KS5|CURRICULUM Mathematics



Entry Requirements: Grade 6 or above in Mathematics

The Mathematics A Level course is designed to help a student's understanding of mathematics and mathematical processes in a way that promotes confidence and fosters enjoyment and provides a strong foundation for progress to further study.

A good grounding in Mathematics is not only intellectually rewarding, but also often provides the passport to a wide variety of jobs, as well as further work in scientific research. A Level Mathematics goes beyond the basics and into the advanced worlds of algebra, geometry, mathematical modelling and more.

This qualification will extend the student's range of mathematical skills and techniques, use their mathematical knowledge to make logical and reasoned decisions in solving problems, both within pure mathematics and in a variety of contexts, together with the ability to communicate the mathematical rationale for these decisions clearly.

Students will learn to process logically and recognise incorrect reasoning. They will be able to identify when mathematics can be used to analyse and solve a problem in context, represent situations mathematically, understand the relationship between problems in context and the mathematical models that may be applied to solve them. Students will also learn to read and comprehend mathematical arguments, including justifications of methods and formulae, and communicate their understanding. They will need to take increasing responsibility for their own learning, as well as evaluating their own mathematical development.

The Pearson Edexcel Level 3 Advanced GCE in Mathematics consists of three externally examined papers at the end of the two year course. There will also be assessments at regular intervals combined with an internal exam at the end of the first year to determine student's ability to continue the course.

- **Paper 1: Pure Mathematics**
- **Paper 2: Pure Mathematics**
- **Paper 3: Statistics and Mechanics**

Each paper is 2-hour written examination and accounts for 33.33% of the qualification



Content and assessment overview

The Pearson Edexcel Level 3 Advanced GCE in Mathematics consists of three externally examined papers. Students must complete all assessment in May/June in any single year.

Paper 1: Pure Mathematics 1 (*Paper code: 9MA0/01)

Paper 2: Pure Mathematics 2 (*Paper code: 9MA0/02)

Each paper is: 2-hour written examination, 33.33% of the qualification, 100 marks

Content overview

Topic 1 - Proof

- Topic 2 Algebra and functions
- 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

Paper 3: Statistics and Mechanics (*Paper code: 9MAO/03)

2-hour written examination, 33.33% of the qualification, 100 marks

Content overview

Section A: Statistics

- Topic 1 Statistical sampling
- Topic 2 Data presentation and interpretation
- Topic 3 Probability
- **Topic 4 Statistical distributions**
- Topic 5 Statistical hypothesis testing

Section B: Mechanics

- Topic 6 Quantities and units in mechanics
- Topic 7 Kinematics
- Topic 9 Forces and Newton's laws
- Topic 10 Moments

All course related information can be found on Pearson Website http://qualifications.pearson.com/en/qualifications/edexcel-a-levels.html



A Beyond ACADEMY

A LEVEL | EDEXCEL (EXAM BOARD)