



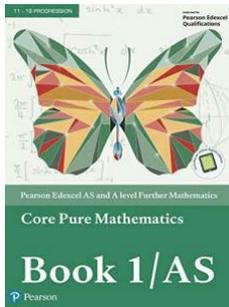
HAYDON
SCHOOL

Year 11 – Year 12
Transition Work
A Level
Mathematics

A Level Maths is widely recognised as a highly valued A Level as it may open many 'doors' for you.

However, **A Level Maths is NOT an easy option** – it does require a lot of self- motivation, determination and self-study.

We recommend that you do a **minimum of 5 hours work outside the classroom each week**. You will need to 'love a challenge' and be willing to accept that a question has 'gone wrong' – and be prepared to have another attempt (and another and maybe even another).



Textbooks

Over the course of your first year of studies you will need a few textbooks. You will need two starting the first week.

This is available from any good bookstore, as well as Amazon.

[Click here](#) to buy Core Pure Mathematics 1/AS from Amazon.

[Click here](#) to buy Decision Mathematics 1 from Amazon.



Calculator

Students will need new calculators for the new A-level.

The minimum standard for this is an advanced scientific calculator, such as the Casio FX-991EX ClassWiz; however, graphical calculators such as the Casio FX-CG50 have the additional advantage of being able to plot the graphs of functions.

At Haydon we recommend buying the Casio 991EX, [click here](#) to buy it from Amazon.



Folders

You will need to buy at least two A4 Lever arch ring binder folders to carry you through the two year course – one for Pure maths and one for Applied maths.

These are available from any stationary store and it is important they are kept in a presentable order for your own revision. In September, you will be issued with a student information sheet which will have a record of all you topics tests, mock exams and predicted grades. This will help you to track your progress. You will also be given a homework folder which must be kept in the class and all submitted homework will be filed and kept in this folder.

A Level Mathematics Course

The specification that we use is the one provided by Pearson Edexcel. At the end of year 13 you will sit two Pure Maths exams, this is worth 2/3 of the qualification. You will then sit one applied paper which will be on statistics and mechanics, which will be worth 1/3 of the qualification. There are 3 exams to sit. All exams are 2 hours long.

A Level Further Mathematics Course

The specification that we use is the one provided by Pearson Edexcel.

At the end of year 13, for A Level, you will sit two exams in Core Pure Mathematics worth 50% of the qualification. You will then sit a minimum of two other exams from the applied section of the course. Further Statistics 1 and Further Mechanics 1 are the two applied modules chosen.

Support Available in Haydon Sixth Form Mathematics

If you feel you are struggling or you need to talk/discuss anything to do with the course or its teachers please feel free to speak to the members of the department.

The top three tips to succeed are:

1. Attendance is important- if you miss a lesson, the next lesson will seem so much more difficult.
2. Catch-up with any work missed if you do miss a lesson BEFORE the next lesson where possible.
3. We have online resources, so use these regularly. There will be many videos on topics too.

A Level Further Mathematics Summer Tasks

1. Have all equipment listed on the first page ready.
2. Make sure you have also completed the Mathematics Summer tasks.
3. Complete the tasks in Maths beyond the Curriculum section and write up a summary of what you have learned.
4. Check out some of the reading books for Sixth Formers in Mathematics

On your first day at Haydon Sixth Form, your Mathematics teacher will look to see you have these tasks done by an equipment check, baseline test and checking you have the checklists filled out on the next couple of pages, so it is advised to print this document out.

Maths Beyond the Curriculum

Task	Date Completed
Complete the Nrich Advanced Problem Solving questions	
Join The Society of Young Mathematicians (a part of the Mathematical Association)	
Complete the Intermediate UKMT papers and Senior UKMT papers	
Read the articles on Maths Careers website	
Read the articles on +Plus magazine	
Check out the videos and podcasts on Numberphile	
Watch episodes of the TV program School of Hard Sums with Dara O'Briain & Marcus Du Sautoy	
Check out the mini lessons on Mathsispower4u	
Attempt some MAT and STEP questions	
Read the Chalkdust magazine	
Find out about the Millennium Maths problems	
Read How to study for a mathematics degree by Lara Alcock	

Great Mathematics Reading Books for Sixth Formers

Do Dice Play God?: The Mathematics of Uncertainty by Ian Stewart
The Art of Statistics: How to Learn from Data
The Math of Life and Death by Kit Yates
Humble Pi: A Comedy of Maths Errors by Matt Parker
Infinite Powers: The Story of Calculus by Steven Strogatz
The Creativity Code: Art and Innovation in the Age of AI by Marcus du Sautoy
The Man Who Knew Infinity by Robert Kanigel
Gödel, Escher, Bach by Douglas Hofstadter
The Colossal Book of Mathematics by Martin Gardner
Euclid in the Rainforest by Joseph Mazur
Four Colours Suffice by Robin Wilson
What is Mathematics Really? by Reuben Hersh
Magical Mathematics by Persi Diaconis and Ron Graham
Games of Life by Karl Sigmund
Mathenauts: Tales of Mathematical Wonder edited by Rudy Rucker
The Mathematical Principles of Natural Philosophy by Isaac Newton
The Simpsons and Their Mathematical Secrets by Simon Singh
How Not to Be Wrong: The Hidden Maths of Everyday Life by Jordan Ellenberg
Fermat's Last Theorem: The Story Of A Riddle That Confounded The World's Greatest Minds For 358 Years by Simon Singh
Alex's Adventures in Numberland: Tenth Anniversary Edition by Alex Bellos