

Analytic Geometry and Calculus I

Quiz 3.4

Due Monday

Name _____

Show all work necessary for your answers.

1. Find: (a) $\sin\left(\sin^{-1}\left(\frac{-1}{2}\right)\right)$

(b) $\sin^{-1}\left(\frac{-1}{2}\right)$

(c) $\sin^{-1}\left(\sin\left(-\frac{\pi}{4}\right)\right)$

2. Simplify: $\tan(\cos^{-1}(x))$

3. Find $\frac{dy}{dx}$ for each of the following: (a) $y = e^{x^2} \cdot \tan^{-1}(e^x + x^2)$

(b) $y = \sin^{-1}\left(\frac{\ln(2x)}{x+1}\right)$