

作りましょう 0.10

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 0.10

Parametric Font Family  
Proofs and pretty-printed  
source code

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2017年11月17日

November 17, 2017

Proofs and pretty-printed source code for Tsukurimashou  
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## Volume III

### Other shared kanji

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**BOTT**

leftrad.mp

**LEFT**

radical.mp

**RADI**

rightrad.mp

**RIGH**

toprad.mp

**TOPR**

gradeeight.mp

**EIGH**

gradenine.mp

**NINE**

gradeten.mp

**TEN**

rare.mp

**RARE**



## bottomrad.mp

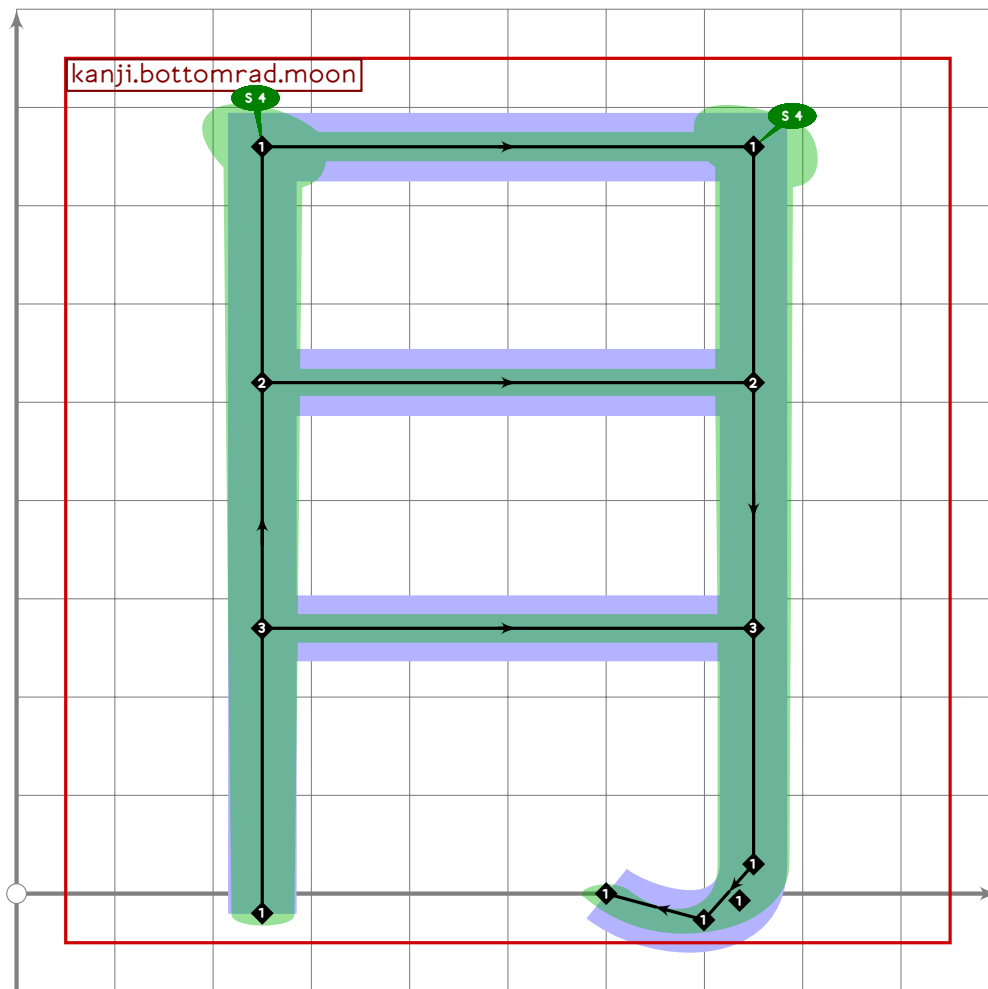
BOTT

```
1 %
2 % Radicals for bottom (often special forms of other radicals)
3 % Copyright (C) 2011, 2012, 2013, 2016, 2017 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 inclusion_lock(bottomrad);
32
33
34
35 vardef kanji.bottomrad.clothes =
36   push_pbox_toexpand("kanji.bottomrad.clothes");
37   push_stroke((470,810)..tension 1.2..(340,650)..(80,510),
38     (1.7,1.7)-(1.5,1.5)-(1,1));
39   push_stroke((point 1 of get_stroke(0))-
40     (xpart point 1 of get_stroke(0),0),
41     (1.5,1.5)-(1.4,1.4));
42   push_stroke((510,80)..tension 1.2..(point 1 of get_stroke(0))..(130,-40),
43     (1,1)-(1.4,1.4)-(1.8,1.8));
44   push_stroke((540,810)..tension 1.2..(700,240)..(890,0),
45     (1,1)-(1.4,1.4)-(1.7,1.7));
46   push_stroke((820,540)..tension 1.2..(720,460)..
47     (point 0.69 of get_stroke(0)),
48     (1.7,1.7)-(1.4,1.4)-(1.2,1.2));
49   expand_pbox;
50 enddef;
51
52 vardef kanji.bottomrad.four_ticks =
53   push_pbox_toexpand("kanji.bottomrad.four_ticks");
54   push_stroke((210,750)..tension 1.2..(160,250)..(100,-30),
55     (1,1)-(1.3,1.3)-(1.8,1.8));
56   push_stroke((350,700)..tension 1.2..(390,300)..(400,-50),
57     (1.1,1.1)-(1.4,1.4)-(1.9,1.9));
58   push_stroke((540,750)..tension 1.2..(610,320)..(630,-40),
59     (1.1,1.1)-(1.4,1.4)-(1.9,1.9));
60   push_stroke((740,800)..tension 1.2..(850,360)..(890,-20),
61     (1.1,1.1)-(1.4,1.4)-(1.9,1.9));
62   expand_pbox;
63 enddef;
64
65 vardef kanji.bottomrad.heart =
66   push_pbox_toexpand("kanji.bottomrad.heart");
67   perl_structure:=perl_structure&"eids.softhead.u5FC3";
68   tsu_xform(identity shifted (-100,0))
69     (push_stroke((450,670),(1.6,1.6));
70     build_kanji.add_ltail(0));
```

```

71  set_boserif(0,0,10);
72  push_stroke((210,540)..tension 1.2..(130,280)..(60,150),
73    (1,1)–(1.5,1.5)–(1.8,1.8));
74  push_stroke((500,720)..tension 1.2..(570,520)..(600,270),
75    (1,1)–(1.3,1.3)–(1.6,1.6));
76  push_stroke((790,540)..tension 1.2..(880,310)..(930,130),
77    (1,1)–(1.5,1.5)–(1.8,1.8));
78  expand_pbox;
79 enddef;
80
81 vardef kanji.bottomrad.job =
82   push_pbox_toexpand("kanji.bottomrad.job");
83   push_stroke((170,-40)–(170,860)–(830,860),
84     (1.5,1.5)–(1.6,1.6)–(1.6,1.6));
85   build_kanji.add_jtail(0);
86   set_botip(0,1,1);
87   set_botip(0,2,1);
88   set_boserif(0,1,4);
89   set_boserif(0,2,4);
90   push_stroke((500,860)–(500,-10),(1.6,1.6)–(1.5,1.5));
91   push_stroke((170,610)–(830,610),(1.5,1.5)–(1.5,1.5));
92   push_stroke((170,350)–(830,350),(1.5,1.5)–(1.5,1.5));
93   expand_pbox;
94 enddef;
95
96 vardef kanji.bottomrad.long_kimono =
97   push_pbox_toexpand("kanji.bottomrad.long_kimono");
98   build_kanji.box((210,760),(790,540));
99   push_stroke((440,540)..tension 1.2..(330,300)..(110,80),
100     (1.6,1.6)–(1.4,1.4)–(1,1));
101   push_stroke((500,540)–(500,-20),(1.6,1.6)–(1.5,1.5));
102   push_stroke((500,380)..tension 1.2..(710,220)..(800,100),
103     (0.9,0.9)–(1.5,1.5)–(1.9,1.9));
104   push_stroke(
105     (810,410)..tension 1.2..(750,340)..(point 0.8 of get_strokep(0)),
106     (1.7,1.7)–(1.2,1.2)–(0.9,0.9));
107   expand_pbox;
108 enddef;

```



```

109
110 vardef kanji.bottomrad.moon =
111   push_pbox_toexpand("kanji.bottomrad.moon");
112   push_stroke((250,-20)..{up}(250,760)–(750,760),
113     (1,4,1,4)–(1,6,1,6)–(1,6,1,6));
114   build_kanji.add_jtail(0);
115   set_botip(0,1,1);
116   set_botip(0,2,1);
117   set_boserif(0,1,4);
118   set_boserif(0,2,4);
119   push_stroke((250,520)–(750,520),
120     (1,5,1,5)–(1,5,1,5));
121   push_stroke((250,270)–(750,270),
122     (1,5,1,5)–(1,5,1,5));
123   expand_pbox;
124 enddef;
125
126 % CHISE calls this CDP-8C6C, it's part of U+5547, needed for U+9069
127 vardef kanji.bottomrad.stalk =
128   push_pbox_toexpand("kanji.bottomrad.stalk");
129   kanji.radical.gmm;

```



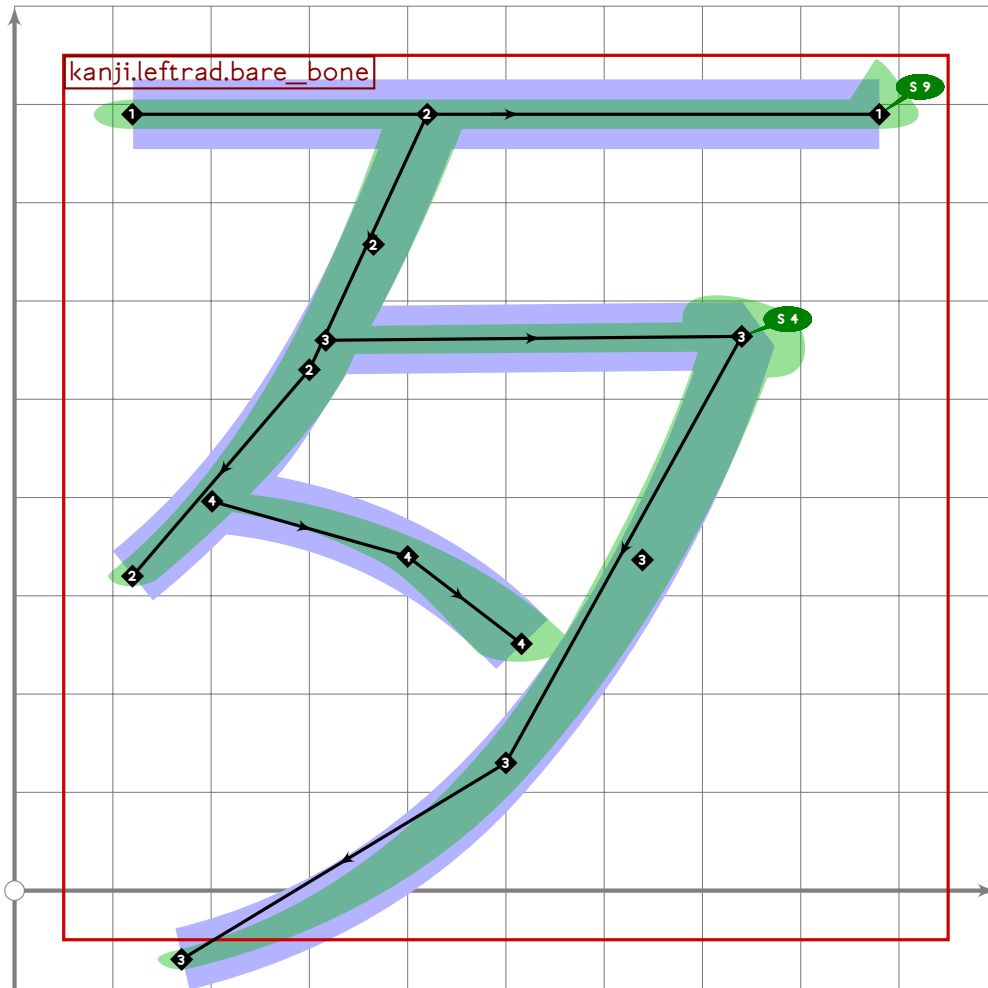
```
130   build_kanji.sscale(xyscaled (0.65,0.82))(kanji.grtwo.old);  
131   expand_pbox;  
132 enddef;
```

# leftrad.mp

LEFT

```
1 %
2 % Radicals for left side (often special forms of other radicals)
3 % Copyright (C) 2011, 2012, 2013, 2016, 2017 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 inclusion_lock(leftrad);
32
33
34
35 vardef kanji.leftrad.alt_person =
36   push_pbox_toexpand("kanji.leftrad.alt_person");
37   push_stroke((510,780)..(450,400)..(300,100)..(20,-90),
38     (1.6,1.6)-(1.5,1.5)-(1.3,1.3)-(0.85,0.85));
39   set_boserif(0,0,10);
40   push_stroke(
41     (point 0.8 of get_strokep(0))..tension 1.2..(640,340)..(860,40),
42     (1.2,1.2)-(1.4,1.4)-(1.6,1.6));
43   expand_pbox;
44 enddef;
45
46 vardef kanji.leftrad.arrow =
47   push_pbox_toexpand("kanji.leftrad.arrow");
48   kanji.grtwo.arrow;
49   replace_strokep(0)((point 1.6 of get_strokep(-1))..(690,200)..(850,80));
50   replace_strokeq(0)((0.9,0.9)-(1.5,1.5)-(1.8,1.8));
51   expand_pbox;
52 enddef;
```

LEFT



```

53
54 vardef kanji.leftrad.bare_bone =
55   push_pbox_toexpand("kanji.leftrad.bare_bone");
56   push_stroke((120,790)-(880,790),(1.6,1.6)-(1.6,1.6));
57   set_boserif(0,1,9);
58   push_stroke((420,790)..tension 1.2..(300,530)..(120,320),
59     (1.6,1.6)-(1.5,1.5)-(1.2,1.2));
60   push_stroke(
61     (get_stroke(0) intersectionpoint ((-infinity,560)-(infinity,560)))-(
62       (740,564)..tension 1.2..(500,130)..(170,-70),
63       (1.5,1.5)-(1.6,1.6)-(1.4,1.4)-(1.2,1.2));
64   set_botip(0,1,0);
65   set_boserif(0,1,4);
66   push_stroke(
67     (point 1.6 of get_stroke(-1))..(400,340)..(point 1.8 of get_stroke(0)),
68     (1.2,1.2)-(1.4,1.4)-(1.8,1.8));
69   replace_stroke(0)(subpath (0,1,7) of oldp);
70   expand_pbox;
71 enddef;
72
73 vardef kanji.leftrad.big =

```

```

74  push_pbox_toexpand("kanji.grone.big");
75  push_stroke((90,500)-(910,500),
76    (1.6,1.6)-(1.6,1.6));
77  set_boserif(0,1,9);
78  push_stroke((510,780){down}{.}(370,200){.}{curl 0.5}{(50,-20),
79    (1.6,1.6)-(1.4,1.4)-(1.1,1.1));
80  push_stroke(((60,-60)+point 0.6 of get_stroke(0)).tension 1.1.
81    (750,190)..(860,0),
82    (0.9,1)-(1.3,1.3)-(1.8,1.8));
83  expand_pbox;
84  endif;
85
86  vardef kanji.leftrad.boat =
87    push_pbox_toexpand("kanji.leftrad.boat");
88    push_stroke((560,850)..tension 1.2..(500,750)..(450,700),
89      (1.6,1.6)-(1.4,1.4)-(1.2,1.2));
90    set_boserif(0,0,10);
91    push_stroke(
92      (150,0)..(260,200){.}{dir 89.5}{(300,700)-(730,700),
93      (1.5,1.5)-(1.6,1.6)-(1.7,1.7)-(1.7,1.7));
94    build_kanji.add_jtail(0);
95    set_botip(0,2,1);
96    set_botip(0,3,0);
97    set_boserif(0,2,4);
98    set_boserif(0,3,4);
99    push_stroke((410,610)..tension 1.2..(520,540)..(560,480),
100      (1.1,1.1)-(1.4,1.4)-(1.7,1.7));
101    set_bosize(0,90);
102    push_stroke((110,350)..tension 1.2..(500,380)..(890,440),
103      (1.6,1.6)-(1.5,1.5)-(1.1,1.1));
104    push_stroke((500,300)-(500,100),
105      (1.6,1.6)-(1.4,1.4));
106    set_boserif(0,0,10);
107    set_bosize(0,90);
108    expand_pbox;
109  endif;
110
111  vardef kanji.leftrad.clothes =
112    push_pbox_toexpand("kanji.leftrad.clothes");
113    kanji.leftrad.showing;
114    push_stroke((830,400)..tension 1.2..(750,320)..(650,300),
115      (1.6,1.6)-(1.4,1.4)-(1,1));
116    set_boserif(0,0,10);
117    expand_pbox;
118  endif;
119
120  vardef kanji.leftrad.day =
121    push_pbox_toexpand("kanji.leftrad.day");

```

LEFT

```

122  tsu_xform(identity shifted (0,-600) yscaled 0.62 shifted (0,600))
123    (kanji.grone.day);
124  expand_pbox;
125 enddef;
126
127 vardef kanji.leftrad.earth =
128  push_pbox_toexpand("kanji.leftrad.earth");
129  build_kanji.sscale(yscaled 0.9)
130    (build_kanji.lift_skirt(370,150+30*mincho)(kanji.grone.earth));
131  expand_pbox;
132 enddef;
133
134 vardef kanji.leftrad.eat =
135  push_pbox_toexpand("kanji.leftrad.eat");
136  kanji.grtwo.eat;
137  pop_stroke;
138  replace_strokep(-6)(subpath(0,175) of oldp);
139  replace_strokep(-1)
140    ((130,20)..tension 1.2..(point 0 of get_strokep(-4))..(720,80));
141  replace_strokep(0)((650,170)..tension 1.3..(720,80)..(770,-20));
142  replace_strokeq(0)((1,1)-(1.5,1.5)-(1.8,1.8));
143  expand_pbox;
144 enddef;
145
146 vardef kanji.leftrad.fire =
147  push_pbox_toexpand("kanji.leftrad.fire");
148  kanji.grone.person;
149  pop_stroke;
150  push_stroke((510,270)..tension 1.2..(750,180)..(900,60),
151    (0,0,9)-(1.3,1.3)-(1.8,1.8));
152  push_stroke((360,600)..(270,480)..(140,360),
153    (0,0,9)-(1.3,1.3)-(1.8,1.8));
154  push_stroke((860,640)..(790,550)..(680,440),
155    (1.6,1.6)-(1.4,1.4)-(1.2,1.2));
156  expand_pbox;
157 enddef;
158
159 vardef kanji.leftrad.foot =
160  push_pbox_toexpand("kanji.leftrad.foot");
161  build_kanji.box((210,730),(790,460));
162  push_stroke((500,460)-(500,40),(1.6,1.6)-(1.5,1.5));
163  push_stroke((500,250)-(850,250),(1.5,1.5)-(1.6,1.6));
164  set_boserif(0,1,9);
165  push_stroke((220,310)-(220,20),(1.6,1.6)-(1.5,1.5));
166  set_boserif(0,0,10);
167  push_stroke((100,0)..tension 1.2..(500,40)..(900,100),
168    (1.7,1.7)-(1.5,1.5)-(1,1));
169  expand_pbox;

```

```

170 enddef;
171
172 vardef kanji.leftrad.gold =
173   push_pbox_toexpand("kanji.leftrad.gold");
174   build_kanji.lift_skirt(250,120)(kanji.grone.gold);
175   replace_stroke(-6)(subpath (0,1.7) of oldp);
176   expand_pbox;
177 enddef;
178
179 vardef kanji.leftrad.hand =
180   push_pbox_toexpand("kanji.leftrad.hand");
181   build_kanji.sscale(xscaled 1.5)
182     (push_stroke((500,810),(1.6,1.6));
183     build_kanji.add_jtail(0);
184     set_boserif(0,0,10));
185   push_stroke((100,580)-(900,580),(1.6,1.6)-(1.6,1.6));
186   set_boserif(0,1,9);
187   push_stroke((120,280)..tension 1.2..(500,330)..(910,420),
188     (1.8,1.8)-(1.5,1.5)-(1.1,1.1));
189   expand_pbox;
190 enddef;
191
192 vardef kanji.leftrad.heap_big =
193   push_pbox_toexpand("kanji.leftrad.heap_big");
194   build_kanji.sscale(scaled 0.88)
195     (kanji.grthree.heap_big;
196     replace_stroke(0)(get_stroke(-6));
197     replace_stroke(0)
198       (get_stroke(-1) shifted ((point 1 of oldp)-(point 0 of oldp))
199       shifted (-500,0) xscaled 1.1 shifted (500,0));
200     replace_stroke(0)(reverse get_stroke(-1));
201     set_boserif(0,1,whatever));
202   expand_pbox;
203 enddef;
204
205 vardef kanji.leftrad.heart =
206   push_pbox_toexpand("kanji.leftrad.heart");
207   kanji.radical.vline;
208   push_stroke((320,630)..tension 1.2..(210,470)..(60,380),
209     (1,1)-(1.4,1.4)-(1.7,1.7));
210   push_stroke((660,660)..tension 1.2..(840,530)..(890,470),
211     (1,1)-(1.5,1.5)-(1.8,1.8));
212   expand_pbox;
213 enddef;
214
215 vardef kanji.leftrad.husband =
216   push_pbox_toexpand("kanji.leftrad.husband");
217   kanji.grfour.husband;

```

LEFT

```

218 pop_stroke;
219 push_stroke(((get_stroke(-1) intersectionpoint get_stroke(0))+(0,-40)).
220 (720,170)..(870,30),
221 (1,1,1)-(1,4,1,4)-(1,7,1,7));
222 expand_pbox;
223 enddef;
224
225 vardef kanji.leftrad.ice =
226 push_pbox_toexpand("kanji.leftrad.ice");
227 push_stroke((450,790)..tension 1.2..(600,730)..(750,650),
228 (1,1)-(1,3,1,3)-(1,9,1,9));
229 push_stroke(
230 interpath(mincho,
231 (880,350)..(810,270)..(750,210)..(600,90)..(450,0),
232 (880,480)..tension 1.2..(630,300)..{dir 180}(360,240){dir 350}..
233 (500,130)..{curl 0}(550,-20)),
234 interpath(mincho,
235 (1,4,1,4)-(1,45,1,45)-(1,5,1,5)-(1,6,1,6)-(1,7,1,7),
236 (0,8,0,8)-(1,2,1,2)-(2,1,2,1)-(1,2,1,2)-(1,9,1,9)));
237 expand_pbox;
238 enddef;
239
240 vardef kanji.leftrad.king =
241 push_pbox_toexpand("kanji.leftrad.king");
242 build_kanji.sscale(yscaled 0.9)
243 (build_kanji.lift_skirt(370,150+30*mincho)(kanji.grone.king));
244 expand_pbox;
245 enddef;
246
247 vardef kanji.leftrad.long_hair =
248 push_pbox_toexpand("kanji.leftrad.long_hair");
249 build_kanji.level(
250 kanji.grtwo.long;
251 pop_stroke;pop_stroke;pop_stroke;
252 replace_stroke(-3)((300,320)-(300,770)-(800,770));
253 build_kanji.sscale(xyscaled (0.9,0.38) shifted (0,-240))
254 (kanji.radical.mu));
255 expand_pbox;
256 enddef;
257
258 vardef kanji.leftrad.morning =
259 push_pbox_toexpand("kanji.leftrad.morning");
260 build_kanji.tb(280,40)
261 (build_kanji.tb(460,50)
262 (kanji.grone.ten)
263 (kanji.grone.day))
264 (build_kanji.sscale(xscaled 1.1)
265 (kanji.grone.ten;

```

```

266         set_boserif(-1,0,whatever));
267     expand_pbox;
268 enddef;
269
270 vardef kanji.leftrad.mouth =
271     push_pbox_toexpand("kanji.leftrad.mouth");
272     build_kanji.box((200,700),(800,230));
273     replace_stroke(-1)((subpath (0,2) of oldp)-(0,40)+point 3 of oldp));
274     expand_pbox;
275 enddef;
276
277 vardef kanji.leftrad.person =
278     push_pbox_toexpand("kanji.leftrad.person");
279     push_stroke((900,800)..(500,520)..(0,330),
280         (1.6,1.6)-(14,14)-(0.8,0.8));
281     set_bosize(0,115);
282     set_boserif(0,0,10);
283     push_stroke(
284         (point 0.7 of get_stroke(0))..(xpart point 0.7 of get_stroke(0);-40),
285         (1.6,1.6)-(14,14));
286     set_bosize(0,115);
287     expand_pbox;
288 enddef;
289
290 vardef kanji.leftrad.request =
291     push_pbox_toexpand("kanji.leftrad.request");
292     kanji.grfour.request;
293     replace_stroke(-2)(oldp shifted (-750,-400) scaled 0.5 shifted (760,470));
294     replace_stroke(-3)((610,370)..tension 1.2..(730,270)..(850,110));
295     expand_pbox;
296 enddef;
297
298 vardef kanji.leftrad.rice =
299     push_pbox_toexpand("kanji.leftrad.rice");
300     build_kanji.level(build_kanji.tb(540,220)
301         (build_kanji.spread_legs(-200)(kanji.toprad.sparkle_two))
302         (build_kanji.lift_skirt(450,60)(kanji.leftrad.wood)));
303     replace_stroke(-3)((500,820)-(500,-30));
304     replace_stroke(-3)((1.6,1.6)-(14,14));
305     expand_pbox;
306 enddef;
307
308 vardef kanji.leftrad.sentence =
309     push_pbox_toexpand("kanji.leftrad.sentence");
310     build_kanji.level(build_kanji.tb(580,30)
311         (kanji.radical.kettle_lid)
312         (kanji.radical.cut_the_grass;
313         replace_stroke(-1)(oldp shifted (0,-400) yscaled 0.7 shifted (0,400))));

```

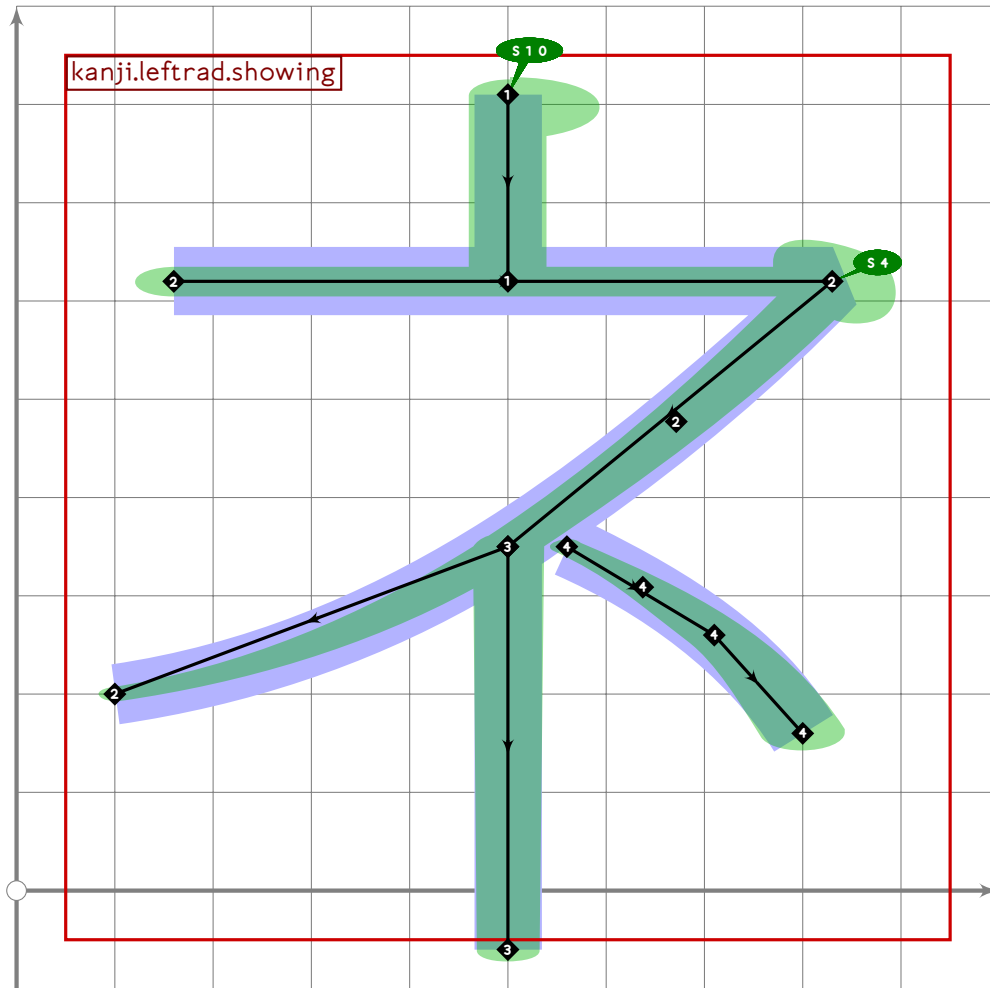
LEFT



```

314 expand_pbox;
315 enddef;
316
317 vardef kanji.leftrad.seal =
318   push_pbox_toexpand("kanji.leftrad.seal");
319   push_stroke((770,810)..tension 1.2..(550,740)..(250,700),
320     (1,8,1,8)–(1,5,1,5)–(1,1));
321   push_stroke((250,730)–(250,0),
322     (1,6,1,6)–(1,5,1,5));
323   set_boserif(0,0,10);
324   push_stroke((250,440)–(800,440),(1,55,1,55)–(1,55,1,55));
325   set_boserif(0,1,9);
326   push_stroke((250,80)–(800,80),(1,5,1,5)–(1,5,1,5));
327   set_boserif(0,1,9);
328   expand_pbox;
329 enddef;
330
331 vardef kanji.leftrad.seven =
332   push_pbox_toexpand("kanji.leftrad.seven");
333   build_kanji.sscale(shifted (0,-300) yscaled 0.7 shifted (0,300))
334     (kanji.grone.seven);
335   set_boserif(-1,3,whatever);
336   expand_pbox;
337 enddef;

```



LEFT

```

338
339 vardef kanji.leftrad.showing =
340   push_pbox_toexpand("kanji.leftrad.showing");
341   push_stroke((500,810)–(500,620),(1.6,1.6)–(1.57,1.57));
342   set_boserif(0,0,10);
343   push_stroke((160,620)–(830,620)..tension 1.2..
344     (500,350)..(100,200),
345     (1.6,1.6)–(1.6,1.6)–(1.4,1.4)–(1,1));
346   set_botip(0,1,0);
347   set_boserif(0,1,4);
348   push_stroke((500,350)–(500,-60),(1.5,1.5)–(1.4,1.4));
349   push_stroke((560,350)..tension 1.2..(710,260)..(800,160),
350     (1,1)–(1.4,1.4)–(1.7,1.7));
351   expand_pbox;
352 enddef;
353
354 vardef kanji.leftrad.two_branch_tree =
355   push_pbox_toexpand("kanji.leftrad.two_branch_tree");
356   tsu_xform(identity shifted (0,-50))
357     (build_kanji.add_beret(kanji.leftrad.wood));
358   expand_pbox;

```

```

359 enddef;
360
361 vardef kanji.leftrad.water =
362   push_pbox_toexpand("kanji.leftrad.water");
363   kanji.leftrad.ice;
364   push_stroke((230,590)..tension 1.2..(390,530)..(540,450),
365     (1,1)–(1.3,1.3)–(1.9,1.9));
366   expand_pbox;
367 enddef;
368
369 vardef kanji.leftrad.woman =
370   push_pbox_toexpand("kanji.leftrad.woman");
371   perl_structure:=perl_structure&"eids.softhead.u5973";
372   push_stroke((100,580)–(800,580){curl 0}..(550,170)..{curl 0.3}(80,-40),
373     (1.6,1.6)–(1.6,1.6)–(1.4,1.4)–(0.94,0.94));
374   set_botip(0,1,0);
375   set_boserif(0,1,4);
376   push_stroke((450,830)..(310,510)..(140,220),
377     (1.6,1.6)–(1.6,1.6)–(1.6,1.6));
378   set_boserif(0,0,10);
379   push_stroke((point 1.75 of get_stroke(0))..(530,200)..(840,60),
380     (0.85,0.85)–(1.5,1.5)–(1.8,1.8)–(1.6,1.6));
381   replace_stroke(0)(insert_nodes(oldp)(1.5));
382   expand_pbox;
383 enddef;
384
385 vardef kanji.leftrad.wood =
386   push_pbox_toexpand("kanji.leftrad.wood");
387   perl_structure:=perl_structure&"eids.softhead.u6728";
388   push_stroke((500,780)–(500,0),
389     (1.6,1.6)–(1.6,1.6));
390   set_boserif(0,0,10);
391   push_stroke((100,580)–(830,580),
392     (1.6,1.6)–(1.6,1.6));
393   set_boserif(0,1,9);
394   push_stroke((500,580)..(250,200)..(80,70),
395     (1.6,1.6)..(1.3,1.3)..(0.9,0.9));
396   push_stroke((500,470)..(680,320)..(800,210),
397     (1.1,1.1)..(1.5,1.5)..(1.7,1.7));
398   expand_pbox;
399 enddef;

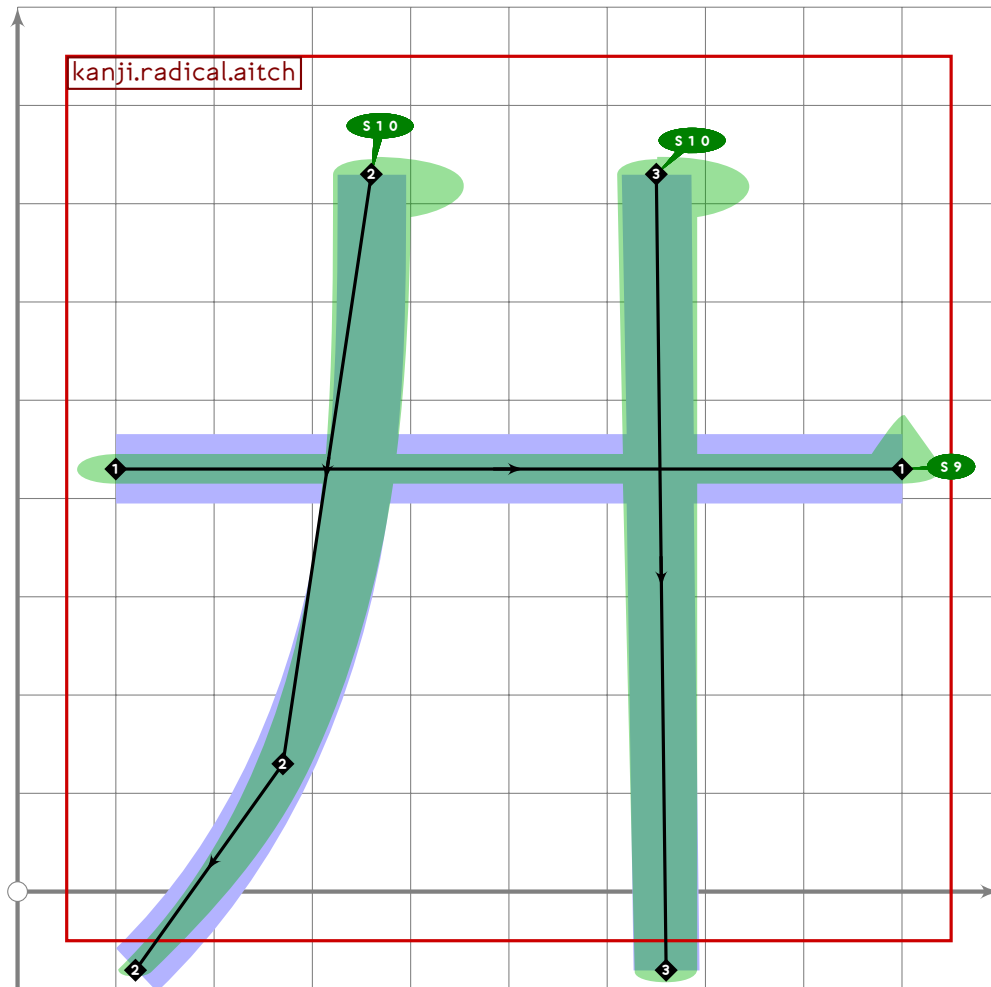
```

# radical.mp

```

1 %
2 % Radicals that are not common kanji in themselves
3 % Copyright (C) 2011, 2012, 2013, 2016, 2017 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 inclusion_lock(radical);
32
33

```



RADI

```

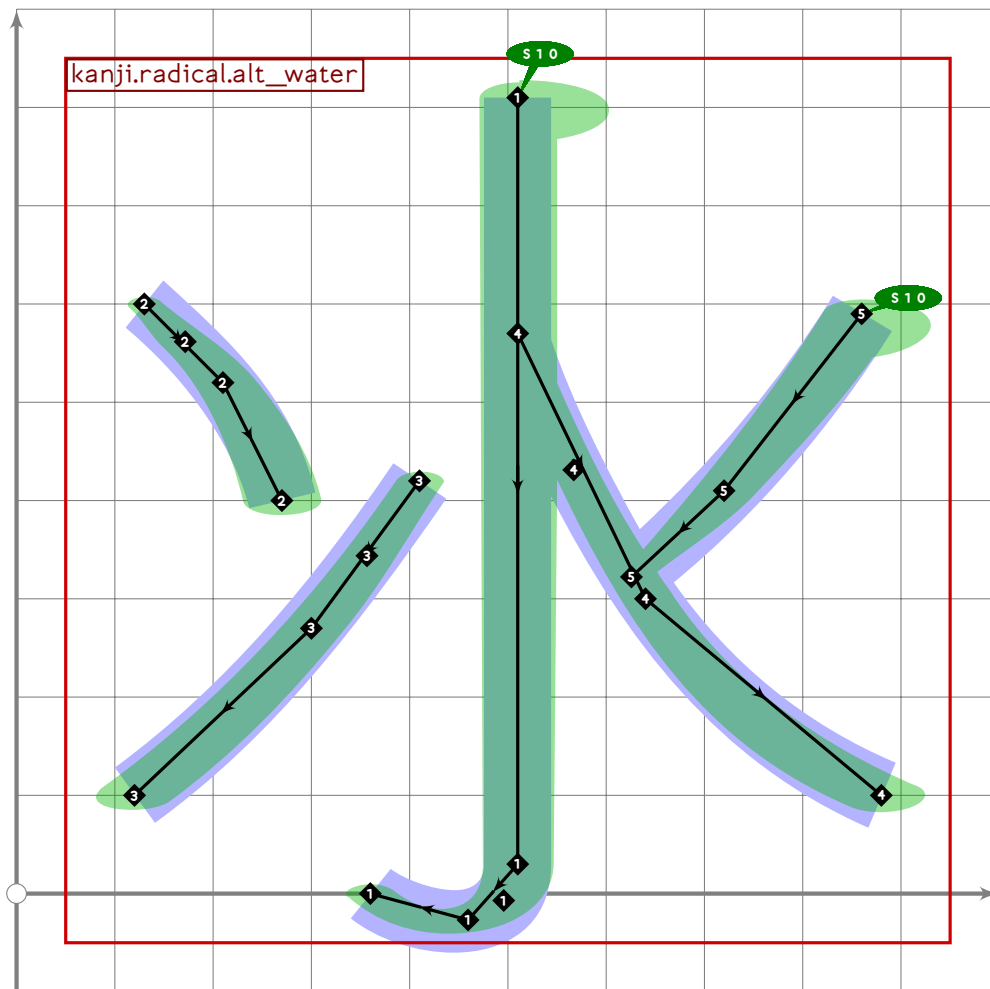
34
35 vardef kanji.radical.aitch =
36   push_pbox_toexpand("kanji.radical.aitch");
37   push_stroke((100,430)-(900,430),(1.6,1.6)-(1.6,1.6));
38   set_boserif(0,1,9);
39   push_stroke((360,730){down}..(270,130)..(120,-80),
40     (1.6,1.6)-(1.3,1.3)-(1,1));
41   set_boserif(0,0,10);
42   push_stroke((650,730)-(660,-80),(1.6,1.6)-(1.4,1.4));
43   set_boserif(0,0,10);

```

```

44 expand_pbox;
45 enddef;
46
47 vardef kanji.radical.alt_bamboo_slips =
48   push_pbox_toexpand("kanji.radical.alt_bamboo_slips");
49   kanji.radical.gmm;
50   push_stroke((383,780)–(383,0),(1,6,1,6)–(1,5,1,5));
51   push_stroke((617,780)–(617,0),(1,6,1,6)–(1,5,1,5));
52   push_stroke((150,410)–(850,410),(1,5,1,5)–(1,5,1,5));
53   expand_pbox;
54 enddef;
55
56 vardef kanji.radical.alt_millet =
57   push_pbox_toexpand("kanji.radical.alt_millet");
58   push_stroke((100,540)–(900,540),
59     (1,6,1,6)–(1,6,1,6));
60   set_boserif(0,1,9);
61   push_stroke((300,440)..(230,230)..(140,130)..(70,60),
62     (1,6,1,6)–(1,4,1,4)–(1,1,1,1)–(0,88,0,88));
63   set_boserif(0,0,10);
64   push_stroke((510,820)–(510,50),(1,6,1,6)–(1,5,1,5));
65   set_boserif(0,0,10);
66   push_stroke((680,740)..tension 1.3..(760,680)..(790,620),
67     (1,1)–(1,4,1,4)–(1,8,1,8));
68   push_stroke((680,430)..tension 1.3..(830,240)..(900,110),
69     (1,1)–(1,4,1,4)–(1,8,1,8));
70   expand_pbox;
71 enddef;

```



RADI

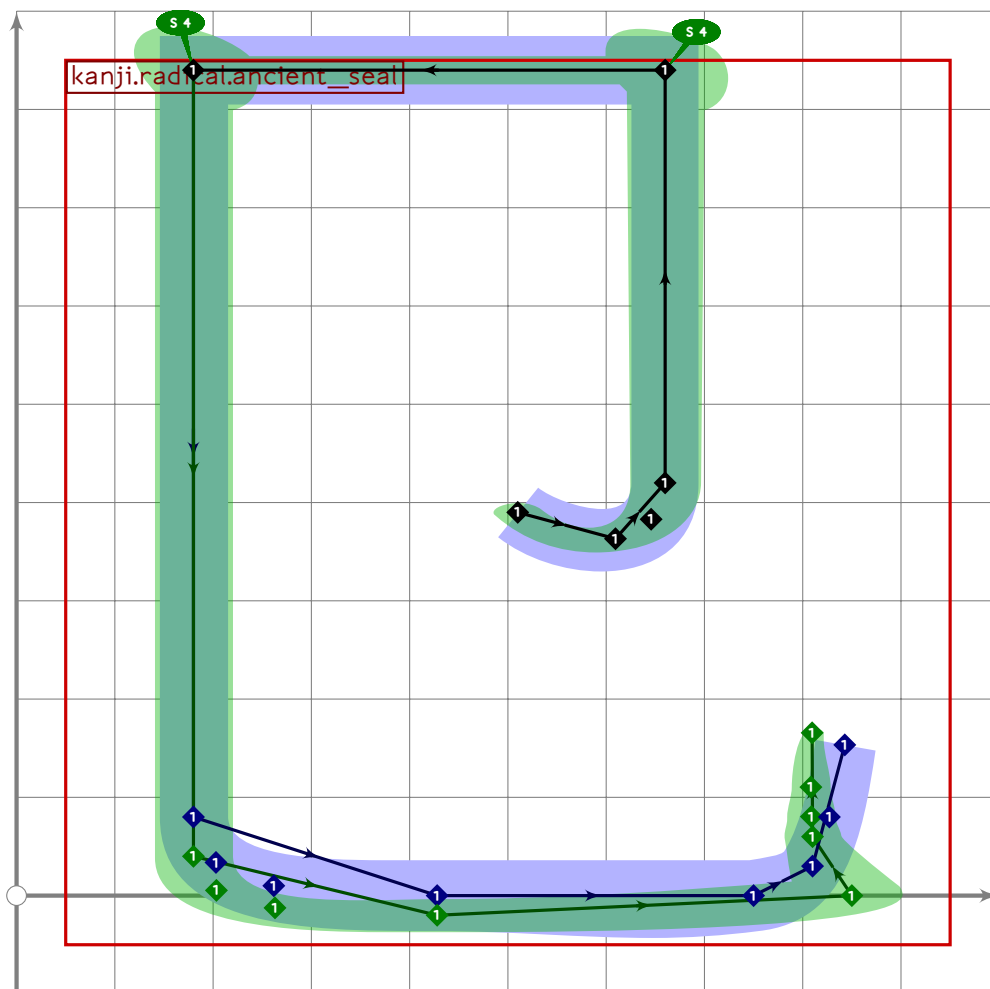
```

72
73 vardef kanji.radical.alt_water =
74   push_pbox_toexpand("kanji.radical.alt_water");
75   push_stroke((510,810),(1.6,1.6));
76   build_kanji.add_jtail(0);
77   set_boserif(0,0,10);
78   push_stroke((130,600)..tension 1.2..(210,520)..(270,400),
79     (1,1)–(1.4,1.4)–(1.6,1.6));
80   push_stroke((410,420)..tension 1.2..(300,270)..(120,100),
81     (1.2,1.2)–(1.4,1.4)–(1.6,1.6));
82   push_stroke((510,570)..tension 1.2..(640,300)..(880,100),
83     (1,1)–(1.3,1.3)–(1.7,1.7));
84   push_stroke((860,590)..(720,410)..(point 0.9 of get_stroke(0)),
85     (1.6,1.6)–(1.4,1.4)–(1,1));
86   set_boserif(0,0,10);
87   expand_pbox;
88 enddef;

```

U+353E  
tsuku.uni353E

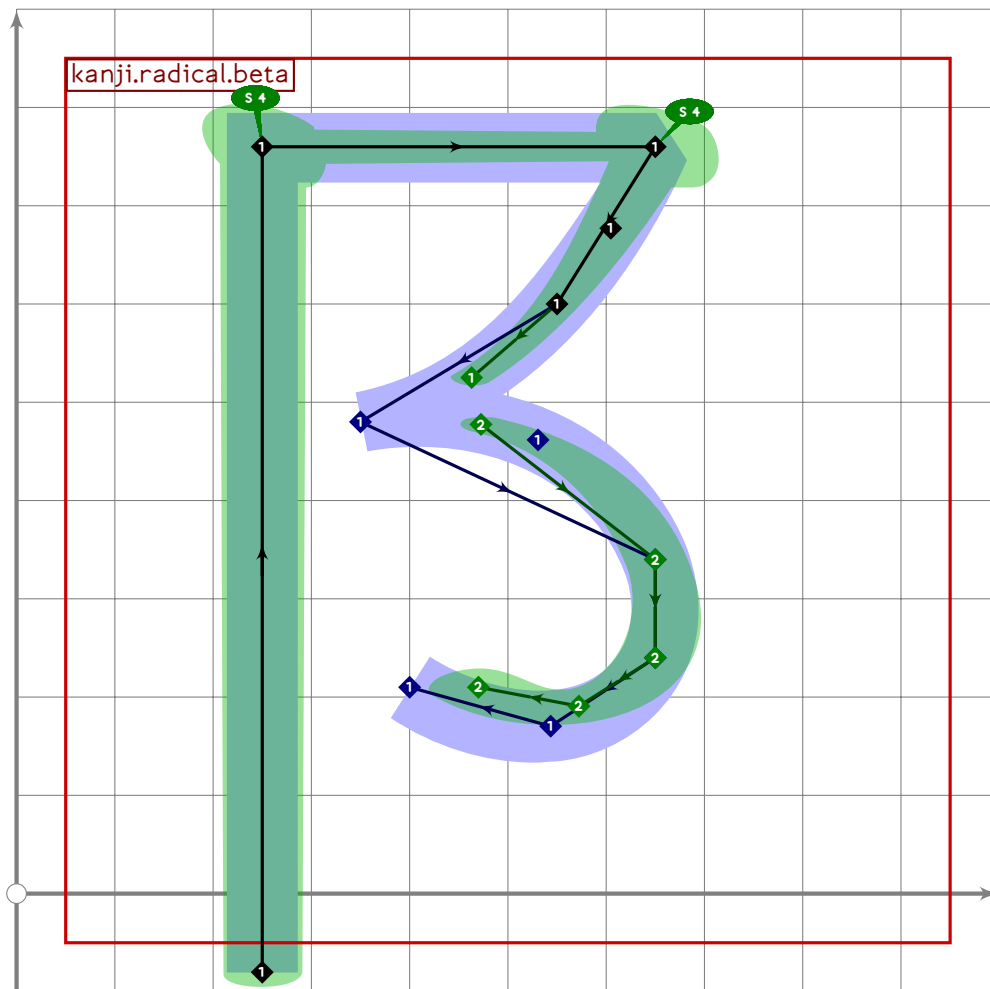
RADI



```

89
90 vardef kanji.radical.ancient_seal =
91   push_pbox_toexpand("kanji.radical.ancient_seal");
92   push_stroke((180,450)-(660,450),(1.6,1.6)-(1.6,1.6));
93   build_kanji.add_jtail(0);
94   replace_strokep(0)(reverse oldp shifted (0,390));
95   replace_strokeq(0)(reverse oldq);
96   build_kanji.add_ltail(0);
97   set_boserif(0,3,4);
98   set_boserif(0,4,4);
99   set_botip(0,3,1);
100  set_botip(0,4,1);
101  expand_pbox;
102 enddef;

```



RADI

```

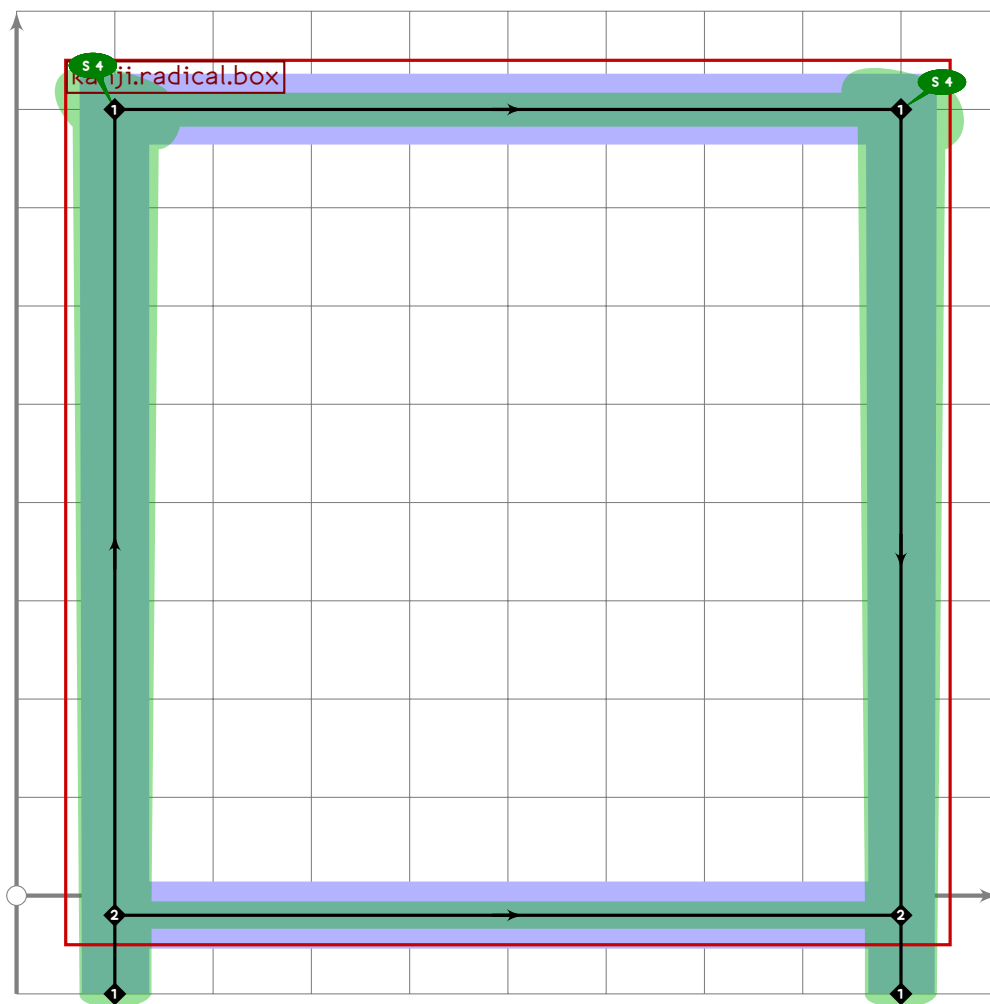
103
104 vardef kanji.radical.beta =
105   push_pbox_toexpand("kanji.radical.beta");
106   push_stroke((250,-80)–(250,760)–(650,760)..tension 1.2..
107     (550,600)..{curl 1}{(350,480){curl 0.5}..
108     (650,340)..(650,240)..{curl 0.3}{(400+70*mincho,210),
109     (1.6,1.6)–(1.71,7)–(1.6,1.6)–
110     (1.1,1.3)–(0.55,1.4)–
111     (1.4,1.4)–(1.6,1.6)–(1.8,1.8)–(1.9,1.9));
112   set_botip(0,1,1);
113   set_botip(0,2,0);
114   set_botip(0,4,1);
115   set_boserif(0,1,4);
116   set_boserif(0,2,4);
117   replace_strokep(0)(insert_nodes(oldp)(6.5));
118   expand_pbox;
119 enddef;

```

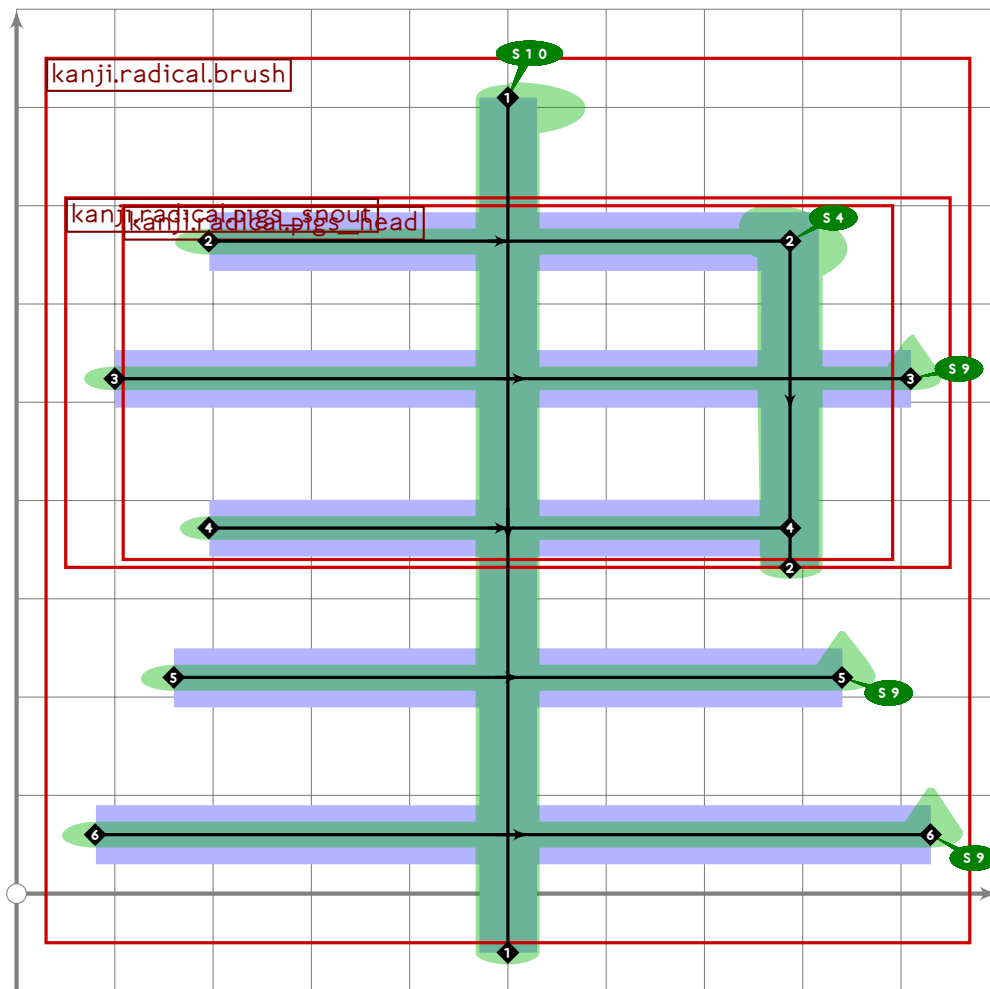


U+56D7  
tsuku.uni56D7

RADI



```
120
121 vardef kanji.radical.box =
122   perl_structure:=perl_structure&"eids.u2FF4.u56D7.l_";
123   push_pbox_toexpand("kanji.radical.box");
124   build_kanji.box((100,800),(900,-20));
125   expand_pbox;
126 enddef;
```



RADI

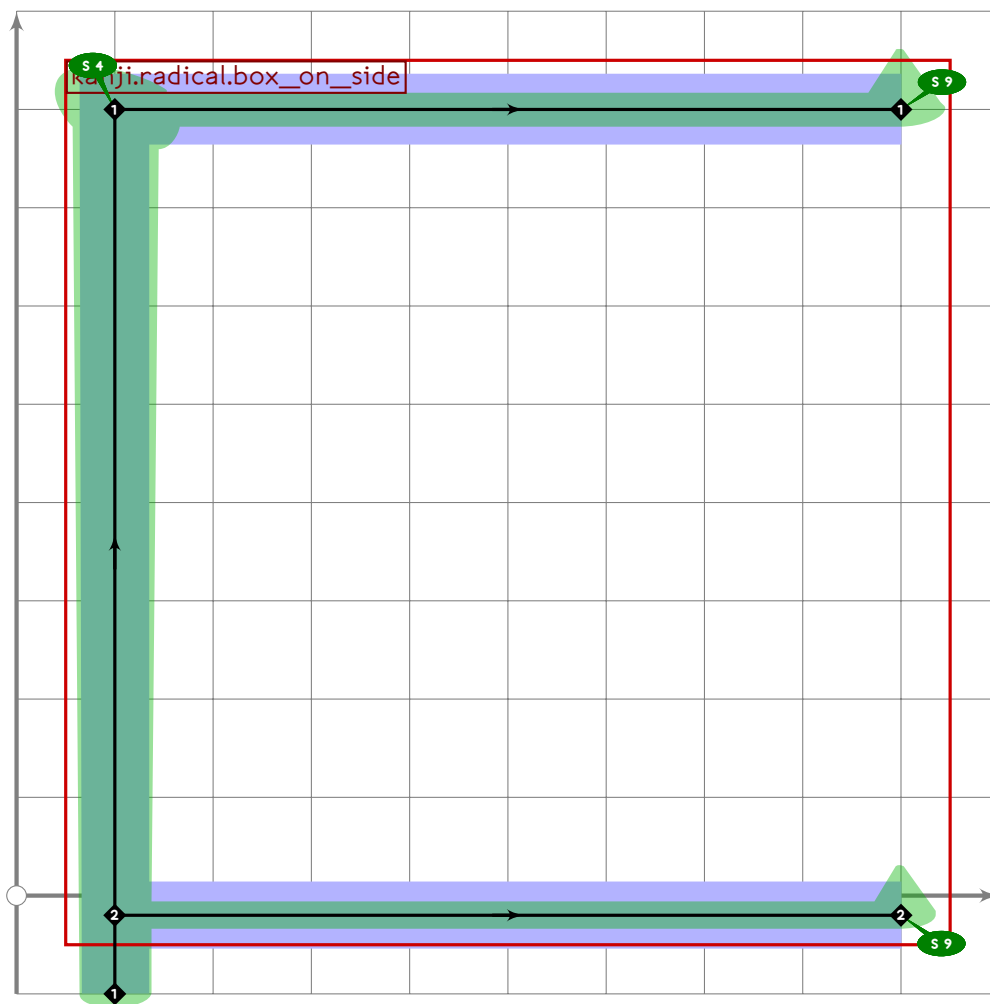
```

127
128 vardef kanji.radical.brush =
129   push_pbox_toexpand("kanji.radical.brush");
130   push_stroke((500,810)-(500,-60),(1.6,1.6)-(1.5,1.5));
131   set_boserif(0,0,10);
132   tsu_xform(identity yscaled 0.4 shifted (0,360))
133     (kanji.radical.pigs_snout);
134   push_stroke((160,220)-(840,220),
135     (1.6,1.6)-(1.6,1.6));
136   set_boserif(0,1,9);
137   push_stroke((80,60)-(930,60),
138     (1.6,1.6)-(1.6,1.6));
139   set_boserif(0,1,9);
140   for i=-5 upto 0: set_bosize(i,85); endfor;
141   expand_pbox;
142 enddef;

```

U+531A  
tsuku.uni531A

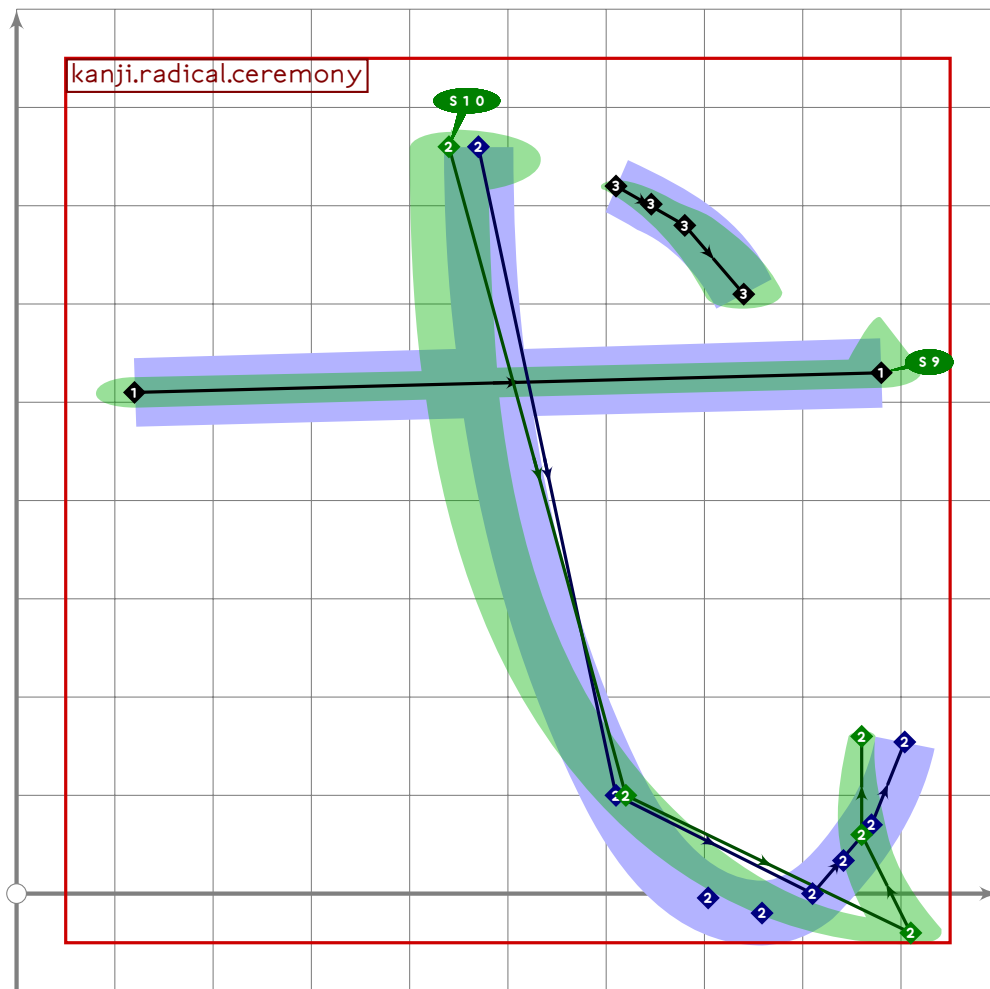
RADI



```

143
144 vardef kanji.radical.box_on_side =
145   push_pbox_toexpand("kanji.radical.box_on_side");
146   build_kanji.box((100,800),(900,-20));
147   replace_strokep(-1)(subpath (0,2) of oldp);
148   replace_strokeq(-1)(subpath (0,2) of oldq);
149   set_boserif(-1,2,9);
150   set_botip(-1,2,whatever);
151   set_boserif(0,1,9);
152   expand_pbox;
153 enddef;

```



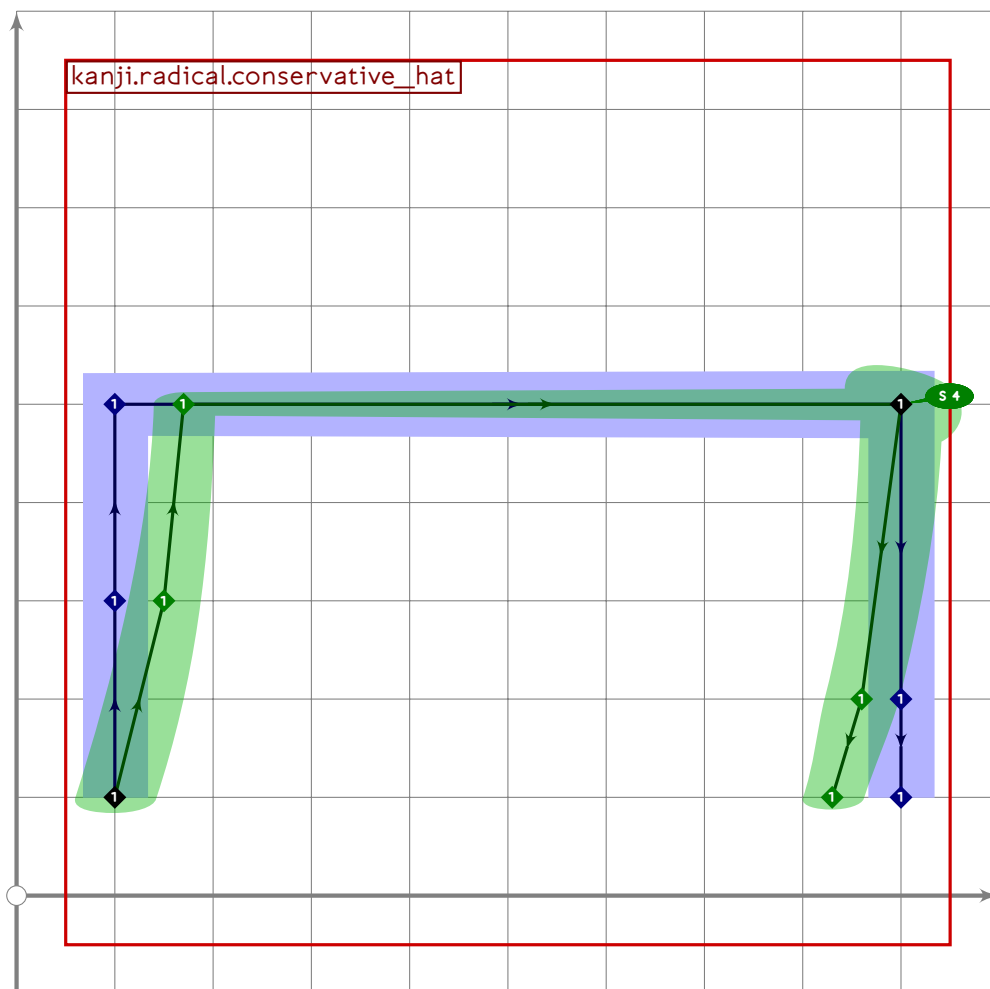
RADI

```

154
155 vardef kanji.radical.ceremony =
156   push_pbox_toexpand("kanji.radical.ceremony");
157   push_stroke((120,510)–(880,530),(1.6,1.6)–(1.6,1.6));
158   set_boserif(0,1,9);
159   push_stroke(interpath(mincho,
160     (470,760){down}..(610,100)..(810,0)..tension 1.5..
161     (870,70)..{curl 0.3}(910,200),
162     (440,760){down}..(620,100)..{right}(910,-40){curl 1}..
163     (860,60)..(860,160)),
164     (1.6,1.6)–(1.4,1.4)–(1.4,1.4)–(1.2,1.2)–(0.9,0.9));
165   set_boserif(0,0,10);
166   push_stroke((610,720)..tension 1.2..(680,680)..(740,610),
167     (1,1)..(1.5,1.5)–(1.7,1.7));
168   set_bosize(0,90);
169   expand_pbox;
170 enddef;

```

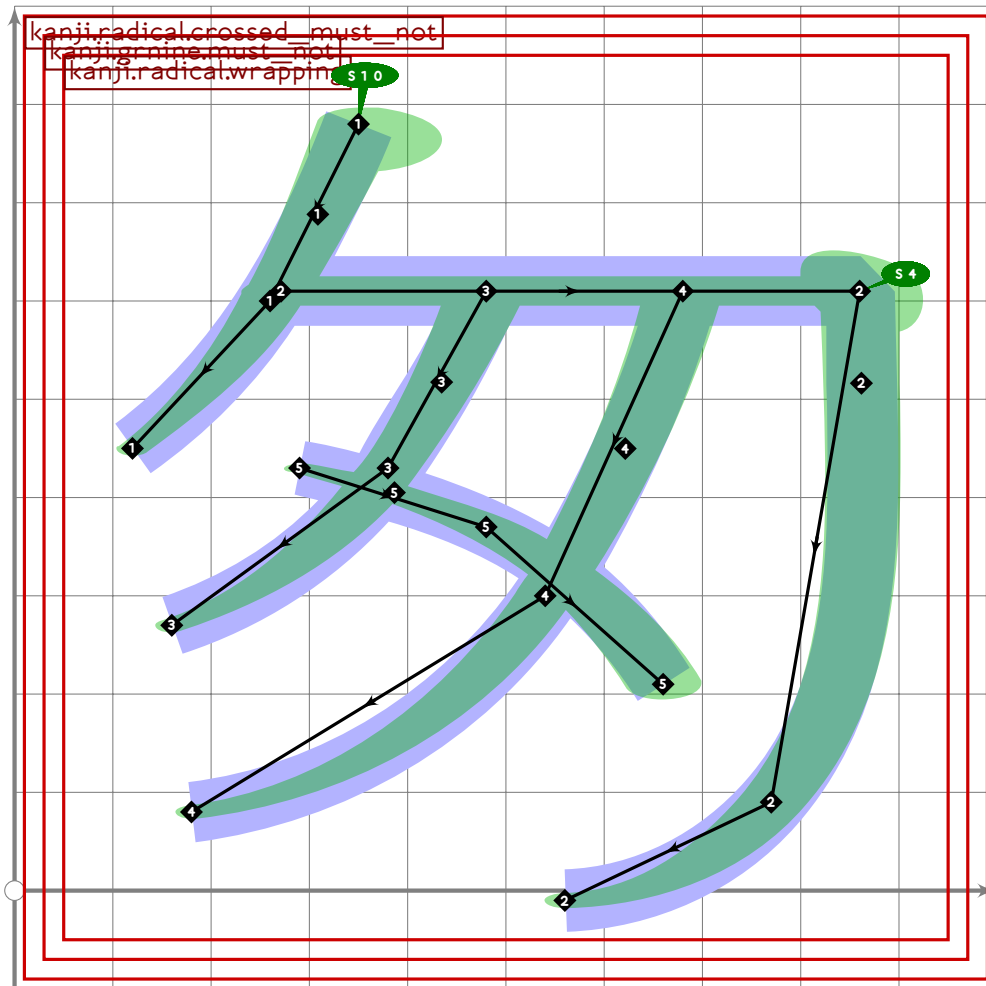
RADI



```

171
172 vardef kanji.radical.conservative_hat =
173   push_pbox_toexpand("kanji.radical.conservative_hat");
174   push_stroke((100,100)..(100+50*mincho,300)..(100+70*mincho,500)-
175     (900,500)..(900-40*mincho,200)..(900-70*mincho,100),
176     (1.7,1.7)-(1.6,1.6)-(1.4,1.4)-(1.7,1.7)-(1.6,1.6)-(1.4,1.4));
177   set_bosize(0,95);
178   set_botip(0,2,1);
179   set_botip(0,3,1);
180   set_boserif(0,3,4);
181   expand_pbox;
182 enddef;

```



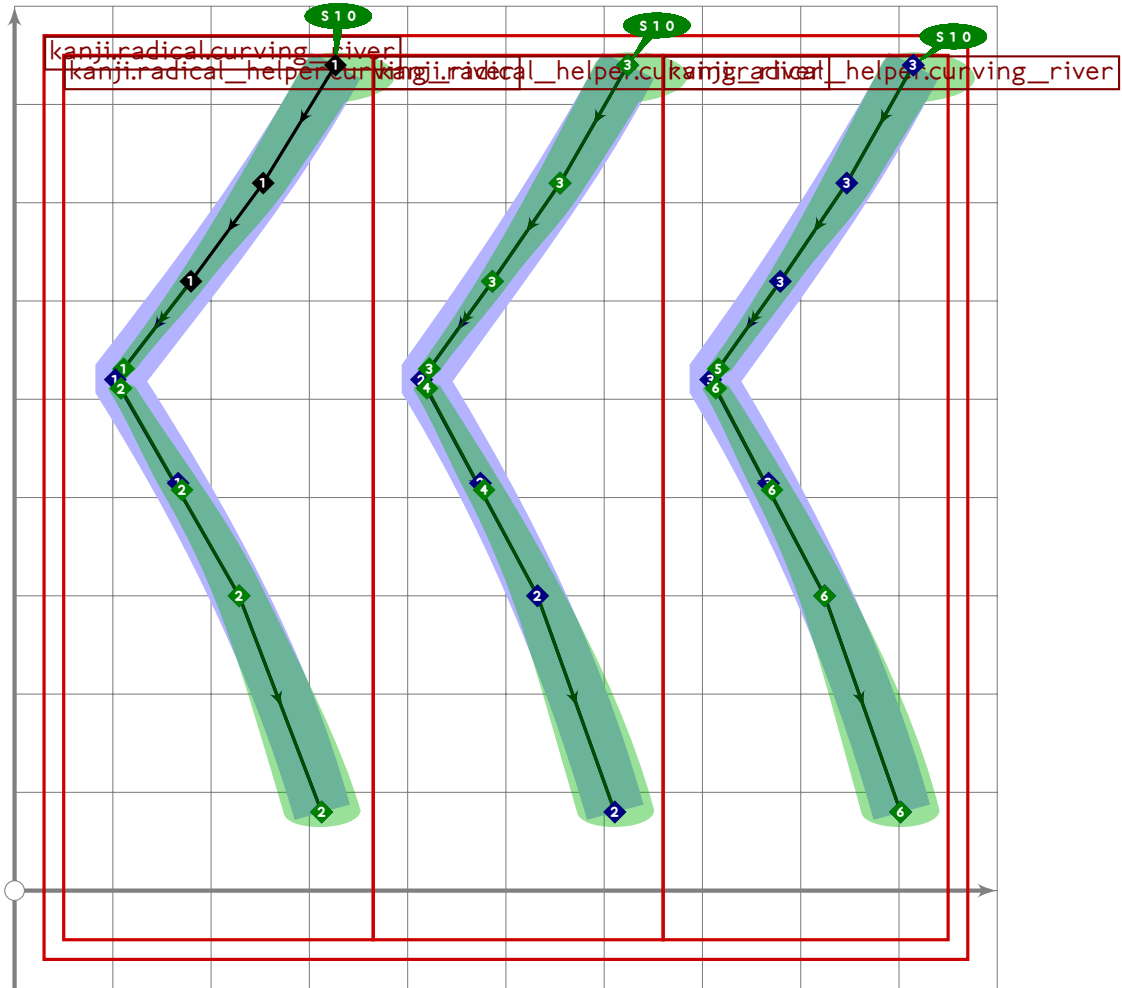
RADI

```

183
184 vardef kanji.radical.crossed_must_not =
185   push_pbox_toexpand("kanji.radical.crossed_must_not");
186   kanji.grnine.must_not;
187   push_stroke((290,430)..tension 1.2..(480,370)..(660,210),
188     (1,1)-(14,14)-(17,17));
189   set_bosize(0,90);
190   expand_pbox;
191 enddef;
192
193 vardef kanji.radical_helper.curving_river =
194   push_pbox_toexpand("kanji.radical_helper.curving_river");
195   push_stroke(((840,840)..(630,720)..(420,620)..(200,520)) &
196     ((200,520)..tension 1.3..(560,300)..(800,80)),
197     (1,6)-(14,14)-(11,11)-(0,8)-(14,14)-(1,8,1,8));
198   set_bosize(0,0,10);
199   set_botip(0,3,1);
200   expand_pbox;
201 enddef;

```

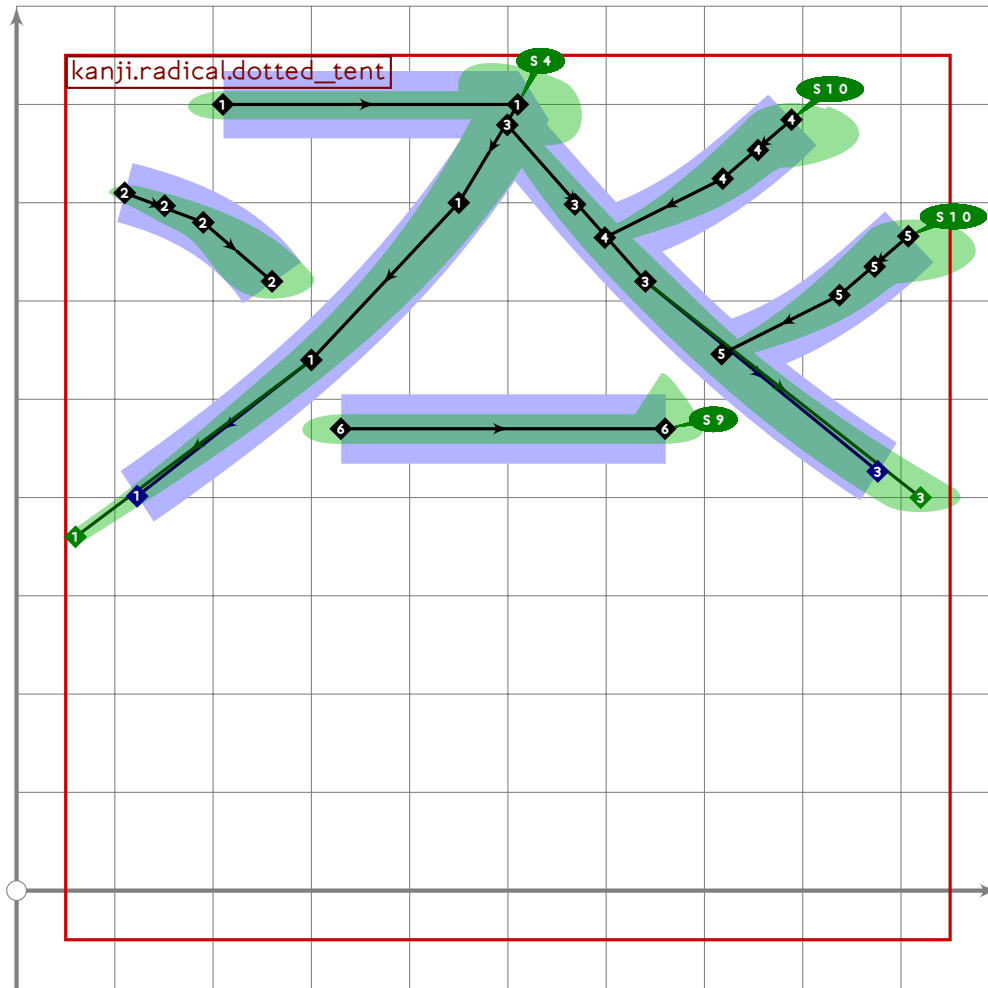
RADI



```

202
203 vardef kanji.radical.curving_river =
204   push_pbox_toexpand("kanji.radical.curving_river");
205   build_kanji.level(build_kanji.lcr(365,0)(660,0)
206     (kanji.radical_helper.curving_river)
207     (kanji.radical_helper.curving_river)
208     (kanji.radical_helper.curving_river));
209   expand_pbox;
210 enddef;
211
212 vardef kanji.radical.cut_the_grass =
213   push_pbox_toexpand("kanji.radical.cut_the_grass");
214   push_stroke((150,750)..(500,500)..(850,50),
215     (1.3,1.3)–(1.5,1.5)–(1.7,1.7));
216   push_stroke((700,800)..(500,330)..(70,30),
217     (1.6,1.6)–(1.5,1.5)–(1,1));
218   set_boserif(0,0,10);
219   expand_pbox;
220 enddef;

```



RADI

```

221
222 vardef kanji.radical.dotted_tent =
223   perl_structure:=perl_structure&"eids.u2FF1.u7676.1_";
224   push_pbox_toexpand("kanji.radical.dotted_tent");
225   push_stroke((210,800)-(510,800)..(450,700)..(300,540)..(60,360),
226     (1.5,1.5)-(1.6,1.6)-(1.5,1.5)-(1.3,1.3)-(0.85,0.9));
227   set_boserif(0,14);
228   set_botip(0,1,0);
229   push_stroke((110,710)..tension 1.2..(190,680)..(260,620),
230     (1,1)-(1.4,1.4)-(1.7,1.7));
231   push_stroke(
232     (point 1.2 of get_stroke(-1)).tension 1.2..(640,620)..(920,400),
233     (1,1)-(1.3,1.3)-(2.25,0.95));
234   push_stroke(((190,120)..tension 1.2..(120,60)..(0,0))
235     shifted (point 0.7 of get_stroke(0)),
236     (1.7,1.7)-(1.5,1.5)-(1,1));
237   set_boserif(0,0,10);
238   push_stroke(((190,120)..tension 1.2..(120,60)..(0,0))
239     shifted (point 1.3 of get_stroke(-1)),
240     (1.7,1.7)-(1.5,1.5)-(1,1));
241   set_boserif(0,0,10);

```



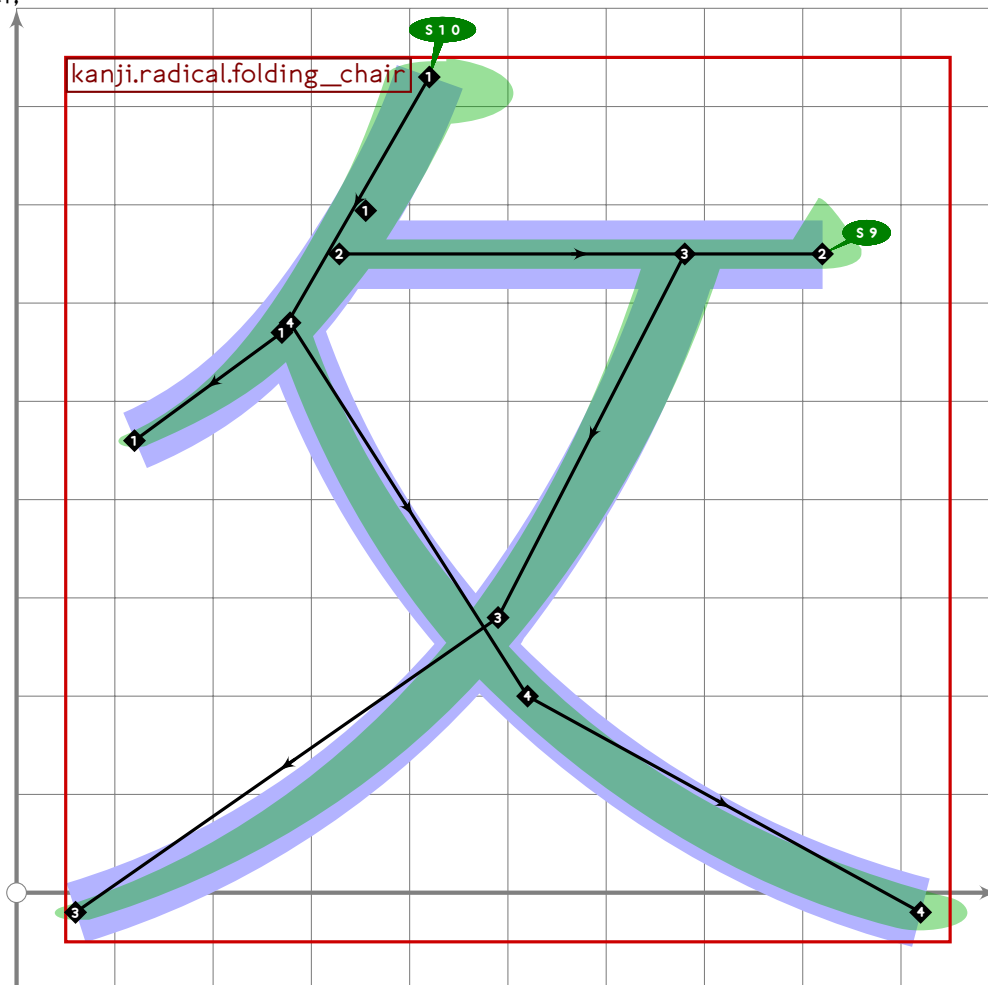
# RADI

834

```

263 (1.5,1.5)–(1.6,1.6)–(1.6,1.6)–(1.3,1.3)–(0.9,0.9));
264 set_botip(0,1,1);
265 set_botip(0,2,1);
266 set_boserif(0,1,4);
267 set_boserif(0,2,4);
268 set_bosize(0,93);
269 push_stroke((((0,490)–(1000,490))
270 intersectionpoint reverse get_strokep(0))–(800,490),
271 (1.5,1.5)–(1.5,1.5));
272 set_bosize(0,93);
273 expand_pbox;
274 enddef;

```



RADI

```

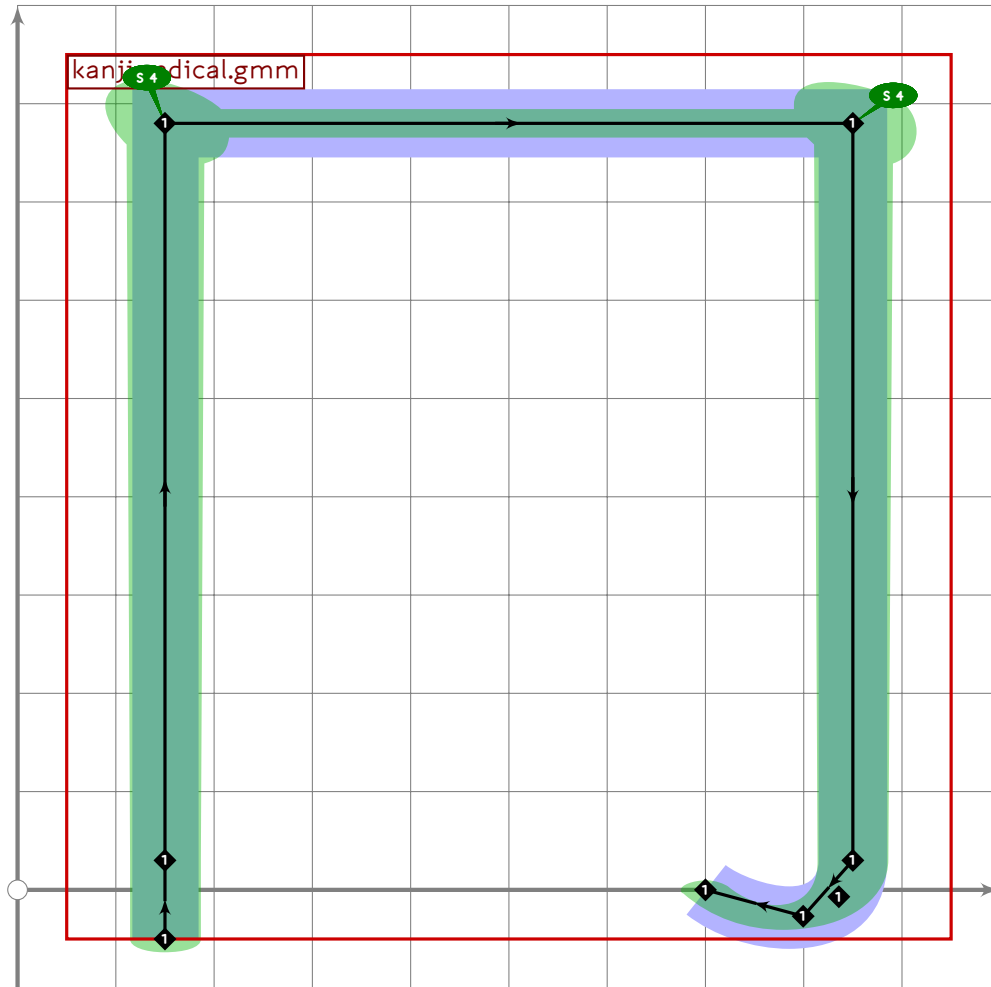
275
276 vardef kanji.radical.folding_chair =
277   push_pbox_toexpand("kanji.radical.folding_chair");
278   push_stroke((420,830)..tension 1.2..(270,570)..(120,460),
279     (1.7,1.7)–(1.4,1.4)–(1,1));
280   set_boserif(0,0,10);
281   push_stroke(
282     (get_strokep(0) intersectionpoint ((0,650)–(1000,650)))–(820,650),
283     (1.5,1.5)–(1.6,1.6));

```

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```
284 set_boserif(0,1,9);
285 push_stroke((680,650)..tension 1.1..(490,280)..(60,-20),
286   (1.6,1.6)–(1.4,1.4)–(1.1,1.1));
287 push_stroke((point 0.95 of get_stroke(-2))..(520,200)..(920,-20),
288   (1,1)–(1.3,1.3)–(1.8,1.8));
289 expand_pbox;
290 enddef;
291
```

RADI



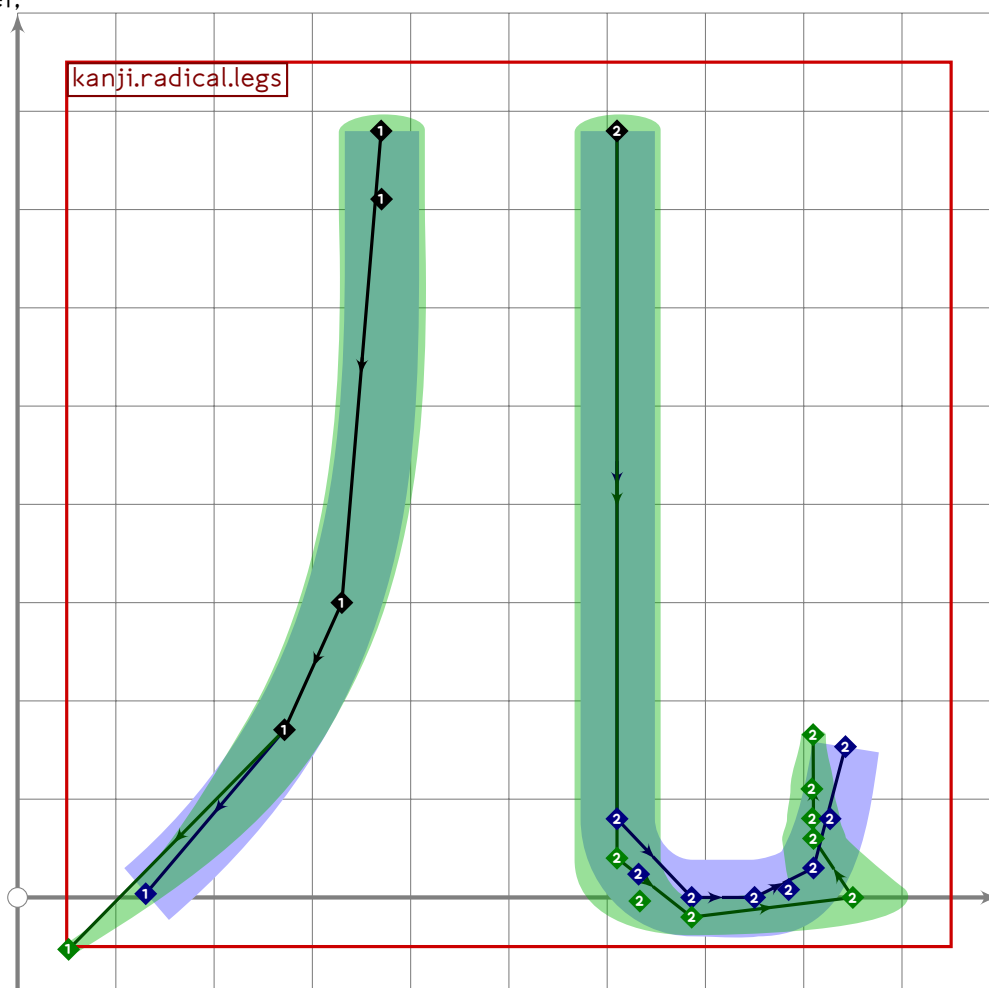
```
292 % "George Michael's Moustache" radical, according to Schultzzz
293 vardef kanji.radical.gmm =
294   push_pbox_toexpand("kanji.radical.gmm");
295   push_stroke((150,-50)–(150,30)–(150,780)–(850,780),
296     (1.5,1.5)–(1.5,1.5)–(1.6,1.6)–(1.6,1.6));
297   build_kanji.add_jtail(0);
298   set_botip(0,2,1);
299   set_botip(0,3,1);
300   set_boserif(0,2,4);
301   set_boserif(0,3,4);
302   expand_pbox;
303 enddef;
304
```

```

305 vardef kanji.radical.half_trunk =
306   push_pbox_toexpand("kanji.radical.half_trunk");
307   push_stroke((830,800)-(830,-30),(1.6,1.6)-(1.4,1.4));
308   set_boserif(0,0,10);
309   push_stroke((130,660)..tension 1.2..(330,570)..(430,500),
310     (1,1)-(1.5,1.5)-(1.8,1.8));
311   push_stroke((550,350)..(330,240)..tension 1.2..(100,200),
312     (1.2,1.2)-(1.6,1.6)-(1.9,1.9));
313   expand_pbox;
314 enddef;
315
316 vardef kanji.radical.kettle_lid =
317   push_pbox_toexpand("kanji.radical.kettle_lid");
318   push_stroke((500,700)..(500,160),(1.6,1.6)-(1.5,1.5));
319   set_bosize(0,125);
320   set_boserif(0,0,10);
321   push_stroke((100,160)-(900,160),(1.7,1.7)-(1.7,1.7));
322   set_bosize(0,125);
323   set_boserif(0,1,9);
324   expand_pbox;
325 enddef;

```

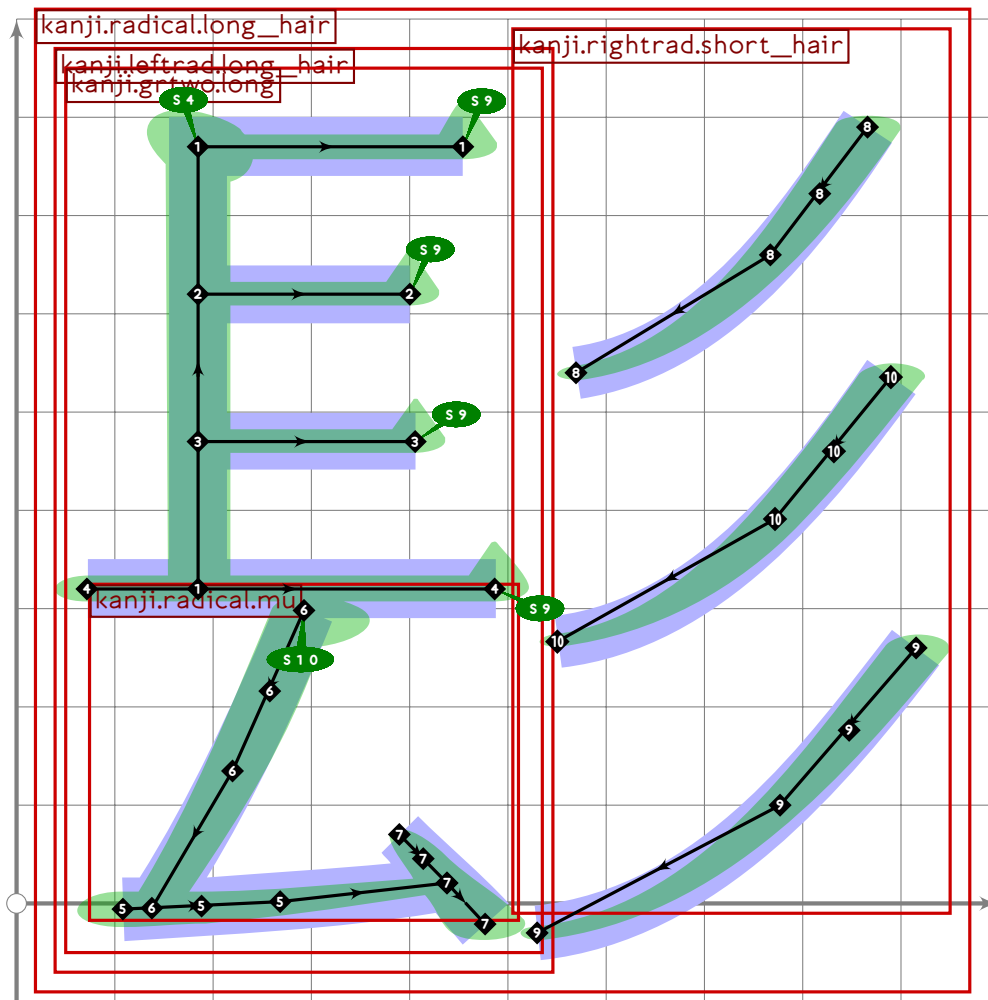
RADI



```

326
327 vardef kanji.radical.legs =
328   push_pbox_toexpand("kanji.radical.legs");
329   push_stroke((370,780){down}..(330,300)..(40,-60),
330     (1.6,1.6)–(1.6,1.6)–(1.6,1.6)–(0.8,0.7));
331   replace_strokep(0)(insert_nodes(oldp)(1.3));
332   set_bosize(0,110);
333   push_stroke((610,780),
334     (1.6,1.6));
335   build_kanji.add_ltail(0);
336   set_bosize(0,110);
337   expand_pbox;
338 enddef;
339
340 vardef kanji.radical.life_minus =
341   push_pbox_toexpand("kanji.radical.life_minus");
342   push_stroke((500,780)–(500,0),(1.6,1.6)–(1.6,1.6));
343   set_boserif(0,0,10);
344   push_stroke((280,700)..(220,360)..(140,120),
345     (1.6,1.6)–(1.2,1.2)–(0.8,0.8));
346   set_boserif(0,0,10);
347   push_stroke((point 0.9 of get_strokep(0))–
348     (820,ypart point 0.9 of get_strokep(0)),
349     (1.6,1.6)–(1.6,1.6));
350   set_boserif(0,1,9);
351   push_stroke((120,0)–(880,0),(1.6,1.6)–(1.6,1.6));
352   set_boserif(0,1,9);
353   expand_pbox;
354 enddef;

```



RADI

```

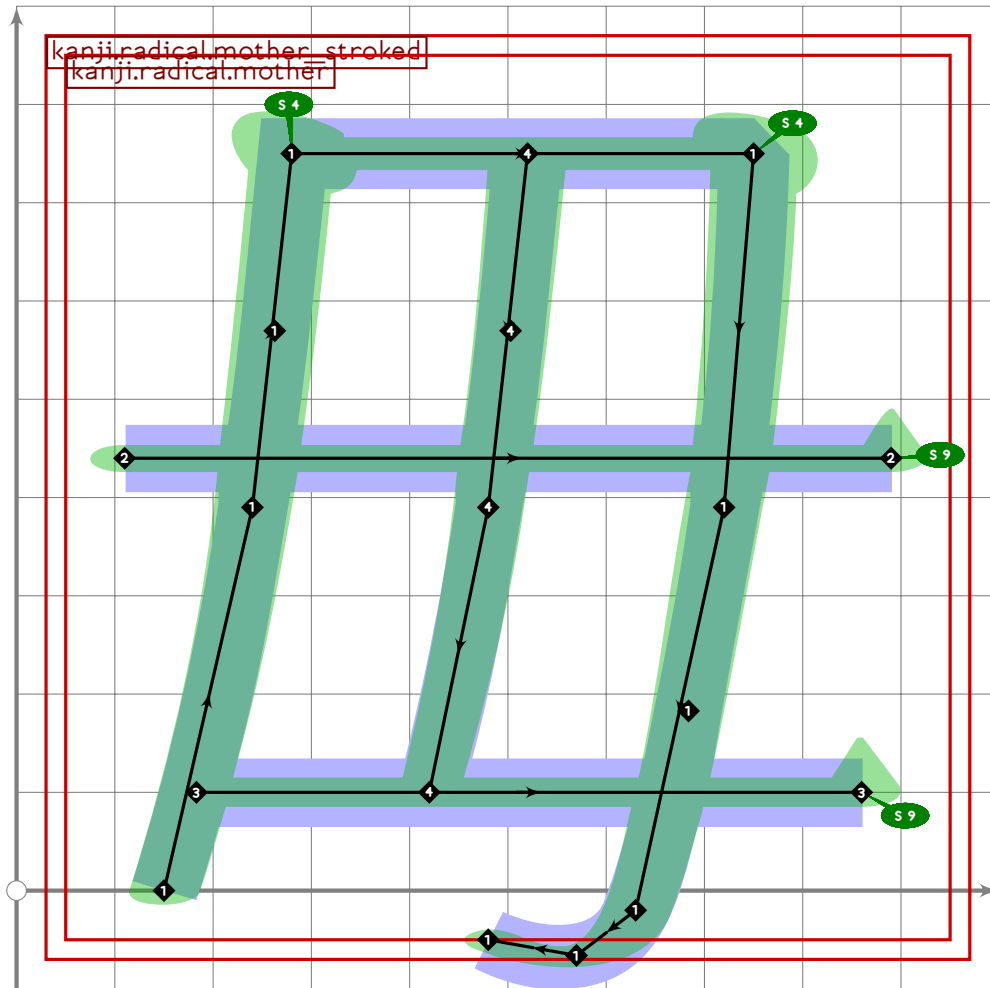
355
356 vardef kanji.radical.long_hair =
357   push_pbox_toexpand("kanji.radical.long_hair");
358   build_kanji.level(build_kanji.lr(520,30)
359     (kanji.leftrad.long_hair)
360     (tsu_xform(identity shifted (0,40))
361       (kanji.rightrad.short_hair)));
362   expand_pbox;
363 enddef;
364
365 vardef kanji.radical.long_kimono =
366   push_pbox_toexpand("kanji.radical.long_kimono");
367   build_kanji.level(build_kanji.tb(600,50)
368     (kanji.grone.earth)
369     (kanji.bottomrad.long_kimono));
370   expand_pbox;
371 enddef;
372
373 vardef kanji.radical.moon_flag =
374   push_pbox_toexpand("kanji.radical.moon_flag");
375   push_stroke((800,300)–(800,730)–(200,730){down}..(160,200)..(30,50),

```

```

376      (1.5,1.5)–(1.6,1.6)–(1.6,1.6)–(1.3,1.3)–(0.9,0.9));
377  set_botip(0,1,1);
378  set_botip(0,2,1);
379  set_boserif(0,1,4);
380  set_boserif(0,2,4);
381  set_bosize(0,93);
382  push_stroke((((0,550)–(1000,550))
383      intersectionpoint reverse get_strokep(0))–(800,550),
384      (1.5,1.5)–(1.5,1.5));
385  set_bosize(0,94);
386  push_stroke((((0,350)–(1000,350))
387      intersectionpoint reverse get_strokep(-1))–(800,350),
388      (1.5,1.5)–(1.5,1.5));
389  set_bosize(0,97);
390  expand_pbox;
391  enddef;
392
393  vardef kanji.radical.mother =
394      push_pbox_toexpand("kanji.radical.mother");
395      push_stroke(
396          (150,0)..(240,390)..tension 1.2..(280,750)–
397          (750,750)..(720,390)..tension 1.2..(630,-20){dir 250}..{curl 0.2}(480,-50),
398          (1.5,1.5)–(1.6,1.6)–(1.7,1.7)–(1.7,1.7)–(1.6,1.6)–(1.5,1.5));
399      replace_strokep(0)(insert_nodes(oldp)((length oldp)–0.5));
400      replace_strokeq(0)(oldq–(1.4,1.4)–(1.2,1.2));
401      set_botip(0,2,1);
402      set_botip(0,3,0);
403      set_boserif(0,2,4);
404      set_boserif(0,3,4);
405      push_stroke((110,440)–(890,440),(1.5,1.5)–(1.5,1.5));
406      set_boserif(0,1,9);
407      push_stroke((183,100)–(860,100),(1.6,1.6)–(1.6,1.6));
408      set_boserif(0,1,9);
409      expand_pbox;
410  enddef;

```



RADI

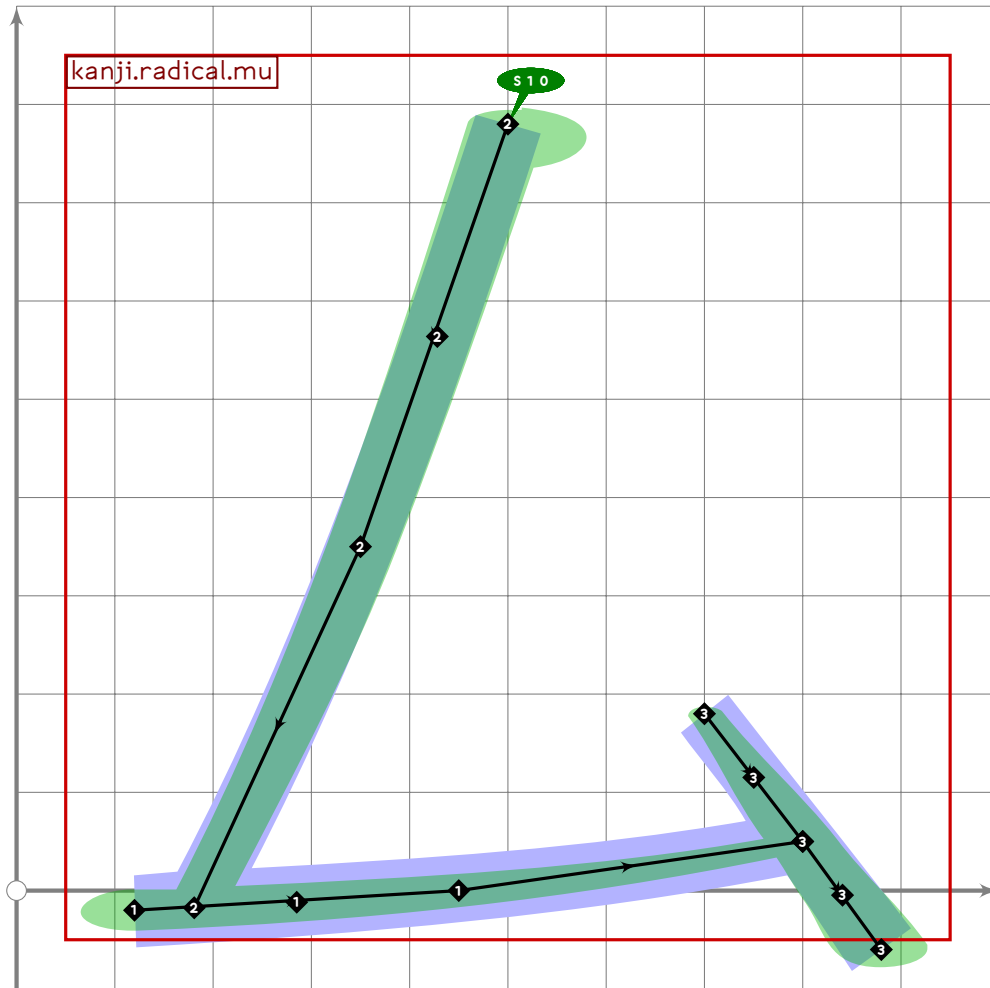
```

