

MATH 242 – Principles of Analysis
Problem Set Guidelines
Spring 2011

Each week’s individual problem set assignment will be posted no later than Friday on the course homepage and collected the following Friday. These assignments will consist of *two portions* – an “A portion” consisting of several somewhat more computational practice problems, and a “B portion” consisting entirely of proof-oriented questions.

In an experiment designed to help selected majors (especially those thinking of graduate study in mathematics) gain an even deeper understanding of the topics covered in the 200-level major sequences, a first pass through the “A portions” will be made a student grader and I will be checking things over (for consistency, for correct arithmetic, etc.) before handing your work back. I will be solely responsible for correcting the “B portions.” Here are some guidelines to follow while doing your assignments, for our mutual benefit.

- The “A portion” and the “B portion” should be treated as *separate assignments* when you write up your solutions. *Do not intermix the questions. You will be handing in the two portions separately each Friday.*
- Please be neat! Write up the problems in each portion *in order*, without extensive crossing-out or erasures. Use only *one side of the page*, and staple each portion of your assignment together. If you are worried about wasting paper here, you can address that concern by *waiting until you have worked out your solutions to recopy the final version to be handed in*. That way you should have a better idea how much space each solution will take and you will not leave too much blank space. However, also see the next guideline.
- Leave sufficient room for us to write comments.
- Copy out the problem statement before giving the solution. (This should help you make sure you have answered everything in the question and make your corrected assignments more valuable for later study when preparing for the exams.)
- Show enough detail so that a confused student in the class could follow your solution. Don’t expect that the reader already knows how to solve the problem. Just writing an answer is almost never sufficient.
- Proofs should be written in complete sentences, although your sentences will often contain mathematical symbols and statements. Proofread what you have said to be sure it makes sense!
- No “and then a miracle occurs” moments during proofs, please! If you are left with a gap in the proof that you just can’t bridge, acknowledge it. I will indicate how to fill the gap, if appropriate, in my comments.

- Start the assignment early (i.e. the day it is posted). This will allow you ample time to consult with me or discuss ideas for solutions with study groups from the class if you get stuck on some problems. If you start the assignment on the day before it is due, you will be very unhappy!
- Work on making your proofs clear and concise. Make good use of notation and diagrams. As the semester progresses, I will grade your proofs more and more for both accuracy and presentation.
- On both portions, if you work with other students to solve a problem, you *must* write up your final solutions independently. (Plan on taking scrap notes when you work out the problem first, and then “writing it up” in a clean form *by yourself* afterwards.) Add a note to your solution listing the other people you consulted.