A level Maths - Curriculum content

Half term	Year 12	Year 13
Autumn 1	Algebraic Expressions Quadratics Equations and Inequalities Graphs and Transformations Data Collection Measures of Location and Spread Modelling in Mechanics Constant Acceleration	Differentiation Radians Trigonometric Functions Trigonometric Modelling Regression, Correlation and Hypothesis Testing Moments
Autumn 2	Straight Line Graphs Circles Algebraic Methods Binomial Expansion Representing Data Correlation Constant Acceleration (cont.)	Trigonometric Modelling (cont.) Parametric Equations Binomial Expansion Integration Conditional Probability Forces and Friction
Spring 1	Trigonometry Ratio Trigonometry Identities and Equations Differentiation Probability Statistical Distributions Forces and Motion	Integration (cont.) Numerical Methods Vectors The Normal Distribution Projectiles
Spring 2	Vectors Integration Hypothesis Testing Forces and Motion (cont.)	The Normal Distribution (cont.) Applications of Forces Further Kinematics
Summer 1	Exponentials and Logarithms Algebraic Methods Hypothesis Testing (cont.) Variable Acceleration	Revision
Summer 2	Revision Functions and Graphs Sequences and Series	

Skills

The aims and objectives of this qualification are to enable students to:

- understand mathematics and mathematical processes in a way that promotes confidence, fosters enjoyment and provides a strong foundation for progress to further study
- extend their range of mathematical skills and techniques
- understand coherence and progression in mathematics and how different areas of mathematics are connected
- apply mathematics in other fields of study and be aware of the relevance of mathematics to the world of work and to situations in society in general
- use their mathematical knowledge to make logical and reasoned decisions in solving problems both within pure mathematics and in a variety of contexts, and communicate the mathematical rationale for these decisions clearly
- reason logically and recognise incorrect reasoning
- generalise mathematically
- construct mathematical proofs
  use their mathematical skills and techniques to solve challenging problems that require them to decide on the solution strategy
- recognise when mathematics can be used to analyse and solve a problem in context
- represent situations mathematically and understand the relationship between problems in context and mathematical models that may be applied to solve them
- draw diagrams and sketch graphs to help explore mathematical situations and interpret solutions
- make deductions and inferences and draw conclusions by using mathematical reasoning
- interpret solutions and communicate their interpretation effectively in the context of the problem
- read and comprehend mathematical arguments, including justifications of methods and formulae, and communicate their understanding
- read and comprehend articles concerning applications of mathematics and communicate their understanding
- use technology such as calculators and computers effectively and recognise when their use may be inappropriate
- take increasing responsibility for their own learning and the evaluation of their own mathematical development.

Assessment

This linear A level course from Edexcel is examined entirely by examination at the end of Year 13. It is broken down into smaller sub-units which you can see based on the long-term curriculum content, and which are assessed by the end of each half term. These unit assessments inform whole-school progress key-ins and also help inform departmental intervention.

Further information can be found at https://qualifications.pearson.com/en/qualifications/edexcel-a-levels/mathematics-2017.html