

Learning overview for: Mathematics			Year group: Foundation GCSE	
Term		What most pupils will learn (prior assessment may alter starting point & content)	How might this learning be extended?	How will this learning be assessed?
	<i>Number</i>	Written methods of calculations Decimals Rounding BIDMAS Rounding to significant figures Estimation	Standard form To solve problems involving standard form	To be assessed by end of unit assessments and GCSE papers
	<i>Percentages</i>	To calculate percentages with and without a calculator To calculate percentage increases and decreases	To calculate profit and loss To calculate simple interest	
	<i>Negative Numbers</i>	To understand the place of negative numbers To add and subtract negative numbers To use the rules of negative numbers for addition, subtraction, multiplication and division	To solve complex calculations using negative numbers	
	<i>Algebra</i>	To collect like terms and simplify To expand a single bracket	To expand a set of brackets To expand double brackets	

		To factorise simple expressions		
	<i>Averages</i>	To calculate averages for discrete data To draw a stem and leaf diagram	To calculate averages for grouped data To find averages from a stem and leaf diagram	To be assessed by end of unit assessments and GCSE papers
	<i>Angles</i>	To estimate, measure and draw angles To use angle facts to solve problems Calculate angles on parallel lines To measure and draw bearings	Calculate interior and exterior angles	
	<i>Equations</i>	To use function machines To solve basic and 2-stage equations	To solve equations with brackets To solve double sided equations To use trial and improvement	
	<i>Coordinates</i>	To plot coordinates in one quadrant To plot coordinates in four quadrants To find the midpoint of a line	To locate coordinates in 3D To plot 3D coordinates	
	Number	To identify types of numbers To use a calculator to find squares and cubes complex problems involving powers and roots	To write numbers as a product of primes To find HCF and LCM of two numbers	To be assessed by end of unit assessments and GCSE papers
	Algebra	To substitute a variety of numbers into expressions To use indices rules for multiplying and dividing	To use a calculator to solve more To form equations and solve To rearrange formulas	
	Pythagoras	To calculate missing lengths in right	Solve problems using	

	Area & Volume	<p>angled triangles.</p> <p>To calculate perimeter and area of simple and compound shapes.</p> <p>To calculate the volume of cuboids and triangular prisms</p> <p>To calculate surface area of cuboids</p>	<p>Pythagoras</p> <p>To calculate area and circumference of circles</p> <p>To calculate the surface area of a triangular prism</p> <p>To calculate the volume of a compound shape</p> <p>To draw plans and elevations</p>	
	Fractions	<p>To find equivalent fractions and fractions of amounts</p> <p>To add and subtract fractions</p>	<p>To add, subtract, multiply and divide with mixed numbers</p>	<p>To be assessed by end of unit assessments and GCSE papers</p>
	Sequences	<p>To describe and complete sequences</p>	<p>To find the nth term of a sequence</p> <p>To use the formula for the nth term of a sequence to generate sequences</p>	
	Data Handling	<p>To collect and interpret data</p> <p>To draw and interpret bar charts, pie charts and pictograms</p> <p>To draw and interpret scatter diagrams</p>	<p>To understand correlation and use lines of best fit</p>	
	Probability	<p>To understand probability scale</p> <p>To calculate simple probabilities</p> <p>To calculate probabilities adding to 1</p> <p>To use sample space diagrams</p>	<p>To understand relative frequency</p>	
	Graphs	<p>To interpret and draw real life graphs (conversion, distance/time)</p>	<p>To construct linear graphs from an equation</p>	<p>To be assessed by end of unit</p>

	Transformations	<p>To understand line and rotational symmetry</p> <p>To complete reflections, translations and rotations</p> <p>To describe transformations</p>	<p>To identify gradients and intercepts from graphs</p> <p>To find the equation of a line</p> <p>Plot a quadratic graph</p> <p>To complete enlargements</p>	assessments and GCSE papers
	Ratio	<p>To simplify ratios</p> <p>To solve ratio problems</p> <p>To share amounts into a ratio</p>	<p>To solve problems involving Proportion</p>	
	Algebra	<p>To collect terms and simplify</p> <p>To solve equations with brackets and with fractional/negative solutions</p> <p>To factorise expressions</p>	<p>To expand sets of brackets</p> <p>To solve double sided equations</p>	
	Number	<p>To calculate percentages of amounts</p> <p>To solve problems involving percentages</p> <p>To solve problems involving fractions</p>	<p>To solve more complex questions with percentages and fractions</p>	
	Probability	<p>To calculate probabilities of events</p> <p>To calculate probabilities using sample space diagrams</p> <p>To understand relative frequency</p>	<p>To use tree diagrams</p>	To be assessed by end of unit assessments and GCSE papers
	Construction	<p>To construct triangles</p> <p>To construct angle and line bisectors</p>	<p>To construct quadrilaterals</p> <p>To draw locus of points</p>	

	Inequalities	To understand inequality signs To show an inequality on a number line To write down integer solutions to inequalities	To solve inequalities	
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