Practice Test

Study Guide

Use the following study guide to direct students who have difficulty with specific questions to appropriate examples to review.

Question	Section(s)	Refer to
1	1.1, 1.2	Examples (pages 7–10), Examples (pages 19–23)
2	1.3, 1.4	Examples (pages 33–35, 37), Examples (pages 46–48)
3	1.4	Investigate (pages 42–43), Examples (pages 46–48)
4	1.2	Investigate 1 (pages 15–17), Example 1 (page 19–20)
5	1.2	Investigate 2 (pages 17–18), Example 2 (pages 20–21)
6	1.3	Example 1 (page 33)
7	1.3	Example 1 (page 33)
8	1.4	Example 1 (page 46)
9	1.4	Example 3 (page 48)
10	1.5	No direct examples
11	1.5	Investigate (pages 54–55), Example 2 (pages 58–59)
12	1.5	Example 3 (pages 60–61)
13	1.5, 1.6	Example 3 (pages 60–61), Example 3 (page 69)

Can students do each of the following?
- Identify polynomial expressions and polynomial functions
- Represent polynomial functions numerically, graphically, and algebraically
- Describe key features of the graphs of polynomial functions
- Distinguish polynomial functions from exponential and sinusoidal functions
- Identify the connection between the factored form of a polynomial function and the x-intercepts the corresponding graph
- Sketch the graph of a polynomial function using the key features given the factored form of the equation
- Describe the transformation associated with the roles of the parameters a, k, c, and d in polynomial functions of the form $y = a[k(x - c)]^n + c$
- Determine an equation of a polynomial given a set of conditions
- Identify and distinguish properties of even and odd polynomial functions
- Understand the connection between average rate of change the slope of a secant, and instantaneous rate of change and the slope of a tangent
- Apply numerical and graphical methods to calculate and interpret average and instantaneous rate of change in real-world applications that involve polynomial functions