

## MATHEMATICS (Edexcel: Mathematics A-Level 9MA0)/Further Mathematics A-Level FMA0)

The A-Level Mathematics and Further Mathematics courses aim to enable students to acquire knowledge and skills which are practised with confidence, satisfaction and enjoyment. They will develop resourcefulness in solving a wide variety of problems, leading to an increased understanding of mathematical manipulation, reasoning, logical deduction and inference.

### Mathematics A-Level

The new linear Mathematics A-Level comprises three compulsory branches of Mathematics: Pure Mathematics, Mechanics and Statistics.

**Pure Mathematics** comprises two-thirds of the A-Level content and continues the subject studied at GCSE building largely on the algebra and trigonometry sections of the syllabus. Calculus is developed and applied in many different situations. Pure Mathematics also provides the essential tools for use in the other disciplines and in other subjects.

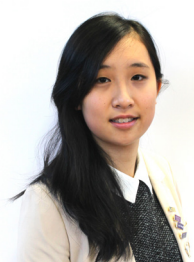
**Statistics** develops the basic ideas of probability, data handling and analysis introduced at GCSE level. Girls will also become familiar with large data sets and how to extract and analyse data from them. The emphasis has shifted to interpretation and data handling rather than relying heavily on calculation. As such girls will require a calculator specifically suited to A-level which they will be advised on. Statistics is relevant to Biology, Geography, Economics and Business.

**Mechanics** is the mathematical application of the equations of motion, Newton's laws, forces, work, energy and power; it provides a valuable link with this area of Physics.

The examinations will comprise of three two-hour papers: two papers examining the Pure Mathematics content and the third examining Mechanics and Statistics.

### Further Mathematics A-Level

The new linear Further Mathematics A-Level again comprises of compulsory Pure Mathematics (50% of content), but there is some choice for the remaining 50%, including Further Pure, Further Mechanics, Further Statistics or Decision Mathematics. Decision Mathematics introduces the ideas and methods used for decision making in business and industry. It involves a good deal of numerical work using rules or algorithms together with diagrams or networks. Decision Mathematics is used to solve practical problems in real life situations such as the scheduling of tasks required to build a new supermarket. The Further Mathematics examinations will comprise four one-and-a-half-hour papers: two compulsory Further Pure papers, and two option papers for which there is some choice.



#### WHERE NEXT?

**Julia Wong**

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Studied Mathematics, Further Mathematics and Physics