Name _____ Date _____

LESSON 10.2

Challenge Practice

For use with the lesson "Use Measures of Central Tendency and Dispersion"

1. Construct a data set of eight non-negative whole numbers such that the mean, median, and mode of the data set is 3, and the mean absolute deviation is $\frac{3}{2}$.

2. Consider the data set below.

   5, 12, 7, 14, 8, 9, 7

   a. Find the mean, median, mode, and range of the data.

   b. Add 6 to each of the data values and find the mean, median, mode, and range of the revised data. How are the measures of central tendency changed? How is the range changed?

   c. Multiply each data value by 2 and find the mean, median, mode, and range of the revised data. How are the measures of central tendency changed? How is the range changed?

In Exercises 3 and 4, use the following information.

Suppose two students, Joe and Sam, wish to compare the quality of their work in an English class. Joe has quiz scores of 80, 85, 75, 72, and 78. Sam has quiz scores of 100, 65, 75, 95, and 90.

3. Compute the mean of each set of scores. Who has the higher average score?

4. Compute the mean absolute deviation of each set of scores. Whose scores are more consistent?

5. The mean and mean absolute deviation of golf scores for three golfers are shown in the table. Whose golf score do you think you could most accurately predict? *Explain* your reasoning. (*Note*: In golf, lower scores are better than higher scores.)

Golfer	Mean score	Mean absolute deviation
Kurt	83	10
Bob	80	15
Ann	85	5