

SUBJECT:
Mathematics
EXAM BOARD:
AQA



**Course
Overview (Y12)**

Pure Maths

Proof, Indices & Surds, Quadratic Functions, Polynomials, Using Graphs, Coordinate Geometry, Logarithms, Exponential Models, Binomial Expansion, Trigonometric Functions & Equations, Triangle Geometry, Differentiation, Applications of Differentiation, Integration.

Mechanics

Vectors, Introduction to Kinematics, Motion with Constant Acceleration, Forces & Motion, Objects in Contact.

Statistics

Working with Data, Probability, Statistical Hypothesis Testing.

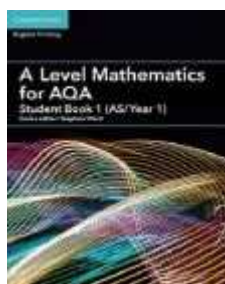
**Useful
websites**

www.aqa.org.uk - specification, specimen papers.

<http://www.mathcentre.ac.uk/> - support materials, free of charge. There are a variety of resources - self study guides; test yourself diagnostics and exercises; video tutorials; iPod and 3G mobile phone downloads; and case studies. Resources are available on-line, and may be printed or downloaded.

<http://plus.maths.org/content/> - *Plus* is an internet magazine written by the Millenium Mathematics Project which aims to introduce readers to the beauty and the practical applications of mathematics.

**Essential text
books and
reading list**



A Level Mathematics for AQA Student Book 1 (AS/Year 1)

Authors: Stephen Ward, Paul Fannon

Publisher: Cambridge University Press

ISBN-13: 9781316644225

You will also require a Casio FX-991EX ClassWiz calculator or a graphics calculator.

Summer task

Students must have strong skills in the following by the time they start the course in September:

Number (real numbers, fractions and indices).

Straight Line Graphs ($y=mx+c$, drawing, finding equations of straight lines).

Algebra (substitution, expanding and simplifying brackets and expressions, linear equations, simultaneous equations, quadratic expressions, factorising quadratics, solving quadratic equations, quadratic formula, rearranging formulae).

Circle Properties.

Trigonometry (SOH CAH TOA including 3D problems, sine rule, cosine rule).

The summer task booklet provided at the induction session must be completed in preparation for the course and handed in at your first maths lesson in September.