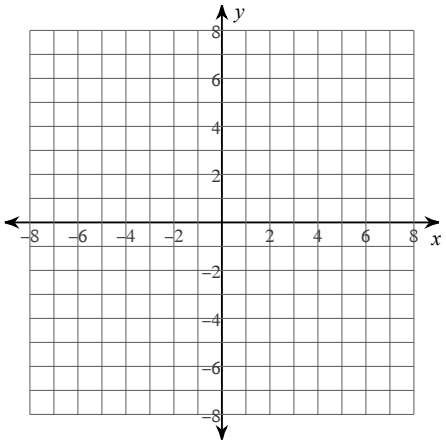
Geometry Name_____

WS Circle Equations

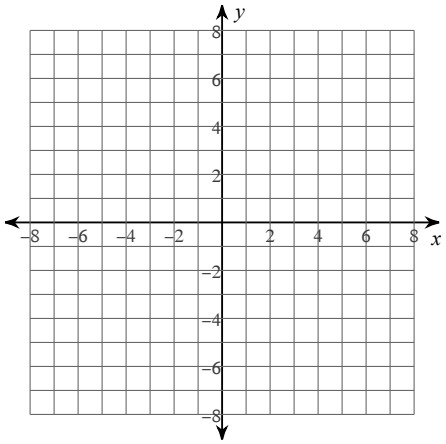
Date_____ Period____

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

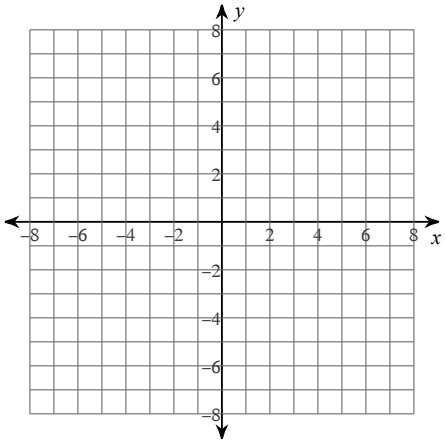
1) $x^2 + y^2 = 13$



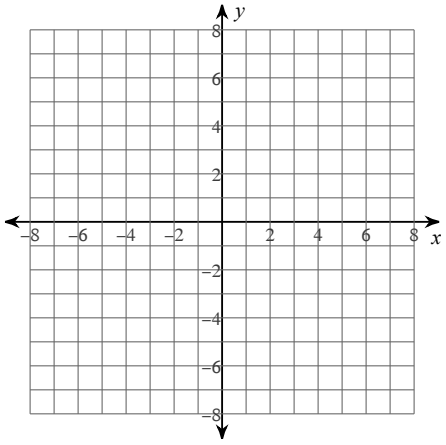
2) $x^2 + y^2 = 31$



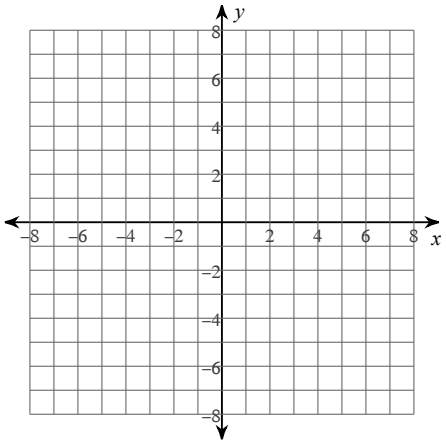
3) $x^2 + y^2 = 4$



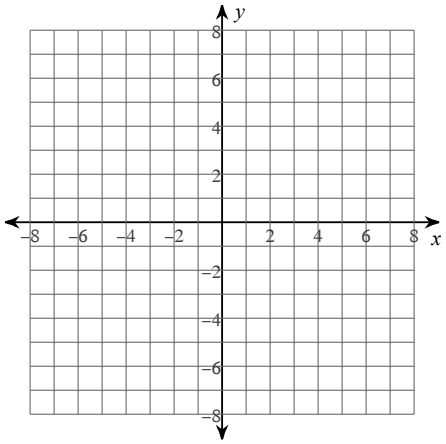
4) $x^2 + y^2 = 15$



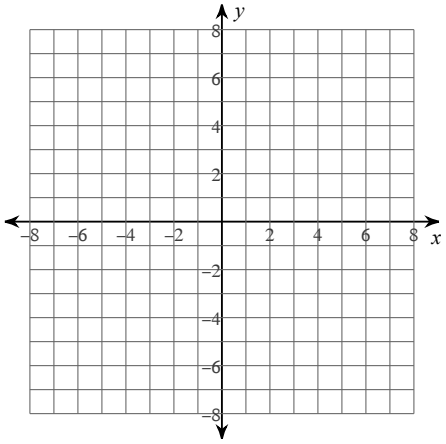
5) $x^2 + y^2 = 16$



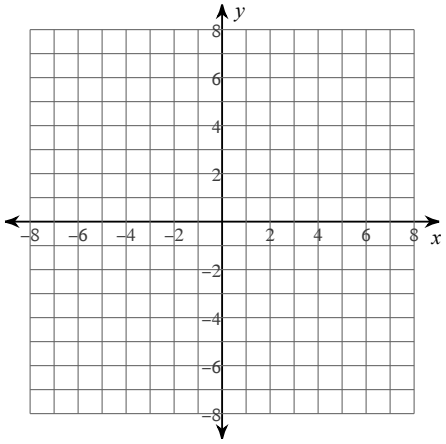
6) $x^2 + y^2 = 9$



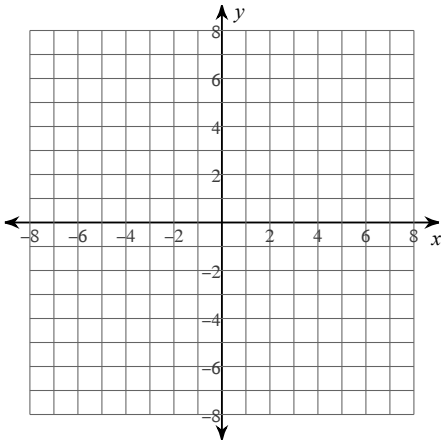
7) $(x-2)^2+(y-4)^2=1$



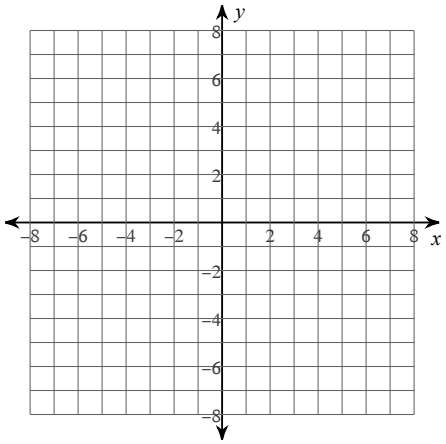
8) $(x+4)^2+y^2=1$



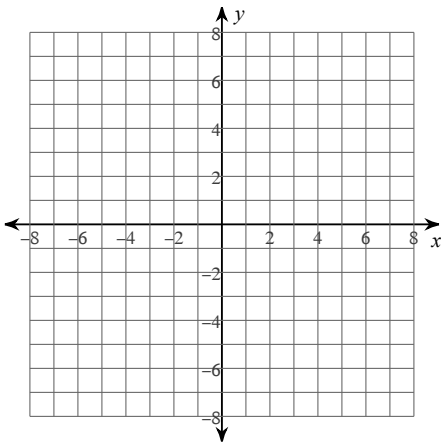
