Table 1 Numerical results on Problem 4.1

Init(n)	${ m HA\text{-}DFPM}_{\pm}$	$\mathrm{HA} ext{-}\mathrm{DFPM}$	MITTCGP	ISTCP
	$\mathrm{Itr/NF/Tcpu}/\ F_*\ $	$\mathrm{Itr/NF/Tcpu}/\ F_*\ $	$\mathrm{Itr/NF/Tcpu}/\ F_*\ $	$\mathrm{Itr/NF/Tcpu}/\ F_*\ $
I(10000)	1/5/0.008/0.00e+00	1/5/0.002/0.00e+00	27/80/0.032/9.94e-07	2/8/0.006/0.00e+00
II(10000)	1/5/0.002/0.00e+00	1/5/0.002/0.00e+00	27/82/0.026/9.35e-07	2/8/0.003/0.00e+00
III(10000)	1/5/0.005/0.00e+00	1/5/0.001/0.00e+00	2/7/0.004/0.00e+00	2/8/0.004/0.00e+00
IV(10000)	1/5/0.001/0.00e+00	1/5/0.001/0.00e+00	1/4/0.001/0.00e+00	2/9/0.004/0.00e+00
V(10000)	1/6/0.002/0.00e+00	1/6/0.002/0.00e+00	1/4/0.001/0.00e+00	2/10/0.004/0.00e+00
VI(10000)	1/6/0.002/0.00e+00	1/6/0.002/0.00e+00	1/5/0.002/0.00e+00	2/11/0.003/0.00e+00
VII(10000)	9/37/0.016/0.00e+00	11/44/0.014/5.19e-07	25/74/0.019/9.52e-07	9/37/0.010/0.00e+00
I(50000)	1/5/0.004/0.00e+00	1/5/0.004/0.00e+00	28/85/0.068/8.58e-07	2/8/0.006/0.00e+00
II(50000)	1/5/0.003/0.00e+00	1/5/0.004/0.00e+00	29/88/0.070/7.89e-07	2/8/0.006/0.00e+00
III(50000)	1/5/0.004/0.00e+00	1/5/0.004/0.00e+00	2/7/0.006/0.00e+00	2/8/0.008/0.00e+00
IV(50000)	1/5/0.004/0.00e+00	1/5/0.004/0.00e+00	1/4/0.003/0.00e+00	2/9/0.008/0.00e+00
V(50000)	1/6/0.005/0.00e+00	1/6/0.006/0.00e+00	1/4/0.003/0.00e+00	2/10/0.009/0.00e+00
VI(50000)	1/6/0.005/0.00e+00	1/6/0.005/0.00e+00	1/5/0.006/0.00e+00	2/11/0.010/0.00e+00
VII(50000)	9/37/0.029/0.00e+00	9/37/0.031/8.07e-07	26/79/0.062/8.41e-07	10/41/0.028/0.00e+0
I(100000)	1/5/0.007/0.00e+00	1/5/0.007/0.00e+00	29/87/0.130/9.60e-07	2/8/0.012/0.00e+00
II(100000)	1/5/0.006/0.00e+00	1/5/0.007/0.00e+00	30/90/0.132/8.86e-07	2/8/0.011/0.00e+00
III(100000)	1/5/0.007/0.00e+00	1/5/0.007/0.00e+00	2/7/0.011/0.00e+00	2/8/0.013/0.00e+00
VI(100000)	1/5/0.008/0.00e+00	1/5/0.007/0.00e+00	1/4/0.007/0.00e+00	2/9/0.018/0.00e+00
V(100000)	1/6/0.010/0.00e+00	1/6/0.011/0.00e+00	1/4/0.007/0.00e+00	2/10/0.016/0.00e+00
VI(100000)	1/6/0.010/0.00e+00	1/6/0.011/0.00e+00	1/5/0.009/0.00e+00	2/11/0.019/0.00e+00
VII(100000)	12/48/0.066/5.44e-08	10/41/0.058/0.00e+00	27/81/0.127/9.04e-07	11/45/0.055/0.00e+0
sum	48/-/0.204/-	48/-/0.19/-	263/-/0.726/-	66/-/0.253/-

