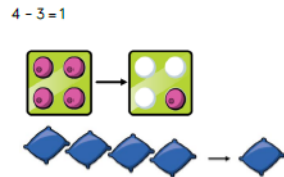


Progression in written subtraction methods

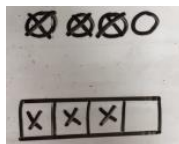
KS1

Reception

Children will subtract two numbers by taking one away from the other and counting how many are left.



Children start to draw the concrete resources they are using and cross out the correct amount.



Year 1

Children will use cubes to continue the 'taking away' principle by counting back. Children will use cubes to help them progress to a number line



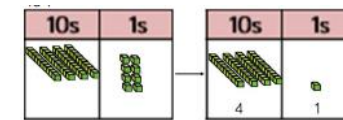
Children will also look at 'finding the difference' which can sometimes be the most efficient method.



Year 2

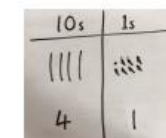
Children continue using base 10 and PV counters to build on their knowledge of 'taking away' and 'finding the difference'.

e.g. $48 - 7 =$



This will progress to two 2-digit numbers, crossing the tens boundary ready for the pictorial method.

Then represent the pictorially.



base 10

They begin to record subtraction number sentences such as $9 - 4 = 5$.

This can also be done with Numicon, laying the smaller piece on top of the greater piece to see what's left.

Children will progress abstract number lines- with and without numbers.

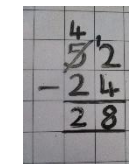


This will progress to exchanging

e.g. $41 - 26 =$



Finally, onto the column method with 2 digit numbers. Children will be taught to work across from right to left, ensuring the largest number is on the top of the calculation and that they understand how to exchange from the tens column.

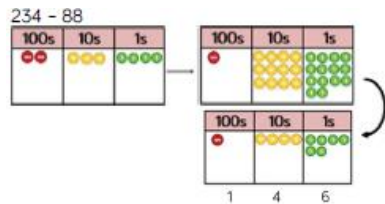


Progression in written subtraction methods

KS2

Year 3

Children will use PV counters to build on their knowledge of exchanging ready for a formal



columnar method with 3-digit numbers.

This then progresses to a formal columnar method involving exchanging:

Year 4

Children will refine the columnar method and progress to 4 digit numbers, this method will continue the rest of the way through the school.

$$\begin{array}{r} 4 \overset{5}{\cancel{5}} \overset{1}{\cancel{4}} 3 \\ - 1574 \\ \hline 3079 \end{array}$$

This would be solved as follows:

Starting with the **ones column**, if the number being subtracted is larger, a ten will be exchanged from the tens column and placed in front of the ones digit.

Year 5

Children will use the columnar method for numbers with more than 4 digits and up to two decimal places.

$$\begin{array}{r} 8 \overset{2}{\cancel{2}} \overset{1}{\cancel{1}} \overset{2}{\cancel{2}} \overset{8}{\cancel{8}} 4 \\ - 215,167 \\ \hline 616,127 \end{array}$$

$$\begin{array}{r} 456 \cdot \overset{1}{\cancel{1}} 4 \\ - 234 \cdot 16 \\ \hline 222 \cdot 08 \end{array}$$

Year 6

Children will continue to use the columnar method extended up to

$$\begin{array}{r} 6'5 \\ \cancel{7} \overset{8}{\cancel{8}} 054 \cdot \overset{2}{\cancel{2}} 2 4 \\ - 57413 \cdot 132 \\ \hline 18641 \cdot 192 \end{array}$$

numbers with 3 decimal places.

$$\begin{array}{r}
 5 \overset{2}{\cancel{3}} 1 \\
 - 228 \\
 \hline
 303
 \end{array}$$

Sp 3 – 4 becomes 13- 4 = 9
once a ten is exchanged.

The tens column:

4- 7 becomes 14-7 = 7 (tens)
once a hundred is
exchanged.

The hundreds column:

5- 5 = 0 (hundreds) once a
thousand is exchanged.
Then the thousands column
can be subtracted.

The column method will also
be applied to solving
calculations with money up
to 2 decimal places.

$$\begin{array}{r}
 \pounds 4 \cdot \overset{2}{\cancel{8}} 2 \\
 - \pounds 2 \cdot 17 \\
 \hline
 \pounds 2 \cdot 15
 \end{array}$$