1. MERGE SORT: Efficiency= O(nlog(n))

|  |  |  |  |
| --- | --- | --- | --- |
| VALUE OF N | COUNT/N | COUNT/N^2 | **COUNT/NlogN** |
| 10  (count=34) | 3.4 | 0.034 | **3.4** |
| 100  (count=672) | 6.72 | 0.0672 | **3.36** |
| 500  (count=4488) | 8.976 | 0.017952 | **3.32** |
| 1000  (count=9976) | 9.976 | 0.009976 | **3.325** |

1. QUICK SORT: Efficiency= avg case: O(Nlog(N))

Worst case: O(n^2)

|  |  |  |  |
| --- | --- | --- | --- |
| VALUE OF N | COUNT/N | COUNT/N^2 | **COUNT/NlogN** |
| 10  (count=44) | 4.4 | 0.44 | **4.4** |
| 100  (count=1020) | 10.2 | 0.102 | **5.1** |
| 500  (count=8160) | 16.32 | 0.03264 | **6.04** |
| 1000  (count=23380) | 23.38 | 0.02338 | **7.79** |