



Examination Board: CCEA

Overview

'A' Mathematics seeks to consolidate and extend the knowledge, skills and understanding developed in Key Stage 4. It provides a suitable foundation for study in Mathematics in further and higher education and for a range of interesting careers. The specification is structured in a modular format.

Two modules are required for an AS grade and a further two modules are required for an A2 grade. The AS modules are worth 40% of the A level and the A2 modules are worth 60% of the A level.

AS LEVEL

Unit	Content	Assessment
AS 1: Pure Mathematics	The topics covered are: Surds, Indices, Quadratics, Quadratic Inequalities, Simultaneous equations, Remainder and Factor Theorem, Transformation of Graphs, Coordinate Geometry, Binomial Expansion, Trigonometry, Exponentials and Logarithms, Differentiation, Integration, Vectors.	External written examination 1 hour 45 mins 60% of AS 24% of A level
AS 2: Applied Mathematics	Mechanics topics covered are: Uniform acceleration, Forces and Newton's laws, Equilibrium, Friction. Statistics topics covered are: Statistical sampling, Data presentation and interpretation, Probability, Statistical distributions.	External written examination 1 hour 15 mins 40% of AS 16% of A level



A LEVEL

Unit	Content	Assessment
A2 1: Pure Mathematics	The topics covered are: Further Algebra including Partial Fractions, Modulus Functions, further Transformations of Graphs, Parametric equations, Sequences and series, further Binomial Expansion, further Trigonometry, further Differentiation and Integration, Numerical Methods.	External written examination 2 hour 30 mins 36% of A level
A2 2: Applied Mathematics	Mechanics topics covered are: Variable acceleration, Projectiles, Moments, Impulse and Momentum. Statistics topics covered are: Probability, Statistical distributions, Statistical hypothesis testing.	External written examination 1 hour 30 mins 24% of A level

Careers

Accountant, Actuary, Astronomer, Architect, Bank Manager/Officer, Careers in Buying and Selling, Logistics/Distribution Manager, Economist, Factory Manager, Investment Analyst, Market Research Executive, Accountancy, Technician, Marketing Manager, Medical Researcher, Meteorologist, Production Manager, Shop Keeper, Statistician, Surveyor, Computer Programmer, Quantity Surveyor, Building Society Manager/Clerk, Systems Analyst, Operational Researcher, Chartered Engineer, Insurance, Mathematics Teacher, Engineering, Craftsperson, Financial Adviser, Primary School Teacher.