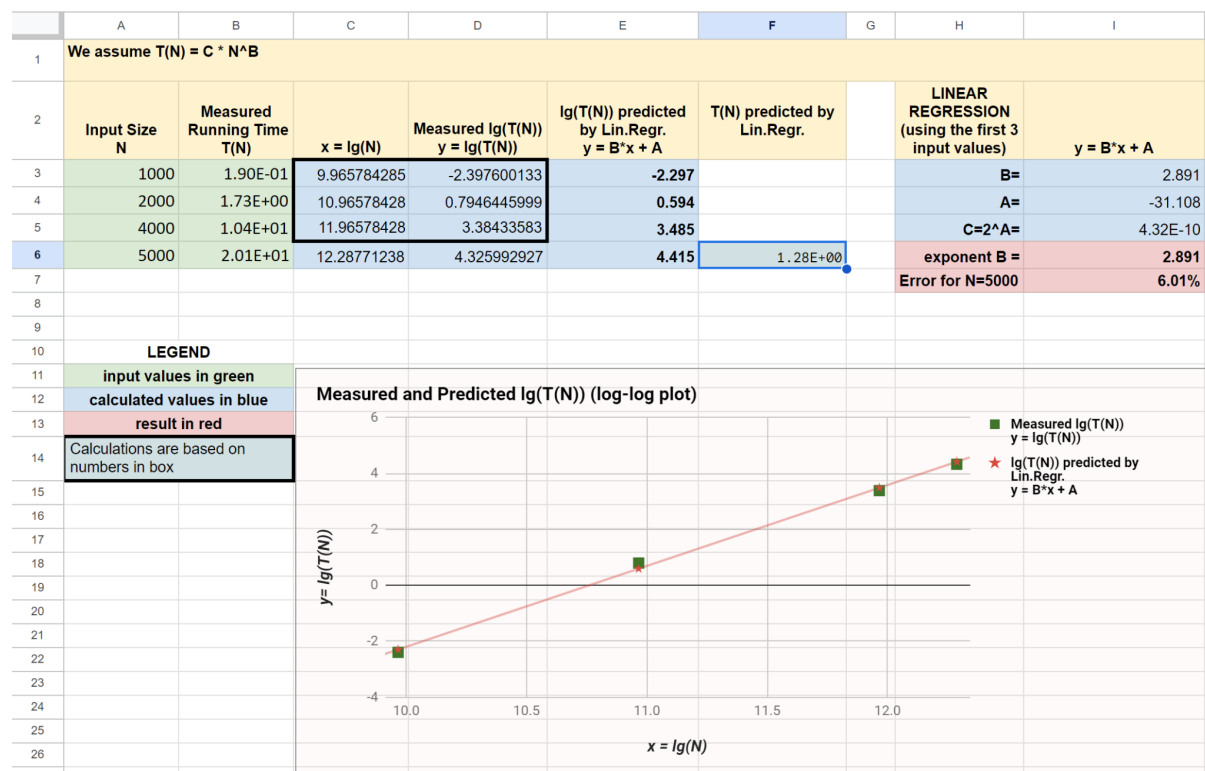


countCollinear performance

In order to test this function accurately I used a loop to run each set of inputs 100 times and calculate the mean average of the samples. This was significantly more time consuming but I did it anyway as I felt it was better experimental practice. The results are displayed in the table below.

Input size	Execution time
1000	0.18978 seconds
2000	1.73465 seconds
4000	10.44207 seconds

After fitting these measurements to a log-log plot with a linear regression, the estimated B value comes to 2.891. This estimate is pretty decent as the expected value is 3, but it is not perfect.



Based on this linear regression model, an input size of 5000 would take 21.3 seconds to execute. After running my test, the average execution time was 20.05643 seconds. This is an error of 6.01% which is relatively small considering the linear regression is only based on three test cases.