RMHC Alpine function con operadores normales			
Iteracion	Tiempo_ms	Solucion	Dimension
1	6.18	12.2	10
2	3.67	20.57	10
3	4.12	21.44	10
4	3.43	23.38	10
5	3.48	20.55	10
6	3.41	16.25	10
7	4.61	24.14	10
8	3.52	27.7	10
9	3.67	27.11	10
10	4.14	18.87	10
11	3.49	19.91	10
12	3.66	24.87	10
13	3.6	21.77	10
14	3.52	24	10
15	3.53	24.24	10
16	3.48	22.67	10
17	3.49	20.04	10
18	3.46	32.88	10
19	3.46	30.06	10
20	3.5	19.83	10
1	3.58	28.57	30
2	3.41	16	30
3	3.43	16.99	30
4	3.39	16.08	30
5	3.54	19.25	30
6	3.42	18.31	30
7	3.45	28.34	30
8	8.99	20.33	30
9	3.57	31.82	30
10	3.63	26.18	30
11	3.42	17.6	30
12	3.45	12.04	30
13	3.79	17.68	30

RMHC Alpine function con operadores tramposos			
Iteracion	Tiempo_ms	Solucion	Dimension
1	4.51	1.24	10
2	3.86	2.43	10
3	3.73	4.31	10
4	4.59	4.07	10
5	8.34	7.13	10
6	4.48	0.69	10
7	3.24	3.67	10
8	2.14	2.31	10
9	2.04	5.19	10
10	2.94	0.7	10
11	5.92	10.76	10
12	4.49	0.49	10
13	2.29	3.06	10
14	4.16	4.22	10
15	3.21	1.46	10
16	2.76	0.31	10
17	4.15	3.87	10
18	4.01	4.41	10
19	3.8	5.26	10
20	3.2	1.36	10
1	3.99	1.11	30
2	3.57	0.89	30
3	2.5	1.35	30
4	2.06	5.7	30
5	3.74	1.36	30
6	1.72	7.01	30
7	1.75	9.99	30
8	2.13	0.96	30
9	453.56	15.06	30
10	4.5	0.51	30
11	4.33	0.39	30
12	4.87	2.92	30
13	4.28	0.23	30

14	3.68	15.94	30
15	3.46	17.64	30
16	3.42	21.86	30
17	3.39	19.23	30
18	3.4	36.7	30
19	3.63	31.6	30
20	3.59	24.84	30
RMHC Dixon function con operadores normales			
Iteracion	Tiempo_ms	Solucion	Dimension
1	4.71	28.43	10
2	4.58	13.19	10
3	4.52	36.18	10
4	4.52	22.94	10
5	4.53	32.53	10
6	4.59	26.06	10
7	4.55	27.18	10
8	4.66	18.27	10
9	4.71	22.56	10
10	4.53	30.13	10
11	308.68	23.83	10
12	6.76	17.67	10
13	5.22	30.6	10
14	4.86	37.41	10
15	4.49	24.23	10
16	4.54	22.25	10
17	4.57	27.86	10
18	4.56	19.58	10
19	4.71	15.42	10
20	4.6	40.51	10
1	4.6	21.34	30
2	4.7	20.9	30
3	4.66	32.86	30
4	4.54	25.11	30
5	4.49	29.99	30
6	4.5	28.57	30

14	4.33	9.7	30
15	4.26	0.73	30
16	4.3	7.71	30
17	4.39	9.03	30
18	4.63	0.61	30
19	4.5	7.87	30
20	304.2	0.27	30
RMHC Dixon function con operadores tramposos			
Iteracion	Tiempo_ms	Solucion	Dimension
1	2.34	1.48	10
2	2.39	0.86	10
3	4.65	4.05	10
4	2.21	1.15	10
5	2.34	0.68	10
6	2.42	1.68	10
7	2.25	1.34	10
8	2.67	5.13	10
9	4.46	3.29	10
10	4.45	1.02	10
11	2.35	0.6	10
12	2.25	0.35	10
13	4.35	0.91	10
14	2.21	4.08	10
15	2.26	11.61	10
16	2.2	1.78	10
17	4.58	1.14	10
18	4.55	11.17	10
19	2.3	0.91	10
20	2.73	1.99	10
1	3.48	0.16	30
2	4.68	4.3	30
3	9.28	1.18	30
4	4.91	6.22	30
5	4.64	1.08	30
6	3.31	0.31	30

7	4.79	45.02	30
8	4.58	25.82	30
9	4.48	23.24	30
10	4.63	28.65	30
11	4.58	33.86	30
12	411.38	23.5	30
13	11.79	28.64	30
14	11.79	22.63	30
15	12.18	15.49	30
16	12.53	26.6	30
17	10.98	31.39	30
18	6.91	40.82	30
19	4.92	36.6	30
20	4.55	10.72	30
RMHC Quintic function con operadores normales			
Iteracion	Tiempo_ms	Solucion	Dimension
1	8.7	37.1	10
2	313.38	26.42	10
3	10.43	35.64	10
4	11.41	40.34	10
5	12.85	20.74	10
6	13.5	18.55	10
7	14.47	18.03	10
8	15.73	41.89	10
9	414.26	17.29	10
10	10.42	24.37	10
11	8.95	24.77	10
12	9.25	26.93	10
13	9.16	36.64	10
14	9.35	32.27	10
15	9.05	24.17	10
16	9.21	36.89	10
17	8.91	14.96	10
18	9.31	29.31	10
19	410.99	41.04	10

7	3.1	2.32	30
8	3.95	0.45	30
9	405.16	6.48	30
10	3.47	0.39	30
11	2.46	1.07	30
12	4.92	2.49	30
13	3.39	0.27	30
14	2.89	0.45	30
15	5.04	1.1	30
16	2.22	0.29	30
17	2.66	1.29	30
18	3.41	0.34	30
19	5.05	2.98	30
20	2.55	4.77	30
RMHC Quintic function con operadores tramposos			
Iteracion	Tiempo_ms	Solucion	Dimension
1	4.46	17.78	10
2	5.75	17.78	10
3	4.85	17.78	10
4	4.51	17.79	10
5	5.43	17.79	10
6	5.26	17.77	10
7	4.51	17.78	10
8	7.35	17.8	10
9	7.72	17.77	10
10	7.04	17.78	10
11	462.78	17.8	10
12	6.12	17.78	10
13	5.73	17.78	10
14	4.99	17.79	10
15	5.62	17.78	10
16	4.5	17.79	10
17	4.41	17.79	10
18	4.45	17.78	10
19	311.29	17.79	10

20	25.6	18.24	10
1	20.28	41.3	30
2	9.92	31.17	30
3	9.41	25.94	30
4	8.62	27.74	30
5	8.57	28.14	30
6	8.62	16.16	30
7	311.79	29.33	30
8	10.34	23.69	30
9	9.09	26	30
10	9.79	25.57	30
11	8.96	37.06	30
12	9.47	25.34	30
13	8.88	25.47	30
14	9.19	31.72	30
15	10.18	20.28	30
16	9.84	28.58	30
17	9.65	28.78	30
18	414.26	28.5	30
19	8.77	26.34	30
20	9.73	20.64	30
RMHC Schwefel function con operadores normales			
Iteracion	Tiempo_ms	Solucion	Dimension
1	2.34	34.17	10
2	2.32	28.87	10
3	2.29	31.34	10
4	2.33	22.59	10
5	2.48	26.11	10
6	2.28	30.26	10
7	2.28	29.57	10
8	2.32	20.21	10
9	2.31	23.73	10
10	2.28	22.26	10
11	2.42	39.65	10
12	2.5	19.1	10

20	7.39	17.79	10
1	6.83	17.79	30
2	5.73	17.79	30
3	6.55	17.77	30
4	5.65	17.79	30
5	5.44	17.78	30
6	6.54	17.76	30
7	5.64	17.78	30
8	5.65	17.79	30
9	5.72	17.79	30
10	5.47	17.8	30
11	5.59	17.79	30
12	5.62	17.77	30
13	5.65	17.8	30
14	5.83	17.78	30
15	408.69	17.79	30
16	10.54	17.79	30
17	11.12	17.79	30
18	10.48	17.79	30
19	10.78	17.78	30
20	11.99	17.79	30
RMHC Schwefel function con operadores tramposos			
Iteracion	Tiempo_ms	Solucion	Dimension
1	3.19	2.88	10
2	3.33	1.33	10
3	3.6	8.86	10
4	3.27	2.02	10
5	2.98	6.91	10
6	2.66	0.89	10
7	2.12	2.88	10
8	1.88	0.61	10
9	1.72	1.96	10
10	1.63	1.78	10
11	1.46	3.05	10
12	1.29	0.44	10

13	2.52	21.97	10
14	2.32	33.82	10
15	2.42	20.44	10
16	2.34	36.24	10
17	2.31	25.36	10
18	1.16	30.37	10
19	1.18	40.39	10
20	2.29	28.36	10
1	2.47	23.02	30
2	2.32	24.62	30
3	2.3	17.67	30
4	2.28	25.84	30
5	2.29	24.43	30
6	2.28	30.13	30
7	2.33	21.55	30
8	2.3	35.47	30
9	2.5	26.74	30
10	403.5	29.83	30
11	5.43	22.95	30
12	3.42	31.38	30
13	2.56	37.96	30
14	3.61	24.23	30
15	4.62	19.23	30
16	3.38	33.46	30
17	2.5	17.9	30
18	2.64	41.97	30
19	3.67	30.78	30
20	2.95	31.79	30
RMHC Streched function con operadores normales			
Iteracion	Tiempo_ms	Solucion	Dimension
1	9.92	33.74	10
2	11.53	23.54	10
3	14.98	18.96	10
4	9.67	38.03	10
5	10.21	36.53	10

13	1.52	0.38	10
14	1.26	0.8	10
15	1.25	4.94	10
16	1.25	0.46	10
17	1.25	0.31	10
18	1.31	2.43	10
19	469.2	10.21	10
20	4.16	7.29	10
1	2.87	0.48	30
2	1.98	2.21	30
3	1.49	1.26	30
4	1.3	4.61	30
5	1.87	2.73	30
6	2.5	1.71	30
7	2.42	4.7	30
8	1.25	2.79	30
9	1.22	5.6	30
10	1.25	1.43	30
11	1.23	7.8	30
12	1.21	2.51	30
13	1.17	13.73	30
14	1.24	1.51	30
15	1.25	0.63	30
16	1.39	5.14	30
17	1.71	2.53	30
18	403.45	0.43	30
19	6.61	1.73	30
20	3.21	0.37	30
RMHC Streched function con operadores tramposos			
Iteracion	Tiempo_ms	Solucion	Dimension
1	19.07	0.33	10
2	20.32	0.34	10
3	22.17	0.61	10
4	9.49	1.8	10
5	10.27	5.42	10

6	416.62	36.56	10
7	21.29	28.18	10
8	22.54	33.61	10
9	21.98	37.71	10
10	20.73	19.01	10
11	323.49	27.46	10
12	22.05	16.43	10
13	22.75	19.34	10
14	21.92	12.68	10
15	424.03	26.52	10
16	21.53	19.31	10
17	21.34	37.02	10
18	21.27	19.89	10
19	21.38	28.18	10
20	524.14	21.49	10
1	21.11	29.89	30
2	20.15	28.11	30
3	26.76	22.52	30
4	324.08	35.6	30
5	21.89	34.96	30
6	21.24	34.29	30
7	9.87	21.11	30
8	8.45	25.91	30
9	8.26	26.95	30
10	9.57	25.77	30
11	9.07	17.51	30
12	314.71	20.53	30
13	9.52	21.44	30
14	8.24	20.95	30
15	8.38	29.04	30
16	8.51	31.2	30
17	10.21	17.89	30
18	10.14	20.7	30
19	8.88	23.25	30
20	8.58	27.73	30

6	4.13	0.71	10
7	326.35	0.56	10
8	5.22	0.53	10
9	10.28	0.56	10
10	5	4.46	10
11	10.28	11.04	10
12	4.31	1.43	10
13	4.43	7.34	10
14	5.12	0.47	10
15	4.23	0.59	10
16	4.12	3.84	10
17	4.22	6.52	10
18	4.18	1.99	10
19	4.15	2.65	10
20	4.11	1	10
1	412.61	1.24	30
2	5.26	0.78	30
3	8.53	0.23	30
4	8.27	0.53	30
5	4.5	2.31	30
6	9.4	4.23	30
7	9.38	4.09	30
8	3.97	4.05	30
9	8.51	5.64	30
10	4.78	0.87	30
11	4.21	0.71	30
12	4.24	5.66	30
13	4.19	5.3	30
14	8.52	5.81	30
15	4.04	1.69	30
16	513.74	5.55	30
17	20.97	1.52	30
18	11.43	0.75	30
19	18.84	3.16	30
20	25	1.93	30

RMHC Sum Squares function con operadores normales			
Iteracion	Tiempo_ms	Solucion	Dimension
1	3.72	33.18	10
2	3.93	30.28	10
3	3.89	27.66	10
4	425.16	24.66	10
5	9.6	25.45	10
6	9.63	38.17	10
7	9.42	31.22	10
8	9.85	28.35	10
9	9.34	28.23	10
10	9.77	19.63	10
11	9.27	29.99	10
12	9.74	28.02	10
13	244.19	20.87	10
14	9.82	39.76	10
15	11.18	24.04	10
16	9.32	34.57	10
17	8.91	22.02	10
18	9.2	19.68	10
19	109.91	16.77	10
20	9.71	22.19	10
1	7.4	45.49	30
2	7.06	22.76	30
3	6.89	26.28	30
4	7.12	32.26	30
5	8.66	17.25	30
6	12.87	21.69	30
7	6.74	28.6	30
8	5.66	25.22	30
9	5.25	21.37	30
10	6.06	24.56	30
11	4.44	17.17	30
12	4.55	13.58	30
13	3.98	30.92	30