411
412 vardef kanji.radical.mother_stroked =
413   push_pbox_toexpand("kanji.radical.mother_stroked");
414   kanji.radical.mother;
415   push_stroke((520,750)..tension 1.2..(480,390)..(420,100),
416     (1.6,1.6)–(1.5,1.5)–(1.4,1.4));
417   expand_pbox;
418 enddef;

```



RADI



```

419
420 vardef kanji.radical.mu =
421   push_pbox_toexpand("kanji.radical.mu");
422   push_stroke((120,-20)..tension 1.2..(450,0)..(800,50),
423     (2,2)-(1.7,1.7)-(1.2,1.2));
424   push_stroke(
425     (500,780)..tension 1.2..(350,350)..(point 0.2 of get_strokep(0)),
426     (1.6,1.6)-(1.5,1.5)-(1.3,1.3));
427   set_boserif(0,0,10);
428   push_stroke((700,180)..tension 1.3..(800,50)..(880,-60),
429     (1,1)-(1.5,1.5)-(1.8,1.8));
430   expand_pbox;
431 enddef;
432
433 vardef kanji.radical.mu_bar =
434   push_pbox_toexpand("kanji.radical.mu_bar");
435   push_stroke((140,780)-(860,780),(1.6,1.6)-(1.6,1.6));
436   set_boserif(0,1,9);
437   build_kanji.scale(xyscaled (0.92,1.5) shifted (0,250))
438     (kanji.radical.mu);
439   replace_strokep(-1)(subpath

```

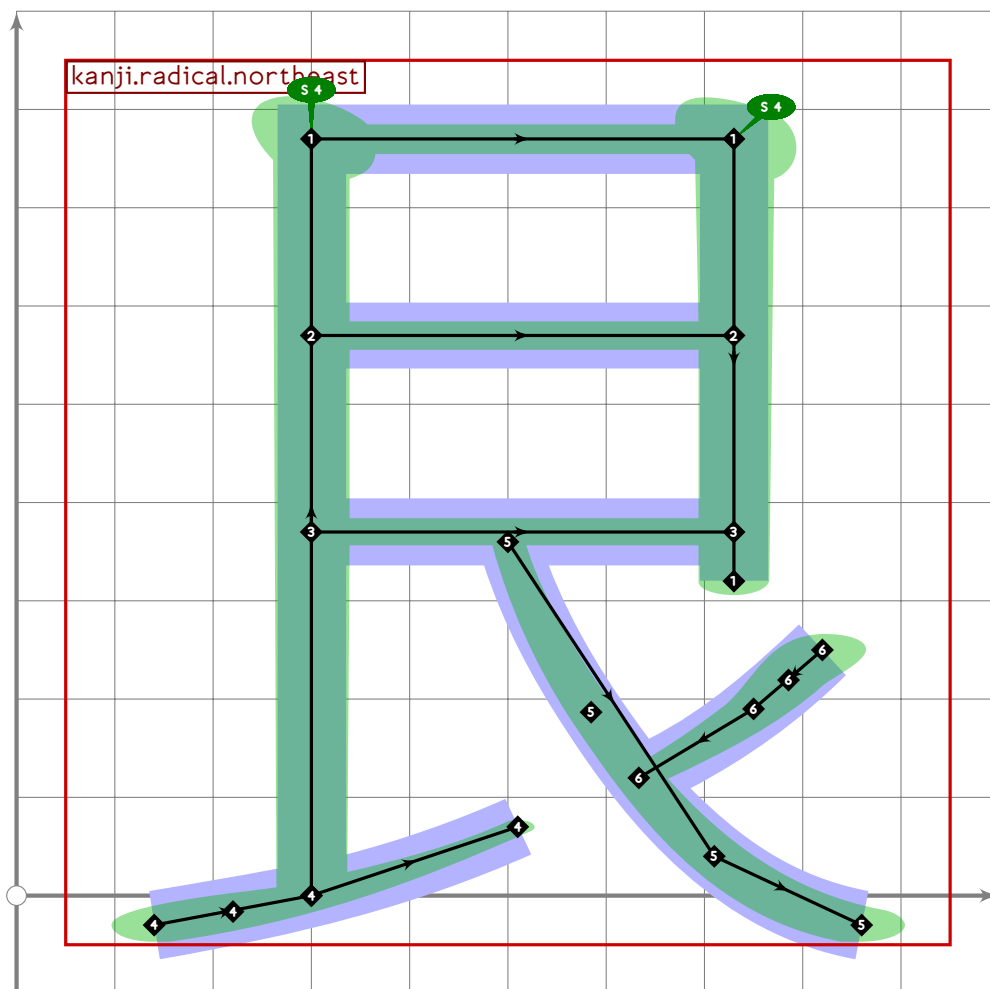
```

440    (xpart (oldp intersectiontimes get_strokep(-3)),infinity) of oldp);
441    set_boserif(-1,0,whatever);
442    replace_strokep(0)(oldp rotatedaround (point 1 of oldp,15));
443    expand_pbox;
444 enddef;
445
446 vardef kanji.radical.narrow_flag =
447   perl_structure:=perl_structure&""eids.u2FF8.u5C38.1_";
448   push_pbox_toexpand("kanji.radical.narrow_flag");
449   push_stroke((800,560)-(800,730)-(200,730){down}..(160,200)..(30,-50),
450     (1.5,1.5)-(1.6,1.6)-(1.6,1.6)-(1.3,1.3)-(0.9,0.9));
451   set_botip(0,1,1);
452   set_botip(0,2,1);
453   set_boserif(0,1,4);
454   set_boserif(0,2,4);
455   set_bosize(0,93);
456   push_stroke((((0,610)-(1000,610))
457     intersectionpoint reverse get_strokep(0))-(800,610),
458     (1.5,1.5)-(1.5,1.5));
459   set_bosize(0,93);
460   expand_pbox;
461 enddef;

```

**RADI**

RADI



```

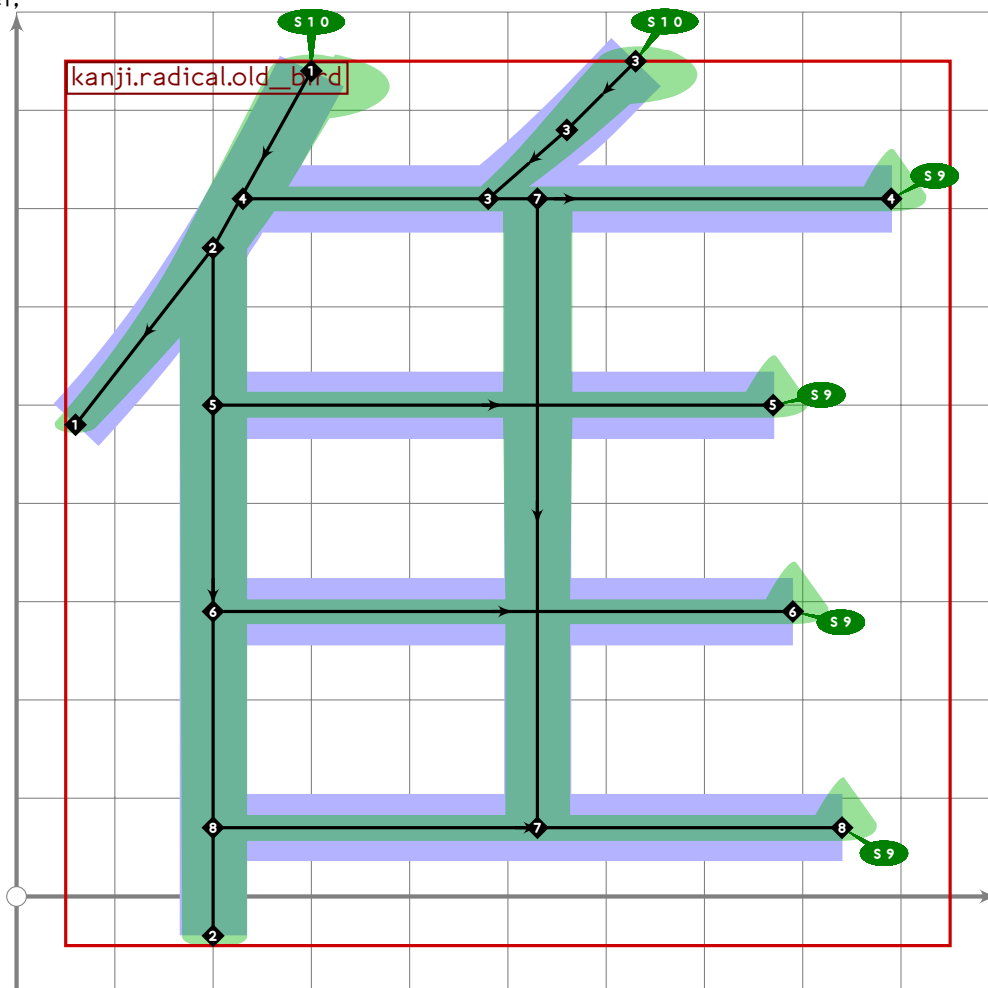
462
463 vardef kanji.radical.northeast =
464   push_pbox_toexpand("kanji.radical.northeast");
465   push_stroke((300,0)–(300,770)–(730,770)–(730,320),
466     (1.5,1.5)–(1.6,1.6)–(1.6,1.6)–(1.5,1.5));
467   set_boserif(0,14);
468   set_boserif(0,2,4);
469   set_botip(0,1,1);
470   set_botip(0,2,1);
471   push_stroke((300,570)–(730,570),(1.5,1.5)–(1.5,1.5));
472   push_stroke((300,370)–(730,370),(1.5,1.5)–(1.5,1.5));
473   push_stroke((140,-30)..tension 1.2..(300,0)..(510,70),
474     (1.7,1.7)–(1.5,1.5)–(1,1));
475   push_stroke((500,360)..tension 1.2..(710,40)..(860,-30),
476     (1,1)–(1.4,1.4)–(1.7,1.7));
477   push_stroke((820,250)..tension 1.2..(750,190)..
478     (point 0.7 of get_stroke(0)),
479     (1.7,1.7)–(1.4,1.4)–(1.2,1.2));
480   expand_pbox;
481 enddef;
482

```

```

483 vardef kanji.radical.alt_northeast =
484   push_pbox_toexpand("kanji.radical.northeast");
485   push_stroke((300,0)-(300,770)-(730,770)-(730,320),
486     (1.5,1.5)-(1.6,1.6)-(1.6,1.6)-(1.5,1.5));
487   set_boserif(0,14);
488   set_boserif(0,2,4);
489   set_botip(0,1,1);
490   set_botip(0,2,1);
491   push_stroke((300,570)-(730,570),(1.5,1.5)-(1.5,1.5));
492   push_stroke((300,370)-(730,370),(1.5,1.5)-(1.5,1.5));
493   push_stroke((130,-20)..tension 1.2..(300,0)..(720,80),
494     (1.7,1.7)-(1.5,1.5)-(1,1));
495   push_stroke((650,170)..tension 1.3..(720,80)..(770,-20),
496     (1,1)-(1.5,1.5)-(1.8,1.8));
497   expand_pbox;
498 enddef;

```



```

499
500 vardef kanji.radical.old_bird =
501   push_pbox_toexpand("kanji.radical.old_bird");
502   push_stroke((300,840){curl 0.1}..(200,660)..(60,480),
503     (1.7,1.7)-(1.5,1.5)-(1.1,1.1));

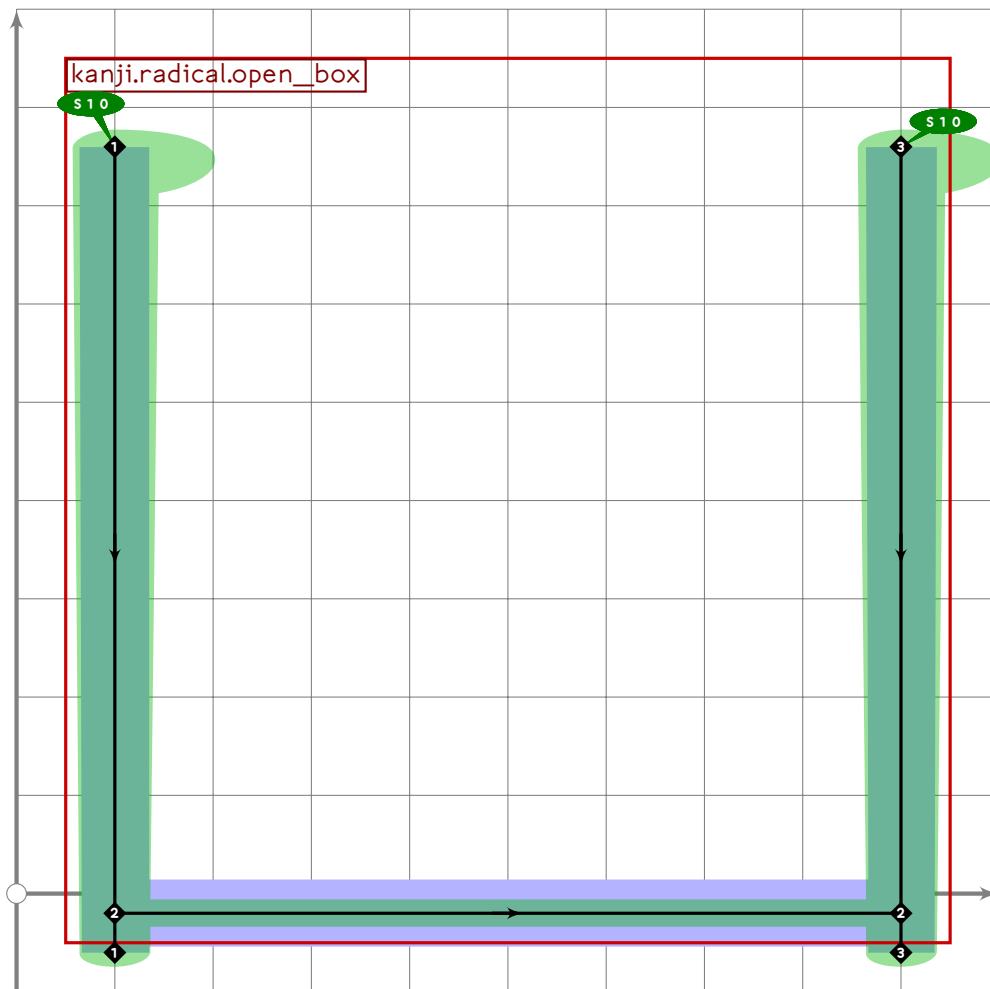
```

RADI

```

504 set_boserif(0,0,10);
505 push_stroke((200,660)-(200,-40),
506   (149,149)-(14,14));
507 push_stroke((630,850){curl 0.1}..(560,780)..(480,710),
508   (1.6,1.6)-(14,14)-(1.1,1.1));
509 set_boserif(0,0,10);
510 push_stroke(
511   (((0,710)-(1000,710)) intersectionpoint get_strokep(-2))-(890,710),
512   (14,14)-(1.5,1.5));
513 set_boserif(0,1,9);
514 push_stroke((200,500)-(770,500),
515   (14,14)-(1.5,1.5));
516 set_boserif(0,1,9);
517 push_stroke((200,290)-(790,290),
518   (14,14)-(1.5,1.5));
519 set_boserif(0,1,9);
520 push_stroke((530,710)-(530,70),(1.5,1.5)-(14,14));
521 push_stroke((200,70)-(840,70),
522   (14,14)-(1.5,1.5));
523 set_boserif(0,1,9);
524 expand_pbox;
525 enddef;
526
527 % pass in some code that goes in the bottom
528 vardef kanji.radical.old_man(text curves) =
529   push_pbox_toexpand("kanji.radical.old_man");
530   build_kanji.level(
531     build_kanji.tb(480,-110)
532     (kanji.grone.earth;
533       replace_strokep(-1)(oldp shifted (-500,0) xscaled 0.75 shifted (480,0)))
534     (curves);
535   push_stroke((880,780)..tension 1.2..(600,530)..(50,260),
536     (1.6,1.6)-(1.5,1.5)-(1,1)));
537   expand_pbox;
538 enddef;

```



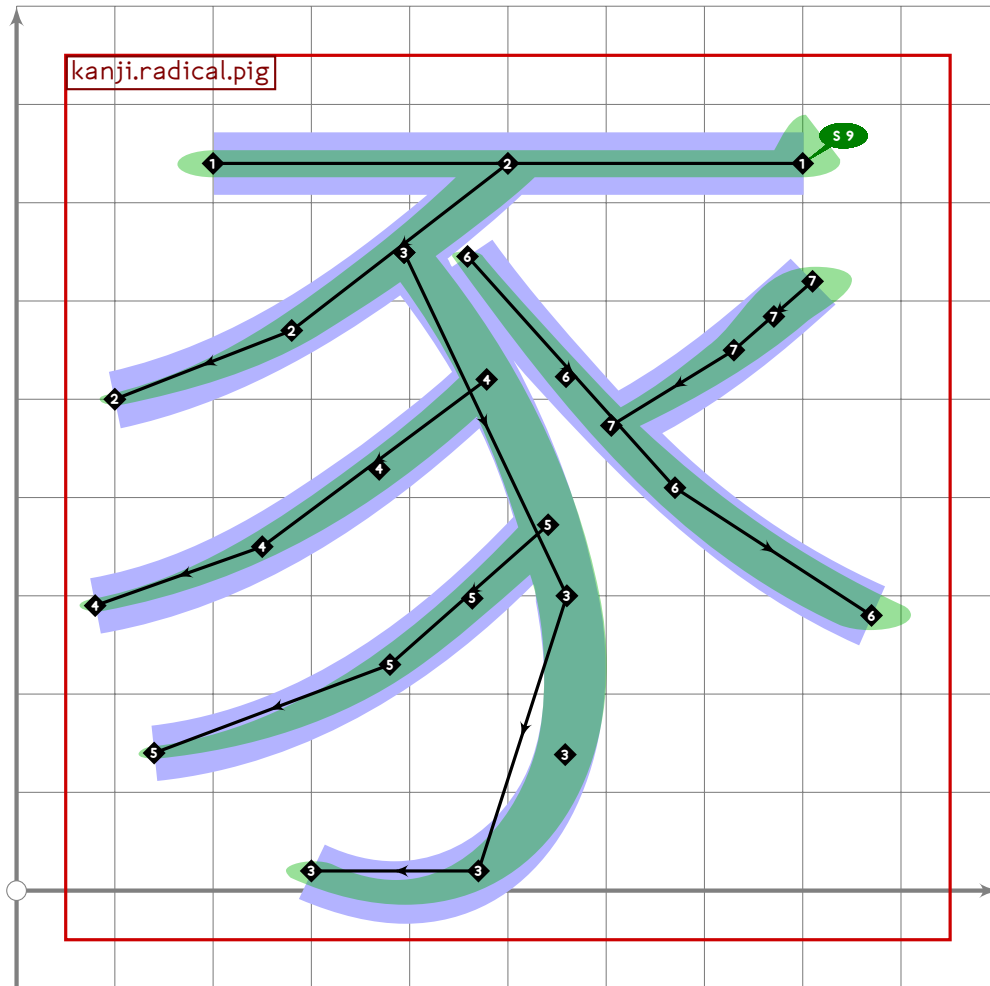
RADI

```

539
540 vardef kanji.radical.open_box =
541   push_pbox_toexpand("kanji.radical.open_box");
542   push_stroke((100,760)-(100,-60),(1.7,1.7)-(1.5,1.5));
543   set_boserif(0,0,10);
544   push_stroke((100,-20)-(900,-20),(1.5,1.5)-(1.5,1.5));
545   push_stroke((900,760)-(900,-60),(1.7,1.7)-(1.5,1.5));
546   set_boserif(0,0,10);
547   expand_pbox;
548 enddef;

```

RADI



```

549
550 vardef kanji.radical.pig =
551   push_pbox_toexpand("kanji.radical.pig");
552   push_stroke((200,740)-(800,740),(1,6,1,6)-(1,6,1,6));
553   set_boserif(0,1,9);
554   push_stroke((500,740)..tension 1.2..(280,570)..(100,500),
555     (1,6,1,6)-(14,1,4)-(1,0,1,0));
556   push_stroke(
557     (point 0.5 of get_stroke(0))..tension 1.1..(560,300)..
558     (470,20)..{curl 0.6}(300,20),
559     (1,3,1,3)-(1,5,1,5)-(14,1,4)-(1,3,1,3));
560   push_stroke(
561     (point 0.4 of get_stroke(0))..tension 1.2..(250,350)..(80,290),
562     (1,35,1,35)-(14,1,4)-(1,0,1,0));
563   push_stroke(
564     (point 0.8 of get_stroke(-1))..tension 1.2..(380,230)..(140,140),
565     (1,35,1,35)-(14,1,4)-(1,0,1,0));
566   push_stroke(
567     ((0,90)+point 0.3 of get_stroke(-2))..tension 1.2..(670,410)..(870,280),
568     (1,1)-(14,1,4)-(1,7,1,7));
569   push_stroke(

```

```

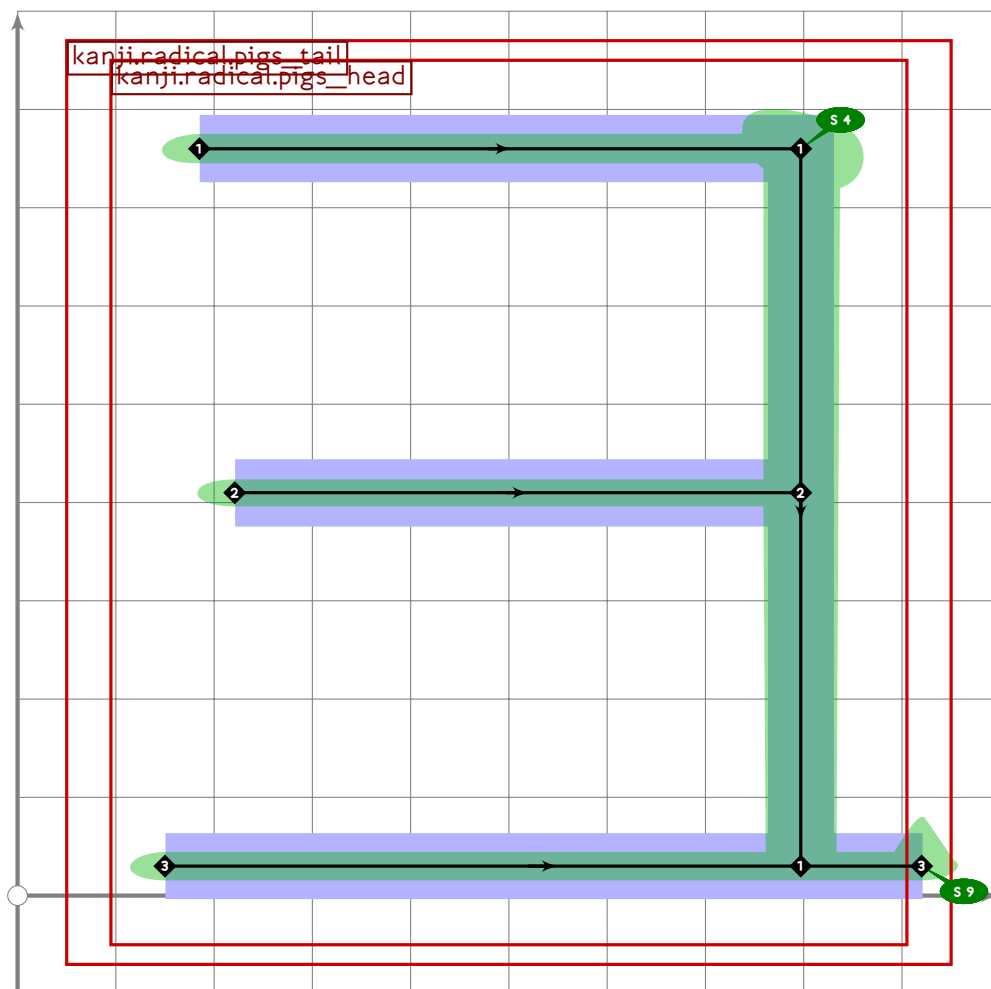
570     (810,620)..tension 1.2..(730,550)..(point 0.7 of get_strokep(0)),
571     (1.7,1.7)–(1.4,1.4)–(1.2,1.2));
572   for i=-6 upto 0: set_bosize(i,92); endfor;
573   expand__pbox;
574 enddef;
575
576 vardef kanji.radical.pigs_head =
577   push_pbox_toexpand("kanji.radical.pigs_head");
578   push_stroke((150,760)–(830,760)–(830,70),
579     (1.6,1.6)–(1.6,1.6)–(1.5,1.5));
580   set_botip(0,1);
581   set_boserif(0,14);
582   push_stroke((190,410)–(830,410),(1.55,1.55)–(1.55,1.55));
583   push_stroke((150,30)–(830,30),(1.5,1.5)–(1.5,1.5));
584   expand__pbox;
585 enddef;
586
587 % name is mine - it has central horizontal line lengthened
588 vardef kanji.radical.pigs_snout =
589   push_pbox_toexpand("kanji.radical.pigs_snout");
590   build_kanji.level(
591     build_kanji.sscale(xscaled 0.87)(kanji.radical.pigs_head);
592     replace_strokep(-1)((100,410)–(910,410));
593     set_boserif(-1,9);
594   );
595   expand__pbox;
596 enddef;
597

```



U+5F50  
tsuku.uni5F50

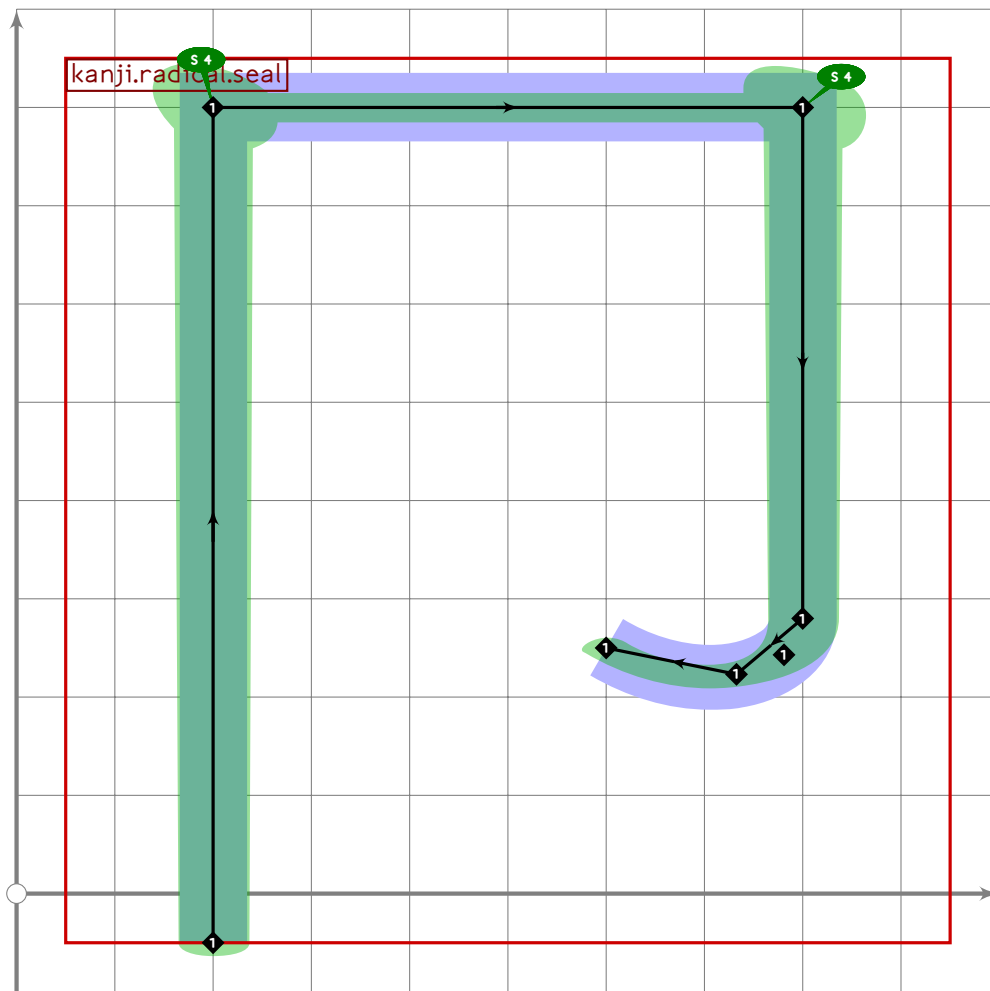
RADI



```

598 % name is mine - it has bottom horizontal line lengthened, vertical clipped
599 vardef kanji.radical.pigs_tail =
600   push_pbox_toexpand("kanji.radical.pigs_tail");
601   build_kanji.sscale(xscaled 0.9)
602   (kanji.radical.pigs_head;
603     replace_stroke(-2)((150,760)-(830,760)-(830,30)));
604   replace_stroke(0)((150,30)-(920,30));
605   set_boserif(0,1,9);
606   expand_pbox;
607 enddef;

```



RADI

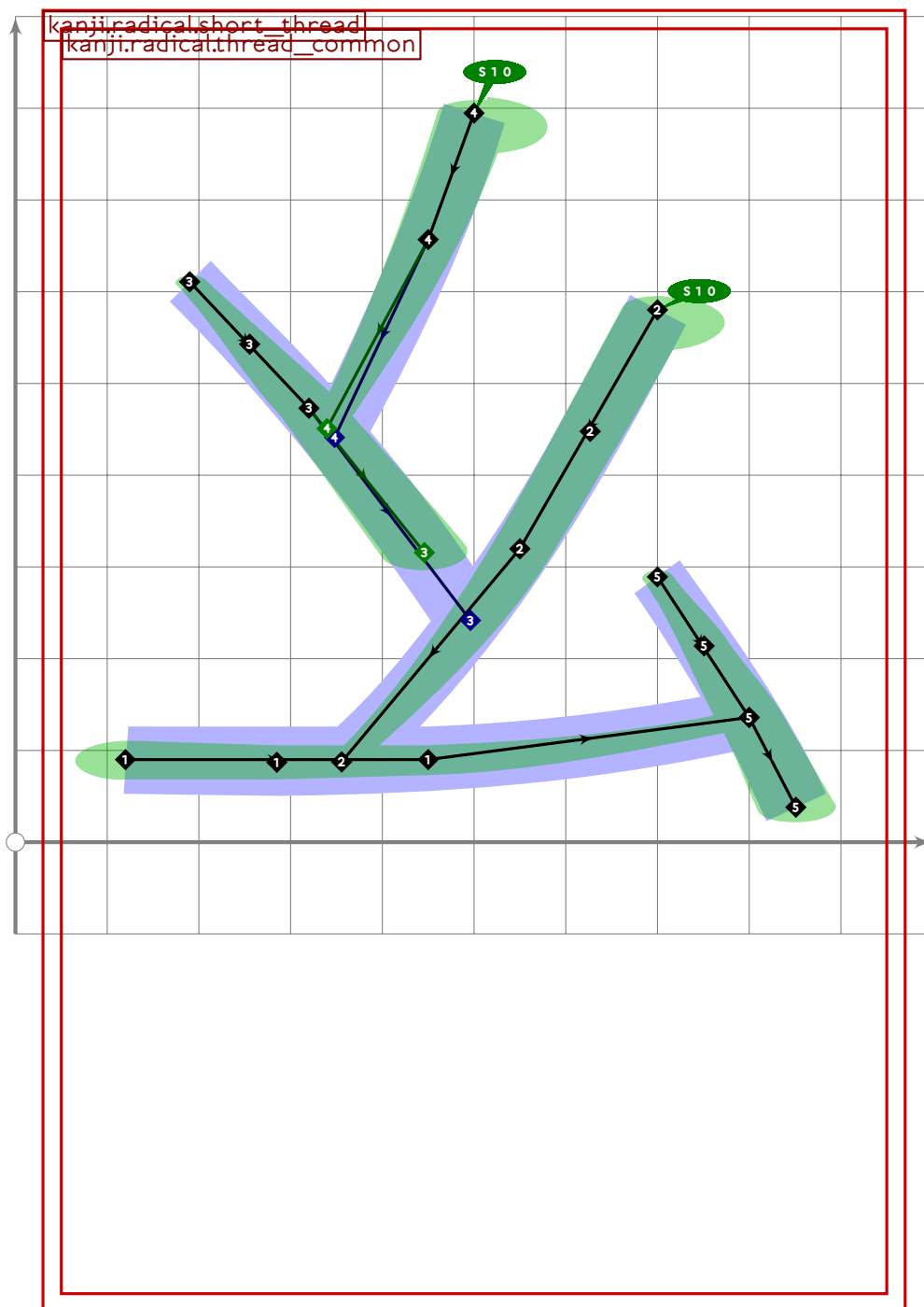
```

608
609 vardef kanji.radical.seal =
610   push_pbox_toexpand("kanji.radical.seal");
611   push_stroke((150,-300)-(150,550)-(600,550),
612     (1.5,1.5)-(1.6,1.6)-(1.6,1.6));
613   build_kanji.add_jtail(0);
614   replace_strokep(0)(oldp shifted (0,250) xscaled 1.3333);
615   set_boserif(0,1,4);
616   set_boserif(0,2,4);
617   set_botip(0,1,1);
618   set_botip(0,2,1);
619   expand_pbox;
620 enddef;

```

U+5E7A  
tsuku.uni5E7A

RADI



```

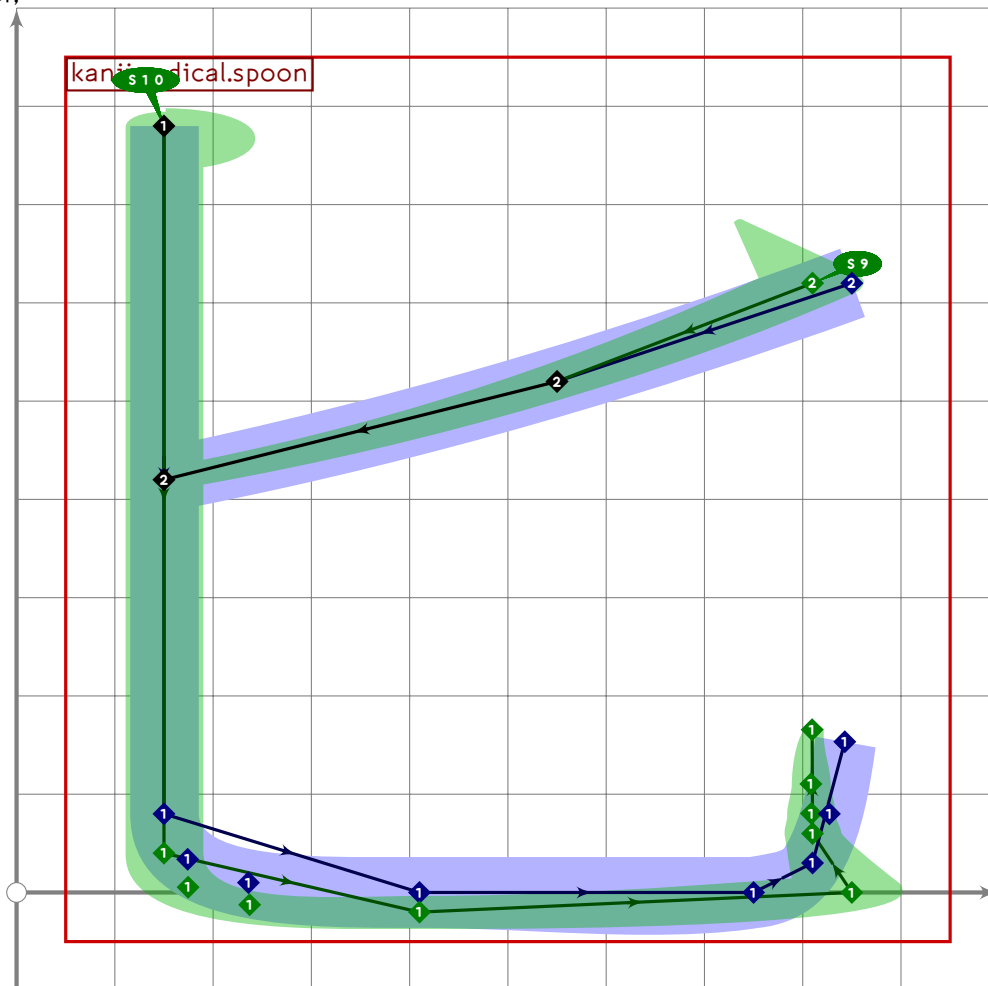
621
622 vardef kanji.radical.short_thread =
623   push_pbox_toexpand("kanji.radical.short_thread");
624   tsu_xform(begingroup
625     save myxf;
626     transform myxf;
627     xpart myxf=yxpart myxf=0;
628     xpart myxf=1;
629     (500,330) transformed myxf=(500,90);
630     (500,800) transformed myxf=(500,810);

```

```

631 myxf
632 endgroup)(kanji.radical.thread_common);
633 replace_strokep(0)(subpath (0,1.6) of oldp);
634 replace_strokeq(0)(subpath (0,1.6) of oldq);
635 for i=-4 upto 0: set_bosize(i,100); endfor;
636 expand_pbox;
637 enddef;
638
639 vardef kanji.radical.silly_hat =
640   push_pbox_toexpand("kanji.radical.silly_hat");
641   push_stroke((500,800)..(500,500),(1.6,1.6)-(1.5,1.5));
642   set_bosize(0,95);
643   set_boserif(0,0,10);
644   kanji.radical.conservative_hat;
645   expand_pbox;
646 enddef;

```



```

647
648 vardef kanji.radical.spoon =
649   push_pbox_toexpand("kanji.radical.spoon");
650   push_stroke((150,780),(1.6,1.6));
651   build_kanji.add_ltail(0);

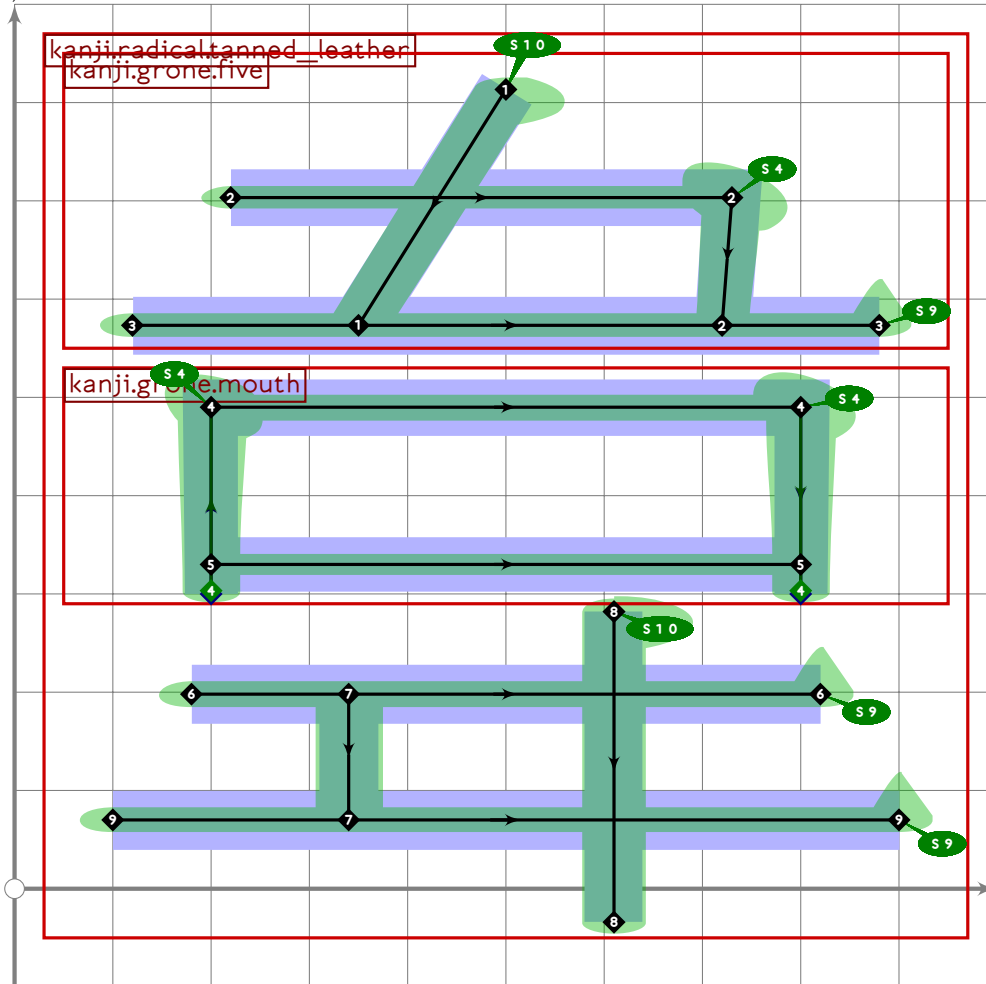
```

RADI

U+97CB  
tsuku.uni97CB

```
652 set_boserif(0,0,10);
653 push_stroke(
654   (xpart point infinity of get_strokep(0),620)..(550,520)..(150,420),
655   (1,9,1,9)..(1,6,1,6)..(1,3,1,3));
656 set_boserif(0,0,9);
657 expand_pbox;
658 enddef;
```

RADI

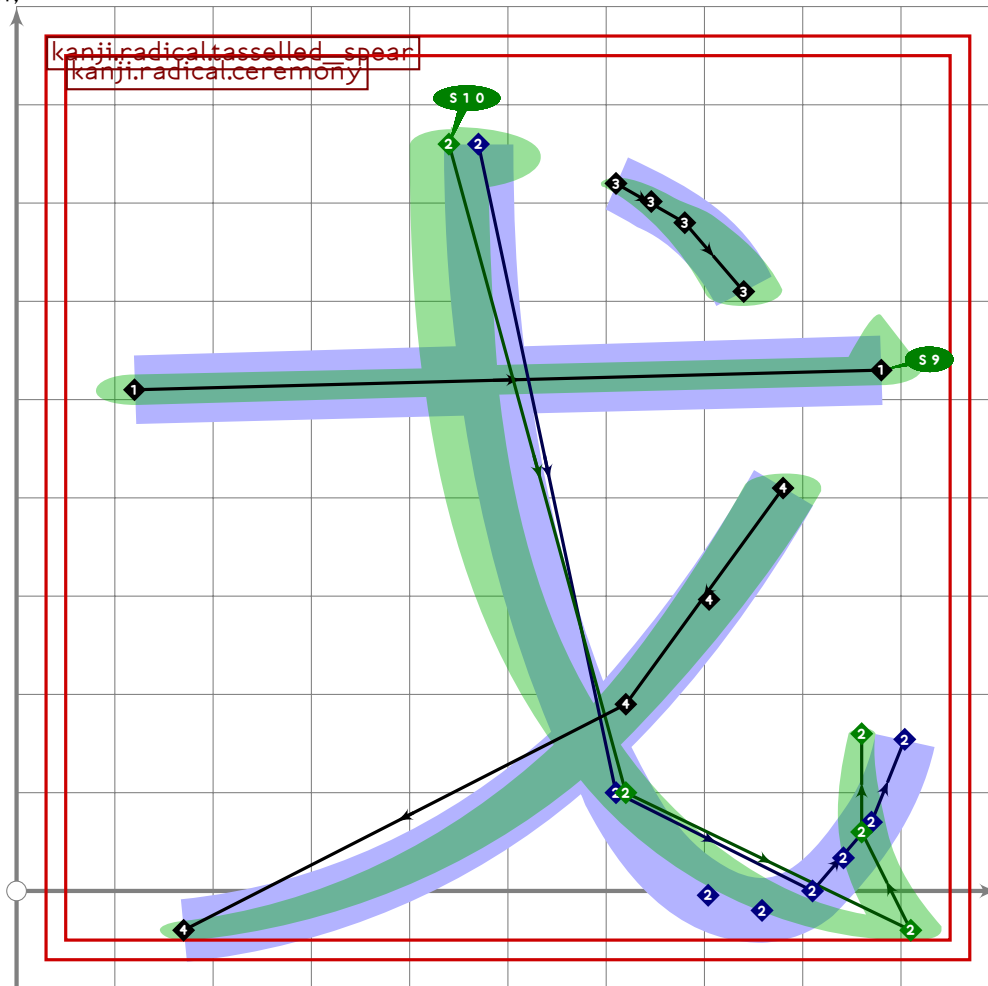


```
659
660 vardef kanji.radical.tanned_leather =
661   push_pbox_toexpand("kanji.radical.tanned_leather");
662   build_kanji.tcb(540,20)(300,20)
663     (kanji.grone.five;
664       set_bosize(-3,0);
665       set_boserif(-2,0,10))
666     (kanji.grone.mouth)
667     (push_stroke((180,570)-(820,570),(1,6,1,6)-(1,6,1,6));
668       set_boserif(0,1,9);
669       push_stroke((340,570)-(340,250),(1,6,1,6)-(1,6,1,6));
670       push_stroke((610,780)-(610,-10),(1,6,1,6)-(1,5,1,5));
671       set_boserif(0,0,10);
672       push_stroke((100,250)-(900,250),(1,6,1,6)-(1,6,1,6));
```

```

673     set_boserif(0,1,9));
674     expand_pbox;
675 endif;

```



RADI

```

676
677 vardef kanji.radical.tassel_spear =
678   push_pbox_toexpand("kanji.radical.tassel_spear");
679   kanji.radical.ceremony;
680   push_stroke((780,410)..tension 1.2..(620,190)..(170,-40),
681     (1.6,1.6)-(1.4,1.4)-(1.2,1.2));
682   expand_pbox;
683 endif;
684
685 vardef kanji.radical.tent =
686   perl_structure:=perl_structure&"eids.u2FF1.u4EBA.1_";
687   push_pbox_toexpand("kanji.radical.tent");
688   push_stroke((510,800)..(450,700)..(300,540)..(60,360),
689     (1.6,1.6)-(1.5,1.5)-(1.3,1.3)-(0.85,0.9));
690   set_boserif(0,0,10);
691   push_stroke(
692     (point 0.2 of get_stroke(0))..tension 1.2..(640,620)..(920,400),
693     (1,1)-(1.3,1.3)-(2.25,0.95));

```

```

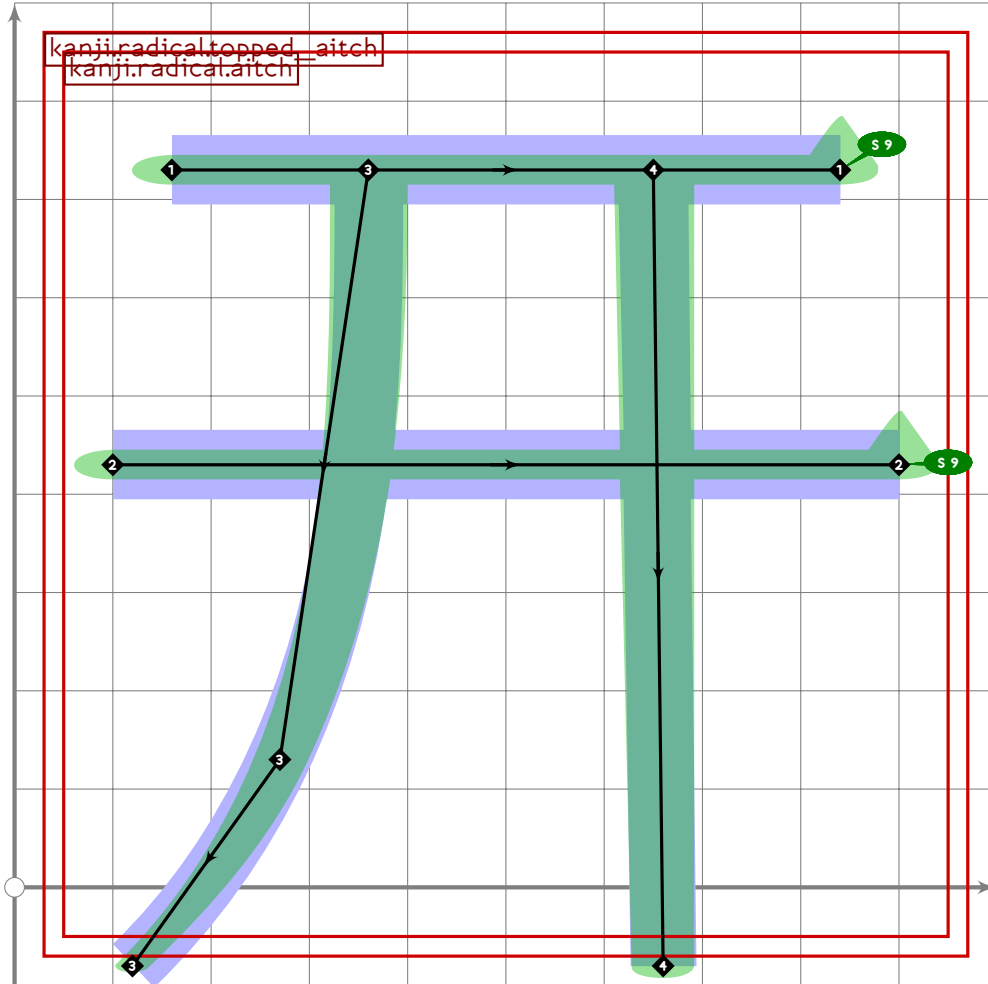
694 push_stroke((330,470)-(660,470),(1.6,1.6)-(1.6,1.6));
695 set_boserif(0,1,9);
696 expand_pbox;
697 endif;
698
699 vardef kanji.radical.thread_common =
700   push_pbox_toexpand("kanji.radical.thread_common");
701   push_stroke((120,330)..tension 1.2..(450,330)..(800,360),
702     (2,2)-(1.7,1.7)-(1.2,1.2));
703   push_stroke((700,650)..tension 1.3..(550,480)..(point 0.7 of get_stroke(0)),
704     (1.6,1.6)-(1.5,1.5)-(1,1));
705   set_boserif(0,0,10);
706   push_stroke(subpath (0,2-0.3*mincho) of
707     ((190,670)..tension 1.3..(320,580)..(point 1.3 of get_stroke(0))),
708     (1,1)-(1.5,1.5)-(1.8,1.8));
709   push_stroke((500,790)..(450,700)..(point 1.15 of get_stroke(0)),
710     (1.6,1.6)-(1.5,1.5)-(1,1));
711   set_boserif(0,0,10);
712   push_stroke((700,460)..tension 1.3..(800,360)..(880,250),
713     (1,1)-(1.5,1.5)-(1.8,1.8));
714   expand_pbox;
715 endif;
716
717 vardef kanji.radical.three_tailed_sheep =
718   push_pbox_toexpand("kanji.radical.three_tailed_sheep");
719   kanji.grthree.sheep;
720   push_stroke(
721     (510,615){down}..(500,260)..(370,70)..{curl 0.5}(50,-60),
722     (1.6,1.6)-(1.4,1.4)-(1.1,1.1));
723   push_stroke(((get_stroke(0) intersectionpoint get_stroke(-4))+(50,0))..
724     (650,80)..(900,-50),
725     (1.1,1.1)-(1.4,1.4)-(1.7,1.7));
726   replace_stroke(-1)(subpath
727     (xpart (oldp intersectiontimes get_stroke(-5)),infinity) of oldp);
728   expand_pbox;
729 endif;
730
731 vardef kanji.radical.three_tasselled_spear =
732   push_pbox_toexpand("kanji.radical.three_tasselled_spear");
733   kanji.radical.ceremony;
734   replace_stroke(-2)(oldp shifted (0,40));
735   replace_stroke(0)(oldp shifted (-680,750) xyscaled (1.2,0.6)
736     shifted (680,750));
737   push_stroke((subpath (0,10.9) of get_stroke(-2)) shifted (0,-130),
738     (1.6,1.6)-(1.6,1.6));
739   set_boserif(0,1,9);
740   push_stroke(get_stroke(-3) shifted (0,-270),
741     (1.6,1.6)-(1.6,1.6));

```

```

742 set_boserif(0,1,9);
743 push_stroke((800,220)..tension 1.2..(620,88)..(120,-40),
744   (1.6,1.6)-(1.4,1.4)-(1.2,1.2));
745 expand_pbox;
746 enddef;

```



```

747
748 vardef kanji.radical.topped_aitch =
749   push_pbox_toexpand("kanji.radical.topped_aitch");
750   push_stroke((160,730)-(840,730),(1.6,1.6)-(1.6,1.6));
751   set_boserif(0,1,9);
752   kanji.radical.aitch;
753   set_boserif(-1,0,whatever);
754   set_boserif(0,0,whatever);
755   expand_pbox;
756 enddef;
757
758 vardef kanji.radical.travel_inside =
759   push_pbox_toexpand("kanji.radical.travel_inside");
760   push_stroke((720,810)..tension 1.2..(380,610)..(80,510),
761     (1.7,1.7)-(1.5,1.5)-(1,1));
762   push_stroke((320,570)-(320,-60),(1.6,1.6)-(1.5,1.5));

```

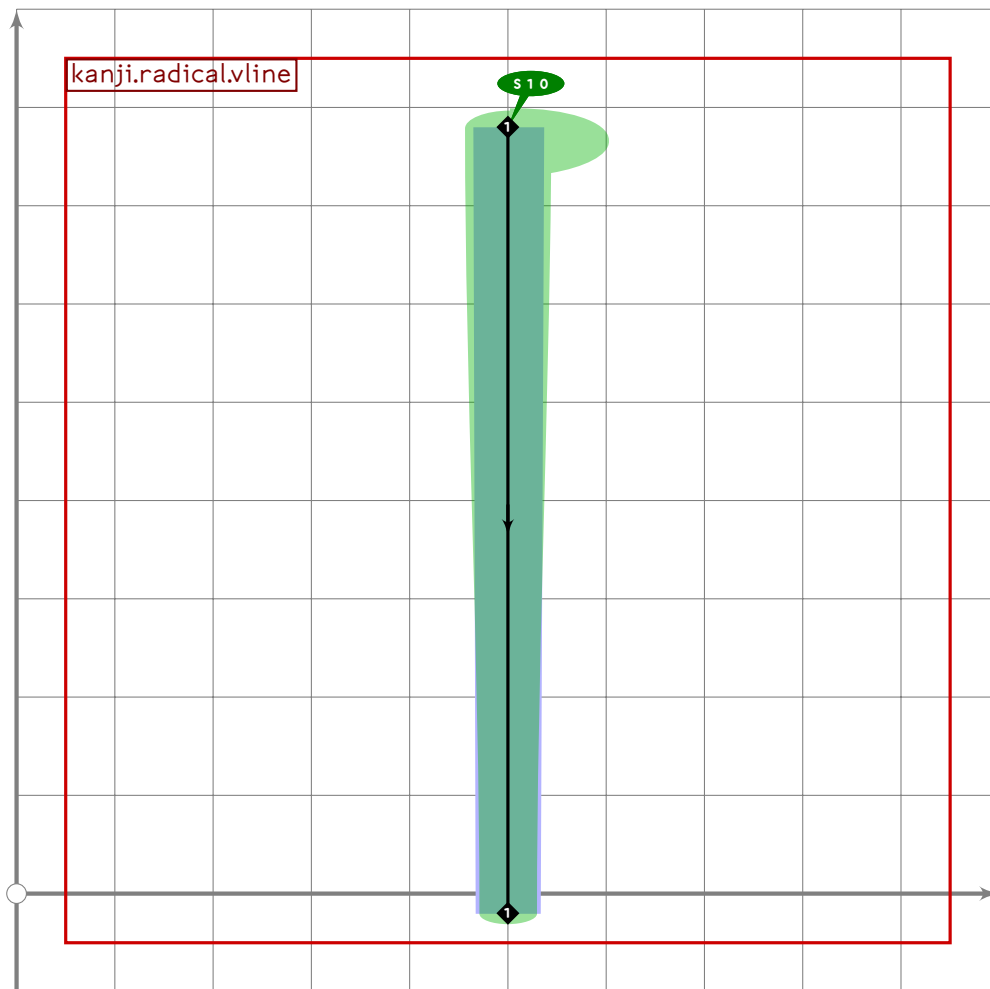
RADI



```

763 push_stroke((point 0.7 of get_stroke(-1))..
764     tension 1.2..(650,240)..(850,0),
765     (1,1)-(14,14)-(17,17));
766 push_stroke((770,490)..tension 1.2..(680,420)..
767     (point 0.65 of get_stroke(0)),
768     (17,17)-(14,14)-(12,12));
769 expand_pbox;
770 enddef;
771
772 vardef kanji.radical.tusk =
773     push_pbox_toexpand("kanji.radical.tusk");
774     push_stroke((140+30*mincho,780)-(830,780),(1.6,1.6)-(1.6,1.6));
775     set_boserif(0,1,9);
776     push_stroke((660,780),(1.6,1.6));
777     build_kanji.add_jtail(0);
778     push_stroke((340,780)-(340,480),(1.6,1.6)-(1.5,1.5));
779     push_stroke((110+30*mincho,480)-(860,480),(1.6,1.6)-(1.6,1.6));
780     set_boserif(0,1,9);
781     push_stroke((580,480)..tension 1.2..(380,200)..(110,60),
782         (1.6,1.6)-(14,14)-(1,1));
783     expand_pbox;
784 enddef;
785
786 % insert "Scottish tsundere" joke here
787 vardef kanji.radical.twin_tailed_sheep =
788     push_pbox_toexpand("kanji.radical.twin_tailed_sheep");
789     kanji.grthree.sheep;
790     replace_stroke(0)
791         ((510,615){down}..(500,260)..(370,70)..{curl 0.5}(50,-60));
792     replace_stroke(0)((1.6,1.6)-(1.6,1.6)-(14,14)-(1,1,1));
793     push_stroke(((get_stroke(0) intersectionpoint get_stroke(-3))+(50,0))..
794         (650,80)..(900,-50),
795         (1,1,1)-(14,14)-(17,17));
796     expand_pbox;
797 enddef;

```



RADI

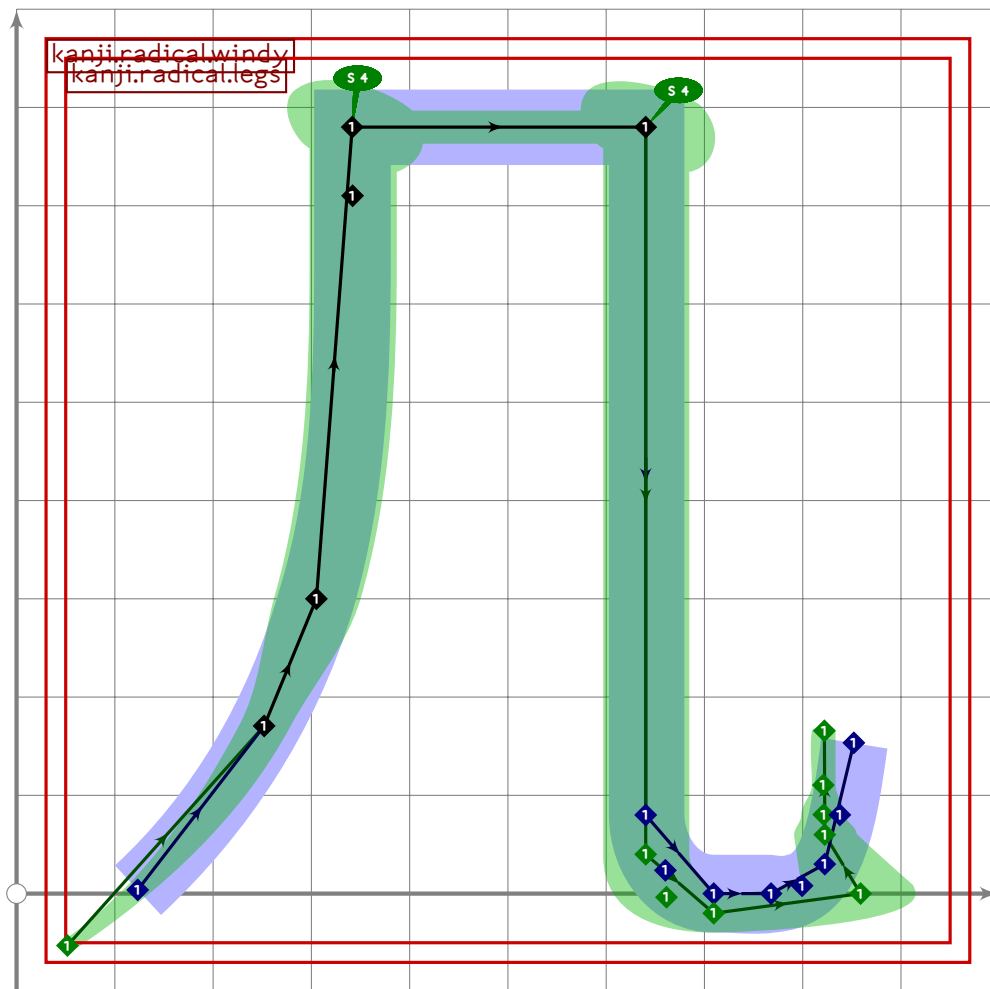
```

798
799 vardef kanji.radical.vline =
800   push_pbox_toexpand("kanji.radical.vline");
801   push_stroke((500,780)-(500,-20),(1.7,1.7)-(1.3,1.3));
802   set_boserif(0,0,10);
803   expand_pbox;
804 enddef;

```

U+51E0  
tsuku.uni51E0

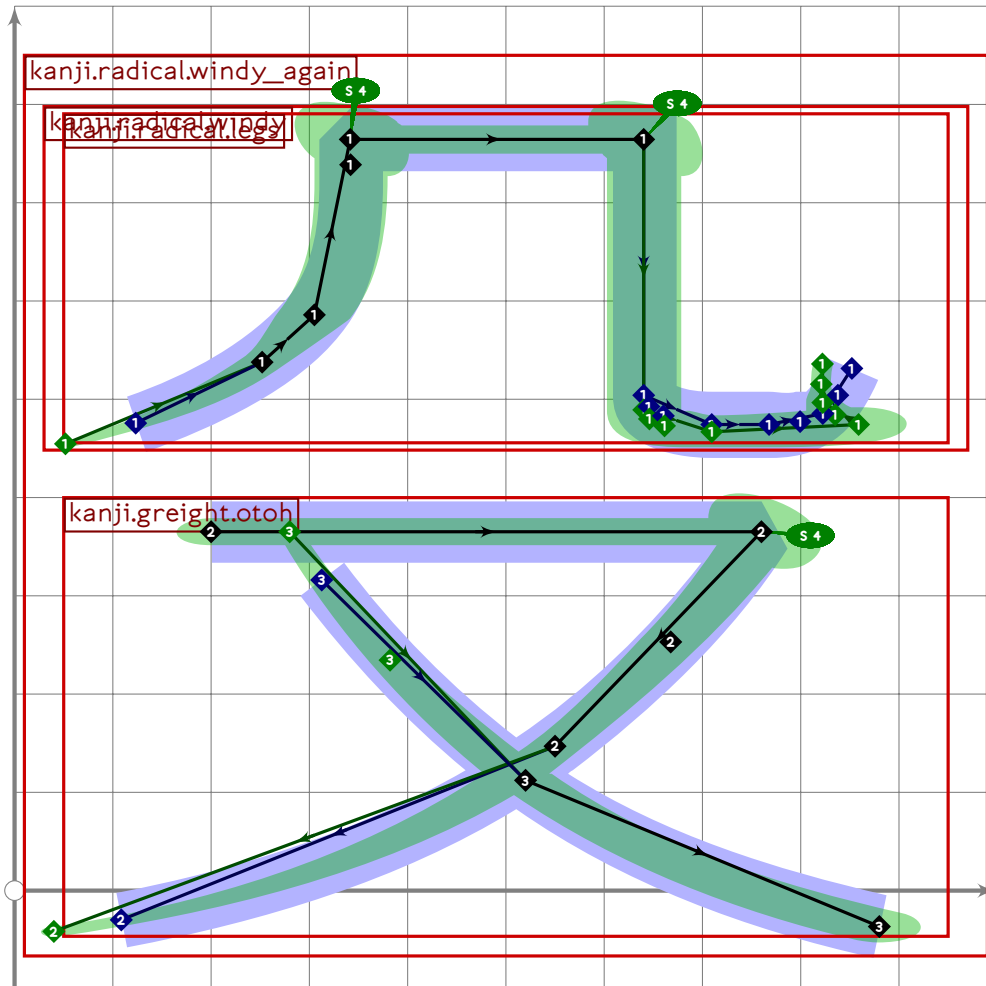
RADI



```

805
806 vardef kanji.radical.windy =
807   push_pbox_toexpand("kanji.radical.windy");
808   build_kanji.spread_legs(80)(kanji.radical.legs);
809   replace_strokep(-1)((reverse oldp)-get_strokep(0));
810   replace_strokeq(-1)((reverse oldq)-get_strokeq(0));
811   pop_stroke;
812   set_boserif(0,3,4);
813   set_boserif(0,4,4);
814   set_botip(0,3,1);
815   set_botip(0,4,1);
816   expand_pbox;
817 enddef;

```



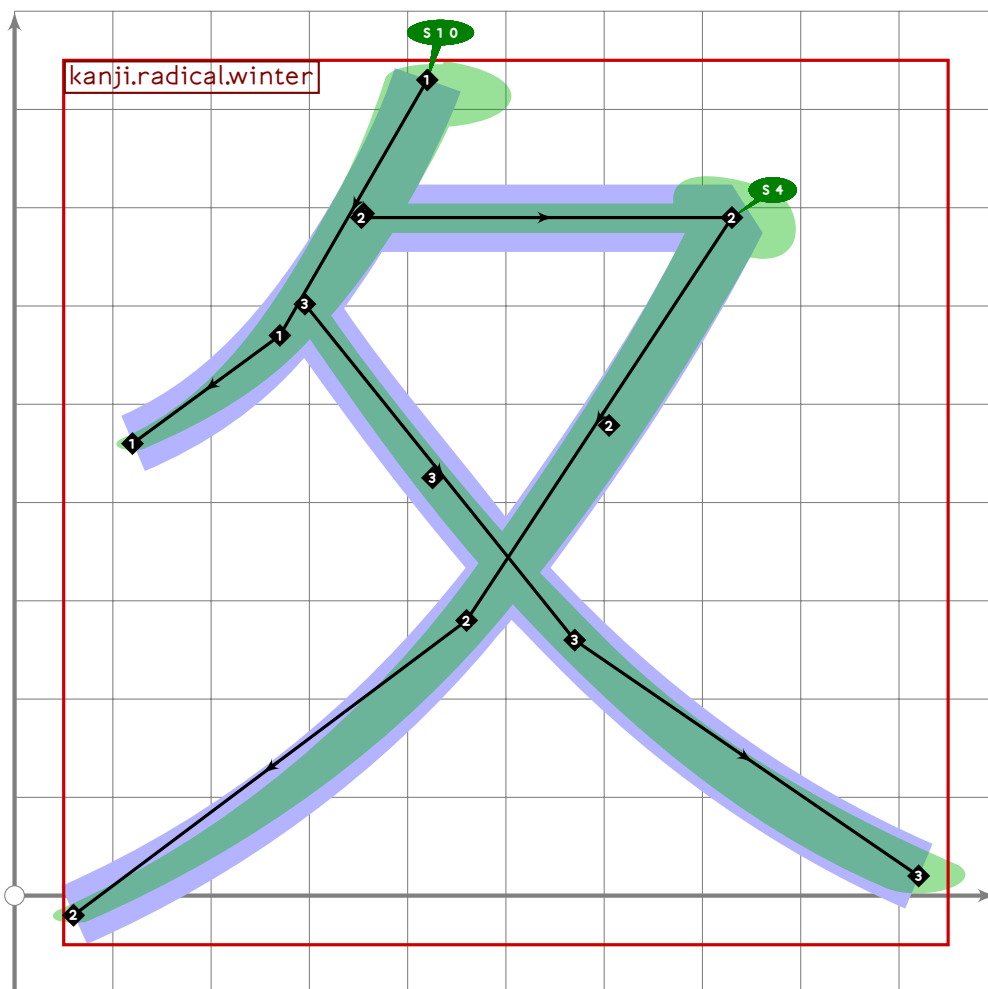
RADI

```

818
819 vardef kanji.radical.windy_again =
820   push_pbox_toexpand("kanji.radical.windy_again");
821   tsu_xform(identity yscaled 0.93)
822   (build_kanji.tb(460;60)
823     (kanji.radical.windy)
824     (kanji.greight.otoh));
825   expand_pbox;
826 enddef;

```

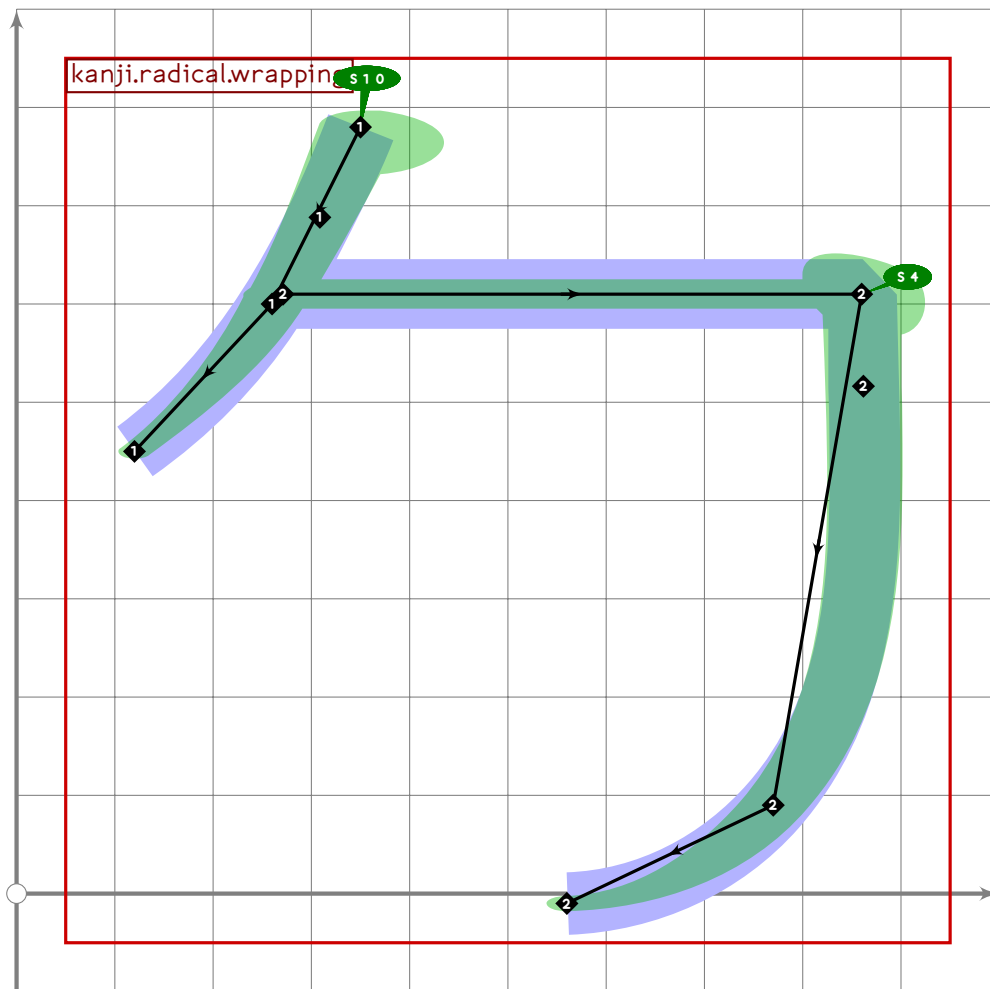
RADI



```

827
828 vardef kanji.radical.winter =
829   push_pbox_toexpand("kanji.radical.winter");
830   push_stroke((420,830)..tension 1.2..(270,570)..(120,460),
831     (1.7,1.7)-(1.4,1.4)-(1,1));
832   set_boserif(0,0,10);
833   push_stroke((get_stroke(0) intersectionpoint ((0,690)-(1000,690)))-(
834     (730,690)..tension 1.2..(460,280)..(60,-20),
835     (1.5,1.5)-(1.6,1.6)-(1.4,1.4)-(1.1,1.1));
836   set_boserif(0,14);
837   set_botip(0,1,0);
838   push_stroke((point 0.85 of get_stroke(-1))..tension 1.2..
839     (570,260)..(920,20),
840     (1,1)-(1.3,1.3)-(1.8,1.8));
841   expand_pbox;
842 enddef;

```



RADI

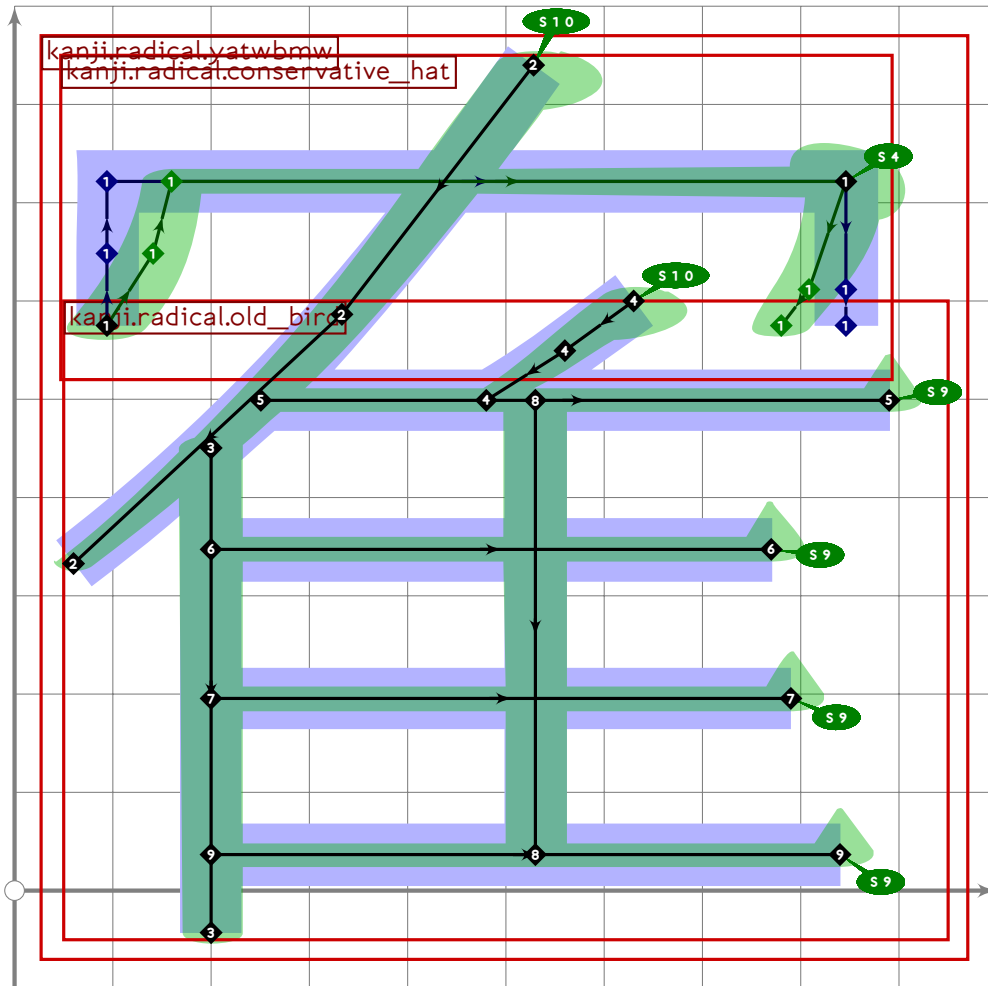
```

843
844 vardef kanji.radical.wrapping =
845   push_pbox_toexpand("kanji.radical.wrapping");
846   push_stroke((350,780)..tension 1.2..(260,600)..(120,450),
847     (1,7,1,7)-(1,4,1,4)-(1,1));
848   set_boserif(0,0,10);
849   push_stroke(
850     ((5,0)+((get_stroke(0) intersectionpoint ((0,610)-(1000,610)))))-
851     (860,610){down}..(770,90)..(560,-10),
852     (1,6,1,6)-(1,6,1,6)-(1,5,1,5)-(1,1,1,1));
853   set_boserif(0,1,4);
854   set_botip(0,1,0);
855   expand_pbox;
856 enddef;
857

```

U+96BA  
tsuku.uni96BA

RADI



858 % "you are the wind beneath my wings" - connotes both literal bird flight

859 % and high ambition

860 vardef kanji.radical.yatwbmw =

861 push\_pbox\_toexpand("kanji.radical.yatwbmw");

862 build\_kanji.level(

863 build\_kanji.tb(560,80)

864 (build\_kanji.sscale(xscaled 0.94 shifted (-30,0))

865 (kanji.radical.conservative\_hat))

866 (kanji.radical.old\_bird);

867 replace\_strokep(-7)

868 (oldp

869 shifted (-point 2 of oldp)

870 scaled ((840-ypart (point 2 of oldp))

871 / (ypart (point 0 of oldp)-ypart (point 2 of oldp)))

872 shifted (point 2 of oldp));

873 replace\_strokep(-6)

874 ((oldp intersectionpoint get\_strokep(-7))-(point 1 of oldp));

875 replace\_strokep(-4)

876 ((oldp intersectionpoint get\_strokep(-7))-(point 1 of oldp));

877 );

878 expand\_pbox;

879 enddef;

**RADI**



## rightrad.mp

```
1 %
2 % Right-side radicals
3 % Copyright (C) 2012, 2013, 2016, 2017 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 inclusion_lock(rightrad);
32
33 _____
34
35 vardef kanji.rightrad.attempt =
36   push_pbox_toexpand("kanji.rightrad.attempt");
37   build_kanji.tb(380,420)
38     (kanji.radical.tent)
39     (kanji.grfour.husband;
40       set_bosize(-3,0);
41       set_bosize(-2,0);
42       set_boserif(-1,0,whatever);
43       build_kanji.box((220,610),(780,360)));
44   expand_pbox;
45 enddef;
46
47 vardef kanji.rightrad.beta =
48   push_pbox_toexpand("kanji.rightrad.beta");
49   kanji.radical.beta;
50   replace_strokep(0)
51     (oldp shifted (-250,-760) xyscaled (1.2,630/550) shifted (300,760));
52   replace_strokep(0)((300,-60)-(subpath (1,infinity) of oldp));
53   expand_pbox;
54 enddef;
55
56 % KanjiVG lists this as U+5F54, but it's a little different visually
57 vardef kanji.rightrad.carve_wood =
58   push_pbox_toexpand("kanji.rightrad.carve_wood");
59   build_kanji.tb(420,60)
60     (kanji.radical.pigs_tail)
61     (kanji.radical.alt_water);
62   expand_pbox;
63 enddef;
64
65 % named for the most common character to contain it
66 vardef kanji.rightrad.clothing =
67   push_pbox_toexpand("kanji.rightrad.clothing");
68   tsu_xform(identity yscaled 0.92)(build_kanji.tb(440,60)
69     (kanji.radical.seal)
70     (tsu_xform(identity shifted (50,0))
```

**RIGH**

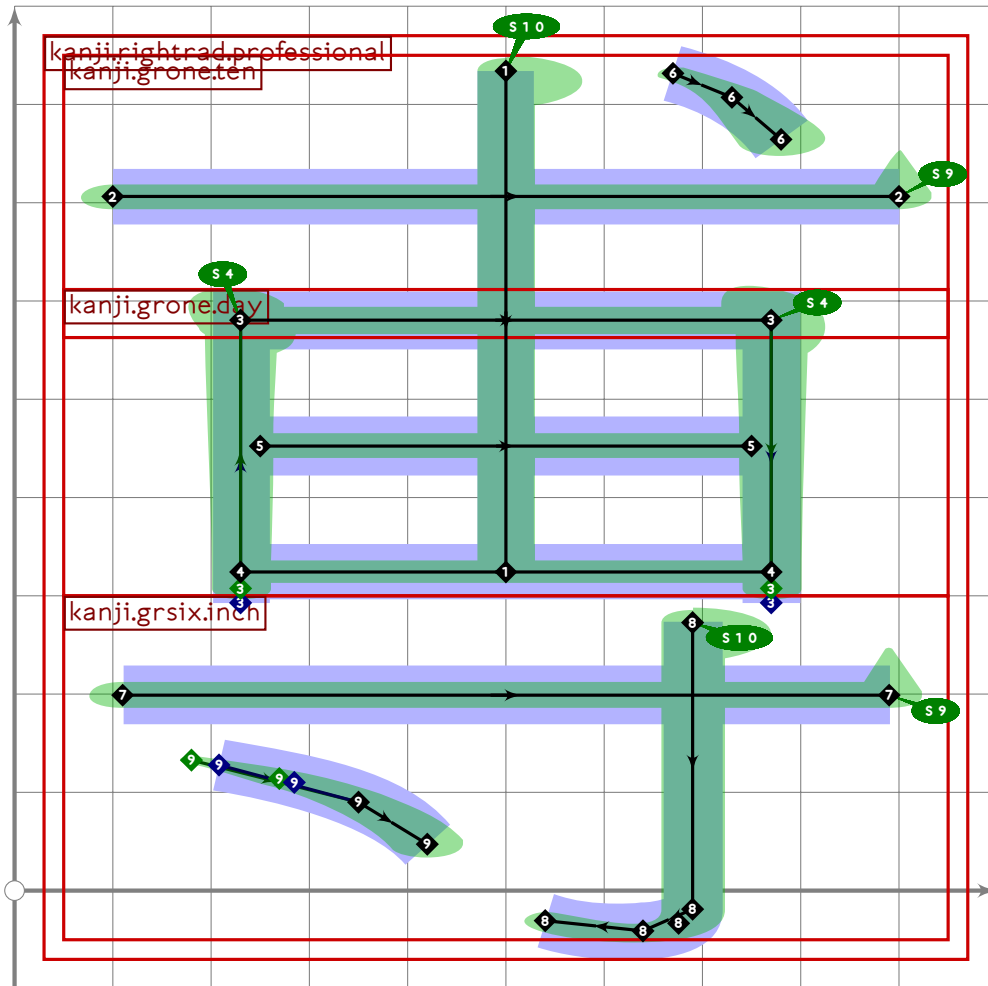
```

71      (kanji.greight.otoh)));
72  replace_stroke(-2)
73    ((xpart point 0 of oldp,-40)-subpath (1,infinity) of oldp);
74  replace_stroke(-1)
75    (oldp shifted (-900,0) xscaled 0.78 shifted (900,0));
76  replace_stroke(-1)
77    (((-170,0)+point 0 of oldp)-subpath (1,infinity) of oldp);
78  expand_pbox;
79 enddef;
80
81 vardef kanji.rightrad.crooked_heaven =
82   push_pbox_toexpand("kanji.rightrad.crooked_heaven");
83   push_stroke((130,740)-(780,740),(1.6,1.6)-(1.6,1.6));
84   set_boserif(0,1,9);
85   push_stroke((80,460)-(890,460),(1.6,1.6)-(1.6,1.6));
86   set_boserif(0,1,9);
87   push_stroke((250,740)-(250,460),(1.6,1.6)-(1.5,1.5));
88   push_stroke((600,740){down}..(575,510)..(370,200)..{curl 0.5}(50,-20),
89     (1.6,1.6)-(1.6,1.6)-(1.4,1.4)-(1.1,1.1));
90   push_stroke((580,360),(1.6,1.6));
91   build_kanji.add_ltail(0);
92   set_boserif(0,0,10);
93   expand_pbox;
94 enddef;
95
96 vardef kanji.rightrad.genius =
97   push_pbox_toexpand("kanji.rightrad.genius");
98   push_stroke((600,800),(1.6,1.6));
99   build_kanji.add_jtail(0);
100  set_boserif(0,0,10);
101  push_stroke((110+30*mincho,580)-(860,580),(1.6,1.6)-(1.6,1.6));
102  set_boserif(0,1,9);
103  push_stroke((520,580)..tension 1.2..(360,260)..(110,90),
104    (1.6,1.6)-(1.4,1.4)-(1,1));
105  expand_pbox;
106 enddef;
107
108 vardef kanji.rightrad.half =
109   push_pbox_toexpand("kanji.rightrad.half");
110   kanji.grtwo.half;
111   replace_stroke(-3)(oldp shifted (-500,0));
112   replace_stroke(-4)(oldp shifted (460,0));
113   expand_pbox;
114 enddef;

```

**RIGH**

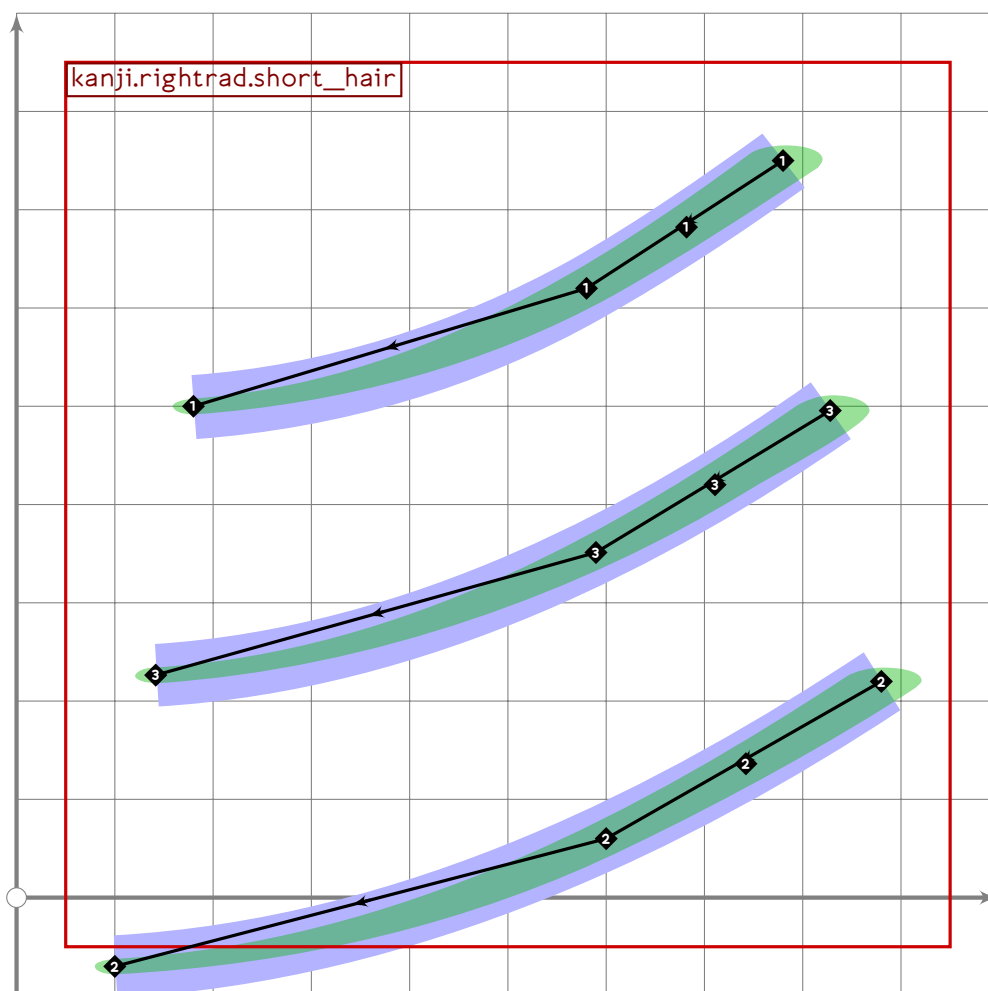
RIGH



```

115
116 vardef kanji.rightrad.professional =
117   push_pbox_toexpand("kanji.rightrad.professional");
118   build_kanji.tb(300,0)
119     (build_kanji.tb(420,80)
120       (kanji.grone.ten)
121       (kanji.grone.day);
122     replace_strokep(-4)((point 0 of oldp)-(point 0.5 of get_strokep(-1)));
123     push_stroke((670,820)..(730,780)..(780,710),
124       (1,1)-(14,14)-(18,18)))
125     (kanji.grsix.inch);
126   expand_pbox;
127 enddef;

```



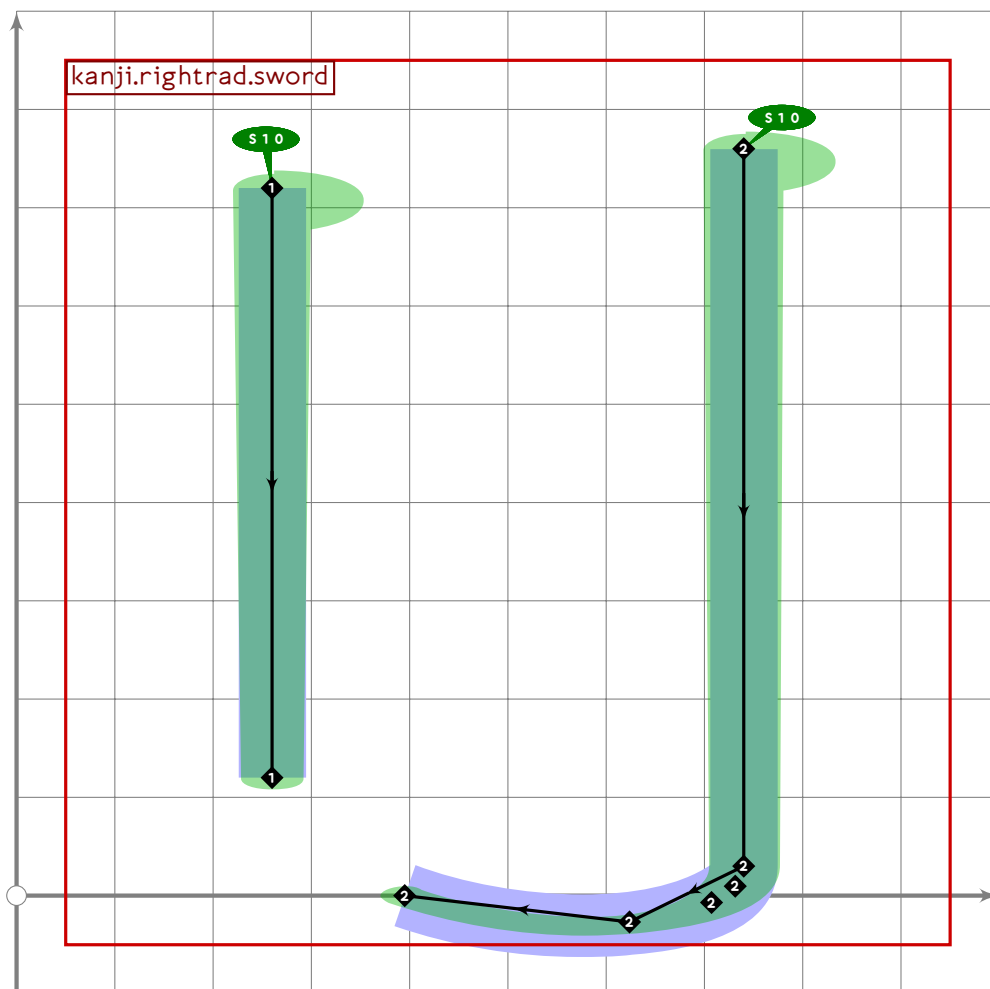
**RIGH**

```

128
129 vardef kanji.rightrad.short_hair =
130   push_pbox_toexpand("kanji.rightrad.short_hair");
131   push_stroke((780,750)..tension 1.2..(580,620)..(180,500),
132     (1.6,1.6)-(1.4,1.4)-(1.1,1.1));
133   push_stroke((880,220)..tension 1.2..(600,60)..(100,-70),
134     (1.6,1.6)-(1.4,1.4)-(1.1,1.1));
135   push_stroke(interpath(0.52,get_stroke(0),get_stroke(-1)),
136     (1.6,1.6)-(1.4,1.4)-(1.1,1.1));
137   expand_pbox;
138 enddef;

```

RIGH



```

139
140 vardef kanji.rightrad.sword =
141   push_pbox_toexpand("kanji.rightrad.sword");
142   push_stroke((260,720)-(260,120),(1.6,1.6)-(1.4,1.4));
143   set_boserif(0,0,10);
144   push_stroke((740,760),(1.6,1.6));
145   set_boserif(0,0,10);
146   build_kanji.add_jtail(0);
147   replace_strokep(0)(oldp shifted (-740,0) xscaled 2.3 shifted (740,0));
148   expand_pbox;
149 enddef;

```

## toprad.mp

```
1 %
2 % Radicals for top (often special forms of other radicals)
3 % Copyright (C) 2011, 2012, 2013 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 inclusion_lock(toprad);
32
33
34
35 vardef kanji.toprad.alt_sparkle_three =
36   push_pbox_toexpand("kanji.toprad.alt_sparkle_three");
37   push_stroke((220,810)..(270,450)..(300,90),
38     (1.2,1.2)–(1.5,1.5)–(1.7,1.7));
39   push_stroke((420,900)..(470,540)..(500,180),
40     (1.2,1.2)–(1.5,1.5)–(1.7,1.7));
41   push_stroke((780,870)–(670,0),(1.7,1.7)–(1.3,1.3));
42   set_boserif(0,0,10);
43   expand_pbox;
44 enddef;
45
46 vardef kanji.toprad.bamboo =
47   push_pbox_toexpand("kanji.toprad.bamboo");
48   push_stroke((250,780)..(190,590)..(70,420),
49     (1.7,1.7)–(1.6,1.6)–(1.2,1.2));
50   set_boserif(0,0,10);
51   push_stroke((190,590)–(490,590),(1.6,1.6)–(1.6,1.6));
52   set_boserif(0,1,9);
53   push_stroke((270,590)..tension 1.2..(360,480)..(390,370),
54     (1,1,1)–(1.5,1.5)–(1.7,1.7));
55   push_stroke((650,780)..(590,590)..(480,440),
56     (1.7,1.7)–(1.6,1.6)–(1.2,1.2));
57   set_boserif(0,0,10);
58   push_stroke((590,590)–(930,590),(1.6,1.6)–(1.6,1.6));
59   set_boserif(0,1,9);
60   push_stroke((680,590)..tension 1.2..(770,480)..(800,370),
61     (1,1,1)–(1.5,1.5)–(1.7,1.7));
62   expand_pbox;
63 enddef;
64
65 vardef kanji.toprad.blue =
66   push_pbox_toexpand("kanji.toprad.blue");
67   push_stroke((120,560)–(880,560),
68     (1.6,1.6)–(1.6,1.6));
69   set_boserif(0,1,9);
70   push_stroke((500,780)–(500,40),
```

TOPR

```

71     (1,6,1,6)–(1,5,1,5));
72     set_boserif(0,0,10);
73     push_stroke((160,310)–(840,310),
74         (1,6,1,6)–(1,6,1,6));
75     set_boserif(0,1,9);
76     push_stroke((80,40)–(920,40),
77         (1,6,1,6)–(1,6,1,6));
78     set_boserif(0,1,9);
79     expand_pbox;
80 enddef;
81
82 vardef kanji.toprad.cave =
83     push_pbox_toexpand("kanji.toprad.cave");
84     build_kanji.level(build_kanji.tb(400,360)
85         (kanji.radical.silly_hat)
86         (kanji.radical.legs));
87     expand_pbox;
88 enddef;
89
90 vardef kanji.toprad.detain =
91     push_pbox_toexpand("kanji.toprad.detain");
92     push_stroke((770,810)..tension 1.2..(550,740)..(250,700),
93         (1,8,1,8)–(1,5,1,5)–(1,1));
94     push_stroke((250,730)–(250,20),
95         (1,6,1,6)–(1,5,1,5));
96     set_boserif(0,0,10);
97     push_stroke((130,-20)..tension 1.2..(250,20)..(720,240),
98         (1,7,1,7)–(1,5,1,5)–(1,1));
99     push_stroke((650,390)..tension 1.3..(720,240)..(770,40),
100         (1,1)–(1,5,1,5)–(1,8,1,8));
101     expand_pbox;
102 enddef;
103
104 vardef kanji.toprad.eyebrow =
105     push_pbox_toexpand("kanji.toprad.eyebrow");
106     build_kanji.box((130,800),(870,120));
107     push_stroke((376,800)–(376,120),(1,6,1,6)–(1,5,1,5));
108     push_stroke((624,800)–(624,120),(1,6,1,6)–(1,5,1,5));
109     expand_pbox;
110 enddef;
111
112 vardef kanji.toprad.grass =
113     push_pbox_toexpand("kanji.toprad.grass");
114     push_stroke((350,800)–(350,-30),
115         (1,6,1,6)–(1,4,1,4));
116     set_boserif(0,0,10);
117     push_stroke((650,800)–(650,-30),
118         (1,6,1,6)–(1,4,1,4));

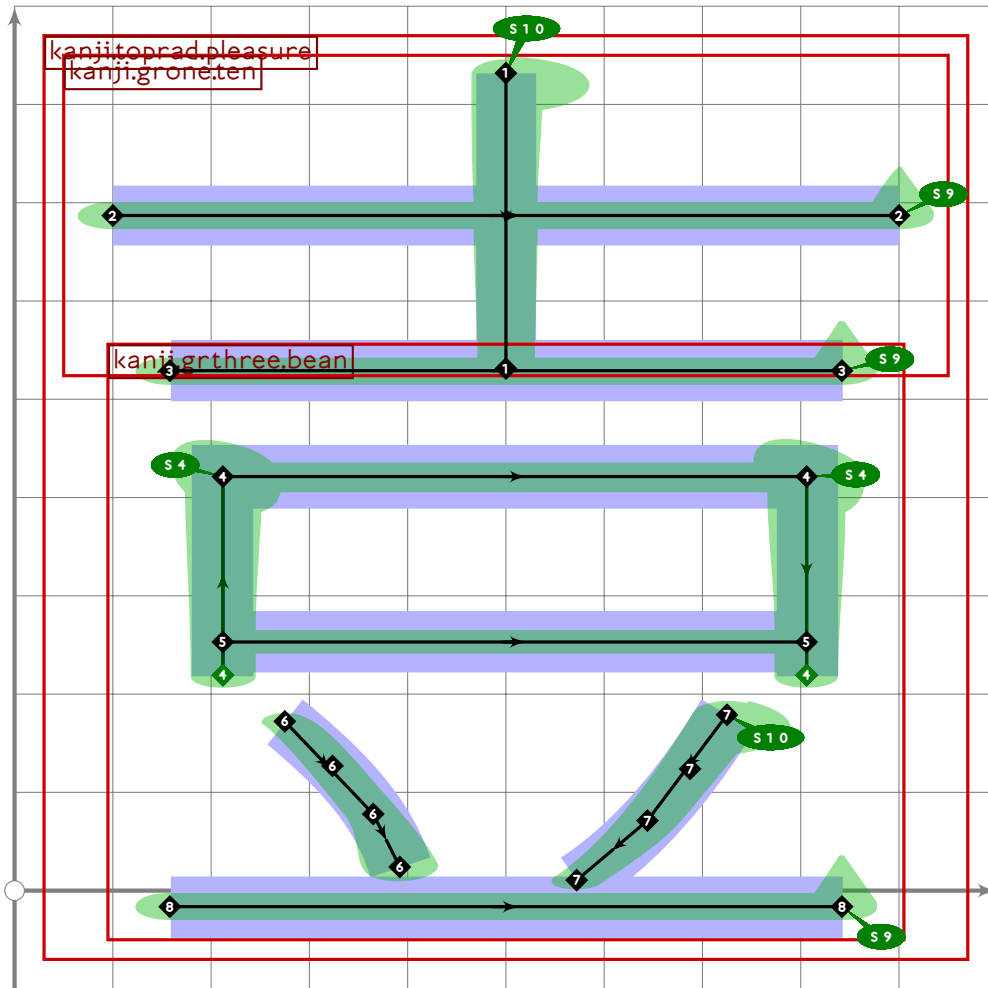
```

```

119 set_boserif(0,0,10);
120 push_stroke((100,400)–(900,400),
121   (1.6,1.6)–(1.6,1.6));
122 set_boserif(0,1,9);
123 expand_pbox;
124 enddef;
125
126 vardef kanji.toprad.once_upon_a_time =
127   push_pbox_toexpand("kanji.toprad.once_upon_a_time");
128   perl_structure:=perl_structure&"eids.u2FF1.u8279.u4E00";
129   build_kanji.sscale(xscaled 0.8)(kanji.toprad.grass);
130   tsu_xform(identity shifted (0,-420))(kanji.grone.one);
131   expand_pbox;
132 enddef;
133
134 vardef kanji.toprad.paw =
135   push_pbox_toexpand("kanji.toprad.paw");
136   tsu_xform(identity yscaled 0.6)
137     (push_stroke(
138       (170,880)..(500,1060)..tension 1.1..(830,1380),
139       (1.1,1.1)–(1.6,1.6)–(2.0,2.0));
140     build_kanji.sscale(rotated 90 slanted -0.35 rotated -90)
141       (kanji.toprad.alt_sparkle_three));
142   expand_pbox;
143 enddef;

```





TOPR

```

144
145 vardef kanji.toprad.pleasure =
146   push_pbox_toexpand("kanji.toprad.pleasure");
147   build_kanji.level(build_kanji.tb(540,32)
148     (kanji.grone.ten)
149     (build_kanji.sscale(xscaled 0.9)(kanji.grthree.bean)));
150   expand_pbox;
151 enddef;
152
153 vardef kanji.toprad.rain =
154   push_pbox_toexpand("kanji.toprad.rain");
155   push_stroke((120,720)–(880,720),(1.6,1.6)–(1.6,1.6));
156   set_boserif(0,1,9);
157   push_stroke((500,720)–(500,30),(1.6,1.6)–(1.5,1.5));
158   push_stroke((100,150)..(100+50*mincho,400)..(100+70*mincho,540)–
159     (900,540)..(900–40*mincho,275)..(900–70*mincho,150),
160     (1.7,1.7)–(1.6,1.6)–(1.4,1.4)–
161     (1.7,1.7)–(1.6,1.6)–(1.4,1.4));
162   set_botip(0,2,1);
163   set_botip(0,3,1);
164   set_boserif(0,3,4);

```

```

165 push_stroke((230,380)..(400,380),(1.6,1.6)–(1.6,1.6));
166 set_boserif(0,1,9);
167 set_bosize(0,80);
168 push_stroke(get_strokep(0) shifted (350,0),get_strokeq(0));
169 set_boserif(0,1,9);
170 set_bosize(0,80);
171 push_stroke(get_strokep(-1) shifted (0,-220),get_strokeq(-1));
172 set_boserif(0,1,9);
173 set_bosize(0,80);
174 push_stroke(get_strokep(-2) shifted (350,-220),get_strokeq(-2));
175 set_boserif(0,1,9);
176 set_bosize(0,80);
177 expand_pbox;
178 enddef;
179
180 vardef kanji.toprad.ridiculous_hat =
181   push_pbox_toexpand("kanji.toprad.ridiculous_hat");
182   build_kanji.level(build_kanji.tb(620,156)
183     (kanji.toprad.sparkle_three)
184     (build_kanji.tb(600,410)
185       (kanji.radical.conservative_hat)
186       (build_kanji.sscale(xyscaled (0.8,0.64) shifted (0,-120))
187         (kanji.grone.mouth))));
188   expand_pbox;
189 enddef;
190
191 vardef kanji.toprad.sheep =
192   push_pbox_toexpand("kanji.toprad.sheep");
193   kanji.grthree.sheep;
194   replace_strokep(0)
195     ((point 0 of oldp)–(oldp intersectionpoint get_strokep(-3)));
196   expand_pbox;
197 enddef;
198
199 vardef kanji.toprad.slash =
200   push_pbox_toexpand("kanji.toprad.slash");
201   push_stroke((280,810)..tension 1.2..(160,220)..(50,0),
202     (1.7,1.7)–(1.5,1.5)–(1.2,1.2));
203   set_boserif(0,0,10);
204   push_stroke((get_strokep(0) intersectionpoint ((0,520)–(1000,520)))–
205     (880,520),
206     (1.5,1.5)–(1.6,1.6));
207   set_boserif(0,1,9);
208   expand_pbox;
209 enddef;
210
211 vardef kanji.toprad.sparkle_four =
212   push_pbox_toexpand("kanji.toprad.sparkle_four");

```

```

213 push_stroke((150,600)..tension 1.2..(200,440)..(270,160),
214   (1,1)-(1.3,1.3)-(1.9,1.9));
215 push_stroke((390,780)-(390,-20),
216   (1.6,1.6)-(1.5,1.5));
217 set_boserif(0,0,10);
218 push_stroke((610,780)-(610,-20),
219   (1.6,1.6)-(1.5,1.5));
220 set_boserif(0,0,10);
221 push_stroke((840,620)..tension 1.2..(780,370)..(720,170),
222   (1.6,1.6)-(1.5,1.5)-(1.3,1.3));
223 set_boserif(0,0,10);
224 expand_pbox;
225 enddef;
226
227 vardef kanji.toprad.sparkle_three =
228   push_pbox_toexpand("kanji.toprad.sparkle_three");
229   kanji.toprad.sparkle_two;
230   push_stroke((500,780)-(500,-20),
231     (1.6,1.6)-(1.5,1.5));
232   set_boserif(0,0,10);
233   expand_pbox;
234 enddef;
235
236 vardef kanji.toprad.sparkle_two =
237   push_pbox_toexpand("kanji.toprad.sparkle_two");
238   push_stroke((200,600)..tension 1.2..(250,440)..(320,160),
239     (1,1)-(1.3,1.3)-(1.9,1.9));
240   push_stroke((790,620)..tension 1.2..(730,370)..(670,170),
241     (1.6,1.6)-(1.5,1.5)-(1.3,1.3));
242   set_boserif(0,0,10);
243   expand_pbox;
244 enddef;
245
246 vardef kanji.toprad.stand_up =
247   push_pbox_toexpand("kanji.toprad.stand_up");
248   push_stroke((500,810)-(500,510),
249     (1.6,1.6)-(1.5,1.5));
250   set_boserif(0,0,10);
251   push_stroke((120,510)-(880,510),
252     (1.6,1.6)-(1.6,1.6));
253   set_boserif(0,1,9);
254   push_stroke((250,430)..tension 1.2..(320,220)..(380,90),
255     (1.2,1.2)-(1.4,1.4)-(1.7,1.7));
256   push_stroke((750,450)..tension 1.2..(660,220)..(580,60),
257     (1.6,1.6)-(1.5,1.5)-(1.3,1.3));
258   set_boserif(0,0,10);
259   push_stroke((70,0)-(930,0),
260     (1.6,1.6)-(1.6,1.6));

```

```

261 set_boserif(0,1,9);
262 expand_pbox;
263 enddef;
264
265 vardef kanji.toprad.summer =
266   push_pbox_toexpand("kanji.toprad.summer");
267   push_stroke((100,855)–(900,855),(1.6,1.6));
268   set_boserif(0,1,9);
269   build_kanji.attach_tick(660)(kanji.grone.eyeye);
270   expand_pbox;
271 enddef;
272
273 vardef kanji.toprad.ticket =
274   push_pbox_toexpand("kanji.toprad.ticket");
275   build_kanji.thickness(0.92)
276     (push_stroke((110,760)–(890,760),(1.6,1.6)–(1.6,1.6));
277     set_boserif(0,1,9);
278     push_stroke((390,760)–(390,30),(1.5,1.5)–(1.4,1.4));
279     push_stroke((610,760)–(610,30),(1.5,1.5)–(1.4,1.4));
280     build_kanji.box((180,420),(820,30)));
281   expand_pbox;
282 enddef;

