SI Session: Week of April 14th
Tuesdays 5:30 – 7:30 PM, Rm. 1130
Wednesdays 4:20 – 6:20 PM. Rm. 1229

Prof. Stockton : Calculus II : Spring 2008
SI Leader : Neil Jody

Determine the convergence or divergence of the series and identify the test that was used.

1. $\sum_{n=0}^{\infty} \frac{n!}{3^n}$

2. $\sum_{n=1}^{\infty} n\left(\frac{3}{4}\right)^n$

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

4. $\sum_{n=1}^{\infty} \frac{n!}{n3^n}$

5. $\sum_{n=0}^{\infty} \frac{3^n}{(n+1)^n}$

6. $\sum_{n=2}^{\infty} \left(\frac{2n+1}{n-1} \right)^n$

7. $\sum_{n=1}^{\infty}\left(2\sqrt[n]{n}+1\right)^{n}$

8. $\sum_{n=1}^{\infty}\left(\frac{1}{n}-\frac{1}{n^{2}}\right)^{n}$

9. $\sum_{n=1}^{\infty} \frac{3}{n\sqrt{n}}$

10. $\sum_{n=1}^{\infty} \frac{(-1)^n 3^{n-2}}{2^n}$

11. $\sum_{n=1}^{\infty} \frac{\cos n}{2^n}$

12. $\sum_{n=1}^{\infty} \frac{(-1)^n 3^{n-1}}{n!}$

13. $\sum_{n=1}^{\infty}(-1)^n \frac{(n!)^2}{(3n)!}$

14. $\sum_{n=1}^{\infty}(-1)^n \frac{e^{n^2}}{n^n}$

15. $\sum_{n=2}^{\infty}(-1)^n \frac{1}{n \ln n}$

16. $\sum_{n=1}^{\infty}\frac{3^n n!}{(2n)!}$

17. Find the interval of convergence of the following power series.

a. $\sum_{n=0}^{\infty} \frac{(-1)^{n+1}(x-1)^{n+1}}{n+1}$

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