

作りましょう 0.8

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 0.8

Parametric Font Family
Proofs and pretty-printed
source code

Matthew Skala

mskala@ansuz.sooke.bc.ca

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Proofs and pretty-printed source code for Tsukurimashou
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Volume III

Other shared kanji

bottomrad.mp

BOTT

leftrad.mp

LEFT

radical.mp

RADI

righttrad.mp

RIGH

toprad.mp

TOPR

gradeeight.mp

EIGH

gradenine.mp

NINE

rare.mp

RARE

bottomrad.mp

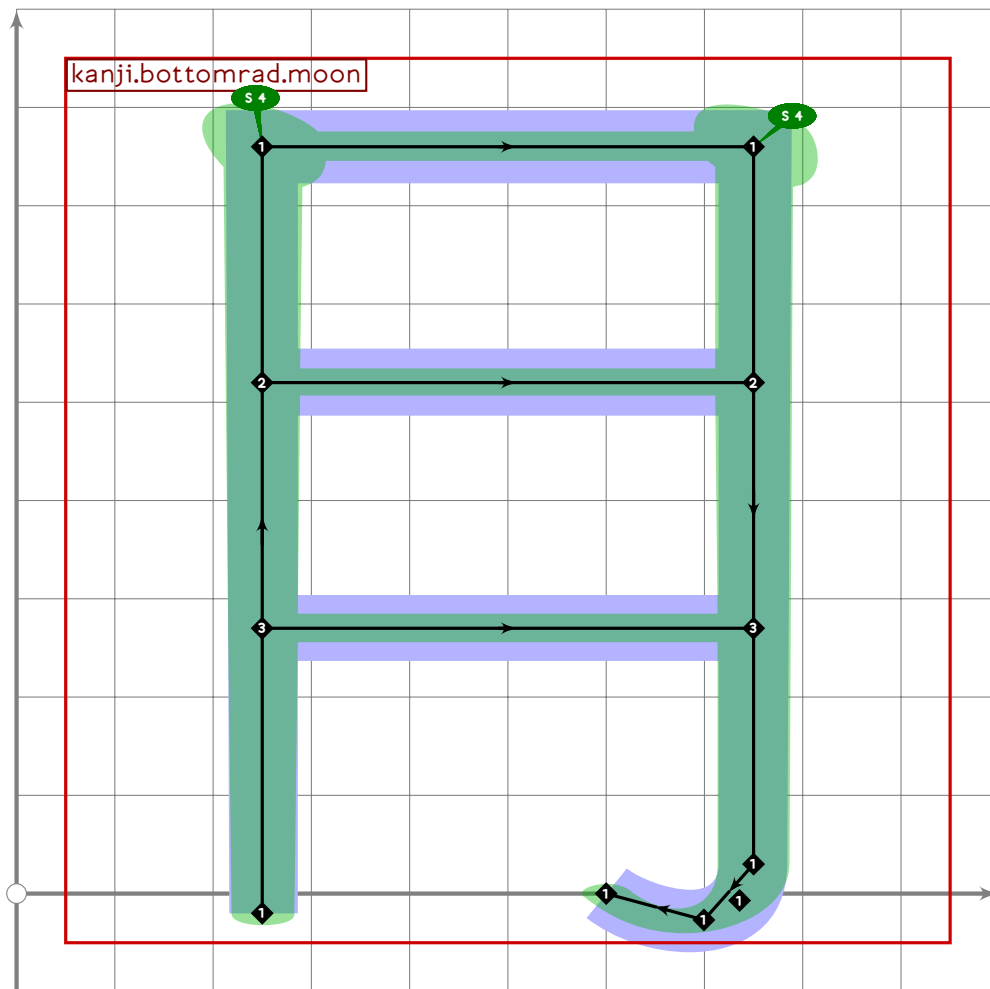
BOTT

```
1 %
2 % Radicals for bottom (often special forms of other radicals)
3 % Copyright (C) 2011, 2012, 2013 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.long_kimono =
82    push_pbox_toexpand("kanji.bottomrad.long_kimono");
83    build_kanji.box((210,760),(790,540));
84    push_stroke((440,540)..tension 1.2..(330,300)..(110,80),
85      (1.6,1.6)–(1.4,1.4)–(1,1));
86    push_stroke((500,540)–(500,-20),(1.6,1.6)–(1.5,1.5));
87    push_stroke((500,380)..tension 1.2..(710,220)..(800,100),
88      (0.9,0.9)–(1.5,1.5)–(1.9,1.9));
89    push_stroke(
90      (810,410)..tension 1.2..(750,340)..(point 0.8 of get_stroke(0)),
91      (1.7,1.7)–(1.2,1.2)–(0.9,0.9));
92    expand_pbox;
93  enddef;

```

```

94
95 vardef kanji.bottomrad.moon =
96   push_pbox_toexpand("kanji.bottomrad.moon");
97   push_stroke((250,-20)..{up}(250,760)-(750,760),
98     (1.4,1.4)-(1.6,1.6)-(1.6,1.6));
99   build_kanji.add_jtail(0);
100   set_botip(0,1,1);
101   set_botip(0,2,1);
102   set_boserif(0,1,4);
103   set_boserif(0,2,4);
104   push_stroke((250,520)-(750,520),
105     (1.5,1.5)-(1.5,1.5));
106   push_stroke((250,270)-(750,270),
107     (1.5,1.5)-(1.5,1.5));
108   expand_pbox;
109 enddef;

```

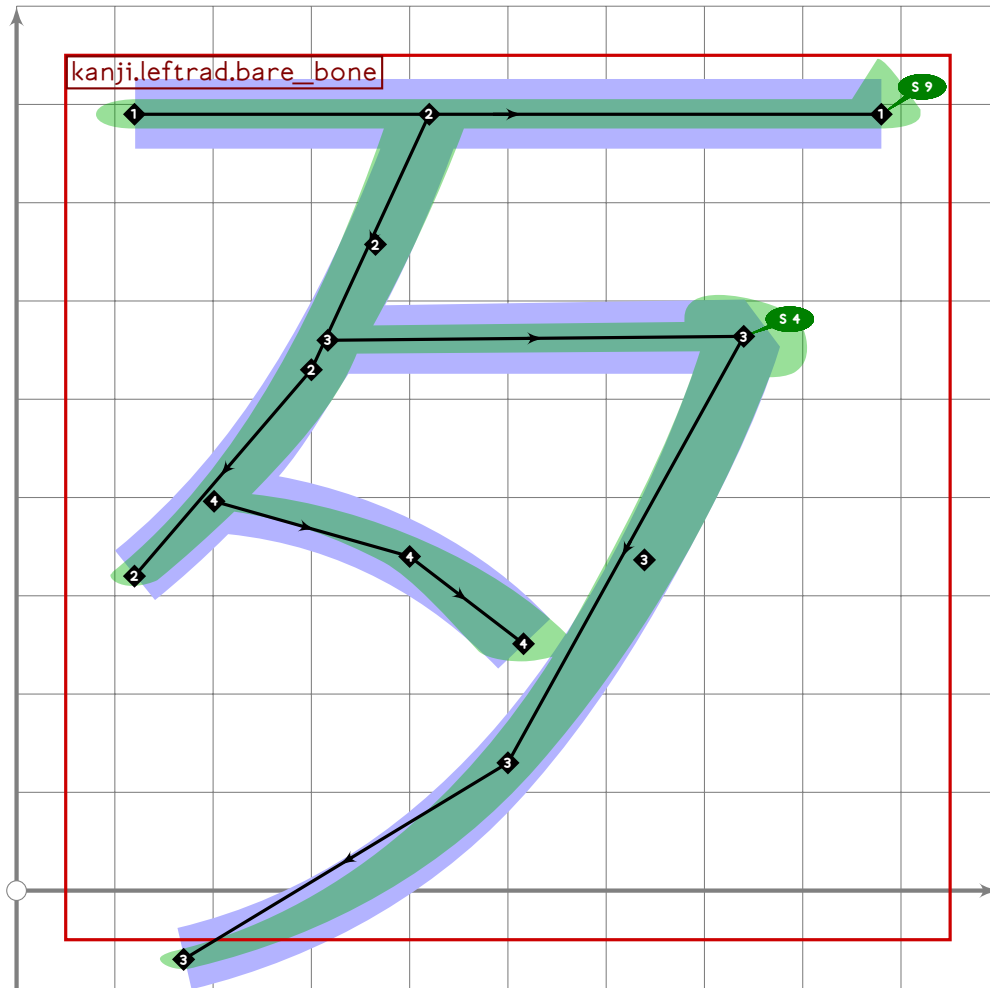
leftrad.mp

LEFT

```
1 %
2 % Radicals for left side (often special forms of other radicals)
3 % Copyright (C) 2011, 2012, 2013 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;
```



LEFT

```

45
46 vardef kanji.leftrad.bare_bone =
47   push_pbox_toexpand("kanji.leftrad.bare_bone");
48   push_stroke((120,790)-(880,790),(1.6,1.6)-(1.6,1.6));
49   set_boserif(0,1,9);
50   push_stroke((420,790)..tension 1.2..(300,530)..(120,320),
51     (1.6,1.6)-(1.5,1.5)-(1.2,1.2));
52   push_stroke(
53     (get_stroke(0) intersectionpoint ((-infinity,560)-(infinity,560)))-
54     (740,564)..tension 1.2..(500,130)..(170,70),
55     (1.5,1.5)-(1.6,1.6)-(1.4,1.4)-(1.2,1.2));
56   set_botip(0,1,0);
57   set_boserif(0,1,4);
58   push_stroke(
59     (point 1.6 of get_stroke(-1))..(400,340)..(point 1.8 of get_stroke(0)),
60     (1.2,1.2)-(1.4,1.4)-(1.8,1.8));
61   replace_stroke(0)(subpath (0,1,7) of oldp);
62   expand_pbox;
63 enddef;
64
65 vardef kanji.leftrad.big =

```

```

66  push_pbox_toexpand("kanji.grone.big");
67  push_stroke((90,500)-(910,500),
68    (1.6,1.6)-(1.6,1.6));
69  set_boserif(0,1,9);
70  push_stroke((510,780){down}..(370,200)..{curl 0.5}(50,-20),
71    (1.6,1.6)-(1.4,1.4)-(1.1,1.1));
72  push_stroke(((60,-60)+point 0.6 of get_strokep(0))..tension 1.1..
73    (750,190)..(860,0),
74    (0.9,1)-(1.3,1.3)-(1.8,1.8));
75  expand_pbox;
76  enddef;
77
78  vardef kanji.leftrad.boat =
79    push_pbox_toexpand("kanji.leftrad.boat");
80    push_stroke((560,850)..tension 1.2..(500,750)..(450,700),
81      (1.6,1.6)-(1.4,1.4)-(1.2,1.2));
82    set_boserif(0,0,10);
83    push_stroke(
84      (150,0)..(260,200)..{dir 89.5}(300,700)-(730,700),
85      (1.5,1.5)-(1.6,1.6)-(1.7,1.7)-(1.7,1.7));
86    build_kanji.add_jtail(0);
87    set_botip(0,2,1);
88    set_botip(0,3,0);
89    set_boserif(0,2,4);
90    set_boserif(0,3,4);
91    push_stroke((410,610)..tension 1.2..(520,540)..(560,480),
92      (1.1,1.1)-(1.4,1.4)-(1.7,1.7));
93    set_bosize(0,9,0);
94    push_stroke((110,350)..tension 1.2..(500,380)..(890,440),
95      (1.6,1.6)-(1.5,1.5)-(1.1,1.1));
96    push_stroke((500,300)-(500,100),
97      (1.6,1.6)-(1.4,1.4));
98    set_boserif(0,0,10);
99    set_bosize(0,9,0);
100   expand_pbox;
101   enddef;
102
103  vardef kanji.leftrad.clothes =
104    push_pbox_toexpand("kanji.leftrad.clothes");
105    kanji.leftrad.showing;
106    push_stroke((830,400)..tension 1.2..(750,320)..(650,300),
107      (1.6,1.6)-(1.4,1.4)-(1,1));
108    set_boserif(0,0,10);
109    expand_pbox;
110   enddef;
111
112  vardef kanji.leftrad.day =
113    push_pbox_toexpand("kanji.leftrad.day");

```

```

114 tsu_xform(identity shifted (0,-600) yscaled 0.62 shifted (0,600))
115   (kanji.grone.day);
116   expand_pbox;
117 enddef;
118
119 vardef kanji.leftrad.earth =
120   push_pbox_toexpand("kanji.leftrad.earth");
121   build_kanji.sscale(yscaled 0.9)
122     (build_kanji.lift_skirt(370,150+30*mincho)(kanji.grone.earth));
123   expand_pbox;
124 enddef;
125
126 vardef kanji.leftrad.eat =
127   push_pbox_toexpand("kanji.leftrad.eat");
128   kanji.grtwo.eat;
129   pop_stroke;
130   replace_strokep(-6)(subpath(0,1,75) of oldp);
131   replace_strokep(-1)
132     ((130,20)..tension 1.2..(point 0 of get_strokep(-4))..(720,80));
133   replace_strokep(0)((650,170)..tension 1.3..(720,80)..(770,-20));
134   replace_strokeq(0)((1,1)-(1.5,1.5)-(1.8,1.8));
135   expand_pbox;
136 enddef;
137
138 vardef kanji.leftrad.fire =
139   push_pbox_toexpand("kanji.leftrad.fire");
140   kanji.grone.person;
141   pop_stroke;
142   push_stroke((510,270)..tension 1.2..(750,180)..(900,60),
143     (0,0,9)-(1.3,1.3)-(1.8,1.8));
144   push_stroke((360,600)..(270,480)..(140,360),
145     (0,0,9)-(1.3,1.3)-(1.8,1.8));
146   push_stroke((860,640)..(790,550)..(680,440),
147     (1.6,1.6)-(1.4,1.4)-(1.2,1.2));
148   expand_pbox;
149 enddef;
150
151 vardef kanji.leftrad.foot =
152   push_pbox_toexpand("kanji.leftrad.foot");
153   build_kanji.box((210,730),(790,460));
154   push_stroke((500,460)-(500,40),(1.6,1.6)-(1.5,1.5));
155   push_stroke((500,250)-(850,250),(1.5,1.5)-(1.6,1.6));
156   set_boserif(0,1,9);
157   push_stroke((220,310)-(220,20),(1.6,1.6)-(1.5,1.5));
158   set_boserif(0,0,10);
159   push_stroke((100,0)..tension 1.2..(500,40)..(900,100),
160     (1.7,1.7)-(1.5,1.5)-(1,1));
161   expand_pbox;

```

LEFT

```

162 enddef;
163
164 vardef kanji.leftrad.gold =
165   push_pbox_toexpand("kanji.leftrad.gold");
166   build_kanji.lift_skirt(250,120)(kanji.grone.gold);
167   replace_stroke(-6)(subpath (0,1,7) of oldp);
168   expand_pbox;
169 enddef;
170
171 vardef kanji.leftrad.hand =
172   push_pbox_toexpand("kanji.leftrad.hand");
173   build_kanji.sscale(xscaled 1.5)
174     (push_stroke((500,810),(1,6,1,6));
175     build_kanji.add_jtail(0);
176     set_boserif(0,0,10));
177   push_stroke((100,580)-(900,580),(1,6,1,6)-(1,6,1,6));
178   set_boserif(0,1,9);
179   push_stroke((120,280)..tension 1.2..(500,330)..(910,420),
180     (1,8,1,8)-(1,5,1,5)-(1,1,1,1));
181   expand_pbox;
182 enddef;
183
184 vardef kanji.leftrad.heap_big =
185   push_pbox_toexpand("kanji.leftrad.heap_big");
186   build_kanji.sscale(scaled 0.88)
187     (kanji.grthree.heap_big;
188     replace_stroke(0)(get_stroke(-6));
189     replace_stroke(0)
190       (get_stroke(-1) shifted ((point 1 of oldp)-(point 0 of oldp))
191       shifted (-500,0) xscaled 1.1 shifted (500,0));
192     replace_stroke(0)(reverse get_stroke(-1));
193     set_boserif(0,1,whatever));
194   expand_pbox;
195 enddef;
196
197 vardef kanji.leftrad.heart =
198   push_pbox_toexpand("kanji.leftrad.heart");
199   kanji.radical.vline;
200   push_stroke((320,630)..tension 1.2..(210,470)..(60,380),
201     (1,1)-(1,4,1,4)-(1,7,1,7));
202   push_stroke((660,660)..tension 1.2..(840,530)..(890,470),
203     (1,1)-(1,5,1,5)-(1,8,1,8));
204   expand_pbox;
205 enddef;
206
207 vardef kanji.leftrad.husband =
208   push_pbox_toexpand("kanji.leftrad.husband");
209   kanji.grfour.husband;

```

```

210 pop_stroke;
211 push_stroke(((get_stroke(-1) intersectionpoint get_stroke(0))+(0,-40))..
212   (720,170)..(870,30),
213   (1,1,1)-(14,14)-(17,17));
214 expand_pbox;
215 enddef;
216
217 vardef kanji.leftrad.ice =
218   push_pbox_toexpand("kanji.leftrad.ice");
219   push_stroke((450,790)..tension 1.2..(600,730)..(750,650),
220     (1,1)-(1.3,1.3)-(1.9,1.9));
221   push_stroke(
222     interpath(mincho,
223       (880,350)..(810,270)..(750,210)..(600,90)..(450,0),
224       (880,480)..tension 1.2..(630,300)..{dir 180}(360,240){dir 350}..
225       (500,130)..{curl 0}(550,20)),
226     interpath(mincho,
227       (14,14)-(145,145)-(1.5,1.5)-(1.6,1.6)-(1.7,1.7),
228       (0.8,0.8)-(1.2,1.2)-(2.1,2.1)-(1.2,1.2)-(1.9,1.9)));
229   expand_pbox;
230 enddef;
231
232 vardef kanji.leftrad.king =
233   push_pbox_toexpand("kanji.leftrad.king");
234   build_kanji.sscale(yscaled 0.9)
235     (build_kanji.lift_skirt(370,150+30*mincho)(kanji.grone.king));
236   expand_pbox;
237 enddef;
238
239 vardef kanji.leftrad.long_hair =
240   push_pbox_toexpand("kanji.leftrad.long_hair");
241   build_kanji.level(
242     kanji.grtwo.long;
243     pop_stroke;pop_stroke;pop_stroke;
244     replace_stroke(-3)((300,320)-(300,770)-(800,770));
245     build_kanji.sscale(xyscaled (0.9,0.38) shifted (0,-240))
246     (kanji.radical.mu));
247   expand_pbox;
248 enddef;
249
250 vardef kanji.leftrad.mouth =
251   push_pbox_toexpand("kanji.leftrad.mouth");
252   build_kanji.box((200,700),(800,230));
253   replace_stroke(-1)((subpath (0,2) of oldp)-((0,40)+point 3 of oldp));
254   expand_pbox;
255 enddef;
256
257 vardef kanji.leftrad.person =

```

```

258 push_pbox_toexpand("kanji.leftrad.person");
259 push_stroke((900,800)..(500,520)..(0,330),
260   (1,6,1,6)-(1,4,1,4)-(0,8,0,8));
261 set_bosize(0,115);
262 set_boserif(0,0,10);
263 push_stroke(
264   (point 0.7 of get_strokep(0))..(xpart point 0.7 of get_strokep(0),-40),
265   (1,6,1,6)-(1,4,1,4));
266 set_bosize(0,115);
267 expand_pbox;
268 enddef;
269
270 vardef kanji.leftrad.request =
271   push_pbox_toexpand("kanji.leftrad.request");
272   kanji.grfour.request;
273   replace_strokep(-2)(oldp shifted (-750,-400) scaled 0.5 shifted (760,470));
274   replace_strokep(-3)((610,370)..tension 1.2..(730,270)..(850,110));
275   expand_pbox;
276 enddef;
277
278 vardef kanji.leftrad.rice =
279   push_pbox_toexpand("kanji.leftrad.rice");
280   build_kanji.level(build_kanji.tb(540,220)
281     (build_kanji.spread_legs(-200)(kanji.toprad.sparkle_two))
282     (build_kanji.lift_skirt(450,60)(kanji.leftrad.wood)));
283   replace_strokep(-3)((500,820)-(500,30));
284   replace_strokeq(-3)((1,6,1,6)-(1,4,1,4));
285   expand_pbox;
286 enddef;
287
288 vardef kanji.leftrad.sentence =
289   push_pbox_toexpand("kanji.leftrad.sentence");
290   build_kanji.level(build_kanji.tb(580,30)
291     (kanji.radical.kettle_lid)
292     (kanji.radical.cut_the_grass;
293       replace_strokep(-1)(oldp shifted (0,-400) yscaled 0.7 shifted (0,400))));
294   expand_pbox;
295 enddef;
296
297 vardef kanji.leftrad.seal =
298   push_pbox_toexpand("kanji.leftrad.seal");
299   push_stroke((770,810)..tension 1.2..(550,740)..(250,700),
300     (1,8,1,8)-(1,5,1,5)-(1,1));
301   push_stroke((250,730)-(250,0),
302     (1,6,1,6)-(1,5,1,5));
303   set_boserif(0,0,10);
304   push_stroke((250,440)-(800,440),(1,55,1,55)-(1,55,1,55));
305   set_boserif(0,1,9);

```

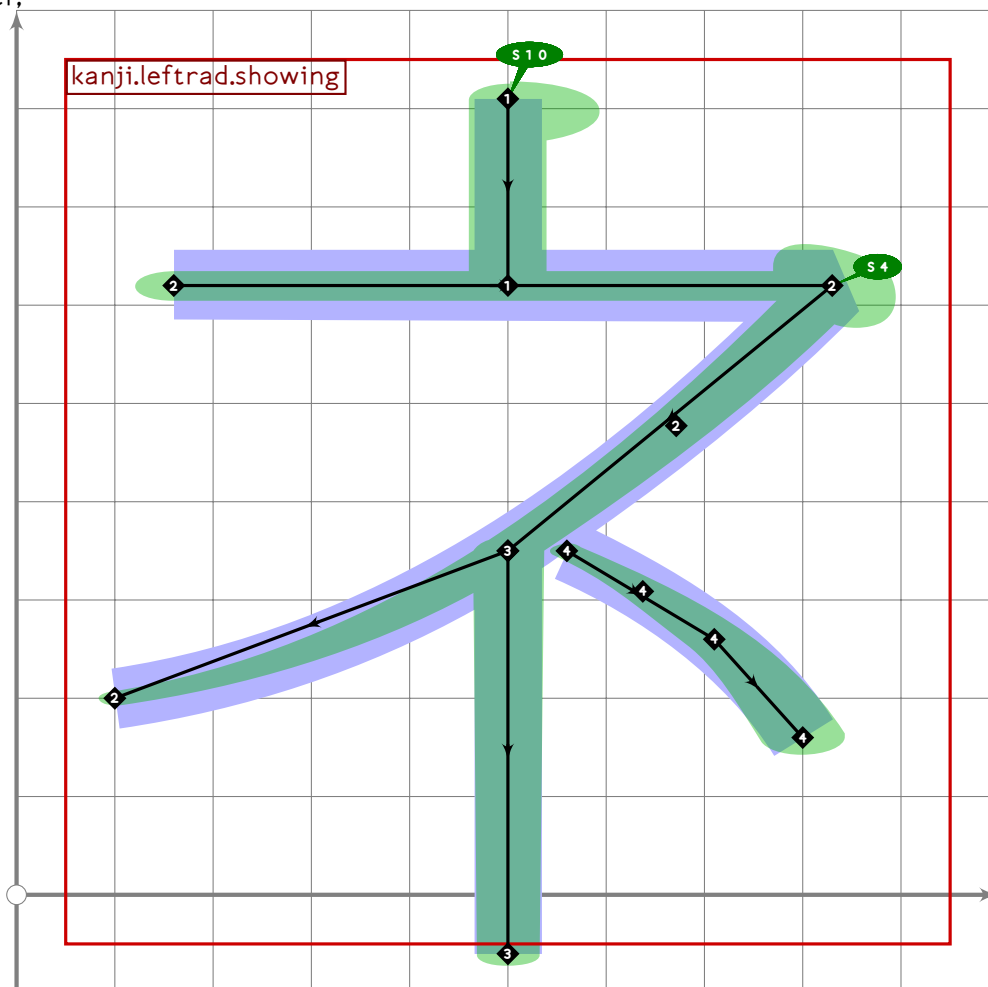


```

306 push_stroke((250,80)-(800,80),(1.5,1.5)-(1.5,1.5));
307 set_boserif(0,1,9);
308 expand_pbox;
309 enddef;
310
311 vardef kanji.leftrad.seven =
312   push_pbox_toexpand("kanji.leftrad.seven");
313   build_kanji.sscale(shifted (0,300) yscaled 0.7 shifted (0,300))
314     (kanji.grone.seven);
315   set_boserif(-1,3,whatever);
316   expand_pbox;
317 enddef;

```

LEFT



```

318
319 vardef kanji.leftrad.showing =
320   push_pbox_toexpand("kanji.leftrad.showing");
321   push_stroke((500,810)-(500,620),(1.6,1.6)-(1.571,1.57));
322   set_boserif(0,0,10);
323   push_stroke((160,620)-(830,620)..tension 1.2..
324     (500,350)..(100,200),
325     (1.6,1.6)-(1.6,1.6)-(1.4,1.4)-(1,1));
326   set_botip(0,1,0);

```

```

327 set_boserif(0,1,4);
328 push_stroke((500,350)-(500,-60),(1.5,1.5)-(1,1,4));
329 push_stroke((560,350)..tension 1.2..(710,260)..(800,160),
330   (1,1)-(1,1,4)-(1,7,1.7));
331 expand_pbox;
332 enddef;
333
334 vardef kanji.leftrad.two_branch_tree =
335   push_pbox_toexpand("kanji.leftrad.two_branch_tree");
336   tsu_xform(identity shifted (0,-50))
337   (build_kanji.add_beret(kanji.leftrad.wood));
338   expand_pbox;
339 enddef;
340
341 vardef kanji.leftrad.water =
342   push_pbox_toexpand("kanji.leftrad.water");
343   kanji.leftrad.ice;
344   push_stroke((230,590)..tension 1.2..(390,530)..(540,450),
345     (1,1)-(1,3,1.3)-(1,9,1.9));
346   expand_pbox;
347 enddef;
348
349 vardef kanji.leftrad.woman =
350   push_pbox_toexpand("kanji.leftrad.woman");
351   perl_structure:=perl_structure&"eids.softhead.u5973";
352   push_stroke((100,580)-(800,580){curl 0}..(550,170)..{curl 0.3}(80,-40),
353     (1,6,1.6)-(1,6,1.6)-(1,1,4)-(0,9,4,0.94));
354   set_botip(0,1,0);
355   set_boserif(0,1,4);
356   push_stroke((450,830)..(310,510)..(140,220),
357     (1,6,1.6)-(1,6,1.6)-(1,6,1.6));
358   set_boserif(0,0,10);
359   push_stroke((point 1.75 of get_stroke(0))..(530,200)..(840,60),
360     (0.85,0.85)-(1.5,1.5)-(1.8,1.8)-(1,6,1.6));
361   replace_stroke(0)(insert_nodes(oldp)(1.5));
362   expand_pbox;
363 enddef;
364
365 vardef kanji.leftrad.wood =
366   push_pbox_toexpand("kanji.leftrad.wood");
367   perl_structure:=perl_structure&"eids.softhead.u6728";
368   push_stroke((500,780)-(500,0),
369     (1,6,1.6)-(1,6,1.6));
370   set_boserif(0,0,10);
371   push_stroke((100,580)-(830,580),
372     (1,6,1.6)-(1,6,1.6));
373   set_boserif(0,1,9);
374   push_stroke((500,580)..(250,200)..(80,70),

```

```
375     (1,6,1,6)..(1,3,1,3)..(0,9,0,9));
376   push_stroke((500,470)..(680,320)..(800,210),
377     (1,1,1,1)..(1,5,1,5)..(1,7,1,7));
378   expand_pbox;
379 enddef;
```

LEFT

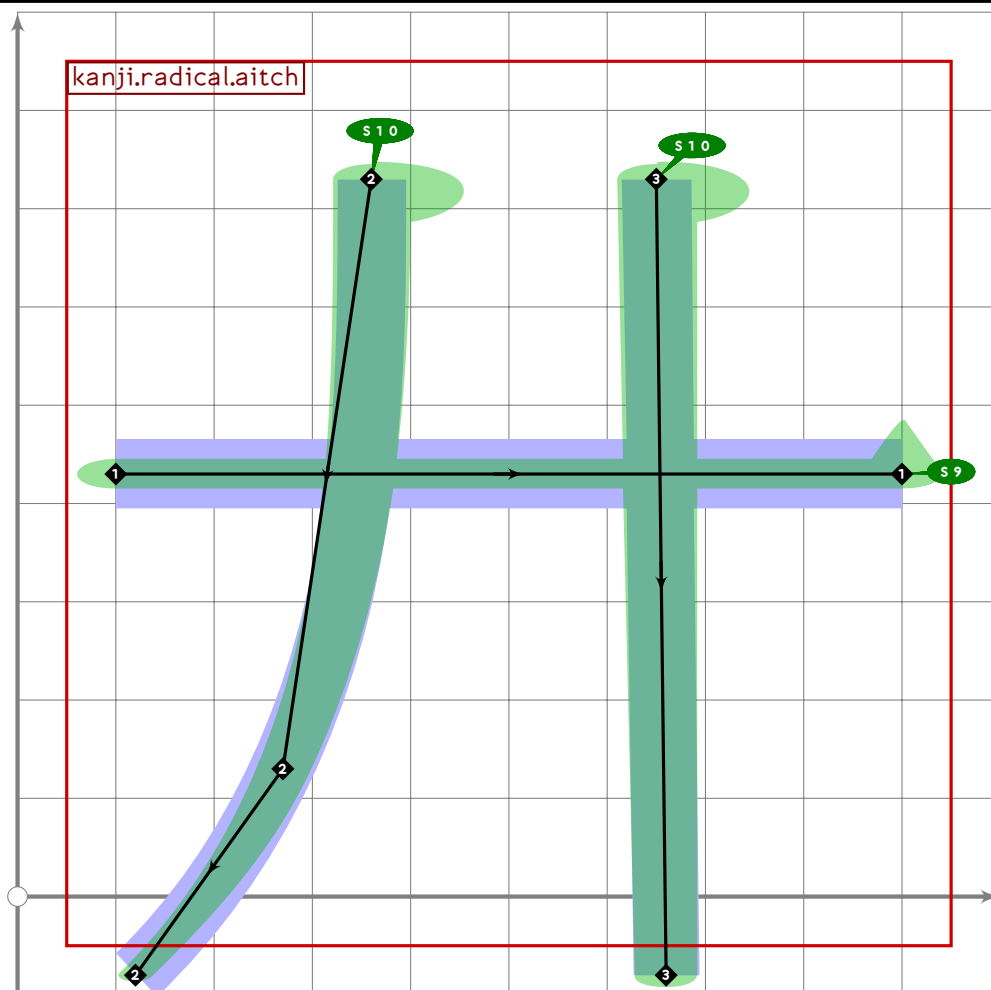
radical.mp

```

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

```

RADI

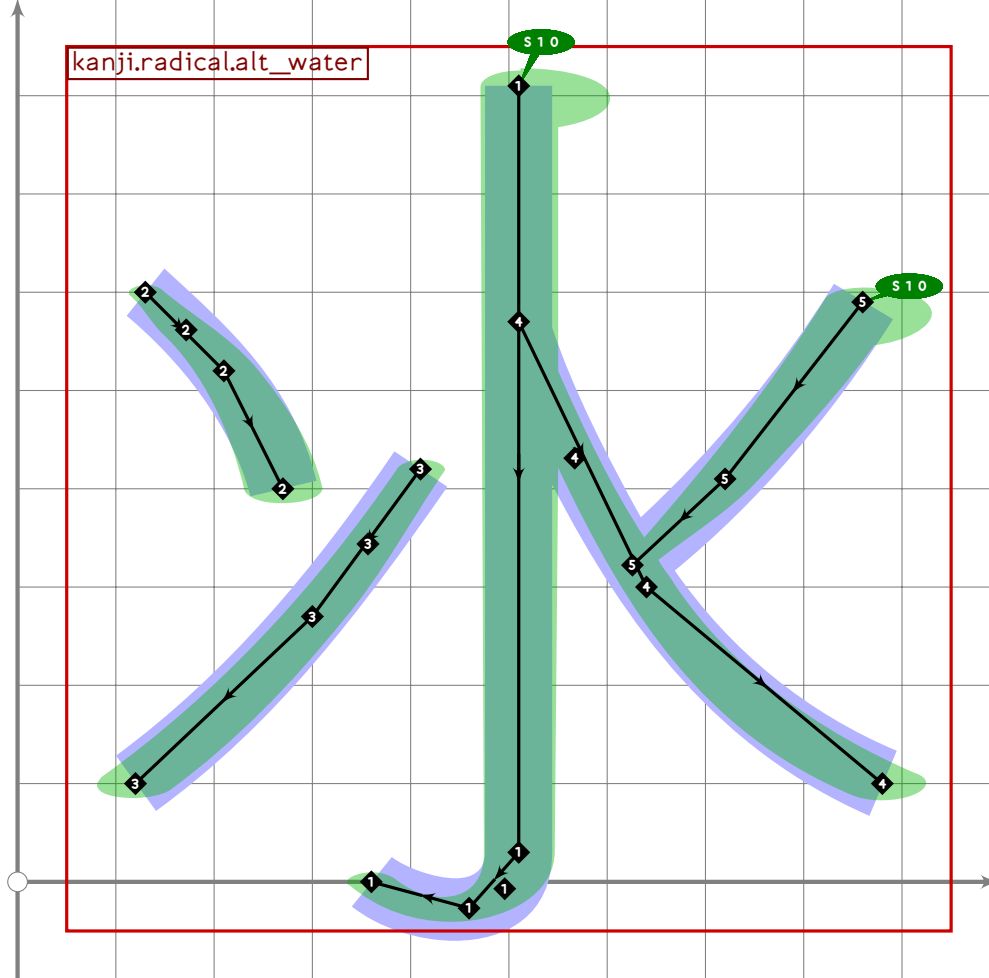


```

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);

```

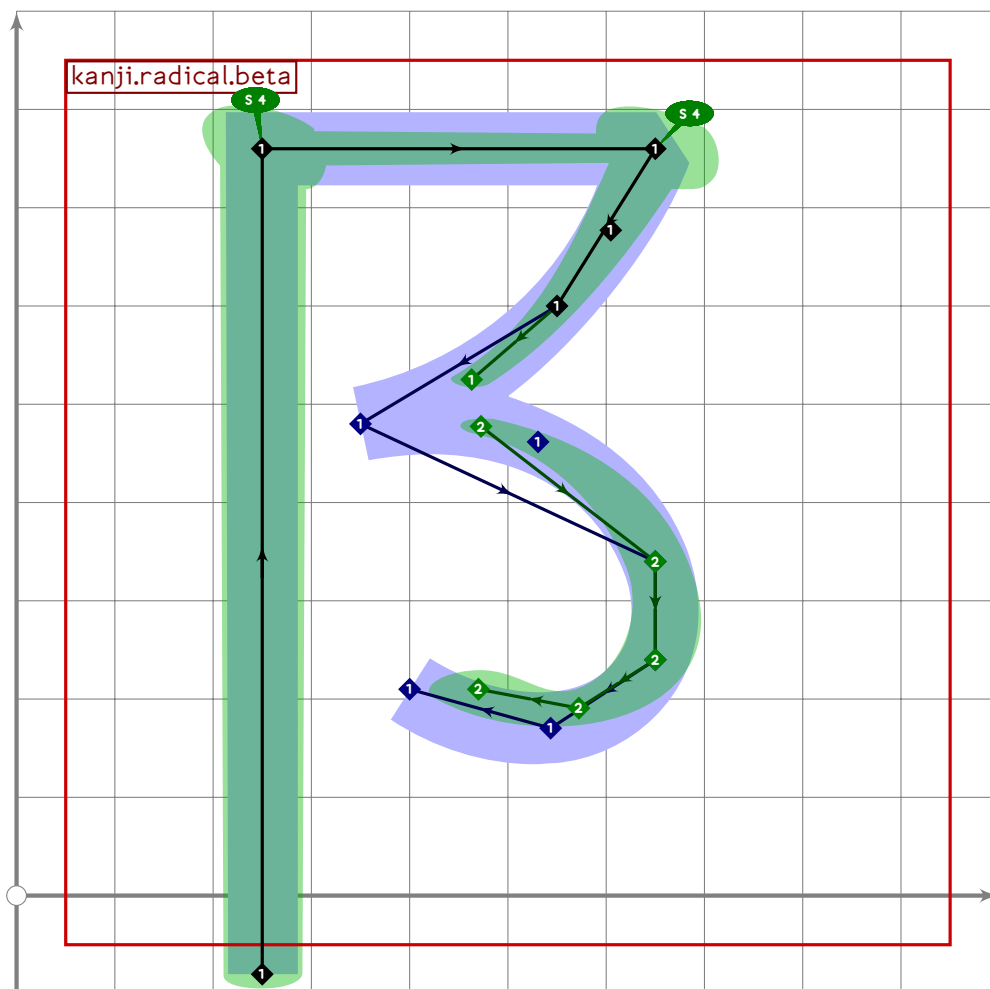
```
44 expand_pbox;
45 enddef;
```



RADI

```
46
47 vardef kanji.radical.alt_water =
48   push_pbox_toexpand("kanji.radical.alt_water");
49   push_stroke((510,810),(1,6,1,6));
50   build_kanji.add_jtail(0);
51   set_boserif(0,0,10);
52   push_stroke((130,600)..tension 1.2..(210,520)..(270,400),
53     (1,1)-(14,14)-(1,6,1,6));
54   push_stroke((410,420)..tension 1.2..(300,270)..(120,100),
55     (1,2,1,2)-(14,14)-(1,6,1,6));
56   push_stroke((510,570)..tension 1.2..(640,300)..(880,100),
57     (1,1)-(1,3,1,3)-(1,7,1,7));
58   push_stroke((860,590)..(720,410)..(point 0.9 of get_stroke(0)),
59     (1,6,1,6)-(14,14)-(1,1));
60   set_boserif(0,0,10);
61   expand_pbox;
62 enddef;
```

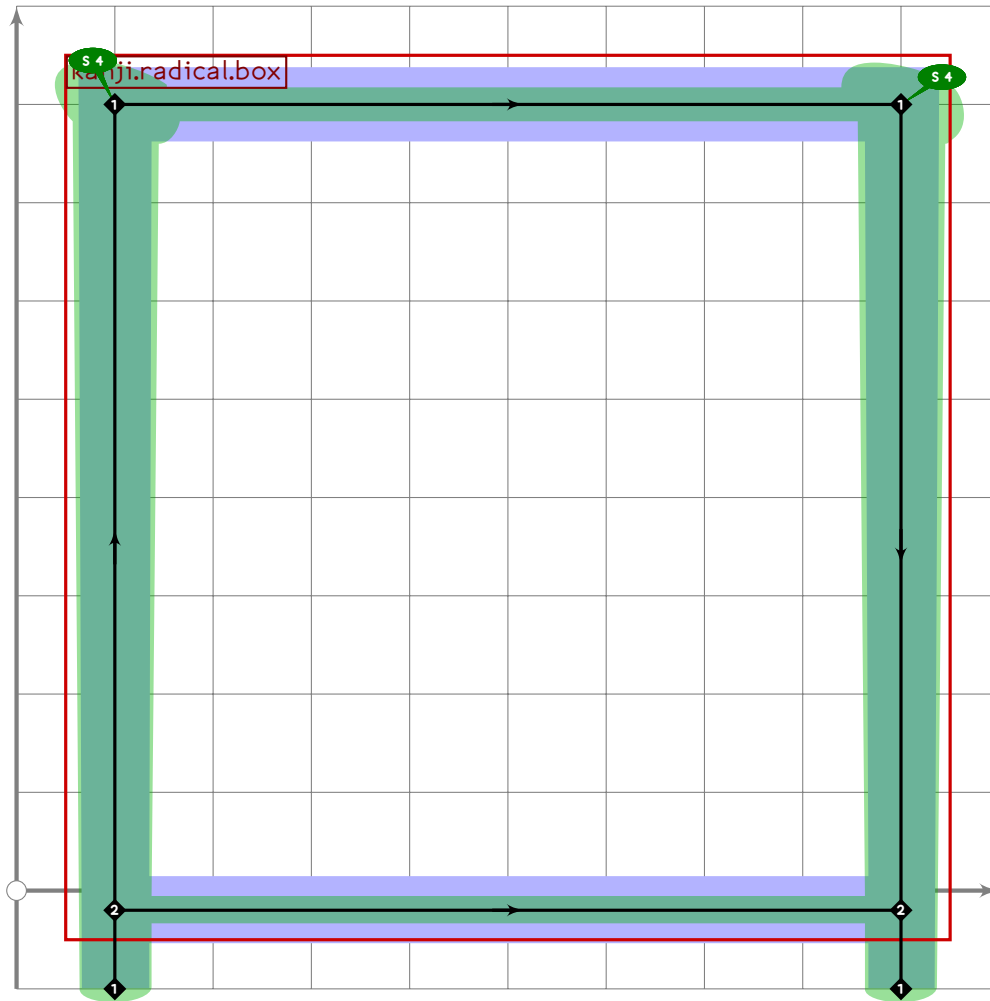
RADI



```

63
64 vardef kanji.radical.beta =
65   push_pbox_toexpand("kanji.radical.beta");
66   push_stroke((250,-80)-(250,760)-(650,760)..tension 1.2..
67     (550,600)..{curl 1}(350,480){curl 0.5}..
68     (650,340)..(650,240)..{curl 0.3}(400+70*mincho,210),
69     (1.6,1.6)-(1.7,1.7)-(1.6,1.6)-
70     (1.1,1.3)-(0.55,1.4)-
71     (1.4,1.4)-(1.6,1.6)-(1.8,1.8)-(1.9,1.9));
72   set_botip(0,1,1);
73   set_botip(0,2,0);
74   set_botip(0,4,1);
75   set_boserif(0,1,4);
76   set_boserif(0,2,4);
77   replace_strokep(0)(insert_nodes(oldp)(6.5));
78   expand_pbox;
79 enddef;

```



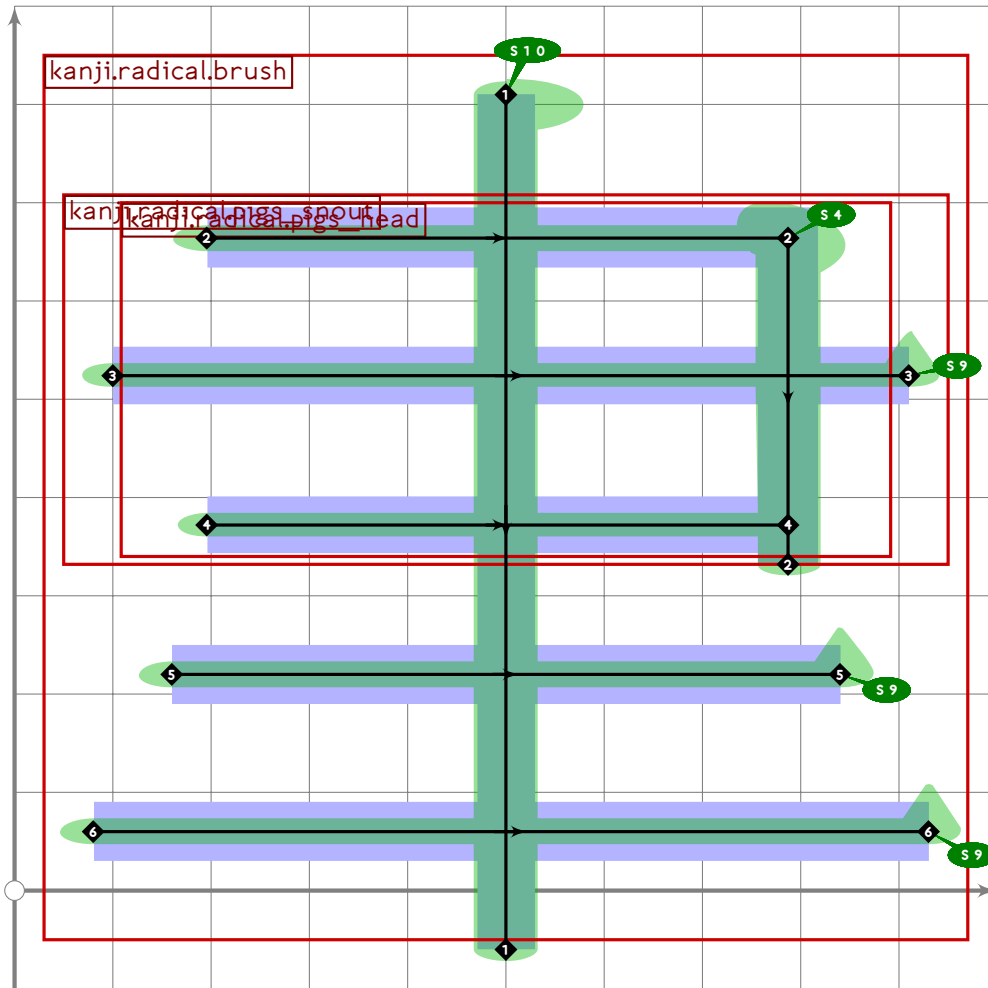
RADI

```

80
81 vardef kanji.radical.box =
82   perl_structure:=perl_structure&"eids.u2FF4.u56D7.1_";
83   push_pbox_toexpand("kanji.radical.box");
84   build_kanji.box((100,800),(900,-20));
85   expand_pbox;
86 enddef;

```

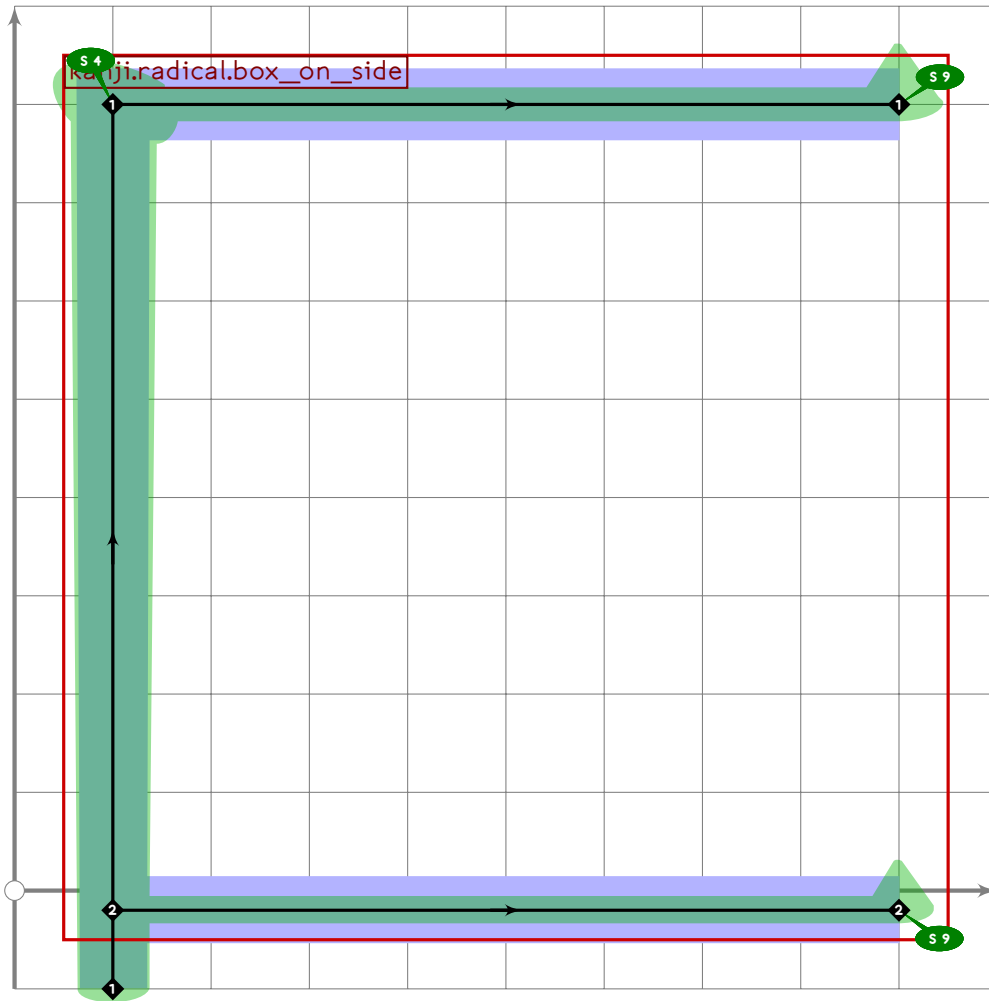
RADI



```

87
88 vardef kanji.radical.brush =
89   push_pbox_toexpand("kanji.radical.brush");
90   push_stroke((500,810)-(500,-60),(1.6,1.6)-(1.5,1.5));
91   set_boserif(0,0,10);
92   tsu_xform(identity yscaled 0.4 shifted (0,360))
93     (kanji.radical.pigs_snout);
94   push_stroke((160,220)-(840,220),
95     (1.6,1.6)-(1.6,1.6));
96   set_boserif(0,1,9);
97   push_stroke((80,60)-(930,60),
98     (1.6,1.6)-(1.6,1.6));
99   set_boserif(0,1,9);
100   for i=-5 upto 0: set_bosize(i,85); endfor;
101   expand_pbox;
102 enddef;

```

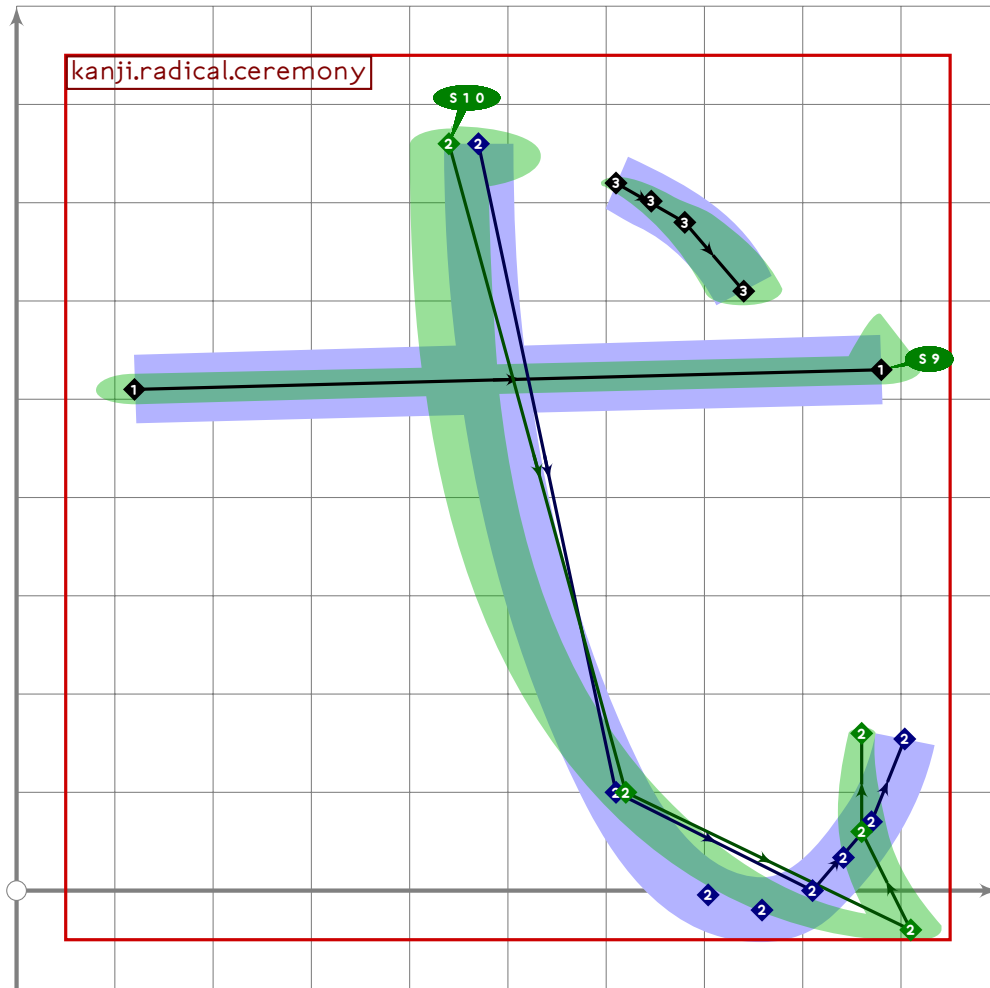
RADI

```

103
104 vardef kanji.radical.box_on_side =
105   push_pbox_toexpand("kanji.radical.box_on_side");
106   build_kanji.box((100,800),(900,20));
107   replace_strokep(-1)(subpath (0,2) of oldp);
108   replace_strokeq(-1)(subpath (0,2) of oldq);
109   set_boserif(-1,2,9);
110   set_botip(-1,2,whatever);
111   set_boserif(0,1,9);
112   expand_pbox;
113 enddef;

```

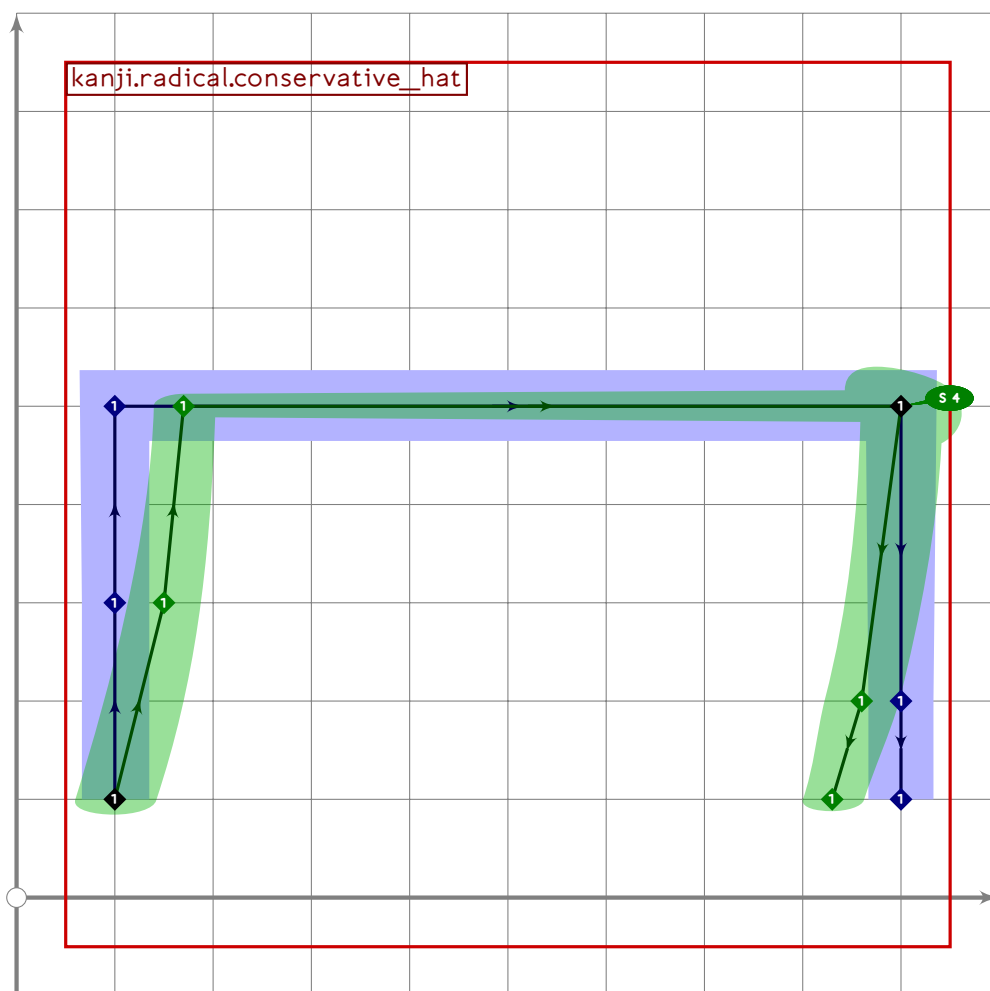
RADI



```

114
115 vardef kanji.radical.ceremony =
116   push_pbox__toexpand("kanji.radical.ceremony");
117   push_stroke((120,510)–(880,530),(1.6,1.6)–(1.6,1.6));
118   set_bosertif(0,1,9);
119   push_stroke(interpather(mincho,
120     (470,760){down}..(610,100)..(810,0)..tension 1.5..
121     (870,70)..{curl 0.3}(910,200),
122     (440,760){down}..(620,100)..{right}(910,-40){curl 1}..
123     (860,60)..(860,160)),
124     (1.6,1.6)–(1.4,1.4)–(1.4,1.4)–(1.2,1.2)–(0.9,0.9));
125   set_bosertif(0,0,10);
126   push_stroke((610,720)..tension 1.2..(680,680)..(740,610),
127     (1,1)..(1.5,1.5)–(1.7,1.7));
128   set_bosize(0,90);
129   expand_pbox;
130 enddef;

```



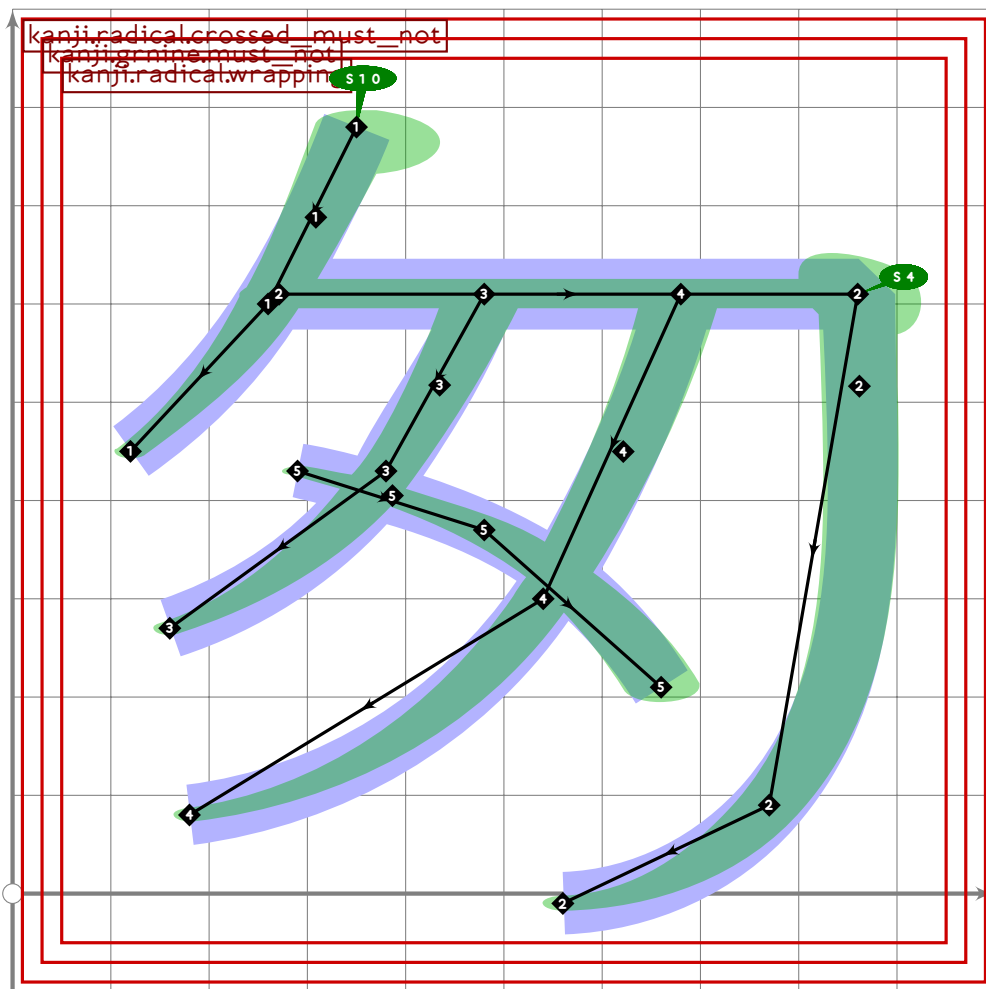
RADI

```

131
132 vardef kanji.radical.conservative_hat =
133   push_pbox_toexpand("kanji.radical.conservative_hat");
134   push_stroke((100,100)..(100+50*mincho,300)..(100+70*mincho,500)-
135     (900,500)..(900-40*mincho,200)..(900-70*mincho,100),
136     (1,7,1,7)-(1,6,1,6)-(1,4,1,4)-(1,7,1,7)-(1,6,1,6)-(1,4,1,4));
137   set_bosize(0,95);
138   set_botip(0,2,1);
139   set_botip(0,3,1);
140   set_boserif(0,3,4);
141   expand_pbox;
142 enddef;

```

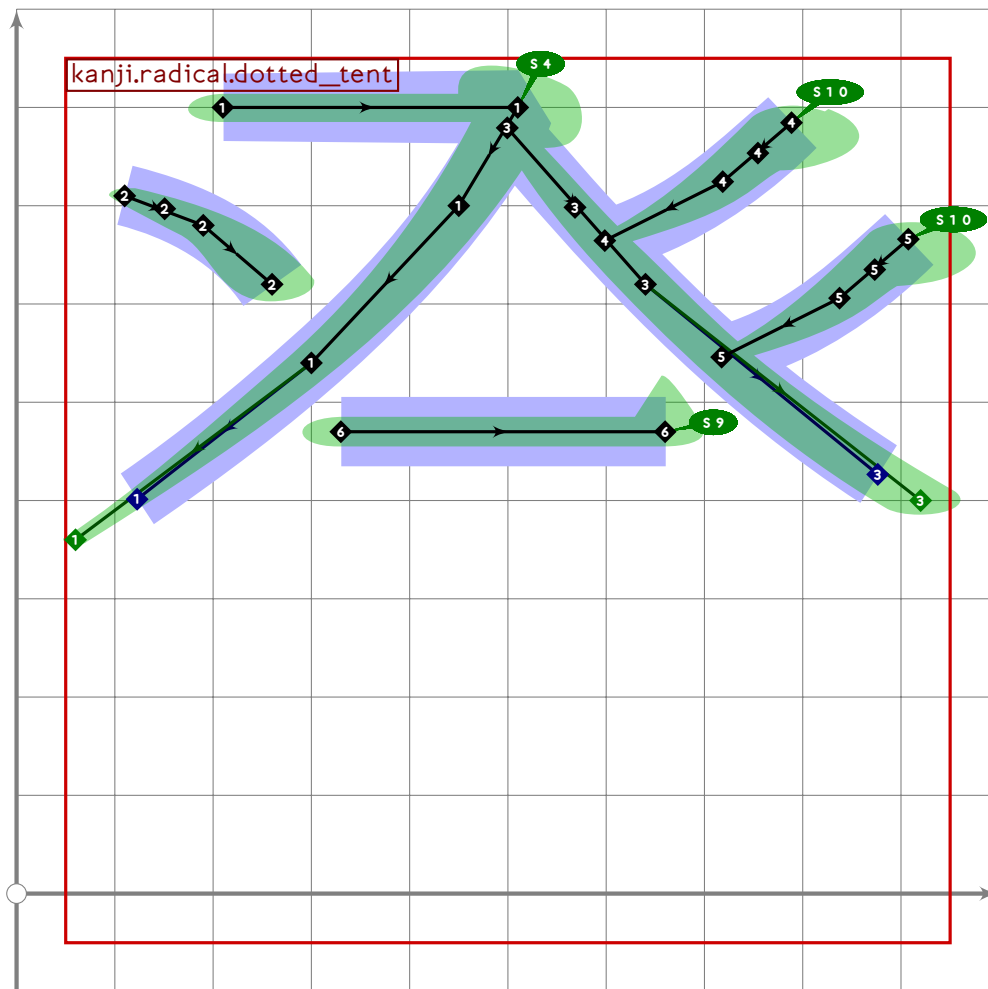
RADI



```

143
144 vardef kanji.radical.crossed_must_not =
145   push_pbox_toexpand("kanji.radical.crossed_must_not");
146   kanji.grnine.must_not;
147   push_stroke((290,430)..tension 1.2..(480,370)..(660,210),
148     (1,1)–(14,14)–(17,17));
149   set_bosize(0,90);
150   expand_pbox;
151 enddef;
152
153 vardef kanji.radical.cut_the_grass =
154   push_pbox_toexpand("kanji.radical.cut_the_grass");
155   push_stroke((150,750)..(500,500)..(850,50),
156     (1,3)–(1.5,1.5)–(1.7,1.7));
157   push_stroke((700,800)..(500,330)..(70,30),
158     (1,6)–(1.5,1.5)–(1,1));
159   set_boserif(0,0,10);
160   expand_pbox;
161 enddef;

```



RADI

```

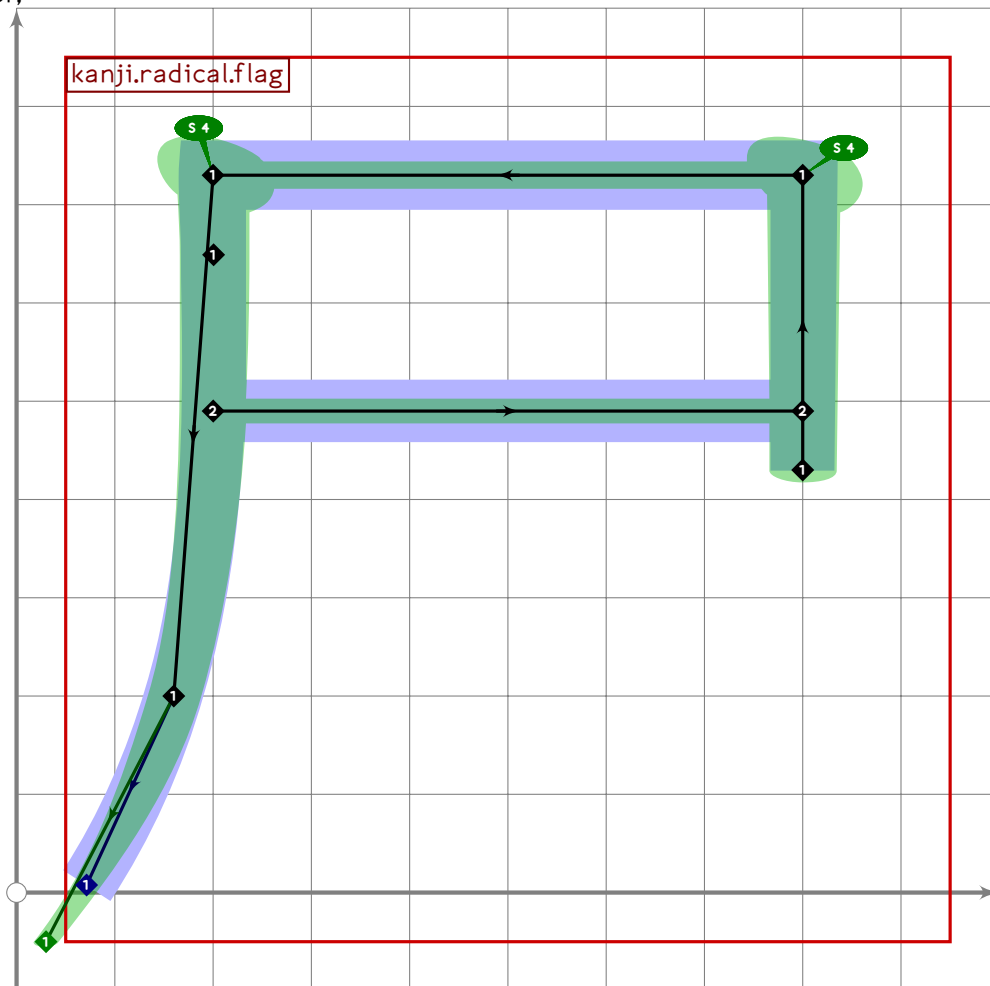
162
163 vardef kanji.radical.dotted_tent =
164   perl_structure:=perl_structure&"eids.u2FF1.u7676.1_";
165   push_pbox_toexpand("kanji.radical.dotted_tent");
166   push_stroke((210,800)-(510,800)..(450,700)..(300,540)..(60,360),
167     (1,5,1,5)-(1,6,1,6)-(1,5,1,5)-(1,3,1,3)-(0,85,0,9));
168   set_boserif(0,1,4);
169   set_botip(0,1,0);
170   push_stroke((110,710)..tension 1.2..(190,680)..(260,620),
171     (1,1)-(1,4,1,4)-(1,7,1,7));
172   push_stroke(
173     (point 1.2 of get_stroke(-1))..tension 1.2..(640,620)..(920,400),
174     (1,1)-(1,3,1,3)-(2,25,0,95));
175   push_stroke(((190,120)..tension 1.2..(120,60)..(0,0))
176     shifted (point 0.7 of get_stroke(0)),
177     (1,7,1,7)-(1,5,1,5)-(1,1));
178   set_boserif(0,0,10);
179   push_stroke(((190,120)..tension 1.2..(120,60)..(0,0))
180     shifted (point 1.3 of get_stroke(-1)),
181     (1,7,1,7)-(1,5,1,5)-(1,1));
182   set_boserif(0,0,10);

```

U+5C38
tsuku.uni5C38

```
183 push_stroke((330,470)-(660,470),(1.6,1.6)-(1.6,1.6));
184 set_boserif(0,1,9);
185 expand_pbox;
186 enddef;
187
188 vardef kanji.radical.eight =
189   push_pbox_toexpand("kanji.radical.eight");
190   push_stroke((610,760)..tension 1.3..(760,240)..(880,-10),
191     (1,1)-(14,14)-(18,1.8));
192   set_bosize(0,110);
193   push_stroke((350,740)..(280,360)..(160,80)..(40,-30),
194     (1.6,1.6)-(14,14)-(1.3,1.3)-(0.88,0.88));
195   set_bosize(0,110);
196   set_boserif(0,0,10);
197   expand_pbox;
198 enddef;
```

RADI

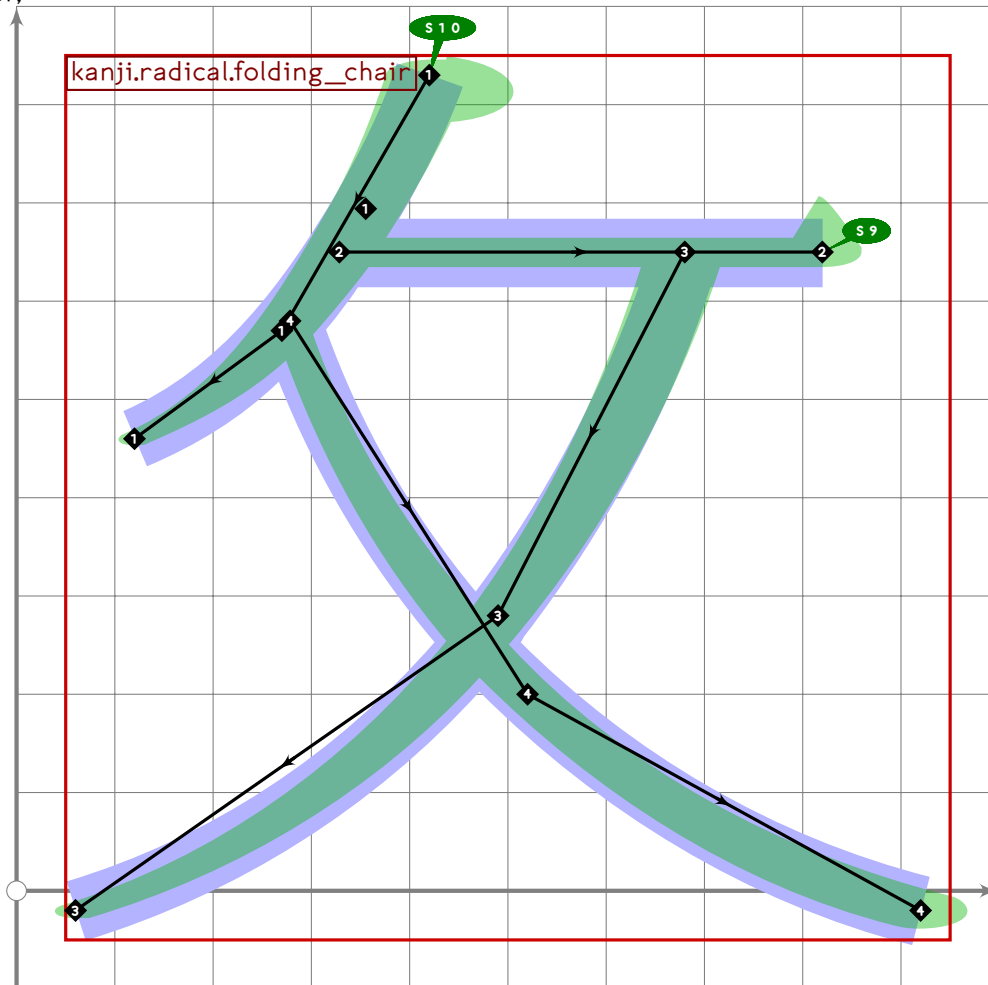


```
199
200 vardef kanji.radical.flag =
201   perl_structure:=perl_structure&"eids.u2FF8.u5C38.1_";
202   push_pbox_toexpand("kanji.radical.flag");
203   push_stroke((800,430)-(800,730)-(200,730){down}..(160,200)..(30,-50),
```

```

204 (1.5,1.5)-(1.6,1.6)-(1.6,1.6)-(1.3,1.3)-(0.9,0.9));
205 set_botip(0,1,1);
206 set_botip(0,2,1);
207 set_boserif(0,1,4);
208 set_boserif(0,2,4);
209 set_bosize(0,93);
210 push_stroke((((0,490)-(1000,490))
211 intersectionpoint reverse get_stroke(0))-(800,490),
212 (1.5,1.5)-(1.5,1.5));
213 set_bosize(0,93);
214 expand_pbox;
215 enddef;

```



RADI

```

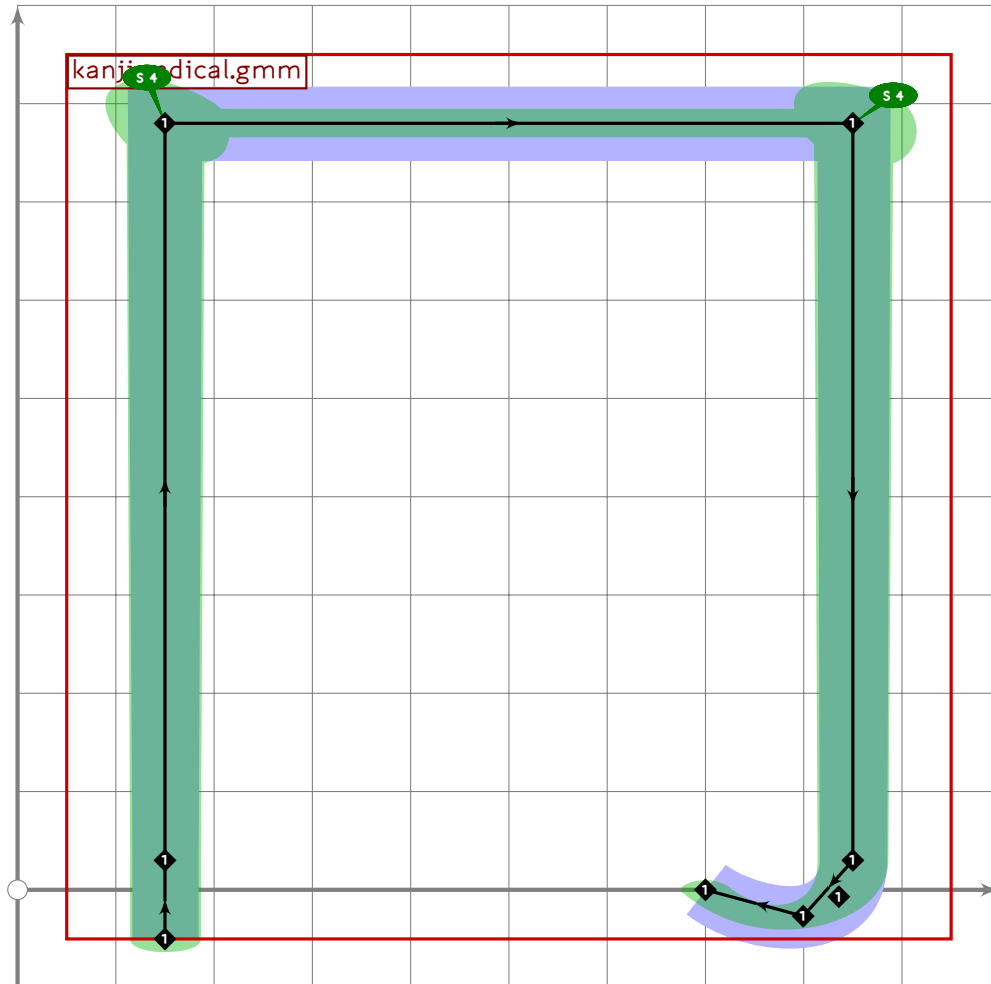
216
217 vardef kanji.radical.folding_chair =
218   push_pbox_toexpand("kanji.radical.folding_chair");
219   push_stroke((420,830)..tension 1.2..(270,570)..(120,460),
220     (1.7,1.7)-(1.4,1.4)-(1,1));
221   set_boserif(0,0,10);
222   push_stroke(
223     (get_stroke(0) intersectionpoint ((0,650)-(1000,650)))-(820,650),
224     (1.5,1.5)-(1.6,1.6));

