Math 181 Name _____
Fall, 2009

Homework # 17
Due _____
No late papers accepted! No excuses!

1. Which series converge and which diverge? Give reasons for your answers.

   a) $\sum_{n=2}^{\infty} \frac{-2}{n-1}$

   b) $\sum_{n=1}^{\infty} \frac{n!}{(2n+1)!}$

   c) $\sum_{n=1}^{\infty} \frac{(-1)^n}{\ln(n+1)}$

2. Which of the series converge conditionally, converge absolutely, and which diverge? Give reasons for your answers.

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

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

3. Which of the sequences converge and which diverge? Find the limit of each convergent sequence?

a) $a_n = \sqrt{\frac{2n}{n+1}}$

b) $a_n = \frac{1-2n}{1+2n}$