Date: _____

Get Ready

Measures of Central Tendency

Measures of central tendency are sometimes called averages.

- The **mean** is commonly called the average. It is the sum of a set of values divided by the number of values in the set.

$\frac{1+1+2+3+4+4+4+5}{8} = \frac{24}{8} = 3$. The mean is 3.

- The **median** is the middle number in a set of data after the data have been arranged in ascending or descending order.

1, 1, 2, 3, 4, 4, 4, 5 There is an even number of data values. The median is the value halfway between the two middle numbers 3 and 4. The median is 3.5.

- The **mode** is the most frequently occurring number in a set of data. A data set can have more than one mode.

1, 1, 2, 3, 4, 4, 4, 5 The mode is 4.

Give all answers to the nearest hundredth where necessary.

1. What are the mean, median, and mode for each data set?

a) 1, 2, 3, 5, 8, 8, 8, 15, 15

b) 4.2, 4.3, 4.3, 5, 5.1, 6.1, 7

2. Arrange the three measures of central tendency in order according to how easy it is to determine each one. Use the data set 3, 5, 7, 3, 5, 2, 7, 3.

Calculating the Range

The **range** provides information about the spread of the data.

Range = highest value – lowest value

1, 1, 2, 3, 4, 4, 4, 5 The range is 5 – 1 = 4.

3. What is the range of each set of data?

a) 9, 8, 8, 3, 7

b) 16, 11, 7, 29, 31, 24, 18, 18, 18

4. If the lowest value in a set of data is 10 and the range is 7, what is the highest value in the set? Explain.