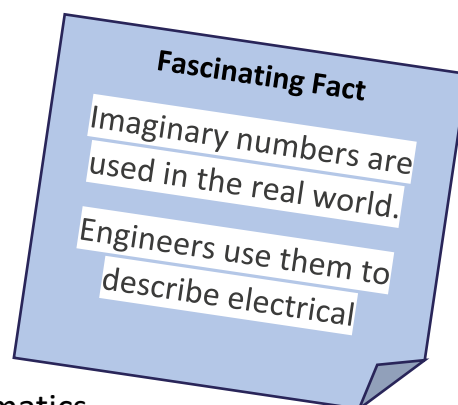


Clarendon Academy Sixth Form: Subject Essentials

Further Mathematics



Exam Board: Pearsons/Edexcel

Specification: Level 3 Advanced GCE in Further Mathematics
(9FM0)

How am I examined in this subject?

You will sit the **AS exam (8FM0)** at the end of **year 12** when you will do **two papers** each paper is 1 hour and 40 minutes long

Paper 1 Core Pure Mathematics – examines the pure content of the course and counts 50% towards the final grade. You are expected to answer all the questions. Calculators are allowed. Questions cover all of the core pure content from year 12 in a mixture of straight forward and problem solving questions.

Paper 2 Further Mathematics Options- paper is split into two equal sections each worth 25%.

Section A- Further Mechanics 1 - will cover momentum and impulse, work, energy and power and elastic collisions in one dimension.

Section B – Decision Mathematics 1 – covers algorithms and graph theory, linear programming and critical path analysis

At the end of **year 13** you will sit four papers each of which each is 1 hour 30 minutes and will test the content of year 12 and 13. Each paper is worth 25% of the final grade

Paper 1 and 2 Core Pure Mathematics – Each paper can cover any part of the pure content in a mixture of straight forward and problem solving questions

Paper 3 Further Mechanics 1 – questions will cover momentum and impulse, work, energy and power, elastic collisions in one dimension and two dimensions and elastic strings and springs.

Paper 4 Decision Mathematics 1 – covers algorithms and graph theory, linear programming and critical path analysis

How are my responses assessed?

Each piece of work you do will contain questions which cover the following assessment objectives

AO1 Use and apply standard techniques. (60% AS, 50% A level) Select and correctly carry out routine procedures, Recall facts, terminology and definitions.

AO2 Reason, interpret and communicate mathematically. (20% AS, 25% A level)

Construct rigorous mathematical arguments and proofs. Make deductions and inferences, assess the validity of an argument, explain your reasoning. Use mathematical notation and language correctly.

AO3 Solve problems within mathematics and in other contexts. (20% AS, 25% A level)

Translate problems in context into mathematical processes. Interpret solutions in terms of the original problem and evaluate the accuracy and limitation. Use mathematical models, understanding their limitations and how they might be refined.

What do I have to achieve at GCSE to study this subject?

You need to achieve at least a grade 8 in GCSE Mathematics in order to study A level Further Mathematics.

How could this subject support my future education or career?

Further Mathematics can help you develop skills that can support careers in finance, computing, engineering, teaching, design, business and a wide range of other sectors.

Some of the most important skills you will develop as a Further Mathematics student are developing a logical argument, problem solving and critical thinking. These are all useful when studying most subjects at degree level.

How do we support students who are aiming for A/A* grades?

- We encourage our most able students to use on line resources to extend their problem solving skills by tackling a variety of questions.
- We organise one-to-one sessions with students who would like additional support in improving any aspect of their mathematics.
- We encourage our most able students to take part in national mathematics competitions which provide extra opportunities to think about how they can use their mathematics to solve problems

How do we support students who are finding this subject difficult?

- We organise one-to-one sessions with students who are struggling with specific topic or skills in our subject.
- We provide online access to textbooks so that students can access their textbook from anywhere with wifi access.
- We provide detailed and helpful feedback on the work that students submit and give them the opportunity to improve their work at regular opportunities.
- We direct students to a range of online resources that are designed to support them with independent study and reviewing their notes from class, such as Mymaths and Dr Frost maths.

Who can I contact if I want to find out more?

Mrs Jane Thrower (*Head of KS5 mathematics / A-Level Mathematics and Further Mathematics Teacher*): jdt@clarendonacademy.com