

# The Equation of a Circle

1. Identify the center and radius of each circle.

a)  $(x+4)^2 + (y-3)^2 = 25$

b)  $(x-1)^2 + (y-6)^2 = 1$

c)  $x^2 + (y-1)^2 = \frac{4}{81}$

d)  $\left(x - \frac{1}{2}\right)^2 + \left(y + \frac{3}{2}\right)^2 = .04$

e)  $x^2 + y^2 = 2$

2. Write the equation of each circle and sketch the graph.

a) center  $(-1, -4)$   
radius = 4

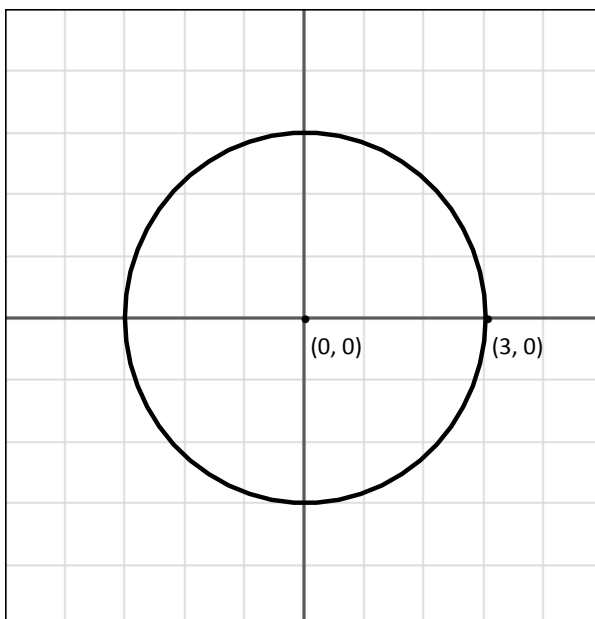
b) center  $(0, 1)$   
radius =  $\frac{1}{3}$

c) center is at the origin  
radius =  $\sqrt{6}$

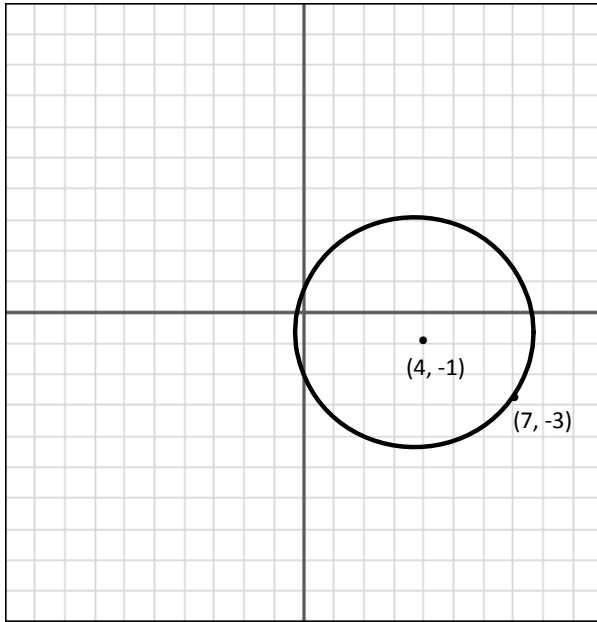
d) center  $\left(\frac{2}{3}, 0\right)$   
radius =  $5\sqrt{2}$

3. Write the equation for each circle.

a)



b)



4. Write the equation of the circle where the endpoints of the diameter are  $(-6, 2)$  and  $(1, -3)$ .