

Tips for Studying Mathematics

Active Study vs. Passive Study

Be **actively** involved in managing the learning process, the mathematics and your study time:

- Take responsibility for studying, recognizing what you do and don't know, and knowing how to get your Instructor to help you with what you don't know.
- Attend class every day and take complete notes. Instructors formulate test questions based on material and examples covered in class as well as on those in the text.
- Be an active participant in the classroom. Get ahead in the book; try to work some of the problems before they are covered in class. Anticipate what the Instructor's next step will be.
- Ask questions in class! There are usually other students wanting to know the answers to the same questions you have.
- Go to office hours and ask questions. The Instructor will be pleased to see that you are interested, and you will be actively helping yourself.
- Good study habits throughout the semester make it easier to study for tests.
- Take responsibility for keeping up with the homework. Make sure **you** find out how to do it.
- You probably need to spend **more** time studying per week - you do more of the learning **outside** of class than in High School.
- Tests may seem harder just because they cover more material.
- Take as much time as you need to do all the homework and to get complete understanding of the material.
- **Form a study group.** Meet once or twice a week (also use the phone). Go over problems you've had trouble with. Either someone else in the group will help you, or you will discover you're all stuck on the same problems. Then it's time to get help from your Instructor.
- The more challenging the material, the more time you should spend on it.

Studying for a Test

- **Start** by going over each section, reviewing your notes and checking that you can still do the homework problems (actually **work** the problems again). Use the worked examples in the text and notes - cover up the solutions and work the problems yourself. Check your work against the solutions given.
- **You're not ready yet!** In the book each problem appears at the end of the section in which you learned how to do that problem; on a test the problems from different sections are all together.

- Step back and ask yourself what kind of problems you have learned how to solve, what techniques of solution you have learned, and how to tell which techniques go with which problems.
- Try to explain out loud, in your own words, how each solution strategy is used (e.g. how to solve a quadratic equation). If you get confused during a test, you can mentally return to your verbal "capsule instructions". Check your verbal explanations with a friend during a study session (it's more fun than talking to yourself!).
- Put yourself in a test-like situation: work problems from review sections at the end of chapters, and work old tests if you can find some. It's important to keep working problems the whole time you're studying.

➤ Also:

- Start studying early. Several days to a week before the test (longer for the final), begin to allot time in your schedule to reviewing for the test.
- Get lots of sleep the night before the test. Math tests are easier when you are mentally sharp.