Mathematics

Scheme of Work for Academic Year September 2024 - July 2025

KS2 Mixed Yr 5/6 (X3.3)

Lesson	Term 1 — Number	Lesson	Term 2 — Number	Lesson	Term 3 — Number/Measurement	Lesson	Term 4 — Number/Measurement	Lesson	Term 5 — Ratio, Algebra, Geogmetry	Lesson	Term 6 — Geometry, Statistics, Measurement
1	Place Value - Roman numerals to 1,000, Numbers to 100,000, Numbers to 1,000,000, Read and write numbers to 1,000,000 and 10,000,000	1	Equivalent Fractions A - Recognise equivalent fractions, Equivalent fractions and simplifying, Equivalent fractions on a number line	1	Multiplication and Division - order of operations, reason from known facts	1	Measurement - Estimate area, Area of triangles, Area of parallelograms	1	Ratio - Add or multiply?, Use ratio language, Ratio and fractions, Use scale factors	1	Shape - Regular and irregular polygons, Circles Draw shapes and 3-D shapes
2	Place Value - Read and write numbers to 10,000,000, powers of 10, Partition numbers to 10,000,000, Number line to 10,000,000, Compare and order any integers	2	Converting Fractions A - Convert improper fractions to mixed numbers and vice versa.	2	Fractions B - Multiply unit and non unit fractions by an integer Multiply a mixed number by an integer, Multiply fractions by fractions	2	Measurement - Volume - cubic centimetres, Volume of a cuboid, Compare volume Estimate volume and capacity	2	Ratio - Similar shape, Ratio problems, Proportion problems	2	Postion and Direction - The first quadrant, Four quadrants, Solve problems with coordinates
3	Place Value - Round within 100,000, Round any integer, Count through zero, Compare and order negative numbers and negative numbers	3	Compare and ordering Fractions A - Compare fractions (denominator), Compare fractions (numerator), Order fractions	3	Fractions B - Divide fractions by an integer, Fraction of an amount, Fraction of an amount - find the whole	3	Decimals B - Use known facts to add and subtract decimals within 1, Add and subtract decimals across 1, Add and subtract decimals with the same number of d.p., Add and subtarct decimals with different numbers of d.p.	3	Algebra - Function machines, Form expressions, Substitution Formulae	3	Postion and Direction - Translations, Lines of symmetry and Reflections
4	Addition and Subtraction - Mental strategies, Add and subtract integers, Inverse operations and missing numbers	4	Adding and subtracting Fractions A - add and subtract any two fractions	4	Decimals A - Decimals up to 2 decimal plac, Decimals up to 3 decimal places, Place value - integers and decimals, Order and compare decimals (same number of d.p.)	4	Decimals B - Efficient strategie, Decimal sequences Step 10 Multiply and divide by 10, 100 and 1,000 Multiply and divide decimals by integers, Multiply and divide decimals in contexts	4	Algebra - Form equations, Solve equations, Find pairs of values Solve problems with two unknowns	4	Statistics- Draw line graphs, Read and interpret line graphs and Bar charts (to include dual bar charts) Tables (to include two-way table)
5	Multiplication and Division A, multiples and common multiples, factors and common factors, rules of divisibility	5	Multiplication and Division B - multiply 2/4 digit numbers by 1/2 digit numbers, short division, dividing using factors, introduction to long division	5	Decimals A - Order and compare decimals with up to 3 decimal place, Round to the nearest whole number, Round to 1 decimal place, Round to 2 decimal places	5	Fractions, decimals and percentages - Equivalent fractions and decimals - tenths, hundreths, thousands Fractions as division, Understand percentages	5	Shape - Understand and use degrees, Classify and measure angles (include estimate), Calculate angles around a point	5	Statistics - Read and interpret pie charts, Pie charts with percentages Draw pie charts, The mean
6	Multiplication and Division A - prime numbers, square and cube numbers, multiply and divide by 10,100 and 1000/ End of term assessment	6	Multiplication and Division B - long division with remainders, solve problems with division, efficient division	6	Measurement - Perimeter of rectangles and rectilinear shapes, Area of rectangles, Area of compound shapes - End of term assessment	6	Fractions, decimals and percentages - Percentages as fractions, Percentages as decimals, Equivalent F, D, P, Order F, D, P, Percentages of an amount - End of term assessment	6	Shape - Calculate angles on a straight line, Vertically opposite angles Angles in a triangle (include missing angles) /End of term assessment	6	Converting Units - Kilograms and kilometres, Millimetres and millilitres, Convert metric units, Miles and kilometres, Imperial measures, Convert units of time, Calculate with timetables
		7	Multiplication and Division B - mental calculations and estimation/ End of term assessment	7		7		7		7	End of term/ year assessments

KS3 (Yr 7 Support) X2.3

Lesson	Term 1 — Algebric Thinking	Lesson	Term 2 — Place Value and Proportion	Lesson	Term 3 — Applications of Number	Lesson	Term 4 — Directed Number/Fractional thinking	Lesson	Term 5 — Lines and angles	Lesson	Term 6 — Reasoning with Number
1	Sequences - Sequences of diagrams Continue number sequences	1	Place Value and ordering - Read and write integers to 10 000, Understand the place value of a digit in an integer to 10 000, Use < and > to compare two numbers, Order a list of integers, Work out intervals on a number line	1	Solve problems with addition and subtraction - Use number bonds, Add integers , Subtract integers	1	Operations and equations with directed number - Negative numbers and number lines, Order directed numbers, Perform calculations that cross zero,Negative numbers and zero pairs	1	Construct, measure and use geometric notation - Draw and measure line segments, Estimate distances in centimetres and metres, Convert between millimetres, centimetres and metres, Classify angles (turns)	1	Develop number sense - Area on a grid, Find the area of a rectangle, Find the area of a parallelogram
2	Sequences - Term-to-term rules, Generate a sequence, Linear and non-linear sequences	2	Place Value and ordering - Position integers on a number line, Round numbers to the nearest 10 Round numbers to the nearest 100	2	Solve problems with addition and subtraction - Solve problems with addition and subtraction, Financial maths Frequency trees	2	Operations and equations with directed number - Add directed numbers, Subtract directed numbers Add and subtract directed numbers	2	Construct, measure and use geometric notation - Estimate the size of a turn in degrees, Protractors, Measure angles using a protractor, Draw angles	2	Develop number sense - Find the area of a triangle, Solve area problems
3	Understand and use algebric notation - One-step function machines (number), One-step function machines (algebra), Substitution (one step)	3	Place Value and ordering - Round numbers to the nearest 10, 100 and 1000, Read and write numbers to 1 000 000, Understand the place value of a digit in integers up to 1 000 000	3	Solve problems with multiplication and division - Double and halve, Multiply integers and decimals by 10, Multiply integers and decimals by 10, 100 and 1000	3	Operations and equations with directed number - Multiply directed numbers, Divide directed numbers Use the four operations with directed numbers	3	Construct, measure and use geometric notation - Recognise types of triangles, Recognise types of quadrilaterals, Identify polygons up to an octagon	3	Sets and probability - The probability scale (words), The probability scale (0 to 1)
4	Understand and use algebric notation - Find a function (one step),Two-step function machines, Two-step function machines (algebra), Substitution (two step)	4	Fraction, decimal and percentage equivalence - Explore equal parts, Fractions on number lines, Understand the meaning of percentage	4	Solve problems with multiplication and division - Divide integers and decimals by 10, Divide integers and decimals by 10, Multiply up to a four-digit number by a one-digit number	4	Addition and subtraction of fractions - Add and subtract fractions with the same denominator, Make a whole, Subtract fractions from a whole, Add and subtract fractions crossing 1	4	Develop geometric reasoning - Angles in a full turn, Angles in a quadrilateral, Angles in a half turn	4	Sets and probability - List outcomes, Equally likely events
5	Equality and equivalence - Like and unlike terms, Collect like terms, Solve 1-step linear equations (+/-)	5	Fraction, decimal and percentage equivalence - Explore tenths, Explore hundredths, Explore a half	5	Solve problems with multiplication and division - Understand sharing and, Short division, Order of operations, Solve multi-step problems	5	Addition and subtraction of fractions - Convert improper fractions to mixed numbers, Convert mixed numbers to improper fractions, Understand and use equivalent fractions	5	Develop geometric reasoning - Angles in a triangle, Angles in special triangles, Solve angle problems, Perimeter on a grid	5	Prime numbers and proof - Identify factors, Identify prime numbers, Identify multiples
6	Equality and equivalence - Solve 1-step linear equations (x/÷), Solve any 1-step linear equation/ End of term assessment	6	Fraction, decimal and percentage equivalence - Explore quarters, Explore fifths, Explore equivalence	6	Fractions and percentages of amounts - Find a unit fraction of an amoun, Find 10%, 25% and 50% of an amount, Use any unit fraction to find the whole/ End of term assessment	6	Addition and subtraction of fractions - Simplify a fraction, Add and subtract fractions within 1 using equivalence, Add and subtract fraction beyond 1 using equivalence/End of term assessment	6	Develop geometric reasoning - Measure perimeter, Calculate perimeter, Use perimeter to work out side lengths/End of term assessment	6	Prime numbers and proof - Identify square numbers, Identify triangular numbers, Identify cube numbers
		7	End of term assessment	7		7		7		7	End of term/year assessment

