

## Resultados BRKGA-MP para o problema P1 sem busca local

Tabela 1: Resultados associados as instâncias P1 sem busca local

Instâncias	$s_B^*$	$t_{x_B^*}$	$s^*$	$gap_{s_B^*} \%$
nlkp.i.10.0	402.002	0.12	401.9964	0.00
nlkp.i.10.1	209.875	0.31	209.8755	0.00
nlkp.i.10.2	184.711	12.31	185.5056	-0.43
nlkp.i.10.3	344.512	112.61	343.3623	0.33
nlkp.i.10.4	305.850	69.24	304.8248	0.34
nlkp.i.10.5	226.528	58.20	208.4337	8.68
nlkp.i.10.6	251.035	92.95	250.9840	0.02
nlkp.i.10.7	236.395	8.33	233.8466	1.09
nlkp.i.10.8	514.159	8.34	513.7746	0.07
nlkp.i.10.9	352.191	0.27	352.1909	0.00
nlkp.i.10.10	274.823	0.40	274.8232	0.00
nlkp.i.10.11	270.100	0.12	270.0996	0.00
nlkp.i.10.12	155.689	29.07	155.5448	0.09
nlkp.i.10.13	342.519	74.88	327.9025	4.46
nlkp.i.10.14	179.583	0.58	178.4352	0.64
nlkp.i.10.15	210.133	94.02	210.0301	0.05
nlkp.i.10.16	351.833	0.09	351.8297	0.00
nlkp.i.10.17	352.397	23.82	352.3505	0.01
nlkp.i.10.18	329.821	59.94	325.7300	1.26
nlkp.i.10.19	285.259	86.43	270.3284	5.52
nlkp.i.20.0	618.491	74.91	617.9949	0.08
nlkp.i.20.1	532.058	110.15	531.7698	0.05
nlkp.i.20.2	549.134	81.59	539.2633	1.83
nlkp.i.20.3	512.137	116.22	500.4662	2.33
nlkp.i.20.4	866.481	2.21	865.6876	0.09
nlkp.i.20.5	561.212	113.45	549.6967	2.09
nlkp.i.20.6	533.797	41.36	533.7375	0.01
nlkp.i.20.7	397.595	21.34	397.5875	0.00
nlkp.i.20.8	707.369	113.94	707.2645	0.01
nlkp.i.20.9	646.680	7.67	646.6333	0.01
nlkp.i.20.10	719.039	3.54	718.9898	0.01
nlkp.i.20.11	734.889	52.40	734.7542	0.02
nlkp.i.20.12	749.337	106.76	749.1971	0.02
nlkp.i.20.13	718.456	109.49	716.0605	0.33
nlkp.i.20.14	622.354	102.90	610.1096	2.01
nlkp.i.20.15	778.713	76.27	759.3399	2.55
nlkp.i.20.16	701.717	117.19	701.6370	0.01
nlkp.i.20.17	774.783	33.62	761.1460	1.79
nlkp.i.20.18	458.846	116.26	457.1839	0.36
nlkp.i.20.19	979.497	83.96	976.1912	0.34
nlkp.i.50.0	1511.430	116.67	1511.6508	-0.01
nlkp.i.50.1	1620.420	117.91	1624.5457	-0.25

