| | | | | Algoritmos Genéticos (GA) | | | | | | |
|---------------|----------|----------|----------|---------------------------|--------|-----------|-----------|-------------|--------|----------|
| | Ī | f(GA | N) | Tempo (s) Nº de Iterações | | | | | | |
| Instância | Ótimo | Min5 | Média5 | Min5 | Média5 | Min5 | Média5 | Média Total | gapMin | gapMédia |
| A-n32-k5.vrp | 784,00 | 797,45 | 806,89 | 29,39 | 127,61 | 21.944,00 | 19.298,20 | 25.613,40 | 1,72% | 2,92% |
| A-n33-k5.vrp | 661,00 | 674,46 | 680,40 | 15,24 | 44,99 | 16.152,00 | 13.885,00 | 23.244,60 | 2,04% | 2,93% |
| A-n33-k6.vrp | 742,00 | 746,97 | 753,80 | 116,07 | 125,44 | 21.207,00 | 10.834,60 | 22.398,20 | 0,67% | 1,59% |
| A-n34-k5.vrp | 778,00 | 795,33 | 798,17 | 77,53 | 167,10 | 6.150,00 | 4.691,20 | 21.680,00 | 2,23% | 2,59% |
| A-n36-k5.vrp | 799,00 | 819,33 | 826,09 | 36,42 | 136,73 | 7.477,00 | 7.839,80 | 18.304,40 | 2,54% | 3,39% |
| A-n37-k5.vrp | 669,00 | 685,75 | 691,57 | 176,73 | 182,21 | 15.810,00 | 7.563,60 | 16.724,80 | 2,50% | 3,37% |
| A-n37-k6.vrp | 949,00 | 996,57 | 1.006,08 | 261,46 | 173,64 | 10.880,00 | 10.542,00 | 14.875,20 | 5,01% | 6,01% |
| A-n38-k5.vrp | 730,00 | 739,97 | 753,12 | 29,77 | 83,85 | 4.980,00 | 8.653,40 | 14.712,00 | 1,37% | 3,17% |
| A-n39-k5.vrp | 822,00 | 872,61 | 880,62 | 160,26 | 179,57 | 12.242,00 | 7.925,80 | 14.548,80 | 6,16% | 7,13% |
| A-n39-k6.vrp | 831,00 | 859,52 | 866,99 | 219,78 | 116,29 | 4.403,00 | 8.395,60 | 14.547,60 | 3,43% | 4,33% |
| A-n44-k7.vrp | 937,00 | 983,19 | 1.003,46 | 300,02 | 165,45 | 6.123,00 | 8.286,20 | 9.787,00 | 4,93% | 7,09% |
| A-n45-k6.vrp | 944,00 | 1.110,17 | 1.212,28 | 293,90 | 143,77 | 7.817,00 | 7.194,20 | 8.636,00 | 17,60% | 28,42% |
| A-n45-k7.vrp | 1.146,00 | 1.259,22 | 1.283,65 | 169,27 | 193,35 | 9.447,00 | 6.659,00 | 9.783,20 | 9,88% | 12,01% |
| A-n46-k7.vrp | 914,00 | 1.027,14 | 1.039,71 | 241,71 | 195,88 | 8.816,00 | 8.261,80 | 9.428,00 | 12,38% | 13,75% |
| A-n48-k7.vrp | 1.073,00 | 1.206,31 | 1.211,12 | 296,78 | 195,20 | 5.654,00 | 5.203,60 | 8.436,40 | 12,42% | 12,87% |
| A-n53-k7.vrp | 1.010,00 | 1.130,20 | 1.156,96 | 146,67 | 199,52 | 3.626,00 | 3.934,00 | 6.322,80 | 11,90% | 14,55% |
| A-n54-k7.vrp | 1.167,00 | 1.334,82 | 1.344,38 | 246,01 | 230,31 | 5.811,00 | 5.849,40 | 5.956,60 | 14,38% | 15,20% |
| A-n55-k9.vrp | 1.073,00 | 1.224,23 | 1.228,96 | 258,04 | 232,17 | 3.709,00 | 3.857,00 | 5.307,20 | 14,09% | 14,53% |
