

Faster MIP Solutions via New Node Selection
Rules: Experiment 2 Data

June 15, 2009

The meanings of the table labels are:

Name: The name of a MIP instance.

Time: The total time in seconds required to solve a MIP; -1 if a MIP is not solved due to solver error.

Iters: The total number of simplex iterations required to solve a MIP; -1 if a MIP is not solved due to solver error.

Nodes: The total number of branch and bound tree nodes solved; -1 if a MIP is not solved due to solver error.

Best: The last incumbent solution found; “not” if no incumbent solution is found; -1 if a MIP is not solved due to solver error.

Solved: Whether or not a MIP is solved: 0 for not solved, 1 for solved.

Table 1: $BPr_0 - Lf - N$ (GLPK default).

Name	Time	Iters	Nodes	Best	Ogap	Solved
22433	6.89	5489	62	21477	0	1
23588	94.31	45434	4509	8090	0	1
10teams	503.33	711067	6043	924	0	1
a1c1s1	3600.22	1160397	34193	13842.91	0.49	0
aflow30a	3599.94	3283388	140441	1158	0.08	0
aflow40b	3600.04	5381232	50436	1370	0.24	0
air04	3599.84	529827	4266	56138	0.01	0
air05	3601.03	427968	6013	26374	0.01	0
air06	32.46	11651	34	49649	0	1
aligninq	2484.72	349746	21424	2713	0	1
atlanta-ip	3643.66	211630	60	not	inf	0
bal8x12	1.09	2592	376	471.55	0	1
bc	3599.34	566547	21759	7	0.41	0
bc1	3398.26	602982	27695	3.34	0	1
bell3b	36.13	41209	25880	11786160.62	0	1
bell4	3599.65	1545541	766835	18553387.58	0	0
bell5	3600.24	947937	563359	8966406.49	0	0
bienst1	1499.73	3971433	32621	46.75	0	1
bienst2	3599.75	9261724	90310	54.75	0.26	0
binkar10_1	3599.95	1954771	223020	6774.67	0.02	0
blend2	23.77	49393	18186	7.6	0	1
bm23	0.08	1244	382	34	0	1
cap6000	3600.53	2069893	140605	-2332219	0.05	0
d10200	3599.99	1432311	123919	12578	0.01	0
d20200	3600.06	301192	16373	12635	0.03	0
dano3_3	101.91	44013	65	576.34	0	1
dano3_4	145.49	63626	110	576.44	0	1
dano3_5	1367.92	548210	1740	576.92	0	1
dano3mip	3600.75	758710	2599	720.44	0.2	0
danooint	3599.36	6719153	80864	65.67	0.05	0
dcmulti	14.65	11246	552	188182	0	1
disctom	3600.12	183444	3703	not	inf	0
ds	3612.39	103555	260	780.06	0.93	0
dsbmip	6.28	2591	26	-305.2	0	1

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Name	Time	Iters	Nodes	Best	Ogap	Solved
egout	0.11	562	13	568.1	0	1
eilD76	1054.57	625773	21928	885.41	0	1
enigma	83.92	824911	113613	0	0	1
fast0507	3602.13	53614	632	183	0.05	0
fiball	3600.08	99090	3704	not	inf	0
fiber	324.45	129490	15673	405935.18	0	1
fixnet4	11.49	11008	672	8936	0	1
fixnet6	24.17	23955	2880	3983	0	1
flugpl	0.78	2892	3478	1201500	0	1
gen	3.5	7375	343	112313.36	0	1
germanrr	3600.23	485672	5427	not	inf	0
gesa2	3456.42	11156761	1061109567	not	inf	0
gesa2-o	3600.48	607812	92291	25785373.38	0	0
gr4x6	0.1	693	108	202.35	0	1
gt2	0.73	2479	413	21166	0	1
haprp	3600.07	113410	60029	3673345.33	0	0
irp	130.75	9940	699	12159.49	0	1
khb05250	2.69	2889	85	106940226	0	1
l152lav	290.23	82776	5333	4722	0	1
liu	3477.09	2988944	8920	3986	0.86	0
lseu	10.91	68869	33066	1120	0	1
markshare1	3600.13	1070855	503285	18	1	0
markshare2	3600.27	1199159	465748	42	1	0
mas284	160.68	231287	51628	91405.72	0	1
mas74	3600.17	2114014	508125	11801.19	0.1	0
mas76	3600.11	1398079	429330	40005.05	0.02	0
mcf2	3600.05	7366767	88541	65.67	0.05	0
mcsched	3600.55	1100380	19830	212887	0.07	0
misc01	0.44	3945	559	563.5	0	1
misc02	0.1	1160	117	1690	0	1
misc03	12.72	36074	3170	3360	0	1
misc04	2.11	2742	13	2666.7	0	1
misc05	1.59	4235	379	2984.5	0	1
misc06	0.86	2082	64	12850.86	0	1
misc07	1191.18	1058824	93303	2810	0	1
mkc	3540.99	1514749	69350	-287.49	1.06	0
mkc1	3600.36	3968677	79027	-598.71	0.02	0
mod008	51.48	79182	40178	307	0	1
mod011	3600.57	2540821	15158	-54353428.06	0.1	0
mod013	0.62	2206	650	280.95	0	1
modglob	3599.56	1066888	146077	20740508.09	0	0
momentum1	3599.86	719408	2170	not	inf	0
momentum3	3668.39	103131	8	not	inf	0
msc98-ip	3614.71	340748	100	not	inf	0
mzzv11	3608.51	543970	375	-16248	0.39	0
mzzv42z	3606.33	65444	451	-17646	0.21	0
n3700	3599.98	175377	30691	1800252	0.45	0
n3701	3599.38	206140	26841	1867170	0.48	0
n3702	3599.72	160191	25283	2012508	0.52	0
n3703	3600.28	246577	25726	1924141	0.51	0
n3704	3600.18	226153	26984	1966551	0.5	0
n3705	3599.51	252103	33045	1953807	0.5	0
n3706	3600.04	279637	29849	1755690	0.45	0
n3707	3600.32	142212	23948	1823077	0.48	0
n3708	3600.81	154596	25340	1852929	0.47	0
n3709	3600.25	176026	24299	1944285	0.5	0
n370a	3600.06	267364	30124	1989867	0.5	0
n370b	3600.16	161216	29088	1893469	0.47	0
n370c	3600.43	157888	22108	1830458	0.47	0
n370d	3599.78	153027	21538	1830458	0.47	0
n370e	3600.06	200259	29625	1843311	0.47	0
nag	-1	-1	-1	-1	-1	0
neos-430149	3600.18	3906895	424167	not	inf	0
neos-476283	3608.19	14111	1033	406.44	0	0
neos-480878	3471.01	1069714	206845	492.51	0	1
neos-494568	3600.49	1391679	22382	-85	0.2	0
neos-495307	3600.16	299404	213128	2233	0.01	0
neos-498623	3600.55	1322973	23915	30.6	0.48	0
neos-501453	0	64	1	47454.61	0	1
neos-501474	584.15	331608	78524	52071.11	0.01	0
neos-503737	2909.07	2077000	17669	50	0	1
neos-504674	687.01	409090	29119	3635.87	0.34	0
neos-504815	3599.91	2389977	154582	2333.03	0.49	0
neos-506422	1175.95	857665	11373	0	0	1
neos-506428	3578.07	3951	1061109567	not	inf	0

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Name	Time	Iters	Nodes	Best	Ogap	Solved
neos-512201	2474.17	1295270	119385	513.57	0	1
neos-520729	3600.81	48240	14109	-1385000	0	0
neos-522351	1378.1	976380	68498	17891.08	0	1
neos-525149	3578.41	21401	302	61	0.02	0
neos-530627	3600.06	996783	417658	2995.2	0.01	0
neos-538867	3599.42	1700520	104318	132	0.76	0
neos-538916	3600.36	819367	51178	134	0.69	0
neos-544324	3605.16	2676	625	not	inf	0
neos-547911	3601.38	8523	1925	not	inf	0
neos-548047	3602.98	2425849	3013	10	0.81	0
neos-548251	3600.14	1066927	190159	not	inf	0
neos-551991	3601.08	4776929	2182	13	0.57	0
neos-555001	3599.69	2197453	50139	not	inf	0
neos-555298	3599.4	940850	44173	1226800	0.05	0
neos-555343	3601.18	446879	9826	not	inf	0
neos-555424	3600.06	407094	11458	2330100	0.47	0
neos-555694	3599.98	3109374	54032	18.6	0.01	0
neos-555771	3584.43	2162692	76697	20.5	0.12	0
neos-555884	3599.76	192678	10019	not	inf	0
neos-555927	3599.58	3006891	107162	not	inf	0
neos-565672	3578.52	83337	1061109567	not	inf	0
neos-565815	2508.42	327696	2685	14	0	1
neos-570431	3599.73	5570563	92514	9	0.15	0
neos-574665	3599.64	479363	123672	5975477.45	0.11	0
neos-578379	3602.77	376444	133	not	inf	0
neos-582605	3600.87	2475407	84382	1	5	0
neos-583731	3600.19	2402737	114670	not	inf	0
neos-584146	3600.69	3941169	121372	0	1.80E+016	0
neos-584851	78.29	50116	1864	-11	0	1
neos-584866	3601.29	424786	2646	-24	5.96	0
neos-585467	62.23	27264	1061109567	not	inf	0
neos-595904	3600.47	1294818	66981	not	inf	0
neos-595905	3599.43	3149444	288567	not	inf	0
neos-595925	3600.83	3673927	197193	not	inf	0
neos-598183	3600.03	4356804	199895	not	inf	0
neos-603073	3428.48	3587699	120751	16858.02	0.09	0
neos-611135	3588.89	525436	10300	12822	0.1	0
neos-611838	3599.97	2152841	46236	1763966.71	0.05	0
neos-612125	3364.09	2198211	44092	1844367.88	0	1
neos-612143	3600.24	2425609	53423	1795981.08	0.03	0
neos-612162	3600.42	2317149	48815	1772948.96	0.04	0
neos-619167	3600.31	2903125	11749	not	inf	0
neos-631164	39.92	13805	23	not	inf	0
neos-631694	3599.59	2031084	75908	50	0.06	0
neos-631709	3602.28	143837	1384	not	inf	0
neos-631784	3617.53	741724	1800	300	0.84	0
neos-641591	3601.29	252918	3889	not	inf	0
neos-655508	0.12	2	1	63015042	0	1
neos-662469	3599.79	253190	3896	not	inf	0
neos-686190	2502.1	784923	32536	6730	0	1
neos-691058	3505.63	994104	2531	297	0.19	0
neos-709469	11.62	26558	690	493.16	0	1
neos-775946	3577.55	1451528	31346	16.9	0.11	0
neos-777800	472.91	601920	720	-80	0	1
neos-780889	3611.84	39913	109	not	inf	0
neos-785899	798.77	629598	12126	101	0	1
neos-785912	3600.61	3812241	12131	not	inf	0
neos-785914	1596.78	1743877	6730	38	0	1
neos-787933	3601.65	28766	2189	101	0.97	0
neos-791021	3599.6	215715	1350	not	inf	0
neos-796608	3600.2	812809	479183	-48296500	0	0
neos-799711	219.51	30080	1061109567	not	inf	0
neos-799838	3600.43	981439	6388	1308000	0.19	0
neos-801834	1097.8	102567	1671	50386	0	1
neos-803219	413.89	291689	62154	210.3	0	1
neos-803220	949.95	571878	137712	195.4	0	1
neos-806323	273.65	185383	28346	215	0	1
neos-807454	3600.13	1251071	10140	not	inf	0
neos-807456	3601.21	1839352	8590	not	inf	0
neos-807639	2012.93	693185	130331	454.2	0	1
neos-807705	1323.12	890264	159585	342.4	0	1
neos-808072	3599.95	1284623	10967	37	0.92	0
neos-808214	3599.81	4884651	44405	not	inf	0
neos-810286	149.85	38471	65	2877	0	1
neos-810326	3600.28	797565	8667	-43378	0.04	0

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Name	Time	Iters	Nodes	Best	Ogap	Solved
neos1	3600.13	1904626	41562	21	0.71	0
neos10	3602.03	111848	1662	-1135	0.06	0
neos11	2642.09	2353491	11936	9	0	1
neos12	3600.89	588569	2247	18	0.47	0
neos13	3470.62	9212	768	-82.95	0.34	0
neos14	3600.77	993932	139546	76342.79	0.13	0
neos15	3600.01	947865	149562	83401.8	0.16	0
neos16	3600.31	2306709	227420	not	inf	0
neos17	3600.47	783721	90371	0.21	0.77	0
neos18	3599.64	2584618	58233	16	0.31	0
neos19	3591.69	65662	1061109567	not	inf	0
neos2	2633.78	4612450	131693	454.86	0	1
neos20	3599.8	763996	70999	not	inf	0
neos3	3599.76	7133072	91351	1344.3	3.37	0
neos4	3385.86	93896	1061109567	not	inf	0
neos5	3600.93	2678362	380815	15	0.08	0
neos6	3600.33	971158	11009	92	0.1	0
neos7	-1	-1	-1	not	inf	0
neos9	3607.04	368830	990	798	0.02	0
newdano	3599.69	9098461	53151	67.13	0.55	0
noswot	3600.26	923723	304509	-38	0.13	0
npmv07	3576.12	242265	1061109567	not	inf	0
nsa	3600.77	9737464	217786	138	0.33	0
nsrand-ipx	3600.24	75428	22754	57120	0.12	0
nug08	86.65	34503	112	214	0	1
nw04	79.16	2270	153	16862	0	1
p0033	0.07	1077	460	3089	0	1
p0201	3.62	11420	893	7615	0	1
p0282	31.95	19063	1875	258411	0	1
p0291	0.12	1048	186	5223.75	0	1
p0548	2.73	4047	349	8691	0	1
p2756	22.93	7927	1078	3124	0	1
p6b	3599.1	703244	40622	-53	1.77	0
pg	3599.91	5926761	144252	-8674.34	0.02	0
pg5_34	3599.42	7039651	184792	-14314.68	0.01	0
pipex	1.04	9936	3007	788.26	0	1
pk1	3600.36	2751928	401741	11	0.76	0
pp08a	791.42	417930	53975	7350	0	1
pp08aCUTS	734.11	403726	45354	7350	0.06	0
prod1	3599.72	3610169	430873	-56	0.27	0
prod2	3600.63	2682616	230332	-59	0.38	0
protfold	2569.6	1540736	1344	-21	0.9	0
qap10	700.44	319778	143	340	0	1
qui	3599.22	4297507	142406	-132.87	2.93	0
qnet1	44.73	53238	1287	16029.69	0	1
qnet1_o	40.73	55743	1183	16029.69	0	1
ramos3	3779.51	64716	18	not	inf	0
ran10x10a	22.97	49547	19275	1499	0	1
ran10x10b	5.13	13249	4075	3073	0	1
ran10x10c	2776.39	907230	428535	13007	0	1
ran10x12	6.45	12743	3681	2714	0	1
ran10x26	3600.48	1399693	433374	4270	0.07	0
ran12x12	3600.36	1250997	401803	2294	0.14	0
ran12x21	3600.58	1304759	360867	3664	0.11	0
ran13x13	3600.18	1129784	350966	3252	0.12	0
ran14x18	3599.43	1381028	394259	4032	0.23	0
ran14x18.1	3599.44	941311	252635	4243	0.27	0
ran14x18.disj-8	558.22	408607	43817	4420	0.22	0
ran16x16	3600.74	1890704	490849	3954	0.19	0
ran17x17	3599.78	1125723	333107	1373	0.05	0
ran4x64	3.3	5732	2114	9711	0	1
ran6x43	1.37	2345	647	6330	0	1
ran8x32	3599.22	1094281	366980	5313	0.05	0
rd-rplusc-21	3527.94	2892	1061109567	not	inf	0
rentacar	5.9	5964	47	30356760.98	0	1
rgn	12.58	24944	4714	82.2	0	1
rlp1	3599.88	300008	157027	15	0.07	0
rlp2	1880.13	5524377	417342	19	0	1
roll3000	306.68	94537	5764	17355	0.33	0
rout	3599.48	3915442	257825	1147.57	0.14	0
roy	2.54	6813	2887	3208.96	0	1
set1al	1.71	663	31	15869.75	0	1
set1ch	3599.84	1661714	319399	56038.25	0.08	0
seymour	3601.15	371436	4980	434	0.06	0
seymour.disj-10	3605.62	707629	1635	295	0.05	0

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Name	Time	Iters	Nodes	Best	Ogap	Solved
sp98ic	3493.08	4379215	1061109567	not	inf	0
stein15	1.27	5130	79	9	0	1
stein27	13.02	20456	3226	18	0	1
stein45	446.46	349280	58717	30	0	1
stein9	0.01	296	6	5	0	1
stp3d	3594.18	93426	1061109567	not	inf	0
t1717	3602.5	13649	243	not	inf	0
Test3	1265.69	287872	5578	2673520.21	0	1
timtab1	3599.81	949931	210811	833108	0.59	0
timtab2	3599.66	638422	122039	1462958	0.69	0
tr12-30	3599.82	4604809	659597	not	inf	0
vpm1	0.84	1640	53	20	0	1
vpm2	3599.87	1782761	272804	13.75	0.1	0

Table 2: $BPr_0 - BPrA_0 - N$.

