1. Do WebAssign 9.5. Remember that the WebAssign will be reopened three days before Exam III for you to review the problems. You will be allowed to improve your score by a maximum or three points. Additional attempts will not be given.

2. Find the radius of convergence of

$$1 + 2x + \frac{4x^2}{2!} + \frac{8x^3}{3!} + \frac{16x^4}{4!} + \frac{32x^5}{5!} + \cdots$$

3. Use the Integral Test to decide whether the series converges or diverges: $\sum_{n=0}^{\infty} ne^{-n^2}$.

4. Determine whether the series converges: $\sum_{n=1}^{\infty} \frac{n^2 + 2^n}{n^2 2^n}$.

5. Determine whether the series converges: $\sum_{n=1}^{\infty} 2^{-n} \frac{n+1}{n+2}$.

6. The series $\sum C_n(x+7)^n$ converges at $x = 0$ and diverges at $x = -17$. What can you say about its radius of convergence?

A set of problems for series tests: determine whether the following series converge or diverge. Clearly state the test you used and show that all requirements of the test are met.

7. $\sum_{n=1}^{\infty} \frac{1}{r^n n!}, r > 0$

8. $\sum_{n=1}^{\infty} \frac{\ln(n)}{n}$

9. $\sum \frac{4\sin(n) + n}{n^2}$

10. $\sum_{n=1}^{\infty} \frac{n-4}{\sqrt{n^3+n^2+8}}$

11. $\sum_{n=1}^{\infty} \frac{2^n+1}{n2^n-1}$

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