

# Year 5 Learning Journey



## Getting Ready for Year 6

solve comparison, sum and difference problems using information presented in a line graph

identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed

identify: angles at a point and one whole turn (total 360°) angles at a point on a straight line and ½ a turn (total 180°) other multiples of 90

know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles

distinguish between regular and irregular polygons based on reasoning about equal sides and angles

use the properties of rectangles to deduce related facts and find missing lengths and angles

draw given angles, and measure them in degrees (°)

identify 3-D shapes, including cubes and other cuboids, from 2-D representations

understand and use equivalences between metric units and common imperial units such as inches, pounds and pints

complete, read and interpret information in tables, including timetables

solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those with a denominator of a multiple of 10 or 25.

calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm<sup>2</sup>) and square metres (m<sup>2</sup>) and estimate the area of irregular shapes

estimate volume (e.g. using 1 cm<sup>3</sup> blocks to build cubes and cuboids) and capacity (e.g. using water)

use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.

measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres

calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm<sup>2</sup>) and square metres (m<sup>2</sup>) and estimate the area of irregular shapes

solve problems involving converting between units of time

convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)

solve problems involving numbers up to three decimal places

recognise mixed numbers fractions and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g.  $2 \frac{2}{5} + 4 \frac{1}{5} = 6 \frac{3}{5} = 11 \frac{3}{5}$ )

add and subtract fractions with the same denominator and multiples of the same number

recognise the per cent symbol (%) and understand that per cent relates to "number of parts per hundred", and write percentages as a fraction with denominator 100 as a decimal fraction

recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents

read and write decimal numbers as fractions (e.g.  $0.71 = \frac{71}{100}$ )

identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths

multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams

solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign

recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)

solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes

solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates

recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents

compare and order fractions whose denominators are all multiples of the same number

round decimals with two decimal places to the nearest whole number and to one decimal place

identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers

know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers

multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers

establish whether a number up to 100 is prime and recall prime numbers up to 19

multiply and divide whole numbers and those involving decimals by 10, 100 and 1000

multiply and divide numbers mentally drawing upon known facts

solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why

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

read, write, order and compare numbers with up to three decimal places

divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context

interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero

count forwards or backwards in steps of powers of 10 for any given number up to 1000 000

read Roman numerals to 1000 (M) and recognise years written in Roman numerals.

read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit

read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit

round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000 and 100 000

solve number problems and practical problems that involve all of the above

add and subtract numbers mentally with increasingly large numbers

add and subtract whole numbers with more than 4 digits, including using formal written methods

## Starting Year 5