

Table 1: Reported results for problems 5.1-5.2

Pnum	Nvars	Ipt	IDKM			Algorithm 2.1			DLPA			ATTCGP		
			#IT	FE	PT	Norm	#IT	FE	PT	Norm	#IT	FE	PT	Norm
5.1	1000	x_0^1	2	7	0.0054	0	31	33	0.6728	9.34E-09	3	19	0.5706	0
	1000	x_0^2	2	8	0.0090	0	39	42	0.1121	8.22E-09	1	5	0.0339	0
	1000	x_0^3	2	11	0.0062	0	40	44	0.0471	9.39E-09	***	***	***	***
	1000	x_0^4	5	16	0.0138	0	37	40	0.0477	9.70E-09	5	52	0.0228	0
	1000	x_0^5	1	4	0.0106	0	38	41	0.2602	5.32E-09	1	4	0.0064	0
	1000	x_0^6	5	16	0.0125	0	39	41	0.0503	8.30E-09	5	52	0.0210	0
	10000	x_0^1	2	7	0.0303	0	31	33	0.2396	9.35E-09	3	19	0.0387	0
	10000	x_0^2	2	8	0.0310	0	42	45	0.2915	7.08E-09	1	5	0.0183	0
	10000	x_0^3	2	11	0.0274	0	43	47	0.2592	8.07E-09	***	***	***	***
	10000	x_0^4	5	16	0.0344	0	40	43	0.2699	8.44E-09	2	16	0.0443	0
	10000	x_0^5	1	4	0.0204	0	40	43	0.2365	5.25E-09	1	4	0.0219	0
	10000	x_0^6	5	16	0.0553	0	41	44	0.3161	6.29E-09	2	16	0.0413	0
	50000	x_0^1	2	7	0.0725	0	31	33	1.0419	9.35E-09	3	19	0.1444	0
	50000	x_0^2	2	8	0.0922	0	44	47	1.2422	6.41E-09	1	5	0.0716	0
	50000	x_0^3	2	11	0.0930	0	45	49	1.2257	7.37E-09	***	***	***	***
	50000	x_0^4	5	16	0.1756	0	42	45	0.8705	7.68E-09	2	16	0.1671	0
5.2	50000	x_0^5	1	4	0.0416	0	42	44	0.8588	8.02E-09	1	4	0.0499	0
	50000	x_0^6	5	16	0.1637	0	42	45	0.9282	9.20E-09	2	16	0.1541	0
	1000	x_0^1	5	6	0.0132	2.22E-16	28	30	0.0406	5.09E-09	9	55	0.0885	0
	1000	x_0^2	2	3	0.0061	0	32	34	0.0420	6.32E-09	***	***	***	***
	1000	x_0^3	3	4	0.0085	0	33	35	0.0469	5.62E-09	***	***	***	***
	1000	x_0^4	6	7	0.0131	1.47E-24	31	33	0.0439	6.38E-09	7	41	0.0230	0
	1000	x_0^5	2	3	0.0058	0	31	33	0.0332	5.98E-09	8	33	0.0227	0
	1000	x_0^6	6	7	0.0187	8.01E-24	31	33	0.0463	6.35E-09	7	41	0.0210	0
	10000	x_0^1	6	7	0.0547	1.72E-12	28	30	0.3523	5.08E-09	7	30	0.0883	0
	10000	x_0^2	2	3	0.0261	0	34	36	0.2747	5.06E-09	***	***	***	***
	10000	x_0^3	3	4	0.0255	0	34	36	0.2821	8.88E-09	***	***	***	***
	10000	x_0^4	6	7	0.0427	1.36E-09	33	35	0.2905	5.11E-09	***	***	***	***
	10000	x_0^5	2	3	0.0206	0	32	34	0.2362	9.50E-09	***	***	***	***
	10000	x_0^6	6	7	0.0507	1.54E-09	33	35	0.2281	5.11E-09	***	***	***	***
