```
1 /Users/meijiaojiao/opt/anaconda3/envs/RunToEnd/bin/python /Users/meijiaojiao/Desktop/Evolution_algorithm/stuck in local minima/L/Lamarck_main.py
 2 [['iterations', 'mutation_rate', 'num_individuals', 'crossover_probability', 'Mutation_type', 'Crossover_type', 'local_search_rate', 'Local_search_type', 'R']]
 3 [[1000000, 1.0, 200, 0.6, 'Normal', 'Probabilistic_crossover', 0.5, 'Uniform', 0.1]] [579]
 4 2022-11-20 20:21:08
 5 Now testing Function21
 6 Times is 0
 7 Iter at 1998.
                 best solution is -5.09375E+00.
                                                  optima is -10.1532,
                                                                       similarity is 1.08088E+01.
                                                                                                    phenotype is [8.009576887162906, 7.9947075491847155, 7.9877616769967945, 7.9954603946869645]
 8 Iter at 3998, best solution is -5.09849E+00,
                                                  optima is -10.1532,
                                                                       similarity is 3.28148E+00.
                                                                                                    phenotype is [7.9948585935377015, 7.9947075491847155, 7.994345647195533, 7.9954603946869645]
9 Iter at 5998, best solution is -5.09995E+00,
                                                  optima is -10.1532,
                                                                      similarity is 2.28490E-01,
                                                                                                    phenotype is [7.999682528892362, 7.9947075491847155, 8.001740568187927, 8.001614252070862]
10 Iter at 7998, best solution is -5.10055E+00,
                                                  optima is -10.1532,
                                                                                                    phenotype is [7.999682528892362, 8.000165425858466, 8.001740568187927, 8.001614252070862]
                                                                       similarity is 0.00000E+00,
11 Iter at 9998, best solution is -5.10061E+00,
                                                                                                    phenotype is [7.999682528892362, 8.000165425858466, 8.001045139220732, 8.001614252070862]
                                                  optima is -10.1532,
                                                                       similarity is 5.79330E-01.
12 Iter at 11998, best solution is -5.10061E+00, optima is -10.1532, similarity is 5.95301E-01
                                                                                                     phenotype is [7.999682528892362, 8.000165425858466, 8.001045139220732, 8.001614252070862]
                                                                                                     phenotype is [7.999682528892362, 8.000165425858466, 8.001045139220732, 8.001614252070862]
13 Iter at 13998, best solution is -5.10061E+00,
                                                   optima is -10.1532,
                                                                        similarity is 3.64781E-01,
14 Iter at 15998, best solution is -5.10061E+00,
                                                  optima is -10.1532,
                                                                        similarity is 0.00000E+00,
                                                                                                     phenotype is [7.999682528892362, 8.000165425858466, 8.001045139220732, 8.001614252070862]
15 Iter at 17998, best solution is -5.10071E+00,
                                                  optima is -10.1532,
                                                                        similarity is 1.10336E+00
                                                                                                     phenotype is [7.999682528892362, 7.999338940921035, 8.001045139220732, 7.999060229127191]
16 Iter at 19998, best solution is -5.10072E+00, optima is -10.1532,
                                                                        similarity is 0.00000E+00
                                                                                                     phenotype is [7.999682528892362, 7.999338940921035, 7.998356661219164, 7.999060229127191]
17 Iter at 21998, best solution is -5.10072E+00, optima is -10.1532,
                                                                        similarity is 2.78442E-01
                                                                                                     phenotype is [7.999682528892362, 7.999338940921035, 7.998356661219164, 7.999060229127191]
18 Iter at 23998, best solution is -5.10073E+00,
                                                  optima is -10.1532,
                                                                        similarity is 0.00000E+00
                                                                                                     phenotype is [7.999682528892362, 7.999338940921035, 7.998356661219164, 7.999385445363402]
                                                   optima is -10.1532,
19 Iter at 25998, best solution is -5.10073E+00,
                                                                                                     phenotype is [7.999682528892362, 7.999338940921035, 7.998356661219164, 7.999385445363402]
                                                                        similarity is 0.00000E+00
20 Iter at 27998, best solution is -5.10073E+00,
                                                  optima is -10.1532,
                                                                        similarity is 0.00000E+00
                                                                                                     phenotype is [7.999682528892362, 7.999338940921035, 7.998356661219164, 7.999385445363402]
21 Iter at 29998, best solution is -5.10073E+00,
                                                   optima is -10.1532,
                                                                        similarity is 9.25704E-01,
                                                                                                     phenotype is [7.999682528892362, 7.999338940921035, 7.998356661219164, 7.999385445363402]
22 Iter at 31998, best solution is -5.10077E+00, optima is -10.1532,
                                                                        similarity is 4.11538E-01,
                                                                                                     phenotype is [7.999682528892362, 7.999338940921035, 7.999329981477379, 7.999385445363402]
23 Iter at 33998, best solution is -5.10077E+00,
                                                   optima is -10.1532,
                                                                        similarity is 0.00000E+00
                                                                                                     phenotype is [7.999682528892362, 7.999338940921035, 7.999329981477379, 7.999385445363402]
24 Iter at 35998, best solution is -5.10077E+00,
                                                  optima is -10.1532,
                                                                        similarity is 4.27431E-01,
                                                                                                     phenotype is [7.999682528892362, 7.999338940921035, 7.999329981477379, 7.999385445363402]
25 Iter at 37998, best solution is -5.10077E+00,
                                                   optima is -10.1532,
                                                                        similarity is 4.26750E-01,
                                                                                                     phenotype is [7.999682528892362, 7.999338940921035, 7.999329981477379, 7.999385445363402]
26 Iter at 39998, best solution is -5.10077E+00,
                                                   optima is -10.1532,
                                                                                                     phenotype is [7.999682528892362, 7.999338940921035, 7.999329981477379, 7.999385445363402]
                                                                        similarity is 3.54159E-01
27 Iter at 41998, best solution is -5.10077E+00,
                                                   optima is -10.1532,
                                                                        similarity is 0.00000E+00
                                                                                                     phenotype is [7.999510495387853, 7.999338940921035, 7.999329981477379, 7.999385445363402]
28 Iter at 43998, best solution is -5.10077E+00,
                                                   optima is -10.1532,
                                                                        similarity is 9.62733E-01,
                                                                                                     phenotype is [7.999510495387853, 7.999338940921035, 7.999329981477379, 7.999385445363402]
29 Iter at 45998, best solution is -5.10077E+00,
                                                   optima is -10.1532,
                                                                        similarity is 1.25432E+00,
                                                                                                     phenotype is [7.999510495387853, 7.999338940921035, 7.999329981477379, 7.999385445363402]
30 Iter at 47998, best solution is -5.10077E+00,
                                                  optima is -10.1532,
                                                                        similarity is 2.96438E-01,
                                                                                                     phenotype is [7.999510495387853, 7.999338940921035, 7.999329981477379, 7.999385445363402]
31 Iter at 49998, best solution is -5.10077E+00, optima is -10.1532,
                                                                        similarity is 6.03134E-01,
                                                                                                     phenotype is [7.999510495387853, 7.999338940921035, 7.999329981477379, 7.999385445363402]
32 Iter at 51998, best solution is -5.10077E+00,
                                                   optima is -10.1532,
                                                                        similarity is 0.00000E+00.
