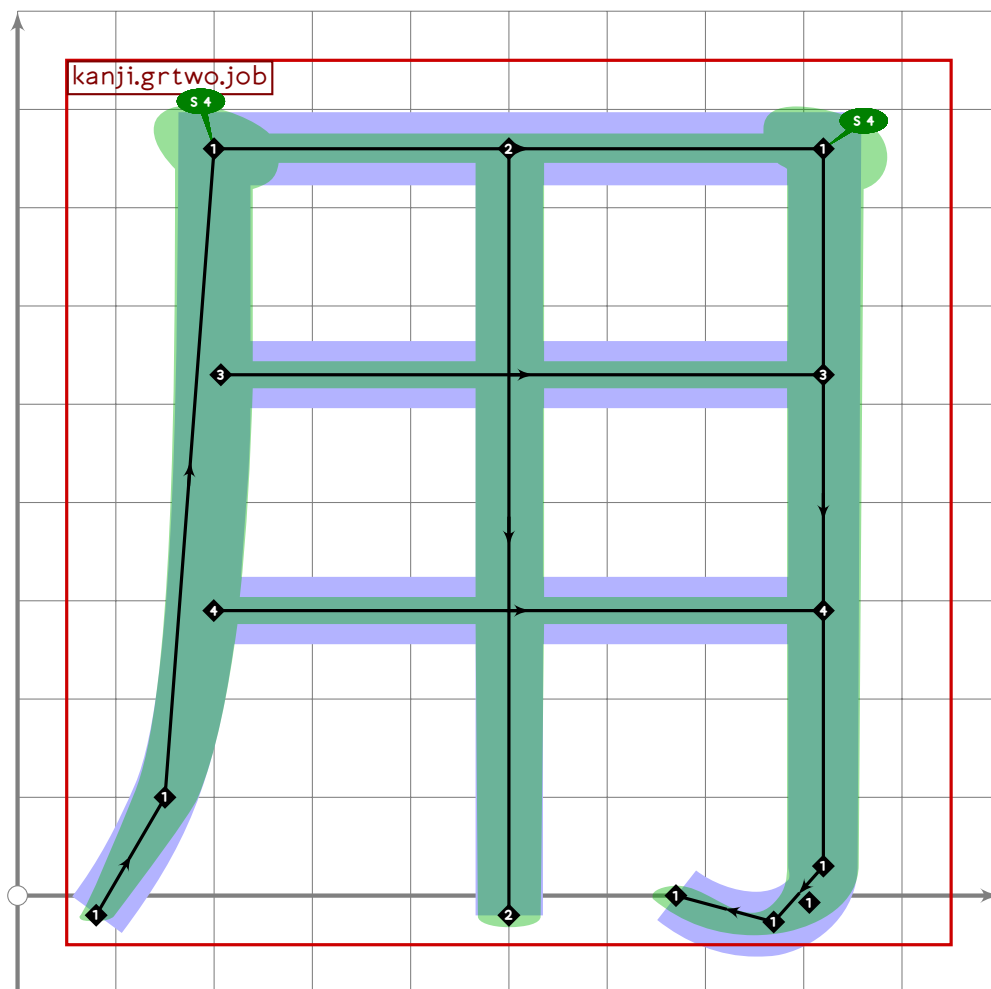



```

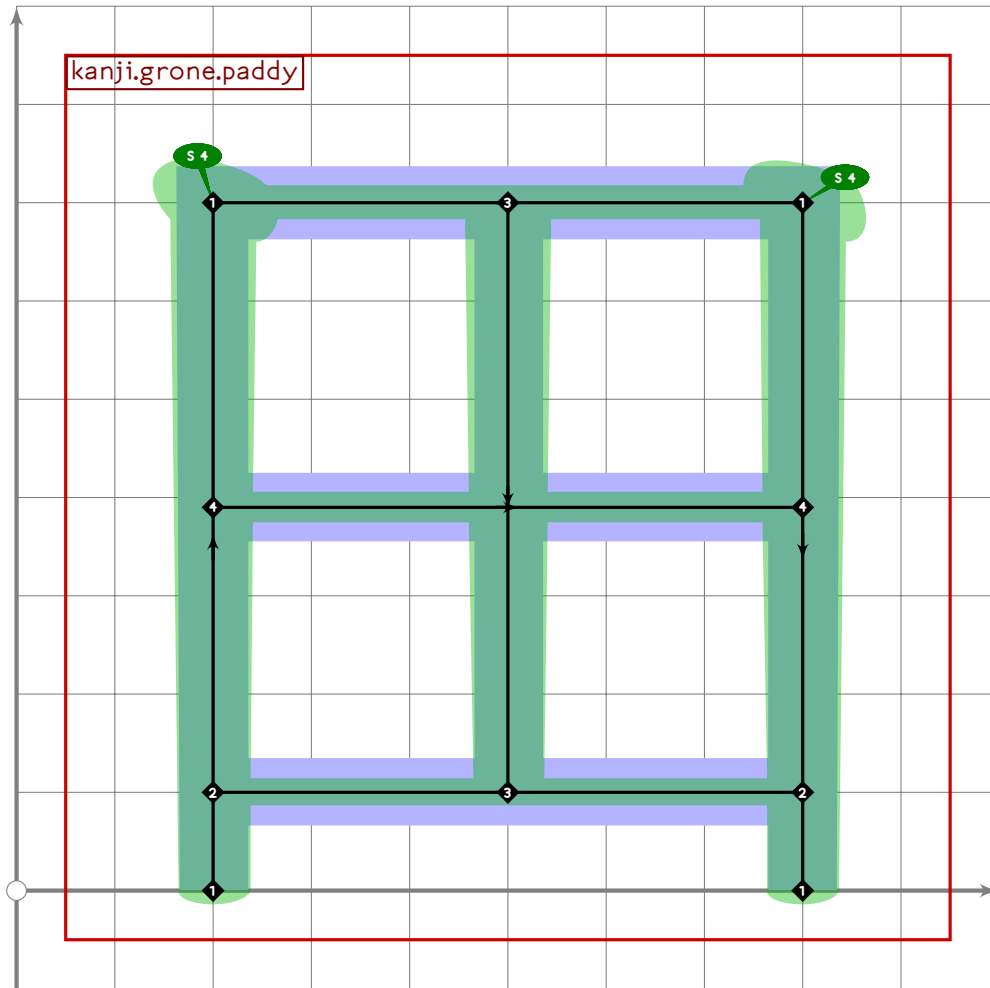
439 % sei/ki "life"
440 begintsuglyph("uni2F63";99);
441   kanji.grone.life;
442   tsu_render;
443 endtsuglyph;
444

```

U+2F64
tsuku.uni2F64

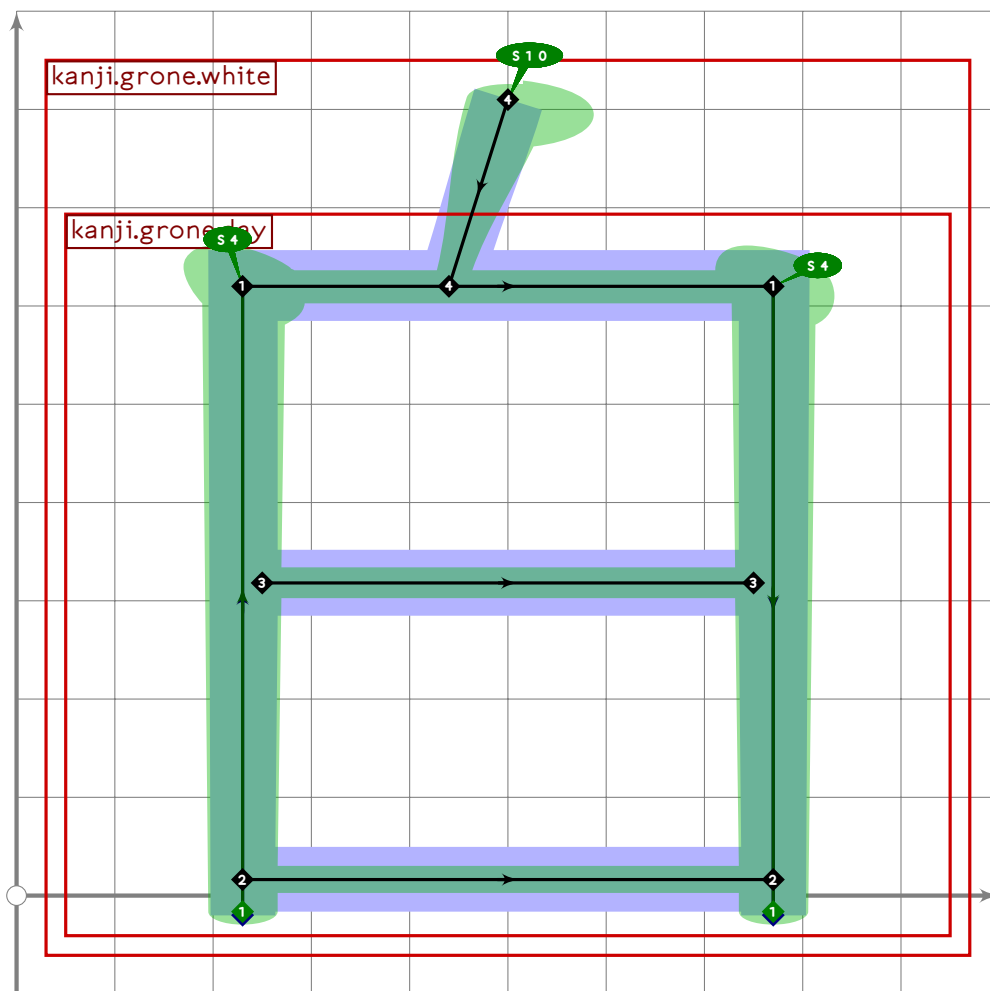


```
445 % you/mochi "job"  
446 begintsuglyph("uni2F64";100);  
447   kanji.grtwo.job;  
448   tsu_render;  
449 endtsuglyph;  
450
```

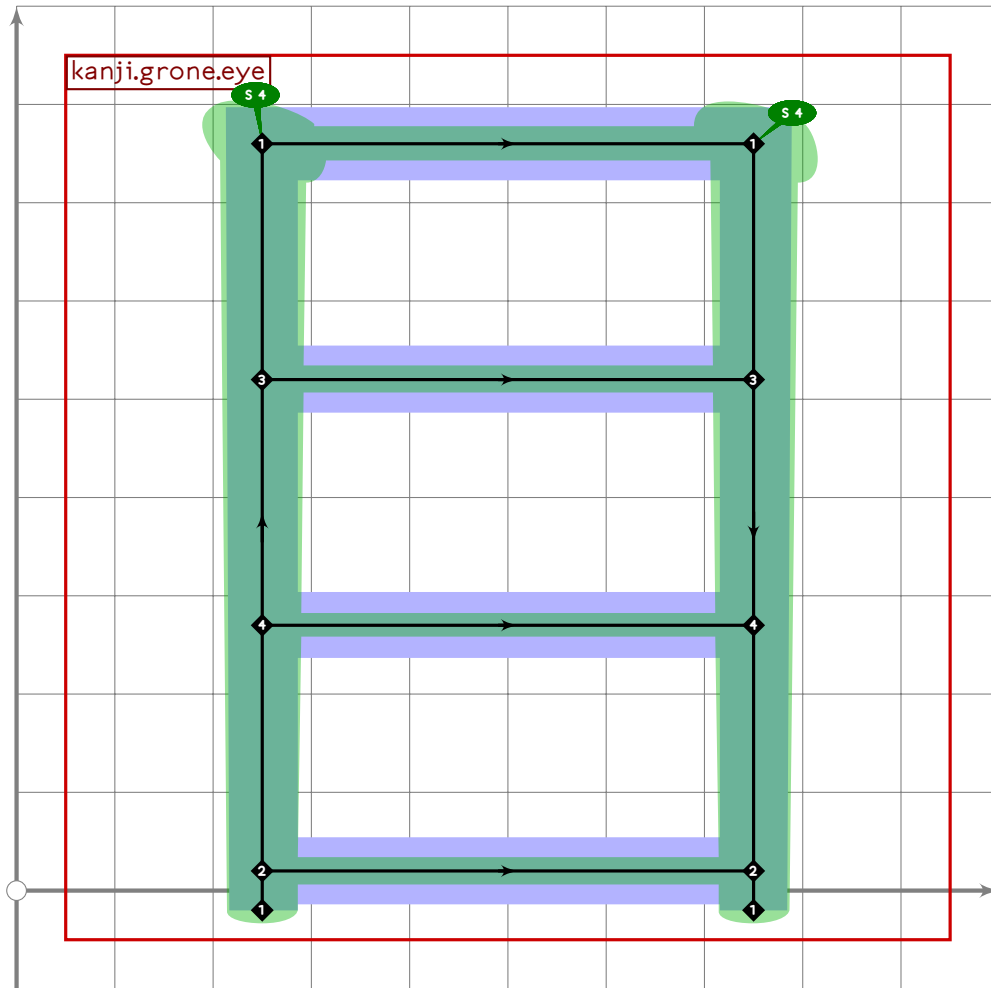


```
451 % ta "rice paddy"  
452 beginsuglyph("uni2F65",101);  
453   kanji.grone.paddy;  
454   tsu_render;  
455 endsuglyph;  
456
```

U+2F69
tsuku.uni2F69

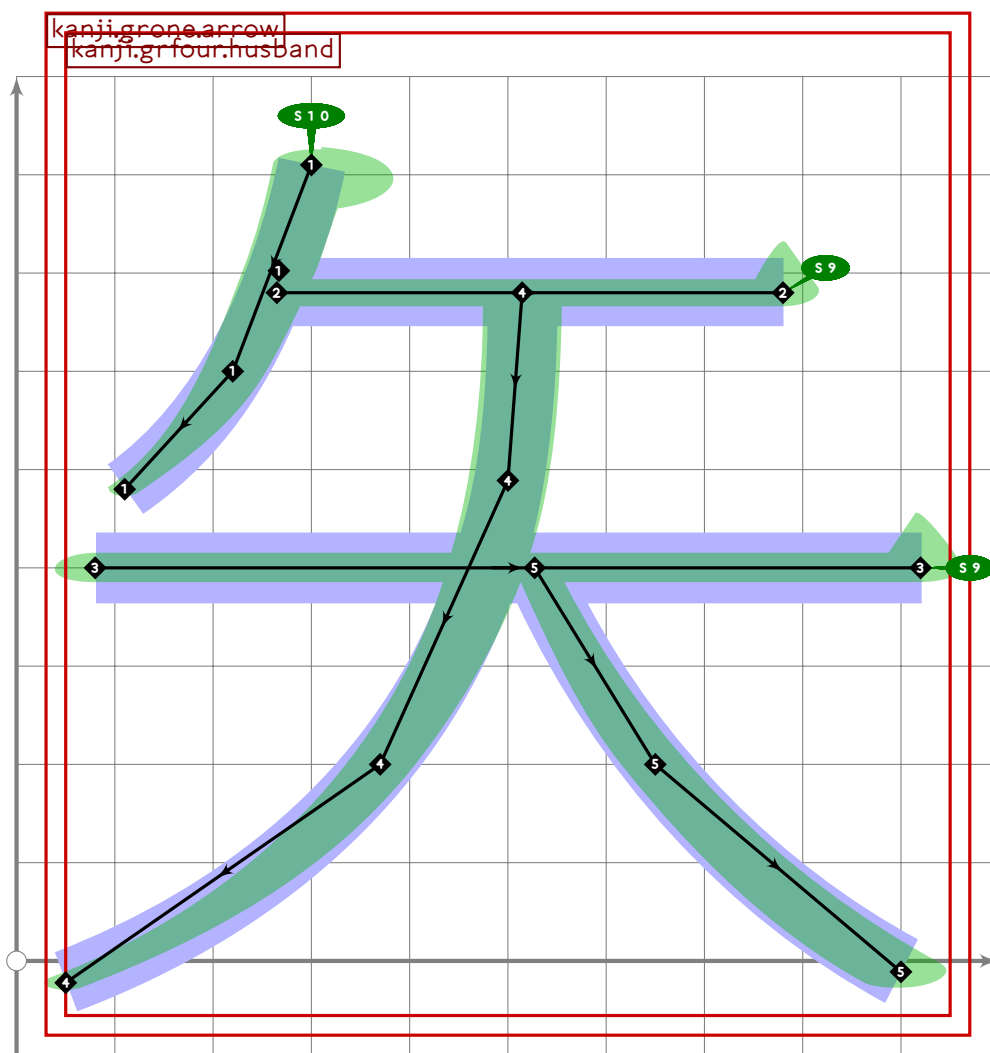


```
457 % shiro "white"
458 begintsuglyph("uni2F69";105);
459   kanji.grone.white;
460   tsu_render;
461 endtsuglyph;
462
```



```
463 % moku/me "eye"  
464 begintsuglyph("uni1F6C",108);  
465   kanji.grone.eye;  
466   tsu_render;  
467 endtsuglyph;  
468
```

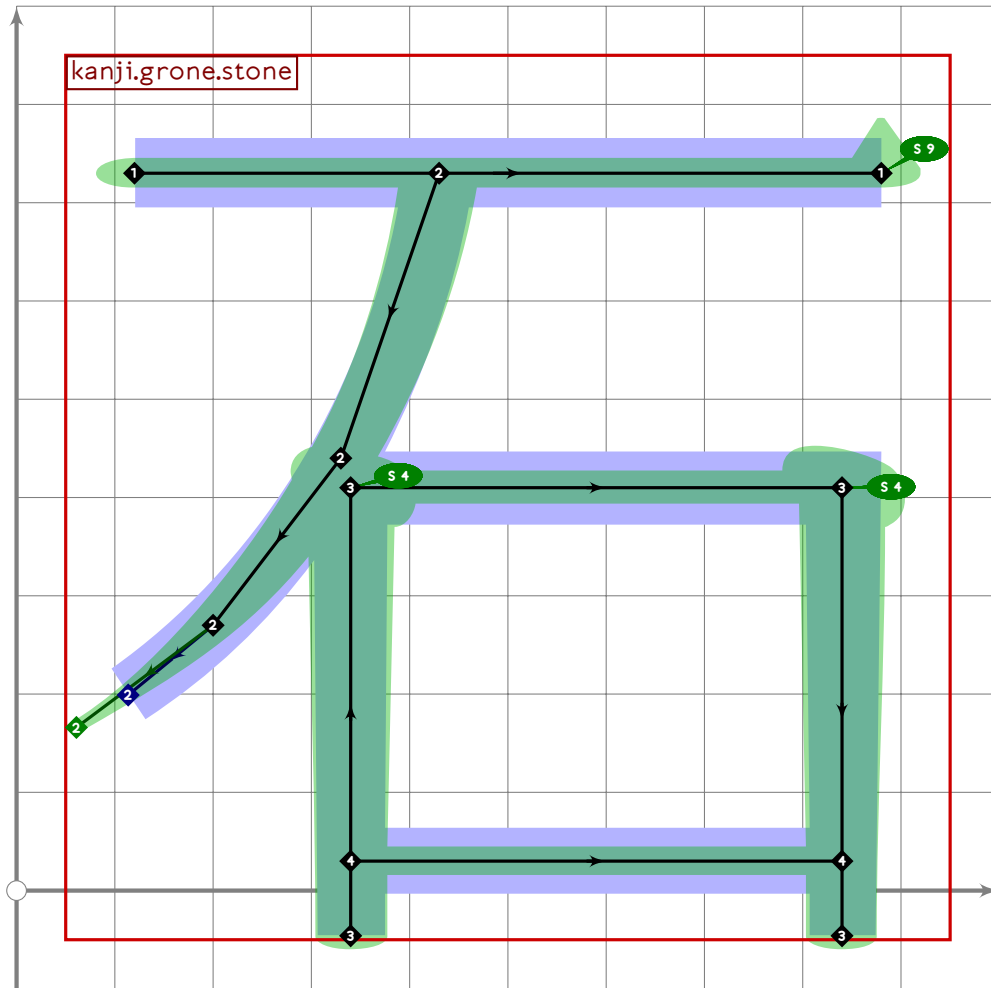
U+2F6E
tsuku.uni2F6E



```

469 % shi/ya "arrow"
470 begintsuglyph("uni2F6E";110);
471   kanji.grtwo.arrow;
472   tsu_render;
473 endtsuglyph;
474

```

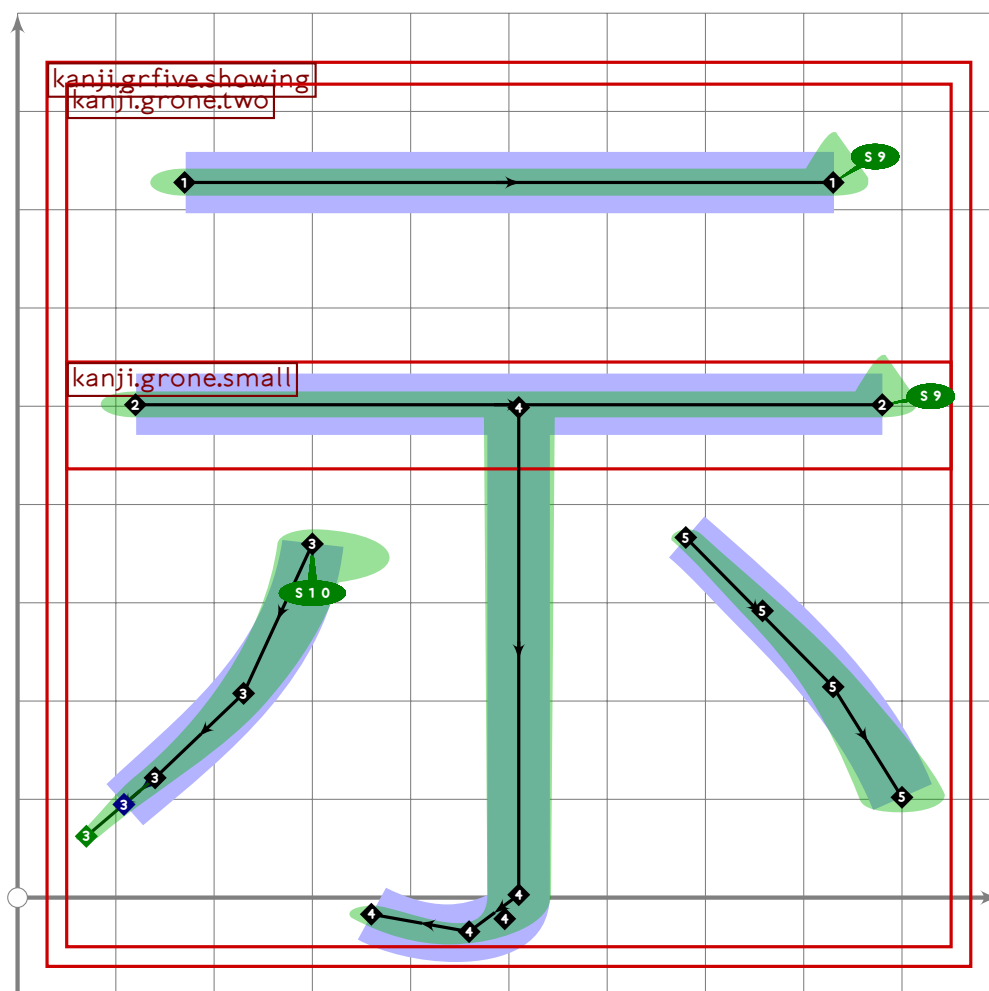


```

475 % seki/ishi "stone"
476 begintsuglyph("uni2F6F";111);
477   kanji.grone.stone;
478   tsu_render;
479 endtsuglyph;
480

```

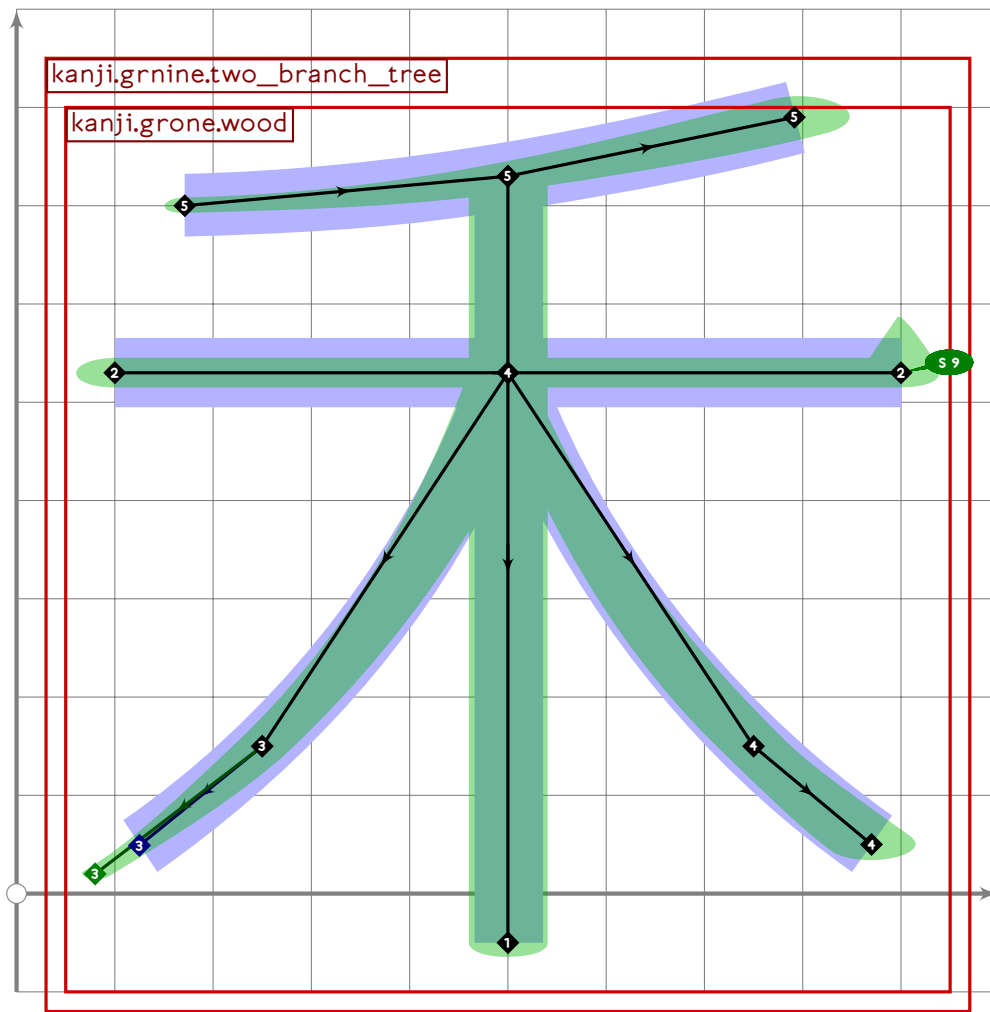
U+2F70
tsuku.uni2F70



```

481 % ji/shime "show" (also older radical form)
482 begintsuglyph("uni2F70";112);
483   kanji.grfive.showing;
484   tsu_render;
485 endtsuglyph;
486

