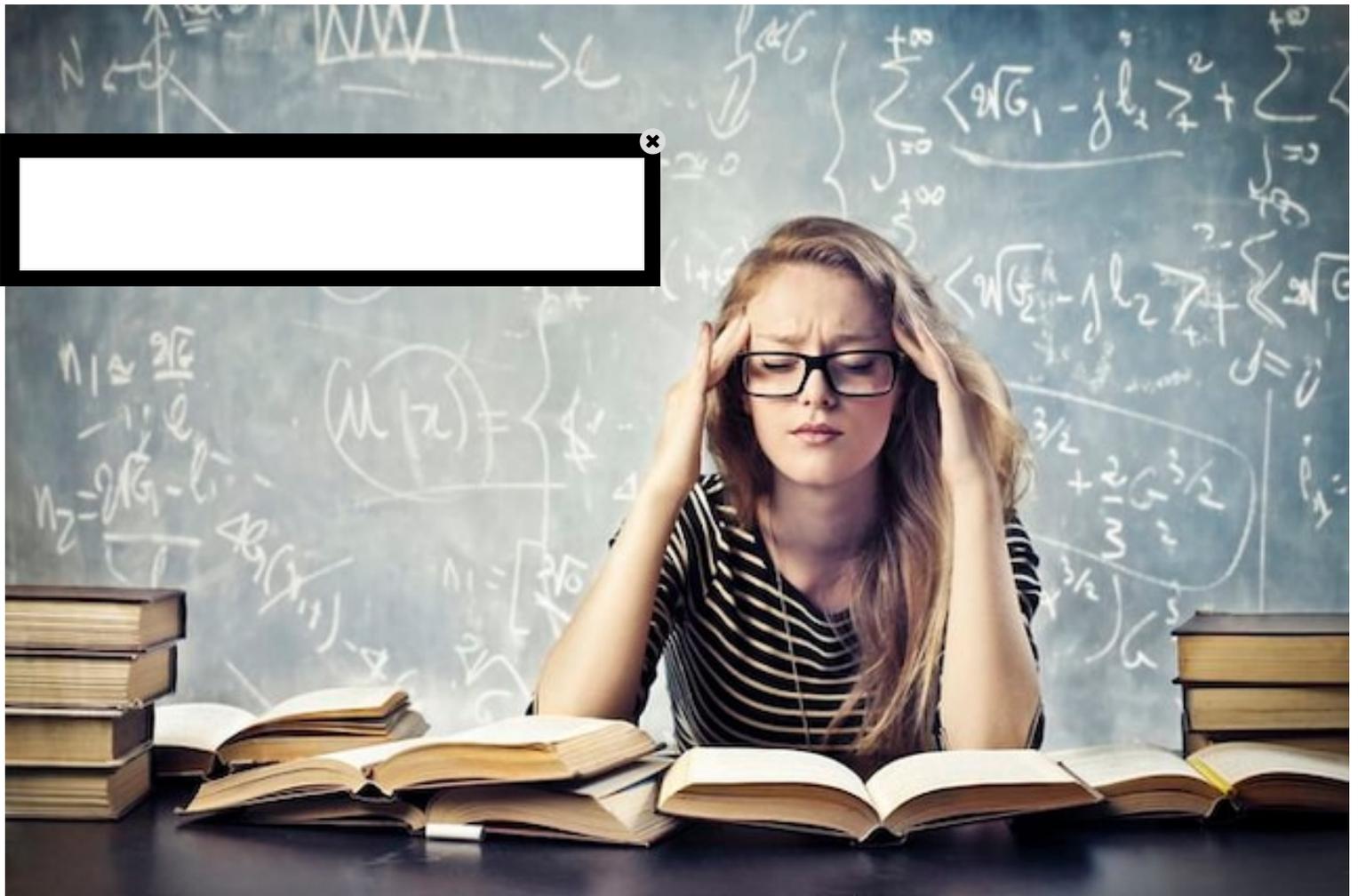


DIY

How to improve your math skills

You need math, but you don't have to struggle.

By Dan Seitz
November 17, 2019



If you can tell us what all those lines on the blackboard mean, you probably don't need this article. *olly18 via Depositphotos*

There's a lot we learn that we instantly forget. In fact, depending on who you ask, up to 60 percent of high school goes straight into your mental recycling bin, and for quite a few of us, that includes our math skills.

Still, that doesn't mean you can't get those skills back. As adults, we handle mathematical problems every day: comparing prices, measuring cooking ingredients, and calculating the time it'll take us to run several errands, to name a few. Some of those may have us thinking more than necessary, but it's never too late to get better and faster at solving them. It just takes a little practice.

