**A-Level Wider Reading List**

Mathematics is a diverse subject with many strands available for further study. As you study Mathematics after GCSE it is worth investigating the many sides of Mathematics to see which areas interest you e.g. did you know that internet security relies on prime numbers, some of the greatest mathematics helped win WWII or zero did not exist for many centuries. Have you ever wondered what infinity looks like? Below is a list of books which will help you discover some of the amazing influences of Mathematics. We hope that these books will inspire you to discover your own reading list. The books are listed loosely in topics and there are also links to reading lists from other institutions. Most books are available in the public or school libraries.

**Chaos**

[Does God Play Dice](http://www.amazon.com/Does-God-Play-Dice-Mathematics/dp/1557861064) by *Ian Stewart*

[Chaos](http://www.amazon.com/Chaos-Making-Science-James-Gleick/dp/0140092501) by *James Gleick*

**Cryptography**

[The Codebook](http://www.amazon.com/Code-Book-Science-Secrecy-Cryptography/dp/0385495323/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236286929&sr=1-1) by *Simon Singh*

[The Mathematics of Ciphers](http://www.amazon.com/Mathematics-Ciphers-Number-Theory-Cryptography/dp/1568810822/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236286967&sr=1-1) by *S.C. Coutinho*

[In Code](http://www.amazon.com/Code-Mathematical-Journey-Sarah-Flannery/dp/1565123778/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236287008&sr=1-1) by *Sara Flannery*

**History of Mathematics**

[A History of Mathematics](http://www.amazon.co.uk/History-Mathematics-Carl-B-Boyer/dp/0471543977/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236363960&sr=1-1) by *Carl B. Boyer*

[Infinity: The Quest to Think the Unthinkable](http://www.amazon.co.uk/Brief-History-Infinity-Quest-Unthinkable/dp/1841196509/ref%3Dsr_1_2?ie=UTF8&s=books&qid=1236364081&sr=1-2) by *Brian Clegg*

[E, the Story of a Number](http://www.amazon.co.uk/%2522e%2522-Number-Princeton-Science-Library/dp/0691141347/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236364159&sr=1-1) by *Eli Maor*

**Biographies**

[The Man Who Loved Only Numbers](http://www.amazon.com/MAN-WHO-LOVED-ONLY-NUMBERS/dp/0786884061) by *Paul Hoffman*

[My Brain is Open: The Mathematical Journeys of Paul Erdos](http://www.amazon.co.uk/My-Brain-Open-Mathematical-Journeys/dp/0684859807/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236364270&sr=1-1) by *Bruce Schecter*

[The Man who knew Infinity](http://www.amazon.co.uk/Man-Who-Knew-Infinity-Ramanujan/dp/0349104522/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236364308&sr=1-1) by *Robert Kanigel*

[Abel's Proof: An Essay on the Sources and Meaning of Mathematical Unsolvability](http://www.amazon.co.uk/Abels-Proof-Sources-Mathematical-Unsolvability/dp/0262661829/ref%3Dsr_1_1?s=books&ie=UTF8&qid=1300524593&sr=1-1) by *Peter Pesic*

**Mathematical Physics**

[A Brief History of Time](http://www.amazon.co.uk/Brief-History-Time-Black-Holes/dp/0553175211/ref%3Dsr_1_2?ie=UTF8&s=books&qid=1236364377&sr=1-2) by *Stephen Hawking*

[The Elegant Universe](http://www.amazon.co.uk/Elegant-Universe-Superstrings-Dimensions-Ultimate/dp/009928992X/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236364411&sr=1-1) by *Brian Greene*

[The Fabric of the Cosmos](http://www.amazon.co.uk/Fabric-Cosmos-Texture-Reality-Penguin/dp/0141011114/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236364469&sr=1-1) by *Brian Greene*

**Mathematical Philosophy**

[Introduction to Mathematical Philosophy](http://www.amazon.co.uk/Introduction-Mathematical-Philosophy-Bertrand-Russell/dp/0851247385/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236364590&sr=1-1) by *Bertrand Russell*

[A Mathematician's Apology](http://www.amazon.co.uk/Mathematicians-Apology-Canto-G-H-Hardy/dp/0521427061/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236364651&sr=1-1) by *G. H. Hardy*

[Thinking About Mathematics](http://www.amazon.co.uk/Thinking-about-Mathematics-Philosophy/dp/0192893068/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1282732129&sr=8-1) by *Stewart Shapiro*

