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Center: negate what's in the parenthesis
* If no parenthesis, the coordinate is 0
radius: take the square root of the right hand side

Date _____
Geometry

Graphing Circles

1. What are the center and the radius of the circle whose equation is $(x+5)^2 + (y-1)^2 = 4$

1) center = $(5, -1)$; radius = 4

2) center = $(-5, 1)$; radius = 4

3) center = $(5, -1)$; radius = 2

④ center = $(-5, 1)$; radius = 2

Center: $(-5, 1)$

radius: 2

2. What are the center and the radius of the circle whose equation is $(x-3)^2 + (y+4)^2 = 36$

① center = $(3, -4)$; radius = 6

2) center = $(-3, 4)$; radius = 6

3) center = $(3, -4)$; radius = 36

4) center = $(-3, 4)$; radius = 36

Center: $(3, -4)$

radius: 6

3. The equation of a circle is $x^2 + (y-7)^2 = \frac{25}{16}$. What are the center and radius of the circle?

① center = $(0, 7)$; radius = $\frac{5}{4}$

2) center = $(0, 7)$; radius = $\frac{25}{16}$

3) center = $(0, -7)$; radius = $\frac{5}{4}$

4) center = $(0, -7)$; radius = $\frac{25}{16}$

Center: $(0, 7)$

radius $\frac{\sqrt{25}}{\sqrt{16}} = \frac{5}{4}$

4. What are the center and the radius of the circle whose equation is $(x-3)^2 + (y+3)^2 = 36$

① center = $(3, -3)$; radius = 6

2) center = $(-3, 3)$; radius = 6

3) center = $(3, -3)$; radius = 36

4) center = $(-3, 3)$; radius = 36

Center: $(3, -3)$

radius: 6

5. What are the center and the radius of the circle whose equation is $(x-5)^2 + (y+3)^2 = 16$?

1) $(-5, 3)$ and 16

2) $(5, -3)$ and 16

3) $(-5, 3)$ and 4

④ $(5, -3)$ and 4

Center: $(5, -3)$

radius: 4

6. The equation of a circle is $(x-4)^2 + (y-5)^2 = \frac{49}{4}$. What are the center and radius of the circle?

1) center = $(-4, -5)$; radius = $\frac{49}{4}$

Center: $(4, 5)$

2) center = $(-4, -5)$; radius = $\frac{7}{2}$

radius: $\frac{\sqrt{49}}{\sqrt{4}} = \frac{7}{2}$

3) center = $(4, 5)$; radius = $\frac{49}{4}$

4) center = $(4, 5)$; radius = $\frac{7}{2}$

7. A circle is represented by the equation $x^2 + (y+3)^2 = 13$. What are the coordinates of the center of the circle and the length of the radius?

1) $(0, 3)$ and 13

Center: $(0, -3)$

2) $(0, 3)$ and $\sqrt{13}$

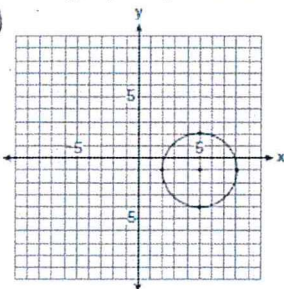
radius: $\sqrt{13}$

3) $(0, -3)$ and 13

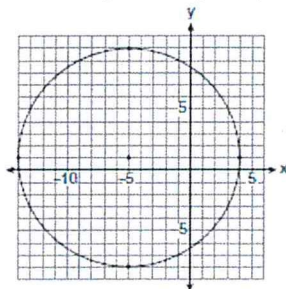
4) $(0, -3)$ and $\sqrt{13}$

8. Which graph represents a circle with the equation $(x-5)^2 + (y+1)^2 = 9$?

1)

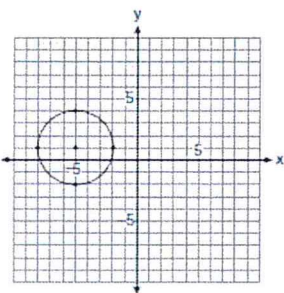


3)

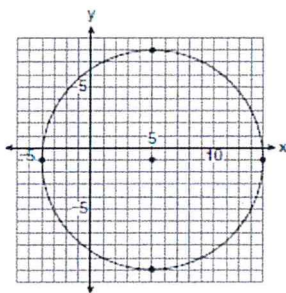


Center: $(5, -1)$
radius: 3

2)

