



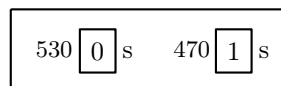
Quiz: Central Limit Theorem

1. Complete the following table for the coin-tossing game.

Number of Tosses	Number of heads		Percent of heads	
	Expected Value	SE	Expected Value	SE
100	50	5	50%	5%
2,500				
10,000				
1,000,000				

2. Would taking the average of 25 measurements divide the likely size of the chance error by a factor of 5, 10 or 25? Justify your answer.

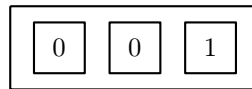
3. A population of 1000 has 470 voters for candidate *A* and 530 voters for candidate *B*. A newspaper plans to poll a certain number of voters to try to estimate the percentage of voters for *A*. Here is a box model.



a) Compute $EV\%$ and $SD\%$

b) Compute $SE\%$ for $n = 16$, $n = 25$, $n = 49$ and $n = 100$.

4. Nine hundred draws will be made at random with replacement from the box shown below.



- a) The number of 1s among the draws will be around _____ give or take _____ or so.
- b) The chance of getting between 280 and 320 1s is _____.
- c) What is the chance that the number of 1s will be less than 270?
- d) The percentage of 1s among the draws will be around _____ give or take _____ or so.
- e) The chance of getting between 30% and 36% 1s is _____.
- f) What is the probability that the percentage of 1s will be over 35%.