10 minutes
5 points for each question
No calculators allowed

Math 285.002
Quiz 6
October 27, 2000

Name

Do all of your work directly on this sheet, using the back for scratch if necessary. Circle your answers.

1. Explain why the function $f(x,y) = e^{x+2y}$ is differentiable at the point $(0,1)$, and find the linearization $L(x,y)$ of the function at that point.

2. If $w = x^2 - y^2 + z^2$, $x = st$, $y = s\sin t$, and $z = s\cos t$, find $\dfrac{\partial w}{\partial t}$ when $s = \pi$, $t = 2\pi$. Simplify your answer as much as possible.