Table 1: Results of test examples 1-3

0 1 3 0.0852 1.25E-21 1 3 0.0195 1.25E-21 1 3 0.0093 2.54E-12 1 3 0.0093 0 4 8 0.0439 1.77E-21 1 3 0.0439 1.77E-21 1 3 0.0439 1.77E-21 1 3 0.0439 0 4 8 0.1280 0 4 8 0.1280 0 4 8 0.1280 0 4 8 0.1280 0 9 0.043
0 4 8 1.25E-21 1 3 0 1 3 1.25E-21 1 3 2.54E-12 1 3 0 4 8 1.77E-21 1 3 0 1 3 0 1 3 0 1 3 0 0 0 0 1 3 0 0 0 0 1 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0.0438 1.25E-21 1 0.0204 0 1 0.0207 1.25E-21 1 0.0343 2.54E-12 1 0.0346 0 4 0.073 1.77E-21 1 0.0218 0 1 0.028 1.77E-21 1 0.0497 3.59E-12 1 0.0876 0 4 0.0876 0 4
0.00248 0 3 0.00365 0 2 0.0132 0 11 0.01387 0 11 0.0463 0 11 0.0853 0 2 0.3719 0 2
2 / 0.0363 1 3 0.0122 1 3 0.0133 1 3 0.0463 2 5 0.0853 8 22 0.3719 1 3 0.0521
0.3070 8.55E-11 1 0.3652 8.88E-11 1 1.3267 7.40E-11 1 1.5614 7.57E-11 2 1.6087 7.21E-11 1 1.6087 7.21E-11 1
76 135 13267 7.7 76 134 1.5614 7.8 89 192 1.8685 7.7 78 157 1.6037 7.7 130 1.5037 7.7
000
0 0000
x y

Table 2: Results of test examples 4-6

N Pdim	E			DFPRP				MPRP1			Z	MZPRP			臣	HTTCGP			Ω	DFDFP	
	Ipt	t Nit	Fval	Ptime	Norm	ž	Fval	Ptime	Norm	ž	Fval	Ptime	Norm	ž	Fval	Ptime	Norm	ij	Fval	Ptime	Norm
4 500	00 x1	-	2	0.0069	0	29	132	0.2475	8.23E-11	7	6	0.0348	0	6		0.0242	0	2	4	0.0157	0
5000		. 71	ıκ	0.0104	0	26	148	0.2860	8.40E-11	. 7	· E	0.0263	0	ις.	· ∞	0.0506	0	1 71	4	0.0199	0
2000		9	6	0.0244	2.22E-16	ß	9	0.0413	0	3	4	0.0187	0	3	4	0.0276	0	3	_	0.0290	0
2000		5	œ	0.0178	7.78E-23	23	136	0.2907	9.25E-11	11	16	0980.0	7.19E-11	ß	8	0.0353	0	7	4	0.0142	0
2000	00 x5	2	3	0.0103	0	82	155	0.3593	8.72E-11	11	16	0.0784	0	^	Ξ	0.0708	0	2	4	0.0114	0
2000		_	œ	0.0197	7.79E-23	73	136	0.3600	8.12E-11	11		0.0605	7.20E-11	Ŋ	œ	0.0465	0	2	4	0.0211	0
10000			7	0.0095	0	29	132	0.4670	8.32E-11	11	15	0.0867	0	8	ഗ	0.0359	0	7	4	0.0377	0
10000			3	0.0149	0	3	150	0.5006	8.59E-11	7	3	0.0198	0	Ŋ	œ	0.0523	0	7	4	0.0492	0
10000		91	6	0.0344	3.14E-16	ro I	9	0.0602	0	<u>^</u> ;		0.0653	0	_ω ι	4 (0.0445	0	т (<u>.</u>	0.0693	0
10000	00 x4		ж (0.0355	2.82E-23	Ζ.	132	0.4232	8.25E-11	11		0.0919	7.71E-11	ıcı	∞ ;	0.0611	0 0	7 (4.	0.0223	0 0
10000			m (0.0162	0	£ 6	157	0.5413	9.06E-11	11		0.0912	0	<u> </u>	Ξ ٩	0.0627	0 0	71	4 .	0.0195	0 0