                                                                                                     phenotype is [7.999510495387853, 7.999748680781884, 7.999329981477379, 7.999385445363402]
33 Iter at 53998, best solution is -5.10077E+00,
                                                   optima is -10.1532,
                                                                        similarity is 5.91424E-01
                                                                                                     phenotype is [7.999510495387853, 7.999748680781884, 7.999329981477379, 7.999385445363402]
34 Iter at 55998, best solution is -5.10077E+00,
                                                   optima is -10.1532,
                                                                        similarity is 5.46911E-01,
                                                                                                     phenotype is [7.999510495387853, 7.999748680781884, 7.999329981477379, 7.999385445363402]
35 Iter at 57998, best solution is -5.10077E+00,
                                                  optima is -10.1532,
                                                                        similarity is 1.56934E+00,
                                                                                                     phenotype is [7.999510495387853, 7.999748680781884, 7.999329981477379, 7.999385445363402]
36 Iter at 59998, best solution is -5.10077E+00,
                                                  optima is -10.1532,
                                                                        similarity is 2.23802E-01,
                                                                                                     phenotype is [7.999510495387853, 7.999748680781884, 7.999329981477379, 7.999385445363402]
37 Iter at 61998, best solution is -5.10077E+00, optima is -10.1532,
                                                                        similarity is 8.04829E-01,
                                                                                                     phenotype is [7.999510495387853, 7.999748680781884, 7.999329981477379, 7.999385445363402]
                                                  optima is -10.1532,
                                                                                                     phenotype is [7.999510495387853, 7.999748680781884, 7.999329981477379, 7.999385445363402]
38 Iter at 63998, best solution is -5.10077E+00,
                                                                        similarity is 0.00000E+00
39 Iter at 65998, best solution is -5.10077E+00, optima is -10.1532,
                                                                        similarity is 9.98148E-01,
                                                                                                     phenotype is [7.999510495387853, 7.999748680781884, 7.999329981477379, 7.999385445363402]
40 Iter at 67998, best solution is -5.10077E+00,
                                                   optima is -10.1532,
                                                                        similarity is 4.92939E-01,
                                                                                                     phenotype is [7.999510495387853, 7.999748680781884, 7.999329981477379, 7.999385445363402]
41 Iter at 69998, best solution is -5.10077E+00,
                                                   optima is -10.1532,
                                                                                                     phenotype is [7.999510495387853, 7.999748680781884, 7.999329981477379, 7.999385445363402]
                                                                        similarity is 6.33696E-01
42 Iter at 71998, best solution is -5.10077E+00,
                                                   optima is -10.1532,
                                                                        similarity is 2.23798E+00
                                                                                                     phenotype is [7.999599572438184, 7.999748680781884, 7.999329981477379, 7.9997393351749455]
43 Iter at 73998, best solution is -5.10077E+00,
                                                   optima is -10.1532,
                                                                        similarity is 2.28747E+00,
                                                                                                     phenotype is [7.99959572438184, 7.999748680781884, 7.999329981477379, 7.9997393351749455]
44 Iter at 75998, best solution is -5.10077E+00,
                                                   optima is -10.1532,
                                                                        similarity is 3.29235E-01,
                                                                                                     phenotype is [7.999599572438184, 7.999748680781884, 7.999329981477379, 7.9997393351749455]
45 Iter at 77998, best solution is -5.10077E+00,
                                                  optima is -10.1532,
                                                                        similarity is 1.67831E+00,
                                                                                                     phenotype is [7.999599572438184, 7.999748680781884, 7.999329981477379, 7.9997393351749455]
46 Iter at 79998, best solution is -5.10077E+00, optima is -10.1532,
                                                                        similarity is 6.22150E-02,
                                                                                                     phenotype is [7.999599572438184, 7.999748680781884, 7.999329981477379, 7.9997393351749455]
47 Iter at 81998, best solution is -5.10077E+00,
                                                   optima is -10.1532,
                                                                        similarity is 1.24721E+00,
                                                                                                     phenotype is [7.99959572438184, 7.999748680781884, 7.999329981477379, 7.9997393351749455]
48 Iter at 83998, best solution is -5.10077E+00,
                                                   optima is -10.1532,
                                                                        similarity is 5.34715E-01
                                                                                                     phenotype is [7.999599572438184, 7.999748680781884, 7.999329981477379, 7.9997393351749455]
49 Iter at 85998, best solution is -5.10077E+00,
                                                   optima is -10.1532,
                                                                        similarity is 0.00000E+00
                                                                                                     phenotype is [7.999599572438184, 7.999748680781884, 7.999329981477379, 7.9997393351749455]
                                                                                                     phenotype is [7.999599572438184, 7.999748680781884, 7.999329981477379, 7.9997393351749455]
50 Iter at 87998, best solution is -5.10077E+00,
                                                  optima is -10.1532,
                                                                        similarity is 3.42462E-01
51 Iter at 89998, best solution is -5.10077E+00,
                                                   optima is -10.1532,
                                                                        similarity is 5.09402E-01.
                                                                                                     phenotype is [7.99959572438184, 7.999748680781884, 7.999329981477379, 7.9997393351749455]
52 Iter at 91998, best solution is -5.10077E+00,
                                                  optima is -10.1532,
                                                                        similarity is 0.00000E+00.
