# 1 CHAPTER TEST

**Evaluate the expression.**

**1.** $7 + 3^2 \cdot 2$

**2.** $(5^2 + 17) \div 7$

**3.** $(24 - 11) - (3 + 2) \div 4$

**4.** $\frac{x}{5}$ when $x = 30$

**5.** $n^3$ when $n = 20$

**6.** $15 - t$ when $t = 11$

**7.** $12 + 4x$ when $x = 1\frac{1}{2}$

**8.** $3z^2 - 7$ when $z = 6$

**9.** $2(4n + 5)$ when $n = 2$

**Write an expression, an equation, or an inequality.**

**10.** The sum of 19 and the cube of a number $x$

**11.** The product of 3 and a number $y$ is no more than 21.

**12.** Twice the difference of a number $z$ and 12 is equal to 10.

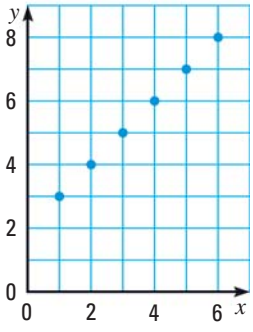
**Check whether the given number is a solution of the equation or inequality.**

**13.** $2 + 3x = 10$; 2

**14.** $8 + 3b > 15$; 2

**15.** $11y - 5 \leq 30$; 3

**16.** Refer to the graph.




**a.** *Explain* why the graph represents a function.

**b.** Identify the domain and the range.

**c.** Write a rule for the function.

**17. FOOD PREPARATION** You buy tomatoes at \$1.29 per pound and peppers at \$3.99 per pound to make salsa. Write an expression for the total cost of the ingredients. Then find the total cost of 5 pounds of tomatoes and 2 pounds of peppers.

**18. CAR EXPENSES** A family determined the average cost of maintaining and operating the family car to be about \$.30 per mile. On one trip, the family drove at an average rate of 50 miles per hour for a total of 6.5 hours. On a second trip, they drove at an average rate of 55 miles per hour for a total of 6 hours. Which trip cost more? How much more?

**19. SHOE SIZES** A man's size 6 shoe is the same size as a woman's size $7\frac{1}{2}$. The table shows other corresponding sizes of men's and women's shoes.

| Men's size, $x$ | 6 | $6\frac{1}{2}$ | 7 | $7\frac{1}{2}$ | 8 | $8\frac{1}{2}$ | 9 |
|---|---|---|---|---|---|---|---|
| Women's size, $y$ | $7\frac{1}{2}$ | 8 | $8\frac{1}{2}$ | 9 | $9\frac{1}{2}$ | 10 | $10\frac{1}{2}$ |

**a.** Using the data in the table, write a rule for women's shoe size as a function of men's shoe size. Identify the domain and the range.

**b.** Graph the function.