

Year 8

		Number	Algebra	Geometry	Probability
Lowest 20%	2:1	<i>Level 2 content from Year 7, plus...</i>	<i>Level 2 content from Year 7, plus...</i>	<i>Level 2 content from Year 7, plus...</i>	
	2:2				
	2:3	<p>Directed number Use negative numbers in simple contexts</p> <p>Compare negative numbers using < and ></p> <p>Factorisation Factorise arithmetic expressions</p> <p>Operations with fractions Add and subtract fractions</p> <p>Rounding Round to the nearest integer power of 10</p> <p>Powers Find the square and cube of a number</p> <p>Factors and multiples Find common factors and multiples by listing</p> <p>Ratio Write and simplify ratios</p> <p>Share an amount in a given ratio</p>	<p>Sequences Write sequences from term-to-term and position to term rules</p> <p>Use the nth term of a sequence</p>	<p>Length, area and volume Find circumference/area of a circle from its radius/diameter</p> <p>Represent 3D shapes using plans and elevations</p> <p>Angle Use corresponding, alternate and cointerior angles in simple cases</p> <p>Use the properties of parallelograms to solve simple problems</p> <p>Constructions Construct triangles from side-side-side descriptions</p>	<p>Probability Enumerate possible combinations of given items</p> <p>Complete a two-way table</p> <p>Complete Venn diagrams from worded descriptions</p> <p>Understand the probability scale</p> <p>Use the fact that mutually exclusive outcomes sum to 1</p>
3:1	<i>Level 3 content from Year 7, plus...</i>	<i>Level 3 content from Year 7, plus...</i>	<i>Level 3 content from Year 7, plus...</i>		
	3:2				

<p>Low middle 40%</p>	<p>3:3</p>	<p>Directed number Add and subtract negative numbers</p> <p>Multiply and divide negative numbers</p> <p>Operations on fractions Add and subtract mixed numbers</p> <p>Rounding Round to a given number of decimal places or significant figures</p> <p>Powers Find the square/cube roots</p> <p>Simplify a calculation in index form</p> <p>Factors and multiples Write a number as a product of its prime factors</p> <p>Use prime factors to find common factors and multiples</p> <p>Ratio Convert between ratios and fractions/percentages</p> <p>Use equivalent ratios to solve problems</p> <p>Solve simple problems involving sharing in a ratio</p>	<p>Equations Solve linear equations with negative coefficients and solutions</p> <p>Expressions Simplify expressions using the laws of indices</p> <p>Expand expressions using the laws of indices</p> <p>Factorise expressions using a known coefficient</p> <p>Simplify expressions by using laws of indices and collecting 'like terms'</p> <p>Sequences Describe a sequence of numbers or a visual pattern using the nth term</p> <p>Rearrangement Make simple rearrangements</p>	<p>Length, area and volume Find the radius/diameter of a circle from its circumference/area</p> <p>Solve simple problems involving circumference and area</p> <p>Find the area of semi-circles and quarter-circles</p> <p>Represent 3D shapes as isometric drawings</p> <p>Represent prisms and pyramids shapes as nets</p> <p>Find the surface area of prisms</p> <p>Find the volume of prisms and cylinders</p> <p>Angle Use corresponding, alternate and cointerior angles in less obvious contexts</p> <p>Distinguish between different types of parallelogram</p> <p>Use the properties of special quadrilaterals to solve simple problems</p> <p>Constructions Construct a perpendicular bisector</p> <p>Construct an angle bisector</p>	<p>Organising information Find the number of combinations when more than one selection is made from a group of items</p> <p>Find number of combinations when selections are made from two or more groups of items</p> <p>Draw an complete a two-way table from a worded description</p> <p>Complete Venn diagrams from partially complete worded descriptions</p> <p>Probability Find the probability of single events using simple list-making strategies</p> <p>Find probabilities of single events from two-way tables and Venn diagrams</p> <p>Estimate a probability by estimating relative frequency</p> <p>Calculate an expected frequency</p> <p>Understand that relative frequency will tend towards theoretical probability as number of trials increases</p>
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High middle 40%	4:1	<i>Level 4 content from Year 7, plus...</i> Directed number Use negative numbers together with the priority of operations Operations on fractions Use the addition and subtraction of fractions to solve problems in a variety of contexts Rounding Solve problems using suitable estimations and all four operations Factors and multiples Solve problems using common factors and multiples Ratio Compare two ratios which feature a common item Solve harder problems involving sharing in a ratio	<i>Level 4 content from Year 7, plus...</i> Equations Solve simple equations where the unknown is an index Expressions Expand and simplify expressions using negative terms Simplify more complex expressions using the laws of indices Factorise expressions using a common algebraic factor and the laws of indices Write expressions which describe consecutive odd and even numbers, and use to solve problems Work with area and volume using dimensions described algebraically Sequences Determine whether a given number will be a term in a given sequence	<i>Level 4 content from Year 7, plus...</i> Length, area and volume Find circumference/area of a circle, inferring radius/diameter from context Work with values in terms of π Find the perimeter/area of compound shapes partly made of circles, semi-circles or quarter-circles Find a missing dimension of a prism of known surface area Find a missing dimension on a prism/cylinder of known volume Find the volume of composite solids made from prisms Solve simple problems based on surface area and volume Angle Use corresponding, alternate, and cointerior angles with other angle facts to solve problems Solve harder angle problems using the properties of special quadrilaterals Constructions	Organising information Find the number of combinations when multiple selections are made from multiple groups Use set notation when working with Venn diagrams Probability Find probabilities of single events by first constructing two-way tables or Venn diagrams Find the probability of single events by finding possible number events using multiplicative strategies
	4:2				
	4:3				

				Construct angles of 30, 45, and 60 degrees	
Top 20%	5:1	<i>Level 4 content from Year 7, plus...</i>	<i>Level 4 content from Year 7, plus...</i>	<i>Level 4 content from Year 7, plus...</i>	
	5:2				
	5:3	<p>Directed number Use the four operations on negative numbers and mixed numbers to solve harder problems</p> <p>Powers Estimate square roots to one decimal place</p> <p>Simplify a calculation in index form where two bases can be written as the same base</p> <p>Factors and multiples Solve harder problems using common factors and multiples</p> <p>Ratio Solve ratio problems by relating a change in the amounts described to a change in the ratio</p>	<p>Expressions Add and subtract algebraic fractions</p> <p>Simplify multiplications/divisions of algebraic fractions using the laws of indices</p> <p>Write expressions which describe base 10 numbers as $100a+10b+c$, and use to solve problems</p> <p>Sequences Find terms common to two linear sequences</p> <p>Solve harder problems using linear sequences</p>	<p>Length, area and volume Find areas contained within concentric circles</p> <p>Solve harder problems involving area and circumference of circles</p> <p>Represent other solids as nets</p> <p>Find the surface area/volume of composite solids made from prisms and cylinders</p> <p>Solve harder problems based on surface area and volume</p> <p>Angle Solve harder problems involving parallel lines</p> <p>Prove that the angle sum for a triangle is 180°</p> <p>Solve harder angle problems involving several special quadrilaterals and special triangles</p> <p>Constructions Construct a perpendicular bisector through a given point</p>	<p>Organising information Solve harder problems concerning the number of possible selections that can be made from groups of items</p> <p>Solve harder problems based on Venn diagrams</p> <p>Probability Solve harder single-event probability problems</p>

