

Solving Systems of Equations by Substitution

Solve each system by substitution.

$$\begin{array}{l}
 1) \quad y = (6x - 11) \\
 \quad -2x - 3y = -7 \\
 \quad -2x - 3(6x - 11) = -7 \\
 \quad -2x - 18x + 33 = -7 \\
 \quad \underline{-20x + 33 = -7} \\
 \quad \quad \quad -33 \quad -33 \\
 \quad \quad \quad -20x = -40 \\
 \quad \quad \quad \boxed{x = 2} \\
 \quad \quad \quad y = 12 - 11 = 1 \\
 \quad \quad \quad \boxed{(2, 1)}
 \end{array}$$

$$\begin{array}{l}
 2) \quad 2x - 3y = -1 \\
 \quad \quad y = x - 1
 \end{array}$$

$$\begin{array}{l}
 3) \quad y = -3x + 5 \\
 \quad \quad 5x - 4y = -3
 \end{array}$$

$$\begin{array}{l}
 4) \quad -3x - 3y = 3 \\
 \quad \quad y = -5x - 17
 \end{array}$$

$$\begin{array}{l}
 5) \quad y = -2 \\
 \quad \quad 4x - 3y = 18
 \end{array}$$

$$\begin{array}{l}
 6) \quad y = 5x - 7 \\
 \quad \quad -3x - 2y = -12
 \end{array}$$

$$\begin{array}{l}
 7) \quad -4x + y = 6 \\
 \quad \quad -5x - y = 21
 \end{array}$$

$$\begin{array}{l}
 8) \quad -7x - 2y = -13 \\
 \quad \quad x - 2y = 11
 \end{array}$$

$$\begin{array}{l}
 9) \quad -5x + y = -2 \\
 \quad \quad -3x + 6y = -12
 \end{array}$$

$$\begin{array}{l}
 10) \quad -5x + y = -3 \\
 \quad \quad 3x - 8y = 24
 \end{array}$$

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

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

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

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

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

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

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

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

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

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

Solving Systems of Equations by Substitution

Solve each system by substitution.

$$\begin{aligned} 1) \quad & y = 6x - 11 \\ & -2x - 3y = -7 \end{aligned}$$

(2, 1)

$$\begin{aligned} 2) \quad & 2x - 3y = -1 \\ & y = x - 1 \end{aligned}$$

(4, 3)

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

(1, 2)

$$\begin{aligned} 4) \quad & -3x - 3y = 3 \\ & y = -5x - 17 \end{aligned}$$

(-4, 3)

$$\begin{aligned} 5) \quad & y = -2 \\ & 4x - 3y = 18 \end{aligned}$$

(3, -2)

$$\begin{aligned} 6) \quad & y = 5x - 7 \\ & -3x - 2y = -12 \end{aligned}$$

(2, 3)

$$\begin{aligned} 7) \quad & -4x + y = 6 \\ & -5x - y = 21 \end{aligned}$$

(-3, -6)

$$\begin{aligned} 8) \quad & -7x - 2y = -13 \\ & x - 2y = 11 \end{aligned}$$

(3, -4)

$$\begin{aligned} 9) \quad & -5x + y = -2 \\ & -3x + 6y = -12 \end{aligned}$$

(0, -2)

$$\begin{aligned} 10) \quad & -5x + y = -3 \\ & 3x - 8y = 24 \end{aligned}$$

(0, -3)

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

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

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

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

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

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

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

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

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

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