10000		υ -	× 0	0.0348	2.82E-23	? !	130	0.4783	9.56E-11	II	16	0.0903	7.71E-111	v (χı	0.0415	0 0	21 (4 -	0.0309	0 0
50000	00 x	·	7 (0.0300	0 0	ો ઈ	132	1.6621	8.39E-11	Ξ	15	0.3239	0 0	mι	ر د	0.0955	0 (21 (4,	0.1016	0 0
50000	00 x2	21 4	n 0	0.0577	0 2147	ξ, ι	154	2.0168	9.89E-11	71 -	41 0	0.0999	0 0	v.	× ~	0.1592	0 0	N C	4 1	0.0837	0 0
20000		0 1	v 0	0.1510	3.14E-10	v 5	0 7	1 9010	0.00	4 ,		0.1000	1 41E 12	O 11	4 0	0.0927	0 0	0 (0.1327	0 0
20000	** 00	n c	0 0	0.1369	2.39E-24	٥ <u>۲</u>	140	71207	9.30E-11 0.13E 11	CT -	17	0.4500	1.41E-13	1 0	0 =	0.1572	0 0	ч с	4 -	0.0044	-
50000		410	o 00	0.1305	2.6E-24	8 %	146	1.9374	9.13E-11 9.11E-11	13		0.3977	1.40E-13	, ιΩ	; ∞	0.1718	0	1 7	t 4	0.0940	0
5 5000			6	0.0075	0	36	8	0.1558	7.42E-11		6	0.0123	0	13	21	0.0668	1.77E-15	-	60	0.0170	0
			, m	0.0084	0	2 4	8 8	0.1426	8.44E-11		, m	0.0135	0	ю (0.0234	0			0.0170	0
2000			3	0.0075	0	37	8	0.1429	5.88E-11	11	_	0.0572	7.39E-11	4	10	0.0234	0	9	12	0.0605	0
2000	00 x4	1	3	0.0059	0	42	98	0.1494	7.32E-11	1	3	0.0212	0	11	18	0.0516	2.77E-16	1	3	0.0211	0
5000	00 x5	1	3	0.0058	0	22	52	0.0989	4.28E-11	1	3	0.0185	0	3	9	0.0212	0	1	3	0.0000	0
2000	9x 00	1	3	0.0073	0	32	65	0.1193	7.93E-11	1	3	0.0092	0	11	18	0.0629	2.77E-16	1	3	0.0202	0
10000	00 x1		3	0.0103	0	42	82	0.2387	4.16E-11	1	3	0.0141	0	13	21	0.0789	1.78E-15	1	8	0.0165	0
10000	00 x2		3	0.0193	0	43	8	0.2367	2.12E-11	1	ε	0.0151	0	ω.	9	0.0272	0	1		0.0184	0
10000			n	0.0104	0	37	8	0.2229	8.32E-11	7	^	0.0287	0	4	10		0	9	12	0.0560	0
10000	00 x4		e	0.0084	0	4 :	8 1	0.2367	6.19E-11	Η,	e 0	0.0150	0	11	. 18		3.91E-16		e 0	0.0155	0
10000	00 x5		m (0.0104	0	52 :	25	0.1819	6.05E-11	.,	m (0.0186	0	m ;	9 9		0 0	Η,	m (0.0185	0 0
10000	x 5		n n	0.0101	>	# 5	3 5	0.2587	9.70E-12 4.50E-11	- -	n c	0.0173	0 0	13	2 5	0.0725	3.92E-16 1.77E-15	- -	n 11	0.0102	-
50000			o cc	0.030	0 0	£ 4	7 &	0.9464	4.73E-11	, ,	ט וכ	0.0951	0 0	j m	1 v	0.1318	0.77	٠.) (r.	0.0436	o C
50000	00 x3		o го	0.0361	0	9 6	2	0.8672	6.54E-11	13		0.4407	0 0	4	9 2	0.1695	0 0	, 9	17	0.2274	o C
20000	00 x4	-	3	0.0415	0	43	88	0.9077	8.24E-11	1		0.0563	0	11	18		8.75E-16			0.0599	0
50000	00 x5	1	3	0.0338	0	27	29	0.6246	6.27E-11	1		0.0680	0	3	9	0.0879	0	_		0.0427	0
