

NAME: \_\_\_\_\_

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

Solve:

1.  $3x - 2y = 6$

$$y = x - 3$$

[A] no solution      [B]  $\left(-3, -\frac{15}{2}\right)$

[C] (1, -2)      [D] (0, -3)

2.  $x - 2y = -5$

$$y = 3x + 5$$

[A] (-1, 2)      [B] no solution

[C] (0, 5)      [D]  $\left(2, \frac{7}{2}\right)$

3. Solve the system using substitution.

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

$$y = -x$$

[A] no solution      [B]  $\left(0, -\frac{1}{2}\right)$

[C] (-5, 5)      [D]  $\left(-\frac{1}{2}, \frac{1}{2}\right)$

4. Solve the system using substitution.

$$3x + 2y = -14$$

$$y = x + 3$$

[A]  $\left(-1, -\frac{11}{2}\right)$       [B] no solution

[C] (-4, -1)      [D] (-3, 0)

5. Solve the system using substitution.

$$x + 4y = -19$$

$$y = 3x - 21$$

[A]  $\left(-6, -\frac{13}{4}\right)$       [B] no solution

[C] (6, -3)      [D] (5, -6)

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6. Solve the system using substitution.

$$x + 4y = -15$$

$$y = 3x - 20$$

[A]  $(6, -2)$                       [B]  $\left(-5, -\frac{5}{2}\right)$

[C] no solution                      [D]  $(5, -5)$

9. Which system has no solution?

[A]  $4x - 2y = 1$

$$y = 2x - 7$$

[B]  $3x - y = 3$

$$y = -3x + 3$$

[C]  $y = 2x + 2$

$$x - 2y = 1$$

[D]  $y = 2x$

$$2x + y = 1$$

[E]  $y = -x + 1$

$$x - y = 1$$

Solve the system by substitution:

7.  $x + 4y = 8$

$$-16y = 4x - 32$$

8.  $x - 2y = -4$

$$4x = 8y - 12$$

10. Compare the quantity in Column A with the quantity in Column B.

$x$ -coordinates of the solution

Column A

$$y = -2x$$

$$x + y = 5$$

Column B

$$y = x + 2$$

$$x + 2y = -11$$

[A] The quantity in Column A is greater.

[B] The quantity in Column B is greater.

[C] The two quantities are equal.

[D] The relationships cannot be determined on the basis of the information supplied.

- [1] D
- [2] A
- [3] A
- [4] C
- [5] D
- [6] D
- [7] dependent (many solutions)
- [8] inconsistent (no solution)
- [9] A
- [10] C