

MATH 152

Mrs. Bonny Tighe

QUIZ 7

25 points

12.4, 12.5, 12.6

NAME _____

Wed. 11/2/05

1. Test the series for convergence or divergence. State the test you use and show all work. If the series is an Alternating Series, find if it is Absolutely or Conditionally convergent. Use each test at least one time.

a) $\sum_{n=1}^{\infty} \frac{(-1)^n (n-1)}{n^3 + n}$

b) $\sum_{n=1}^{\infty} \frac{n(-2)^n}{5^{n-1}}$

c) $\sum_{n=1}^{\infty} \frac{10^n}{n!}$

d) $\sum_{n=1}^{\infty} \frac{3^n n!}{n^4}$

$$\text{e) } \sum_{n=1}^{\infty} \frac{n}{e^n}$$

$$\text{f) } \sum_{n=1}^{\infty} \left(\frac{-3n}{1+8n} \right)^n$$

$$\text{g) } \sum_{n=1}^{\infty} \frac{(-1)^{n-1} \ln n}{n}$$

$$\text{h) } \sum_{n=1}^{\infty} \frac{(-n)^{n-1}}{(n+1)!}$$