

Solving Systems By Substitution

Steps:

1. Solve one equation for one variable (choose an easy one!)
2. Substitute the equation from #1 into the other equation
3. Solve the new equation
4. Substitute your answer to find the other variable

EXAMPLES

$$x + 2y = 8 \quad y = 2x - 1$$

No need to solve, y is by itself!

Substitute!

$$x + 2y = 8$$

$$x + 2(\quad) = 8$$

$$x + \quad = 8$$

$$\quad = 8$$

$$\quad = \quad$$

$$x = \quad$$

Substitute into either equation!

$$y = 2x - 1$$

$$y = 2(\quad) - 1$$

$$y = \quad - 1$$

$$y = \quad$$

Solution:

$$y - 2x = -17 \quad x + y = 16$$

Solve one equation for x or y!

$$x + y = 16$$

$$x =$$

Substitute!

$$y - 2x = -17$$

$$y - 2(\quad) = -17$$

$$y - \quad = -17$$

$$\quad = -17$$

$$\quad = \quad$$

$$y = \quad$$

Substitute into either equation!

$$x + y = 16$$

$$x + \quad = 16$$

$$x = \quad$$

Solution: