

Homework in Math 131A
Fall 2008

Expectations. To do well in Math 131A, you should expect to do **at least:**

14–16 hours of work each week outside of class.

You will have several chances to work on, and revise, all homework problems. Specifically, this process has 3 steps: outline, submission, and revision.

1. Starting with PS02, an outline of each problem set will be due two classes before the completed version is due, and will be discussed briefly in that class. For example, the outline for problem set 02 is due **Wed Sep 03**, and the final version is due **Mon Sep 08**.

In each outline, you should do the following:

- (a) **Write down the definitions of all important new terms in the problem set** (e.g., injective, limit, continuous). The point is to show that you understand what each problem in the problem set is asking.

You do not need to repeat definitions that have appeared before, just new ones. Also, **please do not write out the theorems** involved in each problem set.

- (b) **Write down a plan for every proof.** The way you do this depends on the method of proof used in the problem. (In particular, you need to do enough work on a problem to tell what methods are involved!) See the handout on proof for more about definitions, theorems, assumptions, conclusions, and different methods of proof.

- If the problem is an “if-then” proof, write down what you are **assuming** in your proof, and write down the **conclusion** you are trying to reach.
- If the problem involves proving that “There exists (blah blah)”, write down the name of the object that you need to construct, and write down an assume-conclude structure for the properties that the constructed object needs to have. (We will go into more detail on specific examples of this when the time comes.)
- If the problem involves proof by induction, write down an outline for the base case of the induction (usually either “there exists” or “if-then”), and then write down an assume-conclude pair for the induction step.

Late outlines will not be accepted, but your lowest outline grade will be dropped.

2. Submit the completed version. You do not need to include your outline.
3. After you get the graded problem set back, you have as many chances as you want to revise the problems as much as you like, usually until the next in-class exam. Each time you submit a revision, please attach the original completed version and all previous revisions, so I know how many points to add on to your score. (Please arrange the versions with the **newest on the top**, down to the original version on the bottom.) You do not need to revise/rewrite problems that you have previously gotten correct; just correct the ones you got wrong.

Revising missed problem sets: It is possible to “revise” a problem set that is not turned in on the due date. However, each time you miss a due date, all previous homework from missed due dates becomes unrevisable. Note that “missing” a due date can also include turning a homework that, in my judgement, does not represent a sufficient effort to continue with the course. (I’ll let you know quite clearly that your effort is insufficient if it happens.)

Rules for working together: The basic rule about working together is that you are encouraged to talk to each other about homework, as everyone learns from such discussion, but you are not allowed to copy solutions. Please also do not let others “borrow” or make xeroxes of your homework.

Homework copying will result in 0 grades both for the person copying and the person being copied from. After repeated offenses, I will file a report of academic dishonesty with the university.