✓ Vocabulary and Concept Check

1. **VOCABULARY** Is the equation $2x - 3y = 4$ in function form? Explain.

2. **DIFFERENT WORDS, SAME QUESTION** Which is different? Find "both" answers.

Find the range of the function represented by the table.	Find the inputs of the function represented by the table.
Find the x-values of the function represented by $(2, 7)$, $(4, 5)$, and $(6, -1)$.	Find the domain of the function represented by $(2, 7)$, $(4, 5)$, and $(6, -1)$.

| x	2	4	6
y	7	5	−1

Practice and Problem Solving

3. The number of earrings and headbands you can buy with $24 is represented by the equation $8x + 4y = 24$. The table shows the number of earrings and headbands.

    a. Write the equation in function form.
    b. Find the domain and range.
    c. Why is $x = 6$ not in the domain of the function?

Earrings, x	0	1	2	3
Headbands, y	6	4	2	0

Find the domain and range of the function represented by the graph.

① 4.

5.

6.
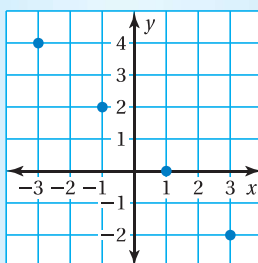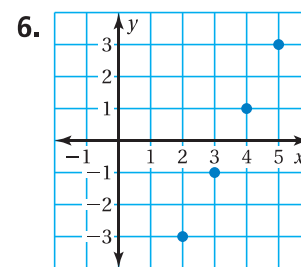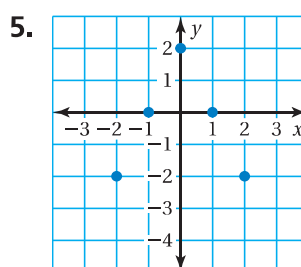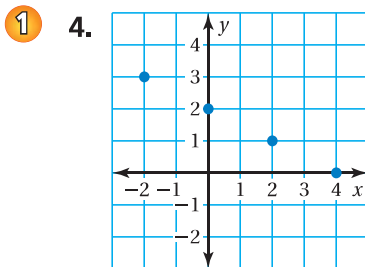
The domain is −2, 0, 2, and 4.

The range is −3, −1, 1, 3.

7. **ERROR ANALYSIS** Describe and correct the error in finding the domain and range of the function represented by the graph.

8. **REASONING** Find the domain and range of the function represented by the table.

Tickets, x	2	3	5	8
Cost, y	$14	$21	$35	$56

Copy and complete the input-output table for the function. Then find the domain and range of the function represented by the table.

2 **9.** $y = 6x + 2$

x	−1	0	1	2
y				

10. $y = -\dfrac{1}{4}x - 2$

x	0	4	8	12
y				

11. $y = 1.5x + 3$

x	−1	0	1	2
y				

12. **VAULTING** In the sport of vaulting, a vaulter performs a routine while on a moving horse. For each round x of competition, the vaulter receives a score y from 1 to 10.

   a. Find the domain and range of the function represented by the table.

   b. Interpret the domain and range.

   c. What is the mean score of the vaulter?

x	y
1	6.856
2	7.923
3	8.135

13. **MANATEE** A manatee eats about 12% of its body weight each day.

   a. Write an equation in function form that represents the amount y (in pounds) of food a manatee eats each day for its weight x.

   b. Create an input-output table for the equation in part (a). Use the inputs 150, 300, 450, 600, 750, and 900.

   c. Find the domain and range of the function represented by the table.

   d. An aquatic center has manatees that weigh 300 pounds, 750 pounds, and 1050 pounds. How many pounds of food do all three manatees eat in a day? in a week?

14. **Critical Thinking** Describe the domain and range of the function.

   a. $y = |x|$ **b.** $y = -|x|$ **c.** $y = |x| - 6$ **d.** $y = -|x| + 4$

Fair Game Review *What you learned in previous grades & lessons*

Graph the linear equation. *(Section 2.1)*

15. $y = 2x + 8$ **16.** $5x + 6y = 12$ **17.** $-x - 3y = 2$ **18.** $y = 7x - 5$

19. **MULTIPLE CHOICE** The minimum number of people needed for a group rate at an amusement park is 8. Which inequality represents the number of people needed to get the group rate? *(Skills Review Handbook)*

   Ⓐ $x \le 8$ Ⓑ $x > 8$ Ⓒ $x < 8$ Ⓓ $x \ge 8$