

# Year 6

Number – number & place value	Number – addition, subtraction multiplication & division	Number – Fractions (include. %'s & decimals)	Ratio & Proportion	Algebra	Measurement	Geometry– properties of shapes	Geometry– position & direction	Statistics
<ul style="list-style-type: none"> <li>Read, write &amp; compare numbers up to 10000000 &amp; determine the value of each digit</li> <li>Round any whole number to a required degree of accuracy</li> <li>Use negative numbers in context, &amp; calculate intervals across 0</li> <li>Solve number &amp; practical problems that involve all of the above</li> </ul>	<ul style="list-style-type: none"> <li>Multiply multi digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</li> <li>Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, &amp; interpret remainders as whole number remainders, fractions or by rounding, as appropriate for the context</li> <li>Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context</li> <li>Perform mental calculations, including with mixed operations &amp; large numbers</li> <li>ID common factors, common multiples &amp; prime numbers</li> <li>Use their knowledge of the order of operations to carry out calculations involving the four operations</li> <li>Solve addition &amp; subtraction multi-step problems in contexts, deciding which operations &amp; methods to use &amp; why</li> <li>Solve problems involving addition, subtraction multiplication &amp; division</li> <li>Use estimation to check answers to calculations &amp; determine, in the context of a problem, an appropriate degree of accuracy</li> </ul>	<ul style="list-style-type: none"> <li>Use common factors to simplify fractions; use common multiples to express fractions in the same denomination</li> <li>Compare &amp; order fractions, including fractions &gt;1</li> <li>Add &amp; subtract fractions with different denominators &amp; mixed numbers, using the concept of equivalent fractions</li> <li>Multiply simple pairs of proper fractions, writing the answer in the simplest form (eg <math>\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}</math>)</li> <li>Divide proper fractions by whole numbers (eg <math>\frac{1}{3} \div 2 = \frac{1}{6}</math> (so <math>\frac{1}{3} \div \frac{2}{1} = \frac{1}{3} \times \frac{1}{2} = \frac{1}{6}</math>))</li> <li>Associate a fraction with division &amp; calculate decimal fraction equivalents (eg 0.375) for a simple fraction (eg <math>\frac{3}{8}</math>)</li> <li>ID the value of each digit in numbers given to 3 decimal places &amp; multiply &amp; divide numbers by 10, 100 &amp; 1000 giving answers up to 3 decimal places</li> <li>Multiply one-digit numbers with up to 2 decimal places by whole numbers</li> <li>Use written division methods in cases where the answer has up to 2 decimal places</li> <li>Solve problems which require answers to be rounded to specified degrees of accuracy</li> <li>Recall &amp; use equivalences between simple fractions, decimals &amp; percentages, including in different contexts</li> </ul>	<ul style="list-style-type: none"> <li>Solve problems involving the relative sizes of 2 quantities where missing values can be found by using integer multiplication &amp; division facts</li> <li>Solve problems involving the calculation of percentage (eg of measures, &amp; such as 16% of 360) &amp; the use of percentages for comparison</li> <li>Solve problems involving similar shapes where the scale factor is known or can be found</li> <li>Solve problems involving unequal sharing &amp; grouping using knowledge of fractions &amp; multiples</li> </ul>	<ul style="list-style-type: none"> <li>Use simple formulae</li> <li>Generate &amp; describe linear number sequences</li> <li>Express missing number problems algebraically</li> <li>Find pairs of numbers that satisfy an equation with 2 unknowns</li> <li>Enumerate possibilities of combination of 2 variables</li> </ul>	<ul style="list-style-type: none"> <li>Solve problems involving the calculation &amp; conversion of units of measure, using decimal notation up to 3 decimal places where appropriate</li> <li>Use, read, write &amp; convert between standard units, converting measurements of length, mass, volume &amp; time from a smaller unit of measure to a larger unit, &amp; vice versa, using decimal notation up to 3 decimal places</li> <li>Convert between miles &amp; kilometres</li> <li>Recognise that shapes with the same areas can have different perimeters &amp; vice versa</li> <li>Recognise when it is possible to use formulae for area &amp; volume of shapes</li> <li>Calculate the area of parallelograms &amp; triangles</li> <li>Calculate, estimate &amp; compare volume of cubes &amp; cuboids using standard units, including cubic cm's (cm<sup>3</sup>) &amp; cubic m's (m<sup>3</sup>) &amp; extending to other units (eg mm<sup>3</sup> &amp; km<sup>3</sup>)</li> </ul>	<ul style="list-style-type: none"> <li>Draw 2-D shapes using given dimensions &amp; angles</li> <li>Recognise, describe &amp; build simple 3-D shapes, including marked nets</li> <li>Compare &amp; classify geometric shapes based on their properties &amp; sizes &amp; find unknown angles in any triangles, quadrilateral, &amp; regular polygons</li> <li>Illustrate &amp; name parts of a circle, including radius, diameter &amp; circumference &amp; know that the diameter is twice the radius</li> <li>Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, &amp; find missing angles</li> </ul>	<ul style="list-style-type: none"> <li>Describe positions on the full coordinate grid (all 4 quadrants)</li> <li>Draw &amp; translate simple shapes on the coordinate plane, &amp; reflect them in the axes</li> </ul>	<ul style="list-style-type: none"> <li>Interpret &amp; construct pie charts &amp; line graphs &amp; use these to solve problems</li> <li>Calculate &amp; interpret the mean as an average</li> </ul>

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