

11am

Quiz 5

Fall 2012

Your name: _____

Math 0220

Your TA's name: _____

No calculators, no notes, no books. Show all your work (no work = no credit). Write neatly. Simplify your answers.

1. Differentiate

(a) [1 point] $f(x) = \sin x + x^2$

(b) [2 point] $y = \sqrt{\cos(x^2)}$

(c) [2 points] $f(\theta) = \frac{\sec \theta}{1 - \sec \theta}$

2. [5 points] Find an equation of the tangent line to the curve $y = \sin x - 2 \sin^2 x$ at the point $(\pi, 0)$. Simplify your answer.

bonus problem [5 points extra] Find an equation of the tangent line to the curve $y = \frac{|x|}{\sqrt{2-x^2}}$ at the point $(-1, 1)$.