

# Advanced MATHEMATICS

**EXAM BOARD: EDEXCEL**

## AIM OF THE COURSE

To further your knowledge and skills of pure and applied maths in preparation for further study or the world of work.

'A scientist sees something happen and attempts to explain it. A mathematician has an idea and explores it to satisfy their own intellects.'

### Provisional Course Entry Requirements

You should have achieved an Average Point Score across all your GCSE subjects of 5.5+ and a high grade 6 in Maths

## Course Summary

Pupils will study both pure and applied maths, with both a pure mathematics paper and a statistics and mechanics paper sat at the end of year 13. The foundation for both strands will be laid in year 12 with the option to sit an AS in the subject in the first summer. This will then be built upon in year 13 before the final examinations after two years.

### Pure Topics include

Factor and Remainder Theorems  
Differential and Integral Calculus  
Numerical Methods  
Vectors  
Trigonometric Functions  
Radian Measure  
Binomial Theorem

### Statistics and Mechanics Topics include

Moments  
Equilibrium  
Vectors  
Kinematics  
Regression  
Normal Distribution  
Working with a Large Data Set

## CAREER PROSPECTS

Mathematics is required by wide range of students, from those intending to read the subject at university to those needing particular techniques to support other subjects or their chosen careers. Mathematics is an integral part of careers in Communications Engineering and Transmissions, Accountancy, the Robotics Industry, Physics, Satellite Technology, Cartography, Computing and Programming.