

Solving Systems of Equations: Substitution Method

Solve each system by substitution.

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

$$\begin{aligned} 2) \quad & -3x + y = -10 \\ & 4x - 2y = 12 \end{aligned}$$

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

$$\begin{aligned} 4) \quad & -2x - y = -2 \\ & -3x + y = -8 \end{aligned}$$

$$\begin{aligned} 5) \quad & x + 3y = 2 \\ & -2x - 6y = 1 \end{aligned}$$

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

$$\begin{aligned} 7) \quad & x + 2y = 1 \\ & -4x - 3y = -4 \end{aligned}$$

$$\begin{aligned} 8) \quad & 3x - 4y = 7 \\ & x - y = 1 \end{aligned}$$

$$\begin{aligned} 9) \quad & x + 2y = -8 \\ & -x - y = 4 \end{aligned}$$

$$\begin{aligned} 10) \quad & x + 2y = 3 \\ & -x - 2y = -3 \end{aligned}$$

$$\begin{aligned} 11) \quad x - 2y &= 8 \\ -x + 5y &= -17 \end{aligned}$$

$$\begin{aligned} 12) \quad 12x + 3y &= 45 \\ 4x + y &= 15 \end{aligned}$$

$$\begin{aligned} 13) \quad x + 3y &= 19 \\ 6x - 5y &= -1 \end{aligned}$$

$$\begin{aligned} 14) \quad -3x - 21y &= -12 \\ x + 7y &= 4 \end{aligned}$$

$$\begin{aligned} 15) \quad 2x + 5y &= 9 \\ 2x - 4y &= 0 \end{aligned}$$

$$\begin{aligned} 16) \quad -x - y &= 7 \\ 6x - 4y &= -2 \end{aligned}$$

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

$$\begin{aligned} 18) \quad -5x - y &= 15 \\ 3x + 6y &= -9 \end{aligned}$$

$$\begin{aligned} 19) \quad -5x + 4y &= -3 \\ -5x - 5y &= 15 \end{aligned}$$

$$\begin{aligned} 20) \quad -6x + 3y &= -1 \\ 12x - 6y &= 4 \end{aligned}$$

Answers to Solving Systems of Equations: Substitution Method

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