- Homework #16 §10.8 #1, 7, 9, 11, 13, 15, 17, 19, 21, 29, 33.
- In §10.8, we will learn how to find the radius of convergence of a power series. This relies on many of the techniques from §10.1–10.6. The main step will usually involve the ratio test.
- Homework #17 §10.9 #1, 3, 5, 7, 11, 13, 15, 21, 23, 25, 27, 30, 36. §10.10 #1, 3, 9, 11, 17, 19, 21, 25, 26, 33, 34, 37, 38, 45, 47, 49.
- The most important idea in §10.9 is that we can apply the techniques of calculus to find series of functions defined by integrals. For example, if we remember the geometric series, then we know how to find series for $1/(1+x)$ and $1/(1+x^2)$. Then, if we integrate, we can find series for $\log(1+x)$ and $\tan^{-1}(x)$. I think that it is more important to understand the procedure than it is to memorize the result.
- In §10.10, we learn about Taylor and Maclaurin series. If we can compute the derivatives of all orders for a function f, then it is easy to find the Taylor or MacLaurin series for f. The three main examples are e^x, $\sin x$ and $\cos x$. Please be sure you know the MacLaurin series for these three functions.

  Also, remember that if you already know a way to write a function as a power series, then that series must be the Taylor series. Thus, we already know the MacLaurin series for $\log(1+x)$ and $\tan^{-1} x$.
- Homework #18 §10.12 #1, 5, 7, 9, 13, 15, 21, 23, 25, 27. To be discussed on Thursday, 4 April 2002.

  This section shows us how to estimate the difference between a function and its Taylor series.
- Extra credit opportunity. Attend the Math club lecture on Wednesday, 27 March 2002. Write a brief description of what you learned about the mathematics of soap bubbles and hand it in on Friday, 29 March 2002. You may earn up to 5 homework points.

  Even if you do not want the extra credit, I believe this will be an interesting and entertaining lecture.
- Quiz 9. Thursday, 28 March 2002. §10.8.
- Homework I. Due Wednesday, 3 April 202. §10.9 #36a), b).
- Please be sure you have the correct time for the final exam. Our final will be on Thursday, 2 May 2002 from 8–10am. The date given on the course calendar is wrong.