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1 /Users/meijiaojiao/opt/anaconda3/envs/RunToEnd/bin/python /Users/meijiaojiao/Desktop/Evolution_algorithm/stuck in local minima/SSGA/SSGA.py
2 [['iterations', 'mutation_rate', 'num_individuals', 'crossover_probability', 'Mutation_type', 'Crossover_type', 'R']]
3 2022-11-20 19:57:44
4 Parameter Combination is [[1000000, 2.0, 100, 0.5, 'Normal', 'Probabilistic_crossover', 0.1]]
5 Now testing Function21
6 Times is 0
7 Iter at 1998, best solution is -2.62429E+00, optima is -10.1532, similarity is 1.13836E+01, phenotype is [3.0052924185570333, 6.98899445012937, 3.017976636862903, 6.973187572018057]
8 Iter at 3998, best solution is -2.62956E+00, optima is -10.1532, similarity is 2.08917E+00, phenotype is [3.0052924185570333, 6.992756582810602, 3.0040230539147665, 6.98844979969142]
9 Iter at 5998, best solution is -2.62956E+00, optima is -10.1532, similarity is 0.00000E+00, phenotype is [3.0052924185570333, 6.992756582810602, 3.0040230539147665, 6.98844979969142]
10 Iter at 7998, best solution is -2.62975E+00, optima is -10.1532, similarity is 2.16409E+00, phenotype is [3.0052924185570333, 6.998064663063686, 3.0040230539147665, 6.98844979969142]
11 Iter at 9998, best solution is -2.63027E+00, optima is -10.1532, similarity is 1.79827E+00, phenotype is [3.0052924185570333, 6.998064663063686, 3.0040230539147665, 7.002195731983871]
12 Iter at 11998, best solution is -2.63027E+00, optima is -10.1532, similarity is 7.91237E-01, phenotype is [3.0052924185570333, 6.998064663063686, 3.0040230539147665, 7.002195731983871]
13 Iter at 13998, best solution is -2.63027E+00, optima is -10.1532, similarity is 8.26133E-01, phenotype is [3.0052924185570333, 6.998064663063686, 3.0040230539147665, 7.002195731983871]
14 Iter at 15998, best solution is -2.63027E+00, optima is -10.1532, similarity is 6.52521E-01, phenotype is [3.0052924185570333, 6.998064663063686, 3.0040230539147665, 7.002195731983871]
15 Iter at 17998, best solution is -2.63027E+00, optima is -10.1532, similarity is 7.90316E-01, phenotype is [3.0052924185570333, 6.998064663063686, 3.0040230539147665, 7.002195731983871]
16 Iter at 19998, best solution is -2.63033E+00, optima is -10.1532, similarity is 1.01777E-01, phenotype is [3.0052924185570333, 6.998064663063686, 3.0040230539147665, 7.000811805363952]
17 Iter at 21998, best solution is -2.63036E+00, optima is -10.1532, similarity is 4.18799E-01, phenotype is [3.0052924185570333, 6.998064663063686, 3.0040230539147665, 6.997944761428063]
18 Iter at 23998, best solution is -2.63036E+00, optima is -10.1532, similarity is 1.66291E+00, phenotype is [3.0052924185570333, 6.998064663063686, 3.0040230539147665, 6.997944761428063]
19 Iter at 25998, best solution is -2.63046E+00, optima is -10.1532, similarity is 1.90392E+00, phenotype is [3.001852476507367, 6.998064663063686, 3.002757600377445, 6.997944761428063]
20 Iter at 27998, best solution is -2.63046E+00, optima is -10.1532, similarity is 1.23638E-02, phenotype is [3.001852476507367, 6.998064663063686, 3.002757600377445, 6.997944761428063]
21 Iter at 29998, best solution is -2.63046E+00, optima is -10.1532, similarity is 1.61239E-01, phenotype is [3.001852476507367, 6.998064663063686, 3.002757600377445, 6.997944761428063]
22 Iter at 31998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.92069E-02, phenotype is [3.001852476507367, 6.998064663063686, 3.002757600377445, 6.9984249338402025]
23 Iter at 33998, best solution is -2.63047E+00, optima is -10.1532, similarity is 2.44444E+00, phenotype is [3.001852476507367, 6.998064663063686, 3.0026103673753433, 6.9984249338402025]
24 Iter at 35998, best solution is -2.63047E+00, optima is -10.1532, similarity is 2.06814E+00, phenotype is [3.001852476507367, 6.998064663063686, 3.0026103673753433, 6.9984249338402025]
25 Iter at 37998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.78159E+00, phenotype is [3.001852476507367, 6.998064663063686, 3.0026103673753433, 6.9984249338402025]
26 Iter at 39998, best solution is -2.63047E+00, optima is -10.1532, similarity is 2.10000E+00, phenotype is [3.001852476507367, 6.998064663063686, 3.0026103673753433, 6.9984249338402025]
27 Iter at 41998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.51965E+00, phenotype is [3.001852476507367, 6.998064663063686, 3.0026103673753433, 6.9984249338402025]
28 Iter at 43998, best solution is -2.63047E+00, optima is -10.1532, similarity is 8.97674E-01, phenotype is [3.001852476507367, 6.998064663063686, 3.0026103673753433, 6.9984249338402025]
29 Iter at 45998, best solution is -2.63047E+00, optima is -10.1532, similarity is 9.81550E-01, phenotype is [3.001852476507367, 6.998064663063686, 3.0026103673753433, 6.9984249338402025]
30 Iter at 47998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.05998E+00, phenotype is [3.001852476507367, 6.998064663063686, 3.0026103673753433, 6.9984249338402025]
31 Iter at 49998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.85035E+00, phenotype is [3.0017572903994303, 6.998064663063686, 3.0026103673753433, 6.9984249338402025]
32 Iter at 51998, best solution is -2.63047E+00, optima is -10.1532, similarity is 2.42774E+00, phenotype is [3.0017572903994303, 6.998064663063686, 3.0026103673753433, 6.9984249338402025]
33 Iter at 53998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.13580E+00, phenotype is [3.0017572903994303, 6.998064663063686, 3.0026103673753433, 6.9984249338402025]
34 Iter at 55998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.14778E+00, phenotype is [3.0017572903994303, 6.998064663063686, 3.0026103673753433, 6.9984249338402025]
35 Iter at 57998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.32264E+00, phenotype is [3.0017572903994303, 6.998064663063686, 3.0026103673753433, 6.9984249338402025]
36 Iter at 59998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.16922E+00, phenotype is [3.0017572903994303, 6.998064663063686, 3.0026103673753433, 6.9984249338402025]
37 Iter at 61998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.74365E+00, phenotype is [3.0017572903994303, 6.998064663063686, 3.0026103673753433, 6.9984249338402025]
38 Iter at 63998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.75666E+00, phenotype is [3.0017572903994303, 6.998064663063686, 3.0026103673753433, 6.9984249338402025]
39 Iter at 65998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.67549E+00, phenotype is [3.0017572903994303, 6.998064663063686, 3.0026103673753433, 6.9984249338402025]
40 Iter at 67998, best solution is -2.63047E+00, optima is -10.1532, similarity is 2.14781E-01, phenotype is [3.0017572903994303, 6.998511143863414, 3.0026103673753433, 6.9984249338402025]
41 Iter at 69998, best solution is -2.63047E+00, optima is -10.1532, similarity is 8.50047E-01, phenotype is [3.0017572903994303, 6.998511143863414, 3.0024733593722224, 6.9984249338402025]
42 Iter at 71998, best solution is -2.63047E+00, optima is -10.1532, similarity is 2.67558E+00, phenotype is [3.0017572903994303, 6.998511143863414, 3.0024733593722224, 6.9984249338402025]
43 Iter at 73998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.29167E+00, phenotype is [3.0017572903994303, 6.998511143863414, 3.0024733593722224, 6.9984249338402025]
44 Iter at 75998, best solution is -2.63047E+00, optima is -10.1532, similarity is 2.41371E+00, phenotype is [3.0017572903994303, 6.998511143863414, 3.0018051102575782, 6.9984249338402025]
45 Iter at 77998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.97937E-01, phenotype is [3.0017572903994303, 6.998511143863414, 3.0018051102575782, 6.9984249338402025]
46 Iter at 79998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.12817E+00, phenotype is [3.0017572903994303, 6.998511143863414, 3.0018051102575782, 6.9984249338402025]
47 Iter at 81998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.02359E+00, phenotype is [3.0017572903994303, 6.998511143863414, 3.0018051102575782, 6.9984249338402025]
48 Iter at 83998, best solution is -2.63047E+00, optima is -10.1532, similarity is 4.15220E-01, phenotype is [3.0017572903994303, 6.998511143863414, 3.0018051102575782, 6.9984249338402025]
49 Iter at 85998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.36181E+00, phenotype is [3.0017572903994303, 6.998511143863414, 3.0018051102575782, 6.9984249338402025]
50 Iter at 87998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.15802E+00, phenotype is [3.0017572903994303, 6.998511143863414, 3.0018051102575782, 6.9984249338402025]
51 Iter at 89998, best solution is -2.63047E+00, optima is -10.1532, similarity is 5.12206E-01, phenotype is [3.0017572903994303, 6.998511143863414, 3.0018051102575782, 6.9984249338402025]
52 Iter at 91998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.13104E+00, phenotype is [3.0017572903994303, 6.998511143863414, 3.0018051102575782, 6.9984249338402025]
53 Iter at 93998, best solution is -2.63047E+00, optima is -10.1532, similarity is 0.00000E+00, phenotype is [3.0017572903994303, 6.998511143863414, 3.0018051102575782, 6.9984249338402025]