RMHC Sum Squares function con operadores tramposos			
Iteracion	Tiempo_ms	Solucion	Dimension
1	8	0.38	10
2	356.52	1.95	10
3	1.98	0.45	10
4	3.37	2.99	10
5	7.2	4.72	10
6	4.5	2.28	10
7	6.64	7.76	10
8	5.39	0.91	10
9	6.83	0.85	10
10	5.07	1.9	10
11	5.16	9.53	10
12	307.43	2	10
13	4.7	1.16	10
14	4.83	2.2	10
15	5.02	0.36	10
16	5.56	0.53	10
17	4.82	1.11	10
18	4.57	1.74	10
19	4.76	1.46	10
20	6.41	9.04	10
1	7.7	0.43	30
2	6.09	2.23	30
3	5.25	0.17	30
4	6.8	0.56	30
5	4.82	4.21	30
6	3.88	5.81	30
7	3.07	3.61	30
8	2.76	0.38	30
9	2.63	0.41	30
10	1.96	11.02	30
11	1.81	6.26	30
12	1.85	0.26	30
13	2.03	1.74	30

RMHC

14	306.51	21.02	30
15	10.14	12.64	30
16	4.38	34.9	30
17	6.78	37.05	30
18	5.76	30.61	30
19	6.94	25.5	30
20	5.91	23.95	30

14	1.84	2.06	30
15	2.04	0.7	30
16	2.04	2.07	30
17	504.87	2.59	30
18	4.71	4.51	30
19	5.56	0.69	30
20	4.17	0.52	30

SA Alpine function con operadores normales				
Iteracion	Tiempo_ms	Alpha	Solucion	Dimension
1	10.01	0.93	24.46	10
2	7.64	0.93	52.67	10
3	5.83	0.91	17.58	10
4	3.69	0.93	23.24	10
5	9.27	0.98	24.89	10
6	10.46	0.97	35.57	10
7	6.19	0.96	32.88	10
8	9.82	0.94	28.78	10
9	7.25	0.97	36.32	10
10	5	0.93	32.22	10
11	5.03	0.98	39.17	10
12	3.87	0.9	44.46	10
13	3.4	0.91	41.41	10
14	3.61	0.91	37.76	10
15	2.15	0.95	51.19	10
16	4.28	0.98	19.88	10
17	505.04	0.9	27.21	10
18	3.04	0.91	19.71	10
19	3.35	0.88	32.18	10
20	2.32	0.9	30.12	10
1	2.21	0.94	23.85	30
2	2.69	0.93	29.62	30
3	2.35	0.91	25.84	30
4	2.59	0.89	36.11	30
5	2.25	0.97	32.39	30
6	2.18	0.98	36.29	30
7	2.09	0.94	40.19	30
8	2	0.89	36.36	30
9	2.75	0.95	32.86	30
10	2.22	0.96	25.41	30
11	2.25	0.88	27.11	30
12	2.05	0.96	28.71	30
13	1.99	0.96	35.85	30

SA Alpine function con operadores tramposos				
Iteracion	Tiempo_ms	Alpha	Solucion	Dimension
1	5.55	0.89	1.12	10
2	5.46	0.97	1.35	10
3	5.19	0.89	0.21	10
4	7.6	0.96	1.45	10
5	5.49	0.99	1.72	10
6	5.89	0.95	1.94	10
7	5.71	0.94	9.42	10
8	5.57	0.88	2.56	10
9	7.7	0.93	0.61	10
10	6.87	0.95	2.43	10
11	6.47	0.88	1.22	10
12	8.22	0.95	0.32	10
13	5.64	0.97	3.37	10
14	7.5	0.95	5.81	10
15	5.32	0.91	1.2	10
16	365.95	0.93	0.84	10
17	2.28	0.98	9.66	10
18	3.32	0.98	11.57	10
19	3.25	0.91	1.2	10
20	2.5	0.95	8.71	10
1	2.31	0.92	0.73	30
2	2.48	0.98	7.69	30
3	2.27	0.96	0.74	30
4	2.13	0.97	0.44	30
5	3.51	0.91	1.09	30
6	2.22	0.97	0.75	30
7	2.22	0.95	7.91	30
8	2.04	0.95	1.96	30
9	2.31	0.89	5.93	30
10	1.98	0.93	2.62	30
11	1.99	0.92	5.26	30
12	2.27	0.97	2.41	30
13	304.87	0.95	13.87	30

14	2.09	0.88	39.91	30
15	2.11	0.96	27.03	30
16	2	0.9	36.94	30
17	2.27	0.98	30.29	30
18	2.06	0.95	42.17	30
19	2.02	0.94	40.81	30
20	2.11	0.91	14.81	30
SA Dixon function con operadores normales				
Iteracion	Tiempo_ms	Alpha	Solucion	Dimension
1	3.02	0.89	33.54	10
2	3.06	0.91	23.71	10
3	3.05	0.95	26.56	10
4	2.91	0.96	35.24	10
5	2.97	0.91	21.88	10
6	3.03	0.94	19.11	10
7	2.93	0.97	31.98	10
8	3.08	0.96	40	10
9	3.33	0.99	15.86	10
10	3.26	0.97	27.05	10
11	3.25	0.97	21.69	10
12	3.51	0.9	18.26	10
13	3.81	0.89	26.73	10
14	303.62	0.9	16.87	10
15	5.25	0.91	36.15	10
16	3.81	0.89	19.52	10
17	2.99	0.95	28.51	10
18	3.63	0.88	30.93	10
19	3.12	0.95	25.75	10
20	2.89	0.94	35.65	10
1	3.27	0.94	23.35	30
2	2.98	0.89	37.47	30
3	2.81	0.92	29.64	30
4	3.16	0.96	23.29	30
5	3.03	0.97	33.97	30
6	2.82	0.89	28.66	30

14	4.76	0.91	0.41	30
15	4.74	0.92	8.29	30
16	4.74	0.89	6.71	30
17	4.7	0.94	2.05	30
18	4.78	0.97	7.02	30
19	4.98	0.93	0.4	30
20	4.65	0.9	0.59	30
SA Dixon function con operadores tramposos				
Iteracion	Tiempo_ms	Alpha	Solucion	Dimension
1	5.91	0.91	3.23	10
2	5.88	0.92	0.72	10
3	5.9	0.97	11.18	10
4	5.72	0.98	1.32	10
5	4.57	0.95	9.13	10
6	4.36	0.97	0.61	10
7	4.05	0.9	3.34	10
8	3.11	0.98	0.47	10
9	2.73	0.91	0.55	10
10	2.99	0.97	0.81	10
11	2.75	0.93	2.56	10
12	2.72	0.96	0.77	10
13	2.7	0.98	1.55	10
14	3.62	0.98	1.38	10
15	4.86	0.98	3.62	10
16	506.95	0.91	2.07	10
17	6.8	0.98	1.09	10
18	7.13	0.93	6.76	10
19	9.9	0.9	4.53	10
20	11.77	0.94	1.93	10
1	10.17	0.93	0.25	30
2	7.88	0.89	0.42	30
3	7.8	0.94	1.25	30
4	7.04	0.94	2.34	30
5	6.79	0.91	1.11	30
6	6.95	0.98	0.94	30

7	2.88	0.95	35.16	30
8	2.82	0.98	30.29	30
9	3.05	0.93	23.48	30
10	3.31	0.96	31.73	30
11	3.08	0.98	28.67	30
12	2.91	0.92	31.15	30
13	2.86	0.99	18.78	30
14	3.09	0.95	21.9	30
15	3.15	0.91	29.62	30
16	2.94	0.92	24.44	30
17	2.93	0.89	12.7	30
18	2.99	0.98	35.01	30
19	2.81	0.93	20.08	30
20	3.22	0.89	20.44	30
SA Quintic function con operadores normales				
Iteracion	Tiempo_ms	Alpha	Solucion	Dimension
1	11.49	0.95	13.59	10
2	317.24	0.97	9.6	10
3	15.15	0.88	15.41	10
4	14.68	0.95	12.23	10
5	14.93	0.88	17.33	10
6	14.17	0.95	10	10
7	13.39	0.96	9.37	10
8	13.06	0.94	10.11	10
9	522.56	0.98	11.78	10
10	22.01	0.96	7.24	10
11	21.96	0.94	18.15	10
12	24.19	0.91	12.23	10
13	330.83	0.93	9.92	10
14	34.08	0.97	12.89	10
15	41.21	0.96	12.58	10
16	332.25	0.91	23.95	10
17	31.68	0.95	7.43	10
18	32.62	0.89	12.14	10
19	533.47	0.93	11.28	10

7	6.58	0.98	1.05	30
8	336.79	0.91	3.42	30
9	6.73	0.97	8.3	30
10	8.82	0.93	7.68	30
11	6.64	0.89	0.5	30
12	7.23	0.99	6.25	30
13	6.73	0.92	0.45	30
14	6.74	0.99	4.72	30
15	6.67	0.99	1.12	30
16	10.23	0.92	7.24	30
17	7.09	0.93	1.3	30
18	308.34	0.94	2.99	30
19	7.67	0.9	1.28	30
20	6.83	0.98	2.19	30
SA Quintic function con operadores tramposos				
Iteracion	Tiempo_ms	Alpha	Solucion	Dimension
1	11.66	0.92	17.79	10
2	11.72	0.98	17.79	10
3	11.97	0.91	17.8	10
4	10.41	0.96	17.79	10
5	6	0.99	17.79	10
6	4.55	0.9	17.79	10
7	4.5	0.94	17.78	10
8	4.45	0.98	17.8	10
9	4.52	0.93	17.79	10
10	4.49	0.89	17.79	10
11	505.84	0.89	17.8	10
12	13.17	0.9	17.78	10
13	9.39	0.99	17.79	10
14	12.54	0.9	17.8	10
15	12.24	0.89	17.78	10
16	12.03	0.93	17.79	10
17	11.79	0.91	17.8	10
18	8.25	0.98	17.8	10
19	5.36	0.95	17.8	10

20	30.61	0.88	13.26	10
1	31.28	0.95	17.53	30
2	338.63	0.98	12.93	30
3	34.02	0.94	10.13	30
4	33.3	0.96	14.03	30
5	425.1	0.98	16.26	30
6	16.25	0.94	13.61	30
7	15.99	0.93	15.28	30
8	24.73	0.92	13.06	30
9	21.66	0.95	18.26	30
10	431.2	0.92	17.24	30
11	37.08	0.88	12.32	30
12	30.58	0.88	11.49	30
13	417.2	0.89	12.71	30
14	14.03	0.93	10.1	30
15	13.21	0.95	13.74	30
16	12.66	0.93	15.38	30
17	13.46	0.9	9.52	30
18	12.65	0.95	10.35	30
19	12.58	0.89	15.3	30
20	416.89	0.91	11.07	30
SA Schwefel function con operadores normales				
Iteracion	Tiempo_ms	Alpha	Solucion	Dimension
1	23.2	0.96	3.4	10
2	24.9	0.91	7.84	10
3	21.38	0.96	7.19	10
4	13.79	0.88	8.46	10
5	8.33	0.96	8.17	10
6	311.91	0.97	5.81	10
7	9.32	0.95	4.56	10
8	8.92	0.92	5.87	10
9	7.69	0.94	8.38	10
10	8.21	0.92	8.76	10
11	8.47	0.9	7.95	10
12	7.91	0.96	5.24	10

20	4.49	0.95	17.79	10
1	4.75	0.95	17.79	30
2	4.59	0.98	17.79	30
3	380.1	0.98	17.77	30
4	4.76	0.98	17.78	30
5	4.61	0.99	17.8	30
6	4.93	0.92	17.8	30
7	4.72	0.89	17.78	30
8	411.66	0.94	17.79	30
9	15.72	0.98	17.78	30
10	20.68	0.88	17.78	30
11	20.92	0.9	17.78	30
12	18.09	0.93	17.79	30
13	7.17	0.88	17.78	30
14	5.11	0.98	17.8	30
15	411.32	0.97	17.78	30
16	11.95	0.97	17.77	30
17	12.03	0.94	17.78	30
18	12.26	0.91	17.78	30
19	15.26	0.91	17.78	30
20	15.2	0.92	17.76	30
SA Schwefel function con operadores tramposos				
Iteracion	Tiempo_ms	Alpha	Solucion	Dimension
1	3.66	0.91	0.55	10
2	3.77	0.96	5.36	10
3	2.13	0.92	0.39	10
4	2.51	0.92	6.56	10
5	1.53	0.88	0.61	10
6	1.77	0.9	0.76	10
7	1.54	0.93	5.1	10
8	1.78	0.91	3.14	10
9	2.45	0.97	6.59	10
10	1.8	0.98	0.33	10
11	402.82	0.93	0.32	10
12	3.36	0.91	0.34	10