Table 2 Numerical results on Problem 4.2

Init(n)	${ m HA\text{-}DFPM}_{\pm}$	HA-DFPM_	MITTCGP	ISTCP
	$\mathrm{Itr/NF/Tcpu}/\ F_*\ $	$\mathrm{Itr/NF/Tcpu}/\ F_*\ $	$\mathrm{Itr/NF/Tcpu}/\ F_*\ $	$\mathrm{Itr/NF/Tcpu}/\ F_*\ $
I(10000)	1/5/0.005/0.00e+00	1/5/0.002/0.00e+00	27/81/0.020/9.86e-07	2/12/0.003/0.00e+00
II(10000)	1/5/0.001/0.00e+00	1/5/0.001/0.00e+00	28/85/0.019/9.58e-07	2/12/0.003/0.00e+00
III(10000)	1/5/0.001/0.00e+00	1/5/0.001/0.00e+00	30/91/0.022/8.14e-07	2/12/0.003/0.00e+00
IV(10000)	1/5/0.001/0.00e+00	1/5/0.001/0.00e+00	30/90/0.022/9.74e-07	2/12/0.003/0.00e+00
V(10000)	1/5/0.001/0.00e+00	1/5/0.001/0.00e+00	29/86/0.020/9.45e-07	2/11/0.003/0.00e+00
VI(10000)	1/5/0.001/0.00e+00	1/5/0.001/0.00e+00	1/4/0.001/0.00e+00	2/12/0.003/0.00e+00
VII(10000)	1/5/0.001/0.00e+00	1/5/0.001/0.00e+00	30/90/0.022/8.85e-07	2/12/0.003/0.00e+00
I(50000)	1/5/0.003/0.00e+00	1/5/0.003/0.00e+00	29/87/0.061/8.21e-07	2/12/0.008/0.00e+00
II(50000)	1/5/0.003/0.00e+00	1/5/0.003/0.00e+00	30/91/0.065/8.48e-07	2/12/0.007/0.00e+00
III(50000)	1/5/0.003/0.00e+00	1/5/0.003/0.00e+00	32/96/0.070/9.14e-07	2/12/0.008/0.00e+00
IV(50000)	1/5/0.004/0.00e+00	1/5/0.004/0.00e+00	32/96/0.067/8.48e-07	2/12/0.009/0.00e+00
V(50000)	1/5/0.003/0.00e+00	1/5/0.003/0.00e+00	30/91/0.064/8.93e-07	2/11/0.009/0.00e+00
VI(50000)	1/5/0.004/0.00e+00	1/5/0.004/0.00e+00	1/4/0.003/0.00e+00	2/12/0.009/0.00e+00
VII(50000)	1/5/0.003/0.00e+00	1/5/0.004/0.00e+00	32/95/0.067/9.85e-07	2/12/0.008/0.00e+00
I(100000)	1/5/0.006/0.00e+00	1/5/0.006/0.00e+00	29/88/0.119/9.92e-07	2/12/0.014/0.00e+00
II(100000)	1/5/0.006/0.00e+00	1/5/0.006/0.00e+00	31/93/0.124/9.50e-07	2/12/0.014/0.00e+00
III(100000)	1/5/0.006/0.00e+00	1/5/0.006/0.00e+00	33/99/0.133/7.92e-07	2/12/0.014/0.00e+00
IV(100000)	1/5/0.007/0.00e+00	1/5/0.008/0.00e+00	33/98/0.132/9.38e-07	2/12/0.016/0.00e+00
V(100000)	1/5/0.007/0.00e+00	1/5/0.008/0.00e+00	31/93/0.127/9.97e-07	2/11/0.018/0.00e+00
VI(100000)	1/5/0.008/0.00e+00	1/5/0.009/0.00e+00	1/4/0.007/0.00e+00	2/12/0.017/0.00e+00
VII(100000)	1/5/0.008/0.00e+00	1/5/0.007/0.00e+00	32/97/0.138/9.26e-07	2/12/0.018/0.00e+00
sum	21/-/0.082/-	21/-/0.082/-	551/-/1.303/-	42/-/0.19/-