Lesson	Term 1 — Algebric Thinking	Lesson	Term 2 — Place Value and Proportion	Lesson	Term 3 — Applications of Number	Lesson	Term 4 — Directed Number/Fractional thinking	Lesson	Term 5 — Lines and angles	Lesson	Term 6 — Reasoning with Number
1	Sequences - Describe and continue sequences, Predict and check next term(s), Sequences in a table and graphically, Linear and non-linear sequences	1	Place Value and ordering - Recognise the place value of any number in an integer up to one billion, Understand and write integers up to one billion in words and figures, Work out intervals on a number line, Position integers on a number line	1	Solve problems with addition and subtraction - Properties of addition and subtraction, Use formal methods for addition and subtraction, Use formal methods for addition of integers, Use formal methods for addition of decimals, Use formal methods for subtraction of integers, Use formal methods for subtraction of decimals, Choose the most appropriate method: mental strategies, formal written or calculator	1	Operations and equations with directed number - Understand and use representations of directed numbers, Order directed numbers using lines and appropriate symbols, Perform calculations that cross zero, Add directed numbers	1	Construct, measure and use geometric notation - Understand and use letter and labelling conventions including those for geometric figures, Draw and measure line segments including geomtric figures, Understand angles as a measure of turn, Classify angles, Measure angles up to 180°, Draw angles up to 180°	1	Develop number sense - Know and use mental addition and subtraction strategies for integers, Known and use mental multiplication and division strategies for integers, Know and use mental arithmetic strategies for decimals, Know and use mental arithmetic strategies for fractions

KS3 (Yr 7) X1.3

Lesson	Term 1	Lesson	Term 2	Lesson	Term 3	Lesson	Term 4	Lesson	Term 5	Lesson	Term 6
2	Sequences - Continue linear sequences, Continue non-linear sequences, Explain the term-to-term rule	2	Place Value and ordering - Round integers to the nearest power of ten, Compare two numbers using =, ≠, <, >, ≤, ≥, Order a list of integers, Find the range of a set of numbers	2	Solve problems with addition and subtraction - Solve problems in the context of perimeter, Solve financial maths problems, Solve problems involving tables and timetables, Solve problems with frequency trees, Solve problems with bar charts and line charts	2	Operations and equations with directed number - Subtract directed numbers, Multiplication of directed numbers, Multiplication and division of directed numbers, Use a calculator for directed number calculations	2	Construct, measure and use geometric notation - Draw and measure angles between 180° and 360°, Identify perpendicular and parallel lines, Recognise types of triangle, Recognise types of quadrilateral, Identify polygons up to a decagon	2	Develop number sense - Use factors to simplify calculations, Use estimation as a method for checking mental calculations, Use known number facts to derive other facts, Use known algebraic facts to derive other facts, Know when to use a mental strategy, formal written method or a calculator
3	Understand and use algebraic notation - Given a numerical input, find the output of a single function, Use inverse operations to find the input given the, Use diagrams and letters to generalise number operations, Use diagrams and letters with single function machines, Find the function machine given a simple expression	3	Place Value and ordering - Find the median of a set of numbers, Understand place value for decimals, Position decimals on a number line, Compare and order any number up to one billion, Round a number to 1 significant figure	3	Solve problems with multiplication and division - Properties of multiplication & division, Understand and use factors, Understand and use multiples, Multiply and divide integers and decimals by powers of 10, Convert metric units, Use fomal methods to multiply integers	3	Operations and equations with directed number - Evaluate algebraic expressions with directed number, Introduction to two-step equations, Solve two-step equations, Use order of operations with directed numbers	3	Construct, measure and use geometric notation - Construct triangles using SSS, Construct triangles using SSS, SAS and ASA Construct more complex polygons, Interpret simple pie charts using proportion, Interpret pie charts using a protractor, Draw pie charts	3	Sets and probability - Identify and represent sets, Interpret and create Venn diagrams, Understand and use the intersection of sets, Understand and use the union of sets
4	Understand and use algebraic notation - Substitute values into single operation, Find numerical inputs and outputs for a series of two function machines, Use diagrams and letters with a series of two function machines, Find the function machines given a two-step expression, Substitute values into two-step expressions	4	Fraction, decimal and percentage equivalence - Represent tenths and hundredths as diagrams, Represent tenths and hundredths on number line, Interchange between fractional and decimal number lines, Convert between fractions and decimals - tenths and hundredths	4	Solve problems with multiplication and division - Use formal methods to multiply decimals, Use formal methods to divide integers, Use formal methods to divide decimals, Understand and use order of operations, Area of rectangles and parallelograms, Area of trianglesm solve problems using the mean	4	Addition and subtraction of fractions - Understand representations of fractions, Convert between mixed numbers and fractions, Add and subtract unit fractions with the same denominator, Add and subtract fractions with the same denominator	4	Develop geometric reasoning - Understand and use the sum of angles at a point, Understand and use the sum of angles on a straight line, Understand and use the equality of vertically opposite angles	4	Sets and probability - Know and use the vocabulary of probability, Generate sample spaces for single events, Calculate the probability of a single event, Understand and use the probability scale, Know that the sum of probabilities for all possible outcomes is 1
5	Equality and equivalence - Understand the meaning of equality, Understand and use fact families, numerically and algebraically, Solve one-step linear equations involving +/- using inverse operations	5	Fraction, decimal and percentage equivalence - Convert between fractions and decimals - fifths and quarters, Understand the meaning of percentage using a hundred square, Convert fluently between simple fractions, decimals and percentages	5	Fractions and percentages of amounts - Find a fraction of a given amount, Use a given fraction to find the whole and/or other fractions, Find a percentage of a given amount using mental methods, Find a pecentage of a given amount using a calculator	5	Addition and subtraction of fractions - Add and subtract fractions from integers expressing the answer as a single fraction, Understand and use equivalent fractions, Add and subtract fractions where denominators share a simple common multiple, Add and subtract fractions with any denominator	5	Develop geometric reasoning - Know and apply the sum of angles in a triangle, Know and apply the sum of angles in a quadrilateral	5	Prime numbers and proof - dentify factors of numbers and expressions, Recognise and identify prime numbers, Recognise square and triangular numbers, Find common factors of a set of numbers including the HCF
6	Equality and equivalence - Solve one-step linear equations involving x/÷ using inverse operations, Understand the meaning of like and unlike terms, Understand the meaning of equivalence/ End of term assessment	6	Fraction, decimal and percentage equivalence - Use and interpret pie charts, Represent any fraction as a diagram, Represent fractions on number lines	6	Fractions and percentages of amounts/ End of term assessment	6	Addition and subtraction of fractions- Add and subtract improper fractions and mixed numbers, Use fractions in algebraic contexts, Use equivalence to add and subtract decimals and fractions/End of term assessment	6	Develop geometric reasoning - Solve angle problems using properties of triangles and quadrilaterals, Solve complex angle problem/End of term assessment	6	Prime numbers and proof - Find common multiples of a set of numbers including the LCM, Write a number as a product of its prime factors, Make and test conjectures, Use counter examples to disprove a conjecture
		7	Fraction, decimal and percentage equivalence - Identify and use simple equivalent fractions, Understand fractions as division, Convert fluently between fractions, decimals and percentage / End of term assessment	7		7		7		7	End of term assessment

Lesson	**Term 1**	Lesson	**Term 2**	Lesson	**Term 3**	Lesson	**Term 4**	Lesson	**Term 5**	Lesson	**Term 6**
Class	**Proportional Reasoning**		**Representations**		**Algebraic techniques**		**Developing Number**		**Developing Geometry**		**Reasoning with data**

