Perla Graham

EDG 500

April 10, 2023

Video 31 ANOVA

1. What is the theory called the Wisdom of the Crowd?

- The average of all the guesses will possibly be more accurate than most of the individual guesses.

2. What was different about the clipboards that students were holding?

- Students were randomly assigned to a clipboard and each of them weighted either one pound, two pounds or three pounds.

3. State the null hypothesis for the one-way ANOVA.

- The null hypothesis for the analysis of variance will be that there is no difference in population means for the three weights of clipboards H0: $\mu1 = \mu2 = \mu3$

4. What is the name of the test statistic that results from ANOVA?

- The name of the test that results from ANOVA is using a software to compute a statistic called F, which is the ratio of two measures of variation.

5. Was the professor able to conclude from the F-statistic that the population means differed depending on the weight of the clipboard? Explain.

- No, he was not able to. *F*-statistic was 0.796 with a *p*-value of 0.45. which means there is a 45% chance of getting an *F* value at least this extreme when there is no difference between the population means. The data from this experiment do not provide sufficient evidence to reject the null hypothesis.

6. Did the crowd prove to be wiser than the individual students?

- Yes, the actual amount in the vase was 237.52. The crowd's average guess was about $100 off from the actual amount of money in the jar. But still better than about three quarters of the individual guesses.