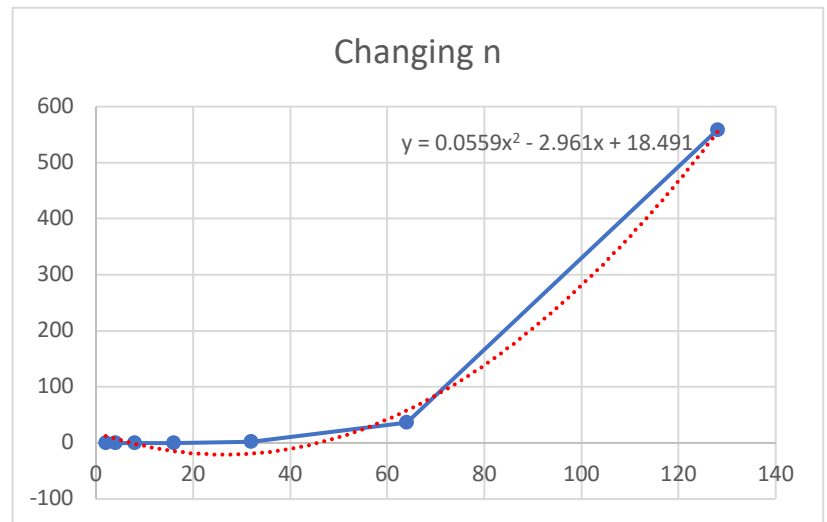
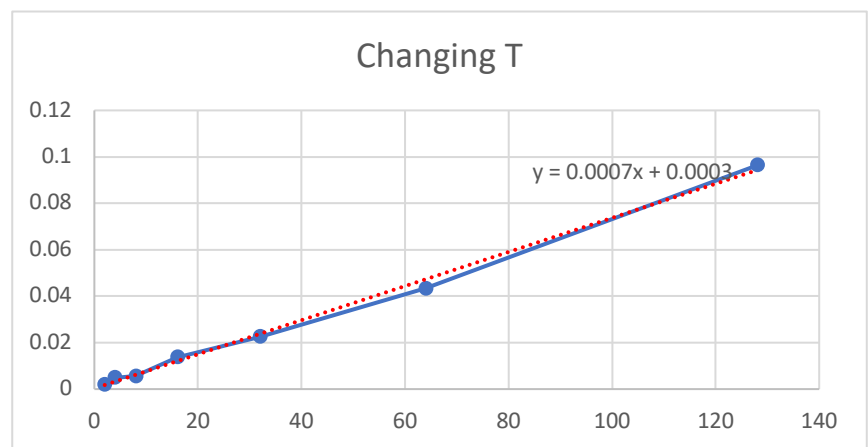


PERCOLATION QUICK FIND

n	time	T
2	0.001355	20
4	0.002674	20
8	0.0164	20
16	0.144507	20
32	2.377784	20
64	36.609586	20
128	558.506356	20



T	time	n
2	0.002006	8
4	0.004935	8
8	0.005658	8
16	0.013749	8
32	0.02259	8
64	0.043356	8
128	0.096323	8



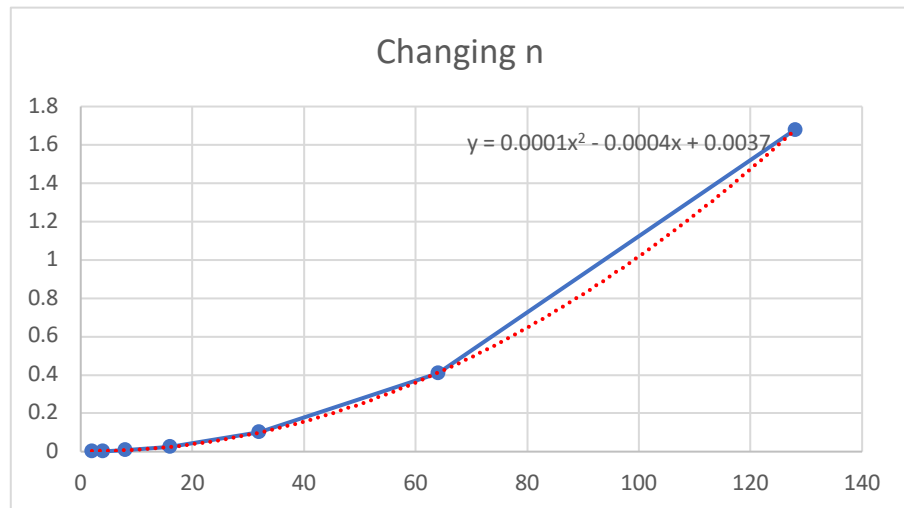
Time Analysis:

Change T: When we double the number of trials, the function looks linear $\sim O(N)$, almost a straight line.
time = CT where C is a constant.

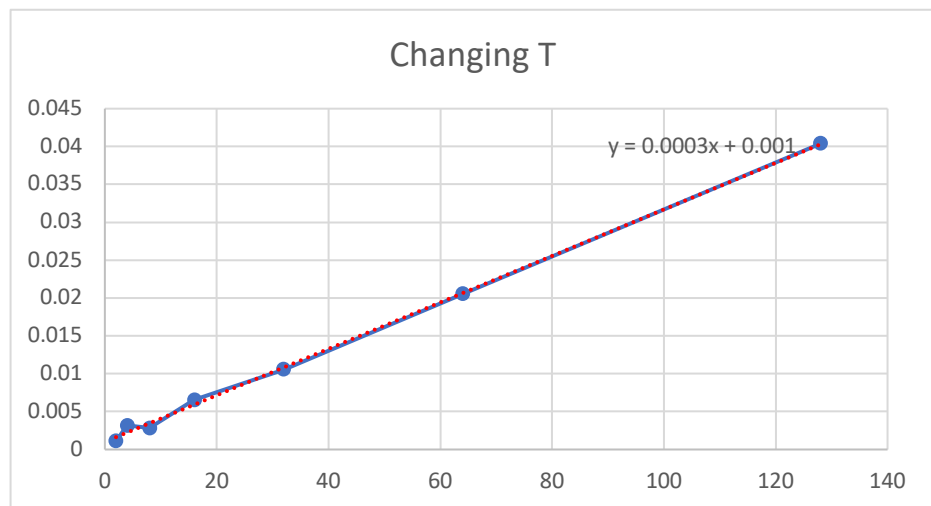
Change N: When we double n, the graph seems so be quadratic. $\sim O(N^2)$

**PERCOLATION
WEIGHTED
QUICK UNION**

n	time	T
2	0.001739	20
4	0.00268	20
8	0.009203	20
16	0.025355	20
32	0.102043	20
64	0.408516	20
128	1.679768	20



T	time	n
2	0.001082	8
4	0.003179	8
8	0.002804	8
16	0.006548	8
32	0.010548	8
64	0.020509	8
128	0.040371	8



Analysis:

Change T: When we double the number of trials, the function looks linear $O(N)$, almost a straight line.
time = CT where C is a constant.

Change N: When we double n, the graph seems to be quadratic. $\sim O(N^2)$