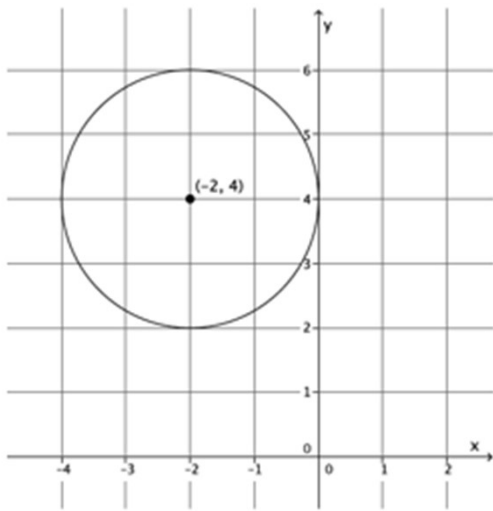


# Equation of Circle

1. Write an equation for the circle whose center is at  $(9, 0)$  and has radius 7.

2. Write an equation whose graph is the circle below.



3. What is the radius and center of the circle given by the equation  $(x + 12)^2 + (y - 4)^2 = 81$ ?

4. a) What is the radius of the circle with center  $(3, 10)$  that passes through  $(12, 12)$ ?

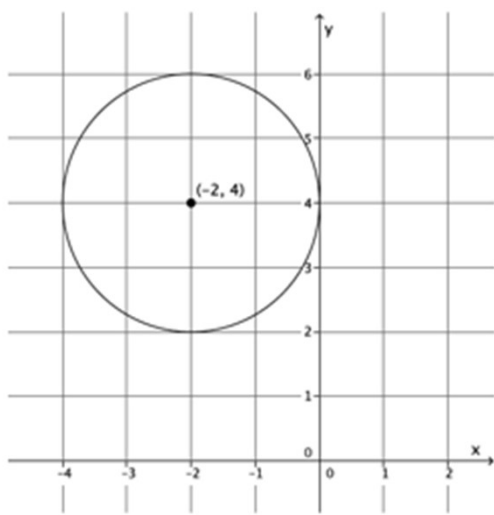
b) What is the equation of this circle?

## Equation of Circle

1. Write an equation for the circle whose center is at  $(9, 0)$  and has radius 7.

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

2. Write an equation whose graph is the circle below.



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

3. What is the radius and center of the circle given by the equation  $(x + 12)^2 + (y - 4)^2 = 81$ ?

The radius is 9, and the center is  $(-12, 4)$ .

4. a) What is the radius of the circle with center  $(3, 10)$  that passes through  $(12, 12)$ ?

$$\begin{aligned}(x - 3)^2 + (y - 10)^2 &= r^2 \\ (12 - 3)^2 + (12 - 10)^2 &= r^2 \\ 81 + 4 &= r^2 \\ \sqrt{85} &= r\end{aligned}$$

- b) What is the equation of this circle?

$$(x - 3)^2 + (y - 10)^2 = 85$$

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