|  |  |  |  |
| --- | --- | --- | --- |
| **Bubble sort** | | | |
| **Number of integers to sort** | **Ascending** | **Descending** | **Random order** |
|  |
| **150** | 522.667 | 136.333 | 86 |  |
| **1500** | 2524 | 4000.333 | 2912 |  |
| **15000** | 68165 | 338347.33 | 473554 |  |
| **30000** | 275059 | 1535584.3 | 1440369 |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Selection sort** | | | |
| **Integers to sort** | **Ascending** | **Descending** | **Random order** |
|  |
| **150** | 365.667 | 344 | 336.33 |  |
| **1500** | 3092 | 10575.333 | 3899 |  |
| **15000** | 27618.33 | 115588.33 | 121752.333 |  |
| **30000** | 96929.67 | 1049881 | 1050538.333 |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Insertion sort** | | | |
| **Number of integers to sort** | **Ascending** | **Descending** | **Random order** |
|  |
| **150** | 12.333 | 424.667 | 261 |  |
| **1500** | 99.667 | 661.667 | 258.667 |  |
| **15000** | 959.333 | 117044 | 48991 |  |
| **30000** | 1199.667 | 361718.67 | 135511.667 |  |

Different results were obtained at different values used. At 150 integers and ascending order the fastest was the insertion sort at approximately 12 nano seconds, descending order bubble sort is the fastest at approximately 136 nano seconds and the random order too bubble was the fastest at 86 nano seconds.

At 1500 integers and ascending order the fastest was the insertion sort at approximately 99 nano seconds, descending order insertion sort is the fastest at approximately 661 nano seconds and the random order insertion sort was the fastest at 258 nano seconds.

At 15000 integers and ascending order the fastest was the insertion sort at approximately 959 nano seconds, descending order selection sort is the fastest at approximately 115588 nano seconds and the random order insertion sort was the fastest at 135511 nano seconds.

At 15000 integers and ascending order the fastest was the insertion sort at approximately 959 nano seconds, descending order selection sort is the fastest at approximately 115588 nano seconds and the random order insertion sort was the fastest at 48991 nano seconds.

At 30000 integers and ascending order the fastest was the insertion sort at approximately 1199 nano seconds, descending order insertion sort is the fastest at approximately 361718 nano seconds and the random order insertion sort was the fastest at 135511 nano seconds.