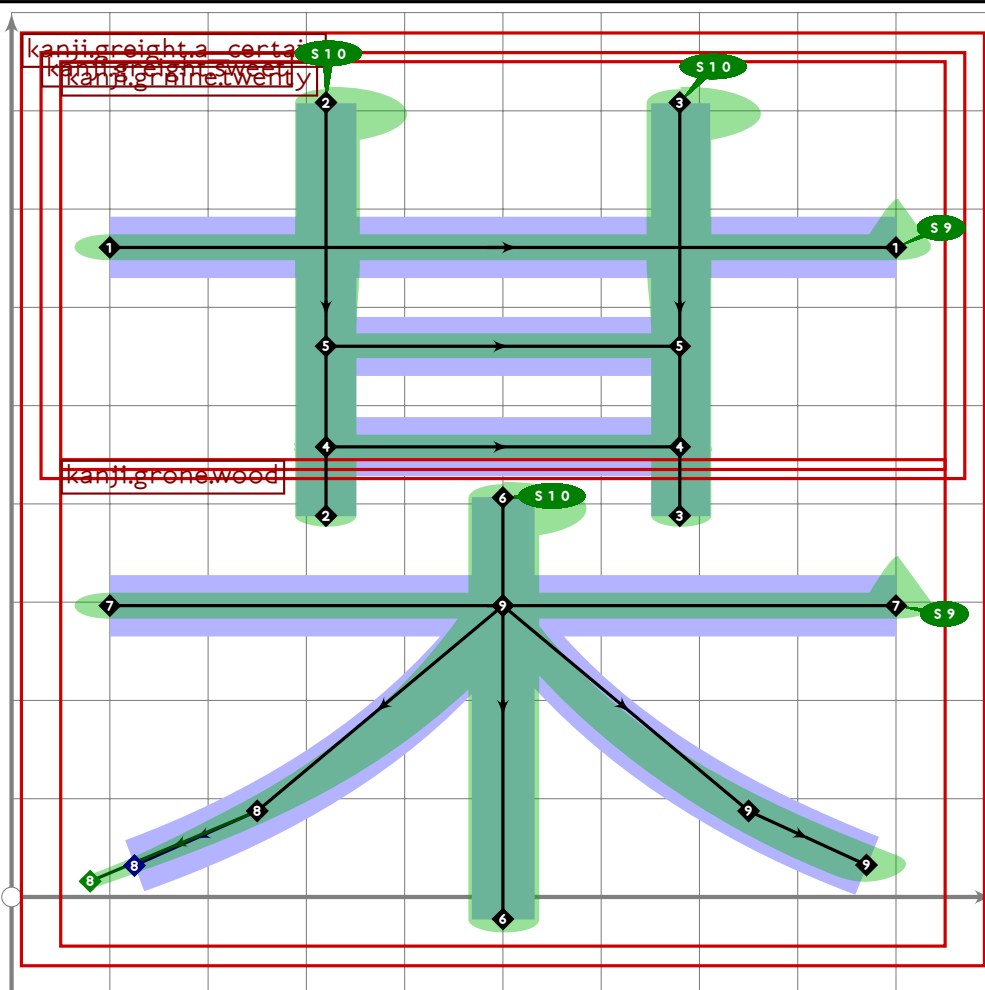
```

# gradeeight.mp

```

1 %
2 % Grade Eight kanji used on more than one page
3 % Copyright (C) 2011, 2012, 2013, 2014, 2016, 2017 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 inclusion_lock(gradeeight);
32
33

```

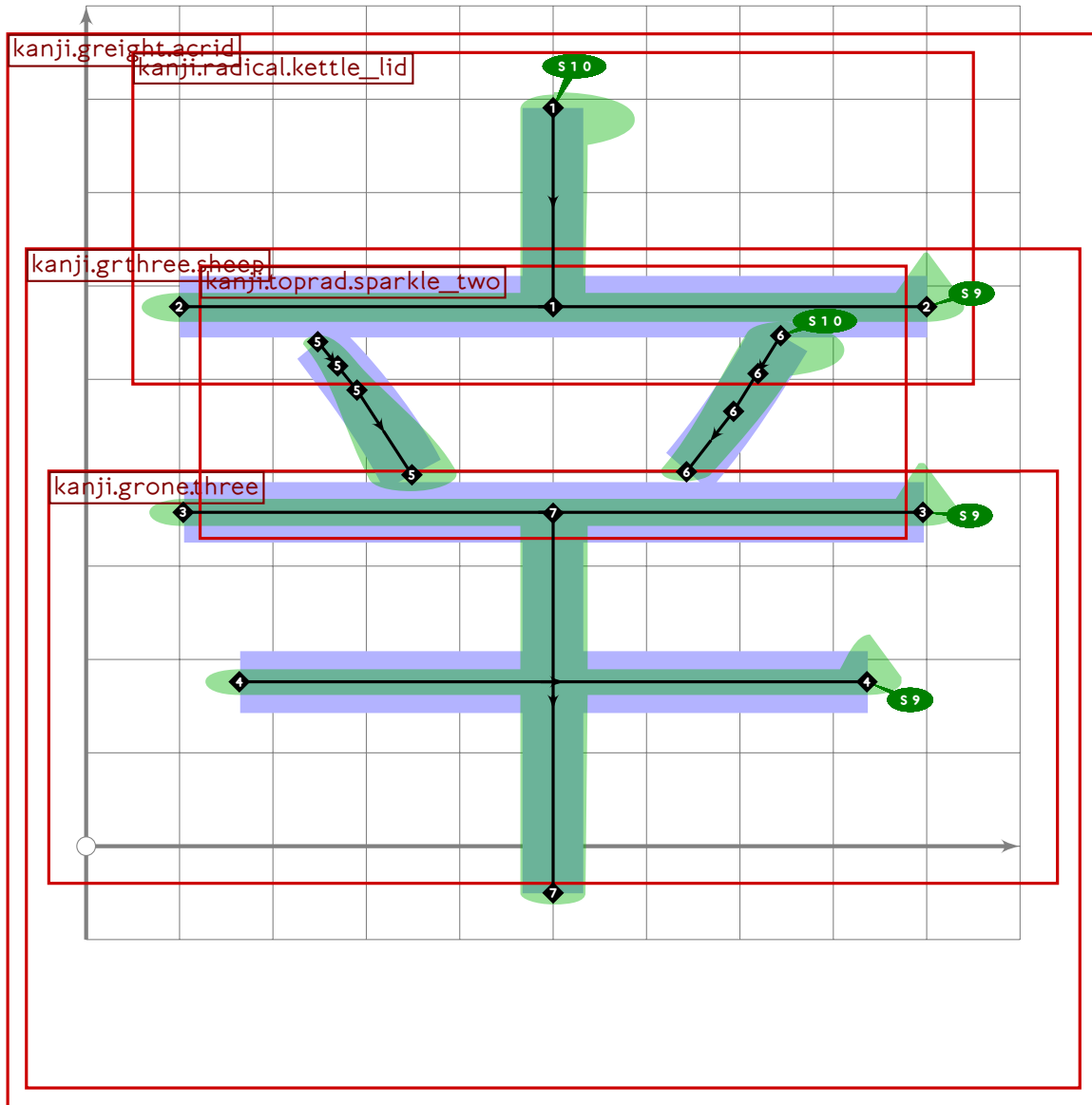


EIGH

```

34
35 vardef kanji.greight.a_certain =
36   push_pbox_toexpand("kanji.greight.a_certain");
37   build_kanji.tb(440,10)
38     (kanji.greight.sweet)
39     (kanji.grone.wood);
40   expand_pbox;
41 enddef;

```



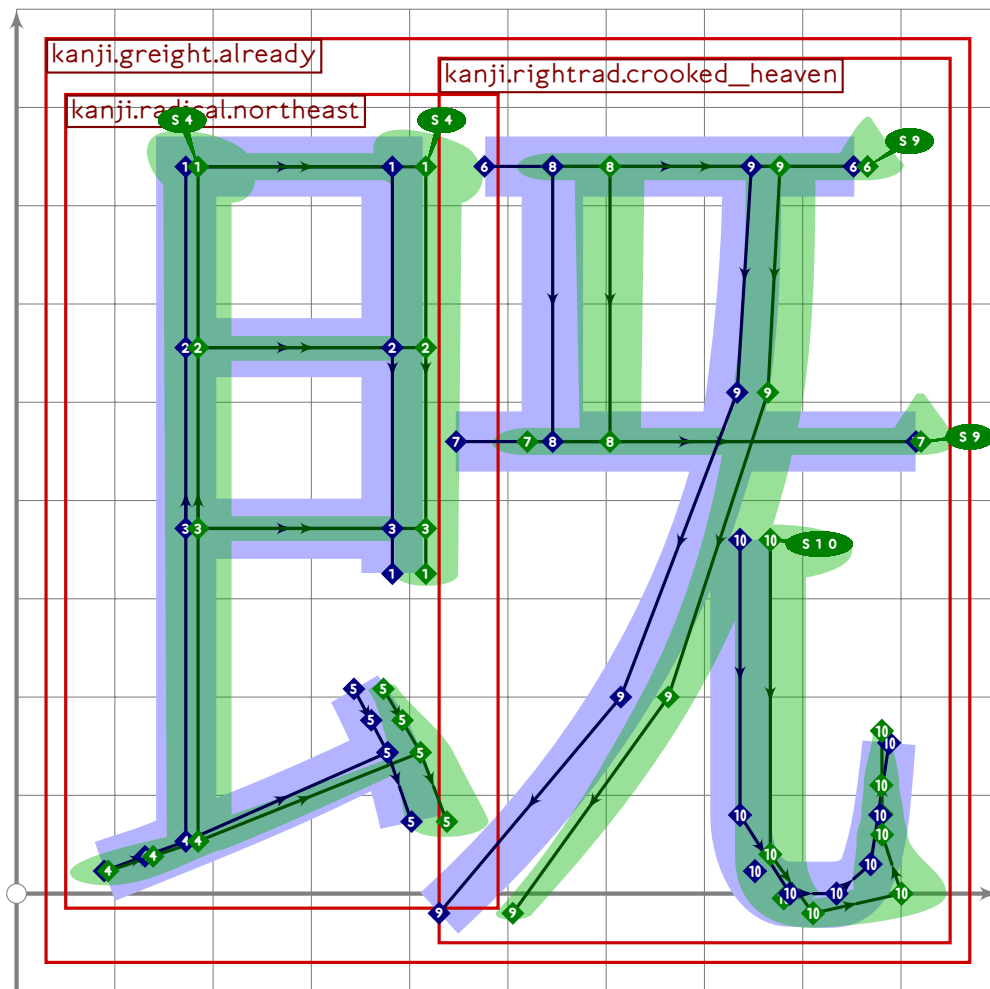
EIGH

```

42
43 vardef kanji.greight.acrid =
44   push_pbox_toexpand("kanji.greight.acrid");
45   build_kanji.level(build_kanji.tb(520,50)
46     (kanji.radical.kettle_lid)
47     (build_kanji.sscale(xyscaled (1.2,1.4) shifted (0,-140))
48       (kanji.grthree.sheep);
49     obstacktype[find_stroke(-3)]:=otnull;
50     replace_stroke(0)((point 0 of oldp)-(500,50))););
51   expand_pbox;
52 enddef;

```

U+65E2  
tsuku.uni65E2

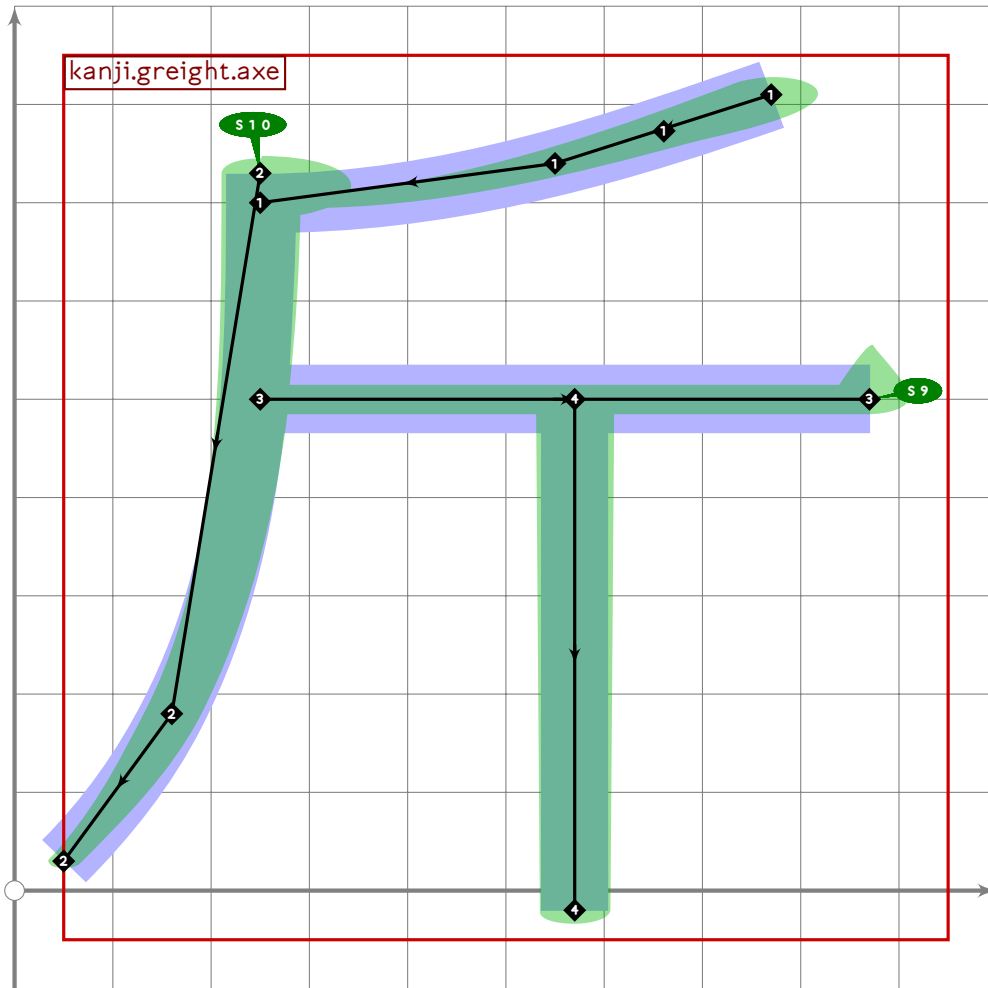


**EIGH**

```

53
54 vardef kanji.greight.already =
55   push_pbox_toexpand("kanji.greight.already");
56   build_kanji.level(build_kanji.lr(460+60*mincho,60-30*mincho)
57     (build_kanji.sscale(yscaled 0.92)(build_kanji.lift_skirt(300,80)
58       (kanji.radical.alt_northeast)))
59     (kanji.rightrad.crooked_heaven));
60   expand_pbox;
61 enddef;

```



```

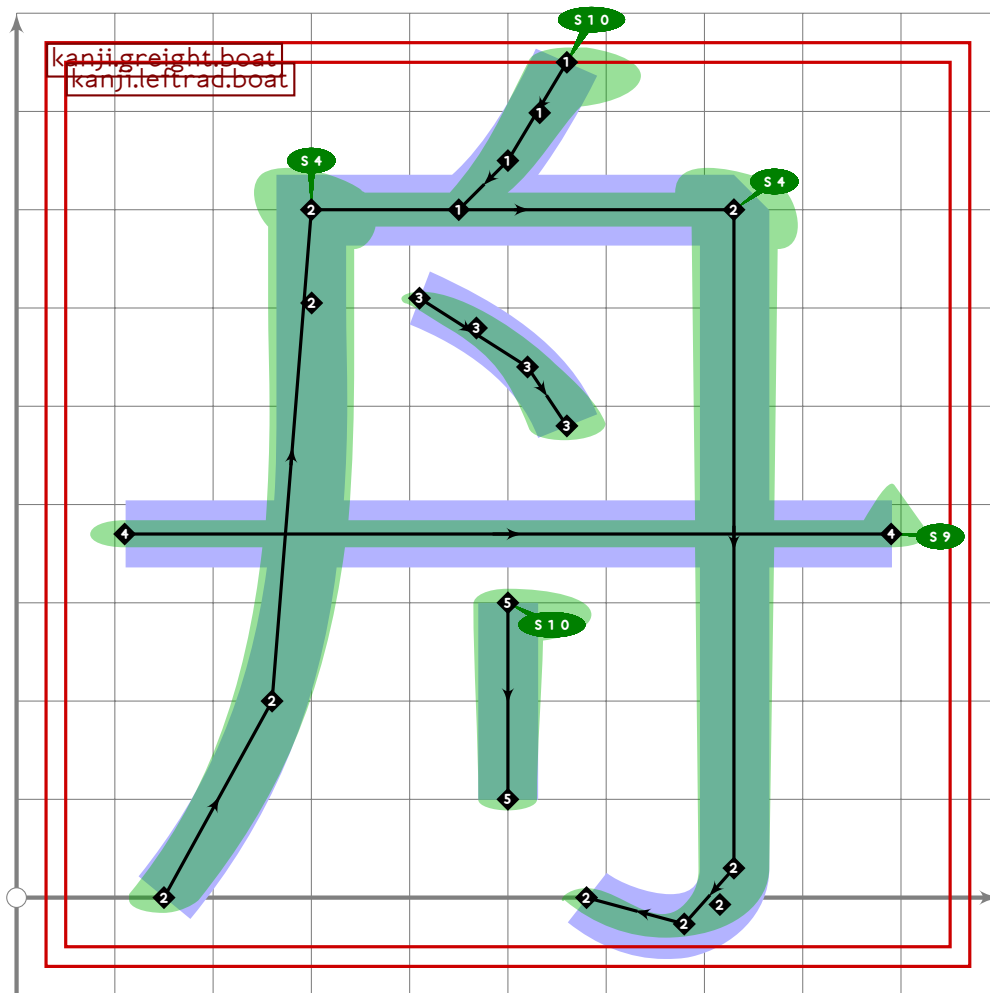
62
63 vardef kanji.greight.axe =
64   push_pbox_toexpand("kanji.greight.axe");
65   push_stroke((770,810)..tension 1.2..(550,740)..(250,700),
66     (1.8,1.8)–(1.5,1.5)–(1,1));
67   push_stroke((250,730){down}..(160,180)..(50,30),
68     (1.6,1.6)–(1.3,1.3)–(1,1));
69   set_boserif(0,0,10);
70   push_stroke((250,500)–(870,500),(1.6,1.6)–(1.6,1.6));
71   set_boserif(0,1,9);
72   push_stroke((570,500)–(570,-20),(1.6,1.6)–(1.5,1.5));
73   expand_pbox;
74 enddef;

```

**EIGH**



U+821F  
tsuku.uni821F

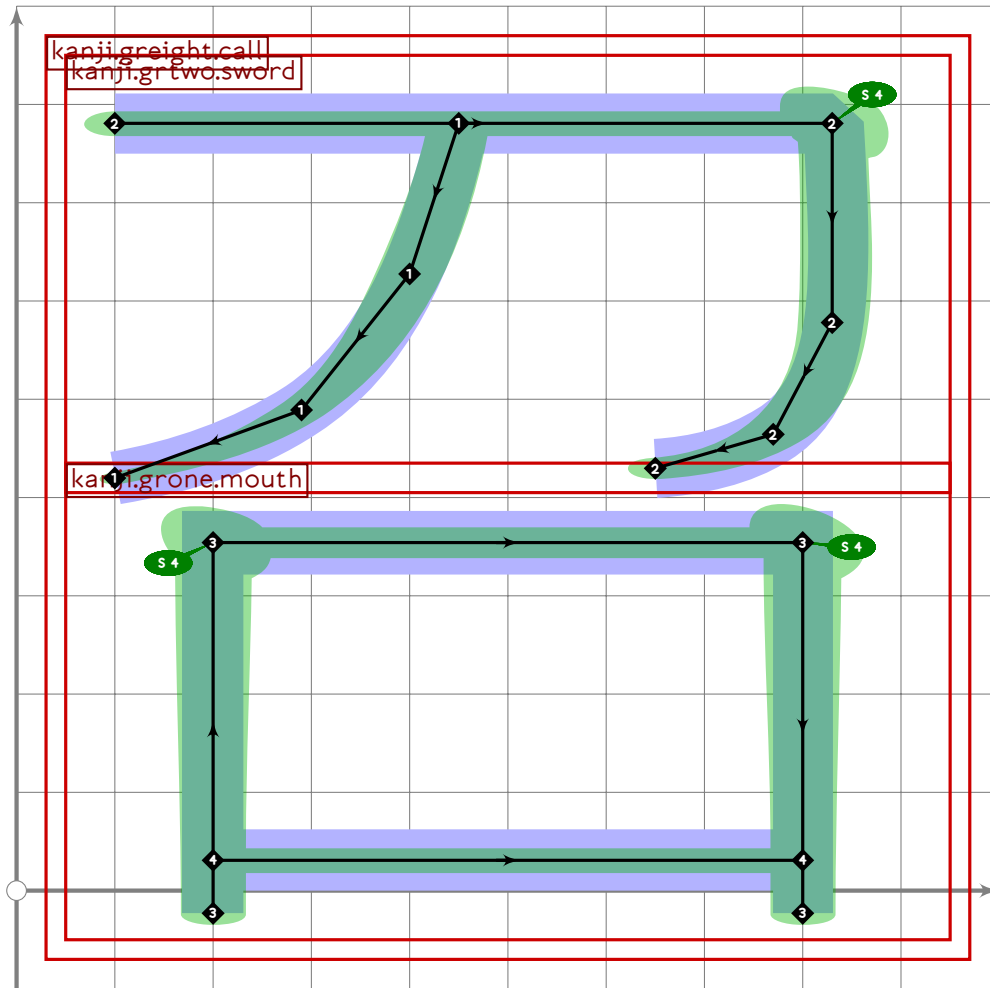


**EIGH**

```

75
76 vardef kanji.greight.boat =
77   push_pbox_toexpand("kanji.greight.boat");
78   kanji.leftrad.boat;
79   replace_strokep(-1)((110,370)-(890,370));
80   replace_strokeq(-1)((1.5,1.5)-(1.5,1.5));
81   set__boserif(-1,1,9);
82   expand_pbox;
83 enddef;

```



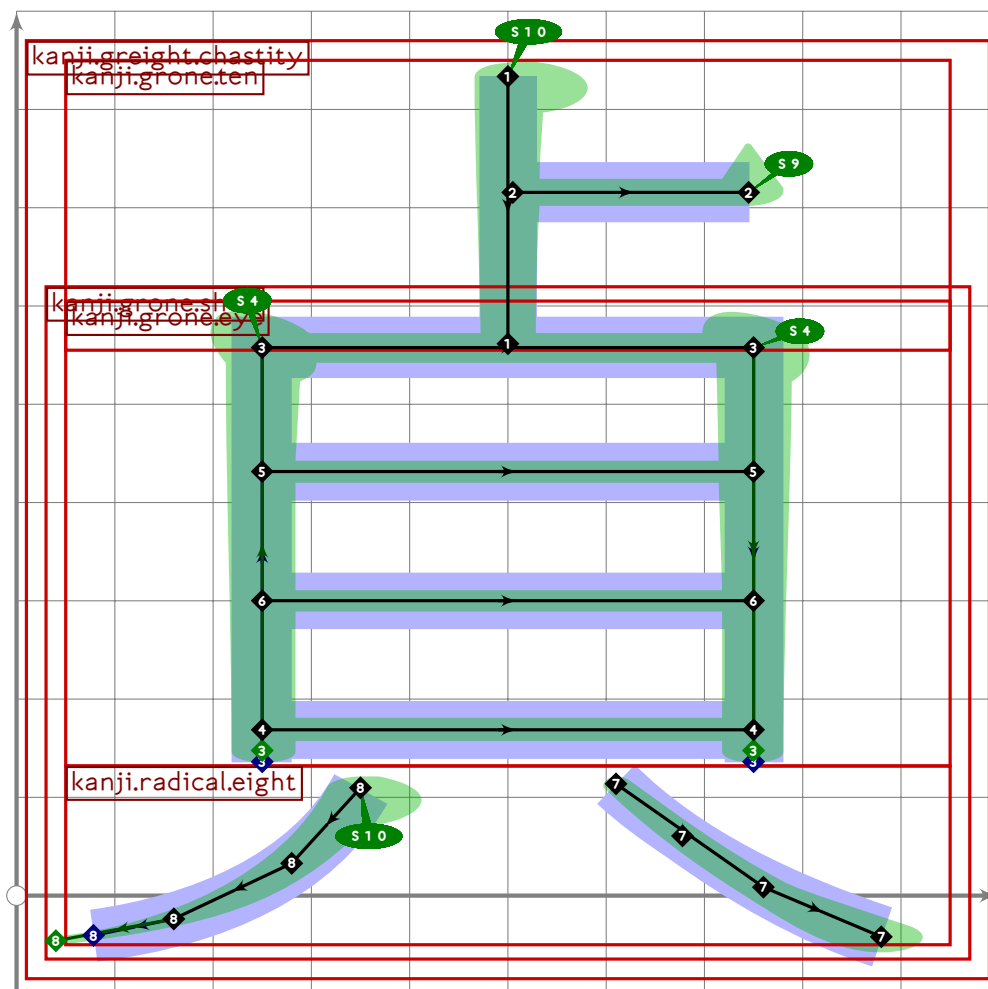
```

84
85 vardef kanji.greight.call =
86   push_pbox_toexpand("kanji.greight.call");
87   build_kanji.tb(420,30)
88     (kanji.grtwo.sword)
89     (kanji.grone.mouth);
90   expand_pbox;
91 enddef;

```

**EIGH**

U+8C9E  
tsuku.uni8C9E

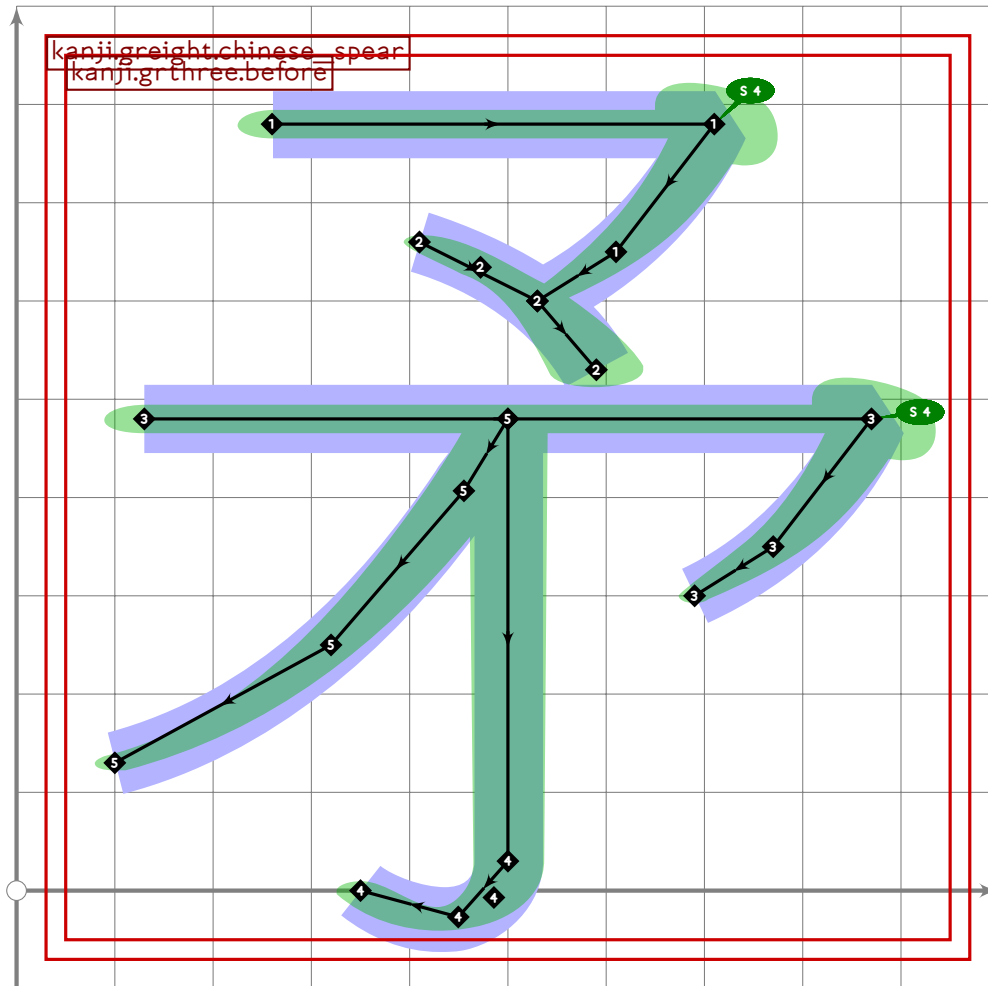


EIGH

```

92
93 vardef kanji.greight.chastity =
94   push_pbox_toexpand("kanji.greight.chastity");
95   build_kanji.level(build_kanji.tb(580,50)
96     (kanji.grone.ten;
97       replace_stroke(0)(subpath (0.5,0.8) of oldp shifted (5,40)))
98     (kanji.grone.shell));
99   expand_pbox;
100 enddef;

```



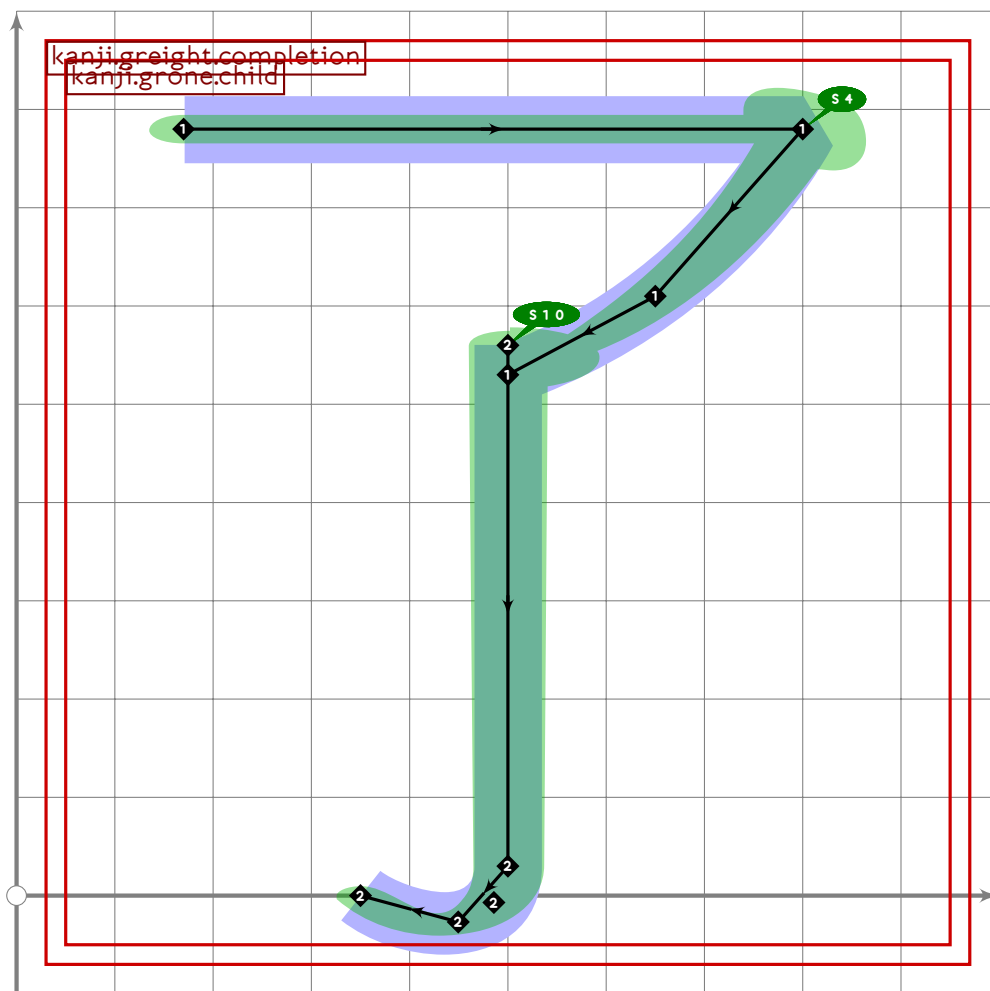
```

101
102 vardef kanji.greight.chinese_spear =
103   push_pbox_toexpand("kanji.greight.chinese_spear");
104   kanji.grthree.before;
105   push_stroke(insert_nodes((500,480)..tension 1.1..
106     (320,250)..{curl 1.2}(100,130))(0.3),
107     (1.6,1.6)-(1.6,1.6)-(1.4,1.4)-(1.1,1.1));
108   expand_pbox;
109 enddef;

```

EIGH

U+4E86  
tsuku.uni4E86

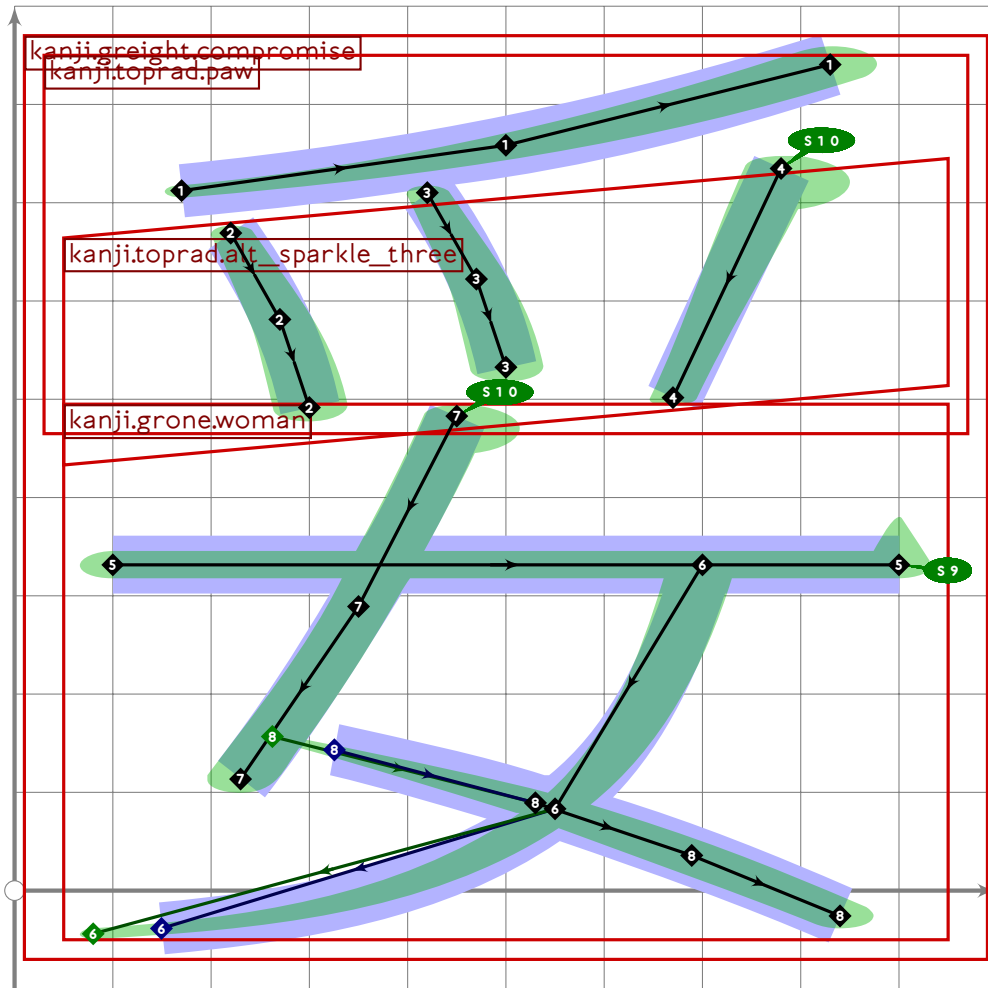


**EIGH**

```

110
111 vardef kanji.greight.completion =
112   push_pbox_toexpand("kanji.greight.completion");
113   kanji.grone.child;
114   pop_stroke;
115   expand_pbox;
116 enddef;

```



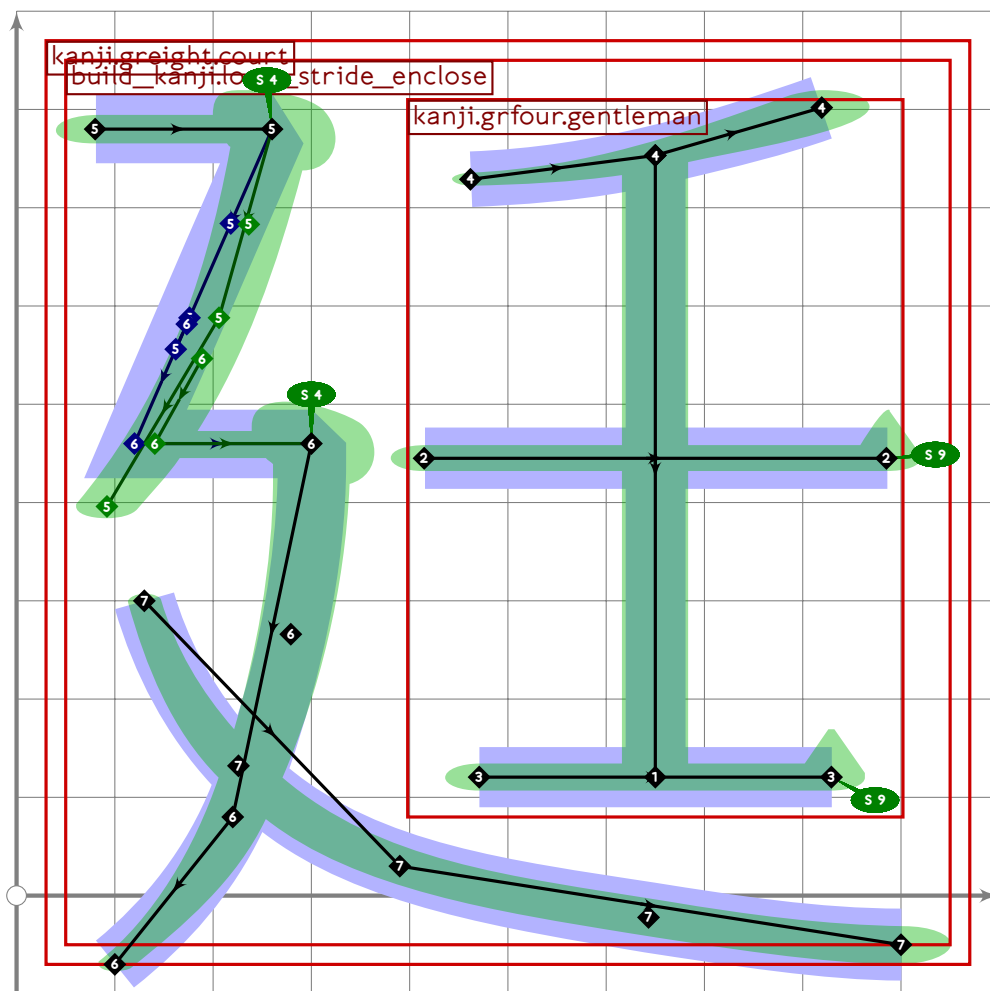
```

117
118 vardef kanji.greight.compromise =
119   push_pbox_toexpand("kanji.greight.compromise");
120   build_kanji.level(build_kanji.tb(480,30)
121     (kanji.toprad.paw)
122     (kanji.grone.woman));
123   expand_pbox;
124 enddef;

```

**EIGH**

U+5EF7  
tsuku.uni5EF7

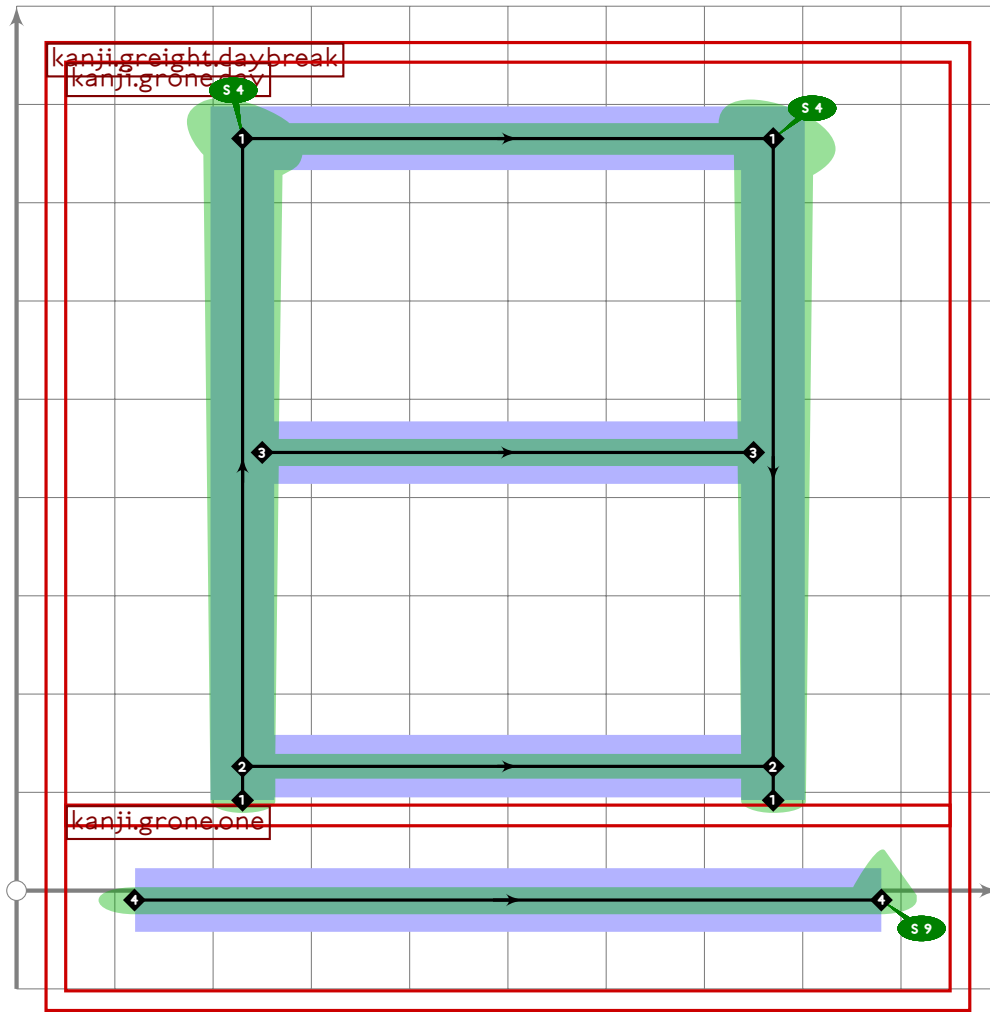


**EIGH**

```

125
126 vardef kanji.greight.court =
127   push_pbox_toexpand("kanji.greight.court");
128   build_kanji.long_stride_enclose(false)
129     (build_kanji.sscale(xscaled 0.84)
130       (build_kanji.add_beret(kanji.grfour.gentleman;
131         replace_stroke(-1)(oldp shifted (0,-70)))));
132   expand_pbox;
133 enddef;

```



```

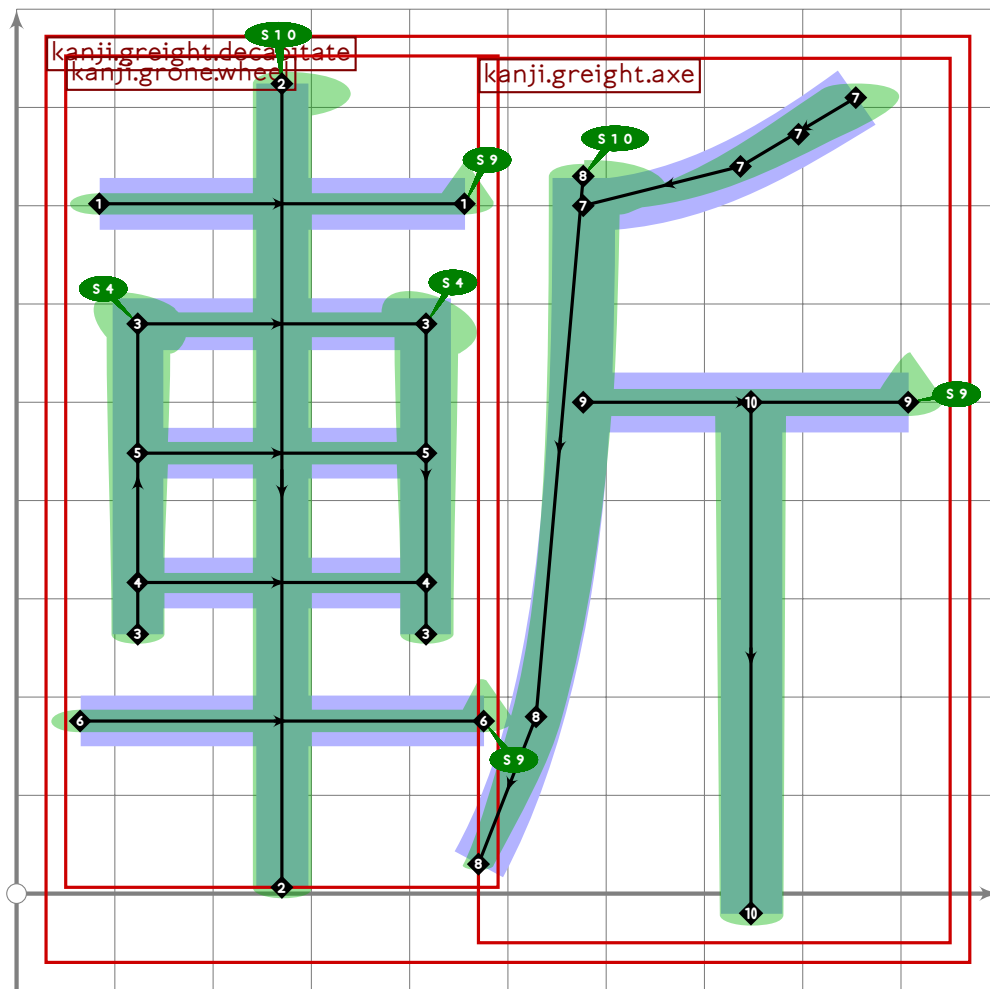
134
135 vardef kanji.greight.daybreak =
136   push_pbox_toexpand("kanji.greight.daybreak");
137   build_kanji.sscale(yscaled 1.05 shifted (0,-30))
138     (build_kanji.level(build_kanji.tb(120,20)
139       (kanji.grone.day)
140       (kanji.grone.one)));
141   expand_pbox;
142 enddef;

```

**EIGH**



U+65AC  
tsuku.uni65AC

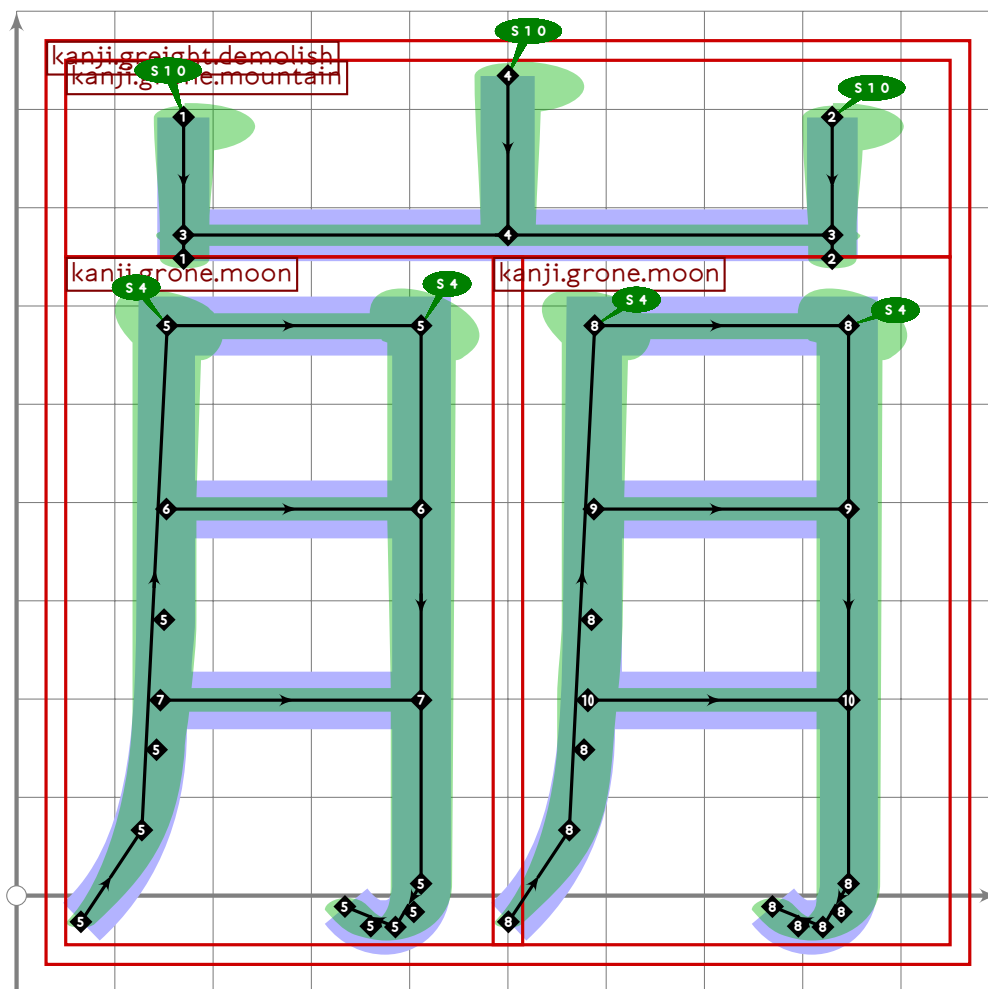


**EIGH**

```

143
144 vardef kanji.greight.decapitate =
145   push_pbox_toexpand("kanji.greight.decapitate");
146   build_kanji.lr(480,20)
147     (build_kanji.sscale(yscaled 0.94 shifted (0,30))
148       (kanji.grone.wheel))
149     (kanji.greight.axe);
150   expand_pbox;
151 enddef;

```



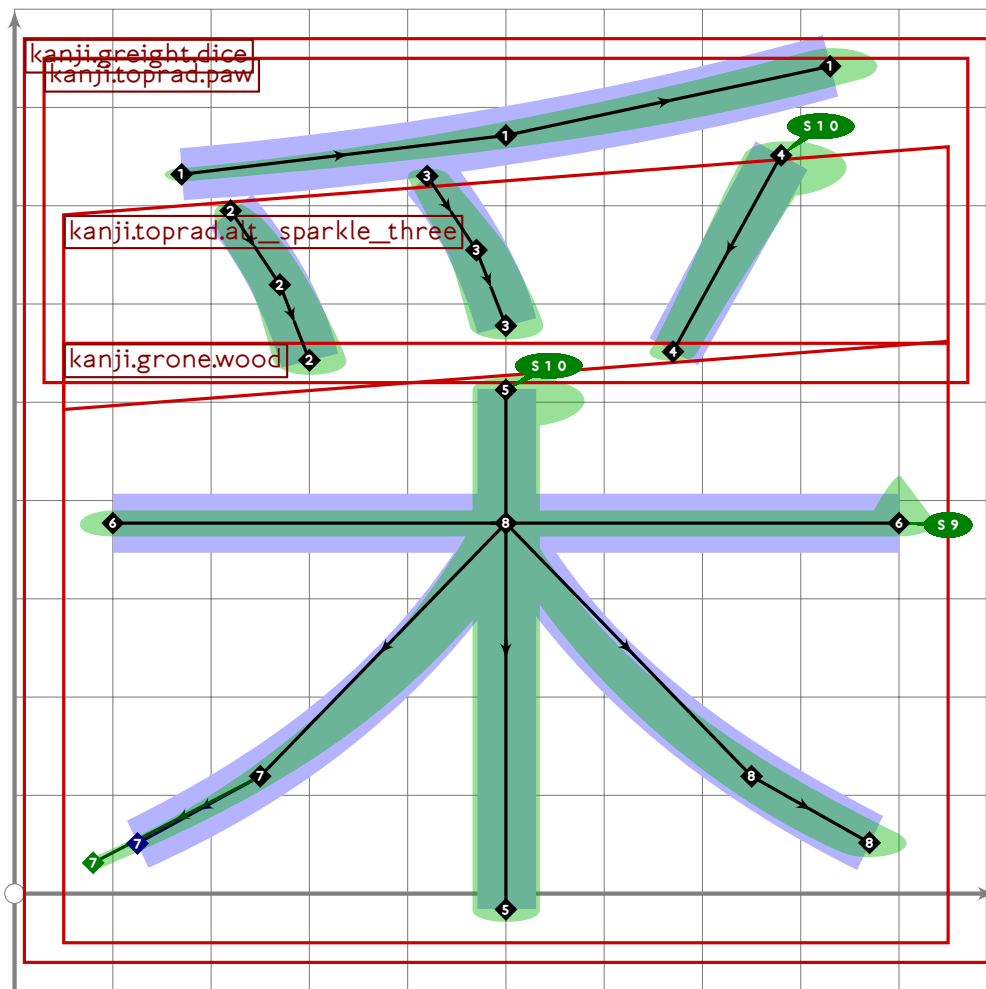
```

152
153 vardef kanji.greight.demolish =
154   push_pbox_toexpand("kanji.greight.demolish");
155   build_kanji.tb(650,0)
156     (kanji.grone.mountain)
157     (build_kanji.lr(500,30)
158     (kanji.grone.moon)
159     (kanji.grone.moon));
160   expand_pbox;
161 enddef;

```

**EIGH**

U+91C7  
tsuku.uni91C7

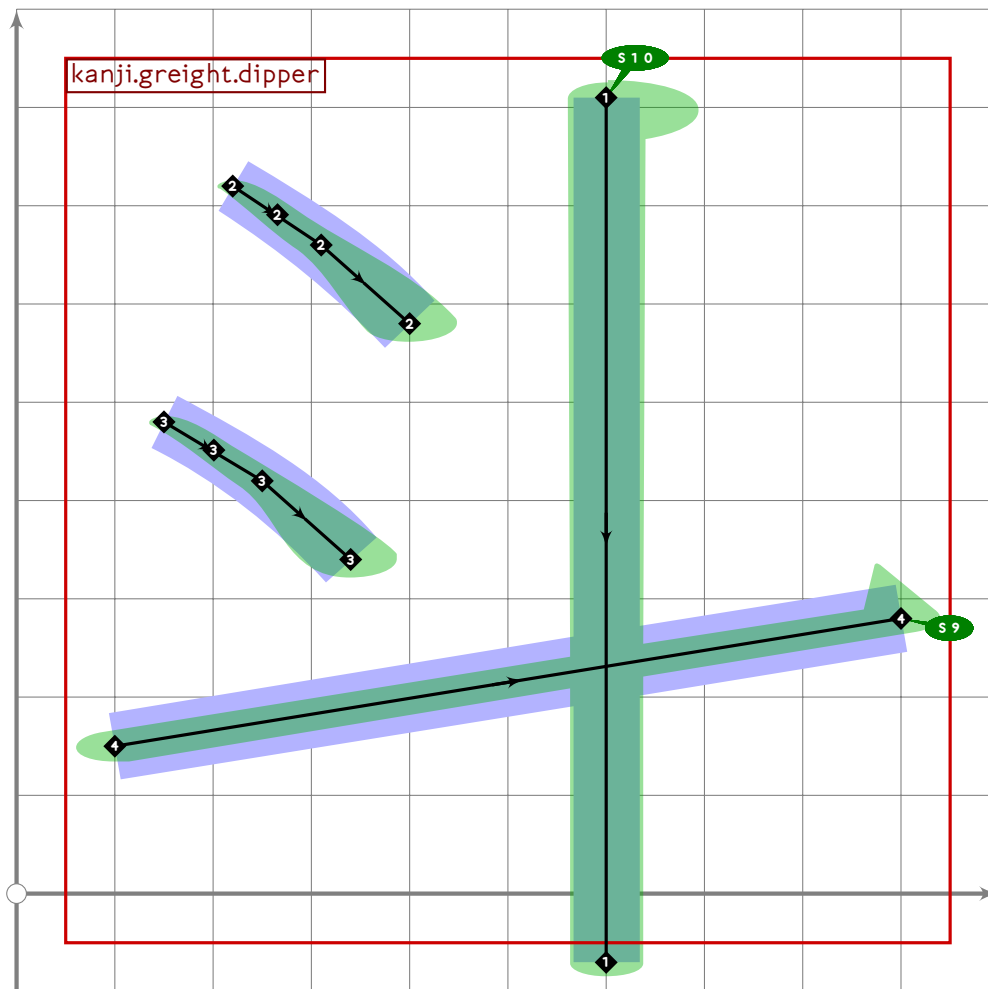


**EIGH**

```

162
163 vardef kanji.greight.dice =
164   push_pbox_toexpand("kanji.greight.dice");
165   build_kanji.level(build_kanji.tb(540,40)
166     (kanji.toprad.paw)
167     (kanji.grone.wood));
168   expand_pbox;
169 enddef;

```

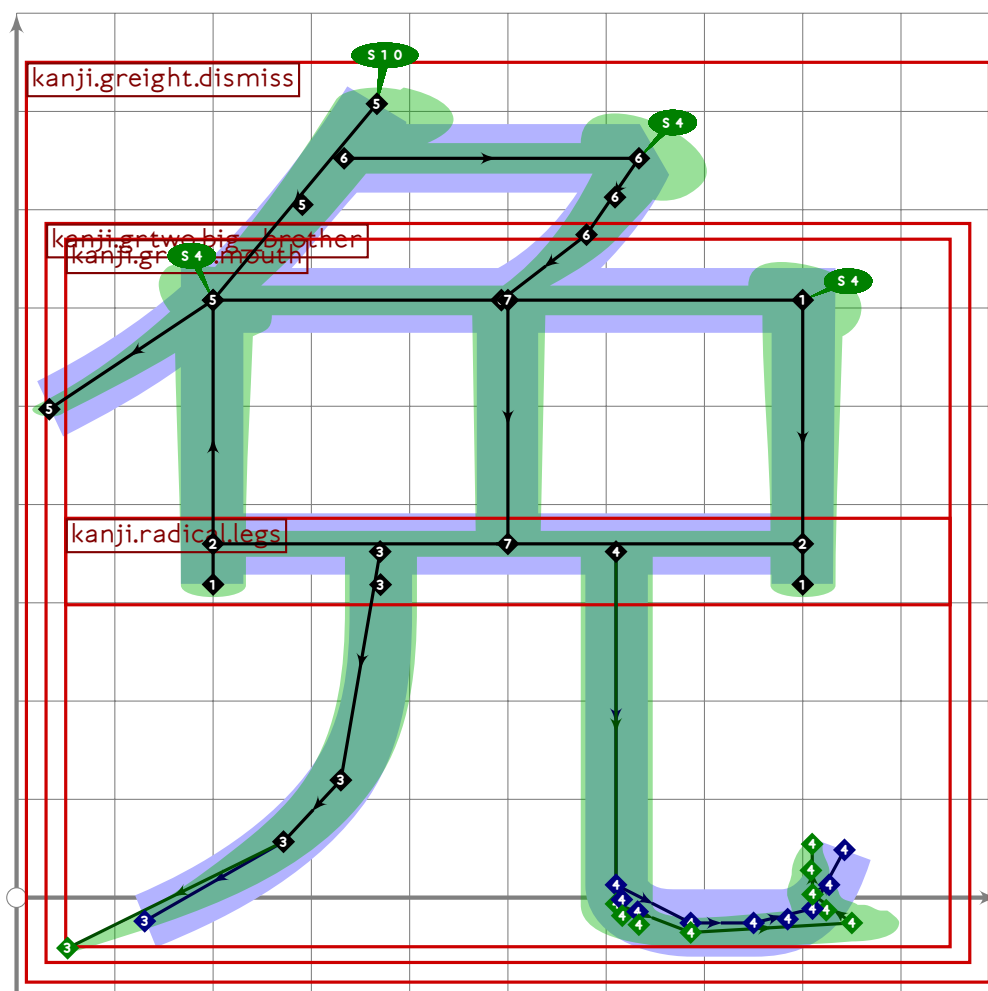


```

170
171 vardef kanji.greight.dipper =
172   push_pbox_toexpand("kanji.greight.dipper");
173   push_stroke((600,810)-(600,-70),(1.6,1.6)-(1.5,1.5));
174   set_boserif(0,0,10);
175   push_stroke((220,720)..tension 1.2..(310,660)..(400,580),
176     (1,1)-(1.3,1.3)-(1.9,1.9));
177   set_bosize(0,94);
178   push_stroke((150,480)..tension 1.2..(250,420)..(340,340),
179     (1,1)-(1.3,1.3)-(1.9,1.9));
180   set_bosize(0,94);
181   push_stroke((100,150)-(900,280),(1.6,1.6)-(1.6,1.6));
182   set_boserif(0,1,9);
183   expand_pbox;
184 enddef;

```

**EIGH**

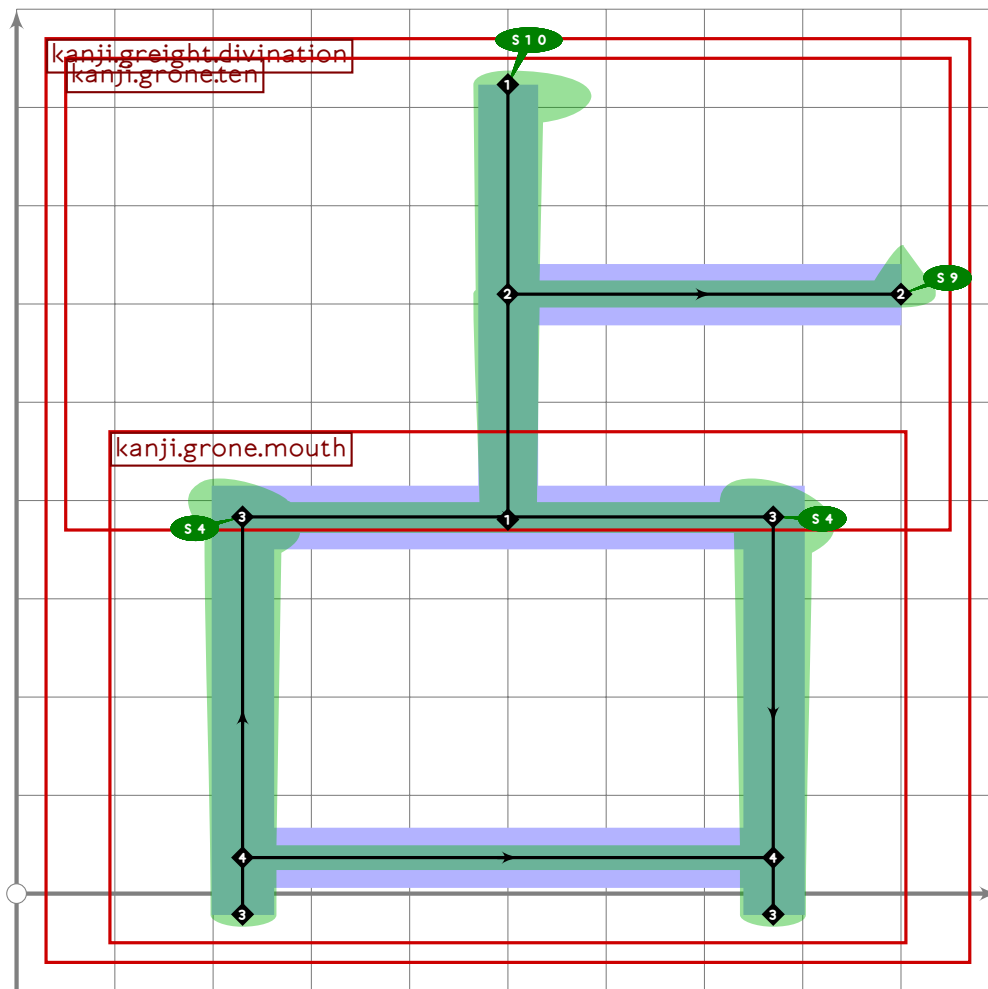


**EIGH**

```

185
186 vardef kanji.greight.dismiss =
187   push_pbox_toexpand("kanji.greight.dismiss");
188   build_kanji.attach_fishhook(0.8)(kanji.grtwo.big_brother);
189   push_stroke(
190     (point 1.5 of get_stroke(-5))-(point 0.5 of get_stroke(-4)),
191     (1.6,1.6)-(1.5,1.5));
192   set_bosize(0,get_bosize(-5));
193   expand_pbox;
194 enddef;

```

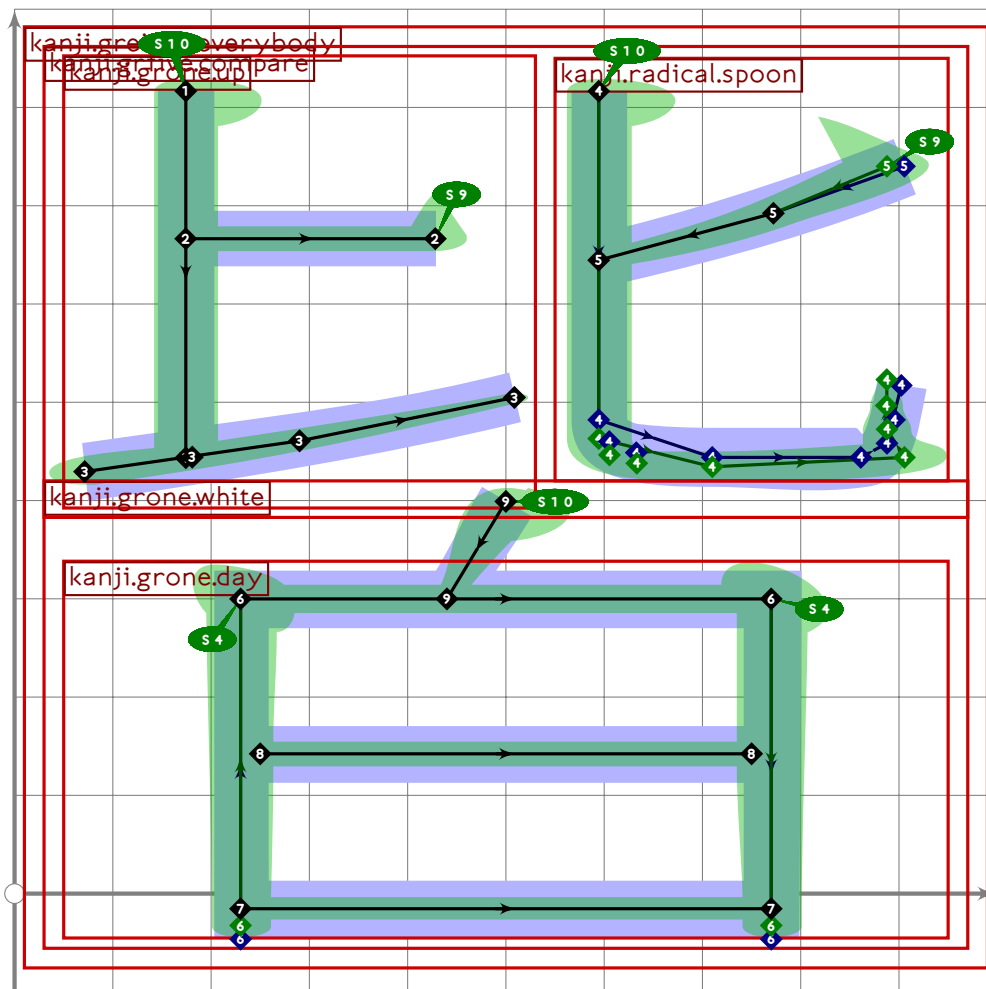


```

195
196 vardef kanji.greight.divination =
197   push_pbox_toexpand("kanji.greight.divination");
198   build_kanji.level(build_kanji.tb(420,100)
199     (kanji.grone.ten;
200       replace_strokep(0)(subpath (0.5,1) of oldp))
201       (build_kanji.sscale(xscaled 0.9)(kanji.grone.mouth)));
202   expand_pbox;
203 enddef;

```

**EIGH**

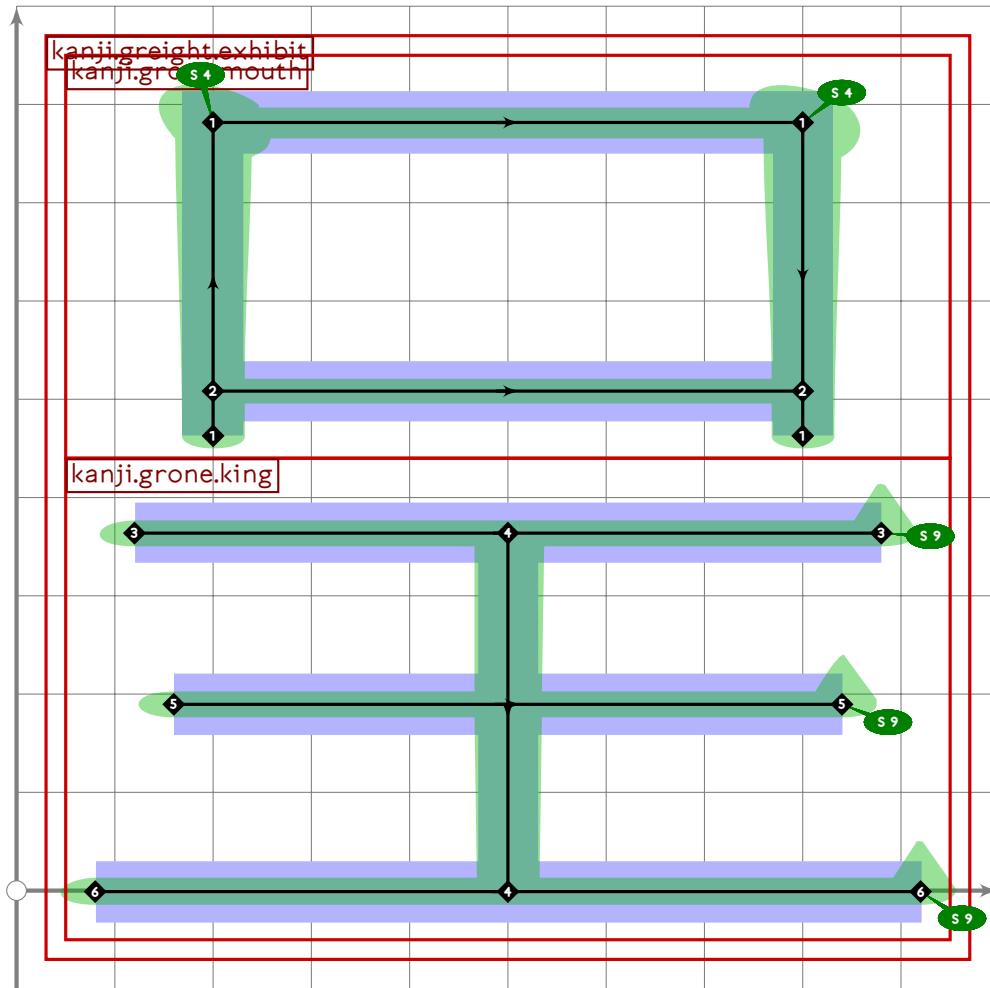


```

204
205 vardef kanji.greight.everybody =
206   push_pbox_toexpand("kanji.greight.everybody");
207   build_kanji.level(build_kanji.tb(420,0)
208     (kanji.grfive.compare)
209     (kanji.grone.white));
210   expand_pbox;
211 enddef;

```

**EIGH**



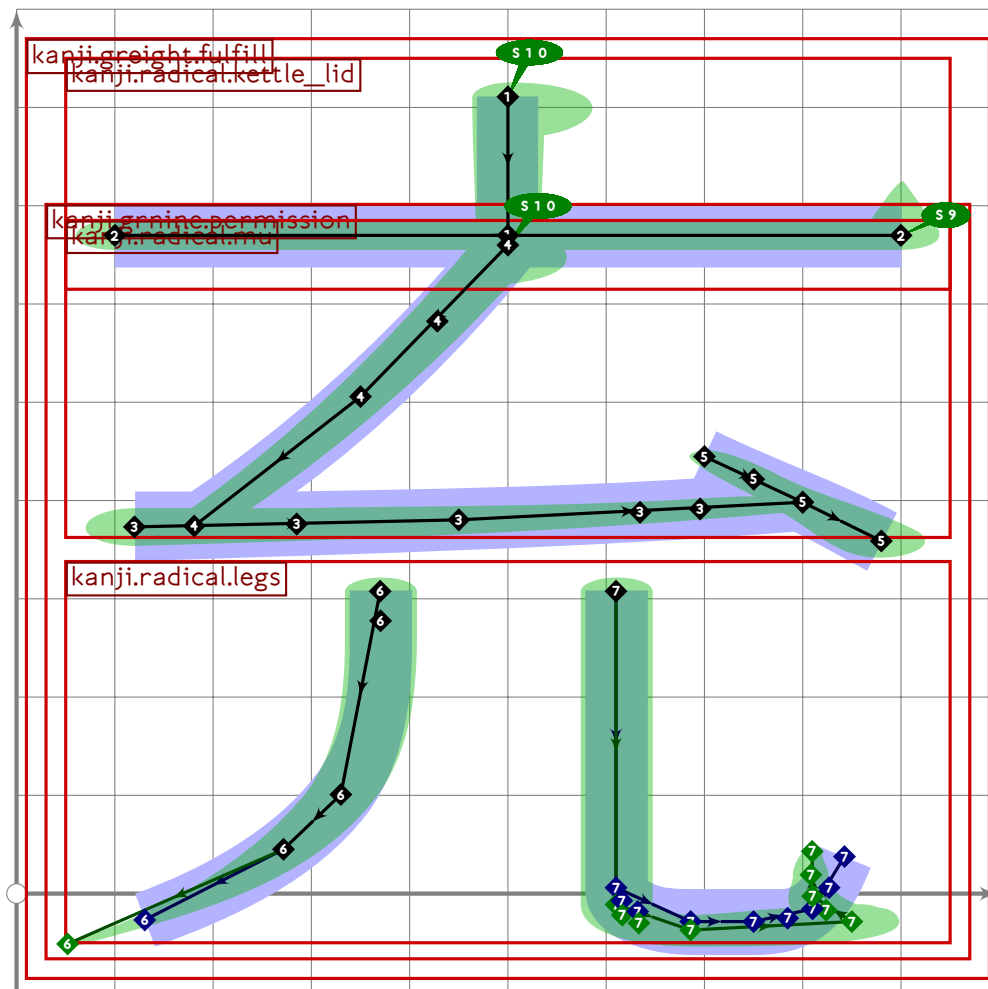
```

212
213 vardef kanji.greight.exhibit =
214   push_pbox_toexpand("kanji.greight.exhibit");
215   build_kanji.level(build_kanji.tb(440,0)
216     (kanji.grone.mouth)
217     (kanji.grone.king));
218   expand_pbox;
219 enddef;

```

**EIGH**



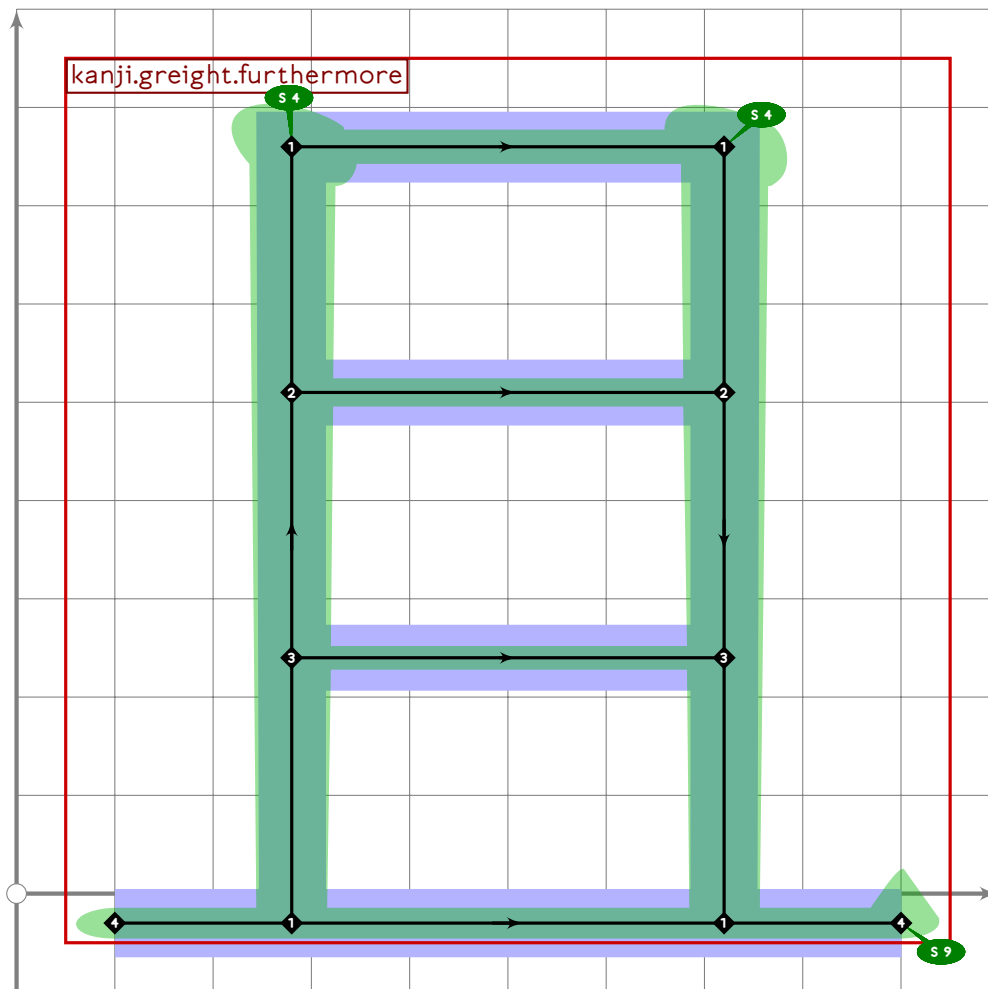


```

220
221 vardef kanji.greight.fulfill =
222   push_pbox_toexpand("kanji.greight.fulfill");
223   build_kanji.level(build_kanji.tb(650,70)
224     (kanji.radical.kettle_lid)
225     (kanji.grnine.permission));
226   expand_pbox;
227 enddef;

```

**EIGH**

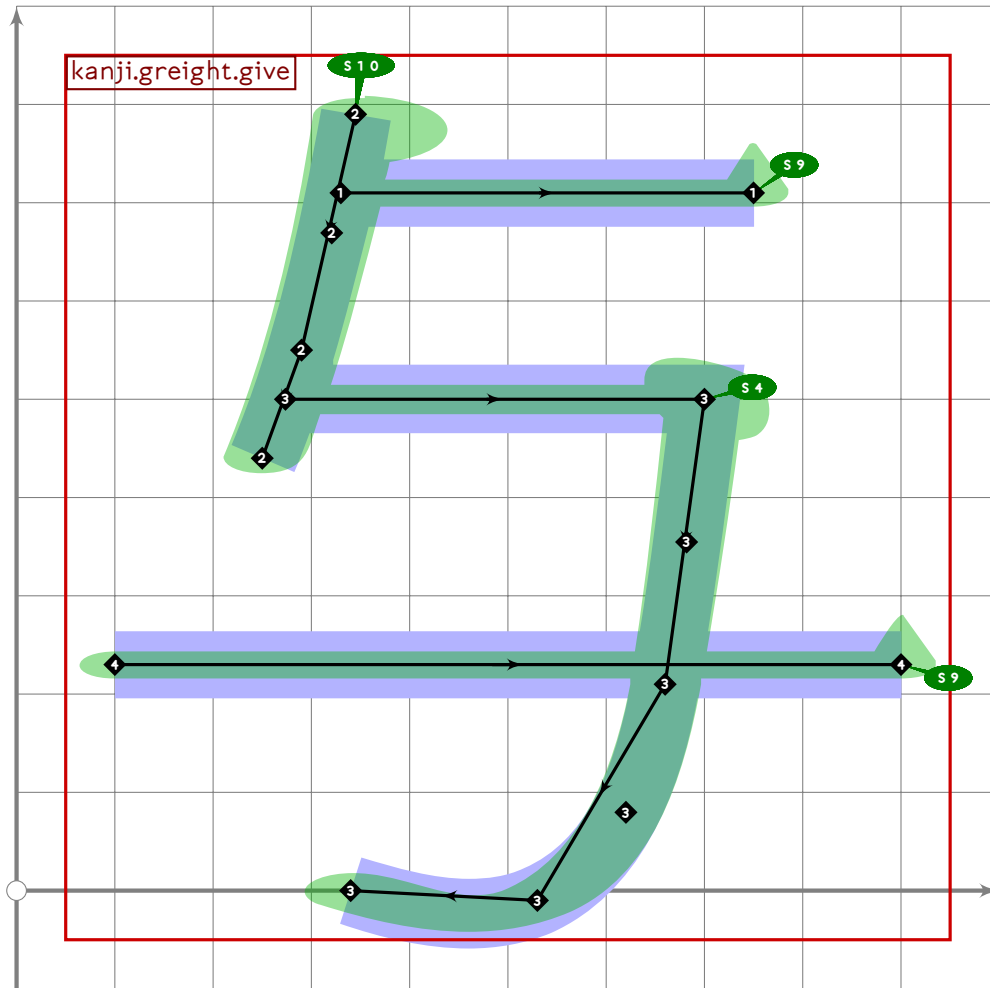


```

228
229 vardef kanji.greight.furthermore =
230   push_pbox_toexpand("kanji.greight.furthermore");
231   push_stroke((280,-30)-(280,760)-(720,760)-(720,-30),
232     (1.5,1.5)-(1.7,1.7)-(1.7,1.5)-(1.5,1.5));
233   set_botip(0,1,1);
234   set_botip(0,2,1);
235   set_boserif(0,1,4);
236   set_boserif(0,2,4);
237   push_stroke((280,510)-(720,510),
238     (1.5,1.5)-(1.5,1.5));
239   push_stroke((280,240)-(720,240),
240     (1.4,1.4)-(1.4,1.4));
241   push_stroke((100,-30)-(900,-30),
242     (1.6,1.6)-(1.6,1.6));
243   set_boserif(0,1,9);
244   expand_pbox;
245 enddef;

```

EIGH

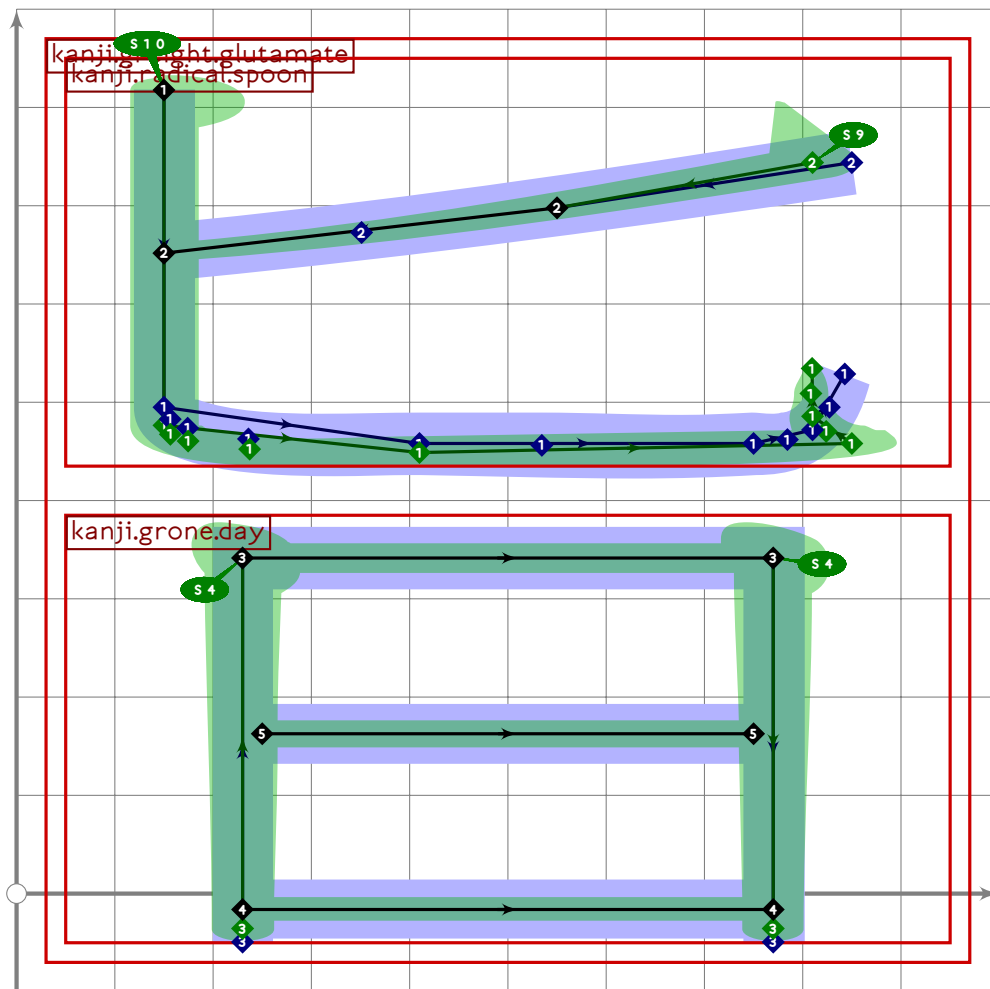


## EIGH

```

246
247 vardef kanji.greight.give =
248   push_pbox_toexpand("kanji.greight.give");
249   push_stroke((330,710)–(750,710),(1.5,1.5)–(1.5,1.5));
250   set_boserif(0,1,9);
251   push_stroke((345,790)..tension 1.2..(290,550)..(250,440),
252     (1.7,1.7)–(1.6,1.6)–(1.6,1.6));
253   set_boserif(0,0,10);
254   push_stroke((get_strokep(0) intersectionpoint ((0,500)–(1000,500)))–
255     (700,500)..tension 1.4..(660,210)..(530,-10)..{curl 0.1}(340,0),
256     (1.6,1.6)–(1.6,1.6)–(1.5,1.5)–(1.7,1.7)–(1.8,1.8));
257   set_botip(0,1,1);
258   set_boserif(0,1,4);
259   push_stroke((100,230)–(900,230),(1.5,1.5)–(1.5,1.5));
260   set_boserif(0,1,9);
261   expand_pbox;
262 enddef;
263

```

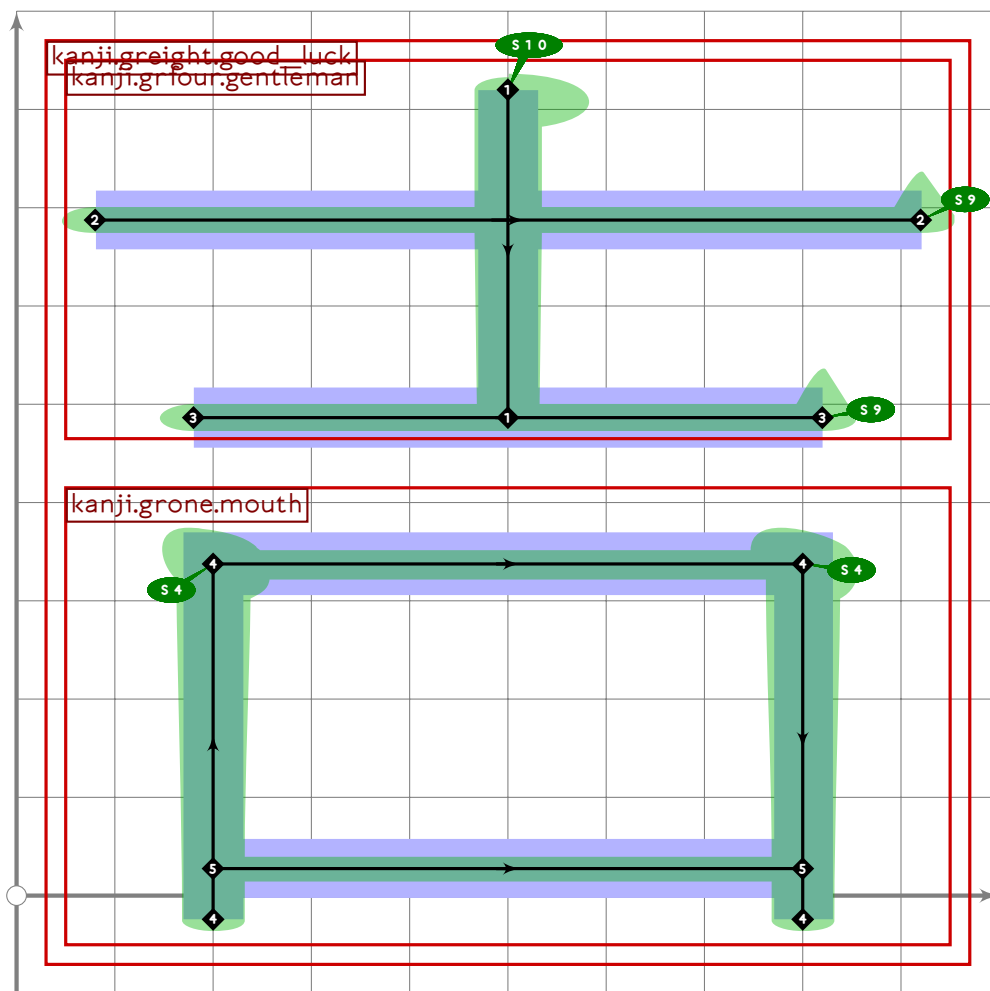


```

264 % this actually means sort of generically "good", but it's "uma" in
265 % "umami" and needs to be distinguished from other vague kanji
266 vardef kanji.greight.glutamate =
267   push_pbox_toexpand("kanji.greight.glutamate");
268   build_kanji.level(build_kanji.tb(410;-50)
269     (kanji.radical.spoon)
270     (kanji.grone.day));
271   expand_pbox;
272 enddef;

```

**EIGH**

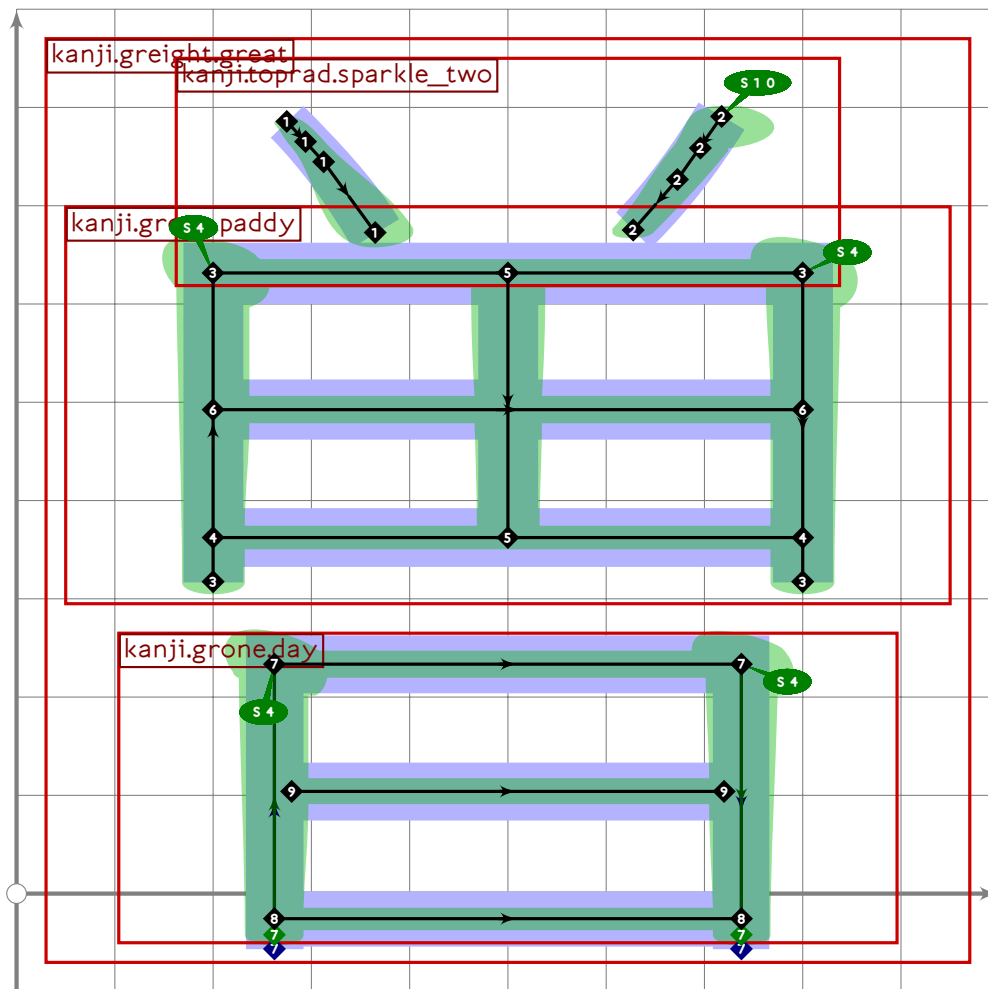


## EIGH

```

273
274 vardef kanji.greight.good_luck =
275   push_pbox_toexpand("kanji.greight.good_luck");
276   build_kanji.level(build_kanji.tb(440,50)
277     (kanji.grfour.gentleman)
278     (kanji.grone.mouth));
279   expand_pbox;
280 enddef;

```

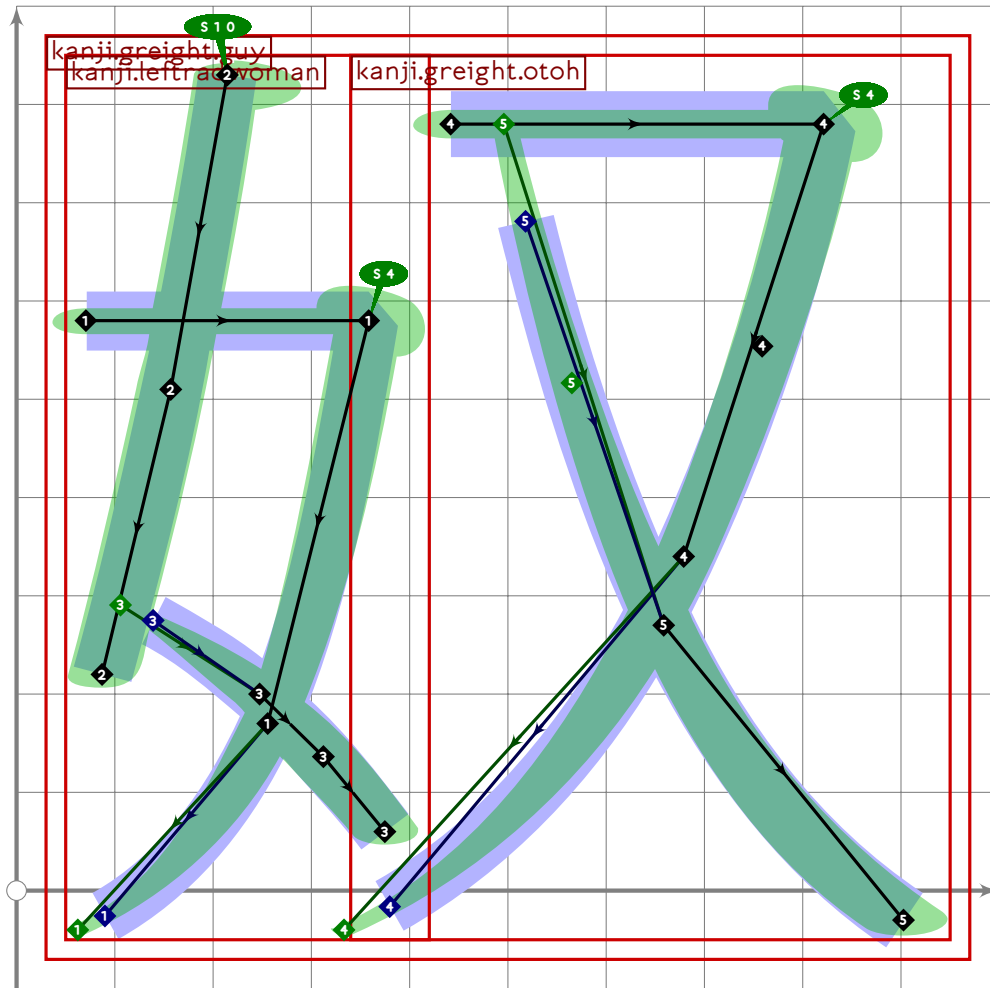


```

281
282 vardef kanji.greight.great =
283   push_pbox_toexpand("kanji.greight.great");
284   build_kanji.tb(280,-30)
285     (build_kanji.tb(540,130)
286       (build_kanji.sscale(xscaled 0.75)(kanji.toprad.sparkle_two))
287       (kanji.grone.paddy))
288     (build_kanji.sscale(xscaled 0.88)(kanji.grone.day));
289   expand_pbox;
290 enddef;

```

EIGH

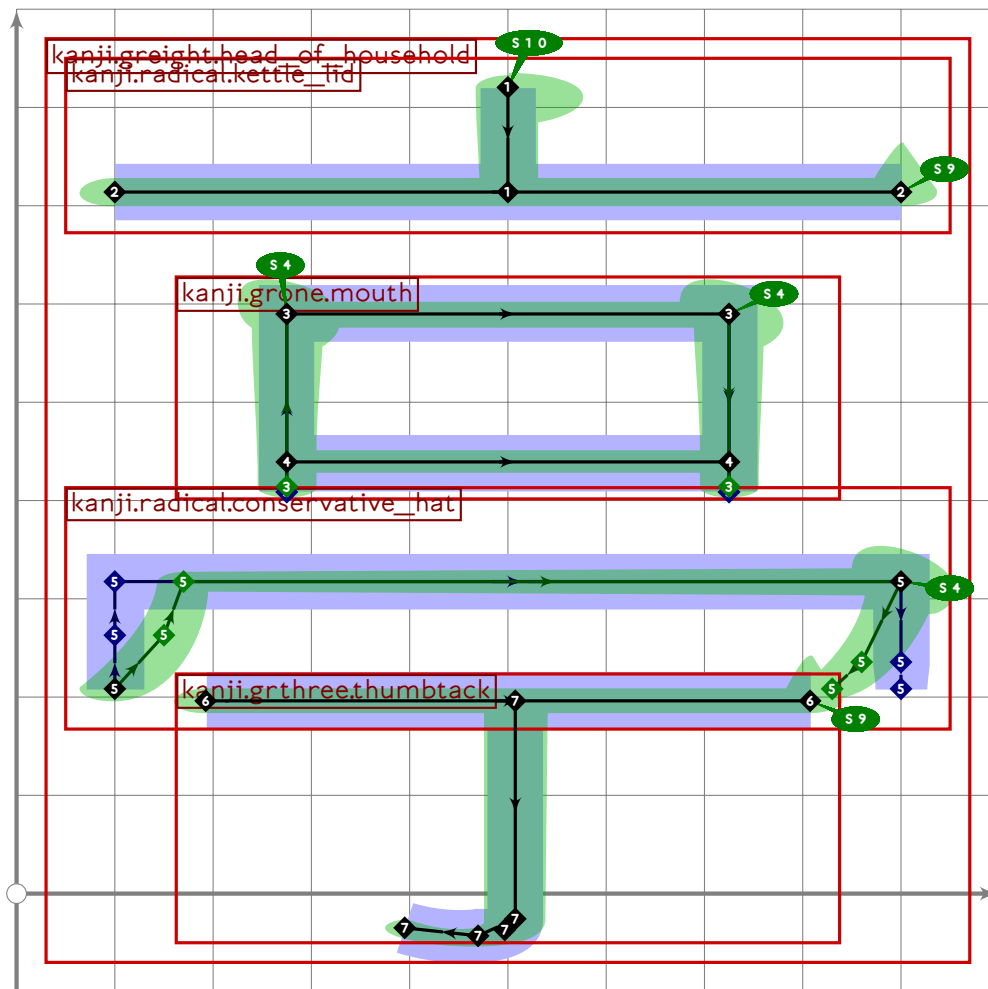


**EIGH**

```

291
292 vardef kanji.greight.guy =
293   push_pbox_toexpand("kanji.greight.guy");
294   build_kanji.lr(380,80)
295     (kanji.leftrad.woman)
296     (kanji.greight.otoh);
297   expand_pbox;
298 enddef;

```



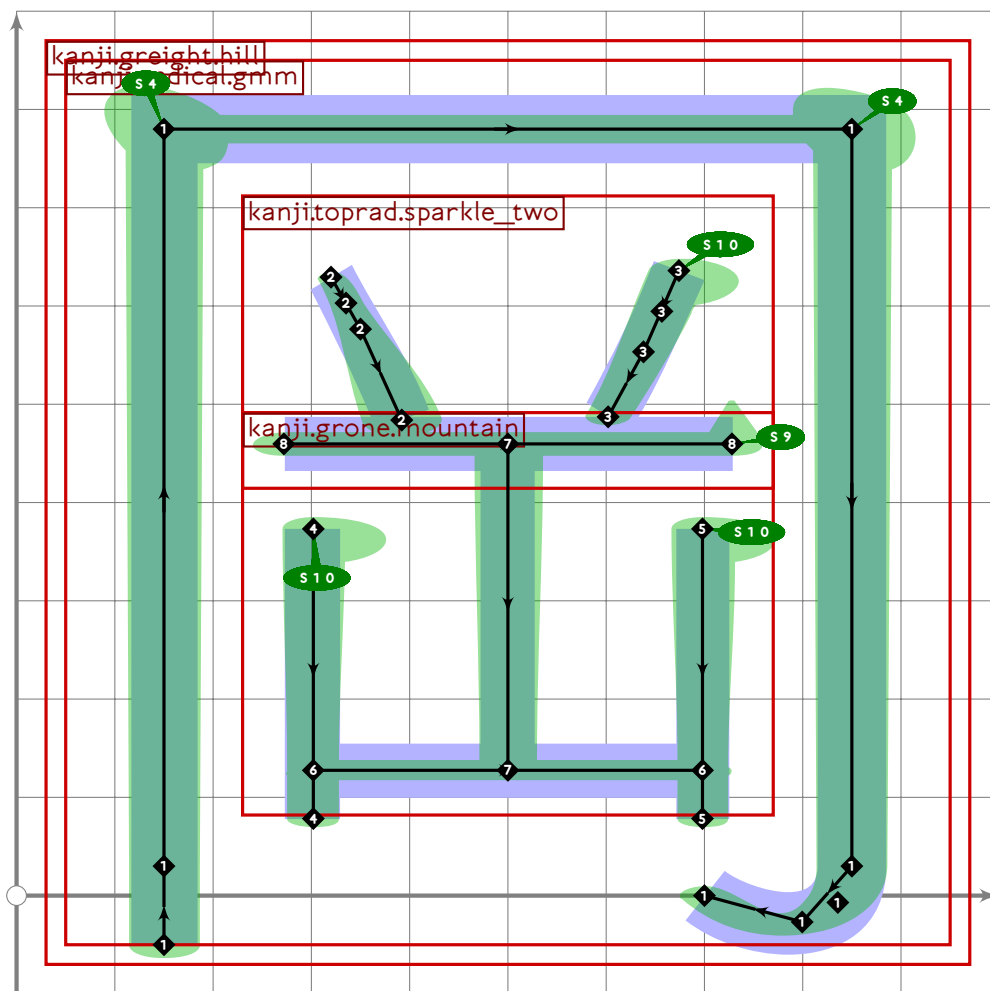
```

299
300 vardef kanji.greight.head_of_household =
301   push_pbox_toexpand("kanji.greight.head_of_household");
302   build_kanji.level(build_kanji.tb(650,-45)
303     (kanji.radical.kettle_lid)
304     (build_kanji.tb(550,0)
305       (build_kanji.sscale(xscaled 0.75)(kanji.grone.mouth))
306       (build_kanji.tb(450,90)
307         (build_kanji.sscale(yscaled 1.1)(kanji.radical.conservative_hat))
308         (build_kanji.sscale(xscaled 0.75)(kanji.grthree.thumbtack)))));
309   expand_pbox;
310 enddef;

```

EIGH



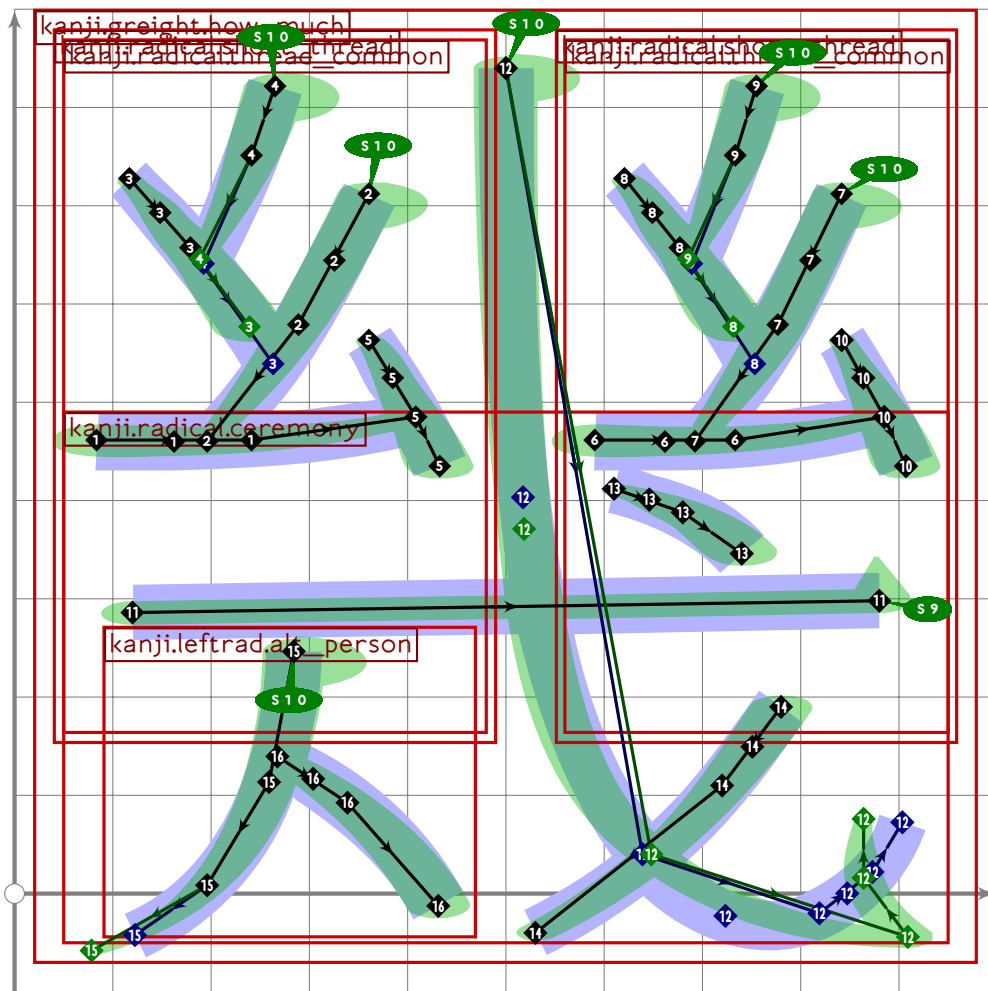


EIGH

