

GEORGIA TECH

SCHOOL OF MATHEMATICS

MATH 1502

CALCULUS II
Quiz # 2
September 6th, 2007

First Name : -----

Last Name : -----

1. Compute the following limits (*what method are you using?*)

$$\lim_{x \rightarrow 0} \frac{x}{(1 + x^2) \tan x} =$$

$$\lim_{x \rightarrow +\infty} x \sin(37/x) =$$

2. Compute the improper integrals

$$\int_1^{+\infty} \frac{dx}{x^{5/3}} =$$

$$\int_0^1 \frac{dx}{\sqrt{1-x}} =$$

3. For which values of $p \in \mathbb{R}$ does the integral $\int_0^\infty dx/(1 + 11x + x^3)^p$ converge?

RESULT =