Subtraction: Yellow (Y2)

Mental Work

Derive and recall

- subtraction facts for all numbers up to at least 10, e.g. 8 - 5

Work mentally (with jottings if needed)

- subtract a pair of 1-digit numbers, including crossing 10, e.g. 12 – 7 (count back in ones, partition)
- subtract any 1-digit number from a multiple of 10, e.g. 80 – 7 (count back, knowledge of bonds to 10)
- subtract a 1-digit number from a 2-digit number, including crossing the tens boundary, e.g. 57 - 3, then 52 – 7 (partition -2 then -5)
- subtract a multiple of 10 from any 2-digit number, e.g. 72 - 50

Children should be encouraged to:

* **approximate** their answers before calculating

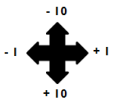
***consider if a mental calculation** would be appropriate **before** using written methods

***check their answers** after calculation using an appropriate strategy

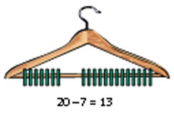
Practical work

Practical work using a **balance** would show that both sides need to be equal, e.g. 11 – 2 = 9 or 9 = 11 – 2.
Extend to using the balance to solve missing number sums, e.g. 12 - Δ = 8.

Use a 100 square to show



Use a washing line or coat hanger and pegs to support knowledge, understanding, reading and using of subtraction vocabulary.
They can also be used to emphasise the **commutativity** of addition and subtraction.



20 – 7 = 13
20 – 13 = 7
13 + 7 = 20
7 + 13 = 20

Number lines

Children will begin to use empty number lines to support calculations
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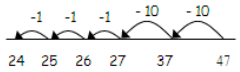
Counting back

Stage 1: First counting back in tens and ones.

1



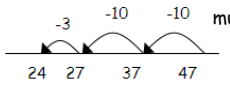
Stage 2: Then help children to become more efficient by subtracting the units in one jump (by using the known fact 7 – 3 = 4)

Stage 3: Next subtract the tens in one jump and the units in one jump.

Stage 4: Teach children to bridge through ten to become more efficient.
Introduce the term **BIG FAT ZERO NUMBERS**.

47 – 23 = 24

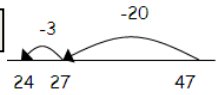
2



Start by taking off multiples of 10

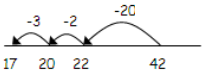
The steps may be recorded in a different order

3



42 – 25 = 17

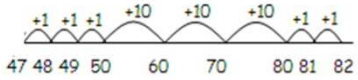
4



Counting on

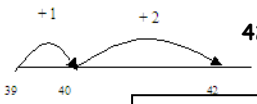
If the numbers involved in the calculation are close together or near to multiples of 10, 100, etc, it can be more efficient to count on.

82 – 47 =



or

47 + 10 + 10 + 10 + 3 + 2
add multiples of 10 first



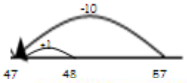
42 – 39 = 3

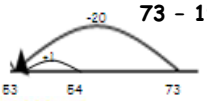
Encourage the children to stop at the BFZN.

Subtracting 9 or 11

Teach the strategy of subtracting 10 and adjusting by 1.
Start with -9/-11 then move onto -19/-21

57 – 9 = 48

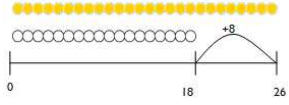




73 – 19 = 54

Subtraction as finding the difference

Find the difference by comparing 2 groups and counting on.
Use **Difference ITP**.



The difference between 18 and 26 is 8.
26 – 18 = 8

Recording

Once a child is confident using and applying the simple written recording of subtraction and is no longer able to solve a calculation because the numbers increase, they move onto partitioning, showing their working on a number line or as a partitioned sum.

37 - 12 = 37 - 10 - 2
= 27 - 2
= 25

NB partition the second number only

42 – 25 = 42 – 20 – 5
= 22 – 5
= 17

(with bridging)

CHILDREN SHOULD NOT MOVE ONTO THE NEXT STAGE IF:

1) they are not ready
2) they are not confident

Missing number calculations

Continue using a range of equations with appropriate larger numbers than **Orange**.
e.g. 19 - 5 = 20 - and mixed addition and subtraction, e.g. 32 + + = 100 35 = 1 + + 5

Practical work using a **balance** would show that both sides need to be equal.