

## CHAPTER 1

### Assorted admin: for students

#### 1. Working together vs. copying

I feel that working together is fine, but people should write up separately. There's a difference between "how should I approach this?" (okay) and "just do it for me/show me how to do it" (cheating), and students should know intuitively which is which.

If you write up your homework with someone else, i.e., if what you hand in is basically copied from another person, this is cheating.

It is *not* cheating to work on a problem with someone else, or even for someone else to explain the solution to a problem to you and then for you to *independently* write it up (but you'll learn more if you at least try problems on your own and get just enough help to progress).

You should have a good intuition about the difference between cooperation and copying – if you have *any* doubts, feel free to ask me.

I prefer if students list their collaborators – this just makes it more transparent and encourages them to be up-front.

#### 2. Getting back homework

Ideally, you got everything right and perfect.

If you just care about your grade and feel confident for the exam (which is legitimate in some cases), there's no need to look at your returned homeworks (but don't rub the grader's face in it).

However, if your goal is understanding, you should go over your mistakes. Not just stare at the comment and go "oops, yeah", but actually internalize the correct way of thinking.

Don't immediately jump on the grader: take a minute to try to understand what they wrote, and if you are still confused, ask them or the teacher to clarify – after class, or in office hours.

**2.1. Quibbling over points.** Very rarely does a single point on the homework, or even a single problem, make any difference in

grades – and grading is inexact enough that you probably get unnoticed errors in your favor (which will never be corrected). Quibbling over a point here or there is obnoxious, and suggests that you're either a jerk or very insecure.

If some grading looks wrong (you did a problem correctly, but it was marked incorrectly – or you don't understand what you did wrong), that's fine to bring to the teacher's attention: to ask for clarification and relief.

However, arguing that grading is too harsh is usually pointless: exact point breakdowns are vague and discretionary. There is such a thing as too-harsh grading (giving little or no credit for a problem that is almost correct but omits one detail), but it's not that common.

On an exam, particularly a final exam, when there's more at stake and a point or two really can make a big difference, some quibbling can be legit, and graders should be respectful and be careful that their grading is fair and correct.

### 3. Administrative points

Show integrity: be honest and respectful of the grader and the teacher.

Don't write junk (an argument that you don't believe or understand or just a mess of steps), hoping that some of it will make sense to the grader. Also, don't write up an *incorrect* proof in the hope that it slips past them. If you can't solve a problem, write up *clearly* what you do know, and say, explicitly, "I can't solve it, but here's what I can show."

Don't write one possible answer, then cross it out and write a different one in the hope that the grader will accept the crossed out one. If you're really lost, be up-front and write: "I think one of these works"

*You are responsible for the homework even if you don't have the book!* (I've had students who thought they weren't responsible for the homework until they got a book.) If you don't have the book, look at a reserve copy or borrow it from a classmate, and *tell the teacher* so that they are aware of any problems (say, the bookstore has run out), and can make adjustments (say, xerox necessary pages in the interim).

### 4. For graders

Red pens are traditional for markup (and I prefer them): they're clear, but a bit loud and stress-inducing. Consider instead green pens, which are also distinctive but more calming.

For handling homework, a folio (or simply folder) helps keep them together.

For privacy, it's best to put the overall homework grade on the *last* page (at the bottom), not on the first page, as these are visible when handed back in a pile.

If some people work together, you should grade their homework together: this encourages consistency in your grading (they often will compare notes and grades, and complain (correctly) if they wrote the same thing and got different grades), and lets you see if people are copying exactly or writing up separately.



## CHAPTER 2

### Assorted admin: for teachers

**0.1. Accepting homework.** I accept homework in class, or in my box before the end of class, not at the end of the day or some such cut-off.

The point is to emphasize a routine on the pulse of class: class, do homework, come to class and hand it in.

This also makes it easier for me and the grader: I drop my homeworks off in the box, and the grader can get them (or if the grader comes to class, I can pass by the box before class and bring them to class).

**0.2. Returning homework.** I prefer to return homework at the start of class, ideally handing it back individually, but more often in piles: I divide up the (alphabeticized) homework into several piles, so that people can go through them more rapidly (instead of queuing for a single pile).

