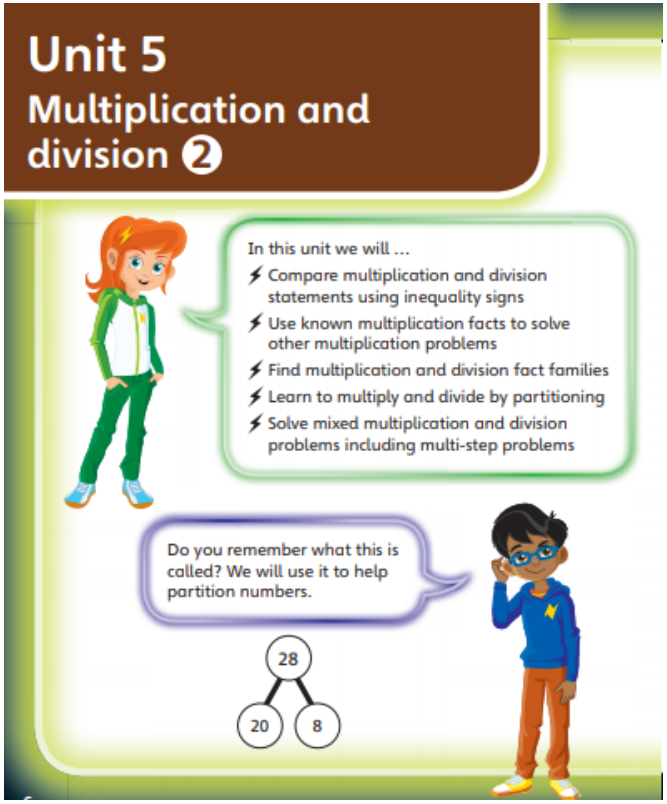
Unit 5
Multiplication and division ❷



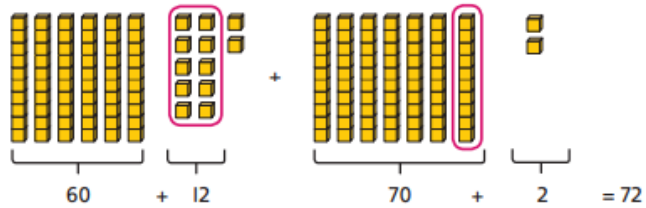
KEY LANGUAGE

There is some key language that children will need to know as part of the learning in this unit:

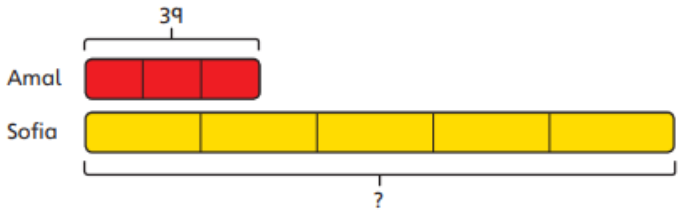
- multiplication
- division
- greater than
- less than
- equal
- remainder
- share
- partition
- tens (10s)
- ones (1s)
- exchange

STRUCTURES AND REPRESENTATIONS

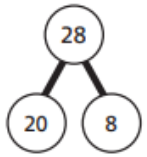
Place value grid and base 10 equipment: place value grids with place value counters and base 10 equipment are used to demonstrate, and enable children to manipulate, the place value of numbers, to support the expanded method for multiplication and the partition method for division.