```

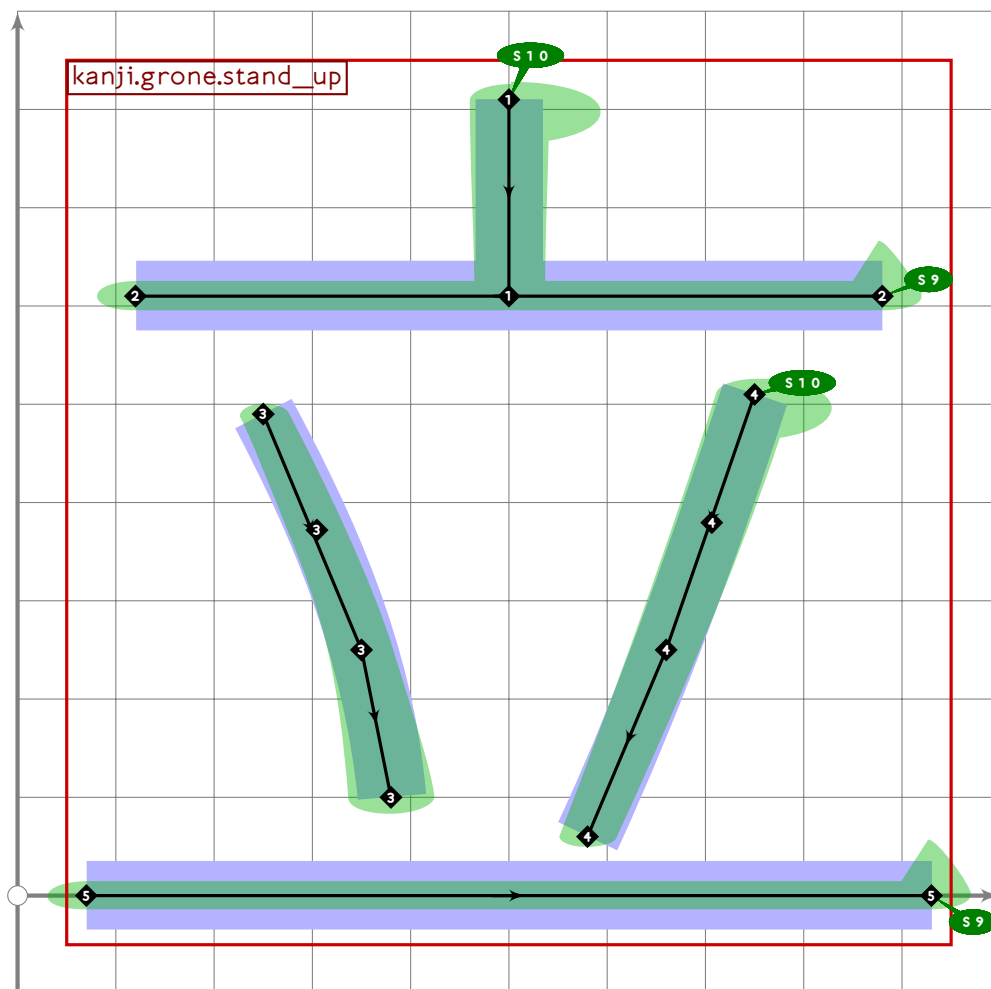



```

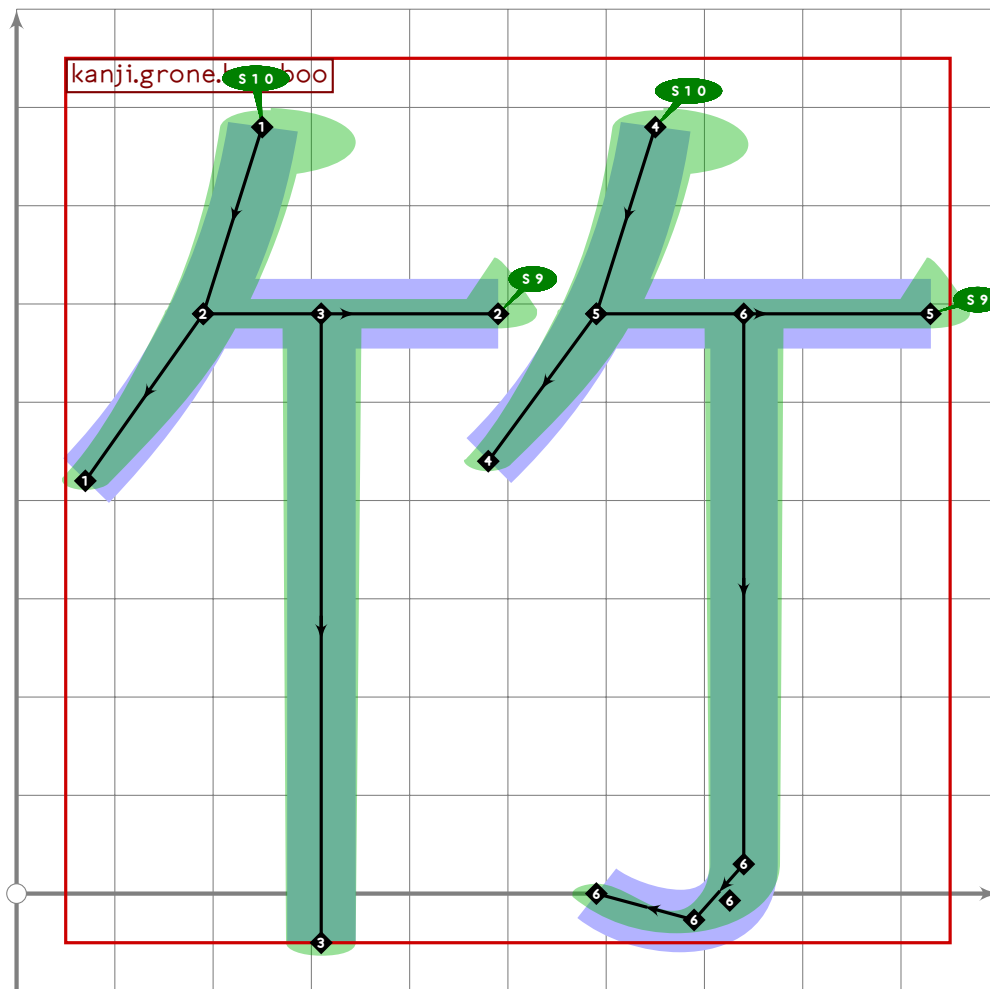
487 % ka/ine little meaning by itself, called "two-branch tree" as a radical
488 begint Suglyph("uni2F72";114);
489   kanji.grnine.two_branch_tree;
490   tsu_render;
491 endtsuglyph;
492

```

U+2F74
tsuku.uni2F74



```
493 % ta "stand up"  
494 begintsuglyph("uni2F74";116);  
495   kanji.grone.stand_up;  
496   tsu_render;  
497 endtsuglyph;  
498
```

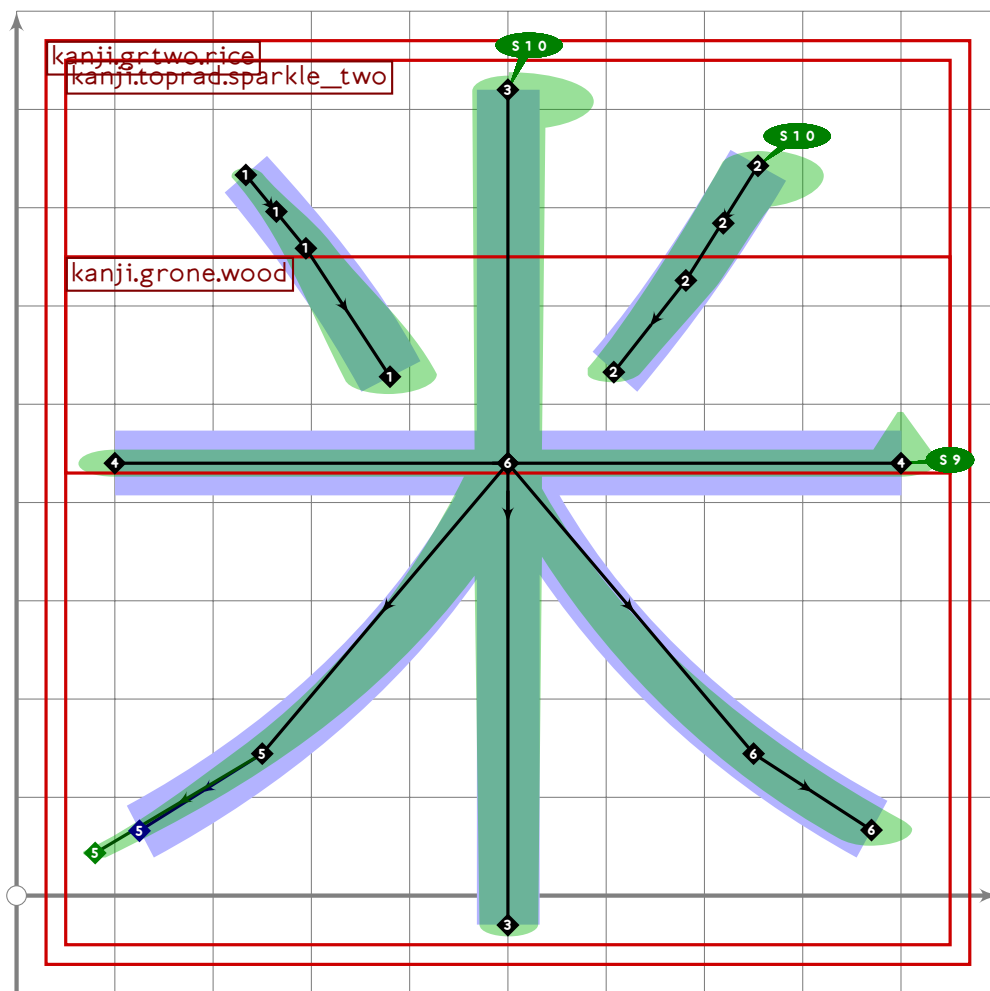


```

499 % chiku/take "bamboo"
500 begintsuglyph("uni2F75",117);
501   kanji.grone.bamboo;
502   tsu_render;
503 endtsuglyph;
504

```

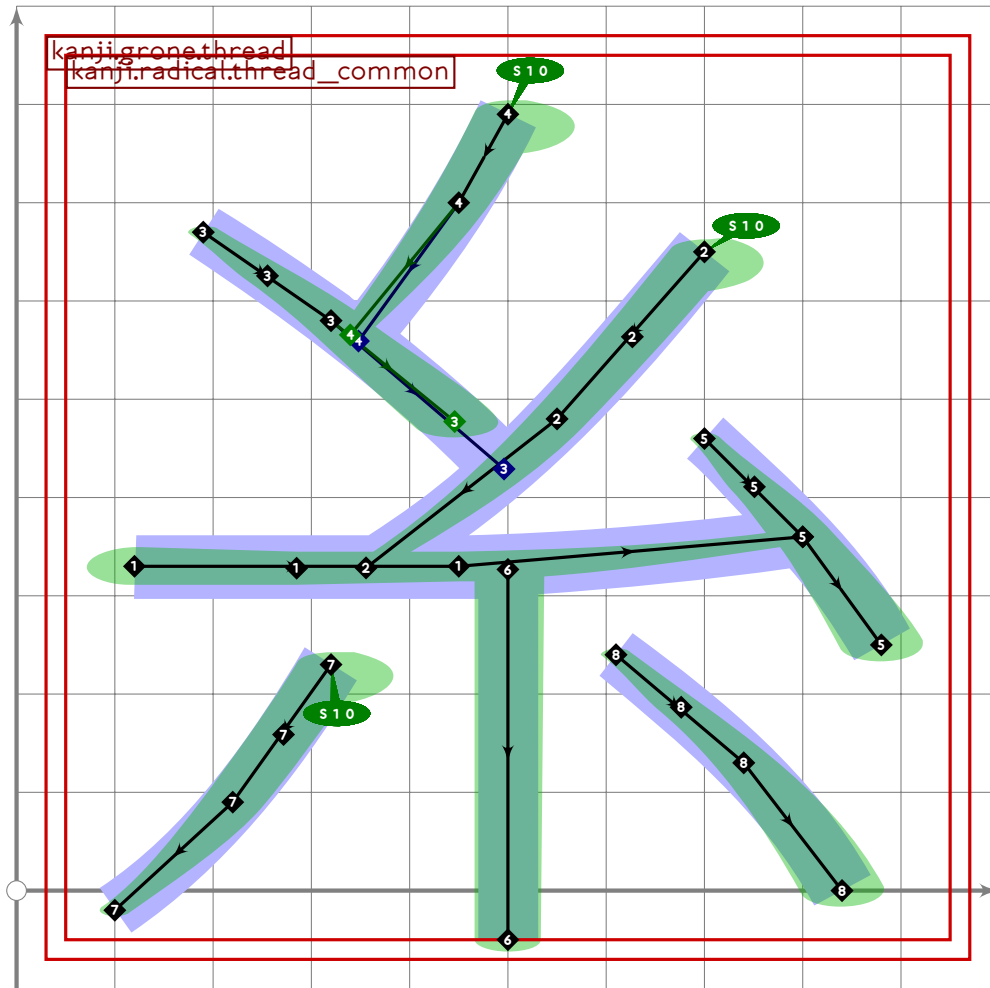
U+2F76
tsuku.uni2F76



```

505 % bei/kome "rice", also "USA" and "metre"
506 begintsuglyph("uni2F76",118);
507   kanji.grtwo.rice;
508   tsu_render;
509 endtsuglyph;
510

```

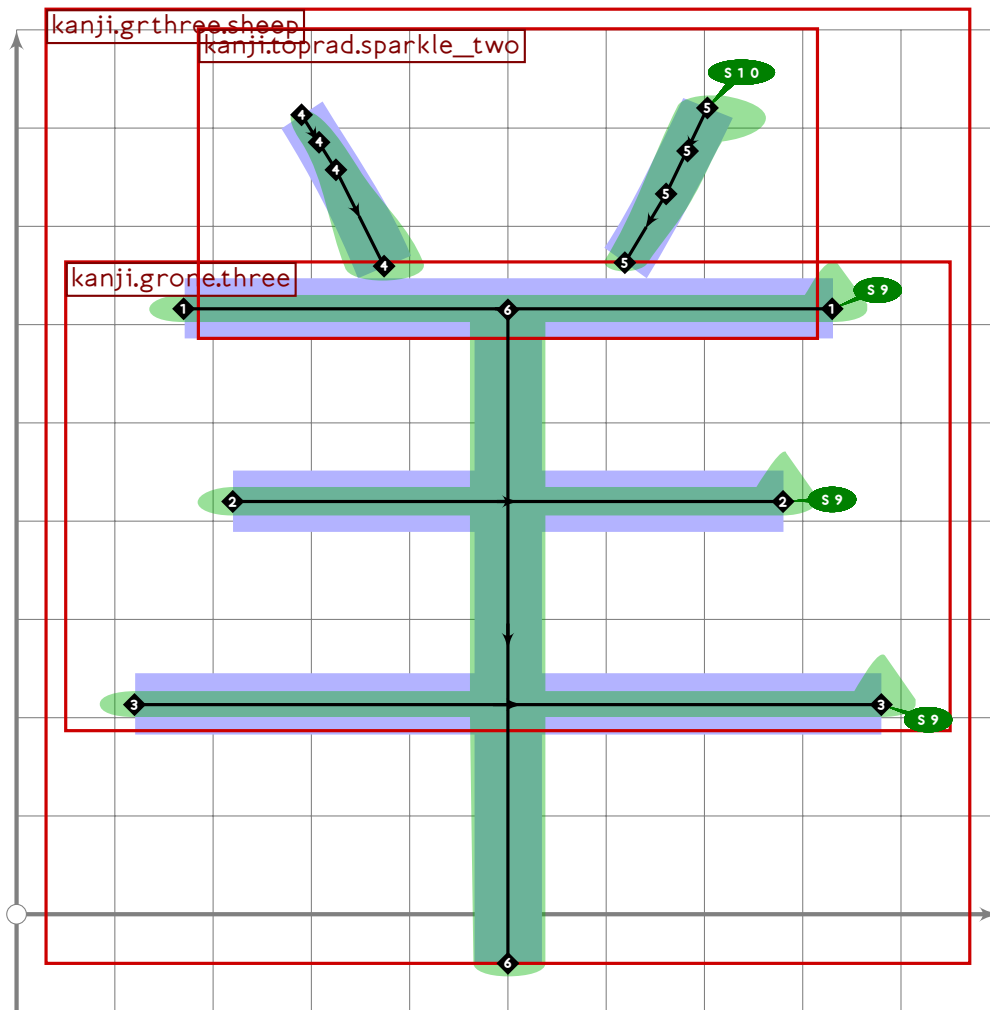


```

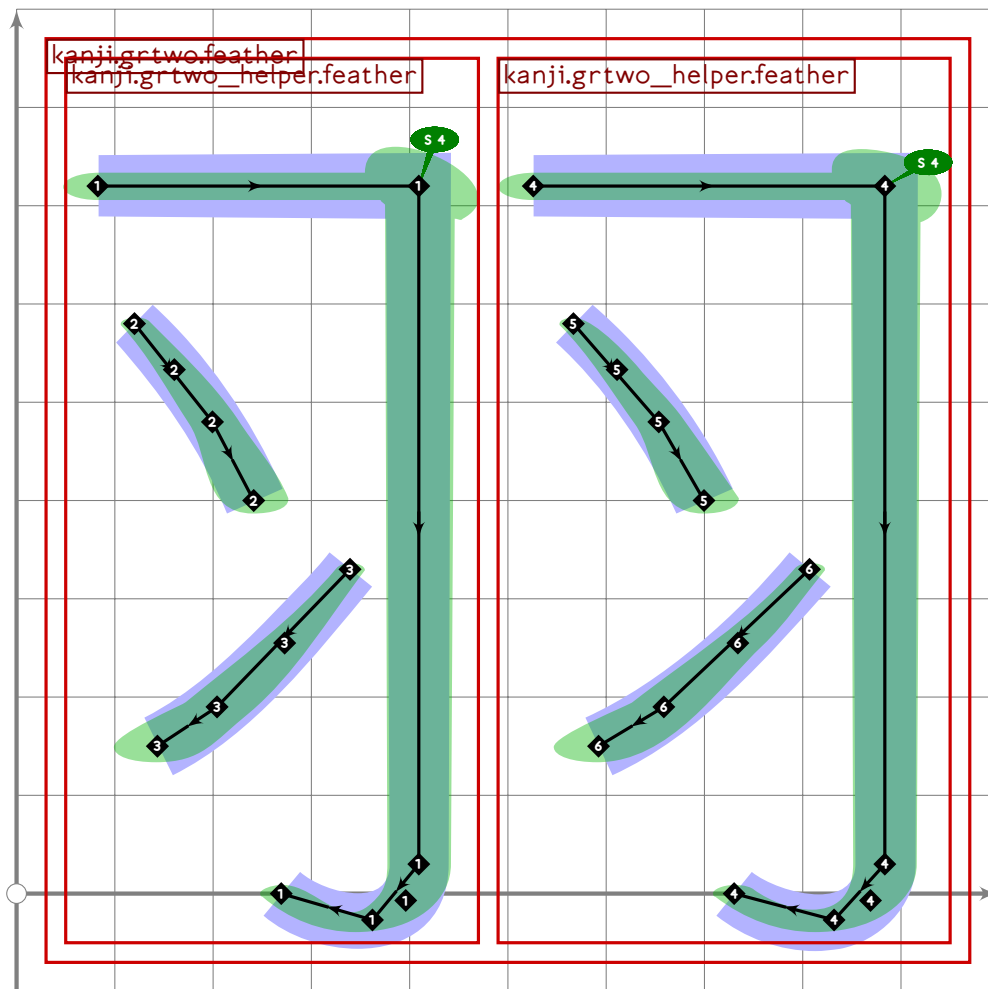
511 % shi/ito "thread"
512 beginsuglyph("uni2F77";119);
513   kanji.grone.thread;
514   tsu_render;
515 endsuglyph;
516

```

U+2F7A
tsuku.uni2F7A



```
517 % you/hitsuji "sheep"  
518 begintsuglyph("uni2F7A";122);  
519 kanji.grthree.sheep;  
520 tsu_render;  
521 endtsuglyph;  
522
```

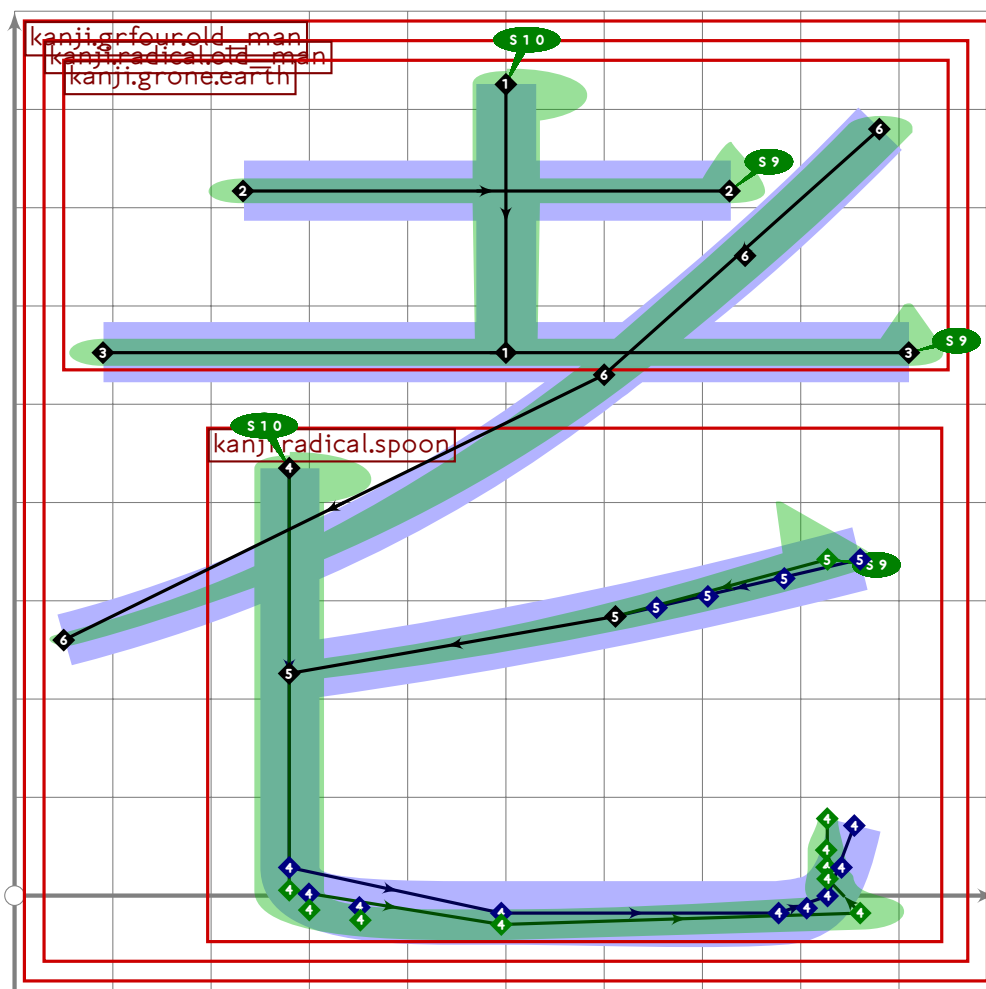


```

523 % u/hane "feather"
524 begintuglyph("uni2F7B",123);
525   kanji.grtwo.feather;
526   tsu_render;
527 endtsuglyph;
528

```

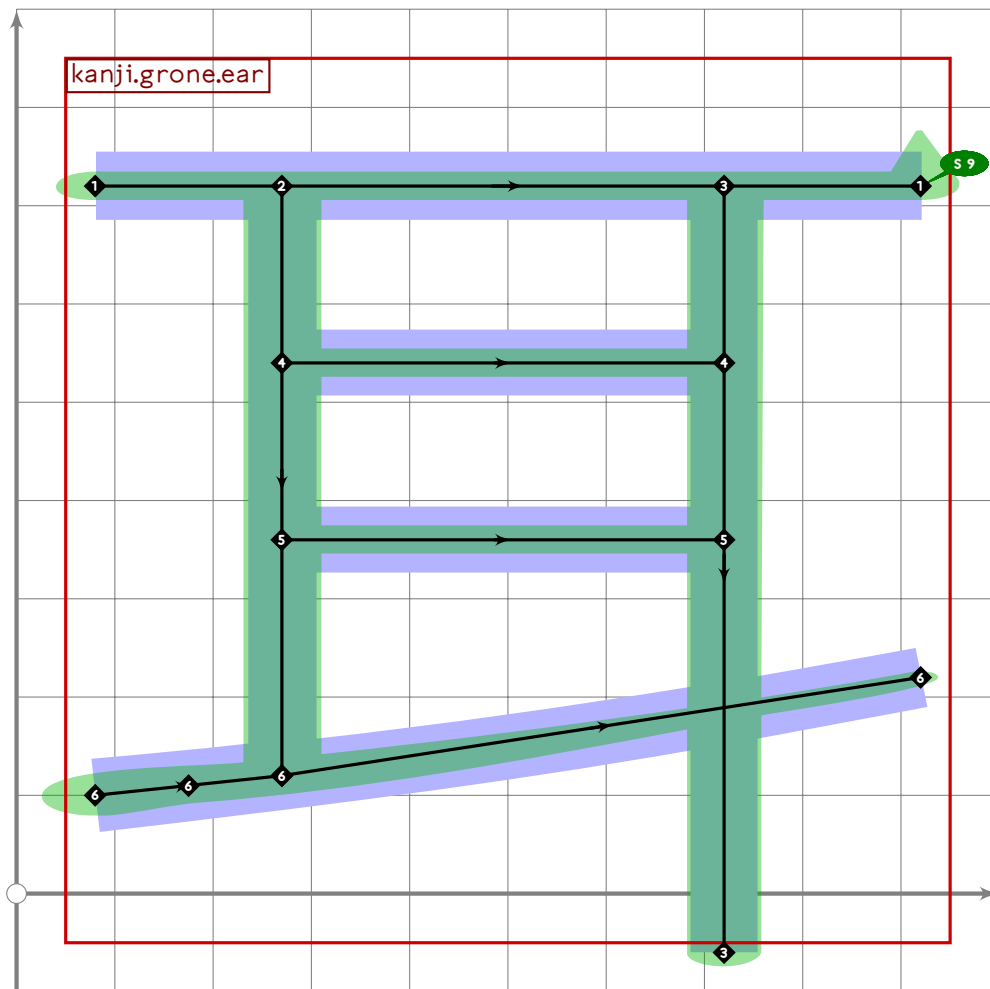
U+2F7C
tsuku.uni2F7C



```

529 % rou/o "old man"
530 begintsuglyph("uni2F7C";124);
531   kanji.grfour.old_man;
532   tsu_render;
533 endtsuglyph;
534

```

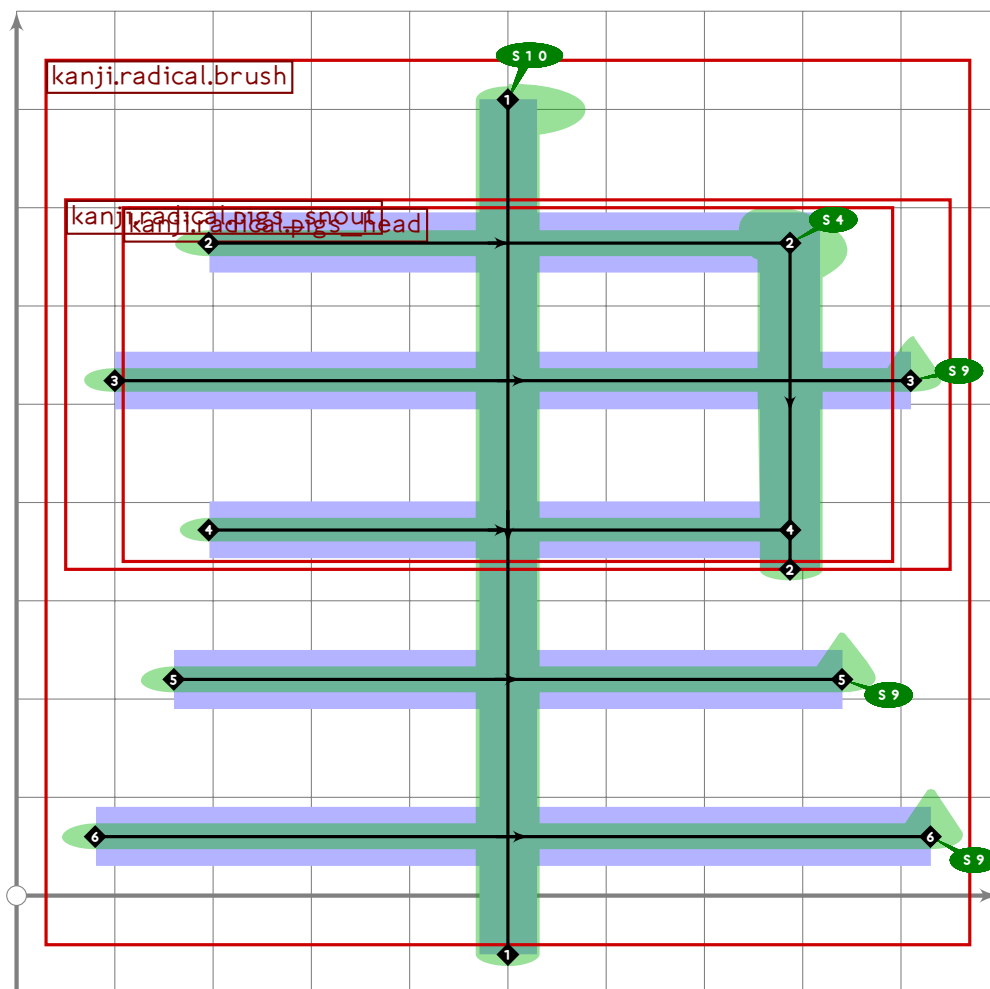



```

535 % ken/mi "ear"
536 begintsuglyph("uni2F7F";127);
537   kanji.grone.ear;
538   tsu_render;
539 endtsuglyph;
540

