

Introduction to Analytic Geometry



Preliminaries and Objectives

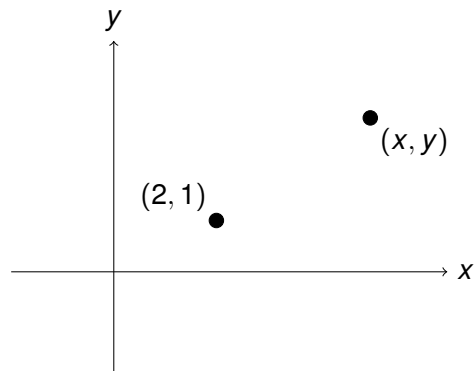
Preliminaries

- Cartesian Coordinate System
- Slope Formula
- Pythagorean Theorem

Objectives

- Write equations involving arbitrary points

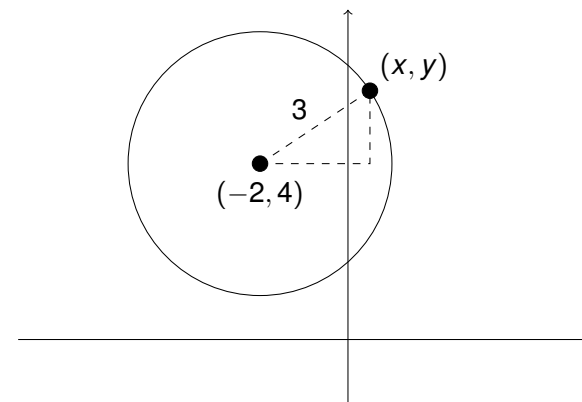
Arbitrary Points



$$\frac{2}{3} = \frac{y-1}{x-2}$$

Equation of a Circle

Find the set of all points that are a distance of 3 from the point $(-2, 4)$.



$$(x + 2)^2 + (y - 4)^2 = 3^2$$

Recap

- Let (x, y) be an arbitrary point
- Write equations corresponding to the geometric description