Maths, Further Maths and Mathematical Studies

Mathematics A Level

Maths A Level is widely seen as an indicator of good problem-solving skills. It is considered an advantage for the majority of University courses and is a requirement on some. For instance, if you are interested in studying Physics at University, Maths is a must. Research carried out a few years ago showed that graduates with A-level Mathematics earned, on average, 10% more than those without, regardless of degree taken.

We follow the MEI (Mathematics in Education and Industry) course with OCR for A-level Mathematics. The course consists of topics drawn from Pure Maths, Statistics and Mechanics.

Topics are whole class taught and we use an online resource, Integral Maths, to share thorough notes, exemplars, power point demonstrations and model solutions for every topic within the course, all of which are intended to assist with self-study. There are also multiple choice and chapter assessments for each topic and these form part of the compulsory self-study and homelearning.

Assessment of the course

The course has been structured so that students can certificate in AS-Level Mathematics at the end of the first year by sitting two terminal examinations; Pure Mathematics with Mechanics and Pure Mathematics with Statistics, and then continue on to a second year to certificate in A-Level Mathematics.

For A-Level Mathematics there are three papers; Pure Mathematics and Mechanics, Pure Mathematics and Statistics and Pure Mathematics and Comprehension. All papers have to be sat together to certificate.
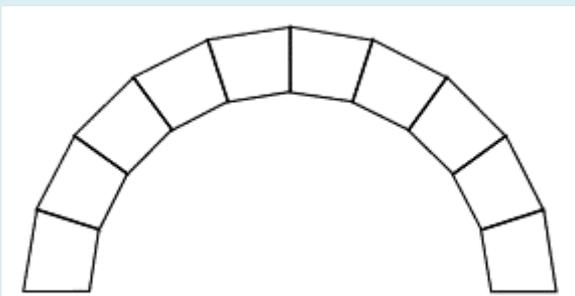
Further Maths AS and A Level

If you are considering a Maths degree at University Further Maths will be helpful.

Many students who have attended interviews for Mathematics based courses at University have been informed that studying Further Maths will not only help with entry but secure an invaluable knowledge base, confidence and understanding.

To study Further Maths you need to have achieved a 7 or above at GCSE. Lessons will take place within the timetabled day and will not clash with other A-Levels.

In AS Further Maths students study content from another Pure unit and two optional applied units.

In A Level Mathematics students study content from Pure maths, Statistics or Mechanics and then a further applied unit, the content of which we can be flexible with depending on students' future directions of study. All course content is assessed at the end of the course, whether certificating in AS-Level or A-Level Further Mathematics.

Mathematical Studies – Level 3 Certificate

Mathematical Studies is a Level 3 qualification which is aimed to equip those studying other subjects where Mathematics is useful, such as Business studies, Geography, Biology, Computer Science and Psychology.

The core content of the course covers Analysis of Data, Maths for Personal Finance, Estimation and Critical Analysis of Data and Models. Assessment is in the form of 2 linear exams and there is no coursework for this course. To be accepted for this course, students must have achieved a grade 4 or above in their GCSE.

Mathematical studies lessons take place in the enrichment option block so that it can be taken alongside other courses for which continuing maths would be helpful.

For further information or advice please contact
Mr Gaunt maths@williamhoward.cumbria.sch.uk

A Challenge

Ten stones, of identical shape and size, are used to make an arch, as shown in the diagram. Each stone has a cross-section in the shape of a trapezium with equal sides. What is the size of the smallest angles of the trapezium?