

unknown

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80 historl_G_best_iter[iter, 3] = 13.0
81 Begin iteration:
82
83 iter = 2
84     cord_individual_obj[indivial_i, :] = [ 0.  5.  8. 13.]
85     cord_individual_obj[indivial_i, :] = [ 1.  4. 12. 16.]
86     cord_individual_obj[indivial_i, :] = [ 2.  5. 24. 29.]
87     cord_individual_obj[indivial_i, :] = [ 3.  5. 32. 37.]
88     cord_individual_obj[indivial_i, :] = [ 4.  5. 12. 17.]
89     cord_individual_obj[indivial_i, :] = [ 5.  5. 24. 29.]
90     cord_individual_obj[indivial_i, :] = [ 6.  4. 56. 60.]
91     cord_individual_obj[indivial_i, :] = [ 7.  5. 12. 17.]
92     cord_individual_obj[indivial_i, :] = [ 8.  5. 12. 17.]
93     cord_individual_obj[indivial_i, :] = [ 9.  5. 24. 29.]
94     cord_individual_obj[indivial_i, :] = [10. 5. 12. 17.]
95     cord_individual_obj[indivial_i, :] = [11. 5. 52. 57.]
96     cord_individual_obj[indivial_i, :] = [12. 5. 48. 53.]
97     cord_individual_obj[indivial_i, :] = [13. 4. 38. 42.]
98     cord_individual_obj[indivial_i, :] = [14. 5. 24. 29.]
99     cord_individual_obj[indivial_i, :] = [15. 5. 48. 53.]
100    cord_individual_obj[indivial_i, :] = [16. 5. 32. 37.]
101    cord_individual_obj[indivial_i, :] = [17. 5. 12. 17.]
102    cord_individual_obj[indivial_i, :] = [18. 5. 12. 17.]
103    cord_individual_obj[indivial_i, :] = [19. 5. 44. 49.]
104
105 min(cord_individual_obj[:, 3]) = 13.0
106 historl_G_best_iter[iter, 3] = 13.0
107 Begin iteration:
108
109 iter = 3
110    cord_individual_obj[indivial_i, :] = [ 0.  5. 24. 29.]
111    cord_individual_obj[indivial_i, :] = [ 1.  5. 28. 33.]
112    cord_individual_obj[indivial_i, :] = [ 2.  5.  8. 13.]
113    cord_individual_obj[indivial_i, :] = [ 3.  5.  8. 13.]
114    cord_individual_obj[indivial_i, :] = [ 4.  5. 24. 29.]
115    cord_individual_obj[indivial_i, :] = [ 5.  4. 42. 46.]
116    cord_individual_obj[indivial_i, :] = [ 6.  5.  8. 13.]
117    cord_individual_obj[indivial_i, :] = [ 7.  4. 28. 32.]
118    cord_individual_obj[indivial_i, :] = [ 8.  4. 56. 60.]
119    cord_individual_obj[indivial_i, :] = [ 9.  5. 20. 25.]
120    cord_individual_obj[indivial_i, :] = [10. 6. 24. 30.]
121    cord_individual_obj[indivial_i, :] = [11. 5. 16. 21.]
122    cord_individual_obj[indivial_i, :] = [12. 5. 42. 47.]
123    cord_individual_obj[indivial_i, :] = [13. 5. 34. 39.]
124    cord_individual_obj[indivial_i, :] = [14. 5. 32. 37.]
125    cord_individual_obj[indivial_i, :] = [15. 5. 28. 33.]
126    cord_individual_obj[indivial_i, :] = [16. 4. 14. 18.]
127    cord_individual_obj[indivial_i, :] = [17. 4. 38. 42.]
128    cord_individual_obj[indivial_i, :] = [18. 5. 32. 37.]
129    cord_individual_obj[indivial_i, :] = [19. 4. 24. 28.]
130
131 min(cord_individual_obj[:, 3]) = 13.0
132 historl_G_best_iter[iter, 3] = 13.0
133 Begin iteration:
134
135 iter = 4
136     cord_individual_obj[indivial_i, :] = [ 0.  6. 38. 44.]
137     cord_individual_obj[indivial_i, :] = [ 1.  5. 56. 61.]
138     cord_individual_obj[indivial_i, :] = [ 2.  6. 38. 44.]
139     cord_individual_obj[indivial_i, :] = [ 3.  5. 52. 57.]
140     cord_individual_obj[indivial_i, :] = [ 4.  6. 44. 50.]
141     cord_individual_obj[indivial_i, :] = [ 5.  4. 64. 68.]
142     cord_individual_obj[indivial_i, :] = [ 6.  5. 56. 61.]
143     cord_individual_obj[indivial_i, :] = [ 7.  5. 56. 61.]
144     cord_individual_obj[indivial_i, :] = [ 8.  5.  8. 13.]
145     cord_individual_obj[indivial_i, :] = [ 9.  6. 64. 70.]
146     cord_individual_obj[indivial_i, :] = [10. 6. 56. 62.]
147     cord_individual_obj[indivial_i, :] = [11. 6. 64. 70.]
148     cord_individual_obj[indivial_i, :] = [12. 5. 64. 69.]
149     cord_individual_obj[indivial_i, :] = [13. 6. 56. 62.]
150     cord_individual_obj[indivial_i, :] = [14. 5. 38. 43.]
151     cord_individual_obj[indivial_i, :] = [15. 5. 84. 89.]
152     cord_individual_obj[indivial_i, :] = [16. 6. 64. 70.]
153     cord_individual_obj[indivial_i, :] = [17. 6. 76. 82.]
154     cord_individual_obj[indivial_i, :] = [18. 5. 44. 49.]
155     cord_individual_obj[indivial_i, :] = [19. 6. 52. 58.]
156
157 min(cord_individual_obj[:, 3]) = 13.0
158 historl_G_best_iter[iter, 3] = 13.0
159 Begin iteration:
160
161 iter = 5
162     cord_individual_obj[indivial_i, :] = [ 0.  6. 24. 30.]
163     cord_individual_obj[indivial_i, :] = [ 1.  5. 24. 29.]

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164 cord_individual_obj[indivial_i,:] = [ 2. 6. 24. 30.]
165 cord_individual_obj[indivial_i,:] = [ 3. 4. 52. 56.]
166 cord_individual_obj[indivial_i,:] = [ 4. 6. 24. 30.]
167 cord_individual_obj[indivial_i,:] = [ 5. 5. 48. 53.]
168 cord_individual_obj[indivial_i,:] = [ 6. 4. 68. 72.]
169 cord_individual_obj[indivial_i,:] = [ 7. 5. 32. 37.]
170 cord_individual_obj[indivial_i,:] = [ 8. 4. 44. 48.]
171 cord_individual_obj[indivial_i,:] = [ 9. 6. 32. 38.]
172 cord_individual_obj[indivial_i,:] = [10. 6. 24. 30.]
173 cord_individual_obj[indivial_i,:] = [11. 6. 32. 38.]
174 cord_individual_obj[indivial_i,:] = [12. 5. 24. 29.]
175 cord_individual_obj[indivial_i,:] = [13. 6. 24. 30.]
176 cord_individual_obj[indivial_i,:] = [14. 5. 24. 29.]
177 cord_individual_obj[indivial_i,:] = [15. 5. 8. 13.]