```

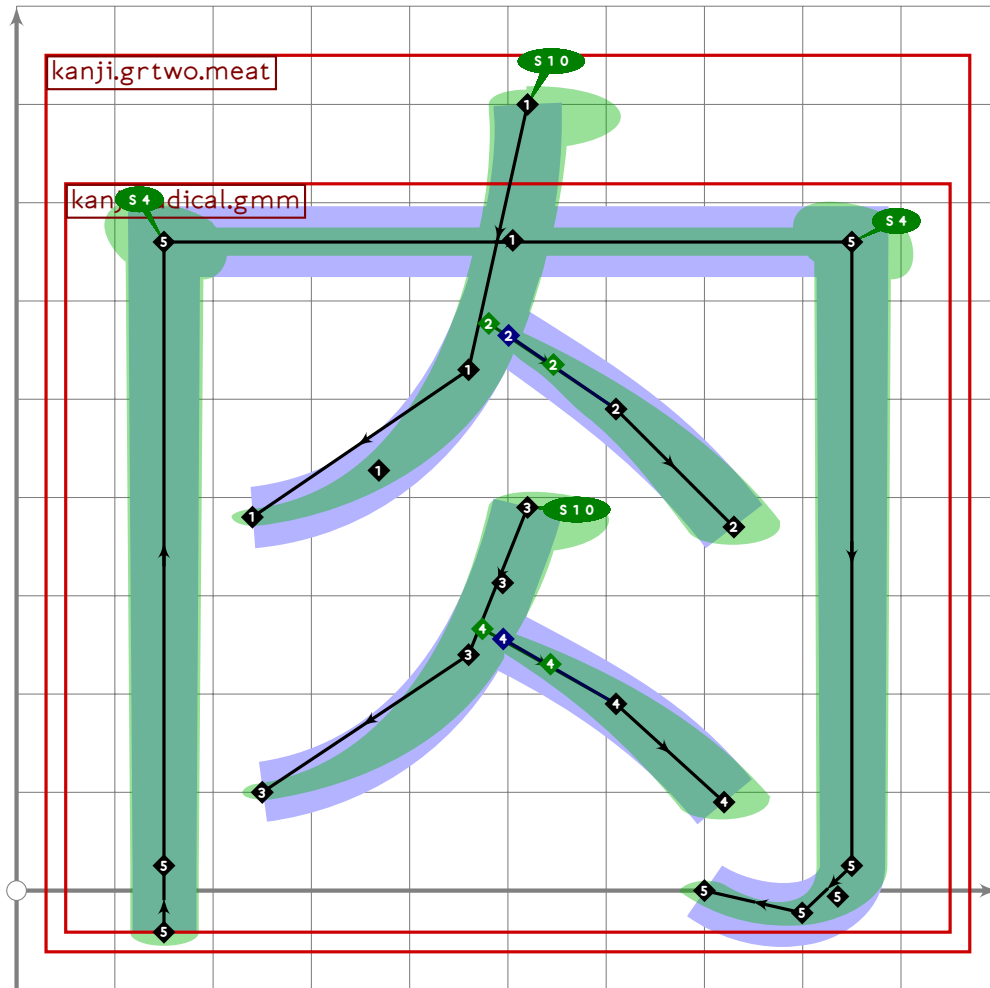
U+2F80
tsuku.uni2F80



```

541 % brush radical
542 beginsuglyph("uni2F80";128);
543   kanji.radical.brush;
544   tsu_render;
545 endsuglyph;
546

```

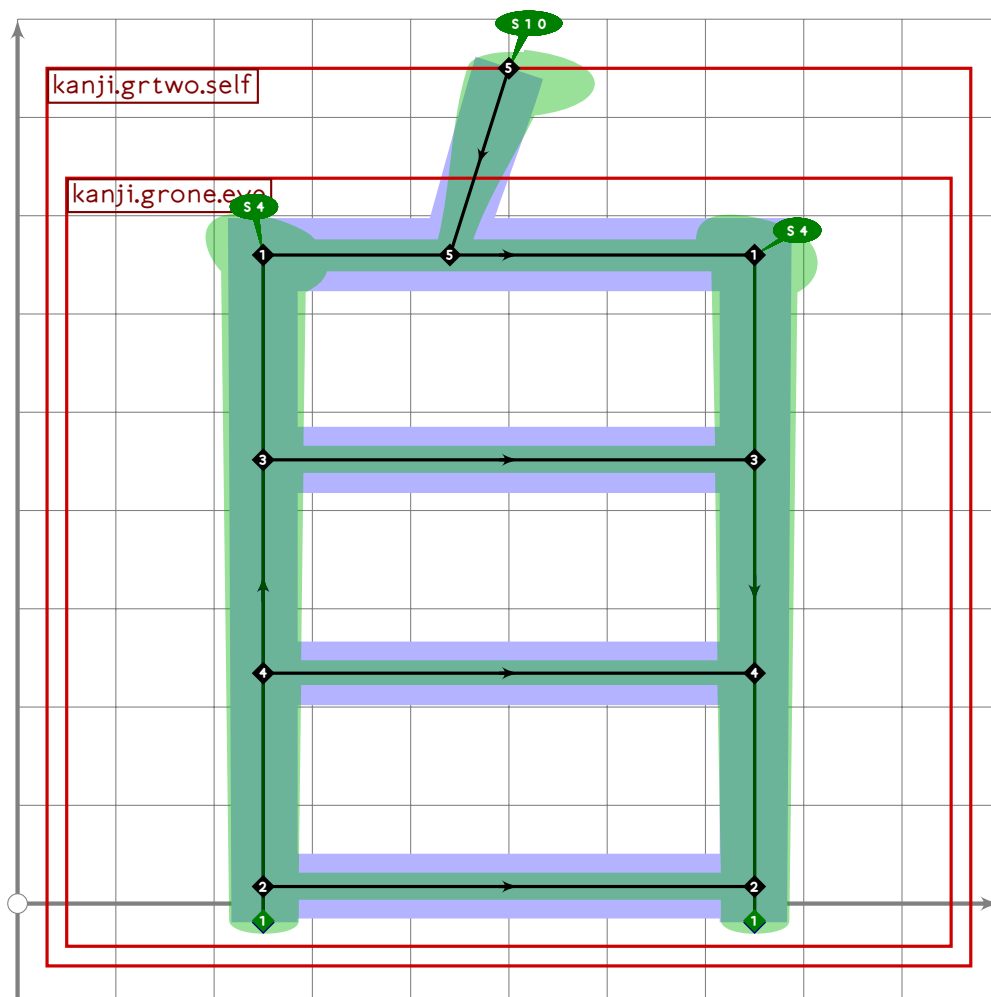


```

547 % niku "meat"
548 beginsuglyph("uni2F81",129);
549   kanji.grtwo.meat;
550   tsu_render;
551 endsuglyph;
552

```

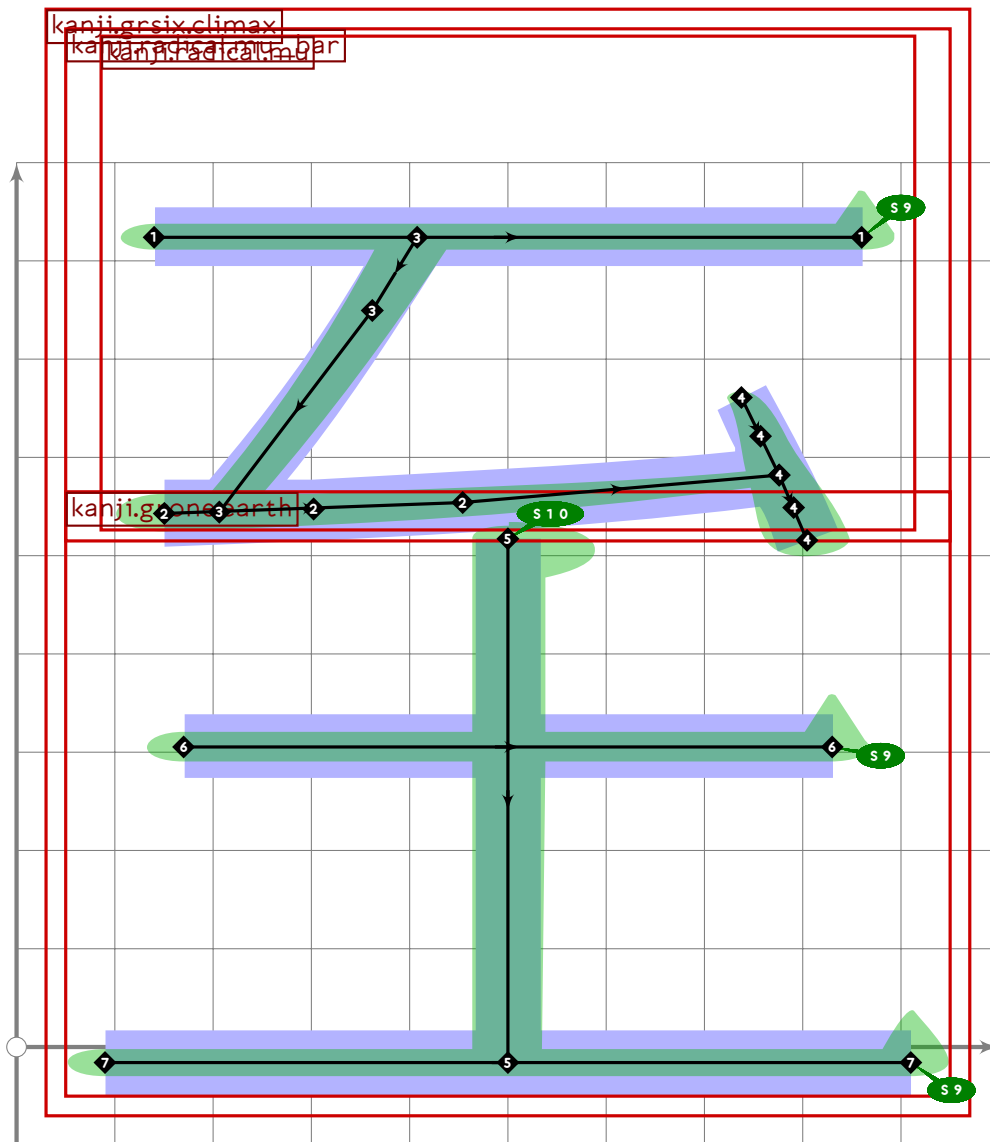
U+2F83
tsuku.uni2F83



```

553 % ji as in jibun "self"
554 begintsuglyph("uni2F83",131);
555   kanji.grtwo.self;
556   tsu_render;
557 endtsuglyph;
558

```

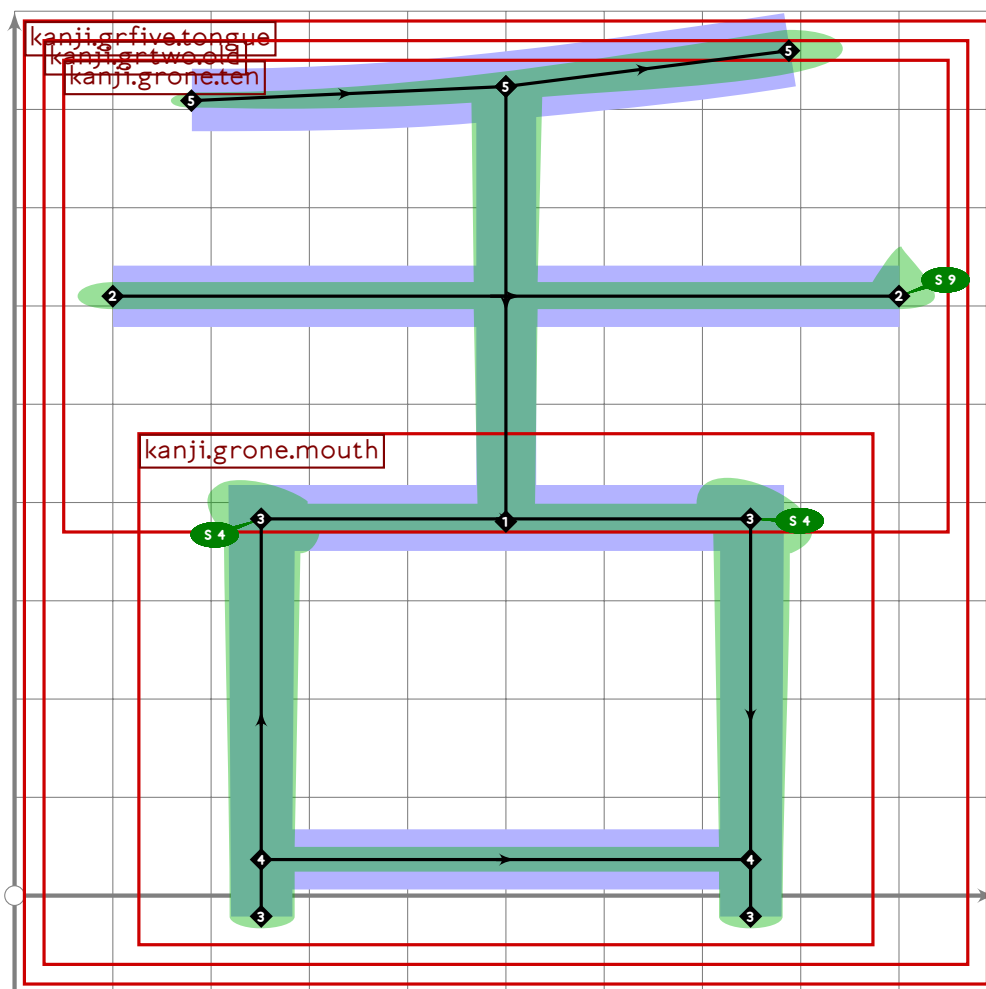


```

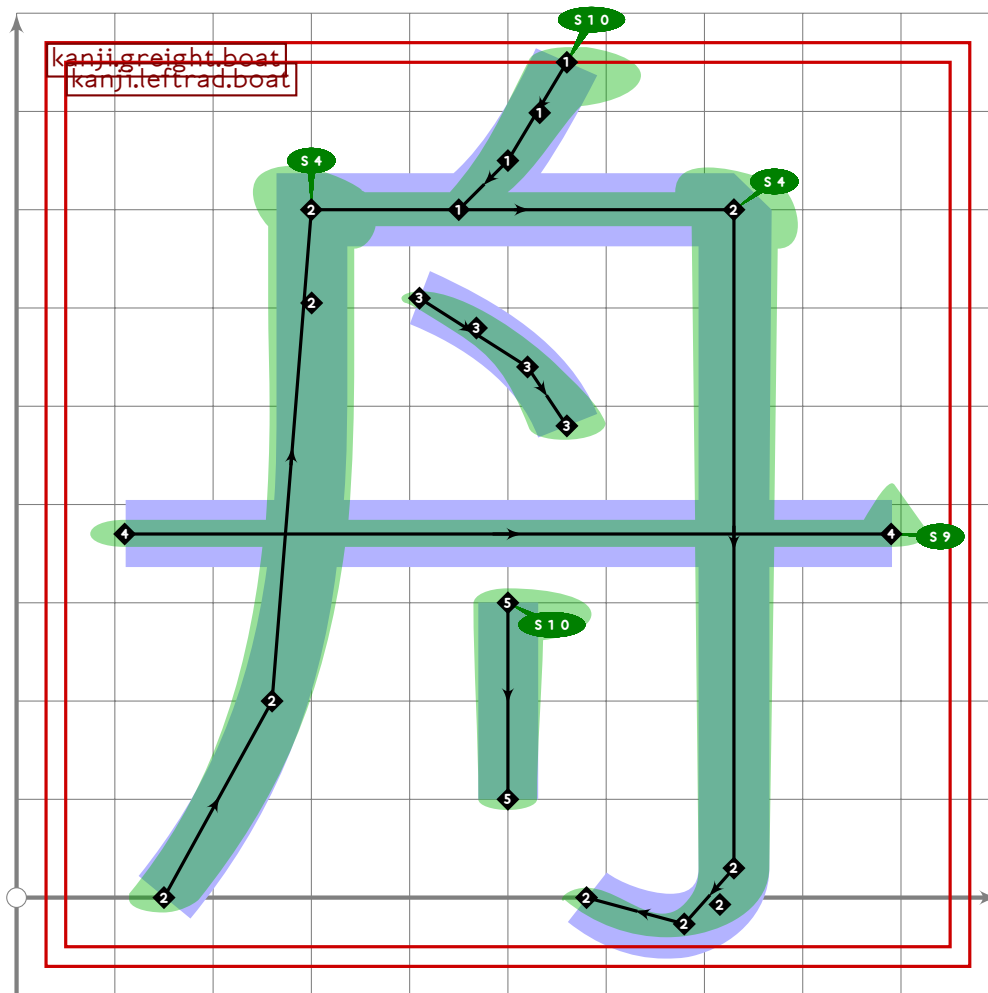
559 % shi/ita "climax"
560 begint Suglyph("uni2F84";132);
561   kanji.grsix.climax;
562   tsu_render;
563 endtsuglyph;
564

```

U+2F86
tsuku.uni2F86



```
565 % zetsu/shita "tongue"  
566 begintsuglyph("uni2F86",134);  
567   kanji.grfive.tongue;  
568   tsu_render;  
569 endtsuglyph;  
570
```

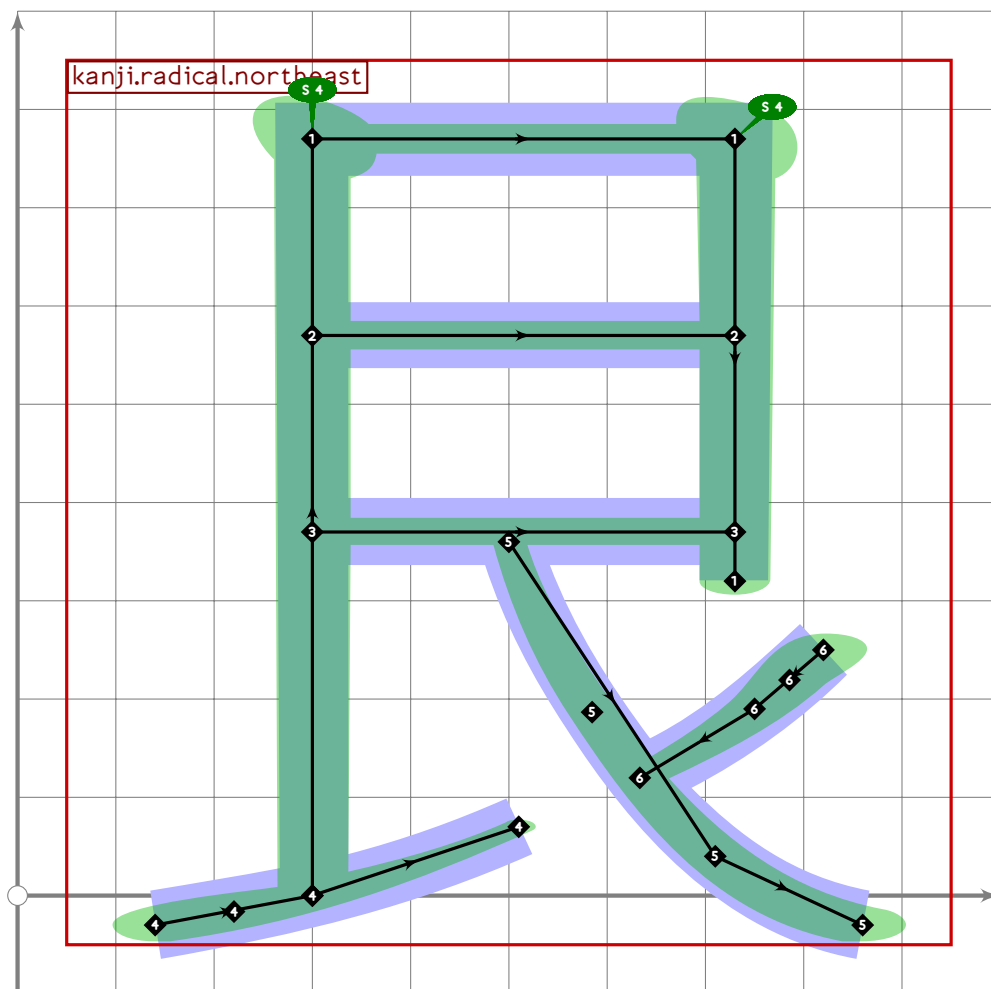


```

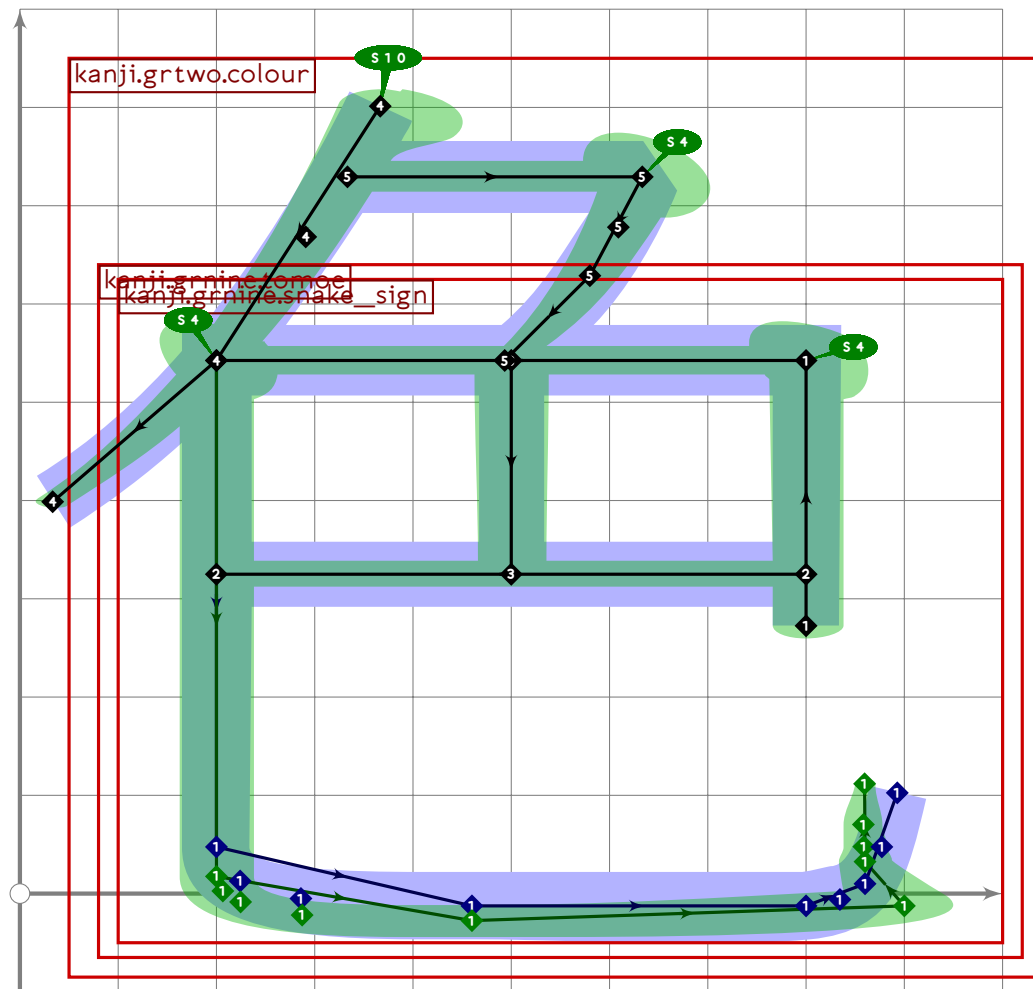
571 % shuu/fune "boat"
572 begintsuglyph("uni2F88";136);
573   kanji.greight.boat;
574   tsu_render;
575 endtsuglyph;
576

```

U+2F89
tsuku.uni2F89



```
577 % kon/ushitora "northeast"  
578 begintsuglyph("uni2F89";137);  
579   kanji.radical.northeast;  
580   tsu_render;  
581 endtsuglyph;  
582
```

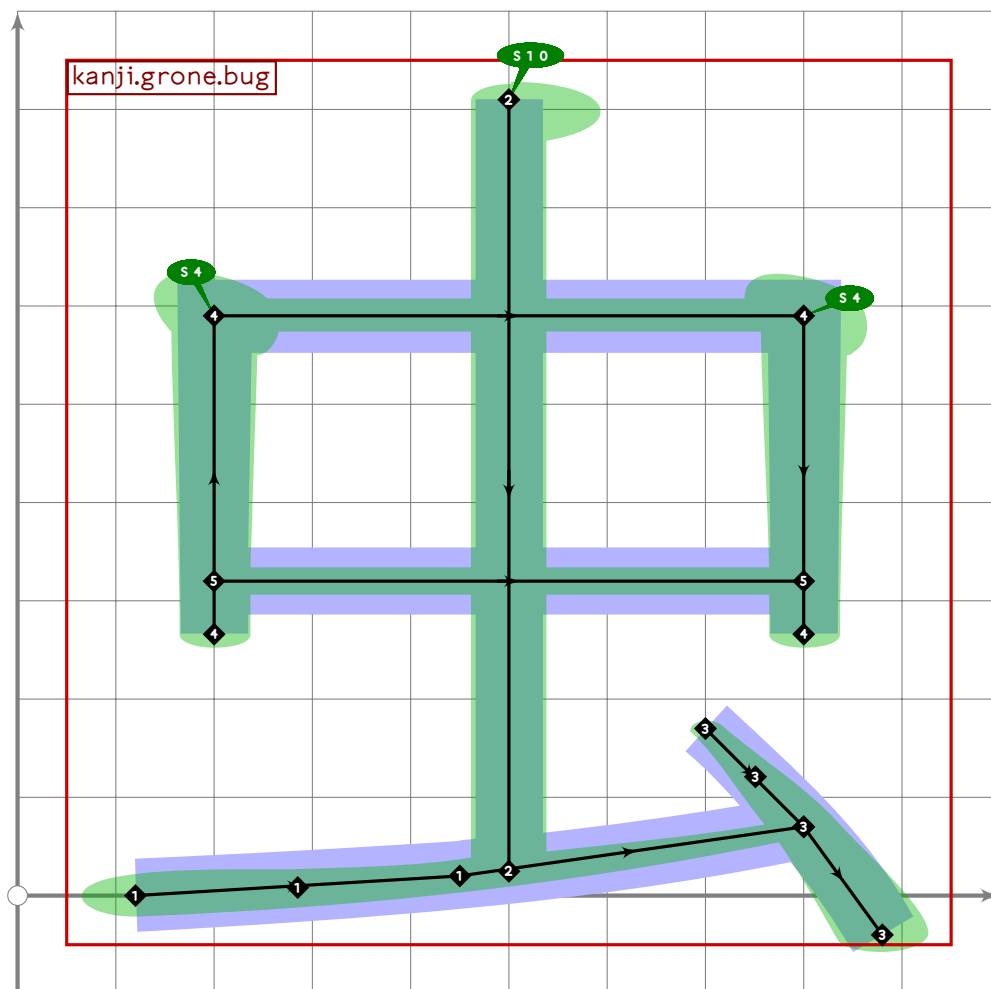



```

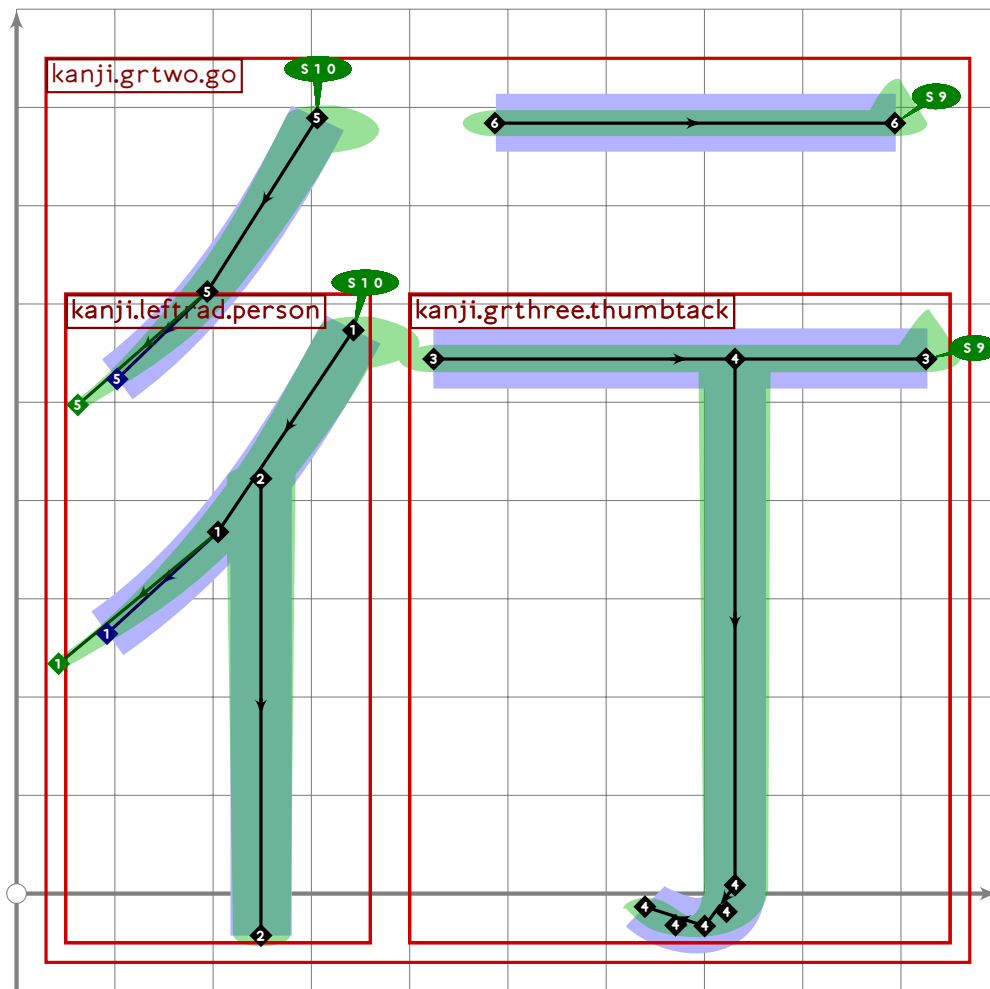
583 % shoku/iro "colour"
584 begintsuglyph("uni2F8A",138);
585   kanji.grtwo.colour;
586   tsu_render;
587 endtsuglyph;
588

