

Name _____

Median and Mode

Essential Question How can you describe a set of data using median and mode?

The **median** of a set of data is the middle value when the data are written in order. For example, a baseball team scored 6, 2, 6, 0, and 3 runs in five games. The median is 3 runs: 0, 2, 3, 6, 6.

If there is an even number of data items, the median is the sum of the two middle items divided by 2.

The **mode** of a data set is the data value or values that occur most often. A data set may have no mode, one mode, or several modes. The mode of the data set of baseball runs is 6.

UNLOCK the Problem

REAL WORLD

For the Science Fair, Ronni grew 9 sweet pea plants under different conditions. Here are the plants' heights, in centimeters: 11, 13, 6, 9, 15, 7, 9, 17, 12.

What are the median and mode of the data?



Find the median and mode.

STEP 1 Order the heights from least to greatest.

6, 7, _____, _____, _____, _____, _____, _____, _____

STEP 2 Circle the middle value.

So, the median is _____ centimeters.

STEP 3 Identify the data value that occurs most often. _____ occurs two times.

So, the mode is _____ centimeters.

- How can you find the median if there is an even number of data items?

Math Talk

Give an example of a data set with two modes.

Try This! Find the median and mode of the numbers: 8, 11, 13, 6, 4, 3.

STEP 1 Order the numbers from least to greatest.

_____, _____, _____, _____, _____, 13

STEP 2 There is an even number of data items, so divide the

sum of the two middle items by 2. $\frac{6 + \underline{\hspace{1cm}}}{2} = \frac{\underline{\hspace{1cm}}}{2} = \underline{\hspace{1cm}}$

So, the median is = _____.

STEP 3 _____ data value appears more than once.

So, the data set has _____ mode.

Share and Show



Find the median and the mode of the data.

1. puppies' weights (pounds): 8, 3, 5, 3, 2, 6, 3

Order the weights: _____

The median, or middle value, is _____ pounds

The mode, or most common value,
is _____ pounds.

3. numbers of 3-point baskets made:
2, 0, 5, 4, 5, 2, 5, 2

median: _____ 3-point baskets

mode: _____ 3-point baskets

2. numbers of students in math classes:
25, 21, 22, 18, 23, 24, 25

median: _____ students

mode: _____ students

4. movie ticket prices (\$):
8, 8, 6, 8, 7, 6, 8, 10, 8, 6

median: \$ _____

mode: \$ _____

On Your Own

Find the median and the mode of the data.

5. ages of first 10 U.S. presidents
when inaugurated:
57, 61, 57, 57, 58, 57, 61, 54, 68, 51

median: _____ years

mode: _____ years

6. weights of rock samples (pounds):
39, 28, 21, 47, 40, 33

median: _____ pounds

mode: _____ pounds

7. lengths of humpback whale songs (minutes):
25, 29, 31, 22, 33, 31, 26, 22

median: _____ minutes

mode: _____ minutes

8. Sascha's test scores:
90, 88, 79, 97, 100, 97, 92, 88, 85, 92

median: _____

mode: _____

Problem Solving



9. Adrian recorded the daily high temperatures the first two weeks of July.
What were the median and mode of her data?

median: _____ °F

mode: _____ °F

Daily High Temperatures (°F)						
101	99	98	96	102	101	98
101	98	95	100	102	98	102