



FREE

MathVideos

CHECKLIST

FOR SURVIVING MATH CLASS

10 steps to a better year



BRIAN MCLOGAN

TABLE OF CONTENTS

Step #1 Forget the Past	02
Step # 2 Introduce Yourself to Your Teacher	03
Step # 3 Find a Partner	04
Step #4 Find Where to get Help	05
Step #5 Learn How to Take Notes	06
Step #6 Learn How to Study	07
Step # 7 Learn to Take Tests Like a Pro	09
Step #8 Find Free Resources	11
Step #9 Get Organized	12
Step #10 Learn How to Reflect	13
About me	15

STEP #1 Forget the Past

Pay no mind to your previous struggles in math. You can do this. Struggling is a part of learning; It should not be avoided - rather, embraced. Crying and worrying over homework every night is not what I am suggesting you do but you do need to learn to step back and give it some time. We do not all digest information the same way. Do not compare yourself to others or to what has happened in the past.

Give this year a chance. Sometimes all you need is a fresh outlook. Understand that everyone had to learn how to walk at some point and we all did not learn how to walk at the same age or the same way. Keep trying and do not give up. Persistence pays off and realizing that your past does not equal your future is key. You may need to re-learn some topics or tactics but accept it and move forward.

STEP #2 Introduce Yourself to Your Teacher

Not all teachers are geniuses. I do forget names and faces here and there just like everyone else. However, a surefire why to ensure your teacher won't remember you is to not share who you are, how you learn best and when you need extra help. Make sure your teacher knows you, remembers you and knows how they can best help you. This is important from the start. Saying your name is great but it is most helpful to ask your teacher how you can succeed in their class or what they could do to help you. They will appreciate it - I promise.

We as teachers are here to help you. Our job is to help you learn. When we know you are eager to learn and not just showing up to get a passing grade, we want to make sure we reciprocate those motives. Some of the best advice I received on how to do well in math class came from open communication with my teachers. Think of them as your coach. You both have the same goals and they are there to help you.

STEP #3 Find a Partner

No one has to learn math alone. Find a partner or group to study with. This can be very hard at the beginning of the year because you may not know many other students but take the proactive approach and start meeting people. Find like-minded classmates and exchange contact information. You do not have to be best friends but great, mutually beneficial relationships can be created.

When I started to struggle in math, knowing that others were struggling or others were working hard to learn the same concepts as me really helped. By working with a partner and group I gained a connection. We learned from one another and in the process, gained more confidence. There is no rule you have to do everything on your own. Learn to work with others and use that to your advantage.

STEP #4 Find Where to get Help

Most schools offer some sort of free tutoring. Know where and when it is so you can take advantage. Tutors are awesome because they have experience and can usually explain things in different ways from your teacher to help you understand. Know when your teacher is available for office hours or help sessions. Meet with them and make sure you get your specific questions answered (I suggest writing your questions down or bringing specific problems with you).

I know a great guy who posts free videos on YouTube and guess what?? There are many other great teachers there as well. I didn't get the opportunity to learn from online lectures when I was in school but obviously am a big fan. There are benefits such as tons of content, being able to rewind and re-play when needed. Some of the negatives would be struggling to locate the exact content needed and the loss of human interaction. Either way they are out there at your disposal and if you start to struggle there is no reason for you not to give different online lectures a shot.

STEP #5 Learn How to Take Notes

The obvious tip is to write down what the teacher writes. The less obvious is to write down what the teacher doesn't write, but says. I am sure you can remember times where you wrote down something, understood it at the time but when you went back to it later, you have no idea what you were talking about much less how to solve or re-learn it with.

If you are able to obtain digital or copies of the notes, stop trying to write down everything. If that is not an option try to start focusing on what the teacher is saying instead of frantically writing down everything on a board or powerpoint. Essential information is important but often more important information is added as commentary so make sure you are paying attention and add it to your notes. Some examples are: Why was a certain step applied or where did things come from? Don't trust your brain to remember, write down the extras.

STEP #6 Learn How to Study

Studying for math can be a learned but difficult skill for some. There are two main reasons I see people struggling on assessments. First, students do not have enough practice on the essential skills and second, they have not built up the connections between the essential ideas. Do not assume the required work is enough practice. Find extra problems (often in the book or from online videos). Take your old notes and cover up the work and try it out on your own then check your answer. Keep working through the problems until you have a solid handle on the concept and working through problems.

