

unknown

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80  cord_individual_obj[indivial_i,:] = [ 5. 5. 24. 29.]
81  cord_individual_obj[indivial_i,:] = [ 6. 4. 32. 36.]
82  cord_individual_obj[indivial_i,:] = [ 7. 6. 44. 50.]
83  cord_individual_obj[indivial_i,:] = [ 8. 4. 84. 88.]
84  cord_individual_obj[indivial_i,:] = [ 9. 6. 8. 14.]
85  cord_individual_obj[indivial_i,:] = [10. 6. 44. 50.]
86  cord_individual_obj[indivial_i,:] = [11. 5. 24. 29.]
87  cord_individual_obj[indivial_i,:] = [12. 6. 24. 30.]
88  cord_individual_obj[indivial_i,:] = [13. 5. 44. 49.]
89  cord_individual_obj[indivial_i,:] = [14. 6. 24. 30.]
90
91 min(cord_individual_obj[:,3]) = 14.0
92 historl_G_best_iter[iter,3] = 14.0
93 Begin iteration:
94
95 iter = 3
96  cord_individual_obj[indivial_i,:] = [ 0. 6. 8. 14.]
97  cord_individual_obj[indivial_i,:] = [ 1. 5. 22. 27.]
98  cord_individual_obj[indivial_i,:] = [ 2. 6. 8. 14.]
99  cord_individual_obj[indivial_i,:] = [ 3. 6. 28. 34.]
100 cord_individual_obj[indivial_i,:] = [ 4. 6. 40. 46.]
101 cord_individual_obj[indivial_i,:] = [ 5. 6. 16. 22.]
102 cord_individual_obj[indivial_i,:] = [ 6. 6. 16. 22.]
103 cord_individual_obj[indivial_i,:] = [ 7. 6. 28. 34.]
104 cord_individual_obj[indivial_i,:] = [ 8. 5. 28. 33.]
105 cord_individual_obj[indivial_i,:] = [ 9. 5. 44. 49.]
106 cord_individual_obj[indivial_i,:] = [10. 6. 8. 14.]
107 cord_individual_obj[indivial_i,:] = [11. 5. 44. 49.]
108 cord_individual_obj[indivial_i,:] = [12. 6. 8. 14.]
109 cord_individual_obj[indivial_i,:] = [13. 5. 24. 29.]
110 cord_individual_obj[indivial_i,:] = [14. 6. 28. 34.]
111
112 min(cord_individual_obj[:,3]) = 14.0
113 historl_G_best_iter[iter,3] = 14.0
114 Begin iteration:
115
116 iter = 4
117  cord_individual_obj[indivial_i,:] = [ 0. 6. 64. 70.]
118  cord_individual_obj[indivial_i,:] = [ 1. 3. 48. 51.]
119  cord_individual_obj[indivial_i,:] = [ 2. 4. 44. 48.]
120  cord_individual_obj[indivial_i,:] = [ 3. 6. 28. 34.]
121  cord_individual_obj[indivial_i,:] = [ 4. 6. 28. 34.]
122  cord_individual_obj[indivial_i,:] = [ 5. 5. 28. 33.]
123  cord_individual_obj[indivial_i,:] = [ 6. 4. 28. 32.]
124  cord_individual_obj[indivial_i,:] = [ 7. 6. 28. 34.]
125  cord_individual_obj[indivial_i,:] = [ 8. 4. 64. 68.]
126  cord_individual_obj[indivial_i,:] = [ 9. 6. 8. 14.]
127  cord_individual_obj[indivial_i,:] = [10. 6. 64. 70.]
128  cord_individual_obj[indivial_i,:] = [11. 6. 54. 60.]
129  cord_individual_obj[indivial_i,:] = [12. 6. 28. 34.]
130  cord_individual_obj[indivial_i,:] = [13. 5. 48. 53.]
131  cord_individual_obj[indivial_i,:] = [14. 6. 28. 34.]
132
133 min(cord_individual_obj[:,3]) = 14.0
134 historl_G_best_iter[iter,3] = 14.0
135 Begin iteration:
136
137 iter = 5
138  cord_individual_obj[indivial_i,:] = [ 0. 6. 8. 14.]
139  cord_individual_obj[indivial_i,:] = [ 1. 5. 84. 89.]
140  cord_individual_obj[indivial_i,:] = [ 2. 5. 102. 107.]
141  cord_individual_obj[indivial_i,:] = [ 3. 6. 28. 34.]
142  cord_individual_obj[indivial_i,:] = [ 4. 6. 28. 34.]
143  cord_individual_obj[indivial_i,:] = [ 5. 5. 28. 33.]
144  cord_individual_obj[indivial_i,:] = [ 6. 6. 56. 62.]
145  cord_individual_obj[indivial_i,:] = [ 7. 6. 48. 54.]
146  cord_individual_obj[indivial_i,:] = [ 8. 5. 28. 33.]
147  cord_individual_obj[indivial_i,:] = [ 9. 3. 56. 59.]
148  cord_individual_obj[indivial_i,:] = [10. 6. 72. 78.]
149  cord_individual_obj[indivial_i,:] = [11. 5. 48. 53.]
150  cord_individual_obj[indivial_i,:] = [12. 6. 28. 34.]
151  cord_individual_obj[indivial_i,:] = [13. 6. 48. 54.]
152  cord_individual_obj[indivial_i,:] = [14. 6. 54. 60.]
153
154 min(cord_individual_obj[:,3]) = 14.0
155 historl_G_best_iter[iter,3] = 14.0
156 Begin iteration:
157
158 iter = 6
159  cord_individual_obj[indivial_i,:] = [ 0. 6. 72. 78.]
160  cord_individual_obj[indivial_i,:] = [ 1. 4. 84. 88.]
161  cord_individual_obj[indivial_i,:] = [ 2. 6. 8. 14.]
162  cord_individual_obj[indivial_i,:] = [ 3. 6. 28. 34.]
163  cord_individual_obj[indivial_i,:] = [ 4. 6. 20. 26.]

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164 cord_individual_obj[indivial_i,:] = [ 5. 5. 20. 25.]
165 cord_individual_obj[indivial_i,:] = [ 6. 5. 44. 49.]
166 cord_individual_obj[indivial_i,:] = [ 7. 6. 44. 50.]
167 cord_individual_obj[indivial_i,:] = [ 8. 5. 44. 49.]
168 cord_individual_obj[indivial_i,:] = [ 9. 5. 38. 43.]
169 cord_individual_obj[indivial_i,:] = [10. 6. 44. 50.]
170 cord_individual_obj[indivial_i,:] = [11. 5. 36. 41.]
171 cord_individual_obj[indivial_i,:] = [12. 6. 20. 26.]
172 cord_individual_obj[indivial_i,:] = [13. 5. 78. 83.]
173 cord_individual_obj[indivial_i,:] = [14. 6. 36. 42.]
174
175 min(cord_individual_obj[:,3]) = 14.0
176 historl_G_best_iter[iter,3] = 14.0
177 Begin iteration:
178
179 iter = 7
180 cord_individual_obj[indivial_i,:] = [ 0. 6. 64. 70.]
181 cord_individual_obj[indivial_i,:] = [ 1. 6. 8. 14.]
182 cord_individual_obj[indivial_i,:] = [ 2. 6. 54. 60.]
183 cord_individual_obj[indivial_i,:] = [ 3. 6. 28. 34.]
184 cord_individual_obj[indivial_i,:] = [ 4. 6. 54. 60.]
185 cord_individual_obj[indivial_i,:] = [ 5. 6. 28. 34.]