```

311
312 vardef kanji.greight.hill =
313   push_pbox_toexpand("kanji.greight.hill");
314   kanji.radical.gmm;
315   build_kanji.sscale(xyscaled (0.6,0.7))
316     (build_kanji.level(build_kanji.tb(480,110)
317       (kanji.toprad.sparkle_two)
318       (kanji.grone.mountain;
319         set_boserif(0,0,whatever);
320         push_stroke((120,780)-(880,780),(1.6,1.6)-(1.6,1.6));
321         set_boserif(0,1,9))));
322   expand_pbox;
323 enddef;

```

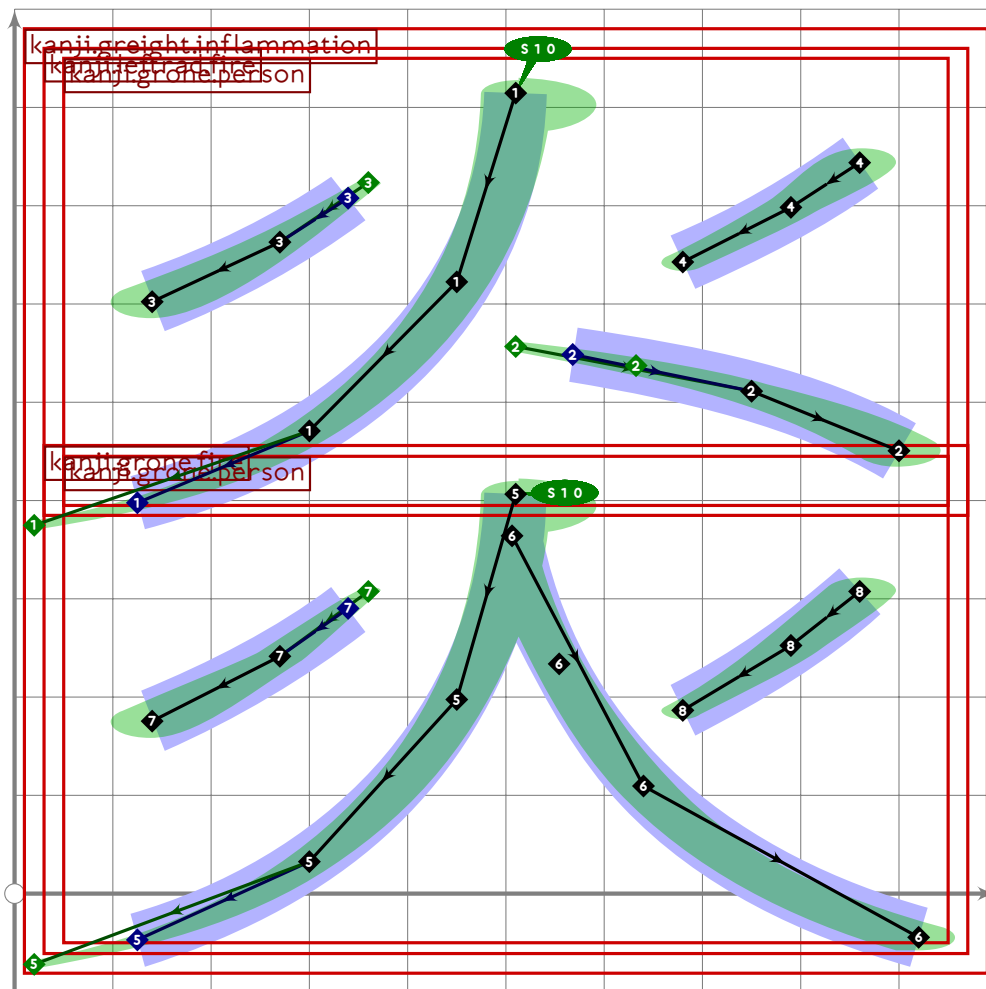


```

324
325 vardef kanji.greight.how_much =
326   push_pbox_toexpand("kanji.greight.how_much");
327   build_kanji.level(
328     build_kanji.tb(440,100)
329     (build_kanji.lr(520,80)
330       (kanji.radical.short_thread)
331       (kanji.radical.short_thread))
332     (kanji.radical.ceremony);
333   replace_stroke(-1)
334     (oldp shifted (-900,60) xscaled 0.9 shifted (900,-60));
335   replace_stroke(-1)((500,840){down}...subpath (1,infinity) of oldp);
336   push_stroke((780,190)..tension 1.2..(720,110)..(530,-40),
337     (1.6,1.6)-(1.4,1.4)-(1.2,1.2));
338   build_kanji.sscale(xyscaled (0.42,0.35) shifted (-220,-280))
339     (kanji.leftrad.alt_person);
340 );
341 expand_pbox;
342 enddef;

```

EIGH

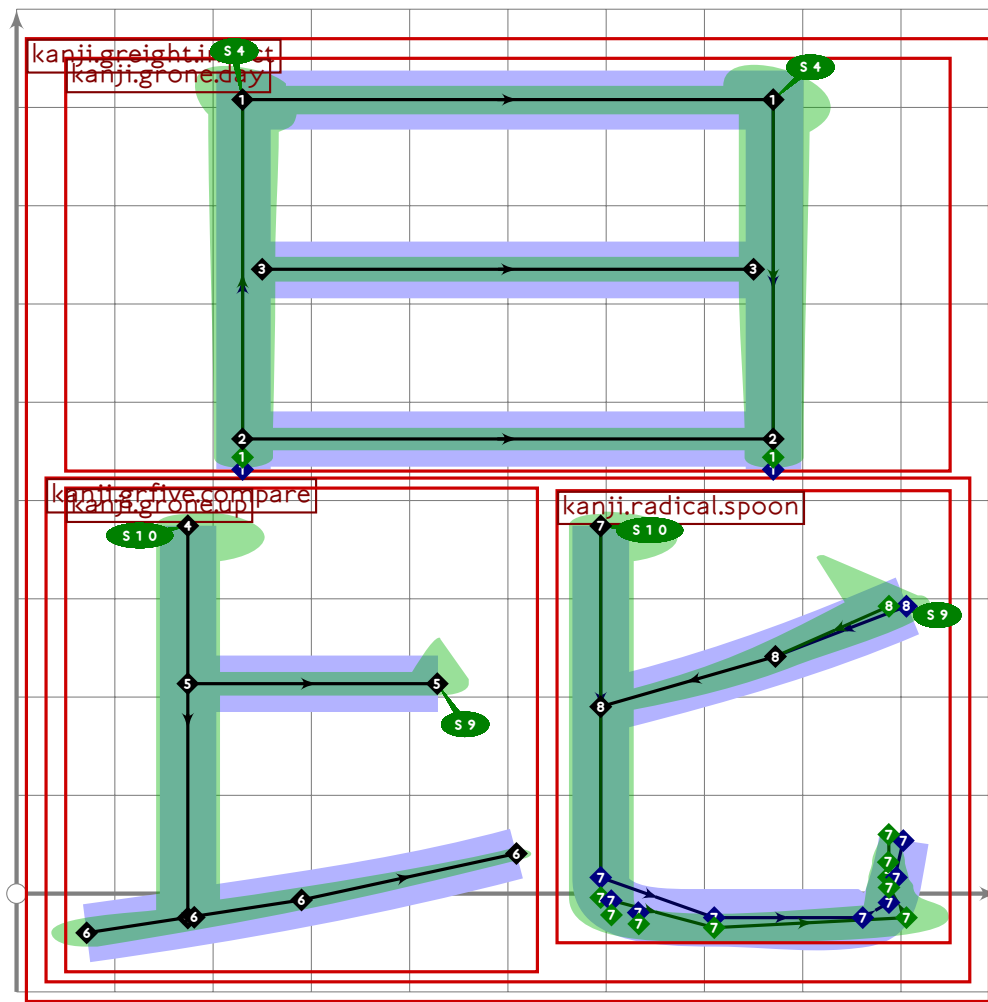


**EIGH**

```

343
344 vardef kanji:greight.inflammation =
345   push_pbox_toexpand("kanji:greight.inflammation");
346   build_kanji.level(build_kanji.tb(420,50)
347     (kanji.leftrad.fire)
348     (kanji.grone.fire));
349   expand_pbox;
350 enddef;

```



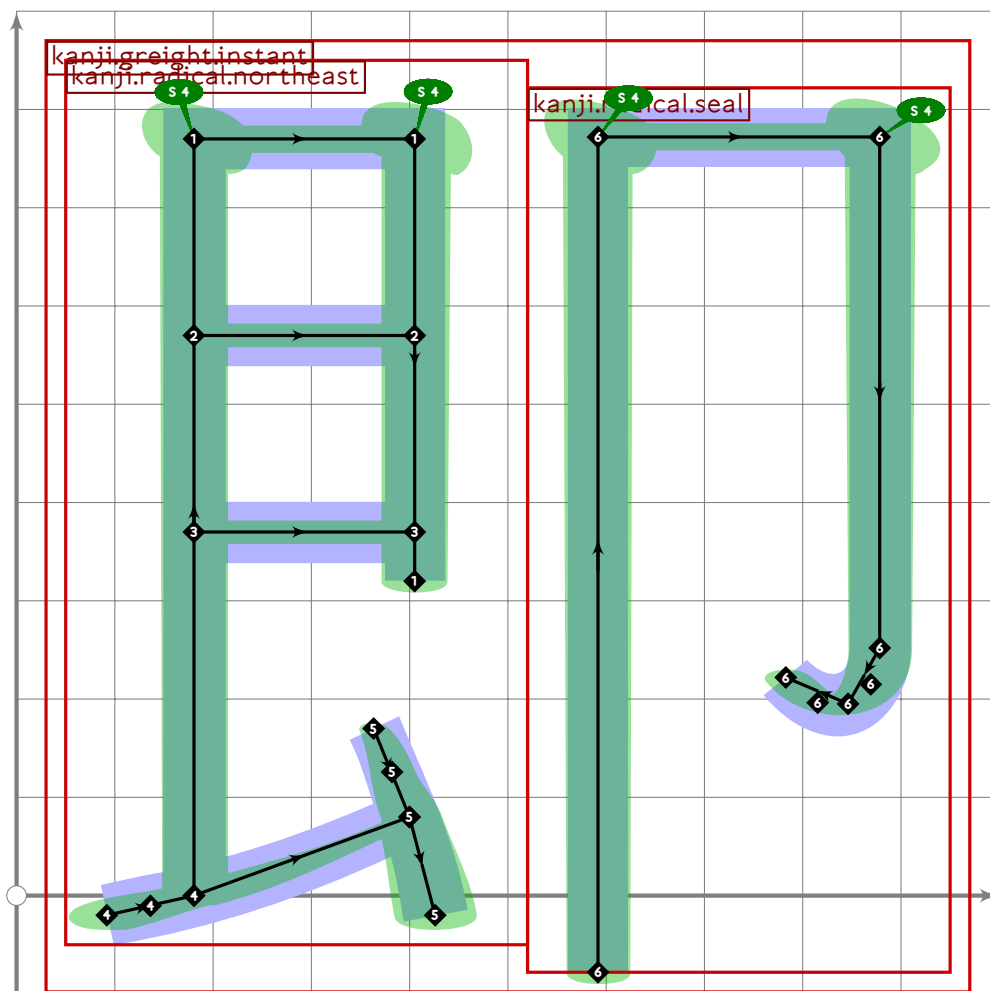
```

351
352 vardef kanji.greight.insect =
353   push_pbox_toexpand("kanji.greight.insect");
354   build_kanji.level(build_kanji.tb(420;20)
355     (kanji.grone.day)
356     (kanji.grfive.compare));
357   expand_pbox;
358 enddef;

```

EIGH

U+5373  
tsuku.uni5373

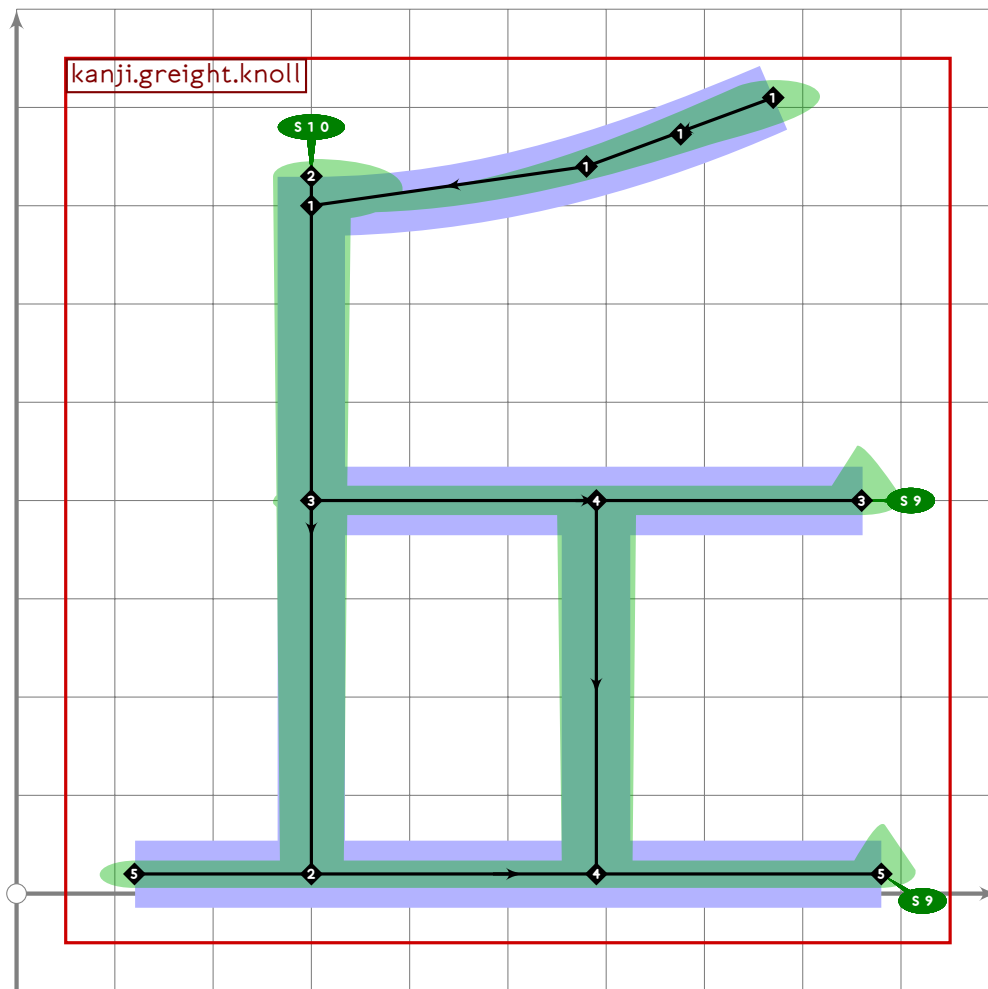


**EIGH**

```

359
360 vardef kanji.greight.instant =
361   push_pbox_toexpand("kanji.greight.instant");
362   build_kanji.level(build_kanji.lr(520,0)
363     (kanji.radical.alt_northeast)
364     (build_kanji.sscale(shifted (0,28))(kanji.radical.seal)));
365   expand_pbox;
366 enddef;

```



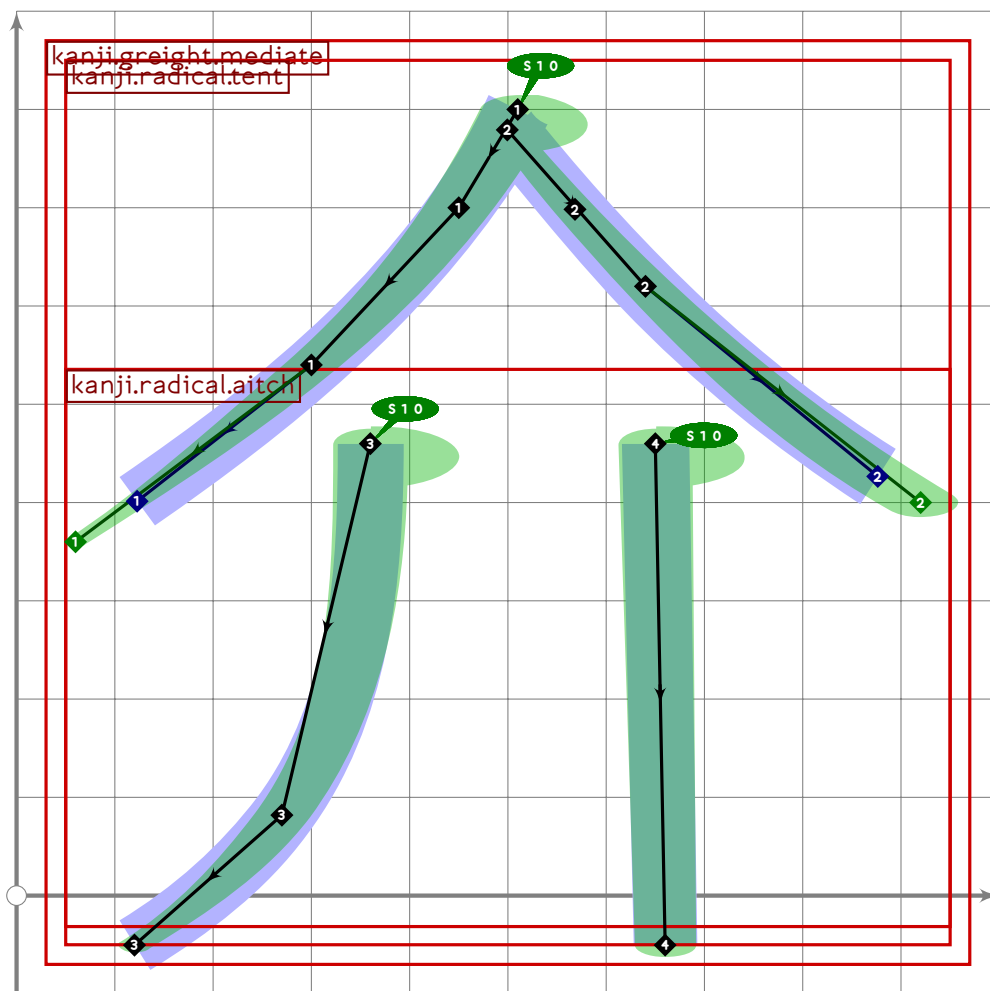
```

367
368 vardef kanji.greight.knoll =
369   push_pbox_toexpand("kanji.greight.knoll");
370   push_stroke((770,810)..tension 1.2..(580,740)..(300,700),
371     (1.8,1.8)–(1.5,1.5)–(1,1));
372   push_stroke((300,730)–(300,20),
373     (1.6,1.6)–(1.4,1.4));
374   set_boserif(0,0,10);
375   push_stroke((300,400)–(860,400),(1.6,1.6)–(1.6,1.6));
376   set_boserif(0,1,9);
377   push_stroke((590,400)–(590,20),(1.6,1.6)–(1.5,1.5));
378   push_stroke((120,20)–(880,20),(1.5,1.5)–(1.5,1.5));
379   set_boserif(0,1,9);
380   expand_pbox;
381 enddef;

```

EIGH

U+4ECB  
tsuku.uni4ECB

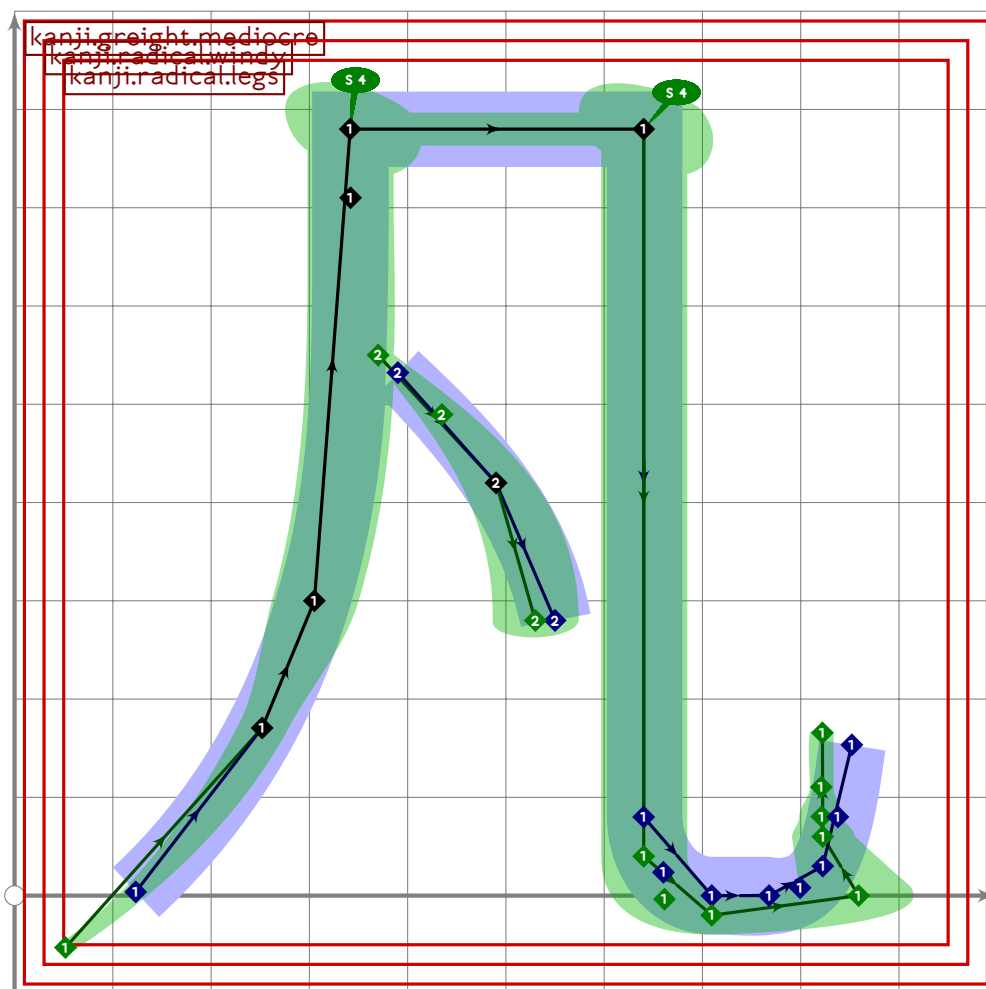


**EIGH**

```

382
383 vardef kanji.greight.mediate =
384   push_pbox__toexpand("kanji.greight.mediate");
385   build_kanji.level(
386     kanji.radical.tent;
387     pop_stroke;
388     tsu_xform(identity yscaled 0.63)(kanji.radical.aitch);
389     obstacktype[find_whatsoever(otstroke,2)]:=otnull;
390   );
391   expand__pbox;
392 enddef;

```



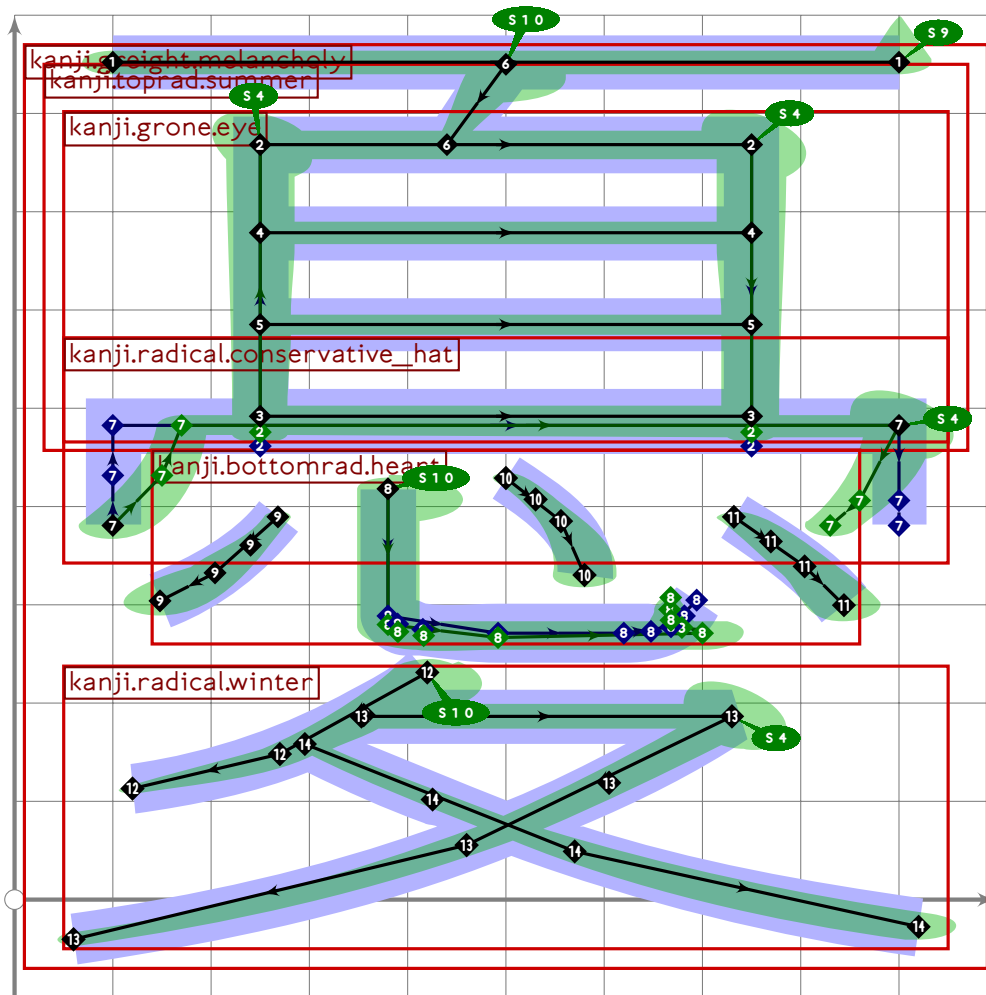
```

393
394 vardef kanji.greight.mediocre =
395   push_pbox_toexpand("kanji.greight.mediocre");
396   kanji.radical.windy;
397   push_stroke((370,550)..tension 1.2..(490,420)..(550-20*mincho,280),
398     (0.9,0.9)–(1.5,1.5)–(1.7,1.7));
399   expand_pbox;
400 enddef;

```

**EIGH**



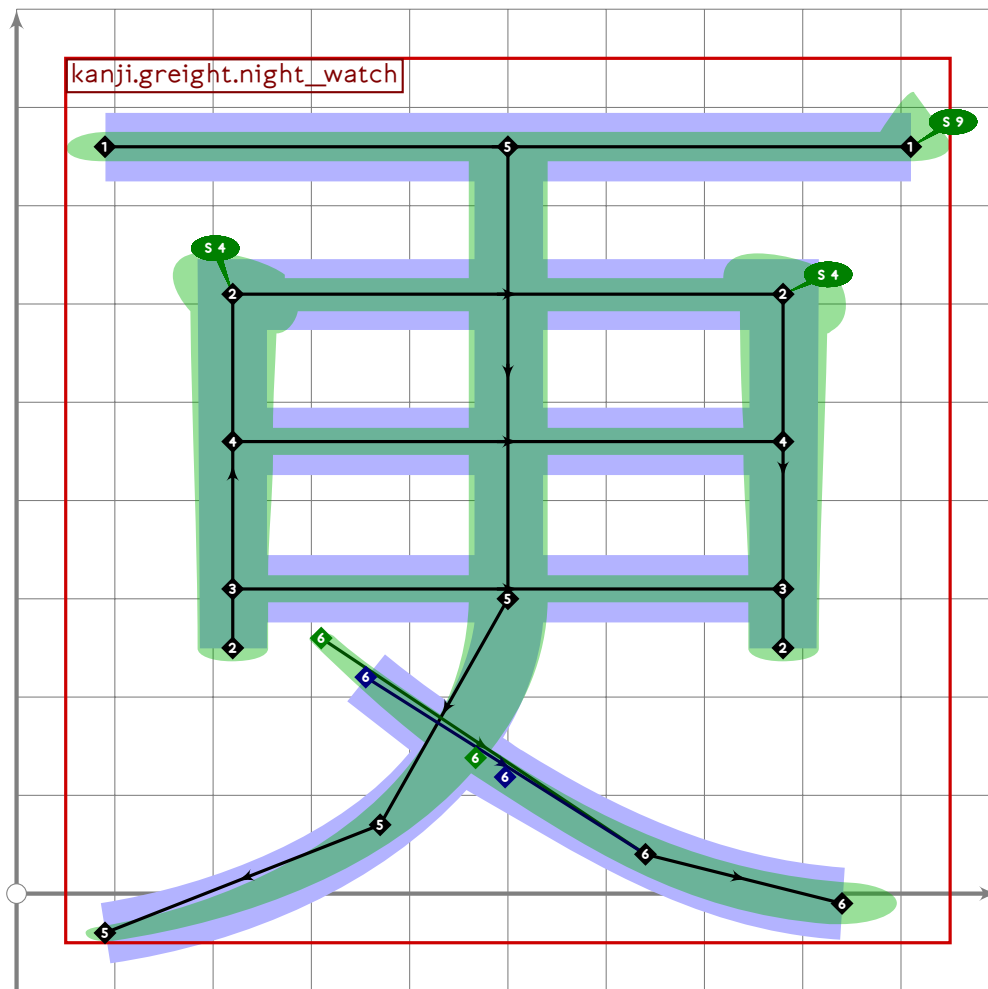


**EIGH**

```

401
402 vardef kanji.greight.melancholy =
403   push_pbox_toexpand("kanji.greight.melancholy");
404   build_kanji.level(build_kanji.tb(400,115)
405     (build_kanji.tb(260,193)
406       (kanji.toprad.summer)
407       (kanji.radical.conservative_hat))
408     (build_kanji.tb(480,-40)
409       (build_kanji.sscale(xscaled 0.8)(kanji.bottomrad.heart))
410       (kanji.radical.winter)));
411   expand_pbox;
412 enddef;

```



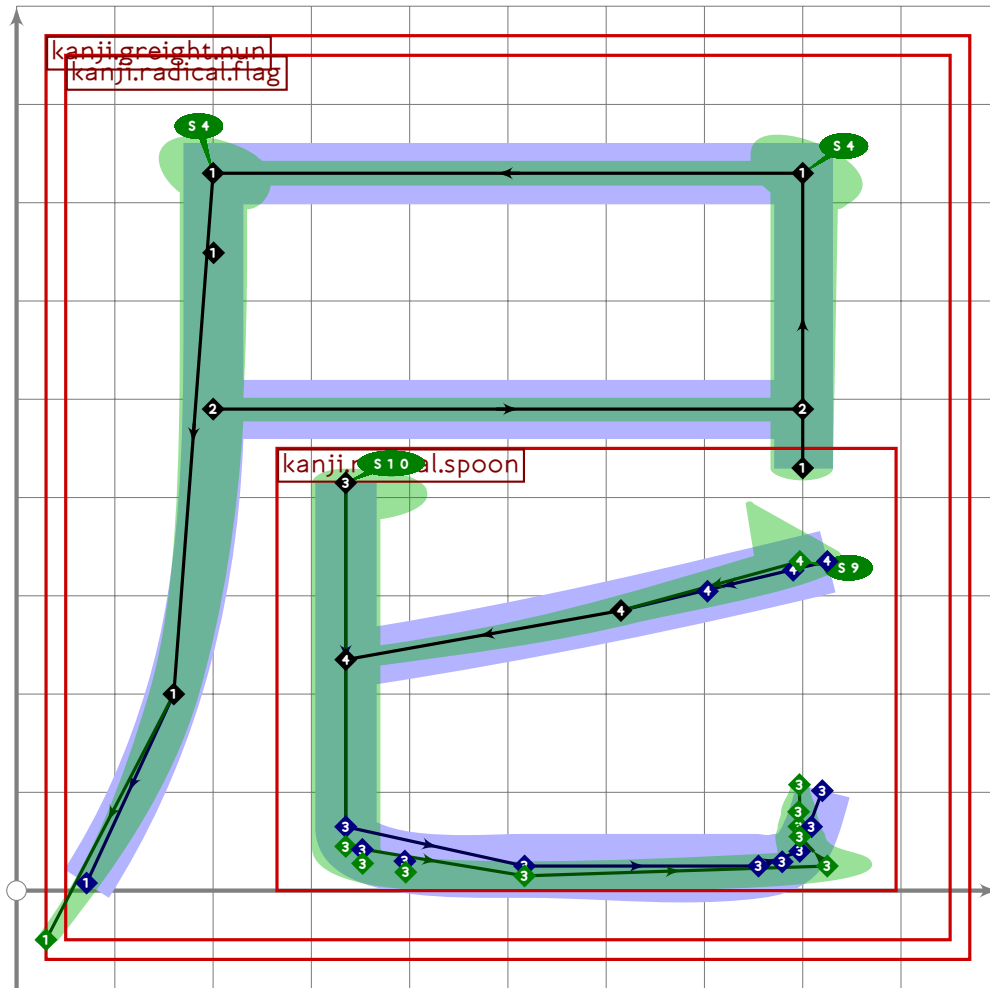
```

413
414 vardef kanji.greight.night_watch =
415   push_pbox_toexpand("kanji.greight.night_watch");
416   push_stroke((90,760)–(910,760),(1,6,1,6)–(1,6,1,6));
417   set_boserif(0,1,9);
418   build_kanji.box((220,610),(780,310));
419   push_stroke((220,460)–(780,460),(1,5,1,5)–(1,5,1,5));
420   push_stroke((500,760)–(500,300){down}{.}(370,70){.}{curl 0.5}{90,-40},
421     (1,6,1,6)–(1,6,1,6)–(1,4,1,4)–(1,1,1,1));
422   push_stroke((310,260){.tension 1.2}{.}(640,40){.}(840,-10),
423     (0,9,0,9)–(1,5,1,5)–(2,2));
424   expand_pbox;
425 enddef;

```

EIGH

U+5C3C  
tsuku.uni5C3C

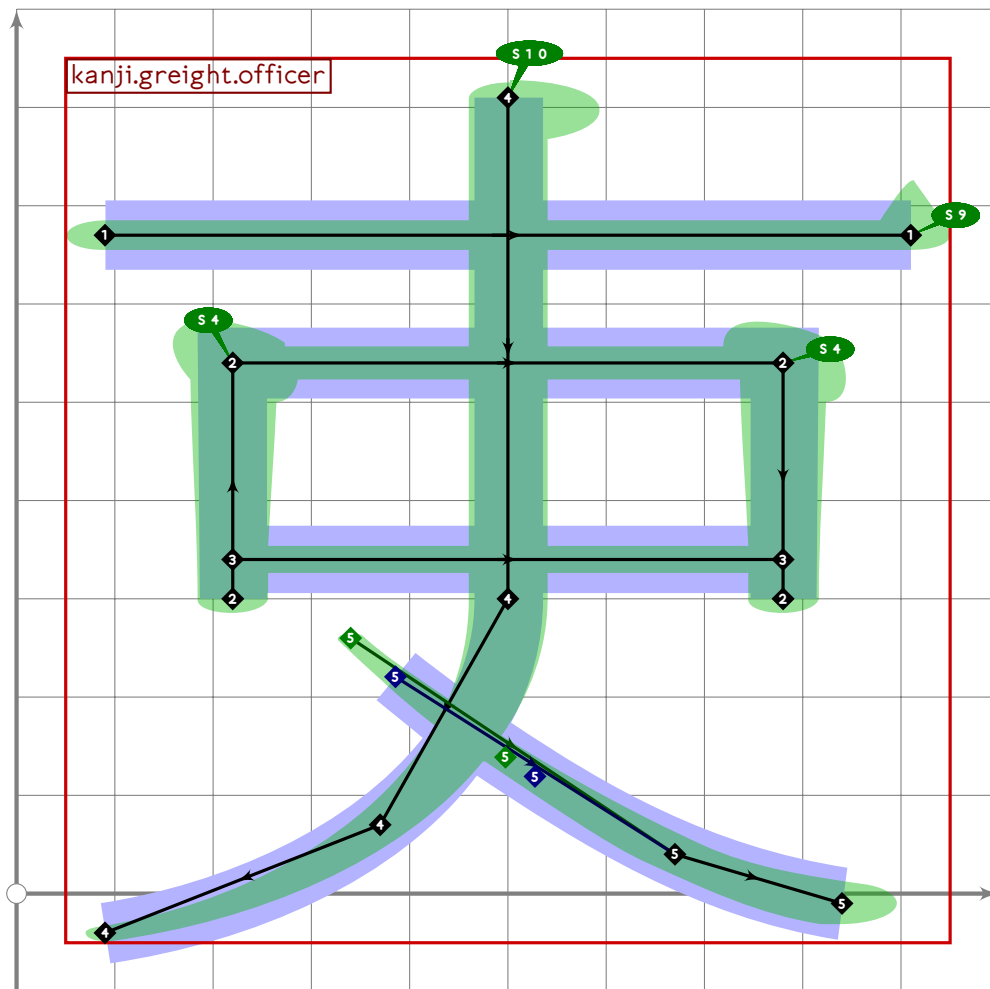


**EIGH**

```

426
427 vardef kanji.greight.nun =
428   push_pbox_toexpand("kanji.greight.nun");
429   build_kanji.level(
430     kanji.radical.flag;
431     build_kanji.sscale(xyscaled (0.7,0.5) shifted (80,-170))
432     (kanji.radical.spoon));
433   expand_pbox;
434 enddef;

```

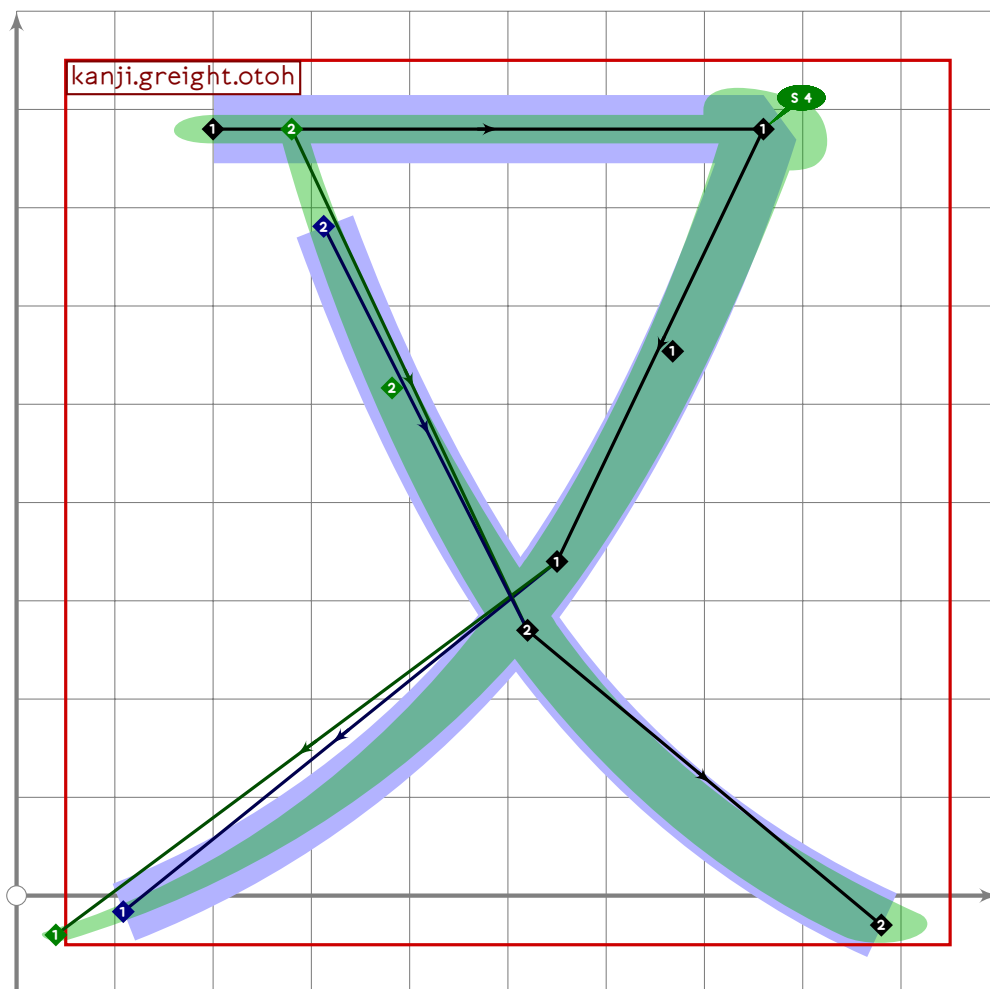


```

435
436 vardef kanji.greight.officer =
437   push_pbox_toexpand("kanji.greight.officer");
438   push_stroke((90,670)–(910,670),(1.6,1.6)–(1.6,1.6));
439   set_boserif(0,1,9);
440   build_kanji.box((220,540),(780,340));
441   push_stroke((500,810)–(500,300){down}..(370,70)..{curl 0.5}(90,-40),
442     (1.6,1.6)–(1.6,1.6)–(1.4,1.4)–(1.1,1.1));
443   set_boserif(0,0,10);
444   push_stroke((340,260)..tension 1.2..(670,40)..(840,-10),
445     (0.9,0.9)–(1.5,1.5)–(2,2));
446   expand_pbox;
447 enddef;

```

EIGH

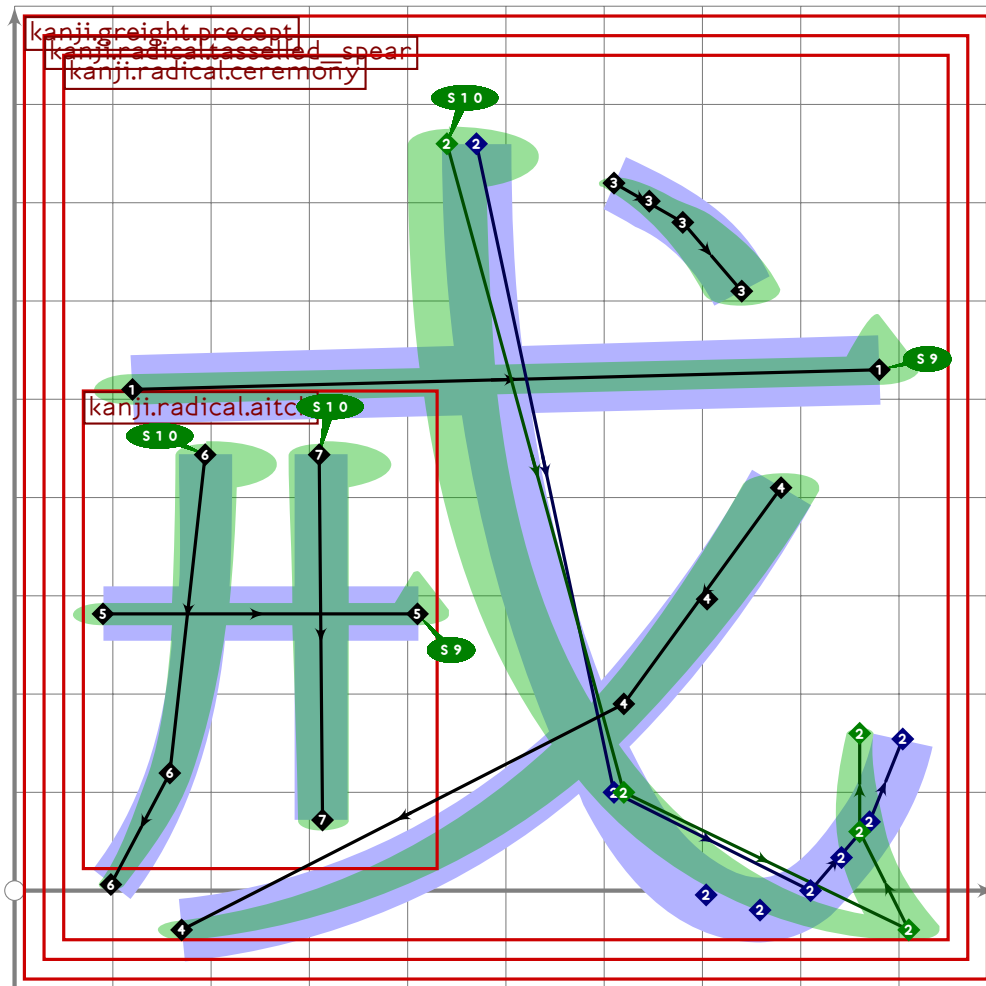


**EIGH**

```

448
449 vardef kanji.greight.otoh =
450   push_pbox_toexpand("kanji.greight.otoh");
451   push_stroke(
452     (200,780)–(760,780)..tension 1.2..(550,340)..(40,-40),
453     (1.6,1.6)–(1.6,1.6)–(1.4,1.4)–(0.9,0.95));
454   set_botip(0,1,0);
455   set_boserif(0,1,4);
456   push_stroke((280,780)..tension 1.2..(520,270)..(880,-30),
457     (0.9,0.9)–(1.4,1.4)–(1.8,1.8));
458   expand_pbox;
459 enddef;

```



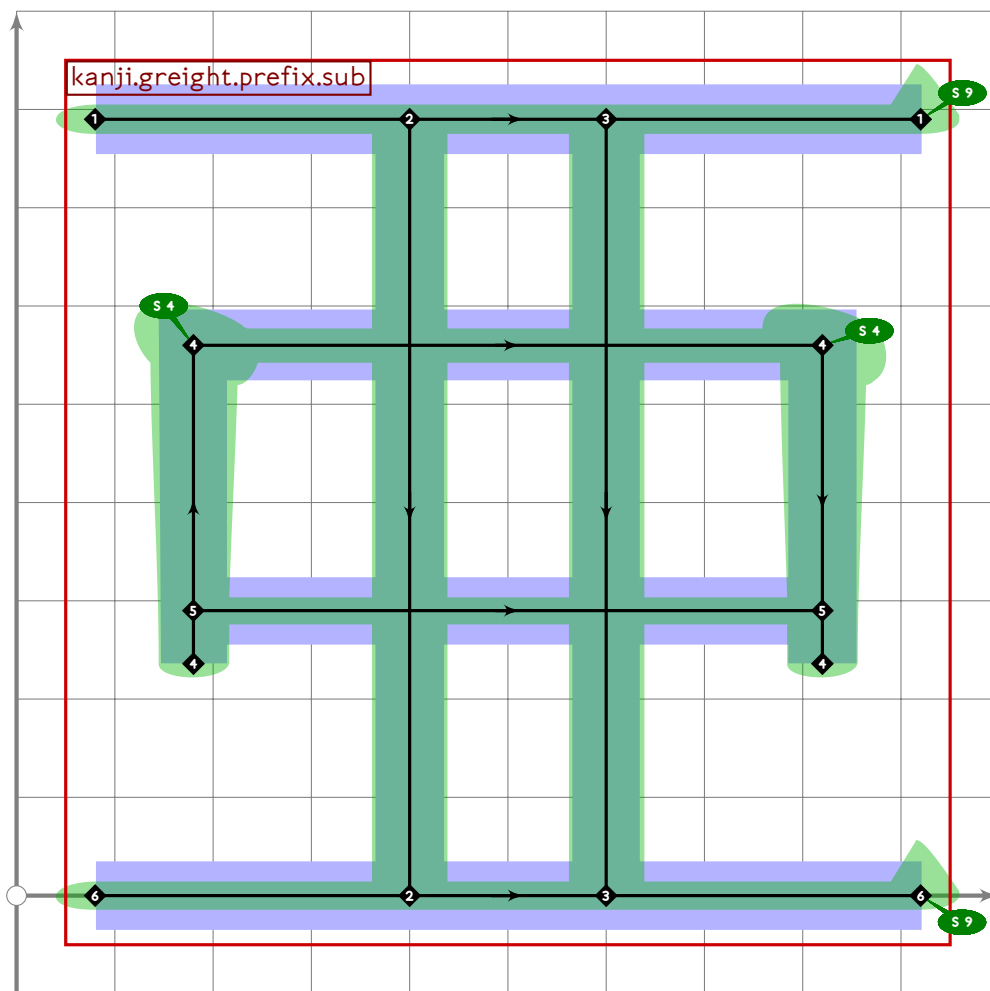
```

460
461 vardef kanji.greight.precept =
462   push_pbox_toexpand("kanji.greight.precept");
463   kanji.radical.tasselled_spear;
464   build_kanji.sscale(xyscaled (0.4,0.54) shifted (-250,130))
465     (kanji.radical.aitch;
466       replace_stroke(0)(subpath (0,0.85) of oldp));
467   expand_pbox;
468 enddef;

```

EIGH

U+4E9C  
tsuku.uni4E9C

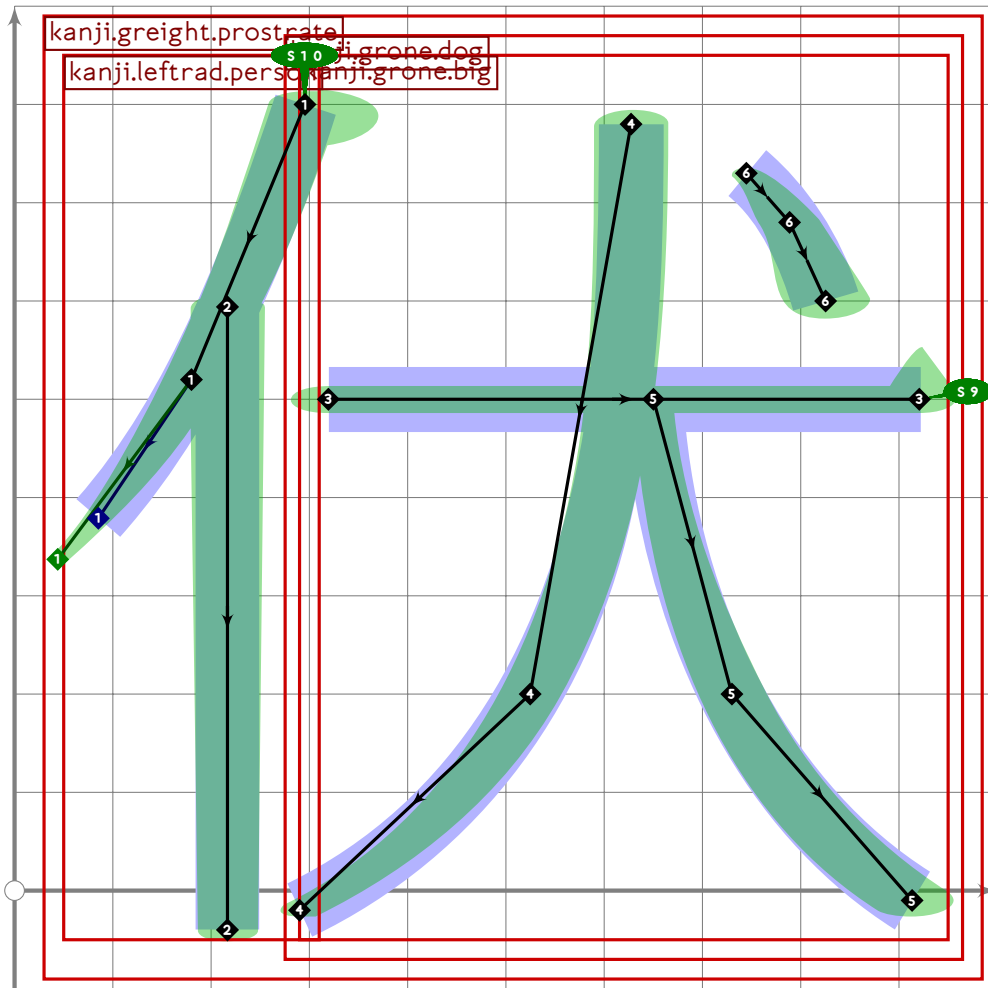


**EIGH**

```

469
470 vardef kanji.greight.prefix_sub =
471   push_pbox_toexpand("kanji.greight.prefix.sub");
472   push_stroke((80,790)-(920,790),(1.6,1.6)-(1.6,1.6));
473   set_boserif(0,1,9);
474   push_stroke((400,790)-(400,0),(1.6,1.6)-(1.5,1.5));
475   push_stroke((600,790)-(600,0),(1.6,1.6)-(1.5,1.5));
476   build_kanji.box((180,560),(820,290));
477   push_stroke((80,0)-(920,0),(1.6,1.6)-(1.6,1.6));
478   set_boserif(0,1,9);
479   expand_pbox;
480 enddef;

```



```

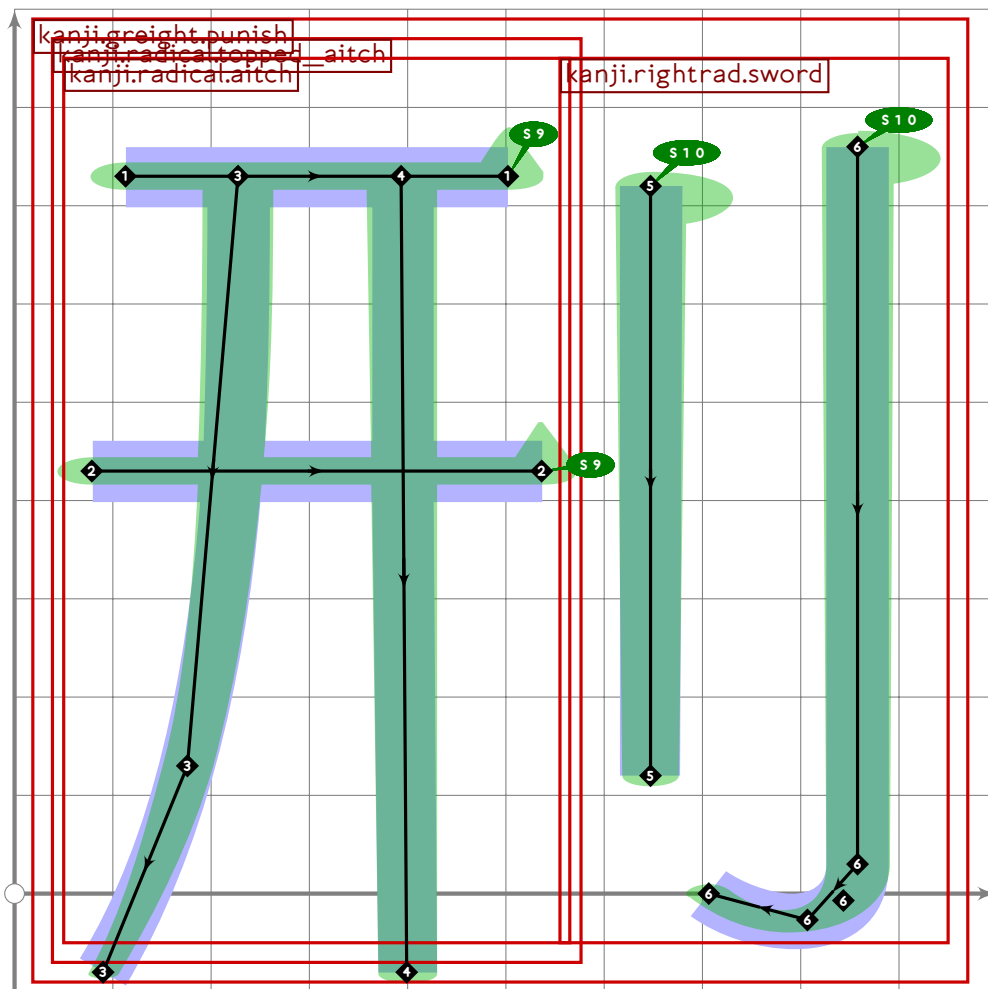
481
482 vardef kanji.greight.prostrate =
483   push_pbox_toexpand("kanji.greight.prostrate");
484   build_kanji.lr(300,20)
485     (kanji.leftrad.person)
486     (kanji.grone.dog);
487   expand_pbox;
488 enddef;

```

EIGH



U+5211  
tsuku.uni5211

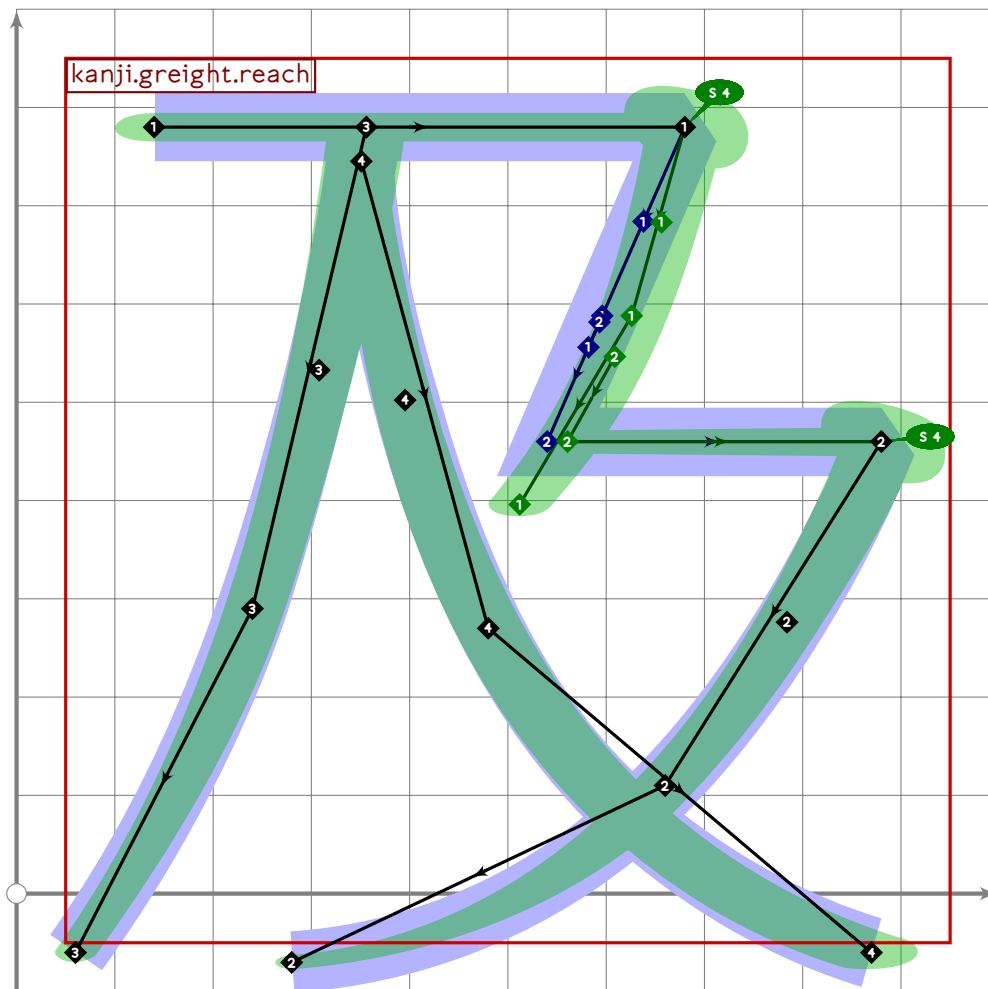


**EIGH**

```

489
490 vardef kanji.greight.punish =
491   push_pbox_toexpand("kanji.greight.punish");
492   build_kanji.level(build_kanji.lr(560,10)
493     (kanji.radical.topped_aitch)
494     (kanji.rightrad.sword));
495   expand_pbox;
496 enddef;

```



```

497
498 vardef kanji.greight.reach =
499   push_pbox_toexpand("kanji.greight.reach");
500   begingroup
501     save x,y;
502     numeric x[],y[];
503     x1=140;
504     x2=680;
505     x4=540;
506     y1=y2=780;
507     y4=460;
508     z3=0.4[z4,z2]+mincho*(30,0);
509     z5=(0.3-0.5*mincho)[z4,z2];
510     push_stroke(z1-z2..tension 1.2..z3..z5,
511       (1.6,1.6)-(1.6,1.6)-(1.6-0.1*mincho,1.6-0.1*mincho)-
512       (1.6-0.2*mincho,1.6-0.2*mincho));
513     set_boserif(0,1,4);
514     set_botip(0,1,0);
515     x7=0;
516     x9=880;
517     x10=660;

```

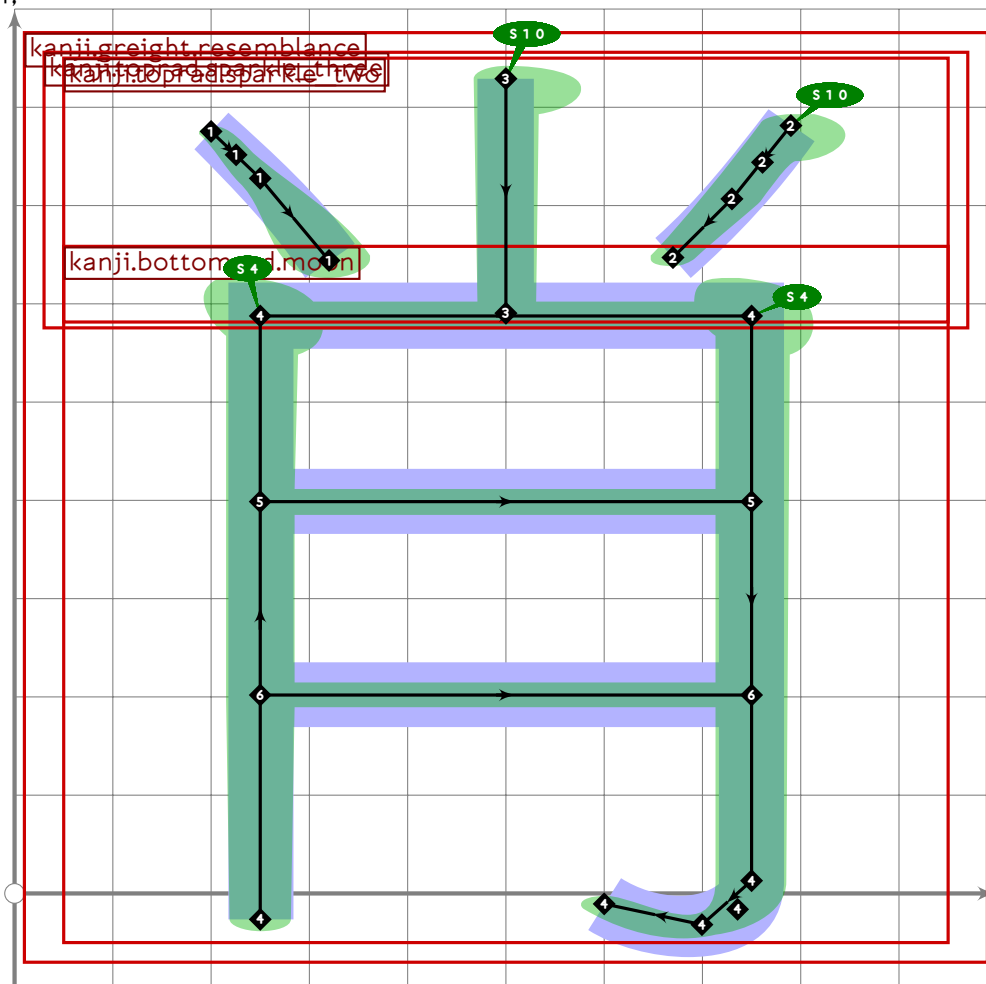
EIGH

U+8096  
tsuku.uni8096

```

518 x11=280;
519 y7=y9=y4;
520 y10=110;
521 y11=-70;
522 z6=point 2.2 of get_stroke(0);
523 z8=(z7-z9) intersectionpoint (get_stroke(0)-((-1)[z4,z2]));
524 push_stroke(z6-z8-z9.tension 1.2..z10..z11,
525   (1.6-0.5*mincho,1.6-0.5*mincho)-(1.5-0.1*mincho,1.5-0.1*mincho)-
526   (1.6,1.6)-(14,14)-(1,1));
527 set_boserif(0,24);
528 set_botip(0,1,1);
529 set_botip(0,2,0);
530 endgroup;
531 push_stroke((point 0.4 of get_stroke(-1)).tension 1.2..
532   (240,290)..(60,-60),
533   (1.6,1.6)-(14,14)-(1,1,1));
534 push_stroke((point 0.08 of get_stroke(0)).tension 1.2..
535   (480,270)..(870,-60),
536   (1.2,1.2)-(1.5,1.5)-(1.8,1.8));
537 expand_pbox;
538 enddef;

```

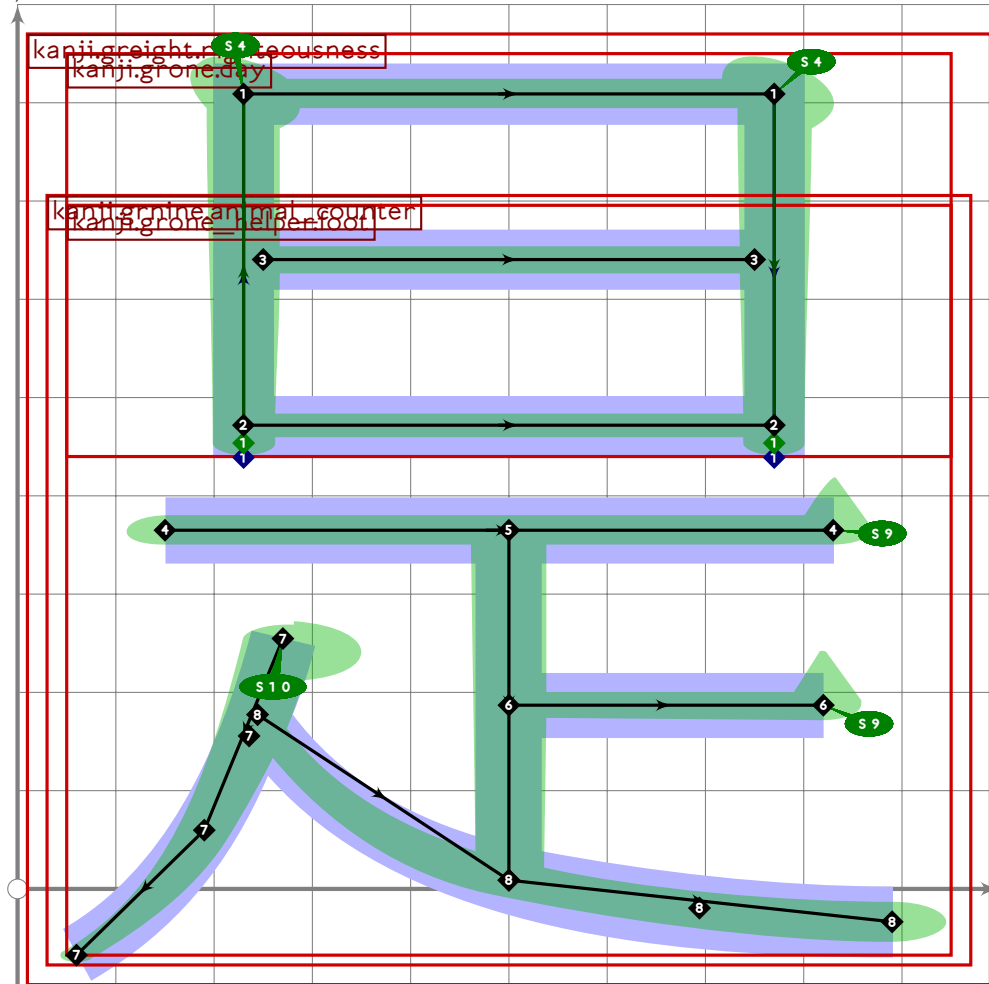


EIGH

```

539
540 vardef kanji.greight.resemblance =
541   push_pbox_toexpand("kanji.greight.resemblance");
542   build_kanji.tb(620,77)
543     (kanji.toprad.sparkle_three)
544     (kanji.bottomrad.moon);
545   expand_pbox;
546 enddef;

```



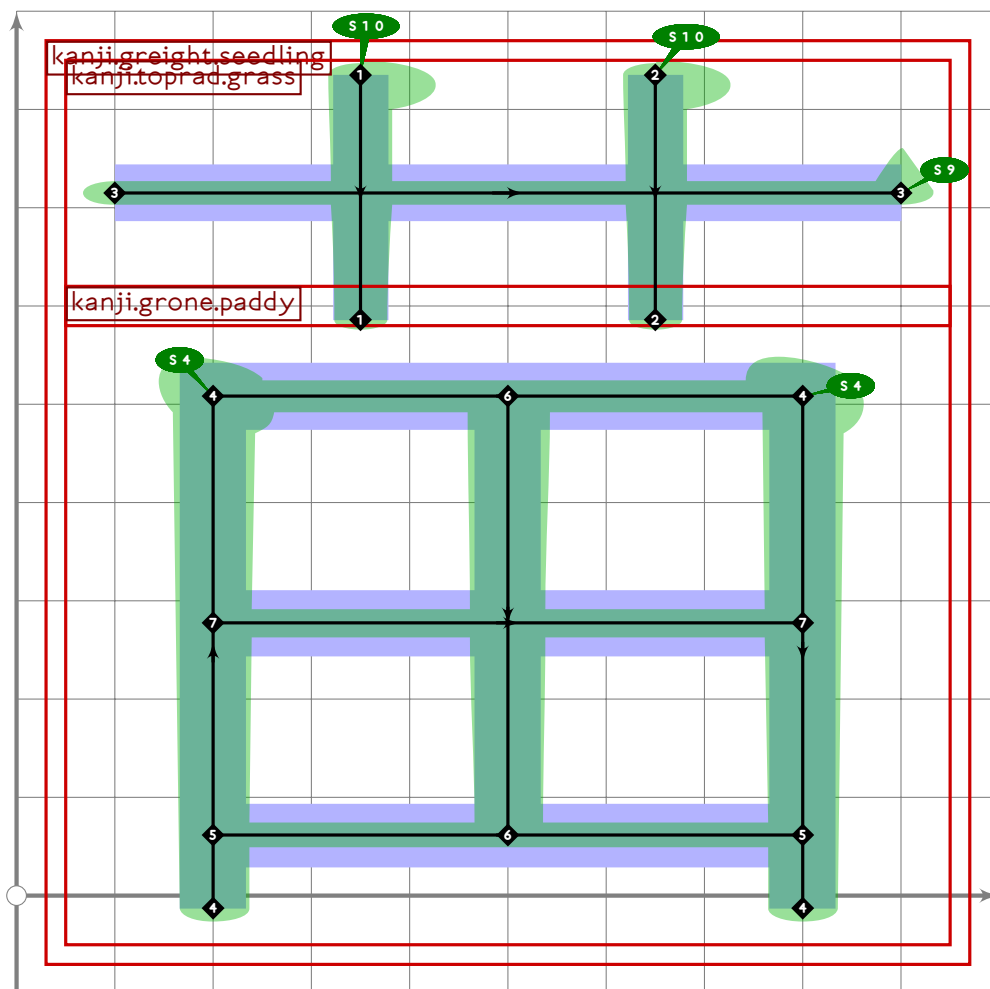
```

547
548 vardef kanji.greight.righteousness =
549   push_pbox_toexpand("kanji.greight.righteousness");
550   build_kanji.tb(420,40)
551     (kanji.grone.day)
552     (kanji.grnine.animal_counter;
553       replace_stroke(-4)(subpath (0,1) of oldp);
554       set_botip(-4,1,whatever);
555       replace_strokeq(-4)((1.6,1.6)-(1.6,1.6));
556       set_boserif(-4,1,9));
557   expand_pbox;
558 enddef;

```

EIGH

U+82D7  
tsuku.uni82D7

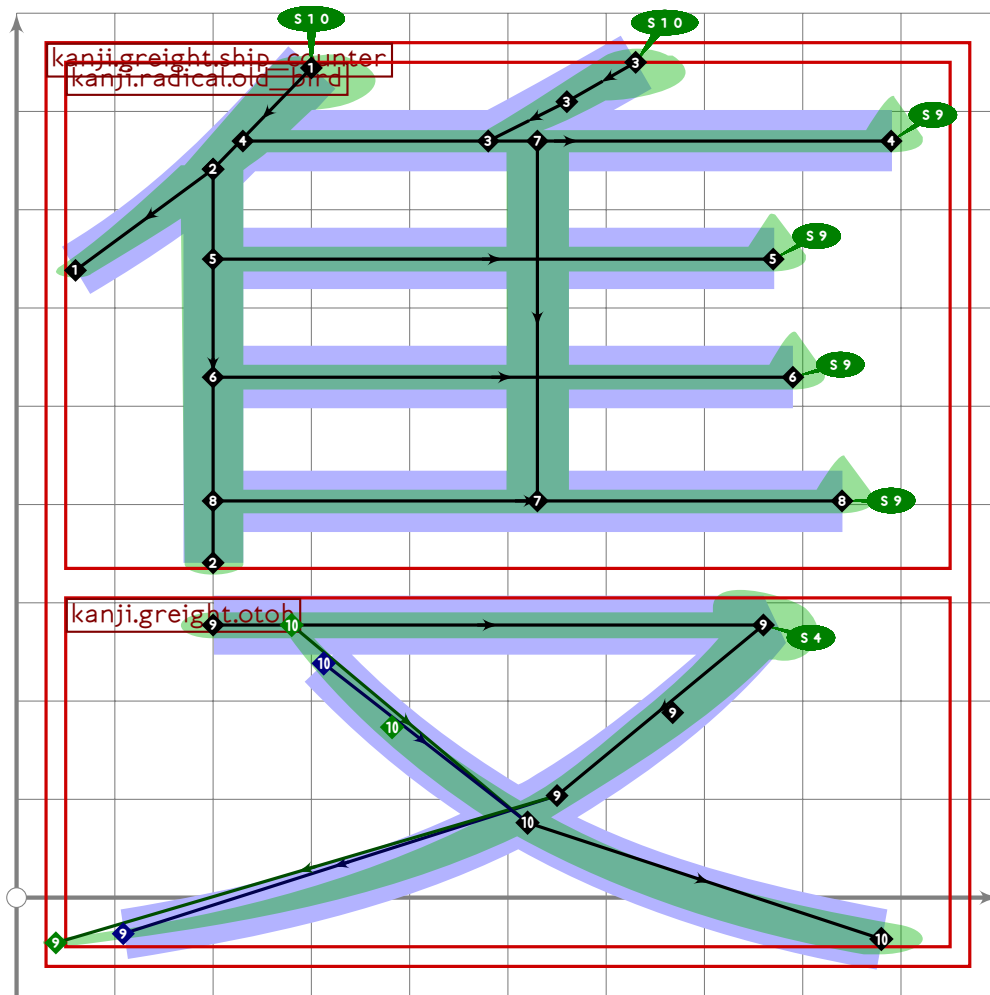


**EIGH**

```

559
560 vardef kanji.greight.seedling =
561   push_pbox_toexpand("kanji.greight.seedling");
562   build_kanji.tb(600,40)
563     (kanji.toprad.grass)
564     (kanji.grone.paddy);
565   expand_pbox;
566 enddef;

```

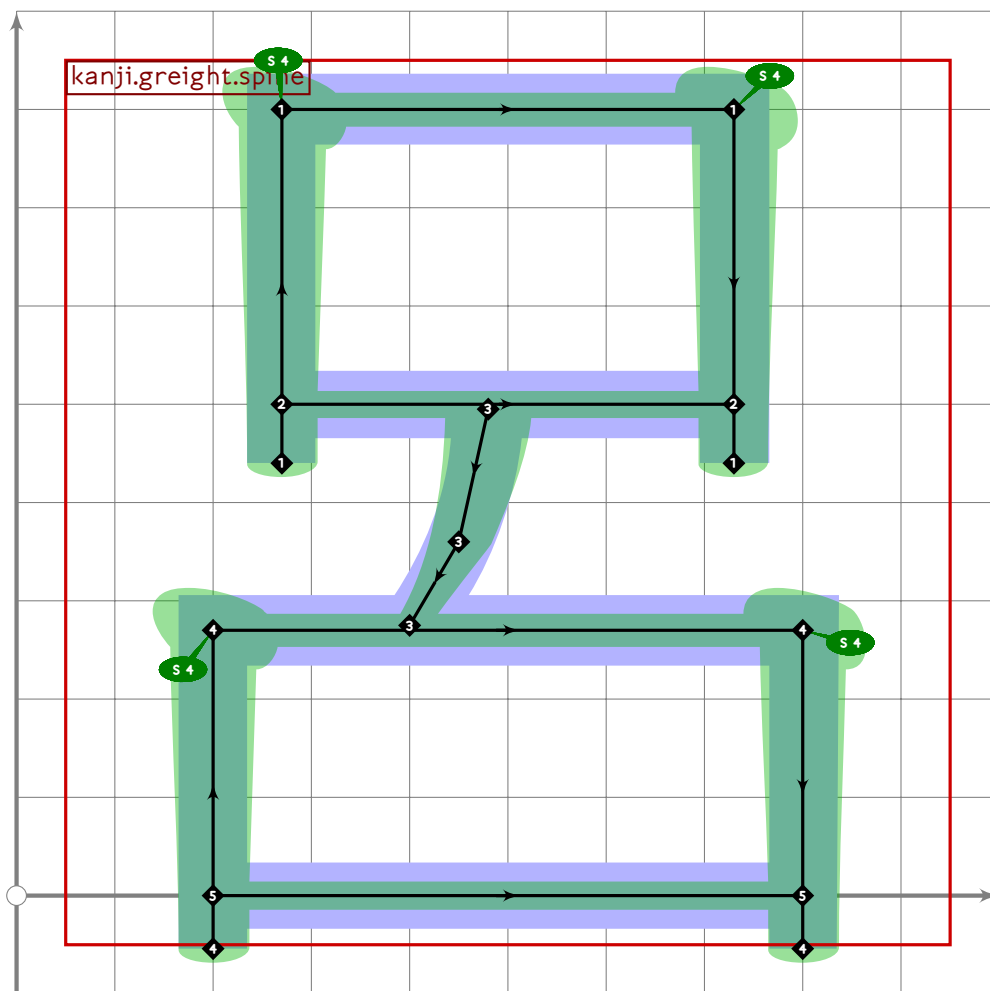


```

567
568 vardef kanji.greight.ship_counter =
569   push_pbox_toexpand("kanji.greight.ship_counter");
570   build_kanji.tb(320,-30)
571     (kanji.radical.old_bird)
572     (kanji.greight.otoh);
573   expand_pbox;
574 enddef;

```

**EIGH**

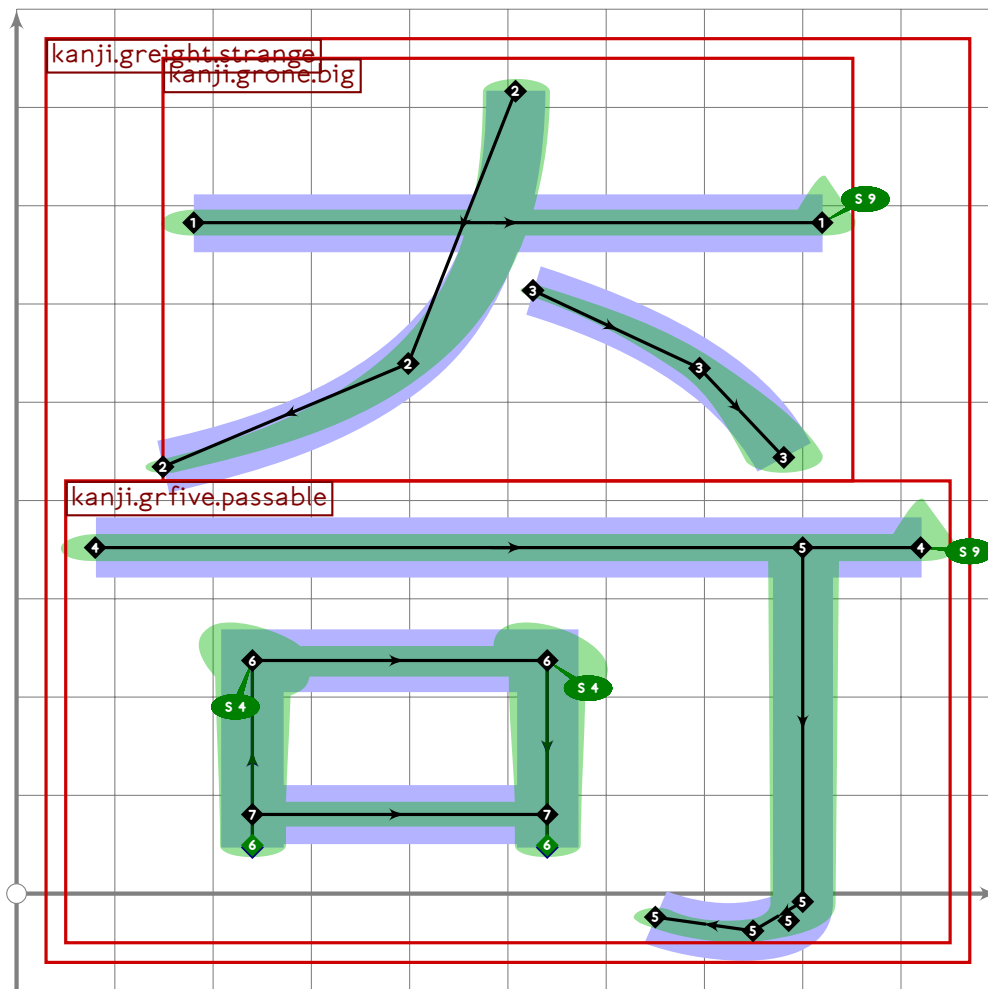


**EIGH**

```

575
576 vardef kanji.greight.spine =
577   push_pbox_toexpand("kanji.greight.spine");
578   build_kanji.box((270,800),(730,500));
579   push_stroke((480,495)..(450,360)..(400,275),
580     (1,7,1,7)-(14,1,4)-(1,1));
581   build_kanji.box((200,270),(800,0));
582   expand_pbox;
583 enddef;

```



```

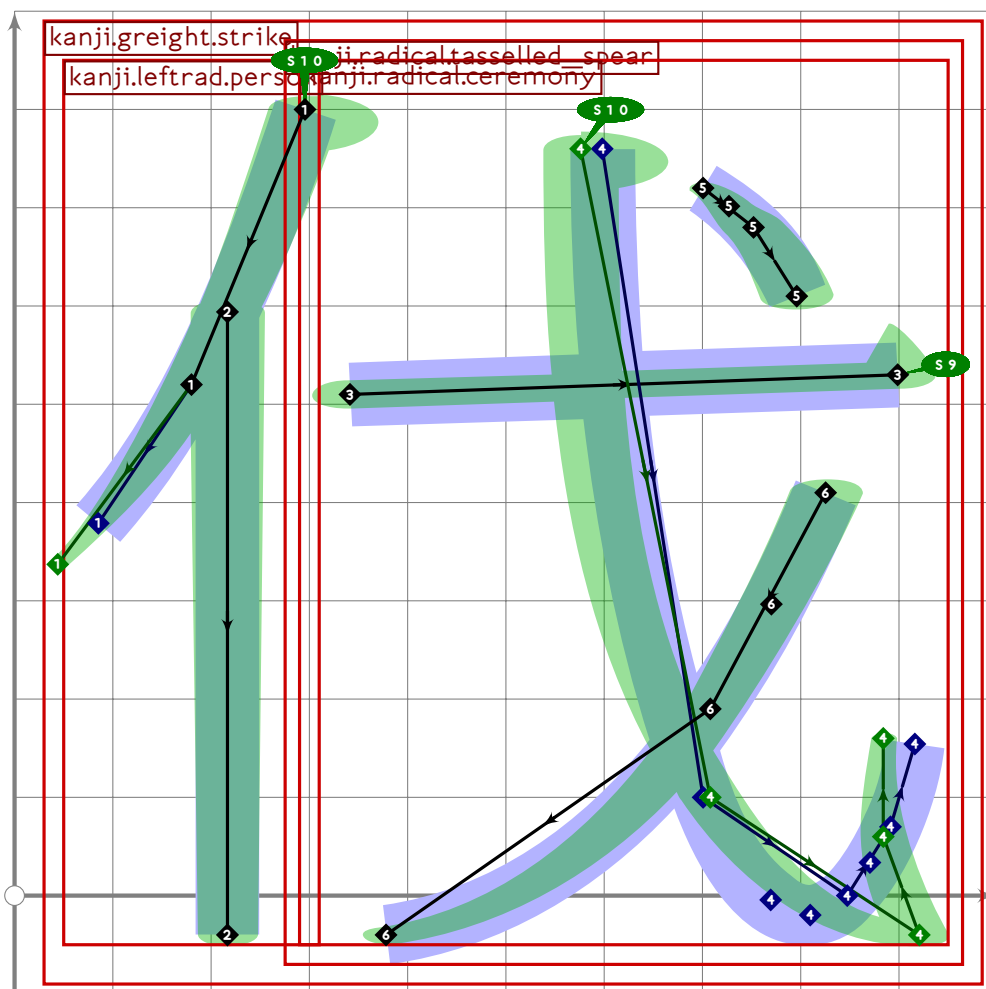
584
585 vardef kanji.greight.strange =
586   push_pbox_toexpand("kanji.greight.strange");
587   build_kanji.tb(420,0)
588     (build_kanji.sscale(xscaled 0.78)(kanji.leftrad.big))
589     (kanji.grfive.passable);
590   expand_pbox;
591 enddef;

```

EIGH



U+4F10  
tsuku.uni4F10

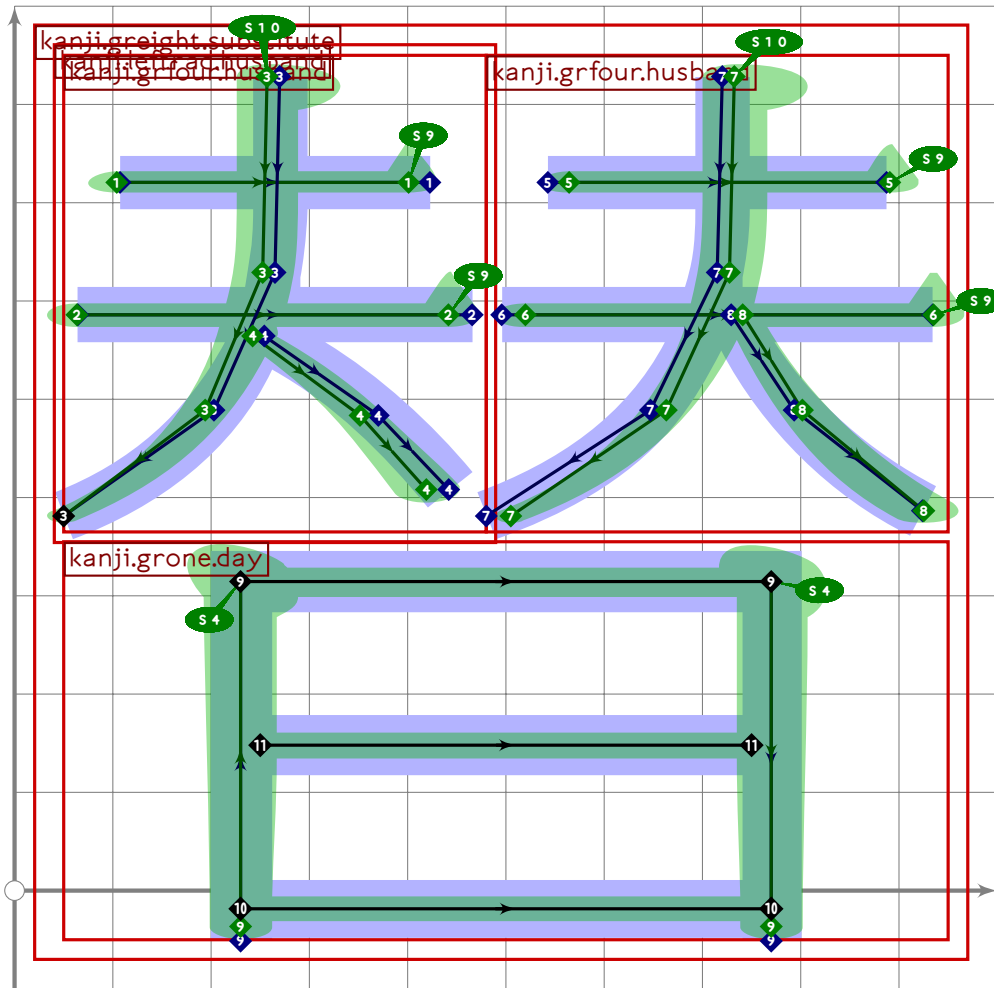


**EIGH**

```

592
593 vardef kanji.greight.strike =
594   push_pbox_toexpand("kanji.greight.strike");
595   build_kanji.lr(300,20)
596     (kanji.leftrad.person)
597     (kanji.radical.tasselled_spear);
598   expand_pbox;
599 enddef;

```



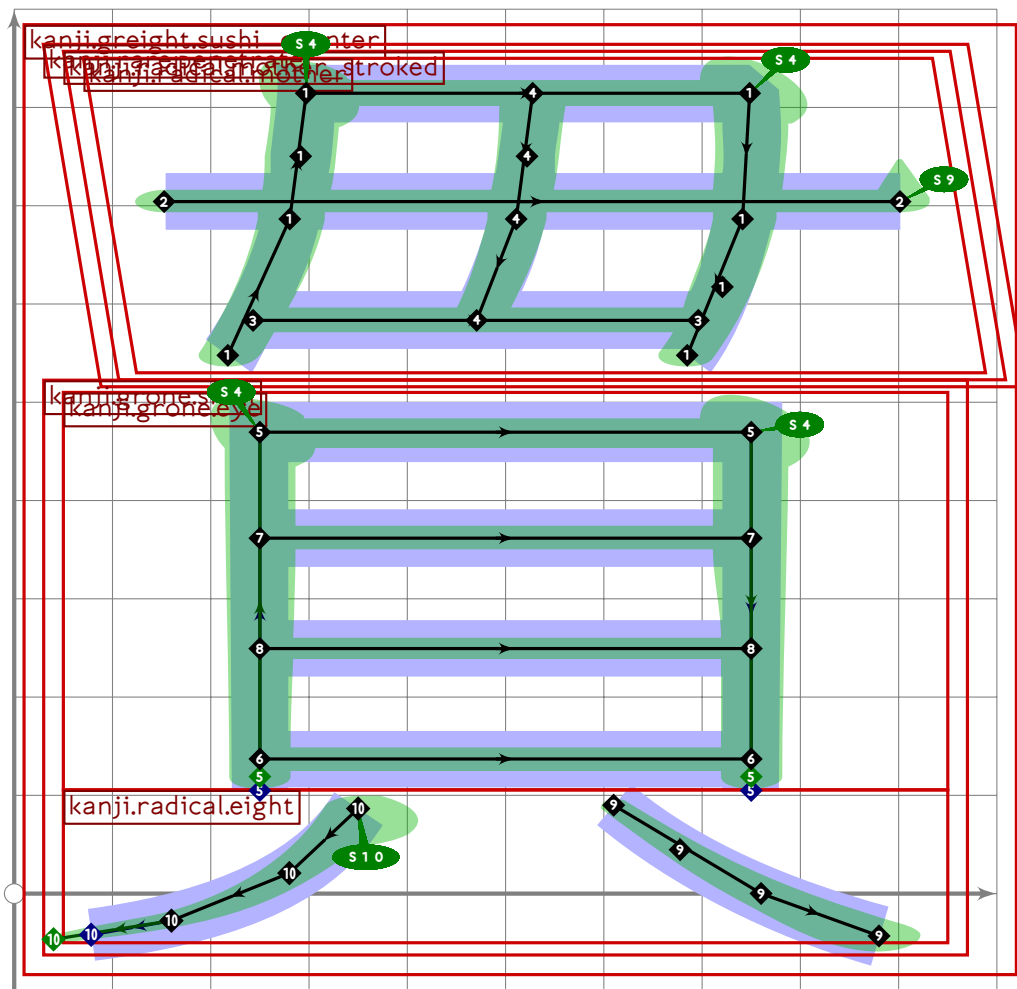
```

600
601 vardef kanji.greight.substitute =
602   push_pbox_toexpand("kanji.greight.substitute");
603   build_kanji.tb(360,-10)
604     (build_kanji.lr(480;50*mincho)
605       (kanji.leftrad.husband)
606       (kanji.grfour.husband))
607     (kanji.grone.day);
608   expand_pbox;
609 enddef;

```

EIGH

U+8CAB  
tsuku.uni8CAB

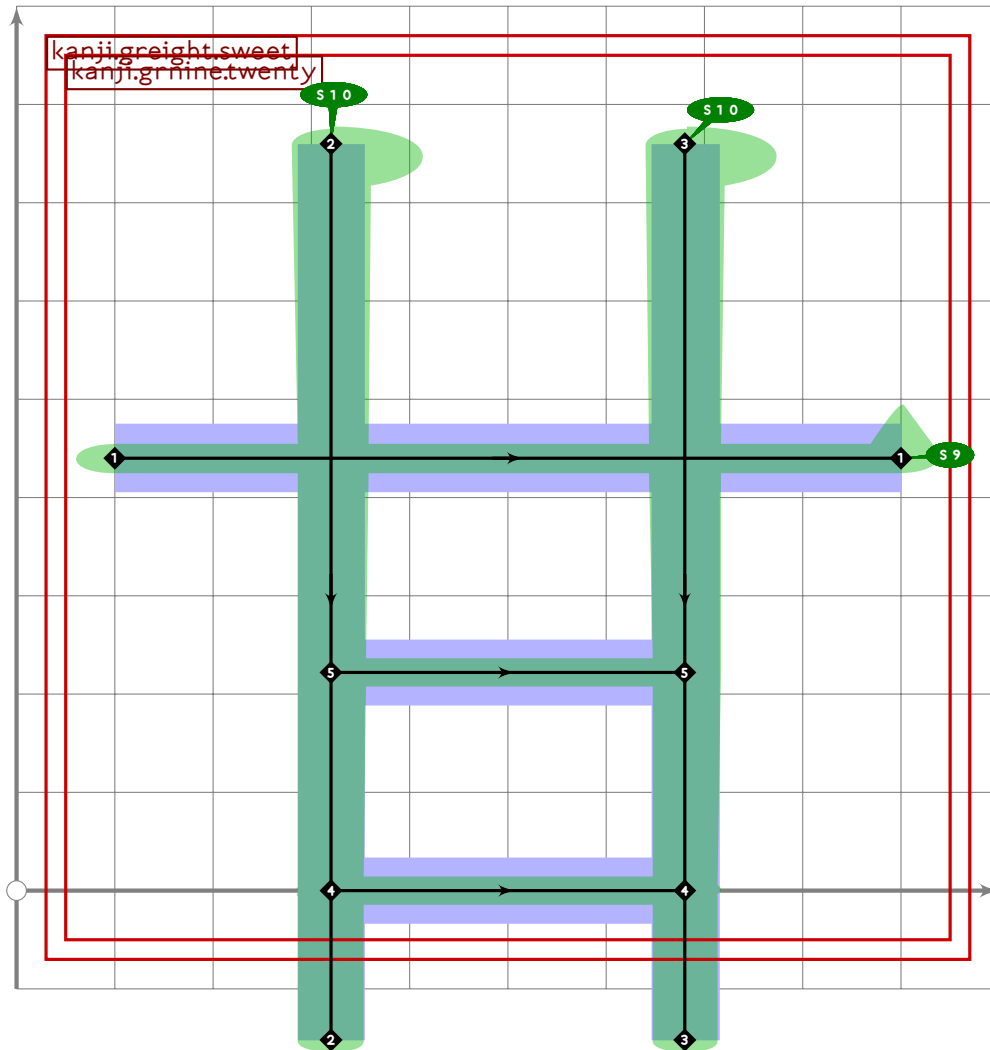


**EIGH**

```

610
611 vardef kanji.greight.sushi_counter =
612   push_pbox_toexpand("kanji.greight.sushi_counter");
613   build_kanji.tb(520,-20)
614     (build_kanji.sscale(xscaled 0.96 shifted (30,0) slanted -0.06)
615       (kanji.rare.penetrate))
616     (kanji.grone.shell);
617   expand_pbox;
618 enddef;

```



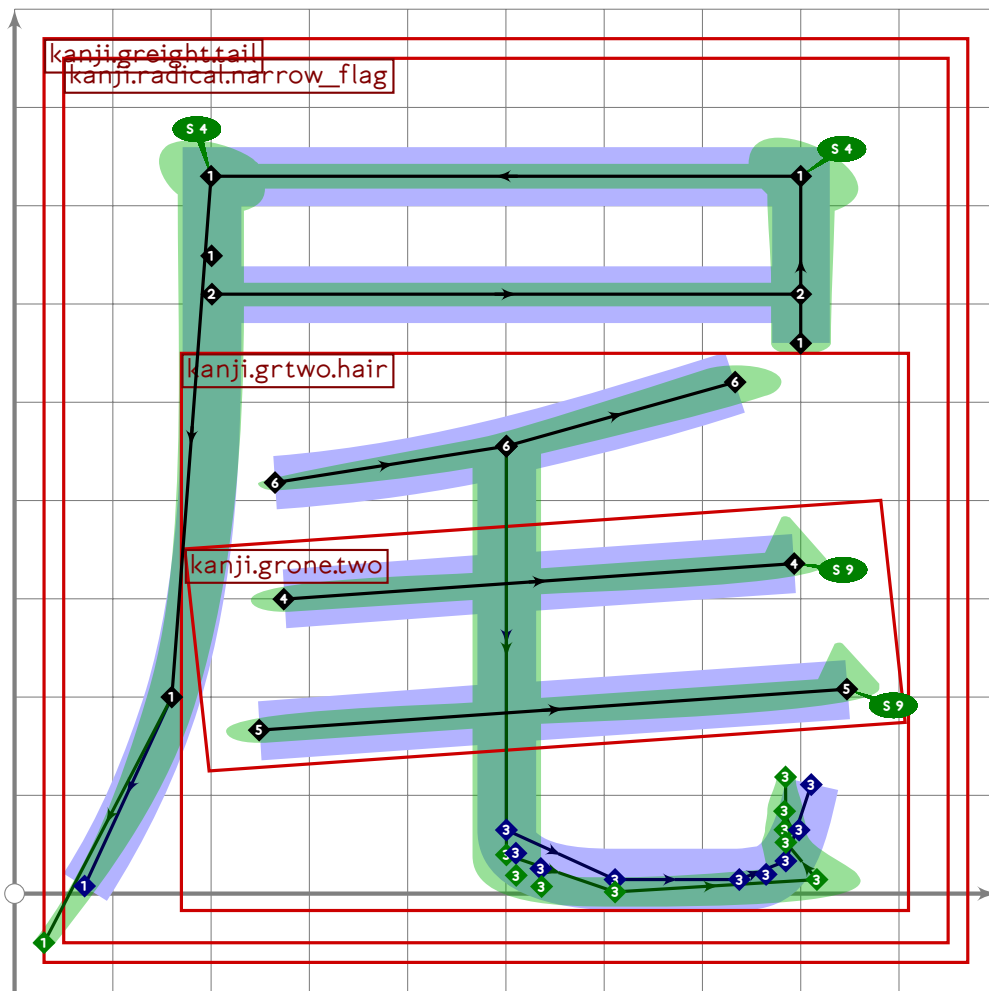
```

619
620 vardef kanji.greight.sweet =
621   push_pbox_toexpand("kanji.greight.sweet");
622   kanji.grnine.twenty;
623   push_stroke((320,222)-(680,222),(1.5,1.5)-(1.5,1.5));
624   expand_pbox;
625 enddef;

```

**EIGH**

U+5C3E  
tsuku.uni5C3E

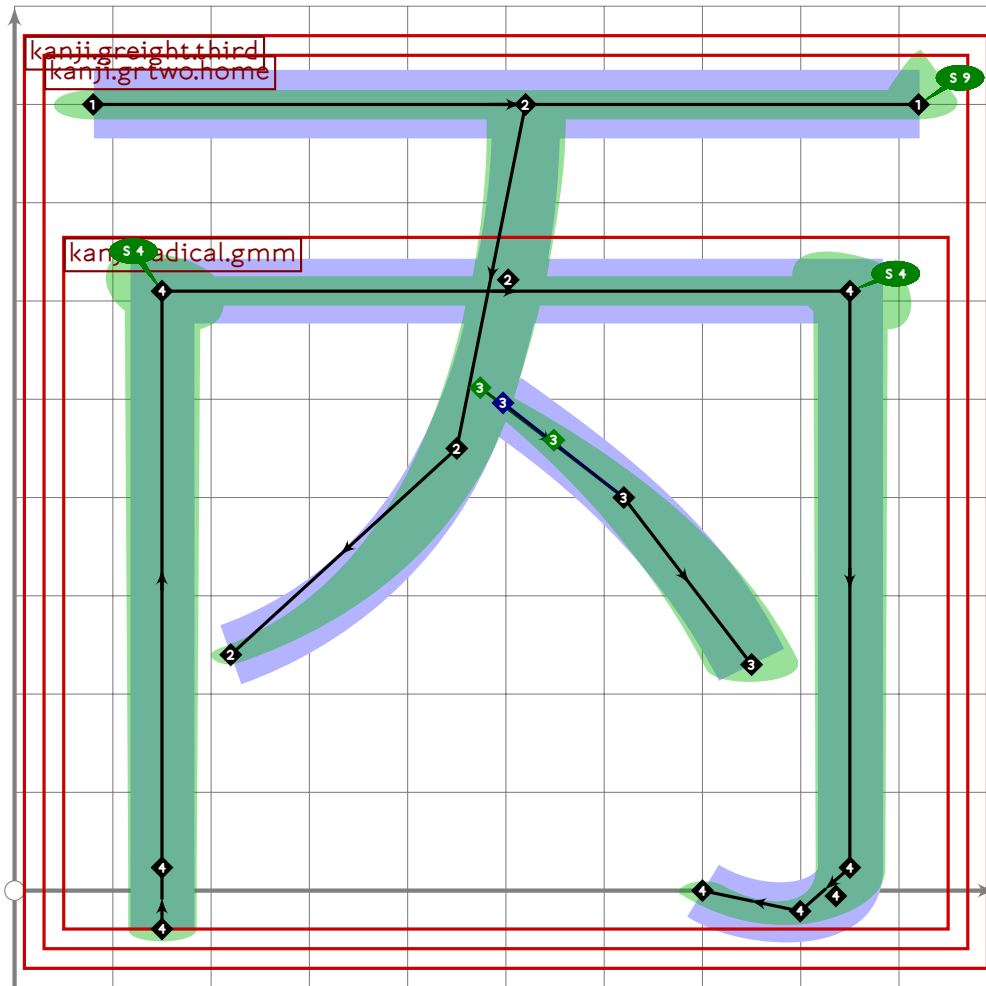


# EIGH

```

626
627 vardef kanji.greight.tail =
628   push_pbox_toexpand("kanji.greight.tail");
629   build_kanji.level(
630     kanji.radical.narrow_flag;
631     build_kanji.sscale(xyscaled (0.79,0.63) shifted (40;-130))
632     (kanji.grtwo.hair));
633   expand_pbox;
634 enddef;

```

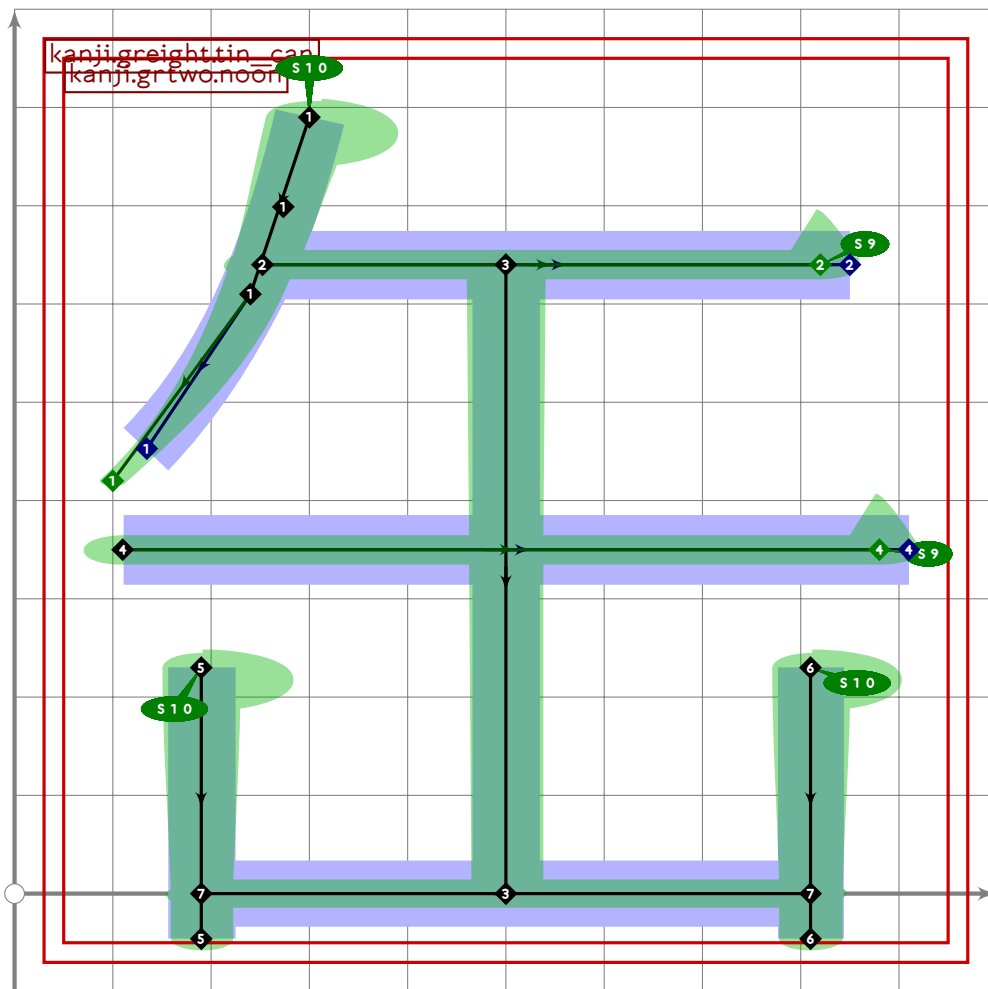


```

635
636 vardef kanji.greight.third =
637   push_pbox_toexpand("kanji.greight.third");
638   push_stroke((80,800)-(920,800),(1.6,1.6)-(1.6,1.6));
639   set_boserif(0,1,9);
640   kanji.grtwo.home;
641   set_boserif(-2,0,whatever);
642   expand_pbox;
643 enddef;

```

**EIGH**

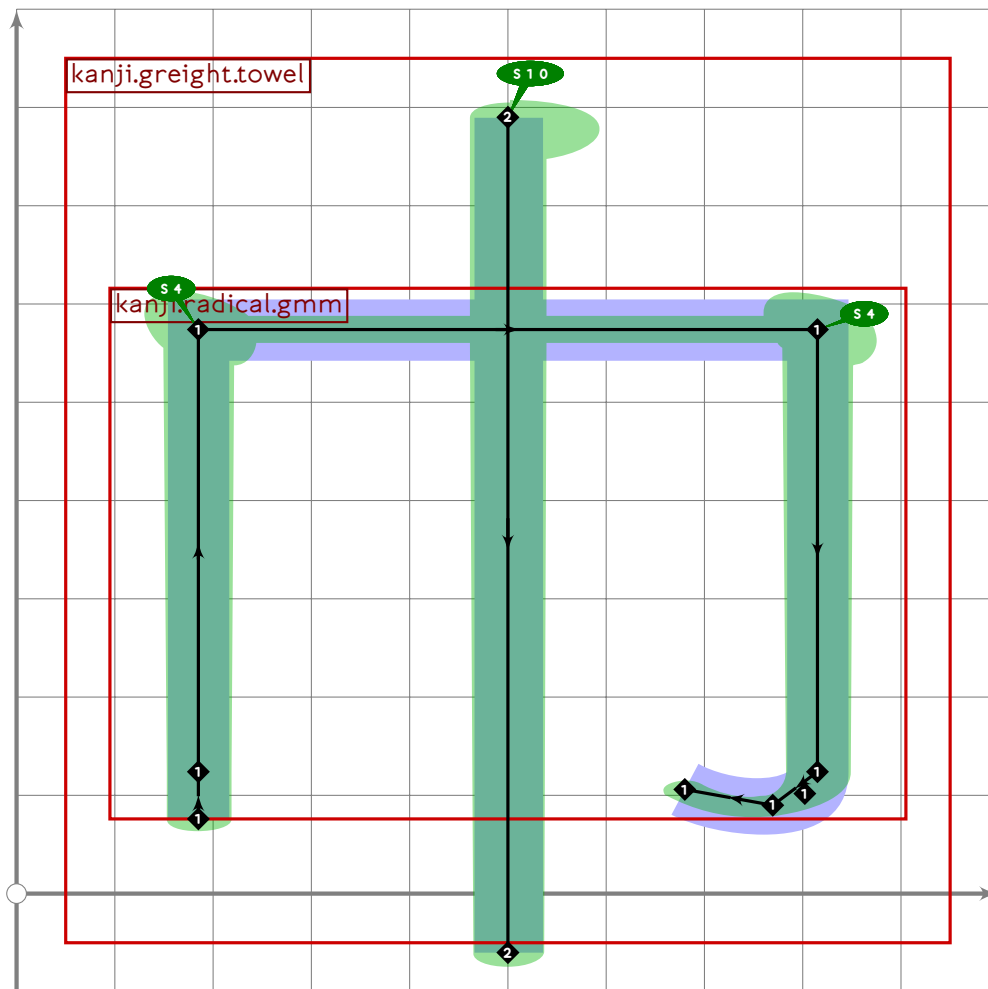


**EIGH**

