

Quiz 2 - Math 53
September 11, 2008

Name _____

Consider the polar curve given by $r = \theta^2$, $-\pi \leq \theta \leq \pi$.

a)[4pts] Compute $\frac{dy}{dx}$ as a function of θ . What is $\frac{dy}{dx}$ at $\theta = -\pi, -\pi/2, 0, \pi/2$, and π ? Sketch this curve.

b)[3pts] Compute the length of the curve.

c)[2pts] Compute the area enclosed by the curve.