9) $x^2+(y+2)^2=16$



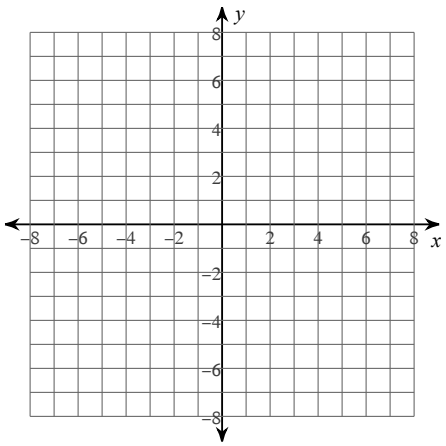
10) $x^2+(y+2)^2=22$



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



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



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

13) Center: $(0, -16)$
Radius: 2

14) Center: $(-14, 7)$
Radius: 2

15) Center: $(-14, -1)$
Radius: 1

16) Center: $(7, -9)$
Radius: 7

17) Center: $(11, 4)$
Point on Circle: $(14, -2)$

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

19) Center: $(12, 12)$
Point on Circle: $(17, 10)$

20) Center: $(-9, 11)$
Point on Circle: $(-4, 6)$

21) Ends of a diameter: $(-5, 5)$ and $(5, -5)$

22) Ends of a diameter: $(-12, -13)$ and $(12, 13)$

