How to Prepare For and Take Your Math Final

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Several Weeks Before the Exam

Find out everything you can about the final from your instructor. Know, and write down, the answers to these questions:

- What will the final cover? (Usually, but not always, it's the whole course.)
- What are you allowed to have during the test? (Calculator? Open book? A page of notes? Open notes?)
- When and where will your final will be given?
- How long will you have to work on it?

Spread your preparation out over a period of three to four weeks. Try to do it in daily chunks of no more than an hour or two at a time, as opposed to marathon sessions. We're best at remembering what we do at the beginning and the end of an activity, so strive for lots of beginning and end, and not so much middle!

Your preparation should consist mainly of working problems. There are many sources:

- Problem sets in the book. You can re-do problems that you did as homework, and for additional practice you can do problems that weren't assigned but are next to problems that were assigned. Usually, but not always, the odd-numbered problems are answered in the back of the book.
- The review problems at the end of each chapter in your textbook (just the chapters that you're responsible for, of course).
- Exams and quizzes that you've taken earlier in the semester.
- Worksheets or handouts that your instructor may have provided.

Whenever you have access to the correct answers to the problems you're working, check your answers. If you get a problem wrong, try to figure out how to get the correct answer. If you don't get the right answer within three attempts, or if you don't see how to do the problem, get help on it as soon as possible.

When you start preparing, work problems from one section or chapter at a time. As your final gets closer, start mixing up the order of the problems, because the ones on the test probably won't be in chapter-by-chapter order.

Ask your instructor if they will hand out a practice final or a copy of an old final. If you get one:

- Make a copy of it, so you can repeat these steps if you need to.
- Sit down and take it as if it were the real test.
- Find out how you did on it. If your instructor didn't give you an answer key for it, ask him or her if they would be willing to check it for you.
- If you did well on it, congratulate yourself, but don't get over-confident. If you did poorly on it, be glad that you got your bad performance out of the way on a practice

test instead of the real thing (sometimes that's just a stage you have to get past) and take it again in a few days.

Look over past tests, quizzes, and homework, and identify what kinds of errors you typically make (arithmetic, dropped negative signs, forgetting to make fraction bars or radical signs long enough, etc.), and practice the exact kinds of problems or operations where you've been making those mistakes. This is just like a professional athlete working on a weakness in his or her game.

If your instructor is letting you bring in a page or two with formulas, prepare it. Even if you can't bring it to the test, prepare one anyway – it'll be good practice. Don't just write down the formulas; you also have to know when to use each one. And if you are going to use it during the test, make sure you can read it!

If your test is going to be open-book:

- Know the names of key concepts (quadratic equation, absolute value, etc.) so you can find them in the index, and practice looking them up.
- Other than that, prepare exactly as you would if the test were closed-book. You will need the great majority of the test time for solving problems, not looking at the book.

While studying, when you run into a problem that you don't see how to solve, or a concept that you don't understand, get help as soon as possible. Here are some resources:

- Your instructor. Find out when they will be available during finals week, because their schedule may be different from what it usually is.
- Your tutor, if you have one.
- The Hartnell tutorial center. The center and the tutors may be on different schedules during finals week.
- Your study group, if you have one.
- Other students in your class. Try to make sure it's someone who's doing well!

Arrange your schedule for the day of the exam so that you'll be able to arrive a few minutes early, and can stay for the full exam period.

Do your studying when you're mentally sharp. When you get tired, take a break, or at least do something else for a few minutes.

The Last 48 Hours Before the Exam

Get a good night's sleep the two nights before the exam. Getting plenty of sleep two nights before is good insurance to have in case you can't sleep well on the eve of the exam.

No more intense studying – just do a last quick review. Hitting the books for hours at this point is not going to improve your grade, and it may have the opposite effect if you don't give yourself a chance to relax and regroup.

Get your materials together. Make sure you've got scratch paper, sharpened pencils, erasers (ones that actually erase instead of smearing!), fresh batteries in your calculator.

Eat a light, low-fat meal at least one hour before the exam. You need to be at your peak for several hours, so avoid high-sugar foods that will send your energy level to a high and then a low. Do what's necessary to make sure you won't be distracted by thirst, hunger, or a call of nature during the exam.

If you can, listen to some soothing music before the test. Studies indicate that people score higher on IQ tests after listening to Mozart, so it's worth a try!

Arrive early enough to stake out a good seat and relax for a few minutes before the test starts. If people are talking about the test or the subject matter, it may be better to leave the room (but stay close by!) until your instructor arrives. You want to be in your zone, not one that's dictated by someone else's conversation.

During the Exam

If you've memorized formulas, write them down on your scratch paper first. That way you won't have to come up with them later when you may be feeling more pressured.

Look through the whole test, and read every question. Even if you don't feel that you know how to solve a problem, just reading it will give your subconscious the opportunity to start working on it.

Answer any questions that you're sure you know how to do. This builds confidence and also ensures you'll get the points for those questions.

Before you start working on a question, read the whole question twice, and make sure you know what it's asking for. Look above the question (and on the preceding page, if the question is at the top of a page) for any instructions that you might otherwise miss.

If you don't know how to solve a problem, put your pencil down and take a minute to just think about it. You need an idea, and that idea is going to come while you're thinking, not while you're writing!

Show every step of every problem in writing. If you use a named function on your graphing calculator (like binompdf, if you're taking Statistics), give the name of the function. That's the key to getting as much partial credit as possible if you don't end up with the correct answer.

You may have heard that the answer to any True/False question that contains the words "always" or "never" is False. This does NOT apply to math!

On an open-book test, spend as little of your time as possible looking at the book.

Ask yourself if your answers are reasonable, especially on word problems. If a car is going 60,000 miles per hour, or if two people are going to paint a house in 5 minutes, something has got to be wrong!

Manage your time. If different questions have different point values, you can afford to spend more time on questions that are worth more points. Don't waste a lot of time on a question that's worth only a few points.

If you decide a big chunk of work is wrong, just cross it out instead of erasing it. This saves time, and you might even get partial credit for what you cross out.

Use all of the time available to you. If you finish early, check all of your work. Check problems in the order you worked them; that way, there will be the most time between solving the problem and checking it, and that makes it easier to spot errors.

In checking your work, make especially sure that you've answered the question asked (for example, make sure you didn't find an area when the problem asked for a perimeter) and that you've answered all parts of each question. Also double-check for the kinds of mistakes that you know you make most often.

Don't let it bother you if other people are finishing and leaving earlier than you. There are no bonus points for finishing early, and the first people to turn in a test are not necessarily the ones who have done especially well.

After the Exam

Reward yourself for a job well done. You deserve it! Just keep it safe and sane.