Table 1: Results for the 40 p-median test problems using th Greedy algorithm

Test Problem	n	p	Edges	Optimal Solution	Computational Time (seconds)				Gap to Optimal (%)			
					Mean	Min	Max	Std Dev	Mean	Best	Worst	Std Dev
1	5	100	198	5819	0	0	0.1	0.01	1.2	1.2	1.2	0
2	10	100	193	4093	0	0	0	0.01	0.6	0.6	0.6	0
3	10	100	198	4250	0	0	0.1	0.01	3.5	3.5	3.5	0
4	20	100	196	3034	0	0	0.1	0.01	2	1.8	2.2	0.2
5	33	100	196	1355	0	0	0.1	0.01	2.6	1.7	4.4	0.69
6	5	200	786	7824	0	0	0.1	0.02	2.6	2.6	2.6	0
7	10	200	779	5631	0	0	0.1	0.02	0.3	0.3	0.3	0
8	20	200	792	4445	0	0	0.1	0.02	1.6	1.5	2.3	0.16
9	40	200	785	2734	0.1	0	0.1	0.02	4.9	4.1	5.2	0.48
10	67	200	786	1255	0.1	0.1	0.2	0.02	5.5	3.6	7.8	1.6
11	5	300	1772	7696	0	0	0.1	0.02	0.3	0.3	0.3	0
12	10	300	1758	6634	0.1	0	0.1	0.03	0.3	0.3	0.3	0
13	30	300	1760	4374	0.2	0.1	0.2	0.03	2.3	2.3	2.3	0
14	60	300	1771	2968	0.3	0.2	0.4	0.03	2.5	2.1	3.1	0.26
15	100	300	1754	1729	0.5	0.4	0.6	0.04	6.2	4.5	7.9	0.83
16	5	400	3153	8162	0.1	0	0.1	0.03	0.9	0.9	0.9	0
17	10	400	3142	6999	0.1	0.1	0.2	0.04	0.3	0.3	0.3	0
18	40	400	3134	4809	0.4	0.3	0.6	0.07	1.4	1.3	1.5	0.07
19	80	400	3134	2845	0.8	0.6	0.9	0.06	3.9	3.6	4.3	0.19
20	133	400	3144	1789	1.4	1.3	1.6	0.07	7.6	5.8	8.9	0.69
21	5	500	4909	9138	0.1	0	0.2	0.04	0	0	0	0
22	10	500	4896	8579	0.2	0.1	0.2	0.04	1.1	1.1	1.1	0
23	50	500	4903	4619	0.7	0.5	0.8	0.05	1.6	1.5	1.8	0.11
24	100	500	4914	2961	1.9	1.4	2.5	0.36	2.2	1.8	2.5	0.16
25	167	500	4894	1828	2.8	2.6	3.2	0.12	7.9	6.6	9.6	0.65
26	5	600	7069	9917	0.1	0.1	0.2	0.03	1.8	1.8	1.8	0
27	10	600	7072	8307	0.2	0.2	0.3	0.04	0.8	0.8	0.8	0
28	60	600	7054	4498	1.5	1.2	1.7	0.1	1.8	1.7	2.2	0.12
29	120	600	7042	3033	3	2.7	3.5	0.17	3.5	2.5	4.5	0.53
30	200	600	7042	1989	5.2	4.9	5.8	0.22	9.1	7.1	10.1	0.55
31	5	700	9601	10086	0.1	0.1	0.2	0.03	0	0	0	0
32	10	700	9584	9297	0.2	0.1	0.3	0.04	0.4	0.4	0.4	0
33	70	700	9616	4700	1.8	1.6	2	0.1	2.1	2	2.3	0.11
34	140	700	9585	3013	3.7	3.5	4.1	0.13	2.9	2	3.8	0.56
35	5	800	12548	10400	0.2	0.1	0.4	0.06	0.1	0.1	0.1	0
36	10	800	12560	9934	0.6	0.5	0.7	0.03	0.2	0.2	0.2	0
37	80	800	12564	5057	2.8	2.4	3.9	0.25	1.5	1.2	1.9	0.2
38	5	900	15898	11060	0.3	0.3	0.4	0.02	0.8	0.8	0.8	0
39	10	900	15896	9423	0.6	0.5	0.7	0.04	0.3	0.3	0.3	0
40	90	900	15879	5128	3.6	3.2	4.1	0.22	1.8	1.3	2	0.18

Table 2: Results for the 40 p-median test problems using the Fast Greedy algorithm