23) Ends of a diameter: $(9, 4)$ and $(13, 4)$

24) Ends of a diameter: $(9, -10)$ and $(-13, 4)$

25) Center: $(0, 0)$
Area: 169π

26) Center: $(0, 0)$
Area: 196π

27) Center: $(-9, -12)$
Area: 16π

28) Center: $(-9, 2)$
Area: 25π

29) Center: $(0, 0)$
Circumference: 16π

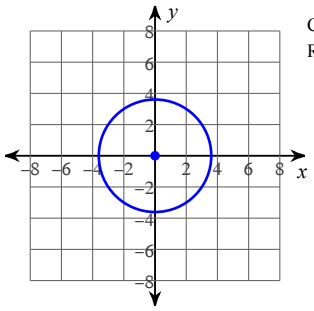
30) Center: $(0, 0)$
Circumference: 8π

31) Center: $(-6, 15)$
Circumference: 6π

32) Center: $(-6, 14)$
Circumference: 8π

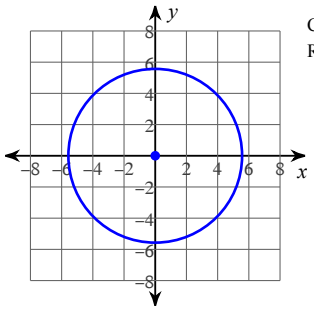
Answers to WS Circle Equations

1)



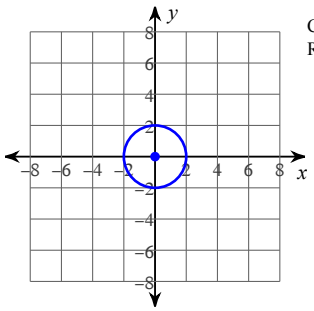
Center: $(0, 0)$
Radius: $\sqrt{13}$

2)



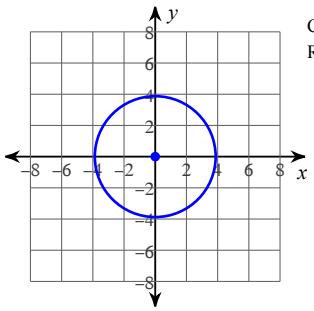
Center: $(0, 0)$
Radius: $\sqrt{31}$

3)



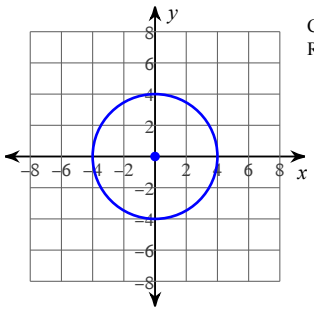
Center: $(0, 0)$
Radius: 2

4)