Table 3 Numerical results on Problem 4.3

Init(n)	${ m HA\text{-}DFPM}_{\pm}$	$\mathrm{HA} ext{-}\mathrm{DFPM}$	MITTCGP	ISTCP
	$Itr/NF/Tcpu/ F_* $	$Itr/NF/Tcpu/ F_* $	$Itr/NF/Tcpu/ F_* $	$Itr/NF/Tcpu/ F_* $
I(10000)	52/315/0.060/8.41e-07	63/384/0.080/7.49e-07	37/136/0.035/7.31e-07	19/144/0.024/3.01e-07
II(10000)	51/310/0.062/8.80e-07	61/374/0.077/8.88e-07	38/142/0.036/6.23e-07	19/147/0.024/3.39e-07
III(10000)	67/409/0.085/9.54e-07	76/464/0.097/7.66e-07	29/115/0.028/9.22e-07	19/199/0.033/4.32e-07
IV(10000)	3/35/0.008/0.00e+00	3/35/0.008/0.00e+00	28/117/0.031/6.60e-07	19/180/0.037/8.95e-07
V(10000)	52/322/0.067/7.13e-07	64/392/0.080/7.83e-07	3/36/0.010/0.00e+00	19/170/0.029/9.89e-07
VI(10000)	3/36/0.009/0.00e+00	3/36/0.008/0.00e+00	29/125/0.031/7.39e-07	17/141/0.028/8.55e-07
VII(10000)	60/368/0.076/9.84e-07	60/370/0.077/9.95e-07	42/172/0.046/6.60e-07	26/207/0.041/6.32e-07
I(50000)	52/315/0.182/8.00e-07	62/378/0.289/9.46e-07	42/150/0.129/8.49e-07	19/142/0.085/3.82e-07
II(50000)	50/303/0.201/8.72e-07	60/366/0.275/8.87e-07	38/143/0.121/8.24e-07	16/124/0.073/7.48e-07
III(50000)	62/379/0.285/8.68e-07	77/470/0.358/7.39e-07	29/110/0.091/8.18e-07	23/240/0.142/4.86e-07
IV(50000)	3/35/0.029/0.00e+00	3/35/0.029/0.00e+00	39/150/0.125/8.35e-07	21/204/0.126/2.43e-07
V(50000)	30/182/0.126/8.02e-07	63/387/0.291/9.71e-07	3/36/0.035/0.00e+00	19/170/0.104/6.76e-07
VI(50000)	3/36/0.034/0.00e+00	3/36/0.030/0.00e+00	41/162/0.135/5.24e-07	24/188/0.132/5.44e-07
VII(50000)	60/366/0.280/9.87e-07	61/377/0.291/9.84e-07	43/178/0.152/9.37e-07	28/223/0.165/4.23e-07
I(100000)	52/315/0.344/7.89e-07	62/378/0.551/9.20e-07	32/120/0.196/9.43e-07	16/122/0.134/7.53e-07
II(100000)	49/298/0.327/7.98e-07	60/366/0.529/8.49e-07	45/166/0.269/7.33e-07	16/123/0.132/7.64e-07
III(100000)	62/379/0.541/8.64e-07	70/428/0.616/7.26e-07	29/116/0.179/7.66e-07	21/236/0.307/6.97e-07
IV(100000)	3/35/0.056/0.00e+00	3/35/0.057/0.00e+00	30/125/0.195/4.92e-07	20/197/0.234/7.36e-07
V(100000)	30/182/0.230/8.05e-07	63/387/0.550/9.47e-07	3/36/0.066/0.00e+00	19/169/0.196/3.78e-07
VI(100000)	3/36/0.060/0.00e+00	3/36/0.060/0.00e+00	31/129/0.207/7.88e-07	24/207/0.233/3.38e-07
VII(100000)	60/368/0.538/9.27e-07	62/382/0.573/7.29e-07	45/183/0.303/7.90e-07	29/231/0.330/4.11e-07
sum	807/-/3.6/-	982/-/4.926/-	656/-/2.42/-	433/-/2.609/-

