Pupils should be taught to:

Understand percentage as the number of parts per 100; recognise the equivalence of fractions, decimals and percentages; calculate percentages and use them to solve problems (continued)

As outcomes, Year 7 pupils should, for example:

Calculate percentages of numbers, quantities and measurements.

Know that 10% is equivalent to $\frac{1}{10} = 0.1$, and 5% is half of 10%.

Use **mental methods**. For example, find:

- 10% of £20 by dividing by 10;
- 10% of 37 g by dividing by 10;
- 5% of £5 by finding 10% and then halving;
- 100% of 5 litres by knowing that 100% represents the whole;
- 15% of 40 by finding 10% then 5% and adding the results together.

Use **informal written methods**. For example, find:

- 11% of £2800 by calculating 10% and 1% as jottings, and adding the results together;
- 70% of 130 g by calculating 10% and multiplying this by 7 as jottings; or by calculating 50% and 20% as jottings and adding the results.

Use a **calculator**, without the % key, to work out percentages of numbers and measures. For example:

- What is 24% of 34?
- Find 14.5% of 56 litres.

Know that there is more than one way to find a percentage using a calculator. For example, to find 12% of 45:

Convert a percentage calculation to an equivalent decimal calculation.

12% of 45 0.12×45

. 1 2 × 4 5 =

Convert a percentage calculation to an equivalent fraction calculation.

12% of 45 $\frac{12}{100} \times 45$

1 2 ÷ 1 0 0 × 4 5 =

Recognise that this method is less efficient than the first.

Understand a calculator display when finding percentages in the context of money. For example:

- Interpret 15% of £48, displayed by most calculators as 7.2, as £7.20.

See Y456 examples (pages 32–3).