

Suggested A Level Maths Preparation for Year 11 pupils (Weeks 1 – 5)

(Weeks 6 – 10 to follow)

Here are some of the key topics from GCSE which are essential for A-level Maths.

Have a look at the videos if you need to refresh your memory and work through the questions.
Good luck!

Week 1: Surds

Topic: Surds	Video	Questions	Solutions
Introduction - simplifying, multiplying and dividing	Surds - Corbettmaths	https://www.mathsgenie.co.uk/resources/7-surds.pdf	https://www.mathsgenie.co.uk/resources/7-surdsans.pdf
Adding and subtracting	Surds Addition - Corbettmaths	https://corbettmaths.com/wp-content/uploads/2013/02/surd-s-pdf1.pdf	
Expanding brackets	Surds expanding brackets - Corbettmaths		
Rationalising the denominator	Rationalising denominators - Corbettmaths		

Week 2: Indices

Topic: Indices	Video	Practise questions	Solutions
Introduction - evaluating integer powers	Powers Indices - Corbettmaths		
Fractional indices	Fractional indices - Corbettmaths		
Negative indices	Negative Indices - Corbettmaths		
Basic index laws	Laws of Indices - Corbettmaths	https://www.mathsgenie.co.uk/resources/4-indices.pdf https://www.mathsgenie.co.uk/resources/4-indices-ws.pdf	https://www.mathsgenie.co.uk/resources/4-indicesans.pdf
Advanced index laws	More advanced indices More advanced indices practice questions and answers	https://www.mathsgenie.co.uk/resources/6-fractional-and-negative-indices.pdf https://www.mathsgenie.co.uk/resources/6-fractional-and-negative-indices-ws.pdf https://www.maths4everyone.com/resources/gcse-questions-by-topic.html	https://www.mathsgenie.co.uk/resources/6-fractional-and-negative-indicesans.pdf https://www.maths4everyone.com/resources/gcse-questions-by-topic.html

Week 3: Quadratics

Topic: Quadratics	Video	Questions	Solutions
Factorising	Factorising quadratics 1 - Corbettmaths Factorising quadratics 2 - Corbettmaths	1. https://www.mathsgenie.co.uk/resources/85_quadratics.pdf 2. https://www.mathsgenie.co.uk/resources/7-factorising-harder-quadratics-ws.pdf	1. https://www.mathsgenie.co.uk/resources/85_quadraticsans.pdf 2. https://www.mathsgenie.co.uk/resources/7-factorising-harder-quadraticsans.pdf
Solving: by factorising	Solving Quadratics using Factorisation - Corbettmaths	1. https://corbettmaths.com/wp-content/uploads/2013/02/solving-quadratics-by-factorising-1-pdf.pdf 2. https://corbettmaths.com/wp-content/uploads/2020/01/Solving-Quadratics-by-Factorising-2.pdf	1. https://corbettmaths.com/2016/10/15/solving-quadratics-by-factorising-1/ 2. https://corbettmaths.com/wp-content/uploads/2020/01/Video-266-answers.pdf
Solving: using the formula	Quadratic formula - Corbettmaths	https://www.mathsgenie.co.uk/resources/7-quadratic-formula-ws.pdf	https://www.mathsgenie.co.uk/resources/7-quadratic-formulaans.pdf
Completing the square: solving and sketching	Completing the Square - Corbettmaths Completing the Square 2 - Corbettmaths Solving Quadratics using Completing the Square Finding Turning Points using Completing the Square	https://www.mathsgenie.co.uk/resources/9-completing-the-square-ws.pdf	https://www.mathsgenie.co.uk/resources/9-completing-the-squareans.pdf
Graphs: plotting and solving	Drawing quadratics - Corbettmaths Solving Quadratic Equations Graphically - Corbettmaths Solving Quadratics Graphically 2 - Corbettmaths	https://www.mathsgenie.co.uk/resources/5-quadratic-graphs.pdf https://www.drfrostmaths.com/resource.php?rid=374	https://www.mathsgenie.co.uk/resources/5-quadratic-graphsans.pdf
Graphs: sketching	Sketching Quadratics	https://corbettmaths.com/wp-content/uploads/2019/04/Sketching-Quadratics.pdf	https://corbettmaths.com/wp-content/uploads/2019/04/Sketching-Quadratics-answers.pdf

Week 4: Algebraic Fractions

Topic: Algebraic Fractions	Video	Questions	Solutions
Adding Algebraic Fractions	https://corbettmaths.com/2013/01/19/adding-algebraic-fractions/	https://corbettmaths.com/wp-content/uploads/2013/02/algebraic-fractions.pdf	
Dividing Algebraic Fractions	http://corbettmaths.com/2013/01/19/dividing-algebraic-fractions/		
Multiplying Algebraic Fractions	http://corbettmaths.com/2013/01/19/multiplying-algebraic-fractions/		
Simplifying Algebraic Fractions	http://corbettmaths.com/2013/01/19/simplifying-algebraic-fractions/	https://www.mathsgenie.co.uk/resources/7-algebraic-fractions.pdf	https://www.mathsgenie.co.uk/resources/7-algebraic-fractionsans.pdf

Week 5: Simultaneous Equations

Topic: Simultaneous Equations	Video	Practise questions	Solutions
Linear Simultaneous Equations	http://corbettmaths.com/2013/03/05/simultaneous-equations-elimination-method/ http://corbettmaths.com/2013/05/07/solving-simultaneous-equations-by-substitution/	https://corbettmaths.com/wp-content/uploads/2019/04/Simultaneous-Equations.pdf	https://corbettmaths.com/wp-content/uploads/2019/01/Simultaneous-Equations-Answers.pdf
Non-Linear Simultaneous Equations	http://corbettmaths.com/2013/05/07/simultaneous-equations-linear-and-quadratic/	https://corbettmaths.com/wp-content/uploads/2013/02/advanced-simultaneous-equations-pdf.pdf	https://corbettmaths.com/2017/05/14/advanced-simultaneous-equations-answers/