

Name _____ Date _____

Which Measure Is Better? Determining the Best Measure of Center for a Data Set

Vocabulary

Define each term in your own words.

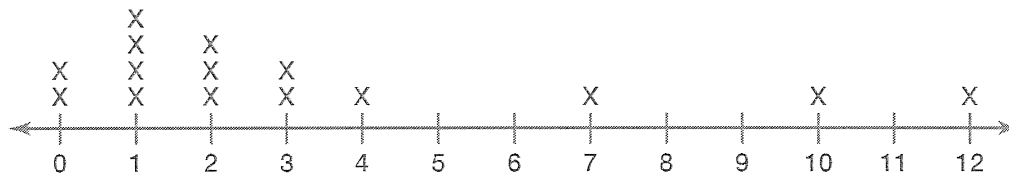
1. statistics

2. measure of central tendency

Problem Set

Create a dot plot of each given data set. Calculate the mean and median. Determine which measure of center best describes each data set.

1. The data are 1, 3, 2, 0, 7, 2, 1, 10, 1, 12, 1, 2, 0, 3, and 4.



$$\begin{aligned} \bar{x} &= \frac{\sum x}{n} \\ &= \frac{0 + 0 + 1 + 1 + 1 + 1 + 2 + 2 + 2 + 3 + 3 + 4 + 7 + 10 + 12}{15} \\ &\approx 3.27 \end{aligned}$$

The mean is approximately 3.27 and the median is 2. The median is the best measure of center because the data are skewed right.



2. The data are 7, 2, 9, 9, 10, 12, 17, 10, 6, 11, 9, 10, 8, 11, and 8.

3. The data are 4, 0, 13, 15, 14, 10, 13, 8, 13, 12, 11, 13, 14, 1, 15, 13, 14, 12, 10, and 7.

4. The data are 50, 50, 40, 70, 60, 50, 20, 50, 80, 40, 60, 40, and 50.

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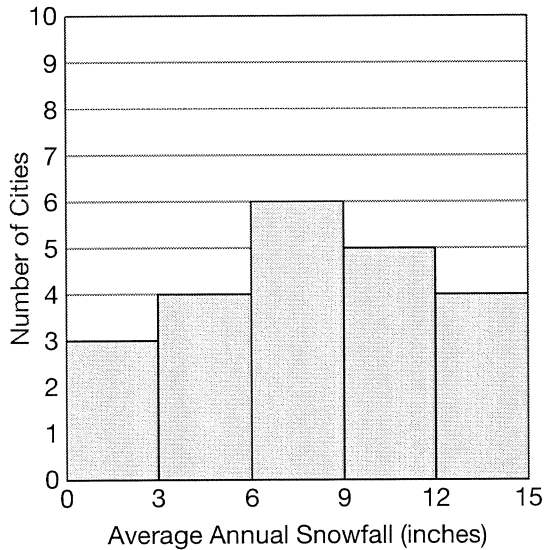
5. The data are 40, 45, 48, 49, 50, 49, 47, 50, 49, 42, 49, 50, 48, 50, and 47.

6. The data are 13, 12, 12, 11, 17, 10, 11, 12, 14, 20, 15, 12, 18, 13, 12, 17, 14, and 11.

Determine which measure of center best describes the data in each given data display. Then determine the mean and median, if possible. If it is not possible, explain why not.

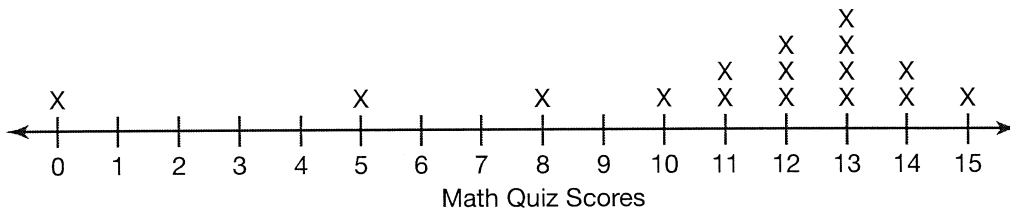
7.

Average Annual Snowfall in Select U.S. Cities



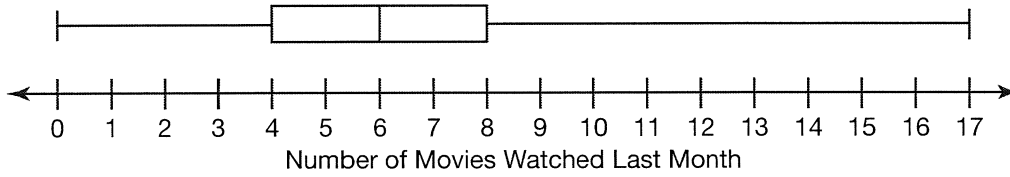
The mean is the best measure of center to describe the data because the data are symmetric. The mean and median cannot be determined because the data values are not given.

8.

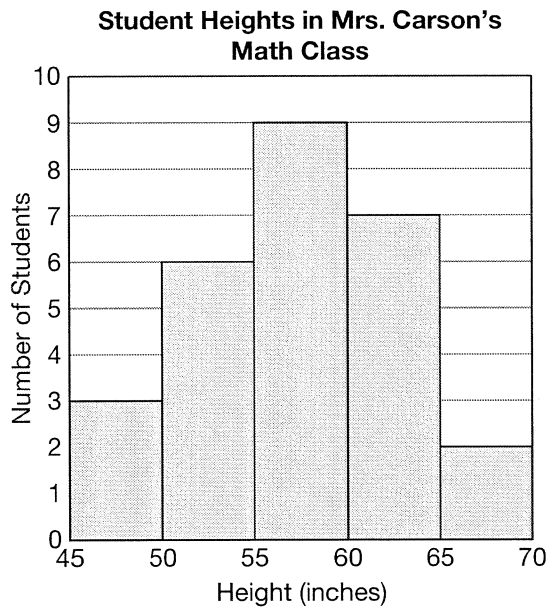


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9.

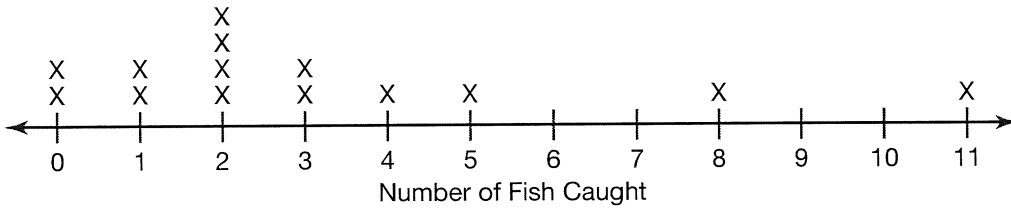


10.



11.

Fishing Derby Results



12.

Results of Diving Expedition

