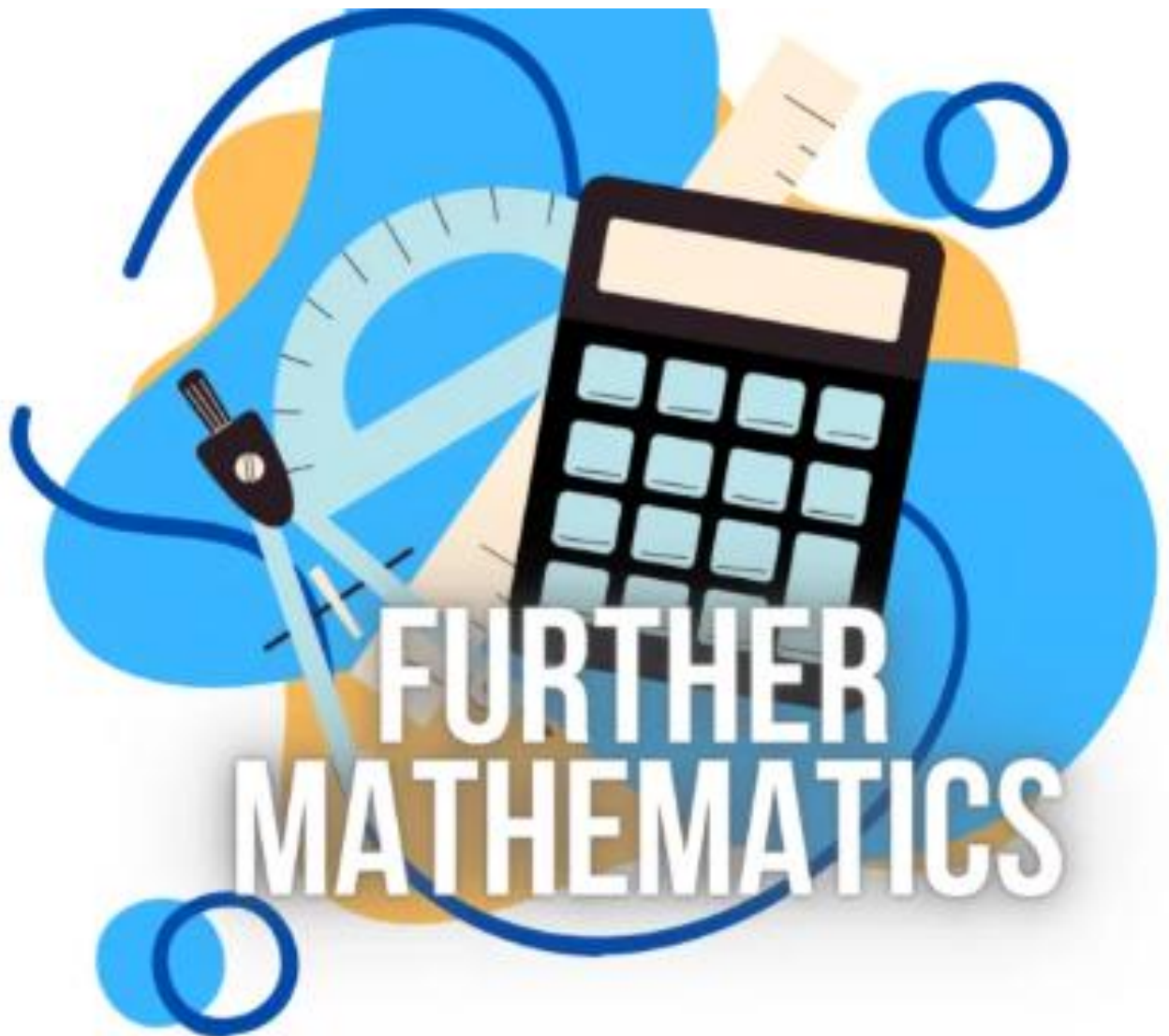
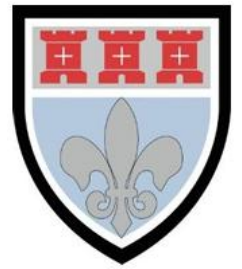


St Mary's Catholic
School



Y11 – 12 Transition

If you are thinking of studying A-Level Further Maths, you should be commended for your astute decision making.