Name	Time	Iters	Nodes	Best	Ogap	Solved
22433	8.25	5693	71	21477	0	1
23588	109.37	45063	4426	8090	0	1
10teams	302.42	435572	3574	924	0	1
a1c1s1	3600.61	820892	23371	16378.66	0.57	0
afLOW30a	3599.92	3179838	134220	1158	0.08	0
afLOW40b	3600.29	4827333	44043	2777	0.62	0
air04	3601.56	526482	4065	56138	0.01	0
air05	3600.42	427753	5999	26374	0.01	0
air06	32.33	11651	34	49649	0	1
aligninq	2430.13	349376	20928	2713	0	1
atlanta-ip	3529.87	202780	56	not	inf	0
bal8x12	0.86	2085	232	471.55	0	1
bc	3599.32	676028	18408	7	0.41	0
bc1	3378.13	602502	27691	3.34	0	1
bell3b	35.4	40882	25754	11786160.62	0	1
bell4	3600.64	1455249	722944	18553387.58	0	0
bell5	3600.2	785106	465225	8966406.49	0	0
bienst1	1504.59	3957013	32478	46.75	0	1
bienst2	3599.67	9658650	94225	54.6	0.26	0
binkar10.1	3599.88	2095198	189821	7581	0.12	0
blend2	12.69	26011	9938	7.6	0	1
bm23	0.08	1250	370	34	0	1
cap6000	3599.52	2448998	95423	-2143847	0.14	0
d10200	3599.53	1703408	99731	12578	0.01	0
d20200	3600.5	251985	10831	12635	0.03	0
dano3_3	106.53	44283	65	576.34	0	1
dano3_4	148.77	63420	108	576.44	0	1
dano3_5	1396.01	547118	1731	576.92	0	1
dano3mip	3599.92	744589	2561	720.44	0.2	0
danooint	3599.24	6415245	77738	65.67	0.04	0
dcmulti	13.13	11214	532	188182	0	1
disctom	3573.73	208696	4110	-5000	0	1
ds	3586.66	102470	253	780.06	0.93	0
dsbmip	9.19	2591	26	-305.2	0	1
egout	0.1	562	13	568.1	0	1
eilD76	1675.9	624768	21853	885.41	0	1
enigma	91.9	824911	113613	0	0	1
fast0507	3601.57	49387	569	183	0.05	0
fiball	3599.83	110501	3980	not	inf	0
fiber	352.54	127572	15348	405935.18	0	1
fixnet4	16.59	10954	655	8936	0	1
fixnet6	35.89	23973	2847	3983	0	1
flugpl	0.83	2931	3517	1201500	0	1
gen	3.9	7201	323	112313.36	0	1
germanrr	3600.9	453018	5094	not	inf	0
gesa2	3598.38	11395689	1061109567	not	inf	0
gesa2-o	3600.64	707272	87034	25785373.38	0	0
gr4x6	0.09	654	84	202.35	0	1
gt2	0.63	2247	330	21166	0	1
haprp	3600.47	178849	81839	3673320.25	0	0
irp	105.18	9940	699	12159.49	0	1

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Table 2 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
khh05250	1.92	2804		106940226	0	1
l152lav	189.7	88765	5661	4722	0	1
liu	3585.54	2981325	7341	4166	0.87	0
lseu	11.44	68865	33065	1120	0	1
markshare1	3600.12	884762	366355	20	1	0
markshare2	3599.24	1033583	355828	53	1	0
mas284	141.42	231071	51543	91405.72	0	1
mas74	3600.13	1859987	434597	11801.19	0.09	0
mas76	3600.09	1309057	394447	40005.05	0.02	0
mcf2	3600.02	6994752	84340	65.67	0.04	0
mcsched	3599.9	1043429	18688	212887	0.07	0
misc01	0.46	3945	559	563.5	0	1
misc02	0.1	1160	117	1690	0	1
misc03	13.53	36073	3169	3360	0	1
misc04	2.3	2742	13	2666.7	0	1
misc05	1.67	4235	379	2984.5	0	1
misc06	0.9	2089	64	12850.86	0	1
misc07	1336.34	1058817	93302	2810	0	1
mkc	3600.14	1940988	57237	-287.49	1.06	0
mkc1	3599.74	3821149	70714	-598.71	0.02	0
mod008	30.56	54094	21503	307	0	1
mod011	3600.06	2575911	14565	-54353428.06	0.09	0
mod013	0.56	2006	559	280.95	0	1
modglob	3599.41	1074264	130319	20749327.34	0	0
momentum1	3603.95	686668	2115	not	inf	0
momentum3	3645.09	103131	8	not	inf	0
msc98-ip	3649.9	280256	80	not	inf	0
mzsv11	3602.76	461269	290	-13958	0.62	0
mzsv42z	3601.05	79791	623	-17646	0.21	0
n3700	3599.26	118084	21809	1800252	0.45	0
n3701	3600.29	123337	19280	1915358	0.49	0
n3702	3599.69	110614	19030	2012508	0.52	0
n3703	3599.71	113213	17567	1924141	0.51	0
n3704	3599.63	134674	21067	1966551	0.5	0
n3705	3600.12	167130	23400	1953807	0.5	0
n3706	3600.63	131902	22829	1755690	0.45	0
n3707	3600.05	126652	20408	1823077	0.48	0
n3708	3600.21	106849	19526	1852929	0.47	0
n3709	3600.08	141319	18295	1944285	0.5	0
n370a	3600.41	123963	19807	1989867	0.5	0
n370b	3600.06	113820	22334	1893469	0.47	0
n370c	3600.29	129014	21110	1830458	0.47	0
n370d	3599.99	106851	17586	1830458	0.47	0
n370e	3600.67	130324	19474	1843311	0.47	0
nag	-1	-1	-1	-1	-1	0
neos-430149	3599.21	3887150	421042	not	inf	0
neos-476283	3603.35	17642	854	406.52	0	0
neos-480878	3290.63	1089736	207561	492.51	0	1
neos-494568	3599.94	513363	19446	-82	0.24	0
neos-495307	3600.14	216972	169702	2233	0.01	0
neos-498623	3600.85	152426	4372	33.8	0.53	0
neos-501453	0	64	1	47454.61	0	1
neos-501474	370.3	227723	48118	52960.76	0.02	0
neos-503737	1202.75	1014115	6055	50	0	1
neos-504674	670.94	411046	28726	3635.87	0.34	0
neos-504815	3599.83	2460632	137705	2333.03	0.49	0
neos-506422	1109.11	821013	10482	0	0	1
neos-506428	3462.11	3869	1061109567	not	inf	0
neos-512201	2557.51	1296986	119323	513.57	0	1
neos-520729	3600.87	43499	12712	-1385000	0	0
neos-522351	1701.89	976380	68498	17891.08	0	1
neos-525149	3580.61	26760	378	61	0.02	0
neos-530627	3600.07	997658	396848	2995.2	0.01	0
neos-538867	3599.49	1566745	85141	167	0.81	0
neos-538916	3600.02	1283533	76347	144	0.71	0
neos-544324	3607.74	2703	652	not	inf	0
neos-547911	3600.48	8376	1857	not	inf	0
neos-548047	3599.56	2408003	2979	10	0.81	0
neos-548251	3599.77	896688	152699	not	inf	0
neos-551991	3599.34	4350561	1877	13	0.57	0
neos-555001	3599.8	2422209	54406	not	inf	0
neos-555298	3599.84	535458	24384	1271800	0.08	0
neos-555343	3599.88	412377	9045	not	inf	0
neos-555424	3600.33	402881	10413	3593800	0.66	0
neos-555694	3600.63	4039550	45202	18.6	0.01	0

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Table 2 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
neos-555771	3600.97	1878651	63486	20.5	0.1	0
neos-555884	3600.21	203824	10674	not	inf	0
neos-555927	3600.1	3310255	117855	not	inf	0
neos-565672	3541.47	82466	1061109567	not	inf	0
neos-565815	2517.9	327696	2685	14	0	1
neos-570431	3599.92	5387637	84747	9	0.18	0
neos-574665	3600.42	310990	88925	6501556.55	0.18	0
neos-578379	3567.13	397719	140	not	inf	0
neos-582605	3599.81	1925752	49954	1	5	0
neos-583731	3600.34	2487336	118658	not	inf	0
neos-584146	3599.96	3340957	86287	0	1.80E+016	0
neos-584851	78.33	50116	1864	-11	0	1
neos-584866	3599.73	409016	2569	-24	5.96	0
neos-585467	65.88	27264	1061109567	not	inf	0
neos-595904	3599.81	1299354	67211	not	inf	0
neos-595905	3599.38	3117466	285823	not	inf	0
neos-595925	3599.82	3717210	199667	not	inf	0
neos-598183	3600	4333063	198933	not	inf	0
neos-603073	1716.06	1799314	54262	17134.84	0.11	0
neos-611135	3601.5	216263	5222	26377	0.56	0
neos-611838	3599.2	2158258	46279	1763966.71	0.05	0
neos-612125	3500.13	2201006	43917	1844367.88	0	1
neos-612143	3600.34	2330685	51090	1795981.08	0.03	0
neos-612162	3600.09	2294620	48184	1772948.96	0.04	0
neos-619167	3599.96	3025679	13300	not	inf	0
neos-631164	39.25	13805	23	not	inf	0
neos-631694	3599.96	1924586	67668	50	0.06	0
neos-631709	3601.21	146115	1412	not	inf	0
neos-631784	3683.46	741724	1800	300	0.84	0
neos-641591	3599.58	240912	3670	not	inf	0
neos-655508	0.12	2	1	63015042	0	1
neos-662469	3600	252375	3883	not	inf	0
neos-686190	2052.09	597738	24214	6730	0	1
neos-691058	3600.6	1124364	2814	297	0.19	0
neos-709469	12.22	26558	690	493.16	0	1
neos-775946	3599.99	1238732	29161	15.7	0.03	0
neos-777800	459.6	601920	720	-80	0	1
neos-780889	3614.74	39913	109	not	inf	0
neos-785899	1139.99	613581	11934	101	0	1
neos-785912	3600.29	3596588	11406	not	inf	0
neos-785914	1533.82	1743877	6730	38	0	1
neos-787933	3602.31	31099	1663	102	0.97	0
neos-791021	3600.52	214583	1343	not	inf	0
neos-796608	3600.22	698481	404790	-48296500	0	0
neos-799711	219.18	30080	1061109567	not	inf	0
neos-799838	3600.2	946590	6317	1308000	0.19	0
neos-801834	1068.31	102567	1671	50386	0	1
neos-803219	410.63	291693	61836	210.3	0	1
neos-803220	1071.76	571557	136116	195.4	0	1
neos-806323	267.81	184658	28180	215	0	1
neos-807454	3599.94	1270765	10262	not	inf	0
neos-807456	3601.72	1385325	6416	not	inf	0
neos-807639	2064.35	692359	130103	454.2	0	1
neos-807705	1355.78	899450	159790	342.4	0	1
neos-808072	3600.55	1321116	9687	31	0.91	0
neos-808214	3600.12	5080990	46020	not	inf	0
neos-810286	154.07	38471	65	2877	0	1
neos-810326	3599.37	854630	9258	-43378	0.04	0
neos1	3600.72	1141279	36607	28	0.79	0
neos10	3601.95	108810	1637	-1133	0.07	0
neos11	2740.84	2352682	11923	9	0	1
neos12	3600.47	636917	2461	18	0.47	0
neos13	3481.28	13641	415	-36.29	2.07	0
neos14	3600.55	963803	108295	83416.33	0.21	0
neos15	3600.15	1016094	119427	83477.12	0.16	0
neos16	3600.2	2256896	222924	not	inf	0
neos17	3599.71	1862822	42759	0.22	0.79	0
neos18	3599.66	2100029	52047	16	0.25	0
neos19	3539.29	65714	1061109567	not	inf	0
neos2	2873.02	4612450	131693	454.86	0	1
neos20	3599.22	743788	68857	not	inf	0
neos3	3599.68	7063679	90191	1344.3	3.37	0
neos4	3385.26	94774	1061109567	not	inf	0
neos5	3600.94	2334231	323158	15	0.07	0
neos6	3600.1	738873	6290	92	0.1	0

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Table 2 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
neos7	-1	-1	-1	not	inf	0
neos9	3600.97	373358	701	798	0.02	0
newdano	3599.74	8992935	49595	67.13	0.55	0
noswot	3600.23	902372	276525	-36	0.19	0
npmv07	3581.14	240733	1061109567	not	inf	0
nsa	3600.63	8010794	185808	121	0.22	0
nsrand-ix	3600.28	75261	21099	70560	0.29	0
nug08	87.53	34503	112	214	0	1
nw04	83.09	2359	158	16862	0	1
p0033	0.06	1077	460	3089	0	1
p0201	3.71	11592	902	7615	0	1
p0282	25.65	17979	1463	258411	0	1
p0291	0.13	1295	173	5223.75	0	1
p0548	2.68	4005	336	8691	0	1
p2756	14.72	4589	482	3124	0	1
p6b	3599.24	683922	39537	-53	1.77	0
pg	3600.11	5643757	142402	-8674.34	0.01	0
pg5_34	3596.38	6379947	206536	-14329.89	0.01	0
pipex	0.65	5932	1711	788.26	0	1
pk1	3599.36	2590193	345152	11	0.78	0
pp08a	823.75	418266	53963	7350	0	1
pp08aCUTS	889.56	397500	44133	7350	0.06	0
prod1	3599.81	3373758	397648	-56	0.27	0
prod2	3600.4	2584035	219557	-59	0.38	0
protfold	2558.14	1534258	1343	-21	0.9	0
qap10	708.59	319778	143	340	0	1
qiu	3599.22	4276578	141676	-132.87	2.93	0
qnet1	32.03	36876	784	16029.69	0	1
qnet1_o	38.63	51784	1056	16029.69	0	1
ramos3	3765.1	64716	18	not	inf	0
ran10x10a	20.82	42735	17054	1499	0	1
ran10x10b	4.02	10566	3242	3073	0	1
ran10x10c	3063.2	881859	419109	13007	0	1
ran10x12	6.14	12742	3376	2714	0	1
ran10x26	3599.48	1259026	385066	4270	0.07	0
ran12x12	3599.35	1179744	377137	2294	0.14	0
ran12x21	3599.53	1089235	265150	3675	0.1	0
ran13x13	3600.21	1041414	319979	3252	0.12	0
ran14x18	3599.44	1190558	336592	5326	0.42	0
ran14x18_1	3600.39	658729	176414	5206	0.4	0
ran14x18.disj-8	3600.6	3047942	233180	5904	0.42	0
ran16x16	3600.65	1627343	404350	5134	0.37	0
ran17x17	3599.76	957815	282678	1373	0.05	0
ran4x64	2.48	4888	1555	9711	0	1
ran6x43	1.32	2337	642	6330	0	1
ran8x32	3600.21	1024020	334834	5313	0.03	0
rd-rplusc-21	3563.91	2892	1061109567	not	inf	0
rentacar	6.04	5964	47	30356760.98	0	1
rgn	13.01	24944	4714	82.2	0	1
rlp1	3600.07	324236	132816	15	0.07	0
rlp2	1842.15	5362592	407562	19	0	1
roll3000	195.11	38422	601	17355	0.33	0
rout	3600.43	3699844	213789	1410.56	0.3	0
roy	3.67	9752	3870	3208.96	0	1
set1al	1.71	663	31	15869.75	0	1
set1ch	3599.98	1691029	253974	58149	0.12	0
seymour	3597.58	284008	3523	436	0.07	0
seymour.disj-10	3600.91	954784	1907	295	0.05	0
sp98ic	3596.37	4113686	1061109567	not	inf	0
stein15	1.38	5130	79	9	0	1
stein27	15.08	20456	3226	18	0	1
stein45	510.2	349231	58704	30	0	1
stein9	0.02	296	6	5	0	1
stp3d	3594.37	88792	1061109567	not	inf	0
t1717	3606.52	14160	273	not	inf	0
Test3	1273.73	290240	5581	2673520.21	0	1
timtab1	3599.95	980941	202321	850049	0.6	0
timtab2	3599.5	523059	92987	1462958	0.69	0
tr12-30	3599.92	4542335	650917	not	inf	0
vpm1	0.82	1640	53	20	0	1
vpm2	3600.81	1663986	234770	13.75	0.1	0

Table 3: $BPr_1 - BPrA_1 - Y$.

Name	Time	Iters	Nodes	Best	Ogap	Solved
22433	8.05	5693	57	21477	0	1
23588	105.37	43297	4198	8090	0	1
10teams	174.72	186249	928	924	0	1
alc1s1	3600.59	906457	18645	not	inf	0
afflow30a	3599.94	3285344	127334	1158	0.1	0
afflow40b	3600.27	4048503	28040	not	inf	0
air04	3600.1	477366	4923	56137	0	0
air05	3600	426072	6083	26436	0.01	0
air06	31.23	11831	35	49649	0	1
aligninq	1752.8	222518	14581	2713	0	1
atlanta-ip	3610.89	241756	49	not	inf	0
bal8x12	0.68	1671	136	471.55	0	1
bc	3599.73	637005	18189	not	inf	0
bc1	3474.53	617771	28326	3.34	0	1
bell3b	24.18	28086	17608	11786160.62	0	1
bell4	10.66	13490	5376	18541484.2	0	1
bell5	3600.19	7041122	4448727	8966406.49	0	0
bienst1	1495.63	3956765	32417	46.75	0	1
bienst2	3599.57	9461439	91396	54.6	0.32	0
binkar10.1	3599.93	1993307	144358	not	inf	0
blend2	5.4	13300	3875	7.6	0	1
bm23	0.09	1374	414	34	0	1
cap6000	1300.78	525595	61434	-2451377	0	1
d10200	3599.25	1464553	53196	not	inf	0
d20200	3600.64	162097	3877	not	inf	0
dano3.3	96.24	40454	53	576.34	0	1
dano3.4	169.09	72160	75	576.44	0	1
dano3.5	1473.26	582705	1771	576.92	0	1
dano3mip	3602.89	1472415	1321	742.2	0.22	0
danooint	3600.18	7406135	79892	65.67	0.05	0
dcmulti	14.52	12506	414	188182	0	1
disctom	3600.89	174003	3542	not	inf	0
ds	3603.93	121476	281	not	inf	0
dsbmip	6.39	2507	21	-305.2	0	1
egout	0.1	576	13	568.1	0	1
eilD76	1058.2	619618	21707	885.41	0	1
enigma	71.24	693013	91473	0	0	1
fast0507	3603.96	43929	598	184	0.06	0
fiball	3602.51	28159	2011	not	inf	0
fiber	450.33	147871	18344	405935.18	0	1
fixnet4	17.25	11336	613	8936	0	1
fixnet6	30.6	21112	2201	3983	0	1
flugpl	0.85	2893	3480	1201500	0	1
gen	3.61	6892	273	112313.36	0	1
germanrr	3600.68	85225	1863	not	inf	0
gesa2	3470.44	11064594	1061109567	not	inf	0
gesa2-o	3600.41	845984	90369	not	inf	0
gr4x6	0.08	599	61	202.35	0	1
gt2	1.76	5620	1228	21166	0	1
haprp	3599.27	119913	50545	not	inf	0
irp	45.91	4846	285	12159.49	0	1
khh05250	1.86	2857	55	106940226	0	1
l152lav	176.75	84762	5335	4722	0	1
liu	3597.8	2983137	10216	3706	0.85	0
lseu	13.89	81526	38028	1120	0	1
markshare1	3600.1	7792937	4311618	15	1	0
markshare2	3600.19	5304284	2614065	24	1	0
mas284	173.15	234066	52318	91405.72	0	1
mas74	3600.09	4906324	1619522	12253.53	0.14	0
mas76	900.17	3055906	1130554	40005.05	0	1
mcf2	3600.04	7920014	86006	65.67	0.05	0
mcsched	3599.8	1142147	20116	212892	0.08	0
misc01	0.45	3990	563	563.5	0	1
misc02	0.1	1168	115	1690	0	1
misc03	12.62	35953	3099	3360	0	1
misc04	2.06	2742	13	2666.7	0	1
misc05	1.6	4257	379	2984.5	0	1
misc06	0.73	1935	31	12850.86	0	1
misc07	1118.54	1054651	93007	2810	0	1
mkc	3600.28	1121097	71802	not	inf	0
mkc1	3599.3	4169729	59823	not	inf	0
mod008	12.72	28596	10165	307	0	1

