

## End of year expectations by year group in mathematics YEAR 4

### Number, including place value, calculation and fractions

Count in 6s, 7s, 9s 25s and 100s from 0. Find 1000 more or less than any given number mentally. Recognise the value of each digit in a 4 digit number. Compare and order a set of numbers beyond a 1000 (e.g. using number lines and  $<>$ ). Identify, represent and estimate numbers using groupings (tallies, groups of 25, 50, 100). Read and write 4-digit numbers in numerals and words (including accurate spelling). Round any number to the nearest 10, 100 and 1000 (using number lines). Read Roman numerals to 100 (I to C). Know that over time, the numeral system changed to include the concept of zero and place value. Solve number and practical problems using all of the above and with increasingly larger positive numbers.

Add and subtract numbers with up to 4 digits using the formal written methods of addition and subtraction where appropriate. Estimate and use inverse operations to check answers to a calculation. Solve addition and subtraction two-step problems in contexts. Decide which operations and methods to use and why within problem solving.

Recall multiplication and division facts for multiplication tables up to  $12 \times 12$ . Use place value, known and derived facts to multiply and divide mentally. Multiplying by 0 and 1; dividing by 1; multiplying together three numbers. Recognise and use factor pairs. Understand commutativity in mental calculations. Multiply two-digit and three-digit numbers by a one-digit number using formal written layout. Solve problems involving multiplying and adding. Use the distributive law to multiply two digit numbers by one digit. Solve harder correspondence problems such as n objects are connected to m objects.

Recognise and show, using diagrams, families of common equivalent fractions.

Count up and down in hundredths. Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. Use fractions to divide quantities, including non-unit fractions where the answer is a whole number. Add and subtract fractions with the same denominator. Recognise and write decimal equivalents of any number of tenths or hundredths. Recognise and write decimal equivalents to  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{3}{4}$ . Find the effect of dividing a one- or two-digit number by 10 and 100. Round decimals with one decimal place to the nearest whole number. Compare numbers with the same number of decimal places up to two decimal places. Solve simple problems involving fractions and decimals (e.g. time, money, measures).

### Measurement

Convert between different units of measure [e.g., kilometre to metre; hour to minute]. Estimate, compare and calculate different measures, including length, mass and money in pounds and pence in order to solve problems.

Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. Find the area of rectilinear shapes by counting squares.

### Geometry

Compare and classify geometric shapes, including different quadrilaterals and different triangles, based on their properties and sizes.

Identify acute and obtuse angles and compare and order angles up to two right angles by size. Identify lines of symmetry in 2-D shapes presented in different orientations. Complete a simple symmetric figure with respect to a specific line of symmetry.

Describe positions on a 2-D grid as coordinates in the first quadrant. Describe movements between positions as translations of a given unit to the left/right and up/down. Plot specified points and draw sides to complete a given polygon.

### Statistics

Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.