186 cord_individual_obj[indivial_i,:] = [ 6. 4. 38. 42.]
187 cord_individual_obj[indivial_i,:] = [ 7. 6. 64. 70.]
188 cord_individual_obj[indivial_i,:] = [ 8. 6. 38. 44.]
189 cord_individual_obj[indivial_i,:] = [ 9. 4. 28. 32.]
190 cord_individual_obj[indivial_i,:] = [10. 6. 44. 50.]
191 cord_individual_obj[indivial_i,:] = [11. 5. 48. 53.]
192 cord_individual_obj[indivial_i,:] = [12. 6. 28. 34.]
193 cord_individual_obj[indivial_i,:] = [13. 5. 38. 43.]
194 cord_individual_obj[indivial_i,:] = [14. 6. 28. 34.]
195
196 min(cord_individual_obj[:,3]) = 14.0
197 historl_G_best_iter[iter,3] = 14.0
198 Begin iteration:
199
200 iter = 8
201 cord_individual_obj[indivial_i,:] = [ 0. 6. 8. 14.]
202 cord_individual_obj[indivial_i,:] = [ 1. 4. 64. 68.]
203 cord_individual_obj[indivial_i,:] = [ 2. 5. 24. 29.]
204 cord_individual_obj[indivial_i,:] = [ 3. 6. 68. 74.]
205 cord_individual_obj[indivial_i,:] = [ 4. 6. 28. 34.]
206 cord_individual_obj[indivial_i,:] = [ 5. 5. 28. 33.]
207 cord_individual_obj[indivial_i,:] = [ 6. 6. 50. 56.]
208 cord_individual_obj[indivial_i,:] = [ 7. 6. 24. 30.]
209 cord_individual_obj[indivial_i,:] = [ 8. 5. 32. 37.]
210 cord_individual_obj[indivial_i,:] = [ 9. 5. 56. 61.]
211 cord_individual_obj[indivial_i,:] = [10. 6. 52. 58.]
212 cord_individual_obj[indivial_i,:] = [11. 5. 24. 29.]
213 cord_individual_obj[indivial_i,:] = [12. 6. 32. 38.]
214 cord_individual_obj[indivial_i,:] = [13. 5. 44. 49.]
215 cord_individual_obj[indivial_i,:] = [14. 6. 40. 46.]
216
217 min(cord_individual_obj[:,3]) = 14.0
218 historl_G_best_iter[iter,3] = 14.0
219 Begin iteration:
220
221 iter = 9
222 cord_individual_obj[indivial_i,:] = [ 0. 6. 94. 100.]
223 cord_individual_obj[indivial_i,:] = [ 1. 6. 28. 34.]
224 cord_individual_obj[indivial_i,:] = [ 2. 3. 62. 65.]
225 cord_individual_obj[indivial_i,:] = [ 3. 6. 8. 14.]
226 cord_individual_obj[indivial_i,:] = [ 4. 6. 68. 74.]
227 cord_individual_obj[indivial_i,:] = [ 5. 6. 28. 34.]
228 cord_individual_obj[indivial_i,:] = [ 6. 5. 84. 89.]
229 cord_individual_obj[indivial_i,:] = [ 7. 6. 36. 42.]
230 cord_individual_obj[indivial_i,:] = [ 8. 6. 68. 74.]
231 cord_individual_obj[indivial_i,:] = [ 9. 6. 28. 34.]
232 cord_individual_obj[indivial_i,:] = [10. 6. 38. 44.]
233 cord_individual_obj[indivial_i,:] = [11. 6. 36. 42.]
234 cord_individual_obj[indivial_i,:] = [12. 6. 38. 44.]
235 cord_individual_obj[indivial_i,:] = [13. 6. 16. 22.]
236 cord_individual_obj[indivial_i,:] = [14. 6. 34. 40.]
237
238 min(cord_individual_obj[:,3]) = 14.0
239 historl_G_best_iter[iter,3] = 14.0
240 Begin iteration:
241
242 iter = 10
243 cord_individual_obj[indivial_i,:] = [ 0. 6. 8. 14.]
244 cord_individual_obj[indivial_i,:] = [ 1. 6. 78. 84.]
245 cord_individual_obj[indivial_i,:] = [ 2. 4. 70. 74.]
246 cord_individual_obj[indivial_i,:] = [ 3. 6. 28. 34.]
247 cord_individual_obj[indivial_i,:] = [ 4. 6. 28. 34.]

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248 cord_individual_obj[indivial_i,:] = [ 5. 5. 28. 33.]
249 cord_individual_obj[indivial_i,:] = [ 6. 4. 50. 54.]
250 cord_individual_obj[indivial_i,:] = [ 7. 6. 24. 30.]
251 cord_individual_obj[indivial_i,:] = [ 8. 4. 50. 54.]
252 cord_individual_obj[indivial_i,:] = [ 9. 5. 20. 25.]
253 cord_individual_obj[indivial_i,:] = [10. 6. 56. 62.]
254 cord_individual_obj[indivial_i,:] = [11. 5. 28. 33.]
255 cord_individual_obj[indivial_i,:] = [12. 6. 32. 38.]
256 cord_individual_obj[indivial_i,:] = [13. 5. 68. 73.]
257 cord_individual_obj[indivial_i,:] = [14. 6. 28. 34.]
258
259 min(cord_individual_obj[:,3]) = 14.0
260 historl_G_best_iter[iter,3] = 14.0
261 Begin iteration:
262
263 iter = 11
264 cord_individual_obj[indivial_i,:] = [ 0. 6. 28. 34.]
265 cord_individual_obj[indivial_i,:] = [ 1. 6. 8. 14.]
266 cord_individual_obj[indivial_i,:] = [ 2. 3. 82. 85.]
267 cord_individual_obj[indivial_i,:] = [ 3. 6. 28. 34.]
268 cord_individual_obj[indivial_i,:] = [ 4. 6. 28. 34.]
269 cord_individual_obj[indivial_i,:] = [ 5. 5. 28. 33.]
270 cord_individual_obj[indivial_i,:] = [ 6. 4. 38. 42.]
271 cord_individual_obj[indivial_i,:] = [ 7. 6. 38. 44.]
272 cord_individual_obj[indivial_i,:] = [ 8. 5. 38. 43.]
273 cord_individual_obj[indivial_i,:] = [ 9. 5. 64. 69.]
274 cord_individual_obj[indivial_i,:] = [10. 6. 28. 34.]
275 cord_individual_obj[indivial_i,:] = [11. 5. 72. 77.]
276 cord_individual_obj[indivial_i,:] = [12. 6. 18. 24.]
277 cord_individual_obj[indivial_i,:] = [13. 5. 36. 41.]
278 cord_individual_obj[indivial_i,:] = [14. 6. 28. 34.]
279
280 min(cord_individual_obj[:,3]) = 14.0
281 historl_G_best_iter[iter,3] = 14.0
282 Begin iteration:
283
284 iter = 12
285 cord_individual_obj[indivial_i,:] = [ 0. 6. 14. 20.]
286 cord_individual_obj[indivial_i,:] = [ 1. 5. 28. 33.]
287 cord_individual_obj[indivial_i,:] = [ 2. 6. 8. 14.]
288 cord_individual_obj[indivial_i,:] = [ 3. 6. 14. 20.]
289 cord_individual_obj[indivial_i,:] = [ 4. 6. 44. 50.]
290 cord_individual_obj[indivial_i,:] = [ 5. 5. 36. 41.]
291 cord_individual_obj[indivial_i,:] = [ 6. 4. 14. 18.]