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Table 3 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
mod011	3600.07	2586061	11415	-54558535.01	0.1	0
mod013	0.52	1880	512	280.95	0	1
modglob	3599.62	989655	144255	20740508.09	0	0
momentum1	3605.39	483713	1291	not	inf	0
momentum3	3625.02	103131	8	not	inf	0
msc98-ip	3608.27	387700	78	not	inf	0
mzzv11	3965.71	567970	251	not	inf	0
mzzv42z	3599.52	57539	778	-18936	0.13	0
n3700	3600.59	62421	13530	not	inf	0
n3701	3600.56	108396	18812	not	inf	0
n3702	3600.32	73391	15227	not	inf	0
n3703	3600.14	60639	14531	not	inf	0
n3704	3599.52	89244	15707	not	inf	0
n3705	3599.36	81204	16152	not	inf	0
n3706	3600.04	80528	20323	not	inf	0
n3707	3600.33	88316	15145	not	inf	0
n3708	3599.84	66807	14121	not	inf	0
n3709	3576.83	115434	18321	not	inf	0
n370a	3600.77	62294	13729	not	inf	0
n370b	3599.36	81385	16297	not	inf	0
n370c	3600.68	95548	18134	not	inf	0
n370d	3599.21	101969	19501	not	inf	0
n370e	3600.17	89175	15668	not	inf	0
nag	-1	-1	-1	-1	-1	0
neos-430149	3600.32	3786081	296944	93.14	1	0
neos-476283	2616.62	23099	1067	406.5	0	0
neos-480878	3599.98	1077593	182911	492.51	0.01	0
neos-494568	3599.86	494891	19794	not	inf	0
neos-495307	3600.13	390942	239642	2234	0.01	0
neos-498623	3599.37	316660	11907	not	inf	0
neos-501453	0	64	1	47454.61	0	1
neos-501474	3600.79	1506991	311071	52040.79	0.01	0
neos-503737	2620.66	1408104	7078	50	0	1
neos-504674	726.39	406115	31983	3635.87	0.32	0
neos-504815	3599.99	2422305	151692	2333.03	0.46	0
neos-506422	579.47	438023	4558	0	0	1
neos-506428	3477.29	3869	1061109567	not	inf	0
neos-512201	2458.17	1299359	119757	513.57	0	1
neos-520729	3600.43	49208	14439	-1385000	0	0
neos-522351	1526.43	923472	63981	17891.08	0	1
neos-525149	3586.96	13817	176	not	inf	0
neos-530627	1238.11	5871509	2901563	2995.2	0	1
neos-538867	3600.73	1907320	84200	not	inf	0
neos-538916	3599.38	1048981	59434	not	inf	0
neos-544324	3604.16	2839	700	not	inf	0
neos-547911	3600.24	10704	2170	not	inf	0
neos-548047	3601.36	3266978	2439	not	inf	0
neos-548251	3600.16	377260	73365	not	inf	0
neos-551991	3602.44	4606177	1593	not	inf	0
neos-555001	3600.04	820871	7787	not	inf	0
neos-555298	3599.21	78878	9512	not	inf	0
neos-555343	3599.86	113260	3899	not	inf	0
neos-555424	3600.8	38301	3377	not	inf	0
neos-555694	3600.08	4264959	45032	18.6	0.01	0
neos-555771	3598.08	3153991	84817	21.6	0.14	0
neos-555884	3599.89	204788	6297	not	inf	0
neos-555927	3599.7	233777	13420	not	inf	0
neos-565672	3545.54	83337	1061109567	not	inf	0
neos-565815	2508.71	328296	2696	14	0	1
neos-570431	3526.15	5559302	94261	9	0	1
neos-574665	3599.49	240288	81293	not	inf	0
neos-578379	3604.03	383978	137	not	inf	0
neos-582605	3600.62	724931	25113	not	inf	0
neos-583731	3599.97	2359365	112488	not	inf	0
neos-584146	3600.15	1275278	49842	not	inf	0
neos-584851	70.31	50116	1864	-11	0	1
neos-584866	3600.33	512417	3633	-24	6	0
neos-585467	64.18	27264	1061109567	not	inf	0
neos-595904	3600.88	631039	24007	not	inf	0
neos-595905	262	339735	8112	not	inf	0
neos-595925	3600.37	1734155	119107	not	inf	0
neos-598183	3600.15	3240833	73715	not	inf	0
neos-603073	3600.98	4492835	148911	16857.33	0.09	0
neos-611135	3601.84	383408	5078	not	inf	0
neos-611838	3599.33	1939909	39846	1763966.71	0.05	0

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Table 3 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
neos-612125	3311.6	2170502	43671	1844367.88	0	1
neos-612143	3599.76	2159954	49022	1795981.08	0.03	0
neos-612162	3599.96	2155918	48040	1772948.96	0.04	0
neos-619167	3600.28	3301841	8753	not	inf	0
neos-631164	36.96	13805	23	not	inf	0
neos-631694	3600.3	4959757	26922	not	inf	0
neos-631709	3741.68	329412	318	not	inf	0
neos-631784	3914.52	759343	157	not	inf	0
neos-641591	3601.57	89269	1537	not	inf	0
neos-655508	0.12	2	1	63015042	0	1
neos-662469	3588.18	88919	1531	not	inf	0
neos-686190	1525.9	430461	19944	6730	0	1
neos-691058	3600.25	1239296	3476	297	0.19	0
neos-709469	12.1	19734	515	493.16	0	1
neos-775946	3599.48	1492956	37329	15.7	0.03	0
neos-777800	395.43	601920	720	-80	0	1
neos-780889	3234.31	41115	116	3421500	0	1
neos-785899	714.38	622116	12046	101	0	1
neos-785912	3601.13	4123650	13069	not	inf	0
neos-785914	1479.08	1743877	6730	38	0	1
neos-787933	3601.06	29494	2588	not	inf	0
neos-791021	3601.89	187029	1402	not	inf	0
neos-796608	2658.67	3822736	2628745	-48296500	0	1
neos-799711	224.74	30080	1061109567	not	inf	0
neos-799838	3599.54	912292	6175	1308000	0.19	0
neos-801834	953.48	89664	1504	50386	0	1
neos-803219	421.08	296815	61990	210.3	0	1
neos-803220	943.63	586332	141049	195.4	0	1
neos-806323	242.51	177933	26563	215	0	1
neos-807454	3600.27	847386	8080	not	inf	0
neos-807456	3600.94	1675403	7810	not	inf	0
neos-807639	2007.68	695051	130344	454.2	0	1
neos-807705	1359.73	950115	165734	342.4	0	1
neos-808072	3600.39	1257135	8722	not	inf	0
neos-808214	3600.72	5631926	31848	not	inf	0
neos-810286	162.47	38471	65	2877	0	1
neos-810326	3599.62	839518	9960	-43456	0.04	0
neos1	3600.67	1482386	41717	not	inf	0
neos10	3598.96	124301	1701	-1135	0.06	0
neos11	2606.38	2206953	11817	9	0	1
neos12	3599.73	667650	2371	18	0.47	0
neos13	3461.81	12035	488	not	inf	0
neos14	3600.59	940448	103202	not	inf	0
neos15	3600.19	1080121	115442	not	inf	0
neos16	3600.17	1683722	173893	not	inf	0
neos17	3600.03	1800626	81281	not	inf	0
neos18	3600.27	3231837	54311	16	0.25	0
neos19	3426.02	65662	1061109567	not	inf	0
neos2	2342.68	4770429	115862	454.86	0	1
neos20	3599.36	1022659	48680	not	inf	0
neos3	3599.83	6821441	81940	671.65	4.71	0
neos4	3328.36	91682	1061109567	not	inf	0
neos5	3600.92	5998688	1213043	15	0.09	0
neos6	3600.9	940046	5504	not	inf	0
neos7	32.99	9136	1072	863934	0.33	0
neos9	3601.67	370375	683	not	inf	0
newdano	3599.74	9019031	55784	68.5	0.55	0
noswot	3600.42	990572	278041	not	inf	0
npmv07	3561.77	243315	1061109567	not	inf	0
nsa	3600.48	8541873	222101	136	0.32	0
nsrand-ipx	3600.3	62463	12858	not	inf	0
nug08	91.49	34172	111	214	0	1
nw04	45.4	1450	85	16862	0	1
p0033	0.06	1135	394	3089	0	1
p0201	3.64	11390	890	7615	0	1
p0282	22.76	16804	1213	258411	0	1
p0291	0.13	1484	156	5223.75	0	1
p0548	3.19	5338	408	8691	0	1
p2756	12.3	4233	288	3124	0	1
p6b	3599.86	532122	39450	not	inf	0
pg	3599.99	5594870	110784	not	inf	0
pg5_34	3600.04	6087623	182504	-14339.35	0.01	0
pipex	1.08	10645	3120	788.26	0	1
pk1	2318.18	6596286	1293984	11	0	1
pp08a	935.95	416202	53585	7350	0	1

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Table 3 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
pp08aCUTS	1196.41	527975	63557	7350	0.05	0
prod1	3599.7	4595654	582207	-56	0.19	0
prod2	3599.35	2783745	213145	-60	0.26	0
protfold	3601.59	2328900	580	not	inf	0
qap10	578.08	261378	141	340	0	1
qiu	3600.12	4393372	132321	-132.87	3.24	0
qnet1	31	38074	753	16029.69	0	1
qnet1.Lo	35.1	49563	976	16029.69	0	1
ramos3	3643.16	62810	19	not	inf	0
ran10x10a	13.25	28443	11068	1499	0	1
ran10x10b	3.84	9604	2980	3073	0	1
ran10x10c	547.74	902515	432742	13007	0	1
ran10x12	3.76	7923	2147	2714	0	1
ran10x26	2565.8	2174294	758176	4270	0	1
ran12x12	3600.33	5576303	2138996	2291	0.13	0
ran12x21	3599.52	1053829	276220	3727	0.11	0
ran13x13	3600.22	1419234	488484	3297	0.1	0
ran14x18	3600.36	1405941	380366	4234	0.25	0
ran14x18_1	3600.09	754610	197903	not	inf	0
ran14x18.disj-8	3600.24	3531304	187602	3737	0.07	0
ran16x16	3599.59	1520163	409131	3993	0.17	0
ran17x17	3599.74	1538857	534622	1373	0.03	0
ran4x64	0.74	1704	384	9711	0	1
ran6x43	1.22	2346	556	6330	0	1
ran8x32	786.49	407296	153479	5247	0	1
rd-rplusc-21	3492.51	2817	1061109567	not	inf	0
rentacar	5.93	5748	40	30356760.98	0	1
rgn	12.82	24909	4709	82.2	0	1
rlp1	3600.01	293549	128417	not	inf	0
rlp2	1950.22	5366030	405771	19	0	1
roll3000	1246.32	261127	4653	not	inf	0
rout	1349.84	1805256	81749	not	inf	0
roy	2.76	7404	2829	3208.96	0	1
set1al	1.71	668	36	15869.75	0	1
set1ch	3599.94	1802599	228484	not	inf	0
seymour	3599.63	292618	3895	429	0.05	0
seymour.disj-10	3600.53	1156677	1701	293	0.04	0
sp98ic	3593.4	4073996	1061109567	not	inf	0
stein15	1.36	5130	79	9	0	1
stein27	15.11	20456	3226	18	0	1
stein45	517.33	345877	58162	30	0	1
stein9	0.01	296	6	5	0	1
stp3d	3594.11	89803	1061109567	not	inf	0
t1717	3604.55	14159	272	not	inf	0
Test3	1406.47	328236	7343	2673520.21	0	1
timtab1	3599.87	890144	142991	not	inf	0
timtab2	3600.83	436526	59098	not	inf	0
tr12-30	3600.16	1209095	232960	133784	0.11	0
vpml	0.81	1640	53	20	0	1
vpm2	3599.79	2079329	357036	13.75	0.1	0

Table 4: $BPr_1 - BPrA_1 - N$.

Name	Time	Iters	Nodes	Best	Ogap	Solved
22433	8.13	5693	57	21477	0	1
23588	106.77	43297	4198	8090	0	1
10teams	172.33	186249	928	924	0	1
alcls1	3600.38	910075	18737	not	inf	0
afflow30a	3599.89	3316884	128621	1158	0.1	0
afflow40b	3600.11	4023462	27860	not	inf	0
air04	3599.76	476402	4911	56137	0	0
air05	3600.81	424620	6058	26436	0.01	0
air06	32.47	11831	35	49649	0	1
aligninq	1816.1	222518	14581	2713	0	1
atlanta-ip	3549.95	240365	46	not	inf	0
bal8x12	0.69	1671	136	471.55	0	1
bc	3599.39	642797	18273	not	inf	0
bc1	3459.33	617771	28326	3.34	0	1

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Table 4 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
bell3b	24.17	28086	17608	11786160.62	0	1
bell4	10.68	13490	5376	18541484.2	0	1
bell5	3599.22	1622290	808819	8966406.49	0	0
bienst1	1508.49	3956765	32417	46.75	0	1
bienst2	3600.69	9029323	87538	54.6	0.32	0
binkar10.1	3599.49	1762352	127179	not	inf	0
blend2	5.17	13300	3875	7.6	0	1
bm23	0.09	1374	414	34	0	1
cap6000	1239.53	525595	61434	-2451377	0	1
d10200	3600.18	2278141	78035	not	inf	0
d20200	3600.42	163232	3902	not	inf	0
dano3.3	98.49	40454	53	576.34	0	1
dano3.4	177.14	72160	75	576.44	0	1
dano3.5	1542.43	582705	1771	576.92	0	1
dano3mip	3607.27	1517402	1364	742.2	0.22	0
danoint	3600.21	7440218	80309	65.67	0.05	0
dcmulti	14.4	12506	414	188182	0	1
disctom	3600.58	162594	3299	not	inf	0
ds	3605.39	114384	261	not	inf	0
dsbmip	7.12	2507	21	-305.2	0	1
egout	0.1	576	13	568.1	0	1
eilD76	1185.28	619618	21707	885.41	0	1
enigma	72.92	693013	91473	0	0	1
fast0507	3601.67	43637	560	184	0.06	0
fiball	3600.06	31681	2283	not	inf	0
fiber	261.82	147871	18344	405935.18	0	1
fixnet4	11.08	11336	613	8936	0	1
fixnet6	19.99	21112	2201	3983	0	1
flugpl	0.8	2934	3521	1201500	0	1
gen	3.16	6892	273	112313.36	0	1
germanrr	3600.83	90081	2037	not	inf	0
gesa2	3459.63	10895409	1061109567	not	inf	0
gesa2-o	3600.83	976853	104660	not	inf	0
gr4x6	0.08	599	61	202.35	0	1
gt2	1.69	5620	1228	21166	0	1
haprp	3599.6	110018	46013	not	inf	0
irp	45.65	4846	285	12159.49	0	1
khh05250	1.89	2857	55	106940226	0	1
1152lav	183.22	84762	5335	4722	0	1
liu	3459.71	2954685	2256	not	inf	0
lseu	26.75	87031	39676	1120	0	1
markshare1	3600.14	1060122	412869	40	1	0
markshare2	3600.28	1354832	433486	61	1	0
mas284	158.51	234066	52318	91405.72	0	1
mas74	3600.14	2132328	491393	12128.13	0.13	0
mas76	3600.1	1234655	363109	40005.05	0.01	0
mcf2	3600.28	7292615	78500	65.67	0.05	0
mcsched	3599.95	1120668	19730	212892	0.08	0
misc01	0.46	3990	563	563.5	0	1
misc02	0.1	1168	115	1690	0	1
misc03	12.33	35953	3099	3360	0	1
misc04	2	2742	13	2666.7	0	1
misc05	1.59	4257	379	2984.5	0	1
misc06	0.71	1935	31	12850.86	0	1
misc07	1156.8	1054651	93007	2810	0	1
mkc	3599.37	1230019	80664	not	inf	0
mkc1	3599.91	4382364	62834	not	inf	0
mod008	12.32	28596	10165	307	0	1
mod011	3600.49	2583445	11404	-54558535.01	0.1	0
mod013	0.54	1880	512	280.95	0	1
modglob	3599.62	1010819	147488	20740508.09	0	0
momentum1	3602.14	456239	1235	not	inf	0
momentum3	3643.32	103131	8	not	inf	0
mzc98-ip	3612.47	438758	84	not	inf	0
mzzv11	3942.99	567970	251	not	inf	0
mzzv42z	3601.37	64763	899	-18936	0.13	0
n3700	3599.76	64044	13848	not	inf	0
n3701	3600.14	68412	11929	not	inf	0
n3702	3599.68	77850	16097	not	inf	0
n3703	3566.87	69592	16623	not	inf	0
n3704	3600.04	99678	17552	not	inf	0
n3705	3600.38	85490	17032	not	inf	0
n3706	3600.18	77835	19518	not	inf	0
n3707	3600.37	78031	12990	not	inf	0
n3708	3599.74	64726	13633	not	inf	0

