Finish and hand in 8.1 part 2 from yesterday (add on today's warm-up.)

Refer to unit circle, 8.1 notes, and identities sheet for today's online assignment.

Use scratch paper when necessary (written work NOT being collected.)

Warm-up: add on to the end of yesterday's assignment

Plot each point on the same set of axes, then convert to polar coordinates (r, θ)

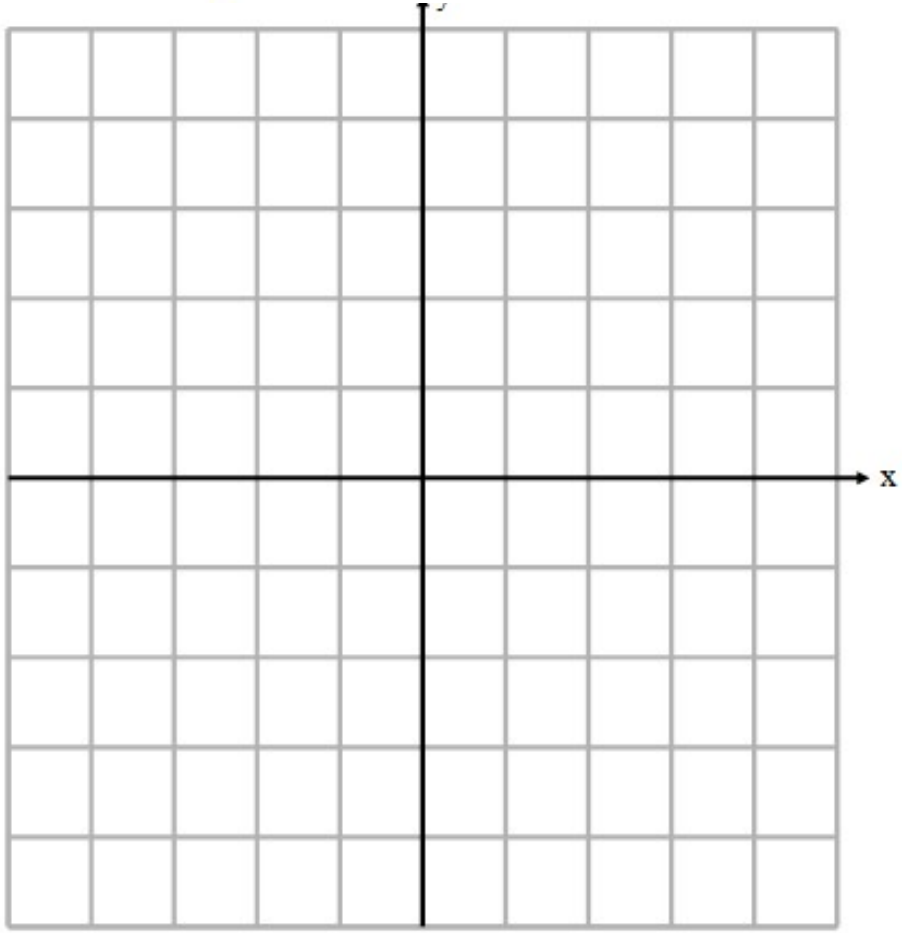
Reminder: use radians!! (No calculator!!)

A (3, 3)

B (-3, 0)

C (0, -1)

D (-4, -4)



Warm-up: add on to the end of yesterday's assignment

Plot each point on the same set of axes, then convert to polar coordinates (r, θ)

Reminder: use radians!! (No calculator!!)

