Standrard Form:
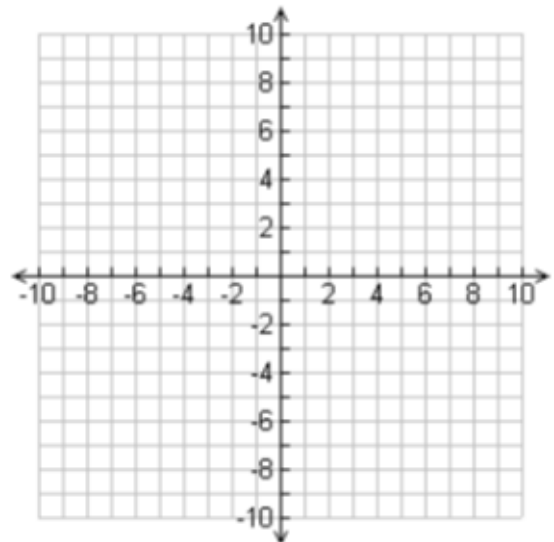
General Form:

Example 1:

Write the equation of a circle that has a center at (-4, 3) and radius of 3. Then graph the circle.
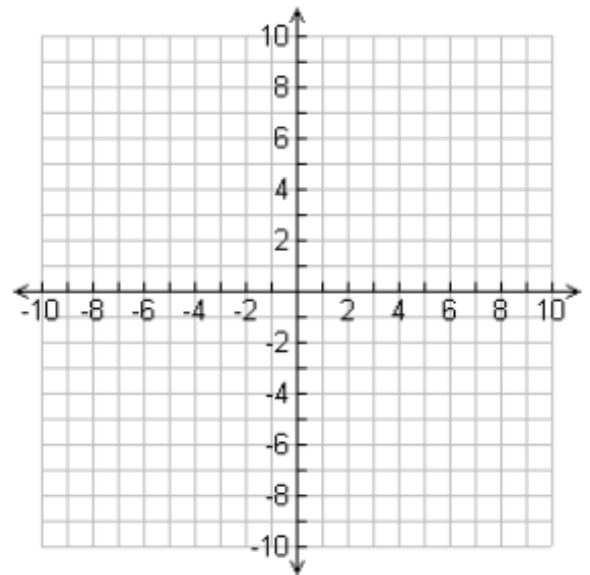
Example 2:

Write the equation of a circle with center (0, 2) and tangent to x-axis. Then graph the circle.

Example 3:

Write the equation of the circle with center (-1, 3) and goes through the point (1, -1).

Example 4:

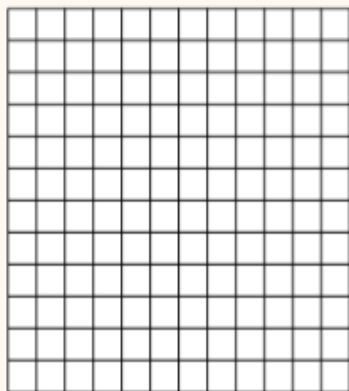Write the equation of the circle with diameter endpoints of (-10, 7) and (2, -3).

Example 5:

$(x - 4)^2 + (y + 1)^2 = 6$ is translated 7 units left and 2 units down. What is the equation of the new circle?

The equation of a circle is:

$$2x^2 + 2y^2 - 4x + 12y - 18 = 0$$

a) Write the equation in standard form.
b) Find the radius and center coordinates.
c) Graph the equation.

The equation of a circle is:

$$4x^2 + 4y^2 + 24x - 16y = -51$$

a) Write the equation in standard form.
b) Find the radius and center coordinates.
c) Graph the equation.