

Mathematics and Further Mathematics

If you are enjoying the challenges of mathematics at GCSE, and you are usually very successful when it comes to examinations in the subject, it is very likely that you will enjoy the subject in the sixth form too. At A level, we will be taking many of the ideas you are currently meeting and will study them in greater depth. We will also extend into many areas that will be new to you. Some parts of the course are very demanding and to succeed at A-level mathematics it is very important that you are fluent and confident when dealing with algebra.

Interesting in its own right, the study of mathematics will also help you to develop strong problem-solving skills and will enhance your ability to express complex arguments simply, clearly and logically. Mathematics goes well with any combination of other subjects.

Mathematics

Prerequisite: Minimum grade 7/A in I/GCSE mathematics required. Grades 9/8/A* recommended.

Two thirds of this course is pure mathematics and one third is applied mathematics. Pure mathematics is examined in two of your final three examination papers and includes topics such as algebra, trigonometry and calculus. Applied mathematics consists of statistics and mechanics. Statistics builds on the data handling skills you learn at GCSE and shows you how to identify the important features of a set of data and how to make informed deductions and predictions. Statistics also involves the mathematics of chance in the form of probability. In mechanics, we investigate the forces acting on an object and the effect they have on its subsequent motion. The applied mathematics content of the course is solely examined on the third paper.

All three papers carry equal weighting and each paper lasts 2 hours. The course does not involve coursework.

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If you choose to take this combination of A levels you will be taught in a separate group and you will choose either another two or another three A level subjects. If you are thinking of taking further mathematics you must talk to the head of mathematics as well as the higher education and student guidance staff about whether two or three other subjects would be more appropriate.

As a further mathematician, you will cover all the material described above and then you will study for two more pure papers and two further applied papers. Each of these four papers will be 90 minutes in duration.

Studying mathematics and further mathematics is a very demanding course in both its content and the pace of work required, but it is highly rewarding and, if you are prepared to work hard, gives you the opportunity to study in depth some fascinating and complex areas of Mathematics.

Mrs VICKY WALKER
acting head of mathematics