| A-n60-k9.vrp | 1.408,00 | 1.507,83 | 1.576,81 | 290,12 | 280,78 | 4.458,00 | 4.302,20 | 4.339,20 | 7,09% | 11,99% |
| A-n61-k9.vrp | 1.035,00 | 1.291,25 | 1.308,47 | 245,18 | 249,44 | 3.393,00 | 3.025,00 | 3.669,00 | 24,76% | 26,42% |
| A-n62-k8.vrp | 1.290,00 | 1.587,67 | 1.589,54 | 297,90 | 224,52 | 2.692,00 | 3.565,80 | 4.330,60 | 23,08% | 23,22% |
| A-n63-k9.vrp | 1.634,00 | 1.869,05 | 1.934,92 | 284,80 | 261,18 | 3.832,00 | 3.673,60 | 3.719,00 | 14,38% | 18,42% |
| A-n63-k10.vrp | 1.315,00 | 1.550,67 | 1.599,64 | 186,92 | 275,49 | 2.917,00 | 3.426,60 | 3.786,80 | 17,92% | 21,65% |
| A-n64-k9.vrp | 1.402,00 | 1.588,21 | 1.598,31 | 289,55 | 274,40 | 3.381,00 | 3.123,00 | 3.519,40 | 13,28% | 14,00% |
| A-n65-k9.vrp | 1.177,00 | 1.466,88 | 1.480,98 | 297,01 | 287,82 | 2.266,00 | 2.291,20 | 3.171,20 | 24,63% | 25,83% |
| A-n69-k9.vrp | 1.168,00 | 1.436,48 | 1.443,71 | 276,84 | 246,37 | 2.388,00 | 2.657,40 | 3.100,60 | 22,99% | 23,61% |
| A-n80-k10.vrp | 1.764,00 | 2.151,30 | 2.171,46 | 299,38 | 282,54 | 1.902,00 | 1.973,40 | 1.985,60 | 21,96% | 23,10% |

| | | Algoritmos Genéticos (GA) | | | | | | | | |
|---------------|----------|---------------------------|------------|-----------|--------|-----------------|-----------|-------------|--------|----------|
| | | f(GA | A) | Tempo (s) | | Nº de Iterações | | | | |
| Instância | Ótimo | Min5 | Média5 | Min5 | Média5 | Min5 | Média5 | Média Total | gapMin | gapMédia |
| B-n31-k5.vrp | 672,00 | 691,42 | 704,66 | 80,14 | 55,84 | 2.829,00 | 4.108,40 | 26.489,00 | 2,89% | 4,86% |
| B-n34-k5.vrp | 788,00 | 796,18 | 797,57 | 298,02 | 166,36 | 5.583,00 | 6.104,20 | 21.656,40 | 1,04% | 1,21% |
| B-n35-k5.vrp | 955,00 | 957,16 | 983,77 | 30,12 | 121,00 | 8.180,00 | 12.020,00 | 20.441,40 | 0,23% | 3,01% |
| B-n38-k6.vrp | 805,00 | 820,94 | 829,12 | 227,51 | 113,03 | 5.194,00 | 10.667,20 | 15.429,20 | 1,98% | 3,00% |
| B-n39-k5.vrp | 549,00 | 580,03 | 606,45 | 212,04 | 88,24 | 5.534,00 | 3.924,80 | 14.900,60 | 5,65% | 10,46% |
| B-n41-k6.vrp | 829,00 | 880,30 | 914,41 | 240,73 | 142,88 | 9.273,00 | 7.133,60 | 11.822,80 | 6,19% | 10,30% |
| B-n43-k6.vrp | 742,00 | 816,19 | 820,22 | 212,61 | 200,22 | 6.662,00 | 6.825,00 | 11.336,00 | 10,00% | 10,54% |
| B-n44-k7.vrp | 909,00 | 983,63 | 1.008,52 | 247,81 | 244,95 | 10.640,00 | 10.079,40 | 10.507,20 | 8,21% | 10,95% |