KS3 (Yr8 Support) Y3.3

Lesson	Term 1	Lesson	Term 2	Lesson	Term 3	Lesson	Term 4	Lesson	Term 5	Lesson	Term 6
1	Ratio and Scale - Understand ratio, Link ratio and fractions, Simplify ratios	1	Work in the Cartesian plane - Work with coordinates in the 1st quadrant, Work with coordinates in all four quadrants, Understand coordinates in all four quadrants	1	Brackets, equations and inequalities - Add and subtract with directed numbers, Collect like terms, Multiply and divide with directed numbers, Expand a single bracket (numerical co-efficient of bracket)	1	Fractions and percentages - Convert fractions and decimals (using equivalence), Convert fractions and decimals (using a calculator), Fraction of an amount, Increase or decrease an amount by a fraction	1	Angles in parallel - Measure and draw angles, Angles on a straight line, Vertically opposite angles, Angles around a point	1	The data handling cycle - Data collection, Ungrouped frequency tables, Grouped frequency tables
2	Ratio and Scale - Divide in a given ratio, Use a part to find other amounts	2	Work in the Cartesian plane - Lines parallel to the axesTables of values download teaching_slides worksheet_write_on answer Step 6 - Plot graphs of the form y = mx	2	Brackets, equations and inequalities - Factorise into a single bracket, Use bar models, Solve 1-step equations, Solve 2-step equations	2	Fractions and percentages - Understand percentages (equivalence), Find a percentage of an amount with a calculator, Find a percentage of an amount without a calculator, Increase or decrease an amount by a percentage	2	Angles in parallel - Angles in a triangle, Angles in a quadrilateral, Alternate angles	2	The data handling cycle - Represent data in pictograms, Interpret pictograms, Represent data in bar charts, Interpret bar charts, Represent data in dual bar charts, Interpret dual bar charts
3	Multiplicative change - The unitary method, Use multipliers, Use recipes	3	Work in the Cartesian plane - Plot graphs of the form y = x + c, Plot graphs of the form y = mx + c, Draw straight line graphs	3	Brackets, equations and inequalities - Solve equations with brackets, Solve equations with fractions, Solve equations in context	3	Standard form Index - Positive powers of 10, Multiply by powers of 10	3	Angles in parallel - Corresponding angles, Co-interior angles, Angles in parallel lines	3	The data handling cycle - Represent data in dual bar charts, Interpret dual bar charts, Represent data in pie charts (1)
4	Multiplicative change - Convert currency, Conversion graphs, Scale diagrams	4	Represent data - Read and interpret tables and scatter graphs, Plot scatter graphs	4	Sequences - Sequences, Generate a sequence given a rule in words, Generate a sequence given a simple algebraic rule	4	Standard form Index - Convert large numbers to standard form	4	Area of trapezia and circles - Find the area of squares, rectangles and parallelograms, Find unknown lengths in rectilinear shapes, Find the area of a rectilinear shape	4	The data handling cycle - Angles in sectors of pie charts, Represent data in pie charts (2), nterpret pie charts
5	Multiply and Divide fractions - Representations of fractions, Convert improper fractions to mixed numbers, Convert mixed numbers to improper fractions	5	Represent data - Understand linear correlation, Draw and use a line of best fit	5	Indicies - Understand index notation, Simplify expressions	5	Number Sense - Add decimals, Subtract decimals, Solve addition and subtraction problems with decimals	5	Area of trapezia and circles - Find the area of a triangle, Find the area of a compound shape, Find the area of a trapezium	5	Measures of Location - Range, Mode, Median
6	Multiply and Divide fractions - Simplify fractions, Multiply a fraction by an integer, Multiply a fraction by a fraction / End of term assessment	6	Tables and probabilities - Two-way tables, Probability review	6	Indicies - Collect like terms, Evaluate expressions / End of term assessment	6	Number Sense - Multiply decimals, Divide decimals, Round with decimals / End of term assessment	6	Lines of symmetry/End of term assessment - Recognise line symmetry, Reflect a shape in a horizontal or vertical line (touching the shape), Reflect a shape in a horizontal or vertical line (not touching the shape), Reflect a shape in a diagonal line (touching the shape), Reflect a shape in a diagonal line (not touching the shape) / End of term assessment	6	Measures of Location - Mean, Use averages and range, Mean from an ungrouped frequency table / End of term/year assessment
		7	Tables and probabilities - Sample space diagrams / End of term assessment	7		7		7		7	Measures of Location/End of term assessment

Lesson	**Term 1**	Lesson	**Term 2**	Lesson	**Term 3**	Lesson	**Term 4**	Lesson	**Term 5**	Lesson	**Term 6**
Class	**Proportional Reasoning**		**Representations**		**Algebraic techniques**		**Developing Number**		**Developing Geometry**		**Reasoning with data**

KS3 (Yr8) Y2.3

Lesson	Term 1	Lesson	Term 2	Lesson	Term 3	Lesson	Term 4	Lesson	Term 5	Lesson	Term 6
1	Ratio and Scale - Understand the meaning and representation of ratio. Understand and use ratio notation. Solve problems involving ratios of the form 1 : n (or n : 1). Solve problems involving ratios of the form m :	1	Work in the Cartesian plane - Work with coordinates in all four quadrants. Identify and draw lines that are parallel to the axes. Recognise and use the line y=x	1	Brackets, equations and inequalities - Form algebraic expressions. Use directed number with algebra. Multiply out a single bracket. Factorise into a single bracket	1	Fractions and percentages - Convert fluently between key fractions decimals and percentages. Calculate key fractions, decimals and percentages of an amount without a calculator. Calculate fractions, decimals and percentages of an amount using calculator methods	1	Angles in parallel - Understand and use basic angle rules and notation. Investigate angles between parallel lines and the transversal. Identify and calculate with alternate and corresponding angles. Identify and calculate with co-interior, alternate and corresponding angles	1	The data handling cycle - Set up a statistical enquiry. Design and criticise questionnaires. Draw and interpret pictograms, bar charts and vertical line charts
2	Ratio and Scale - Divide in a given ratio. Express ratios in their simplest integer form. Compare ratios and fractions. Understand pi as a ratio	2	Work in the Cartesian plane - Recognise and use lines of the form y=kx. Link y=kx to direct proportion problems. Recognise and use lines of the form y=x+a	2	Brackets, equations and inequalities - Expand multiple single brackets and simplify Solve equations, including with brackets. Form and solve equations with brackets	2	Fractions and percentages - Convert between decimals and percentages greater than 100% Percentage decrease with a multiplier. Calculate percentage increase and decrease using a multiplier	2	Angles in parallel - Solve complex problems with parallel line. Constructions triangles and special quadrilaterals. Investigate the properties of special quadrilaterals. Identify and calculate with sides and angles in special quadrilaterals	2	The data handling cycle - Draw and interpret multiple bar charts. Draw and interpret pie charts. Draw and interpret line graphs
3	Multiplicative change - Solve problems involving direct proportion. Explore conversion graphs. Convert between currencies	3	Work in the Cartesian plane - Explore graphs with negative gradient (y=-kx, y=a-x, x+y=a). Link graphs to linear sequences. Plot graphs of the form y=mx+c	3	Brackets, equations and inequalities - Understand and solve simple inequalities, Identify and use formulae, expressions, identities and equations. Form and solve inequalities	3	Fractions and percentages - Express one number as a fraction or a percentage of another without a calculator. Express one number as a fraction or a percentage of another using calculator methods. Work with percentage change. Choose appropriate methods to solve percentage problems	3	Angles in parallel - Understand and use the properties of diagonals of quadrilaterals. Understand and use the sum of exterior angles of any polygon. Understand and use the sum of the interior angles in any polygon. Calculate missing interior angles in regular polygons	3	The data handling cycle - Choose the most appropriate diagram for a given set of data. Represent and interpret grouped quantitative data. Find and interpret the range
4	Multiplicative change - Explore relationships between similar shapes. Understand scale factors as multiplicative representations. Draw and interpret scale diagrams. Interpret maps using scale factors and ratios	4	Represent data - Draw and interpret scatter graphs. Understand and describe linear correlation. Draw and use line of best fit. Identify non-linear relationships. Identify different types of data	4	Sequences - Generate sequences given a rule in words. Generate sequences given a simple algebraic rule Generate sequences given a complex algebraic rule	4	Standard form Index - Investigate positive powers of 10. Work with numbers greater than 1 in standard form. Investigate negative powers of 10. Work with numbers between 0 and 1 in standard form	4	Area of trapezia and circles - Calculate the area of triangles, rectangles and parallelograms. Calculate the area of a trapezium. Calculate the perimeter and area of compound shapes (1)	4	The data handling cycle - Compare distributions using charts. Identify misleading graphs
5	Multiply and Divide fractions - Represent multiplication of fractions. Multiply a fraction by an integer. Find the product of a pair of unit fractions. Find the product of a pair of any fractions. Divide an integer by a fraction	5	Represent data - Read and interpret ungrouped frequency tables. Read and interpret grouped frequency tables. Represent grouped discrete data. Represent continuous data grouped into equal classes. Construct and interpret two-way tables	5	Indicies - Adding and subtracting expressions with indices. Simplifying algebraic expressions by multiplying indices. Simplifying algebraic expressions by dividing indices	5	Standard form Index - Compare and order numbers in standard form. Mentally calculate with numbers in standard form. Add and subtract numbers in standard form. Multiply and divide numbers in standard form. Use a calculator to work with numbers in standard form	5	Area of trapezia and circles - Investigate the area of a circle. Calculate the area of a circle and parts of a circle without a calculator. Calculate the area of a circle and parts of a circle with a calculator. Calculate the perimeter and area of compound shapes (2)	5	Measurses of Location - Understand and use the mean, median and mode. Choose the most appropriate average
6	Multiply and Divide fractions - Divide a fraction by a unit fraction. Understand and use the reciprocal. Divide any pair of fractions. Multiply and divide improper and mixed fractions / End of term assessment	6	Tables and probabilities - Construct sample spaces for one or more events. Find probabilities from a sample space. Find probabilities from two-way tables	6	Indicies - Using the addition law for indices. Using the addition and subtraction law for indices. End of term assessment	6	Number Sense - Round numbers to a given number of decimal places. Estimate the answer to a calculation Calculate using the order of operations. Calculate with money. Convert metric measures of lengths. Convert metric units of weight and capacity/ End of term assessment	6	Lines of symmetry - Recognise line symmetry. Reflect a shape in a horizontal or vertical line 1 (shapes touching the line). Reflect a shape in a horizontal or vertical line 2 (shapes not touching the line). Reflect a shape in a diagonal line 1 (shapes touching the line). Reflect a shape in a diagonal line 2 (shapes not touching the line) / End of term assessment	6	Measurses of Location - Identify outliers. Compare distributions using averages and the range
		7	Tables and probabilities - Find probabilities from Venn diagrams. Use the product rule for finding the total number of possible outcomes / End of term assessment	7		7		7		7	End of term/year assessment

