

Name: _____ Date: _____

Solve each linear system using substitution. Check your solution.

_____ 1. $y = \frac{1}{2}x + 6$
 $y = -2x - 4$

_____ 2. $2x + y = 8$
 $-4x - 2y = 4$

_____ 3. $4.5x + 1.8y = 18$
 $6x - 3y = -3$

_____ 4. $3x - y = 25$
 $4.7x + 7y = 82$

_____ 5. $x + 2y = 6$
 $5x + 3y = 19.5$

_____ 6. $y = 3x + 18$
 $x = -6$

In the following problems, identify and circle the mistakes. Then, fix the problem by completing it correctly.

7.
$$\begin{cases} 4x + 2y = 26 \\ 3x + y = 16 \end{cases}$$

$$\begin{aligned} 3x + y &= 16 \\ y &= 3x + 16 \end{aligned}$$

$$4x + 2(3x + 16) = 26$$

$$4x + 6x + 32 = 26$$

$$10x + 32 = 26$$

$$10x = -6$$

$$x = -0.6$$

$$3(-0.6) + y = 16$$

$$-1.8 + y = 16$$

$$y = 17.8$$

$(-0.6, 17.8)$

8.
$$\begin{cases} 3x + 7y = -2 \\ x + y = 2 \end{cases}$$

$$\begin{aligned} x + y &= 2 \\ x &= -y + 2 \end{aligned}$$

$$3(-y + 2) + 7y = -2$$

$$-3y + 2 + 7y = -2$$

$$4y + 2 = -2$$

$$4y = -4$$

$$y = -1$$

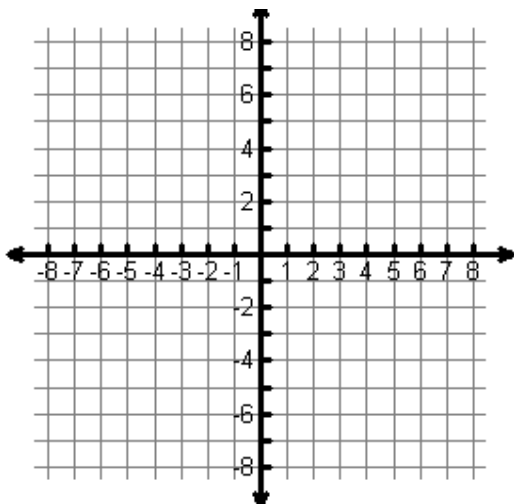
$$x + (-1) = 2$$

$$x = 3$$

$(3, -1)$

Review: Solve the system by graphing.

9.
$$\begin{cases} 2x + 2y = 4 \\ 3x - 2y = 6 \end{cases}$$



10.
$$\begin{cases} 2x + y = 5 \\ 2y = -4x - 8 \end{cases}$$