178 cord_individual_obj[indivial_i,:] = [16. 6. 24. 30.]
179 cord_individual_obj[indivial_i,:] = [17. 6. 24. 30.]
180 cord_individual_obj[indivial_i,:] = [18. 5. 32. 37.]
181 cord_individual_obj[indivial_i,:] = [19. 6. 24. 30.]
182
183 min(cord_individual_obj[:,3]) = 13.0
184 historl_G_best_iter[iter, 3] = 13.0
185 Begin iteration:
186
187 iter = 6
188 cord_individual_obj[indivial_i,:] = [ 0. 4. 38. 42.]
189 cord_individual_obj[indivial_i,:] = [ 1. 4. 38. 42.]
190 cord_individual_obj[indivial_i,:] = [ 2. 6. 38. 44.]
191 cord_individual_obj[indivial_i,:] = [ 3. 5. 64. 69.]
192 cord_individual_obj[indivial_i,:] = [ 4. 6. 38. 44.]
193 cord_individual_obj[indivial_i,:] = [ 5. 5. 56. 61.]
194 cord_individual_obj[indivial_i,:] = [ 6. 5. 8. 13.]
195 cord_individual_obj[indivial_i,:] = [ 7. 4. 56. 60.]
196 cord_individual_obj[indivial_i,:] = [ 8. 5. 54. 59.]
197 cord_individual_obj[indivial_i,:] = [ 9. 6. 56. 62.]
198 cord_individual_obj[indivial_i,:] = [10. 6. 56. 62.]
199 cord_individual_obj[indivial_i,:] = [11. 5. 38. 43.]
200 cord_individual_obj[indivial_i,:] = [12. 5. 38. 43.]
201 cord_individual_obj[indivial_i,:] = [13. 6. 38. 44.]
202 cord_individual_obj[indivial_i,:] = [14. 5. 38. 43.]
203 cord_individual_obj[indivial_i,:] = [15. 5. 38. 43.]
204 cord_individual_obj[indivial_i,:] = [16. 6. 56. 62.]
205 cord_individual_obj[indivial_i,:] = [17. 6. 54. 60.]
206 cord_individual_obj[indivial_i,:] = [18. 4. 44. 48.]
207 cord_individual_obj[indivial_i,:] = [19. 5. 38. 43.]
208
209 min(cord_individual_obj[:,3]) = 13.0
210 historl_G_best_iter[iter, 3] = 13.0
211 Begin iteration:
212
213 iter = 7
214 cord_individual_obj[indivial_i,:] = [ 0. 5. 56. 61.]
215 cord_individual_obj[indivial_i,:] = [ 1. 4. 56. 60.]
216 cord_individual_obj[indivial_i,:] = [ 2. 5. 76. 81.]
217 cord_individual_obj[indivial_i,:] = [ 3. 5. 8. 13.]
218 cord_individual_obj[indivial_i,:] = [ 4. 5. 44. 49.]
219 cord_individual_obj[indivial_i,:] = [ 5. 5. 56. 61.]
220 cord_individual_obj[indivial_i,:] = [ 6. 4. 56. 60.]
221 cord_individual_obj[indivial_i,:] = [ 7. 4. 56. 60.]
222 cord_individual_obj[indivial_i,:] = [ 8. 4. 64. 68.]
223 cord_individual_obj[indivial_i,:] = [ 9. 5. 76. 81.]
224 cord_individual_obj[indivial_i,:] = [10. 6. 56. 62.]
225 cord_individual_obj[indivial_i,:] = [11. 5. 56. 61.]
226 cord_individual_obj[indivial_i,:] = [12. 5. 54. 59.]
227 cord_individual_obj[indivial_i,:] = [13. 4. 76. 80.]
228 cord_individual_obj[indivial_i,:] = [14. 5. 38. 43.]
229 cord_individual_obj[indivial_i,:] = [15. 5. 38. 43.]
230 cord_individual_obj[indivial_i,:] = [16. 4. 56. 60.]
231 cord_individual_obj[indivial_i,:] = [17. 5. 56. 61.]
232 cord_individual_obj[indivial_i,:] = [18. 5. 54. 59.]
233 cord_individual_obj[indivial_i,:] = [19. 4. 76. 80.]
234
235 min(cord_individual_obj[:,3]) = 13.0
236 historl_G_best_iter[iter, 3] = 13.0
237 Begin iteration:
238
239 iter = 8
240 cord_individual_obj[indivial_i,:] = [ 0. 4. 58. 62.]
241 cord_individual_obj[indivial_i,:] = [ 1. 5. 8. 13.]
242 cord_individual_obj[indivial_i,:] = [ 2. 5. 8. 13.]
243 cord_individual_obj[indivial_i,:] = [ 3. 4. 76. 80.]
244 cord_individual_obj[indivial_i,:] = [ 4. 6. 8. 14.]
245 cord_individual_obj[indivial_i,:] = [ 5. 4. 34. 38.]
246 cord_individual_obj[indivial_i,:] = [ 6. 5. 16. 21.]
247 cord_individual_obj[indivial_i,:] = [ 7. 5. 22. 27.]

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248 cord_individual_obj[indivial_i,:] = [ 8. 5. 8. 13.]
249 cord_individual_obj[indivial_i,:] = [ 9. 5. 16. 21.]
250 cord_individual_obj[indivial_i,:] = [10. 5. 8. 13.]
251 cord_individual_obj[indivial_i,:] = [11. 5. 44. 49.]
252 cord_individual_obj[indivial_i,:] = [12. 5. 8. 13.]
253 cord_individual_obj[indivial_i,:] = [13. 6. 8. 14.]
254 cord_individual_obj[indivial_i,:] = [14. 5. 22. 27.]
255 cord_individual_obj[indivial_i,:] = [15. 5. 8. 13.]
256 cord_individual_obj[indivial_i,:] = [16. 6. 8. 14.]
257 cord_individual_obj[indivial_i,:] = [17. 6. 8. 14.]
258 cord_individual_obj[indivial_i,:] = [18. 5. 22. 27.]
259 cord_individual_obj[indivial_i,:] = [19. 5. 8. 13.]
260
261 min(cord_individual_obj[:,3]) = 13.0
262 historl_G_best_iter[iter,3] = 13.0
263 Begin iteration:
264
265 iter = 9
266 cord_individual_obj[indivial_i,:] = [ 0. 5. 28. 33.]
267 cord_individual_obj[indivial_i,:] = [ 1. 5. 28. 33.]
268 cord_individual_obj[indivial_i,:] = [ 2. 6. 38. 44.]
269 cord_individual_obj[indivial_i,:] = [ 3. 5. 8. 13.]
270 cord_individual_obj[indivial_i,:] = [ 4. 6. 54. 60.]
271 cord_individual_obj[indivial_i,:] = [ 5. 5. 40. 45.]
272 cord_individual_obj[indivial_i,:] = [ 6. 4. 66. 70.]
273 cord_individual_obj[indivial_i,:] = [ 7. 4. 52. 56.]
274 cord_individual_obj[indivial_i,:] = [ 8. 5. 28. 33.]
275 cord_individual_obj[indivial_i,:] = [ 9. 5. 40. 45.]
276 cord_individual_obj[indivial_i,:] = [10. 6. 52. 58.]
277 cord_individual_obj[indivial_i,:] = [11. 5. 28. 33.]