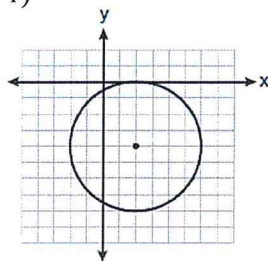


4)

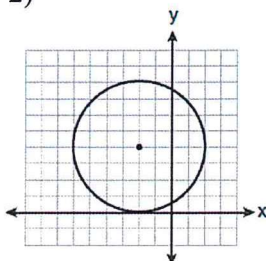


9. The equation of a circle is $(x-2)^2 + (y+4)^2 = 4$. Which diagram is the graph of the circle? Center: $(2, -4)$

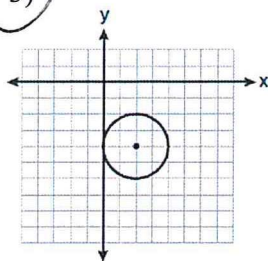
1)



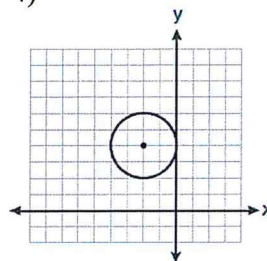
2)



3)



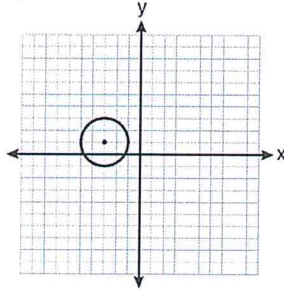
4)



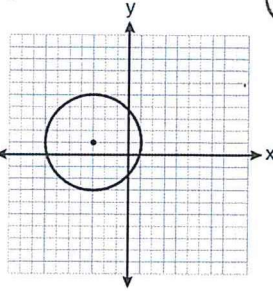
radius: 2

10. Which graph represents a circle with the equation $(x-3)^2 + (y+1)^2 = 4$?

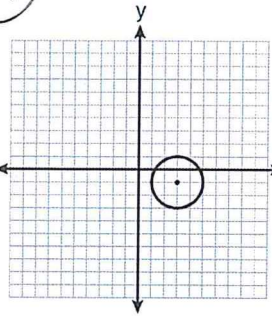
1)



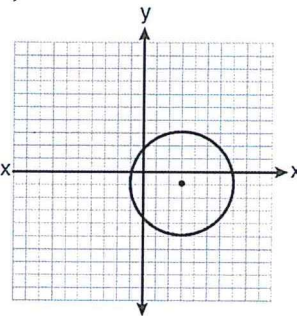
2)



3)



4)



Center: (3, -1)
radius: 2

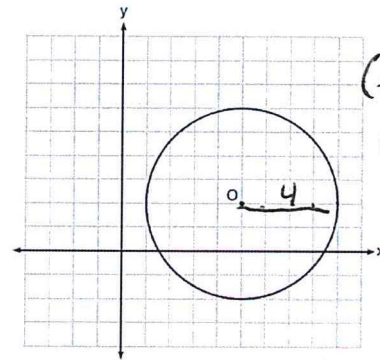
11. Which of the following is the equation of the given circle?

1) $(x-5)^2 + (y-2)^2 = 16$ (5, 2) r=4

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

3) $(x-5)^2 + (y-2)^2 = 4$

4) $(x+5)^2 + (y+2)^2 = 4$



Center: (5, 2)
radius = 4

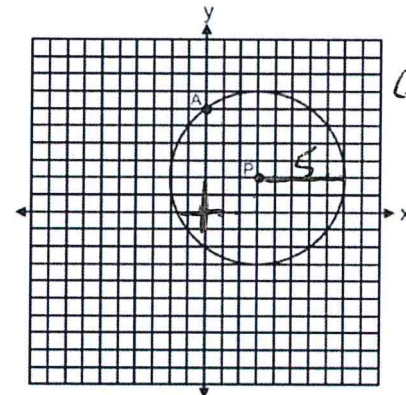
12. Which of the following is the equation of the given circle?

