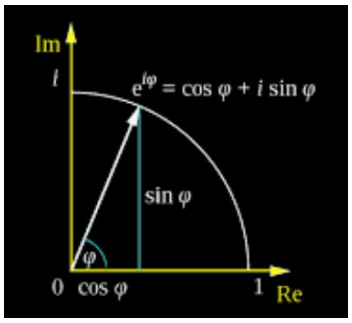
Roundwood Park School: Mathematics Department

A Level Further Mathematics

Following the Edexcel specification, this course builds on key A Level Mathematics concepts such as calculus and series, whilst introducing new topics such as matrices and complex numbers. Just like A Level Mathematics it also covers the applied mathematical disciplines of statistics and mechanics, but to a higher level. For those with a real flair and love of mathematics it offers a satisfying challenge.



COURSE STRUCTURE AND ASSESSMENT

Topics Covered	Assessment	Exam Breakdown
Pure Mathematics: Proof; Complex numbers; Matrices; Further algebra and functions; Further calculus; Further vectors; Polar coordinates; Hyperbolic functions and Differential equations Statistics: Discrete probability distributions; Poisson & binomial distributions; Geometric and negative binomial distributions; Hypothesis Testing; Central Limit Theorem; Chi Squared Tests; Quality of tests and Probability generating functions Mechanics: Momentum and impulse; Work, energy and power; Elastic strings and springs and elastic energy; Elastic collisions in one dimension and Elastic collisions in two dimensions	4 x 1.5hr exams at end of Yr 13 (No Coursework)	Exam 1 – Pure Mathematics 25% Exam 2 – Pure Mathematics 25% Exam 3 – Statistics 25% Exam 4 – Mechanics 25%

Students who undertake Further Mathematics will be taught in a separate class to the Single Mathematicians. Both the two Mathematics A Levels will be taught together in 9 x 1 hour lessons a week, usually across 3 teachers. Students are expected to undertake an additional hour of study (either independently or on work set by the class teacher) for each hour taught. It is recommended that students wishing to take A Level Further Mathematics alongside A Level Mathematics have a GCSE grade of 8 or higher.

The A-level in further mathematics is aimed at students who have a keen interest in furthering their understanding of mathematics. This is a course designed to stretch and challenge our most determined mathematicians and is delivered by teachers who are both passionate about their subject and hugely experienced. This qualification will usually be required for a degree in mathematics, especially at a Russell Group university. Whilst not essential, it has also proven a real bonus feature on the UCAS application for many students applying for STEM subject or financial degrees.

Contact for further queries: c.davies@roundwoodpark.co.uk