

Subject Long Term Plan Year 9

W/C	6 th September	10 th September	17 th September	24 th September	1 st October	8 th October	15 th October	HALF TERM	31 st October	5 th November	12 th November	
	Revise and Improve	Revise and Improve	Revise and Improve	Revise and Improve	Algebra 3	Algebra 3	Algebra 3		Algebra 3	Revision and assessment week	Algebra 3	
4 operations Negative numbers Fractions, decimals and percentages Algebra 1 and 2 Ratio and Proportion				Coordinates in all 4 quadrants Recognise, sketch and produce graphs of: linear functions of 1 variable Quadratic functions of one variable Understand and use standard mathematical formulae Rearrange formulae to change the subject including where the subject appears more than once.					Interpret mathematical relationships both algebraically and graphically e.g. direct and indirect proportion and real-life graphs	Reduce a given linear equation in 2 variables to the standard for $y = mX + c$ Calculate and interpret gradients and intercepts of such equations numerically, graphically and algebraically		
W/C	19 th November	26 th November	3 rd December	10 th December	CHRISTMAS	7 th January	14 th January	21 st January	28 th January	4 th February	11 th February	
	Algebra 3	Algebra 3	Algebra 3	Problem Solving		Geometry: Transformations	Geometry: Transformations	Geometry: Transformations	Geometry – Angles and constructions	Geometry – Angles and constructions	Geometry – Angles and constructions	
Use linear and quadratic graphs to estimate values of y for given values of x and vice versa and to find approximate solutions of simultaneous linear equations Find approximate solutions to contextual problems from given graphs of a variety of functions including linear, exponential and reciprocal. Recognise and generate geometric sequences				Investigations from problem solving folders		Identify properties of and describe the results of translations, rotations and reflections applied to given figures			Use scale factors, scale drawings and maps Draw and measure line segments and angles in geometric figures, including interpreting scale diagrams and use of bearings and loci. Identify and construct congruent triangles and construct similar shapes by enlargement s , with and without coordinate grids Derive and use standard ruler and compass constructions - perpendicular bisectors or a line segment, constructing a perpendicular to a given line from. At a given point, bisecting a given angle. Recognise and use the perpendicular distance from a point to a line as the shortest distance to the line			
W/C	25 th February	4 th March	11 th March	18 th March	EASTER	25 th March	1 st April	EASTER	24 th April	29 th April	6 th May	13 th May
	Revision and assessment week	Statistics	Statistics	Probability		Probability	Probability		Number – standard form	Number – standard form	Number – standard form	Number – standard form

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		Revise cumulative frequency Draw and interpret box plots Use and interpret scatter graphs of bivariate data and recognise correlation. For continuous data in a table, find an estimate of the mean, modal class interval and class interval containing the mean		Record, describe and analyse the frequency of outcomes of simple probability experiments involving randomness, fairness, equally and unequally likely outcomes, using appropriate language and the 0 to 1 probability scale, using probability and frequency trees Understand that the probabilities of all possible outcomes sum to 1 Enumerate sets and unions of sets systematically, using tables, grids and Venn diagrams Generate theoretical sample spaces for single and combined events with equally likely, mutually exclusive outcomes and use these to calculate theoretical probabilities.			Interpret and compare numbers in standard form $A \times 10^n$ $1 \leq A < 10$, where n is a positive or negative integer or 0. Add and subtract 2 numbers in standard form Understand what a surd is and simplify basic surds Evaluate simple fractional and negative indices in the form: a^{-n} , $a^{\frac{1}{n}}$, $a^{-\frac{1}{n}}$ where n is an integer	
W/C	20 th May	HALF TERM	3 rd June	10 th June	17 th June	24 th June	1 st July	8 th July
	Geometry - Pythagoras and Trigonometry		Geometry - Pythagoras and Trigonometry	Exam week	Geometry - Pythagoras and Trigonometry	Geometry - Pythagoras and Trigonometry		Geometry - Pythagoras and Trigonometry
	Apply angle facts, triangle congruence, similarity and properties of quadrilaterals to derive results about angles and sides, including Pythagoras theorem and use known results to obtain simple proofs		Use Pythagoras and trigonometric ratios in similar triangles to solve problems using right angle triangles.		Know the formulae for Pythagoras theorem, $a^2 + b^2 = c^2$ and the trigonometric ratios Apply them to find angles and lengths in right angle triangles and where possible, general triangles in 2 and 3d figures.		Enrichment week	Know the exact values of $\sin \theta$ and $\cos \theta$ for $\theta = 0^\circ, 30^\circ, 45^\circ, 60^\circ, 90^\circ$ / Know the exact value for $\tan \theta$ for $\theta = 0^\circ, 30^\circ, 45^\circ, 60^\circ$