KING'S COLLEGE LONDON MATHEMATICS SCHOOL



KINC'S Maths School

AUTUMN TERM 2018

Maths Schools

King's Maths School and Exeter Mathematics School both opened in September 2014. Their great success since that time is now inspiring a new wave of maths schools to be opened around the country by leading universities. There are confirmed maths schools currently on route in Liverpool, Durham and Cambridge, with more universities likely to follow.

For all students who have attended King's Maths School, for all staff who have worked there and for all our many supporters and collaborators, this is great news as it means that more young people around the country will benefit from the unique community and education that maths schools provide.

The new maths schools have established a steering committee that will act as a way for the full family of UK maths schools to collaborate, communicate and learn from and with each other.

Curriculum X

Curriculum X is a new extension curriculum for students in year 13 made possible by a partnership and donation from XTX Markets. It is inspired by the same Russian maths schools that inspired King's Maths School and aims to be both challenging and engaging, to provide students with a way to develop their knowledge, skills and understanding of the mathematical sciences beyond the confines of A Level, and to help prepare students for undergraduate study. There have been courses this term on limiting processes, continued fractions, algorithms from the 1950s, sums and integrals, problem solving in physics, frames of reference, and developmental and international economics. Take-up has been huge, and enthusiasm high with over 50 students completing courses.

"The problems in curriculum X are there to make us think, and that is what I enjoy—solving problems for the sake of solving problems." — Natasha "The fast pace of learning and importance of independent thinking make curriculum X exciting and immersive." — Oliver

Next term features even more courses than this term—bring it on!

Houses and Tutoring

This term has seen the launch of the new House system at KCLMS. The 4 Houses have been renamed to reflect the diversity of the student body and the society in which we are based. Names for the new Houses were submitted by students and teachers at the end of the summer term and the final choices were confirmed by Mr Abramson at the End-of-Year assembly. Our new Houses are named after influential figures from the Mathematical Sciences: Langlands, Mirzakhani, Noether and Ramanujan. Students have already had the opportunity to research their House figure which culminated in a fast-paced and fun House modelling competition before the October half-term break.

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Above: Curriculum X sessions taught by Dr Kumon and Mr Lawsen

This year has also witnessed developments within the core pastoral system as all tutor groups have moved towards vertical tutoring. This means that all 8 tutor groups now have a mixture of Year 12s and Year 13s. The benefits of this system have been obvious as our new students have had the wisdom of the Year 13s to help them settle in and learn how KCLMS works. It has also helped us to ensure that a community atmosphere is embedded into the minds of all our students from the outset.

Competitions

Autumn term is full of competitions! This year for the first time over 50% of King's Maths School students attained a Gold Medal in the Senior Mathematical Challenge. (Gold certificates are awarded to the top 10% of participants.) Special mention must go to the 14 students who qualified for the British Mathematic Olympiad Round 1.

In November KCLMS again hosted a regional final of the Senior Team Mathematics

Challenge. In an extremely competitive heat, which included the likes of Eton College and Harris Westminster, our team achieved a highly commendable 3rd place, drawing with Eton and beating our local and exciting careers. We rivals!

A busy term of competitions for our students also included the Who Wants To Be A Mathematician competition. Almost 100 of our students entered Round 1, with 40 qualifying for Round 2 of the competition our best ever conversion rate. Congratulations to all who took Alex Gerko, the CEO of XTX part.

About 30 Y13 students took on of KCLMS. In the second halfthe Physics A2 Challenge in October, with 11 qualifying for Round 1 of the Physics Olympi- Eleanor Rajaratnam, Dr Silvia ad, where 2000 of the top physics students in the country compete. Our students went on to achieve our best-ever Round 1 results in November, with 6 Gold, 2 Silver and 2 Bronze. Three of them (Sae, Danny and Miles) can now take part in Round 2, limited to 100 students nationally, with the possibility of qualifying for Round 3 and the International Olympiad.

Speakers

This term, we have hosted an outstanding range of speakers who have shared insights into their academic journeys were delighted to welcome Robin Hayes, CEO of JetBlue, as well as Helena Andres Terre of Cambridge University and Dan Cerigo, a freelance data scientist who demystified the hype around machine learning. As our keynote speaker, we heard from Markets and proud supporter term, we had the pleasure of meeting Dr Eugene Chang, Bartolucci, and none other than Dr Jess Wade as our keynote speaker.

WEEKLY MATHS CHALLENGE

If n is a positive integer and all of n, $n^2 + 1$ and $n^3 + 3$ are prime, what is the value of n?