

## Year 9 – Foundation

### Learning Landmark (LL) assessments:

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
LL1: Baseline Test reviewing previous year's content	LL2: Theme 1: Number & Calculation	LL3: Theme 2: Shape & Angle	LL4: Theme 3&4: FDP and Algebra	LL5: Theme 5&6: Ratio & Proportion and Sequences	LL6: Theme 7&8: Data & Probability and Geometry

### Content Covered:

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Theme 1: Number and Calculation</b>	<b>Theme 2: Shapes &amp; Angles</b>	<b>Theme 4: Algebra</b> <i>Students will also complete Theme 3 in this term</i>	<b>Theme 5: Ratio &amp; Proportion</b>	<b>Theme 7: Data &amp; Probability</b>	<b>Theme 9: Transformations &amp; Graphs</b>
The signs <, > and = to compare numbers	Interpret and draw plans and elevations	Reading and writing algebraic statements including inequalities	Problems involving division in a ratio with two or more parts	Listing outcomes of an event systematically	Given a function, establish outputs from given inputs and plot a graph
Compound inequalities to compare three or more numbers (e.g. $-1 < 0.5 < 4$ )	Use isometric paper to draw 3D shapes	Simplifying an expression	Simple ratio problems involving comparison	Sample space diagrams	Elements of graphs with functions of the form $y = mx \pm c$
Standard form	Problems using vertically opposite angles, angles at a point, angles on a line	Manipulating expressions and the distributive law	Simple ratio problems involving mixing or concentrations	Calculating probabilities using a sample space	Gradient of a straight line on a unit grid
Multiplying and dividing decimals	Missing angle problems involving triangles and quadrilaterals	Expanding two sets of single brackets	Using proportion in problems involving recipes	Theoretical probability to calculate expected outcomes	Plot graphs of quadratic functions
Transforming calculations involving the multiplication/division of decimals to an equivalent multiplication/division involving integers	Solve missing angle problems (alternate, opposite, corresponding and co-interior)	Factorising an algebraic expression by taking out common factors	Finding a relevant multiplier in a situation involving proportion	Experimental probability to calculate expected outcomes	Distinguishing between a linear and quadratic graph
The order of operations including powers and roots (BIDMAS)	Problems with corresponding, alternate, opposite, co-interior angles	Solve linear equations (Recap: one step and two step, introduce three step)	Direct proportion in a situation	Frequency trees to record outcomes of probability experiments	Graphs of piece-wise linear functions in real contexts
Calculating with negative numbers	Bearings	Solving linear equations involving brackets	Solving problems involving unit pricing	Line charts	Distance-time graphs (speed-time graphs) and kinematic problems
Calculating powers (square, cube etc.) and roots	Corresponding sides of 2D shapes (different orientations)	Solving equations when the solution is an integer or a fraction	Convert fluently between metric units of length, mass and volume/capacity	Plot and interpret scatter diagrams of bivariate data	Vectors (understanding movement)

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Square and cube negative numbers	Solve basic scale factor problems involving similar shapes	Knowing the meaning of expression, term, formula, equation, identity function	Calculating with speed, distance and time	Scatter diagrams, correlation and causation	Rotations, reflections, & translations
Common factors and Highest Common Factor	<b>Theme 3: Fractions, Decimals &amp; Percentages</b>	Changing the subject of a formula (one/two steps)	Estimating with scale drawings	<b>Theme 8: Geometry</b>	Enlargements by positive or fractional scale factor but with no centre of enlargement
Common multiples and Lowest Common Multiple (LCM)	Writing a quantity as a fraction of another where the fraction is greater than 1		Scaling in diagrams (maps/product design)	Circle definitions and properties, including centre, radius, diameter, circumference	
Problems involving HCF & LCM	Determine whether fractions are terminating or recurring		<b>Theme 6: Sequences</b>	Circumference of a circle using radius or diameter is given	
Numbers as a product of its prime factors in index form	Writing a terminating decimal as a fraction		The nth term to generate a sequence or given term in the sequence	Perimeter of composite shapes that include half and quarter circles	
Calculating with negative numbers and positive/negative fractions	Ordering integers, decimals, fractions and mixed numbers		Finding the nth term of an ascending linear sequence	Area of a circle when radius or diameter are given	
Round numbers to a given number of significant figures	Adding and subtracting fractions		Finding the nth term of a descending linear sequence	Area of composite shapes that include half and quarter circles	
Using significant figures to estimate calculations	Adding and subtracting mixed numbers			Volume of a right prism	
Simplifying expressions using index laws	Multiplying and dividing fractions			Volume of a cylinder	
<b>Theme 2: Shapes &amp; Angles</b>	Percentage of an amount				
Constructing triangles, and other shapes, from written descriptions (ASA and SAS)	Use decimal multipliers for a percentage increase or decrease				
Construct triangles when all three sides are known (SSS)	Increasing and decreasing an amount by a percentage				
Faces, edges and vertices in 3D shapes (Euler's formula)	Problems involving percentage change				
Nets of 3D shapes					