

Lesson 1-2

Example 1

EDUCATION Ten students in Mrs. Feinstein's fourth period math class got the following scores on their most recent 100-point chapter test.

53 72 85 67 93 78 87 72 95 64

Use this data to find each of the following.

- a. mean b. median c. mode d. range

Solution

- a. Find the sum of the data. Then divide by the number of values.

$$53 + 72 + 85 + 67 + 93 + 78 + 87 + 72 + 95 + 64 = 766$$

$$\frac{766}{10} = 76.6$$

The mean is 76.6.

- b. Because the number of scores is even, add the middle two scores and divide by 2.

When the data are arranged in order, the two middle scores are 72 and 78.

$$53, 64, 67, 72, 72, 78, 85, 87, 93, 95$$

$$\frac{72 + 78}{2} = \frac{150}{2} = 75$$

The median is 75.

- c. The score that occurs most frequently is 72, which is the only score that occurs more than once.

53 64 67 72 72 78 85 87 93 95

The mode is 72.

- d. Find the difference between the greatest and least scores.

$$95 - 53 = 42$$

The range is 42.

Example 2

Which measure of central tendency best represents the data?

- a. favorite ice cream flavor among the children attending an elementary school
b. spread between highest and lowest recorded temperatures for a city

Solution

- a. The mode indicates which ice cream flavor was chosen by the most students.
b. The range indicates the difference between the record high and record low temperatures.