|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Unsorted |  |  |  |  |  |  |  |
| n | Bubble sort | Insertion sort | Selection sort |  | Merge sort | Quick sort (first) | Quick sort (middle) |
| 1000 | 1 | 1 | 1 |  | 0 | 0 | 1 |
| 5000 | 30 | 9 | 14 |  | 1 | 0 | 1 |
| 10000 | 140 | 37 | 57 |  | 2 | 2 | 1 |
| 50000 | 4950 | 936 | 1516 |  | 9 | 7 | 7 |
| 75000 | 11293 | 2126 | 3183 |  | 13 | 11 | 11 |
| 100000 | 20235 | 3727 | 5718 |  | 17 | 16 | 15 |
| 500000 | 514038 | 108865 | 260686 |  | 94 | 74 | 76 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sorted |  |  |  |  |  |  |  |
| N | Bubble sort | Insertion sort | Selection sort |  | Merge sort | Quick sort (first) | Quick sort (middle) |
| 1000 | 1 | 0 | 0 |  | 0 | 1 | 0 |
| 5000 | 14 | 0 | 14 |  | 1 | 9 | 0 |
| 10000 | 58 | 0 | 58 |  | 1 | 33 | 1 |
| 50000 | 1449 | 0 | 1412 |  | 6 | 684 | 5 |
| 75000 | 3204 | 0 | 3181 |  | 8 | 1460 | 7 |
| 100000 | 5633 | 0 | 5700 |  | 11 | 3026 | 10 |
| 500000 | 202774 | 1 | 263793 |  | 58 | 56923 | 47 |

Unsorted Timing Results

Sorted Timing Results