

UNIT 3 • MODELING AND ANALYZING QUADRATIC FUNCTIONS**Lesson 3: Interpreting and Analyzing Quadratic Functions**

Scaffolded Practice 3.3.3**Example 1**

Calculate the average rate of change for the function $f(x) = x^2 + 6x + 9$ between $x = 1$ and $x = 3$.

1. Evaluate the function for $x = 3$.

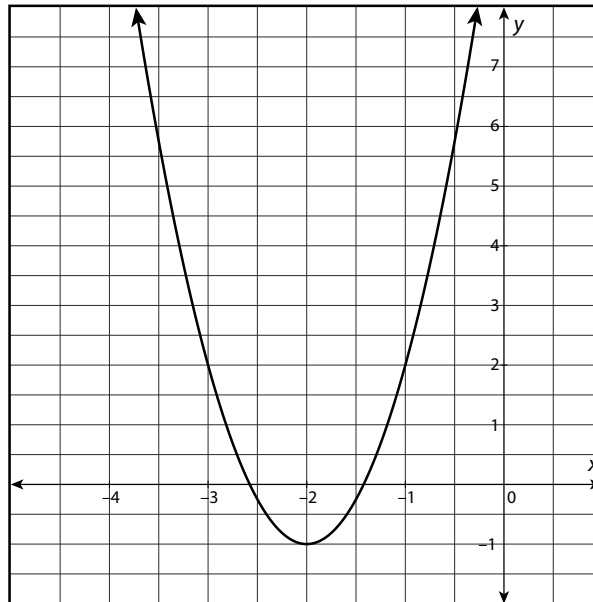
2. Evaluate the function for $x = 1$.

3. Use the average rate of change formula to determine the average rate of change between $x = 1$ and $x = 3$.

continued

UNIT 3 • MODELING AND ANALYZING QUADRATIC FUNCTIONS**Lesson 3: Interpreting and Analyzing Quadratic Functions****Example 2**

Use the graph of the function to calculate the average rate of change between $x = -3$ and $x = -2$.

**Example 3**

For the function $g(x) = (x - 3)^2 - 2$, is the average rate of change greater between $x = -1$ and $x = 0$ or between $x = 1$ and $x = 2$?

Example 4

Find the average rate of change between $x = -0.75$ and $x = -0.25$ for the following function.

x	$g(x)$
-1	0
-0.75	3.44
-0.5	6.25
-0.25	8.44
0	10
0.25	10.94