

- Homework F. Due Wednesday, 27 February 2002. Applications plus, p. 501, #7a)b). Alert students may be aware that the answers to the odd-numbered questions appear in the back of the book. I feel this is an outrage—it is the author’s duty to prepare the questions and the student’s duty to prepare the answers. I imagine that any day now, a group of concerned students will arise to protest this encroachment on their duties. Until this happens, the grader of Homework F will have to be particularly alert to make sure that students explain each step of their reasoning. The point of mathematics is explanations, not answers.
- Homework #10 §7.9 #1, 3, 5, 11, 17, 19, 49, 51, 57, 60. (Hint: #60 involves integration by parts.) §8.1 #1, 3, 5, 11, 15, 17, 29, 31, 35. Review problems, p. 176, #47, 54, 86a).¹
In §8.1 we see an application of integration of rational functions by partial fractions to solving differential equations such as $y' = y(1 - y)$. I hope that this application helps to justify some of the tedious calculations we were forced to do in section 7.4.
Recitation on Tuesday, 26 February should cover Homework 10, with a little time for students to work together on Homework F.
- Homework #11. §8.2 #1, 3, 5, 6, 7, 29, 30. This section covers arclength and provides an example of how a familiar geometric idea, the length of a curve, can be defined carefully using the integral.
- Quiz 6(?) on Thursday, 28 February 2002 over section 7.8. If needed, the error estimates in the trapezoid rule and Simpson’s rule will be provided to you. As always, the quiz will be based on homework.
- Exam 2. The second exam will be on Tuesday night, 5 March 2002 at 7:30-9:30pm in CP139. This exam will cover sections 7.1–7.6, 7.8, 7.9, 8.1, 8.2. Please see earlier homework sheets for the list of integrals and the trigonometry which we are expected to know for the exam. No additional review questions will be provided. Students should review their complete and neatly written solutions to the (numbered) homework assignments to prepare for the exam. Work nearby problems from the text, if you feel you need additional practice.

February 20, 2002

¹Why are these problems here? One reason why mathematics is difficult is that each topic builds on the previous one, while the natural inclination of a student is to learn a topic and then forget it. In order to fight this, we should work a few review problems every week. These problems will not be directly examined. However, this does not mean that a student who cannot differentiate correctly will do well on the examination.