Tips for Mathematics Success

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Studying
Reading & Lecture
Pre-read the material before the lecture - use something to organize what you read and note what you do not understand. (Section Summary Sheet)
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Go to class, take notes as needed; some of what is written in class should be in what you pre-read and noted hence you may be able to concentrate on understanding with some notations in your notes rather than writing it all down.
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Check off things you did not understand when they occur and you understand them. Ask about the others, either in lecture or in office.
Studying
Homework
For hard sciences, such as math, you should spend a minimum of three hours outside class for every hour in class.
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Begin problems the same day as the material was presented in class. Do not seek help on the first pass; look at your notes and examples to attempt to start them.
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• Do not attempt all of the homework on the first day; in fact, you should divide the homework up into three consecutive days.

• Second day of the homework set is when you seek help for problems you could not start; get some hint on getting them started, try again, and go on to the second batch of the homework.
For the third day, seek help to finish any that you had started and could not complete. Remember, it is best to get help on only one step, then try to continue on your own.
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Seek help from your instructor to go over areas that you do not understand. Be sure to do problems of the same type you got help with until you can do that type without help.
Use all free resources: instructor office hours, appointments with instructor, tutoring centers, study groups, extra problems, etc.
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Make note of repetitive errors so that you know to check for them.
Studying
Daily Preparation

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Every day do something from the current material, do something from earlier material that will be on the next exam, and do something from the old material that has already been tested.
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Anything that you need to commit to memory should be written on 3x5 cards (or something like that) and read whenever you are walking from a to b. You will ”memorize” faster in this manner than when you make a conscious effort to memorize.
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Get a study buddy (and be willing to cut your losses to replace a bad one) that you can be comfortable with. You will want to explain how to do the problems and why you do each step to each other.
• Practice teaching the theorems and definitions to each other. Make sure you mention all details and conditions that apply.
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- If you cannot explain something, it pinpoints for you something that you do not understand. If neither you nor your study partner truly understand it, seek out your instructor for help.
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Theorems, definitions, and proofs should be read, written, read, written, read, written, etc....
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Use the summaries that you made when you were pre-reading.
Do problems from more than one source so that you are not dependent on the particular way in which a problem is worded.
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Use all sources provided by your instructor (seek out extra sources if your instructor does not provide any others). Use your instructor’s office hours.
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You want to feel as if you can do the problems in your sleep.
Tests
Test Preparation
Do the reading, homework and daily studying. In other words, do the previous section "Studying".
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- Do NOT simply study one old exam. Every exam is a random selection of the material.
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Learn to get yourself into a very relaxed state very quickly by practicing.
Tests
Taking a Test
Get a scratch paper and make a legal "cheat sheet"; that is do a brain dump of everything that you committed to memory that you feel you might forget once you start taking the test. This is a good place to write down the reminders of errors to check for.
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Read the questions carefully and skip over it if a solution is not immediate; look for those you are most comfortable with to do first.
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Work CAREFULLY, do NOT skip steps. Show all detail and be sure to check for the errors you noted to look for.
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Check your work and make sure that you have answered the question asked.
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Check your work and make sure that you have answered the question asked.

Do not second guess yourself! If you do not find an error in your solution, don’t just change it. If you do decide one needs changing, be sure to check those changes just as carefully as the original.
Tests
Test Anxiety
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If you feel that you are fully prepared but still suffering from anxiety, seek counseling.
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- If you feel that you are fully prepared but still suffering from anxiety, seek counseling.

- If you find your stress level going up during an exam, put your pencil down, close your eyes and get in that relaxed state you have been practicing. The efficiency you gain will make up for the loss of the minute it took to relax.
Tests
Additional Information
Sources my students have found helpful

- http://www.tc3.edu/instruct/sbrown/math/test.htm
- http://www.mathacademy.com/pr/minitext/anxiety/