Mathematics

Aims

- To give pupils a vision and understanding of the breadth and integrity of mathematics.
- To give pupils an appreciation of the intrinsic structures and processes of mathematics and their wide applicability in every branch of law, finance, commerce, industry, the arts, science, medicine and technology.
- To develop an understanding of, and to build skills in, synthesis and analysis.
- To develop logical powers of prediction and deduction and an appreciation and understanding of axiomatic systems.
- To develop an appreciation of order, continuity, symmetry and similarity.
- To equip students with a spread of mathematical skills to serve as a basis for further study in a wide range of disciplines or for the furtherance of their careers.
- To develop pupils' awareness of self evaluation and assessment, recognising the importance of independent learning.

Who studies what and when?

Years 7-8

In Years 7 and 8 we lay the foundation for the pupils' future development in mathematics. We extend the pupils' knowledge and understanding of arithmetic and expose them to the fundamental concepts of algebra. In these years, pupils also learn basic geometry, co-ordinate geometry, probability and statistics. We develop the pupils' ability to apply their mathematics to a wide variety of contexts.

Year 9

During the first half of Year 9, pupils continue to develop mathematical skills in Number, Algebra, and Shape and Space. Topics studied at this time include Standard Form, The Laws of Indices, and Trigonometry. During the second half of Year 9, pupils embark on the modular GCSE course. Students will study for the first module, involving Statistics only, which will be taken early in Year 10.

Years 10-11

In Years 10 and 11, pupils continue to study for their GCSE. Once the first module has been taken early in Year 10, pupils will further develop skills in Number, Algebra, and Shape and Space in preparation for the second module, which will be taken later in Year 10. Following the second module, pupils embark on the third and final module of the GCSE. Skills in Number, Algebra, and Shape and Space are further developed, and students will encounter topics such as Surds, Quadratic Equations and Vectors. Pupils who show exceptional ability in the subject may also be taught the International GCSE course to extend their knowledge and skills.

LVI

In the LVI students may study AS Mathematics, comprising two modules of Pure Mathematics, and one module of Applied Mathematics.

UVI

In the UVI students complete the full A Level in Mathematics with two more modules of Pure Mathematics and one module of Applied Mathematics.

A Level Further Mathematics

We offer A Level Further Mathematics in the LVI and UVI, which is beneficial to students seeking to read Mathematics, Computer Science or Engineering at university.