```

U+5182
tsuku.uni5182

```
225 set_boserif(0,1,9);
226 push_stroke((680,650)..tension 1.1..(490,280)..(60,-20),
227   (1.6,1.6)-(1.4,1.4)-(1.1,1.1));
228 push_stroke((point 0.95 of get_stroke(-2))..(520,200)..(920,-20),
229   (1,1)-(1.3,1.3)-(1.8,1.8));
230 expand_pbox;
231 enddef;
232
```

RADI



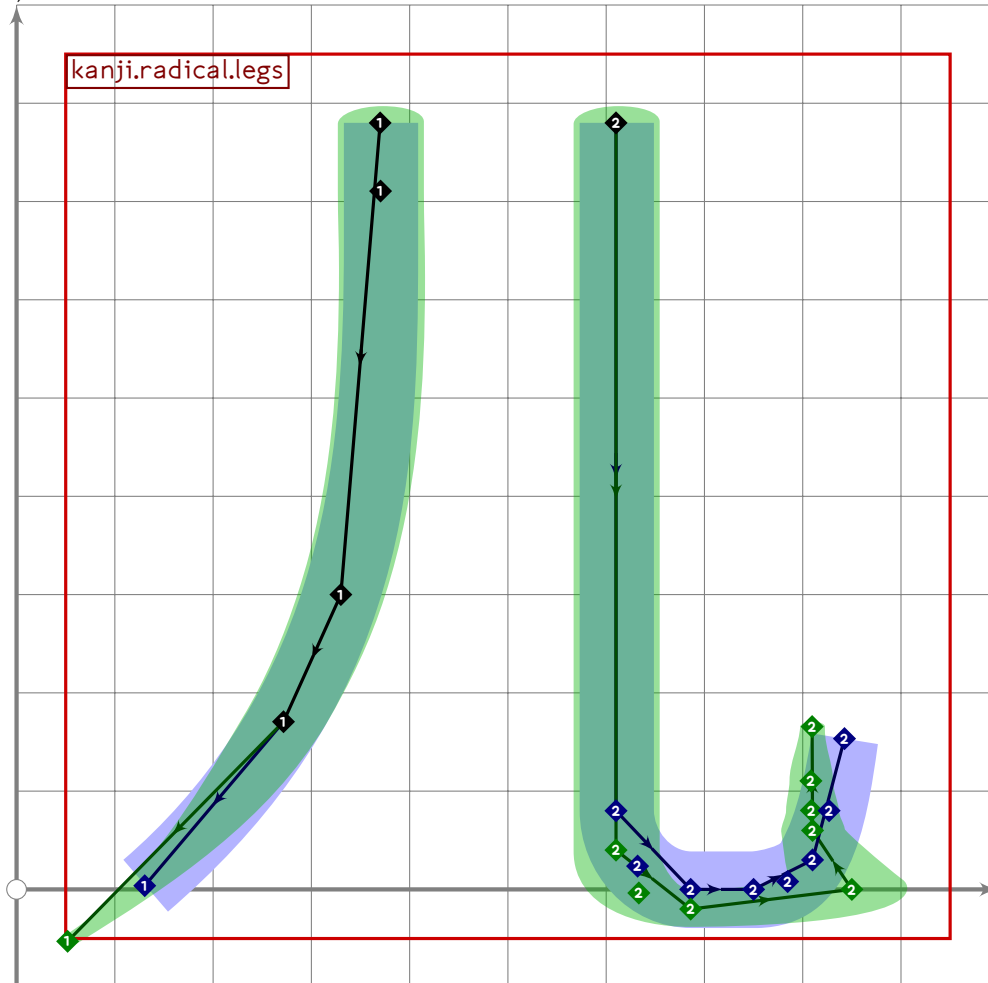
```
233 % "George Michael's Moustache" radical, according to Schultzzz
234 vardef kanji.radical.gmm =
235   push_pbox_toexpand("kanji.radical.gmm");
236   push_stroke((150,-50)-(150,30)-(150,780)-(850,780),
237     (1.5,1.5)-(1.5,1.5)-(1.6,1.6)-(1.6,1.6));
238   build_kanji.add_jtail(0);
239   set_botip(0,2,1);
240   set_botip(0,3,1);
241   set_boserif(0,2,4);
242   set_boserif(0,3,4);
243   expand_pbox;
244 enddef;
245
```



```

246 vardef kanji.radical.kettle_lid =
247   push_pbox_toexpand("kanji.radical.kettle_lid");
248   push_stroke((500,700)..(500,160),(1.6,1.6)-(1.5,1.5));
249   set_bosize(0,125);
250   set_boserif(0,0,10);
251   push_stroke((100,160)-(900,160),(1.7,1.7)-(1.7,1.7));
252   set_bosize(0,125);
253   set_boserif(0,1,9);
254   expand_pbox;
255 enddef;

```



```

256
257 vardef kanji.radical.legs =
258   push_pbox_toexpand("kanji.radical.legs");
259   push_stroke((370,780){down}..(330,300)..(40,-60),
260     (1.6,1.6)-(1.6,1.6)-(1.6,1.6)-(0.8,0.7));
261   replace_strokep(0)(insert_nodes(oldp)(1.3));
262   set_bosize(0,110);
263   push_stroke((610,780),
264     (1.6,1.6));
265   build_kanji.add_ltail(0);
266   set_bosize(0,110);

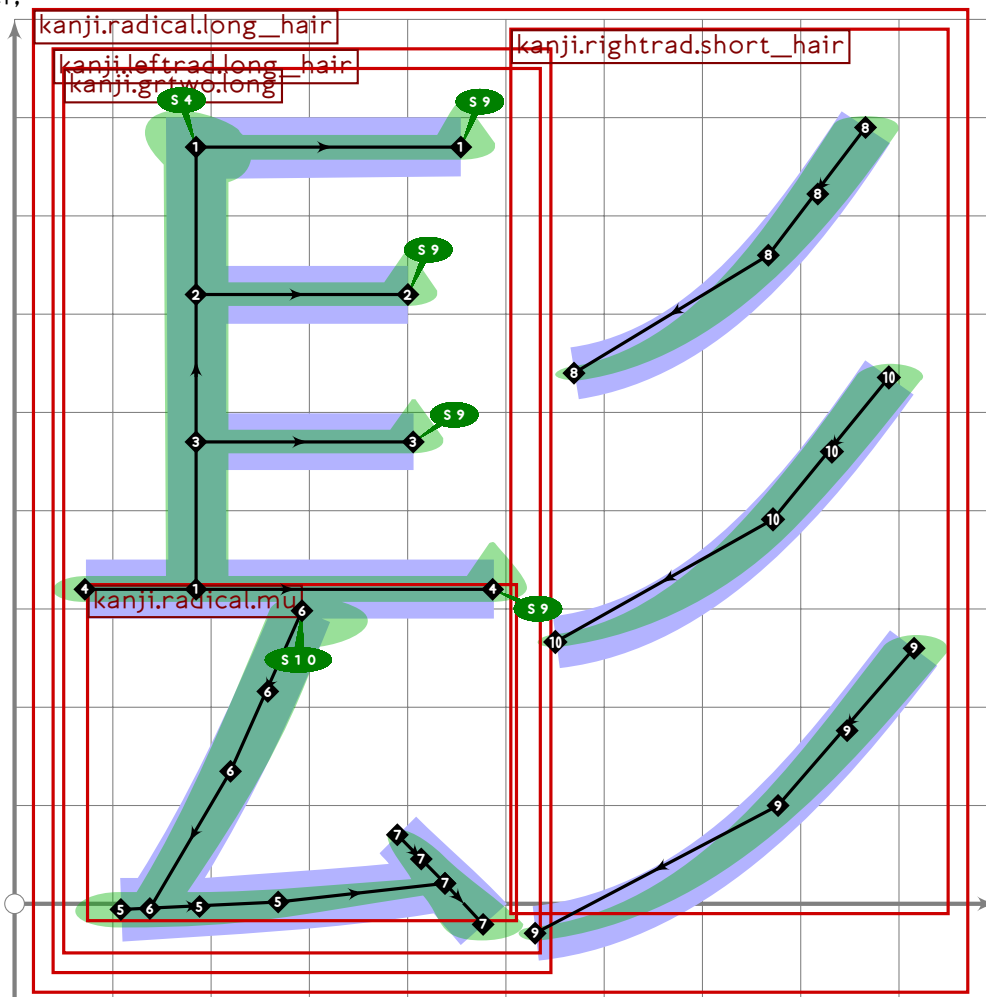
```

RADI

U+9ADF
tsuku.uni9ADF

RADI

```
267 expand_pbox;
268 enddef;
269
270 vardef kanji.radical.life_minus =
271   push_pbox_toexpand("kanji.radical.life_minus");
272   push_stroke((500,780)-(500,0),(1.6,1.6)-(1.6,1.6));
273   set_boserif(0,0,10);
274   push_stroke((280,700)..(220,360)..(140,120),
275     (1.6,1.6)-(1.2,1.2)-(0.8,0.8));
276   set_boserif(0,0,10);
277   push_stroke((point 0.9 of get_stroke(0))-
278     (820,ypart point 0.9 of get_stroke(0)),
279     (1.6,1.6)-(1.6,1.6));
280   set_boserif(0,1,9);
281   push_stroke((120,0)-(880,0),(1.6,1.6)-(1.6,1.6));
282   set_boserif(0,1,9);
283   expand_pbox;
284 enddef;
```



```
285
286 vardef kanji.radical.long_hair =
287   push_pbox_toexpand("kanji.radical.long_hair");
```

```

288 build_kanji.level(build_kanji.lr(520,30)
289   (kanji.leftrad.long_hair)
290   (tsu_xform(identity shifted (0,40))
291     (kanji.rightrad.short_hair)));
292 expand_pbox;
293 enddef;
294
295 vardef kanji.radical.long_kimono =
296   push_pbox_toexpand("kanji.radical.long_kimono");
297   build_kanji.level(build_kanji.tb(600,-50)
298     (kanji.grone.earth)
299     (kanji.bottomrad.long_kimono));
300   expand_pbox;
301 enddef;
302
303 vardef kanji.radical.moon_flag =
304   push_pbox_toexpand("kanji.radical.moon_flag");
305   push_stroke((800,300)–(800,730)–(200,730){down}..(160,200)..(30,-50),
306     (1.5,1.5)–(1.6,1.6)–(1.6,1.6)–(1.3,1.3)–(0.9,0.9));
307   set_botip(0,1,1);
308   set_botip(0,2,1);
309   set_boserif(0,1,4);
310   set_boserif(0,2,4);
311   set_bosize(0,93);
312   push_stroke((((0,550)–(1000,550))
313     intersectionpoint reverse get_strokep(0))–(800,550),
314     (1.5,1.5)–(1.5,1.5));
315   set_bosize(0,94);
316   push_stroke((((0,350)–(1000,350))
317     intersectionpoint reverse get_strokep(-1))–(800,350),
318     (1.5,1.5)–(1.5,1.5));
319   set_bosize(0,97);
320   expand_pbox;
321 enddef;
322
323 vardef kanji.radical.mother =
324   push_pbox_toexpand("kanji.radical.mother");
325   push_stroke(
326     (150,0)..(240,390)..tension 1.2..(280,750)–
327     (750,750)..(720,390)..tension 1.2..(630,-20){dir 250}..{curl 0.2}{480,-50},
328     (1.5,1.5)–(1.6,1.6)–(1.7,1.7)–(1.7,1.7)–(1.6,1.6)–(1.5,1.5));
329   replace_strokep(0)(insert_nodes(oldp)((length oldp)–0.5));
330   replace_strokeq(0)(oldq–(1.4,1.4)–(1.2,1.2));
331   set_botip(0,2,1);
332   set_botip(0,3,0);
333   set_boserif(0,2,4);
334   set_boserif(0,3,4);
335   push_stroke((110,440)–(890,440),(1.5,1.5)–(1.5,1.5));

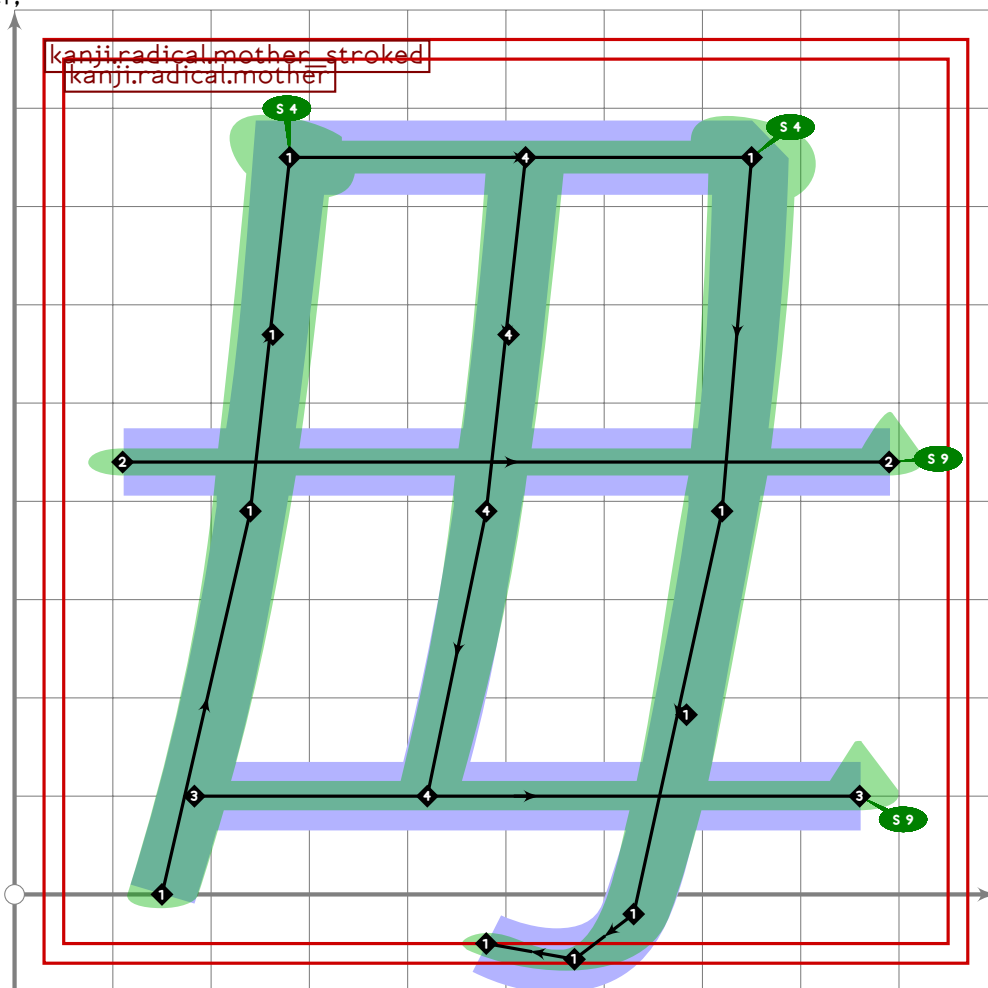
```

U+6BCB
tsuku.uni6BCB

```

336 set_boserif(0,1,9);
337 push_stroke((183,100)-(860,100),(1.6,1.6)-(1.6,1.6));
338 set_boserif(0,1,9);
339 expand_pbox;
340 enddef;

```

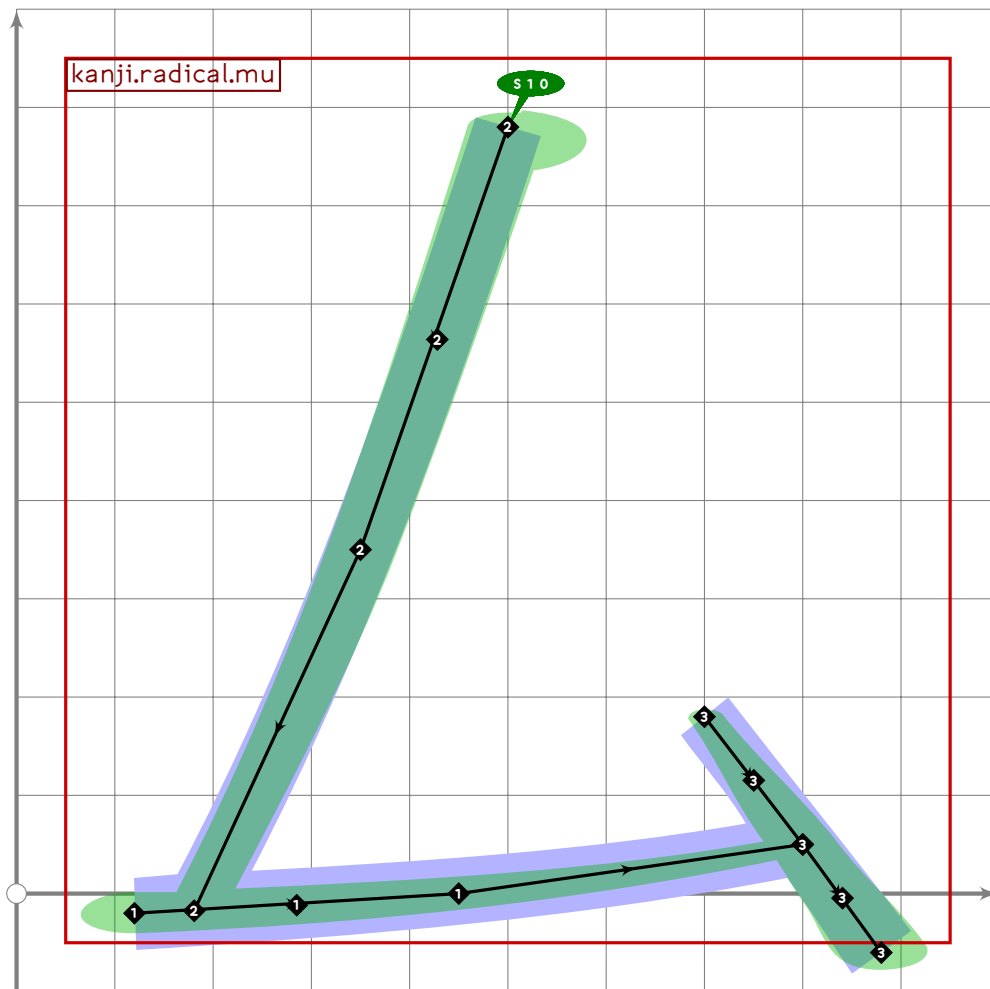


```

341
342 vardef kanji.radical.mother_stroked =
343   push_pbox_toexpand("kanji.radical.mother_stroked");
344   kanji.radical.mother;
345   push_stroke((520,750)..tension 1.2..(480,390)..(420,100),
346     (1.6,1.6)-(1.5,1.5)-(14,14));
347   expand_pbox;
348 enddef;

```

RADI



RADI

```

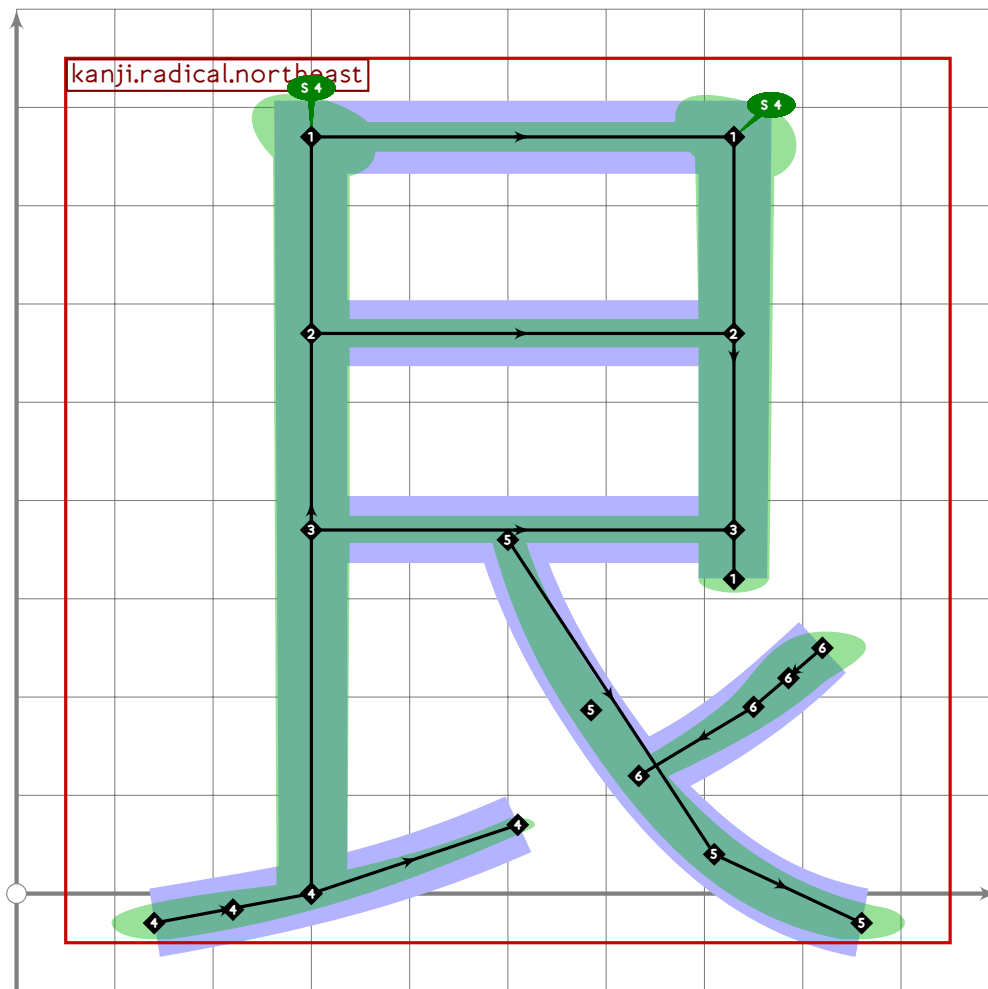
349
350 vardef kanji.radical.mu =
351   push_pbox_toexpand("kanji.radical.mu");
352   push_stroke((120,-20)..tension 1.2..(450,0)..(800,50),
353     (2,2)-(1,7,1,7)-(1,2,1,2));
354   push_stroke(
355     (500,780)..tension 1.2..(350,350)..(point 0.2 of get_stroke(0)),
356     (1,6,1,6)-(1,5,1,5)-(1,3,1,3));
357   set_boserif(0,0,10);
358   push_stroke((700,180)..tension 1.3..(800,50)..(880,-60),
359     (1,1)-(1,5,1,5)-(1,8,1,8));
360   expand_pbox;
361   enddef;
362
363 vardef kanji.radical.mu_bar =
364   push_pbox_toexpand("kanji.radical.mu_bar");
365   push_stroke((140,780)-(860,780),(1,6,1,6)-(1,6,1,6));
366   set_boserif(0,1,9);
367   build_kanji.scale(xyscaled (0.92,1.5) shifted (0,250))
368     (kanji.radical.mu);
369   replace_stroke(-1)(subpath

```

```

370    (xpart (oldp intersectiontimes get_strokep(-3)),infinity) of oldp);
371    set_boserif(-1,0,whatever);
372    replace_strokep(0)(oldp rotatedaround (point 1 of oldp,-15));
373    expand_pbox;
374 enddef;
375
376 vardef kanji.radical.narrow_flag =
377   perl_structure:=perl_structure&"eids.u2FF8.u5C38.1_";
378   push_pbox_toexpand("kanji.radical.narrow_flag");
379   push_stroke(((800,560)-(800,730)-(200,730){down}..(160,200)..(30,-50),
380     (1.5,1.5)-(1.6,1.6)-(1.6,1.6)-(1.3,1.3)-(0.9,0.9));
381   set_botip(0,1,1);
382   set_botip(0,2,1);
383   set_boserif(0,1,4);
384   set_boserif(0,2,4);
385   set_bosize(0,93);
386   push_stroke((((0,610)-(1000,610))
387     intersectionpoint reverse get_strokep(0))-(800,610),
388     (1.5,1.5)-(1.5,1.5));
389   set_bosize(0,93);
390   expand_pbox;
391 enddef;

```



RADI

```

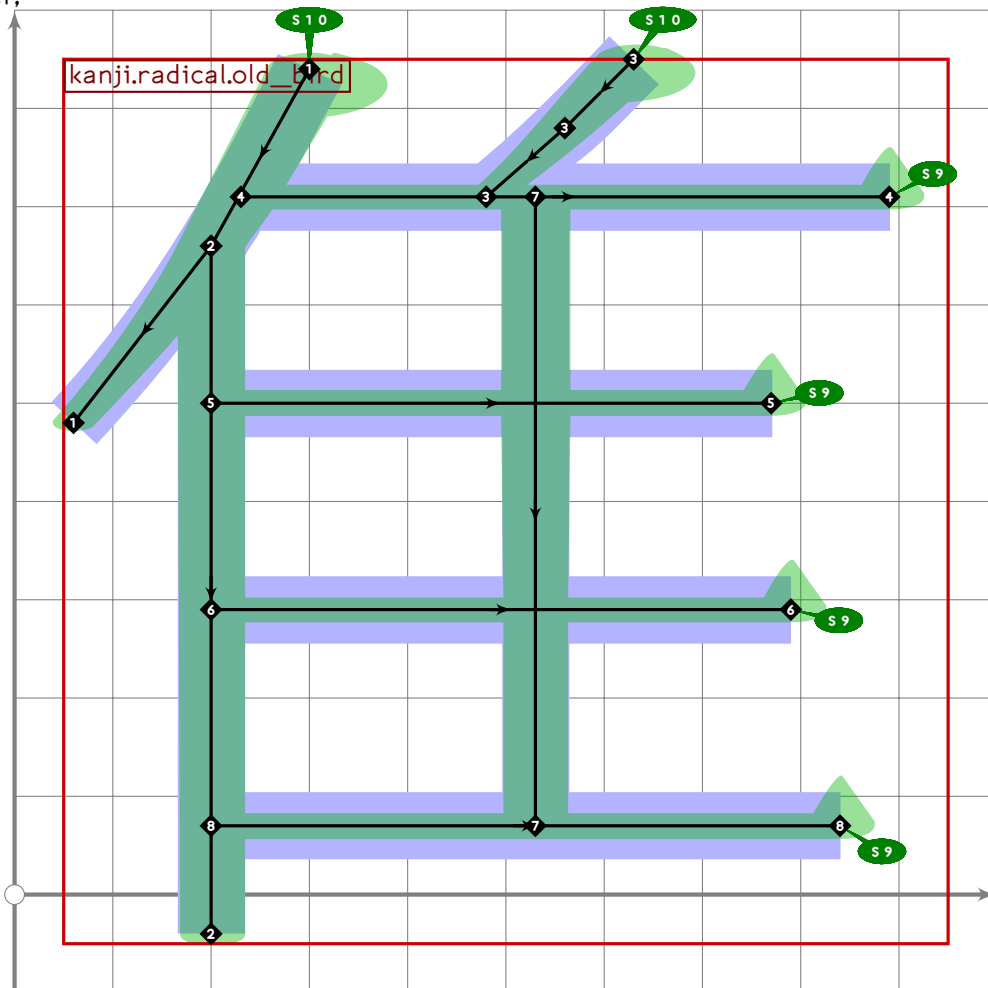
392
393 vardef kanji.radical.northeast =
394   push_pbox_toexpand("kanji.radical.northeast");
395   push_stroke((300,0)–(300,770)–(730,770)–(730,320),
396     (1.5,1.5)–(1.6,1.6)–(1.6,1.6)–(1.5,1.5));
397   set_boserif(0,1,4);
398   set_boserif(0,2,4);
399   set_botip(0,1,1);
400   set_botip(0,2,1);
401   push_stroke((300,570)–(730,570),(1.5,1.5)–(1.5,1.5));
402   push_stroke((300,370)–(730,370),(1.5,1.5)–(1.5,1.5));
403   push_stroke((140,-30)..tension 1.2..(300,0)..(510,70),
404     (1.7,1.7)–(1.5,1.5)–(1,1));
405   push_stroke((500,360)..tension 1.2..(710,40)..(860,-30),
406     (1,1)–(14,14)–(17,17));
407   push_stroke((820,250)..tension 1.2..(750,190)..
408     (point 0.7 of get_stroke(0)),
409     (1.7,1.7)–(14,14)–(1.2,1.2));
410   expand_pbox;
411 enddef;
412

```

U+96B9
tsuku.uni96B9

RADI

```
413 vardef kanji.radical.alt_northeast =
414   push_pbox_toexpand("kanji.radical.northeast");
415   push_stroke((300,0)-(300,770)-(730,770)-(730,320),
416     (1.5,1.5)-(1.6,1.6)-(1.6,1.6)-(1.5,1.5));
417   set_boserif(0,1,4);
418   set_boserif(0,2,4);
419   set_botip(0,1,1);
420   set_botip(0,2,1);
421   push_stroke((300,570)-(730,570),(1.5,1.5)-(1.5,1.5));
422   push_stroke((300,370)-(730,370),(1.5,1.5)-(1.5,1.5));
423   push_stroke((130,-20)..tension 1.2..(300,0)..(720,80),
424     (1.7,1.7)-(1.5,1.5)-(1,1));
425   push_stroke((650,170)..tension 1.3..(720,80)..(770,-20),
426     (1,1)-(1.5,1.5)-(1.8,1.8));
427   expand_pbox;
428 enddef;
```



```
429
430 vardef kanji.radical.old_bird =
431   push_pbox_toexpand("kanji.radical.old_bird");
432   push_stroke((300,840){curl 0}..(200,660)..(60,480),
433     (1.7,1.7)-(1.5,1.5)-(1.1,1.1));
```



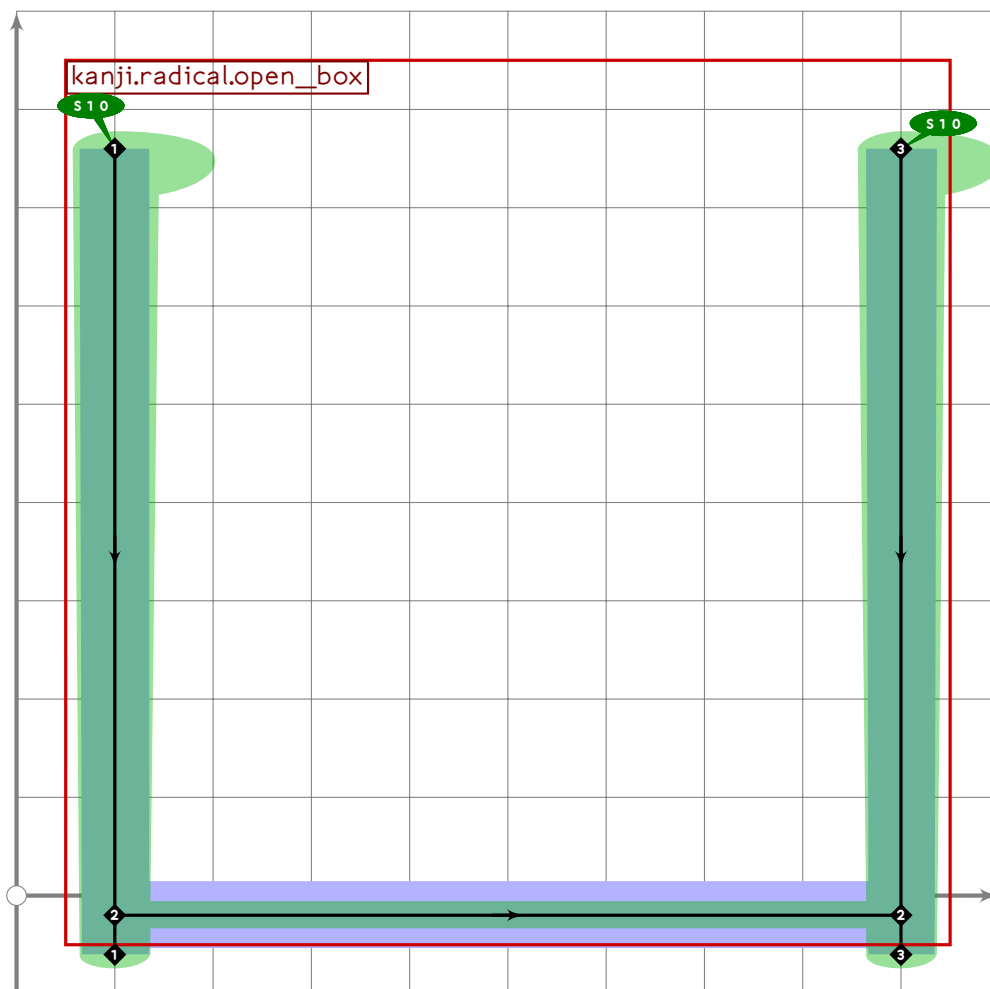
```

434 set_boserif(0,0,10);
435 push_stroke((200,660)-(200,-40),
436   (149,149)-(14,14));
437 push_stroke((630,850){curl 0.1}..(560,780)..(480,710),
438   (1.6,1.6)-(14,14)-(1.1,1.1));
439 set_boserif(0,0,10);
440 push_stroke(
441   (((0,710)-(1000,710)) intersectionpoint get_stroke(-2))-(890,710),
442   (14,14)-(1.5,1.5));
443 set_boserif(0,1,9);
444 push_stroke((200,500)-(770,500),
445   (14,14)-(1.5,1.5));
446 set_boserif(0,1,9);
447 push_stroke((200,290)-(790,290),
448   (14,14)-(1.5,1.5));
449 set_boserif(0,1,9);
450 push_stroke((530,710)-(530,70),(1.5,1.5)-(14,14));
451 push_stroke((200,70)-(840,70),
452   (14,14)-(1.5,1.5));
453 set_boserif(0,1,9);
454 expand_pbox;
455 enddef;
456
457 % pass in some code that goes in the bottom
458 vardef kanji.radical.old_man(text curves) =
459   push_pbox_toexpand("kanji.radical.old_man");
460   build_kanji.level(
461     build_kanji.tb(480,-110)
462       (kanji.grone.earth;
463         replace_stroke(-1)(oldp shifted (-500,0) xscaled 0.75 shifted (480,0)))
464       (curves);
465     push_stroke((880,780)..tension 1.2..(600,530)..(50,260),
466       (1.6,1.6)-(1.5,1.5)-(1,1)));
467   expand_pbox;
468 enddef;

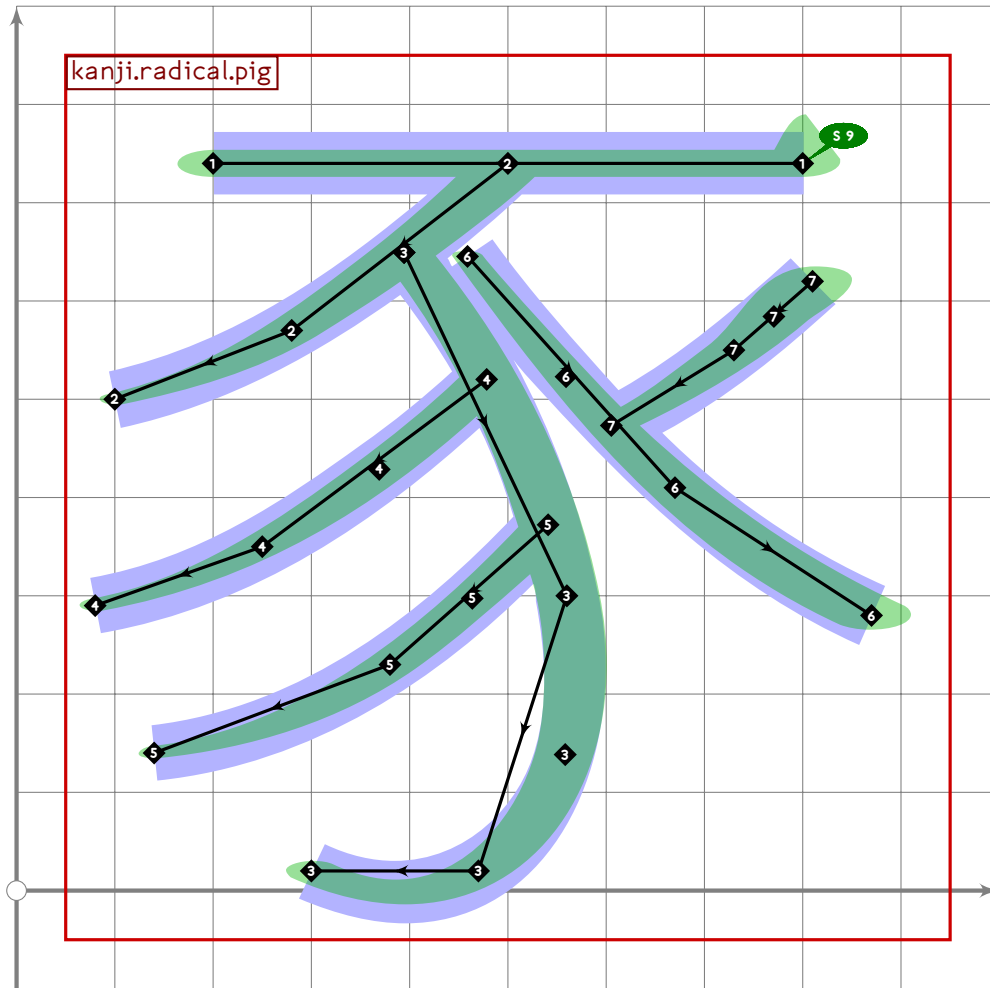
```

U+51F5
tsuku.uni51F5

RADI



```
469
470 vardef kanji.radical.open_box =
471   push_pbox_toexpand("kanji.radical.open_box");
472   push_stroke((100,760)-(100,-60),(1.7,1.7)-(1.5,1.5));
473   set_boserif(0,0,10);
474   push_stroke((100,-20)-(900,-20),(1.5,1.5)-(1.5,1.5));
475   push_stroke((900,760)-(900,-60),(1.7,1.7)-(1.5,1.5));
476   set_boserif(0,0,10);
477   expand_pbox;
478 enddef;
```



RADI

```

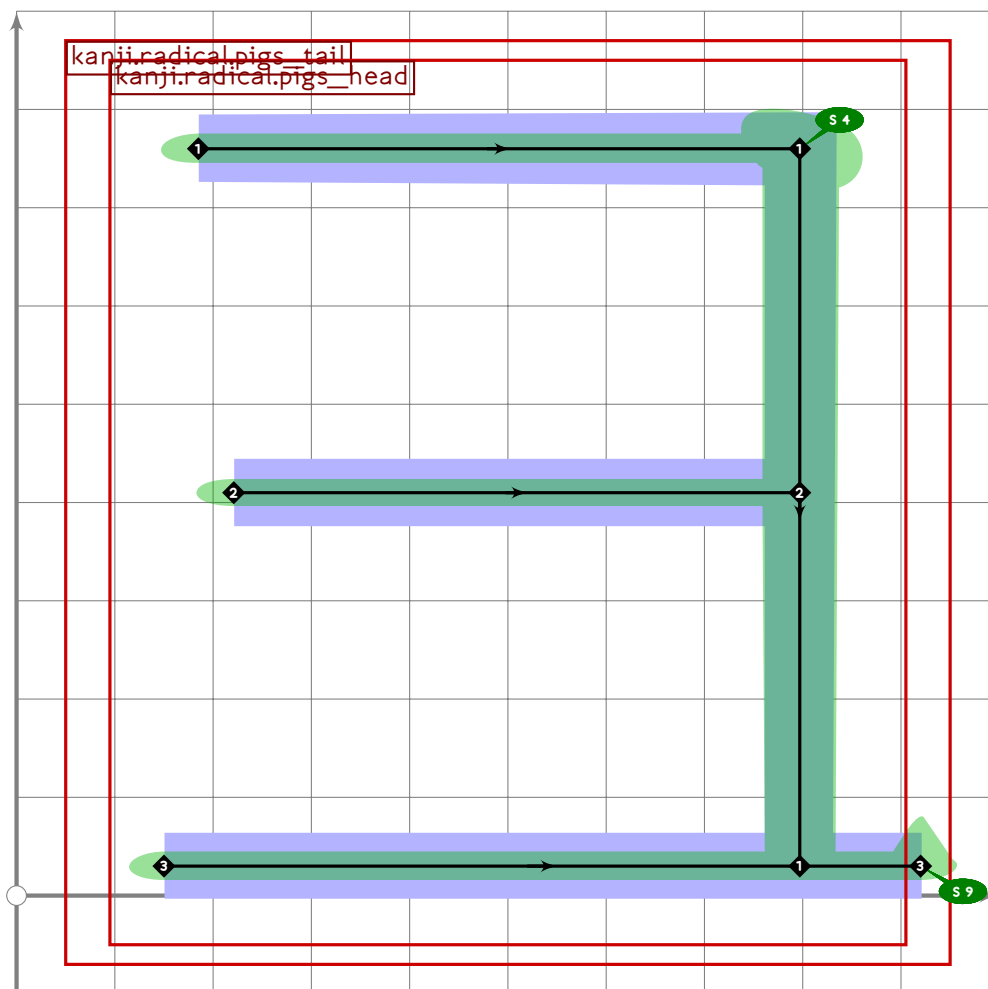
479
480 vardef kanji.radical.pig =
481   push_pbox_toexpand("kanji.radical.pig");
482   push_stroke((200,740)-(800,740),(1.6,1.6)-(1.6,1.6));
483   set_boserif(0,1,9);
484   push_stroke((500,740)..tension 1.2..(280,570)..(100,500),
485     (1.6,1.6)-(14,14)-(10,10));
486   push_stroke(
487     (point 0.5 of get_stroke(0))..tension 1.1..(560,300)..
488     (470,20)..{curl 0.6}(300,20),
489     (1.3,1.3)-(1.5,1.5)-(14,14)-(1.3,1.3));
490   push_stroke(
491     (point 0.4 of get_stroke(0))..tension 1.2..(250,350)..(80,290),
492     (1.35,1.35)-(14,14)-(10,10));
493   push_stroke(
494     (point 0.8 of get_stroke(-1))..tension 1.2..(380,230)..(140,140),
495     (1.35,1.35)-(14,14)-(10,10));
496   push_stroke(
497     ((0,90)+point 0.3 of get_stroke(-2))..tension 1.2..(670,410)..(870,280),
498     (1,1)-(14,14)-(17,17));
499   push_stroke(

```

```

500     (810,620)..tension 1.2..(730,550)..(point 0.7 of get_strokep(0)),
501     (1.7,1.7)-(1.4,1.4)-(1.2,1.2));
502   for i=-6 upto 0: set_bosize(i,92); endfor;
503   expand__pbox;
504 enddef;
505
506 vardef kanji.radical.pigs_head =
507   push_pbox__toexpand("kanji.radical.pigs_head");
508   push_stroke((150,760)-(830,760)-(830,70),
509     (1.6,1.6)-(1.6,1.6)-(1.5,1.5));
510   set_botip(0,1);
511   set_boserif(0,1,4);
512   push_stroke((190,410)-(830,410),(1.55,1.55)-(1.55,1.55));
513   push_stroke((150,30)-(830,30),(1.5,1.5)-(1.5,1.5));
514   expand__pbox;
515 enddef;
516
517 % name is mine - it has central horizontal line lengthened
518 vardef kanji.radical.pigs_snout =
519   push_pbox__toexpand("kanji.radical.pigs_snout");
520   build_kanji.level(
521     build_kanji.sscale(xscaled 0.87)(kanji.radical.pigs_head);
522     replace_strokep(-1)((100,410)-(910,410));
523     set_boserif(-1,1,9);
524   );
525   expand__pbox;
526 enddef;
527

```



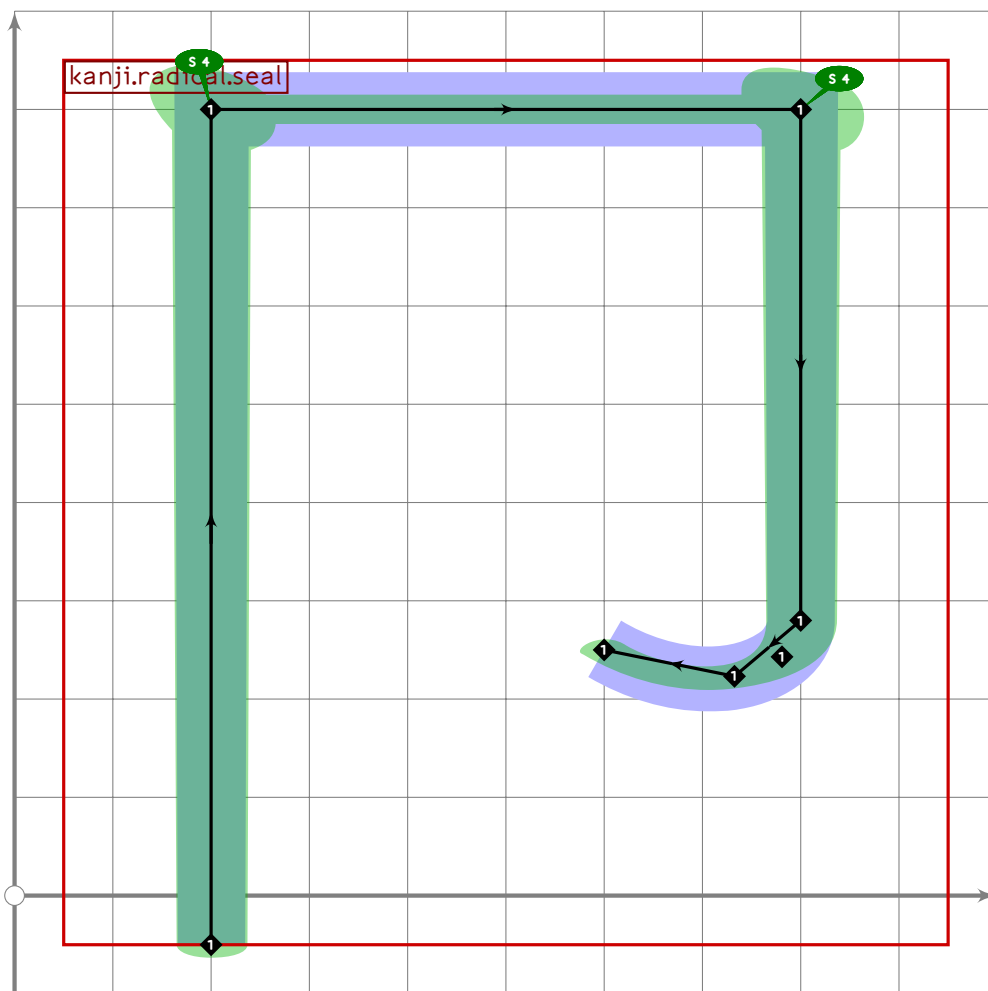
RADI

```

528 % name is mine - it has bottom horizontal line lengthened, vertical clipped
529 vardef kanji.radical.pigs_tail =
530   push_pbox_toexpand("kanji.radical.pigs_tail");
531   build_kanji.sscale(xscaled 0.9)
532   (kanji.radical.pigs_head;
533     replace_stroke(-2)((150,760)-(830,760)-(830,30)));
534   replace_stroke(0)((150,30)-(920,30));
535   set_boserif(0,1,9);
536   expand_pbox;
537 enddef;

```

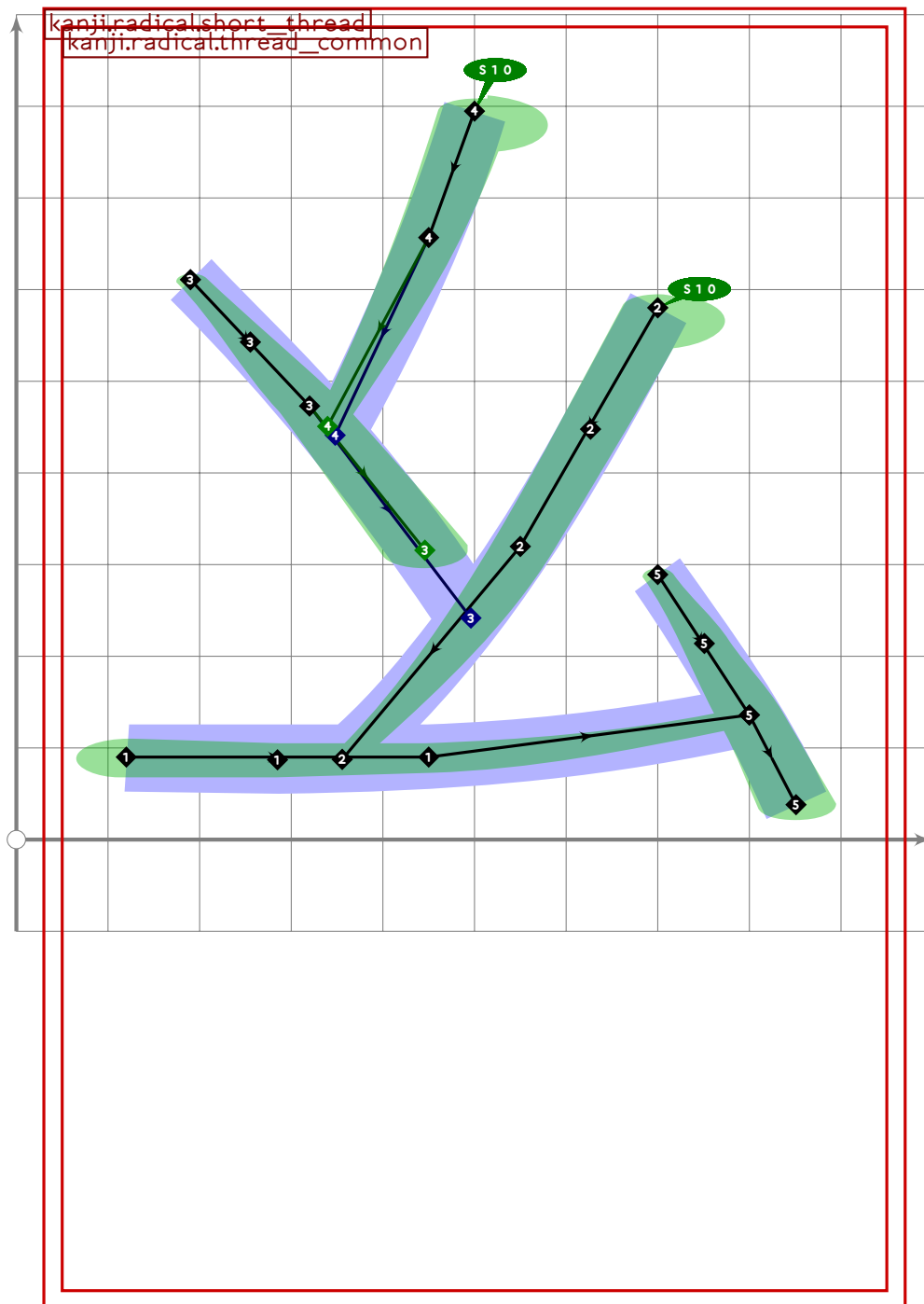
RADI



```

538
539 vardef kanji.radical.seal =
540   push_pbox__toexpand("kanji.radical.seal");
541   push_stroke((150,-300)-(150,550)-(600,550),
542     (1.5,1.5)-(1.6,1.6)-(1.6,1.6));
543   build_kanji.add_jtail(0);
544   replace_strokep(0)(oldp shifted (0,250) xscaled 1.3333);
545   set_boserif(0,1,4);
546   set_boserif(0,2,4);
547   set_botip(0,1,1);
548   set_botip(0,2,1);
549   expand_pbox;
550 enddef;

```



RADI

```

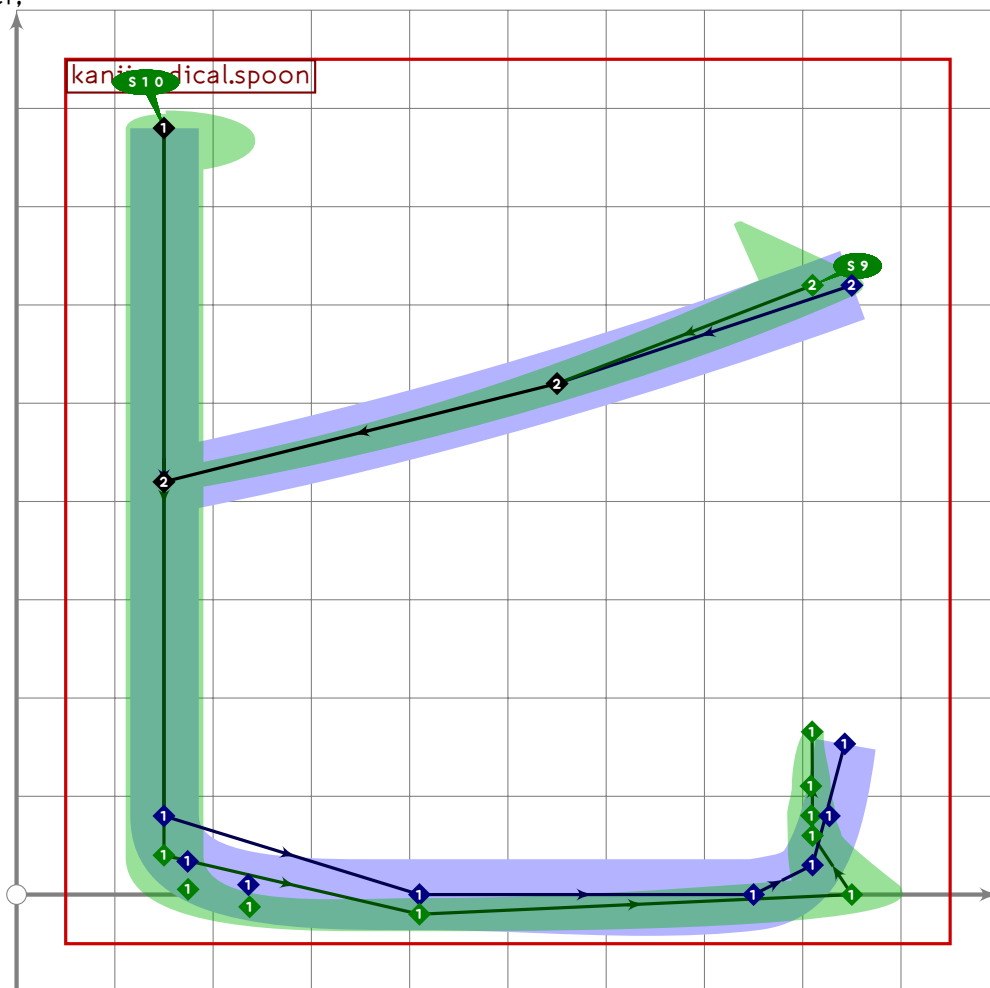
551
552 vardef kanji.radical.short_thread =
553   push_pbox_toexpand("kanji.radical.short_thread");
554   tsu_xform(begingroup
555     save myxf;
556     transform myxf;
557     xpart myxf=yxpart myxf=0;
558     xpart myxf=1;
559     (500,330) transformed myxf=(500,90);
560     (500,800) transformed myxf=(500,810);

```

```

561 myxf
562 endgroup)(kanji.radical.thread_common);
563 replace_strokep(0)(subpath (0,1.6) of oldp);
564 replace_strokeq(0)(subpath (0,1.6) of oldq);
565 for i=-4 upto 0: set_bosize(i,100); endfor;
566 expand_pbox;
567 enddef;
568
569 vardef kanji.radical.silly_hat =
570   push_pbox_toexpand("kanji.radical.silly_hat");
571   push_stroke((500,800)..(500,500),(1.6,1.6)-(1.5,1.5));
572   set_bosize(0,95);
573   set_boserif(0,0,10);
574   kanji.radical.conservative_hat;
575   expand_pbox;
576 enddef;

```



```

577
578 vardef kanji.radical.spoon =
579   push_pbox_toexpand("kanji.radical.spoon");
580   push_stroke((150,780),(1.6,1.6));
581   build_kanji.add_ltail(0);

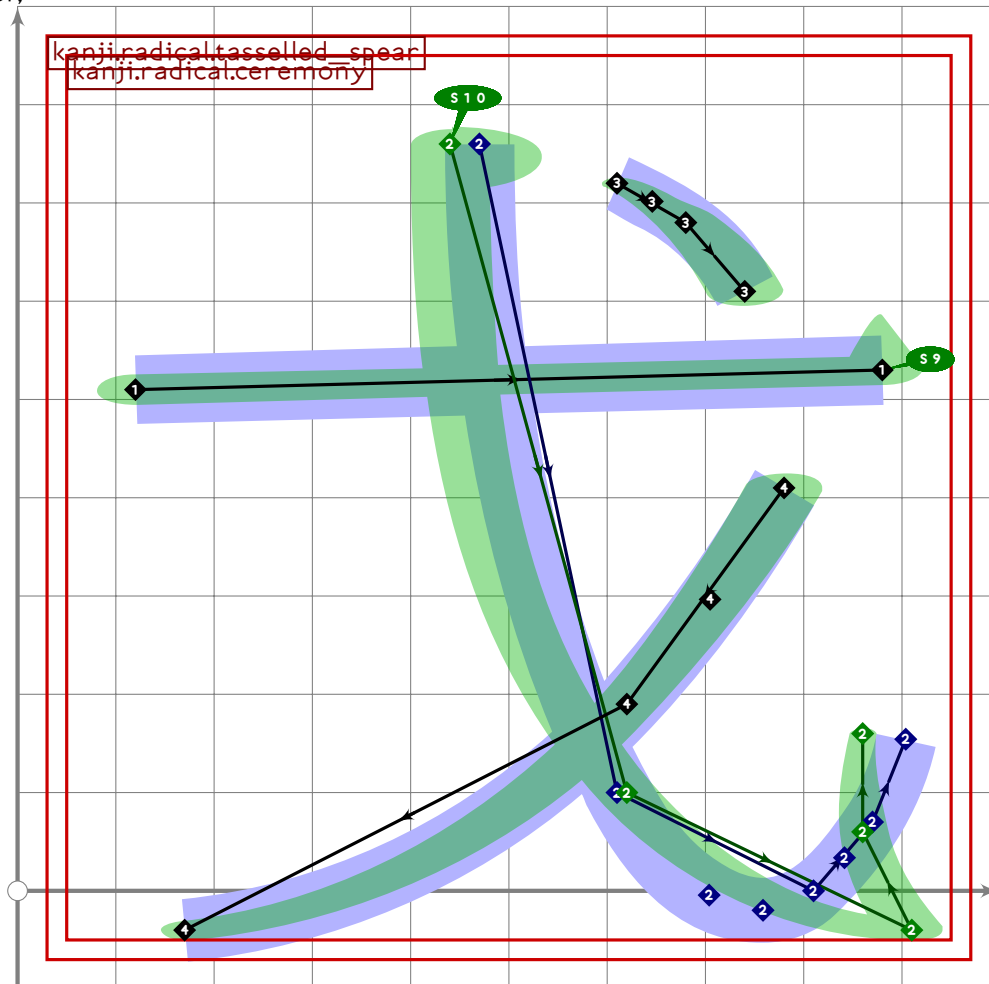
```



```

582 set_boserif(0,0,10);
583 push_stroke(
584   (xpart point infinity of get_stroke(0),620)..(550,520)..(150,420),
585   (1.9,1.9)..(1.6,1.6)..(1.3,1.3));
586 set_boserif(0,0,9);
587 expand_pbox;
588 endif;

```



```

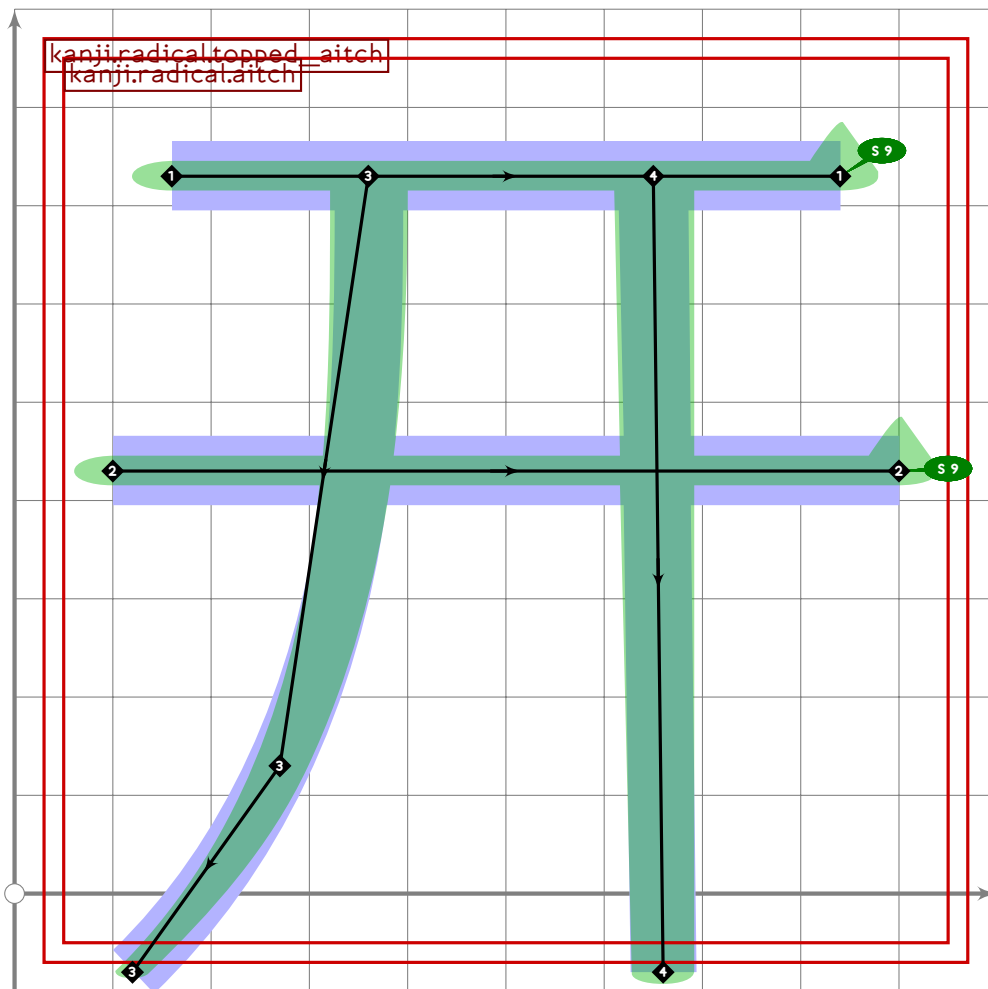
589
590 vardef kanji.radical.tasselled_spear =
591   push_pbox_toexpand("kanji.radical.tasselled_spear");
592   kanji.radical.ceremony;
593   push_stroke((780,410)..tension 1.2..(620,190)..(170,-40),
594     (1.6,1.6)-(1.4,1.4)-(1.2,1.2));
595   expand_pbox;
596 endif;
597
598 vardef kanji.radical.tent =
599   perl_structure:=perl_structure&"eids.u2FF1.u4EBA.1.";
600   push_pbox_toexpand("kanji.radical.tent");
601   push_stroke((510,800)..(450,700)..(300,540)..(60,360),
602     (1.6,1.6)-(1.5,1.5)-(1.3,1.3)-(0.85,0.9));

```

```

603 set_boserif(0,0,10);
604 push_stroke(
605     (point 0.2 of get_strokep(0))..tension 1.2..(640,620)..(920,400),
606     (1,1)-(1.3,1.3)-(2.25,0.95));
607 push_stroke((330,470)-(660,470),(1.6,1.6)-(1.6,1.6));
608 set_boserif(0,1,9);
609 expand_pbox;
610 enddef;
611
612 vardef kanji.radical.thread_common =
613     push_pbox_toexpand("kanji.radical.thread_common");
614     push_stroke((120,330)..tension 1.2..(450,330)..(800,360),
615         (2,2)-(1.7,1.7)-(1.2,1.2));
616     push_stroke((700,650)..tension 1.3..(550,480)..(point 0.7 of get_strokep(0)),
617         (1.6,1.6)-(1.5,1.5)-(1,1));
618     set_boserif(0,0,10);
619     push_stroke(subpath (0,2-0.3*mincho) of
620         ((190,670)..tension 1.3..(320,580)..(point 1.3 of get_strokep(0))),
621         (1,1)-(1.5,1.5)-(1.8,1.8));
622     push_stroke((500,790)..(450,700)..(point 1.15 of get_strokep(0)),
623         (1.6,1.6)-(1.5,1.5)-(1,1));
624     set_boserif(0,0,10);
625     push_stroke((700,460)..tension 1.3..(800,360)..(880,250),
626         (1,1)-(1.5,1.5)-(1.8,1.8));
627     expand_pbox;
628 enddef;
629
630 vardef kanji.radical.three_tasselled_spear =
631     push_pbox_toexpand("kanji.radical.three_tasselled_spear");
632     kanji.radical.ceremony;
633     replace_strokep(-2)(oldp shifted (0,40));
634     replace_strokep(0)(oldp shifted (-680,750) xyscaled (1.2,0.6)
635         shifted (680,750));
636     push_stroke((subpath (0,1,0.9) of get_strokep(-2)) shifted (0,-130),
637         (1.6,1.6)-(1.6,1.6));
638     set_boserif(0,1,9);
639     push_stroke(get_strokep(-3) shifted (0,-270),
640         (1.6,1.6)-(1.6,1.6));
641     set_boserif(0,1,9);
642     push_stroke((800,220)..tension 1.2..(620,88)..(120,-40),
643         (1.6,1.6)-(1.4,1.4)-(1.2,1.2));
644     expand_pbox;
645 enddef;

```



RADI

```

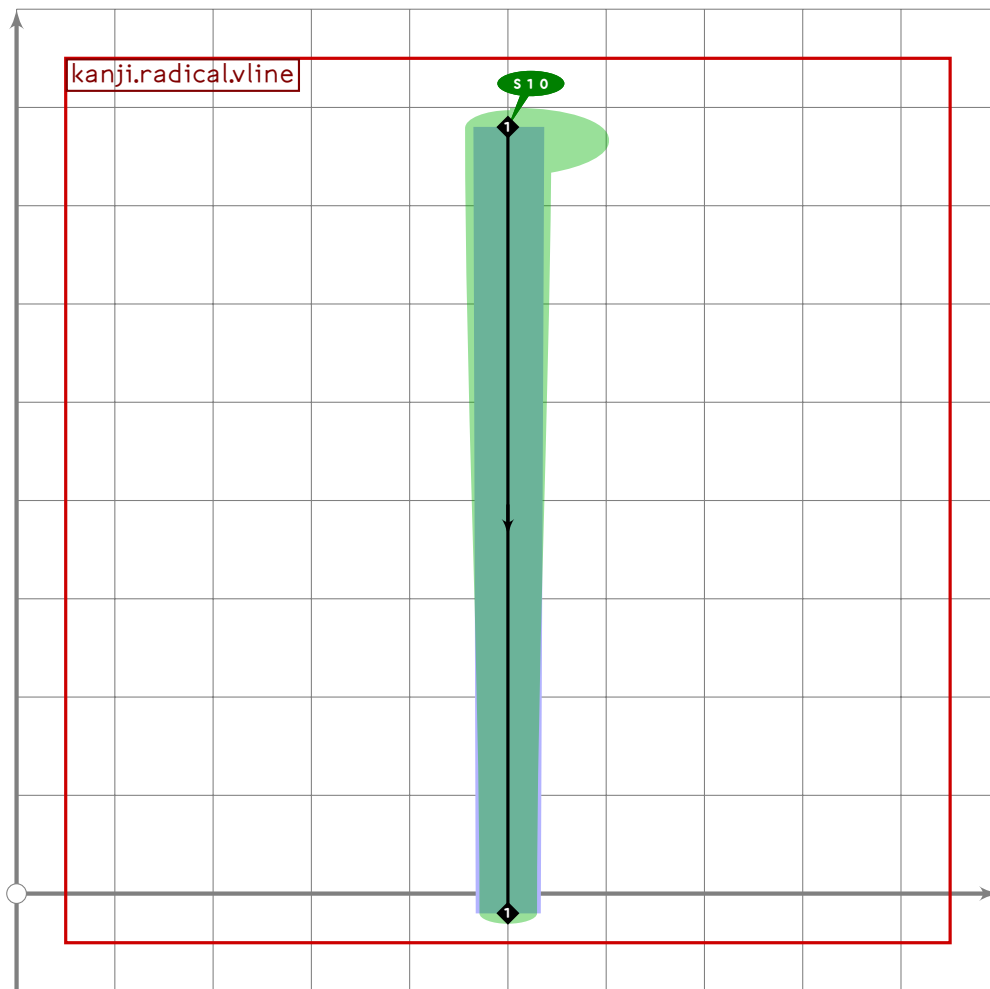
646
647 vardef kanji.radical.topped_aitch =
648   push_pbox_toexpand("kanji.radical.topped_aitch");
649   push_stroke((160,730)-(840,730),(1.6,1.6)-(1.6,1.6));
650   set_boserif(0,1,9);
651   kanji.radical.aitch;
652   set_boserif(-1,0,whatever);
653   set_boserif(0,0,whatever);
654   expand_pbox;
655 enddef;
656
657 vardef kanji.radical.travel_inside =
658   push_pbox_toexpand("kanji.radical.travel_inside");
659   push_stroke((720,810)..tension 1.2..(380,610)..(80,510),
660     (1.7,1.7)-(1.5,1.5)-(1,1));
661   push_stroke((320,570)-(320,-60),(1.6,1.6)-(1.5,1.5));
662   push_stroke((point 0.7 of get_stroke(-1))..
663     tension 1.2..(650,240)..(850,0),
664     (1,1)-(1.4,1.4)-(1.7,1.7));
665   push_stroke((770,490)..tension 1.2..(680,420)..
666     (point 0.65 of get_stroke(0)),

```

```

667     (1,7,1,7)–(1,4,1,4)–(1,2,1,2));
668   expand_pbox;
669 enddef;
670
671 vardef kanji.radical.tusk =
672   push_pbox_toexpand("kanji.radical.tusk");
673   push_stroke((140+30*mincho,780)–(830,780),(1,6,1,6)–(1,6,1,6));
674   set_boserif(0,1,9);
675   push_stroke((660,780),(1,6,1,6));
676   build_kanji.add_jtail(0);
677   push_stroke((340,780)–(340,480),(1,6,1,6)–(1,5,1,5));
678   push_stroke((110+30*mincho,480)–(860,480),(1,6,1,6)–(1,6,1,6));
679   set_boserif(0,1,9);
680   push_stroke((580,480)..tension 1.2..(380,200)..(110,60),
681     (1,6,1,6)–(1,4,1,4)–(1,1));
682   expand_pbox;
683 enddef;
684
685 % insert "Scottish tsunderé" joke here
686 vardef kanji.radical.twin_tailed_sheep =
687   push_pbox_toexpand("kanji.radical.twin_tailed_sheep");
688   kanji.grthree.sheep;
689   replace_stroke(0)
690     ((510,615){down}..(500,260)..(370,70)..{curl 0.5}(50,-60));
691   replace_strokeq(0)((1,6,1,6)–(1,6,1,6)–(1,4,1,4)–(1,1,1,1));
692   push_stroke(((get_stroke(0) intersectionpoint get_stroke(-3))+(50,0))..
693     (650,80)..(900,-50),
694     (1,1,1,1)–(1,4,1,4)–(1,7,1,7));
695   expand_pbox;
696 enddef;

```



RADI

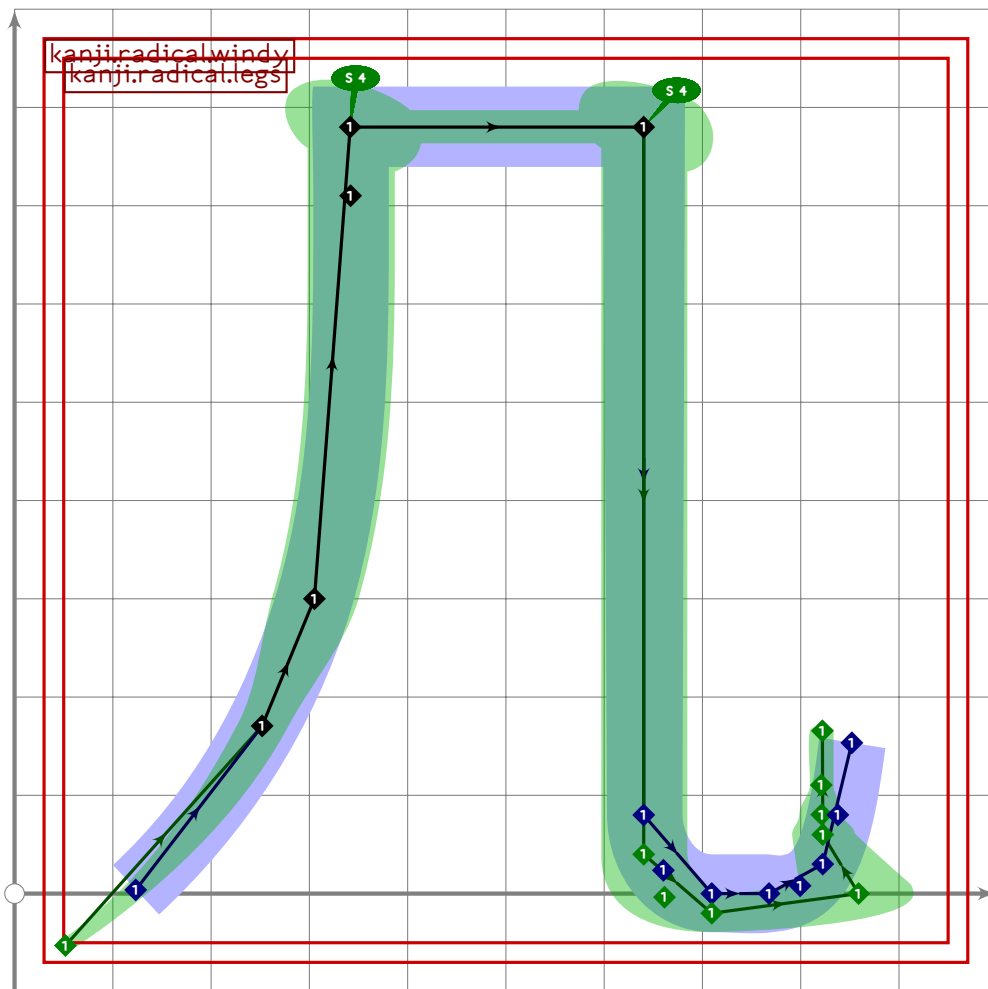
```

697
698 vardef kanji.radical.vline =
699   push_pbox__toexpand("kanji.radical.vline");
700   push_stroke((500,780)-(500,-20),(1.7,1.7)-(1.3,1.3));
701   set_boserif(0,0,10);
702   expand_pbox;
703 enddef;

```

U+51E0
tsuku.uni51E0

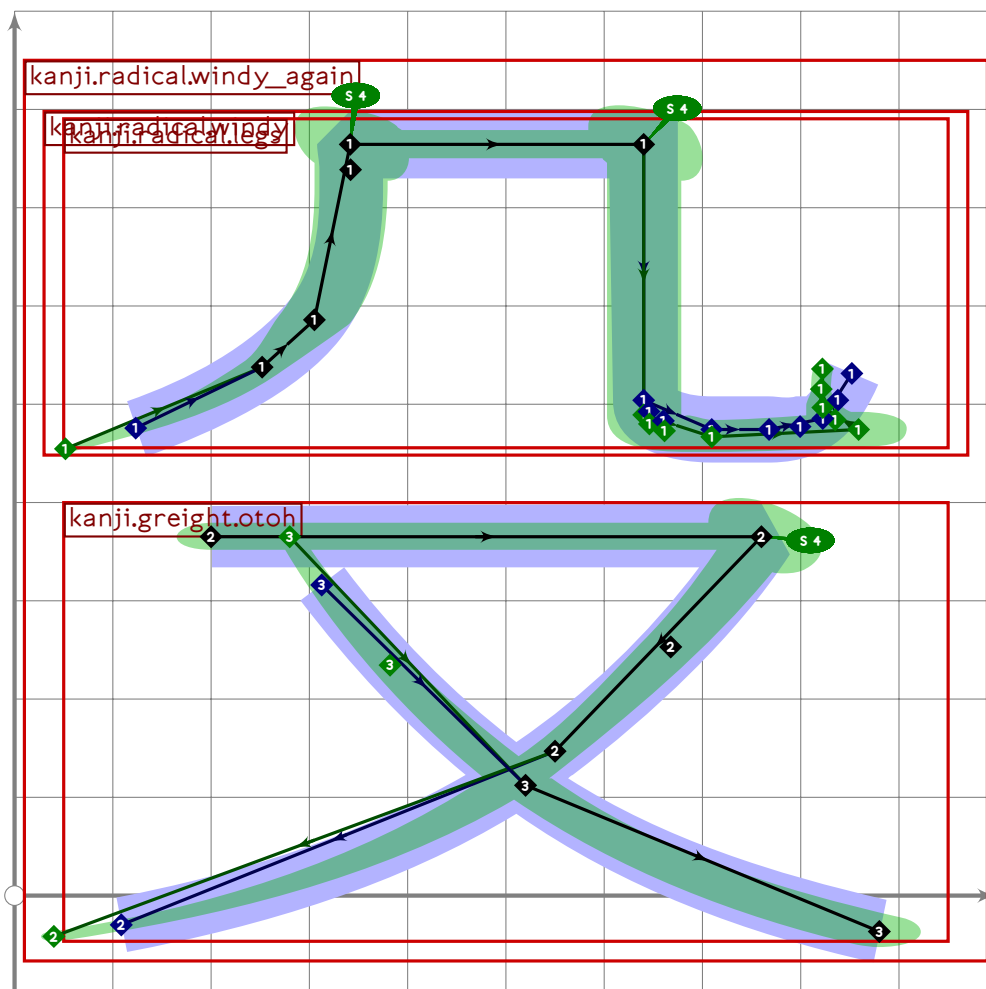
RADI



```

704
705 vardef kanji.radical.windy =
706   push_pbox__toexpand("kanji.radical.windy");
707   build_kanji.spread_legs(80)(kanji.radical.legs);
708   replace_strokep(-1)((reverse oldp)-get_strokep(0));
709   replace_strokeq(-1)((reverse oldq)-get_strokeq(0));
710   pop_stroke;
711   set_boserif(0,3,4);
712   set_boserif(0,4,4);
713   set_botip(0,3,1);
714   set_botip(0,4,1);
715   expand_pbox;
716 enddef;