Table 4 Numerical results on Problem 4.4

Init(n)	${ m HA\text{-}DFPM}_{\pm}$	HA-DFPM_	MITTCGP	ISTCP
` ,	$Itr/NF/Tcpu/ F_* $	$\mathrm{Itr/NF/Tcpu}/\ F_*\ $	$\mathrm{Itr/NF/Tcpu}/\ F_*\ $	$\mathrm{Itr/NF/Tcpu}/\ F_*\ $
I(10000)	1/4/0.005/0.00e+00	1/4/0.003/0.00e+00	27/82/0.040/9.37e-07	2/8/0.004/0.00e+00
II(10000)	1/4/0.002/0.00e+00	1/4/0.002/0.00e+00	29/88/0.043/8.43e-07	2/8/0.004/0.00e+00
III(10000)	1/4/0.002/0.00e+00	1/4/0.002/0.00e+00	32/96/0.047/9.50e-07	2/8/0.004/0.00e+00
IV(10000)	1/4/0.002/0.00e+00	1/4/0.002/0.00e+00	34/103/0.051/9.20e-07	2/8/0.004/0.00e+00
V(10000)	1/4/0.002/0.00e+00	1/4/0.002/0.00e+00	36/108/0.054/9.18e-07	2/8/0.005/0.00e+00
VI(10000)	2/8/0.004/0.00e+00	2/8/0.004/0.00e+00	37/112/0.055/8.10e-07	3/11/0.006/0.00e+00
VII(10000)	5/20/0.010/0.00e+00	4/16/0.008/0.00e+00	33/99/0.048/8.39e-07	7/25/0.011/4.50e-24
I(50000)	1/4/0.008/0.00e+00	1/4/0.008/0.00e+00	29/88/0.174/8.07e-07	2/8/0.017/0.00e+00
II(50000)	1/4/0.008/0.00e+00	1/4/0.008/0.00e+00	31/93/0.185/9.58e-07	2/8/0.016/0.00e+00
III(50000)	1/4/0.008/0.00e+00	1/4/0.008/0.00e+00	34/102/0.201/8.18e-07	2/8/0.017/0.00e+00
IV(50000)	1/4/0.006/0.00e+00	1/4/0.006/0.00e+00	36/108/0.215/9.96e-07	2/8/0.014/0.00e+00
V(50000)	1/4/0.008/0.00e+00	1/4/0.008/0.00e+00	38/113/0.227/9.81e-07	2/8/0.016/0.00e+00
VI(50000)	2/8/0.016/0.00e+00	2/8/0.016/0.00e+00	39/117/0.237/8.65e-07	3/11/0.022/0.00e+00
VII(50000)	5/20/0.041/0.00e+00	8/32/0.059/2.32e-08	34/103/0.204/9.85e-07	7/25/0.042/5.79e-25
I(100000)	1/4/0.015/0.00e+00	1/4/0.015/0.00e+00	30/90/0.345/9.11e-07	2/8/0.032/0.00e+00
II(100000)	1/4/0.015/0.00e+00	1/4/0.015/0.00e+00	32/96/0.374/8.35e-07	2/8/0.032/0.00e+00
III(100000)	1/4/0.016/0.00e+00	1/4/0.015/0.00e+00	34/103/0.401/9.76e-07	2/8/0.032/0.00e+00
IV(100000)	1/4/0.012/0.00e+00	1/4/0.012/0.00e+00	37/111/0.432/8.54e-07	2/8/0.029/0.00e+00
V(100000)	1/4/0.016/0.00e+00	1/4/0.015/0.00e+00	38/115/0.454/9.08e-07	2/8/0.033/0.00e+00
VI(100000)	2/8/0.032/0.00e+00	2/8/0.033/0.00e+00	40/119/0.471/9.39e-07	3/11/0.043/0.00e+00
VII(100000)	9/35/0.129/0.00e+00	8/32/0.119/5.40e-07	35/106/0.417/8.49e-07	8/29/0.091/2.38e-25
sum	40/-/0.357/-	41/-/0.36/-	715/-/4.675/-	61/-/0.474/-

