

Progression map: breaks down the key concepts to specify the most important knowledge and how that knowledge builds within the curriculum.

Key Concepts	Year 7	Year 8	Year 9
Number	- Place value and proportion - Application of number - Directed number and Fractional Thinking - Reasoning with numbers - Using a calculator	- Proportional reasoning - Developing number	- Application of number - Developing number
Ratio and proportion	Place value and proportion	Proportional reasoning	Proportional reasoning
Algebra	- Algebraic Thinking - Directed number - Reasoning with number	- Algebraic techniques - Developing geometry	- Algebraic techniques - Developing Algebra
Geometry and Measures	- Lines and Angles - Application of number	- Representation - Developing geometry	- Lines and angles - Algebraic techniques
Statistics	- Application of number - Lines and angles - Sets and probability	- Representation - Reasoning with data	- Reasoning with data - Developing probability
Probability	Sets and probability	Representation	Developing probability

Long-term plan: organises the knowledge from the progression map into units to give an overview of what is taught when in the curriculum.

Year 7					
Autumn Term		Spring Term		Summer Term	
Unit Title: - Intro to CAP - Algebraic Thinking - Place value and proportion	Unit length: 2 week 6 weeks 6 weeks	Unit Title: - Application of number - Directed number and Fractional Thinking	Unit length: 6 weeks 6 weeks	Unit Title: - Lines and angles - Reasoning with number	Unit length: 6 weeks 6 weeks
Domains of Knowledge: - Exploring sequences - Understanding and using algebraic notation - Equality and equivalence - Place value and ordering - Fraction, decimal and percentage equivalence		Domains of Knowledge: - Addition and subtraction - Multiplication and division - Fractions and percentages of amounts - Directed number - Adding and subtracting fractions		Domains of Knowledge: - Construction and measuring - Geometric reasoning - Developing number sense - Sets and probability - Prime number and proof	
Relevant Key Concepts: - Number - Algebra - Ratio and proportion		Key Concepts: - Number - Algebra - Geometry and measures - Statistics		Key Concepts: - Number - Algebra - Geometry and measures - Statistics - sets and probability	
Gateway knowledge: - recognising patterns - represent FDP		Gateway knowledge: written methods for 4 operations.		Gateway knowledge: - representing fractions - number bonds to 100	

Assessment end-points: ● finding next term/ any term in sequence. ● substitute into functions/algebraic expressions ● inverse operations ● solve one step equations ● simplifying expressions including collecting like terms. ● Comparing and ordering numbers ● Finding the range and median of a set of numbers ● rounding numbers ● Converting simple fractions, decimals and percentages	Assessment end-points: ● use column method for addition/subtraction ● Find factors and multiples ● Use formal methods for multiplication and division ● order of operations ● Fractions and percentages of amounts ● order/calculate/substitute with directed numbers ● Convert between mixed and improper fractions ● Add./subtract with proper and improper fractions	Assessment end-points: ● understand labelling notation ● Calculate missing angles ● calculate using mental strategies ● calculate probability ● recognise special numbers ● powers and roots

Year 8					
Autumn Term		Spring Term		Summer Term	
Unit Title: - Proportional Reasoning - Representation	Unit length: 6 weeks 6 weeks	Unit Title: - Algebraic Techniques - Developing Number	Unit length: 6 weeks 6 weeks	Unit Title: - Developing Geometry - Reasoning with data	Unit length: 6 weeks 6 weeks
Domains of Knowledge: - Ratio and Scale - Multiplicative change - Multiplying and dividing fractions - Working in the cartesian plane - Representing data - Probability		Domains of Knowledge: - Brackets, equations and inequalities - Sequences - Indices - Fractions and percentages - Standard Index Form - Number sense		Domains of Knowledge: - Angles in parallel lines and polygons - Area of trapezia and circles - line symmetry and reflection - Data handling cycle - Measures of location and dispersion	
Relevant Key Concepts: - Ratio and proportion - Number - Geometry and measure - Statistics - Probability		Key Concepts: - Algebra - Number		Key Concepts: - Geometry and measures - Statistics - Algebra	
Gateway knowledge: - Multiplication and division - Ratio notation - equal parts - Converting between mixed numbers and improper fractions - Substitution into expressions - Four operations; including directed number - Algebraic notation - equations		Gateway knowledge: - Factors - Four operations including directed number - Algebraic notation - collecting like terms - Sequences - finding next term and any term - Understanding concept of powers - Fraction and percentage of amounts - Rounding - Ordering numbers - Multiplying and Dividing by powers of 10		Gateway knowledge: - Calculate missing angles - Labelling notation. - Area and perimeter of simple shapes - Mean and median	
Assessment end-points: Divide an amount into a given ratio		Assessment end-points: Expand and simplify brackets		Assessment end-points: Understand and use parallel lines and angles	

