

## Systems - solving by substitution - extra practice

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**Solve each system by substitution.**

1)  $6x + y = 12$   
 $-5x - 5y = -10$

2)  $x + 2y = 16$   
 $-4x + 8y = 16$

3)  $-6x - y = -23$   
 $6x + y = 23$

4)  $3x + y = 12$   
 $-2x + 3y = 3$

5)  $-2x + 8y = -16$   
 $-3x + y = -2$

6)  $5x - 8y = -24$   
 $-4x + y = -24$

7)  $4x + 4y = 0$   
 $x - 6y = -14$

8)  $x + y = -6$   
 $-2x + 6y = -12$

9)  $-4x + y = -23$   
 $6x + 8y = 6$

10)  $x - 4y = 3$   
 $2x - 6y = 2$

$$\begin{aligned} 11) \quad & 6x + 4y = -8 \\ & x - 4y = -6 \end{aligned}$$

$$\begin{aligned} 12) \quad & 2x + 3y = -7 \\ & x - 7y = 5 \end{aligned}$$

$$\begin{aligned} 13) \quad & 3x - 2y = -2 \\ & 7x + y = 18 \end{aligned}$$

$$\begin{aligned} 14) \quad & -3x - 3y = -9 \\ & -8x + y = 3 \end{aligned}$$

$$\begin{aligned} 15) \quad & x + 4y = -4 \\ & -x - 4y = 3 \end{aligned}$$

$$\begin{aligned} 16) \quad & 4x - 5y = -24 \\ & x + 3y = -6 \end{aligned}$$

$$\begin{aligned} 17) \quad & -x + 6y = 13 \\ & x - 7y = -14 \end{aligned}$$

$$\begin{aligned} 18) \quad & -3x - 9y = -3 \\ & x + 3y = -2 \end{aligned}$$

$$\begin{aligned} 19) \quad & x - 2y = -1 \\ & -2x + 4y = 2 \end{aligned}$$

$$\begin{aligned} 20) \quad & 8x + 3y = 21 \\ & x - 8y = 11 \end{aligned}$$

## Answers to Systems - solving by substitution - extra practice (ID: 1)

- |                                  |             |                                 |                 |
|----------------------------------|-------------|---------------------------------|-----------------|
| 1) (2, 0)                        | 2) (6, 5)   | 3) Infinite number of solutions |                 |
| 4) (3, 3)                        | 5) (0, -2)  | 6) (8, 8)                       | 7) (-2, 2)      |
| 8) (-3, -3)                      | 9) (5, -3)  | 10) (-5, -2)                    | 11) (-2, 1)     |
| 12) (-2, -1)                     | 13) (2, 4)  | 14) (0, 3)                      | 15) No solution |
| 16) (-6, 0)                      | 17) (-7, 1) | 18) No solution                 |                 |
| 19) Infinite number of solutions | 20) (3, -1) |                                 |                 |