

Five Tips for Effective Studying in Mathematics Courses

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The student who wishes to learn mathematics and perform well on exams must be prepared to devote an adequate amount of time to studying and be persistent and patient. It is easy to spend a lot of time studying without making real progress if you study ineffectively. Here are five study tips which make your efforts worthwhile:

- 1. Read the Textbook.** Read the textbook slowly and carefully. Understand the logical development of the ideas, rereading critical passages as necessary. Underline key ideas and make notes in the margins. Complete all missing details in worked-out examples.
- 2. Take Notes.** Take notes during lectures. Revise your notes afterwards in consultation with the textbook and the professor.
- 3. Do the Homework.** Work out homework problems carefully and completely. Think through a problem on your own rather than copying the steps from a worked-out example. Work with a tutor or with the professor if necessary, but don't let anyone else do all the thinking for you.
- 4. Ask Questions.** Prepare questions for the professor as you read the textbook, work on homework problems, and study for an exam. Ask your questions at the beginning of a lecture or during office hours.
- 5. Prepare for Exams.** When preparing for an exam, make sure you can solve any problem with the textbook closed, without the use of notes, and with no help from friends or from a tutor. If you get stuck on a problem, be aware of whatever gap in your knowledge this represents and seek out help from all available resources: textbook, notes, friends, tutor, professor. After you fill in the gap, try again with no books, notes, friends, tutor, etc. Your goal is to reduce the number of gaps to zero.