



# KING'S MATHS SCHOOL

## AUTUMN TERM 2017

### WELCOME BACK

The start of a new year sees the start of a new journey and this is especially the case for the cohort of 72 new students who joined us in September. Whilst only being one term in, we already have plenty of exciting news to share about the year so far.

### SIXTH FORM OF THE YEAR

This autumn we made our debut appearance in the The Sunday Times School Guide, ranking at the top of the league as the State Sixth Form College of the Year. In a special online feature our school was celebrated for its 'magic formula' in delivering 'astonishing results'. We're extra pleased that Mr Abramson's description that KCLMS 'is like a Disneyland of Mathematics' made the final edit – because it really is!

### KING'S AWARDS

King's Maths School was delighted to win the King's Award for the most outstanding commitment to London and local communities. 40% of King's Maths School students come from financially challenging backgrounds, over a third are from families with no history of higher education, and every

student is a bright young mathematician in need of academic nurturing; we are proud to have been recognised by King's College London for the impact the school has had on the lives of these young people.

### IT'S COMPETITION TIME!

As ever, the Autumn term has seen our students take part and excel in an array of team and individual mathematics competitions. In the Senior Maths Challenge, our new year 12 students have done us proud as we saw our highest ever percentage of students achieving a Gold certificate. Congratulations go to the 51 students who achieved this feat, 15 of whom qualified for the BMO.

King's Maths School also won the regional heat of the Senior Team Maths Challenge in November for the fourth successive year – our team of Katherine, John, Shrimat and Sae are now looking forward to the national final in February.

Following on from last year's successful launch, the "Who wants to be a mathematician?" competition was back again this year. Out of 6,000 that entered, Katherine, Stanley and Orson were among the 100 students who qualified for the

second round of the competition. The school also had the privilege of hosting the National final. The event was hosted by Simon Singh, the acclaimed author, and Matt Parker, a popular mathematics personality. Both gave fascinating talks and Matt Parker delighted our students by signing their calculator using binary after the event!

### MATHS OLYMPIAD FOR GIRLS

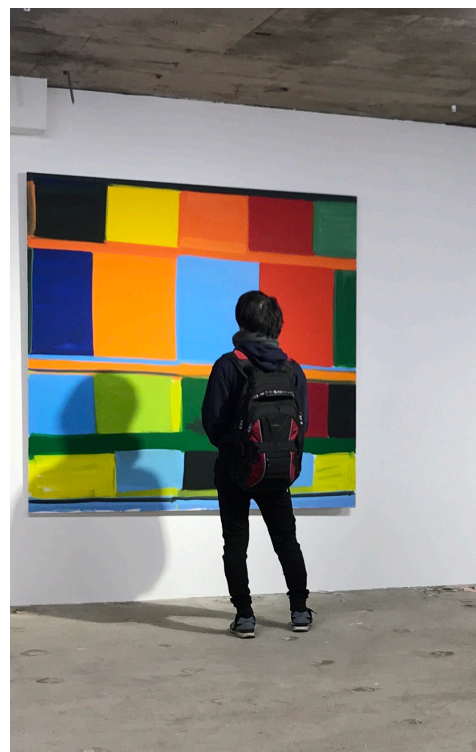
In November, several of our female students participated in the Mathematical Olympiad for Girls, a challenging paper set by the UKMT. Over half of our students that entered earned a Certificate of Distinction, awarded to the top 25% of participants. Congratulations to Sara, Tabs, Sae, Kristen Katherine, Thalia, Juliana and Siana who represented the school. Special congratulations must also go to Katherine, whose exceptional performance once again placed her on UKMT's list of national high scorers.

### KING'S CERTIFICATE

This term has seen the launch of a new research programme for Year 12 students. Nineteen teams of researchers have been working in earnest with either academics from KCL and Imperial or industry partners, including



Group picture taken at the Dyson Institute's 'Open House'; Eito engaging with Stanley Whitney's new collection at *Everything At Once*



Arbor, Capita, Dyson, and WSP. Each partner has set a project brief for their students researchers to tackle for the next eight months, culminating in a published journal article and a short lecture at Bush House on 28th June.

## DYSON INSTITUTE

Dyson hosted an Open House to introduce their undergraduate Dyson Institute programme and also the undergraduates on that programme. Two of those undergraduates are our previous students Nathalie (graduated 2016) and Greshan (graduated 2017). Mr Abramson brought along a current student, Belmiro (graduating 2018), making three generations of KCLMS students having dinner at Dyson together!

## VISITING SPEAKERS

To begin our speaker programme for this year, we have hosted six guests over the autumn term. Peter from Cambridge Analytica shared the power of data science and examples of how data can be used. Professor Alice Rogers OBE and Baroness Alison Wolf of Dulwich, both from KCL, shared aspects of their research. Dr Ed Segal delivered an exciting lecture about key ideas in modern geometry.

Later in the term, Dr Hugh Deighton discussed his career path from philosophy, to physics, and finally to the space industry. Our last guest was Max from Kazendi, who introduced the virtual reality technology HoloLens, and gave students the opportunity to experience this themselves.

## STUDENT COUNCIL

The Student Council chaired by Ife and comprised of Muhsina, Liam, Serkan, Kinneret, Abu and Semanur have worked hard to ensure the student voice has been heard this term. They have been successful in improving facilities in the student canteen by championing the need for a new microwave, promoting diverse identities through Educate and Celebrate events and facilitating RAG week, in which a range of House events took place over a single week to raise money for charity at the end of this term.

## CULTURE AT KCLMS

Our newly appointed Culture and Literacy monitors Oliver, Nada and Matylda invited students to the first of a series of cultural trips. This month a group of students visited *Everything at Once* at the Lisson Gallery and were inspired by the vibrancy of the exhibition which featured fascinating examples of how mathematical patterns can be turned into visual art.

## WMC 150

For the 150th Weekly Maths Challenge, KCLMS students submitted ideas for problems that could be used to celebrate reaching this milestone. The published problem contained ideas from Jim, Jonathan, Daniel S and Alex M-D in, and appropriately, included a 150-sided polygon.

### WEEKLY MATHS CHALLENGE 150

Connect the midpoints of adjacent sides of a regular hectakapentacontagon (150-gon) to form a smaller regular hectakapentacontagon. What proportion of the area of the larger polygon is the smaller polygon?