54 Iter at 95998, best solution is -2.63047E+00, optima is -10.1532, similarity is 3.91165E-01, phenotype is [3.0017572903994303, 6.998511143863414, 3.0018051102575782, 6.9984249338402025]
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55	Iter	at	97998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	0.00000E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
56	Iter	at	99998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.78029E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
57	Iter	at	101998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	6.01241E-01,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
58	Iter	at	103998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	3.93636E-01,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
59	Iter	at	105998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.13291E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
60	Iter	at	107998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.39297E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
61	Iter	at	109998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.78436E-01,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
62	Iter	at	111998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.39270E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
63	Iter	at	113998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.77497E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
64	Iter	at	115998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.10054E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
65	Iter	at	117998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	8.78384E-01,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
66	Iter	at	119998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	5.46419E-01,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
67	Iter	at	121998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.08009E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
68	Iter	at	123998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.22672E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
69	Iter	at	125998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	5.30786E-01,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
70	Iter	at	127998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.50234E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
71	Iter	at	129998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.11573E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
72	Iter	at	131998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.22155E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
73	Iter	at	133998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.52763E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
74	Iter	at	135998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.25790E-01,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
75	Iter	at	137998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.41841E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
76	Iter	at	139998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	9.27612E-01,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
77	Iter	at	141998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.18911E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
78	Iter	at	143998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.46206E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
79	Iter	at	145998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.83481E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
80	Iter	at	147998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	9.67715E-01,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
81	Iter	at	149998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	6.41801E-01,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
82	Iter	at	151998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.37586E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
83	Iter	at	153998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	6.56428E-01,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
84	Iter	at	155998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.45699E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
85	Iter	at	157998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	4.05966E-01,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
86	Iter	at	159998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.26735E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
87	Iter	at	161998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.01803E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
88	Iter	at	163998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.17444E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
89	Iter	at	165998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.72606E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
90	Iter	at	167998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	8.21198E-01,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
91	Iter	at	169998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.56088E-01,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
92	Iter	at	171998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.68207E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
93	Iter	at	173998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	0.00000E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
94	Iter	at	175998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.59486E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
95	Iter	at	177998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.67652E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
96	Iter	at	179998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.71852E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
97	Iter	at	181998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.27132E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
98	Iter	at	183998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.12820E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
99	Iter	at	185998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	4.75685E-01,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
100	Iter	at	187998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.83049E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
101	Iter	at	189998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.27858E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
102	Iter	at	191998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.24410E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
103	Iter	at	193998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	5.20652E-02,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
104	Iter	at	195998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.45268E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
105	Iter	at	197998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.81197E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
106	Iter	at	199998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.37353E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
107	Iter	at	201998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.68620E-01,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
108	Iter	at	203998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.02302E+00,	phenotype is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]

109	Iter	at	205998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.01683E+00,	phenotype	is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
110	Iter	at	207998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	8.60399E-01,	phenotype	is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
111	Iter	at	209998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.17292E+00,	phenotype	is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
112	Iter	at	211998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.50505E+00,	phenotype	is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
113	Iter	at	213998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	5.79693E-01,	phenotype	is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
114	Iter	at	215998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.55719E+00,	phenotype	is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
115	Iter	at	217998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.48320E+00,	phenotype	is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
116	Iter	at	219998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.00212E+00,	phenotype	is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
117	Iter	at	221998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.66211E+00,	phenotype	is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
118	Iter	at	223998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.13626E+00,	phenotype	is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
