Math 218: Elementary Number Theory

Homework Grading Rubric and Guidelines

4 points Correct mathematical solution. Everything is justified with only very minor errors, if that (for example a simple copying error).

3 points The solution is mainly correct with only a minor error or omissions, such as correct statement asserted at some point but not justified.

2 points The solution may technically be correct but there is little or no justification of it. Or the solution may contain a more serious error (something that is clearly a misunderstanding of a crucial concept).

1 point The problem started on the right track and then things went bad quickly. Perhaps a major error was made early, or wild claims with no justification, or the whole point of the problem was misunderstood.

0 points Did not attempt the problem or only stated trivial consequences of the problem.

I. Assume you should always justify why your answer is valid or correct, even if the problem doesn't explicitly say that. For "Find a blah . . . " or "Give an example of blah . . . " problems you should always implicitly add an ". . . and explain why" to the problem.

II. All your solutions should be written in complete sentences and in paragraph form.

III. List at the top of the first page, or next to specific problems, the names of anyone with whom you worked or any source (animate or inanimate) from which you received assistance. You do not need to mention conversations with me or the mentor.

IV. While you are writing your solutions, don't think about writing them for me. Think about writing explanations for the other students in the class. You don't need to justify results we proved in class (although you must reference them) but you should explain your reasoning for any results or conclusions beyond what we cover in class.

V. If you are struggling with a new problem, here are some suggestions that may help get you started. Make sure you understand exactly what the question is asking you. Do you know what all the mathematical symbols are referring to? Remind yourself or write down any definitions of mathematical words in the problem. Would working through an example (or even several examples) help clarify the problem?

VI. I am happy to give you a basic introduction to LaTeX. Other professors require it in higher level classes so this is a great opportunity to learn it.

Academic Honesty

(This information also appears on the syllabus).

You are allowed (and even encouraged) to work together on most homework assignments to solve problems but everyone must write their own solutions.

Here are some more explicit instructions regarding working together. If a few of you are sitting around discussing how to solve a problem and in the course of the conversation one of you figures out a key piece and discusses it with everyone else, and then you all go home and write up your own answers, that is fine. Additionally, you may discuss your written solutions with anyone you have worked with to solve a particular problem.

However, it is not ok if one of you solves a problem on their own first, and then gives other people the key pieces of the proof. Giving good hints is sometimes very tough. If you already have a proof and someone asks you how to solve the problem, you should tell them you already figured it out. Conversely, if you know your colleagues have figured out a proof, you should not ask them for help but instead should talk to me or the mentor.

Consulting any completed solutions is academically dishonest. Never search the internet for a solution to a problem. Reading a math solution is much easier than figuring it out yourself. It only hurts your learning to find solutions online or in other books. I intentionally write some difficult problems and do not assume students will ace the homeworks. Talk to me or the mentor or other students who have not yet solved the problem if you are stuck.

As is mentioned above, giving a hint that helps but doesn't give away too much information is very hard. As such, you are not to consult other students who have formerly taken the class (except the mentor!) or are currently in other sections of MAT-218.