```



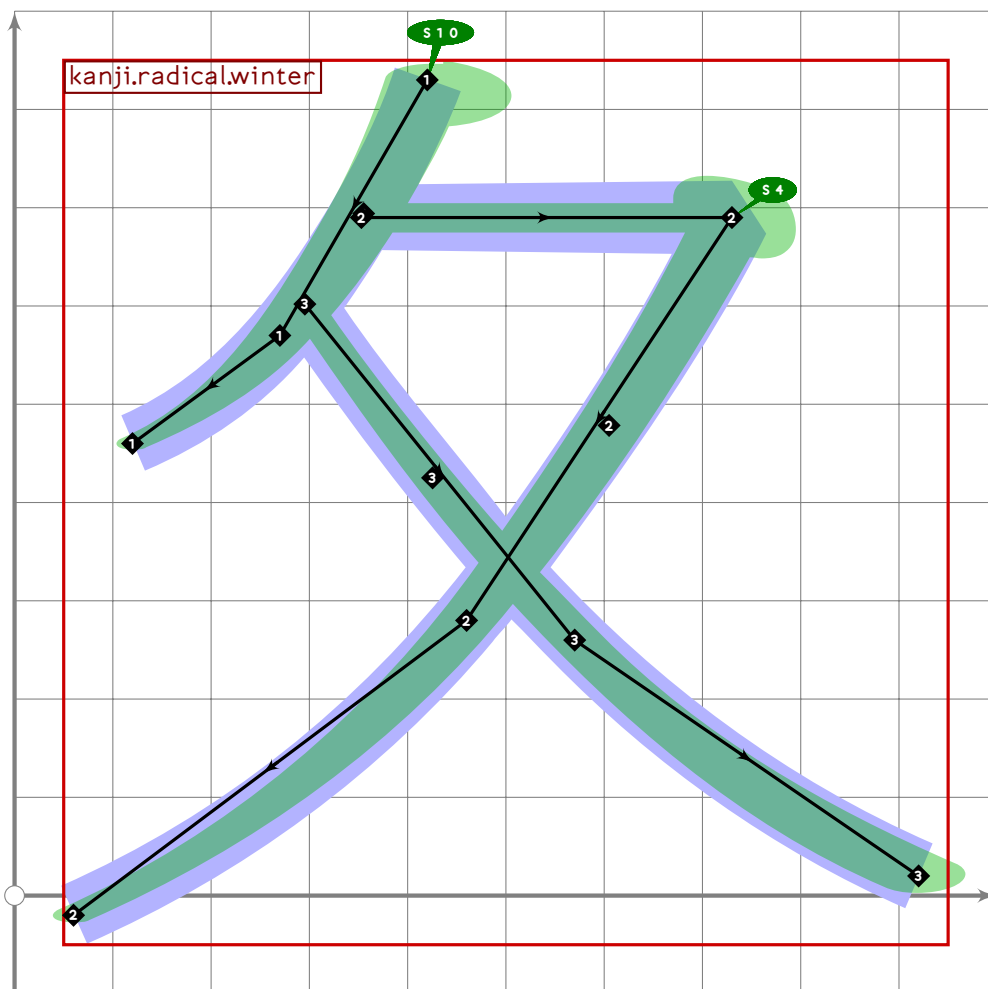
RADI

```

717
718 vardef kanji.radical.windy_again =
719   push_pbox_toexpand("kanji.radical.windy_again");
720   tsu_xform(identity yscaled 0.93)
721     (build_kanji.tb(460,-60)
722       (kanji.radical.windy)
723       (kanji.greight.otoh));
724   expand_pbox;
725 enddef;

```

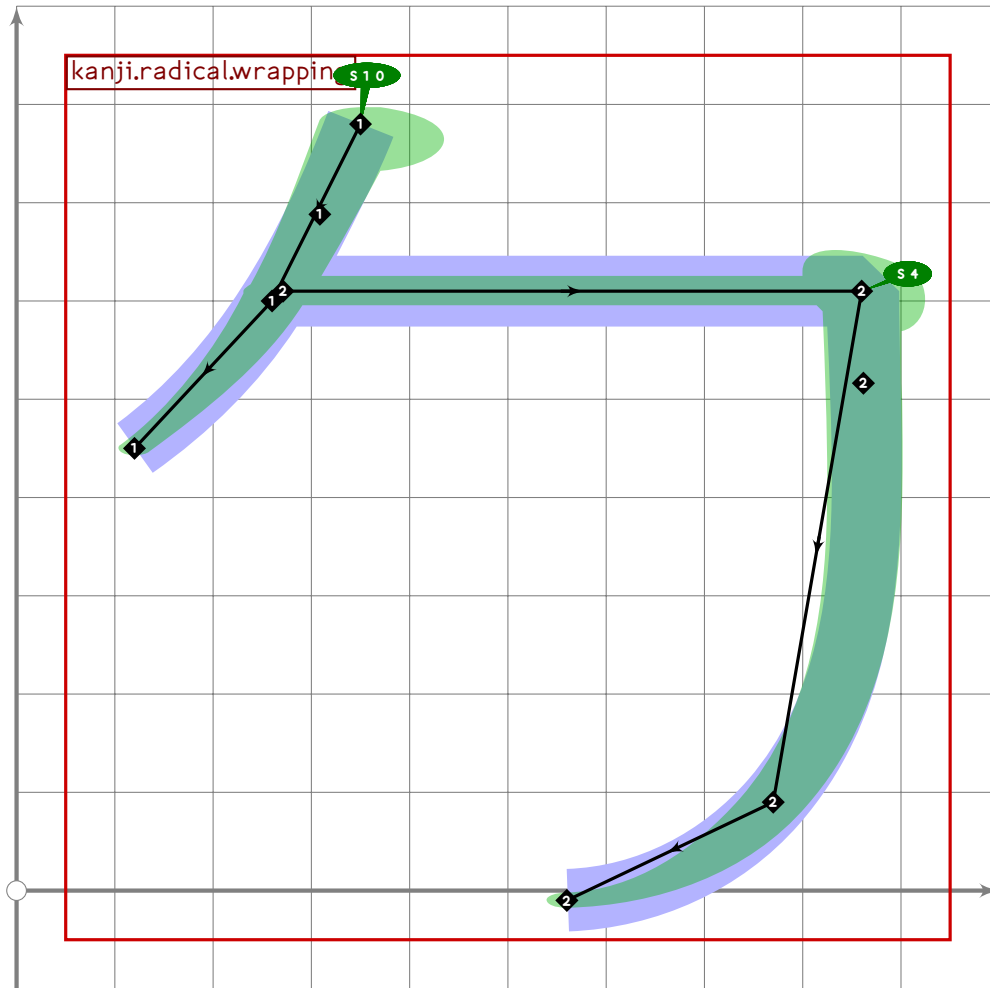
RADI



```

726
727 vardef kanji.radical.winter =
728   push_pbox_toexpand("kanji.radical.winter");
729   push_stroke((420,830)..tension 1.2..(270,570)..(120,460),
730     (1,1,7)-(14,14)-(1,1));
731   set_boserif(0,0,10);
732   push_stroke((get_stroke(0) intersectionpoint ((0,690)-(1000,690)))-(
733     (730,690)..tension 1.2..(460,280)..(60,-20),
734     (1,5,1,5)-(1,6,1,6)-(14,14)-(1,1,1,1));
735   set_boserif(0,1,4);
736   set_botip(0,1,0);
737   push_stroke((point 0.85 of get_stroke(1))..tension 1.2..
738     (570,260)..(920,20),
739     (1,1)-(1,3,1,3)-(1,8,1,8));
740   expand_pbox;
741 enddef;

```

RADI

```

742
743 vardef kanji.radical.wrapping =
744   push_pbox__toexpand("kanji.radical.wrapping");
745   push_stroke((350,780)..tension 1.2..(260,600)..(120,450),
746     (1,7,1,7)-(1,4,1,4)-(1,1));
747   set_boserif(0,0,10);
748   push_stroke(
749     ((5,0)+((get_stroke(0) intersectionpoint ((0,610)-(1000,610)))))-
750     (860,610){down}..(770,90)..(560,10),
751     (1,6,1,6)-(1,6,1,6)-(1,5,1,5)-(1,1,1,1));
752   set_boserif(0,1,4);
753   set_botip(0,1,0);
754   expand_pbox;
755 enddef;

```

rightrad.mp

```
1 %
2 % Right-side radicals
3 % Copyright (C) 2012, 2013 Matthew Skala
4 %
5-29 [Standard copyright notice]
30
31 inclusion_lock(rightrad);
32
33 _____
34
35 vardef kanji.rightrad.beta =
36   push_pbox_toexpand("kanji.rightrad.beta");
37   kanji.radical.beta;
38   replace_strokep(0)
39     (oldp shifted (-250,-760) xyscaled (1.2,630/550) shifted (300,760));
40   replace_strokep(0)((300,-60)-(subpath (1,infinity) of oldp));
41   expand_pbox;
42 enddef;
43
44 % KanjiVG lists this as U+5F54, but it's a little different visually
45 vardef kanji.rightrad.carve_wood =
46   push_pbox_toexpand("kanji.rightrad.carve_wood");
47   build_kanji.tb(420,60)
48     (kanji.radical.pigs_tail)
49     (kanji.radical.alt_water);
50   expand_pbox;
51 enddef;
52
53 % named for the most common character to contain it
54 vardef kanji.rightrad.clothing =
55   push_pbox_toexpand("kanji.rightrad.clothing");
56   tsu_xform(identity yscaled 0.92)(build_kanji.tb(440,60)
57     (kanji.radical.seal)
58     (tsu_xform(identity shifted (50,0))
59       (kanji.greight.otoh)));
60   replace_strokep(-2)
61     ((xpart point 0 of oldp,-40)-subpath (1,infinity) of oldp);
62   replace_strokep(-1)
63     (oldp shifted (-900,0) xscaled 0.78 shifted (900,0));
64   replace_strokep(-1)
65     (((-170,0)+point 0 of oldp)-subpath (1,infinity) of oldp);
66   expand_pbox;
67 enddef;
68
69 vardef kanji.rightrad.crooked_heaven =
70   push_pbox_toexpand("kanji.rightrad.crooked_heaven");
```

RIGH

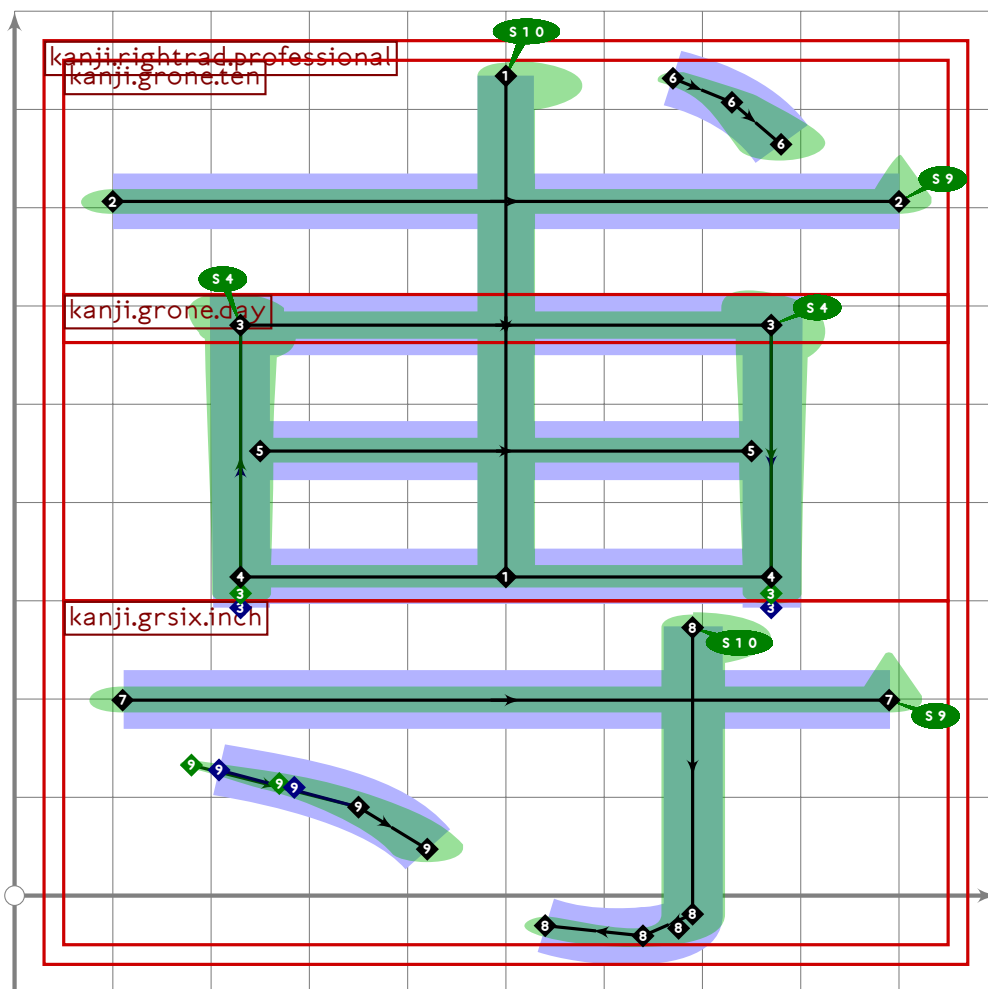
```

71  push_stroke((130,740)-(780,740),(1.6,1.6)-(1.6,1.6));
72  set_boserif(0,1,9);
73  push_stroke((80,460)-(890,460),(1.6,1.6)-(1.6,1.6));
74  set_boserif(0,1,9);
75  push_stroke((250,740)-(250,460),(1.6,1.6)-(1.5,1.5));
76  push_stroke((600,740){down}..(575,510)..(370,200)..{curl 0.5}{50,-20},
77    (1.6,1.6)-(1.6,1.6)-(1.4,1.4)-(1.1,1.1));
78  push_stroke((580,360),(1.6,1.6));
79  build_kanji.add_ltail(0);
80  set_boserif(0,0,10);
81  expand_pbox;
82 enddef;
83
84 vardef kanji.rightrad.genius =
85   push_pbox_toexpand("kanji.rightrad.genius");
86   push_stroke((600,800),(1.6,1.6));
87   build_kanji.add_jtail(0);
88   set_boserif(0,0,10);
89   push_stroke((110+30*mincho,580)-(860,580),(1.6,1.6)-(1.6,1.6));
90   set_boserif(0,1,9);
91   push_stroke((520,580)..tension 1.2..(360,260)..(110,90),
92     (1.6,1.6)-(1.4,1.4)-(1,1));
93   expand_pbox;
94 enddef;

```

RIGH

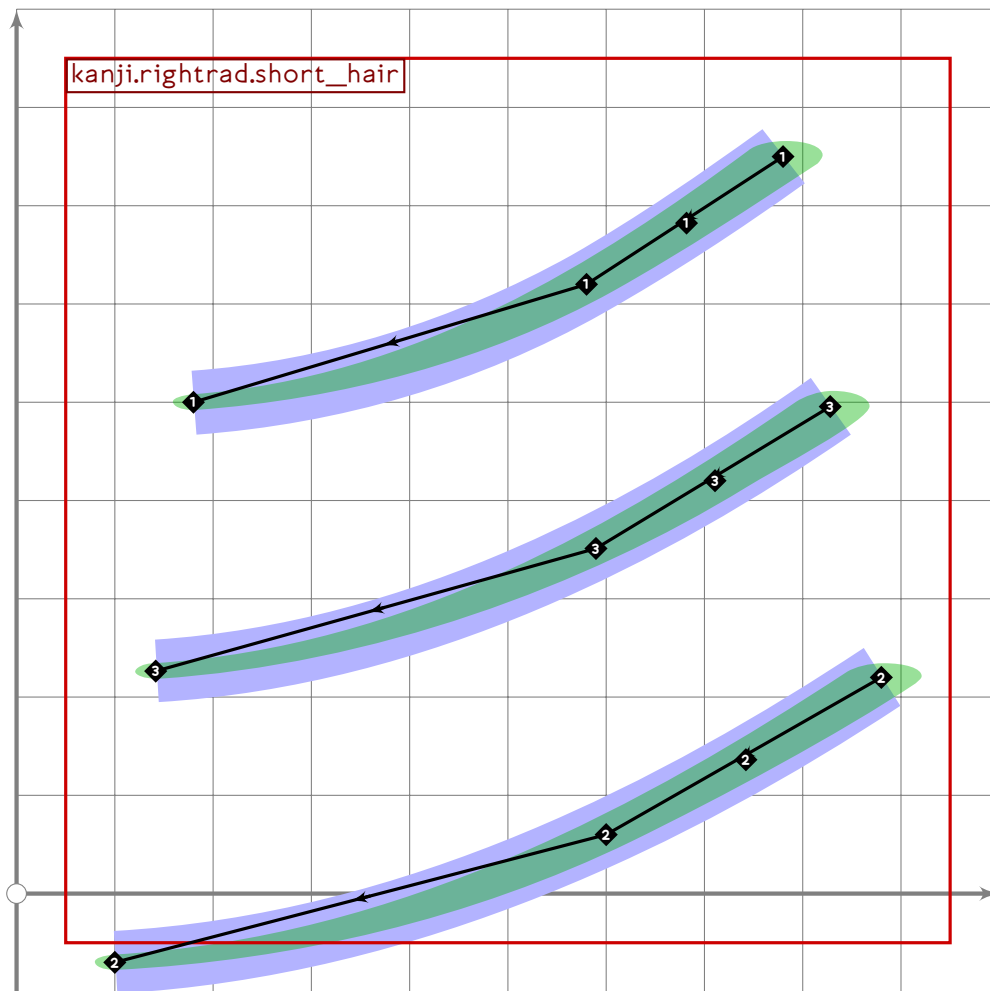
RIGH



```

95
96 vardef kanji.rightrad.professional =
97   push_pbox_toexpand("kanji.rightrad.professional");
98   build_kanji.tb(300,0)
99   (build_kanji.tb(420,80)
100    (kanji.grone.ten)
101    (kanji.grone.day);
102   replace_stroke(-4)((point 0 of oldp)-(point 0.5 of get_stroke(-1)));
103   push_stroke((670,820)..(730,780)..(780,710),
104    (1,1)-(14,14)-(18,18)))
105   (kanji.grsix.inch);
106   expand_pbox;
107 enddef;

```



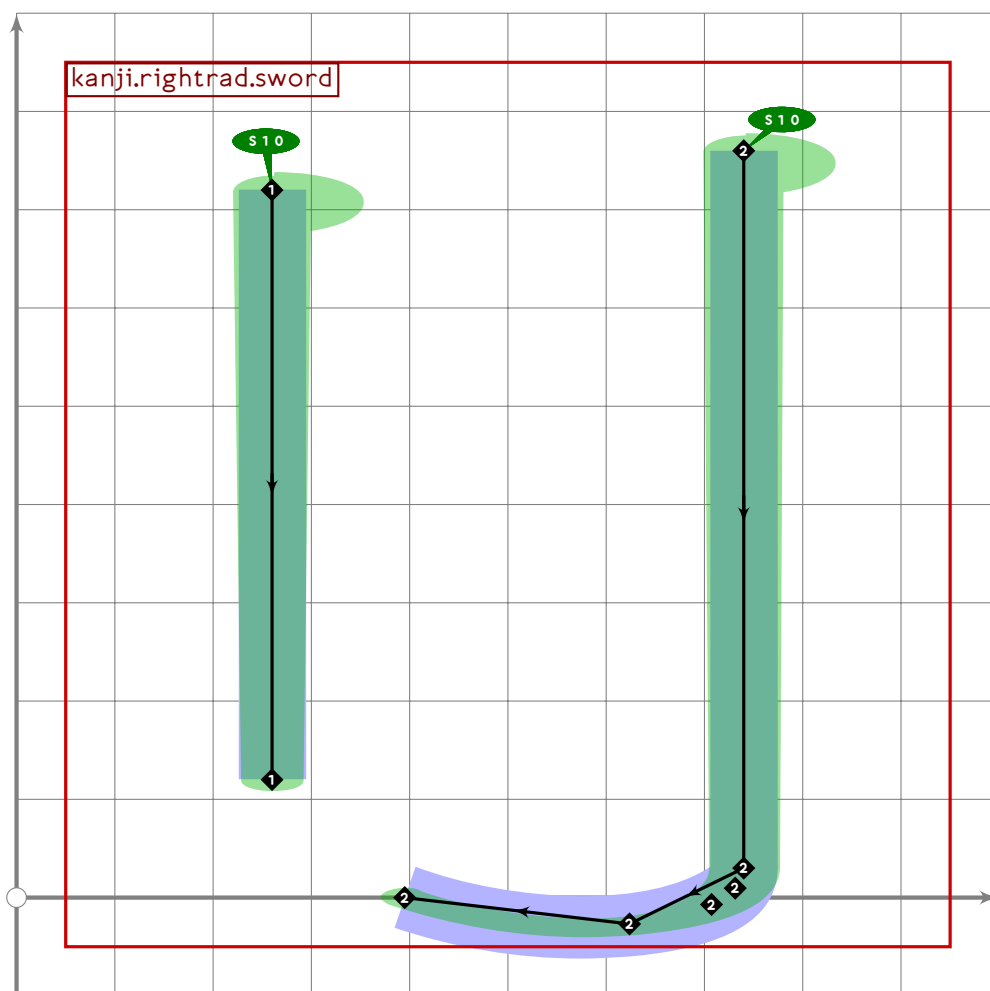
RIGH

```

108
109 vardef kanji.rightrad.short_hair =
110   push_pbox_toexpand("kanji.rightrad.short_hair");
111   push_stroke((780,750)..tension 1.2..(580,620)..(180,500),
112     (1.6,1.6)–(1.4,1.4)–(1.1,1.1));
113   push_stroke((880,220)..tension 1.2..(600,60)..(100,70),
114     (1.6,1.6)–(1.4,1.4)–(1.1,1.1));
115   push_stroke(interpath(0.52,get_stroke(0),get_stroke(-1)),
116     (1.6,1.6)–(1.4,1.4)–(1.1,1.1));
117   expand_pbox;
118 enddef;

```

RIGH



```

119
120 vardef kanji.rightrad.sword =
121   push_pbox__toexpand("kanji.rightrad.sword");
122   push_stroke((260,720)-(260,120),(1.6,1.6)-(14,14));
123   set_boserif(0,0,10);
124   push_stroke((740,760),(1.6,1.6));
125   set_boserif(0,0,10);
126   build_kanji.add_jtail(0);
127   replace_stroke(0)(oldp shifted (-740,0) xscaled 2.3 shifted (740,0));
128   expand_pbox;
129 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)–(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)–(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));

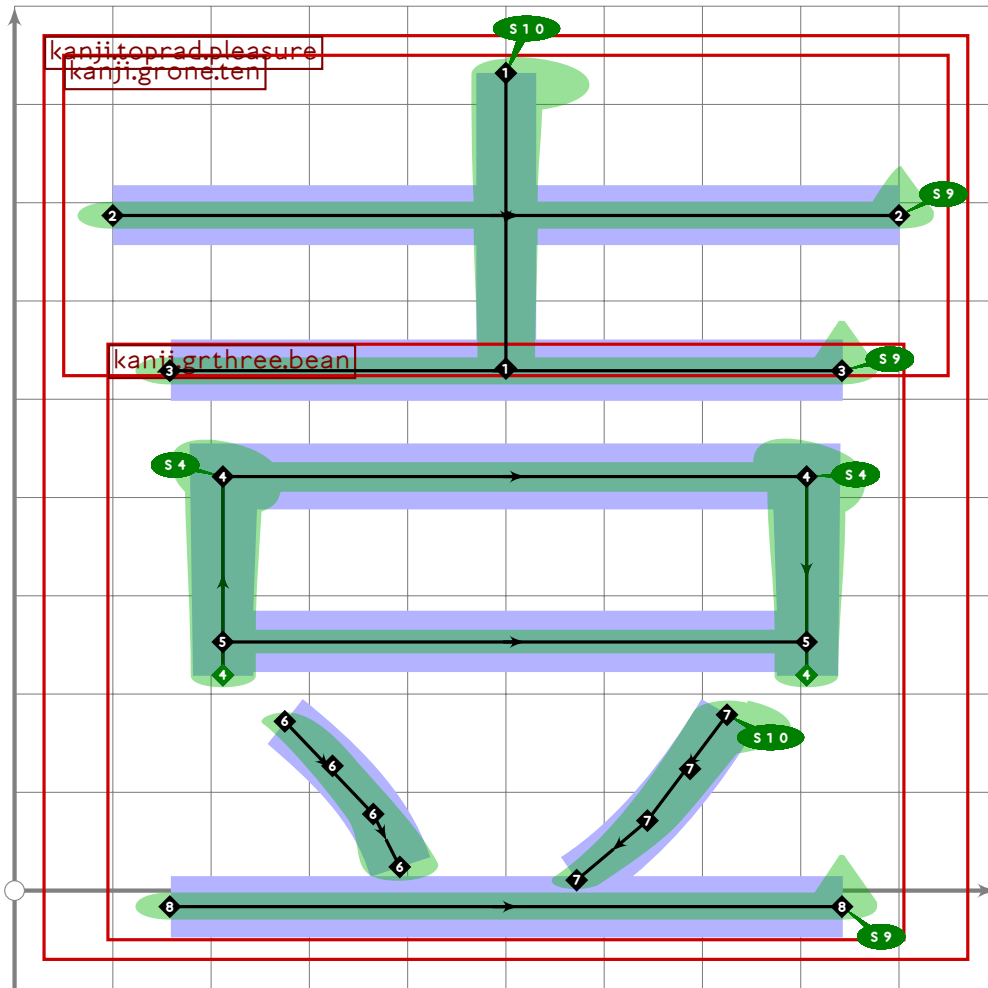
```



```

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.eyec);
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;

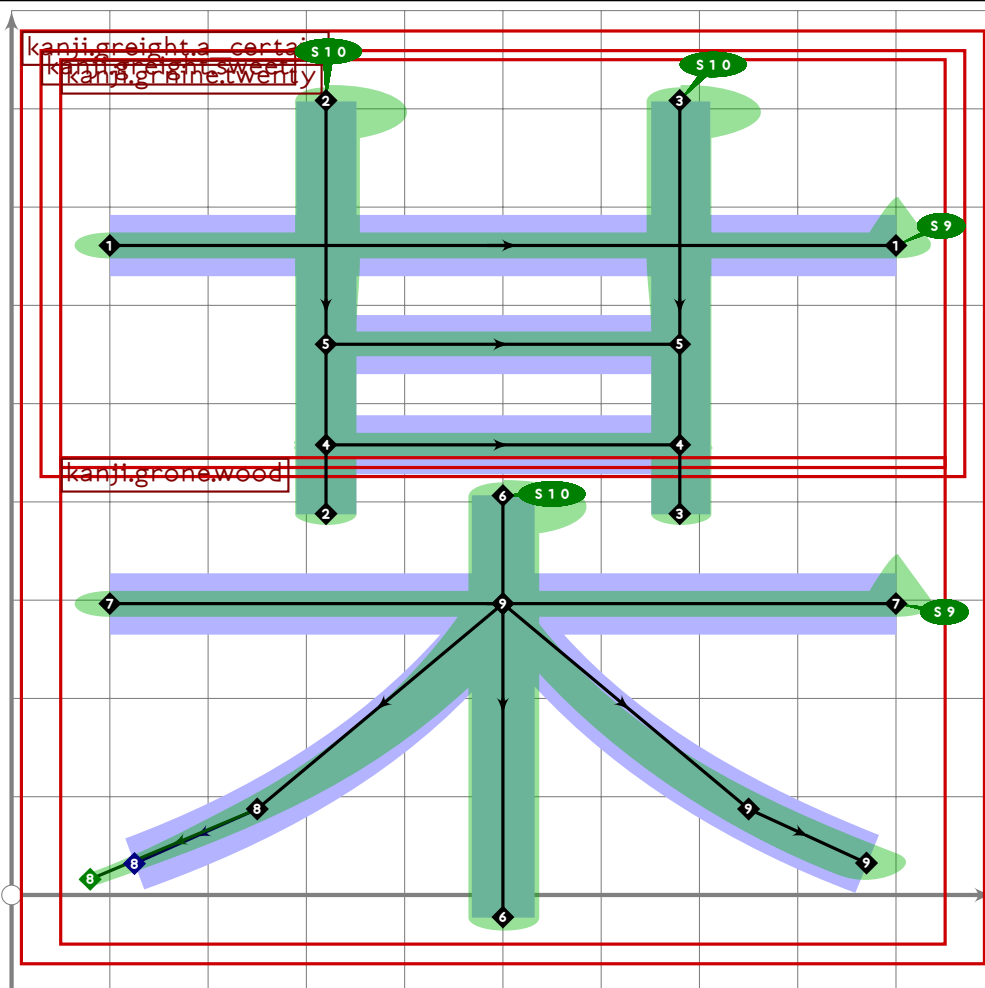
```

gradeeight.mp

```

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

```

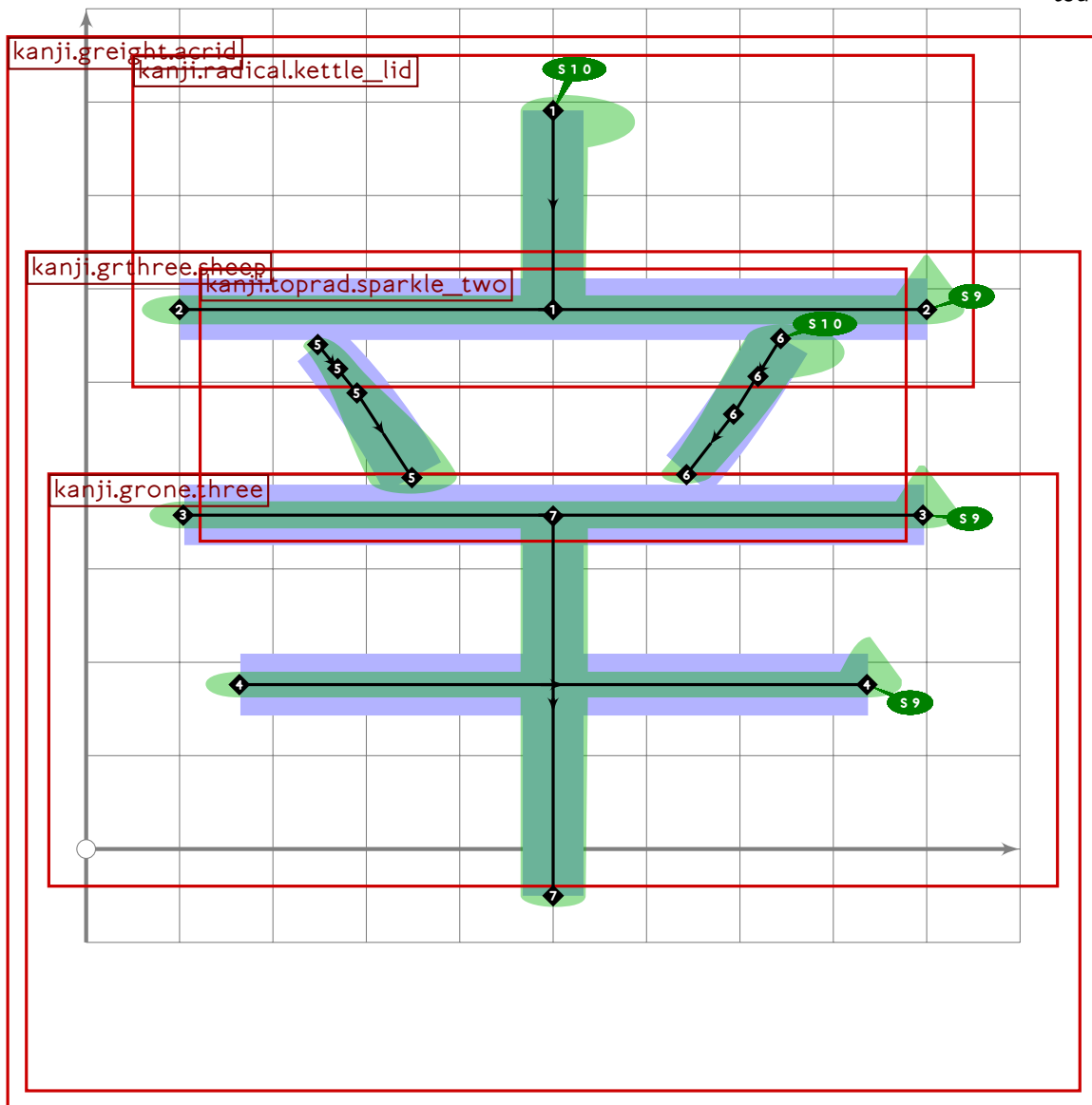


EIGH

```

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;

```



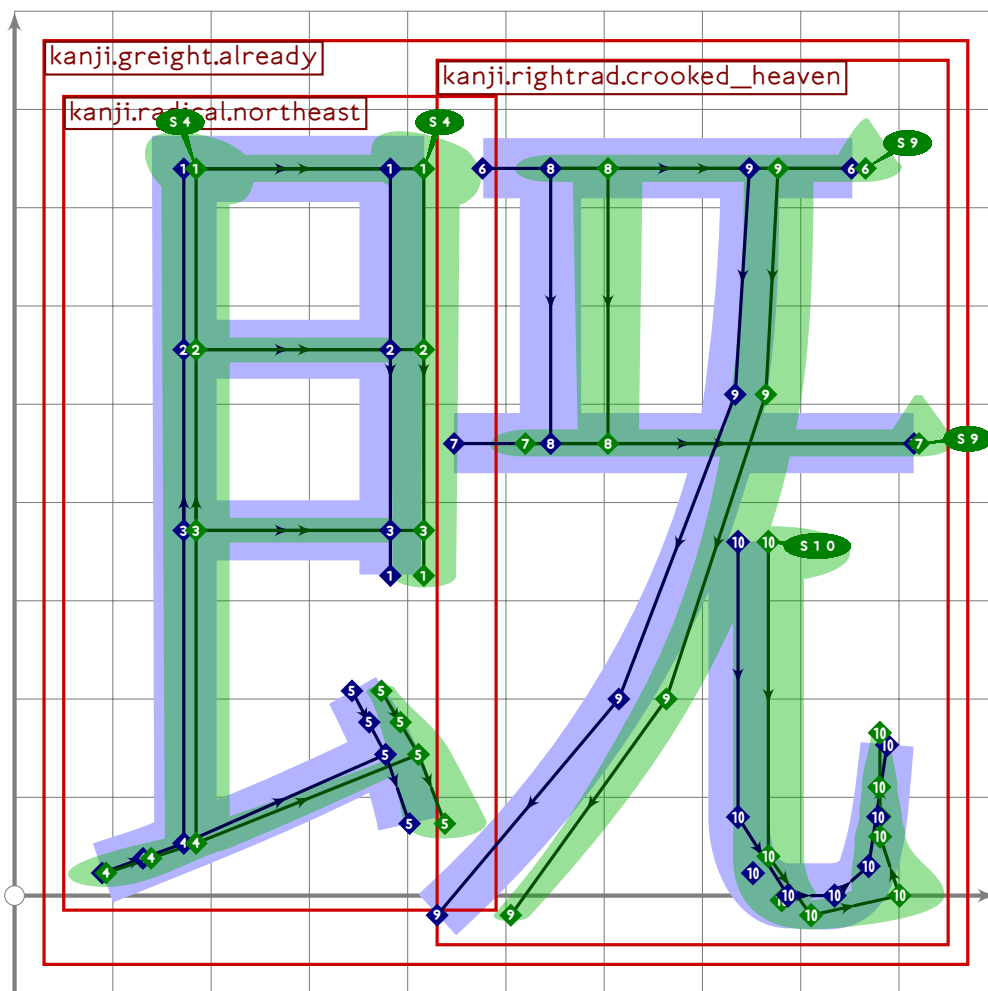
EIGH

```

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 (1.2,14) 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

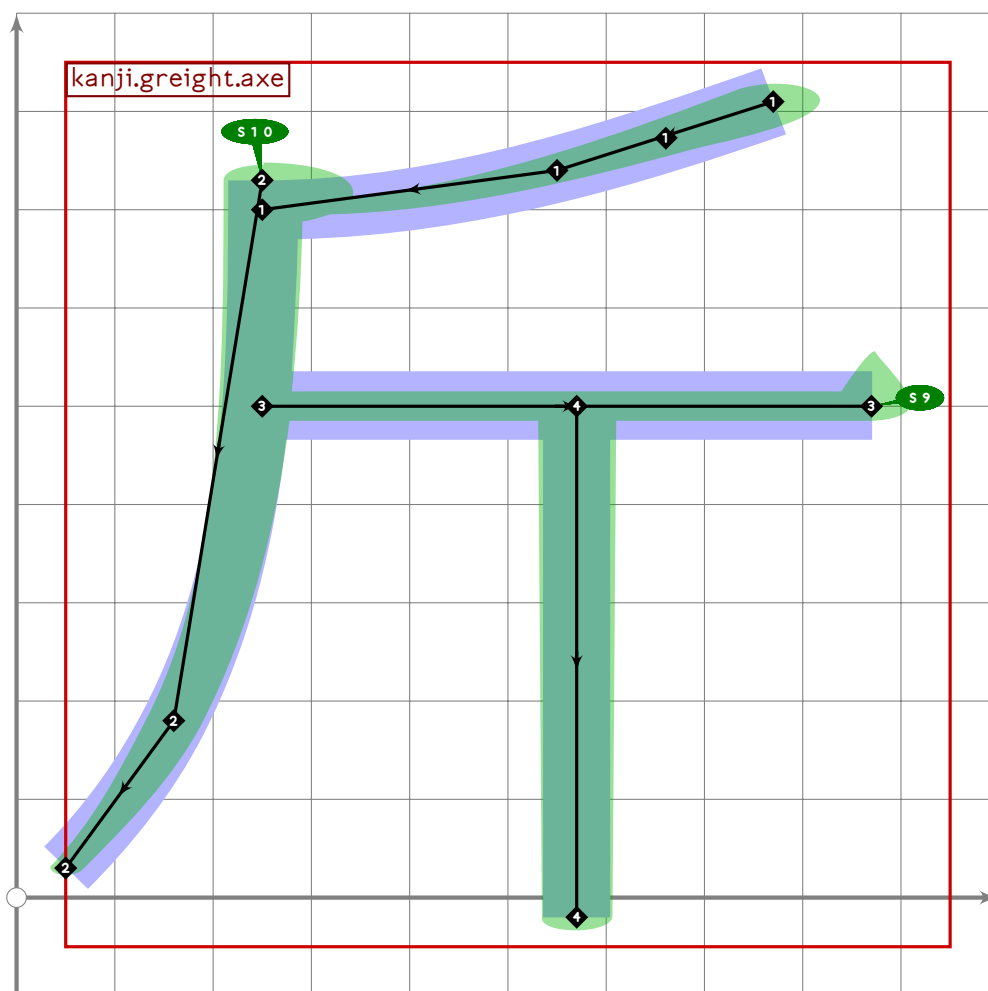


EIGH

```

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;

```

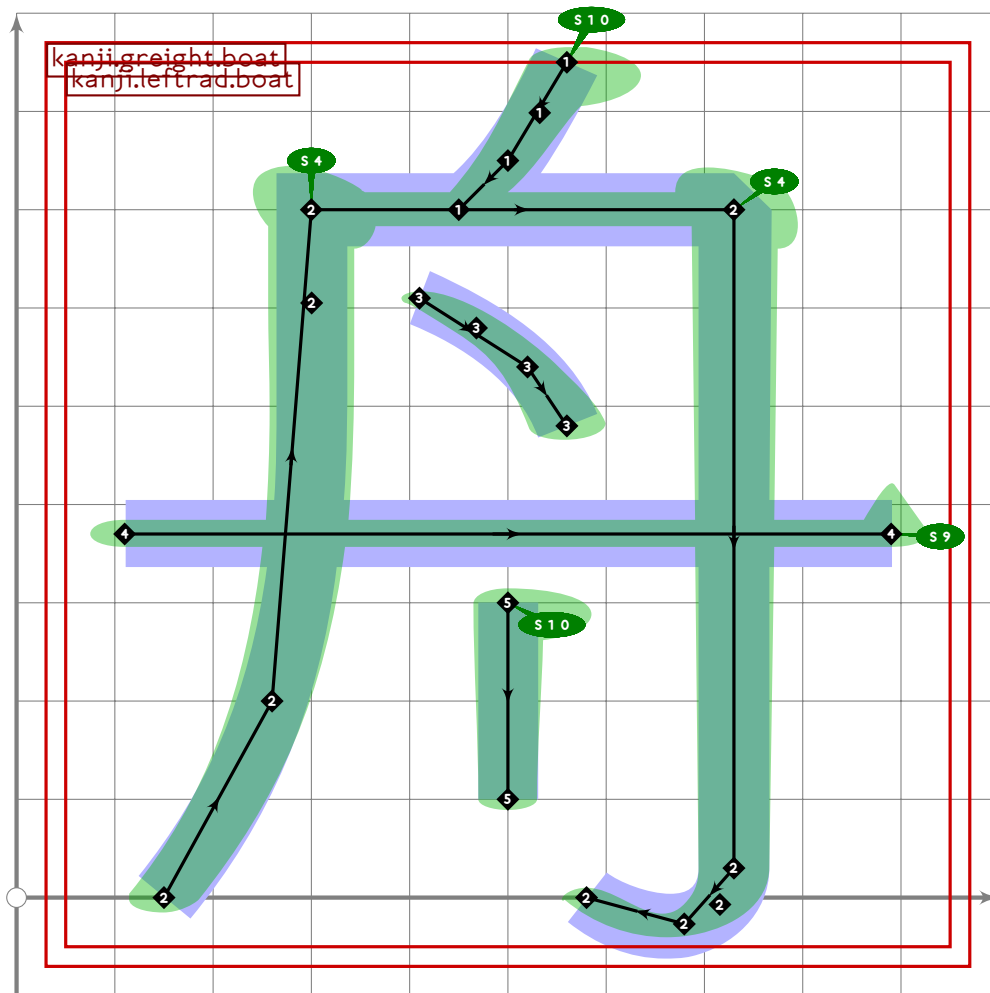
```

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

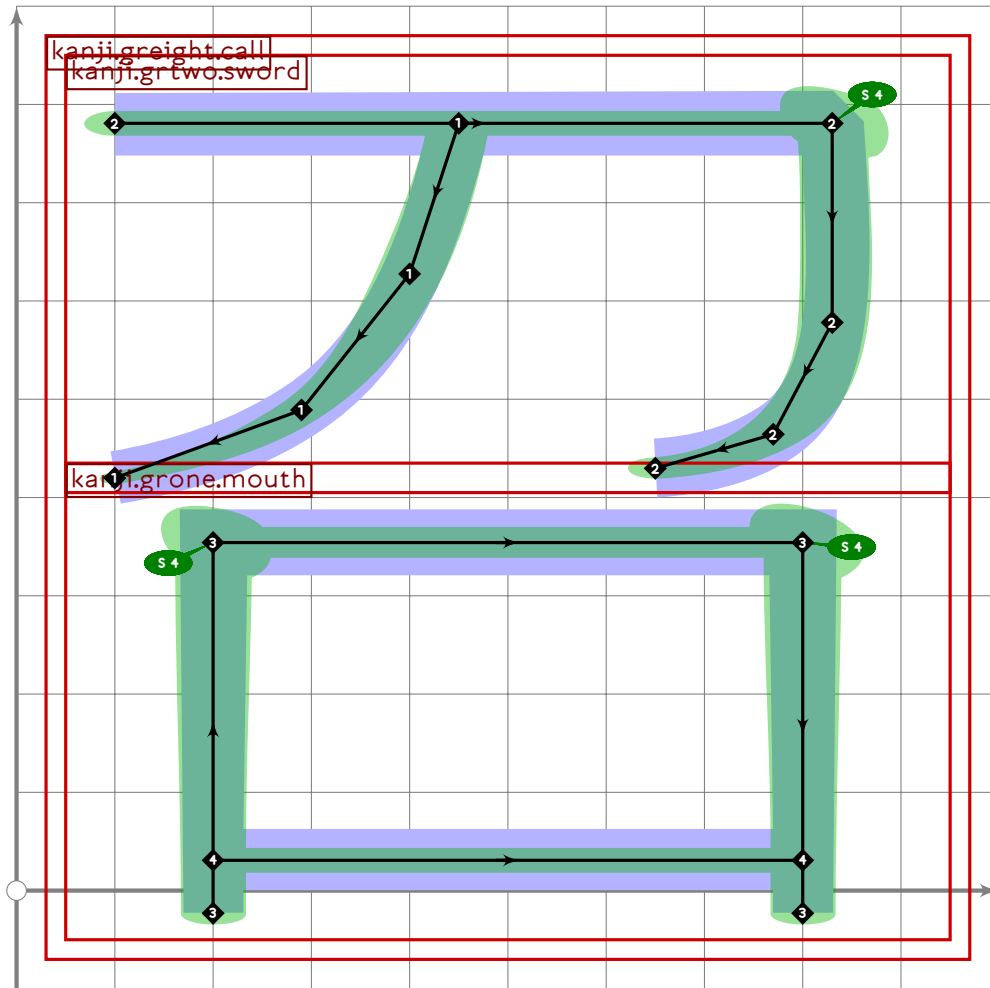


EIGH

```

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;

```



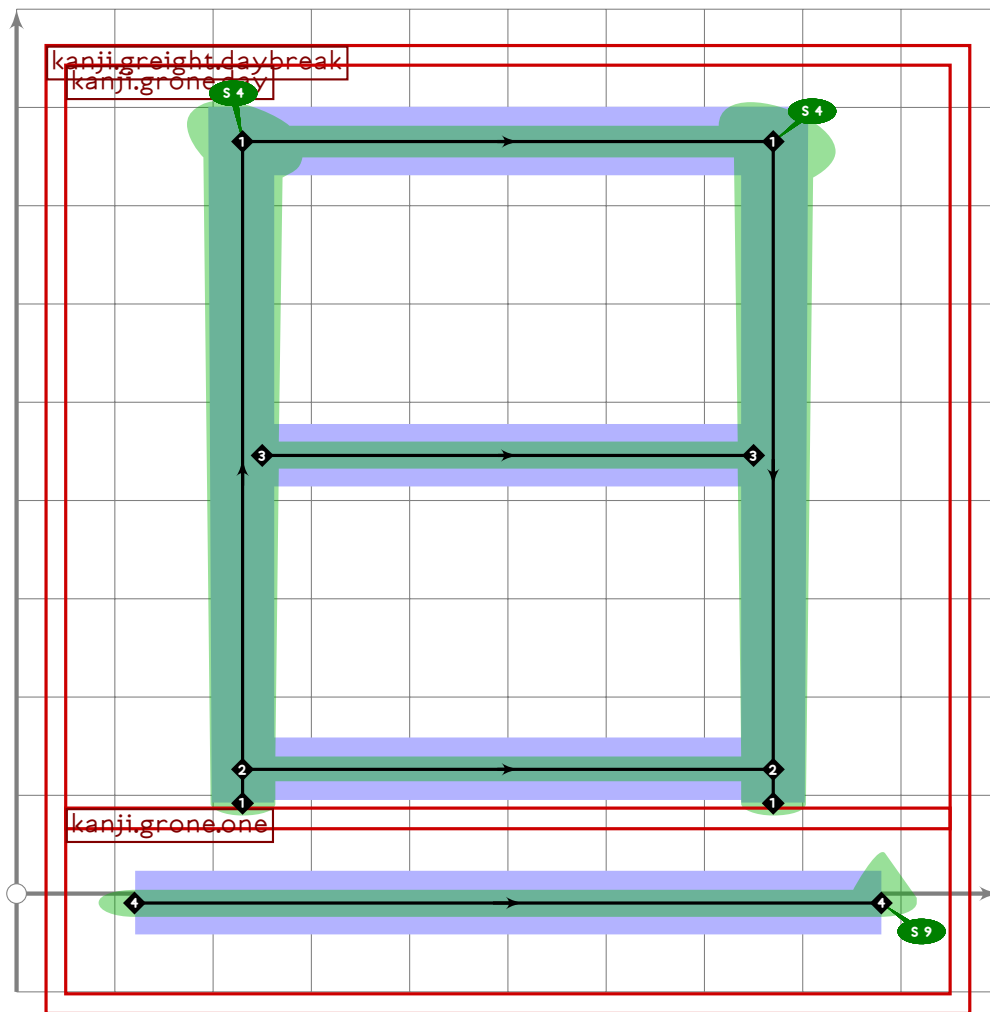
```

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+65E6
tsuku.uni65E6

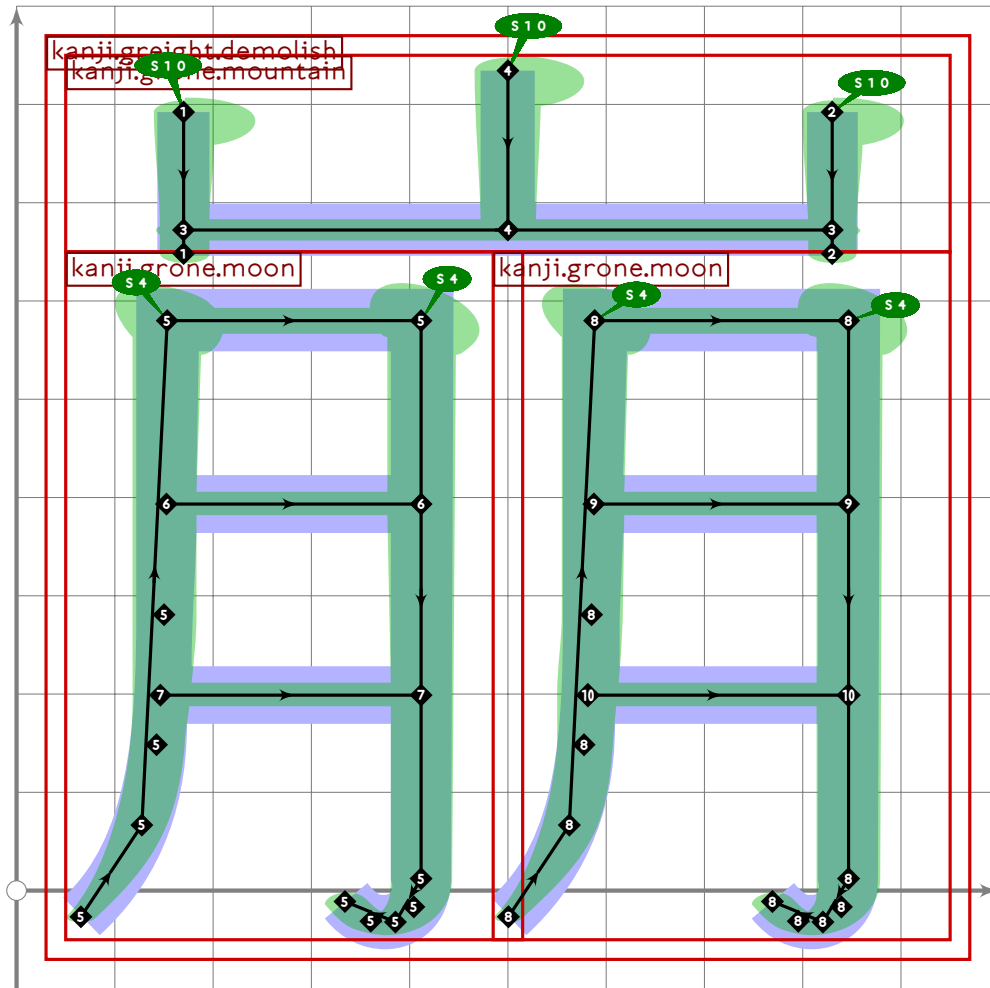


EIGH

```

92
93 vardef kanji.greight.daybreak =
94   push_pbox_toexpand("kanji.greight.daybreak");
95   build_kanji.sscale(yscaled 1.05 shifted (0,-30))
96     (build_kanji.level(build_kanji.tb(120,20)
97       (kanji.grone.day)
98       (kanji.grone.one)));
99   expand_pbox;
100 enddef;

```



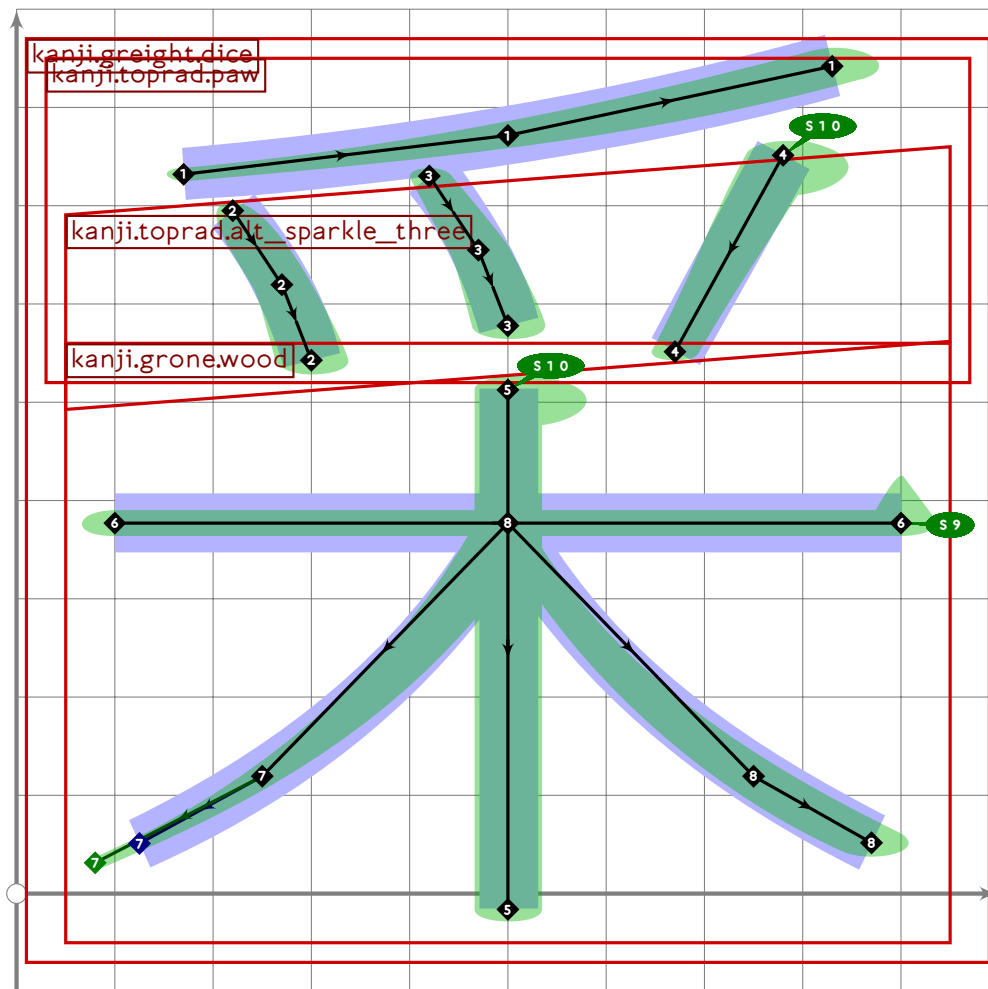
```

101
102 vardef kanji.greight.demolish =
103   push_pbox_toexpand("kanji.greight.demolish");
104   build_kanji.tb(650,0)
105     (kanji.grone.mountain)
106     (build_kanji.lr(500,30)
107      (kanji.grone.moon)
108      (kanji.grone.moon));
109   expand_pbox;
110 enddef;

```

EIGH

U+91C7
tsuku.uni91C7

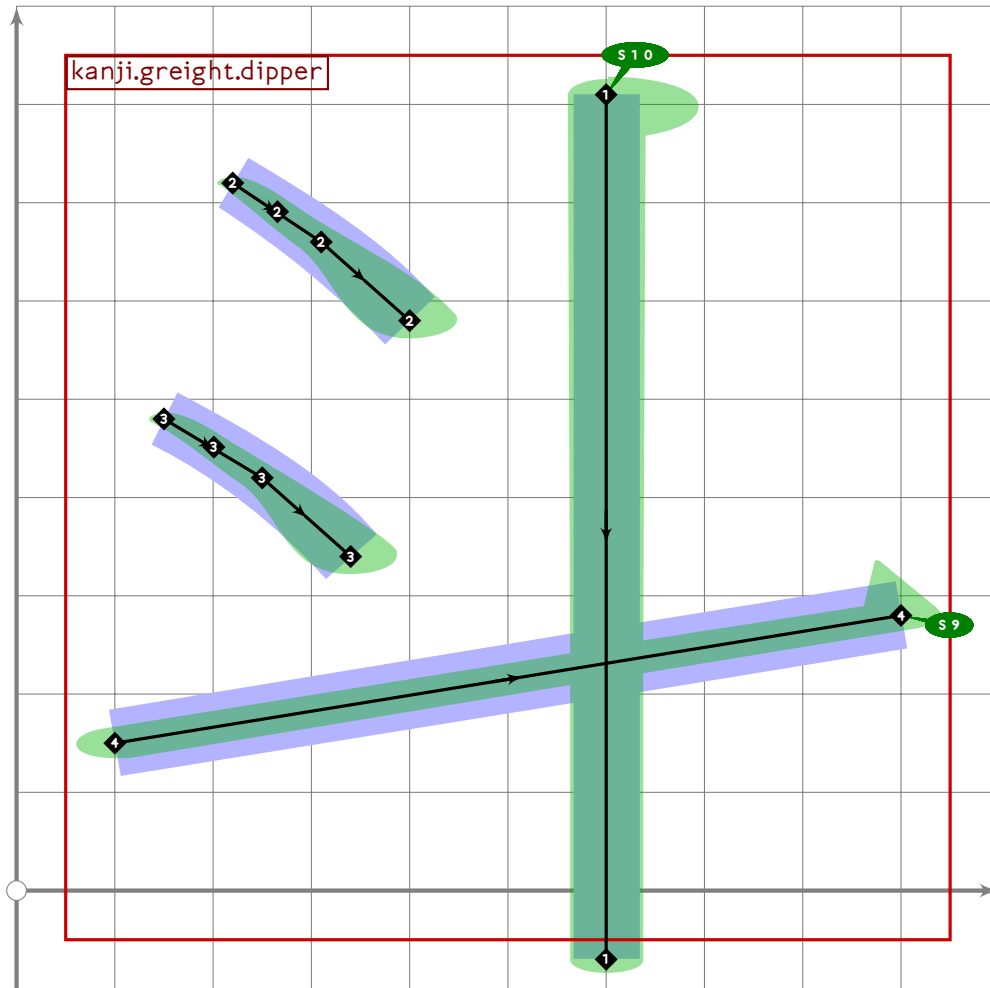


EIGH

```

111
112 vardef kanji.greight.dice =
113   push_pbox_toexpand("kanji.greight.dice");
114   build_kanji.level(build_kanji.tb(540,40)
115     (kanji.toprad.paw)
116     (kanji.grone.wood));
117   expand_pbox;
118 enddef;

```

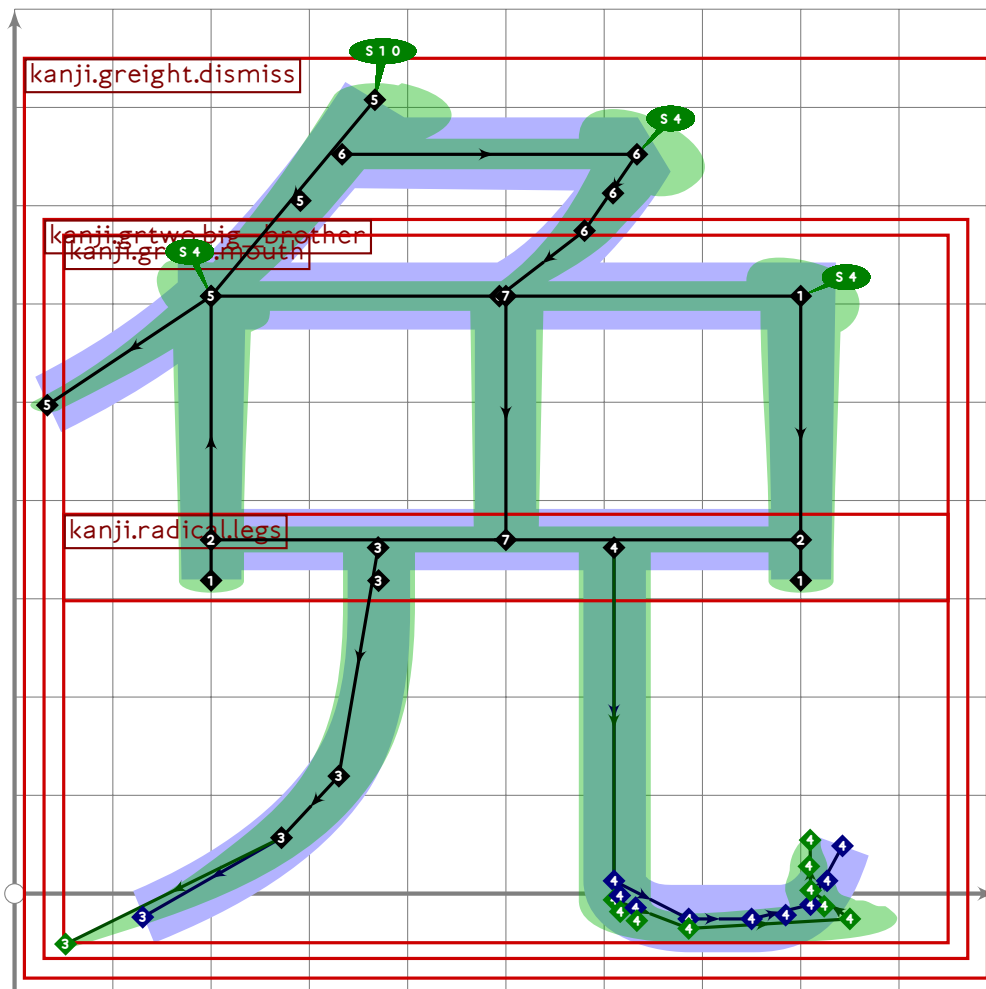


```

119
120 vardef kanji.greight.dipper =
121   push_pbox__toexpand("kanji.greight.dipper");
122   push_stroke((600,810)-(600,-70),(1.6,1.6)-(1.5,1.5));
123   set_boserif(0,0,10);
124   push_stroke((220,720)..tension 1.2..(310,660)..(400,580),
125     (1,1)-(1.3,1.3)-(1.9,1.9));
126   set_bosize(0,94);
127   push_stroke((150,480)..tension 1.2..(250,420)..(340,340),
128     (1,1)-(1.3,1.3)-(1.9,1.9));
129   set_bosize(0,94);
130   push_stroke((100,150)-(900,280),(1.6,1.6)-(1.6,1.6));
131   set_boserif(0,1,9);
132   expand_pbox;
133 enddef;

```

EIGH

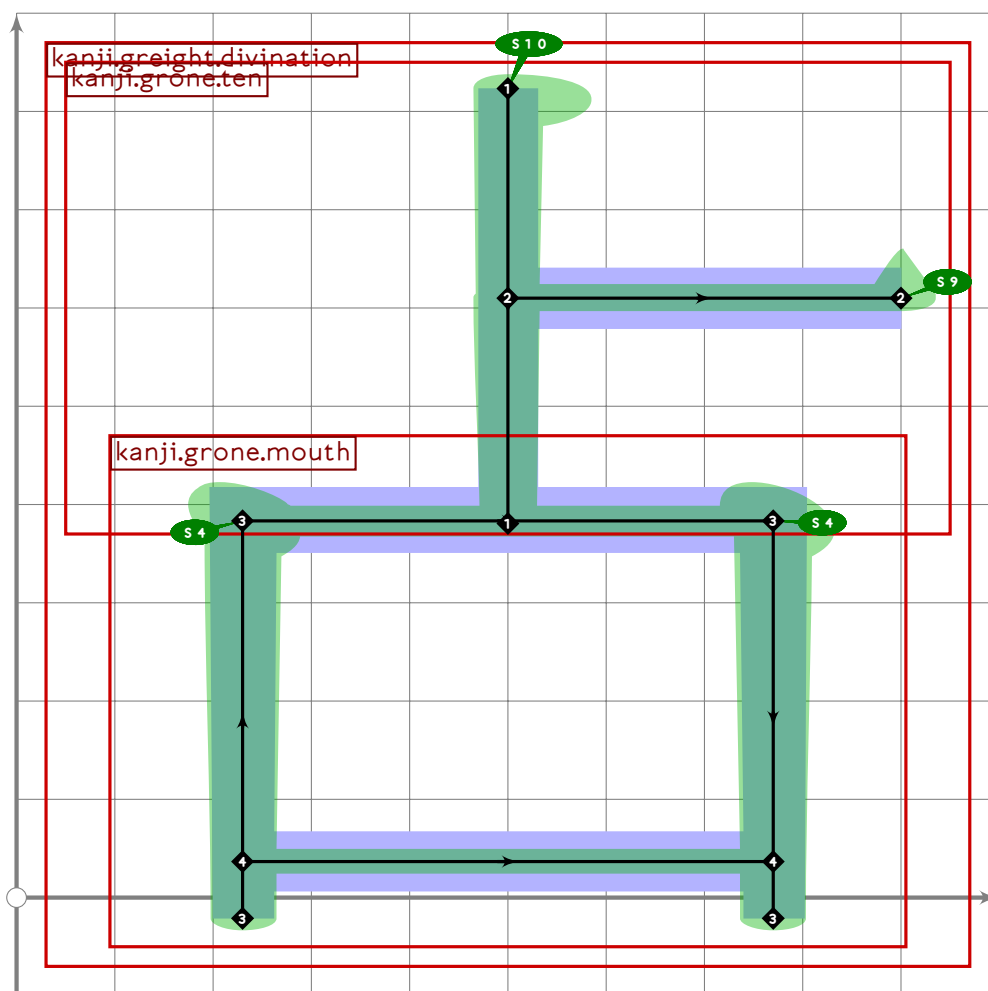


EIGH

```

134
135 vardef kanji.greight.dismiss =
136   push_pbox_toexpand("kanji.greight.dismiss");
137   build_kanji.attach_fishhook(0.8)(kanji.grtwo.big_brother);
138   push_stroke(
139     (point 1.5 of get_stroke(-5))-(point 0.5 of get_stroke(-4)),
140     (1.6,1.6)-(1.5,1.5));
141   set_bosize(0,get_bosize(-5));
142   expand_pbox;
143 enddef;

```

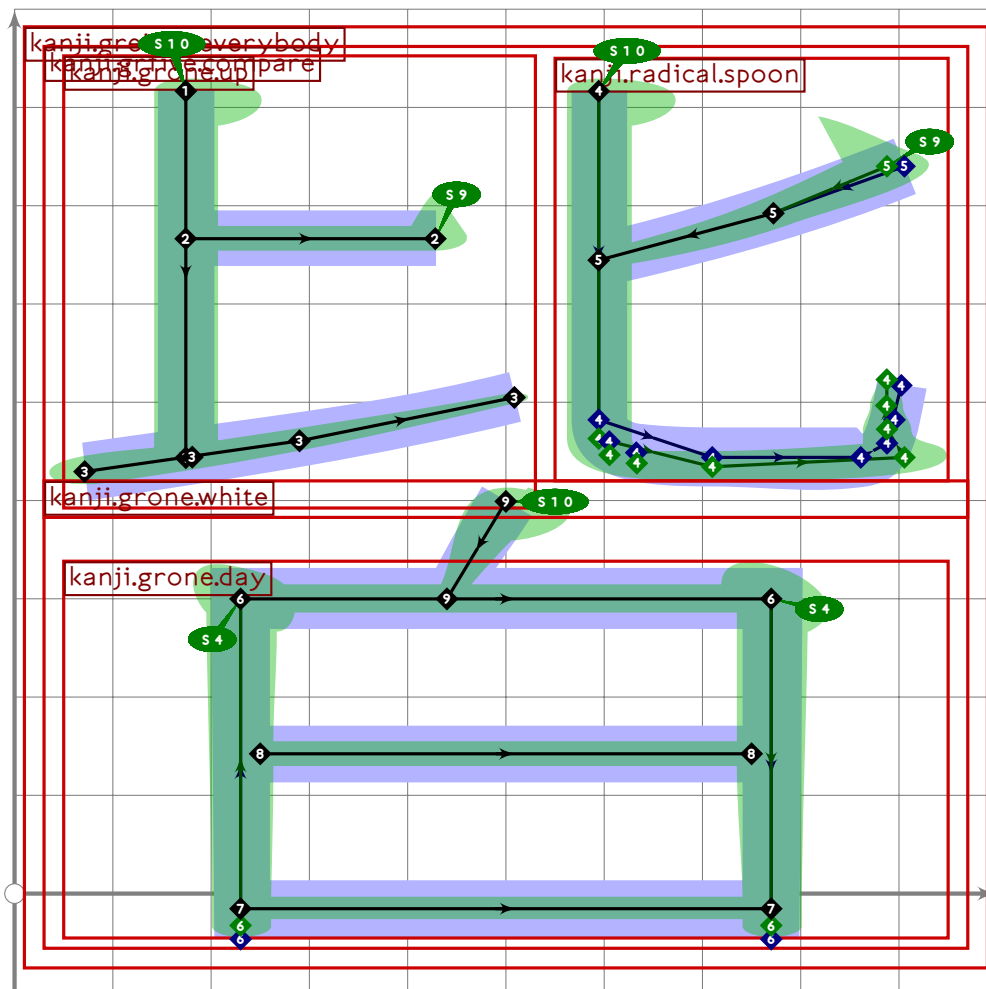



```

144
145 vardef kanji.greight.divination =
146   push_pbox__toexpand("kanji.greight.divination");
147   build_kanji.level(build_kanji.tb(420,100)
148     (kanji.grone.ten;
149       replace_strokep(0)(subpath (0.5,1) of oldp))
150     (build_kanji.sscale(xscaled 0.9)(kanji.grone.mouth)));
151   expand_pbox;
152 enddef;

```

EIGH

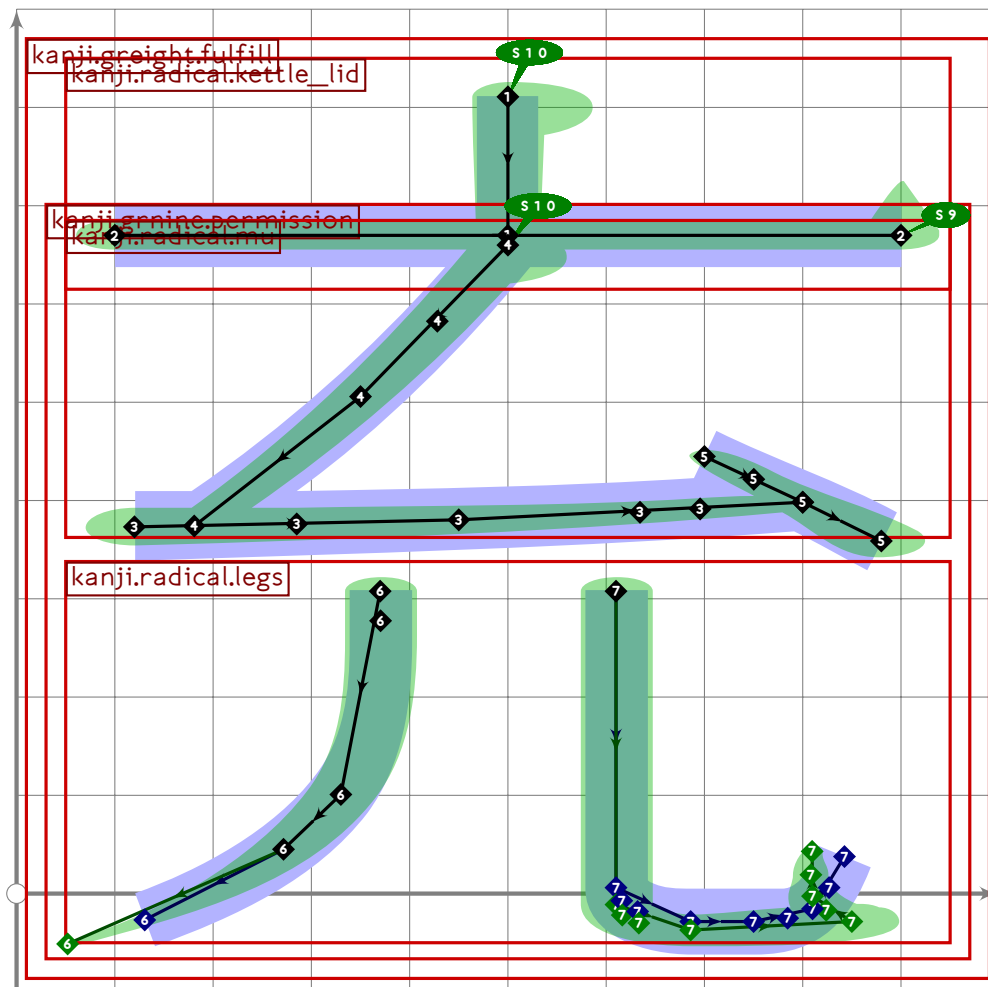


EIGH

```

153
154 vardef kanji.greight.everybody =
155   push_pbox_toexpand("kanji.greight.everybody");
156   build_kanji.level(build_kanji.tb(420,0)
157     (kanji.grfive.compare)
158     (kanji.grone.white));
159   expand_pbox;
160 enddef;

```



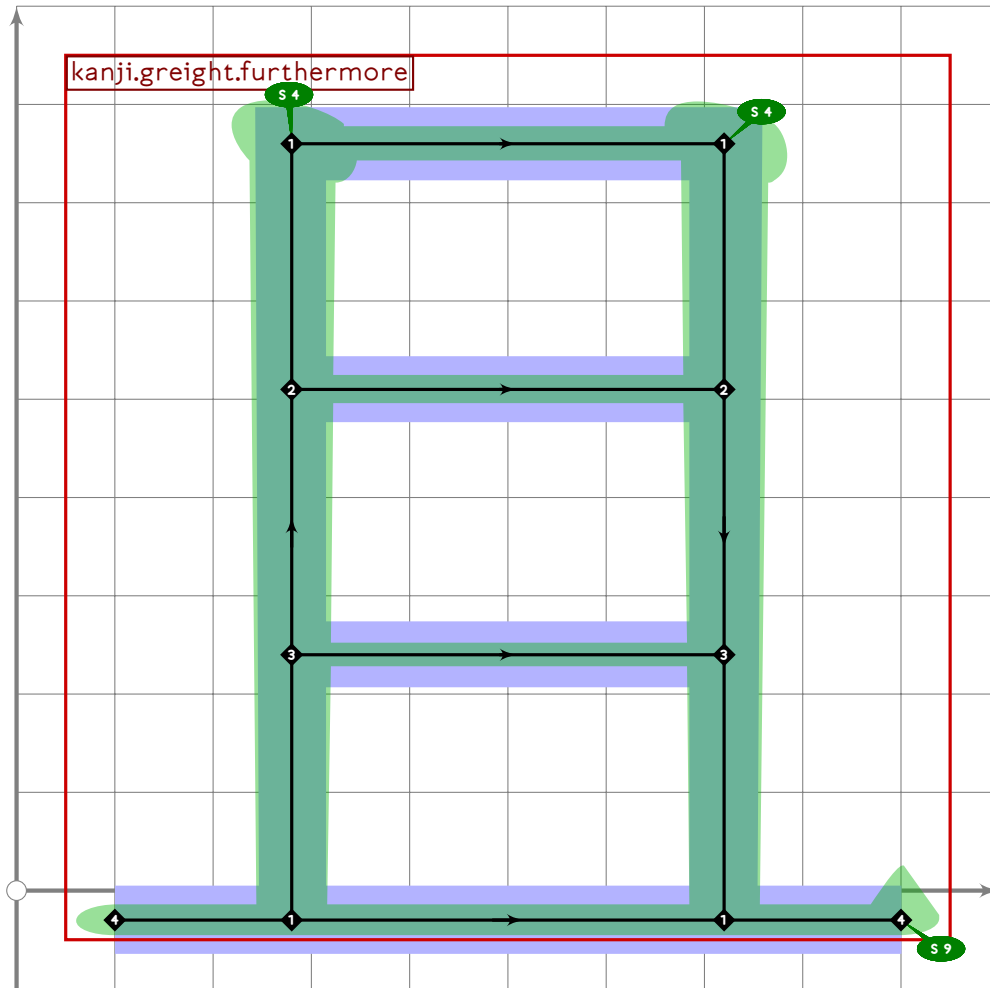
```

