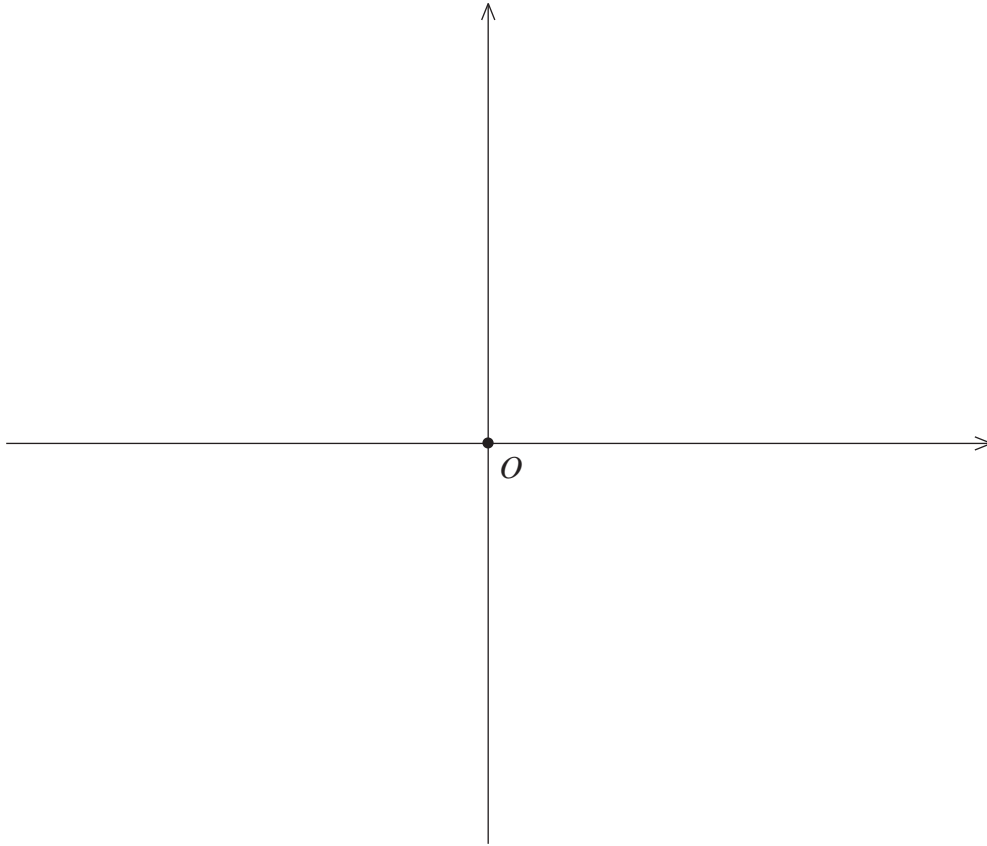


**Quiz****Name**

1. Find the Cartesian equivalent of the equation  $r = \frac{-6}{\sin \theta - 3 \cos \theta}$ . Use it to sketch the graph of the polar function  $r = f(\theta) = \frac{-6}{\sin \theta - 3 \cos \theta}$  carefully in the coordinate plane above.



2. Consider the function  $r = f(\theta) = \sec \theta = (\cos \theta)^{-1}$ . Convert this polar equation to a Cartesian equation and sketch its graph. Verify the equation  $f'(\theta) = \tan(\gamma - \frac{\pi}{2}) \cdot f(\theta)$  in this case.