What grade do you hope to achieve in GCSE Mathematics?

Do you know what topics you must learn?

Grade 1	Grade 3	Grade 5	Grade 7	Grade 9
Number: Types of number Place value Directed numbers	**Number:** HCF and LCM Laws of indices Rounding BIDMAS	**Number:** Standard form Laws of indices Rounding and estimating Bounds	**Number:** Surds Bounds calculations	**Number:** Surds Algebraic proofs
Algebra: Coordinates Patterns and sequences Collecting like terms (simplifying) Solving linear equations Inequalities	**Algebra:** nth term Sketching linear graphs Expanding and factorising (single brackets) Solving linear equations Solving linear inequalities Substituting	**Algebra:** Expand and factorise quadratics Rearrange formulae Linear simultaneous equations Graphical inequalities	**Algebra:** Parallel and perpendicular graphs Transformations of graphs Algebraic fractions - simplifying Algebraic fractions – solving Solving quadratic inequalities	**Algebra:** Transformations of graphs Equations of circles Quadratic and other sequences Completing the square Inverse and composite functions Expanding more than two binomials Nonlinear simultaneous equations Solving quadratic inequalities
Shape, Space and Measure: Types of shapes and properties Reflection, rotation and symmetry Area and perimeter of rectangles and triangles Measures	**Shape, Space and Measure:** Angles in parallel lines Constructing triangles Bearings Transformations Area and circumference of circles Area problems Volume and surface area of prisms Speed, distance and time	**Shape, Space and Measure:** Angles in parallel lines and polygons Loci and construction Transformations Pythagoras' Theorem SOH CAH TOA Area and perimeter of sectors Volume and surface area of cones and spheres Length, area and volume similarity (LAV)	**Shape, Space and Measure:** Circle theorems Vectors Sine and cosine rules	**Shape, Space and Measure:** Circle theorems Vectors Sine and cosine rules Area under graphs
Data Handling: Averages Tally charts and bar graphs Pictograms	**Data Handling:** Averages problems Scatter graphs	**Data Handling:** Averages from tables Sampling	**Data Handling:** Cumulative frequency and box plots Histograms	**Data Handling:** Histograms Moving averages
Probability: Probability	**Probability:** Relative frequency	**Probability:** Probability trees	**Probability:** Set theory	**Probability:** Set theory

Ratio and Proportion:	Ratio and Proportion:	Ratio and Proportion:	Ratio and Proportion:	Ratio and Proportion:
Simplifying ratios Simplifying fractions and fractions of amounts Fractions, decimals and percentages	Dividing into a ratio Recipes Percentages of amounts, increasing and decreasing Fractions, decimals and percentages	Proportion Calculating with fractions Percentages – compound interest Percentages – reverse	Proportion Percentages – compound interest Percentages – reverse	Proportion Percentages – reverse

Warning: Although this list is showing the main topics, it is not every sub-topic