

## **Primary Stage3 Math for Year3**

## N Number

### Nn Numbers and the number system

- **3Nn1** Recite numbers 100 to 200 and beyond.
- **3Nn2** Read and write numbers to at least 1000.
- **3Nn3** Count on and back in ones, tens and hundreds from two- and three-digit numbers.
- **3Nn4** Count on and back in steps of 2, 3, 4 and 5 to at least 50.
- **3Nn5** Understand what each digit represents in three-digit numbers and partition into hundreds, tens and units.
- **3Nn6** Find 1, 10, 100 more/less than two- and three-digit numbers.
- **3Nn7** Multiply two-digit numbers by 10 and understand the effect.
- **3Nn8** Round two-digit numbers to the nearest 10 and round threedigit numbers to the nearest 100.
- **3Nn9** Place a three-digit number on a number line marked off in multiples of 100. • **3Nn10** Place a three-digit number on a number line marked off in multiples of 10. • **3Nn11** Compare three-digit numbers, use  $<$  and  $>$  signs, and find a number in between.
- **3Nn12** Order two- and three-digit numbers.
- **3Nn13** Give a sensible estimate of a number as a range (e.g. 30 to 50) by grouping in tens.
- **3Nn14** Find half of odd and even numbers to 40, using notation such as  $13\frac{1}{2}$ .
- **3Nn15** Understand and use fraction notation recognising that fractions are several parts of one whole, e.g.  $\frac{3}{4}$  is three quarters and  $\frac{2}{3}$  is two thirds.
- **3Nn16** Recognise equivalence between  $\frac{1}{2}$ ,  $\frac{2}{4}$ ,  $\frac{4}{8}$  and  $\frac{5}{10}$  using diagrams.
- **3Nn17** Recognise simple mixed fractions, e.g.  $1\frac{1}{2}$  and  $2\frac{1}{4}$ .
- **3Nn18** Order simple or mixed fractions on a number line, e.g. using the knowledge that  $\frac{1}{2}$  comes half way between  $\frac{1}{4}$  and  $\frac{3}{4}$ , and that  $1\frac{1}{2}$  comes half way between 1 and 2.
- **3Nn19** Begin to relate finding fractions to division.
- **3Nn20** Find halves, thirds, quarters and tenths of shapes and numbers (whole number answers).

## N Number (continued)

### Nc Calculation

#### *Mental strategies*

- **3Nc1** Know addition and subtraction facts for all numbers to 20.
- **3Nc2** Know the following addition and subtraction facts:

– multiples of 100 with a total of 1000

– multiples of 5 with a total of 100

- **3Nc3** Know multiplication/division facts for  $2 \times$ ,  $3 \times$ ,  $5 \times$ , and  $10 \times$  tables.
- **3Nc4** Begin to know  $4 \times$  table.
- **3Nc5** Recognise two- and three-digit multiples of 2, 5 and 10.
- **3Nc6** Work out quickly the doubles of numbers 1 to 20 and derive the related halves.
- **3Nc7** Work out quickly the doubles of multiples of 5 ( $< 100$ ) and derive the related halves.
- **3Nc8** Work out quickly the doubles of multiples of 50 to 500.

#### *Addition and subtraction*

- **3Nc9** Add and subtract 10 and multiples of 10 to and from two- and three-digit numbers.
- **3Nc10** Add 100 and multiples of 100 to three-digit numbers.
- **3Nc11** Use the = sign to represent equality, e.g.  $75 + 25 = 95 + 5$ .
- **3Nc12** Add several small numbers.
- **3Nc13** Find complements to 100, solving number equations such as  $78 + \textcircled{?} = 100$ .
- **3Nc14** Add and subtract pairs of two-digit numbers.

- **3Nc15** Add three-digit and two-digit numbers using notes to support.
- **3Nc16** Re-order an addition to help with the calculation, e.g.  $41 + 54$ , by adding 40 to 54, then 1.
- **3Nc17** Add/subtract single-digit numbers to/from three-digit numbers. • **3Nc18** Find 20, 30, ... 90, 100, 200, 300 more/less than three-digit numbers.

#### *Multiplication and division*

- **3Nc19** Understand the relationship between halving and doubling.
- **3Nc20** Understand the effect of multiplying two-digit numbers by 10.
- **3Nc21** Multiply single-digit numbers and divide two-digit numbers by 2, 3, 4, 5, 6, 9 and 10.
- **3Nc22** Multiply teens numbers by 3 and 5.
- **3Nc23** Begin to divide two-digit numbers just beyond  $10 \times$  tables, e.g.  $60 \div 5$ ,  $33 \div 3$ . • **3Nc24** Understand that division can leave a remainder (initially as 'some left over'). • **3Nc25** Understand and apply the idea that multiplication is commutative.
- **3Nc26** Understand the relationship between multiplication and division and write connected facts.

