

Teaching a 'top set' in KS4: success now, success later

KING'S MATHS SCHOOL

Online CPD for KS4 teachers

Teaching a 'top set' in KS4 is easy: the students are 'rapid graspers' who achieve highly, so that's 'job done' for us. But it's also hard: what else do our students need once they've 'got it' so quickly? The National Curriculum says that students "who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content": this sounds great, but how do we ensure this? Many of our 'top set' students will want to study Maths (and, we hope, Further Maths) in KS5: how best do we teach them now so that they have, and enjoy, success not only in this school year but also later: in Y12, then in Y13, then at university, and then beyond?

In these CPD sessions (via Zoom) we will look at examples of "rich and sophisticated problems" in some of the key topics, techniques and concepts in the GCSE Higher Tier specification. We will discuss, and try ourselves, questions and tasks that

- catalyse students' **mathematical reasoning**
- strengthen their **problem-solving resilience**
- deepen their **conceptual understanding**

as well as improving their **procedural fluency**. As we do so, connections between seemingly disparate topics will be brought out, and 'standard' concepts will be looked at from 'non-standard' perspectives. This CPD will be especially useful for you if you are new to teaching students already attaining at, or expected to attain at, GCSE grades 8 and 9, but we think that experienced teachers will also enjoy looking at familiar topics in a new light.

King's Maths School is a specialist state funded school for gifted mathematicians aged 16-19 in the heart of London, run in partnership with King's College London.

KING'S
College
LONDON

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The CPD will be created and led by Robert Wilne, who is the Lead Teacher of Outreach at King's Maths School. Robert oversees all our student enrichment programmes, such as GCSE+ for Maths and Physics and Maths Circles for KS3, and teacher CPD such as this and "Teaching Further Maths". Robert is a highly experienced secondary mathematics teacher and a designer and leader of CPD.

The CPD sessions are on Zoom on Wednesdays 17:15-18:15. You can participate in one, some or all of the sessions: you don't have to 'Zoom in' to each one. Please click [here](#) to register your interest, and then we will send you the 'join meeting' information for each Zoom session:

Focus	Date
Indices and Surds	15/09
Angles & Triangles	22/09
Angles & Circles	29/09
Sequences	6/10
No session	13/10
Quadratic expressions	20/10
Quadratic expressions	3/11
Curves, Lines & Circles	10/11
Curves, Lines & Circles	17/11
No session	24/11
Ratio	1/12
Proportion	8/12
Probability	15/12

***Thanks to the generous support of XTX Markets,
there is no fee or charge to participate in this PD.***