| B-n45-k5.vrp | 751,00 | 928,24 | 984,06 | 208,38 | 194,38 | 8.236,00 | 6.721,00 | 9.680,60 | 23,60% | 31,03% |
| B-n45-k6.vrp | 678,00 | 781,22 | 868,39 | 280,85 | 155,18 | 8.057,00 | 6.391,20 | 8.414,00 | 15,22% | 28,08% |
| B-n50-k7.vrp | 741,00 | 842,86 | 898,93 | 244,60 | 195,59 | 3.636,00 | 5.427,80 | 7.320,40 | 13,75% | 21,31% |
| B-n50-k8.vrp | 1.313,00 | 1.361,72 | 1.494,93 | 278,15 | 271,36 | 4.071,00 | 5.323,60 | 6.489,00 | 3,71% | 13,86% |
| B-n51-k7.vrp | 1.032,00 | 1.092,31 | 1.122,66 | 290,69 | 231,39 | 5.841,00 | 4.687,00 | 6.059,80 | 5,84% | 8,78% |
| B-n52-k7.vrp | 747,00 | 921,70 | 939,88 | 285,15 | 165,02 | 1.800,00 | 4.692,40 | 6.846,20 | 23,39% | 25,82% |
| B-n56-k7.vrp | 707,00 | 779,63 | 834,88 | 276,12 | 258,00 | 2.355,00 | 3.213,60 | 5.538,20 | 10,27% | 18,09% |
| B-n57-k7.vrp | 1.153,00 | 1.434,62 | 1.456,13 | 260,00 | 246,66 | 4.380,00 | 4.454,80 | 4.616,40 | 24,42% | 26,29% |
| B-n57-k9.vrp | 1.598,00 | 1.670,14 | 1.800,55 | 291,97 | 274,76 | 1.614,00 | 2.827,20 | 5.155,60 | 4,51% | 12,68% |
| B-n63-k10.vrp | 1.537,00 | 1.613,35 | 1.678,86 | 234,24 | 267,10 | 2.440,00 | 3.142,40 | 3.653,80 | 4,97% | 9,23% |
| B-n64-k9.vrp | 861,00 | 1.062,16 | 1.111,84 | 150,07 | 239,87 | 3.021,00 | 3.407,00 | 3.578,00 | 23,36% | 29,13% |
| B-n66-k9.vrp | 1.316,00 | 1.368,35 | 1.392,82 | 270,42 | 257,72 | 3.090,00 | 3.070,00 | 3.337,80 | 3,98% | 5,84% |
| B-n67-k10.vrp | 1.033,00 | 1.195,04 | 1.202,79 | 293,39 | 275,34 | 3.100,00 | 2.865,80 | 3.248,60 | 15,69% | 16,44% |
| B-n68-k9.vrp | 1.304,00 | 1.348,30 | 1.393,69 | 292,31 | 209,41 | 2.642,00 | 2.730,20 | 3.168,20 | 3,40% | 6,88% |
| B-n78-k10.vrp | 1.266,00 | 1.379,49 | 1.410,16 | 299,04 | 290,02 | 2.051,00 | 1.881,60 | 2.135,40 | 8,96% | 11,39% |

| | | Algoritmos Genéticos (GA) | | | | | | | | |
|---------------|---------|---------------------------|---------|-----------|--------|-----------------|---------|-------------|--------|----------|
| | | f(GA) | | Tempo (s) | | Nº de Iterações | | | | |
| Instância | Ótimo | Min5 | Média5 | Min5 | Média5 | Min5 | Média5 | Média Total | gapMin | gapMédia |
| F-n45-k4.vrp | 728,00 | 762,06 | 826,21 | 209,56 | 194,35 | 10256 | 5541, 0 | 10504, 2 | 4,68% | 13,49% |
| F-n72-k4.vrp | 238,00 | 283,14 | 287,86 | 296,55 | 284,43 | 1617 | 1561, 8 | 2909, 6 | 18,97% | 20,95% |
| F-n135-k7.vrp | 1165,00 | 2060,62 | 2171,34 | 298,6 | 299,58 | 431 | 437, 2 | 443, 4 | 76,88% | 86,38% |