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Table 4 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
n3709	3600.06	110699	17553	not	inf	0
n370a	3599.09	78138	16554	not	inf	0
n370b	3600.16	84596	16988	not	inf	0
n370c	3600.63	81921	15500	not	inf	0
n370d	3600.24	103635	19797	not	inf	0
n370e	3600.43	76003	13021	not	inf	0
nag	-1	-1	-1	-1	-1	0
neos-430149	3600.54	4333963	219162	not	inf	0
neos-476283	2751.24	23099	1067	406.5	0	0
neos-480878	3600.05	1066406	180065	492.51	0.01	0
neos-494568	3600.41	535988	21237	not	inf	0
neos-495307	3600.16	293422	213932	2233	0.01	0
neos-498623	3600.14	287186	10709	not	inf	0
neos-501453	0	64	1	47454.61	0	1
neos-501474	3599.75	1540539	218889	not	inf	0
neos-503737	2831.69	1408104	7078	50	0	1
neos-504674	718.62	406115	31983	3635.87	0.32	0
neos-504815	3600.11	2452664	153358	2333.03	0.45	0
neos-506422	562.27	438023	4558	0	0	1
neos-506428	3631.76	4365	1061109567	not	inf	0
neos-512201	2487.82	1299359	119757	513.57	0	1
neos-520729	3600.85	45164	13257	-1385000	0	0
neos-522351	1437.02	923472	63981	17891.08	0	1
neos-525149	3587.71	14031	182	not	inf	0
neos-530627	3600.06	898437	372186	2995.2	0.01	0
neos-538867	3600.06	1161196	50548	not	inf	0
neos-538916	3600.01	785356	44777	not	inf	0
neos-544324	3607.21	2675	624	not	inf	0
neos-547911	3601.17	14356	2587	not	inf	0
neos-548047	3600	3360648	2548	not	inf	0
neos-548251	3599.77	362210	70260	not	inf	0
neos-551991	3599.51	4512385	1543	not	inf	0
neos-555001	3599.64	966483	9228	not	inf	0
neos-555298	3600.03	74712	8894	not	inf	0
neos-555343	3600.29	87131	3120	not	inf	0
neos-555424	3600.59	39931	3571	not	inf	0
neos-555694	3599.97	4171912	44182	18.6	0.01	0
neos-555771	3600.67	3000513	80810	21.6	0.14	0
neos-555884	3474.71	199991	6191	not	inf	0
neos-555927	3600.45	233913	13428	not	inf	0
neos-565672	3535.42	83337	1061109567	not	inf	0
neos-565815	2514.96	328296	2696	14	0	1
neos-570431	3469.86	5559302	94261	9	0	1
neos-574665	3600.09	276302	93336	not	inf	0
neos-578379	3555.81	390551	138	not	inf	0
neos-582605	3599.75	732360	25263	not	inf	0
neos-583731	3599.28	2376416	113334	not	inf	0
neos-584146	3600.01	1266771	49530	not	inf	0
neos-584851	70.4	50116	1864	-11	0	1
neos-584866	3600.67	493344	3532	-24	6	0
neos-585467	64.43	27264	1061109567	not	inf	0
neos-595904	3599.75	511216	19471	not	inf	0
neos-595905	319.81	339735	8112	not	inf	0
neos-595925	3599.67	1757587	120741	not	inf	0
neos-598183	3599.94	3200000	72845	not	inf	0
neos-603073	3600.02	4510084	149412	16857.33	0.09	0
neos-611135	3601.21	398070	5168	not	inf	0
neos-611838	3600.55	1886592	38645	1763966.71	0.05	0
neos-612125	3368.18	2170502	43671	1844367.88	0	1
neos-612143	3599.82	2150856	48815	1795981.08	0.03	0
neos-612162	3600.63	2119513	47173	1772948.96	0.04	0
neos-619167	3600.23	3289015	8713	not	inf	0
neos-631164	36.98	13805	23	not	inf	0
neos-631694	3600.24	5043977	27355	not	inf	0
neos-631709	3728.8	269957	301	not	inf	0
neos-631784	3605.71	694930	156	not	inf	0
neos-641591	3601.43	86153	1487	not	inf	0
neos-655508	0.11	2	1	63015042	0	1
neos-662469	3600.43	88181	1520	not	inf	0
neos-686190	1571.19	430461	19944	6730	0	1
neos-691058	3600.37	1283573	3596	297	0.19	0
neos-709469	9.67	19734	515	493.16	0	1
neos-775946	3599.82	1503224	37553	15.7	0.03	0
neos-777800	431.55	601920	720	-80	0	1
neos-780889	3609.83	40874	115	not	inf	0

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Table 4 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
neos-785899	1084.54	622116	12046	101	0	1
neos-785912	3600.35	3177984	10044	not	inf	0
neos-785914	1712.01	1743877	6730	38	0	1
neos-787933	3601.01	28624	2513	not	inf	0
neos-791021	3600.11	175506	1299	not	inf	0
neos-796608	3600.2	1283861	824593	-48296500	0	0
neos-799711	226.34	30080	1061109567	not	inf	0
neos-799838	3600.46	894311	6097	1308000	0.19	0
neos-801834	978.92	89664	1504	50386	0	1
neos-803219	420.62	296815	61990	210.3	0	1
neos-803220	982.29	586331	141048	195.4	0	1
neos-806323	245.86	177933	26563	215	0	1
neos-807454	3600.68	901988	8616	not	inf	0
neos-807456	3600.54	1446574	6715	not	inf	0
neos-807639	2132.98	695051	130344	454.2	0	1
neos-807705	1452.23	950115	165734	342.4	0	1
neos-808072	3600.88	1349690	9331	not	inf	0
neos-808214	3600.07	5688281	32130	not	inf	0
neos-810286	154.57	38471	65	2877	0	1
neos-810326	3600.57	795176	9472	-43456	0.04	0
neos1	3600.4	1551326	43670	not	inf	0
neos10	3600.67	126851	1744	-1135	0.06	0
neos11	2682.76	2206953	11817	9	0	1
neos12	3600.77	653314	2311	18	0.47	0
neos13	3596.45	18895	921	-89.15	0.25	0
neos14	3599.55	838071	92129	not	inf	0
neos15	3599.51	963621	103917	not	inf	0
neos16	3600.08	1682144	173761	not	inf	0
neos17	3599.91	1612289	72409	not	inf	0
neos18	3599.95	3195152	53836	16	0.25	0
neos19	3569.87	65714	1061109567	not	inf	0
neos2	2385.61	4770429	115862	454.86	0	1
neos20	3600.15	1048968	49927	not	inf	0
neos3	3599.71	6884627	83072	671.65	4.69	0
neos4	3309.39	91350	1061109567	not	inf	0
neos5	3600.93	2305036	337030	15	0.08	0
neos6	3599.58	940041	5501	not	inf	0
neos7	33.1	9136	1072	863934	0.33	0
neos9	3602.39	370135	682	not	inf	0
newdano	3599.72	8980318	55501	68.5	0.55	0
noswot	3599.26	982434	275952	not	inf	0
npmv07	3558.07	243750	1061109567	not	inf	0
nsa	3600.57	7982375	173269	134	0.31	0
nsrand-ixp	3600.4	62186	12788	not	inf	0
nug08	91.35	34172	111	214	0	1
nw04	45.32	1450	85	16862	0	1
p0033	0.06	1135	394	3089	0	1
p0201	3.71	11390	890	7615	0	1
p0282	22.6	16804	1213	258411	0	1
p0291	0.13	1484	156	5223.75	0	1
p0548	3.18	5338	408	8691	0	1
p2756	12.16	4233	288	3124	0	1
p6b	3599.47	542806	40292	not	inf	0
pg	3600.72	5678237	112387	not	inf	0
pg5_34	3600.08	6065122	181561	-14339.35	0.01	0
pipex	0.38	3723	879	788.26	0	1
pk1	3599.34	2730612	285727	11	0.42	0
pp08a	881.62	416202	53585	7350	0	1
pp08aCUTS	1146.59	527975	63557	7350	0.05	0
prod1	3599.75	3521828	401669	-56	0.16	0
prod2	3600.31	2823012	216381	-60	0.26	0
protfold	3606.09	2404340	591	not	inf	0
qap10	575.79	261378	141	340	0	1
qiu	3600.2	4393233	132314	-132.87	3.24	0
qnet1	30.1	38074	753	16029.69	0	1
qnet1_o	34.8	49563	976	16029.69	0	1
ramos3	3615.26	61692	17	not	inf	0
ran10x10a	14.52	28443	11068	1499	0	1
ran10x10b	3.93	9604	2980	3073	0	1
ran10x10c	3599.21	816161	370958	13007	0.06	0
ran10x12	3.8	7923	2147	2714	0	1
ran10x26	3600.47	1215857	338682	4281	0.04	0
ran12x12	3600.39	1322001	380516	2294	0.1	0
ran12x21	3599.74	930565	213654	not	inf	0
ran13x13	3600.2	1188492	299669	3252	0.08	0

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Table 4 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
ran14x18	3599.47	1000940	263450	not	inf	0
ran14x18.1	3600.35	679424	177978	not	inf	0
ran14x18.disj-8	3395.24	3318967	168348	not	inf	0
ran16x16	3599.62	1281459	297101	not	inf	0
ran17x17	3599.76	941414	273464	1373	0.04	0
ran4x64	0.73	1704	384	9711	0	1
ran6x43	1.23	2346	556	6330	0	1
ran8x32	984.1	407296	153479	5247	0	1
rd-rplusc-21	3595.88	2935	1061109567	not	inf	0
rentacar	5.59	5748	40	30356760.98	0	1
rgn	11.97	24909	4709	82.2	0	1
rlp1	3599.76	327184	141327	not	inf	0
rlp2	2066.79	5366030	405771	19	0	1
roll3000	1240.56	261127	4653	not	inf	0
rout	1378.04	1805256	81749	not	inf	0
roy	2.67	7404	2829	3208.96	0	1
set1al	1.71	668	36	15869.75	0	1
set1ch	3599.94	1735416	218956	not	inf	0
seymour	3600.59	336392	4526	429	0.05	0
seymour.disj-10	3600.76	1112936	1575	293	0.04	0
sp98ic	3473.68	3187186	1061109567	not	inf	0
stein15	1.32	5130	79	9	0	1
stein27	13.59	20456	3226	18	0	1
stein45	448.68	345877	58162	30	0	1
stein9	0.01	296	6	5	0	1
stp3d	3530.86	100437	1061109567	not	inf	0
t1717	3611.75	14161	274	not	inf	0
Test3	1355.6	328236	7343	2673520.21	0	1
timtab1	3599.88	889370	142885	not	inf	0
timtab2	3600.05	385714	51747	not	inf	0
tr12-30	3600.91	1207372	232663	133784	0.11	0
vpm1	0.87	1640	53	20	0	1
vpm2	3599.99	1678285	227024	13.75	0.1	0

Table 5: $BPr_1 - PCA - Y$.

Name	Time	Iters	Nodes	Best	Ogap	Solved
22433	7.18	5467	51	21477	0	1
23588	78.22	42755	4165	8090	0	1
10teams	285.94	309725	2153	924	0	1
a1c1s1	3600.38	790149	20417	not	inf	0
aflow30a	3599.85	3739148	138536	1158	0.1	0
aflow40b	3600.42	4954833	23306	not	inf	0
air04	3600.31	499899	5365	56137	0	0
air05	3600.11	531790	6264	26374	0.01	0
air06	25.86	10854	26	49649	0	1
aligninq	1431.86	182203	12595	2713	0	1
atlanta-ip	3621.54	299477	22	not	inf	0
bal8x12	0.66	1541	129	471.55	0	1
bc	3599.29	968542	14193	not	inf	0
bc1	3394.69	608142	27683	3.34	0	1
bell3b	31.95	37508	22574	11786160.62	0	1
bell4	30.07	43215	14519	18541484.2	0	1
bell5	3600.2	7101558	4488139	8966406.49	0	0
bienst1	1496.15	3932483	32387	46.75	0	1
bienst2	3599.67	9047304	86633	54.6	0.26	0
binkar10.1	3600.53	1784416	151204	6897.41	0.03	0
blend2	5.46	12675	3756	7.6	0	1
bm23	0.07	1049	307	34	0	1
cap6000	3599.61	1983391	127075	-2436793	0.01	0
d10200	3600.36	2750324	49604	not	inf	0
d20200	3599.99	358705	2649	not	inf	0
dano3.3	141.49	61012	64	576.34	0	1
dano3.4	327.72	145651	123	576.44	0	1
dano3.5	1411.23	589214	1648	576.92	0	1
dano3mip	3601.06	1153890	958	not	inf	0
danooint	3599.45	7601273	76010	66.27	0.05	0
dcmulti	14.44	13069	475	188182	0	1

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Table 5 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
disctom	3599.92	174887	3559	not	inf	0
ds	3602.34	151224	174	not	inf	0
dsbmip	7.76	2758	34	-305.2	0	1
egout	0.1	576	13	568.1	0	1
eilD76	1264.84	598826	20834	885.41	0	1
enigma	89.23	845969	112778	0	0	1
fast0507	3603.73	99874	429	not	inf	0
fiball	3600.79	36515	2417	not	inf	0
fiber	198.9	115221	13710	405935.18	0	1
fixnet4	12.15	11855	631	8936	0	1
fixnet6	20.24	20797	2201	3983	0	1
flugpl	0.77	2697	3223	1201500	0	1
gen	3.12	6847	267	112313.36	0	1
germanrr	3600.4	285076	1566	not	inf	0
gesa2	3545.23	11820415	1061109567	not	inf	0
gesa2-o	3592.69	807646	86868	25817678.87	0.01	0
gr4x6	0.1	689	104	202.35	0	1
gt2	0.42	1447	94	21166	0	1
haprp	3599.55	165742	40726	not	inf	0
irp	79.39	6658	388	12159.49	0	1
khh05250	2.64	3095	64	106940226	0	1
l152lav	241.43	73830	4683	4722	0	1
liu	3595.98	3051612	4479	not	inf	0
lseu	11.3	65122	30859	1120	0	1
markshare1	3600.1	6624864	3667415	15	1	0
markshare2	3599.2	6622050	3259577	22	1	0
mas284	157.3	238164	52782	91405.72	0	1
mas74	3600.1	4349419	1412660	12136.89	0.13	0
mas76	846.62	3068504	1134830	40005.05	0	1
mcf2	3600.15	7460510	74429	66.27	0.05	0
mcsched	3599.94	1331374	16249	212969	0.07	0
misc01	0.46	3977	557	563.5	0	1
misc02	0.11	1179	113	1690	0	1
misc03	13.4	33251	2961	3360	0	1
misc04	2.63	2939	18	2666.7	0	1
misc05	1.78	4396	379	2984.5	0	1
misc06	0.94	2176	59	12850.86	0	1
misc07	1284.13	1055613	93063	2810	0	1
mkc	3599.58	1608427	71973	not	inf	0
mkc1	3599.98	4188130	76155	not	inf	0
mod008	14.03	35686	11563	307	0	1
mod011	3600.23	2663978	13890	-54422236.85	0.1	0
mod013	0.6	2113	604	280.95	0	1
modglob	3599.61	1118890	144051	20740508.09	0	0
momentum1	3600.41	517800	1083	not	inf	0
momentum3	3861.62	111642	4	not	inf	0
msc98-ip	3639.16	463199	31	not	inf	0
mzzv11	3858.53	653631	179	not	inf	0
mzzv42z	3602.07	70700	1011	-18936	0.13	0
n3700	3600.87	134678	9811	not	inf	0
n3701	3599.88	138194	9794	not	inf	0
n3702	3599.7	167581	12210	not	inf	0
n3703	3599.76	147045	12852	not	inf	0
n3704	3600.79	154800	12548	not	inf	0
n3705	3599.75	160374	10314	not	inf	0
n3706	3600.25	151735	13495	not	inf	0
n3707	3600.04	175183	9975	not	inf	0
n3708	3600.62	191855	11549	not	inf	0
n3709	3599.28	158893	13438	not	inf	0
n370a	3600.92	190043	13459	not	inf	0
n370b	3599.96	147783	15325	not	inf	0
n370c	3600.13	184713	12716	not	inf	0
n370d	3600.53	171783	11831	not	inf	0
n370e	3599.96	125983	12128	not	inf	0
nag	-1	-1	-1	-1	-1	0
neos-430149	3600.16	3789797	330476	88.67	1	0
neos-476283	3604.39	49007	1228	not	inf	0
neos-480878	3268.04	1135396	210122	492.51	0	1
neos-494568	3600.2	1295655	21774	-85	0.2	0
neos-495307	3600.14	222472	203494	2233	0.01	0
neos-498623	3601.8	319284	1945	not	inf	0
neos-501453	0	64	1	47454.61	0	1
neos-501474	3600.85	1850403	400376	52044.75	0.01	0
neos-503737	2966.67	1829133	8490	50	0	1
neos-504674	998.43	585480	47783	3635.87	0.27	0