292 cord_individual_obj[indivial_i,:] = [ 7. 6. 28. 34.]
293 cord_individual_obj[indivial_i,:] = [ 8. 4. 90. 94.]
294 cord_individual_obj[indivial_i,:] = [ 9. 5. 40. 45.]
295 cord_individual_obj[indivial_i,:] = [10. 6. 8. 14.]
296 cord_individual_obj[indivial_i,:] = [11. 6. 16. 22.]
297 cord_individual_obj[indivial_i,:] = [12. 6. 12. 18.]
298 cord_individual_obj[indivial_i,:] = [13. 5. 8. 13.]
299 cord_individual_obj[indivial_i,:] = [14. 6. 44. 50.]
300
301 min(cord_individual_obj[:,3]) = 13.0
302 historl_G_best_iter[iter,3] = 13.0
303 Begin iteration:
304
305 iter = 13
306 cord_individual_obj[indivial_i,:] = [ 0. 5. 28. 33.]
307 cord_individual_obj[indivial_i,:] = [ 1. 5. 42. 47.]
308 cord_individual_obj[indivial_i,:] = [ 2. 4. 28. 32.]
309 cord_individual_obj[indivial_i,:] = [ 3. 4. 28. 32.]
310 cord_individual_obj[indivial_i,:] = [ 4. 4. 28. 32.]
311 cord_individual_obj[indivial_i,:] = [ 5. 5. 28. 33.]
312 cord_individual_obj[indivial_i,:] = [ 6. 5. 44. 49.]
313 cord_individual_obj[indivial_i,:] = [ 7. 4. 36. 40.]
314 cord_individual_obj[indivial_i,:] = [ 8. 5. 8. 13.]
315 cord_individual_obj[indivial_i,:] = [ 9. 5. 28. 33.]
316 cord_individual_obj[indivial_i,:] = [10. 5. 28. 33.]
317 cord_individual_obj[indivial_i,:] = [11. 5. 38. 43.]
318 cord_individual_obj[indivial_i,:] = [12. 5. 36. 41.]
319 cord_individual_obj[indivial_i,:] = [13. 5. 38. 43.]
320 cord_individual_obj[indivial_i,:] = [14. 5. 28. 33.]
321
322 min(cord_individual_obj[:,3]) = 13.0
323 historl_G_best_iter[iter,3] = 13.0
324 Begin iteration:
325
326 iter = 14
327 cord_individual_obj[indivial_i,:] = [ 0. 3. 54. 57.]
328 cord_individual_obj[indivial_i,:] = [ 1. 5. 102. 107.]
329 cord_individual_obj[indivial_i,:] = [ 2. 3. 54. 57.]
330 cord_individual_obj[indivial_i,:] = [ 3. 3. 64. 67.]
331 cord_individual_obj[indivial_i,:] = [ 4. 3. 64. 67.]

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332 cord_individual_obj[indivial_i,:] = [ 5. 5. 54. 59.]
333 cord_individual_obj[indivial_i,:] = [ 6. 5. 8. 13.]
334 cord_individual_obj[indivial_i,:] = [ 7. 3. 54. 57.]
335 cord_individual_obj[indivial_i,:] = [ 8. 5. 48. 53.]
336 cord_individual_obj[indivial_i,:] = [ 9. 3. 80. 83.]
337 cord_individual_obj[indivial_i,:] = [10. 5. 54. 59.]
338 cord_individual_obj[indivial_i,:] = [11. 5. 54. 59.]
339 cord_individual_obj[indivial_i,:] = [12. 5. 36. 41.]
340 cord_individual_obj[indivial_i,:] = [13. 5. 102. 107.]
341 cord_individual_obj[indivial_i,:] = [14. 5. 74. 79.]
342
343 min(cord_individual_obj[:,3]) = 13.0
344 historl_G_best_iter[iter,3] = 13.0
345 Begin iteration:
346
347 iter = 15
348 cord_individual_obj[indivial_i,:] = [ 0. 4. 28. 32.]
349 cord_individual_obj[indivial_i,:] = [ 1. 5. 8. 13.]
350 cord_individual_obj[indivial_i,:] = [ 2. 4. 28. 32.]
351 cord_individual_obj[indivial_i,:] = [ 3. 3. 48. 51.]
352 cord_individual_obj[indivial_i,:] = [ 4. 4. 28. 32.]
353 cord_individual_obj[indivial_i,:] = [ 5. 5. 54. 59.]
354 cord_individual_obj[indivial_i,:] = [ 6. 5. 28. 33.]
355 cord_individual_obj[indivial_i,:] = [ 7. 4. 38. 42.]
356 cord_individual_obj[indivial_i,:] = [ 8. 3. 72. 75.]
357 cord_individual_obj[indivial_i,:] = [ 9. 5. 28. 33.]
358 cord_individual_obj[indivial_i,:] = [10. 5. 28. 33.]
359 cord_individual_obj[indivial_i,:] = [11. 5. 28. 33.]
360 cord_individual_obj[indivial_i,:] = [12. 5. 36. 41.]
361 cord_individual_obj[indivial_i,:] = [13. 5. 38. 43.]
362 cord_individual_obj[indivial_i,:] = [14. 5. 28. 33.]
363
364 min(cord_individual_obj[:,3]) = 13.0
365 historl_G_best_iter[iter,3] = 13.0
366 Begin iteration:
367
368 iter = 16
369 cord_individual_obj[indivial_i,:] = [ 0. 5. 54. 59.]
370 cord_individual_obj[indivial_i,:] = [ 1. 4. 28. 32.]
371 cord_individual_obj[indivial_i,:] = [ 2. 5. 54. 59.]
372 cord_individual_obj[indivial_i,:] = [ 3. 3. 64. 67.]
373 cord_individual_obj[indivial_i,:] = [ 4. 3. 64. 67.]
374 cord_individual_obj[indivial_i,:] = [ 5. 5. 54. 59.]
375 cord_individual_obj[indivial_i,:] = [ 6. 3. 92. 95.]
376 cord_individual_obj[indivial_i,:] = [ 7. 3. 90. 93.]
377 cord_individual_obj[indivial_i,:] = [ 8. 5. 8. 13.]
378 cord_individual_obj[indivial_i,:] = [ 9. 3. 54. 57.]
379 cord_individual_obj[indivial_i,:] = [10. 5. 54. 59.]
380 cord_individual_obj[indivial_i,:] = [11. 5. 102. 107.]
381 cord_individual_obj[indivial_i,:] = [12. 5. 36. 41.]
382 cord_individual_obj[indivial_i,:] = [13. 5. 102. 107.]
383 cord_individual_obj[indivial_i,:] = [14. 5. 74. 79.]
384
385 min(cord_individual_obj[:,3]) = 13.0
386 historl_G_best_iter[iter,3] = 13.0
387 Begin iteration:
388
389 iter = 17
390 cord_individual_obj[indivial_i,:] = [ 0. 4. 28. 32.]
391 cord_individual_obj[indivial_i,:] = [ 1. 5. 54. 59.]
392 cord_individual_obj[indivial_i,:] = [ 2. 4. 28. 32.]
393 cord_individual_obj[indivial_i,:] = [ 3. 3. 84. 87.]
394 cord_individual_obj[indivial_i,:] = [ 4. 4. 28. 32.]
395 cord_individual_obj[indivial_i,:] = [ 5. 5. 54. 59.]
396 cord_individual_obj[indivial_i,:] = [ 6. 5. 28. 33.]
397 cord_individual_obj[indivial_i,:] = [ 7. 5. 56. 61.]
