

GCSE to A-level Maths Transition

In order to make a successful start to A-level maths you must be confident in key GCSE skills. The set of worksheets below were produced by Edexcel and are a nice way to keep your top-end GCSE skills up to date or perhaps identify areas where you are less confident.

In these cases you need to fill those gaps using resources available to you. A good free website is Mr Corbett Maths, but you may have access to other resources from your current school as well.

I suggest you spread these out over the remainder of the term and really make sure you have “nailed” these topics as you go.

The worksheets are freely available from Edexcel at the following link:

https://qualifications.pearson.com/content/dam/pdf/A%20Level/Mathematics/2017/Teaching%20and%20learning%20materials/Transition_worksheets_between_GCSE_and_AS_Mathematics.zip

	Done
1a-1 Expanding brackets and simplifying expressions	
1a-2 Surds	
1a-3 Rules of Indices	
1b-1 Factorising expressions	
1b-2 Completing the square	
1b-3 Solving quadratic equations	
1b-4 Sketching quadratic graphs	
1c-1 Solving linear simultaneous equations	
1c-2 Solving linear and quadratic simultaneous equations	
1c-3 Solving simultaneous equations graphically	
1d-1 Linear inequalities	
1d-2 Quadratic inequalities	
1e Sketching cubic and reciprocal graphs	
1f Translating graphs	
2a-1 Straight line graphs	
2a-2 Parallel and perpendicular lines	
2a-3 Pythagoras theorem	
2a-4 Proportion done	
2b Circle theorems	
4a Trigonometry	
6a Rearranging equations	
6b Volume and surface area of 3D shapes	
7b Area under a graph	

I have also published a suggested reading list, which is entirely for background interest and not essential, which I attach overleaf.

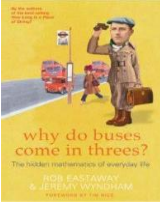
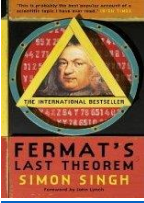
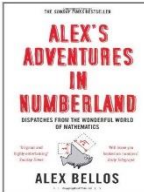
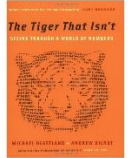
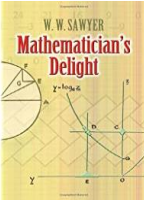
If you have any questions about preparing for A-level maths please feel free to contact me at R.Miles@maidenerleghtrust.org.

R Miles

Head of KS5 Mathematics

Mathematical Reading List

The following books would provide a worthwhile and not too heavy background in mathematical thinking. They are not text books but background reading.

<p>Why Do Buses Come in Threes?: The Hidden Mathematics of Everyday Life (Rob Eastaway & Jeremy Wyndham)</p>	
<p>Fermat's Last Theorem: The story of a riddle that confounded the world's greatest minds for 358 years (Simon Singh) The story of how an English Mathematician, Andrew Wiles, proved one of the most famous problems in mathematics. There is also lots of interesting information on the associated website.</p>	
<p>Alex's Adventures in Numberland (Alex Bellos) A very accessible and well-written introduction to mathematics written in the style of a travelogue that demonstrates how useful, universal, interesting and beautiful mathematics is.</p>	
<p>The Tiger That Isn't: Seeing Through a World of Numbers (Andrew Dilnot and Michael Blastland) The creator of radio 4's More or Less programme uses stories from the news and encourages critical thinking about statistical stories. Good for the general reader – no mathematics is needed.</p>	
<p>Mathematician's Delight (Dover Science Books) (W.W. Sawyer) Written in the style of a novel, this book starts from simple arithmetic and builds to calculus, providing insight and understanding throughout. The sections on logarithms and trigonometry are especially good.</p>	

With thanks to MEI for their descriptions, where you can find further recommendations.

<https://mei.org.uk/books2>