

Math 10 final project report example

[Education](#)



This project involves interviewing people who go crabbing, a total of 30 individuals were interviewed and responded to four questions. These questions were:

1. How many time do you go crabbing per week?
2. How much money do you spend on baits?
3. What country dose your fish poles come from?
4. Can you get 10 more crabs per time?

The first question yielded numerical data; the second question also yielded numerical data whereas the third question and fourth question yielded nominal and ordinal data respectively.

Data was collected and analyzed using excel, the analyses involved developing charts, making inferences by calculating the mean, median, mode and confidence interval.

Data exploration:

Crabbing per week:

The number of times individuals went crabbing per week was captured in question one, this question yielded numerical data:

The following are summary measure:

The mean number of times individuals went crabbing was 3. 767, this variable mode is 3 whereas the median value was 3. The standard deviation value was 1. 906.

It is therefore evident that on average individuals go for crabbing 3. 767 times in a week.

Histogram:

The table summarizes the frequency of this variable:

This yields the following histogram:

Amount spent on bait:

The amount spent by individuals per week was captured in question two, this question yielded numerical data:

The following are summary measure:

The mean number of times individuals went crabbing was 6.067, this variable mode is 5 whereas the median value was 5. The standard deviation value was 2.728.

It is therefore evident that on average individuals spend \$6.067 per week.

Histogram:

The table summarizes the frequency of this variable:

This yields the following histogram:

Fish pole manufacturer:

Question three aimed at gathering data on fishing pole manufacturer, the following is a summary of the countries where these poles were manufactured:

It is evident from the chart that fishing poles were manufactured in difference location; the frequency is highest for Taiwan made fishing poles and lowest for Japan made fishing poles.

More than ten crabs per week:

The question whether individuals caught more than ten crabs per week was also analyzed, the following were the results:

The results indicate the mode of this variable is yes, this means that majority of individuals catch more than ten crabs per week.

Inferential statistics:

95% confidence interval:

Variable one mean is 3.767; we construct a confidence interval as follows:

At the 95% level, the mean ranges from 3.085 and 4.449

Variable two mean is 6.067, we construct a confidence interval as follows:

At the 95% level, the mean ranges from 5.09 and 7.04

Regression:

The regression estimated is to test whether the number of times individuals goes for crabbing and affects the amount spent on bait:

The following is scatter diagram:

The scatter diagram indicates that there is a positive relationship between these variables. The estimated regression is:

Amount spent per week = 3.011 + 0.811 number of times individuals goes crabbing

This regression means that if you increase the number of times an individual goes crabbing in a week by one, the amount spent increases by 0.811.

The R squared value is 0.321, this value shows that there is a weak relationship between variables.

Hypothesis Two tailed test:

Crabbing per week:

Hypothesis that the mean number of crabbing for those with US fishing poles is greater than the number of crabbing for those with Taiwan fishing poles:

H0: US mean = Taiwan mean

H1: US mean \neq Taiwan mean

Excel results are summarized below:

Amount spent per week:

Hypothesis that the mean Amount spent per week for those with US fishing poles is greater than the Amount spent per week for those with Taiwan fishing poles:

H0: US mean = Taiwan mean

H1: US mean \neq Taiwan mean

Excel results are summarized below:

ANOVA:

We test whether there are difference in the amount spent per week compared to the manufacturer of the fishing pole, the following are the results:

Hypothesis:

H0: US mean = Taiwan mean = China mean = Japan Mean

H1: US mean \neq Taiwan mean \neq China mean \neq Japan Mean

F statistics value is 0.754 which is less than the f critical value of 2.975. this means that the null hypothesis is accepted meaning that the amount spent is not affected by the manufacturer of the fishing pole.

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