**Mathematical Problems**

[Fermat's Last Theorem](http://www.amazon.co.uk/Fermats-Last-Theorem-Simon-Singh/dp/1841157910/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236365090&sr=8-1) by *Simon Singh*

The Millenium Problems by *Keith Devlin*

[Journey Through Genius: The Great Theorems of Mathematics](http://www.amazon.co.uk/Journey-Through-Genius-Theorems-Mathematics/dp/0471500305/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236365161&sr=1-1) by *William Dunham*

[The Equation That Couldn't Be Solved](http://www.amazon.co.uk/Equation-That-Couldnt-Solved-Mathematical/dp/0285637894/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236365203&sr=1-1) by *Mario Livio*

[Kepler's Conjecture](http://www.amazon.co.uk/Keplers-Conjecture-Greatest-History-Problems/dp/0471086010/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236365238&sr=1-1) by *George Szpiro*

[Poincaré's Prize](http://www.amazon.co.uk/Poincares-Prize-Hundred-year-Greatest-Puzzles/dp/0525950249/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236365267&sr=1-1) by *George Szpiro*

[The Music of the Primes](http://www.amazon.co.uk/Music-Primes-Unsolved-Problem-Mathematics/dp/1841155802/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236365301&sr=1-1) by *Marcus du Sautoy*

[Four Colors Suffice](http://www.amazon.co.uk/Four-Colors-Suffice-Problem-Solved/dp/0691120234/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236365328&sr=1-1) by *Robin Wilson*

**Logic**

Godel, Escher, Bach by *Douglas Hofstadter*

**Readable Textbooks**

[Concepts in Modern Mathematics](http://www.amazon.co.uk/Concepts-Modern-Mathematics-Ian-Stewart/dp/0486284247/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236365419&sr=1-1) by *Ian Stewart*

[Geometry for Dummies](http://www.amazon.co.uk/Geometry-Dummies-Mark-Ryan/dp/0470089466/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236365483&sr=1-1) by *Mark Ryan*

[Concise Introduction to Pure Mathematics](http://www.amazon.co.uk/Concise-Introduction-Pure-Mathematics-Chapman/dp/1584885475/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236365530&sr=1-1) by *Martin Liebeck*

[Mathematical Methods for Science Students](http://www.amazon.co.uk/Mathematical-Methods-Science-Students-Stephenson/dp/0582444160/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1236365565&sr=1-1) by *G Stephenson*

**Other**

The Emperor's New Mind by *Roger Penrose*

The Mathematical Universe by *William Dunham*

The Wonders of Numbers by *Clifford Pickover*

From Here to Infinity by *Ian Stewart*

The Art of the Infinite: Our Lost Language of Numbers by *Robert Kaplan*

What is Mathematics? by *Richard Courant, Herbert Robbins and Ian Stewart*

Flatterland by *Ian Stewart*

The Number Devil: A Mathematical Adventure by *Hans Magnus Enzensberger*

Art of the Infinite by *Kaplan*

Imagining Numbers: Particularly the Square Root of Minus Fifteen by *Barry Mazur*

A Very Short Introduction to Mathematics by *Timothy Gowers*

**Other Sources of recommended books**

**MEI** – General interest Mathematical books

<http://www.mei.org.uk/index.php?section=resources&page=books2>

**University of Cambridge** – Recommended reading for Sixth Formers planning to study Maths

<http://www.maths.cam.ac.uk/undergrad/admissions/readinglist.pdf>

**University of Oxford** – Texts aimed at bridging the gap between A-Level and Degree Page 10-11

<https://www.maths.ox.ac.uk/system/files/attachments/introbook12.pdf>

**Forest Hills School** – reading list

<https://docs.google.com/viewer?a=v&q=cache:KyfpAXYYYbIJ:www.foresthillschool.co.uk/uploads/asset_file/A%2520level%2520Mathematics%2520wider%2520reading%2520list.doc+a+level+maths+reading+list&hl=en&gl=uk&pid=bl&srcid=ADGEESjiSURyLfUdDlZBxiGuQoYSOvePrhzuyYZevXD8neEcypD39ydSe__UfZ5SzmipWXdR_QDir5UJvLJF7n0uL64di-W293fsdt03H03ppbZrDQaGNj6ID5cC93Ml71QJzCrUSxjs&sig=AHIEtbQaLar5Gitz09lh9ERVlAb58dpYGQ>