Unit 07-03 - Sample Quiz: Measures of Spread

Multiple Choice
Identify the choice that best completes the statement or answers the question.

_____ 1. Two different gas stations below list the price per gallon of gasoline over 5 days.

Day	Gas Plus	Go Station
Monday	$2.50	$2.48
Tuesday	$2.51	$2.56
Wednesday	$2.52	$2.46
Thursday	$2.57	$2.59
Friday	$2.55	$2.44

Which gas station has more variation based on their **range**?

a. 'Gas Plus' has more variation
b. 'Go Station' has more variation
c. The two gas stations have the same variation
d. There isn't enough information to determine the variation.

_____ 2. Consider the following data set:

20, 22, 31, 37, 39, 40

How would the **range** be affected if the data point 28 was added to the data set?

a. The range would decrease by 0.5.
b. The range would decrease by 3.
c. The range would increase by 8.
d. There would be no effect on the range.

_____ 3. Consider the following unorganized data set:

12, 15, 8, 29, 30, 27, 19, 12

What is the **range** of the data set?

a. 7.25
b. 12
c. 19
d. 22

_____ 4. Given a data set has the following summary statistics:

Minimum	20
Quartile 1 (Q_1)	24
Median	25
Quartile 3 (Q_3)	28
Maximum	30

What is the **Interquartile Range (IQR)** of the data set?

a. 2
b. 4
c. 10
d. 25.4

_____ 5. Consider the data set:

60, 44, 56, 52, 48

Data Points (x)	Mean ($\overline{X}$)	Deviation
60	52	8
44	52	− 8
56	52	4
52	52	0
48	52	− 4

What is the **mean absolute deviation** of the data set (use the table for help)?

a. 0   c. 4.8
b. 4   d. 8

_____ 6. Consider the data set:

5, 9, 11, 17, 23

The data set has a mean deviation of 5.6. If you were to **add 2** to every number in the data set and recalculate the mean deviation, what would it be?

a. 5.6   c. 11.2
b. 7.6   d. 12.1

_____ 7. Which of the following dot plots would most likely have the highest **standard deviation**?

____ 8. Consider the data set:

12, 10 , 1, 8, 4

Data Points (x)	Mean (X̄)	Deviation	(Deviation)²
12	7	5	25
10	7	3	9
1	7	− 6	36
8	7	1	1
4	7	− 3	9

What is the **standard deviation** of the data set (use the table for help)?

a. 0.00   c. 4.00
b. 3.60   d. 4.47

____ 9. Two different cable company's basic channel line up and number of customers are nearly identical but the companies vary in their pricing based on location.

• Carter Cable charges customers a mean monthly price of $60 with a standard deviation of $14

• Eighty & Tee cable charges customers a mean monthly price of $60 with a standard deviation of $5

Which of the following statement is most likely to be true?

a. Carter Cable is more consistent with its pricing.
b. Eighty & Tee cable is more consistent with its pricing.
c. On average, Carter Cable charges $9 more.
d. On average, Carter Cable charges $9 less.

____ 10. Consider the data set:

23, 1, 5, 14, 17

The data set has a standard deviation of 8. If you were to **add 3** to every number in the data set and recalculate the standard deviation, what would it be?

a. 8   c. 11
b. 5   d. 23