

Math Tips For:

Kinesthetic/Tactile Learners

Do you prefer real-life experiences with math, such as manipulating it and experimenting with it? Do you find that you like to move around when you study, pace the floor, or shift positions a lot?

Here are some strategies that may be useful to you are a kinesthetic/tactile learner.

1. Use a hands-on approach to learning. Work out as many math problems as possible. Do, do, do. Practice, practice, practice. You'll be amazed at the positive results.
2. Whenever possible, convert what you are learning in math to real-life, concrete experiences. If applicable, use measuring cups, measuring vials, toothpicks, seeds, stones, marbles, paperclips, rulers, sticks.
3. If someone shows you how to do a problem, immediately work out a similar one to see if you understand how to do it.
4. While studying, try to solve problems several different ways in order to decide which method feels right for you.
5. Many kinesthetic/tactile learners find that they must move during the learning process. You may want to walk to and fro while reading your assignment or even while working out problems. Some students like to rock back and forth. Others need to shift positions frequently. The movement seems to increase understanding and comprehension for some highly kinesthetic people.
6. Use computers and workbooks.
7. While you exercise or engage in other types of physical activities, review your math concepts in your mind.
8. Use your fingers and even your toes if this helps when you figure out math problems.
9. Rewrite class notes.
10. Use a calculator to solve problems.
11. When appropriate, use or build models to help understand math concepts as you learn.

Math Tips For:

Visual Learners

Are you a strong visual learner? Do you find it helpful to see math problems written on the blackboard or on paper before you can begin to understand and comprehend what is being asked of you? Would it drive you crazy if you had to listen to a math lecture and you had nothing to write with or if the teacher wrote nothing on the board?

Ted, a construction worker, returned to college after being out of school for almost ten years. He really wanted to get his college degree, but math was terribly frustrating to him. He could easily copy everything his instructor put on the blackboard, but he was completely lost with the lecture. Math just didn't make sense to him when he listened to it. Ted learned that he is a strong visual learner but a weak auditory learner. Once he understood *how* he learned, he began using strategies to help him gain the most out of his math classes and his studying. Soon Ted's math achievement and his enjoyment of math began to improve. Ted has continued to take math courses and now doing well in calculus and loving it.

Here are some strategies that may be helpful to you if you are a strong visual learner.

1. Take written notes when someone is explaining math to you.
2. Whenever possible, ask for written instructions.
3. Make your own drawings or diagrams when figuring out word problems.
4. Use flashcards to review all concepts, formulas, theorems, equations, and explanations.
5. Write as much as you can when you study. Work out lots of problems.
6. In lecture, copy down everything the instructor writes on the blackboard.
7. Use two or more math books. Read how different authors explain the topics you are having trouble understanding or remembering.
8. Visualize in your mind's eye the math concepts you are learning.
9. Use computer programs that illustrate concepts you are learning.
10. Read your textbook assignment and previous class notes before your next class.
11. Use workbooks, supplemental study guides, handouts.
12. Map out, chart, or in some way graphically illustrate your classroom and textbook notes.
13. Always write in your textbook. Underline key words. Mark important concepts and use colored pencils to liven them up.
14. Sit near the front of the classroom to avoid visual distractions and to pay closer attention to your instructor.
15. When you review your classroom notes, creatively highlight the important points with colored pencils or markers.

Math Tips For:

Auditory Learners

Are you primarily an auditory learner? Do you prefer to have someone explain math to you rather than read about it or see it on paper? Does it help you to repeat math problems aloud or in your head before you can figure them out? Does it frustrate you when a teacher shows the class how to figure out a math problem on the board, but doesn't explain each step aloud while writing it?

The following suggestions will be particularly helpful if you are a strong auditory learner.

1. Sit near the front of the classroom so you can clearly hear your teacher without auditory distractions.
2. You may want to use a tape recorder during lectures and listen to each lecture as soon as class as possible. Listen to it over and over again, when you drive, study, jog or do your chores.
3. Take part in classroom discussions.
4. Ask lots of questions in class, after class, and in help sessions. Ask for clarification if you don't completely follow an explanation in class.
5. Restate, in your own words, math concepts you are trying to understand.
6. Ask your math teacher to repeat important concepts.
7. Listen carefully to the math lecture. Mentally follow the concepts, then write them down to capture what was said.
8. If you can't get everything that the teacher writes on the blackboard, find a classmate who seems to be more of a visual learner and is writing everything from the board. Ask if you could look at this person's notes after class and fill in anything you have missed.
9. Immediately after you read your math textbook assignment, recite aloud what you have learned.
10. Read your class notes and textbooks aloud. Whenever possible, say them in your own words into a tape recorder.
11. Talk about math to a study partner or to anyone who might listen. (I know some students who have explained their assignments to their pets.)
12. Listen for key words in your math lecture. Note if your instructor emphasizes certain points through his or her tone of voice, emphasis on certain words, voice inflections, and so on.
13. Record all the key concepts, formulas, explanations, and theorems on an audiocassette and listen to them often.