278 cord_individual_obj[indivial_i,:] = [12. 5. 28. 33.]
279 cord_individual_obj[indivial_i,:] = [13. 6. 28. 34.]
280 cord_individual_obj[indivial_i,:] = [14. 5. 52. 57.]
281 cord_individual_obj[indivial_i,:] = [15. 5. 38. 43.]
282 cord_individual_obj[indivial_i,:] = [16. 6. 52. 58.]
283 cord_individual_obj[indivial_i,:] = [17. 6. 28. 34.]
284 cord_individual_obj[indivial_i,:] = [18. 4. 28. 32.]
285 cord_individual_obj[indivial_i,:] = [19. 5. 28. 33.]
286
287 min(cord_individual_obj[:,3]) = 13.0
288 historl_G_best_iter[iter,3] = 13.0
289 Begin iteration:
290
291 iter = 10
292 cord_individual_obj[indivial_i,:] = [ 0. 4. 12. 16.]
293 cord_individual_obj[indivial_i,:] = [ 1. 4. 24. 28.]
294 cord_individual_obj[indivial_i,:] = [ 2. 6. 24. 30.]
295 cord_individual_obj[indivial_i,:] = [ 3. 4. 38. 42.]
296 cord_individual_obj[indivial_i,:] = [ 4. 6. 12. 18.]
297 cord_individual_obj[indivial_i,:] = [ 5. 5. 34. 39.]
298 cord_individual_obj[indivial_i,:] = [ 6. 5. 8. 13.]
299 cord_individual_obj[indivial_i,:] = [ 7. 5. 32. 37.]
300 cord_individual_obj[indivial_i,:] = [ 8. 4. 24. 28.]
301 cord_individual_obj[indivial_i,:] = [ 9. 5. 28. 33.]
302 cord_individual_obj[indivial_i,:] = [10. 6. 12. 18.]
303 cord_individual_obj[indivial_i,:] = [11. 5. 12. 17.]
304 cord_individual_obj[indivial_i,:] = [12. 5. 8. 13.]
305 cord_individual_obj[indivial_i,:] = [13. 6. 44. 50.]
306 cord_individual_obj[indivial_i,:] = [14. 5. 24. 29.]
307 cord_individual_obj[indivial_i,:] = [15. 5. 28. 33.]
308 cord_individual_obj[indivial_i,:] = [16. 6. 12. 18.]
309 cord_individual_obj[indivial_i,:] = [17. 6. 24. 30.]
310 cord_individual_obj[indivial_i,:] = [18. 5. 32. 37.]
311 cord_individual_obj[indivial_i,:] = [19. 4. 12. 16.]
312
313 min(cord_individual_obj[:,3]) = 13.0
314 historl_G_best_iter[iter,3] = 13.0
315 Begin iteration:
316
317 iter = 11
318 cord_individual_obj[indivial_i,:] = [ 0. 5. 28. 33.]
319 cord_individual_obj[indivial_i,:] = [ 1. 5. 20. 25.]
320 cord_individual_obj[indivial_i,:] = [ 2. 6. 26. 32.]
321 cord_individual_obj[indivial_i,:] = [ 3. 5. 38. 43.]
322 cord_individual_obj[indivial_i,:] = [ 4. 6. 38. 44.]
323 cord_individual_obj[indivial_i,:] = [ 5. 5. 38. 43.]
324 cord_individual_obj[indivial_i,:] = [ 6. 4. 38. 42.]
325 cord_individual_obj[indivial_i,:] = [ 7. 5. 38. 43.]
326 cord_individual_obj[indivial_i,:] = [ 8. 5. 20. 25.]
327 cord_individual_obj[indivial_i,:] = [ 9. 5. 38. 43.]
328 cord_individual_obj[indivial_i,:] = [10. 6. 38. 44.]
329 cord_individual_obj[indivial_i,:] = [11. 5. 28. 33.]
330 cord_individual_obj[indivial_i,:] = [12. 5. 28. 33.]
331 cord_individual_obj[indivial_i,:] = [13. 5. 8. 13.]

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332 cord_individual_obj[indivial_i, :] = [14. 5. 20. 25.]
333 cord_individual_obj[indivial_i, :] = [15. 5. 28. 33.]
334 cord_individual_obj[indivial_i, :] = [16. 6. 38. 44.]
335 cord_individual_obj[indivial_i, :] = [17. 6. 20. 26.]
336 cord_individual_obj[indivial_i, :] = [18. 4. 48. 52.]
337 cord_individual_obj[indivial_i, :] = [19. 5. 28. 33.]
338
339 min(cord_individual_obj[:, 3]) = 13.0
340 historl_G_best_iter[iter, 3] = 13.0
341 Begin iteration:
342
343 iter = 12
344 cord_individual_obj[indivial_i, :] = [ 0. 4. 34. 38.]
345 cord_individual_obj[indivial_i, :] = [ 1. 4. 34. 38.]
346 cord_individual_obj[indivial_i, :] = [ 2. 6. 28. 34.]
347 cord_individual_obj[indivial_i, :] = [ 3. 4. 38. 42.]
348 cord_individual_obj[indivial_i, :] = [ 4. 6. 26. 32.]
349 cord_individual_obj[indivial_i, :] = [ 5. 5. 42. 47.]
350 cord_individual_obj[indivial_i, :] = [ 6. 5. 24. 29.]
351 cord_individual_obj[indivial_i, :] = [ 7. 4. 38. 42.]
352 cord_individual_obj[indivial_i, :] = [ 8. 4. 34. 38.]
353 cord_individual_obj[indivial_i, :] = [ 9. 5. 38. 43.]
354 cord_individual_obj[indivial_i, :] = [10. 5. 20. 25.]
355 cord_individual_obj[indivial_i, :] = [11. 5. 20. 25.]
356 cord_individual_obj[indivial_i, :] = [12. 5. 16. 21.]
357 cord_individual_obj[indivial_i, :] = [13. 6. 28. 34.]
358 cord_individual_obj[indivial_i, :] = [14. 5. 28. 33.]
359 cord_individual_obj[indivial_i, :] = [15. 5. 20. 25.]
360 cord_individual_obj[indivial_i, :] = [16. 6. 28. 34.]
361 cord_individual_obj[indivial_i, :] = [17. 6. 34. 40.]
362 cord_individual_obj[indivial_i, :] = [18. 5. 8. 13.]
363 cord_individual_obj[indivial_i, :] = [19. 4. 34. 38.]
364
365 min(cord_individual_obj[:, 3]) = 13.0
366 historl_G_best_iter[iter, 3] = 13.0
367 Begin iteration:
368
369 iter = 13
370 cord_individual_obj[indivial_i, :] = [ 0. 5. 20. 25.]
371 cord_individual_obj[indivial_i, :] = [ 1. 5. 28. 33.]
372 cord_individual_obj[indivial_i, :] = [ 2. 6. 28. 34.]
373 cord_individual_obj[indivial_i, :] = [ 3. 5. 42. 47.]
374 cord_individual_obj[indivial_i, :] = [ 4. 6. 28. 34.]
375 cord_individual_obj[indivial_i, :] = [ 5. 5. 8. 13.]
376 cord_individual_obj[indivial_i, :] = [ 6. 5. 42. 47.]
377 cord_individual_obj[indivial_i, :] = [ 7. 5. 38. 43.]