```

U+2F8D
tsuku.uni2F8D



```
589 % mushi "bug"  
590 beginsuglyph("uni2F8D";141);  
591   kanji.grone.bug;  
592   tsu_render;  
593 endsuglyph;  
594
```

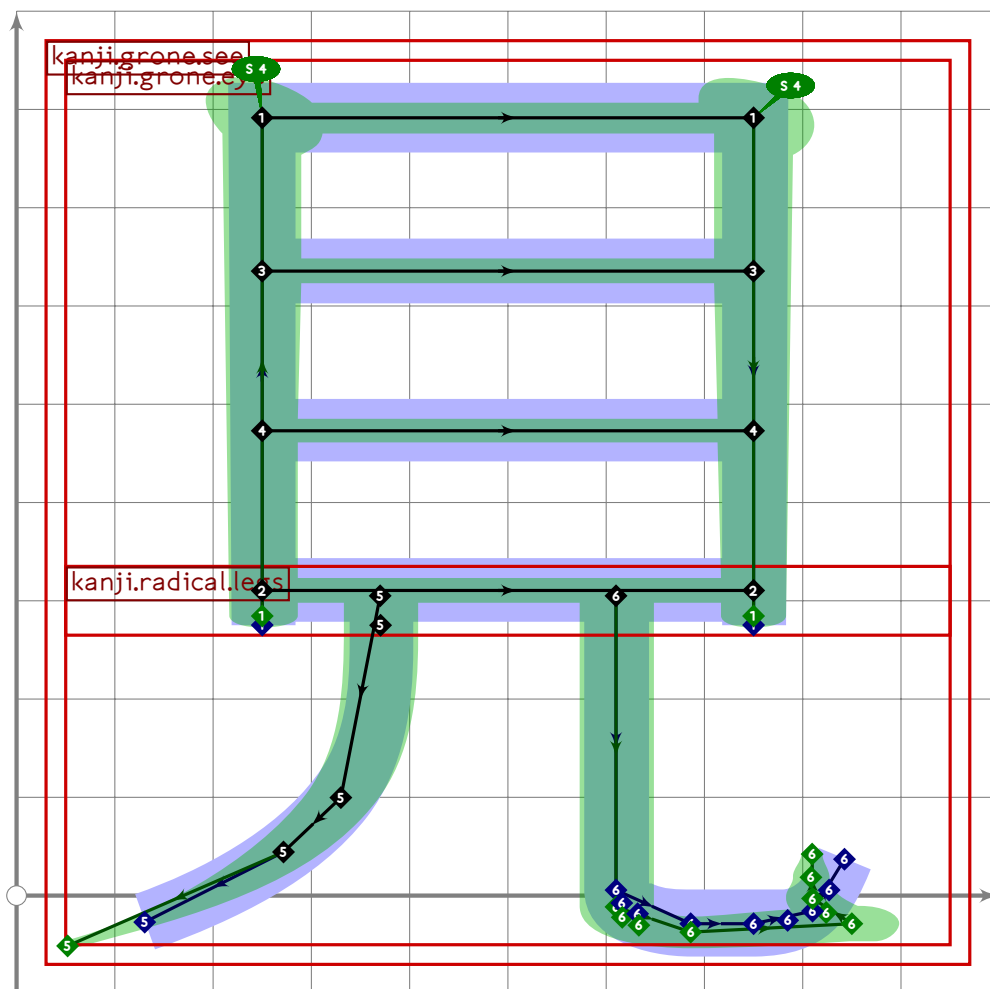


```

595 % kou/i(ku) "go"
596 begintsuglyph("uni2F8F";143);
597   kanji.grtwo.go;
598   tsu_render;
599 endtsuglyph;
600

```

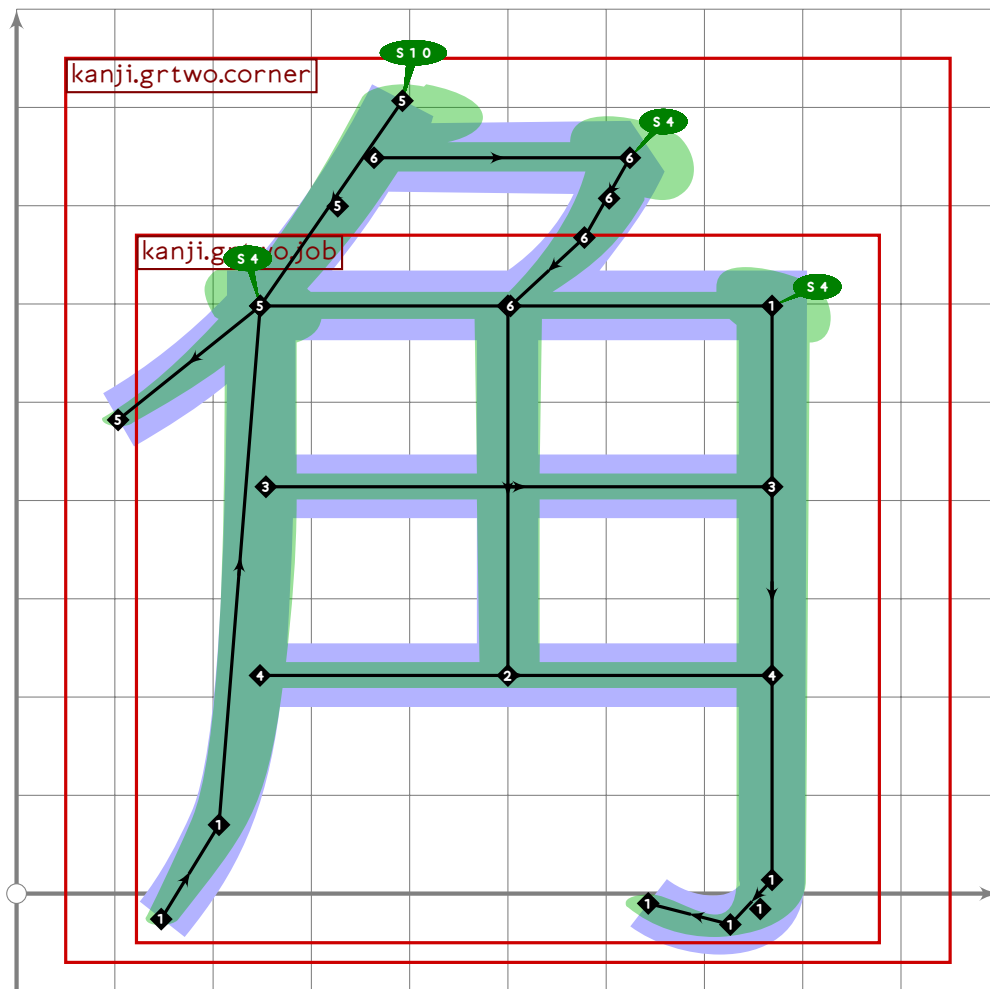
U+2F92
tsuku.uni2F92



```

601 % ken/mi "see"
602 begintsuglyph("uni2F92";146);
603   kanji.grone.see;
604   tsu_render;
605 endtsuglyph;
606

```

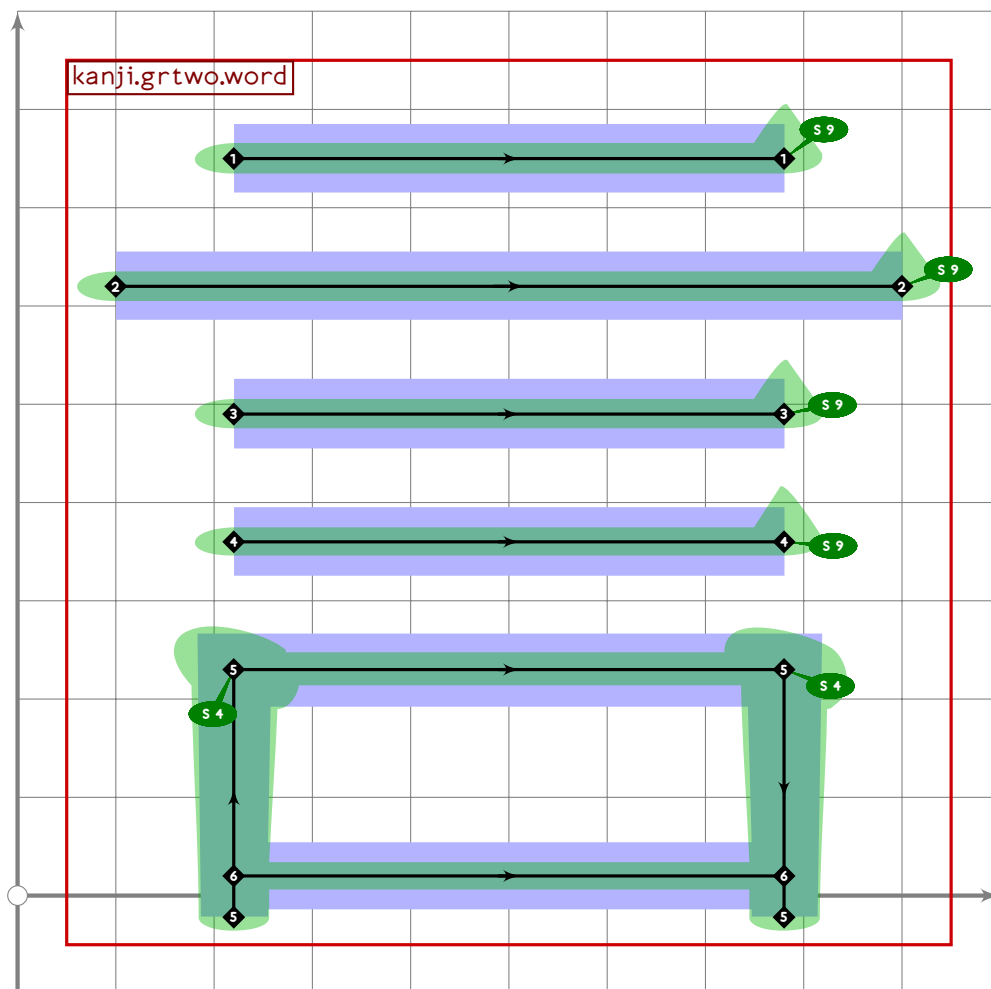


```

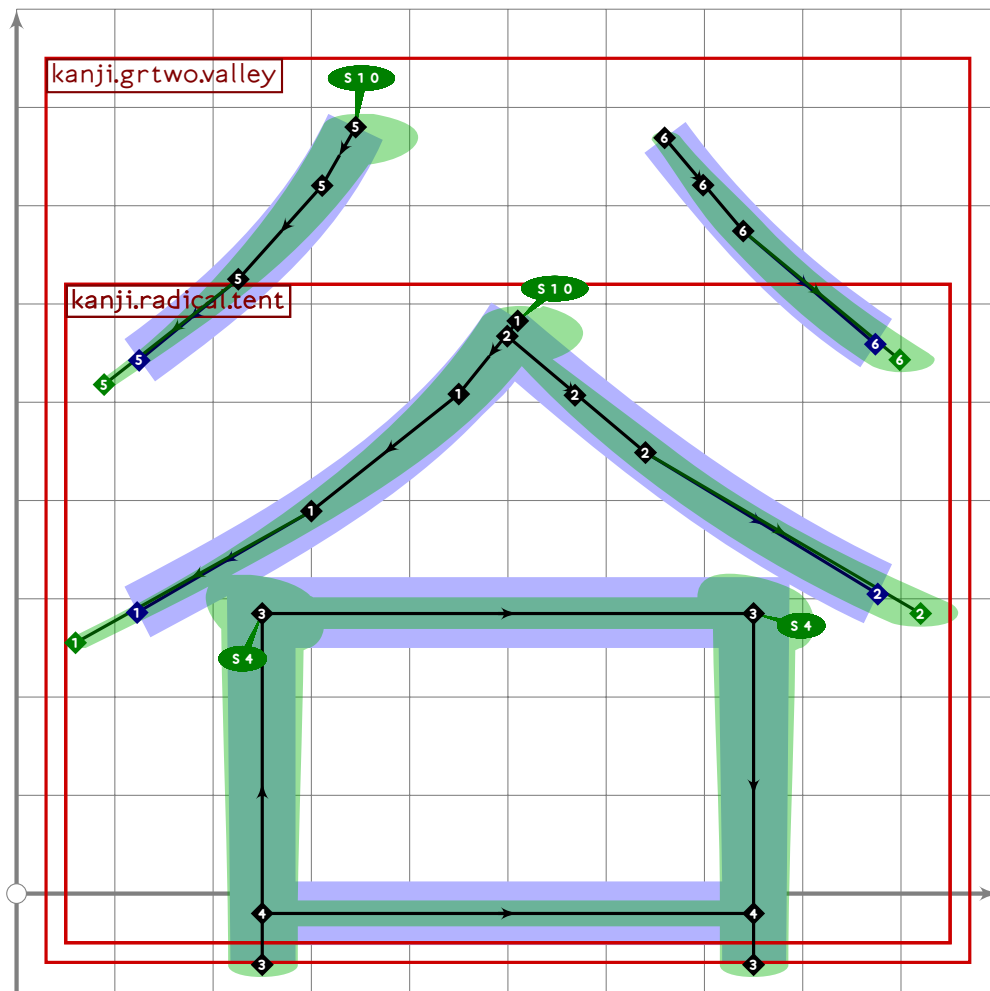
607 % kaku/kado "corner"
608 begintsuglyph("uni2F93",147);
609   kanji.grtwo.corner;
610   tsu_render;
611 endtsuglyph;
612

```

U+2F94
tsuku.uni2F94



```
613 % gen/i "word"  
614 begintsuglyph("uni2F94";148);  
615   kanji.grtwo.word;  
616   tsu_render;  
617 endtsuglyph;  
618
```

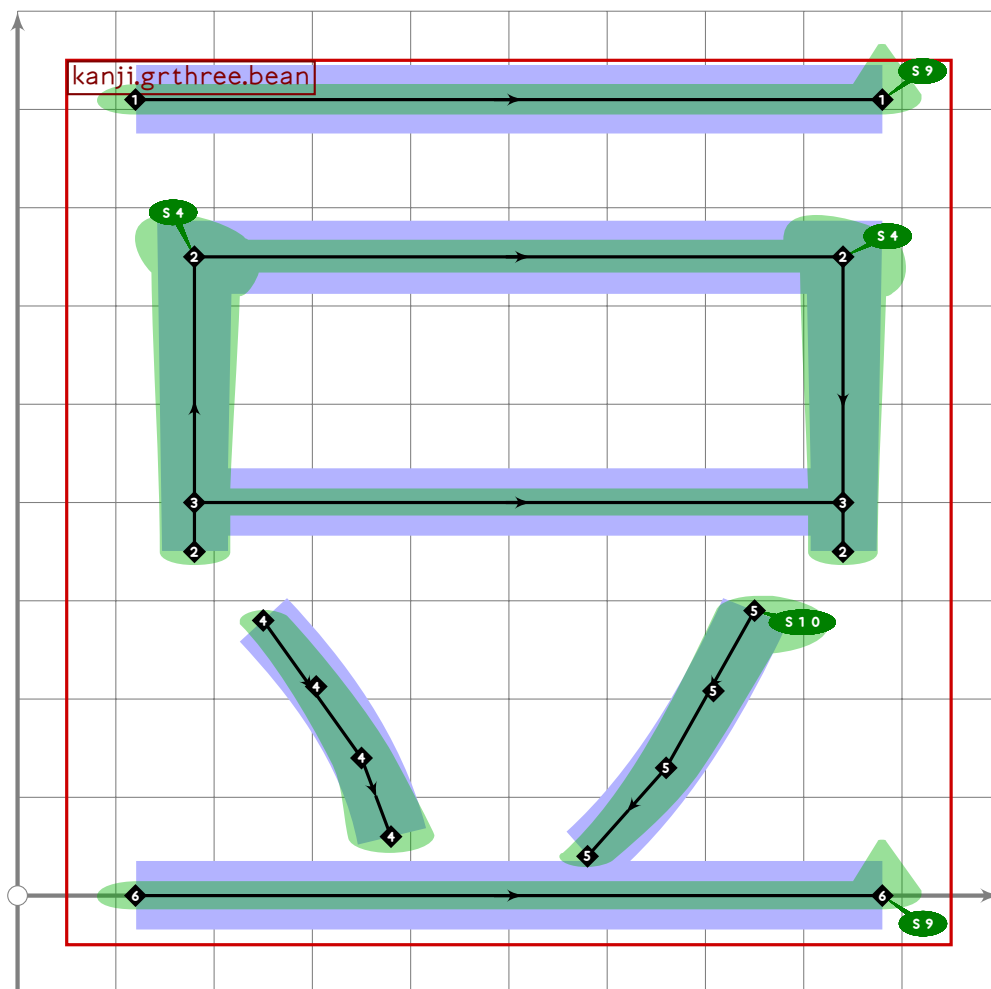


```

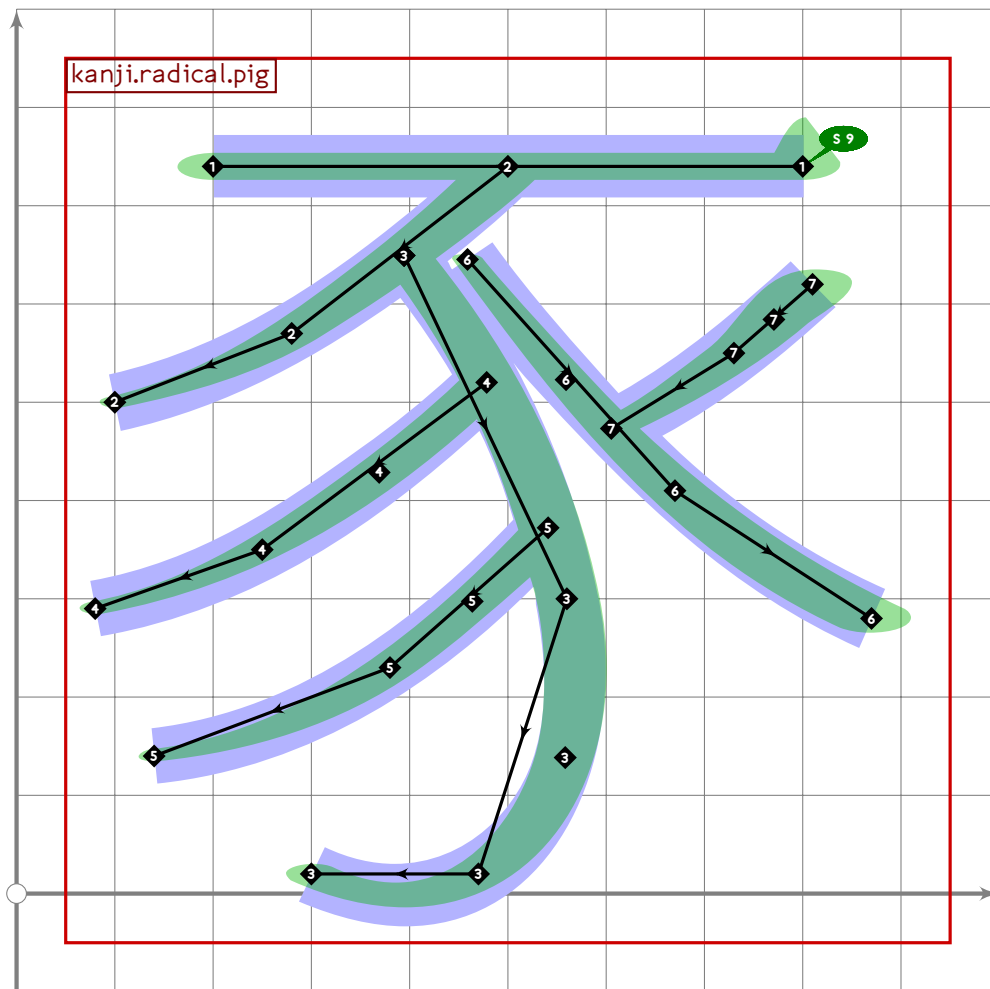
619 % koku/tani "valley"
620 begintsuglyph("uni2F95",149);
621   kanji.grtwo.valley;
622   tsu_render;
623 endtsuglyph;
624

```

U+2F96
tsuku.uni2F96



```
625 % tou/mame "bean"  
626 begintsuglyph("uni2F96";150);  
627   kanji.grthree.bean;  
628   tsu_render;  
629 endtsuglyph;  
630
```

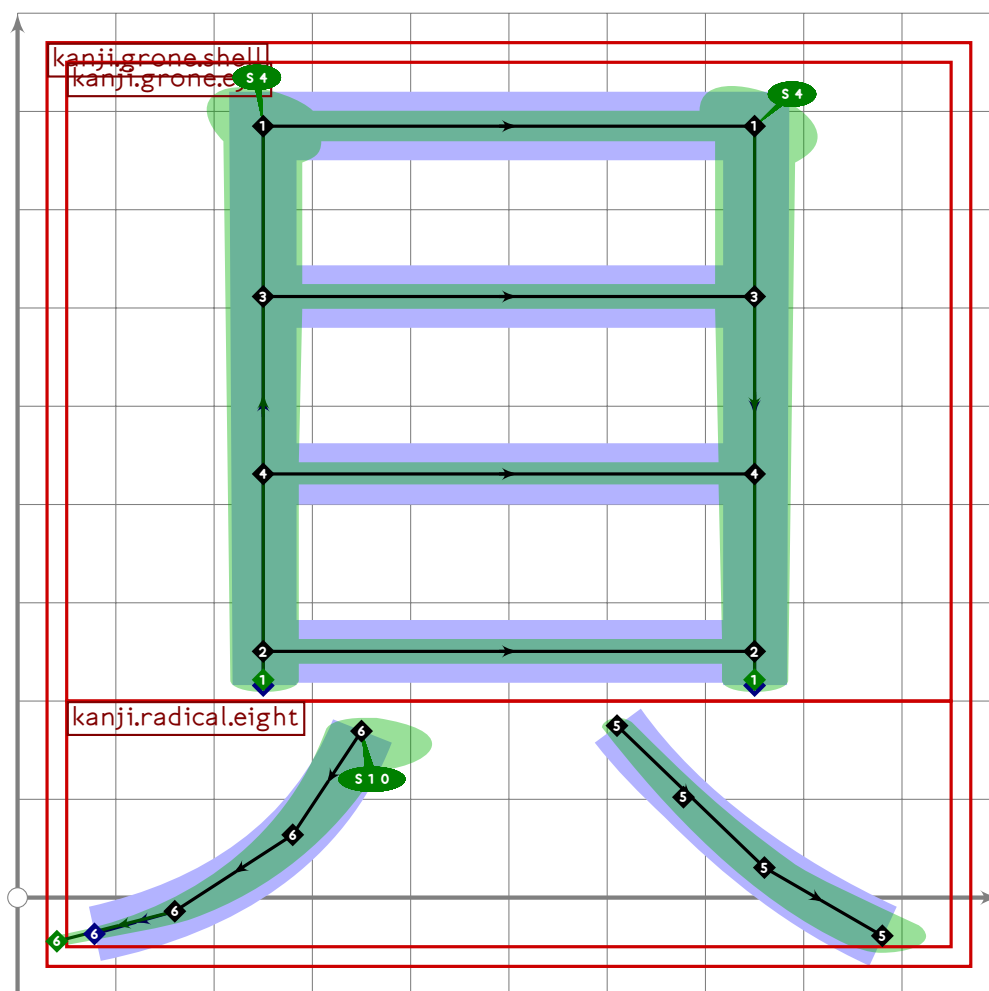



```

631 % inoko "pig" radical
632 begintsuglyph("uni2F97";151);
633   kanji.radical.pig;
634   tsu_render;
635 endtsuglyph;
636

```

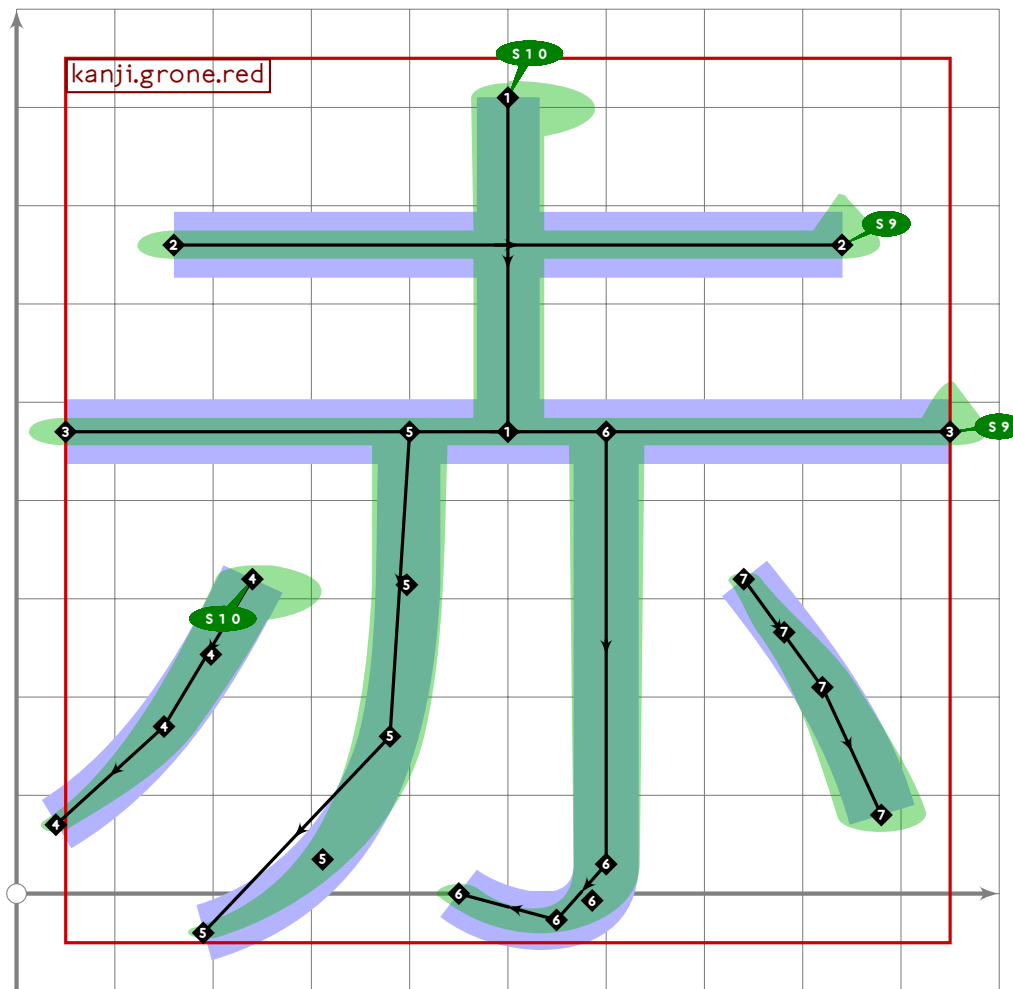
U+2F99
tsuku.uni2F99



```

637 % bai/kai "shellfish"
638 begintsuglyph("uni2F99";153);
639   kanji.grone.shell;
640   tsu_render;
641 endsuglyph;
642

