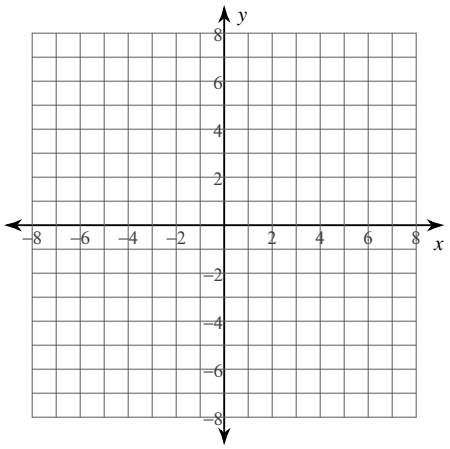
 Name_____

Equations of Circles

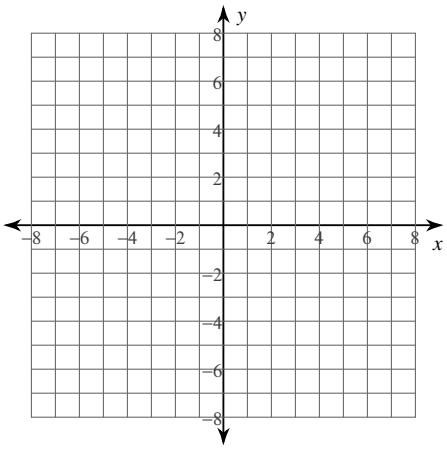
Date_____ Period____

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

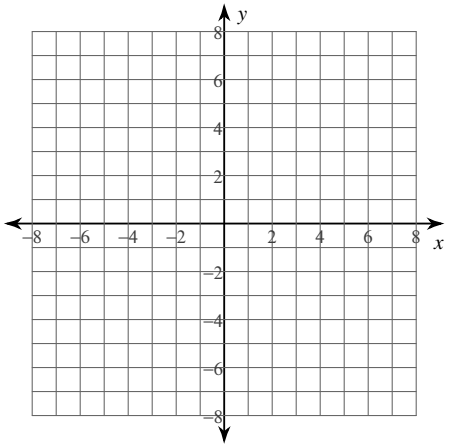
1) $(x-1)^2+(y+3)^2=4$



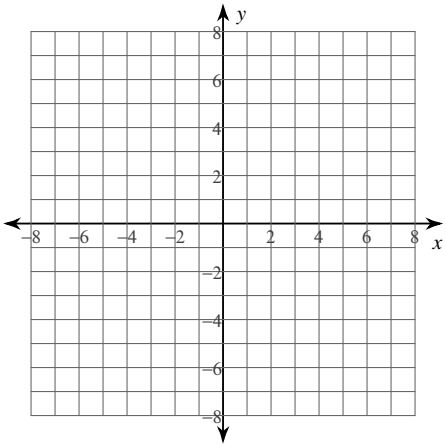
2) $(x-2)^2+(y+1)^2=16$



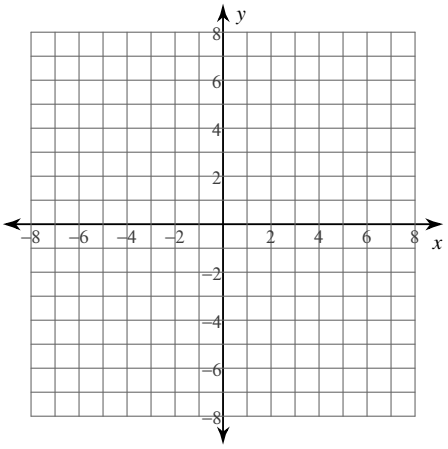
3) $(x-1)^2+(y+4)^2=9$



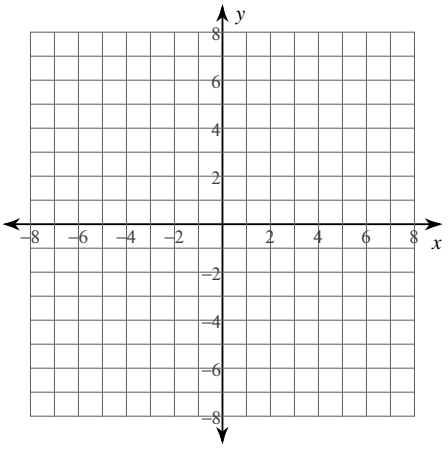
4) $x^2+(y-3)^2=14$



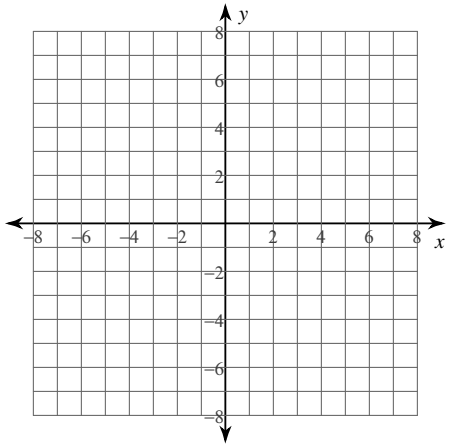
