|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **#comp** | Bubble Sort | | | Shell Sort | | |
| *n* | Inc | Ran | Dec | Inc | Ran | Dec |
| 100 | 99 | 4972 | 5048 | 826 | 1186 | 1054 |
| 103 | 999 | 499742 | 500497 | 14180 | 20136 | 17363 |
| 104 | 9999 | 49992757 | 50005000 | 201688 | 294454 | 244771 |
| 105 | 99999 | 4999871596 | 715827881 | 2616692 | 3885858 | 3153491 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **#comp** | Selection Sort | | | Insertion Sort | | |
| *n* | Inc | Ran | Dec | Inc | Ran | Dec |
| 100 | 198 | 2927 | 5041 | 198 | 2927 | 5041 |
| 103 | 1998 | 8258706 | 500380 | 1998 | 258706 | 500380 |
| 104 | 19998 | 25200236 | 50003703 | 19998 | 25200236 | 50003703 |
| 105 | 199998 | 2502510900 | 715827881 | 199998 | 2506679184 | 5000036897 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **RT** | Shell Sort | | | Radix Sort | | |
| *n* | Inc | Ran | Dec | Inc | Ran | Dec |
| 100 | .008 | .015 | .010 | .014 | .014 | .012 |
| 103 | 1.11 | .217 | .114 | 1.91 | .143 | .130 |
| 104 | .217 | 3.23 | 1.512 | 1.91 | 1.95 | 1.707 |
| 105 | 15.2 | 1298073 | 18.72 | 24.7 | 24.6 | 21.1833 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **RT** | Selection Sort | | | Insertion Sort | | | Bubble Sort | | |
| *n* | Inc | Ran | Dec | Inc | Ran | Dec | Inc | Ran | Dec |
| 100 | .005 | .023 | .035 | .004 | .022 | .037 | .003 | .061 | .062 |
| 103 | .108 | 1.72 | 3.349 | .137 | 1.7 | 3.304 | .062 | 6.19 | 5.602 |
| 104 | .108 | 168 | 33.63 | .137 | 166 | 333.857 | .062 | 596 | 551.583 |
| 105 | 1.05 | 16830 | 33462 | 1.15 | 16801 | 33710.2 | .589 | 60276 | 55861.4 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Complexity** | Inc | Ran | Dec |
| Selection Sort |  |  |  |
| Insertion Sort |  |  |  |
| Bubble Sort |  |  |  |
| Shell Sort |  |  |  |
| Radix Sort |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Complexity** | Best | Average | Worst |
| Selection Sort | N2 | N2 | N2 |
| Insertion Sort | N | N2 | N2 |
| Bubble Sort | N | N2 | N2 |
| Shell Sort | N log N |  | N2 |
| Radix Sort | Nk | Nk | Nk |