```

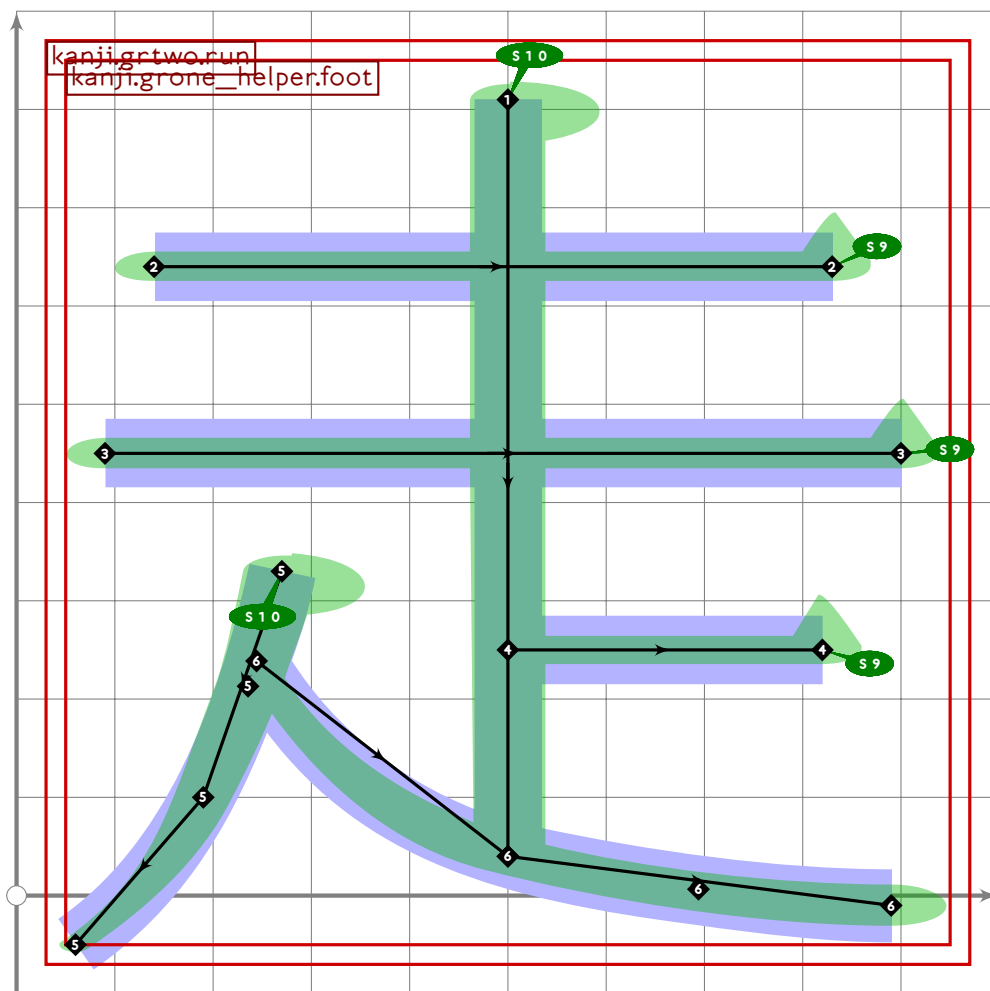


```

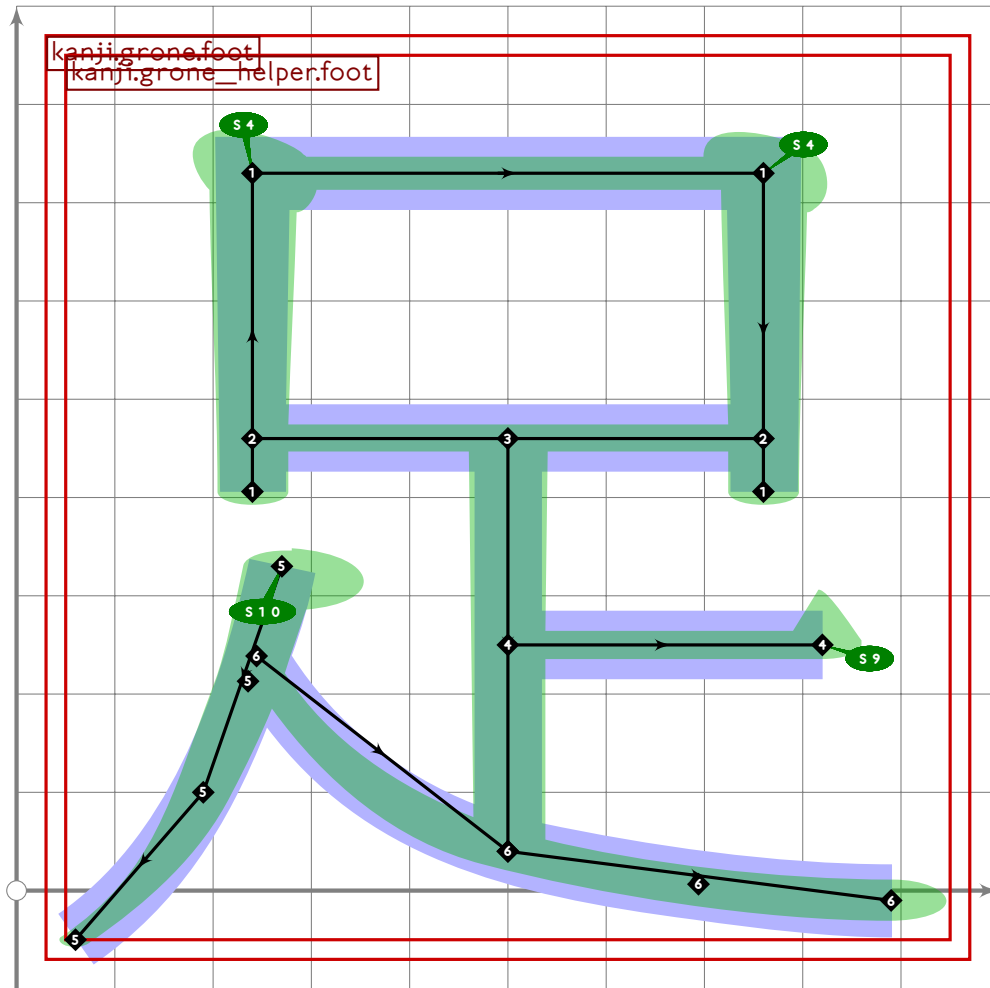
643 % aka/seki "red"
644 begintsuglyph("uni2F9A";154);
645   kanji.grone.red;
646   tsu_render;
647 endtsuglyph;
648

```

U+2F9B
tsuku.uni2F9B



```
649 % sou/hasi "run"  
650 beginsuglyph("uni2F9B";155);  
651   kanji.grtwo.run;  
652   tsu_render;  
653 endsuglyph;  
654
```

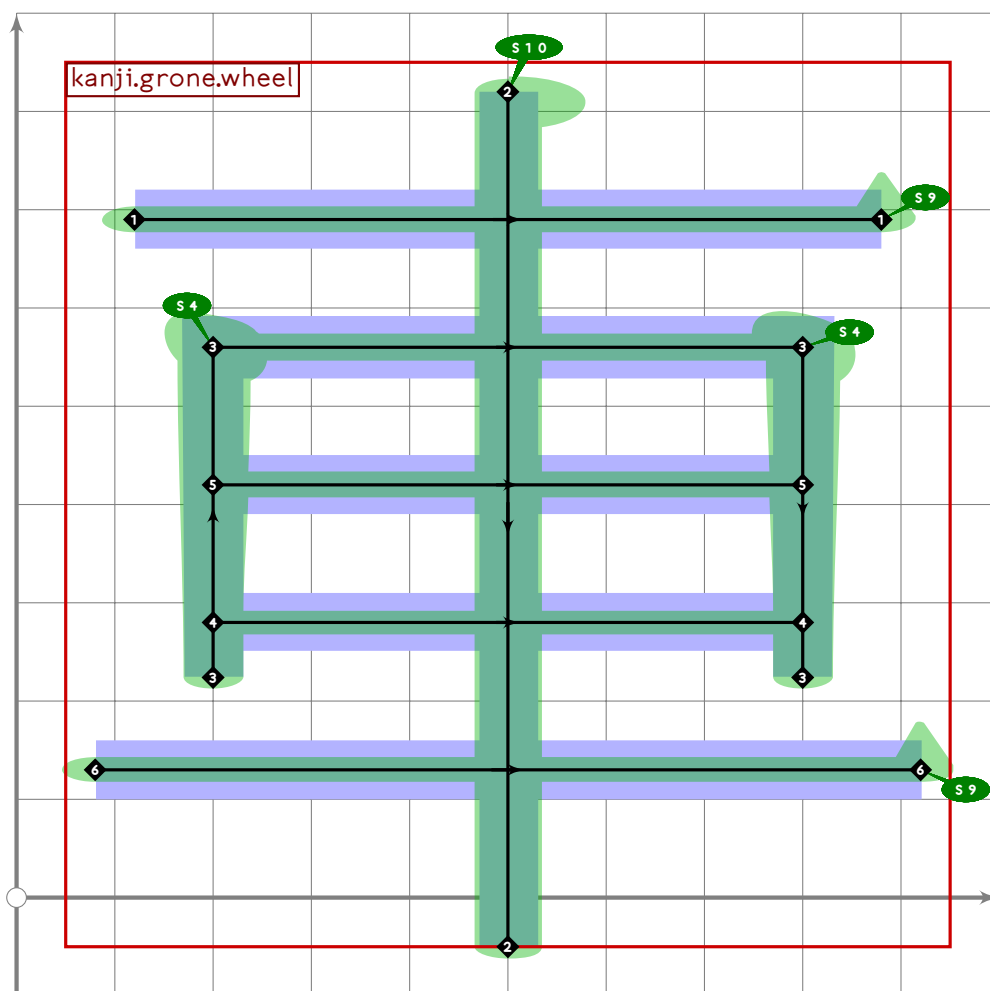


```

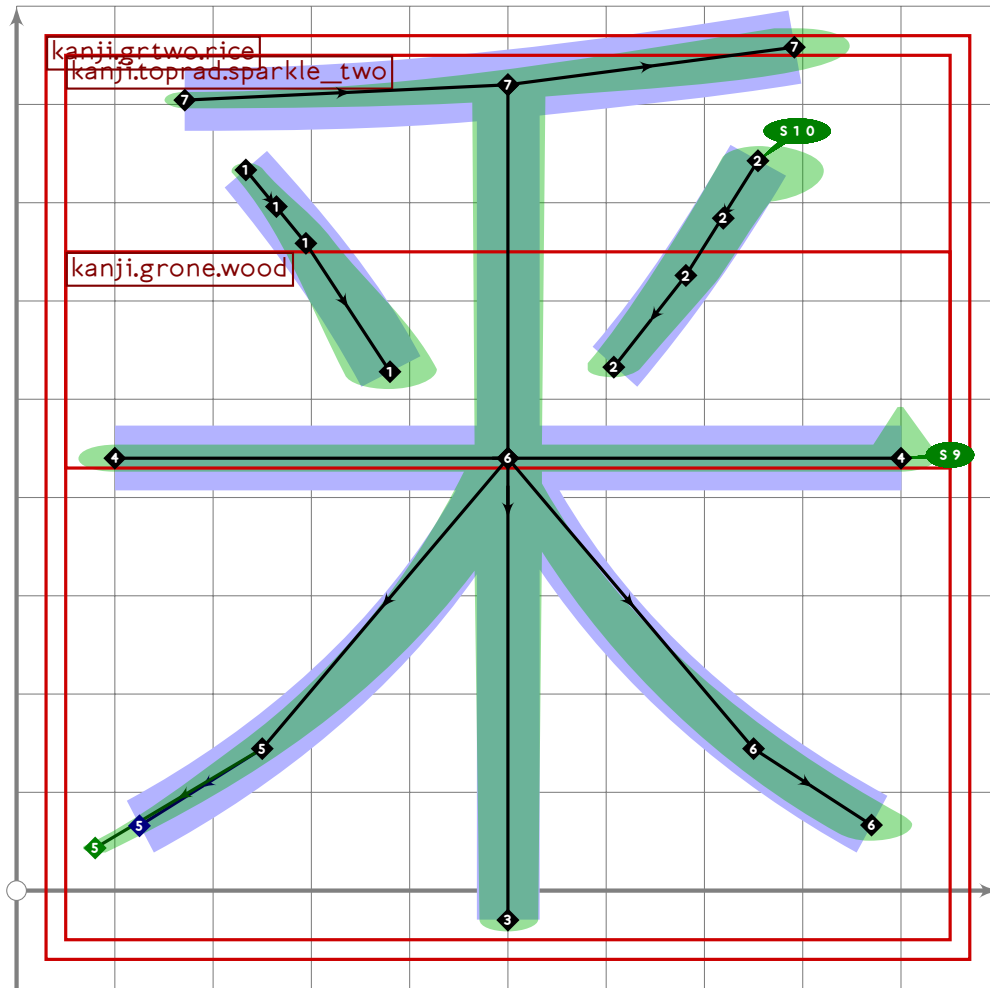
655 % ashi/soku "foot"
656 begintsuglyph("uni2F9C",156);
657   kanji.grone.foot;
658   tsu_render;
659 endtsuglyph;
660

```

U+2F9E
tsuku.uni2F9E



```
661 % kuruma "car/wheel"  
662 beginsuglyph("uni2F9E";158);  
663   kanji.grone.wheel;  
664   tsu_render;  
665 endsuglyph;  
666
```

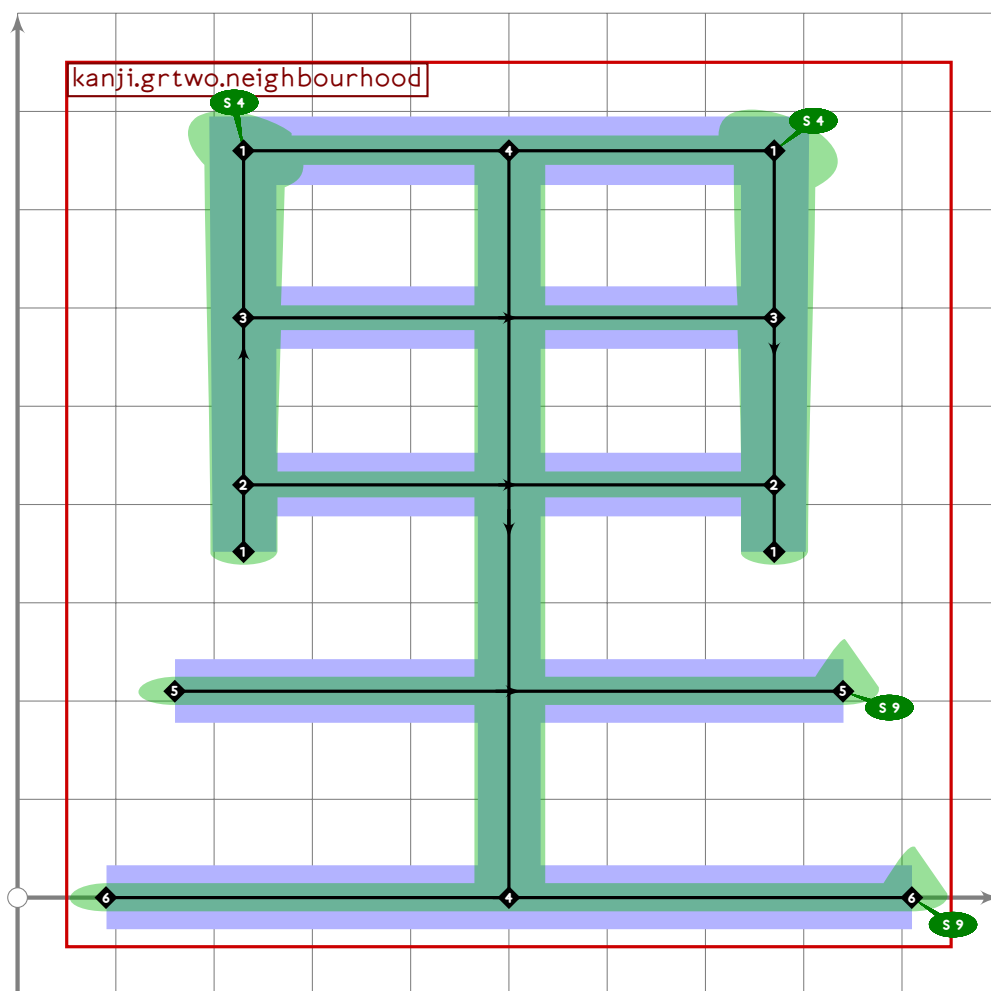


```

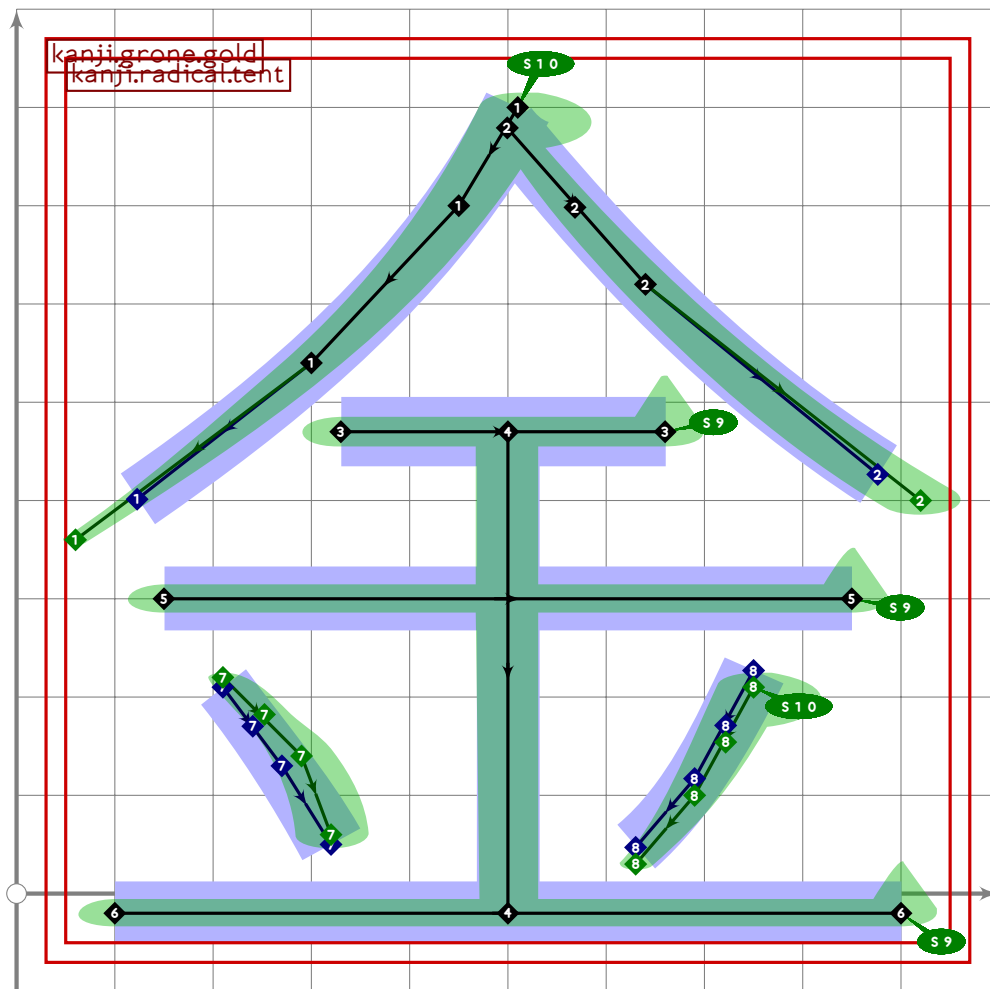
667 % han/irodori "separate" or "divide" but mostly "topped rice radical"
668 begintsuglyph("uni2FA4",164);
669   build_kanji.add_beret(kanji.grtwo.rice);
670   tsu_render;
671 endtsuglyph;
672

```

U+2FA5
tsuku.uni2FA5



```
673 % ri/sato, multiple meanings including 3.929km and "neighbourhood"  
674 begintsuglyph("uni2FA5";165);  
675   kanji.grtwo.neighbourhood;  
676   tsu_render;  
677 endtsuglyph;  
678
```

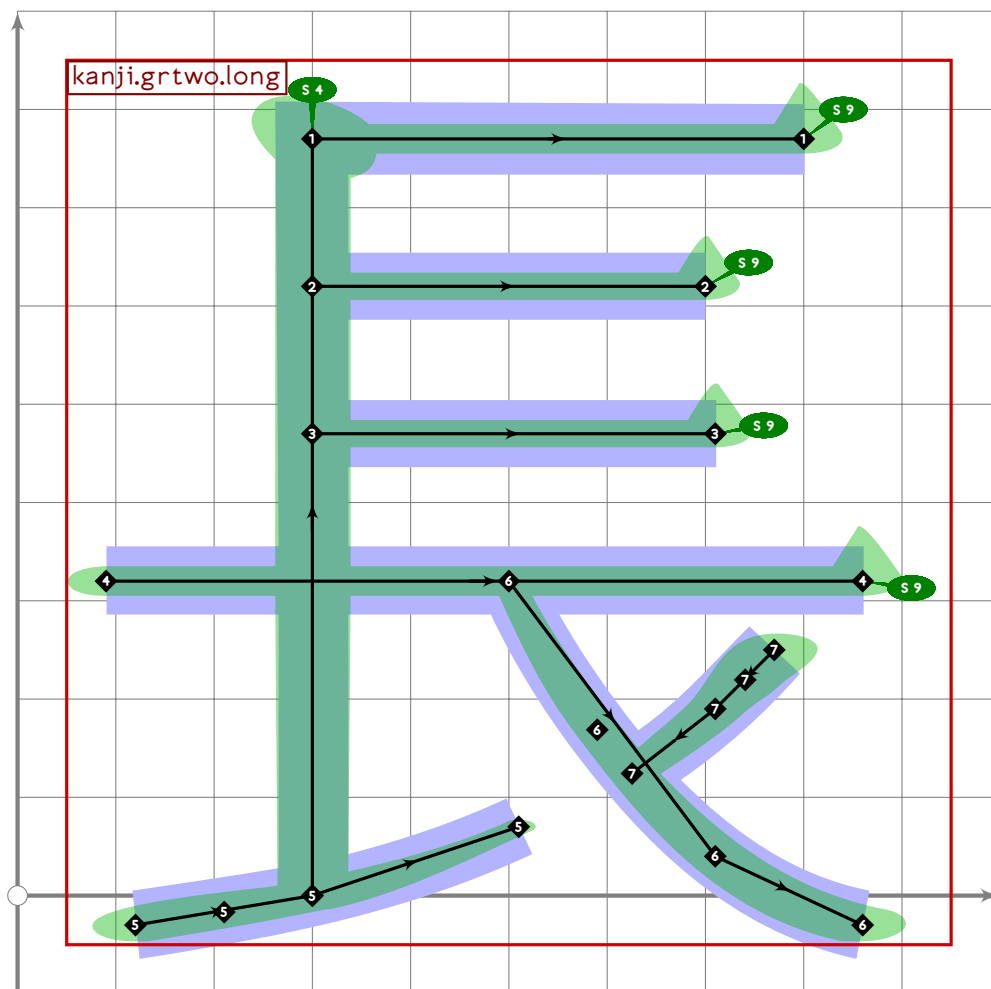



```

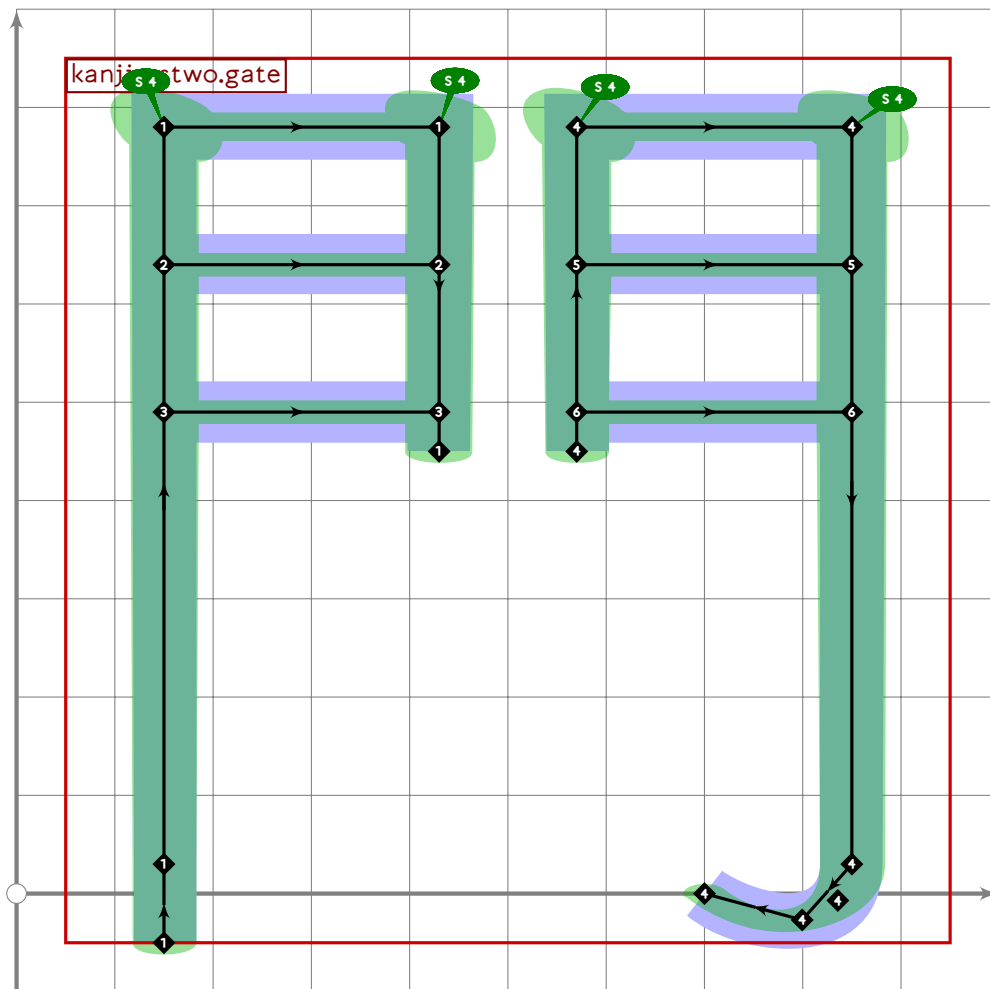
679 % kane/kin "gold"
680 begint Suglyph("uni2FA6",166);
681   kanji.grone.gold;
682   tsu_render;
683 endtsuglyph;
684

```

U+2FA7
tsuku.uni2FA7



```
685 % chou/naga "long"  
686 begintsuglyph("uni2FA7";167);  
687   kanji.grtwo.long;  
688   tsu_render;  
689 endtsuglyph;  
690
```

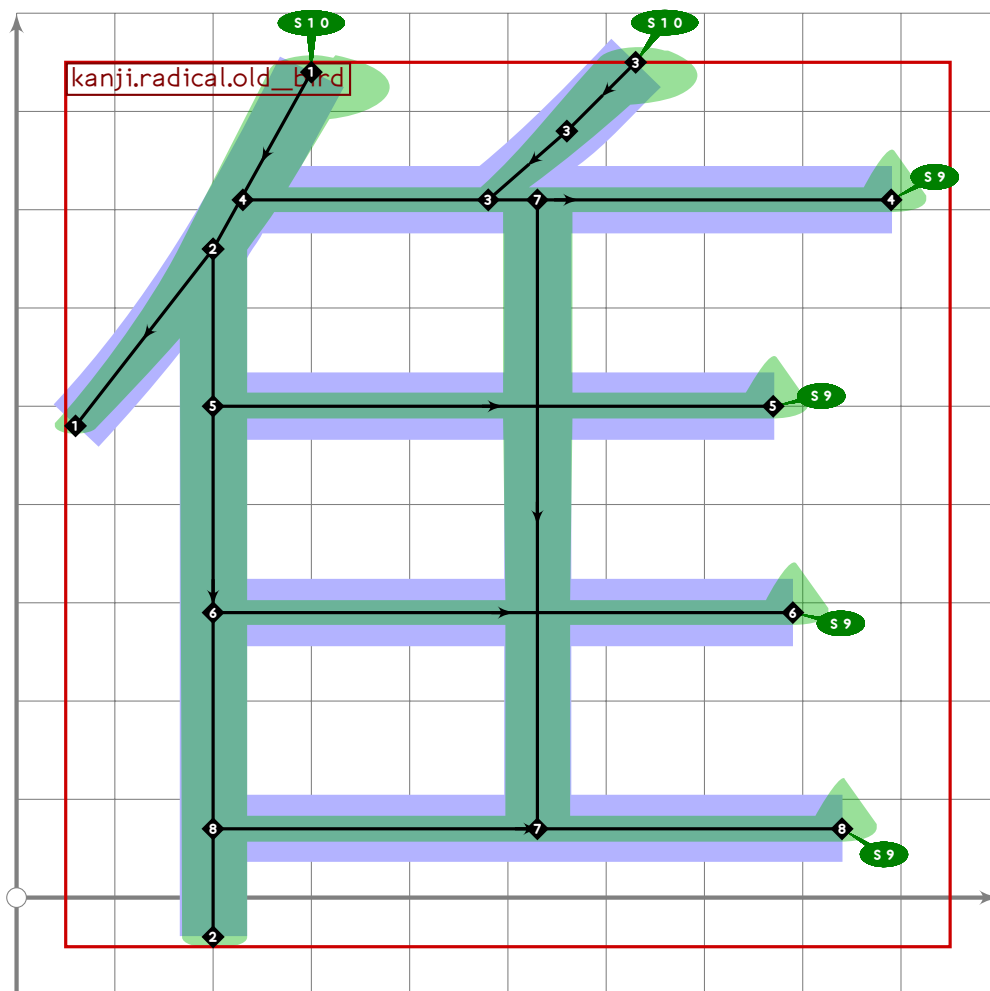


```

691 % mon/kado "gate"
692 begintuglyph("uni2FA8",168);
693   kanji.grtwo.gate;
694   tsu_render;
695 endtsuglyph;
696