	50000	x_0^1	9	14	0.2506	3.35E-09	28	30	0.6760	5.08E-09	7	30	0.3055	0
	50000	x_0^2	2	3	0.0615	0	35	37	0.8587	5.69E-09	***	***	***	***
5.3	50000	x_0^3	3	4	0.0826	0	35	37	0.9470	9.98E-09	***	***	***	***
	50000	x_0^4	9	16	0.2631	6.07E-09	34	36	0.8528	5.76E-09	***	***	***	***
	50000	x_0^5	2	3	0.0592	0	34	36	0.8400	5.39E-09	***	***	***	***
	50000	x_0^6	10	16	0.2734	6.05E-10	34	36	0.8999	5.75E-09	***	***	***	***
	1000	x_0^1	5	6	0.0132	2.22E-16	28	30	0.0406	5.09E-09	9	55	0.0885	0
	1000	x_0^2	2	3	0.0061	0	32	34	0.0420	6.32E-09	***	***	***	***
	1000	x_0^3	3	4	0.0085	0	33	35	0.0469	5.62E-09	***	***	***	***
	1000	x_0^4	6	7	0.0131	1.47E-24	31	33	0.0439	6.38E-09	7	41	0.0230	0
	1000	x_0^5	2	3	0.0058	0	31	33	0.0332	5.98E-09	8	33	0.0227	0
	1000	x_0^6	6	7	0.0187	8.01E-24	31	33	0.0463	6.35E-09	7	41	0.0210	0
	10000	x_0^1	6	7	0.0547	1.72E-12	28	30	0.3523	5.08E-09	7	30	0.0883	0
	10000	x_0^2	2	3	0.0261	0	34	36	0.2747	5.06E-09	***	***	***	***
	10000	x_0^3	3	4	0.0255	0	34	36	0.2821	8.88E-09	***	***	***	***
	10000	x_0^4	6	7	0.0427	1.36E-09	33	35	0.2905	5.11E-09	***	***	***	***
	10000	x_0^5	2	3	0.0206	0	32	34	0.2362	9.50E-09	***	***	***	***
	10000	x_0^6	6	7	0.0507	1.54E-09	33	35	0.2281	5.11E-09	***	***	***	***

Table 2: Reported results for problems 5.3-5.4

Pnum	Nvars	Ipt	IDKM				Algorithm 2.1				DLPA				ATTCGP			
			#IT	FE	PT	Norm	#IT	FE	PT	Norm	#IT	FE	PT	Norm	#IT	FE	PT	Norm
5.3	1000	x_1^1	2	4	0.0182	0	27	30	0.1644	6.52E-09	1	3	0.0830	0	37	75	0.0575	7.13E-09
	1000	x_2^0	1	3	0.0079	0	32	35	0.0432	5.87E-09	1	3	0.0097	0	43	87	0.0635	7.54E-09
	1000	x_3^0	7	18	0.0176	8.60E-09	35	38	0.0426	6.17E-09	1	4	0.0056	0	44	89	0.0440	6.59E-09
	1000	x_4^0	8	16	0.0200	1.03E-09	31	34	0.0369	5.46E-09	1	3	0.0065	0	42	85	0.0621	7.95E-09
	1000	x_5^0	1	3	0.0054	0	31	34	0.0353	5.10E-09	1	3	0.0101	0	42	85	0.0689	7.81E-09
	1000	x_6^0	8	16	0.0181	1.08E-09	31	34	0.0274	5.34E-09	1	3	0.0070	0	42	85	0.0796	7.94E-09
	10000	x_1^1	2	4	0.0205	0	27	30	0.1490	6.53E-09	1	3	0.0182	0	37	75	0.2952	7.13E-09
	10000	x_2^0	1	3	0.0135	0	33	36	0.1737	9.31E-09	1	3	0.0136	0	45	91	0.2608	8.58E-09
