

Quick Sort – Random Initialization

- The 11 data points indicate an $O(n^2)$ relationship between list length and sorting time. The relation between length of list and time can be modeled by $.000000000828*n^2 - .0000009*n + .063$
- Prediction for the time required for Merge Sort to sort a randomly initialized list of length 10,000,000: $y(10000000) = 82791.063$ seconds or 23.00 hours

