180	Points	Sets	Fitness Function	 Met 	! Variant		 Count	+ Time		Cost	-++ is_valid		
180 180	1 100	 100	fitness1	++ hill climbing		 stochastic		+ 11	++- 1.919e-04		 1- (99. –1	-+	
180 180													
108 108 fitness1 restart_hill_climbing inters_closed 7 5.343=-83 (108, -6) True 108 108 fitness1 terrate_local_search stochastic 15 2.281=-84 (108, -11) True 108 108 fitness1 terrate_local_search stochastic 15 2.281=-84 (108, -11) True 108 108 fitness1 terrate_local_search stochastic 15 2.281=-84 (108, -11) True 108 108 fitness1 terrate_local_search first_choice 108 2.383=-83 (38, -11) False 108 108 fitness5 hill_climbing stochastic 9 1.380=-83 (3.1156782108879, -8) False 108 108 fitness5 hill_climbing stochastic 9 1.380=-83 (3.1156782108879, -8) False 108 108 fitness5 hill_climbing stochastic 2 2.622=-84 (3.3445084780459735, -11) False 108 108 fitness5 restart_hill_climbing stochastic 25 2.122=-84 (3.3445084780735, -12) True 108 108 fitness5 restart_hill_climbing stochastic 25 2.122=-84 (3.3445084780735, -12) True 108 108 fitness5 restart_hill_climbing stochastic 27 5.435=-83 (3.428047804380735, -12) True 108 108 fitness5 tierate_local_search first_choice 108 8.886=-83 (3.34456894150785, -12) False 108 108 fitness5 tierate_local_search first_choice 108 8.886=-83 (3.34456894150785, -11) False 108 108 fitness5 simulated_annealing stochastic 10 5.190=-04 109 True 100 100 fitness6 simulated_annealing stochastic 10 5.190=-04 109 True 100 100 fitness6 simulated_annealing stochastic 10 5.190=-04 109 True 100 100 fitness6 simulated_annealing stochastic 18 6.189=-04 109 True 100 100 fitness6 simulated_annealing stochastic 24 7.601=-04 109 True 100 100 fitness6 simulated_annealing stochastic 25 4.773=-04 100 True 100 100 fitness6 simulated_annealing stochastic 25 1.894=-03 (3.028080785, -11) fralse 108 1000 fitness6 simulated_annealing stochastic 25 7.8	100	100	fitness1	hill_cl	imbing	first_	choice	12			(98, -1	False	
100 100 fitness1 restart_hill_clumbing first_choice 100 2.2858—84 (100, -11) False 100 100 fitness1 iterrate_local_search steepest_ascent 7 5.3426—83 (100, -6) True 100 100 fitness5 hill_clumbing steepest_ascent 7 5.3426—83 (100, -6) False 100 100 fitness5 hill_clumbing steepest_ascent 7 5.3426—83 (100, -6) False 100 100 fitness5 hill_clumbing steepest_ascent 7 5.3456—83 (100, -6) False 100 100 fitness5 hill_clumbing steepest_ascent 7 5.3456—83 (100, -6) False 100 100 fitness5 hill_clumbing steepest_ascent 7 5.3456—83 (10, -2004) False 100 100 fitness5 restart_hill_clumbing steepest_ascent 7 5.3456—84 (1.348469415091655, -11) False 100 100 fitness5 restart_hill_clumbing steepest_ascent 7 5.3456—84 (1.348469415091655, -11) False 100 100 fitness5 restart_hill_clumbing steepest_ascent 7 5.3456—83 (1.348469415091655, -11) False 100 100 fitness5 terrate_local_search steepest_ascent 7 6.3567—83 (3.428477264387345, -12) True 100 100 fitness5 terrate_local_search steepest_ascent 7 6.3567—83 (3.428477264387345, -13) True 100 100 fitness3 simulated_annealing steepest_ascent 7 6.3666—83 (3.348469415091655, -11) False 100 100 fitness3 simulated_annealing steepest_ascent 6 6.7646—83 100 True 100 100 fitness6 simulated_annealing steepest_ascent 1 6.7646—83 100 True 100 100 fitness6 simulated_annealing steepest_ascent 1 6.7646—83 100 True 100 100 fitness6 simulated_annealing steepest_ascent 1 6.7646—83 100 True 100 100 fitness6 simulated_annealing steepest_ascent 1 6.7646—83 100 True 100 100 fitness6 simulated_annealing steepest_ascent 1 6.7646—83 100 True 100 100 fitness6 simulated_annealing steepest_ascent 1 6.7646—83 100 True 100 100 fitness6 simulated_annealing	100	100	fitness1	restart_hil	l_climbing	stoch	astic	15			(100, -	True	
100 100 fitness1 iterrate_local_search stochastic 15 Z.281e-84 (100, -1) True 100 100 fitness1 iterrate_local_search first_choice 100 Z.280e-83 (100, -6) True 100 100 fitness5 hill_climbing stochastic 9 1.382e-83 (3.11567021080797, -8) False 100 100 fitness5 hill_climbing stochastic 12 Z.622e-84 (3.3415680136979, -8) False 100 100 fitness5 hill_climbing stochastic 22 Z.622e-84 (3.342680728438745, -6) True 100 100 fitness5 restart_hill_climbing stochastic 25 9.122e-84 (3.342680728438745, -12) True 100 100 fitness5 restart_hill_climbing stochastic 25 9.122e-84 (3.42680728438745, -12) True 100 100 fitness5 restart_hill_climbing stochastic 7 5.4591e-83 (3.4268728438745, -13) True 100 100 fitness5 iterated_local_search stochastic 14 1.242e-83 (3.4268728438745, -13) True 100 100 fitness5 iterated_local_search stochastic 14 1.242e-83 (3.4268728438745, -13) True 100 100 fitness5 iterated_local_search stochastic 100 8.686e-83 (3.43669415919655, -11) False 100 100 fitness5 iterated_local_search stochastic 100 8.686e-83 (3.43669415919655, -11) False 100 100 fitness3 simulated_annealing stochastic 100 8.686e-83 (3.43669415919655, -11) False 100 100 fitness3 simulated_annealing stochastic 100 5.190e-04 100 True 100 100 fitness6 simulated_annealing stochastic 100 5.090e-04 100 True 100 100 fitness6 simulated_annealing stochastic 100 5.090e-04 100 True 100 100 fitness6 simulated_annealing stochastic 100 6.000e-04 100 True 100 100 fitness1 hill_climbing stochastic 100 7.600e-04 100 True 100 100 fitness1 hill_climbing stochastic 100 7.600e-04 100 True 100 100 fitness1 hill_climbing stochastic 100 7.600e-04 100 7.700e-04 100 7.700e-04 100 7.700e-04 100 7.700e-04													
108 108 fitness1 iterrate_local_search first_choice 108 2.389—83 (88, -1) False 108 108 fitness5 iterrate_local_search first_choice 108 2.389—83 (38, -1) False 108 108 fitness5 hill_climbing stochastic 9 1.382—83 (38, -2) False 108 108 fitness5 hill_climbing first_choice 12 2.623—64 (3.43694728438745, -6) True 108 108 fitness5 frestart_hill_climbing stochastic 25 9.122—64 (3.43694728438745, -6) True 108 108 fitness5 restart_hill_climbing stochastic 25 9.122—64 (3.43694728438745, -12) True 108 108 fitness5 restart_hill_climbing stochastic 25 9.122—64 (3.43694728438745, -12) True 109 109 fitness5 restart_hill_climbing first_choice 108 1.174—63 (3.42694728438745, -12) True 109 109 fitness5 iteratec_local_search stochastic 14 1.424—63 (3.42694728438745, -13) True 109 109 fitness5 iteratec_local_search first_choice 108 8.660—63 (3.344569415961655, -11) False 109 109 fitness5 iteratec_local_search first_choice 108 8.660—63 (3.344569415961655, -11) False 109 109 fitness3 simulated_annealing stochastic 10 5.190—04 109 True 100 100 fitness3 simulated_annealing stochastic 10 5.190—04 100 True 100 100 fitness6 simulated_annealing stochastic 11 6.766—63 100 True 100 100 fitness6 simulated_annealing stochastic 11 6.780—04 100 True 100 100 fitness6 simulated_annealing stochastic 11 6.798—04 100 True 100 100 fitness6 simulated_annealing stochastic 11 6.798—04 100 True 100 100 fitness6 simulated_annealing stochastic 21 4.773—04 100 True 100 100 fitness6 simulated_annealing stochastic 23 6.798—04 100 True 100 100 fitness6 simulated_annealing stochastic 24 7.601—04 100 True 100 100 fitness6 simulated_annealing stochastic 25 7.604—04 100 True 100 1000 f													