                                                                                                     phenotype is [7.999599572438184, 7.999748680781884, 7.999329981477379, 7.9997393351749455]
53 Iter at 93998, best solution is -5.10077E+00, optima is -10.1532,
                                                                        similarity is 0.00000E+00,
                                                                                                     phenotype is [7.99959572438184, 7.999748680781884, 7.999467856293006, 7.9997393351749455]
54 Iter at 95998, best solution is -5.10077E+00, optima is -10.1532, similarity is 2.43817E-02,
                                                                                                     phenotype is [7.999599572438184, 7.999748680781884, 7.999467856293006, 7.9997393351749455]
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File - Lamarck_main						
55 Iter at 97998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.69929E-01,	phenotype is [7.999599572438184,	7.999748680781884,	7.999467856293006, 7.9997393351749455]
56 Iter at 99998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,	7.999748680781884,	7.999467856293006, 7.9997393351749455]
57 Iter at 101998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.32612E+00,		-	, 7.999467856293006, 7.9997393351749455]
58 Iter at 103998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 9.54367E-01,			, 7.999467856293006, 7.9997393351749455]
59 Iter at 105998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,			, 7.999467856293006, 7.9997393351749455]
60 Iter at 107998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.19721E+00,			, 7.999467856293006, 7.9997393351749455]
61 Iter at 109998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 8.64294E-01,			, 7.999493314320636, 7.9997393351749455]
	•	•	•			· · · · · · · · · · · · · · · · · · ·
62 Iter at 111998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.42390E+00,			, 7.999493314320636, 7.9997393351749455]
63 Iter at 113998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.00164E+00,			, 7.999493314320636, 7.9997393351749455]
64 Iter at 115998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 6.40123E-01,			, 7.999493314320636, 7.9997393351749455]
65 Iter at 117998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 7.92930E-01,			, 7.999493314320636, 7.9997393351749455]
66 Iter at 119998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	· · · · · · · · · · · · · · · · · · ·		, 7.999493314320636, 7.9997393351749455]
67 Iter at 121998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 6.02665E-01,			, 7.999493314320636, 7.9997393351749455]
68 Iter at 123998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,			, 7.999493314320636, 7.9997393351749455]
69 Iter at 125998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.30574E+00,			, 7.999493314320636, 7.9997393351749455]
70 Iter at 127998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.21401E-01,	phenotype is [7.999599572438184,	, 7.999748680781884	, 7.999493314320636, 7.9997393351749455]
71 Iter at 129998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,	, 7.999748680781884	, 7.999493314320636, 7.9997393351749455]
72 Iter at 131998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.44682E-01,	phenotype is [7.999599572438184,	, 7.999748680781884	, 7.999493314320636, 7.9997393351749455]
73 Iter at 133998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.48017E+00,	phenotype is [7.999599572438184,	, 7.999748680781884	, 7.999493314320636, 7.9997393351749455]
74 Iter at 135998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.51324E+00,	phenotype is [7.999599572438184,	, 7.999748680781884	, 7.999493314320636, 7.9997393351749455]
75 Iter at 137998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 5.64634E-01,	phenotype is [7.999599572438184,	, 7.999748680781884	, 7.999493314320636, 7.9997393351749455]
76 Iter at 139998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 7.62554E-01,			, 7.999493314320636, 7.9997393351749455]
77 Iter at 141998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 8.08201E-01,			, 7.999493314320636, 7.9997393351749455]
78 Iter at 143998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 8.76978E-02,			, 7.999493314320636, 7.9997393351749455]
79 Iter at 145998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.12803E-01,			, 7.999493314320636, 7.9997393351749455]
80 Iter at 147998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 7.61481E-01,			, 7.999493314320636, 7.9997393351749455]
81 Iter at 149998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.60547E-01,			, 7.999493314320636, 7.9997393351749455]
82 Iter at 151998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.04291E+00,			, 7.999493314320636, 7.9997393351749455]
83 Iter at 153998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.37263E+00,			, 7.999493314320636, 7.9997393351749455]
84 Iter at 155998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.37203E+00, similarity is 2.87056E-01,	· · · · · · · · · · · · · · · · · · ·		, 7.999493314320636, 7.9997393351749455]
85 Iter at 157998,	-	optima is -10.1532,	•			, 7.999493314320636, 7.9997393351749455]
	best solution is -5.10077E+00,	'	similarity is 8.08780E-01,			
86 Iter at 159998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 9.52014E-01,			, 7.999493314320636, 7.9997393351749455]
87 Iter at 161998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.37912E+00,			, 7.999493314320636, 7.9997393351749455]
88 Iter at 163998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,			, 7.999493314320636, 7.9997393351749455]
89 Iter at 165998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.67547E+00,			, 7.999493314320636, 7.9997393351749455]
90 Iter at 167998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 5.94633E-01,			, 7.999493314320636, 7.9997393351749455]
91 Iter at 169998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,			, 7.999493314320636, 7.9997393351749455]
92 Iter at 171998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.21982E+00,			, 7.999493314320636, 7.9997393351749455]
93 Iter at 173998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.57940E-02,			, 7.999493314320636, 7.9997393351749455]
94 Iter at 175998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.36257E+00,			, 7.999493314320636, 7.9997393351749455]
95 Iter at 177998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 7.98816E-01,			, 7.999493314320636, 7.9997393351749455]
96 Iter at 179998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,	, 7.999748680781884	, 7.999493314320636, 7.9997393351749455]
97 Iter at 181998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.81581E+00,	phenotype is [7.999599572438184,	, 7.999748680781884	, 7.999493314320636, 7.9997393351749455]
98 Iter at 183998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,	, 7.999748680781884	, 7.999493314320636, 7.9997393351749455]
99 Iter at 185998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.37501E-01,	phenotype is [7.999599572438184,	, 7.999748680781884	, 7.999493314320636, 7.9997393351749455]
100 Iter at 187998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,	, 7.999748680781884	, 7.999493314320636, 7.9997393351749455]
101 Iter at 189998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 9.10291E-01,	phenotype is [7.999599572438184,	, 7.999748680781884	, 7.999493314320636, 7.9997393351749455]
102 Iter at 191998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.46006E-01,	phenotype is [7.999599572438184,	, 7.999748680781884	, 7.999493314320636, 7.9997393351749455]
103 Iter at 193998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 8.77583E-01,			, 7.999493314320636, 7.9997393351749455]
104 Iter at 195998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.05754E+00,			, 7.999493314320636, 7.9997393351749455]
105 Iter at 197998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.61129E+00,			, 7.999493314320636, 7.9997393351749455]
106 Iter at 199998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.40129E+00,			, 7.999493314320636, 7.9997393351749455]
107 Iter at 201998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,			, 7.999493314320636, 7.9997393351749455]
108 Iter at 203998,	-	optima is -10.1532,	similarity is 0.00000E+00,			, 7.999493314320636, 7.9997393351749455]
130 100 00 200778,	5050 5000010H 13 5.100//L+00,	Sperma 13 10.1332,	51m1 car 1 cy 13 0.00000L+00,	phonocype 13 [/.///3//3/2430104]	,	, ,.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

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109 Iter at 205998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.44988E-02,	phenotype is [7.999599572438184, 7.999748680781884, 7.999493314320636, 7.9997393351749455]
110 Iter at 207998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 5.53301E-01,	phenotype is [7.999599572438184, 7.999748680781884, 7.999493314320636, 7.9997393351749455]
111 Iter at 209998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.04416E+00,	phenotype is [7.999599572438184, 7.999748680781884, 7.999493314320636, 7.9997393351749455]
112 Iter at 211998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 9.68939E-04,	phenotype is [7.999599572438184, 7.999748680781884, 7.999493314320636, 7.9997393351749455]
113 Iter at 213998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.56561E+00,	phenotype is [7.999599572438184, 7.999748680781884, 7.999493314320636, 7.9997393351749455]
114 Iter at 215998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 7.06286E-01,	phenotype is [7.999599572438184, 7.999748680781884, 7.999493314320636, 7.9997393351749455]
115 Iter at 217998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.14388E-01,	phenotype is [7.999599572438184, 7.999748680781884, 7.999493314320636, 7.9997393351749455]
116 Iter at 219998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.16811E+00,	phenotype is [7.999599572438184, 7.999748680781884, 7.999493314320636, 7.9997393351749455]
117 Iter at 221998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.10775E+00,	phenotype is [7.999599572438184, 7.999748680781884, 7.999493314320636, 7.9997393351749455]
118 Iter at 223998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 5.59925E-01,	phenotype is [7.999599572438184, 7.999748680781884, 7.999493314320636, 7.9997393351749455]
119 Iter at 225998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.99053E-02,	phenotype is [7.999599572438184, 7.999748680781884, 7.999493314320636, 7.9997393351749455]
120 Iter at 227998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 9.31453E-02,	phenotype is [7.999599572438184, 7.999748680781884, 7.999493314320636, 7.9997393351749455]
