Maths Y7

Curriculum Overview

The Rowan Learning Trust

Hawkley Hall High School

Key Stage 3 Curriculum Journey: Mathematics Year 7

	Week 1 → Week 39								
	Number	**FDP**	**1- Algebraic Thinking**	**2- Place Value and Proportion**	**3- Application of number**	**4- Directed number/Fractional thinking**	**5- Lines and angles**	**6- Reasoning with number**	
Key content (know that…Know how…)	Calculations Types of number Negative numbers Decimals Types of number and indices Decimals and rounding Powers and roots	Compare Fractions Manipulation Calculation with fractions Percentages Compare fractions Calculations with fractions Percentages Calculations with fractions percentages	Sequences. Understand and use algebraic notation. Equality and equivalence	Place value and ordering integers and decimals. Fraction, decimal and percentage equivalence	Solving problems with addition and subtraction. Solving problems with multiplication and division. Fractions and percentages of amounts	Operations and equations with directed number. Addition and subtraction of fractions.	Constructing, measuring and using geometric notation. Developing geometrical reasoning	Developing number sense. Sets and probability. Prime numbers and proof	
Prior Knowledge	Calculate mentally Order numbers Carry out written calculations effectively Find factors and multiples Add, subtract, multiply and divide integers using a suitable written method. Multiply and divide integers by	Write percentages as a fraction with a denominator of 100 Write a percentage as a decimal Describe simple parts of a shape using fractions. Compare simple fractions Change an improper fraction	-1 and 2-step function machines. -Substitution -Formulae -Forming equations -Solving one and two step equations.	-Place value to 10,000,000 -Compare and order integers -Rounding -Negative numbers -Equivalent FDPs -Ordering FDPs -Percentages of amounts	-Equations and simplifying -Rounding -Order of operations -Negative numbers	-Sequences -Substitution -Equations	-Simplifying -Perimeter for example in polygons -Recall mental and formal methods of addition and subtraction, including with decimals.	-Fraction, decimal and percentage equivalence. -Simple FDP addition and subtraction. -Factors and multiples, both numerically and algebraically.	

	multiples of 10, 100, 1000. Use estimation to check an answer to a multiplication Divide numbers that give decimal answers Use inverse operations to check answers. Use the priority of operations including powers. Know and use the priority of operations, including brackets. Recognise prime numbers. Recognise square numbers. Order positive and negative numbers. Calculate with negative numbers. Order decimals. Multiply and divide decimals by multiples of 10, 100 and 1000. Add, subtract, multiply and divide decimals Calculate with money. Round decimals	to a mixed number. Identify equivalent fractions. Simplify fractions Work with equivalent fractions and decimals. Add and subtract fractions with the same denominator. Calculate simple fractions of quantities. Write one quantity as a fraction of another. Convert simple fractions to percentages Calculate simple percentages (multiples of 10 and 5) Order fractions by converting them to decimals or equivalent fractions. Add and subtract fractions with different denominators. Multiply fractions. Calculate fractions of quantities. Convert between fractions,							

		decimals, and percentages. Calculate percentages of amounts. Express one quantity as a percentage of another.							
KS3 National Curriculum Links	**Developing fluency, reasoning mathematically and solve problems features across all units. Document number 4 - 21**								
	22 – 30 34 - 37	22 25 – 27, 30- 34 56 59 60 61	Use algebra to generalise the structure of arithmetic, including to formulate mathematical relationships use language and properties precisely to analyse numbers, algebraic expressions, 2-D and 3-D shapes, probability and statistics Generate terms of a sequence from either a term-to-term or a position-to-term rule	Consolidate their numerical and mathematical capability from key stage 2 and extend their understanding of the number system and place value to includedecimals, fractions, powers and roots. use language and properties precisely to analyse numbers, algebraic expressions,2-D and 3-D shapes, probability and statistics Order positive	Consolidate their numerical and mathematical capability from keystage 2 and extend their understanding of the number system and place value to includedecimals, fractions, powers and roots. Select and use appropriate calculation strategies to solve increasingly complex problems. use language and properties precisely to analyse	Consolidate their numerical and mathematical capability from key stage 2 and extend their understanding of the number system and placevalue to include decimals, fractions, powers and roots Use language and properties precisely to analyse numbers, algebraic expressions, 2-D and 3-D shapes, probability and statistics Develop their mathematical knowledge,in part through solving	Use language and properties precisely to analyse numbers, algebraic expressions, 2-D and 3-D shapes, probability and statistics Draw and measure line segments and angles in geometric figures, including interpreting scale drawings Describe, sketch and draw using conventional terms and notations: points, lines, parallel lines,	Use the concepts and vocabulary of prime numbers, factors (or divisors), multiples, common factors, common multiples, highest common factor, lowest common multiple, prime factorisation, including using product notation and the unique factorisation property use the 4 operations, including formal written methods,	

			Consolidate their numerical and mathematical capabilityfrom key stage 2 and extend their understanding of the number system and place value to include decimals, fractions, powers and roots.	and negative integers, decimals and fractions; use the number line as a model for ordering of the real numbers; use the symbols =, ≠, <, >, ≤, ≥ Define percentage as 'number of parts per hundred', interpret percentages andpercentage changes as a fraction or a decimal, interpret these multiplicatively ,express 1 quantity as a percentage of another, compare 2 quantities using percentages, and work with percentages greater than 100% Understand and use the concepts andvocabulary of expressions, equations, inequalities, terms and factors	numbers, algebraic expressions, 2-D and 3-D shapes, probability and statistics interpret when the structure of a numerical problem requires additive, multiplicative or proportional reasoning	problems and evaluating the outcomes, including multi-step problems Understand and use placevalue for decimals, measures and integers of any size	perpendicular lines, right angles, regular polygons, and other polygons that are reflectively and rotationally symmetric Use the standard conventions for labelling thesides and angles of triangle ABC, and know and use the criteria for congruence of triangles	applied to integers, decimals, proper and improper fractions, and mixed numbers, all both positive and negative use conventional notation for the priority of operations, including brackets, powers, rootsand reciprocals Recognise and use relationships between operations including inverse operations Record, describe and analyse the frequency of outcomes of simple probability experiments involving randomness, fairness, equally and unequally likely outcomes,	

								using appropriate language and the 0-1 probability scale Understand that the probabilities of all possible outcomes sum to 1 Enumerate sets and unions/intersections of sets systematically, using tables, grids and Venn diagrams	
Assessments	Assessment 1	Assessment 2	End of block assessments	End of block assessments	End of block assessments	End of block assessments	End of block assessments	End of block assessments	