

# 10.7 Graphing Polar Equations

Tuesday, April 28, 2015

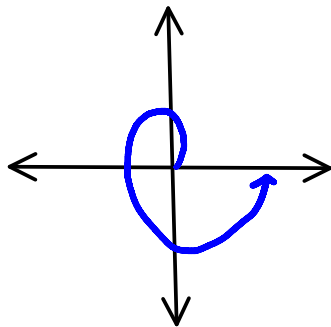
10:58 AM

- ① Calculator must be in radians
- ② Calculator must be in Polar mode
- ③ Zoom Fit to see graph (zoom 6)
- ④ Change table settings [TBLSET (2nd Window)]  
so you can enter values. Indpnt: Ask

## Spiral of Archimedes

$$r = 2\theta$$

$$r = n\theta$$



## Ex.1 Graphing with the calculator

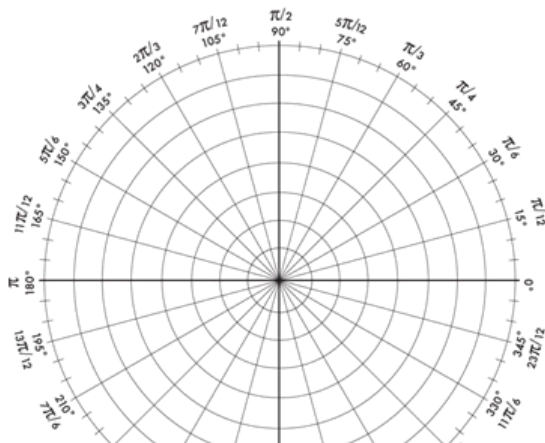
a)  $4\cos 3\theta$   
rose curve

b)  $3 + 2\sin\theta$   
Dimpled  
Limacon

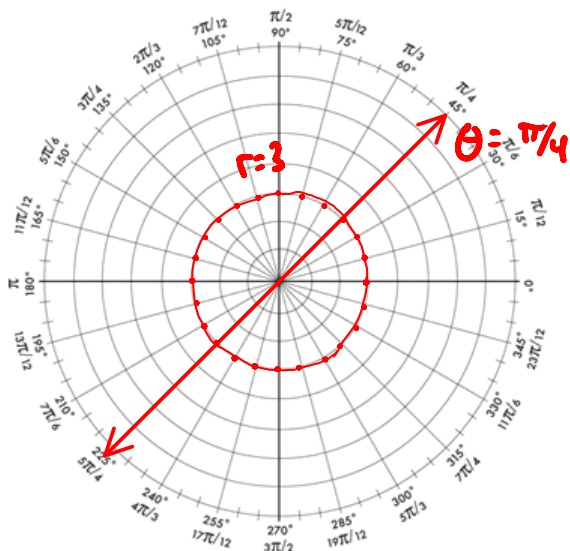
## Ex.2 Graphing by Hand

a)  $r = 3$

b)  $\theta = \pi/4$



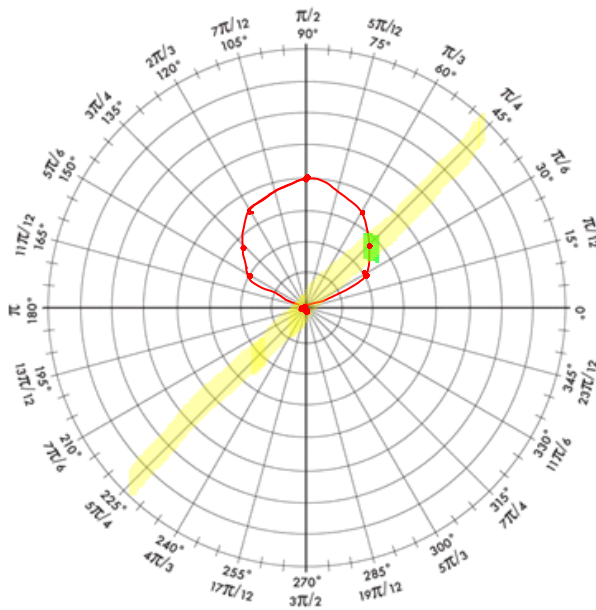
$\theta$	$r$
0	3
$\pi/4$	3
$\pi/2$	3
$3\pi/4$	3
$\pi$	3
$5\pi/4$	3
$3\pi/2$	3
$7\pi/4$	3
$2\pi$	3



$\theta$	$r$
$\pi/4$	3
$\pi/4$	2
$\pi/4$	1
$\pi/4$	-1
$\pi/4$	-2
$\pi/4$	-3
$\pi/4$	

c)  $r = 4 \sin \theta$

$\theta$	$r$
0	0
$\pi/6$	2
$\pi/4$	2.8284
$\pi/3$	3.4641
$\pi/2$	4
$2\pi/3$	3.464
$3\pi/4$	2.828
$5\pi/6$	2
$\pi$	0



$\theta$	$r$
$5\pi/4$	-2.828
$3\pi/2$	-4

Hw

1)  $r = \frac{2}{\sin \theta}$

2)  $r = 2 \cos 2\theta$

Review for Quiz