121 Iter at 229998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.64281E+00,	phenotype is [7.999599572438184, 7.999748680781884, 7.999493314320636, 7.9997393351749455]
122 Iter at 231998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.41248E-01,	phenotype is [7.999599572438184, 7.999553647629974, 7.999493314320636, 7.9997254821825585]
123 Iter at 233998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.65751E+00,	phenotype is [7.999599572438184, 7.999553647629974, 7.999493314320636, 7.9997254821825585]
124 Iter at 235998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.98897E-01,	phenotype is [7.999599572438184, 7.999553647629974, 7.999493314320636, 7.9997254821825585]
125 Iter at 237998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.17862E-01,	phenotype is [7.999599572438184, 7.999553647629974, 7.999493314320636, 7.9997254821825585]
126 Iter at 239998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.13753E-01,	phenotype is [7.999599572438184, 7.999553647629974, 7.999493314320636, 7.9997254821825585]
127 Iter at 241998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.13733E+00,	phenotype is [7.7777732430164, 7.777333647627774, 7.777473314320636, 7.777254821825385]
128 Iter at 243998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 5.92395E-01,	phenotype is [7.999599572438184, 7.999553647629974, 7.999493314320636, 7.9997254821825585]
129 Iter at 245998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.19701E-01,	phenotype is [7.999599572438184, 7.999553647629974, 7.999493314320636, 7.9997254821825585]
130 Iter at 247998,	best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.777377372436184, 7.777333647627774, 7.777473314320636, 7.7777254821825385]
131 Iter at 249998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 8.03947E-02,	phenotype is [7.999599572438184, 7.999553647629974, 7.999493314320636, 7.9997254821825585]
132 Iter at 251998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 7.16393E-01,	phenotype is [7.7777732430164, 7.777333647627774, 7.777473314320636, 7.777254821825385]
133 Iter at 253998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 7.10373E 01, similarity is 9.99676E-01,	phenotype is [7.999599572438184, 7.999553647629974, 7.999493314320636, 7.9997254821825585]
134 Iter at 255998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999553647629974, 7.999493314320636, 7.9997254821825585]
135 Iter at 257998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.7777732430164, 7.777333647627774, 7.777473314320636, 7.777254821825385]
136 Iter at 259998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999553647629974, 7.999493314320636, 7.9997254821825585]
137 Iter at 261998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999553647629974, 7.999493314320636, 7.9997254821825585]
138 Iter at 263998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.53697E+00,	phenotype is [7.7777732430164, 7.777333647627774, 7.777473314320636, 7.777254821825385]
139 Iter at 265998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999553647629974, 7.999493314320636, 7.9997254821825585]
140 Iter at 267998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.18997E+00,	phenotype is [7.999599572438184, 7.999553647629974, 7.999493314320636, 7.9997254821825585]
141 Iter at 269998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.52977E-01,	phenotype is [7.7777732430164, 7.777333647627774, 7.777473314320636, 7.777254821825385]
142 Iter at 271998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 6.91209E-01,	phenotype is [7.999599572438184, 7.999553647629974, 7.999493314320636, 7.9997254821825585]
143 Iter at 273998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999553647629974, 7.999493314320636, 7.9997254821825585]
144 Iter at 275998,	best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 0.00000E+00, similarity is 3.99847E-01,	phenotype is [7.777377372436184, 7.777333647627774, 7.777473314320636, 7.7777254821825385]
145 Iter at 277998,	best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 3.776472-01, similarity is 1.49903E+00,	phenotype is [7.777377372436184, 7.777333647627774, 7.777473314320636, 7.7777254821825385]
146 Iter at 277998,	best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 1.477032+00, similarity is 3.24321E-01,	phenotype is [7.777377372436184, 7.777333647627774, 7.777473314320636, 7.7777254821825385]
147 Iter at 281998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 6.51886E-01,	phenotype is [7.999599572438184, 7.999553647629974, 7.999493314320636, 7.9997254821825585]
148 Iter at 283998,	best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 0.51886E-01, similarity is 1.55831E+00,	phenotype is [7.777377372436184, 7.777333647627774, 7.777473314320636, 7.7777254821825385]
149 Iter at 285998,	best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 1.33531E+00, similarity is 1.12551E+00,	phenotype is [7.777377372436184, 7.777333647627774, 7.777473314320636, 7.7777254821825385]
150 Iter at 287998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.16328E+00,	phenotype is [7.999599572438184, 7.999553647629974, 7.999575738521806, 7.9997254821825585]
151 Iter at 289998,	best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 3.10328E+00, similarity is 2.03382E+00,	phenotype is [7.777377372436184, 7.777333647627774, 7.777373738521806, 7.7777243621825385]
152 Iter at 291998,	best solution is -5.10077E+00, best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 2.03382E+00, similarity is 1.65995E-01,	phenotype is [7.999599572438184, 7.999553647629974, 7.999575738521806, 7.9997254821825585]
153 Iter at 293998,	best solution is -5.10077E+00, best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 1.46131E-01,	phenotype is [7.999599572438184, 7.999553647629974, 7.999575738521806, 7.9997254821825585]
154 Iter at 295998,	best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	•	phenotype is [7.999599572438184, 7.999553647629974, 7.999575738521806, 7.9997254821825585]
154 Iter at 295998,	best solution is -5.10077E+00, best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 1.78431E+00, similarity is 2.32490E-01,	phenotype is [7.999599572438184, 7.999553647629974, 7.999575738521806, 7.9997254821825385]
156 Iter at 297998,		•	•	
150 Iter at 299998, 157 Iter at 301998,	best solution is -5.10077E+00, best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 4.62199E-01,	phenotype is [7.999599572438184, 7.999553647629974, 7.999575738521806, 7.9997254821825585] phenotype is [7.999599572438184, 7.999553647629974, 7.999575738521806, 7.9997254821825585]
,		•	similarity is 9.74239E-01,	phenotype is [7.999599572438184, 7.999553647629974, 7.999575738521806, 7.9997254821825585]
158 Iter at 303998, 159 Iter at 305998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	
160 Iter at 307998,	best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999553647629974, 7.999575738521806, 7.9997254821825585]
,	best solution is -5.10077E+00,	•	similarity is 1.14494E+00,	phenotype is [7.999599572438184, 7.999553647629974, 7.999575738521806, 7.9997254821825585]
161 Iter at 309998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.48119E+00,	phenotype is [7.999599572438184, 7.999553647629974, 7.999575738521806, 7.9997254821825585]
162 Iter at 311998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999553647629974, 7.999575738521806, 7.9997254821825585]

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163 Iter at 313998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999553647629974, 7.999575738521806, 7.9997254821825585]	Ī
164 Iter at 315998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.06638E+00,	phenotype is [7.999599572438184, 7.999553647629974, 7.999575738521806, 7.9997254821825585]	
165 Iter at 317998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.00027E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	]
166 Iter at 319998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	
167 Iter at 321998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 9.89941E-01,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	
168 Iter at 323998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.04572E-02,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	
169 Iter at 325998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	
170 Iter at 327998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.03459E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	=
171 Iter at 329998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.86766E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	
172 Iter at 331998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.19765E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	
173 Iter at 333998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	-
174 Iter at 335998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	
175 Iter at 337998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 6.47609E-01,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	_
176 Iter at 339998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.12751E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	
177 Iter at 341998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	
178 Iter at 343998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 9.26295E-02,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	_
179 Iter at 345998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.65313E-01,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	
180 Iter at 347998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.40279E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	
181 Iter at 349998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	
182 Iter at 351998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 5.33546E-01,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	_
183 Iter at 353998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.89369E-01,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	
184 Iter at 355998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	_
185 Iter at 357998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.9997254821825585]	_
186 Iter at 359998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.47591E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	,
187 Iter at 361998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.02332E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
188 Iter at 363998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.12094E-01,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
189 Iter at 365998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.48926E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
190 Iter at 367998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 5.69390E-01,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
