

1) **Plot** each point in the polar coordinate grid. **LABEL** each point.

A. $\left(-10, -\frac{\pi}{4}\right)$

B. $\left(2, -\frac{5\pi}{6}\right)$

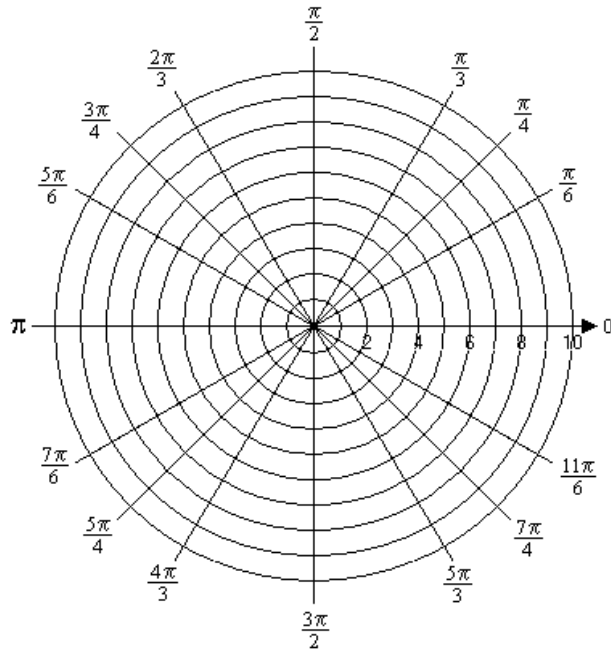
C. $\left(5, \frac{9\pi}{4}\right)$

D. $\left(-8, \frac{11\pi}{6}\right)$

E. $\left(-7, \frac{5\pi}{3}\right)$

F. $\left(-1, \frac{4\pi}{3}\right)$

G. $\left(3, \frac{7\pi}{2}\right)$



2) Rewrite the following coordinates:

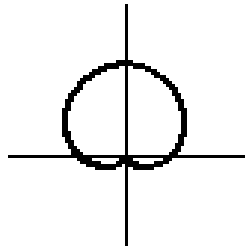
A. $\left(5, \frac{\pi}{6}\right) = (5, \underline{\quad}), (-5, \underline{\quad}), (-5, \underline{\quad})$

B. $\left(-4, \frac{3\pi}{4}\right) = (-4, \underline{\quad}), (4, \underline{\quad}), (4, \underline{\quad})$

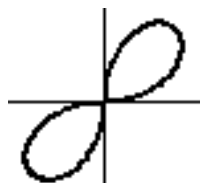
3) **Match the equations to the curve that best fits:**

___ 1. $r = 2 + 5\sin \theta$

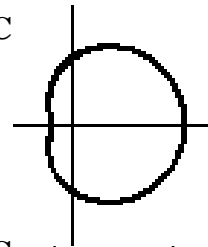
A.



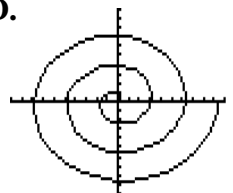
B.



C.



D.

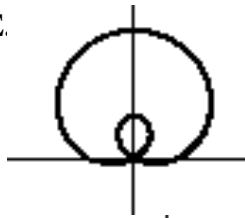


___ 2. $r = 3\theta$

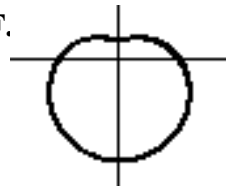
___ 3. $r = 2 + 2\sin \theta$

___ 4. $r = 3 - 3\cos \theta$

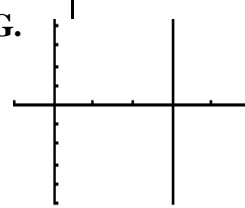
E.



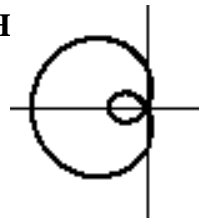
F.



G.



H.