100 100 fitness5 hill_climbing stochastic 9 1.380e-83 31.590e-83 1.150e-180897, -0) False 100 100 fitness5 hill_climbing stochastic 9 1.380e-83 31.150e-180987, -0) False 100 100 fitness5 hill_climbing stochastic 2 2.02.000 43.3445680415601655, -11) False 100 100 fitness5 fitl_climbing first_choice 12 2.02.000 43.3445680415601655, -12) True 100 100 fitness5 restart_hill_climbing stochastic 25 9.122e-84 (3.3445680415601655, -12) True 100 100 fitness5 restart_hill_climbing first_choice 100 1.174e-82 (3.34280472024807345, -6) True 100 100 fitness5 iterated_local_search stochastic 10 1.174e-82 (3.34280472024807345, -6) True 100 100 fitness5 iterated_local_search stochastic 14 1.42e-82 (3.4280472024807345, -6) True 100 100 fitness3 simulated_annealing stochastic 10 5.190e-04 100 True 100 100 fitness3 simulated_annealing stochastic 10 5.190e-04 100 True 100 100 fitness3 simulated_annealing stochastic 10 5.190e-04 100 True 100 100 fitness6 simulated_annealing stochastic 10 5.190e-04 100 True 100 100 fitness6 simulated_annealing stochastic 10 5.190e-04 100 True 100 100 fitness6 simulated_annealing stochastic 10 5.190e-04 100 True 100 100 fitness6 simulated_annealing stochastic 10 5.190e-04 100 True 100 100 fitness6 simulated_annealing stochastic 10 5.190e-04 100 True 100 100 fitness6 simulated_annealing stochastic 10 7.980e-04 100 True 100 100 fitness1 hill_climbing stochastic 10 7.980e-04 100 True 100 100 fitness1 hill_climbing stochastic 10 7.980e-04 100 True 100 100 fitness1 hill_climbing stochastic 10 7.980e-04 100 True 100 100 fitness1 hill_climbing stochastic 10 7.980e-04 100 7.990e-04 100 7.990e-04 100 7.990e-04 100 7.990e-04													
100 100 fitness5 hill_climbing stochastic 9 1.302-0-3 (3.12067021040879, -0) False 100 100 fitness5 hill_climbing first_choice 12 2.622-0-4 (3.4206702437745, -6) True 100 100 fitness5 restart_hill_climbing stochastic 25 9.122-0-4 (3.4206702437745, -6) True 100 100 fitness5 restart_hill_climbing steepest_ascent 7 5.4910-03 (3.42067024397345, -6) True 100 100 fitness5 restart_hill_climbing first_choice 100 1.742-0-3 (3.42067024397345, -6) True 100 100 fitness5 iterated_local_search stochastic 14 1.4240-0-3 (3.42067024397345, -13) True 100 100 fitness5 iterated_local_search stochastic 14 1.4240-0-3 (3.42067024397345, -13) True 100 100 fitness5 iterated_local_search first_choice 100 8.8000-03 (3.42067024397345, -13) True 100 100 fitness5 iterated_local_search first_choice 100 8.8000-03 (3.42067024397345, -13) True 100 100 fitness3 simulated_annealing stochastic 10 5.1900-04 100 True 100 100 fitness3 simulated_annealing stochastic 10 5.1900-04 100 True 100 100 fitness6 simulated_annealing first_choice 21 4.7720-04 100 True 100 100 fitness6 simulated_annealing stochastic 18 6.1900-04 100 True 100 100 fitness6 simulated_annealing stochastic 18 6.1900-04 100 True 100 100 fitness6 simulated_annealing stochastic 18 6.1900-04 100 True 100 100 fitness6 simulated_annealing stochastic 16 7.9800-04 100 True 100 100 fitness6 simulated_annealing stochastic 16 7.9800-04 100 True 100 100 fitness1 hill_climbing stochastic 16 7.9800-04 (1000, -15) True 100 100 fitness1 hill_climbing stochastic 16 7.9800-04 (1000, -15) True 100 100 fitness1 hill_climbing stochastic 26 7.8800-04 (1000, -15) True 1000 1000 fitness1 hill_climbing stochastic 27 7.9800-04 (1000, -15)													
100 100 fitness5 hill_climbing steepest_ascent 7 5.495e-08 (3.24864720/387345, -6) True 100 100 fitness5 hill_climbing stechnistic 12 2.622e-04 (3.344568415691655, -11) False 100 100 fitness5 restart_hill_climbing stechnistic 25 9.122e-04 (3.344568415691655, -12) True 100 100 fitness5 restart_hill_climbing first_choice 100 1.174e-02 (3.2480720/2487345, -12) True 100 100 fitness5 iterated_local_search stechnistic 14 1.424e-03 (3.42804720/387345, -6) True 100 100 fitness5 iterated_local_search stechnistic 14 1.424e-03 (3.42804720/3487345, -6) True 100 100 fitness5 iterated_local_search stechnistic 10 8.886e-03 (3.428068415691655, -11) False 100 100 fitness5 iterated_local_search first_choice 100 8.886e-03 (3.428068415691655, -11) False 100 100 fitness3 simulated_annealing stochastic 10 5.190e-04 100 True 100 100 fitness3 simulated_annealing stochastic 10 5.190e-04 100 True 100 100 fitness6 simulated_annealing stochastic 18 6.189e-04 100 True 100 100 fitness6 simulated_annealing stochastic 18 6.189e-04 100 True 100 100 fitness6 simulated_annealing first_choice 21 4.773e-04 100 True 100 100 fitness6 simulated_annealing stochastic 18 6.189e-04 100 True 100 100 fitness6 simulated_annealing stochastic 18 6.189e-04 100 True 100 100 fitness6 simulated_annealing first_choice 24 7.601e-04 100 True 100 100 fitness1 hill_climbing stochastic 16 7.689e-04 (1800, -15) True 100 100 fitness1 hill_climbing stochastic 16 7.689e-04 (1800, -15) False 1800 1800 1800 fitness1 hill_climbing stochastic 16 7.680e-04 (1800, -15) False 1800 1800 fitness1 hill_climbing stochastic 16 7.680e-04 (1800, -15) False 1800 1800 fitness1 hill_climbing stochastic 18 1.419e-01 (18													
108 108													
100													
100	100	100	fitness5	restart_hil			astic	25	9.12	2e-04	(3.428047202438	37345, -12)	True
100	100	100	fitness5	restart_hil	rt_hill_climbing steepest		_ascent	7	7 5.491		91e-03 (3.4280472024387345		True
100						first_	choice						
Points Sets Fitness Function Method Variant Count Time Cost is_valid													
Points Sets Fitness Function Method Variant Count Time Cost is_valid													
100	++	 	T1tness5	1terated_lo: +	cal_search	T1rst_ +	100 +	8.08 +	66e-03 +-	(3.344568941569	raise -++		
100	+	-+	+				+		1	+	-+	-++	+
100	Points	Set -+	s Fitness Fund +	ction 	Method 	d 	Va 	ariant 	 +	Count 	Time -+	Cost -++	is_valid +
100	100	100	fitness	3 sim	ulated_anr	nealing	sto	ochasti	c	10	5.190e-04	100	True
100	100	100	fitness	3 sim	ulated_anr	nealing steepe		est_asc	ent	6	6.764e-03	100	True
100	100	1 100	fitness	sim	ulated ann	nealing	fire	st choi	ce l	21	4.773e-04	100	True I
100		i 100			_			_				i 100 i	
Points Sets Fitness Function Method Variant Count Time Cost is_valid	•												