191 Iter at 369998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.94015E-01,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
192 Iter at 371998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.46641E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
193 Iter at 373998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
194 Iter at 375998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.06362E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
195 Iter at 377998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
196 Iter at 379998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.13216E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
197 Iter at 381998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
198 Iter at 383998,	best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 0.00000E+00, similarity is 1.21918E+00,	phenotype is [7.777377372436184, 7.777837213727434, 7.777373736321806, 7.77707702873004] phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
199 Iter at 385998,	best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 1.217182+00, similarity is 3.39277E-01,	phenotype is [7.777377372436184, 7.777037213727434, 7.777373736321806, 7.77707702873004] phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
200 Iter at 387998,	best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 3.372772-01, similarity is 3.01316E-01,	phenotype is [7.777377372436184, 7.777837213727434, 7.777373736321806, 7.77707702873004] phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
201 Iter at 389998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
201 Iter at 307778,	best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 0.00000E+00, similarity is 9.16405E-01,	phenotype is [7.777377372436184, 7.777037213727434, 7.777373736321806, 7.77707702873004] phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
203 Iter at 393998,	best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 7.10403E-01, similarity is 1.92644E+00,	phenotype is [7.777377372436184, 7.777837213727434, 7.777373736321806, 7.77707702873004] phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
204 Iter at 395998,	best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 1.72044E+00, similarity is 4.10500E-01,	phenotype is [7.777377372436184, 7.777037213727434, 7.777373736321806, 7.77707702873004] phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
205 Iter at 397998,	best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 4.103002-01, similarity is 1.42741E+00,	phenotype is [7.777377372436184, 7.777037213727434, 7.777373736321806, 7.77707702873004] phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
206 Iter at 399998,	best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 1.42741E+00, similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
207 Iter at 401998,		•	•		
208 Iter at 403998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.34464E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
209 Iter at 405998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.56625E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
210 Iter at 407998, 211 Iter at 409998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.53337E-01,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
212 Iter at 411998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
213 Iter at 413998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.09671E-01,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
214 Iter at 415998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 9.16659E-01,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
215 Iter at 417998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.03738E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	
216 Iter at 419998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184, 7.999639215929434, 7.999575738521806, 7.99967702895664]	

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217 Iter at 421998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,	, 7.999639215929434, 7.99957573852180	6, 7.99967702895664]
218 Iter at 423998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,	, 7.999639215929434, 7.99957573852180	6, 7.99967702895664]
219 Iter at 425998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.64961E+00,	phenotype is [7.999599572438184,	7.999639215929434, 7.99957573852180	6, 7.99967702895664]
220 Iter at 427998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.96600E+00,	phenotype is [7.999599572438184,	7.999639215929434, 7.99957573852180	6, 7.99967702895664]
221 Iter at 429998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.05224E-01,	- · · · · · · · · · · · · · · · · · · ·	, 7.999639215929434, 7.99957573852180	
222 Iter at 431998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	_ · · · · · · · · · · · · · · · · · · ·	7.999639215929434, 7.99957573852180	
223 Iter at 433998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.06715E+00,		7.999639215929434, 7.99957573852180	
224 Iter at 435998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.86972E-01,	- · · · · · · · · · · · · · · · · · · ·	, 7.999639215929434, 7.99957573852180	
225 Iter at 437998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	_ · · · · · · · · · · · · · · · · · · ·	, 7.999639215929434, 7.99957573852180	
226 Iter at 439998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.88762E+00,		, 7.999639215929434, 7.99957573852180	
227 Iter at 441998,	best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 1.88702E+00, similarity is 0.00000E+00,	- · · · · · · · · · · · · · · · · · · ·	, 7.999639215929434, 7.99957573852180	
228 Iter at 443998,		•		_ · · · · · · · · · · · · · · · · · · ·		
	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.35336E-01,		, 7.999639215929434, 7.99957573852180 , 7.999639215929434, 7.99957573852180	
229 Iter at 445998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	_ · · · · · · · · · · · · · · · · · · ·		
230 Iter at 447998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,		, 7.999639215929434, 7.99957573852180	
231 Iter at 449998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	- · · · · · · · · · · · · · · · · · · ·	, 7.999639215929434, 7.99957573852180	
232 Iter at 451998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	_ · · · · · · · · · · · · · · · · · · ·	, 7.999639215929434, 7.99957573852180	
233 Iter at 453998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.93007E-01,	_ · · · · · · · · · · · · · · · · · · ·	, 7.999639215929434, 7.99957573852180	
234 Iter at 455998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.35549E+00,	- · · · · · · · · · · · · · · · · · · ·	, 7.999639215929434, 7.99957573852180	
235 Iter at 457998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.77315E+00,	_ · · · · · · · · · · · · · · · · · · ·	, 7.999639215929434, 7.99957573852180	
236 Iter at 459998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 9.72395E-01,	phenotype is [7.999599572438184,	, 7.999639215929434, 7.99957573852180	6, 7.99967702895664]
237 Iter at 461998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,	, 7.999639215929434, 7.99957573852180	6, 7.99967702895664]
238 Iter at 463998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,	, 7.999639215929434, 7.99957573852180	6, 7.99967702895664]
239 Iter at 465998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.80124E-01,	phenotype is [7.999599572438184,	, 7.999639215929434, 7.99957573852180	6, 7.99967702895664]
240 Iter at 467998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 6.97334E-01,	phenotype is [7.999599572438184,	, 7.999639215929434, 7.99957573852180	6, 7.99967702895664]
241 Iter at 469998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,	, 7.999639215929434, 7.99957573852180	6, 7.99967702895664]
242 Iter at 471998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 9.02792E-02,	phenotype is [7.999599572438184,	, 7.999639215929434, 7.99957573852180	6, 7.99967702895664]
243 Iter at 473998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.09399E+00,	phenotype is [7.999599572438184,	, 7.999639215929434, 7.99957573852180	6, 7.99967702895664]
244 Iter at 475998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.25407E+00,	phenotype is [7.999599572438184,	, 7.999639215929434, 7.99957573852180	6, 7.99967702895664]
245 Iter at 477998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 7.81094E-01,	phenotype is [7.999599572438184,	, 7.999639215929434, 7.99957573852180	6, 7.99967702895664]
246 Iter at 479998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,	7.999639215929434, 7.99957573852180	6, 7.99967702895664]
247 Iter at 481998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,	7.999639215929434, 7.99957573852180	6, 7.99967702895664]
248 Iter at 483998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.77005E-02,	phenotype is [7.999599572438184,	7.999639215929434, 7.99957573852180	6, 7.99967702895664]
249 Iter at 485998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.04120E+00,	- · · · · · · · · · · · · · · · · · · ·	, 7.999639215929434, 7.99957573852180	
250 Iter at 487998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.21330E-01,		7.999639215929434, 7.99957573852180	
251 Iter at 489998.	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,		7.999639215929434, 7.99957573852180	•
252 Iter at 491998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,		7.999639215929434, 7.99957573852180	
253 Iter at 493998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.80365E-01,		7.999639215929434, 7.99957573852180	
254 Iter at 495998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.92302E+00,	· · · · · · · · · · · · · · · · · · ·	7.999639215929434, 7.99957573852180	· · · · · · · · · · · · · · · · · · ·
255 Iter at 497998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 8.05206E-01,		7.999639215929434, 7.99957573852180	
256 Iter at 499998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,		, 7.999639215929434, 7.99957573852180	
257 Iter at 501998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 8.23396E-01,		, 7.999639215929434, 7.99957573852180	
258 Iter at 503998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.27271E+00,		, 7.999639215929434, 7.99957573852180	
259 Iter at 505998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,		, 7.999639215929434, 7.99957573852180	•
260 Iter at 507998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,		, 7.999639215929434, 7.99957573852180	
261 Iter at 509998,	best solution is -5.10077E+00,	optima is -10.1532, optima is -10.1532,	similarity is 0.000002+00, similarity is 1.80957E+00,	_ · · · · · · · · · · · · · · · · · · ·	, 7.999639215929434, 7.99957573852180	
