

size(log10(n))	time(log10(t))[sec]	size	time(sec):actual
3	-1.823908741	1000	0.015
3.301029996	-1.283996656	2000	0.052
3.602059991	-0.709965389	4000	0.195
3.903089987	-0.096910013	8000	0.8
4.204119983	0.506910726	16000	3.213

Power Law Equation: $T(n) = a N^b \rightarrow 10^{-7.68} N^{1.9429} = 2.08 \times 10^{-8} N^{1.9429}$

time(sec)	Ratio	Log 2
0.015	3.466666667	1.793549123
0.052	3.75	1.906890596
0.195	4.102564103	2.03652587602511
0.8	4.01625	2.00584907569669
3.213	4.077497666	2.027684051

n	t(seconds)
16,000	3.195
16,000	3.22
16,000	3.197

Constant Estimate:

$$t(16,000) = a \times N^b$$

$$a = 3.204/16,000^3 = .0078 \times 10^{-10}$$

$$t(1,000,000) = .0078 \times 10^{-10} \times 1,000,000^{2.03} = 1.18$$

time(sec) estimate
0.014
0.054
0.208
0.8
3.077



