

Key Stage 3 Subject Timeline Year 7 to 8

Subject: Mathematics (class 4 and 5)

Exam Board: Pearson

Year 7						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topics	Square numbers Pythagoras Place value for integers Ordering numbers Using 4 operations Using a calculator	Algebraic notation Substitution Identify equations, expressions, formulae, terms, factors, inequalities Coordinates (4 quadrants)	Prime number identification Factors and multiples HCF/LCM BIDMAS Rounding Revisit use of calculators	Angle rules Angles in polygons Symmetry in 2D shapes	Measurement Area and perimeter Properties of shapes Fractions, decimals, percentages Fractions calculations	Transformations End of term assessment Revision
Key skills and Concepts	Recognising square numbers Pythagoras Ordering positive and negative numbers 4 operations Using calculators effectively	Substitution Using correct algebra notation Using coordinates in 4 quadrants	Identifying prime numbers Factors and multiples Strategies for finding HCF/LCM Rounding numbers Using a calculator	Angle notation Drawing and measuring angles Angle sums for interior/exterior Symmetry	Measuring lines/angles Calculating area/perimeter Identifying key properties of shapes Converting FDP Calculations with fractions	Reflection Rotation Translation Enlargement Congruency Coordinates
Threshold Concepts	Concept of square numbers Using basic equipment Concept of negative numbers Using the four operations	Basic substitution Using a coordinate grid Basic algebraic notation Concept of simplifying with algebra	Some knowledge of prime numbers Finding basic factors and multiples Times tables Rounding numbers	Different types of angles Basic angle rules Identifying shapes	Use of ruler Basic understanding of area Understanding of properties of shapes Basic knowledge of fractions	Knowledge of symmetry Understanding of reflection Ability to use measuring equipment
Endpoints	Finding missing sides Ordering numbers 4 operations Using calculators	Substitution Identifying algebraic terminology Coordinates Simplifying expressions	Finding factors and multiples Identifying primes Finding HCF/LCM Using BIDMAS Rounding to DP/SF	To find missing angles in a range of contexts To find interior and exterior angles To identify symmetry of shapes	Finding angles Angle rules understanding Find properties of shapes Calculate with fractions	Identify coordinates Transformation of 2D shape in a range of contexts Revision – able to answer exam style questions.
Assessment	In class formative assessment	End of term test	In class formative assessment	In class formative assessment	In class formative assessment	End of year exam

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Year 8						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topics	Place value 4 operations including negative numbers Ratio notation Dividing into ratios Converting ratios and fractions Vertices, faces, edges Nets and isometric drawing Calculating volume Converting units	Scatter graphs Bar charts and frequency polygons Pie charts Sampling/data collection Transformations Simplifying expressions Simplifying algebra Functions Solve equations Expand brackets	Place value for decimals Ordering numbers Ordering decimals/ fractions Using inequality symbols 4 operations Draw/measure angles Angle rules Constructing triangles Congruency/similarity	BIDMAS Factors/multiples HCF/LCM Powers Using a calculator	Sequences from nth term rules Geometric sequences Finding nth term 4 operations with fractions Convert FDP Calculate percentages Find percentage change	Experimental probability Probability scale Mutually exclusive events Language of probability Use the fact that all outcomes sum to 1
Key skills and Concepts	Place value Adding/subtracting/multiplying and dividing numbers Understand and using ratio Converting ratios/fractions Identifying 2D/3D shapes Identifying vertices, edges, faces Using isometric paper	Scatter graphs Pie charts Ways to present data Transformations Simplifying/expanding	Place value Ordering numbers Using inequality symbols 4 operations Drawing and measuring angles Construction Similar shapes	BIDMAS Factors/multiples HCF/LCM Using powers Using a calculator effectively	Writing sequences from rules Finding nth term Adding, subtracting, multiplying and dividing fractions Finding percentages	Working with theoretical and experimental probability Sum of outcomes = 1 Mutually exclusive events, definition and calculations Calculating probabilities
Threshold Concepts	Place value Basic use of the 4 operations Finding factors of numbers Concept of ratio	Identifying some shapes Knowledge of charts/graphs Drawing graphs Ability to read tables/graphs Simplifying algebra	Types of angle Inequalities Angle knowledge Some understanding of congruency	Place value Ordering numbers Factors and multiples	Spotting patterns/sequences Finding sequences from a rule Some understanding of using the nth term Finding simple percentages	The difference between experimental and theoretical probability Finding all outcomes from an experiment Calculating basic probabilities
Endpoints	Able to convert fractions and ratios Use ratio notation correctly Add, subtract, multiply and divide with negative numbers	Drawing and interpreting charts and graphs Use scatter graphs and pie charts to represent data Transform shapes Solving equations Expanding brackets	Solve inequalities Draw and measure angles Find missing angles Constructions Similar shapes	Congruency/similarity BIDMAS Find factors and multiples and HCF/LCM	Use nth term rules Add, subtract, multiply and divide fractions Find percentages Calculate percentage change Geometric sequences	Use the probability scale Calculate theoretical and experimental probabilities Use the fact that all outcomes sum to 1 to find probabilities Understand the term mutually exclusive
Assessment	In class formative assessment	End of term test	In class formative assessment	In class formative assessment	In class formative assessment	End of year exam