

Name _____

Interpret Data Using Mean, Median, Mode, and Range

I Can describe a set of data using mean, median, mode, and range.

A **measure of center** is a single value used to describe the middle of a data set. A measure of center can be a useful way to summarize a data set, especially when the data set is large.

Florida's B.E.S.T.

- Data Analysis & Probability 5.DP.1.2
- Mathematical Thinking & Reasoning MTR.1.1, MTR.2.1, MTR.5.1



UNLOCK the Problem



Kara made a paper airplane. She flew her airplane 6 times and recorded how long it stayed in the air during each flight. The times in seconds for the flights are 5.8, 2.9, 6.7, 1.6, 2.9, and 4.7. What are the mean, median, mode, and range of the data?



What unit of time is used in the problem?

How many flight times are given?

Find the mean, median, mode, and range.

The **mean** is the sum of the data items divided by the number of data items.

$$\text{Mean} = \frac{5.8 + 2.9 + 6.7 + 1.6 + 2.9 + 4.7}{6} = \frac{\quad}{\quad} = \quad$$

The **median** is the middle value when the data are written in order. If the number of data items is even, the median is the mean of the two middle values.

Order the values from least to greatest.

1.6, 2.9, 2.9, 4.7, 5.8, 6.7

The data set has an _____ number of values, so the median is the mean of the two middle values. Circle the two middle values of the data set.

Now find the mean of the two middle values.

$$\frac{\quad + \quad}{2} = \frac{\quad}{2} = \quad$$

The **mode** is the data value or values that occur most often.

_____ occurs twice, and all the other values occur once.

_____ is the mode.

The **range** is the difference between the greatest and the least values.

$$\quad - 1.6 = \quad$$

The range is _____.

Math Talk

MTR 4.1 Engage in discussions on mathematical thinking.

How could you use a line plot and the idea of a balance point to check your answer for the mean? Explain.

Example 1 Mrs. O'Donnell's class has a fundraiser for a field trip to a wildlife preservation. Five of the donations are \$15, \$25, \$30, \$28, and \$27. Find the mean, median, and mode of the donations.

$$\text{Mean} = \frac{\boxed{} + \boxed{} + \boxed{} + \boxed{} + \boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}} = \boxed{}$$

Order the data from least to greatest to find the median.

_____, _____, _____, _____, _____

Median = _____

If all of the values in a data set occur with equal frequency, then the data set has no mode. What is the mode of this data set? _____

Subtract to find the range. _____ - _____ = _____

The range is _____.

Example 2 Keith surveys his classmates about how many brothers and sisters they have. Six of the responses were 1, 3, 1, 2, 2, and 0. Find the mean, median, and mode of the data.

$$\text{Mean} = \frac{\boxed{} + \boxed{} + \boxed{} + \boxed{} + \boxed{} + \boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}} = \boxed{}$$

Order the data from least to greatest to find the median.

_____, _____, _____, _____, _____, _____

The number of data values is even, so find the mean of the two middle values.

$$\text{Median} = \frac{\boxed{} + \boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}} = \boxed{}$$

The data values _____ and _____ both appear twice in the set. So, the data set has two modes.

Modes = _____ and _____

The range of the data set is _____.