398 cord_individual_obj[indivial_i,:] = [ 8. 4. 84. 88.]
399 cord_individual_obj[indivial_i,:] = [ 9. 4. 28. 32.]
400 cord_individual_obj[indivial_i,:] = [10. 5. 28. 33.]
401 cord_individual_obj[indivial_i,:] = [11. 5. 8. 13.]
402 cord_individual_obj[indivial_i,:] = [12. 5. 36. 41.]
403 cord_individual_obj[indivial_i,:] = [13. 5. 38. 43.]
404 cord_individual_obj[indivial_i,:] = [14. 5. 28. 33.]
405
406 min(cord_individual_obj[:,3]) = 13.0
407 historl_G_best_iter[iter,3] = 13.0
408 Begin iteration:
409
410 iter = 18
411 cord_individual_obj[indivial_i,:] = [ 0. 4. 14. 18.]
412 cord_individual_obj[indivial_i,:] = [ 1. 5. 20. 25.]
413 cord_individual_obj[indivial_i,:] = [ 2. 4. 12. 16.]
414 cord_individual_obj[indivial_i,:] = [ 3. 5. 16. 21.]
415 cord_individual_obj[indivial_i,:] = [ 4. 5. 20. 25.]

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416 cord_individual_obj[indivial_i,:] = [ 5. 5. 28. 33.]
417 cord_individual_obj[indivial_i,:] = [ 6. 6. 38. 44.]
418 cord_individual_obj[indivial_i,:] = [ 7. 4. 60. 64.]
419 cord_individual_obj[indivial_i,:] = [ 8. 5. 8. 13.]
420 cord_individual_obj[indivial_i,:] = [ 9. 5. 22. 27.]
421 cord_individual_obj[indivial_i,:] = [10. 5. 28. 33.]
422 cord_individual_obj[indivial_i,:] = [11. 5. 38. 43.]
423 cord_individual_obj[indivial_i,:] = [12. 5. 60. 65.]
424 cord_individual_obj[indivial_i,:] = [13. 6. 12. 18.]
425 cord_individual_obj[indivial_i,:] = [14. 5. 20. 25.]
426
427 min(cord_individual_obj[:,3]) = 13.0
428 historl_G_best_iter[iter,3] = 13.0
429 Begin iteration:
430
431 iter = 19
432 cord_individual_obj[indivial_i,:] = [ 0. 5. 28. 33.]
433 cord_individual_obj[indivial_i,:] = [ 1. 5. 28. 33.]
434 cord_individual_obj[indivial_i,:] = [ 2. 5. 28. 33.]
435 cord_individual_obj[indivial_i,:] = [ 3. 3. 104. 107.]
436 cord_individual_obj[indivial_i,:] = [ 4. 4. 48. 52.]
437 cord_individual_obj[indivial_i,:] = [ 5. 5. 64. 69.]
438 cord_individual_obj[indivial_i,:] = [ 6. 6. 32. 38.]
439 cord_individual_obj[indivial_i,:] = [ 7. 5. 28. 33.]
440 cord_individual_obj[indivial_i,:] = [ 8. 4. 48. 52.]
441 cord_individual_obj[indivial_i,:] = [ 9. 5. 38. 43.]
442 cord_individual_obj[indivial_i,:] = [10. 5. 28. 33.]
443 cord_individual_obj[indivial_i,:] = [11. 5. 28. 33.]
444 cord_individual_obj[indivial_i,:] = [12. 5. 8. 13.]
445 cord_individual_obj[indivial_i,:] = [13. 6. 36. 42.]
446 cord_individual_obj[indivial_i,:] = [14. 5. 28. 33.]
447
448 min(cord_individual_obj[:,3]) = 13.0
449 historl_G_best_iter[iter,3] = 13.0
450 Begin iteration:
451
452 iter = 20
453 cord_individual_obj[indivial_i,:] = [ 0. 5. 24. 29.]
454 cord_individual_obj[indivial_i,:] = [ 1. 4. 24. 28.]
455 cord_individual_obj[indivial_i,:] = [ 2. 4. 48. 52.]
456 cord_individual_obj[indivial_i,:] = [ 3. 5. 8. 13.]
457 cord_individual_obj[indivial_i,:] = [ 4. 5. 32. 37.]
458 cord_individual_obj[indivial_i,:] = [ 5. 5. 64. 69.]
459 cord_individual_obj[indivial_i,:] = [ 6. 6. 48. 54.]
460 cord_individual_obj[indivial_i,:] = [ 7. 4. 24. 28.]
461 cord_individual_obj[indivial_i,:] = [ 8. 6. 28. 34.]
462 cord_individual_obj[indivial_i,:] = [ 9. 4. 116. 120.]
463 cord_individual_obj[indivial_i,:] = [10. 5. 32. 37.]
464 cord_individual_obj[indivial_i,:] = [11. 5. 12. 17.]
465 cord_individual_obj[indivial_i,:] = [12. 5. 54. 59.]
466 cord_individual_obj[indivial_i,:] = [13. 6. 24. 30.]
467 cord_individual_obj[indivial_i,:] = [14. 5. 16. 21.]
468
469 min(cord_individual_obj[:,3]) = 13.0
470 historl_G_best_iter[iter,3] = 13.0
471 Begin iteration:
472
473 iter = 21
474 cord_individual_obj[indivial_i,:] = [ 0. 5. 28. 33.]
475 cord_individual_obj[indivial_i,:] = [ 1. 5. 32. 37.]
476 cord_individual_obj[indivial_i,:] = [ 2. 5. 20. 25.]
477 cord_individual_obj[indivial_i,:] = [ 3. 5. 72. 77.]
478 cord_individual_obj[indivial_i,:] = [ 4. 4. 44. 48.]
479 cord_individual_obj[indivial_i,:] = [ 5. 5. 68. 73.]
480 cord_individual_obj[indivial_i,:] = [ 6. 6. 28. 34.]
481 cord_individual_obj[indivial_i,:] = [ 7. 5. 28. 33.]
482 cord_individual_obj[indivial_i,:] = [ 8. 6. 72. 78.]
483 cord_individual_obj[indivial_i,:] = [ 9. 5. 8. 13.]
484 cord_individual_obj[indivial_i,:] = [10. 5. 28. 33.]
485 cord_individual_obj[indivial_i,:] = [11. 5. 32. 37.]
486 cord_individual_obj[indivial_i,:] = [12. 5. 28. 33.]
487 cord_individual_obj[indivial_i,:] = [13. 6. 28. 34.]
488 cord_individual_obj[indivial_i,:] = [14. 5. 28. 33.]
489
490 min(cord_individual_obj[:,3]) = 13.0
491 historl_G_best_iter[iter,3] = 13.0
492 Begin iteration:
493
494 iter = 22
495 cord_individual_obj[indivial_i,:] = [ 0. 4. 28. 32.]
496 cord_individual_obj[indivial_i,:] = [ 1. 5. 36. 41.]
497 cord_individual_obj[indivial_i,:] = [ 2. 5. 28. 33.]
498 cord_individual_obj[indivial_i,:] = [ 3. 3. 132. 135.]
499 cord_individual_obj[indivial_i,:] = [ 4. 5. 28. 33.]

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500 cord_individual_obj[indivial_i,:] = [ 5. 5. 68. 73.]
501 cord_individual_obj[indivial_i,:] = [ 6. 6. 20. 26.]
502 cord_individual_obj[indivial_i,:] = [ 7. 4. 28. 32.]
503 cord_individual_obj[indivial_i,:] = [ 8. 5. 8. 13.]
504 cord_individual_obj[indivial_i,:] = [ 9. 4. 28. 32.]
