

## Solving Systems of Equations by Substitution

**Solve each system by substitution.**

1)  $y = 6x - 11$   
 $-2x - 3y = -7$

2)  $2x - 3y = -1$   
 $y = x - 1$

3)  $y = -3x + 5$   
 $5x - 4y = -3$

4)  $-3x - 3y = 3$   
 $y = -5x - 17$

5)  $y = -2$   
 $4x - 3y = 18$

6)  $y = 5x - 7$   
 $-3x - 2y = -12$

7)  $-4x + y = 6$   
 $-5x - y = 21$

8)  $-7x - 2y = -13$   
 $x - 2y = 11$

9)  $-5x + y = -2$   
 $-3x + 6y = -12$

10)  $-5x + y = -3$   
 $3x - 8y = 24$

$$\begin{aligned} 11) \quad x + 3y &= 1 \\ -3x - 3y &= -15 \end{aligned}$$

$$\begin{aligned} 12) \quad -3x - 8y &= 20 \\ -5x + y &= 19 \end{aligned}$$

$$\begin{aligned} 13) \quad -3x + 3y &= 4 \\ -x + y &= 3 \end{aligned}$$

$$\begin{aligned} 14) \quad -3x + 3y &= 3 \\ -5x + y &= 13 \end{aligned}$$

$$\begin{aligned} 15) \quad 6x + 6y &= -6 \\ 5x + y &= -13 \end{aligned}$$

$$\begin{aligned} 16) \quad 2x + y &= 20 \\ 6x - 5y &= 12 \end{aligned}$$

$$\begin{aligned} 17) \quad -3x - 4y &= 2 \\ 3x + 3y &= -3 \end{aligned}$$

$$\begin{aligned} 18) \quad -2x + 6y &= 6 \\ -7x + 8y &= -5 \end{aligned}$$

$$\begin{aligned} 19) \quad -5x - 8y &= 17 \\ 2x - 7y &= -17 \end{aligned}$$

$$\begin{aligned} 20) \quad -2x - y &= -9 \\ 5x - 2y &= 18 \end{aligned}$$

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**Solve each system by substitution.**

1)  $y = 6x - 11$   
 $-2x - 3y = -7$

 $(2, 1)$ 

2)  $2x - 3y = -1$   
 $y = x - 1$

 $(4, 3)$ 

3)  $y = -3x + 5$   
 $5x - 4y = -3$

 $(1, 2)$ 

4)  $-3x - 3y = 3$   
 $y = -5x - 17$

 $(-4, 3)$ 

5)  $y = -2$   
 $4x - 3y = 18$

 $(3, -2)$ 

6)  $y = 5x - 7$   
 $-3x - 2y = -12$

 $(2, 3)$ 

7)  $-4x + y = 6$   
 $-5x - y = 21$

 $(-3, -6)$ 

8)  $-7x - 2y = -13$   
 $x - 2y = 11$

 $(3, -4)$ 

9)  $-5x + y = -2$   
 $-3x + 6y = -12$

 $(0, -2)$ 

10)  $-5x + y = -3$   
 $3x - 8y = 24$

 $(0, -3)$

$$\begin{aligned} 11) \quad x + 3y &= 1 \\ -3x - 3y &= -15 \\ (7, -2) \end{aligned}$$

$$\begin{aligned} 12) \quad -3x - 8y &= 20 \\ -5x + y &= 19 \\ (-4, -1) \end{aligned}$$

$$\begin{aligned} 13) \quad -3x + 3y &= 4 \\ -x + y &= 3 \\ \text{No solution} \end{aligned}$$

$$\begin{aligned} 14) \quad -3x + 3y &= 3 \\ -5x + y &= 13 \\ (-3, -2) \end{aligned}$$

$$\begin{aligned} 15) \quad 6x + 6y &= -6 \\ 5x + y &= -13 \\ (-3, 2) \end{aligned}$$

$$\begin{aligned} 16) \quad 2x + y &= 20 \\ 6x - 5y &= 12 \\ (7, 6) \end{aligned}$$

$$\begin{aligned} 17) \quad -3x - 4y &= 2 \\ 3x + 3y &= -3 \\ (-2, 1) \end{aligned}$$

$$\begin{aligned} 18) \quad -2x + 6y &= 6 \\ -7x + 8y &= -5 \\ (3, 2) \end{aligned}$$

$$\begin{aligned} 19) \quad -5x - 8y &= 17 \\ 2x - 7y &= -17 \\ (-5, 1) \end{aligned}$$

$$\begin{aligned} 20) \quad -2x - y &= -9 \\ 5x - 2y &= 18 \\ (4, 1) \end{aligned}$$