

Homework 4.3 Writing Equations & Graphing Circles

Answer the following questions as specific as possible.

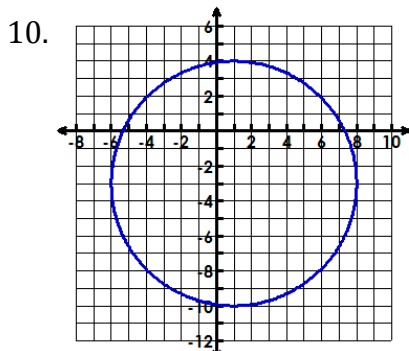
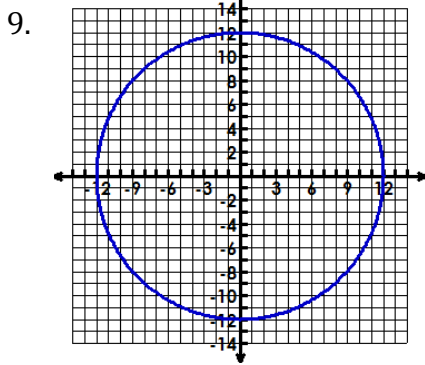
1. What is the standard form of a circle? _____
2. What is the center of the circle (from standard form equation)? _____
3. What is the radius of a circle (from standard form equation)? _____
4. What is the general form of a circle? _____
5. What the standard form of an equation of a circle with a center (3, -2) and a radius of 4.

6. What the standard form of an equation of a circle with a center (3, -2) and a diameter of 10.

7. What the standard form of an equation of a circle with a center (2, -9) and a radius of $\sqrt{11}$.

8. Find the coordinate of the center and measure of the radius of $(x - 6)^2 + (y + 3)^2 = 25$.

Find the center, radius and equation of the circle using the graph.



Answer the following questions as specific as possible.

1. What is the standard form of a circle? $(x - h)^2 + (y - k)^2 = r^2$
2. What is the center of the circle (from standard form equation)? (h, k)
3. What is the radius of a circle (from standard form equation)? r
4. What is the general form of a circle? all term on left = 0
5. What the standard form of an equation of a circle with a center $(3, -2)$ and a radius of 4.

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

6. What the standard form of an equation of a circle with a center $(3, -2)$ and a diameter of 10.

$$(x + 4)^2 + y^2 = 25$$

7. What the standard form of an equation of a circle with a center $(2, -9)$ and a radius of $\sqrt{11}$.

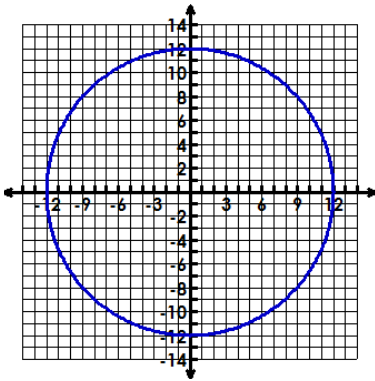
$$(x - 2)^2 + (y + 9)^2 = 11$$

8. Find the coordinate of the center and measure of the radius of $(x - 6)^2 + (y + 3)^2 = 25$.

center: $(6, -3)$, radius: 5

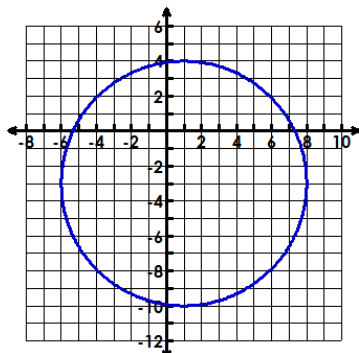
Find the center, radius and equation of the circle using the graph.

9.



center: $(0, 0)$, radius: 12, $x^2 + y^2 = 144$

10.



center: $(1, -3)$, radius: 7, $(x - 1)^2 + (y + 3)^2 = 49$

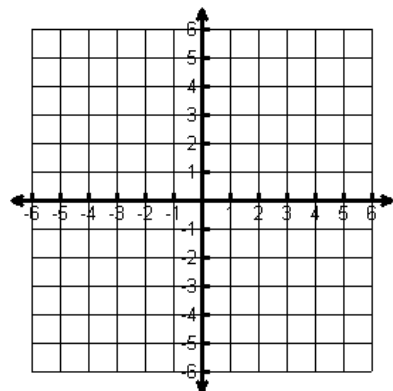
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Sketch the circle and identify the center & radius.

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

Center: _____

Radius: _____



Write the standard equation of the circle and state the center/radius.

12. $x^2 + y^2 - 8x + 7 = 0$

Center: _____

Radius: _____

13. $x^2 + y^2 + 4x - 6y - 3 = 0$

Center: _____

Radius: _____

14. $2x^2 + 2y^2 - 16x + 4y + 20 = 0$

Center: _____

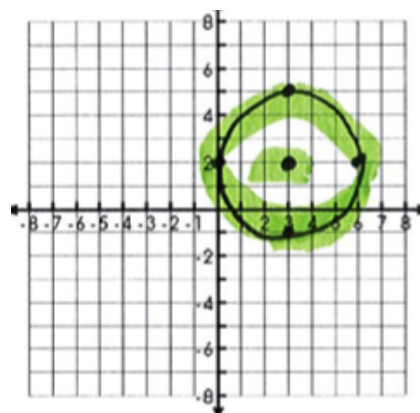
Radius: _____

Sketch the circle and identify the center & radius.

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

Center: $(3, 2)$

Radius: 3



Write the standard equation of the circle and state the center/radius.

12. $x^2 + y^2 - 8x + 7 = 0$

Center: $(4, 0)$

Radius: 3

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

13. $x^2 + y^2 + 4x - 6y - 3 = 0$

Center: $(-2, 3)$

Radius: 4

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

14. $2x^2 + 2y^2 - 16x + 4y + 20 = 0$

Center: $(4, -1)$

Radius: $\sqrt{7}$

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