

## **Video 31 ANOVA**

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

In this experiment, the idea is that the mean of all the guesses will be more accurate than individual guesses because of the general public's experience with money.

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

The clipboards had a compartment for paper and were of different weights based on the amount of paper put in them.

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

The null hypothesis for the one way anova is that the differences between the means of the groups will not be statistically significant.

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

F is the variation between sample means as a numerator and variation within individual observations in the denominator.

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

The professor was not able to reject the null hypothesis because the  $p$  value was .45 which is over the statistical standard of .05. Therefore the one way ANOVA that was done multiple times showed that the different weights of the clipboards did not produce results that were statistically significant.

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

The mean of the crowd's estimates was \$129.22 with the actual amount being \$237.52. This was better than 3/4 of the guesses. (My personal estimate was \$150) The crowd proved to be slightly wiser than the individual. Of course not wiser than the winner.