

NAME: _____

P.I. A.A.10: Solve systems of two linear equations in two variables algebraically

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] $(-8, -6)$

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] $(-1, -1)$

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

[D] no solution

7. Solve the system using the method of elimination:

$$2x - y = 3$$

$$3x + y = 12$$

[A] $(3, 3)$

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

[C] $(0, -3)$

[D] no solution

8. Solve: $4x + 4y = 40$

$$x - 4y = -15$$

[A] $(0, 10)$

[B] $(5, 5)$

[C] no solution

[D] $(60, 5)$

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

Column A

the value of x in the system

$$4x - y = 11$$

$$3x + y = 3$$

Column B

the value of y in the system

$$x - 5y = -8$$

$$-x + 4y = 5$$

[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. $2x - 5y = -21$ [A] $(-3, 3)$ [B] $(-27, 3)$ [C] $\left(0, \frac{21}{5}\right)$ [D] no solution
 $3x + 5y = 6$

11. $4x - 2y = -12$ [A] $(-20, 2)$ [B] no solution [C] $(0, 6)$ [D] $(-2, 2)$
 $3x + 2y = -2$

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.
 $3x + y = -2$
 $px - y = -12$

[1] B

[2] C

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