

## Achievement band 105–114

### Number and algebra

#### *Whole number operations*

Students in this band typically are developing fluency (making connections, thinking and working flexibly) with formulating and carrying out calculations in a wide range of contexts. They are able to use proportional reasoning and multiplicative thinking to interpret and use simple ratios, proportions and rates expressed informally. They can also interpret remainders appropriately in situations involving division.

#### *Fractions and decimals*

Students in this band typically are able to use a number line to represent relative locations of whole numbers, common fractions with related denominators, and decimal fractions with tenths and hundredths. They can use proportional reasoning and multiplicative thinking to interpret and use simple ratios, proportions and rates expressed informally. They can recognise fractions (and their different equivalent representations) represented either as parts of a whole, or part of a set of objects. They can calculate simple fractions of whole numbers, and they also recognise the meaning of the percentage symbol (%).

#### *Money and financial mathematics*

Students in this band typically are able to identify sets of coins that are equivalent in value, for example, the number of 10-cent coins needed to make up the same value as a 50-cent coin and a 20-cent coin. They can also calculate change from small amounts.

#### *Patterns and algebra*

Students in this band typically are able to recognise and continue a pattern in a visual or numeric sequence involving doubling or other simple multiplicative process. They can continue a visual or numeric pattern to find an element that occurs later in the sequence. They can also interpret and solve missing number equations involving addition, subtraction, multiplication and division, and use two orthogonal number lines (the Cartesian coordinate system) to locate or describe points in a plane.

### Measurement and geometry

#### *Measurement*

Students in this band typically are able to read time on digital and analogue clocks to the minute, can perform time calculations including am/pm time, and can find the time difference between two times (analogue or digital). They understand the concepts of perimeter and circumference, and can measure the perimeter of different figures. They can use grid squares to calculate the area of irregular shapes and count small cubes to calculate the volume of compound objects composed of cuboids of various sizes. They can also estimate angle size in relation to reference angles, such as right angles or straight angles.

#### *Geometry*

Students in this band typically are able to recognise, create and use tessellations of two-dimensional shapes. They can recognise relationships among features of linked geometric objects (for example, match a range of three-dimensional objects to their nets) and can interpret instructions that use positional language to solve problems (for example, use of the words clockwise and anticlockwise to describe the direction of a turn). They can read and interpret simple maps in order to perform tasks such as using a simple scale to calculate a distance and describing the direction of one landmark from another.

### Statistics and probability

#### *Statistics*

Students in this band typically are able to design simple survey questions to gather data. They can organise given or collected data into an appropriate representation such as a pictograph, column graph or table. Students can also retrieve and interpret data displayed as: a pictograph where the symbol represents more than one unit; a two-category column graph or a column graph with a vertical axis that represents a measured quantity rather than a frequency; and a two-way table or tally chart.

#### *Probability*

Students in this band typically are able to use the language of chance (more likely, less likely, impossible and certain) to describe everyday events and the outcomes of simple probability experiments (for example, rolling dice, spinning a spinner and picking objects from a bag). They can also express as a fraction the chance of a given event in a simple probability experiment.