Table 5 Numerical results on Problem 4.5

Init(n)	HA-DFPM ₊	HA-DFPM_	MITTCGP	ISTCP
	$Itr/NF/Tcpu/ F_* $	$\operatorname{Itr/NF/Tcpu/} \ F_*\ $	$Itr/NF/Tcpu/ F_* $	$Itr/NF/Tcpu/ F_* $
I(10000)	43/258/0.044/6.32e-07	29/174/0.027/5.78e-07	32/127/0.023/8.79e-07	55/396/0.055/4.94e-07
II(10000)	35/210/0.033/4.77e-07	60/358/0.054/7.55e-07	34/131/0.025/9.52e-07	45/319/0.043/8.49e-07
III(10000)	51/306/0.045/6.30e-07	44/264/0.039/9.54e-07	26/108/0.021/8.73e-07	48/342/0.046/5.44e-07
IV(10000)	24/144/0.021/2.73e-07	44/263/0.038/8.83e-07	27/117/0.022/8.57e-07	37/270/0.037/9.12e-07
V(10000)	35/210/0.033/4.33e-07	44/264/0.039/7.78e-07	33/131/0.024/9.91e-07	31/225/0.030/7.31e-07
VI(10000)	49/294/0.043/8.43e-07	41/246/0.037/9.41e-07	37/147/0.027/8.52e-07	25/189/0.025/5.84e-07
VII(10000)	45/269/0.040/7.61e-07	44/260/0.040/8.59e-07	64/241/0.045/8.86e-07	122/844/0.113/9.49e-07
I(50000)	47/282/0.133/9.04e-07	46/276/0.133/8.43e-07	30/124/0.072/8.68e-07	48/343/0.153/4.59e-07
II(50000)	37/222/0.105/7.58e-07	32/192/0.090/4.10e-07	31/118/0.066/6.77e-07	49/347/0.154/9.44e-07
III(50000)	41/246/0.117/9.95e-07	55/330/0.154/9.45e-07	32/128/0.074/8.82e-07	46/327/0.148/9.67e-07
IV(50000)	27/162/0.077/8.31e-07	29/175/0.083/8.79e-07	25/112/0.060/8.22e-07	40/276/0.123/9.32e-07
V(50000)	41/246/0.117/5.68e-07	37/219/0.102/6.25e-07	23/104/0.062/6.09e-07	28/209/0.094/7.18e-07
VI(50000)	43/258/0.123/5.09e-07	35/210/0.098/4.68e-07	37/144/0.080/9.64e-07	27/205/0.094/6.08e-07
VII(50000)	45/269/0.128/5.75e-07	87/520/0.246/8.44e-07	73/273/0.154/7.72e-07	68/493/0.218/2.09e-07
I(100000)	39/234/0.207/9.00e-07	40/240/0.216/9.79e-07	35/140/0.149/8.45e-07	52/361/0.305/3.75e-07
II(100000)	37/222/0.197/8.82e-07	30/181/0.162/3.93e-07	35/133/0.142/7.02e-07	58/404/0.351/7.12e-07
III(100000)	51/306/0.274/2.75e-07	54/324/0.287/7.95e-07	33/131/0.139/9.79e-07	48/343/0.289/4.29e-07
IV(100000)	27/162/0.147/9.71e-07	39/233/0.210/9.78e-07	25/109/0.113/9.72e-07	38/268/0.226/8.10e-07
V(100000)	37/222/0.200/8.32e-07	25/150/0.134/7.82e-07	26/119/0.123/7.06e-07	28/213/0.179/6.25e-07
VI(100000)	43/258/0.231/7.56e-07	39/234/0.210/9.91e-07	31/124/0.134/8.51e-07	26/192/0.159/5.93e-07
VII(100000)	43/257/0.229/9.51e-07	49/294/0.262/3.65e-07	80/282/0.308/1.00e-06	150/1044/0.886/8.90e-07
sum	840/-/2.544/-	903/-/2.661/-	769/-/1.863/-	1069/-/3.728/-