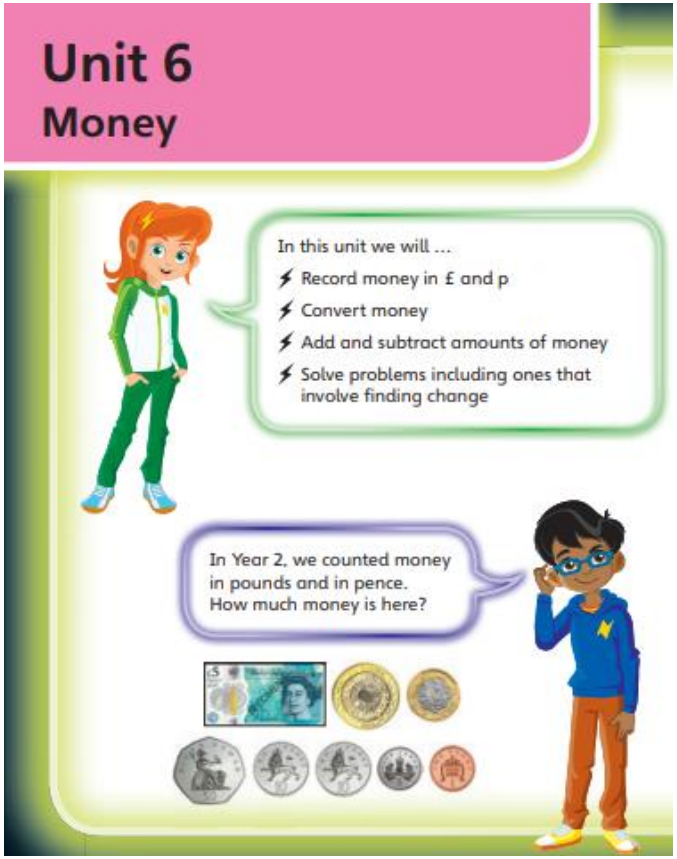


Bar model: bar models are used in this unit to support children in solving multi-step mixed problems.



Part-whole model: part-whole models are used in this unit to partition 2-digit numbers when dividing.





KEY LANGUAGE

There is some key language that children will need to know as part of the learning in this unit.

- pounds (£) and pence (p)
- convert
- total
- difference
- change

STRUCTURES AND REPRESENTATIONS

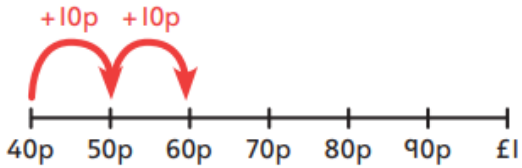
Coins: Using coins to physically model the problems will help children visualise and manipulate different amounts, particularly when bridging a pound.

Bar model: This model will help children visualise and understand the structure of the problems.

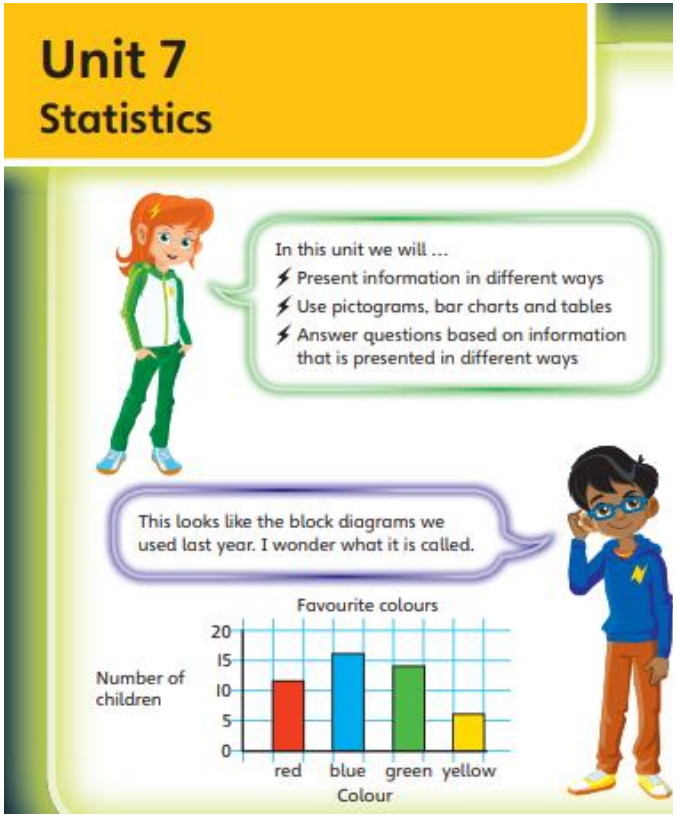
£12 + ☐ = £20

£20	
£12	?

Number line: This model helps children visualise the order of numbers. It can help them count up or back to find a total amount and can be more efficient than using concrete resources.



Unit 7
Statistics



KEY LANGUAGE

There is some key language that children will need to know as part of the learning in this unit.

