

**Curriculum objectives**

- To perform mental calculations, including with mixed operations, and large numbers.

**You will need****1. Check****Oral and mental starter**

30 Quick additions

**2. Assess**

'Jumbled calculations (1)'

**3. Further practice****Photocopiable sheets**

'Jumbled calculations (2)'

**Mental calculations**

Most children should be able to add, subtract, multiply and divide large numbers mentally with the use of jottings.

Some children will not have made such progress and will need practical support to develop their mental strategies.

**1. Check**

30 Quick additions

Use this starter to check that the children have strategies which they apply, for example looking for pairs of digits that add up to 10. Progress the strings of numbers to three-digit numbers, then to simple decimal numbers. Can they add these numbers mentally:  $24.5 + 16 + 31 + 105 + 9.4$ ? (185.9)

**2. Assess**

On the photocopiable page 127 'Jumbled calculations (1)' make sure that the children are using mental calculations, with jottings where necessary. Encourage them to say how they are doing the calculations. To make sure the children can apply their mental strategies in different situations, ask a few extra related questions, such as:  $42 \div 0.14$  (300);  $55 \times 6$  (330);  $2.8 \div 20$  (0.14). Record the outcomes.

**3. Further practice**

The photocopiable page 'Jumbled calculations (2)' from the CD-ROM will give children quick-fire practice with their mental calculation skills.

**Curriculum objectives**

- To add and subtract fractions with different denominators, using the concept of equivalent fractions.

**You will need****1. Check****Oral and mental starter**

50 Equivalent fractions

**2. Assess**

Individual whiteboards

**3. Further practice****Photocopiable sheets**

'Fraction calculations'

**General resources**

'Fraction wall'

**Add and subtract fractions with different denominators**

Most children should be able to convert fractions to equivalent fractions leading to finding the lowest common denominator to enable addition and subtraction.

Some children will require more help to identify equivalent fractions.

**1. Check**

50 Equivalent fractions

Begin with familiar unitary fractions such as  $\frac{1}{2}$ , asking the children to write as many equivalent fractions as they can. Move on to other fractions to make sure that the children realise that, to find an equivalent fraction, they must either multiply or divide both the numerator and the denominator by the same number. Ask: *Why do we need to convert the fractions to those with the same denominator? If we are adding fractions, which part of the fraction tells us the number of parts?*

**2. Assess**

Remind the children that, if they are adding or subtracting fractions, the fractions must have the same denominator, so it is best to find the lowest common denominator. Give small groups two fractions for them to decide on the lowest common denominator, then find the sum and the difference between. Make sure that the children are clear about the difference between the numerator and denominator. Record the outcomes.

**3. Further practice**

The children should use photocopiable page 'Fraction wall' to help identify equivalent fractions. Photocopiable page 128 'Fraction calculations' will give further practice in adding and subtracting fractions.