505 cord_individual_obj[indivial_i,:] = [10. 5. 12. 17.]
506 cord_individual_obj[indivial_i,:] = [11. 5. 28. 33.]
507 cord_individual_obj[indivial_i,:] = [12. 5. 64. 69.]
508 cord_individual_obj[indivial_i,:] = [13. 6. 38. 44.]
509 cord_individual_obj[indivial_i,:] = [14. 5. 28. 33.]
510
511 min(cord_individual_obj[:,3]) = 13.0
512 historl_G_best_iter[iter,3] = 13.0
513 Begin iteration:
514
515 iter = 23
516 cord_individual_obj[indivial_i,:] = [ 0. 5. 48. 53.]
517 cord_individual_obj[indivial_i,:] = [ 1. 5. 32. 37.]
518 cord_individual_obj[indivial_i,:] = [ 2. 4. 48. 52.]
519 cord_individual_obj[indivial_i,:] = [ 3. 5. 8. 13.]
520 cord_individual_obj[indivial_i,:] = [ 4. 5. 28. 33.]
521 cord_individual_obj[indivial_i,:] = [ 5. 5. 56. 61.]
522 cord_individual_obj[indivial_i,:] = [ 6. 6. 34. 40.]
523 cord_individual_obj[indivial_i,:] = [ 7. 5. 32. 37.]
524 cord_individual_obj[indivial_i,:] = [ 8. 4. 84. 88.]
525 cord_individual_obj[indivial_i,:] = [ 9. 5. 38. 43.]
526 cord_individual_obj[indivial_i,:] = [10. 5. 20. 25.]
527 cord_individual_obj[indivial_i,:] = [11. 5. 16. 21.]
528 cord_individual_obj[indivial_i,:] = [12. 5. 68. 73.]
529 cord_individual_obj[indivial_i,:] = [13. 6. 16. 22.]
530 cord_individual_obj[indivial_i,:] = [14. 5. 48. 53.]
531
532 min(cord_individual_obj[:,3]) = 13.0
533 historl_G_best_iter[iter,3] = 13.0
534 Begin iteration:
535
536 iter = 24
537 cord_individual_obj[indivial_i,:] = [ 0. 4. 44. 48.]
538 cord_individual_obj[indivial_i,:] = [ 1. 4. 28. 32.]
539 cord_individual_obj[indivial_i,:] = [ 2. 4. 28. 32.]
540 cord_individual_obj[indivial_i,:] = [ 3. 3. 54. 57.]
541 cord_individual_obj[indivial_i,:] = [ 4. 5. 16. 21.]
542 cord_individual_obj[indivial_i,:] = [ 5. 5. 56. 61.]
543 cord_individual_obj[indivial_i,:] = [ 6. 5. 22. 27.]
544 cord_individual_obj[indivial_i,:] = [ 7. 5. 32. 37.]
545 cord_individual_obj[indivial_i,:] = [ 8. 5. 8. 13.]
546 cord_individual_obj[indivial_i,:] = [ 9. 6. 56. 62.]
547 cord_individual_obj[indivial_i,:] = [10. 5. 24. 29.]
548 cord_individual_obj[indivial_i,:] = [11. 5. 28. 33.]
549 cord_individual_obj[indivial_i,:] = [12. 5. 56. 61.]
550 cord_individual_obj[indivial_i,:] = [13. 6. 28. 34.]
551 cord_individual_obj[indivial_i,:] = [14. 5. 22. 27.]
552
553 min(cord_individual_obj[:,3]) = 13.0
554 historl_G_best_iter[iter,3] = 13.0
555 Begin iteration:
556
557 iter = 25
558 cord_individual_obj[indivial_i,:] = [ 0. 3. 38. 41.]
559 cord_individual_obj[indivial_i,:] = [ 1. 5. 60. 65.]
560 cord_individual_obj[indivial_i,:] = [ 2. 3. 36. 39.]
561 cord_individual_obj[indivial_i,:] = [ 3. 5. 54. 59.]
562 cord_individual_obj[indivial_i,:] = [ 4. 5. 64. 69.]
563 cord_individual_obj[indivial_i,:] = [ 5. 5. 56. 61.]
564 cord_individual_obj[indivial_i,:] = [ 6. 5. 44. 49.]
565 cord_individual_obj[indivial_i,:] = [ 7. 5. 84. 89.]
566 cord_individual_obj[indivial_i,:] = [ 8. 4. 84. 88.]
567 cord_individual_obj[indivial_i,:] = [ 9. 5. 8. 13.]
568 cord_individual_obj[indivial_i,:] = [10. 5. 48. 53.]
569 cord_individual_obj[indivial_i,:] = [11. 5. 56. 61.]
570 cord_individual_obj[indivial_i,:] = [12. 5. 24. 29.]
571 cord_individual_obj[indivial_i,:] = [13. 5. 68. 73.]
572 cord_individual_obj[indivial_i,:] = [14. 5. 20. 25.]
573
574 min(cord_individual_obj[:,3]) = 13.0
575 historl_G_best_iter[iter,3] = 13.0
576 Begin iteration:
577
578 iter = 26
579 cord_individual_obj[indivial_i,:] = [ 0. 4. 28. 32.]
580 cord_individual_obj[indivial_i,:] = [ 1. 4. 38. 42.]
581 cord_individual_obj[indivial_i,:] = [ 2. 5. 28. 33.]
582 cord_individual_obj[indivial_i,:] = [ 3. 3. 102. 105.]
583 cord_individual_obj[indivial_i,:] = [ 4. 4. 28. 32.]

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584     cord_individual_obj[indivial_i, :] = [ 5.  5. 54. 59.]
585     cord_individual_obj[indivial_i, :] = [ 6.  3. 30. 33.]
586     cord_individual_obj[indivial_i, :] = [ 7.  5.  8. 13.]
587     cord_individual_obj[indivial_i, :] = [ 8.  3. 72. 75.]
588     cord_individual_obj[indivial_i, :] = [ 9.  4. 28. 32.]
589     cord_individual_obj[indivial_i, :] = [10.  5. 38. 43.]
590     cord_individual_obj[indivial_i, :] = [11.  5. 28. 33.]
591     cord_individual_obj[indivial_i, :] = [12.  5. 54. 59.]
592     cord_individual_obj[indivial_i, :] = [13.  6. 28. 34.]
593     cord_individual_obj[indivial_i, :] = [14.  5. 30. 35.]
594
595 min(cord_individual_obj[:, 3]) = 13.0
596 historl_G_best_iter[iter, 3] = 13.0
597 Begin iteration:
598
599 iter = 27
600     cord_individual_obj[indivial_i, :] = [ 0.  3. 54. 57.]
601     cord_individual_obj[indivial_i, :] = [ 1.  3. 44. 47.]
602     cord_individual_obj[indivial_i, :] = [ 2.  3. 54. 57.]
603     cord_individual_obj[indivial_i, :] = [ 3.  5.  8. 13.]
604     cord_individual_obj[indivial_i, :] = [ 4.  3. 64. 67.]
605     cord_individual_obj[indivial_i, :] = [ 5.  5. 54. 59.]
606     cord_individual_obj[indivial_i, :] = [ 6.  4. 74. 78.]
607     cord_individual_obj[indivial_i, :] = [ 7.  5. 28. 33.]
608     cord_individual_obj[indivial_i, :] = [ 8.  4. 64. 68.]
609     cord_individual_obj[indivial_i, :] = [ 9.  5. 54. 59.]
610     cord_individual_obj[indivial_i, :] = [10.  5. 30. 35.]
