

- ◆ Start by going over each section. Look over your notes and text. Make a list of major concepts and formulas that have been covered.
- ◆ Review and rework problems in the text, notes, and homework. If possible, locate an old test and use it to take a practice test.
- ◆ Test yourself under conditions that are as realistic as possible (i.e., no notes, time restriction, random sequence of problems, etc.) Also, try to predict test questions. Make up your own problems and practice working them.

TAKING THE MATH TEST

1. Before working out any problems, write down on the test itself the formulas that you find confusing or difficult to remember. Doing this could prevent further confusion and a possible mental block.
2. Glance over the whole exam quickly, assessing questions as to their level of difficulty and point value.
 - a. Get a sense of how much time to spend on each question.
 - b. Try to identify those problems you definitely know how to do right away, and those you expect to have to think about.
 - c. Leave time at the end to check your work.

3. Start with the easier problems you know for sure, while giving priority to those worth the most points. Next, proceed to do the ones you are least certain about.
4. **Show all your work**, you might get partial credit.
5. If you get **stuck on a problem**, skip it and return to it later.
6. **Time** is of the essence - work as **quickly** and **continuously** as you can while still writing legibly and showing all your work.
7. If time permits, **revise your work**.
8. Make sure you **read** the questions carefully and that **all** parts of each question were done.



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HOW TO STUDY MATH



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THE TRUTH ABOUT MATH

- ◆ Math has less to do with smarts and a lot to do with practice and learning by doing problems.
- ◆ Read your math book very carefully. Don't try speed reading or skimming.
- ◆ **The secret to math is doing the assignment before the lecture instead of after.** You will know exactly where you are having trouble, what you need to learn and what questions you need to ask in class
- ◆ **Do the homework, even if you don't have to turn it in.**
- ◆ Each math class builds on the previous one, therefore try very hard not to miss class.
- ◆ Review your notes every day.
- ◆ When being introduced to a new concept, write it down. Take as much time as you need to get a complete understanding of the material.
- ◆ If you get lost, don't wait. Immediately ask your instructor for help. If you don't get answers during lecture time, seek out your instructor during office hours or ask for a **TUTOR!**
- ◆ Form a **STUDY GROUP** that meets once or twice a week and go over problems you had trouble with.

PROBLEM SOLVING

Doing problems is the most important aspect of math. **Be a maniac about math homework.** When doing homework, write out complete solutions to each problem; don't just rush and scribble an answer in hopes it matches the one in the back of the book.



If the answer is not right, rework the problem. Do not convince yourself that it is okay because with a little more work you know you would have done alright. If you can't get the answer, get help!!!

The 4 steps to solving problems:

1. **Understand the problem.** Read each part of the problem and write down all information that is given. If appropriate, draw a diagram and label the givens. It is often helpful to say out loud the things you are thinking. Talking through the problem, even in just in your head, may help visualize the solution.
2. Next you need to **devise a plan.** Identify which strategies and techniques you have learned that can be applied to solve the problem.
3. Once you have a plan, **carry it out.** If it doesn't work, try another plan.
4. **Check your solution** to see if the answer is in proper form by inserting it into the problem. **Look back:** Does the answer you found seem reasonable? Also review the problem and method of solution to help you recognize and solve similar problems in the future.

If working a multi-step problem, break it into smaller pieces and solve each piece using this four-step process.

SOLVING A WORD (APPLIED) PROBLEM

1. First convert the problem into mathematics. This step can be the most challenging part of a word problem.
2. If possible, start by **drawing a picture.**
3. **Label** it with all the quantities mentioned in the problem. If a quantity in the problem is not a fixed number, **name it by a variable.**
4. **Identify** the goal of the problem, then complete the conversion of the problem into math, i.e., find equations which describe relationships among the variables, and describe the goal of the problem mathematically.
5. Solve the math problem you have generated, using whatever strategies and techniques you need (refer to the previous four-step process).

STUDYING FOR THE TEST

If you have followed the study approach presented here, your preparation for a test should not be too difficult. Consider these strategies:

- ◆ Start studying early - several days to a week before the test (longer for the final).

