

unknown

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80 cord_individual_obj[indivial_i,:] = [16. 4. 26. 30.]
81 cord_individual_obj[indivial_i,:] = [17. 7. 76. 83.]
82 cord_individual_obj[indivial_i,:] = [18. 6. 70. 76.]
83 cord_individual_obj[indivial_i,:] = [19. 5. 154. 159.]
84 cord_individual_obj[indivial_i,:] = [20. 5. 77. 82.]
85 cord_individual_obj[indivial_i,:] = [21. 5. 30. 35.]
86 cord_individual_obj[indivial_i,:] = [22. 4. 138. 142.]
87 cord_individual_obj[indivial_i,:] = [23. 4. 26. 30.]
88 cord_individual_obj[indivial_i,:] = [24. 4. 161. 165.]
89
90 min(cord_individual_obj[:,3]) = 19.0
91 historl_G_best_iter[iter,3] = 19.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [ 0. 11. 82. 93.]
96 cord_individual_obj[indivial_i,:] = [ 1. 7. 70. 77.]
97 cord_individual_obj[indivial_i,:] = [ 2. 6. 41. 47.]
98 cord_individual_obj[indivial_i,:] = [ 3. 6. 98. 104.]
99 cord_individual_obj[indivial_i,:] = [ 4. 4. 32. 36.]
100 cord_individual_obj[indivial_i,:] = [ 5. 7. 53. 60.]
101 cord_individual_obj[indivial_i,:] = [ 6. 6. 51. 57.]
102 cord_individual_obj[indivial_i,:] = [ 7. 6. 62. 68.]
103 cord_individual_obj[indivial_i,:] = [ 8. 5. 127. 132.]
104 cord_individual_obj[indivial_i,:] = [ 9. 6. 86. 92.]
105 cord_individual_obj[indivial_i,:] = [10. 7. 109. 116.]
106 cord_individual_obj[indivial_i,:] = [11. 5. 15. 20.]
107 cord_individual_obj[indivial_i,:] = [12. 5. 68. 73.]
108 cord_individual_obj[indivial_i,:] = [13. 7. 36. 43.]
109 cord_individual_obj[indivial_i,:] = [14. 6. 62. 68.]
110 cord_individual_obj[indivial_i,:] = [15. 5. 74. 79.]
111 cord_individual_obj[indivial_i,:] = [16. 5. 104. 109.]
112 cord_individual_obj[indivial_i,:] = [17. 5. 117. 122.]
113 cord_individual_obj[indivial_i,:] = [18. 6. 92. 98.]
114 cord_individual_obj[indivial_i,:] = [19. 7. 92. 99.]
115 cord_individual_obj[indivial_i,:] = [20. 5. 102. 107.]
116 cord_individual_obj[indivial_i,:] = [21. 6. 87. 93.]
117 cord_individual_obj[indivial_i,:] = [22. 7. 37. 44.]
118 cord_individual_obj[indivial_i,:] = [23. 5. 16. 21.]
119 cord_individual_obj[indivial_i,:] = [24. 4. 15. 19.]
120
121 min(cord_individual_obj[:,3]) = 19.0
122 historl_G_best_iter[iter,3] = 19.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [ 0. 8. 63. 71.]
127 cord_individual_obj[indivial_i,:] = [ 1. 6. 74. 80.]
128 cord_individual_obj[indivial_i,:] = [ 2. 5. 96. 101.]
129 cord_individual_obj[indivial_i,:] = [ 3. 6. 58. 64.]
130 cord_individual_obj[indivial_i,:] = [ 4. 5. 73. 78.]
131 cord_individual_obj[indivial_i,:] = [ 5. 7. 89. 96.]
132 cord_individual_obj[indivial_i,:] = [ 6. 5. 21. 26.]
133 cord_individual_obj[indivial_i,:] = [ 7. 5. 76. 81.]
134 cord_individual_obj[indivial_i,:] = [ 8. 4. 15. 19.]
135 cord_individual_obj[indivial_i,:] = [ 9. 8. 53. 61.]
136 cord_individual_obj[indivial_i,:] = [10. 7. 64. 71.]
137 cord_individual_obj[indivial_i,:] = [11. 5. 30. 35.]
138 cord_individual_obj[indivial_i,:] = [12. 6. 41. 47.]
139 cord_individual_obj[indivial_i,:] = [13. 5. 37. 42.]
140 cord_individual_obj[indivial_i,:] = [14. 6. 107. 113.]
141 cord_individual_obj[indivial_i,:] = [15. 6. 97. 103.]
142 cord_individual_obj[indivial_i,:] = [16. 6. 74. 80.]
143 cord_individual_obj[indivial_i,:] = [17. 5. 35. 40.]
144 cord_individual_obj[indivial_i,:] = [18. 6. 93. 99.]
145 cord_individual_obj[indivial_i,:] = [19. 7. 90. 97.]
146 cord_individual_obj[indivial_i,:] = [20. 6. 43. 49.]
147 cord_individual_obj[indivial_i,:] = [21. 5. 94. 99.]
148 cord_individual_obj[indivial_i,:] = [22. 8. 83. 91.]
149 cord_individual_obj[indivial_i,:] = [23. 5. 22. 27.]
150 cord_individual_obj[indivial_i,:] = [24. 5. 66. 71.]
151
152 min(cord_individual_obj[:,3]) = 19.0
153 historl_G_best_iter[iter,3] = 19.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [ 0. 6. 123. 129.]
158 cord_individual_obj[indivial_i,:] = [ 1. 6. 142. 148.]
159 cord_individual_obj[indivial_i,:] = [ 2. 7. 67. 74.]
160 cord_individual_obj[indivial_i,:] = [ 3. 5. 146. 151.]
161 cord_individual_obj[indivial_i,:] = [ 4. 6. 142. 148.]
162 cord_individual_obj[indivial_i,:] = [ 5. 7. 103. 110.]
163 cord_individual_obj[indivial_i,:] = [ 6. 7. 97. 104.]

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164 cord_individual_obj[indivial_i,:] = [ 7. 6. 83. 89.]
