Section _____ **Name** _____

TA _____ **Student Number** _____

Math 126B **Calculus With Analytic Geometry III** **Fall 1995**

QUIZ #8

11/16/95

Don't worry about algebraically simplifying numbers (i.e. you may leave radicals in the denominator, fractions unreduced, etc.). **Show your work.**

Suppose $T(p,q)$ is the function

$$T(p,q) = \frac{p}{q+1}.$$

1. Compute the differential dT in terms of dp and dq at the point where $p = 3$ and $q = 2$.

$dT =$ [ ]

2. Suppose the values $p = 2$ and $q = 3$ are known to be accurate to within ± 0.1. Use the differential to *estimate* the maximum (absolute) error in T that could be caused by errors in the values of p and q.

Maximum error in $T =$ [ ]