Stage 10 Higher
Topics

Half Term 1	Coordinates & Graphs 1	plot graphs of equations y= mx +c
		Use the form y = mx + c to identify parallel lines find the equation of the line through two given points, or through one point with a given gradient
		use the form y = mx + c to identify perpendicular lines
	Indices 2	Know and use the laws of indices with fractional and negative powers
	Trigonometry 3	Use Pythagoras' theorem to find lengths in three dimensional figures
		Use trigonometry to find the angle between a line and a plane
		Solve practical problems involving lengths and angles in three dimensional figures
		Know the shapes of the graphs of Sine, Cosine and Tangent.
	Inequalities 2	Understand the use of a graph to represent an inequality in two variables
		State the (simple) inequality represented by a shaded region on a graph
		Know when to use a dotted or solid line as a boundary for an inequality on a graph
		Construct and shade a graph to represent a set of linear inequalities in two variables
		Find the set of integer coordinates that are solutions to a set of inequalities in two variables
		Use set notation to represent the solution set to an inequality
	Sequences 1	Substitute numbers into formulae including terms in x^2
		Generate terms of a quadratic sequence from its nth term
		Identify quadratic sequences
		Find the formula of a simple quadratic sequence
Half Term 2	Completing the Sq, Quad Formula + Sketching Graphs	Solve an Equation of the form $x^2 + bx + c = 0$ by Completing the square.
		Understand that the coordinates of the turning point can be found by examining a Quadratic in Completed Square Form.
		Sketch the Graphs of Quadratics by finding the roots and/or turning points
		Use the Quadratic formula to solve problems involving Quadratic Equations
	Similarity & Congruence 10H	Know the criteria for triangles to be congruent (SSS, SAS, ASA, RHS)
		Know that AAA shows triangles are similar
		Understand the idea of Scale Factor
		Area and Volume Scale Factors
		Be able to find missing lengths surface ares and Volumes on pyramids, frustrums, cones
	Bounds	use inequality notation to specify simple error intervals due to truncation or rounding
		apply and interpret limits of accuracy including upper and lower bounds
	Transformations Stage 10H	All 2D transformations on a Cartesian grid;
		- translation (with Vector notation)
		- reflection (in a known vertical or horizontal line)
		- rotation about a given centre
		- enlargement from a centre (given as coordinates)
		- Fractional Enlargement
		- Negative Enlargement
		Understand Invariance and Invariant Points (Higher Only)
		Understand plans and elevations
erm 3	Surds	Plot a scatter diagram.B54:B77
		Add / Subtract /Multiply / Divide Surds
		Expand single and double brackets involving Surds
		Rationalise the Denominator
		Solve a variety of problems involving Area, pythagoras etc. using surds.
		Convert recurring decimals to Fractions and visa versa
	Scatter Graphs	Plot a scatter diagram of bivariate data
		Understand Positive, Negative and No Correlation.
		Understand Weak and Strong Correlation
		Understand Interpolation and Extrapolation and the limitations.
		Draw on a line of best fit.
	Review Basic Probability	Probability something is not = 1 - Probability that something is.

Half T		Record systematically outcomes of 2 mutually exclusive events; Compare theoretical and experimental probabilities Analyse possibilities using tables and "Frequency Trees" (Different from Tree diags) - more experiments (greater confidence in the result)
	Statistics H1 Stage 10	Use a sample to infer properties of a population Calculate and interpret the interquartile range Construct and interpret a box plot for discrete data Construct a cumulative frequency curve Use a cumulative frequency curve to estimate the quartiles for grouped continuous data sets Construct Histograms with and without equal bar widths Interpret Hitograms with and without equal bar widths
Half Term 4	Statistics H1 Stage 10 Probability 10H	Continuation from previous half term relate relative expected frequencies to theoretical probability, using appropriate language and the 0 to 1 probability scale understand that empirical unbiased samples tend towards theoretical probability distributions, with increasing sample size Students understand set notation, be able to apply to venn diagrams
Half Term 5	Revision	
	Exam Review	
	Simultaneous Equations 2	Simultaneous Equations by Substitution Simultaneous Equations with Quadratics
Half Term 6	Direct and Inverse proportion	Secure unitary method for direct proportion and inverse proportion Recognise and Draw (sketch) the graphs corresponding to direct and inverse proportion Construct from text / written problem type question / scenario construct and interpret equations that describe direct and inverse proportion Problem Solving with Ratio and Proportion