

## Appendix A: Instance Detail

Instance name	variable count	constraint count
QP_9048.lp	202	1
QP_9030.lp	10000	5000
QP_7164.lp	420	225
QP_7159.lp	364	196
QP_7154.lp	312	169
QP_7149.lp	264	144
QP_7144.lp	220	121
QP_7139.lp	180	100
QP_7127.lp	1000	50
QP_6941.lp	2203	315
QP_6799.lp	2075	297
QP_6764.lp	2071	297
QP_6757.lp	2046	297
QP_6647.lp	627	33
QP_6597.lp	600	60
QP_6487.lp	618	309
QP_6324.lp	640	16
QP_5980.lp	150	8381
QP_5971.lp	150	5587
QP_5962.lp	150	2793
QP_5944.lp	100	2475
QP_5935.lp	100	1237
QP_5922.lp	500	0
QP_5909.lp	250	0
QP_5882.lp	150	0
QP_5881.lp	120	0
QP_5875.lp	200	0
QP_5755.lp	400	0
QP_5725.lp	343	0
QP_5721.lp	300	0
QP_3980.lp	235	48
QP_3931.lp	316	80
QP_3923.lp	395	80
QP_3913.lp	300	61
QP_3883.lp	182	1456
QP_3877.lp	630	0
QP_3865.lp	525	50
QP_3860.lp	435	8120
QP_3852.lp	231	0
QP_3850.lp	1225	0
QP_3841.lp	300	4600
QP_3838.lp	780	0
QP_3834.lp	50	1
QP_3832.lp	561	0
QP_3822.lp	861	0
QP_3815.lp	192	64
QP_3803.lp	190	2280
QP_3780.lp	168	72
QP_3775.lp	180	60
QP_3772.lp	380	4560
QP_3762.lp	90	480
QP_3757.lp	552	8096
QP_3752.lp	462	6160
QP_3751.lp	150	50
QP_3750.lp	210	70
QP_3745.lp	325	0
QP_3738.lp	435	0
QP_3714.lp	120	40
QP_3709.lp	600	50

**Table 1** Instances detail

Instance name	variable count	constraint count
QP_3706.lp	703	0
QP_3705.lp	378	0
QP_3703.lp	225	30
QP_3693.lp	1128	0
QP_3650.lp	946	0
QP_3642.lp	1035	0
QP_3614.lp	210	44
QP_3587.lp	240	46
QP_3584.lp	528	10912
QP_3565.lp	276	0
QP_3562.lp	63	42
QP_3506.lp	496	0
QP_3413.lp	400	40
QP_3402.lp	144	24
QP_3380.lp	8904	823
QP_3361.lp	1024	64
QP_3347.lp	676	52
QP_3307.lp	256	32
QP_2957.lp	484	44
QP_2880.lp	625	50
QP_2733.lp	324	36
QP_2512.lp	100	20
QP_2492.lp	196	28
QP_2359.lp	306	3264
QP_2357.lp	240	2240
QP_2315.lp	595	13090
QP_2096.lp	300	6925
QP_2087.lp	276	6096
QP_2085.lp	253	5336
QP_2077.lp	231	4642
QP_2073.lp	210	4011
QP_2067.lp	190	3440
QP_2060.lp	171	2926
QP_2055.lp	153	2466
QP_2047.lp	136	2057
QP_2036.lp	324	324
QP_2029.lp	299	299
QP_2022.lp	275	275
QP_2017.lp	252	252
QP_1976.lp	152	152
QP_10074.lp	75	10
QP_10073.lp	75	6
QP_10072.lp	75	10
QP_10071.lp	200	11
QP_10070.lp	200	11
QP_10069.lp	200	10
QP_10068.lp	200	11
QP_10067.lp	200	5
QP_10066.lp	200	11
QP_10065.lp	200	11
QP_10064.lp	200	11
QP_10063.lp	200	5
QP_10062.lp	200	10
QP_10061.lp	200	5
QP_10060.lp	200	10
QP_10059.lp	200	10
QP_10058.lp	200	11
QP_10057.lp	200	11
QP_10056.lp	175	5

