


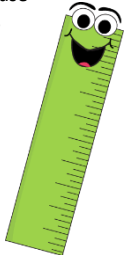


Key Learning in Mathematics – Year 5

Number – number and place value	Number – addition and subtraction	Number – multiplication and division
<ul style="list-style-type: none"> Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 Interpret negative numbers in context, count on and back with positive and negative whole numbers, including through zero Read Roman numerals to 1000 (M); recognise years written as such Solve number and practical problems that involve all of the above 	<ul style="list-style-type: none"> Add and subtract numbers mentally with increasingly large numbers Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why 	<ul style="list-style-type: none"> Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers Establish whether a number up to 100 is prime and recall prime numbers up to 19 Recognise and use square (²) and cube (³) numbers, and notation Multiply and divide numbers mentally drawing upon known facts Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes 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 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 Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates
<h3>Number – fractions, decimals and percentages</h3> <ul style="list-style-type: none"> Recognise mixed numbers and improper fractions and convert from one form to the other and write statements > 1 as a mixed number (e.g. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$) Read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$) Compare and order fractions whose denominators are all multiples of the same number Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents Add and subtract fractions with denominators and that are multiples of the same number Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams Read and write decimal numbers as fractions. 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. Read, write, order and compare numbers with up to three decimal places. 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 fraction Solve problems involving fractions and decimals to three places 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 fractions with a denominator of a multiple of 10 or 25 	<h3>Geometry – properties of shapes</h3> <ul style="list-style-type: none"> Distinguish between regular and irregular polygons based on reasoning about equal sides and angles Use the properties of rectangles to deduce related facts and find missing lengths and angles Identify 3-D shapes from 2-D representations Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles Draw given angles, and measure them in degrees (°) Identify: <ul style="list-style-type: none"> angles at a point and one whole turn (total 360°) angles at a point on a straight line and half a turn (total 180°) other multiples of 90° 	<h3>Measurement</h3> <ul style="list-style-type: none"> Estimate volume ((e.g., using 1 cm³ blocks to build cuboids (including cubes)) and capacity (e.g. using water) Convert between different units of metric measure (e.g. km and m, cm and m, cm and mm, g and kg, l and ml) Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints Measure/calculate the perimeter of composite rectilinear shapes Calculate and compare the area of squares and rectangles, use standard units square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes Solve problems involving converting between units of time Use all four operations to solve problems involving measure using decimal notation, including scaling 
	<h3>Geometry – position and direction</h3> <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 	
	<h3>Statistics</h3> <ul style="list-style-type: none"> Complete, read and interpret information in tables and timetables Solve comparison, sum and difference problems using information presented in a line graph 