

St Mary's Level	Number	Algebra	Geometry	Ratio	Probability	Data
8	Effect of repeated percentage change	Factorise quadratic expressions	Calculate volume and surface area of a cylinder Calculate volumes, areas and perimeters after enlargements		Use tree diagrams to find the probabilities of two or more events	Identify a random sample
7	Use the four operators with mixed numbers Reverse percentages Index laws for multiplying and dividing Multiplying and dividing by a power of 10 Round to a number of significant figures Calculate percentage change	Use factorising Expand expressions involving brackets Form and solve equations with unknowns on both sides Solve by trial and improvement Simplify expressions involving brackets and powers Use the index laws in algebraic calculations and expressions Simplify expressions with powers Find the Y intercept of a straight line graphs Find the gradient and equation of a straight line Plot and use non linear graphs	Calculate the surface area of prisms Calculate the volume of right prisms Calculate the diameter and radius Use Pythagoras' Theorem Transformations including descriptions Use loci Identify congruent and similar shapes			Understand misleading graphs Using lines of best fit
6	Four operations with negative numbers Calculate with squares, cubes and roots Estimate answers Calculations involving brackets Convert between improper and mixed numbers Add and subtract fractions Calculate fractions of amounts Calculate percentage increases and decreases Write the prime factor decomposition Use the PPF to find the HCF and LCM Use powers of 10	Substitute into formula Substitute into expressions involving powers Solve problems with equations Form and solve equations with brackets Write and simplify expressions involving brackets and powers Plot straight line graphs Use $y=mx+c$	Calculate interior and exterior angles Calculate areas of parallelograms, trapeziums Recognise geometric sequences Convert between metric measures for area and volume Work out the midpoint of a line segment Recognise graphs of $y=x$ and $y=-x$ Calculate the circumference and area of a circle Constructions – bisecting angles, perpendiculars Draw diagrams to scale	Write ratios in the form 1:n	List all possible outcomes in sample space diagrams and Venn Diagrams	Choosing appropriate averages Draw and interpret pie charts Describe correlations

5	<p>Understand multiples, factors and primes. Find HCF and LCM of two numbers Divide a 3 digit number by a 2 digit number Use index notation for squares and roots Work out simple fractions of amounts Write fractions as decimals Multiply fraction by fraction Four operators using decimals and whole numbers Calculate percentages with or without calculators Recognise fractional equivalents to important recurring decimals</p>	<p>Simplify expressions by collecting like terms Construct expressions Write and solve two step equations Work out and use expressions for the nth term in an arithmetic sequence Generate sequences Draw straight line graphs Recognise lines parallel to the axis</p>	<p>Work out unknown angles in parallel lines Describe line and rotational symmetry Use properties of triangles and quadrilaterals to solve angle problems Calculate the area of triangles Calculate the area and perimeter of compound shapes Calculate surface areas Calculate volumes of cubes and cuboids Constructions – triangles, nets of 3D solids Measure and use bearings</p>	<p>Compare different proportions using percentages Simplify a ratio expressed in fractions or decimals Solve simple direct proportion / ratio problems Use the unitary method Solve best buy problems</p>	<p>Identify mutually exclusive events and outcomes Find the probability of an event not happening Use estimated probability Estimate probability using data from an experiment</p>	<p>Choose suitable sample size Use two way tables Interpret and draw line graphs Draw scatter graphs</p>
4	<p>Find all factor pairs of any whole numbers Recognise square numbers Written and mental strategies for multiplication Compare and simplify fractions Write one as a fraction of another Add / subtract fractions</p>	<p>Write and solve simple equations</p>	<p>Work out angles at a point and on a straight line. Properties of quadrilaterals Identify nets of different 3D shapes Use positive and negative coordinates Use vertically opposite angles Calculate angles in a triangle</p>	<p>Share a quantity in two or more parts in a given ratio. Write a ratio in its simplest form</p>	<p>Find all possible outcomes in an event Estimate probabilities Write probabilities as fractions, decimals and percentages Use a probability scale with words and numbers</p>	<p>Primary and secondary data Plan and collect data Group data into equal class widths Draw dual and compound bar charts Find the mean, median, mode and range for a set of data Compare averages</p>
3	<p>Round to the nearest 10 Subtract numbers in different ways Multiply numbers Use times tables to help divide Multiply and divide by 10, 100, 1000 Use simple negative numbers Continue a sequence including decimals Multiply 3 digit numbers by a single digit Round to the nearest 100, 1000 Divide 3 digit numbers by a single digit Identify factors Identify prime numbers</p>	<p>Simplify expressions by collecting like terms</p>	<p>Work out the terms of an arithmetic sequence using the term to term rule Find outputs of simple functions Rad information from real-life graphs Estimate and choose suitable units to measure length, mass and capacity Know a right angle is 90 degrees Recognise parallel and perpendicular lines Recognise acute, obtuse and reflex angles Describe lines of symmetry Find perimeter of squares, rectangles and regular</p>		<p>The language of probability</p>	<p>Use frequency tables Understand and draw a grouped bar chart</p>

	Identify equivalent fractions		<p>polygons</p> <p>Count faces, vertices and edges</p> <p>Describe and continue special sequences</p>			
2	<p>Add numbers in different ways</p> <p>Recognise multiples of 2, 5, 10 and 25</p> <p>Work out multiples</p> <p>Write numbers in words and figures</p> <p>Recognise quarters, half and three quarter turns</p> <p>Order fractions</p>		<p>Draw lines to the nearest mm, cm</p> <p>Order metric measurements</p> <p>Identify shapes and their properties</p>			<p>Find information from charts</p> <p>Organise data using tally charts</p>