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Graphs and Explanations

Figure 1

Figure 2

Figure 3

Figure 4

Analyzing the data from my program, I feel confident in saying that each algorithm performed as expected. The speed of each algorithm increased with each chronological algorithm. From slowest to fastest, the order is: algorithm 1, algorithm 2, algorithm 3, and algorithm 4. Algorithm 1 performed at an O time complexity, algorithm 2 shows an O time complexity, Algorithm 3: O, and algorithm 4: O(n) time complexity- as indicated by the title of the charts.

For all of the algorithms, when graphed with their expected counterparts, T1(n), T2(n), T3(n), and T4(n) respectively, the main difference in the shapes of the graphs can be described as a constant scale. Each algorithm had their share of outliers that did not perfectly correspond to their expected charts. However, I think that this issue can be attributed to the number of times each algorithm was run and timed. In conclusion, each algorithm ran as expected.