

Stat 171 - Exam 1
Show all of your work

Name: _____

The frequency distribution shows the number of magazine subscriptions per household for 60 households of Macomb.

Number of magazines	0	1	2	3	4
Frequency	15	9	21	10	5

1. Identify the population and the sample.
2. Determine whether the data is qualitative or quantitative. Explain your reasoning.
3. Determine the level of measurement of the data set. Explain your reasoning.
4. Find the mean, median, and the mode of the data set.
5. Draw a pie chart for the given data set. Show your calculations.

Same table for reference:

Number of magazines	0	1	2	3	4
Frequency	15	9	21	10	5

6. Find a 5 number summary of the data set.

7. Draw a box-and-whisker plot for the data set.

8. Find the variance, and the standard deviation of the sample data set. Show your calculations.

$$\left(\text{formulas: } s = \sqrt{\frac{\sum(x - \bar{x})^2}{n - 1}}, \quad \sigma = \sqrt{\frac{\sum(x - \mu)^2}{n}} \right)$$