

## Guide to the New Homework Style and the Final Notebook

One definition of being crazy is when you do the same thing over and over again, but expect a different result. I've been 'crazy' about the homework system and thus am making a change. Here's how the new homework works:

1. Each day (except days before exams), you'll get a homework sheet which has 3 types of problems on it: Exercises, Proofs and Board/Claim Proofs.
2. The answers to the Exercises should be put on the homework sheet in the space provided. This probably means you need to work it out elsewhere and then copy the relevant answers to the sheet. These will be worth 5 points each.
3. The Proofs should be worked out on your own paper, one proof per page, and attached to the homework sheet when you turn it in. The Proofs will be graded out of 15 points according to the rubric on the back of this page. You will have a chance to redo a Proof if any area scores below 4/5.
4. The Board/Claim Proofs will not be collected. You should mark the box for any proof that you think you have done completely (would get 80%) and are willing to present. After collecting the sheets, I will randomly select from the students that claimed a problem, for them to present it on the board. If you go to the board and do a decent enough job, you get 2 points. If you refuse or go to the board and do a lousy job, you lose 3 points. If you claim a problem but are not called to the board you get 1 points. If you don't claim a problem, you get 0 points. I will have at least 2 people do each problem.

**Proof Portfolio:** On Thursday, June 30, you'll turn in a notebook containing a collection of samples of proofs you've done this term. Typically the Proofs problems will go into the notebook, plus a few others. I encourage you to let me do an early (and frequent) evaluation of your notebook so you make any needed corrections. The proofs will be evaluated according to the same rubric as for the Proofs problems. I'll post a list soon of the proofs that we've done so far that should be in the notebook.

## Guide to the Evaluation of a Proof (Rubric)

Proofs will be evaluated in three areas: Logic/Reasoning, Understanding/Terminology, and Communication. Each proof will receive a score from 0 to 5 in each of the three areas according to the following guidelines:

### Logic/Reasoning

- 0 Proof shows no logic or is too incomplete to evaluate
- 1 Proof reflects a '1-step' solution; has no middle argument
- 2 Individual steps are logically correct mostly, but the overall argument lacks logical order
- 3 Proof has good logic and overall reasoning, but either several small steps or one big step is wrong or missing
- 4 Proof is logical and complete but is too mechanical in the details or makes some small mistakes
- 5 Proof is correct, efficient and shows proper detail in all parts

### Understanding/Terminology

- 0 No understanding or improper use of terminology
- 1 Misused terminology or definitions
- 2 Proper terminology but incomplete understanding (missing 'essence')
- 3 Shows understanding but using natural or imprecise language
- 4 Shows understanding and uses proper terminology, but misses some finer points
- 5 Shows understanding of all parts and uses terminology properly

### Communication

- 0 No structure or unreadable
- 1 Follows proper basic structure for type of proof
- 2 And has proper use of notation
- 3 And uses complete sentences
- 4 And makes no spelling or grammar mistakes
- 5 And has good flow