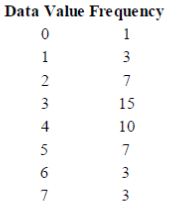
1. Last week, police ticketed 13 men traveling 18 miles per hour over the speed limit and 8 women traveling 14 miles per hour over the speed limit. What was the mean speed over the limit of all 21 drivers? (A) 16 miles per hour (B) 16.5 miles per hour (C) 17 miles per hour (D) none of these (E) cannot be determined

2. If the range of a set of integers is 2 and the mean is 50, which of the following statements must be true? I. The mode is 50 II. The median is 50 III. There are exactly three data values (A) only I (B) only II (C) only III (D) I and II (E) I, II, and III

3. What is the median of the frequency distribution shown below?  (A) 2 (B) 3 (C) 4 (D) 5 (E) Cannot be determined

4. Which of the following statements must be true? I. The range of a data set must be smaller than its standard deviation. II. The standard deviation of a data set must be smaller than its mean. III. The median of a data set must be smaller than its mode. (A) I only (B) I and II (C) II only (D) I, II, and III (E) none are true

5. The mean and standard deviation for SAT math scores are shown in the table below for five high schools in a large city. A particular score for each city is also shown (in the right column). Which single score has the highest z-score? (A) 474 in school D (B) 552 in school E (C) 560 in school B (D) 561 in school C (E) 600 in school A

6. Jack recorded the amount of time he studied the night before each of 4 history quizzes and the score he got on each quiz. The data are in the table below.  Use linear regression to estimate the score Jack would get if he studied for 20 minutes. (A) 71 (B) 72 (C) 73 (D) 74 (E) 75

7. The scatter plot shows gas mileage (miles per gallon) at various speeds (miles per hour) when a car was driven 100 miles at various speeds on a test track.  Which regression model is probably the best predictor of gas mileage as a function of speed? (A) constant (B) linear (C) quadratic (D) cubic (E) exponential