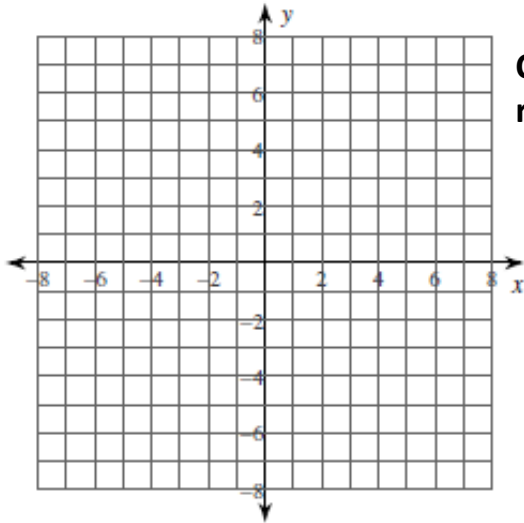Name: _____

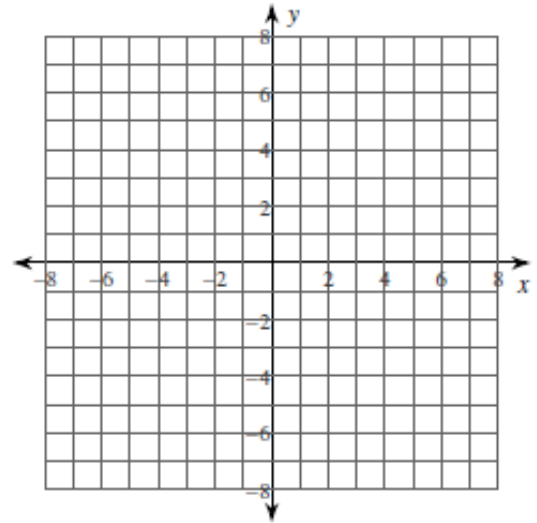**Identify the center and radius of each. Then sketch the graph**
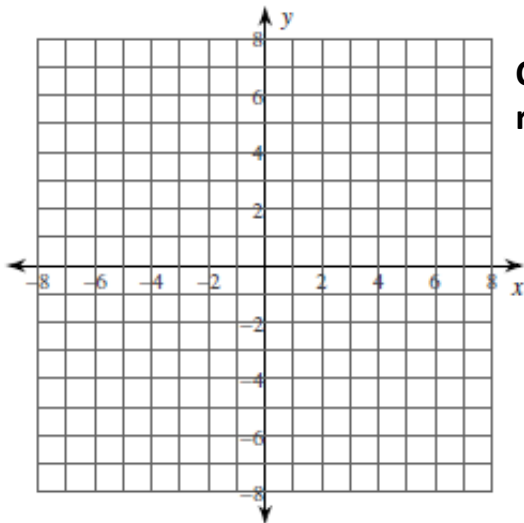
1) $(x-1)^2 + (y+3)^2 = 4$

Center:

r =

2) $(x-2)^2 + (y+1)^2 = 16$
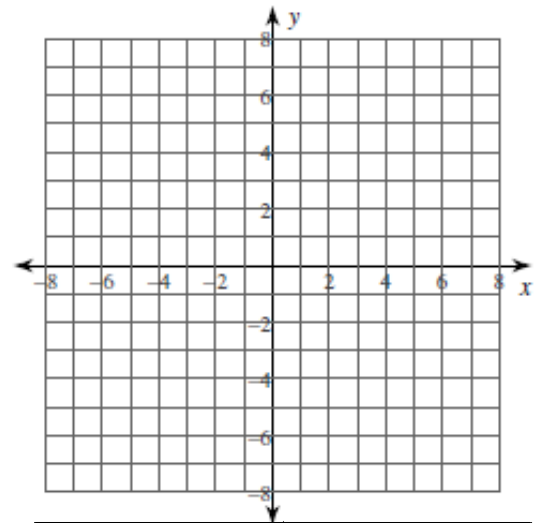

Center:

r =

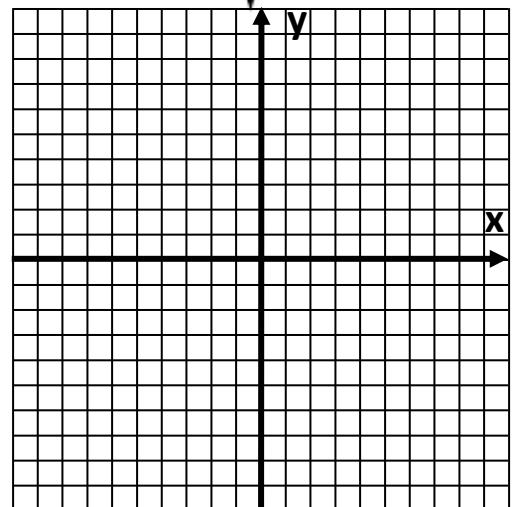3) $(x-1)^2 + (y+4)^2 = 9$

Center:

r =

4) $x^2 + (y-3)^2 = 14$

Center:

r =

Circle equation: $(x-1)^2 + (y-3)^2 = 7^2$

What point lies on the circle?

