

Mathematics

Course description and Assessment

The Course (AS)

The AS level consists of PURE and APPLIED Mathematics, in the ratio of 2:1. The Applied Mathematics will consist of Statistics and Mechanics.

In year 12 you will sit:

- 1 Pure Paper (2 hours)
- 1 Applied Paper (1 hour 15 minutes)

All students will sit AS Level Mathematics at the end of year 12.

If you wish to carry on to A level Mathematics these examinations will NOT count towards your results.

The Course (A Level)

A level Mathematics also consists of PURE and APPLIED Mathematics, in the ratio of 2:1.

In year 13 you will sit:

- 2 Pure Paper (2 hours each)
- 1 Applied Paper (2 hours)

These examinations will contain content from both Year 12 and 13 combined.

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Course content

AS Level: Content

PURE

- Problem Solving
- Surds and Indices
- Differentiation
- Integration
- Vectors
- Quadratic Functions
- Equations and Inequalities
- Polynomials
- Coordinate Geometry
- Trigonometry
- Graphs and Transformations
- Exponentials and Logarithms
- The Binomial Expansion

STATISTICS

- ◆ Data Collection
- ◆ Data Processing, Presentation and Interpretation
- ◆ Probability
- ◆ The Binomial Distribution
- ◆ Hypothesis Testing

MECHANICS

- * Kinematics
- * Forces and Newton's Law of Motion
- * Variable Acceleration

A Level: Additional Content

PURE

- Algebraic Methods
- Functions and Graphs
- Sequences and Series
- Binomial Expansion
- Radians
- Trigonometric Functions
- Trigonometry and Modelling
- Parametric Equations
- Differentiation
- Numerical Methods
- Integration
- Vectors

STATISTICS

- ◆ Regression, Correlation and Hypothesis Testing
- ◆ Conditional Probability
- ◆ The Normal Distribution

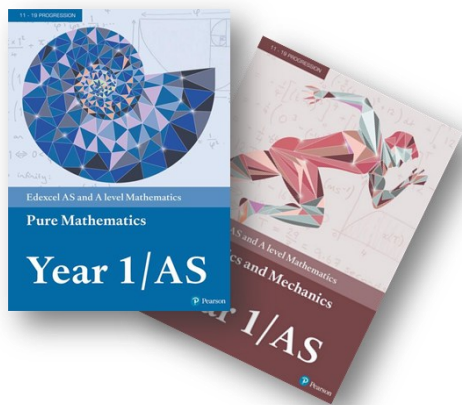
MECHANICS

- * Moments
- * Forces and Friction
- * Projectiles
- * Applications of Forces
- * Further Kinematics

Mathematics

Recommended textbook and equipment

You will need Pearson's Edexcel textbooks for Pure Mathematics Year 1 and Statistics & Mechanics Year 1. These will be available from the mathematics department for a small deposit.



Casio ClassWiz FX-991EX

This brand new advanced scientific calculator is specifically designed for the new A level course.

You will also need a new calculator.

Again these will be available to buy through the mathematics department.

Mathematics

Future Pathways

