

MTH5103 Complex Variables 2014-2015

Some Remarks on Tutorials

In the tutorial or recitation period, you will be working in with 2-4 other students on the Problem Sets; some of the more challenging exercises require combining concepts and coming up with problem-solving strategies.

One aim of a “workshop-style” tutorial is for you to reinforce concepts from lecture, to explore instructive new examples, lessons, and to document your findings. A second, equally important aim is for you to learn how to solve mathematical problems in a team setting, including how to articulate what you do (or don't) understand about a given exercise, devise and explain strategies to each other, and finally, clearly communicate your solutions.

The skills you will be learning during active participation in such a tutorial will help you gain the skills needed to address more open-ended, real-world problems. This small-group work will be directed by your instructor and by a graduate teaching assistant. You will be required to hand in 1-2 exercises as posted on the QMPlus website in the week following the tutorial. Late write-ups will not be accepted.

Often there will be more exercises on the problem set than can be completed during the class period. This is intentional. The idea will be for you and your group to utilize the tutorial period to investigate the full problem set and formulate strategies to solve each of the exercises. You can fill in the details and finish the computations on your own later when you go home. Don't spend time on completing only one exercise during the allotted time.

To this end, communicating your results from the discussions naturally requires more exposition than what you will write down during the tutorial. It is not enough to just present mathematical scrap work; the focus is to solve the exercises and report on what you find, as you would in a lab report.

Suggestions on approaching your workshop submission.

- Clearly write the precise problem statement at the top
- Staple the pages. If you have multiple pages, write your name on each.
- Acknowledge all of your group members on the top of your write-up
- If you use spiral notebook paper, cut off ragged edges.
- Handwriting must be neat. You may type the solutions if you wish, but the equations should look neat.
- Diagrams must be labelled, and drawn with rulers whenever possible.

Emphasis will be on problem-solving strategies, multi-step problems, and clear, well-written write-ups of solutions. If a workshop submission were worth 10 points, there would be 5 points for mathematical correctness and 5 points for concise exposition.

For mathematical correctness, your Instructor/TA is looking for:

(*Concepts*) How well you know what you are doing, e.g., correct calculations and elucidated steps

(*Reasoning*) Mathematical rigour and robustness of reasoning

(*Strategy*) Efficiency of calculation, justification for steps that are not immediately obvious

For quality exposition, your Instructor/TA is looking for:

(*Explanation*) Concise, precise and to the point

(*Terminology/Notation*) Use of correct mathematical terms (e.g., though not incorrect, it is obnoxious to denote volume by A and area by the letter V)

(*Presentation*) Correct grammar and English usage, neatness of presentation, clear writing, discussion presented as complete sentences/thoughts

In this sense, you may receive only half of the full credit if your work is sloppy or your solution lacks sufficient explanation even if your math work is completely right.

Communicating clearly (and with correct mathematical terminology, no less!) is a skill that can only be bettered through hard work.