Connecting ideas is much more difficult. I recommend first organizing all the essential ideas, definitions, processes, and problems and put them on one sheet of paper. I call this the 'cheat sheet' but it is really just a summary of everything you have learned for the unit.

STEP #6 Learn How to Study

Look over the information and start asking yourself these questions: How is one connected to another? What questions might my teacher ask about this topic or process? Often problems in the back of the book are a great resource for different vantage points. There is no better feeling than to know you have covered everything before a test compared waking up and winging it.

STEP #7 Learn to Take Tests Like a Pro

No one likes test. They are stressful, time consuming and often leave you feeling deflated. But it doesn't have to be this way! To be successful you have make the test work in your favor. There is no rule that tests must be completed a test in chronological order. So then why do we? Skip around the test and focus your brain power on only the questions you know how to solve and feel most confident with first. Not only will this rev up your brain and increase your confidence, but you will remain sharp and not fatigued. You'll be on a roll!

Once you have finished completing the questions you know, it is time to work on the problems that take a few extra steps or are just a degree more difficult than what you completed. I call these the 'medium questions'. Save the last section for the hard problems or most complex for you personally.

STEP #7 Learn to Take Tests Like a Pro

If time is running out it is best to have made sure you completed all the other problems you 100% knew how to complete. By this time your brain has already worked through the content so it will be primed to solve these deeper problems. This is not backed by science but by experience.

STEP #8 Find Free Resources

My favorite resources are free. There are three main resources I use within my classroom and advise my students to use as well (there are more out there so explore them on your own but here is what I use). First is Desmos -- a phone app and website. It has amazing graphing capabilities as well as activities that help you understand essential mathematical concepts. It also can function as a scientific calculator and now has capabilities for geometry even though I have not explored those features just yet.

When you are working on problems and just get really stuck, I love to you use mathway.com and slader.com. Mathway will give you the answer to almost any problem you give it. It's a quick and helpful way to make sure your answer is correct. You can pay to see the steps but I just prefer the free version. For problems out of a textbook, Slader provides user generated worked out solutions. Not everyone works out the solutions or uses the same notation the same way but either way, the steps are there and free!

STEP #9 Get Organized

Organization seems simple but it has made a huge difference to me as a student and many of those I taught. There are a lot of great hacks available online but that is not what this is about. I think of organization as keeping things simple and in their place. I sometimes have to fight my mathematical brain on this but the more I do it the better I feel.

Do not be that kid stuffing their homework in their book to just lose it when it comes time to do it later or turn it in for credit. However you learn to organize your content, do it and stay consistent. If this is not a habit of yours already it will take time but that is okay. Just try to make sure everything from the unit you are learning is together and in order. Don't be that kid carrying around chapter 1 test when you are on chapter 5. Once you finish a section or chapter, collect everything and remove it from your binder. This helps you focus on just what you are learning and makes sure all your work is together and will not get lost in the future.

STEP #10 Learn How to Reflect

Reflecting is essential to guiding you through your course. You can walk in a jungle for days and not get out. Reflecting is like standing atop the mountain and realizing where you are and where you need to go. It's your compass. There are multiple opportunities to reflect during your math class. The only way to really improve is by understanding your current situation and how you got there.

After each assessment spend some time reflecting what you did to earn that grade. Did you do everything you said you were going to do or know you needed to do? Did you fall short? Why did you fall short? What can you do next time? The most important part of this whole checklist is to do something about it. Every day is a new opportunity for you to prove to yourself and anyone else that you can change, improve and learn math.

STEP #10 Learn How to Reflect

Here is your homework (I'm a teacher - did you think I would let you off easy?!): Use this checklist as an action tool and not just something you read, save and never see again. These steps can truly help you not only survive math class, but succeed! I look forward to hearing about your journey and want to let you know I am here for you.

About me



My name is Brian McLogan and I make short, to-the-point online math tutorials. I struggled with math growing up and have been able to use those experiences to help

students improve in math through practical applications and tips. I have taught everything from Algebra 1 through Calculus at the high school level in Jacksonville, Florida.