

Mathematics



Year 3

Number

- To compare and order numbers to 1000 and read and write numbers to 1000 in numerals and words.
- To count from 0 in multiples of 4, 8, 50 and 100.
- To recognise the value of each digit in a 3-digit number.
- To understand and be able to count in tenths, and find the fractional value of a given set.
- To add and subtract fractions with a common denominator.
- To derive and recall multiplication facts for 3, 4 and 8x tables.
- To add and subtract mentally combinations of 1-digit and 2-digit numbers.
- To add and subtract numbers with up to 3-digits using formal written methods.
- To write and calculate mathematical statements for multiplication and vision using the 2x, 3x, 4x, 5x, 8x and 10x tables.
- To calculate 2-digit x 1-digit.
- To solve number problems using one and two step problems

Measurement, Geometry and Statistics

- To identify right angles and can compare other angles stating whether they are greater or smaller than a right angle.
- To identify horizontal and vertical lines and pairs of perpendicular and parallel lines.
- To tell the time to the nearest minute and use specific vocabulary, including seconds, am & pm.
- To measure, compare, add and subtract using common metric measures.
- To solve one and two step problems using information presented in scaled bar charts, pictograms and tables.

Year 4

Number

- To recall all multiplication facts to 12×12 .
- To round any number to the nearest 10, 100 or 1000 and decimals with one decimal place to the nearest whole number.
- To count backwards through zero to include negative numbers.
- To compare numbers with the same number of decimal places up to 2-decimal places.
- To recognise and write decimal equivalents of any number of tenths or hundredths.
- To add and subtract with up to 4-decimal places using formal written methods of columnar addition and subtraction.
- To divide a 1 or 2-digit number by 10 or 100 identifying the value of the digits in the answer as units, tenths and hundredths.
- To multiply 2-digit and 3-digit numbers by a 1-digit number using formal written layout.
- To solve two step addition and subtraction problems in context.
- To solve problems involving multiplication.

Measurement, Geometry and Statistics

- To compare and classify geometrical shapes, including quadrilaterals and triangles, based on their properties and sizes.
- To know that angles are measured in degrees and can identify acute and obtuse angles.
- To compare and order angles up to two right angles by size.
- To measure and calculate the perimeter of a rectilinear figure in cm and m.
- To read, write and convert between analogue and digital 12 and 24 hour times.
- To interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.

Year 5

Number

- To count forwards and backwards in steps of powers of 10 for any given number up to 1,000,000.
- To recognise and use thousandths and relate them to tenths, hundredths and decimals equivalents.
- To recognise mixed numbers and improper fractions and can convert from one to the other.
- To read and write decimal numbers as fractions.
- To recognise the % symbol and understand percent relates to a number of parts per hundred.
- To write percentages as a fraction with denominator hundred and as a decimal fraction.
- To compare and add fractions whose denominators are all multiples of the same number.
- To multiply and divide numbers mentally drawing on known facts up to 12×12 .
- To round decimals with 2dp to the nearest whole number and to 1dp.
- To recognise and use square numbers and cube numbers; and can use the notation 2 and 3 .
- To multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.
- To multiply numbers up to 4-digit by a 1 or 2-digit number using formal written methods, including long multiplication for a 2-digit number.
- To divide numbers up to 4-digits by a 1-digit number.
- To solve problems involving multiplication and division where large numbers are used by decomposing them into factors.
- To solve addition and subtraction multi-step problems in context, deciding which operations and methods to use and why.
- To solve problems involving numbers up to 3dp.

Measurement, Geometry and Statistics

- To know that angles are measured in degrees.
- To estimate and compare acute, obtuse and reflex angles.
- To draw given angles and measure them in degrees.
- To convert between different units of metric measures and estimate volume and capacity.
- To measure and calculate the perimeter of composite rectilinear shapes in cm and m.
- To calculate and compare the areas of squares and rectangles including using standard units (cm^2 and m^2).
- To solve comparison, sum and difference problems using information presented in a line graph.

Year 6

Number

- To use negative numbers in context, and calculate intervals across zero.
- To round any whole number to a required degree of accuracy and solve problems which require answers to be rounded to a specific degree of accuracy.
- To solve problems involving the relative sizes of two quantities where the missing values can be found by using integer multiplication and division facts.
- To use common factors to simplify fractions; use common multiples to express fractions in the same denomination.
- To solve problems involving the calculation of percentages.
- To multiply 1-digit numbers with up to two decimal places by whole numbers.
- To perform mental calculations, including with mixed operations with large numbers.
- To divide numbers up to 4-digits by a 2-digit whole number using formal written methods of long division and interpret remainder in various ways.
- To use knowledge of order of operations to carry out calculations involving all four operations.
- To add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.
- To multiply simple pairs of proper fractions, writing the answer in its simplest form.
- To divide proper fractions by whole numbers.
- To associate a fraction with division and calculate decimal fraction equivalents.
- To express missing number problems algebraically.
- To find pairs of numbers that satisfy number sentences involving two unknowns.

Measurement, Geometry and Statistics

- To recognise, describe and build simple 3D shapes, including making nets.
- To compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangle, quadrilateral and regular polygons.
- To illustrate and name parts of circles, including radius, diameter and circumference and know that the radius is half the diameter.
- To 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 3 decimal places.
- To calculate the area of a parallelogram and triangles and calculate, estimate and compare volume of cubes and cuboids using standard units.
- To interpret and construct pie charts and line graphs and use these to solve problems.