

Circles Video Lecture

Section 13.1

Course Learning Objective:

Graph non-linear equations.

Weekly Learning Objectives:

- 1) Graph circles of the form $(x-h)^2+(y-k)^2=r^2$.**
- 2) Write the equation of a circle given its center and radius.**
- 3) Find the center and the radius of a circle, given its equation.**

Circles

General Form of the Equation of a Circle:

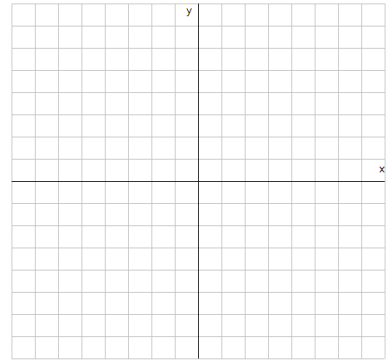
$$(x-h)^2 + (y-k)^2 = r^2$$

Center : (h, k)

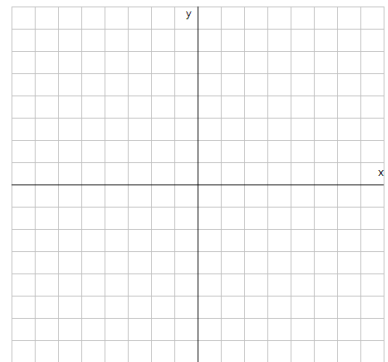
Radius : r

Find the equation of the circle having radius 2 and center at $(-7, 6)$:

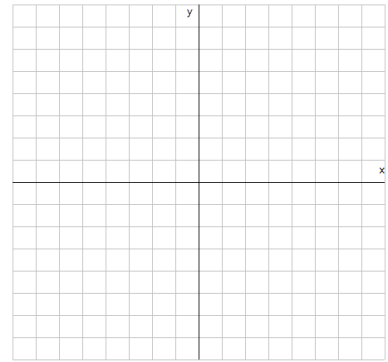
$$x^2 + y^2 = 25$$



$$4x^2 + 4y^2 = 8$$



$$x^2 + 10x + y^2 = 0$$



$$2x^2 + 12x + 2y^2 - 8y = 6$$

