## How to Overcome Your Fear of Math

The word *math* is enough to strike fear into <u>the hearts of many students</u>, How many of us have memories of sitting through confusing lectures, wrestling over mind-numbing homework, or taking tests <u>we don't understand no matter how long we study</u>? Years after graduation, <u>these horrific math memories can still make us shudder</u>.

The fact is, math is not just a classroom subject. It has real-world <u>applications</u> that you <u>use</u> every day, whether you realize it or not. This may be balancing your monthly budget, deciding how many supplies to buy for a project, or simply splitting a meal with friends. The idea of daily confrontations with math can be so paralyzing that some develop a condition known as **math anxiety**.

But you do NOT need to be paralyzed by this anxiety! In fact, while you may have thought all your life that you're not good at math, or that your brain isn't wired to understand it, the truth is that you may have been conditioned to think this way. From your earliest school days, the way you were taught affected the way you viewed different subjects. And the way math has been taught has changed.

Several decades ago, there was a shift in American math classrooms. The focus changed from traditional problem-solving to a conceptual view of topics, de-emphasizing the importance of learning the basics and building on them. The solid foundation necessary for math progression and confidence was undermined. Math became more of an <u>abstract</u> concept than a concrete idea. Today, it is common to think of math, not as a straightforward system, but as a mysterious, complicated method that can't be fully understood unless you're a genius.

This is why you may still have nightmares about being called on to answer a difficult problem in front of the class. Math anxiety is a very real, though <u>conquerable</u>, fear.

Math anxiety may begin with <u>something as small as</u> a single class period. Let's say you missed a day in 6<sup>th</sup> grade math and never quite understood the concept that was taught while you were gone. Since math is cumulative, with each new concept building on past ones, this could very well affect the rest of your math career. Without that one day's knowledge, it will be difficult to understand any other concepts that link to it. Rather than realizing that you're just missing one key piece, you may begin to believe that you're simply not capable of understanding math.

This belief can change the way you approach other classes, career options, and everyday life experiences, if you <u>avoid anything involving math</u>. A student who loves science may choose a different path of study upon realizing that multiple math classes will be required for a degree. An aspiring medical student may hesitate at the thought of going through the necessary math classes. For some this anxiety escalates into a more extreme state known as **math phobia**.

Math anxiety is challenging to address because it is rooted deeply<u>in the subconscious</u> and may come from a variety of causes: an embarrassing moment in class, a teacher who did not

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you that you're just not cut out for math,	Deleted: of math failure
These causes add up over time, encouraged by <u>the popular view that math is hard and</u>	Deleted: society's
unpleasant. Eventually a person comes to firmly believe that he is simply bad at math. This	Deleted: or she
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and test grades begin to slip, which only confirms <u>his</u> belief. Th <u>is</u> poor performance is not <u>caused by a</u> lack of ability but by math anxiety.	Deleted: the
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Math anxiety is an emotional issue, not a <u>n intelligence issue</u> , But when it becomes deeply	Deleted: due to
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overwhelming and impossible. The <u>negative</u> emotional and physical responses to math	Deleted: -
prevents the brain from <u>approaching the problem logically</u> .	
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The more this happens, the more a person's confidence drops, and the more math anxiety is generated. This vicious cycle must be broken!	Deleted: the thought of
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The first step in breaking the cycle is to go back to <u>the</u> very beginning and make sure you really understand the basics of how math works and why it works. It is not enough to memorize rules for multiplication and division. If you don't know WHY these rules work, your foundation will be shaky, and you will be at risk of developing a phobia. Understanding mathematical concepts not only promotes confidence and security, but allows you to build on this understanding <u>to learn</u> new concepts. Additionally, you can solve unfamiliar problems using familiar concepts and processes.	Deleted: hrough it logically Deleted: for
Why is it that students in other countries regularly outperform American students in math? The answer likely boils down to a couple of things: the foundation of mathematical conceptual understanding and societal perception. While students in the US are not expected to <i>like</i> or <i>get</i> math, in many other nations, students are expected not only to understand math but also to excel at it.	
Changing the American view of math that leads to math anxiety is a monumental task. It requires changing the training of teachers nationwide, from kindergarten through high school, so that they learn to teach the <i>why</i> behind math and to combat the wrong math views that students may develop. It also involves changing the stigma associated with math, so that it is no longer viewed as unpleasant and incomprehensible. While these are necessary changes, they are challenging and will take time. But in the meantime, math anxiety is not irreversible—it can be faced and defeated, one person at a time.	Deleted: -

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