13	8.59	0.94	7.69	10
14	7.82	0.98	7.9	10
15	9.16	0.94	6.27	10
16	8.51	0.93	11.94	10
17	410	0.93	9.83	10
18	10.72	0.89	7.17	10
19	9.53	0.95	8.45	10
20	9.31	0.95	9.61	10
1	8.53	0.93	7.62	30
2	9.28	0.97	9.31	30
3	9.27	0.99	12.33	30
4	11.29	0.89	6.49	30
5	9.3	0.92	10.32	30
6	10.67	0.98	4.56	30
7	9.61	0.9	7.11	30
8	309.81	0.93	3.18	30
9	10.78	0.93	7.3	30
10	8.62	0.97	7.01	30
11	8.18	0.99	8.2	30
12	8.59	0.99	7.99	30
13	8.31	0.93	8.53	30
14	7.71	0.91	7.48	30
15	8.35	0.99	10.03	30
16	7.94	0.9	8.13	30
17	8.39	0.89	11.67	30
18	7.51	0.93	8.72	30
19	115.57	0.94	9.05	30
20	12.28	0.89	5.94	30

SA Streched function con operadores normales				
Iteracion	Tiempo_ms	Alpha	Solucion	Dimension
1	4.65	0.98	41.64	10
2	5.36	0.92	29.29	10
3	8.89	0.89	31.54	10
4	5.76	0.88	30.89	10
5	6.15	0.95	34.7	10

13	2.6	0.99	0.57	10
14	2.25	0.88	3.65	10
15	2.02	0.93	3.03	10
16	2.63	0.97	6.13	10
17	1.6	0.96	0.83	10
18	1.49	0.93	4.27	10
19	1.45	0.98	1.99	10
20	1.44	0.89	1.22	10
1	1.61	0.94	1.07	30
2	2.71	0.88	9.19	30
3	1.95	0.96	1.88	30
4	3.77	0.92	5.32	30
5	3.1	0.92	1.08	30
6	5.27	0.9	3.88	30
7	2.22	0.96	0.45	30
8	2.81	0.99	7.08	30
9	1.65	0.94	1.43	30
10	1.49	0.97	1.08	30
11	2.29	0.99	0.59	30
12	1.45	0.89	0.96	30
13	2.56	0.98	6.04	30
14	1.44	0.97	0.93	30
15	1.54	0.98	0.34	30
16	1.46	0.91	0.27	30
17	1.77	0.91	5.17	30
18	1.52	0.96	3.17	30
19	1.52	0.88	1.36	30
20	1.53	0.96	4.91	30

SA Streched function con operadores tramposos				
Iteracion	Tiempo_ms	Alpha	Solucion	Dimension
1	4.46	0.9	2.12	10
2	4.43	0.93	0.81	10
3	4.29	0.92	11.09	10
4	4.87	0.98	1.13	10
5	5.59	0.94	1.25	10

6	5.76	0.9	39.31	10
7	6.54	0.93	18.36	10
8	7.8	0.99	33.06	10
9	4.57	0.92	30.22	10
10	5.15	0.92	41.99	10
11	6.15	0.89	22.59	10
12	4.4	0.89	38.32	10
13	4.49	0.94	31.76	10
14	270.98	0.88	32.29	10
15	11.53	0.98	26.25	10
16	11.66	0.99	43.78	10
17	156.75	0.91	13.38	10
18	13.09	0.94	34.63	10
19	7.67	0.93	38.76	10
20	6.03	0.99	37.4	10
1	9.05	0.93	21.27	30
2	5.26	0.9	20.73	30
3	4.6	0.89	37.28	30
4	4.78	0.96	33.07	30
5	108.65	0.97	23.03	30
6	11.24	0.93	23.47	30
7	11.18	0.93	23.41	30
8	11.1	0.92	31.25	30
9	11.04	0.92	45.39	30
10	11.26	0.98	35.3	30
11	16.69	0.94	21.56	30
12	10.98	0.91	20.07	30
13	7.15	0.93	31.15	30
14	107.37	0.9	30.58	30
15	5.89	0.97	19.88	30
16	5.69	0.95	25.03	30
17	5.54	0.97	41.33	30
18	4.46	0.95	28.07	30
19	4.96	0.9	29.17	30
20	4.92	0.93	34.37	30

6	4.89	0.92	0.18	10
7	4.34	0.96	0.26	10
8	433.41	0.94	0.5	10
9	12.08	0.97	5.52	10
10	11.83	0.96	0.95	10
11	12	0.96	0.88	10
12	11.68	0.9	0.66	10
13	12.05	0.98	9.04	10
14	312.48	0.98	4	10
15	4.61	0.89	10.72	10
16	4.45	0.98	0.95	10
17	5.5	0.93	1.36	10
18	4.25	0.89	0.82	10
19	4.33	0.95	1.32	10
20	4.44	0.89	3.24	10
1	4.57	0.98	2.5	30
2	4.26	0.96	2.01	30
3	4.73	0.94	1.06	30
4	4.4	0.94	1.44	30
5	4.59	0.98	1.38	30
6	4.2	0.98	1.17	30
7	4.34	0.94	1.28	30
8	4.83	0.96	1.13	30
9	4.23	0.96	2.67	30
10	4.36	0.95	5.93	30
11	4.39	0.91	5.67	30
12	4.77	0.89	2.68	30
13	4.25	0.93	0.97	30
14	4.51	0.99	0.56	30
15	4.26	0.94	1.42	30
16	407.02	0.92	0.56	30
17	5.93	0.94	0.71	30
18	4.71	0.88	6.83	30
19	5.01	0.95	0.59	30
20	4.43	0.95	0.37	30

SA Sum Squares function con operadores normales				
Iteracion	Tiempo_ms	Alpha	Solucion	Dimension
1	2.45	0.95	22.33	10
2	2.42	0.9	25.97	10
3	2.56	0.89	42.8	10
4	2.43	0.94	33.27	10
5	2.62	0.98	24.28	10
6	2.49	0.96	18.35	10
7	2.29	0.93	36.05	10
8	2.35	0.9	35.05	10
9	2.48	0.94	26.26	10
10	2.28	0.98	27.25	10
11	2.63	0.93	27.87	10
12	2.45	0.95	34.91	10
13	2.34	0.98	31.46	10
14	2.52	0.97	26.05	10
15	2.35	0.94	38.62	10
16	2.41	0.96	26.03	10
17	2.54	0.99	22.14	10
18	2.27	0.97	30.74	10
19	2.54	0.95	30.84	10
20	2.3	0.93	34.96	10
1	2.36	0.99	29.02	30
2	2.58	0.97	25.58	30
3	2.32	0.89	17.53	30
4	2.28	0.99	25.8	30
5	2.52	0.97	13.13	30
6	2.51	0.94	28.84	30
7	153.65	0.89	23	30
8	3.81	0.89	38.63	30
9	4.95	0.97	24.02	30
10	5.51	0.89	30.48	30
11	3.95	0.89	34.05	30
12	2.58	0.94	22.25	30
13	2.48	0.98	23.76	30

SA Sum Squares function con operadores tramposos				
Iteracion	Tiempo_ms	Alpha	Solucion	Dimension
1	2.09	0.91	0.29	10
2	2.43	0.91	10.46	10
3	2.06	0.92	11.2	10
4	2.56	0.9	1.04	10
5	2.06	0.95	0.81	10
6	2.32	0.92	2.19	10
7	2.22	0.99	11.32	10
8	2.08	0.98	0.4	10
9	2.37	0.89	3.39	10
10	2.35	0.9	2.12	10
11	2.48	0.98	2.22	10
12	2.25	0.88	7.12	10
13	3.31	0.96	0.73	10
14	3.02	0.9	1.83	10
15	2.17	0.98	0.38	10
16	2.19	0.93	3.71	10
17	2.91	0.91	2.64	10
18	3.4	0.97	8.15	10
19	2.36	0.91	0.42	10
20	2.27	0.9	3.14	10
1	3.56	0.95	0.44	30
2	4.24	0.9	4.62	30
3	4.19	0.92	6.24	30
4	4.43	0.89	0.95	30
5	3.81	0.99	0.57	30
6	2.33	0.94	2.99	30
7	2.48	0.89	3.52	30
8	369.7	0.9	1.04	30
9	4.02	0.93	4.53	30
10	2.7	0.93	0.45	30
11	2.88	0.93	0.31	30
12	2.66	0.96	0.4	30
13	2.53	0.95	1.58	30

14	2.62	0.98	16.39	30
15	4.83	0.92	27.85	30
16	3.35	0.91	23.38	30
17	2.88	0.93	25.36	30
18	2.34	0.91	32.04	30
19	2.7	0.97	26.44	30
20	3.84	0.93	28.53	30

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14	2.81	0.89	0.46	30
15	2.88	0.89	0.47	30
16	2.63	0.89	0.71	30
17	3.53	0.97	5.43	30
18	2.42	0.99	2.51	30
19	204.63	0.94	6.25	30
20	5.64	0.94	2.65	30

Alpine function Stacionary GA con operadores normales Por torneo				
Iteracion	Tiempo_ms	Sol	Iter_sol	Dimension
1	1061.52	2.07	8	10
2	1370.05	1.23	8	10
3	1444.41	1.86	7	10
4	1952.36	1.19	2	10
5	1343.91	1.34	3	10
6	595.27	2	5	10
7	787.4	1.52	7	10
8	406.45	1.65	8	10
9	437.27	0.63	4	10
10	419.87	3.27	5	10
11	269.17	1.69	5	10
12	207.55	1.89	0	10
13	365.95	2.03	8	10
14	414.42	3.99	0	10
15	155.57	1.6	7	10
16	506.17	2.1	3	10
17	264.98	2.85	8	10
18	233.87	1.69	0	10
19	219.37	3.11	8	10
20	277.01	2.36	6	10
1	380.84	3.03	0	30
2	288.46	1.34	2	30
3	231.74	2.5	1	30
4	430.47	2.08	1	30
5	458.02	1.98	4	30
6	427.33	1.69	0	30
7	413.01	1.54	6	30
8	477.91	2.04	6	30
9	251	1.51	7	30
10	327.74	1.04	6	30
11	597.9	1.33	7	30
12	172.83	1.68	7	30
13	394.14	0.87	4	30

Alpine function Stacionary GA con operadores tramp			
Iteracion	Tiempo_ms	Sol	Iter_sol
1	849.78	0.01	7
2	1406.68	0.01	7
3	1412.69	0.01	5
4	850.4	0.07	4
5	1531.56	0.05	8
6	1288.66	0.03	8
7	740.32	0.02	8
8	670.4	0.01	3
9	239.54	0.02	7
10	223.76	0.01	8
11	177.35	0.13	6
12	437.77	0.01	5
13	160.3	0.01	7
14	172.71	0.02	4
15	428.29	0.02	5
16	183.59	0.07	8
17	366.07	0.01	1
18	266.43	0.04	6
19	329.71	0.01	7
20	241.26	0.01	7
1	447.95	0.05	5
2	350.89	0.31	8
3	262.28	0.17	5
4	299.13	0.02	4
5	363.7	0.11	7
6	453.7	0.01	5
7	318.1	0.04	8
8	200.11	0.04	1
9	309.6	0.02	8
10	117.18	0.04	6
11	210.92	0.03	8
12	186.34	0.05	8
13	443.16	0.02	5

14	100.35	1.45	6	30
15	468.07	1.48	1	30
16	313.32	1.88	8	30
17	227.52	2.06	7	30
18	378.68	2.44	1	30
19	240.69	1	7	30
20	174.34	2.2	6	30
Dixon function Stacionary GA con operadores normales Por torneo				
Iteracion	Tiempo_ms	Sol	Iter_sol	Dimension
1	335.03	91.17	7	10
2	402.42	30.21	3	10
3	422.95	19.14	6	10
4	299.25	58.08	4	10
5	269.63	23.23	8	10
6	213.31	27.55	8	10
7	260.22	54.81	0	10
8	310.6	42.55	5	10
9	356.46	24.98	8	10
10	205.78	33.01	2	10
11	302.93	42.79	7	10
12	396.7	17.83	8	10
13	386.74	95.7	5	10
14	273.45	14.04	8	10
15	275.49	56.1	7	10
16	93.99	38.23	8	10
17	330.61	46.72	5	10
18	280.81	80.14	5	10
19	179.81	62.9	8	10
20	385.51	23.67	7	10
1	354.13	16.33	6	30
2	313.35	20.73	7	30
3	303.17	28.44	3	30
4	438.93	24.78	8	30
5	411.81	113.42	8	30
6	245.54	63.09	5	30

14	396.12	0.01	6
15	208.75	0.02	3
16	475.59	0.07	5
17	462.62	0.01	7
18	320.63	0.02	8
19	321.04	0.01	5
20	345.15	0.02	8
Dixon function Stacionary GA con operadores trampo			
Iteracion	Tiempo_ms	Sol	Iter_sol
1	243.81	2.8	4
2	448.04	13.07	6
3	427.9	0.81	4
4	277.8	1.89	7
5	302.67	0.68	8
6	243.85	0.99	8
7	475.72	4.65	8
8	172.86	1.99	7
9	391.27	3.41	7
10	250.39	0.62	8
11	271.42	0.75	5
12	295.75	2.01	8
13	162.73	0.84	4
14	387.55	0.74	8
15	347.7	1.54	4
16	499.25	0.5	8
17	276.16	4.54	8
18	149.89	0.65	7
19	553.27	5.02	8
20	345.47	4.92	4
1	210.89	1.66	4
2	349.47	0.45	7
3	302.1	4.91	5
4	272.98	1.59	5
5	269.79	1.65	6
6	500.5	0.62	3

