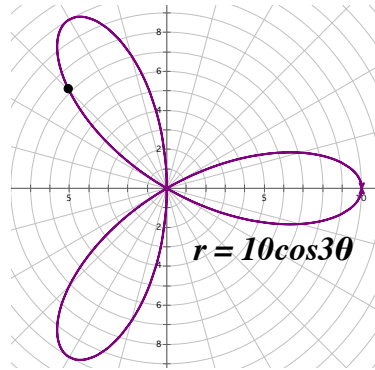


CH.10 WS Polar Equations Name: _____

1) Given $r = 10\cos(3\theta)$.

a) Find $\frac{dr}{d\theta}$ at $\theta = \frac{3\pi}{4}$.



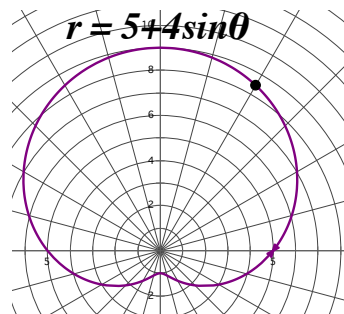
b) Find $\frac{dx}{d\theta}$ at $\theta = \frac{3\pi}{4}$.

c) Find $\frac{dy}{d\theta}$ at $\theta = \frac{3\pi}{4}$.

d) Find $\frac{dy}{dx}$ at $\theta = \frac{3\pi}{4}$.

2) Given $r = 5 + 4\sin\theta$, find the following:

a) Find $\frac{dr}{d\theta}$ at $\theta = \frac{\pi}{3}$.



b) Find $\frac{dx}{d\theta}$ at $\theta = \frac{\pi}{3}$.

c) Find $\frac{dy}{d\theta}$ at $\theta = \frac{\pi}{3}$.

d) Find $\frac{dy}{dx}$ at $\theta = \frac{\pi}{3}$.