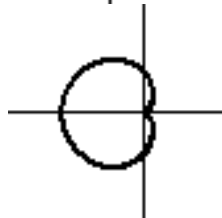


___ 5. $r = 4 - 2\sin \theta$

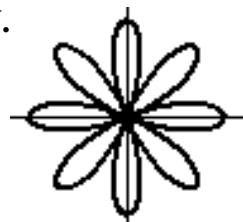
___ 6. $r = 5 + 3\cos \theta$

___ 7. $r = 3 - 5\cos \theta$

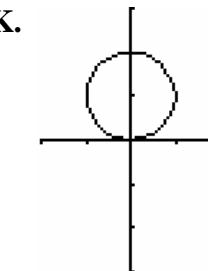
I.



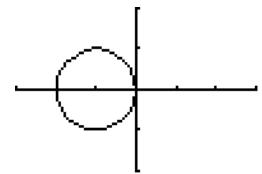
J.



K.



L.



___ 8. $r^2 = 9\sin 2\theta$

___ 9. $r = 5\cos 4\theta$

___ 10. $r = -2\cos \theta$

___ 11. $r = 4\sin \theta$

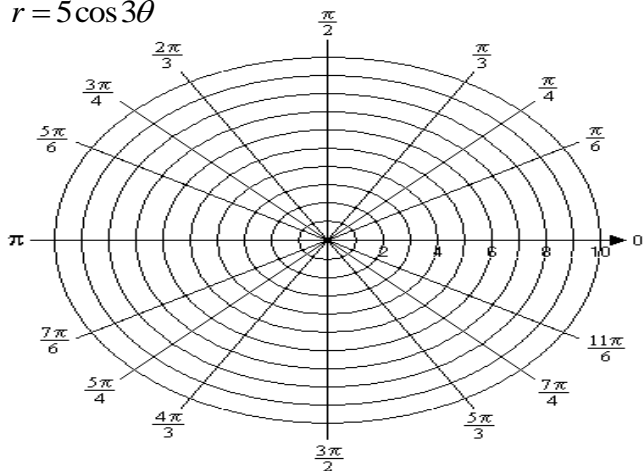
___ 12. $r \cos \theta = 3$

4) **Convert the polar coordinate into Rectangular Form.** A. $\left(-9, \frac{\pi}{6}\right)$ B. $(4, \pi)$

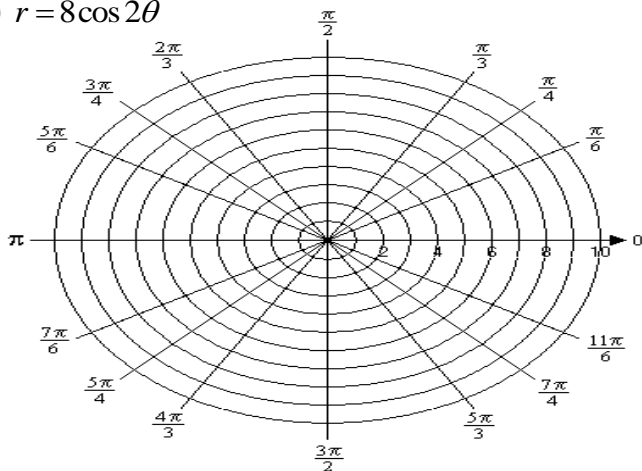
5) Convert each rectangular coordinate into Polar Form. A. $(\sqrt{3}, 1)$ B. $(0, 4)$

Graph:

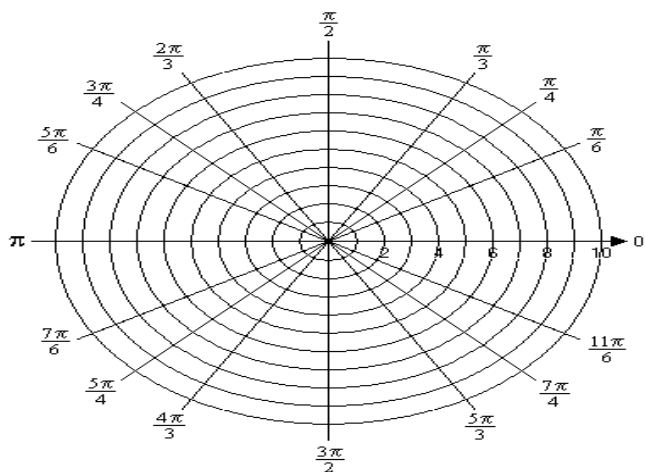
a) $r = 5 \cos 3\theta$



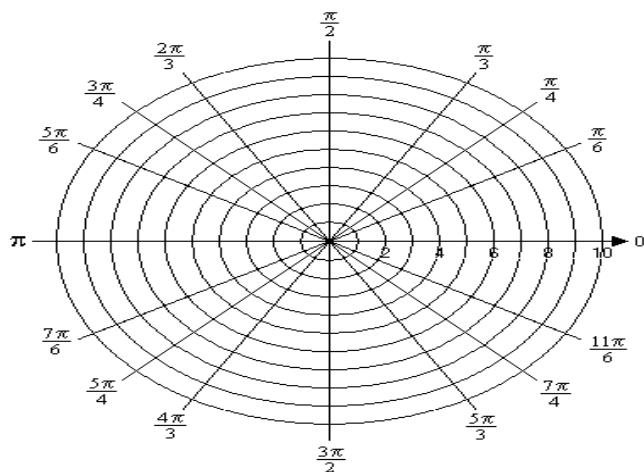
b) $r = 8 \cos 2\theta$



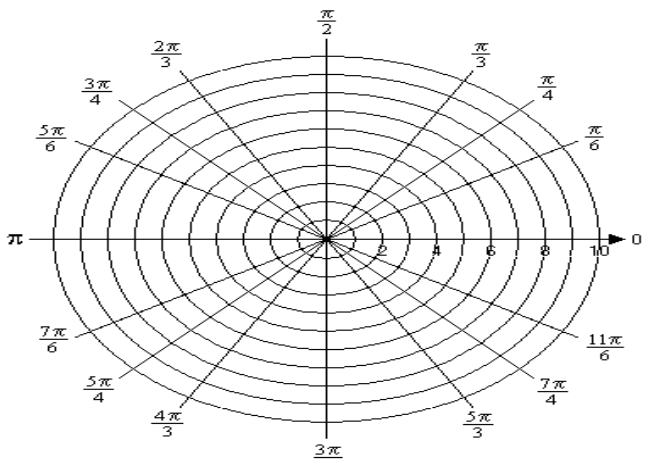
c) $r = 5 - 5 \cos \theta$



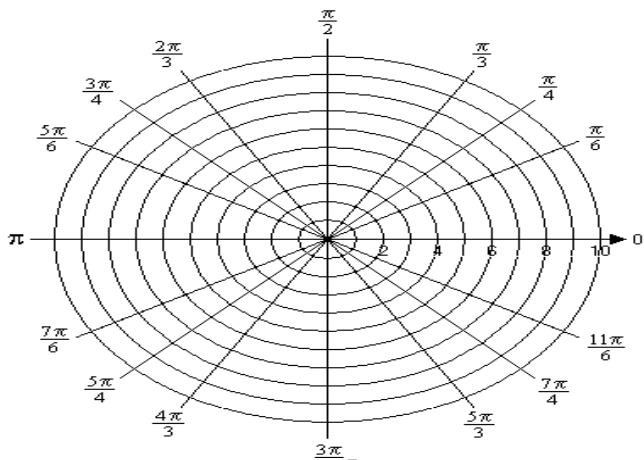
d) $r^2 = 36 \cos 2\theta$



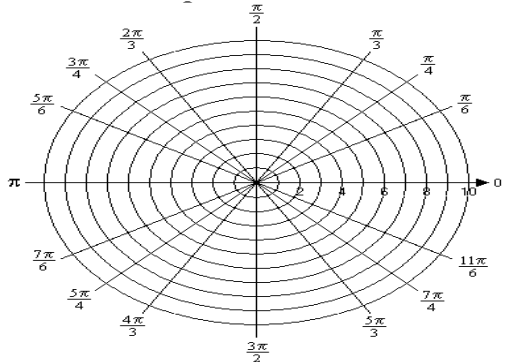
e) $r = 3 + 2 \cos \theta$



f) $r = 2 + 3 \sin \theta$



g) $r = 10 \sin \theta$



h) $\theta = \frac{3\pi}{4}$