```

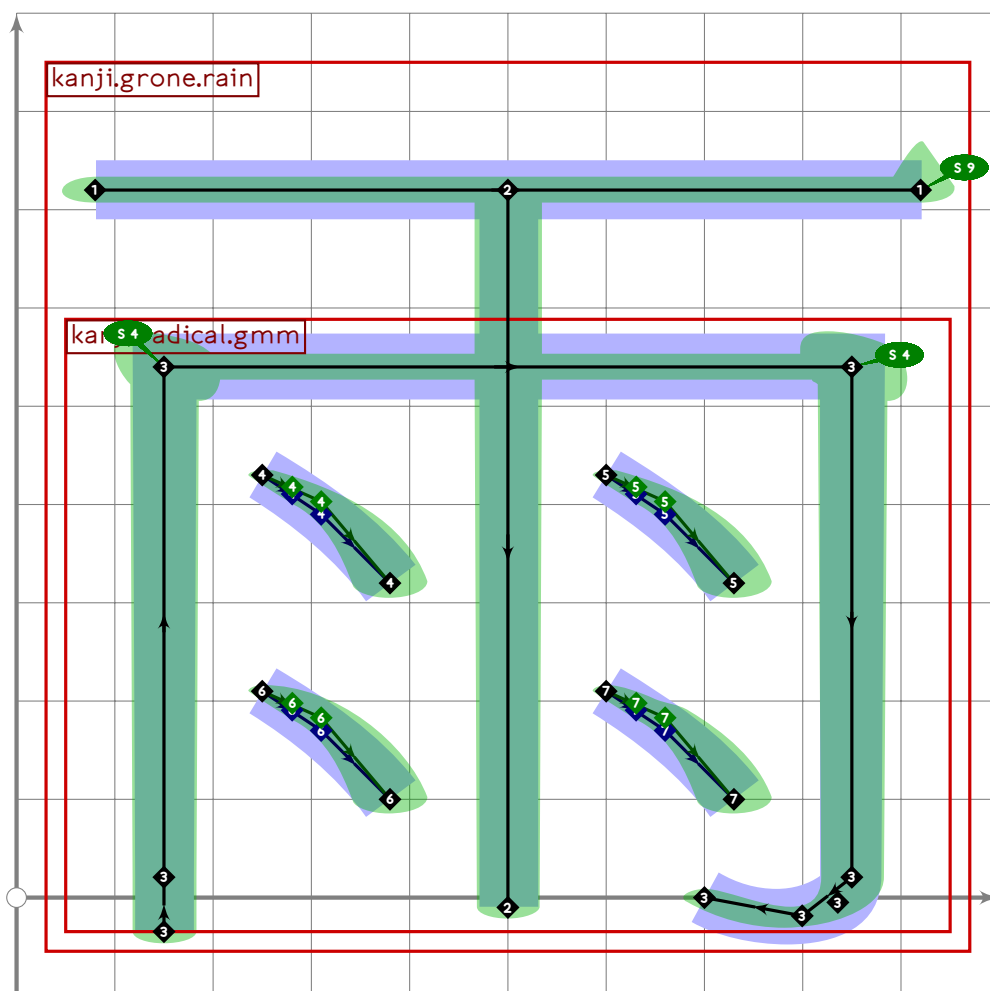
U+2FAB
tsuku.uni2FAB



```

697 % sai/tori "old bird" radical
698 begintsuglyph("uni2FAB",171);
699   kanji.radical.old_bird;
700   tsu_render;
701 endtsuglyph;
702

```

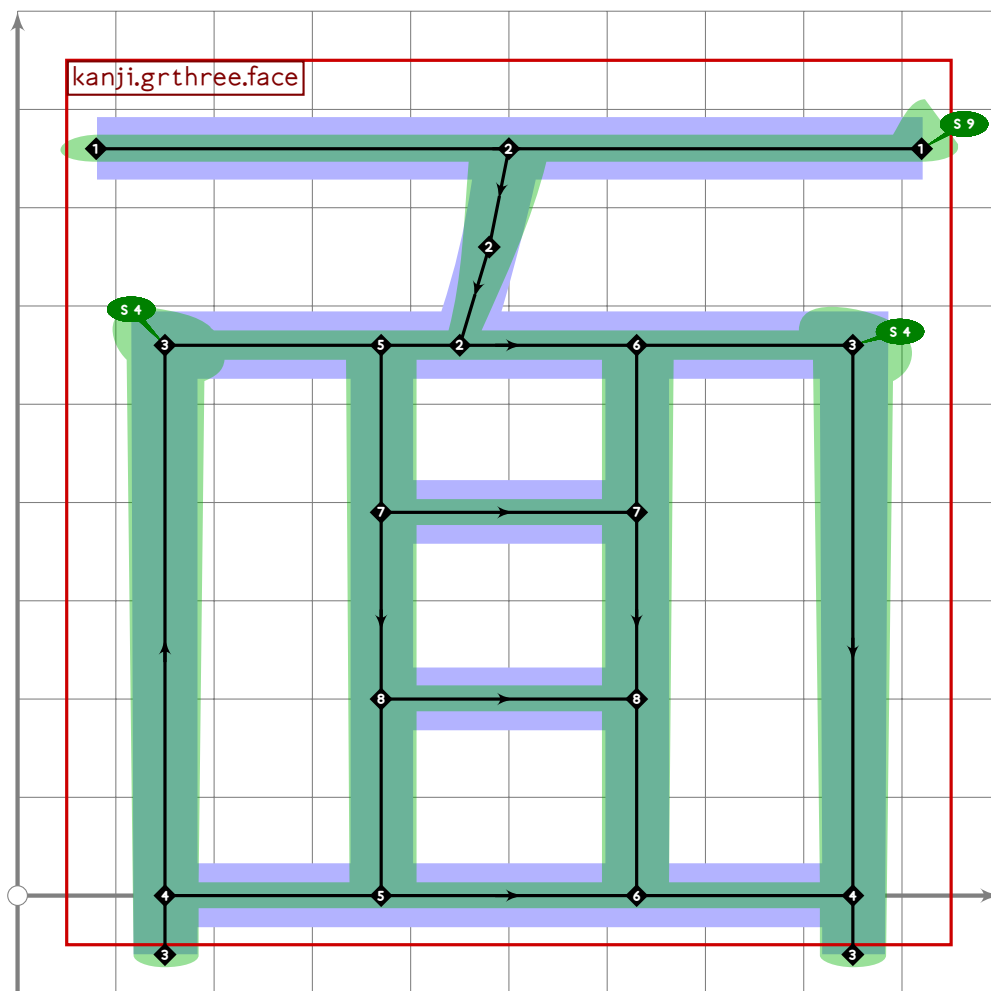


```

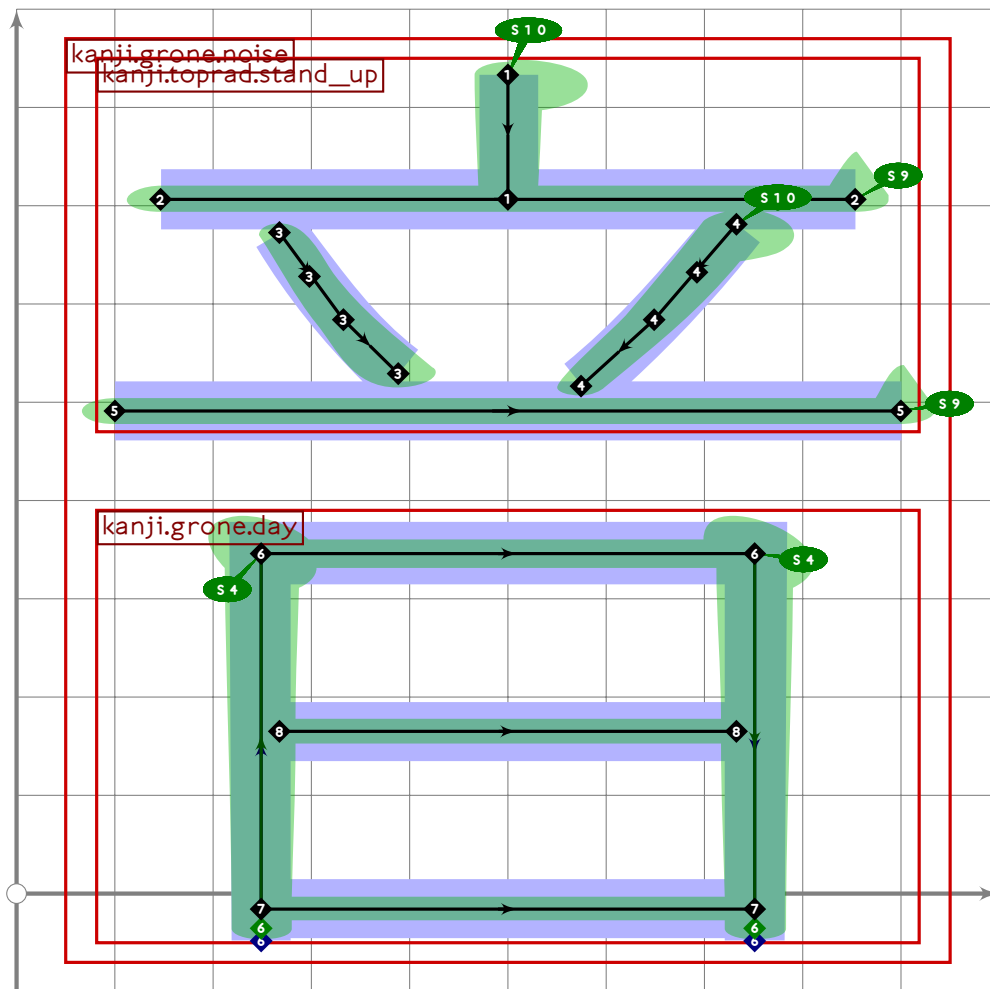
703 % u/ame "rain"
704 begintsuglyph("uni2FAC";172);
705   kanji.grone.rain;
706   tsu_render;
707 endtsuglyph;
708

```

U+2FAF
tsuku.uni2FAF



```
709 % men/omo "face"  
710 begintsuglyph("uni2FAF";175);  
711   kanji.grthree.face;  
712   tsu_render;  
713 endtsuglyph;  
714
```

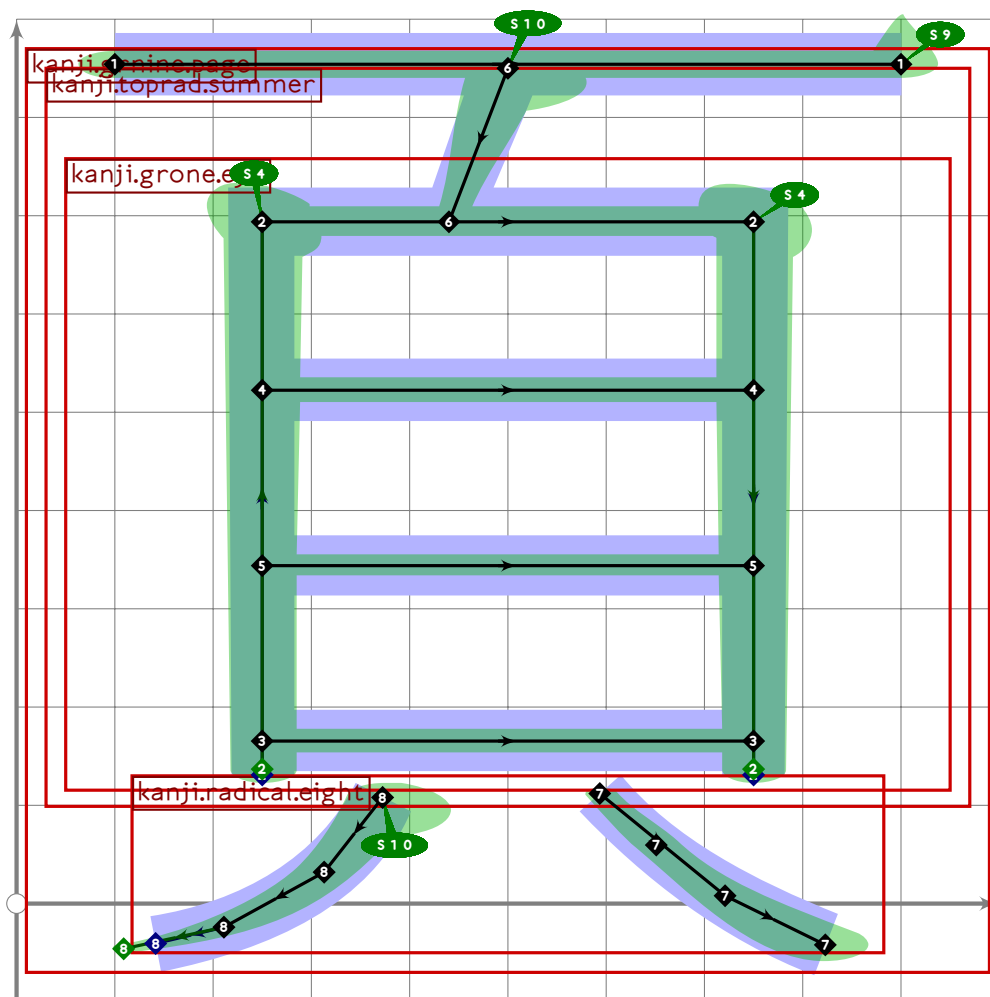


```

715 % oto/on "noise"
716 begintsuglyph("uni2FB3";179);
717   kanji.grone.noise;
718   tsu_render;
719 endtsuglyph;
720

```

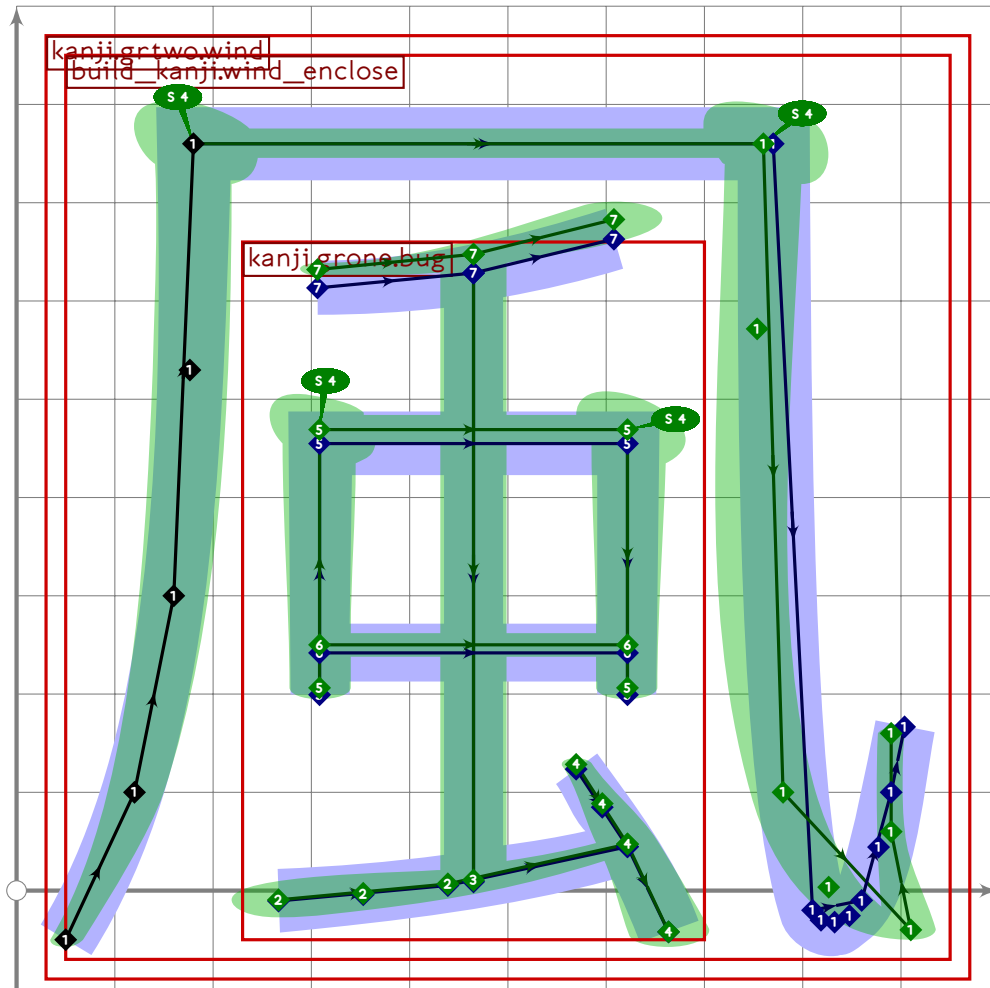
U+2FB4
tsuku.uni2FB4



```

721 % ketsu/peeji "page"
722 begintsuglyph("uni2FB4";180);
723   kanji.grnine.page;
724   tsu_render;
725 endtsuglyph;
726

```

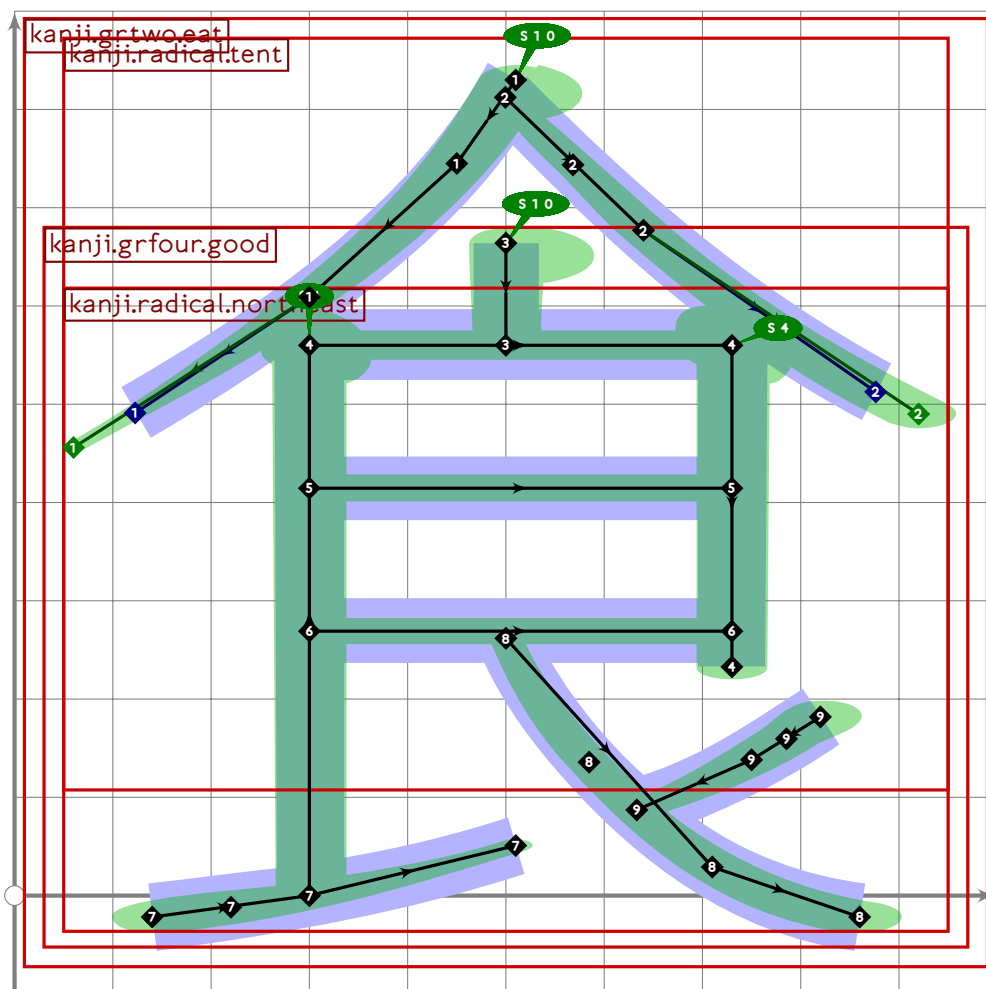



```

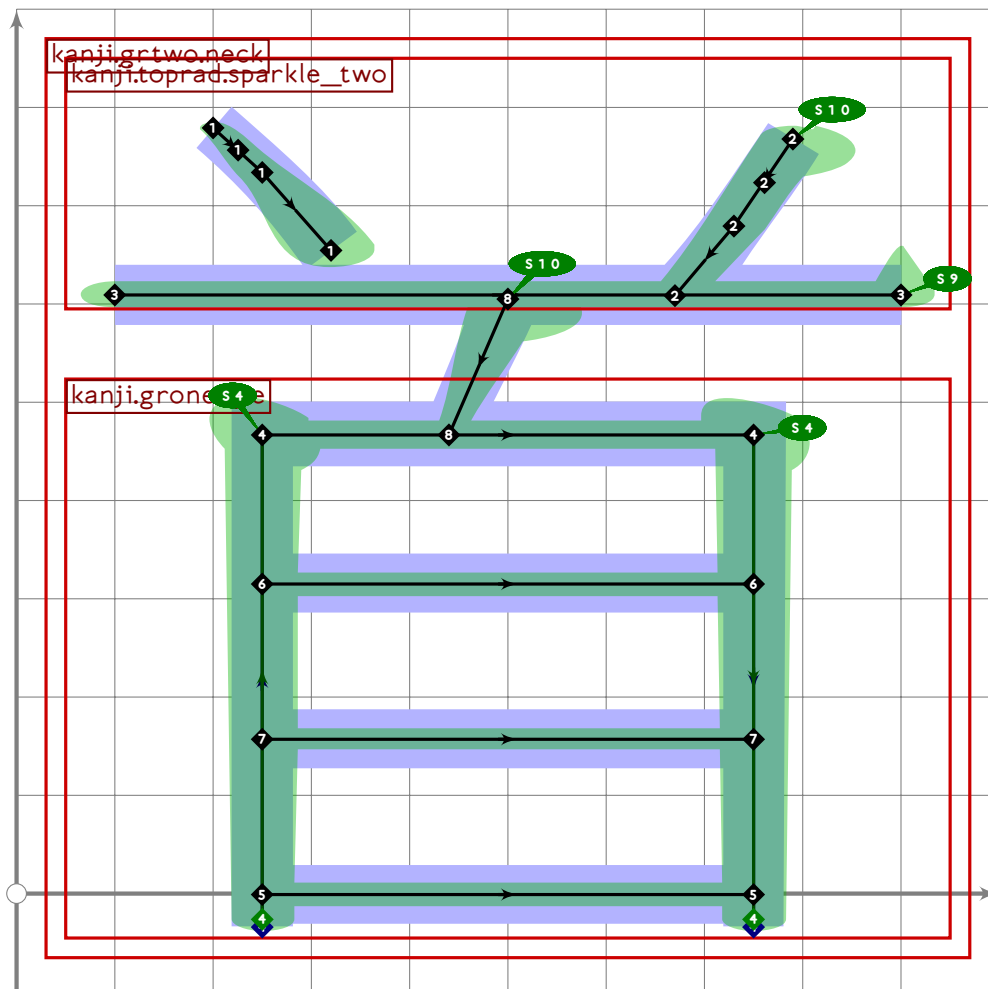
727 % fuu/kaze "wind"
728 begintsuglyph("uni2FB5",181);
729   kanji.grtwo.wind;
730   tsu_render;
731 endtsuglyph;
732

```

U+2FB7
tsuku.uni2FB7



```
733 % shoku/ta "eat"  
734 begintsuglyph("uni2FB7";183);  
735   kanji.grtwo.eat;  
736   tsu_render;  
737 endtsuglyph;  
738
```

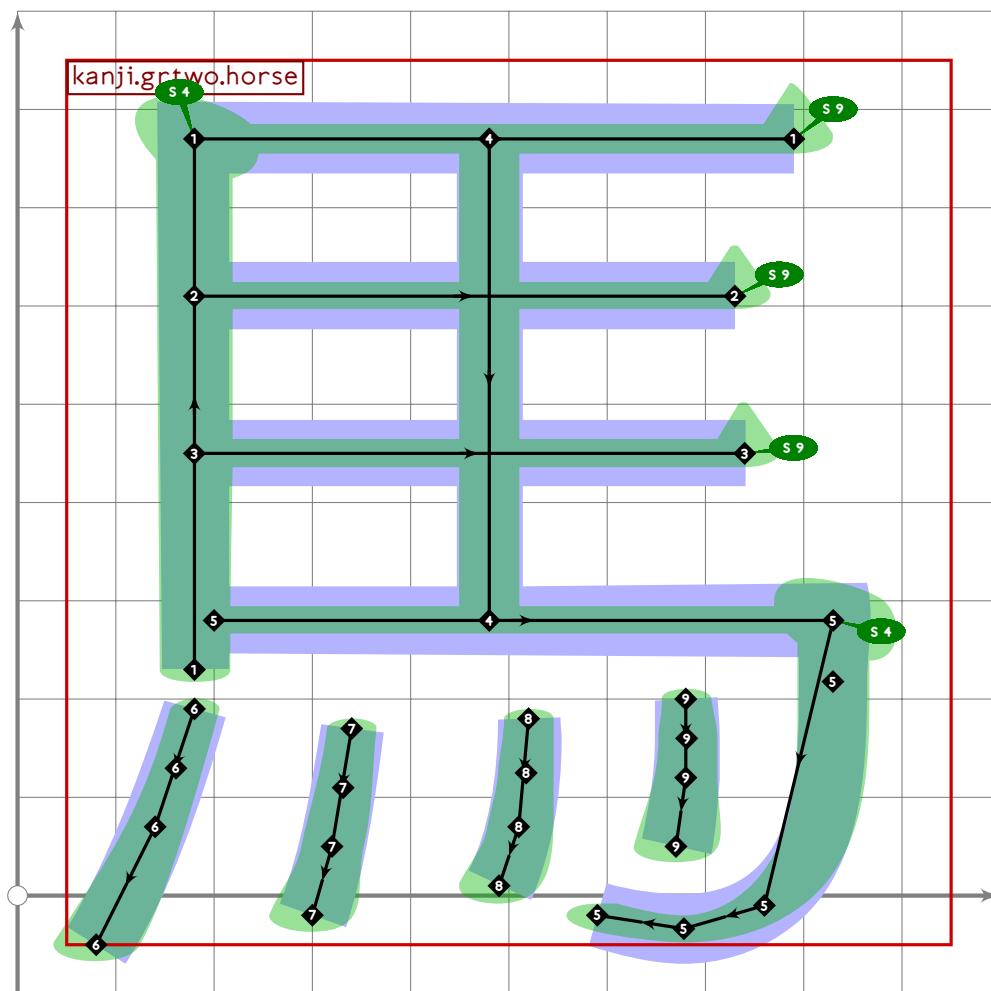


```

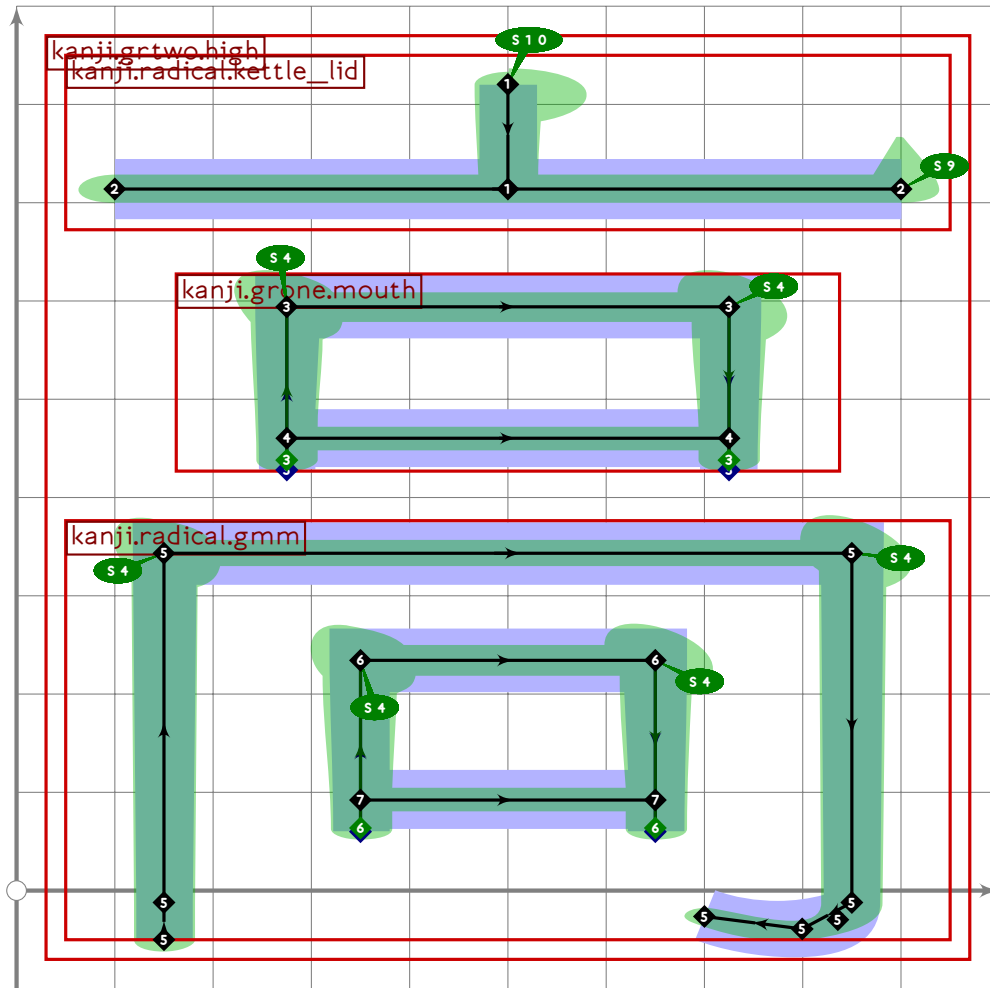
739 % shu/kubi "neck"
740 begintsuglyph("uni2FB8";184);
741   kanji.grtwo.neck;
742   tsu_render;
743 endtsuglyph;
744