```

644
645 vardef kanji.greight.tin_can =
646   push_pbox_toexpand("kanji.greight.tin_can");
647   kanji.grtwo.noon;
648   replace_strokep(-1)((500,640)-(500,0));
649   replace_strokep(0)(oldp shifted (0,20));
650   build_kanji.cup((190,230),(810,0));
651   expand_pbox;
652 enddef;

```



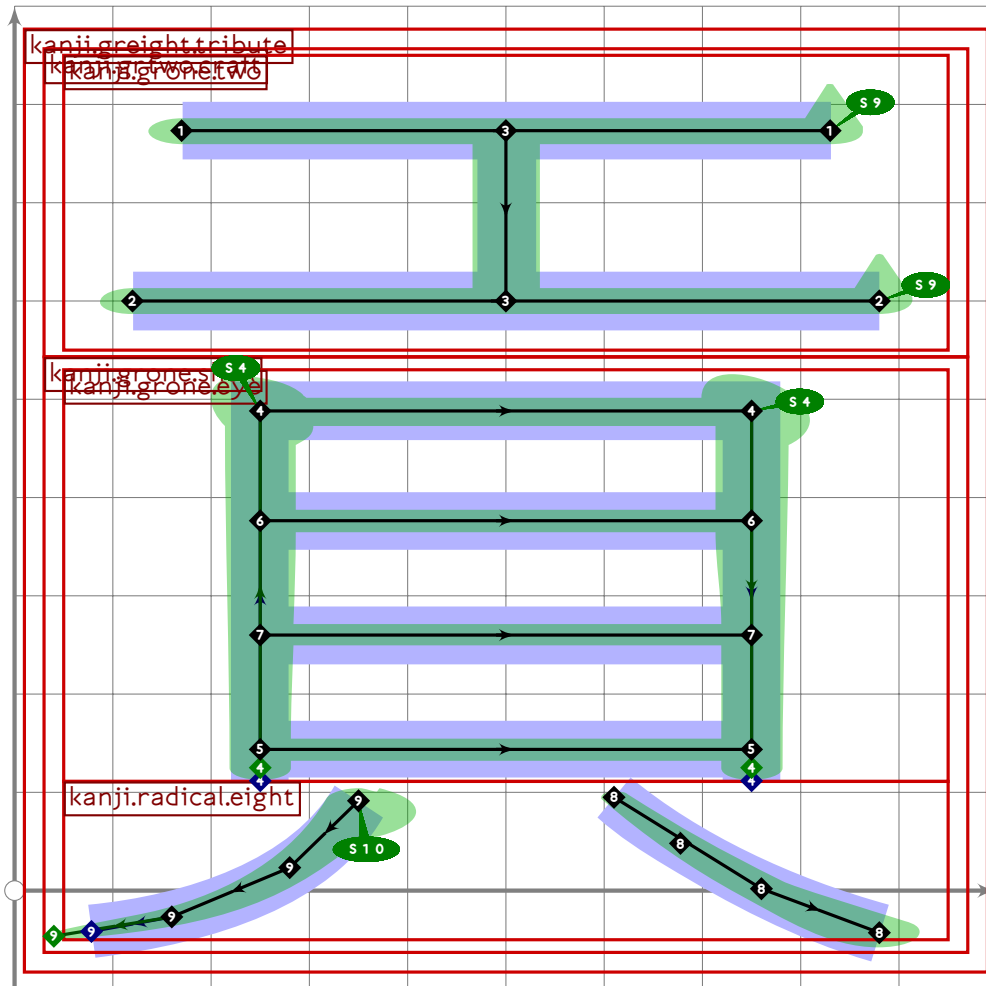
```

653
654 vardef kanji.greight.towel =
655   push_pbox_toexpand("kanji.greight.towel");
656   build_kanji.sscale(xyscaled (0.9,0.6) shifted (0,-50))
657   (kanji.radical.gmm);
658   push_stroke((500,790)-(500,-60),
659   (1.6,1.6)-(1.5,1.5));
660   set_boserif(0,0,10);
661   expand_pbox;
662 enddef;

```

EIGH



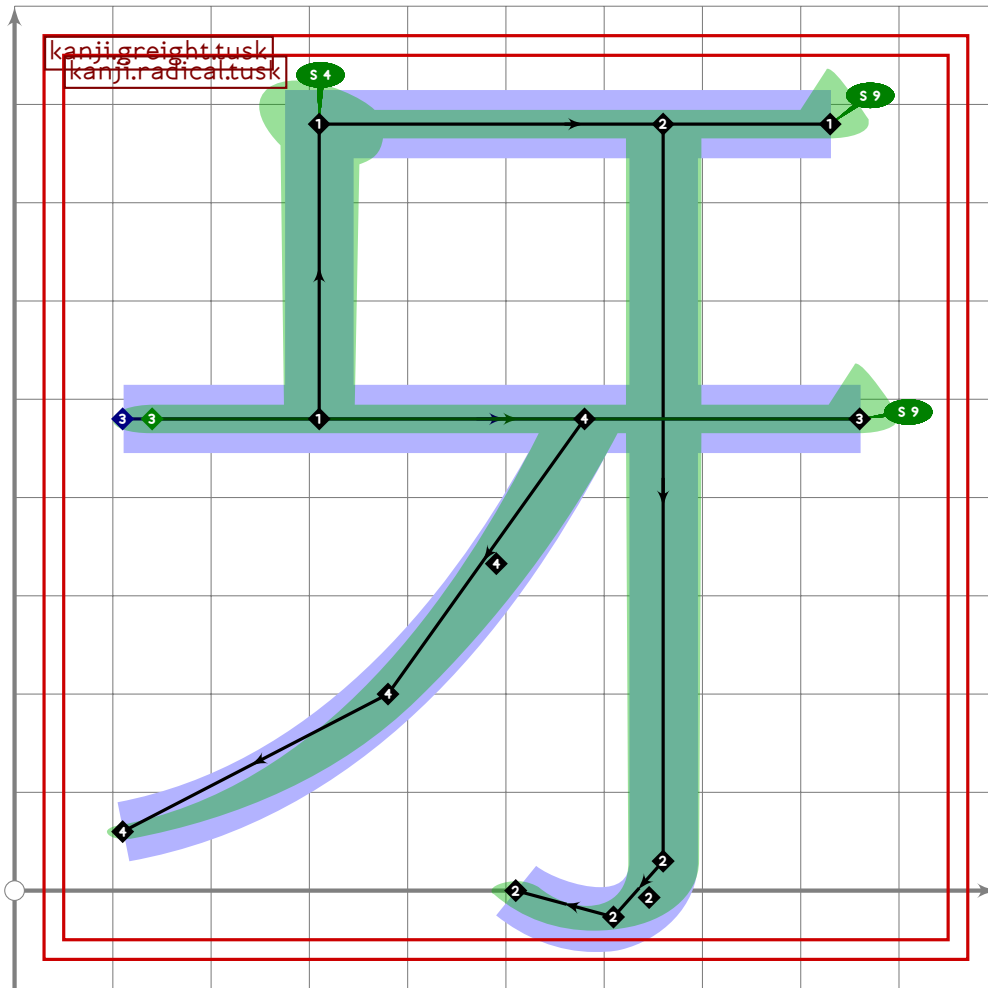


## EIGH

```

663
664 vardef kanji.greight.tribute =
665   push_pbox_toexpand("kanji.greight.tribute");
666   build_kanji.level(build_kanji.tb(540,-20)
667     (kanji.grtwo.craft)
668     (kanji.grone.shell));
669   expand_pbox;
670 enddef;

```



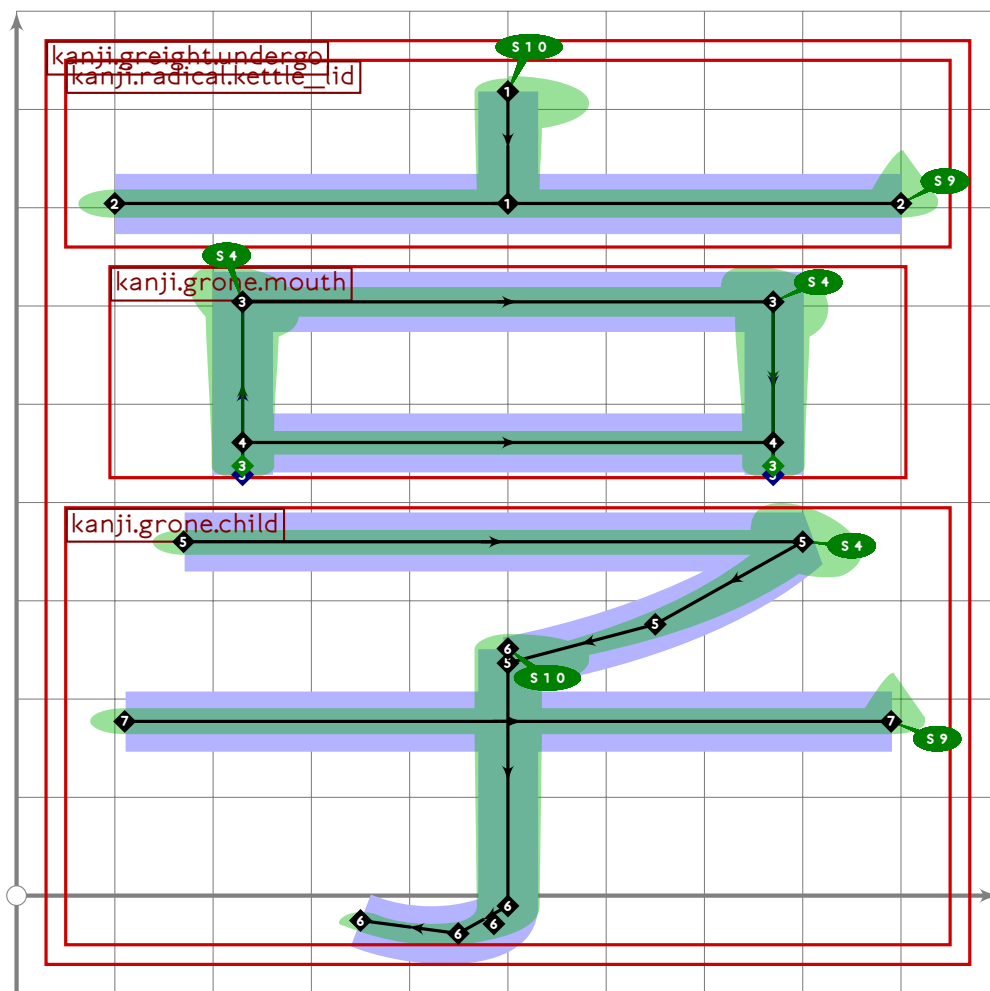
```

671
672 vardef kanji.greight.tusk =
673   push_pbox_toexpand("kanji.greight.tusk");
674   kanji.radical.tusk;
675   replace_strokeq(-4)((310,480)-(310,780)-(830,780));
676   replace_strokeq(-4)((1.5,1.5)-(1.6,1.6)-(1.6,1.6));
677   set_boserif(-4,1,4);
678   set_boserif(-4,2,9);
679   set_botip(-4,1,1);
680   obstacktype[find_whatever(otstroke,2)]:=otnull;
681   expand_pbox;
682 enddef;

```

**EIGH**

U+4EAB  
tsuku.uni4EAB

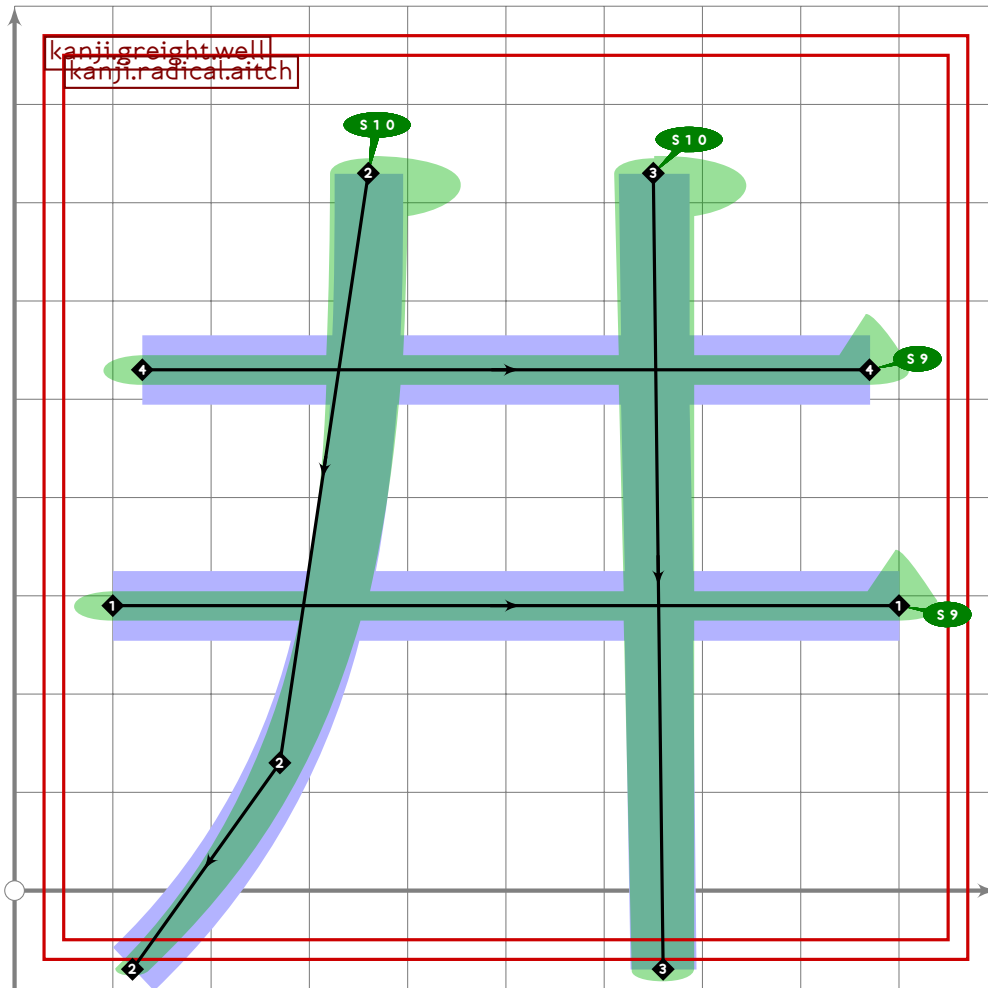


```

683
684 vardef kanji.greight.undergo =
685   push_pbox_toexpand("kanji.greight.undergo");
686   build_kanji.level(build_kanji.tb(650,-20)
687     (kanji.radical.kettle_lid)
688     (build_kanji.tb(550,-40)
689       (build_kanji.sscale(xscaled 0.9)(kanji.grone.mouth))
690       (kanji.grone.child)));
691   expand_pbox;
692 enddef;

```

EIGH

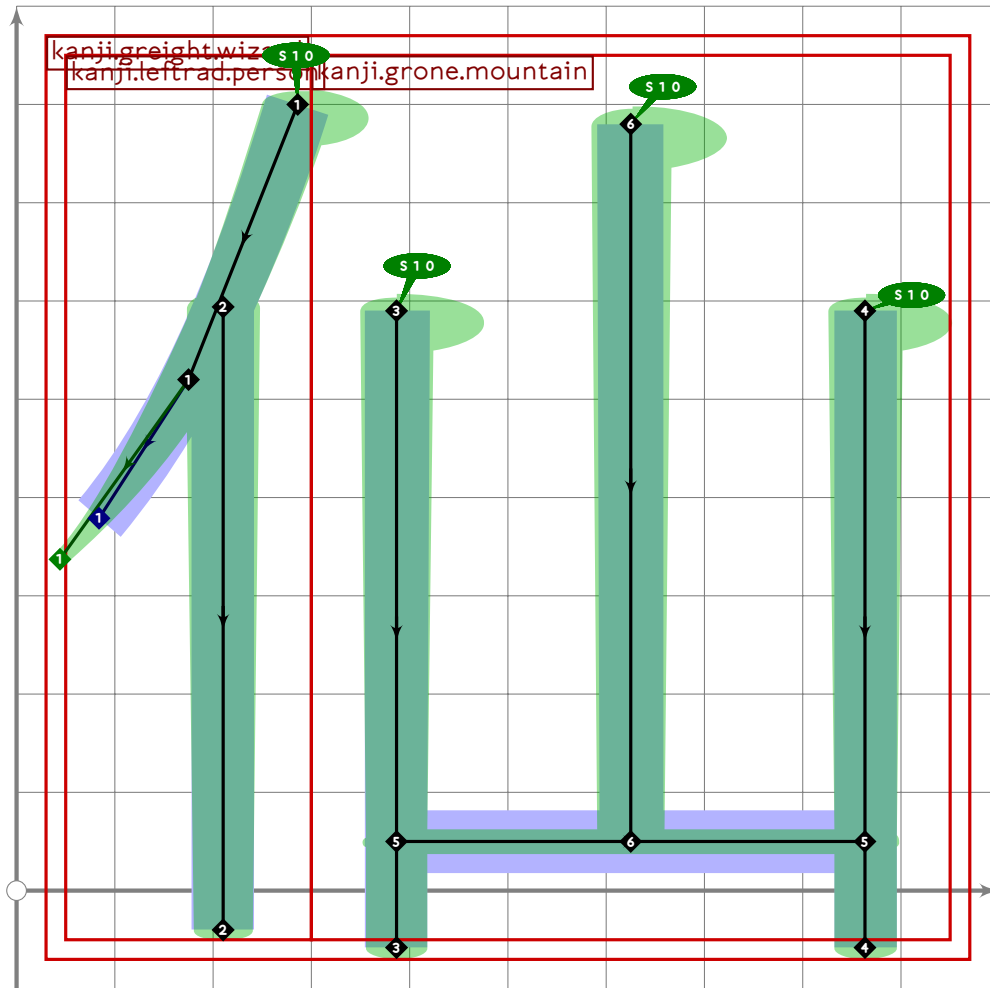


```

693
694 vardef kanji.greight.well =
695   push_pbox_toexpand("kanji.greight.well");
696   kanji.radical.aitch;
697   replace_strokep(-2)(oldp shifted (0,-140));
698   push_stroke((130,530)–(870,530),(1.6,1.6)–(1.6,1.6));
699   set_boserif(0,1,9);
700   expand_pbox;
701 enddef;

```

**EIGH**



**EIGH**

```

702
703 vardef kanji.greight.wizard =
704   push_pbox_toexpand("kanji.greight.wizard");
705   build_kanji.lr(300,0)
706     (kanji.leftrad.person)
707     (kanji.grone.mountain);
708   expand_pbox;
709 enddef;

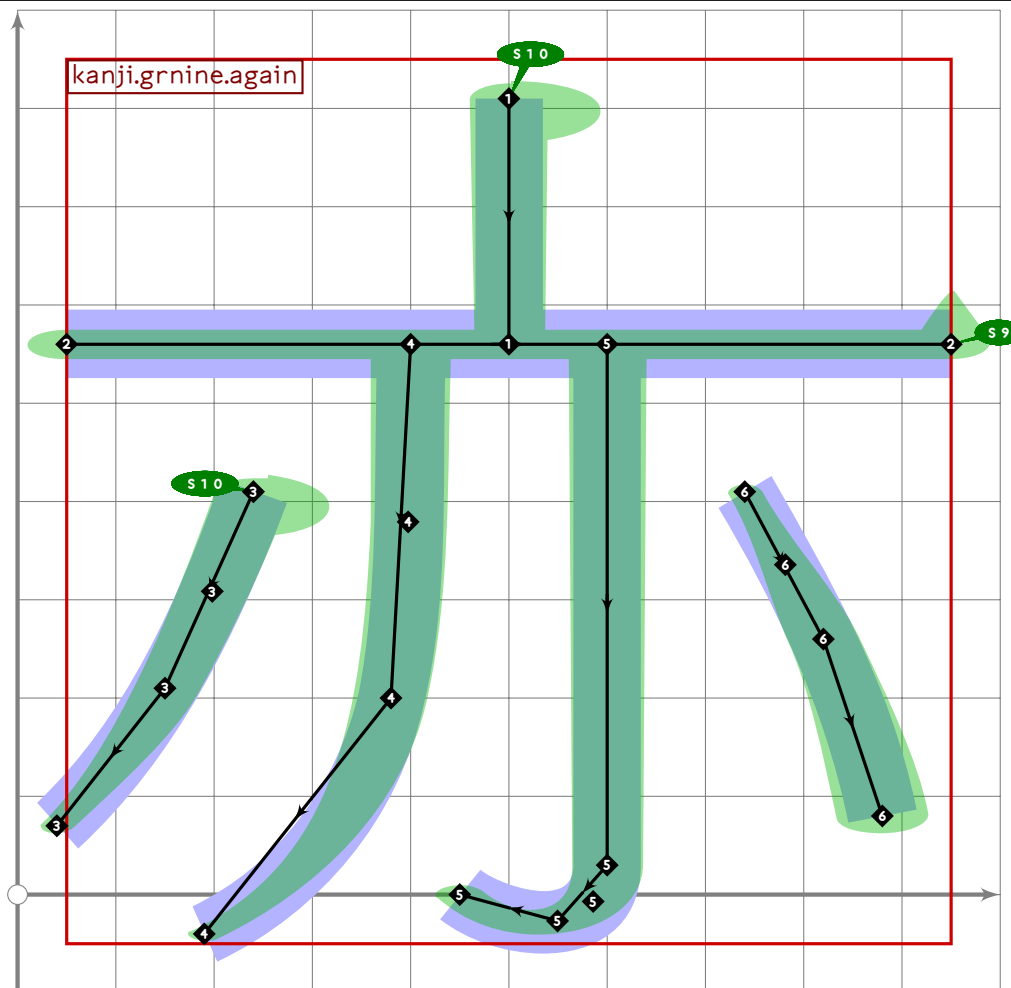
```

# gradenine.mp

```

1 %
2 % Grade Nine kanji used on more than one page
3 % Copyright (C) 2011, 2012, 2013, 2014, 2016, 2017 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 inclusion_lock(gradenine);
32
33

```



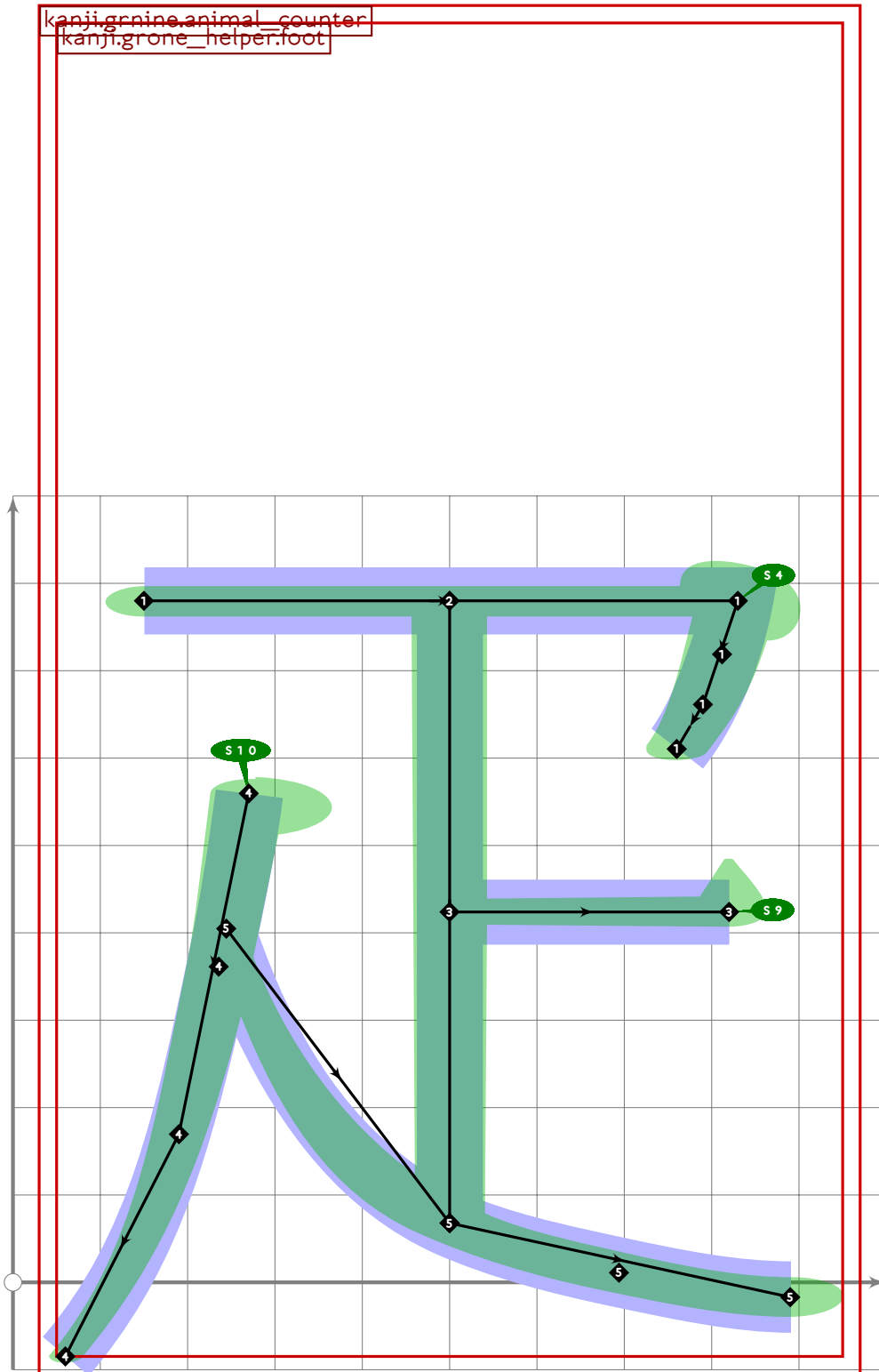
```

34
35 vardef kanji.grnine.again =
36   push_pbox_toexpand("kanji.grnine.again");
37   push_stroke((500,810)-(500,560),(1.6,1.6)-(1.5,1.5));
38   set_boserif(0,0,10);
39   push_stroke((50,560)-(950,560),(1.6,1.6)-(1.6,1.6));
40   set_boserif(0,1,9);
41   push_stroke((240,410)..tension 1.3..(150,210)..(40,70),
42     (1.6,1.6)-(1.5,1.5)-(1,1));
43   set_boserif(0,0,10);

```

NINE

```
44  push_stroke((400,560){down}..tension 1.3..(380,200)..(190,-40),
45    (1.6,1.6)–(1.5,1.5)–(1,1));
46  push_stroke((600,560),(1.6,1.6));
47  build_kanji.add_jtail(0);
48  push_stroke((740,410)..tension 1.3..(820,260)..(880,80),
49    (1,1)–(1.5,1.5)–(1.8,1.8));
50  expand_pbox;
51 enddef;
```



NINE

```

52
53 vardef kanji.grnine.animal_counter =
54   push_pbox_toexpand("kanji.grnine.animal_counter");
55   tsu_xform(identity yscaled (780/460))
56   (push_stroke((150,460)-(830,460)..tension 1.2..(790,390)..(760,360),
57     (1.6,1.6)-(1.7,1.7)-(1.6,1.6)-(1.4,1.4));

```

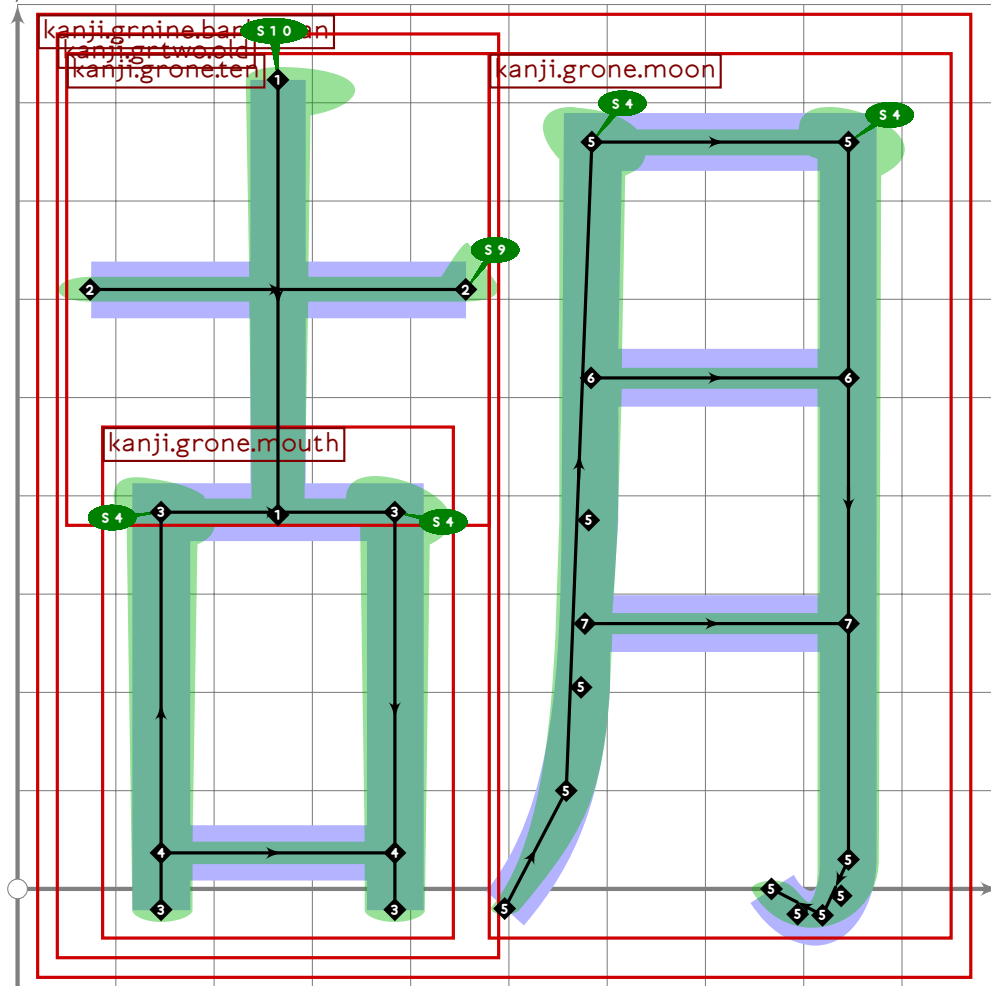


U+80E1  
tsuku.uni80E1

```

58   set_botip(0,1);
59   set_boserif(0,1,4);
60   push_stroke((500,460)-(500,40),(1.6,1.6)-(1.5,1.5));
61   push_stroke((500,250)-(820,250),(1.5,1.5)-(1.6,1.6));
62   set_boserif(0,1,9);
63   kanji.grone_helper.foot);
64   expand_pbox;
65 enddef;

```

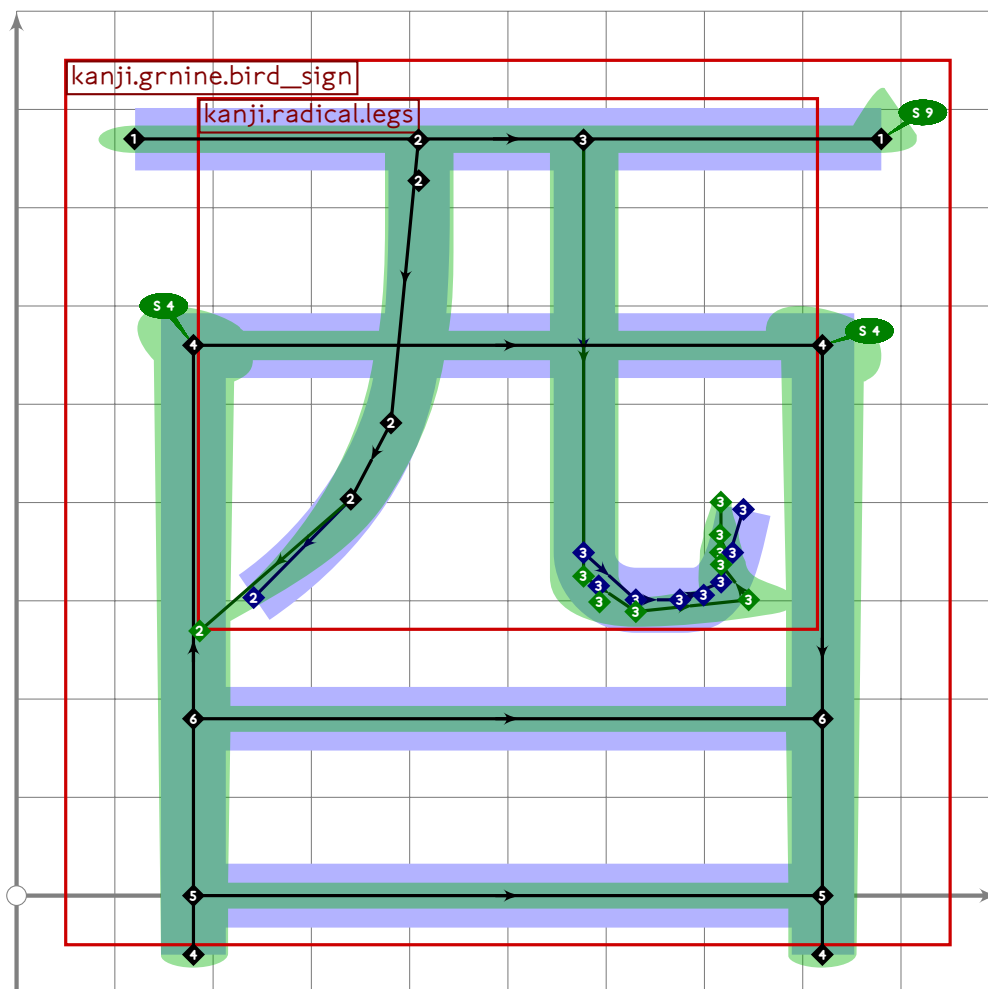


NINE

```

66
67 vardef kanji.grnine.barbarian =
68   push_pbox_toexpand("kanji.grnine.barbarian");
69   build_kanji.level(build_kanji.lr(480,0)
70     (kanji.grtwo.old)
71     (kanji.grone.moon));
72   expand_pbox;
73 enddef;

```

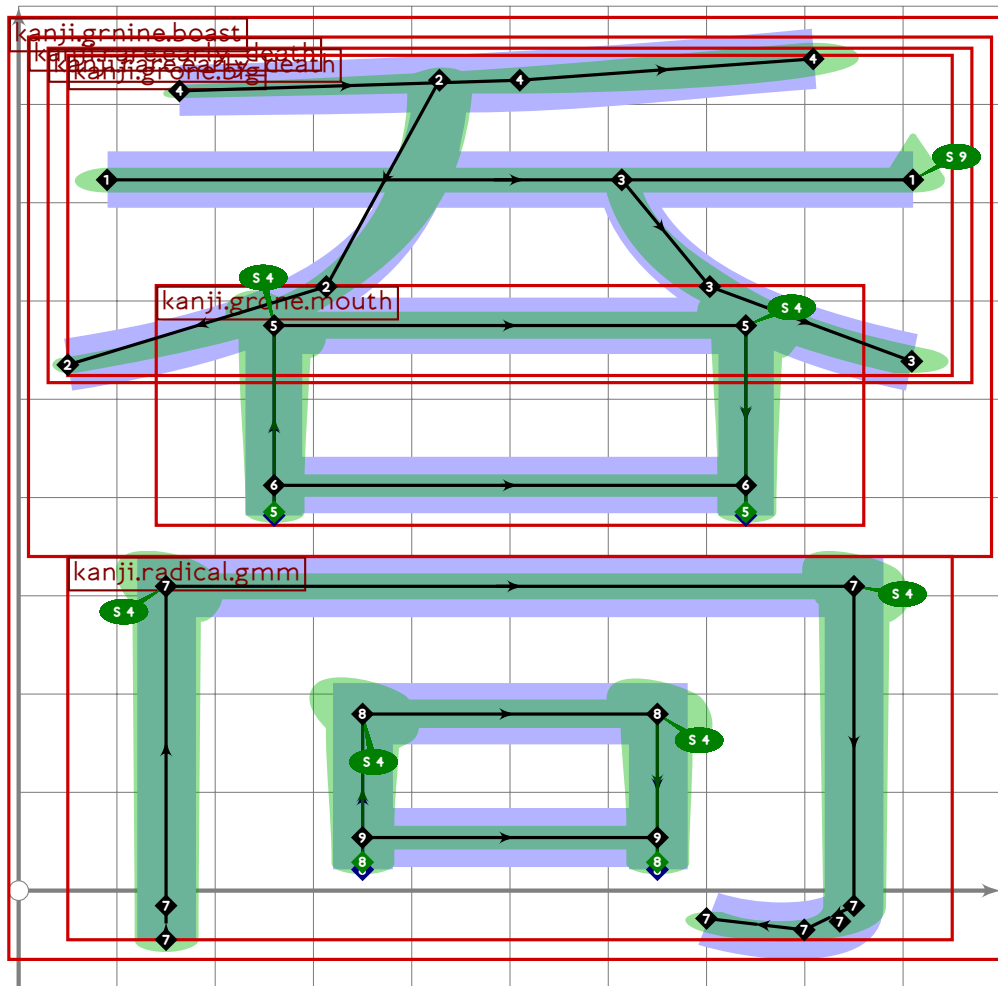


```

74
75 vardef kanji.grnine.bird_sign =
76   push_pbox_toexpand("kanji.grnine.bird_sign");
77   build_kanji.thickness(0.93)(
78     push_stroke((120,770)–(880,770),(1.6,1.6)–(1.6,1.6));
79     set_boserif(0,1,9);
80     build_kanji.sscale(xyscaled (0.7,0.6) shifted (0,145))
81     (kanji.radical.legs);
82     build_kanji.box((180,560),(820,0));
83     push_stroke((180,180)–(820,180),(1.5,1.5)–(1.5,1.5));
84   expand_pbox;
85 enddef;

```

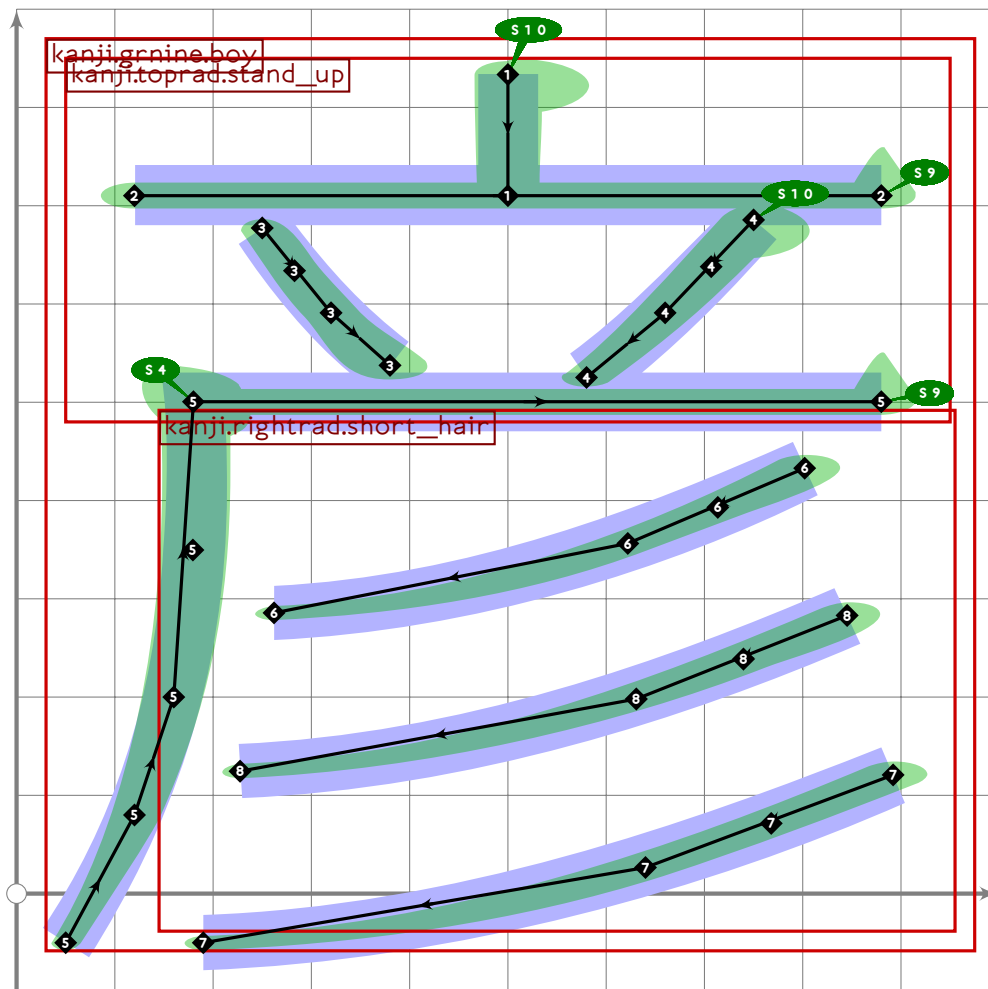
NINE



```

86
87 vardef kanji.grnine.boast =
88   push_pbox_toexpand("kanji.grnine.boast");
89   build_kanji.tb(340,0)
90   (kanji.rare.drink)
91   (kanji.radical.gmm;
92     build_kanji.box((350,480),(650,190)));
93   expand_pbox;
94 enddef;

```



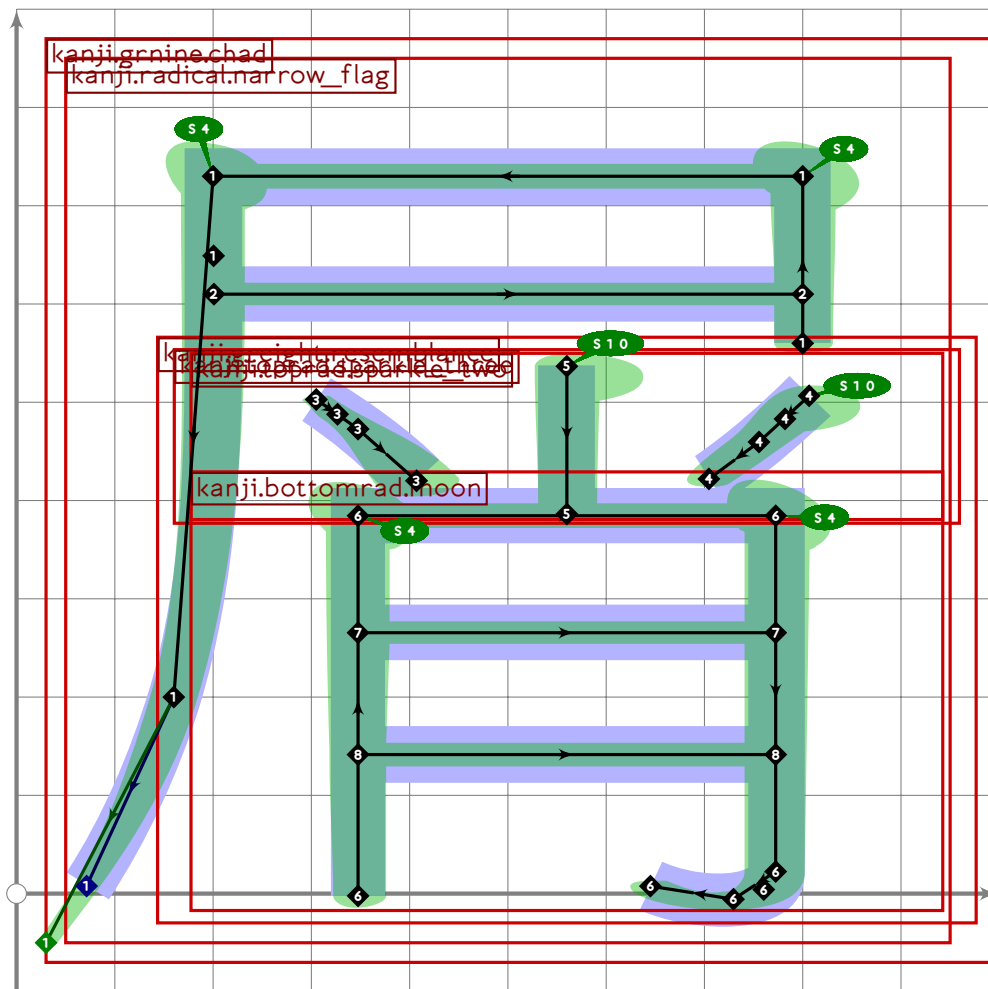
```

95
96 vardef kanji.grnine.boy =
97   push_pbox_toexpand("kanji.grnine.boy");
98   build_kanji.level(build_kanji.tb(480,0)
99     (kanji.toprad.stand_up)
100     (build_kanji.sscale(xscaled 0.9 shifted (50,20))
101       (kanji.rightrad.short_hair)));
102   replace_strokep(-3)((50,-50)..(120,80)..(160,200)..tension 1.2..
103     (180,ypart point 0 of oldp)-(880,ypart point 1 of oldp));
104   replace_strokeq(-3)((1,1)-(1.3,1.3)-(1.5,1.5)-(1.6,1.6)-(1.6,1.6));
105   set_botip(-3,1);
106   set_boserif(-3,1,whatever);
107   set_boserif(-3,3,4);
108   set_boserif(-3,4,9);
109   expand_pbox;
110 enddef;

```

NINE

U+5C51  
tsuku.uni5C51

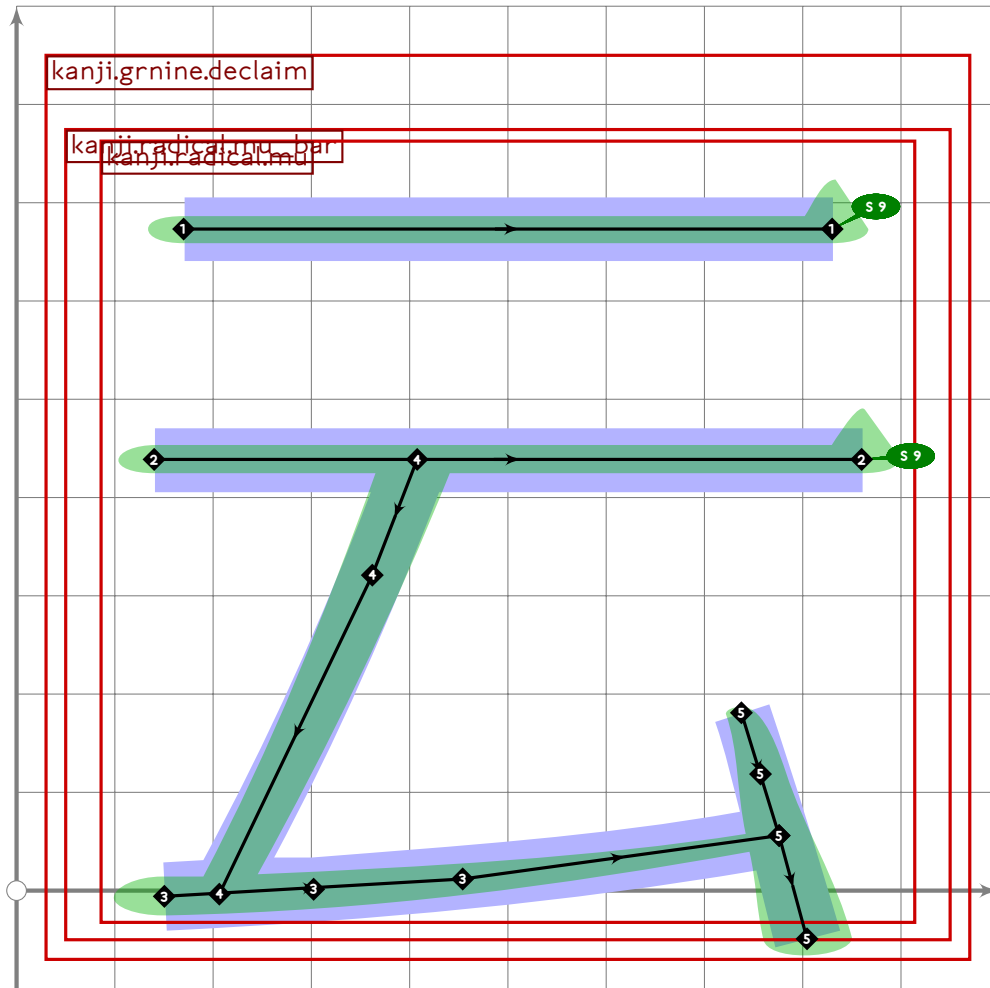


```

111
112 vardef kanji.grnine.chad =
113   push_pbox_toexpand("kanji.grnine.chad");
114   build_kanji.level(
115     kanji.radical.narrow_flag;
116     build_kanji.sscale(xyscaled (0.85,0.63) shifted (60,-130))
117     (kanji.greight.resemblance));
118   expand_pbox;
119 enddef;

```

NINE



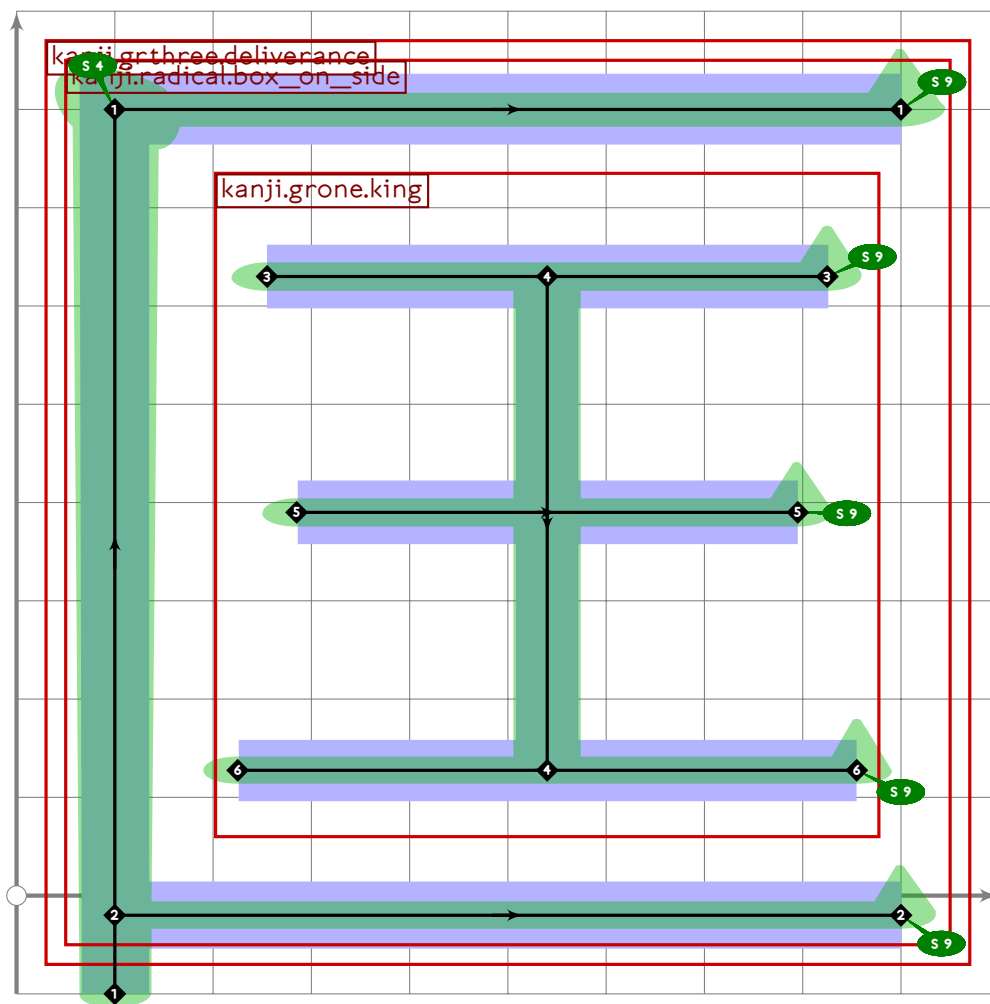
```

120
121 vardef kanji.grnine.declaim =
122   push_pbox_toexpand("kanji.grnine.declaim");
123   build_kanji.level(build_kanji.tb(480,0)
124     (push_stroke((170,420)-(830,420),
125       (1.6,1.6)-(1.6,1.6));
126     set_boserif(0,1,9);
127   )
128   (kanji.radical.mu_bar));
129   expand_pbox;
130 enddef;

```

NINE

U+5321  
tsuku.uni5321

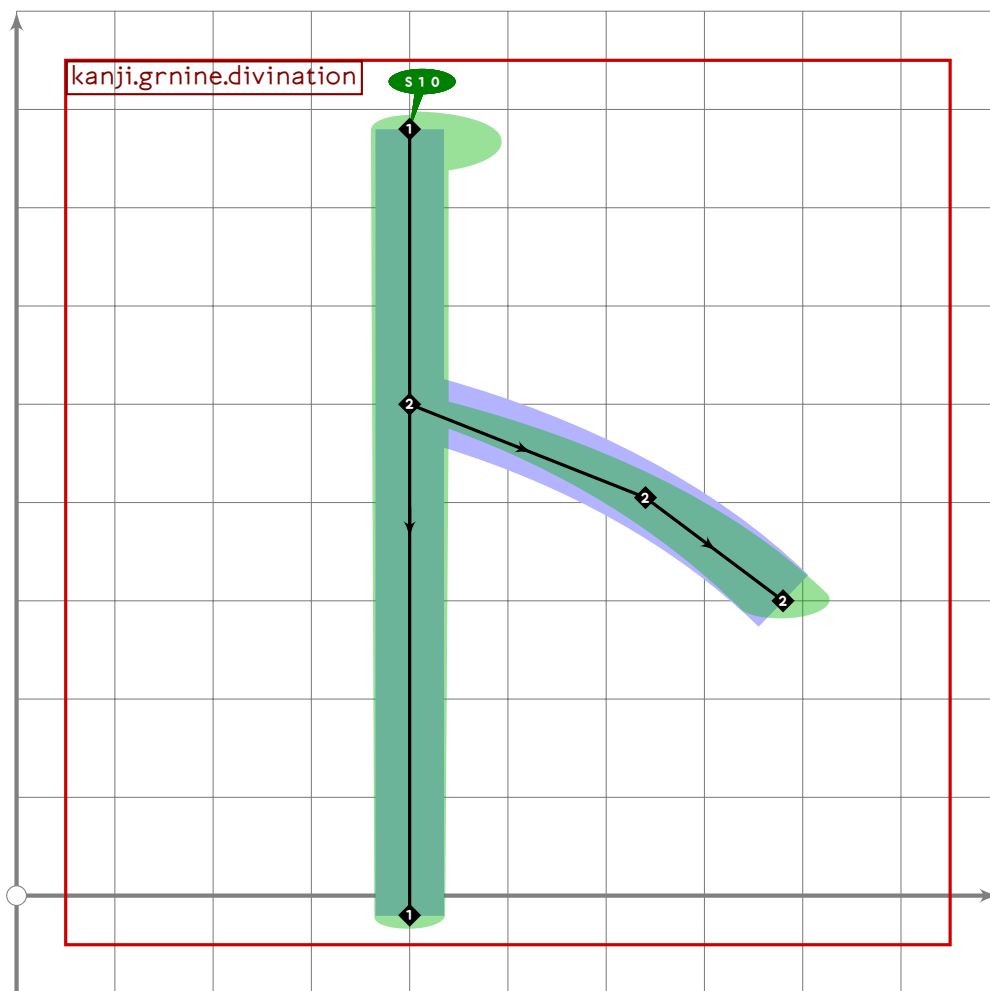


```

131
132 vardef kanji.grnine.deliverance =
133   push_pbox_toexpand("kanji.grthree.deliverance");
134   kanji.radical.box_on_side;
135   build_kanji.sscale(scaled 0.75 shifted (40,0))(kanji.grone.king);
136   expand_pbox;
137 enddef;

```

NINE



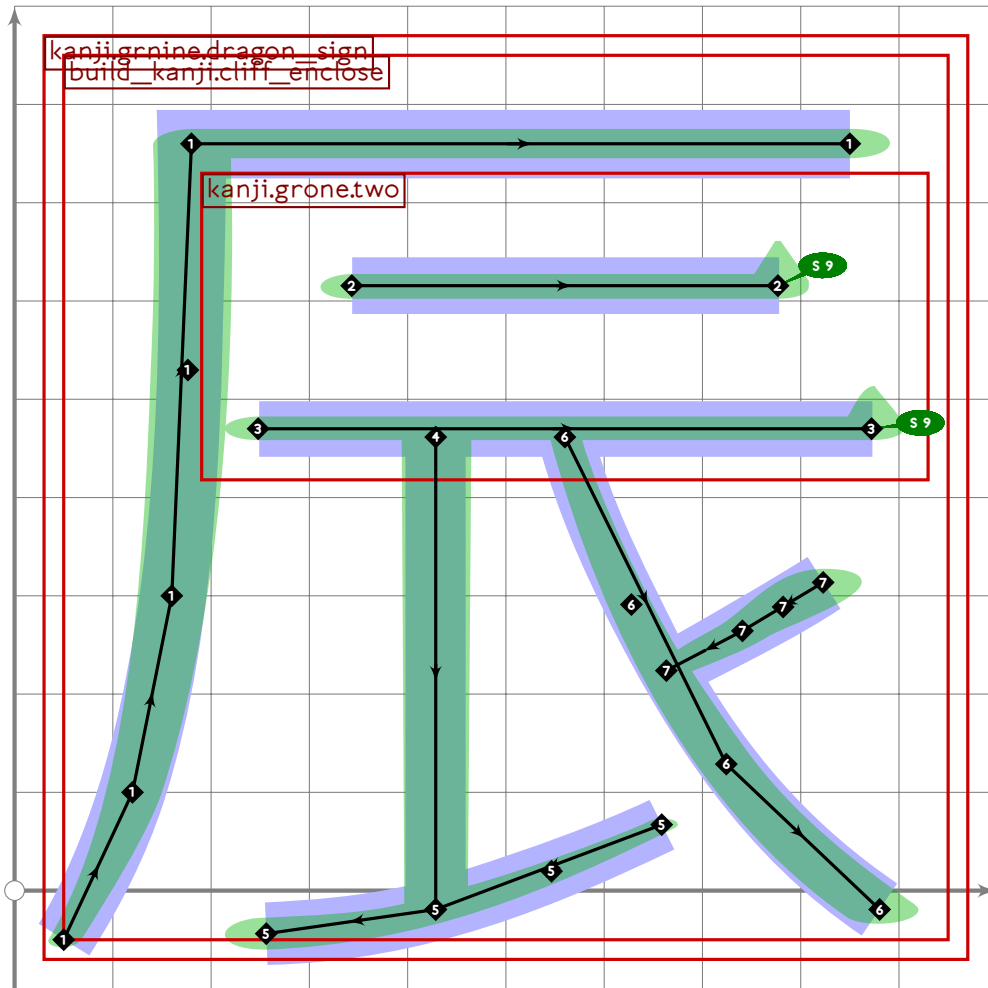
```

138
139 vardef kanji.grnine.divination =
140   push_pbox_toexpand("kanji.grnine.divination");
141   push_stroke((400,780)-(400,-20),
142     (1.6,1.6)-(1.5,1.5));
143   set_boserif(0,0,10);
144   push_stroke((400,500)..tension 11..(640,405)..(780,300),
145     (1.3,1.3)-(1.6,1.6)-(1.8,1.8));
146   expand_pbox;
147 enddef;

```

NINE

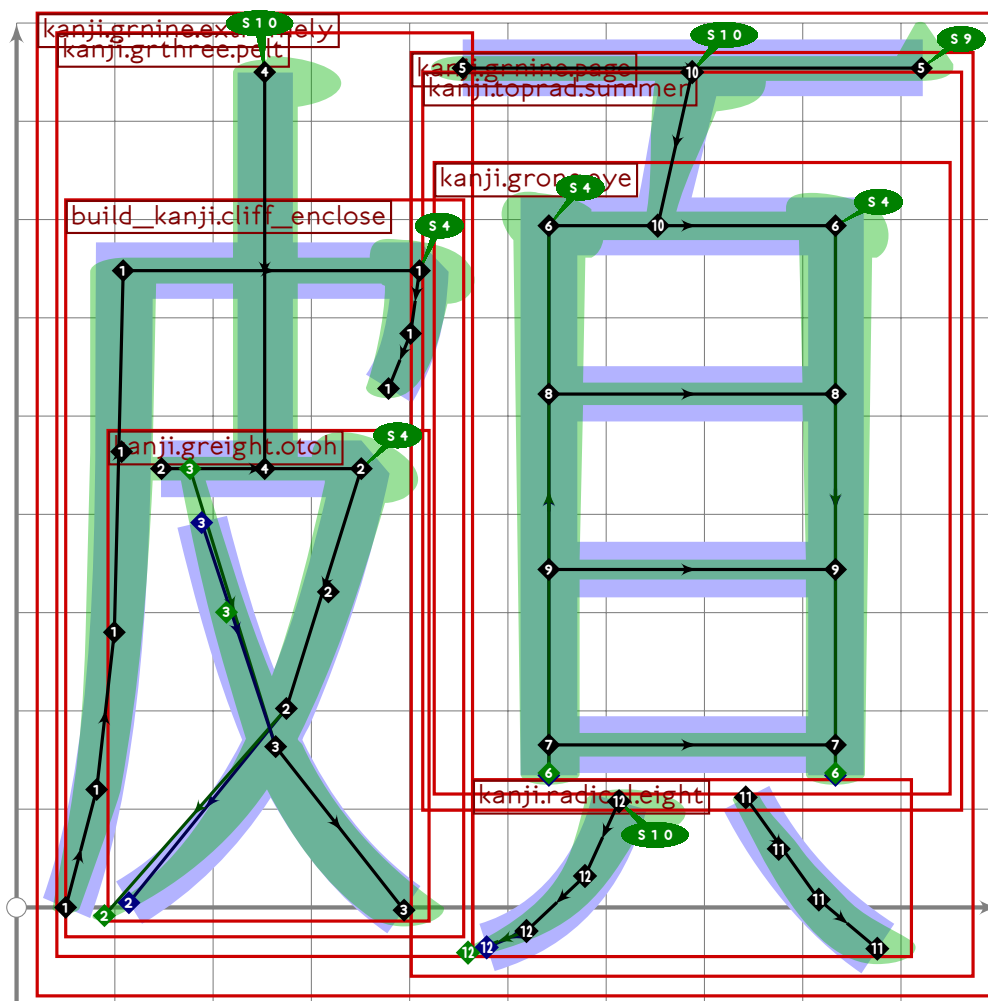




```

148
149 vardef kanji.grnine.dragon_sign =
150   push_pbox_toexpand("kanji.grnine.dragon_sign");
151   build_kanji.cliff_enclose(build_kanji.sscale(xscaled 1.12)
152     (build_kanji.tb(540,100)
153       (kanji.grone.two;
154         replace_strokep(-1)
155           (oldp shifted (-500,-100) xscaled 0.8 shifted (500,0)))
156       (push_stroke((340,780)-(340,0),(1.6,1.6)-(1.5,1.5));
157         push_stroke((620,140)..tension 1.2..
158           (point 1 of get_strokep(0)).(130,-40),
159           (1,1)-(1.5,1.5)-(1.8,1.8));
160         push_stroke((500,780)..tension 1.2..(700,240)..(890,0),
161           (1,1)-(1.4,1.4)-(1.7,1.7));
162         push_stroke((820,540)..tension 1.2..(720,460)..
163           (point 0.69 of get_strokep(0)),
164           (1.7,1.7)-(1.4,1.4)-(1.2,1.2)))));
165   expand_pbox;
166 enddef;

```

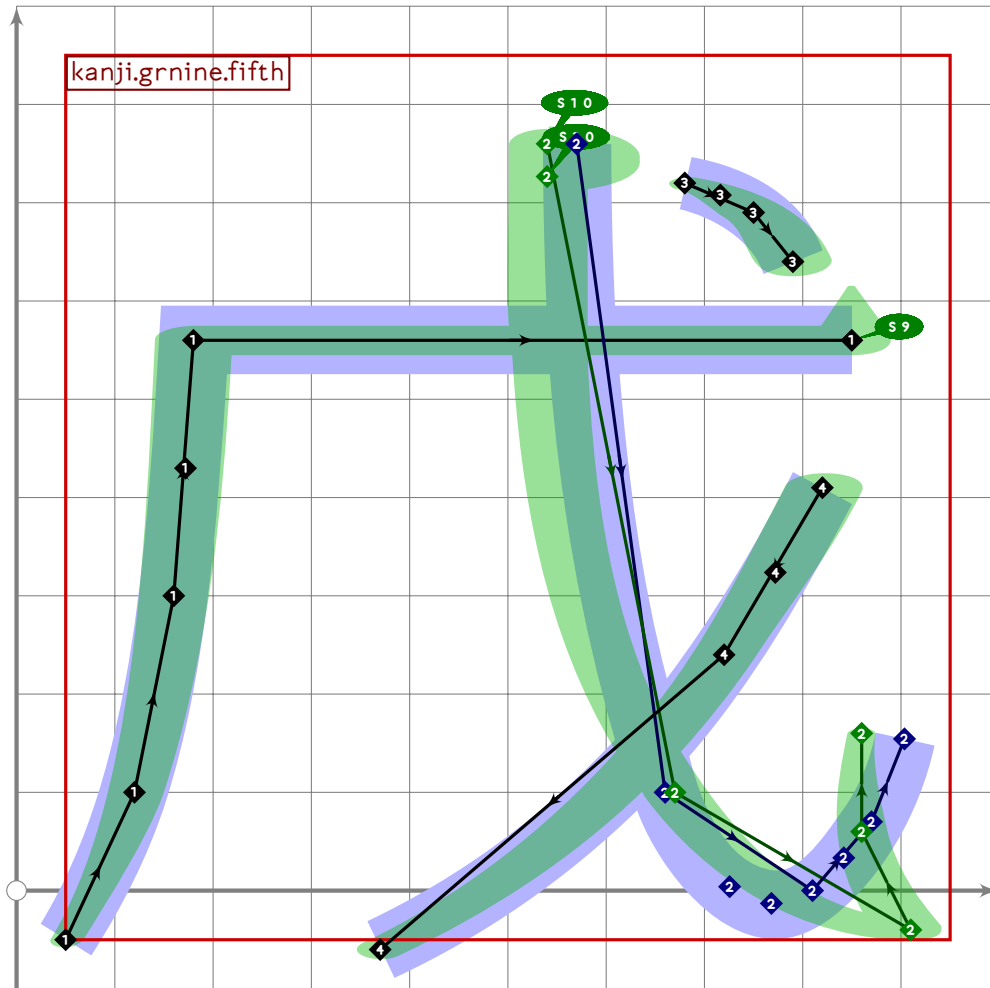


```

167
168 vardef kanji.grnine.extremely =
169   push_pbox_toexpand("kanji.grnine.extremely");
170   build_kanji.level(build_kanji.lr(440,30)
171     (build_kanji.sscale(shifted (0,40))(kanji.grthree.pelt))
172     (kanji.grnine.page));
173   expand_pbox;
174 enddef;

```

NINE

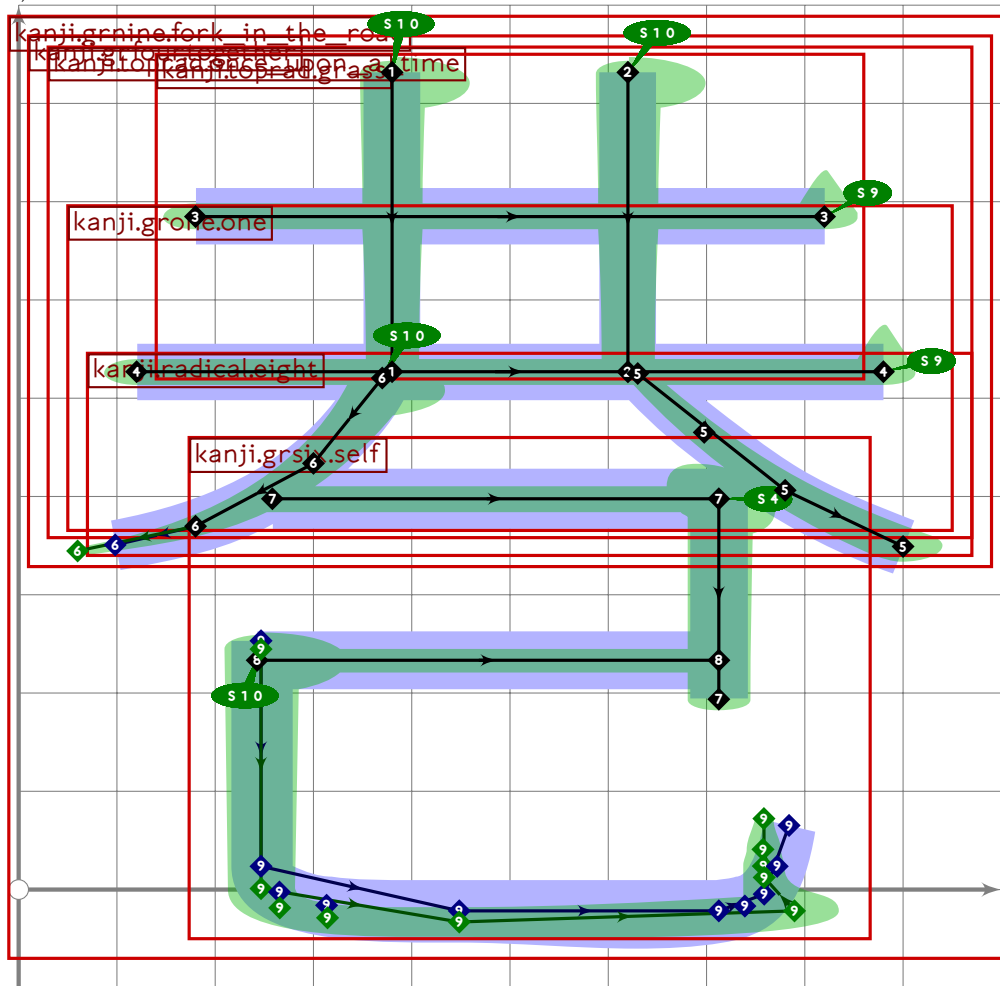


```

175
176 vardef kanji.grnine.fifth =
177   push_pbox_toexpand("kanji.grnine.fifth");
178   push_stroke((50,-50)..(120,100)..(160,300)..tension 1.2..(180,560)
179     -(850,560),
180     (1,1)-(1.3,1.3)-(1.5,1.5)-(1.6,1.6)-(1.6,1.6));
181   set_botip(0,3,1);
182   set_boserif(0,4,9);
183   push_stroke(interpath(mincho,
184     (570,760){down}..(660,100)..(810,0)..tension 1.5..
185     (870,70)..{curl 0.3}(910,200),
186     (540,760){down}..(670,100)..{right}(910,-40){curl 1}..
187     (860,60)..(860,160)),
188     (1.6,1.6)-(1.4,1.4)-(1.4,1.4)-(1.2,1.2)-(0.9,0.9));
189   set_boserif(0,0,10);
190   push_stroke((680,720)..tension 1.2..(750,690)..(790,640),
191     (1,1)..(1.5,1.5)-(1.7,1.7));
192   set_bosize(0,90);
193   push_stroke((820,410)..tension 1.2..(720,240)..(370,-60),
194     (1.6,1.6)-(1.4,1.4)-(1.2,1.2));
195   expand_pbox;

```

196 endif;

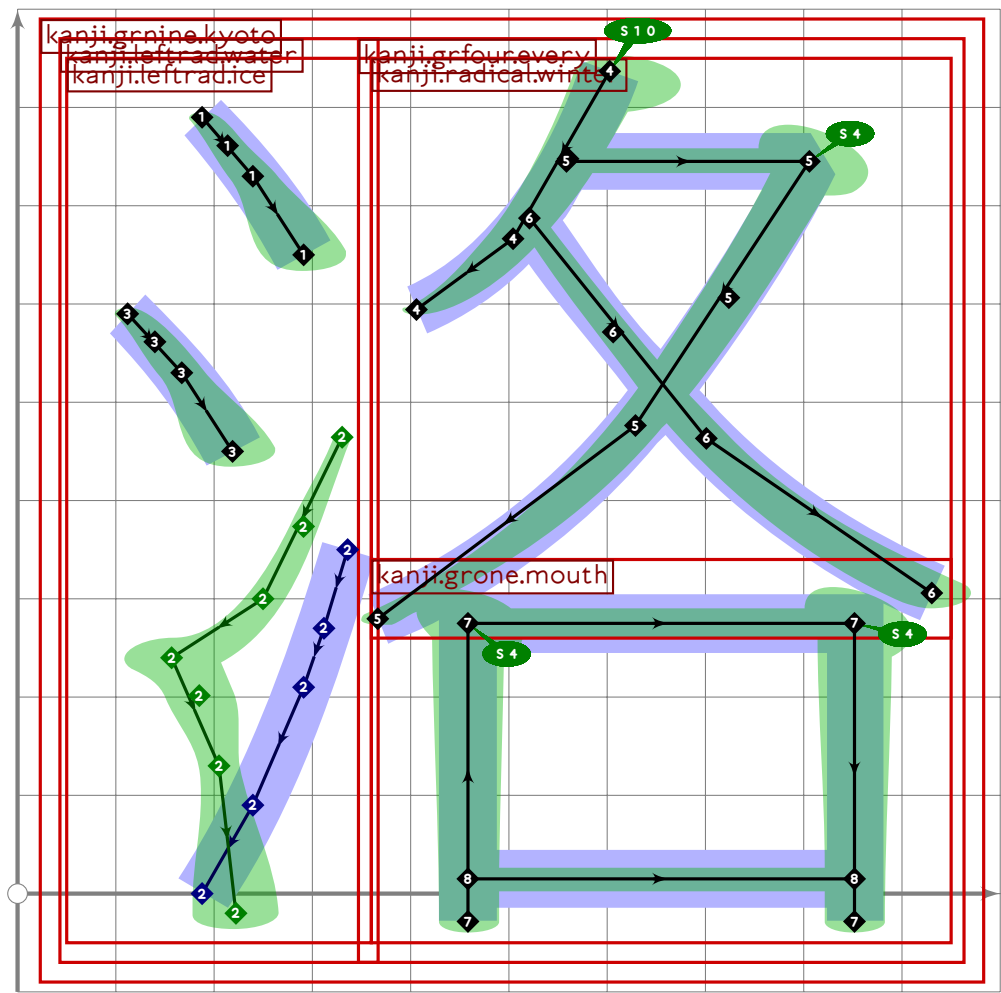


197

```
198 vardef kanji.grnine.fork_in_the_road =
199   push_pbox_toexpand("kanji.grnine.fork_in_the_road");
200   build_kanji.tb(400,120)
201     (kanji.grfour.together)
202     (build_kanji.sscaled(xscaled 0.77 shifted (20,0))(kanji.grsix.self));
203   expand_pbox;
204 endif;
```

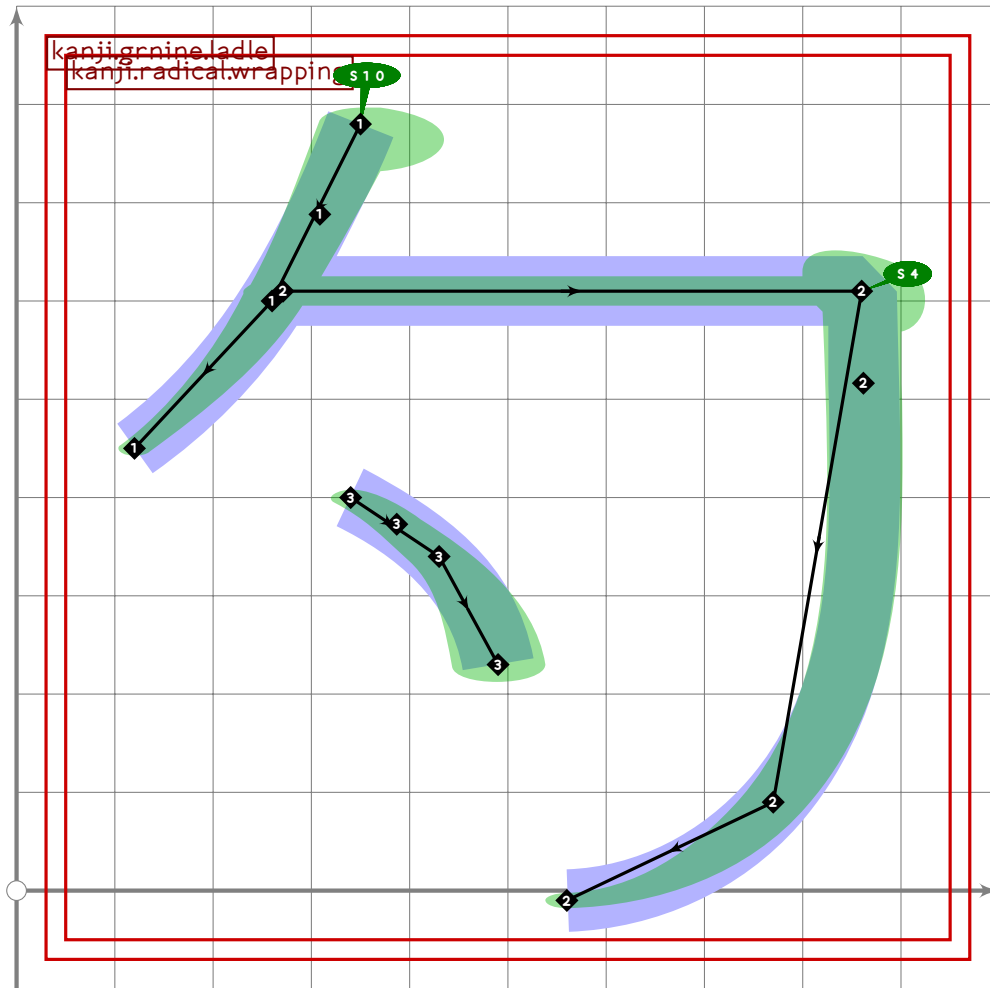
NINE

U+6D1B  
tsuku.uni6D1B



```
205
206 vardef kanji.grnine.kyoto =
207   push_pbox_toexpand("kanji.grnine.kyoto");
208   build_kanji.lr(360,0)
209     (kanji.leftrad.water)
210     (kanji.grfour.every);
211   expand_pbox;
212 enddef;
```

NINE

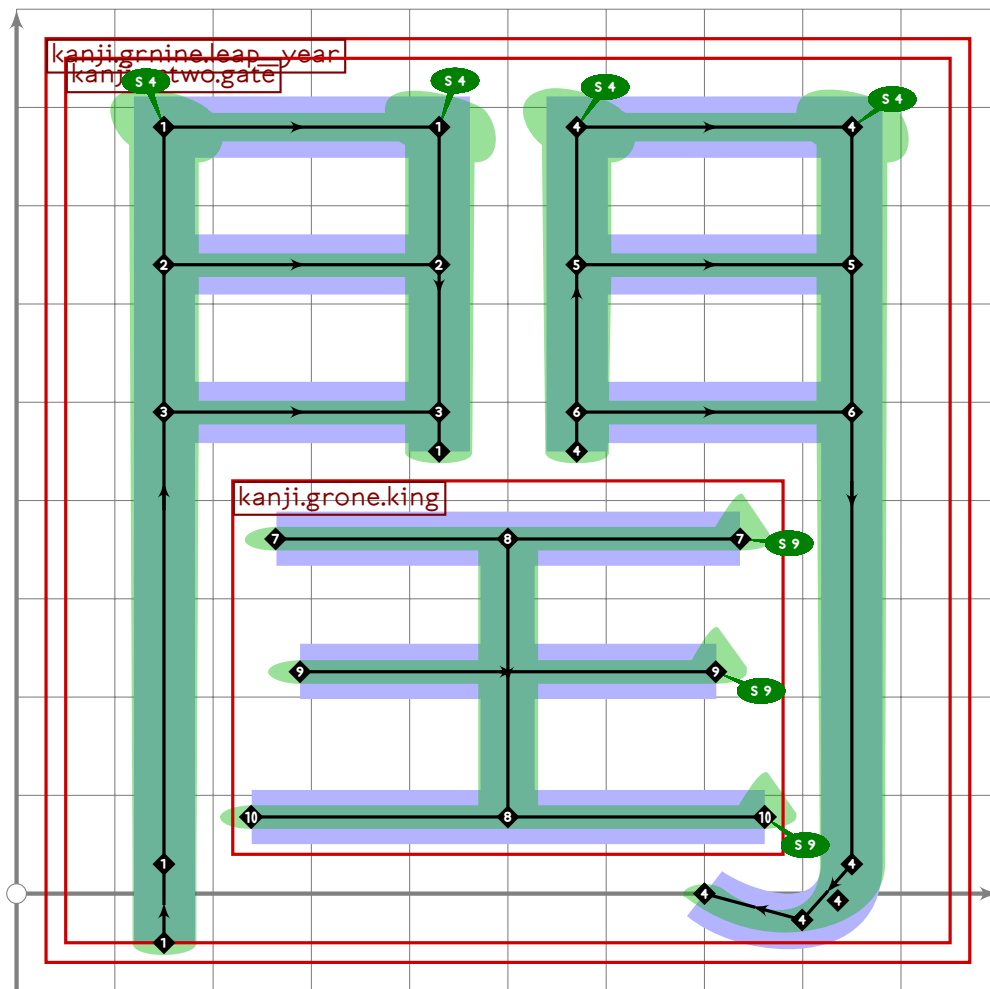


```

213
214 vardef kanji.grnine.ladle =
215   push_pbox_toexpand("kanji.grnine.ladle");
216   kanji.radical.wrapping;
217   push_stroke((340,400)..tension 1.2..(430,340)..(490,230),
218     (1,1,1)-(14,14)-(18,18));
219   expand_pbox;
220 enddef;

```

NINE

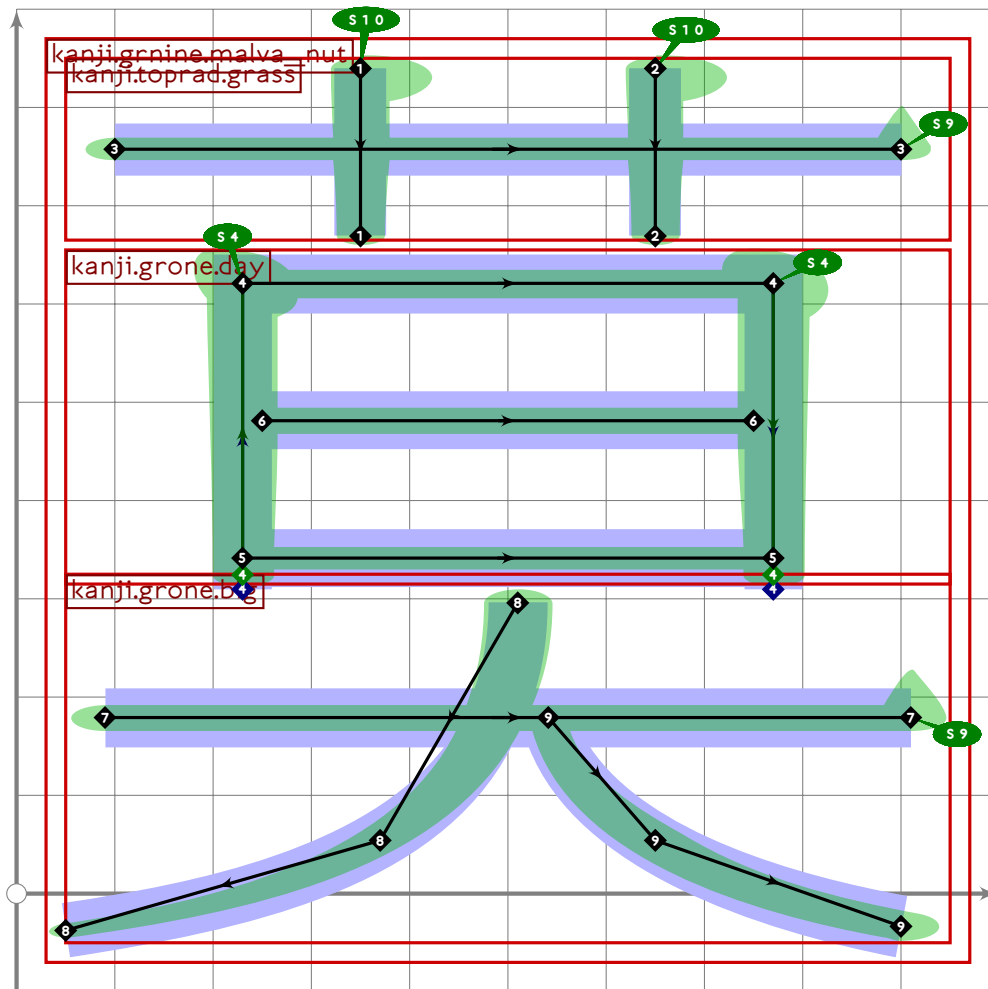


```

221
222 vardef kanji.grnine.leap_year =
223   push_pbox_toexpand("kanji.grnine.leap_year");
224   build_kanji.gate_enclose(kanji.grone.king);
225   expand_pbox;
226 enddef;

```

NINE



```

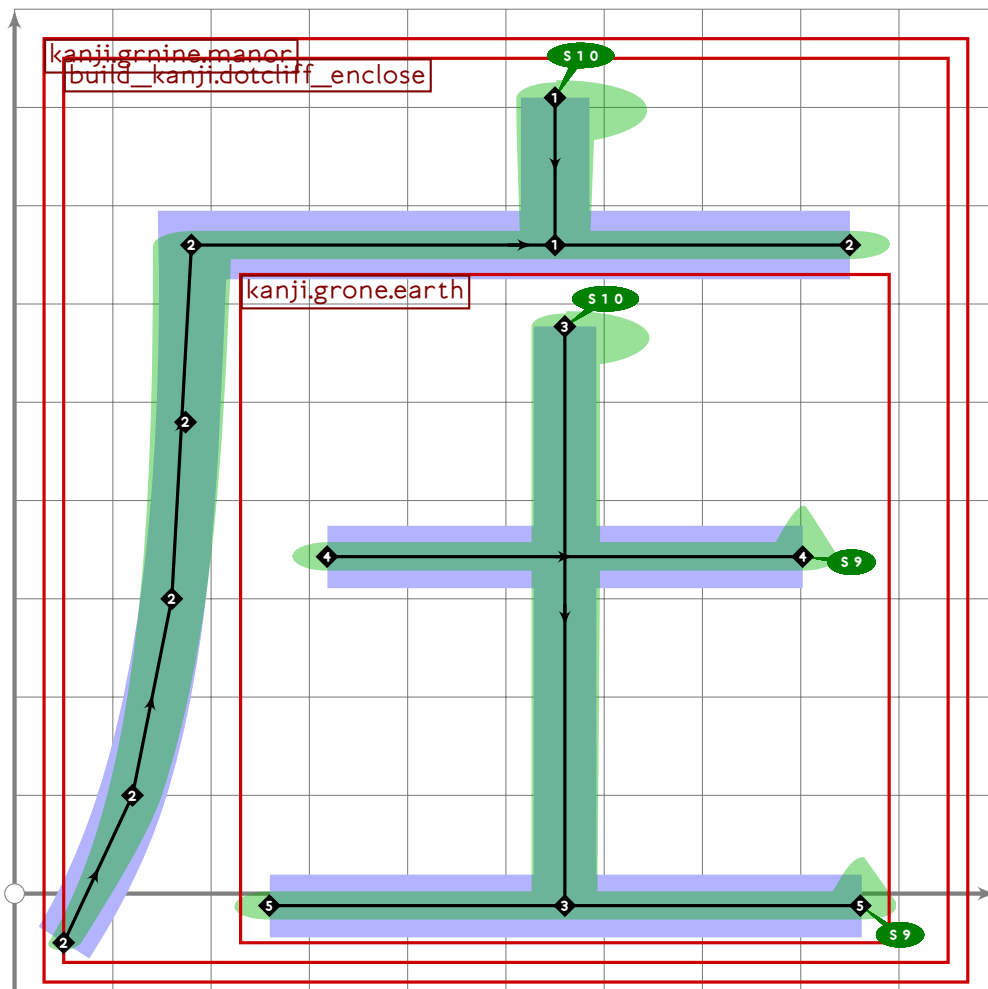
227
228 vardef kanji.grnine.malva_nut =
229   push_pbox_toexpand("kanji.grnine.malva_nut");
230   build_kanji.tcb(660,-10)(320,10)
231     (kanji.toprad.grass)
232     (kanji.grone.day)
233     (kanji.grone.big);
234   expand_pbox;
235 enddef;

```

NINE



U+5E84  
tsuku.uni5E84

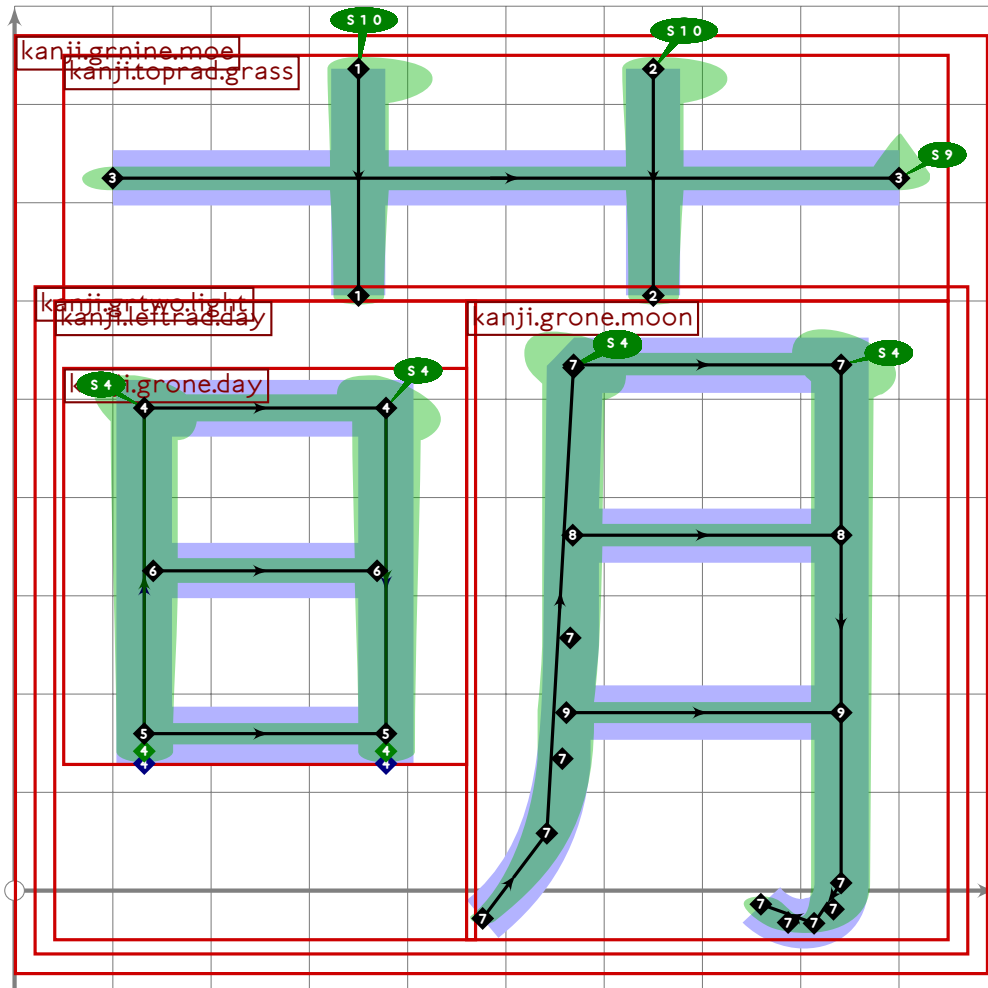


```

236
237 vardef kanji.grnine.manor =
238   push_pbox_toexpand("kanji.grnine.manor");
239   build_kanji.dotcliff_enclose(kanji.grone.earth);
240   expand_pbox;
241 enddef;

```

**NINE**



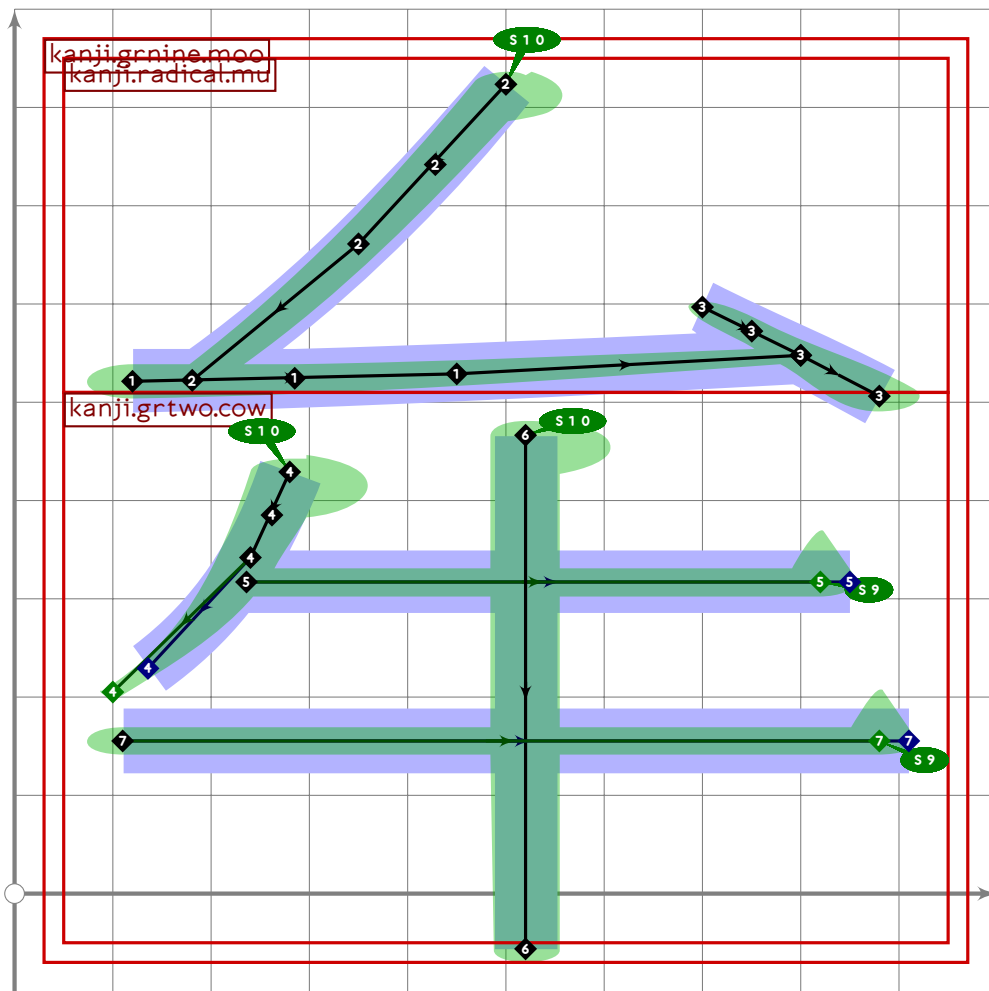
```

242
243 vardef kanji.grnine.moe =
244   push_pbox_toexpand("kanji.grnine.moe");
245   build_kanji.tb(600,0)
246     (kanji.toprad.grass)
247     (kanji.grtwo.light);
248   expand_pbox;
249 enddef;

```

NINE

U+725F  
tsuku.uni725F

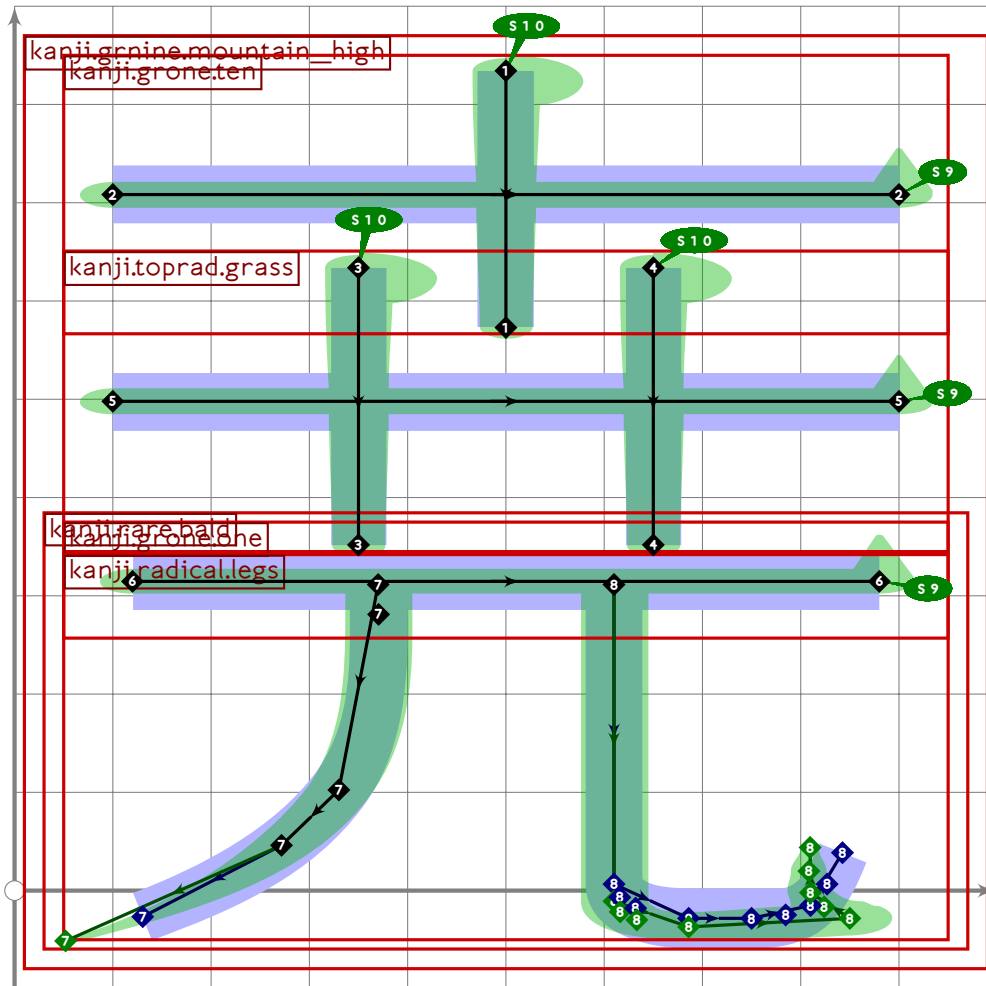


```

250
251 vardef kanji.grnine.moo =
252   push_pbox_toexpand("kanji.grnine.moo");
253   build_kanji.tb(510,0)
254     (kanji.radical.mu)
255     (kanji.grtwo.cow);
256   expand_pbox;
257 enddef;

```

**NINE**



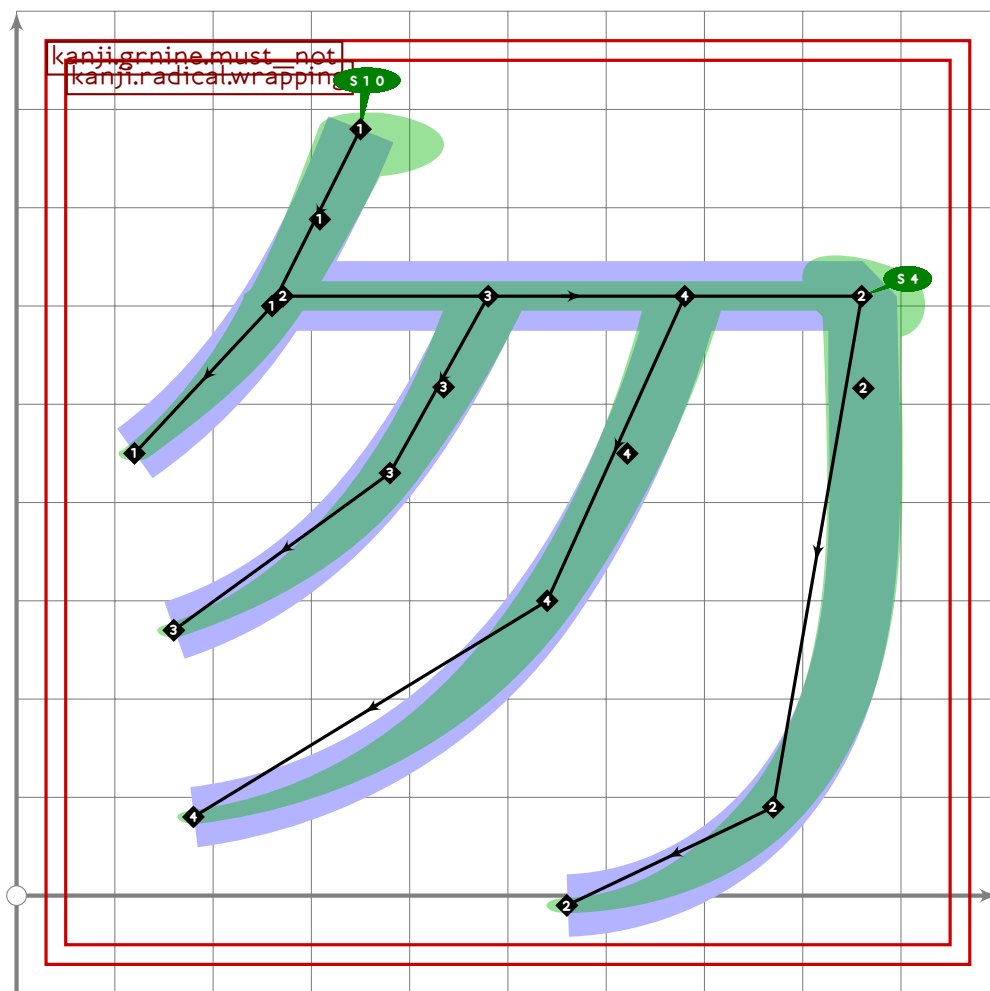
```

258
259 vardef kanji.grnine.mountain_high =
260   push_pbox_toexpand("kanji.grnine.mountain_high");
261   build_kanji.level(build_kanji.tb(360,30)
262     (build_kanji.tb(420,150)
263       (kanji.gronet.ten)
264       (kanji.toprad.grass))
265     (kanji.rare.bald));
266   expand_pbox;
267 enddef;

```

NINE

U+52FF  
tsuku.uni52FF

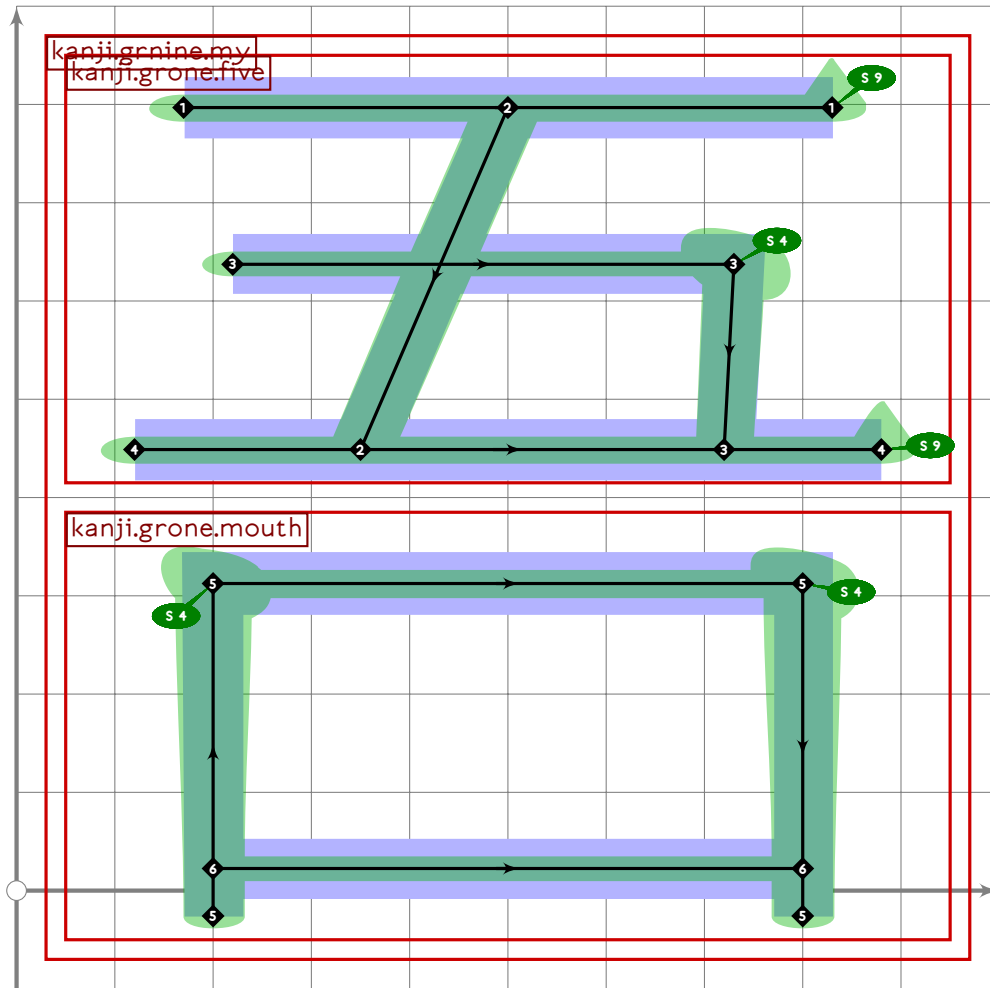


