Math 3 Name_____

Unit 6.5 Equations of Circles EXAMPLE

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

1) Center: $(0, 0)$
Radius: 14

2) Center: $(0, 0)$
Radius: 10

3) Center: $(1, 2)$
Radius: 9

4) Center: $(-10, -12)$
Radius: 6

5) Center: $(6, 8)$
Radius: 9

6) Center: $(-1, -5)$
Radius: 6

7) Center: $(-4, 1)$
Point on Circle: $(-19, 1)$

8) Center: $(11, -4)$
Point on Circle: $(15, -6)$

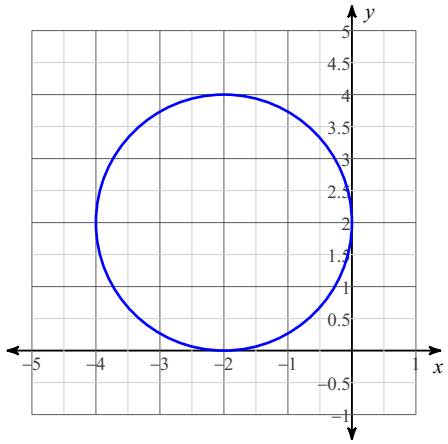
9) Center: $(-12, 15)$
Circumference: 4π

10) Center: $(-9, 5)$
Circumference: 8π

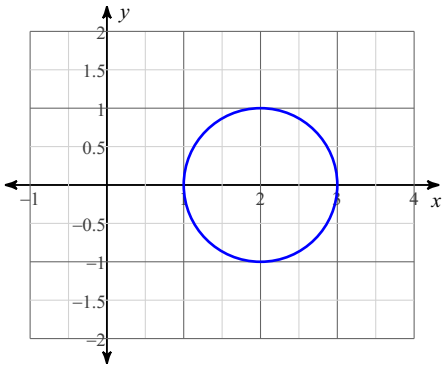
11) Center: $(6, 1)$
Area: 121π

12) Center: $(-3, 9)$
Area: 36π

13)

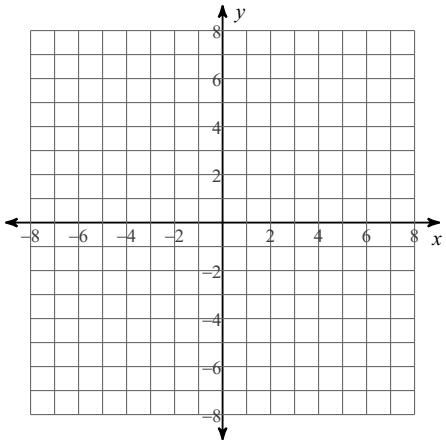


14)

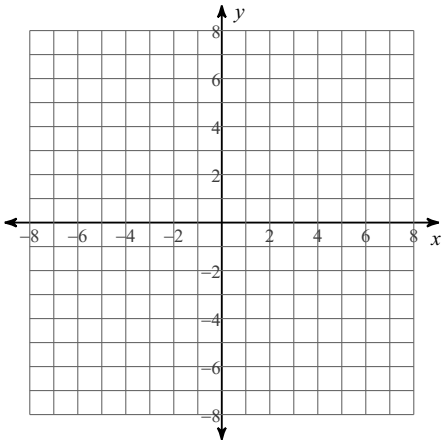


Identify the center and radius of each. Then sketch the graph.

