Juliana Berube
Frequentist concepts
10/22/21
*worked with Jessica Bonin and Julia Vineyard

1. 0.421875 (42.19%)
    dbinom(3, 4, 0.75)

2. 0.6835937 (68. 36%)
    pbinom(3, 4, 0.75)

3. 0.6328125 (63.28%)
    1-pbinom(3, 5, 0.75)

4. 0.3445783 (34.46%)
    pnorm(1.2, mean = 2, sd = 2)

5. 0.6554217 (65.54%)
    1-pnorm(1.2, mean = 2, sd = 2)

6. 0.3811686 (38.12%)
    pnorm(3.2, 2, 2)-pnorm(1.2, 2, 2)

7. The histogram changes marginally by becoming more slightly more skewed to one side. It does not have any dramatic changes.

8. The overall histogram changes minimally but begins to approach a normal distribution.

9. The shape of the histogram approaches a normal distribution when the sample size is increased to 15.

10. It becomes less broad, since the standard deviation decreases when you increase in sample size and it becomes more normal. There is much more of a change from 1 to 15 samples than there is from 1 to 2 samples.

11. The sample size and the variance determine the width of the sampling distribution of the mean

12. 25*25*25 = 15625

13. B(25)=(25^{1,312,001})