611     cord_individual_obj[indivial_i, :] = [11.  5. 64. 69.]
612     cord_individual_obj[indivial_i, :] = [12.  5. 54. 59.]
613     cord_individual_obj[indivial_i, :] = [13.  5. 104. 109.]
614     cord_individual_obj[indivial_i, :] = [14.  5. 28. 33.]
615
616 min(cord_individual_obj[:, 3]) = 13.0
617 historl_G_best_iter[iter, 3] = 13.0
618 Begin iteration:
619
620 iter = 28
621     cord_individual_obj[indivial_i, :] = [ 0.  4. 28. 32.]
622     cord_individual_obj[indivial_i, :] = [ 1.  5. 38. 43.]
623     cord_individual_obj[indivial_i, :] = [ 2.  5. 28. 33.]
624     cord_individual_obj[indivial_i, :] = [ 3.  3. 110. 113.]
625     cord_individual_obj[indivial_i, :] = [ 4.  4. 28. 32.]
626     cord_individual_obj[indivial_i, :] = [ 5.  5. 54. 59.]
627     cord_individual_obj[indivial_i, :] = [ 6.  4. 38. 42.]
628     cord_individual_obj[indivial_i, :] = [ 7.  5. 72. 77.]
629     cord_individual_obj[indivial_i, :] = [ 8.  5. 84. 89.]
630     cord_individual_obj[indivial_i, :] = [ 9.  4. 28. 32.]
631     cord_individual_obj[indivial_i, :] = [10.  5. 20. 25.]
632     cord_individual_obj[indivial_i, :] = [11.  5. 28. 33.]
633     cord_individual_obj[indivial_i, :] = [12.  5. 54. 59.]
634     cord_individual_obj[indivial_i, :] = [13.  5.  8. 13.]
635     cord_individual_obj[indivial_i, :] = [14.  5. 48. 53.]
636
637 min(cord_individual_obj[:, 3]) = 13.0
638 historl_G_best_iter[iter, 3] = 13.0
639 Begin iteration:
640
641 iter = 29
642     cord_individual_obj[indivial_i, :] = [ 0.  5. 28. 33.]
643     cord_individual_obj[indivial_i, :] = [ 1.  4. 36. 40.]
644     cord_individual_obj[indivial_i, :] = [ 2.  4. 28. 32.]
645     cord_individual_obj[indivial_i, :] = [ 3.  5.  8. 13.]
646     cord_individual_obj[indivial_i, :] = [ 4.  5. 38. 43.]
647     cord_individual_obj[indivial_i, :] = [ 5.  5. 64. 69.]
648     cord_individual_obj[indivial_i, :] = [ 6.  5. 36. 41.]
649     cord_individual_obj[indivial_i, :] = [ 7.  5. 28. 33.]
650     cord_individual_obj[indivial_i, :] = [ 8.  5. 48. 53.]
651     cord_individual_obj[indivial_i, :] = [ 9.  4. 38. 42.]
652     cord_individual_obj[indivial_i, :] = [10.  5. 28. 33.]
653     cord_individual_obj[indivial_i, :] = [11.  5. 28. 33.]
654     cord_individual_obj[indivial_i, :] = [12.  5. 64. 69.]
655     cord_individual_obj[indivial_i, :] = [13.  5. 38. 43.]
656     cord_individual_obj[indivial_i, :] = [14.  5. 38. 43.]
657
658 min(cord_individual_obj[:, 3]) = 13.0
659 historl_G_best_iter[iter, 3] = 13.0
660 Begin iteration:
661
662 iter = 30
663     cord_individual_obj[indivial_i, :] = [ 0.  3. 54. 57.]
664     cord_individual_obj[indivial_i, :] = [ 1.  3. 110. 113.]
665     cord_individual_obj[indivial_i, :] = [ 2.  3. 54. 57.]
666     cord_individual_obj[indivial_i, :] = [ 3.  3. 54. 57.]
667     cord_individual_obj[indivial_i, :] = [ 4.  5. 54. 59.]

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668 cord_individual_obj[indivial_i,:] = [ 5. 5. 8. 13.]
669 cord_individual_obj[indivial_i,:] = [ 6. 5. 54. 59.]
670 cord_individual_obj[indivial_i,:] = [ 7. 3. 72. 75.]
671 cord_individual_obj[indivial_i,:] = [ 8. 3. 88. 91.]
672 cord_individual_obj[indivial_i,:] = [ 9. 3. 54. 57.]
673 cord_individual_obj[indivial_i,:] = [10. 5. 54. 59.]
674 cord_individual_obj[indivial_i,:] = [11. 5. 72. 77.]
675 cord_individual_obj[indivial_i,:] = [12. 5. 54. 59.]
676 cord_individual_obj[indivial_i,:] = [13. 5. 54. 59.]
677 cord_individual_obj[indivial_i,:] = [14. 5. 54. 59.]
678
679 min(cord_individual_obj[:,3]) = 13.0
680 historl_G_best_iter[iter,3] = 13.0
681 Begin iteration:
682
683 iter = 31
684 cord_individual_obj[indivial_i,:] = [ 0. 5. 28. 33.]
685 cord_individual_obj[indivial_i,:] = [ 1. 5. 8. 13.]
686 cord_individual_obj[indivial_i,:] = [ 2. 4. 28. 32.]
687 cord_individual_obj[indivial_i,:] = [ 3. 5. 72. 77.]
688 cord_individual_obj[indivial_i,:] = [ 4. 5. 28. 33.]
689 cord_individual_obj[indivial_i,:] = [ 5. 5. 64. 69.]
690 cord_individual_obj[indivial_i,:] = [ 6. 4. 38. 42.]
691 cord_individual_obj[indivial_i,:] = [ 7. 5. 56. 61.]
692 cord_individual_obj[indivial_i,:] = [ 8. 4. 48. 52.]
693 cord_individual_obj[indivial_i,:] = [ 9. 5. 28. 33.]
694 cord_individual_obj[indivial_i,:] = [10. 5. 28. 33.]
695 cord_individual_obj[indivial_i,:] = [11. 5. 28. 33.]
696 cord_individual_obj[indivial_i,:] = [12. 5. 54. 59.]
697 cord_individual_obj[indivial_i,:] = [13. 5. 56. 61.]
698 cord_individual_obj[indivial_i,:] = [14. 5. 28. 33.]
699
700 min(cord_individual_obj[:,3]) = 13.0
701 historl_G_best_iter[iter,3] = 13.0
702 Begin iteration:
703
704 iter = 32
705 cord_individual_obj[indivial_i,:] = [ 0. 4. 14. 18.]
706 cord_individual_obj[indivial_i,:] = [ 1. 4. 56. 60.]
707 cord_individual_obj[indivial_i,:] = [ 2. 5. 62. 67.]
708 cord_individual_obj[indivial_i,:] = [ 3. 5. 8. 13.]
709 cord_individual_obj[indivial_i,:] = [ 4. 4. 48. 52.]
710 cord_individual_obj[indivial_i,:] = [ 5. 5. 28. 33.]
711 cord_individual_obj[indivial_i,:] = [ 6. 6. 38. 44.]
712 cord_individual_obj[indivial_i,:] = [ 7. 5. 20. 25.]
713 cord_individual_obj[indivial_i,:] = [ 8. 6. 8. 14.]
714 cord_individual_obj[indivial_i,:] = [ 9. 6. 8. 14.]
715 cord_individual_obj[indivial_i,:] = [10. 5. 28. 33.]
716 cord_individual_obj[indivial_i,:] = [11. 5. 28. 33.]