165 cord_individual_obj[indivial_i,:] = [ 8. 5. 111. 116.]
166 cord_individual_obj[indivial_i,:] = [ 9. 6. 32. 38.]
167 cord_individual_obj[indivial_i,:] = [10. 7. 64. 71.]
168 cord_individual_obj[indivial_i,:] = [11. 7. 111. 118.]
169 cord_individual_obj[indivial_i,:] = [12. 7. 70. 77.]
170 cord_individual_obj[indivial_i,:] = [13. 4. 36. 40.]
171 cord_individual_obj[indivial_i,:] = [14. 4. 15. 19.]
172 cord_individual_obj[indivial_i,:] = [15. 6. 195. 201.]
173 cord_individual_obj[indivial_i,:] = [16. 4. 55. 59.]
174 cord_individual_obj[indivial_i,:] = [17. 6. 79. 85.]
175 cord_individual_obj[indivial_i,:] = [18. 7. 89. 96.]
176 cord_individual_obj[indivial_i,:] = [19. 7. 99. 106.]
177 cord_individual_obj[indivial_i,:] = [20. 6. 94. 100.]
178 cord_individual_obj[indivial_i,:] = [21. 5. 67. 72.]
179 cord_individual_obj[indivial_i,:] = [22. 4. 18. 22.]
180 cord_individual_obj[indivial_i,:] = [23. 7. 84. 91.]
181 cord_individual_obj[indivial_i,:] = [24. 7. 106. 113.]
182
183 min(cord_individual_obj[:,3]) = 19.0
184 historl_G_best_iter[iter,3] = 19.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i,:] = [ 0. 6. 44. 50.]
189 cord_individual_obj[indivial_i,:] = [ 1. 6. 106. 112.]
190 cord_individual_obj[indivial_i,:] = [ 2. 6. 73. 79.]
191 cord_individual_obj[indivial_i,:] = [ 3. 6. 46. 52.]
192 cord_individual_obj[indivial_i,:] = [ 4. 8. 54. 62.]
193 cord_individual_obj[indivial_i,:] = [ 5. 5. 37. 42.]
194 cord_individual_obj[indivial_i,:] = [ 6. 5. 64. 69.]
195 cord_individual_obj[indivial_i,:] = [ 7. 7. 27. 34.]
196 cord_individual_obj[indivial_i,:] = [ 8. 6. 115. 121.]
197 cord_individual_obj[indivial_i,:] = [ 9. 8. 97. 105.]
198 cord_individual_obj[indivial_i,:] = [10. 5. 53. 58.]
199 cord_individual_obj[indivial_i,:] = [11. 6. 69. 75.]
200 cord_individual_obj[indivial_i,:] = [12. 6. 11. 17.]
201 cord_individual_obj[indivial_i,:] = [13. 7. 66. 73.]
202 cord_individual_obj[indivial_i,:] = [14. 6. 62. 68.]
203 cord_individual_obj[indivial_i,:] = [15. 4. 15. 19.]
204 cord_individual_obj[indivial_i,:] = [16. 6. 89. 95.]
205 cord_individual_obj[indivial_i,:] = [17. 7. 82. 89.]
206 cord_individual_obj[indivial_i,:] = [18. 6. 110. 116.]
207 cord_individual_obj[indivial_i,:] = [19. 8. 116. 124.]
208 cord_individual_obj[indivial_i,:] = [20. 6. 94. 100.]
209 cord_individual_obj[indivial_i,:] = [21. 4. 140. 144.]
210 cord_individual_obj[indivial_i,:] = [22. 6. 113. 119.]
211 cord_individual_obj[indivial_i,:] = [23. 7. 96. 103.]
212 cord_individual_obj[indivial_i,:] = [24. 5. 69. 74.]
213
214 min(cord_individual_obj[:,3]) = 17.0
215 historl_G_best_iter[iter,3] = 17.0
216 Begin iteration:
217
218 iter = 6
219 cord_individual_obj[indivial_i,:] = [ 0. 7. 58. 65.]
220 cord_individual_obj[indivial_i,:] = [ 1. 5. 129. 134.]
221 cord_individual_obj[indivial_i,:] = [ 2. 6. 75. 81.]
222 cord_individual_obj[indivial_i,:] = [ 3. 6. 107. 113.]
223 cord_individual_obj[indivial_i,:] = [ 4. 8. 48. 56.]
224 cord_individual_obj[indivial_i,:] = [ 5. 4. 87. 91.]
225 cord_individual_obj[indivial_i,:] = [ 6. 8. 99. 107.]
226 cord_individual_obj[indivial_i,:] = [ 7. 6. 128. 134.]
227 cord_individual_obj[indivial_i,:] = [ 8. 7. 38. 45.]
228 cord_individual_obj[indivial_i,:] = [ 9. 5. 130. 135.]
229 cord_individual_obj[indivial_i,:] = [10. 6. 99. 105.]
230 cord_individual_obj[indivial_i,:] = [11. 7. 110. 117.]
231 cord_individual_obj[indivial_i,:] = [12. 7. 193. 200.]
232 cord_individual_obj[indivial_i,:] = [13. 6. 116. 122.]
233 cord_individual_obj[indivial_i,:] = [14. 6. 65. 71.]
234 cord_individual_obj[indivial_i,:] = [15. 6. 98. 104.]
235 cord_individual_obj[indivial_i,:] = [16. 5. 70. 75.]
236 cord_individual_obj[indivial_i,:] = [17. 4. 185. 189.]
237 cord_individual_obj[indivial_i,:] = [18. 6. 95. 101.]
238 cord_individual_obj[indivial_i,:] = [19. 6. 57. 63.]
239 cord_individual_obj[indivial_i,:] = [20. 4. 111. 115.]
240 cord_individual_obj[indivial_i,:] = [21. 6. 11. 17.]
241 cord_individual_obj[indivial_i,:] = [22. 4. 80. 84.]
242 cord_individual_obj[indivial_i,:] = [23. 6. 75. 81.]
243 cord_individual_obj[indivial_i,:] = [24. 4. 98. 102.]
