



Maths

Why Study A-Level Mathematics?

A-Level Mathematics is one of the most valuable and widely respected qualifications, combining logical reasoning, problem-solving, and real-world application. It's essential for many university courses and careers, especially in science, technology, engineering, and finance.

Whether you're aiming for a STEM-related degree or simply enjoy working with numbers and solving problems, A-Level Maths is a versatile and highly regarded choice.

Who Is This Course For?

Students who enjoyed and succeeded in GCSE Mathematics

Anyone planning to study subjects like physics, engineering, economics, computer science, or medicine

What Will You Study?

AQA A-Level Mathematics is a two-year linear course, meaning all assessments take place at the end of Year 13. The course is made up of **Pure Mathematics, Statistics, and Mechanics**.

◆ 1. Pure Mathematics

This forms the foundation of the course and includes: Algebra and functions, Coordinate geometry, Trigonometry, Calculus (differentiation and integration), Vectors, Proof, Sequences and series and Exponentials and logarithms

These topics develop logical thinking and introduce mathematical techniques used in both abstract mathematics and real-world modelling.

◆ 2. Statistics

Statistics is widely used in psychology, biology, economics, and social sciences.

This area involves collecting, analysing and interpreting data: Statistical sampling, Data presentation and interpretation, Probability, Statistical distributions (e.g., binomial, normal) and Hypothesis testing

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◆ 3. Mechanics

Mechanics involves applying mathematics to physical situations: Kinematics (motion in a straight line), Forces and Newton's Laws, Moments, Constant acceleration, Variable acceleration and Energy, work, and power

Mechanics is particularly relevant for students interested in physics, engineering or architecture.

How Will You Be Assessed?

At the end of the two years, you will sit three written exams, each lasting 2 hours:

Paper 1: Pure Mathematics 1

Paper 2: Pure Mathematics 2

Paper 3: Statistics and Mechanics

Each paper is worth one-third of the final grade and includes a mix of short and long questions.



Where Can A-Level Maths Take You?

A-Level Mathematics is highly valued by universities and employers alike. It opens doors to a range of degree courses and careers, such as:

- Mathematics
- Engineering
- Physics
- Computer Science
- Economics and Finance
- Architecture
- Data Science
- Medicine (some courses prefer it alongside Chemistry and Biology)

It also strengthens problem-solving and analytical skills that are applicable in almost any field.

Key Benefits of Studying A-Level Maths

- Builds strong problem-solving and logical thinking skills
- Complements subjects like Physics, Chemistry, Biology, and Economics
- Offers excellent preparation for university and careers
- Encourages precision, resilience, and structured thinking

Is A-Level Maths Right for Me?

If you enjoy solving problems, working with numbers, and have a solid grasp of algebra and GCSE Maths, then A-Level Maths is a great choice. It's challenging but highly rewarding, and provides a strong foundation for future study and employment.

Complementary Subjects

A-Level Maths pairs especially well with:

- Physics
- Further Mathematics
- Economics
- Chemistry
- Computer Science
- Biology
- Psychology

Want to Know More?

Visit the Maths Department during the open evening to:

- Speak with teachers
- Speak with current A-level students
- See example student work
- Try out some engaging maths challenges
- Learn about support available for students