- pictogram
- key
- symbol
- compare
- least, most
- altogether
- bar chart
- horizontal axis, vertical axis
- scale
- half-way between
- table
- row, column
- order
- smallest, largest
- total

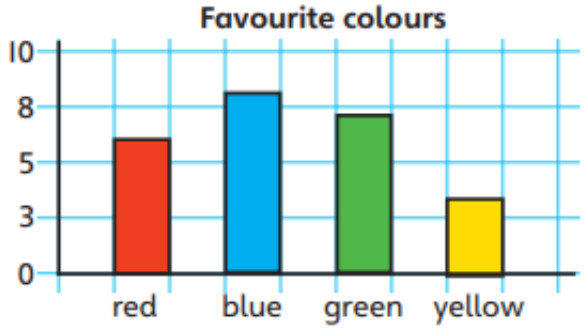
STRUCTURES AND REPRESENTATIONS

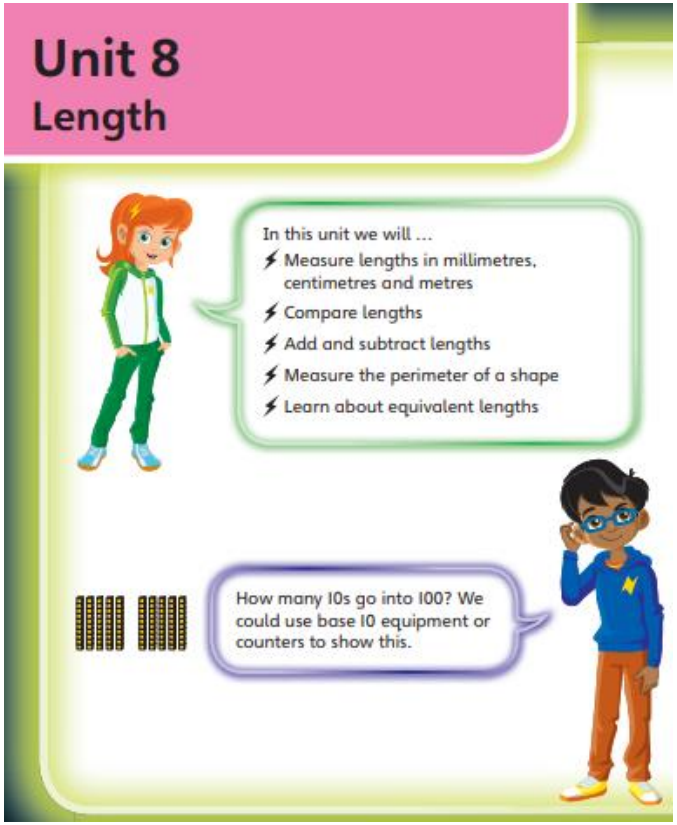
Pictograms

Each ○ represents 2 people.

Sport	Number
skiing	○○○○○
snowboarding	○○○○○○

Bar charts





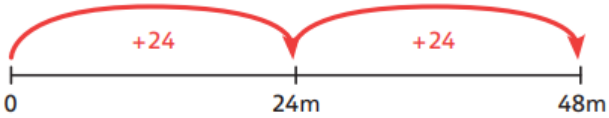
KEY LANGUAGE

There is some key language that children will need to know as part of the learning in this unit.

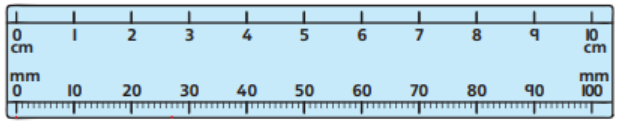
- millimetres (mm), centimetres (cm), metres (m)
- measure, measurement
- length, height, width, distance, diagonal
- how long? how wide? how tall? how high?
- ruler, metre stick, metre ruler
- longer, shorter, longest, shortest, furthest
- perimeter
- addition, subtraction, find the difference, repeated addition, multiplication
- greater than (>), less than (<)
- polygon, quadrilateral, triangle, rectangle
- compare, convert, equal, equivalent, ascending, predict, calculate, expression, method

STRUCTURES AND REPRESENTATIONS

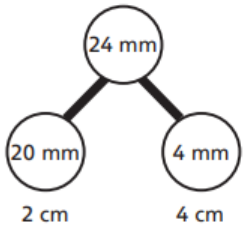
Number line: Number lines will be used to help children make the link between scales, measurement and counting.



