

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.

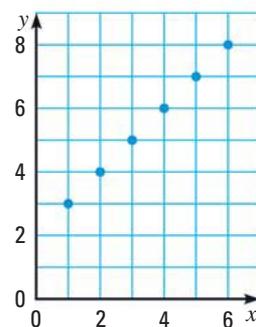
10. The sum of 19 and the cube of a number x
11. The product of 3 and a number y is no more than 21.
12. Twice the difference of a number z and 12 is equal to 10.

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.