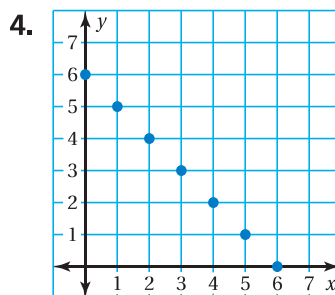
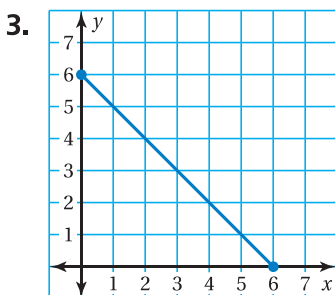


## Vocabulary and Concept Check

- VOCABULARY** Describe the difference between a discrete domain and a continuous domain.
- WRITING** Describe how you can use a graph to determine whether a domain is discrete or continuous.

## Practice and Problem Solving

Describe the domain and range of the function. Is the domain discrete or continuous?



Graph the function. Is the domain of the graph discrete or continuous?

1 2 5.

Input Bags, $x$	Output Marbles, $y$
2	20
4	40
6	60

6.

Input Years, $x$	Output Height of a Tree, $y$ (feet)
0	3
1	6
2	9

7.

Input Width, $x$ (inches)	Output Volume, $y$ (cubic inches)
5	50
10	100
15	150

8.

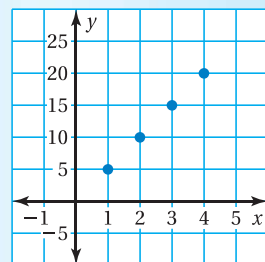
Input Hats, $x$	Output Cost, $y$ (dollars)
0	0
1	8.45
2	16.9

9. **ERROR ANALYSIS** Describe and correct the error in classifying the domain.

10. **YARN** The function  $m = 40 - 8.5b$  represents the amount  $m$  of money (in dollars) that you have after buying  $b$  balls of yarn. Graph the function using a domain of 0, 1, 2, and 3. Is the domain discrete or continuous?



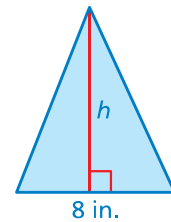
**X** The domain is continuous.



11. **REASONING** The input of one function is *length*. The input of another function is *number of shirts*. Which function has a continuous domain? Explain.

12. **DISTANCE** The function  $y = 3.28x$  converts length from  $x$  meters to  $y$  feet. Graph the function. Is the domain discrete or continuous?

13. **AREA** The area  $A$  of the triangle is a function of the height  $h$ . Graph the function. Is the domain discrete or continuous?



14. **PACKING** You are packing books into boxes. The function  $y = 20x$  represents the number  $y$  of books that will fit into  $x$  boxes.

- a. Is 4 in the domain? Explain.
- b. Is 60 in the range? Explain.

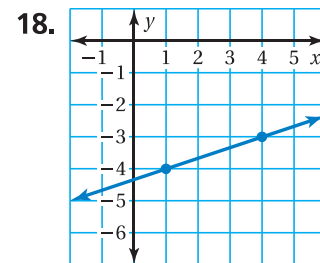
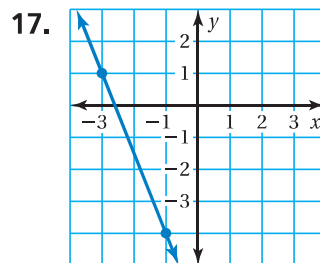
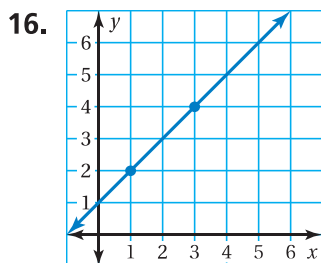
15. **Reasoning** You want to fill a 2-foot shelf with framed pictures. There are  $x$  pictures in 4-inch frames and  $y$  pictures in 8-inch frames.

- a. Write a function for this situation.
- b. Graph the function.
- c. Is the domain discrete or continuous?



## Fair Game Review what you learned in previous grades & lessons

Find the slope of the line. (Section 2.2)



19. **MULTIPLE CHOICE** What is the  $y$ -intercept of the graph of the linear equation? (Section 2.3)

- (A)  $-4$
- (B)  $-2$
- (C)  $2$
- (D)  $4$

