Year 6 Learning Journey

Flourish at Hatfeild
A Place to Grow

Starting Year 6

use negative numbers in context, and calculate intervals across zero

read, write, order and compare numbers up to 10 000000 and determine the value of each digit

round any whole number to a required degree of accuracy

solve number and practical problems that involve all of the above

perform mental calculations, including with mixed operations and large numbers

use their knowledge of the order of operations to carry out calculations involving the four operations

use estimation 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

Solve problems involving addition, subtraction, multiplication and division

use common factors to simplify fractions; use common multiples to express fractions in the same denomination

identify the value of each digit in numbers given to three decimal places

compare and order fractions, including fractions >1

solve problems which require answers to be rounded to specified degrees of accuracy

use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy

identify common factors, common multiples and prime numbers

use their knowledge of the order of operations to carry out calculations involving the four operations

divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division where appropriate for the context 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

multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication

perform mental calculations, including with mixed operations and large numbers

associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction e.g. 3 / 8)

recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

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 (e.g. 1 / 4 × 1 / 2 = 1 / 8)

multiply one-digit numbers with up to two decimal places by whole numbers

divide proper fractions by whole numbers (e.g. 1 / 3 ÷ 2 = 1 / 6)

multiply one-digit numbers with up to two decimal places by whole numbers

multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places

identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places

calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm 3) and cubic metres (m 3), and extending to other units such as mm 3 and km 3 .

solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate

solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

solve problems involving similar shapes where the scale factor is known or can be found

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 the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts

use written division methods in cases where the answer has up to two decimal places

associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3 /8)

recognise that shapes with the same areas can have different perimeters and vice versa

convert between miles and kilometres

calculate the area of parallelograms and triangles

calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm 3) and cubic metres (m 3), and extending to other units [e.g. mm 3 and km 3].

recognise when it is possible to use formulae for area and volume of shapes

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

recognise, describe and build simple 3-D shapes, including making nets

illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice identify 2-D shapes on the the radius

describe positions on the full coordinate grid (all four quadrants)

enumerate all possibilities of combinations of two variables

generate and describe linear number sequences

use simple formulae

find pairs of numbers that satisfy number sentences involving two unknowns

express missing number problems algebraically

interpret and construct pie charts and line graphs and use these to solve problems

calculate and interpret the mean as an average

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

compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons

draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

draw 2-D shapes using given dimensions and angles

Getting Ready for Year 7