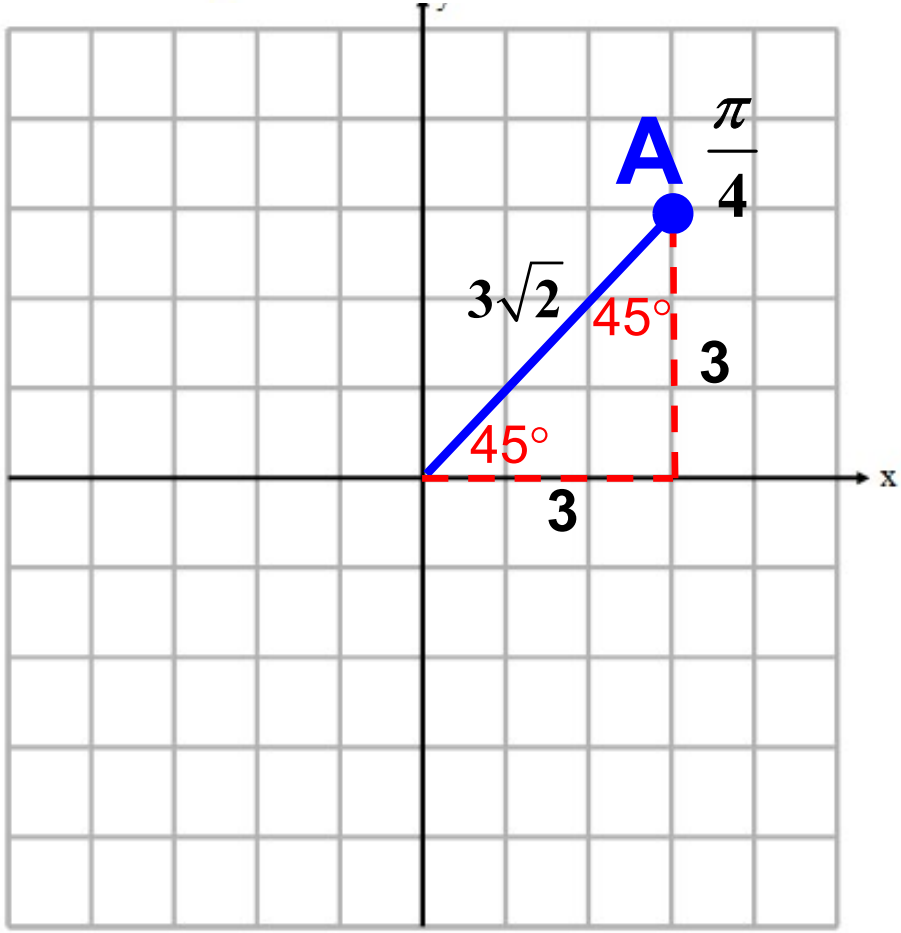
A (3, 3) $= \left(3\sqrt{2}, \frac{\pi}{4}\right)$

r , θ

B (-3, 0)

C (0, -1)

D (-4, -4)



Warm-up: add on to the end of yesterday's assignment

Plot each point on the same set of axes, then convert to polar coordinates (r, θ)

Reminder: use radians!! (No calculator!!)

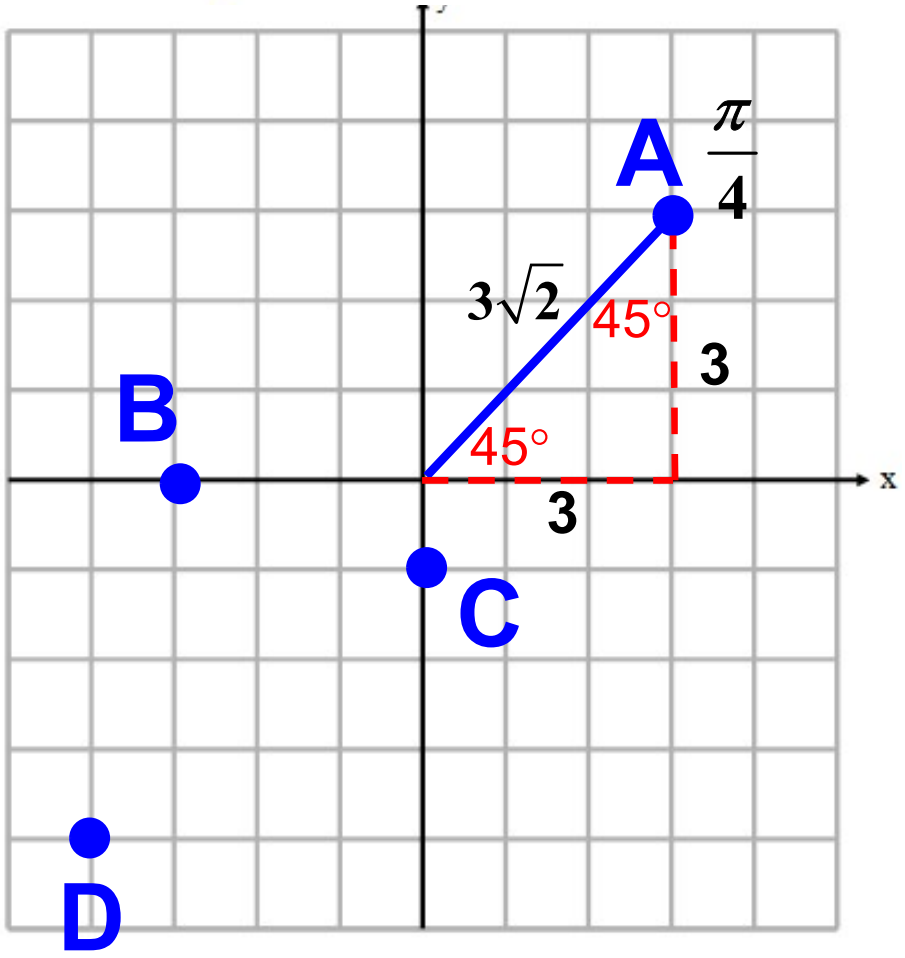
A (3, 3) $= \left(3\sqrt{2}, \frac{\pi}{4}\right)$