378 cord_individual_obj[indivial_i, :] = [ 8. 5. 28. 33.]
379 cord_individual_obj[indivial_i, :] = [ 9. 5. 42. 47.]
380 cord_individual_obj[indivial_i, :] = [10. 6. 38. 44.]
381 cord_individual_obj[indivial_i, :] = [11. 5. 28. 33.]
382 cord_individual_obj[indivial_i, :] = [12. 5. 28. 33.]
383 cord_individual_obj[indivial_i, :] = [13. 6. 28. 34.]
384 cord_individual_obj[indivial_i, :] = [14. 5. 28. 33.]
385 cord_individual_obj[indivial_i, :] = [15. 5. 38. 43.]
386 cord_individual_obj[indivial_i, :] = [16. 6. 38. 44.]
387 cord_individual_obj[indivial_i, :] = [17. 6. 28. 34.]
388 cord_individual_obj[indivial_i, :] = [18. 4. 28. 32.]
389 cord_individual_obj[indivial_i, :] = [19. 5. 20. 25.]
390
391 min(cord_individual_obj[:, 3]) = 13.0
392 historl_G_best_iter[iter, 3] = 13.0
393 Begin iteration:
394
395 iter = 14
396 cord_individual_obj[indivial_i, :] = [ 0. 4. 28. 32.]
397 cord_individual_obj[indivial_i, :] = [ 1. 4. 34. 38.]
398 cord_individual_obj[indivial_i, :] = [ 2. 6. 28. 34.]
399 cord_individual_obj[indivial_i, :] = [ 3. 5. 8. 13.]
400 cord_individual_obj[indivial_i, :] = [ 4. 6. 32. 38.]
401 cord_individual_obj[indivial_i, :] = [ 5. 4. 38. 42.]
402 cord_individual_obj[indivial_i, :] = [ 6. 4. 50. 54.]
403 cord_individual_obj[indivial_i, :] = [ 7. 5. 58. 63.]
404 cord_individual_obj[indivial_i, :] = [ 8. 4. 34. 38.]
405 cord_individual_obj[indivial_i, :] = [ 9. 5. 42. 47.]
406 cord_individual_obj[indivial_i, :] = [10. 6. 24. 30.]
407 cord_individual_obj[indivial_i, :] = [11. 5. 24. 29.]
408 cord_individual_obj[indivial_i, :] = [12. 5. 28. 33.]
409 cord_individual_obj[indivial_i, :] = [13. 6. 32. 38.]
410 cord_individual_obj[indivial_i, :] = [14. 5. 32. 37.]
411 cord_individual_obj[indivial_i, :] = [15. 5. 28. 33.]
412 cord_individual_obj[indivial_i, :] = [16. 6. 50. 56.]
413 cord_individual_obj[indivial_i, :] = [17. 6. 24. 30.]
414 cord_individual_obj[indivial_i, :] = [18. 5. 24. 29.]
415 cord_individual_obj[indivial_i, :] = [19. 4. 28. 32.]

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416
417 min(cord_individual_obj[:, 3]) = 13.0
418 historl_G_best_iter[iter, 3] = 13.0
419 Begin iteration:
420
421 iter = 15
422 cord_individual_obj[indivial_i, :] = [ 0.  5. 28. 33.]
423 cord_individual_obj[indivial_i, :] = [ 1.  4. 28. 32.]
424 cord_individual_obj[indivial_i, :] = [ 2.  6. 28. 34.]
425 cord_individual_obj[indivial_i, :] = [ 3.  4. 38. 42.]
426 cord_individual_obj[indivial_i, :] = [ 4.  6. 28. 34.]
427 cord_individual_obj[indivial_i, :] = [ 5.  5. 38. 43.]
428 cord_individual_obj[indivial_i, :] = [ 6.  5. 38. 43.]
429 cord_individual_obj[indivial_i, :] = [ 7.  5.  8. 13.]
430 cord_individual_obj[indivial_i, :] = [ 8.  4. 28. 32.]
431 cord_individual_obj[indivial_i, :] = [ 9.  5. 38. 43.]
432 cord_individual_obj[indivial_i, :] = [10. 6. 38. 44.]
433 cord_individual_obj[indivial_i, :] = [11. 5. 28. 33.]
434 cord_individual_obj[indivial_i, :] = [12. 5. 28. 33.]
435 cord_individual_obj[indivial_i, :] = [13. 6. 28. 34.]
436 cord_individual_obj[indivial_i, :] = [14. 5. 38. 43.]
437 cord_individual_obj[indivial_i, :] = [15. 5. 28. 33.]
438 cord_individual_obj[indivial_i, :] = [16. 6. 38. 44.]
439 cord_individual_obj[indivial_i, :] = [17. 6. 28. 34.]
440 cord_individual_obj[indivial_i, :] = [18. 4. 28. 32.]
441 cord_individual_obj[indivial_i, :] = [19. 5. 28. 33.]
442
443 min(cord_individual_obj[:, 3]) = 13.0
444 historl_G_best_iter[iter, 3] = 13.0
445 Begin iteration:
446
447 iter = 16
448 cord_individual_obj[indivial_i, :] = [ 0.  5. 26. 31.]
449 cord_individual_obj[indivial_i, :] = [ 1.  5.  8. 13.]
450 cord_individual_obj[indivial_i, :] = [ 2.  6. 24. 30.]
451 cord_individual_obj[indivial_i, :] = [ 3.  5. 12. 17.]
452 cord_individual_obj[indivial_i, :] = [ 4.  6. 26. 32.]
453 cord_individual_obj[indivial_i, :] = [ 5.  4. 46. 50.]
454 cord_individual_obj[indivial_i, :] = [ 6.  5.  8. 13.]
455 cord_individual_obj[indivial_i, :] = [ 7.  4. 38. 42.]
456 cord_individual_obj[indivial_i, :] = [ 8.  5.  8. 13.]
457 cord_individual_obj[indivial_i, :] = [ 9.  5. 28. 33.]
458 cord_individual_obj[indivial_i, :] = [10. 5.  8. 13.]
459 cord_individual_obj[indivial_i, :] = [11. 5. 12. 17.]
460 cord_individual_obj[indivial_i, :] = [12. 5. 28. 33.]
461 cord_individual_obj[indivial_i, :] = [13. 6. 32. 38.]
462 cord_individual_obj[indivial_i, :] = [14. 5. 32. 37.]
463 cord_individual_obj[indivial_i, :] = [15. 5. 32. 37.]
464 cord_individual_obj[indivial_i, :] = [16. 6. 12. 18.]
465 cord_individual_obj[indivial_i, :] = [17. 6. 12. 18.]
466 cord_individual_obj[indivial_i, :] = [18. 5. 12. 17.]
467 cord_individual_obj[indivial_i, :] = [19. 4. 12. 16.]
468
469 min(cord_individual_obj[:, 3]) = 13.0
470 historl_G_best_iter[iter, 3] = 13.0
471 Begin iteration:
472
473 iter = 17
474 cord_individual_obj[indivial_i, :] = [ 0.  5. 58. 63.]
475 cord_individual_obj[indivial_i, :] = [ 1.  5. 38. 43.]
476 cord_individual_obj[indivial_i, :] = [ 2.  4. 38. 42.]