However, while Further Maths can be challenging, it's not necessarily impossible for those with a genuine interest and commitment to the subject. It's a demanding A-Level that requires a significant amount of work and dedication but can lead to strong academic outcomes for those who succeed.

What can you do to ensure the best possible start to the course?

Well, it's easy really - don't forget everything you studied for GCSE Maths, especially the Algebra.

This booklet contains work that you will be expected to complete and hand in, along with additional ideas on where to go to keep your maths skills up to scratch over the Summer break

Summer Work – Further Maths

**We would like you to do some research on the topic of
Complex Numbers**

What are they? Who invented them? What applications do they have?

Watch the following as an introduction:

[complex number - Numberphile](#)

<https://www.youtube.com/watch?v=gHUAHZXjpwOE>

<https://www.youtube.com/watch?v=00HiSZUvn0I>

Work through some of the activities here:

[Complex Numbers Further | NRICH](#)

You can use the following resource to help you get started:

[complex number | plus.maths.org](#)

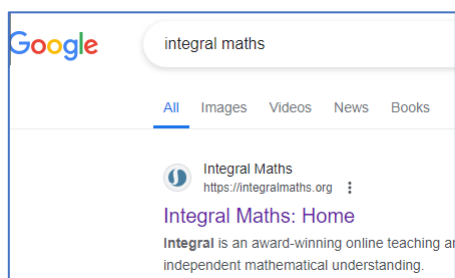
When you begin your Further Mathematics course in September you will be asked to do a short presentation on your findings! Be prepared!

Summer Work – Further Maths

Work through the seven sections of the “Transition to A Level Mathematics” course on Integral.

- Watch videos and work through tasks in each section
- Complete the online Topic Assessment for each section
- **The “Go Deeper” tasks that appear on completion of the Topic Assessment for Maths**

Further details below



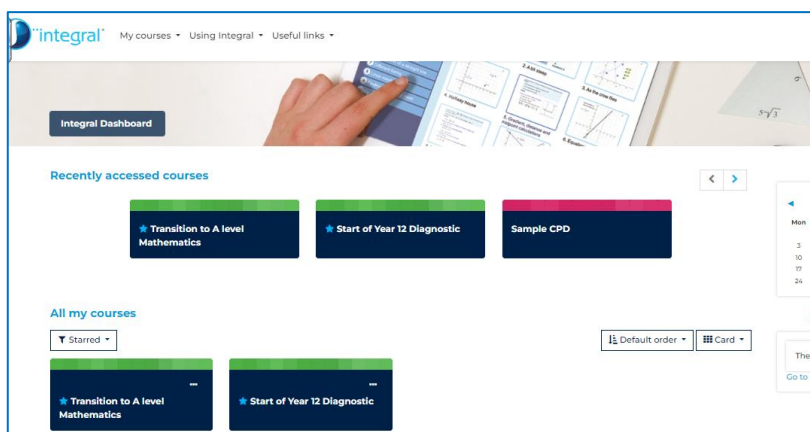
Search for “Integral Maths” in Google.

Log in using the following credentials:
(you will be prompted to change your password the first time you log in)

A screenshot of a login form. The username field contains the text '1349AL-jbloggs'. The password field contains the text 'Password changeme'. A blue arrow points from the text '1349AL- first initial of your first name, followed by your surname' to the username field.

1349AL- first initial of your first name, followed by your surname

You will have two courses on your dashboard: “Transition to A Level Mathematics” (**Task 1**) and “Start of Year 12 Diagnostic” (**Task 2**)



Select the relevant course and follow the on-screen instructions.

