

## Circles

1. Write the standard form of the equation of the circle with the given center and radius

*Center*  $(-2, -4)$ ,  $r = \sqrt{3}$

2. Give the center and radius of the circle described by the equation and graph each equation.

$$(x + 2)^2 + (y - 3)^2 = 16$$

3. Give the center and radius of the circle described by the equation and graph each equation.

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

4. Complete the square and write the equation in standard form. Then give the center and radius of each circle and graph the equation.

$$x^2 + y^2 - 8x - 16y + 76 = 0$$

5. Complete the square and write the equation in standard form. Then give the center and radius of each circle and graph the equation.

$$x^2 + y^2 + 7x + 9y + \frac{49}{4} = 0$$