161
162 vardef kanji.greight.fulfill =
163   push_pbox_toexpand("kanji.greight.fulfill");
164   build_kanji.level(build_kanji.tb(650,70)
165     (kanji.radical.kettle_lid)
166     (kanji.grnine.permission));
167   expand_pbox;
168 enddef;

```

EIGH

U+4E14
tsuku.uni4E14

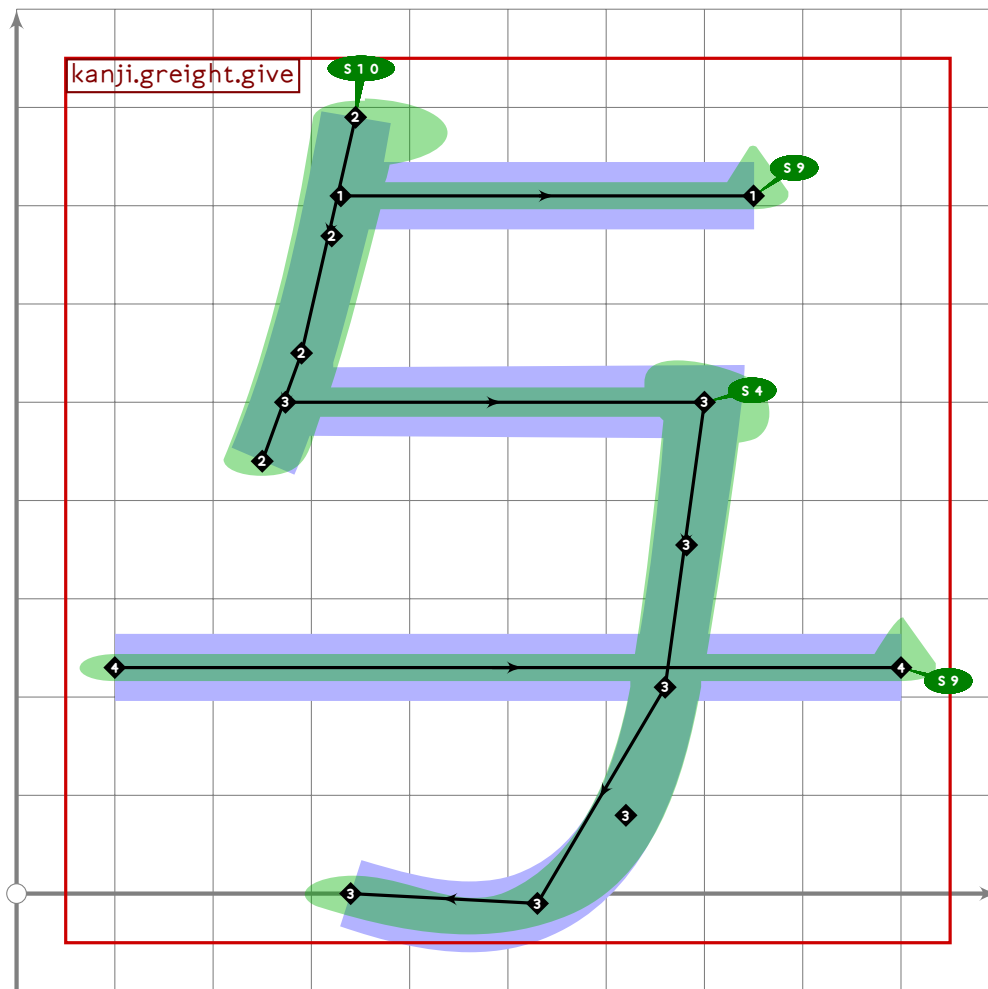


IGH

```

169
170 vardef kanji.greight.furthermore =
171   push_pbox_toexpand("kanji.greight.furthermore");
172   push_stroke((280,-30)-(280,760)-(720,760)-(720,-30),
173     (1.5,1.5)-(1.7,1.7)-(1.7,1.7)-(1.5,1.5));
174   set_botip(0,1,1);
175   set_botip(0,2,1);
176   set_boserif(0,1,4);
177   set_boserif(0,2,4);
178   push_stroke((280,510)-(720,510),
179     (1.5,1.5)-(1.5,1.5));
180   push_stroke((280,240)-(720,240),
181     (1.4,1.4)-(1.4,1.4));
182   push_stroke((100,-30)-(900,-30),
183     (1.6,1.6)-(1.6,1.6));
184   set_boserif(0,1,9);
185   expand_pbox;
186 enddef;

```



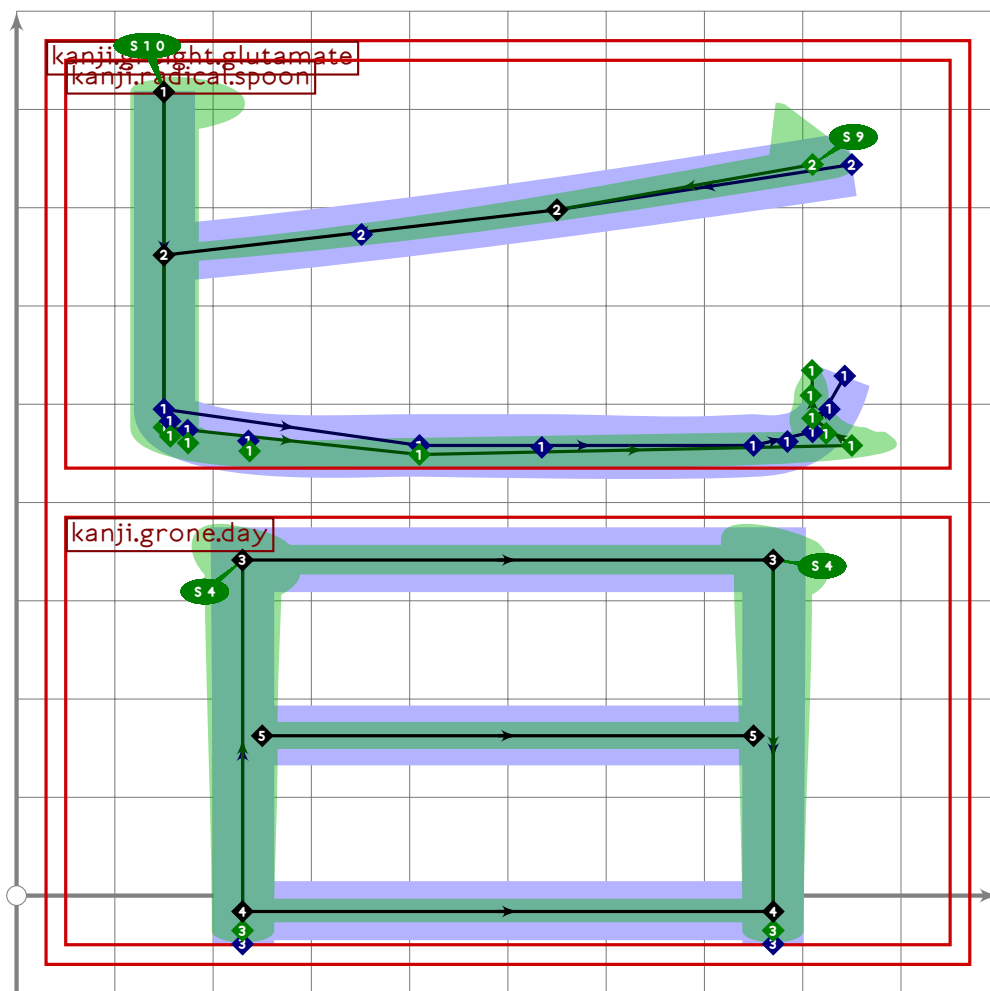
```

187
188 vardef kanji.greight.give =
189   push_pbox__toexpand("kanji.greight.give");
190   push_stroke((330,710)–(750,710),(1.5,1.5)–(1.5,1.5));
191   set_boserif(0,1,9);
192   push_stroke((345,790)..tension 1.2..(290,550)..(250,440),
193     (1.7,1.7)–(1.6,1.6)–(1.6,1.6));
194   set_boserif(0,0,10);
195   push_stroke((get_strokep(0) intersectionpoint ((0,500)–(1000,500)))–
196     (700,500)..tension 14..(660,210)..(530,10)..{curl 0.1}(340,0),
197     (1.6,1.6)–(1.6,1.6)–(1.5,1.5)–(1.7,1.7)–(1.8,1.8));
198   set_botip(0,1,1);
199   set_boserif(0,1,4);
200   push_stroke((100,230)–(900,230),(1.5,1.5)–(1.5,1.5));
201   set_boserif(0,1,9);
202   expand_pbox;
203 enddef;
204

```

EIGH

U+65E8
tsuku.uni65E8

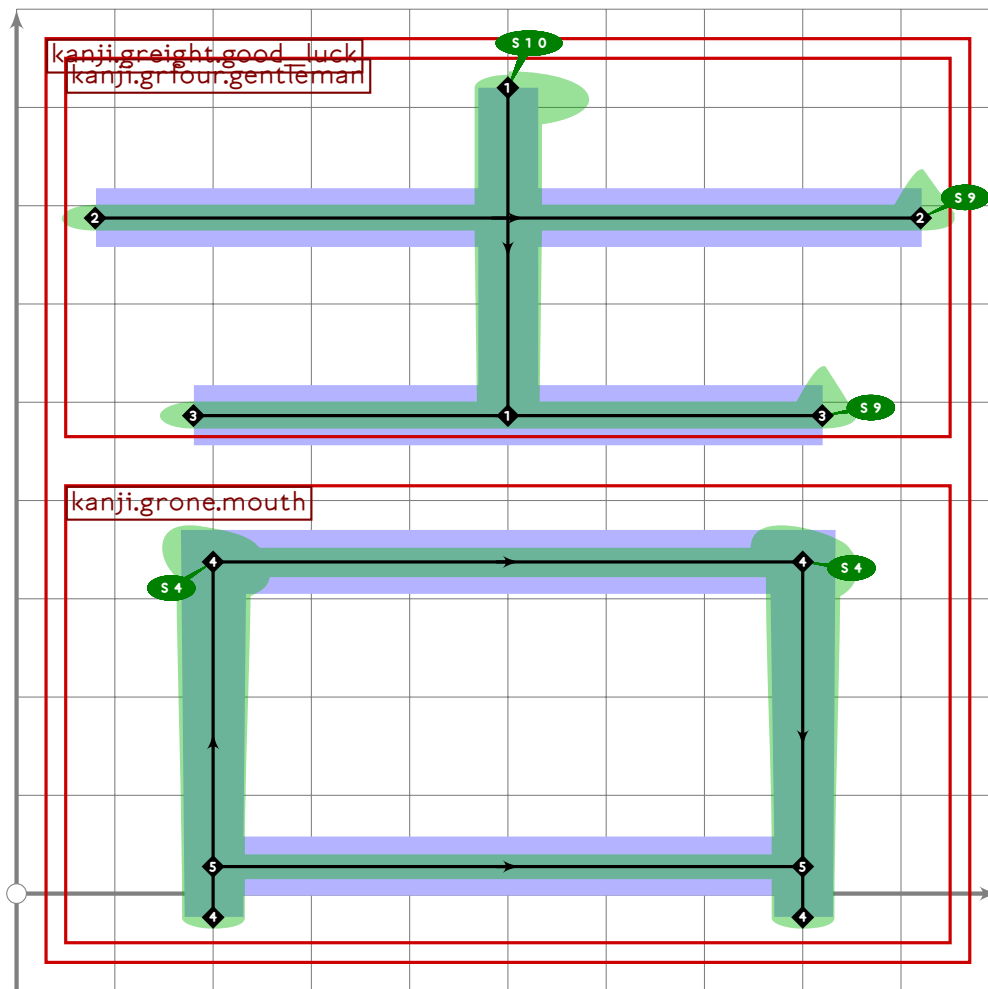


EIGH

```

205 % this actually means sort of generically "good", but it's "uma" in
206 % "umami" and needs to be distinguished from other vague kanji
207 vardef kanji.greight.glutamate =
208   push_pbox_toexpand("kanji.greight.glutamate");
209   build_kanji.level(build_kanji.tb(410,-50)
210     (kanji.radical.spoon)
211     (kanji.grone.day));
212   expand_pbox;
213 enddef;

```

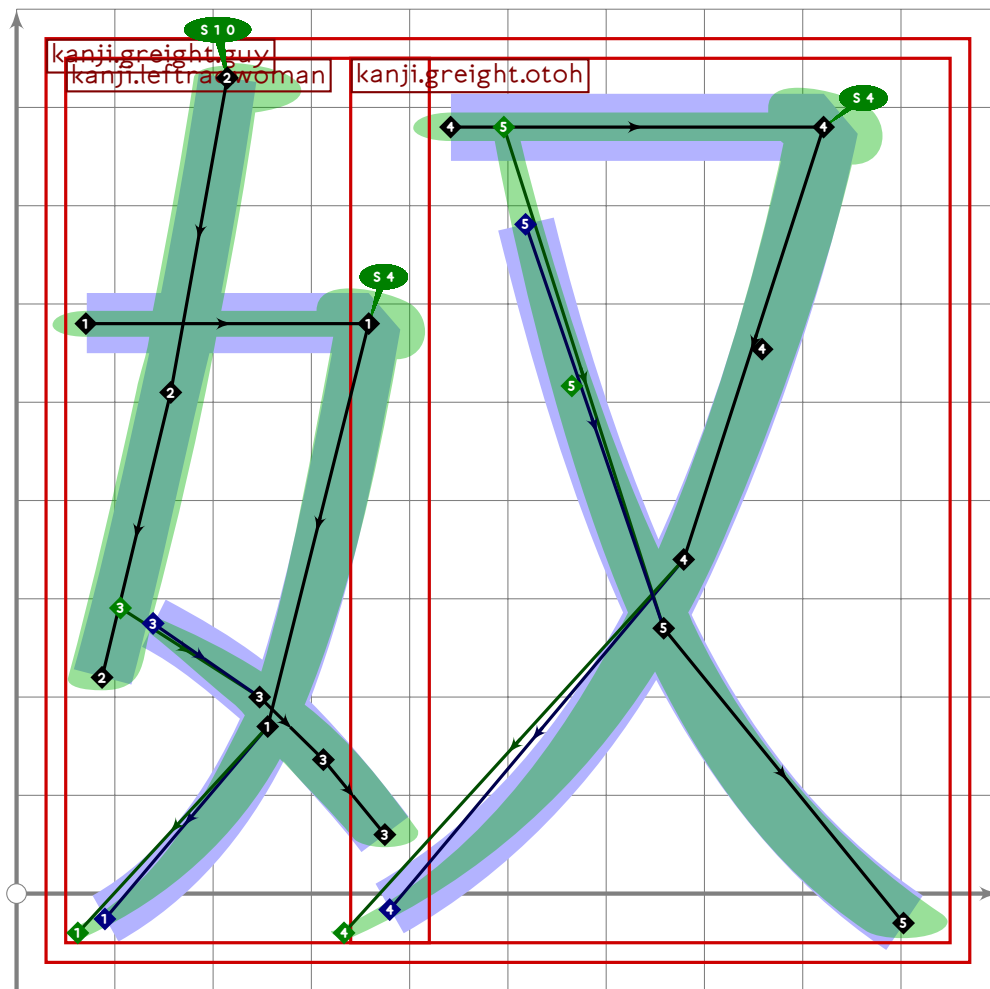


```

214
215 vardef kanji.greight.good_luck =
216   push_pbox_toexpand("kanji.greight.good_luck");
217   build_kanji.level(build_kanji.tb(440,-50)
218     (kanji.grfour.gentleman)
219     (kanji.grone.mouth));
220   expand_pbox;
221 enddef;

```

EIGH

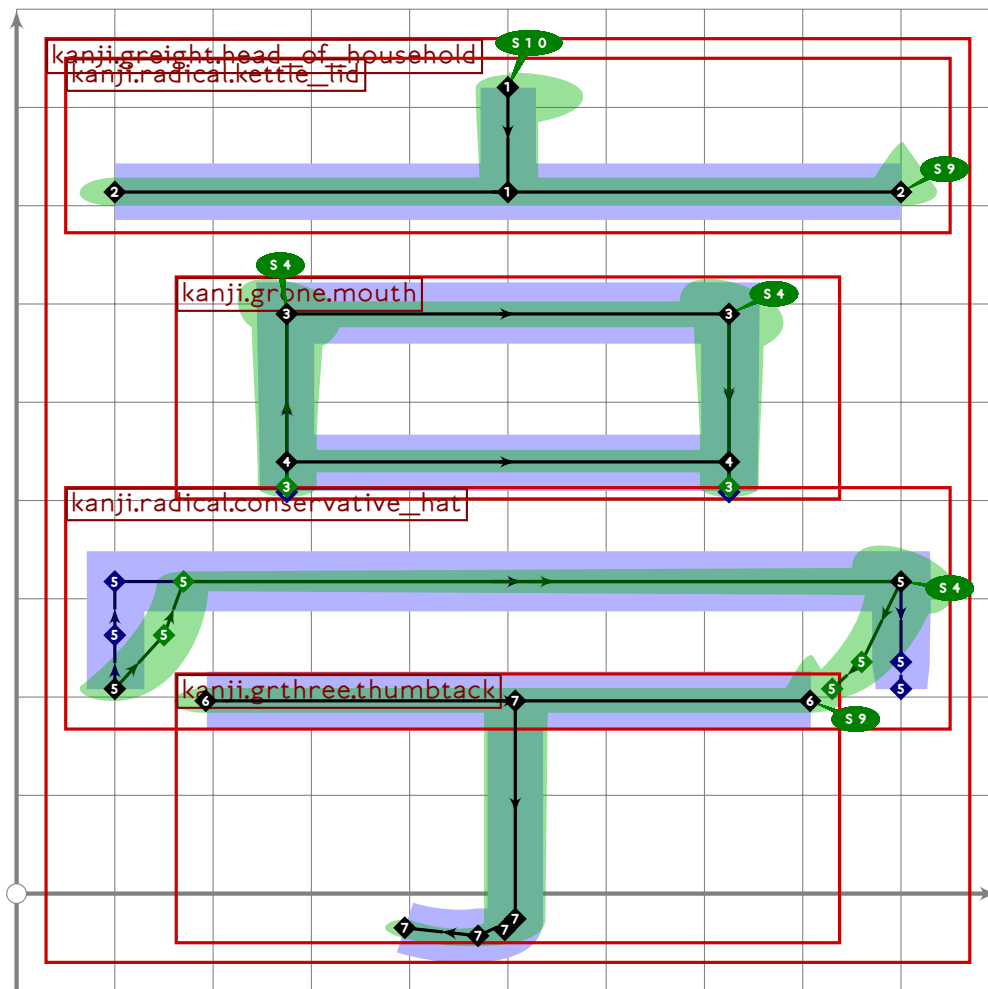


EIGH

```

222
223 vardef kanji.greight.guy =
224   push_pbox_toexpand("kanji.greight.guy");
225   build_kanji.lr(380,80)
226     (kanji.leftrad.woman)
227     (kanji.greight.otoh);
228   expand_pbox;
229 enddef;

```

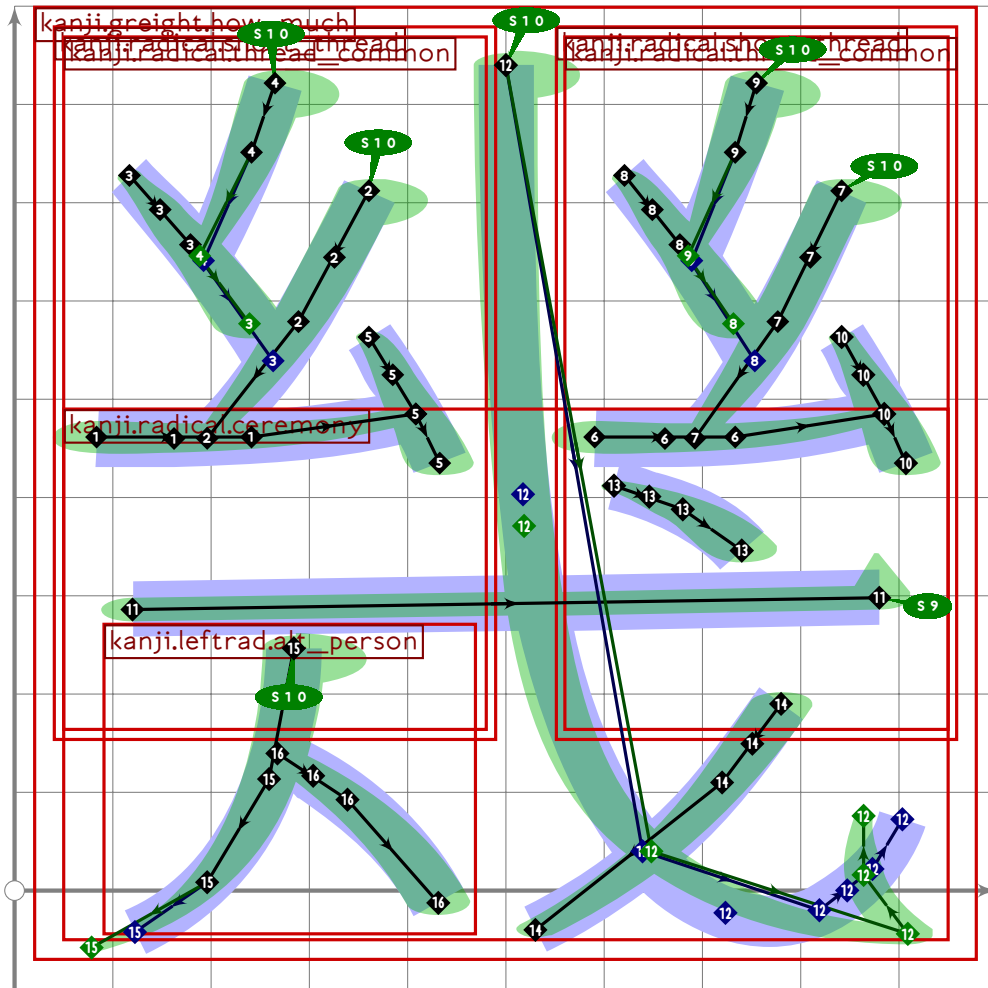
```

230
231 vardef kanji.greight.head_of_household =
232   push_pbox_toexpand("kanji.greight.head_of_household");
233   build_kanji.level(build_kanji.tb(650,-45)
234     (kanji.radical.kettle_lid)
235     (build_kanji.tb(550,0)
236       (build_kanji.sscale(xscaled 0.75)(kanji.grone.mouth))
237       (build_kanji.tb(450,90)
238         (build_kanji.sscale(yscaled 1.1)(kanji.radical.conservative_hat))
239         (build_kanji.sscale(xscaled 0.75)(kanji.grthree.thumbtack)))));
240   expand_pbox;
241 enddef;

```

EIGH

U+5E7E
tsuku.uni5E7E

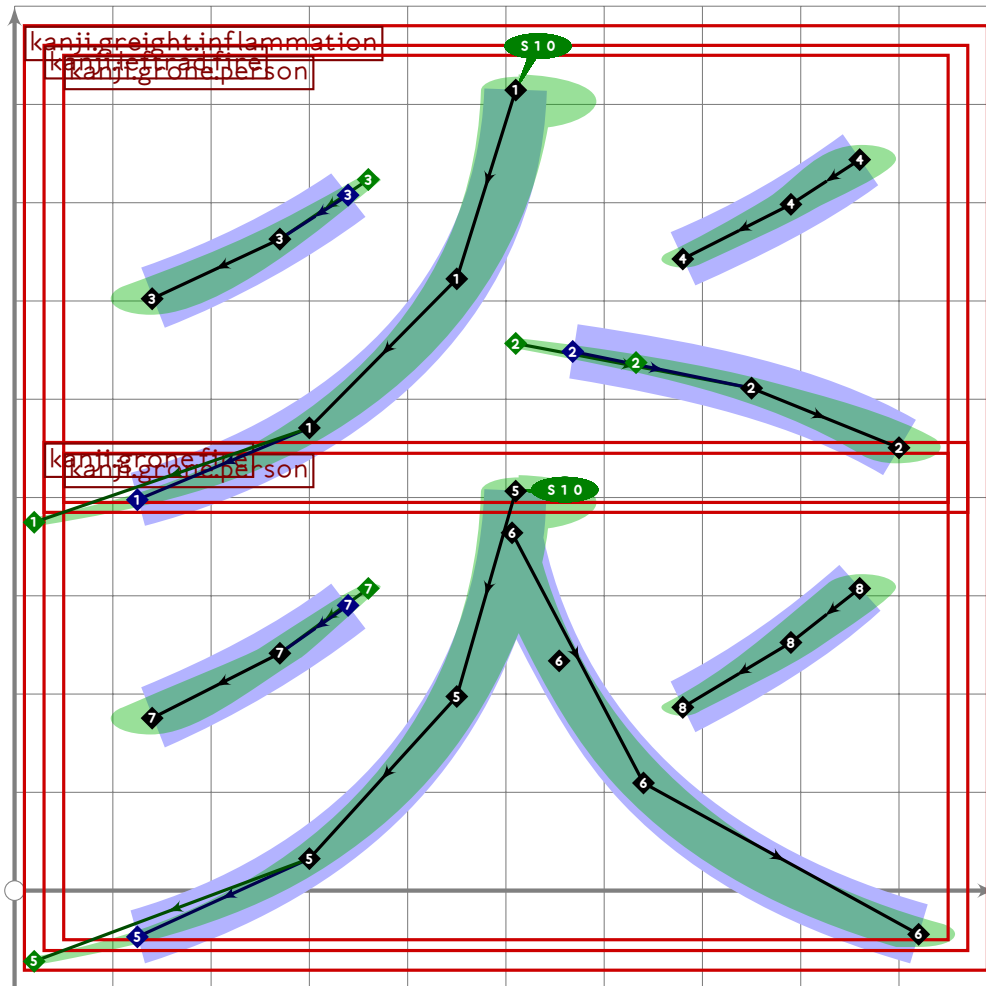


EIGH

```

242
243 vardef kanji.greight.how_much =
244   push_pbox_toexpand("kanji.greight.how_much");
245   build_kanji.level(
246     build_kanji.tb(440,100)
247     (build_kanji.lr(520,80)
248       (kanji.radical.short_thread)
249       (kanji.radical.short_thread))
250     (kanji.radical.ceremony);
251   replace_strokep(-1)
252     (oldp shifted (-900,60) xscaled 0.9 shifted (900,-60));
253   replace_strokep(-1)((500,840){down}...subpath (1,infinity) of oldp);
254   push_stroke((780,190)..tension 1.2..(720,110)..(530,-40),
255     (1.6,1.6)-(14,14)-(1.2,1.2));
256   build_kanji.sscale(xyscaled (0.42,0.35) shifted (-220,-280))
257     (kanji.leftrad.alt_person);
258 );
259 expand_pbox;
260 enddef;

```



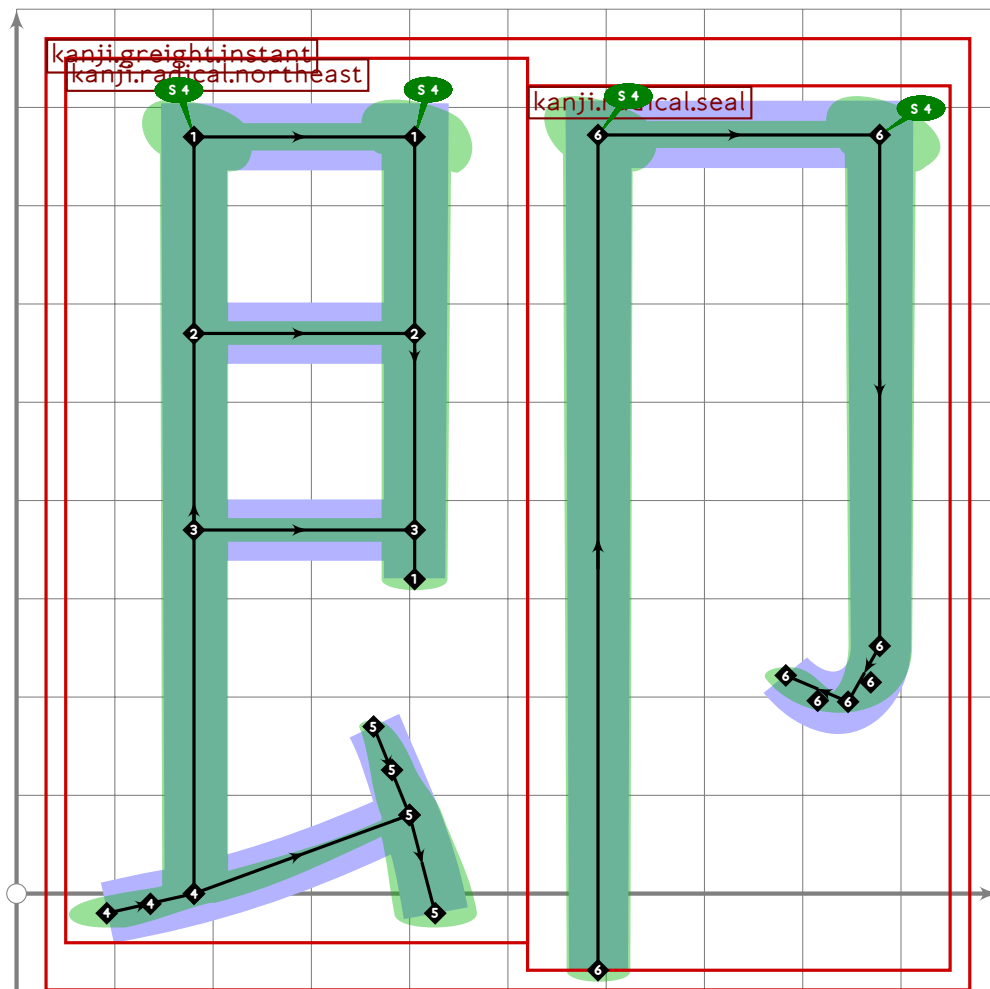
```

261
262 vardef kanji.greight.inflammation =
263   push_pbox_toexpand("kanji.greight.inflammation");
264   build_kanji.level(build_kanji.tb(420,50)
265     (kanji.leftrad.fire)
266     (kanji.grone.fire));
267   expand_pbox;
268 enddef;

```

EIGH

U+5373
tsuku.uni5373

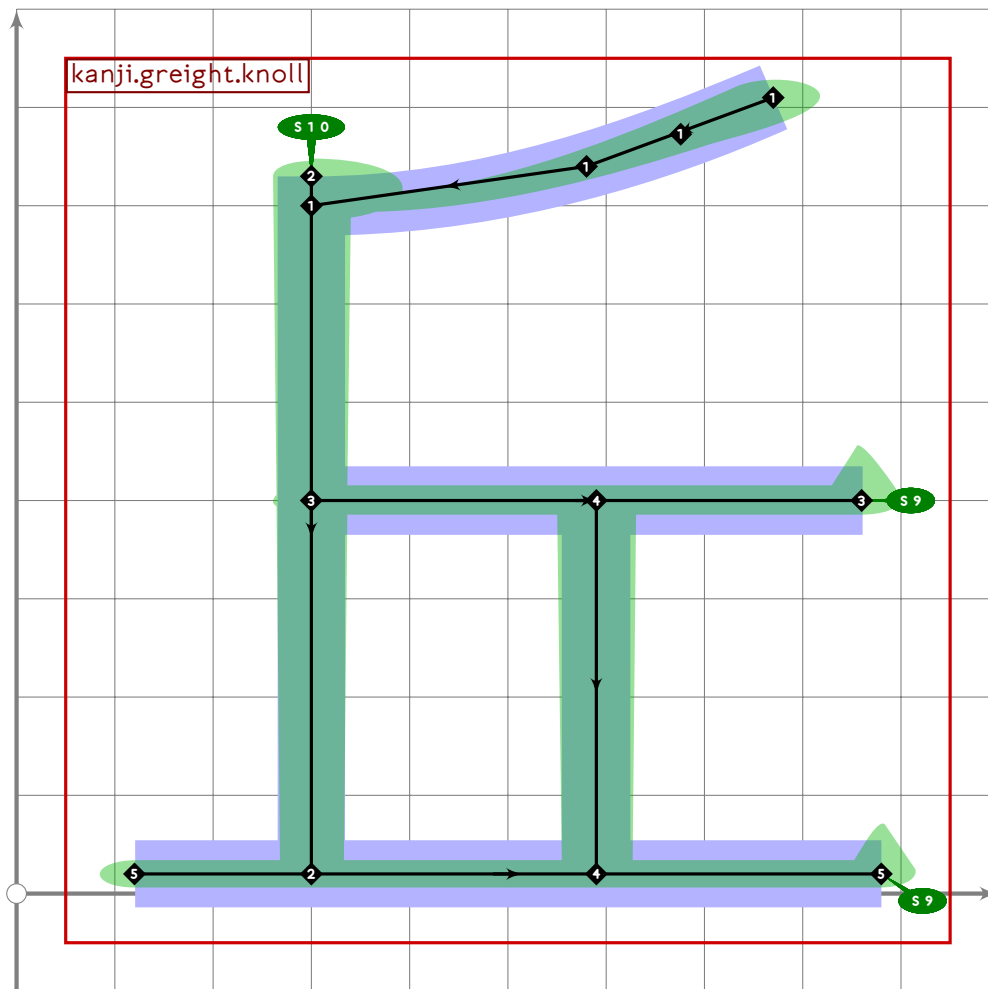


EIGH

```

269
270 vardef kanji.greight.instant =
271   push_pbox_toexpand("kanji.greight.instant");
272   build_kanji.level(build_kanji.lr(520,0)
273     (kanji.radical.alt_northeast)
274     (build_kanji.sscale(shifted (0,-28))(kanji.radical.seal)));
275   expand_pbox;
276 enddef;

```



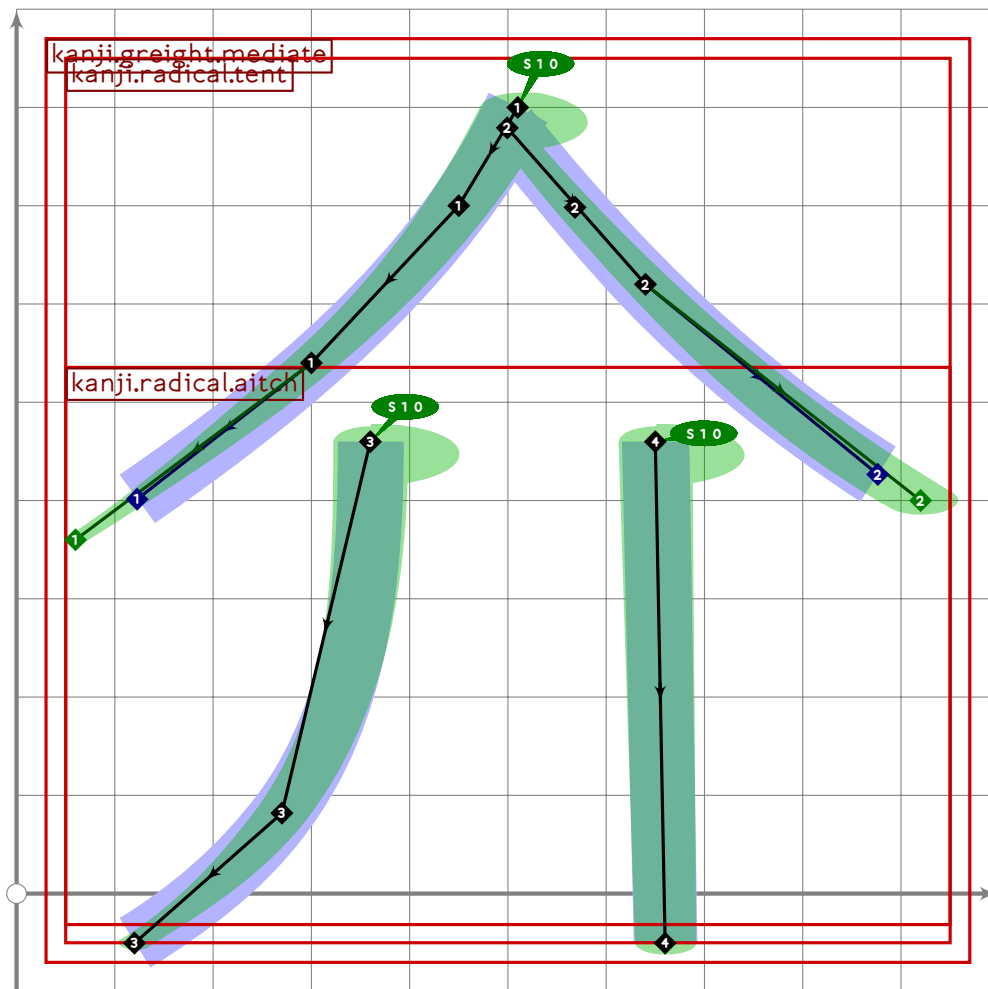
```

277
278 vardef kanji.greight.knoll =
279   push_pbox_toexpand("kanji.greight.knoll");
280   push_stroke((770,810)..tension 1.2..(580,740)..(300,700),
281     (1.8,1.8)–(1.5,1.5)–(1,1));
282   push_stroke((300,730)–(300,20),
283     (1.6,1.6)–(1.4,1.4));
284   set_boserif(0,0,10);
285   push_stroke((300,400)–(860,400),(1.6,1.6)–(1.6,1.6));
286   set_boserif(0,1,9);
287   push_stroke((590,400)–(590,20),(1.6,1.6)–(1.5,1.5));
288   push_stroke((120,20)–(880,20),(1.5,1.5)–(1.5,1.5));
289   set_boserif(0,1,9);
290   expand_pbox;
291 enddef;

```

EIGH

U+4ECB
tsuku.uni4ECB

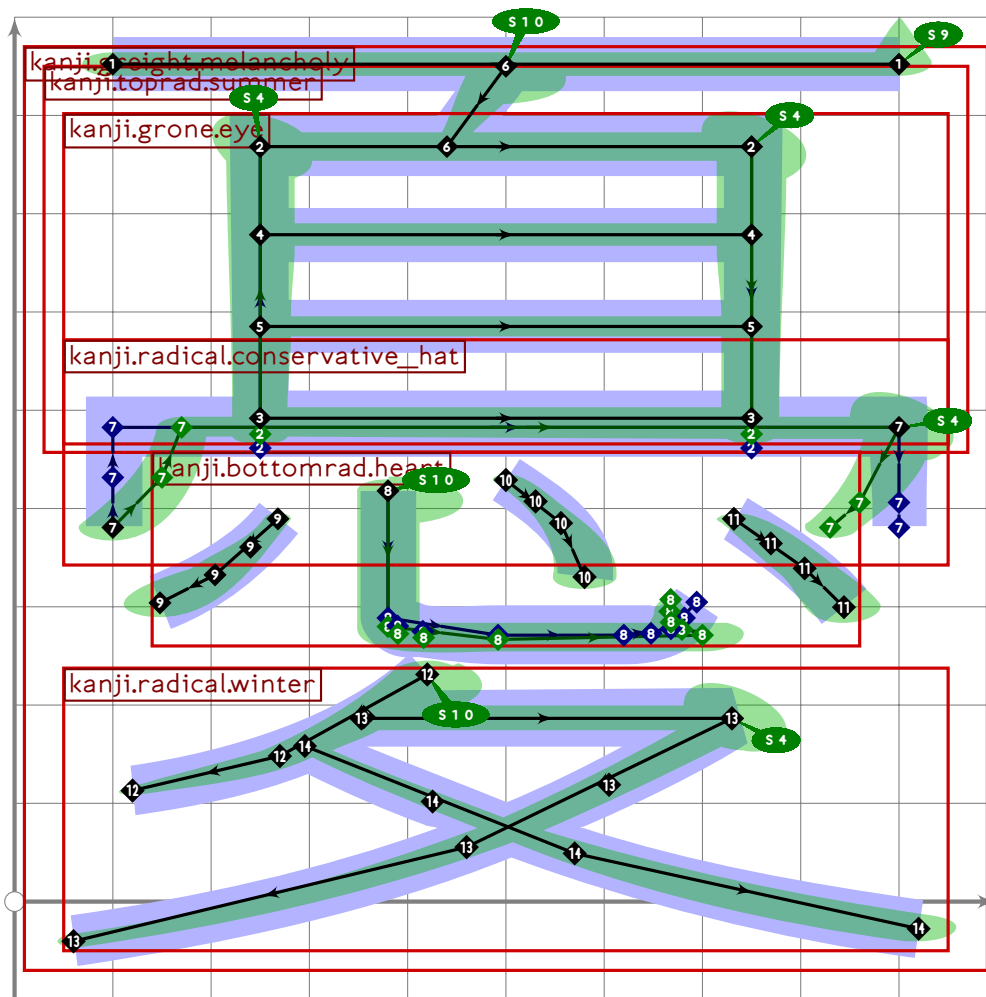


EIGH

```

292
293 vardef kanji.greight.mediate =
294   push_pbox__toexpand("kanji.greight.mediate");
295   build_kanji.level(
296     kanji.radical.tent;
297     pop_stroke;
298     tsu_xform(identity yscaled 0.63)(kanji.radical.aitch);
299     obstacktype[find_whatever(otstroke,-2)]:=otnull;
300   );
301   expand_pbox;
302 enddef;

```

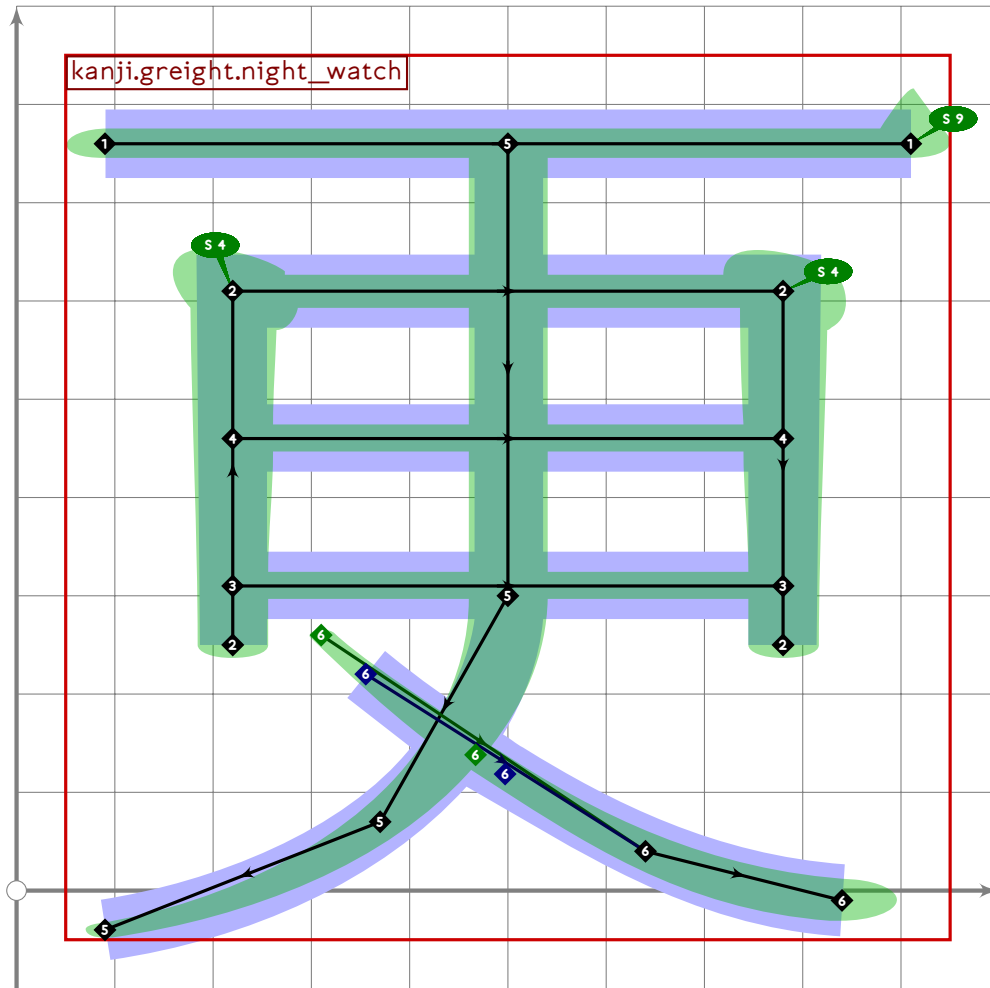


```

303
304 vardef kanji.greight.melancholy =
305   push_pbox_toexpand("kanji.greight.melancholy");
306   build_kanji.level(build_kanji.tb(400,115)
307     (build_kanji.tb(260,193)
308       (kanji.toprad.summer)
309       (kanji.radical.conservative_hat))
310     (build_kanji.tb(480,-40)
311       (build_kanji.sscale(xscaled 0.8)(kanji.bottomrad.heart))
312       (kanji.radical.winter)));
313   expand_pbox;
314 enddef;

```

EIGH

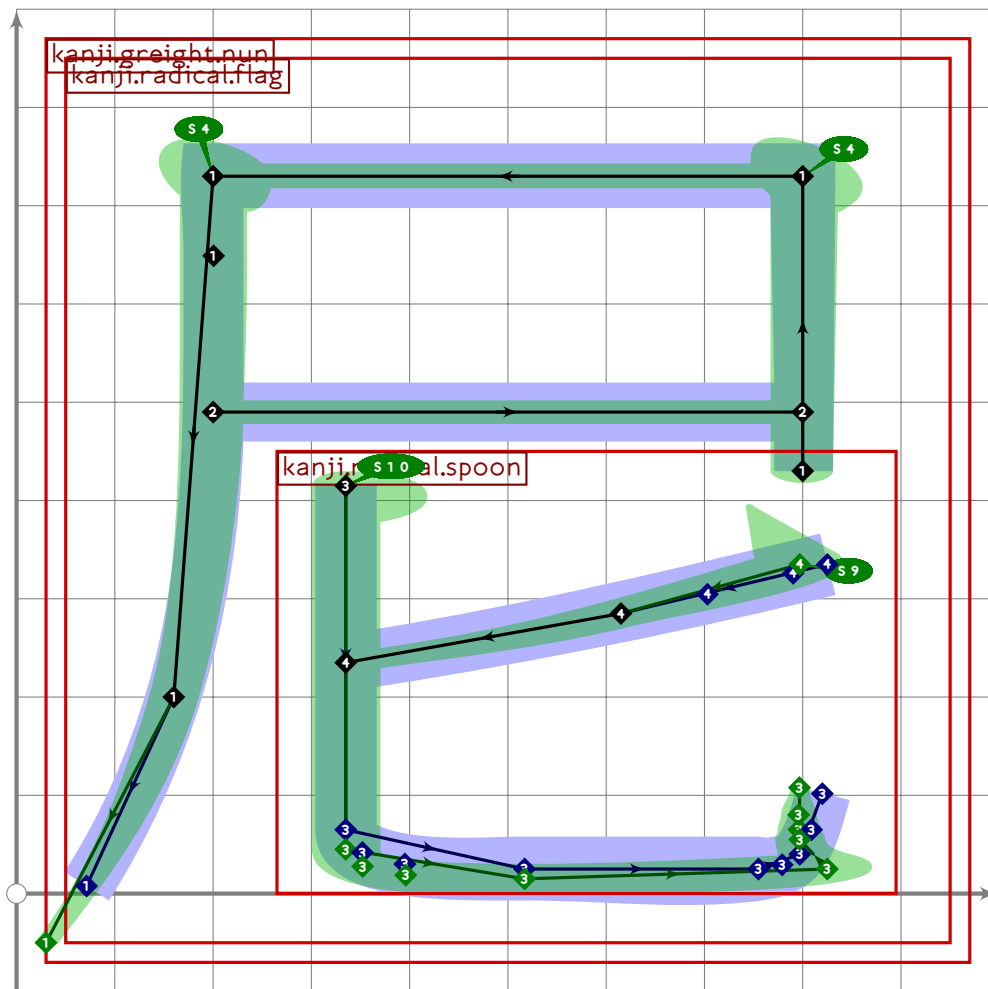


EIGH

```

315
316 vardef kanji.greight.night_watch =
317   push_pbox_toexpand("kanji.greight.night_watch");
318   push_stroke((90,760)–(910,760),(1.6,1.6)–(1.6,1.6));
319   set_boserif(0,1,9);
320   build_kanji.box((220,610),(780,310));
321   push_stroke((220,460)–(780,460),(1.5,1.5)–(1.5,1.5));
322   push_stroke((500,760)–(500,300){down}{.curl 0.5}{(90,-40),
323     (1.6,1.6)–(1.6,1.6)–(14,14)–(11,11));
324   push_stroke((310,260)..tension 1.2..(640,40)..(840,-10),
325     (0,0,9)–(1.5,1.5)–(2,2));
326   expand_pbox;
327 enddef;

```

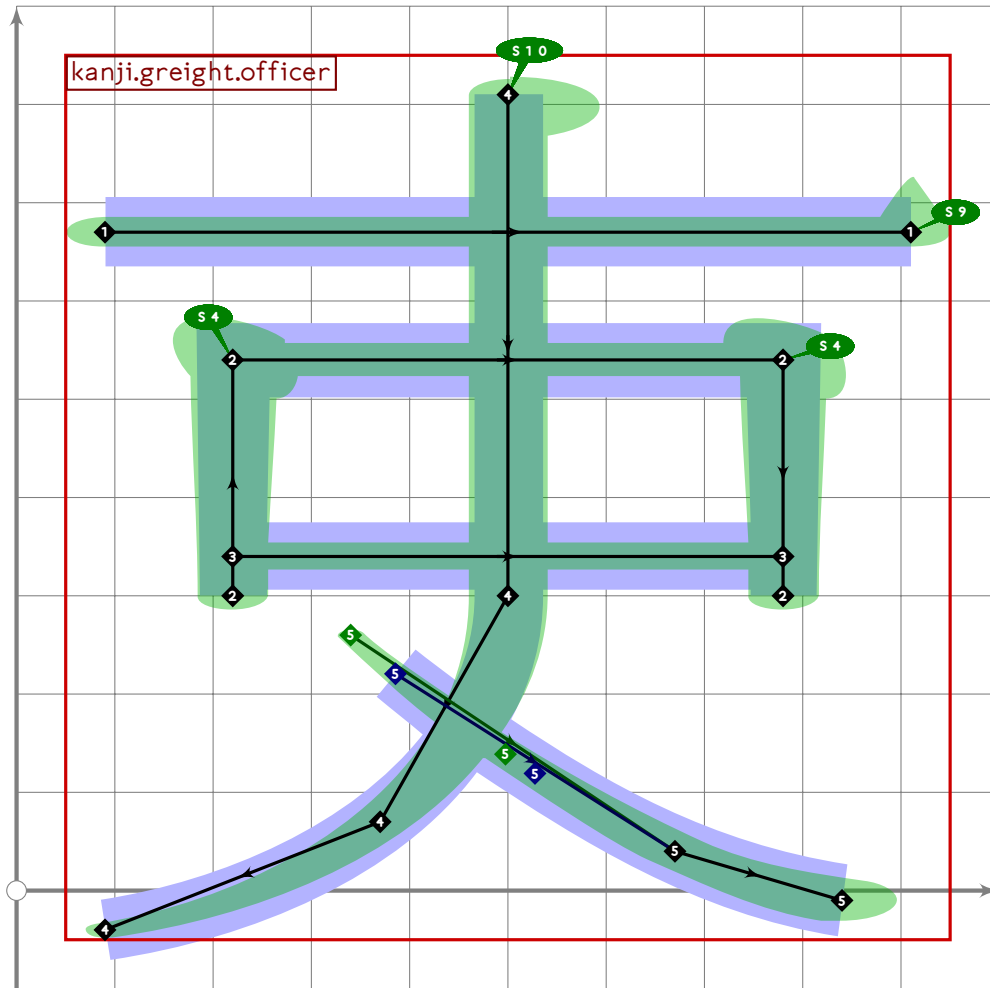



```

328
329 vardef kanji.greight.nun =
330   push_pbox_toexpand("kanji.greight.nun");
331   build_kanji.level(
332     kanji.radical.flag;
333     build_kanji.sscale(xyscaled (0.7,0.5) shifted (80,170))
334     (kanji.radical.spoon));
335   expand_pbox;
336 enddef;

```

EIGH

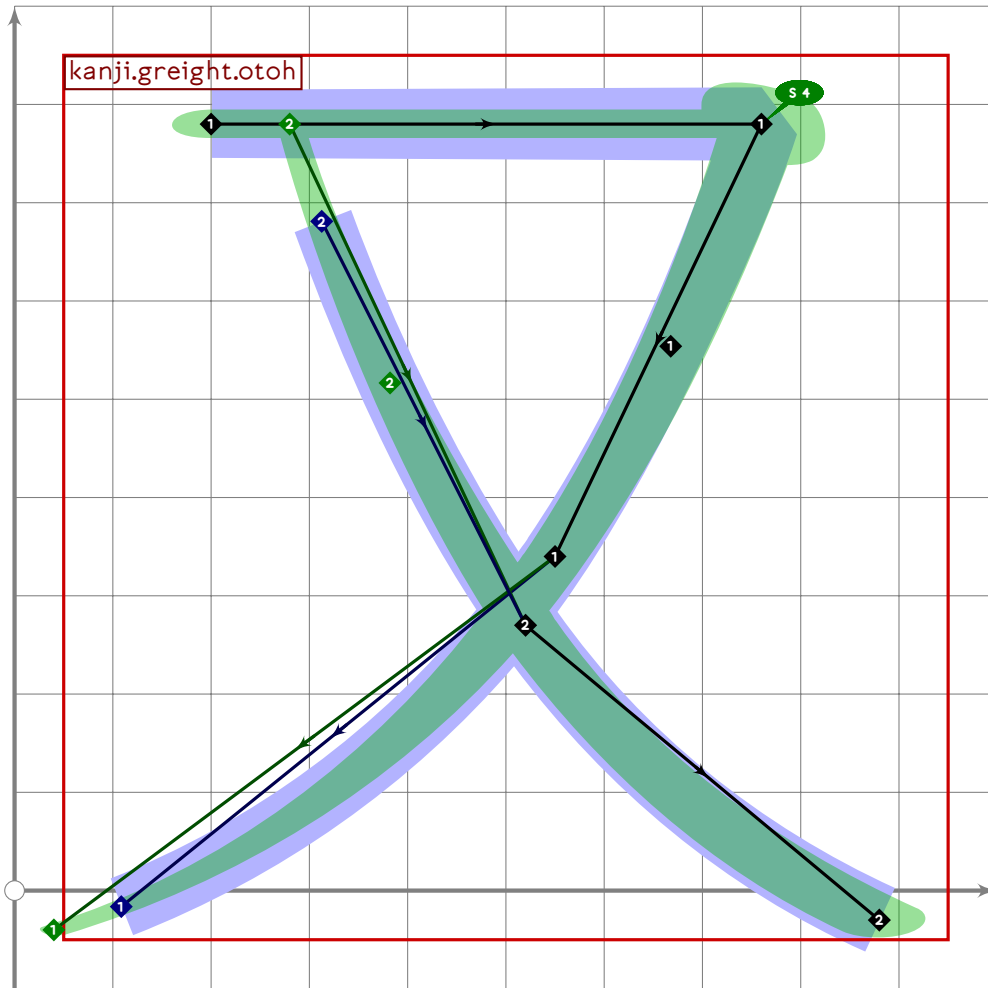


EIGH

```

337
338 vardef kanji.greight.officer =
339   push_pbox_toexpand("kanji.greight.officer");
340   push_stroke((90,670)–(910,670),(1.6,1.6)–(1.6,1.6));
341   set_boserif(0,1,9);
342   build_kanji.box((220,540),(780,340));
343   push_stroke((500,810)–(500,300){down}..(370,70)..{curl 0.5}(90,-40),
344     (1.6,1.6)–(1.6,1.6)–(1.4,1.4)–(1.1,1.1));
345   set_boserif(0,0,10);
346   push_stroke((340,260)..tension 1.2..(670,40)..(840,-10),
347     (0,0,9)–(1.5,1.5)–(2,2));
348   expand_pbox;
349 enddef;

```

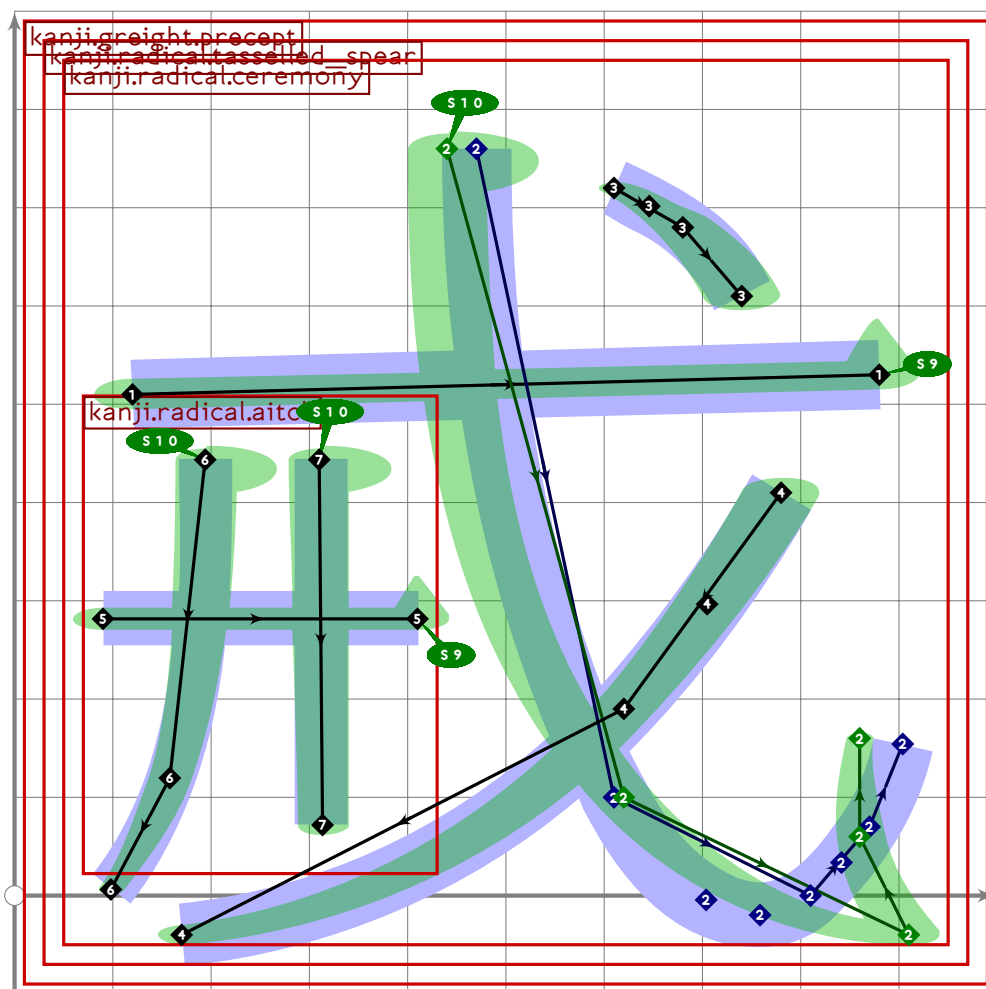


```

350
351 vardef kanji.greight.otoh =
352   push_pbox__toexpand("kanji.greight.otoh");
353   push_stroke(
354     (200,780)–(760,780)..tension 1.2..(550,340)..(40,-40),
355     (1.6,1.6)–(1.6,1.6)–(14,14)–(0.9,0.95));
356   set_botip(0,1,0);
357   set_boserif(0,1,4);
358   push_stroke((280,780)..tension 1.2..(520,270)..(880,-30),
359     (0.9,0.9)–(14,14)–(1.8,1.8));
360   expand_pbox;
361 enddef;

```

EIGH

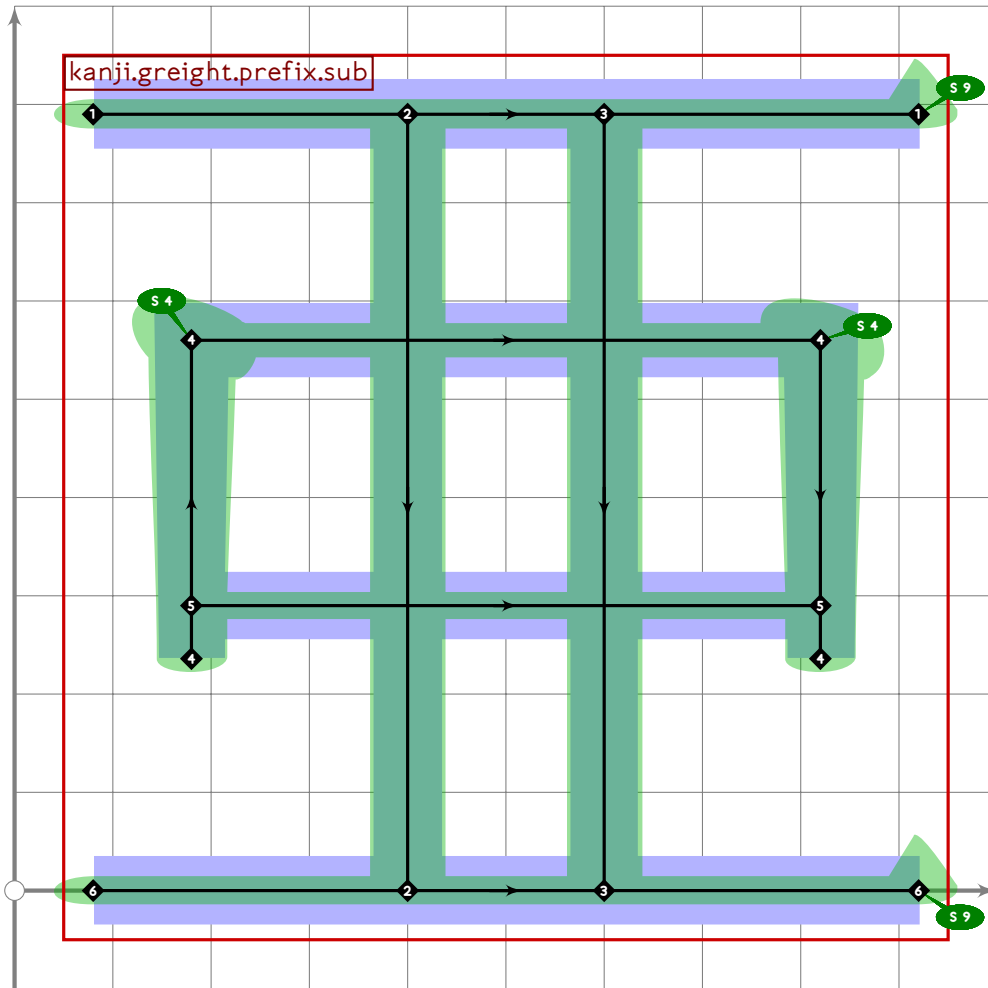


EIGH

```

362
363 vardef kanji.greight.precept =
364   push_pbox_toexpand("kanji.greight.precept");
365   kanji.radical.tasselled_spear;
366   build_kanji.sscale(xyscaled (0.4,0.54) shifted (-250,-130))
367     (kanji.radical.aitch;
368       replace_stroke(0)(subpath (0,0.85) of oldp));
369   expand_pbox;
370 enddef;

```



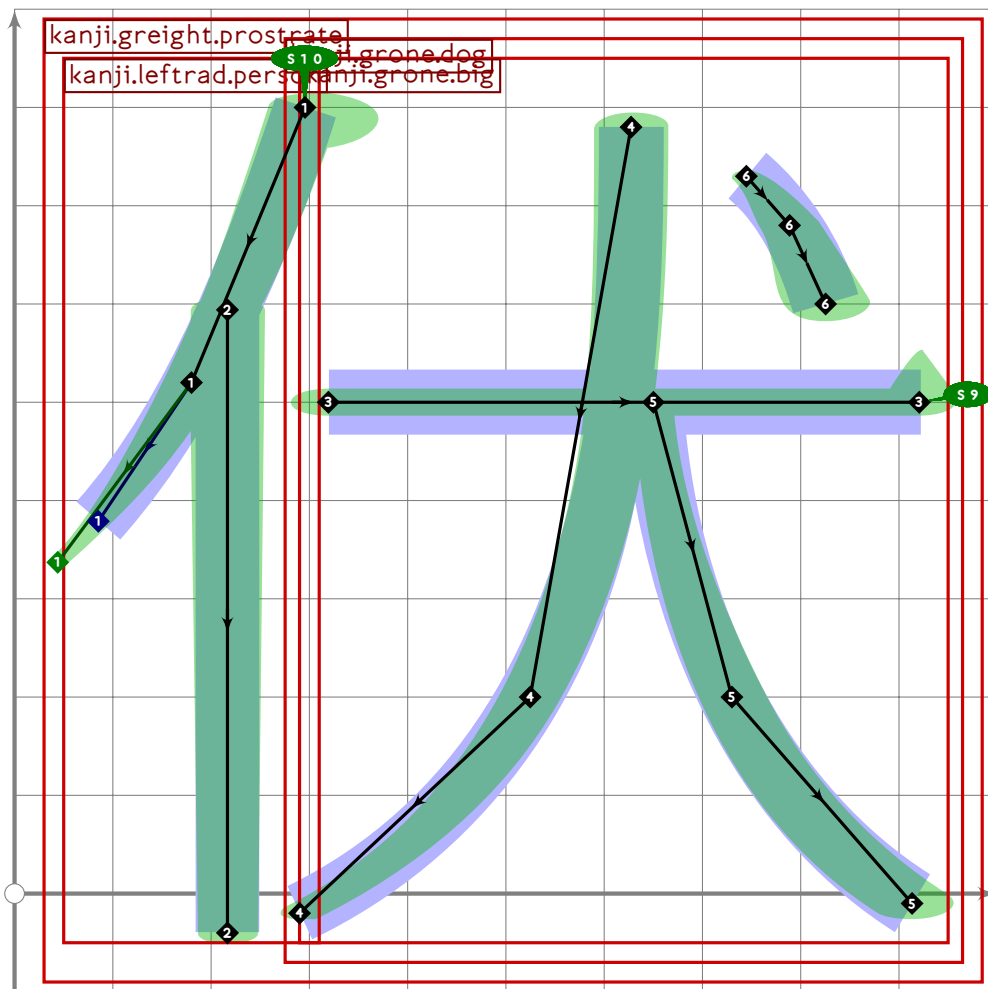
```

371
372 vardef kanji.greight.prefix_sub =
373   push_pbox__toexpand("kanji.greight.prefix.sub");
374   push_stroke((80,790)-(920,790),(1.6,1.6)-(1.6,1.6));
375   set_boserif(0,1,9);
376   push_stroke((400,790)-(400,0),(1.6,1.6)-(1.5,1.5));
377   push_stroke((600,790)-(600,0),(1.6,1.6)-(1.5,1.5));
378   build_kanji.box((180,560),(820,290));
379   push_stroke((80,0)-(920,0),(1.6,1.6)-(1.6,1.6));
380   set_boserif(0,1,9);
381   expand_pbox;
382 enddef;

```

EIGH

U+4F0F
tsuku.uni4F0F

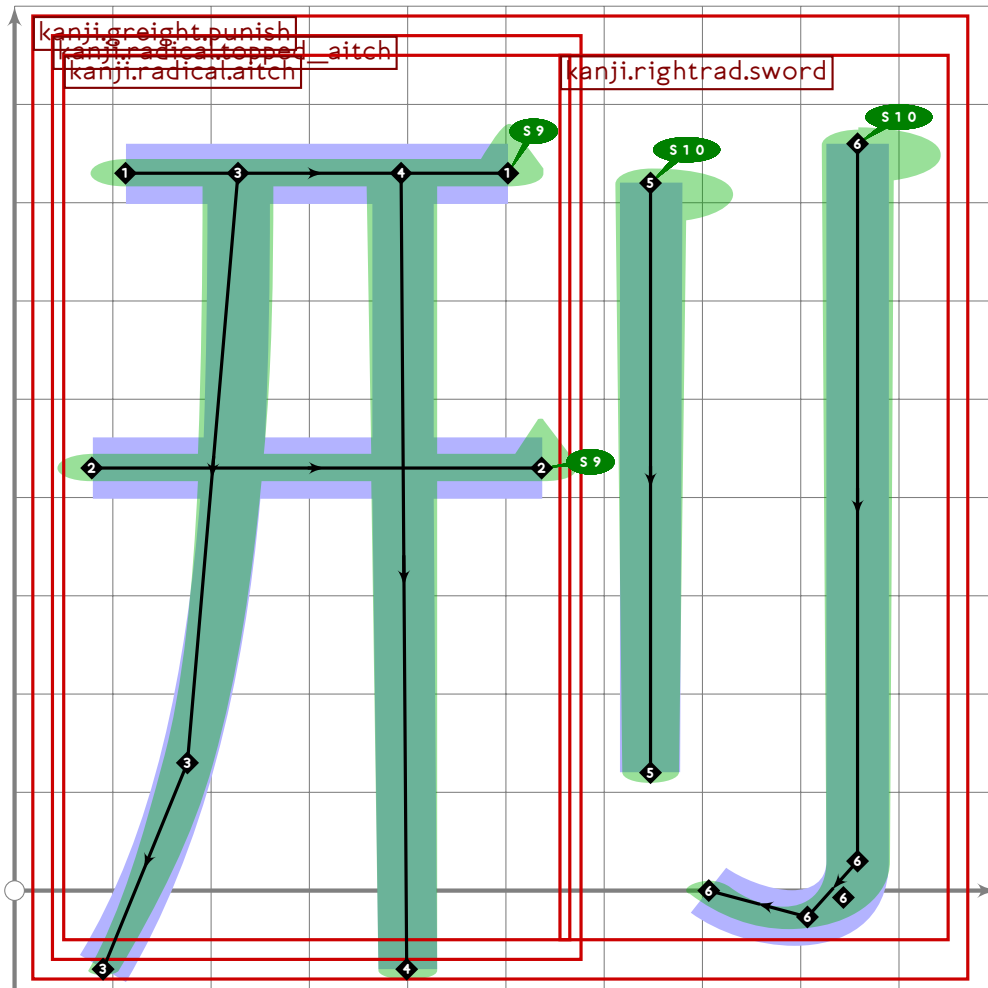


EIGH

```

383
384 vardef kanji.greight.prostrate =
385   push_pbox_toexpand("kanji.greight.prostrate");
386   build_kanji.lr(300,20)
387     (kanji.leftrad.person)
388     (kanji.grone.dog);
389   expand_pbox;
390 enddef;

```

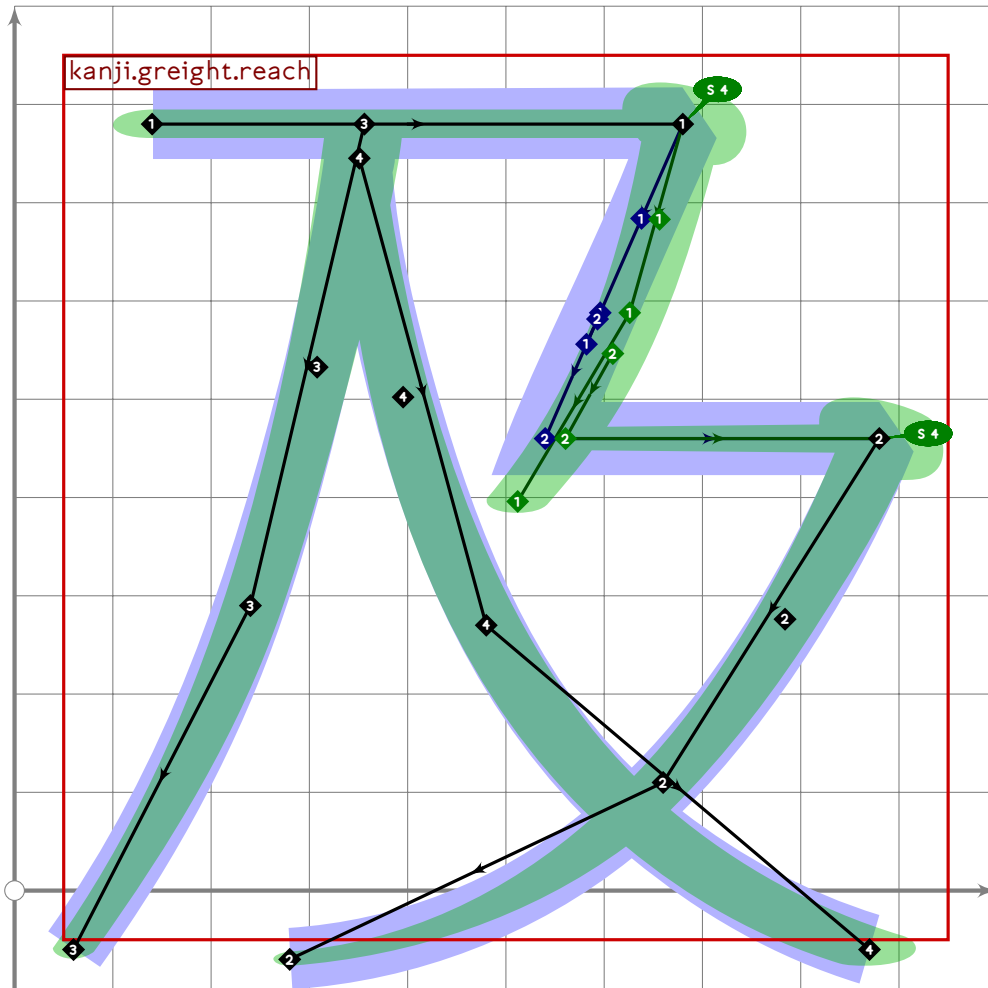


```

391
392 vardef kanji.greight.punish =
393   push_pbox_toexpand("kanji.greight.punish");
394   build_kanji.level(build_kanji.lr(560,10)
395     (kanji.radical.topped_aitch)
396     (kanji.rightrad.sword));
397   expand_pbox;
398 enddef;

```

EIGH



EIGH

```

399
400 vardef kanji.greight.reach =
401   push_pbox_toexpand("kanji.greight.reach");
402   begingroup
403     save x,y;
404     numeric x[],y[];
405     x1=140;
406     x2=680;
407     x4=540;
408     y1=y2=780;
409     y4=460;
410     z3=0.4[z4,z2]+mincho*(30,0);
411     z5=(0.3-0.5*mincho)[z4,z2];
412     push_stroke(z1-z2..tension 1.2..z3..z5,
413       (1.6,1.6)-(1.6,1.6)-(1.6-0.1*mincho,1.6-0.1*mincho)-
414       (1.6-0.2*mincho,1.6-0.2*mincho));
415     set_boserif(0,1,4);
416     set_botip(0,1,0);
417     x7=0;
418     x9=880;
419     x10=660;