717 cord_individual_obj[indivial_i,:] = [12. 5. 28. 33.]
718 cord_individual_obj[indivial_i,:] = [13. 6. 28. 34.]
719 cord_individual_obj[indivial_i,:] = [14. 5. 8. 13.]
720
721 min(cord_individual_obj[:,3]) = 13.0
722 historl_G_best_iter[iter,3] = 13.0
723 Begin iteration:
724
725 iter = 33
726 cord_individual_obj[indivial_i,:] = [ 0. 3. 54. 57.]
727 cord_individual_obj[indivial_i,:] = [ 1. 3. 88. 91.]
728 cord_individual_obj[indivial_i,:] = [ 2. 5. 8. 13.]
729 cord_individual_obj[indivial_i,:] = [ 3. 5. 102. 107.]
730 cord_individual_obj[indivial_i,:] = [ 4. 3. 36. 39.]
731 cord_individual_obj[indivial_i,:] = [ 5. 5. 54. 59.]
732 cord_individual_obj[indivial_i,:] = [ 6. 5. 64. 69.]
733 cord_individual_obj[indivial_i,:] = [ 7. 5. 96. 101.]
734 cord_individual_obj[indivial_i,:] = [ 8. 5. 94. 99.]
735 cord_individual_obj[indivial_i,:] = [ 9. 5. 36. 41.]
736 cord_individual_obj[indivial_i,:] = [10. 5. 28. 33.]
737 cord_individual_obj[indivial_i,:] = [11. 5. 52. 57.]
738 cord_individual_obj[indivial_i,:] = [12. 5. 64. 69.]
739 cord_individual_obj[indivial_i,:] = [13. 5. 30. 35.]
740 cord_individual_obj[indivial_i,:] = [14. 5. 36. 41.]
741
742 min(cord_individual_obj[:,3]) = 13.0
743 historl_G_best_iter[iter,3] = 13.0
744 Begin iteration:
745
746 iter = 34
747 cord_individual_obj[indivial_i,:] = [ 0. 4. 14. 18.]
748 cord_individual_obj[indivial_i,:] = [ 1. 4. 38. 42.]
749 cord_individual_obj[indivial_i,:] = [ 2. 4. 28. 32.]
750 cord_individual_obj[indivial_i,:] = [ 3. 5. 8. 13.]
751 cord_individual_obj[indivial_i,:] = [ 4. 4. 28. 32.]

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752 cord_individual_obj[indivial_i,:] = [ 5. 5. 8. 13.]
753 cord_individual_obj[indivial_i,:] = [ 6. 4. 100. 104.]
754 cord_individual_obj[indivial_i,:] = [ 7. 4. 28. 32.]
755 cord_individual_obj[indivial_i,:] = [ 8. 5. 20. 25.]
756 cord_individual_obj[indivial_i,:] = [ 9. 4. 50. 54.]
757 cord_individual_obj[indivial_i,:] = [10. 5. 40. 45.]
758 cord_individual_obj[indivial_i,:] = [11. 5. 16. 21.]
759 cord_individual_obj[indivial_i,:] = [12. 5. 22. 27.]
760 cord_individual_obj[indivial_i,:] = [13. 5. 38. 43.]
761 cord_individual_obj[indivial_i,:] = [14. 5. 24. 29.]
762
763 min(cord_individual_obj[:,3]) = 13.0
764 historl_G_best_iter[iter,3] = 13.0
765 Begin iteration:
766
767 iter = 35
768 cord_individual_obj[indivial_i,:] = [ 0. 5. 44. 49.]
769 cord_individual_obj[indivial_i,:] = [ 1. 6. 20. 26.]
770 cord_individual_obj[indivial_i,:] = [ 2. 5. 22. 27.]
771 cord_individual_obj[indivial_i,:] = [ 3. 3. 102. 105.]
772 cord_individual_obj[indivial_i,:] = [ 4. 5. 40. 45.]
773 cord_individual_obj[indivial_i,:] = [ 5. 5. 64. 69.]
774 cord_individual_obj[indivial_i,:] = [ 6. 5. 8. 13.]
775 cord_individual_obj[indivial_i,:] = [ 7. 4. 28. 32.]
776 cord_individual_obj[indivial_i,:] = [ 8. 5. 26. 31.]
777 cord_individual_obj[indivial_i,:] = [ 9. 4. 36. 40.]
778 cord_individual_obj[indivial_i,:] = [10. 5. 28. 33.]
779 cord_individual_obj[indivial_i,:] = [11. 6. 44. 50.]
780 cord_individual_obj[indivial_i,:] = [12. 5. 76. 81.]
781 cord_individual_obj[indivial_i,:] = [13. 5. 24. 29.]
782 cord_individual_obj[indivial_i,:] = [14. 5. 16. 21.]
783
784 min(cord_individual_obj[:,3]) = 13.0
785 historl_G_best_iter[iter,3] = 13.0
786 Begin iteration:
787
788 iter = 36
789 cord_individual_obj[indivial_i,:] = [ 0. 3. 20. 23.]
790 cord_individual_obj[indivial_i,:] = [ 1. 6. 20. 26.]
791 cord_individual_obj[indivial_i,:] = [ 2. 4. 28. 32.]
792 cord_individual_obj[indivial_i,:] = [ 3. 5. 8. 13.]
793 cord_individual_obj[indivial_i,:] = [ 4. 4. 38. 42.]
794 cord_individual_obj[indivial_i,:] = [ 5. 5. 28. 33.]
795 cord_individual_obj[indivial_i,:] = [ 6. 4. 28. 32.]
796 cord_individual_obj[indivial_i,:] = [ 7. 5. 56. 61.]
797 cord_individual_obj[indivial_i,:] = [ 8. 6. 60. 66.]
798 cord_individual_obj[indivial_i,:] = [ 9. 6. 38. 44.]
799 cord_individual_obj[indivial_i,:] = [10. 5. 40. 45.]
800 cord_individual_obj[indivial_i,:] = [11. 5. 16. 21.]
801 cord_individual_obj[indivial_i,:] = [12. 5. 22. 27.]
802 cord_individual_obj[indivial_i,:] = [13. 6. 52. 58.]
803 cord_individual_obj[indivial_i,:] = [14. 5. 24. 29.]
804
805 min(cord_individual_obj[:,3]) = 13.0
806 historl_G_best_iter[iter,3] = 13.0
807 Begin iteration:
808
809 iter = 37
810 cord_individual_obj[indivial_i,:] = [ 0. 5. 28. 33.]
811 cord_individual_obj[indivial_i,:] = [ 1. 6. 28. 34.]
812 cord_individual_obj[indivial_i,:] = [ 2. 5. 20. 25.]
813 cord_individual_obj[indivial_i,:] = [ 3. 5. 72. 77.]
814 cord_individual_obj[indivial_i,:] = [ 4. 4. 62. 66.]
815 cord_individual_obj[indivial_i,:] = [ 5. 5. 28. 33.]
816 cord_individual_obj[indivial_i,:] = [ 6. 6. 50. 56.]
817 cord_individual_obj[indivial_i,:] = [ 7. 5. 60. 65.]
818 cord_individual_obj[indivial_i,:] = [ 8. 5. 8. 13.]
819 cord_individual_obj[indivial_i,:] = [ 9. 6. 98. 104.]
820 cord_individual_obj[indivial_i,:] = [10. 5. 28. 33.]
821 cord_individual_obj[indivial_i,:] = [11. 5. 28. 33.]
822 cord_individual_obj[indivial_i,:] = [12. 5. 76. 81.]
