

Name _____

Homework 14

Section 9.4

1. (4) Use a basic comparison to determine whether $\sum_{n=1}^{\infty} \frac{5 + 3 \cos n}{n^2}$ converges or diverges.

2. (4) Use the limit comparison test to determine whether $\sum_{n=1}^{\infty} \frac{8n^2 - 5}{n^3(n+1)^2}$ converges or diverges.

3. (6) Determine whether the series $\sum_{n=2}^{\infty} \frac{(-1)^n}{\sqrt{n-1}}$ is absolutely convergent, conditionally convergent or divergent. (Be sure to state which test(s) you are using, and check that the hypotheses are satisfied.)

4. (6) Determine whether the series $\sum_{n=1}^{\infty} (-1)^{n-1} \frac{2^{2n}}{(2n-1)!}$ is absolutely convergent, conditionally convergent or divergent. (Be sure to state which test(s) you are using, and check that the hypotheses are satisfied.)