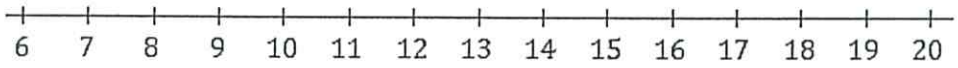
Lesson Summary

- For any given value in a data set, the deviation from the mean is the value minus the mean. Written algebraically, this is $x - \bar{x}$.
- The greater the variability (spread) of the distribution, the greater the deviations from the mean (ignoring the signs of the deviations).

Problem Set Lesson 4 Name_____

1. Ten members of a high school girls' basketball team were asked how many hours they studied in a typical week. Their responses (in hours) were 20, 13, 10, 6, 13, 10, 13, 11, 11, 10.

   a. Using the axis given below, draw a dot plot of these values. (Remember, when there are repeated values, stack the dots with one above the other.)



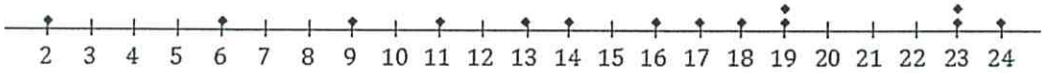
Study Time (Hours)

   b. Calculate the mean study time for these students.

   c. Calculate the deviations from the mean for these study times, and write your answers in the appropriate places in the table below.

Number of Hours Studied	20	13	10	6	13	10	13	11	11	10
Deviation from the Mean										

   d. The study times for fourteen girls from the soccer team at the same school as the one above are shown in the dot plot below.



Study time (hours)

   Based on the data, would the deviations from the mean (ignoring the sign of the deviations) be greater or less for the soccer players than for the basketball players? Explain.