

Foster Care to Academic Success

How to Do Well in Your Math Classes

Math! There's them's wot likes it, and them's wot don't. Or, better stated, some people love numbers, and others do better with letters.

However, like it or not, chances are you'll have to take at least one math class in college, so we've collected our best suggestions for getting through it successfully. Of course, you may be a math whiz and spend all your free time doing Sudoku ... GOOD for you! If you're not a math whiz, hopefully these suggestions will help you not only pass but do well in your math classes.

First and Foremost

- **Are you in the right math class?** Hopefully you took a math placement test when you started college. If so, you should be in a class that's the appropriate level for you. If you didn't, see your academic advisor and ask about taking a placement test. It's MUCH better to be in a lower level math class and do better, than to be in a class that is too advanced.
- **Have you considered trying to "CLEP out?"** If you did fairly well in math in high school, you may be able to pass a test that will give you up to three credits each in College Mathematics, College Algebra, Precalculus or Calculus. Visit www.collegeboard.com and click on "For Students" and then "College Board Tests" to find out all about the College Level Examination Program. The tests cost \$72 each, you know instantly whether or not you passed, and you don't have to report the score to your college unless you pass.
- **Do you know your math basics?** Even though we all use calculators for practically everything, it's very important to know how to add, subtract, multiply and divide. If you're not comfortable with your basic math skills, buy flashcards and practice. Here, too, are some very good math websites. They can help you with math fundamentals all the way up to trigonometry, calculus and statistics.

www.math.com

www.mathpower.com

and just for fun and fundamentals

www.freerice.com

(Click on **subjects** to get to prealgebra and the multiplication tables – for every correct answer 10 grains of rice are donated to the United Nations World Food Program to end hunger.)

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Math Class – it's all in the attitude

- **Math is not a spectator sport!** To do well in math, you need to actively participate in EVERY class. You have to do ALL the homework. You have to ask questions, revise your mistakes, and solve problems. You have to solve more problems. And you have to solve MORE problems. Solving math problems is, to be honest, the only way you can learn to solve math problems. Practice builds success, success builds confidence, and confidence conquers “math anxiety”.
- **You have to understand the principles.** Memorizing formulas and theorems is not enough. You have to understand HOW and WHY they work in order to use them appropriately. Math is not just numbers; you have to be able to explain the concepts in words, as well.
- **Math builds upon math.** In order to understand higher level math you have to understand basic math. You can't understand algebra without prealgebra, or calculus without precalculus. Nor can you understand Thursday's class if you skipped out on Tuesday's.

All right. You've determined you're in the right math class, and you know you're going to have to work hard. Here are our suggestions for doing well in any math class:

- **In class**
 - **Go to class!** Go to every class.
 - **Listen carefully;** you can't doze off in math class because EVERYTHING the professor says is important.
 - **Take good notes.** Copy everything the professor writes on the board, and pay attention to the explanations. When you have to solve similar problems for homework, your class notes may be very helpful.
 - **Ask questions.** If you don't understand something, ASK. Equally important, listen when the professor answers other students' questions.
- **After class**
 - **Review your notes.** Copy them over and make sure you understand them.
 - **Do your homework as soon as possible after class.** Solve the first few problems with the help of your notes and your book; try the rest on your own. Organize your work neatly, using margins and white space near the problem instead of scratch paper for little calculations. Try not to use your calculator. Math is gymnastics for your brain! From prealgebra on, simplify expressions proceeding down the page rather than left to right, making changes line by line. When solving equations, try to keep equal signs right below one another. If you circle or highlight the problem numbers, you can find them easily when it comes to discussing a particular problem.

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It's really good practice to do your math homework first, before you tackle other subjects. Chances are, math is your hardest homework, and you want to be wide awake and alert for it.

- **If you don't understand something, ask your professor** before the next class or during office hours. Bring along the problem(s) you don't understand; show the professor the attempts you've made to solve it and this will help him – or her – to see just what is confusing you and how to explain it.
- **Join a study group.** Working with others may be very helpful. Share your answers with your study partners. If you don't all come up with the same answer, discuss it until you come to agreement. This is an excellent way to ensure that you all understand the concepts! However, DON'T copy others' work and don't let them copy yours – nobody will learn anything at all that way.
- **Visit the tutoring center.** Your school surely has a math center. It's the perfect place to get help with difficult problems, and to find as many more problems as your little heart could possibly desire. And the secret to math, as we've said, is practice, practice, practice.

- **Before an exam**

Because every section in a math class is based on what came before it, if you've done all of your homework you should be relatively caught up for exams. However, here are our suggestions for preparing for a math exam:

- **Review your notes and make a list of every concept and formula.** Write each one on an index card and carry them with you to study whenever you have a free minute.
- **Rework your homework problems.** Don't just look them over – solve them again. If there are additional problems at the back of your book, solve them too. And go to the tutoring center to get even more problems. The more problems you solve, the easier you will find it and the better you will do on your exam.
- **Try to find common characteristics in similar problems.** When you solve homework problems, you know what section of the book they came from. Exam problems will be all mixed up together. When you study, learn to recognize identifying characteristics so you will know how to solve particular types of problems.
- **Again, practice, practice, practice.**

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- **Taking an exam**

- **Look over the entire test.** Identify questions you think you can answer right away.
- **Work the easiest problems first.** This will build your confidence and ensure that you don't miss any points you should have gotten just because you ran out of time.
- **Work QUICKLY and CONTINUOUSLY.** If you get stuck on a problem, move on and then come back to it if you have time in the end.
- **Work by the clock** – On a 50-minute, 100-question test, you have 30 seconds per question. Start with the easy questions, and when you get to the harder ones spend the allotted time on each one and move on if you cannot finish it.
- **Show all of your work.** This makes it easier for the professor to see how much you know, and to allow you partial points if you cannot finish the question or the answer is incorrect. If your answer doesn't make sense but you don't know where you went wrong, say so. Write a note by the problem that tells the professor you recognize there is some error in your solution, not that you stand by an impossible answer.
- Never waste precious time erasing – just draw a line through work you want ignored and move on.
- **VERIFY your answers. Always reread the question for story problems to ensure you are answering the question after all those calculations.**
- **If you finish the test early, go back and CHECK every problem.**

- **After the exam**

Math is one subject where you really can learn from your mistakes. When you get your test back, review it and try to solve any problems you got wrong. If you don't understand something, ask your professor or take it to the tutoring center. Remember, everything in math is based on what comes before, so in order to do well on your NEXT test, you have to understand what you missed on the previous one.

Good luck!

**You can do well in any math class if you
Attend every class and pay attention
Do all the homework
Get extra help when you need it
and
Practice, practice, practice.**