Test Problem	n	p	Edges	Optimal Solution	Computational Time (seconds)				Gap to Optimal (%)			
					Mean	Min	Max	Std Dev	Mean	Best	Worst	Std Dev
1	5	100	198	5819	0	0	0.1	0.01	20.3	20.3	20.3	0
2	10	100	193	4093	0	0	0.1	0.01	66.3	66.3	66.3	0
3	10	100	198	4250	0	0	0.1	0.01	64.9	64.9	64.9	0
4	20	100	196	3034	0.1	0.1	0.1	0.01	178.3	178.3	178.3	0
5	33	100	196	1355	0.1	0.1	0.1	0.01	376.4	376.4	376.4	0
6	5	200	786	7824	0	0	0.1	0.01	10.1	10.1	10.1	0
7	10	200	779	5631	0	0	0.1	0.01	41.8	41.8	41.8	0
8	20	200	792	4445	0.1	0.1	0.1	0.01	108.4	108.4	108.4	0
9	40	200	785	2734	0.1	0.1	0.2	0.01	221.2	221.2	221.2	0
10	67	200	786	1255	0.2	0.2	0.3	0.02	457.9	457.9	457.9	0
11	5	300	1772	7696	0	0	0.1	0.01	11.1	11.1	11.1	0
12	10	300	1758	6634	0.1	0	0.1	0.02	36.2	36.2	36.2	0
13	30	300	1760	4374	0.1	0.1	0.2	0.02	110.1	110.1	110.1	0
14	60	300	1771	2968	0.2	0.2	0.3	0.02	262.5	262.5	262.5	0
15	100	300	1754	1729	0.4	0.3	0.5	0.03	417.7	417.4	418.2	0.4
16	5	400	3153	8162	0.1	0	0.1	0.03	6.8	6.8	6.8	0
17	10	400	3142	6999	0.1	0	0.1	0.03	37.1	37.1	37.1	0
18	40	400	3134	4809	0.2	0.1	0.2	0.03	122.7	122.7	122.7	0
19	80	400	3134	2845	0.3	0.3	0.4	0.03	262.5	262.5	262.5	0
20	133	400	3144	1789	0.5	0.5	0.7	0.05	547	547	547	0
21	5	500	4909	9138	0.1	0	0.2	0.04	7.6	7.6	7.6	0
22	10	500	4896	8579	0.1	0.1	0.2	0.02	24.9	24.8	24.9	0.06
23	50	500	4903	4619	0.3	0.2	0.3	0.03	142.3	142.3	142.3	0
24	100	500	4914	2961	0.5	0.4	0.8	0.08	286.1	285.9	286.3	0.2
25	167	500	4894	1828	0.6	0.6	0.8	0.04	499	499	499	0
26	5	600	7069	9917	0.1	0.1	0.2	0.04	5.4	5.4	5.4	0
27	10	600	7072	8307	0.1	0.1	0.2	0.02	24.1	24.1	24.1	0
28	60	600	7054	4498	0.3	0.3	0.4	0.04	132.7	132.2	133.3	0.55
29	120	600	7042	3033	0.5	0.5	0.6	0.04	279.7	279.7	279.7	0
30	200	600	7042	1989	0.8	0.7	0.9	0.04	542.6	542.6	542.6	0
31	5	700	9601	10086	0.2	0.1	0.2	0.03	7.4	7.4	7.4	0
32	10	700	9584	9297	0.2	0.1	0.2	0.03	28.5	28.5	28.5	0
33	70	700	9616	4700	0.4	0.3	0.5	0.04	167.8	167.8	167.8	0
34	140	700	9585	3013	0.6	0.6	0.9	0.05	302.9	302.9	302.9	0
35	5	800	12548	10400	0.2	0.1	0.3	0.04	4.3	4.3	4.3	0
36	10	800	12560	9934	0.2	0.2	0.3	0.04	26.4	26.4	26.4	0
37	80	800	12564	5057	0.5	0.4	0.5	0.03	172.2	172.2	172.2	0.02
38	5	900	15898	11060	0.2	0.2	0.3	0.03	5.9	5.9	5.9	0
39	10	900	15896	9423	0.2	0.2	0.3	0.03	23.3	23.3	23.3	0
40	90	900	15879	5128	0.6	0.5	0.7	0.04	167.6	167.6	167.6	0

Table 3: Results for the 40 p-median test problems using the Stingy algorithm

Test Problem	n	p	Edges	Optimal Solution	Computational Time (seconds)				Gap to Optimal (%)			
					Mean	Min	Max	Std Dev	Mean	Best	Worst	Std Dev
1	5	100	198	5819	3.3	3.2	4.2	0.16	116.1	116.1	116.1	0
2	10	100	193	4093	3.3	3.2	3.6	0.11	131.9	126.3	138.1	3.4
3	10	100	198	4250	3.3	3.2	3.6	0.11	130.6	130.4	131	0.29
4	20	100	196	3034	3.1	3	3.7	0.12	108.5	106.7	110.2	1.78
5	33	100	196	1355	2.9	2.8	3.4	0.15	145	138.5	155.6	8.07
6	5	200	786	7824	28.2	27.8	30.2	0.47	99.2	99.2	99.2	0
7	10	200	779	5631	28.1	27.6	28.7	0.36	125.3	124.5	126.1	0.81
8	20	200	792	4445	27.8	27.4	28.4	0.34	131.3	128.7	133	2.1
9	40	200	785	2734	26.9	26.5	27.5	0.37	135.3	132.2	137.1	2.34
10	67	200	786	1255	25	24.4	28.5	0.77	173.2	173.2	173.2	0
11	5	300	1772	7696	131.8	131.5	132.3	0.38	154.2	148.2	172.4	12.12
12	10	300	1758	6634	131.4	131.1	131.6	0.23	163	163	163	0
13	30	300	1760	4374	130.1	129.7	130.7	0.44	149.6	149.6	149.6	0
14	60	300	1771	2968	125.5	125.2	125.9	0.26	138.7	137	140.6	1.97
15	100	300	1754	1729	116.4	115.8	117.4	0.38	125.8	123.7	127.3	1.03
16	5	400	3153	8162	406.3	406.1	406.5	0.17	149.7	149.7	149.7	0
17	10	400	3142	6999	406.8	405.4	408.1	1.41	136.8	135.4	141	2.79
18	40	400	3134	4809	402.4	400.1	408.2	3.86	135.7	134.2	136.9	1.26
19	80	400	3134	2845	389.6	388.9	390.5	0.69	124.3	124	124.7	0.33
20	133	400	3144	1789	359	358.8	359.2	0.19	128.2	128.2	128.2	0