Contents

List of Tables

1	Results on Cordeau et al. (1997) MDVRP instances	1
2	Results on Cordeau et al. (1997) PVRP instances	2
3	Results on Vidal et al. (2011) MDPVRP instances	3

List of Figures

LIST OF FIGURES

Instance	n_c	n_d	n_{v_d}	n_v	Percent Gap	BKS	Min	Avg	Max
p01	50	4	4	16	0	576.87	576.87	578.08	581.3
p02	50	4	2	8	0	473.53	473.53	475.74	480.04
p03	75	2	3	6	0	641.19	641.19	645.03	646.41
p04	100	2	8	16	3.207664029	1001.04	1033.15	1043.14	1053.75
p05	100	2	5	10	0.805301121	750.03	756.07	762.51	773.13
p06	100	3	6	18	1.275527667	876.5	887.68	896.52	913.18
p07	100	4	4	16	3.064730093	881.97	909	915.81	921.12
p08	249	2	14	28	4.998879431	4372.78	4591.37	4618.14	4649.91
p09	249	3	12	36	4.172692074	3858.66	4019.67	4062.02	4095.59
p10	249	4	8	32	6.68968993	3631.11	3874.02	3923.5	3962.28
p11	249	5	6	30	7.671613001	3546.06	3818.1	3878.94	3923.79
p12	80	2	5	10	0	1318.95	1318.95	1321.72	1335.57
p13	80	2	5	10	0	1318.95	1318.95	1323.81	1338.96
p14	80	2	5	10	-3.0269388	1360.12	1318.95	1322.81	1338.57
p15	160	4	5	20	4.623176952	2505.42	2621.25	26664.88	2717.87
p16	160	4	5	20	1.424833705	2572.23	2608.88	2653.41	2706.62
p17	160	4	5	20	-2.840068067	2709.09	2632.15	2661.83	2680.76
p18	240	6	5	30	7.452637833	3702.85	3978.81	4029.31	4075.37
p19	240	6	5	30	3.136088799	3827.06	3947.08	4021.08	4048.58
p20	240	6	5	30	-2.929964244	4058.07	3939.17	4035.9	4134.09
p21	360	9	5	45	9.737818822	5474.84	6007.97	6096.24	6182.22
p22	360	9	5	45	5.749750972	5702.16	6030.02	6083.18	6153.44
p23	360	9	5	45	-1.765330043	6078.75	5971.44	6103.89	6178.49
pr01	48	4	2	48	0	861.32	861.32	861.32	861.32
pr02	98	4	4	16	-1.96429391	1307.34	1281.66	1288.7	1302.89
pr03	144	4	6	24	1.523450493	1803.8	1831.28	1847.42	1859.1
pr04	192	4	8	32	4.384665089	2058.31	2148.56	2164.07	2192.44
pr05	240	4	10	40	15.04118051	2331.2	2681.84	2752.16	2818.57
pr06	288	4	12	48	7.474124724	2676.3	2876.33	2976.47	3031.04
pr07	72	6	3	18	-1.122471456	1089.56	1077.33	1077.33	1077.33
pr08	144	6	6	36	2.459681052	1664.85	1705.8	1755.95	1781.68
pr09	216	6	9	54	4.06384774	2133.2	2219.89	2243.6	2274.67
pr10	288	6	12	72	16.14811767	2868.26	3331.43	3453.44	3514.13