```

268
269 vardef kanji.grnine.must_not =
270   push_pbox_toexpand("kanji.grnine.must_not");
271   kanji.radical.wrapping;
272   push_stroke(
273     (480,610)..tension 1.2..(380,430)..(160,270),
274     (1.6,1.6)–(1.4,1.4)–(1.0,1.0));
275   push_stroke(
276     (680,610)..tension 1.2..(540,300)..(180,80),
277     (1.6,1.6)–(1.4,1.4)–(1.0,1.0));
278   expand_pbox;
279 enddef;

```

NINE



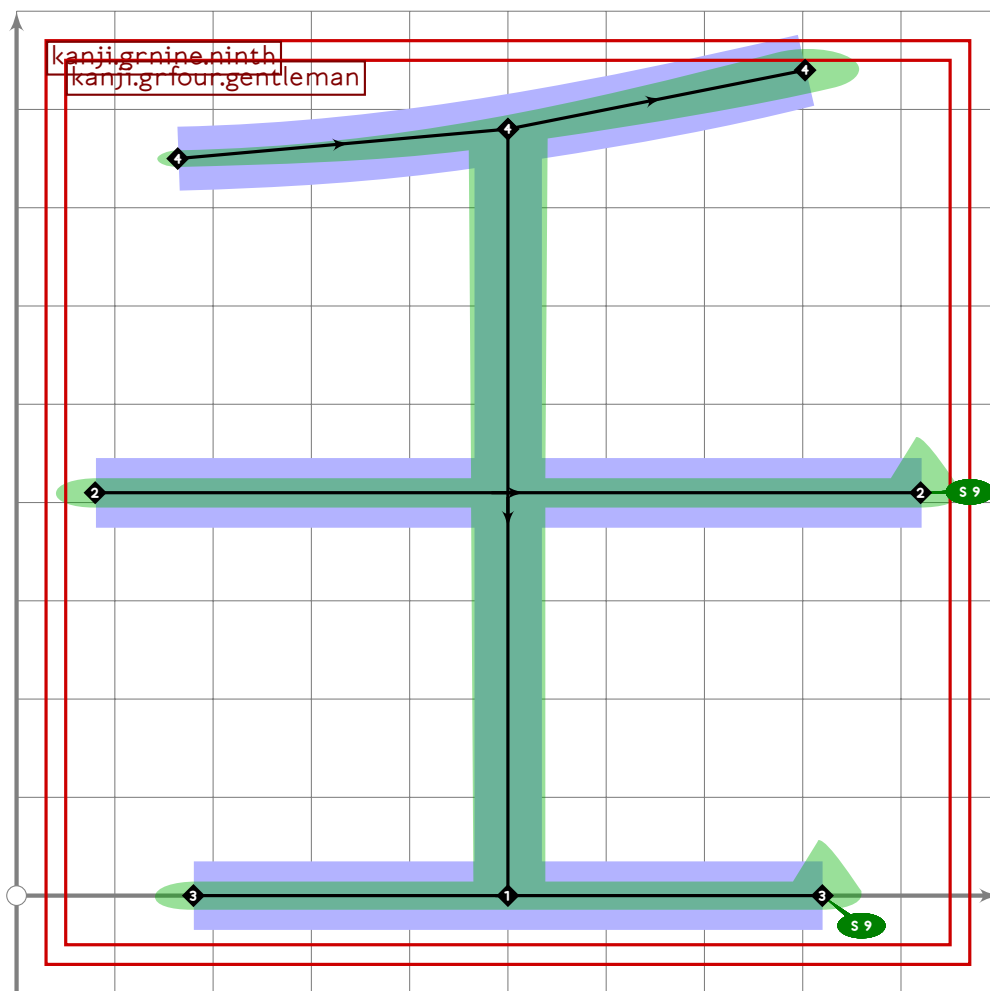
```

280
281 vardef kanji.grnine.my =
282   push_pbox_toexpand("kanji.grnine.my");
283   build_kanji.level(build_kanji.tb(400;30)
284     (kanji.grone.five)
285     (kanji.grone.mouth));
286   expand_pbox;
287 enddef;

```

NINE

U+58EC  
tsuku.uni58EC

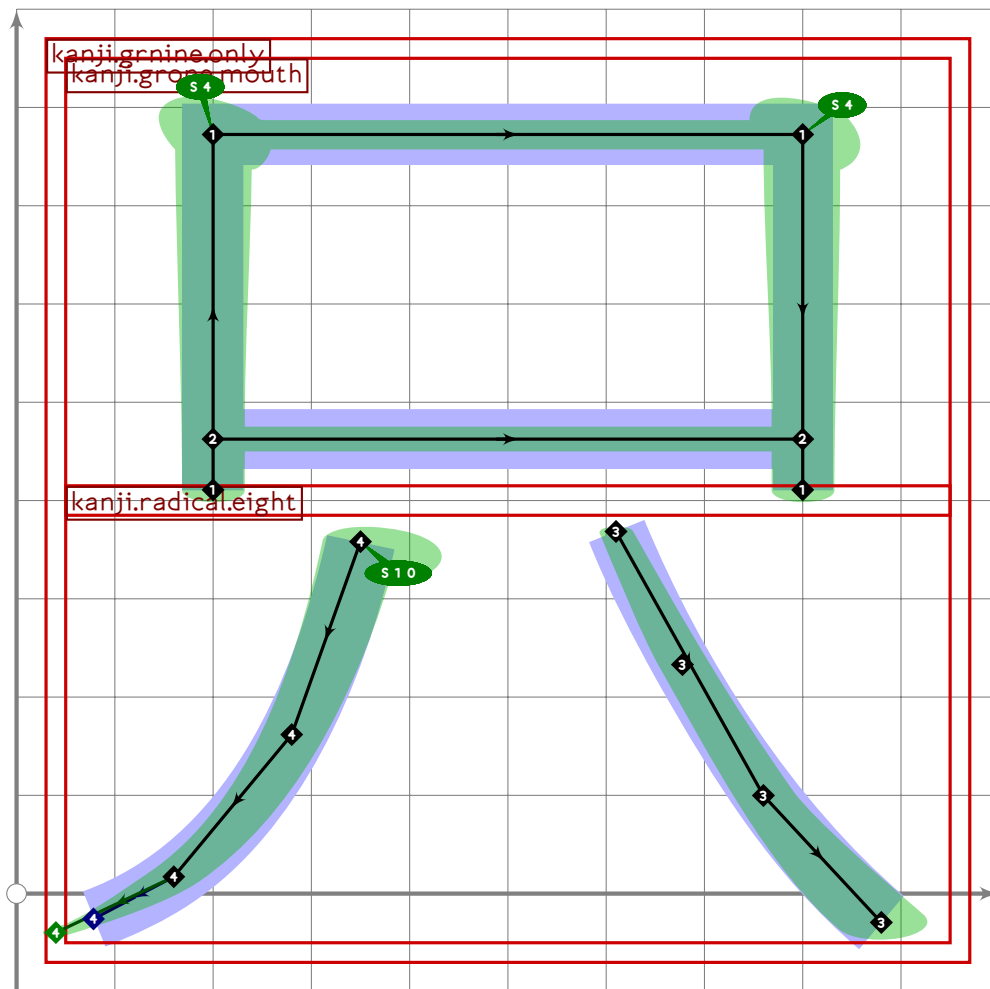


```

288
289 vardef kanji.grnine.ninth =
290   push_pbox_toexpand("kanji.grnine.ninth");
291   build_kanji.add_beret(
292     kanji.grfour.gentleman;
293     replace_stroke(-1)(oldp shifted (0;60)));
294   expand_pbox;
295 enddef;

```

NINE



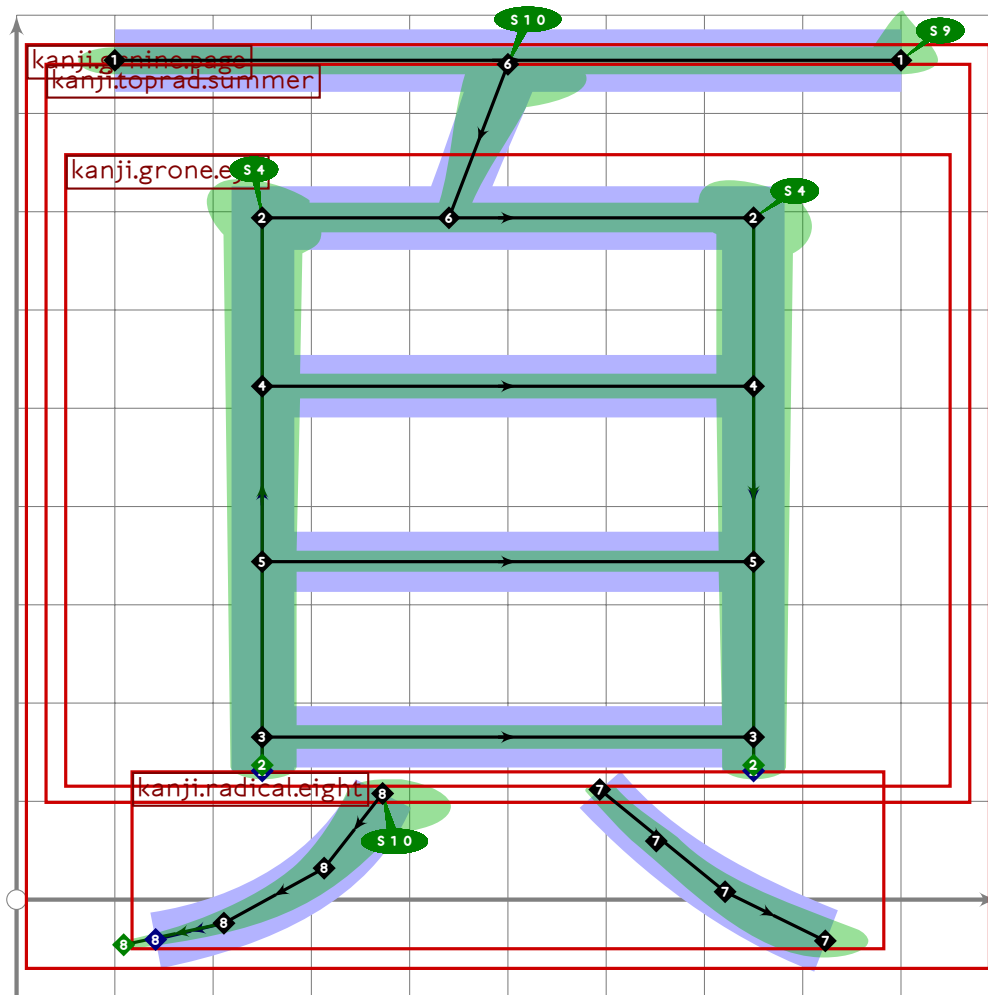
```

296
297 vardef kanji.grnine.only =
298   push_pbox_toexpand("kanji.grnine.only");
299   build_kanji.tb(400,30)
300     (kanji.grnine.mouth)
301     (kanji.radical.eight);
302   expand_pbox;
303 enddef;

```

NINE



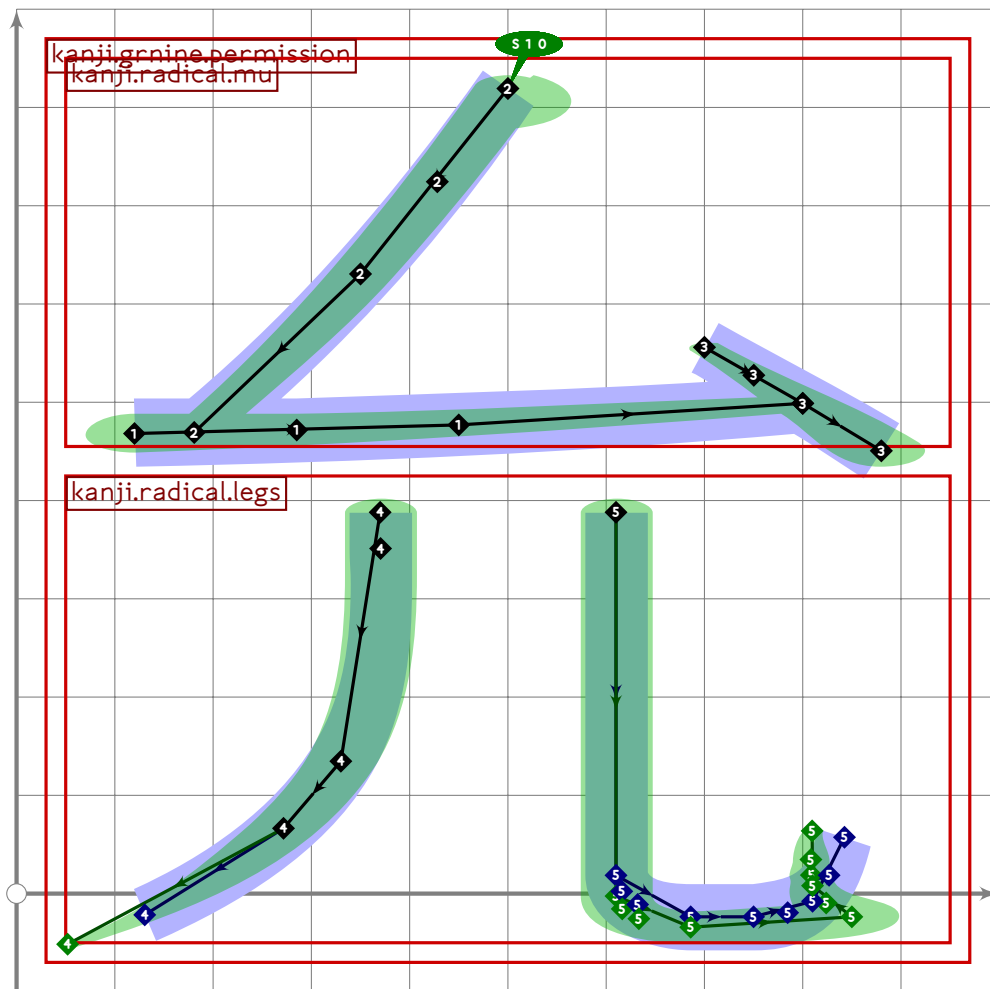


```

304
305 vardef kanji.grnine.page =
306   push_pbox_toexpand("kanji.grnine.page");
307   build_kanji.level(build_kanji.tb(120,20)
308     (kanji.toprad.summer)
309     (build_kanji.sscale(xscaled 0.85)(kanji.radical.eight)));
310   expand_pbox;
311 enddef;

```

NINE

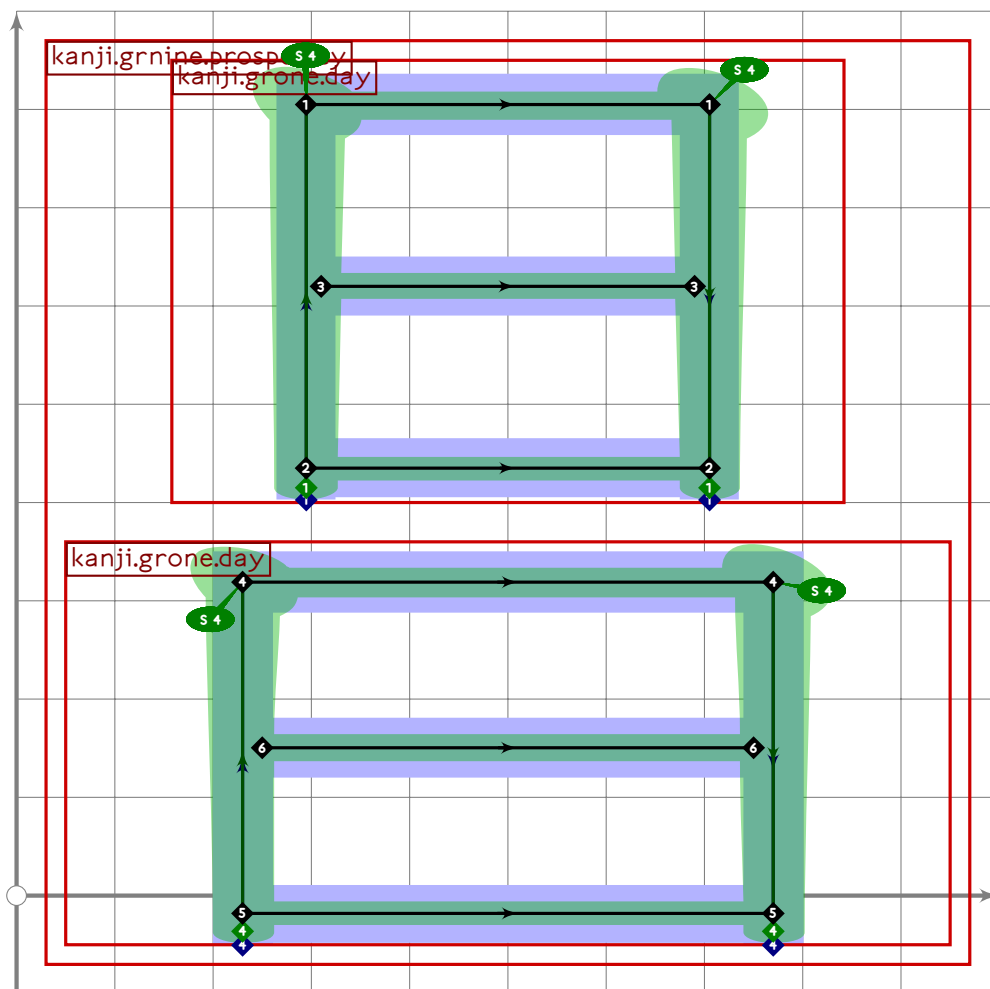


```

312
313 vardef kanji.grnine.permission =
314   push_pbox_toexpand("kanji.grnine.permission");
315   build_kanji.level(build_kanji.tb(440,-30)
316     (kanji.radical.mu)
317     (kanji.radical.legs));
318   expand_pbox;
319 enddef;

```

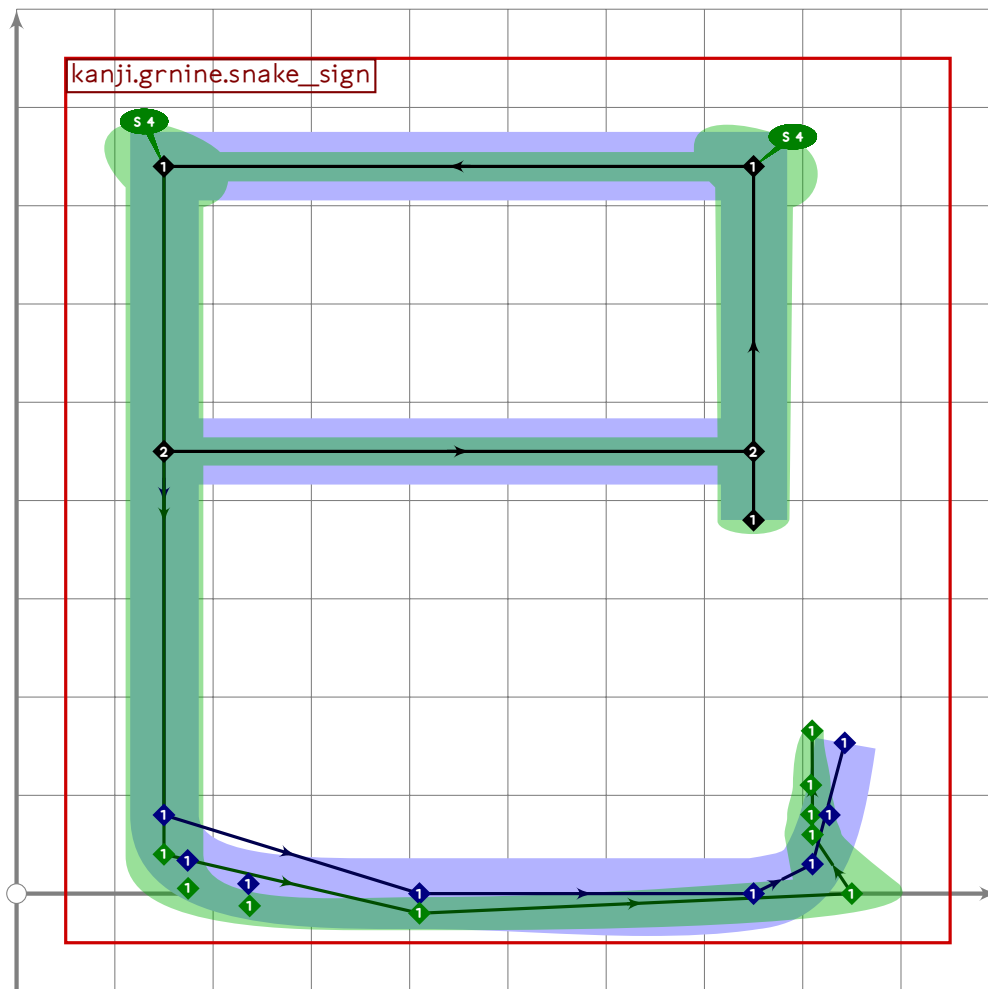
NINE



```

320
321 vardef kanji.grnine.prosp =
322   push_pbox_toexpand("kanji.grnine.prosp");
323   build_kanji.level(build_kanji.tb(380,-40)
324     (build_kanji.sscale(xscaled 0.76)(kanji.grone.day))
325     (kanji.grone.day));
326   expand_pbox;
327 enddef;

```

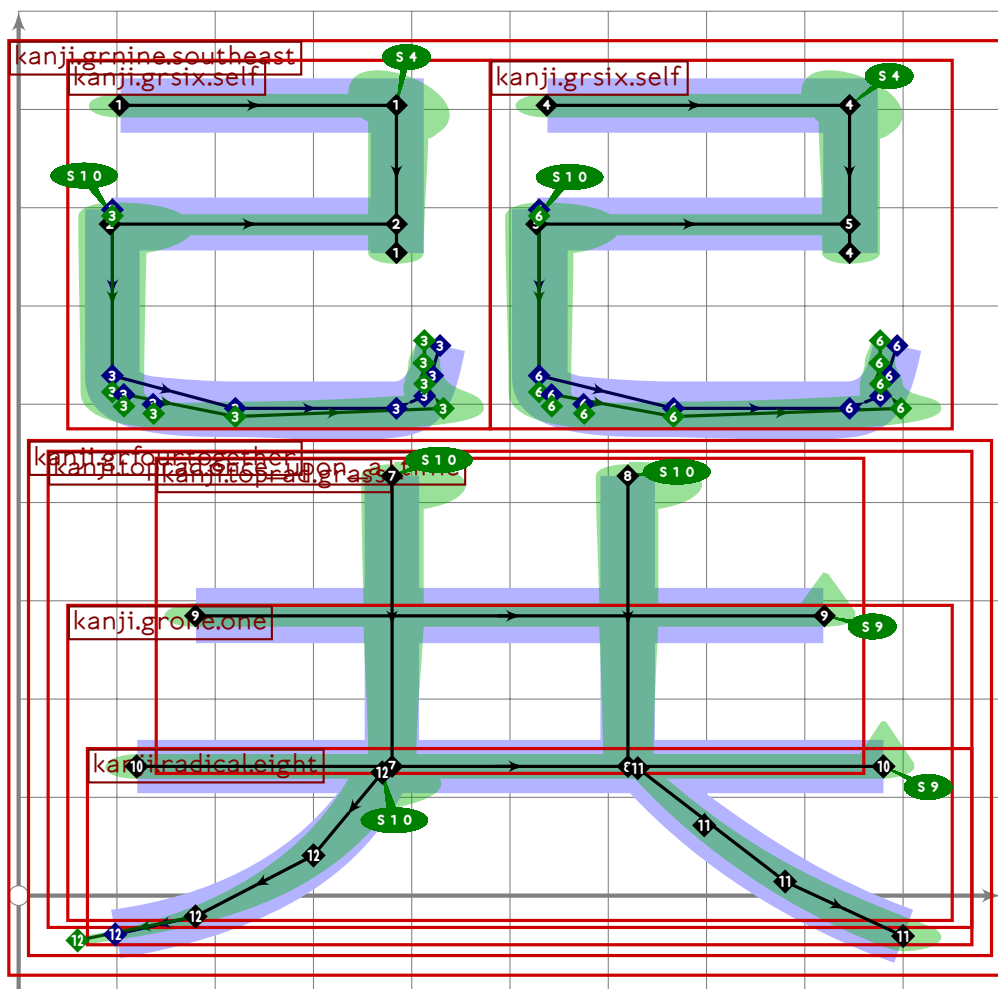


```

328
329 vardef kanji.grnine.snake_sign =
330   push_pbox_toexpand("kanji.grnine.snake_sign");
331   push_stroke((750,380)–(750,740)–(150,740),
332     (1.5,1.5)–(1.6,1.6)–(1.6,1.6));
333   set_botip(0,1,1);
334   set_botip(0,2,1);
335   set_boserif(0,1,4);
336   set_boserif(0,2,4);
337   build_kanji.add_ltail(0);
338   push_stroke((150,450)–(750,450),
339     (1.5,1.5)–(1.5,1.5));
340   expand_pbox;
341 enddef;

```

NINE

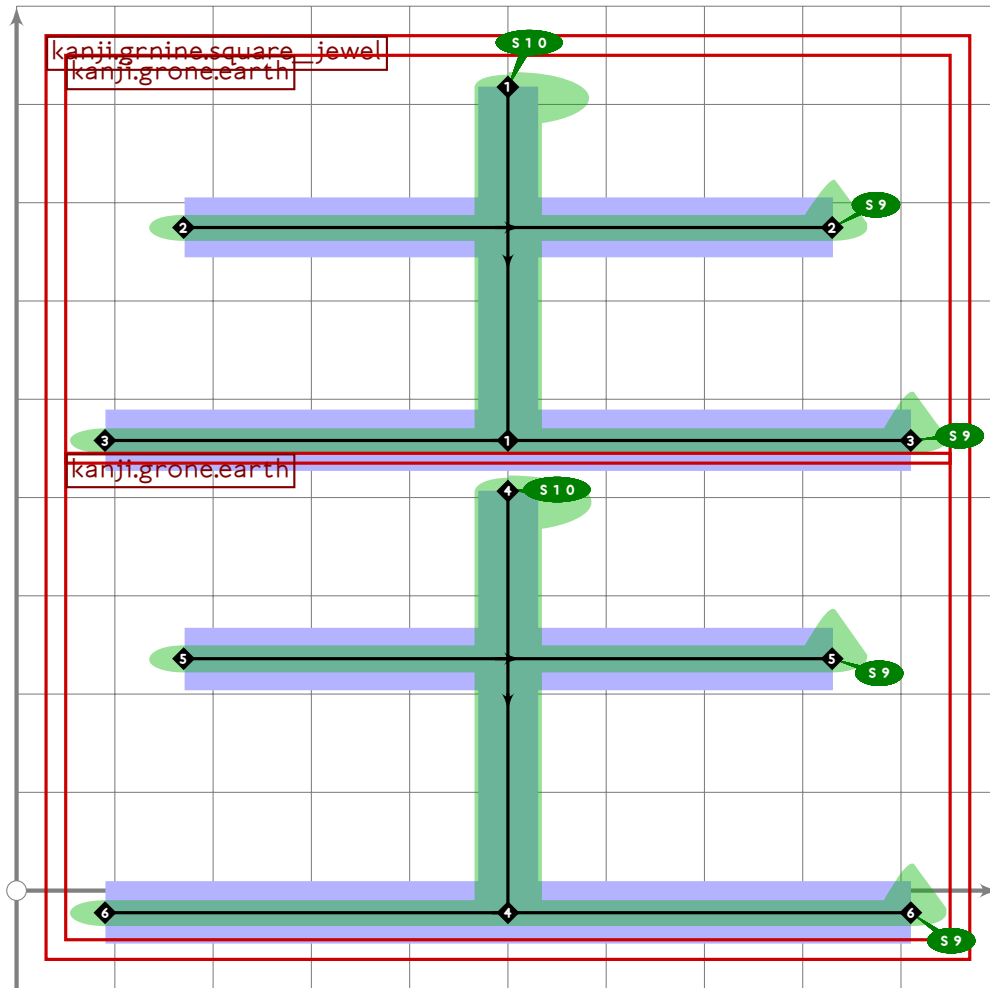


```

342
343 vardef kanji.grnine.southeast =
344   push_pbox_toexpand("kanji.grnine.southeast");
345   build_kanji.level(build_kanji.tb(460,-30)
346     (build_kanji.lr(480,0)
347       (kanji.grsix.self)
348       (kanji.grsix.self))
349     (kanji.grfour.together));
350   expand_pbox;
351 enddef;

```

NINE



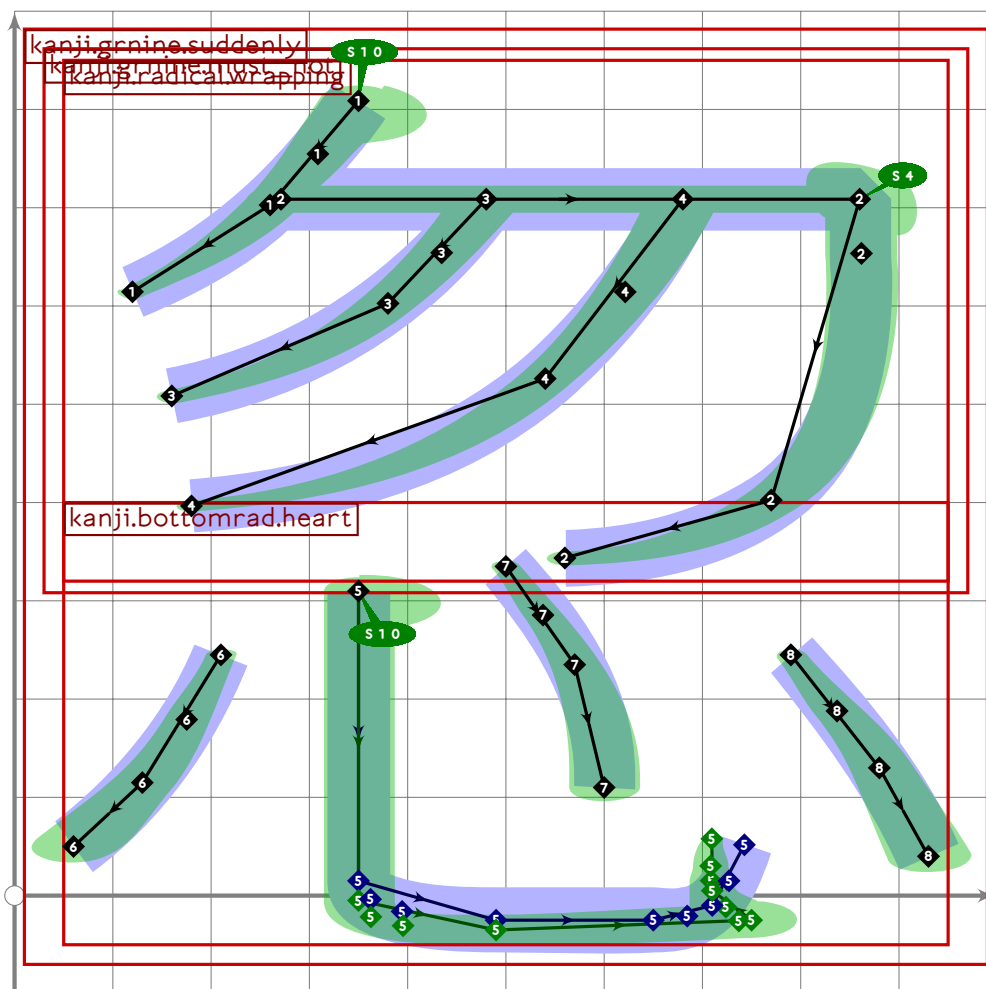
```

352
353 vardef kanji.grnine.square_jewel =
354   push_pbox_toexpand("kanji.grnine.square_jewel");
355   build_kanji.tb(440,10)
356     (kanji.grone.earth)
357     (kanji.grone.earth);
358   expand_pbox;
359 enddef;

```

NINE

U+5FFD  
tsuku.uni5FFD

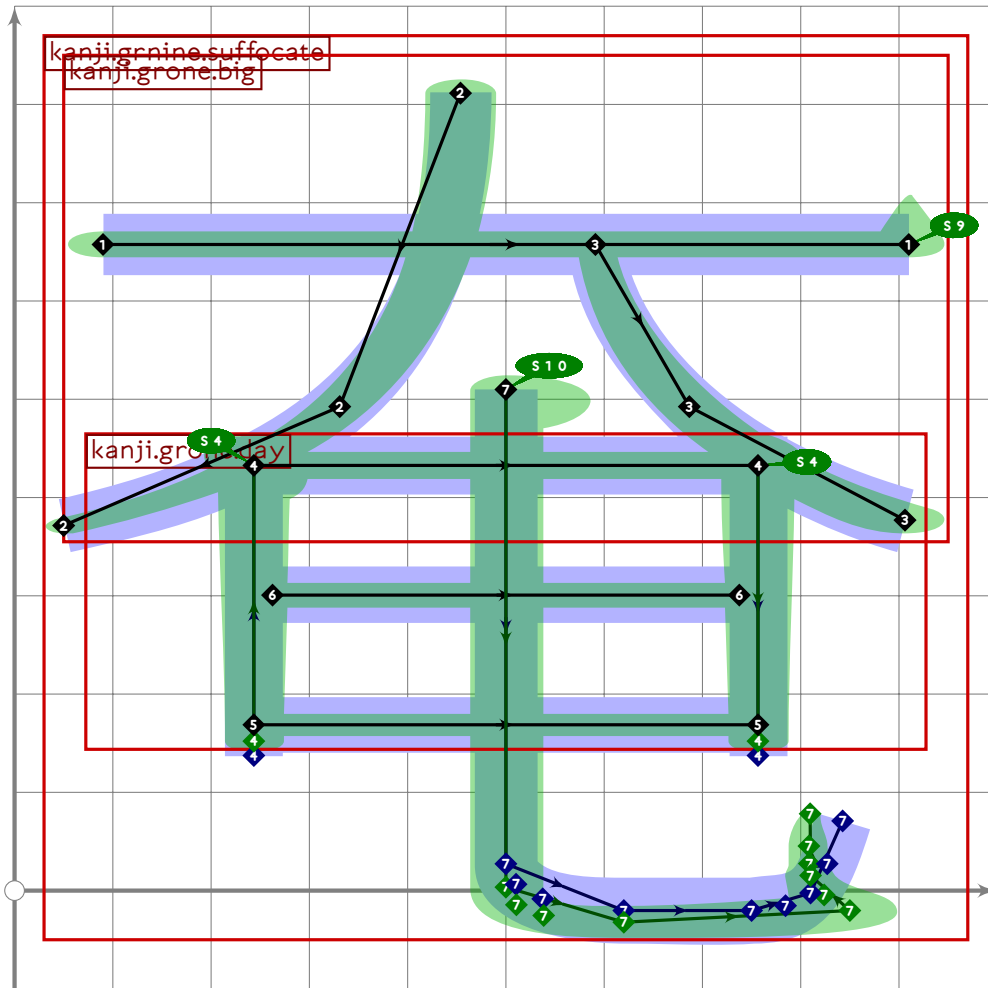


```

360
361 vardef kanji.grnine.suddenly =
362   push_pbox_toexpand("kanji.grnine.suddenly");
363   build_kanji.level(build_kanji.tb(360,80)
364     (kanji.grnine.must_not)
365     (kanji.bottomrad.heart));
366   expand_pbox;
367 enddef;

```

NINE



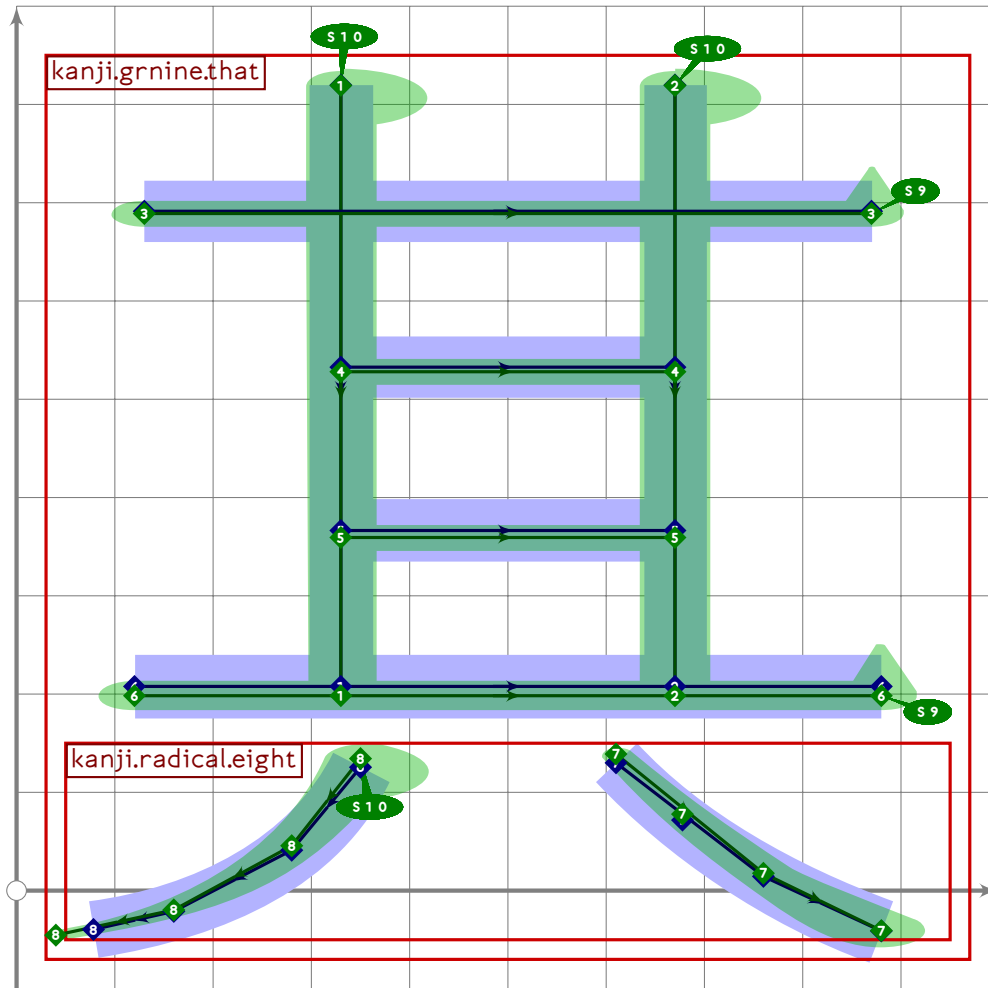
```

368
369 vardef kanji.grnine.suffocate =
370   push_pbox_toexpand("kanji.grnine.suffocate");
371   build_kanji.tb(420,130)
372     (build_kanji.spread_legs(110)
373       (kanji.grone.big))
374     (build_kanji.sscale(xyscaled (0.95,0.6) shifted (0,150))
375       (kanji.grone.day);
376     push_stroke(((0,130)+point 1.5 of get_strokep(-2)),(1.6,1.6));
377     build_kanji.add_ltail(0);
378     set_boserif(0,0,10));
379   expand_pbox;
380 enddef;

```

NINE



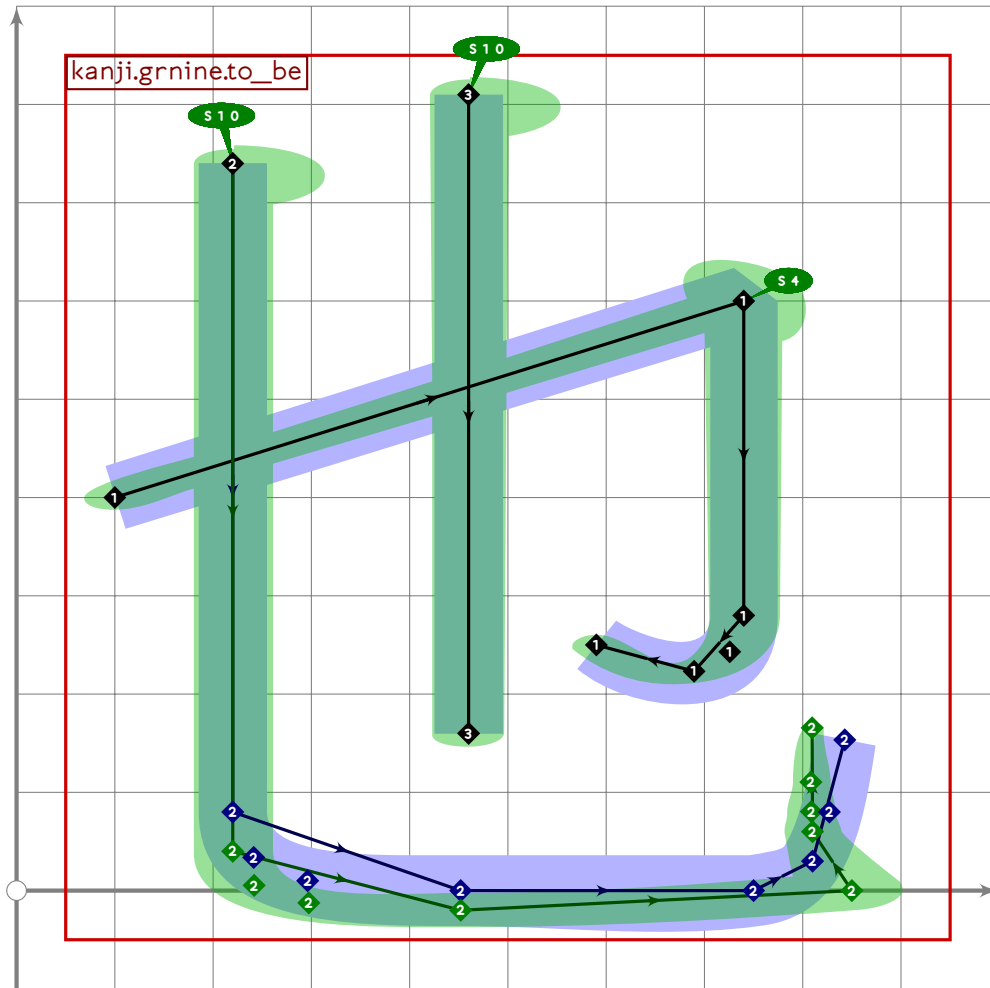


```

381
382 vardef kanji.grnine.that =
383   push_pbox_toexpand("kanji.grnine.that");
384   build_kanji.level(build_kanji.tb(160,-20+20*mincho)
385     (push_stroke((330,810)-(330,0),(1.6,1.6)-(1.5,1.5));
386       set_boserif(0,0,10);
387     push_stroke((670,810)-(670,0),(1.6,1.6)-(1.5,1.5));
388       set_boserif(0,0,10);
389     push_stroke((130,640)-(870,640),(1.5,1.5)-(1.5,1.5));
390       set_boserif(0,1,9);
391     push_stroke((330,430)-(670,430),(1.5,1.5)-(1.5,1.5));
392     push_stroke((330,210)-(670,210),(1.5,1.5)-(1.5,1.5));
393     push_stroke((120,0)-(880,0),(1.6,1.6)-(1.6,1.6));
394     set_boserif(0,1,9))
395     (kanji.radical.eight));
396   expand_pbox;
397 enddef;

```

NINE



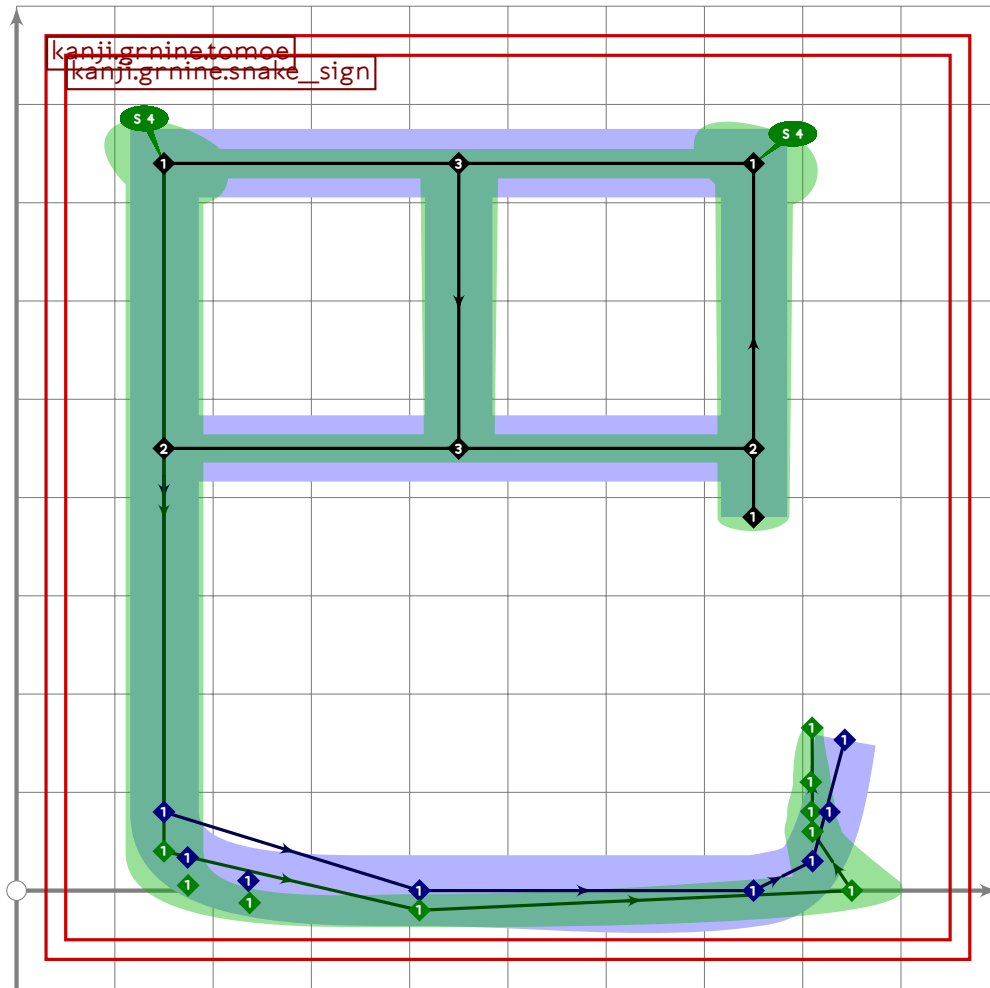
```

398
399 vardef kanji.grnine.to_be =
400   push_pbox_toexpand("kanji.grnine.to_be");
401   tsu_xform(identity shifted (0,250))(
402     push_stroke((100,150)–(740,350),
403       (1.4,1.4)–(1.6,1.6));
404     set_botip(0,1,0);
405     set_boserif(0,1,4);
406     build_kanji.add_jtail(0);
407   );
408   push_stroke((220,740),(1.6,1.6));
409   build_kanji.add_ltail(0);
410   set_boserif(0,0,10);
411   push_stroke((460,810)–(460,160),
412     (1.6,1.6)–(1.5,1.5));
413   set_boserif(0,0,10);
414   expand_pbox;
415 enddef;

```

NINE

U+5DF4  
tsuku.uni5DF4

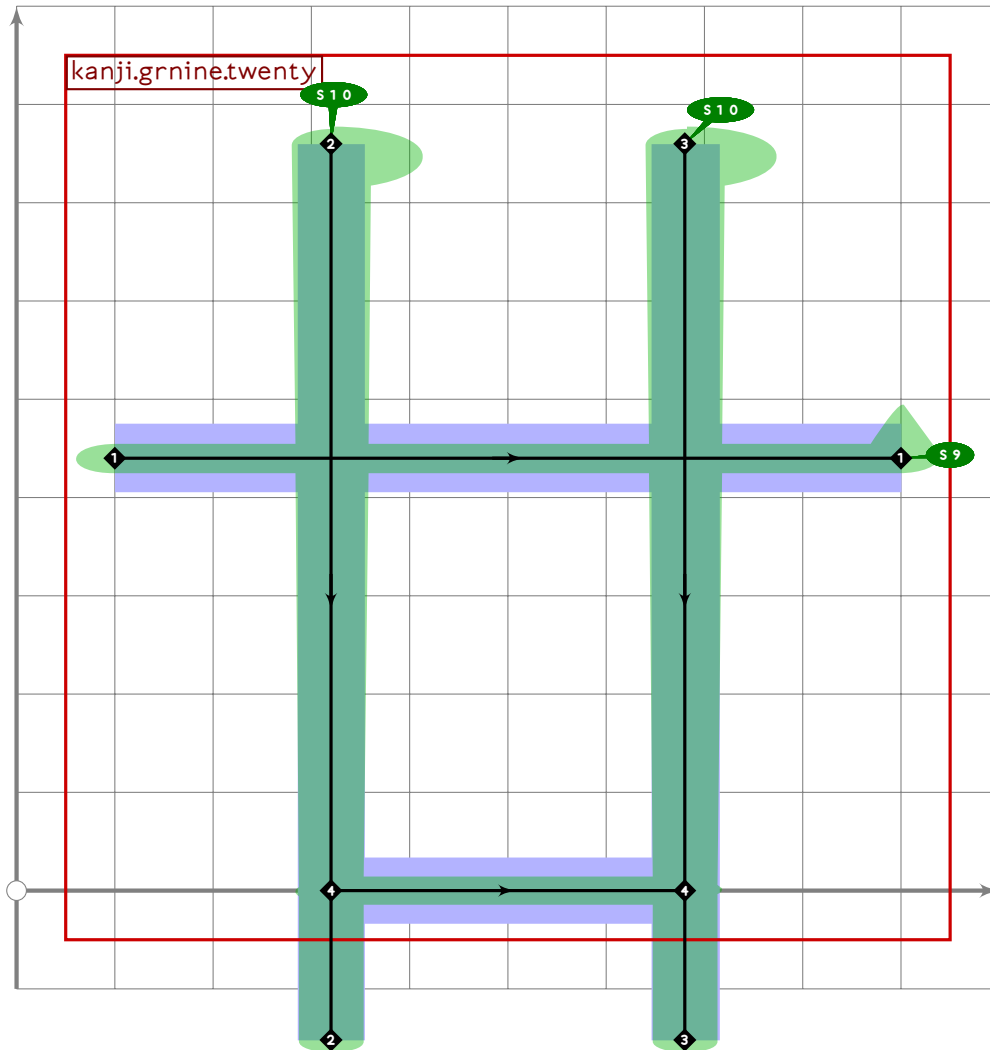


```

416
417 vardef kanji.grnine.tomoe =
418   push_pbox_toexpand("kanji.grnine.tomoe");
419   kanji.grnine.snake_sign;
420   push_stroke((450,740)-(450,450),(1.6,1.6)-(1.5,1.5));
421   expand_pbox;
422 enddef;

```

NINE



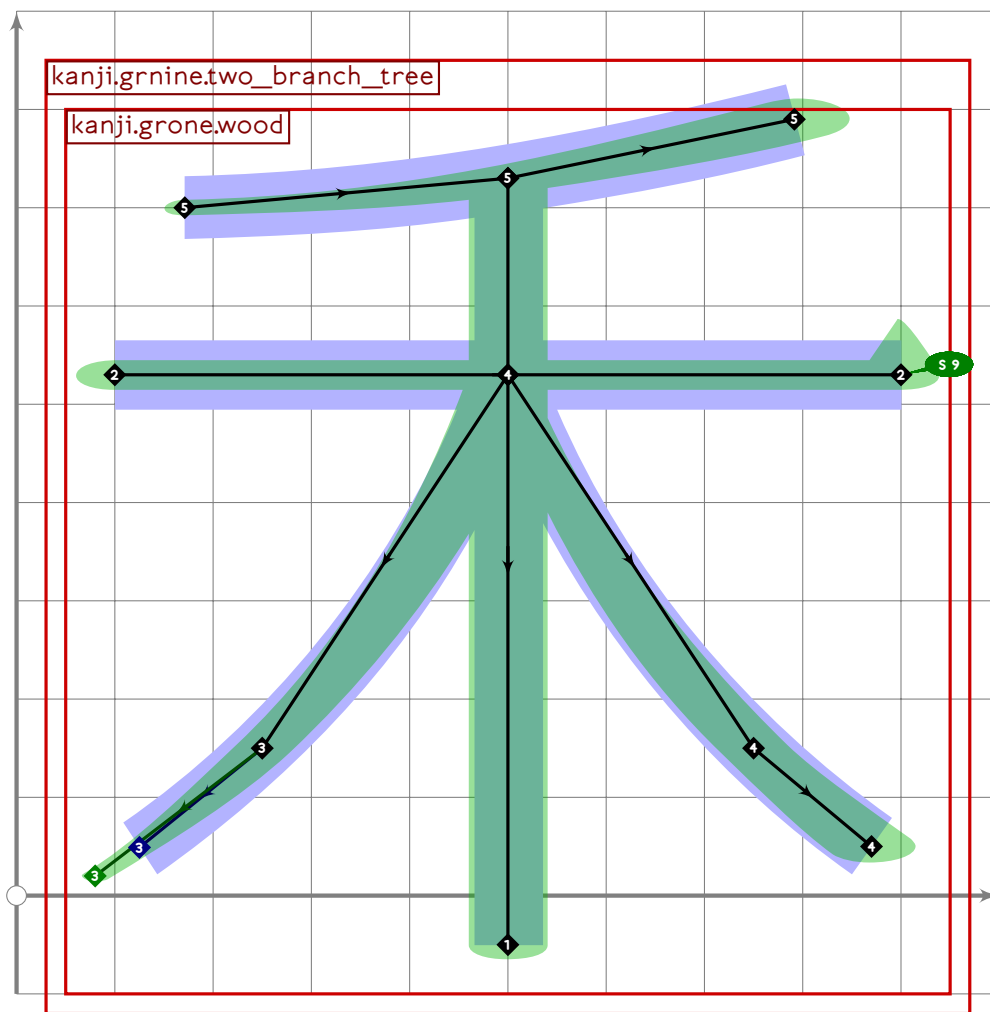
```

423
424 vardef kanji.grnine.twenty =
425   push_pbox_toexpand("kanji.grnine.twenty");
426   push_stroke((100,440)–(900,440),(1,6,1,6)–(1,6,1,6));
427   set_boserif(0,1,9);
428   build_kanji.cup((320,760),(680,0));
429   expand_pbox;
430 enddef;

```

NINE

U+79BE  
tsuku.uni79BE

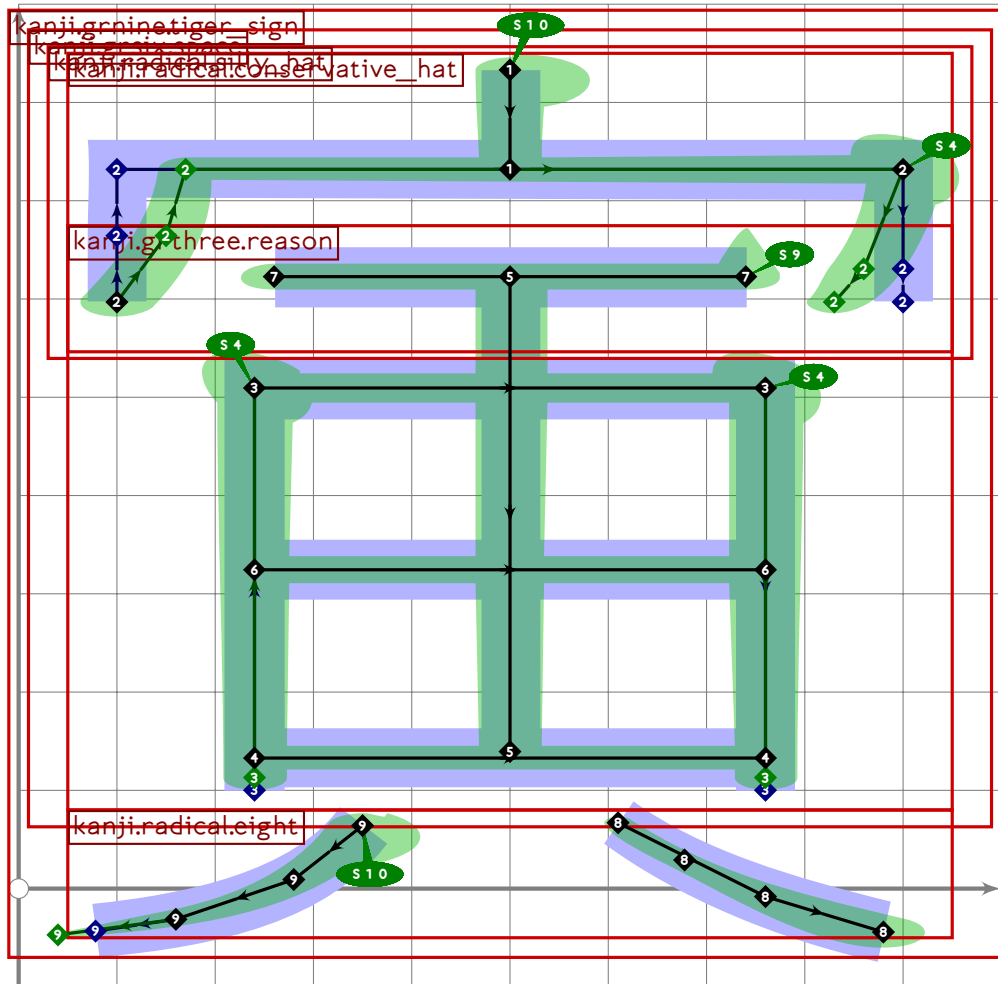


```

431
432 vardef kanji.grnine.two_branch_tree =
433   push_pbox_toexpand("kanji.grnine.two_branch_tree");
434   tsu_xform(identity shifted (0;-50))
435     (build_kanji.add_beret(kanji.grone.wood));
436   expand_pbox;
437 enddef;

```

NINE



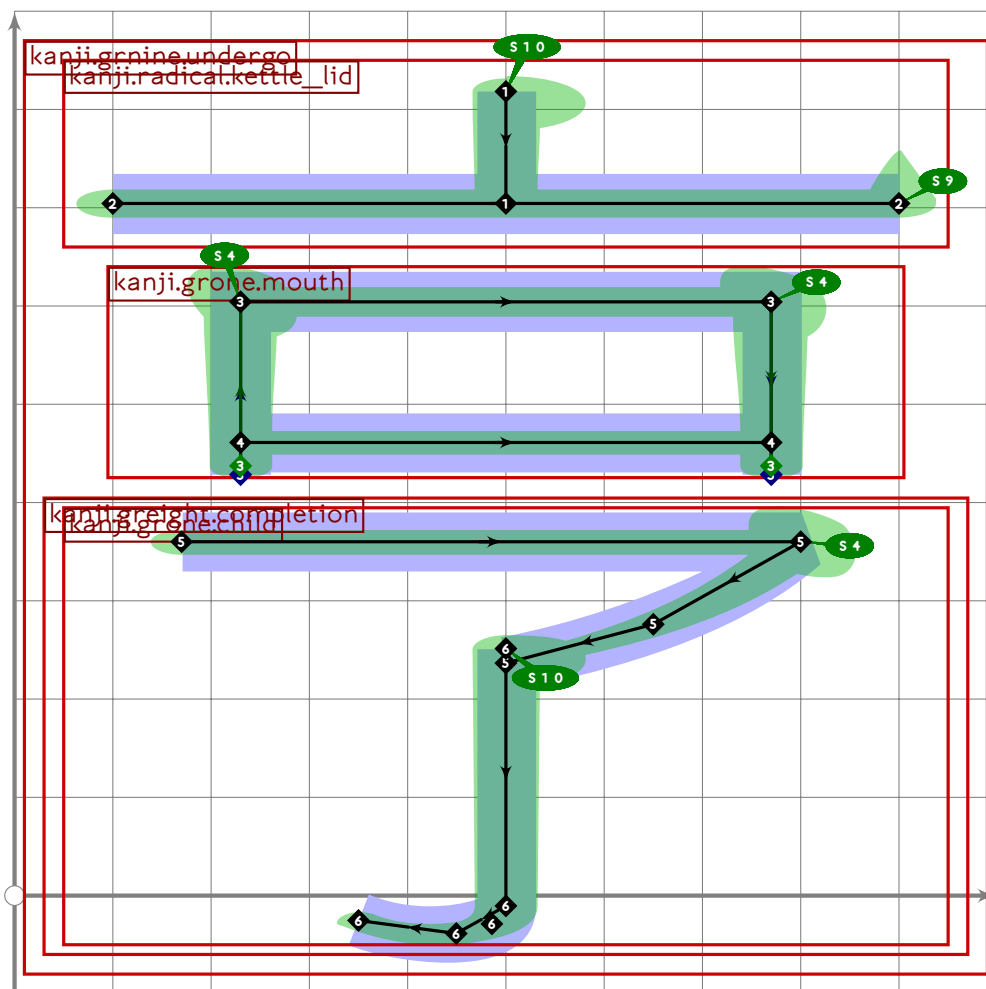
```

438
439 vardef kanji.grnine.tiger_sign =
440   push_pbox_toexpand("kanji.grnine.tiger_sign");
441   build_kanji.level(build_kanji.tb(80,0)
442     (kanji.grsix.space;
443       set_boserif(-1,0,whatever);
444       replace_stroke(-1)(subpath (0,0.5,1) of oldp);
445       push_stroke((((-240,0)-(-240,0)) shifted (point 0 of get_stroke(-1)),
446         (1.6,1.6)-(1.6,1.6));
447       set_boserif(0,1,9))
448     (kanji.radical.eight));
449   expand_pbox;
450 enddef;

```

NINE

U+4EA8  
tsuku.uni4EA8



```

451
452 vardef kanji.grnine.undergo =
453   push_pbox_toexpand("kanji.grnine.undergo");
454   build_kanji.level(build_kanji.tb(650,-20)
455     (kanji.radical.kettle_lid)
456     (build_kanji.tb(550,-40)
457       (build_kanji.sscale(xscaled 0.9)(kanji.grone.mouth))
458       (kanji.greight.completion)));
459   expand_pbox;
460 enddef;

```

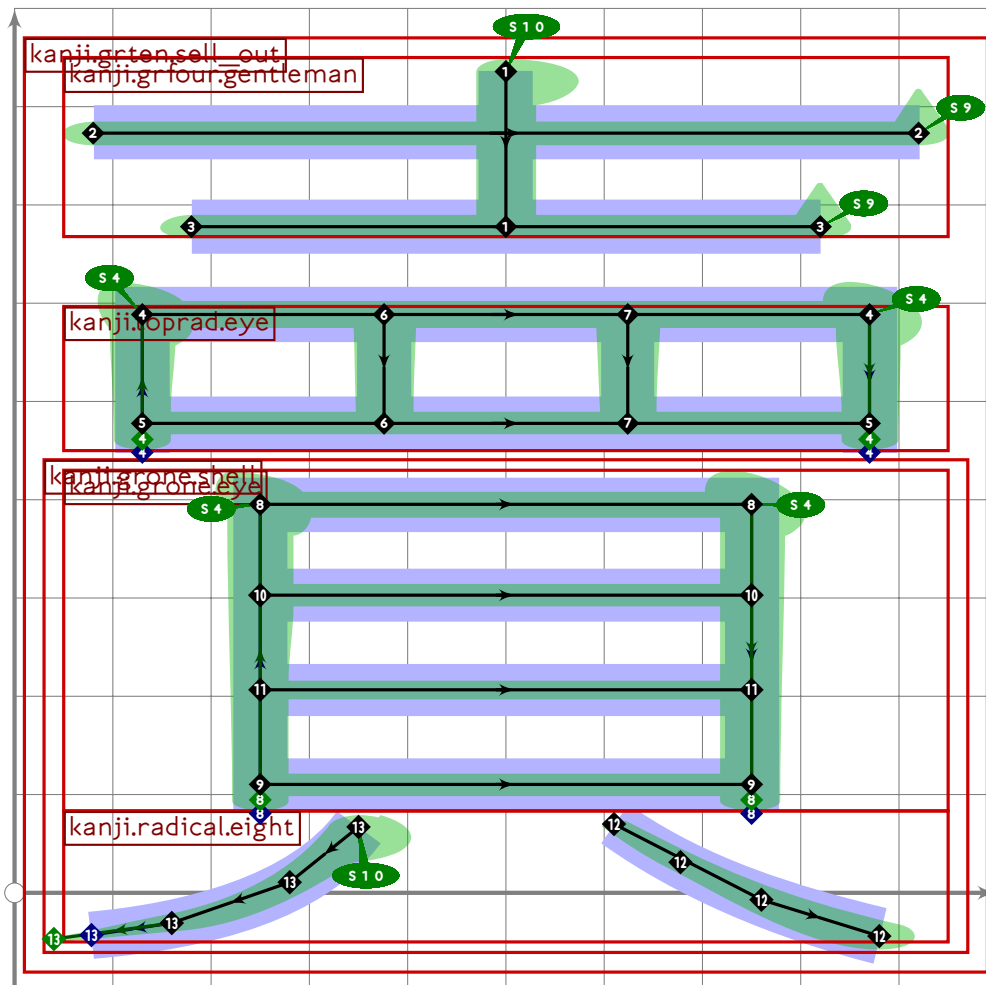
NINE

# gradeten.mp

```

1 %
2 % Grade Ten kanji used on more than one page
3 % Copyright (C) 2013 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 inclusion_lock(gradeten);
32
33

```



```

34
35 vardef kanji.grten.sell_out =
36   push_pbox_toexpand("kanji.grten.sell_out");
37   build_kanji.level(build_kanji.tb(440;20)
38     (build_kanji.tb(360;160)
39       (kanji.grfour.gentleman)
40       (kanji.toprad.eye))
41     (kanji.grone.shell));
42   expand_pbox;
43 enddef;

```

TEN

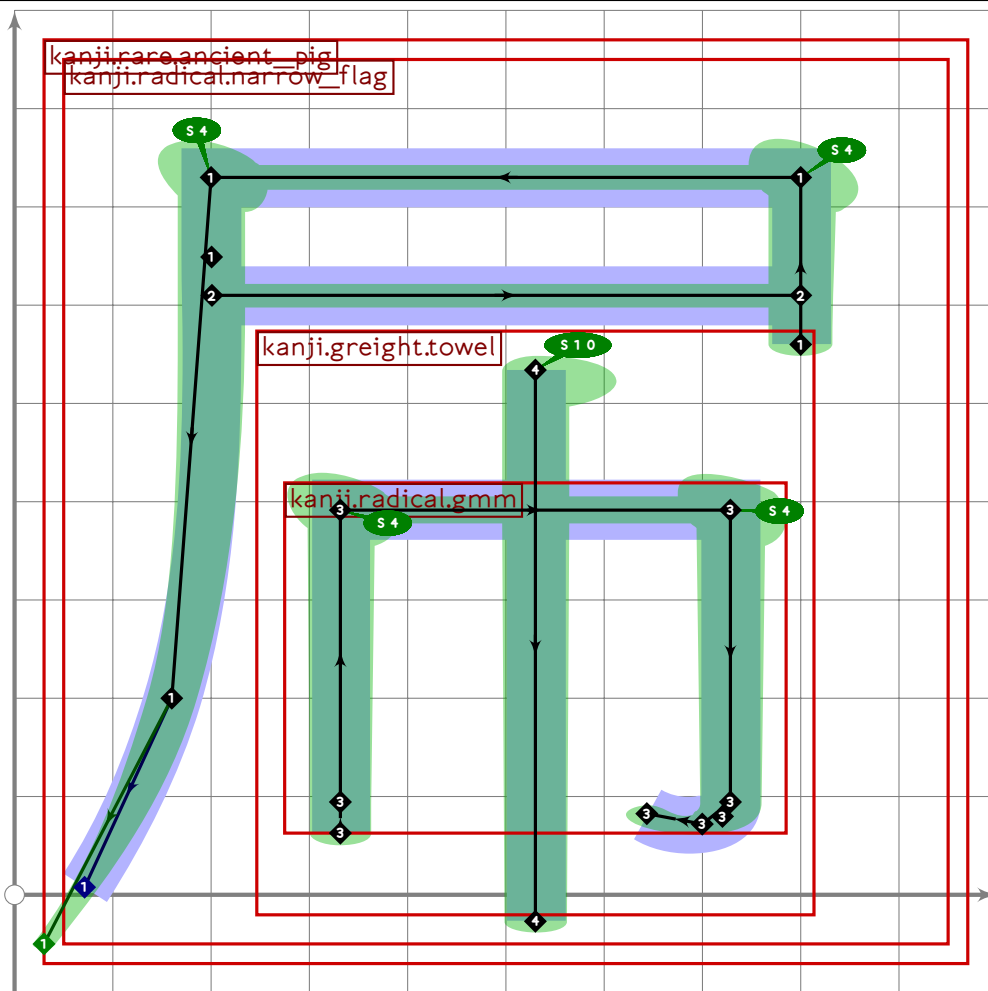


## rare.mp

```

1 %
2 % Rare kanji needed to build others
3 % Copyright (C) 2011, 2012, 2013, 2014, 2016, 2017 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 inclusion_lock(rare);
32
33

```

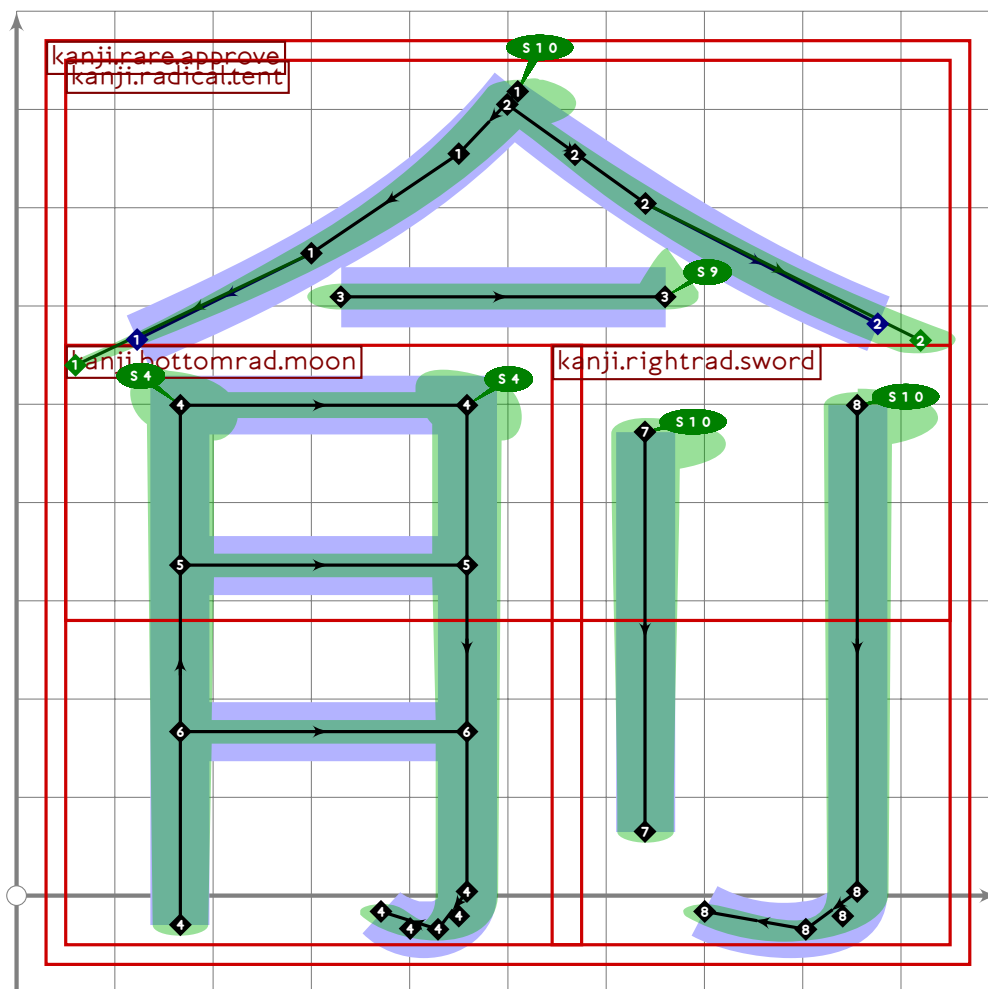


```

34
35 vardef kanji.rare.ancient_pig =
36   push_pbox_toexpand("kanji.rare.ancient_pig");
37   build_kanji.level(
38     kanji.radical.narrow_flag;
39     build_kanji.sscale(xyscaled (0.63,0.66) shifted (30,-120))
40     (kanji.greight.towel));
41   expand_pbox;
42 enddef;

```

RARE



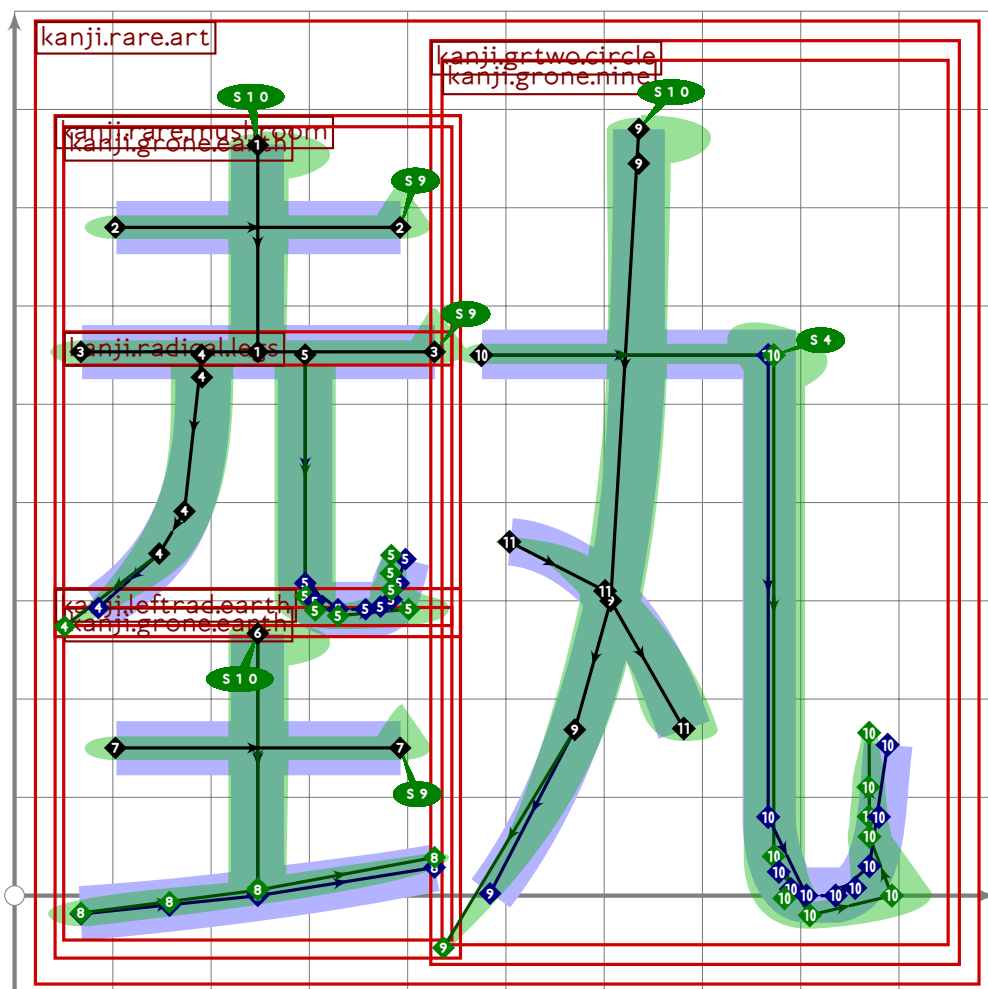
```

43
44 vardef kanji.rare.approve =
45   push_pbox_toexpand("kanji.rare.approve");
46   build_kanji.level(build_kanji.tb(420,280)
47     (kanji.radical.tent)
48     (build_kanji.lr(560,30)
49       (kanji.bottomrad.moon)
50       (kanji.rightrad.sword)));
51   expand_pbox;
52 enddef;

```

RARE

U+57F6  
tsuku.uni57F6

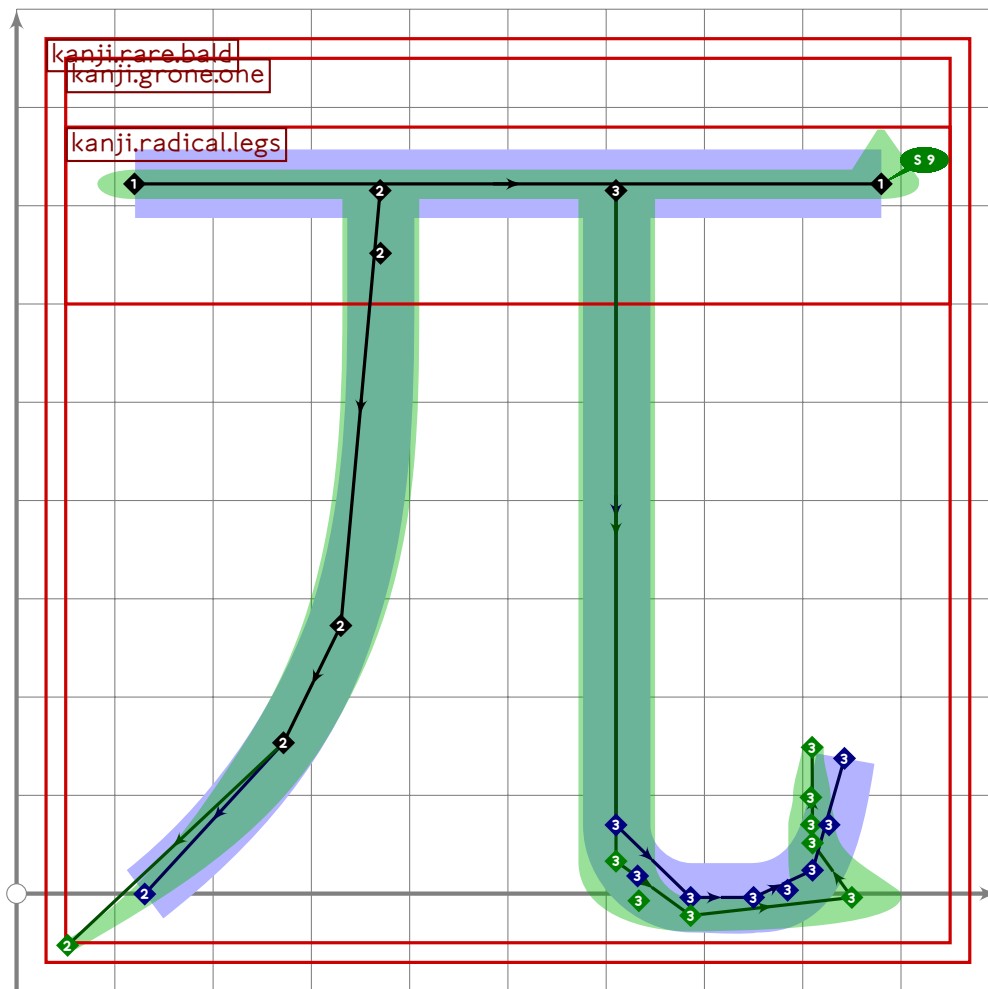


```

53
54 vardef kanji.rare.art =
55   push_pbox_toexpand("kanji.rare.art");
56   build_kanji.level(build_kanji.lr(440,10)
57     (build_kanji.sscale(yscaled 0.94 shifted (0,-40))(build_kanji.tb(330,40)
58       (kanji.rare.mushroom)
59       (kanji.leftrad.earth)))
60     (kanji.grtwo.circle));
61   expand_pbox;
62 enddef;

```

RARE

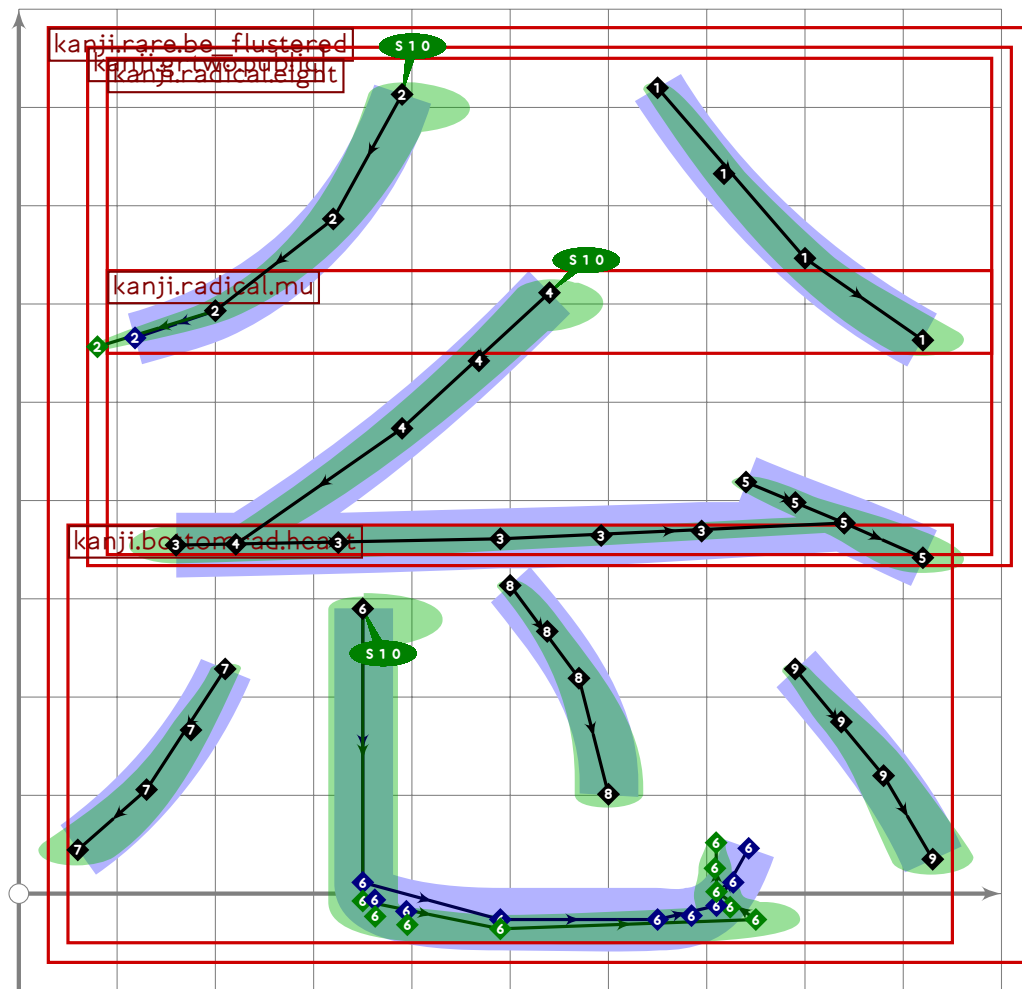


```

63
64 vardef kanji.rare.bald =
65   push_pbox_toexpand("kanji.rare.bald");
66   build_kanji.level(build_kanji.tb(690,180)
67     (kanji.grone.one)
68     (kanji.radical.legs));
69   expand_pbox;
70 enddef;

```

U+5FE9  
tsuku.uni5FE9

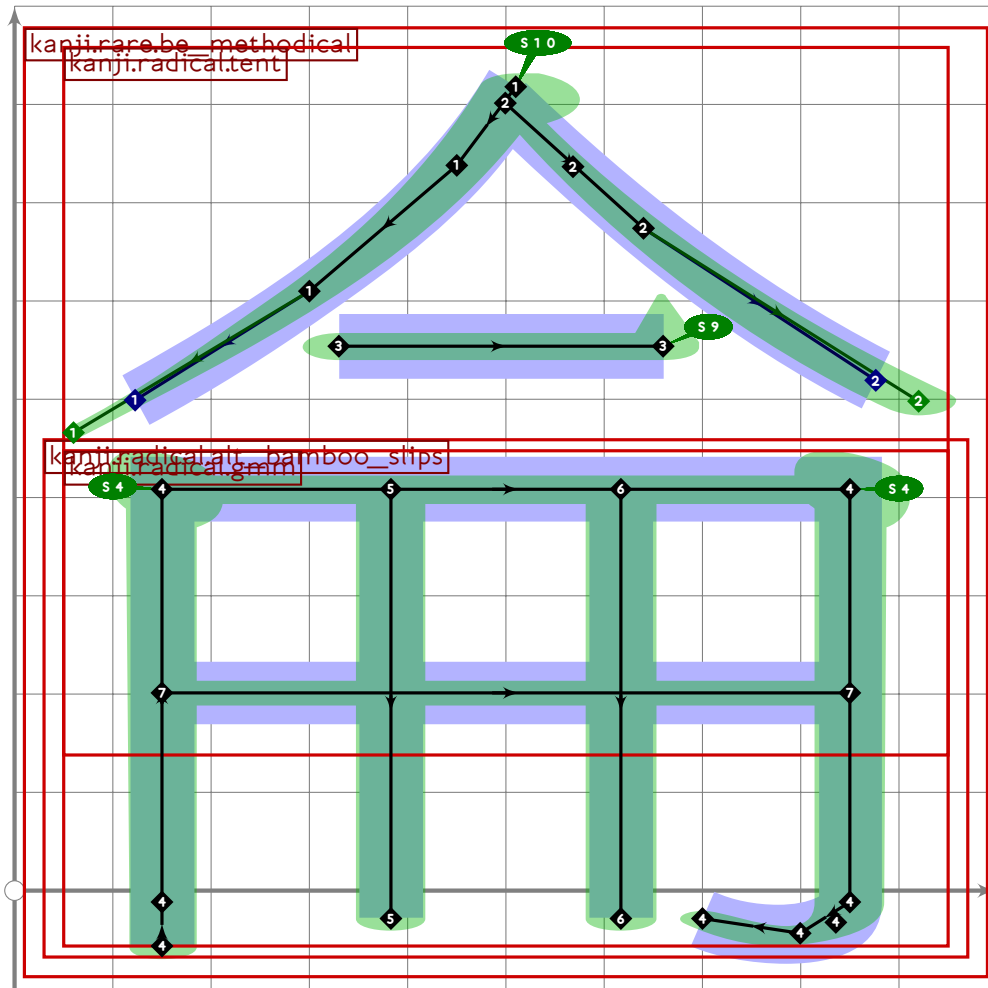


```

71
72 vardef kanji.rare.be_flustered =
73   push_pbox_toexpand("kanji.rare.be_flustered");
74   build_kanji.level(build_kanji.tb(360,30)
75     (build_kanji.sscale(shifted (40,0))(kanji.grtwo.public))
76     (kanji.bottomrad.heart));
77   expand_pbox;
78 enddef;

```

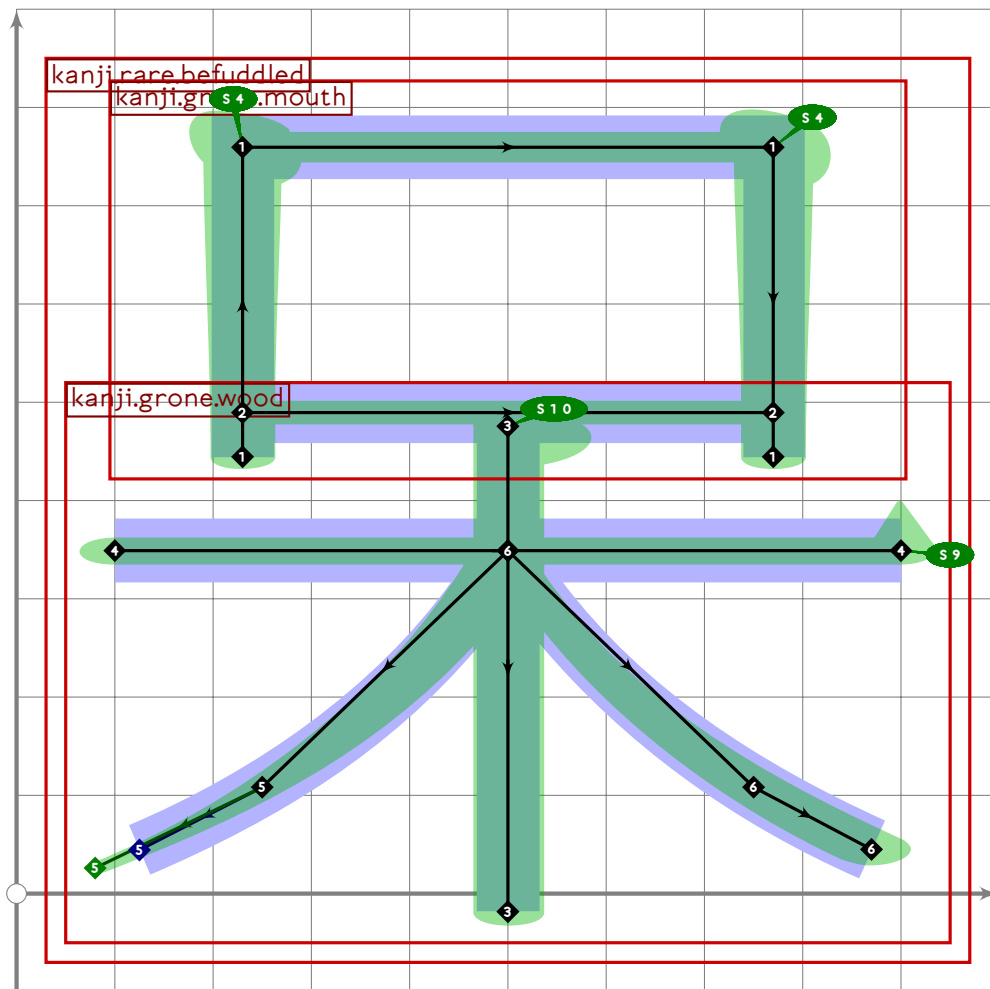
RARE



```

79
80 vardef kanji.rare.be_methodical =
81   push_pbox_toexpand("kanji.rare.be_methodical");
82   build_kanji.level(
83     build_kanji.sscale(yscaled 0.8 shifted (0,100))(kanji.radical.tent);
84     build_kanji.sscale(yscaled 0.56 shifted (0,200))
85     (kanji.radical.alt_bamboo_slips));
86   expand_pbox;
87 enddef;

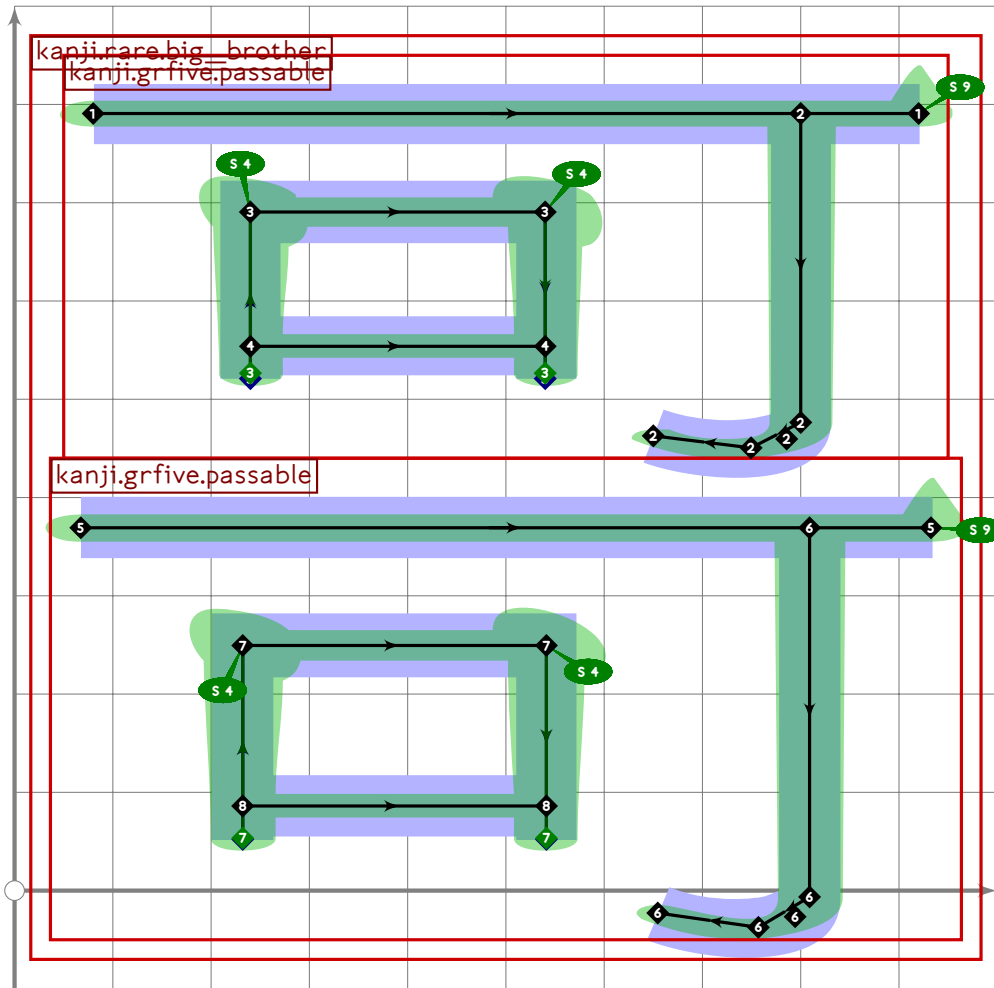
```



```

88
89 vardef kanji.rare.befuddled =
90   push_pbox_toexpand("kanji.rare.befuddled");
91   build_kanji.level(build_kanji.tb(460,120)
92     (build_kanji.sscale(scaled 0.9)(kanji.grone.mouth))
93     (kanji.grone.wood));
94   expand_pbox;
95 enddef;

```



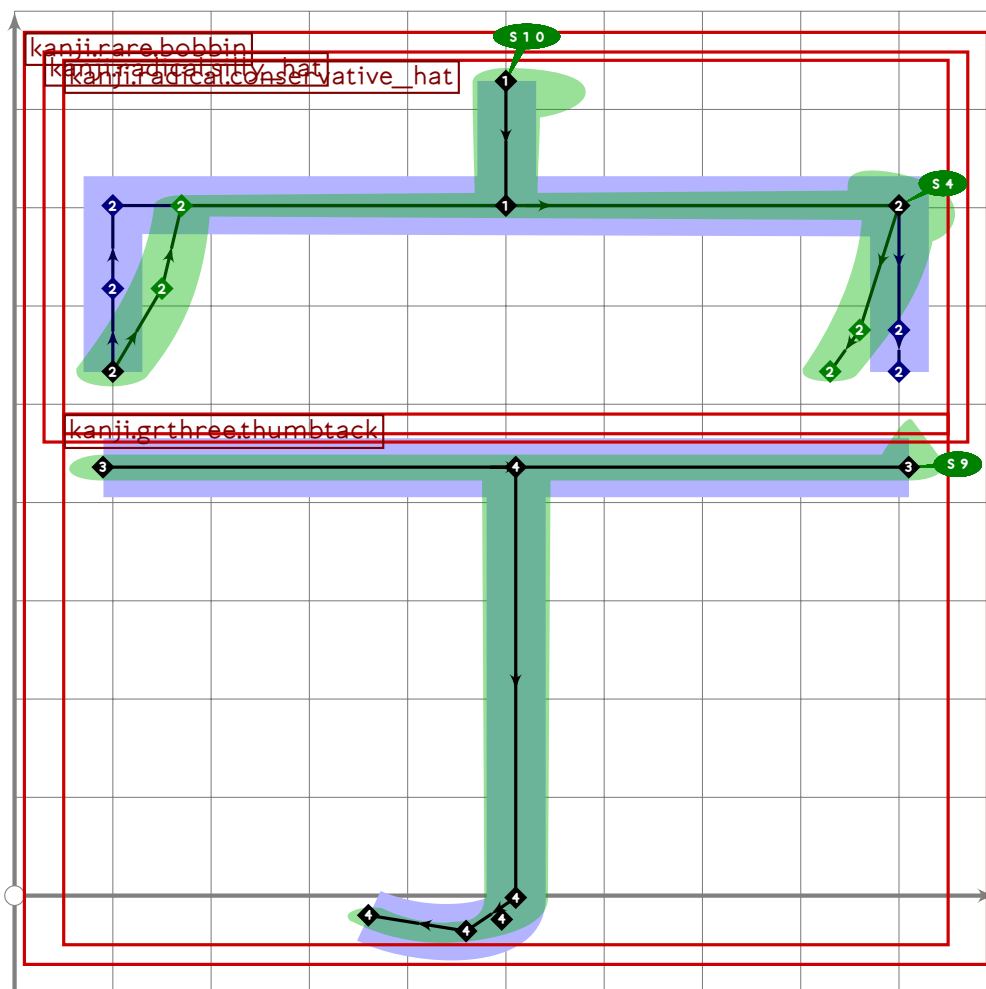
```

96
97 vardef kanji.rare.big_brother =
98   push_pbox_toexpand("kanji.rare.big_brother");
99   build_kanji.tb(440,0)
100     (kanji.grfive.passable)
101     (build_kanji.sscale(xscaled 1.03)(kanji.grfive.passable));
102   expand_pbox;
103 enddef;

```



U+5B81  
tsuku.uni5B81

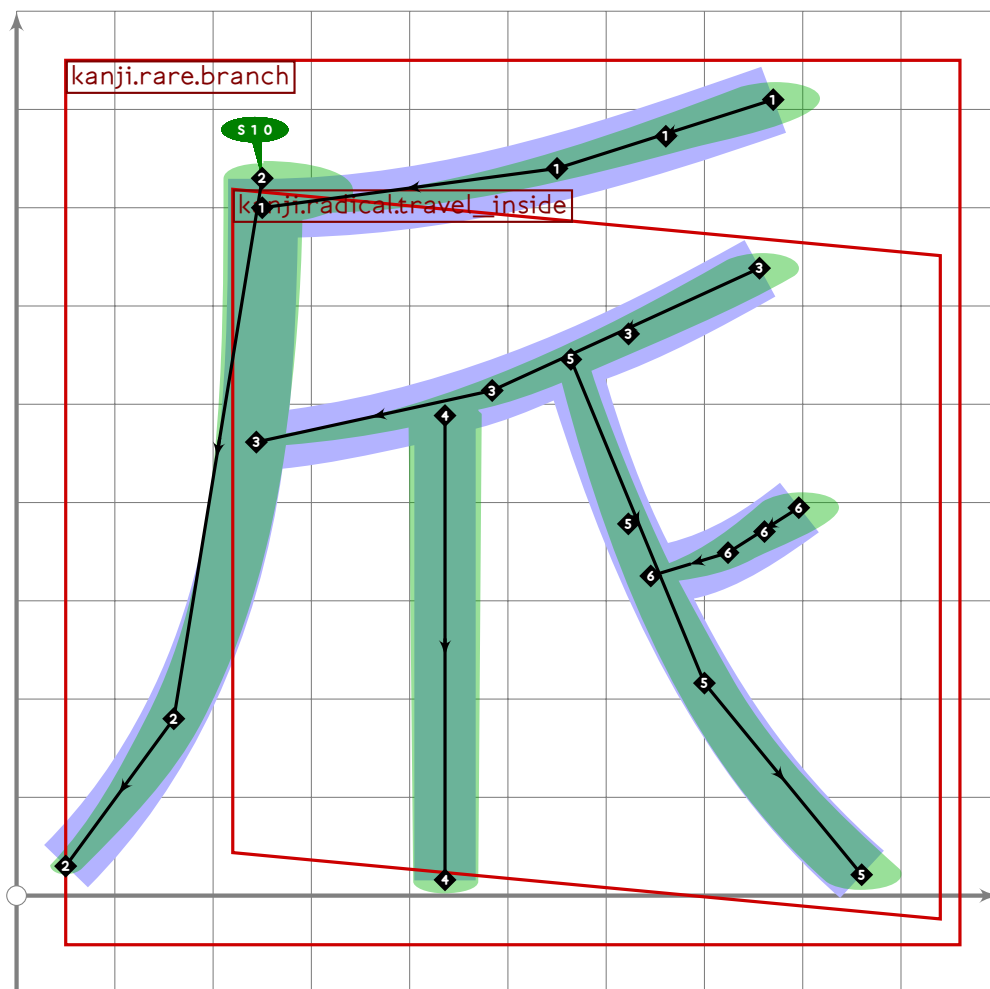


```

104
105 vardef kanji.rare.bobbin =
106   push_pbox_toexpand("kanji.rare.bobbin");
107   build_kanji.level(build_kanji.tb(480,20)
108     (kanji.radical.silly_hat)
109     (kanji.grthree.thumbtack));
110   expand_pbox;
111 enddef;

```

RARE

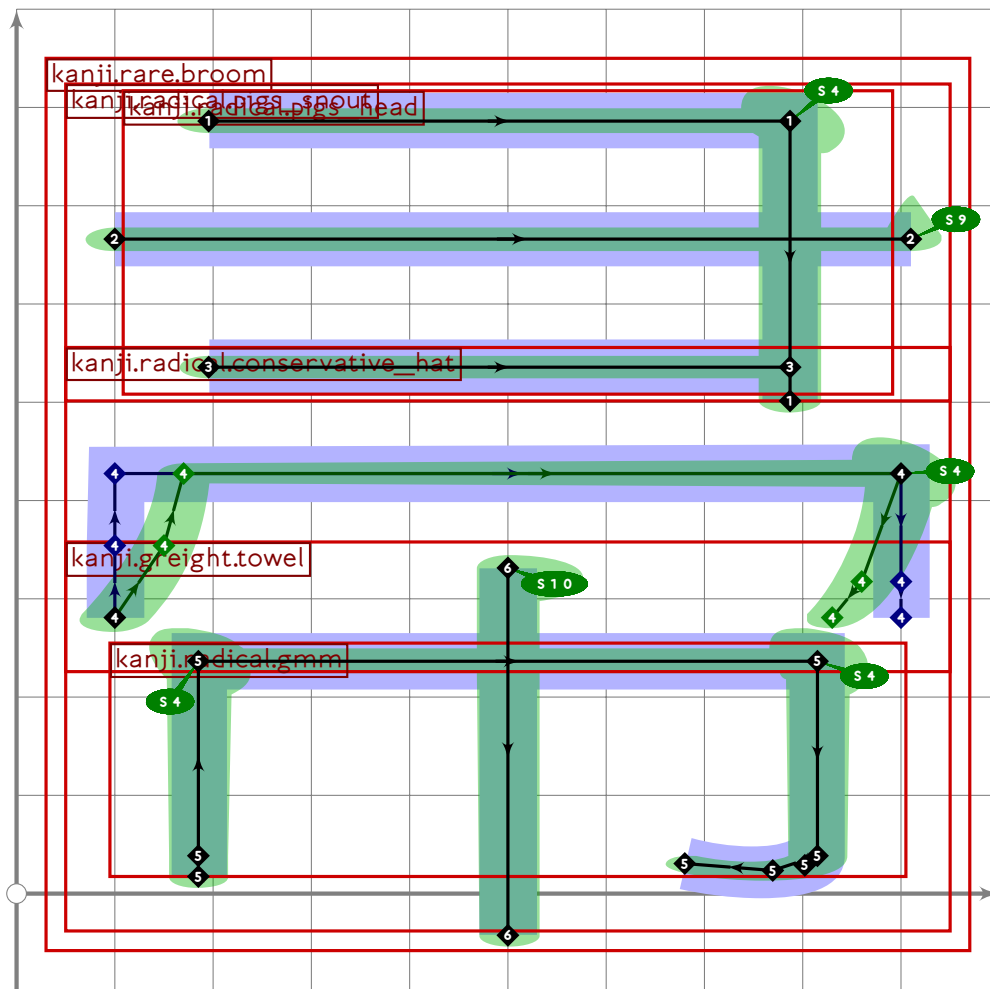


```

112
113 vardef kanji.rare.branch =
114   push_pbox_toexpand("kanji.rare.branch");
115   push_stroke((770,810)..tension 1.2..(550,740)..(250,700),
116     (1.8,1.8)–(1.5,1.5)–(1,1));
117   push_stroke((250,730){down}..(160,180)..(50,30),
118     (1.6,1.6)–(1.3,1.3)–(1,1));
119   set_boserif(0,0,10);
120   build_kanji.sscale(rotated 90 slanted 0.1 rotated -90
121     xyscaled (0.8,0.75) shifted (80,-50))
122     (kanji.radical.travel_inside);
123   expand_pbox;
124 enddef;

```

U+5E1A  
tsuku.uni5E1A

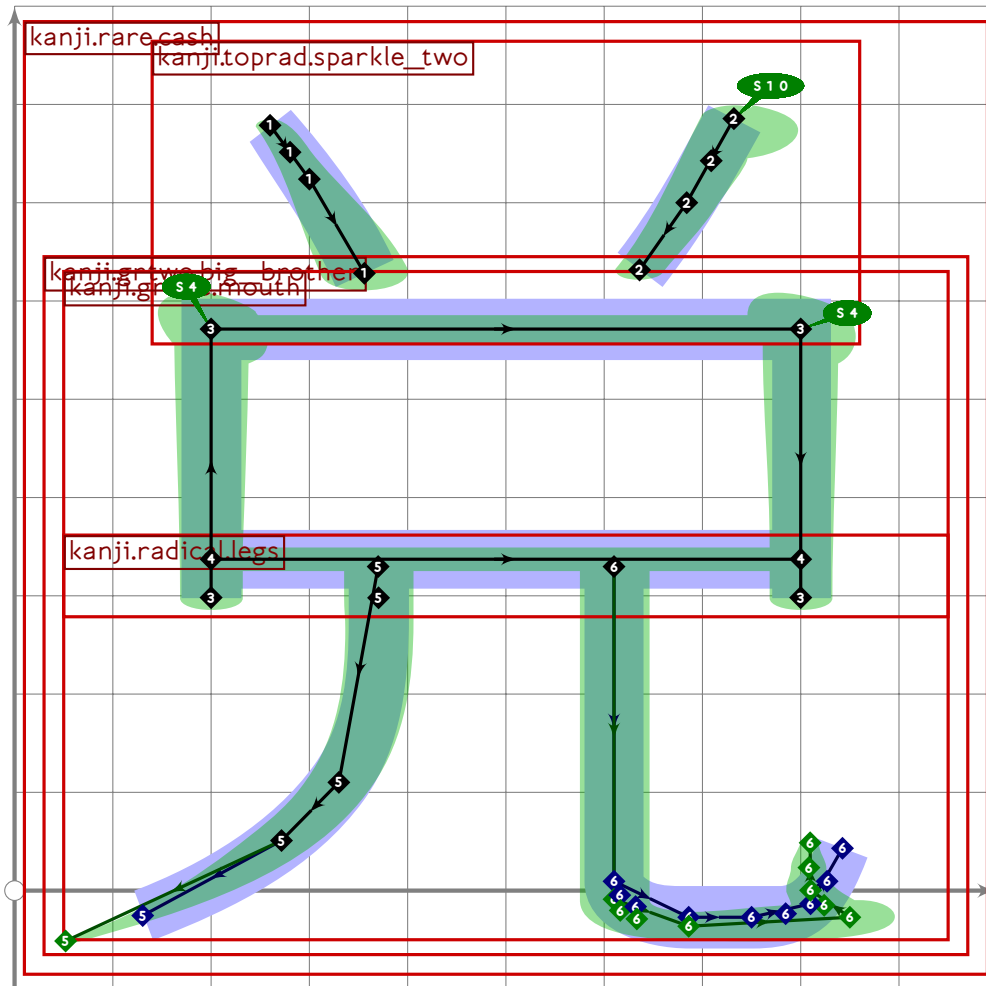


```

125
126 vardef kanji.rare.broom =
127   push_pbox_toexpand("kanji.rare.broom");
128   build_kanji.level(build_kanji.sscale(yscaled 0.95 shifted (0,-10))
129     (build_kanji.tb(550,50)
130       (kanji.radical.pigs_snout)
131       (build_kanji.tb(450,200)
132         (kanji.radical.conservative_hat)
133         (kanji.greight.towel))));
134   expand_pbox;
135 enddef;

```

RARE

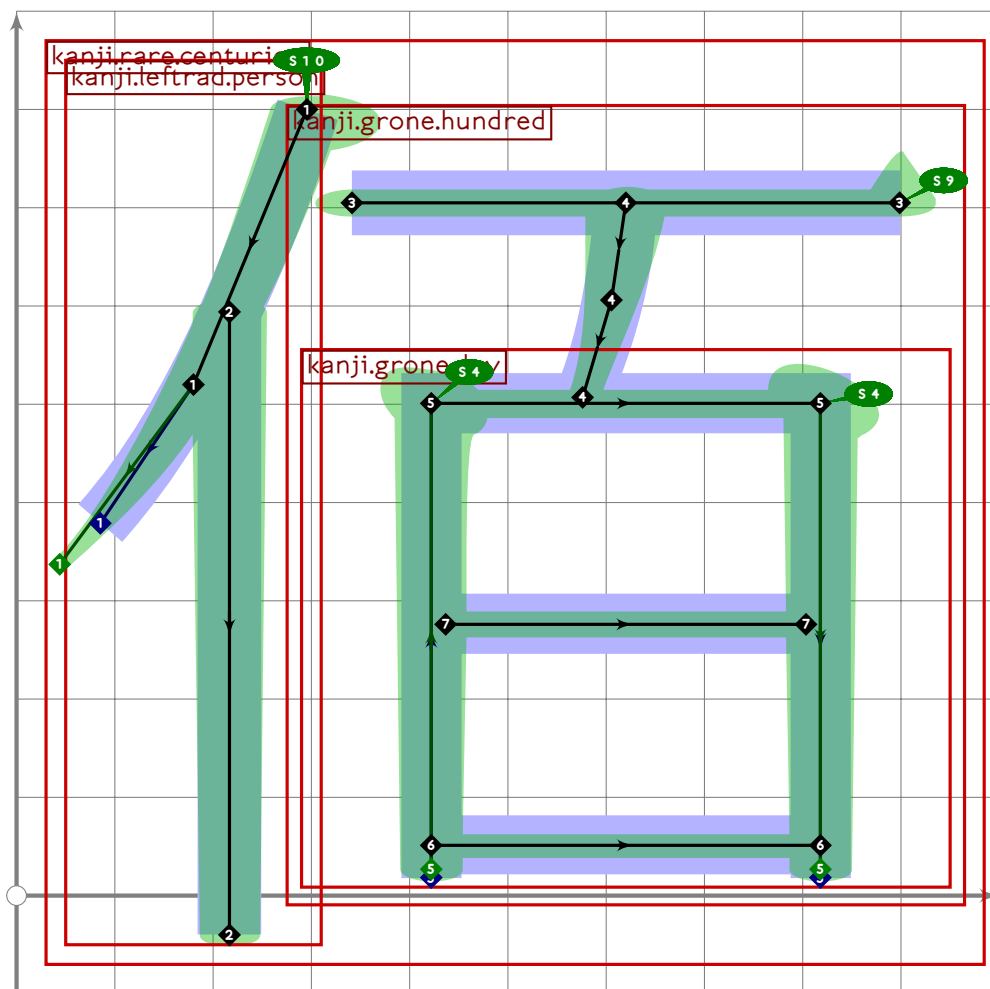