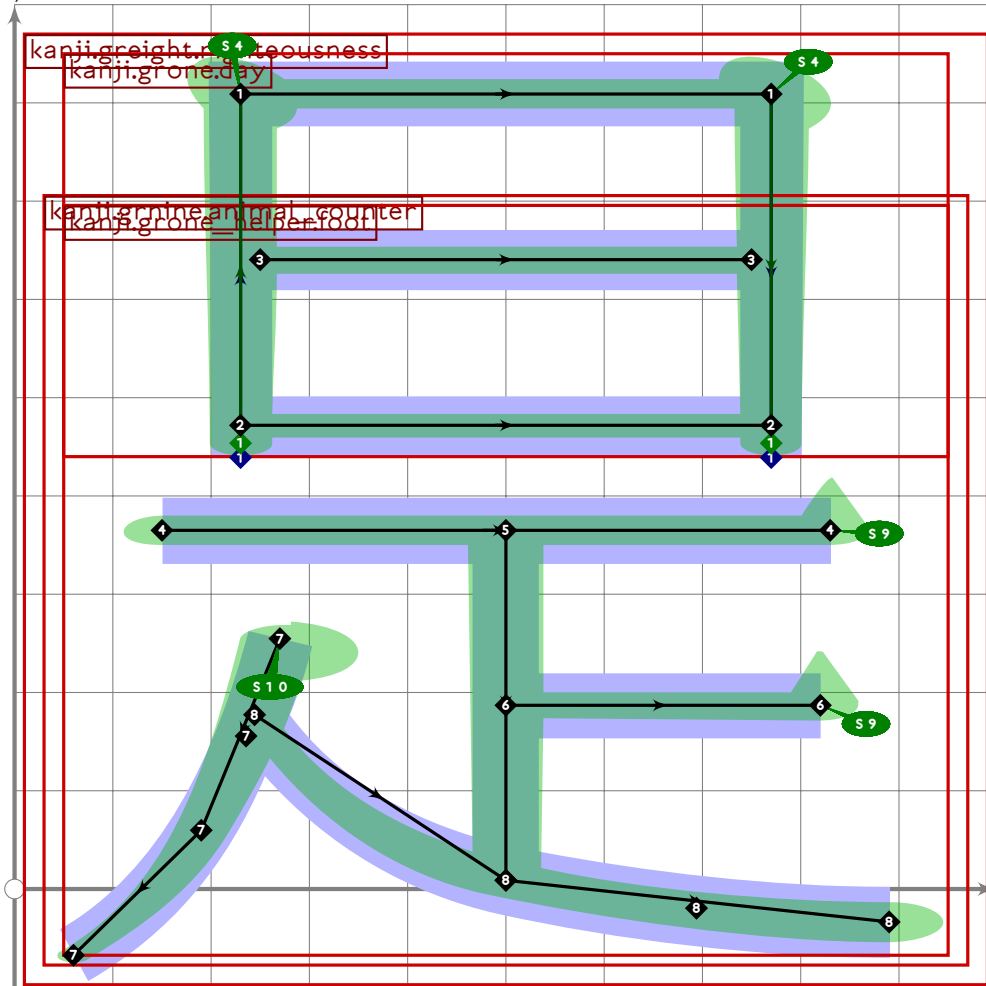
```


U+662F
tsuku.uni662F

```

441
442 vardef kanji.greight.resemblance =
443   push_pbox_toexpand("kanji.greight.resemblance");
444   build_kanji.tb(620,77)
445     (kanji.toprad.sparkle_three)
446     (kanji.bottomrad.moon);
447   expand_pbox;
448 enddef;

```

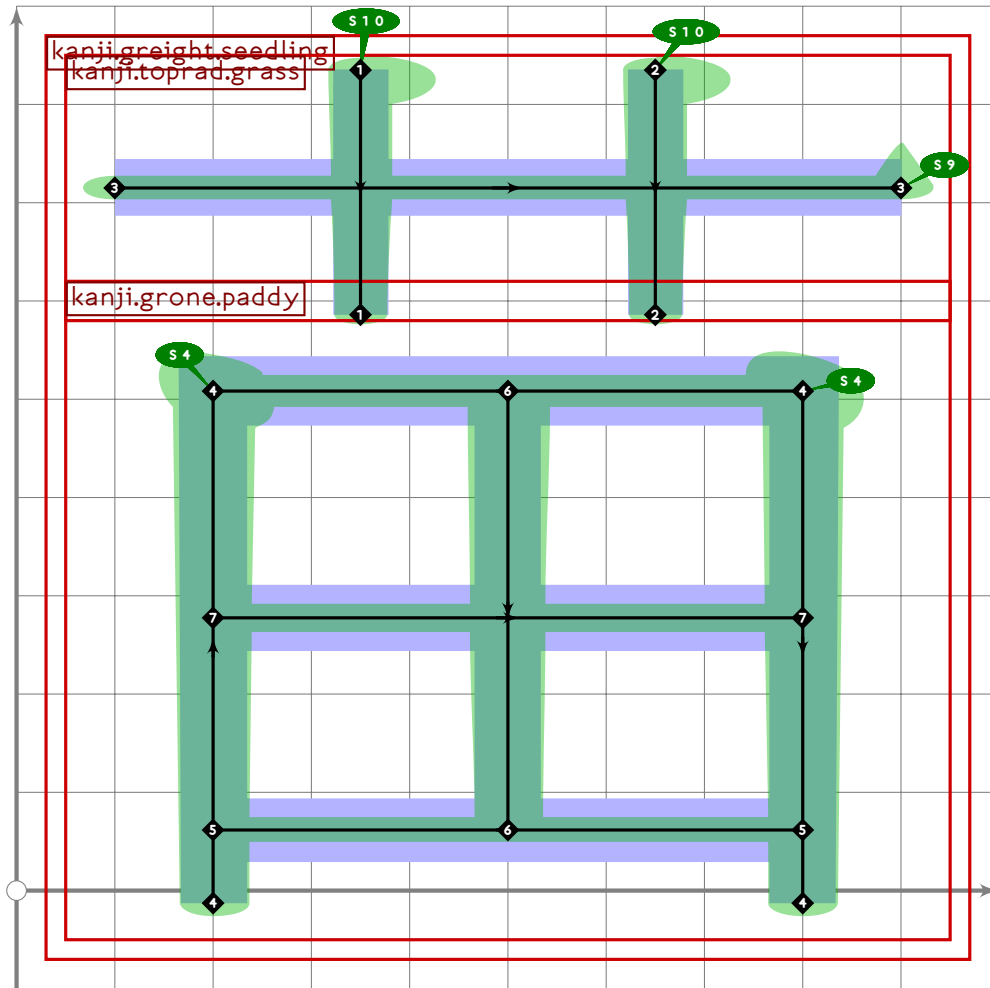


RIGHT

```

449
450 vardef kanji.greight.righteousness =
451   push_pbox_toexpand("kanji.greight.righteousness");
452   build_kanji.tb(420,-40)
453     (kanji.grone.day)
454     (kanji.grnine.animal_counter;
455       replace_stroke(-4)(subpath (0,1) of oldp);
456       set_botip(-4,whatever);
457       replace_strokeq(-4)((1.6,1.6)-(1.6,1.6));
458       set_boserif(-4,1,9));
459   expand_pbox;
460 enddef;

```

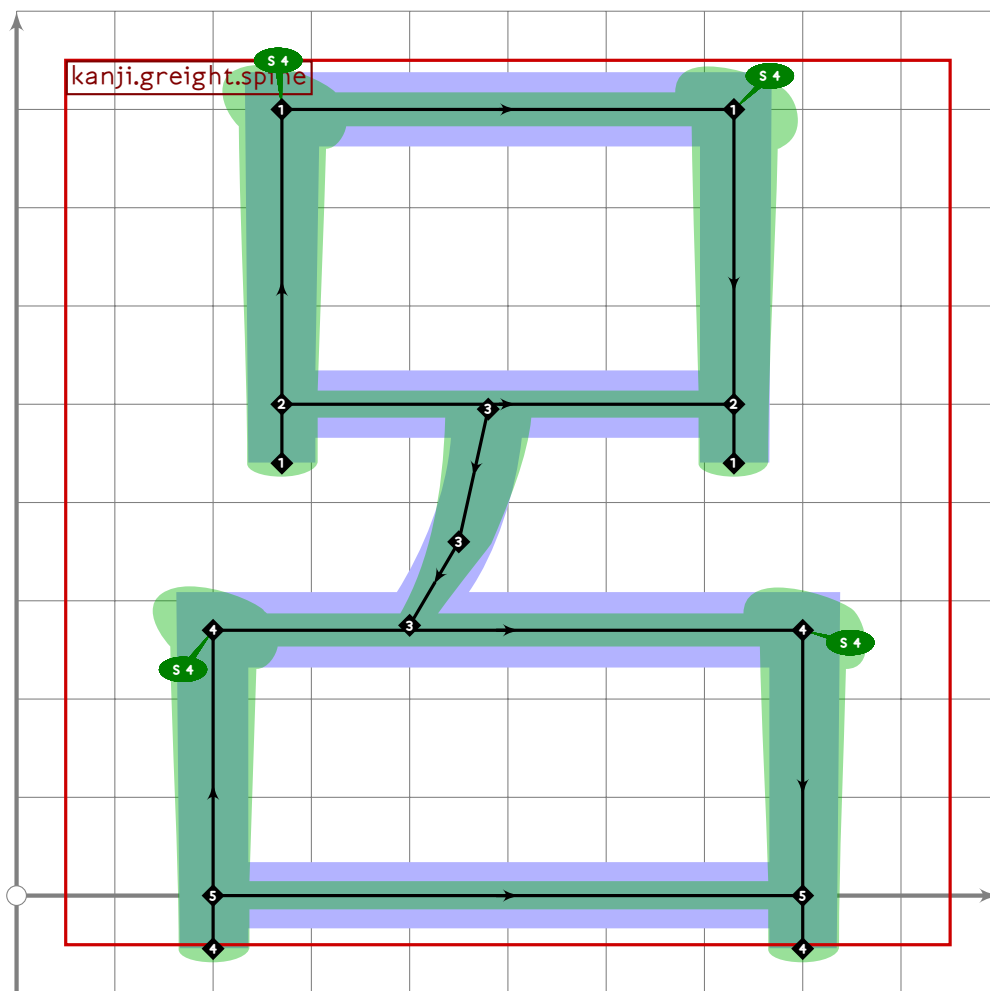


```

461
462 vardef kanji.greight.seedling =
463   push_pbox_toexpand("kanji.greight.seedling");
464   build_kanji.tb(600,40)
465     (kanji.toprad.grass)
466     (kanji.grone.paddy);
467   expand_pbox;
468 enddef;

```

EIGH

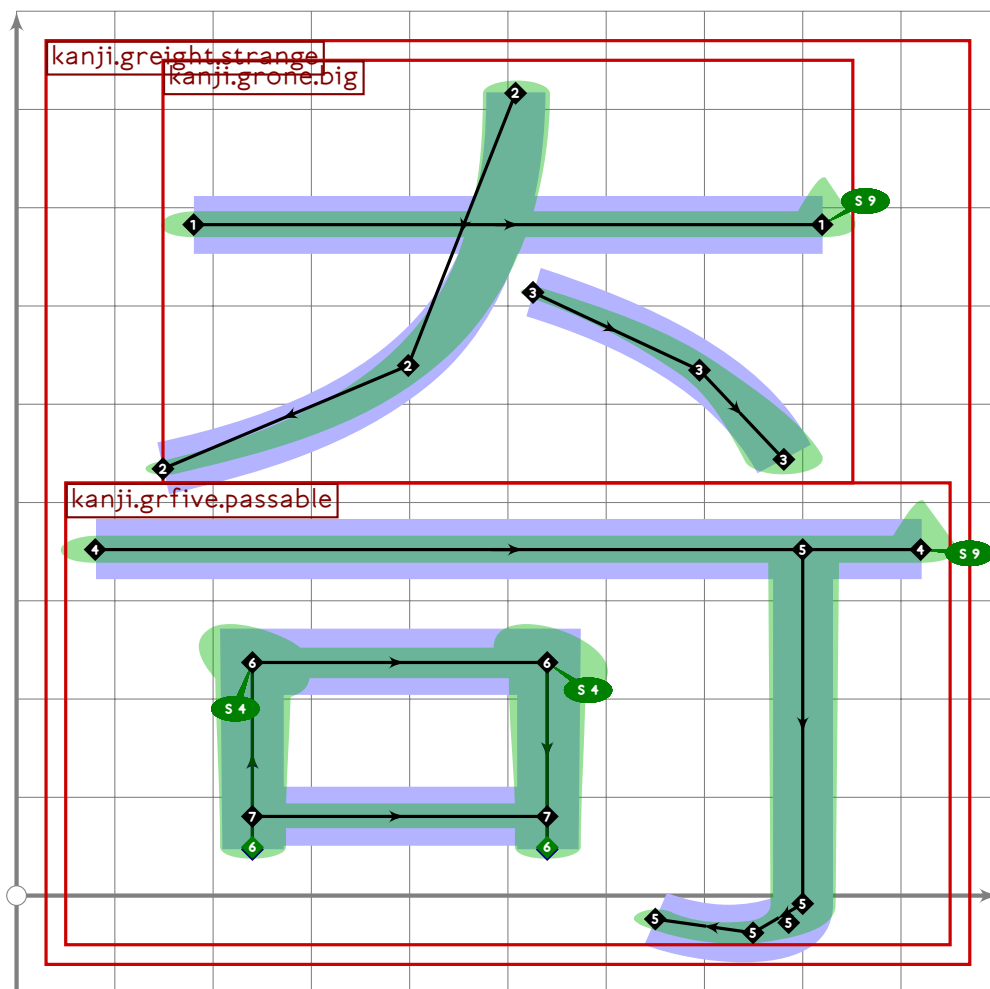


EIGH

```

469
470 vardef kanji.greight.spine =
471   push_pbox_toexpand("kanji.greight.spine");
472   build_kanji.box((270,800),(730,500));
473   push_stroke((480,495)..(450,360)..(400,275),
474     (1,7),(1,7)-(1,4),(1,1));
475   build_kanji.box((200,270),(800,0));
476   expand_pbox;
477 enddef;

```



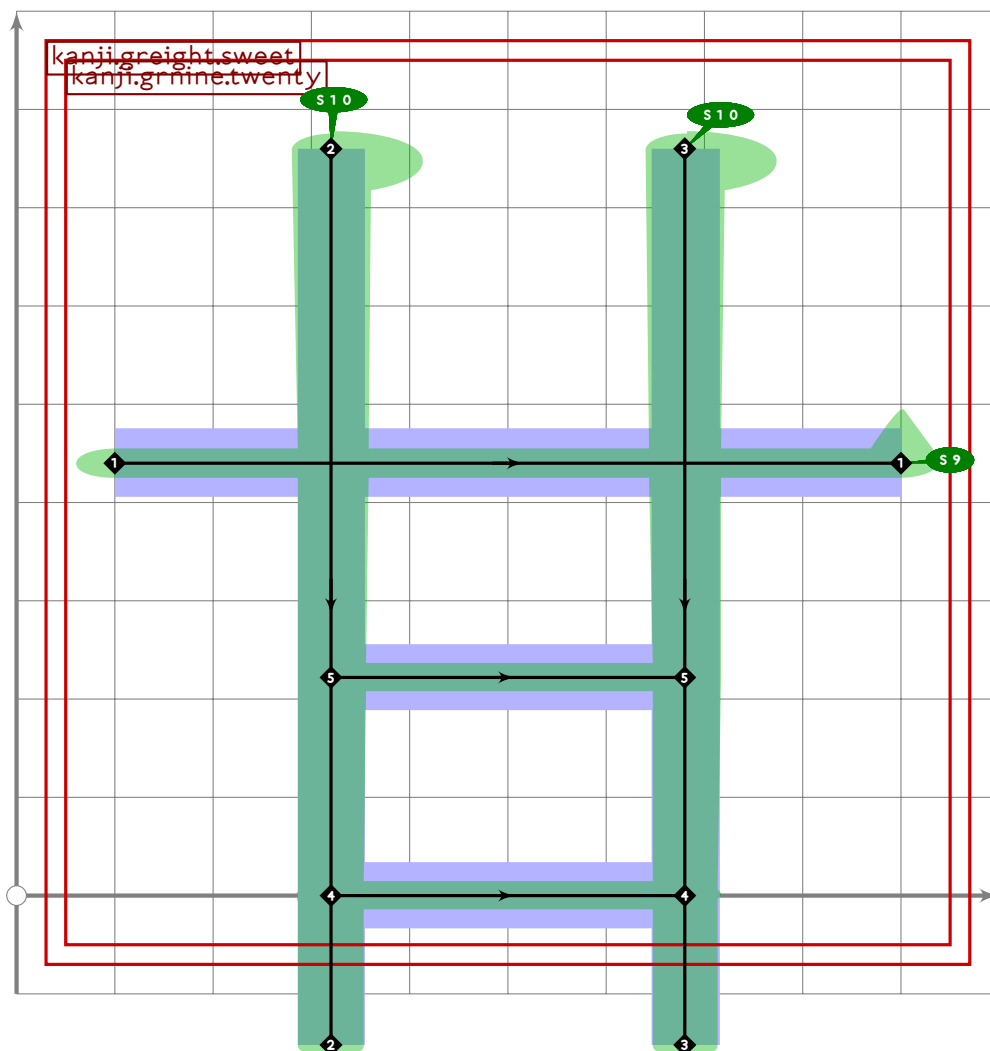
```

478
479 vardef kanji.greight.strange =
480   push_pbox__toexpand("kanji.greight.strange");
481   build_kanji.tb(420,0)
482     (build_kanji.sscale(xscaled 0.78)(kanji.leftrad.big))
483     (kanji.grfive.passable);
484   expand_pbox;
485 enddef;

```

EIGH

U+7518
tsuku.uni7518

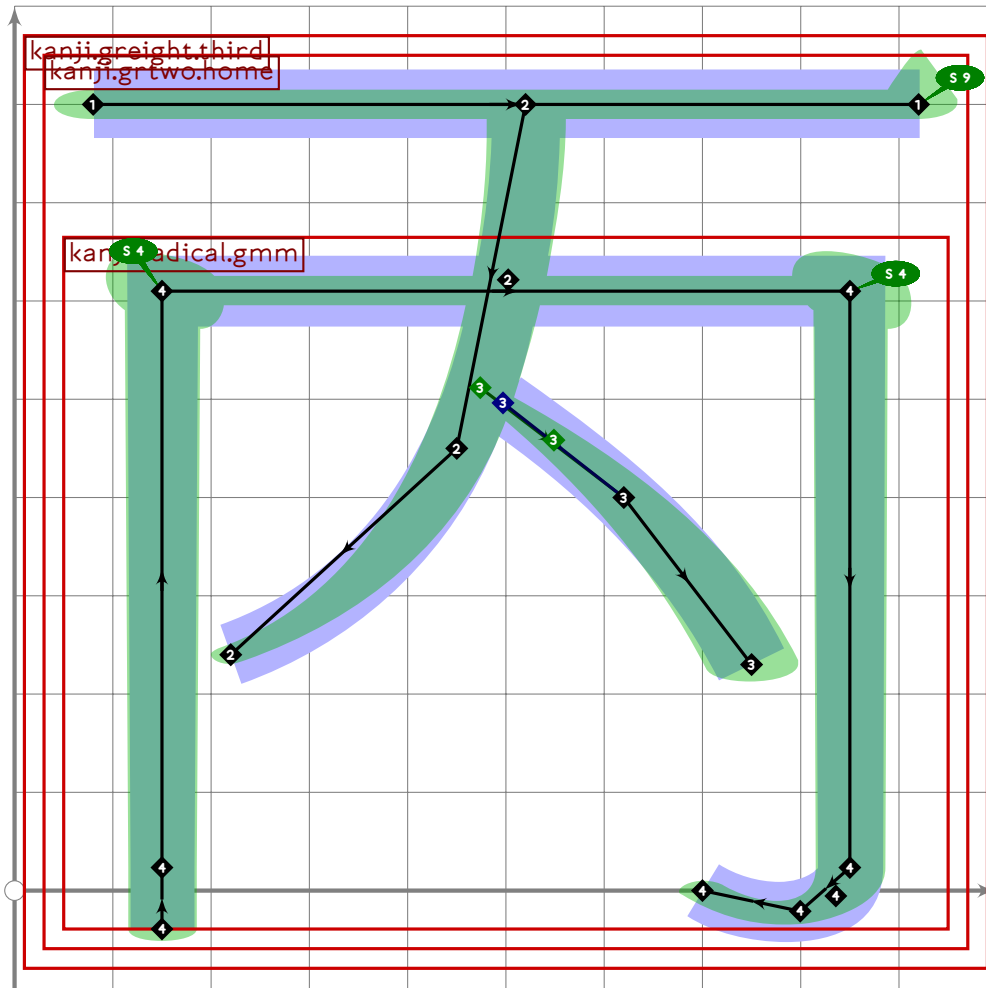


EIGH

```

486
487 vardef kanji.greight.sweet =
488   push_pbox_toexpand("kanji.greight.sweet");
489   kanji.grnine.twenty;
490   push_stroke((320,222)-(680,222),(1.5,1.5)-(1.5,1.5));
491   expand_pbox;
492 enddef;

```

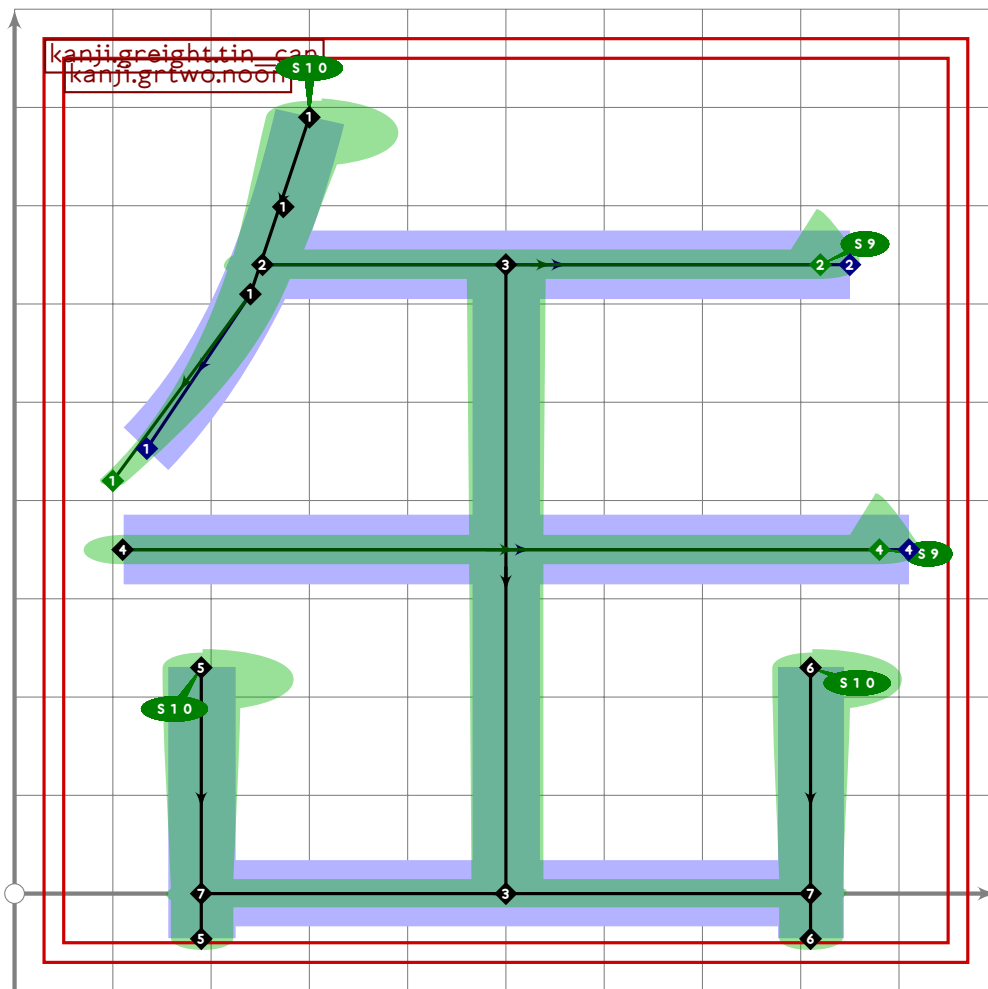


```

493
494 vardef kanji.greight.third =
495   push_pbox_toexpand("kanji.greight.third");
496   push_stroke((80,800)-(920,800),(1.6,1.6)-(1.6,1.6));
497   set_boserif(0,1,9);
498   kanji.grtwo.home;
499   set_boserif(-2,0,whatever);
500   expand_pbox;
501 enddef;

```

EIGH

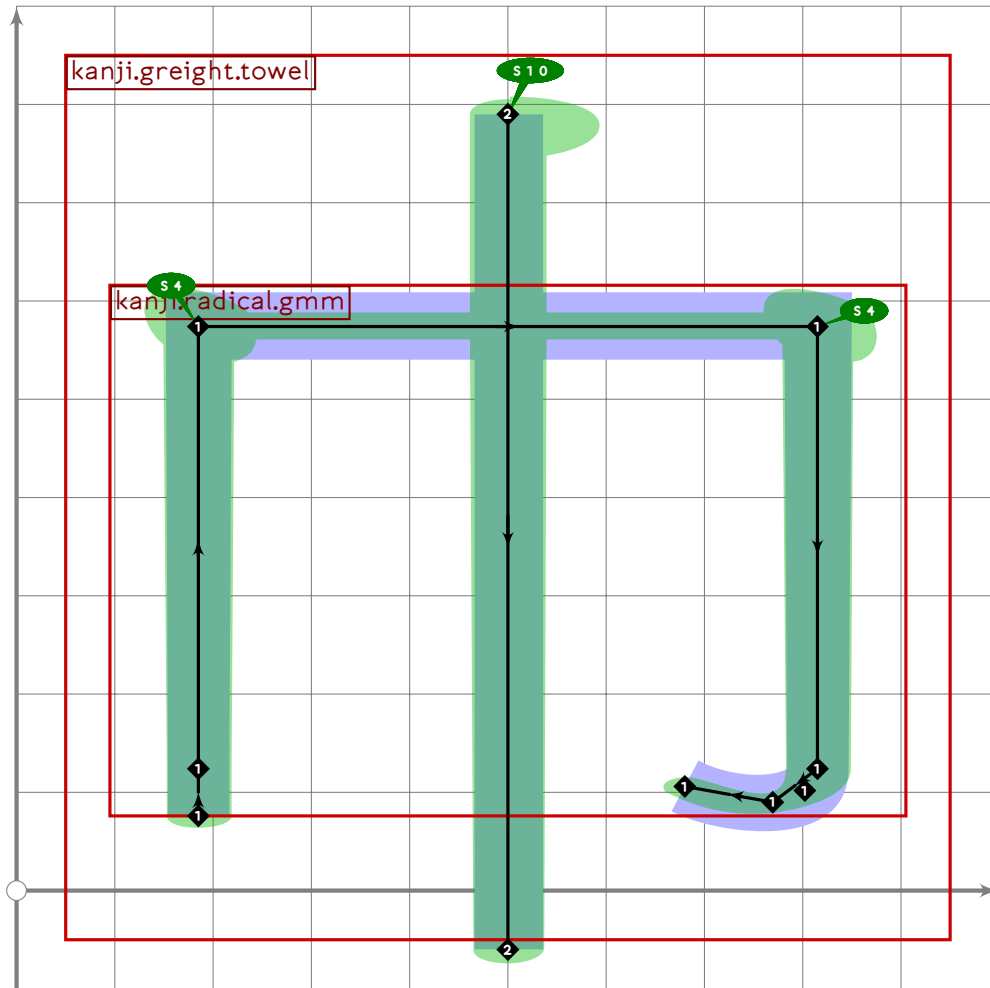


```

502
503 vardef kanji.greight.tin_can =
504   push_pbox_toexpand("kanji.greight.tin_can");
505   kanji.grtwo.noon;
506   replace_strokep(-1)((500,640)-(500,0));
507   replace_strokep(0)(oldp shifted (0,20));
508   build_kanji.cup((190,230),(810,0));
509   expand_pbox;
510 enddef;

```

EIGH



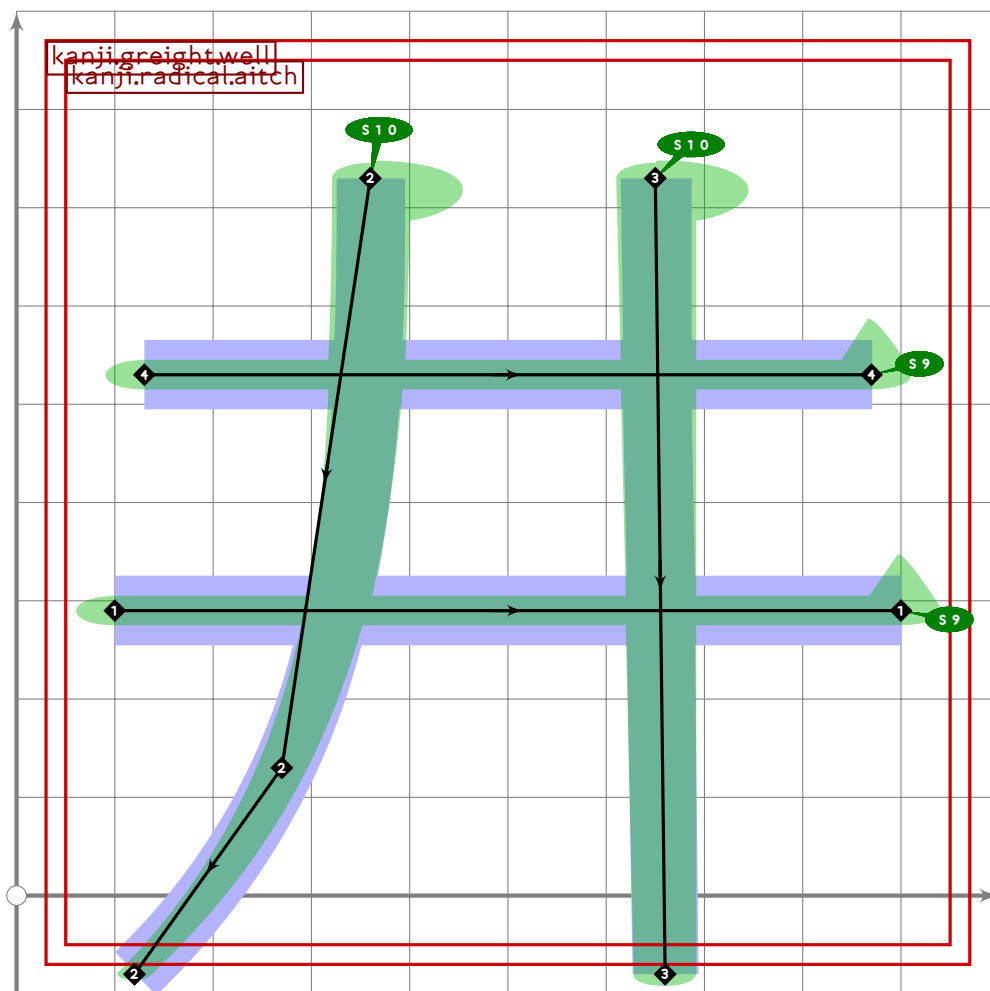
```

511
512 vardef kanji.greight.towel =
513   push_pbox__toexpand("kanji.greight.towel");
514   build_kanji.sscale(xyscaled (0,9,0,6) shifted (0,-50))
515     (kanji.radical.gmm);
516   push_stroke((500,790)-(500,-60),
517     (1,6,1,6)-(1,5,1,5));
518   set_boserif(0,0,10);
519   expand_pbox;
520 enddef;

```

EIGH

U+4E95
tsuku.uni4E95

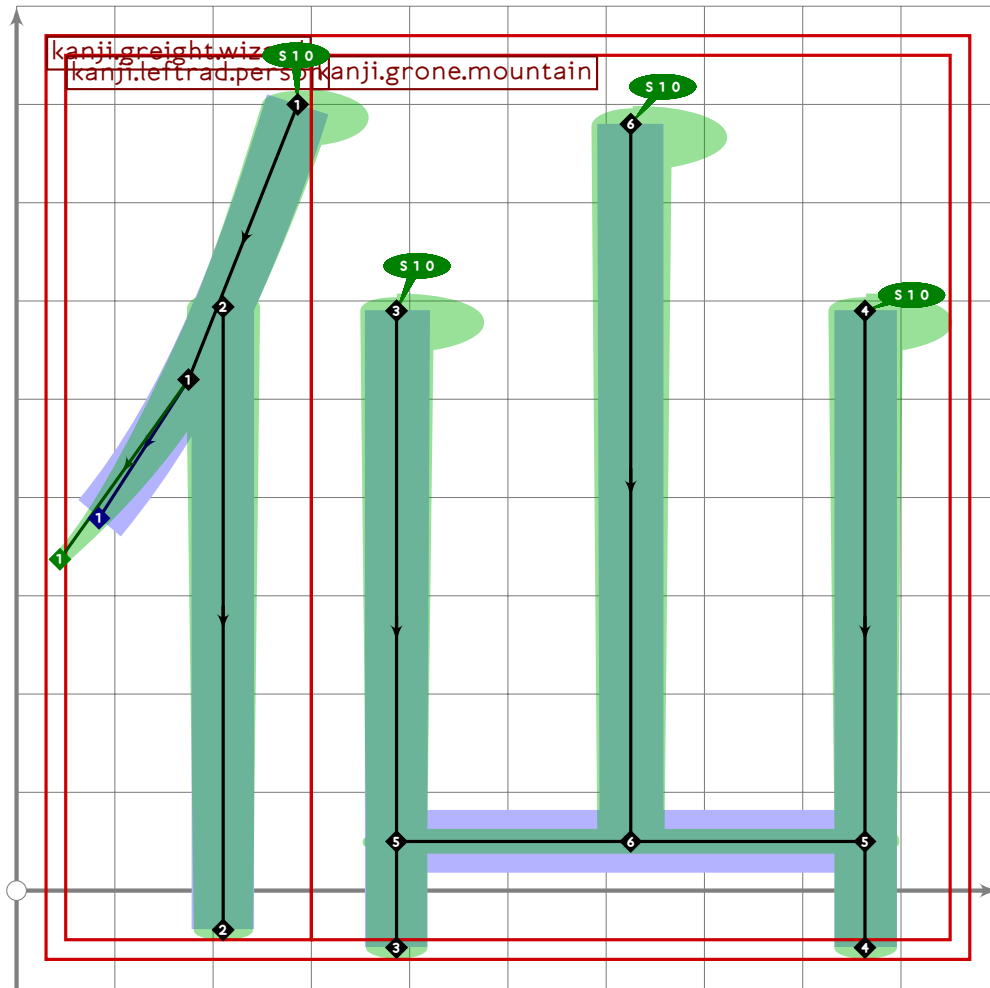


EIGH

```

521
522 vardef kanji.greight.well =
523   push_pbox_toexpand("kanji.greight.well");
524   kanji.radical.aitch;
525   replace_stroke(-2)(oldp shifted (0,-140));
526   push_stroke((130,530)-(870,530),(1.6,1.6)-(1.6,1.6));
527   set_boserif(0,1,9);
528   expand_pbox;
529 enddef;

```



```

530
531 vardef kanji.greight.wizard =
532   push_pbox_toexpand("kanji.greight.wizard");
533   build_kanji.lr(300,0)
534     (kanji.leftrad.person)
535     (kanji.grone.mountain);
536   expand_pbox;
537 enddef;

```

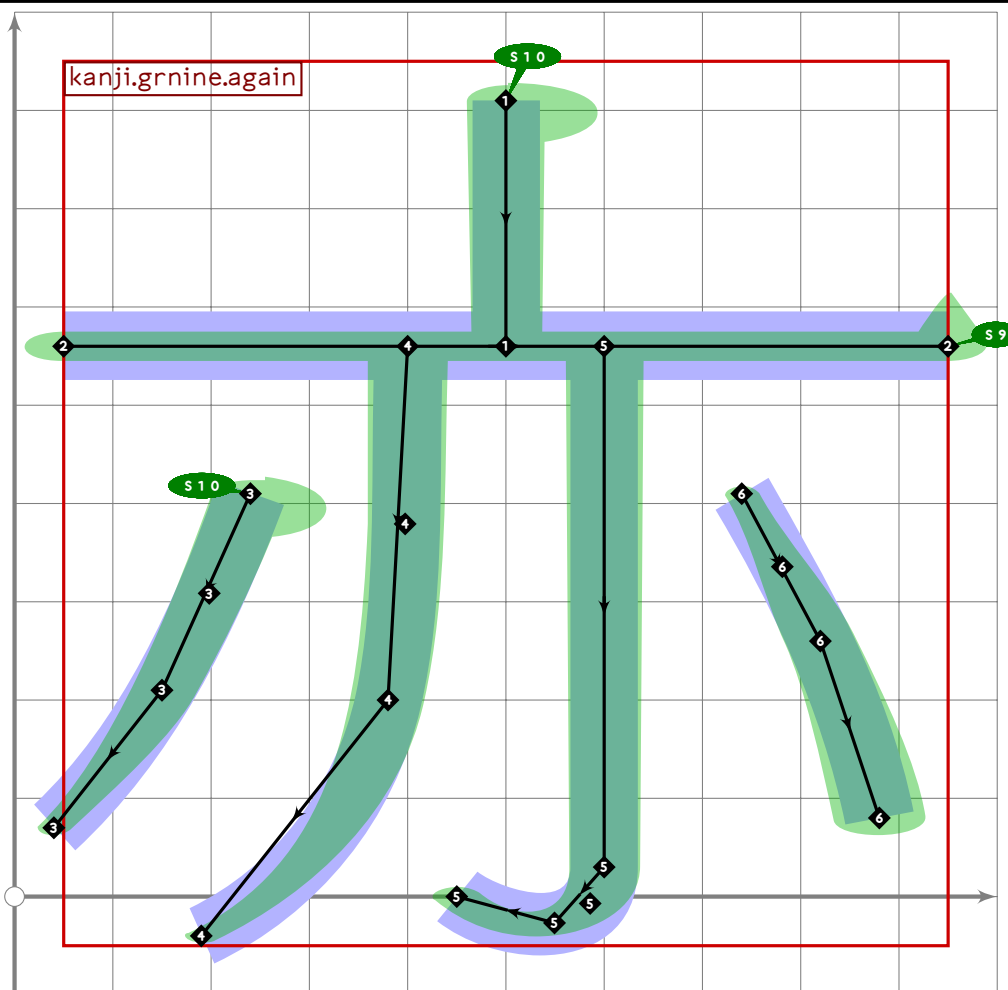
EIGH

gradenine.mp

```

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

```



NINE

```

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);

```

```

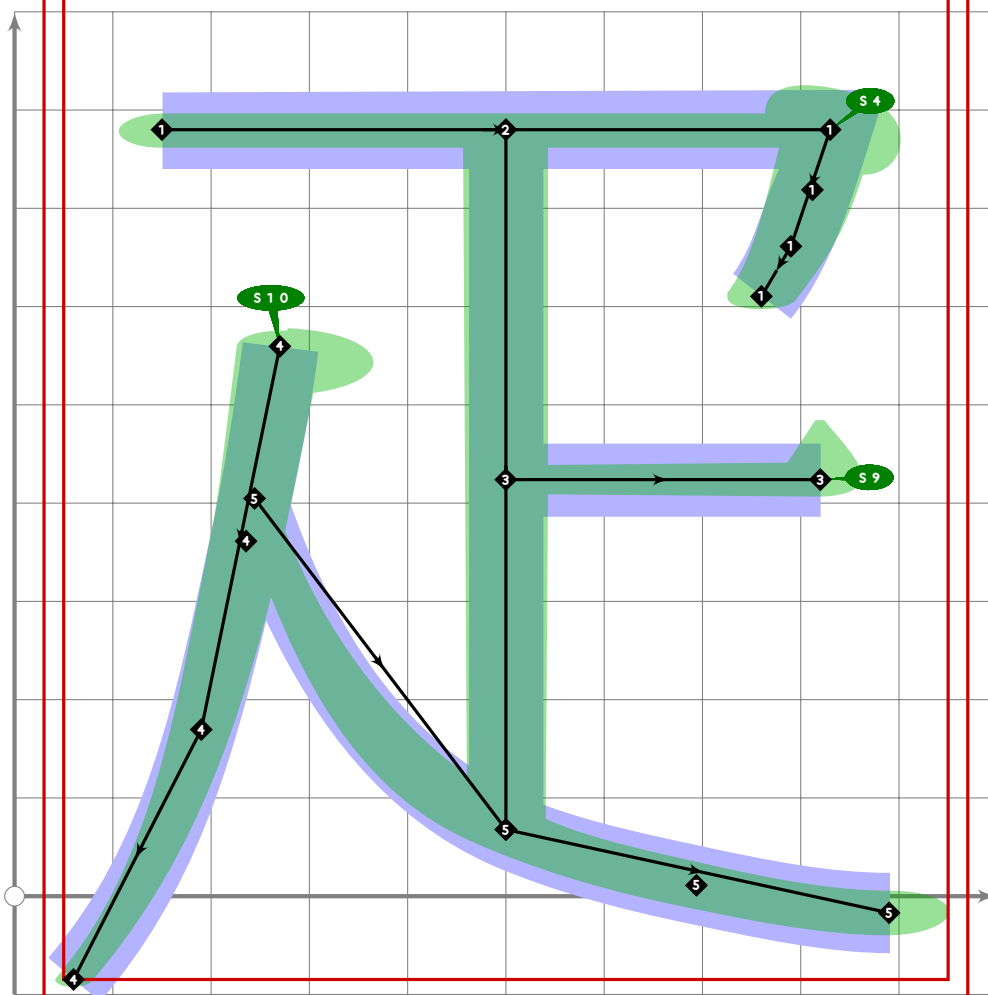
44  push_stroke((400,560){down}..tension 1.3..(380,200)..(190,-40),
45    (1.6,1.6)–(1.5,1.5)–(1,1));
46  push_stroke((600,560),(1.6,1.6));
47  build_kanji.add_jtail(0);
48  push_stroke((740,410)..tension 1.3..(820,260)..(880,80),
49    (1,1)–(1.5,1.5)–(1.8,1.8));
50  expand_pbox;
51 enddef;

```

U+758B
tsuku.uni758B

kanji.grnine.animal_counter
kanji.grnine_helper.foot

NINE



```

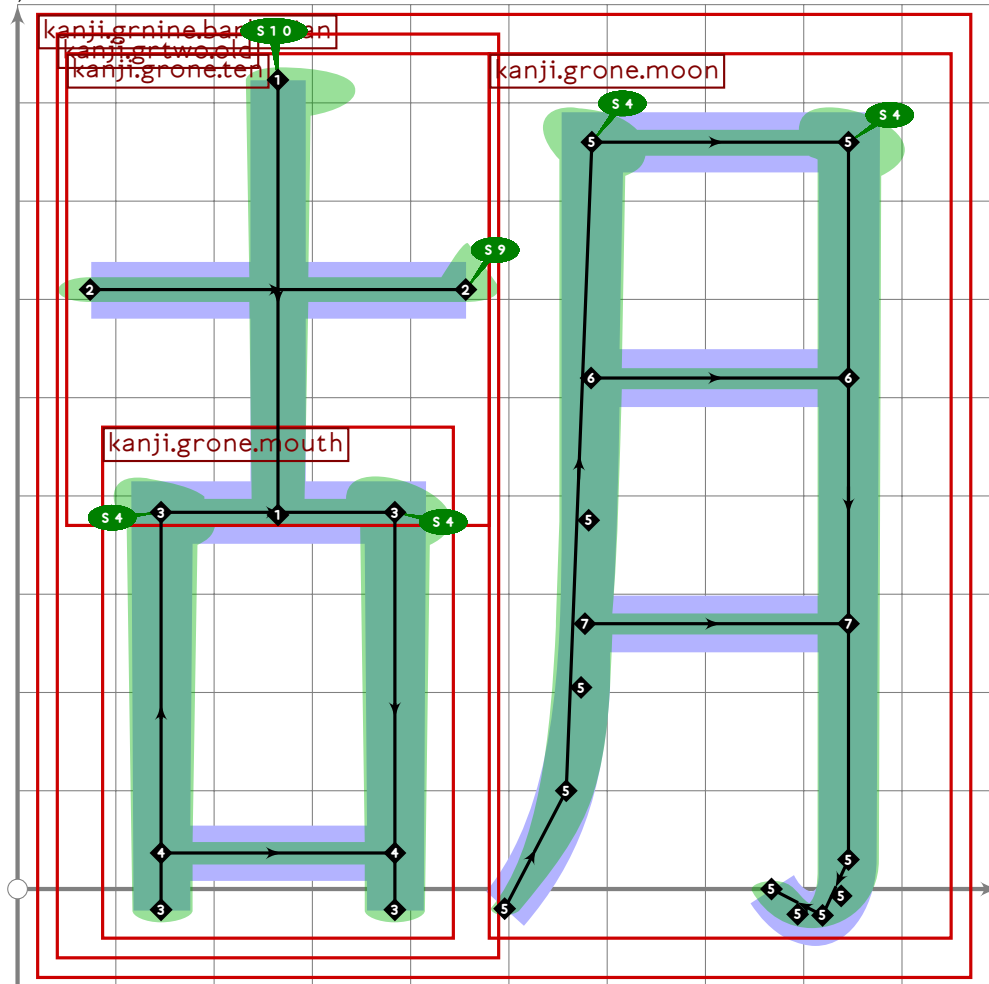
52
53 vardef kanji.grnine.animal_counter =
54   push_pbox_toexpand("kanji.grnine.animal_counter");
55   tsu_xform(identity yscaled (780/460))
56   (push_stroke((150,460)-(830,460)..tension 1.2..(790,390)..(760,360),
57     (1.6,1.6)-(1.7,1.7)-(1.6,1.6)-(1.4,1.4));

```

```

58   set_botip(0,1,1);
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;

```



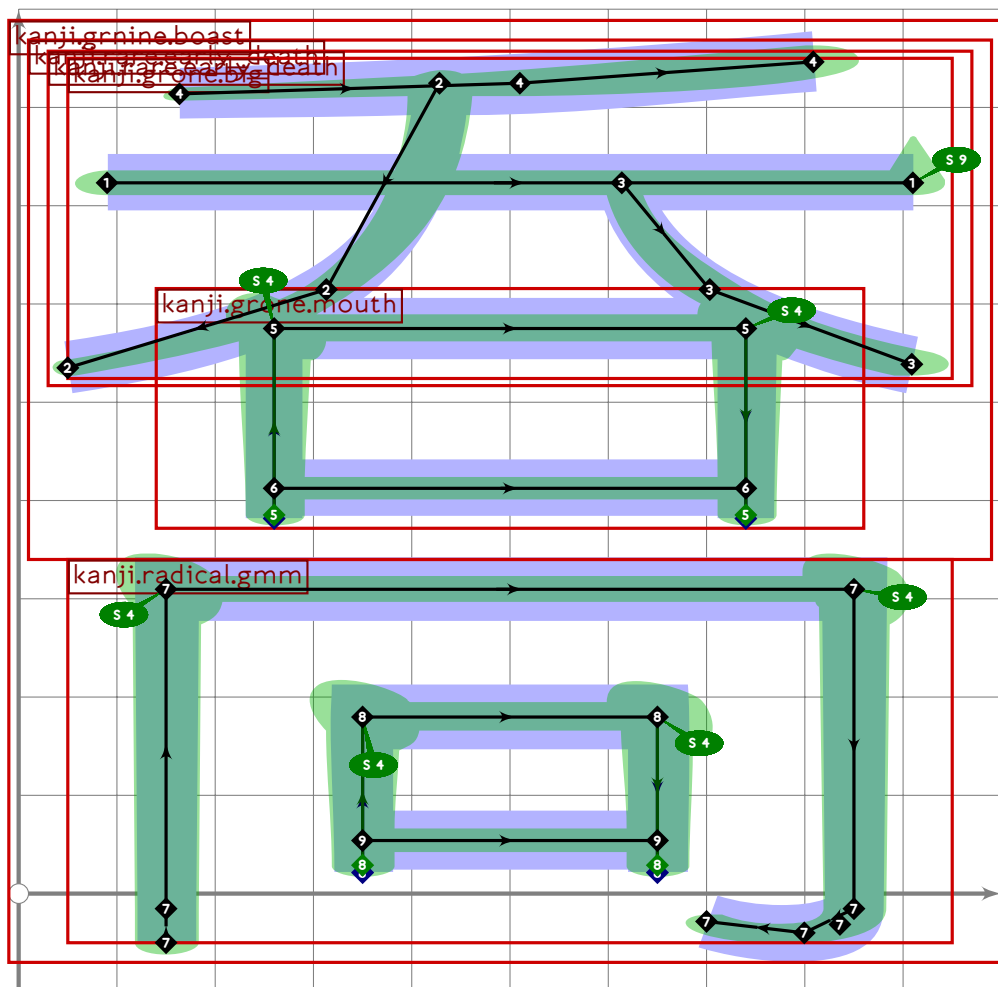
```

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;

```

NINE

U+55AC
tsuku.uni55AC

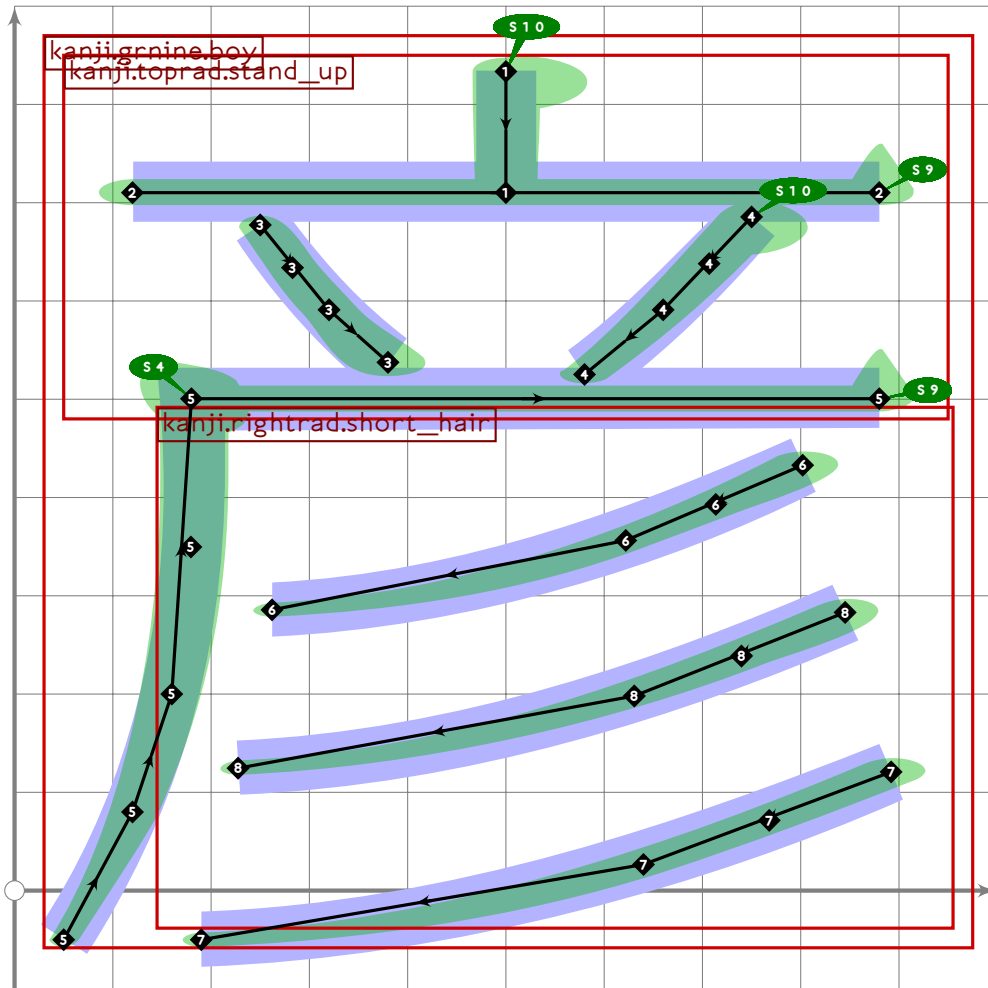


```

74
75 vardef kanji.grnine.boast =
76   push_pbox_toexpand("kanji.grnine.boast");
77   build_kanji.tb(340,0)
78   (kanji.rare.drink)
79   (kanji.radical.gmm;
80     build_kanji.box((350,480),(650,190)));
81   expand_pbox;
82 enddef;

```

NINE



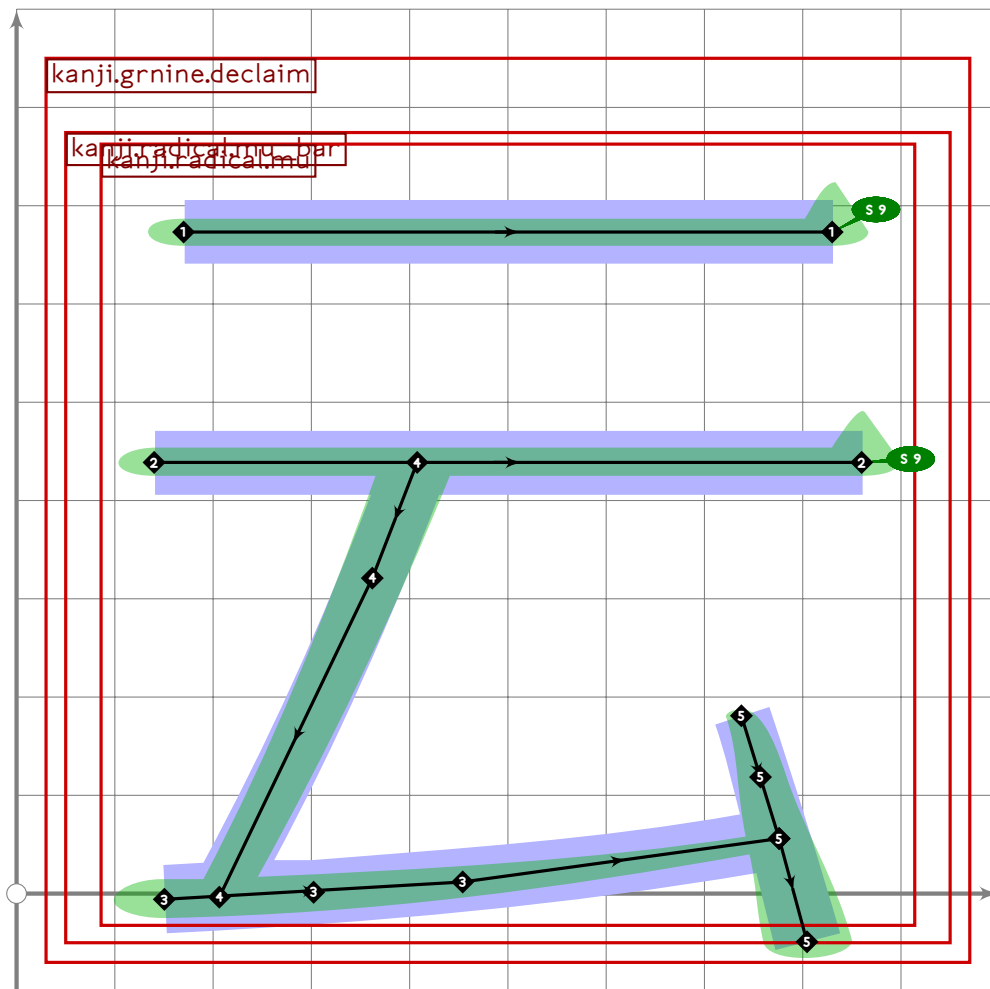
```

83
84 vardef kanji.grnine.boy =
85   push_pbox_toexpand("kanji.grnine.boy");
86   build_kanji.level(build_kanji.tb(480,0)
87     (kanji.toprad.stand_up)
88     (build_kanji.sscale(xscaled 0.9 shifted (50,20))
89       (kanji.rightrad.short_hair)));
90   replace_strokep(-3)((50,-50)..(120,80)..(160,200)..tension 1.2..
91     (180,y part point 0 of oldp)-(880,y part point 1 of oldp));
92   replace_strokeq(-3)((1,1)-(1.3,1.3)-(1.5,1.5)-(1.6,1.6)-(1.6,1.6));
93   set_botip(-3,3,1);
94   set_boserif(-3,1,whatever);
95   set_boserif(-3,3,4);
96   set_boserif(-3,4,9);
97   expand_pbox;
98 enddef;

```

NINE

U+4E91
tsuku.uni4E91

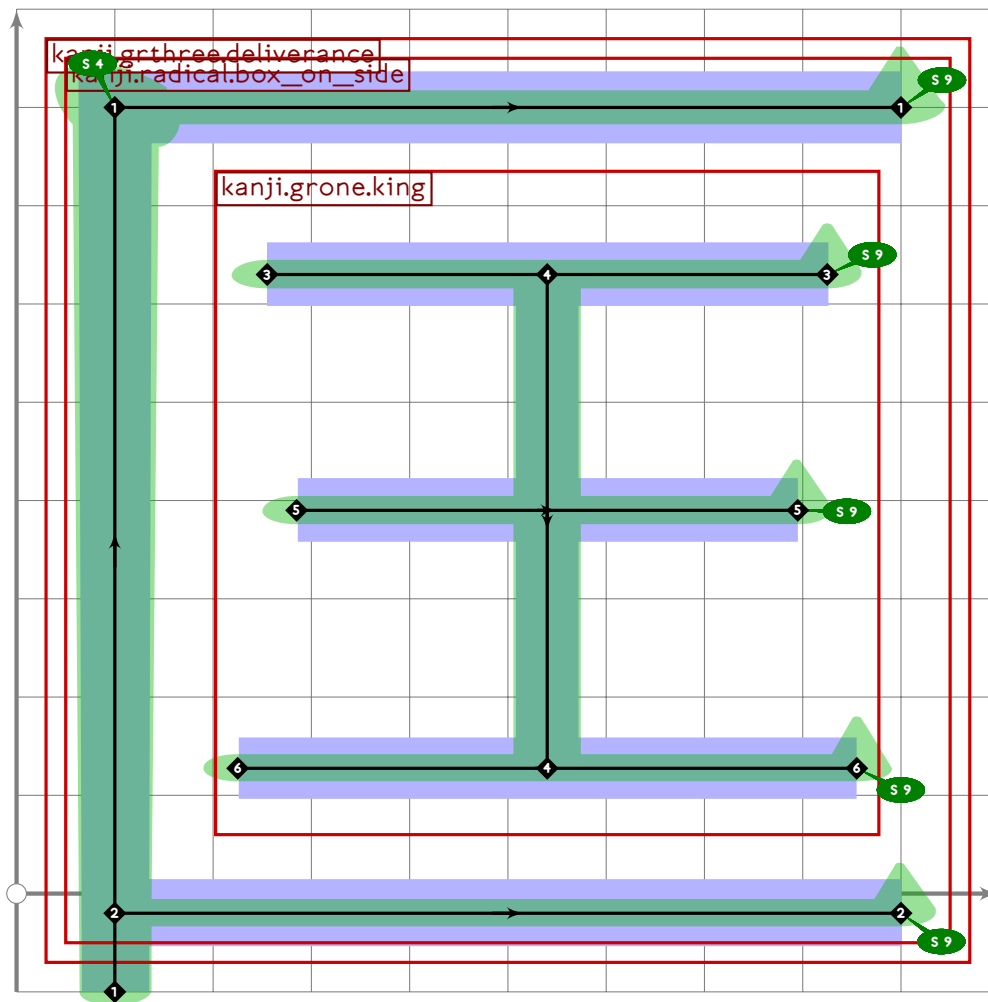


```

99
100 vardef kanji.grnine.declaim =
101   push_pbox_toexpand("kanji.grnine.declaim");
102   build_kanji.level(build_kanji.tb(480,0)
103     (push_stroke((170,420)-(830,420),
104       (1.6,1.6)-(1.6,1.6));
105     set_boserif(0,19);
106   )
107   (kanji.radical.mu_bar));
108   expand_pbox;
109 enddef;

```

NINE

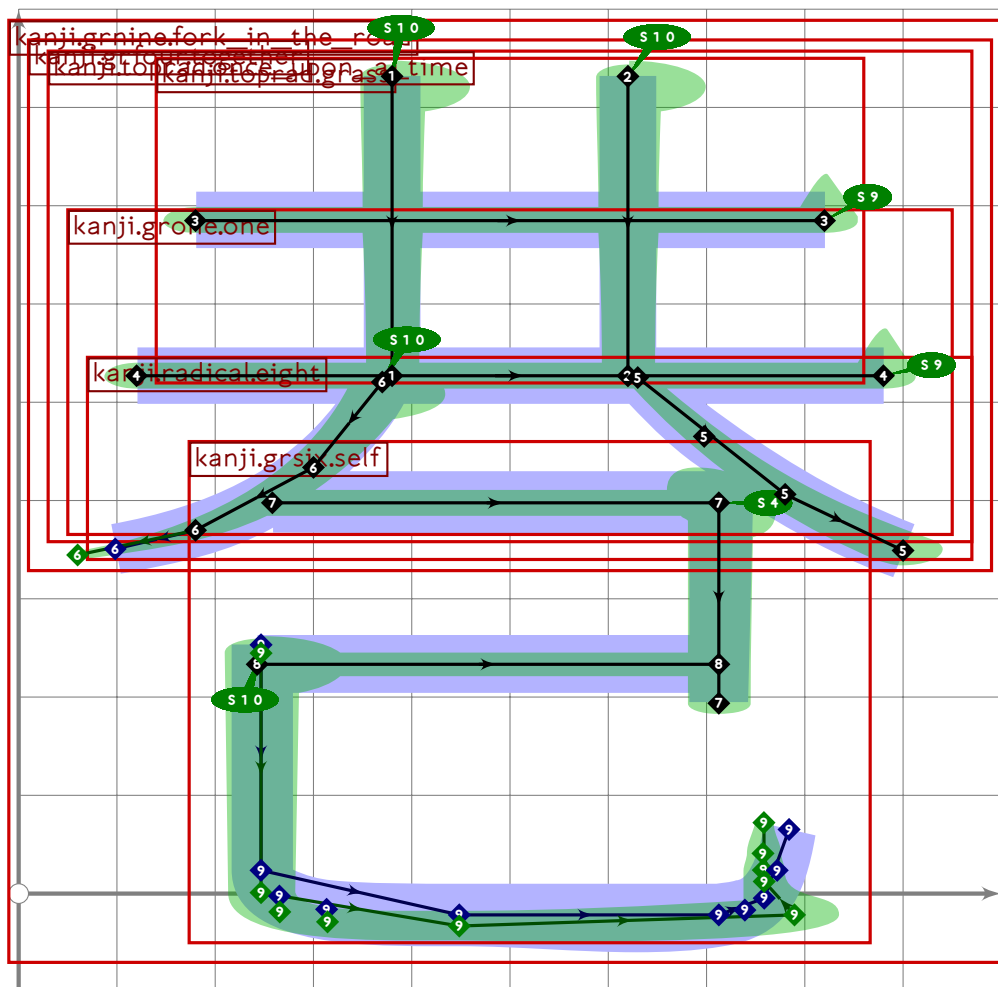


```

110
111 vardef kanji.grnine.deliverance =
112   push_pbox_toexpand("kanji.grthree.deliverance");
113   kanji.radical.box_on_side;
114   build_kanji.sscale(scaled 0.75 shifted (40,0))(kanji.grone.king);
115   expand_pbox;
116 enddef;

```

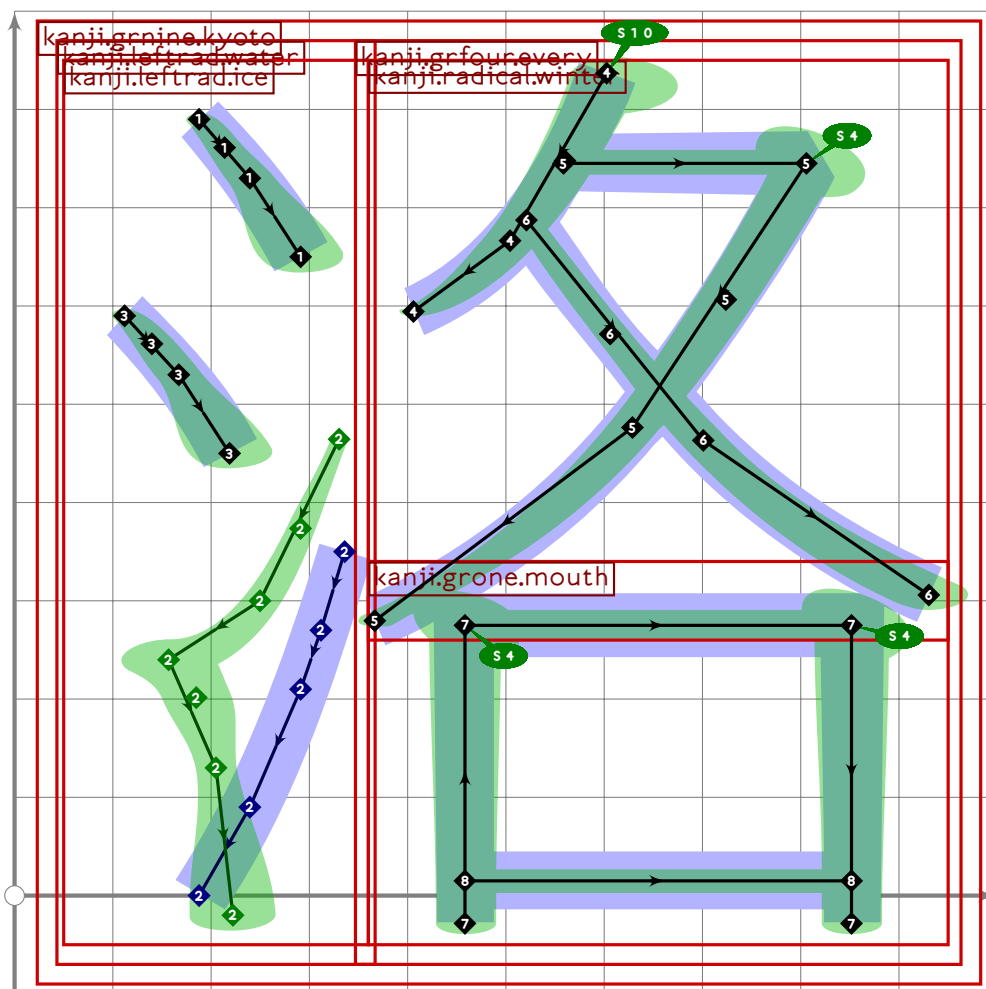
NINE



```

117
118 vardef kanji.grnine.fork_in_the_road =
119   push_pbox_toexpand("kanji.grnine.fork_in_the_road");
120   build_kanji.tb(400,120)
121     (kanji.grfour.together)
122     (build_kanji.sscale(xscaled 0.77 shifted (20,0))(kanji.grsix.self));
123   expand_pbox;
124 enddef;

```



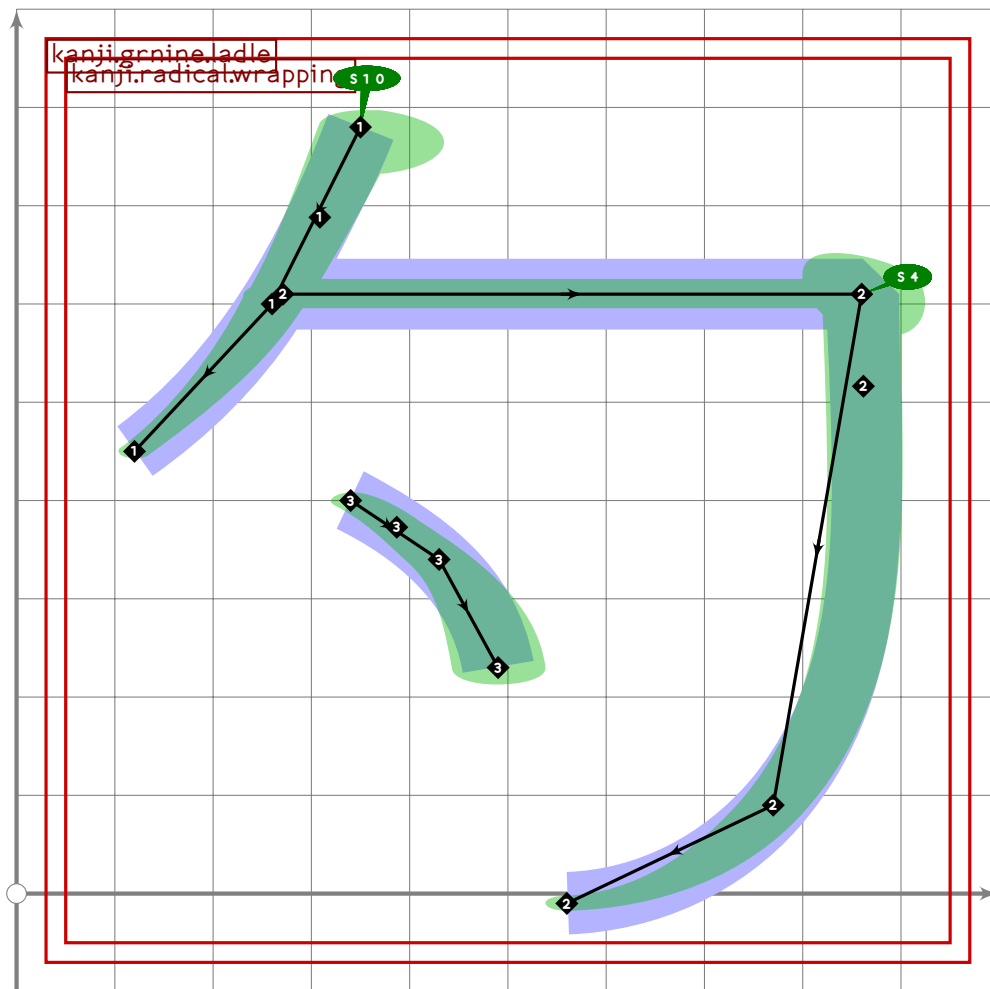
```

125
126 vardef kanji.grnine.kyoto =
127   push_pbox_toexpand("kanji.grnine.kyoto");
128   build_kanji.lr(360,0)
129     (kanji.leftrad.water)
130     (kanji.grfour.every);
131   expand_pbox;
132 enddef;

```

NINE

U+52FA
tsuku.uni52FA

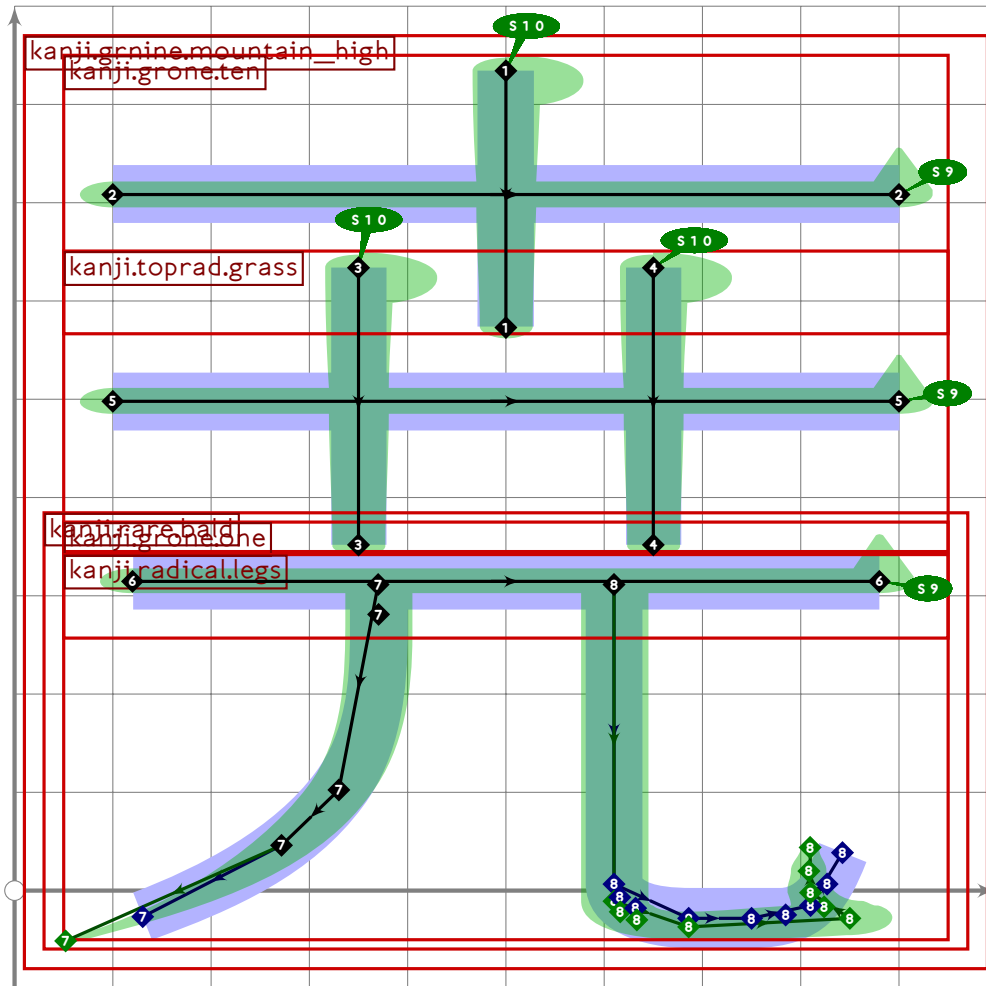


```

133
134 vardef kanji.grnine.ladle =
135   push_pbox_toexpand("kanji.grnine.ladle");
136   kanji.radical.wrapping;
137   push_stroke((340,400)..tension 1.2..(430,340)..(490,230),
138     (1,1,1)-(14,1,4)-(18,1,8));
139   expand_pbox;
140 enddef;

```

NINE



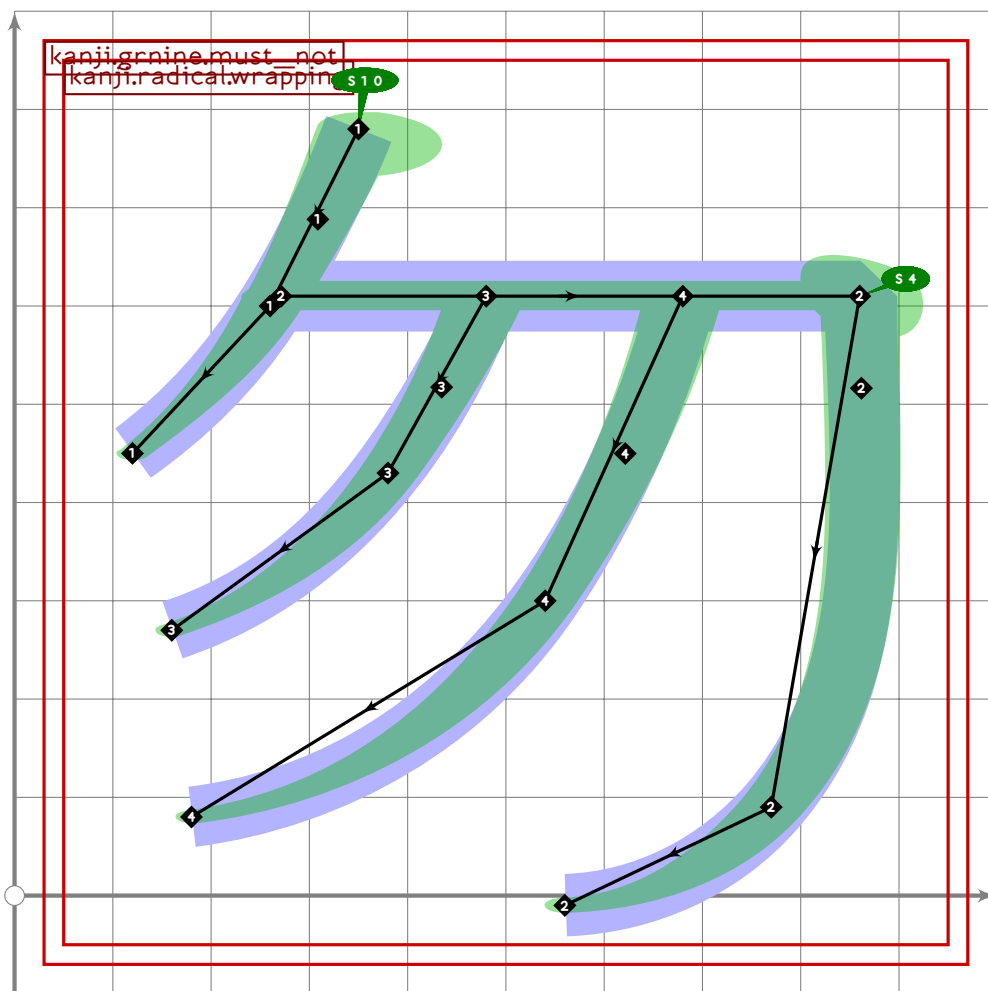
```

141
142 vardef kanji.grnine.mountain_high =
143   push_pbox_toexpand("kanji.grnine.mountain_high");
144   build_kanji.level(build_kanji.tb(360,30)
145     (build_kanji.tb(420,150)
146       (kanji.grone.ten)
147       (kanji.toprad.grass))
148     (kanji.rare.bald));
149   expand_pbox;
150 enddef;

```

NINE

U+52FF
tsuku.uni52FF

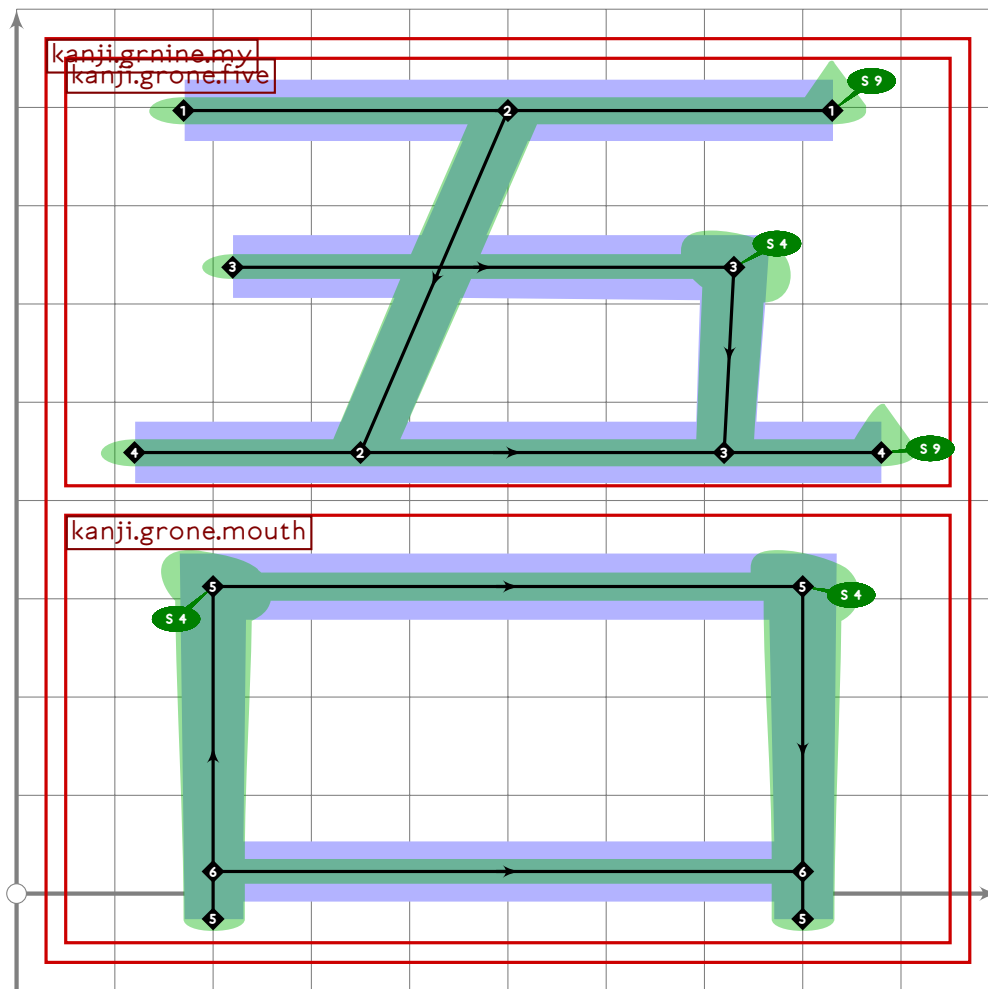


