

NAME:

SECTION: (circle one) 11:00-11:55 12:05-1:00

Math 105 - Quiz 6 - October 27, 2005

Instructions: Show all of your work and circle your final answers. Calculators are allowed, but notes and books are not.

1. (5 pts.) Simplify $f(x) = \cos(\arctan x)$.

2. (5 pts.) Calculate the derivative of $g(x) = \frac{\ln x}{\sqrt{3+\cos x}}$.

3. (5 pts.) Calculate the derivative of $y = (x)^{\sin x}$. (Logarithmic differentiation?)

4. (5 pts.) Suppose $h(t)$ is a solution of the DE $y' = t^2 + y$ and that $h(1) = 4$. Find an equation of the line tangent to h at the point $(1, 4)$.