

Your name: \_\_\_\_\_

Quiz no. 5 (1100-1 Quantitative Analysis,  
Spring 2008)  
March 7, 2008

**25 min. No symbolic calculators allowed (TI-89 and similar)!**  
(TI-86 or lower are allowed.) Show all work.

1. (14 points) Compute the derivatives  $f'(x)$  for the following functions:

$$f(x) = 2 \ln 4x \quad (1a)$$

$$f(x) = x^4 \cdot \ln x \quad (1b)$$

$$f(x) = e^{x^2-1} \quad (1c)$$

$$f(x) = \frac{x}{e^x} \quad (1d)$$

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2. (5 points) Find an expression for  $\frac{dy}{dx}$  if  $x^3 + y^2 = 3$

3. (6 points) Find the slope of the tangent to the curve given by  $x^2 - xy - y^2 = 3$  at  $(2, -1)$ .