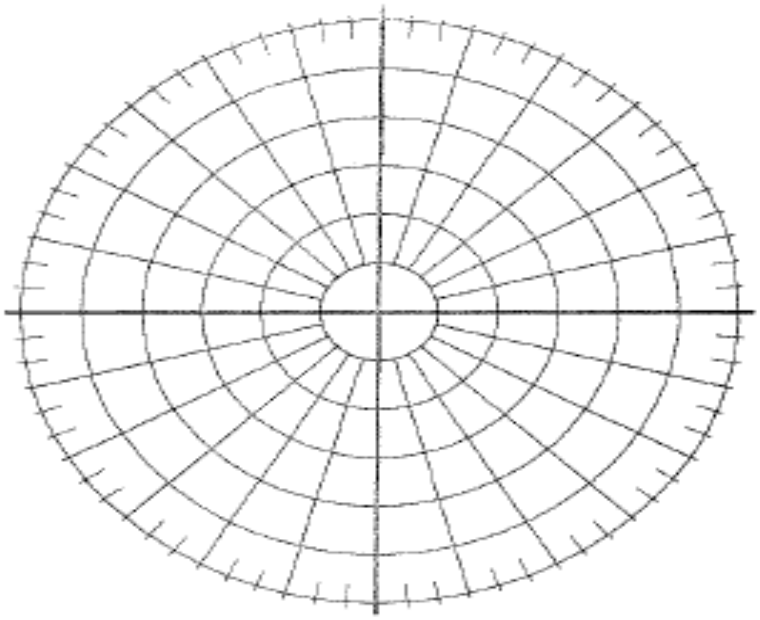
Polar Review

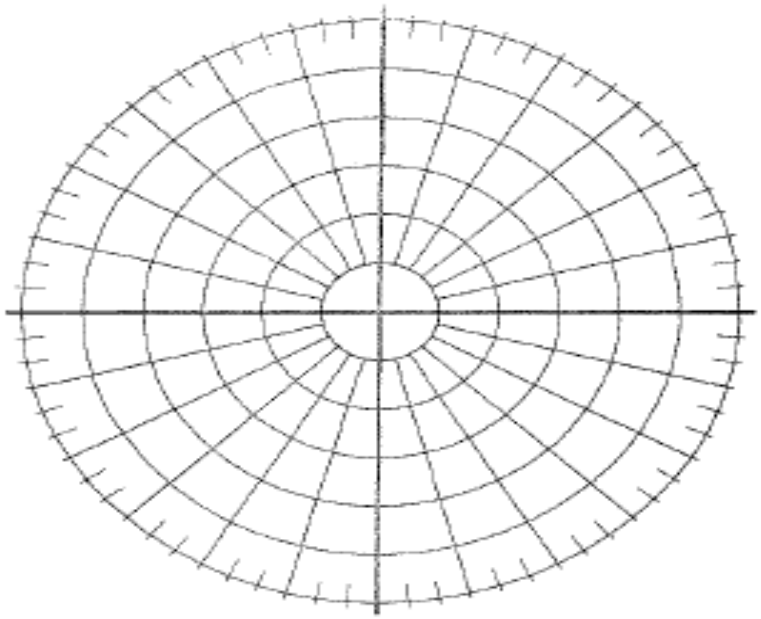
Plot the point whose polar coordinates are given. Then find the Cartesian coordinates of the point.

