# **Mathematics**

# **Key Learning Indicators of Performance: Year 5**



## Number – fractions, decimals and percentages

- ▶ Recognise mixed numbers and improper fractions and convert from one form to the other.
- Read and write decimal numbers as fractions (e.g.  $0.71 = \frac{71}{100}$ ).
- Count on and back in mixed number steps such as  $1\frac{1}{3}$ .
- Compare and order fractions whose denominators are all multiples of the same number (including on a number line).
- ▶ Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.
- Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.
- Add and subtract fractions with denominators that are the same and that are multiples of the same number (using diagrams).
- Write statements > 1 as a mixed number (e.g.  $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1 \frac{1}{5}$ ).
- Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.
- Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.
- ▶ Solve problems involving fractions and decimals to three places.
- Solve problems which require knowing percentage and decimal equivalents of  $\frac{1}{2'}$ ,  $\frac{1}{4'}$ ,  $\frac{1}{5'}$ ,  $\frac{2}{5'}$ ,  $\frac{4}{5}$  and fractions with a denominator of a multiple of  $\frac{1}{10}$  or 25.

### **Geometry – properties of shapes**

- Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.
- Use the properties of rectangles to deduce related facts and find missing lengths and angles.
- ▶ Identify 3-D shapes from 2-D representations.
- ► Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.
- Draw given angles, and measure them in degrees (°).
- Identify:
  - angles at a point and one whole turn (total 360°).
  - angles at a point on a straight line and half a turn (total 180°).
  - other multiples of 90°.

## **Geometry – position and direction**

- Describe positions on the first quadrant of a coordinate grid.
- Plot specified points and complete shapes.
- ▶ Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.

### Measurement

- ▶ Use, read and write standard units of length and mass.
- Estimate (and calculate) volume ((e.g., using 1 cm³ blocks to build cuboids (including cubes)) and capacity (e.g. using water).
- Understand the difference between liquid volume and solid volume.
- ► Continue to order temperatures including those below 0°C.
- ▶ Convert between different units of metric measure.
- Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.
- Measure/calculate the perimeter of composite rectilinear shapes.
- Calculate and compare the area of rectangle, use standard units square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes.
- Continue to read, write and convert time between analogue and digital 12 and 24-hour clocks.
- Solve problems involving converting between units of time.
- Use all four operations to solve problems involving measure using decimal notation, including scaling.

### **Statistics**

- Complete and interpret information in a variety of sorting diagrams (including those used to sort properties of numbers and shapes).
- ► <u>Complete, read and interpret information in tables and timetables.</u>
- Solve comparison, sum and difference problems using information presented in all types of graph including a line graph.
- ► Calculate and interpret the mode, median and range.

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