Points Sets Fitness Function Method Variant Count Time Cost is_valid 1000 1000 fitness1 hill_climbing stochastic 16 7.989e-04 (1000, -15) True 1000 1000 fitness1 hill_climbing steepest_ascent 11 4.157e-01 (1000, -10) True 1000 1000 fitness1 hill_climbing first_choice 16 7.809e-04 (995, -15) False 1000 1000 fitness1 restart_hill_climbing stochastic 25 1.894e-03 (1000, -10) True 1000 1000 fitness1 restart_hill_climbing stochastic 25 1.894e-03 (1000, -10) True 1000 1000 fitness1 restart_hill_climbing steepest_ascent 11 4.197e-01 (1000, -10) True 1000 1000 fitness1 restart_hill_climbing first_choice 100 1.707e-02 (1000, -10) True 1000 1000 fitness1 iterated_local_search stochastic 23 1.337e-03 (1000, -20) True 1000 1000 fitness1 iterated_local_search steepest_ascent 11 4.205e-01 (1000, -10) True 1000 1000 fitness1 iterated_local_search first_choice 100 1.168e-02 (1000, -10) True 1000 1000 fitness5 hill_climbing stochastic 18 1.551e-02 (3.337237658655357, -17) False 1000 1000 fitness5 hill_climbing steepest_ascent 11 4.205e-01 (3.348660129501899, -10) True 1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.205e-01 (3.348660129501899, -10) True 1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.205e-01 (3.348660129501899, -10) True 1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.205e-01 (3.348660129501899, -10) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.205e-01 (3.348660129501899, -10) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.205e-01 (3.340660129501899, -10) True 1000 1000 fitness3 simulated_annealing steepest_ascent 10 3.804e-01 1000 True 1000 1000 fitness3 simulated_annealing steepest_					_	•							
1000 1000 fitness1 hill_climbing stochastic 16 7.989e-04 (1000, -15) True 1000 1000 fitness1 hill_climbing steepest_ascent 11 4.157e-01 (1000, -10) True 1000 1000 fitness1 hill_climbing first_choice 16 7.889e-04 (995, -15) False 1000 1000 fitness1 restart_hill_climbing stochastic 25 1.894e-03 (1000, -19) True 1000 1000 fitness1 restart_hill_climbing stochastic 25 1.894e-03 (1000, -10) True 1000 1000 fitness1 restart_hill_climbing steepest_ascent 11 4.197e-01 (1000, -10) True 1000 1000 fitness1 restart_hill_climbing first_choice 100 1.176e-02 (995, -15) False 1000 1000 fitness1 iterated_local_search steepest_ascent 11 4.205e-01 (1000, -10) True 1000 1000 fitness1 iterated_local_search steepest_ascent 11 4.205e-01 (1000, -10) True 1000 1000 fitness5 hill_climbing stochastic 18 1.551e-02 (3.3372375865337, -17) False 1000 1000 fitness5 hill_climbing steepest_ascent 11 4.289e-01 (3.340860129501899, -10) True 1000 1000 fitness5 hill_climbing steepest_ascent 11 4.289e-01 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing stochastic 16 1.356e-02 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing stochastic 16 1.560e-02 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing stochastic 10 1.600e-01 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing stochastic 10 1.600e-01 (3.340860129501899, -10) True 1000 1000 fitness5 iterated_local_search stochastic 10 1.550e-02 (3.340860129501899, -15) False 1000 1000 fitness5 iterated_local_search stochastic 10 1.550e-01 (3.340860129501899, -15) False 1000 1000 fitness5 simulated_annealing stochastic 21 1.720e-03 1000 True 1000 1000 fitness6 simulated_annealing s	100 100 -												
1000	Points	+ Sets	Fitness Function	Meth	hod	Varia	ant	Count	Т	ime	Cost		is_valid
1000 1000 fitness1 hill_climbing steepest_ascent 11 4.157e-01 (1000, -10) True 1000 1000 fitness1 hill_climbing first_choice 16 7.808e-04 (995, -15) False 1000 1000 fitness1 restart_hill_climbing stochastic 25 1.894e-03 (1000, -19) True 1000 1000 fitness1 restart_hill_climbing steepest_ascent 11 4.197e-01 (1000, -10) True 1000 1000 fitness1 restart_hill_climbing first_choice 100 1.170e-02 (995, -15) False 1000 1000 fitness1 iterated_local_search steepest_ascent 11 4.208e-01 (1000, -20) True 1000 1000 fitness1 iterated_local_search steepest_ascent 11 4.208e-01 (1000, -10) True 1000 1000 fitness1 iterated_local_search first_choice 100 1.168e-02 (995, -15) False 1000 1000 fitness5 hill_climbing stochastic 18 1.551e-02 (3.337237656555357, -17) False 1000 1000 fitness5 hill_climbing steepest_ascent 11 4.208e-01 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing first_choice 16 1.365e-02 (3.3237135144508323, -15) False 1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.208e-01 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.208e-01 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing first_choice 100 1.608e-01 (3.3237135144508323, -15) False 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.208e-01 (3.340860129501899, -10) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.208e-01 (3.340860129501899, -10) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.208e-01 (3.340860129501899, -15) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.208e-01 (3.3207135144508323, -15) False 1000 1000 fitness6 simulated_annealing steepest_ascent 10 3	1000	1000	fitness1	hill_cli	imbing	stocha	astic	16	7.98	9e-04 l	(1000, -	15)	I True I
1000 1000 fitness1 restart_hill_climbing stochastic 25 1.894e-03 (1000, -19) True 1000 1000 fitness1 restart_hill_climbing steepest_ascent 11 4.197e-01 (1000, -10) True 1000 1000 fitness1 restart_hill_climbing first_choice 100 1.170e-02 (995, -15) False 1000 1000 fitness1 iterated_local_search stochastic 23 1.337e-03 (1000, -20) True 1000 1000 fitness1 iterated_local_search stochastic 23 1.337e-03 (1000, -20) True 1000 1000 fitness1 iterated_local_search first_choice 100 1.168e-02 (995, -15) False 1000 1000 fitness5 hill_climbing stochastic 18 1.551e-02 (3.3372237658655357, -17) False 1000 1000 fitness5 hill_climbing steepest_ascent 11 4.289e-01 (3.340860129501899, -10) True 1000 1000 fitness5 hill_climbing stochastic 18 1.355e-02 (3.33723374508323, -15) False 1000 1000 fitness5 restart_hill_climbing stochastic 21 2.172e-02 (3.340860129501899, -18) True 1000 1000 fitness5 restart_hill_climbing stochastic 21 2.172e-02 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.280e-01 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing first_choice 100 1.608e-01 (3.3237135144508323, -15) False 1000 1000 fitness5 iterated_local_search stochastic 16 1.550e-02 (3.340860129501899, -15) True 1000 1000 fitness5 iterated_local_search stochastic 21 1.805e-03 1000 True 1000 1000 fitness5 simulated_annealing stochastic 21 1.805e-03 1000 True 1000 1000 fitness3 simulated_annealing stochastic 21 1.720e-03 1000 True 1000 1000 fitness6 simulated_annealing stochastic 30 2.832e-02 1000 True 1000 1000 fitness6 simulated_annealing stochastic 30 2.832e-02 1000 True 1000 1000 fitness6 simulated_annealing stochastic 30 2.832e-02 10	1000												I True