5) $y^2+4x-20-2y=-x^2$



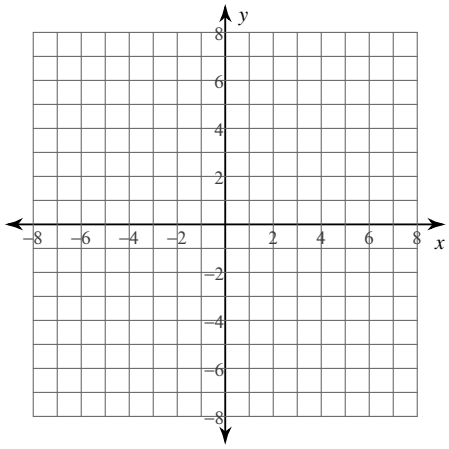
6) $-9=-y^2-x^2$



7) $9 = 2y - y^2 - 6x - x^2$



8) $16 + x^2 + y^2 - 8x - 6y = 0$



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

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

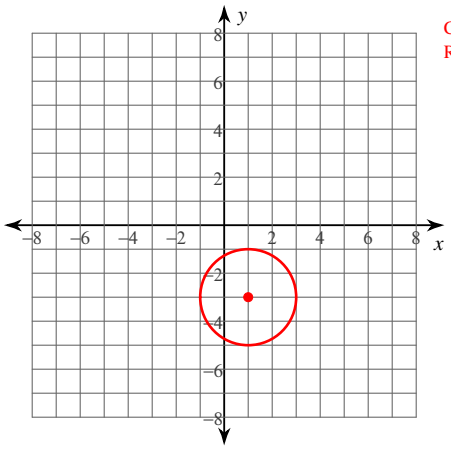
Kuta Software - Infinite Geometry Name_____

Equations of Circles

Date_____ Period____

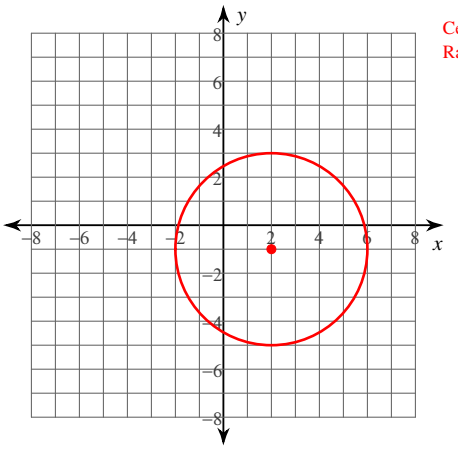
Identify the center and radius of each. Then sketch the graph.

