

Name: _____

This quiz covers: 3.1 and 3.6.

Directions: Complete all question and **show all applicable work.** Partial credit will be given. All questions are equally weighted.

1.) Compute the derivative of $f(x) = 3e^{2x}$.

2.) Compute the derivative of $f(x) = \tan^{-1} x$.

3.) Using implicit differentiation to compute $\frac{dy}{dx}$ of the equation below. You may leave your answer in terms of y .

$$xy^2 = e^x + x$$