Can I write addition and subtraction sentences that use the same three numbers and explain how they are linked?

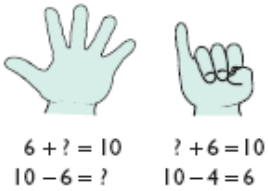
Teaching guidance

Key vocabulary

add, addition, total, altogether, subtract, take away, equals, number sentences, sign, operation

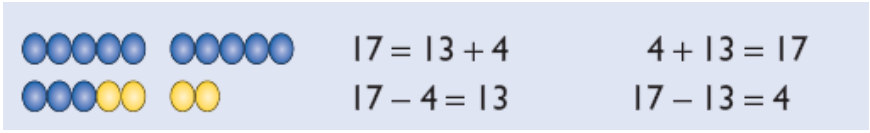
Models and images, resources and equipment

Model how to record the addition and subtraction number sentences that arise from practical activities



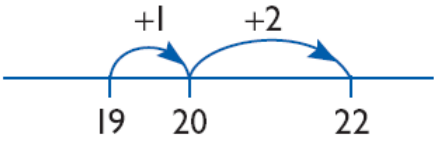
Sets of objects in two colours

These can be used to show that there are four linked number sentences for each addition and subtraction number family.

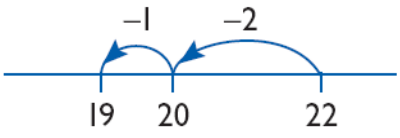


Number lines

Record linked addition and subtraction calculations on a number line to emphasise the inverse relationship.



19 + 3 = 22



22 - 3 = 19

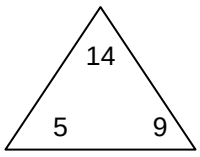
Teaching tips

- Provide children with practical opportunities to explore and confirm for themselves that:
    - it does not matter in which order any two numbers are added and so 7 + 4 gives you the same total as 4 + 7;
    - order does matter in subtraction and so 5 - 3 is not the same as 3 - 5.
- Give children practical experience of adding and then subtracting the same number, for example adding 3 then subtracting 3. They need to understand that if you add then subtract the same number (or vice versa), you get back to where you started because one operation 'undoes' the other. Use different resources to model this, including:
    - counters and objects;
    - number lines.

  Model how you would record these practical experiences as number sentences, for example:

  7 + 3 = 10 10 - 3 = 7
- Ask children questions that require them to identify and use knowledge that every addition calculation can be replaced by an equivalent subtraction calculation, for example:
    - If 9 add 6 equals 15, what is 15 subtract 6?
    - If 15 subtract 8 equals 7, what do I need to add to 7 to make a total of 15?
- When children are learning and recalling facts, remind them that there are four facts for every addition/subtraction family (two addition facts and equivalent subtraction facts for each of the addition facts). Encourage them to say all four related facts.

5 + 9 = 14 14 - 9 = 5
9 + 5 = 14 14 - 5 = 9



- Organise children into groups of six and give them a set of A4 cards, for example:

-	=	+	5	4	9

Ask the children to take it in turns to be the photographer/organiser and arrange the other five children into appropriate number sentences before taking a photograph. Refer to these photographs when helping children to consolidate and practise known facts.