

GEORGIA TECH

SCHOOL OF MATHEMATICS

MATH 1512

HONORS CALCULUS II

Quiz # 4

September 21st, 2005

First Name : _____

Last Name : _____

In all the following cases indicate whether the series is convergent, absolutely convergent or divergent. Indicate each time the corresponding test you are using.

$$\sum_{n=2}^{\infty} \frac{1}{n^{1/\ln n}}$$

$$\sum_{n=2}^{\infty} \frac{1}{n \ln^2 n}$$

$$\sum_{k=0}^{\infty} \frac{2^{k^2}}{k!^k}$$

$$\sum_{n=0}^{\infty} \frac{(-1)^n}{\ln^2 n}$$

Discuss convergence as before in function of $-\infty < x < +\infty$ for

$$\sum_{n=0}^{\infty} n(n+1)(n+2)x^n$$