

Timing	Unit Title	Key Question	Knowledge	Assessing understanding
Autumn	Factors and powers	Can you use factors and powers to represent and simplify numbers?	<ul style="list-style-type: none"> ● Prime factor decomposition ● Laws of indices ● Powers of 10 ● Calculating and estimating 	<p>How understanding is assessed:</p> <ul style="list-style-type: none"> ● Applying concepts to multi-step and increasingly abstract problems ● Selecting and applying appropriate methods independently ● Explaining and justifying reasoning using mathematical language ● Independent practice through classroom and homework ● Retrieval practice to secure and connect key knowledge ● Topic tests <p>Skills developed:</p> <ul style="list-style-type: none"> ● Conceptual understanding and connections between topics ● Numerical and algebraic fluency ● Problem solving and mathematical reasoning ● Interpreting and analysing mathematical information
	Working with powers	Can you manipulate algebraic expressions and equations?	<ul style="list-style-type: none"> ● Expanding and simplifying expressions ● Substitute into expressions ● Construct and solve equations 	
	2D shapes and 3D solids	Can you apply geometric properties in two and three dimensions?	<ul style="list-style-type: none"> ● Plans and elevations ● Volume and surface area of prisms ● Area and circumference of circles ● Volume and surface area of cylinders ● Pythagoras' theorem 	
	Real life graphs	Can you interpret and analyse graphs in real-world contexts?	<ul style="list-style-type: none"> ● Direct proportion ● Financial graphs ● Distance-time graphs ● Rates of change ● Misleading graphs 	
Spring	Transformations	Can you describe and apply transformations accurately?	<ul style="list-style-type: none"> ● Reflections and translations ● Rotations ● Enlargements ● Combining transformations 	<p>Assessment points:</p> <ul style="list-style-type: none"> ● Topic tests ● End of term summative tests
	Scale drawings and measures	Can you use scale, ratio and similarity to interpret diagrams?	<ul style="list-style-type: none"> ● Maps and scale drawings ● Scales and ratio ● Congruent and similar shapes ● Solving geometry problems 	

Timing	Unit Title	Key Question	Knowledge	Assessing understanding
Spring	Fractions, decimals and percentages	Can you use fractions, decimals and percentages fluently?	<ul style="list-style-type: none"> • Multiplying and dividing decimals • Recurring decimals • Percentages and percentage change • Repeated percentage change 	<p>How understanding is assessed:</p> <ul style="list-style-type: none"> • Applying concepts to multi-step and increasingly abstract problems • Selecting and applying appropriate methods independently • Explaining and justifying reasoning using mathematical language • Independent practice through classroom and homework • Retrieval practice to secure and connect key knowledge • Topic tests <p>Skills developed:</p> <ul style="list-style-type: none"> • Conceptual understanding and connections between topics • Numerical and algebraic fluency • Problem solving and mathematical reasoning • Interpreting and analysing mathematical information <p>Assessment points:</p> <ul style="list-style-type: none"> • Topic tests • End of term summative tests
	Constructions and loci	Can you construct geometric diagrams accurately?	<ul style="list-style-type: none"> • Accurate drawings • Constructing shapes • Constructions • Loci 	
Summer	Probability	Can you calculate and interpret probabilities?	<ul style="list-style-type: none"> • Comparing probabilities • Mutually exclusive events • Experimental probability • Probability diagrams • Tree diagrams 	
	Graphs	Can you represent and interpret relationships graphically?	<ul style="list-style-type: none"> • Plotting linear graphs • Gradient and $y = mx + c$ • Parallel and perpendicular lines • Non-linear graphs 	
	Averages	Can you calculate and interpret averages and range?	<ul style="list-style-type: none"> • Averages and range • Grouped data • Averages from frequency tables 	