MA 16400 - Spring, 2014 Quiz 9 Name_____

1. Determine whether the series converges or diverges. Indicate which test you use and show your work.

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

   (b) $\displaystyle\sum_{n=0}^{\infty} \frac{\sqrt{n}}{n^2+5}$

2. Determine whether the series converges absolutely, converges conditionaly, or diverges. **Explain your answers.**

(a) $\displaystyle\sum_{n=0}^{\infty} \frac{(-1)^n}{\sqrt{n+2}}$

(b) $\displaystyle\sum_{n=0}^{\infty} (-1)^n \frac{n}{n^3-5}$

(c) $\displaystyle\sum_{n=0}^{\infty} (-1)^n \frac{n}{n+5}$