

## Dr Radcliffe's C of E Primary School Mathematics Year 6

Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions, including decimals and percentages	Ratio and Proportion
<p>read, write, order and compare numbers up to 10 000 000 and determine the value of each digit</p> <p>use negative numbers in context, and calculate intervals across zero</p> <p>round any whole number to a required degree of accuracy</p> <p>solve number and practical problems that involve all of the above.</p>	<p>use their knowledge of the order of operations to carry out calculations involving the four operations</p> <p>solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</p> <p>solve problems involving addition, subtraction, multiplication and division</p> <p>use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</p>	<p>perform mental calculations, including with mixed operations and large numbers</p> <p>identify common factors, common multiples and prime numbers</p> <p>multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</p> <p>use their knowledge of the order of operations to carry out calculations involving the four operations</p> <p>divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context</p> <p>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</p> <p>solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</p> <p>solve problems involving addition, subtraction, multiplication and division</p> <p>use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</p>	<p>add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</p> <p>compare and order fractions, including fractions <math>&gt; 1</math></p> <p>use common factors to simplify fractions; use common multiples to express fractions in the same denomination</p> <p>multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, <math>\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}</math></p> <p>associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, <math>\frac{3}{8}</math></p> <p>identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places</p> <p>multiply one-digit numbers with up to two decimal places by whole numbers</p> <p>use written division methods in cases where the answer has up to two decimal places</p> <p>solve problems which require answers to be rounded to specified degrees of accuracy</p> <p>recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.</p>	<p>solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</p> <p>solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison</p> <p>solve problems involving similar shapes where the scale factor is known or can be found</p> <p>solve problems involving unequal sharing and grouping using knowledge of fractions and multiples</p>



**Together We Achieve**

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Algebra	Measurement	Geometry – properties of shape	Geometry – position and direction	Statistics
<p>use simple formulae</p> <p>generate and describe linear number sequences</p> <p>express missing number problems algebraically</p> <p>find pairs of numbers that satisfy an equation with two unknowns enumerate possibilities of combinations of two variables</p>	<p>recognise that shapes with the same areas can have different perimeters and vice versa</p> <p>recognise that shapes with the same areas can have different perimeters and vice versa</p> <p>recognise when it is possible to use formulae for area and volume of shapes</p> <p>calculate the area of parallelograms and triangles</p> <p>recognise when it is possible to use formulae for area and volume of shapes</p> <p>calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm<sup>3</sup>) and cubic metres (m<sup>3</sup>), and extending to other units [for example, mm<sup>3</sup> and km<sup>3</sup>]</p> <p>use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation up to three decimal places</p> <p>convert between miles and kilometres</p> <p>solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate</p>	<p>draw 2-D shapes using given dimensions and angles</p> <p>recognise, describe and build simple 3-D shapes, including making nets</p> <p>compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons</p> <p>recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles</p> <p>illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</p>	<p>describe positions on the full coordinate grid (all four quadrants)</p> <p>draw and translate simple shapes on the coordinate plane, and reflect them in the axes</p>	<p>interpret and construct pie charts and line graphs and use these to solve problems</p> <p>calculate and interpret the mean as an average</p>