1000 1000 fitness1 restart_hill_climbing steepest_ascent 11 4.197e-01 (1000, -10) True 1000 1000 fitness1 restart_hill_climbing first_choice 100 1.170e-02 (995, -15) False 1000 1000 fitness1 iterated_local_search stochastic 23 1.337e-03 (1000, -20) True 1000 1000 fitness1 iterated_local_search steepest_ascent 11 4.205e-01 (1000, -10) True 1000 1000 fitness5 iterated_local_search stochastic 18 1.551e-02 (3.337237658655357, -17) False 1000 1000 fitness5 hill_climbing stochastic 18 1.551e-02 (3.33723765865357, -17) False 1000 1000 fitness5 hill_climbing steepest_ascent 11 4.209e-01 (3.340860129501899, -10) True 1000 1000 fitness5 hill_climbing first_choice 16 1.365e-02 (3.3237135144508323, -15) False 1000 1000 fitness5 restart_hill_climbing stochastic 21 2.172e-02 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.20e-01 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing first_choice 100 1.600e-01 (3.3237135144508323, -15) False 1000 1000 fitness5 iterated_local_search stochastic 16 1.550e-02 (3.340860129501899, -15) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.20e-01 (3.340860129501899, -15) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.20e-01 (3.340860129501899, -15) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.20e-01 (3.340860129501899, -15) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.20e-01 (3.340860129501899, -15) True 1000 1000 fitness6 simulated_annealing steepest_ascent 10 3.804e-01 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.	1000		fitness1	hill_cli	imbing	steepest_		11	4.15				
1000 1000 fitness1 restart_hill_climbing first_choice 100 1.170e-02 (995, -15) False 1000 1000 fitness1 iterated_local_search stochastic 23 1.337e-03 (1000, -20) True 1000 1000 fitness1 iterated_local_search stechastic 23 1.337e-03 (1000, -20) True 1000 1000 fitness1 iterated_local_search first_choice 100 1.168e-02 (995, -15) False 1000 1000 fitness5 hill_climbing stochastic 18 1.551e-02 (3.3372237658655357, -17) False 1000 1000 fitness5 hill_climbing steepest_ascent 11 4.289e-01 (3.340860129501899, -10) True 1000 1000 fitness5 hill_climbing first_choice 16 1.365e-02 (3.3327135144508323, -15) False 1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.280e-01 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.280e-01 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.280e-01 (3.3327135144508323, -15) False 1000 1000 fitness5 iterated_local_search stochastic 16 1.550e-02 (3.340860129501899, -15) True 1000 1000 fitness5 iterated_local_search stochastic 16 1.550e-02 (3.340860129501899, -10) True 1000 1000 fitness5 iterated_local_search stochastic 16 1.550e-02 (3.340860129501899, -15) True 1000 1000 fitness5 iterated_local_search stochastic 16 1.550e-02 (3.340860129501899, -10) True 1000 1000 fitness5 iterated_local_search stochastic 16 1.550e-02 (3.340860129501899, -10) True 1000 1000 fitness5 iterated_local_search stochastic 16 1.550e-02 (3.340860129501899, -10) True 1000 1000 fitness6 simulated_annealing stochastic 21 1.805e-03 1000 True 1000 1000 fitness6 simulated_annealing stochastic 30 2.832e-02 1000 True 1000 1000 fitness6 simulated_annealing stochastic 30 2.832e-02 1000 True 1000		1000					_ascent			7e-01	(1000, -	10)	True
1000 1000 fitness1 iterated_local_search stochastic 23 1.337e-03 (1000, -20) True 1000 1000 fitness1 iterated_local_search steepest_ascent 11 4.205e-01 (1000, -10) True 1000 1000 fitness1 iterated_local_search first_choice 100 1.168e-02 (995, -15) False 1000 1000 fitness5 hill_climbing stochastic 18 1.551e-02 (3.3372237658655357, -17) False 1000 1000 fitness5 hill_climbing steepest_ascent 11 4.289e-01 (3.340860129501899, -10) True 1000 1000 fitness5 hill_climbing first_choice 16 1.365e-02 (3.327135144508323, -15) False 1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.289e-01 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.280e-01 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing first_choice 100 1.608e-01 (3.340860129501899, -10) True 1000 1000 fitness5 iterated_local_search stochastic 16 1.550e-02 (3.340860129501899, -15) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.282e-01 (3.340860129501899, -15) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.282e-01 (3.340860129501899, -15) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.282e-01 (3.340860129501899, -15) False 1000 1000 fitness5 iterated_local_search steepest_ascent 10 3.804e-01 1000 True 1000 1000 fitness3 simulated_annealing stochastic 21 1.805e-03 1000 True 1000 1000 fitness3 simulated_annealing steepest_ascent 10 3.804e-01 1000 True 1000 1000 fitness6 simulated_annealing stochastic 30 2.832e-02 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000 1000 fitness6		1000	fitness1 fitness1	hill_cli restart_hill	imbing l_climbing	first_c	_ascent choice	16 25	7.80 1.89	7e-01 8e-04 4e-03	(1000, - (995, - (1000, -	10) 15) 19)	True False
1000 1000 fitness1 iterated_local_search steepest_ascent 11 4.205e-01 (1000, -10) True 1000 1000 fitness1 iterated_local_search first_choice 100 1.168e-02 (995, -15) False 1000 1000 fitness5 hill_climbing stochastic 18 1.551e-02 (3.3372237658655357, -17) False 1000 1000 fitness5 hill_climbing steepest_ascent 11 4.289e-01 (3.340860129501899, -10) True 1000 1000 fitness5 hill_climbing first_choice 16 1.365e-02 (3.327135144508323, -15) False 1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.280e-01 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.280e-01 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing first_choice 100 1.608e-01 (3.3237135144508323, -15) False 1000 1000 fitness5 iterated_local_search stochastic 16 1.550e-02 (3.340860129501899, -15) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.282e-01 (3.340860129501899, -10) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.282e-01 (3.340860129501899, -15) False 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.282e-01 (3.340860129501899, -15) False 1000 1000 fitness3 simulated_annealing stochastic 21 1.805e-03 1000 True 1000 1000 fitness3 simulated_annealing steepest_ascent 10 3.804e-01 1000 True 1000 1000 fitness6 simulated_annealing stochastic 30 2.832e-02 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000 1	1000	1000 1000	fitness1 fitness1 fitness1	hill_cli restart_hill restart_hill	imbing l_climbing l_climbing	first_c stocha steepest_	_ascent choice astic _ascent	16 25 11	7.80 1.89 4.19	7e-01 8e-04 4e-03 7e-01	(1000, - (995, - (1000, - (1000, -	10) 15) 19) 10)	True False True True
1000 1000 fitness1 iterated_local_search first_choice 100 1.168e-02 (995, -15) False 1000 1000 fitness5 hill_climbing stochastic 18 1.551e-02 (3.3372237658655357, -17) False 1000 1000 fitness5 hill_climbing steepest_ascent 11 4.289e-01 (3.340860129501899, -10) True 1000 1000 fitness5 hill_climbing first_choice 16 1.365e-02 (3.3237135144508323, -15) False 1000 1000 fitness5 restart_hill_climbing stochastic 21 2.172e-02 (3.340860129501899, -18) True 1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.280e-01 (3.3237135144508323, -15) False 1000 1000 fitness5 restart_hill_climbing first_choice 100 1.608e-01 (3.3237135144508323, -15) False 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.282e-01 (3.3240860129501899, -15) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.282e-01 (3.340860129501899, -15) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.282e-01 (3.3237135144508323, -15) False 1000 1000 fitness5 iterated_local_search first_choice 100 1.550e-01 (3.3237135144508323, -15) False 1000 1000 fitness3 simulated_annealing stochastic 21 1.805e-03 1000 True 1000 1000 fitness3 simulated_annealing steepest_ascent 10 3.804e-01 1000 True 1000 1000 fitness6 simulated_annealing stochastic 30 2.832e-02 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 10000 10000 10000 10000 10000 10000 10000 10000 10000 10000 10000 10000 1	1000 1000	1000 1000 1000	fitness1 fitness1 fitness1 fitness1	hill_cli restart_hill restart_hill restart_hill	imbing l_climbing l_climbing l_climbing	first_c stocha steepest_ first_c	_ascent choice astic _ascent choice	16 25 11 100	7.80 1.89 4.19 1.17	7e-01 8e-04 4e-03 7e-01 0e-02	(1000, - (995, - (1000, - (1000, - (995, -	10) 15) 19) 10) 15)	True False True True True