244
245 min(cord_individual_obj[:,3]) = 17.0
246 historl_G_best_iter[iter,3] = 17.0
247 Begin iteration:

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248
249 iter = 7
250 cord_individual_obj[indivial_i, :] = [ 0.  8. 86. 94.]
251 cord_individual_obj[indivial_i, :] = [ 1.  7. 148. 155.]
252 cord_individual_obj[indivial_i, :] = [ 2.  6. 52. 58.]
253 cord_individual_obj[indivial_i, :] = [ 3.  7. 105. 112.]
254 cord_individual_obj[indivial_i, :] = [ 4.  6. 68. 74.]
255 cord_individual_obj[indivial_i, :] = [ 5.  5. 132. 137.]
256 cord_individual_obj[indivial_i, :] = [ 6.  5. 30. 35.]
257 cord_individual_obj[indivial_i, :] = [ 7.  7. 128. 135.]
258 cord_individual_obj[indivial_i, :] = [ 8.  4. 19. 23.]
259 cord_individual_obj[indivial_i, :] = [ 9.  7. 123. 130.]
260 cord_individual_obj[indivial_i, :] = [ 10. 7. 115. 122.]
261 cord_individual_obj[indivial_i, :] = [ 11. 7. 103. 110.]
262 cord_individual_obj[indivial_i, :] = [ 12. 6. 11. 17.]
263 cord_individual_obj[indivial_i, :] = [ 13. 7. 68. 75.]
264 cord_individual_obj[indivial_i, :] = [ 14. 5. 118. 123.]
265 cord_individual_obj[indivial_i, :] = [ 15. 8. 165. 173.]
266 cord_individual_obj[indivial_i, :] = [ 16. 5. 69. 74.]
267 cord_individual_obj[indivial_i, :] = [ 17. 4. 14. 18.]
268 cord_individual_obj[indivial_i, :] = [ 18. 6. 136. 142.]
269 cord_individual_obj[indivial_i, :] = [ 19. 7. 105. 112.]
270 cord_individual_obj[indivial_i, :] = [ 20. 6. 66. 72.]
271 cord_individual_obj[indivial_i, :] = [ 21. 5. 125. 130.]
272 cord_individual_obj[indivial_i, :] = [ 22. 4. 80. 84.]
273 cord_individual_obj[indivial_i, :] = [ 23. 7. 94. 101.]
274 cord_individual_obj[indivial_i, :] = [ 24. 4. 144. 148.]
275

276 min(cord_individual_obj[:, 3]) = 17.0
277 historl_G_best_iter[iter, 3] = 17.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [ 0.  5. 98. 103.]
282 cord_individual_obj[indivial_i, :] = [ 1.  5. 113. 118.]
283 cord_individual_obj[indivial_i, :] = [ 2.  5. 74. 79.]
284 cord_individual_obj[indivial_i, :] = [ 3.  6. 107. 113.]
285 cord_individual_obj[indivial_i, :] = [ 4.  6. 76. 82.]
286 cord_individual_obj[indivial_i, :] = [ 5.  5. 138. 143.]
287 cord_individual_obj[indivial_i, :] = [ 6.  6. 69. 75.]
288 cord_individual_obj[indivial_i, :] = [ 7.  6. 75. 81.]
289 cord_individual_obj[indivial_i, :] = [ 8.  7. 58. 65.]
290 cord_individual_obj[indivial_i, :] = [ 9.  5. 131. 136.]
291 cord_individual_obj[indivial_i, :] = [ 10. 6. 99. 105.]
292 cord_individual_obj[indivial_i, :] = [ 11. 7. 106. 113.]
293 cord_individual_obj[indivial_i, :] = [ 12. 5. 66. 71.]
294 cord_individual_obj[indivial_i, :] = [ 13. 6. 101. 107.]
295 cord_individual_obj[indivial_i, :] = [ 14. 6. 77. 83.]
296 cord_individual_obj[indivial_i, :] = [ 15. 6. 11. 17.]
297 cord_individual_obj[indivial_i, :] = [ 16. 5. 70. 75.]
298 cord_individual_obj[indivial_i, :] = [ 17. 5. 135. 140.]
299 cord_individual_obj[indivial_i, :] = [ 18. 5. 87. 92.]
300 cord_individual_obj[indivial_i, :] = [ 19. 5. 57. 62.]
301 cord_individual_obj[indivial_i, :] = [ 20. 4. 110. 114.]
302 cord_individual_obj[indivial_i, :] = [ 21. 6. 127. 133.]
303 cord_individual_obj[indivial_i, :] = [ 22. 7. 97. 104.]
304 cord_individual_obj[indivial_i, :] = [ 23. 7. 91. 98.]
305 cord_individual_obj[indivial_i, :] = [ 24. 8. 76. 84.]
306

307 min(cord_individual_obj[:, 3]) = 17.0
308 historl_G_best_iter[iter, 3] = 17.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [ 0.  6. 136. 142.]
313 cord_individual_obj[indivial_i, :] = [ 1.  8. 90. 98.]
314 cord_individual_obj[indivial_i, :] = [ 2.  6. 52. 58.]
315 cord_individual_obj[indivial_i, :] = [ 3.  5. 65. 70.]
316 cord_individual_obj[indivial_i, :] = [ 4.  7. 100. 107.]
317 cord_individual_obj[indivial_i, :] = [ 5.  6. 11. 17.]
318 cord_individual_obj[indivial_i, :] = [ 6.  6. 60. 66.]
319 cord_individual_obj[indivial_i, :] = [ 7.  4. 198. 202.]
320 cord_individual_obj[indivial_i, :] = [ 8.  9. 55. 64.]
321 cord_individual_obj[indivial_i, :] = [ 9.  8. 52. 60.]
322 cord_individual_obj[indivial_i, :] = [ 10. 5. 171. 176.]
323 cord_individual_obj[indivial_i, :] = [ 11. 9. 106. 115.]
324 cord_individual_obj[indivial_i, :] = [ 12. 5. 113. 118.]
325 cord_individual_obj[indivial_i, :] = [ 13. 7. 60. 67.]
