# 5 Polynomials and Polynomial Functions

Before

In previous chapters, you learned the following skills, which you'll use in Chapter 5: graphing functions, factoring, and solving equations.

Prerequisite Skills

VOCABULARY CHECK

Copy and complete the statement.

1. The **zeros** of the function graphed are __?__.

2. The **maximum value** of the function graphed is __?__.

3. The **standard form** of a quadratic equation in one variable is __?__ where $a \neq 0$.
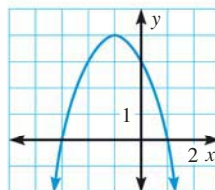
SKILLS CHECK

Graph the function. Label the vertex and the axis of symmetry.
(Review pp. 236, 245 for 5.2.)

4. $y = -2(x-1)^2 + 4$
5. $y = 3(x-2)(x+3)$
6. $y = -x^2 - 4x + 4$

Factor the expression. *(Review pp. 252, 259 for 5.4.)*

7. $x^2 + 9x + 20$
8. $2x^2 + 5x - 3$
9. $9x^2 - 64$

Solve the equation. *(Review pp. 252, 259 for 5.4–5.7.)*

10. $2x^2 + x + 6 = 0$
11. $10x^2 + 13x = 3$
12. $x^2 + 6x + 2 = 20$

TEXAS *@HomeTutor* Prerequisite skills practice at classzone.com