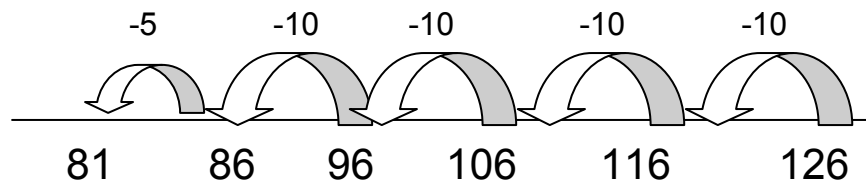## Subtraction - Year Three

- **Subtract numbers with up to three digits, using formal written method of columnar subtraction**

NB Ensure that children are confident with the methods outlined in the previous year's guidance before moving on.
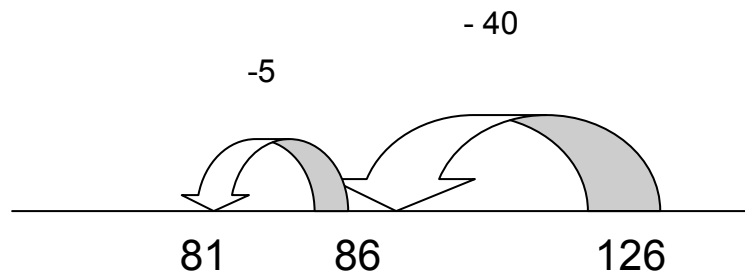
Further develop the use of the **empty number line** with calculations that **bridge 100:**
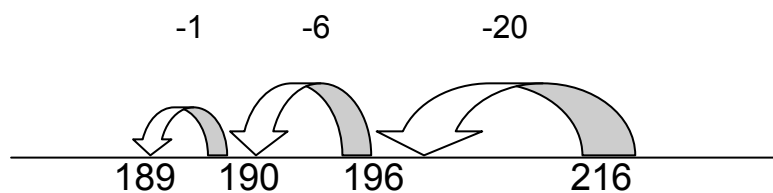
126 – 45 = 81

Use a **200 grid** to support counting back in tens and bridging 100
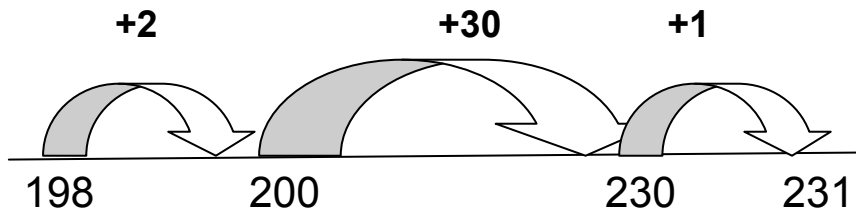
Then use more efficient jumps:

Extend with larger numbers by counting back…

216 – 27 = 189

…and by **counting on to find the difference** (small difference):

231 – 198 = 33

'The difference between 198 and 231 is 33.'

Introduce the **expanded written method** with the calculation presented both horizontally and vertically (in columns). Use two-digit numbers when introducing this method, initially:

78 – 23 = 55

$$\begin{array}{r} 70 + 8 \\ -\underline{20 + 3} \\ 50 + 5 = 55 \end{array}$$

'Partition numbers into tens and ones/units. Subtract the ones, and then subtract the tens. Recombine to give the answer.'

NB In this example decomposition (exchange) is not required.

You might replace the **+ sign** with the word **'and'** to avoid confusion.

This will lead into the **formal written method:**

$$\begin{array}{r} 7\,8 \\ -\underline{2\,3} \\ \underline{5\,5} \end{array}$$

Use the language of place value to ensure understanding:
 'Eight subtract three, seventy subtract twenty.'

NB A number line would be an appropriate method for this calculation but use two-digit numbers to illustrate the formal written method initially.

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Introduce the **expanded written method** where **exchange/decomposition** is required:

73 − 27 = 46

70 + 3   becomes   60 +13   73 is partitioned into 60+13 in
- 20 + 7   - 20 + 7   order to calculate 73-27
                    40 + 6 = 46

NB children will need to practise partitioning numbers in this way. **Base- ten materials** could be used to support this.

When children are confident with the expanded method introduce the **formal written method,** involving decomposition/exchange**:**

73 − 27 = 46

$$\begin{array}{r} {}^{6}\ {}^{13} \\ \cancel{7}\ \ \cancel{3} \\ -\ \ 2\ \ 7 \\ \hline 4\ \ 6 \end{array}$$

Use the language of place value to ensure understanding.
'We can't subtract seven from three, so we need to exchange a ten for ten ones to give us 60 + 13.'

Use **base ten materials** to support understanding.

If children are confident, extend the use of the **formal written method with numbers over 100**, returning to the expanded method first, if necessary.

235 – 127 = 108

$$\begin{array}{r} {}^{2}\ {}^{15} \\ 2\ \cancel{3}\ \cancel{5} \\ -\ 1\ 2\ 7 \\ \hline 1\ 0\ 8 \end{array}$$

Use the language of place value to ensure understanding.
In this example it has only been necessary to exchange from the tens column.

Use base ten materials to support understanding.

NB If, at any time, children are making significant errors, return to the previous stage in calculation.