Study Plan for Success in Math class

Many students are not ready for the changes they face when they take their first university-level math course. They frequently do not realize that the time they need to spend outside class is far greater than the time spent in class. It is generally expected that students spend at least two hours studying for each hour that the class meets. Students who want grades higher than C typically have to spend more than this much time. The purpose of this page is an attempt to give students some specific suggestions on how to spend that study time.

I. Attend class and take notes.
Some students seem to do well without taking notes, but most people do better if they have some class notes to review before homework and tests. Your notes are a form of communication with yourself. They can provide details about why or how a process works. Many students write in their notes all those things, and only those things, that the teacher writes on the board. Frequently teachers add explanatory comments without writing them on the board. Be ready to add such comments to your notes. Teachers will also say things like, ‘Expect a problem like this on the test’, even though they do not write that statement on the board. Take note of comments like this. If you need a little more time to finish what you are writing, ask the teacher let you finish before moving on. The teacher presenting information in class is the same person who writes your quizzes and tests (except the final exam). Your class notes should be a good guide for anticipating your tests.

II. Read the book and take notes.
Many students finish high school without ever reading their math books except to do the assigned problems. We do not have enough time to present in class every item that we expect you to learn. We may refer to the easier material, assuming that you will spend enough time reading the book to get it. We spend more class time on the more difficult material. When you read the book, you will generally find a lot of overlap between what is presented in class and what is in the book. This repetition is NOT a waste of time. Many of the concepts of this course are sufficiently complex that people do not get them on the first attempt. When you read the book, you can read as slowly as you need, and you can review other material that is necessary background. Reading a math book is much slower than reading a novel. Be prepared to spend some time on this. As you read the book, take some notes. Your notes from the book may be quite close to your class notes, but there will probably be details, examples and background material that are not covered in class. Taking notes over material a second time will be a big help in understanding and REMEMBERING that material. If you read the book on a day by day basis, then your review for tests (especially the final exam) will be much more effective. The book has a table of contents and an index. You can quickly and easily find specific topics that you need to review. And if you have already read the book, then it will be review, not a first time approach.

III. Review both sets of notes.
It is a good idea to read your class notes shortly after class. Do they make sense? Are your notes adequate to stimulate your memory about further details? Did you make any mistakes? It will be easier to spot these if you read your notes soon after taking them. Compare your class notes to your notes from the book.
IV. Do the homework problems.
If you spend the time and exert the effort suggested on the first three points in this list, you will probably be very surprised at your high level of readiness to do the homework. Some of the time spent reading the book and taking notes will be saved when you do the homework. If you do the preparation before starting the homework, then you will be far more ready to do the homework without any help (from book, notes or tutors). Don't forget that you will not have any help on the tests. Doing homework without help is a form of practice for the tests.

V. Organize and review for the tests.
Students sometimes say they studied for eight hours the night before the test, but failed it anyway. If you do the day by day studying that is suggested above, you will never need to cram like that right before a test. Several days before a test, it is a good idea to organize the material. The table of contents in the book provides an outline, and your notes can provide the details. Try to assemble a list of topics and typical examples that you expect to see on the test. Check with your teacher during an office hour to see if there are any holes in your list. Choose some odd-numbered problems covering all the material, and try to do them without looking anything up. Problems that you cannot do suggest topics that need review. The night before the test, try a few more problems, and get a good night's sleep.