Math 444/445 **Geometry for Teachers** **Winter/Spring 2017**

Homework Guidelines

These guidelines are here for two reasons: to make it easier for the graders to evaluate your homework, and to help you begin to develop good habits of mathematical writing. Not following them will definitely have an adverse effect on your grade!

Collaboration: I strongly encourage you to work on the written asignments together with other students. And in the discussion sessions, you can share your solutions with other students, or listen to other students present their solutions. However, when you write up your solutions to hand in, you must *write your own solutions in your own words.* Even if you work out a solution as a group, it is not acceptable for one person to write down the solution and for others to copy it. If we receive papers from different people that include identical or near-identical answers, they will be treated as instances of academic dishonesty.

Due Date: Each written assignment has a due date; the assignment should be turned in *at the beginning of class* on that day. Homework turned in after the first ten minutes of class will get a 10% deduction for lateness, and homework turned in after class will not be accepted except in extraordinary circumstances (with advance permission) or medical emergencies (with appropriate documentation).

Identification: Make sure the first page of each homework packet is clearly labeled with your name, the course number (Math 444 or 445), and the assignment due date. Put your name on each page, in case the pages become separated.

Staple everything together in order: For each assignment, arrange your solutions in the order the problems were listed on the assignment, with each problem number clearly labeled. Problems that are out of order might not get credit.

White space: Leave *one-inch margins* on all four sides of your pages, and leave at least one blank line between consecutive problems. Don't be stingy with white space. The white space is there partly for readability, but more importantly for the grader to have space to write comments. If there's no place for the grader to write, he is likely to get annoyed at you, and you don't want your paper evaluated by an annoyed grader.

State each problem: Begin each problem by stating what you've been asked to do. You don't have to copy the complete problem statement verbatim; just write enough so that we'll recognize which problem you're solving. If you're asked to prove something, write what you're going to prove in the form of a *theorem statement* ("There are infinitely many prime numbers"), not in the form of a command ("Prove that there are infinitely many prime numbers").

Answers, explanations and proofs: For any homework problem that asks for a short answer (such as a true/false question or a question that asks you to write the negation of a mathematical statement), you can just write the answer (and make sure it's clearly identifiable); you don't need to show your reasoning unless you want it to be considered for partial credit. If a problem asks you to "explain" or "analyze" something, give a cogent and convincing explanation; it doesn't need to be a rigorous proof. If a problem asks you to "prove" or "show" something (both words mean the same thing), write a complete, rigorous mathematical proof, in complete sentences, making sure that the justification for each step is clear.

Proofread: Don't forget to read over what you've written before handing it in. You'll be amazed how many silly mistakes you can catch that way.

Legibility: If you write by hand, make sure your writing is neat and legible, not too small, with as few erasures or crossouts as possible. Be sure to distinguish clearly between similar symbols, such as a/α, $b/6$, $C/\subset$, $\in/\varepsilon$, $g/q/9$, h/n, $I/l/1$, $s/5$, $t/+$, u/v, $U/\cup$, $x/\times$, $y/4$, $z/2$, and uppercase/lowercase letters. Unless mathematical ideas spring fully and impeccably realized from your pen, your first draft is not likely to be acceptable. If the grader has to struggle to understand something you've written, it will be marked wrong.

Word processing: We welcome computer-typeset submissions from those who are comfortable producing mathematical homework assignments by computer, but (neatly) handwritten solutions are fine. If you do use a computer, please print out your solutions and turn in paper copies.