

Year 11

Resources to help you prepare for Maths and Further Maths A level



 <p>Watch any video of your choice from the Numberphile website – there are lots to choose from:</p> <p>numberphile</p>	 <p>Complete the Hegarty maths RAG self-assessment in the Maths Google classroom and aim to review one topic every week.</p>	 <p>Watch Matt Parker’s Royal Institute lecture which covers part of the content of his book ‘Humble Pie’:</p> <p>When Maths Goes Wrong</p>	 <p>Read a popular maths book, there are lots to choose from, but you can take inspiration for the list available on the next page.</p>
 <p>Listen to a podcast from ‘More or Less’, the BBC radio 4 programme that uses statistics to make sense of everyday life. There is lots on Covid-19, but you may prefer <i>Mathematics and the Simpsons</i> instead</p> <p>More or Less</p>	 <p>Watch Benoit Mandelbrot’s TED talk on fractals and roughness.</p> <p>Fractals and Roughness</p>	 <p>Complete an Intermediate Maths Challenge paper from the UKMT or push your-self to complete a Senior one instead:</p> <p>Intermediate</p> <p>Senior</p>	 <p>Listen to this radio programme in which Jim Al-Khalili interviews Professor Ian Stewart, mathematician and author of popular maths books:</p> <p>Life Scientific</p>
 <p>Learn about problem solving and complete one of the problem sheets available in your Maths Google classroom.</p>	 <p>Watch this PBS documentary on origami and discover how it is much more than paper folding:</p> <p>The Origami Revolution</p>	 <p>Watch this three part documentary originally made by Hanna Fry for the BBC:</p> <p>Magic Numbers - Mysterious World of Maths</p>	 <p>Complete every now and again one of Mr Hegarty’s online lessons for A-level mathematics transition available live on YouTube</p> <p>A-level maths transition videos</p>
 <p>Listen to this radio programme in which BBC security correspondent Gordon Corera goes inside Britain's secret listening station:</p> <p>GCHQ Cracking the Code</p>	 <p>Watch this talk from Matt Parker, the stand-up mathematician and see if you can solve his maths calculator trick. If you can’t, the video will give you the answer:</p> <p>Calculator Trick</p>	 <p>Read an article published in Plus Magazine – there are plenty to choose from:</p> <p>Maths in a minute</p>	 <p>Listen to this radio programme in which Melvyn Bragg explores how the perception of mathematics has changed in the 20th century:</p> <p>In our time</p>

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NOTES for Mathematics A-level:

The A-level Mathematics Google Classroom (code: qfeyyqq) has some useful resources and some problem solving, further suggestions if want something else to do. It is really important that you don't forget the maths you've learnt so far, so make sure you do some of the Hegarty maths tasks (starting from the RAG self-assessment). However, you should really take this opportunity to broaden your understanding of how maths fits in the wider world and engage with the other task suggested or find you enjoy.

NOTES for Further Mathematics A-level:

The A-level Further Mathematics Classroom (code: ci6lipv) has some more challenging problem solving – new problems will appear once a week and solutions to these will also be posted. They become increasingly more challenging as the times go by, so while you don't have to do them all, try to stick to the order in which they are set.

READING SUGGESTIONS for all: there are lots of popular maths books, these are some that you may enjoy.

Fermat's Last Theorem <i>Simon Singh</i> 	17 Equations that Changed the World <i>Ian Stewart</i> 	The Code Book <i>Simon Singh</i> 	Uncle Petros and Goldbach's Conjecture <i>Apostolos Doxiadis</i> 
Does God Play Dice <i>Ian Stewart</i> 	The Penguin Book of Curious and Interesting Numbers <i>David Wells</i> 	1089 And All That <i>David Acheson</i> 	Mathletics <i>Wayne L Winston</i> 
Alex's Adventures in Numberland <i>Alex Bellos</i> 	The Man Who Loved Only Numbers <i>Paul Hoffman</i> 	Humble Pi <i>Matt Parker</i> 	The Great Mathematical Problems <i>Ian Stewart</i> 