Lesson 6 Practice Problems

1. Which equation is equivalent to the equation $6x + 9 = 12$?

    A. $x + 9 = 6$

    B. $2x + 3 = 4$

    C. $3x + 9 = 6$

    D. $6x + 12 = 9$

2. Select **all** the equations that have the same solution as the equation $3x - 12 = 24$.

    A. $15x - 60 = 120$

    B. $3x = 12$

    C. $3x = 36$

    D. $x - 4 = 8$

    E. $12x - 12 = 24$

3. Jada has a coin jar containing n nickels and d dimes worth a total of $3.65. The equation $0.05n + 0.1d = 3.65$ is one way to represent this situation.

    Which equation is equivalent to the equation $0.05n + 0.1d = 3.65$?

    A. $5n + d = 365$

    B. $0.5n + d = 365$

    C. $5n + 10d = 365$

    D. $0.05d + 0.1n = 365$

4. Select **all** the equations that have the same solution as $2x - 5 = 15$.

    A. $2x = 10$

    B. $2x = 20$

    C. $2(x - 5) = 15$

    D. $2x - 20 = 0$

    E. $4x - 10 = 30$

    F. $15 = 5 - 2x$

5. The number of hours spent in an airplane on a single flight is recorded on a dot plot. The mean is 5 hours and the standard deviation is approximately 5.82 hours. The median is 4 hours and the IQR is 3 hours. The value 26 hours is an outlier that should not have been included in the data.

number of hours spent in an airplane
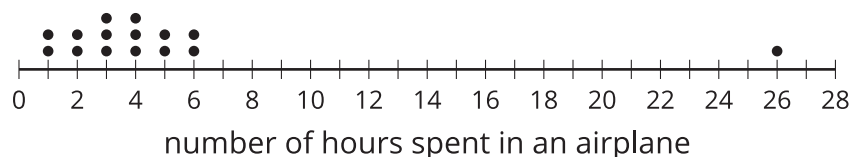
When the outlier is removed from the data set:

    a. What is the mean?

    b. What is the standard deviation?

    c. What is the median?

    d. What is the IQR?

(From Unit 1, Lesson 14.)

6. A basketball coach purchases bananas for the players on his team. The table shows total price in dollars, P, of n bananas.

Which equation could represent the total price in dollars for n bananas?

number of bananas	total price in dollars
7	4.13
8	4.72
9	5.31
10	5.90

A. $P = 0.59n$

B. $P = 5.90 - 0.59n$

C. $P = \frac{5.90}{n}$

D. $P = n + 0.59$

(From Unit 2, Lesson 3.)

7. Kiran is collecting dimes and quarters in a jar. He has collected $10.00 so far and has d dimes and q quarters. The relationship between the numbers of dimes and quarters, and the amount of money in dollars is represented by the equation $0.1d + 0.25q = 10$.
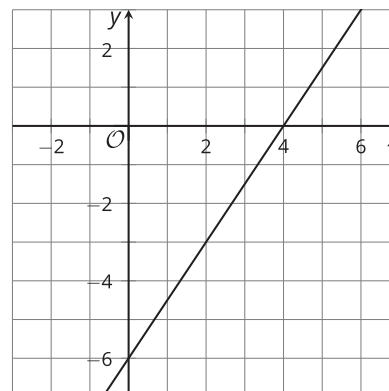
Select **all** the values (d, q) that could be solutions to the equation.

A. $(100, 0)$

B. $(20, 50)$

C. $(50, 20)$

D. $(0, 100)$

E. $(10, 36)$

(From Unit 2, Lesson 4.)

8. Here is a graph of the equation $3x - 2y = 12$.

   Select **all** coordinate pairs that represent a solution to the equation.

   A. $(2, -3)$

   B. $(4, 0)$

   C. $(5, -1)$

   D. $(0, -6)$

   E. $(2, 3)$

   (From Unit 2, Lesson 5.)

9. Jada bought some sugar and strawberries to make strawberry jam. Sugar costs $1.80 per pound, and strawberries cost $2.50 per pound. Jada spent a total of $19.40.

   Which point on the coordinate plane could represent the pounds of sugar and strawberries that Jada used to make jam?
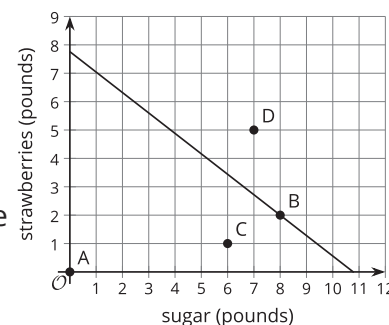
   A. Point A

   B. Point B

   C. Point C

   D. Point D

   (From Unit 2, Lesson 5.)