NAME _____ DATE _____ PERIOD _____

8-2 Study Guide and Intervention

Measures of Central Tendency and Range

The **mean** is the sum of the data divided by the number of data items. The **median** is the middle number of the ordered data, or the mean of the middle two numbers. The **mode** is the number (or numbers) that occur most often. The mean, median, and mode are each **measures of central tendency**.

Example **The table shows the number of hours students spent practicing for a music recital. Find the mean, median, and mode of the data.**

Numbers of Hours Spent Practicing				
3	12	10	8	7
18	11	12	10	3
8	6	0	1	5
8	2	15	9	12

$\text{mean} = \frac{3 + 12 + 10 + \ldots + 12}{20} = \frac{160}{20}$ or 8.

To find the median, the data must be ordered.

0, 1, 2, 3, 3, 5, 6, 7, 8, $\underbrace{8, 8}$, 9, 10, 10, 11, 12, 12, 12, 15, 18

$$\frac{8 + 8}{2} = 8$$

To find the mode, look for the number that occurs most often. Since 8 and 12 each occur 3 times, the modes are 8 and 12.

Exercises

Find the mean, median, and mode for each set of data. Round to the nearest tenth if necessary.

1. 27, 56, 34, 19, 41, 56, 27, 25, 34, 56
   mean, 37.5; median, 34; mode, 56

2. 7, 3, 12, 4, 6, 3, 4, 8, 7, 3, 20
   mean, 7; median, 6; mode, 3

3. 1, 23, 4, 6, 7, 20, 7, 5, 3, 4, 6, 7, 11, 6
   mean, 7.9; median, 6; mode, 7 and 6

4. 3, 3, 3, 3, 3, 3, 3
   mean, 3; median, 3; mode, 3

5. 2, 4, 1, 3, 5, 6, 1, 1, 3, 4, 3, 1
   mean, 2.8; median, 3; mode, 1

6. 4, 0, 12, 10, 0, 5, 7, 16, 12, 10, 12, 12
   mean, 8.3, median, 10; mode, 12

Lesson 8–2