1000 1000 fitness5 hill_climbing stochastic 18 1.551e-02 (3.3372237658655357, -17) False 1000 1000 fitness5 hill_climbing steepest_ascent 11 4.289e-01 (3.340860129501899, -10) True 1000 1000 fitness5 hill_climbing first_choice 16 1.365e-02 (3.3237135144508323, -15) False 1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.280e-01 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.280e-01 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing first_choice 100 1.608e-01 (3.3237135144508323, -15) False 1000 1000 fitness5 iterated_local_search stochastic 16 1.550e-02 (3.340860129501899, -15) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.282e-01 (3.340860129501899, -10) True 1000 1000 fitness5 iterated_local_search first_choice 100 1.550e-01 (3.3237135144508323, -15) False 1000 1000 fitness5 iterated_local_search first_choice 100 1.550e-01 (3.3237135144508323, -15) False 1000 1000 fitness5 simulated_annealing steepest_ascent 10 3.804e-01 1000 True 1000 1000 fitness3 simulated_annealing steepest_ascent 10 3.804e-01 1000 True 1000 1000 fitness6 simulated_annealing stochastic 30 2.832e-02 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000	1000 1000 1000	1000 1000 1000 1000	fitness1 fitness1 fitness1 fitness1 fitness1	hill_cli restart_hill restart_hill restart_hill iterated_loc	imbing l_climbing l_climbing l_climbing cal_search	first_c stocha steepest_ first_c stocha	_ascent choice astic _ascent choice astic	16 25 11 100 23	7.80 1.89 4.19 1.17 1.33	7e-01 8e-04 4e-03 7e-01 0e-02 7e-03	(1000, - (995, - (1000, - (1000, - (995, - (1000, -	10) 15) 19) 10) 15) 20)	True False True True False True
1000 1000 fitness5 hill_climbing steepest_ascent 11 4.289e-01 (3.340860129501899, -10) True 1000 1000 fitness5 hill_climbing first_choice 16 1.365e-02 (3.3237135144508323, -15) False 1000 1000 fitness5 restart_hill_climbing stochastic 21 2.172e-02 (3.340860129501899, -18) True 1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.280e-01 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing first_choice 100 1.608e-01 (3.3237135144508323, -15) False 1000 1000 fitness5 iterated_local_search stochastic 16 1.550e-02 (3.340860129501899, -10) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.282e-01 (3.340860129501899, -10) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.282e-01 (3.340860129501899, -10) True 1000 1000 fitness5 iterated_local_search first_choice 100 1.550e-01 (3.3237135144508323, -15) False 1000 1000 fitness5 simulated_annealing stochastic 21 1.805e-03 1000 True 1000 1000 fitness3 simulated_annealing steepest_ascent 10 3.804e-01 1000 True 1000 1000 fitness6 simulated_annealing stochastic 30 2.832e-02 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000	1000 1000 1000 1000	1000 1000 1000 1000 1000	fitness1 fitness1 fitness1 fitness1 fitness1 fitness1	hill_cli restart_hill restart_hill restart_hill iterated_loc iterated_loc	imbing l_climbing l_climbing l_climbing cal_search cal_search	first_(stocha steepest_ first_(stocha steepest_	_ascent choice astic ascent choice astic ascent	16 25 11 100 23 11	7.80 1.89 4.19 1.17 1.33 4.20	7e-01 8e-04 4e-03 7e-01 0e-02 7e-03 5e-01	(1000, - (995, - (1000, - (1000, - (995, - (1000, -	10) 15) 19) 10) 15) 20)	True False True True False True
1000 1000 fitness5 hill_climbing first_choice 16 1.365e-02 (3.3237135144508323, -15) False 1000 1000 fitness5 restart_hill_climbing stochastic 21 2.172e-02 (3.340860129501899, -18) True 1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.280e-01 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing first_choice 100 1.6008e-01 (3.3237135144508323, -15) False 1000 1000 fitness5 iterated_local_search stochastic 16 1.550e-02 (3.340860129501899, -15) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.282e-01 (3.340860129501899, -15) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.282e-01 (3.340860129501899, -15) True 1000 1000 fitness5 iterated_local_search first_choice 100 1.550e-01 (3.3237135144508323, -15) False 1000 1000 fitness5 iterated_local_search first_choice 100 1.550e-01 (3.3237135144508323, -15) False 1000 1000 fitness3 simulated_annealing stochastic 21 1.805e-03 1000 True 1000 1000 fitness3 simulated_annealing steepest_ascent 10 3.804e-01 1000 True 1000 1000 fitness6 simulated_annealing stochastic 30 2.832e-02 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True 1000 10	1000 1000 1000 1000 1000	1000 1000 1000 1000 1000 1000	fitness1 fitness1 fitness1 fitness1 fitness1 fitness1 fitness1 fitness1	hill_cli restart_hill restart_hill restart_hill iterated_loc iterated_loc iterated_loc	imbing l_climbing l_climbing l_climbing cal_search cal_search cal_search	first_c stocha steepest_ first_c stocha steepest_ first_c	_ascent choice astic _ascent choice astic astic _ascent choice	16 25 11 100 23 11 100	7.80 1.89 4.19 1.17 1.33 4.20	7e-01 8e-04 4e-03 7e-01 0e-02 7e-03 5e-01 8e-02	(1000, - (995, - (1000, - (1000, - (995, - (1000, - (995, -	10) 15) 19) 10) 15) 20) 10)	True False True True False True True
1000 1000 fitness5 restart_hill_climbing steepest_ascent 11 4.280e-01 (3.340860129501899, -10) True 1000 1000 fitness5 restart_hill_climbing first_choice 100 1.608e-01 (3.3237135144508323, -15) False 1000 1000 fitness5 iterated_local_search stochastic 16 1.550e-02 (3.340860129501899, -15) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.282e-01 (3.340860129501899, -10) True 1000 1000 fitness5 iterated_local_search first_choice 100 1.550e-01 (3.3237135144508323, -15) False 1000 1000 fitness5 iterated_local_search first_choice 100 1.550e-01 (3.3237135144508323, -15) False 1000 1000 fitness3 simulated_annealing stochastic 21 1.805e-03 1000 True 1000 1000 fitness3 simulated_annealing steepest_ascent 10 3.804e-01 1000 True 1000 1000 fitness6 simulated_annealing stochastic 30 2.832e-02 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True	1000 1000 1000 1000 1000	1000 1000 1000 1000 1000 1000	fitness1 fitness1 fitness1 fitness1 fitness1 fitness1 fitness1 fitness5	hill_cl: restart_hill restart_hill restart_hill iterated_loc iterated_loc iterated_loc hill_cl:	imbing _climbing _climbing _climbing cal_search cal_search cal_search imbing	first_(stocha steepest_ first_(stocha steepest_ first_(stocha	_ascent choice astic ascent choice astic astic choice ascent choice ascent	16 25 11 100 23 11 100 18	7.80 1.89 4.19 1.17 1.33 4.20 1.16	7e-01 8e-04 4e-03 7e-01 0e-02 7e-03 5e-01 8e-02 1e-02	(1000, - (995, - (1000, - (1000, - (1000, - (1000, - (1000, - (995, - (3.337223765865	10) 15) 19) 10) 15) 20) 10) 15) 5357, -17)	True False True True False True True False
