

## 6-4

## Skills Practice

## Elimination Using Multiplication

Use elimination to solve each system of equations.

1.  $x + y = -9$

$5x - 2y = 32$

$(2, -11)$

2.  $3x + 2y = -9$

$x - y = -13$

$(-7, 6)$

3.  $2x + 5y = 3$

$-x + 3y = -7$

$(4, -1)$

4.  $2x + y = 3$

$-4x - 4y = -8$

$(1, 1)$

5.  $4x - 2y = -14$

$3x - y = -8$

$(-1, 5)$

6.  $2x + y = 0$

$5x + 3y = 2$

$(-2, 4)$

7.  $5x + 3y = -10$

$3x + 5y = -6$

$(-2, 0)$

8.  $2x + 3y = 14$

$3x - 4y = 4$

$(4, 2)$

9.  $2x - 3y = 21$

$5x - 2y = 25$

$(3, -5)$

10.  $3x + 2y = -26$

$4x - 5y = -4$

$(-6, -4)$

11.  $3x - 6y = -3$

$2x + 4y = 30$

$(7, 4)$

12.  $5x + 2y = -3$

$3x + 3y = 9$

$(-3, 6)$

13. Two times a number plus three times another number equals 13. The sum of the two numbers is 7. What are the numbers?

14. Four times a number minus twice another number is  $-16$ . The sum of the two numbers is  $-1$ . Find the numbers.

15. **FUNDRAISING** Trisha and Byron are washing and vacuuming cars to raise money for a class trip. Trisha raised \$38 washing 5 cars and vacuuming 4 cars. Byron raised \$28 by washing 4 cars and vacuuming 2 cars. Find the amount they charged to wash a car and vacuum a car.

**6-4 Practice****Elimination Using Multiplication**

Use elimination to solve each system of equations.

$$\begin{aligned} 1. \quad & 2x - y = -1 \\ & 3x - 2y = 1 \end{aligned}$$

$$(-3, -5)$$

$$\begin{aligned} 2. \quad & 5x - 2y = -10 \\ & 3x + 6y = 66 \end{aligned}$$

$$(2, 10)$$

$$\begin{aligned} 3. \quad & 7x + 4y = -4 \\ & 5x + 8y = 28 \end{aligned}$$

$$(-4, 6)$$

$$\begin{aligned} 4. \quad & 2x - 4y = -22 \\ & 3x + 3y = 30 \end{aligned}$$

$$(3, 7)$$

$$\begin{aligned} 5. \quad & 3x + 2y = -9 \\ & 5x - 3y = 4 \end{aligned}$$

$$(-1, -3)$$

$$\begin{aligned} 6. \quad & 4x - 2y = 32 \\ & -3x - 5y = -11 \end{aligned}$$

$$(7, -2)$$

$$7. \quad 3x + 4y = 27$$

$$5x - 3y = 16$$

$$(5, 3)$$

$$8. \quad 0.5x + 0.5y = -2$$

$$x - 0.25y = 6$$

$$(4, -8)$$

$$9. \quad 2x - \frac{3}{4}y = -7$$

$$x + \frac{1}{2}y = 0$$

$$(-2, 4)$$

$$\begin{aligned} 10. \quad & 6x - 3y = 21 \\ & 2x + 2y = 22 \end{aligned}$$

$$(6, 5)$$

$$\begin{aligned} 11. \quad & 3x + 2y = 11 \\ & 2x + 6y = -2 \end{aligned}$$

$$(5, -2)$$

$$\begin{aligned} 12. \quad & -3x + 2y = -15 \\ & 2x - 4y = 26 \end{aligned}$$

$$(1, -6)$$

13. Eight times a number plus five times another number is  $-13$ . The sum of the two numbers is 1. What are the numbers?

14. Two times a number plus three times another number equals 4. Three times the first number plus four times the other number is 7. Find the numbers.

15. **FINANCE** Gunther invested \$10,000 in two mutual funds. One of the funds rose 6% in one year, and the other rose 9% in one year. If Gunther's investment rose a total of \$684 in one year, how much did he invest in each mutual fund?

16. **CANOEING** Laura and Brent paddled a canoe 6 miles upstream in four hours. The return trip took three hours. Find the rate at which Laura and Brent paddled the canoe in still water.

17. **NUMBER THEORY** The sum of the digits of a two-digit number is 11. If the digits are reversed, the new number is 45 more than the original number. Find the number.