

Reviewing Graded Work

It is extremely hard to learn a skill in a vacuum. One of the best ways to learn a new skill – dancing, carpentry, cooking, or proof-based mathematics – is to get helpful feedback and criticism from people with more experience than you.

We have just finished grading Problem Set One and have released them online. While it might be tempting to just check your score on the problem set and move on, we strongly suggest that you read over our feedback and use it to help yourself improve your skills in discrete math.

When you get back a problem set in this course, we recommend that you do the following:

1. **Make sure you understand our feedback.** If you had points deducted on a problem set question, your top priority should be to understand why we deducted those points. If you just look at the point total on your problem set and don't read over the feedback, you'll (1) miss out on a key learning opportunity, (2) probably make the same mistakes on future problem sets and lose more points, and (3) likely make the same mistakes on the exams, and significantly hurt your final grade.

Take the time to read over the deductions and feedback we've left. If you understand the deduction, that's great! Hopefully, you won't end up making similar mistakes in the future. If you don't understand the deduction, and *especially* if the deduction seems really nitpicky, please ask us for a clarification. Often times, details that might seem minor to you are actually quite important. Plus, there's always the small chance that we made an error while grading, in which case we can return the points back to you.

2. **Read over our sample solutions.** We release problem set solutions each week with sample solutions to each of the problems. Those solutions aren't necessarily the only possible solutions or even the “best” solutions – they're just one possible solution out of many. If your solution is along the same lines as ours, you might be able to better understand our feedback by seeing how your solution differs from our own. Plus, if you solved the problem in a totally different way, you can use the solutions as a way to learn another route to solving the problem.
3. **Read over the “Why We Asked This Question” sections in the solutions sets.** We've been tuning the questions on our problem sets for over four years now and try to specifically select questions that will get you playing around with specific concepts or exercising particular skills. In the solution sets, we include a small section along with each problem explaining specifically why each question was included. This might help give you a sense of what we were looking for while grading or what specific techniques we hoped to exercise.

This is a decent amount of work, but if you take the time to do it, we think you'll find that you'll end up with a significantly deeper understanding of the material and a better handle on the craft of mathematical proofwriting.