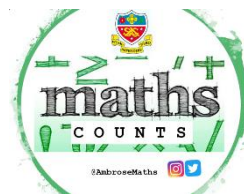


Knowledge Organiser

Further Maths GCSE Year 11 Set 1

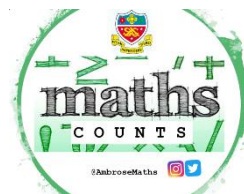


Unit	Topic
Algebra I	<ul style="list-style-type: none">1.1 Number and the number system1.2 Simplifying expressions1.3 Solving linear equations1.4 Algebra and number1.5 Expanding brackets1.6 The binomial expansion1.7 Manipulating surds1.8 The product rule for counting
Algebra II	<ul style="list-style-type: none">2.1 Factorising2.2 Rearranging formulae2.3 Simplifying algebraic fractions2.4 Solving linear equations involving fractions2.5 Completing the Square
Algebra III	<ul style="list-style-type: none">3.1 Function notation3.2 Domain and range of a function3.3 Composite functions3.4 Graphs of functions3.5 Graphs of linear functions3.6 Finding the equation of a line3.7 Graphs of quadratic functions3.8 Inverse functions3.9 Graphs of exponential functions3.10 Graphs of functions with up to three parts to their domain
Algebra IV	<ul style="list-style-type: none">4.1 Quadratic equations4.2 Simultaneous equations in two unknowns4.3 The factor theorem4.4 Linear inequalities4.5 Quadratic inequalities4.6 Indices4.7 Algebraic proof4.8 Sequences4.9 Limiting value of a sequence4.10 Simultaneous equations in three unknowns

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Further Maths GCSE

Year 11 Set 1



Unit	Topic
Co-ordinate Geometry	
5.1	Parallel and perpendicular lines
5.2	The distance between two points
5.3	The midpoint of a line joining two points
5.4	Equation of a straight line
5.5	The intersection of two lines
5.6	Dividing a line in a given ratio
5.7	Equation of a circle
Geometry I	
6.1	Mensuration
6.2	Pythagoras' Theorem
6.3	Angle facts
6.4	Circle theorems
6.5	Geometric proof
6.6	Trigonometry in two dimensions
6.7	Trigonometric functions for angles of any size
6.8	The sine and cosine graphs
6.9	The tangent graph
6.10	Solutions of trigonometric equations
6.11	Trigonometric identities
Geometry II	
7.1	The area of a triangle
7.2	The sine rule
7.3	The cosine rule
7.4	Using the sine and cosine rules together
7.5	
7.6	Problems in three dimensions
7.7	Lines and planes in three dimensions
Calculus	
8.1	The gradient of a curve
8.2	Differentiation
8.3	Differentiation using standard results
8.4	Tangents and normals
8.5	Increasing and decreasing functions
8.6	The second derivative
8.7	Stationary points
Matrices	
9.1	Multiplying matrices
9.2	Transformations
9.3	The identity matrix
9.4	Transformations of the unit square
9.5	Combining transformations