



TATWORTH PRIMARY SCHOOL

Maths

The following content will be introduced during Year6

Counting and number Use negative numbers in context and calculate intervals across zero; 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.

Calculating Perform mental calculations including mixed operations and large numbers; identify common factors, multiple and prime numbers; multiply multi-digit numbers up to four digits by a two-digit whole number using the formal written method of long multiplication; divide numbers up to four-digits by a two-digit whole number using the formal written method of long and short division and interpret remainders as whole number remainders, fractions or by rounding as appropriate for the context; 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 on which operations and methods to use and why; solve problems addition, subtraction, multiplication and division; use estimation to check answers to calculations and determine, in the context of the problem, an appropriate degree of accuracy.

Fractions Use common fractions to simplify fractions; 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; divide proper fractions by whole numbers; associate a fraction with division and calculate decimal fraction equivalence e.g. 0.375 for a simple fraction; identify the value of each digit in numbers given to three-decimal places; multiply and divide numbers by 10/100/1000 giving answers up to three-decimal places; multiply one-digit number 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 involving the calculation of percentages (e.g. of measures and such as 15% of 360) and the use of percentages for comparison); 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; solve problems involving the relative sizes of two quantities where missing values can be found by using multiplication and division facts; 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.

Measure and shape 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 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 and cubic metres and extending to other units; illustrate and name parts of circles including radius, diameter and circumference and know that the diameter is twice the radius; draw 2D-shapes using given dimensions and angles; compare and classify geometric shapes based on their properties and sizes; recognise, describe and build simple 3D shapes including making nets; find unknown angles in any triangles, quadrilaterals and regular

polygons; recognise angles where they meet at a point, are on a straight line or are vertically opposite and find the missing angles.

Position and direction 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.

Algebra 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.

Statistics Interpret and construct pie charts and line graphs; calculate and interpret the mean as an average; use pie charts and line graphs to solve problems.