7	279.04	30.34	7	30
8	223.43	60.53	5	30
9	249.93	40.71	0	30
10	404.41	17.35	7	30
11	309.46	25.36	8	30
12	295.49	46.49	6	30
13	141.48	78.42	8	30
14	321.31	18.36	8	30
15	497.97	36.99	6	30
16	403.84	24.85	7	30
17	234.01	20.04	7	30
18	258.26	59.71	6	30
19	143.84	34.38	8	30
20	262.47	39.22	7	30
Quintic function Stacionary GA con operadores normales Por torneo				
Iteracion	Tiempo_ms	Sol	Iter_sol	Dimension
1	424.8	43.11	3	10
2	272.22	81.55	6	10
3	346.46	57.17	3	10
4	102.02	50.39	3	10
5	209.11	81.29	5	10
6	319.86	19.56	8	10
7	464.11	39.54	5	10
8	555	61.37	7	10
9	563.98	63.21	6	10
10	92.41	49.22	0	10
11	277.41	54.1	8	10
12	402.04	72.07	7	10
13	272.31	71.25	7	10
14	385.57	42.98	4	10
15	313.12	31.66	3	10
16	397.83	10	8	10
17	310.66	19.22	6	10
18	285.1	97.38	6	10
19	400.1	53.35	0	10

7	320.65	3.19	8
8	184.83	0.77	5
9	389.81	0.98	8
10	305.57	1.88	6
11	119.66	10.15	8
12	166.59	7.03	6
13	334.29	0.66	4
14	237.26	1.77	1
15	401.37	1.61	8
16	371.09	1.3	6
17	455.91	2.82	1
18	223.68	3.85	7
19	260.06	2.05	6
20	458.12	0.89	2
Quintic function Stacionary GA con operadores tramp			
Iteracion	Tiempo_ms	Sol	Iter_sol
1	393.73	0.11	8
2	153.19	0.15	2
3	230	0.12	8
4	230.54	0.14	8
5	395.09	0.19	7
6	439.88	0.12	4
7	338.38	0.12	4
8	280.92	0.11	7
9	349.64	0.19	6
10	409.68	0.13	8
11	410.26	0.11	6
12	403.98	0.15	8
13	408.02	0.25	0
14	310.58	0.15	3
15	307.93	0.19	2
16	289.17	0.18	6
17	351	0.11	8
18	404.78	0.14	5
19	380.02	0.13	8

20	396.48	23.12	1	10
1	348.75	28.18	6	30
2	126.59	75.79	8	30
3	310.52	114.12	0	30
4	449.67	40.62	4	30
5	373.83	44.17	2	30
6	304.34	59.07	8	30
7	344.47	84.3	8	30
8	278.75	37.83	3	30
9	149.71	38.76	6	30
10	431.1	36	4	30
11	233.24	46.48	7	30
12	218.51	142.09	7	30
13	246.25	61.41	8	30
14	425.22	67.27	4	30
15	239.02	42.9	5	30
16	362.23	62.72	8	30
17	382.41	41.27	5	30
18	602.22	38.52	3	30
19	292.36	56.27	7	30
20	466.28	36.46	6	30
Schwefel function Stacionary GA con operadores normales Por torneo				
Iteracion	Tiempo_ms	Sol	Iter_sol	Dimension
1	347.49	1512.22	7	10
2	326.51	525.55	7	10
3	255.5	287.15	7	10
4	498.74	18.06	1	10
5	491.1	8.46	2	10
6	298.72	28.49	7	10
7	292.08	9.99	8	10
8	264.17	98.63	5	10
9	222.68	0.03	7	10
10	184.35	3172	7	10
11	418.15	125.07	8	10
12	430.46	588.16	8	10

20	257.95	0.13	5
1	211.04	0.16	7
2	342.31	0.06	7
3	315.08	0.13	7
4	169.81	0.13	8
5	294.84	0.11	0
6	110.12	0.23	3
7	288.6	0.09	8
8	338.62	0.18	8
9	372.22	0.19	8
10	260.71	0.11	4
11	371.29	0.13	7
12	521.14	0.16	2
13	342.63	0.15	7
14	407.52	0.12	5
15	435.07	0.07	8
16	453.95	0.18	8
17	398.75	0.15	4
18	385.92	0.07	7
19	323.23	0.19	7
20	224.7	0.15	8
Schwefel function Stacionary GA con operadores tram			
Iteracion	Tiempo_ms	Sol	Iter_sol
1	407.3	0	8
2	157.66	0	7
3	258.05	0	6
4	528.83	0	8
5	140.7	0	0
6	71.36	0	0
7	105.02	0	8
8	269.36	0	7
9	309.79	0	7
10	215.22	0	6
11	237.73	0	8
12	279.88	0	5

13	372.09	18.13	7	10
14	346.13	42.38	2	10
15	263.56	1.69	5	10
16	308.99	37.74	6	10
17	448.34	3.65	2	10
18	289.15	1076.52	7	10
19	260.72	91	8	10
20	112.71	67.61	8	10
1	237.33	385.41	8	30
2	274.61	4.75	5	30
3	153.65	101.98	7	30
4	336.27	166.12	1	30
5	236.06	3.99	6	30
6	249.38	4.35	7	30
7	601.74	30.79	6	30
8	426.81	35.7	5	30
9	372.75	0.5	4	30
10	132.91	6.22	7	30
11	207.32	4.62	4	30
12	322.62	6058.72	1	30
13	206.22	579.33	7	30
14	316.14	8679.66	2	30
15	251.42	7.75	6	30
16	178.8	0.99	3	30
17	104.65	20030.2	8	30
18	318.79	0.9	7	30
19	89.58	8315.93	8	30
20	190.42	3399.83	1	30
Streched function Stacionary GA con operadores normales Por torneo				
Iteracion	Tiempo_ms	Sol	Iter_sol	Dimension
1	367.65	2.27	3	10
2	564.97	1.8	8	10
3	455.38	2.17	0	10
4	200.32	2.31	1	10
5	118.62	1.74	8	10

13	135.8	0	2
14	380.23	0	5
15	426.81	0	7
16	290.67	0	5
17	333.61	0.04	6
18	407.67	0	7
19	249.75	0	6
20	332.02	0	5
1	274.33	0	3
2	271.53	0	7
3	82.76	0	7
4	363.9	0	1
5	325.82	0	5
6	338.16	0	6
7	140.08	0	2
8	186.88	0	3
9	332.81	0	6
10	336.81	0	8
11	143.52	0	8
12	420.53	0	8
13	322.25	0	5
14	457.01	0	4
15	307.65	0	6
16	212.45	0	5
17	198.34	0	7
18	230.45	0	7
19	211.56	0	7
20	282.76	0	5
Streched function Stacionary GA con operadores tram			
Iteracion	Tiempo_ms	Sol	Iter_sol
1	149.58	0.46	8
2	212.61	0.33	6
3	455.7	0.38	7
4	405.96	0.43	5
5	333.74	0.74	7

6	607.11	1.78	6	10
7	400.88	2.09	3	10
8	342.02	2.36	1	10
9	299.93	2.69	0	10
10	342.66	1.41	5	10
11	315.39	2.19	2	10
12	330.88	3.16	1	10
13	155.37	2.57	3	10
14	407.2	2.74	7	10
15	403.27	3.09	0	10
16	350.41	2.39	8	10
17	392.57	2.5	1	10
18	255.86	2.72	5	10
19	201.9	3.21	0	10
20	411.97	2.48	2	10
1	341.12	2.26	6	30
2	204.62	3.31	8	30
3	450.5	2.09	3	30
4	347.3	1.9	4	30
5	567.73	2.54	2	30
6	429.99	2.02	7	30
7	402.69	2.55	6	30
8	219.13	2.23	5	30
9	568.28	2.51	4	30
10	169.86	2.49	7	30
11	203.12	2.32	7	30
12	184.81	2.34	1	30
13	158.74	2.13	0	30
14	527.56	2.7	2	30
15	360.21	2.75	8	30
16	492.02	2.59	4	30
17	356.89	1.35	8	30
18	104.18	3.25	8	30
19	167.45	2.07	7	30
20	359.43	2.22	7	30

6	242.12	0.69	4
7	356.93	0.53	7
8	291.66	0.57	2
9	213.04	0.37	8
10	299.11	0.29	8
11	549.97	0.48	5
12	444.88	0.84	8
13	301.36	1.5	0
14	560.3	0.44	8
15	410.75	0.43	8
16	309.34	0.65	5
17	256.27	0.69	7
18	177.08	0.8	7
19	413.17	0.82	0
20	361.15	0.75	4
1	203.66	0.88	8
2	221.23	0.52	8
3	173.09	0.95	7
4	419.2	1	1
5	372.18	0.35	7
6	362.23	0.71	6
7	252.06	0.63	7
8	118.43	0.47	2
9	252.06	0.74	8
10	379.27	0.52	5
11	461.97	0.74	6
12	189.11	0.65	0
13	237.53	0.83	8
14	165.93	1.27	7
15	348.36	1.05	8
16	432.02	0.43	8
17	369.84	0.49	7
18	160.76	0.55	1
19	343.03	0.51	2
20	325.35	0.68	4

Sum Squares function Stacionary GA con operadores normales Por torneo				
Iteracion	Tiempo_ms	Sol	Iter_sol	Dimension
1	264.88	15.17	3	10
2	250.39	6.92	2	10
3	257.38	50.12	4	10
4	331.75	10.56	8	10
5	330.79	23.27	7	10
6	298.44	26.54	3	10
7	434.52	7.67	8	10
8	300.35	14.64	6	10
9	379.84	17.56	8	10
10	234.66	18.85	3	10
11	350.82	21.67	4	10
12	284.29	23.58	4	10
13	327.36	26.98	5	10
14	144.67	28.56	8	10
15	245.05	41.95	8	10
16	449.53	23.17	4	10
17	201.58	50.56	7	10
18	278.56	9.47	5	10
19	210.46	20.19	7	10
20	370.57	21.04	8	10
1	85.39	39.34	5	30
2	239.43	34.8	2	30
3	236.8	15.92	3	30
4	213.81	36.43	4	30
5	386.31	68.84	8	30
6	326.46	10.91	3	30
7	424.33	8.46	6	30
8	141.63	36.59	8	30
9	267.71	28.23	8	30
10	255.06	46.19	8	30
11	73.5	20.06	3	30
12	118.64	6.22	8	30
13	111.03	7.98	7	30

Sum Squares function Stacionary GA con operadores tra			
Iteracion	Tiempo_ms	Sol	Iter_sol
1	208	0.75	6
2	377.51	0.02	7
3	356.69	0.03	3
4	227.28	0.01	6
5	295.14	0.08	7
6	248.12	0.11	4
7	218.29	0.05	1
8	292.13	0.04	7
9	178.82	0.52	6
10	300.42	1.09	3
11	343.13	0.06	1
12	280.28	0.1	3
13	297.79	0.34	5
14	256.7	0.11	8
15	164.54	0.05	7
16	193.65	2.23	1
17	334.64	0.11	0
18	163.42	0.08	2
19	389.53	0.07	2
20	391.67	0.03	4
1	379.19	0.1	8
2	285.65	0.04	6
3	222.14	0.03	5
4	410.13	0.08	5
5	314.5	0.15	7
6	246.36	0.17	4
7	387.01	0.04	5
8	97.44	0.07	4
9	257.03	0.02	1
10	232.01	0.02	8
11	295.22	0.15	6
12	166.07	0.1	5
13	147.03	0.01	8

14	73.22	27.76	2	30
15	138.73	30.07	6	30
16	72.4	19.8	8	30
17	73.01	41.99	8	30
18	110.94	15.11	3	30
19	113.19	9.33	5	30
20	112.64	4.65	7	30

14	93.48	0.02	7
15	285.76	0.1	8
16	103.77	0.06	1
17	312.85	0.06	7
18	305.48	0.06	7
19	248.25	0.04	5
20	255.93	0.05	7

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Alpine function Generational GA con operadores normales Por torneo							
Iteracion	Tiempo_ms	Gen_sol	Iter_gen	Sol_gen	Sol	Iter_sol	Dimension
1	3372.64	15	4	8.02	24.64	7	10
2	3366.76	327	2	8.27	18.88	8	10
3	3351.56	1	1	6.22	18.35	9	10
4	3366.85	122	4	7.82	20.77	6	10
5	2284.67	38	7	7.1	21.06	0	10
6	3395.62	174	2	6.07	9.34	7	10
7	3393.11	378	9	5.77	19.43	5	10
8	3396.66	96	7	3.07	15.54	5	10
9	3382.44	416	4	6.68	16.34	2	10
10	3365.01	210	6	6.92	14.35	4	10
11	2261.4	86	6	7.31	23.14	5	10
12	2236.08	156	3	6.95	16.23	0	10
13	3407.34	164	0	4.82	12.61	9	10
14	2258.09	224	0	6.96	26.2	4	10
15	3376.12	442	7	4.28	12.85	6	10
16	2256.49	45	8	5.78	14.05	4	10
17	2272.78	173	9	6.42	10.25	1	10
18	3391.56	168	7	6.97	23.15	6	10
19	3391.1	381	7	5.46	23.96	9	10
20	2261.58	126	2	6.34	23.27	2	10
1	3389.4	300	4	6.54	23.97	3	30
2	3353.89	257	6	7.72	23.72	8	30
3	2240.72	197	5	7.43	17.67	2	30
4	3349.08	39	9	6.56	21.8	8	30
5	2258.26	103	7	5.64	17.85	8	30
6	3330.23	407	6	6.52	17.62	4	30
7	3384.23	479	4	8.01	16.47	0	30
8	3371.9	467	8	6.48	21.66	4	30
9	2251.57	301	6	6.31	15.42	2	30
10	2262.74	180	7	7.26	21.24	6	30
11	3375.15	102	4	6.59	16.14	7	30
12	2214.24	317	8	6.92	18.64	8	30
13	3330.27	377	1	6.02	21.48	6	30