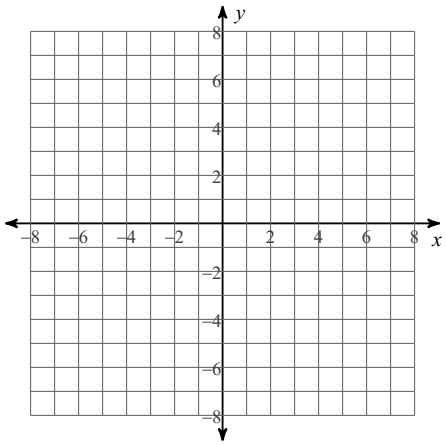
15) $x^2 + y^2 = 49$



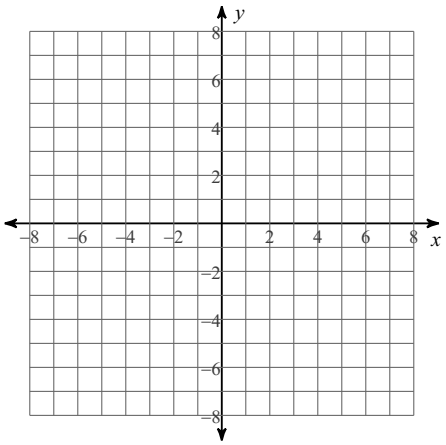
16) $(x-2)^2 + (y-3)^2 = 15$



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



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



Math 3 Name_____

Unit 6.5 Equations of Circles EXAMPLE

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

1) Center: $(0, 0)$
Radius: 14

$x^2 + y^2 = 196$

2) Center: $(0, 0)$
Radius: 10

$x^2 + y^2 = 100$

3) Center: $(1, 2)$
Radius: 9

$(x - 1)^2 + (y - 2)^2 = 81$

4) Center: $(-10, -12)$
Radius: 6

$(x + 10)^2 + (y + 12)^2 = 36$

5) Center: $(6, 8)$
Radius: 9

$(x - 6)^2 + (y - 8)^2 = 81$

6) Center: $(-1, -5)$
Radius: 6

$(x + 1)^2 + (y + 5)^2 = 36$

7) Center: $(-4, 1)$
Point on Circle: $(-19, 1)$

$(x + 4)^2 + (y - 1)^2 = 225$

8) Center: $(11, -4)$
Point on Circle: $(15, -6)$

$(x - 11)^2 + (y + 4)^2 = 20$

9) Center: $(-12, 15)$
Circumference: 4π

$(x + 12)^2 + (y - 15)^2 = 4$

10) Center: $(-9, 5)$
Circumference: 8π

$(x + 9)^2 + (y - 5)^2 = 16$

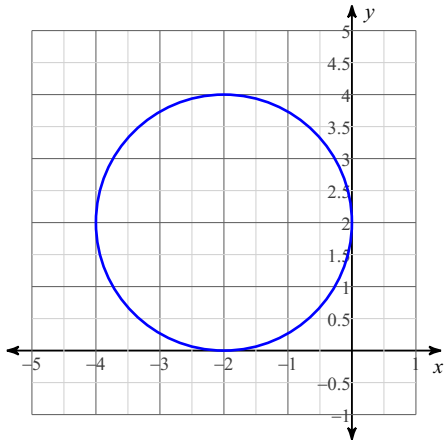
11) Center: $(6, 1)$
Area: 121π

$(x - 6)^2 + (y - 1)^2 = 121$

12) Center: $(-3, 9)$
Area: 36π

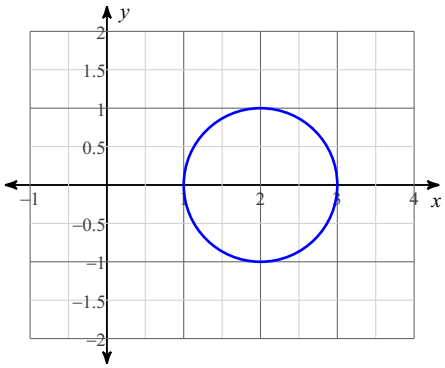
$(x + 3)^2 + (y - 9)^2 = 36$

13)



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

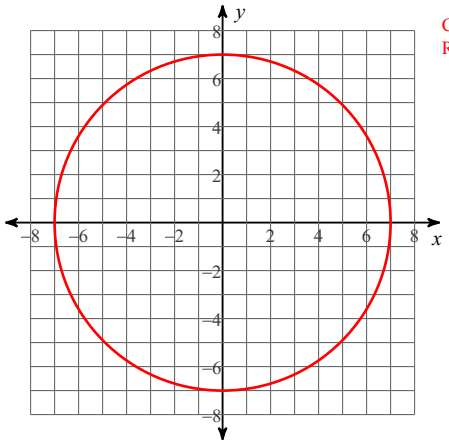
14)



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

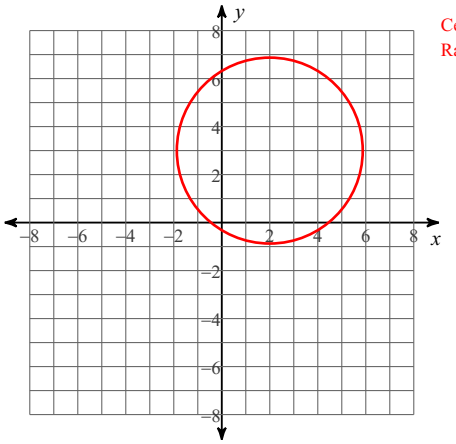
Identify the center and radius of each. Then sketch the graph.

15) $x^2+y^2=49$



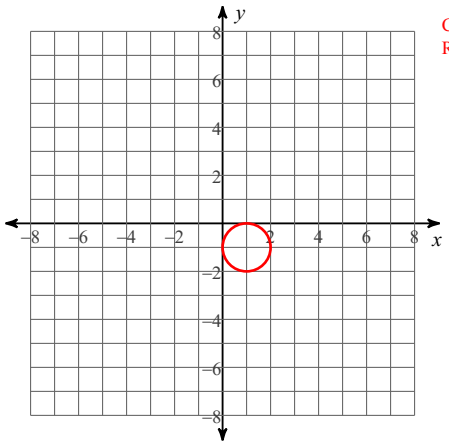
Center: $(0, 0)$
Radius: 7

16) $(x-2)^2+(y-3)^2=15$



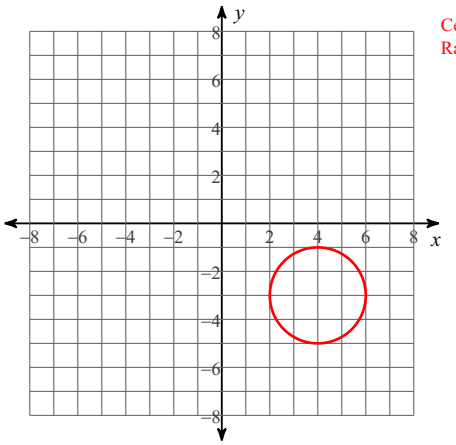
Center: $(2, 3)$
Radius: $\sqrt{15}$

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



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

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



Center: $(4, -3)$
Radius: 2