



## Lesson Check

### Do you know HOW?

Solve each equation for the given variable.

- $-2x + 5y = 12$  for  $y$
- $a - 2b = -10$  for  $b$
- $mx + 2nx = p$  for  $x$
- $C = \frac{5}{9}(F - 32)$  for  $F$

5. **Gardening** Jonah is planting a rectangular garden. The perimeter of the garden is 120 yd, and the width is 20 yd. What is the length of the garden?

### Do you UNDERSTAND?

**Vocabulary** Classify each equation below as a formula, a literal equation, or both.

- $c = 2d$
- $y = 2x - 1$
- $A = \frac{1}{2}bh$
- $P = 2\ell + 2w$

10. **Compare and Contrast** How is the process of rewriting literal equations similar to the process of solving equations in one variable? How is it different?



## Practice and Problem-Solving Exercises



### Practice

Solve each equation for  $y$ . Then find the value of  $y$  for each value of  $x$ .

- $y + 2x = 5$ ;  $x = -1, 0, 3$
- $3x - 5y = 9$ ;  $x = -1, 0, 1$
- $5x = -4y + 4$ ;  $x = 1, 2, 3$
- $x - 4y = -4$ ;  $x = -2, 4, 6$

- $2y + 4x = 8$ ;  $x = -2, 1, 3$
- $4x = 3y - 7$ ;  $x = 4, 5, 6$
- $2y + 7x = 4$ ;  $x = 5, 10, 15$
- $6x = 7 - 4y$ ;  $x = -2, -1, 0$

See Problem 1.

Solve each equation for  $x$ .

- $mx + nx = p$
- $y = \frac{x - v}{b}$
- $A = Bxt + C$

- $ax - x = c$
- $S = C + xC$
- $4(x - b) = x$

- $\frac{rx + sx}{t} = 1$
- $\frac{x}{a} = \frac{y}{b}$
- $\frac{x + 2}{y - 1} = 2$

See Problem 2.

Solve each problem. Round to the nearest tenth, if necessary. Use 3.14 for  $\pi$ .

- What is the radius of a circle with circumference 22 m?
- What is the length of a rectangle with width 10 in. and area 45 in.<sup>2</sup>?
- A triangle has height 4 ft and area 32 ft<sup>2</sup>. What is the length of its base?
- A rectangle has perimeter 84 cm and length 35 cm. What is its width?
- Parks** A public park is in the shape of a triangle. The side of the park that forms the base of the triangle is 200 yd long, and the area of the park is 7500 yd<sup>2</sup>. What is the length of the side of the park that forms the height of the triangle?

See Problem 3.

