

Dear Father of Algebra, **Sir Al Khwarizmi**,

I always struggled with math, and I found it pointless sometimes, too. I watched my older siblings solve large equations that made my brain and hands cripple! It honestly made me fear growing up! My brain was programmed to think that middle and high school was exactly what older kids always complained about; the fact that math was useless. I always heard the older kids say they aren't interested in learning math because they'll never use it in life. And I had always thought that too! It wasn't until one day, I came across a page on my sibling's algebra book that had a picture of a desert looking Arabian, and wondered why that was there? Curious George I was, so I went over and took a peek and found myself reading about you! You made it on the math book and you're known as the father of Algebra! That's what you're famous for, Sir Al Khwarizmi, and I thought I'd write this letter to tell you that your hard work paid off!

So you may be thinking..."Well that's cool! I made it on a math book, hoorah, but what good is that? Do people use this in their everyday lives, and who took credit for my work?" None other than you, of course! Your writings from a centuries ago were kept, and even to this day, people all around the world apply them and find them useful.

In my letter to you, I will summarize the basics of what has gone around about you. Firstly, you were born in Khorasan around the year of 780. Not much is really known about your early life, but, people started to recognize your works, and soon, you became a famous mathematician, astronomer, and geographer in what was known as the House of Wisdom located in Baghdad at the time. The Quran and your Religion, Islam, preached about how gaining knowledge is important and good, and that was what pushed you to study philosophy, astronomy (the study of space and stars), geography, and math. Your most famous work, *Hisab al-Jabr wa-al-Muqabala*, which FYI is called *The Compendious Book on Calculation by Completion and Balancing*, in English, is what our algebra lessons are based on! In that book, you collected pages and pages of endless work and equations, such as completing the square, which I have yet to learn. You also translated Greek and Latin works and added on to those. Lastly, the number zero, developed by Hindus and started in the Babylonian and Mayan's empire, wouldn't have spread without your help and book. Aside from that, Algorithm too, which believe it or not, was taken from YOUR name. Al Khwarizmi was called Algorithmi in some places of the world, and today is called Algorithm. And Algebra too! Who knew you were called Al Jabari, which today is called Algebra. Amazing, huh?

So why all the chaos over math, you may ask? Well, not only does math help us in school, but also in daily life. We use math and algebra directly and indirectly. For example, buildings can't be made

without measurements, equations, formulas and precise detail! Mathematicians and Engineers need to learn the basics of algebra so they can move on to harder math lessons. Because let's be honest, most of us are too blind to realize, that without Algebra and math, we wouldn't have all the technology we have today, or the medicine, and probably not the buildings that touch the clouds. Computers and technology, too, run on math equations and formulas, that computers understand.

$ax^2 + c = bx$, is also one of your equations, and is used more than it has been back in your day, Sir Al Khwarizmi! And little did you know that the polynomial equations (which I have yet to learn as well) are used today to make 2 Dimensional drawings and designs. These 2D drawings are used to create the cartoons that bring joy to kids! Now asides from Algebra, you also studied Astronomy. When I admire the stars in the black night sky, I remember the people who brang definition to them, and you're one of those people.

I have chosen to write this letter to you because of my appreciation and admiration toward your efforts. I thank you for saving the time of our mathematicians today, and our time as well. The time you put in back then, has saved us time now! Thank you for your determination and love for learning. Who knows what obstacles you went through while studying? What matters is that you made a difference. I too, hope that I can make a change, even if it's a little one in my society, and better yet, the world! Oh, and while I was researching about your history and life, I learned that you highly admired poetry, so I decided to write and dedicate this poem to you!

*At a time where journals were empty and papers weren't hefty,
A man who loved knowledge, and helped advance The Great College,
Brought strength through math to the existing empires,
With math and astronomy, and the love for philosophy*

*And the mighty black ink pen,
That wrote fancy words and helped men,
Played a role in helping him become
The Father, and Founder of Algebra.*

Sincerely,

Fatima

5th grade,