Table 6 Numerical results on Problem 4.6

Init(n)	${ m HA\text{-}DFPM}_{\pm}$	$\mathrm{HA} ext{-}\mathrm{DFPM}$	MITTCGP	ISTCP
	$Itr/NF/Tcpu/ F_* $	$Itr/NF/Tcpu/ F_* $	$\mathrm{Itr/NF/Tcpu}/\ F_*\ $	$\mathrm{Itr/NF/Tcpu}/\ F_*\ $
I(10000)	19/115/0.024/6.11e-07	15/92/0.014/6.75e-07	25/111/0.020/9.10e-07	27/248/0.033/5.18e-07
II(10000)	19/117/0.017/4.35e-07	17/106/0.017/7.32e-07	29/138/0.025/8.32e-07	18/143/0.021/4.13e-07
III(10000)	20/123/0.020/7.63e-07	18/112/0.017/2.30e-07	25/117/0.020/7.80e-07	29/261/0.035/2.70e-07
IV(10000)	18/111/0.016/8.74e-07	14/88/0.014/7.19e-07	27/121/0.022/9.83e-07	19/146/0.020/6.97e-07
V(10000)	24/153/0.022/6.17e-07	19/126/0.020/5.80e-07	25/108/0.019/8.56e-07	33/311/0.040/9.47e-07
VI(10000)	29/206/0.030/3.47e-07	32/238/0.033/9.56e-07	27/127/0.023/3.04e-07	19/149/0.021/8.54e-07
VII(10000)	24/158/0.023/7.30e-07	20/136/0.020/4.67e-07	30/153/0.026/8.24e-07	28/255/0.033/6.66e-07
I(50000)	20/122/0.057/5.29e-07	17/105/0.051/5.21e-07	25/113/0.060/9.24e-07	24/222/0.098/7.78e-07
II(50000)	20/123/0.059/9.99e-07	20/123/0.059/4.00e-07	36/190/0.099/3.55e-07	18/143/0.065/9.34e-07
III(50000)	20/125/0.059/4.54e-07	16/101/0.048/6.12e-07	27/142/0.075/9.26e-07	24/222/0.098/4.75e-07
IV(50000)	19/117/0.056/9.01e-07	16/99/0.047/3.34e-07	28/127/0.068/4.48e-07	18/143/0.063/8.87e-07
V(50000)	33/283/0.130/1.93e-07	23/155/0.074/9.46e-07	23/106/0.057/5.97e-07	24/229/0.099/6.48e-07
VI(50000)	29/241/0.112/5.38e-07	33/274/0.127/3.22e-07	29/133/0.072/4.82e-07	19/148/0.066/4.93e-07
VII(50000)	23/150/0.072/5.76e-07	22/152/0.077/4.70e-07	33/167/0.087/3.50e-07	35/351/0.152/3.55e-07
I(100000)	20/122/0.110/6.18e-07	20/121/0.111/4.73e-07	28/126/0.131/7.17e-07	30/303/0.246/9.46e-07
II(100000)	20/125/0.111/5.20e-07	18/112/0.100/4.09e-07	35/185/0.183/3.60e-07	18/143/0.119/8.83e-07
III(100000)	19/118/0.105/5.87e-07	19/118/0.107/3.98e-07	37/200/0.199/7.81e-07	27/260/0.211/3.27e-07
IV(100000)	21/130/0.116/4.61e-07	17/105/0.094/4.45e-07	25/116/0.120/6.81e-07	18/144/0.121/5.24e-07
V(100000)	22/148/0.131/3.96e-07	31/222/0.196/9.82e-07	34/155/0.161/4.43e-07	22/195/0.160/6.55e-07
VI(100000)	41/364/0.309/8.18e-07	40/334/0.286/9.72e-07	24/113/0.114/8.61e-07	19/148/0.127/4.97e-07
VII(100000)	22/151/0.133/9.98e-07	28/190/0.169/5.09e-07	36/195/0.196/3.06e-07	36/355/0.288/4.91e-07
sum	482/-/1.712/-	455/-/1.681/-	608/-/1.777/-	505/-/2.116/-

Table 7 Numerical results on Problem 4.7

Init(n)	${ m HA\text{-}DFPM}_{\pm}$	$\mathrm{HA} ext{-}\mathrm{DFPM}$	MITTCGP	ISTCP
	$Itr/NF/Tcpu/ F_* $	$Itr/NF/Tcpu/ F_* $	$\mathrm{Itr/NF/Tcpu}/\ F_*\ $	$\mathrm{Itr/NF/Tcpu}/\ F_*\ $
I(10000)	1/6/0.005/0.00e+00	1/6/0.002/0.00e+00	1/4/0.001/0.00e+00	5/23/0.005/0.00e+00
II(10000)	1/6/0.001/0.00e+00	1/6/0.002/0.00e+00	1/4/0.001/0.00e+00	6/28/0.005/0.00e+00
III(10000)	1/6/0.001/0.00e+00	1/6/0.003/0.00e+00	1/4/0.001/0.00e+00	6/28/0.006/0.00e+00
IV(10000)	1/6/0.002/0.00e+00	1/6/0.001/0.00e+00	1/5/0.001/0.00e+00	6/27/0.006/0.00e+00
V(10000)	6/29/0.007/0.00e+00	5/26/0.006/0.00e+00	1/5/0.001/0.00e+00	5/24/0.005/0.00e+00
VI(10000)	1/7/0.002/0.00e+00	1/7/0.002/0.00e+00	1/6/0.001/0.00e+00	5/25/0.006/0.00e+00
VII(10000)	3/16/0.003/0.00e+00	2/11/0.003/0.00e+00	8/26/0.007/9.52e-08	10/54/0.011/0.00e+00
I(50000)	1/6/0.004/0.00e+00	1/6/0.004/0.00e+00	1/4/0.003/0.00e+00	5/23/0.014/0.00e+00
II(50000)	1/6/0.004/0.00e+00	1/6/0.004/0.00e+00	1/4/0.003/0.00e+00	6/28/0.018/0.00e+00
III(50000)	1/6/0.005/0.00e+00	1/6/0.005/0.00e+00	1/4/0.004/0.00e+00	6/28/0.020/0.00e+00
IV(50000)	1/6/0.005/0.00e+00	1/6/0.005/0.00e+00	1/5/0.005/0.00e+00	6/27/0.019/0.00e+00
V(50000)	6/30/0.022/0.00e+00	5/26/0.020/0.00e+00	1/5/0.004/0.00e+00	5/24/0.017/0.00e+00
VI(50000)	1/7/0.007/0.00e+00	1/7/0.006/0.00e+00	1/6/0.005/0.00e+00	5/25/0.019/0.00e+00
VII(50000)	3/16/0.013/0.00e+00	2/11/0.009/0.00e+00	5/17/0.013/0.00e+00	12/64/0.044/2.74e-14
I(100000)	1/6/0.008/0.00e+00	1/6/0.008/0.00e+00	1/4/0.005/0.00e+00	5/23/0.030/0.00e+00
II(100000)	1/6/0.008/0.00e+00	1/6/0.008/0.00e+00	1/4/0.005/0.00e+00	6/28/0.034/0.00e+00
III(100000)	1/6/0.008/0.00e+00	1/6/0.010/0.00e+00	1/4/0.006/0.00e+00	6/28/0.034/0.00e+00
IV(100000)	1/6/0.009/0.00e+00	1/6/0.010/0.00e+00	1/5/0.008/0.00e+00	6/27/0.035/0.00e+00
V(100000)	6/30/0.043/0.00e+00	5/26/0.036/0.00e+00	1/5/0.008/0.00e+00	5/24/0.033/0.00e+00
VI(100000)	1/7/0.012/0.00e+00	1/7/0.013/0.00e+00	1/6/0.010/0.00e+00	5/25/0.037/0.00e+00
VII(100000)	3/16/0.024/0.00e+00	6/31/0.044/1.97e-07	5/17/0.026/0.00e+00	12/64/0.083/1.99e-13
sum	42/-/0.193/-	40/-/0.201/-	36/-/0.118/-	133/-/0.481/-

