

## Mathematics in Year 4

By the end of Year 4, children will be expected to know all of their times tables up to  $12 \times 12$  by heart. This means not only recalling them in order but also being able to answer any times table question at random, and also knowing the related division facts. For example, in knowing that  $6 \times 8 = 48$ , children can also know the related facts that  $8 \times 6 = 48$  and that  $48 \div 6 = 8$  and  $48 \div 8 = 6$ . This expertise will be particularly useful when solving larger problems and working with fractions.

### Number and Place Value

- Count in multiples of 6, 7, 9, 25 and 1,000
- Count backwards, including using negative numbers
- Recognise the place value in numbers of four digits (1000s, 100s, 10s and 1s)
- Put larger numbers in order, including those greater than 1,000
- Round any number to the nearest 10, 100 or 1,000
- Read Roman numbers up to 100

Roman Numerals' Basics:

I = 1 ; V = 5 ; X = 10 ; L = 50 ; C = 100

Letters can be combined to make larger numbers. If a smaller value appears in front of a larger one then it is subtracted, e.g. IV (5 - 1) means 4. If the larger value appears first then they are added, e.g. VI (5 + 1) means 6.

### Calculations

- Use the standard method of column addition and subtraction for values up to four digits
- Solve two-step problems involving addition and subtraction
- Know the multiplication and division facts up to  $12 \times 12 = 144$
- Use knowledge of place value, and multiplication and division facts to solve larger calculations
- Use factor pairs to solve mental calculations, e.g. knowing that  $9 \times 7$  is the same as  $3 \times 3 \times 7$
- Use the standard short multiplication method to multiply three-digit numbers by two-digit numbers

### Fractions

- Use hundredths, including counting in hundredths
- Add and subtract fractions with the same denominator, e.g.  $\frac{4}{7} + \frac{5}{7}$
- Find the decimal value of any number of tenths or hundredths, for example  $\frac{7}{100}$  is 0.07
- Recognise the decimal equivalents of  $\frac{1}{4}$ ,  $\frac{1}{2}$  and  $\frac{3}{4}$
- Divide one- or two-digit numbers by 10 or 100 to give decimal answers
- Round decimals to the nearest whole number
- Compare the size of numbers with up to two decimal places

### Measurements

#### Parent Tip

Playing traditional games, such as battleships or even draughts and chess, is great for exploring coordinates and movements across the coordinate grid.



- Convert between different measures, such as kilometres to metres or hours to minutes
- Calculate the perimeter of shapes made of squares and rectangles
- Find the area of rectangular shapes by counting squares
- Read, write and convert times between analogue and digital clocks, including 24-hour clocks
- Solve problems that involve converting amounts of time, including minutes, hours, days, weeks and months

## Shape and Position

- Classify groups of shapes according to the properties, such as sides and angles
- Identify acute and obtuse angles
- Complete a simple symmetrical figure by drawing the reflected shape
- Use coordinates to describe the position of something on a standard grid
- Begin to describe movements on a grid by using left/right and up/down measures

## Graphs and Data

- Construct and understand simple graphs using discrete and continuous data

Discrete data is data which is made up of separate values, such as eye colour or shoe size. Continuous data is that which appears on a range, such as height or temperature.