```

151
152 vardef kanji.grnine.must_not =
153   push_pbox_toexpand("kanji.grnine.must_not");
154   kanji.radical.wrapping;
155   push_stroke(
156     (480,610)..tension 1.2..(380,430)..(160,270),
157     (1.6,1.6)–(1.4,1.4)–(1.0,1.0));
158   push_stroke(
159     (680,610)..tension 1.2..(540,300)..(180,80),
160     (1.6,1.6)–(1.4,1.4)–(1.0,1.0));
161   expand_pbox;
162 enddef;

```

NINE



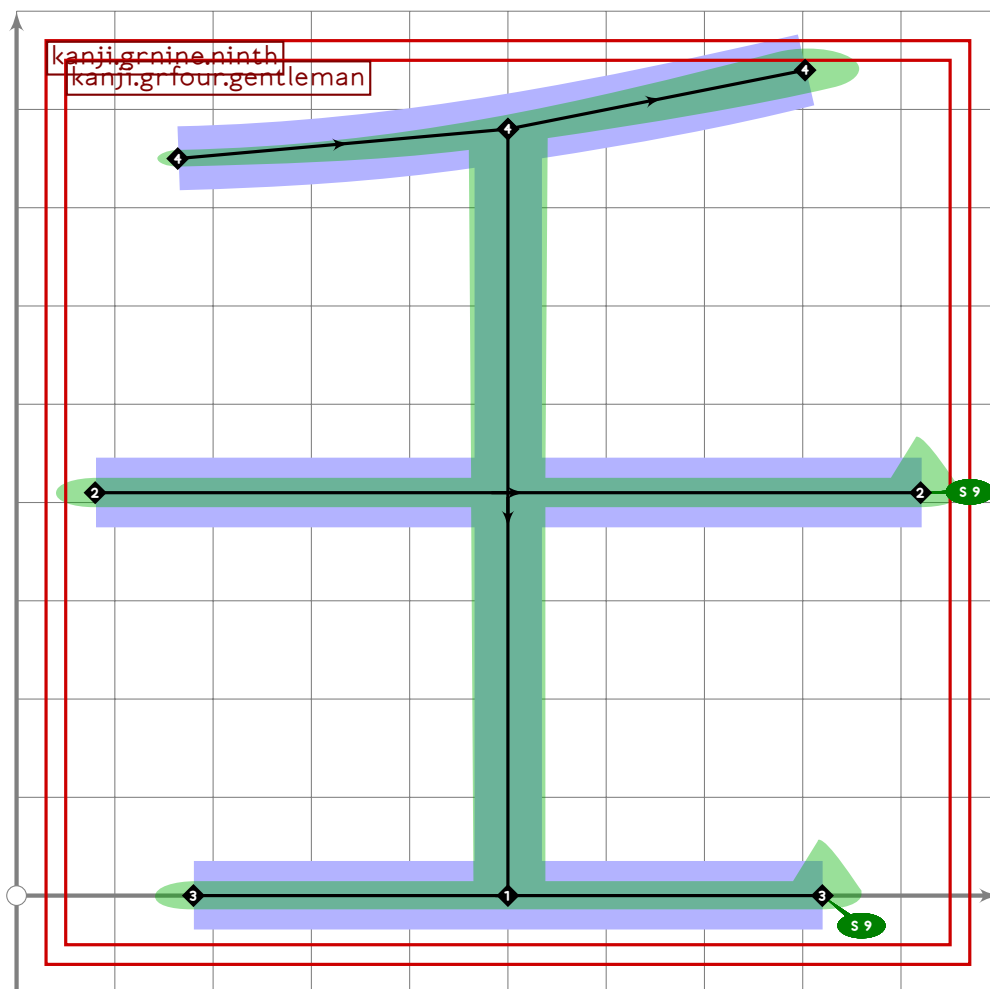
```

163
164 vardef kanji.grnine.my =
165   push_pbox_toexpand("kanji.grnine.my");
166   build_kanji.level(build_kanji.tb(400,-30)
167     (kanji.grone.five)
168     (kanji.grone.mouth));
169   expand_pbox;
170 enddef;

```

NINE

U+58EC
tsuku.uni58EC

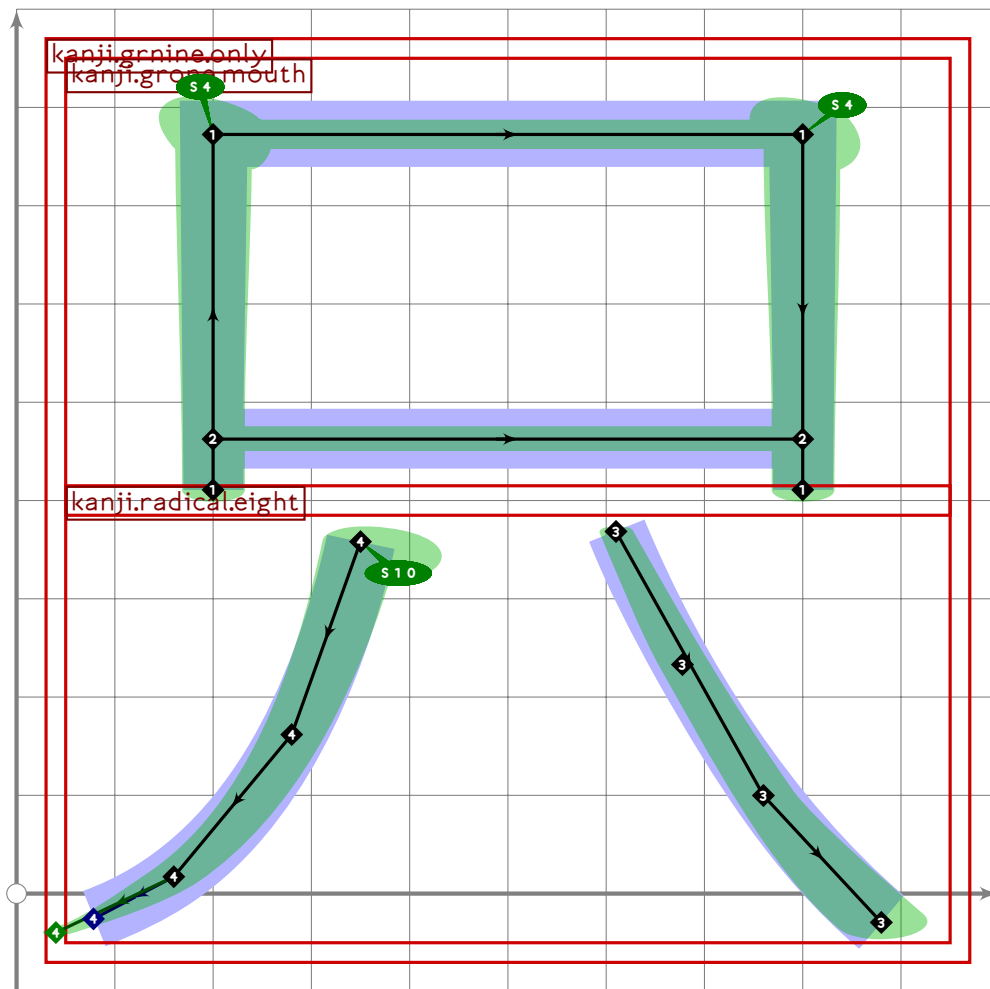


```

171
172 vardef kanji.grnine.ninth =
173   push_pbox_toexpand("kanji.grnine.ninth");
174   build_kanji.add_beret(
175     kanji.grfour.gentleman;
176     replace_strokep(-1)(oldp shifted (0,-60)));
177   expand_pbox;
178 enddef;

```

NINE



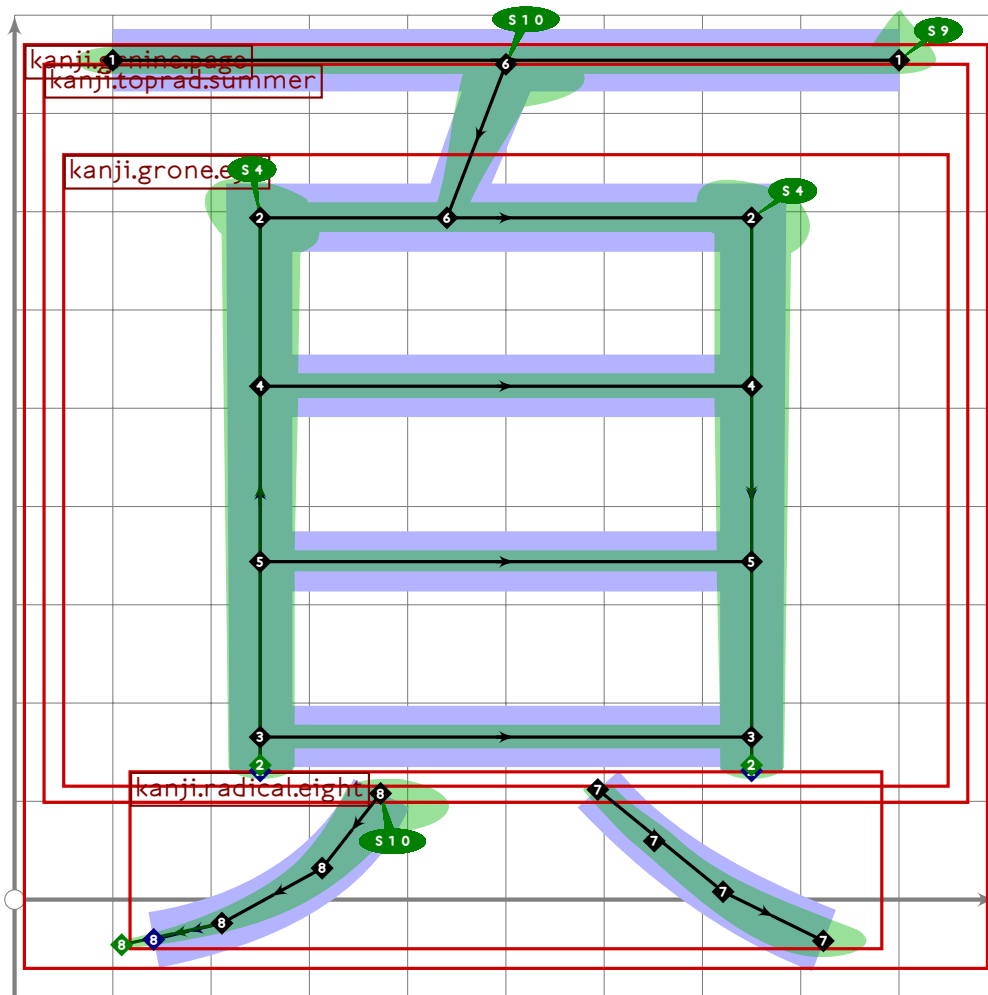
```

179
180 vardef kanji.grnine.only =
181   push_pbox_toexpand("kanji.grnine.only");
182   build_kanji.tb(400,30)
183     (kanji.grnine.mouth)
184     (kanji.radical.eight);
185   expand_pbox;
186 enddef;

```

NINE

U+9801
tsuku.uni9801

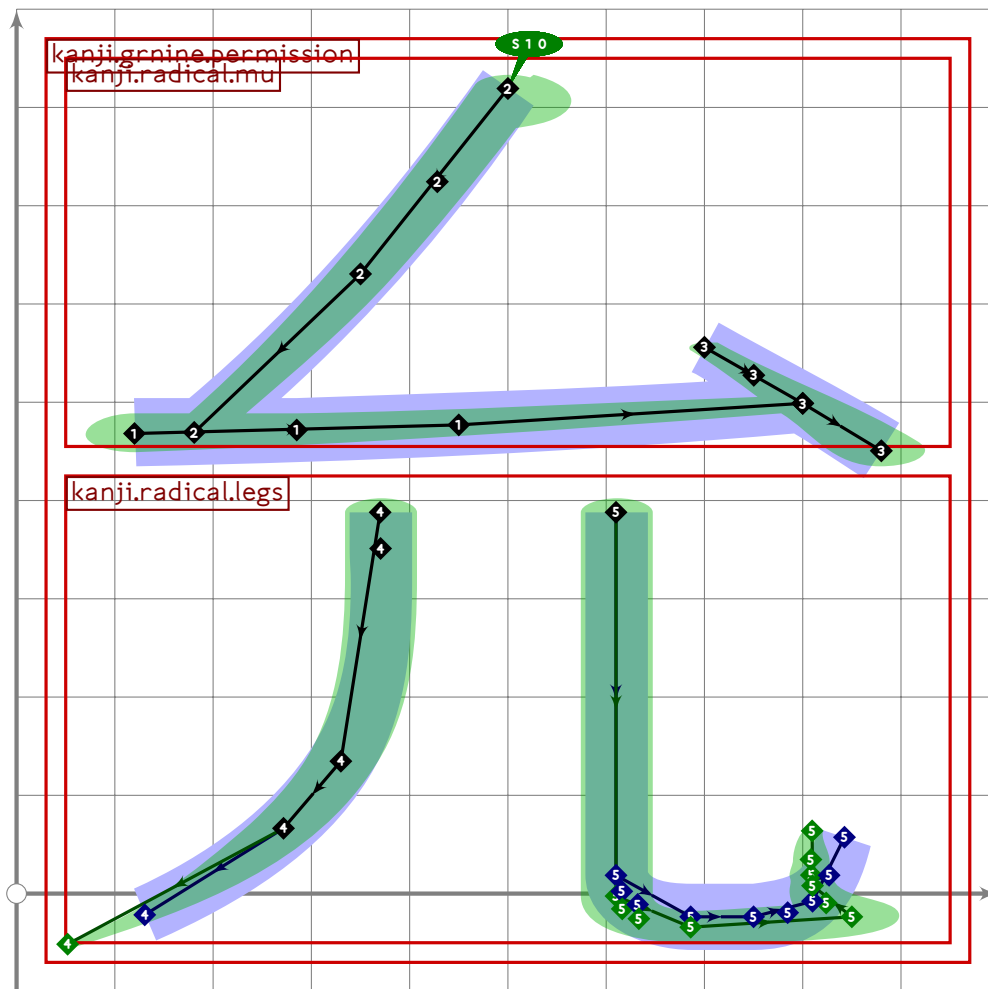


```

187
188 vardef kanji.grnine.page =
189   push_pbox_toexpand("kanji.grnine.page");
190   build_kanji.level(build_kanji.tb(120,20)
191     (kanji.toprad.summer)
192     (build_kanji.sscale(xscaled 0.85)(kanji.radical.eight)));
193   expand_pbox;
194 enddef;

```

NINE

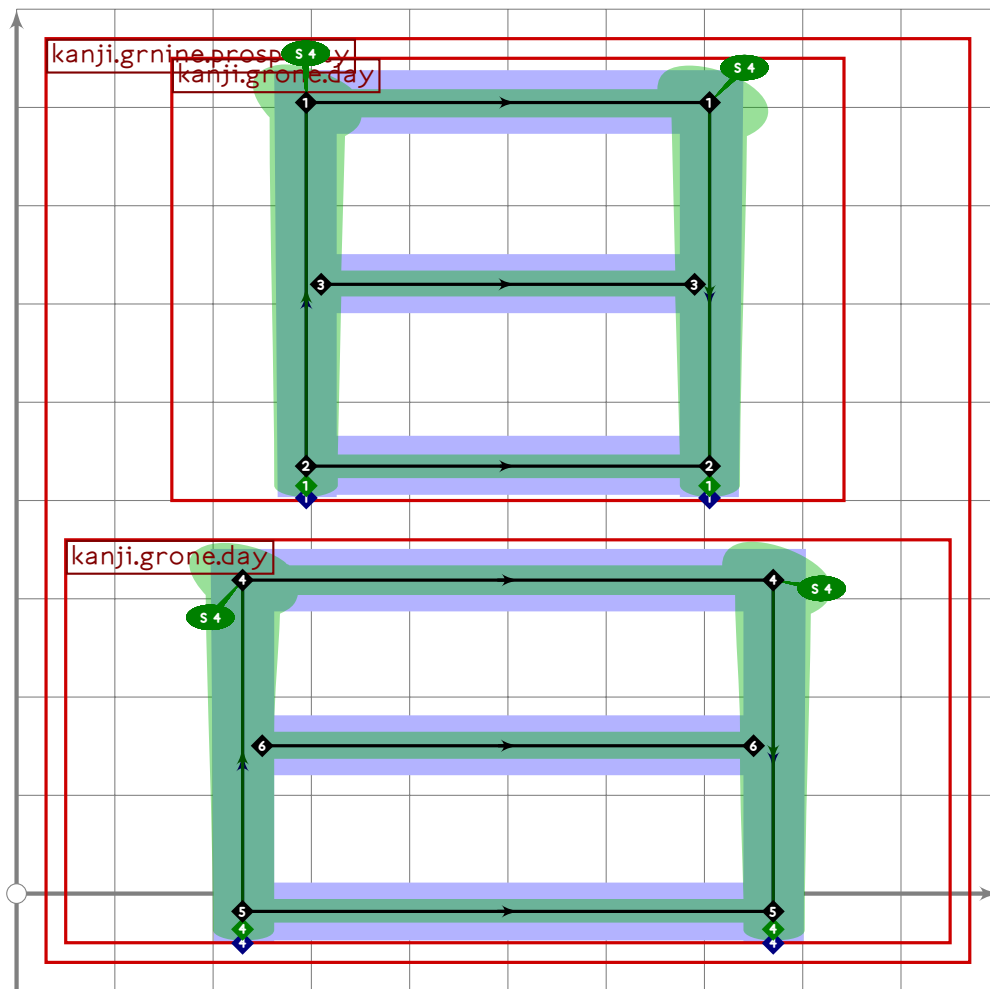


```

195
196 vardef kanji.grnine.permission =
197   push_pbox_toexpand("kanji.grnine.permission");
198   build_kanji.level(build_kanji.tb(440,-30)
199     (kanji.radical.mu)
200     (kanji.radical.legs));
201   expand_pbox;
202 enddef;

```

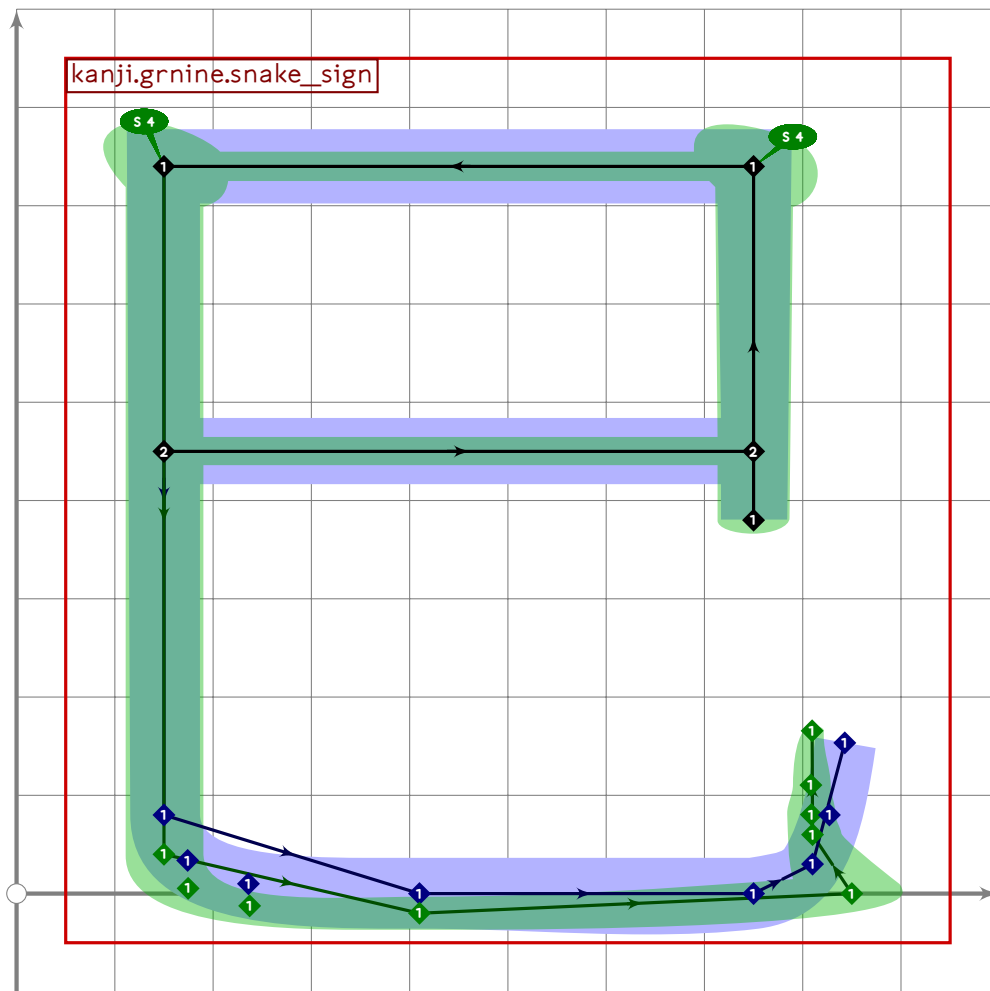
NINE



```

203
204 vardef kanji.grnine.prosperity =
205   push_pbox_toexpand("kanji.grnine.prosperity");
206   build_kanji.level(build_kanji.tb(380,-40)
207     (build_kanji.sscale(xscaled 0.76)(kanji.grone.day))
208     (kanji.grone.day));
209   expand_pbox;
210 enddef;

```

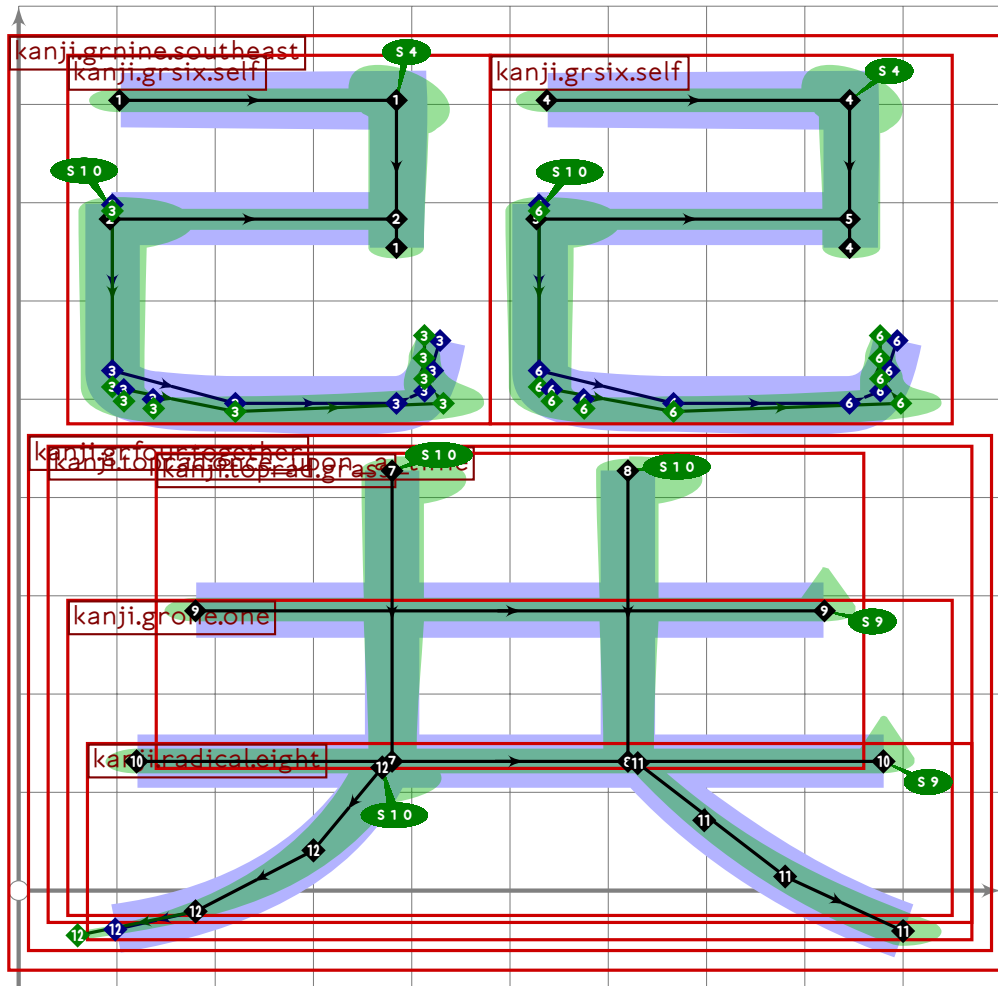


```

211
212 vardef kanji.grnine.snake_sign =
213   push_pbox_toexpand("kanji.grnine.snake_sign");
214   push_stroke((750,380)–(750,740)–(150,740),
215     (1.5,1.5)–(1.6,1.6)–(1.6,1.6));
216   set_botip(0,1,1);
217   set_botip(0,2,1);
218   set_boserif(0,1,4);
219   set_boserif(0,2,4);
220   build_kanji.add_tail(0);
221   push_stroke((150,450)–(750,450),
222     (1.5,1.5)–(1.5,1.5));
223   expand_pbox;
224 enddef;

```

NINE

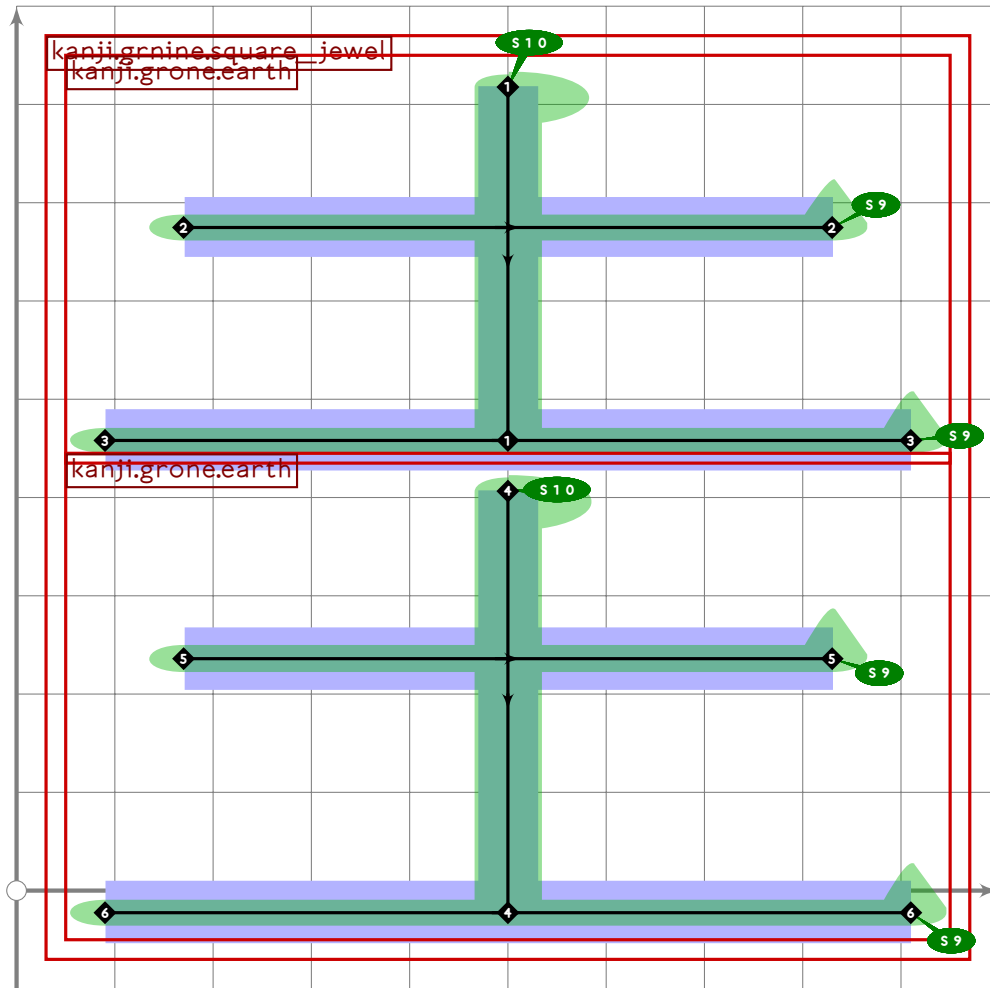


```

225
226 vardef kanji.grnine.southeast =
227   push_pbox_toexpand("kanji.grnine.southeast");
228   build_kanji.level(build_kanji.tb(460,-30)
229     (build_kanji.lr(480,0)
230       (kanji.grsix.self)
231       (kanji.grsix.self))
232     (kanji.grfour.together));
233   expand_pbox;
234 enddef;

```

NINE

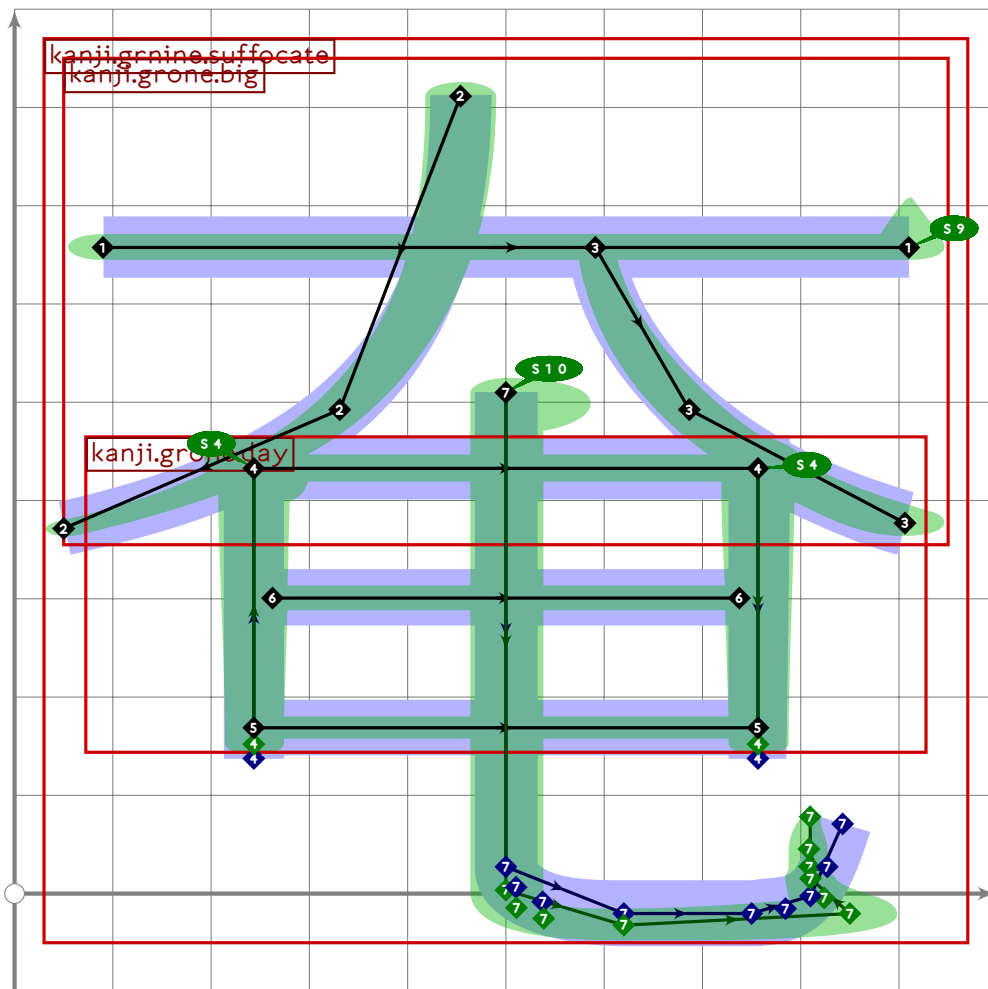


```

235
236 vardef kanji.grnine.square_jewel =
237   push_pbox_toexpand("kanji.grnine.square_jewel");
238   build_kanji.tb(440,10)
239     (kanji.grone.earth)
240     (kanji.grone.earth);
241   expand_pbox;
242 enddef;

```

NINE

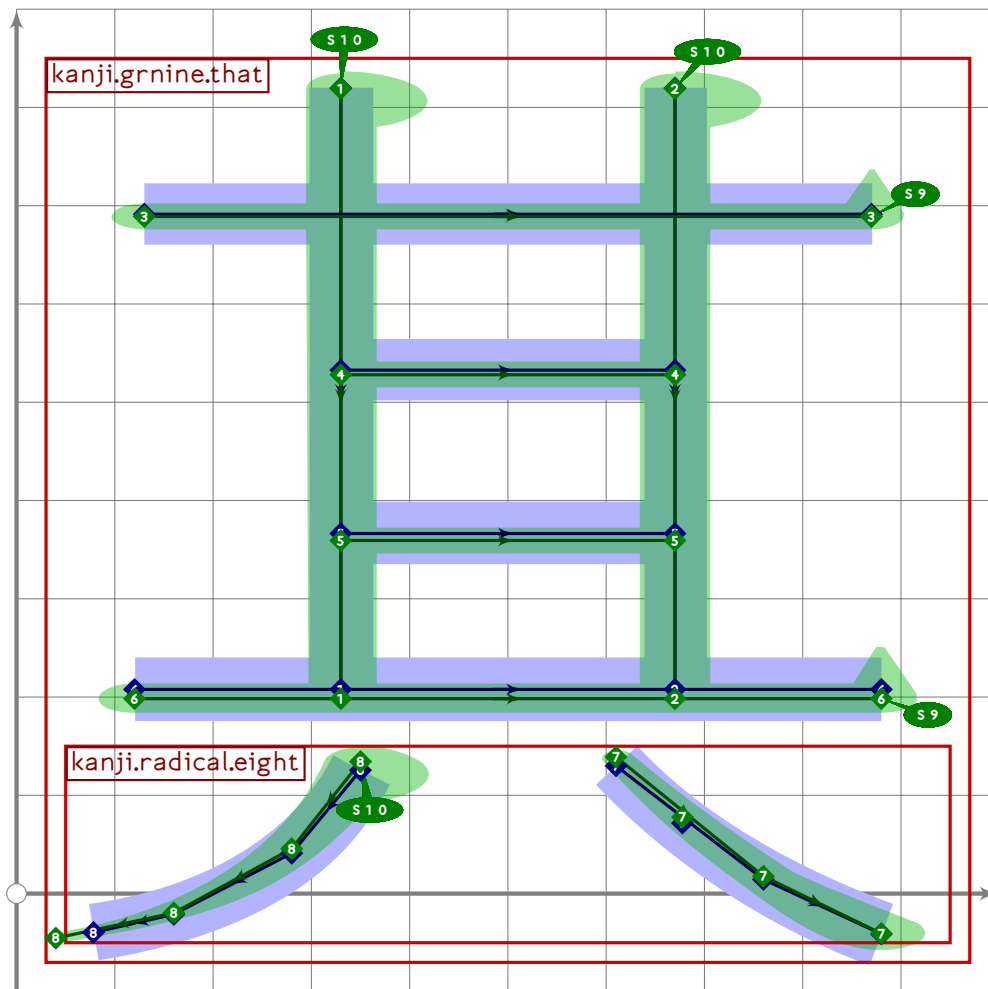


```

243
244 vardef kanji.grnine.suffocate =
245   push_pbox__toexpand("kanji.grnine.suffocate");
246   build_kanji.tb(420,130)
247   (build_kanji.spread_legs(110)
248     (kanji.grone.big))
249   (build_kanji.sscale(xyscaled (0.95,0.6) shifted (0,150))
250     (kanji.grone.day);
251   push_stroke(((0,130)+point 1.5 of get_stroke(-2)),(1.6,1.6));
252   build_kanji.add__ltail(0);
253   set_boserif(0,0,10));
254   expand_pbox;
255 enddef;

```

NINE



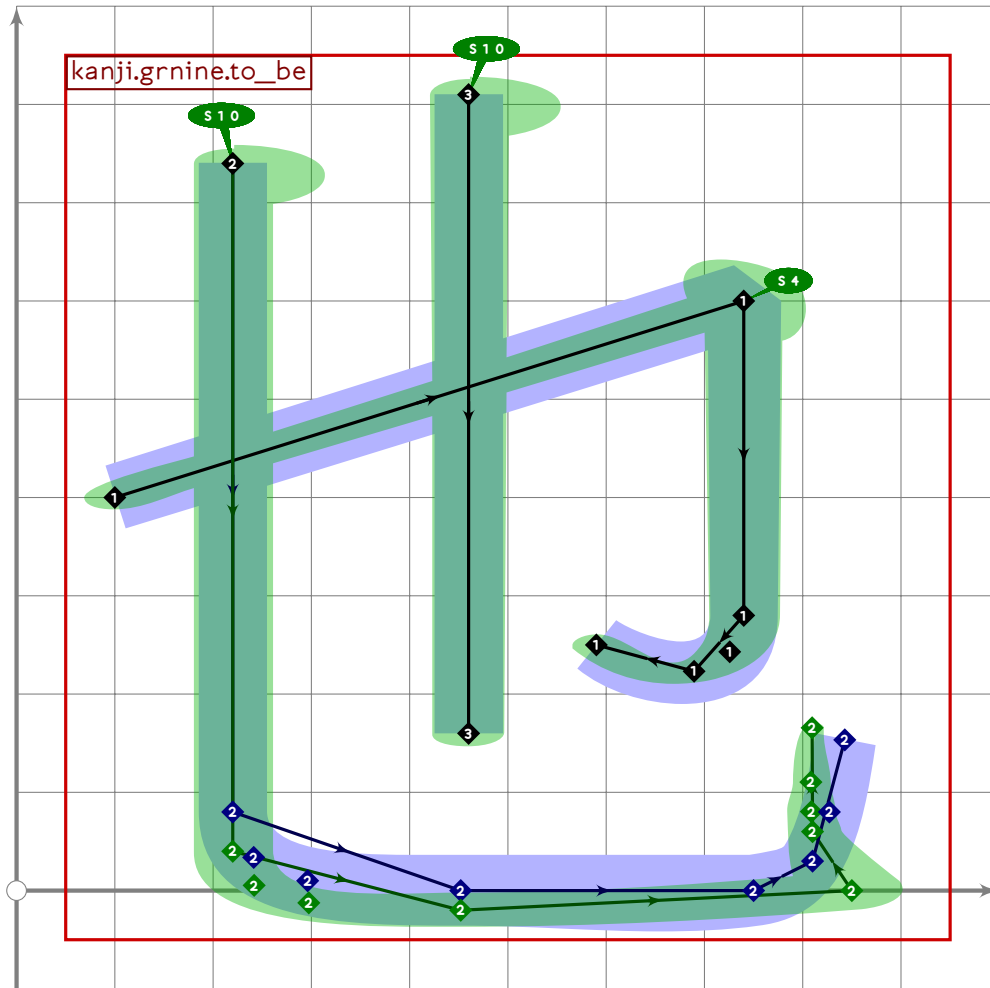
```

256
257 vardef kanji.grnine.that =
258   push_pbox_toexpand("kanji.grnine.that");
259   build_kanji.level(build_kanji.tb(160,-20+20*mincho)
260     (push_stroke((330,810)-(330,0),(1.6,1.6)-(1.5,1.5));
261       set_boserif(0,0,10);
262       push_stroke((670,810)-(670,0),(1.6,1.6)-(1.5,1.5));
263       set_boserif(0,0,10);
264       push_stroke((130,640)-(870,640),(1.5,1.5)-(1.5,1.5));
265       set_boserif(0,19);
266       push_stroke((330,430)-(670,430),(1.5,1.5)-(1.5,1.5));
267       push_stroke((330,210)-(670,210),(1.5,1.5)-(1.5,1.5));
268       push_stroke((120,0)-(880,0),(1.6,1.6)-(1.6,1.6));
269       set_boserif(0,19))
270     (kanji.radical.eight));
271   expand_pbox;
272 enddef;

```

NINE

U+4E5F
tsuku.uni4E5F

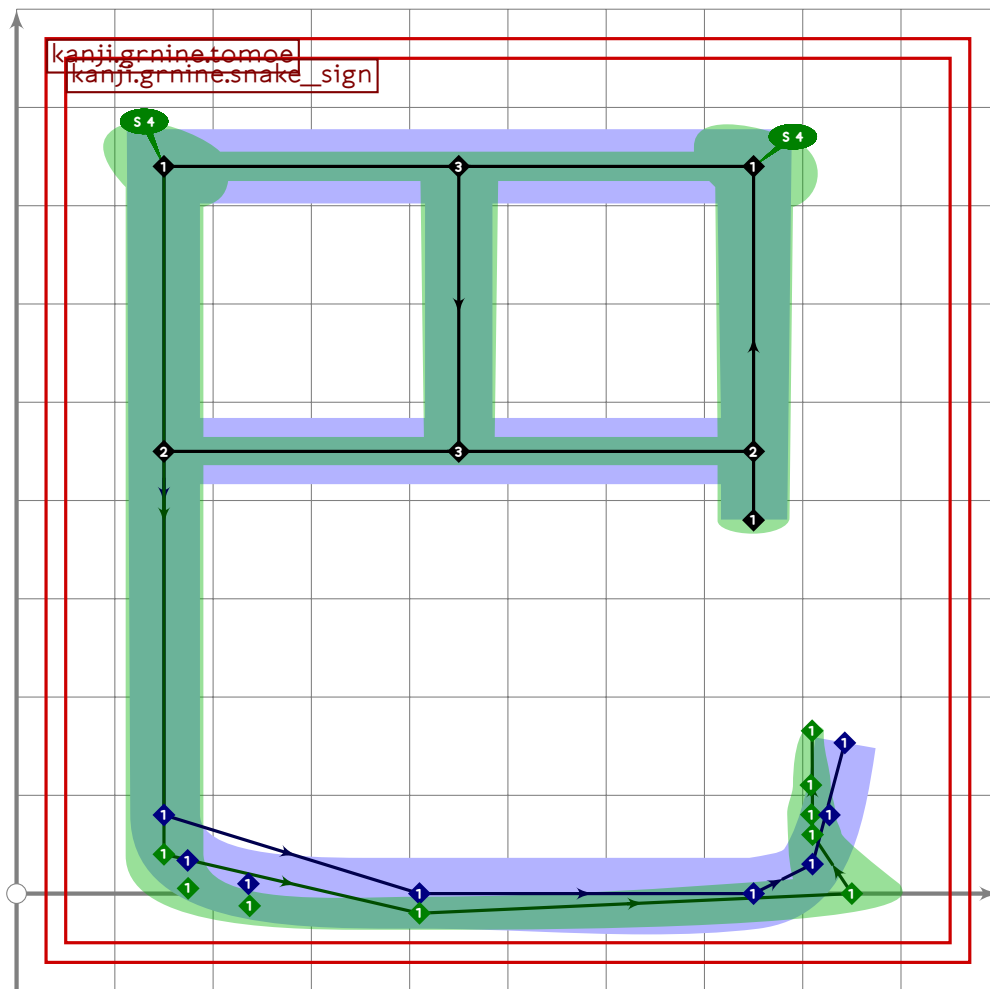


```

273
274 vardef kanji.grnine.to_be =
275   push_pbox_toexpand("kanji.grnine.to_be");
276   tsu_xform(identity shifted (0,250))(
277     push_stroke((100,150)–(740,350),
278       (1.4,1.4)–(1.6,1.6));
279     set_botip(0,1,0);
280     set_boserif(0,1,4);
281     build_kanji.add_jtail(0);
282   );
283   push_stroke((220,740),(1.6,1.6));
284   build_kanji.add_ltail(0);
285   set_boserif(0,0,10);
286   push_stroke((460,810)–(460,160),
287     (1.6,1.6)–(1.5,1.5));
288   set_boserif(0,0,10);
289   expand_pbox;
290 enddef;

```

NINE



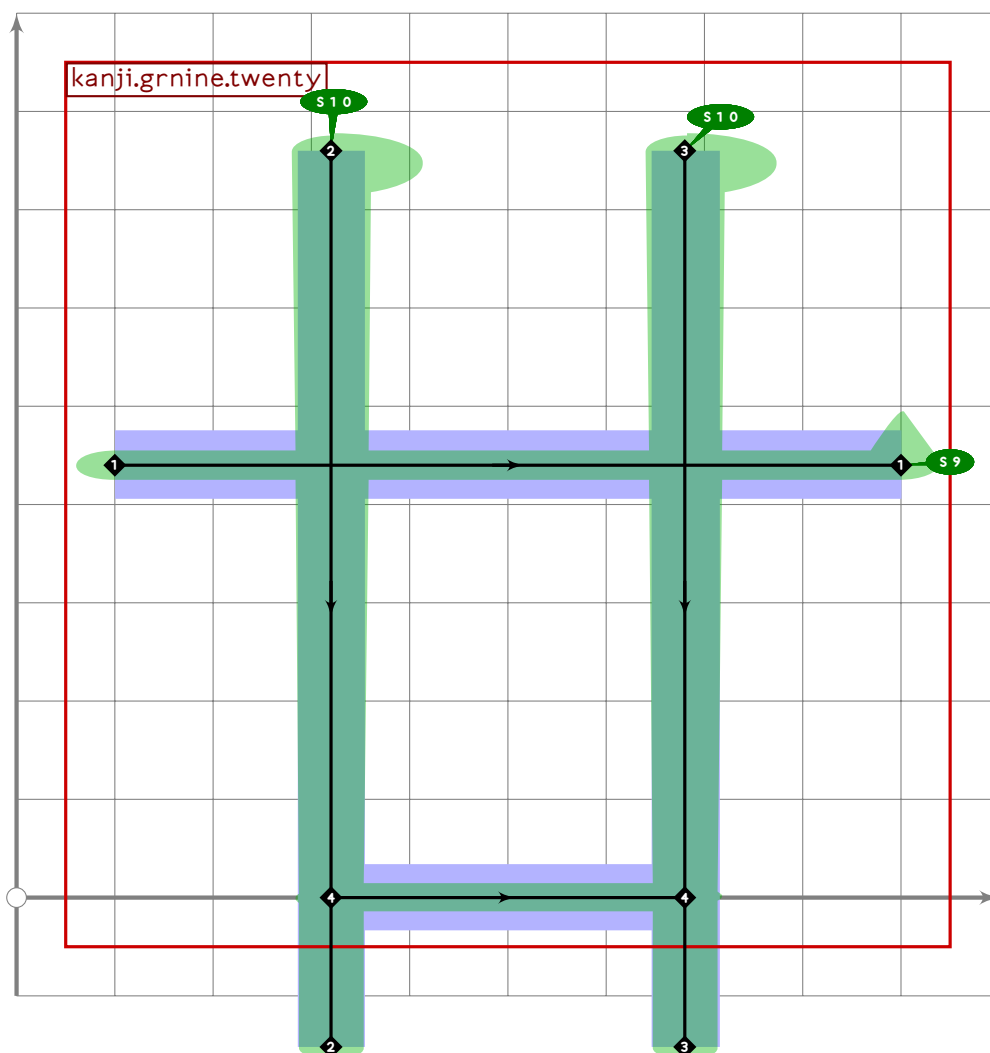
```

291
292 vardef kanji.grnine.tomoe =
293   push_pbox_toexpand("kanji.grnine.tomoe");
294   kanji.grnine.snake_sign;
295   push_stroke((450,740)-(450,450),(1.6,1.6)-(1.5,1.5));
296   expand_pbox;
297 enddef;

```

NINE

U+5EFF
tsuku.uni5EFF

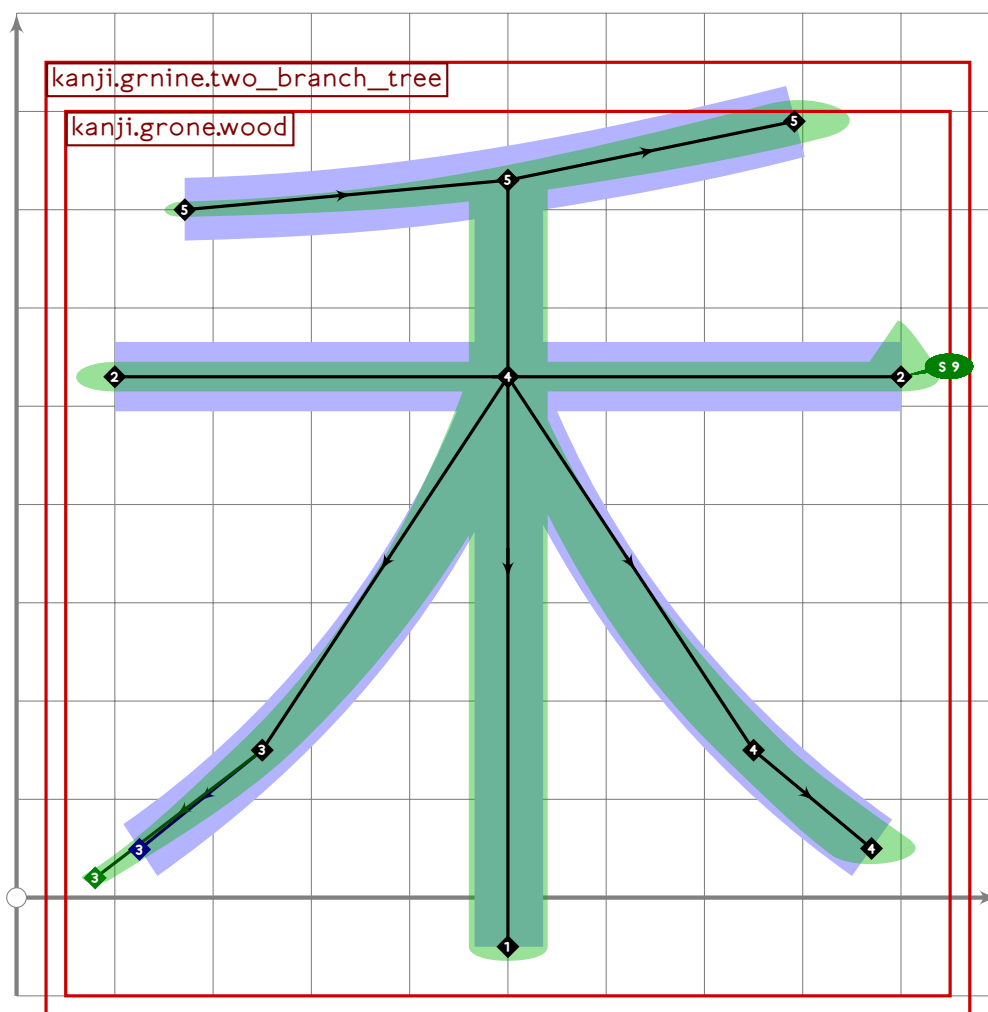


```

298
299 vardef kanji.grnine.twenty =
300   push_pbox_toexpand("kanji.grnine.twenty");
301   push_stroke((100,440)–(900,440),(1.6,1.6)–(1.6,1.6));
302   set_boserif(0,1,9);
303   build_kanji.cup((320,760),(680,0));
304   expand_pbox;
305 enddef;

```

NINE



```

306
307 vardef kanji.grnine.two_branch_tree =
308   push_pbox_toexpand("kanji.grnine.two_branch_tree");
309   tsu_xform(identity shifted (0,-50))
310     (build_kanji.add_beret(kanji.grone.wood));
311   expand_pbox;
312 enddef;

```

NINE

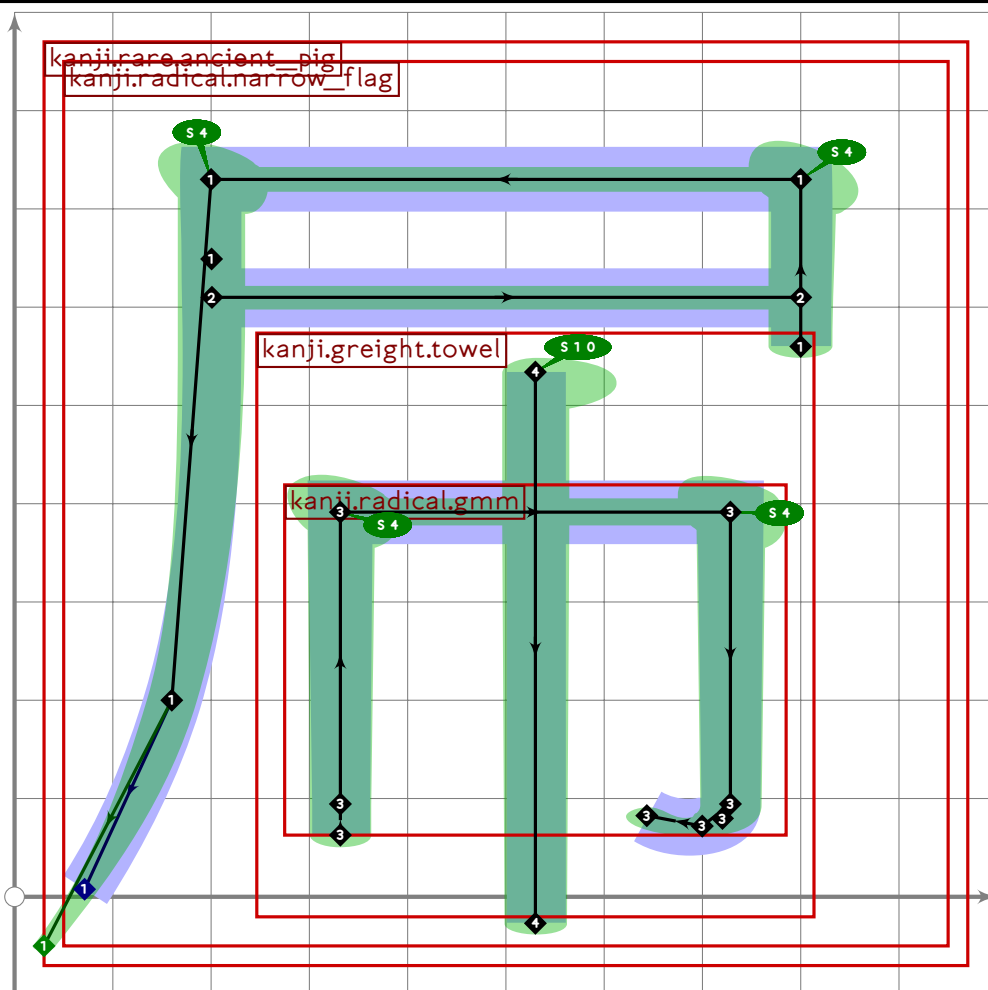
rare.mp

```
1 %
2 % Rare kanji needed to build others
3 % Copyright (C) 2011, 2012, 2013 Matthew Skala
4 %
5-29 [Standard copyright notice]
```

```
30
31 inclusion_lock(rare);
```

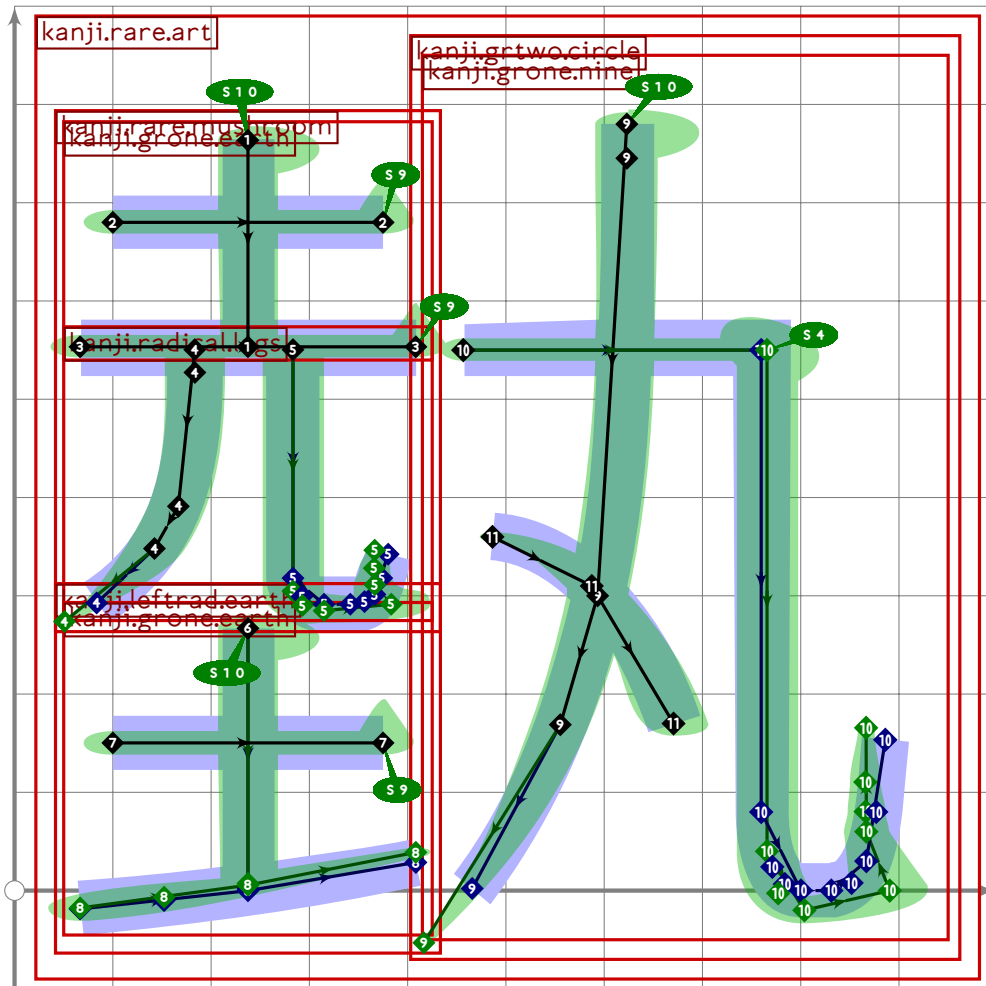
```
32
```

```
33
```



RARE

```
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;
```

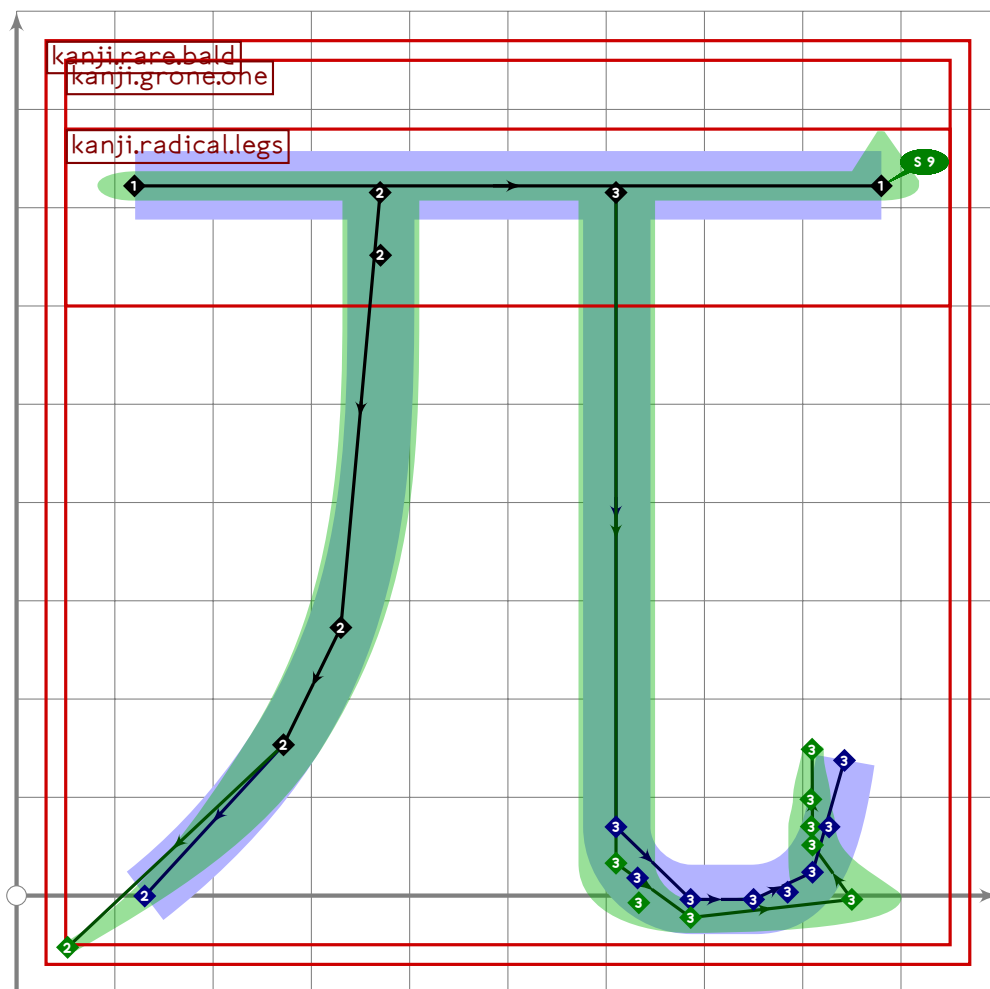
```

43
44 vardef kanji.rare.art =
45   push_pbox_toexpand("kanji.rare.art");
46   build_kanji.level(build_kanji.lr(420,10)
47     (build_kanji.sscale(yscaled 0.94 shifted (0,-40))(build_kanji.tb(330,40)
48       (kanji.rare.mushroom)
49       (kanji.leftrad.earth)))
50     (kanji.grtwo.circle));
51   expand_pbox;
52 enddef;

```

RARE

U+5140
tsuku.uni5140

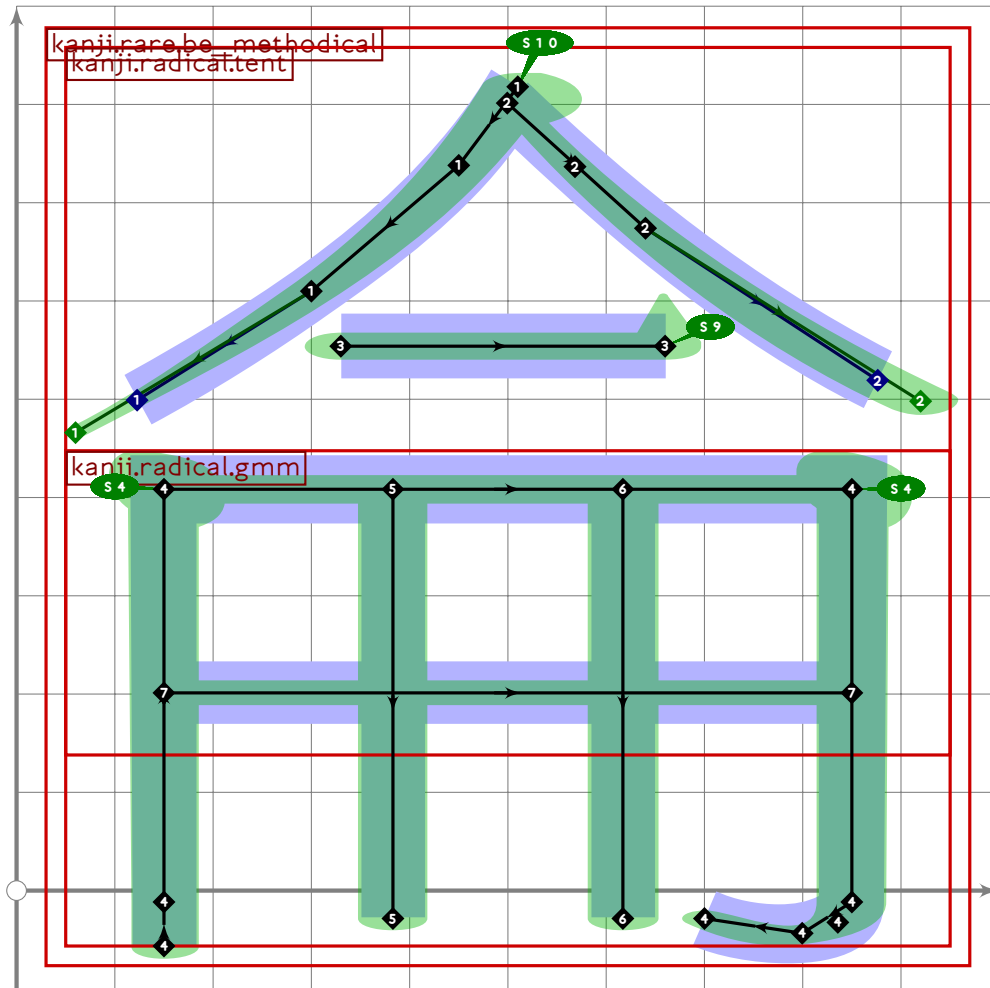


```

53
54 vardef kanji.rare.bald =
55   push_pbox_toexpand("kanji.rare.bald");
56   build_kanji.level(build_kanji.tb(690,180)
57     (kanji.grone.one)
58     (kanji.radical.legs));
59   expand_pbox;
60 enddef;

```

RARE



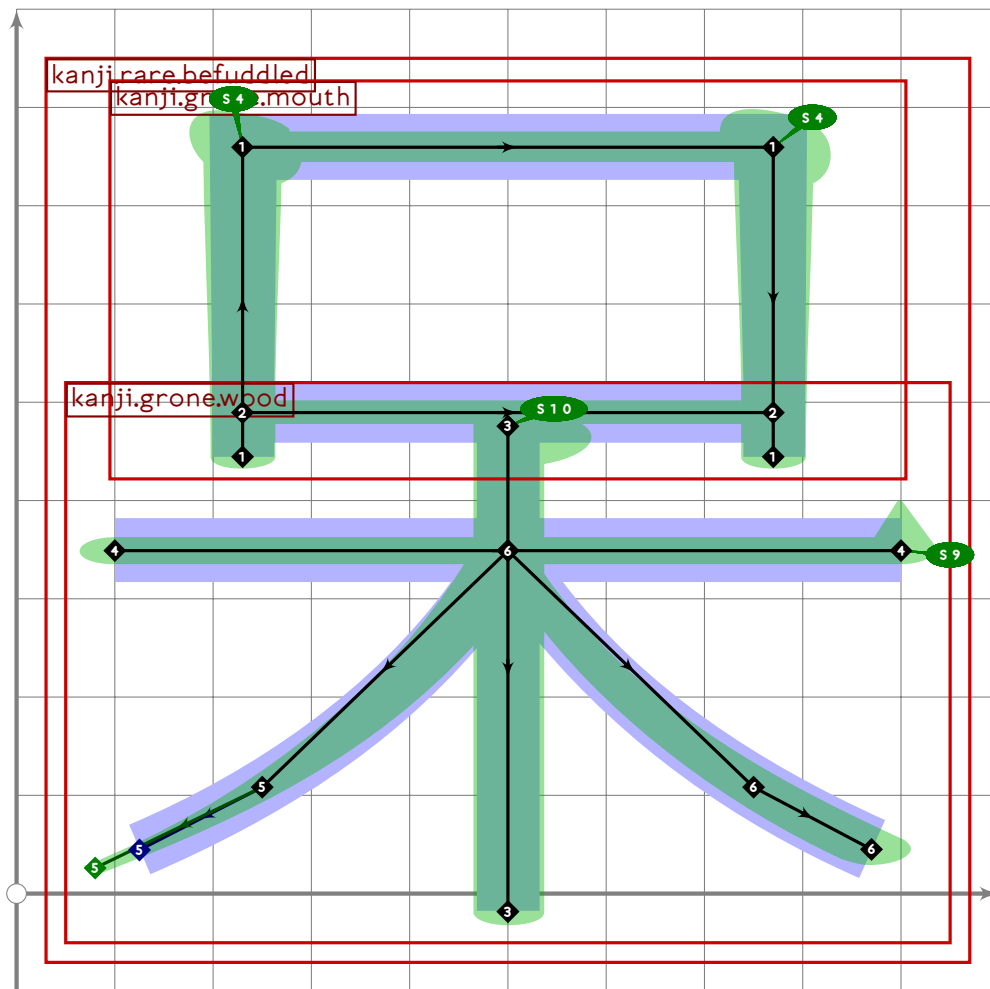
```

61
62 vardef kanji.rare.be_methodical =
63   push_pbox_toexpand("kanji.rare.be_methodical");
64   build_kanji.level(
65     build_kanji.sscale(yscaled 0.8 shifted (0,100))(kanji.radical.tent);
66     build_kanji.sscale(yscaled 0.56 shifted (0,-200))
67     (kanji.radical.gmm;
68       push_stroke((383,780)-(383,0),(1.6,1.6)-(1.5,1.5));
69       push_stroke((617,780)-(617,0),(1.6,1.6)-(1.5,1.5));
70       push_stroke((150,410)-(850,410),(1.5,1.5)-(1.5,1.5)));
71   expand_pbox;
72 enddef;

```

RARE

U+5446
tsuku.uni5446

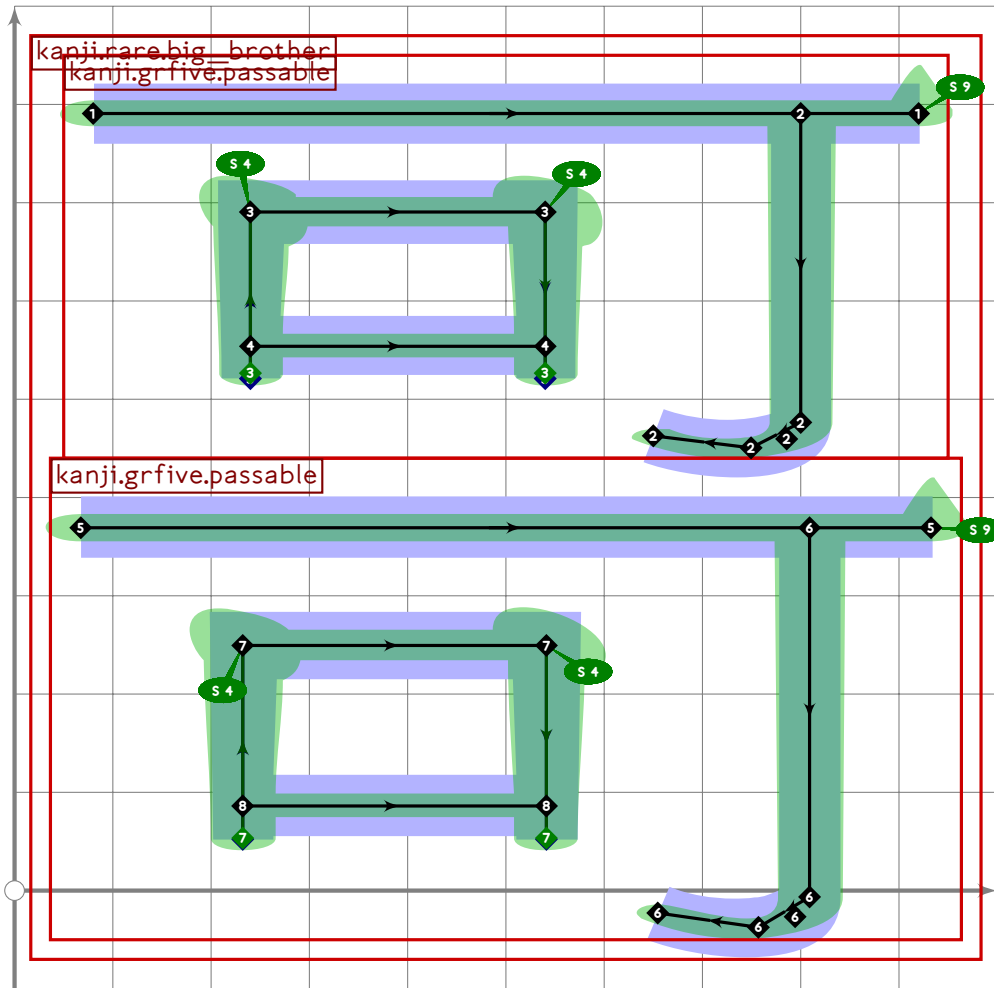


```

73
74 vardef kanji.rare.befuddled =
75   push_pbox_toexpand("kanji.rare.befuddled");
76   build_kanji.level(build_kanji.tb(460,120)
77     (build_kanji.sscale(scaled 0.9)(kanji.grone.mouth))
78     (kanji.grone.wood));
79   expand_pbox;
80 enddef;

```

RARE



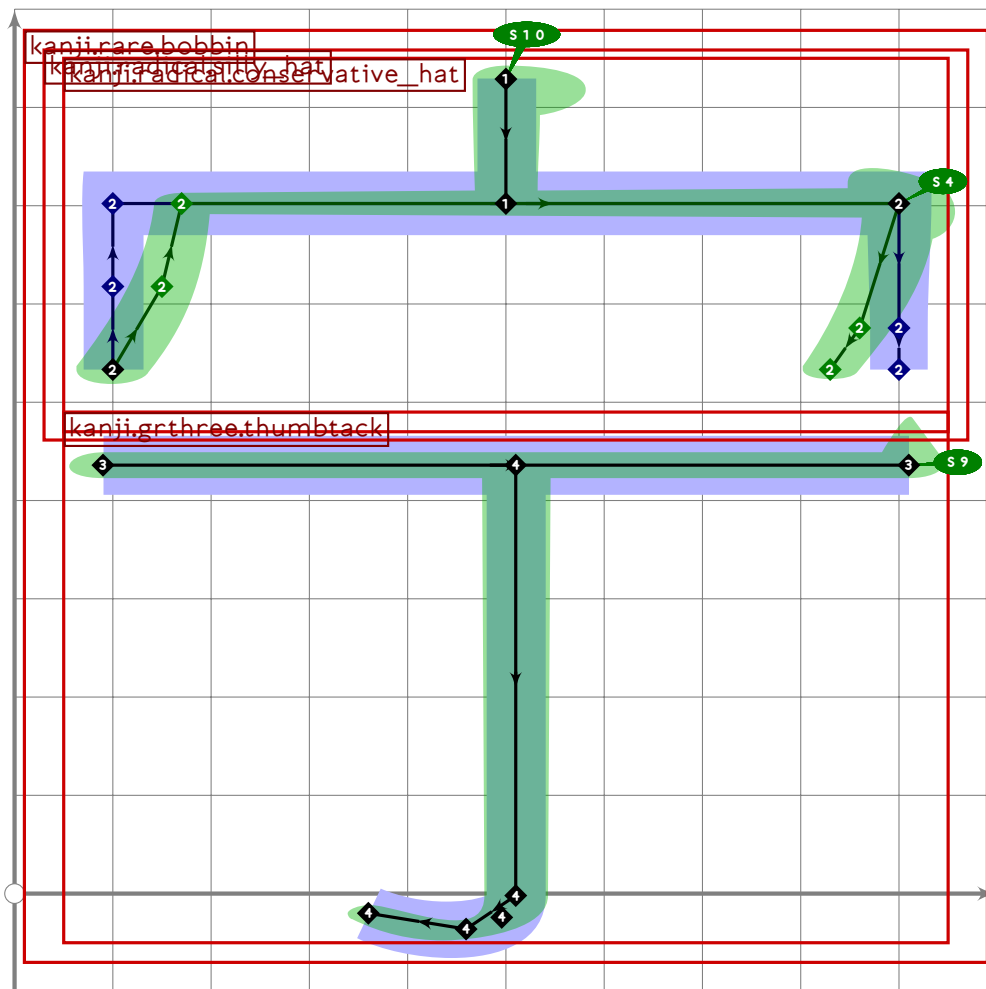
```

