Polar Practice HWK Name: _____

1. Convert from Rectangular to Polar Coordinates then graph

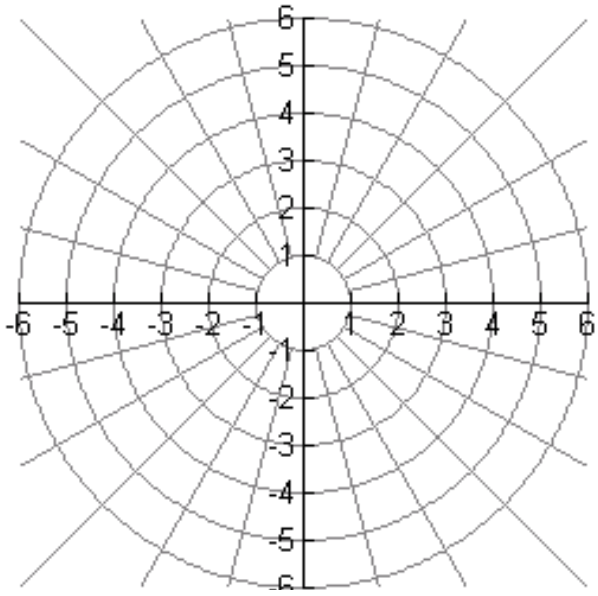
A (–3, $3\sqrt{3}$)

B (4, $-4\sqrt{3}$)

C (0, – 5)

D ($-\sqrt{3}$, 1)

E (5, – 5)



2. Graph then, Convert from Polar to Rectangular Coordinates.

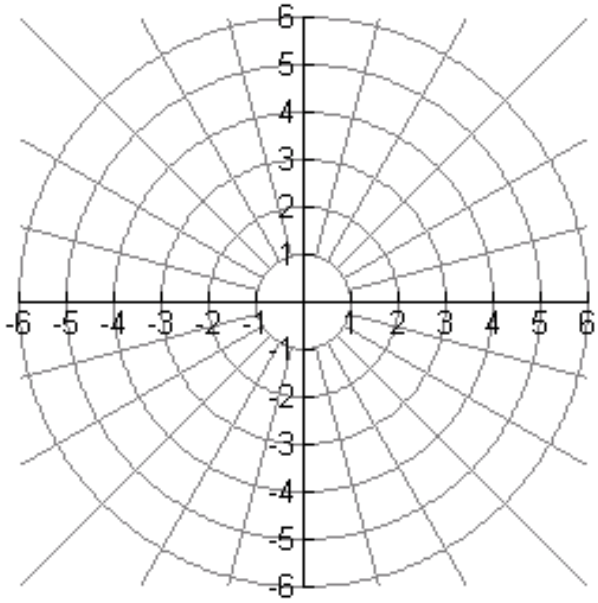
F $(1, \frac{-\pi}{2})$

G (6, 120°)

H (4, –270°)

I $(2, \frac{\pi}{4})$

J (3, π)



3. Give 3 additional coordinates for the points given.

A) (1, 45º)

B) (2, 210°)

4. Find where the two polar graphs intersect.

A) r = 3; r = 2 – sin θ

B) r = 4; r = 3 + 2cos θ

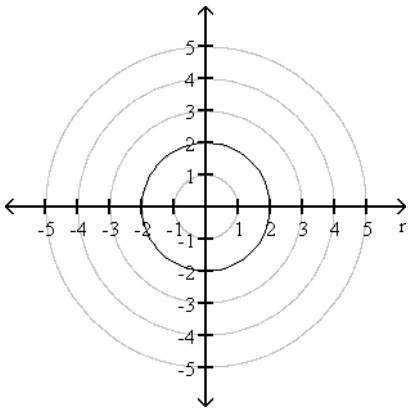
Adv. Algebra Trig.
Graphs of Polar Equations

Name_____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

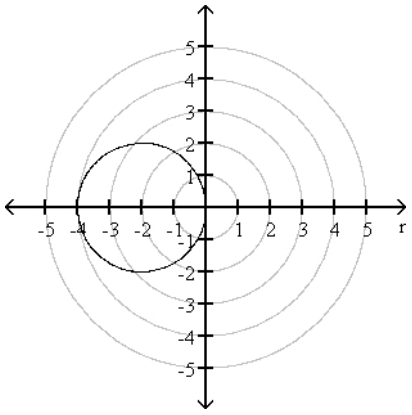
The graph of a polar equation is given. Select the polar equation for the graph.

