CUHS PS Example
Mathematics 2026 (4)

Q1. Why do you want to study this course or subject?
This is your opportunity to showcase your passion and knowledge of your chosen subject area and to demonstrate to universities and colleges why they are a good fit for you and your future ambitions.

My interest in mathematics began in grade 7, when I was accepted into the mathematics class at Fazekas Mihály Secondary School in Budapest, a renowned institution recognised for its excellence in mathematics in Hungary. Before the semester started, my insight was limited to the school curriculum, as I grew up in a relatively remote town called Kaposvár, where educational resources were limited. However, after the semester began, the maths teachers enlightened me about the vastness of mathematics beyond the syllabus.

Grade 7 marked my introduction to number theory and combinatorics —the fields I had never encountered before. I gradually gained enthusiasm and participated in various camps and lectures. I was fascinated by how simple methods, such as colouring, could tackle seemingly complex problems, and vice versa, by the underlying depth of easily articulated questions, like combinatorial geometry problems such as the Sylvester-Gallai theorem or the Erdős-Szekeres theorem.

Maths is puzzling and rewarding to me, so I've often spent tens of hours on one problem to arrive at an answer. It is said that creativity is the ability to link together seemingly unrelated existing pieces, and I think that mathematics tests and utilises this skill in the most aesthetic way possible. I became intrigued by number theory after reading "Elementary Number Theory" by Chen Jingrun and "Number Theory: Concepts and Problems" by Titu Andreescu. I wish to continue my journey in mathematics during my undergraduate studies, and I did not hesitate to choose this course.

Q2. How have your qualifications and studies helped you to prepare for this course or subject?
This is your chance to shout about the relevant or transferable skills you've gained from your education and highlight your understanding of how they will help you succeed in this subject area.

Since grade 8, I have consistently participated in the Hungarian EGMO camps and the Pósa weekend maths camps, which take up about 8-10 weekends per semester. The first one focuses on Olympic problems, whilst the second one involves mainly combinatorics. Thanks to these preparations, I was fortunate to qualify for and receive a silver medal at the 2025 European Girls' Mathematical Olympiad, which is my proudest result. Attending international camps was also crucial in fostering my mathematical abilities, and these camps also enabled me to connect with talented students around the world. I was also involved in the IMSC 2024, the International Mathematics Summer Camp held in Beijing, hosting the best olympiad competitors internationally; the Italian EGMO camp in 2024; the UK-Hungarian IMO Winter camp in 2024; and the Hungarian IMO summer camp in 2025, all of which deepened my understanding of mathematics and constituted great memories through interesting lectures, such as those of projective geometry, fractals, and Ramsey-numbers.

Regarding teamwork, I also participated in the Hungarian team as a guest contestant in the Italian Gara a Squadre competition held in Cesenatico in 2024. I also earned a silver medal at the Finale Nazionale. I have won the regional round of the Dürer team competition with my friends. I find brainstorming with others to be both entertaining and inspiring, and I've

always enjoyed working with others during problem-solving. These events have shaped my ability to collaborate with others.

Q3. What else have you done to prepare outside of education, and why are these experiences useful?

This is your chance to reflect on any other activities you have undertaken outside of your education, or personal experiences which further demonstrate your suitability for the course. This section is likely to be deeply personal to you, so anything you include should be meaningful and relevant to you.

Outside academic studies, I'm also a musician and have played the piano for over 13 years. It always helped me to unwind. My other hobbies include badminton, volleyball, and chess, and I am always motivated to learn new things. I play badminton 4-6 hours a week, and I am a passionate fan of this sport. I am particularly keen on doubles, as it brings people closer and is a great social program. At school, I have also taught grade 6 students to help them succeed at the high school admission test. Every time a student manages to solve a problem, I feel a sense of accomplishment. I am fluent in Hungarian and Chinese, and I have been learning German for seven years. I believe these language skills will enhance my ability to thrive in an international environment and contribute to the community, which I have always sought, especially within UK universities.