

Solving by Substitution

1. For each system, use the given value to find the value of the other variable.

a) $x = 2$

$$2x + y = 3$$

b) $y = 2$

$$4x - 2y = 8$$

2. Solve each system of equations.

a) $y = 3x - 8$

$$5x + y = 6$$

b) $x = 2y + 2$

$$5x - 9y = 12$$

c) $3x - 2y = -5$

$$x = y - 2$$

d) $4x - 3y = 9$

$$y = 2x + 11$$

e) $2x - y = -11$

$$y = x - 1$$

3. Two meshing gears in a printer have a total of 89 teeth. One of the gears has 4 teeth less than twice the number of teeth of the other gear. Their equations are given by: $x + y = 89$
 $y = 2x - 4$

How many teeth does each gear have?