119	Iter	at	225998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.98535E+00,	phenotype	is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
120	Iter	at	227998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.11662E+00,	phenotype	is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
121	Iter	at	229998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.70627E-02,	phenotype	is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
122	Iter	at	231998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.13613E+00,	phenotype	is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
123	Iter	at	233998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.42352E+00,	phenotype	is	[3.0017572903994303,	6.998511143863414,	3.0018051102575782,	6.9984249338402025]
124	Iter	at	235998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.06372E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
125	Iter	at	237998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	8.54222E-02,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
126	Iter	at	239998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.82418E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
127	Iter	at	241998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	7.42791E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
128	Iter	at	243998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.85883E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
129	Iter	at	245998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	6.14629E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
130	Iter	at	247998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	8.68191E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
131	Iter	at	249998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	3.39274E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
132	Iter	at	251998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.04763E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
133	Iter	at	253998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	7.47246E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
134	Iter	at	255998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	5.65724E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
135	Iter	at	257998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.11206E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
136	Iter	at	259998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.49623E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
137	Iter	at	261998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.99922E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
138	Iter	at	263998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	4.46704E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
139	Iter	at	265998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	0.00000E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
140	Iter	at	267998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	3.66514E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
141	Iter	at	269998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	8.35086E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
142	Iter	at	271998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	9.71249E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
143	Iter	at	273998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.02367E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
144	Iter	at	275998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.46190E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
145	Iter	at	277998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.75300E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
146	Iter	at	279998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	5.85778E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
147	Iter	at	281998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.77058E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
148	Iter	at	283998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.00738E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
149	Iter	at	285998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.48360E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
150	Iter	at	287998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.39443E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
151	Iter	at	289998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	5.80331E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
152	Iter	at	291998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	9.71509E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
153	Iter	at	293998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	6.79106E-02,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
154	Iter	at	295998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.10586E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
155	Iter	at	297998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	0.00000E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
156	Iter	at	299998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.75979E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
157	Iter	at	301998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	7.83822E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
158	Iter	at	303998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.01694E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
159	Iter	at	305998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	0.00000E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
160	Iter	at	307998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.17308E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
161	Iter	at	309998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.03819E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
162	Iter	at	311998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.08637E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]

163	Iter	at	313998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.14792E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
164	Iter	at	315998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.44604E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
165	Iter	at	317998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.38332E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
166	Iter	at	319998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.13879E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
167	Iter	at	321998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.46756E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
168	Iter	at	323998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.59876E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
169	Iter	at	325998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.34137E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
170	Iter	at	327998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.18557E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
171	Iter	at	329998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.53253E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
172	Iter	at	331998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	3.62206E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
173	Iter	at	333998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.46161E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
174	Iter	at	335998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.62631E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
175	Iter	at	337998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.09947E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
176	Iter	at	339998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.65322E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
177	Iter	at	341998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	9.88610E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
178	Iter	at	343998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.35084E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
179	Iter	at	345998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	3.94254E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
180	Iter	at	347998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	8.59298E-01,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
181	Iter	at	349998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.07079E+00,	phenotype	is	[3.0017572903994303,	6.998232700764504,	3.0018051102575782,	6.9984249338402025]
182	Iter	at	351998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	9.60886E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
183	Iter	at	353998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.14766E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
184	Iter	at	355998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.13610E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