326 cord_individual_obj[indivial_i, :] = [ 14. 5. 169. 174.]
327 cord_individual_obj[indivial_i, :] = [ 15. 7. 57. 64.]
328 cord_individual_obj[indivial_i, :] = [ 16. 6. 72. 78.]
329 cord_individual_obj[indivial_i, :] = [ 17. 6. 33. 39.]
330 cord_individual_obj[indivial_i, :] = [ 18. 7. 95. 102.]
331 cord_individual_obj[indivial_i, :] = [ 19. 7. 74. 81.]

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332 cord_individual_obj[indivial_i, :] = [20. 6. 93. 99.]
333 cord_individual_obj[indivial_i, :] = [21. 4. 133. 137.]
334 cord_individual_obj[indivial_i, :] = [22. 7. 125. 132.]
335 cord_individual_obj[indivial_i, :] = [23. 5. 85. 90.]
336 cord_individual_obj[indivial_i, :] = [24. 6. 193. 199.]
337
338 min(cord_individual_obj[:, 3]) = 17.0
339 histol_G_best_iter[iter, 3] = 17.0
340 Begin iteration:
341
342 iter = 10
343 cord_individual_obj[indivial_i, :] = [ 0. 6. 22. 28.]
344 cord_individual_obj[indivial_i, :] = [ 1. 4. 159. 163.]
345 cord_individual_obj[indivial_i, :] = [ 2. 7. 55. 62.]
346 cord_individual_obj[indivial_i, :] = [ 3. 6. 82. 88.]
347 cord_individual_obj[indivial_i, :] = [ 4. 7. 153. 160.]
348 cord_individual_obj[indivial_i, :] = [ 5. 6. 93. 99.]
349 cord_individual_obj[indivial_i, :] = [ 6. 8. 120. 128.]
350 cord_individual_obj[indivial_i, :] = [ 7. 6. 11. 17.]
351 cord_individual_obj[indivial_i, :] = [ 8. 7. 32. 39.]
352 cord_individual_obj[indivial_i, :] = [ 9. 5. 38. 43.]
353 cord_individual_obj[indivial_i, :] = [10. 6. 149. 155.]
354 cord_individual_obj[indivial_i, :] = [11. 6. 37. 43.]
355 cord_individual_obj[indivial_i, :] = [12. 6. 92. 98.]
356 cord_individual_obj[indivial_i, :] = [13. 5. 18. 23.]
357 cord_individual_obj[indivial_i, :] = [14. 7. 118. 125.]
358 cord_individual_obj[indivial_i, :] = [15. 6. 118. 124.]
359 cord_individual_obj[indivial_i, :] = [16. 6. 78. 84.]
360 cord_individual_obj[indivial_i, :] = [17. 5. 28. 33.]
361 cord_individual_obj[indivial_i, :] = [18. 5. 58. 63.]
362 cord_individual_obj[indivial_i, :] = [19. 6. 73. 79.]
363 cord_individual_obj[indivial_i, :] = [20. 6. 46. 52.]
364 cord_individual_obj[indivial_i, :] = [21. 7. 158. 165.]
365 cord_individual_obj[indivial_i, :] = [22. 8. 65. 73.]
366 cord_individual_obj[indivial_i, :] = [23. 6. 63. 69.]
367 cord_individual_obj[indivial_i, :] = [24. 7. 129. 136.]
368
369 min(cord_individual_obj[:, 3]) = 17.0
370 histol_G_best_iter[iter, 3] = 17.0
371 Begin iteration:
372
373 iter = 11
374 cord_individual_obj[indivial_i, :] = [ 0. 5. 119. 124.]
375 cord_individual_obj[indivial_i, :] = [ 1. 6. 45. 51.]
376 cord_individual_obj[indivial_i, :] = [ 2. 6. 33. 39.]
377 cord_individual_obj[indivial_i, :] = [ 3. 5. 65. 70.]
378 cord_individual_obj[indivial_i, :] = [ 4. 5. 111. 116.]
379 cord_individual_obj[indivial_i, :] = [ 5. 6. 78. 84.]
380 cord_individual_obj[indivial_i, :] = [ 6. 7. 49. 56.]
381 cord_individual_obj[indivial_i, :] = [ 7. 4. 224. 228.]
382 cord_individual_obj[indivial_i, :] = [ 8. 6. 91. 97.]
383 cord_individual_obj[indivial_i, :] = [ 9. 7. 59. 66.]
384 cord_individual_obj[indivial_i, :] = [10. 5. 91. 96.]
385 cord_individual_obj[indivial_i, :] = [11. 5. 114. 119.]
386 cord_individual_obj[indivial_i, :] = [12. 4. 156. 160.]
387 cord_individual_obj[indivial_i, :] = [13. 6. 99. 105.]
388 cord_individual_obj[indivial_i, :] = [14. 5. 122. 127.]
389 cord_individual_obj[indivial_i, :] = [15. 6. 93. 99.]
390 cord_individual_obj[indivial_i, :] = [16. 5. 49. 54.]
391 cord_individual_obj[indivial_i, :] = [17. 7. 93. 100.]
392 cord_individual_obj[indivial_i, :] = [18. 5. 16. 21.]
393 cord_individual_obj[indivial_i, :] = [19. 6. 77. 83.]
394 cord_individual_obj[indivial_i, :] = [20. 5. 68. 73.]
395 cord_individual_obj[indivial_i, :] = [21. 6. 11. 17.]
396 cord_individual_obj[indivial_i, :] = [22. 7. 50. 57.]
397 cord_individual_obj[indivial_i, :] = [23. 6. 48. 54.]
398 cord_individual_obj[indivial_i, :] = [24. 4. 76. 80.]
399
400 min(cord_individual_obj[:, 3]) = 17.0
401 histol_G_best_iter[iter, 3] = 17.0
402 Begin iteration:
403
404 iter = 12
405 cord_individual_obj[indivial_i, :] = [ 0. 6. 69. 75.]
406 cord_individual_obj[indivial_i, :] = [ 1. 6. 138. 144.]
