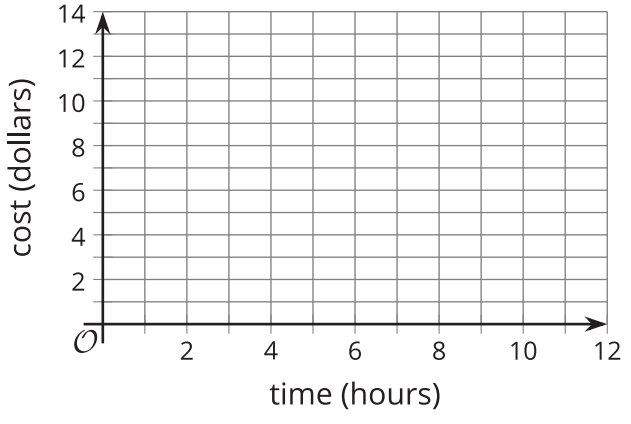
Lesson 12 Practice Problems

1. A parking garage charges \$5 for the first hour, \$10 for up to two hours, and \$12 for the entire day. Let G be the dollar cost of parking for t hours.

   a. Complete the table.

   b. Sketch a graph of G for $0 \leq t \leq 12$.

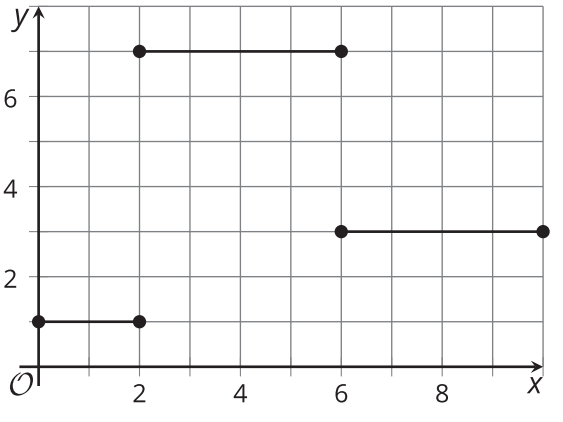


t (hours)	G (dollars)
0	
$\frac{1}{2}$	
1	
$1\frac{3}{4}$	
2	
5	

   c. Is G a function of t? Explain your reasoning.

   d. Is t a function of G? Explain your reasoning.

2. Is this a graph of a function? Explain your reasoning.



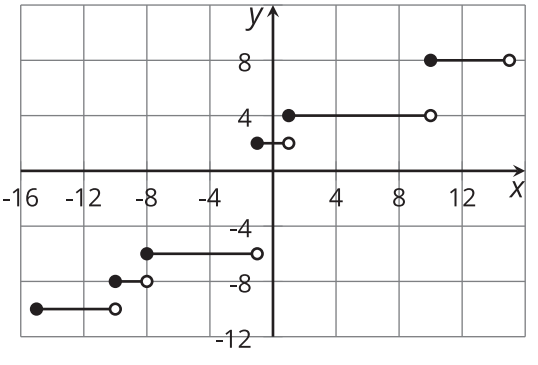
3. Use the graph of function g to answer these questions.

a. What are the values of $g(1)$, $g(\text{-}12)$, and $g(15)$?

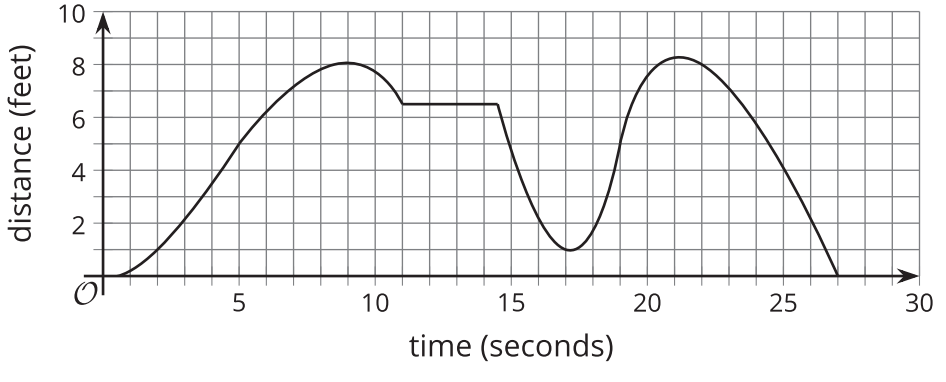
b. For what x-values is $g(x) = \text{-}6$?

c. Complete the rule for $g(x)$ so that the graph represents it.

$$g(x) = \begin{cases} \text{-}10, & \text{-}15 \leq x < \text{-}10 \\ \_\_\_\_, & \text{-}10 \leq x < \text{-}8 \\ \text{-}6, & \_\_\_\_ \leq x < \text{-}1 \\ \_\_\_\_, & \text{-}1 \leq x < 1 \\ 4, & \_\_\_\_ \leq x < \_\_\_\_ \\ 8, & 10 \leq x < 15 \end{cases}$$



4. This graph represents Andre's distance from his bicycle as he walks in a park.



a. For which intervals of time is the value of the function decreasing?

b. For which intervals is it increasing?

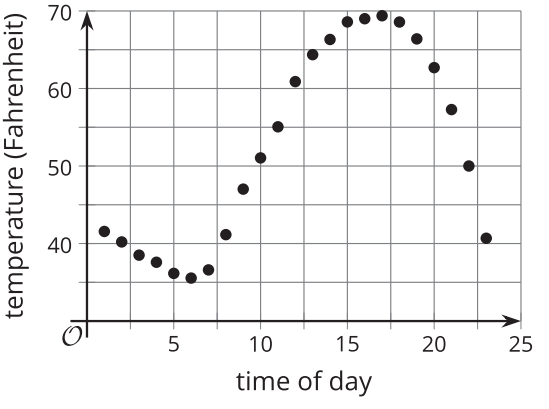
c. Describe what Andre is doing during the time when the value of the function is increasing.

(From Unit 4, Lesson 6.)

5. The temperature was recorded at several times during the day. Function T gives the temperature in degrees Fahrenheit, n hours since midnight.

   Here is a graph for this function.

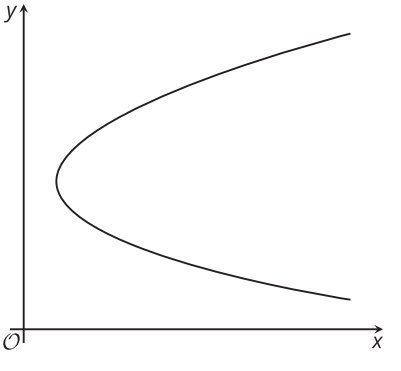
   a. Describe the overall trend of temperature throughout the day.



   b. Based on the graph, did the temperature change more quickly between 10:00 a.m. and noon, or between 8:00 p.m. and 10:00 p.m.? Explain how you know.

(From Unit 4, Lesson 7.)

6. Explain why this graph does not represent a function.



(From Unit 4, Lesson 8.)