

Number & place Value	Addition & Subtraction	Multiplication & Division	Fractions (including decimals & %)	Measurement	Geometry: Properties of Shapes
<ul style="list-style-type: none"> <li>❖ <u>Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit.</u></li> <li>❖ <u>Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.</u></li> <li>❖ <u>Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.</u></li> <li>❖ <u>Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.</u></li> <li>❖ Solve number problems and practical problems that involve all of the above.</li> <li>❖ Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).</li> <li>❖ <u>Add and subtract numbers mentally with increasingly large numbers (example, <math>2300 = 10\ 162</math>).</u></li> <li>❖ Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.</li> <li>❖ <u>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</u></li> </ul>	<ul style="list-style-type: none"> <li>❖ <u>Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.</u></li> <li>❖ Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.</li> <li>❖ <u>Establish whether a number up to 100 is prime and recall prime numbers up to 19.</u></li> <li>❖ <u>Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers.</u></li> <li>❖ <u>Multiply and divide numbers mentally drawing upon known facts.</u></li> <li>❖ <u>Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.</u></li> <li>❖ <u>Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.</u></li> <li>❖ Recognise and use square numbers and cube numbers, and the notation for squared (<math>^2</math>) and cubed (<math>^3</math>).</li> <li>❖ <u>Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.</u></li> <li>❖ Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.</li> <li>❖ <u>Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.</u></li> </ul>	<ul style="list-style-type: none"> <li>❖ Compare and order fractions whose denominators are all multiples of the same number.</li> <li>❖ <u>Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.</u></li> <li>❖ Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements <math>&gt; 1</math> as a mixed number [for example, <math>\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}</math>].</li> <li>❖ Add and subtract fractions with the same denominator and denominators that are multiples of the same number.</li> <li>❖ Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.</li> <li>❖ <u>Read and write decimal numbers as fractions [for example, <math>0.71 = \frac{71}{100}</math>].</u></li> <li>❖ Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.</li> <li>❖ Round decimals with two decimal places to the nearest whole number and to one decimal place.</li> <li>❖ <u>Read, write, order and compare numbers with up to three decimal places.</u></li> <li>❖ Solve problems involving number up to three decimal places.</li> <li>❖ <u>Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.</u></li> <li>❖ <u>Solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math>, <math>\frac{2}{5}</math>, <math>\frac{4}{5}</math> and those fractions with a denominator of a multiple of 10 or 25.</u></li> </ul>	<ul style="list-style-type: none"> <li>❖ Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre).</li> <li>❖ Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.</li> <li>❖ <u>Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres</u></li> <li>❖ <u>Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm<sup>2</sup>) and square metres (m<sup>2</sup>).</u></li> <li>❖ Estimate the area of irregular shapes.</li> <li>❖ Estimate volume [for example, using 1 cm<sup>3</sup> blocks to build cuboids (including cubes)] and capacity [for example, using water].</li> <li>❖ Solve problems involving converting between units of time.</li> <li>❖ Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.</li> <li>❖ <u>Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.</u></li> <li>❖ Draw given angles, and measure them in degrees (<math>^{\circ}</math>).</li> </ul> <p><i>Identify:</i></p> <ul style="list-style-type: none"> <li>❖ angles at a point and one whole turn (total 3600);</li> <li>❖ angles at a point on a straight line and <math>\frac{1}{2}</math> a turn (total 1800);</li> <li>❖ other multiples of 90.</li> <li>❖ Use the properties of rectangles to deduce related facts and find missing lengths and angles.</li> <li>❖ <u>Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</u></li> </ul>
					<b>Geometry: Position &amp; Direction</b>
					<ul style="list-style-type: none"> <li>❖ Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.</li> </ul>
					<b>Statistics</b>
					<ul style="list-style-type: none"> <li>❖ Solve comparison, sum and difference problems using information presented in a line graph.</li> <li>❖ <u>Complete, read and interpret information in tables, including timetables.</u></li> </ul>