1)



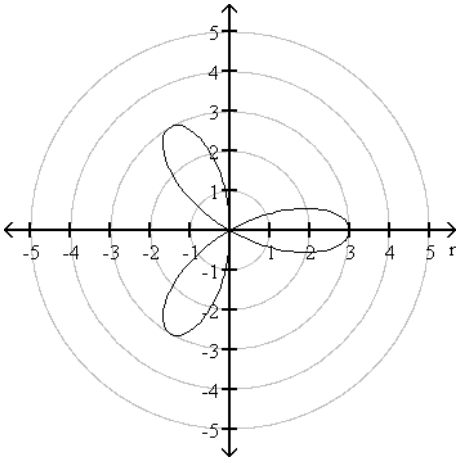
A) r = 4 cos θ
B) r = 2
C) r sin θ = 2
D) r = 4 sin θ

2)

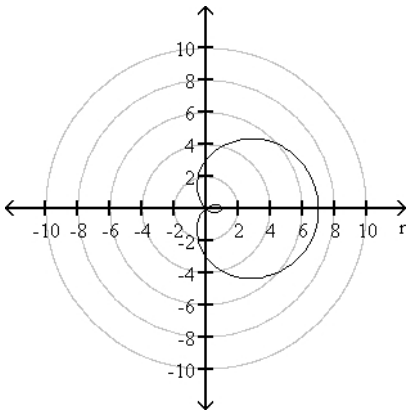


A) r = -4 sin θ
B) r = -4 cos θ
C) r = -2
D) r sin θ = -2

3)

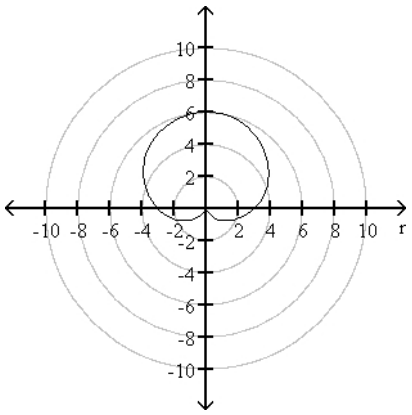


A) r = 3
B) r = 3 + cos(3θ)
C) r = 3 cos(3θ)
D) r = 3 sin(θ)



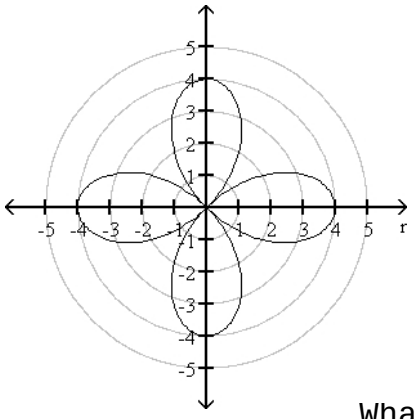
4)

A) r = 3+4 cos θ
B) r = 7 cosθ
C) r = 3+4 sinθ
D) r = 7



5)

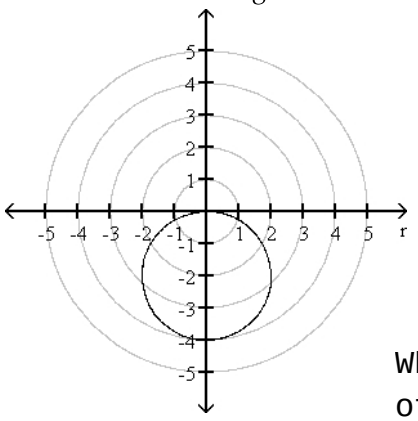
A) r = 6
B) r = 7 cosθ
C) r = 3+3 sinθ
D) r = 3+4 cos θ



6) What is the equation of this polar graph?

A) lemniscate
B) limacon with loop
C) rose
D) cardioid

7) Describe the following off-center circle:



What is the equation of this polar graph?

A) negative sine graph
B) positive sine graph
C) negative cosine graph
D) positive cosine graph

8) For the following rose equation, determine the number of petals and the length of each petal:

$r = 3 \sin(4\theta)$

A) 7 petals, each 3 units long
B) 3 petals, each 4 units long
C) 8 petals, each 3 units long
D) 4 petals, each 3 units long

9) For the following rose equation, determine the number of petals and the length of each petal:

$r = 9 \sin(7\theta)$

A) 14 petals, each 9 units long
B) 7 petals, each 9 units long
C) 9 petals, each 7 units long
D) 18 petals, each 7 units long

10) For the following lemniscate equation, determine the length of each petal:

$r = 9 \sin(2\theta)$

A) each is 9 units long
B) each is 2 units long
C) each is 4 units long
D) each is 3 units long