

MATHEMATICS

GCSE OCR SPECIFICATION

	Outline
Y10 Half Term 1 & 2	<p>Similarity Congruence, similarity and enlargement Trigonometry Lengths and angles in right angles triangles including 3D, exact values, sine and cosine rule</p> <p>Algebra Expanding and factorising Factorising and solving quadratics Changing the subject of a formula Perpendicular graphs</p> <p>Surds Simplifying surds Operations with surds Rationalising the denominator</p>
Y10 Half Term 3 & 4	<p>Geometry Sine and Cosine rules Angles and bearings Using and proving circle theorems Working with circles Vectors Geometric proofs Volumes and surface areas of spheres, pyramids and cones including frustums</p> <p>Ratio and fractions Fractions in and from ratios Recurring decimal and fraction equivalence Scale factors with lengths, areas and volumes Accuracy and bounds of measurement</p> <p>Probability Independent events, tree diagrams, conditional probability</p>
Y10 Half Term 5 & 6	<p>Data Collecting, representing and interpreting data Grouped data, correlation, frequency polygons, cumulative frequency, histograms</p>

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	<p>Using number Non-calculator methods Indices and roots Direct and inverse proportion problems and graphs</p>
Y11 Half Term 1 & 2	<p>Graphs Transforming graphs Graphs of trigonometric functions Recap of the shapes of graphs Equation of a circle and related problems</p> <p>Testing conjectures Proving statements with algebraic deduction</p> <p>Functions Finding inputs, output and composite function Inverse functions Solving equations and inequalities from functions</p> <p>Multiplicative relationships Direct and inverse proportion in the context of compound units Constructing equations with proportion Distance and velocity time graphs, including estimating speed and acceleration using tangents, finding average speeds, distance travelled</p>
Y11 Half Term 3 & 4	<p>Geometric problem solving Revisit shape properties in context of reasoning Transforming trigonometric functions Review of constructions Line and rotational symmetry Translations Combining multiple transformations Angles in polygons problems</p> <p>Algebraic problem solving Regions and inequalities graphically Algebraic problems in context Solving trigonometric equations</p>

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	Types of number and sequences Linear, quadratic, geometric and Fibonacci sequences Describing sequences with position to term, term to term and subscript notation.
Y11 Half Term 5	Revision