• Simplify ratios • Solve direct proportion problems • Use scale factors; on diagrams and maps • Conversion of currencies or using conversion graphs • Multiply and divide all types of fractions or fractions with integers etc. • Plot linear graphs, using the form $y = mx + c$ • Plot and interpret scatter graphs (using line of best fit) • Understand frequency tables for continuous and discrete data • Understand how to write probability of events from different representations	• Factorise a single bracket • Solve equations and inequalities • Find terms of a sequence given the rule • Find the nth term (higher) • Simplify algebraic expressions with indices using the laws of indices • Percentage increase and decrease • Express an amount as a fraction or percentage of another amount • Find the original amount given a percentage (Higher) • Convert to and from standard index form • Four operations using standard index form • Fractional and Negative Indices (higher) • Estimation using rounding to significant figures • Solve problems using the correct order of operations • Convert metric measures	• Work out angles in special quadrilaterals • Find and use the sum for interior and exterior angles in polygons • Calculate area of trapezia, circles and compound shapes • Recognise line symmetry and reflect shapes. • Collect, interpret, represent and compare data • Calculate and compare averages for grouped data
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Year 9					
Autumn Term		Spring Term		Summer Term	
Unit Title: - Application of number - Algebraic techniques	Unit length: 5 week 8 weeks	Unit Title: - Developing number - Lines and angles - Reasoning with data	Unit length: 6 weeks 3 weeks 3 weeks	Unit Title: - Developing algebra - Proportional reasoning - Developing probability	Unit length: 3 weeks 3 weeks 6 weeks
Domains of Knowledge: 4 operations with fractions and decimals - Rounding and estimation - Recurring decimals - Standard form - Expand, simplify and substitution - Solving equations - Changing subject of formula - Graphs		Domains of Knowledge: - Calculate with percentages - Simplify, use and express ratios - Negative and fractional indices - Calculate missing angles - Interior and exterior angles - Angle proof - Averages and ranges		Domains of Knowledge: - Factorising expressions including quadratics - Forming and solving linear and quadratic equations. - HCF/LCM including product of primes - Error Bounds - Direct and inverse proportion - Relative frequency and expectation - Probability diagrams	
Relevant Key Concepts: - Number - Algebra		Key Concepts: - Number - Geometry and measures - Statistics		Key Concepts: - Number - Algebra - Statistics - Sets and probability	
Gateway knowledge: 4 operations with integers - Rounding to nearest whole number/10 - Algebraic expressions		Gateway knowledge: - Find basic percentages with /without calculator - Understand and use powers - Angles in straight line and point		Gateway knowledge: - Factorising using common factors - Prime numbers - Rounding - Ratio	
Assessment end-points:		Assessment end-points:		Assessment end-points:	

• Application of 4 operations with integers, decimals and fractions • Rounding to dp and sig fig • Convert and calculate with standard form • Multiply out single and double brackets • Substitute into formulae • Solve equations with unknowns on both sides • Change the subject of formulae • Draw linear, quadratics and reciprocal graphs • Find the equation of linear graphs	• Find percentage increase/decrease • Find percentage change • Solve compound interest problems • Reverse percentages • Use ratios • Use negative and fractional indices • Find angles in parallel lines and polygons • Find averages from a table including groups.	• Factorising including quadratics • Forming and solving equations • Find product of primes, HCF and LCM • Find and calculate with upper and lower bounds • Calculate and use direct/inverse proportion • Find probabilities through experiment/tables or diagrams • Work with conditional probability.
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