Table 2 Instances detail

Instance name	variable count	constraint count
QP_10055.lp	175	5
QP_10054.lp	175	11
QP_10053.lp	150	10
QP_10052.lp	150	6
QP_10051.lp	150	10
QP_10050.lp	150	5
QP_10049.lp	150	10
QP_10048.lp	150	5
QP_10047.lp	150	10
QP_10046.lp	150	6
QP_10045.lp	150	10
QP_10044.lp	150	6
QP_10043.lp	150	10
QP_10042.lp	125	5
QP_10041.lp	125	6
QP_10040.lp	125	6
QP_0752.lp	250	1
QP_0633.lp	75	1
QP_0067.lp	80	1
_st_testph4.lp	3	10
_st_testgr3.lp	20	20
_st_testgr1.lp	10	5
_st_test8.lp	24	20
_st_test6.lp	10	5
_st_test5.lp	10	11
_st_test4.lp	6	5
_st_test3.lp	13	10
_st_test2.lp	6	2
_st_test1.lp	5	1
_st_miqp3.lp	2	1
_st_miqp2.lp	4	3
_st_miqp1.lp	5	1
_prob03.lp	2	1
_prob02.lp	6	8
_pb351575.lp	525	50
_pb351555.lp	525	50
_pb351535.lp	525	50
_pb302075.lp	600	50
_pb302055.lp	600	50
_pb302035.lp	600	50
_nvs24.lp	10	10
_nvs23.lp	9	9
_nvs19.lp	8	8
_nvs18.lp	6	6
_nvs17.lp	7	7
_nvs15.lp	4	1
_nvs13.lp	5	5
_nvs12.lp	4	4
_nvs11.lp	3	3
_nvs10.lp	2	2
_nvs03.lp	3	2

Table 3 Instances detail

Instance name	variable count	constraint count
_Graphpart_3pm-0334-0334.lp	108	36
_Graphpart_3pm-0333-0333.lp	81	27
_Graphpart_3pm-0244-0244.lp	96	32
_Graphpart_3pm-0234-0234.lp	72	24
_Graphpart_3g-0444-0444.lp	192	64
_Graphpart_3g-0344-0344.lp	144	48
_Graphpart_3g-0334-0334.lp	108	36
_Graphpart_3g-0333-0333.lp	81	27
_Graphpart_3g-0244-0244.lp	96	32
_Graphpart_3g-0234-0234.lp	72	24
_Graphpart_2pm-0099-0999.lp	243	81
_Graphpart_2pm-0088-0888.lp	192	64
_Graphpart_2pm-0077-0777.lp	147	49
_Graphpart_2pm-0066-0066.lp	108	36
_Graphpart_2pm-0055-0055.lp	75	25
_Graphpart_2pm-0044-0044.lp	48	16
_Graphpart_2g-1010-0824.lp	300	100
_Graphpart_2g-0099-9211.lp	243	81
_Graphpart_2g-0088-0088.lp	192	64
_Graphpart_2g-0077-0077.lp	147	49
_Graphpart_2g-0066-0066.lp	108	36
_Graphpart_2g-0055-0062.lp	75	25
_Graphpart_2g-0044-1601.lp	48	16
_crossdock_15x8.lp	240	46
_chimera_selby-c8-onc8-02.lp	507	0
_chimera_selby-c8-onc8-01.lp	507	0
_chimera_selby-c16-02.lp	2031	0
_chimera_selby-c16-01.lp	2031	0
_chimera_rfr-02.lp	2032	0
_chimera_rfr-01.lp	2032	0
_chimera_mis-02.lp	2032	0
_chimera_mis-01.lp	2032	0
_chimera_mgw-c8-507-onc8-02.lp	508	0
_chimera_mgw-c8-507-onc8-01.lp	508	0
_chimera_mgw-c8-439-onc8-002.lp	440	0
_chimera_mgw-c8-439-onc8-001.lp	440	0
_chimera_mgw-c16-2031-02.lp	2032	0
_chimera_mgw-c16-2031-01.lp	2032	0
_chimera_lga-02.lp	964	0
_chimera_lga-01.lp	1120	0
_chimera_k64maxcut-02.lp	1145	0
_chimera_k64maxcut-01.lp	1101	0
_chimera_k64ising-01.lp	1192	0
_ball_mk4_15.lp	30	1
_ball_mk4_10.lp	20	1
_ball_mk4_05.lp	10	1
_ball_mk3_30.lp	30	1
_ball_mk3_20.lp	20	1
_ball_mk3_10.lp	10	1
_ball_mk2_30.lp	30	1
_ball_mk2_10.lp	10	1

Table 4 Instances detail