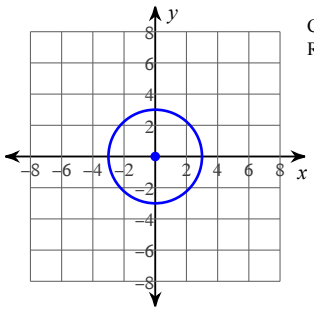
Center: $(0, 0)$
Radius: $\sqrt{15}$

5)



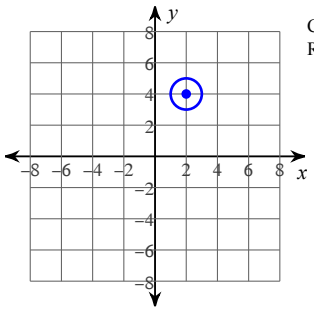
Center: $(0, 0)$
Radius: 4

6)



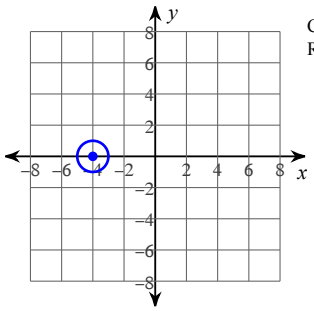
Center: $(0, 0)$
Radius: 3

7)



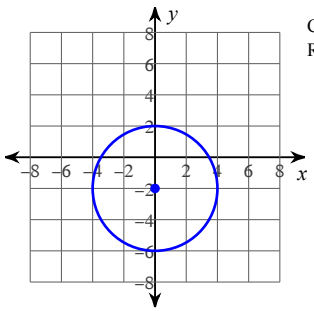
Center: $(2, 4)$
Radius: 1

8)



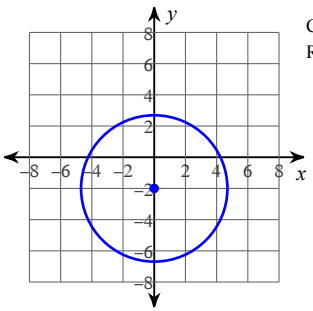
Center: $(-4, 0)$
Radius: 1

9)



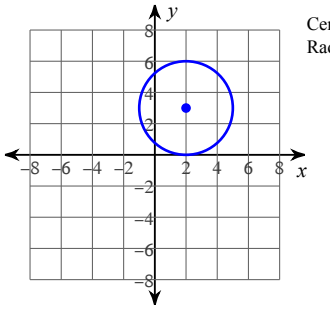
Center: $(0, -2)$
Radius: 4

10)



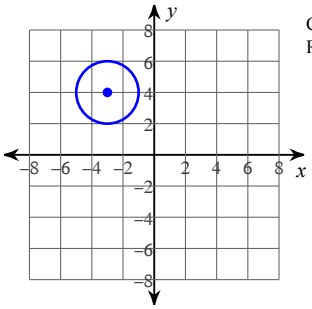
Center: $(0, -2)$
Radius: $\sqrt{22}$

11)



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

12)



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

13) $x^2 + (y + 16)^2 = 4$

14) $(x + 14)^2 + (y - 7)^2 = 4$

15) $(x + 14)^2 + (y + 1)^2 = 1$

16) $(x - 7)^2 + (y + 9)^2 = 49$

17) $(x - 11)^2 + (y - 4)^2 = 45$

18) $(x + 8)^2 + (y - 11)^2 = 4$

19) $(x - 12)^2 + (y - 12)^2 = 29$

20) $(x + 9)^2 + (y - 11)^2 = 50$

21) $x^2 + y^2 = 50$

22) $x^2 + y^2 = 313$

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

24) $(x + 2)^2 + (y + 3)^2 = 170$

25) $x^2 + y^2 = 169$

26) $x^2 + y^2 = 196$

27) $(x + 9)^2 + (y + 12)^2 = 16$

28) $(x + 9)^2 + (y - 2)^2 = 25$

29) $x^2 + y^2 = 64$

30) $x^2 + y^2 = 16$

31) $(x + 6)^2 + (y - 15)^2 = 9$

32) $(x + 6)^2 + (y - 14)^2 = 16$