1) $(x-3)^2 + (y-2)^2 = 25$ (3, 2) r=5

2) $(x+3)^2 + (y+2)^2 = 25$

3) $(x-3)^2 + (y-2)^2 = 5$

4) $(x+3)^2 + (y+2)^2 = 5$



Center: (3, 2)
radius: 5

13. Which of the following is the equation of the given circle?

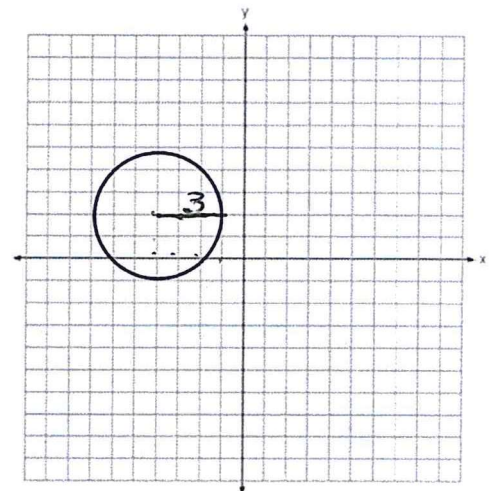
1) $(x-4)^2 + (y+2)^2 = 9$

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

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

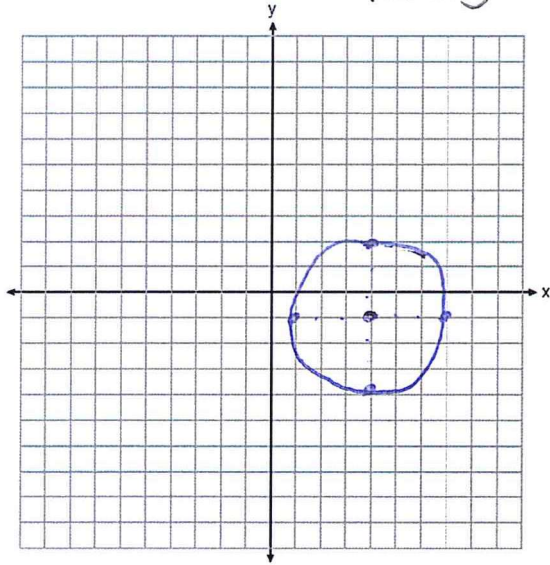
4) $(x+4)^2 + (y-2)^2 = 3$

Center: (-4, 2)
radius: 3



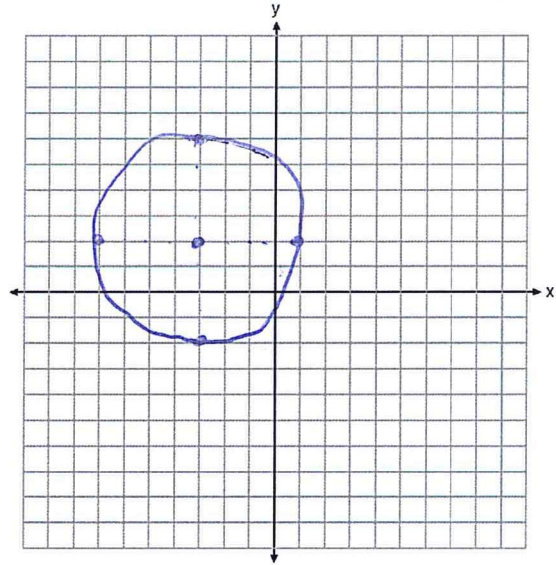
Graph the following circles on the provided graphs