477 cord_individual_obj[indivial_i, :] = [ 3.  4. 28. 32.]
478 cord_individual_obj[indivial_i, :] = [ 4.  5. 32. 37.]
479 cord_individual_obj[indivial_i, :] = [ 5.  5.  8. 13.]
480 cord_individual_obj[indivial_i, :] = [ 6.  5. 38. 43.]
481 cord_individual_obj[indivial_i, :] = [ 7.  4. 28. 32.]
482 cord_individual_obj[indivial_i, :] = [ 8.  4. 28. 32.]
483 cord_individual_obj[indivial_i, :] = [ 9.  5. 28. 33.]
484 cord_individual_obj[indivial_i, :] = [10. 6. 52. 58.]
485 cord_individual_obj[indivial_i, :] = [11. 5. 28. 33.]
486 cord_individual_obj[indivial_i, :] = [12. 5. 58. 63.]
487 cord_individual_obj[indivial_i, :] = [13. 5. 28. 33.]
488 cord_individual_obj[indivial_i, :] = [14. 5. 28. 33.]
489 cord_individual_obj[indivial_i, :] = [15. 5. 38. 43.]
490 cord_individual_obj[indivial_i, :] = [16. 5. 38. 43.]
491 cord_individual_obj[indivial_i, :] = [17. 5. 28. 33.]
492 cord_individual_obj[indivial_i, :] = [18. 4. 58. 62.]
493 cord_individual_obj[indivial_i, :] = [19. 5. 38. 43.]
494
495 min(cord_individual_obj[:, 3]) = 13.0
496 historl_G_best_iter[iter, 3] = 13.0
497 Begin iteration:
498
499 iter = 18

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500 cord_individual_obj[indivial_i,:] = [ 0. 5. 8. 13.]
501 cord_individual_obj[indivial_i,:] = [ 1. 5. 28. 33.]
502 cord_individual_obj[indivial_i,:] = [ 2. 6. 32. 38.]
503 cord_individual_obj[indivial_i,:] = [ 3. 5. 28. 33.]
504 cord_individual_obj[indivial_i,:] = [ 4. 6. 28. 34.]
505 cord_individual_obj[indivial_i,:] = [ 5. 4. 28. 32.]
506 cord_individual_obj[indivial_i,:] = [ 6. 4. 34. 38.]
507 cord_individual_obj[indivial_i,:] = [ 7. 5. 28. 33.]
508 cord_individual_obj[indivial_i,:] = [ 8. 5. 48. 53.]
509 cord_individual_obj[indivial_i,:] = [ 9. 5. 32. 37.]
510 cord_individual_obj[indivial_i,:] = [10. 6. 42. 48.]
511 cord_individual_obj[indivial_i,:] = [11. 5. 38. 43.]
512 cord_individual_obj[indivial_i,:] = [12. 5. 28. 33.]
513 cord_individual_obj[indivial_i,:] = [13. 6. 32. 38.]
514 cord_individual_obj[indivial_i,:] = [14. 5. 28. 33.]
515 cord_individual_obj[indivial_i,:] = [15. 5. 28. 33.]
516 cord_individual_obj[indivial_i,:] = [16. 6. 28. 34.]
517 cord_individual_obj[indivial_i,:] = [17. 6. 68. 74.]
518 cord_individual_obj[indivial_i,:] = [18. 5. 28. 33.]
519 cord_individual_obj[indivial_i,:] = [19. 4. 28. 32.]
520
521 min(cord_individual_obj[:,3]) = 13.0
522 historl_G_best_iter[iter,3] = 13.0
523 Begin iteration:
524
525 iter = 19
526 cord_individual_obj[indivial_i,:] = [ 0. 5. 58. 63.]
527 cord_individual_obj[indivial_i,:] = [ 1. 5. 28. 33.]
528 cord_individual_obj[indivial_i,:] = [ 2. 6. 52. 58.]
529 cord_individual_obj[indivial_i,:] = [ 3. 5. 28. 33.]
530 cord_individual_obj[indivial_i,:] = [ 4. 6. 52. 58.]
531 cord_individual_obj[indivial_i,:] = [ 5. 4. 28. 32.]
532 cord_individual_obj[indivial_i,:] = [ 6. 4. 28. 32.]
533 cord_individual_obj[indivial_i,:] = [ 7. 4. 28. 32.]
534 cord_individual_obj[indivial_i,:] = [ 8. 5. 28. 33.]
535 cord_individual_obj[indivial_i,:] = [ 9. 5. 28. 33.]
536 cord_individual_obj[indivial_i,:] = [10. 6. 28. 34.]
537 cord_individual_obj[indivial_i,:] = [11. 5. 28. 33.]
538 cord_individual_obj[indivial_i,:] = [12. 5. 58. 63.]
539 cord_individual_obj[indivial_i,:] = [13. 6. 52. 58.]
540 cord_individual_obj[indivial_i,:] = [14. 5. 38. 43.]
541 cord_individual_obj[indivial_i,:] = [15. 5. 58. 63.]
542 cord_individual_obj[indivial_i,:] = [16. 6. 28. 34.]
543 cord_individual_obj[indivial_i,:] = [17. 5. 8. 13.]
544 cord_individual_obj[indivial_i,:] = [18. 4. 58. 62.]
545 cord_individual_obj[indivial_i,:] = [19. 4. 28. 32.]
546
547 min(cord_individual_obj[:,3]) = 13.0
548 historl_G_best_iter[iter,3] = 13.0
549 Begin iteration:
550
551 iter = 20
552 cord_individual_obj[indivial_i,:] = [ 0. 5. 8. 13.]
553 cord_individual_obj[indivial_i,:] = [ 1. 5. 8. 13.]
554 cord_individual_obj[indivial_i,:] = [ 2. 6. 8. 14.]
555 cord_individual_obj[indivial_i,:] = [ 3. 5. 8. 13.]
556 cord_individual_obj[indivial_i,:] = [ 4. 6. 22. 28.]
557 cord_individual_obj[indivial_i,:] = [ 5. 5. 28. 33.]
558 cord_individual_obj[indivial_i,:] = [ 6. 5. 8. 13.]
559 cord_individual_obj[indivial_i,:] = [ 7. 5. 28. 33.]
560 cord_individual_obj[indivial_i,:] = [ 8. 5. 8. 13.]
561 cord_individual_obj[indivial_i,:] = [ 9. 5. 22. 27.]
562 cord_individual_obj[indivial_i,:] = [10. 5. 8. 13.]
563 cord_individual_obj[indivial_i,:] = [11. 5. 8. 13.]
564 cord_individual_obj[indivial_i,:] = [12. 5. 22. 27.]
565 cord_individual_obj[indivial_i,:] = [13. 6. 8. 14.]
566 cord_individual_obj[indivial_i,:] = [14. 5. 28. 33.]
567 cord_individual_obj[indivial_i,:] = [15. 5. 22. 27.]
568 cord_individual_obj[indivial_i,:] = [16. 6. 8. 14.]
569 cord_individual_obj[indivial_i,:] = [17. 6. 52. 58.]
570 cord_individual_obj[indivial_i,:] = [18. 5. 16. 21.]
571 cord_individual_obj[indivial_i,:] = [19. 5. 8. 13.]
