



HAYDON  
SCHOOL

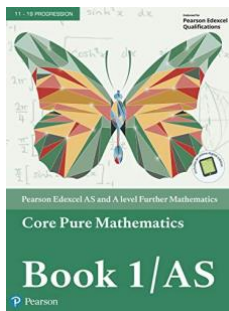
**Year 11 – Year 12  
Transition Work**

**Further Mathematics  
A Level**

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. Miss Maher will carry out random folder checks each term. In September, you will be given a folder checklist and a revision booklet that must be kept in the folder at all times.

### **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 in any of the applied options: Further Decision 1, Further Pure 1, Further Statistics 1 and Further Mechanics 1. These options will be picked by the teacher, and only a maximum of three will be covered in lessons.

### **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.

There will also be weekly revision sessions held with Miss Maher, that all A Level Mathematic students are welcome to attend.

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

## Great Mathematics Reading Books for Sixth Formers

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