Name _____

1. Solve each equation. Then write the equation in the appropriate box below.
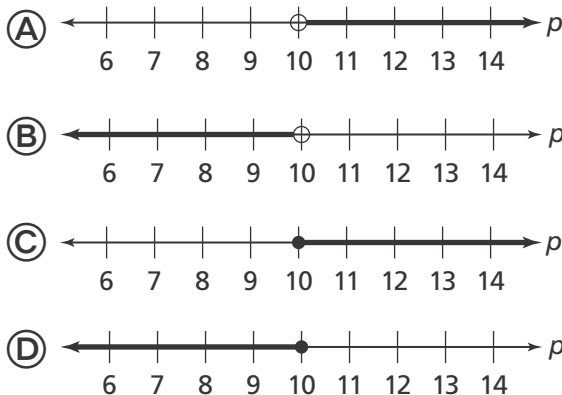
$8x = 56$ $x + 5\frac{3}{4} = 8\frac{3}{4}$ $\frac{x}{2} = 3.5$

$2\frac{1}{4} + x = 9\frac{1}{8}$ $x - 2.56 = 0.44$

Equations with solution $x = 3$
Equations with solution $x = 7$
Neither

2. Ed's birthday is less than 16 days away. Ann writes the inequality $d \leq 16$, where d equals the number of days, to represent this. Is Ann correct? Explain.

3. Which graph represents the solutions of the inequality $p \geq 10$?

(A)
6 7 8 9 10 11 12 13 14 p

(B)
6 7 8 9 10 11 12 13 14 p

(C)
6 7 8 9 10 11 12 13 14 p

(D)
6 7 8 9 10 11 12 13 14 p

4. Choose all the equations that are true if $x = 9$.

☐ $32.54 - 23.54 = x$

☐ $x \div 27 = 4$

☐ $\frac{3}{8}x = 3\frac{3}{8}$

☐ $8.7 + x = 17$

☐ $5x = 45$

5. Noah wrote that $6 + 6 = 12$. Then he wrote that $6 + 6 - n = 12 - n$. Are his equations balanced? Explain.

6. Mr. Daniels is organizing a class trip on a budget of $900. The bus rental costs $600. Mr. Daniels will also buy tickets that cost $9.50 per student.

Write an inequality to represent the number of students, y, that Mr. Daniels can bring on the trip.

7. The manager of a water park keeps track of the amount of money collected, m, and the number of tickets sold, t, each day. Which best describes the variables m and t?

Ⓐ The variable m is the independent variable because it depends on the number of tickets sold, t.

Ⓑ The variable t is the dependent variable because it depends on the amount of money collected, m, each day.

Ⓒ The variable t is the independent variable because it affects the amount of money collected, m, each day.

Ⓓ The variable m is independent of variable t, and variable t is independent of variable m.

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8. April pays a dog-walking service $30 each week to walk her dog. Complete the table to show how many dollars, d, April spends on dog-walking in w weeks.
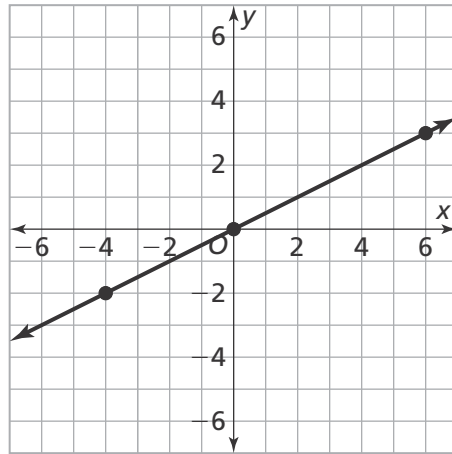
w	1	2			5
d	30		90	120	

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9. Which equation can be used to describe the pattern in the table?

a	5	6	7	8	9
b	0	1	2	3	4

Ⓐ $b + a = 5$ Ⓒ $b = a - 5$

Ⓑ $b = a + 5$ Ⓓ $a = b - 5$

10. Part A

Which of the following equations was used to graph the line shown?

Ⓐ $y = 2x$

Ⓑ $y = x \div 2$

Ⓒ $y = x + 2$

Ⓓ $y = x - 2$

Part B

Write two ordered pairs for points that are on the graph of the line.

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11. What is the value of t in the following equation?

$$t + \frac{1}{4} = 2\frac{7}{12}$$