**Prompt 6: Think about an academic subject that inspires you. Describe how you have furthered this interest inside and/or outside of the classroom.**

Maths! That’s the first thing that pops into my head whenever I’m asked for a favourite subject. One thing I like about maths is that there is always a right answer. To put it simply, maths is logic: true or false, yes or no.

Wanting to enhance my maths knowledge, I participated in the American Mathematics Olympiad. When I took the practice test, I was blown away; I couldn't solve a single question. Instead of merely inputting equations and solving them, it required me to think logically and approach the questions strategically. At this point, I realised that maths isn’t about memorising but understanding the concepts. I need to understand the logic behind each question, be familiar with the principles of mathematical formulas, and know when to use them. After all, the Olympiad was all about proving why one plus one equals two and how this logic could be applied to other questions.

Looking back at all the concepts that I’d learned, I started questioning all the formulas and tried to comprehend why they were the way they were. The adrenaline surge I had each time I was successful in solving a question was unmatched. After a few weeks of doing this, I was able to receive a silver medal in that competition.

Needless to say, I began to involve myself in other competitions, starting with the maths week held at my school, followed by the Singapore and Asian Maths Olympiad, and the SINGA Maths Global Finals.

They taught me that in-depth concept analysis is the key to a deeper understanding of the topic. To analyse means to fully understand, allowing flexibility when applying ideas and information to statistical models. Hence, I became interested in data science, which involves gathering and analysing data to find recurring patterns, comprehending trends over time, and visualising relationships between objects. The understanding of maths concepts aids in the implementation of algorithm development and patterns identification.

We live in a world filled with numbers, equations, and algorithms where the laws of mathematics are everywhere. Solving maths problems allows me to develop analytical skills and critical thinking so I can prioritise tasks and make logical, evidence-based decisions.