Guide to Students Entering First Year Calculus

Study methods

You will need to study 2 - 3 hours outside of class for every hour of class lecture. That means *you will need to work at least 5 to 10 hours per week on your calculus course.* It is best to work steadily throughout the semester than to 'cram' just before tests or exams. Mathematics takes time to sink in and for you to understand.

The homework problems are there to help you study and understand the material, *not* just as a means for getting a few more additional marks. Most of your mark will come from your performance on the tests and exam. The homework problems are preparing you for those. You should be able to do the homework problems on your own (although it's a good practice to discuss them with your peers, as long as you do your own work in the end). Remember, you will see questions on the tests and exam that you have not seen in the homework. You have to try to *understand* the homework problems so you will be prepared for the test problems.

Get help when you need it! The workshops (Open Lab) are there to help you. Talk to your instructor or a TA if you are having difficulties with the material. If it's a homework problem you are having difficulty with try the 'problem solving methods' listed below, and if that doesn't allow you to finish the problem, discuss with your instructor or TA the place where you are having difficulty (the more accurately you can identify where the difficulty lies, the more you will learn and the quicker the instructor or TA can help you).

Problem solving methods

Here's some suggestions to follow when you get stuck with a problem;

· Read over your course notes and the sections(s) in the text that cover the material, especially the examples
· Write down all the concepts, Theorems, Definitions, and formulae that you think maybe useful in solving this problem
· Re-write the question in your own words
· Make a sketch
· Write down all the information given in the question
· Look at examples and similar problems
· Try to break the problem down into smaller pieces
· Are there any assumptions you can make that would result in a simpler problem?
· Discuss it with another student in the class

See also `www.math.sfu.ca` → undergrad → Survival Guide 1st Year