823 cord_individual_obj[indivial_i,:] = [13. 6. 28. 34.]
824 cord_individual_obj[indivial_i,:] = [14. 5. 16. 21.]
825
826 min(cord_individual_obj[:,3]) = 13.0
827 historl_G_best_iter[iter,3] = 13.0
828 Begin iteration:
829
830 iter = 38
831 cord_individual_obj[indivial_i,:] = [ 0. 4. 36. 40.]
832 cord_individual_obj[indivial_i,:] = [ 1. 6. 28. 34.]
833 cord_individual_obj[indivial_i,:] = [ 2. 4. 12. 16.]
834 cord_individual_obj[indivial_i,:] = [ 3. 5. 16. 21.]
835 cord_individual_obj[indivial_i,:] = [ 4. 5. 38. 43.]

```

```

836 cord_individual_obj[indivial_i,:] = [ 5. 5. 46. 51.]
837 cord_individual_obj[indivial_i,:] = [ 6. 6. 16. 22.]
838 cord_individual_obj[indivial_i,:] = [ 7. 5. 16. 21.]
839 cord_individual_obj[indivial_i,:] = [ 8. 4. 64. 68.]
840 cord_individual_obj[indivial_i,:] = [ 9. 5. 8. 13.]
841 cord_individual_obj[indivial_i,:] = [10. 5. 44. 49.]
842 cord_individual_obj[indivial_i,:] = [11. 5. 24. 29.]
843 cord_individual_obj[indivial_i,:] = [12. 5. 44. 49.]
844 cord_individual_obj[indivial_i,:] = [13. 6. 72. 78.]
845 cord_individual_obj[indivial_i,:] = [14. 5. 46. 51.]
846
847 min(cord_individual_obj[:,3]) = 13.0
848 historl_G_best_iter[iter,3] = 13.0
849 Begin iteration:
850
851 iter = 39
852 cord_individual_obj[indivial_i,:] = [ 0. 5. 28. 33.]
853 cord_individual_obj[indivial_i,:] = [ 1. 3. 64. 67.]
854 cord_individual_obj[indivial_i,:] = [ 2. 4. 28. 32.]
855 cord_individual_obj[indivial_i,:] = [ 3. 3. 72. 75.]
856 cord_individual_obj[indivial_i,:] = [ 4. 4. 28. 32.]
857 cord_individual_obj[indivial_i,:] = [ 5. 5. 54. 59.]
858 cord_individual_obj[indivial_i,:] = [ 6. 5. 56. 61.]
859 cord_individual_obj[indivial_i,:] = [ 7. 5. 28. 33.]
860 cord_individual_obj[indivial_i,:] = [ 8. 4. 84. 88.]
861 cord_individual_obj[indivial_i,:] = [ 9. 5. 28. 33.]
862 cord_individual_obj[indivial_i,:] = [10. 5. 28. 33.]
863 cord_individual_obj[indivial_i,:] = [11. 5. 64. 69.]
864 cord_individual_obj[indivial_i,:] = [12. 5. 54. 59.]
865 cord_individual_obj[indivial_i,:] = [13. 5. 8. 13.]
866 cord_individual_obj[indivial_i,:] = [14. 5. 28. 33.]
867
868 min(cord_individual_obj[:,3]) = 13.0
869 historl_G_best_iter[iter,3] = 13.0
870 Begin iteration:
871
872 iter = 40
873 cord_individual_obj[indivial_i,:] = [ 0. 4. 28. 32.]
874 cord_individual_obj[indivial_i,:] = [ 1. 5. 16. 21.]
875 cord_individual_obj[indivial_i,:] = [ 2. 5. 28. 33.]
876 cord_individual_obj[indivial_i,:] = [ 3. 5. 64. 69.]
877 cord_individual_obj[indivial_i,:] = [ 4. 5. 48. 53.]
878 cord_individual_obj[indivial_i,:] = [ 5. 5. 44. 49.]
879 cord_individual_obj[indivial_i,:] = [ 6. 4. 28. 32.]
880 cord_individual_obj[indivial_i,:] = [ 7. 4. 28. 32.]
881 cord_individual_obj[indivial_i,:] = [ 8. 5. 8. 13.]
882 cord_individual_obj[indivial_i,:] = [ 9. 5. 38. 43.]
883 cord_individual_obj[indivial_i,:] = [10. 5. 12. 17.]
884 cord_individual_obj[indivial_i,:] = [11. 5. 28. 33.]
885 cord_individual_obj[indivial_i,:] = [12. 5. 28. 33.]
886 cord_individual_obj[indivial_i,:] = [13. 5. 28. 33.]
887 cord_individual_obj[indivial_i,:] = [14. 5. 28. 33.]
888
889 min(cord_individual_obj[:,3]) = 13.0
890 historl_G_best_iter[iter,3] = 13.0
891 Iteration calculate over
892
893
894
895
896 All item are in Bin and:
897 Bin area = 1080
898 Real_area = 101.0
899 Proportion_of_area = 0.09351851851851851
900 BEST_CHROM =
901 berth: [ 5.5 26. 11. 16.5 1.5 21. ]
902 time: [0. 0. 0. 0. 0. 0.]
903 num_QC: [2. 2. 4. 3. 3. 2.]
904 Objective function values and some other indicators:
905 Obj0 = 5.00          Obj1 = 8.00          Obj0 + Obj1 = 13.00
906 Total movement of crane: 8.00
907 Total waiting time in berth position: 0.00
908 Total index of q during berthing: 547.00
909 Specific arrangement for each vessel:
910 V_id: 0           li: 5.0           xi: 5.5           bow of i: 3.0           tail of i: 8.0           gama_i0: 0.0           gama_i1: 1.0
911           gama_i1 + 1: 2.0           gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 80.0           work load_i:
912           work load gap_i: 0
911 V_id: 1           li: 6.0           xi: 26.0           bow of i: 23.0           tail of i: 29.0           gama_i0: 0.0           gama_i1: 2
912           gama_i1 + 1: 3.0           gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 120.0           work
912 load_i: 120.0           work load gap_i: 0
912 V_id: 2           li: 6.0           xi: 11.0           bow of i: 8.0           tail of i: 14.0           gama_i0: 0.0           gama_i1: 3
912           gama_i1 + 1: 4.0           gama_i1 - gama_i0: 3.0           duration_time_i: 4.0           demand_i: 260.0           work
912 load_i: 260.0           work load gap_i: 0
913 V_id: 3           li: 5.0           xi: 16.5           bow of i: 14.0           tail of i: 19.0           gama_i0: 0.0           gama_i1: 1

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unknown

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913 .0      gama_i1 + 1: 2.0      gama_i1 - gama_i0: 1.0      duration_time_i: 2.0      demand_i: 80.0      work
load_i: 80.0      work load gap_i: 0
914   V_id: 4      li: 3.0      xi: 1.5      bow of i: 0.0      tail of i: 3.0      gama_i0: 0.0      gama_i1: 3.0
      gama_i1 + 1: 4.0      gama_i1 - gama_i0: 3.0      duration_time_i: 4.0      demand_i: 200.0      work load_i:
200.0      work load gap_i: 0
915   V_id: 5      li: 4.0      xi: 21.0      bow of i: 19.0      tail of i: 23.0      gama_i0: 0.0      gama_i1: 5
.0      gama_i1 + 1: 6.0      gama_i1 - gama_i0: 5.0      duration_time_i: 6.0      demand_i: 220.0      work
load_i: 220.0      work load gap_i: 0
916
917 Algorithm finished and the total CPU time: 200 s
918 End
919
```