

## CHAPTER 4

### How to Reduce Math Test Anxiety

**P**eople who fear math feel the most anxious when confronted with a math test. In addition to the methods discussed earlier, several other positive steps will help reduce test anxiety.

#### BEFORE THE TEST

- The unknown or unexpected is usually what you most fear when taking a test. You can eliminate this source of fear by knowing exactly what material the test will cover. If not written or announced by the teacher, ask! Ask what pages to review and what kind of problems you need to know.

But don't nitpick by saying, "Do we really need to know how to work these problems?" You need to know **all** the material, unless told otherwise. Do not ignore the ones you don't like or find difficult. They are not going to go away. Get help with these problems. **They wouldn't be taught if you could not do them.** Once you understand difficult problems, you won't mind them, and you will be a lot less nervous going into the test knowing that you have adequately prepared yourself for all types of problems.

- Don't cram** for math tests. If you do, then you will be unsure of yourself while taking a test. **Begin your review several days in advance.** Dig out all those big study sheets you made and make sure you understand the principles they teach. Then work on practice tests. They can be chapter tests in your textbook, or you can ask your teacher or tutor to find or make up some for you.

You can also make up your own practice tests. On a separate sheet of paper, copy a couple of problems from each exercise you have studied. Be sure to write out the instructions for working each type of problem. Close your notes and textbook and pretend these problems are a test.

*test*

- The night before the <sup>test</sup>, you should just review what you have already studied. Do not stay up late. Remember, you began preparing for the test several days earlier. And if you don't get a fair amount of rest and sleep, you will defeat all your good intentions. Budget your time that day so you can complete your review and still go to bed at a decent hour.
- Make your test study time the last thing you do that night before preparing for sleep. Do not clutter your mind by reading, talking on the phone, or watching television. Research shows that the last thing on your mind before sleep will stay with you through your sleep cycle. If you have ever intensely worked on an idea or problem right before going to bed, you may have experienced waking up in the middle of the night with the solution or a new insight. Your mind, in a relaxed state, can keep working while you are sleeping.

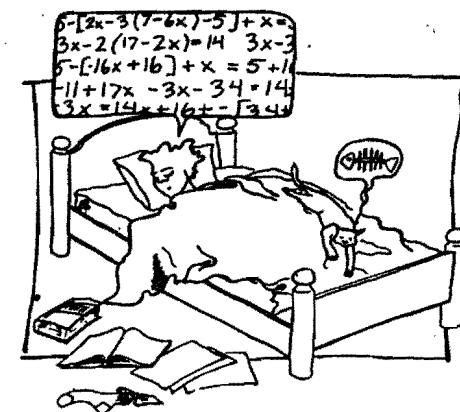
- The morning of the test, pay attention to your **nutritional needs**. You need to keep your energy level constant over time. Eating the wrong foods can make your energy too high, too low, or short-lived. Avoid caffeine (coffee, tea, soft drinks, chocolate), which can upset your stomach and make you nervous. (If you need help waking up, remember that light exercise will stimulate you mentally and relax you physically.) Avoid sugary foods such as donuts, some cereals, and coffee cakes. These foods give a rush of energy right after they are eaten, but the energy "peaks" quickly and then "crashes". Avoid greasy foods such as fried eggs or hash browns. Grease is hard to digest, will cause sluggishness, and can upset your stomach. Avoid acidic foods such as orange, tomato, or grapefruit juice. If you are nervous, you will already have enough acid in your stomach.

Do not eat too much, because you will get sleepy. When you eat a big meal, digestion becomes complex. More blood is channeled to your stomach, which leaves less blood in your brain.

**What's left to eat!?** There's plenty, really. Eat a light breakfast, such as fruit (cantaloupe, banana, or apple is fine) and a piece of lightly buttered or dry toast. A healthy (less sugar) cereal is fine, with a glass of milk. A snack, such as a lean meat sandwich, or eggs (prepared in very little oil or butter), also makes a good pre-test breakfast. Protein stays with you over time, decreasing the chances of irritability from hunger, and it will help stabilize your blood sugar so that your energy level will be more even and longer lasting.

