Integrated Algebra Practice: A.A.10 #4

NAME:_____

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

1. Solve by the elimination method:
$$3x - 4y = 10$$
$$x + y = 1$$

2. Solve by the elimination method:
$$3x - 2y = 15$$
$$x + y = 0$$

3. Solve by the elimination method:
$$3x - 2y = 7$$
$$x + y = -1$$

4. Solve by the elimination method:
$$3x + 4y = 10$$
$$x + y = 3$$

5. Solve by the elimination method:
$$3x - 4y = 17$$
$$x + y = 1$$

6. Solve by the elimination method: $3x - 2y = 7$
$$x + y = 4$$

7. Which system has infinitely many solutions?

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

[B] $4x + 2y = 1$
$2x - y = 2$

[C] $3x - 3y = 3$
$x - y = 1$

[D] $x + y = -1$
$x - y = 1$

[E] $2x - y = 2$
$2x + y = 2$

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

$3x + 2y = 3$

$x + y = 2$

Column A   Column B

x - coordinate of solution y - coordinate of solution

[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.

9. Solve the system using the method of elimination:

$3x - 4y = -18$
$2x - y = -7$

[A] dependent (many solutions)   [B] (–2, 3)   [C] inconsistent (no solution)   [D] (–2, –3)

10. Solve the system using the method of elimination:

$x + 4y = 11$
$2x + y = 8$

[A] inconsistent (no solution)   [B] (3, –2)   [C] dependent (many solutions)   [D] (3, 2)

[1] (2, –1)

[2] (3, –3)

[3] (1, –2)

[4] (2, 1)

[5] (3, –2)

[6] (3, 1)

[7] C

[8] B

[9] B

[10] D