



Math Strategies

BOISE STATE
UNIVERSITY
Advising and Academic Enhancement

Daily Studying

- Take responsibility for studying, recognizing what you do and don't know, and getting help with what you *don't* know. Take advantage of your professor's office hours as often as possible, and form a study group!
- Attend class *everyday* and take complete notes. Classes build on each previous one, so missing one class can hurt down the road. Also, refer to texts and videos if applicable.
- Be an active participant in the classroom and in the lab - *Ask questions!* If you have a question, you can be sure that at least 5 other people have one too!
- Math is learned by *doing*. Complete all assigned problems, and be willing to do more if you need extra practice.

Studying for Math Exams

- **Daily review is key.** Quiz yourself often. This will help you identify the problems you know, and the ones you need more practice with. Then, do some extra problems for practice. Don't save all your questions until the day before the test! Ask questions as they come up.
- **Start early.** You should plan to start your test review *at least 7 days* prior to the exam. Review each section that will be on the test and make sure you can still do all the problems in each section. Get into a study group!
- **Prepare your mind and body.** You need *at least 6 hours* of sleep the night before an exam, no exceptions! A glass of water and some form of complex carbohydrate (i.e. oatmeal) will help sharpen your mind before the test.

Problem-Solving Tips

- **Understand the problem.** Read the *entire* problem, and make sure you know what you're trying to find. Underlining or circling cue words may be helpful.
- **What's given?** Make a list of all the information that you are given in the problem. This will help you identify what's missing.
- **Create a plan.** Make a list of all the skills and/or formulas you think will be helpful for solving the problem. Then create a simple outline of how you will work through the problem.
- **Review.** Make sure your answer is reasonable. Double check your calculations and make sure your answer has the correct label.

Taking the Test

- **Look over the test.** Overview all problems, so you can better manage your time. Do the problems you know first. Don't get stuck on difficult problems! You can come back to them at the end if there's time.
- **Watch your time.** Work as *quickly* and *continuously* as possible without sacrificing quality. Stay calm and keep a steady, even pace.
- **Read each problem carefully.** Show *all* your work and complete *all* parts of the problem.
- **Don't give up.** If you don't know how to do the entire problem, just start with what you do know. This may lead you to the correct answer(s). Also, many instructors will give partial credit if they can see your work.
- **Check your answers.** If you finish early, go back over your test and review your answers. Make sure you didn't make any obvious errors and hand in your exam with confidence!





Math Anxiety

BOISE STATE
UNIVERSITY
Advising and Academic Enhancement

Strategies for Studying Math

Lectures

- Find a balance between writing down the examples on the board and what is being said.
- If the instructor is lecturing from a text, everything is already written down in your book. In this case write down the instructor's ideas, comments and methods.
- Read your textbook before class.

Self Study and Homework

- Homework is for you, and you alone. It is your opportunity to learn, and to begin to gain mastery—that is what you are here for.
- Read with a blank paper and pencil in your hand. Work through examples yourself, until you thoroughly understand each step.
- Have a study group that meets once a week to go over the material. Talk about math with others.

Working Out Problems

- Take the problems one at a time. Compare them to the examples. Work through the examples.
- If you get completely stuck, skip it for now, but come back to it. Give yourself time. Your subconscious mind will gradually formulate ideas about how to work the exercise, which it will present to your conscious mind when it is ready.
- Pick the easiest exercises and work at them. Compare them to the examples. Try doing the exercise the same way the examples were done.

Story Problems

- The study of math is meant to give you power over the real world, and the real world doesn't present you with textbook equations. The real world presents you with story problems.
 1. Read the problem.
 2. Do not expect to immediately know how to do the problem. Keep an open mind.
 3. Assign all the quantities labels. If a quantity is unknown, give it a name like a, b, or c.
 4. If appropriate, make a sketch of the situation.
 5. Focus on the quantities and how they are related to each other. Try to express them in simple equations.

6. Focus on the equation that expresses the quantity you are trying to find in terms of the other known and unknown quantities.
7. Check your answer by putting it in the original situation.

Taking Exams

- Don't cram. If you have been studying regularly, you already know what you need to know. If you put studying off until right before the test, it is too late to do much about it. There is nothing you will gain in the few hours before the exam, desperately trying to absorb the material, that will make up for not being fresh and alert at exam time.
- On exam day, have breakfast. The brain consumes a surprisingly high number of calories when it is working on a task (e.g. a math test). Without the appropriate amount of nutrients, your brain will not function at full capacity.
- When you get the exam, look over it thoroughly. Read each question. If there are some questions that you feel you immediately know how to do, then do these first. Save the hardest ones for last.
- It is extremely common to get the exam, look at the questions, and feel that you cannot work a single problem. This initial panic is not unusual. Assume ahead of time that this is what is going to happen. Say to yourself, "Relax. I expected this." Take a deep breath and let it out slowly. Look for the question on the exam that most resembles one you know how to do, and start there.
- Math exams are usually timed—but remember, it's not a race! Pace yourself. If you get stuck, mark that question and move on to the next one. Come back to it at the end.
- Take the time to make your work neat and orderly. If your instructor can't read or understand your answer, it's likely you won't receive very many points, even if your answer is right.
- In math, having the right answer is nice, but it doesn't always come down to that. **SHOW YOUR WORK.** Often your work will show that you understood the problem, even if the answer you arrived at is incorrect.
- Finally, place things in perspective. Fear of the exam will make the test seem like a much bigger deal than it really is. You can't demonstrate your understanding and skills as well if you panic. It's just another day, and just another assignment. Your future happiness will not be determined by this one exam.

