2-7 Study Guide and Intervention

Median, Mode, and Range

The **median** is the middle number of the data put in order, or the mean of the middle two numbers. The **mode** is the number or numbers that occur most often.

Example 1 The table shows the costs of seven different books. Find the mean, median, and mode of the data.

Book Costs ($)			
22	13	11	16
14	13	16	

mean: $\dfrac{22 + 13 + 11 + 16 + 14 + 13 + 16}{7} = \dfrac{105}{7}$ or 15

To find the median, write the data in order from least to greatest.
median: 11, 13, 13, (14,) 16, 16, 22

To find the mode, find the number or numbers that occur most often.
mode: 11, (13, 13,) 14, (16, 16,) 22

The mean is $15. The median is $14. There are two modes, $13 and $16.

Whereas the measures of central tendency describe the average of a set of data, the **range** of a set of data describes how the data vary.

Example 2 Find the range of the data in the stem-and-leaf plot. Then write a sentence describing how the data vary.

Stem	Leaf
3	2
4	0
5	0 5
6	0 3

3 | 2 = 32°

The greatest value is 63. The least value is 32. So, the range is 63° − 32° or 31°. The range is large. It tells us that the data vary greatly in value.
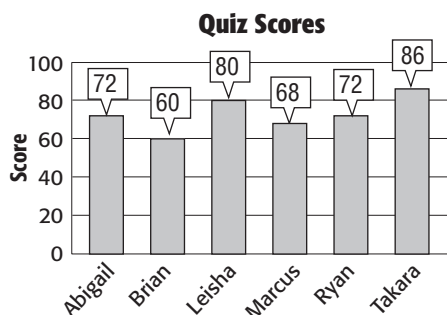
Exercises

Find the mean, median, mode, and range of each set of data.

1. hours worked: 14, 13, 14, 16, 8

2. points scored by football team: 29, 31, 14, 21, 31, 22, 20

3.

Quiz Scores

4.

Snowfall (inches)