

Maths
Year 8 curriculum map

Year 8	T1	T2	T3	T4	T5	T6
Content / Topic for Term	Number 1 and 2	Algebra 1	Shape 1	Ratio and proportion 1 (FDP in context)	Statistics 1 Probability 1	Algebra 2
Key knowledge for acquisition, recall and application in assessment or exam	<p>Know times tables</p> <p>Recognise special types of numbers</p> <p>Know prime numbers</p> <p>Know HCF and LCM</p> <p>Know the first three laws of indices</p> <p>Know that anything to the power of 0 is 1</p> <p>Know place value</p> <p>Know basic fraction concepts</p>	<p>Basic rules of algebra</p> <p>Recall like terms</p> <p>Methods for expanding brackets</p> <p>Balancing method for solving equations</p> <p>How to substitute using BIDMAS</p> <p>Recall the inequality signs</p> <p>Recognise the difference between an equation and inequalities</p>	<p>Know all the basic angle rules</p> <p>Know properties of triangles</p> <p>Know the sums of the interior angles of polygons</p> <p>Exterior angles of polygons sum to 360</p> <p>Angle theory of parallel lines: alternate, co-interior, corresponding</p> <p>Define a compound shape</p>	<p>Recognise equivalent fractions</p> <p>Understand that percent means 'out of 100'</p> <p>Decimal multipliers for percentage increase and decrease</p> <p>Know the difference between simple and compound interest and the corresponding formulae</p> <p>Understanding the link between ratios and fractions</p>	<p>Rules for drawing bar/line charts</p> <p>Recap proportions (eg $\frac{1}{4} = 90^\circ$)</p> <p>Difference between proportions and frequencies</p> <p>Identify types of correlation</p> <p>Know the three types of average and range</p> <p>Language of probability and basics rules</p>	<p>Method of how to plot coordinates (x,y)</p> <p>How to find the midpoint of 2 numbers</p> <p>Know that m stands for gradient and c is the y intercept in $y=mx + c$</p> <p>Rise/Run = gradient</p> <p>Identify the four different types of transformation (reflection, translation, rotation & enlargement)</p>

	<p>Recognise equivalent fractions</p> <p>Recognise improper, mixed and proper fractions</p> <p>Know what reciprocals are</p> <p>Know what BIDMAS stands for</p> <p>Recognise like terms</p>		<p>Know the formula for the area of a triangle, trapezium, circle and the circumference of a circle</p> <p>Know parts of a circle</p> <p>Understand Pi comes from the ratio between the circumference and the diameter</p> <p>Basic metric conversions</p> <p>Formula for the volume of a cuboid</p>			
Key skills to apply in assessment or exam	<p>Use all four arithmetic operations</p> <p>Use rules of indices</p> <p>Express a term in index form</p>	<p>Finding HCF of two terms</p> <p>Expand brackets and use HCF to factorise</p>	<p>Use knowledge of angles rules to find missing angles</p> <p>Derive the formula for the sum of the interior angles of any polygon (from</p>	Use division and equivalent fractions to convert between fractions and decimals (and vice versa)	<p>Construct and interpret three types of bar charts</p> <p>Calculate angle of sector</p>	<p>Substitute into expressions/formulae</p> <p>Draw a mirror line</p> <p>Use tracing paper to rotate or translate shapes</p>

	<p>Apply rules of BIDMAS</p> <p>Convert from standard form to an ordinary number and back</p> <p>Collect like terms</p> <p>Work out factors or multiples</p> <p>Draw prime factor trees</p> <p>Draw and use Venn diagrams to work out HCF and LCM</p>	<p>Apply four operations to algebra</p> <p>Use of negative numbers</p> <p>Apply BIDMAS to algebra</p> <p>Interpret and represent inequalities on a number line</p> <p>How to find numbers that satisfy an inequality</p> <p>Apply understanding of equations to solve inequalities</p>	<p>the number of triangles)</p> <p>Be able to calculate interior and exterior angles of polygons</p> <p>Be able to calculate perimeter and area of compound shapes</p> <p>Use and apply formula for area of shapes</p> <p>Metric conversions between area and volume</p>	<p>Use 'out of 100' as a definition for percentage to convert between F and P (and vice versa) and D and P (and vice versa), and to work out percentages of amounts</p> <p>Multiply or divide decimal values to work out percentage increase/decrease and reverse percentages</p> <p>Use formulae to work out repeated percentage change and interest</p> <p>Convert between ratios and fractions and apply this to solving proportional reasoning problems</p>	<p>Interpret and construct pie charts and scatter graphs</p> <p>Find three averages and range from a list and from a table</p> <p>Use a protractor</p> <p>Use of axis/scales</p> <p>Express probabilities as fractions, decimals and percentages</p> <p>Convert between FDP</p> <p>Apply probability to two-way tables</p> <p>Interpret and construct basic probability trees</p>	<p>Draw rays to execute enlargements</p> <p>Identify centre of enlargement and centre of rotation</p> <p>Understand column vector notation</p>
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Title of Knowledge Organiser	Factors and multiple Fractions	Algebra Equations and formulae	Angles Properties of polygons	Fractions Basic percentages	Basic probability Representing data	Coordinates and linear graphs
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