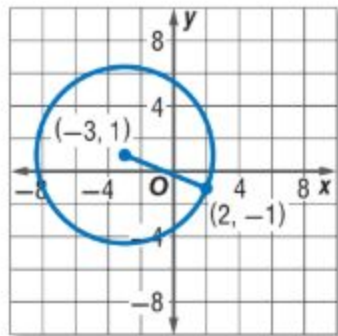Midpoint Formula: Distance Formula:
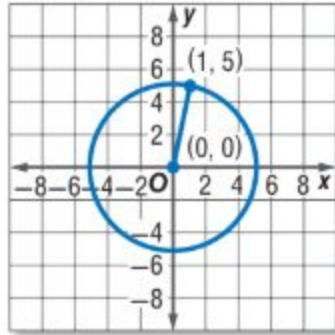
Circle:
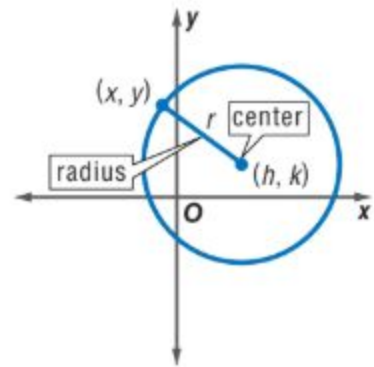
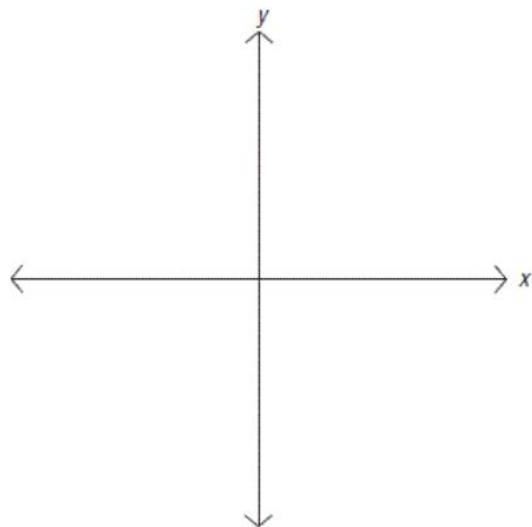1. Write an equation for the graph:
   a.

b.

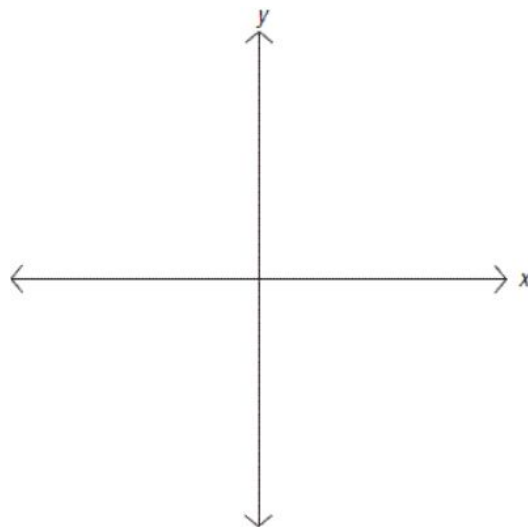2. Write an equation for a circle if the endpoints of a diameter are at $(7, 6)$ and $(-1, -8)$.

3. Write an equation for a circle if the endpoints of a diameter are at $(3, -3)$ and $(1, 5)$.

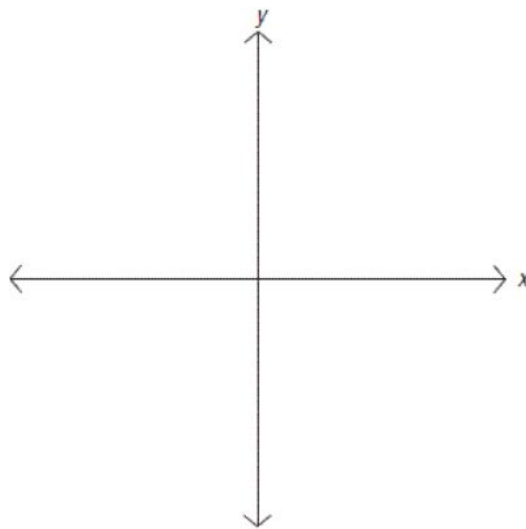4. Find the center and radius of each circle. Then graph the circle.

a. $x^2 + (y - 7)^2 = 9$
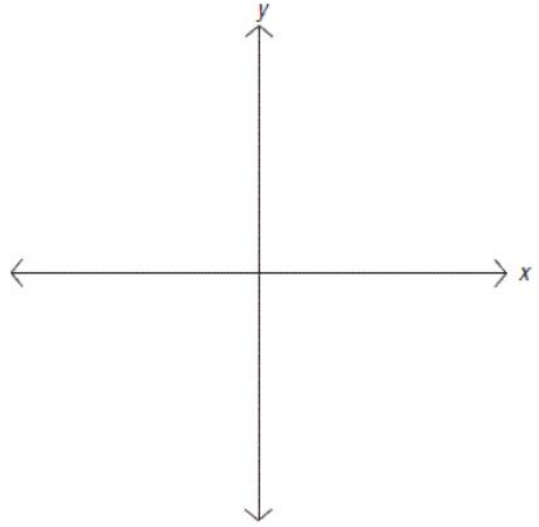
b. $(x - 4)^2 + (y - 4)^2 = 25$

c. $x^2 + y^2 - 4x + 8y - 5 = 0$

d. $x^2 + y^2 - 8x + 12y - 12 = 0$

e. $x^2 + y^2 + 4x - 10y - 7 = 0$