nlkp.i.50_2	1282.910	108.00	1282.5041	0.03
nlkp.i.50_3	1621.100	112.76	1616.0808	0.31
nlkp.i.50_4	1946.770	77.62	1946.7971	0.00
nlkp.i.50_5	1629.060	110.57	1627.8181	0.08
nlkp.i.50_6	1877.010	119.66	1876.5354	0.03
nlkp.i.50_7	1935.850	97.04	1934.7414	0.06
nlkp.i.50_8	1525.730	85.21	1524.9838	0.05
nlkp.i.50_9	1647.660	98.19	1646.7900	0.05
nlkp.i.50_10	1692.730	105.99	1692.6302	0.01
nlkp.i.50_11	1616.490	108.35	1615.4028	0.07
nlkp.i.50_12	1730.010	112.38	1731.7095	-0.10
nlkp.i.50_13	1638.300	117.98	1638.1031	0.01
nlkp.i.50_14	1655.180	118.45	1652.6656	0.15
nlkp.i.50_15	1619.060	80.47	1618.8876	0.01
nlkp.i.50_16	2077.330	99.71	2075.0145	0.11
nlkp.i.50_17	1645.220	49.30	1645.3715	-0.01
nlkp.i.50_18	1793.340	116.12	1793.9550	-0.03
nlkp.i.50_19	1765.410	114.90	1765.7979	-0.02
nlkp.i.100_0	3133.320	114.83	3138.2572	-0.16
nlkp.i.100_1	2906.340	96.40	2898.9567	0.25
nlkp.i.100_2	3582.030	105.13	3579.8460	0.06
nlkp.i.100_3	3825.300	115.87	3824.7293	0.01
nlkp.i.100_4	3183.780	103.92	3184.9359	-0.04
nlkp.i.100_5	3308.540	98.08	3303.7474	0.15
nlkp.i.100_6	3370.840	107.00	3373.2699	-0.07
nlkp.i.100_7	3288.700	115.24	3287.5616	0.03
nlkp.i.100_8	3770.570	92.88	3773.1281	-0.07
nlkp.i.100_9	3578.880	117.93	3579.9226	-0.03
nlkp.i.100_10	3143.620	116.59	3141.9981	0.05
nlkp.i.100_11	3238.060	106.79	3232.4167	0.17
nlkp.i.100_12	3654.030	109.45	3660.8067	-0.19
nlkp.i.100_13	3780.580	116.44	3780.5357	0.00
nlkp.i.100_14	3744.090	119.13	3747.1065	-0.08
nlkp.i.100_15	3399.400	110.07	3406.5886	-0.21
nlkp.i.100_16	3300.640	103.79	3301.0714	-0.01
nlkp.i.100_17	3203.770	111.66	3205.0494	-0.04
nlkp.i.100_18	2738.280	109.50	2740.1787	-0.07
nlkp.i.100_19	3622.030	111.95	3621.8288	0.01
nlkp.i.200_0	6091.620	98.22	6102.6534	-0.18
nlkp.i.200_1	7411.200	104.24	7399.1064	0.16
nlkp.i.200_2	6500.300	113.00	6501.0145	-0.01
nlkp.i.200_3	6651.080	104.59	6655.1416	-0.06
nlkp.i.200_4	7337.890	120.01	7344.7220	-0.09
nlkp.i.200_5	6367.210	118.32	6358.9192	0.13
nlkp.i.200_6	7424.700	119.78	7437.7406	-0.18
nlkp.i.200_7	7149.390	111.83	7144.7174	0.07
nlkp.i.200_8	6497.070	117.36	6485.9474	0.17