1000 1000 fitness5	1000 1000 1000 1000 1000 1000	1000 1000 1000 1000 1000 1000 1000	fitness1 fitness1 fitness1 fitness1 fitness1 fitness1 fitness1 fitness5 fitness5	hill_cl: restart_hill restart_hill restart_hill iterated_loc iterated_loc hill_cl: hill_cl:	imbing l_climbing l_climbing l_climbing cal_search cal_search cal_search imbing imbing	first_(stocha steepest_ first_(stocha steepest_ first_(stocha steepest_ stocha	_ascent choice astic ascent choice astic ascent choice ascent choice astic	16 25 11 100 23 11 100 18 11	7.80 1.89 4.19 1.17 1.33 4.20 1.16 1.55	7e-01 8e-04 4e-03 7e-01 0e-02 7e-03 5e-01 8e-02 1e-02	(1000, - (995, - (1000, - (1000, - (1000, - (1000, - (1000, - (1000, - (995, - (3.337223765865	10) 15) 19) 10) 15) 20) 10) 15) 5357, -17) 1899, -10)	True False True True False True False False
1000 1000 fitness5 iterated_local_search stochastic 16 1.550e-02 (3.340860129501899, -15) True 1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.282e-01 (3.340860129501899, -10) True 1000 1000 fitness5 iterated_local_search first_choice 100 1.550e-01 (3.3237135144508323, -15) False 1000 1000 fitness5 iterated_local_search first_choice 100 1.550e-01 (3.3237135144508323, -15) False 1000 1000 fitness3 simulated_annealing stochastic 21 1.805e-03 1000 True 1000 1000 fitness3 simulated_annealing steepest_ascent 10 3.804e-01 1000 True 1000 1000 fitness3 simulated_annealing first_choice 21 1.720e-03 1000 True 1000 1000 fitness6 simulated_annealing stochastic 30 2.832e-02 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True	1000 1000	1000 1000 1000 1000 1000 1000 1000 1000	fitness1 fitness1 fitness1 fitness1 fitness1 fitness1 fitness5 fitness5 fitness5 fitness5 fitness5	hill_cl: restart_hill restart_hill iterated_loc iterated_loc hill_cl: hill_cl: restart_hill	imbing _climbing _climbing _climbing cal_search cal_search imbing imbing imbing _climbing	first_ stocha steepest_ first_ stocha steepest_ first_(stocha steepest_ first_(_ascent choice astic ascent choice astic ascent choice ascent choice astic ascent	16 25 11 100 23 11 100 18 11 16 21	7.80 1.89 4.19 1.17 1.33 4.20 1.16 1.55 4.28 1.36	7e-01 8e-04 4e-03 7e-01 0e-02 7e-03 5e-01 8e-02 1e-02 9e-01 5e-02	(1000, - (995, - (1000, - (1000, - (1000, - (1000, - (1000, - (300, - (995, - (3.337223765865) (3.34086012950) (3.3323713514450)	10) 15) 19) 10) 15) 20) 15) 5357, -17) 1899, -10) 8323, -15)	True False True False True True False False False
1000 1000 fitness5 iterated_local_search steepest_ascent 11 4.282e-01 (3.340860129501899, -10) True 1000 1000 fitness5 iterated_local_search first_choice 100 1.550e-01 (3.3237135144508323, -15) False	1000 1000	1000 1000 1000 1000 1000 1000 1000 1000 1000	fitness1 fitness1 fitness1 fitness1 fitness1 fitness1 fitness5 fitness5 fitness5 fitness5 fitness5 fitness5 fitness5	hill_cl: restart_hill restart_hill restart_hill iterated_loc iterated_loc hill_cl: hill_cl: restart_hill restart_hill	imbing L_climbing L_climbing L_climbing cal_search cal_search imbing imbing imbing L_climbing L_climbing	first_(stocha steepest_	_ascent choice astic _ascent choice astic _ascent choice astic _ascent choice astic ascent choice ascent ascent ascent	16 25 11 100 23 11 100 18 11 16 21 11	7.80 1.89 4.19 1.17 1.33 4.20 1.16 1.55 4.28 1.36 2.17 4.28	7e-01 8e-04 4e-03 7e-01 0e-02 7e-03 5e-01 8e-02 1e-02 9e-01 5e-02	(1000, - (995, - (1000, - (1000, - (1000, - (1000, - (1000, - (300, - (300, - (337223765865) (334086012950 (334086012950 (334086012950 (334086012950	10) 15) 19) 10) 15) 20) 10) 15) 5357, -17) 1899, -10) 1899, -18)	True
1000 1000 fitness5 iterated_local_search first_choice 100 1.550e-01 (3.3237135144508323, -15) False	1000 1000	1000 1000 1000 1000 1000 1000 1000 1000 1000 1000	fitness1 fitness1 fitness1 fitness1 fitness1 fitness1 fitness5 fitness5 fitness5 fitness5 fitness5 fitness5 fitness5 fitness5 fitness5	hill_cl: restart_hill restart_hill restart_hill iterated_loc iterated_loc hill_cl: hill_cl: restart_hill restart_hill restart_hill	imbing _climbing _climbing _climbing cal_search cal_search imbing imbing climbing _climbing _climbing	first_(stocha steepest_ first_(_ascent choice astic ascent choice astic astic assic ascent choice astic ascent choice ascent choice ascent choice ascent	16 25 11 100 23 11 100 18 11 16 21 11 100	7.80 1.89 4.19 1.17 1.33 4.20 1.16 1.55 4.28 1.36 2.17 4.28 1.60	7e-01 8e-04 4e-03 7e-01 0e-02 7e-03 5e-01 8e-01 9e-01 9e-01 9e-01 8e-01	(1000, - (995, - (1000, - (1000, - (1000, - (1000, - (1000, - (1000, - (3.337223765865 (3.34086012950 (3.34086012950 (3.3423713514450 (3.3423713514450	10) 15) 19) 10) 15) 20) 10) 15) 5357, -17) 1899, -10) 88323, -15)	True
Points Sets Fitness Function Method Variant Count Time Cost is_valid	1000 1000	1000 1000	fitness1 fitness1 fitness1 fitness1 fitness1 fitness1 fitness5	hill_cl: restart_hill restart_hill iterated_loc iterated_loc hill_cl: hill_cl: hill_cl: restart_hill restart_hill iterated_loc	imbing -climbing -climbing -climbing cal_search cal_search imbing imbing -climbing -climbing -climbing -climbing	first_(stoche steepest_ first_(stoche	_ascent choice sstic ascent choice sstic ascent choice ascent choice ascent choice ascent choice ascent choice astic ascent ascent choice ascent	16 25 11 100 23 11 100 18 11 16 21 11 100 16 16 16 16 16	7.80 1.89 4.19 1.17 1.33 4.20 1.16 1.55 4.28 1.36 2.17 4.28 1.60 1.55	7e-01 8e-04 4e-03 7e-01 0e-02 7e-03 5e-01 8e-02 9e-01 5e-02 9e-01 8e-02 8e-02	(1000, - (995, - (1000, - (1000, - (1000, - (1000, - (1000, - (3.337223765865 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950	10) 15) 19) 10) 15) 20) 10) 15) 5357, -17) 1899, -10) 8323, -15) 1899, -10) 8323, -15)	True