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



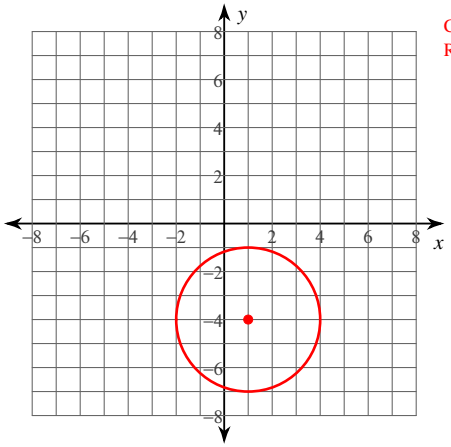
Center: (1, –3)
Radius: 2

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



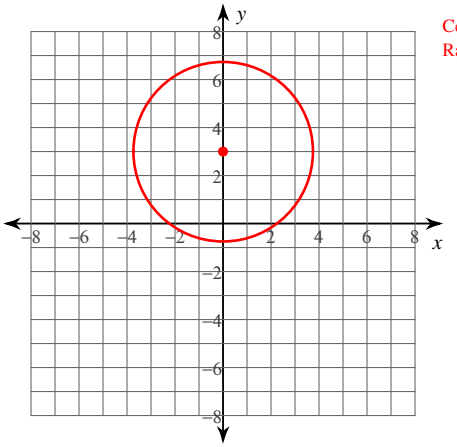
Center: (2, –1)
Radius: 4

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



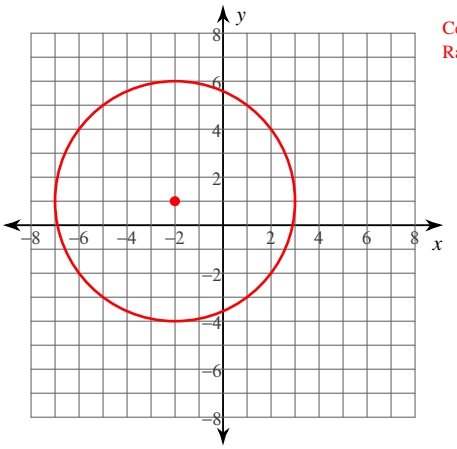
Center: (1, –4)
Radius: 3

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



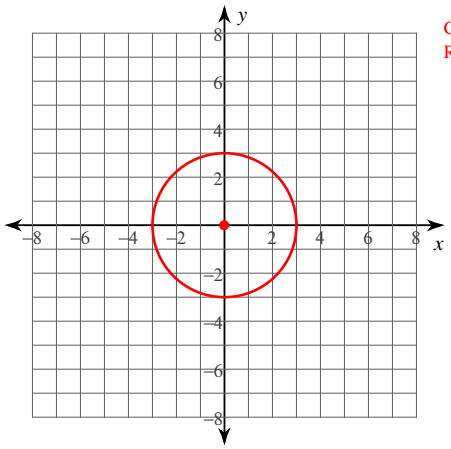
Center: (0, 3)
Radius: $\sqrt{14}$

5) $y^2+4x-20-2y=-x^2$



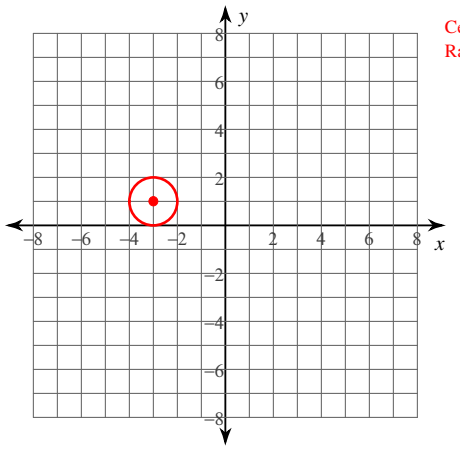
Center: (–2, 1)
Radius: 5

6) $-9=-y^2-x^2$



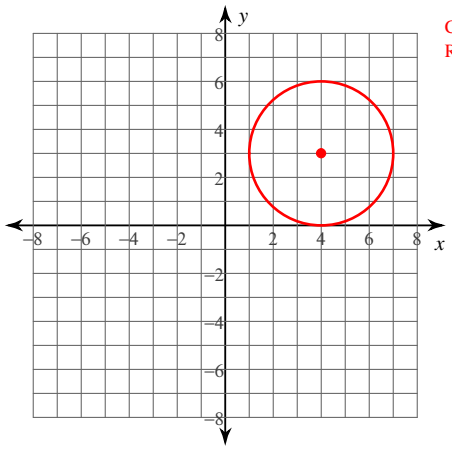
Center: (0, 0)
Radius: 3

7) $9 = 2y - y^2 - 6x - x^2$



Center: $(-3, 1)$
Radius: 1

8) $16 + x^2 + y^2 - 8x - 6y = 0$



Center: $(4, 3)$
Radius: 3

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

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

$(x - 13)^2 + (y + 13)^2 = 16$

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

$(x + 13)^2 + (y + 16)^2 = 9$

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

$(x - 11)^2 + (y + 8)^2 = 74$

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

$(x - 10)^2 + (y + 14)^2 = 9$

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

$(x - 11)^2 + (y - 6)^2 = 9$

14) Center: $(0, 13)$
Area: 25π

$x^2 + (y - 13)^2 = 25$