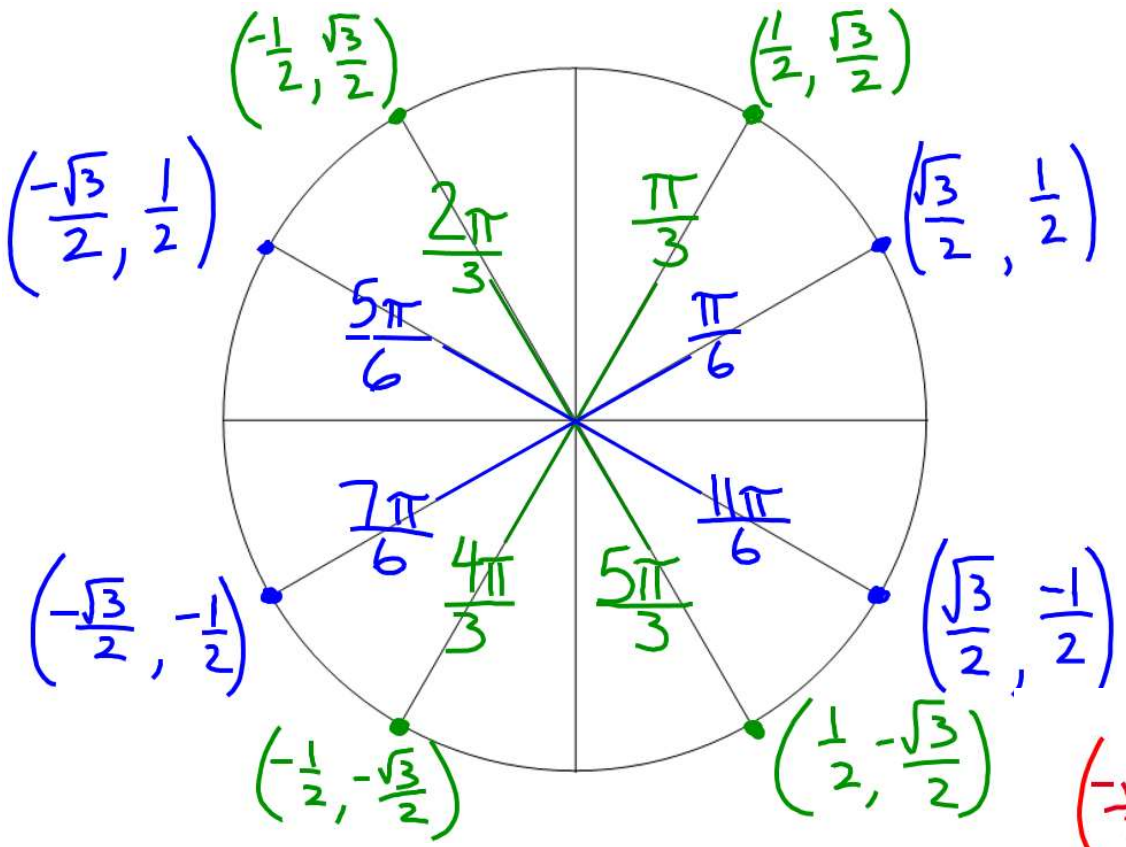
r , θ

B (-3, 0) $= (3, \pi)$

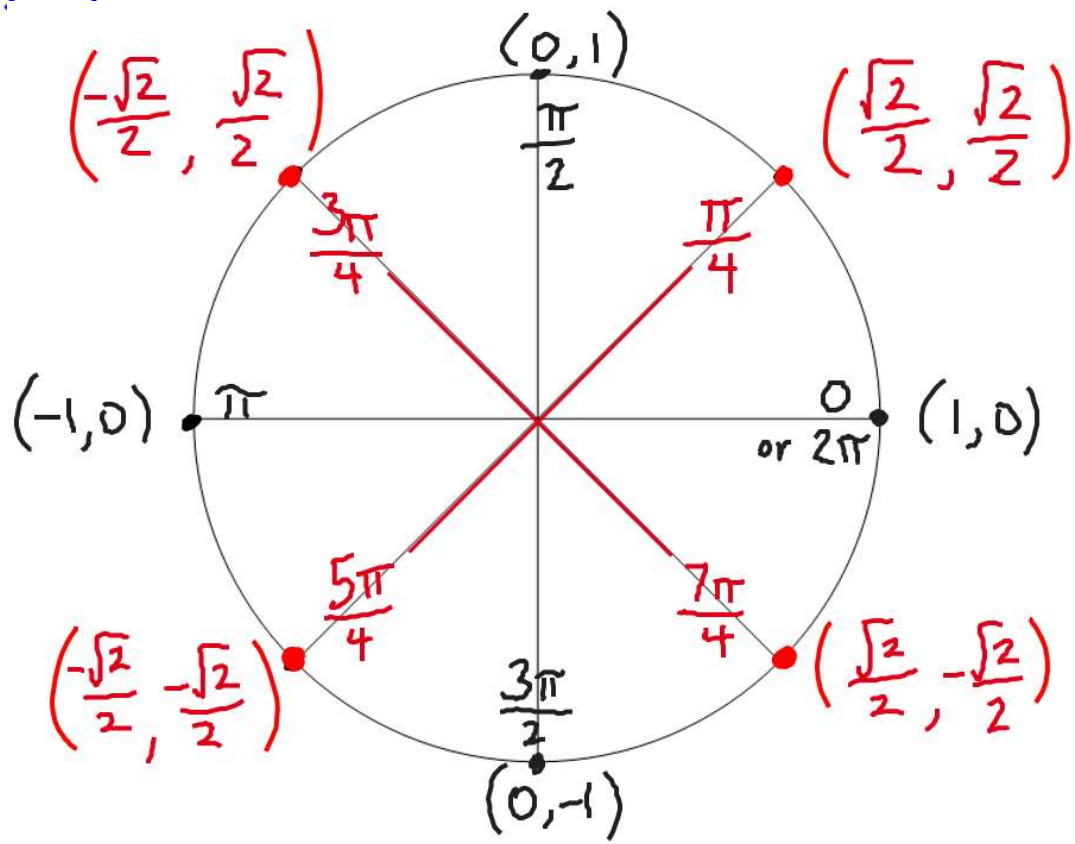
C (0, -1) $= \left(1, \frac{3\pi}{2}\right)$

D (-4, -4) $= \left(4\sqrt{2}, \frac{5\pi}{4}\right)$





Refer to a unit circle and 8.1 notes for today's online assignment. Use scratch paper when necessary (written work NOT being collected.)



Conversion from Polar Coordinates to Rectangular Coordinates

$(r,\theta) \rightarrow (x,y)$

polar *rectangular*

$$x = r\cos\theta, \quad y = r\sin\theta$$

Conversion from Rectangular Coordinates to Polar Coordinates

$(x,y) \rightarrow (r,\theta)$

rectangular *polar*

$$r = \sqrt{x^2 + y^2} \quad or \quad r^2 = x^2 + y^2$$

$$\tan\theta = \frac{y}{x} \quad (x \neq 0)$$