



Head of subject:

Mr A Hollick

Minimum entry requirements:

Grade 7 GCSE Mathematics

Mathematics

What will you study in Year 12?

The course develops your algebraic skills from GCSE such as solving quadratic equations and transforming graphs including circles. You will be introduced to calculus techniques for finding the gradient and areas under curves. You will also learn how to use logarithms to solve equations, how to sum arithmetic and geometric series and be introduced to vectors.

The Statistics element of the course does again build on the work from GCSE and also introduces more robust techniques for analysing data, probability, statistical distributions and hypothesis testing.

The Mechanics part of the course introduces kinematics and Newton's laws.

What will you study in Year 13?

The Core elements cover further manipulation of algebra, functions, graphs, proof, along with more advanced techniques of differentiation and integration, numerical methods to solve equations, simple differential equations.

The Statistics course in year 2 is similar to year 1 but is in more depth. In Mechanics, similar topics to year 1 will be extended to cover moments.

Many elements of Year 2 Mathematics is taught in Year 12 to introduce the examination level material as early as possible.

How will you be assessed during the course?

There will be an initial baseline test on entry to Year 12 and regular topic tests and assessments throughout the year. In June of Year 12, there will be a transition examination, consisting of three papers to simulate the A level examinations in Year 13.

You will sit all of the examinations at the end of Year 13.
Paper 1 – Pure Mathematics (33.33% of the qualification).
Paper 2 – Pure Mathematics (33.33% of the qualification).
Paper 3 – Statistics and Mechanics (33.33% of the qualification).

Where could this course lead?

Mathematics may be studied for its own sake out of general interest or as part of a career in Mathematics or Statistics or as a support to your other A level subjects.

It will assist your study in any of the science subjects and is essential if you are considering a career in Physics or Engineering. The Statistics element of the course will be of benefit to anyone considering advanced study in Economics, Sociology, Psychology or Geography.

Further information

This is the website for our examination board, Pearson Edexcel
<https://qualifications.pearson.com/en/qualifications/edexcel-a-levels/mathematics-2017.html>

We usually run a trip to see lectures and workshops annually. We participate in various competitions throughout the year.

Students have opportunities to be Maths Captains and mentors supporting the department and other students.

The department run regular help sessions including a weekly Maths Clinic.