-,	9 x 00	1	3	0.0423	0	41	84	0.8872	1.84E-11	1	3	0.0690	0	11	18	0.2716	8.76E-16	1	3	0.0569	0
9 2000		9	13	0.0376	1.85E-11	6	16	0.0491	5.05E-11	14		0.0993	7.30E-11	* *	* * *	* * *	* * *	11	23		1.61E-11
2000	00 x x	o v	5 5	0.0343	1.49E-11	0 1	7 5	0.0662	7.48E-11	41.	4 6	0.1107	4.00E-13	* * * *	* * *	* * * *	* * * * * *	11	52 5	0.1290	1.06E-11 o 74E 11
5000		9 0	3 5	0.034	1.86E-11	3 6	19	0.0755	9.84E-11	17			5.99E-12	***	***	***	***	11			3.7±E-11 1.33E-11
2000		9	13	0.0400	1.86E-11	6	16	0.0502	5.49E-11	14	24	0.1359	4.91E-11	*	* *	*	***	11	23		1.33E-11
2000	9x 00	9	13	0.0448	1.86E-11	6	19	0.0489	9.84E-11	15	56	0.1174	5.99E-12	***	***	***	***	111	23	0.1113	I.33E-11
10000	00 x1	9	13	0.0544	2.61E-11	6	19	0.0922	7.12E-11	19	33	0.2748	2.78E-11	*	***	* * *	***	11	23	0.1574	2.28E-11
10000	00 x2	9	13	0.0690	2.10E-11	6	19	0.0889	6.38E-11	16	56	0.2401	2.95E-11	***	*	***	***	11	23	0.1718	l.50E-11
10000		9 '	13	0.0620	3.20E-11	10	77	0.1162	4.73E-11	13		0.1937	1.76E-11	* :	* * * * * * * * * * * * * * * * * * * *	* :	* :	11	23		1.03E-11
10000	00 x 4	۰ و	13	0.0585	2.63E-11	<i>2</i> 0	F 6	0.0788	6.56E-11	18	31		3.24E-11	* *	* * *		k 1	Ξ;	5 23		1.88E-11
10000	00 x	۰ م	13	0.0705	2.63E-11	<i>y</i> 0	F 19	0.1101	5.98E-11	19			4.22E-11	* **	****	* **	k #	11 :	52		1.8/E-11
00001	00 x	۰ ۵	5 5	0.035	2.63E-11 5.84E-11	ν 5	5 5	0.1305	6.36E-11 6.33E-12	73	31	1 1202	3.23E-11 2.13E-11	* *	* *	* *	* *	11 11	3 6	0.1722	1.88E-11 5.11E-11
00005		9 0	3 5	0.2537	4.71E-11	2 2	2 12	0.4067	4 19E-12	6 6	7 2	0.9649	1.14E-11	***	**	***	***	11	3 5		3.36E-11
50000	00 x3		13	0.2451	7.15E-11	6	19	0.3867	7.27E-11	17	30	0.9160	5.27E-12	***	***	***	***	11	23		2.31E-11
20000	00 x4	9	13	0.2484	5.88E-11	10	21	0.5163	5.27E-12	20	36	0.9790	2.79E-11	***	***	***	***	11		0.5995	4.20E-11
20000		-	13	0.2574	5.87E-11	Π	23	0.4441	8.16E-11	20	37	0.9824	1.97E-11	* * *	***	***	***	11	23		4.20E-11
20000	9x 00	9	13	0.2517	5.88E-11	10	21	0.4605	5.27E-12	20	36	0.9771	2.79E-11	* * *	***	***	***	11		0.5666	4.20E-11

Table 3: Results of test examples 7-8

