Warm up

1. Convert from rectangular to polar and give 3 equivalent points.

   $(1,-1)$

2. Convert from a polar equation to a rectangular equation.

   a. r = 5

   c. $\theta = -\frac{\pi}{3}$

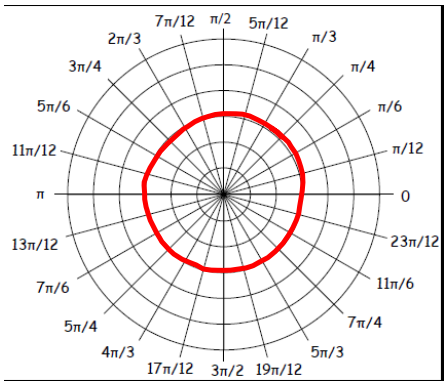
   b. $r = 4\cos\theta$

3. Convert from a rectangular equation to a polar equation.

   x = 3

9.7 Graphs of Polar Equations

$r = 3$

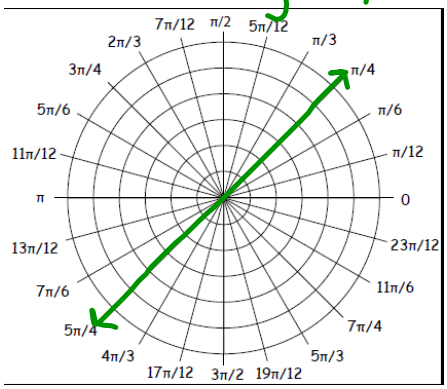


$\theta = \frac{\pi}{4}$

$\tan\theta = \tan\frac{\pi}{4}$

$\frac{y}{x} = 1$

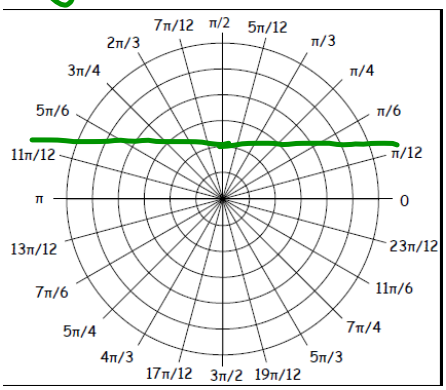
$y = x$



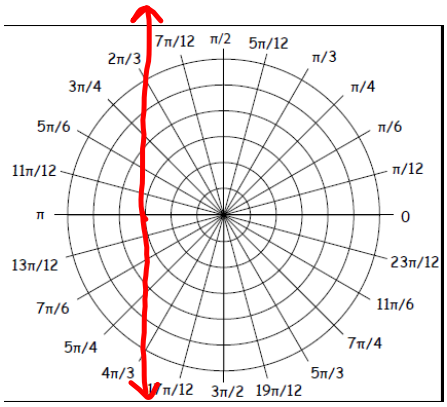
θ

$r\sin\theta = 2$

$y = 2$



$r\cos\theta = -3$



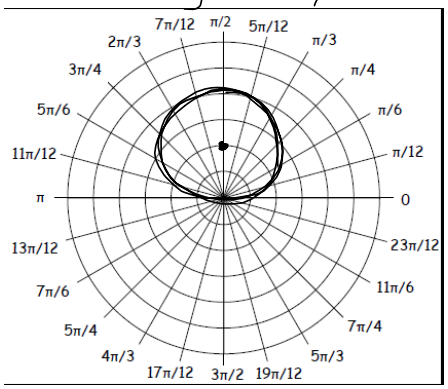
$r = 4\sin\theta$

$r^2 = 4r\sin\theta$

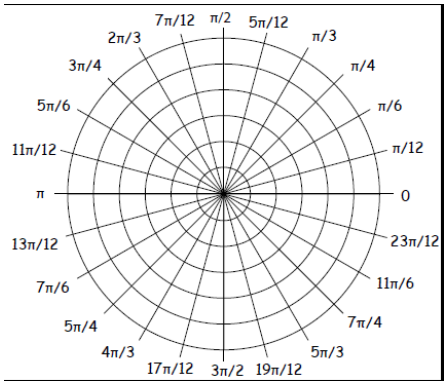
$x^2 + y^2 = 4y$

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

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



$r = -2\cos\theta$



Homework

p720 #23-26

WB p 138 part 1 # 1-6, 10, 12

sketch and convert to rect algebraically