FOUNDATION

GCSE MATHS KEY TOPICS TO REVISE

Please note this is not a list of everything on the syllabus.

This is a list of some KEY TOPICS as starting point for revision for each target grade

You would also need to be confident with the topics at the grades lower than your target grade.

Grade 1 to 3

Number	Algebra	Geometry	Data
4 rules with whole numbers and decimals	Simplifying with add, subtract, multiply and divide	Simple angle rules – straight line, point, full turn, triangle	Find mode, median, mean and range
Directed number arithmetic	Expand a simple single bracket	Perimeter and area of simple shapes to include rectangle and triangle	Tallying and frequency tables
4 rules with fractions	Solving simple 1 step and 2 step equations	2D shape names and properties	Bar charts, Line graphs and pictograms – draw and interpret
Fractions of amounts	Simple substitution	3D shape names and faces, edges and vertices	Plot scatter-graphs and understand types of correlation
Simple fraction, decimal and percentage equivalents	Describing and continuing sequences	Symmetry	Complete a two way table
Order of operations (Bidmas)	Plot a simple straight line graph	Co-ordinates	Find simple probabilities and show on a number line
Rounding and estimation	Distance time graphs	Transformations - simple	
Finding simple percentages of amounts		Units of measure	
Multiples, factors and primes			

Grade 4

Number, ratio and proportion	**Algebra and graphs**	**Geometry**	**Data**
Fraction, decimal and percentage equivalence	Simplifying expressions – including brackets	Angle facts including parallel lines	Find mode, median, mean and range and use to compare 2 sets of data
Calculating percentages (non-calculator and calculator methods)	Factorise a simple expression	Perimeter and area of 2D shapes – including trapezium and circle	Find averages from a frequency table and grouped frequency table
4 rules with whole numbers and decimals	Solving linear equations	Volume and surface are of a cuboid	Plot scatter-graphs and use line of best fit
Directed number arithmetic	Laws of Indices - simple	Volume of a simple prism	Draw and interpret dual and composite bar charts
4 rules with fractions – including mixed numbers	Substitution – more complex	Use Pythagoras to find missing sides on a right-angled triangle	Pie charts
Highest common factor and Lowest common multiple	Linear sequences – finding the rule for the nth term (easier)	Construct triangles	Relative frequency/experimental probability
Writing a number as a product of prime factors	Changing the subject of a formula	Transformations – reflections, rotations, translations and positive enlargements	
Simplify ratios	Plotting straight line graphs	Add and subtract column vectors	
Share in a given ratio	Reading solutions from graphs	Understand the word Congruent	
Solve problems with direct proportion	Interpret real life graphs eg distance time graphs, conversion graphs	Find scale factor of an enlargement and use to find a missing side	

Grade 5

Number, ratio and proportion	**Algebra and Graphs**	**Geometry**	**Data**
Calculate percentages of an amount	Expand and simplify a double bracket	Understand and use bearings	Draw and interpret Cumulative Frequency graphs
Calculate percentage increase and decrease	Solve linear inequalities and show on a number line	Area and volume of part circles	Draw and use Box plots
Simple rules of indices	Change the subject of a formula involving squares or roots	Volume and surface area of right prisms	Use a line of best fit on a Scatter-graph to make an estimate
Converting between ordinary and standard form	Solve quadratic equations by factorisation	Volume of a cylinder and other 3D shapes	Venn diagrams
Calculate with standard form	Linear sequences – finding the rule for the nth term (harder)	Understand plans and elevations	Use AND/OR rules for probability
Calculate with compound measures – Speed, Density and pressure	Recognise and continue different types of sequence (arithmetic, geometric, quadratic)	Use Trigonometry to calculate missing angles and lengths in right angled triangles	Draw and use a tree diagram for independent events
Calculate with simple direct and inverse proportion	Solve simultaneous equations	Construct bisectors	
	Understand y=mx + c Find the equation of a line	Simple Loci	
	Plot quadratic, cubic, reciprocal and exponential graphs	Combined Transformations including fractional enlargements	
		Vector arithmetic	