KS3 (Yr9) Y1.3

Lesson	Term 1	Lesson	Term 2	Lesson	Term 3	Lesson	Term 4	Lesson	Term 5	Lesson	Term 6
Class	Reasoning with Algebra		Constructing in 2 amd 3 dimensions		Reasoning with Number		Reasoning with Geometry		Reasoning with Geometry		Reasoning with Geometry
1	Straight line graphs - Plot and read coordinates in four quadrants. Lines parallel to the axes. Plot lines of the form y = mx	1	Three-dimensional shapes - - Identify and name 2-D shapes. Identify and name 3-D shapes. Faces, edges and vertices	1	Numbers - Order of operations. Four operations. Four operations with decimals. Addition and subtraction with fractions	1	Deduction - One-step angle problems. Angles in triangles. Angles in quadrilaterals. Multi-step angle problems	1	Enlargement and Similarity - Enlarge a shape on a grid. Enlarge a shape about a point on a grid. Enlarge a shape on coordinate axes. Describe an enlargement	1	Algerbraic representation - Expand brackets and simplify (numerical coefficient of bracket). Expand brackets (algebraic coefficient of bracket)
2	Straight line graphs - Plot lines of the form y = x + c. Plot lines of the form y = mx + c. Plot lines of the form x + y = a, y - x = a and x - y = a	2	Three-dimensional shapes - Nets of cubes and cuboids. Nets of other 3-D shapes. Plans and elevations	2	Numbers - Multiplication with fractions. Divide a fraction by an integer. Divide a fraction by a fraction	2	Deduction - Solve problems with angles and shapes. Identify angles in parallel lines. Solving problems with angles in parallel lines (with reasons)	2	Enlargement and Similarity - Recognise similar shapes. Work out unknown lengths and angles Solve Ratio and Proportional problems - Direct proportion. Conversion graphs	2	Algerbraic representation - Expand double brackets. Plot quadratic graphs
3	Form and solve equations - Solve 1-step and 2-step equations. Solve equations with brackets. Interpret inequalities	3	Three-dimensional shapes - Find the area of 2-D shapes. Find the surface area of cubes and cuboids. Find the volume of cubes and cuboids by counting cubes. Find the volume of cubes and cuboids	3	Use percentage - - Fractions, decimals and percentages equivalence. Find a percentage of an amount. Find the whole given a percentage	3	Rotation and Transition - Identify the order of rotational symmetry of a shape. Recognise line symmetry of shapes. Rotate a shape about a point on the shape. Rotate a shape about a point not on the shape	3	Solve Ratio and Proportional problems - Best buy problems. Sharing in a ratio. Solving ratio problems. Inverse proportion	3	Circle geometry - Find the circumference of a circle. Find the area of a circle. Find the area of composite shapes
4	Form and solve equations - Represent inequalities. Solve 1-step inequalities. Solve 2-step inequalities	4	Constructions and congruency - Measure and draw angles up to 180°. Measure and draw angles between 180° and 360°	4	Use percentage - Increase or decrease an amount by a percentage. Express one quantity as a percentage of another. Solve percentage problems	4	Rotation and Transition - Translate points and line segments. Translate a shape. Describe a translation	4	Rates - Time. Speed. Speed, distance and time (non-calculator). Speed, distance and time (calculator)	4	Circle geometry - Volume of prisms. Volume of cylinders
5	Test conjectures - Factors and multiples. Prime numbers. Write a number as a product of its prime factors	5	Constructions and congruency - Draw circles and parts of circles. Draw SAS triangles	5	Maths and Money - Earnings. Taxes. Bills	5	Pythagoras Theorem - Evaluate squares and square roots. Solve equations with squares and square roots. Identify the hypotenuse of a right-angled triangle	5	Rates - Interpret distance-time graphs. Draw distance-time graph Probabilit - Single event probability. Probabilities from Venn diagrams	5	Polygon geometry - Exterior angles in regular polygons. Interior angles in regular polygons

Lesson	Term 1	Lesson	Term 2	Lesson	Term 3	Lesson	Term 4	Lesson	Term 5	Lesson	Term 6
6	Test conjectures - Create Venn diagrams Interpret Venn diagrams/End of term assessment	6	Constructions and congruency - Draw ASA triangles Draw SSS triangles	6	Maths and Money - Budgets Loans Holidays / End of term assessment	6	Pythagoras Theoram - Calculate the hypotenuse of a right-angled triangle Calculate a shorter side of a right-angled triangle Calculate an unknown side in a right-angled triangle / End of term assessment	6	Probability - Probability of an event not happening Probability experiments Expected outcomes / End of Term Assessment	6	Polygon geometry - Angle problems in regular polygons Angle problems in any polygon
		7	Constructions and congruency - Understand congruency Recognise a pair of congruent triangles / End of term assessment	7		7		7		7	End of term/year assessment

Lesson	**Term 1**	Lesson	**Term 2**	Lesson	**Term 3**	Lesson	**Term 4**	Lesson	**Term 5**	Lesson	**Term 6**
Class	**Similarity**		**Developing Algebra**		**Geometry**		**Proportions and proportional change**		**Delving into data**		**Using Number**