There are many other ways you can keep your maths skills sharp, in addition to traditional revision;

Try the free Sumaze apps

Number and logic problems in a maze-style game. If you have a lot of free time Sumaze 1 can be done in under two days



Investigate YouTube

Look for the Numberphile channel or videos by the 'Festival of the Spoken' nerd team

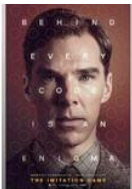
Read a review and watch a film

'Hidden Figures' PG

'Beautiful Mind' 12

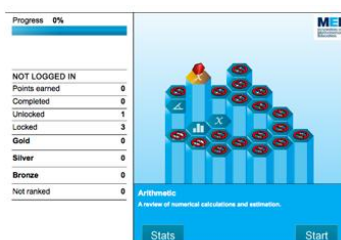
'The Imitation Game' 12

You'll be surprised how many results you get if you Google 'maths films on Netflix', however they aren't all available on the UK service

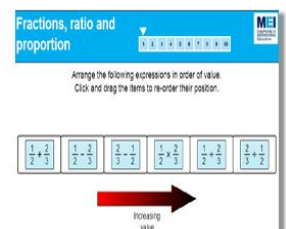


Go to an event

If you get the opportunity to, go to a popular Maths or Science lecture. You'll be surprised where they pop up - even the famous Hay Literary festival has a maths lecture! Don't worry if you don't understand all of it, you won't be alone, but you'll start to see the links between different areas



Try "Bridge It" by MEI
An online, flash-based quiz game to support preparation for PostGCSE maths. Google "Bridge It MEI"



Read a book and follow the authors on social media

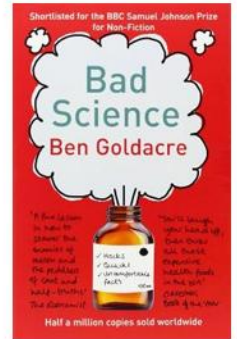
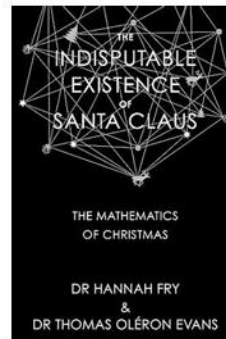
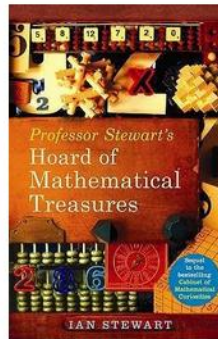
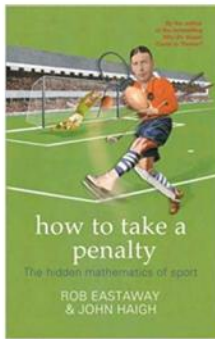
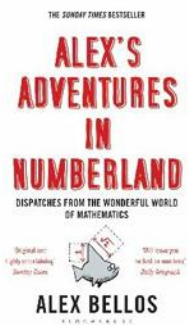
'Alex's Adventures in Numberland' by Alex Bellos

'Bad Science' by Ben Goldacre

'Professor Stewart's hoard of mathematical treasures' by Ian Stewart (one of many titles)

'The indisputable existence of Santa Claus: The mathematics of Christmas' by Dr Hannah Fry & Dr Thomas Oleron Evans

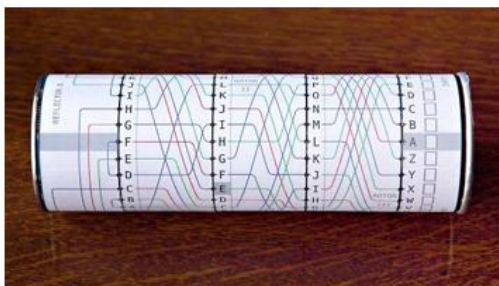
Anything by Rob Eastaway or Danica McKellar



Puzzles

Invest in some Maths related puzzle books: Sudoku, mathdoku, menseki meiro (books are in other languages, but you don't need the instructions, just the pictures), logic problems

They'll all keep your brain alert



Eat some tubes of Pringles with friends

- Then Google Pringles Enigma machine
- Make enigma machines out of the tubes
- Text each other coded messages whilst sunbathing (in the rain)

We look forward to seeing you in September!