# Activity 10.2: Measures of Central Tendency and Measures of Variation

For problems 1 and 2, determine whether the following statements are true or false. If it is false, rewrite the statement so that it is true.

1. The median is the measure of central tendency most likely to be affected by an outlier.
2. Every data set must have a mode.

For the data set below in problems 3 and 4:

1. Find the mean, median, and mode of the set if possible. If not possible, explain why that measure of central tendency cannot be found.
2. Determine which measure of central tendency best represents the data. Explain your reasoning.
3. The maximum number of seats in a sample of 13 SUVs:

6 6 9 9 6 5 5 5 7 5 5 5 8

1. The education cost per student (in thousands of dollars) from a sample of 10 liberal arts colleges.

22 26 19 20 20 18 21 17 19 14

1. Explain how to find all the deviations in a data set. What is the sum of all the deviations?

Find the range, mean, and standard deviation for the given data sets. Write an interpretation for the data.

1. Sample annual salaries (in thousands of dollars) for municipal employees in Dallas:

34.9 25.7 17.3 16.8 26.8 24.7 29.4 32.7 25.5

1. Sample annual salaries (in thousands of dollars) for municipal employees in Houston.
 25.6 23.2 26.7 27.7 25.4 26.4 18.3 26.1 31.3
2. Compare the results you found for Dallas and Houston (problems 7 and 8) and write a statement interpreting the results.