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Table 5 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
neos-504815	3599.21	2855130	155111	2303.97	0.4	0
neos-506422	278.56	227175	1655	0	0	1
neos-506428	3565.28	3982	1061109567	not	inf	0
neos-512201	2353.02	1292692	119043	513.57	0	1
neos-520729	3600.86	46737	13637	-1385000	0	0
neos-522351	1289.94	787468	54367	17891.08	0	1
neos-525149	3589.64	13338	159	not	inf	0
neos-530627	1128.99	5916376	2901574	2995.2	0	1
neos-538867	3599.66	2231386	57240	not	inf	0
neos-538916	3599.87	1885771	53811	not	inf	0
neos-544324	3604.07	77231	821	not	inf	0
neos-547911	3600.07	225779	2952	not	inf	0
neos-548047	3601.73	3418881	2060	not	inf	0
neos-548251	3600.25	1064792	83268	not	inf	0
neos-551991	3600.5	4688569	1214	not	inf	0
neos-555001	3599.86	349428	6484	not	inf	0
neos-555298	3559.73	65642	7281	not	inf	0
neos-555343	3600.4	153084	3362	not	inf	0
neos-555424	3600.57	29044	3479	not	inf	0
neos-555694	40.65	9585	83	18.4	0	1
neos-555771	3600.11	1708057	47369	18.6	0	0
neos-555884	3583.62	148815	7480	not	inf	0
neos-555927	3560.89	448949	15612	not	inf	0
neos-565672	3687.68	85608	1061109567	not	inf	0
neos-565815	2741.51	338161	2676	14	0	1
neos-570431	3442.22	5555874	94265	9	0	1
neos-574665	3599.64	315405	80676	not	inf	0
neos-578379	3629.72	426387	152	not	inf	0
neos-582605	3599.44	1614580	54255	1	5	0
neos-583731	3599.64	2109702	80245	not	inf	0
neos-584146	3600.15	4157694	122486	0	1.80E+016	0
neos-584851	70.06	50116	1864	-11	0	1
neos-584866	3600.43	512574	3934	-24	6	0
neos-585467	64.26	27264	1061109567	not	inf	0
neos-595904	3600.06	1020582	28298	not	inf	0
neos-595905	366.92	487567	11966	not	inf	0
neos-595925	3599.89	2096672	117067	not	inf	0
neos-598183	3600.06	3112783	72597	not	inf	0
neos-603073	470.9	543037	21380	not	inf	0
neos-611135	628.9	27389	675	not	inf	0
neos-611838	3600.42	2351436	44518	1763966.71	0.05	0
neos-612125	3430.43	2159760	43598	1844367.88	0	1
neos-612143	3599.8	2027284	46172	1795981.08	0.03	0
neos-612162	3600.07	2131746	45764	1772948.96	0.04	0
neos-619167	3599.35	3174605	6726	not	inf	0
neos-631164	3600.4	4053481	102292	11644085	0.13	0
neos-631694	3600.19	5253556	26412	not	inf	0
neos-631709	3910.63	326347	48	not	inf	0
neos-631784	3658.35	490387	356	not	inf	0
neos-641591	3601.5	126884	1382	not	inf	0
neos-655508	0.12	2	1	63015042	0	1
neos-662469	3601.17	124537	1355	not	inf	0
neos-686190	1418.94	400874	18440	6730	0	1
neos-691058	3601.94	1572401	2951	not	inf	0
neos-709469	9.4	19257	502	493.16	0	1
neos-775946	283.63	117923	802	not	inf	0
neos-777800	417.99	601920	720	-80	0	1
neos-780889	3648.26	56776	76	not	inf	0
neos-785899	738.15	570021	11113	101	0	1
neos-785912	3600.37	3537295	13825	not	inf	0
neos-785914	1295.07	1542022	6968	38	0	1
neos-787933	3602.86	119908	896	not	inf	0
neos-791021	3600.85	163123	1264	not	inf	0
neos-796608	2671.01	3822736	2628745	-48296500	0	1
neos-799711	217.25	30080	1061109567	not	inf	0
neos-799838	3600.3	870794	6353	1308000	0.19	0
neos-801834	888.37	86782	1449	50386	0	1
neos-803219	426.97	303512	63131	210.3	0	1
neos-803220	885.07	563983	135827	195.4	0	1
neos-806323	242.74	171312	25803	215	0	1
neos-807454	3600.53	937157	8917	not	inf	0
neos-807456	3601.11	1861811	8265	not	inf	0
neos-807639	2119.4	693025	129977	454.2	0	1
neos-807705	1373.22	991977	173779	342.4	0	1
neos-808072	3600.16	1630178	8694	not	inf	0

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Table 5 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
neos-808214	3600	5907039	32908	not	inf	0
neos-810286	3600.51	414111	2057	not	inf	0
neos-810326	3600.69	909004	9778	-43348	0.04	0
neos1	3600.01	2446437	52095	21	0.71	0
neos10	3601.5	116746	1684	-1135	0.06	0
neos11	2561.03	2192585	11805	9	0	1
neos12	3600.94	1220418	1608	14	0.28	0
neos13	3595.08	6759	688	-80.86	0.38	0
neos14	3600.65	1380004	71973	not	inf	0
neos15	2122.24	859940	33338	not	inf	0
neos16	3600.01	2187148	204162	not	inf	0
neos17	3600.67	1767251	57394	not	inf	0
neos18	3599.1	3091211	53968	16	0.25	0
neos19	3465.32	65726	1061109567	not	inf	0
neos2	2359.04	4539219	113262	454.86	0	1
neos20	788.01	185730	6218	not	inf	0
neos3	3599.64	6935061	83449	671.65	4.69	0
neos4	3368.87	92616	1061109567	not	inf	0
neos5	3600.91	6911764	1409700	15	0.07	0
neos6	3601.19	597512	3811	not	inf	0
neos7	94.08	49228	1652	not	inf	0
neos9	3602.49	340407	567	not	inf	0
newdano	3599.8	8742883	55469	69.71	0.56	0
noswot	3599.34	991676	327365	not	inf	0
npmv07	3476.4	240333	1061109567	not	inf	0
nsa	3600.65	8385298	305011	120	0.21	0
nsrand-ixp	3600	248098	7408	not	inf	0
nug08	77.79	34484	113	214	0	1
nw04	42.46	1392	81	16862	0	1
p0033	0.06	1149	395	3089	0	1
p0201	3.57	11493	872	7615	0	1
p0282	25.79	21287	1661	258411	0	1
p0291	0.14	1539	161	5223.75	0	1
p0548	3.18	5399	412	8691	0	1
p2756	24	10183	1203	3124	0	1
p6b	3599.66	594305	49669	-53	1.83	0
pg	3582.06	5979448	125799	-8666.33	0.02	0
pg5_34	3600.25	6500192	179686	-14329.89	0.01	0
pipex	0.54	4970	1513	788.26	0	1
pk1	1943.71	5821200	1126119	11	0	1
pp08a	878.18	414666	53427	7350	0	1
pp08aCUTS	1035.7	485941	58901	7350	0.05	0
prod1	3599.74	4826338	615441	-56	0.19	0
prod2	3600.32	2943964	226627	-60	0.26	0
protfold	1785.91	945698	291	not	inf	0
qap10	612.52	283506	146	340	0	1
qui	3600.22	4518500	136985	-132.87	3.24	0
qnet1	28.67	36434	788	16029.69	0	1
qnet1_o	30.71	49354	853	16029.69	0	1
ramos3	3696.96	57377	22	not	inf	0
ran10x10a	13.25	27617	10578	1499	0	1
ran10x10b	4.53	10745	3455	3073	0	1
ran10x10c	760.29	911556	430862	13007	0	1
ran10x12	3.4	7134	1929	2714	0	1
ran10x26	3059.47	2609359	910859	4270	0	1
ran12x12	3600.31	4443970	1712876	2291	0.11	0
ran12x21	3599.76	1037890	279014	3675	0.12	0
ran13x13	3600.15	1416720	483243	3331	0.1	0
ran14x18	3600.25	1475234	417307	3839	0.17	0
ran14x18_1	3599.29	920853	253116	3961	0.19	0
ran14x18.disj-8	3600.21	3573711	242416	3737	0.07	0
ran16x16	3600.61	1624320	447413	3993	0.17	0
ran17x17	3376.18	1571041	543194	1373	0	1
ran4x64	0.7	1598	353	9711	0	1
ran6x43	1.28	2423	564	6330	0	1
ran8x32	845.16	444654	160285	5247	0	1
rd-rplusc-21	3503.81	2832	1061109567	not	inf	0
rentacar	6.08	6462	43	30356760.98	0	1
rgn	12.26	25409	4775	82.2	0	1
rip1	3600.87	805766	146608	15	0.07	0
rip2	2014.47	5343657	412455	19	0	1
roll3000	192.21	55419	315	not	inf	0
rout	468.14	851984	28906	not	inf	0
roy	2.78	7275	2829	3208.96	0	1
setlal	1.78	753	76	15869.75	0	1

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Table 5 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
set1ch	3599.98	1747512	278538	55663.25	0.08	0
seymour	-1	-1	-1	-1	-1	0
seymour.disj-10	3602.39	1556641	784	not	inf	0
sp98ic	3527.44	3825628	1061109567	not	inf	0
stein15	1.41	5125	78	9	0	1
stein27	14.65	20460	3224	18	0	1
stein45	502.22	339962	56539	30	0	1
stein9	0.02	293	4	5	0	1
stp3d	3593.64	94284	1061109567	not	inf	0
t1717	3604.22	81790	226	not	inf	0
Test3	1265.23	314766	6459	2673520.21	0	1
timtab1	3599.72	1145447	139332	not	inf	0
timtab2	3600.71	702092	39960	not	inf	0
tr12-30	3599.74	1485736	293009	133206	0.11	0
vpm1	1	1953	103	20	0	1
vpm2	3600.03	2056288	383471	13.75	0.11	0

Table 6: $Dist - E - N$.

Name	Time	Iters	Nodes	Best	Ogap	Solved
22433	7.61	5787	70	21477	0	1
23588	78.46	43373	4348	8090	0	1
10teams	44.43	68802	352	924	0	1
alclsl	3599.63	895991	33718	14370.44	0.5	0
afLOW30a	3599.97	3070188	111388	1158	0.04	0
afLOW40b	3600.24	4978018	33467	1285	0.17	0
air04	3600.37	506845	5256	56137	0	0
air05	3600.04	532567	7205	26436	0.01	0
air06	21.76	10040	12	49649	0	1
aligninq	1471.02	188996	12945	2713	0	1
atlanta-ip	3666.43	293697	32	not	inf	0
bal8x12	0.65	1531	129	471.55	0	1
bc	3599.38	931094	16839	7	0.37	0
bcl	3532.44	632608	28732	3.34	0	1
bell3b	27.19	30971	18689	11786160.62	0	1
bell4	77.73	46502	30366	18541484.2	0	1
bell5	3600.21	839040	442336	8966406.49	0	0
bienst1	1521.69	3958154	32694	46.75	0	1
bienst2	3599.71	8237612	74213	54.6	0.15	0
binkar10_1	3596.58	1242608	99303	6754.54	0.01	0
blend2	13.03	48819	9747	7.6	0	1
bm23	0.09	1213	361	34	0	1
cap6000	1600.73	1875030	29660	-2451377	0	1
d10200	3600.24	2854331	59581	not	inf	0
d20200	3600.43	401129	4712	not	inf	0
dano3_3	128.92	57596	61	576.34	0	1
dano3_4	280.02	118087	136	576.44	0	1
dano3_5	1765.7	678389	1840	576.92	0	1
dano3mip	3600.55	1175163	1015	not	inf	0
danoInt	3600.13	6853994	68663	65.67	0.04	0
dcmulti	14.66	11224	581	188182	0	1
disctom	3601.02	116006	2733	not	inf	0
ds	3618.65	141719	344	803.82	0.93	0
dsbmip	7.39	2732	29	-305.2	0	1
egout	0.11	591	18	568.1	0	1
eilD76	1254.63	617230	21713	885.41	0	1
enigma	7.69	76104	8802	0	0	1
fast0507	3605.07	109972	499	179	0.03	0
fiball	3601.13	139834	3761	not	inf	0
fiber	194.68	116707	14033	405935.18	0	1
fixnet4	13.49	12335	942	8936	0	1
fixnet6	20.21	20967	2363	3983	0	1
flugpl	0.86	2559	3023	1201500	0	1
gen	3.46	7468	343	112313.36	0	1
germanrr	3603.01	281852	3239	49541454.32	0.07	0
gesa2	3456.9	11317571	1061109567	not	inf	0
gesa2-o	3600.33	991392	70625	25787873.58	0	0
gr4x6	0.1	662	96	202.35	0	1

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Table 6 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
gt2	0.34	1219	59	21166	0	1
haprp	3600.71	119451	41872	3673342.67	0	0
irp	73.5	6082	375	12159.49	0	1
khh05250	2.53	2846	61	106940226	0	1
l152lav	255.74	75544	4924	4722	0	1
liu	3546.52	3001831	2603	3650	0.85	0
lseu	15.55	55557	26898	1120	0	1
markshare1	3600.12	792476	317968	28	1	0
markshare2	3600.2	839783	311903	20	1	0
mas284	203.87	237152	53284	91405.72	0	1
mas74	3600.15	1392298	274682	11801.19	0.08	0
mas76	3599.07	1107360	326576	40005.05	0.02	0
mcf2	3599.28	6913638	69260	65.67	0.04	0
mcsched	3599.66	1450574	22328	211955	0.05	0
misc01	0.48	3998	565	563.5	0	1
misc02	0.11	1173	121	1690	0	1
misc03	12.61	34136	3078	3360	0	1
misc04	2.22	2893	13	2666.7	0	1
misc05	1.67	4405	392	2984.5	0	1
misc06	0.8	2061	41	12850.86	0	1
misc07	1266.9	1056107	93134	2810	0	1
mkc	3600.26	515940	50001	not	inf	0
mkc1	3599.8	3657652	81987	-580.66	0.05	0
mod008	14.43	32433	11654	307	0	1
mod011	3599.82	2597136	11681	-54205699.16	0.06	0
mod013	0.57	1920	541	280.95	0	1
modglob	3599.67	936320	104246	20743253.14	0	0
momentum1	3614.4	628212	1299	not	inf	0
momentum3	3857.69	111642	4	not	inf	0
msc98-ip	3615.85	402793	72	not	inf	0
mzzv11	3738.29	570015	295	not	inf	0
mzzv42z	3603.57	50950	720	-16990	0.25	0
n3700	3599.65	270844	30545	1408176	0.3	0
n3701	3600.49	238976	28569	1404912	0.31	0
n3702	3599.96	332268	25842	1398413	0.3	0
n3703	3599.27	262708	28709	1400758	0.32	0
n3704	3600.45	393126	30365	1450852	0.32	0
n3705	3599.7	255257	29568	1440439	0.32	0
n3706	3600.02	216554	31835	1403127	0.31	0
n3707	3599.33	283519	29891	1383278	0.32	0
n3708	3578.33	250006	29470	1408435	0.31	0
n3709	3600.31	240221	32205	1442535	0.33	0
n370a	3599.95	216093	29438	1507415	0.35	0
n370b	3600.57	253014	30462	1505803	0.34	0
n370c	3599.88	362451	32095	1435154	0.32	0
n370d	3600.35	341939	29822	1435154	0.32	0
n370e	3599.78	176712	26099	1420086	0.31	0
nag	-1	-1	-1	-1	-1	0
neos-430149	3600.18	2965392	208356	110.8	1	0
neos-476283	3605.09	37884	1571	406.49	0	0
neos-480878	3600.14	966298	177269	492.51	0	0
neos-494568	3600.37	1100787	19612	not	inf	0
neos-495307	3599.14	202906	191485	2233	0.01	0
neos-498623	3600.15	645315	7437	not	inf	0
neos-501453	0	64	1	47454.61	0	1
neos-501474	3595.8	1488982	198748	52108.29	0.01	0
neos-503737	371.23	356824	1642	50	0	1
neos-504674	672.07	410990	29597	3635.87	0.18	0
neos-504815	3599.99	2396854	107425	2370.49	0.3	0
neos-506422	174.89	133366	1252	0	0	1
neos-506428	3605.77	4192	1061109567	not	inf	0
neos-512201	2451.69	1296650	119747	513.57	0	1
neos-520729	3599.79	51733	11586	-1385000	0	0
neos-522351	1153.98	716496	49212	17891.08	0	1
neos-525149	3580.2	59969	674	61	0.02	0
neos-530627	3600.04	733694	318082	2995.2	0.01	0
neos-538867	3600.41	1415059	45297	142	0.77	0
neos-538916	3599.91	1220268	44336	164	0.74	0
neos-544324	3605.08	73066	876	16	0.13	0
neos-547911	3600.7	235936	3365	15	0.13	0
neos-548047	3599.68	3595783	2310	9	0.68	0
neos-548251	3599.58	1168321	76837	63	0.49	0
neos-551991	3604.59	4518322	1408	12	0.39	0
neos-555001	3600.12	969316	10578	not	inf	0
neos-555298	3600.05	529976	39554	1204300	0.03	0

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Table 6 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
neos-555343	3600.25	367377	11734	not	inf	0
neos-555424	3600.11	33093	4175	not	inf	0
neos-555694	3600.13	176465	2032	19.5	0.06	0
neos-555771	3600.33	1847187	51240	18.6	0	0
neos-555884	3575.59	176615	8703	not	inf	0
neos-555927	3599.8	1125875	39590	712500	0.08	0
neos-565672	3600.08	83337	1061109567	not	inf	0
neos-565815	2501.82	325185	2682	14	0	1
neos-570431	3600.55	5329358	85667	9	0.05	0
neos-574665	3599.14	372785	100116	5984003.53	0.1	0
neos-578379	3489	368981	194	not	inf	0
neos-582605	3600.39	2202241	23549	not	inf	0
neos-583731	3562.49	2110904	80285	not	inf	0
neos-584146	3600.18	3702288	67316	0	1.29E+016	0
neos-584851	69.65	50110	1863	-11	0	1
neos-584866	3601.58	1441678	843	-25	5.2	0
neos-585467	64.68	27264	1061109567	not	inf	0
neos-595904	1978.99	648714	26267	not	inf	0
neos-595905	632.82	675961	25736	29719.71	0.14	0
neos-595925	3600.02	3698635	224376	not	inf	0
neos-598183	3599.81	3005354	94070	18452.52	0.03	0
neos-603073	320	387603	15523	16804.82	0.09	0
neos-611135	2063.09	552140	5386	19457	0.4	0
neos-611838	3600.11	2195352	40430	1763966.71	0.02	0
neos-612125	3600.34	2171027	43766	1844367.88	0	0
neos-612143	3600.4	2254497	46844	1795981.08	0.01	0
neos-612162	3599.57	1870080	37619	1772948.96	0.02	0
neos-619167	958.76	750788	2060	not	inf	0
neos-631164	173.9	178256	2572	not	inf	0
neos-631694	3600.49	5027952	27152	not	inf	0
neos-631709	4203.39	326678	63	not	inf	0
neos-631784	3606.27	601087	899	not	inf	0
neos-641591	3600.32	622605	7560	184491	0	0
neos-655508	0.1	2	1	63015042	0	1
neos-662469	3600.06	624500	7581	184491	0	0
neos-686190	1377.43	407294	19221	6730	0	1
neos-691058	3600.51	1469995	4102	297	0.19	0
neos-709469	9.25	18847	501	493.16	0	1
neos-775946	3599.52	1544820	36575	16.6	0.06	0
neos-777800	511.58	515762	763	-80	0	1
neos-780889	3631.98	63314	109	not	inf	0
neos-785899	708.13	594363	11796	101	0	1
neos-785912	3599.85	4152288	14209	not	inf	0
neos-785914	38.18	20059	92	38	0	1
neos-787933	3602.38	124597	1994	104	0.97	0
neos-791021	3602.86	280869	1716	20	0.45	0
neos-796608	3600.18	515750	339011	-48296500	0	0
neos-799711	215.72	30080	1061109567	not	inf	0
neos-799838	3601.44	622423	4106	1308000	0.12	0
neos-801834	948.3	87123	1453	50386	0	1
neos-803219	511.27	298621	64029	210.3	0	1
neos-803220	1272.54	567461	138023	195.4	0	1
neos-806323	251.13	171986	26331	215	0	1
neos-807454	3599.89	1540982	9742	not	inf	0
neos-807456	3600.15	1921667	8522	not	inf	0
neos-807639	2320.82	693257	130415	454.2	0	1
neos-807705	1999.01	941081	168766	342.4	0	1
neos-808072	3601.01	2412470	9825	28	0.86	0
neos-808214	3600.33	5721285	31190	not	inf	0
neos-810286	450.28	74872	252	2877	0	1
neos-810326	3600.69	1288640	13054	-43456	0.03	0
neos1	3600.79	967941	38105	not	inf	0
neos10	3548.99	145512	2232	-1135	0.03	0
neos11	2462	2409771	11907	9	0	1
neos12	3600.1	1427990	2522	13	0.23	0
neos13	3579.2	15796	1081	-83.95	0.31	0
neos14	3600.55	1163185	239704	76382.34	0.12	0
neos15	3599.7	1182951	132906	83206.9	0.15	0
neos16	3599.94	1737087	158436	not	inf	0
neos17	3599.58	1482828	64320	0.2	0.74	0
neos18	3600.33	986609	18506	19	0.32	0
neos19	3561.56	65771	1061109567	not	inf	0
neos2	2067.03	3322169	98392	454.86	0	1
neos20	3600.02	1240757	54401	not	inf	0
neos3	3599.9	6362425	85651	547.41	3.41	0