185	Iter	at	357998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.28226E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
186	Iter	at	359998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.20198E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
187	Iter	at	361998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	5.46111E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
188	Iter	at	363998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.45906E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
189	Iter	at	365998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.14517E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
190	Iter	at	367998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	4.36400E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
191	Iter	at	369998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.44792E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
192	Iter	at	371998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.08776E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
193	Iter	at	373998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	6.56332E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
194	Iter	at	375998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.34800E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
195	Iter	at	377998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.75860E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
196	Iter	at	379998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.77550E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
197	Iter	at	381998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	0.00000E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
198	Iter	at	383998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	4.38223E-03,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
199	Iter	at	385998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	0.00000E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
200	Iter	at	387998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.18442E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
201	Iter	at	389998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.49944E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
202	Iter	at	391998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	9.49664E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
203	Iter	at	393998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.85026E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
204	Iter	at	395998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.10891E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
205	Iter	at	397998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	0.00000E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
206	Iter	at	399998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.53647E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
207	Iter	at	401998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.07875E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
208	Iter	at	403998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.38532E-02,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
209	Iter	at	405998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.00846E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
210	Iter	at	407998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.21087E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
211	Iter	at	409998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	8.35037E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
212	Iter	at	411998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	3.23825E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
213	Iter	at	413998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.11767E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
214	Iter	at	415998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	9.66125E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
215	Iter	at	417998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	9.30900E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
216	Iter	at	419998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.95202E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]

217	Iter	at	421998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	4.37901E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
218	Iter	at	423998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.01887E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
219	Iter	at	425998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.12394E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.9984249338402025]
220	Iter	at	427998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.66925E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998405182656066]
221	Iter	at	429998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.40667E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998405182656066]
222	Iter	at	431998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	6.97512E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998405182656066]
223	Iter	at	433998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.54399E+01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998405182656066]
224	Iter	at	435998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	3.53617E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998405182656066]
225	Iter	at	437998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	6.07354E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
226	Iter	at	439998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	5.69452E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
227	Iter	at	441998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	4.05901E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
228	Iter	at	443998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.15408E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
229	Iter	at	445998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.79928E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
230	Iter	at	447998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.70504E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
231	Iter	at	449998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	9.72861E-04,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
232	Iter	at	451998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.22590E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
233	Iter	at	453998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.90716E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
234	Iter	at	455998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	7.54004E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
235	Iter	at	457998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.66843E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
236	Iter	at	459998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	5.87437E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
237	Iter	at	461998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	8.20028E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
238	Iter	at	463998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.03210E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
239	Iter	at	465998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.61279E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
240	Iter	at	467998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.28964E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
241	Iter	at	469998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.36413E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
242	Iter	at	471998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.86159E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
243	Iter	at	473998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.35797E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
244	Iter	at	475998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	0.00000E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
245	Iter	at	477998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	5.77468E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
246	Iter	at	479998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.73712E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
247	Iter	at	481998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.69551E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
248	Iter	at	483998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.51140E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
249	Iter	at	485998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	5.39541E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
250	Iter	at	487998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	4.52810E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
251	Iter	at	489998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	5.73218E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
