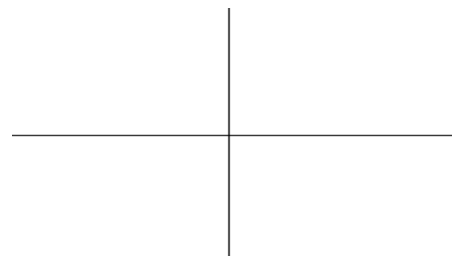


11.1a Polar Coordinates: The Basics

Another way to represent the same point

• (x, y)

• (r, θ)



- 1.
- 2.
- 3.
- 4.

Polar Coordinates \rightarrow Graph

1. (+, +)

2. (-, +)

NOTE:

3. (-, -)

Multiple Ways to Represent the Same Point

- $(x, y) = (1, 1)$

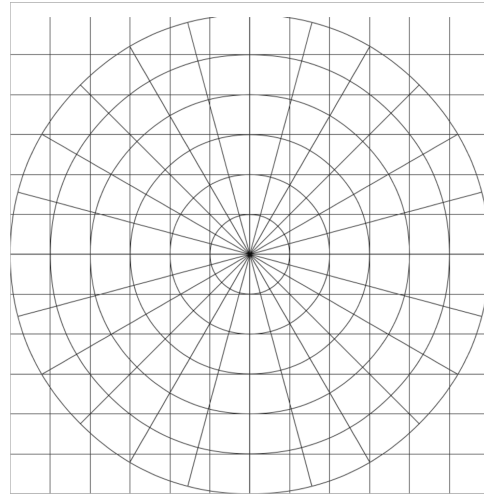
- $(r, \theta) = (-r, \theta \pm \pi)$

Write this point in polar form 3 different ways:

- $(r, \theta) = (r, \theta \pm 2\pi n)$

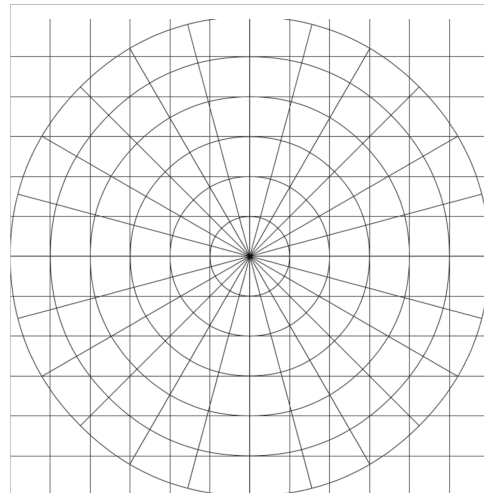
Polar Coordinates to Rectangular Coordinates

Example:



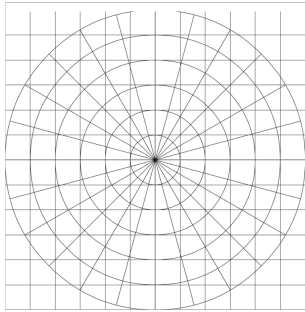
Rectangular Coordinates to Polar Coordinates

Example:



Special Graphs

$r = a \text{ constant}$



$\theta = a \text{ constant}$

