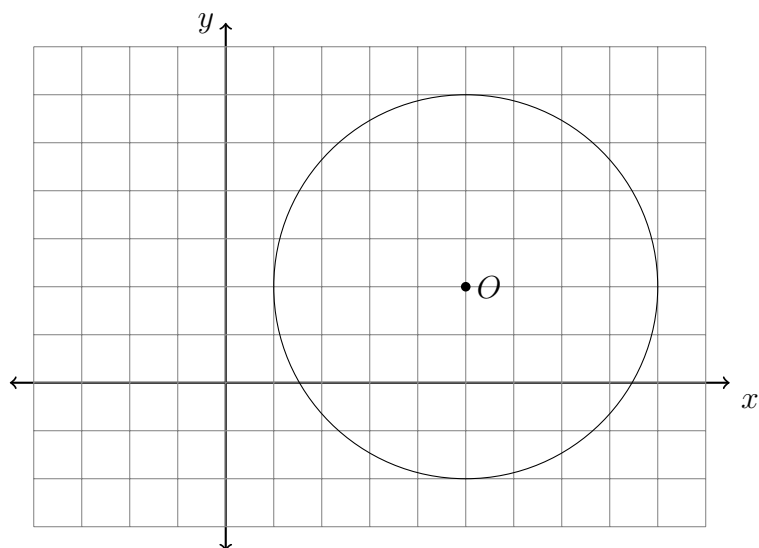


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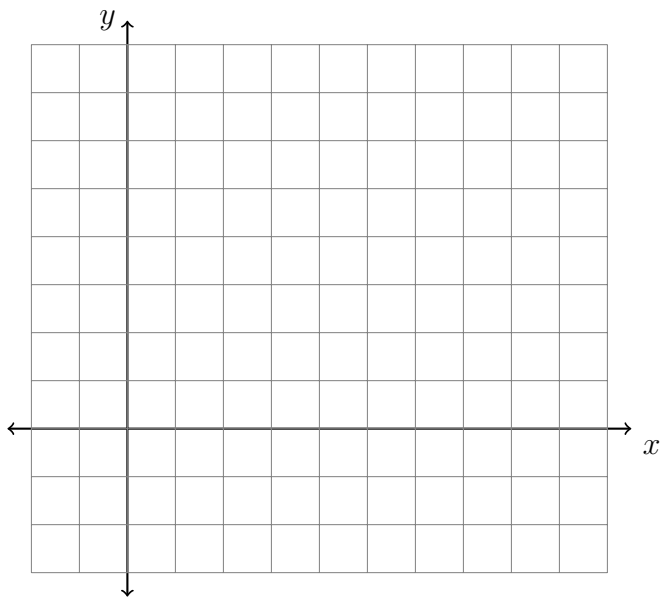
8.9 Classwork: The equation for a circle

1. What is the equation of a circle with center $(5, 7)$ and radius $r = 3$?
2. What are the coordinates of the center and the length of the radius of the circle whose equation is $(x - 3)^2 + y^2 = 16$?
3. What is the equation of a circle with center $(-3, 7)$ and radius $r = 4$?
4. The equation of a circle is $x^2 + 8x + y^2 - 12y = 144$. What are the coordinates of the center and the length of the radius of the circle?
 - (a) center $(4, -6)$ and radius 12
 - (b) center $(-4, 6)$ and radius 12
 - (c) center $(4, -6)$ and radius 14
 - (d) center $(-4, 6)$ and radius 14
5. What is an equation of circle O shown in the graph below?



- | | |
|----------------------------------|----------------------------------|
| (a) $x^2 + 10x + y^2 + 4y = -13$ | (c) $x^2 + 10x + y^2 + 4y = -25$ |
| (b) $x^2 - 10x + y^2 - 4y = -13$ | (d) $x^2 - 10x + y^2 - 4y = -25$ |

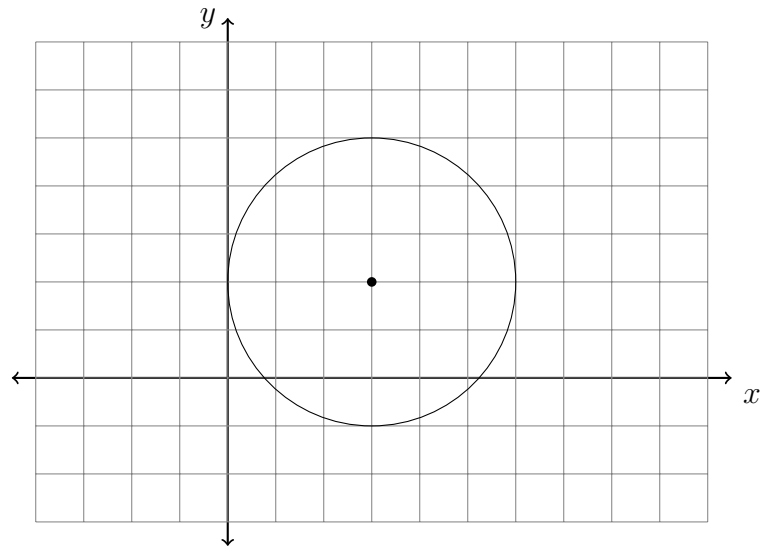
6. What are the coordinates of the center and the length of the radius of the circle whose equation is $x^2 + y^2 = 8x - 6y + 39$?
- (a) center $(-4, 3)$ and radius 64
 - (b) center $(4, -3)$ and radius 64
 - (c) center $(-4, 3)$ and radius 8
 - (d) center $(4, -3)$ and radius 8
7. What is an equation of a circle whose center is $(1, 4)$ and diameter is 10?
- (a) $x^2 - 2x + y^2 - 8y = 8$
 - (b) $x^2 + 2x + y^2 + 8y = 8$
 - (c) $x^2 - 2x + y^2 - 8y = 83$
 - (d) $x^2 + 2x + y^2 + 8y = 83$
8. The equation of a circle is $x^2 + y^2 + 4x - 8y = -16$. The statement that best describes circle O is the
- (a) center is $(2, -4)$ and is tangent to the x -axis
 - (b) center is $(2, -4)$ and is tangent to the y -axis
 - (c) center is $(-2, 4)$ and is tangent to the x -axis
 - (d) center is $(-2, 4)$ and is tangent to the y -axis
9. What is the equation of a circle whose diameter is \overline{AB} with $A(2, -1)$ and $B(8, 7)$?



Name:

8.9 Exit Note: The equation for a circle

10. What are the coordinates of the center and the length of the radius of the circle whose equation is $(x + 8)^2 + (y - 3)^2 = 4$?
11. What is the equation of a circle with center $(1, -9)$ and radius $r = 8$?
12. What is an equation of circle O shown in the graph below?



13. The equation of a circle is $x^2 + y^2 - 6x + 2y = 6$. What are the coordinates of the center and the length of the radius of the circle?
- (a) center $(-3, 1)$ and radius 4
 - (b) center $(3, -1)$ and radius 4
 - (c) center $(-3, 1)$ and radius 16
 - (d) center $(3, -1)$ and radius 16