	10000	x_3^0	8	18	0.0674	2.72E-09	36	39	0.2069	9.82E-09	1	4	0.0151	0	46	93	0.2702	7.50E-09
	10000	x_4^0	8	16	0.0693	3.26E-09	32	35	0.1863	8.66E-09	1	3	0.0213	0	44	89	0.3320	9.06E-09
	10000	x_5^0	1	3	0.0186	0	32	35	0.2238	8.07E-09	1	3	0.0175	0	44	89	0.2652	8.89E-09
	10000	x_6^0	8	16	0.0665	3.24E-09	32	35	0.2020	8.68E-09	1	3	0.0134	0	44	89	0.2524	9.12E-09
	50000	x_1^1	2	4	0.0743	0	27	30	0.6013	6.53E-09	1	3	0.0507	0	37	75	0.8816	7.13E-09
	50000	x_2^0	1	3	0.0391	0	35	38	0.7678	5.25E-09	1	3	0.0376	0	47	95	1.0146	6.91E-09
	50000	x_3^0	8	18	0.2233	6.08E-09	38	41	0.7973	5.57E-09	1	4	0.0571	0	48	97	0.9998	6.04E-09
	50000	x_4^0	8	16	0.1933	7.28E-09	33	36	0.7482	9.69E-09	1	3	0.0453	0	46	93	1.0365	7.29E-09
	50000	x_5^0	1	3	0.0372	0	33	36	0.6742	9.03E-09	1	3	0.0480	0	46	93	1.0061	7.16E-09
	50000	x_6^0	8	16	0.2086	7.33E-09	33	36	0.8039	9.71E-09	1	3	0.0486	0	46	93	1.0370	7.28E-09
5.4	1000	x_1^1	5	20	0.0122	7.99E-09	40	44	0.0778	7.40E-09	**	**	**	**	37	112	0.0574	8.05E-09
	1000	x_2^0	8	32	0.0190	4.25E-09	41	44	0.0399	8.11E-09	**	**	**	**	38	111	0.0475	9.70E-09
	1000	x_3^0	16	54	0.0262	7.60E-09	51	57	0.0575	6.87E-09	**	**	**	**	65	168	0.0982	5.39E-09
	1000	x_4^0	7	27	0.0151	5.60E-10	41	45	0.0554	6.73E-09	**	**	**	**	36	109	0.0597	6.96E-09
	1000	x_5^0	5	24	0.0149	6.12E-09	39	43	0.0397	9.77E-09	**	**	**	**	36	109	0.0632	6.18E-09
	1000	x_6^0	7	27	0.0157	6.01E-10	41	45	0.0537	6.66E-09	**	**	**	**	36	109	0.0614	6.88E-09
	10000	x_1^1	6	24	0.0613	6.16E-11	41	45	0.2404	8.25E-09	**	**	**	**	39	118	0.2949	7.44E-09
	10000	x_2^0	9	32	0.1599	7.91E-11	43	46	0.2737	9.52E-09	**	**	**	**	40	117	0.3090	8.88E-09
	10000	x_3^0	16	58	0.1555	9.04E-09	53	59	0.3323	8.07E-09	**	**	**	**	66	171	0.4341	9.18E-09
	10000	x_4^0	7	27	0.0697	1.76E-09	43	47	0.2399	7.89E-09	**	**	**	**	38	115	0.3195	6.37E-09
	10000	x_5^0	6	24	0.0650	1.14E-10	42	46	0.2701	6.99E-09	**	**	**	**	38	115	0.2691	5.66E-09
	10000	x_6^0	7	27	0.0644	1.78E-09	43	47	0.2312	7.88E-09	**	**	**	**	38	115	0.3019	6.36E-09
	50000	x_1^1	6	24	0.2223	1.44E-10	42	46	0.8625	7.54E-09	**	**	**	**	40	121	1.1081	8.97E-09