81
82 vardef kanji.rare.big_brother =
83   push_pbox_toexpand("kanji.rare.big_brother");
84   build_kanji.tb(440,0)
85     (kanji.grfive.passable)
86     (build_kanji.sscale(xscaled 1.03)(kanji.grfive.passable));
87   expand_pbox;
88 enddef;

```

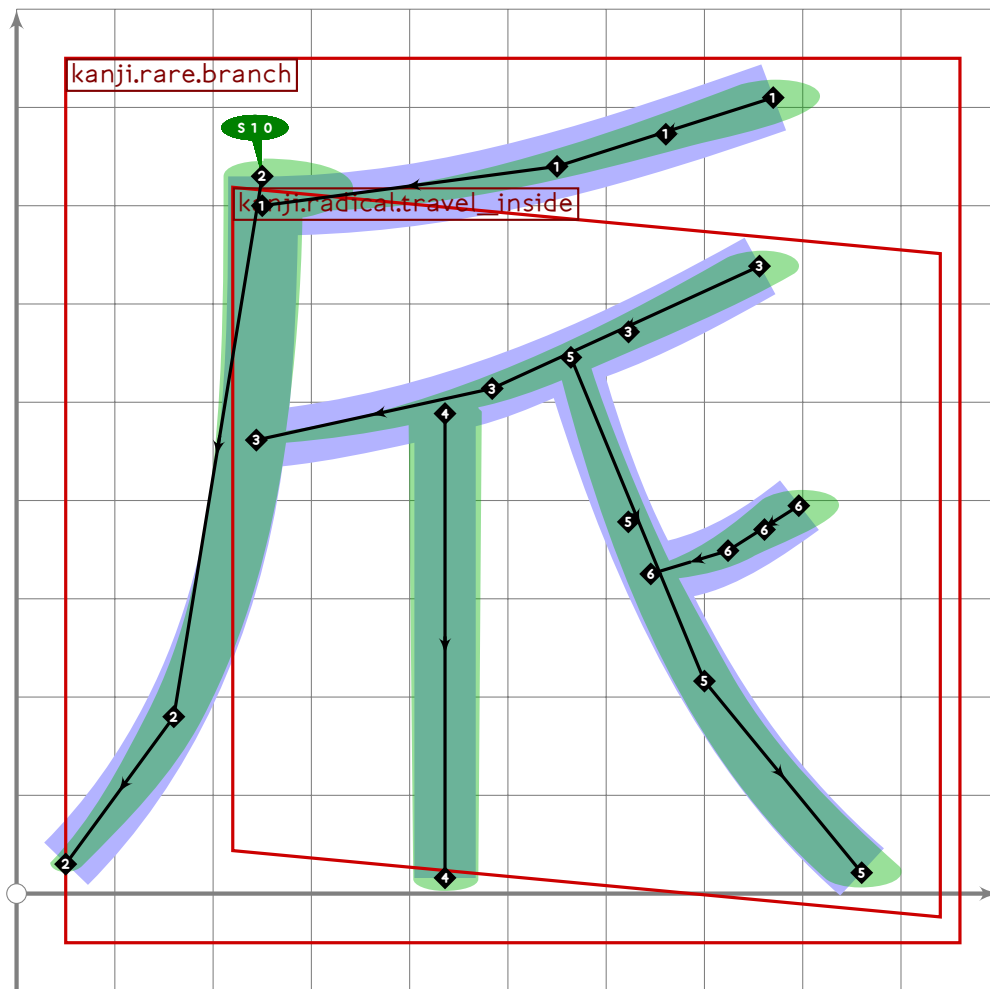
RARE

U+5B81
tsuku.uni5B81



```
89
90 vardef kanji.rare.bobbin =
91   push_pbox_toexpand("kanji.rare.bobbin");
92   build_kanji.level(build_kanji.tb(480,20)
93     (kanji.radical.silly_hat)
94     (kanji.grthree.thumbtack));
95   expand_pbox;
96 enddef;
```

RARE

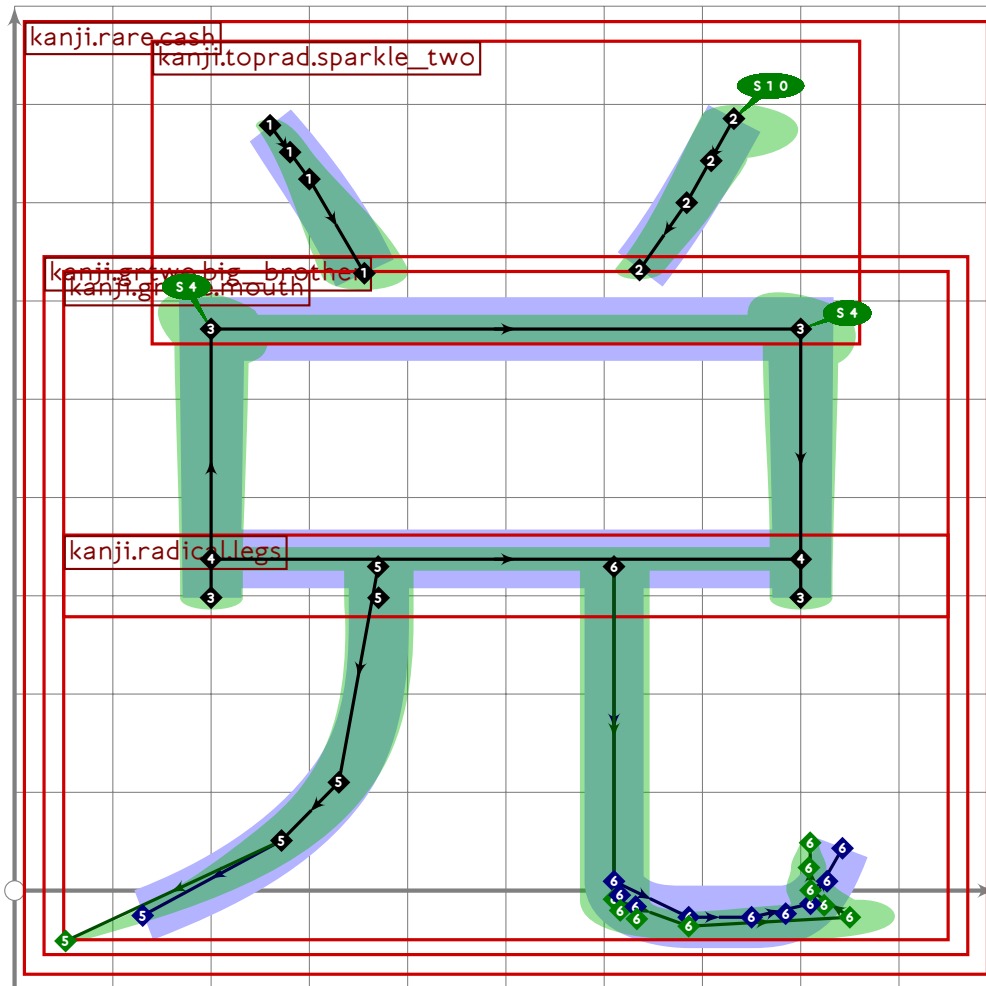


```

97
98 vardef kanji.rare.branch =
99   push_pbox_toexpand("kanji.rare.branch");
100   push_stroke((770,810)..tension 1.2..(550,740)..(250,700),
101     (1.8,1.8)–(1.5,1.5)–(1,1));
102   push_stroke((250,730){down}..(160,180)..(50,30),
103     (1.6,1.6)–(1.3,1.3)–(1,1));
104   set_boserif(0,0,10);
105   build_kanji.sscale(rotated 90 slanted 0.1 rotated -90
106     xyscaled (0.8,0.75) shifted (80,-50))
107     (kanji.radical.travel_inside);
108   expand_pbox;
109 enddef;

```

RARE

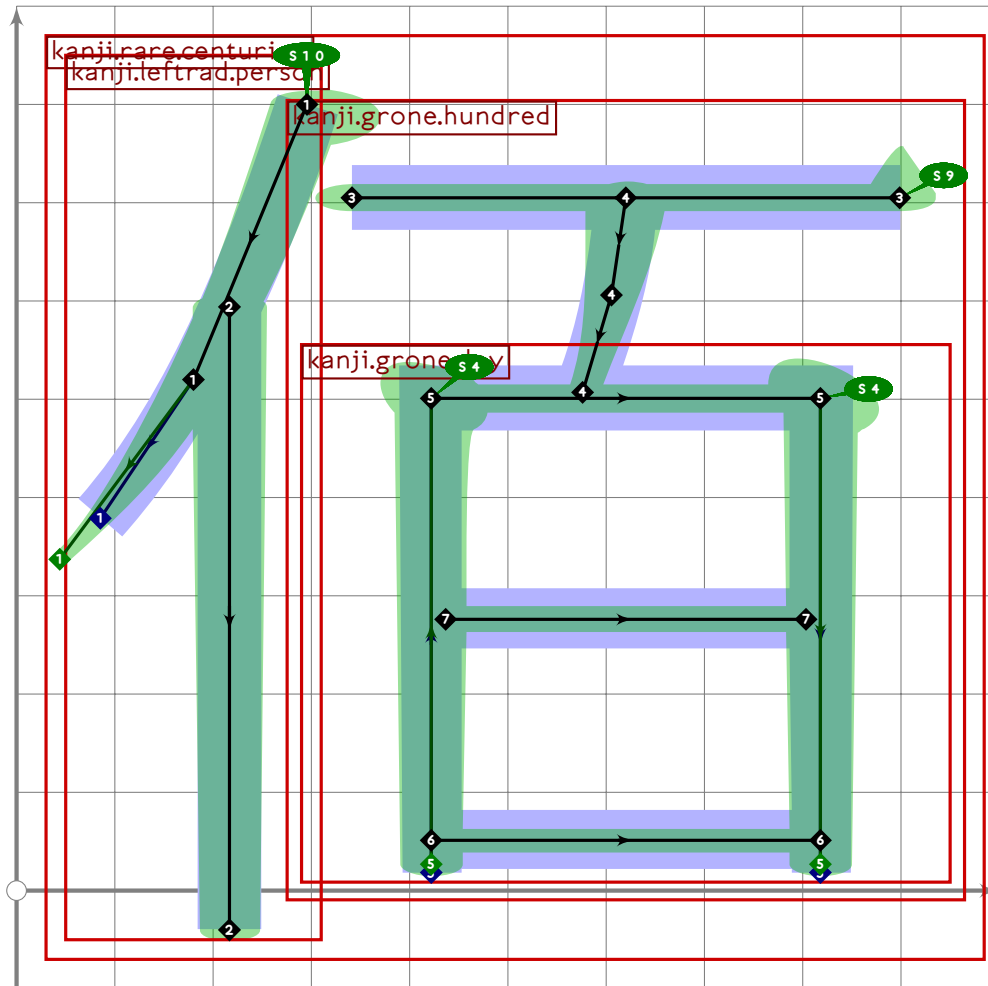


```

110
111 vardef kanji.rare.cash =
112   push_pbox_toexpand("kanji.rare.cash");
113   build_kanji.level(build_kanji.tb(600,60)
114     (build_kanji.sscale(xyscaled (0.8,1,1))(kanji.toprad.sparkle_two))
115     (kanji.grtwo.big_brother));
116   expand_pbox;
117 enddef;

```

RARE



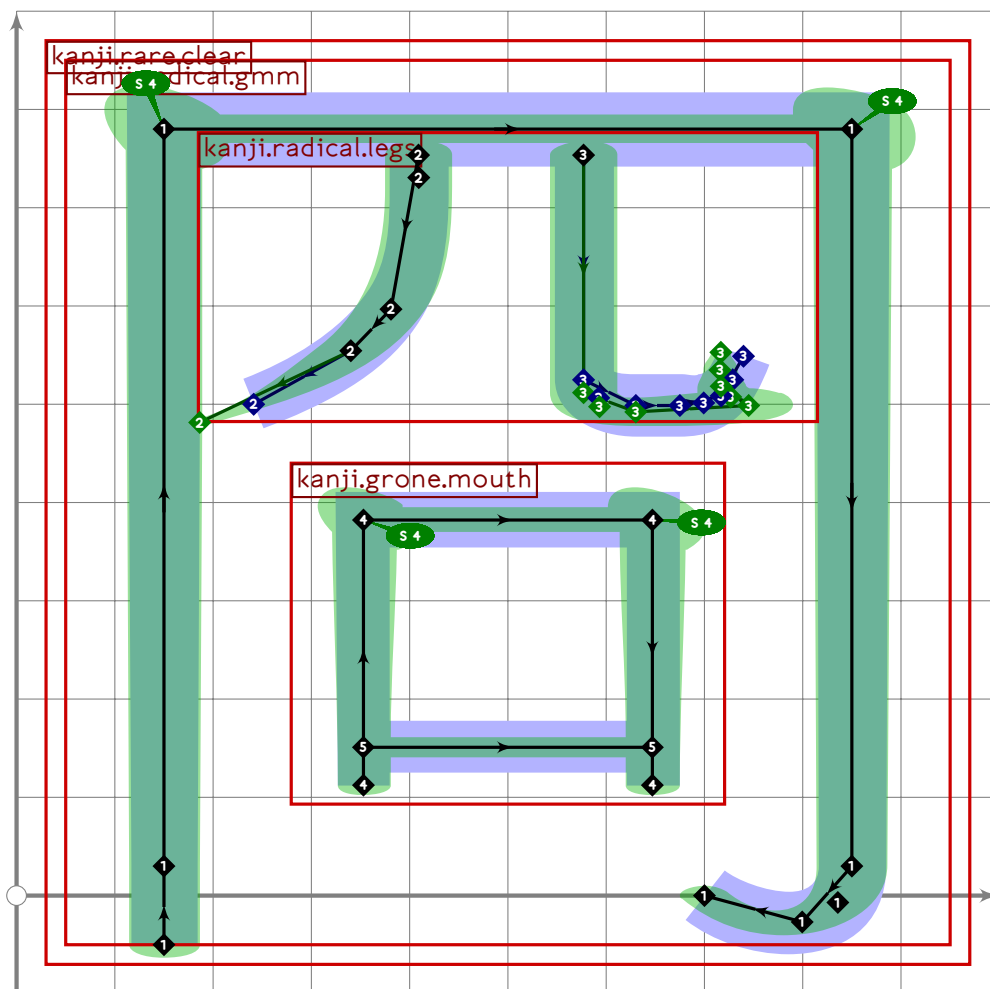
```

118
119 vardef kanji.rare.centurion =
120   push_pbox_toexpand("kanji.rare.centurion");
121   build_kanji.lr(300,20)
122     (kanji.leftrad.person)
123     (build_kanji.sscale(yscaled 0.9)(kanji.grone.hundred));
124   expand_pbox;
125 enddef;

```

RARE

U+518F
tsuku.uni518F

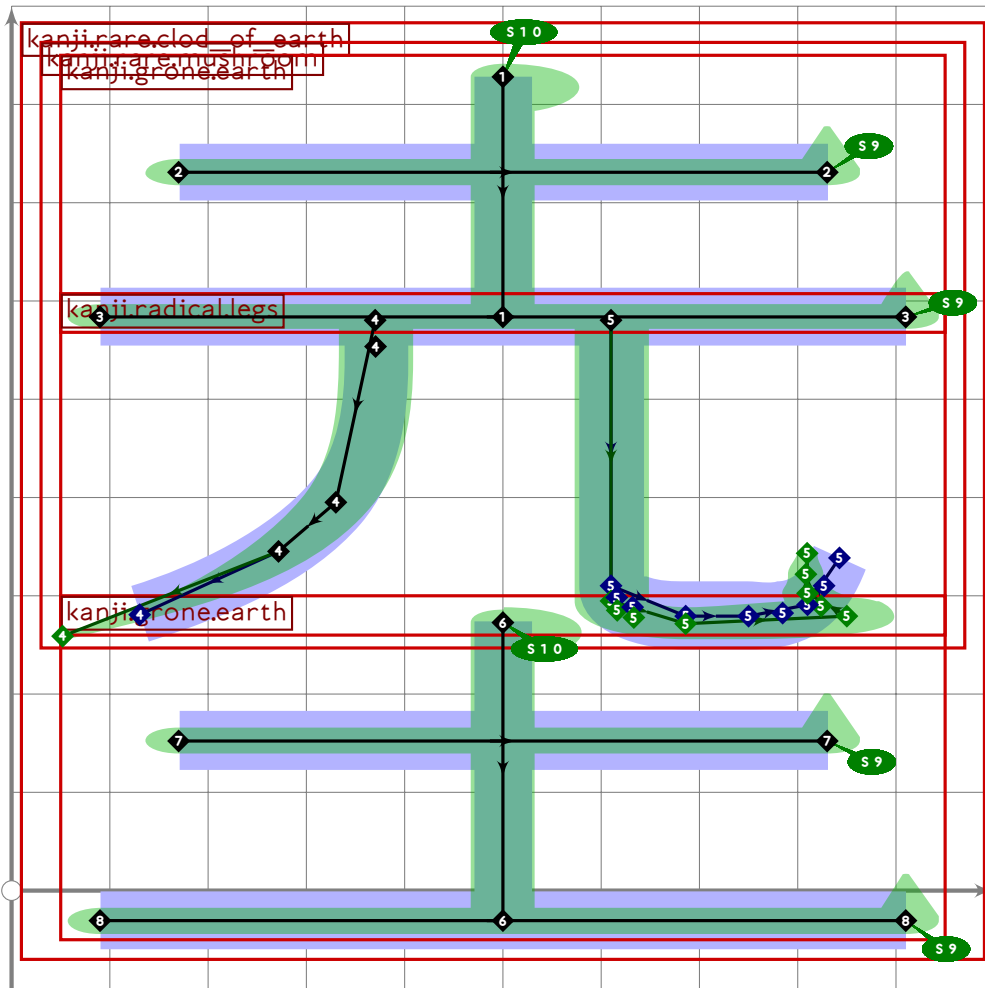


```

126
127 vardef kanji.rare.clear =
128   push_pbox_toexpand("kanji.rare.clear");
129   kanji.radical.gmm;
130   build_kanji.sscale(xyscaled (0.7,0.84))(build_kanji.tb(520,40)
131     (kanji.radical.legs)
132     (build_kanji.sscale(scaled 0.7)(kanji.grone.mouth)));
133   expand_pbox;
134 enddef;

```

RARE



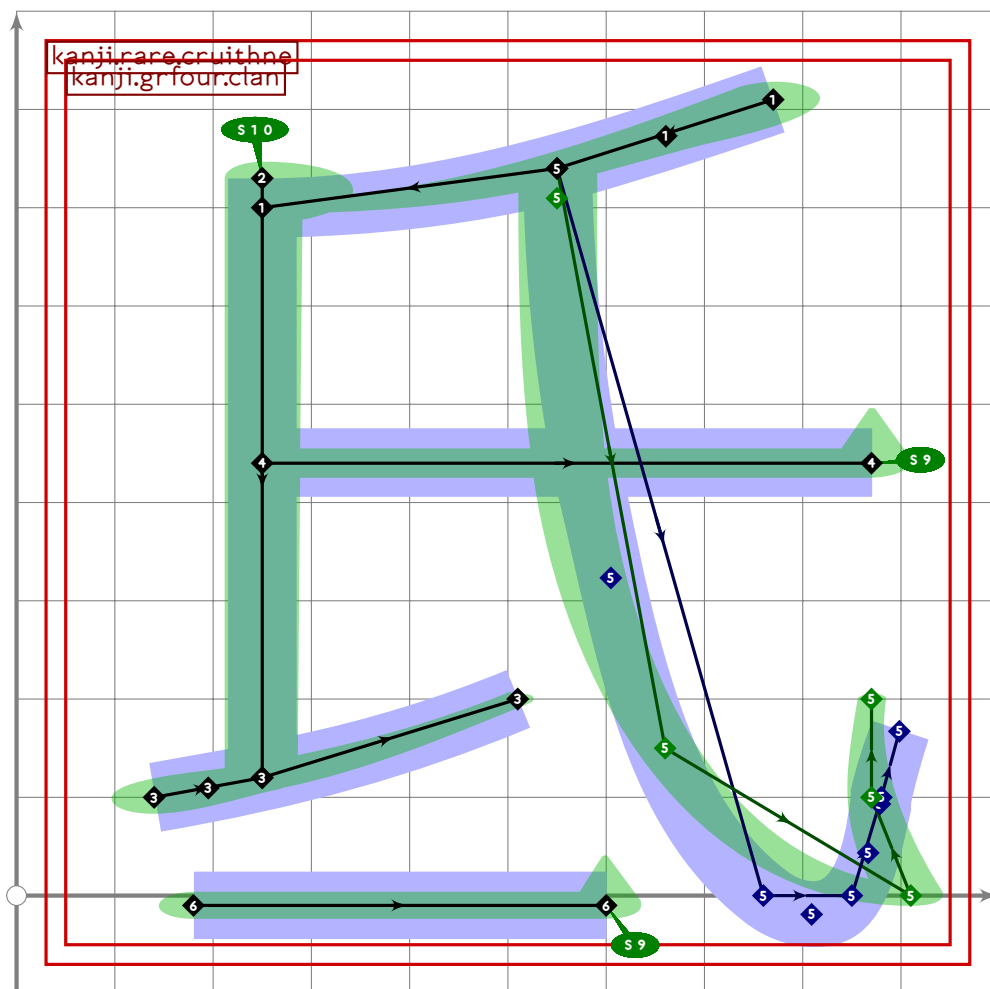
```

135
136 vardef kanji.rare.clod_of_earth =
137   push_pbox_toexpand("kanji.rare.clod_of_earth");
138   build_kanji.tb(28040)
139     (kanji.rare.mushroom)
140     (kanji.grone.earth);
141   expand_pbox;
142 enddef;
143

```

RARE

U+6C10
tsuku.uni6C10

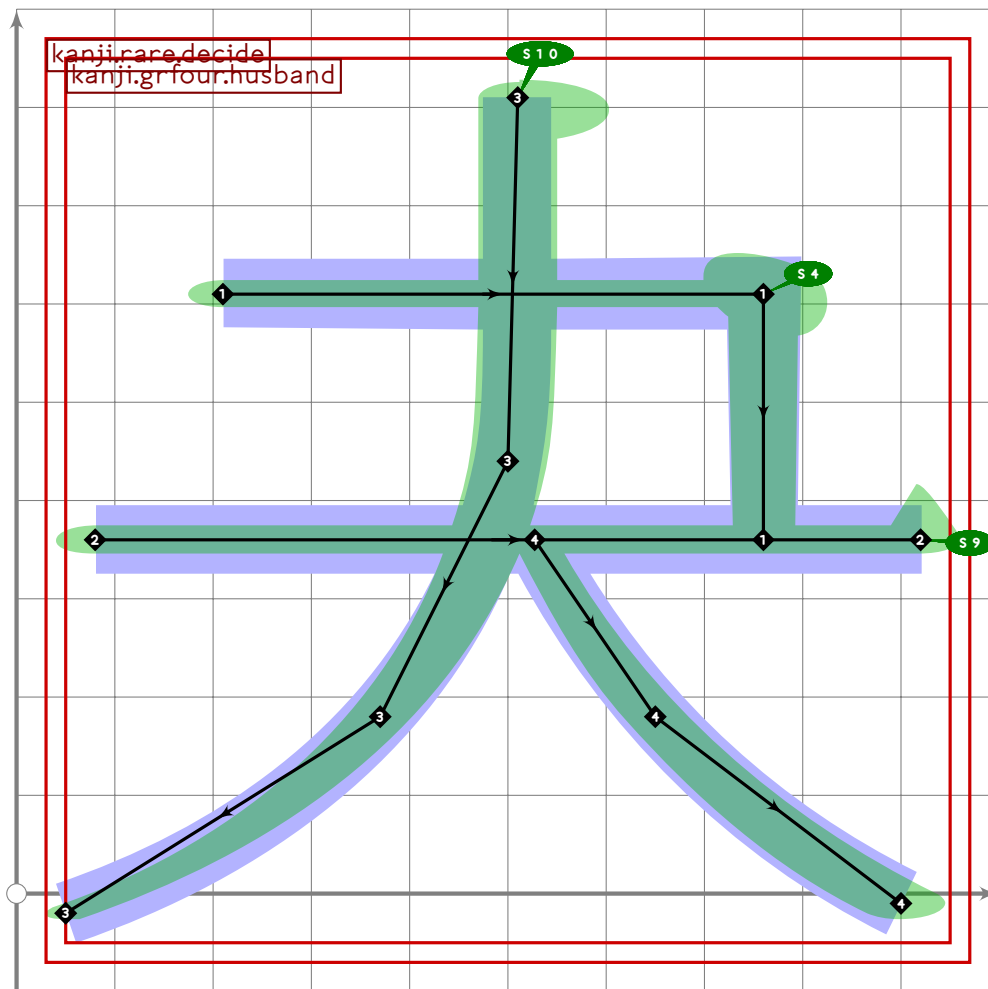


```

144 % dictionary says "name of an ancient tribe"; needed for grfour.low
145 vardef kanji.rare.cruithne =
146   push_pbox_toexpand("kanji.rare.cruithne");
147   kanji.grfour.clan;
148   replace_strokep(-3)((250,730)-(250,120));
149   replace_strokep(-2)(oldp shifted (0,130));
150   push_stroke((180,-10)-(600,-10),(1.5,1.5)-(1.5,1.5));
151   set_boserif(0,1,9);
152   expand_pbox;
153 enddef;

```

RARE

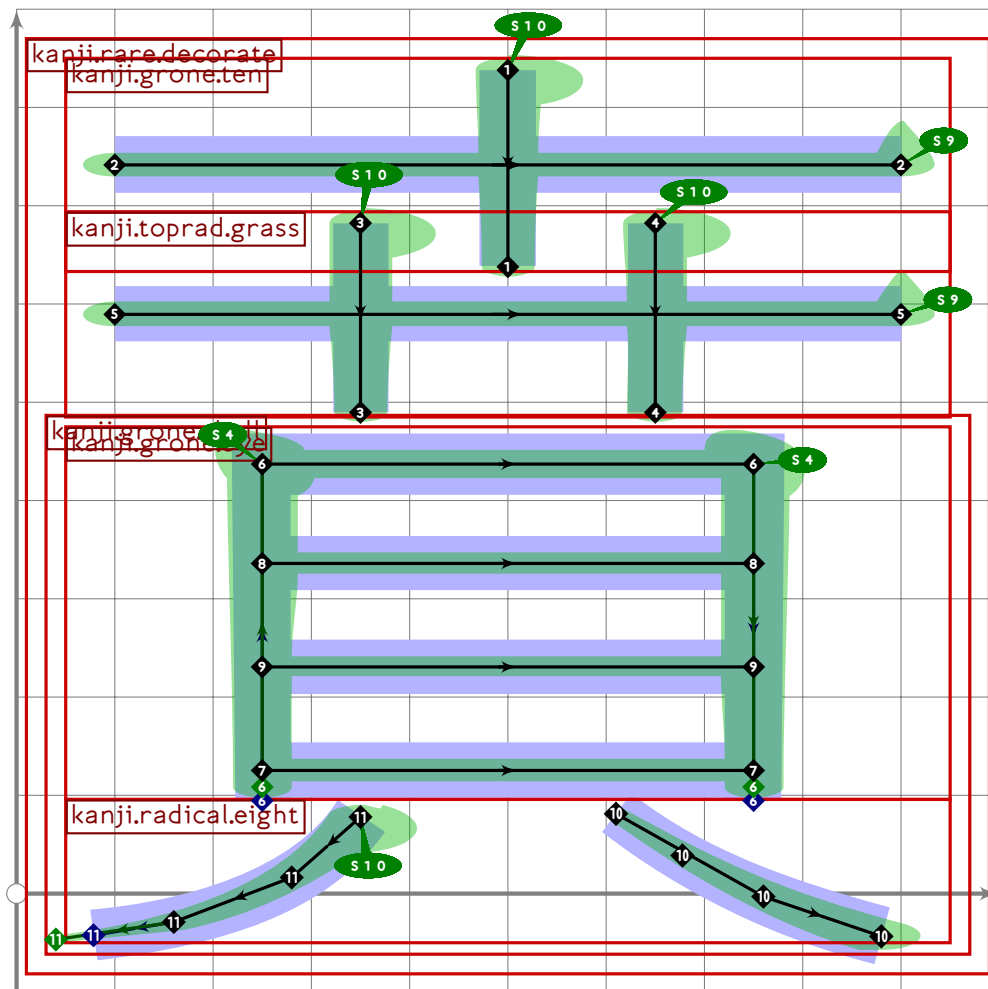


```

154
155 vardef kanji.rare.decide =
156   push_pbox__toexpand("kanji.rare.decide");
157   kanji.grfour.husband;
158   replace_strokep(-3)((210,610)-(760,610)-(760,360));
159   replace_strokeq(-3)((1.5,1.5)-(1.5,1.5)-(14,14));
160   set_boserif(-3,14);
161   set_botip(-3,1,1);
162   expand_pbox;
163 enddef;

```

RARE

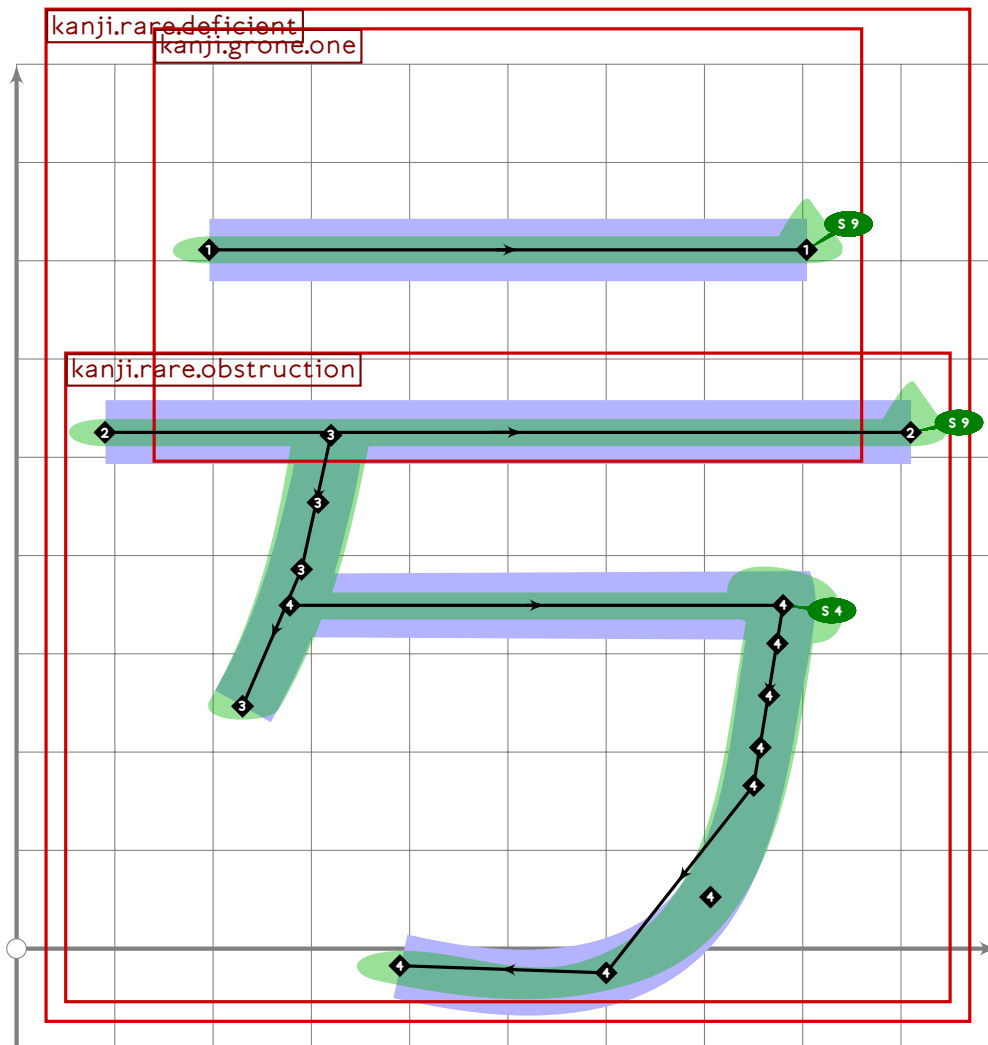


```

164
165 vardef kanji.rare.decorate =
166   push_pbox_toexpand("kanji.rare.decorate");
167   build_kanji.level(build_kanji.tb(480,-10)
168     (build_kanji.tb(390,150)
169       (kanji.grone.ten)
170       (kanji.toprad.grass))
171     (kanji.grone.shell));
172   expand_pbox;
173 enddef;

```

RARE



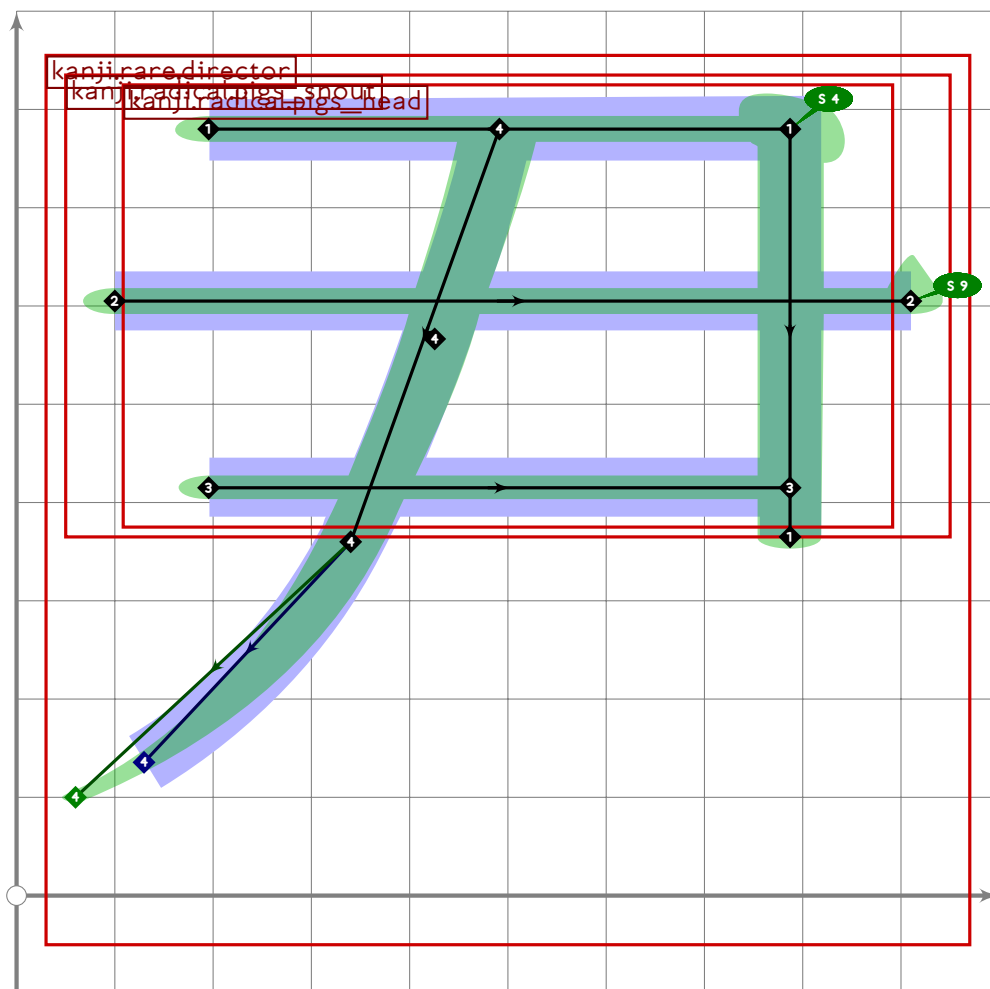
```

174
175 vardef kanji.rare.deficient =
176   push_pbox_toexpand("kanji.rare.deficient");
177   build_kanji.level(build_kanji.sscale(yscaled 1.1 shifted (0,40))
178     (build_kanji.tb(500,100)
179       (build_kanji.sscale(xscaled 0.8)(kanji.grone.one))
180       (kanji.rare.obstruction)));
181   expand_pbox;
182 enddef;

```

RARE

U+5C39
tsuku.uni5C39

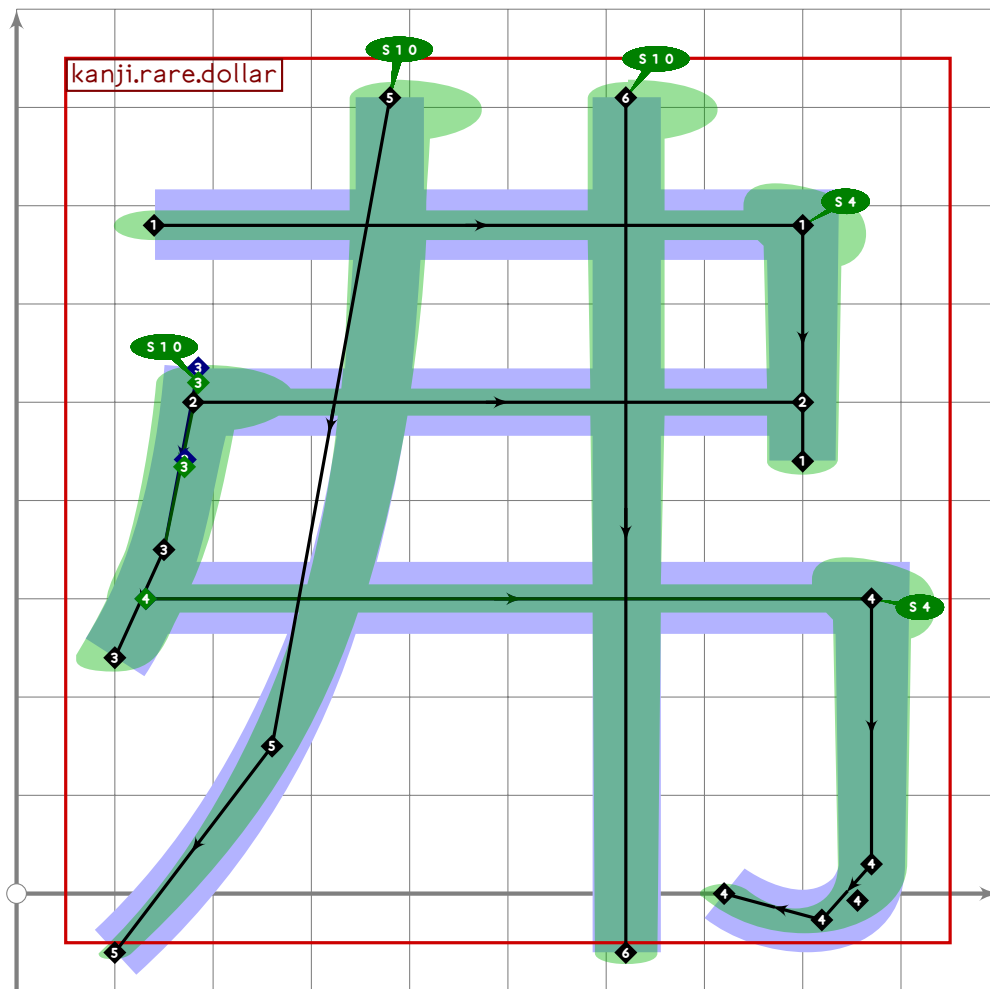


```

183
184 vardef kanji.rare.director =
185   push_pbox_toexpand("kanji.rare.director");
186   tsu_xform(identity yscaled 0.5 shifted (0,400))
187   (kanji.radical.pigs_snout);
188   push_stroke(
189     (point 0.5 of get_stroke(-2))..tension 14..(340,360)..(60,100),
190     (1.6,1.6)–(14,14)–(0.9,0.9));
191   expand_pbox;
192 enddef;

```

RARE



```

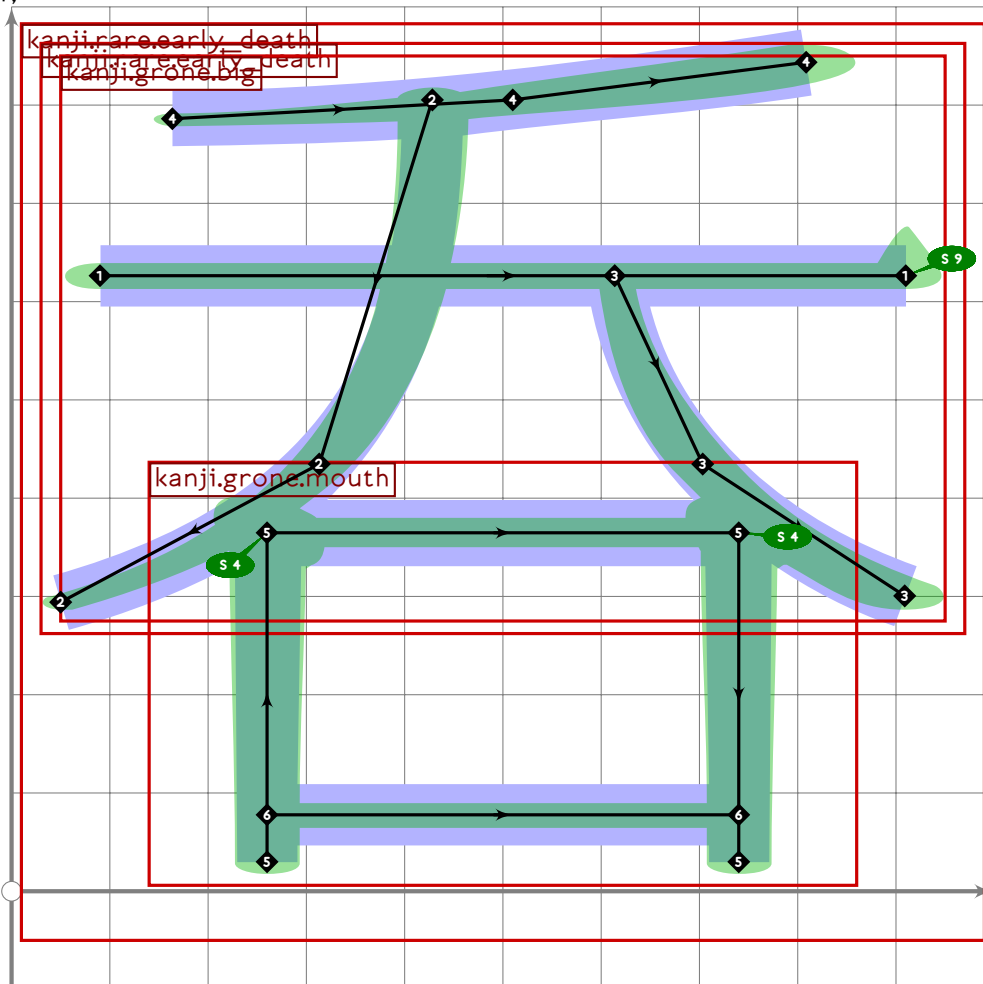
193
194 vardef kanji.rare.dollar =
195   push_pbox_toexpand("kanji.rare.dollar");
196   push_stroke((140,680)–(800,680)–(800,440),
197     (1.6,1.6)–(1.6,1.6)–(1.5,1.5));
198   set_botip(0,1,1);
199   set_boserif(0,1,4);
200   push_stroke((180,500)–(800,500),
201     (1.5,1.5)–(1.5,1.5));
202   push_stroke((185,535-15*mincho)..tension 1.2..(150,350)..(100,240),
203     (1.7,1.7)–(1.6,1.6)–(1.6,1.6));
204   set_boserif(0,0,10);
205   push_stroke((get_strokep(0) intersectionpoint ((0,300)–(1000,300)))–
206     (870,300),
207     (1.6,1.6)–(1.6,1.6));
208   build_kanji.add_jtail(0);
209   set_botip(0,1,1);
210   set_boserif(0,1,4);
211   push_stroke((380,810){down}..(260,150)..(100,-60),
212     (1.6,1.6)–(1.3,1.3)–(1,1));
213   set_boserif(0,0,10);

```

RARE

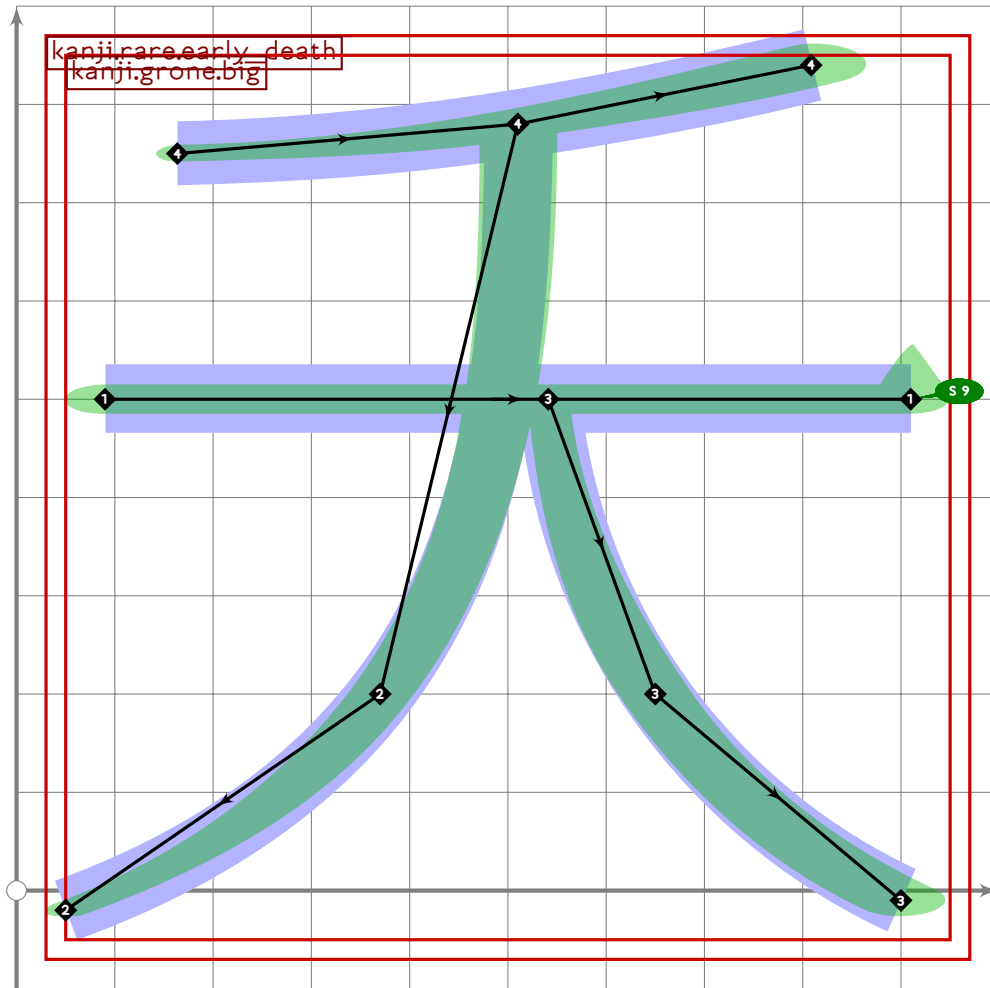
U+5451
tsuku.uni5451

```
214 push_stroke((620,810)-(620,-60),(1.6,1.6)-(1.4,1.4));
215 set_boserif(0,0,10);
216 expand_pbox;
217 enddef;
```



```
218
219 vardef kanji.rare.drink =
220   push_pbox_toexpand("kanji.rare.early_death");
221   build_kanji.level(build_kanji.tb(420,290)
222     (build_kanji.spread_legs(160)
223       (kanji.rare.early_death))
224     (build_kanji.sscale(xyscaled (0.8,0.7) shifted (0,-50))
225       (kanji.grone.mouth)));
226   expand_pbox;
227 enddef;
```

RARE



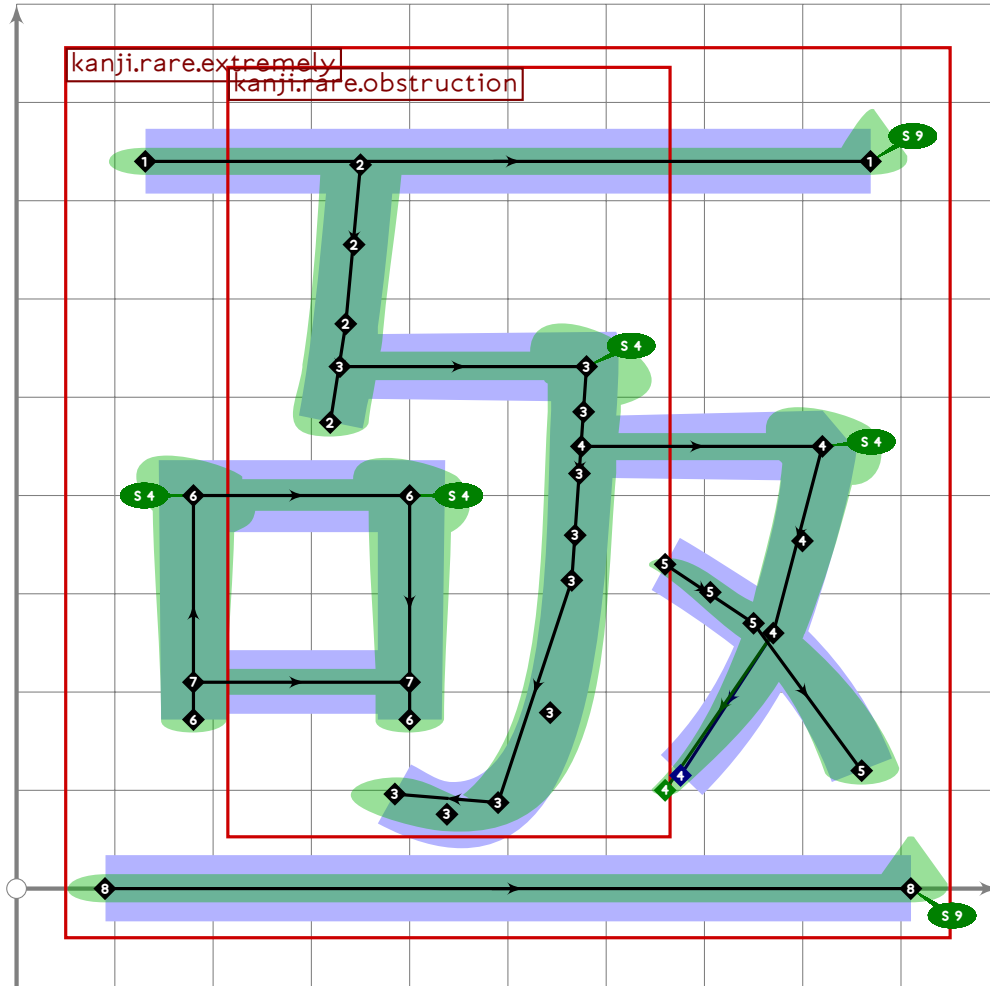
```

228
229 vardef kanji.rare.early_death =
230   push_pbox_toexpand("kanji.rare.early_death");
231   build_kanji.add_beret(kanji.grone.big);
232   expand_pbox;
233 enddef;

```

RARE

U+4E9F
tsuku.uni4E9F



```

234
235 vardef kanji.rare.extremely =
236   push_pbox_toexpand("kanji.rare.extremely");
237   build_kanji.level(
238     path my_saved_path;
239     tsu_xform(identity shifted (-500,740)
240       xyscaled (0.5,0.87) shifted (440,740))
241     (kanji.rare.obstruction;
242       my_saved_path:=get_stroke(-2));
243     replace_stroke(-2)(my_saved_path shifted (-500,0)
244       xscaled 0.9 shifted (500,0));
245     replace_stroke(-1)(subpath (0,(length oldp)-0.4) of oldp);
246     push_stroke((get_stroke(0) intersectionpoint ((0,450)-(1000,450)))-(
247       (820,450)..tension 1.2..(770,260)..(660,100),
248       (1.5,1.5)-(1.6,1.6)-(1.4,1.4)-(0.9,0.95));
249     set_boserif(0,14);
250     set_botip(0,1);
251     push_stroke((660,330)..tension 1.2..(750,270)..(860,120),
252       (1,1)-(1.3,1.3)-(1.6,1.6));
253     build_kanji.box((180,400),(400,210));
254     push_stroke(my_saved_path shifted (0,-740),(1.6,1.6)-(1.6,1.6));

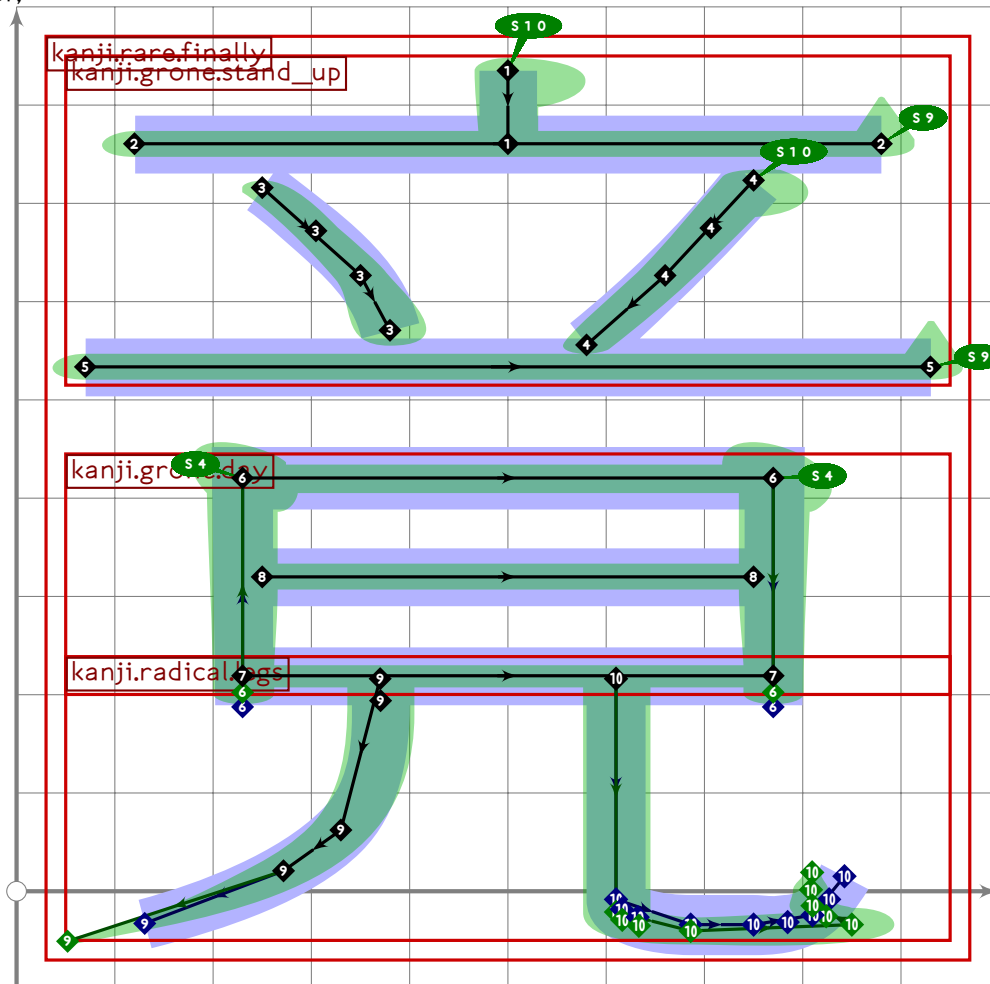
```

RARE

```

255   set_boserif(0,19);
256   );
257   expand_pbox;
258 enddef;

```



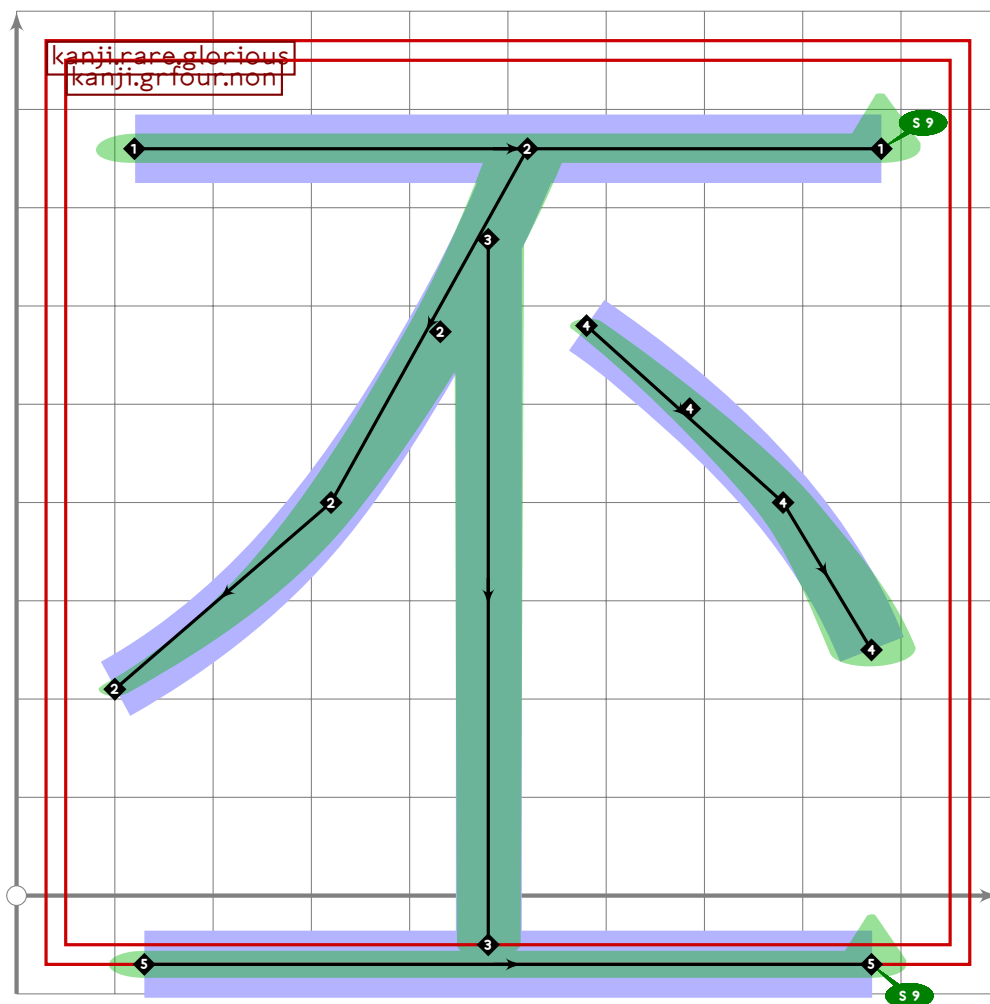
```

259
260 vardef kanji.rare.finally =
261   push_pbox_toexpand("kanji.rare.finally");
262   build_kanji.tb(480,70)
263     (kanji.grone.stand_up)
264     (build_kanji.level(build_kanji.tb(440,70)
265       (kanji.grone.day)
266       (kanji.radical.legs)));
267   expand_pbox;
268 enddef;

```

RARE

U+4E15
tsuku.uni4E15

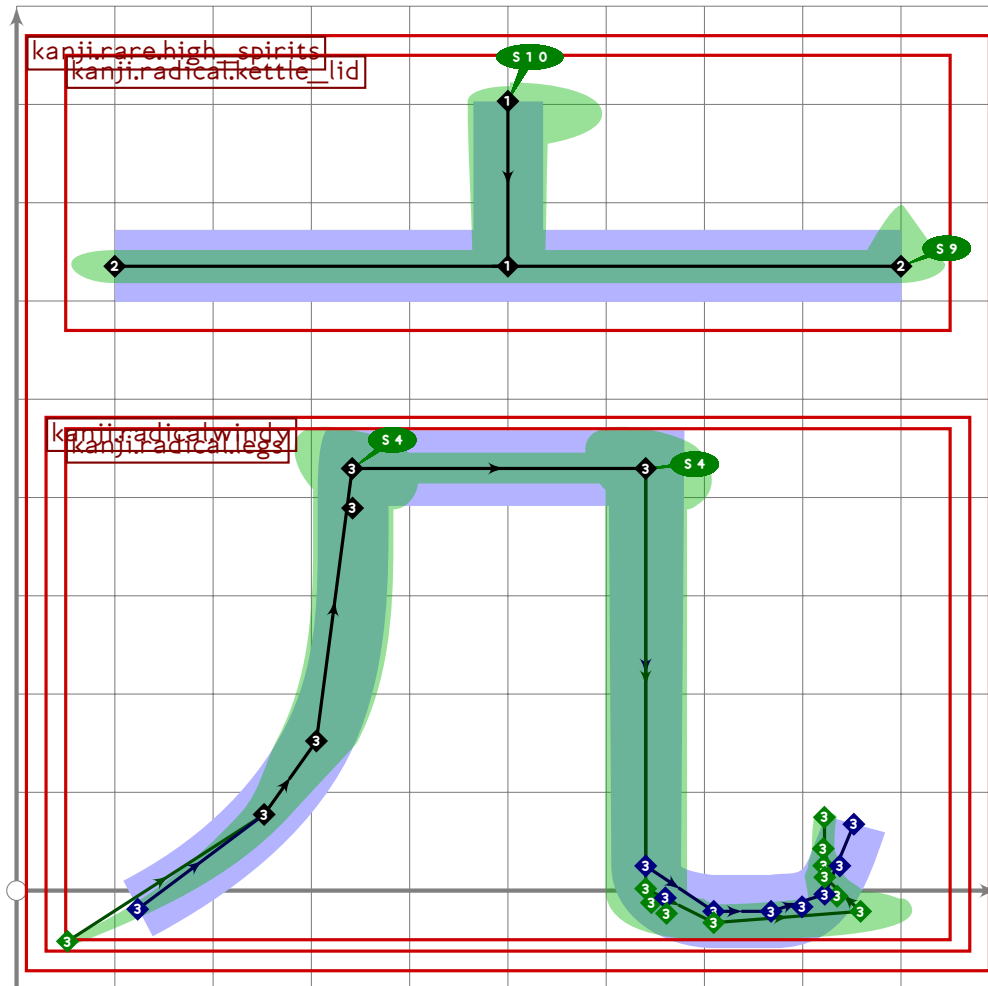


```

269
270 vardef kanji.rare.glorious =
271   push_pbox_toexpand("kanji.rare.glorious");
272   kanji.grfour.non;
273   push_stroke((130,70)-(870,70),(1.5,1.5)-(1.5,1.5));
274   set_boserif(0,19);
275   expand_pbox;
276 enddef;

```

RARE

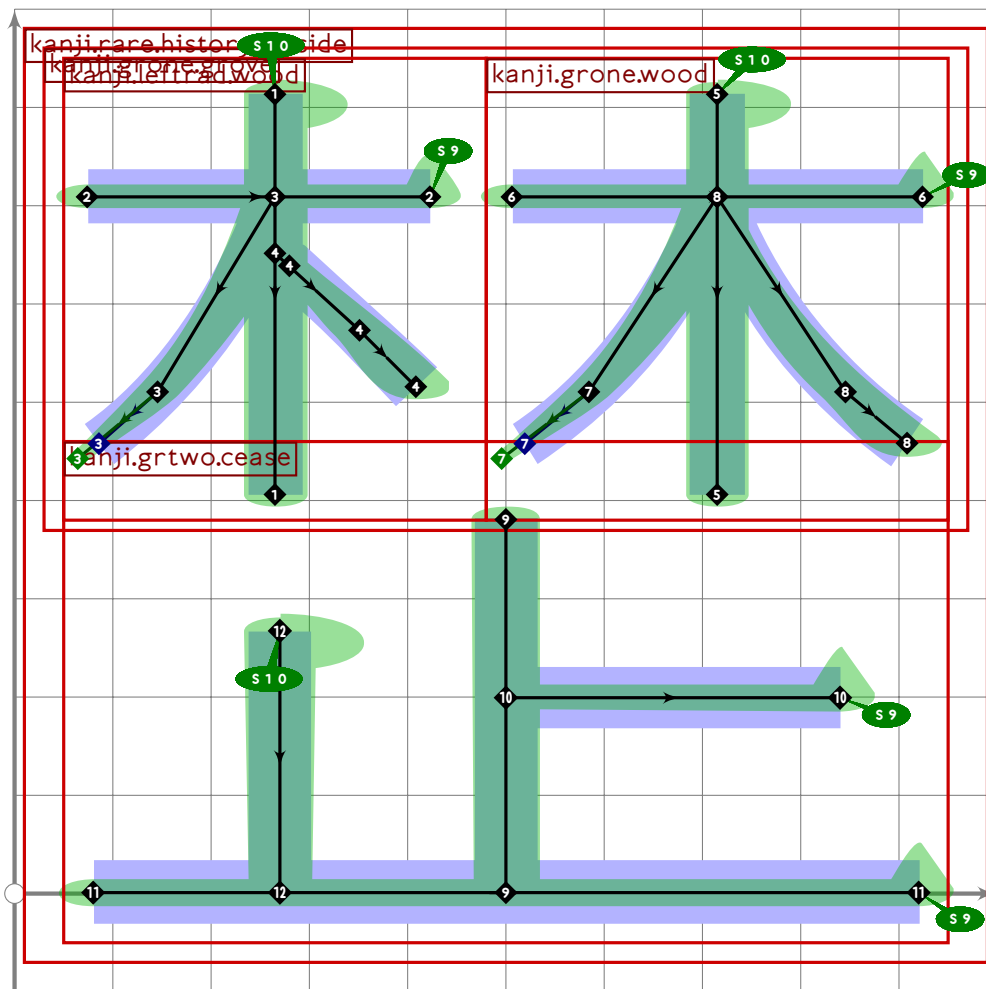


```

277
278 vardef kanji.rare.high_spirits =
279   push_pbox_toexpand("kanji.rare.high_spirits");
280   build_kanji.level(build_kanji.tb(520,100)
281     (kanji.radical.kettle_lid)
282     (kanji.radical.windy));
283   expand_pbox;
284 enddef;

```

RARE

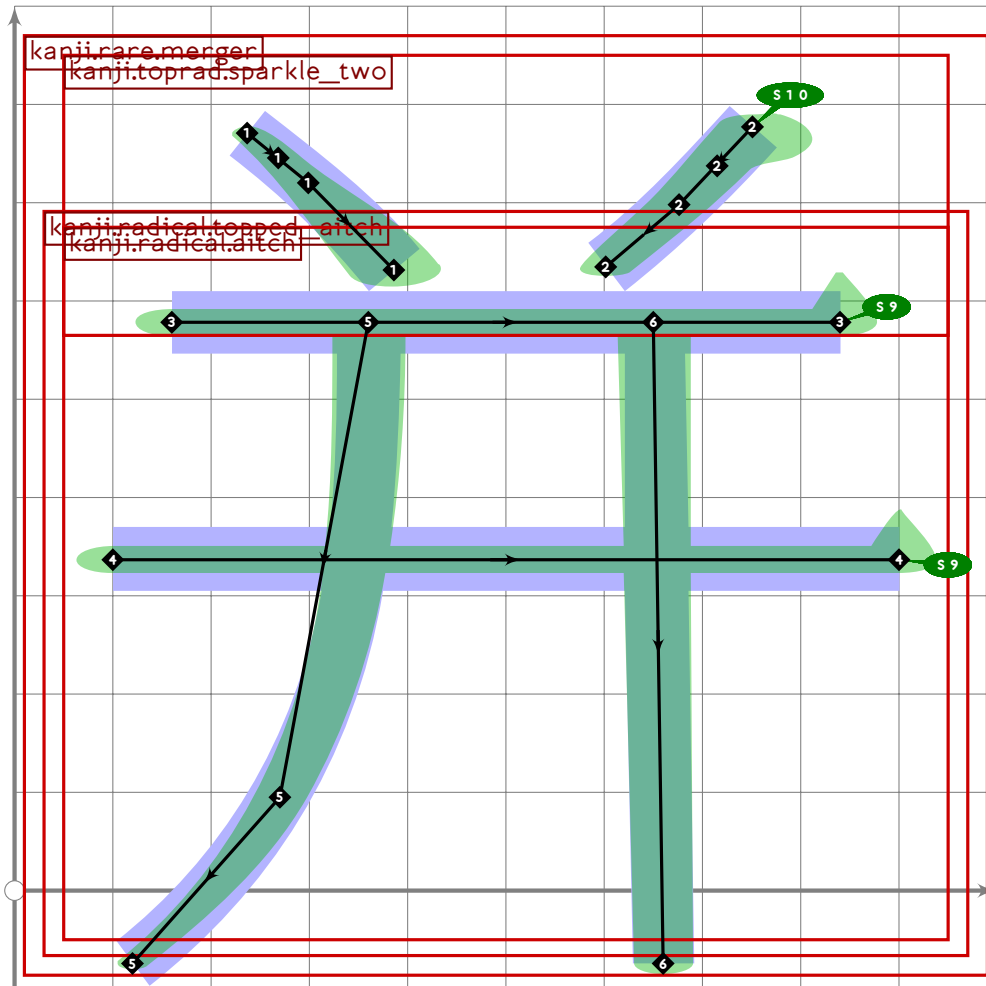


```

285
286 vardef kanji.rare.history_inside =
287   push_pbox_toexpand("kanji.rare.history_inside");
288   build_kanji.tb(420,80)
289     (kanji.grone.grove)
290     (kanji.grtwo.cease);
291   expand_pbox;
292 enddef;

```

RARE



```

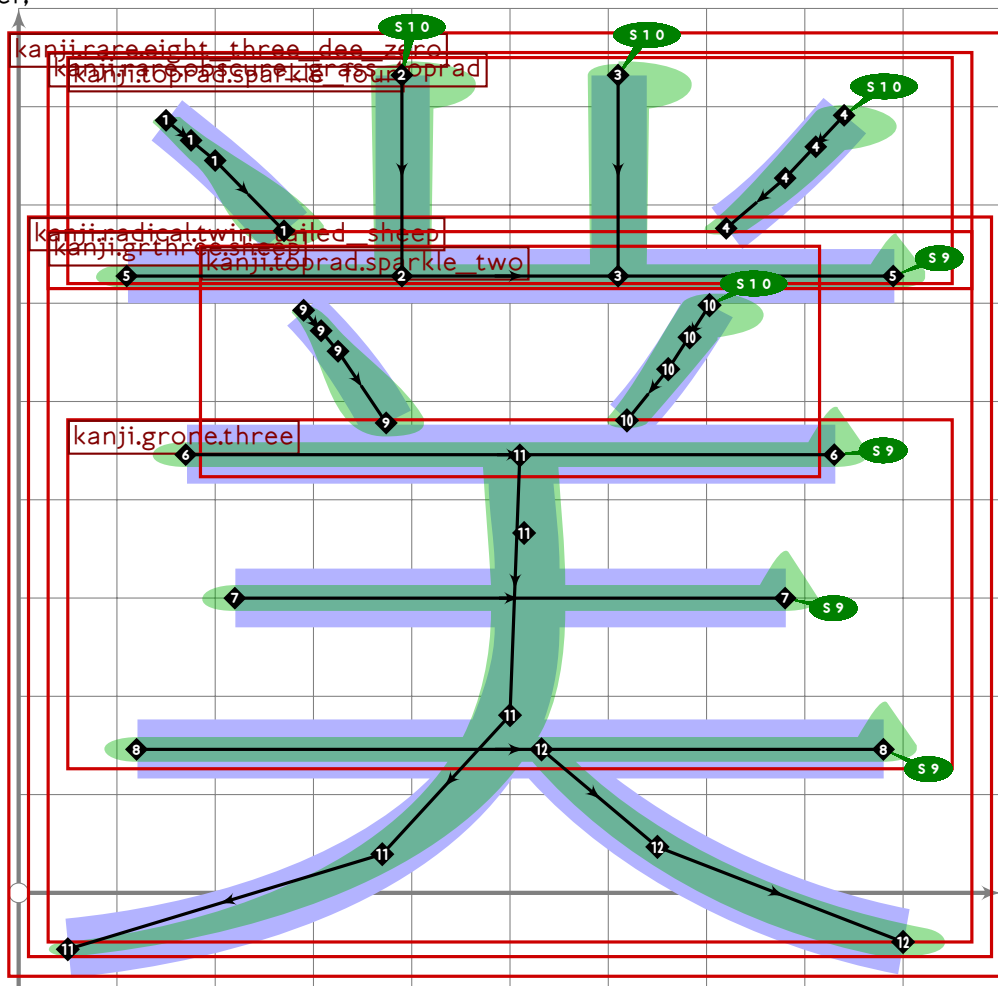
293
294 vardef kanji.rare.merger =
295   push_pbox_toexpand("kanji.rare.merger");
296   build_kanji.level(build_kanji.tb(620,110)
297     (build_kanji.spread_legs(-220)(kanji.toprad.sparkle_two))
298     (kanji.radical.topped_aitch));
299   expand_pbox;
300 enddef;
301
302 % This obscure form of the "grass" radical seems to be used only in U+83D0,
303 % an obscure kanji that doesn't seem to have a meaning of its own but forms
304 % the right-hand side of the fairly common kanji for the masculine
305 % first-person pronoun "boku," which we need in order to spell the type
306 % style name "Bokukko." It's not even clear that it really is a form of the
307 % "grass" radical at all, but that's how Unicode seems to classify it.
308
309 vardef kanji.rare.obscure_grass_toprad =
310   push_pbox_toexpand("kanji.rare.obscure_grass_toprad");
311   kanji.toprad.sparkle_four;
312   push_stroke((110,-20)-(890,-20),(1.6,1.6)-(1.6,1.6));
313   set_bosserif(0,1,9);

```

RARE

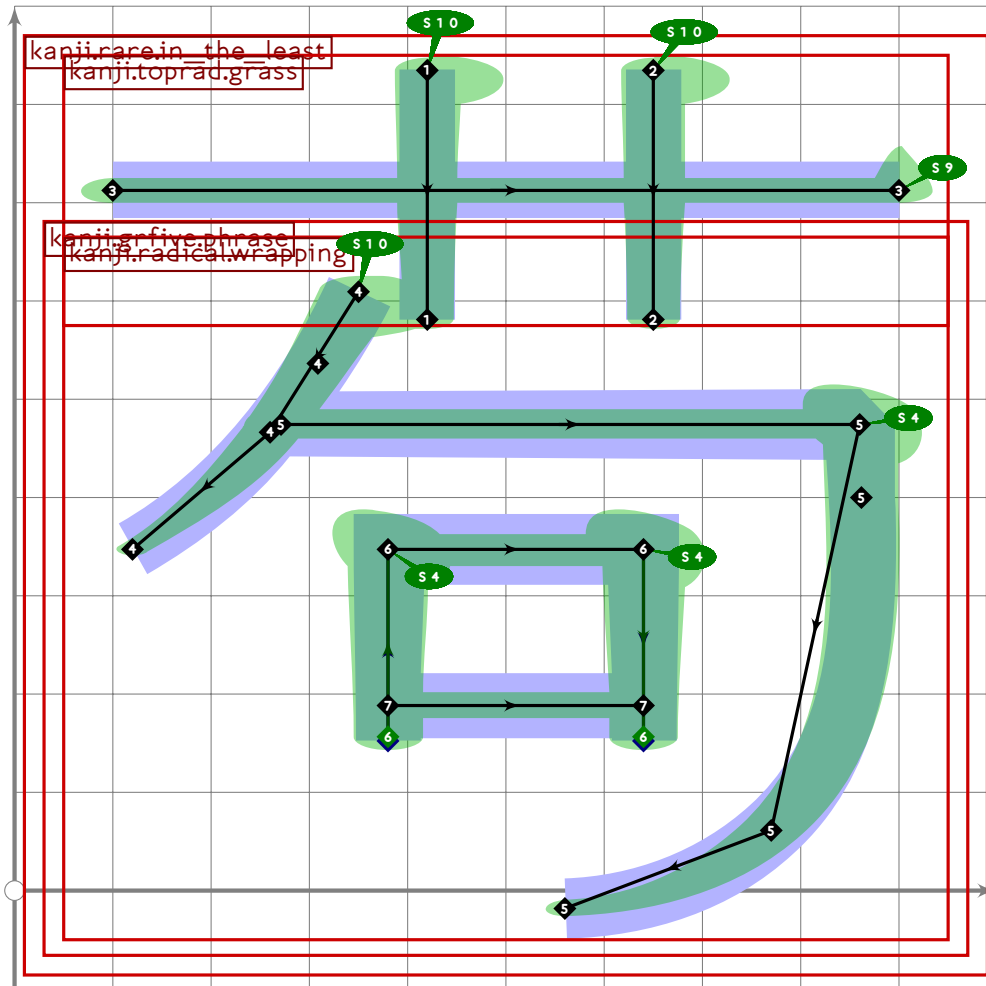
U+83D0
tsuku.uni83D0

