Traffic Lights

On your way to work you must pass 3 widely separated traffic lights which operate independently of each other. The probability that you will be stopped at any one of them is 40%. Use simulation to find the probability that you make it to work—without stopping, stopping once, twice, at all three lights.

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RandInt(1,10,3) where 1-4 is STOP
5-10 is GO

Do 10 individual rounds & then pool the results of your group. Lastly, pool results of class.

Ex: {9, 9, 8} no stops
{6, 2, 4} two stops
{8, 9, 2} one stop

# of Stops	Individual	Group	Class
0			
1			
2			
3			

Theoretically: P(S) = P(G) =

P(GGG) =

P(GGS) =

P(GSS) =

P(SSS) =

Binomial Probability Distribution—four conditions

- There is a fixed number of trials.
- The trials must be independent.
- Each trial has only two outcomes—success or failure.
- The probability of success, call it p, is the same for each trial.