Alpine function Gener		
Iteracion	Tiempo_ms	Gen_sol
1	4485.12	51
2	2249.02	112
3	3379.66	41
4	2252.34	203
5	2207.63	184
6	2280.11	273
7	3373.18	456
8	3372.93	4
9	2262.97	354
10	2268.02	405
11	2269.68	206
12	2252.95	385
13	2237.46	317
14	3346.65	392
15	2270.76	110
16	2267.96	475
17	2282	38
18	3386.02	421
19	3370.68	258
20	2276.98	424
1	2246.81	124
2	2245.69	23
3	3384.28	140
4	2255.4	199
5	2251.95	358
6	3325.61	62
7	3370.08	248
8	3384.1	310
9	3380.99	266
10	3347.8	67
11	2263.79	266
12	3408.7	58
13	2246.35	55

14	3359.46	379	5	5.95	20.44	4	30
15	3375.43	354	5	7.01	15.42	8	30
16	3362.2	80	4	6.9	23.81	8	30
17	2285.93	462	2	6.76	20.63	2	30
18	3425.77	386	6	6.45	24.47	6	30
19	2339.85	445	3	5.83	15.75	4	30
20	3511.29	20	0	7.1	15.58	1	30
Dixon function Generational GA con operadores normales Por torneo							
Iteracion	Tiempo_ms	Gen_sol	Iter_gen	Sol_gen	Sol	Iter_sol	Dimension
1	3597.6	316	8	65.03	661.72	1	10
2	3567.15	284	3	168.76	1204.47	8	10
3	3593.69	453	8	186.38	299.13	4	10
4	3575.97	389	8	99.6	882.28	6	10
5	2424.82	344	6	120.97	925.39	1	10
6	2366.03	330	2	182.65	787.96	1	10
7	2408.31	29	5	140.55	970.11	7	10
8	2423.78	121	1	169.4	977.54	9	10
9	3591.02	330	8	185.65	780.27	8	10
10	3595.22	424	3	133.89	669.79	8	10
11	3576.24	129	7	80.9	774.75	4	10
12	2367.72	463	5	162.41	747.07	0	10
13	3569.58	356	1	129.52	831.24	0	10
14	2407.51	401	8	147.62	795.95	7	10
15	2390.68	488	6	175.33	862.59	8	10
16	2388.13	426	4	92.28	1176.16	4	10
17	2386.5	139	3	154.62	1082.53	9	10
18	2400	167	3	136.42	862.98	7	10
19	2368.24	152	6	194.2	1186.94	2	10
20	2395.38	319	0	109.82	532.35	8	10
1	2384.48	478	4	147.26	859.43	7	30
2	3597.38	390	4	131.35	738.27	0	30
3	2402.36	327	4	173.24	373	3	30
4	2389.9	257	2	79.92	999.79	7	30
5	2398.13	377	8	137.12	1274.96	7	30
6	2430.03	256	8	96.33	569.89	6	30

14	3344.2	134
15	3293.19	139
16	3368.04	10
17	3363.69	132
18	3388.16	220
19	3390.55	64
20	2258.76	400
Dixon function Genera		
Iteracion	Tiempo_ms	Gen_sol
1	3496.74	82
2	2337.23	133
3	3534.3	371
4	2414.16	434
5	3558.15	274
6	2413.58	327
7	2373.45	76
8	2408.95	315
9	2378.02	28
10	3616	293
11	2427.1	477
12	2381.24	0
13	2420.22	218
14	2379.68	164
15	3603.63	235
16	3583.09	83
17	3576.72	184
18	3606.09	399
19	3611.43	44
20	3610.48	210
1	3574.94	228
2	3566.9	369
3	3550.21	431
4	2380.91	372
5	2390.05	75
6	3605.67	181

7	2416.44	366	4	186.1	646.58	4	30
8	3575.46	396	2	125.15	591.19	3	30
9	3581.56	369	5	108.19	812.55	4	30
10	3446.14	181	3	114.56	936.71	7	30
11	2397.21	108	5	169.79	522.23	7	30
12	3579	453	6	176	876.95	3	30
13	3413.53	406	6	91.33	917.75	0	30
14	1555.91	255	4	125.65	414.88	5	30
15	1437.88	33	0	170.53	789.91	3	30
16	2035.15	349	5	106.05	1385.53	2	30
17	2093.81	471	1	189.75	1044.42	8	30
18	1908.01	491	0	135.21	882.95	2	30
19	2455.5	101	7	99.57	527.66	2	30
20	3754.47	483	3	138.91	893.34	5	30
Quintic function Generational GA con operadores normales Por torneo							
Iteracion	Tiempo_ms	Gen_sol	Iter_gen	Sol_gen	Sol	Iter_sol	Dimension
1	2893.49	438	9	566.27	97639.48	1	10
2	2943.39	133	8	615.03	57259.79	1	10
3	2400.52	224	7	2537.45	40103.11	1	10
4	1567.69	281	6	1670.67	83929.84	8	10
5	2311.63	491	1	956.14	58951.96	9	10
6	2826.32	225	5	1236.28	73936.96	4	10
7	4338.92	400	6	239.29	63777.14	5	10
8	2899.75	59	5	1918.24	22678.39	7	10
9	4294.04	89	7	147.61	60824.38	2	10
10	2867.41	475	8	2501.45	53398.32	8	10
11	2891.93	363	3	2519.22	60457.27	7	10
12	4294.47	482	6	435.58	25227.71	2	10
13	2873.52	191	5	2379.61	47812.71	9	10
14	2916.83	39	3	460.69	66716.72	1	10
15	2864.62	356	7	885.61	70586.39	6	10
16	4339.19	453	8	858.67	20353.84	0	10
17	2890.71	499	7	2300.06	70393.31	4	10
18	2880.71	64	8	1316.87	52137.96	9	10
19	2897.4	463	1	917.09	19086.58	7	10

7	2424.51	410
8	2361.06	143
9	3579.56	320
10	2417.34	453
11	2234.87	138
12	3564.72	106
13	3566.74	143
14	3467.53	499
15	2260.43	309
16	1371.32	297
17	1364.76	247
18	2041.15	144
19	2980.86	10
20	3653.5	389
Quintic function Gener		
Iteracion	Tiempo_ms	Gen_sol
1	4215.47	17
2	2901.94	117
3	2554.5	38
4	1583.53	382
5	2294.42	286
6	1597.28	35
7	2520.93	319
8	2908.84	94
9	4313.95	230
10	4306.46	312
11	4339.15	345
12	2892.01	399
13	2816.33	314
14	2879.91	24
15	4281.56	162
16	4346.18	499
17	4305.53	366
18	4317.96	472
19	4308.68	49

20	4315.13	315	4	1101.78	46905.7	1	10
1	2887.17	190	7	1021.29	32103.1	5	30
2	4260.7	222	3	1741.03	27586.41	5	30
3	2899.55	183	1	1756.9	39219.26	2	30
4	4327.18	303	4	1061.91	28435.05	2	30
5	4301.01	366	8	1358.61	40061.42	9	30
6	4308.56	77	6	2799.39	36054.42	9	30
7	4307.86	419	8	1326.02	95356.48	4	30
8	4307.97	325	0	1191.1	67424.45	3	30
9	4326.11	327	2	954.4	17725.06	7	30
10	4323.32	241	3	840.35	67782.43	0	30
11	4322.45	169	1	193.6	27351.39	8	30
12	2884.7	200	2	1724.92	12686.01	7	30
13	2900.11	274	4	640.51	82894.41	7	30
14	4365.54	211	0	821.39	75913.71	6	30
15	4317.08	264	7	1306.54	58778.14	9	30
16	4306.99	171	0	497.69	24712.84	8	30
17	2888.04	248	5	1108.29	29942.37	5	30
18	2866.09	192	3	1085.75	47584.59	0	30
19	2927.3	4	8	1981.37	59970.6	9	30
20	4134.13	59	5	789.21	61634.48	8	30
Schwefel function Generational GA con operadores normales Por torneo							
Iteracion	Tiempo_ms	Gen_sol	Iter_gen	Sol_gen	Sol	Iter_sol	Dimension
1	2108.79	211	7	180580.07	327196272.25	7	10
2	2132.12	475	7	57725.54	216315047.63	8	10
3	2141.43	280	4	127799.85	314088068.09	7	10
4	3171.35	374	4	146056.09	993116115.21	1	10
5	3186.8	439	1	614168.6	174394325.64	7	10
6	2119.7	114	6	1457754.64	2923650560.22	6	10
7	2144.2	344	2	2859804.44	4284451491.32	5	10
8	3154.34	407	8	51748.93	916063176.49	7	10
9	3167.5	157	8	445591.16	3795124540.95	4	10
10	2105.53	73	3	2691976.6	211749640.14	5	10
11	2162.31	133	7	3191373.19	1798486005.06	2	10
12	3160.07	245	5	1422597.45	4500137026.31	4	10

20	4310.55	352
1	4262.63	414
2	2906.39	187
3	4296.43	249
4	2878.3	156
5	2883.92	228
6	4299.09	64
7	2889.62	20
8	4307.74	370
9	2876.39	97
10	2855.38	313
11	4327.46	77
12	2875.92	183
13	2919.7	3
14	4329.16	54
15	2892.41	237
16	2909.05	50
17	4300.37	414
18	4337.12	191
19	4362.06	131
20	2902.2	350
Schwefel function Gene		
Iteracion	Tiempo_ms	Gen_sol
1	2384.02	400
2	2115	240
3	2133.15	196
4	3205.58	23
5	2108.63	444
6	3185.85	354
7	3207.74	95
8	3145.37	185
9	2134.7	236
10	3207.78	254
11	2112.15	335
12	2100.55	412

13	2120.8	470	9	221066.55	145659004.49	0	10
14	2165.87	338	2	5462893.95	886830947.25	9	10
15	2120.9	107	2	1606947.49	803822731.68	9	10
16	3154.09	309	3	731877.43	1303616732.97	5	10
17	3181.2	84	8	212069.33	131527369.17	4	10
18	2130.76	250	5	336042.43	630228847.94	3	10
19	3137.02	297	2	61604.55	1022750965.22	8	10
20	3185.62	497	3	325873.87	102929440.33	8	10
1	3191.12	189	6	1882272.35	227505797.37	2	30
2	2110.57	190	5	939548.34	1976519260.87	2	30
3	2141.37	107	5	672887.59	12947923.11	8	30
4	3194.14	186	5	1599407.91	4923215255.87	6	30
5	2130.22	358	2	108822.95	686225690.22	8	30
6	3183.67	295	8	63919.5	24941215.38	1	30
7	3146.9	52	7	113901.25	1413121944.02	2	30
8	3198.88	401	1	123557.78	1219621808.54	5	30
9	2133.89	445	3	636884.56	445886409.93	2	30
10	3205.13	448	8	877364.91	321625809.27	7	30
11	2144.94	144	2	35269.6	16289902.44	7	30
12	2095.1	430	8	1492653.7	917202389.53	2	30
13	3188.14	153	2	1467866.14	973686501.47	4	30
14	3191.77	114	7	8915.66	2979569973.81	1	30
15	2143.58	245	6	1353222.51	1847351134.11	8	30
16	3183.63	30	4	61283.75	1059346682.93	7	30
17	2136.22	2	2	2130385.8	1674215582.08	6	30
18	3170.69	245	6	1034493.53	1647780452.16	5	30
19	2180.18	390	2	1689937.64	1107523020.83	6	30
20	3693.71	471	6	256106.47	67367238.15	8	30

Streched function Generational GA con operadores normales Por torneo							
Iteracion	Tiempo_ms	Gen_sol	Iter_gen	Sol_gen	Sol	Iter_sol	Dimension
1	4239.91	54	8	2.78	8.57	8	10
2	4260.23	451	3	3.39	8.59	0	10
3	2808.67	73	8	4.08	6.75	7	10
4	2854.77	275	0	3.38	9.5	8	10
5	2815.2	33	8	3.32	10.94	1	10

13	2128.8	99
14	2152.52	133
15	3211.25	41
16	3149.18	5
17	2116.04	48
18	3200.77	17
19	3156.63	184
20	3186.92	397
1	3199.25	142
2	3153.3	141
3	2148.07	288
4	2124.37	207
5	2132.91	419
6	3193.04	150
7	3123.79	85
8	3174.72	169
9	2151.82	302
10	2153.49	308
11	2155.87	324
12	2136.45	288
13	3195.63	371
14	2110.71	410
15	3167.84	366
16	2125.86	416
17	2146.8	220
18	2123.93	188
19	3160.79	18
20	2125.75	29

Streched function Gene		
Iteracion	Tiempo_ms	Gen_sol
1	3683.04	164
2	4189.45	318
3	2825.4	480
4	4247.32	271
5	2832.27	366