252	Iter	at	491998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.53456E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
253	Iter	at	493998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	0.00000E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
254	Iter	at	495998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.34454E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
255	Iter	at	497998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.26744E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
256	Iter	at	499998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.75967E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
257	Iter	at	501998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.54839E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
258	Iter	at	503998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	6.53826E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
259	Iter	at	505998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.24404E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
260	Iter	at	507998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.09462E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
261	Iter	at	509998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	4.53305E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
262	Iter	at	511998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.11767E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
263	Iter	at	513998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	5.26768E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
264	Iter	at	515998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	4.77540E-01,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
265	Iter	at	517998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.70412E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
266	Iter	at	519998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.02814E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
267	Iter	at	521998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.12650E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
268	Iter	at	523998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.47687E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
269	Iter	at	525998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.09084E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
270	Iter	at	527998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.98716E+00,	phenotype	is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]

271	Iter	at	529998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	8.89814E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
272	Iter	at	531998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.19590E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
273	Iter	at	533998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.57119E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
274	Iter	at	535998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.41351E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
275	Iter	at	537998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.75235E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
276	Iter	at	539998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.00970E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
277	Iter	at	541998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	7.11356E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
278	Iter	at	543998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.96692E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
279	Iter	at	545998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	3.23920E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
280	Iter	at	547998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	6.58836E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
281	Iter	at	549998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.29777E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
282	Iter	at	551998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.70698E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
283	Iter	at	553998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.84675E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
284	Iter	at	555998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	5.66870E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
285	Iter	at	557998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	0.00000E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
286	Iter	at	559998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.29181E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
287	Iter	at	561998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.95070E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
288	Iter	at	563998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	6.09983E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
289	Iter	at	565998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.00748E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
290	Iter	at	567998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.87645E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
291	Iter	at	569998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.08063E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
292	Iter	at	571998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.38124E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
293	Iter	at	573998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.23087E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
294	Iter	at	575998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	3.60078E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
295	Iter	at	577998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.80610E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
296	Iter	at	579998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.36260E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
297	Iter	at	581998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	6.24579E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
298	Iter	at	583998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.89633E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
299	Iter	at	585998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.18314E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
300	Iter	at	587998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.62017E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
301	Iter	at	589998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	6.63335E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998266027407633]
302	Iter	at	591998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	4.58584E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
303	Iter	at	593998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.21296E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
304	Iter	at	595998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	8.29978E-02,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
305	Iter	at	597998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.65257E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
306	Iter	at	599998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	9.89051E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
307	Iter	at	601998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	7.88926E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
308	Iter	at	603998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	0.00000E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
309	Iter	at	605998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.30635E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
310	Iter	at	607998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.55390E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
311	Iter	at	609998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.09375E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
312	Iter	at	611998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	8.28404E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
313	Iter	at	613998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.75608E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
314	Iter	at	615998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.15113E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
315	Iter	at	617998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	6.49219E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
316	Iter	at	619998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.98360E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
317	Iter	at	621998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	4.02757E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
318	Iter	at	623998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.50643E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
319	Iter	at	625998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.51571E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