	50000	x_2^0	9	32	0.3442	1.77E-10	45	48	0.8751	7.90E-09	**	**	**	**	42	123	1.1029	5.75E-09
	50000	x_3^0	17	58	0.5558	1.19E-10	55	61	1.1551	6.70E-09	**	**	**	**	68	177	1.9815	5.94E-09
	50000	x_4^0	7	27	0.2309	3.95E-09	45	49	0.9123	6.55E-09	**	**	**	**	39	118	1.0850	7.66E-09
	50000	x_5^0	6	24	0.2133	2.55E-10	43	47	0.8285	9.53E-09	**	**	**	**	39	118	1.0433	6.81E-09
	50000	x_6^0	7	27	0.2510	3.91E-09	45	49	0.8471	6.56E-09	**	**	**	**	39	118	1.1043	7.65E-09

Table 3: Reported results for problems 5.5-5.6

Pnum	Nvars	Ipt	IDKM			Algorithm 2.1			DLPA			ATCGP		
			#IT	FE	PT	Norm	#IT	FE	PT	Norm	#IT	FE	PT	Norm
5.5	1000	x_0^1	7	17	0.0189	5.56E-09	33	36	0.1905	5.98E-09	***	***	***	***
	1000	x_0^2	7	15	0.0130	9.18E-09	32	35	0.0436	7.90E-09	35	164	0.0998	4.07E-09
	1000	x_0^3	7	15	0.0188	6.37E-09	32	35	0.0442	5.44E-09	39	170	0.1063	8.13E-09
	1000	x_0^4	7	17	0.0190	4.59E-09	32	35	0.0626	9.87E-09	***	***	***	***
	1000	x_0^5	7	17	0.0189	4.58E-09	32	35	0.0652	9.85E-09	***	***	***	***
	1000	x_0^6	7	17	0.0211	4.60E-09	32	35	0.0679	9.82E-09	***	***	***	***
	10000	x_0^1	8	17	0.0845	1.78E-09	34	37	0.2860	9.49E-09	***	***	***	***
	10000	x_0^2	8	17	0.0768	1.17E-09	34	37	0.3272	6.25E-09	***	***	***	***
	10000	x_0^3	7	17	0.1004	8.07E-09	33	36	0.2939	8.60E-09	***	***	***	***
	10000	x_0^4	8	17	0.1100	1.47E-09	34	37	0.3789	7.81E-09	***	***	***	***
	10000	x_0^5	8	17	0.0857	1.46E-09	34	37	0.3043	7.80E-09	***	***	***	***
	10000	x_0^6	8	17	0.1026	1.46E-09	34	37	0.3290	7.81E-09	***	***	***	***
	50000	x_0^1	8	17	0.3254	3.98E-09	36	39	1.1692	5.31E-09	***	***	***	***
	50000	x_0^2	8	17	0.3647	2.62E-09	35	38	1.1328	6.99E-09	***	***	***	***
	50000	x_0^3	8	17	0.3636	1.80E-09	34	37	1.1422	9.62E-09	***	***	***	***
	50000	x_0^4	8	17	0.3421	3.28E-09	35	38	1.1169	8.73E-09	***	***	***	***
	50000	x_0^5	8	17	0.4026	3.27E-09	35	38	1.1230	8.72E-09	***	***	***	***
	50000	x_0^6	8	17	0.3763	3.28E-09	35	38	1.1538	8.73E-09	***	***	***	***
5.6	1000	x_0^1	2	7	0.0201	0	31	33	0.1063	5.49E-09	3	19	0.0457	0
	1000	x_0^2	1	4	0.0113	0	40	42	0.0472	5.71E-09	1	4	0.0138	0