*before*

- The morning of the test or right before the test, do not be tempted to take a hasty look at your books or notes. Remember, you reached a point the night before where you felt comfortable with the material. Why risk losing that feeling by a rushed (and probably confusing) look at the material you have already gone over?
- Ignore what other students have to say right before a test. Often they are confused and frantically searching for solutions at the last minute. Most of the time they will be wrong anyway. And listening to snippets of conversation about problems taken out of context is extremely confusing. Keep your mind clear, and remember, in your review the night before you felt good about what you know. Do not allow yourself to be confused by pre-test chaos.



## DURING THE TEST

Remember to sit at the front of the room. By doing so, you will be less distracted by what the other students are doing and you will be able to concentrate more on what you need to do.

Carefully read the instructions before beginning any problem.

Go to a problem that is familiar to you. You don't always have to work the problems in sequence. So begin with one that you are confident you can work correctly. You will be less likely to engage in negative self-talk. Fears of failing will not be as likely to enter your mind.

And by first working the problems you know best, you will make positive progress toward completing the test. Knowing that you are making progress, you will feel more confident and relaxed. If you get stuck on any problem, do not spend too much time trying to work it. Work the problems you know first, then return to the difficult ones later. Your concentration will be much better.

Focus all your attention on the problem you're working. Don't let your feelings about a prior problem interfere with your performance on the current one. Keep your emotions under control. Anger or frustration will get in the way of what you can do. For example, tennis professionals are often faced with a bad play or call that can interfere with their ability to concentrate. Consistent winners ignore such distractions and concentrate on each individual play. Remember, each problem is a separate chance to score points.

Show all of your work! It is impossible to get partial credit for a problem when you have only written the answer and it is wrong. Most math problems require several steps of work to get to the answer. When you take shortcuts or try to do too much in your head, you will be more likely to make careless errors.

Watch out for careless errors! Remember, the best attack is a good defense. Professional athletes say one of the secrets to success is avoiding mistakes.

Far too many students could have scored 10 to 20 points higher on a test if they simply would have been careful. Even when you get partial credit for a problem, those one to two points off for each careless error add up quickly and, in some cases, will be the difference between passing or failing, or making an A

instead of a B. When you work the steps to a problem, double check each step before you go to the next. In this way you will eliminate careless errors before working too far into the problem. It is easier to catch mistakes right away than to try to find them later.

Another way to catch careless errors is by recognizing when a step or answer doesn't make sense. For instance, if you are working a problem which requires you to multiply  $8.14 \times 7.974$ , you would expect the answer to be about  $8 \times 8$  or 64 because both 8.14 and 7.974 are close in value to 8. So if you get an answer of 649.0836, you should know that you have made the careless mistake of misplacing the decimal point. Mathematics involves common sense. Take advantage of your own basic knowledge when working math problems.

- When taking a multiple choice test, read carefully for what the problem is asking. Then read and think through all the choices. Whoever made up the test has probably thought of all the wrong ways to read and answer the question, so those choices will be there, too. Thus, what appears to be the most obvious is not always correct. Do not select the first familiar answer. You are avoiding math when you move too quickly to the next problem.
- Watch out for negative self-talk and anxiety. Do not let negative self-talk fool you into thinking you cannot do something before you have had the chance to give your best effort. Do not be afraid to try. Trying helps you learn, even if you do "fail." And remember, you are only taking a test; you are not being physically threatened, and you are not going "to die." Any test is just one of many that you will have to face in life. The more you take them, the more you will get used to them. And the more you control your negative self-talk and anxiety, the better you will do.

## AFTER THE TEST

- Congratulate yourself on having worked hard. Do not pay much attention to what other students say after a test. Wait and see for yourself how you did.
- When you get your test back, make sure you know and understand your mistakes. Mistakes are an opportunity to learn. If you can, go over the test with your teacher or tutor. Recopy the problems you missed and try them again. If you are not allowed to look at or keep your test, ask your teacher to tell you what types of problems you missed. Know exactly what pages you should review again and what problems you should practice to help clear up any trouble you may still be having.
- If you do not earn the grade you hoped for, remember that trying is as important as succeeding. Success might not always come as quickly as you want, but you must not stop trying. Look at the outcome in positive rather than negative terms. For instance, the problems that you got right mean that you are capable of learning and understanding, and you can work toward getting more problems right the next time.