NAME _____ DATE _____ PERIOD _____

10-6

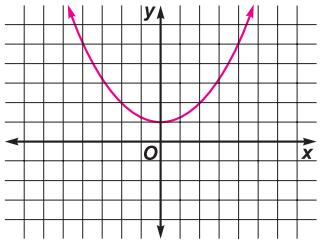
Practice

Rectangular and Parametric Forms of Conic Sections

Identify the conic section represented by each equation. Then write the equation in standard form and graph the equation.

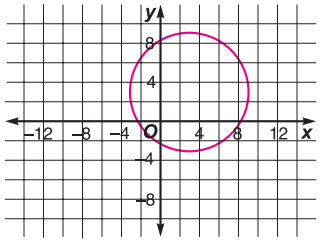
1. $x^2 - 4y + 4 = 0$

parabola; $x^2 = 4(y - 1)$



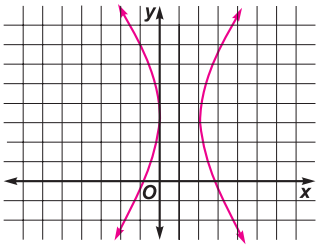
2. $x^2 + y^2 - 6x - 6y - 18 = 0$

circle; $(x - 3)^2 + (y - 3)^2 = 36$



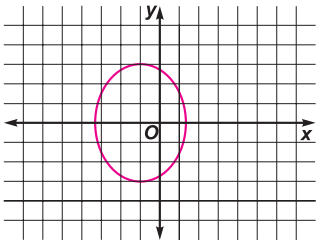
3. $4x^2 - y^2 - 8x + 6y = 9$

hyperbola; $\frac{(x-1)^2}{1} - \frac{(y-3)^2}{4} = 1$



4. $9x^2 + 5y^2 + 18x = 36$

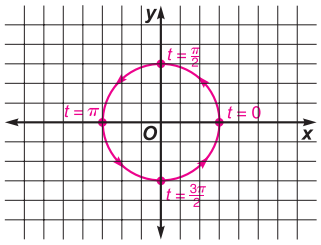
ellipse; $\frac{(x+1)^2}{5} + \frac{y^2}{9} = 1$



Find the rectangular equation of the curve whose parametric equations are given. Then graph the equation using arrows to indicate orientation.

5. $x = 3 \cos t, y = 3 \sin t, 0 \le t \le 2\pi$

$x^2 + y^2 = 9$



6. $x = -4 \cos t, y = 5 \sin t, 0 \le t \le 2\pi$

$\frac{x^2}{16} + \frac{y^2}{25} = 1$