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Table 6 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
neos4	3271.59	92086	1061109567	not	inf	0
neos5	3600.94	1374542	154428	15	0.05	0
neos6	3600.64	1008962	8190	87	0.05	0
neos7	-1	-1	-1	not	inf	0
neos9	3607.3	361660	876	798	0.02	0
newdano	3599.71	8316759	40455	67.25	0.55	0
noswot	3599.38	1032024	252015	-41	0.05	0
npmv07	3519.17	245402	1061109567	not	inf	0
nsa	3600.47	4985843	132002	120	0.11	0
nsrand-ipx	3600.1	330575	17498	53120	0.05	0
nug08	112.68	34484	113	214	0	1
nw04	48.46	1394	81	16862	0	1
p0033	0.06	1173	407	3089	0	1
p0201	4.02	12030	946	7615	0	1
p0282	31.82	19713	2034	258411	0	1
p0291	0.15	1268	245	5223.75	0	1
p0548	3.42	4917	505	8691	0	1
p2756	22.96	10380	845	3124	0	1
p6b	3600.34	1406504	44006	-52	1.69	0
pg	3599.93	4326849	94807	-8668.54	0.01	0
pg5_34	3600.41	4725653	110471	-14334.2	0	0
pipex	0.6	4792	1271	788.26	0	1
pk1	3599.34	1639412	213956	11	0.5	0
pp08a	895.92	425281	55327	7350	0	1
pp08aCUTS	1509.25	629763	75118	7350	0.02	0
prod1	3599.72	2879691	332057	-56	0.11	0
prod2	3599.44	1995335	172243	-61	0.16	0
protfold	3614.61	1861115	194	not	inf	0
qap10	730.76	283506	146	340	0	1
qui	3600.57	3695362	93258	-132.87	1.22	0
qnet1	30.25	31802	757	16029.69	0	1
qnet1.o	31.32	40907	824	16029.69	0	1
ramos3	3851.74	61626	24	not	inf	0
ran10x10a	21.32	32415	12427	1499	0	1
ran10x10b	4.96	11233	3498	3073	0	1
ran10x10c	3600.23	542441	221383	13007	0.03	0
ran10x12	4.78	9139	2574	2714	0	1
ran10x26	3600.46	1042453	256969	4288	0.02	0
ran12x12	3600.32	684801	179081	2294	0.06	0
ran12x21	3600.63	697101	136594	3664	0.05	0
ran13x13	3600.17	709954	169986	3276	0.05	0
ran14x18	3600.23	671462	144849	3861	0.16	0
ran14x18_1	3600.36	582824	124180	3769	0.13	0
ran14x18.disj-8	3600.14	2564686	119326	3736	0.05	0
ran16x16	3600.65	657894	141234	3891	0.12	0
ran17x17	3599.78	698648	186796	1373	0.02	0
ran4x64	0.84	2024	437	9711	0	1
ran6x43	1.59	2727	667	6330	0	1
ran8x32	1334.39	444573	159928	5247	0	1
rd-rplusc-21	3518.95	2800	1061109567	not	inf	0
rentacar	4.93	4725	41	30356760.98	0	1
rgn	12.48	24889	4701	82.2	0	1
rlp1	3599.78	1439896	90511	not	inf	0
rlp2	2562.06	6030418	423142	19	0	1
roll3000	159.18	39391	455	15394	0.24	0
rout	2260.77	2362768	94154	1143.13	0.12	0
roy	3.41	8193	3396	3208.96	0	1
setlal	1.78	723	67	15869.75	0	1
setlch	3600	1082454	145201	55187.75	0.06	0
seymour	3096.33	549900	5773	439	0.07	0
seymour.disj-10	3599.8	1500918	2010	298	0.05	0
sp98ic	3596.43	4563727	1061109567	not	inf	0
stein15	1.27	5125	78	9	0	1
stein27	12.87	20461	3225	18	0	1
stein45	513.54	344745	58098	30	0	1
stein9	0.02	293	4	5	0	1
stp3d	3539.76	97617	1061109567	not	inf	0
t1717	3611.23	84495	373	254521	0.47	0
Test3	1159.77	296947	6219	2673520.21	0	1
timtab1	3599.63	901279	118936	828735	0.51	0
timtab2	3599.99	721886	63666	not	inf	0
tr12-30	3599.62	612067	134095	137741	0.12	0
vpml	0.94	1850	87	20	0	1
vpm2	3599.88	1156755	156703	13.75	0.04	0

Table 7: $Dist - BPrA_1 - Y$.

Name	Time	Iters	Nodes	Best	Ogap	Solved
22433	9.32	6443	109	21477	0	1
23588	103.58	42872	4166	8090	0	1
10teams	151.69	245643	1418	924	0	1
a1c1s1	3600.15	972596	32648	not	inf	0
afLOW30a	3599.86	3053079	142861	1158	0.05	0
afLOW40b	3566.63	4029616	34997	1282	0.17	0
air04	3600.98	533031	6126	56137	0.01	0
air05	3600.23	418425	6362	26442	0.01	0
air06	32.52	11759	34	49649	0	1
aligninq	1727.34	214087	14327	2713	0	1
atlanta-ip	3715.24	302766	30	not	inf	0
bal8x12	0.71	1714	156	471.55	0	1
bc	3599.86	744786	18520	7	0.38	0
bc1	3494.86	628515	28357	3.34	0	1
bell3b	34.69	37047	23470	11786160.62	0	1
bell4	49.48	51094	27317	18541484.2	0	1
bell5	3600.2	7327654	4646559	8966406.49	0	0
bienst1	1538.88	4037511	33317	46.75	0	1
bienst2	3599.75	8555487	73169	54.6	0.17	0
binkar10.1	3599.57	1701618	204063	6757.69	0.01	0
blend2	6.62	23544	4658	7.6	0	1
bm23	0.1	1353	413	34	0	1
cap6000	1601.42	862429	69118	-2451377	0	1
d10200	3600.15	3105706	133405	not	inf	0
d20200	3600	313239	4941	not	inf	0
dano3.3	114.69	45883	58	576.34	0	1
dano3.4	139.12	57464	87	576.44	0	1
dano3.5	1301.81	493535	1589	576.92	0	1
dano3mip	3599.94	700433	2685	not	inf	0
danoint	3599.13	6192367	83348	65.67	0.04	0
dcmulti	14.11	11147	503	188182	0	1
disctom	3599.94	162203	3283	not	inf	0
ds	3623.62	104274	261	688.07	0.92	0
dsbmip	6.98	2725	28	-305.2	0	1
egout	0.11	591	18	568.1	0	1
eilD76	1085.64	624781	22474	885.41	0	1
enigma	127.31	1166027	157727	0	0	1
fast0507	3601.97	111709	683	179	0.03	0
fiball	3600.58	122049	3244	not	inf	0
fiber	378.02	125686	15214	405935.18	0	1
fixnet4	18.43	11635	740	8936	0	1
fixnet6	30.35	20507	2297	3983	0	1
flugpl	0.82	2784	3263	1201500	0	1
gen	4.01	7468	343	112313.36	0	1
germanrr	3600.93	126965	2534	50111897.97	0.08	0
gesa2	3572.77	11413080	1061109567	not	inf	0
gesa2-o	3600.44	867077	78313	25785373.38	0	0
gr4x6	0.09	644	87	202.35	0	1
gt2	1.48	4432	1086	21166	0	1
haprp	3599.74	124384	44153	3673347.95	0	0
irp	53.89	6516	434	12159.49	0	1
khh05250	1.89	2924	67	106940226	0	1
l152lav	170.91	78789	5482	4722	0	1
liu	3597.43	3169219	9094	2540	0.78	0
lseu	8.9	58286	28172	1120	0	1
markshare1	3600.1	8480989	4641211	16	1	0
markshare2	3600.19	4787379	2385747	31	1	0
mas284	159.28	233038	52235	91405.72	0	1
mas74	3600.09	3699627	1194692	12098.25	0.11	0
mas76	859.79	3066012	1134054	40005.05	0	1
mcf2	3600.01	6705915	90307	65.67	0.04	0
mcsched	3575.3	1437900	22210	211955	0.05	0
misc01	0.45	3950	557	563.5	0	1
misc02	0.1	1163	115	1690	0	1
misc03	12.17	33896	3025	3360	0	1
misc04	2.08	2704	13	2666.7	0	1
misc05	1.63	4291	383	2984.5	0	1
misc06	0.75	1950	38	12850.86	0	1

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Table 7 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
misc07	1125.65	1055405	93072	2810	0	1
mkc	3600.31	427210	32535	not	inf	0
mkc1	3599.3	4000259	64462	-598.71	0.02	0
mod008	12.1	27652	9609	307	0	1
mod011	3599.9	2554958	13175	-54422236.85	0.06	0
mod013	0.56	1976	547	280.95	0	1
modglob	3599.56	969731	143704	20747687.75	0	0
momentum1	3627.6	545441	1814	not	inf	0
momentum3	3617.35	103131	8	not	inf	0
msc98-ip	3601.57	377790	80	not	inf	0
mzzv11	-1	-1	-1	-1	-1	0
mzzv42z	3604.39	33965	642	-17652	0.21	0
n3700	3600.2	93488	13534	1480327	0.34	0
n3701	3600.36	91186	13416	1569375	0.38	0
n3702	3600.3	213088	17482	1522611	0.36	0
n3703	3600.42	91163	13620	1531790	0.38	0
n3704	3599.6	103235	12518	1598900	0.38	0
n3705	3599.9	129999	20530	1453454	0.32	0
n3706	3600.28	107036	19660	1768107	0.45	0
n3707	3599.51	120323	15916	1494797	0.37	0
n3708	3599.83	80619	12278	1440872	0.32	0
n3709	3600.21	111842	15382	1797928	0.46	0
n370a	3575.48	104718	18045	1464663	0.33	0
n370b	3600.24	95265	18581	1525145	0.35	0
n370c	3599.37	241621	17229	1534395	0.36	0
n370d	3599.36	235513	16098	1534395	0.36	0
n370e	3600.25	118633	21487	1419373	0.32	0
nag	-1	-1	-1	-1	-1	0
neos-430149	3600.14	3671316	384016	89.4	1	0
neos-476283	3606.43	13709	947	406.42	0	0
neos-480878	3600.02	1134263	223099	492.51	0.01	0
neos-494568	3600.55	554820	21116	-84	0.21	0
neos-495307	3600.14	286581	202204	2233	0.01	0
neos-498623	3600.23	504073	11878	44.6	0.64	0
neos-501453	0	64	1	47454.61	0	1
neos-501474	349.23	227617	42901	52184.73	0.01	0
neos-503737	1014.44	1306659	4576	50	0	1
neos-504674	371.96	244057	14008	3635.87	0.23	0
neos-504815	3600.14	2149475	167935	2393.57	0.38	0
neos-506422	335.2	234711	3026	0	0	1
neos-506428	3446.65	3844	1061109567	not	inf	0
neos-512201	2532.76	1302911	120099	513.57	0	1
neos-520729	3601.57	49094	14400	-1385000	0	0
neos-522351	1186.17	713220	49493	17891.08	0	1
neos-525149	3459.78	57369	742	61	0.02	0
neos-530627	1460.42	5871509	2901563	2995.2	0	1
neos-538867	3600.55	1838496	101617	142	0.77	0
neos-538916	3599.97	1107602	71506	134	0.69	0
neos-544324	3601.91	2858	715	not	inf	0
neos-547911	3601.91	16814	2089	not	inf	0
neos-548047	3602.86	3483915	2243	9	0.68	0
neos-548251	3600.29	777041	67781	63	0.5	0
neos-551991	3599.7	4711408	1472	12	0.38	0
neos-555001	3599.81	1052144	11096	not	inf	0
neos-555298	3600	642208	43097	1211800	0.04	0
neos-555343	3600.28	919404	9459	not	inf	0
neos-555424	3600.42	192060	8297	not	inf	0
neos-555694	3600.16	3946671	46488	18.6	0.01	0
neos-555771	3600.01	2335513	67881	18.6	0	0
neos-555884	3600.2	107316	4965	not	inf	0
neos-555927	3599.9	1333701	49685	707500	0.08	0
neos-565672	3727.42	85608	1061109567	not	inf	0
neos-565815	2518.76	327013	2717	14	0	1
neos-570431	3600.59	5408272	88218	9	0.04	0
neos-574665	3599.5	303065	95075	5937662.22	0.1	0
neos-578379	3541.49	383868	136	not	inf	0
neos-582605	3587.58	2768516	31878	not	inf	0
neos-583731	3599.7	2475472	117946	not	inf	0
neos-584146	3599.94	3858698	114388	0	1.70E+016	0
neos-584851	69.53	50116	1864	-11	0	1
neos-584866	3601.41	556298	3527	-21	6.86	0
neos-585467	51.48	27264	1061109567	not	inf	0
neos-595904	3600.35	1704754	79782	not	inf	0
neos-595905	3600.8	2714938	200594	29202.44	0.13	0
neos-595925	3600.41	3735443	201307	not	inf	0

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Table 7 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
neos-598183	3599.26	2853765	98848	18448.55	0.03	0
neos-603073	554.65	594790	23926	16804.82	0.09	0
neos-611135	-1	-1	-1	-1	-1	0
neos-611838	3600.4	2114808	40318	1763966.71	0.02	0
neos-612125	3448.54	2184102	43922	1844367.88	0	1
neos-612143	3599.44	1977543	40080	1795981.08	0.02	0
neos-612162	3600.55	2083325	43262	1773097.58	0.02	0
neos-619167	1707.5	1504480	5474	not	inf	0
neos-631164	37.7	13805	23	not	inf	0
neos-631694	3600.3	4586927	26412	not	inf	0
neos-631709	3814.83	299061	303	not	inf	0
neos-631784	3962.56	761345	206	not	inf	0
neos-641591	3600.86	455611	4066	not	inf	0
neos-655508	0.13	2	1	63015042	0	1
neos-662469	3600.89	500090	4432	not	inf	0
neos-686190	1637.23	506560	22964	6730	0	1
neos-691058	3600.86	1872494	4754	297	0.19	0
neos-709469	9.16	19734	515	493.16	0	1
neos-775946	3600.46	1835317	32462	16.2	0.04	0
neos-777800	412.97	601920	720	-80	0	1
neos-780889	3210.82	41115	116	3421500	0	1
neos-785899	691.36	593412	11799	101	0	1
neos-785912	3600.64	4054383	12847	not	inf	0
neos-785914	1396.62	1743877	6730	38	0	1
neos-787933	3600.57	36860	1782	not	inf	0
neos-791021	3601.25	253455	1843	20	0.45	0
neos-796608	2831.94	3822778	2628753	-48296500	0	1
neos-799711	229.59	30080	1061109567	not	inf	0
neos-799838	3600.39	725281	4502	1308000	0.12	0
neos-801834	822.8	87123	1453	50386	0	1
neos-803219	372.23	282916	61180	210.3	0	1
neos-803220	806.61	567602	138105	195.4	0	1
neos-806323	249.46	170644	26062	215	0	1
neos-807454	3600.29	1009729	9502	not	inf	0
neos-807456	3600.1	1633714	7596	not	inf	0
neos-807639	2169.79	692079	130217	454.2	0	1
neos-807705	1322.69	1045731	190201	342.4	0	1
neos-808072	3599.67	1752573	10059	32	0.9	0
neos-808214	3599.68	5195653	33936	not	inf	0
neos-810286	148.36	38471	65	2877	0	1
neos-810326	3600.42	871723	10541	-43518	0.03	0
neos1	3600.55	1137606	34671	21	0.71	0
neos10	3602.36	136217	2070	-1135	0.04	0
neos11	2355.76	2184630	11805	9	0	1
neos12	3600.41	1475683	2570	13	0.23	0
neos13	3596.16	11282	911	-91.37	0.22	0
neos14	3599.82	1159234	200884	75349.01	0.11	0
neos15	3599.43	1037233	209347	83819.83	0.16	0
neos16	3600.18	1806321	184435	not	inf	0
neos17	3600.19	1429993	72731	0.21	0.76	0
neos18	3600.58	673999	20430	16	0.19	0
neos19	3637.52	65771	1061109567	not	inf	0
neos2	2315.88	3843341	108185	454.86	0	1
neos20	288.87	72644	3044	not	inf	0
neos3	3600.24	6429721	90476	533.88	3.51	0
neos4	3321.7	95395	1061109567	not	inf	0
neos5	3600.91	6954628	1607126	15	0.07	0
neos6	3600.08	994294	7995	87	0.05	0
neos7	1243.37	431602	49197	787934	0.15	0
neos9	3601.69	362376	885	798	0.02	0
newdano	3599.7	8494064	44014	67.6	0.55	0
noswot	3600.08	1016398	336190	-37	0.16	0
npmv07	3518.95	233605	1061109567	not	inf	0
nsa	3600.7	7924190	306815	122	0.16	0
nsrand-ipx	3600.31	54442	10608	75360	0.33	0
nug08	107.89	34723	113	214	0	1
nw04	46.28	1394	81	16862	0	1
p0033	0.07	1090	463	3089	0	1
p0201	4.35	13349	1093	7615	0	1
p0282	27.09	17703	1533	258411	0	1
p0291	0.13	1126	208	5223.75	0	1
p0548	3.31	4667	522	8691	0	1
p2756	23.79	6600	1023	3124	0	1
p6b	3599.05	634978	39387	-45	2.2	0
pg	3599.92	4985855	113869	-8666.33	0.01	0

