

Maths Enrichment Activities

In addition to the Summer Work that you will be expected to complete ahead of September, here are a few activities you can do to prepare for Maths and Further Maths A-Level and extend your interest and knowledge in the subject.

Books

- The Simpsons and Their Mathematical Secrets – Simon Singh
- From 0 to infinity in 26 Centuries – Chris Waring
- The Music of the Primes – Marcus Du Sautoy
- Fermat's Last Theorem – Simon Singh
- How to Bake Pi – Eugenia Cheng
- Seventeen Equations that Changed the World – Ian Stewart
- Humble Pi - Matt Parker
- Hello World - Hannah Fry
- The Indisputable Existence of Santa Claus - Hannah Fry
- Acheson, David 1089 and All That (2002), The Calculus Story (2017)
- Bellos, Alex Alex's Adventures in Numberland (2010)
- Clegg, Brian A Brief History of Infinity (2003)
- Courant, Robbins and Stewart What is Mathematics? (1996)
- Devlin, Keith Mathematics: The New Golden Age (1998), The Millennium Problems (2004), The Unfinished Game (2008)
- Dudley, Underwood Is Mathematics Inevitable? A Miscellany (2008)
- Elwes, Richard MATHS 1001 (2010), Maths in 100 Key Breakthroughs (2013)
- Gardiner, Martin The Colossal Book of Mathematics (2001)
- Gowers, Tim Mathematics: A Very Short Introduction (2002)
- Hofstadter, Douglas Gödel, Escher, Bach: an Eternal Golden Braid (1979)
- Körner, T. W. The Pleasures of Counting (1996)
- Neale, Vicky Closing the Gap: the quest to understand prime numbers (2017)
- Odifreddi, Piergiorgio The Mathematical Century: The 30 Greatest Problems of the Last 100 Years (2004)
- Piper, Fred & Murphy, Sean Cryptography: A Very Short Introduction (2002)
- Polya, George How to Solve It (1945)
- Sewell, Michael (ed.) Mathematics Masterclasses: Stretching the Imagination (1997)
- Singh, Simon The Code Book (2000), Fermat's Last Theorem (1998)
- Stewart, Ian Letters to a Young Mathematician (2006), 17 Equations That Changed The World (2012)

Websites

- <https://plus.maths.org/content/> - Magazine
- <http://chalkdustmagazine.com/> - Magazine
- <https://flowingdata.com/> - Stats for leisure
- https://mei.org.uk/bridging_tests - MEI quiz game to support preparation for post-GCSE
- <https://members.gcsepod.com/shared/podcasts/title/13627/82172> - Getting ready for KS5

Films

- Hidden Figures
- A Beautiful Mind
- Good Will Hunting
- The Man Who Knew Infinity
- Moneyball

Youtube

- Numberphile - videos made by mathematicians
- TEDed Riddles - problem solving riddles with answers
- StandupMaths - Matt Parker's Youtube Channel
- Vi Hart

Online Courses

Online courses are a great way to take an interest to the next level, whether it is something that you have been meaning to delve into more significantly, or an interest that you have been cultivating over many years. The most popular websites that offer a variety of online courses are Coursera and edX (links below). This is your opportunity to build skills with courses and certificates from world-class universities and companies (IBM, Imperial College, Harvard, MIT...).

- <https://www.edx.org/course/subject/math>
- <https://www.edx.org/course/subject/math>