407 cord_individual_obj[indivial_i, :] = [ 2. 7. 48. 55.]
408 cord_individual_obj[indivial_i, :] = [ 3. 4. 98. 102.]
409 cord_individual_obj[indivial_i, :] = [ 4. 5. 125. 130.]
410 cord_individual_obj[indivial_i, :] = [ 5. 4. 66. 70.]
411 cord_individual_obj[indivial_i, :] = [ 6. 6. 72. 78.]
412 cord_individual_obj[indivial_i, :] = [ 7. 6. 11. 17.]
413 cord_individual_obj[indivial_i, :] = [ 8. 4. 15. 19.]
414 cord_individual_obj[indivial_i, :] = [ 9. 6. 92. 98.]
415 cord_individual_obj[indivial_i, :] = [10. 5. 130. 135.]

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416 cord_individual_obj[indivial_i,:] = [ 11. 5. 109. 114.]
417 cord_individual_obj[indivial_i,:] = [12. 6. 50. 56.]
418 cord_individual_obj[indivial_i,:] = [13. 7. 64. 71.]
419 cord_individual_obj[indivial_i,:] = [14. 5. 31. 36.]
420 cord_individual_obj[indivial_i,:] = [ 15. 6. 135. 141.]
421 cord_individual_obj[indivial_i,:] = [16. 7. 51. 58.]
422 cord_individual_obj[indivial_i,:] = [17. 7. 48. 55.]
423 cord_individual_obj[indivial_i,:] = [18. 7. 34. 41.]
424 cord_individual_obj[indivial_i,:] = [19. 6. 65. 71.]
425 cord_individual_obj[indivial_i,:] = [20. 5. 79. 84.]
426 cord_individual_obj[indivial_i,:] = [21. 6. 84. 90.]
427 cord_individual_obj[indivial_i,:] = [22. 7. 64. 71.]
428 cord_individual_obj[indivial_i,:] = [23. 9. 53. 62.]
429 cord_individual_obj[indivial_i,:] = [24. 6. 40. 46.]
430
431 min(cord_individual_obj[:,3]) = 17.0
432 histol_G_best_iter[iter,3] = 17.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0. 4. 20. 24.]
437 cord_individual_obj[indivial_i,:] = [ 1. 6. 11. 17.]
438 cord_individual_obj[indivial_i,:] = [ 2. 6. 67. 73.]
439 cord_individual_obj[indivial_i,:] = [ 3. 5. 30. 35.]
440 cord_individual_obj[indivial_i,:] = [ 4. 8. 50. 58.]
441 cord_individual_obj[indivial_i,:] = [ 5. 4. 91. 95.]
442 cord_individual_obj[indivial_i,:] = [ 6. 5. 126. 131.]
443 cord_individual_obj[indivial_i,:] = [ 7. 7. 113. 120.]
444 cord_individual_obj[indivial_i,:] = [ 8. 7. 39. 46.]
445 cord_individual_obj[indivial_i,:] = [ 9. 5. 133. 138.]
446 cord_individual_obj[indivial_i,:] = [10. 6. 61. 67.]
447 cord_individual_obj[indivial_i,:] = [11. 5. 133. 138.]
448 cord_individual_obj[indivial_i,:] = [12. 5. 173. 178.]
449 cord_individual_obj[indivial_i,:] = [13. 5. 98. 103.]
450 cord_individual_obj[indivial_i,:] = [14. 5. 144. 149.]
451 cord_individual_obj[indivial_i,:] = [15. 5. 60. 65.]
452 cord_individual_obj[indivial_i,:] = [16. 6. 34. 40.]
453 cord_individual_obj[indivial_i,:] = [17. 5. 109. 114.]
454 cord_individual_obj[indivial_i,:] = [18. 8. 53. 61.]
455 cord_individual_obj[indivial_i,:] = [19. 8. 78. 86.]
456 cord_individual_obj[indivial_i,:] = [20. 7. 76. 83.]
457 cord_individual_obj[indivial_i,:] = [21. 7. 70. 77.]
458 cord_individual_obj[indivial_i,:] = [22. 7. 41. 48.]
459 cord_individual_obj[indivial_i,:] = [23. 4. 176. 180.]
460 cord_individual_obj[indivial_i,:] = [24. 5. 82. 87.]
461
462 min(cord_individual_obj[:,3]) = 17.0
463 histol_G_best_iter[iter,3] = 17.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0. 5. 38. 43.]
468 cord_individual_obj[indivial_i,:] = [ 1. 4. 129. 133.]
469 cord_individual_obj[indivial_i,:] = [ 2. 5. 49. 54.]
470 cord_individual_obj[indivial_i,:] = [ 3. 8. 122. 130.]
471 cord_individual_obj[indivial_i,:] = [ 4. 8. 40. 48.]
472 cord_individual_obj[indivial_i,:] = [ 5. 5. 98. 103.]
473 cord_individual_obj[indivial_i,:] = [ 6. 6. 142. 148.]
474 cord_individual_obj[indivial_i,:] = [ 7. 4. 254. 258.]
475 cord_individual_obj[indivial_i,:] = [ 8. 6. 20. 26.]
476 cord_individual_obj[indivial_i,:] = [ 9. 5. 165. 170.]
477 cord_individual_obj[indivial_i,:] = [10. 6. 83. 89.]
478 cord_individual_obj[indivial_i,:] = [11. 6. 126. 132.]
479 cord_individual_obj[indivial_i,:] = [12. 4. 74. 78.]
480 cord_individual_obj[indivial_i,:] = [13. 5. 99. 104.]
481 cord_individual_obj[indivial_i,:] = [14. 5. 102. 107.]
482 cord_individual_obj[indivial_i,:] = [15. 6. 72. 78.]
483 cord_individual_obj[indivial_i,:] = [16. 6. 70. 76.]
484 cord_individual_obj[indivial_i,:] = [17. 5. 65. 70.]
485 cord_individual_obj[indivial_i,:] = [18. 8. 68. 76.]
486 cord_individual_obj[indivial_i,:] = [19. 7. 84. 91.]