KS4 (Yr10-GCSE Higher) Y1.4

Lesson	Similarity	Lesson	Developing Algebra	Lesson	Geometry	Lesson	Proportions and proportional change	Lesson	Delving into data	Lesson	Using Number
1	Congruence, similarity and enlargement- Enlarge a shape by a positive integer scale factor (R) Enlarge a shape by a fractional scale factor (R) Enlarge a shape by a negative scale factor (H)	1	Reprsenting solutions of equations and equalities - Form and solve one-step and two-step equations (R), Form and solve one-step and two-step inequalities (R),Represent solutions to inequalities using set notation (H)	1	Angles and bearings - Use cardinal directions and related angles (R) Draw and interpret scale diagrams (R) Understand and represent bearings Measure and read bearings	1	Ratios and Fractions - Compare quantities using a ratio (R) Link ratios and fractions (R) Share in a ratio (given total or one part) (R) Link ratios and scales (R) Use ratios and fractions to make comparisons	1	Collecting, representing and interpreting data - Understand populations and samples Construct a stratified sample (H) Primary and secondary data Construct and interpret frequency tables and frequency polygons Construct and interpret two-way tables (R) Construct and interpret line and bar charts (including composite bar charts) Construct and interpret pie charts (R)	1	Types of number and sequences - Understand the difference between factors and multiples (R) Understand primes and express a number as a product of its prime factors (R) Find the HCF and LCM of a set of numbers (R) Describe and continue arithmetic and geometric sequences
2	Congruence, similarity and enlargement - Use parallel line rules to work out missing angles (R) Explore areas of similar shapes (1) (H) Explore areas of similar shapes (2) (H)	2	Reprsenting solutions of equations and equalities -Draw straight line graphs (R), Represent solutions to single inequalities on a graph (H) Represent solutions to multiple inequalities on a graph (H)	2	Angles and bearings - Make scale drawings using bearings Calculate bearings using angle rules Solve bearings problems using Pythagoras and trigonometry Solve bearings problems using the sine and cosine rules (H)	2	Ratios and Fractions - Combine a set of ratios Link ratio and algebra Ratio in area problems (H) Ratio in volume problems (H) Mixed ratio problems	2	Collecting, representing and interpreting data - Criticise charts and graphs Construct histograms (H) Interpret histograms (H) Find and interpret averages from a list (R) Find and interpret averages from a table (R)	2	Types of number and sequences-Explore other sequences Describe and continue sequences involving surds (H) Find the rule for the nth term of a linear sequence (H) Find the rule for the nth term of a quadratic sequence (H)
3	Congruence, similarity and enlargement - Explore volumes of similar shapes (H) Solve mixed problems involving similar shapes (H) Prove a pair of triangles are congruent (H)	3	Reprsenting solutions of equations and equalities - Form and solve equations with unknowns on both sides (R), Solve quadratic equations by factorisation (H) Solve quadratic inequalities in one variable (H)	3	Working with circles - Recognise and label parts of a circle (R) Calculate fractional parts of a circle Calculate the length of an arc Calculate the area of a sector	3	Percentages and interest - Convert and compare fractions, decimals and percentages (R) Work out percentages of amounts (with and without a calculator) (R) Increase and decrease by a given percentage (R) Express one number as a percentage of another (R) Find the original value after a percentage change (R)	3	Collecting, representing and interpreting data - Construct and interpret time series graphs Construct and interpret stem-and-leaf diagrams, Construct and interpret cumulative frequency diagrams (H) Use cumulative frequency diagrams to find measures (H) Construct and interpret box plots (H)	3	Indicies and roots - Square and cube numbers (R) Calculate higher powers and roots Powers of ten and standard form (R) The addition and subtraction rules for indices (R)
4	Trigonometry - Calculate sides in right-angled triangles using Pythagoras' Theorem (R), Use trigonometry in 3-D shapes (H) Use the formula 1/2absinC to find the area of non-right angled triangles (H)	4	Simultaneous equations - Understand that equations can have more than one solution Determine whether a given (x, y) is a solution to a pair of linear simultaneous equations Solve a pair of linear simultaneous equations by substituting a known variable Solve a pair of linear simultaneous equations by substituting an expression	4	Working with circles - Circle theorem: Angles at the centre and circumference (H) Circle theorem: Angles in a semi-circle (H) Circle theorem: Angles in the same segment (H) Circle theorem: Angles in a cyclic quadrilateral (H) Solve area and volume problems involving similar shapes (R) (H)	4	Percentages and interest - Calculate simple and compound interest Solve problems involving growth and decay Understand iterative processes (H) Solve problems involving percentages, ratios and fractions Repeated percentage change	4	Collecting, representing and interpreting data -Compare distributions using charts and measures Compare distributions using complex charts and measures (H) Construct and interpret scatter graphs (R) Draw and use a line of best fit (R) Understand extrapolation	4	Indicies and roots - Understand and use the power zero and negative indices Work with powers of powers Understand and use fractional indices (H) Calculate with numbers in standard form (R)
5	Trigonometry - Understand and use the sine rule to find missing lengths (H) Understand and use the sine rule to find missing angles (H) Understand and use the cosine rule to find missing lengths (H)	5	Simultaneous equations - Solve a pair of linear simultaneous equations using graphs Solve a pair of linear simultaneous equations by subtracting equations Solve a pair of linear simultaneous equations by adding equations Use a given equation to derive related facts (R)	5	Vectors - Explore vector journeys in shapes Explore quadrilaterals using vectors (H) Understand parallel vectors (H)	5	Probability - Know how to add, subtract and multilply fractions (R) Find probabilities using equally likely outcomes (R) Use the property that probabilities sum to 1 (R) Using experimental data to estimate probabilities Find probabilities from tables, Venn diagrams and frequency trees	5	Non-Calculator Methods - The four rules of fraction arithmetic (R) Exact answers Rational and irrational numbers (R) Understand and use surds (H) Calculate with surds (H)	5	Manipulating expressions - Simplify algebraic expressions (R) Use identities Add and subtract simple algebraic fractions Add and subtract complex algebraic fractions Multiply and divide simple algebraic fractions
6	Trigonometry - Understand and use the cosine rule to find missing angles (H) Choose and use the sine and cosine rules (H) /End of term assessment	6	Simultaneous equations - Determine whether a given (x, y) is a solution to both a linear and quadratic equation (H) Solve a pair of simultaneous equations (one linear, one quadratic) using graphs (H)	6	Vectors - Explore co-linear points using vectors (H) Use vectors to construct geometric arguments and proofs (H) / End of term assessment	6	Probability - Construct and interpret sample spaces for more than one event (R) Calculate probability with independent events Use tree diagrams for independent events Use tree diagrams for dependent events Construct and interpret conditional probabilities (tree diagrams) (H) / End of term assessment	6	Non-calculator Methods - Rounding to decimal places and significant figures (R) Estimating answers to calculations (R) Understand and use limits of accuracy Upper and lower bounds (H) Break down and solve multi-step problems / End of term assessment	6	Manipulating expressions - Multiply and divide complex algebraic fractions (H) Form and solve equations and inequalities with fractions Solve equations with algebraic fractions (H) Represent numbers algebraically Algebraic arguments and proof
		7	Simultaneous equations - Solve a pair of simultaneous equations (one linear, one quadratic) algebraically (H) Solve a pair of simultaneous equations involving a third unknown (H) / End of term assessment	7		7		7		7	End of term/year assessment

Lesson	**Term 1**	Lesson	**Term 2**	Lesson	**Term 3**	Lesson	**Term 4**	Lesson	**Term 5**	Lesson	**Term 6**
Class	**Similarity**		**Developing Algebra**		**Geometry**		**Proportions and proportional change**		**Delving into data**		**Using Number**
1	Congruence, similarity and enlargement - Enlarge a shape by a positive integer scale factor (R) Enlarge a shape by a fractional scale factor (R)	1	Reprsenting solutions of equations and equalities - Understand the meaning of a solution Form and solve one-step and two-step equations (R) Form and solve one-step and two-step inequalities (R)	1	Angles and bearings - Use cardinal directions and related angles (R) Draw and interpret scale diagrams (R) Understand and represent bearings Measure and read bearings	1	Ratios and Fractions - Compare quantities using a ratio (R) Link ratios and fractions (R) Share in a ratio (given total or one part) (R) Link ratios and scales (R) Use ratios and fractions to make comparisons	1	Collecting, representing and interpreting data - Understand populations and samples Primary and secondary data Construct and interpret frequency tables and frequency polygons Construct and interpret two-way tables (R)	1	Types of number and sequences - Understand the difference between factors and multiples (R) Understand primes and express a number as a product of its prime factors (R) Find the HCF and LCM of a set of numbers (R)