	Norm	11E-11	2.26E-11	5.01E-11	5.23E-11	6.36E-11	5.22E-11	1.58E-11	3.20E-11	7.09E-11	7.39E-11	8.99E-11	7.39E-11	3.53E-11	7.15E-11	.40E-11	L47E-11	.78E-11	.47E-11	2.41E-11	l.49E-11	9.74E-11	2.89E-11	5.90E-11	6.64E-11	1.75E-11	54E-11	3.63E-11	.82E-11	3.17E-11	.06E-12	9.82E-12	2.49E-11	2.34E-11	6.79E-11	3.23E-11	2.26E-11
DFDFP					_,	_		()										_	П	. 1		•	(1		•	_		~				-	. ,				_
	Ptime	0.0904	0.0924	0.1109	0.0717	0.0702	0.0811	0.1331	0.1590	0.1488	0.1369	0.1078	0.1330	0.477	0.5017	0.5311	0.5451	0.4865	0.5404	0.1007	0.1158	0.0934	0.1139	0.0799	0.0943	0.1935	0.2080	0.1365	0.1617	0.1967	0.1548	0.7808	0.7686	0.7757	0.6777	0.7447	0.779]
	Fval	27	29	27	27	25	27	27	29	27	27	25	27	27	29	29	29	27	29	26	27	25	27	25	25	28	27	22	26	30	27	30	28	30	25	59	29
	ž	13	12	13	13	12	13	13	12	13	13	12	13	13	12	14	14	13	14	14	14	13	14	13	13	15	14	11	13	17	14	16	15	16	13	16	16
	Norm	****	***	****	**	****	***	***	***	***	***	***	****	***	****	***	****	***	****	****	***	***	***	***	***	***	****	***	***	***	***	***	***	***	***	***	***
GP	Ptime	***	*	***	**	***	*	*	***	*	***	***	***	***	***	***	***	***	***	***	***	*	***	***	***	***	***	*	***	*	***	***	***	***	***	***	***
HTTCGP	Fval Pt	* ***	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	* ***
	Nit F	** ***	** ***	** ***	**	** ***	** ***	* * ***	** ***	**	** ***	** ***	** ***	** ***	** ***	**	** ***	** ***	** ***	** ***	**	**	** ***	**	** ***	** ***	** ***	**	** ***	**	** ***	** ***	** ***	** ***	** ***	** ***	****
	~ 	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	_	*	*	*	*	*	*
	Norm	4.57E-11	3.96E-11	8.33E-11	9.39E-11	8.58E-11	9.42E-11	7.10E-11	5.60E-11	1.49E-11	1.68E-11	1.53E-11	1.68E-11	1.91E-11	1.07E-11	4.14E-11	3.75E-11	3.41E-11	3.76E-11	2.57E-11	5.33E-11	3.80E-11	4.01E-11	3.76E-11	9.34E-11	5.33E-11	7.80E-11	3.14E-11	2.13E-11	1.61E-11	7.59E-11	3.69E-11	2.03E-11	7.40E-11	3.68E-1]	7.09E-11	5.53E-11
MZPRP	Ptime	0.1844	0.1423	0.1632	0.1696	0.1703	0.1574	0.2402	0.2528	0.3219	0.2963	0.2961	0.2793	1.0639	0.8830	1.0180	1.1128	1.0658	1.0644	0.1674	0.1701	0.1570	0.1444	0.1385	0.1510	0.2866	0.2415	0.2394	0.2646	0.3068	0.2734	1.3137	1.2781	1.1048	1.2013	1.1925	1.2234
Σ	Fval	89	53	89	99	89	99	99	23	23	71	23	71	7	28	7	7	33	Z	41	41	37	37	41	36	48	41	36	46	48	49	54	25	45	49	20	52
