

# Lesson 7.2 • Functions and Graphs

Name \_\_\_\_\_ Period \_\_\_\_\_ Date \_\_\_\_\_

1. Use the given equations to find the missing output values.

a.  $y = 3 - x$

Input $x$	Output $y$
-4	
-3	
-2	
-1	
0	
1	
2	

b.  $y = -1.5 + 3x$

Input $x$	Output $y$
-2	
-1.5	
-1	
-0.5	
0	
0.5	
1	

c.  $y = 6.8 + 0.5x$

Input $x$	Output $y$
-6	
-2.4	
1	
2.8	
-14	
3.1	
-17.5	

2. Use the given equations to find the missing domain and range values.

a.  $y = -3x + 5$

Domain $x$	Range $y$
-4	
-2	
	5
3	
	-7

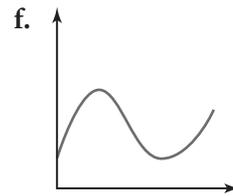
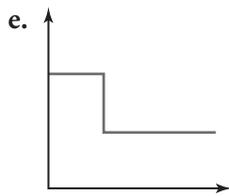
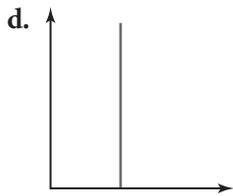
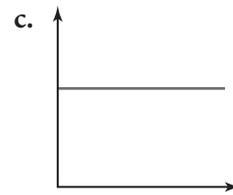
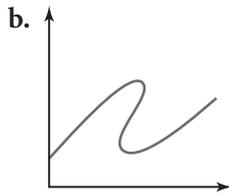
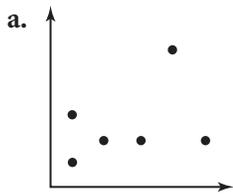
b.  $2x - 3y = 6$

Domain $x$	Range $y$
	0
0	
	2
-6	
	5

c.  $x^2 - 2y = 11$

Domain $x$	Range $y$
-3	
0	
	7
1	
4	

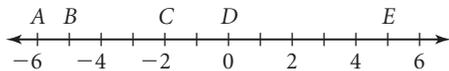
3. Find whether each graph represents a function.



## Lesson 7.3 • Graphs of Real-World Situations

Name \_\_\_\_\_ Period \_\_\_\_\_ Date \_\_\_\_\_

- For each relationship, identify the independent variable and the dependent variable. Then sketch a reasonable graph for each situation and label the axes. Write a few sentences explaining each graph. In your explanations, use terms such as *linear*, *nonlinear*, *continuous*, *discrete*, *increasing*, and *decreasing*.
  - The temperature of a carton of milk and the length of time it has been out of the refrigerator
  - The number of cars on the freeway and the level of exhaust fumes in the air
  - The temperature of a pot of water as it is heated
  - The relationship between the cooking time for a 2-pound roast and the temperature of the oven
  - The distance from a Ferris-wheel rider to the ground during two revolutions
- Sketch a graph of a continuous function to fit each description.
  - Linear and increasing, then linear and decreasing
  - Neither increasing nor decreasing
  - Increasing with a slower and slower rate of change
  - Decreasing with a slower and slower rate of change, then increasing with a faster and faster rate of change
  - Increasing with a slower and slower rate of change, then increasing with a faster and faster rate of change
- Write an inequality for each interval in 3a–f. Include the least point in each interval and exclude the greatest point in each interval.



- A to B
  - B to D
  - A to C
  - B to E
  - C to E
  - C to D
- Describe each of these discrete function graphs using the words *increasing*, *decreasing*, *linear*, *nonlinear*, and *rate of change*.