572
573 min(cord_individual_obj[:,3]) = 13.0
574 historl_G_best_iter[iter,3] = 13.0
575 Begin iteration:
576
577 iter = 21
578 cord_individual_obj[indivial_i,:] = [ 0. 5. 58. 63.]
579 cord_individual_obj[indivial_i,:] = [ 1. 4. 38. 42.]
580 cord_individual_obj[indivial_i,:] = [ 2. 6. 28. 34.]
581 cord_individual_obj[indivial_i,:] = [ 3. 5. 28. 33.]
582 cord_individual_obj[indivial_i,:] = [ 4. 6. 28. 34.]
583 cord_individual_obj[indivial_i,:] = [ 5. 4. 52. 56.]

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584 cord_individual_obj[indivial_i, :] = [ 6. 5. 28. 33.]
585 cord_individual_obj[indivial_i, :] = [ 7. 5. 32. 37.]
586 cord_individual_obj[indivial_i, :] = [ 8. 5. 28. 33.]
587 cord_individual_obj[indivial_i, :] = [ 9. 5. 28. 33.]
588 cord_individual_obj[indivial_i, :] = [10. 6. 28. 34.]
589 cord_individual_obj[indivial_i, :] = [11. 5. 38. 43.]
590 cord_individual_obj[indivial_i, :] = [12. 5. 28. 33.]
591 cord_individual_obj[indivial_i, :] = [13. 6. 28. 34.]
592 cord_individual_obj[indivial_i, :] = [14. 5. 32. 37.]
593 cord_individual_obj[indivial_i, :] = [15. 5. 28. 33.]
594 cord_individual_obj[indivial_i, :] = [16. 6. 28. 34.]
595 cord_individual_obj[indivial_i, :] = [17. 5. 8. 13.]
596 cord_individual_obj[indivial_i, :] = [18. 5. 20. 25.]
597 cord_individual_obj[indivial_i, :] = [19. 5. 28. 33.]
598
599 min(cord_individual_obj[:, 3]) = 13.0
600 historl_G_best_iter[iter, 3] = 13.0
601 Begin iteration:
602
603 iter = 22
604 cord_individual_obj[indivial_i, :] = [ 0. 5. 8. 13.]
605 cord_individual_obj[indivial_i, :] = [ 1. 5. 8. 13.]
606 cord_individual_obj[indivial_i, :] = [ 2. 5. 8. 13.]
607 cord_individual_obj[indivial_i, :] = [ 3. 5. 8. 13.]
608 cord_individual_obj[indivial_i, :] = [ 4. 5. 22. 27.]
609 cord_individual_obj[indivial_i, :] = [ 5. 5. 28. 33.]
610 cord_individual_obj[indivial_i, :] = [ 6. 4. 34. 38.]
611 cord_individual_obj[indivial_i, :] = [ 7. 4. 50. 54.]
612 cord_individual_obj[indivial_i, :] = [ 8. 4. 14. 18.]
613 cord_individual_obj[indivial_i, :] = [ 9. 5. 22. 27.]
614 cord_individual_obj[indivial_i, :] = [10. 5. 8. 13.]
615 cord_individual_obj[indivial_i, :] = [11. 5. 70. 75.]
616 cord_individual_obj[indivial_i, :] = [12. 5. 22. 27.]
617 cord_individual_obj[indivial_i, :] = [13. 5. 22. 27.]
618 cord_individual_obj[indivial_i, :] = [14. 5. 32. 37.]
619 cord_individual_obj[indivial_i, :] = [15. 5. 22. 27.]
620 cord_individual_obj[indivial_i, :] = [16. 4. 14. 18.]
621 cord_individual_obj[indivial_i, :] = [17. 6. 52. 58.]
622 cord_individual_obj[indivial_i, :] = [18. 4. 34. 38.]
623 cord_individual_obj[indivial_i, :] = [19. 4. 14. 18.]
624
625 min(cord_individual_obj[:, 3]) = 13.0
626 historl_G_best_iter[iter, 3] = 13.0
627 Begin iteration:
628
629 iter = 23
630 cord_individual_obj[indivial_i, :] = [ 0. 5. 38. 43.]
631 cord_individual_obj[indivial_i, :] = [ 1. 4. 28. 32.]
632 cord_individual_obj[indivial_i, :] = [ 2. 6. 38. 44.]
633 cord_individual_obj[indivial_i, :] = [ 3. 4. 28. 32.]
634 cord_individual_obj[indivial_i, :] = [ 4. 6. 38. 44.]
635 cord_individual_obj[indivial_i, :] = [ 5. 4. 28. 32.]
636 cord_individual_obj[indivial_i, :] = [ 6. 4. 28. 32.]
637 cord_individual_obj[indivial_i, :] = [ 7. 4. 28. 32.]
638 cord_individual_obj[indivial_i, :] = [ 8. 5. 58. 63.]
639 cord_individual_obj[indivial_i, :] = [ 9. 5. 28. 33.]
640 cord_individual_obj[indivial_i, :] = [10. 6. 28. 34.]
641 cord_individual_obj[indivial_i, :] = [11. 5. 8. 13.]
642 cord_individual_obj[indivial_i, :] = [12. 5. 58. 63.]
643 cord_individual_obj[indivial_i, :] = [13. 6. 28. 34.]
644 cord_individual_obj[indivial_i, :] = [14. 5. 28. 33.]
645 cord_individual_obj[indivial_i, :] = [15. 5. 28. 33.]
646 cord_individual_obj[indivial_i, :] = [16. 6. 28. 34.]
647 cord_individual_obj[indivial_i, :] = [17. 5. 28. 33.]
648 cord_individual_obj[indivial_i, :] = [18. 5. 38. 43.]
649 cord_individual_obj[indivial_i, :] = [19. 5. 28. 33.]
650
651 min(cord_individual_obj[:, 3]) = 13.0
652 historl_G_best_iter[iter, 3] = 13.0
653 Begin iteration:
654
655 iter = 24
656 cord_individual_obj[indivial_i, :] = [ 0. 5. 38. 43.]
657 cord_individual_obj[indivial_i, :] = [ 1. 4. 58. 62.]
658 cord_individual_obj[indivial_i, :] = [ 2. 5. 58. 63.]
659 cord_individual_obj[indivial_i, :] = [ 3. 5. 28. 33.]
660 cord_individual_obj[indivial_i, :] = [ 4. 5. 28. 33.]
661 cord_individual_obj[indivial_i, :] = [ 5. 4. 28. 32.]
662 cord_individual_obj[indivial_i, :] = [ 6. 5. 28. 33.]
663 cord_individual_obj[indivial_i, :] = [ 7. 4. 28. 32.]
664 cord_individual_obj[indivial_i, :] = [ 8. 5. 8. 13.]
665 cord_individual_obj[indivial_i, :] = [ 9. 5. 28. 33.]
666 cord_individual_obj[indivial_i, :] = [10. 5. 28. 33.]
667 cord_individual_obj[indivial_i, :] = [11. 5. 58. 63.]

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668 cord_individual_obj[indivial_i,:] = [12. 5. 58. 63.]
669 cord_individual_obj[indivial_i,:] = [13. 5. 58. 63.]
670 cord_individual_obj[indivial_i,:] = [14. 5. 38. 43.]
671 cord_individual_obj[indivial_i,:] = [15. 5. 38. 43.]
672 cord_individual_obj[indivial_i,:] = [16. 4. 28. 32.]
