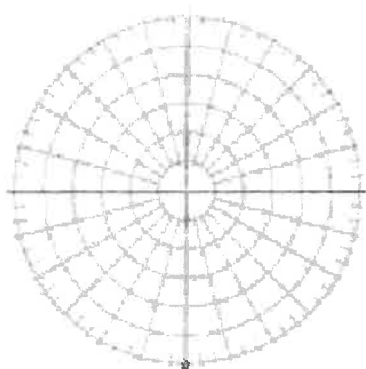


The polar coordinates of point P are given. Convert the polar coordinate to rectangular coordinates.

1) $P = (3, \pi/4)$

Find 4 pairs of polar coordinates for the point given .

2) $(5, -5\sqrt{3})$



Find an equivalent equation in rectangular coordinates.

3) $r = 10 \cos \theta$

4) $r = \frac{2}{6 \sin \theta + 2 \cos \theta}$

Find an equivalent equation in polar coordinates. Make sure to solve the equation for r .

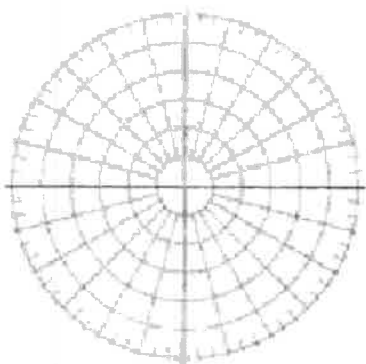
5) $5x + 6y = 2$

Find an equivalent equation in polar coordinates.

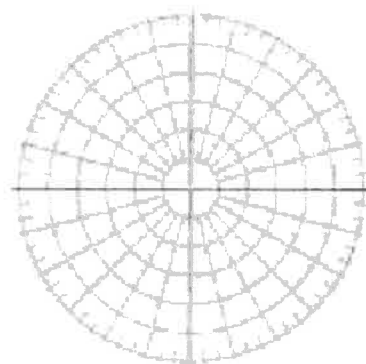
6) $x^2 + y^2 - 8y = 0$

Graph the equation. Make sure to show where the graph starts and the direction.

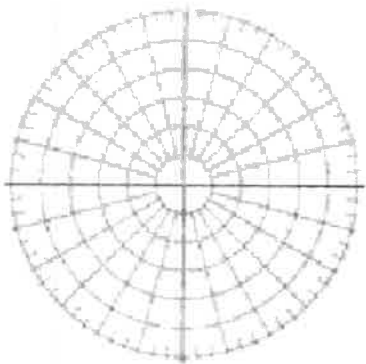
7) $r = 4$



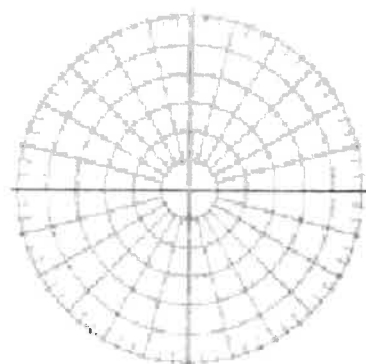
7) $\theta = \frac{\pi}{3}$



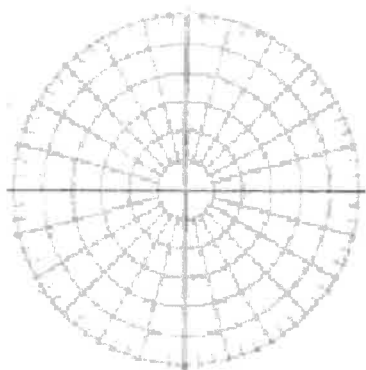
8) $r = 3 \sin \theta$



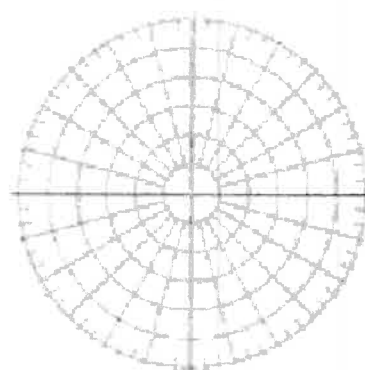
8) $r = -3 \cos \theta$



9) Graph $r = 1 - 3\sin \theta$

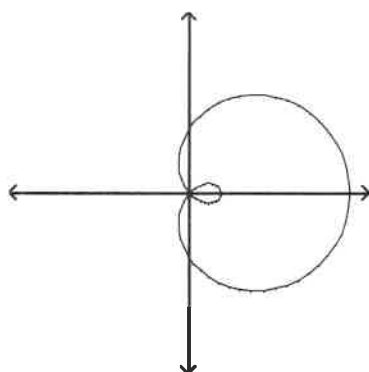


8) Graph $r = 3 + 3\cos \theta$



The graph of a limaçon curve is given. Without using your graphing calculator, determine which equation is correct for the graph.

10)



$[-5, 5]$ by $[-5, 5]$

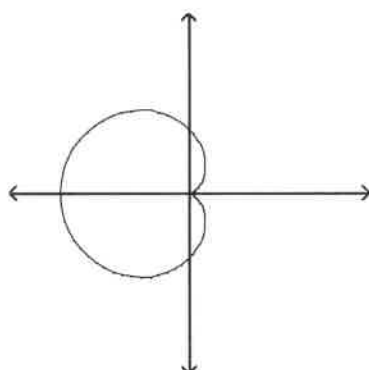
A) $r = 4 + \cos \theta$

B) $r = 3 + 2\cos \theta$

C) $r = 2 + 3\cos \theta$

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

11)



$[-5, 5]$ by $[-5, 5]$

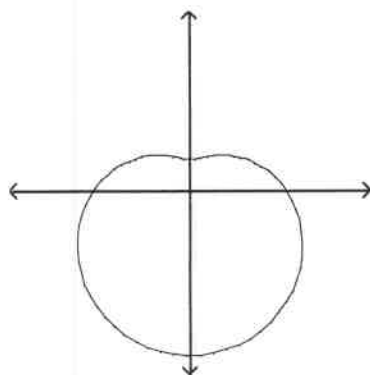
A) $r = 2 - 3\cos \theta$

B) $r = 2 - 2\sin \theta$

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

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

12)



$[-5, 5]$ by $[-5, 5]$

A) $r = 4 - \sin \theta$

B) $r = 2 - 2 \sin \theta$

C) $r = 3 - 2 \sin \theta$

D) $r = 2 - 3 \sin \theta$