

## Handout #5 (11/16/05)

## Portfolio Problem #4

Your final portfolio writing assignment is an independent study project. Each writing group needs to choose a project from the list below, and write a short expository paper about it. All drafts will be group work.

**Guidelines**

- Your group should choose one of the readings below to write about. Begin by trying to understand as much of the reading as you can and answering the questions you find there.
- Your paper should be self-contained and understandable to your classmates who have not read the chapter or section on which it is based. This means you'll need to explain any new concepts and define any new mathematical terminology that you will use.
- In the final written project, don't just answer the "Guided Project" questions literally; instead, organize the material into a coherent presentation, with theorems clearly stated and proved.
- You don't have to answer all the questions in the reading, or prove all the theorems that are suggested there; but your paper must include at least one significant mathematical proof that you work out on your own. If appropriate, you may also include proofs from the reading, but if so you must rewrite them in your own words.
- Be sure to include some background information to explain why the result is interesting and how it relates to the mathematical ideas we have talked about this quarter.
- If your paper is handwritten, make sure it is *neat* and *legible*. If typed, make sure all of your mathematical symbols are clearly and correctly inserted.
- Length guidelines: approximately 800–2000 words (roughly 6–15 pages handwritten or 2–5 pages typed).

**Schedule**

- Between now and December 2, you'll need to complete *two drafts*. Write a first draft, arrange to have it peer reviewed by at least two people not in your group, and then incorporate the peer-review suggestions into a second draft to be completed by December 2. I'll give you time in class on Monday, Nov 28, to exchange first drafts, but if yours isn't ready by then, you'll have to arrange to get it peer reviewed on your own.
- Bring one copy of the second draft, *together with all your marked-up first drafts and peer review comments*, to class on Friday, December 2.
- I'll return the second draft with my comments on Monday, December 5.
- Final draft is due with your completed portfolio on Monday, December 12.

**Possible Projects**

- Any of the projects in Chapter 27 (sections 27.1–27.11) of the textbook.
- Part of Chapter 12, 18, or 23 in the textbook. If you do one of these, you must choose at least one of the Problems at the end of the chapter that asks for a significant proof, and write up a solution to that problem.
- If you would like to propose a different project, you'll need my permission. Bring your source materials to class or to my office hour no later than Monday, November 21.