Lesson 13 Practice Problems

1. Three drivers competed in the same fifteen drag races. The mean and standard deviation for the race times of each of the drivers are given.

   Driver A had a mean race time of 4.01 seconds and a standard deviation of 0.05 seconds.

   Driver B had a mean race time of 3.96 seconds and a standard deviation of 0.12 seconds.

   Driver C had a mean race time of 3.99 seconds and a standard deviation of 0.19 seconds.

   a. Which driver had the fastest typical race time?

   b. Which driver's race times were the most variable?

   c. Which driver do you predict will win the next drag race? Support your prediction using the mean and standard deviation.

2. The widths, in millimeters, of fabric produced at a ribbon factory are collected. The mean is approximately 23 millimeters and the standard deviation is approximately 0.06 millimeters.

   Interpret the mean and standard deviation in the context of the problem.

3. Select **all** the statements that are true about standard deviation.

    A. It is a measure of center.

    B. It is a measure of variability.

    C. It is the same as the MAD.

    D. It is calculated using the mean.

    E. It is calculated using the median.

4. The number of different species of plants in some gardens is recorded.

    1   2   3   4   4   5   5   6
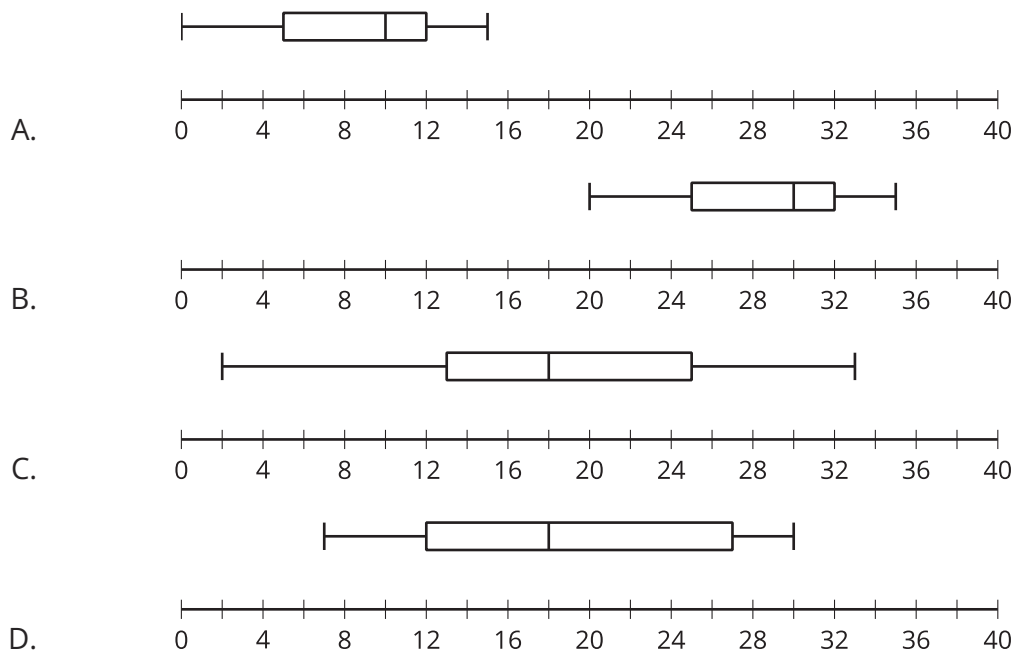
    7   8

    a. What is the mean?

    b. What is the standard deviation?

(From Unit 1, Lesson 12.)

5. A set of data has ten numbers. The mean of the data is 12 and the standard deviation is 0. What values could make up a data set with these statistics?

(From Unit 1, Lesson 12.)

6. Which box plot has the largest interquartile range?

A.

B.

C.

D.

(From Unit 1, Lesson 11.)

7. a. What is the five-number summary for 1, 3, 3, 3, 4, 8, 9, 10, 10, 17?

   b. When the maximum, 17, is removed from the data set, what is the five-number summary?

(From Unit 1, Lesson 9.)