Written Calculation Policy

Subtraction

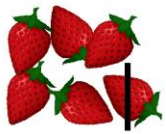
Reviewed March 2021

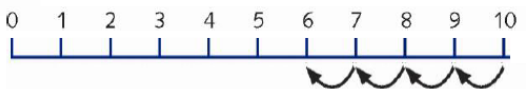
Obj Gui **Year 1** Vid Ex

Missing number problems e.g. 7 = □ - 9; 20 - □ = 9; 15 – 9 = □; □ - □ = 11; 16 – 0 = □

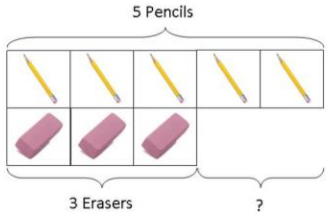
Use concrete objects and pictorial representations. If appropriate, progress from using number lines with every number shown to number lines with significant numbers shown.

Understand subtraction as take-away:
E.G 10 – 4 = 6



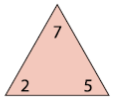


Understand subtraction as finding the difference:



Understand the relationship between addition & subtraction

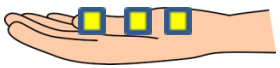
5 + 2 = 7
2 + 5 = 7
7 – 2 = 5
7 – 5 = 2

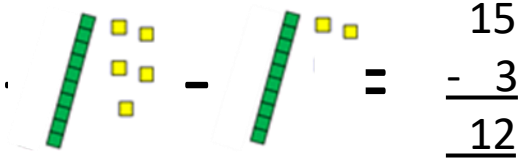


Column Subtraction Method (2-digit by 1-digit no decomposition)

Recording subtraction in columns to support understanding of the quantity aspect of place value and prepare for efficient written methods with larger numbers. Represent numbers with Diennes apparatus.

E.g. 15 – 3 = 12



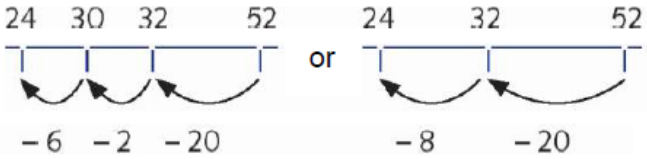


15
- 3
12

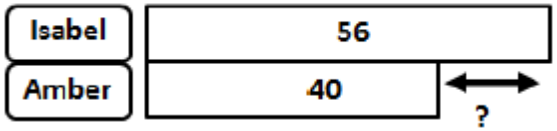
Obj Gui **Year 2** Vid Ex

Missing number problems e.g. 52 – 28 = □; □ – 20 = 25; 22 = □ – 21; 6 + □ + 3 = 11

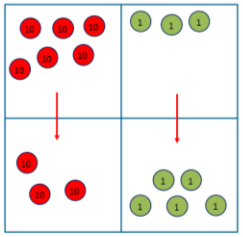
Continue to use number lines to model take-away: Children jumping back in multiples of 10 and bridging 10
E.G. 52 - 28 = 24



Understand subtraction as finding the difference:



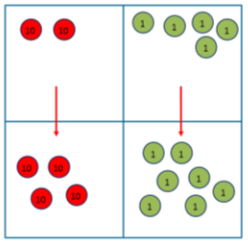
Column Subtraction Method leading to decomposition



Physically take away

98
- 35
63

For the majority of children this will lead to exchanging, modelled using place value counters or Diennes.



Exchange then physically take away

6 7 12
- 4 7
2 5

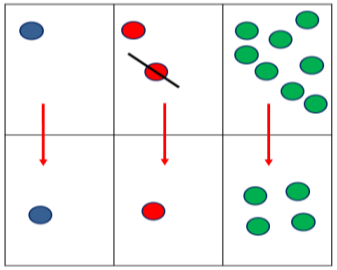
Obj Gui **Year 3** Vid Ex

Missing number problems e.g. □ = 43 – 27; 145 – □ = 138; 274 – 30 = □; 245 – □ = 195; 532 – 200 = □; 364 – 153 = □

Mental methods should continue to develop, supported by a range of models and images, including the number line. The bar model should continue to be used to help with problem solving (see Y1 and Y2).