Table 8 Numerical results on Problem 4.8

Init(n)	${ m HA\text{-}DFPM_{\pm}}$	HA-DFPM_	MITTCGP	ISTCP
. ,	$Itr/NF/Tcpu/ F_* $	$Itr/NF/Tcpu/ F_* $	$Itr/NF/Tcpu/ F_* $	$Itr/NF/Tcpu/ F_* $
I(10000)	16/76/0.036/7.24e-07	13/63/0.025/7.89e-07	34/103/0.047/8.08e-07	23/116/0.045/7.58e-07
II(10000)	16/78/0.031/7.01e-07	14/69/0.028/5.29e-07	34/103/0.045/7.89e-07	23/116/0.046/7.91e-07
III(10000)	21/99/0.040/4.17e-07	13/63/0.025/2.60e-07	34/102/0.046/8.27e-07	23/116/0.046/8.51e-07
IV(10000)	15/74/0.029/6.31e-07	17/83/0.033/6.16e-07	33/100/0.044/9.59e-07	23/116/0.045/7.78e-07
V(10000)	17/82/0.032/9.08e-07	14/69/0.027/3.95e-07	33/99/0.044/9.59e-07	19/100/0.038/6.66e-07
VI(10000)	15/71/0.029/7.94e-07	12/58/0.022/7.00e-07	32/97/0.043/9.35e-07	23/123/0.047/5.94e-07
VII(10000)	16/76/0.029/8.87e-07	15/73/0.030/7.60e-07	34/102/0.045/8.37e-07	23/116/0.044/8.08e-07
I(50000)	18/87/0.144/4.22e-07	15/73/0.121/5.82e-07	36/108/0.190/8.70e-07	27/141/0.229/3.03e-07
II(50000)	16/77/0.128/2.80e-07	14/67/0.113/7.91e-07	36/108/0.189/8.36e-07	27/141/0.230/3.05e-07
III(50000)	15/71/0.118/6.25e-07	14/67/0.111/3.17e-07	35/106/0.186/9.73e-07	27/141/0.230/3.09e-07
IV(50000)	20/96/0.159/5.49e-07	16/77/0.134/4.64e-07	35/105/0.185/9.63e-07	26/137/0.223/3.37e-07
V(50000)	15/72/0.118/8.68e-07	18/82/0.137/3.21e-07	34/103/0.185/9.34e-07	24/125/0.203/4.42e-07
VI(50000)	15/74/0.122/4.33e-07	12/57/0.095/2.74e-07	33/100/0.176/9.73e-07	23/124/0.201/4.87e-07
VII(50000)	15/71/0.116/6.74e-07	14/66/0.111/4.31e-07	36/107/0.190/9.48e-07	27/141/0.229/3.07e-07
I(100000)	15/74/0.241/2.91e-07	13/63/0.206/3.25e-07	37/110/0.380/9.47e-07	27/137/0.438/9.90e-07
II(50000)	16/77/0.249/2.89e-07	14/66/0.214/6.07e-07	36/109/0.381/9.83e-07	27/141/0.455/2.81e-07
III(50000)	19/90/0.294/5.67e-07	15/72/0.237/5.02e-07	36/109/0.377/8.36e-07	27/141/0.456/3.08e-07
IV(50000)	15/74/0.242/5.96e-07	15/73/0.242/4.60e-07	36/108/0.377/8.14e-07	27/141/0.458/3.06e-07
V(50000)	17/80/0.263/8.21e-07	13/61/0.201/6.47e-07	35/105/0.370/9.87e-07	19/100/0.318/7.16e-07
VI(50000)	15/74/0.237/8.15e-07	13/64/0.210/9.67e-07	34/102/0.353/9.91e-07	23/124/0.398/4.85e-07
VII(50000)	19/89/0.287/9.19e-07	13/62/0.204/5.15e-07	36/109/0.381/8.65e-07	27/141/0.456/3.06e-07
sum	346/-/2.944/-	297/-/2.526/-	729/-/4.234/-	515/-/4.835/-