a)   (-1, 4)
b)   (0,7)
c)   (1,3)
d)   (8,3)
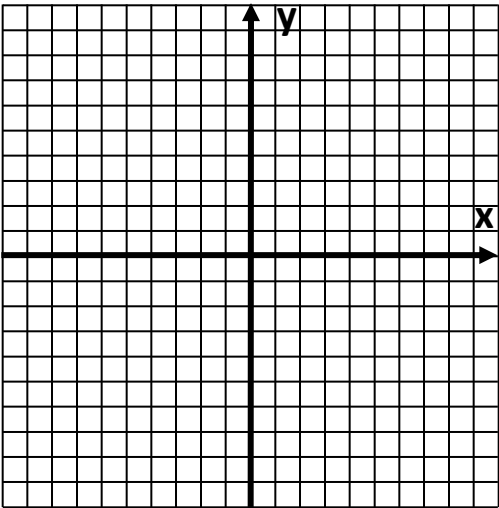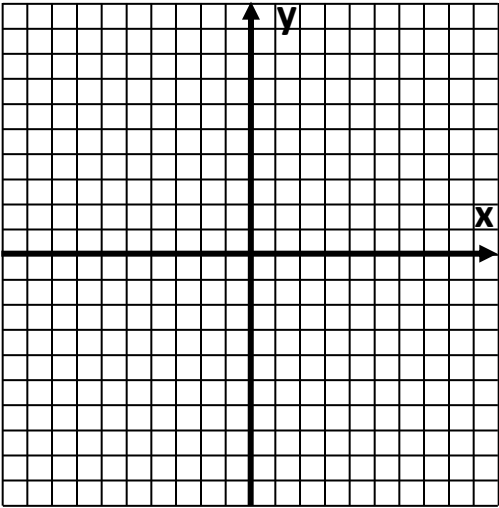

Key Concept: The equation of a circle is

$(x-h)^2 + (y-k)^2 = r^2$; where (h, k) is the center and r is the radius.

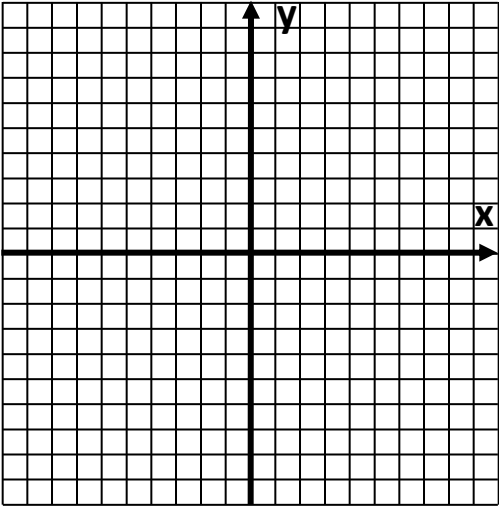**Use the information provided to write the equation of each circle. Use graphs if needed.**
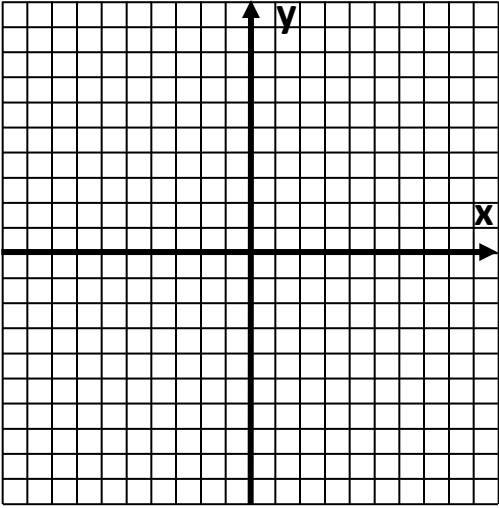
9) Center: (-4, 1)   Radius: $\sqrt{41}$

10) Center: (1, 3) Point on circle: (4, 7)

11) Ends of a diameter: (-7, −4) and (1, 2)

12) Center: (-2, −2) and a diameter of 10 units

Key Concept: The center is at the midpoint of the diameter. Distance from center to point on the (edge of) circle is the same as the radius. Tangents located on edge.