KS4 (Yr10-GCSE Foundation) Y2.4

Lesson	Term 1	Lesson	Term 2	Lesson	Term 3	Lesson	Term 4	Lesson	Term 5	Lesson	Term 6
2	Congruence, similarity and enlargement - Identify similar shapes. Work out missing sides and angles in a given pair of similar shapes	2	Reprsenting solutions of equations and equalities - Show solutions to inequalities on a number line. Interpret representation on number lines as inequalities, Draw straight line graphs (R)	2	Angles and bearings - Make scale drawings using bearings. Calculate bearings using angle rules. Solve bearings problems using Pythagoras and trigonometry	2	Ratios and Fractions - Use ratios and fractions to make comparisons. Link ratios and graphs. Solve problems with currency conversion Use and interpret ratios of the form 1 : n and n : 1. Combine a set of ratios	2	Collecting, representing and interpreting data - Construct and interpret line and bar charts (including composite bar charts) Construct and interpret pie charts (R) Criticise charts and graphs	2	Types of number and sequences - Describe and continue arithmetic and geometric sequences. Explore other sequences. Find the rule for the nth term of a linear sequence (R)
3	Congruence, similarity and enlargement - Use parallel line rules to work out missing angles (R) Understand the difference between 'congruence and similarity. Understand and use conditions for congruent triangles	3	Reprsenting solutions of equations and equalities - Find solutions to equations using straight line graphs, Form and solve equations with unknowns on both sides (R) Form and solve inequalities with unknowns on both sides. Form and solve more complex equations and inequalities	3	Working with circles - Recognise and label parts of a circle (R) Calculate fractional parts of a circle. Calculate the length of an arc. Calculate the area of a sector	3	Percentages and interest - Convert and compare fractions, decimals and percentages (R) Work out percentages of amounts (with and without a calculator) (R) Increase and decrease by a given percentage (R) Express one number as a percentage of another (R) Find the original value after a percentage change (R)	3	Collecting, representing and interpreting data - Find and interpret averages from a list (R) Find and interpret averages from a table (R) Construct and interpret time series graphs (R) Construct and interpret stem-and-leaf diagrams,	3	Indicies and roots - Square and cube numbers. Calculate higher powers and roots. Powers of ten and standard form (R) The addition and subtraction rules for indices (R)
4	Trigonometry - Explore ratio in similar right-angled triangles. Work fluently with the hypotenuse, opposite and adjacent sides. Use the tangent ratio to find missing side lengths	4	Simultaneous equations - Understand that equations can have more than one solution. Determine whether a given (x, y) is a solution to a pair of linear simultaneous equations. Solve a pair of linear simultaneous equations by substituting a known variable. Solve a pair of linear simultaneous equations by substituting an expression	4	Working with circles - Understand and use the volume of a cylinder and cone. Understand and use the volume of a sphere. Understand and use the surface area of a sphere. Understand and use the surface area of a cylinder and cone	4	Percentages and interest - Calculate simple and compound interest Solve problems involving growth and decay. Solve problems involving percentages, ratios and fractions. Repeated percentage change	4	Collecting, representing and interpreting data -Compare distributions using charts and measures. Construct and interpret scatter graphs (R) Draw and use a line of best fit (R) Understand extrapolation	4	Indicies and roots - Understand and use the power zero and negative indices. Work with powers of powers. Calculate with numbers in standard form (R)
5	Trigonometry - Use the sine and cosine ratio to find missing side lengths. Use the sine, cosine and tangent to find missing side lengths. Use the sine, cosine and tangent to find missing angles	5	Simultaneous equations - Solve a pair of linear simultaneous equations using graphs. Solve a pair of linear simultaneous equations by subtracting equations. Solve a pair of linear simultaneous equations by adding equations. Use a given equation to derive related facts (R)	5	Vectors - Understand and represent vectors. Use and read vector notation. Draw and understand vectors multiplied by a scalar	5	Probability - Know how to add, subtract and multiply fractions (R) Find probabilities using equally likely outcomes (R) Use the property that probabilities sum to 1. Using experimental data to estimate probabilities. Find probabilities from tables, Venn diagrams and frequency trees	5	Non-Calculator Methods - Mental/written methods of integer/decimal addition and subtraction (R) Mental/written methods of integer/decimal multiplication and division. The four rules of fraction arithmetic (R) Exact answers Rounding to decimal places and significant figures (R)	5	Manipulating expressions - Simplify algebraic expressions (R) Use identities
6	Trigonometry - Calculate sides in right-angled triangles using Pythagoras' Theorem (R) Select the appropriate method to solve right-angled triangle problems. Work with key angles in right-angled triangles /End of term assessment	6	Simultaneous equations - Solve a pair of linear simultaneous equations by adjusting one equation. Solve a pair of linear simultaneous equations by adjusting both equations. Form a pair of linear simultaneous equations from given information. Form and solve pair of linear simultaneous equations from given information	6	Vectors - Draw and understand addition of vectors. Draw and understand addition and subtraction of vectors / End of term assessment	6	Probability - Construct and interpret sample spaces for more than one event (R) Calculate probability with independent events. Use tree diagrams for independent events. Use tree diagrams for dependent events /End of term assessment	6	Non-calculator Methods - Estimating answers to calculations (R) Understand and use limits of accuracy, Use number sense, Solve financial maths problems. Break down and solve multi-step problems / End of term assessment	6	Manipulating expressions - Form and solve equations and inequalities with fractions. Represent numbers algebraically. Algebraic arguments and proof
		7	End of term assessment	7		7		7		7	End of term/year assessment

KS4 (Yr 11 -GCSE Grade4/5) X1.4

Lesson	Term 1	Lesson	Term 2	Lesson	Term 3	Lesson	Term 4	Lesson	Term 5	Lesson	Term 6
	Proprotional and Numerical reasoning		**Algebraic and Geometric reasoning**		**Proprotional and Numerical reasoning**		**Algebraic and Geometric reasoning**		**Representations**		**Revision and Examinations**
1	Ratio - 4/5 Using scales and maps,	1	Equations and Inequalities - 4/5 Solve two-step equations 4/5 Solve multi-step equations (1) 4/5 Solve multi-step equations (2) 4/5 Solve inequalities	1	Types of Number - 4/5 Products of prime factors 4/5 HCF and LCM	1	Area and Volume - 4/5 Area of a circle (1) 4/5 Area of a circle (2) 4/5 Volume of a prism (1) 4/5 Volume of a prism (2)	1	Probability - 4/5 Sample spaces 4/5 More than one event 4/5 Tree diagrams	1	Revision and Examinations
2	Rates - Density 4/5 Flow problems	2	Straight Line Graphs - 4/5 Interpret straight line graphs (1) 4/5 Interpret straight line graphs (2) 4/5 Interpret y=mx + c	2	Fractions - 4/5 Adding and subtracting fractions 4/5 Multiplying fractions 4/5 Dividing fractions	2	Transforming Shapes - 4/5 Translation and vectors 4/5 Describing transformation	2	Constructions - 4/5 Bisectors (1) 4/5 Bisectors (2)	2	Revision and Examinations
3	Direct Proportion - 4/5 Converting miles and kilometres 4/5 Direct proportion graphs 4/5 Comparing direct and inverse proportion	3	Quadratic and Other Graphs - 4/5 Speed Distance Time Graphs (1) 4/5 Speed Distance Time Graphs (2)	3	Percentages - 4/5 Percentage increase/decrease 4/5 Expressing as a percentage (1) 4/5 Expressing as a percentage (2)	3	Right-Angled Triangles - 4/5 Pythagoras' theorem (1) 4/5 Pythagoras' theorem (2) 4/5 Trigonometry - Finding missing sides 4/5 Trigonometry - Finding missing angles	3	Representing Data - 4/5 Pie charts 4/5 Scatter graphs (1) 4/5 Scatter graphs (2)	3	Revision and Examinations
4	Number Sense - 4/5 Derived facts: Multiplicative 4/5 Standard form: Large numbers 4/5 Standard form: Small numbers	4	Angles Rules - 4/5 Alternate and Corresponding 4/5 Co-interior angles	4	Averages Ratios and Fractions - 4/5 Mean from a frequency table 4/5 Mean from a grouped frequency table 4/5 Comparing distributions	4	Manipulating Algebra Sequences - 4/5 Expand a pair of binomials 4/5 Identify algebraic constructs,	4	Revision and Past Paper Practice	4	Revision and Examinations
5	Accuracy - 4/5 Roots and indices (1) 4/5 Roots and indices (2) 4/5 Limits of accuracy	5	Shape Properties - Types of quadrilateral 4/5 Angles in polygons 4/5 Equations and angles	5	Context Problems - 4/5 Solve problems involving ratios and fractions 4/5 Unit pricing ('best buys')	5	Manipulating Algebra Sequences - 4/5 Use the rule of indices (1 and 2) 4/5 Solve a pair of linear simultaneous equations (1 and 2) 4/5 Solve a pair of linear simultaneous equations (2)	5	Revision and Past Paper Practice	5	Introduction to next steps inMaths
6	Calculation - 4/5 Calculating in standard form (1) 4/5 Calculating in standard form (2) 4/5 Circles: Exact answers / End of term assessment	6	Similarity - 4/5 Enlarging shapes 4/5 Similar triangles	6	Context - 4/5 Goal free problems 4/5 Breaking down problems 4/5 Financial maths problems (1) 4/5 Financial maths problems (2)Problems / End of Term Assessment	6	Manipulating Algebra Sequences - 4/5 Factorise quadratic expressions, 4/5 Use formulae to generate sequences 4/5 Find the rule for the nth term of a sequence / End of Term Assessment	6	Revision and Past Paper Practice	6	Introduction to next steps inMaths
		7	End of Term Assessment	7		7		7		7	Introduction to next steps inMaths