8) $\left(3, \frac{\pi}{2}\right)$



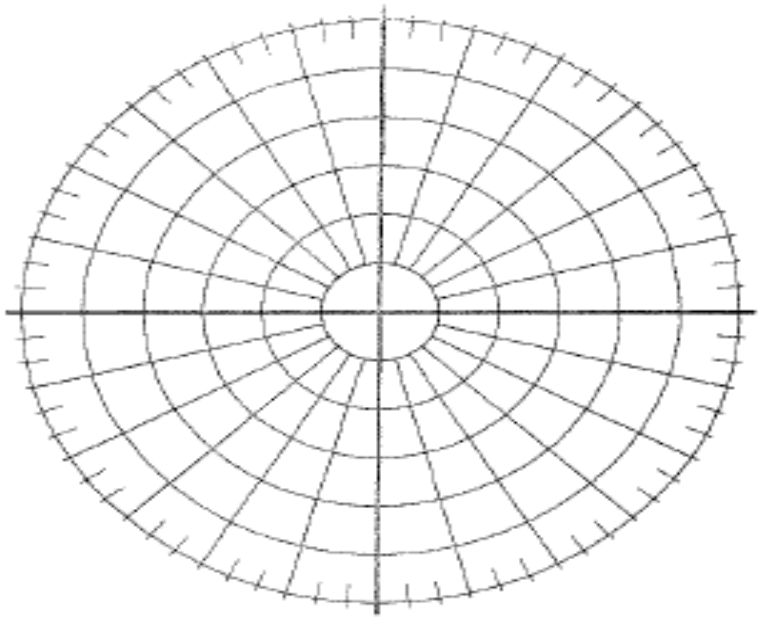
Plot the point whose polar coordinates are given. Then find the Cartesian coordinates of the point.

17) $\left(2\sqrt{2}, \frac{3\pi}{4}\right)$



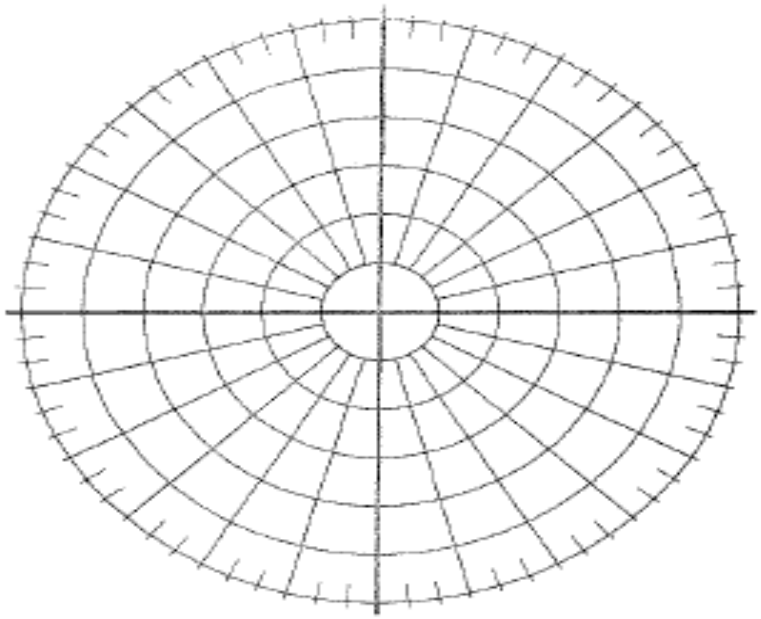
The Cartesian coordinates of a point are given. Plot the point and then find 4 polar representations of the curve

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



The Cartesian coordinates of a point are given. Plot the point and then find 4 polar representations of the curve

19) $(-1,-\sqrt{3})$



Identify the curve by finding a Cartesian/Rectangular equation for the curve.

12. $r = 2$

Identify the curve by finding a Cartesian/Rectangular equation for the curve.

$$r\cos\theta = 1$$

Identify the curve by finding a Cartesian/Rectangular equation for the curve.

$$r = 3\sin\theta$$

Identify the curve by finding a Cartesian/Rectangular equation for the curve.

$$r = \tan\theta \sec\theta$$

Find a polar equation for the curve represented by the given Cartesian equation.

16. $x = 3$

Find a polar equation for the curve represented by the given Cartesian equation.

$$x^2 + y^2 = 9$$

Find a polar equation for the curve represented by the given Cartesian equation.

