■ Building Basic Skills and Vocabulary

True or False? *In Exercises 1–6, determine whether the statement is true or false. If it is false, rewrite it as a true statement.*

1. The mean is the measure of central tendency most likely to be affected by an extreme value (an outlier).

2. Every data set must have a mode.

3. Some quantitative data sets do not have a median.

4. The mean is the only measure of central tendency that can be used for data at the nominal level of measurement.

8. Construct a data set in which the median and the mode are the same.

■ Using and Interpreting Concepts

Finding and Discussing the Mean, Median, and Mode *In Exercises 17–34, find the mean, median, and mode of the data, if possible. If any of these measures cannot be found or a measure does not represent the center of the data, explain why.*

17. **SUVs**   The maximum number of seats in a sample of 13 sport utility vehicles

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

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

    30 35 19 22 22 20 23 21 35 25

22. **Power Failures**   The durations (in minutes) of power failures at a residence in the last 10 years

    18 26 45   75 125 80 33 40   44 49
    89 80 96 125   12 61 31 63 103 28

26. **Purchase Preference**   The responses of a sample of 1001 people who were asked if their next vehicle purchase will be foreign or domestic

    Domestic: 704   Foreign: 253   Don't know: 44

32. **Grade Point Averages of Students in a Class**

    | 0 | 8 | Key: 0|8 = 0.8
    | 1 | 5 6 8 |
    | 2 | 1 3 4 5 |
    | 3 | 0 9 |
    | 4 | 0 0 |

34. **Top Speeds (in miles per hour) of High-Performance Sports Cars**