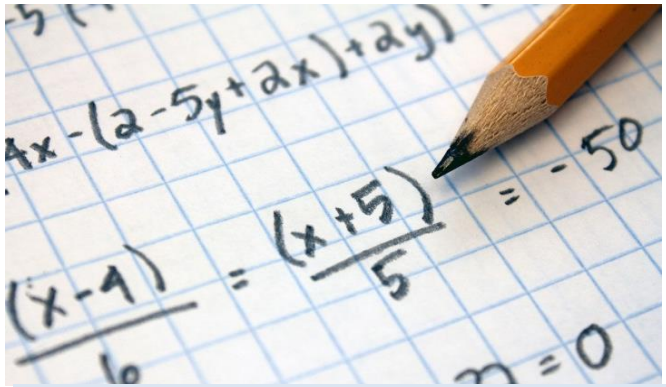
AS/A Level Mathematics



Entry Criteria:

- You will need to achieve the pathway criteria, please see the prospectus for further information
- You will need to achieve a Grade 6 or above from GCSE Mathematics.

Coursework/Examination Requirements:

AS Assessment	Two examinations worth 50% each
A Level Assessment	Three examinations worth 33.3% each.

Awarding Body/Specifications: Edexcel

Advanced Level (A Level): Mathematics is the most universal of languages. Combining factual content and logical structure, this subject has beauty in the way that all of its component parts link to create solutions. As well as for the love of the subject, Mathematics has a very wide field of application and a number of other disciplines make A Level Mathematics a prerequisite for advanced study. **The following units are met in the first year of the course and then build on in Year 13 with increasing complexity and challenge as the course progresses:**

Pure Mathematics
Topics studied include proof, algebra and functions, coordinate geometry in the (x, y) plane, sequences and series, trigonometry, exponentials and logarithms, differentiation, integration, numerical methods and vectors.

Statistics
Topics include statistical sampling, data presentation and interpretation, probability, statistical distributions and statistical hypothesis testing.

Mechanics
Topics include quantities and units in mechanics, kinematics, forces and Newton's laws and moments.

There are three overarching themes that span the content of the whole specification. These are:
Mathematical Argument, Language and Proof

Mathematical Problem Solving

Mathematical Modelling

These themes are inherent throughout the content and students are required to develop skills in working scientifically over the course of the qualification.

Advanced Subsidiary (AS): If you choose to study this subject for one year only you will be awarded the AS Level. You will cover all three units listed above but in less detail than in the full A level course and sit public examinations in Year 12.

Progression: Mathematics is considered a very useful subject if you intend to go on to study any of the following at university: actuarial science, architecture, biology, chemistry, computer science, dentistry, engineering, medicine, pharmacy, physiotherapy and many more. You can expect to earn, on average 11% more by the age of 34 if you have a mathematics A Level, due to the transferable skills of logical thinking, problem solving and analysis which are always in demand.

Opportunities: Students will have access to textbooks as well as many online resources which they should use as a source of information for note taking, practising and attempting mock examination questions. Students will compete in the Senior Mathematics Challenge and can attend the annual Mathematical Michaelmas Symposium.