6	4242.6	271	9	3.09	9.8	7	10
7	2870.15	95	9	3.63	11.01	6	10
8	2834.72	64	9	3.53	10.34	8	10
9	4270.45	290	4	2.78	8.4	5	10
10	4222.64	181	8	3.14	8.42	6	10
11	4220.54	208	1	3.04	7.9	7	10
12	4226.04	144	7	3.27	5.3	7	10
13	2842.4	158	8	3.86	9.32	1	10
14	2854.02	230	4	3.47	10.06	4	10
15	2837.72	321	1	2.9	7.98	7	10
16	4271.26	272	8	3.12	8.26	6	10
17	2827.61	319	8	3.34	7.57	0	10
18	4257.78	153	4	2.85	5.29	2	10
19	4253.89	139	8	2.94	9.03	9	10
20	4227.17	474	5	3.62	7.56	1	10
1	4212.79	289	1	3.29	10.22	5	30
2	4246.69	464	8	3.42	9.31	7	30
3	2815.5	479	4	3.67	10.1	0	30
4	4212.1	483	4	3.02	8.09	4	30
5	4204.08	293	1	3.38	7.1	8	30
6	2854.4	222	3	3.27	8.95	5	30
7	4238.16	30	4	3.31	8.13	2	30
8	2847.84	488	6	3.16	12.42	3	30
9	4247.72	216	9	2.43	7.29	9	30
10	2835.95	22	5	3.29	9.25	1	30
11	4256.98	473	4	2.6	9.52	9	30
12	4246.7	268	2	2.34	8.31	3	30
13	2833.43	379	4	3.45	9.35	8	30
14	2853.4	158	8	2.69	9.28	7	30
15	4254.58	182	3	3.92	8.76	8	30
16	4231.66	250	6	3.26	9.25	2	30
17	2843.41	81	7	2.04	8.68	5	30
18	4240.45	302	5	3.24	10.05	2	30
19	3896.93	468	8	2.81	5.25	9	30
20	2560.18	265	4	3.22	7.99	2	30

6	2853.94	13
7	4229.83	436
8	2842.98	390
9	4246.65	211
10	2847.44	229
11	2832.2	68
12	4231.51	277
13	4182.49	96
14	2817.86	340
15	2848.27	85
16	4227.78	195
17	4231.68	354
18	4264.29	355
19	4269.6	356
20	2815.34	155
1	4213.68	219
2	4246.48	474
3	4233.82	261
4	4245.47	5
5	4211.46	420
6	2812.04	491
7	4234.67	256
8	4236.53	278
9	2822.23	100
10	2812.24	49
11	2837.02	232
12	2824.98	225
13	2844.35	176
14	2837.66	341
15	4223.36	369
16	2851.74	434
17	4228.45	249
18	4279.1	365
19	4231.89	109
20	2804.21	425

Sum Squares function Generational GA con operadores normales Por torneo							
Iteracion	Tiempo_ms	Gen_sol	Iter_gen	Sol_gen	Sol	Iter_sol	Dimension
1	2270.94	464	6	212.38	1086.74	9	10
2	3456.54	186	2	180.45	782.77	4	10
3	3424.98	240	6	135.18	696.34	5	10
4	3411.51	330	6	209.88	1210.77	1	10
5	3418.22	392	2	204.96	502.96	6	10
6	2266.9	160	3	196.81	1064.13	7	10
7	2269.6	26	5	129.68	1216.05	5	10
8	3399.65	277	8	235.59	1202.62	5	10
9	2259.43	24	6	195.42	1432.12	6	10
10	3393.68	237	0	182	916.84	0	10
11	2271.89	356	8	182.87	784.01	9	10
12	2300.23	34	5	93.64	900.64	7	10
13	3411.2	11	0	190.78	829.7	4	10
14	3420.4	52	3	256.61	1468.03	2	10
15	2272.74	414	3	212.06	664.07	6	10
16	2289.11	495	2	189.33	933.61	9	10
17	3403.34	23	1	187.88	1306.89	6	10
18	3415.56	234	0	194.37	1351.47	7	10
19	2277.81	227	4	234.61	1093.72	4	10
20	2268.82	499	3	269.92	1010.85	5	10
1	2274.88	353	0	225.57	1149.59	1	30
2	3393.11	432	2	160.95	336	9	30
3	3387.86	24	2	169.97	820.78	8	30
4	3384.94	165	7	202.24	1154.39	3	30
5	2295	445	9	203.53	660.24	4	30
6	3399.87	328	6	258.14	768.02	6	30
7	3379.87	161	5	156.13	1211.66	5	30
8	2289.34	443	2	139.88	618.14	4	30
9	2293.78	383	7	254.69	671.16	7	30
10	3424.45	379	5	167.32	1141.79	7	30
11	3421.35	48	1	192.26	1373.98	6	30
12	3395.32	149	7	168.54	1157.49	4	30
13	3411.34	429	0	197.97	777.35	3	30

Sum Squares function Ge		
Iteracion	Tiempo_ms	Gen_sol
1	3847.39	374
2	3637.17	173
3	2266.6	254
4	2296.31	59
5	3402.4	123
6	2264.15	251
7	3422.35	199
8	3386.59	493
9	2275.09	302
10	2261.55	400
11	2268	202
12	3390.46	331
13	3396.01	490
14	2270.9	498
15	3397.27	321
16	2296.3	343
17	3427.81	75
18	3393.88	468
19	2275.64	89
20	2273.73	196
1	2299.07	348
2	2263.5	491
3	3423.47	410
4	3398.73	270
5	3394.41	111
6	3393.35	115
7	3423.95	153
8	3380.4	172
9	2266.16	124
10	3436.63	215
11	3416.16	219
12	3414.82	9
13	2287	256

14	2262.69	162	4	245.07	909.35	4	30
15	3442.55	250	0	226.45	943.04	7	30
16	3429.57	212	8	212.12	826.56	3	30
17	2292.03	136	0	203.51	603.07	0	30
18	3411.19	372	8	189.02	852.38	8	30
19	1280.33	251	6	264.15	845.29	1	30
20	1118.88	353	7	193.8	819.01	7	30

14	3425.76	378
15	3397.95	230
16	2275.3	291
17	3404.67	466
18	2303.91	15
19	3421.82	272
20	2280.38	14

ational GA con operadores tramposos Por torneo				
Iter_gen	Sol_gen	Sol	Iter_sol	Dimension
6	2.04	14.87	8	10
8	2.17	8.08	7	10
8	1.87	19.11	7	10
1	3.36	18.54	0	10
7	6.87	20.23	7	10
5	2.58	14.72	7	10
4	2.53	14.49	4	10
0	1.7	15.08	7	10
7	3.52	20.93	8	10
2	2.49	23.68	7	10
7	2.24	4.44	7	10
1	3.23	20.49	6	10
4	3.37	20.64	7	10
8	5.84	19.17	1	10
3	3.2	19.9	6	10
6	4.4	20.57	0	10
6	5.88	17.83	8	10
5	2.84	16.81	0	10
0	3.65	20.06	0	10
8	2.23	17.33	6	10
5	4.28	13.32	0	30
7	4.43	22.08	7	30
6	1.52	28.74	2	30
7	2.33	11.23	6	30
0	4.03	20.96	0	30
4	3.45	16.96	7	30
5	2.51	18.35	9	30
8	3.06	12.18	5	30
4	2.96	18.18	2	30
3	3.29	16.05	5	30
2	3.49	14.1	6	30
7	5.87	19.85	7	30
4	3.52	18.53	1	30

2	2.05	11.94	6	30
2	3.69	18.34	4	30
0	2.44	14.84	4	30
4	1.3	17.52	1	30
6	5.13	17.07	0	30
3	2.12	12.09	8	30
5	6.88	14.2	3	30

ational GA con operadores tramposos Por torneo

Iter_gen	Sol_gen	Sol	Iter_sol	Dimension
8	68.41	895.89	4	10
8	73.62	426.42	2	10
8	52.47	1060.7	5	10
7	104.01	447.3	4	10
8	54.04	628.46	6	10
7	43.34	493.7	1	10
2	60.92	539.44	5	10
0	51.69	498.79	9	10
1	87.74	496.65	2	10
7	85.47	459.87	7	10
6	55.53	951.86	4	10
6	36.37	320.97	0	10
8	54.74	764.63	7	10
6	50.42	515.18	0	10
3	53.68	458.77	9	10
0	17.74	140.72	7	10
7	43.58	647.59	8	10
5	42.77	503.16	8	10
6	56.76	903.45	1	10
5	58.63	823.63	8	10
7	76.86	968.51	4	30
6	35.83	1114.12	1	30
8	72.63	783.7	2	30
7	81.85	837.31	2	30
1	81.32	1383.45	0	30
3	51.53	483.38	4	30

1	84.28	1079.58	6	30
3	53.46	1027.55	5	30
5	37.71	692.22	0	30
4	98.41	789.45	2	30
7	41.32	677.8	6	30
4	38.3	1275.19	8	30
5	97.11	1081.75	3	30
6	88.91	255.02	6	30
8	47.24	387.51	4	30
7	54.59	891.8	6	30
0	46.89	865.82	6	30
2	46.45	829.14	0	30
7	22.22	869.21	2	30
5	40.01	930.82	6	30

ational GA con operadores tramposos Por torneo

Iter_gen	Sol_gen	Sol	Iter_sol	Dimension
8	85.82	26934.73	4	10
3	102.85	34345	7	10
4	100.87	18456.87	7	10
4	123.34	70577.57	1	10
4	102.93	119563.98	6	10
8	166.35	70490.06	7	10
5	36.01	35428	7	10
3	143.41	44897.53	0	10
6	34.77	72131.78	3	10
4	55.94	22677.08	0	10
0	249.95	43735.9	6	10
5	235.33	4924.93	2	10
3	25.02	23812.89	3	10
7	48.7	85422.43	0	10
7	250.21	39993.47	3	10
6	51.21	51.21	6	10
2	25.07	24863.07	6	10
3	190.48	11306.17	5	10
5	24.9	49343.17	9	10

0	41.07	104117.75	8	10
6	59.33	125336.46	4	30
5	177.78	6328.32	3	30
3	14.18	32950.88	2	30
3	126.56	45293	7	30
0	91.09	7475.13	6	30
8	164.06	46607.33	5	30
5	55.99	34058.26	6	30
1	80.4	22497.01	1	30
6	49.04	110375.16	9	30
2	33.53	41375.46	2	30
7	49.67	3139.77	7	30
8	11.2	36362.48	3	30
5	77.55	8024.31	6	30
4	18.65	28991.67	7	30
6	33.31	8085.48	5	30
7	285.03	8368.91	3	30
8	180.5	15302.25	3	30
5	90.45	90202.93	4	30
8	45.12	32718.35	7	30
1	68.03	66292.54	8	30

erational GA con operadores tramposos Por torneo

Iter_gen	Sol_gen	Sol	Iter_sol	Dimension
7	148882.88	177356764.42	9	10
8	65083.39	1773585689.46	3	10
6	20534.73	2449145411.25	5	10
1	10878.91	710827094.68	5	10
7	381	657970708.04	6	10
7	31946.1	393896542.65	7	10
7	9484.14	4282257617.9	7	10
8	2376.84	152280486.34	0	10
4	94831.98	411723243.5	1	10
7	95652.83	21321263.41	3	10
8	4515.59	2771609474.25	4	10
4	37813.02	511953106.79	8	10

1	65149.98	2449702784.91	4	10
7	3029.05	2200128302.06	1	10
6	862.35	3360360073.56	6	10
5	62.45	712007393.28	7	10
5	6926.49	1135084826.93	9	10
3	64230.8	2082767785.15	5	10
5	3465.48	1475430029.69	3	10
7	621.43	2124149600.64	5	10
1	23341.65	1288487442.3	3	30
4	2671.08	865118434.04	1	30
3	30432.3	1907087647.14	4	30
0	3746.13	69876888.59	8	30
5	54.13	1009997269.79	9	30
8	6322.25	266470133.84	6	30
7	13229.33	1444270945.81	7	30
8	103785.51	1133678204.05	6	30
8	288.96	2547129544.56	7	30
6	6165.26	1750101543.46	3	30
3	6630.62	174754298.43	5	30
4	205.59	1495481730.14	9	30
6	1.81	161382581.23	6	30
4	64170.24	51359782.41	2	30
8	396.56	599819784.04	8	30
8	45957.37	4003368069.55	6	30
4	59518.88	5376983575.54	8	30
6	18856.47	1664534420.84	6	30
4	23826.23	551275199.52	7	30
5	121.78	1464104366.79	1	30

ɛrational GA con operadores tramposos Por torneo

Iter_gen	Sol_gen	Sol	Iter_sol	Dimension
1	2.35	8.9	5	10
1	2.19	6.92	2	10
5	2.47	9.22	9	10
4	3.1	8.97	5	10
2	2.76	6.24	1	10

7	2.62	5.84	3	10
6	2.65	4.73	4	10
7	2.7	9.2	9	10
7	3.07	5.9	8	10
6	3.17	8.97	8	10
6	2.23	6.2	8	10
1	2.89	8.65	8	10
7	2.54	10.22	4	10
2	2.5	8.72	4	10
8	2.8	5.31	9	10
7	3.35	8.4	4	10
7	2.29	7.83	7	10
2	2.65	9.48	2	10
5	1.55	7.52	1	10
4	3.09	9.33	8	10
7	2.39	5.51	9	30
7	2.36	8.98	1	30
8	2.78	10.49	6	30
7	2.28	9.36	8	30
3	2.47	7.05	2	30
3	3.24	7.07	8	30
6	2.2	10.44	6	30
3	2.47	5.91	3	30
8	2.93	6.36	4	30
1	2.74	8.56	0	30
5	2.4	5.12	6	30
3	3.14	6.39	0	30
3	2.22	8.55	9	30
2	3.32	10.17	4	30
0	2.66	5.35	8	30
7	2.49	8.55	6	30
4	2.56	10.76	8	30
6	1.8	9.48	2	30
5	2.31	7.63	7	30
8	2.08	7.54	3	30

enerational GA con operadores tramposos Por torneo				
Iter_gen	Sol_gen	Sol	Iter_sol	Dimension
7	104.76	912.28	1	10
7	87.07	1349.17	8	10
3	81.45	931.75	5	10
7	77.15	452.17	9	10
3	39.42	1143.5	4	10
0	54.85	373.76	4	10
6	24.75	507	1	10
0	38.42	694.24	8	10
5	66.86	1302.88	1	10
5	53.12	693.6	6	10
2	48.87	384.92	7	10
6	102.03	582.4	5	10
3	65.21	914.15	5	10
6	27.93	405.73	8	10
7	27.97	1083.75	3	10
8	72.3	1031.2	0	10
5	41.13	700.99	0	10
4	74.45	1206.67	8	10
4	70.72	1077.94	6	10
7	42.07	695.32	1	10
8	61.92	1274.54	0	30
6	96.45	1095.36	0	30
5	16.27	474.61	3	30
7	88.74	432.05	2	30
8	55.9	430.35	5	30
8	39.3	212.12	4	30
0	94.24	1187.46	4	30
5	6.88	666.63	4	30
5	24.49	752.26	5	30
3	69.1	166.68	4	30
0	24.58	1030.94	7	30
0	23.27	724.71	8	30
3	75.28	765.14	5	30

