

**LESSON**  
**12-1**

# Writing Equations to Represent Situations

## Practice and Problem Solving: A/B

Determine whether the given value is a solution of the equation. Write *yes* or *no*.

- |                                       |  |
|---------------------------------------|--|
| 1. $x + 11 = 15$ ; $x = 4$ _____      | 2. $36 - w = 10$ ; $w = 20$ _____      |
| 3. $0.2v = 1.2$ ; $v = 10$ _____      | 4. $15 = 6 + d$ ; $d = 8$ _____        |
| 5. $28 - w = 25$ ; $w = 3$ _____      | 6. $4t = 32$ ; $t = 8$ _____           |
| 7. $\frac{12}{s} = 4$ ; $s = 3$ _____ | 8. $\frac{33}{p} = 3$ ; $p = 11$ _____ |

Circle the letter of the equation that each given solution makes true.

- |                      |                     |
|----------------------|---------------------|
| 9. $m = 19$          | 10. $a = 16$        |
| A $10 + m = 20$      | A $2a = 18$         |
| B $m - 4 = 15$       | B $a + 12 = 24$     |
| C $7m = 26$          | C $24 - a = 6$      |
| D $\frac{18}{m} = 2$ | D $\frac{a}{4} = 4$ |

Write an equation to represent each situation.

- |  |   |
|--|---|
| 11. Seventy-two people signed up for the soccer league. After the players were evenly divided into teams, there were 6 teams in the league and $x$ people on each team.<br>_____ | 12. Mary covered her kitchen floor with 10 tiles. The floor measures 6 feet long by 5 feet wide. The tiles are each 3 feet long and $w$ feet wide.<br>_____ |
|--|---|

**Solve.**

13. The low temperature was  $35^\circ\text{F}$ . This was  $13^\circ\text{F}$  lower than the daytime high temperature. Write an equation to determine whether the high temperature was  $48^\circ\text{F}$  or  $42^\circ\text{F}$ .  
\_\_\_\_\_

14. Kayla bought 16 bagels. She paid a total of \$20. Write an equation to determine whether each bagel cost \$1.50 or \$1.25.  
\_\_\_\_\_

15. Write a real-world situation that could be modeled by the equation  $\frac{24}{y} = 3$ . Then solve the problem.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_