Practice, practice, practice

Several studies point out the benefits of being good at math. More “numerate” people tend to be healthier because they better understand how the numbers on their charts interact, and are more likely to use hard data to evaluate risk over anecdotal evidence and emotional appeals.

But that can be you, too. Scientists have shown that when it comes to improving your math skills, practice is what matters most—not talent.

The best way to think about math is to search for patterns.

“Mathematics is more about careful thinking than it is about speed,” explains Samuel Otten, a professor of mathematics education at the University of Missouri. “Asking good questions or making insightful observations should be just as important.”

So the question is: What type of math do you want to learn, and what do you want to get out of it?

A good foundation, Otten says, is to develop a “number sense,” or a grasp of how numbers relate to each other. For example, $525 - 496$ might seem like an intimidating subtraction, but it’s close to a much more comfortable one: $525 - 500$. You should know the answer to the latter equation is 25 and that the difference between 496 and 500 is four. Put 25 and 4 together and you’ve got the answer to the original problem: 29.

“That line of reasoning can happen almost instantaneously in my mind,” Otten says. As you develop these connections with numbers, you’ll become more comfortable with them.

Nothing gets you closer to success than practice, so take all the real-life opportunities you get to flex your math muscles.

Whenever you come across a numerical problem—like how much your lunch will cost, or how many miles you drive in a day—take a moment to try rounding things up or down to numbers you feel more comfortable with, and work it out. Having a way to check your work, like a calculator or, in the case of your mileage, an odometer, will help you catch errors.

The key is to focus on the process, not the solution, especially when you find you’ve made a mistake. Take the lunch example: If

you add up the cost of each item and the final bill is a little higher than you expected, check your receipt to see if you forgot tax or transposed a number.

Learn online or teach yourself

It's never been easier to learn math at your own pace. Everybody can learn and apply it in different ways, but a few options include:

- Free online courses on YouTube, such as [PatrickJMT](#), a community college mathematics professor who posts short single-topic instructional videos.
- Interactive course books like those available at [Khan Academy](#).
- Podcasts, like [Breaking Math](#).

And, of course, there are also workbooks and self-teaching courses. The key is to find an avenue you can stick with. Teaching yourself a subject takes practice, and you'll definitely hit bumps in the road. It's OK if there's something you don't know.

As you develop your skills, make things easier for yourself by using the following strategies:

- **Follow your interests and needs.** Subjects you care about are more likely to be the ones you stick with as you teach yourself.

If, for example, you're working on reducing your credit card debt, start learning about how interest functions.

- **Get a study buddy.** Like any other subject, math is easier and more fun when you can check your work with a friend. In fact, “learning by teaching” is a highly effective method of educating yourself.
- **Remember you're not being graded.** There's also no test you have to pass. If you get frustrated, step away. Try a different problem or apply your approach to another question and see if you hit the same cul-de-sac.
- **Limit the stakes of your work.** It's easy to stress out when you're trying to solve an important problem. Sticking with the credit card example, don't practice by trying to calculate your next payment while you're planning your next month's budget. Instead, wait until you've already paid and work in reverse, using your payment, fees, and interest to figure out how your credit card company calculated your minimum payment.
- **Look up unfamiliar words and concepts.** Feel free to even set aside what you're working on to explore them more thoroughly. Many mathematical concepts tie into one another—geometry is the foundation of algebra, for example, so learning one helps reinforce the other.
- **Try another teacher.** If you don't understand something at first, look for an alternate explanation or tutorial, or do what the Breaking Math team recommends: Write a how-to for yourself, step by step, and see where you're having trouble. That way you can look for the exact question you have and solve it quicker.
- **Keep practicality in mind.** If you're mostly doing math around financial matters, for example, it makes sense to round numbers off at two decimal places. Just remember that different industries have slightly different rules—bankers, for

example, use banker's rounding, which rounds up or down from the penny.

- **Don't do it all in your head.** You don't need to impress anyone. If you need to write stuff down, do it.

Yes, you can use a computer

“Calculators and computers work quite well, so there shouldn't be any shame in using them,” Otten says. Just like a second- or third-grader shouldn't be ashamed to use their fingers with basic arithmetic. In fact, mathematicians are increasingly teaming up with computer scientists to have their more complex work checked over for errors. So bust out your calculator without any anxiety.

We'll probably never get back everything we learned in high school math. But with a little practice, we can all become a little better with the numbers around us.