**Results of quicksort using Python**

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I ran my experiment on three different files containing 10 thousand, 100 thousand, and 1 million values respectively. My program kept track of the number of assignments and comparisons that took place during each sort. The results compared to O (n lg(n)) proves the accuracy of my program.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **INPUT SIZE** | **COMPARISONS** | **ASSIGNMENTS** | **n lg(n)** | **n^2** |
| 10,000 | 154415 | 263123 | 130,000 | 100,000,000 |
| 100,000 | 2044336 | 3186549 | 1,600,000 | 10^10 |
| 1,000,000 | 25225681 | 44277429 | 20,000,000 | 1000^4 |