MATH 152 **QUIZ 7A** NAME _____

Mrs. Bonny Tighe 25 points

12.5, 12.6 Section _____ Wed. 4/12/06

1. Test the series for convergence or divergence. **State the test you use** and show your work. If the series is an Alternating Series, find if it is Absolutely or Conditionally convergent.

a) $\sum_{n=1}^{\infty} \frac{3^n \, n}{n!}$

b) $\sum_{n=1}^{\infty} \frac{(-1)^{n-1} \ln n}{n^3}$

c) $\sum_{n=1}^{\infty} \frac{2^n}{n!}$

d) $\sum_{n=1}^{\infty} \frac{(-1)^n (n+1)}{n^3 + 2n}$

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

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

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

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