## **Test Data Benchmarks**

Note that these benchmark values are not necessarily the optimal known values for each problem, as supplied in the solution files, but rather provide a benchmark that we expect you to be able to reach. Similar data will be provided on the demo day and to get full score you will need to reach within 5% of the benchmark for a given data set.

Proble m	Benchmark Distance	+5%	+10%	+20%	+30%
P01	570.53	599.0565	627.583	684.636	741.689
P02	462.94	486.087	509.234	555.528	601.822
P03	641.19	673.2495	705.309	769.428	833.547
P04	1013.26	1063.923	1114.586	1215.912	1317.238
P05	753.07	790.7235	828.377	903.684	978.991
P06	882.29	926.4045	970.519	1058.748	1146.977
P07	896.11	940.9155	985.721	1075.332	1164.943
P08	4528.74	4755.177	4981.614	5434.488	5887.362
P09	3969.94	4168.437	4366.934	4763.928	5160.922
P10	3786.58	3975.909	4165.238	4543.896	4922.554
P11	3690.5	3875.025	4059.55	4428.6	4797.65
P12	1304.69	1369.9245	1435.159	1565.628	1696.097
P13	1318.95	1384.8975	1450.845	1582.74	1714.635
P14	1285.69	1349.9745	1414.259	1542.828	1671.397
P15	2511.92	2637.516	2763.112	3014.304	3265.496
P16	2572.23	2700.8415	2829.453	3086.676	3343.899
P17	2608.84	2739.282	2869.724	3130.608	3391.492
P18	3795.98	3985.779	4175.578	4555.176	4934.774
P19	3839.36	4031.328	4223.296	4607.232	4991.168
P20	4005.92	4206.216	4406.512	4807.104	5207.696
P21	5640.88	5922.924	6204.968	6769.056	7333.144
P22	5751.57	6039.1485	6326.727	6901.884	7477.041
P23	6098.21	6403.1205	6708.031	7317.852	7927.673