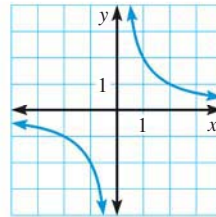# 9 Quadratic Relations and Conic Sections

Before

In previous chapters, you learned the following skills, which you'll use in Chapter 9: graphing quadratic functions, completing the square, and solving linear systems.

Prerequisite Skills

VOCABULARY CHECK

Copy and complete the statement.

1. The graph of a(n) __?__ function is a **parabola**.

2. The graph of the **rational function** $y = \dfrac{2}{x}$, shown at the right, is a __?__.

3. Two equations of the form $Ax + By = C$ and $Dx + Ey = F$ form a __?__ **system of equations**.

SKILLS CHECK

Graph. Label the vertex and axis of symmetry. *(Review pp. 236, 245 for 9.2.)*

4. $y = x^2 - 3$
5. $y = -0.25x^2$
6. $y = 3(x + 1)^2$
7. $y = 0.5(x - 2)^2 + 4$

Solve the equation by completing the square. *(Review p. 284 for 9.6.)*

8. $x^2 - 4x + 7 = 0$
9. $x^2 - 8x - 15 = 0$
10. $3x^2 + 9x - 12 = 0$

Solve the system using any algebraic method. *(Review p. 160 for 9.7.)*

11. $2x - y = 11$
    $-x - 2y = -3$
12. $x + 5y = -17$
    $-2x - 3y = 13$
13. $-4x + 7y = -14$
    $2x - 6y = 12$

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