673 cord_individual_obj[indivial_i,:] = [17. 6. 28. 34.]
674 cord_individual_obj[indivial_i,:] = [18. 4. 58. 62.]
675 cord_individual_obj[indivial_i,:] = [19. 5. 28. 33.]
676
677 min(cord_individual_obj[:,3]) = 13.0
678 historl_G_best_iter[iter,3] = 13.0
679 Begin iteration:
680
681 iter = 25
682 cord_individual_obj[indivial_i,:] = [ 0. 5. 58. 63.]
683 cord_individual_obj[indivial_i,:] = [ 1. 4. 28. 32.]
684 cord_individual_obj[indivial_i,:] = [ 2. 5. 8. 13.]
685 cord_individual_obj[indivial_i,:] = [ 3. 4. 28. 32.]
686 cord_individual_obj[indivial_i,:] = [ 4. 6. 28. 34.]
687 cord_individual_obj[indivial_i,:] = [ 5. 4. 28. 32.]
688 cord_individual_obj[indivial_i,:] = [ 6. 4. 28. 32.]
689 cord_individual_obj[indivial_i,:] = [ 7. 4. 28. 32.]
690 cord_individual_obj[indivial_i,:] = [ 8. 4. 28. 32.]
691 cord_individual_obj[indivial_i,:] = [ 9. 5. 28. 33.]
692 cord_individual_obj[indivial_i,:] = [10. 6. 28. 34.]
693 cord_individual_obj[indivial_i,:] = [11. 5. 38. 43.]
694 cord_individual_obj[indivial_i,:] = [12. 5. 38. 43.]
695 cord_individual_obj[indivial_i,:] = [13. 6. 38. 44.]
696 cord_individual_obj[indivial_i,:] = [14. 5. 28. 33.]
697 cord_individual_obj[indivial_i,:] = [15. 5. 28. 33.]
698 cord_individual_obj[indivial_i,:] = [16. 6. 28. 34.]
699 cord_individual_obj[indivial_i,:] = [17. 4. 38. 42.]
700 cord_individual_obj[indivial_i,:] = [18. 4. 28. 32.]
701 cord_individual_obj[indivial_i,:] = [19. 5. 28. 33.]
702
703 min(cord_individual_obj[:,3]) = 13.0
704 historl_G_best_iter[iter,3] = 13.0
705 Begin iteration:
706
707 iter = 26
708 cord_individual_obj[indivial_i,:] = [ 0. 5. 8. 13.]
709 cord_individual_obj[indivial_i,:] = [ 1. 5. 28. 33.]
710 cord_individual_obj[indivial_i,:] = [ 2. 6. 38. 44.]
711 cord_individual_obj[indivial_i,:] = [ 3. 4. 28. 32.]
712 cord_individual_obj[indivial_i,:] = [ 4. 5. 28. 33.]
713 cord_individual_obj[indivial_i,:] = [ 5. 5. 28. 33.]
714 cord_individual_obj[indivial_i,:] = [ 6. 4. 28. 32.]
715 cord_individual_obj[indivial_i,:] = [ 7. 4. 28. 32.]
716 cord_individual_obj[indivial_i,:] = [ 8. 4. 28. 32.]
717 cord_individual_obj[indivial_i,:] = [ 9. 5. 28. 33.]
718 cord_individual_obj[indivial_i,:] = [10. 6. 28. 34.]
719 cord_individual_obj[indivial_i,:] = [11. 5. 38. 43.]
720 cord_individual_obj[indivial_i,:] = [12. 5. 38. 43.]
721 cord_individual_obj[indivial_i,:] = [13. 4. 38. 42.]
722 cord_individual_obj[indivial_i,:] = [14. 5. 58. 63.]
723 cord_individual_obj[indivial_i,:] = [15. 5. 58. 63.]
724 cord_individual_obj[indivial_i,:] = [16. 5. 28. 33.]
725 cord_individual_obj[indivial_i,:] = [17. 6. 28. 34.]
726 cord_individual_obj[indivial_i,:] = [18. 4. 28. 32.]
727 cord_individual_obj[indivial_i,:] = [19. 5. 28. 33.]
728
729 min(cord_individual_obj[:,3]) = 13.0
730 historl_G_best_iter[iter,3] = 13.0
731 Begin iteration:
732
733 iter = 27
734 cord_individual_obj[indivial_i,:] = [ 0. 5. 28. 33.]
735 cord_individual_obj[indivial_i,:] = [ 1. 4. 28. 32.]
736 cord_individual_obj[indivial_i,:] = [ 2. 6. 38. 44.]
737 cord_individual_obj[indivial_i,:] = [ 3. 4. 28. 32.]
738 cord_individual_obj[indivial_i,:] = [ 4. 6. 52. 58.]
739 cord_individual_obj[indivial_i,:] = [ 5. 4. 28. 32.]
740 cord_individual_obj[indivial_i,:] = [ 6. 5. 28. 33.]
741 cord_individual_obj[indivial_i,:] = [ 7. 5. 28. 33.]
742 cord_individual_obj[indivial_i,:] = [ 8. 5. 38. 43.]
743 cord_individual_obj[indivial_i,:] = [ 9. 5. 28. 33.]
744 cord_individual_obj[indivial_i,:] = [10. 6. 28. 34.]
745 cord_individual_obj[indivial_i,:] = [11. 5. 38. 43.]
746 cord_individual_obj[indivial_i,:] = [12. 5. 58. 63.]
747 cord_individual_obj[indivial_i,:] = [13. 6. 38. 44.]
748 cord_individual_obj[indivial_i,:] = [14. 5. 8. 13.]
749 cord_individual_obj[indivial_i,:] = [15. 5. 28. 33.]
750 cord_individual_obj[indivial_i,:] = [16. 6. 28. 34.]
751 cord_individual_obj[indivial_i,:] = [17. 6. 38. 44.]

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752     cord_individual_obj[indivial_i, :] = [18. 5. 58. 63.]
753     cord_individual_obj[indivial_i, :] = [19. 5. 58. 63.]
754
755     min(cord_individual_obj[:, 3]) = 13.0
756     historl_G_best_iter[iter, 3] = 13.0
757 Begin iteration:
758
759 iter = 28
760     cord_individual_obj[indivial_i, :] = [ 0. 4. 28. 32.]
761     cord_individual_obj[indivial_i, :] = [ 1. 5. 60. 65.]
762     cord_individual_obj[indivial_i, :] = [ 2. 6. 28. 34.]
763     cord_individual_obj[indivial_i, :] = [ 3. 5. 28. 33.]
764     cord_individual_obj[indivial_i, :] = [ 4. 6. 28. 34.]
765     cord_individual_obj[indivial_i, :] = [ 5. 5. 28. 33.]
766     cord_individual_obj[indivial_i, :] = [ 6. 4. 34. 38.]
767     cord_individual_obj[indivial_i, :] = [ 7. 5. 28. 33.]
768     cord_individual_obj[indivial_i, :] = [ 8. 4. 34. 38.]
769     cord_individual_obj[indivial_i, :] = [ 9. 5. 28. 33.]
770     cord_individual_obj[indivial_i, :] = [10. 6. 28. 34.]
771     cord_individual_obj[indivial_i, :] = [11. 5. 28. 33.]
772     cord_individual_obj[indivial_i, :] = [12. 5. 8. 13.]