nlkp.i.200_9	6354.990	103.55	6362.9497	-0.13
nlkp.i.200_10	6979.700	111.96	6973.5437	0.09
nlkp.i.200_11	6849.900	118.03	6853.8089	-0.06
nlkp.i.200_12	7586.700	119.92	7598.6942	-0.16
nlkp.i.200_13	7497.010	119.06	7485.8150	0.15
nlkp.i.200_14	7394.940	119.07	7402.9587	-0.11
nlkp.i.200_15	7037.840	104.03	7034.3804	0.05
nlkp.i.200_16	7035.930	92.20	7050.7630	-0.21
nlkp.i.200_17	6756.230	106.39	6734.6732	0.32
nlkp.i.200_18	6210.050	117.15	6216.6355	-0.11
nlkp.i.200_19	6990.750	98.61	7006.8980	-0.23
nlkp.i.500_0	16613.500	115.84	16642.8770	-0.18
nlkp.i.500_1	17208.900	118.73	17287.3307	-0.45
nlkp.i.500_2	17452.500	117.09	17481.2310	-0.16
nlkp.i.500_3	16143.400	119.63	16206.5470	-0.39
nlkp.i.500_4	17545.100	115.33	17624.4100	-0.45
nlkp.i.500_5	18644.300	119.28	18695.8339	-0.28
nlkp.i.500_6	17180.800	118.49	17266.7023	-0.50
nlkp.i.500_7	16734.100	97.05	16812.7636	-0.47
nlkp.i.500_8	16637.200	116.01	16738.2265	-0.60
nlkp.i.500_9	16473.500	119.08	16519.8165	-0.28
nlkp.i.500_10	18202.900	118.69	18250.6693	-0.26
nlkp.i.500_11	16997.300	118.18	17014.3668	-0.10
nlkp.i.500_12	17802.700	104.58	17896.4295	-0.52
nlkp.i.500_13	17492.600	113.03	17547.4981	-0.31
nlkp.i.500_14	16834.700	119.08	16852.6308	-0.11
nlkp.i.500_15	16997.200	118.33	17115.1555	-0.69
nlkp.i.500_16	16884.500	118.62	16968.6750	-0.50
nlkp.i.500_17	16787.400	117.37	16824.3460	-0.22
nlkp.i.500_18	16586.400	97.60	16646.8005	-0.36
nlkp.i.500_19	17241.500	100.66	17332.9141	-0.53
nlkp.i.1000_0	33429.900	116.57	33896.5205	-1.38
nlkp.i.1000_1	33276.100	114.03	33675.5826	-1.19
nlkp.i.1000_2	35900.200	120.09	36255.3825	-0.98
nlkp.i.1000_3	33657.200	114.42	34038.0216	-1.12
nlkp.i.1000_4	33228.400	120.02	33256.4650	-0.08
nlkp.i.1000_5	34963.400	117.87	35239.3782	-0.78
nlkp.i.1000_6	35061.900	120.05	35422.0989	-1.02
nlkp.i.1000_7	33624.600	117.50	33931.3417	-0.90
nlkp.i.1000_8	33401.900	120.00	33738.1701	-1.00
nlkp.i.1000_9	33512.700	119.92	33916.5340	-1.19
nlkp.i.1000_10	32954.200	119.82	33390.0276	-1.31
nlkp.i.1000_11	33940.200	118.48	34278.6829	-0.99
nlkp.i.1000_12	34172.700	119.92	34573.8550	-1.16
nlkp.i.1000_13	32278.600	119.92	32707.4556	-1.31
nlkp.i.1000_14	34304.200	119.09	34646.7308	-0.99
nlkp.i.1000_15	35194.200	116.11	35526.3825	-0.94

nlkp.i.1000_16	31971.400	116.69	32407.3436	-1.35
nlkp.i.1000_17	35909.600	119.12	36265.6301	-0.98
nlkp.i.1000_18	33878.200	119.46	34135.3950	-0.75
nlkp.i.1000_19	33283.100	119.97	33581.2811	-0.89
nlkp.i.2500_0	79773.800	120.06	85102.8503	-6.26
nlkp.i.2500_1	81098.000	119.56	85875.7829	-5.56
nlkp.i.2500_2	82580.500	120.17	87514.3537	-5.64
nlkp.i.2500_3	79620.300	119.81	84719.7505	-6.02
nlkp.i.2500_4	80130.200	119.56	85212.0612	-5.96
nlkp.i.2500_5	79251.300	119.44	84254.6707	-5.94
nlkp.i.2500_6	81669.900	120.04	86565.7304	-5.66
nlkp.i.2500_7	80425.900	120.20	85102.7379	-5.50
nlkp.i.2500_8	81518.900	120.01	86769.3132	-6.05
nlkp.i.2500_9	79204.600	119.83	84438.8134	-6.20
nlkp.i.2500_10	79754.500	119.85	84848.0882	-6.00
nlkp.i.2500_11	79082.600	120.20	84307.6525	-6.20
nlkp.i.2500_12	82962.300	120.20	87911.7023	-5.63
nlkp.i.2500_13	81105.400	119.81	86149.7753	-5.86
nlkp.i.2500_14	78470.700	120.23	83201.9582	-5.69
nlkp.i.2500_15	81005.800	120.14	86169.4849	-5.99
nlkp.i.2500_16	79083.200	120.08	84173.1073	-6.05
nlkp.i.2500_17	81258.800	119.80	86491.6841	-6.05
nlkp.i.2500_18	79376.900	119.88	84096.3434	-5.61
nlkp.i.2500_19	76793.000	119.53	81691.9495	-6.00