MATH 550 (Section 1)
D. Meade

University of South Carolina
Fall 1997

Homework Problems for Chapters 7 and 8
Integrals over Paths and Surfaces
and
The Integral Theorems of Vector Analysis

Section	Page	Problems
7.1	400	# 1*, 2ab, 3c*, 5, 7, 10a, 11*
7.2	417	# 1ab*c, 2, 4*, 9, 11*
7.3	427	# 2*, 3, 5*, 7, 12*
7.4	438	# 4*, 9, 13*, 14, 22b*c
7.5	446	# 2, 3, 5*, 7, 9, 10*
7.6	460	# 4, 6, 7*, 14, 15*
Review	462	# 1bc, 2a, 3a, 5*, 7, 8*, 9, 11, 17*, 18, 20, 21, 23*, 25, 26
8.1	476	# 1, 2, 4*, 7, 9*, 13, 15*, 20
8.2	490	# 2*, 5, 6*, 7, 11, 15*, 23*
8.3	501	# 3, 4*, 9*, 10, 14ab, 15a*
8.4	515	# 3*, 4b, 5c, 9*, 12, 13, 15, 18*
Review	552	# 1, 3*, 4, 7, 8*, 11, 13*, 15, 18, 20

Notes

- Problems marked with an asterisk (*) will be collected and graded.
- These problems have been selected as the minimum amount of work that you should be doing for this course. Some problems will be straightforward computations; some will require the construction of a logical argument using the terminology and concepts discussed in class; some problems will require you to expand your knowledge (with given information) and apply this to a new setting.
- If you need more practice, there are many other problems in the text that are similar to the ones I have assigned.
- There is a section of review problems at the end of each chapter. None of these problems will be collected for grading. These problems should be a good test of your understanding of the main points in the chapter. I suggest solving these problems as one part of your preparation for an exam.
- Be sure you know how to do all of these problems. Do not hesitate to ask questions – in class, by e-mail, or during office hours.
- This is the final set of homework problems. As you can see, we still have a fair amount of material to cover. The topics in the last two chapters are applications of everything discussed in the course: tangent vectors, normal vectors, parameterizations, double integrals, triple integrals, ...
- The final exam will concentrate on the topics in Chapters 7 and 8. However, as mentioned above, you will need to be able to use many of the earlier methods and techniques to solve these problems.