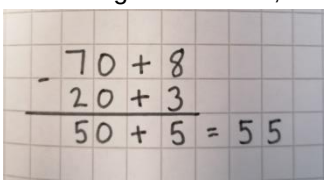
Subtraction – Stage Three

Subtract numbers with up to three digits, using formal written method of column subtraction

Expanded written method (no exchange)

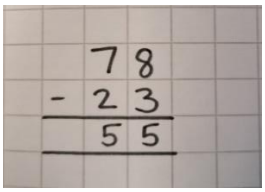
The calculation presented both horizontally and vertically (in columns). Use two-digit numbers when introducing this method, initially:



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

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

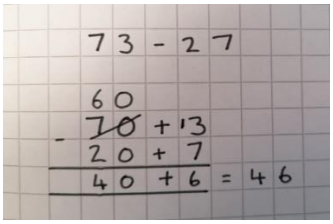
Formal written Method (no exchange)



Use the language of place value to ensure understanding:

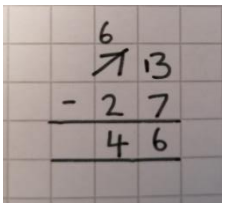
'Eight subtract three, seventy subtract twenty.'

Expanded written method (with exchange)

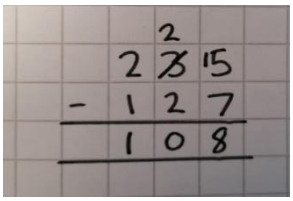


73 is partitioned into 60 + 13 in order to calculate 73 - 27
Children will need to **practise partitioning numbers** in this way.

Formal written Method (with exchange)



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.'
If children are confident**, extend the use of the formal written method** with numbers over 100, returning to the expanded method first, if necessary.
Only move onto this method once children are secure using numbers under 100.

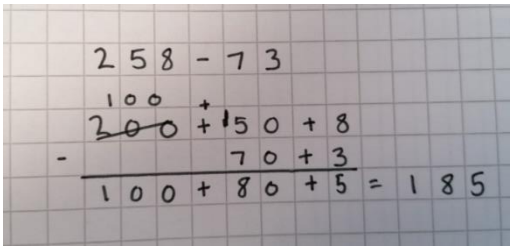


Use the language of place value to ensure understanding.
'In this example it has only been necessary to exchange from the ten's column'
If, at any time, children are making significant errors, return to the previous stage in calculation.

Subtraction – Stage Four

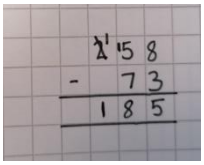
Subtract numbers with up to 4 digits using the formal written method of columnar subtraction where appropriate
Ensure that children are confident with the methods outlined in the previous stage's guidance before moving on.

Expanded written method (with exchange)



You might replace the **+ sign** with the word **'and'** to avoid confusion.
Children will need to practise partitioning in a variety of ways.

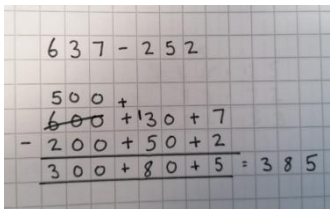
Formal written method (with exchange)



Use the language of place value to ensure understanding.
In this example it has been necessary to exchange from the hundred's column.
Ensure children are exchanging and using this language when being taught this method. When exchanging, ensure they write the new value at the top of their calculation as in the above example.

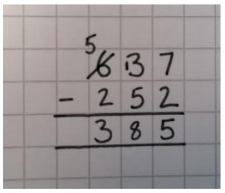
Expanded written method (with exchange)

Further develop by subtracting a three-digit number from a three-digit number:



Ensure that children are confident in partitioning numbers in this way.

Formal Written Method (with exchange)



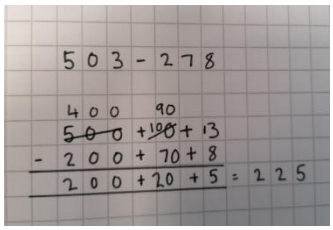
Use the language of place value to ensure understanding.
When children are confident, develop with **four digit numbers** and decimal numbers (in the context of money and measures).
If, at any time, children are making significant errors, return to the previous stage in calculation

Subtraction - Stage Five

Subtract whole numbers with more than 4 digits, including using formal written method (Column Subtraction).

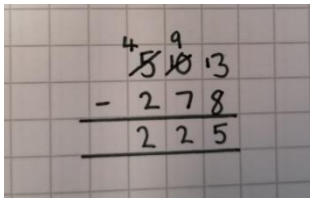
Ensure that children are confident with the methods outlined in the previous stage's guidance before moving on.

Expanded written method (with exchange)



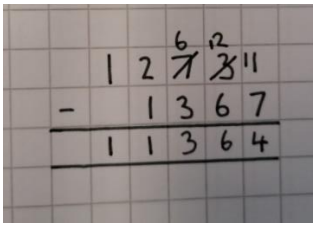
In this example 503 has to be partitioned into 400 + 90 + 13 in order to carry out the subtraction calculation.

Formal Written Method (with exchange)



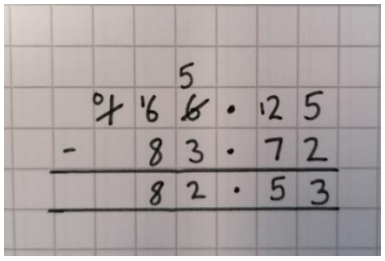
There are no tens in the first number (503) so we have to exchange a hundred for 10 tens before we can exchange a ten for ten ones.

Formal Written Method (with multiple exchanges)



In this example it has been necessary to exchange from the tens and the hundred's columns. If children are making significant errors, provide calculations where only one exchange is required.

Formal Written Method (with decimals)



Ensure the decimal numbers line up
If, at any time, children are making significant errors, return to the previous stage in calculation.

Subtraction – Stage six

No objectives have been included in the programmes of study explicitly related to written methods for subtraction in stage six. However, there is an expectation that children will continue to practice and use the formal written method for larger numbers and decimals and use these methods when solving problems, when appropriate (see previous stages guidance for methods).

Our aim is that by the end of stage six children use mental methods (with jottings) when appropriate, but for calculations that they cannot do in their heads, they use an efficient formal written method accurately and with confidence.