KS4 (Yr 11) X2.4

Lesson	Term 1	Lesson	Term 2	Lesson	Term 3	Lesson	Term 4	Lesson	Term 5	Lesson	Term 6
	Proprotional and Numerical reasoning		**Algebraic and Geometric reasoning**		**Proprotional and Numerical reasoning**		**Algebraic and Geometric reasoning**		**Representations**		**Revision and Examinations**
1	Ratio - G Equivalent ratios G Working out parts and wholes	1	Equations and Inequalities - G Inverse operations G Solve one-step equations (1) G Solve one-step equations (2)	1	Types of Number - G Factors and multiples G Primes, squares and cubes (1) G Primes, squares and cubes (2)	1	Area - G Area of rectangles and parallelograms G Area of a triangle	1	Probability - G Equally likely events G Experimental and theoretical probability	1	Revision and Examinations

KS4 (Yr 11 - GCSE Groundwork/Grade1-)

Lesson	Term 1	Lesson	Term 2	Lesson	Term 3	Lesson	Term 4	Lesson	Term 5	Lesson	Term 6
2	Rates - G Speed, distance and time (1) G Speed, distance and time (2)	2	Straight Line Graphs - G Interpret and use coordinates G Plot straight line graphs	2	Fractions - G Equivalent fractions G Key fractions and decimals(1) G Key fractions and decimals(2) G Key fractions and decimals(3)	2	Transforming Shapes - G Reflection G Rotation	2	Constructions - G Plans and elevations G Constructing triangles	2	Revision and Examinations
3	Direct Proportion - G Scaling up and down G Exchange rates	3	Quadratic and Other Graphs - G Plot quadratic graphs G Investigate shapes of graphs G Read information from graphs	3	Percentages - G Key percentages G Working out percentages	3	Right-Angled Triangles - Pythagoras' theorem (1)	3	Representing Data - G Bar and line charts G Two way tables	3	Revision and Examinations
4	Number Sense - G Comparing integers G Derived facts: Additive,	4	Angles Rules - G Types of angle G Basic angle rules(1) G Basic angle rules(2) G Angles in a triangle	4	Averages - G The mean G The median and mode (1) G The median and mode (2)	4	Manipulating Algebra Sequences - G Simplify algebraic expressions by collecting like terms G Expand and factorise single brackets (1)	4	Revision and Past Paper Practice	4	Revision and Examinations
5	Accuracy - G Decimal places G Significant figures	5	Shape Properties - G Types of triangle, Types of quadrilateral,	5	Ratios and Fractions- G Link ratios and fractions G Compare ratios and fractions	5	Manipulating Algebra Sequences - G Expand and factorise single brackets (2), G Simplify expressions involving sums, products and powers	5	Revision and Past Paper Practice	5	Introduction to next steps inMaths
6	Calculation - G Four operations: Integers (1,2,3 and 4) G Four operations: Decimals (1,2,3 and 4) /End of term assessment	6	Similarity - G Recognising similar shapes G Finding missing sides	6	Context Problems - G Modelling problems / End of Term Assessment	6	Manipulating Algebra Sequences - G Recognise and continue patterns G Continue a sequence given rules in words / End of Term Assessment	6	Revision and Past Paper Practice	6	Introduction to next steps inMaths
		7	End of Term Assessment	7		7		7		7	Introduction to next steps inMaths

	Lesson	Term 1	Lesson	Term 2	Lesson	Term 3	Lesson	Term 4	Lesson	Term 5	Lesson	Term 6
Class		Number and calculation		Number and calculation		Measures, Geometry		Geometry, Algebra		Albegra		Statistics

KS4 (Yr 11 - GCSE Access to Foundation Grade1-3) X3.4

Lesson	Term 1	Lesson	Term 2	Lesson	Term 3	Lesson	Term 4	Lesson	Term 5	Lesson	Term 6
1	Place value - Count, read, write and order whole numbers to 100 and know what each digit represents (including 0 as a place holder)	1	Mulitplication and Division - To undersatand the operation of multiplication as repeated addition [or as describing an array.], use halving as the inverse of doubling. Halve even two-digit numbers with even tens	1	Measures - Estimate, measure and compare lengths, using standard units; suggest suitable units and equipment for such measurements, Read a simple scale to the nearest labelled division, including using a ruler to draw and measure lines to the nearest centimetre	1	Transformations - Use mathematical vocabulary to describe position.	1	Use letter symbols to represent unknown numbers and know that letters represent numbers, not objects	1	Data handling - Solve a given problem by organising and interpreting numerical data in simple lists.
2	Ordering - Place numbers on a number line	2	Mulitplication and Division - Double numbers up to 50, facts for the 2 and 10 multiplication tables, then for 5, to know the divisibility rules for 2, 5 and 10	2	Measures - Find areas by counting squares, Convert between digital and analogue times using the 12-hour clock (i.e. tell the time).	2	Transformations - Use mathematical vocabulary to describe direction and movement (including clockwise and anti-clockwise).	2	Simplify linear algebraic expressions by collecting like terms (one variable only)	2	Data handling - Solve a given problem by organising and interpreting numerical data in simple tables.
3	Rounding - Round two-digit numbers to the nearest 10, Describe and extend simple number sequences (including odd/even numbers, counting on or back in ones or tens from any two-digit number)	3	Mulitplication and Division - Understand division and recognise that division is the inverse of multiplication, Find pairs of factors of numbers up to 20, identifying square and prime numbers, i)Use a calculator to multiply and divide	3	Measures - Use units of time and know the relationships between them (second, minute, hour, day, week, month, year). Find the perimeter of a shape by adding lengths of sides	3	Transformations - Identify lines of symmetry in simple shapes and recognise shapes with no lines of symmetry	3	Construct and solve simple linear equations with integer coefficients (unknown on one side only)	3	Data handling - Solve a given problem by organising and interpreting numerical data in simple graphs.
4	Addition and Subtraction - all addition and subtraction facts for each number to 10, then 20, adding and subtracting combinations of even and odd numbers, subtraction is the inverse of addition	4	Fractions - Recognise unit fractions such as 1/2, 1/3, 1/4, 1/5, 1/10 and use them to find fractions of shapes and numbers.	4	Shape - Use the mathematical names for common 2D shapes (triangle, square, rectangle, hexagon, circle, quadrilateral) and 3D shapes (cube, cuboid, pyramid, sphere, cone, cylinder);	4	Coordinates - Indentify features of a graph, heading x and y axis, scales	4	Construct and solve simple linear equations with integer coefficients (unknown on one side only)	4	Probability - Understand the language of probability
5	Addition and Subtraction - Use a number line to show addition and subtraction, Find missing numbers in addition and subtraction calculations up to 20,	5	Fractions - Recognise the equivalence of simple fractions	5	Shape - sort shapes and describe some of their features (using vocabulary: side, angle, face, edge).	5	Coordinates - Read and plot coordinates in the first quadrant	5	Use simple formulae; substitute positive integers into simple linear expressions and formulae	5	Probability - Understand the language of probability
6	Addition and Subtraction - Use knowledge that addition can be done in any order to do mental calculations more efficiently, Use a calculator to add and subtract and to check answers, including using the inverse of subtraction / End of Term Assessment	6	Fractions and decimals - Place fractions and decimals on a number line, recognise simple equivalents (0.5 & 1/2 , 0.1 & 1/10 , 0.25 & 1/4 , 0.75 & 3/4).	6	Shape - Identify right angles/End of term assessment	6	End of Term assessment	6	End of term assessment	6	Probability - Understand the language of probability
		7	End of term assessment	7		7		7		7	End of term assessments

	Lesson	Term 1	Lesson	Term 2	Lesson	Term 3	Lesson	Term 4	Lesson	Term 5	Lesson	Term 6
Class		Albegra 1, FDP, Shape 1		Number 1, Graphs, Ration and proportion, Shape 2		Data, Algebra 2, Pythagoras and Trigonometry		Probability, Number 2, Transformations, Constructions		Algebra 3, Vectors, Similarity		Revision and Examinations

