

How to Succeed and How to Fail in Mathematics

HOW TO SUCCEED

1. **BE IN CLASS, EVERY DAY, ON TIME.** Take notes in class. Then you'll have everything you need to know to succeed in the class. Your class notes will be a useful study guide. Read the relevant sections of the textbook *before* the topics are covered in class. That way you'll be prepared to ask questions in class on issues you may not yet understand.
2. **WORK EVERY DAY.** Set aside at least two hours **EVERY DAY** to work on mathematics. Do not wait until the weekend.
3. **READ THE BOOK AND TRY TO UNDERSTAND EVERYTHING IN IT.** Before working any homework problems, quickly read the relevant sections in the book to get the main ideas. Then read them again, carefully. When you come to an example, close the book and try to solve it yourself. When you get stuck open the book and find out what the author does. This way you will learn what the difficulties are and how to get around them. Do the same thing with the proofs of theorems. Only after you think you understand the text should you work the homework problems. That way you will get the most out of them.
4. **WORK MORE PROBLEMS.** Work the hard ones, the ones you don't know how to do (at first). Work problems that were not assigned in the homework. Answers to many problems are in the back of the book. If you're unsure about a problem find one like it which has an answer in the back, and work that one first.
5. **ASK QUESTIONS.** Come to office hours and tutoring sessions. If you don't want to (or can't) ask me, ask somebody else – another faculty member (call the math office 310-243-3378 or look at our on-line directory "<http://www.csudh.edu/math/DeptDirectory.html>" to see who's around), or another student (get their phone number and you can help each other on your homework). Don't be afraid to "look stupid" by asking a "dumb question".

HOW TO FAIL

1. Don't come to class, or consistently show up late. You have better things to do with your time. Everything the instructor discusses in class is covered in the textbook, so you don't really need to be there.
2. Don't study until the weekend. That way you will always be behind. Because you didn't do Monday's homework before Wednesday you won't understand Wednesday's lecture. By the time the weekend rolls around you will have forgotten Monday's lecture, too. You'll be facing eight or ten hours of homework in a subject you haven't looked at in a week, and you'll have to learn it all on your own. Good luck.
3. Don't read the book. When you come to a homework problem you can't solve search the text for a similar example and try to copy it. Otherwise ignore the text. That way you'll never be able to solve a problem unless you have something to copy or unless it is exactly like one you've seen before. You'll never really understand what's going on.
4. Do only the easy problems. Better yet, don't do any!
5. Don't ask questions. Be afraid that you'll look stupid if you do.