14. $(x-4)^2 + (y+1)^2 = 9$ Center: $(4, -1)$
radius: 3

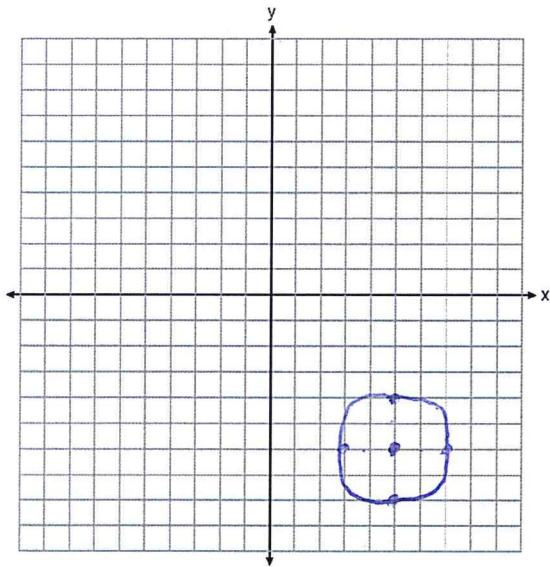


15. $(x+3)^2 + (y-2)^2 = 16$

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

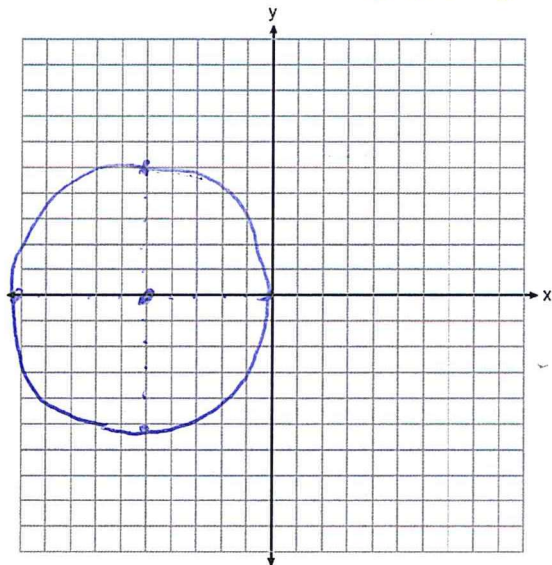


16. $(x-5)^2 + (y+6)^2 = 4$ Center: $(5, -6)$
radius: 2



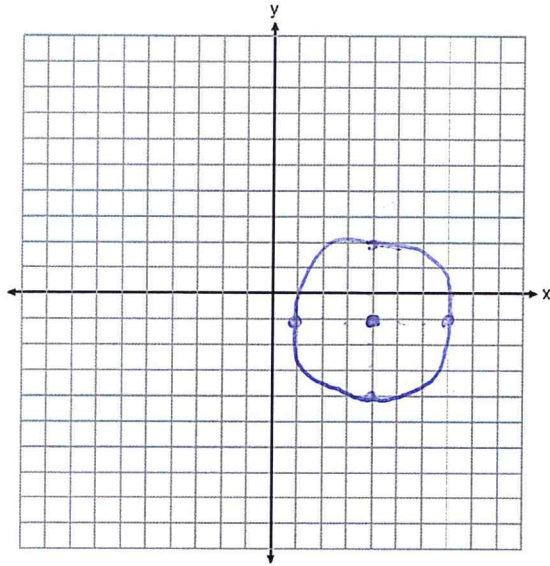
17. $(x+5)^2 + y^2 = 25$

Center: $(-5, 0)$
radius: 5



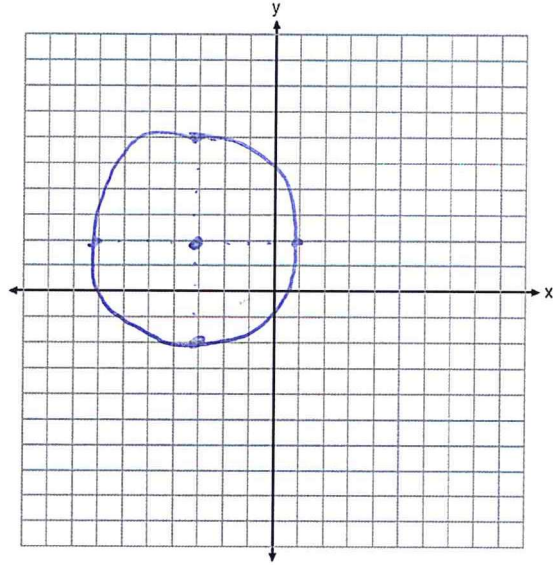
Center: (4, -1)
radius: 3

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



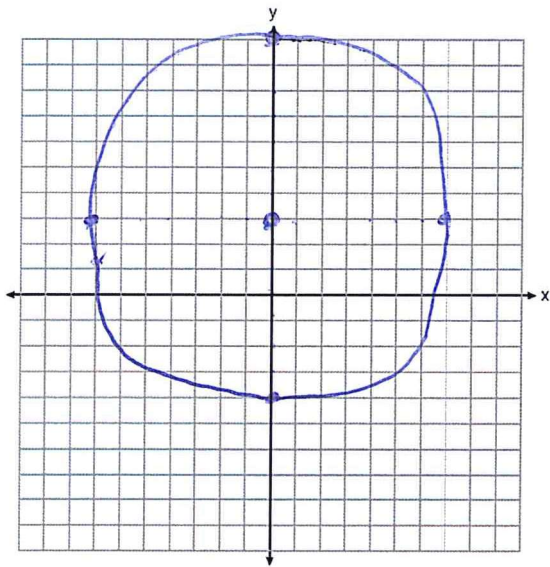
Center: (-3, 2)
radius: 4

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



Center: (0, 3)
radius: 7

20. $x^2 + (y-3)^2 = 49$



Center: (7, -9)
radius: 1

21. $(x-7)^2 + (y+9)^2 = 1$