	Ņ	27	21	27	56	27	56	56	21	56	28	59	28	28	23	28	28	59	28	20	20	18	18	20	19	24	20	19	23	24	22	22	56	22	23	24	25
	r.m	.30E-11	E-11	E-11	E-11	E-11	E-11	E-11	E-11	E-11	E-11	E-11	E-11	E-11	E-11	E-11	E-11	E-11	E-11	E-11	.00E-10	E-11	E-11	.57E-11	E-11	.00E-11	.75E-11	.73E-11	E-12	.34E-11	E-11	E-11	.96E-12	E-11	E-11	E-11	:60E-11
MPRP1	Norm	9.30]	9.11E-1	8.67E-1]	9.85E-11	9.90E-11	9.86E-11	9.92E-11	8.57E-11	8.15E-1	9.26E-1	9.31E-11	9.27E-1		~	8.06E-11	9.16E-11	9.21E-11	9.16E-1	4.89E-1	1.00	9.86E-1	8.10E-1	7.57]	9.24E-1	1.00]	5.75	7.73]	8.93E-12	9.341	1.44E-11	6.22E-11	7.96	9.00E-11	3.25E-11	2.72E-11	2.60]
	Ptime	0.3780	0.3465	0.3636	0.4004	0.3834	0.3814	0.5641	0.5805	0.6121	0.6144	0.6009	0.6335	2.4507	2.3498	2.6905	2.5694	2.4487	2.6462	0.1768	0.1985	0.2016	0.1822	0.2038	0.2103	0.3391	0.2883	0.3372	0.3352	0.3693	0.4468	1.6574	2.0339	1.4072	1.6541	2.0033	1.3974
	Fval	308	307	341	330	325	330	300	312	346	335	330	335	306	322	356	345	340	345	81	4	98	83	88	26	95	4	8	93	92	114	104	123	95	111	134	68
	ž	65	62	20	99	65	99	62	63	71	29	99	29	62	65	73	69	89	69	31	30	32	31	35	37	36	31	38	38	34	46	44	54	35	42	51	34
FPRP	Norm	2.23E-12	6.04E-11	6.16E-12	L91E-12	8.99E-11	1.75E-12	3.14E-12	3.54E-11	7.31E-12	2.64E-12	9.80E-13	53E-12	7.01E-12	1.48E-12	5.14E-11	5.81E-12	2.19E-12	5.76E-12	8.65E-11	8.60E-11	4.63E-11	7.91E-11	7.22E-11	F.86E-11	5.04E-11	5.57E-11	3.16E-11	8.13E-11	6.58E-11	7.45E-11	3.13E-11).21E-11	3.77E-11	l.56E-11	3.69E-11	F.24E-11
	Ptime	0.0333 2	0.0477	0.0531 (0.0715 1	0.0566	0.0665 8	0.1189 7	0.1024 2	0.0875	0.1257 2	0.2434 7	0.3103 1	0.5034		0.3545 2		0.0656	0.0664 8	0.0698	0.0623 7	0.0658 7	0.0690	_	_	0.1226		0.1249 (.,	0.5008	0.5097	0.5242 4	0.5297	0.4961 4
	Fval										30																										
	N:t	∞	10	13	17	13	17	8	10	17									17									12	12	12	12	14	13	14	14	14	14
	Ipt	又	Ş	B	x 4	x2	9x	マ	ğ	B	x 4	Š	9x	ヹ	ğ	Š	x4	х <u>э</u>	9x	x	ğ	B	x 4	х ₂	9x	ヹ	ß	B	x 4	Š	9x	ž	ğ	B	x	χ.	9x
Pdim		2000	2000	2000	2000	2000	2000	10000	00001	10000	0000	0000	0000	20000	20000	20000	20000	20000	20000	5000	2000	2000	2000	2000	2000	0000	0000	10000	0000	10000	0000	20000	20000	20000	20000	20000	20000
z		7	.,	.,		•	.,	1	1	1	1	1	1	IL)	Ľ	ĽΩ	Ľ	ĽΩ	IL)	∞	.,	.,		,		1	1	1	1	1	1	ĽΩ	ιΩ	ц	Ľ)	ц)	ונים