

## Lesson 9.2 Mean

### Key Idea

#### Mean

**Words** The **mean** of a data set is the sum of the data divided by the number of data values.

**Numbers** Data: 8, 5, 6, 9    Mean:  $\frac{8 + 5 + 6 + 9}{4} = \frac{28}{4} = 7$

*(A red bracket under the data values 8, 5, 6, 9 points to the number 4 in the denominator of the mean formula. A red arrow points from the number 4 in the denominator to the text "4 data values".)*

**Example 1: Finding the Mean**

The table shows the number of text messages sent by a group of friends over 1 week. What is the mean number of messages sent?

**(A)** 100

**(B)** 102

**(C)** 103

**(D)** 104

**Text Messages Sent**

Mark: 120

Laura: 95

Stacy: 101

Josh: 125

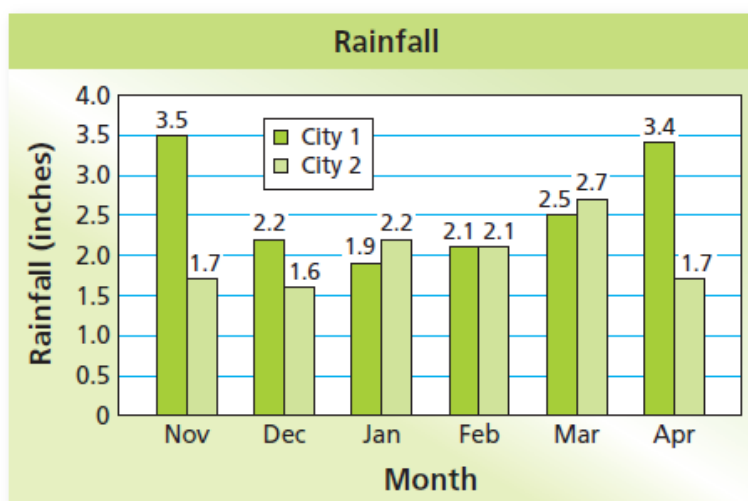
Kevin: 82

Maria: 108

Manny: 90

**Example 2: Comparing Means**

The double bar graph shows the monthly rainfall amounts for two cities over a six-month period. Compare the mean monthly rainfalls.



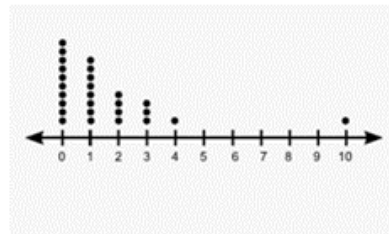
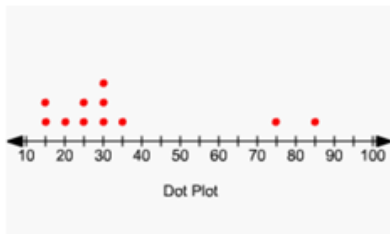
**Example 1 and 2: On Your Own**

**Find the mean of the data.**

**1.** 49, 62, 52, 54, 61, 70, 55, 53

**2.** 7.2, 8.5, 7.0, 8.1, 6.7

An **outlier** is a data value that is much greater or much less than the other values. When included in a data set, it can affect the mean.



**Example 3: Finding the Mean With and Without the Outlier**

The table shows the heights of several Shetland ponies.

a. Identify the outlier.

Shetland Pony Heights (inches)				
40	37	39	40	42
38	38	37	28	40

b. Find the mean with and without the outlier.

c. Describe how the outlier affects the mean.