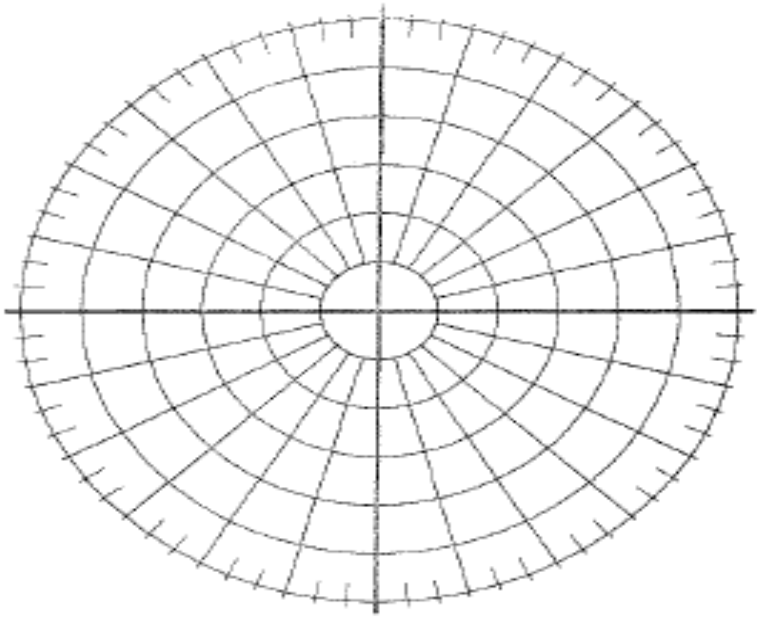
$x = -y^2$

Find a polar equation for the curve represented by the given Cartesian equation.

