

KS4 Maths – Curriculum at a glance

2024-25	AUTUN	NN TERM	SPRIN	G TERM	SUMME	R TERM
Maths	Number:	Graphs, tables and	Equations,	Averages and	Graphs:	Ratio and
Year 10	Calculations	charts:	inequalities and	Range:	Coordinates	Proportion:
Foundation	 Decimal numbers Place value Factors and multiples Squares, cubes and roots Index notation Algebra: Algebraic expressions Simplifying expressions Substitution Formulae Expanding brackets Factorising 	 Frequency tables Two-way tables Representing data Time series Stem and leaf diagrams Pie charts Scatter graph Fractions and percentages: Working with fractions Operating with fractions Fractions, decimals and percentages Calculating 	 sequences: Solving equations Introducing Inequalities Generating sequences Nth Term Angles: Properties of angles Angles in parallel lines Angles in triangles Interior and exterior angles Geometric problems 	 Mean, mode, median, range Types of average Estimating the Mean Sampling Perimeter, Area and Volume I: Rectangles, parallelograms, triangles and trapezia Units of measurement Area of compound shapes Surface area of 3D Solids Volume of 	 Linear graphs Equations of a line and gradient Real-Life graphs Distance-Time graphs Transformations: Translation Reflections Rotation Enlargement Describing transformationss Combining transformations 	 Writing ratios Using ratios Comparing ratios Using proportion Proportion and graphs. Right-Angles Triangles: Pythagoras theorem Sine ratio Cosine ratio Tangent ratio Using trigonometry

Year 10 Higher	Number: Number problems and reasoning Place value and estimating HCF and LCM Laws of Indices Standard form Algebra: Algebraic indices Expanding and factorising Equations Formulae Linear sequences Non-linear	Interpreting and representing data: Statistical diagrams Time series Scatter graphs Averages and range Fractions, ratio and percentages: Fractions Ratios Proportion Percentages Fractions, decimals and percentage	 Angles and Trigonometry: Angle properties of triangles and quadrilaterals Interior and exterior angles of a polygon Pythagoras theorem Trigonometry Graphs: Linear graphs Graphing rates of change Real-Life graphs Line segments Quadratic graphs Cubic and reciprocal graphs 	 Area and Volume: Perimeter and area Units of accuracy Prisms Circles Sectors Cylinders and spheres Pyramids and cones Transformations and Constructions: 3D Solids Reflection and rotation Enlargement Combinations of transformations Scale drawings and bearings Constructions: Scale drawings and bearings Constructions 	Equations and inequalities: • Solving linear inequalities • Solving quadratic equations • Completing the square • Solving simultaneous equations • Solving duadratic simultaneous equations • Solving quadratic simultaneous equations • Combined events • Mutually exclusive events • Experimental probability • Tree diagrams and set notation	 Multiplicative reasoning: Growth and decay Compound measures Ration and proportion Similarity and Congruence: Similarity Congruence Geometric proof Similarity in 3D solids
	 Non-linear sequences 				notation	

Year 11 Foundation	 Probability: Calculating probability Simultaneous Events Experimental Probability Venn diagrams Tree diagrams Multiplicative Reasoning: Percentage multipliers Growth and decay Compound measures Distance, speed and view 	Constructions, Loci and Bearings:	 Perimeter, Area and Volume II: Circumference of a circle. Area of a circle Semicircles and sectors. Cylinders, pyramids and cones Spheres and composite solids Fractions, Indices and Standard Form: Multiplying and dividing fractions Laws of indices Standard form Operating with standard form 	Congruence, Similarity and Vectors: Similarity Congruence Solving problems with similarity and congruence Vectors More Algebra: Graphs of cubic and reciprocal functions Non-linear graphs Solving simultaneous equations graphically and algebraically Rearranging formulae	Examination practice	Revision
	 Distance, speed and time Direct and inverse proportion 	 Factorising quadratic expressions Solving quadratic equations 		 Rearranging formulae 		
Year 11 Higher	More Trigonometry: • Graph of the sine, cosine and tangent function	Equations and Graphs: Solving simultaneous equations graphically	More Algebra: • Rearranging algebra • Algebraic fractions	Proportion and Graphs: • Direct proportion • Inverse proportion	Examination practice	Revision

 Calculating areas of the sine rule Cosine rule and 2D trigonometric problems Solving problems in 3D 	 Representing inequalities Quadratic equations and graphs Cubic equations Using iterations to solve equations 	 Simplifying algebraic fractions Proofs Surds Solving algebraic fractions equations Functions 	 Exponential functions Non-linear graphs Translating graphs of functions Reflecting graphs of functions 	
 Transforming trigonometric graphs Further Statistics: Sampling Cumulative frequency Box plots Histograms Comparing and describing distributions 	Circle Theorems: Radii and chords Tangents Circle theorems Applying circle theorems 	 Vectors and Geometric proof: Vector notation Vector arithmetic Parallel vectors and collinear points Solving geometric problems 	Revision and Practice	