Table 9 Numerical results on Problems 4.9 and 4.10

NP(Init)	${ m HA\text{-}DFPM}_{\pm}$	$\mathrm{HA} ext{-}\mathrm{DFPM}$	MITTCGP	ISTCP
	$\mathrm{Itr/NF/Tcpu}/\ F_*\ $	$\mathrm{Itr/NF/Tcpu}/\ F_*\ $	$Itr/NF/Tcpu/ F_* $	$Itr/NF/Tcpu/ F_* $
$4.9(x_0^1)$	97/290/0.009/9.55e-07	69/206/0.005/8.48e-07	2000/6001/0.134/8.27e-06	26/79/0.002/8.91e-07
$4.9(x_0^2)$	97/290/0.007/9.32e-07	69/206/0.004/8.79e-07	2000/6001/0.130/8.27e-06	27/82/0.002/7.05e-07
$4.9(x_0^3)$	89/266/0.006/9.85e-07	56/169/0.004/9.34e-07	2000/6001/0.127/8.27e-06	26/79/0.002/8.41e-07
$4.9(x_0^4)$	83/250/0.005/8.62e-07	46/137/0.003/8.47e-07	2000/6001/0.131/8.27e-06	27/82/0.003/7.28e-07
$4.9(x_0^5)$	85/254/0.005/8.54e-07	49/148/0.004/9.43e-07	2000/6001/0.132/8.27e-06	26/79/0.002/9.72e-07
$4.9(x_0^6)$	87/262/0.006/9.18e-07	54/161/0.004/9.12e-07	2000/6001/0.134/8.27e-06	26/79/0.003/8.61e-07
$4.9(x_0^7)$	89/268/0.006/8.60e-07	60/181/0.004/8.98e-07	2000/6001/0.131/8.27e-06	1/4/0.001/0.00e+00
$4.9(x_0^8)$	85/254/0.006/8.75e-07	49/146/0.003/9.17e-07	2000/6001/0.133/8.27e-06	26/79/0.002/9.50e-07
$4.10(x_0^3)$	33/224/0.008/5.35e-07	39/270/0.006/8.14e-07	27/136/0.003/2.04e-07	52/438/0.008/6.19e-07
$4.10(x_0^4)$	33/224/0.005/5.35e-07	39/270/0.005/8.14e-07	27/136/0.004/2.04e-07	52/438/0.009/6.19e-07
$4.10(x_0^5)$	20/135/0.003/4.15e-07	28/194/0.004/9.72e-07	24/113/0.003/9.91e-07	34/295/0.006/9.78e-07
$4.10(x_0^6)$	29/199/0.004/6.67e-07	34/230/0.005/9.05e-07	33/153/0.003/4.05e-07	56/466/0.008/6.79e-07
$4.10(x_0^7)$	29/200/0.005/3.66e-07	31/213/0.005/5.36e-07	21/107/0.003/3.58e-07	37/328/0.007/8.30e-07
$4.10(x_0^8)$	25/170/0.004/6.67e-07	33/224/0.005/9.91e-07	34/155/0.003/3.80e-07	33/291/0.006/8.00e-07
sum	881/-/0.079/-	656/-/0.061/-	16166/-/1.071/-	700/-/4.852/-