

Further Mathematics A Level

AQA

The mathematical family does not grow without labour pains. According to the Greek philosopher Iamblichus, the discovery of irrational numbers by Hippasus so shocked the followers of Pythagoras, who believed that all numbers could be expressed as fractions, that he was drowned at sea. It took a long time before zero was mathematically acceptable and negative numbers were not dismissed as imaginary. But what of their square roots? The laws of mathematics seemingly dictate that a negative squared is a positive. Yet they too are now embraced, even though they have inherited the label imaginary numbers. The level of abstraction here is indicative of the progression towards degree level mathematics that you will find in the Further Mathematics A Level, which builds on the knowledge of the single A Level to introduce new and fascinating areas of the subject.

Course Structure

In addition to studying the content of the standard Mathematics A-level, you will also study a variety of pure and applied topics. Further Pure Mathematics including Proof, Complex numbers, Matrices, Further Algebra and Functions, Further Calculus, Further Vectors, Polar coordinates, Hyperbolic functions, Differential equations, Trigonometry, Numerical Methods. Optional Material will be chosen from a selection of topics from Mechanics: Dimensional Analysis, Momentum & Collisions, Work & Power, Circular Motion, Centres of Mass & Moments; Statistics: Discrete & Continuous Random Variables, Poisson & Exponential Distributions, Chi-Tests, Inference & Confidence Intervals.

Skills & Knowledge

Further Mathematics is a second A Level in Mathematics and regarded as a subject in its own right. The aim is to build on skills developed in A Level Mathematics and increase depth and breadth of subject knowledge.

Assessment

The course will be assessed by three exams at the end of the second year, these exams will make up 100% of the grade for the course. There will be a number of internal assessments over the course of the two years.

Opportunities & Enrichment

The course is universally recognised as an excellent academic subject, useful in itself but also as an indicator of ability. It can lead on to an exceptionally wide range of courses at university and jobs in later life.

Future Careers & Pathways

Further Maths an academically rigorous and demanding subject and is suited to those who are considering Higher Education courses in Mathematics, Engineering, Physics, and other highly numerate disciplines or simply for those who really enjoy mathematics!