Algebra I Practice A.REI.C.6: Solving Linear Systems 3 www.jmap.org

1. Which equation is the result of adding these two equations?

$$2x + 3y = -5$$

$$7x - 3y = 9$$

[A]
$$5x = 4$$

[B]
$$9x = 4$$

[C]
$$-5x = -14$$

[D]
$$9x = 14$$

2. Find the point of intersection of the two lines:

$$2x - y = 13$$

$$4x + y = 17$$

$$[A] (-3, 5)$$

$$[B] (-1, 6)$$

$$[C]$$
 (5, -3)

$$[D]$$
 $(6,-1)$

3. Find the point of intersection of the two lines:

$$3x - y = 13$$

$$2x + y = -3$$

$$[A] (3, -4)$$

[B]
$$(2, -7)$$

$$[C](-7,2)$$

$$[D] (-4, 3)$$

4. Find the point of intersection of the two lines:

$$4x - y = -26$$

$$3x + y = -30$$

[A]
$$(-2, -7)$$

[B]
$$(-6, -8)$$

$$[C]$$
 $(-7, -2)$

$$[D] (-8, -6)$$

- NAME:
- 5. Solve the system using the method of elimination:

$$4x - 5y = -9$$

$$3x + 5y = 37$$

[A]
$$\left(0, \frac{9}{5}\right)$$

[B]
$$(4, 5)$$

[C]
$$\left(-4, -\frac{16}{5}\right)$$

[D] no solution

6. Solve the system using the method of elimination:

$$2x + 4y = -6$$

$$x-4y = 3$$

[A]
$$\left(0, -\frac{3}{2}\right)$$
 [B] $\left(-1, -1\right)$

[B]
$$(-1, -1)$$

[C]
$$\left(1, -\frac{1}{2}\right)$$

[D] no solution

7. Solve the system using the method of elimination:

$$2x - y = 3$$

$$3x + y = 12$$

[B]
$$(-3, -6)$$

[C]
$$(0, -3)$$

[D] no solution

8. Solve: 4x + 4y = 40

$$x - 4y = -15$$

[A]
$$(0, 10)$$

9. Compare the quantities in Column A and Column B.

Column A

Column B

the value of x in the system

the value of *y* in the system

$$4x - y = 11$$

$$x - 5y = -8$$

$$3x + y = 3$$

$$-x + 4y = 5$$

- [A] The quantity in Column A is greater.
- [B] The quantity in Column B is greater.
- [C] The quantities are equal.
- [D] The relationship cannot be determined from the information given.

Solve:

10.
$$2x - 5y = -21$$

3x + 5y = 6

$$[A] (-3, 3)$$

[C]
$$\left(0, \frac{21}{5}\right)$$

[D] no solution

11.
$$4x - 2y = -12$$

3x + 2y = -2

$$[A] (-20, 2)$$

[D](-2,2)

12.
$$\begin{cases} 4x + 2y = 12 \\ x - 2y = 13 \end{cases}$$

13.
$$\begin{cases} 2x - 5y = -9 \\ 3x + 5y = 24 \end{cases}$$

14.
$$\begin{cases} 4x - 4y = -4 \\ x + 4y = 4 \end{cases}$$

15. Find a value of p that will result in one solution for this system. Then find the solution.

$$3x + y = -2$$

$$px - y = -12$$

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- [1] B
- [2] <u>C</u>
- [3] B
- [4] D
- [5] B
- [6] B
- [7] A
- [8] B
- [9] B
- [10] A
- [11] D
- [12] (5, -4)
- [13] (3,3)
- [14] (0,1)

Answers may vary. Sample: Let

[15] p = 4, x = -2, y = 4.