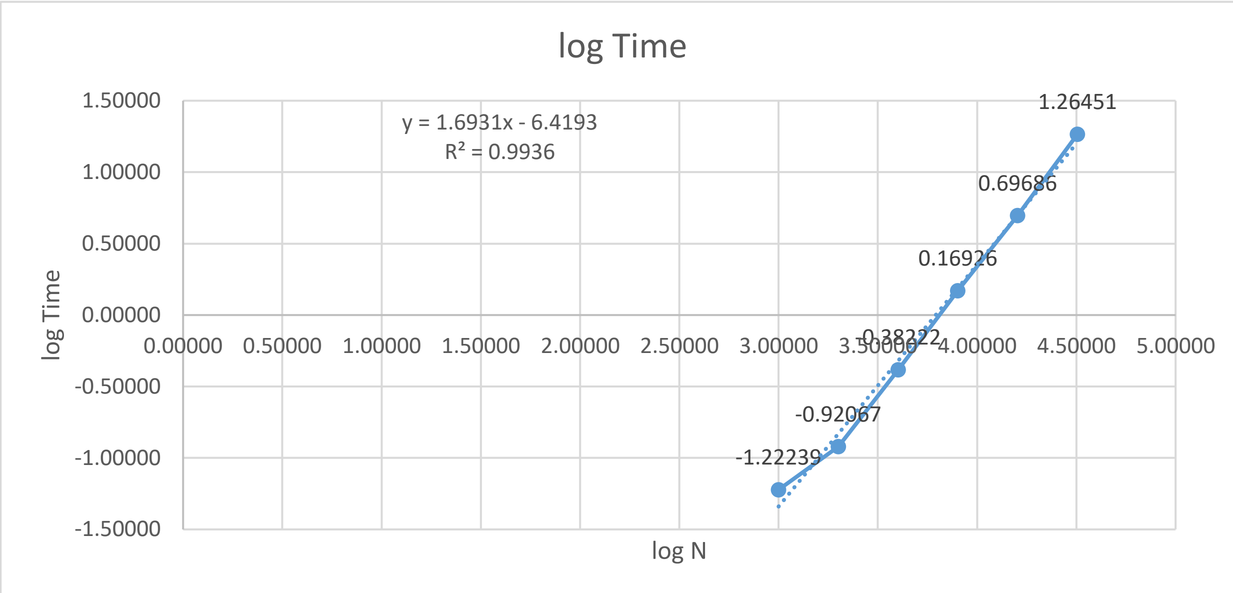
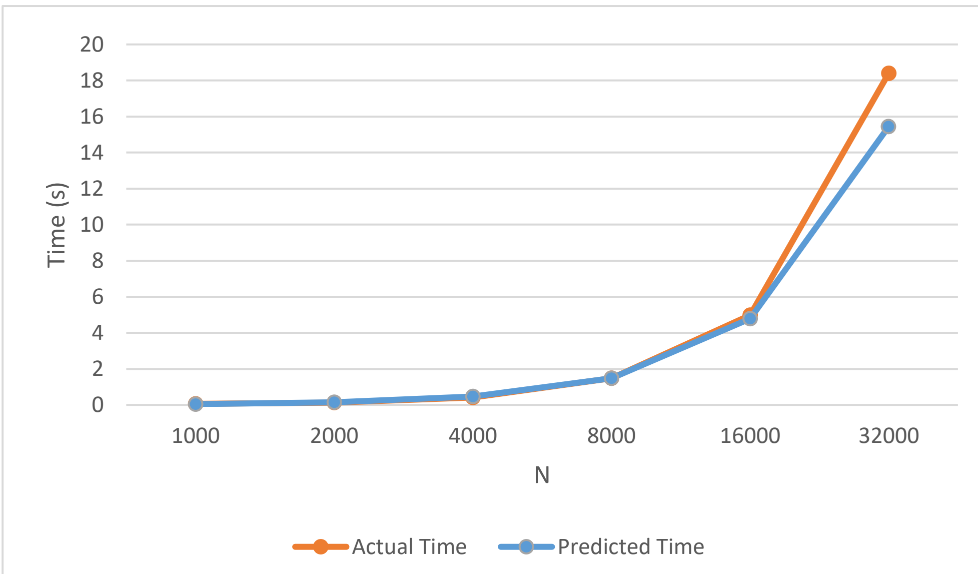
N	Actual Time (seconds)	Triples found	log N	log Time	Predicted Time (seconds)
1,000	0.0599247	70	3.00000	-1.22239	0.04368
2,000	0.1200414	528	3.30103	-0.92067	0.14122
4,000	0.4147462	4039	3.60206	-0.38222	0.45665
8,000	1.4765793	32074	3.90309	0.16926	1.47658
16,000	4.9757937	255181	4.20412	0.69686	4.77453
32,000	18.3870265	2052358	4.50515	1.26451	15.43848
1,000,000			6.00000		5242.45992
10,000,000			7.00000		258603.92897
T(n)	a N^b				
y	bx + c				
b	1.6931				
c	-6.4193				
N	8000				
N^b	4058089.836				
T(8000)	1.4765793				
a = T(n)/N^b	3.64E-07				
a = 10^c	3.81E-07		Power Law Equation	T(n) = (3.64E-07)*n^1.6931	
T(n) = (3.64E-07)n^1.6931					
T(n) = b log n + c	0.189021657				

Doubling Technique					
N	Actual Time (seconds)	Ratio	Log 2 Ratio		
1,000	0.0599247	2.003204	1.00230936		
2,000	0.1200414	3.455026	1.78869671	Growth Rate	Quadratic
4,000	0.4147462	3.5602	1.83195817		
8,000	1.4765793	3.369811	1.75266783		
16,000	4.9757937	3.695295	1.88568961		
32,000	18.3870265	0			
			b ≈ 1.70		





After collecting data and plotting the log-log graph, I used excel to calculate a trend line. The trend line calculated a **b** value of 1.6931 and a **c** value of -6.4193. After some calculates, I calculated a Power Law Equation of T(n) = (3.64E-07)*n^1.6931.

Using the dobling technique, I determined that the growth rate was Quadratic. The Log 2 Ration equaled out to approximately 1.70.

I used the equations I found to calculate the estimated run time for 1 million numbers. It is estimated that 1 million numbers would take 5242.45992 seconds, roughly 87 minutes or an hour and 27 minutes, to run. And for 10 million numbers I estimated it would take 258603.92897 seconds, roughly 72 hours or 3 days, to run.