Despite running 100 tests per n number of variables, we have a large discrepancy between the data we found during our tests and what the trend line of the data is. As the number of variables increase, so does the standard deviation of our tests. The Big-O we found was O(n1.3978).

We have included the graph with the data and trend line; the formula of the trend line (y = 0.3418x1.3978); how accurate that trend line is (99.19%); our predictions for 85 (170.1), 105 (228.55), and 135 (324.75) variables; as well as the actual results from running 100 tests each of 85 (223.44), 105 (296.54) and 135 (383.38) variables.

To have more accurate test results, we believe that we should increase the number of experiments as we increase the number of variables; however, due to the computing limitations of our computers, we were not able to increase the number of experiments per variable beyond 100.