Q3 PDF Report

Running the cubic function with an input size of 100,000 was taking too long, so I sized down the input size to 10,000. The issue with running the functions with an input size of 10,000 is that the Linear and Quadratic function ran immensely faster than the cubic function. Graphing these data points with such a huge range (0.001 – 299.49) was difficult, so I have included the data table above the graph to indicate that the Linear and Quadratic functions did run; however, their running times were too small to show up on the bar graph. Another issue I faced was that even with an input size of 10,000, the Linear function showed a time of 0.0000 seconds about 50% I ran the function, and this occurred with input sizes up to 20,000. I took the quickest output time (0.001) as my data to draw the correct conclusions.

Looking at the data table along with the bar graph, one can clearly tell that the more nested loops, the longer it takes to parse through the data.

Type of Function	Observed Execution Time (s)
Linear	0.001
Quadratic	0.003
Cubic Function	299.49