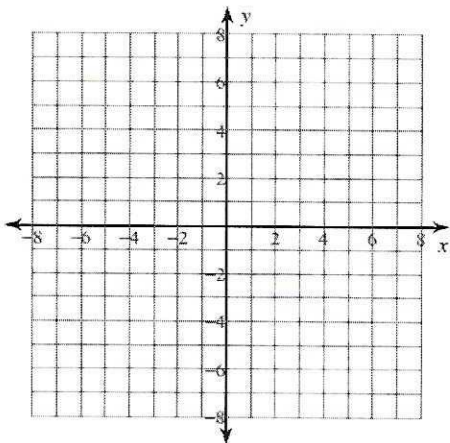


The Equation of a Circle

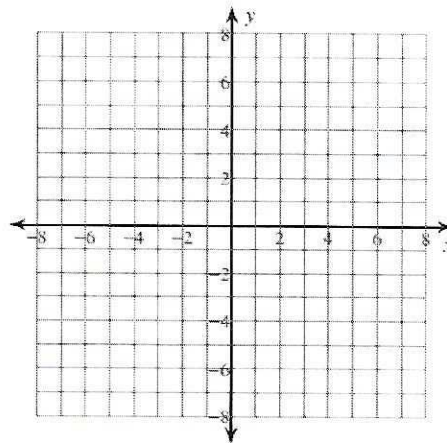
Name: _____ Period: _____

Part 1 - Identify the center and radius of each circle from its equation. Then sketch the graph.

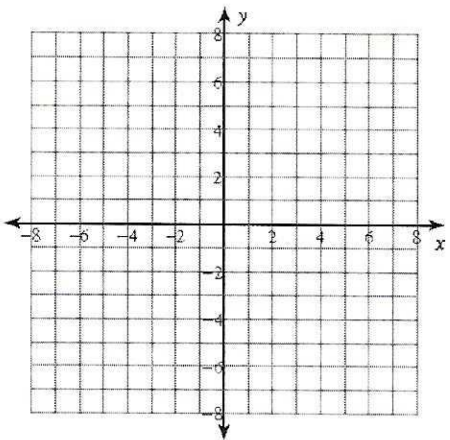
1) $(x - 1)^2 + (y + 3)^2 = 4$



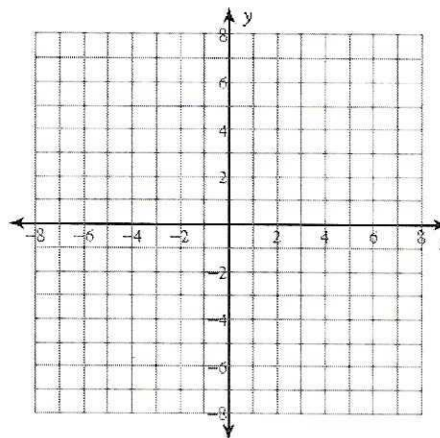
2) $(x - 2)^2 + (y + 1)^2 = 16$



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

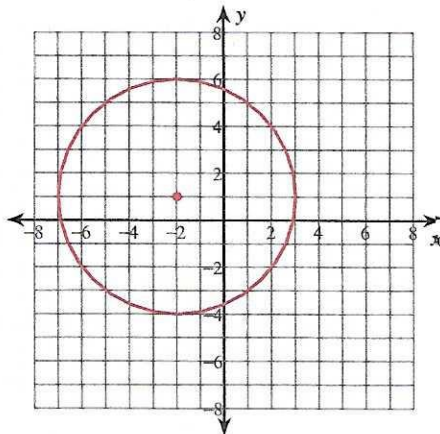


4) $x^2 + (y - 3)^2 = 14$

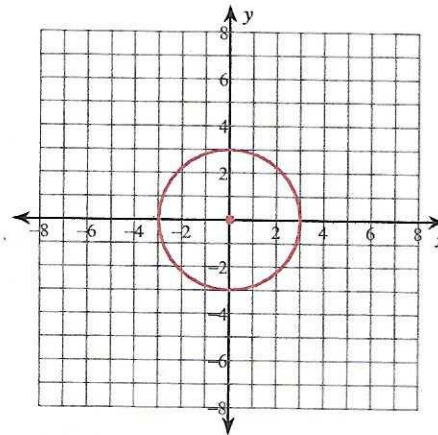


Part 2 - Identify the radius and center of each circle. Then write the equation of the circle.

5)

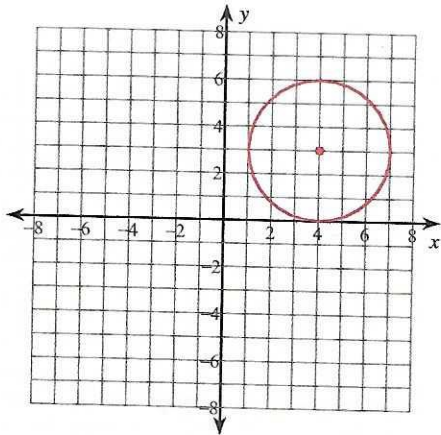


6)

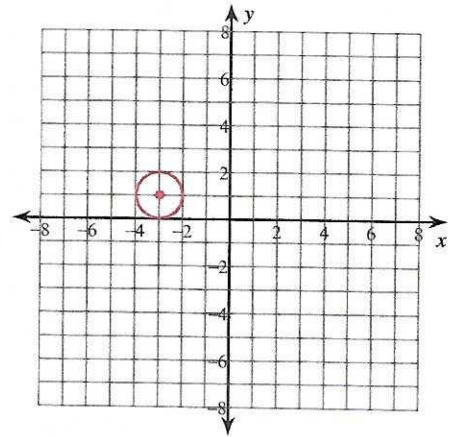


Use the information provided to write the equation of each circle.

7)



8)



Part 3 - Use the information provided to write the equation of the circle.
(Hint: Make a sketch on graph paper.)

9) Center: $(13, -13)$
Radius: 4

10) Center: $(-13, -16)$
Point on Circle: $(-10, -16)$

11) Ends of a diameter: $(18, -13)$ and $(4, -3)$

12) Center: $(10, -14)$
Tangent to $x = 13$

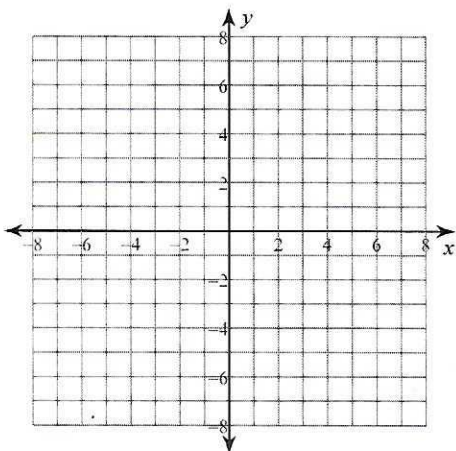
13) Center lies in the first quadrant
Tangent to $x = 8$, $y = 3$, and $x = 14$

14) Center: $(0, 13)$
Area: 25π

CHALLENGE

Identify the center and radius of each. Then sketch the graph.

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



2) $4 + x^2 = 4x + 6y - y^2$