If several students have made a mistake on the homework, the best time to go over it is immediately after handing back homework, as it's fresh in their minds. If you (or your grader) notices a common misconception, *correct it* – and emphasize it the next time you teach it (indeed, make a note of it and share with colleagues).

Indeed, ideal would be immediately after they *hand in* homework, and handing out solution sets as students leave an exam achieves this.

For individual questions, it's best if you have time immediately after class to go over them (again, for freshness and to get it over with and get closure); otherwise, they can bring them to office hours, but that's unusual and distant.

**0.3. Late homework.** Late homework causes administrative hassles (grading old homeworks), and results in people developing an overwhelming backlog of work, but more seriously, it means people aren't working on the current material: they aren't following what's in class.

I thus don't allow late homework (except in exceptional cases), but do allow lowest 2 homeworks to be dropped. Alternatively, allowing 1 or 2 late homeworks per quarter/semester works the same, but beware of any scheme that lets students remain chronically behind: it doesn't help anyone, makes grading a pain, and stresses everyone out.

**0.4. Homework corrections.** I don't like the notion of "homework corrections" (or "exam corrections", though these are more understandable): they are depressing and an administrative nightmare, and are either unfair to the good students (if some people did well) or indicate that the assignment was unfair or poorly taught (if everyone did poorly).

Instead, have people review it, then test it again on the exam (or final), optionally giving review work or another homework assignment covering the same material.

**0.5. Problem sessions.** Problem sessions are generally to help people "work through the homework". Ideally, students will have done most of the homework, and just come with questions on the problems they're still not getting.

These usually proceed Socratically, giving *minimal hints*: just enough to solve the problem.

Calling on students (it's usually a more intimate group) or having students come up to the board can work well: you can think of it as a led study group.

You can also consider it a "lecture on the homework", (i.e., on the material that's relevant for the homework), particularly if the lectures have diverged from the homework material.

A key value of problem sessions is that proper lecture itself *does not need to focus on the homework*.

They are also great ways to get junior folk (TAs) started in lecturing: it's small, low-stakes, and they're presenting on a specific subject (the current assignment) that they know.

**0.6. Grading exams and assigning grades.** Be extra-careful grading exams and assigning final grades, correctly and fairly (giving appropriate credit) – grades do matter to students, and with reason. (See essay on grading for further suggestions.)

**0.7. Giving exams.** Since exams mean a lot in terms of grade and are stressful, I like to be very careful and regular: to maintain integrity (so honest students don't feel penalized), and to not lead the students into temptation.

(I try to structure class so that they're not tempted to cheat: this doesn't mean I'm suspicious, but just that I don't want to put them in a bad situation.)

I give out solutions as people leave the exam, both because I like to give solution sets and because that way they are read: the questions are fresh in their minds, and they get immediate feedback.

Ideally, I wait until everyone has arrived before starting the exam, so long as no-one is more than a few minutes late. Otherwise I start a few minutes late (time for stragglers). If someone arrives late, I don't penalize them: they have the same time as others, meaning that they end after (but may need to move if we don't have the classroom).

If there are people missing, then I don't let anyone leave until near the end (say, half an hour to go), and thereafter no latecomers are allowed.

It's best if people go to the bathroom before the exam, and don't have anything on their desk except their exam and pen/pencil.

I give exams with one problem per sheet, divided into sub-parts (preferably independent), both to ease my grading and to help students gauge their progress. I give bluebooks for scrap paper, and insist that all answers be written on the exam book. (Notice that this results in the exams being written in my ideal format for homework.)

I try to grade exams and assign final grades immediately after giving them, (preferably the same day, unless the exam was given in the evening), both so it's not hanging over me and (more importantly), so that students get prompt feedback and less anxiety.

Makeup exams are a huge hassle: they need to be different from the administered exam (for safety), but should ideally be the same (for fairness and curving).

This is easiest if you've already told students what the questions will be (or what they're expected to know), so a make-up is just a matter of changing the numbers in the question.

**0.8. Homework content.** I prefer for homework to be assigned on what has just been covered in class, as time for deeper examination, and reinforcement of what's been learnt.

Most disheartening is when homework is on something that is *about* to be covered: when the perfect solution is presented right after you hand it in.