

Math 316-01, Guidelines for Written Work

A significant objective of this class is learning to explain mathematical results clearly and carefully in writing. There are (at least) two reasons why mathematical writing is an important part of your education as a mathematician: (1) because it deepens your understanding of the mathematics: the process of writing your ideas in a coherent way forces you to think deeply and carefully, and (2) because effectively communicating your mathematical ideas is an essential aspect of being a scholar.

The written work you submit in this course will be graded for clarity and coherence of exposition, as well as mathematical writing style and correctness. I am not requiring volumes of written work, so I expect that the work you do submit is written thoughtfully and presented neatly. Show me your best work.

Please make sure your homework is neatly assembled in a stapled packet and clearly labeled with name, date, problem number, etc. I reserve the right to take off points if your homework is not neat.

Guidelines for written problems:

- Make sure your work is readable. If necessary, use a word processor.
- Restate the question. If you are asked to prove something, restate the question in the form of a claim followed by a proof.
- In a computation, show all your steps, and make your reasoning clear.
- Cite relevant theorems, definitions, or previous exercises to back up your claims.
- You will not usually need to write full paragraphs, but you should use helpful transitional words and phrases like, “first we will ...,” “next we need to verify ...,” “therefore,” “thus,” “one one hand ... on the other hand,” ... “we can conclude that ...,” etc.

Rubric for written problems:

- Very Nice (4): clear, correct, and complete solution of the problem and good presentation
- Right Idea (3): essentially correct, but some small gaps, lack of clarity, or poor presentation
- Good Start (2): shows partial understanding, e.g. correct start, but significant flaws or gaps
- Good Effort (1): inappropriate approach, faulty reasoning, or wrong problem
- No Attempt (0): recopy problem but do not attempt to solve it

The numbers are “messages” not points! For example, getting an all 3s and 4s (with a few more 4s) would be very good, A-level work, whereas consistently scoring 2s would mean that your work does not demonstrate sufficient understanding to move on (D-level work).