

Number & place Value	Addition & Subtraction	Multiplication & Division	Fractions (including decimals & %)	Measurement	Geometry: Properties of Shapes
<ul style="list-style-type: none"> ❖ <u>Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit.</u> ❖ <u>Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.</u> ❖ <u>Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.</u> ❖ <u>Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.</u> ❖ Solve number problems and practical problems that involve all of the above. ❖ Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. 	<ul style="list-style-type: none"> ❖ Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction). ❖ <u>Add and subtract numbers mentally with increasingly large numbers</u> (example, $2300 = 10\ 162$) ❖ Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. ❖ <u>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</u> 	<ul style="list-style-type: none"> ❖ <u>Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.</u> ❖ Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. ❖ <u>Establish whether a number up to 100 is prime and recall prime numbers up to 19.</u> ❖ <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> ❖ <u>Multiply and divide numbers mentally drawing upon known facts.</u> ❖ <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> ❖ <u>Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.</u> ❖ Recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³). ❖ <u>Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.</u> ❖ Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. ❖ <u>Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.</u> 	<ul style="list-style-type: none"> ❖ Compare and order fractions whose denominators are all multiples of the same number. ❖ <u>Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.</u> ❖ Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]. ❖ Add and subtract fractions with the same denominator and denominators that are multiples of the same number. ❖ Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. ❖ <u>Read and write decimal numbers as fractions</u> [for example, $0.71 = \frac{71}{100}$]. ❖ Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. ❖ Round decimals with two decimal places to the nearest whole number and to one decimal place. ❖ <u>Read, write, order and compare numbers with up to three decimal places.</u> ❖ Solve problems involving number up to three decimal places. ❖ <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> ❖ <u>Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25.</u> 	<ul style="list-style-type: none"> ❖ Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre). ❖ Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. ❖ <u>Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres</u> ❖ <u>Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²).</u> ❖ Estimate the area of irregular shapes. ❖ Estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water]. ❖ Solve problems involving converting between units of time. ❖ Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. 	<ul style="list-style-type: none"> ❖ Identify 3-D shapes, including cubes and other cuboids, from 2-D representations. ❖ <u>Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.</u> ❖ Draw given angles, and measure them in degrees (°). <p><i>Identify:</i></p> <ul style="list-style-type: none"> ❖ angles at a point and one whole turn (total 3600); ❖ angles at a point on a straight line and $\frac{1}{2}$ a turn (total 1800); ❖ other multiples of 90. ❖ Use the properties of rectangles to deduce related facts and find missing lengths and angles. ❖ <u>Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</u>
					Geometry: Position & Direction
					<ul style="list-style-type: none"> ❖ 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.
					Statistics
					<ul style="list-style-type: none"> ❖ Solve comparison, sum and difference problems using information presented in a line graph. ❖ <u>Complete, read and interpret information in tables, including timetables.</u>