	1000	x_0^3	5	15	0.0133	5.81E-10	43	46	0.0397	8.04E-09	28	112	0.0443	9.68E-09
	1000	x_0^4	1	4	0.0078	0	38	41	0.0416	6.66E-09	1	4	0.0095	0
	1000	x_0^5	1	4	0.0081	0	38	40	0.0423	8.88E-09	1	4	0.0075	0
	1000	x_0^6	1	4	0.0048	0	38	41	0.0422	6.42E-09	1	4	0.0071	0
	10000	x_0^1	2	7	0.0296	0	31	33	0.1874	5.50E-09	3	19	0.0390	0
	10000	x_0^2	1	4	0.0159	0	41	44	0.2876	6.17E-09	1	4	0.0218	0
	10000	x_0^3	3	9	0.0314	0	46	49	0.2701	6.95E-09	34	125	0.3018	7.22E-09
	10000	x_0^4	1	4	0.0136	0	40	43	0.2378	6.67E-09	1	4	0.0314	0
	10000	x_0^5	1	4	0.0244	0	40	43	0.2332	5.67E-09	1	4	0.0171	0
	10000	x_0^6	1	4	0.0124	0	40	43	0.2395	6.55E-09	1	4	0.0198	0
	50000	x_0^1	2	7	0.0874	0	31	33	0.6102	5.50E-09	3	19	0.1751	0
	50000	x_0^2	1	4	0.0476	0	42	45	0.9210	7.30E-09	1	4	0.0474	0
	50000	x_0^3	3	9	0.1235	0	48	51	1.0134	6.48E-09	37	136	1.1184	5.82E-09
	50000	x_0^4	1	4	0.0913	0	42	44	0.8560	8.94E-09	1	4	0.0632	0
	50000	x_0^5	1	4	0.0553	0	42	44	0.8697	7.76E-09	1	4	0.0484	0
	50000	x_0^6	1	4	0.0449	0	42	44	0.8544	8.72E-09	1	4	0.0503	0

Table 4: Reported results for problems 5.7

Pnum	Nvars	Ipt	IDKM			Algorithm 2.1			DLPA			ATTCGP		
			#IT	FE	PT	Norm	#IT	FE	PT	Norm	#IT	FE	PT	Norm
5.7	1000	x_0^1	1	2	0.0096	0	1	2	0.6655	0	1	2	0.0050	0
	1000	x_0^2	1	2	0.0042	0	1	2	0.0202	0	1	2	0.0063	0
	1000	x_0^3	1	2	0.0047	0	1	2	0.0053	0	1	2	0.0071	0
	1000	x_0^4	1	2	0.0059	0	1	2	0.0057	0	1	2	0.0057	0
	1000	x_0^5	1	2	0.0087	0	1	2	0.0064	0	1	2	0.0054	0
	1000	x_0^6	1	2	0.0090	0	1	2	0.0067	0	1	2	0.0103	0
	10000	x_0^1	1	2	0.0125	0	1	2	0.0108	0	1	2	0.0132	0
	10000	x_0^2	1	2	0.0123	0	1	2	0.0160	0	1	2	0.0118	0
	10000	x_0^3	1	2	0.0212	0	1	2	0.0109	0	1	2	0.0169	0
	10000	x_0^4	1	2	0.0143	0	1	2	0.0226	0	1	2	0.0140	0
	10000	x_0^5	1	2	0.0123	0	1	2	0.0156	0	1	2	0.0103	0
	10000	x_0^6	1	2	0.0111	0	1	2	0.0108	0	1	2	0.0130	0
	50000	x_0^1	1	2	0.0256	0	1	2	0.0374	0	1	2	0.0354	0
	50000	x_0^2	1	2	0.0337	0	1	2	0.0354	0	1	2	0.0425	0
	50000	x_0^3	1	2	0.0278	0	1	2	0.0714	0	1	2	0.0302	0
	50000	x_0^4	1	2	0.0308	0	1	2	0.0311	0	1	2	0.0360	0
	50000	x_0^5	1	2	0.0287	0	1	2	0.0361	0	1	2	0.0381	0
	50000	x_0^6	1	2	0.0286	0	1	2	0.0403	0	1	2	0.0284	0