

Math =
Success

Go figure!

Winning at Math

Learning Disability Association of Sudbury

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Other Information

Cambrian College offers an online course called **Winning at Math - Math Strategies** through the Continuing Education department

Dr. Paul Nolting's book **Winning at Math** is available from www.academicsuccess.com

Winning at Math - Why is Math Different?

By Marlene McIntosh, BSc, MBA, MEd

This is a first in a series of articles about how to learn math.

Math is a unique subject in school. In order to do well in math, there are several factors to consider. This is the first – **Math is different from other subjects.**

In order to learn math, you must *understand* the material, *process* the material, *apply* what you've learned *correctly*, and *remember* what you've learned. In math, you must learn the building blocks in order to progress – math is **sequential**. This is where students don't do so well when they get a 50% in a math course and go onto the next level. Their lack of the fundamental building blocks often leads to failure in the next math course. Compare this to something like history. You can study chapters 1 and 2, skip chapter 3, and have a test after chapter 4. You can still pass. However, this is not the case in math.

Math is similar to a **puzzle**. You need to understand all of the concepts and rules in order to solve a problem. Not knowing or forgetting one major rule can cause you to miss **MANY** problems.

Math is a **foreign language**. Think of all of the terms that are used **JUST** for math – quotient, divisor, remainder, etc. If you don't practice a new language, you forget it. Plus, you have to understand what the words mean. In fact, many universities in the US will allow students to take math as an equivalent to a foreign language course! What can you do about this? 1) **Get a book and use it just for vocabulary**. You could do this in MS Word as well if you want to sort it in alphabetical order or use **Ctrl+F** to find a word. In this book, include definitions and examples. 2) Before class, **preview the chapter** and identify words you don't know. You don't have to understand them all – but make a note of them. You can ask the teacher to clarify any vocabulary that you don't know. 3) Practice saying the vocabulary out loud, so you become comfortable with words, meanings, and how they connect to each other. 4) When working math equations, say them out loud saying words that the symbols represent. For example: $2x + x^2 = 7$. You would say "This is a quadratic equation – 2 x plus x squared equals 7."

Math is **unpopular**. There are many school subjects that are reinforced with everyday television programs, for example. Look at how these subjects are fortified on TV – English, humanities, speech, social studies, and natural sciences. Not so for math.

Learning math is like learning to play a **sport**. You have to actively practice math. You can't just listen to the coach – it's not a spectator sport. Math is similar to learning how to play a **musical instrument**. You need to understand the theory and the rules of playing. You need to **practice** – unless you practice, you will not learn how to play.

Practicing Math – 1) Make sure you understand math concepts and the basics. 2) Practice homework problems **every day** (7 days a week) until it comes to you naturally. 3) Learn the vocabulary. 4) Try to “teach” math to someone else.

Doing Math Homework – 1) Reserve much more time to read a chapter and to complete homework. 2) If you don't have time to complete ALL of your homework, make sure you review your notes and do a **COUPLE** of problems. 3) Start thinking like a math instructor in your course and when you do your homework. 4) Time yourself once you feel comfortable (math is a **speed subject**).

Math is the only socially acceptable course to fail! How many times have you heard someone say “Don't worry about your grade in math. I am not good at math either.” In fact, it seems that everyone is in the “I like math” or “I don't like math” category. Very few of us are ambivalent about the subject. Did you know that math is the **only subject to have a mental health diagnosis attached to it? Math Disorder** – you don't hear of anyone having a History Disorder or a Social Studies Disorder. In fact, Math Disorder is in the Diagnostic Service Manual (the DSM) V. This can lead to a *bad math attitude*. “I won't ever need to know math in the real world.” Sound familiar? **Check your attitude at the door!** Constantly reminding yourself that you “don't like math” will lead to failure.

The next article will be on assessing your math strengths.

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