	•	•			•	•
262 Iter at 511998, 263 Iter at 513998,	best solution is -5.10077E+00, best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,		, 7.999639215929434, 7.99957573852180 , 7.999639215929434, 7.99957573852180	
,	•	optima is -10.1532,	similarity is 0.00000E+00,		•	
264 Iter at 515998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 6.16631E-01,		7.999639215929434, 7.99957573852180	
265 Iter at 517998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.74938E-01,		7.999639215929434, 7.99957573852180	
266 Iter at 519998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.57641E-01,		, 7.999639215929434, 7.99957573852180	
267 Iter at 521998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.24032E+00,	- · · · · · · · · · · · · · · · · · · ·	, 7.999639215929434, 7.99957573852180	
268 Iter at 523998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	_ · · · · · · · · · · · · · · · · · · ·	, 7.999639215929434, 7.99957573852180	
269 Iter at 525998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,		, 7.999639215929434, 7.99957573852180	
270 Iter at 527998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.73030E+00,	pnenotype is [7.999599572438184,	, 7.999639215929434, 7.99957573852180	6, 7.99967702895664]

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271 Iter at 529998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,	7.999639215929434,	7.999575738521806,	7.99967702895664]
272 Iter at 531998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,	7.999639215929434,	7.999575738521806,	7.99967702895664]
273 Iter at 533998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,	7.999639215929434,	7.999575738521806,	7.99967702895664]
274 Iter at 535998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,	7.999639215929434,	7.999575738521806,	7.99967702895664]
275 Iter at 537998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,			_
276 Iter at 539998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.25447E+00,	phenotype is [7.999599572438184,		·	
277 Iter at 541998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,		·	
278 Iter at 543998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.07448E+00,	phenotype is [7.999599572438184,	· ·	·	
279 Iter at 545998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.33204E-01,	phenotype is [7.999599572438184,		•	
280 Iter at 547998,		•				·	
· ·	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.03631E+00,	phenotype is [7.999599572438184,		·	
281 Iter at 549998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.06176E+00,	phenotype is [7.999599572438184,		•	
282 Iter at 551998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.41236E+00,	phenotype is [7.999599572438184,		·	
283 Iter at 553998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,		•	
284 Iter at 555998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,		•	
285 Iter at 557998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 6.98468E-01,	phenotype is [7.999599572438184,		·	
286 Iter at 559998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.68501E-01,	phenotype is [7.999599572438184,		•	
287 Iter at 561998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.97814E-01,	phenotype is [7.999599572438184,	7.999639215929434,	7.999575738521806,	7.99967702895664]
288 Iter at 563998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.59891E-01,	phenotype is [7.999599572438184,	7.999639215929434,	7.999575738521806,	7.99967702895664]
289 Iter at 565998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.37214E-01,	phenotype is [7.999599572438184,	7.999639215929434,	7.999575738521806,	7.99967702895664]
290 Iter at 567998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,	7.999639215929434,	7.999575738521806,	7.99967702895664]
291 Iter at 569998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.17706E-01,	phenotype is [7.999599572438184,	7.999639215929434,	7.999575738521806,	7.999659703498437]
292 Iter at 571998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.39266E+00,	phenotype is [7.999599572438184,	7.999639215929434,	7.999575738521806,	7.999659703498437]
293 Iter at 573998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,	7.999639215929434,	7.999575738521806,	7.999659703498437]
294 Iter at 575998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 8.88899E-01,	phenotype is [7.999599572438184,	7.999639215929434,	7.999575738521806,	7.999659703498437]
295 Iter at 577998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,			
296 Iter at 579998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.82173E-01,	phenotype is [7.999599572438184,		•	
297 Iter at 581998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.64822E-01,	phenotype is [7.999599572438184,		·	
298 Iter at 583998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.26495E+00,	phenotype is [7.999599572438184,			
299 Iter at 585998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,		•	
300 Iter at 587998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999599572438184,		·	
301 Iter at 589998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.45953E+00,	phenotype is [7.999568220585948,		•	
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302 Iter at 591998, 303 Iter at 593998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,			
1	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,			
304 Iter at 595998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.32197E+00,	phenotype is [7.999568220585948,	•	•	
305 Iter at 597998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	· ·	·	
306 Iter at 599998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.39816E-01,	phenotype is [7.999568220585948,			
307 Iter at 601998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.20629E+00,	phenotype is [7.999568220585948,	•	•	
308 Iter at 603998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,		·	
309 Iter at 605998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.46635E+00,	phenotype is [7.999568220585948,		·	
310 Iter at 607998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	•	•	
311 Iter at 609998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.78978E+00,	phenotype is [7.999568220585948,		·	
312 Iter at 611998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.47715E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999575738521806,	7.999659703498437]
313 Iter at 613998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 5.13376E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999575738521806,	7.999659703498437]
314 Iter at 615998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.97389E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999575738521806,	7.999659703498437]
315 Iter at 617998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999575738521806,	7.999659703498437]
316 Iter at 619998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.28142E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999575738521806,	7.999659703498437]
317 Iter at 621998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999575738521806,	7.999659703498437]
318 Iter at 623998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999575738521806,	7.999659703498437]
319 Iter at 625998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,		·	
320 Iter at 627998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.51848E-01,	phenotype is [7.999568220585948,		•	
321 Iter at 629998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,		·	
322 Iter at 631998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.51642E+00,	phenotype is [7.999568220585948,		·	
323 Iter at 633998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,		•	
324 Iter at 635998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,		•	
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325 Iter at 637998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.56101E-01,	phenotype is [7.999568220585948, 7.999	639215929434, 7.99	99575738521806, 7	7.999659703498437]
326 Iter at 639998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948, 7.999	639215929434, 7.99	99575738521806, 7	7.999659703498437]
327 Iter at 641998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.42092E+00,	phenotype is [7.999568220585948, 7.999	639215929434, 7.99	99575738521806, 7	7.999659703498437]
328 Iter at 643998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948, 7.999	639215929434, 7.99	99575738521806, 7	7.999659703498437]
329 Iter at 645998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948, 7.999	639215929434, 7.99	99575738521806, 7	7.999659703498437]
330 Iter at 647998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948, 7.999	639215929434, 7.9	99575738521806, 7	7.999659703498437]
331 Iter at 649998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 5.70956E-02,	phenotype is [7.999568220585948, 7.999	-	·	
332 Iter at 651998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.51384E+00,	phenotype is [7.999568220585948, 7.999	)639215929434, 7.9°	99575738521806, 7	7.999659703498437]
333 Iter at 653998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 8.75225E-01,	phenotype is [7.999568220585948, 7.999	-	·	
334 Iter at 655998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948, 7.999	-	·	
335 Iter at 657998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948, 7.999	•	•	
336 Iter at 659998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948, 7.999	-	·	
337 Iter at 661998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 9.40010E-01,	phenotype is [7.999568220585948, 7.999	•	•	
338 Iter at 663998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948, 7.999	-	·	
339 Iter at 665998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.61913E+00,	phenotype is [7.999568220585948, 7.999	-	·	
340 Iter at 667998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.87898E-01,	phenotype is [7.999568220585948, 7.999	•	•	
341 Iter at 669998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.82481E-01,	phenotype is [7.999568220585948, 7.999	-	·	
342 Iter at 671998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.13604E+00,	phenotype is [7.999568220585948, 7.999	-	·	
343 Iter at 673998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.88613E-02,	phenotype is [7.999568220585948, 7.999	•	·	
344 Iter at 675998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 9.16719E-01,	phenotype is [7.999568220585948, 7.999	•	· · · · · · · · · · · · · · · · · · ·	
345 Iter at 677998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948, 7.999	-	·	
346 Iter at 679998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948, 7.999	-	·	
347 Iter at 681998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.92931E-01,	phenotype is [7.999568220585948, 7.999	-	·	