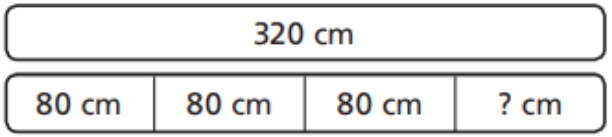
Rulers: Rulers of varying scales and sizes will be used across the unit to develop children's ability to measure accurately.

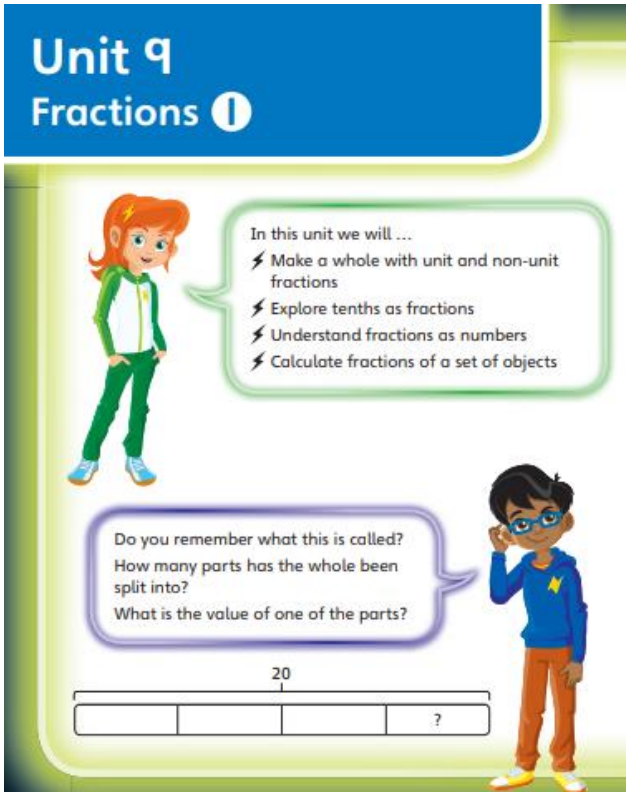


Part-whole model: This model will be used to help children recognise the relationship between addition and subtraction and how numbers can be partitioned.



Bar model: This model will be used to support the representation of children's calculations and problem solving.





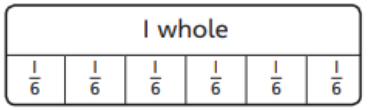
KEY LANGUAGE

There is some key language that children will need to know as part of the learning in this unit.

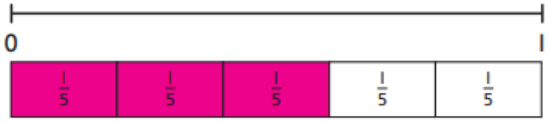
- part, whole, equal parts, fraction, unit fraction, non-unit fraction, denominator, numerator
- partition, split, share, group, interval, combine, count on, count back, represent
- halves, thirds, quarters, fifths, sixths, sevenths, eighths, ninths, tenths, elevenths, twelfths
- mixed number, whole number, fractional part, integer, set of objects

STRUCTURES AND REPRESENTATIONS

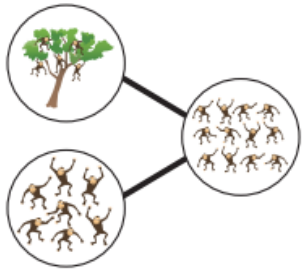
Bar model: This representation is crucial to allow children to show the information they are given and understand how it should be manipulated in order to find the solution to the problem.



Number line: This is an important representation to allow children to understand fractions as a number. Positioning fractions accurately on a number line will require a secure understanding of the role of the denominator and numerator within a fraction and how this represents the whole being split into the required number of parts.



Part-whole model: This representation is used to show how a whole can be split into a different number of parts and provides an alternative option to the bar model for some questions.



Ten frame: This is an important model to allow children to understand the concept of tenths and how different numbers of objects can be shared or grouped in tenths in different ways.