Chapter	Time		Topic Break-Down	Learning Objectives (Students will be able to)
21: Variation	**8**	21.1	Direct proportion	Solve problems where two variables have a directly proportional relationship
				Work out the constant of proportionality
		21.1	Inverse proportion	Solve problems where two variables have a inversely proportional relationship
				Work out the constant of proportionality
22: Triangles	**12**	22.1	Further 2D problems	Use trigonometric ratios and Pythagoras' theorem to solve more complex two-dimensional problems
		22.2	Further 3D problems	Use trigonometric ratios and Pythagoras' theorem to solve more complex three-dimensional problems
		22.3	Trigonometric ratios of angles between 0 and 360	Find the sine, cosine and tangent of any angle from 0 to 360
		22.4	Solving any triangle	Use the sine rule and the cosine rule to find sides and angles in any triangle
		22.5	Use sine to calculate the area of any triangle	Work out the area of a triangle if you know the two sides and the included angle

Week Commencing 17th October 2022 - Revision & Assessment

Half Term

26: Proof - Booklet	**6**	26.1	Introduction to proof	Understand that proof is about logic, deciding whether statemtents are true/false
		26.2	Equations and Identities	Know the difference between equations and identities, prove simple identities
		26.3	Starting to generalise	Show something is true using specific cases, introducing algebra as an approach
		26.4	Multiple proofs	Show that expressions are a multiple of a given number using factorisation
		26.5	Types of number	Expressing differen types of number as algebraic expresions (even, odd, consecutive e
		26.6	More complex proofs	Converting worded statements to algebra and proving them always true
		26.7	**Consecutive number proofs (Extension only)**	**Complete generic proofs involving conecutive number tricks**
		26.8	**Geometric proofs (Extension only)**	**Challenging proofs involving geometric representations instead of algebra**

23: Graphs	**12**	23.1	Distance-time graphs	Interpret distance-time graphs
				Draw a graph of a the depth of liquid as a container is filled
		23.2	Velocity-time graphs	Read information from a velocity-time graph
				Work out the distance travelled from a velocity-time graph
				Work out the acceleration from a velocity-time graph
		23.3	Estimating the area under a curve	Use areas of rectangles, triangles and trapeziums to estimate the area under a curve
				Interpret the gradient at a point on a curve
		23.5	Equation of a circle	Find the equation of a tangent to a circle
		23.6	Other graphs	Recognise and plot cubic, expotential and reciprocal graphs
		23.7	Transformation of the graph y = f(x)	Transform a graph

Week Commencing 5th December 2022 - Year 11 Mocks

Week Commencing 12th December 2022 - Year 11 Mocks

End Of Autumn Term

24: Algebraic fractions and functions	**12**	24.1	Algebraic fractions	Simplify algebraic fractions
				Solve equations containing algebraic fractions
		24.2	Changing the subject of a formula	Change the subject of formula where the subject occurs more than once
		24.3	Functions	Find the output of a function
				Find the inverse function
		24.4	Composite functions	Find the composite of two functions
		24.5	Iteration	Find an approximate solution for an equation using the process of iteration
25: Vector geometry	**8**	25.1	Properties of vectors	Add and subtract vectors
		25.2	Vectors in geometry	Use vectors to solve

Week Commencing 6th February 2023 - Revision & Assessment

Half Term

Week Commencing 27th March 2023 - Revision & Assessment

End Of Spring Term

Week Commencing 15th May - Year 11 Public Exams