

Homework 10

Time cost

Item number	Heuristic method	Simulated Annealing	LP solver	ILP solver
100	0.0002	3.0816	0.0063	0.4016
200	0.0005	12.4530	0.0194	0.8992
400	0.0008	58.1044	0.0931	305.5934

Objective value

Item number	Heuristic method	Simulated Annealing	LP solver	ILP solver
100	1680	2964.33	3119.73	3096
200	4104	5946.19	6360.07	6337
400	8399	11620.90	12956.93	12935

	SciPy (Highs)	PuLP (CBC)	CVXPY (ECOS)
Problem 1	x1=0, x2=1	x1=1, x2=0	x1=0.5, x2=0.5
Problem 2	x1=1, x2=0, x3=1, x4=0	x1=0, x2=1, x3=0, x4=1	x1=0.5, x2=0.5, x3=0.5, x4=0.5