487 cord_individual_obj[indivial_i,:] = [20. 5. 111. 116.]
488 cord_individual_obj[indivial_i,:] = [21. 7. 85. 92.]
489 cord_individual_obj[indivial_i,:] = [22. 7. 62. 69.]
490 cord_individual_obj[indivial_i,:] = [23. 6. 11. 17.]
491 cord_individual_obj[indivial_i,:] = [24. 4. 124. 128.]
492
493 min(cord_individual_obj[:,3]) = 17.0
494 histol_G_best_iter[iter,3] = 17.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0. 5. 27. 32.]
499 cord_individual_obj[indivial_i,:] = [ 1. 6. 100. 106.]

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500 cord_individual_obj[indivial_i, :] = [ 2.  7. 88. 95.]
501 cord_individual_obj[indivial_i, :] = [ 3.  6. 41. 47.]
502 cord_individual_obj[indivial_i, :] = [ 4.  6. 14. 20.]
503 cord_individual_obj[indivial_i, :] = [ 5.  6. 80. 86.]
504 cord_individual_obj[indivial_i, :] = [ 6.  7. 174. 181.]
505 cord_individual_obj[indivial_i, :] = [ 7.  6. 11. 17.]
506 cord_individual_obj[indivial_i, :] = [ 8.  6. 43. 49.]
507 cord_individual_obj[indivial_i, :] = [ 9.  4. 31. 35.]
508 cord_individual_obj[indivial_i, :] = [10.  6. 111. 117.]
509 cord_individual_obj[indivial_i, :] = [11.  6. 26. 32.]
510 cord_individual_obj[indivial_i, :] = [12.  5. 129. 134.]
511 cord_individual_obj[indivial_i, :] = [13.  6. 101. 107.]
512 cord_individual_obj[indivial_i, :] = [14.  6. 100. 106.]
513 cord_individual_obj[indivial_i, :] = [15.  5. 106. 111.]
514 cord_individual_obj[indivial_i, :] = [16.  7. 84. 91.]
515 cord_individual_obj[indivial_i, :] = [17.  6. 47. 53.]
516 cord_individual_obj[indivial_i, :] = [18.  7. 158. 165.]
517 cord_individual_obj[indivial_i, :] = [19.  5. 104. 109.]
518 cord_individual_obj[indivial_i, :] = [20.  6. 70. 76.]
519 cord_individual_obj[indivial_i, :] = [21.  7. 137. 144.]
520 cord_individual_obj[indivial_i, :] = [22.  8. 61. 69.]
521 cord_individual_obj[indivial_i, :] = [23.  5. 75. 80.]
522 cord_individual_obj[indivial_i, :] = [24.  4. 105. 109.]
523
524 min(cord_individual_obj[:, 3]) = 17.0
525 histol_G_best_iter[iter, 3] = 17.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i, :] = [ 0.  6. 62. 68.]
530 cord_individual_obj[indivial_i, :] = [ 1.  4. 132. 136.]
531 cord_individual_obj[indivial_i, :] = [ 2.  5. 61. 66.]
532 cord_individual_obj[indivial_i, :] = [ 3.  8. 122. 130.]
533 cord_individual_obj[indivial_i, :] = [ 4.  6. 22. 28.]
534 cord_individual_obj[indivial_i, :] = [ 5.  4. 110. 114.]
535 cord_individual_obj[indivial_i, :] = [ 6.  6. 11. 17.]
536 cord_individual_obj[indivial_i, :] = [ 7.  7. 92. 99.]
537 cord_individual_obj[indivial_i, :] = [ 8.  7. 52. 59.]
538 cord_individual_obj[indivial_i, :] = [ 9.  7. 78. 85.]
539 cord_individual_obj[indivial_i, :] = [10.  6. 94. 100.]
540 cord_individual_obj[indivial_i, :] = [11.  7. 114. 121.]
541 cord_individual_obj[indivial_i, :] = [12.  6. 44. 50.]
542 cord_individual_obj[indivial_i, :] = [13.  5. 97. 102.]
543 cord_individual_obj[indivial_i, :] = [14.  5. 160. 165.]
544 cord_individual_obj[indivial_i, :] = [15.  5. 63. 68.]
545 cord_individual_obj[indivial_i, :] = [16.  4. 44. 48.]
546 cord_individual_obj[indivial_i, :] = [17.  5. 98. 103.]
547 cord_individual_obj[indivial_i, :] = [18.  7. 101. 108.]
548 cord_individual_obj[indivial_i, :] = [19.  7. 94. 101.]
549 cord_individual_obj[indivial_i, :] = [20.  6. 80. 86.]
550 cord_individual_obj[indivial_i, :] = [21.  7. 125. 132.]
551 cord_individual_obj[indivial_i, :] = [22.  9. 90. 99.]
552 cord_individual_obj[indivial_i, :] = [23.  7. 99. 106.]
553 cord_individual_obj[indivial_i, :] = [24.  7. 118. 125.]
554
555 min(cord_individual_obj[:, 3]) = 17.0
556 histol_G_best_iter[iter, 3] = 17.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i, :] = [ 0.  7. 73. 80.]
561 cord_individual_obj[indivial_i, :] = [ 1.  5. 156. 161.]
562 cord_individual_obj[indivial_i, :] = [ 2.  5. 61. 66.]
563 cord_individual_obj[indivial_i, :] = [ 3.  8. 122. 130.]
564 cord_individual_obj[indivial_i, :] = [ 4.  5. 59. 64.]
565 cord_individual_obj[indivial_i, :] = [ 5.  5. 98. 103.]
566 cord_individual_obj[indivial_i, :] = [ 6.  6. 60. 66.]
567 cord_individual_obj[indivial_i, :] = [ 7.  7. 176. 183.]
568 cord_individual_obj[indivial_i, :] = [ 8.  5. 20. 25.]
569 cord_individual_obj[indivial_i, :] = [ 9.  6. 63. 69.]
570 cord_individual_obj[indivial_i, :] = [10.  6. 99. 105.]
571 cord_individual_obj[indivial_i, :] = [11.  7. 176. 183.]
