























# Maths Learning Ladders



Year 4	Areas of Study
<p>Number: Place Value</p>	<ul style="list-style-type: none"> <li> Count in multiples of 25 and 1000.</li> <li> Find 1000 more or less than a given number.</li> <li> Recognise the place value of each digit in a four digit number (thousands, hundreds, tens and ones)</li> <li> Order and compare numbers beyond 1000</li> <li> Identify, represent and estimate numbers using different representations.</li> <li> Round any number to the nearest 10, 100 or 1000</li> <li> Solve number and practical problems that involve all of the above and with increasingly large positive numbers.</li> <li> Count backwards through zero to include negative numbers.</li> <li> Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.</li> </ul>
<p>Number: Addition and Subtraction</p>	<ul style="list-style-type: none"> <li> Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.</li> <li> Estimate and use inverse operations to check answers to a calculation.</li> <li> Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.</li> </ul>
<p>Number: Multiplication and Division</p>	<ul style="list-style-type: none"> <li> Recall and use multiplication and division facts for multiplication tables up to <math>12 \times 12</math>.</li> <li> Count in multiples of 6, 7 and 9</li> <li> Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers.</li> <li> Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit; integer scaling problems and harder correspondence problems such as <math>n</math> objects are connected to <math>m</math> objects.</li> <li> Recognise and use factor pairs and commutativity in mental calculations.</li> <li> Multiply two digit and three digit numbers by a one digit number using formal written layout.</li> </ul>

<p>Number: Fractions</p>	<ul style="list-style-type: none"> <li> Recognise and show, using diagrams, families of common equivalent fractions.</li> <li> Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.</li> <li> Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.</li> <li> Add and subtract fractions with the same denominator.</li> </ul>
<p>Measurement</p>	<ul style="list-style-type: none"> <li> Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres</li> <li> Convert between different units of measure [for example, kilometre to metre, hour to minute]</li> <li> Find the area of rectilinear shapes by counting squares.</li> <li> Estimate, compare and calculate different measures, including money in pounds and pence.</li> <li> Solve simple measure and money problems involving fractions and decimals to two decimal places.</li> <li> Read, write and convert time between analogue and digital 12- and 24-hour clocks.</li> <li> Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.</li> </ul>
<p>Geometry: Properties of Shape</p>	<ul style="list-style-type: none"> <li> Identify acute and obtuse angles and compare and order angles up to two right angles by size.</li> <li> Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.</li> <li> Identify lines of symmetry in 2-D shapes presented in different orientations.</li> <li> Complete a simple symmetric figure with respect to a specific line of symmetry.</li> </ul>
<p>Geometry: Position and Direction</p>	<ul style="list-style-type: none"> <li> Describe positions on a 2-D grid as coordinates in the first quadrant.</li> <li> Plot specified points and draw sides to complete a given polygon.</li> <li> Describe movements between positions as translations of a given unit to the left/ right and up/ down.</li> </ul>
<p>Statistics</p>	<ul style="list-style-type: none"> <li> Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.</li> <li> Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.</li> </ul>