Name _____

Homework 13
Section 9.4

1. (5) Use a basic comparison to determine whether $\sum_{n=1}^{\infty} \frac{2+\cos n}{n^2}$ converges or diverges.

2. (5) Use the limit comparison test to determine whether $\sum_{n=1}^{\infty} \frac{8n^2-7}{e^n(n+1)^2}$ converges or diverges.

For numbers 3 and 4, determine whether the series is absolutely convergent, conditionally convergent or divergent. State which test you are using, and be sure to check that the hypotheses are satisfied.

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

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