320	Iter	at	627998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.51482E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
321	Iter	at	629998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	7.28387E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
322	Iter	at	631998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.12960E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
323	Iter	at	633998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.51657E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
324	Iter	at	635998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	5.88667E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]

325	Iter	at	637998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.34473E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
326	Iter	at	639998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.75147E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
327	Iter	at	641998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	7.41281E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
328	Iter	at	643998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	0.00000E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
329	Iter	at	645998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	6.48235E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
330	Iter	at	647998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.21494E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
331	Iter	at	649998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	9.92289E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
332	Iter	at	651998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	6.03769E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
333	Iter	at	653998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.91500E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
334	Iter	at	655998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	6.30265E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
335	Iter	at	657998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.14098E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
336	Iter	at	659998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.43458E+00,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
337	Iter	at	661998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	9.18666E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
338	Iter	at	663998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	8.18417E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
339	Iter	at	665998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.10136E-02,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
340	Iter	at	667998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	7.07193E-01,	phenotype is	[3.0017572903994303,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
341	Iter	at	669998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.71465E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
342	Iter	at	671998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	5.01751E-01,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
343	Iter	at	673998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.39889E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
344	Iter	at	675998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.46680E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
345	Iter	at	677998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	6.04462E-01,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
346	Iter	at	679998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.25028E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
347	Iter	at	681998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.40888E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
348	Iter	at	683998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.16448E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
349	Iter	at	685998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.44902E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
350	Iter	at	687998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	9.52644E-02,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
351	Iter	at	689998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.12666E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
352	Iter	at	691998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	7.06228E-01,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
353	Iter	at	693998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.76392E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
354	Iter	at	695998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.16921E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
355	Iter	at	697998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.42741E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
356	Iter	at	699998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.10682E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
357	Iter	at	701998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	3.27279E-01,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
358	Iter	at	703998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	3.23979E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
359	Iter	at	705998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	7.18401E-01,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
360	Iter	at	707998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	0.00000E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
361	Iter	at	709998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	4.78565E-01,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
362	Iter	at	711998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	8.16093E-01,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
363	Iter	at	713998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	4.77815E-01,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
364	Iter	at	715998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	8.85125E-01,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
365	Iter	at	717998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.14022E-03,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
366	Iter	at	719998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.81930E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
367	Iter	at	721998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.13317E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
368	Iter	at	723998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	9.97493E-02,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
369	Iter	at	725998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.64512E-01,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
370	Iter	at	727998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.76755E-01,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
371	Iter	at	729998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.68495E-01,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
372	Iter	at	731998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.69979E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
373	Iter	at	733998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.32615E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
374	Iter	at	735998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	1.05985E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
375	Iter	at	737998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	2.44559E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
376	Iter	at	739998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	0.00000E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
377	Iter	at	741998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	0.00000E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
378	Iter	at	743998,	best solution is	-2.63047E+00,	optima is	-10.1532,	similarity is	0.00000E+00,	phenotype is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]

379	Iter	at	745998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.87246E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
380	Iter	at	747998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.11098E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
381	Iter	at	749998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.01943E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
382	Iter	at	751998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.33264E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
383	Iter	at	753998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.00812E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
384	Iter	at	755998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.35956E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
385	Iter	at	757998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.38323E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