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Table 7 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
pg5_34	3600.42	5560777	163235	-14328.77	0	0
pipex	1.08	9391	3474	788.26	0	1
pk1	2098.15	6361390	1233052	11	0	1
pp08a	868.36	425281	55327	7350	0	1
pp08aCUTS	2279.74	941396	137096	7350	0.03	0
prod1	3044.24	4819078	618111	-56	0	1
prod2	3600.16	3258619	340921	-61	0.2	0
protfold	3473.08	1377637	175	not	inf	0
qap10	632.03	280965	141	340	0	1
qiu	2720.08	3337965	100114	-132.87	1.81	0
qnet1	24.12	28662	603	16029.69	0	1
qnet1_o	28.95	41255	823	16029.69	0	1
ramos3	3608.46	65649	15	not	inf	0
ran10x10a	27.19	55139	23678	1499	0	1
ran10x10b	4.09	10111	3078	3073	0	1
ran10x10c	527.38	952221	457291	13007	0	1
ran10x12	5.31	10364	2999	2714	0	1
ran10x26	3275.41	2957543	1033738	4270	0	1
ran12x12	3599.31	4075267	1560454	2291	0.1	0
ran12x21	3599.6	1066999	295331	3675	0.08	0
ran13x13	3600.16	1765839	632122	3324	0.1	0
ran14x18	3599.27	1379047	389147	3997	0.19	0
ran14x18_1	3600.35	914352	264640	4466	0.3	0
ran14x18.disj-8	3600.13	2700363	238334	3736	0.06	0
ran16x16	3599.6	1269305	369500	3886	0.14	0
ran17x17	3599.74	1471090	508681	1373	0.04	0
ran4x64	1.28	3259	716	9711	0	1
ran6x43	1.8	3191	874	6330	0	1
ran8x32	2973.13	1582511	605991	5247	0	1
rd-rplusc-21	3567.33	2676	1061109567	not	inf	0
rentacar	7.26	5523	51	30356760.98	0	1
rgn	17.83	25374	4791	82.2	0	1
rlp1	3599.54	774389	117859	15	0.07	0
rlp2	1882.34	5387366	408086	19	0	1
roll3000	681.05	280653	4526	17420	0.33	0
rout	441.09	562212	34770	1160.62	0.14	0
roy	3.31	8199	3492	3208.96	0	1
set1al	1.71	645	25	15869.75	0	1
set1ch	3599.8	1839159	455336	55502.25	0.07	0
seymour	3600.07	418870	5310	429	0.05	0
seymour.disj-10	-1	-1	-1	-1	-1	0
sp98ic	3496.75	3871998	1061109567	not	inf	0
stein15	1.32	5130	79	9	0	1
stein27	13.62	20456	3226	18	0	1
stein45	496.72	356643	60594	30	0	1
stein9	0.02	296	6	5	0	1
stp3d	3497.84	99064	1061109567	not	inf	0
t1717	3601.2	14161	274	not	inf	0
Test3	1198.96	286096	5708	2673520.21	0	1
timtab1	3599.62	629128	127071	855968	0.55	0
timtab2	3599.63	383937	48036	not	inf	0
tr12-30	3600.48	1101132	326806	136082	0.12	0
vpm1	1	1945	102	20	0	1
vpm2	3599.78	2234608	409251	13.75	0.07	0

Table 8: $BPr_1 - PCA - N$.

Name	Time	Iters	Nodes	Best	Ogap	Solved
22433	7.66	5467	51	21477	0	1
23588	102.79	42755	4165	8090	0	1
10teams	412.72	309725	2153	924	0	1
alclsl	3599.85	695558	17734	not	inf	0
aflow30a	3599.91	3748301	134490	1158	0.1	0
aflow40b	3600.02	4927388	23159	not	inf	0
air04	3601.41	500408	5369	56137	0	0
air05	3600.64	532902	6284	26374	0.01	0
air06	25.67	10854	26	49649	0	1
aligninq	1453.11	182203	12595	2713	0	1

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Table 8 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
atlanta-ip	3624.99	299477	22	not	inf	0
bal8x12	0.66	1541	129	471.55	0	1
bc	3599.38	967513	14183	not	inf	0
bcl	3398.72	608142	27683	3.34	0	1
bell3b	31.73	37508	22574	11786160.62	0	1
bell4	15.3	17663	7717	18541484.2	0	1
bell5	3600.2	1457904	792752	8966406.49	0	0
bienst1	1494.71	3932483	32387	46.75	0	1
bienst2	3599.7	8993173	85982	54.6	0.26	0
binkar10_1	3600.49	2055761	127291	not	inf	0
blend2	5.15	12675	3756	7.6	0	1
bm23	0.07	1049	307	34	0	1
cap6000	3599.52	2157376	140070	-2438498	0.01	0
d10200	3600.3	2214633	39573	not	inf	0
d20200	3601.14	317871	2332	not	inf	0
dano3_3	144.71	61012	64	576.34	0	1
dano3_4	337.93	145651	123	576.44	0	1
dano3_5	1454.88	589214	1648	576.92	0	1
dano3mip	3601.37	1209598	1000	not	inf	0
danoint	3599.22	7589599	75913	66.27	0.05	0
dcmulti	15.34	13069	475	188182	0	1
disctom	3600.43	162321	3287	not	inf	0
ds	3604.96	150653	173	not	inf	0
dsbmip	6.62	2758	34	-305.2	0	1
egout	0.11	576	13	568.1	0	1
eilD76	1023.1	598826	20834	885.41	0	1
enigma	70.93	693013	91473	0	0	1
fast0507	3605.74	106096	457	not	inf	0
fiball	3600.46	35885	2374	not	inf	0
fiber	321.1	115221	13710	405935.18	0	1
fixnet4	15.28	11855	631	8936	0	1
fixnet6	25.37	20797	2201	3983	0	1
flugpl	0.77	2697	3223	1201500	0	1
gen	3.43	6847	267	112313.36	0	1
germanrr	3602.51	238289	1268	not	inf	0
gesa2	3562.08	11622433	1061109567	not	inf	0
gesa2-o	3590.23	895174	85756	not	inf	0
gr4x6	0.08	581	57	202.35	0	1
gt2	0.42	1447	94	21166	0	1
haprp	3600.35	92449	20741	not	inf	0
irp	71.89	6658	388	12159.49	0	1
khh05250	2.46	3095	64	106940226	0	1
l152lav	228.09	73830	4683	4722	0	1
liu	3595.94	3065730	5068	not	inf	0
lseu	13.08	73527	33895	1120	0	1
markshare1	3600.18	1252501	476021	45	1	0
markshare2	3600.27	1576424	465201	119	1	0
mas284	172.38	238164	52782	91405.72	0	1
mas74	3600.13	1420011	253433	11801.19	0.06	0
mas76	3600.09	1070479	287639	40005.05	0.01	0
mcf2	3600.02	7967374	80574	66.27	0.05	0
mcsched	3600.12	1448251	17824	212969	0.07	0
misc01	0.46	3977	557	563.5	0	1
misc02	0.1	1179	113	1690	0	1
misc03	11.99	33251	2961	3360	0	1
misc04	2.24	2939	18	2666.7	0	1
misc05	1.66	4396	379	2984.5	0	1
misc06	0.88	2176	59	12850.86	0	1
misc07	1119.52	1055613	93063	2810	0	1
mkc	3599.24	1515979	67804	not	inf	0
mkc1	3600.18	4040120	73532	not	inf	0
mod008	15.26	35686	11563	307	0	1
mod011	3600.82	2541104	13264	-54422236.85	0.1	0
mod013	0.54	1893	509	280.95	0	1
modglob	3599.51	1120410	131314	20740508.09	0	0
momentum1	3528.13	515004	1050	not	inf	0
momentum3	3885.3	111642	4	not	inf	0
msc98-ip	3610.53	463199	31	not	inf	0
mzzv11	3918.6	560535	139	not	inf	0
mzzv42z	3600.77	69096	975	-18936	0.13	0
n3700	3600.24	174913	13055	not	inf	0
n3701	3600.55	160634	11574	not	inf	0
n3702	3600.23	147655	10440	not	inf	0
n3703	3600.26	135793	11859	not	inf	0
n3704	3599.89	148755	12107	not	inf	0

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Table 8 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
n3705	3600.1	170829	11042	not	inf	0
n3706	3600.2	171070	15439	not	inf	0
n3707	3599.95	190868	11138	not	inf	0
n3708	3599.54	179501	10745	not	inf	0
n3709	3600.09	132240	11244	not	inf	0
n370a	3599.86	155925	10986	not	inf	0
n370b	3600.83	132947	13777	not	inf	0
n370c	3600.09	157000	10683	not	inf	0
n370d	3599.82	180432	12440	not	inf	0
n370e	3599.46	135152	13018	not	inf	0
nag	-1	-1	-1	-1	-1	0
neos-430149	3599.63	4425195	223295	not	inf	0
neos-476283	3604.5	48833	1220	not	inf	0
neos-480878	3568.7	1135396	210122	492.51	0	1
neos-494568	3600.99	1353762	22750	-85	0.2	0
neos-495307	3600.12	259010	251464	2233	0.01	0
neos-498623	3600.47	335397	2015	not	inf	0
neos-501453	0	64	1	47454.61	0	1
neos-501474	2410.54	1516223	129924	not	inf	0
neos-503737	2992.68	1829133	8490	50	0	1
neos-504674	1029.85	585480	47783	3635.87	0.27	0
neos-504815	3600.22	2636231	132734	2303.97	0.39	0
neos-506422	292.41	227175	1655	0	0	1
neos-506428	3474.07	3869	1061109567	not	inf	0
neos-512201	2293.82	1292692	119043	513.57	0	1
neos-520729	3600.62	47256	13801	-1385000	0	0
neos-522351	1340.06	787468	54367	17891.08	0	1
neos-525149	3593.08	13309	157	not	inf	0
neos-530627	3600.02	2848816	1422744	2995.2	0.01	0
neos-538867	3596.95	1855143	47053	not	inf	0
neos-538916	3599.8	1255220	35536	not	inf	0
neos-544324	3603.78	60447	647	not	inf	0
neos-547911	3600.61	178030	2349	not	inf	0
neos-548047	3601.24	3505201	2112	not	inf	0
neos-548251	3599.29	1084989	84798	not	inf	0
neos-551991	3602.12	4538035	1167	not	inf	0
neos-555001	3599.98	343193	6374	not	inf	0
neos-555298	3599.68	85612	9228	not	inf	0
neos-555343	3600.12	161015	3723	not	inf	0
neos-555424	3600.29	31079	3600	not	inf	0
neos-555694	33.08	9585	83	18.4	0	1
neos-555771	3600.22	1826854	50735	18.6	0	0
neos-555884	3600.28	197734	10433	not	inf	0
neos-555927	3599.5	444390	15439	not	inf	0
neos-565672	3542.28	82466	1061109567	not	inf	0
neos-565815	2792.07	338161	2676	14	0	1
neos-570431	3502.25	5555874	94265	9	0	1
neos-574665	3599.46	275181	68658	not	inf	0
neos-578379	3601.06	412132	147	not	inf	0
neos-582605	3600.1	1543825	51924	1	5	0
neos-583731	3599.97	1828432	67851	not	inf	0
neos-584146	3600.29	4033374	118983	0	1.80E+016	0
neos-584851	72.22	50116	1864	-11	0	1
neos-584866	3599.87	633716	4812	-25	5.72	0
neos-585467	53.91	27264	1061109567	not	inf	0
neos-595904	3600.58	1001611	27902	not	inf	0
neos-595905	362.67	487567	11966	not	inf	0
neos-595925	3600.21	2372286	120142	not	inf	0
neos-598183	3599.69	3113662	72620	not	inf	0
neos-603073	486	543037	21380	not	inf	0
neos-611135	640.47	27389	675	not	inf	0
neos-611838	3599.18	2338086	44204	1763966.71	0.05	0
neos-612125	3451.14	2159760	43598	1844367.88	0	1
neos-612143	3600.49	2006036	45696	1795981.08	0.03	0
neos-612162	3600.5	1931789	40897	1772948.96	0.04	0
neos-619167	3600.39	3023135	6412	not	inf	0
neos-631164	3599.9	3387026	84236	not	inf	0
neos-631694	3599.84	4997780	25243	not	inf	0
neos-631709	4480.11	326347	48	not	inf	0
neos-631784	3714.06	453146	350	not	inf	0
neos-641591	3600.2	116116	1259	not	inf	0
neos-655508	0.12	2	1	63015042	0	1
neos-662469	3600.76	124481	1354	not	inf	0
neos-686190	1413.52	400874	18440	6730	0	1
neos-691058	3601.21	1806449	3418	not	inf	0

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Table 8 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
neos-709469	9.04	19257	502	493.16	0	1
neos-775946	257.69	117923	802	not	inf	0
neos-777800	388.1	601920	720	-80	0	1
neos-780889	3640.69	60946	86	not	inf	0
neos-785899	1140.94	570021	11113	101	0	1
neos-785912	3600.21	3208388	12549	not	inf	0
neos-785914	1235.41	1542022	6968	38	0	1
neos-787933	3601.14	113641	837	not	inf	0
neos-791021	3601.57	171299	1333	not	inf	0
neos-796608	3600.18	1504714	984694	-48296500	0	0
neos-799711	218.64	30080	1061109567	not	inf	0
neos-799838	3600.45	820884	6048	1308000	0.19	0
neos-801834	941.01	86782	1449	50386	0	1
neos-803219	432.34	303512	63131	210.3	0	1
neos-803220	986.43	568696	136773	195.4	0	1
neos-806323	259.48	171312	25803	215	0	1
neos-807454	3599.94	703902	6637	not	inf	0
neos-807456	3600.44	1112409	4906	not	inf	0
neos-807639	2277	693025	129977	454.2	0	1
neos-807705	1455.68	941966	164851	342.4	0	1
neos-808072	3600.77	1198752	6423	not	inf	0
neos-808214	3599.88	4514267	25626	not	inf	0
neos-810286	3600.67	373704	1771	not	inf	0
neos-810326	3600.61	818372	8663	-43348	0.05	0
neos1	3600.71	2364798	50376	21	0.71	0
neos10	3599.23	105682	1523	-1135	0.09	0
neos11	2750.22	2192585	11805	9	0	1
neos12	3601.57	1371627	1813	14	0.28	0
neos13	3595.69	8916	1151	-80.86	0.38	0
neos14	3600.31	1542700	81310	not	inf	0
neos15	1914.88	859940	33338	not	inf	0
neos16	3600.43	2092314	194407	not	inf	0
neos17	3599.43	1519687	47272	not	inf	0
neos18	3600.18	2578919	44397	16	0.25	0
neos19	3562.82	65771	1061109567	not	inf	0
neos2	2410.95	4539219	113262	454.86	0	1
neos20	827.75	185730	6218	not	inf	0
neos3	3600.06	6805665	81171	671.65	4.71	0
neos4	3303.27	93668	1061109567	not	inf	0
neos5	3600.93	1965312	277218	15	0.07	0
neos6	3600.81	609496	3879	not	inf	0
neos7	88.57	49228	1652	not	inf	0
neos9	3606.44	353886	591	not	inf	0
newdano	3599.83	9047521	56927	69.71	0.56	0
noswot	3599.15	935224	287049	not	inf	0
npmv07	3553.05	231939	1061109567	not	inf	0
nsa	3600.74	7056650	180581	120	0.21	0
nsrand-idx	3600.23	214159	6557	not	inf	0
nug08	109.12	34484	113	214	0	1
nw04	46.59	1392	81	16862	0	1
p0033	0.06	1149	395	3089	0	1
p0201	3.77	11493	872	7615	0	1
p0282	31.11	21287	1661	258411	0	1
p0291	0.14	1539	161	5223.75	0	1
p0548	3.4	5399	412	8691	0	1
p2756	30.71	10183	1203	3124	0	1
p6b	3598.93	503574	41492	-53	1.83	0
pg	3599.99	5854952	123081	-8666.33	0.02	0
pg5_34	3600.62	6463270	178481	-14329.89	0.01	0
pipex	0.38	3661	875	788.26	0	1
pk1	3600.36	2496923	256510	11	0.36	0
pp08a	748.07	414666	53427	7350	0	1
pp08aCUTS	892.43	485941	58901	7350	0.05	0
prod1	3599.67	3756911	435556	-56	0.16	0
prod2	3599.5	2873532	220702	-60	0.26	0
protfold	1838.63	945698	291	not	inf	0
qap10	694.45	283506	146	340	0	1
qiu	3600.42	4379350	131936	-132.87	3.24	0
qnet1	32.17	36434	788	16029.69	0	1
qnet1.o	36.99	49354	853	16029.69	0	1
ramos3	3680.87	60824	25	not	inf	0
ran10x10a	13.63	30521	11111	1499	0	1
ran10x10b	4.27	10745	3455	3073	0	1
ran10x10c	3022.45	862111	409223	13007	0	1
ran10x12	3.47	7134	1929	2714	0	1

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Table 8 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
ran10x26	3600.47	1248797	321291	4288	0.04	0
ran12x12	3600.33	1056854	270026	2294	0.09	0
ran12x21	3600.56	1015219	188222	3664	0.09	0
ran13x13	3600.22	1083441	232755	3276	0.08	0
ran14x18	3599.26	963584	188569	not	inf	0
ran14x18.1	3599.42	708737	140158	not	inf	0
ran14x18.disj-8	3599.23	3900351	145659	3736	0.07	0
ran16x16	3600.62	1038507	196651	not	inf	0
ran17x17	3599.81	997584	292428	1373	0.03	0
ran4x64	0.7	1598	353	9711	0	1
ran6x43	1.35	2423	564	6330	0	1
ran8x32	862.59	428025	154586	5247	0	1
rd-rplusc-21	3570.22	2667	1061109567	not	inf	0
rentacar	8	6462	43	30356760.98	0	1
rgn	17.37	25409	4775	82.2	0	1
rlp1	3600.24	2226561	120920	not	inf	0
rlp2	2033.42	5343657	412455	19	0	1
roll3000	157.73	55419	315	not	inf	0
rout	458.42	851984	28906	not	inf	0
roy	2.74	7275	2829	3208.96	0	1
set1al	1.78	753	76	15869.75	0	1
set1ch	3599.82	1534904	172781	not	inf	0
seymour	-1	-1	-1	-1	-1	0
seymour.disj-10	3599.83	1539653	777	not	inf	0
sp98ic	3540.14	3794280	1061109567	not	inf	0
stein15	1.26	5125	78	9	0	1
stein27	12.71	20460	3224	18	0	1
stein45	436.28	339962	56539	30	0	1
stein9	0.02	293	4	5	0	1
stp3d	3490.4	100070	1061109567	not	inf	0
t1717	3609.27	82529	229	not	inf	0
Test3	1302.41	314766	6459	2673520.21	0	1
timtab1	3599.73	1087222	114246	not	inf	0
timtab2	3599.84	578211	32099	not	inf	0
tr12-30	3600.09	985505	156900	132631	0.1	0
vpm1	0.9	1779	78	20	0	1
vpm2	3599.92	1669561	237548	13.75	0.1	0

Table 9: $BPr_1 - DExA - Y$.

