

# A Level Mathematics

Many career or university choices demand or benefit from an A level mathematics qualification. It teaches you to think in abstract terms and relate this to practical applications in many fields of study and endeavour. Employers value this skill. In the future, people are likely to have more than one career in more than one discipline and the transferability of high-level thinking skills makes mathematics a good choice: it says “I am adaptable”. So many of today’s jobs did not exist 20 years ago... You cannot necessarily future-proof careers, but with mathematics you can “future-adapt” them...

Memory Augmentation surgeon      Body part-maker      Quarantine enforcer      Weather modification      police  
Space tour guide      Exoskeleton engineer      Nano-medic

## Subject specific entry requirements

In addition to the standard entry requirements, the following subject entry criteria should be met:

- 6 in GCSE Maths (7 preferred); 4 in GCSE English

## Exam Board

**Edexcel** – L3 Advanced GCE in Mathematics (9MA0)

<https://qualifications.pearson.com/en/qualifications/edexcel-a-levels/mathematics-2017.html>

## Assessment

At A level, all components are assessed by mean of three written exams.

- Paper 1 and Paper 2 may contain questions on any topics from the Pure Mathematics content.
- Paper 3 will contain questions on topics from the Statistics content in Section A and Mechanics content in Section B.
- Students must answer all questions.
- Calculators can be used in all the assessment.

A Level – two year course		
<b>Paper 1:</b> Pure Maths 1 Content overview		
Topic 1 – Proof	Topic 2 – Algebra and functions	Written exam: 2 hours 33.33% of the A level 100 marks
Topic 3 – Coordinate geometry in the (x, y) plane	Topic 4 – Sequences and series	
Topic 5 – Trigonometry	Topic 6 – Exponentials and logarithms	
Topic 7 – Differentiation	Topic 8 – Integration	
Topic 9 – Numerical methods	Topic 10 – Vectors	
<b>Paper 2:</b> Pure Maths 2 Same as paper 1		Written exam: 2 hours 33.33% of the A level 100 marks
<b>Paper 3:</b> Statistics and Mechanics. The assessment comprises two sections:		
<b>Section A: Statistics</b>		
Topic 1 – Statistical sampling	Topic 2 – Data presentation and interpretation	Written exam: 2 hours 33.33% of the A level Section A 50 marks Section B 50 marks Total: 100 marks
Topic 3 – Probability	Topic 4 – Statistical distributions	
Topic 5 – Statistical hypothesis testing		
<b>Section B: Mechanics</b>		
Topic 6 – Quantities and units in mechanics	Topic 7 – Kinematics	
Topic 8 – Forces and Newton’s laws	Topic 9 – Moments	

## This course will lead to:

Careers such as Economics, Architecture, Medicine, Engineering, Accountancy, Teaching, Psychology, Environmental Studies, Computing, Physics, Biochemistry, Astronomy, Biology, Chemistry, Geology, Geography, Personnel, Forensic Science, Genetics, Telecoms, Logistics, Evo Devo - anything that needs you to think!  
**Maths really counts!**