**Math 414 Analysis II**
Problem Set 6

**Due Friday February 27**

Do the following problems from Abbott's *Understanding Analysis*.
Exercise 2.7.6
Exercise 2.7.8
Exercise 2.7.10

1) Decide if the following series coverges or diverges. Justify your answers and state explicity which test or tests you are using.

a) $\sum_{n=1}^{\infty} \frac{n^2}{3^n}$

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

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

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

e) $\sum_{n=1}^{\infty} \frac{n^5}{2^n + n^2}$