



## Success in Math

Transitioning from high school to college math can be a challenge. In college you're encountering more complex material while spending less time in class. Fortunately, there are resources on campus to help you, starting with these basic tips.

### Attend Class

You may be tired, there may be something else more exciting going on, or members of your extracurricular organization may be pressuring you to sell cookies outside the student center; there are all kinds of temptations to miss class. Don't do it! Poor attendance is the number one reason students perform poorly. Unless you have a deadly, contagious illness, attend class!

### Prepare for Class

Check your syllabus to see what will be covered in your next class. Always read the corresponding material in your textbook before class so that you will have some familiarity with it before the lecture begins. You'll learn more effectively this way.

### Class Time

While in class, you should be listening, thinking, asking questions, and taking notes. Try to balance all these activities. Don't overdo one at the expense of another.

### Take Notes

Your professor may post notes on the web. You may plan to get notes from someone who, you think, takes better notes than you do. Regardless, take your own notes. There is no substitute for your own notes. The simple process of note-taking in class helps you absorb and retain information. And if you don't understand something during a lesson, you can note it so that you can ask for clarification at the end of class or after. Be strategic about it, though. Make sure you are listening to ideas and thinking about what your instructor is saying rather than trying to create a transcript of it.

### Ask Questions

If you don't understand something during a lecture, don't resort to taking copious notes and trying to learn later. Ask for clarification or a more thorough explanation. In all likelihood, some of your classmates have the same question and will be relieved that you asked. Also, instructors aren't bothered by questions. In fact, most instructors are frustrated by a lack of participation from students.

### Review Your Notes

Read and re-read your notes. Make sure you understand the link between concepts and examples, as well as why problems are solved in a particular way. Instructors tend to ask exam

questions on the same concepts covered in class. Also, the way you take notes can help you understand your learning preferences. Taking notes can also help you remember what you have questions about so that you can get clarification from your instructor, classmates, or tutors.

## **Don't Get Behind. If You Do, Get Help!**

Math is cumulative, which means that new concepts are introduced every class period and each class period builds on the information that was covered in the previous class. If you fall behind, it is very difficult to catch up. Get help immediately.

## **Homework**

Instructors treat homework differently. Some use it to simply give you practice problems to help you learn concepts. Some instructors review homework to see how well you're mastering concepts taught in class. Some instructors grade homework, while others don't. Some merely "suggest" problems that you could use to practice and measure your own progress.

Whatever expectation your instructor has regarding homework completion, understand that YOU are responsible for ensuring that you know the concepts and problem solving techniques sufficiently. Furthermore, college level math courses require you to use multi-step approaches.

When you work on homework problems it is important to write out the complete solutions step by step to ensure comprehension. DO NOT use solution manuals as a crutch. If you need a solution manual to find the answer, you need to review or get help.

## **Word Problems**

Word problems are actually "applied problems" that allow you to take math concepts and apply what you have learned to "everyday" situations. The first step to tackling an "applied problem" tends to be the most challenging in that you must convert the words into mathematics. If possible, most people find it helpful to start by drawing a picture and label it with the quantities mentioned in the problem. If no quantity is given within the problem, you need to name it by a variable. Identify what you are solving for and then create a mathematical equation. Once you have solved the math problem, you should convert your answer back into words (i.e. 54 refers to Jack traveled 54 miles per hour.)

## **Do All Assigned Work**

You may take homework and quiz points less seriously than exam points because they carry less weight in your final grade. However, all points count and a few here and there can make quite a difference (for better or for worse), especially if you have a borderline average.

## **Find a Partner or Form a Study Group**

Don't use a study group so you can get others to do your work for you. Practice and solve problems on your own, but discuss how to solve problems. Don't compare answers unless you get permission from your instructor. And get help from your instructor, or a tutor, if you need it.

## Learn from a Poor Test Performance

Put a bad test behind you only after you properly review. Make an appointment with your instructor in office hours. See if you can determine what went wrong before your appointment. Ask to see if there's anything you can do to bring your grade up or what you can do differently next time. Simply hoping that you'll do better on the next test is rarely effective.

## Study Every Day

You can't study for math in the days before the exam like you can most other subjects. Math is a skill, like learning an instrument. The best way to learn it is by doing it.

## Use Available Resources

There are lots of resources on campus to help you. Take advantage of them. Go to office hours with your instructor. Check out CATS for information on Week-in-Review, Help Sessions or Tutoring.

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Adapted from Dr. Janice Epstein's "Tips for Success" and the TAMU Math Department's "Brochure for Success."

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