Math 201 Quiz 1 (A)

Name:.....Serial#:.....Sec #.....

Q.1: Elliminate the parameter t from the parametric equations $x = \tan(t),\ y = \sec^2(t)$ to find a cartesian equation and sketch its graph.

Q.2: Find $\dfrac{dy}{dx}$ for the parametric equations given in Question 1. Also find equation of the tangent line to the curve at $t = \dfrac{\pi}{4}$.

Q.3: Sketch the graph of the polar equation $r = 1 + \sin(\theta)$.