Name	Time	Iters	Nodes	Best	Ogap	Solved
22433	7.93	5606	67	21477	0	1
23588	103.5	43052	4289	8090	0	1
10teams	182.48	215098	1355	924	0	1
a1c1s1	3600	914801	18866	not	inf	0
afflow30a	3599.87	3368305	133119	1158	0.1	0
afflow40b	3600.07	4229455	34005	not	inf	0
air04	3599.86	475322	5042	56137	0	0
air05	3600.22	476900	5899	26442	0.01	0
air06	32.41	11831	35	49649	0	1
aligninq	1795.45	224650	14703	2713	0	1
atlanta-ip	3608.55	204109	64	not	inf	0
bal8x12	1.23	2980	458	471.55	0	1
bc	3599.65	600506	20348	7	0.41	0
bc1	3481.67	618061	28424	3.34	0	1
bell3b	24.78	28238	17710	11786160.62	0	1
bell4	24.65	30099	11920	18541484.2	0	1
bell5	3600.19	7032947	4442940	8966406.49	0	0
bienst1	1518.71	3989421	32694	46.75	0	1
bienst2	3599.82	9200522	89456	54.6	0.32	0
binkar10.1	3599.89	2173129	212497	6754.54	0.01	0
blend2	7.64	12730	6084	7.6	0	1
bm23	0.09	1308	404	34	0	1
cap6000	3600.51	2100731	135610	-2437276	0.01	0
d10200	3600.47	1405734	86845	not	inf	0
d20200	3601.04	156483	2892	not	inf	0
dano3.3	96.6	41494	52	576.34	0	1
dano3.4	163.72	71037	93	576.44	0	1

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Table 9 – continued from previous page

Name	Time	Iters	Nodes	Best	Ogap	Solved
dano3_5	1534.28	621939	1794	576.92	0	1
dano3mip	3600.84	1542836	1512	747.38	0.23	0
danooint	3599.38	7493659	75703	65.67	0.05	0
dcmulti	13.58	10669	456	188182	0	1
disctom	3601.04	186933	3767	not	inf	0
ds	3615.62	103251	281	not	inf	0
dsbmip	6.59	2758	34	-305.2	0	1
egout	0.1	577	14	568.1	0	1
eilD76	1002.21	603998	20881	885.41	0	1
enigma	85.51	839825	111857	0	0	1
fast0507	3603.29	55844	647	186	0.07	0
fiball	3600.21	20221	1841	not	inf	0
fiber	397.61	133862	16297	405935.18	0	1
fixnet4	17.14	10810	651	8936	0	1
fixnet6	30.4	20544	2268	3983	0	1
flugpl	0.97	3351	4073	1201500	0	1
gen	3.71	6772	295	112313.36	0	1
germanrr	3600.45	154453	1553	not	inf	0
gesa2	3517.38	11209096	1061109567	not	inf	0
gesa2-o	3600.44	752734	105126	25783073.06	0	0
gr4x6	0.1	682	102	202.35	0	1
gt2	1.25	4043	839	21166	0	1
haprp	3599.98	130840	55366	3673331.98	0	0
irp	46.98	4942	292	12159.49	0	1
khb05250	1.9	2798	77	106940226	0	1
l152lav	178.91	80463	5328	4722	0	1
liu	3597.99	2982579	7648	not	inf	0
lseu	10.25	58448	28139	1120	0	1
markshare1	3600.1	8611939	4690365	15	1	0
markshare2	3600.18	5314972	2640925	30	1	0
mas284	167.79	232513	52024	91405.72	0	1
mas74	3600.09	4432165	1433421	12032.39	0.12	0
mas76	895.62	3056781	1130964	40005.05	0	1
mcf2	3600.13	7951922	79862	65.67	0.05	0
mcsched	3600.45	1131451	20460	212892	0.08	0
misc01	0.46	4008	569	563.5	0	1
misc02	0.1	1179	118	1690	0	1
misc03	11.92	33242	2967	3360	0	1
misc04	2.09	2742	13	2666.7	0	1
misc05	1.58	4235	379	2984.5	0	1
misc06	0.71	1917	31	12850.86	0	1
misc07	1148.1	1060398	93473	2810	0	1
mkc	3600.6	1690400	64356	not	inf	0
mkc1	3599.5	3995724	71739	not	inf	0
mod008	13.56	29240	11224	307	0	1
mod011	3600.98	2553819	13336	-54422236.85	0.1	0
mod013	0.6	2099	612	280.95	0	1
modglob	3600.56	1011650	158015	20740508.09	0	0
momentum1	3599.94	546673	1198	not	inf	0
momentum3	3623.04	103131	8	not	inf	0
msc98-ip	3603.76	303871	112	not	inf	0
mzzv11	3810.72	653631	179	not	inf	0
mzzv42z	3603.67	44425	592	-19126	0.12	0
n3700	3600.31	61705	11905	not	inf	0
n3701	3600.47	107926	18579	not	inf	0
n3702	3600.03	102259	20241	not	inf	0
n3703	3599.94	77367	15770	not	inf	0
n3704	3600.48	117878	19353	not	inf	0
n3705	3599.48	67007	12771	not	inf	0
n3706	3599.94	137332	14161	not	inf	0
n3707	3599.98	88486	11716	not	inf	0
n3708	3600.28	79334	11123	not	inf	0
n3709	3600.2	47504	11427	not	inf	0
n370a	3600.46	50856	10418	not	inf	0
n370b	3600.33	61374	14181	not	inf	0
n370c	3600.14	133056	21037	not	inf	0
n370d	3600.07	163948	25776	not	inf	0
n370e	3600.38	138557	24750	not	inf	0
nag	-1	-1	-1	-1	-1	0
neos-430149	3600.31	3285985	322602	113.6	1	0
neos-476283	3602.95	22486	1528	406.42	0	0
neos-480878	3600.02	1044884	197249	492.51	0.01	0
neos-494568	3599.59	1338502	22503	-85	0.2	0
neos-495307	3600.13	320267	234482	2233	0.01	0
neos-498623	3599.79	1269878	22931	29.6	0.46	0

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Name	Time	Iters	Nodes	Best	Ogap	Solved
neos-501453	0	64	1	47454.61	0	1
neos-501474	3599.75	1483670	347079	52125.97	0.01	0
neos-503737	2119.68	1765913	13511	50	0	1
neos-504674	681.21	385353	29888	3635.87	0.32	0
neos-504815	3600.02	2462804	152378	2333.03	0.45	0
neos-506422	430.59	329776	3103	0	0	1
neos-506428	3494.05	3869	1061109567	not	inf	0
neos-512201	2484.14	1300150	119897	513.57	0	1
neos-520729	3600.63	60407	14311	-1385000	0	0
neos-522351	1484.05	892745	61964	17891.08	0	1
neos-525149	3578.8	37544	537	61	0.02	0
neos-530627	1216.02	5871509	2901563	2995.2	0	1
neos-538867	3600.08	1905611	113429	127	0.75	0
neos-538916	3599.53	1113859	71140	134	0.69	0
neos-544324	3606.41	2836	697	not	inf	0
neos-547911	3600.97	15568	2135	not	inf	0
neos-548047	3599.79	3189154	2829	not	inf	0
neos-548251	3599.47	1250488	74648	not	inf	0
neos-551991	3602.83	4662932	1948	not	inf	0
neos-555001	3600	768509	14052	not	inf	0
neos-555298	3599.53	537116	29274	not	inf	0
neos-555343	3600.65	311012	7384	not	inf	0
neos-555424	3600.16	117686	4820	not	inf	0
neos-555694	3600.23	4016700	47509	18.6	0.01	0
neos-555771	3599.96	3105033	90046	21.6	0.14	0
neos-555884	3600.05	109342	4949	not	inf	0
neos-555927	3599.33	236095	13557	not	inf	0
neos-565672	3697.75	85608	1061109567	not	inf	0
neos-565815	2489.61	327696	2685	14	0	1
neos-570431	3539.89	5580526	94511	9	0	1
neos-574665	3599.3	296103	76268	not	inf	0
neos-578379	3604.88	412132	147	not	inf	0
neos-582605	3600.26	1377058	40094	1	5	0
neos-583731	3599.73	1891249	91420	not	inf	0
neos-584146	3600.49	3835256	113079	0	1.80E+016	0
neos-584851	72.72	50116	1864	-11	0	1
neos-584866	3559.07	702028	3581	-24	6	0
neos-585467	53.72	27264	1061109567	not	inf	0
neos-595904	3599.71	757264	25720	not	inf	0
neos-595905	319.92	371855	10027	not	inf	0
neos-595925	3599.91	1901506	127368	not	inf	0
neos-598183	3600.34	3089157	101407	18504.06	0.04	0
neos-603073	1534.48	1466879	56959	16839.25	0.09	0
neos-611135	2314.92	157650	3839	not	inf	0
neos-611838	3600.66	2259426	47277	1763966.71	0.05	0
neos-612125	3505.01	2180101	43865	1844367.88	0	1
neos-612143	3600.48	2220706	50404	1795981.08	0.03	0
neos-612162	3600.45	2039322	45313	1772948.96	0.04	0
neos-619167	3599.37	2882256	7237	not	inf	0
neos-631164	39.22	13805	23	not	inf	0
neos-631694	3600.5	4769139	25892	not	inf	0
neos-631709	3765.34	329412	318	not	inf	0
neos-631784	3604.93	636804	163	not	inf	0
neos-641591	3601.17	121512	1583	not	inf	0
neos-655508	0.11	2	1	63015042	0	1
neos-662469	3601.68	119814	1561	not	inf	0
neos-686190	1588.61	387251	17711	6730	0	1
neos-691058	3602.1	1253613	3525	297	0.19	0
neos-709469	10.32	26186	680	493.16	0	1
neos-775946	3599.58	1845994	38057	16.9	0.11	0
neos-777800	389.47	601920	720	-80	0	1
neos-780889	3018.09	41115	116	3421500	0	1
neos-785899	854.26	631570	12218	101	0	1
neos-785912	3600.17	3915140	12450	not	inf	0
neos-785914	1404.82	1743877	6730	38	0	1
neos-787933	3600.94	46181	1951	not	inf	0
neos-791021	3601.17	191742	1655	not	inf	0
neos-796608	2587.97	3822736	2628745	-48296500	0	1
neos-799711	217.39	30080	1061109567	not	inf	0
neos-799838	3602.23	965696	6428	1308000	0.19	0
neos-801834	986.4	91359	1483	50386	0	1
neos-803219	440.78	295402	62970	210.3	0	1
neos-803220	929.48	584383	141721	195.4	0	1
neos-806323	250.62	177726	26652	215	0	1
neos-807454	3600.23	724867	8033	not	inf	0

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Name	Time	Iters	Nodes	Best	Ogap	Solved
neos-807456	3599.93	1713624	7992	not	inf	0
neos-807639	1912.41	696058	130591	454.2	0	1
neos-807705	1328.92	939060	166619	342.4	0	1
neos-808072	3599.77	1149967	7918	not	inf	0
neos-808214	3599.48	4679883	29559	not	inf	0
neos-810286	151.95	38471	65	2877	0	1
neos-810326	3095.23	942358	9367	-44378	0	1
neos1	3599.39	2215642	45599	not	inf	0
neos10	3601.88	188078	1765	-1135	0.04	0
neos11	2469.51	2192982	11830	9	0	1
neos12	3599.76	891275	1977	not	inf	0
neos13	3596.16	12494	807	-68.62	0.62	0
neos14	3600.77	986713	140259	75780.91	0.13	0
neos15	3600.78	1064667	166540	83582.79	0.17	0
neos16	3600.87	1769570	179174	not	inf	0
neos17	3599.79	436210	110294	not	inf	0
neos18	3599.52	3627736	47402	16	0.31	0
neos19	3465.49	65726	1061109567	not	inf	0
neos2	2564.09	4593070	113618	454.86	0	1
neos20	839.45	183996	6120	not	inf	0
neos3	3600.1	6780197	81116	671.65	4.71	0
neos4	3384.3	95711	1061109567	not	inf	0
neos5	3600.93	5849236	1208059	15	0.09	0
neos6	3600.55	665224	8615	93	0.11	0
neos7	217.37	68400	9259	725934	0.2	0
neos9	3601.31	387057	936	798	0.02	0
newdano	3600.57	9085081	63365	67.4	0.55	0
noswot	3600.47	917017	270366	not	inf	0
npmv07	3489.84	234461	1061109567	not	inf	0
nsa	3600.56	9022418	236562	136	0.32	0
nsrand-ipx	3600.45	54526	9616	not	inf	0
nug08	94.3	34172	111	214	0	1
nw04	68.04	1883	125	16862	0	1
p0033	0.06	1096	466	3089	0	1
p0201	3.69	11326	884	7615	0	1
p0282	32.36	18887	1766	258411	0	1
p0291	0.13	1105	205	5223.75	0	1
p0548	3.09	4558	439	8691	0	1
p2756	17.52	4911	658	3124	0	1
p6b	3599.35	573818	34187	not	inf	0
pg	3599.9	5806033	122017	-8666.33	0.02	0
pg5_34	3599.52	6509889	178845	-14329.89	0.01	0
pipex	0.51	4484	1453	788.26	0	1
pk1	2672.46	6783880	1321019	11	0	1
pp08a	760.64	418394	53966	7350	0	1
pp08aCUTS	1020.04	537152	65549	7350	0.05	0
prod1	3551.13	4848519	616528	-56	0	1
prod2	3599.54	2882282	220790	-60	0.26	0
protfold	3603.03	2798888	776	not	inf	0
qap10	563	273830	141	340	0	1
qiu	3600.14	4493266	136056	-132.87	3.24	0
qnet1	24.77	23514	696	16029.69	0	1
qnet1_o	35.05	43614	912	16029.69	0	1
ramos3	3732.51	64716	18	not	inf	0
ran10x10a	16.52	35791	13947	1499	0	1
ran10x10b	5.12	13472	4102	3073	0	1
ran10x10c	596.3	1047317	501957	13007	0	1
ran10x12	3.92	7758	2248	2714	0	1
ran10x26	3018.97	2369931	823570	4270	0	1
ran12x12	3600.32	5026176	1912418	2291	0.15	0
ran12x21	3599.6	1173483	312845	3664	0.11	0
ran13x13	3599.18	1451998	492857	3271	0.14	0
ran14x18	3599.29	1360535	384087	4625	0.31	0
ran14x18_1	3600.27	773858	218370	not	inf	0
ran14x18_disj-8	3600.27	2926741	249780	3873	0.11	0
ran16x16	3599.71	1338447	376309	4020	0.2	0
ran17x17	3599.79	1128247	380278	1373	0.05	0
ran4x64	1.6	2437	821	9711	0	1
ran6x43	1.8	2461	679	6330	0	1
ran8x32	3600.46	1061469	386413	5327	0.06	0
rd-rplusc-21	3536.26	2882	1061109567	not	inf	0
rentacar	6.05	6155	49	30356760.98	0	1
rgn	12.58	24823	4701	82.2	0	1
rlp1	3600.02	2059797	157538	15	0.07	0
rlp2	1883.49	5387670	405551	19	0	1

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Name	Time	Iters	Nodes	Best	Ogap	Solved
roll3000	1835.58	651098	21184	not	inf	0
rout	752.34	950845	58083	1202.29	0.18	0
roy	2.58	6656	2838	3208.96	0	1
set1al	1.75	668	36	15869.75	0	1
set1ch	3589.08	1747144	298378	55397.25	0.07	0
seymour	3600.04	656279	8544	not	inf	0
seymour.disj-10	3599.9	1490271	2850	293	0.04	0
sp98ic	3597.82	5413894	1061109567	not	inf	0
stein15	1.22	5130	79	9	0	1
stein27	11.92	20456	3226	18	0	1
stein45	388.35	345877	58162	30	0	1
stein9	0.01	296	6	5	0	1
stp3d	3593.7	118728	1061109567	not	inf	0
t1717	3603.14	14564	305	not	inf	0
Test3	1787.69	404609	11878	2673520.21	0	1
timtab1	3599.75	1085955	182474	not	inf	0
timtab2	3600.06	586523	80389	not	inf	0
tr12-30	3600.28	1323088	257317	134023	0.11	0
vpm1	0.79	1640	53	20	0	1
vpm2	3599.64	2334448	407595	13.75	0.12	0