**SKILLS** Objective A

In 1–4, rewrite the equation in standard form $Ax^2 + Bxy + Cy^2 + Dx + Ey + F = 0$.

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

2. $(x + 1)^2 + (y + 4)^2 = 9$

3. $y = \frac{15}{x}$

4. $\frac{x^2}{12} + \frac{y^2}{20} = 1$

**SKILLS** Objective B

In 5 and 6, write an equation for a hyperbola meeting the given conditions in the standard form of a quadratic equation.

5. Foci $(-4, -4)$ and $(4, 4)$ and focal constant 8

6. Vertices $(4, 0)$ and $(-4, 0)$ and asymptotes $y = \pm x$

**PROPERTIES** Objective E

In 7 and 8, find a. the foci, b. the focal constant, and c. the asymptotes of the hyperbola.

7. $y = \frac{1}{x}$
   
   a. __________
   
   b. __________
   
   c. __________

8. $xy = 14$
   
   a. __________
   
   b. __________
   
   c. __________

**REPRESENTATIONS** Objective I

9. Write an equation for the hyperbola graphed below.

10. Graph $xy = 12$ below.