```

U+2FBA
tsuku.uni2FBA



```
745 % ba/uma "horse"  
746 begintsuglyph("uni2FBA";186);  
747   kanji.grtwo.horse;  
748   tsu_render;  
749 endsuglyph;  
750
```

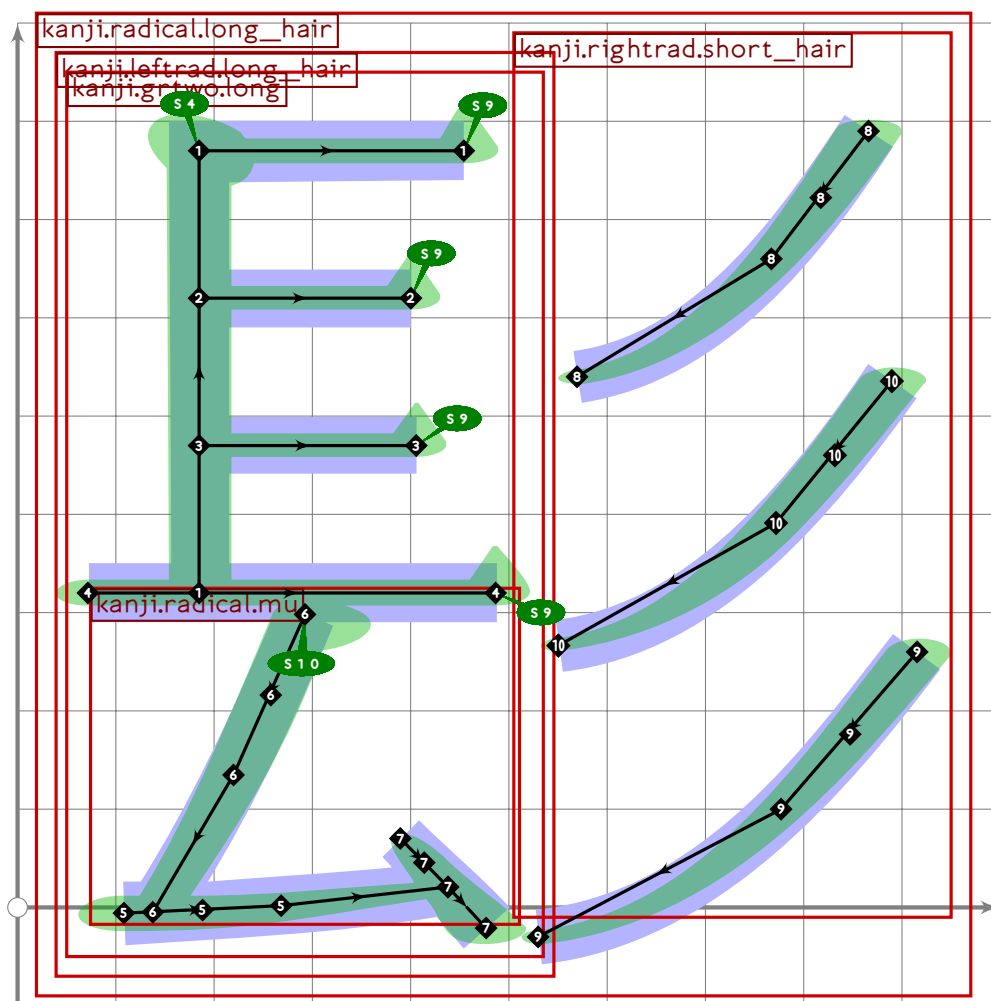


```

751 % kou/taka "high"
752 beginsuglyph("uni2FBC",188);
753   kanji.grtwo.high;
754   tsu_render;
755   endtsuglyph;
756

```

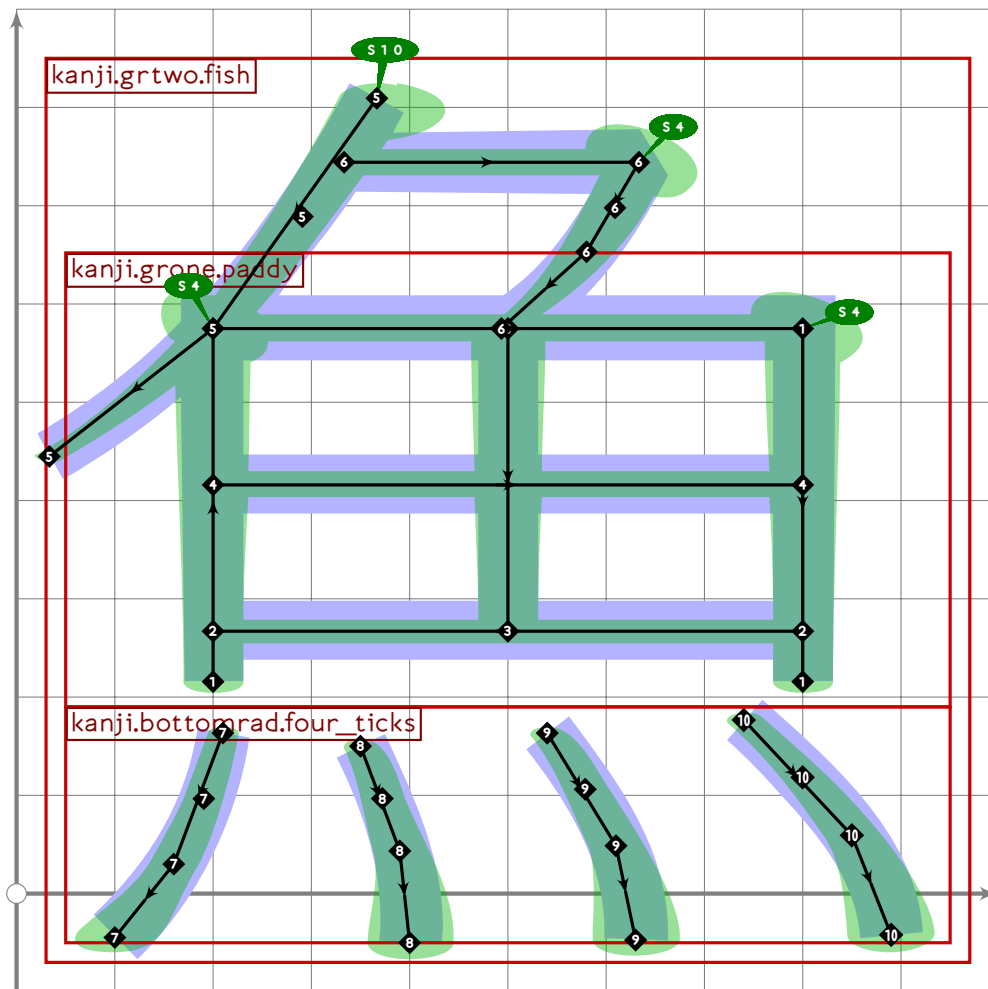
U+2FBD
tsuku.uni2FBD



```

757 % hyuu/kamigashira "long hair radical"
758 begintsuglyph("uni2FBD";189);
759   kanji.radical.long_hair;
760   tsu_render;
761 endtsuglyph;
762

```

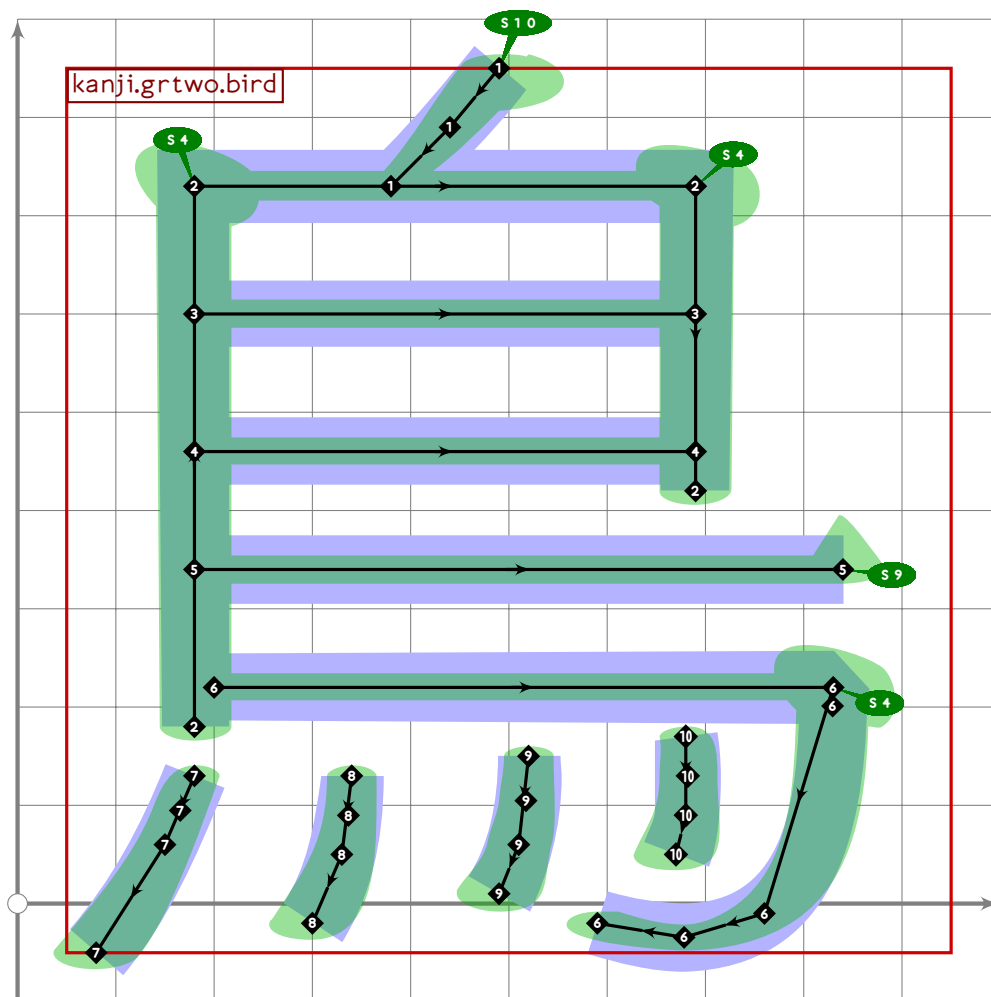


```

763 % gyo/sakana "fish"
764 begintsuglyph("uni2FC2";194);
765   kanji.grtwo.fish;
766   tsu_render;
767 endtsuglyph;
768

```

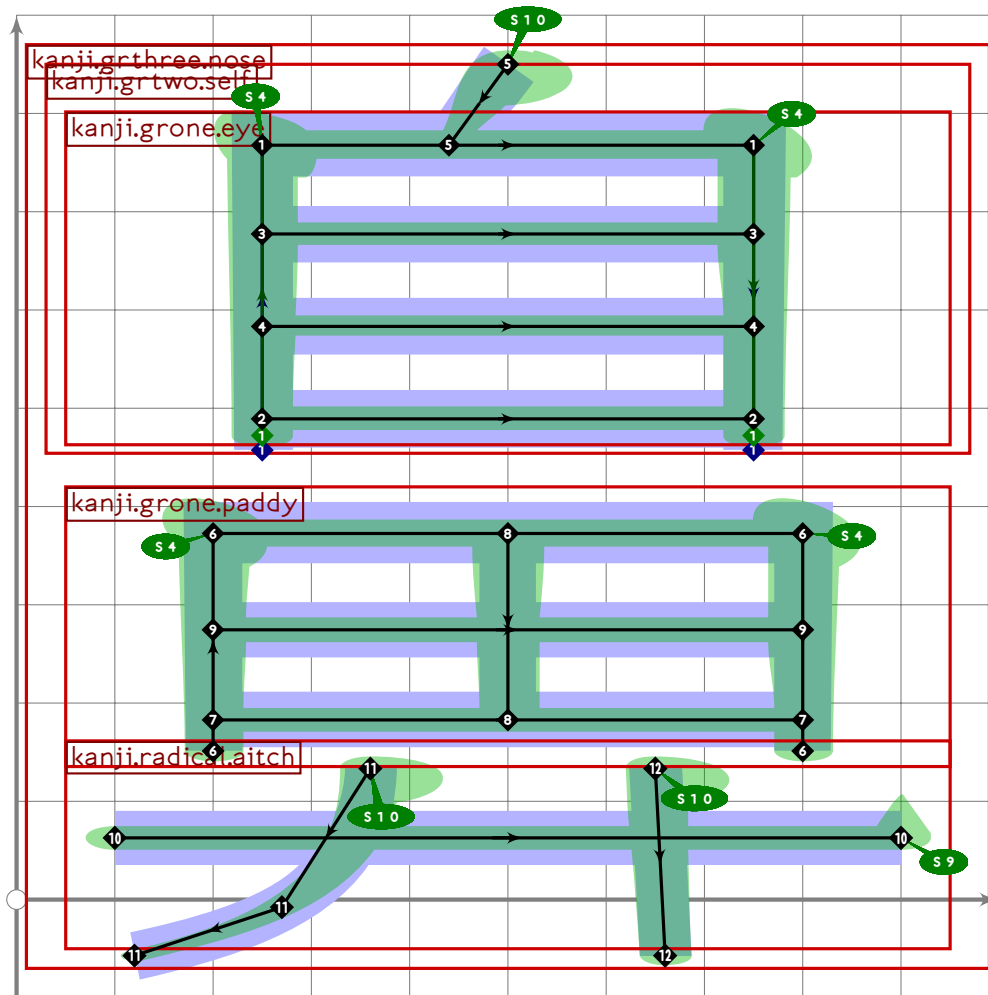
U+2FC3
tsuku.uni2FC3



```

769 % chou/tori "bird"
770 beginsuglyph("uni2FC3";195);
771   kanji.grtwo.bird;
772   tsu_render;
773 endsuglyph;
774

```

```

775 % bi/hana "nose"
776 begintsuglyph("uni2FD0";208);
777   kanji.grthree.nose;
778   tsu_render;
779 endtsuglyph;
780
781
782

```

Ideographic Description Characters

```

783 % IDEOGRAPHIC DESCRIPTION CHARACTERS
784
785 numeric idc_corners;
786
787 vardef idc_horiz(expr v,ha,hb) =
788   for h:=ha upto hb:
789     if h<hb: idc_corners[h][v].r:=1; fi;
790     if h>ha: idc_corners[h][v].l:=1; fi;
791   endfor;
792 enddef;
793

```

```

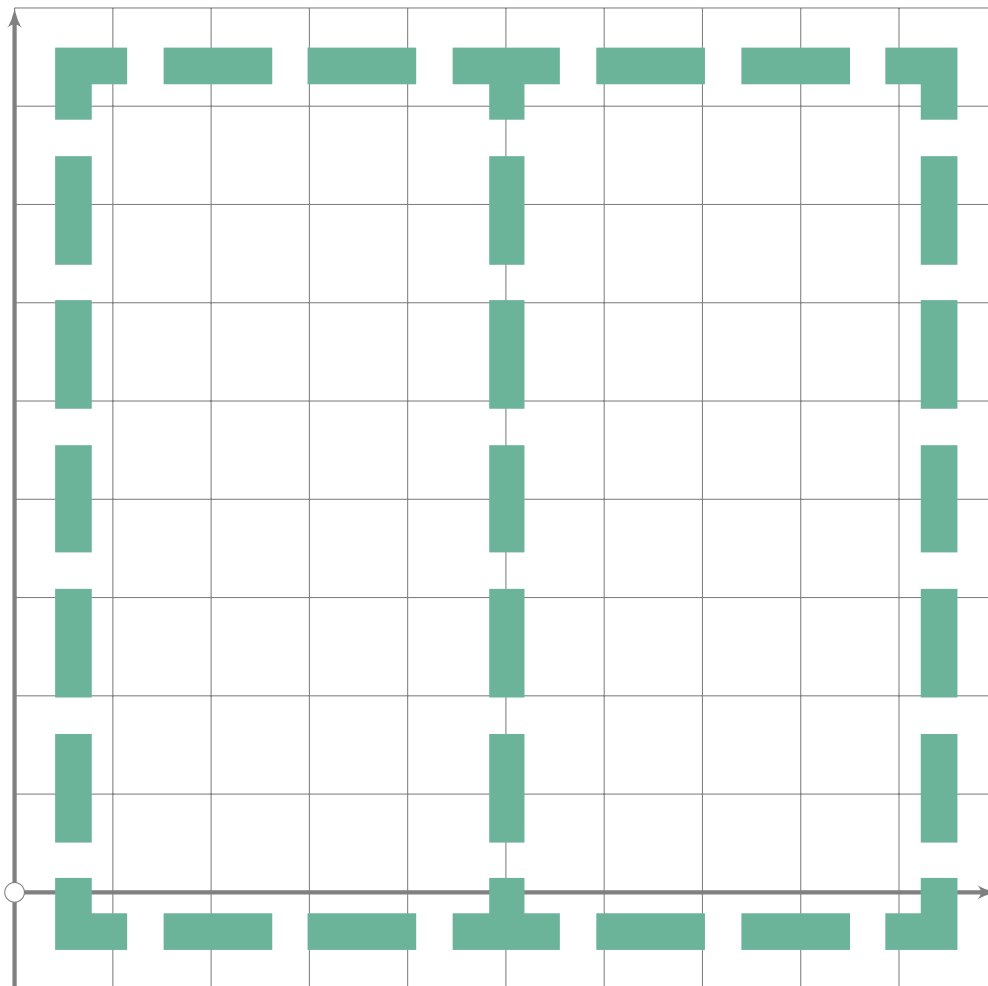
794 vardef idc_vert(expr h,va,vb) =
795   for v:=va upto vb:
796     if v<vb: idc_corners[h][v].d:=1; fi;
797     if v>va: idc_corners[h][v].u:=1; fi;
798   endfor;
799 enddef;
800
801 vardef idc_rect(expr ur,ll) =
802   idc_horiz(ypart ur,xpart ur,xpart ll);
803   idc_vert(xpart ur,ypart ll,ypart ur);
804   idc_vert(xpart ll,ypart ll,ypart ur);
805   idc_horiz(ypart ll,xpart ur,xpart ll);
806 enddef;
807
808 transform idc_drawxf;
809 (-1,-1) transformed idc_drawxf=(50,-50);
810 (97,-1) transformed idc_drawxf=(950,-50);
811 (97,97) transformed idc_drawxf=(950,850);
812
813 vardef idc_render =
814   begingroup
815     save glyph;
816     path glyph;
817     for h:=0 upto 6:
818       for v:=0 upto 6:
819         if (known idc_corners[h][v].l) or (known idc_corners[h][v].r)
820           or (known idc_corners[h][v].u) or (known idc_corners[h][v].d):
821           if fine_idcs:
822             glyph:=(
823               (-1,1)-if known idc_corners[h][v].d: (-1,2.5)-(-1,2.5)- fi
824               (1,1)-if known idc_corners[h][v].r: (2.5,1)-(2.5,1)- fi
825               (1,-1)-if known idc_corners[h][v].u: (1,-2.5)-(-1,-2.5)- fi
826               (-1,-1)-if known idc_corners[h][v].l: (-2.5,-1)-(-2.5,-1)- fi
827               cycle) shifted ((h,v) scaled 16);
828             dangerousFill glyph transformed idc_drawxf;
829             if known idc_corners[h][v].d:
830               glyph:=((-1,5.5)-(-1,10.5)-(1,10.5)-(1,5.5)-cycle)
831               shifted ((h,v) scaled 16);
832               dangerousFill glyph transformed idc_drawxf;
833             fi;
834             if known idc_corners[h][v].r:
835               glyph:=((5.5,-1)-(5.5,1)-(10.5,1)-(10.5,-1)-cycle)
836               shifted ((h,v) scaled 16);
837               dangerousFill glyph transformed idc_drawxf;
838             fi;
839           else:
840             glyph:=(
841               (-2,2)-if known idc_corners[h][v].d: (-2,6)-(-2,6)- fi

```

```

842         (2,2)-if known idc_corners[h][v].r: (6,2)-(6,-2)- fi
843         (2,-2)-if known idc_corners[h][v].u: (2,-6)-(-2,-6)- fi
844         (-2,-2)-if known idc_corners[h][v].l: (-6,-2)-(-6,2)- fi
845         cycle) shifted ((h,v) scaled 16);
846         dangerousFill glyph transformed idc_drawxf;
847     fi;
848 fi;
849 idc_corners[h][v].l:=whatever;
850 idc_corners[h][v].r:=whatever;
851 idc_corners[h][v].u:=whatever;
852 idc_corners[h][v].d:=whatever;
853 endfor;
854 endfor;
855 endgroup;
856 enddef;
857

```



```

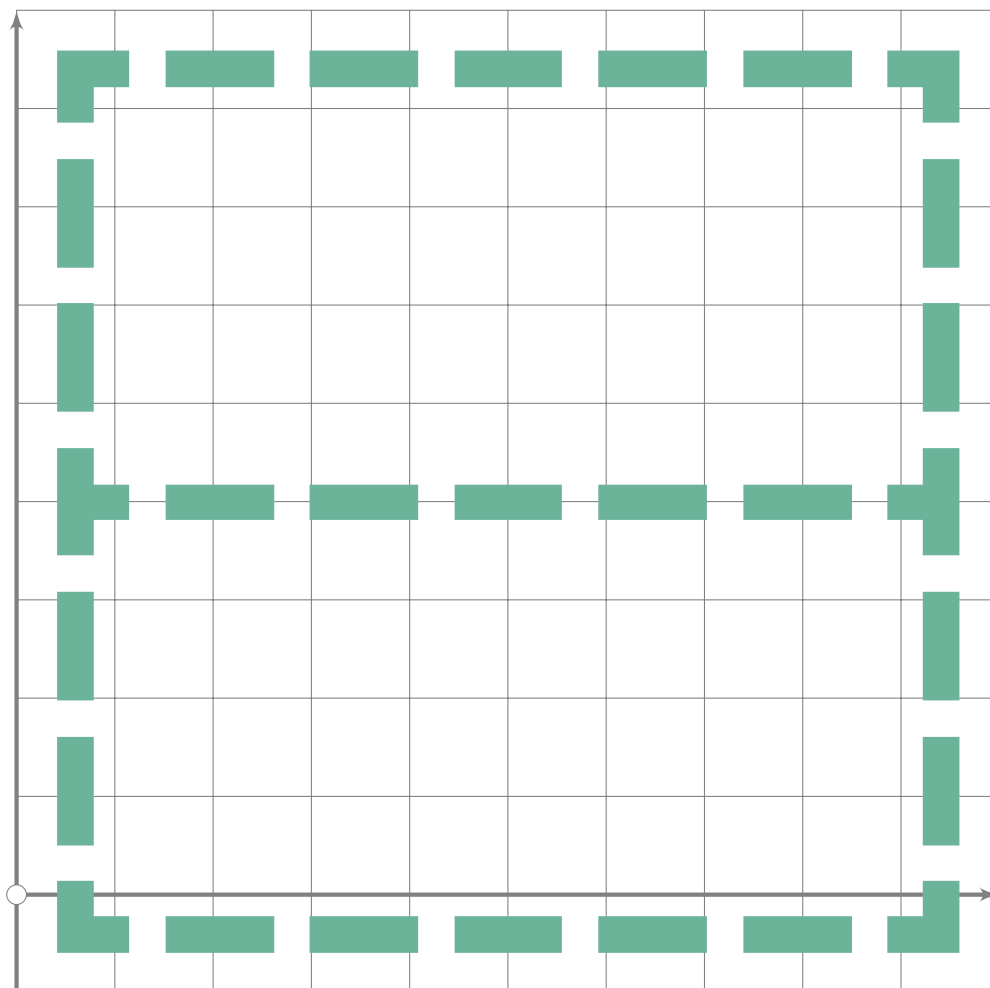
858 % left to right
859 begintsuglyph("uni2FF0";240);
860 idc_rect((0,6),(6,0));
861 idc_vert(3,0,6);
862 idc_render;

```

U+2FF1
tsuku.uni2FF1

863 endtsuglyph;

864



865 % above to below

866 begintsuglyph("uni2FF1";241);

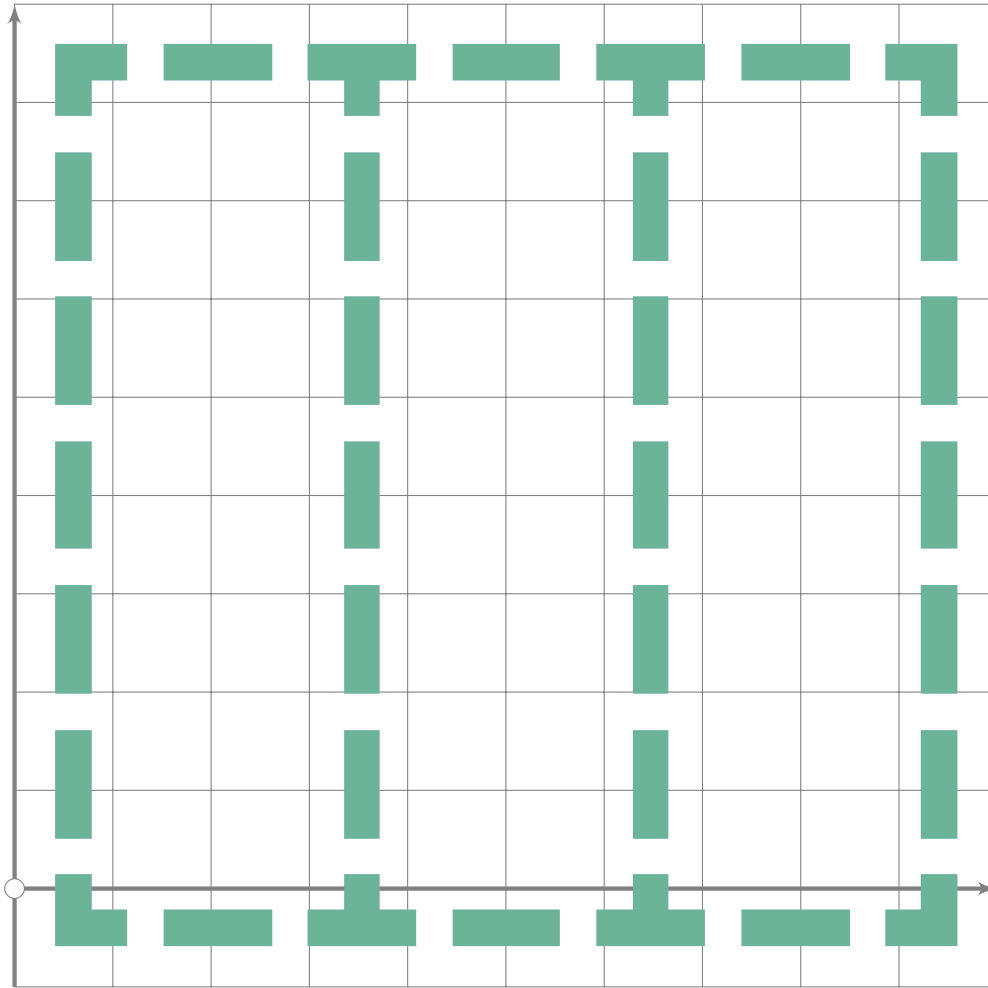
867 idc_rect((0,6),(6,0));

868 idc_horiz(3,0,6);

869 idc_render;

870 endtsuglyph;

