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ECO-602 Analysis of Environmental Data

10/27/2021 -LATE

**Individual Assignment: Probability and Frequentist Concepts**

**Q1:** 0.421875

dbinom(3, 4, 0.75)

**Q2:** 0.6835937

pbinom(3, 4, 0.75)

**Q3:** 0.6328125

pbinom(3, 5, 0.75)

1 - 0.3671875

**Q4:** 0.3445783

pnorm(1.2, 2, 2)

**Q5:** 0.6554217

pnorm(1.2, 2, 2)

1 - 0.3445783

**Q6:** -0.7257469

pnorm(1.2, 2, 2)

- pnorm(3.2, 2, 2)

**Q7:** With submitting the sample button multiple times the sample data changes slightly each time but it always stays within the skewed curve line of the chart. The more times I run the model, the closer to a more gradual curve it gets.

**Q8:** With changing the sample size to 2, the histogram still follows the curve of the above graph but not as closely. After a times submitting the sample, the graph stops fluctuating and levels out. The shape looks little closer to a normal distribution than it did with a sample size of 1.

**Q9:** With a sample size of 15 and 50 draws the graph looks like a normal distribution. With each submission it gets a little closer to a normal distribution.

**Q10:** There is a drastic change from sample size 1 to 2 because you are doubling the number of samples. This instantly starts to move towards a more normal distribution.

**Q11:** The two main factors that determine the width of the sampling distribution of the mean are the sample size and the population size.

**Q12:** 15625

25 \* 25 \* 25 = 253 = 15625

The library of babel has 25 characters, 22 letters, the period, the comma, and the space.

**Q13:** 410 \* 40 \* 81 = 1328400 = 251328400