**Comparing the running time of insertion sort algorithm and merge sort algorithm.**

|  |  |  |
| --- | --- | --- |
| **Value of n** | **Insertion Sort (s)** | **Merge Sort (s)** |
| 1000 | 0.001031 | 0.001012 |
| 5000 | 0.024806 | 0.006957 |
| 10000 | 0.124262 | 0.012093 |
| 20000 | 0.292079 | 0.024252 |
| 30000 | 0.640315 | 0.032224 |
| 40000 | 1.739443 | 0.064601 |
| 50000 | 2.069535 | 0.076887 |
| 60000 | 2.970781 | 0.095463 |
| 100000 | 8.080645 | 0.124697 |
| 500000 | 191.53900 | 0.559406 |
| 1000000 | 765.00500 | 1.436347 |

The approximate value of N not in the above table is around about 1250.

**Comparing the running time of insertion sort, merge sort and hybrid merge Sort algorithms.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Value of n** | **Insertion Sort** | **Merge Sort** | **Hybrid Merge Sort** |
| 1000 | 0.000983 | 0.001572 | 0.000980 |
| 5000 | 0.024806 | 0.006957 | 0.006136 |
| 10000 | 0.124262 | 0.012093 | 0.015158 |
| 20000 | 0.292079 | 0.024252 | 0.028983 |
| 30000 | 0.640315 | 0.032224 | 0.030763 |
| 40000 | 1.739443 | 0.064601 | 0.043035 |
| 50000 | 2.069535 | 0.076887 | 0.047790 |
| 60000 | 2.970781 | 0.095463 | 0.064427 |
| 100000 | 8.080645 | 0.124697 | 0.070880 |
| 500000 | 191.53900 | 0.559406 | 0.094011 |
| 1000000 | 765.00500 | 1.436347 | 1.056786 |