UNIT 5 • COMPARING AND CONTRASTING FUNCTIONS
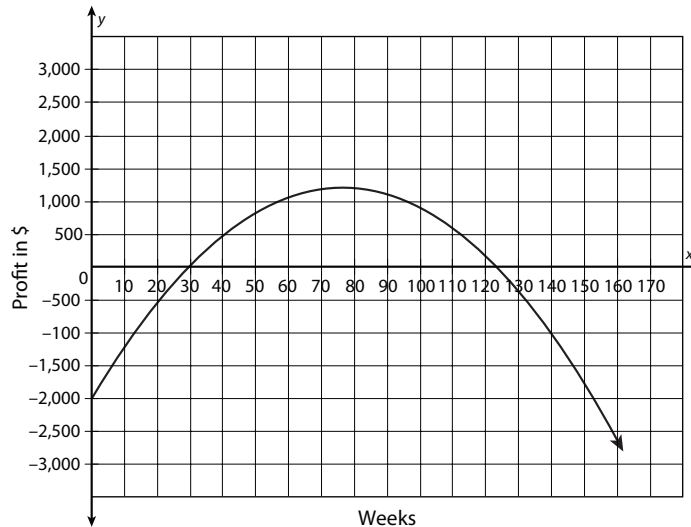Lesson 2: Average Rate of Change

Pre-Assessment

Circle the letter of the best answer.

1. In the following table, what is the pattern between dependent values?

Hours worked	Money earned ($)
8	120
16	240
24	360
32	480
40	600
48	720

  a. constant first difference   c. constant multiple

  b. constant second difference   d. There is no pattern in the values.

2. The following graph represents a bicycle company's profit over a period of time. What is the approximate rate of change on the interval [40, 95]?

  a. −$0.11 per week   c. $11 per week

  b. $9 per week   d. The rate of change cannot be determined.

Assessment

3. Antwon's new boat cost $38,000. Every year its value decreases by 6%. Let V be the value of the boat t years after it is purchased. What type of function best models the value of the boat?

    a. linear function

    b. quadratic function

    c. exponential function

    d. cubic function

4. Use the following table to determine the rate of change on the interval [2, 5].

Years	Height of shrub (inches)
1	3
2	9
3	19
4	33
5	51

    a. 4 inches per year

    b. 9 inches per year

    c. 12 inches per year

    d. 14 inches per year

5. The function $g(x)$ can be described as:
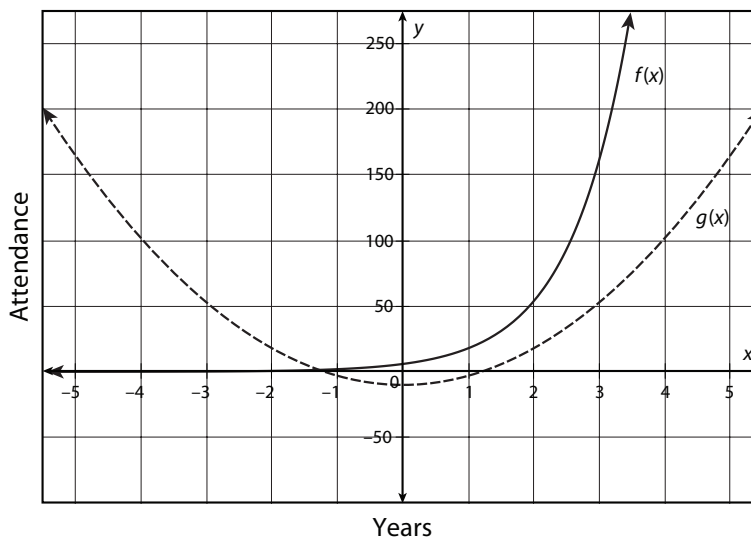
    a. an exponential function with a positive initial value

    b. an exponential function with a negative initial value

    c. a quadratic function with a positive leading coefficient

    d. a quadratic function with a negative leading coefficient