```

136
137 vardef kanji.rare.cash =
138   push_pbox_toexpand("kanji.rare.cash");
139   build_kanji.level(build_kanji.tb(600,60)
140     (build_kanji.sscale(xyscaled (0.8,1.1))(kanji.toprad.sparkle_two))
141     (kanji.grtwo.big_brother));
142   expand_pbox;
143 enddef;

```

U+4F70  
tsuku.uni4F70

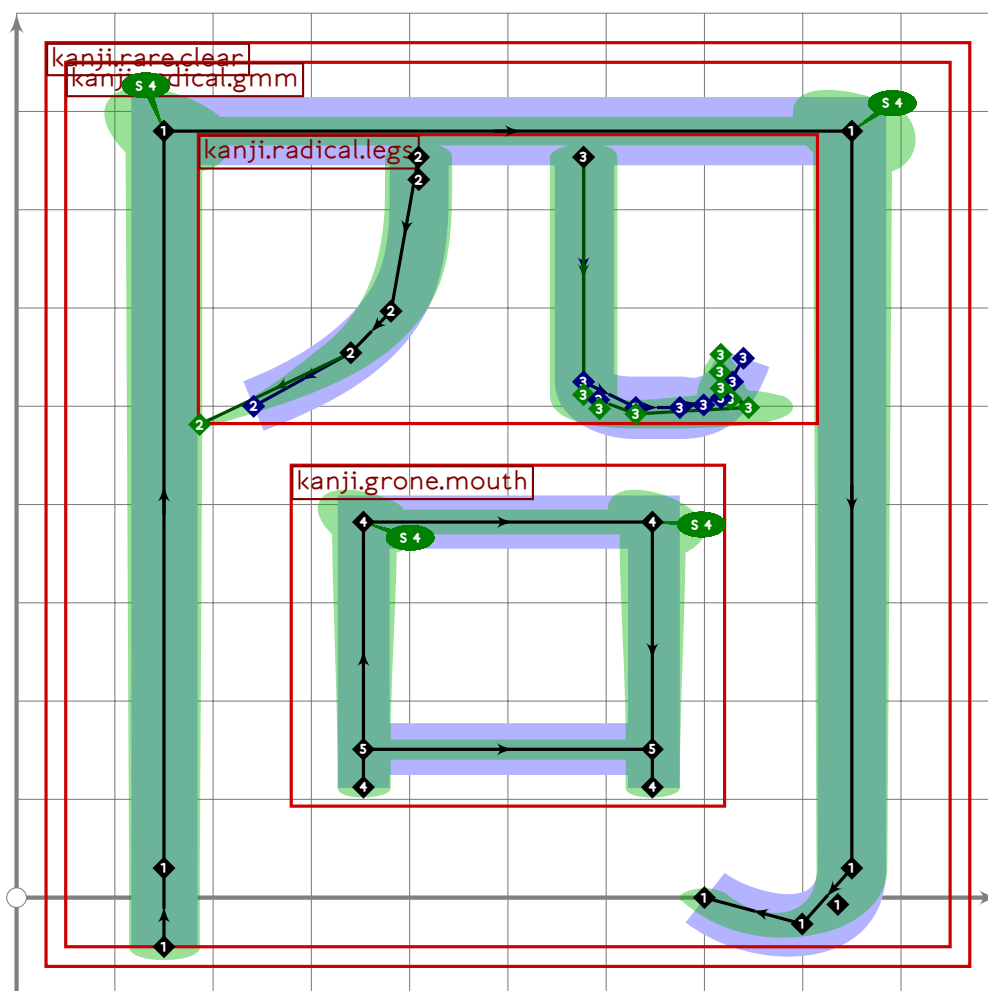


```

144
145 vardef kanji.rare.centurion =
146   push_pbox_toexpand("kanji.rare.centurion");
147   build_kanji.lr(300,20)
148     (kanji.leftrad.person)
149     (build_kanji.sscale(yscaled 0.9)(kanji.grone.hundred));
150   expand_pbox;
151 enddef;

```

RARE

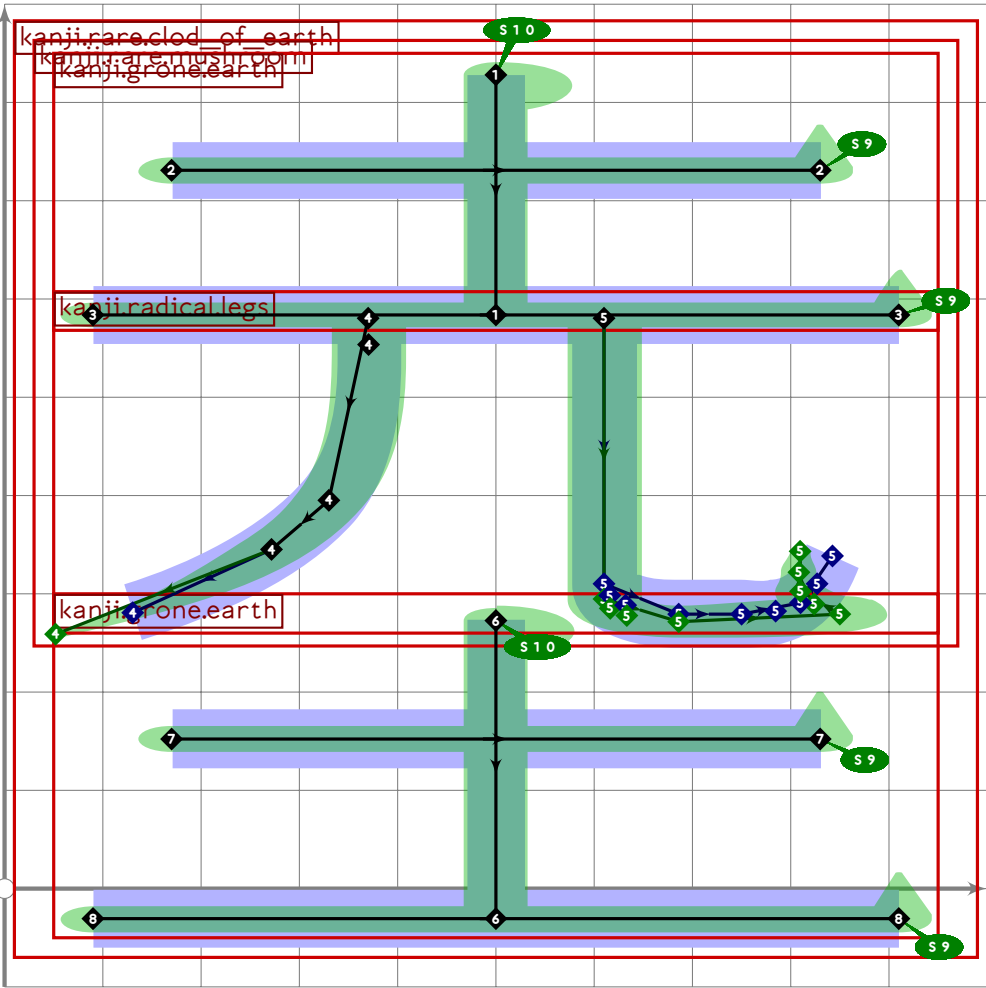


```

152
153 vardef kanji.rare.clear =
154   push_pbox_toexpand("kanji.rare.clear");
155   kanji.radical.gmm;
156   build_kanji.sscale(xyscaled (0.7,0.84))(build_kanji.tb(520,40)
157     (kanji.radical.legs)
158     (build_kanji.sscale(scaled 0.7)(kanji.grone.mouth)));
159   expand_pbox;
160 enddef;

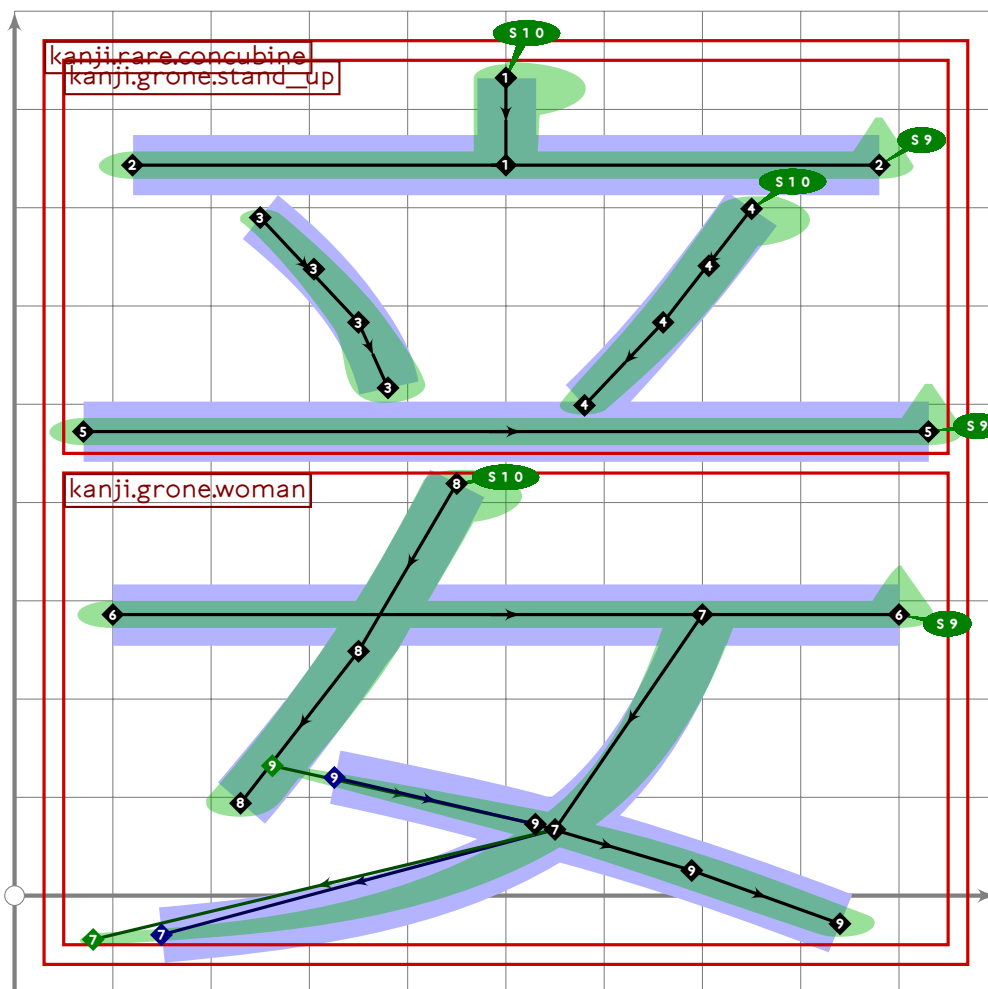
```

RARE



```
161
162 vardef kanji.rare.clod_of_earth =
163   push_pbox_toexpand("kanji.rare.clod_of_earth");
164   build_kanji.tb(280,40)
165     (kanji.rare.mushroom)
166     (kanji.grone.earth);
167   expand_pbox;
168 enddef;
```

RARE



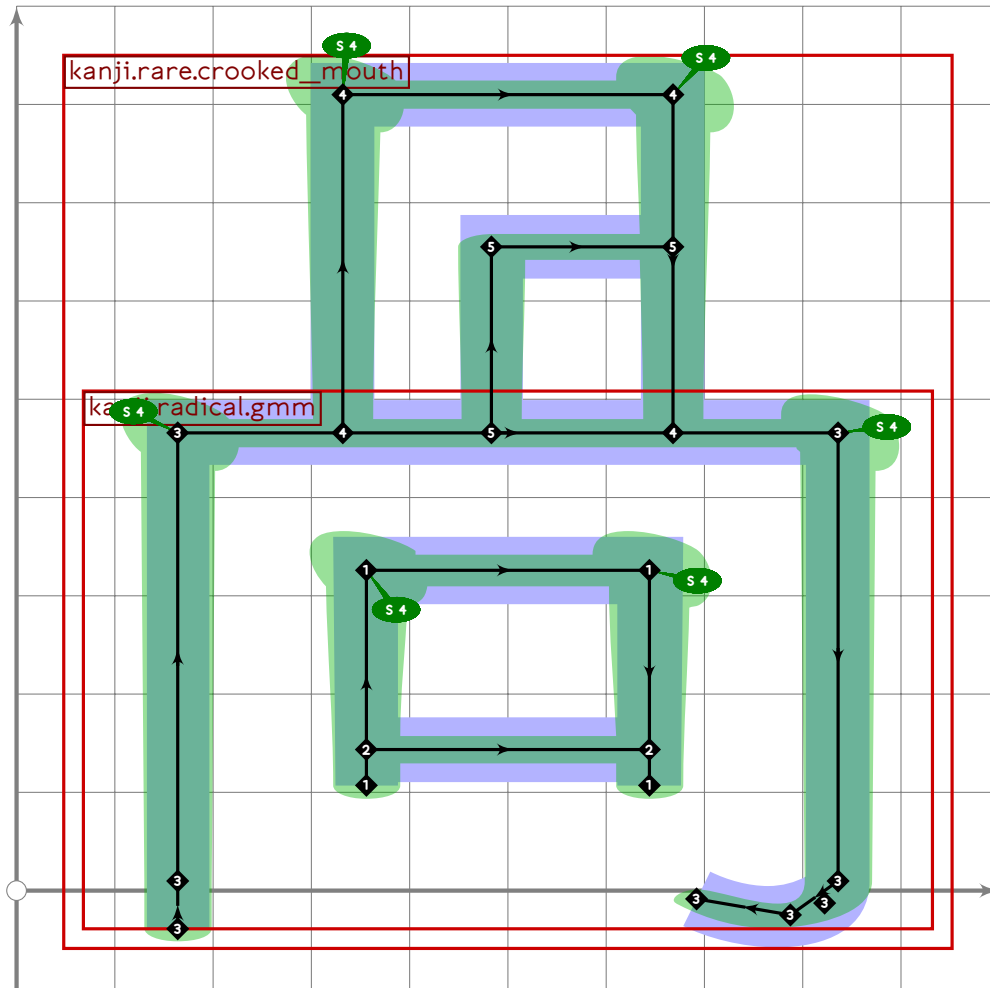
```

169
170 vardef kanji.rare.concubine =
171   push_pbox_toexpand("kanji.rare.concubine");
172   build_kanji.tb(440;-20)
173     (kanji.grone.stand_up)
174     (kanji.grone.woman);
175   expand_pbox;
176 enddef;

```

RARE





```

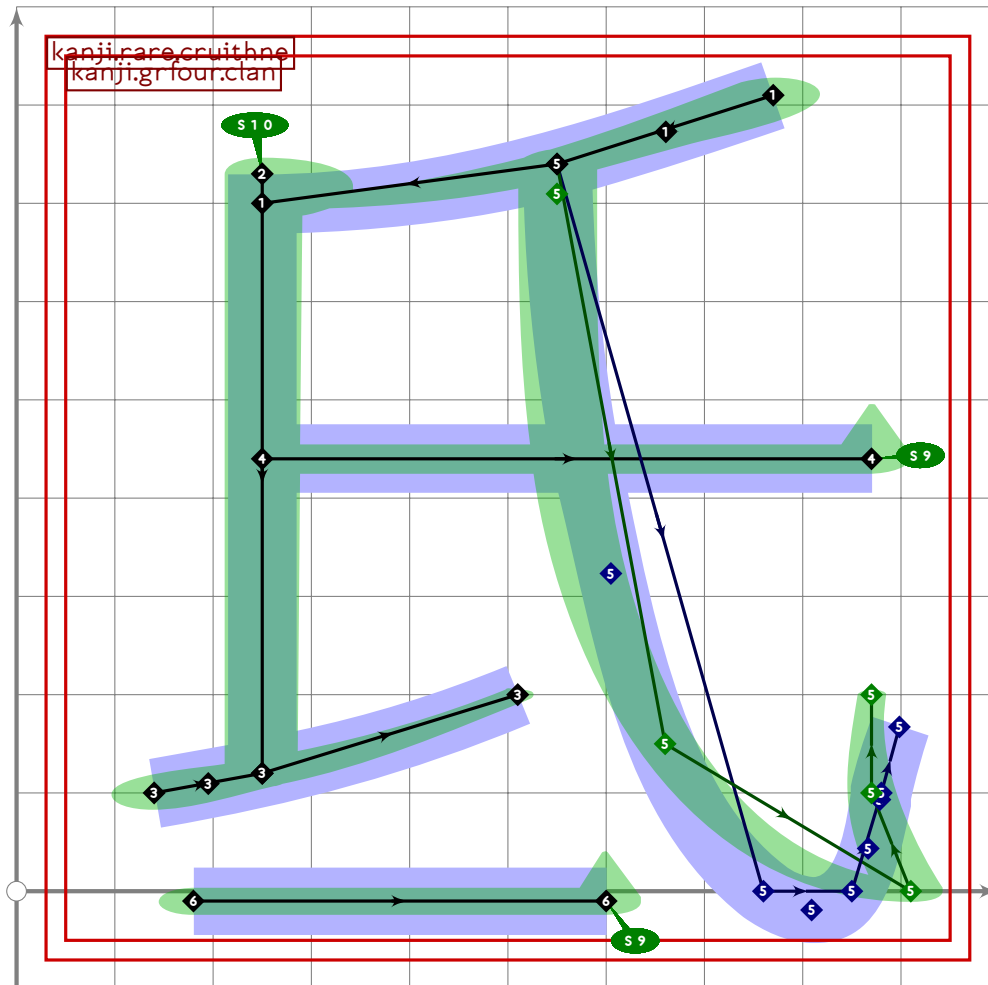
177
178 vardef kanji.rare.crooked_mouth =
179   push_pbox_toexpand("kanji.rare.crooked_mouth");
180   build_kanji.level(
181     build_kanji.tb(520,0)()
182     (build_kanji.sscale(scaled 0.96)(build_kanji.box((350,550),(650,250)));
183     kanji.radical.gmm));
184   begingroup
185     save gmm_path,top_path;
186     path gmm_path,top_path;
187     gmm_path:=get_strokep(0);
188     top_path:=(point 2.25 of gmm_path)-
189       (xpart point 2.25 of gmm_path,810)-
190       (xpart point 2.75 of gmm_path,810)-
191       (point 2.75 of gmm_path);
192     push_stroke(top_path,(1,4,1,4)-(1,6,1,6)-(1,6,1,6)-(1,4,1,4));
193     set_botip(0,1,1);
194     set_botip(0,2,1);
195     set_boserif(0,1,4);
196     set_boserif(0,2,4);
197     push_stroke(

```

```

198      (xpart point 145 of top_path,ypart point 0 of top_path)-
199      (xpart point 145 of top_path,ypart point 0.55 of top_path)-
200      (point 245 of top_path),
201      (14,14)-(1.5,1.5)-(1.5,1.5));
202      set_botip(0,1);
203      endgroup;
204  );
205  expand_pbox;
206  enddef;
207

```



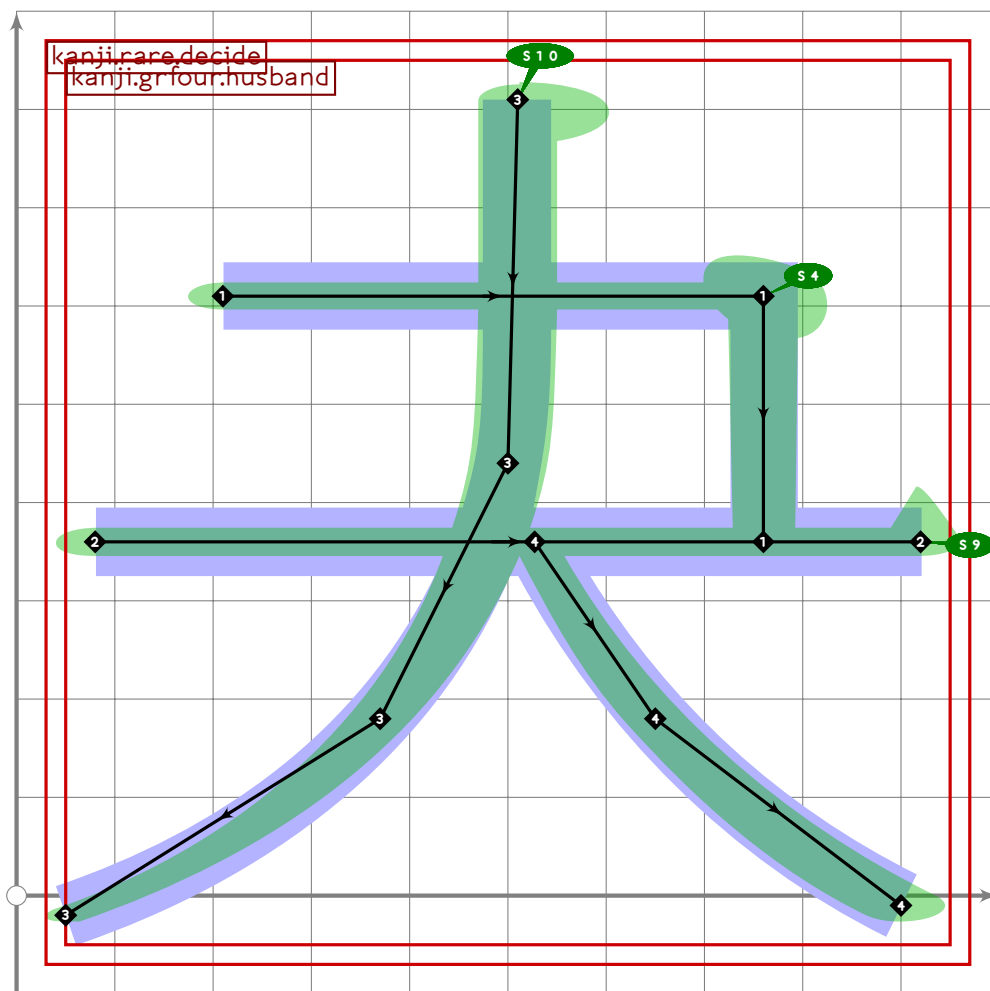
```

208 % dictionary says "name of an ancient tribe"; needed for grfour.low
209 vardef kanji.rare.cruithne =
210   push_pbox_toexpand("kanji.rare.cruithne");
211   kanji.grfour.clan;
212   replace_strokep(-3)((250,730)-(250,120));
213   replace_strokep(-2)(oldp shifted (0,130));
214   push_stroke((180,-10)-(600,-10),(1.5,1.5)-(1.5,1.5));
215   set_boserif(0,1,9);
216   expand_pbox;
217 enddef;

```

RARE

U+592C  
tsuku.uni592C

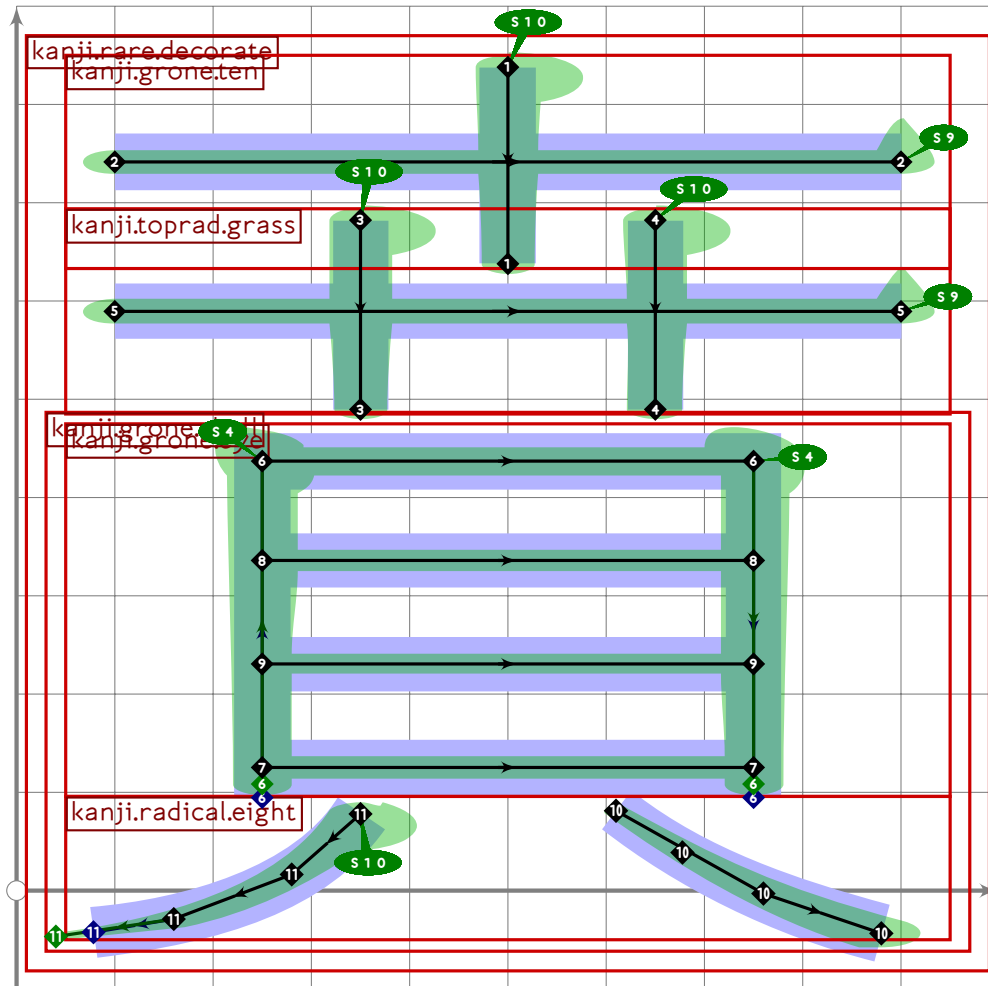


```

218
219 vardef kanji.rare.decide =
220   push_pbox_toexpand("kanji.rare.decide");
221   kanji.grfour.husband;
222   replace_strokep(-3)((210,610)-(760,610)-(760,360));
223   replace_strokeq(-3)((1.5,1.5)-(1.5,1.5)-(1.4,1.4));
224   set_boserif(-3,1,4);
225   set_botip(-3,1,1);
226   expand_pbox;
227 enddef;

```

RARE

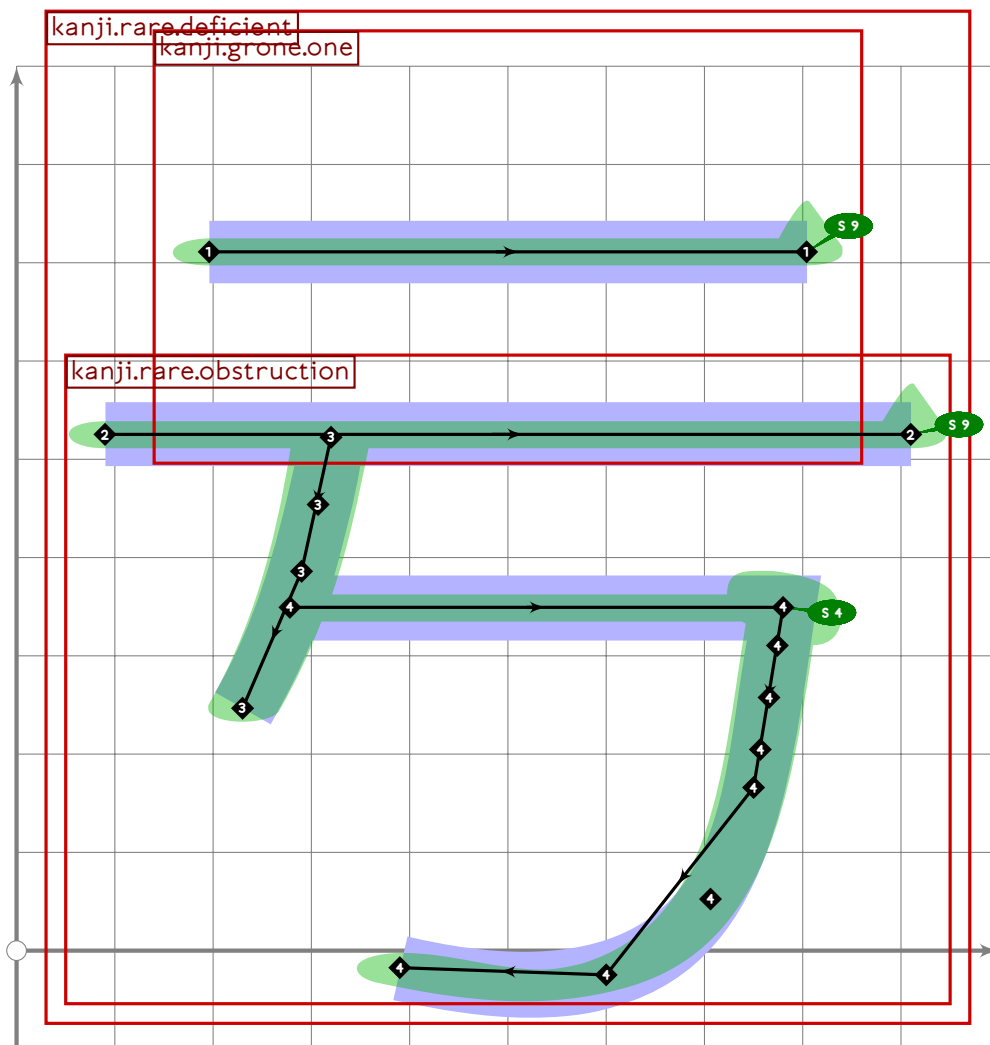


```

228
229 vardef kanji.rare.decorate =
230   push_pbox_toexpand("kanji.rare.decorate");
231   build_kanji.level(build_kanji.tb(480,-10)
232     (build_kanji.tb(390,150)
233       (kanji.grone.ten)
234       (kanji.toprad.grass))
235     (kanji.grone.shell));
236   expand_pbox;
237 enddef;

```

U+4E8F  
tsuku.uni4E8F

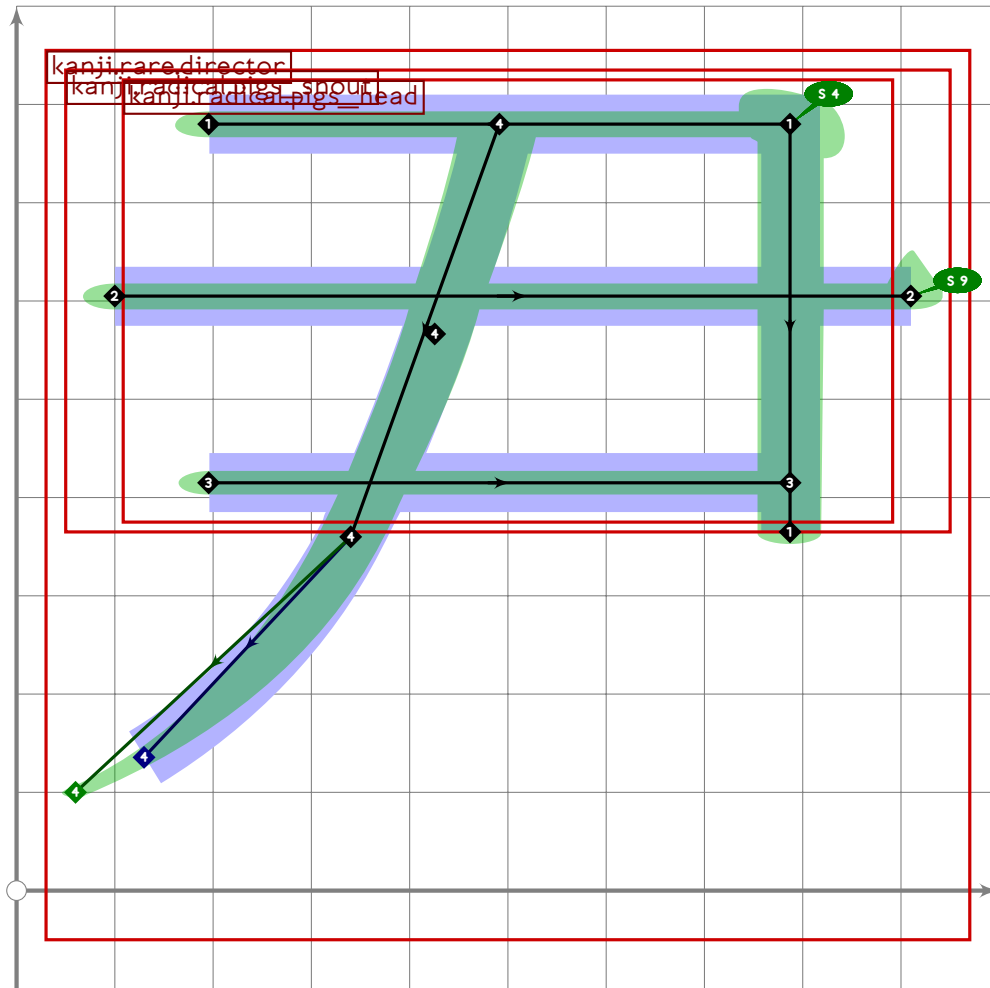


```

238
239 vardef kanji.rare.deficient =
240   push_pbox_toexpand("kanji.rare.deficient");
241   build_kanji.level(build_kanji.sscale(yscaled 1.1 shifted (0,40))
242     (build_kanji.tb(500,100)
243       (build_kanji.sscale(xscaled 0.8)(kanji.grone.one))
244       (kanji.rare.obstruction)));
245   expand_pbox;
246 enddef;

```

RARE

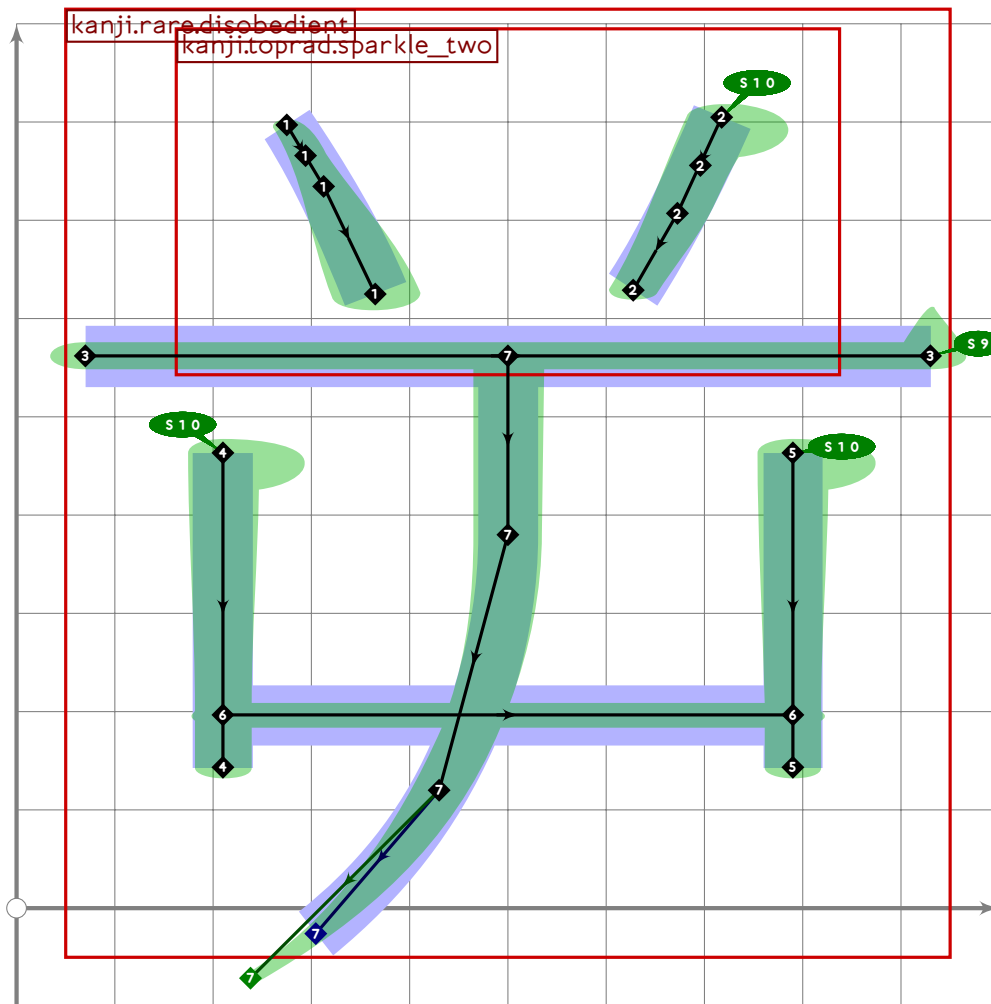


```

247
248 vardef kanji.rare.director =
249   push_pbox_toexpand("kanji.rare.director");
250   tsu_xform(identity yscaled 0.5 shifted (0,400))
251     (kanji.radical.pigs_snout);
252   push_stroke(
253     (point 0.5 of get_stroke(-2))..tension 14..(340,360)..(60,100),
254     (1.6,1.6)-(1.4,1.4)-(0.9,0.9));
255   expand_pbox;
256 enddef;

```

U+5C70  
tsuku.uni5C70

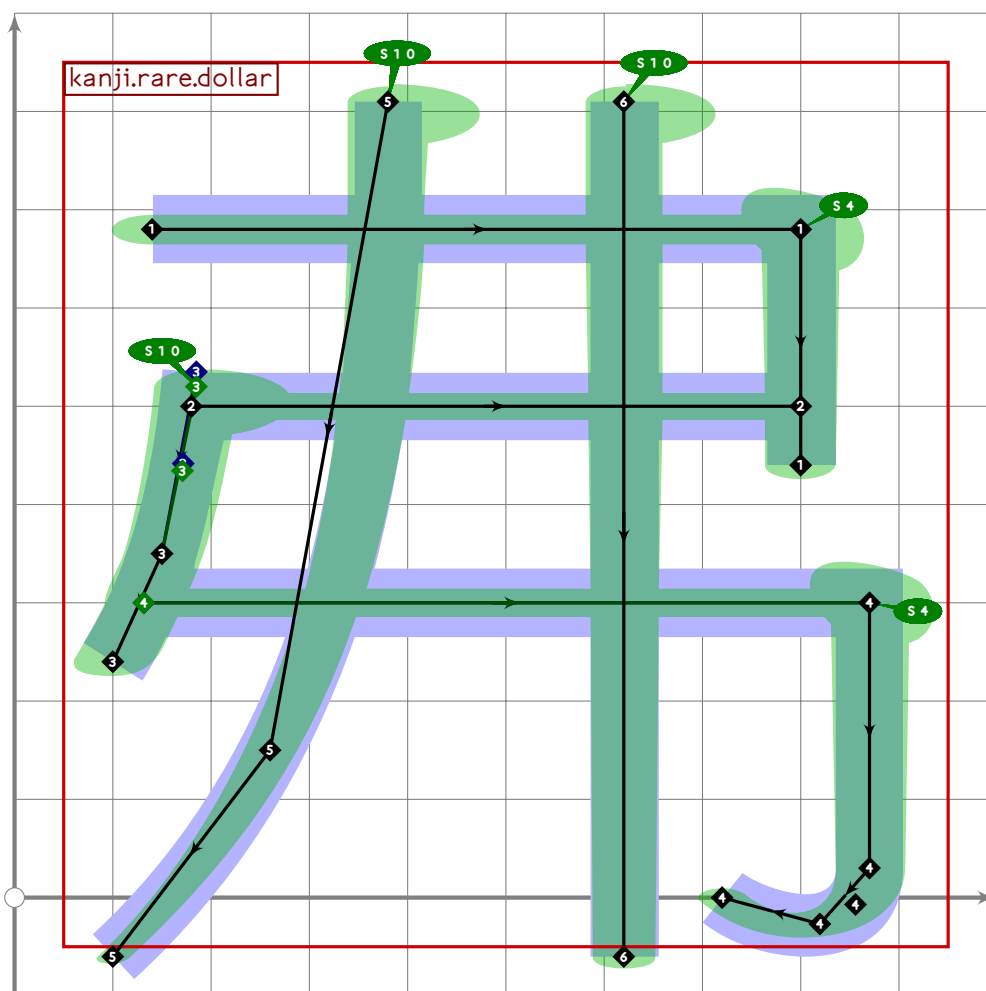


```

257
258 vardef kanji.rare.disobedient =
259   push_pbox_toexpand("kanji.rare.disobedient");
260   build_kanji.level(
261     build_kanji.tb(540,20)
262     (build_kanji.sscale(xyscaled (0.75,1.1) shifted (0,80))
263       (kanji.toprad.sparkle_two);
264     push_stroke((70,40)–(930,40),(1.6,1.6)–(1.6,1.6));
265     set_boserif(0,0,whatever);
266     set_boserif(0,1,9))
267     (build_kanji.cup((210,720),(790,320)));
268   push_stroke((point 0.5 of get_strokep(-3))–
269     (500,380){down}{.}(430,120){.}{curl 1}{(180,-100),
270     (1.6,1.6)–(1.55,1.55)–(1.4,1.4)–(0.70,7)}));
271   expand_pbox;
272 enddef;

```

RARE



```

273
274 vardef kanji.rare.dollar =
275   push_pbox_toexpand("kanji.rare.dollar");
276   push_stroke((140,680)–(800,680)–(800,440),
277     (1.6,1.6)–(1.6,1.6)–(1.5,1.5));
278   set_botip(0,1);
279   set_boserif(0,14);
280   push_stroke((180,500)–(800,500),
281     (1.5,1.5)–(1.5,1.5));
282   push_stroke((185,535-15*mincho)..tension 1.2..(150,350)..(100,240),
283     (1.7,1.7)–(1.6,1.6)–(1.6,1.6));
284   set_boserif(0,0,10);
285   push_stroke((get_strokep(0) intersectionpoint ((0,300)–(1000,300)))–
286     (870,300),
287     (1.6,1.6)–(1.6,1.6));
288   build_kanji.add_jtail(0);
289   set_botip(0,1);
290   set_boserif(0,14);
291   push_stroke((380,810){down}..(260,150)..(100,-60),
292     (1.6,1.6)–(1.3,1.3)–(1,1));
293   set_boserif(0,0,10);

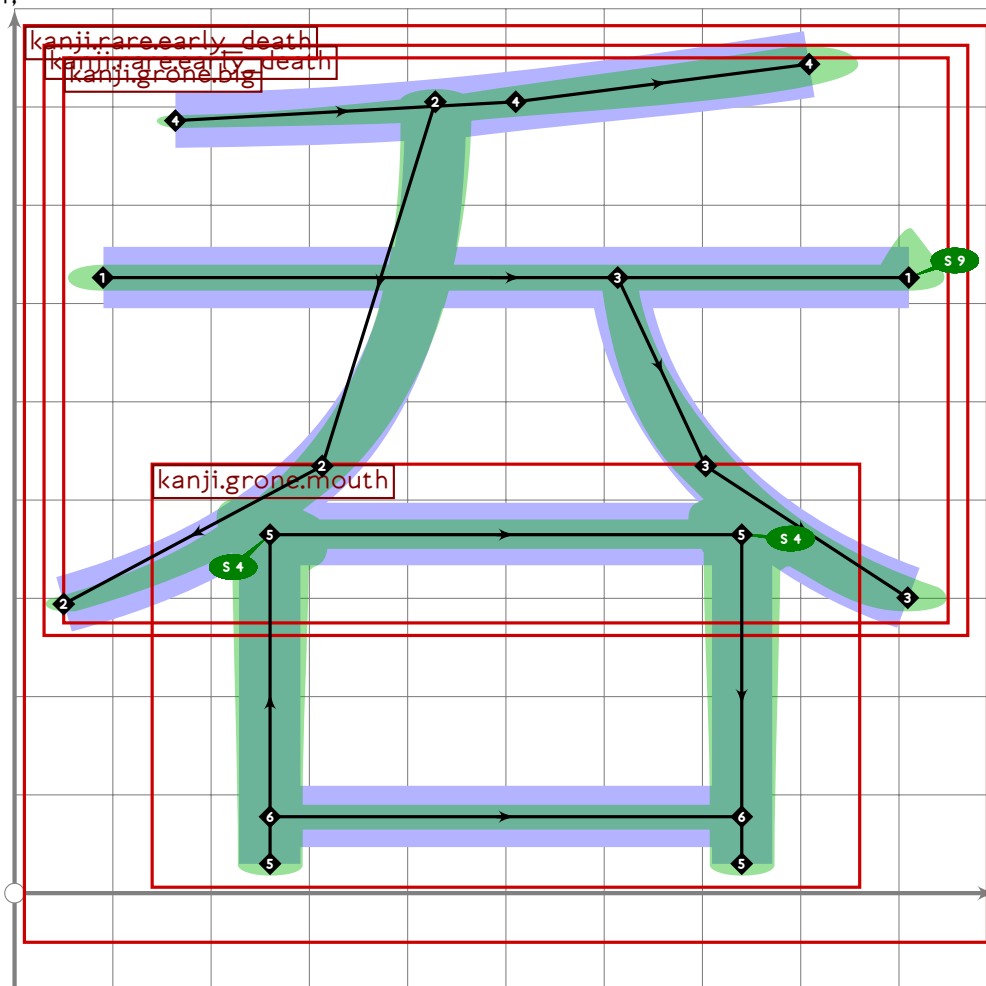
```

RARE



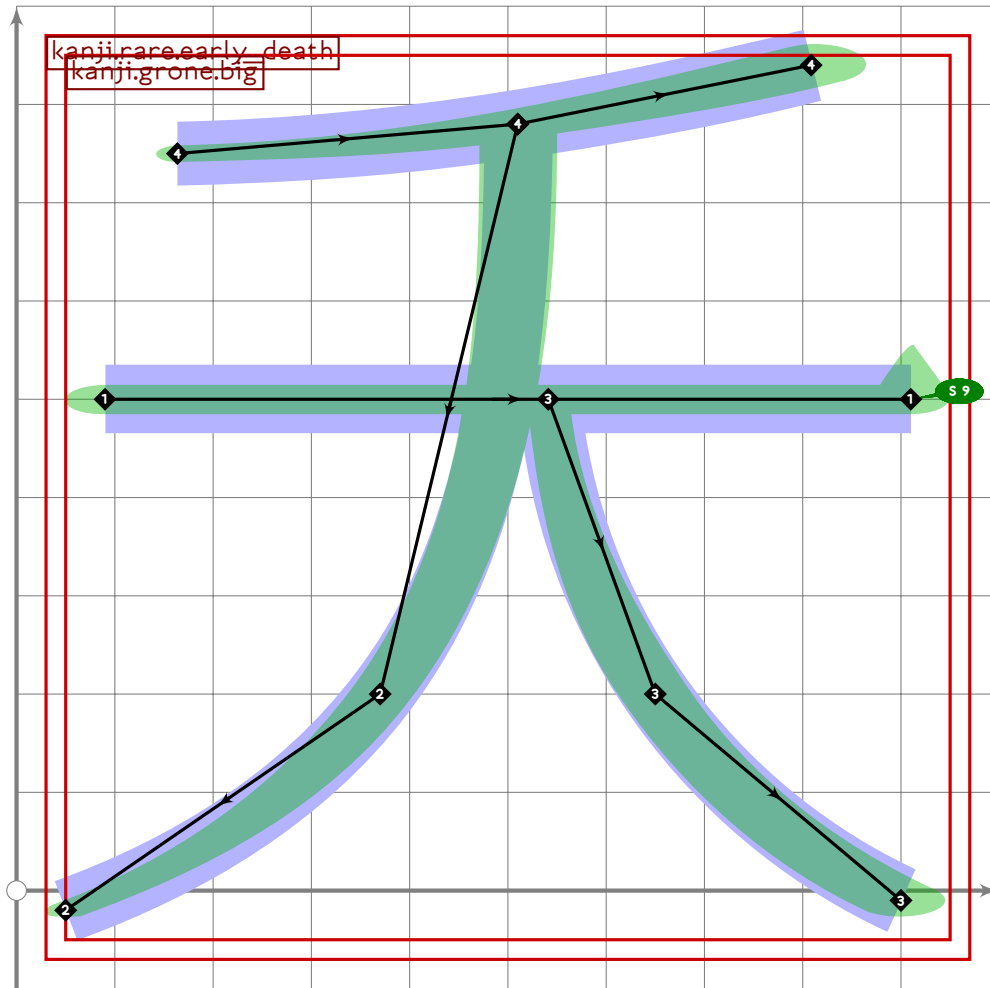
U+5451  
tsuku.uni5451

```
294 push_stroke((620,810)-(620,-60),(1.6,1.6)-(1.4,1.4));
295 set_boserif(0,0,10);
296 expand_pbox;
297 enddef;
```



```
298
299 vardef kanji.rare.drink =
300   push_pbox_toexpand("kanji.rare.early_death");
301   build_kanji.level(build_kanji.tb(420,290)
302     (build_kanji.spread_legs(160)
303       (kanji.rare.early_death))
304     (build_kanji.sscale(xyscaled (0.8,0.7) shifted (0,-50))
305       (kanji.grone.mouth)));
306   expand_pbox;
307 enddef;
```

RARE



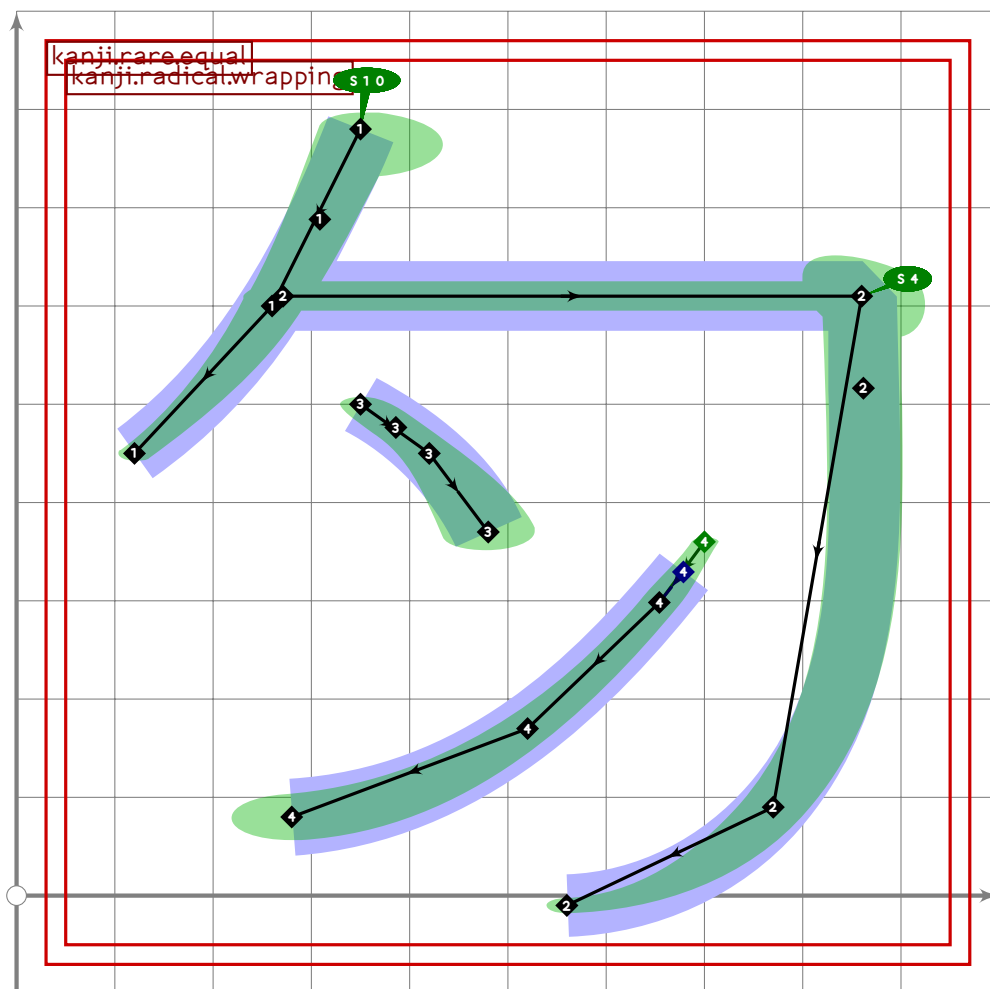
```

308
309 vardef kanji.rare.early_death =
310   push_pbox_toexpand("kanji.rare.early_death");
311   build_kanji.add_beret(kanji.grone.big);
312   expand_pbox;
313 enddef;

```

RARE

U+5300  
tsuku.uni5300

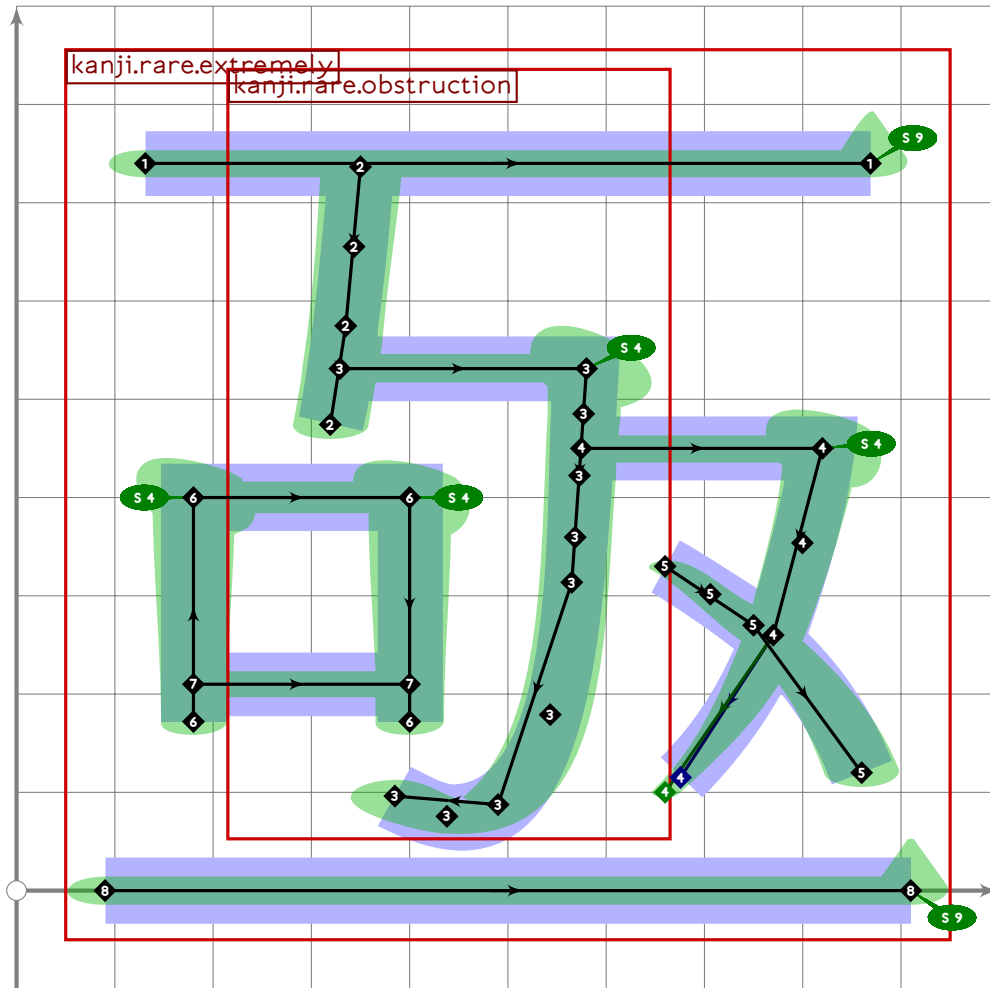


```

314
315 vardef kanji.rare.equal =
316   push_pbox_toexpand("kanji.rare.equal");
317   kanji.radical.wrapping;
318   push_stroke((350,500)..tension 1.2..(420,450)..(480,370),
319     (1,1,1)–(14,14)–(18,18));
320   push_stroke(insert_nodes((700,360)..tension 1.1..
321     (520,170)..{curl 1.2}(280,80))(0,3),
322     (0,9,0,9)–(1,1,1)–(14,14)–(2,2,2,2));
323   expand_pbox;
324 enddef;

```

RARE



```

325
326 vardef kanji.rare.extremely =
327   push_pbox_toexpand("kanji.rare.extremely");
328   build_kanji.level(
329     path my_saved_path;
330     tsu_xform(identity shifted (-500,740)
331       xyscaled (0.5,0.87) shifted (440,740))
332     (kanji.rare.obstruction;
333       my_saved_path:=get_stroke(-2));
334     replace_stroke(-2)(my_saved_path shifted (-500,0)
335       xscaled 0.9 shifted (500,0));
336     replace_stroke(-1)(subpath (0,(length oldp)-0.4) of oldp);
337     push_stroke((get_stroke(0) intersectionpoint ((0,450)-(1000,450)))-
338       (820,450)..tension 1.2..(770,260)..(660,100),
339       (1.5,1.5)-(1.6,1.6)-(1.4,1.4)-(0.9,0.95));
340     set_boserif(0,1,4);
341     set_botip(0,1,1);
342     push_stroke((660,330)..tension 1.2..(750,270)..(860,120),
343       (1,1)-(1.3,1.3)-(1.6,1.6));
344     build_kanji.box((180,400),(400,210));
345     push_stroke(my_saved_path shifted (0,-740),(1.6,1.6)-(1.6,1.6));

```

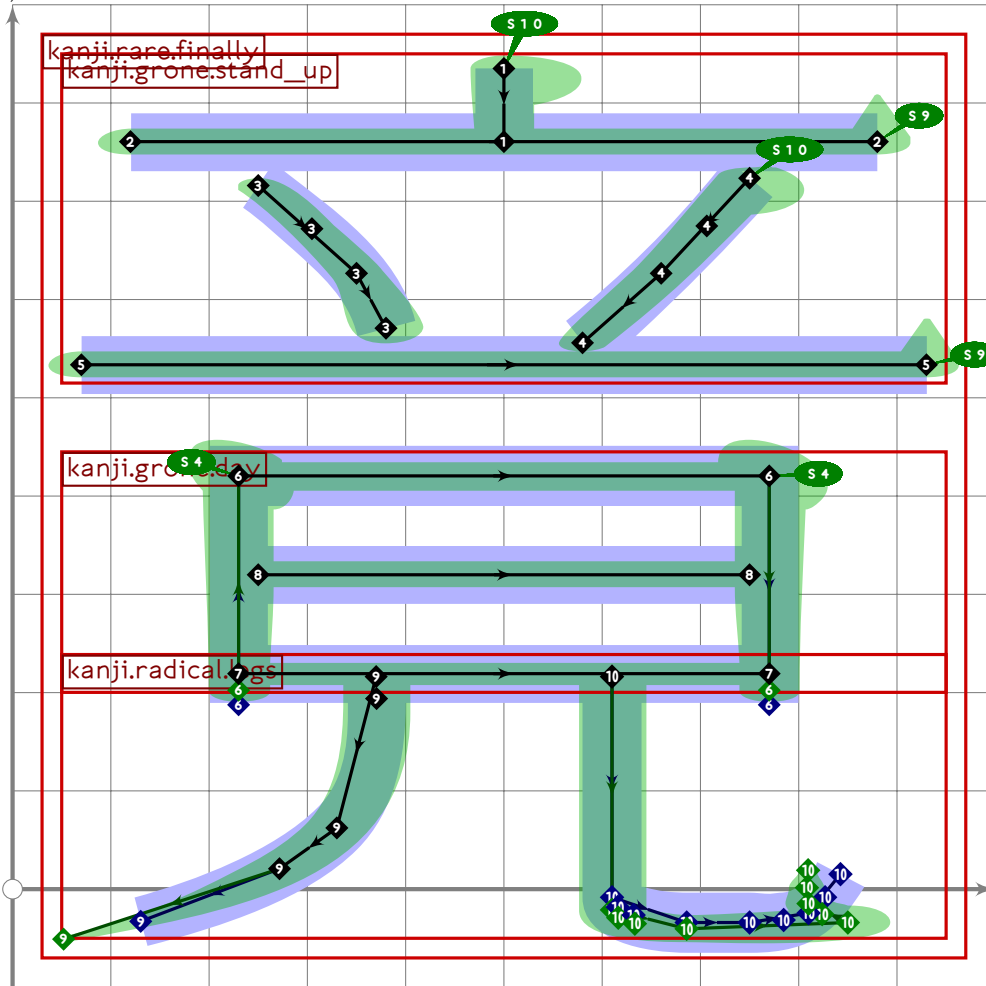
RARE

U+7ADF  
tsuku.uni7ADF

```

346     set_boserif(0,1,9):
347 );
348 expand_pbox;
349 endif;

```

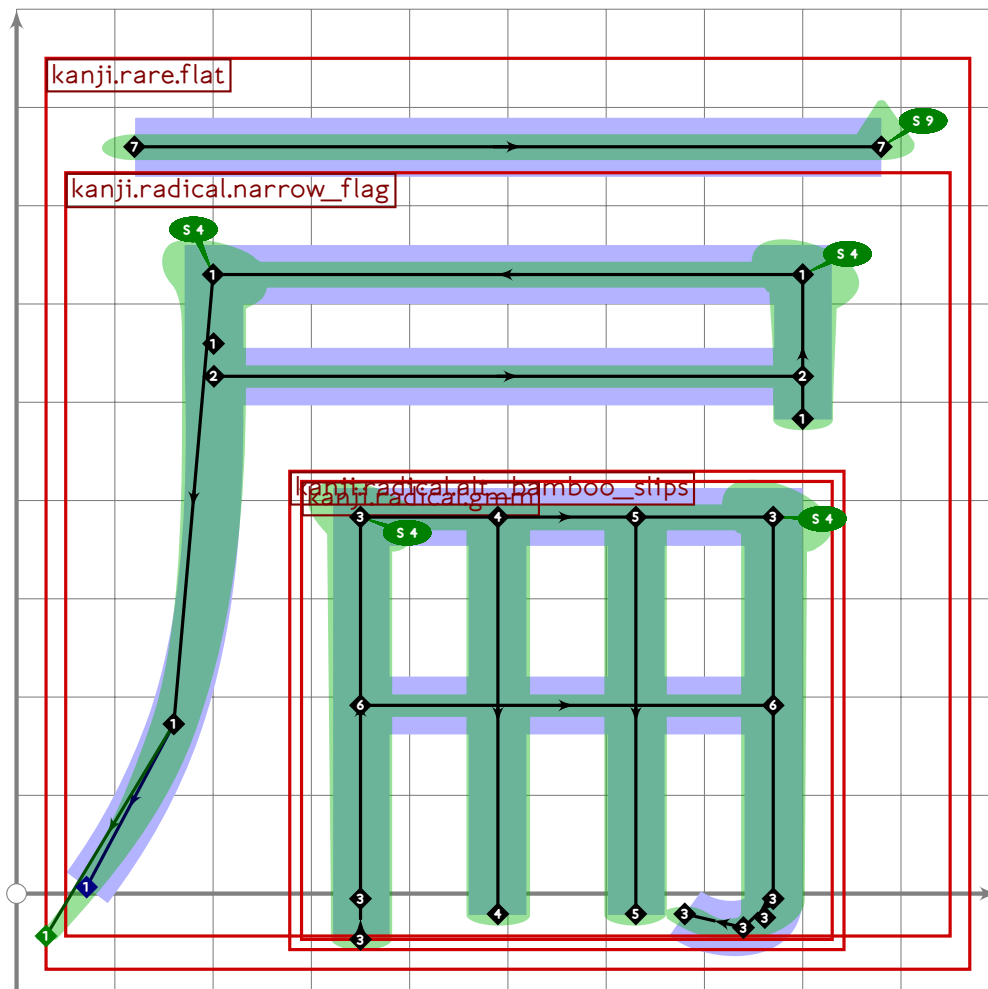


```

350
351 vardef kanji.rare.finally =
352   push_pbox_toexpand("kanji.rare.finally");
353   build_kanji.tb(480,70)
354     (kanji.grone.stand_up)
355     (build_kanji.level(build_kanji.tb(440,70)
356       (kanji.grone.day)
357       (kanji.radical.legs)));
358   expand_pbox;
359 enddef;

```

**RARE**

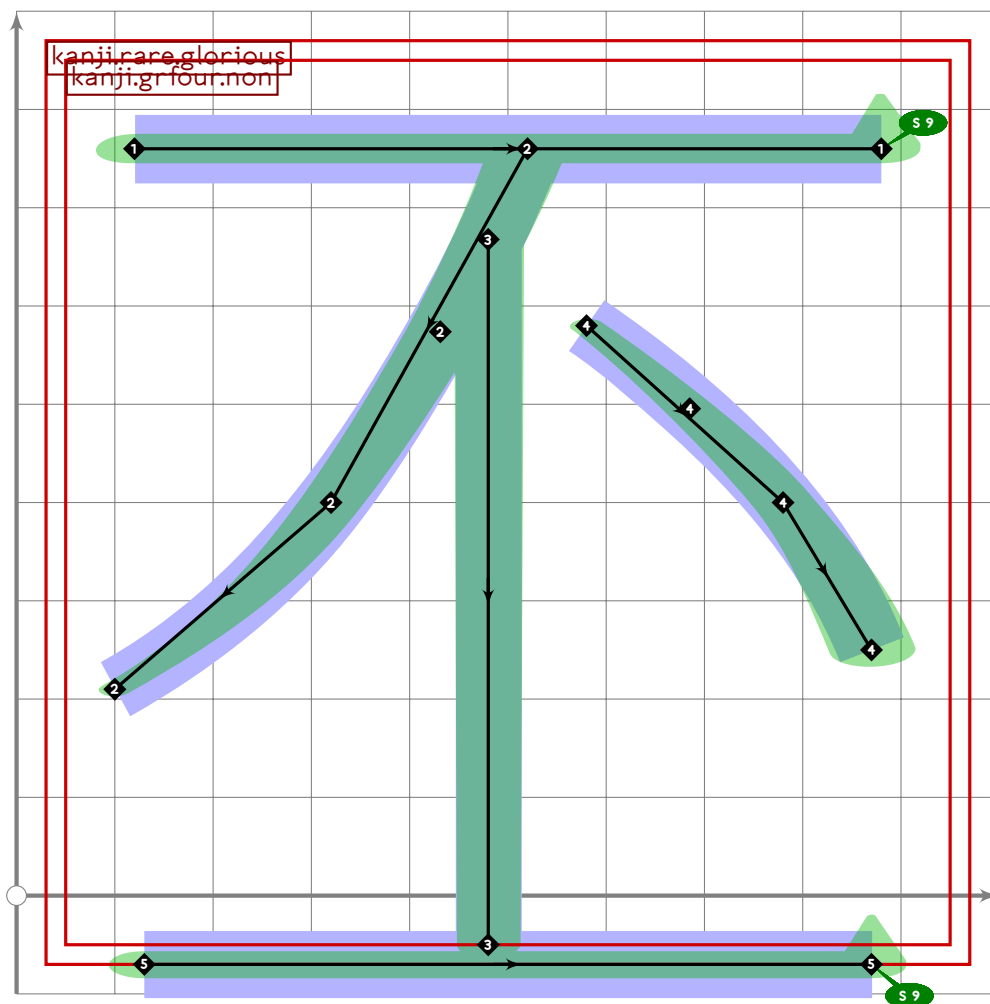


```

360
361 vardef kanji.rare.flat =
362   push_pbox_toexpand("kanji.rare.flat");
363   tsu_xform(identity yscaled (630/730))(build_kanji.level
364     (kanji.radical.narrow_flag;
365       build_kanji.sscale(scaled 0.60 shifted (60,180))
366         (kanji.radical.alt_bamboo_slips)));
367   push_stroke((120,760)-(880,760),(1.6,1.6));
368   set_boserif(0,1,9);
369   set_bosize(0,85);
370   expand_pbox;
371 enddef;

```

U+4E15  
tsuku.uni4E15

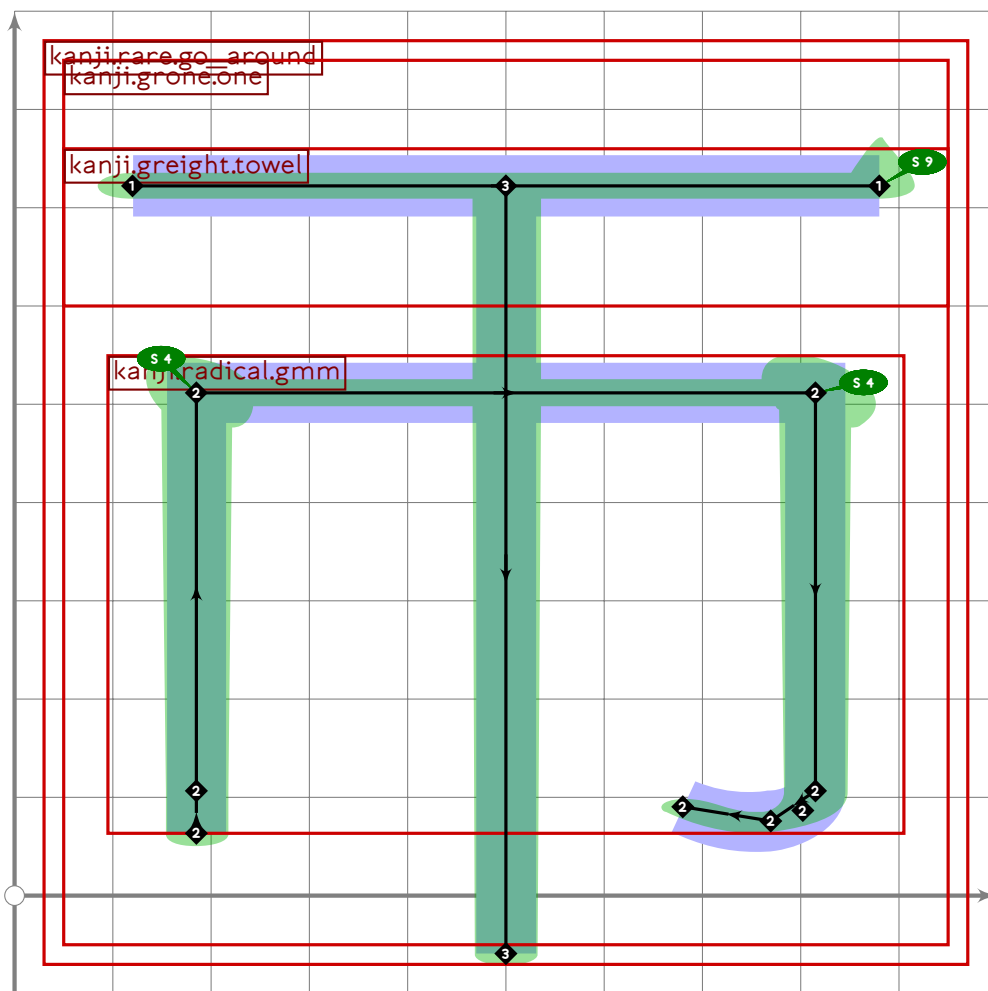


```

372
373 vardef kanji.rare.glorious =
374   push_pbox_toexpand("kanji.rare.glorious");
375   kanji.grfour.non;
376   push_stroke((130,-70)-(870,-70),(1.5,1.5)-(1.5,1.5));
377   set_boserif(0,1,9);
378   expand_pbox;
379 enddef;

```

RARE



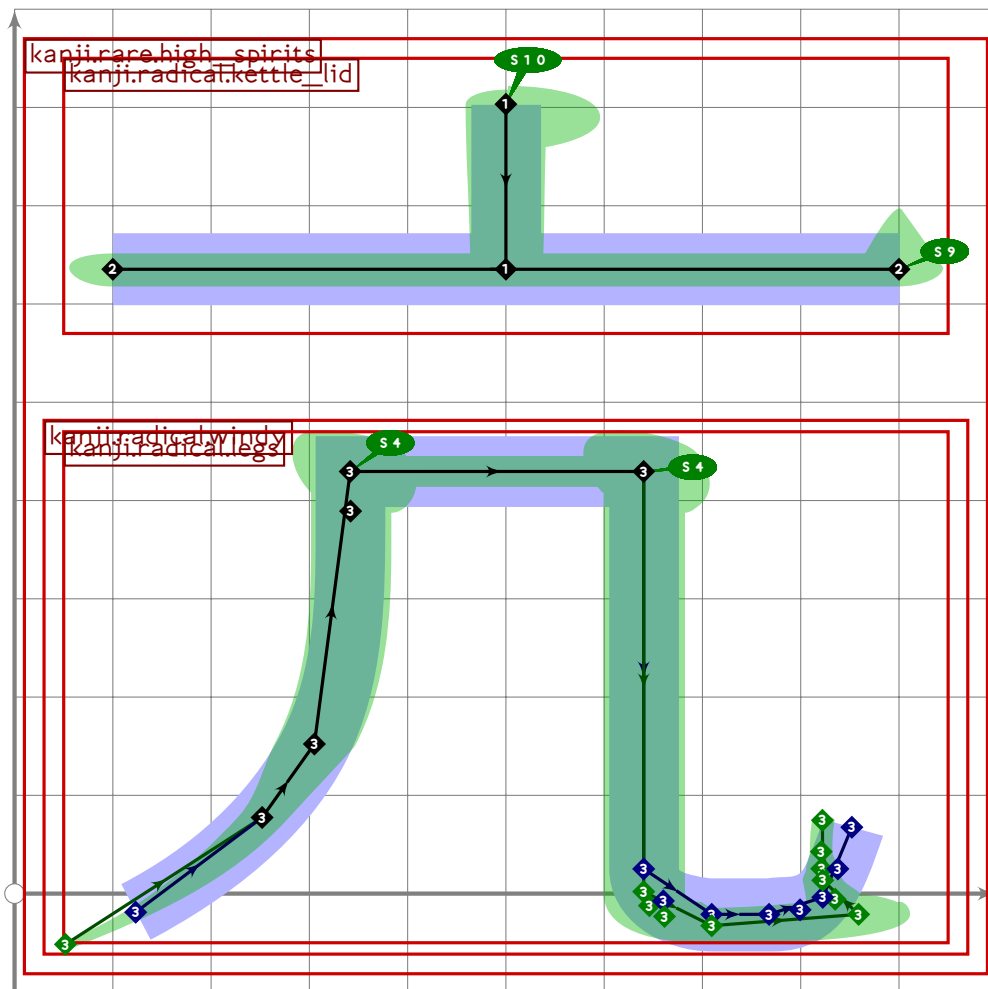
```

380
381 vardef kanji.rare.go_around =
382   push_pbox_toexpand("kanji.rare.go_around");
383   build_kanji.level(build_kanji.tb()
384     (kanji.grone.one)
385     (kanji.greight.towel));
386   expand_pbox;
387 enddef;

```



U+4EA2  
tsuku.uni4EA2

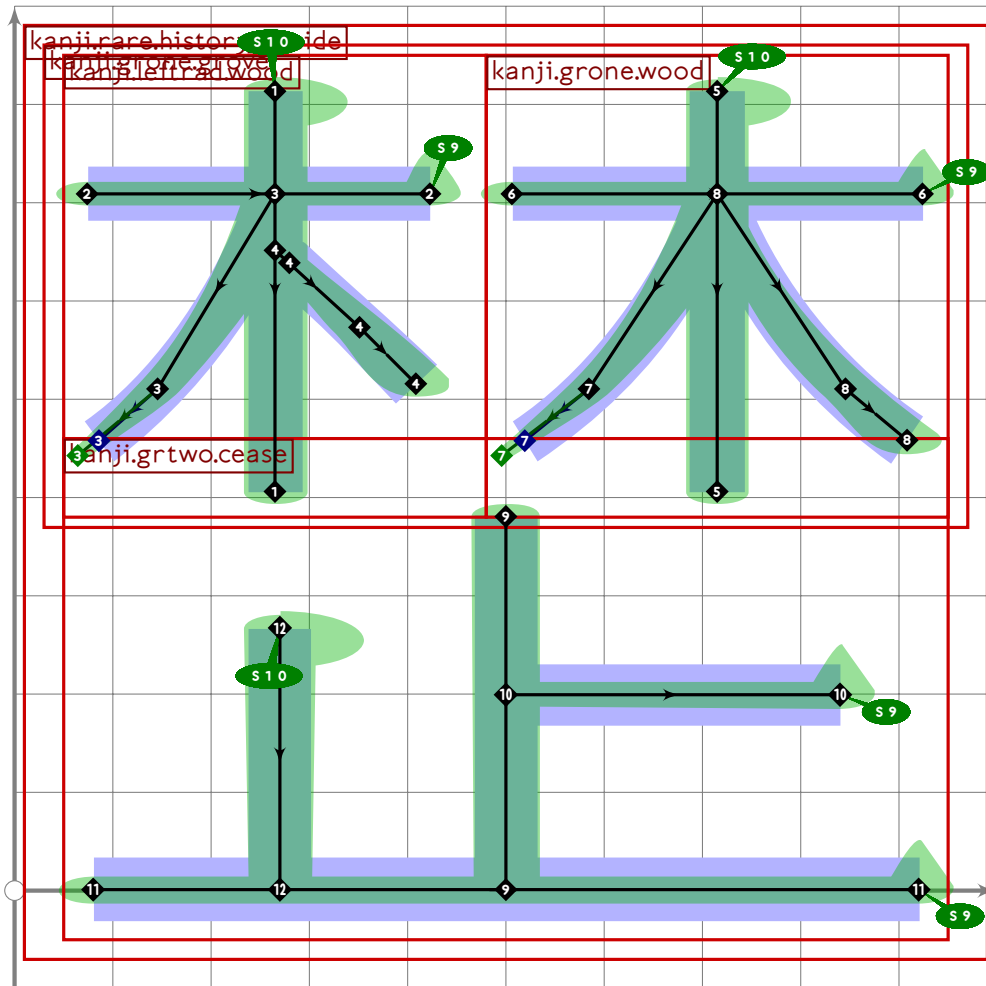


```

388
389 vardef kanji.rare.high_spirits =
390   push_pbox_toexpand("kanji.rare.high_spirits");
391   build_kanji.level(build_kanji.tb(520,100)
392     (kanji.radical.kettle_lid)
393     (kanji.radical.windy));
394   expand_pbox;
395 enddef;

```

**RARE**

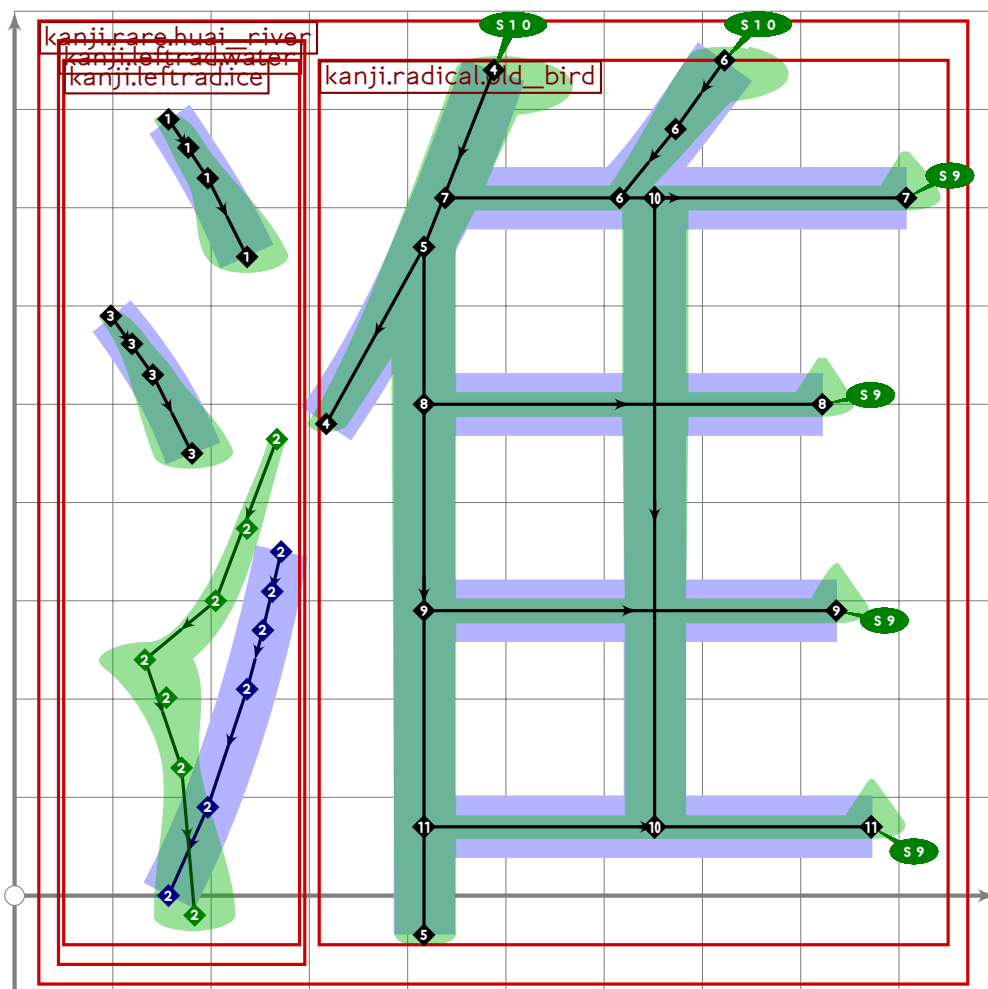


```

396
397 vardef kanji.rare.history_inside =
398   push_pbox_toexpand("kanji.rare.history_inside");
399   build_kanji.tb(420,80)
400     (kanji.grone.grove)
401     (kanji.grtwo.cease);
402   expand_pbox;
403 enddef;

```

U+6DEE  
tsuku.uni6DEE

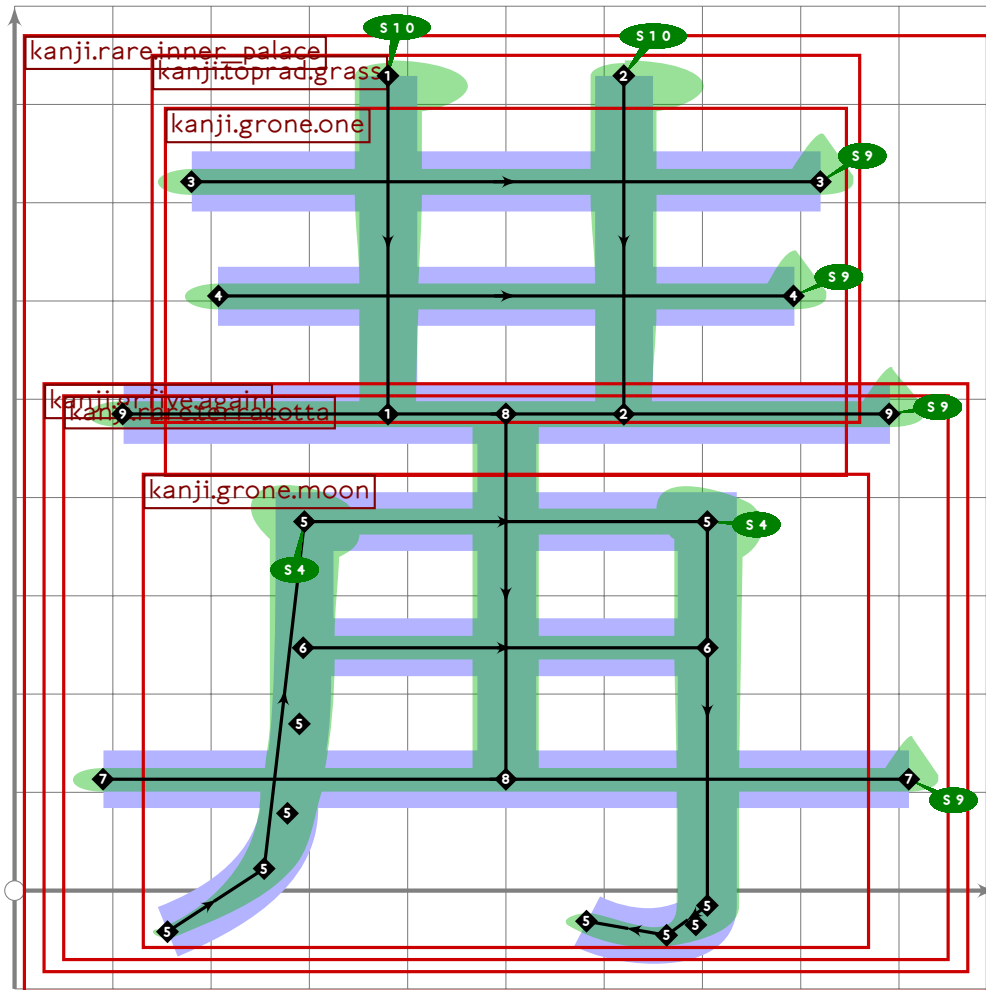


```

404
405 vardef kanji.rare.huai_river =
406   push_pbox_toexpand("kanji.rare.huai_river");
407   build_kanji.lr(300,-20)
408     (kanji.leftrad.water)
409     (kanji.radical.old_bird);
410   expand_pbox;
411 enddef;

```

RARE

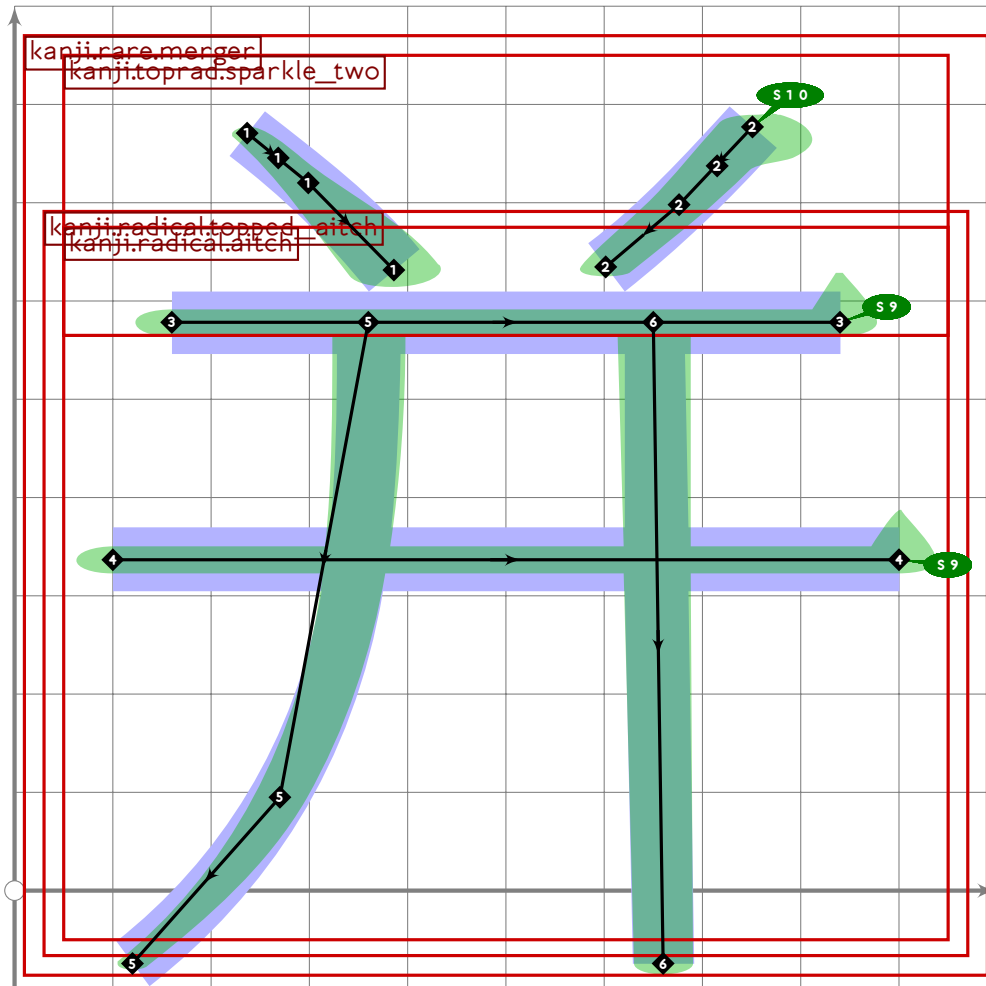


```

412
413 vardef kanji.rare.inner_palace =
414   push_pbox_toexpand("kanji.rare.inner_palace");
415   build_kanji.level(build_kanji.tb(490,27)
416     (build_kanji.sscale(xscaled 0.8)(kanji.toprad.grass);
417       replace_strokep(0)(oldp shifted (0,140));
418       build_kanji.sscale(xscaled 0.77 shifted (0,-130))(kanji.grone.one))
419     (kanji.grfive.again));
420   expand_pbox;
421 enddef;

```

RARE



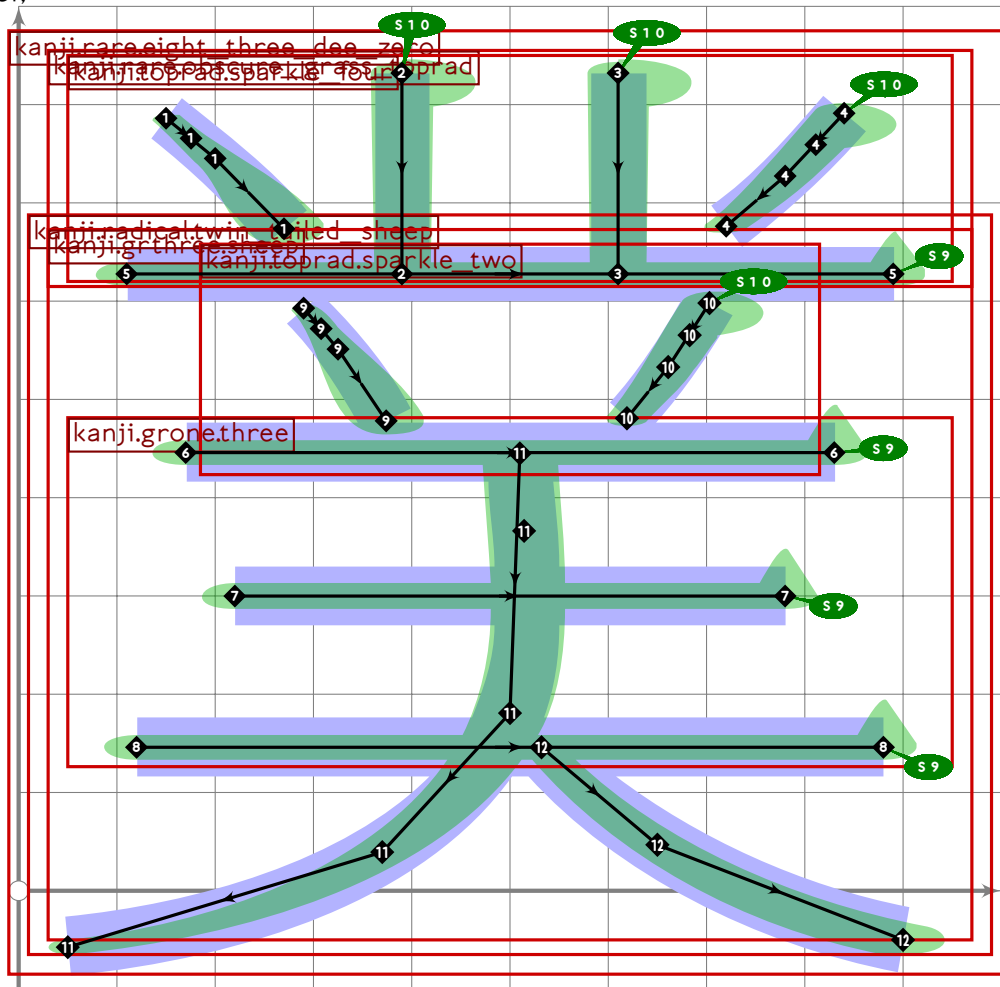
```

422
423 vardef kanji.rare.merger =
424   push_pbox_toexpand("kanji.rare.merger");
425   build_kanji.level(build_kanji.tb(620,110)
426     (build_kanji.spread_legs(-220)(kanji.toprad.sparkle_two))
427     (kanji.radical.topped_aitch));
428   expand_pbox;
429 enddef;
430
431 % This obscure form of the "grass" radical seems to be used only in U+83D0,
432 % an obscure kanji that doesn't seem to have a meaning of its own but forms
433 % the right-hand side of the fairly common kanji for the masculine
434 % first-person pronoun "boku," which we need in order to spell the type
435 % style name "Bokukko." It's not even clear that it really is a form of the
436 % "grass" radical at all, but that's how Unicode seems to classify it.
437
438 vardef kanji.rare.obscure_grass_toprad =
439   push_pbox_toexpand("kanji.rare.obscure_grass_toprad");
440   kanji.toprad.sparkle_four;
441   push_stroke((110,-20)-(890,-20),(1.6,1.6)-(1.6,1.6));
442   set_boserif(0,1,9);

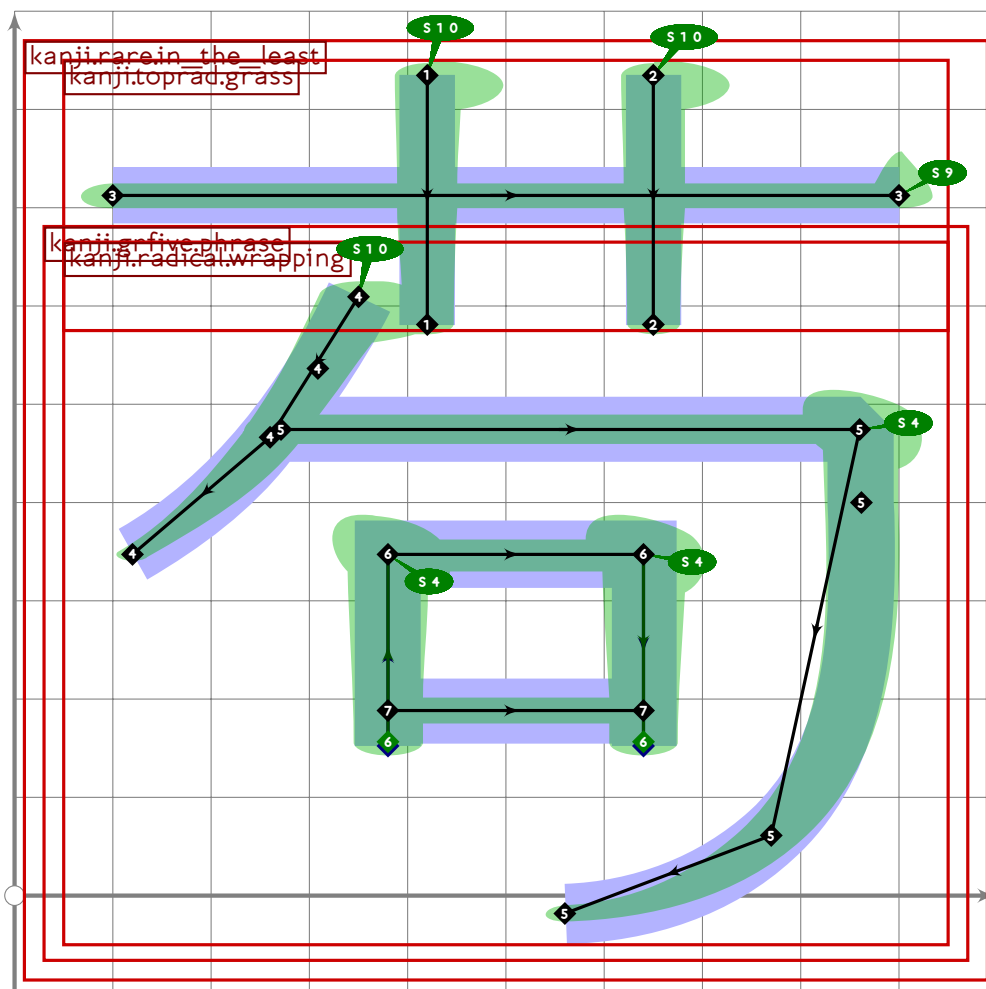
```

RARE

```
443 expand_pbox;
444 enddef;
```



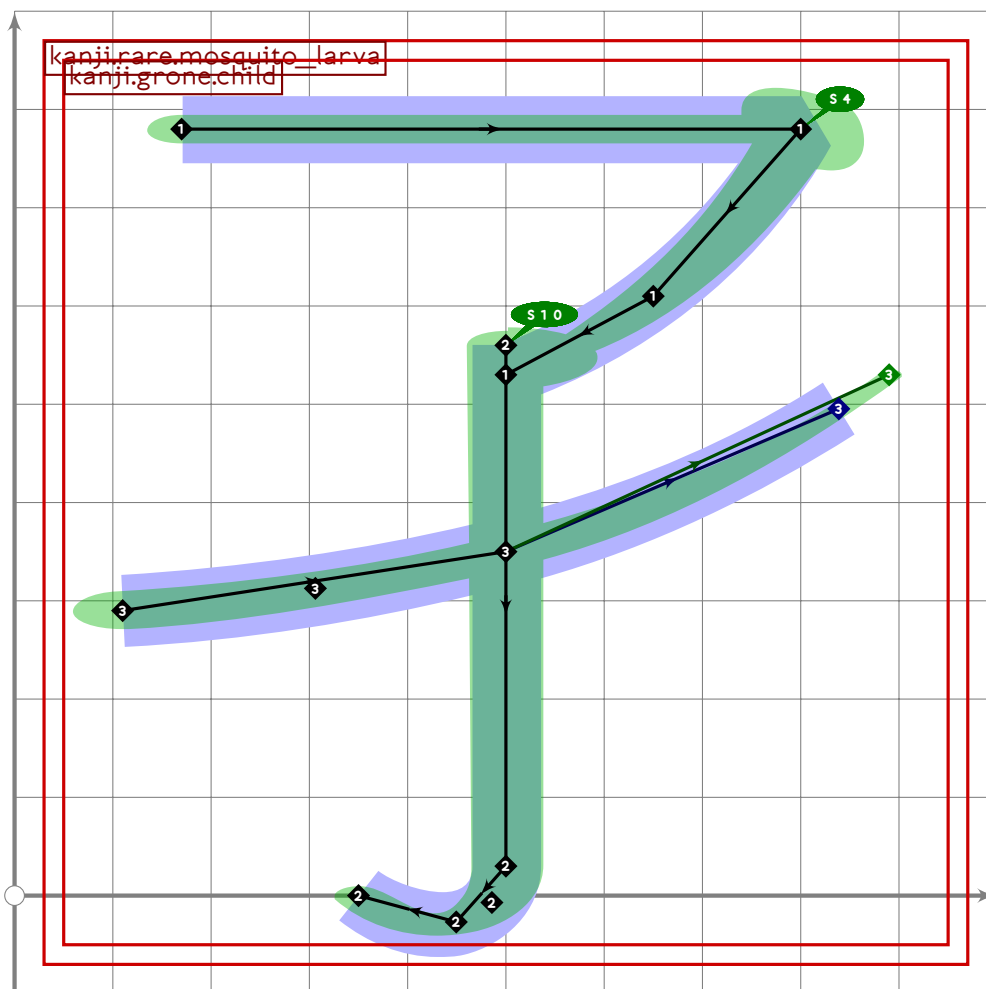
```
445
446 vardef kanji.rare.eight_three_dee_zero =
447   push_pbox_toexpand("kanji.rare.eight_three_dee_zero");
448   build_kanji.tb(620,0)
449     (kanji.rare.obscure_grass_toprad)
450     (kanji.radical.twin_tailed_sheep);
451   expand_pbox;
452 enddef;
```



```

453
454 vardef kanji.rare.in_the_least =
455   push_pbox_toexpand("kanji.rare.in_the_least");
456   build_kanji.tb(620,90)
457     (kanji.toprad.grass;
458       replace_stroke(-2)(oldp shifted (70,0)))
459     (kanji.grfive.phrase);
460   expand_pbox;
461 enddef;

```



```

462
463 vardef kanji.rare.mosquito_larva =
464   push_pbox_toexpand("kanji.rare.mosquito_larva");
465   kanji.grone.child;
466   replace_strokep(0)((110,290)..tension 1.2..(500,350)..(890,530));
467   replace_strokeq(0)((1.9,1.9)-(1.6,1.6)-(0.9,0.9));
468   set_boserif(0,1,whatever);
469   expand_pbox;
470 enddef;
471
472 vardef hook.mound_bottoms(expr left_i,right_i,bottom_i) =
473   if (obstacktype[left_i]=otstroke)
474     and (obstacktype[right_i]=otstroke)
475     and (obstacktype[bottom_i]=otstroke):
476     if (3=length obstackp[left_i])
477       and (2=length obstackp[right_i])
478       and (1=length obstackp[bottom_i]):
479       begingroup;
480       save x,y,p,e;
481       numeric x[],y[],e[];
482       path p[];

```



```

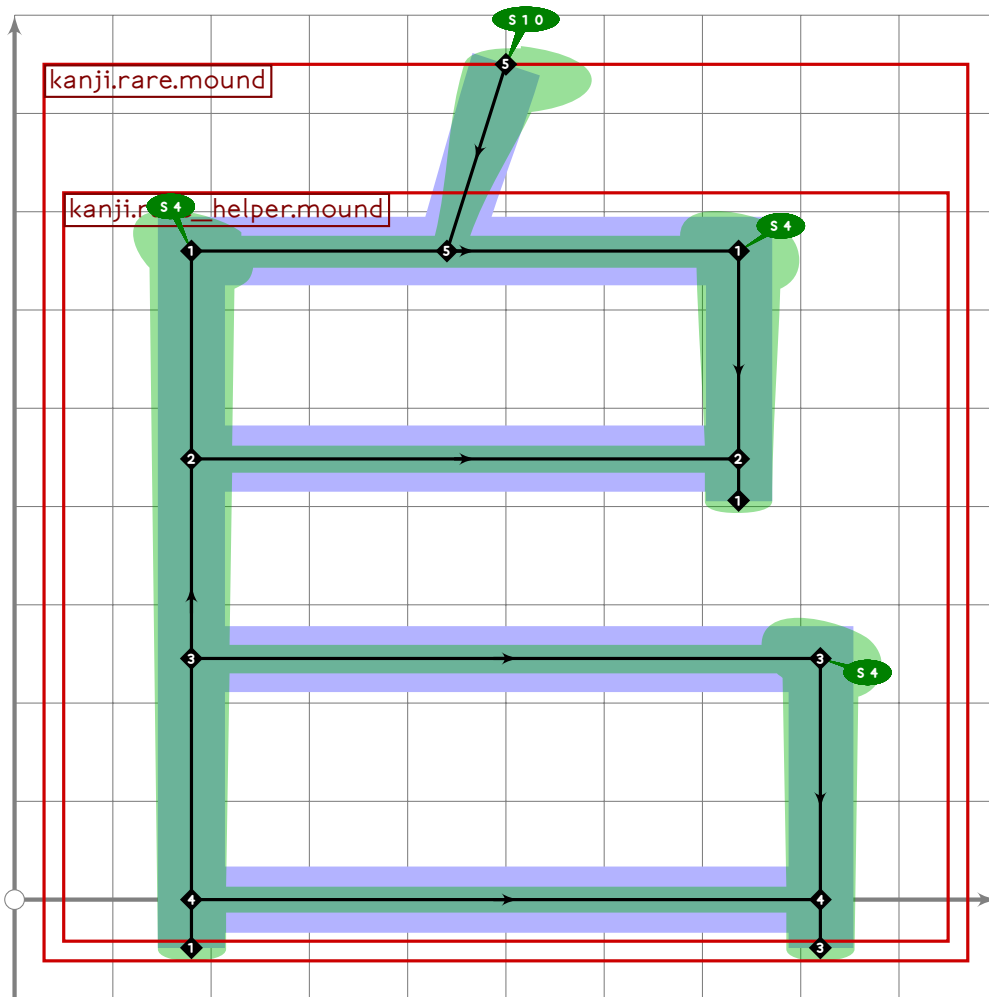
483
484     p1=obstackp[left_i];
485     p2=obstackp[bottom_i];
486     p3=obstackp[right_i];
487
488     z1=-(direction 0 of p1)/abs(direction 0 of p1);
489     z2=(direction 0.5 of p2)/abs(direction 0.5 of p2);
490     z3=(direction 2 of p3)/abs(direction 2 of p3);
491
492     e3=obstackna.bosize[bottom_i]*tsu_brush_max.brletter
493         *tsu_brush_shape.brletter*0.5;
494     if abs(z1 dotprod z2)<0.1:
495         point 0 of p1=z4+e1*z1;
496         z4=(point 0.5 of p2)+whatever*z2;
497
498         if e1<e3:
499             p1:=(z4+e3*z1)-(subpath (1,3) of p1);
500             obstackp[left_i]:=p1;
501         fi;
502     fi;
503     if abs(z3 dotprod z2)<0.1:
504         point 0 of p1=z5+e2*z3;
505         z5=(point 0.5 of p2)+whatever*z2;
506
507         if e2<e3:
508             p3:=(subpath (0,1) of p2)-(z5+e3*z2);
509             obstackp[right_i]:=p3;
510         fi;
511     fi;
512     endgroup;
513 fi;
514 fi;
515 enddef;
516
517 vardef kanji.rare_helper.mound =
518     push_pbox_toexpand("kanji.rare_helper.mound");
519     begingroup
520         save x,y;
521         numeric x[],y[];
522
523         x1=x2=x5=x7=x10=180;
524         x3=x4=x6=0.87[x1,x8];
525         x8=x9=x11=1000-x1;
526
527         y1=y9=(-0.2)[y10,y7];
528         y2=y3=780;
529         y4=(-0.2)[y5,y2];
530         y5=y6=530;

```

