

ANOVA Classwork

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1.) .33, .72, .56, .56, .37, .48, .75, .56, .21, .23, .08, .41, .26, .95, .51, .86, .81, .52, .25, .75

So the proportion of p-values that reject the null hypothesis is 0. This is expected because the sample size is very small, and the population means are all the same.

2.)

0.49/0.35/0.64/0.65/0.2/0.53/0.67/0.06/0.19/0.17/0.29/0.96/0.89/0.8/0.67/0.73/0.6/0.57/0.56/0.4

Increasing the sample size to 50 lead to very similar results as question 1, where the null hypothesis was not rejected most of the time. Showing that increasing the sample size does not impact the results too much because the sample means are still all the same.

3.)

0.52/0.88/0.19/0/0.6/0.1/0.21/0.13/0.45/0.15/0.56/0.15/0.22/0.32/0.34/0.75/0.88/0.58/0.46/0.04/.55

Changing the population means slightly increased the chances of getting a p-value below 0.05, displaying that that the population mean plays a large role in the p-value for ANOVA tests.

4.) The proportion of time that the null hypothesis was rejected was about 50%. This is expected because the larger the sample size the higher the possibility that the null hypothesis can be rejected.

5.) We changed the sample size to 100 and the population means to 0, -10, and 10 and received a p-value of less than .05 100% of the time.