1000 1000 fitness3 simulated_annealing stochastic 21 1.805e-03 1000 True 1000 1000 fitness3 simulated_annealing steepest_ascent 10 3.804e-01 1000 True 1000 1000 fitness3 simulated_annealing first_choice 21 1.720e-03 1000 True 1000 1000 fitness6 simulated_annealing stochastic 30 2.832e-02 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True	1000 1000	1000 1000	fitness1 fitness1 fitness1 fitness1 fitness1 fitness1 fitness5	hill_cl: restart_hill restart_hill iterated_loc iterated_loc hill_cl: hill_cl: restart_hill restart_hill iterated_loc iterated_loc iterated_loc iterated_loc iterated_loc iterated_loc iterated_loc	imbing -climbing -climbing -climbing cal_search cal_search imbing imbing -climbing -climbing -climbing -climbing -climbing -climbing	first_(stocha steepest_ first_(stocha steepest_ first_(stocha steepest_ first_(stocha steepest_ stocha steepest_ stocha steepest_ stocha steepest_ first_(stocha steepest_	_ascent choice astic ascent choice ascent ascent choice	16 25 11 100 23 11 100 18 11 16 21 11 100 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 10	7.80 1.89 4.19 1.17 1.33 4.20 1.16 1.55 4.28 1.36 2.17 4.28 1.60 1.55 4.28	7e-01 8e-04 4e-03 7e-01 7e-01 7e-03 7e-03 7e-03 1e-02 1e-02 9e-01 5e-02 2e-02 8e-01 8e-01	(1000, - (995, - (1000, - (1000, - (1000, - (1000, - (1000, - (1000, - (3.337223765865 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950	10) 15) 19) 10) 15) 15) 15) 16) 15) 5357, -17) 1899, -10) 8323, -15) 1899, -18) 1899, -18) 1899, -18)	True False True False True False True True True True True True True True True False True
1000 1000 fitness3 simulated_annealing steepest_ascent 10 3.804e-01 1000 True 1000 1000 fitness3 simulated_annealing first_choice 21 1.720e-03 1000 True 1000 1000 fitness6 simulated_annealing stochastic 30 2.832e-02 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True	1000 1000	1000 1000	fitness1 fitness1 fitness1 fitness1 fitness1 fitness1 fitness5	hill_cl: restart_hill restart_hill iterated_loc iterated_loc hill_cl: hill_cl: restart_hill restart_hill iterated_loc iterated_loc iterated_loc iterated_loc iterated_loc iterated_loc iterated_loc	imbing -climbing -climbing -climbing cal_search cal_search imbing imbing -climbing -climbing -climbing -climbing -climbing -climbing	first_(stocha steepest_ first_(stocha steepest_ first_(stocha steepest_ first_(stocha steepest_ stocha steepest_ stocha steepest_ stocha steepest_ first_(stocha steepest_	_ascent choice astic ascent choice ascent ascent choice	16 25 11 100 23 11 100 18 11 16 21 11 100 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 16 11 10 10	7.80 1.89 4.19 1.17 1.33 4.20 1.16 1.55 4.28 1.36 2.17 4.28 1.60 1.55 4.28	7e-01 8e-04 4e-03 7e-01 7e-01 7e-03 7e-03 7e-03 1e-02 1e-02 9e-01 5e-02 2e-02 8e-01 8e-01	(1000, - (995, - (1000, - (1000, - (1000, - (1000, - (1000, - (1000, - (3.337223765865 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950	10) 15) 19) 10) 15) 15) 15) 16) 15) 5357, -17) 1899, -10) 8323, -15) 1899, -18) 1899, -18) 1899, -18)	True False True False True False True True True True True True True True True False True
1000 1000 fitness3 simulated_annealing steepest_ascent 10 3.804e-01 1000 True 1000 1000 fitness3 simulated_annealing first_choice 21 1.720e-03 1000 True 1000 1000 fitness6 simulated_annealing stochastic 30 2.832e-02 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True	1000 1000	1000 1000	fitness1 fitness1 fitness1 fitness1 fitness1 fitness1 fitness5	hill_cl: restart_hill restart_hill restart_hill iterated_loc iterated_loc hill_cl: hill_cl: hill_cl: restart_hill restart_hill iterated_loc iterated_loc iterated_loc	imbing -climbing -climbing -climbing cal_search cal_search imbing imbing -climbing	first_(stochi steepest, first_(stochi	_ascent choice sstic _ascent choice sstic _ascent choice sstic _ascent choice sstic ascent choice sstic ascent choice sstic ascent choice sstic ascent choice choice	16 25 11 100 18 11 100 16 11 100	7.80 1.89 4.19 1.17 1.33 4.20 1.16 1.55 4.28 1.36 2.17 4.28 1.60 1.55 4.28	7e-01 8e-04 4e-03 7e-01 4e-03 7e-01 0e-02 7e-03 7e-03 7e-04 6e-02 1e-02 2e-02 0e-01 8e-01 0e-02 2e-01 0e-01 0e-01	(1000, - (995, - (1000, - (1000, - (1000, - (1000, - (1000, - (1000, - (3.33723765865) (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950	10) 15) 19) 10) 15) 20) 10) 15) 5357, -17) 1899, -10) 8323, -15) 1899, -10) 8323, -15) 1899, -10)	True False True False True False True True False True True False True
1000 1000 fitness3 simulated_annealing first_choice 21 1.720e-03 1000 True 1000 1000 fitness6 simulated_annealing stochastic 30 2.832e-02 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True	1000 1000	1000 1000	fitness1 fitness1 fitness1 fitness1 fitness1 fitness1 fitness5	hill_cl: restart_hill restart_hill restart_hill iterated_loc iterated_loc hill_cl: hill_cl: restart_hill restart_hill iterated_loc iterated_loc iterated_loc iterated_loc iterated_loc	imbing -climbing -climbing -climbing -climbing -cal_search cal_search imbing -climbing -climbin	first_(stochi steepest, first_(first_(stochi	_ascent choice astic _ascent choice astic _ascent choice astic _ascent choice astic ascent choice astic ascent choice batic ascent choice	16 25 11 100 18 11 100 16 11 100 16 11 100 16 11 100 16 11 100 16 11 100 16 11 100 16 11 100 16 11 100 10 1	7.80 1.89 4.19 1.17 1.33 4.20 1.16 1.55 4.28 1.36 1.55 4.28 1.55 4.28	7e-01 8e-04 4e-03 7e-01 0e-02 7e-01 8e-02 1e-02 9e-01 9e-01 8e-02 2e-02 0e-01 8e-01 0e-01 Count	(1000, - (995, - (1000, - (1000, - (1000, - (1000, - (1000, - (1000, - (3.33723765865 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950	10) 15) 19) 10) 15) 20) 10) 15) 5357, -17) 1899, -10) 8323, -15) 1899, -18) 1899, -10) 8323, -15) 1899, -15 1899, -15 1899, -16	True False True True False True True False True Tr
1000 1000 fitness6 simulated_annealing stochastic 30 2.832e-02 1000 True 1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True	1000 1000	1000 1000	fitness1 fitness1 fitness1 fitness1 fitness1 fitness1 fitness5	hill_cl: restart_hill restart_hill restart_hill iterated_loc iterated_loc hill_cl: hill_cl: hill_cl: restart_hill restart_hill iterated_loc	imbing _climbing _climbing _climbing cal_search cal_search cal_search imbing imbing _climbing _cal_search _ca	first_(stochi steepest, first_(stochi	_ascent choice astic ascent choice astic ascent choice astic ascent choice astic ascent choice ascent choice stic ascent choice stic ascent choice	16 25 11 100 23 11 100 18 11 100 16 11 100 16 11 100 16 11 100 16 11 100 16 11 100 16 11 100 10 1	7.80·1.89·4.19 1.17·1.33 4.20 1.16-1.55 4.28 1.36 2.17 4.28 1.55	7e-01 8e-04 4e-03 7e-01 0e-02 7e-01 5e-01 8e-02 1e-02 9e-01 5e-02 2e-02 0e-01 8e-01 0e-01 Count	(1000, - (995, - (1000, - (1000, - (1000, - (1000, - (1000, - (1000, - (3.337223765865 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950 (3.34086012950	10) 15) 19) 10) 10) 15) 20) 10) 15) 5357, -17) 1899, -10) 8323, -15) 1899, -18) 1899, -10) 8323, -15 1899, -15 1899, -1 1000	True False True True False True True False True True False True True True True True
