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| **A Level Maths AQA** |  |

A level Maths is a rigorous subject, suited to highly motivated mathematicians. Maths is one of the best subjects to develop your analytical, research and problem solving skills. Not only will studying maths help give you the knowledge to tackle scientific, mechanical, coding and abstract problems, it will also help you develop logic to tackle everyday issues like planning projects, managing budgets and even debating effectively.

**Course Structure:**

The A Level course is split and assessed in 3 papers with a heavy focus on Pure Maths and a minor focus on Mechanics and Statistics:

**Paper 1: Pure Mathematics**

Students build on a range of topics from the GCSE such as trigonometry, exponentials and coordinate geometry. They also meet a range of new topics including calculus and series. There is an even greater focus on proof and rigour than in the GCSE.

**Paper 2: Pure Mathematics and Mechanics**

Students continue to work on topics mentioned in paper 1 and they also study vectors and mechanics. Mechanics is the study of the physical world, exploring the underlying processes that explain the movement of vehicles, planets and explores the effects of slopes and friction. Students will study classical topics including Newton’s laws, Moments, Kinematics and Forces.

**Paper 3: Pure Mathematics and Statistics**

Students continue to work on topics mentioned in paper 1 and they also study probability and statistics. Statistics will introduce students to statistical distributions and hypothesis testing. This allows pupils to understand statistical models that describe a whole host of real world scenarios. They will study a large data set and understand the meaning of statistical measures. Probability will build on their GCSE course looking at set notation, conditional probability, mutually exclusive and independent events as well as considering the assumptions we make when we model using probability.

**Course Delivery:**

Lessons will follow a familiar style from those students will have been used to at GCSE. Problem solving remains an important aspect of the A level and so students will spend lesson time considering challenging problems. Practice continues to make perfect and so there will be time dedicated to improving skills. The department use a variety of teaching techniques. There will be an increased focus on answering exam style questions from early on. Use of small group work and mini-whiteboards is encouraged to allow pupils to explore harder content and work with one another to improve.

**Assessment:**

Externally assessed through 3 exam papers taken at the end of Yr13. Each paper is worth one third of the A level.

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| Paper 1 | Paper 2 | Paper 3 |
| Pure Mathematics | Pure Mathematics and Mechanics | Pure Mathematics and Statistics |
| 2 hrs | 2 hrs | 2 hrs |

**Resources:**

Students will be advised on the correct textbook to buy for each year of the course, and this will be essential. In addition to this, there will be access on websites, , including Integral which offers a huge amount of consolidation and assessment practice as well as notes and examples. Students will also need to have a calculator which can be used for the statistical distribution work – details will be provided – it is not possible to sit the exams without this.

**Progression:**

A level Maths is a very versatile A level. It is the most popular A level nationally and it opens up opportunities in almost any future career. Please speak to your teacher to see if A level Maths would complement your other A level choices.

**Minimum Entry Requirements:**

For students to take A Level Maths they need to achieve a minimum grade 6 in GCSE Maths and should ideally have achieved a grade 7. They should achieve at least a grade 5 in GCSE Further Maths if this has been studied.