

Curriculum Roadmap



Yr 7

Autumn 1	Sequencing Linear & non-linear sequences Understand & use algebraic notation Equality & Equivalence - inverse operations	Spring 1	Solving problems with addition & subtraction. Solving problems with multiplication & division Fractions & Percentages of amounts	Summer 1	Constructing, measuring & using geometric notation Developing geometric reasoning
Autumn 2	Place value & ordering integers & decimals Finding averages Fractions, Decimals & Percentages	Spring 2	Operations & equations with directed number Addition & subtraction of fractions Converting between mixed numbers and fractions	Summer 2	Developing number sense - know and use mental + - x and ÷ Probability Prime Numbers, Squares & Cubes

Yr 8

Summer 1	Angles in parallel lines & polygons Area of trapezia & circles Line Symmetry & reflections	Spring 1	Brackets, Equations & Inequalities Algebraic sequences Indices in algebraic expressions	Autumn 1	Ratio & Scale Multiplicative change Multiplying & dividing fractions
Summer 2	The data handling cycle - draw & interpret pictograms, bar charts & vertical line charts Measures of location - understand averages	Spring 2	Fractions & Percentages Developing Number Sense Powers & Standard Index Form	Autumn 2	Working in the Cartesian Plane Representing data Tables & Probability

Yr 9

Autumn 1	Reasoning with Algebra Straight line graphs Forming & solving equations Testing conjectures	Spring 1	Reasoning with Number Numbers Using percentages Maths & Money	Summer 1	Reasoning with Proportion Enlargement & similarity Solving ratio & proportion problems Rates
Autumn 2	Constructing in 2D & 3D 3D shapes Construction & congruency	Spring 2	Reasoning with Geometry Deduction Rotation & translation Pythagoras Theorem	Summer 2	Representations & revision Probability Algebraic representation Revision

Yr 10

Summer 1	Delving into Data Collecting, representing & interpreting data Non-calculator methods	Spring 1	Geometry Angles & Bearing Working with Circles Vectors	Autumn 1	Congruence, Similarity & Enlargement Trigonometry
Summer 2	Using number Types of number & sequences Indices & roots Manipulating expressions	Spring 2	Proportions & Proportional Change Ratios & Fractions Percentages & Interest Probability	Autumn 2	Developing Algebra Representing solutions of equations & inequalities Simultaneous Equations

Yr 11

Autumn 1	Gradients & Lines Non-Linear Graphs Using Graphs Expanding & Factorising	Spring 1	Multiplicative, Geometric & Algebraic Reasoning Transformations & Construction	Summer 1	Intervention Exam Preparation
Autumn 2	Algebraic terms recap Changing the Subject Functions	Spring 2	Listing & Describing Show that...	Summer 2	Intervention Exams

Skills Covered at Key Stage 3 – Mathematics

In KS3, Mathematics is about developing fluency, mathematical reasoning and problem-solving. Pupils learn how to think mathematically, not just memorise methods. These are an overview of some of the skills students will develop at KS3 Maths.

Number	Algebra
Use integers, decimals, and fractions confidently. Apply order of operations (BIDMAS). Calculate with percentages, including increase and decrease. Use ratio and proportion in real contexts. Convert between different units and scales. Use standard form and rounding for estimation.	Use symbols and expressions fluently. Simplify and manipulate algebraic expressions. Solve linear and simple quadratic equations. Use and rearrange formulae. Generate terms in sequences and describe them. Use function machines and mappings.
Geometry & Measure	Statistics & Probability
Classify and name 2D and 3D shapes. Use angle rules in triangles, quadrilaterals and polygons. Calculate area, perimeter, surface area, and volume. Apply scale drawings and loci. Use constructions with compass and ruler. Transform shapes using reflection, rotation, translation, and enlargement.	Collect and record data using appropriate methods. Draw and interpret bar charts, pie charts, line graphs, and scatter diagrams. Calculate averages (mean, median, and mode) and range. Use probability scales and find probabilities of events. Estimate and calculate relative frequency. Compare data sets using statistical measures.

Skills Covered at Key Stage 4 – Mathematics (AQA GCSE)

In KS4, Mathematics is about applying core knowledge fluently, solving problems in a variety of contexts, and reasoning mathematically. Pupils build on KS3 learning and prepare for real-life application and post-16 progression. These are overviews of the skills students develop at GCSE Foundation level.

Number	Algebra	
Calculate with integers, decimals, fractions, and percentages (including increase/decrease) Estimate and round numbers in context Use factors, multiples, primes, and HCF/LCM Work with standard form Apply integer powers and roots Understand and use place value and numerical methods	Simplify and manipulate expressions Solve linear and quadratic equations Use and rearrange formulae Plot and interpret linear graphs Use nth term of a sequence Substitute into expressions and formulae Factorise expressions (simple quadratics)	
Geometry & Measure	Statistics & Probability	Ratio, Proportion & Rates of Change
Use angle facts, rules, and properties Calculate perimeters, areas, volumes Use Pythagoras' theorem and trigonometry in right-angled triangles Apply transformations: reflection, rotation, translation, enlargement Use geometric constructions and loci	Interpret and draw bar charts, pie charts, scatter graphs Calculate averages and range Compare distributions using charts and summary statistics Estimate probabilities from data or diagrams Use Venn diagrams and two-way tables Understand relative frequency and experimental probability	Use ratio notation and simplify ratios Solve proportion problems using fractions, percentages, or equations Scale recipes and drawings Use speed, density, pressure formulae Convert units and scale quantities Work with compound measures