|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **#comp** | Bubble Sort | | | Shell Sort | | |
| *n* | Inc | Ran | Dec | Inc | Ran | Dec |
| 100 | 99 | 4972 | 1 | 826 | 1186 | 1 |
| 103 | 999 | 499742 | 1 | 14180 | 20136 | 1 |
| 104 | 9999 | 49992757 | 1 | 201688 | 294454 | 1 |
| 105 | 99999 | 4999871596 | 1 | 2616692 | 3885858 | 1 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **#comp** | Selection Sort | | | Insertion Sort | | |
| *n* | Inc | Ran | Dec | Inc | Ran | Dec |
| 100 | 198 | 2927 | 1 | 198 | 2927 | 1 |
| 103 | 1998 | 8258706 | 1 | 1998 | 258706 | 1 |
| 104 | 19998 | 25200236 | 1 | 19998 | 25200236 | 1 |
| 105 | 199998 | 2502510900 | 1 | 199998 | 2506679184 | 1 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **RT** | Shell Sort | | | Radix Sort | | |
| *n* | Inc | Ran | Dec | Inc | Ran | Dec |
| 100 | .008 | .015 | .003 | .014 | .014 | .003 |
| 103 | 1.11 | .217 | .003 | 1.91 | .143 | .003 |
| 104 | .217 | 3.23 | .003 | 1.91 | 1.95 | .003 |
| 105 | 15.2 | 1298073 | .003 | 24.7 | 24.6 | .003 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **RT** | Selection Sort | | | Insertion Sort | | | Bubble Sort | | |
| *n* | Inc | Ran | Dec | Inc | Ran | Dec | Inc | Ran | Dec |
| 100 | .005 | .023 | .003 | .004 | .022 | .003 | .003 | .061 | .003 |
| 103 | .108 | 1.72 | .003 | .137 | 1.7 | .003 | .062 | 6.19 | .003 |
| 104 | .108 | 168 | .003 | .137 | 166 | .004 | .062 | 596 | .003 |
| 105 | 1.05 | 16830 | .003 | 1.15 | 16801 | .003 | .589 | 60276 | .003 |

|  |  |  |  |
| --- | --- | --- | --- |
| **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 |