# The Year 4 Learner

## Number

### Counting and understanding number

Children will count in multiples of 6, 7, 9, 25 and 1000. They will find 1000 more or less than a given number. Children will count backwards through zero to include negative numbers. They will recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones). Children will order and compare numbers beyond 1000. They will identify, represent and estimate numbers using different representations. Children will round any number to the nearest 10, 100 or 1000. They will solve number and practical problems that involve all of the above and with increasingly large positive numbers. Children will read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.

### Calculating

Children will add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. They will estimate and use inverse operations to check answers to a calculation. Children will solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. They will recall multiplication and division facts for multiplication tables up to 12 × 12. Children will use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. They will recognise and use factor pairs and commutativity in mental calculations. Children will multiply two-digit and three-digit numbers by a one-digit number using formal written layout. They will solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

### Fractions

Children will recognise and show, using diagrams, families of common equivalent fractions. They will count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten. Children will solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number. They will add and subtract fractions with the same denominator. Children will recognise and write decimal equivalents of any number of tenths or hundredths. They will recognise and write decimal equivalents to ¼, ½, ¾ Children will find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths. They will round decimals with one decimal place to the nearest whole number. Children will compare numbers with the same number of decimal places up to two decimal places. They will solve simple measure and money problems involving fractions and decimals to two decimal places.

## Geometry

### Position and direction

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

## Geometry

### Properties of shape

Children will compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. They will identify acute and obtuse angles and compare and order angles up to two right angles by size. Children will identify lines of symmetry in 2-D shapes presented in different orientations. They will complete a simple symmetric figure with respect to a specific line of symmetry.

## Measurement

Children will convert between different units of measure (for example, kilometre to metre; hour to minute). They will measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. Children will find the area of rectilinear shapes by counting squares. They will estimate, compare and calculate different measures, including money in pounds and pence. Children will read, write and convert time between analogue and digital 12 and 24-hour clocks. They will solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.

## Statistics

Children will interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. They will solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.