Name _____ Class _____ Date _____

# Additional Practice

**Lesson 2.17**

**1.** Solve the equation $3a - 2b + 7 = 4a - 3b + 10$ for $a$. Then solve the equation for $b$.

**2.** The equation $7x - 3y = 42$ relates $x$ and $y$.
- **a.** Suppose $x$ is 4 and $y$ is 25. Do these values make the equation true? Explain.
- **b.** Suppose $x$ is 9. Find a value of $y$ that makes the equation true.
- **c.** Find three pairs of points $(x, y)$ that make the equation true.

**3.** You can find the perimeter of a rectangle if you subtract the width from the length, add 7 inches, and multiply the result by 4.
- **a.** If the rectangle's length is $\ell$ and its width is $w$, what is its perimeter?
- **b.** Explain why the equation $2\ell + 2w = 4(\ell - w + 7)$ is true for the rectangle.
- **c.** Solve the equation in part (b) for the variable $\ell$.
- **d.** If the rectangle's width is 8 inches, what is the length? What is its perimeter?

**4.** A shoe store makes \$2880 during a one-day sale. Men's shoes cost \$24 per pair and women's shoes cost \$18 per pair. Let $m$ equal the number of pairs of men's shoes and $w$ equal the number of pairs of women's shoes. The equation $24m + 18w = 2880$ describes the store's income for the sale.
- **a.** If the store sold 30 pairs of men's shoes during the sale, how many pairs of women's shoes were sold?
- **b.** Can the store have sold exactly 150 pairs of women's shoes during the sale? Explain.
- **c.** The store sold one more pair of men's shoes than women's shoes during the sale. How many pairs of each were sold?

**5.** Consider the equation $4x + 7y = 56$.
- **a.** Solve for $y$. Write the equation in the form $y =$ an expression.
- **b.** Solve for $x$.

**6.** Consider the equation $5x + 7y = 29$.
- **a.** Solve for $y$.
- **b.** Solve for $x$.