348 Iter at 683998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.03144E+00,	phenotype is [7.999568220585948, 7.999	•	·	
349 Iter at 685998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 7.04286E-01,	phenotype is [7.999568220585948, 7.999	-	·	
350 Iter at 687998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 6.98934E-01,	phenotype is [7.999568220585948, 7.999	-	·	
351 Iter at 689998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.04010E+00,	phenotype is [7.999568220585948, 7.999	•	·	
352 Iter at 691998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.53253E+00,	phenotype is [7.999568220585948, 7.999	-	·	
353 Iter at 693998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948, 7.999	-	·	
354 Iter at 695998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 7.51108E-01,	phenotype is [7.999568220585948, 7.999	•	•	
355 Iter at 697998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.87145E-01,	phenotype is [7.999568220585948, 7.999	-	·	
356 Iter at 699998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 9.36718E-01,	phenotype is [7.999568220585948, 7.999	-	·	
357 Iter at 701998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.99157E+00,	phenotype is [7.999568220585948, 7.999	-	·	
358 Iter at 703998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.95917E-01,	phenotype is [7.999568220585948, 7.999	-	·	
359 Iter at 705998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.85574E+00,	phenotype is [7.999568220585948, 7.999	-	·	
360 Iter at 707998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 8.66300E-01,	phenotype is [7.999568220585948, 7.999	•	·	
361 Iter at 709998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948, 7.999	•	· · · · · · · · · · · · · · · · · · ·	
362 Iter at 711998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.33794E+00,	phenotype is [7.999568220585948, 7.999	•	·	
363 Iter at 713998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948, 7.999	-	·	
364 Iter at 715998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948, 7.999	-	·	
365 Iter at 717998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 8.31779E-01,	phenotype is [7.999568220585948, 7.999	•	·	
366 Iter at 719998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 7.20194E-01,	phenotype is [7.999568220585948, 7.999	•	· · · · · · · · · · · · · · · · · · ·	
367 Iter at 721998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 8.32723E-01,	phenotype is [7.999568220585948, 7.999	-	·	
368 Iter at 723998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948, 7.999	-	·	
369 Iter at 725998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.50307E+00,	phenotype is [7.999568220585948, 7.999	-	·	
370 Iter at 727998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 6.78932E-01,	phenotype is [7.999568220585948, 7.999	-	·	
371 Iter at 729998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.55383E+00,	phenotype is [7.999568220585948, 7.999	•	•	
372 Iter at 731998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 6.86136E-01,	phenotype is [7.999568220585948, 7.999	-	·	
373 Iter at 733998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.24613E+00,	phenotype is [7.999568220585948, 7.999	•	·	
374 Iter at 735998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.90947E-01,	phenotype is [7.999568220585948, 7.999	•	· · · · · · · · · · · · · · · · · · ·	
375 Iter at 737998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.11010E+00,	phenotype is [7.999568220585948, 7.999	•	· · · · · · · · · · · · · · · · · · ·	
376 Iter at 739998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.88975E-01,	phenotype is [7.999568220585948, 7.999	-	·	
377 Iter at 741998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948, 7.999	•	· · · · · · · · · · · · · · · · · · ·	
378 Iter at 743998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948, 7.999	•	· · · · · · · · · · · · · · · · · · ·	
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379 Iter at 745998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.53353E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
380 Iter at 747998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
381 Iter at 749998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
382 Iter at 751998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 8.63470E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
383 Iter at 753998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
384 Iter at 755998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.00577E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
385 Iter at 757998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.62260E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
386 Iter at 759998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
387 Iter at 761998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.32108E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
388 Iter at 763998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
389 Iter at 765998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.56964E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
390 Iter at 767998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.09869E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
391 Iter at 769998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.19840E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
392 Iter at 771998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 8.93426E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
393 Iter at 773998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.70750E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
394 Iter at 775998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.27890E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
395 Iter at 777998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.65708E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
396 Iter at 779998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.68428E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
397 Iter at 781998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
398 Iter at 783998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.94263E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
399 Iter at 785998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.25354E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
400 Iter at 787998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.85427E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
401 Iter at 789998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.47318E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
402 Iter at 791998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
403 Iter at 793998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.45929E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
404 Iter at 795998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 6.63022E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
405 Iter at 797998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.91284E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
406 Iter at 799998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
407 Iter at 801998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.21809E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
408 Iter at 803998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 7.26003E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
409 Iter at 805998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.26941E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
410 Iter at 807998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
411 Iter at 809998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
412 Iter at 811998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 8.38846E-02,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
413 Iter at 813998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
414 Iter at 815998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
415 Iter at 817998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
416 Iter at 819998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.89203E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
417 Iter at 821998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.67160E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
418 Iter at 823998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.95415E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
419 Iter at 825998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.67694E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
420 Iter at 827998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.30585E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
421 Iter at 829998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.26069E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
422 Iter at 831998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 7.45472E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
423 Iter at 833998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.06238E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
424 Iter at 835998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 3.44979E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
425 Iter at 837998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.30507E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
426 Iter at 839998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
427 Iter at 841998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 5.52962E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
428 Iter at 843998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.72884E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
429 Iter at 845998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.07566E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
430 Iter at 847998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.28257E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
431 Iter at 849998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.02865E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
432 Iter at 851998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 5.49632E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]

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433 Iter at 853998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 7.29723E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
434 Iter at 855998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
435 Iter at 857998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
436 Iter at 859998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.04642E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
