



Mathematics

OCR-A, H240



Sir Isaac Newton
Sixth Form

What GCSE grade do I need to study maths at Sir Isaac?

- You will need GCSE maths grade 6 or higher

Key Yr12 topics

- Quadratics
- Coordinate Geometry
- Exponentials and Logarithms
- Surds and Indices
- Proof
- Vectors
- Trigonometry
- Calculus
- Probability & Statistics
- Kinematics
- Newton's Laws of Motion

Key Yr13 topics

- Advanced Calculus
- Parametric Equations
- Differential Equations
- Numerical Methods
- Further Trigonometry
- Functions
- Sequences and Series
- Statistical Distributions
- Hypothesis testing
- Moments of Forces
- Projectile Motion

Paper 1 – Pure Maths	2 hours	33%
Paper 2 – Pure & Statistics	2 hours	33%
Paper 3 – Pure & Mechanics	2 hours	33%



Frequently Asked Questions

Q: What do you study in A level maths?

A: A level maths builds on the algebra skills that you learn at GCSE, and two-thirds of the content is pure maths and is algebra-based. The other third of the content is split between mechanics (the maths behind force and motion), and statistics. We follow the OCR-A specification, but the content for A level maths is fixed for all exam boards so the content is the same wherever you study it.

Q: Is A level maths difficult?

A: It's certainly a step up from GCSE, but anyone with a level 6 or above at GCSE can succeed at A level maths. It really helps if you practise the algebra, number and trigonometry topics at GCSE as they are the ones that follow through to A level. Our homework provides a lot of problem-solving practise to help you get to the next level.

Q: What does the homework look like?

A: At Sir Isaac we set two pieces of homework each week that follow the lessons and provide the essential practice needed. These are mainly online, and we have a system that checks your answers as you go along so you know straight away if you're not doing something correctly. We also set a third, short, revision homework each week, which is normally two or three questions on past topics to help you keep your knowledge fresh.

Q: Will I need a new calculator?

A: Yes, unless you are already using an A level calculator you will need to get one as there are functions needed for A level that most GCSE calculators don't have. They cost around £25, and we recommend the Casio fx991ex "Classwiz".