

Notes

1

(a)

$$y = 4x$$

(b)  $x + y = 10$

$$x + (4x) = 10$$

$$\frac{5x}{5} = \frac{10}{5}$$

$$x = 2$$

$$(2, 8)$$

(b)

$$\begin{array}{r} (2) + y = 10 \\ -2 \quad -2 \\ \hline y = 8 \end{array}$$

2

(a)

(b)  $y = -7x$   $4x + y = 12$

$$4x + (-7x) = 12$$

$$\begin{array}{r} -3x = 12 \\ -3 \quad -3 \\ \hline \end{array}$$

$$x = -4$$

(a)

$$y = -7(-4)$$

$$y = 28$$

$$(-4, 28)$$

(b)

$$4(-4) + y = 12$$

$$\begin{array}{r} -16 + y = 12 \\ +16 \quad +16 \\ \hline \end{array}$$

$$y = 28$$

3 (a)

$$y = -x + 3$$

(b)

$$3y - 1 = 5x$$

$$3(-x + 3) - 1 = 5x$$

$$-3x + 9 - 1 = 5x$$

$$\begin{array}{r} -3x + 9 = 5x \\ +3x \quad +3x \\ \hline \end{array}$$

$$\frac{8}{8} = \frac{8x}{8}$$

$$1 = x$$

$$y = -(1) + 3$$

$$y = -(1) + 3$$

$$y = 2$$

$$(1, 2)$$

4 (a)

$$y = -8x$$

(b)

$$2x + y = -6$$

$$2x + (-8x) = -6$$

$$\begin{array}{r} -6x = -6 \\ -6 \quad -6 \\ \hline \end{array}$$

$$1x = 1$$

( , )

you finish

Name \_\_\_\_\_

5.2 (B) Systems Of Equations—Solve by substitution.

**Solve by substitution.**

1.  $y = -3x$   
 $y - x = -8$

2.  $y = -2x$   
 $4x + y = 10$

3.  $y = x - 2$   
 $x + y = 12$

4.  $y = -7x$   
 $4x + y = -12$

5.  $y = 3x$   
 $y - 2x = 7$

6.  $y = -x + 3$   
 $3y - 1 = 5x$

**Solve by substitution.**

$$\begin{aligned} 7. \quad y &= 6x \\ 3x + y &= 9 \end{aligned}$$

$$\begin{aligned} 8. \quad y &= 2x \\ 2x + y &= 24 \end{aligned}$$

$$\begin{aligned} 9. \quad y &= -5x \\ y - 6x &= 11 \end{aligned}$$

$$\begin{aligned} 10. \quad y &= -2x \\ y - 8x &= -10 \end{aligned}$$

$$\begin{aligned} 11. \quad y &= -2x \\ y - x &= -12 \end{aligned}$$

$$\begin{aligned} 12. \quad y &= -2x \\ y - 2x &= -20 \end{aligned}$$