A Level Further Mathematics (Edexcel)

Head of Department: Mrs G Kelly

95% A*-B in 2026

For students taking A Level Mathematics, it is possible to also opt for A Level Further Mathematics. All examination boards offer the same 50% core material and we have chosen Edexcel's A Level in Further Mathematics.

Further Pure Mathematics Topics:

- Proof
- Complex numbers
- Matrices
- Further algebra and functions
- Further calculus
- Further vectors
- Polar coordinates
- Hyperbolic functions
- Differential equations

Building on A Level Mathematics, we have chosen to offer:

Further Statistics topics:

- Discrete probability distributions
- Poisson, binomial and geometric distributions
- Hypothesis testing
- Central limit theorem
- Chi squared tests
- Probability generating functions
- Quality of tests.

Topics in Further Mechanics:

- Momentum and impulse
- Work, Energy and Power
- Elastic strings and springs
- Elastic collisions in one and two dimensions

This is an exciting course which means that up to two thirds of the total A Level time will be Mathematics; applicants will need to really enjoy and be committed to the subject in order to make this a viable option. It is especially important that prospective Further Mathematics candidates discuss their intentions with their Mathematics teacher and the Head of Faculty.

Examinations

Students will sit internal examinations throughout the course and four external examinations will be taken in the summer of Year 13, reflecting the topics studied. Two papers will test Further Pure Mathematics with the remaining two examining the applied topics. Each paper will be worth 75 marks and will take one and a half hours, giving a maximum of 300 marks over the 6 hours. Calculators will be allowed in all papers.

Entry requirements

Because of the extra demands, if you wish to take Further Mathematics you should have gained a Grade 8 or 9 at GCSE.

General

Homework is set after every lesson in both Mathematics and Further Mathematics and it is a requirement of the course that this is completed punctually. Mathematics is a linear subject in the more general sense, so that homeworks are necessary to the understanding of subsequent lessons and ultimately to success at this level. Only students with a good homework record are likely to succeed. The above information provides guidelines only. Any student who requires further information on any aspect of these courses should consult a member of the Mathematics Faculty who will be happy to advise. Mathematics is equally suitable for girls and boys studying a wide range of other A Level subjects and successful former students have studied Arts, Sciences or a combination of both. The Mathematics Faculty has a proven reputation for supporting students at all levels and both encourages and expects that sixth formers will use their free time seek any help that they need.

