Year 6 Mathematics Targets

Number and Place Value	Number – Addition, Subtraction, Multiplication and Division	Number – Fractions (including decimals and percentages)
⌨ read, write, order and compare numbers up to 10 000 000 and determine the value of each digit; ⌨ **round any whole number to a required degree of accuracy;** ⌨ **use negative numbers in context, and calculate intervals across zero;** ⌨ solve number and practical problems that involve all of the above.	⌨ **multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication;** ⌨ 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; ⌨ **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;** ⌨ perform mental calculations, including with mixed operations and large numbers; ⌨ identify common factors, common multiples and prime numbers; ⌨ use their knowledge of the order of operations to carry out calculations involving the four operations; ⌨ **solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why;** ⌨ solve problems involving addition, subtraction, multiplication and division; ⌨ **use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.**	⌨ use common factors to simplify fractions and use common multiples to express fractions in the same denomination; ⌨ compare and order fractions, including fractions > 1; ⌨ add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions; ⌨ multiply simple pairs of proper fractions, writing the answer in its simplest form (for example, 4); ⌨ 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; ⌨ multiply one-digit numbers with up to two decimal places by whole numbers; ⌨ **use written division methods in cases where the answer has up to two decimal places;** ⌨ **solve problems which require answers to be rounded to specified degrees of accuracy;** ⌨ **recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.**

Measurement	Ratio and Proportion	Algebra	Geometry-Properties of Shapes	Statistics
⌨ solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate; ⌨ **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 to up to three decimal places;** ⌨ convert between miles and kilometres; ⌨ recognise that shapes with the same areas can have different perimeters and vice versa; ⌨ recognise when it is possible to use formulae for area and volume of shapes; ⌨ calculate the area of parallelograms and triangles; ⌨ calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres	⌨ solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts; ⌨ **solve problems involving the calculation of percentages (for example, of measures, and such as 15% of 360) and the use of percentages for comparison;** ⌨ solve problems involving similar shapes where the scale factor is known or can be found; ⌨ **solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.**	⌨ **use simple formulae;** ⌨ generate and describe linear number sequences; ⌨ express missing number problems algebraically; ⌨ find pairs of numbers that satisfy an equation with two unknowns; ⌨ enumerate possibilities of combinations of two variables.	⌨ draw 2-D shapes using given dimensions and angles; ⌨ recognise, describe and build simple 3-D shapes, including making nets; ⌨ **compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons;** ⌨ illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius; ⌨ recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles; ⌨ describe positions on the full coordinate grid (all four quadrants); ⌨ **draw and translate simple shapes on the coordinate plane, and reflect them in the axes.**	⌨ **interpret and construct pie charts and line graphs and use these to solve problems;** ⌨ **calculate and interpret the mean as an average.**

(m³), and extending to other units (for example, mm³ and km³).				