



# Being a mathematician in Three



## A year Three Mathematician

### Number

- I know how to count from 0 in multiples of 4, 8, 50 and 100: find 10 or 100 more or less than a given number.
- I know how to recognise the place value of each digit in a 3-digit number (hundreds, tens, ones).
- I know how to compare and order numbers up to 1000.
- I know how to identify, represent and estimate numbers using different representations.
- I know how to read and write numbers to 1000 in numerals and words.
- I know how to solve number problems and practical problems involving these ideas.

### Calculations

- I know how to add and subtract numbers mentally including a 3 digit number and ones
- I know how to add and subtract numbers mentally including a 3 digit number and tens
- I know how to add and subtract numbers mentally including a 3 digit number and hundreds
- I know how to add and subtract numbers with up to three digits using formal written methods of columnar addition and subtraction.
- I know how to estimate the answer to a calculation and use inverse operations to check answers.
- I know how to solve problems including missing number problems using number facts, place value and more complex addition and subtraction.
- I know how to recall and use multiplication and division facts for the 3, 4 and 8 times table.
- I know how to write and calculate mathematical statements for multiplication and division using the x tables that I know, including two digit numbers times 1 digit using mental and progressing to formal written methods .
- I know how to solve problems including missing number problems involving multiplication and division, including positive integer scaling problems and correspondence problems.

### Fractions

- I know how to count up and down in tenths: recognise that tenths arise from dividing an object into 10 equal parts and in dividing one digit numbers or quantities by 10.
- I know how to recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.
- I know how to recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.

- I know how to recognise and show using diagrams equivalent fractions with small denominators.
- I know how to add and subtract fractions with the same denominator within one whole (eg  $5/7 + 1/7 = 6/7$ ).
- I know how to compare and order unit fractions and fractions with the same denominator.
- I know how to solve problems that involve all of the above.

### Measurement

- I know how to measure, compare, add and subtract lengths (m/cm/mm) mass (kg/g) volume/capacity (l/ml).
- I know how to measure and calculate the perimeter of simple 2-D shapes.
- I know how to add and subtract amounts of money to give change to give both £ and p in practical contexts
- I know how to tell and write the time from an analogue clock including using roman numerals 1-X11 12 hour and 24 hour clocks.
- I know how to estimate and read time to the nearest minute, record and compare time in terms of seconds, minutes and hours; use vocab such as o'clock, am and pm, noon and midnight.
- I know the number of seconds in a minute and know the number of days in each month, year and leap year.
- I know how to compare durations of events.

### Shape

- I know how to draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them.
- I know how to recognise angles as a property of shape or a description of a turn.
- I know how to identify right angles, and recognise that two right angles make a half turn etc. Identify whether angles are greater than or less than a right angle.
- I know how to identify horizontal and vertical lines and pairs of perpendicular and parallel lines.

### Stats

- I know how to solve one-step and two-step questions using information presented in scaled bar charts, pictograms and tables.
- I know how to interpret and present data using bar charts, pictograms and tables.