Integrated Algebra Practice: A.A.10 #3

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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	Column B
the value of x in the system $4x - y = 11$, $3x + y = 3$	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. $2x - 5y = -21$, $3x + 5y = 6$ [A] (–3, 3) [B] (–27, 3) [C] $\left(0, \frac{21}{5}\right)$ [D] no solution

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

[15] Answers may vary. Sample: Let $p = 4$, $x = -2$, $y = 4$.