## G Geometry

### Gs Shapes and geometric reasoning

- **3Gs1** Identify, describe and draw regular and irregular 2D shapes including pentagons, hexagons, octagons and semi-circles. • **3Gs2** Classify 2D shapes according to the number of sides, vertices and right angles.
- **3Gs3** Identify, describe and make 3D shapes including pyramids and prisms; investigate which nets will make a cube. • **3Gs4** Classify 3D shapes according to the number and shape of faces, number of vertices and edges.
- **3Gs5** Draw and complete 2D shapes with reflective symmetry and draw reflections of shapes (mirror line along one side).
- **3Gs6** Relate 2D shapes and 3D solids to drawings of them.
- **3Gs7** Identify 2D and 3D shapes, lines of symmetry and right angles in the environment.
- **3Gs8** Identify right angles in 2D shapes. **Gp Position and movement**
- **3Gp1** Use the language of position, direction and movement, including clockwise and anti-clockwise. • **3Gp2** Find and describe the position of a square on a grid of squares where the rows and columns are labelled.

- **3Gp3** Use a set square to draw right angles. • **3Gp4**

Compare angles with a right angle and recognise that a straight line is equivalent to two right angles.

## G Measure

### Gm Money

- **3Gm1** • **3Mm1** Consolidate using money notation.
- **3Gm2** • **3Mm2** Use addition and subtraction facts with a total of 100 to find change.

### GI Length, mass and capacity

- **3GI1** • **3MI1** Choose and use appropriate units and equipment to estimate, measure and record measurements.
- **3GI2** • **3MI2** Know the relationship between kilometres and metres, metres and centimetres, kilograms and grams, litres and millilitres.
- **3GI3** • **3MI3** Read to the nearest division or half division, use scales that are numbered or partially numbered.
- **3GI4** • **3MI4** Use a ruler to draw and measure lines to the nearest centimetre.
- **3GI5** • **3MI5** Solve word problems involving measures.

## G Measure (continued)

### Gt Time

- 3Gt1** • **3Mt1** Suggest and use suitable units to measure time and know the relationships between them (second, minute, hour, day, week, month, year).
- 3Gt2** • **3Mt2** Read the time on analogue and digital clocks, to the nearest 5 minutes on an analogue clock and to the nearest minute on a digital clock.
- 3Gt3** • **3Mt3** Begin to calculate simple time intervals in hours and minutes.
- 3Gt4** • **3Mt4** Read a calendar and calculate time intervals in weeks or days.

## D Handling data

**Dh Organising, categorising and representing data** • **3Dh1** Answer a real-life question by collecting, organising and interpreting data, e.g. investigating the population of mini-beasts in different environments.

- **3Dh2** Use tally charts, frequency tables, pictograms (symbol representing one or two units) and bar charts (intervals labelled in ones or twos).
- **3Dh3** Use Venn or Carroll diagrams to sort data and objects using two criteria.

## Problem solving

### Using techniques and skills in solving mathematical problems

- **3Pt1** Choose appropriate mental strategies to carry out calculations.
- **3Pt2** Begin to understand everyday systems of measurement in length, weight, capacity and time and use these to make measurements as appropriate.
- **3Pt3** Make sense of and solve word problems, single (all four operations) and two-step (addition and subtraction), and begin to represent them, e.g. with drawings or on a number line.
  - **3Pt4** Check the results of adding two numbers using subtraction, and several numbers by adding in a different order.
  - **3Pt5** Check subtraction by adding the answer to the smaller number in the original calculation.
  - **3Pt6** Check multiplication by reversing the order, e.g. checking that  $6 \times 4 = 24$  by doing  $4 \times 6$ .
- **3Pt7** Check a division using multiplication, e.g. check  $12 \div 4 = 3$  by doing  $4 \times 3$ .
- **3Pt8** Recognise the relationships between different 2D shapes.
- **3Pt9** Identify the differences and similarities between different 3D shapes.
- **3Pt10** Estimate and approximate when calculating, and check working.
- **3Pt11** Make a sensible estimate for the answer to a calculation, e.g. using rounding.
- **3Pt12** Consider whether an answer is reasonable.