MATH 142 (Section 502) University of South Carolina
D. Meade Spring 1996

Homework Problems for Chapter 10
Numerical Methods and Approximations

Section	Page	Problems	
10.1	450	# 15, 16, 17, 19, 20, 21, 23, 26, 27, 28	(CR # 2, 3, 4)
10.2	458	# 1, 4, 5, 6, 7, 9, 10, 14, 15, 17, 19, 24	(CR # 1, 2, 3, 4)
10.3	465	# 1, 4, 5, 6, 7, 17, 18, 24	(CR # 1, 2, 3)
10.6	480	# 7, 8, 9	(CR # 1, 3, 4, 5, 13)

Notes

- The main theme of this chapter is approximation, in particular the approximation of functions and of integrals. These ideas are quite powerful, as many (if not most) real-world problems cannot be solved using exact methods.
- Our emphasis will not, however, be on numerical computations. We will concentrate on the ideas behind the approximations and the errors that are introduced with approximations.
- Some of the assigned problems do require the use of a calculator. These problems are important. The exam problems will be similar, but will not involve calculations that require a calculator (or other electronic device).
- These problems will reinforce the main points presented in the text, and in the lectures. You should be sure you know how to work all of them. Note that references to examples in the text are provided for many problems. Don't be afraid to use these hints.
- Some problems will require you to use knowledge learned in Math 141. If you don't remember the appropriate technique, look it up!
- If you need more practice, there are many other problems in the text that are similar to the ones I have assigned.
- If you don't know how to do a problem, ask about it in class, recitation, or office hours!