13-1 Practice

Exploring Periodic Data

Name one cycle in two different ways. Then determine the period of the function.

1. [Graph]
   Answers may vary. Sample: from 0 to 3; 3

2. [Graph]
   Answers may vary. Sample: from 0 to 4; 4

3. [Graph]
   Answers may vary. Sample: from 0 to 4; 4

Determine whether each function is or is not periodic. If it is, find the period.

4. [Graph]
   not periodic

5. [Graph]
   periodic; 2

6. [Graph]
   periodic; 4

Find the amplitude of each periodic function.

7. [Graph]

8. [Graph]

9. [Graph]

Sketch the graph of a sound wave with the given period and amplitude.

10. period 0.03, amplitude 2
    Answers may vary. Sample:

11. period 0.006, amplitude 3
    Answers may vary. Sample:
12. **Open-Ended** Describe a situation that you could represent with a periodic function. **Answers may vary. Sample:** the height above the ground of the last car of an amusement park roller coaster, recorded during each ride for one day.

13. The graph below shows the height of ocean waves below the deck of a platform.

   ![Graph of ocean waves](image)

   a. What is the period of the graph? 10 s
   b. What is the amplitude of the graph? 2 ft

14. **Open-Ended** Sketch a graph of a periodic function that has a period of 8 and an amplitude of $3 \frac{1}{2}$. **Answers may vary. Sample:**

   ![Graph of periodic function](image)

   Find the maximum, minimum, and period of each periodic function. Then copy the graph and sketch two more cycles.

15. 

   ![Graph](image)

   1; -3; 4

16. 

   ![Graph](image)

   2; -1; 5