



Maths

Why study MATHEMATICS?

Mathematics has served humanity in our quest to understand the world and extend the possibilities that this ever-changing world can offer. Mathematics underpins the atomic fabric of the universe; the principles and patterns of allow us to search for meaning in the universe with greater precision.

Studying A level Mathematics will raise your confidence to tackle and solve increasingly complex abstract and real-life problems. Mathematics helps you develop your abilities to be creative, think with clarity and reason logically. Employers and universities value the skills and knowledge acquired through an A level in mathematics and research has shown that students who have studied A level Mathematics can earn around 10% more than students who have not studied the subject.

[Courses in A Level Mathematics](#)

Exam Board: Edexcel

A Level

Three exams papers are taken for an award in A level Mathematics. Papers 1 and 2 assess pure examination papers are equally weighted and last 2 hours. Calculator usage is allowed in all three papers.

Overview of content of A level papers:

Paper 1

Pure 1: Algebra and functions; coordinate geometry in the (x, y) plane; sequences and series; trigonometry; exponentials and logarithms; differentiation; integration; vectors

Paper 2

Pure 2: Binomial expansion; proof by induction; differentiation; integration; vectors

Paper 3

Section A: Statistics

Frequency distributions; graphical representation; measures of central tendency; measures of dispersion; probability distributions; interpretation; probability; statistical inference

Quantities and units in mechanics; kinematics; forces and Newton's laws; moments

Which activities will I be engaged in during the course?

It is algebra based; you will need to be able to work confidently with equations and graphs. As part of your study of statistics you will be able to use a calculator to compute summary statistics and access probabilities from standard statistical distributions.

The course is designed to be a challenge for all students.

Learning objectives for the course are as follows:

Independently reading up on prior knowledge and new theories.

Self-evaluating your understanding and making corrections within a term and taking action to address any shortfall.

Thinking and communicating with clarity using subject specific vocabulary.

Constructing rigorous mathematical arguments (including proofs).