Table 1: Results on Cordeau et al. (1997) MDVRP instances

LIST OF FIGURES 2

Instance	n_c	n_v	P_{max}	Percent Gap	BKS	Min	Avg	Max
p01	50	3	2	2.037704199	524.61	535.3	546.89	578.4
p02	50	3	5	0.347728802	1322.87	1327.47	1341.94	1353.11
p03	50	1	5	2.565715484	524.61	538.07	572.54	615.73
p04	75	6	5	8.688312621	835.26	907.83	934.93	959.77
p05	75	1	10	4.804539349	2024.96	2122.25	2141.02	2162.78
p06	75	1	10	27.43696574	835.26	1064.43	1104.34	1156.47
p07	100	4	2	0.723848258	826.14	832.12	838.56	846.21
p08	100	5	5	3.509075536	2022.47	2093.44	2117.86	2149.39
p09	100	1	8	1.231026218	826.14	836.31	846.49	860.32
p10	100	4	5	3.799978662	1593.43	1653.98	1678.15	1720.42
p11	126	4	5	3.573791332	770.89	798.44	811.27	817.46
p12	163	3	5	7.718694952	1186.47	1278.05	1298	1316
p13	417	9	7	18.72346395	3492.89	4146.88	4234.94	4336
p14	20	2	4	0	954.81	954.81	954.81	954.81
p15	38	2	4	0	1862.63	1862.63	1862.63	1863.63
p16	56	2	4	0	2875.24	2875.24	2875.24	2875.24
p17	40	4	4	0	1597.75	1597.75	1604.51	1629.67
p18	76	4	4	1.139219888	3131.09	3166.76	3181.22	3201.37
p19	112	4	4	0.251326965	4834.34	4846.49	4846.49	4846.49
p20	184	4	4	0	8367.4	8367.4	8367.4	8367.4
p21	60	6	4	0	2170.61	2170.61		
p22	114	6	4	0	4193.95	4193.95		
p23	168	6	4	0	6420.71	6420.71		
p24	51	3	6	0.163798387	3687.46	3693.5	3733	3751.28
p25	51	3	6	0.111989198	3777.15	3781.38	3781.38	3781.38
p26	51	3	6	0.081943025	3795.32	3798.43	3824.13	3834.01
p27	102	6	6	3.784670331	21833.87	22660.21	22978.21	23535.47
p28	102	6	6	3.764458238	22242.51	23079.82	23458.83	24086.62
p29	102	6	6	5.848405877	22543.75	23862.2	24612.01	25060.96
p30	153	9	6	7.604203793	73875.19	79492.81	82370.31	85197.76
p31	153	9	6	6.738281854	76001.57	81122.77	83615.17	86485.52
p32	153	9	6	10.80103869	77598	85979.39	87853.45	89565.31
pr01	48	2	4	-1.88318802	2209.02	2167.42	2179.57	2184.46
pr02	96	4	4	-0.572528202	3767.5	3745.93	3780.79	3808.83
pr03	144	6	4	1.414173558	5153.54	5226.42	5270.21	5315.67
pr04	192	8	4	5.471665047	5877.37	6198.96	6244.41	6301.74
pr05	240	10	4	6.60548786	6581.8	7016.56	7150.41	7331.64
pr06	288	12	4	3.786670501	8207.21	8517.99	8593.76	8688.36
pr07	72	3	6	-1.836017405	4996.14	4904.41	4936.93	4961.7
pr08	144	6	6	5.592567727	6970.68	7360.52	7436.52	7493.5
pr09	216	9	6	7.4170961	10038.43	10782.99	10875.58	10940.19
pr10	288	12	6	6.356357016	12897.01	13716.79	13944.4	14089.86

Table 2: Results on Cordeau et al. (1997) PVRP instances

LIST OF FIGURES 3

Instance	n_c	n_{v_d}	n_v	n_d	P_{max}	Percent Gap	BKS	Min	Avg	Max
pr01	48	1	4	4	4	-2.764586429	2019	1963.183	1974.269	1985.346
pr02	96	1	4	4	4	-3.534623462	3547.45	3422.061	3443.568	3460.638
pr03	144	2	8	4	4	-1.958570545	4480.87	4393.109	4457.126	4519.483
pr04	192	2	8	4	4	3.01351533	5134.17	5288.889	5337.972	5358.551
pr05	240	3	12	4	4	5.204175605	5570.45	5860.346	5899.083	5946.554
pr06	288	3	12	4	4	5.704652318	6524.92	6897.144	6943.004	7001.522
pr07	722	1	6	6	6	-1.711609455	4502.02	4424.963	4442.258	4456.37
pr08	144	1	6	6	6	1.238516728	6023.98	6098.588	6179.245	6301.037
pr09	216	2	12	6	6	3.554469713	8257.8	8551.321	8582.77	8615.216
pr10	288	3	18	6	6	6.099250185	9818.42	10417.27	10519.93	10689.79

Table 3: Results on Vidal et al. (2011) MDPVRP instances