386	Iter	at	759998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	6.53044E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
387	Iter	at	761998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	8.80047E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
388	Iter	at	763998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	5.54466E-02,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
389	Iter	at	765998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.51760E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
390	Iter	at	767998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.11607E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
391	Iter	at	769998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.33611E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
392	Iter	at	771998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.61480E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
393	Iter	at	773998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	7.33145E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
394	Iter	at	775998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.58536E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
395	Iter	at	777998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.66413E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
396	Iter	at	779998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	6.58283E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
397	Iter	at	781998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.31720E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
398	Iter	at	783998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.24674E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0018051102575782,	6.998307791722515]
399	Iter	at	785998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.38344E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
400	Iter	at	787998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.52977E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
401	Iter	at	789998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.97375E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
402	Iter	at	791998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.93851E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
403	Iter	at	793998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.99697E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
404	Iter	at	795998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	3.78577E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
405	Iter	at	797998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.09742E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
406	Iter	at	799998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.17820E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
407	Iter	at	801998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	4.32619E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
408	Iter	at	803998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	7.24998E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
409	Iter	at	805998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	3.16888E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
410	Iter	at	807998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	0.00000E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
411	Iter	at	809998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	8.20365E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
412	Iter	at	811998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	6.50050E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
413	Iter	at	813998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.25922E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
414	Iter	at	815998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	4.37225E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
415	Iter	at	817998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.18632E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
416	Iter	at	819998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	3.78799E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
417	Iter	at	821998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	7.87526E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
418	Iter	at	823998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.18905E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
419	Iter	at	825998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	7.87509E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
420	Iter	at	827998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.30277E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
421	Iter	at	829998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.12764E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
422	Iter	at	831998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	9.77924E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
423	Iter	at	833998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.68684E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
424	Iter	at	835998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	0.00000E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
425	Iter	at	837998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.42724E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
426	Iter	at	839998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.19554E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
427	Iter	at	841998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.17045E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
428	Iter	at	843998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.62834E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
429	Iter	at	845998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	6.09730E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
430	Iter	at	847998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.82780E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
431	Iter	at	849998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.57106E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
432	Iter	at	851998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.25277E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]

433	Iter	at	853998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.25831E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
434	Iter	at	855998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.25276E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
435	Iter	at	857998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	0.00000E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
436	Iter	at	859998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.24300E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
437	Iter	at	861998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.36930E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
438	Iter	at	863998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.53043E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
439	Iter	at	865998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.61363E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
440	Iter	at	867998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.87938E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
441	Iter	at	869998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.49182E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
442	Iter	at	871998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	9.90887E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
443	Iter	at	873998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.38787E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
444	Iter	at	875998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	3.57403E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
445	Iter	at	877998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	0.00000E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
446	Iter	at	879998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.98196E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
447	Iter	at	881998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.30117E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
448	Iter	at	883998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.19798E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
449	Iter	at	885998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.40847E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
450	Iter	at	887998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.43446E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
451	Iter	at	889998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.85190E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
452	Iter	at	891998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	6.26717E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