KS5(Post-16 GCSE Grade 4) X1.5 and Y1.5

Lesson	Term 1	Lesson	Term 2	Lesson	Term 3	Lesson	Term 4	Lesson	Term 5	Lesson	Term 6
1	Simplifying expressions - Simplify complex expressions	1	Intergers and Fractions	1	Finding averages, charts and graphs	1	Single event probability, listing outcomes	1	Simultaneous linear equations	1	Revision and Examinations
2	Substituiton and Solving linear equations - Find the rule for the nth term of a linear sequence, Use rules for sequences, Solve linear simultaneous equations	2	Rounding and Estimation	2	Recognise correlation	2	Convert to and from standard form	2	Read solutions from graphs	2	Revision and Examinations
3	FDP Equivalence, Calculating percentages	3	Plot y=mx+c	3	Laws of Indicies, Linear sequences	3	Product of prime factors	3	Add and subtract vectors	3	Revision and Examinations
4	Basic angle facts	4	Intepret real life graphs	4	Changing the subject formula	4	Perform reflections and rotations	4	Find missing sides in similar shapes	4	Revision and Examinations
5	Properties of shapes	5	Plot quadratics	5	Finding sides using Pythagoras	5	Perform translations and positive enlargements	5	Understand congruency	5	Introduction to next steps inMaths
6	Interior and exterior angles/End of term assessment	6	Ratio and proportion	6	Find sides and angles using trig ratios/End of term asessment	6	Construct triangles/End of term assessment	6	Consolidation Terms 3,4 and 5	6	Introduction to next steps inMaths
		7	Perimeter and area of 2D shapes, Volume and surface Area of prisms. Consolidation of Terms 1 and 2	7		7		7		7	Introduction to next steps inMaths

	Lesson	Term 1	Lesson	Term 2	Lesson	Term 3	Lesson	Term 4	Lesson	Term 5	Lesson	Term 6
Class		Proportional and Numerical reasoning		Algebraic and Geometric reasoning		Proprotional and Numerical reasoning		Algebraic and Geometric reasoning		Representations		Revision and Examinations

Y2.5

Lesson	Term 1	Lesson	Term 2	Lesson	Term 3	Lesson	Term 4	Lesson	Term 5	Lesson	Term 6
1	Ratio - G Equivalent ratios G Working out parts and wholes	1	Equations and Inequalities - G Inverse operations G Solve one-step equations (1) G Solve one-step equations (2)	1	Types of Number - G Factors and multiples G Primes, squares and cubes (1) G Primes, squares and cubes (2)	1	Area - G Area of rectangles and parallelograms G Area of a triangle	1	Probability - G Equally likely events G Experimental and theoretical probability	1	Revision and Examinations

KS5 (Post-16 GCSE Grade 1-3) X2.5 and

Lesson	Term 1	Lesson	Term 2	Lesson	Term 3	Lesson	Term 4	Lesson	Term 5	Lesson	Term 6
2	Rates - G Speed, distance and time (1) G Speed, distance and time (2)	2	Straight Line Graphs - G Interpret and use coordinates G Plot straight line graphs	2	Fractions - G Equivalent fractions G Key fractions and decimals(1) G Key fractions and decimals(2) G Key fractions and decimals(3)	2	Transforming Shapes - G Reflection G Rotation	2	Constructions - G Plans and elevations G Constructing triangles	2	Revision and Examinations
3	Direct Proportion - G Scaling up and down G Exchange rates	3	Quadratic and Other Graphs - G Plot quadratic graphs G Investigate shapes of graphs G Read information from graphs	3	Percentages - G Key percentages G Working out percentages	3	Right-Angled Triangles - Pythagoras' theorem (1)	3	Representing Data - G Bar and line charts G Two way tables	3	Revision and Examinations
4	Number Sense - G Comparing integers G Derived facts: Additive,	4	Angles Rules - G Types of angle G Basic angle rules(1) G Basic angle rules(2) G Angles in a triangle	4	Averages - G The mean G The median and mode (1) G The median and mode (2)	4	Manipulating Algebra Sequences - G Simplify algebraic expressions by collecting like terms G Expand and factorise single brackets (1)	4	Revision and Past Paper Practice	4	Revision and Examinations
5	Accuracy - G Decimal places G Significant figures	5	Shape Properties - G Types of triangle, Types of quadrilateral,	5	Ratios and Fractions- G Link ratios and fractions G Compare ratios and fractions	5	Manipulating Algebra Sequences - G Expand and factorise single brackets (2), G Simplify expressions involving sums, products and powers	5	Revision and Past Paper Practice	5	Introduction to next steps inMaths
6	Calculation - G Four operations: Integers (1,2,3 and 4) G Four operations: Decimals (1,2,3 and 4) /End of term assessment	6	Similarity - G Recognising similar shapes G Finding missing sides	6	Context Problems - G Modelling problems / End of Term Assessment	6	Manipulating Algebra Sequences - G Recognise and continue patterns G Continue a sequence given rules in words / End of Term Assessment	6	Revision and Past Paper Practice	6	Introduction to next steps inMaths
		7	End of Term Assessment	7		7		7		7	Introduction to next steps inMaths

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Lesson	Term 1	Lesson	Term 2	Lesson	Term 3	Lesson	Term 4	Lesson	Term 5	Lesson	Term 6
	Number and calculation		**Number and calculation**		**Measures, Geometry**		**Number and Calculation, Albegra**		**Geometry, Algebra**		**Statistics**
1	Place value - Count, read, write and order whole numbers to 100 and know what each digit represents (including 0 as a place holder)	1	Mulitplication and Division - To undersatand the operation of multiplication as repeated addition [or as describing an array.], use halving as the inverse of doubling. Halve even two-digit numbers with even tens	1	Measures - Estimate, measure and compare lengths, using standard units; suggest suitable units and equipment for such measurements, Read a simple scale to the nearest labelled division, including using a ruler to draw and measure lines to the nearest centimetre	1	Transformations - Use mathematical vocabulary to describe position.	1	Use letter symbols to represent unknown numbers and know that letters represent numbers, not objects	1	Data handling - Solve a given problem by organising and interpreting numerical data in simple lists.
2	Ordering - Place numbers on a number line	2	Mulitplication and Division - Double numbers up to 50, facts for the 2 and 10 multiplication tables, then for 5, to know the divisibility rules for 2, 5 and 10	2	Measures - Find areas by counting squares, Convert between digital and analogue times using the 12-hour clock (i.e. tell the time).	2	Transformations - Use mathematical vocabulary to describe direction and movement (including clockwise and anti-clockwise).	2	Simplify linear algebraic expressions by collecting like terms (one variable only)	2	Data handling - Solve a given problem by organising and interpreting numerical data in simple tables.
3	Rounding - Round two-digit numbers to the nearest 10, Describe and extend simple number sequences (including odd/even numbers, counting on or back in ones or tens from any two-digit number)	3	Mulitplication and Division - Understand division and recognise that division is the inverse of multiplication, Find pairs of factors of numbers up to 20, identifying square and prime numbers, i)Use a calculator to multiply and divide	3	Measures - Use units of time and know the relationships between them (second, minute, hour, day, week, month, year). Find the perimeter of a shape by adding lengths of sides	3	Transformations - Identify lines of symmetry in simple shapes and recognise shapes with no lines of symmetry	3	Construct and solve simple linear equations with integer coefficients (unknown on one side only)	3	Data handling - Solve a given problem by organising and interpreting numerical data in simple graphs
4	Addition and Subtraction - all addition and subtraction facts for each number to 10, then 20, adding and subtracting combinations of even and odd numbers, subtraction is the inverse of addition	4	Fractions - Recognise unit fractions such as 1/2, 1/3, 1/4, 1/5, 1/10 and use them to find fractions of shapes and numbers.	4	Shape - Use the mathematical names for common 2D shapes (triangle, square, rectangle, hexagon, circle, quadrilateral) and 3D shapes (cube, cuboid, pyramid, sphere, cone, cylinder);	4	Coordinates - Indentify features of a graph, heading x and y axis, scales	4	Construct and solve simple linear equations with integer coefficients (unknown on one side only)	4	Probability - Understand the language of probability
5	Addition and Subtraction - Use a number line to show addition and subtraction, Find missing numbers in addition and subtraction calculations up to 20,	5	Fractions - Recognise the equivalence of simple fractions	5	Shape - sort shapes and describe some of their features (using vocabulary: side, angle, face, edge).	5	Coordinates - Read and plot coordinates in the first quadrant	5	Use simple formulae; substitute positive integers into simple linear expressions and formulae	5	Probability - Understand the language of probability
6	Addition and Subtraction - Use knowledge that addition can be done in any order to do mental calculations more efficiently, Use a calculator to add and subtract and to check answers, including using the inverse of subtraction / End of Term Assessment	6	Fractions and decimals - Place fractions and decimals on a number line, recognise simple equivalents (0.5 & 1/2 , 0.1 & 1/10 , 0.25 & 1/4 , 0.75 & 3/4).	6	Shape - Identify right angles/End of term assessment	6	End of Term assessment	6	End of term assessment	6	Probability - Understand the language of probability
7		7	End of term assessment	7		7		7		7	End of term assessments