5	52.77	700.63	7	30
3	75.99	900.12	5	30
7	31.34	581.91	5	30
8	15.9	656.33	4	30
5	20.9	1354.5	8	30
5	93.85	502.72	5	30
6	4.78	867.56	8	30

RMHC	Ejecución					Tiempo					
Funciones	Mejor	Peor	Promedio	Mediana	Desviación	Mejor	Peor	Promedio	Mediana	Desviación	Dimension
Alpine	12.2	32.88	22.624	22.22	4.55341564	3.39	8.99	3.7765	3.51	0.9571717453	10
Dixon	13.19	40.51	25.8415	25.145	7.15880107	4.48	411.38	23.41175	4.615	78.111220221	10
Quintic	14.96	41.89	28.2795	26.675	8.6366414	8.57	414.26	56.00725	9.69	121.09290906	10
Schewel	19.1	40.39	28.2405	28.615	6.23517079	1.16	403.5	12.601	2.335	62.598250047	10
Streched	12.68	38.03	26.7095	26.99	7.95488245	8.24	524.14	71.27475	20.92	136.29186115	10
Sum Squares	16.77	39.76	27.237	27.84	6.07858544	3.72	425.16	33.9665	8.785	86.96842167	10
Promedio	14.817	38.91	26.48866667	26.2475	6.7695828	4.926667	364.5717	33.506292	8.309167	81.003305649	

SA	Ejecución					Tiempo					
Funciones	Mejor	Peor	Promedio	Mediana	Desviación	Mejor	Peor	Promedio	Mediana	Desviación	Dimension
Alpine	17.58	52.67	32.585	32.2	9.68548476	1.99	505.04	16.38825	2.64	78.286157553	10
Dixon	15.86	40	26.7495	26.645	6.95649802	2.81	303.62	10.66575	3.05	46.912053882	10
Quintic	7.24	23.95	12.5245	12.185	3.80272465	11.49	533.47	118.102	27.655	170.75827958	10
Schewel	3.4	11.94	7.5245	7.87	1.90425701	7.51	410	37.9415	9.215	89.661184008	10
Streched	13.38	43.78	32.508	32.675	7.6693087	4.4	270.98	22.87975	6.345	50.691564362	10
Sum Squares	18.35	42.8	29.7615	29.305	6.01930168	2.27	153.65	6.5695	2.515	23.564472936	10
Promedio	12.635	35.8566667	23.60883333	23.48	6.00626247	5.078333	362.7933	35.424458	8.57	76.645618721	

GA_St	Ejecución					Tiempo					
Funciones	Mejor	Peor	Promedio	Mediana	Desviación	Mejor	Peor	Promedio	Mediana	Desviación	Dimension
Alpine	0.63	3.99	2.0035	1.875	0.77366191	100.35	1952.36	487.17325	387.49	395.45690616	10
Dixon	14.04	95.7	44.1425	40.39	23.5107122	93.99	497.97	301.839	301.09	86.276447505	10
Quintic	10	97.38	51.077	51.87	22.6470956	92.41	602.22	334.4015	332.165	115.96322078	10
Schewel	0.03	3172	385.6265	54.995	751.026623	89.58	601.74	290.97775	281.88	111.93273084	10
Streched	1.41	3.21	2.3835	2.375	0.47072577	104.18	607.11	338.49975	348.855	132.08504861	10
Sum Squares	6.92	50.56	22.9235	21.355	12.1174838	72.4	449.53	238.003	247.72	109.31650553	10
Promedio	5.505	570.473333	84.69275	28.81	135.09105	92.15167	785.155	331.81571	316.5333	158.50514324	

GA_Gen	Ejecución					Tiempo					
Funciones	Mejor	Peor	Promedio	Mediana	Desviación	Mejor	Peor	Promedio	Mediana	Desviación	Dimension
Alpine	3.07	8.27	6.3615	6.55	1.23705002	2214.24	3511.29	2988.9868	3360.83	533.56066362	10
Dixon	65.03	194.2	141.8	144.085	36.8079725	1437.88	3754.47	2766.148	2412.375	661.71519821	10
Quintic	147.61	2537.45	1278.1805	1028.96	797.632032	1567.69	4365.54	3466.7383	2922.065	792.30938194	10

Schewel	51749	5462893.95	1110277.608	390816.795	1397041.85	2095.1	3693.71	2667.8563	2658.6	540.68811438	10
Streched	2.78	4.08	3.2765	3.295	0.34814185	2560.18	4271.26	3629.268	4212.445	696.80792005	10
Sum Squares	93.64	269.92	194.721	194.895	40.1800888	1118.88	3456.54	2847.2725	3386.4	663.60070167	10
Promedio	8677	910984.645	185316.9913	65365.7633	232986.342	1832.328	3842.135	3061.045	3158.786	648.11366331	

RMHC	Ejecución					Tiempo					
Funciones	Mejor	Peor	Promedio	Mediana	Desviación	Mejor	Peor	Promedio	Mediana	Desviación	Dimension
Alpine	12.04	36.7	21.85	19.24	6.45714565	3.39	8.99	3.782	3.455	1.1998733266	30
Dixon	10.72	45.02	27.5875	27.585	7.8607607	4.48	411.38	26.879	4.68	88.264619747	30
Quintic	16.16	41.3	27.3875	27.04	5.39128452	8.57	414.26	45.268	9.56	107.17850272	30
Schewel	17.67	41.97	27.5475	26.29	6.47863865	2.28	403.5	22.9675	2.53	87.304191988	30
Streched	17.51	35.6	25.7675	25.84	5.41133521	8.24	324.08	43.381	9.72	92.195898222	30
Sum Squares	12.64	45.49	25.641	24.89	7.8733804	3.98	306.51	21.655	6.76	65.381667805	30
Promedio	14.457	41.0133333	25.9635	25.1475	6.57875752	5.156667	311.4533	27.322083	6.1175	73.587458969	

SA	Ejecución					Tiempo					
Funciones	Mejor	Peor	Promedio	Mediana	Desviación	Mejor	Peor	Promedio	Mediana	Desviación	Dimension
Alpine	14.81	42.17	32.1275	32.625	6.76795972	1.99	2.75	2.214	2.145	0.2194401969	30
Dixon	12.7	37.47	26.9915	28.665	6.29985339	2.81	3.31	3.0055	2.985	0.1534429862	30
Quintic	9.52	18.26	13.5155	13.335	2.5685803	12.58	431.2	117.625	27.655	167.42764412	30
Schewel	3.18	12.33	8.0485	8.06	2.11678595	7.51	309.81	29.4995	8.945	68.362741495	30
Streched	19.88	45.39	28.7705	28.62	7.23181338	4.46	108.65	18.0905	8.1	30.150706206	30
Sum Squares	13.13	38.63	25.804	25.69	5.81604195	2.28	153.65	10.703	2.66	32.8083107	30
Promedio	12.203	32.375	22.54291667	22.8325	5.13350578	5.271667	168.2283	30.189583	8.748333	49.853714284	

GA_St	Ejecución					Tiempo					
Funciones	Mejor	Peor	Promedio	Mediana	Desviación	Mejor	Peor	Promedio	Mediana	Desviación	Dimension
Alpine	0.87	3.03	1.757	1.685	0.5336675	100.35	597.9	337.718	353.21	122.77829473	30
Dixon	16.33	113.42	39.977	32.36	23.9868064	141.48	497.97	304.5935	299.33	90.756469316	30
Quintic	28.18	142.09	57.7115	45.325	27.8196843	126.59	602.22	329.2735	327.495	111.48705357	30
Schewel	0.5	20030.2	2390.887	33.245	4899.82032	89.58	601.74	260.3735	243.355	116.81093683	30
Streched	1.35	3.31	2.381	2.33	0.43127601	104.18	568.28	330.7815	352.095	142.9809351	30
Sum Squares	4.65	68.84	25.434	23.91	16.235918	72.4	424.33	178.7115	128.685	106.08819936	30
Promedio	8.6467	3393.48167	419.69125	23.1425	828.137945	105.7633	548.74	290.24192	284.0283	115.15031482	

Analysis_Normal

GA_Gen	Ejecución					Tiempo					
Funciones	Mejor	Peor	Promedio	Mediana	Desviación	Mejor	Peor	Promedio	Mediana	Desviación	Dimension
Alpine	5.64	8.01	6.7	6.575	0.60038321	2214.24	3511.29	2988.5805	3351.485	532.84480138	30
Dixon	79.92	189.75	135.1005	133.28	32.6026809	1437.88	3754.47	2662.6175	2409.4	717.29104628	30
Quintic	193.6	2799.39	1210.0135	1097.02	569.683376	2866.09	4365.54	3808.093	4304	672.72061544	30
Schewel	8916	2130385.8	827435.097	775126.25	696860.918	2095.1	3693.71	2738.1925	3158.795	556.47116932	30
Streched	2.04	3.92	3.0905	3.25	0.4563932	2560.18	4256.98	3646.6475	4208.09	693.24586651	30
Sum Squares	139.88	264.15	201.5655	200.105	34.8176143	1118.88	3442.55	2849.4175	3386.4	745.11101818	30
Promedio	1556	355608.503	138165.2612	129427.747	116249.846	2048.728	3837.423	3115.5914	3469.695	652.94741952	

RMHC	Ejecución					Tiempo					
Funciones	Mejor	Peor	Promedio	Mediana	Desviación	Mejor	Peor	Promedio	Mediana	Desviación	Dimension
Alpine	0.31	10.76	3.347	3.365	2.5043864	2.04	8.34	3.893	3.83	1.3834851	10
Dixon	0.35	11.61	2.761	1.41	3.1482422	2.2	4.65	2.998	2.37	0.9978156	10
Quintic	17.77	17.8	17.7845	17.78	0.0080467	4.41	462.78	43.708	5.525	116.92677	10
Schewel	0.31	10.21	3.0215	1.99	2.9373088	1.25	469.2	25.5165	1.8	101.79212	10
Streched	0.33	11.04	2.6095	1.215	2.8804227	4.11	326.35	24.0725	5.06	69.580014	10
Sum Squares	0.36	9.53	2.666	1.82	2.7687838	1.98	356.52	37.938	5.115	98.327708	10
Promedio	3.23833	11.825	5.36491667	4.5966667	2.3745318	2.665	271.307	23.021	3.95	64.834652	

SA	Ejecución					Tiempo					
Funciones	Mejor	Peor	Promedio	Mediana	Desviación	Mejor	Peor	Promedio	Mediana	Desviación	Dimension
Alpine	0.21	11.57	3.3355	1.585	3.4952489	2.28	365.95	23.574	5.605	78.563292	10
Dixon	0.47	11.18	2.881	1.74	2.8958693	2.7	506.95	30.221	4.715	109.39472	10
Quintic	17.78	17.8	17.792	17.79	0.0067823	4.45	505.84	33.4685	9.9	108.42116	10
Schewel	0.32	6.59	2.587	1.605	2.2772376	1.44	402.82	22.23	2.075	87.316167	10
Streched	0.18	11.09	2.84	1.19	3.3978184	4.25	433.41	43.299	4.88	111.57663	10
Sum Squares	0.29	11.32	3.678	2.205	3.6881291	2.06	3.4	2.445	2.335	0.3921033	10
Promedio	3.20833	11.5917	5.51891667	4.3525	2.6268476	2.86333	369.728	25.8729167	4.9183333	82.610679	

GA_St	Ejecución					Tiempo					
Funciones	Mejor	Peor	Promedio	Mediana	Desviación	Mejor	Peor	Promedio	Mediana	Desviación	Dimension
Alpine	0.01	0.13	0.0285	0.015	0.0300458	160.3	1531.56	598.8635	397.18	459.67063	10
Dixon	0.5	13.07	2.621	1.715	2.8588125	149.89	553.27	326.175	299.21	111.32128	10
Quintic	0.11	0.25	0.146	0.135	0.0359722	153.19	439.88	337.237	350.32	75.482287	10
Schewel	0	0.04	0.002	0	0.0087178	71.36	528.83	276.873	274.62	116.02015	10
Streched	0.29	1.5	0.6095	0.55	0.2653766	149.58	560.3	337.236	321.54	111.91941	10
Sum Squares	0.01	2.23	0.294	0.08	0.5223639	163.42	391.67	275.8875	286.205	72.644857	10
Promedio	0.15333	2.87	0.61683333	0.4158333	0.6202148	141.29	667.585	358.712	321.5125	157.8431	

