



Further Mathematics

Staff delivering: Miss Mawer and Miss Stammers

Topics/Units studied:

Further Mathematics is comprised of compulsory components

- Proof
- Complex Numbers
- Matrices
- Vectors
- Algebra
- Polar Coordinates
- Hyperbolic Functions
- Differential Equations
- Trigonometry
- Numerical Methods

Key dates & deadlines:

A2 Paper 1 – Core Pure Mathematics 1	11 th May	1½ hours
A2 Paper 2 – Core Pure Mathematics 2	14 th May	1½ hours
A2 Paper 3 – Further Pure Mathematics 1	22 nd May	1½ hours
A2 Paper 4 – Decision Mathematics 1	17 th June	1½ hours

Career Pathways:

Actuary, Air Traffic Control Analyst, Banking, Civil Engineer, Computer Scientist, Cryptologist, Data Scientist, Ecologist, Economist, Environmental Mathematician, Geophysical Mathematician, Investment Banking, Mathematics Teacher, Operations Research Analyst, Physician, Research Scientist, Software Engineer, Robotics Engineer, Statistician.

Success

The Mathematics department have had consistently good results for over 5 years and have achieved grades placing Holderness Academy in the top 10% Nationally for A-Level Further Mathematics.

2019 Results A*-C 100%

2018 Results A*-C 100%

2017 Results A*-D 100%

2016 Results A*-C 100%

Progression

An A Level in Further Mathematics is useful for the following degree courses

- Actuarial Science
- Actuarial Studies
- Aeronautical Engineering
- Biochemistry
- Biomedical Sciences
- Chemical Engineering
- Chemistry
- Computing
- Dentistry
- Electronic Engineering
- Material Sciences
- Mathematics
- Mechanical Engineering
- Medicine
- Optometry
- Physics

An A Level in Mathematics may be essential for some Russell Group University degree courses in Mathematics and Economics.

- Students taking Further Mathematics overwhelmingly find it to be an enjoyable, rewarding, stimulating and empowering experience.
- It is a challenging qualification, which both extends and deepens your knowledge and understanding beyond the standard A Level Mathematics. Students who do it often say it is their favourite subject.
- For someone who enjoys mathematics, it provides a challenge and a chance to explore new and/or more sophisticated mathematical concepts.
- As well as new learning new areas of pure mathematics you will study further applications of mathematics in mechanics, statistics and decision mathematics.
- Students who take Further Mathematics find that the additional time spent studying mathematics boosts their marks in single A Level Mathematics.

- Any student capable of passing an AS/A level in Mathematics should also be able to pass AS Further Mathematics. Studying Further Mathematics consolidates and reinforces your standard A Level Mathematics work, helping you to achieve your best possible grades.
- It makes the transition from sixth form to university courses which are mathematically rich that much easier as more of the first year course content will be familiar.
- If you are planning to take a degree such as Engineering, Sciences, Computing, Finance/Economics, etc., or perhaps Mathematics itself, you will benefit enormously from taking Further Mathematics, at least to AS level. AS Further Mathematics introduces new topics such as matrices and complex numbers that are vital in many STEM degrees. Students who have studied Further Mathematics find the transition to such degrees far more straightforward.
- It enables students to distinguish themselves as able mathematicians in their applications for university and future employment.