```
314 expand_pbox;
315 enddef;
```



```
316
317 vardef kanji.rare.eight_three_dee_zero =
318   push_pbox_toexpand("kanji.rare.eight_three_dee_zero");
319   build_kanji.tb(620,0)
320     (kanji.rare.obscure_grass_toprad)
321     (kanji.radical.twin_tailed_sheep);
322   expand_pbox;
323 enddef;
```

RARE



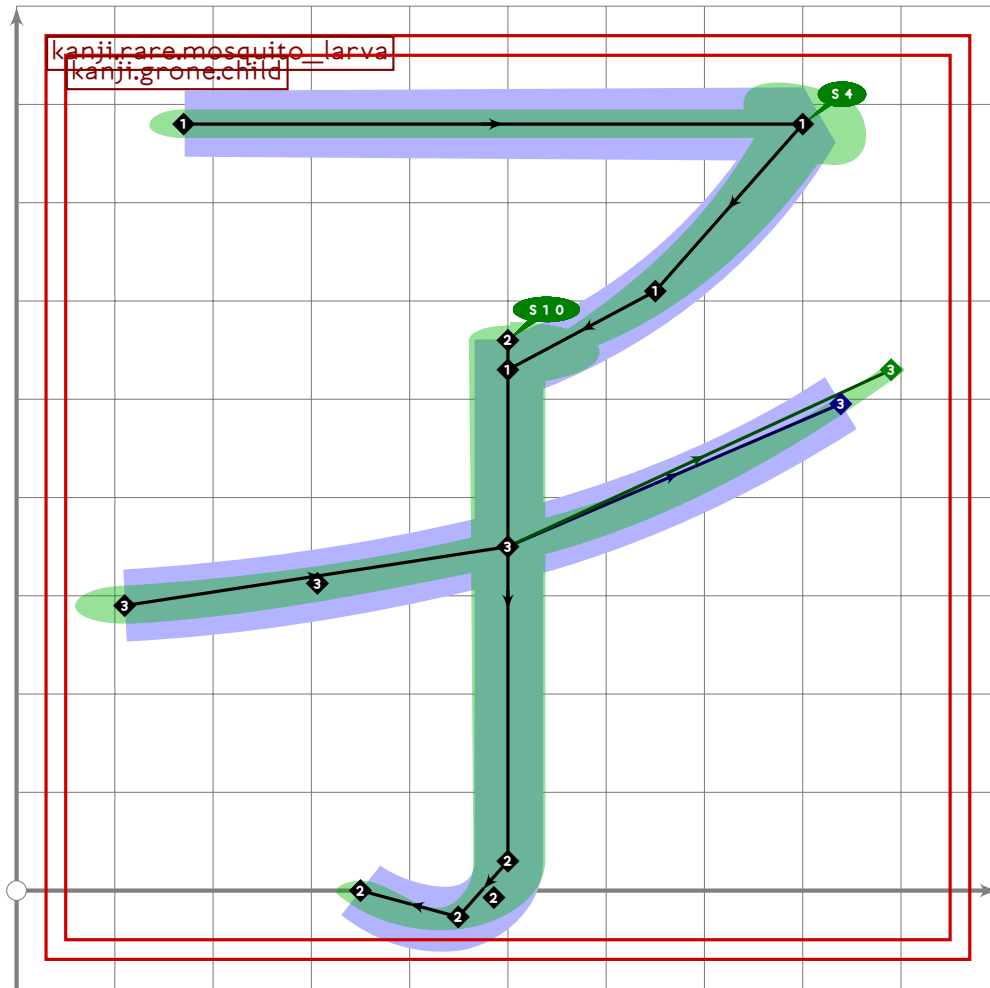
```

324
325 vardef kanji.rare.in_the_least =
326   push_pbox_toexpand("kanji.rare.in_the_least");
327   build_kanji.tb(620,90)
328     (kanji.toprad.grass;
329       replace_strokep(-2)(oldp shifted (70,0)))
330     (kanji.grfive.phrase);
331   expand_pbox;
332 enddef;

```

RARE

U+5B51
tsuku.uni5B51



```

333
334 vardef kanji.rare.mosquito_larva =
335   push_pbox_toexpand("kanji.rare.mosquito_larva");
336   kanji.grone.child;
337   replace_strokeq(0)((110,290)..tension 1.2..(500,350)..(890,530));
338   replace_strokeq(0)((1.9,1.9)-(1.6,1.6)-(0.9,0.9));
339   set_boserif(0,1,whatever);
340   expand_pbox;
341 enddef;
342
343 vardef hook.mound_bottoms(expr left_i,right_i,bottom_i) =
344   if (obstacktype[left_i]=otstroke)
345     and (obstacktype[right_i]=otstroke)
346     and (obstacktype[bottom_i]=otstroke):
347     if (3=length obstackp[left_i])
348       and (2=length obstackp[right_i])
349       and (1=length obstackp[bottom_i]):
350       begingroup;
351       save x,y,p,e;
352       numeric x[],y[],e[];
353       path p[];

```

RARE

```

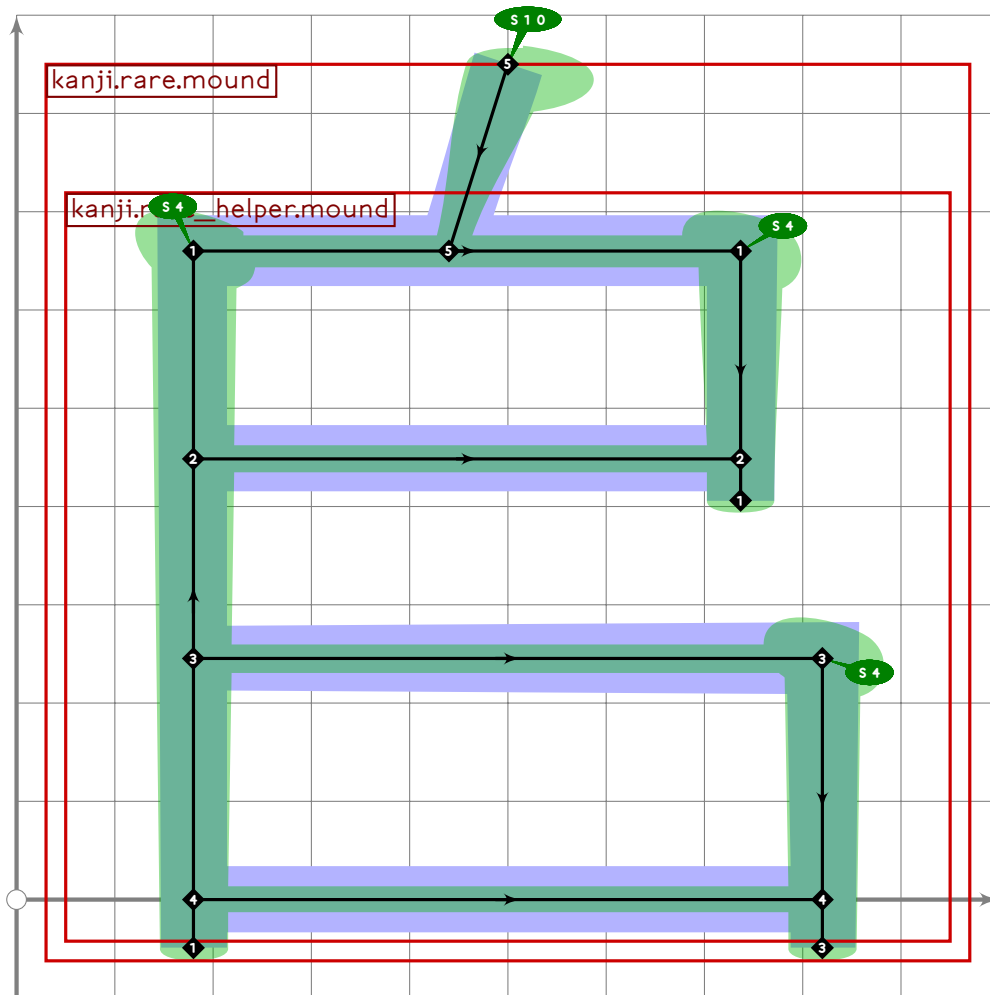
354
355     p1=obstackp[left_i];
356     p2=obstackp[bottom_i];
357     p3=obstackp[right_i];
358
359     z1=-(direction 0 of p1)/abs(direction 0 of p1);
360     z2=(direction 0.5 of p2)/abs(direction 0.5 of p2);
361     z3=(direction 2 of p3)/abs(direction 2 of p3);
362
363     e3=obstackna.bosize[bottom_i]*tsu_brush_max*tsu_brush_shape*0.5;
364     if abs(z1 dotprod z2)<0.1:
365         point 0 of p1=z4+e1*z1;
366         z4=(point 0.5 of p2)+whatever*z2;
367
368         if e1<e3:
369             p1:=(z4+e3*z1)-(subpath (1,3) of p1);
370             obstackp[left_i]:=p1;
371         fi;
372     fi;
373     if abs(z3 dotprod z2)<0.1:
374         point 0 of p1=z5+e2*z3;
375         z5=(point 0.5 of p2)+whatever*z2;
376
377         if e2<e3:
378             p3:=(subpath (0,1) of p2)-(z5+e3*z2);
379             obstackp[right_i]:=p3;
380         fi;
381     fi;
382     endgroup;
383 fi;
384 fi;
385 enddef;
386
387 vardef kanji.rare_helper.mound =
388     push_pbox_toexpand("kanji.rare_helper.mound");
389     begingroup
390         save x,y;
391         numeric x[],y[];
392
393         x1=x2=x5=x7=x10=180;
394         x3=x4=x6=0.87[x1,x8];
395         x8=x9=x11=1000-x1;
396
397         y1=y9=(-0.2)[y10,y7];
398         y2=y3=780;
399         y4=(-0.2)[y5,y2];
400         y5=y6=530;
401         y7=y8=290;

```

```

402     y10=y11=0;
403
404     push_stroke(z1-z2-z3-z4,(1.5,1.5)-(1.7,1.7)-(1.7,1.7)-(1.5,1.5));
405     set_botip(0,1);
406     set_botip(0,2,1);
407     set_boserif(0,1,4);
408     set_boserif(0,2,4);
409     push_stroke(z5-z6,(1.5,1.5)-(1.5,1.5));
410     push_stroke(z7-z8-z9,(1.5,1.5)-(1.6,1.6)-(1.5,1.5));
411     set_botip(0,1);
412     set_boserif(0,1,4);
413     push_stroke(z10-z11,(1.5,1.5)-(1.5,1.5));
414
415     push_hook(hsmain_render,
416         "hook.box_bottom("&(decimal find_stroke(-3))&"
417             &(decimal find_stroke(-2))&");" );
418     push_hook(hsmain_render,
419         "hook.mound_bottoms("&(decimal find_stroke(-3))&"
420             &(decimal find_stroke(-1))&"
421             &(decimal find_stroke(0))&");" );
422     endgroup;
423     expand_pbox;
424 endif;

```

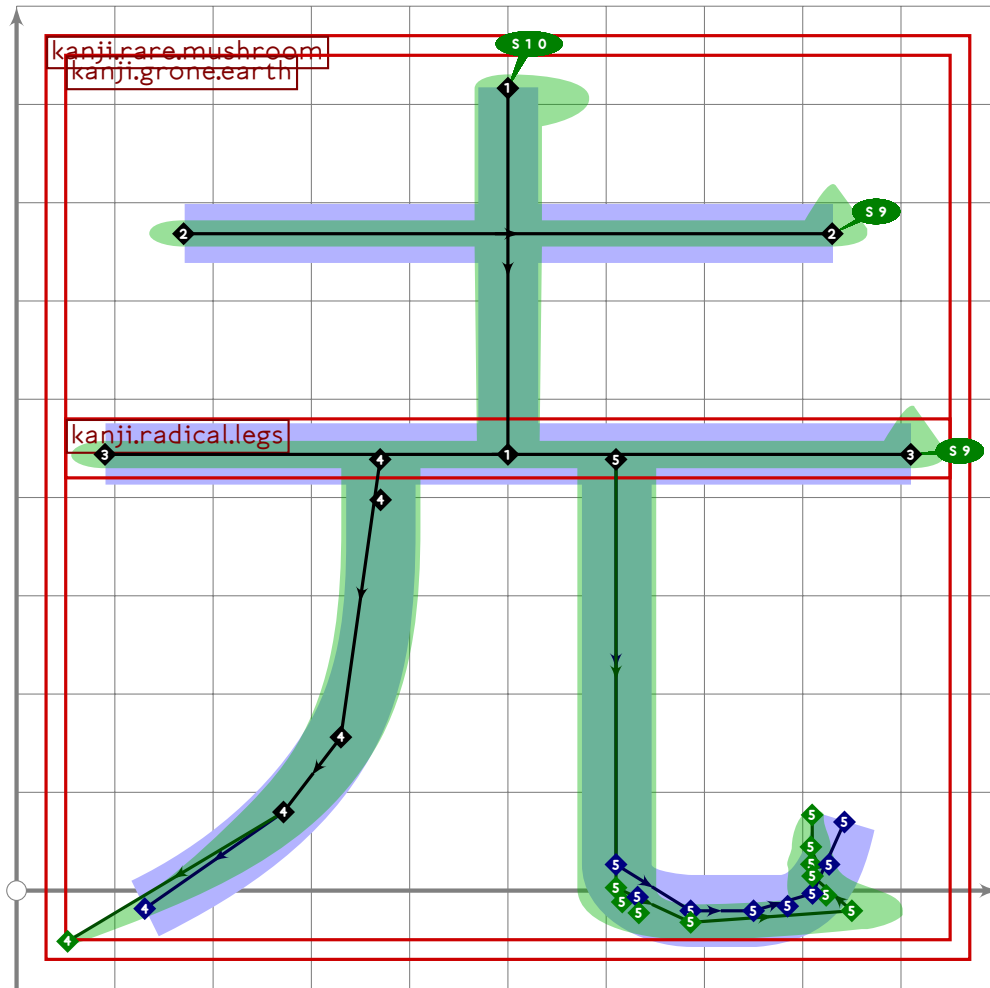


```

425
426 vardef kanji.rare.mound =
427   push__pbox_toexpand("kanji.rare.mound");
428   build_kanji.attach_tick(660)(kanji.rare_helper.mound);
429   expand__pbox;
430 enddef;

```

RARE

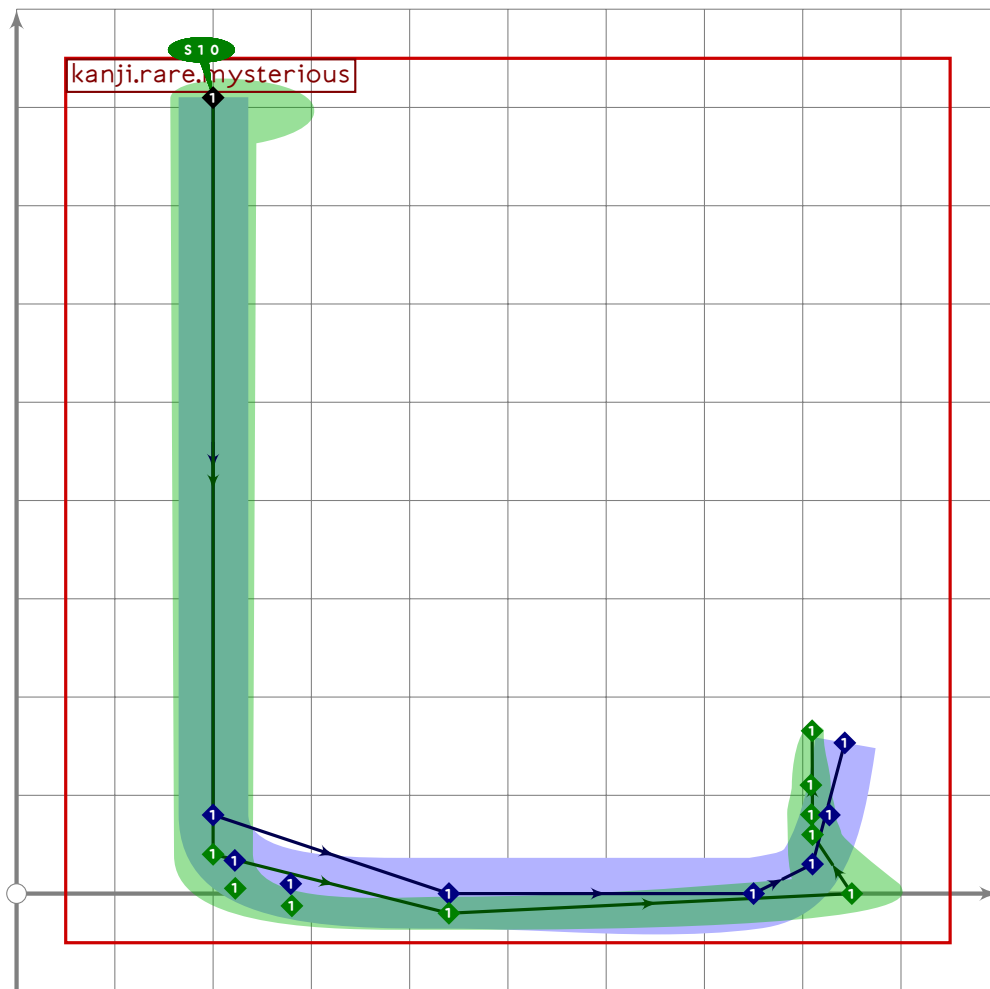


```

431
432 vardef kanji.rare.mushroom =
433   push_pbox_toexpand("kanji.rare.mushroom");
434   build_kanji.tb(450,60)
435     (kanji.grone.earth)
436     (kanji.radical.legs);
437   expand_pbox;
438 enddef;

```

RARE

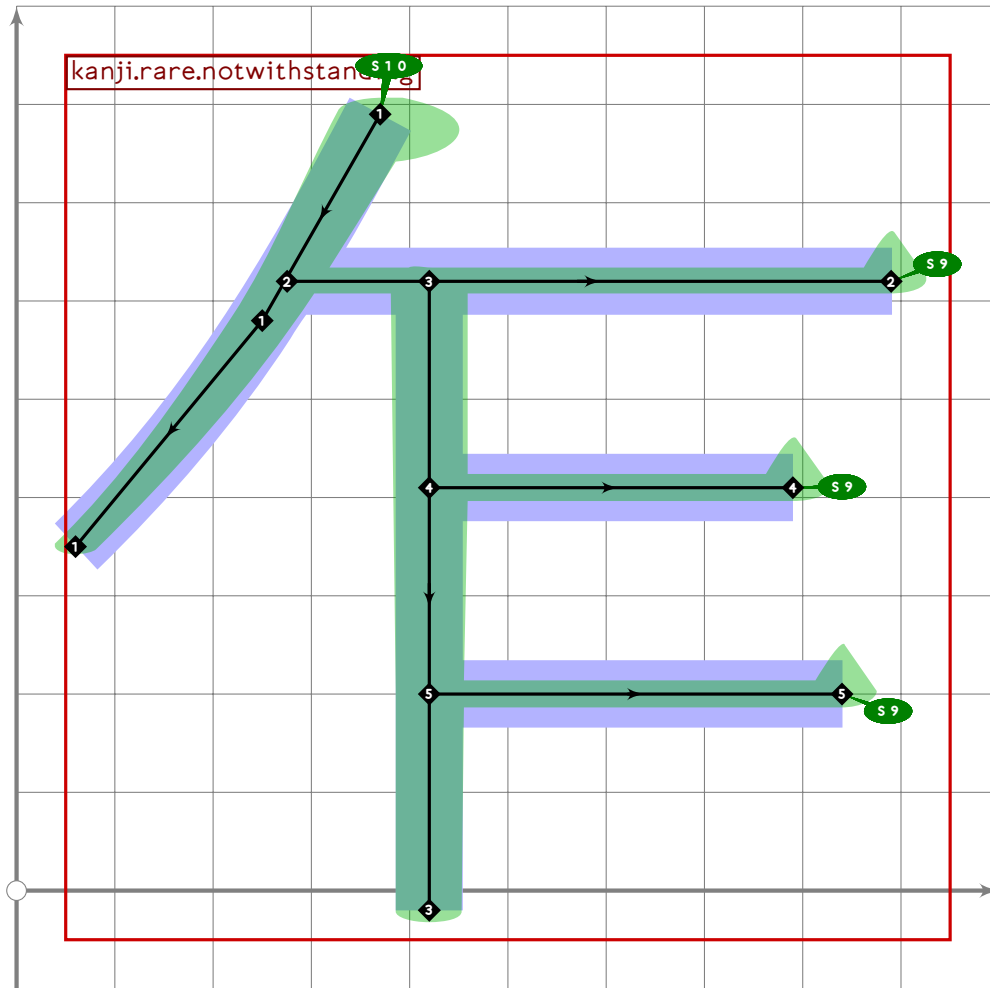


```

439
440 vardef kanji.rare.mysterious =
441   push_pbox_toexpand("kanji.rare.mysterious");
442   push_stroke((200,810))((1,7,1,7));
443   build_kanji.add_ltail(0);
444   set_boserif(0,0,10);
445   expand_pbox;
446 enddef;

```

RARE

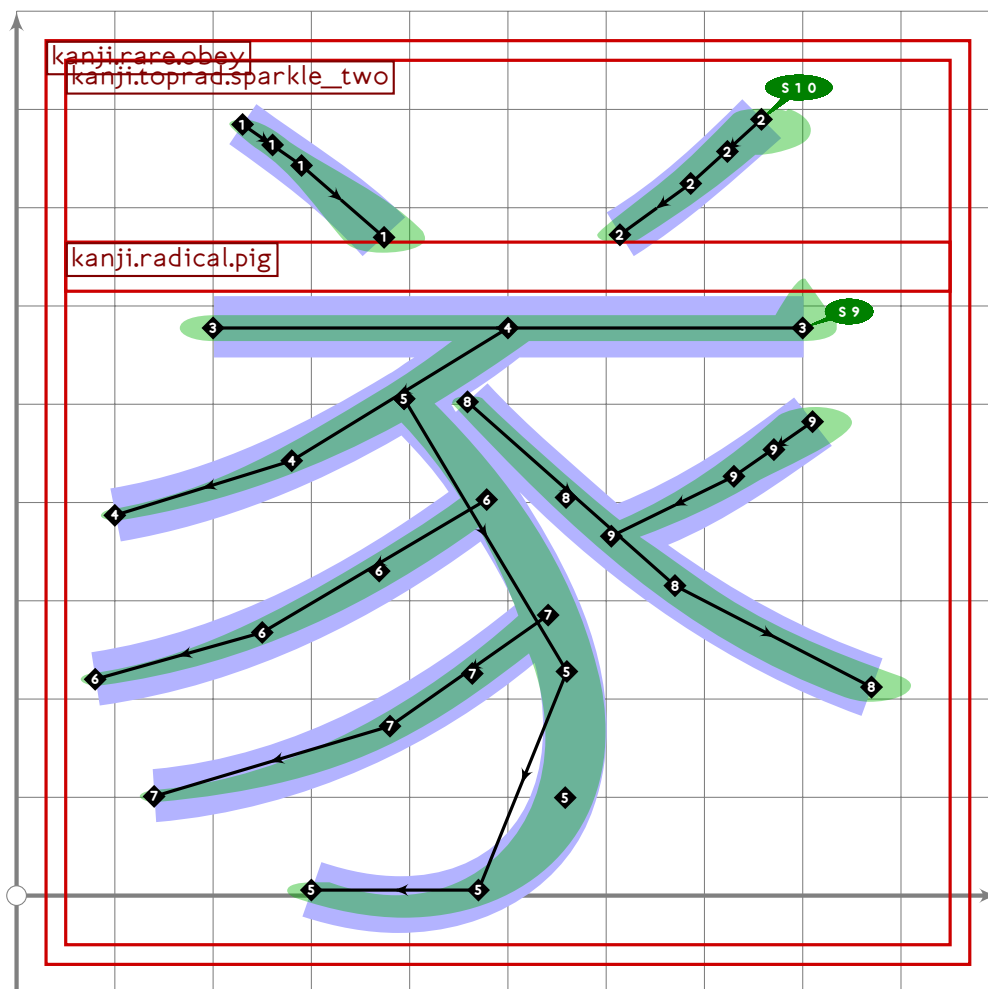


```

447
448 vardef kanji.rare.notwithstanding =
449   push_pbox_toexpand("kanji.rare.notwithstanding");
450   push_stroke((370,790){curl 0.1}..(250,580)..(60,350),
451     (1,7,1,7)–(14,1,4)–(1,1,1,1));
452   set_boserif(0,0,10);
453   push_stroke(
454     (((0,620)–(1000,620)) intersectionpoint get_stroke(0))–(890,620),
455     (14,1,4)–(1,5,1,5));
456   set_boserif(0,1,9);
457   push_stroke((420,620)–(420,-20),
458     (1,6,1,6)–(14,1,4));
459   push_stroke((420,410)–(790,410),
460     (1,5,1,5)–(1,5,1,5));
461   set_boserif(0,1,9);
462   push_stroke((420,200)–(840,200),
463     (1,5,1,5)–(1,5,1,5));
464   set_boserif(0,1,9);
465   expand_pbox;
466 enddef;

```

RARE

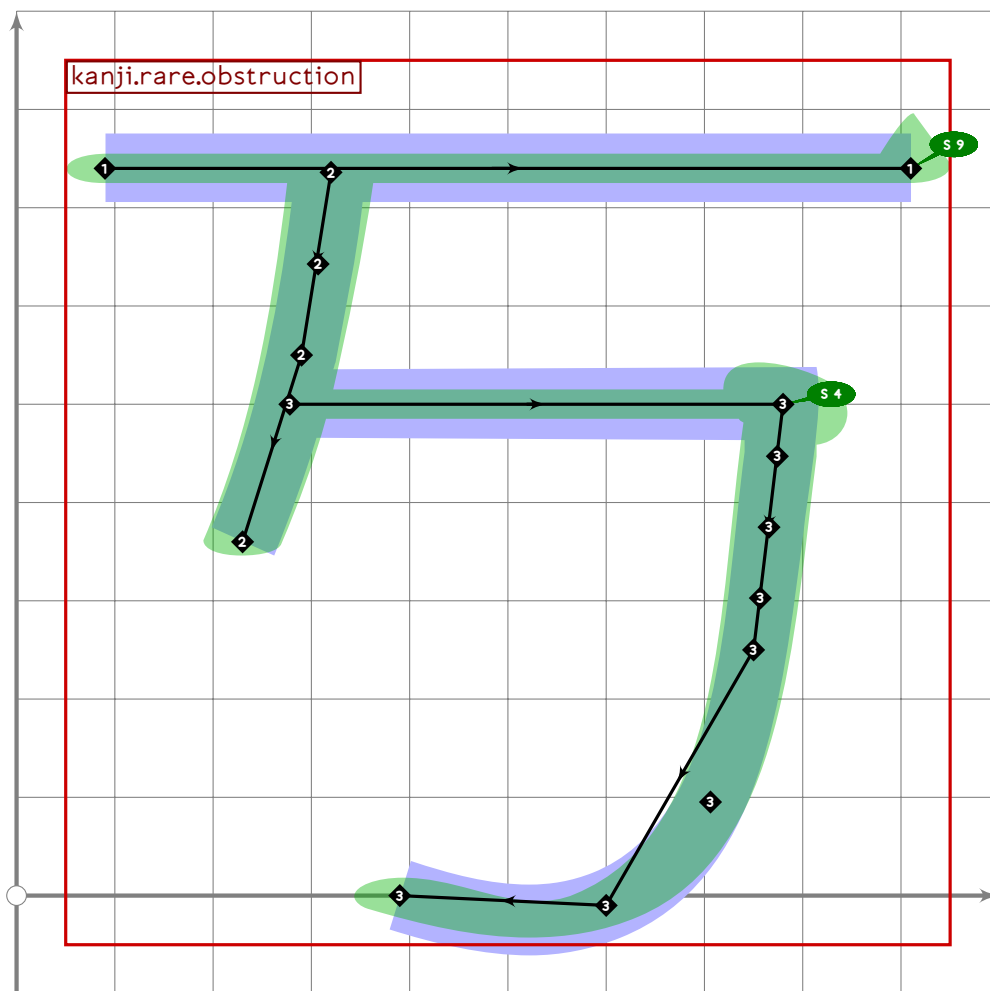


```

467
468 vardef kanji.rare.obey =
469   push_pbox_toexpand("kanji.rare.obey");
470   build_kanji.tb(640,50)
471     (build_kanji.spread_legs(-180)(kanji.toprad.sparkle_two))
472     (kanji.radical.pig);
473   expand_pbox;
474 enddef;

```

RARE

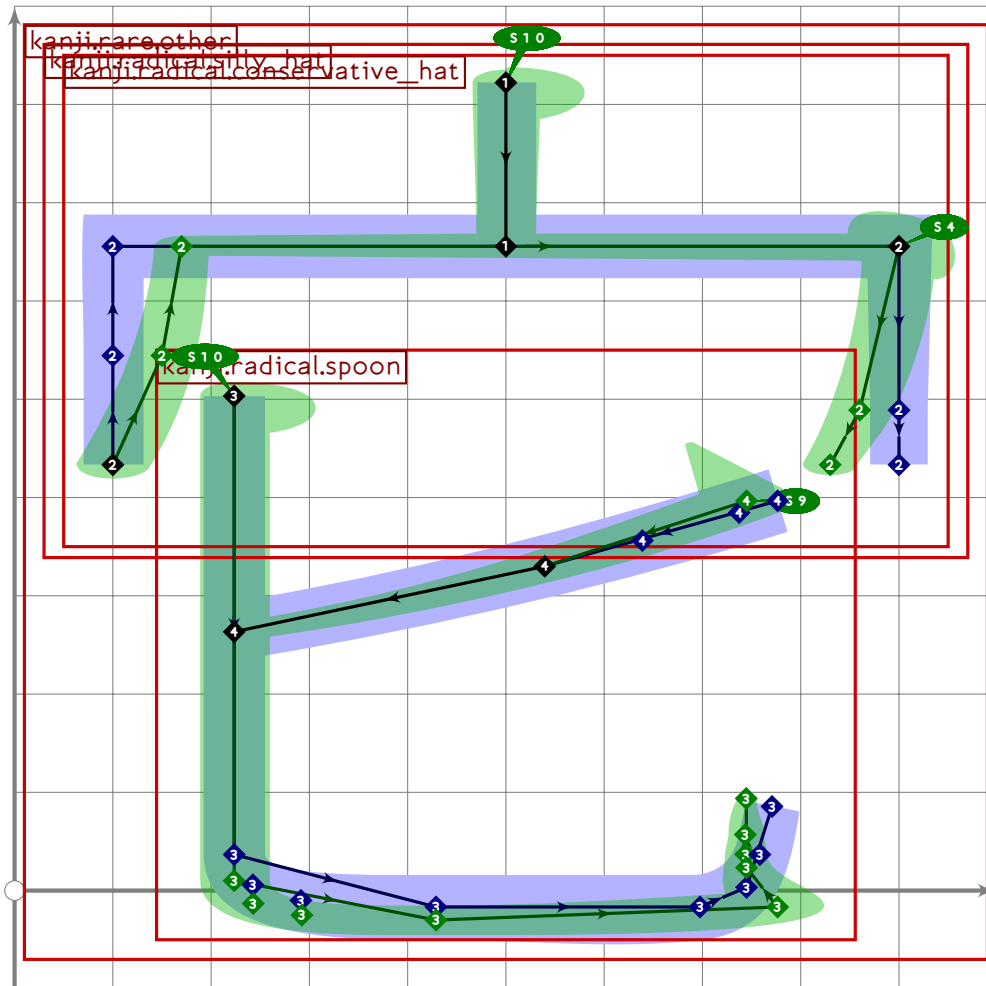


```

475
476 vardef kanji.rare.obstruction =
477   push_pbox__toexpand("kanji.rare.obstruction");
478   push_stroke((90,740)-(910,740),(1.6,1.6)-(1.6,1.6));
479   set_boserif(0,1,9);
480   push_stroke((320,736)..tension 1.2..(290,550)..(230,360),
481     (1.7,1.7)-(1.6,1.6)-(1.6,1.6));
482   push_stroke((get_strokep(0) intersectionpoint ((0,500)-(1000,500)))-
483     (780,500)..tension 1.7..(750,250)..(600,10)..{curl 0.1}(390,0),
484     (1.6,1.6)-(1.6,1.6)-(1.5,1.5)-(1.7,1.7)-(1.8,1.8));
485   set_botip(0,1,1);
486   set_boserif(0,1,4);
487   expand_pbox;
488 enddef;

```

RARE



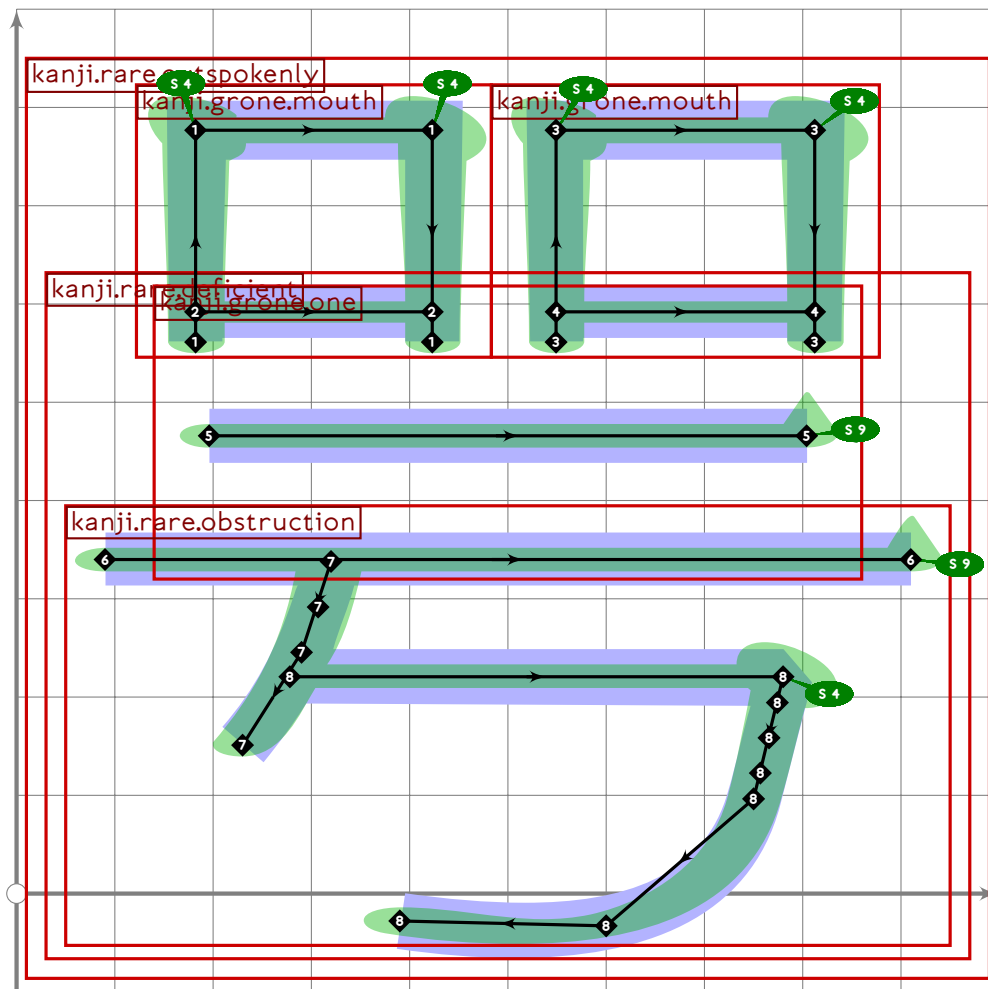
```

489
490 vardef kanji.rare.other =
491   push_pbox_toexpand("kanji.rare.other");
492   build_kanji.tb(450,200)
493     (kanji.radical.silly_hat)
494     (build_kanji.sscale(xscaled 0.79)
495       (kanji.radical.spoon));
496   expand_pbox;
497 enddef;

```

RARE

U+54A2
tsuku.uni54A2

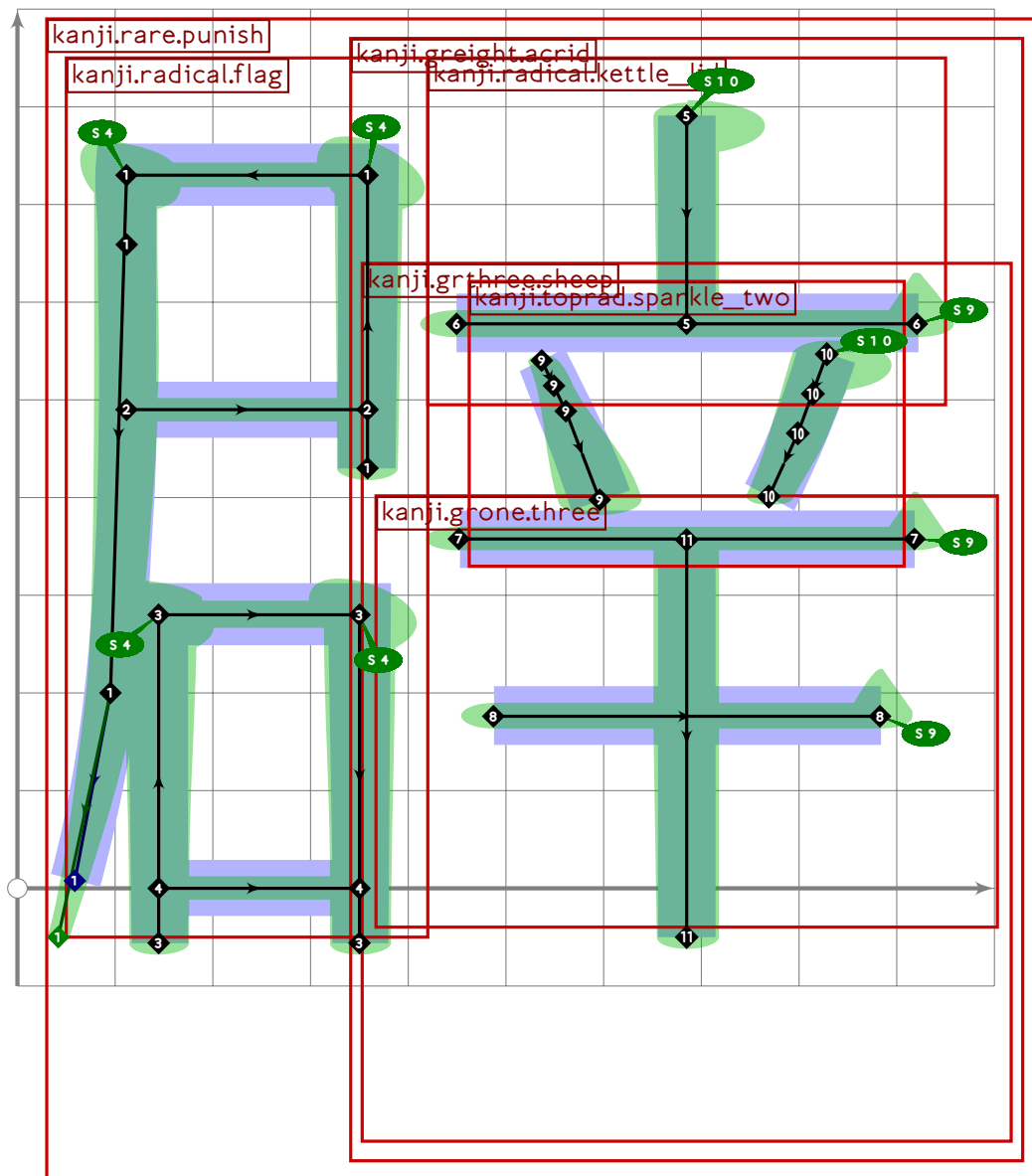


```

498
499 vardef kanji.rare.outspokenly =
500   push_pbox_toexpand("kanji.rare.outspokenly");
501   build_kanji.level(build_kanji.tb(540,40)
502     (build_kanji.sscale(scaled 0.84)(build_kanji.lr(480,0)
503       (kanji.grone.mouth)(kanji.grone.mouth)))
504     (kanji.rare.deficient));
505   expand_pbox;
506 enddef;

```

RARE



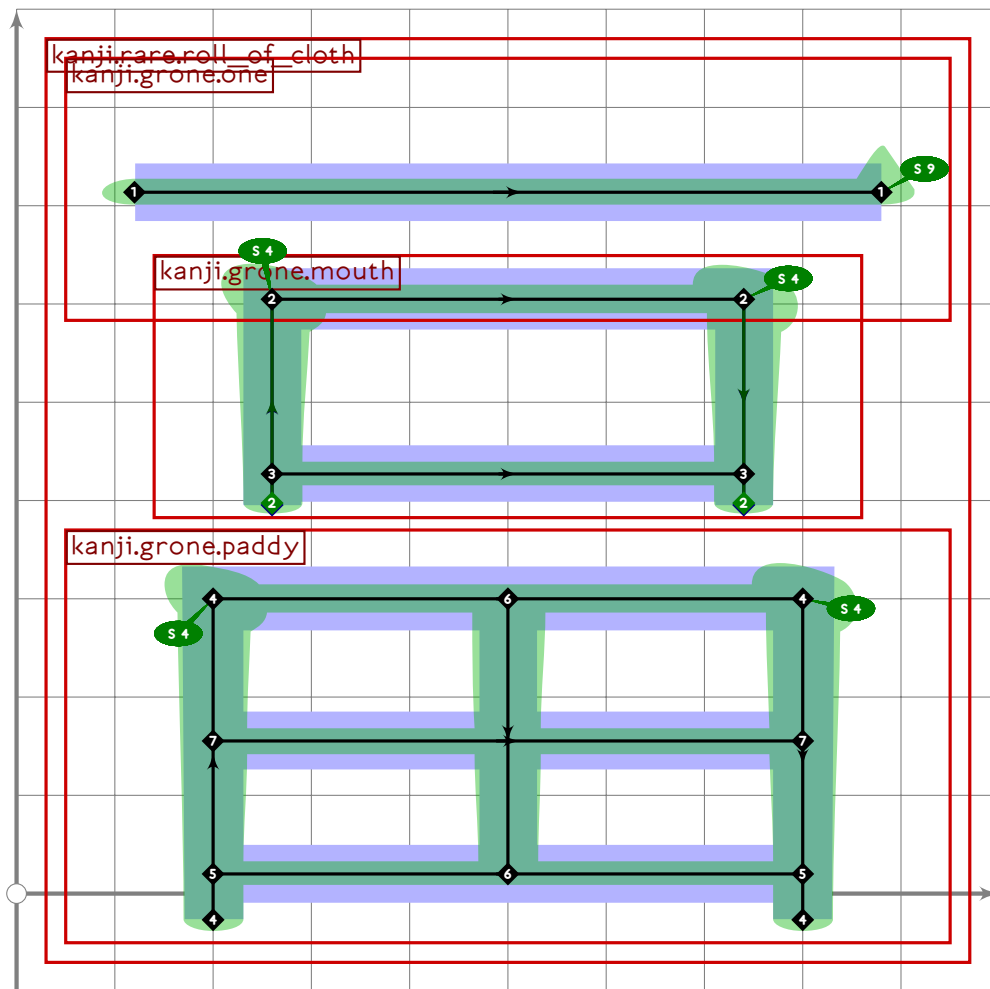
```

507
508 vardef kanji.rare.punish =
509   push_pbox_toexpand("kanji.rare.punish");
510   build_kanji.level(build_kanji.lr(420,0)
511     (kanji.radical.flag;
512       build_kanji.box((280,280),(780,0)))
513     (kanji.greight.acrid));
514   expand_pbox;
515 enddef;

```

RARE

U+7550
tsuku.uni7550

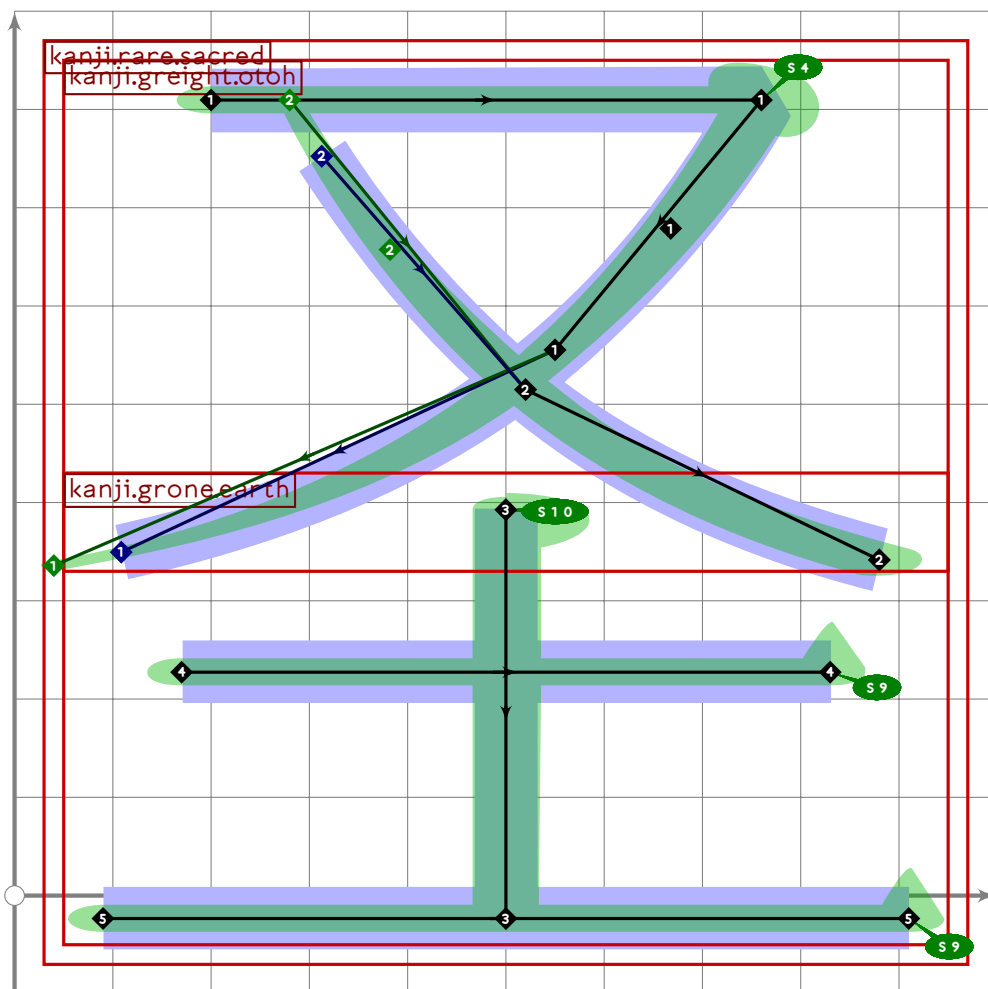


```

516
517 vardef kanji.rare.roll_of_cloth =
518   push_pbox_toexpand("kanji.rare.roll_of_cloth");
519   build_kanji.level(build_kanji.tb(360,20)
520     (build_kanji.tb(460,180)
521       (kanji.grone.one)
522       (build_kanji.sscale(scaled 0.8)(kanji.grone.mouth)))
523     (kanji.grone.paddy));
524   expand_pbox;
525 enddef;

```

RARE



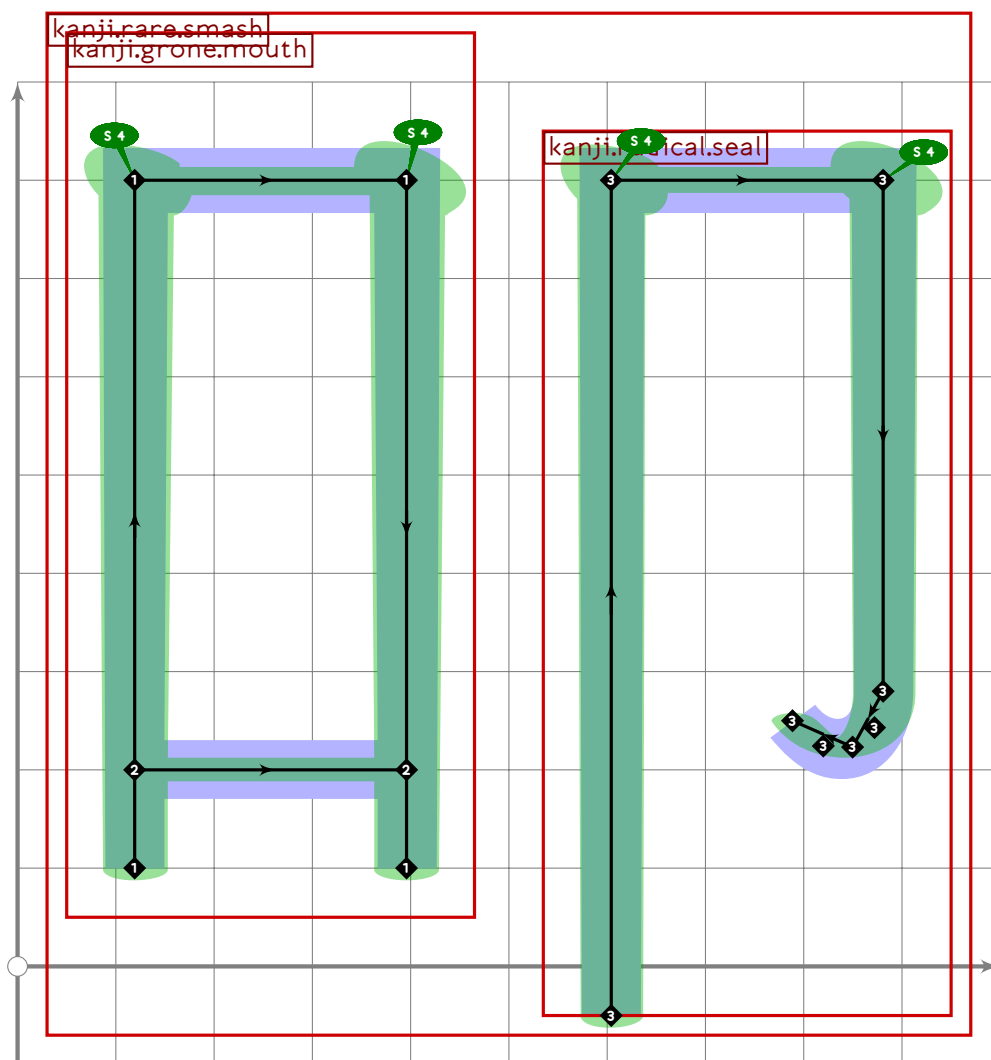
```

526
527 vardef kanji.rare.sacred =
528   push_pbox_toexpand("kanji.rare.sacred");
529   build_kanji.level(build_kanji.tb(380,100)
530     (kanji.greight.otoh)
531     (kanji.grone.earth));
532   expand_pbox;
533 enddef;

```

RARE

U+53E9
tsuku.uni53E9

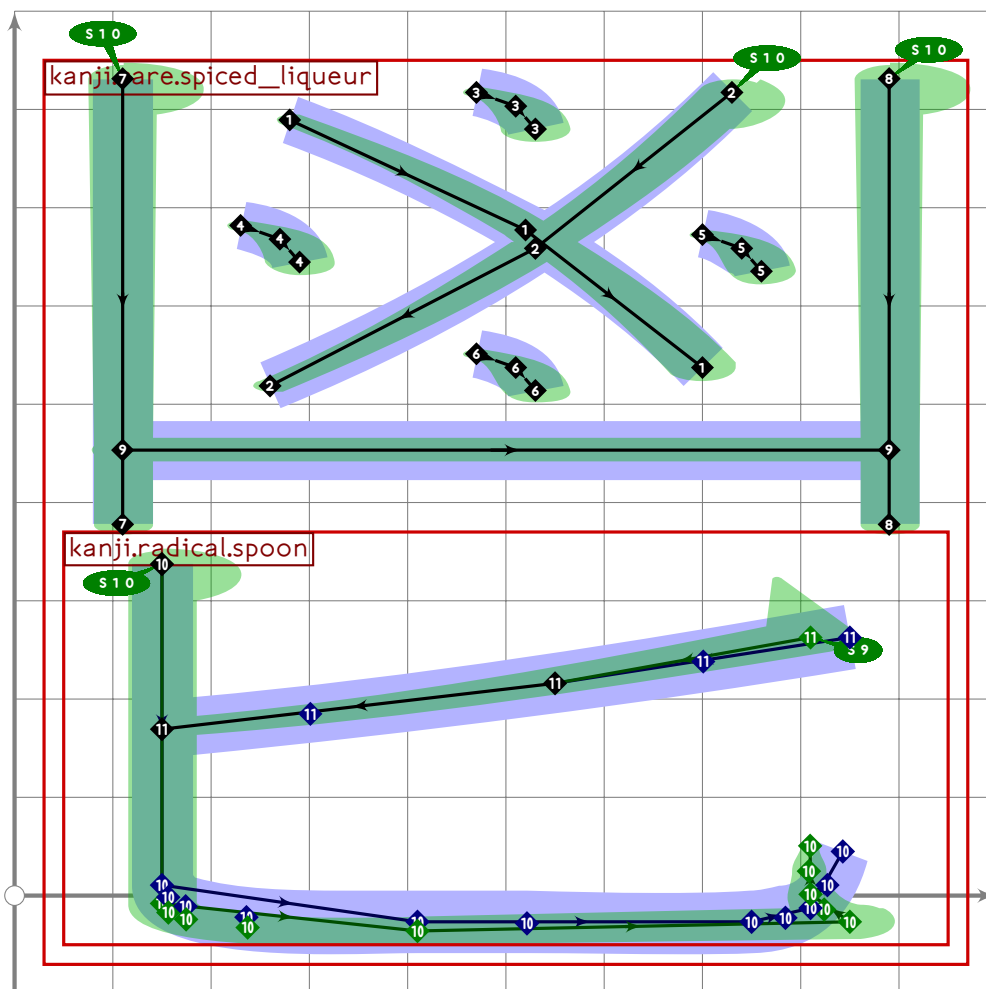


```

534
535 vardef kanji.rare.smash =
536   push_pbox_toexpand("kanji.rare.smash");
537   build_kanji.level(build_kanji.lr(500;70)
538     (tsu_xform(identity shifted (0,100))(kanji.grone.mouth))
539     (kanji.radical.seal));
540   expand_pbox;
541 enddef;

```

RARE



```

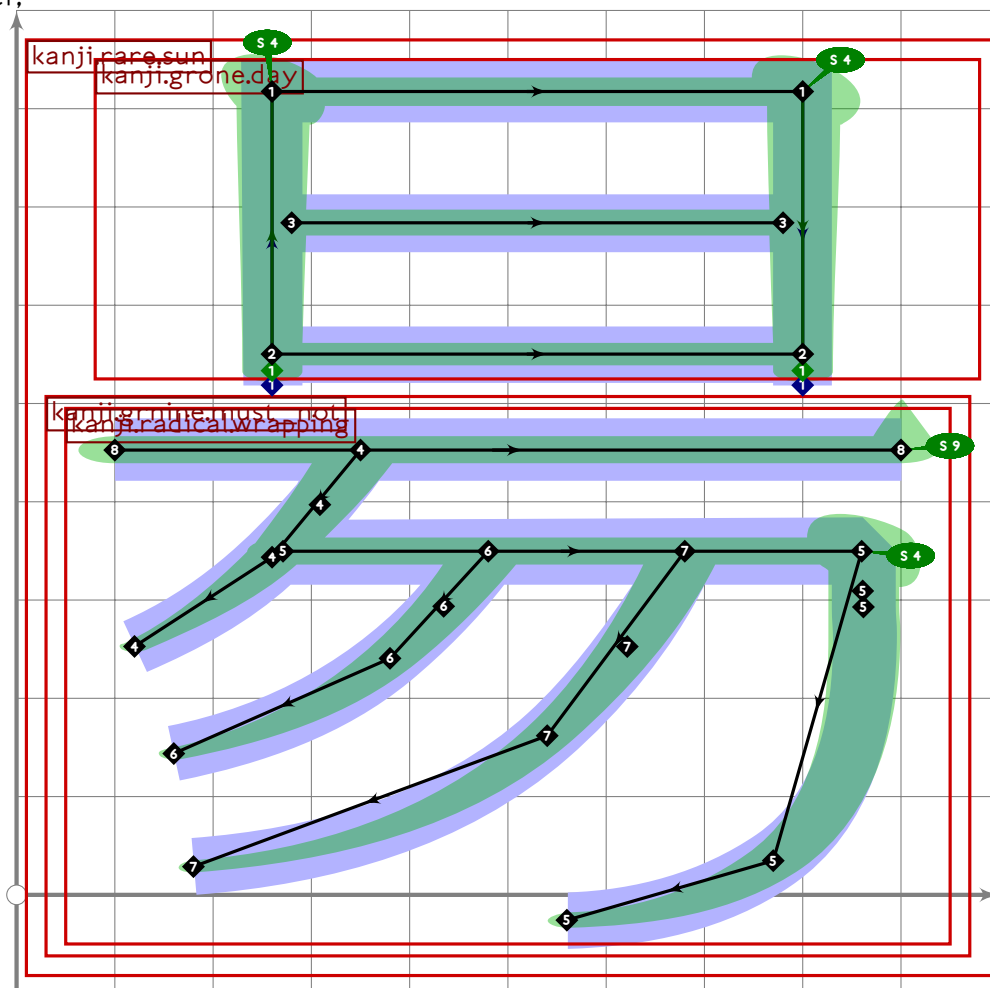
542
543 vardef kanji.rare.spiced_liqueur =
544   push_pbox_toexpand("kanji.rare.spiced_liqueur");
545   build_kanji.tb(400,-60)
546     (push_stroke((280,720)..(520,480)..(700,180),
547       (1,1)-(1.4,1.4)-(1.7,1.7));
548     set_bosize(0,90);
549     push_stroke((730,780)..(530,440)..(260,140),
550       (1.7,1.7)-(1.5,1.5)-(1.1,1.1));
551     set_boserif(0,0,10);
552     set_bosize(0,90);
553     push_stroke((470,780)..(510,750)..(530,700),(1,1)-(1.5,1.5)-(1.7,1.7));
554     set_bosize(0,90);
555     push_stroke((230,490)..(270,460)..(290,410),(1,1)-(1.5,1.5)-(1.7,1.7));
556     set_bosize(0,90);
557     push_stroke((700,470)..(740,440)..(760,390),(1,1)-(1.5,1.5)-(1.7,1.7));
558     set_bosize(0,90);
559     push_stroke((470,210)..(510,180)..(530,130),(1,1)-(1.5,1.5)-(1.7,1.7));
560     set_bosize(0,90);
561     build_kanji.cup((110,810),(890,0)))
562   (kanji.radical.spoon);

```

RARE

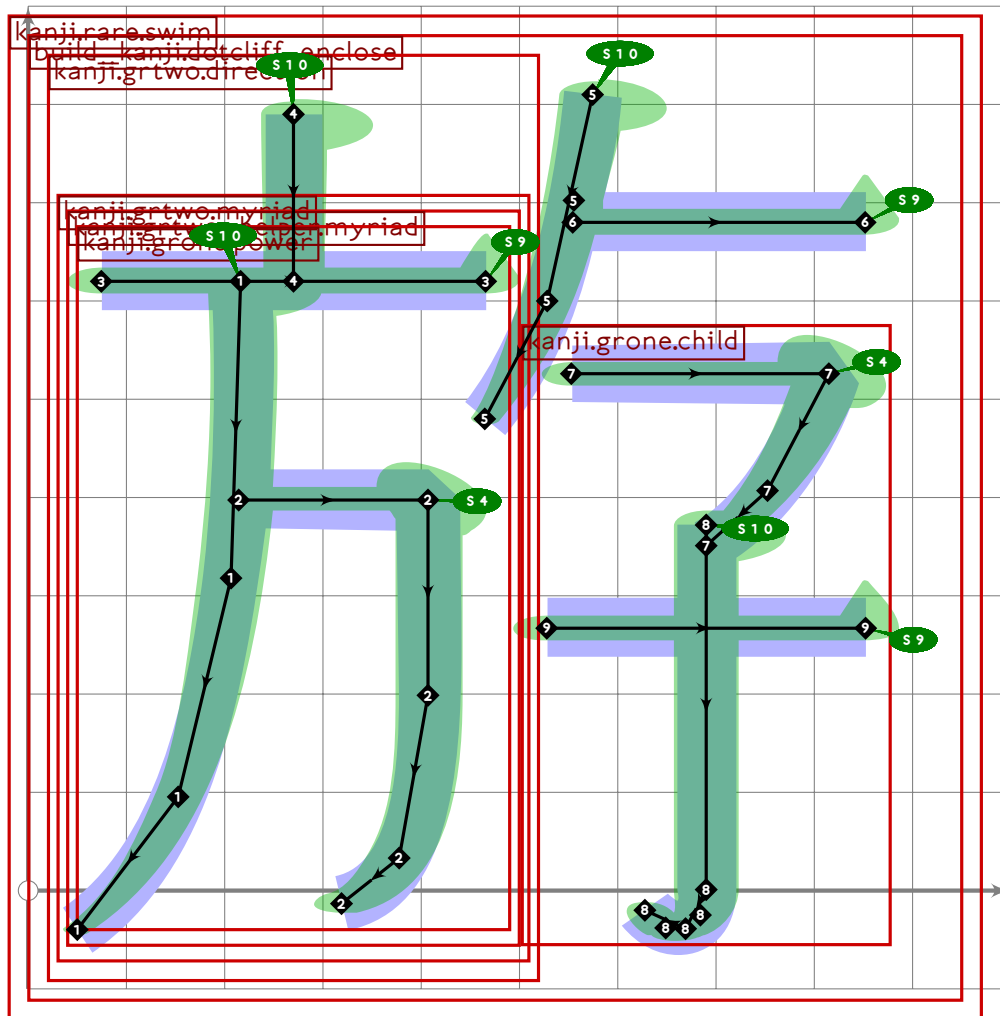
U+661C
tsuku.uni661C

```
563 expand_pbox;
564 enddef;
```



```
565
566 vardef kanji.rare.sun =
567   push_pbox_toexpand("kanji.rare.sun");
568   build_kanji.tb(510,-30)
569     (tsu_xform(identity shifted (30,0))(kanji.grone.day))
570     (kanji.grnine.must_not;
571       set_boserif(-3,0,whatever);
572       push_stroke((100,780)-(900,780),(1.6,1.6)-(1.6,1.6));
573       set_boserif(0,1,9));
574   expand_pbox;
575 enddef;
```

RARE

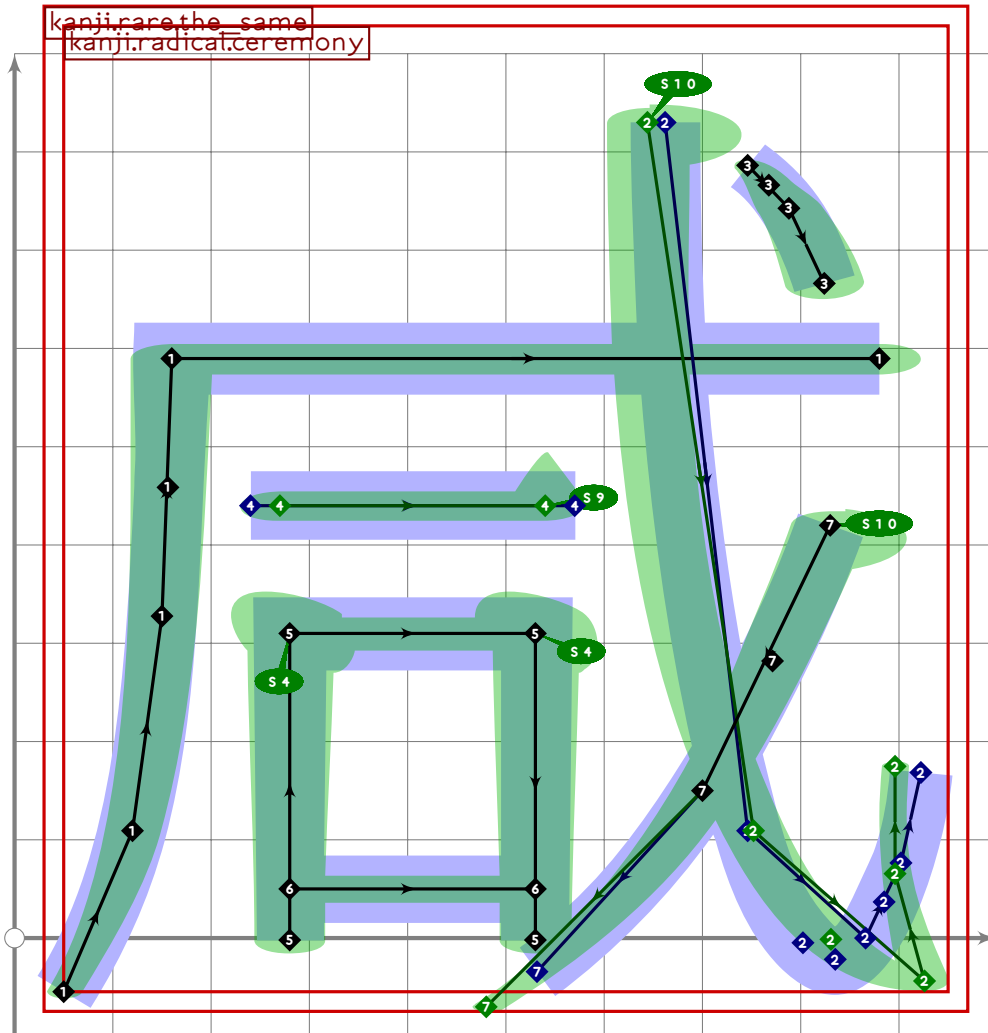


```

576
577 vardef kanji.rare.swim =
578   push_pbox_toexpand("kanji.rare.swim");
579   build_kanji.level(build_kanji.flag_enclose(0.72,0.7)
580     (kanji.grone.child));
581   expand_pbox;
582 enddef;

```

RARE



```

583
584 vardef kanji.rare.the_same =
585   push_pbox_toexpand("kanji.rare.the_same");
586   tsu_xform(identity yscaled (830/760))
587   (kanji.radical.ceremony;
588     replace_stroke(-2)
589       ((50,50)..(120,100)..(150,300)..tension 1.2..(160,540)-(880,540));
590     replace_stroke(-2)
591       ((1,1)-(1.3,1.3)-(1.5,1.5)-(1.6,1.6)-(1.6,1.6)));
592   set_botip(-2,3,1);
593   set_boserif(-2,1,whatever);
594   replace_stroke(-1)(oldp shifted (-950,0) xscaled 0.6 shifted (950,0));
595   replace_stroke(0)(oldp shifted (-950,0) xscaled 0.6 shifted (950,0));
596   push_stroke((if sharp_corners: 240 else: 270 fi,440)-
597     (if sharp_corners: 570 else: 540 fi,440),
598     (1.6,1.6)-(1.6,1.6));
599   set_boserif(0,1,9);
600   build_kanji.box((280,310),(530,50));
601   push_stroke((830,420)..tension 1.2..(700,150)..(480,70),
602     (1.6,1.6)-(1.4,1.4)-(0.9,0.9));

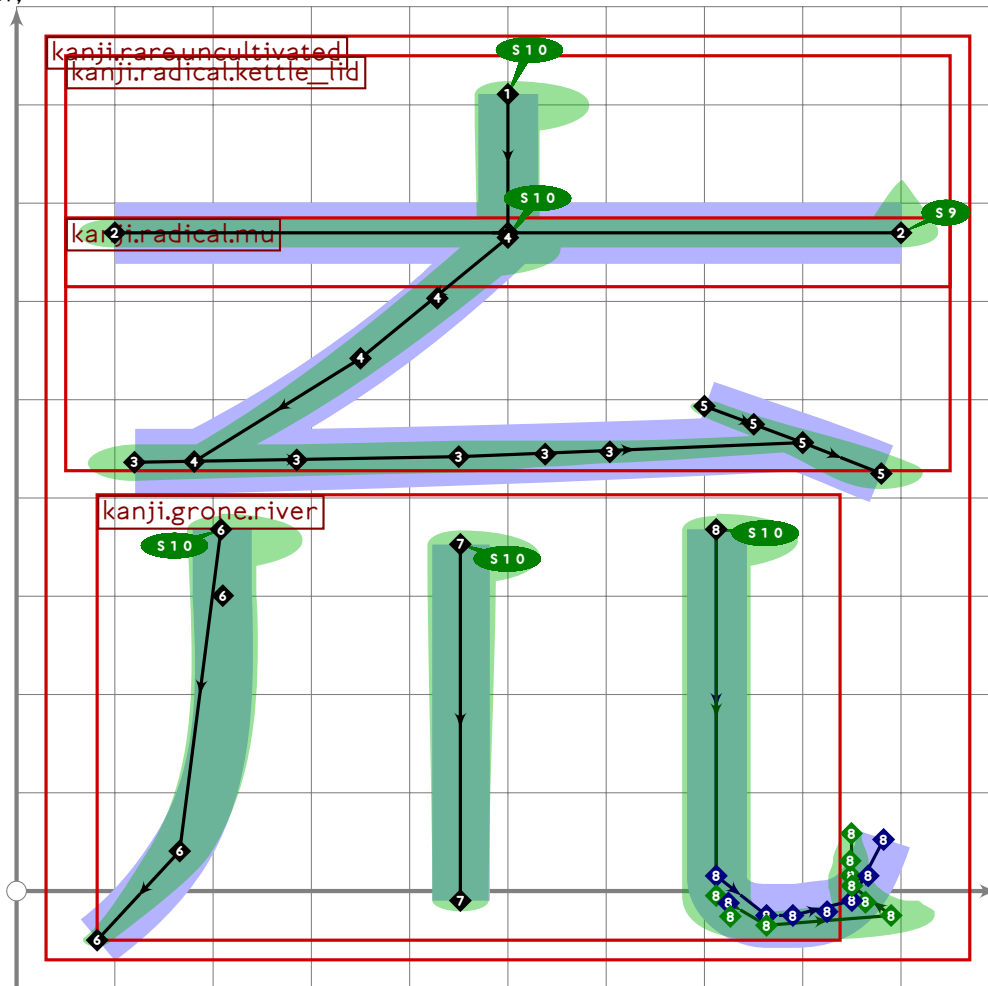
```

RARE

```

603 set_boserif(0,0,10);
604 expand_pbox;
605 enddef;

```

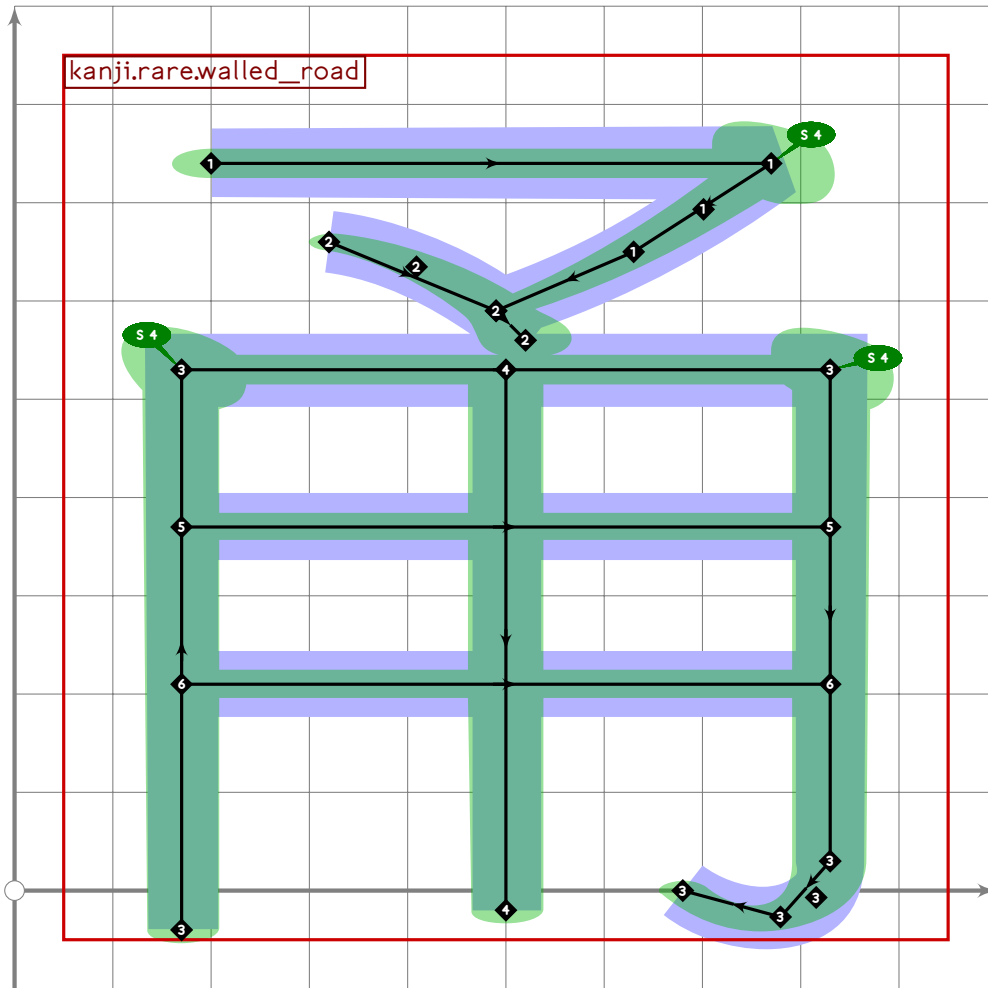


```

606
607 vardef kanji.rare.uncultivated =
608   push_pbox_toexpand("kanji.rare.uncultivated");
609   build_kanji.level(build_kanji.tb(650,70)
610     (kanji.radical.kettle_lid)
611     (build_kanji.tb(520,30)
612       (kanji.radical.mu)
613       (tsu_xform(identity shifted (40,0))
614         (tsu_xform(identity xscaled 0.84)(kanji.grone.river);
615         replace_stroke(0)((point 0 of oldp));
616         replace_strokeq(0)((point 0 of oldq));
617         build_kanji.add_ltail(0)))));
618   expand_pbox;
619 enddef;

```

RARE

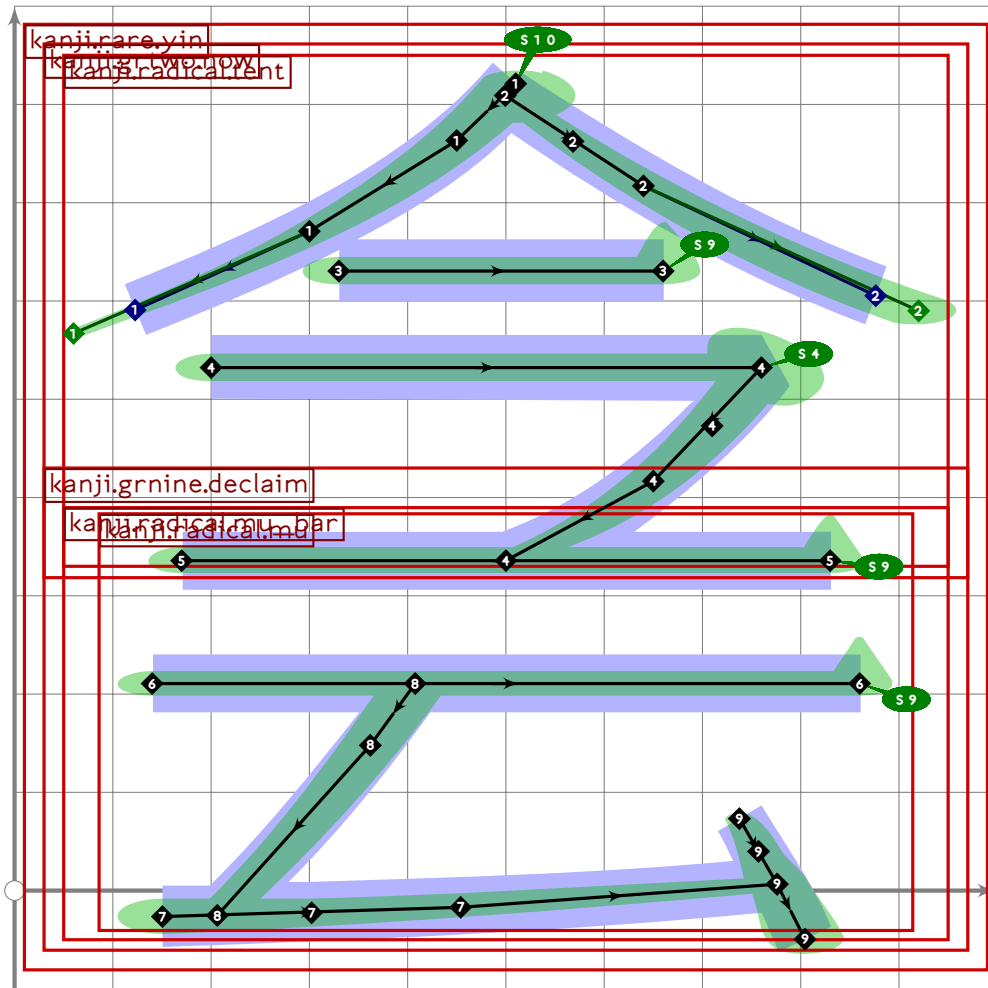


```

620
621 vardef kanji.rare.walled_road =
622   push_pbox_toexpand("kanji.rare.walled_road");
623   push_stroke((200,740)-(770,740)..tension 1.2..(630,650)..(490,590),
624     (1.6,1.6)-(1.6,1.6)-(1.4,1.4)-(1.1,1.1));
625   set_botip(0,1,0);
626   set_boserif(0,1,4);
627   push_stroke((320,660)..tension 1.2..(490,590)..(520,560),
628     (1.1,1.1)-(1.5,1.5)-(1.8,1.8));
629   push_stroke((170,-40)-(170,530)-(830,530),
630     (1.5,1.5)-(1.6,1.6)-(1.6,1.6));
631   build_kanji.add_jtail(0);
632   set_botip(0,1,1);
633   set_botip(0,2,1);
634   set_boserif(0,1,4);
635   set_boserif(0,2,4);
636   push_stroke((500,530)-(500,-20),(1.6,1.6)-(1.5,1.5));
637   push_stroke((170,370)-(830,370),(1.5,1.5)-(1.5,1.5));
638   push_stroke((170,210)-(830,210),(1.5,1.5)-(1.5,1.5));
639   expand_pbox;
640 enddef;

```

RARE



```

641
642 vardef kanji.rare.yin =
643   push_pbox_toexpand("kanji.rare.yin");
644   build_kanji.tb(380,100)
645     (kanji.grtwo.now)
646     (kanji.grnine.declaim);
647   expand_pbox;
648 enddef;

```

RARE