

A-Level Further Maths

Welcome to A Level Further Maths - a journey deeper into the abstract areas of Maths that underpin many things we take for granted in society.

A Level Further Maths will challenge you in new and exciting ways. You'll have to be open minded to think about new structures, new types of number and perform deeper reasoning and analysis surrounding likelihood and optimisation. Further Maths will make you think in a different way and give you a rich, deep understanding of a variety of mathematical concepts.

Mr H Pugh – Lead teacher, Further Maths A-Level

Understanding the course

Specification	Edexcel A Level Further Maths (9FM0)
Exams	<p>All exams are at the end of Y13.</p> <p>The Pearson Edexcel Level 3 Advanced GCE in Further Mathematics consists of four externally-examined papers. Students must take Paper 1 and Paper 2, the two mandatory Core Pure papers, and two optional papers.</p> <p>Paper 1: Core Pure Mathematics 1 1 hour 30 min exam 25% of the course 75 marks</p> <p>Paper 2: Core Pure Mathematics 2 1 hour 30 min exam 25% of the course 75 marks</p> <p><i>Paper 1 and Paper 2 may contain questions on any topics from the Pure Mathematics content.</i></p> <p>Further Mathematics Optional Papers (The options we have chosen to teach as a school)</p> <p>Paper 3B: Further Statistics 1 1 hour 30 min exam 25% of the course 75 marks</p> <p>Paper 3D: Decision Mathematics 1 1 hour 30 min exam 25% of the course 75 marks</p>
Teacher	Mr H Pugh hpugh@yateacademy.co.uk

Course requirements

Please come prepared to your first lesson with the following materials:

- Pencil case with black pens, pencils, ruler, rubber
- A Casio FX-991 CW calculator (has extra functions that help at A-Level) or Casio FX-CG100 (has even more functions including graph drawing - but is expensive)
- 1 lever arch folders
- 1 blank, lined exercise book for independent study
- A diary or planner to record homework requirements

Summer bridging work

To ensure you start the year as successfully as possible, please come to your first lesson having completed the following tasks.

Consolidate Task

Calculate the sum of the first 1000 even numbers, clearly explaining every step.

Apply Task

Task Instructions:

Please complete all questions in the [A-Level Further Maths Transition Booklet.pdf](#).

While the answers can be found on [Maths Genie](#), you **must show full workings** for every question in the booklet. You may use a calculator throughout.

You are required to bring your fully worked solutions to class during the **first week of September**, so your teacher can check that the work has been completed.

Useful Resources to help:

If there are any topics you're not fully confident with, you can strengthen your understanding by watching the **Hegarty Maths A-Level Preparation** videos, available here: [Hegarty Maths A-Level Preparation Playlist](#)

Why is this important:

During the first three weeks of September, you will sit an in-class assessment designed to test your prior knowledge and initial progress in the subject. This will help us evaluate your readiness and suitability for the course.

To prepare effectively, it is essential that you complete the **Transition Workbook** in full before this assessment.

Extension Task

- Watch this BBC video about algorithms used by food delivery apps <https://www.bbc.co.uk/iplayer/episode/m001fc80/the-secret-genius-of-modern-life-series-1-2-food-delivery-app>

Write a summary of Dijkstra's algorithm after watching the program. What is it for? How does it work? Who was Dijkstra?