

Solving Systems of Equations

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Solve each system by elimination.

$$\begin{aligned} 1) \quad & -4x + 12y = 8 \\ & -2x - 6y = -8 \end{aligned}$$

$$\begin{aligned} 2) \quad & -12x - 5y = 27 \\ & 2x + 7y = -23 \end{aligned}$$

$$\begin{aligned} 3) \quad & -2x + 4y = -30 \\ & 5x + 8y = 21 \end{aligned}$$

$$\begin{aligned} 4) \quad & 11x - 7y = 19 \\ & x - 5y = -7 \end{aligned}$$

$$\begin{aligned} 5) \quad & -7x - 7y = 0 \\ & -9x - 6y = 6 \end{aligned}$$

$$\begin{aligned} 6) \quad & -4x - 9y = -9 \\ & 5x - 6y = -6 \end{aligned}$$

$$\begin{aligned} 7) \quad & 10x + 3y = 0 \\ & -9x - 5y = 0 \end{aligned}$$

$$\begin{aligned} 8) \quad & 6x - 5y = 7 \\ & 4x - 6y = 2 \end{aligned}$$

$$\begin{aligned} 9) \quad & 3x + 5y = 19 \\ & -8x + 5y = -14 \end{aligned}$$

$$\begin{aligned} 10) \quad & -3x - 6y = 3 \\ & -3x - 10y = -13 \end{aligned}$$

$$\begin{aligned} 11) \quad & -5x + 4y = -14 \\ & -5x - 3y = 28 \end{aligned}$$

$$\begin{aligned} 12) \quad & -6x + 5y = 4 \\ & -6x + 9y = 12 \end{aligned}$$

$$\begin{aligned} 13) \quad & 4x - 4y = -12 \\ & -4x - y = -28 \end{aligned}$$

$$\begin{aligned} 14) \quad & x + 8y = 24 \\ & -x - 9y = -27 \end{aligned}$$

$$\begin{aligned} 15) \quad & x + 7y = 4 \\ & -x + 2y = 14 \end{aligned}$$

$$\begin{aligned} 16) \quad & 9x - 7y = 28 \\ & -9x + 5y = -20 \end{aligned}$$

Solve each system by substitution.

$$\begin{aligned} 17) \quad & -x + 4y = -2 \\ & 7x + y = 14 \end{aligned}$$

$$\begin{aligned} 18) \quad & 4x - 5y = -18 \\ & x + 2y = 15 \end{aligned}$$

$$\begin{aligned} 19) \quad & 2x + y = 14 \\ & -6x + 7y = -2 \end{aligned}$$

$$\begin{aligned} 20) \quad & -x - 8y = 22 \\ & x - 2y = -2 \end{aligned}$$

$$\begin{aligned} 21) \quad & -7x + 2y = -7 \\ & -3x + 7y = -3 \end{aligned}$$

$$\begin{aligned} 22) \quad & 6x + 2y = -10 \\ & -5x - 7y = 19 \end{aligned}$$

$$\begin{aligned} 23) \quad & 6x + 4y = 24 \\ & -2x + 7y = 17 \end{aligned}$$

$$\begin{aligned} 24) \quad & -5x + 5y = 0 \\ & -6x + 8y = -6 \end{aligned}$$

$$\begin{aligned} 25) \quad & y = -7x - 17 \\ & y = x - 1 \end{aligned}$$

$$\begin{aligned} 26) \quad & y = -6x + 13 \\ & y = 4x + 3 \end{aligned}$$

$$\begin{aligned} 27) \quad & y = -7x - 8 \\ & y = -8 \end{aligned}$$

$$\begin{aligned} 28) \quad & y = 4x - 12 \\ & y = -7x + 10 \end{aligned}$$

$$\begin{aligned} 29) \quad & 6x + 8y = 2 \\ & y = -5 \end{aligned}$$

$$\begin{aligned} 30) \quad & y = x + 7 \\ & -6x - 4y = 12 \end{aligned}$$

$$\begin{aligned} 31) \quad & y = 3x - 15 \\ & -3x + 7y = 21 \end{aligned}$$

$$\begin{aligned} 32) \quad & -6x - 3y = -24 \\ & y = x - 7 \end{aligned}$$

Solve each system by graphing.

$$\begin{aligned} 33) \quad & y = \frac{1}{2}x + 3 \\ & y = -3x - 4 \end{aligned}$$

$$\begin{aligned} 34) \quad & y = -\frac{1}{4}x - 2 \\ & y = \frac{1}{2}x + 1 \end{aligned}$$

$$\begin{aligned} 35) \quad & y = -x - 2 \\ & y = -4 \end{aligned}$$

$$\begin{aligned} 36) \quad & y = -7x - 4 \\ & y = -7x - 1 \end{aligned}$$

$$\begin{aligned} 37) \quad & 0 = -y + 2 - 5x \\ & -\frac{1}{2}y = 1 + \frac{1}{2}x \end{aligned}$$

$$\begin{aligned} 38) \quad & 0 = 4y + 12 - x \\ & \frac{1}{2}y = 1 + \frac{3}{4}x \end{aligned}$$

$$\begin{aligned} 39) \quad & -x = -2y + 8 \\ & x + 8 - 2y = 0 \end{aligned}$$

$$\begin{aligned} 40) \quad & -2x = 16 + 4y \\ & 1 = \frac{1}{8}x + \frac{1}{4}y \end{aligned}$$

Answers to Solving Systems of Equations (ID: 1)

- | | | | |
|-----------------|--------------|----------------------------------|-----------------|
| 1) (1, 1) | 2) (-1, -3) | 3) (9, -3) | 4) (3, 2) |
| 5) (-2, 2) | 6) (0, 1) | 7) (0, 0) | 8) (2, 1) |
| 9) (3, 2) | 10) (-9, 4) | 11) (-2, -6) | 12) (1, 2) |
| 13) (5, 8) | 14) (0, 3) | 15) (-10, 2) | 16) (0, -4) |
| 17) (2, 0) | 18) (3, 6) | 19) (5, 4) | 20) (-6, -2) |
| 21) (1, 0) | 22) (-1, -2) | 23) (2, 3) | 24) (-3, -3) |
| 25) (-2, -3) | 26) (1, 7) | 27) (0, -8) | 28) (2, -4) |
| 29) (7, -5) | 30) (-4, 3) | 31) (7, 6) | 32) (5, -2) |
| 33) (-2, 2) | 34) (-4, -1) | 35) (2, -4) | 36) No solution |
| 37) (1, -3) | 38) (-4, -4) | 39) Infinite number of solutions | |
| 40) No solution | | | |