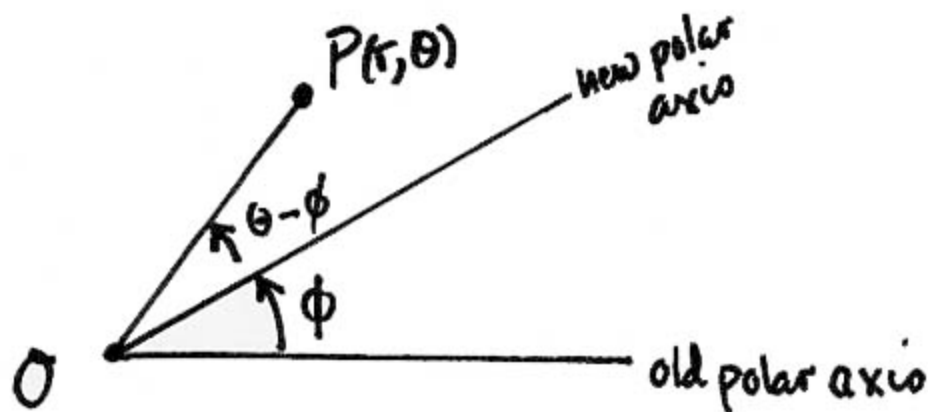


Rotation of Axes - Polar Coordinates.

11.6-11.7

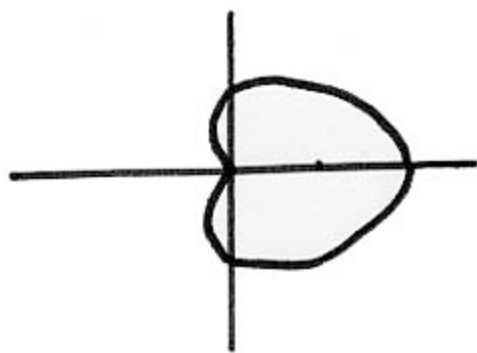
Math 151



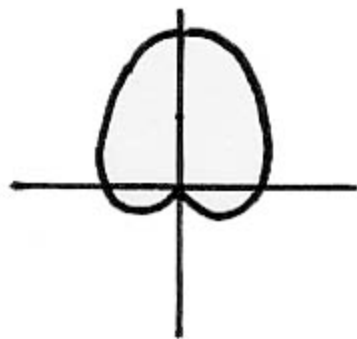
Replacing θ by $\theta - \phi$ rotates the graph by $+\phi$ ↴

Replacing θ by $\theta + \phi$ rotates the graph by $+\phi$ ↶

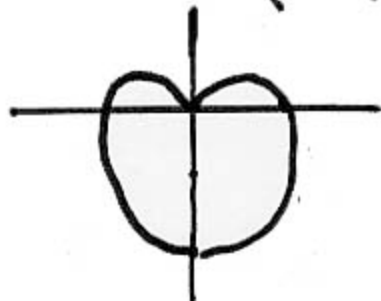
Example: $r = 1 + \cos \theta$



$r = 1 + \cos(\theta - \frac{\pi}{2}) = 1 + \sin \theta$



$r = 1 + \cos(\theta + \frac{\pi}{2}) = 1 - \sin \theta$



$r = 1 + \cos(\theta - \pi) = 1 - \cos \theta$

