

Year 8

Students will take their skills from year 7 and build on them to deepen their fluency with increasingly more complex numbers and algebra. They will begin to appreciate the interconnected nature of Mathematics, applying their knowledge and skills to problems that require a more multidisciplinary approach.

	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Knowledge & Skills Overview	<p>Four Operations & Standard Form Solve problems $+$ $-$ \times \div with directed numbers & decimals. Explore standard form numbers.</p> <p>Index Laws & HCF/LCM Explore and use the index laws with numbers & algebra. Apply HCF and LCM in context to problems.</p> <p>Probability The vocabulary and calculations needed to describe likelihood, including combined events.</p>	<p>Algebraic Manipulation Expand, factorise and simplify expressions, including quadratics. Substitute into formulae.</p> <p>Fractions & Decimals Solve problems $+$ $-$ \times \div with fractions, mixed numbers, decimals or combinations of these. Introduction of algebraic fractions.</p>	<p>Area & Volume Calculate the surface area & volume of prisms and cylinders.</p> <p>Calculator Percentages Use a calculator efficiently to solve a range of percentage problems including reverse percentage.</p>	<p>Solving Equations Form and solve equations with unknown quantities on both sides. Begin to solve simple quadratic equations.</p> <p>Ratio & Proportion Understand how ratios are used to share quantities & solve problems in context. Explore the link between ratio & proportion through compound units</p>	<p>Ratio & Proportion Understand how ratios are used to share quantities & solve problems in context. Explore the link between ratio & proportion through compound units</p> <p>Angles in Parallel Lines & Polygons Know angle facts & rules, allowing for multi-step geometric problems to be solved</p>	<p>Averages Determine which average to use to compare sets of data. Calculate averages from tables</p> <p>Sequences Explore number patterns & sequences including Fibonacci. Investigate sequences linked to diagrammatic patterns. Find & work with the nth term of a sequence. Explore geometric sequences.</p>
Opportunities for Recall & Retrieval of Prior Learning	<p>From Year 7</p> <ul style="list-style-type: none"> • Calculation $+$ $-$ \times \div • Prime factors • Decimal, fractional & percentage with probability • Algebraic expressions 	<p>From Year 7</p> <ul style="list-style-type: none"> • Algebra introduction • Fraction & decimal equivalence • Calculation with fractions & decimals 	<p>From Year 7</p> <ul style="list-style-type: none"> • Area & perimeter • Units of measure • Percentages without a calculator 	<p>From Year 7</p> <ul style="list-style-type: none"> • Solving equations • Writing expressions • Share by ratio 	<p>From Year 7</p> <ul style="list-style-type: none"> • Converting units • Measuring & drawing angles • Multistep angles problems 	<p>From Year 7</p> <ul style="list-style-type: none"> • Averages & range • Writing expressions • Number patterns • Substitution
	<p>From Year 8</p> <ul style="list-style-type: none"> • Improved efficiency in calculation $+$ $-$ \times \div 	<p>From Year 8</p> <ul style="list-style-type: none"> • Work with fractional & decimal algebraic expressions 	<p>From Year 8</p> <ul style="list-style-type: none"> • Use of algebra, fractions & decimals with shape problems • Fraction, decimal & percentage equivalence 	<p>From Year 8</p> <ul style="list-style-type: none"> • Algebraic manipulation with equations. • Fractions decimals & standard form with ratio 	<p>From Year 8</p> <ul style="list-style-type: none"> • Angles with equations 	<p>From Year 8</p> <ul style="list-style-type: none"> • Averages of algebraic expressions • Fractional, decimal and algebraic sequences • Algebraic manipulation