

UKMT Mentoring Scheme

Guidance for teachers

What are the mathematical demands of the different levels?

The first three levels (Pythagoras, Hypatia, Archimedes) generally require a reasonable confidence with Year 7 and some Year 8 topics (England and Wales), Year 8 and 9 (Northern Ireland) and S2 and S3 (Scotland).

The next three levels (Mary Cartwright, Julia Robinson, Emmy Noether) require the Key Stage 3 content and some GCSE content or, for students in Scotland, require fourth level content and some National 5 content.

The final three levels (Hanna Neumann, G.H. Hardy, Srinivasa Ramanujan) assume the whole GCSE or National 5 content and are best suited to students studying A levels or Highers/Advanced Highers.

What is a suitable level for my student/s?

The Mentoring Scheme is intended to help stretch students and teach them to work on particular types of problems. It is best to start at a lower level than start a student on too high a scheme as students need to be confident with this sort of problem solving. Students should not begin the scheme at Hardy or Ramanujan.

How do the mentoring sheet levels relate to the UKMT Challenges?

Another indication of a suitable level for a student is their past performance on the UKMT (individual) Maths Challenges. As a rough indication:

If a student has achieved...	Consider starting on this level...
Silver or above in the Junior Challenge	Pythagoras
A certificate in the Junior Kangaroo	Pythagoras or Hypatia
A score of 20 or more in the JMO	Hypatia or Archimedes
Silver or above in the Intermediate Challenge	Archimedes or Cartwright
A certificate of merit in the Grey/Pink Kangaroo	Archimedes, Cartwright or Robinson
A score of 20 or more in an Intermediate Olympiad	Cartwright, Robinson or Noether
Silver or above on the Senior Challenge	Cartwright, Robinson or Noether
A certificate of merit in the Senior Kangaroo	Noether or Neumann

A score of 20 or more on a BMO1 paper	Neumann
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If you need further help deciding on the appropriate level for your student, or have any other questions, please contact us at mentoring@ukmt.org.uk