1000 1000 fitness6 simulated_annealing steepest_ascent 15 5.716e-01 1000 True	1000 10000 10000 10000	1000 1000	fitness1 fitness1 fitness1 fitness1 fitness1 fitness1 fitness5	hill_cl: restart_hill restart_hill restart_hill iterated_loc iterated_loc hill_cl: hill_cl: hill_cl: restart_hill restart_hill iterated_loc iterated	imbing -climbing -climbing -climbing -climbing -cal_search -cal_search -cal_search -climbing -cal_search -c	first_(stoche steepest, stoche steepest, first_(stoche steepest, stoche stoch	_ascent choice astic _ascent choice stic ascent choice stic ascent choice stic ascent choice stic ascent choice	16 25 11 100 18 11 100 16 11 100 16 11 100 16 11 100 16 11 100 16 11 100 16 11 100 16 11 100 10 1	7.80·1.89·4.19 1.17·1.33 4.20 1.16-1.55 4.28 1.36 2.17·4.28 1.55 4.28 1.55 C ent	7e-01 8e-04 4e-03 7e-01 0e-02 7e-01 5e-01 8e-02 1e-02 9e-01 5e-02 2e-02 0e-01 8e-01 0e-01 Count	(1000, - (995, - (1000, - (1000, - (1000, - (1000, - (1000, - (1000, - (1000, - (3.337223765865 (3.34086012950 (3.34080000000000000000000000000000000000	10) 15) 19) 10) 10) 15) 20) 10) 15) 5357, -17) 1899, -10) 8323, -15) 1899, -18) 1899, -10) 8323, -15 1899, -15 1899, -1 1000 1000	True False True True False True True False True True False True Tru
	1000 1000	1000 1000	fitness1 fitness1 fitness1 fitness1 fitness1 fitness1 fitness5	hill_cl: restart_hill restart_hill restart_hill iterated_loc iterated_loc hill_cl: hill_cl: hill_cl: restart_hill restart_hill iterated_loc iterated	imbing _climbing _climbing _climbing cal_search cal_search cal_search imbing _climbing _cal_search _cal_search	first_(stochi steepest, first_(stochi	_ascent choice astic ascent choice astic ascent choice astic ascent choice astic ascent choice stic ascent choice stic ascent choice stic ascent choice firs	16 25 11 100 18 11 100 16 11 100 16 11 100 16 11 100 16 11 100 16 11 100 16 11 100 16 11 100 16 11 100 10 1	7.80. 1.89. 4.19 1.17. 1.13. 4.20. 1.16. 1.55. 4.28. 1.36. 1.55. 4.28. 1.56. C cent ce	7e-01 8e-04 4e-03 7e-01 0e-02 7e-01 5e-01 8e-02 1e-02 9e-01 5e-02 2e-02 0e-01 8e-01 0e-01 10e-01	(1000, - (995, - (1000, - (1000, - (1000, - (1000, - (1000, - (1000, - (1000, - (3.33723765865 (3.34086012950 (3.34080000000000000000000000000000000000	10) 15) 19) 10) 10) 15) 20) 10) 15) 5357, -17) 1899, -10) 8323, -15) 1899, -18) 1899, -10) 8323, -15 1899, -1 1000 1000 1000	True False True True False True False True False True False True False True False True
1000 1000 fitness6	1000 1000	1000 1000	fitness1 fitness1 fitness1 fitness1 fitness1 fitness1 fitness5	hill_cl: restart_hill restart_hill restart_hill iterated_loc iterated_loc hill_cl: hill_cl: hill_cl: restart_hill restart_hill iterated_loc iterated	imbing -climbing -climbing -climbing -climbing cal_search cal_search cal_search cclimbing -climbing -clim	first_(stochi steepest, stochi steepest, first_(stochi steepest, stochi stochi steepest, stochi s	_ascent choice astic _ascent choice stic ascent choice stic ascent choice firs	16 25 11 100 23 11 100 18 11 100 16 11 100 16 11 100 16 11 100 16 11 100 16 11 100 16 11 100 10 1	7.80·1.189 4.19 1.17·1.11.133 4.20 1.160 1.555 4.28 1.360 1.555 4.28 1.550	7e-01 8e-04 4e-03 7e-01 0e-02 7e-01 8e-02 1e-02 9e-01 9e-01 8e-02 2e-02 0e-01 8e-01 0e-02 2e-01 0e-01 10e-01 10	(1000, - (995, - (1000, - (100	10) 15) 19) 10) 10) 15) 20) 10) 15) 5357, -17) 1899, -10) 8323, -15) 1899, -18) 1899, -10) 8323, -15 1899, -1 1000 1000 1000	True False True True False True False True False True False True False True T
	1000 1000	1000 1000	fitness1 fitness1 fitness1 fitness1 fitness1 fitness1 fitness5	hill_cl: restart_hill restart_hill restart_hill iterated_loc iterated_loc hill_cl: hill_cl: hill_cl: restart_hill restart_hill restart_hill iterated_loc iterated	imbing _climbing _climbing _climbing cal_search cal_search cal_search imbing _climbing _cal_search _cal_search	first_(stochi steepest, stochi stochi steepest, stochi stochi steepest, stochi steepest, stochi s	_ascent choice astic ascent choice astic ascent choice astic ascent choice astic ascent choice stic steepe firs	16 25 11 100 18 11 100 16 11 100 16 11 100 16 11 100 16 11 100 16 11 100 16 11 100 16 11 100 10 1	7.80. 1.89. 4.19 1.17. 1.17. 1.16. 1.55. 4.28. 1.36. 1.55. 4.28. 1.55. C ent cce cce cent	7e-01 8e-04 4e-03 7e-01 0e-02 7e-01 8e-02 1e-02 9e-01 9e-01 8e-02 2e-02 0e-01 8e-01 0e-02 21 10 10 10 10 10 10 10 1	(1000, - (995, - (1000, - (1000, - (1000, - (1000, - (1000, - (1000, - (1000, - (3.337223765865) (3.34086012950 (3.34080000000000000000000000000000000000	10) 15) 19) 10) 15) 20) 10) 15) 5357, -17) 1899, -10) 8323, -15) 1899, -18) 1899, -10) 8323, -15 1899, -15 1899, -16 1899, -10	True False True True False True False True False True False True Tr

+ Points	+ Sets	Fitness Function	! !	Method	+ Vari	ant	+ Count	+ Ti	+ me		Cost		+
5000	- 5000	fitness1	+ hill_climbing		stochastic		+ 24	+ 7.235e-03		(5000, –23)			True
5000	5000	fitness1	hi	ll_climbing	steepest_ascent		14	1.255e+01		(5000, -13)			True
5000	5000	fitness1	hi	ll_climbing	first_choice		23	8.126e-03		(4999, –22)			False
5000	5000	fitness1	restar	t_hill_climbing	stochastic		31	1.419	e-02		True		
5000	5000	fitness1	restar	t_hill_climbing	steepest_ascent		14	1.262	e+01		True		
5000	5000	fitness1	restar	t_hill_climbing	first_choice		100	5.426	e-02		False		
5000	5000	fitness1	iterat	ed_local_search	stochastic		26	7.557	e-03	(5000, -21)			True
5000	5000	fitness1	iterat	ed_local_search	steepest_ascent		14	1.240	e+01		(5000, -	13)	True
5000	5000	fitness1	iterat	ed_local_search	first_choice		100	6.729	e-02	(4999, -22)			False
5000	5000	fitness5	hi	ll_climbing	stoch	astic	21	4.166	e-01	(3.3334038708439033, -20)			False
5000	5000	fitness5	hi	ll_climbing	steepest_ascent		14	1.269	e+01	(3.3361070193088893, -13)			True
5000	5000	fitness5	hi	ll_climbing	first_choice		23	4.583	e-01	(3.335423024780846, -22)			False
5000	5000	fitness5	restar	t_hill_climbing	stochastic		23	4.905e-01		(3.3361070193088893, -21)			True
5000	5000	fitness5	restar	t_hill_climbing	steepest_ascent		14	1.264e+01		(3.3361070193088893, -13)			True
5000	5000	fitness5	restar	t_hill_climbing	first_choice		100	3.436e+00		(3.335423024780846, -22)			False
5000	5000	fitness5	iterat	ed_local_search	stochastic		25	5.392e-01		(3.3361070193088893, -23)			True
5000	5000	fitness5	iterat	ed_local_search	steepest_ascent		14	1.273e+01		(3.3361070193088893, -13)			True
5000	5000	fitness5	iterated_local_search		first_choice		100	3.492	e+00	(3.335423024780846, -22)			False
+	++ +		+ 		+		+ 	+ +-	+	 +		+ ++	++ +
Points	nts Sets Fitness Function Met		Metho	od V		ariant Coun		Count	: [Time	Cost	is_valid	
5000 5000		 0 fitness:	 3	simulated_an	 nealing st		ochasti	c I	 27	1 1.0	 35е–02		True l
					5 1		est_ascent 14				19e+01	1 5000 I	True I
					J							1 1	
							st_choice 33				45e-02	5000	True
5000	500			simulated_an	imulated_annealing st		ochastic 35		35	6.9	47e-01	5000	True
5000	500	0 fitness	fitness6 si		<pre>simulated_annealing s</pre>		est_ascent 22		22	1.8	96e+01	5000	True
5000	500	0 fitness	6	simulated_an	nealing first		st_choice '		41	8.1	09e-01	5000	True
+	-+	+				+		+-		+		++	+