| Array size  | Selection Sort              | Bubble Sort                     | Inserstion Sort          | Merge Sort | Quick Sort |  |
|---|-----------------------------|---------------------------------|--------------------------|------------|------------|--|
| 50000   | 1152                        | 4673                            | 335                      | 15         | 22         |  |
| 100000  | 4718                        | 17310                           | 1177                     | 24         | 191        |  |
| 150000  | 10119                       | 39137                           | 2725                     | 36         | 251        |  |
| 200000  | 17111                       | 73132                           | 6052                     | 50         | 716        |  |
| 250000  | 27063                       | 110254                          | 7458                     | 49         | 1071       |  |
| 300000  | 38061                       | 156708                          | 10928                    | 65         | 668        |  |
| 350000  | 51545                       | 225245                          | 16601                    | 81         | 738        |  |
| 400000  | 74844                       | 302561                          | 21924                    | 115        | 2030       |  |
| 450000  | 96098                       | 384452                          | 27935                    | 109        | 4132       |  |
| 500000  | 120746                      | 484600                          | 36700                    | 111        | 3303       |  |
| art I   |                             |                                 |                          |            |            |  |
|   | Sort, Bubbletion Sort - Bub |                                 |                          |            |            |  |
| 500000 ————————————————————————————————   |                             | ble Sort 🛑 Inse                 |                          |            |            |  |
| 500000 — 5000000 — 50000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 50000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 500000000 | tion Sort - Bub             | ble Sort 🛑 Inse                 | erstion Sort • N         | Merge Sort |            |  |
| 500000 — 5000000 — 50000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 50000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 500000000 | tion Sort - Bub             | ble Sort — Inse<br>— Quick Sort | one description Sort No. | Merge Sort |            |  |
| 500000 — 5000000 — 50000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 50000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 500000000 | tion Sort - Bub             | Dono 3000                       | one description Sort No. | Merge Sort |            |  |
| 500000 — 5000000 — 50000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 50000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 500000000 | tion Sort - Bub             | Dono 3000                       | one description Sort No. | Merge Sort |            |  |
| 500000 — 5000000 — 50000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 50000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 5000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 50000000 — 500000000 | tion Sort - Bub             | Dono 3000                       | one description Sort No. | Merge Sort |            |  |

|  |        | Bubble Sort | Inserstion Sort | Merge Sort  | Quick Sort | QuickMergeSort |
|--|--------|-------------|-----------------|---|------------|----------------|
| 50000  | 1152   | 4673        | 335             | 15  | 22         | 1357           |
| 100000   | 4718   | 17310       | 1177            | 24  | 191        | 5447           |
| 150000   | 10119  | 39137       | 2725            | 36  | 251        | 13141          |
| 200000   | 17111  | 73132       | 6052            | 50  | 716        | 21254          |
| 250000   | 27063  | 110254      | 7458            | 49  | 1071       | 33417          |
| 300000   | 38061  | 156708      | 10928           | 65  | 668        | 46676          |
| 350000   | 51545  | 225245      | 16601           | 81  | 738        | 63533          |
| 400000   | 74844  | 302561      | 21924           | 115   | 2030       | 85645          |
| 450000   | 96098  | 384452      | 27935           | 109   | 4132       | 110330         |
| 500000   | 120746 | 484600      | 36700           | 111   | 3303       | 134968         |
| Part II  |        |             |                 |   |            |                |
|  | ,      | c cort, mac | rstion Sort,    | Merge   |            |                |
| 500000<br>400000<br>300000<br>200000<br>100000 |        | o dort, mac | erstion Sort,   | <ul> <li>1152</li> <li>4673</li> <li>335</li> <li>15</li> <li>22</li> <li>1357</li> </ul> |            |                |