Final Reflection on My 2025 Summer Enrichment Experience at AwesomeMath Summer Program.

By David Johnson

It is kind of crazy to think that three weeks can pass so quickly. Even though it was all online and I had only just met these people a few weeks prior, it was peculiar that first day when I did not have class. I did not see the same people that I was so used to seeing, and it seemed like I just did not show up to any normal school day. However, this version of school was over, and it was a little bit bittersweet at first to admit that.

I would be dishonest if I were to say that three weeks cannot really change your life. I learned so many skills and insights from this program that not only made my life clearer but made math, a subject that is so simultaneously intricate and complicated, have clarity as well. I not only gained a foundation from the new branches of math I was exposed to from my professor, but I learned that not every challenge needs to be solved at first glance. In fact, not every challenge needs to be solved at all. I discovered that there is no success without process, struggle, and failure. Success, and more importantly, growth, does not come with a detour.

I think the hardest part of this program was talking to people, especially my professors. Of course, I had an entire Discord server available with quick access, but I had this debilitating fear of being judged. Getting to know the nature of the program and the talent of my peers made the opportunity to shine incredibly daunting. I shrank back when the professor wanted the answer to a question, even if I was 100% positive I had the answer right. When I found out I had it right from a peer, the opportunity felt missed, and I began to question if I really belonged. I knew I was capable, but I knew I could not capitalize if I could not be confident. During the first week or so, I tended to just turn my homework in, without asking follow-up questions on my work, because I genuinely just thought I could not do it.

It took multiple comments and reach-outs from my professor and T.A. to give me really any motivation. I was going into this program with barely any experience in math competition, and it was not easy to navigate my way around these problems, even if I knew they were easy, considering the expertise I had. I knew that if I was going to make any progress, I had to reach out, which was a skill I even lacked at school. From a young age, even if I did not have to, I sort of forced myself to navigate my academic work on my own. Although I knew I had to break this habit if I were really to benefit from this program. When I realized in class that first week that I was suddenly starting to fall behind, I finally made the decision to reach out via email and private comments on Google Classroom. I began the habit of reaching out on assignments where I both were able to answer as much as 80% and 30% alike, and the feedback I received opened doors I kept locked before my decision. I learned this program was more about trying than getting everything right. Even when I got almost nothing right, I learned that the effort counted more, and that is a lesson I still hold true to myself two weeks after the conclusion of the program.

I would say the curriculum itself is the most fascinating part of this program and the part I enjoyed the most. Each day always had new content, but I was familiar with the roots of the lessons. Everything I learned had some background in Algebra 2, which I would say is the best part about this program. Vieta's formulas allow you to find the sums and products of the roots of a polynomial without having to know the roots themselves; I learned about polynomials in Algebra 2, but I never learned about Vieta's formulas there. In trigonometry, I learned the same trigonometric functions that I learned in Algebra 2, but I learned why these identities actually work. Later on in the course, we delved into the roots of unity, which considers Euler, a mathematician whom I learned briefly about in Algebra 2 with logarithms but not with the complex plane. Simply, the content I learned in this program added a new level of difficulty to what I already knew, which helped my understanding each day despite the underlying challenge.

One thing AwesomeMath places much emphasis on is the rigor of the program. Each day, I found myself spending almost the entire day on each homework lesson, and some days I would not even be able to finish half of it. The tests would take me a long time too. Along with the comments from my professor and TA, I learned that the effort is expected but accuracy is not. This sort of ideology made each piece of work less intimidating, but the philosophy still helped me make progress in my understanding.

I would say the greatest takeaway and accomplishment I extracted from this program was the idea that stepping out of my comfort zone is necessary to succeed. In the summers in the past, I have taken many other programs, from topics ranging from coding to psychology and beyond. However, I realized that none of these programs I took were very significantly challenging to my own expectations. I felt like I got by rather than I truly got anything out of it. With AwesomeMath, on the other hand, there was not a single day when I would deem the content “easy”. I would rather call every day a learning experience. With the help of my professors and peers, I learned much more both about the content and myself than I had ever learned from other programs in the past.

I would achieve none of the success in this program without the help, as I previously mentioned, of my peers. As part of the Zoom meetings each day, we had these segments called problem sessions. During these sessions, the professor and TA assigned us problems to work on in these little breakout groups. We would then return to the main session after about 30 minutes and discuss the answers we came up with. I was able to solve many on my own, but I also learned how to solve other problems from my peers. I ended up finding out that, a good portion of the time, the solving process was much easier to decipher, and seeing the ways my peers completed them made similar problems in future homework much more attainable than I would have previously thought.

I think one of the hardest parts about this program was the fact that it was virtual. Of course, the Discord server was always available to communicate with my peers, but I feel that if

the camp had been in-person, I would have built longer-lasting connections, and I would have learned so much more about them. It would also have been cool to experience dorm life to help prepare me for college in the future, which would have been possible if the camp had been in-person.

Aside from the fact that this camp is virtual, I would still definitely recommend this camp to future Garwin Family Foundation students. As part of this program, students will learn so much about math that they will not learn about in school. They will find out what it means to learn through struggle, but they will also learn to celebrate what they accomplish due to the struggle.

Going into this program, I was very unsure as to what career path I would like to pursue. Despite the mathematical challenges of this program, I feel more after this program that a major that incorporates math and challenges me in that way would be best for me, such as something like chemistry or neuroscience.

I want to conclude by giving my utmost thanks and gratitude to the Garwin Family Foundation for such an amazing opportunity. Without their assistance throughout the entire process for this camp, I do not think I would have gained nearly as much experience, learning, and benefit. I would definitely recommend this program and GFF to any student seeking a challenge and to learn more about themselves.