|  |  |  |
| --- | --- | --- |
| Array length | Quicksort t in milliseconds | Insertion in milliseconds |
| 5 | 0.000442 | 0.000199 |
| 10 | 0.000686 | 0.000412 |
| 20 | 0.001742 | 0.001243 |
| 40 | 0.003026 | 0.002838 |
| 80 | 0.008022 | 0.009853 |
| 160 | 0.024721 | 0.037717 |
| 320 | 0.045505 | 0.146803 |
| 640 | 0.068055 | 0.633894 |
| 1280 | 0.209788 | 1.99308 |
| 2560 | .321962 | 7.85185 |
| 5120 | .565699 | 34.1599 |
| 10240 | 1.06902 | 136.664 |
| 20480 | 2.59646 | 555.251 |
| 40960 | 4.85878 | 2179.1 |
| 81920 | 8.88907 | 8741.02 |
| 163840 | 17.373 | 35350.9 |
| 327680 | 35.9312 | 135399 |
| 655360 | 73.5042 | 540084 |

Conclusion

In the smaller arrays of length 80 and below insertion is faster but not by much. However once you get into larger and larger arrays the difference is by a very large factor of quicksort being much fast than insertion as seen in the table above.