

Name _____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Change the polar coordinates (r, θ) to rectangular coordinates (x, y) .

1) $(4, 45^\circ)$ 1) _____

2) $(-6, \pi)$ 2) _____

3) $\left(9, -\frac{\pi}{3}\right)$ 3) _____

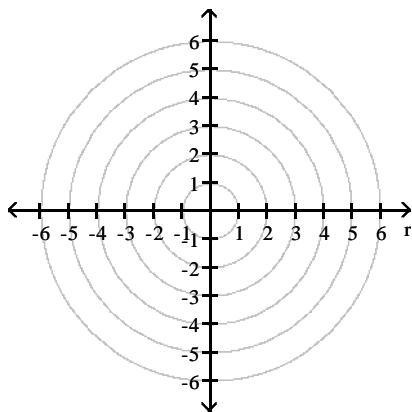
For the point given in rectangular coordinates, find equivalent polar coordinates (r, θ) for $r > 0$ and $0^\circ \leq \theta < 360^\circ$.

4) $(3\sqrt{3}, 3)$ 4) _____

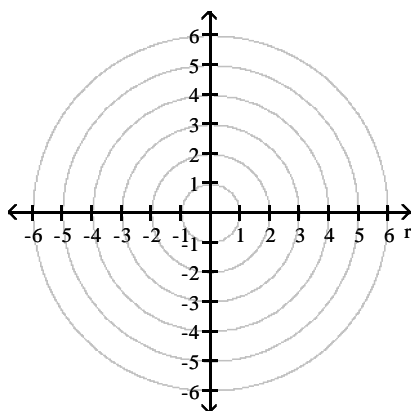
5) $(-6, 6\sqrt{3})$ 5) _____

Graph the polar equation.

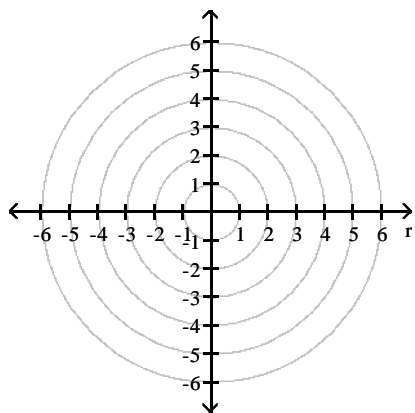
6) $r \sin \theta = 1$ 6) _____



7) $r = 4 \sin \theta$ 7) _____



8) $r = 6 \sin 2\theta$



8) _____

Write the equation in polar form.

9) $x^2 + y^2 = -3x$

9) _____

10) $x = -9$

10) _____

Write the polar equation in terms of x and y .

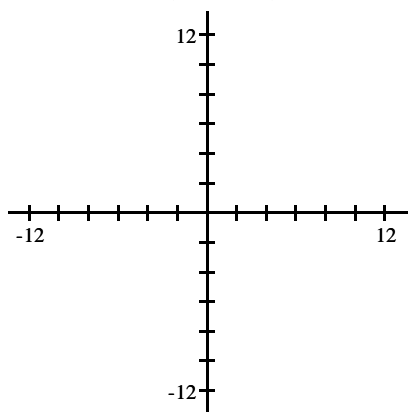
11) $r = \frac{5}{5 \cos \theta + 6 \sin \theta}$

11) _____

Graph the curve.

12) $r = 6 + 6 \sin \theta$ (cardioid)

12) _____



Answer Key

Testname: UNTITLED1

1) $(2\sqrt{2}, 2\sqrt{2})$

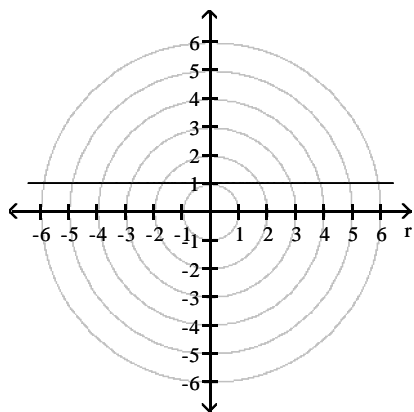
2) $(6, 0)$

3) $\left(\frac{9}{2}, \frac{-9\sqrt{3}}{2}\right)$

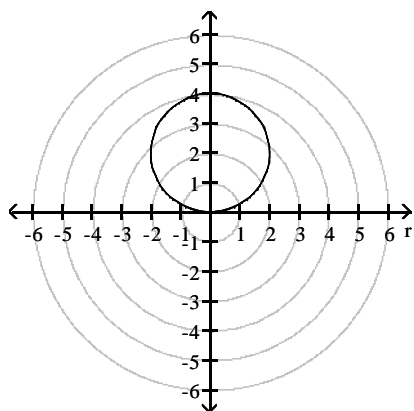
4) $(6, 30^\circ)$

5) $(12, 120^\circ)$

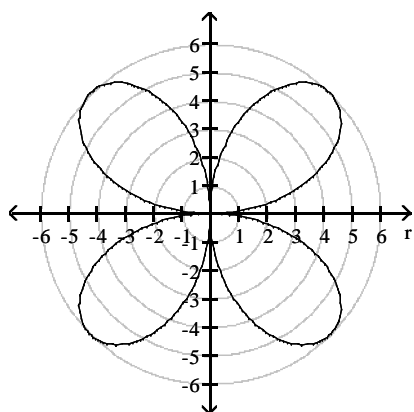
6)



7)



8)



9) $r = -3 \cos \theta$

10) $r = -9 \sec \theta$

11) $5x + 6y = 5$

Answer Key

Testname: UNTITLED1

12)

