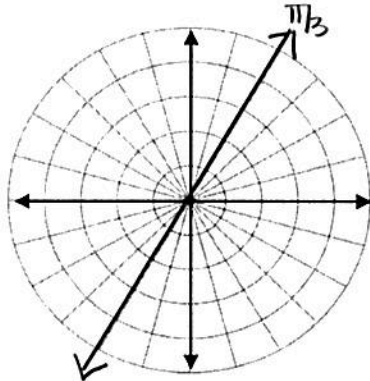


Homework on Polar Graphing Day 1  
 Lines, Circles, Roses, and Lemniscates

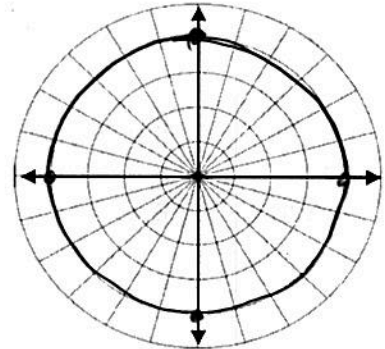
name Key

Sketch a graph of the following polar equations. I will be looking for correct general shape and x and y intercepts.

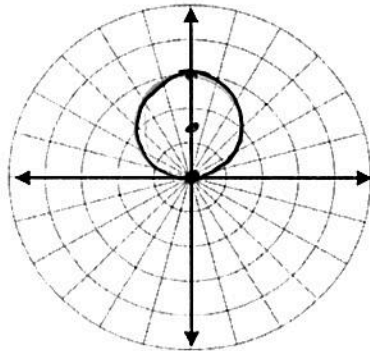
1.  $\theta = \frac{\pi}{3}$



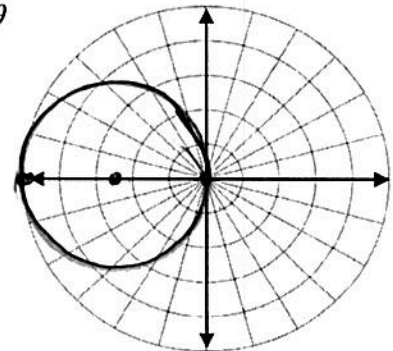
2.  $r = 4$



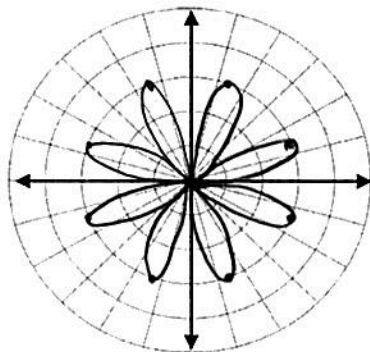
3.  $r = 3\sin\theta$



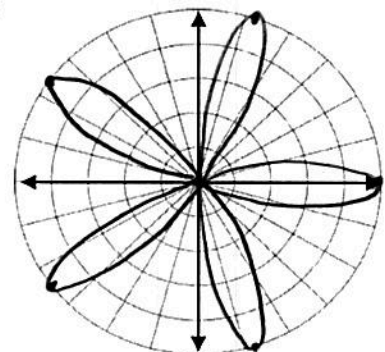
4.  $r = -5\cos\theta$



5.  $r = -3\sin 4\theta$

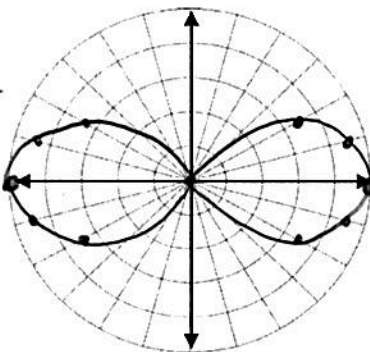


6.  $r = 5\cos 5\theta$



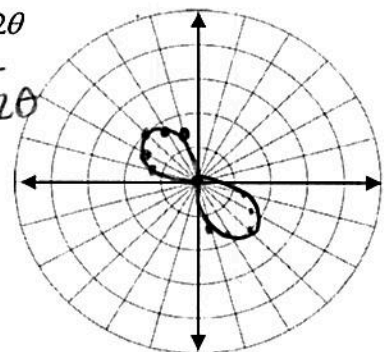