437 Iter at 861998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
438 Iter at 863998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.57655E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
439 Iter at 865998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 6.14894E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
440 Iter at 867998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.48653E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
441 Iter at 869998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.30471E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
442 Iter at 871998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.48968E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
443 Iter at 873998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.98095E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
444 Iter at 875998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 5.88737E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
445 Iter at 877998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.74736E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
446 Iter at 879998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 5.71242E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
447 Iter at 881998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
448 Iter at 883998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 6.06920E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
449 Iter at 885998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
450 Iter at 887998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.03683E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
451 Iter at 889998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.58778E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
452 Iter at 891998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
453 Iter at 893998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 4.22780E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
454 Iter at 895998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,			
455 Iter at 897998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
456 Iter at 899998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 7.20103E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
457 Iter at 901998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.23646E+00,	phenotype is [7.999568220585948,			
458 Iter at 903998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
459 Iter at 905998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
460 Iter at 907998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
461 Iter at 909998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
462 Iter at 911998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
463 Iter at 913998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.36209E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
464 Iter at 915998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 7.59223E-01,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
465 Iter at 917998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.47407E+00,	phenotype is [7.999568220585948,	•	·	
466 Iter at 919998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.79806E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
467 Iter at 921998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.22110E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
468 Iter at 923998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	·	•	
469 Iter at 925998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.04431E+00,	phenotype is [7.999568220585948,			
470 Iter at 927998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
471 Iter at 929998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.55540E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
472 Iter at 931998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.38776E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
473 Iter at 933998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
474 Iter at 935998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
475 Iter at 937998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
476 Iter at 939998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163,	7.999659703498437]
477 Iter at 941998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.76886E-01,	phenotype is [7.999568220585948,	•	·	
478 Iter at 943998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	7.999639215929434,	7.999578431210163.	7.9996597034984371
479 Iter at 945998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	•	•	
480 Iter at 947998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	•	•	=
481 Iter at 949998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	·	•	
482 Iter at 951998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.19859E+00,	phenotype is [7.999568220585948,	•	·	
483 Iter at 953998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 0.00000E+00,	phenotype is [7.999568220585948,	•	·	
484 Iter at 955998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 1.32828E+00,	phenotype is [7.999568220585948,	•	•	
485 Iter at 957998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 5.21196E-01,	phenotype is [7.999568220585948,	•	·	
486 Iter at 959998,	best solution is -5.10077E+00,	optima is -10.1532,	similarity is 2.14844E+00,	phenotype is [7.999568220585948,	•	·	
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## File - Lamarck main

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487 Iter at 961998,
                    best solution is -5.10077E+00,
                                                    optima is -10.1532,
                                                                         similarity is 2.42458E+00,
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
488 Iter at 963998.
                    best solution is -5.10077E+00,
                                                    optima is -10.1532,
                                                                         similarity is 3.13950E-01,
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
489 Iter at 965998, best solution is -5.10077E+00,
                                                    optima is -10.1532,
                                                                         similarity is 1.24049E+00,
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
490 Iter at 967998, best solution is -5.10077E+00,
                                                    optima is -10.1532,
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
                                                                         similarity is 0.00000E+00,
491 Iter at 969998, best solution is -5.10077E+00,
                                                    optima is -10.1532,
                                                                         similarity is 4.69391E-01,
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
492 Iter at 971998, best solution is -5.10077E+00,
                                                    optima is -10.1532,
                                                                         similarity is 0.00000E+00,
493 Iter at 973998, best solution is -5.10077E+00,
                                                    optima is -10.1532,
                                                                         similarity is 0.00000E+00.
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
494 Iter at 975998, best solution is -5.10077E+00,
                                                    optima is -10.1532,
                                                                         similarity is 0.00000E+00,
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
495 Iter at 977998, best solution is -5.10077E+00,
                                                    optima is -10.1532,
                                                                         similarity is 1.26071E+00,
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
496 Iter at 979998, best solution is -5.10077E+00,
                                                    optima is -10.1532,
                                                                         similarity is 3.73994E-01,
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
497 Iter at 981998, best solution is -5.10077E+00,
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
                                                    optima is -10.1532,
                                                                         similarity is 1.92153E+00.
498 Iter at 983998, best solution is -5.10077E+00,
                                                    optima is -10.1532,
                                                                         similarity is 1.96018E+00,
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
499 Iter at 985998, best solution is -5.10077E+00, optima is -10.1532,
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
                                                                         similarity is 1.24905E+00,
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
500 Iter at 987998, best solution is -5.10077E+00, optima is -10.1532,
                                                                         similarity is 1.52787E+00,
501 Iter at 989998, best solution is -5.10077E+00,
                                                    optima is -10.1532,
                                                                         similarity is 7.89903E-01,
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
502 Iter at 991998, best solution is -5.10077E+00,
                                                    optima is -10.1532, similarity is 1.97119E+00,
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
503 Iter at 993998, best solution is -5.10077E+00, optima is -10.1532, similarity is 7.11662E-02,
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
504 Iter at 995998, best solution is -5.10077E+00, optima is -10.1532,
                                                                         similarity is 8.78967E-01,
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
505 Iter at 997998, best solution is -5.10077E+00, optima is -10.1532,
                                                                         similarity is 1.75846E+00,
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
506 Iter at 999998, best solution is -5.10077E+00, optima is -10.1532, similarity is 6.03863E-01,
                                                                                                      phenotype is [7.999568220585948, 7.999639215929434, 7.999578431210163, 7.999659703498437]
508 Process finished with exit code 0
```