



MATHEMATICS

STAFF

Mrs Hepworth
(Subject Leader)
Mr Robinson
(2nd in Dept.)
Mr Bensley
Mr Brooke-Mawson
Mr Cockcroft
Mr Fraser
Mrs Harker
Ms Jarvis
Mr Mullaney
Mr Tilley

SUPPORT

Support sessions take place at various times each week within the department.

All members of the department are happy to support you at other times too – either come and ask

INTRODUCTION

Welcome to **Mathematics** and **Further Mathematics!**

You will be studying the AQA syllabus. You will have 2 teachers – one for Pure Mathematics (which you see 3 times a week) and one for Applied - Mechanics and Statistics (which you see 2 times a week).

The first topics that we study are Algebra, Indices, Surds and Co-ordinate Geometry in the Pure and Kinematics (the mathematics of motion) in Applied. These are topics you will have come across in year 11, but here we focus on extending your understanding and on problem solving.

For those of you who have chosen Further Mathematics, you will have 9 lessons a fortnight. You have two teachers, one that teaches Pure and Mechanics and the other that teaches Pure and Statistics. Students who choose Further Mathematics cover the Mathematics year 1 in the Autumn Term and then we teach the AS Further Mathematics content after that in order that all students take the AS Further Maths exam at the end of year 12. At the end of year 12, you can decide whether you want to continue with A level Further Mathematics or drop down to single Mathematics.

WHAT TO BRING FOR YOUR FIRST LESSON

In the first week, you will be tested on Algebra. This will be based around the algebra content from GCSE, including manipulation, solving linear equations, changing the subject, quadratics and simultaneous equations.



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when you need to or email.

The induction material on the HGS website should be completed by the first lesson.

You will require a pen, pencil and ruler for the first lesson. You will need some A4 folders for organising your maths work and lots of lined paper. During the first few weeks on the course, you will need to buy a calculator, the Classwiz fx-991EX (costs around £20 from school) or a Graphical Calculator if choosing Further Mathematics (around £70 from school). Students on bursary will receive one of these calculators free of charge.

CLASSWORK, HOMEWORK AND INDEPENDENT STUDY

A Level Mathematics is not just about knowing the content, it is about applying this content into familiar and unfamiliar situations. Your teachers will use activities in class that will help to develop your knowledge and ability to problem solve.

You will be expected to do homework or independent study after every lesson. This may involve a reading task, answering some exam questions or simply just some completing mathematics. It is important that homework is handed in on time, so your teacher can identify any areas of misconception.

RESOURCES

You will receive at the start of year 12 a textbook that covers year 1 Mathematics which you should bring to every lesson.

We have a subscription to a number of websites which you will have free access to including ...

* Integral <https://integralmaths.org/>

This website is designed to develop deep mathematical understanding and all the skills students need for your AS/A level studies and beyond. It contains notes, videos, examples and lots of questions with answers which help you understand each topic. You will be given an individual login and password at the start of the year.

* Hegarty <https://hegartymaths.com/>

This website has several resources, videos and questions which are particularly useful at the start of year 12.

* Dr Frost <https://www.drfrostmaths.com/>

This website has lots of support for students doing Mathematics and Further Mathematics A level. We use this to set work where you get immediate feedback.

* Exam Solutions <https://www.examsolutions.net/as-maths/aqa/>

This website has lots of videos and practice exam papers.