Timing	Unit Title	Key Question	Knowledge	Assessing understanding
Autumn	**Algebra**	**Can you solve linear inequalities, quadratic and simultaneous equations?**	• Solve quadratic equations by all methods • Solve simultaneous equations • Solve linear and quadratic simultaneous equations • Solve linear inequalities	**How understanding is assessed:** • 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 **Skills developed:** • Conceptual understanding • Numerical skills • Algebraic skills • Problem solving skills **Assessment points:** • Topic tests • End of term summative tests
	Probability	**Can you construct and use a probability tree?** **Can you construct and use a Venn diagram?**	• Listing outcomes, combined events, sample space diagrams, mutually exclusive events and experimental probability • Independent events and tree diagram • Conditional probability • Venn diagrams and set notation	
	Multiplicative reasoning	**Can you calculate with percentages?** **Can you calculate with compound measures?** **Can you solve problems involving direct and inverse proportion?**	• Percentages (percentages of amounts, reverse percentages, simple interest, percentage change) • Problem solving (growth and decay) • Compound measures (Speed, distance and time; Mass, density and volume; Force, pressure and area) • Units • Direct and inverse proportion algebraic problem solving	

Timing	Unit Title	Key Question	Knowledge	Assessing understanding
Spring	**Similarity and congruence**	**Can you apply congruence and similarity to 2D and 3D shapes?**	• Geometric proof and congruence • Similarity in 2D (length, area and volume problem solving) • Similarity in 3D solids	**How understanding is assessed:** • 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 **Skills developed:** • Conceptual understanding • Numerical skills • Algebraic skills • Problem solving skills **Assessment points:** • Topic tests • End of term summative tests • End of year summative test based on a GCSE paper
	More trigonometry	**How do you use trigonometry for non-right angled triangles and 3D problems?**	• Calculation with upper and lower bounds • Graphs of sine, cosine, and tangent • Sine rule and cosine rule • 2D and 3D trigonometric problems • Exact values	
	Further statistics	**Can you represent and compare data using advanced diagrams?**	• Cumulative frequency • Box plots • Drawing and interpreting histograms • Comparing and describing populations	
Summer	**Equations and graphs**	**Can you solve equations and inequalities using graphical methods?**	• Solving simultaneous equations graphically • Representing inequalities graphically • Graphs of quadratic and cubic functions	
	Circle theorems	**Can you identify and apply the properties of circles?**	• Applying circle theorems • Proofs of circle theorems • Finding the equation of a tangent at a point on a circle	
	More algebra	**Can you manipulate complex algebraic fractions and functions?**	• Rearranging formulae • Simplifying algebraic fractions • Composite and inverse functions • Problem solving with surds • Algebraic proof	