

9

Quadratic Relations and Conic Sections



a.1

9.1 Apply the Distance and Midpoint Formulas

2A.5.B

9.2 Graph and Write Equations of Parabolas

2A.5.B

9.3 Graph and Write Equations of Circles

2A.5.B

9.4 Graph and Write Equations of Ellipses

2A.5.B

9.5 Graph and Write Equations of Hyperbolas

2A.5.D

9.6 Translate and Classify Conic Sections

2A.3.B

9.7 Solve Quadratic Systems

Before

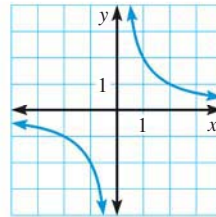
In previous chapters, you learned the following skills, which you'll use in Chapter 9: graphing quadratic functions, completing the square, and solving linear systems.

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** $y = \frac{2}{x}$, 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. $2x - y = 11$ 12. $x + 5y = -17$ 13. $-4x + 7y = -14$
 $-x - 2y = -3$ $-2x - 3y = 13$ $2x - 6y = 12$



TEXAS

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Prerequisite skills practice at classzone.com