Column Subtraction Method (3-digit by 3-digit)

Consolidate decomposition in 2-digit numbers and then progress onto decomposition of 3-digit numbers. Continue to teach method alongside practical representation with place value counters or diennes aiming for conceptual understanding and procedural understanding.



2 3 2
- 1 1 4
1 1 8

Children should have experience of dealing with decomposition involving both the Hundreds and Tens column initially separately and then both together. Children need to be secure understanding decomposition where a 0 is holding the place value E.G.

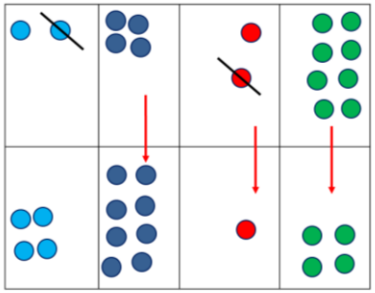
2 9
3 ~~0~~ 12
- 5 5
2 4 7

Obj Gui **Year 4** Vid Ex

Missing number/digit problems: 456 + □ = 710; 1□7 + 6□ = 200; 60 + 99 + □ = 340; 200 – 90 – 80 = □; 225 - □ = 150; □ – 25 = 67; 3450 – 1000 = □; □ - 2000 = 900

Mental methods should continue to develop, supported by a range of models and images, including the number line.

Column Subtraction Method (4-digits by 4-digits)
Children will continue to secure both conceptual understanding and procedural fluency with decomposition, which can be modelled with place value counters or diennes



5 1 2 1
6232
- 4814
1418

Practical activities involving coins 1p, 10p, £1 can be used alongside the columnar method to develop understanding of subtraction with decimal numbers.

6 4
7 12 . 5 10
- 4 7 . 2 5
2 5 . 2 5

Progress to calculating with decimals, particularly in the context of money (2-decimal places).

The bar model should continue to be used to help visualisation when problem solving.

Obj Gui **Year 5** Vid Ex

Missing number/digit problems: 6.45 = 6 + 0.4 + □; 119 - □ = 86; 1 000 000 - □ = 999 000; 600 000 + □ + 1000 = 671 000; 12 462 – 2 300 = □

Mental methods should continue to develop, supported by a range of models and images, including the number line. The bar model should continue to be used to help with problem solving.

Column Subtraction Method (progressing to more than 4-digits & decimal numbers)

As year 4, progressing to larger numbers, aiming for both conceptual understanding and procedural fluency with decomposition to be secured.

Progress to calculating with decimals, including those with different numbers of decimal places E.g.

2 9
3 5 3 . 10 12
2 1 . 5 5
3 3 1 . 4 7

Problem Solving
Teachers should ensure that pupils have the opportunity to apply their knowledge in a variety of contexts and problems (exploring cross curricular links) to deepen their understanding. The bar model should continue to be used to help visualisation when problem solving.

Obj Gui **Year 6** Vid Ex

Missing number/digit problems: □ and # each stand for a different number. # = 34. # + # = □ + □ + #. What is the value of □? What if # = 28? What if # = 21
10 000 000 = 9 000 100 + □
7 – 2 x 3 = □; (7 – 2) x 3 = □; (□ - 2) x 3 = 15

Mental methods should continue to develop, supported by a range of models and images, including the number line. The bar model should continue to be used to help with problem solving.

Column Subtraction Method
As year 5, progressing to larger numbers, aiming for both conceptual understanding and procedural fluency with decomposition to be secured.

Continue calculating with increasingly larger numbers as well as decimals, including those with different numbers of decimal places.

Problem Solving
Teachers should ensure that pupils have the opportunity to apply their knowledge in a variety of contexts and problems (exploring cross curricular links) to deepen their understanding. The bar model should continue to be used to help visualise when problem solving E.g.