572 cord_individual_obj[indivial_i, :] = [12.  6. 67. 73.]
573 cord_individual_obj[indivial_i, :] = [13.  6. 68. 74.]
574 cord_individual_obj[indivial_i, :] = [14.  6. 11. 17.]
575 cord_individual_obj[indivial_i, :] = [15.  7. 73. 80.]
576 cord_individual_obj[indivial_i, :] = [16.  5. 70. 75.]
577 cord_individual_obj[indivial_i, :] = [17.  5. 97. 102.]
578 cord_individual_obj[indivial_i, :] = [18.  5. 98. 103.]
579 cord_individual_obj[indivial_i, :] = [19.  6. 60. 66.]
580 cord_individual_obj[indivial_i, :] = [20.  6. 99. 105.]
581 cord_individual_obj[indivial_i, :] = [21.  4. 82. 86.]
582 cord_individual_obj[indivial_i, :] = [22.  5. 52. 57.]
583 cord_individual_obj[indivial_i, :] = [23.  6. 22. 28.]

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unknown

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584     cord_individual_obj[indivial_i, :] = [24. 8. 84. 92.]
585
586     min(cord_individual_obj[:, 3]) = 17.0
587     historl_G_best_iter[iter, 3] = 17.0
588 Begin iteration:
589
590 iter = 18
591     cord_individual_obj[indivial_i, :] = [ 0. 8. 109. 117.]
592     cord_individual_obj[indivial_i, :] = [ 1. 5. 107. 112.]
593     cord_individual_obj[indivial_i, :] = [ 2. 5. 86. 91.]
594     cord_individual_obj[indivial_i, :] = [ 3. 6. 105. 111.]
595     cord_individual_obj[indivial_i, :] = [ 4. 6. 63. 69.]
596     cord_individual_obj[indivial_i, :] = [ 5. 4. 150. 154.]
597     cord_individual_obj[indivial_i, :] = [ 6. 5. 46. 51.]
598     cord_individual_obj[indivial_i, :] = [ 7. 6. 11. 17.]
599     cord_individual_obj[indivial_i, :] = [ 8. 7. 63. 70.]
600     cord_individual_obj[indivial_i, :] = [ 9. 7. 191. 198.]
601     cord_individual_obj[indivial_i, :] = [10. 6. 99. 105.]
602     cord_individual_obj[indivial_i, :] = [11. 6. 18. 24.]
603     cord_individual_obj[indivial_i, :] = [12. 4. 148. 152.]
604     cord_individual_obj[indivial_i, :] = [13. 6. 74. 80.]
605     cord_individual_obj[indivial_i, :] = [14. 6. 65. 71.]
606     cord_individual_obj[indivial_i, :] = [15. 7. 165. 172.]
607     cord_individual_obj[indivial_i, :] = [16. 6. 72. 78.]
608     cord_individual_obj[indivial_i, :] = [17. 7. 13. 20.]
609     cord_individual_obj[indivial_i, :] = [18. 6. 92. 98.]
610     cord_individual_obj[indivial_i, :] = [19. 5. 115. 120.]
611     cord_individual_obj[indivial_i, :] = [20. 5. 66. 71.]
612     cord_individual_obj[indivial_i, :] = [21. 5. 174. 179.]
613     cord_individual_obj[indivial_i, :] = [22. 7. 97. 104.]
614     cord_individual_obj[indivial_i, :] = [23. 7. 48. 55.]
615     cord_individual_obj[indivial_i, :] = [24. 8. 90. 98.]
616
617     min(cord_individual_obj[:, 3]) = 17.0
618     historl_G_best_iter[iter, 3] = 17.0
619 Begin iteration:
620
621 iter = 19
622     cord_individual_obj[indivial_i, :] = [ 0. 7. 46. 53.]
623     cord_individual_obj[indivial_i, :] = [ 1. 5. 155. 160.]
624     cord_individual_obj[indivial_i, :] = [ 2. 5. 74. 79.]
625     cord_individual_obj[indivial_i, :] = [ 3. 5. 106. 111.]
626     cord_individual_obj[indivial_i, :] = [ 4. 5. 59. 64.]
627     cord_individual_obj[indivial_i, :] = [ 5. 5. 102. 107.]
628     cord_individual_obj[indivial_i, :] = [ 6. 5. 117. 122.]
629     cord_individual_obj[indivial_i, :] = [ 7. 7. 97. 104.]
630     cord_individual_obj[indivial_i, :] = [ 8. 6. 36. 42.]
631     cord_individual_obj[indivial_i, :] = [ 9. 6. 11. 17.]
632     cord_individual_obj[indivial_i, :] = [10. 6. 83. 89.]
633     cord_individual_obj[indivial_i, :] = [11. 6. 126. 132.]
634     cord_individual_obj[indivial_i, :] = [12. 7. 193. 200.]
635     cord_individual_obj[indivial_i, :] = [13. 5. 133. 138.]
636     cord_individual_obj[indivial_i, :] = [14. 5. 120. 125.]
637     cord_individual_obj[indivial_i, :] = [15. 7. 92. 99.]
638     cord_individual_obj[indivial_i, :] = [16. 5. 69. 74.]
639     cord_individual_obj[indivial_i, :] = [17. 5. 135. 140.]
640     cord_individual_obj[indivial_i, :] = [18. 8. 107. 115.]
641     cord_individual_obj[indivial_i, :] = [19. 6. 60. 66.]
642     cord_individual_obj[indivial_i, :] = [20. 4. 110. 114.]
643     cord_individual_obj[indivial_i, :] = [21. 5. 125. 130.]
644     cord_individual_obj[indivial_i, :] = [22. 7. 114. 121.]
645     cord_individual_obj[indivial_i, :] = [23. 5. 75. 80.]
646     cord_individual_obj[indivial_i, :] = [24. 4. 75. 79.]
647
648     min(cord_individual_obj[:, 3]) = 17.0
649     historl_G_best_iter[iter, 3] = 17.0
650 Begin iteration:
651
652 iter = 20
653     cord_individual_obj[indivial_i, :] = [ 0. 8. 107. 115.]
