Midhurst Rother College
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FURTHER MATHEMATICS

Further Mathematics

Exam Board: AQA

Contact teachers: Mr R Burton, Mr J Roberts

Why study Further Mathematics?

Real-world Maths is so much more complicated than the maths you have explored so far, and more so even than A level Maths. Further Mathematicians will understand the concepts and applications that allow maths to model all situations and to form a basis for all scientific study.

Course details

The content of Further Maths extends the underpinning mathematical concepts, including imaginary numbers (you can square root a negative!), function terminology and manipulation, proving identities and theorems using logical approaches, simultaneous equations in 3D, matrix manipulation, graph transformations, polar coordinates and differential equations. These create ways to model the world around us and to analyse situations that arise.

The group will then choose two from the three areas of application of Maths:

Mechanics – building on the A-level specification, considering springs, circular motion, bouncing balls in collision, centres of mass.

Statistics – probability distributions for discrete and continuous measures, and their use beyond mathematics

Discrete (or Decision) – networks and network flows, algorithms (the underpinning methods of computing), linear programming, critical path analysis, game theory, binary operations and group theory.

How is the course taught and assessed?

All the content will be taught in lessons, with example question and modelled solutions with expected layout and method outlined. There will be some practice questions during lessons, but the majority of consolidation time will be outside lessons, with arising issues addressed during subsequent lessons. Topic assessments will give a 'running total' on how you are doing, but all exams are at the end of the year. There is no coursework.

Entry requirements

Students considering Further Maths must also be doing Maths A-Level.

Students need to have achieved at least a grade 8 at GCSE and should really enjoy maths.

Career routes and popular combinations

A-level Further Maths provides a good background for any Maths degree. It will also be looked on very favourably for science, engineering, design and technology degrees.