MATHEMATICS

Examination Board

- Edexcel

A2 course background

Consists of three examination, each examination is 2 hours in length and 33.33% of the final grade. A calculator is required for all assessments.

Paper 1: Pure Mathematics 1
Paper 2: Pure Mathematics 2

Content overview
- Proof
- Algebra and functions
- Coordinate geometry in the (*x, y*) plane
- Sequences and series
- Trigonometry
- Exponentials and logarithms
- Differentiation
- Integration
- Numerical methods
- Vectors

Paper 3: Statistics and Mechanics

Content overview
Section A: Statistics
- Statistical sampling
- Data presentation and interpretation
- Probability
- Statistical distributions
- Statistical hypothesis testing

Section B: Mechanics
- Quantities and units in mechanics
- Kinematics
- Forces and Newton's laws
- Moments

Useful websites / reading materials

- https://vle.mathswatch.co.uk/vle/ (login needed, this will be provided by the maths teacher).
- www.integralmaths.org (login needed, this will be provided by the maths teacher).

Continued…

To enjoy the magic of mathematics, along with developing your knowledge of the wider mathematical environment, the below books are useful.

[What the Numbers Say: A Field Guide to Mastering Our Numerical World](#) (Derrick Niederman and David Boyum)

[Alex's Adventures in Numberland](#)
(Alex Bellos)

[What is Mathematics?: An Elementary Approach to Ideas and Methods (Oxford paperbacks)](#) (Richard Courant, Herbert Robbins, Ian Stewart)

[The Tiger That Isn't: Seeing Through a World of Numbers](#) (Andrew Dilnot)

[Euler : The Master of Us All](#) (William Dunham)

[Why Do Buses Come in Threes?: The Hidden Mathematics of Everyday Life](#) (Rob Eastaway and Jeremy Wyndham)

[The Cartoon Guide to Statistics](#) (Larry Gonick & Woolcott Smith)

[Thinking Mathematically](#) (J.Mason, L.Burton, K.Stacey)

[Mathematician's Delight (Dover Science Books)](#) (W.W. Sawyer)

[Fermat's Last Theorem: The story of a riddle that confounded the world's greatest minds for 358 years](#) (Simon Singh)

[Professor Stewart's Cabinet of Mathematical Curiosities](#) (Ian Stewart)

Recommended study

- Complete all tasks and exam-style questions from the course book.
- Complete tasks on 'mathswatch' and integral maths and any other tasks as directed by your teacher
- Approximately 3-5 hours per week to include homework tasks and independent study.