654     cord_individual_obj[indivial_i, :] = [ 1. 6. 119. 125.]
655     cord_individual_obj[indivial_i, :] = [ 2. 7. 95. 102.]
656     cord_individual_obj[indivial_i, :] = [ 3. 6. 105. 111.]
657     cord_individual_obj[indivial_i, :] = [ 4. 6. 63. 69.]
658     cord_individual_obj[indivial_i, :] = [ 5. 5. 132. 137.]
659     cord_individual_obj[indivial_i, :] = [ 6. 5. 46. 51.]
660     cord_individual_obj[indivial_i, :] = [ 7. 5. 104. 109.]
661     cord_individual_obj[indivial_i, :] = [ 8. 7. 28. 35.]
662     cord_individual_obj[indivial_i, :] = [ 9. 5. 138. 143.]
663     cord_individual_obj[indivial_i, :] = [10. 5. 112. 117.]
664     cord_individual_obj[indivial_i, :] = [11. 7. 122. 129.]
665     cord_individual_obj[indivial_i, :] = [12. 6. 11. 17.]
666     cord_individual_obj[indivial_i, :] = [13. 6. 66. 72.]
667     cord_individual_obj[indivial_i, :] = [14. 5. 169. 174.]
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668 cord_individual_obj[indivial_i,:] = [ 15. 7. 167. 174.]
669 cord_individual_obj[indivial_i,:] = [16. 5. 69. 74.]
670 cord_individual_obj[indivial_i,:] = [17. 5. 32. 37.]
671 cord_individual_obj[indivial_i,:] = [18. 5. 29. 34.]
672 cord_individual_obj[indivial_i,:] = [ 19. 5. 112. 117.]
673 cord_individual_obj[indivial_i,:] = [20. 6. 63. 69.]
674 cord_individual_obj[indivial_i,:] = [ 21. 5. 176. 181.]
675 cord_individual_obj[indivial_i,:] = [22. 5. 82. 87.]
676 cord_individual_obj[indivial_i,:] = [23. 7. 57. 64.]
677 cord_individual_obj[indivial_i,:] = [ 24. 6. 117. 123.]
678
679 min(cord_individual_obj[:, 3]) = 17.0
680 historl_G_best_iter[iter, 3] = 17.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 110.0
689 Proportion_of_area = 0.10185185185185185
690 BEST_CHROM =
691 berth: [18. 24.5 4. 2.5 10. 6.5 10.5 13.5 2. 13.5]
692 time: [0. 0. 0. 1. 0. 3. 1. 0. 3. 3.]
693 num_QC: [5. 2. 6. 2. 4. 4. 2. 2. 4. 2.]
694 Objective function values and some other indicators:
695 Obj0 = 6.00          Obj1 = 11.00          Obj0 + Obj1 = 17.00
696 Total movement of crane: 0.00
697 Total waiting time in berth position: 11.00
698 Total index of q during berthing: 586.00
699 Specific arrangement for each vessel:
700 V_id: 0           li: 6.0           xi: 18.0           bow of i: 15.0           tail of i: 21.0           gama_i0: 0.0           gama_i1: 0
701 .0             gama_i1 + 1: 1.0       gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 100.0           work
702 load_i: 100.0           work load gap_i: 0
703 V_id: 1           li: 7.0           xi: 24.5           bow of i: 21.0           tail of i: 28.0           gama_i0: 0.0           gama_i1: 3
704 .0             gama_i1 + 1: 4.0       gama_i1 - gama_i0: 3.0           duration_time_i: 4.0           demand_i: 160.0           work
705 load_i: 160.0           work load gap_i: 0
706 V_id: 2           li: 8.0           xi: 4.0           bow of i: 0.0           tail of i: 8.0           gama_i0: 0.0           gama_i1: 0
707 .0             gama_i1 + 1: 1.0       gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 120.0           work load_i:
708 120.0           work load gap_i: 0
709 V_id: 3           li: 5.0           xi: 2.5           bow of i: 0.0           tail of i: 5.0           gama_i0: 1.0           gama_i1: 2.0
710 .0             gama_i1 + 1: 3.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 60.0           work load_i:
711 60.0           work load gap_i: 0
712 V_id: 4           li: 4.0           xi: 10.0           bow of i: 8.0           tail of i: 12.0           gama_i0: 0.0           gama_i1: 0
713 .0             gama_i1 + 1: 1.0       gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 80.0           work
714 load_i: 80.0           work load gap_i: 0
715 V_id: 5           li: 5.0           xi: 6.5           bow of i: 4.0           tail of i: 9.0           gama_i0: 3.0           gama_i1: 4.0
716 .0             gama_i1 + 1: 5.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 120.0           work load_i:
717 120.0           work load gap_i: 0
718 V_id: 6           li: 3.0           xi: 10.5           bow of i: 9.0           tail of i: 12.0           gama_i0: 1.0           gama_i1: 3
719 .0             gama_i1 + 1: 4.0       gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 120.0           work
720 load_i: 120.0           work load gap_i: 0
721 V_id: 7           li: 3.0           xi: 13.5           bow of i: 12.0           tail of i: 15.0           gama_i0: 0.0           gama_i1: 2
722 .0             gama_i1 + 1: 3.0       gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 120.0           work
723 load_i: 120.0           work load gap_i: 0
724 V_id: 8           li: 4.0           xi: 2.0           bow of i: 0.0           tail of i: 4.0           gama_i0: 3.0           gama_i1: 4.0
725 .0             gama_i1 + 1: 5.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 160.0           work load_i:
726 160.0           work load gap_i: 0
727 V_id: 9           li: 3.0           xi: 13.5           bow of i: 12.0           tail of i: 15.0           gama_i0: 3.0           gama_i1: 6
728 .0             gama_i1 + 1: 7.0       gama_i1 - gama_i0: 3.0           duration_time_i: 4.0           demand_i: 160.0           work
729 load_i: 160.0           work load gap_i: 0
730
731 Algorithm finished and the total CPU time: 262 s
732 End
733

```