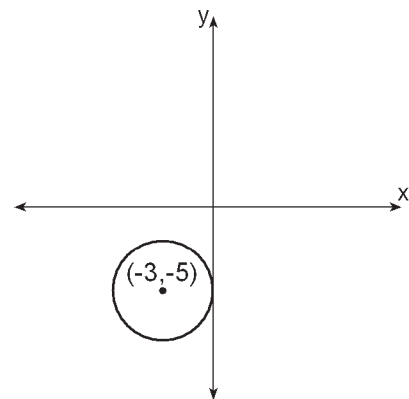


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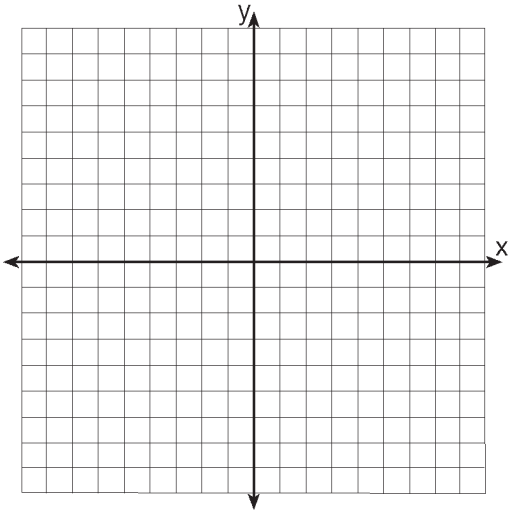
CC Geometry Homework

Equations of Circles

- 1) What is an equation of a circle with center at $(5,-3)$ and radius 6?
- A) $(x - 5)^2 + (y + 3)^2 = 6$
 B) $(x + 5)^2 + (y - 3)^2 = 36$
 C) $(x + 5)^2 + (y - 3)^2 = 6$
 D) $(x - 5)^2 + (y + 3)^2 = 36$
- 2) Which point lies on the circle whose equation is $x^2 + y^2 = 100$?
- A) $(-6,8)$ C) $(10,10)$
 B) $(0,0)$ D) $(5,5)$
- 3) What are the center and radius of the given circle $(x - 3)^2 + (y + 8)^2 = 39$?
- A) $(-3,8), r = \sqrt{39}$
 B) $(-3,-8), r = \sqrt{39}$
 C) $(3,-8), r = \sqrt{39}$
 D) $(3,-8), r = 39$
- 4) What is an equation of a circle with center at $(0,-8)$ and radius 3?
- A) $x^2 + (y + 8)^2 = 9$
 B) $x^2 + (y - 8)^2 = 9$
 C) $x^2 - (y + 8)^2 = 3$
 D) $(x + 8)^2 + y^2 = 9$
- 5) What are the coordinates of the center of the circle whose equation is $(x - 5)^2 + (y + 3) = 16$? [*Show all work.*]
- 6) Write an equation of a circle with the center at the origin and a radius of 9. [*Show all work.*]
- 7) Find the radius and the coordinates of the center of $(x + 3)^2 + (y - 2) = 64$. [*Show all work.*]
- 8) The circle shown in the accompanying diagram has a center at $(-3,-5)$ and is tangent to the y -axis. Write an equation of this circle in center-radius form.



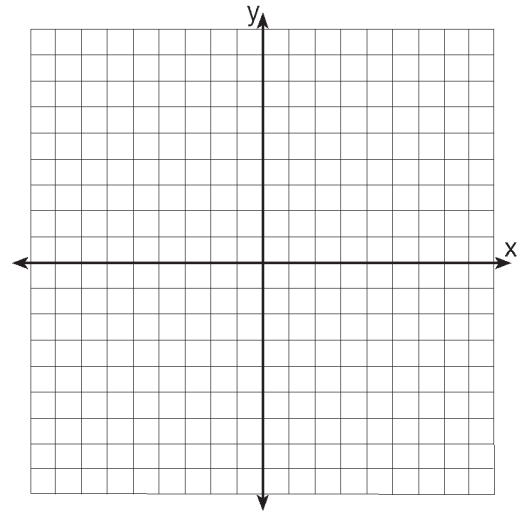
- 9) (a) On the accompanying grid, graph a circle whose center is at $(0,0)$ and whose radius is 5.



- (b) Determine algebraically if the point $(5,-2)$ lies on the circle. [Show all work.]

- 10) (a) Sketch the graph of a circle with the equation $(x - 3)^2 + (y - 2)^2 = 16$.

- (b) Sketch the graph of the circle with equation $x^2 + (y + 3)^2 = 9$.



- (c) What is the total number of points of intersection of the two graphs?