871

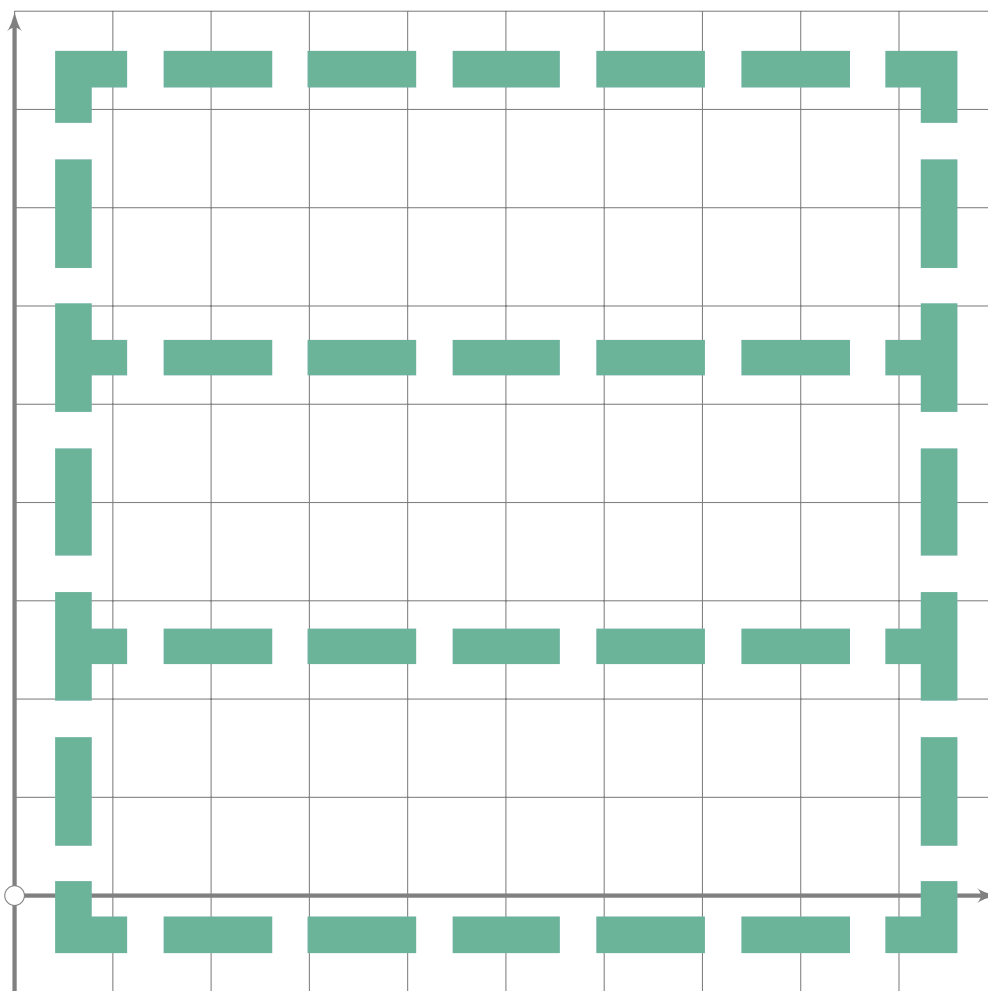


```

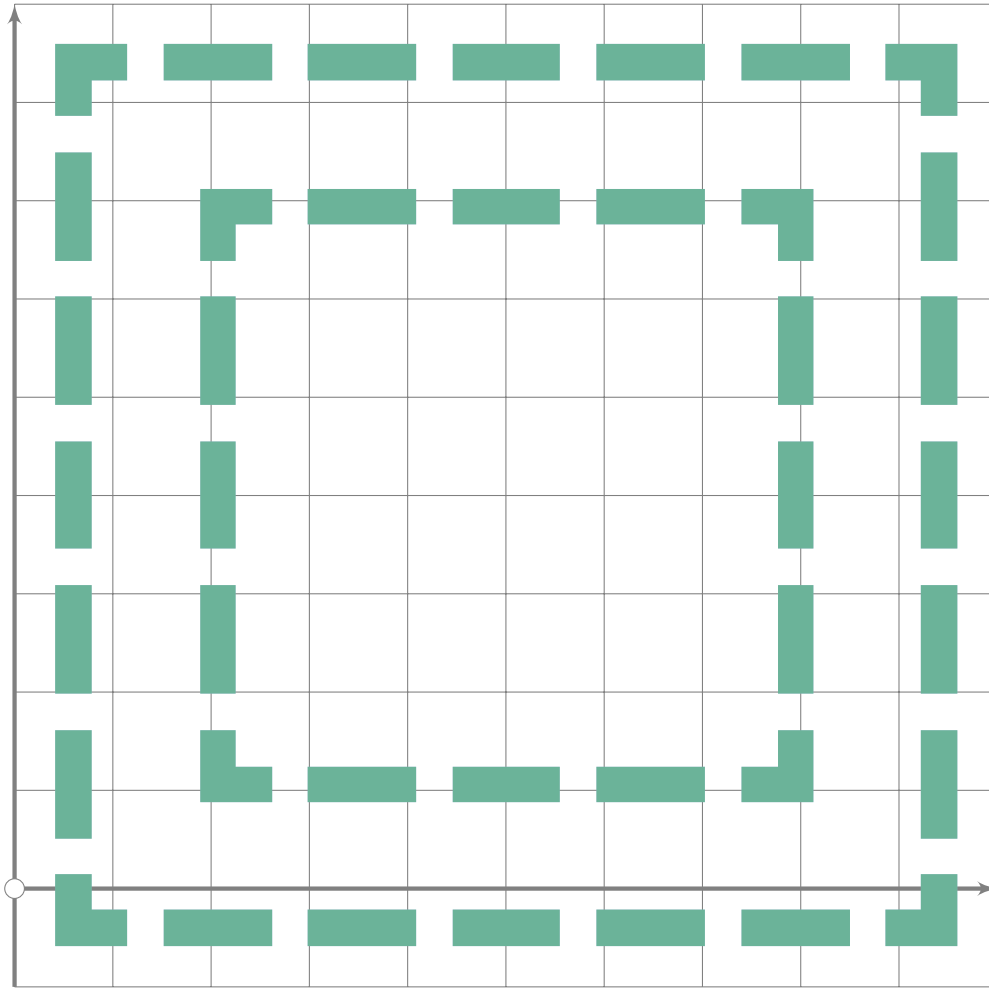
872 % left to middle to right
873 begintsuglyph("uni2FF2";242);
874   idc_rect((0,6),(6,0));
875   idc_vert(2,0,6);
876   idc_vert(4,0,6);
877   idc_render;
878 endtsuglyph;
879

```

U+2FF3
tsuku.uni2FF3



```
880 % above to middle to below
881 begintsuglyph("uni2FF3",243);
882   idc_rect((0,6),(6,0));
883   idc_horiz(2,0,6);
884   idc_horiz(4,0,6);
885   idc_render;
886 endtsuglyph;
887
```

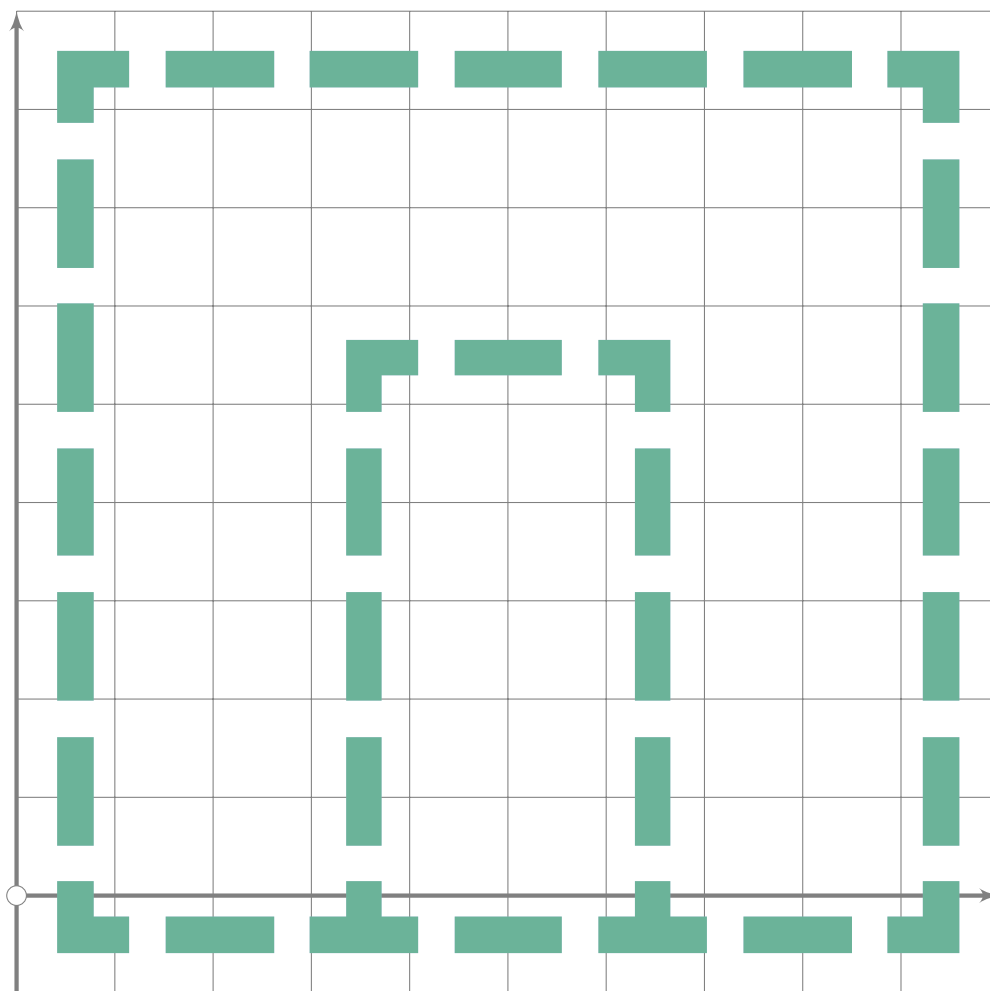


```

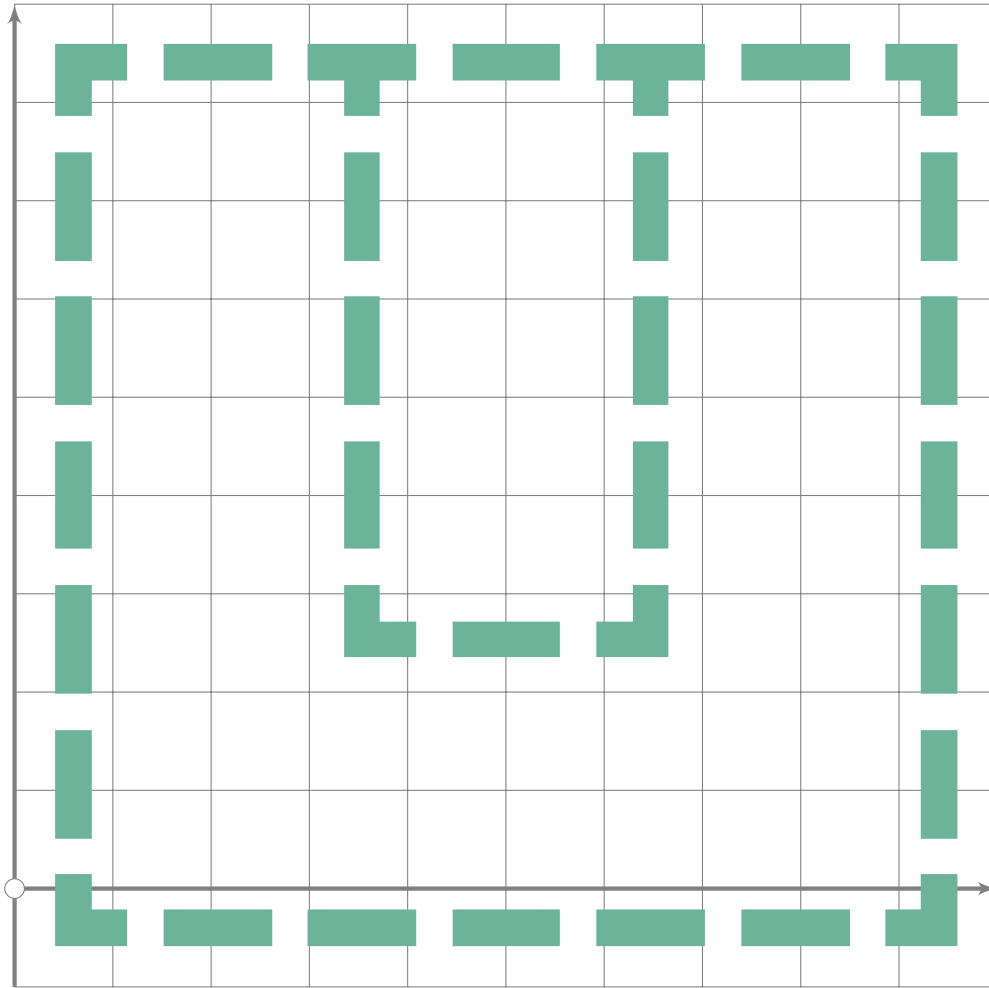
888 % full surround
889 begint Suglyph("uni2FF4",244);
890   idc_rect((0,6),(6,0));
891   idc_rect((1,5),(5,1));
892   idc_render;
893 endtsuglyph;
894

```

U+2FF5
tsuku.uni2FF5



```
895 % surround from above
896 begint Suglyph("uni2FF5",245);
897   idc_rect((0,6),(6,0));
898   idc_rect((2,4),(4,0));
899   idc_render;
900 endtsuglyph;
901
```

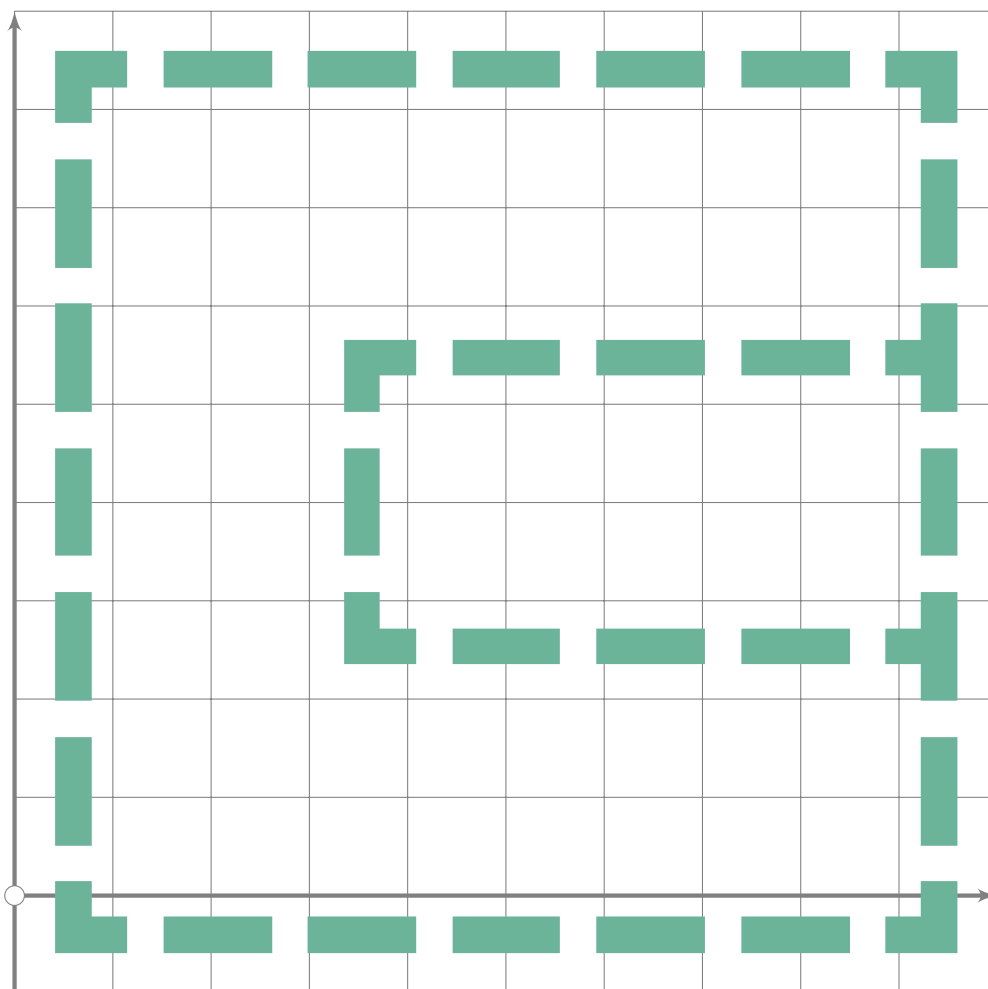



```

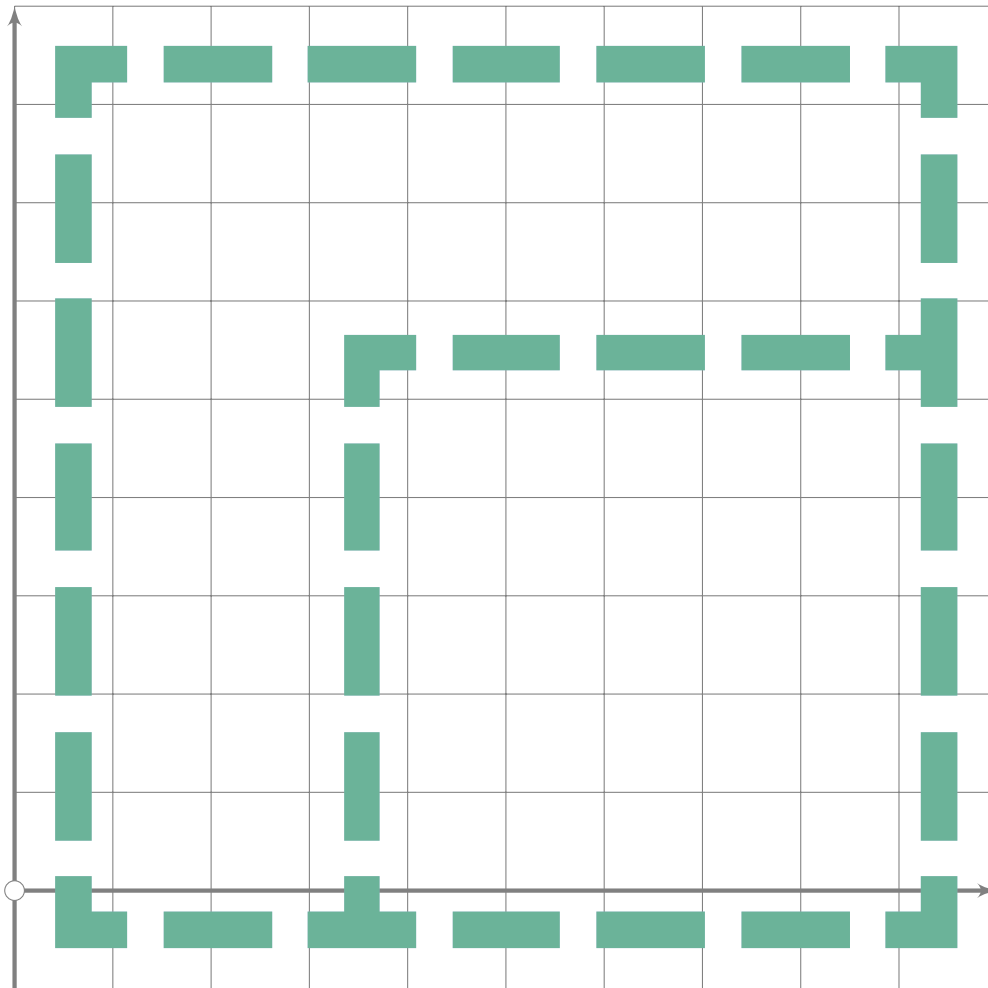
902 % surround from below
903 begint Suglyph("uni2FF6";246);
904   idc_rect((0,6),(6,0));
905   idc_rect((2,6),(4,2));
906   idc_render;
907 endtsuglyph;
908

```

U+2FF7
tsuku.uni2FF7



```
909 % surround from left
910 begint Suglyph("uni2FF7";247);
911   idc_rect((0,6),(6,0));
912   idc_rect((2,4),(6,2));
913   idc_render;
914 endtsuglyph;
915
```

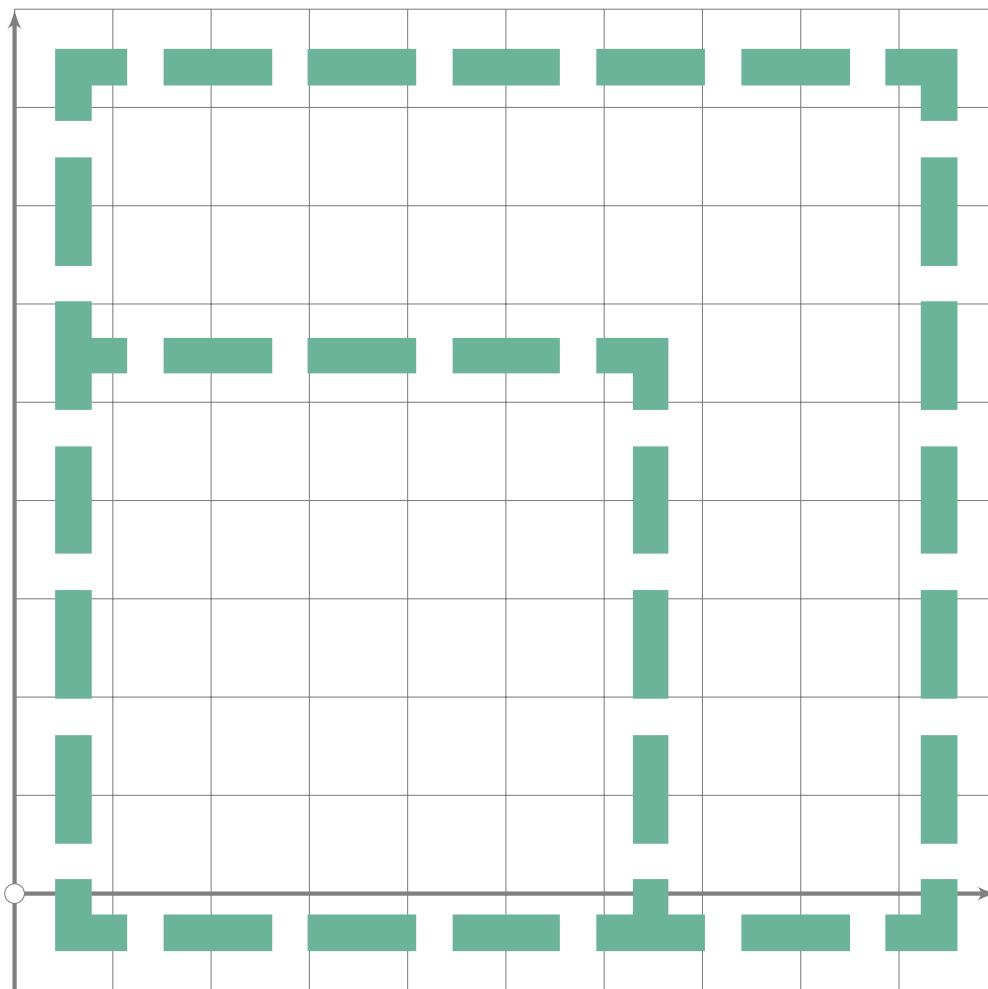


```

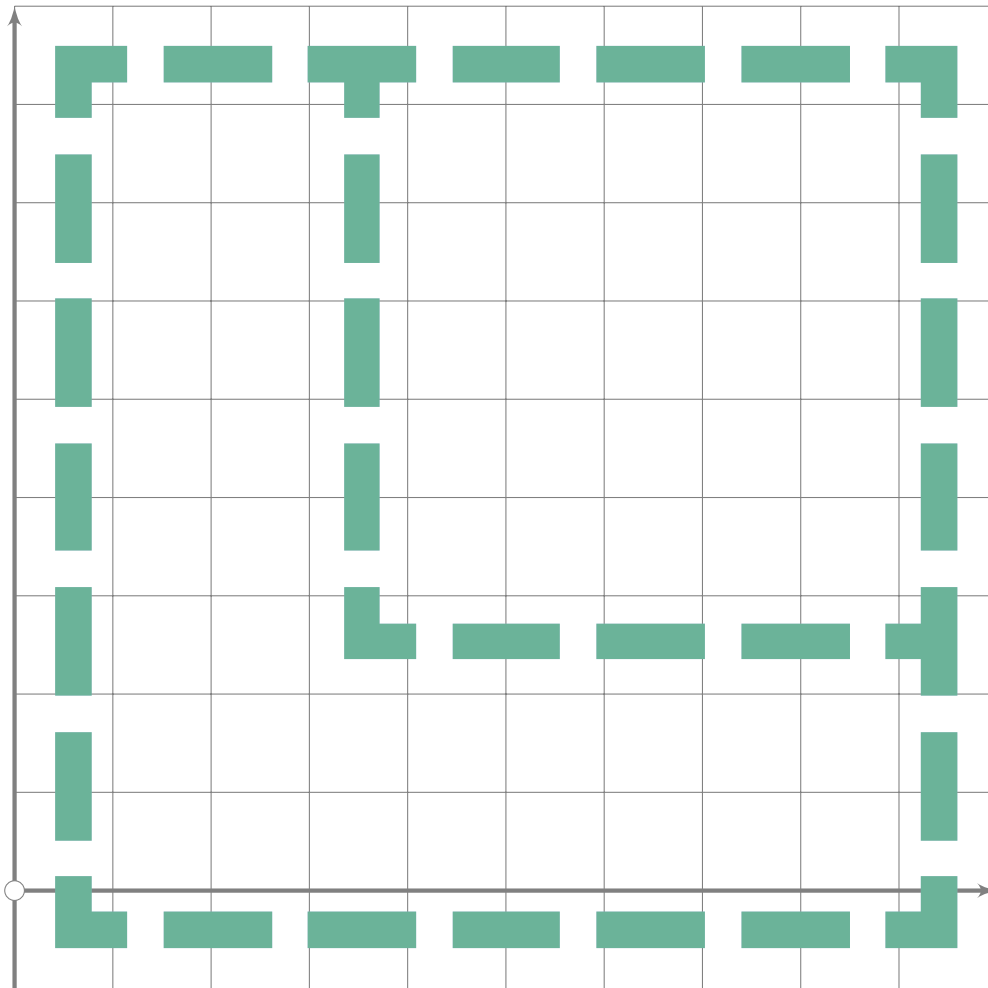
916 % surround from upper left
917 begint Suglyph("uni2FF8",248);
918   idc_rect((0,6),(6,0));
919   idc_rect((2,4),(6,0));
920   idc_render;
921 endtsuglyph;
922

```

U+2FF9
tsuku.uni2FF9



```
923 % surround from upper right
924 begint Suglyph("uni2FF9",249);
925   idc_rect((0,6),(6,0));
926   idc_rect((0,4),(4,0));
927   idc_render;
928 endtsuglyph;
929
```

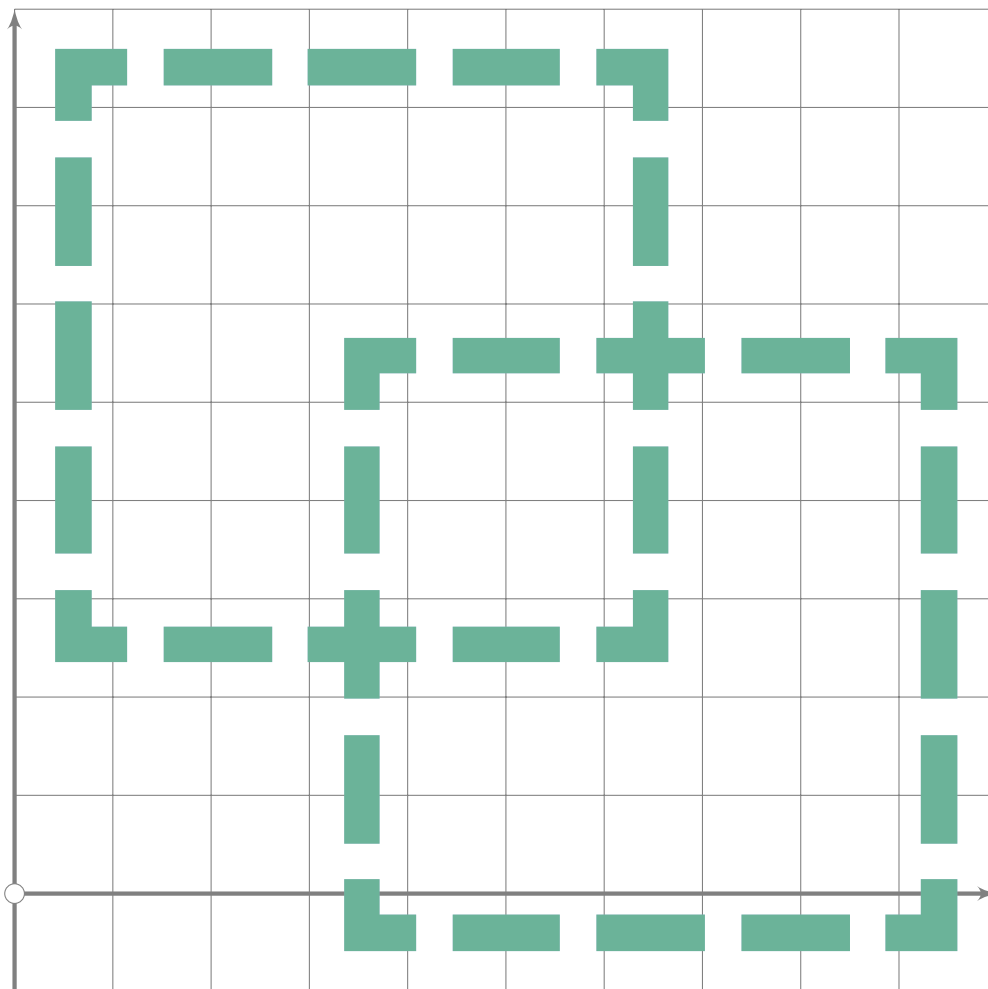


```

930 % surround from lower left
931 begint Suglyph("uni2FFA",250);
932   idc_rect((0,6),(6,0));
933   idc_rect((2,6),(6,2));
934   idc_render;
935 endtsuglyph;
936

```

U+2FFB
tsuku.uni2FFB



```
937 % overlaid
938 begint Suglyph("uni2FFB",251);
939   idc_rect((0,6),(4,2));
940   idc_rect((2,4),(6,0));
941   idc_render;
942 endtsuglyph;
943
944
945
946 endfont;
947
948
```