

Dear Student,

Welcome to College-level Mathematics. The following are some thoughts and suggestions to help you be successful in this and future mathematics courses taken during your college education:

1. **You are no longer in high school.** The great majority of you, not having done so already, will have to discard high school notions of teaching and learning and replace them with college-level notions. This may be difficult, but it must happen sooner or later, so sooner is better. Our goal is more than just getting you to reproduce what is told to you in the classroom.
2. Expect to have material covered at *two to three* (or more) times the pace of high school. Above that, we aim for greater command of the material, especially the ability to apply what you have learned to new situations (when relevant).
3. Class time is at a premium, so it must be used efficiently. You cannot learn everything in the classroom. **It is *your responsibility to learn the material*.** Most of this learning must take place *outside* the classroom. You should be willing to put in two to three (or more) hours outside the classroom for each hour of class.
4. The instructor's job is primarily to provide a framework, with *some* of the particulars, to guide you in doing your learning of the concepts and methods that comprise the material of the course. It is neither to "program" you with isolated facts and problem types nor to monitor your progress.
5. You are expected to read the textbook for comprehension. It gives the detailed account of the material of the course. It also contains many examples of problems worked out, and these should be used to supplement those you see in class. The textbook is not a novel, so the reading must often be slow-paced and careful. However, there is the clear advantage that you can read it at your own speed. Use pencil and paper to work through the material and to fill in omitted steps.
6. As for *when* you engage the textbook, you have the following dichotomy:
 - a. Read for the first time the appropriate section(s) of the book (with pencil and paper) *before* the material is discussed in class. That is, come prepared for class. Then the faster-paced college-style will make more sense.
 - b. If you haven't looked at the book beforehand, expect to be "lost" but try to pick up what you can from the class discussion (absorb the general idea and/or take thorough notes) and count on sorting it out later while studying from the book outside of class.
7. Exams will consist largely of fresh problems that fall within the material that is being tested.

These are many of the so-called "tricks" to learning mathematics. I certainly cannot guarantee success but I am sure you will have a greater probability of success in mathematics if you follow the above suggestions.

Have a great learning experience. I look forward to working with you this semester.

Jeff Lewis

Reference:

Zucker, S., Teaching at the University Level, *Notices of the AMS*, 43(8), p. 863-5.