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ECo 602: Michael France Nelson

Frequentism Concepts

1. dbinom(3, 4, p = 0.75)

   0.421875

2. pbinom(3, 4, p = 0.75)

   0.6835937

3. 1 - (pbinom(q=3, size=5, p=0.75))

   0.6328125

4. pnorm(1.2, mean = 2, sd=2)

   0.3445783

5. 1- pnorm(1.2, mean= 2, sd=2)

   0.6554217

6. pnorm(3.2, mean = 2, sd=2) - pnorm(1.2, mean = 2, sd =2)

   0.3811686

7. The shape of the histogram changes very little. As I continue to press the sample button the numbers seem to stabilize. All of the bars vary by no more than 3%. For example, the tallest bar varies between 11-13%.

8. As I ran the sample many times, small percentages of data in the middle of the graph started popping up. The bars toward the skew stayed very consistent after many times varying only by a 1% each sample.

9. Initially, the lower tail increases in percentage each time that I press sample, but it hit a peak around 16%. In this example, the distribution curve was the narrowest out of the three sample size trials and was normally distributed.

10. There is a drastic change between sample sizes 1 and 2 because there is no variation when there is a sample size of 1. However, the variation can be huge when there are 2 random samples because they can be on complete opposite sides of the sample.

11. The two main factors that determine the width of the sampling distribution of the mean are sample size and α.

12. 15625 possible 3-character words possible

13. 25 * B