

I already owe the best things in my life to mathematics. It not only allowed me to meet wonderful people and form precious friendships during the years, but an elegant proof or an interesting problem can always brighten up my day. Mathematics is an essential part of my life, and I can't imagine studying any other degree course. For me, there's nothing like the feeling when a difficult concept clicks into place, or when I succeed in solving a difficult problem. The field that amazes me the most is number theory.

I try to make the best of every opportunity I get to learn more about mathematics, I am always keen on participating at various programmes in my free time. I have been attending monthly extracurricular lectures at the University of Pécs since the 5th grade, and for four years I have been attending the Paul Erdős Mathematical Talent School, which offers lectures on five weekends each year. These programmes had a major influence on me, as they introduced me to how broad, complex and beautiful mathematics is, beyond the small part of it explored in high school. From this year I will also join the IMO training sessions held biweekly in Budapest. Although these occasions mean several hours of travelling, the interesting problems and new concepts I am introduced to there make it worth it.

I enjoy solving problems in my free time. I have been sending in solutions for challenging problems monthly through my high school years in the Mathematical and Physical Journal for Secondary Schools. I have been in the top 15 nationally each year, and won my category in 10<sup>th</sup> grade. I particularly enjoy that I have time to think through each problem from different points of view, learning new theorems and methods related to the problems.

I have been entering mathematics competitions regularly since primary school, and both my local and national results reinforced my aspirations to study mathematics, for example earning a national 2<sup>nd</sup> place on the Szőkefalvi competition last year. I believe competitive settings bring out the best in me, and as much as I like participating in individual competitions, team competitions are my favourites. They allowed me to improve my cooperation and organizational skills, and my team has been in the top 3 in various national ones (e. g the Bolyai competition).

Since I feel my school curriculum doesn't cover topics to a depth that would fulfil my curiosity, I have been teaching myself calculus and further mathematics from different course books and online materials, along with preparing for the STEP exam. I like to read subject-related books in my free time, such as A Concise Introduction to Pure Mathematics by Martin Liebeck.

Besides mathematics, I am interested in linguistics. I find the International Linguistics Olympiad (IOL) tasks interesting, and similar to mathematics puzzles, as they only need logic and algorithmic thinking. Obtaining a place in Team Hungary 1 in the selection process, I represented my country at IOL in India this summer, and won an Honourable Mention. I hope to have the opportunity to participate again next summer with a better result.

My hobbies are mostly related to arts. I have been playing the piano for three years, and I am currently doing ballroom dancing as well. I am a member of the school's student theatre group,

and together we earned a silver medal at the national student's art festival last year. I am a participant in the Hungarian Junior Templeton Fellow Talent Programme, to which 300 students were selected out of 20,000 applicants through cognitive tests. It allowed me to participate at lectures from different areas of sciences, meet with researchers, and enlarge my perspective. All these experiences confirmed to me that mathematics is the right career choice for me.

I am confident that my skills, dedication and passion for mathematics make me suitable for a degree in the subject, and I am looking forward to the challenges it will pose.