773     cord_individual_obj[indivial_i, :] = [13. 6. 32. 38.]
774     cord_individual_obj[indivial_i, :] = [14. 5. 38. 43.]
775     cord_individual_obj[indivial_i, :] = [15. 5. 42. 47.]
776     cord_individual_obj[indivial_i, :] = [16. 6. 28. 34.]
777     cord_individual_obj[indivial_i, :] = [17. 6. 28. 34.]
778     cord_individual_obj[indivial_i, :] = [18. 5. 28. 33.]
779     cord_individual_obj[indivial_i, :] = [19. 5. 28. 33.]
780
781     min(cord_individual_obj[:, 3]) = 13.0
782     historl_G_best_iter[iter, 3] = 13.0
783 Begin iteration:
784
785 iter = 29
786     cord_individual_obj[indivial_i, :] = [ 0. 5. 22. 27.]
787     cord_individual_obj[indivial_i, :] = [ 1. 5. 8. 13.]
788     cord_individual_obj[indivial_i, :] = [ 2. 5. 22. 27.]
789     cord_individual_obj[indivial_i, :] = [ 3. 4. 34. 38.]
790     cord_individual_obj[indivial_i, :] = [ 4. 5. 22. 27.]
791     cord_individual_obj[indivial_i, :] = [ 5. 4. 28. 32.]
792     cord_individual_obj[indivial_i, :] = [ 6. 5. 16. 21.]
793     cord_individual_obj[indivial_i, :] = [ 7. 5. 22. 27.]
794     cord_individual_obj[indivial_i, :] = [ 8. 5. 48. 53.]
795     cord_individual_obj[indivial_i, :] = [ 9. 5. 20. 25.]
796     cord_individual_obj[indivial_i, :] = [10. 6. 8. 14.]
797     cord_individual_obj[indivial_i, :] = [11. 5. 8. 13.]
798     cord_individual_obj[indivial_i, :] = [12. 5. 28. 33.]
799     cord_individual_obj[indivial_i, :] = [13. 4. 88. 92.]
800     cord_individual_obj[indivial_i, :] = [14. 5. 44. 49.]
801     cord_individual_obj[indivial_i, :] = [15. 5. 16. 21.]
802     cord_individual_obj[indivial_i, :] = [16. 6. 16. 22.]
803     cord_individual_obj[indivial_i, :] = [17. 6. 14. 20.]
804     cord_individual_obj[indivial_i, :] = [18. 4. 76. 80.]
805     cord_individual_obj[indivial_i, :] = [19. 4. 34. 38.]
806
807     min(cord_individual_obj[:, 3]) = 13.0
808     historl_G_best_iter[iter, 3] = 13.0
809 Begin iteration:
810
811 iter = 30
812     cord_individual_obj[indivial_i, :] = [ 0. 5. 58. 63.]
813     cord_individual_obj[indivial_i, :] = [ 1. 5. 58. 63.]
814     cord_individual_obj[indivial_i, :] = [ 2. 6. 38. 44.]
815     cord_individual_obj[indivial_i, :] = [ 3. 5. 28. 33.]
816     cord_individual_obj[indivial_i, :] = [ 4. 6. 38. 44.]
817     cord_individual_obj[indivial_i, :] = [ 5. 5. 28. 33.]
818     cord_individual_obj[indivial_i, :] = [ 6. 5. 28. 33.]
819     cord_individual_obj[indivial_i, :] = [ 7. 5. 28. 33.]
820     cord_individual_obj[indivial_i, :] = [ 8. 4. 28. 32.]
821     cord_individual_obj[indivial_i, :] = [ 9. 5. 28. 33.]
822     cord_individual_obj[indivial_i, :] = [10. 6. 28. 34.]
823     cord_individual_obj[indivial_i, :] = [11. 5. 58. 63.]
824     cord_individual_obj[indivial_i, :] = [12. 5. 38. 43.]
825     cord_individual_obj[indivial_i, :] = [13. 5. 8. 13.]
826     cord_individual_obj[indivial_i, :] = [14. 5. 38. 43.]
827     cord_individual_obj[indivial_i, :] = [15. 5. 38. 43.]
828     cord_individual_obj[indivial_i, :] = [16. 4. 28. 32.]
829     cord_individual_obj[indivial_i, :] = [17. 4. 28. 32.]
830     cord_individual_obj[indivial_i, :] = [18. 5. 28. 33.]
831     cord_individual_obj[indivial_i, :] = [19. 4. 58. 62.]
832
833     min(cord_individual_obj[:, 3]) = 13.0
834     historl_G_best_iter[iter, 3] = 13.0
835 Iteration calculate over

```

unknown

```
836
837
838
839
840 All item are in Bin and:
841   Bin area = 1080
842   Real_area = 89.0
843   Proportion_of_area = 0.0824074074074074
844   BEST_CHROM =
845     berth: [ 8.5 26. 3. 13.5 17.5 21. ]
846     time: [0. 0. 0. 0. 0.]
847     num_QC: [2. 2. 3. 2. 2. 2.]
848 Objective function values and some other indicators:
849   Obj0 = 5.00      Obj1 = 8.00      Obj0 + Obj1 = 13.00
850 Total movement of crane: 8.00
851 Total waiting time in berth position: 0.00
852 Total index of q during berthing: 592.00
853 Specific arrangement for each vessel:
854   V_id: 0           li: 5.0          xi: 8.5          bow of i: 6.0          tail of i: 11.0          gama_i0: 0.0          gama_i1: 1.0
855   .0                gama_i1 + 1: 2.0    gama_i1 - gama_i0: 1.0    duration_time_i: 2.0      demand_i: 80.0        work load_i:
856   80.0              work load gap_i: 0
855   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
856   .0                gama_i1 + 1: 3.0    gama_i1 - gama_i0: 2.0    duration_time_i: 3.0      demand_i: 120.0       work
856   load_i: 120.0      work load gap_i: 0
856   V_id: 2           li: 6.0          xi: 3.0           bow of i: 0.0          tail of i: 6.0          gama_i0: 0.0          gama_i1: 4.0
856   .0                gama_i1 + 1: 5.0    gama_i1 - gama_i0: 4.0    duration_time_i: 5.0      demand_i: 260.0        work load_i:
856   260.0              work load gap_i: 0
857   V_id: 3           li: 5.0          xi: 13.5          bow of i: 11.0          tail of i: 16.0          gama_i0: 0.0          gama_i1: 1
857   .0                gama_i1 + 1: 2.0    gama_i1 - gama_i0: 1.0    duration_time_i: 2.0      demand_i: 80.0        work
857   load_i: 80.0      work load gap_i: 0
858   V_id: 4           li: 3.0          xi: 17.5          bow of i: 16.0          tail of i: 19.0          gama_i0: 0.0          gama_i1: 4
858   .0                gama_i1 + 1: 5.0    gama_i1 - gama_i0: 4.0    duration_time_i: 5.0      demand_i: 200.0       work
858   load_i: 200.0      work load gap_i: 0
859   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
859   .0                gama_i1 + 1: 6.0    gama_i1 - gama_i0: 5.0    duration_time_i: 6.0      demand_i: 220.0       work
859   load_i: 220.0      work load gap_i: 0
860
861 Algorithm finished and the total CPU time: 286 s
862 End
863
```