453	Iter	at	893998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.05673E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
454	Iter	at	895998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.46403E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
455	Iter	at	897998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	6.79929E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
456	Iter	at	899998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.20547E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
457	Iter	at	901998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.62765E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
458	Iter	at	903998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.25367E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
459	Iter	at	905998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.02179E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
460	Iter	at	907998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	3.19957E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
461	Iter	at	909998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	5.35386E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
462	Iter	at	911998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	6.79413E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
463	Iter	at	913998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	8.90868E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
464	Iter	at	915998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.58153E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
465	Iter	at	917998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.70212E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
466	Iter	at	919998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	5.86564E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
467	Iter	at	921998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.85242E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
468	Iter	at	923998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.73248E+00,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
469	Iter	at	925998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	3.12202E-01,	phenotype	is	[3.0018224487743868,	6.998364302626367,	3.0017898622684034,	6.998307791722515]
470	Iter	at	927998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.13613E+00,	phenotype	is	[3.0018224487743868,	6.9983205998670055,	3.0017898622684034,	6.998307791722515]
471	Iter	at	929998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	3.55455E-01,	phenotype	is	[3.0018224487743868,	6.9983205998670055,	3.0017898622684034,	6.998307791722515]
472	Iter	at	931998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.45650E+00,	phenotype	is	[3.0018224487743868,	6.9983205998670055,	3.0017898622684034,	6.998307791722515]
473	Iter	at	933998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	9.33655E-01,	phenotype	is	[3.0018224487743868,	6.9983205998670055,	3.0017898622684034,	6.998307791722515]
474	Iter	at	935998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	3.03604E-01,	phenotype	is	[3.0018224487743868,	6.9983205998670055,	3.0017898622684034,	6.998307791722515]
475	Iter	at	937998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.25876E+00,	phenotype	is	[3.0018224487743868,	6.9983205998670055,	3.0017898622684034,	6.998307791722515]
476	Iter	at	939998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	8.01645E-01,	phenotype	is	[3.0018224487743868,	6.9983205998670055,	3.0017898622684034,	6.998307791722515]
477	Iter	at	941998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	8.91436E-01,	phenotype	is	[3.0018224487743868,	6.9983205998670055,	3.0017898622684034,	6.998307791722515]
478	Iter	at	943998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	5.31120E-01,	phenotype	is	[3.0018224487743868,	6.9983205998670055,	3.0017898622684034,	6.998307791722515]
479	Iter	at	945998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	8.58058E-01,	phenotype	is	[3.0018224487743868,	6.9983205998670055,	3.0017898622684034,	6.998307791722515]
480	Iter	at	947998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	2.02986E+00,	phenotype	is	[3.0018224487743868,	6.9983205998670055,	3.0017898622684034,	6.998307791722515]
481	Iter	at	949998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.45668E+00,	phenotype	is	[3.0018224487743868,	6.9983205998670055,	3.0017898622684034,	6.998307791722515]
482	Iter	at	951998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	8.99552E-01,	phenotype	is	[3.0018224487743868,	6.9983205998670055,	3.0017898622684034,	6.998307791722515]
483	Iter	at	953998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	6.84155E-01,	phenotype	is	[3.0018224487743868,	6.9983205998670055,	3.0017898622684034,	6.998307791722515]
484	Iter	at	955998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.58740E+00,	phenotype	is	[3.0018224487743868,	6.9983205998670055,	3.0017898622684034,	6.998307791722515]
485	Iter	at	957998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	1.44873E+00,	phenotype	is	[3.0018224487743868,	6.9983205998670055,	3.0017898622684034,	6.998307791722515]
486	Iter	at	959998,	best	solution	is	-2.63047E+00,	optima	is	-10.1532,	similarity	is	8.78918E-01,	phenotype	is	[3.0018224487743868,	6.9983205998670055,	3.0017898622684034,	6.998307791722515]

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487 Iter at 961998, best solution is -2.63047E+00, optima is -10.1532, similarity is 3.10188E-01, phenotype is [3.0018224487743868, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
488 Iter at 963998, best solution is -2.63047E+00, optima is -10.1532, similarity is 7.29290E-01, phenotype is [3.0018224487743868, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
489 Iter at 965998, best solution is -2.63047E+00, optima is -10.1532, similarity is 2.32495E-01, phenotype is [3.0018224487743868, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
490 Iter at 967998, best solution is -2.63047E+00, optima is -10.1532, similarity is 0.00000E+00, phenotype is [3.0018224487743868, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
491 Iter at 969998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.86136E+00, phenotype is [3.0018224487743868, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
492 Iter at 971998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.28603E+00, phenotype is [3.0018224487743868, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
493 Iter at 973998, best solution is -2.63047E+00, optima is -10.1532, similarity is 2.00392E+00, phenotype is [3.0018224487743868, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
494 Iter at 975998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.84649E-01, phenotype is [3.0018224487743868, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
495 Iter at 977998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.04047E+00, phenotype is [3.0018224487743868, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
496 Iter at 979998, best solution is -2.63047E+00, optima is -10.1532, similarity is 6.62214E-01, phenotype is [3.0018224487743868, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
497 Iter at 981998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.25307E+00, phenotype is [3.0018224487743868, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
498 Iter at 983998, best solution is -2.63047E+00, optima is -10.1532, similarity is 0.00000E+00, phenotype is [3.0018224487743868, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
499 Iter at 985998, best solution is -2.63047E+00, optima is -10.1532, similarity is 4.78719E-01, phenotype is [3.001801979516982, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
500 Iter at 987998, best solution is -2.63047E+00, optima is -10.1532, similarity is 2.17015E+00, phenotype is [3.001801979516982, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
501 Iter at 989998, best solution is -2.63047E+00, optima is -10.1532, similarity is 6.83479E-01, phenotype is [3.001801979516982, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
502 Iter at 991998, best solution is -2.63047E+00, optima is -10.1532, similarity is 5.46499E-01, phenotype is [3.001801979516982, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
503 Iter at 993998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.64370E+00, phenotype is [3.001801979516982, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
504 Iter at 995998, best solution is -2.63047E+00, optima is -10.1532, similarity is 6.28974E-01, phenotype is [3.001801979516982, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
505 Iter at 997998, best solution is -2.63047E+00, optima is -10.1532, similarity is 1.44165E+00, phenotype is [3.001801979516982, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
506 Iter at 999998, best solution is -2.63047E+00, optima is -10.1532, similarity is 4.54438E-01, phenotype is [3.001801979516982, 6.9983205998670055, 3.0017898622684034, 6.998307791722515]
507
508 Process finished with exit code 0
509
```