

CCSS.A.REI.5: Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.

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 _____