

Timing	Unit Title	Key Question	Knowledge	Assessing understanding
Autumn 1	More algebra	Can you apply advanced algebraic techniques to solve equations and problems?	<ul style="list-style-type: none"> • Surds • Rationalising denominators • Completing the square • Maximum and minimum points • Solving quadratic equations graphically 	<p>How understanding is assessed:</p> <ul style="list-style-type: none"> • Applying concepts to increasingly complex and unfamiliar problems • Explaining and justifying methods through class discussion and questioning • Independent practice through classwork and homework • Retrieval practice to secure key knowledge and methods • Topic tests based on the GCSE past paper questions <p>Skills developed:</p> <ul style="list-style-type: none"> • Conceptual understanding • Numerical skills • Algebraic skills • Problem solving skills <p>Assessment points:</p> <ul style="list-style-type: none"> • Topic tests • End of term summative tests
	Simultaneous equations and inequalities	Can you solve simultaneous equations and inequalities involving quadratics?	<ul style="list-style-type: none"> • Solving linear and quadratic simultaneous equations • Forming equations from real situations • Quadratic inequalities • Set notation 	
	Functions, proof and iteration	Can you use functions, proof and numerical methods to solve problems?	<ul style="list-style-type: none"> • Function notation • Composite functions • Inverse functions • Algebraic proof • Iteration 	
Autumn 2	Vectors	Can you use vectors to solve geometric problems?	<ul style="list-style-type: none"> • Vector notation and magnitude • Vector arithmetic • Resultant vectors and position vectors • Parallel and collinear vectors • Geometric proof using vectors 	
	Proportion and graphs	Can you interpret and apply proportional and graphical relationships?	<ul style="list-style-type: none"> • Direct and inverse proportion • Square and cubic proportion • Exponential functions • Gradients and areas under graphs • Transformations of graphs 	
	Revision			