7.  $r^2 = 25\cos 2\theta$

$r = \sqrt{25\cos 2\theta}$



8.  $r^2 = -4\sin 2\theta$

$r = \sqrt{-4\sin 2\theta}$



9. Match the equations to the graphs above. List the number of petals and the length.

$3\sin 5\theta$

Graph C

# Petals 5

Petal Length 3

$4\sin 2\theta$

Graph F

# Petals 4

Petal Length 4

$3\cos 5\theta$

Graph A

# Petals 5

Petal Length 3

$3\sin 7\theta$

Graph D

# Petals 7

Petal Length 3

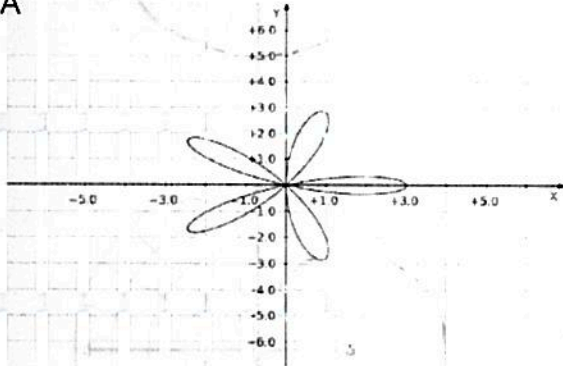
$4\cos 2\theta$

Graph E

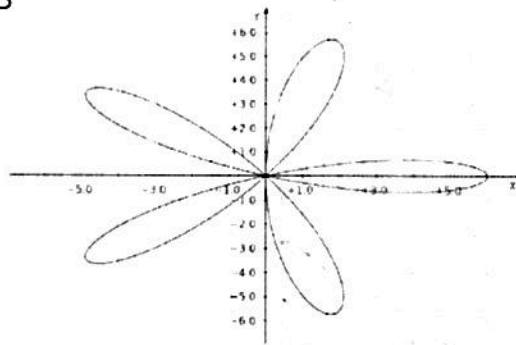
# Petals 4

Petal Length 4

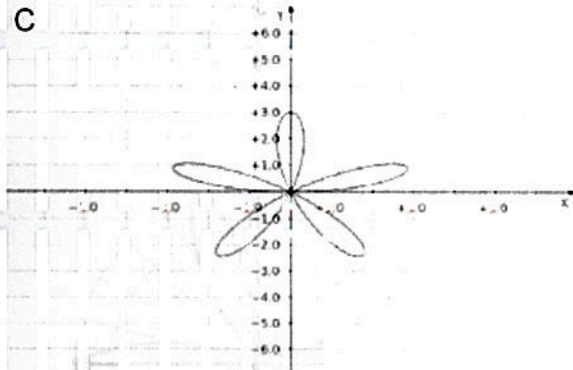
A



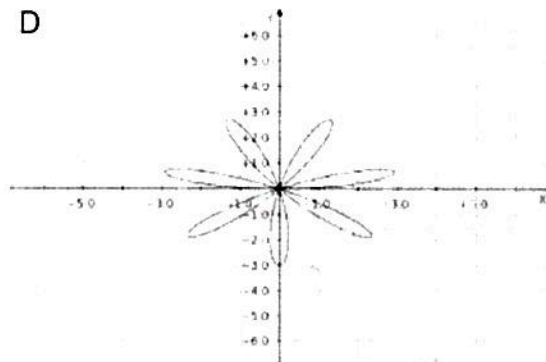
B



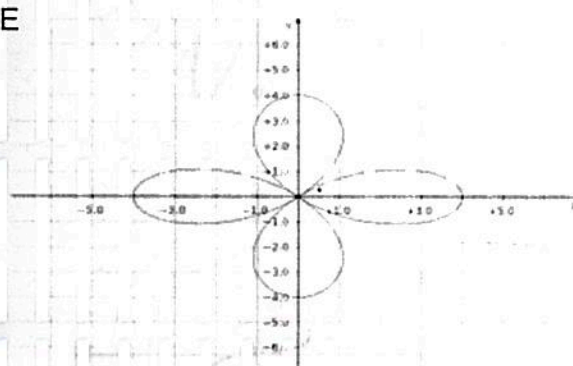
C



D



E



F