```

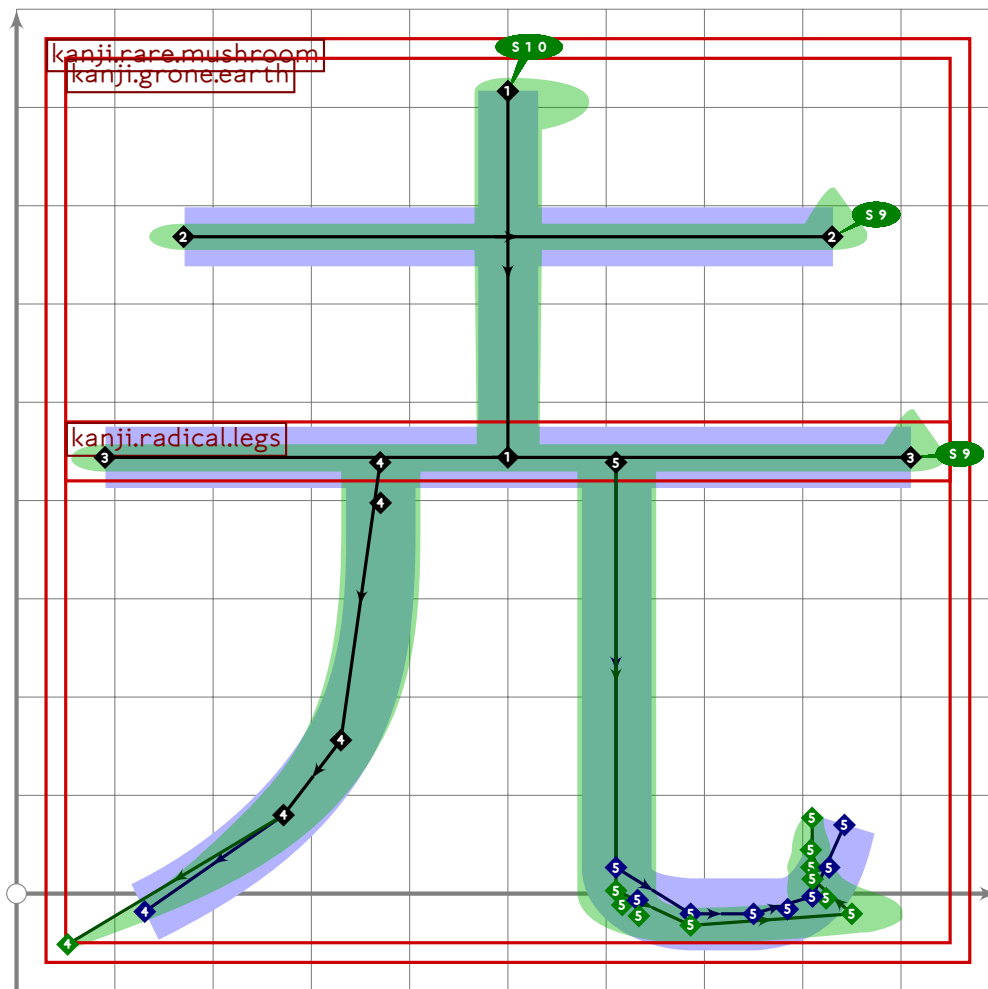
531 y7=y8=290;
532 y10=y11=0;
533
534 push_stroke(z1-z2-z3-z4,(1.5,1.5)-(1.7,1.7)-(1.7,1.7)-(1.5,1.5));
535 set_botip(0,1,1);
536 set_botip(0,2,1);
537 set_boserif(0,1,4);
538 set_boserif(0,2,4);
539 push_stroke(z5-z6,(1.5,1.5)-(1.5,1.5));
540 push_stroke(z7-z8-z9,(1.5,1.5)-(1.6,1.6)-(1.5,1.5));
541 set_botip(0,1,1);
542 set_boserif(0,1,4);
543 push_stroke(z10-z11,(1.5,1.5)-(1.5,1.5));
544
545 push_hook(hsmain_render,
546   "hook.box_bottom("&(decimal find_stroke(-3))&"
547     &(decimal find_stroke(-2))&");" );
548 push_hook(hsmain_render,
549   "hook.mound_bottoms("&(decimal find_stroke(-3))&"
550     &(decimal find_stroke(-1))&"
551     &(decimal find_stroke(0))&");" );
552 endgroup;
553 expand_pbox;
554 endif;

```



```
555
556 vardef kanji.rare.mound =
557   push_pbox_toexpand("kanji.rare.mound");
558   build_kanji.attach_tick(660)(kanji.rare_helper.mound);
559   expand_pbox;
560 enddef;
```

**RARE**

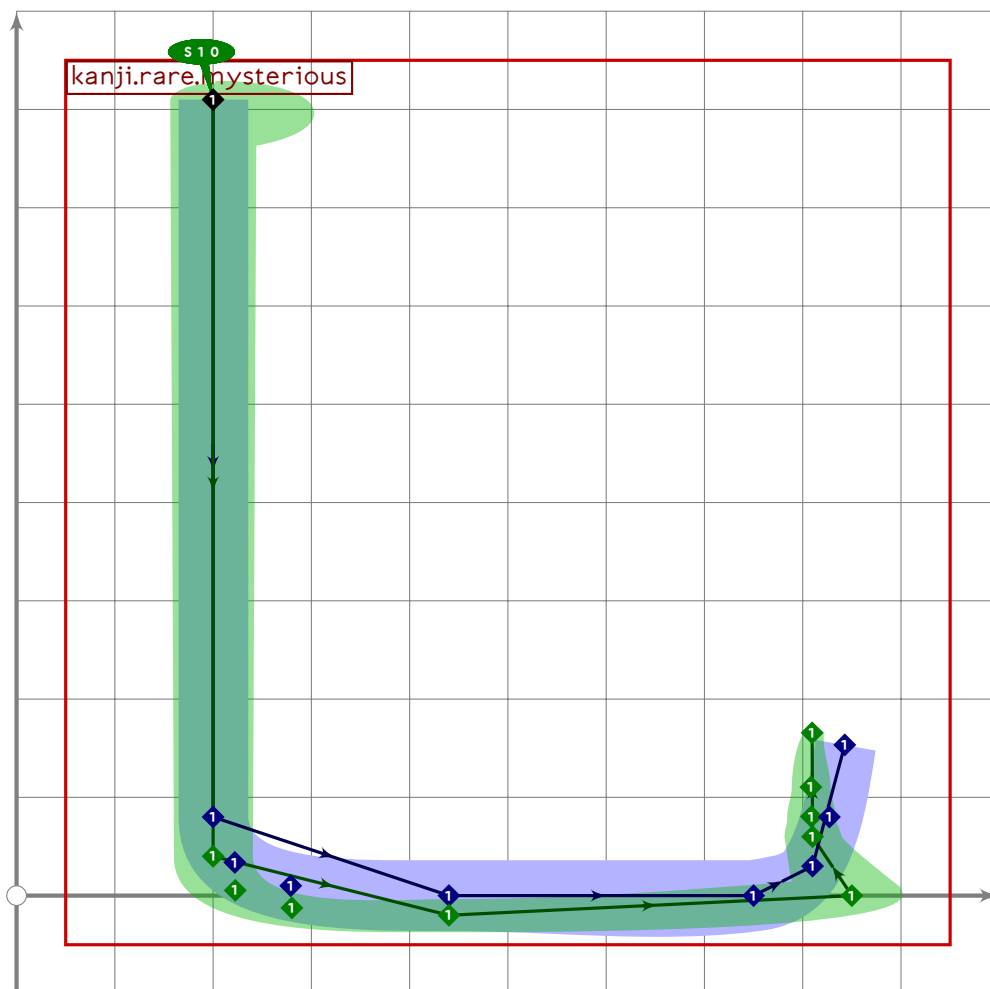


```

561
562 vardef kanji.rare.mushroom =
563   push_pbox_toexpand("kanji.rare.mushroom");
564   build_kanji.tb(450,60)
565     (kanji.grone.earth)
566     (kanji.radical.legs);
567   expand_pbox;
568 enddef;

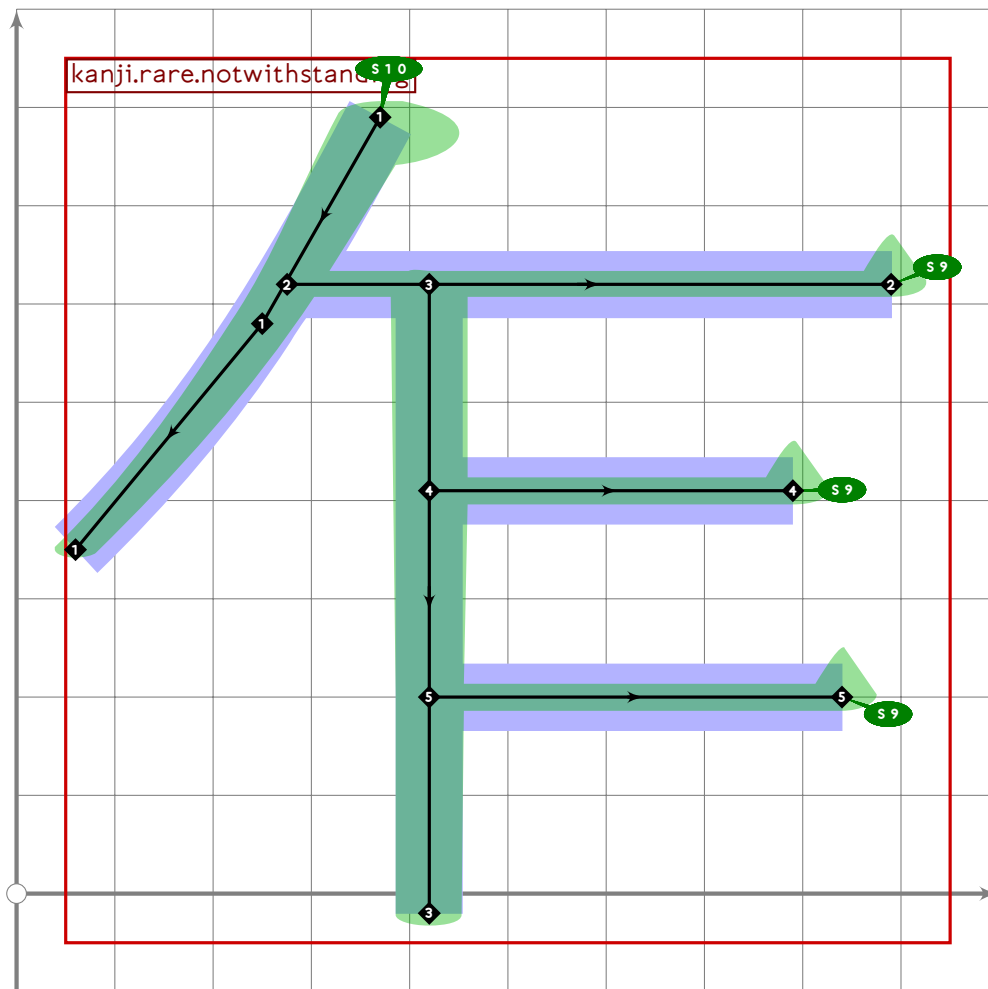
```

U+4E5A  
tsuku.uni4E5A



```
569
570 vardef kanji.rare.mysterious =
571   push_pbox_toexpand("kanji.rare.mysterious");
572   push_stroke((200,810))((1.7,1.7));
573   build_kanji.add_tail(0);
574   set_boserif(0,0,10);
575   expand_pbox;
576 enddef;
```

RARE



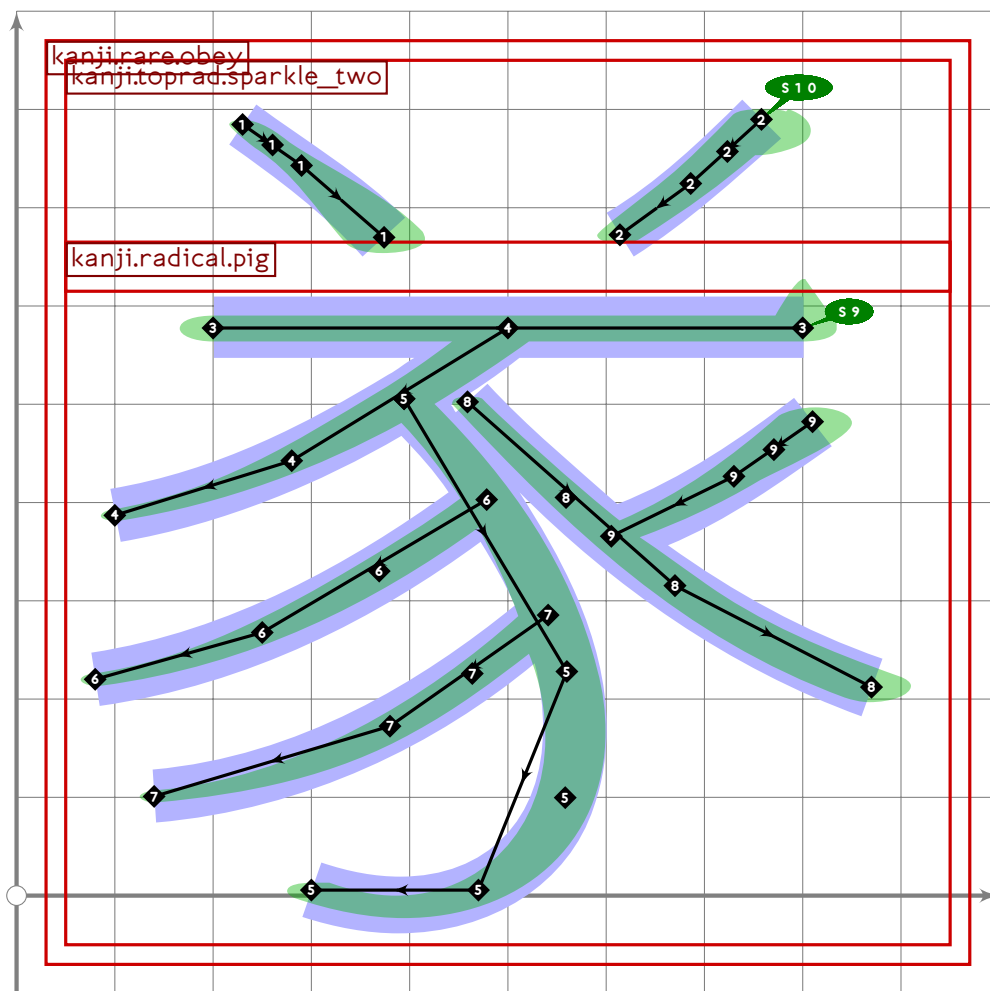
```

577
578 vardef kanji.rare.notwithstanding =
579   push_pbox_toexpand("kanji.rare.notwithstanding");
580   push_stroke((370,790){curl 0.1}..(250,580)..(60,350),
581     (1.7,1.7)–(1.4,1.4)–(1.1,1.1));
582   set_boserif(0,0,10);
583   push_stroke(
584     (((0,620)–(1000,620)) intersectionpoint get_stroke(0))–(890,620),
585     (1.4,1.4)–(1.5,1.5));
586   set_boserif(0,1,9);
587   push_stroke((420,620)–(420,20),
588     (1.6,1.6)–(1.4,1.4));
589   push_stroke((420,410)–(790,410),
590     (1.5,1.5)–(1.5,1.5));
591   set_boserif(0,1,9);
592   push_stroke((420,200)–(840,200),
593     (1.5,1.5)–(1.5,1.5));
594   set_boserif(0,1,9);
595   expand_pbox;
596 enddef;

```

RARE

U+34B8  
tsuku.uni34B8

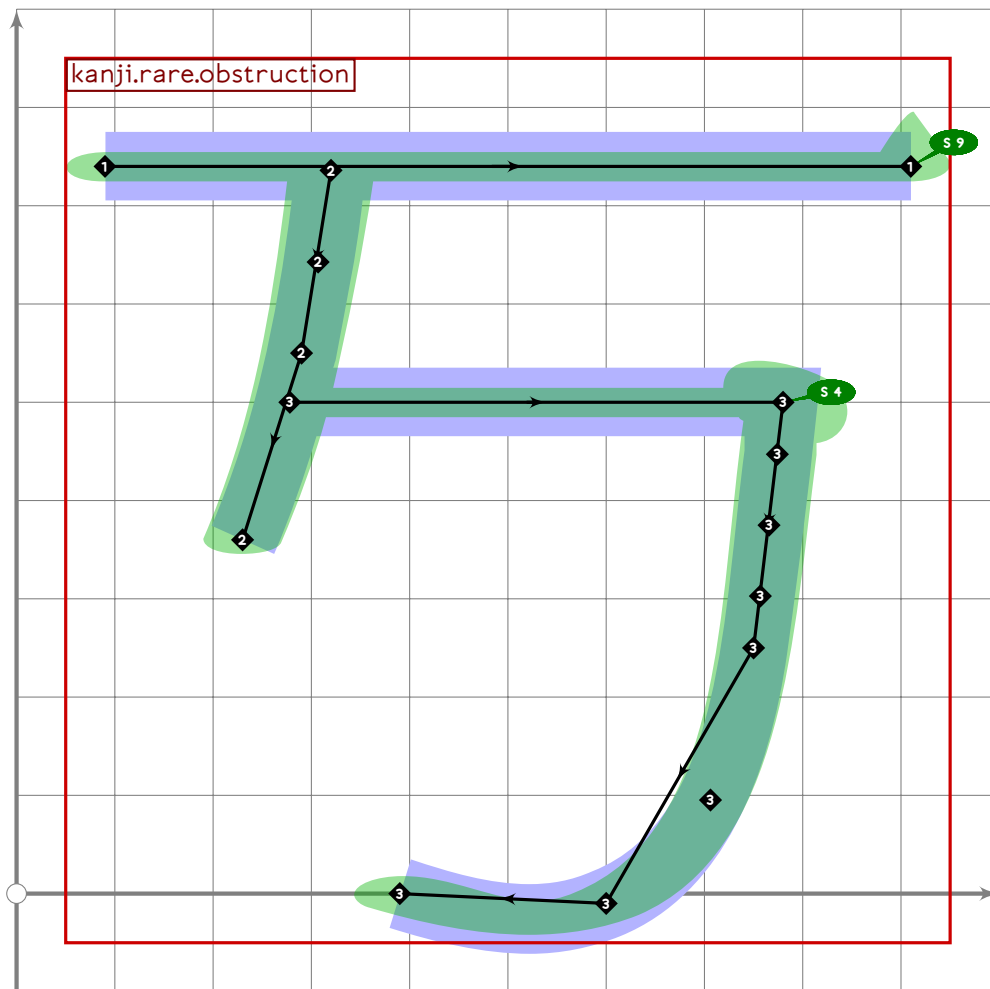


```

597
598 vardef kanji.rare.obey =
599   push_pbox_toexpand("kanji.rare.obey");
600   build_kanji.tb(640,50)
601     (build_kanji.spread_legs(-180)(kanji.toprad.sparkle_two))
602     (kanji.radical.pig);
603   expand_pbox;
604 enddef;

```

RARE



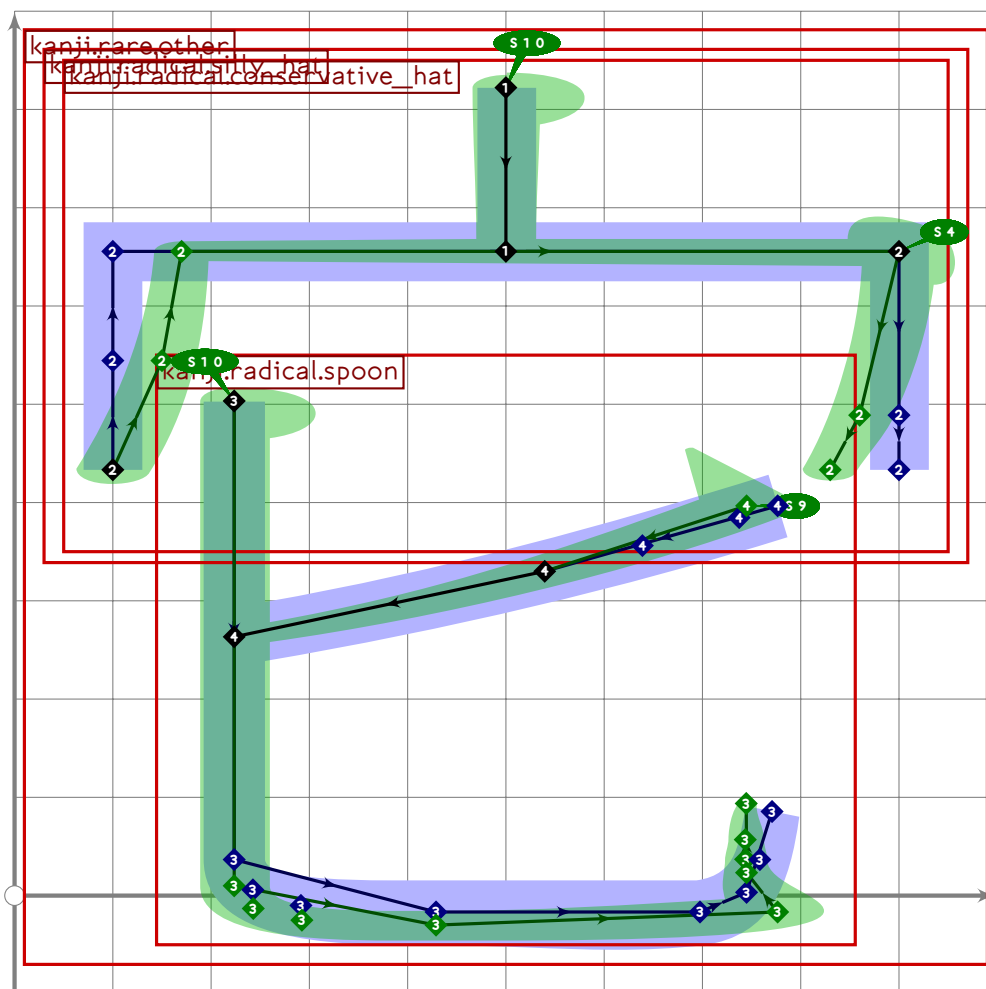
```

605
606 vardef kanji.rare.obstruction =
607   push_pbox_toexpand("kanji.rare.obstruction");
608   push_stroke((90,740)-(910,740),(1.6,1.6)-(1.6,1.6));
609   set_boserif(0,1,9);
610   push_stroke((320,736)..tension 1.2..(290,550)..(230,360),
611     (1.7,1.7)-(1.6,1.6)-(1.6,1.6));
612   push_stroke((get_stroke(0) intersectionpoint ((0,500)-(1000,500)))-
613     (780,500)..tension 1.7..(750,250)..(600,-10)..fcurl 0.1}(390,0),
614     (1.6,1.6)-(1.6,1.6)-(1.5,1.5)-(1.7,1.7)-(1.8,1.8));
615   set_botip(0,1,1);
616   set_boserif(0,1,4);
617   expand_pbox;
618 enddef;

```



U+5B83  
tsuku.uni5B83

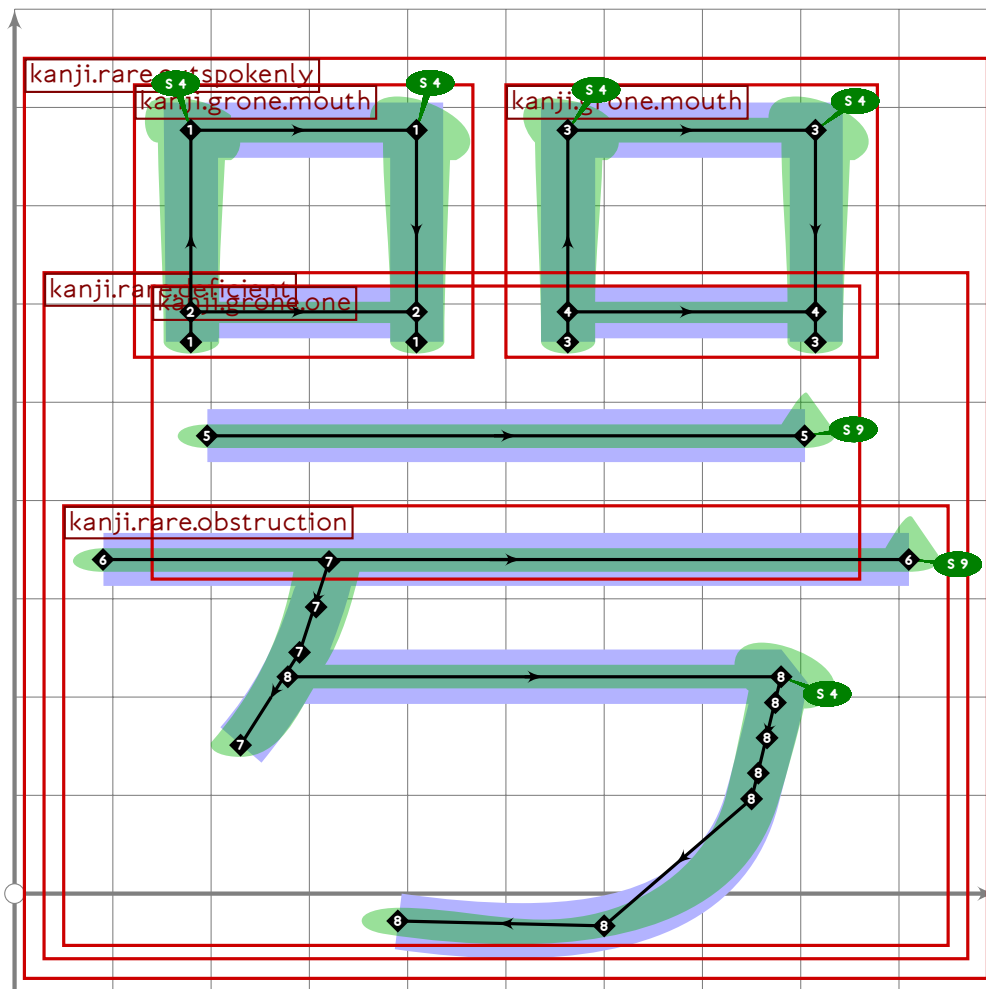


```

619
620 vardef kanji.rare.other =
621   push_pbox_toexpand("kanji.rare.other");
622   build_kanji.tb(450,200)
623     (kanji.radical.silly_hat)
624     (build_kanji.sscale(xscaled 0.79)
625       (kanji.radical.spoon));
626   expand_pbox;
627 enddef;

```

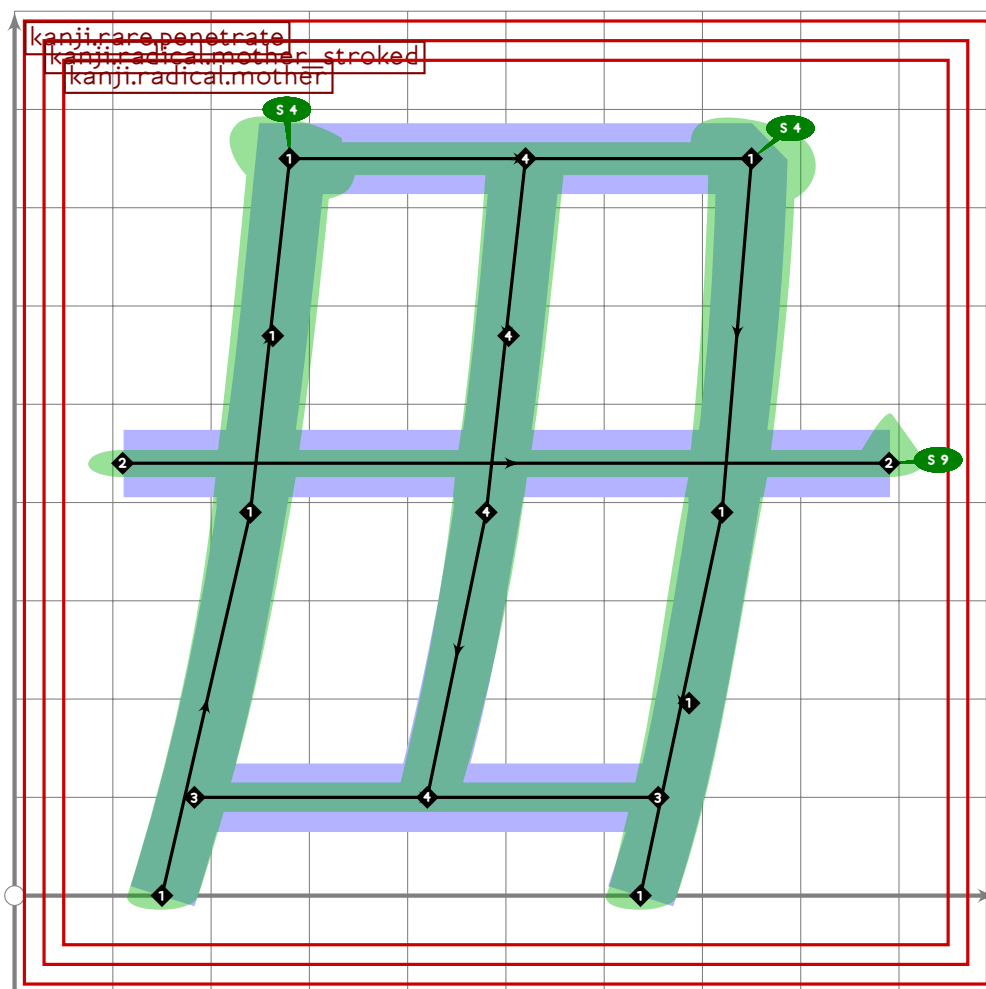
RARE



```

628
629 vardef kanji.rare.outspokenly =
630   push_pbox_toexpand("kanji.rare.outspokenly");
631   build_kanji.level(build_kanji.tb(540,40)
632     (build_kanji.sscale(scaled 0.84)(build_kanji.lr(480,-40)
633       (kanji.grone.mouth)(kanji.grone.mouth)))
634     (kanji.rare.deficient));
635   expand_pbox;
636 enddef;

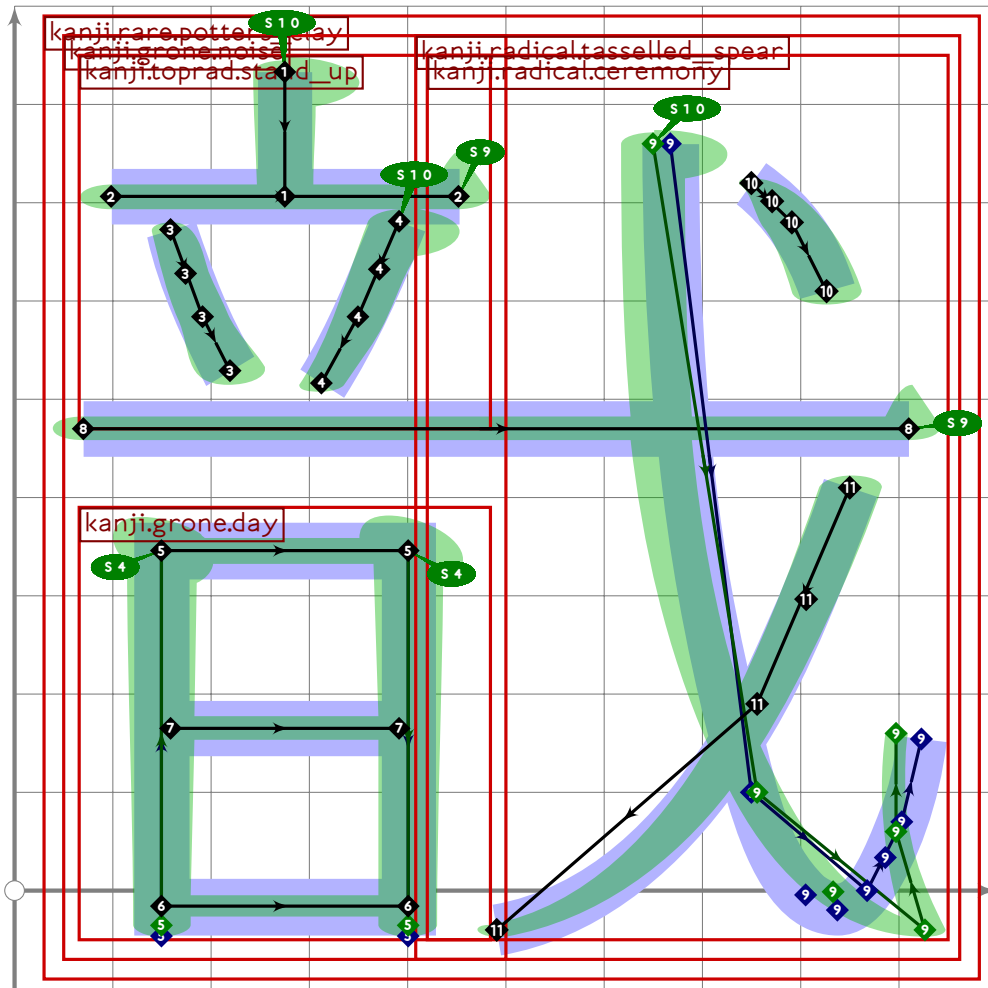
```



```

637
638 vardef kanji.rare.penetrate =
639   push_pbox_toexpand("kanji.rare.penetrate");
640   kanji.radical.mother_stroked;
641   replace_strokep(-3)(subpath (0,xpart (oldp intersectiontimes
642     ((500,0)-(1000,0)))) of oldp);
643   replace_strokeq(-3)(subpath (0,length get_strokep(-3)) of oldq);
644   replace_strokep(-1)((183,100)-(655,100));
645   set_bosertif(-1,whatever);
646   expand_pbox;
647 enddef;

```

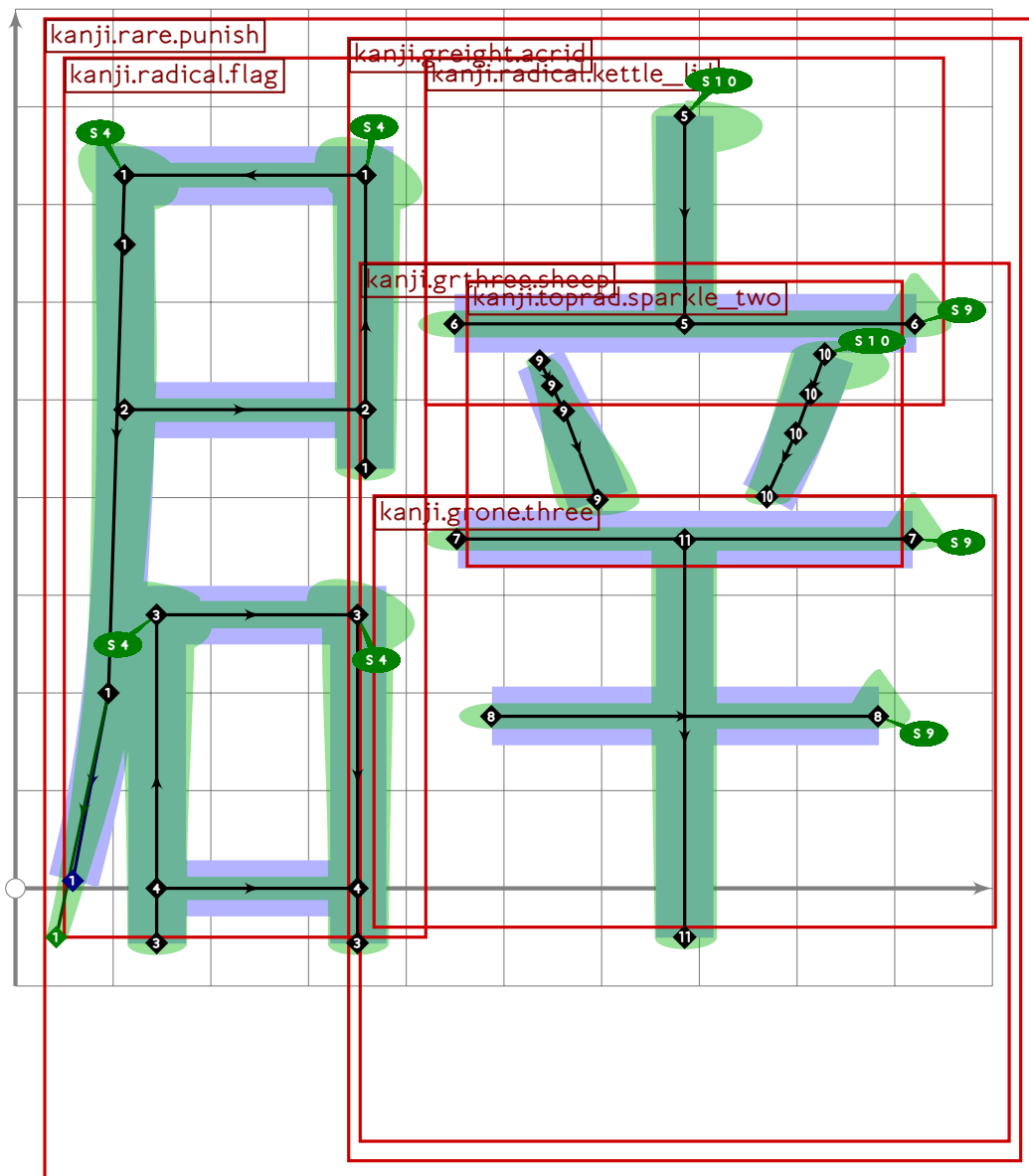


```

648
649 vardef kanji.rare.potters_clay =
650   push_pbox_toexpand("kanji.rare.potters_clay");
651   build_kanji.level(
652     build_kanji.lr(460,80)
653     (kanji.grone.noise;
654       obstacktype[find_whatsoever(otstroke,3)]:=otnull)
655     (kanji.radical.tasselled_spear;
656       replace_stroke(-3)((70,470)-(910,470)));
657   expand_pbox;
658 enddef;

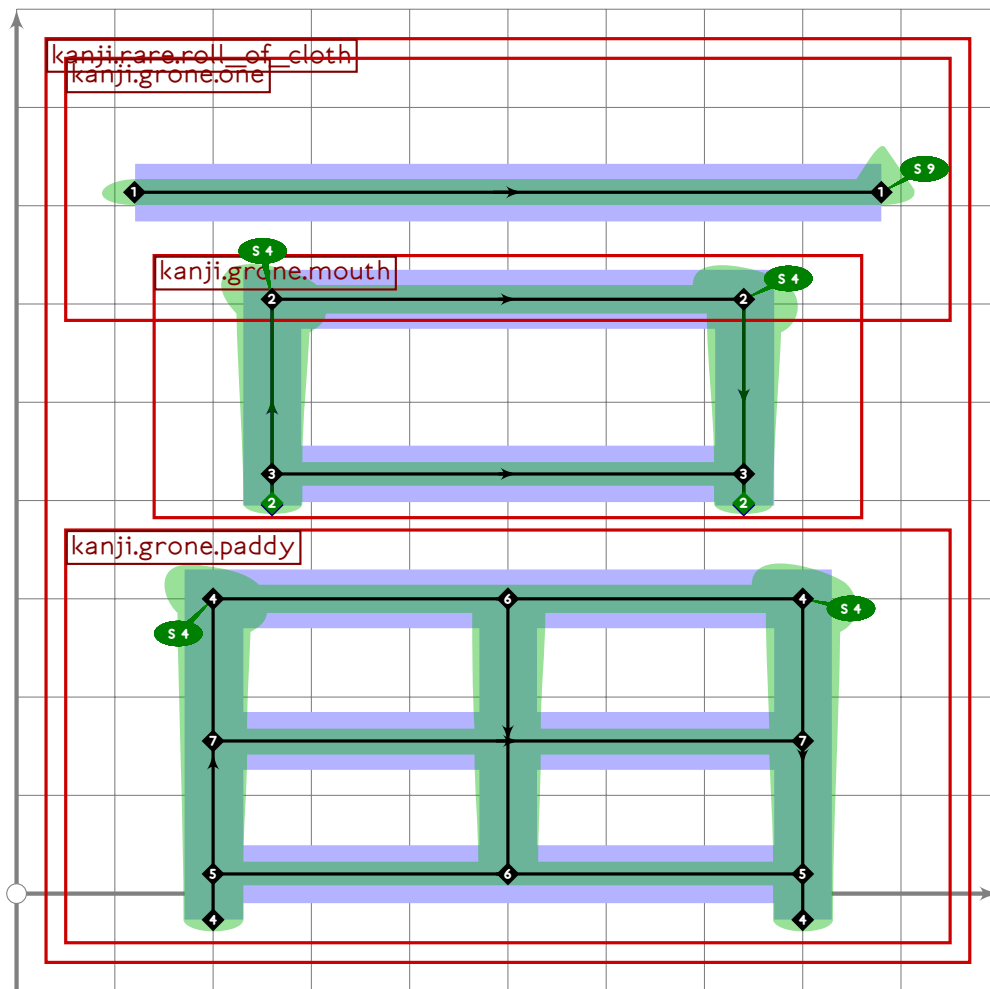
```

U+8F9F  
tsuku.uni8F9F



```
659
660 vardef kanji.rare.punish =
661   push_pbox_toexpand("kanji.rare.punish");
662   build_kanji.level(build_kanji.lr(420,0)
663     (kanji.radical.flag;
664       build_kanji.box((280,280),(780,0)))
665     (kanji.greight.acrid));
666   expand_pbox;
667 enddef;
```

**RARE**

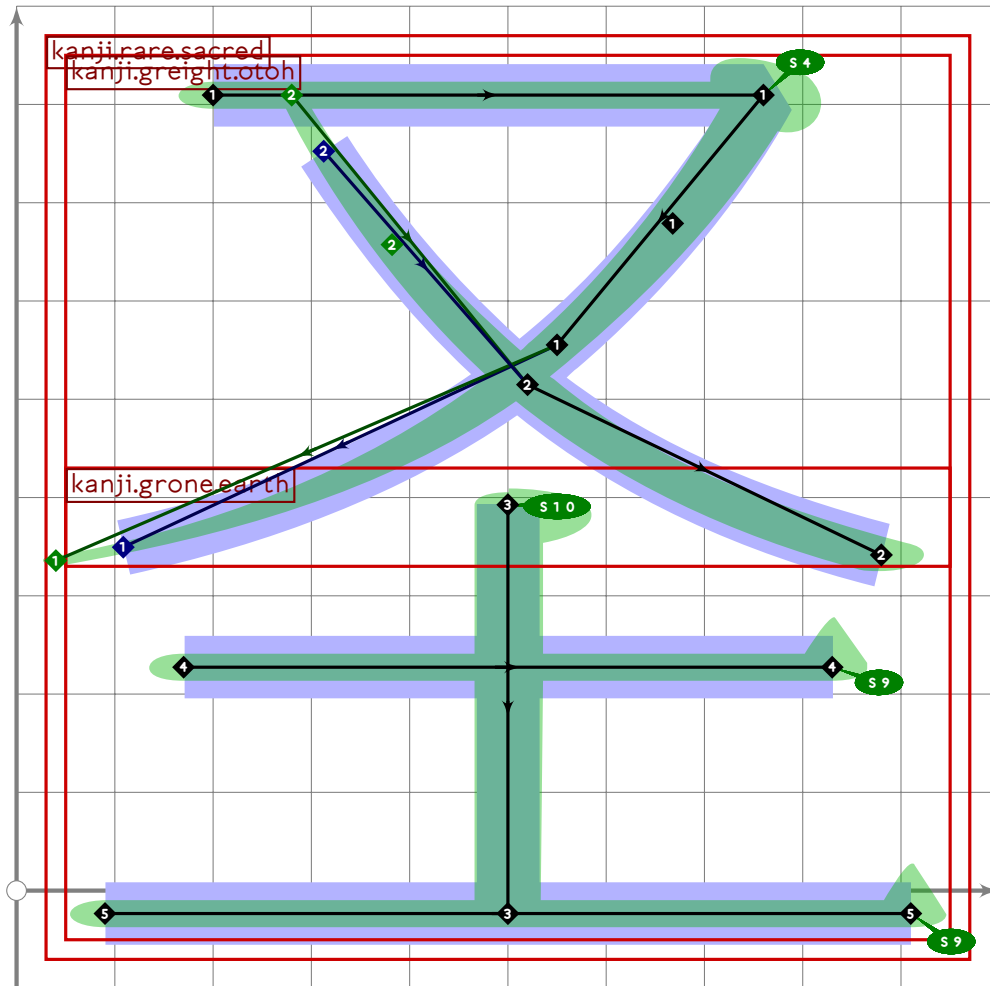


```

668
669 vardef kanji.rare.roll_of_cloth =
670   push_pbox_toexpand("kanji.rare.roll_of_cloth");
671   build_kanji.level(build_kanji.tb(360,20)
672     (build_kanji.tb(460,180)
673       (kanji.grone.one)
674       (build_kanji.sscale(scaled 0.8)(kanji.grone.mouth)))
675     (kanji.grone.paddy));
676   expand_pbox;
677 enddef;

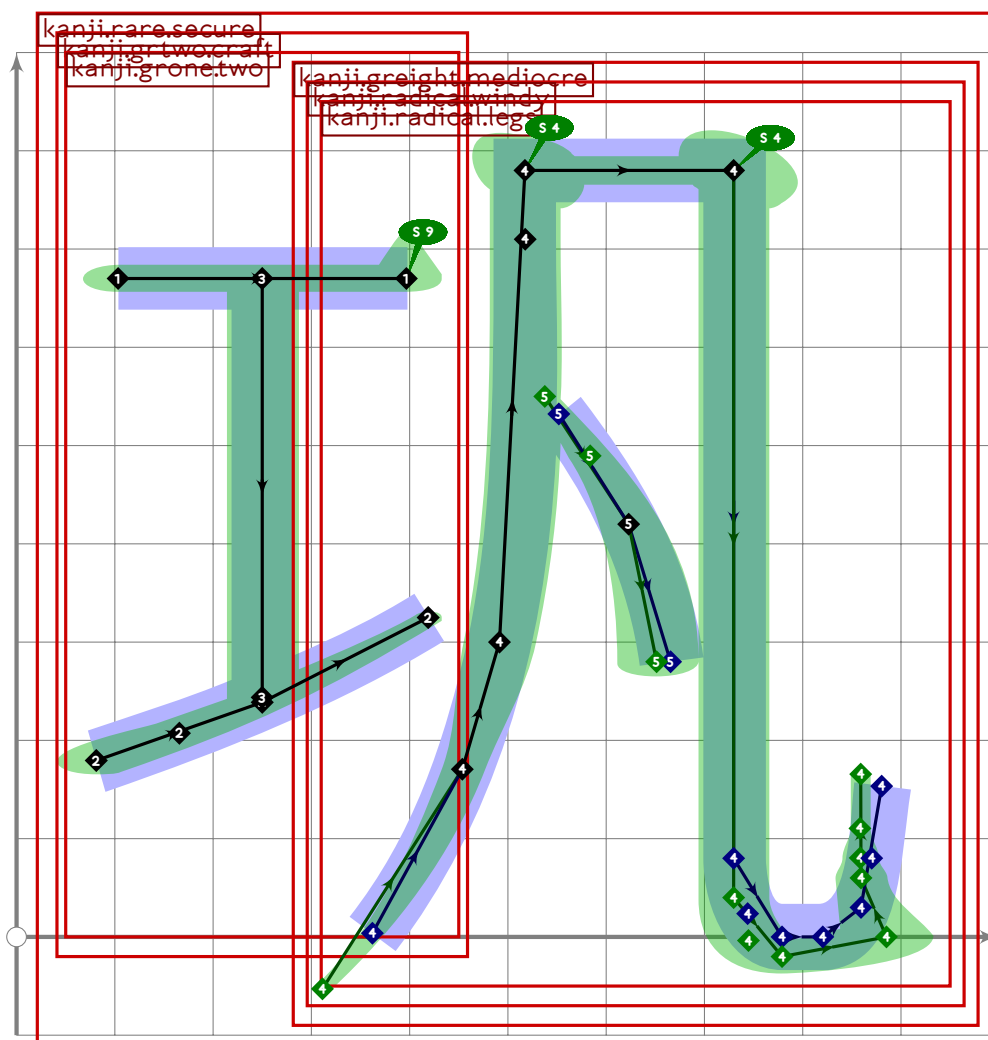
```

U+5723  
tsuku.uni5723



```
678
679 vardef kanji.rare.sacred =
680   push_pbox_toexpand("kanji.rare.sacred");
681   build_kanji.level(build_kanji.tb(380,100)
682     (kanji.greight.otoh)
683     (kanji.grone.earth));
684   expand_pbox;
685 enddef;
```

RARE



```

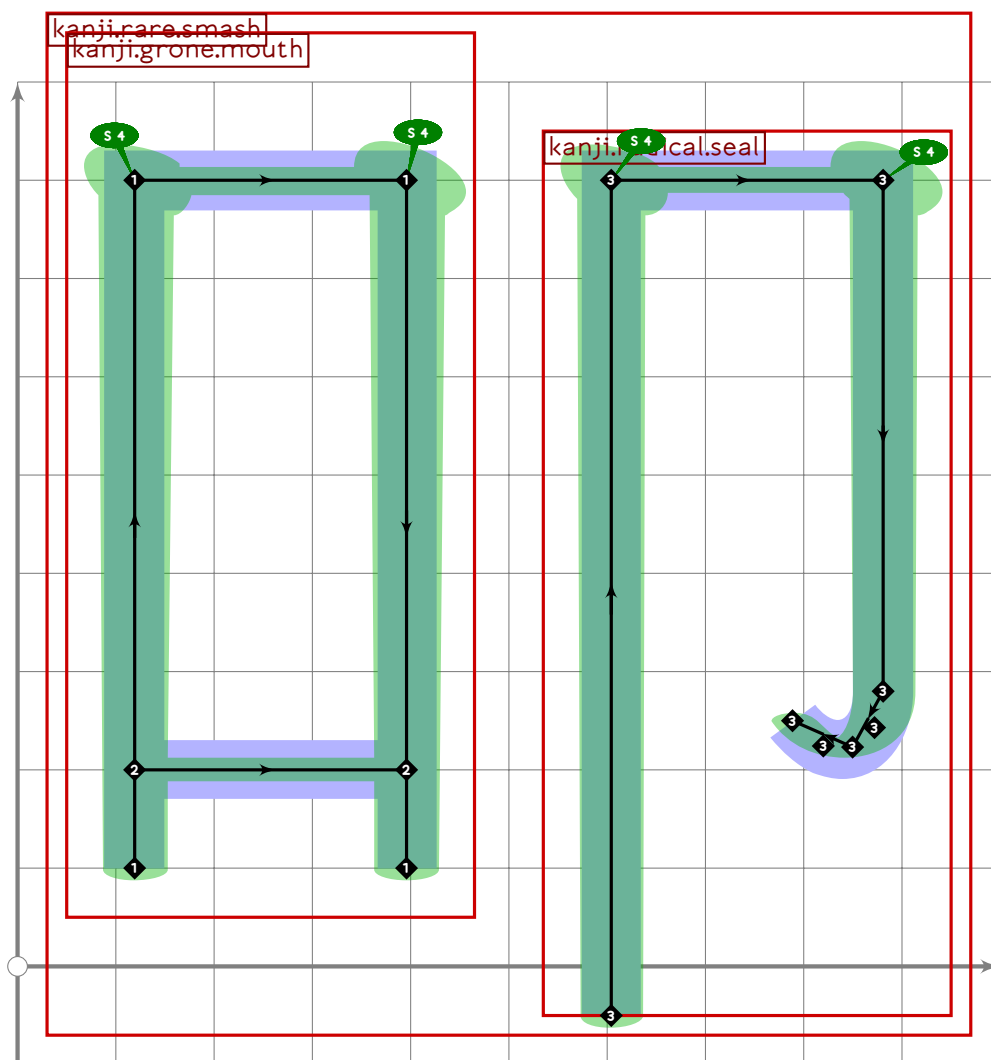
686
687 vardef kanji.rare.secure =
688   push_pbox_toexpand("kanji.rare.secure");
689   build_kanji.level(build_kanji.lr(380,140)
690     (tsu_xform(identity shifted (0,50))(build_kanji.lift_skirt(400,250)
691       (kanji.grtwo.craft)))
692     (kanji.greight.mediocre));
693   expand_pbox;
694 enddef;

```

RARE



U+53E9  
tsuku.uni53E9

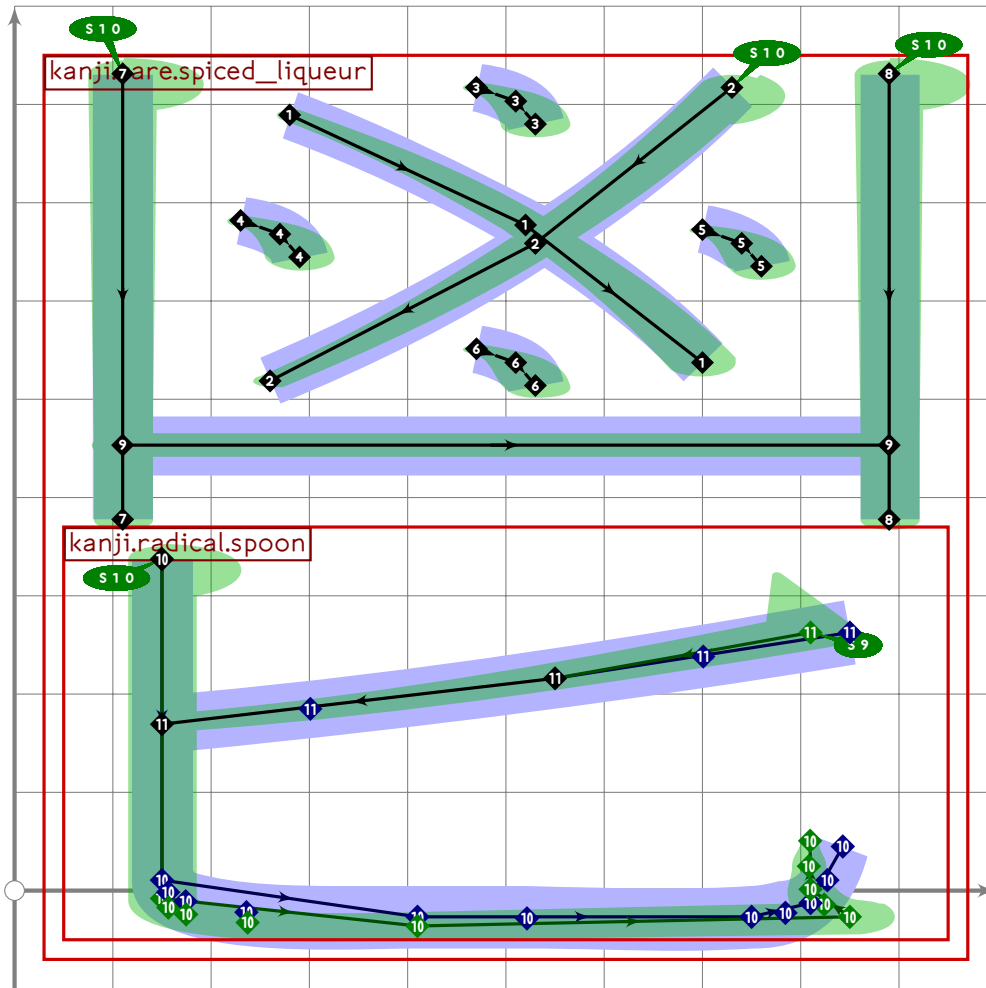


```

695
696 vardef kanji.rare.smash =
697   push_pbox_toexpand("kanji.rare.smash");
698   build_kanji.level(build_kanji.lr(500,-70)
699     (tsu_xform(identity shifted (0,100))(kanji.grone.mouth))
700     (kanji.radical.seal));
701   expand_pbox;
702 enddef;

```

RARE



```

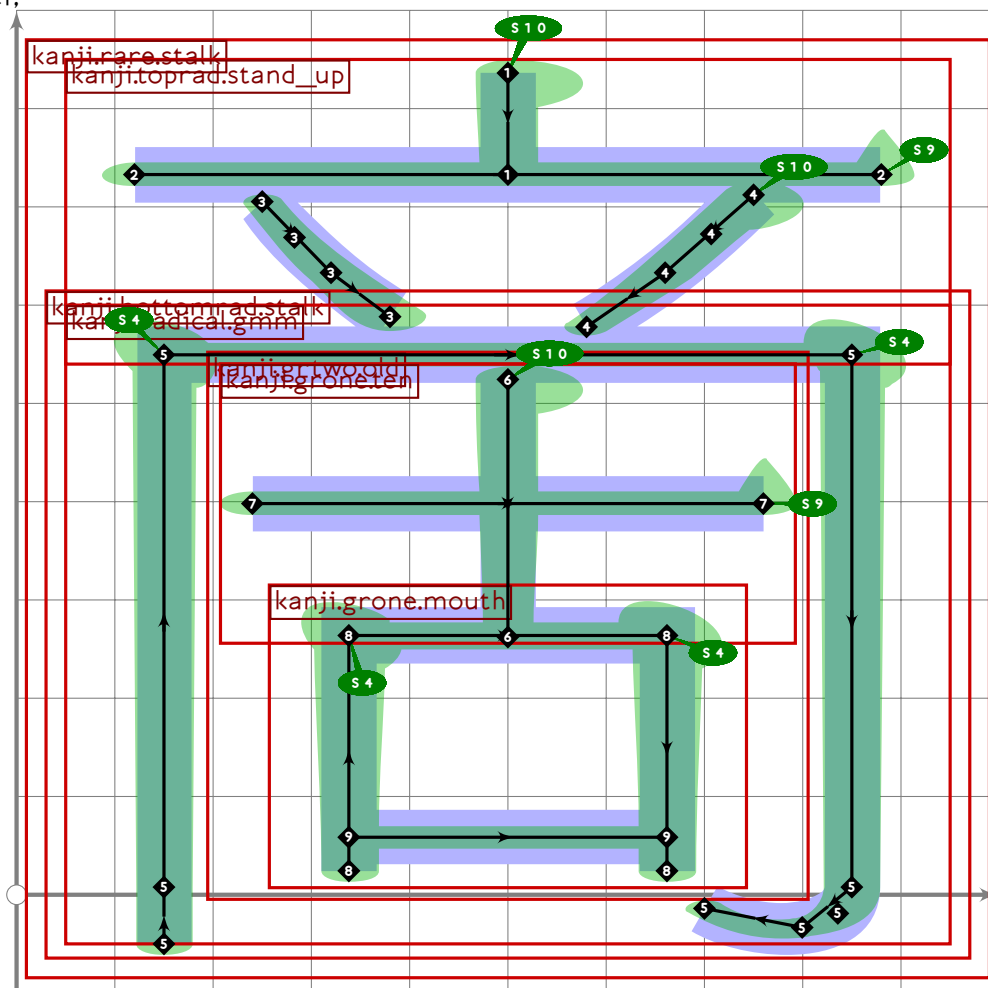
703
704 vardef kanji.rare.spiced_liqueur =
705   push_pbox_toexpand("kanji.rare.spiced_liqueur");
706   build_kanji.tb(400,-60)
707     (push_stroke((280,720)..(520,480)..(700,180),
708       (1,1)-(1,4,1,4)-(1,7,1,7));
709     set_bosize(0,90);
710     push_stroke((730,780)..(530,440)..(260,140),
711       (1,7,1,7)-(1,5,1,5)-(1,1,1,1));
712     set_boserif(0,0,10);
713     set_bosize(0,90);
714     push_stroke((470,780)..(510,750)..(530,700),(1,1)-(1,5,1,5)-(1,7,1,7));
715     set_bosize(0,90);
716     push_stroke((230,490)..(270,460)..(290,410),(1,1)-(1,5,1,5)-(1,7,1,7));
717     set_bosize(0,90);
718     push_stroke((700,470)..(740,440)..(760,390),(1,1)-(1,5,1,5)-(1,7,1,7));
719     set_bosize(0,90);
720     push_stroke((470,210)..(510,180)..(530,130),(1,1)-(1,5,1,5)-(1,7,1,7));
721     set_bosize(0,90);
722     build_kanji.cup((110,810),(890,0)))
723   (kanji.radical.spoon);

```

RARE

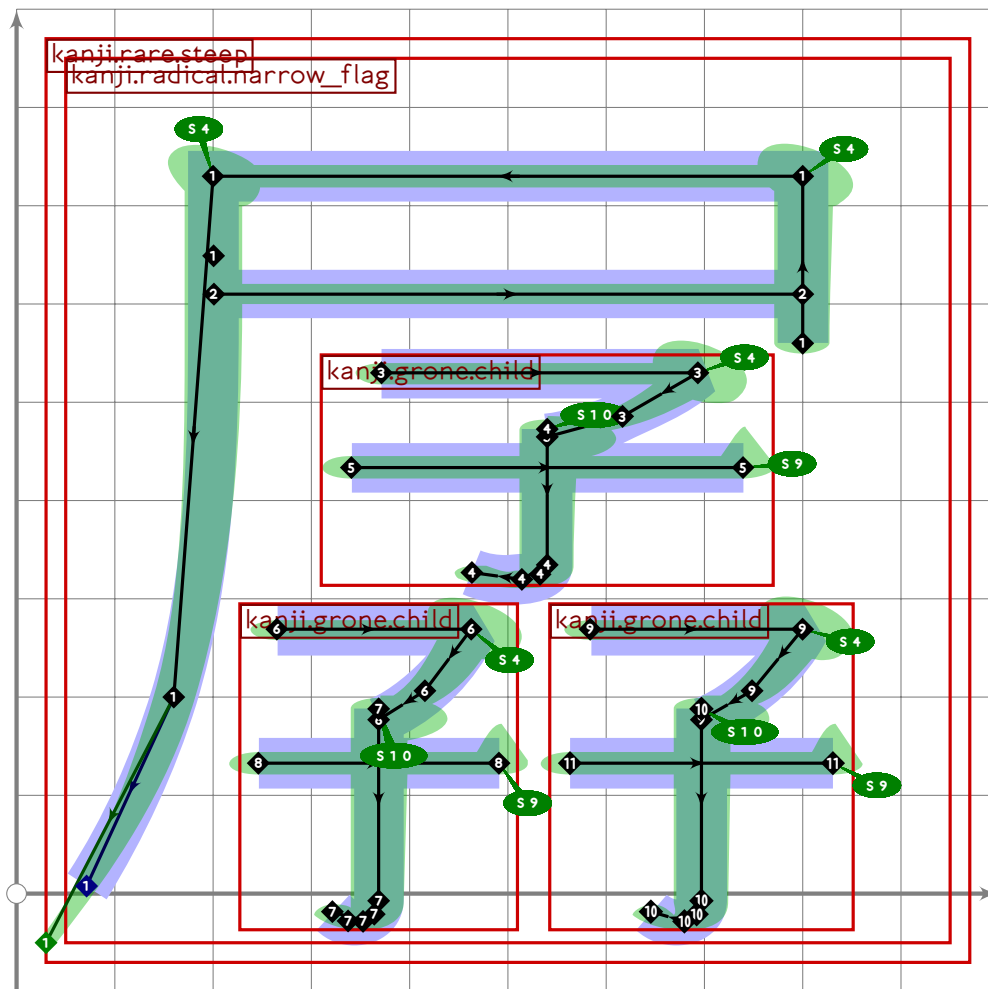
U+5547  
tsuku.uni5547

```
724 expand_pbox;
725 enddef;
```



```
726
727 vardef kanji.rare.stalk =
728   push_pbox_toexpand("kanji.rare.stalk");
729   build_kanji.level(build_kanji.tb(570,60)
730     (kanji.toprad.stand_up;
731       pop_stroke)
732     (kanji.bottomrad.stalk));
733   expand_pbox;
734 enddef;
```

RARE

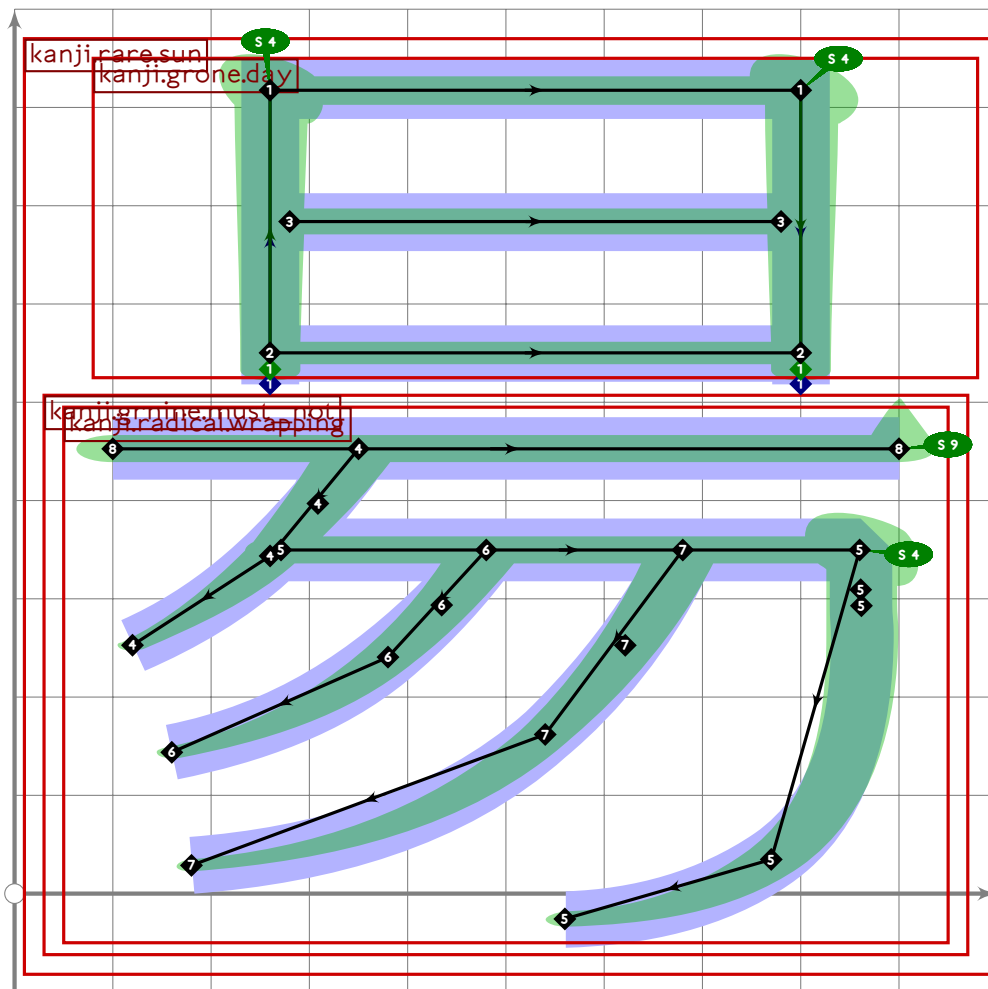


```

735
736 vardef kanji.rare.steep =
737   push_pbox_toexpand("kanji.rare.steep");
738   build_kanji.level(
739     kanji.radical.narrow_flag;
740     build_kanji.sscale(xyscaled (0.73,0.67) shifted (40;150))
741     (build_kanji.tricuster(0.7)
742       (kanji.grone.child)
743       (build_kanji.sscale(scaled 0.9)(kanji.grone.child))
744       (build_kanji.sscale(scaled 0.9)(kanji.grone.child))));
745   expand_pbox;
746 enddef;

```

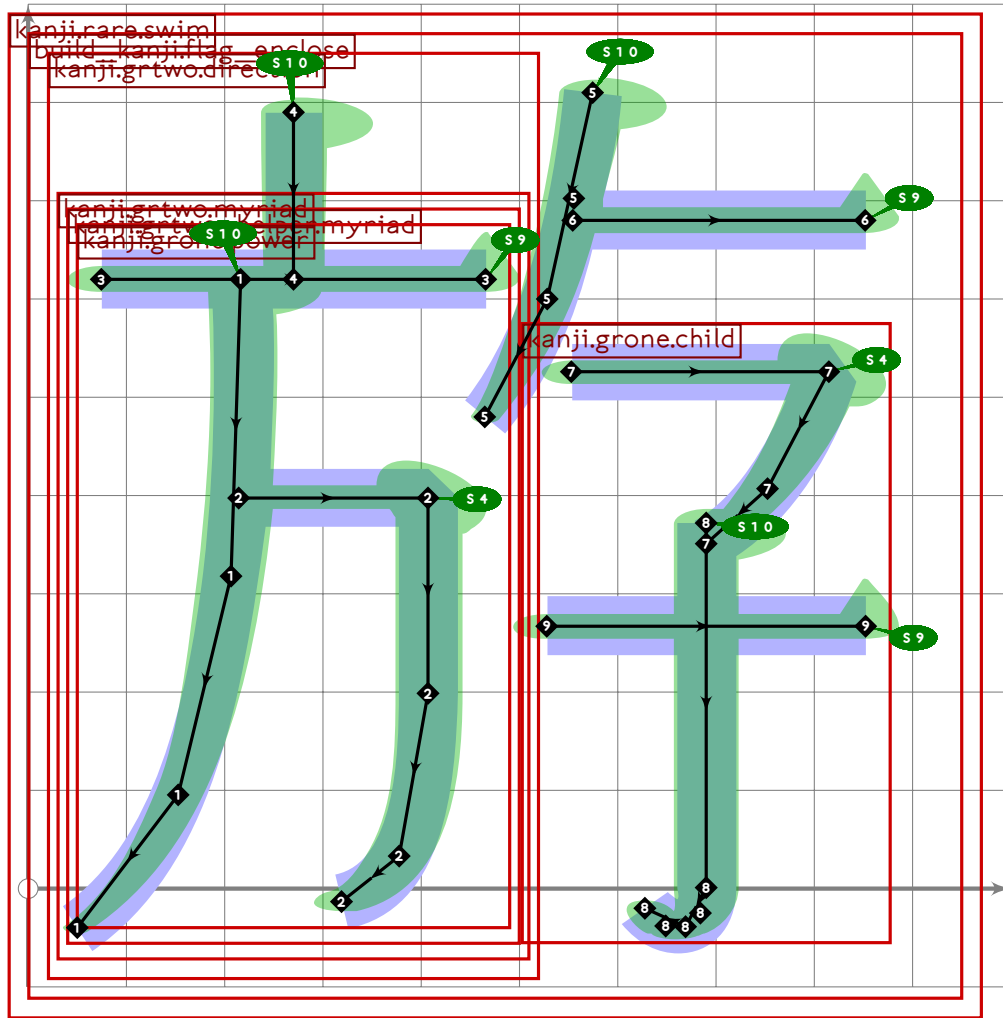
RARE



```

747
748 vardef kanji.rare.sun =
749   push_pbox_toexpand("kanji.rare.sun");
750   build_kanji.tb(510,-30)
751     (tsu_xform(identity shifted (30,0))(kanji.grone.day))
752     (kanji.grnine.must_not;
753       set_boserif(-3,0,whatever);
754       push_stroke((100,780)-(900,780),(1.6,1.6)-(1.6,1.6));
755       set_boserif(0,1,9));
756   expand_pbox;
757 enddef;

```



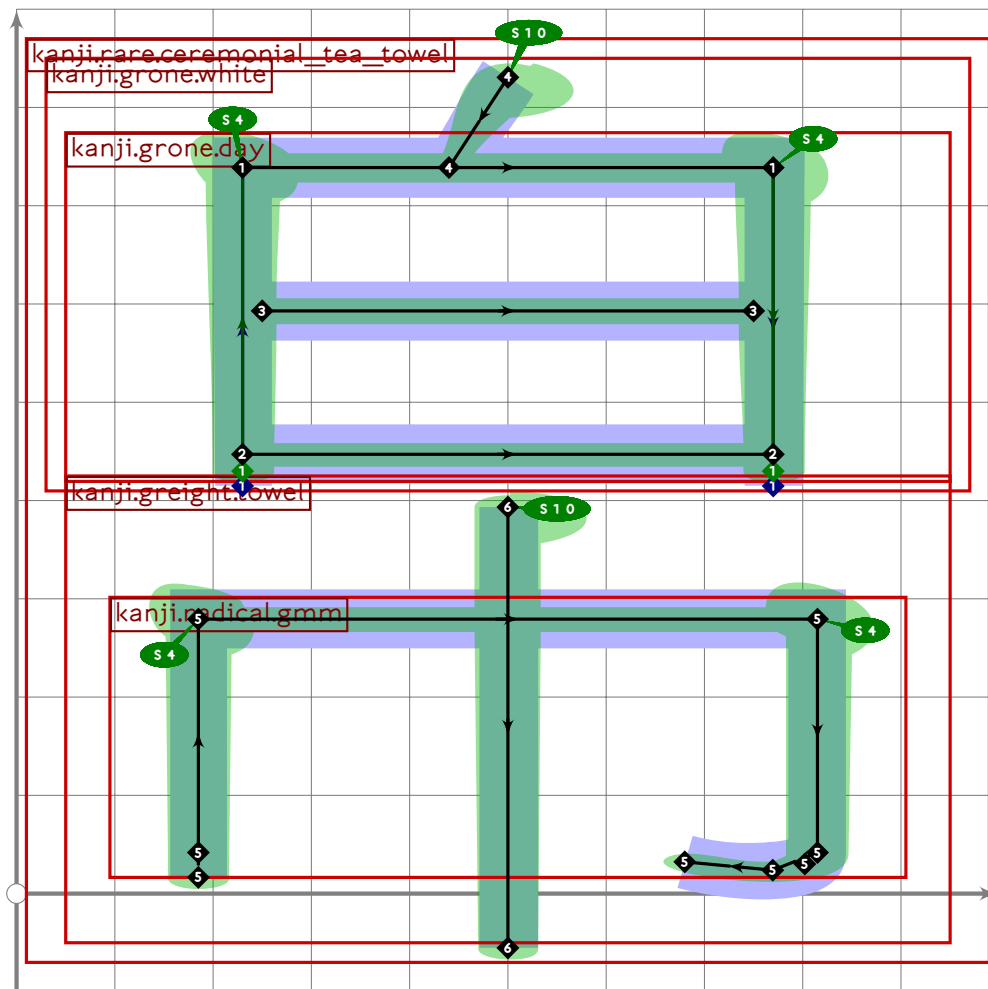
```

758
759 vardef kanji.rare.swim =
760   push_pbox_toexpand("kanji.rare.swim");
761   build_kanji.level(build_kanji.flag_enclose(0.72,0.7)
762     (kanji.grone.child));
763   expand_pbox;
764 enddef;

```

RARE

U+5E1B  
tsuku.uni5E1B

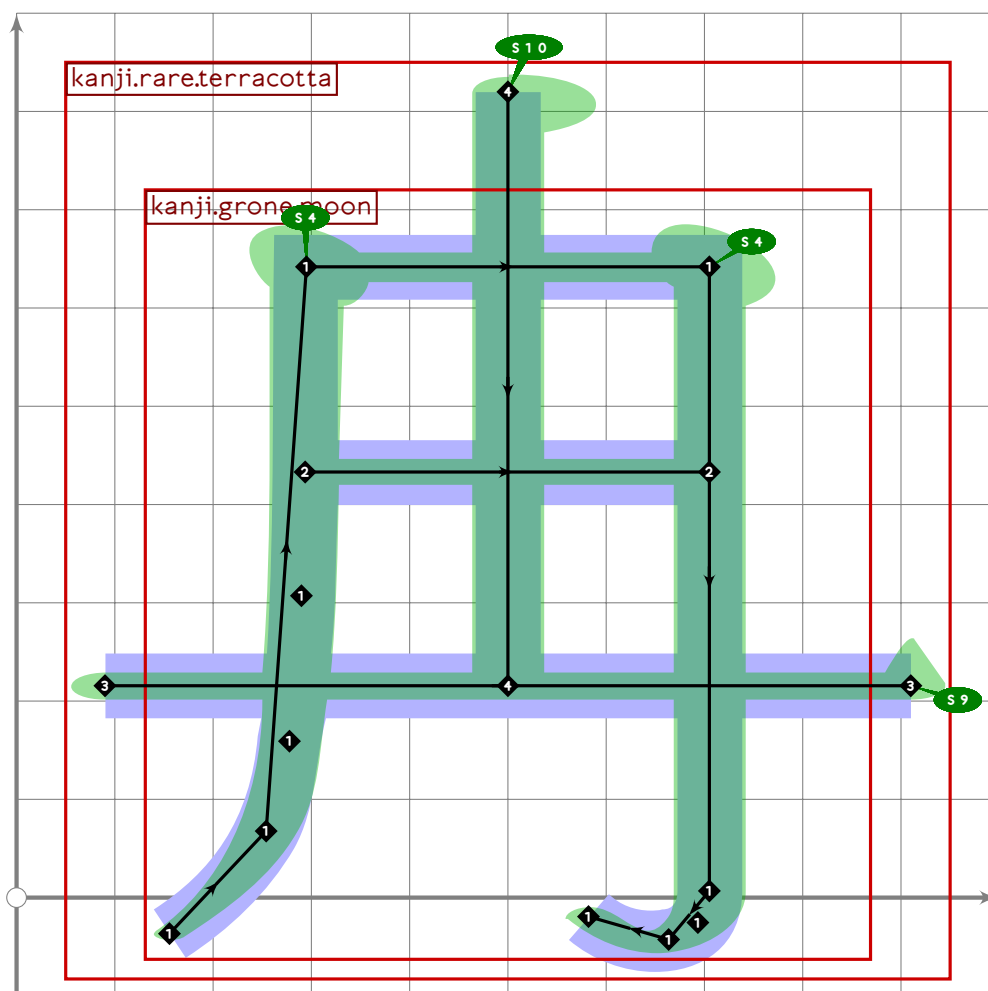


```

765
766 vardef kanji.rare.ceremonial_tea_towel =
767   push_pbox_toexpand("kanji.rare.ceremonial_tea_towel");
768   build_kanji.level(build_kanji.tb(420,10)
769     (kanji.grone.white)
770     (kanji.greight.towel));
771   expand_pbox;
772 enddef;

```

RARE

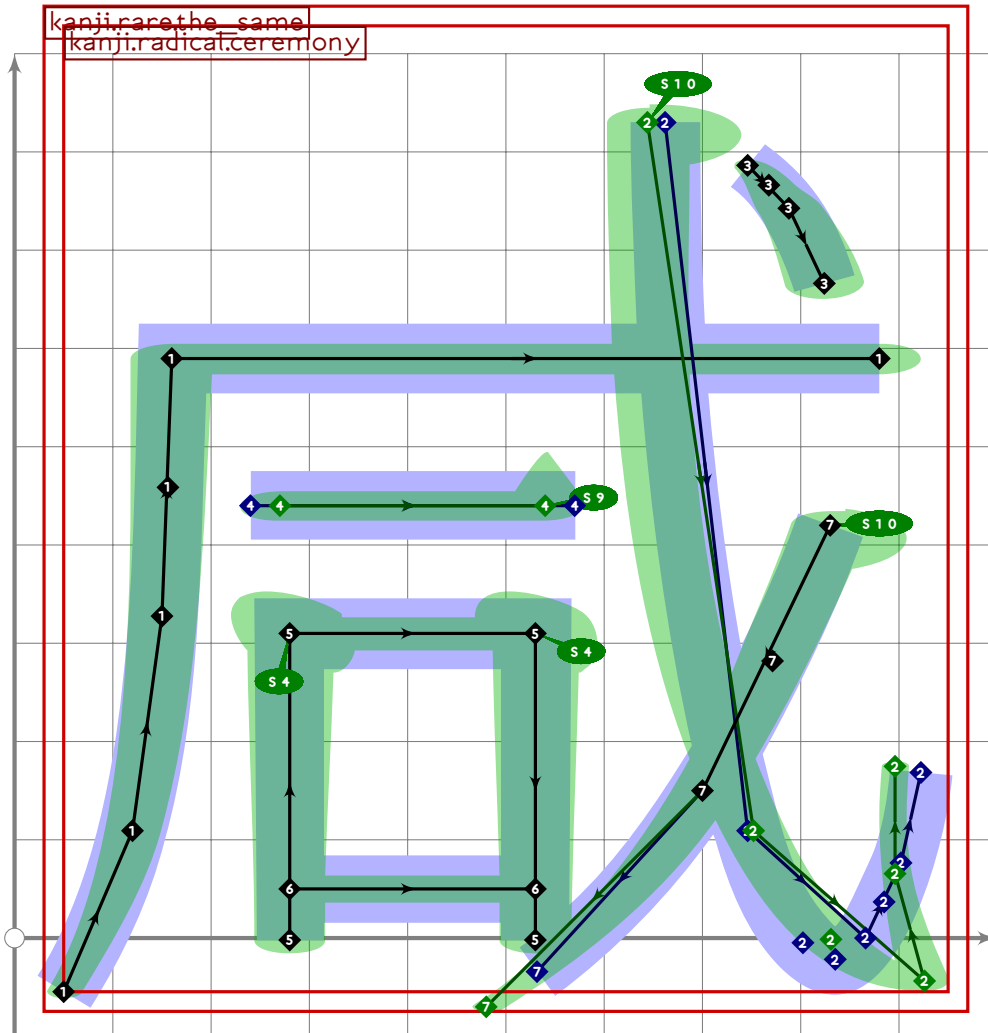


```

773
774 vardef kanji.rare.terracotta =
775   push_pbox_toexpand("kanji.rare.terracotta");
776   build_kanji.level(build_kanji.sscale(xyscaled (0.82,0.87) shifted (0,-70))
777     (kanji.grone.moon);
778   replace_strokep(0)((90,0)-(910,0)) shifted (0,ypart point 0 of oldp));
779   set_boserif(0,1,9);
780   push_stroke((500,820)-(point 0.5 of get_strokep(0)),
781     (1.6,1.6)-(1.5,1.5));
782   set_boserif(0,0,10));
783   expand_pbox;
784 enddef;

```



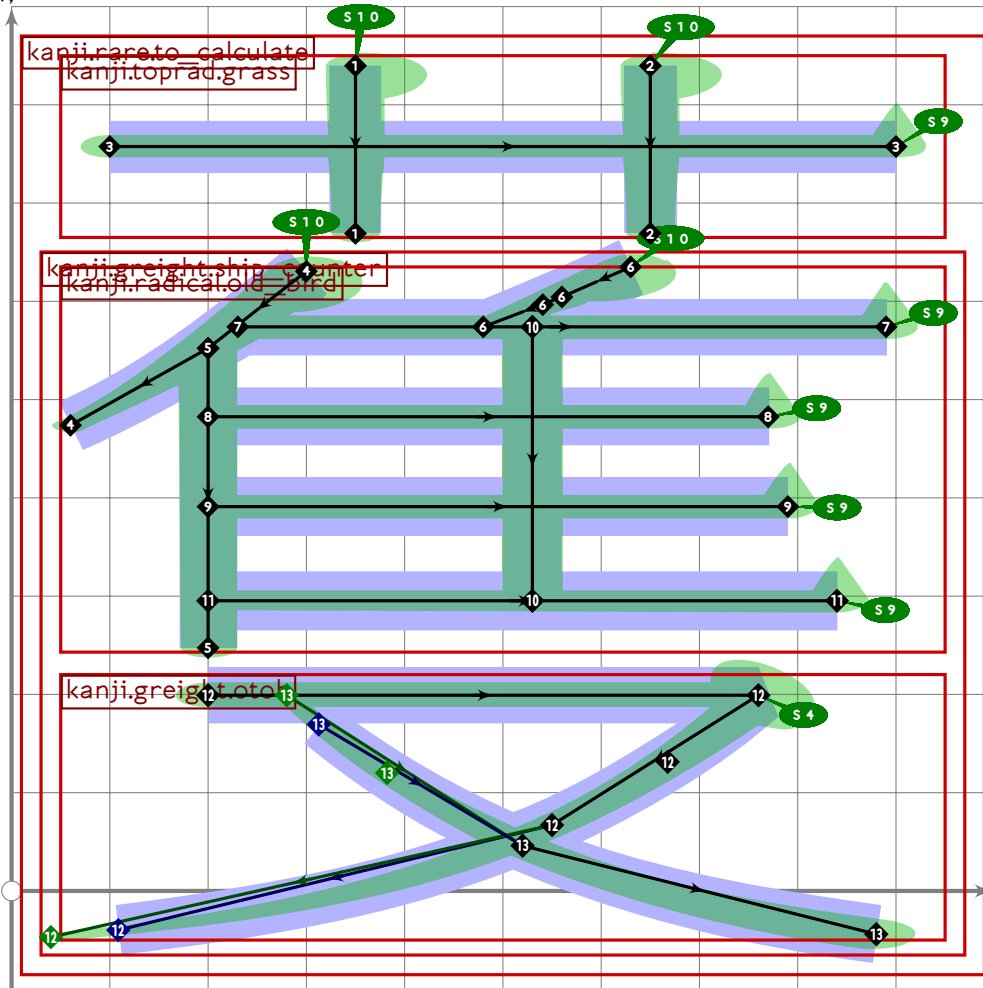


```

785
786 vardef kanji.rare.the_same =
787   push_pbox_toexpand("kanji.rare.the_same");
788   tsu_xform(identity yscaled (830/760))
789   (kanji.radical.ceremony;
790     replace_strokep(-2)
791       ((50,-50)..(120,100)..(150,300)..tension 1.2..(160,540)-(880,540));
792     replace_strokeq(-2)
793       ((1,1)-(1.3,1.3)-(1.5,1.5)-(1.6,1.6)-(1.6,1.6)));
794   set_botip(-2,3,1);
795   set_boserif(-2,1,whatever);
796   replace_strokep(-1)(oldp shifted (-950,0) xscaled 0.6 shifted (950,0));
797   replace_strokep(0)(oldp shifted (-950,0) xscaled 0.6 shifted (950,0));
798   push_stroke((if sharp_corners: 240 else: 270 fi,440)-
799     (if sharp_corners: 570 else: 540 fi,440),
800     (1.6,1.6)-(1.6,1.6));
801   set_boserif(0,1,9);
802   build_kanji.box((280,310),(530,50));
803   push_stroke((830,420)..tension 1.2..(700,150)..(480,-70),
804     (1.6,1.6)-(1.4,1.4)-(0.9,0.9));

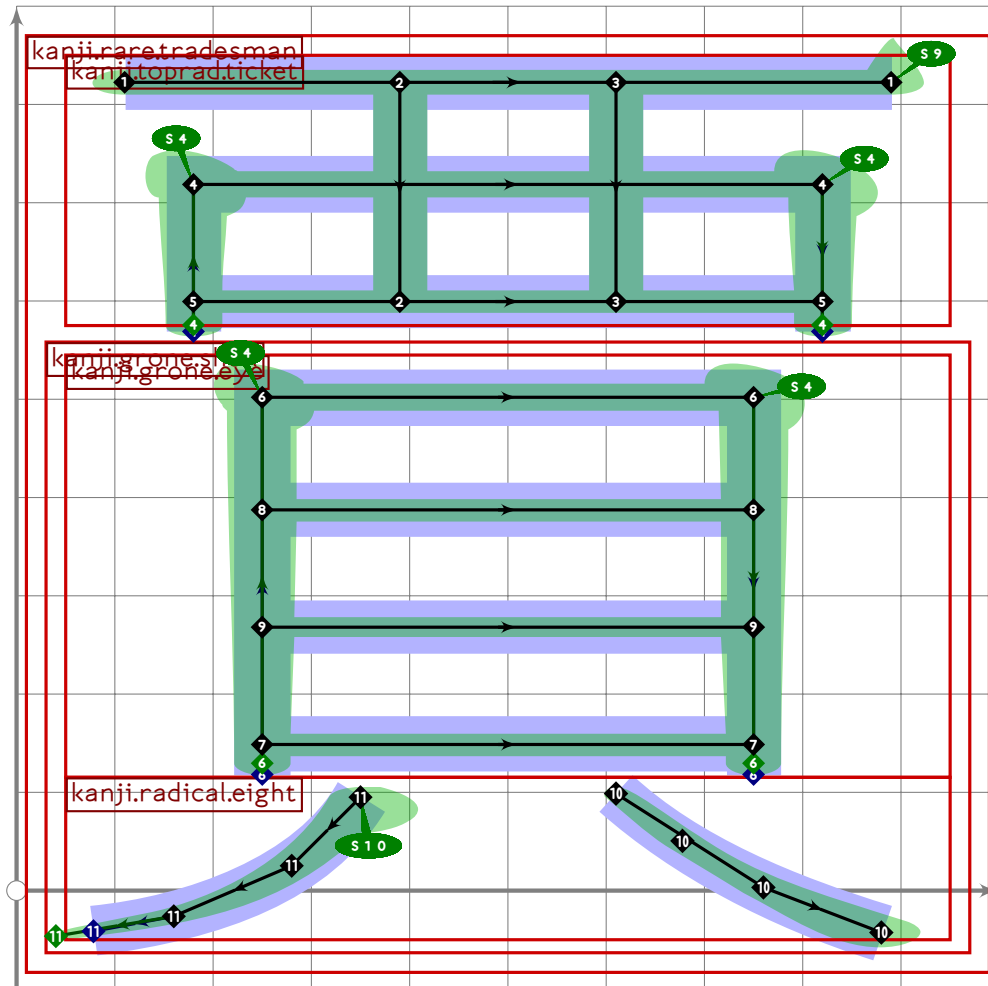
```

```
805 set_boserif(0,0,10);
806 expand_pbox;
807 enddef;
```



```
808
809 vardef kanji.rare.to_calculate =
810   push_pbox_toexpand("kanji.rare.to_calculate");
811   build_kanji.tb(650;30)
812     (kanji.toprad.grass)
813     (kanji.greight.ship_counter);
814   expand_pbox;
815 enddef;
```

U+8CC8  
tsuku.uni8CC8

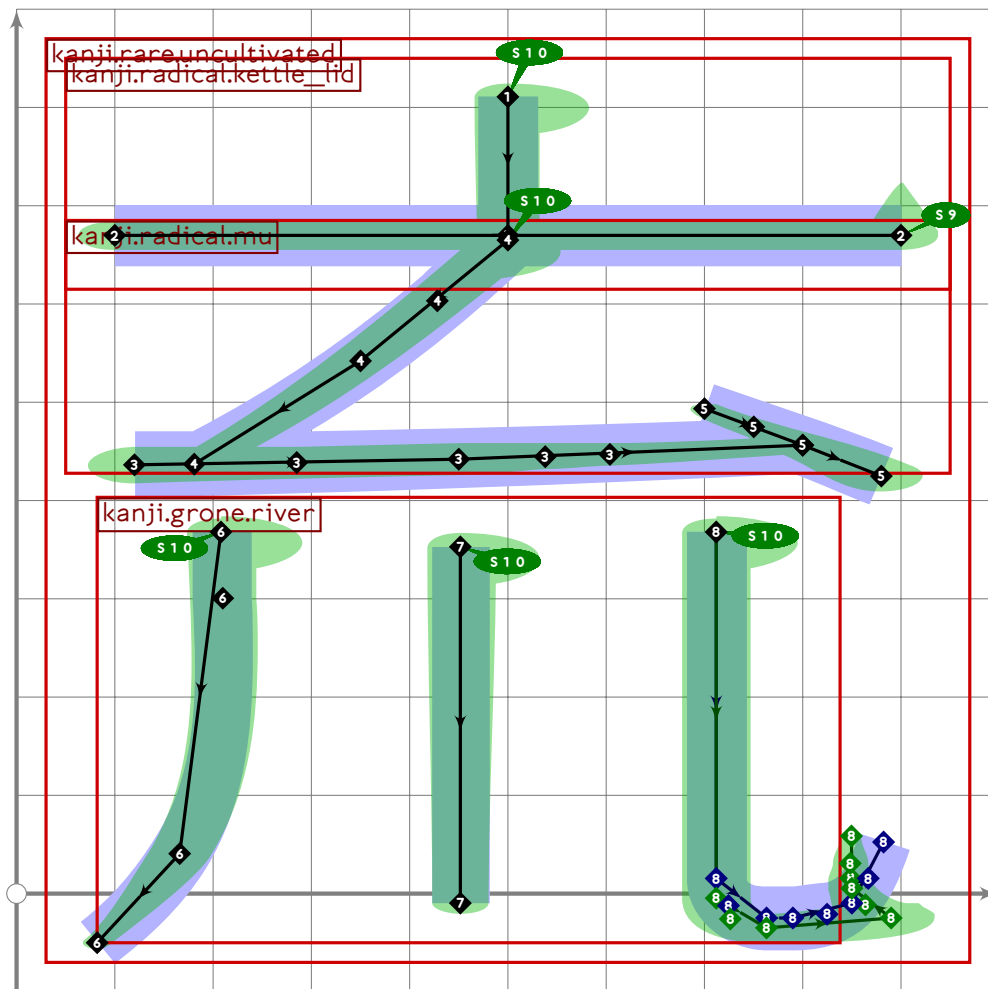


```

816
817 vardef kanji.rare.tradesman =
818   push_pbox_toexpand("kanji.rare.tradesman");
819   build_kanji.level(build_kanji.tb(560;30)
820     (kanji.toprad.ticket)
821     (kanji.grone.shell));
822   expand_pbox;
823 enddef;

```

RARE



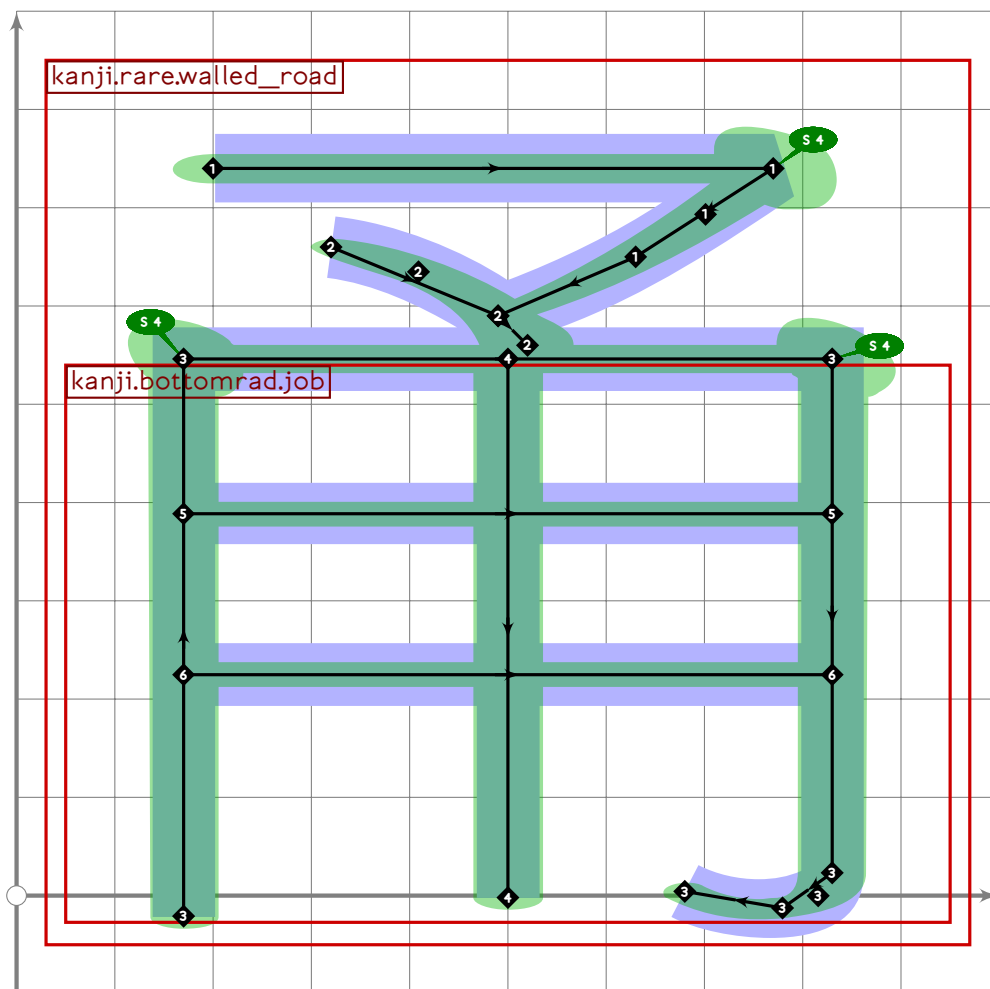
```

824
825 vardef kanji.rare.uncultivated =
826   push_pbox_toexpand("kanji.rare.uncultivated");
827   build_kanji.level(build_kanji.tb(650,70)
828     (kanji.radical.kettle_lid)
829     (build_kanji.tb(520,30)
830       (kanji.radical.mu)
831       (tsu_xform(identity shifted (40,0))
832         (tsu_xform(identity xscaled 0.84)(kanji.grone.river);
833         replace_strokep(0)((point 0 of oldp));
834         replace_strokeq(0)((point 0 of oldq));
835         build_kanji.add_ltail(0)))));
836   expand_pbox;
837 enddef;

```

RARE

U+752C  
tsuku.uni752C

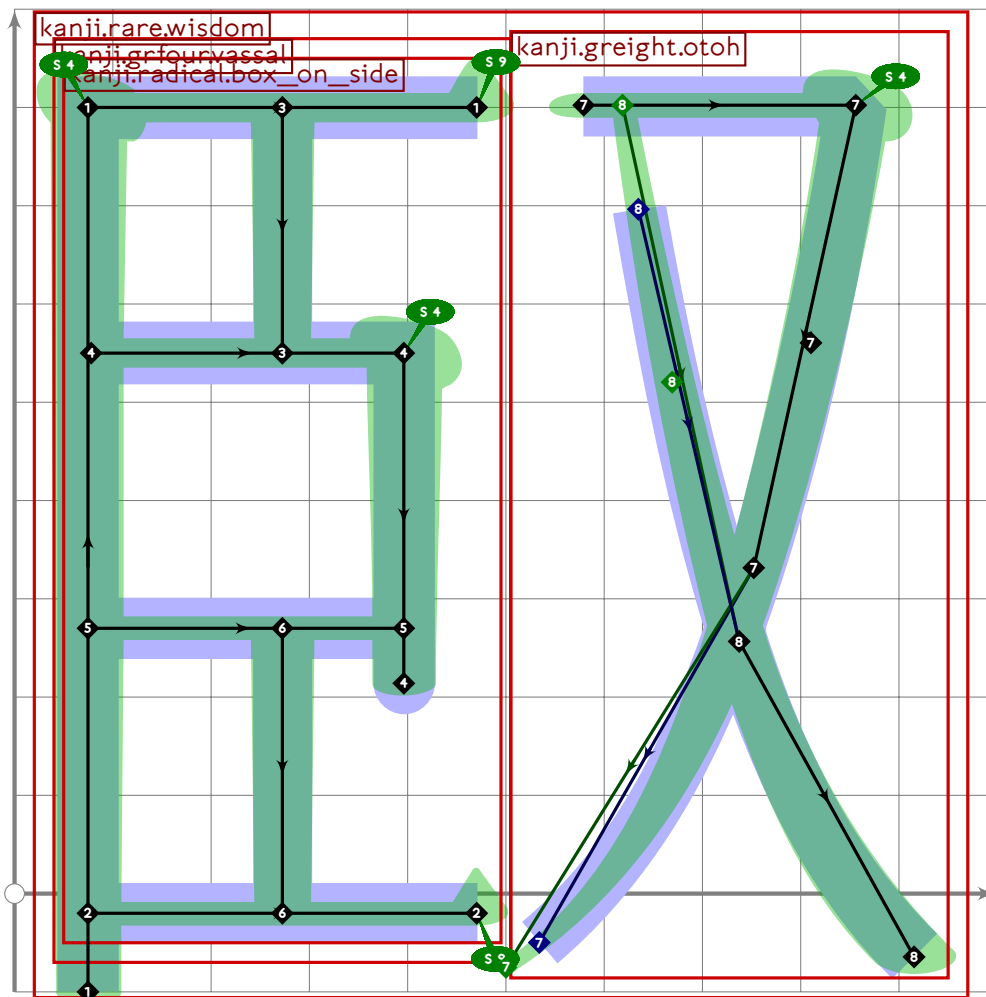


```

838
839 vardef kanji.rare.walled_road =
840   push_pbox_toexpand("kanji.rare.walled_road");
841   push_stroke((200,740)-(770,740)..tension 1.2..(630,650)..(490,590),
842     (1.6,1.6)-(1.6,1.6)-(1.4,1.4)-(1.1,1.1));
843   set_botip(0,1,0);
844   set_boserif(0,1,4);
845   push_stroke((320,660)..tension 1.2..(490,590)..(520,560),
846     (1.1,1.1)-(1.5,1.5)-(1.8,1.8));
847   build_kanji.sscale(yscaled 0.63 shifted (0,-140))(kanji.bottomrad.job);
848   expand_pbox;
849 enddef;

```

RARE

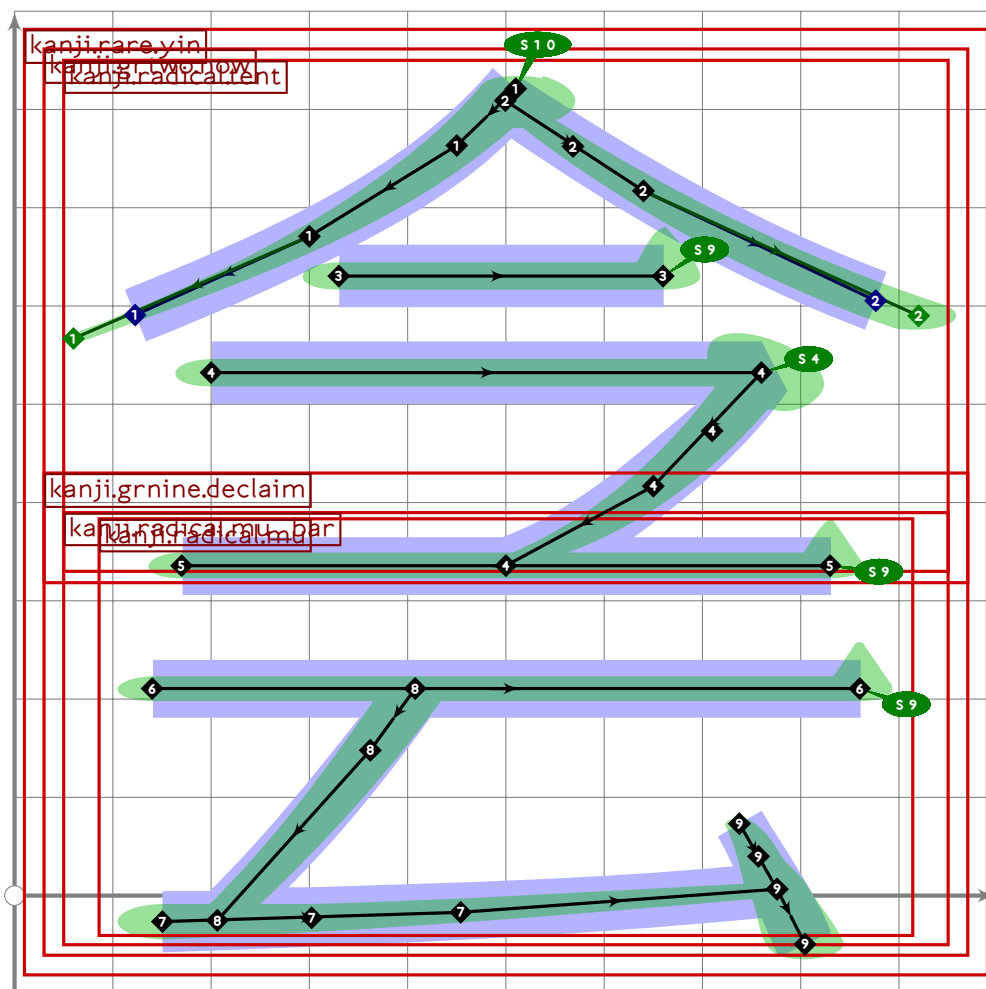


```

850
851 vardef kanji.rare.wisdom =
852   push_pbox_toexpand("kanji.rare.wisdom");
853   build_kanji.level(build_kanji.lr(500;10)
854     (kanji.grfour.vassal)
855     (build_kanji.sscale(yscaled 1.07 shifted (0;-5))(kanji.greight.otoh)));
856   expand_pbox;
857 enddef;

```

U+4F8C  
tsuku.uni4F8C

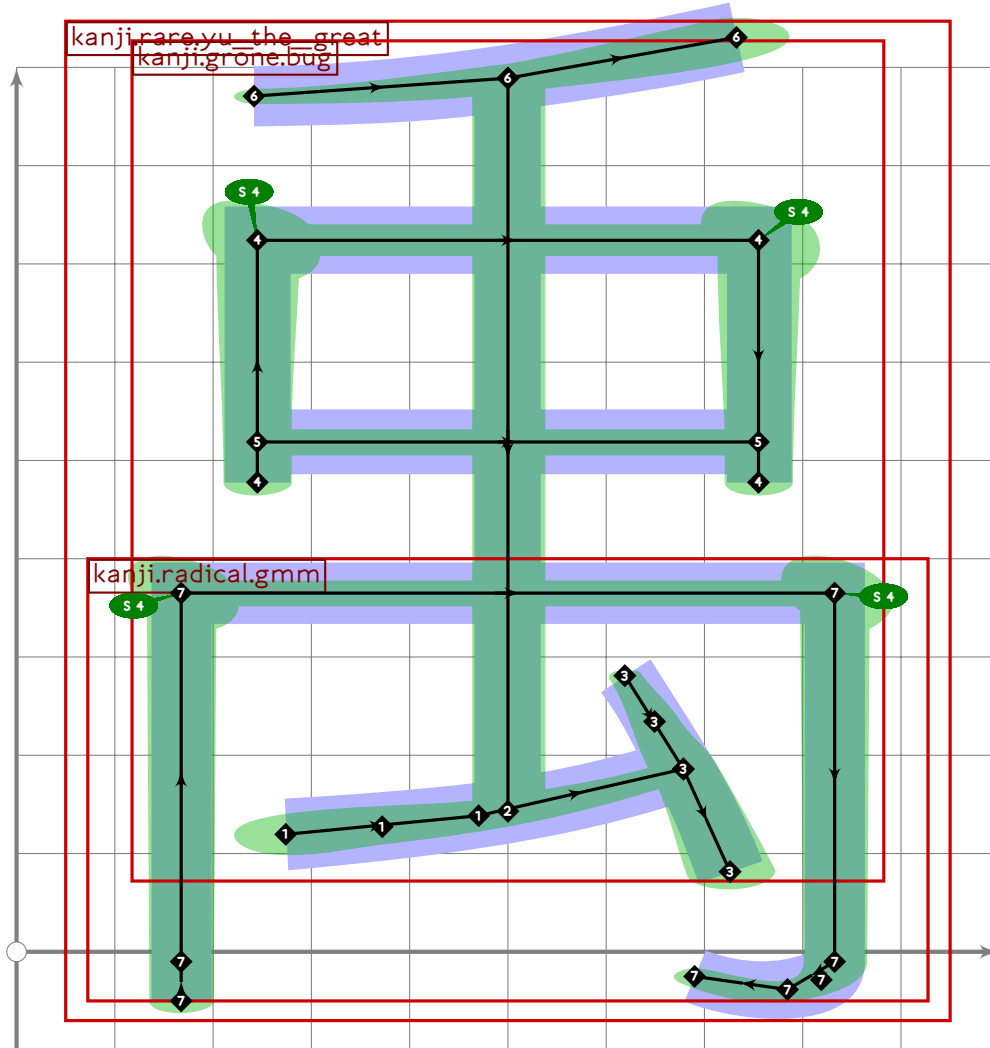


```

858
859 vardef kanji.rare.yin =
860   push_pbox_toexpand("kanji.rare.yin");
861   build_kanji.tb(380,100)
862   (kanji.grtwo.now)
863   (kanji.grnine.declaim);
864   expand_pbox;
865 enddef;

```

RARE



```

866
867 vardef kanji.rare.yu_the_great =
868   push_pbox_toexpand("kanji.rare.yu_the_great");
869   build_kanji.sscale(xyscaled (0.85,0.95) shifted (0,100))
870     (build_kanji.add_beret(kanji.grone.bug));
871   replace_stroke(-5)(oldp shifted (-500,0) xscaled 0.7 shifted (500,0));
872   replace_stroke(-3)(oldp shifted (-500,0) xscaled 0.7 shifted (500,0));
873   replace_stroke(-2)(oldp shifted (0,-500) yscaled 0.8 shifted (0,580));
874   replace_stroke(-1)(oldp shifted (0,-500) yscaled 0.8 shifted (0,580));
875   build_kanji.sscale(xyscaled (0.95,0.50) shifted (0,220))
876     (kanji.radical.gmm);
877   expand_pbox;
878 enddef;

```