GA_Gen	Ejecución					Tiempo					
Funciones	Mejor	Peor	Promedio	Mediana	Desviación	Mejor	Peor	Promedio	Mediana	Desviación	Dimension
Alpine	1.7	6.87	3.3005	3.02	1.3959602	2207.63	4485.12	2704.606	2273.87	648.70764	10
Dixon	17.74	104.01	57.5965	54.39	18.758999	2337.23	3616	2986.513	2961.92	594.03571	10
Quintic	24.9	250.21	104.7115	93.345	75.43452	1583.53	4346.18	3399.759	3562.155	969.83586	10

Schewel	62.45	148883	33336.472	10181.525	41149.161	2100.55	3211.25	2667.1315	2764.695	521.92682	10
Streched	1.55	3.35	2.6485	2.65	0.4070046	2815.34	4269.6	3575.967	3932.765	680.62573	10
Sum Squares	24.75	104.76	60.0265	60.03	23.310605	2261.55	3847.39	2872.48	2841.45	606.38099	10
Promedio	22.1817	24892	5594.12592	1732.4933	6878.078	2217.64	3962.59	3034.40942	3056.1425	670.25213	

RMHC	Ejecución					Tiempo					
Funciones	Mejor	Peor	Promedio	Mediana	Desviación	Mejor	Peor	Promedio	Mediana	Desviación	Dimension
Alpine	0.23	15.06	4.17	1.355	4.3246676	1.72	453.56	41.1805	4.29	115.02146	30
Dixon	0.16	6.48	1.897	1.09	1.9741026	2.22	405.16	24.0285	3.475	87.450663	30
Quintic	17.76	17.8	17.7855	17.79	0.009734	5.44	408.69	27.2755	5.78	87.531363	30
Schewel	0.37	13.73	3.195	2.36	3.0977	1.17	403.45	22.031	1.44	87.512052	30
Streched	0.23	5.81	2.8025	2.12	1.9868766	3.97	513.74	54.5195	8.515	137.27659	30
Sum Squares	0.17	11.02	2.5115	1.9	2.6898778	1.81	504.87	28.794	3.475	109.23395	30
Promedio	3.15333	11.65	5.39358333	4.4358333	2.3471598	2.72167	448.245	32.9715	4.4958333	104.00435	

SA	Ejecución					Tiempo					
Funciones	Mejor	Peor	Promedio	Mediana	Desviación	Mejor	Peor	Promedio	Mediana	Desviación	Dimension
Alpine	0.4	13.87	3.8435	2.23	3.6668096	1.98	304.87	18.2975	2.395	65.75507	30
Dixon	0.25	8.3	2.74	1.29	2.5733441	6.58	336.79	38.986	7.065	94.639204	30
Quintic	17.76	17.8	17.783	17.78	0.0100499	4.59	411.66	69.2915	12.145	139.57989	30
Schewel	0.27	9.19	2.81	1.395	2.5575086	1.44	5.27	2.183	1.71	0.9582124	30
Streched	0.37	6.83	2.0465	1.33	1.8541879	4.2	407.02	24.6895	4.47	87.713466	30
Sum Squares	0.31	6.25	2.306	1.31	2.0499376	2.33	369.7	31.7035	3.205	89.067859	30
Promedio	3.22667	10.3733	5.25483333	4.2225	2.1186396	3.52	305.885	30.8585	5.165	79.618951	

GA_St	Ejecución					Tiempo					
Funciones	Mejor	Peor	Promedio	Mediana	Desviación	Mejor	Peor	Promedio	Mediana	Desviación	Dimension
Alpine	0.01	0.31	0.0535	0.025	0.070091	117.18	475.59	324.648	320.835	101.08228	30
Dixon	0.45	10.15	2.4915	1.655	2.3651327	119.66	500.5	306.731	303.835	100.1521	30
Quintic	0.06	0.23	0.138	0.14	0.0438862	110.12	521.14	328.3775	340.465	96.924769	30
Schewel	0	0	0	0	0	82.76	457.01	271.98	278.545	93.579749	30
Streched	0.35	1.27	0.6985	0.665	0.2319542	118.43	461.97	289.3655	288.705	100.8477	30
Sum Squares	0.01	0.17	0.0685	0.06	0.0456372	93.48	410.13	252.265	256.48	90.771091	30
Promedio	0.14667	2.02167	0.575	0.4241667	0.4594502	106.938	471.057	295.561167	298.14417	97.226282	

Analysis_Trampa

GA_Gen	Ejecución					Tiempo					
Funciones	Mejor	Peor	Promedio	Mediana	Desviación	Mejor	Peor	Promedio	Mediana	Desviación	Dimension
Alpine	1.3	6.88	3.4175	3.37	1.3806624	2245.69	3408.7	2975.907	3346	531.26273	30
Dixon	22.22	98.41	59.846	52.495	22.408615	1364.76	3653.5	2817.8515	2702.685	758.04253	30
Quintic	11.2	285.03	85.5735	63.68	67.80873	2855.38	4362.06	3530.567	2914.375	708.60129	30
Schewel	1.81	103786	20486.1075	6476.435	27260.65	2110.71	3199.25	2550.2195	2152.655	507.24261	30
Streched	1.8	3.32	2.542	2.47	0.3812689	2804.21	4279.1	3601.569	4212.57	700.47161	30
Sum Squares	4.78	96.45	48.5975	46.035	30.731595	2263.5	3436.63	3015.372	3396.18	538.22642	30
Promedio	7.185	17379.3	3447.68067	1107.4142	4563.8934	2274.04	3723.21	3081.91433	3120.7442	623.97453	

resumen

Normal	Mejor Ejecución				Desviación Ejecución				
Funciones	RMHC	SA	GA_St	GA_Gen	RMHC	SA	GA_St	GA_Gen	Dimensión
Alpine	12.2	17.58	0.63	3.07	4.553415641	9.685484758	0.773661909	1.237050019	10
Dixon	13.19	15.86	14.04	65.03	7.158801069	6.956498023	23.51071221	36.80797251	10
Quintic	14.96	7.24	10	147.61	8.636641405	3.802724648	22.64709564	797.6320317	10
Schewel	19.1	3.4	0.03	51748.93	6.235170788	1.904257007	751.0266226	1397041.848	10
Streched	12.68	13.38	1.41	2.78	7.954882447	7.669308704	0.470725769	0.348141853	10
Sum Squares	16.77	18.35	6.92	93.64	6.078585444	6.019301683	12.11748376	40.18008884	10
Promedio	14.81666667	12.635	5.505	8676.843333	6.769582799	6.006262471	135.0910503	232986.3422	

Normal	Promedio Tiempo				Desviación Tiempo				
Funciones	RMHC	SA	GA_St	GA_Gen	RMHC	SA	GA_St	GA_Gen	Dimensión
Alpine	3.7765	16.38825	487.17325	2988.98675	0.957171745	78.28615755	395.4569062	1.199873327	10
Dixon	23.41175	10.66575	301.839	2766.148	78.11122022	46.91205388	86.2764475	88.26461975	10
Quintic	56.00725	118.102	334.4015	3466.73825	121.0929091	170.7582796	115.9632208	107.1785027	10
Schewel	12.601	37.9415	290.97775	2667.85625	62.59825005	89.66118401	111.9327308	87.30419199	10
Streched	71.27475	22.87975	338.49975	3629.268	136.2918611	50.69156436	132.0850486	92.19589822	10
Sum Squares	33.9665	6.5695	238.003	2847.2725	86.96842167	23.56447294	109.3165055	65.38166781	10
Promedio	33.50629167	35.42445833	331.8157083	3061.044958	81.00330565	76.64561872	158.5051432	73.58745897	

Normal	Mejor Ejecución				Desviación Ejecución				
Funciones	RMHC	SA	GA_St	GA_Gen	RMHC	SA	GA_St	GA_Gen	Dimensión
Alpine	12.04	14.81	0.87	5.64	6.457145654	6.767959718	0.533667499	0.600383211	30
Dixon	10.72	12.7	16.33	79.92	7.860760698	6.299853391	23.98680639	32.60268094	30
Quintic	16.16	9.52	28.18	193.6	5.391284518	2.568580299	27.81968427	569.6833757	30
Schewel	17.67	3.18	0.5	8915.66	6.478638649	2.116785948	4899.820316	696860.918	30
Streched	17.51	19.88	1.35	2.04	5.41133521	7.231813379	0.431276014	0.456393197	30
Sum Squares	12.64	13.13	4.65	139.88	7.873380405	5.816041953	16.23591802	34.81761429	30
Promedio	14.45666667	12.20333333	8.646666667	1556.123333	6.578757522	5.133505781	828.1379447	116249.8464	

Normal	Promedio Tiempo				Desviación Tiempo				
Funciones	RMHC	SA	GA_St	GA_Gen	RMHC	SA	GA_St	GA_Gen	Dimensión
Alpine	3.782	2.214	337.718	2988.5805	1.199873327	0.219440197	122.7782947	532.8448014	30
Dixon	26.879	3.0055	304.5935	2662.6175	88.26461975	0.153442986	90.75646932	717.2910463	30
Quintic	45.268	117.625	329.2735	3808.093	107.1785027	167.4276441	111.4870536	672.7206154	30
Schewel	22.9675	29.4995	260.3735	2738.1925	87.30419199	68.3627415	116.8109368	556.4711693	30
Streched	43.381	18.0905	330.7815	3646.6475	92.19589822	30.15070621	142.9809351	693.2458665	30
Sum Squares	21.655	10.703	178.7115	2849.4175	65.38166781	32.8083107	106.0881994	745.1110182	30
Promedio	27.32208333	30.18958333	290.2419167	3115.591417	73.58745897	49.85371428	115.1503148	652.9474195	

resumen_conveniente

Conveniente	Mejor Ejecución				Desviación Ejecución				
Funciones	RMHC	SA	GA_St	GA_Gen	RMHC	SA	GA_St	GA_Gen	Dimensión
Alpine	0.31	0.01	1.7	0.23	2.504386352	3.495248882	0.030045798	1.395960153	10
Dixon	0.35	0.5	17.74	0.16	3.148242208	2.8958693	2.858812516	18.75899925	10
Quintic	17.77	0.11	24.9	17.76	0.008046738	0.00678233	0.035972211	75.43451964	10
Schewel	0.31	0	62.45	0.37	2.93730876	2.277237581	0.008717798	41149.16066	10
Streched	0.33	0.29	1.55	0.23	2.880422669	3.397818418	0.265376619	0.407004607	10
Sum Squares	0.36	0.01	24.75	0.17	2.768783849	3.688129065	0.522363858	23.31060451	10
Promedio	3.238333333	0.153333333	22.18166667	3.153333333	2.374531763	2.626847596	0.6202148	6878.077958	

Conveniente	Promedio Tiempo				Desviación Tiempo				
Funciones	RMHC	SA	GA_St	GA_Gen	RMHC	SA	GA_St	GA_Gen	Dimensión
Alpine	3.893	23.574	598.8635	2704.606	1.383485092	78.56329164	459.6706309	648.7076449	10
Dixon	2.998	30.221	326.175	2986.513	0.997815614	109.3947241	111.3212846	594.0357069	10
Quintic	43.708	33.4685	337.237	3399.759	116.9267684	108.421163	75.4822868	969.8358564	10
Schewel	25.5165	22.23	276.873	2667.1315	101.7921228	87.3161674	116.0201503	521.9268236	10
Streched	24.0725	43.299	337.236	3575.967	69.58001393	111.5766269	111.9194054	680.6257294	10
Sum Squares	37.938	2.445	275.8875	2872.48	98.32770788	0.392103303	72.64485686	606.3809896	10
Promedio	23.021	25.87291667	358.712	3034.409417	64.8346523	82.6106794	157.8431025	670.2521251	

Conveniente	Mejor Ejecución				Desviación Ejecución				
Funciones	RMHC	SA	GA_St	GA_Gen	RMHC	SA	GA_St	GA_Gen	Dimensión
Alpine	0.23	0.4	0.01	1.3	4.324667617	3.666809615	0.070091012	1.380662432	30
Dixon	0.16	0.25	0.45	22.22	1.974102581	2.573344128	2.365132713	22.40861495	30
Quintic	17.76	17.76	0.06	11.2	0.009733961	0.010049876	0.043886217	67.80873036	30
Schewel	0.37	0.27	0	1.81	3.097699953	2.557508553	0	27260.64969	30
Streched	0.23	0.37	0.35	1.8	1.986876632	1.854187895	0.231954198	0.381268934	30
Sum Squares	0.17	0.31	0.01	4.78	2.689877832	2.04993756	0.045637156	30.73159496	30
Promedio	3.153333333	3.226666667	0.146666667	7.185	2.347159763	2.118639604	0.459450216	4563.893427	

resumen_conveniente

Conveniente	Promedio Tiempo				Desviación Tiempo				
Funciones	RMHC	SA	GA_St	GA_Gen	RMHC	SA	GA_St	GA_Gen	Dimensión
Alpine	41.1805	18.2975	324.648	2975.907	115.0214601	65.75507021	101.0822794	531.26273	30
Dixon	326.175	2986.513	24.0285	38.986	87.45066285	94.63920427	100.1521022	758.0425275	30
Quintic	337.237	3399.759	27.2755	69.2915	87.53136303	139.5798924	96.92476907	708.6012876	30
Schewel	276.873	2667.1315	22.031	2.183	87.51205225	0.958212398	93.57974904	507.2426142	30
Streched	337.236	3575.967	54.5195	24.6895	137.2765873	87.71346587	100.8476997	700.4716143	30
Sum Squares	275.8875	2872.48	28.794	31.7035	109.2339488	89.06785948	90.7710913	538.2264179	30
Promedio	358.712	3034.409417	32.9715	30.8585	104.0043457	79.61895077	97.22628178	623.9745319	