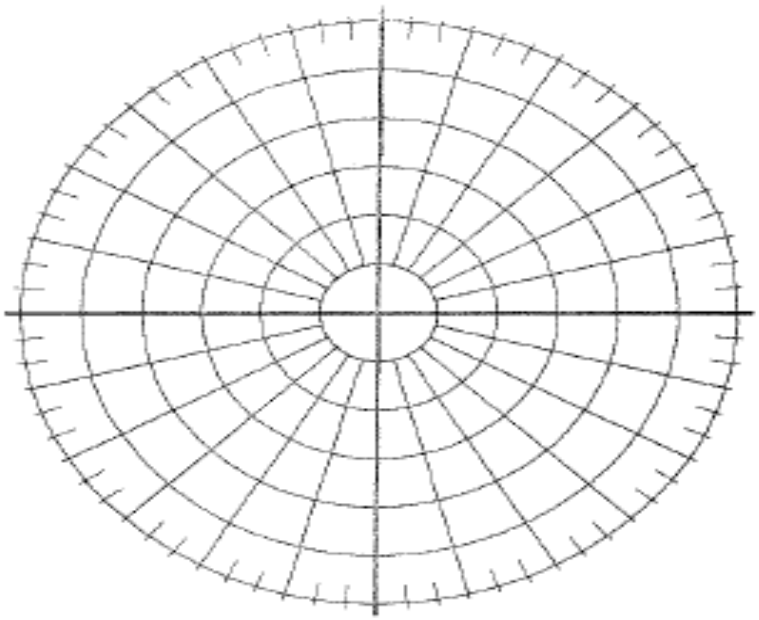
$$x + y = 9$$

Sketch the curve with the given polar equation

$$r = 5\sin\theta$$

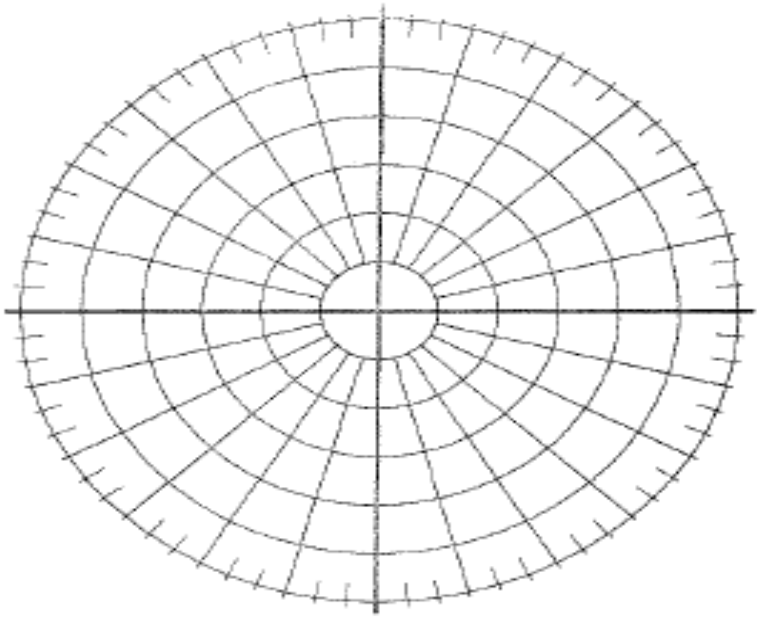


$$r = -5\cos\theta$$

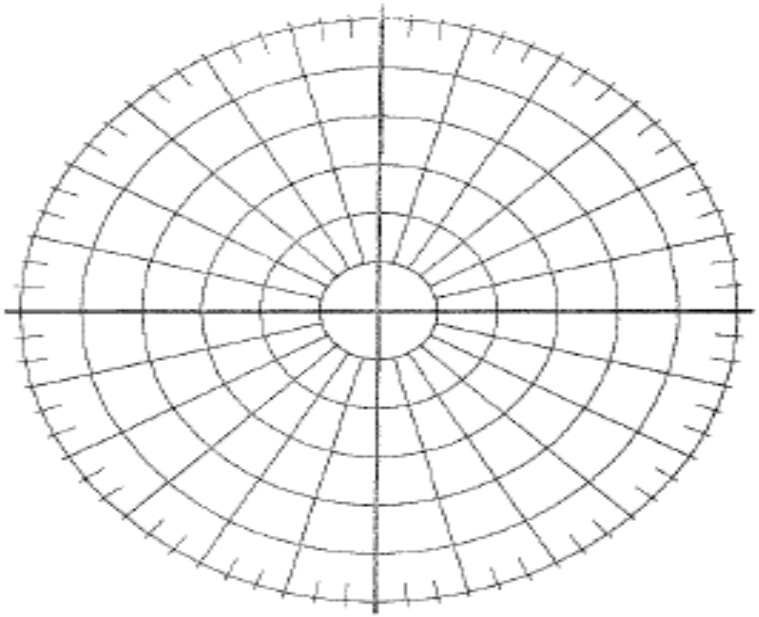


Sketch the curve with the given polar equation

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

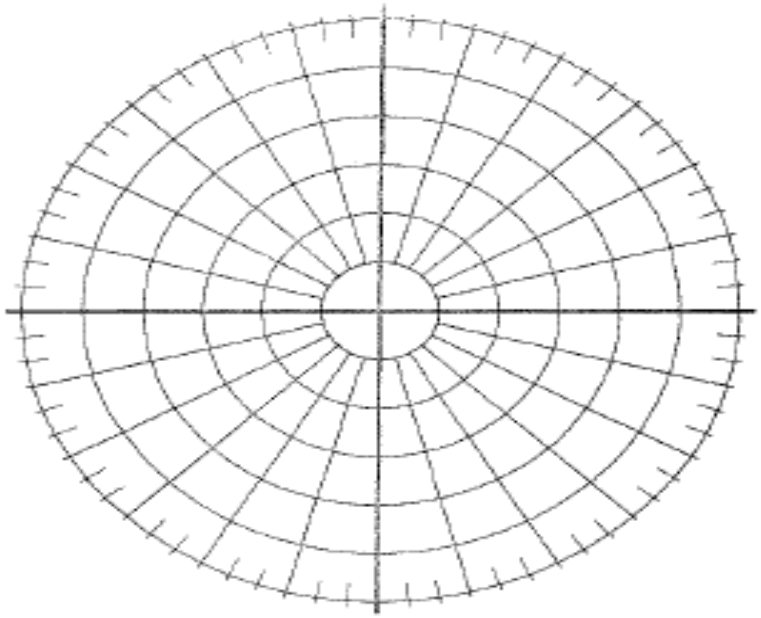


$$r = -3 + 2\cos\theta$$

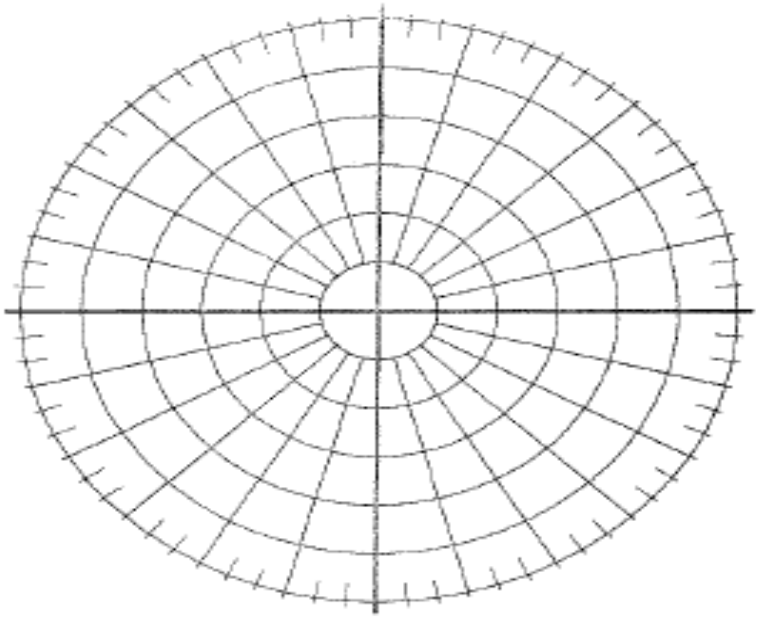


Sketch the curve with the given polar equation

$r = 3 + 4\cos\theta$



$r = 4\cos 2\theta$



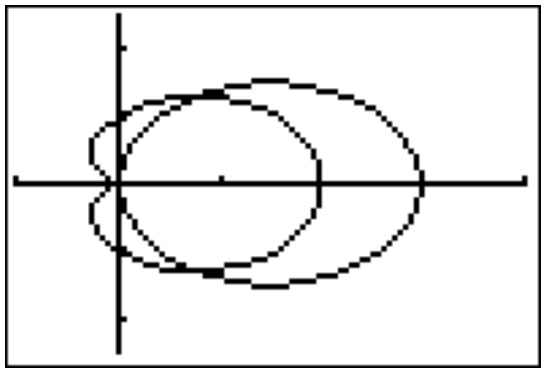
a) Find where each of the curves is when $\theta = 0$.

b) Find where each of the curves is when $\theta = \frac{\pi}{2}$

c) Using your information from parts a and b identify the direction the curve is moving.

d) Find when each curve is at the pole. e)Find where the 2 curves intersect.

26. the circle r = 3cos θ and the cardiod r = 1 + cos θ



a) Find where each of the curves is when $\theta = 0$.

b) Find where each of the curves is when $\theta = \frac{\pi}{2}$

c) Using your information from parts a and b identify the direction the curve is moving.

d) Find when each curve is at the pole. e)Find where the 2 curves intersect.

27. the circle r = 2 and the cardiod r = 2(1 – sinθ)