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| PROBLEM INSTANCE | SIGMA | AVG COUNT | AVG COST | MIN COST |
|  | 1000 | 6.1 | 9.1 | 7 |
|  | 2000 | 6.4 | 9.5 | 7 |
| TEST.TSP | 3000 | 6.2 | 9.1 | 7 |
|  | 4000 | 6.7 | 9.5 | 7 |
|  | 5000 | 6.3 | 9.3 | 7 |
|  | 6000 | 5.7 | 8.5 | 7 |
|  | 7000 | 5.7 | 8.6 | 7 |
|  | 8000 | 4.9 | 9.2 | 7 |
|  | 9000 | 6.1 | 9.3 | 8 |
|  | 10000 | 6 | 9.4 | 7 |

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| PROBLEM INSTANCE | SIGMA | AVG COUNT | AVG COST | MIN COST |
|  | 1000 | 148.6 | 34852.5 | 33794 |
|  | 2000 | 165.3 | 34762.3 | 33531 |
| ATT48.TSP | 3000 | 155.6 | 34146.2 | 32243 |
|  | 4000 | 152.5 | 34736.8 | 33188 |
|  | 5000 | 155.7 | 34818 | 33264 |
|  | 6000 | 160.9 | 34625 | 33264 |
|  | 7000 | 163.8 | 34328.7 | 33192 |
|  | 8000 | 157.2 | 34000.7 | 32595 |
|  | 9000 | 160.7 | 34223.7 | 33183 |
|  | 10000 | 164.8 | 34592.7 | 33251 |

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| PROBLEM INSTANCE | SIGMA | AVG COUNT | AVG COST | MIN COST |
|  | 1000 | 12.7 | 23.7 | 21 |
|  | 2000 | 13.1 | 22.3 | 15 |
| BURMA14.TSP | 3000 | 14.8 | 23.6 | 20 |
|  | 4000 | 13.3 | 23.4 | 21 |
|  | 5000 | 13 | 24.3 | 22 |
|  | 6000 | 14.5 | 22.7 | 21 |
|  | 7000 | 14.7 | 23.4 | 20 |
|  | 8000 | 14.5 | 22.7 | 19 |
|  | 9000 | 13.5 | 23.0 | 15 |
|  | 10000 | 14.3 | 23.2 | 20 |

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| PROBLEM INSTANCE | SIGMA | AVG COUNT | AVG COST | MIN COST |
|  | 1000 | 243.5 | 703.9 | 663 |
|  | 2000 | 232.2 | 698.3 | 667 |
|  | 3000 | 242.8 | 703.3 | 662 |
| ST70.TSP | 4000 | 243 | 707.7 | 664 |
|  | 5000 | 239 | 712.2 | 671 |
|  | 6000 | 243.4 | 692.6 | 657 |
|  | 7000 | 239.9 | 698.3 | 673 |
|  | 8000 | 237.9 | 710.4 | 660 |
|  | 9000 | 238.1 | 699.7 | 678 |
|  | 10000 | 240 | 696.9 | 650 |

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| PROBLEM INSTANCE | SIGMA | AVG COUNT | AVG COST | MIN COST |
|  | 1000 | 18.1 | 65.2 | 64 |
|  | 2000 | 18.1 | 57.7 | 62 |
|  | 3000 | 22.0 | 64.5 | 55 |
| ULYSSES16.TSP | 4000 | 19.5 | 64.9 | 63 |
|  | 5000 | 19.7 | 65.5 | 60 |
|  | 6000 | 20.2 | 63.5 | 57 |
|  | 7000 | 19.9 | 64.5 | 59 |
|  | 8000 | 19.3 | 62.7 | 31 |
|  | 9000 | 18.5 | 58.9 | 63 |
|  | 10000 | 21.6 | 64.3 | 58 |

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| PROBLEM INSTANCE | SIGMA | AVG COUNT | AVG COST | MIN COST |
|  | 1000 | 33.9 | 65.0 | 63 |
|  | 2000 | 32.7 | 65.4 | 63 |
|  | 3000 | 31.6 | 65.1 | 63 |
| ULYSSES22.TSP | 4000 | 33.6 | 64.6 | 64 |
|  | 5000 | 34.8 | 64.9 | 62 |
|  | 6000 | 33.5 | 65.0 | 63 |
|  | 7000 | 32.6 | 65.8 | 64 |
|  | 8000 | 36.8 | 71.4 | 64 |
|  | 9000 | 28.7 | 65.7 | 60 |
|  | 10000 | 35.1 | 64.9 | 58 |