

Date: 9/27/13.

Instructor: Cody Clifton.

Name: \_\_\_\_\_

This 10-point quiz will test your knowledge of the chain rule and implicit differentiation. Read carefully and always show your work. You have 10 minutes... good luck!

Note: for this quiz, it's *not* necessary to simplify your answers.

(1) Differentiate  $f(x) = (x^2 + 1)^{-10}$ .

(2) Differentiate  $k(s) = \cos(\pi \sin(1 - s^2))$ .

(3) Use implicit differentiation to find  $y'$  for the equation  $e^y \cos x = 1 + \sin(xy)$ .