



# MATHEMATICS

There are lots of exciting and practical uses of Mathematics in the modern world. This course will help shed some light on them. If you enjoyed solving problems at GCSE and want to be challenged further, studying A Level Mathematics will offer you a rewarding experience. It will help train your mind in clear and logical thought and allow you to develop your reasoning abilities. Whilst worth studying in its own right, A Level Mathematics also provides excellent support for the physical and social sciences.

## COURSE DETAILS:

### Pure Mathematics:

- Algebra and Functions
- Trigonometry
- Exponentials and Logarithms
- Differentiation
- Integration
- Further Calculus
- Vectors
- Numerical Methods
- Proof
- Coordinate Geometry in the  $(x,y)$  plane
- Sequences and Series

### Statistics:

- Mathematical Models in Probability and Statistics
- Representation and Summary of Data
- Probability
- Correlation and Regression
- Discrete Random Variables
- The Normal Distribution

### EXAM BOARD:

EDEXCEL A LEVEL MATHS  
(9MA0)

### ASSESSMENT:

3 PAPERS AT THE END OF  
YEAR 13 WORTH 33% EACH  
COVERING:-  
PURE MATHEMATICS  
(2 PAPERS)  
MECHANICS & STATISTICS  
(1 PAPER)



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## Mechanics:

- Quantities and Units in Mechanics
- Kinematics
- Forces and Newton's Laws
- Moments
- Reaction Forces
- Non-Uniform Acceleration

## OTHER LEARNING OPPORTUNITIES:

- Supporting KS3/4 students in Mathematics lessons
- Take part in the UKMT Maths Challenge
- Use of graphing software
- Learning new functions on your calculator

## WHERE NEXT WITH THIS COURSE?

A Level Mathematics is a much sought-after qualification which is essential for further study of the subject and is often a requirement for degree courses in Physics, Economics, Medicine, Architecture, Engineering, Accountancy, Psychology and Computing.

A degree in Mathematics could lead to opportunities in actuarial work, investment banking, accountancy and computing.



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# HIGHAM LANE SIXTH FORM