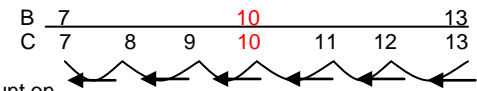

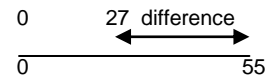
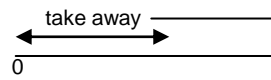
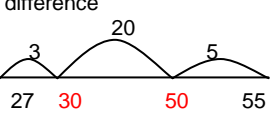

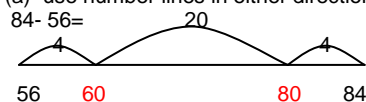




Progression in Maths – Subtraction

Please note; methods are taught progressively so that children’s conceptual understanding of how and, importantly, why a ‘method’ works is continually developed. Having a range of strategies for children to select from enables every child to be able to succeed when faced with a subtraction question/problem.

Year	What will subtraction look like?	Notes
	<i>This progression builds on the number line (KS1) through to an informal written method (KS2). When subtracting using this method one of the numbers usually stays whole & it is useful to make use of the fact that this number is close to 10 or a multiple of 10 by partitioning another number to provide the difference.</i>	
R	Teacher modelling/recording pictorial representation, number line, number sentences Practical demonstrations of ‘take away’, in context Vocabulary of subtraction.	Mostly mental calculations with Informal jottings. Teacher recording.
1	Number lines introduced for recording ‘jumps’- take away(count back) A) Recall- 1 jump B) Big/few jumps efficient C) Small/many inefficient & error prone A) 13 - 6 = 7 B) 13-6 = 13- 3 - 3 = 7 C) 13-6= 13-1-1-1-1-1-1= 7 Count back  Introduce count on 	<ul style="list-style-type: none"> Mostly mental calculations with informal jottings. Teacher models with counting stick, washing line, marked and empty number line. Multiple of ten a bench mark Children verbalising method, showing jumps recording using empty and marked number lines – jumps recorded UNDERNEATH so that children do not become confused between subtraction and addition – visual difference, Discuss, explain and compare methods and recordings
2	    <p style="text-align: center;">so 55 – 27 = 28</p> <p>(Note: Ensure children record jumps in 1s and 10s as some may become confused when asked to count back/on by “20” for example)</p> <p>Check using inverse 28 + 27 = ? on number line or horizontally etc</p>	<ul style="list-style-type: none"> Visualisation of difference and take away Model both as counting on and/or back on number line Discuss, explain and compare methods and recordings Special cases Close together count on 82-78= Far apart count back 82-5=
3	(a) use number lines in either direction 84- 56=  56 60 80 84 Check answer using the inverse 28 + 56 = ? extend to 783 - 356 = (HTU-HTU) _____	<ul style="list-style-type: none"> TU – TU, HTU – TU, HTU – HTU Estimate, calculate & check it mate! Check for mental approach first before written method. Discuss, explain and compare methods and recordings <p>so following PATH A counting on from the small number to the larger number (complementary addition) stepping on multiples of 10</p>

A MORE FORMAL APPROACH IS USED THROUGHOUT KEY STAGE 2 – See Overleaf.



Progression in Subtraction.

Please note; methods are taught progressively so that children's conceptual understanding of how and, importantly, why a 'method' works is continually developed. Having a range of strategies for children to select from enables every child to be able to succeed when faced with a subtraction question/problem.

Year	What will subtraction look like?	Notes
	This progression favours the development of partitioning numbers with a focus on place value.	
R	Teacher modelling, pictorial representation Practical demonstrations of 'take away'. Vocabulary of subtraction.	Mostly mental calculations with Informal jottings. Teacher recording.
1	Begin to work out mentally that $15 - 7 = (15 - 5) - 2$ $= 10 - 2$ $= 8$	Mostly mental calculations with informal jottings. Teacher recording. Partition by breaking into 5 and 'abit'
2	a) $23 - 12 = (23 - 10) - 2$ $= 13 - 2$ $= 11$ An efficient method that partitions one of the numbers. Hundred square imagery is also useful. b) $23 - 12 = (20 \text{ and } 3) \text{ take away } (10 \text{ and } 2)$ $20 - 10 = 10$ $3 - 2 = 1$ $= 11$ Less efficient but leads into future methods of partitioning both numbers when decomposing	Continue to break 6,7,8,and 9 into '5 and a bit' <ul style="list-style-type: none"> Partition into tens and units. Work out mentally (using hundred square) then explain
3	a) $87 - 56 = 80 + 7$ $156 - 45 = 100 + 50 + 6$ $168 - 123 = 100 + 60 + 8$ $\quad - 50 + 6$ $\quad - 40 + 5$ $\quad - 100 + 20 + 3$ $\quad \underline{30 + 1 = 31}$ $\quad \underline{100 + 10 + 1 = 111}$ $\quad \underline{0 + 40 + 5 = 45}$ $81 - 57$ (Partitioning to solve – expanded decomposition with "stealing") $\begin{array}{r} 81 \\ - 57 \\ \hline \end{array}$ $\begin{array}{r} 70 \quad 11 \\ 80 \quad 11 \\ - 50 \quad 7 \\ \hline 20 \quad 4 \end{array} = 24$ " 1 take away 7 is tricky so steal " and check answer with inverse	<ul style="list-style-type: none"> TU – TU, HTU – TU, HTU – HTU Lead on to decomposition method in expanded format (Note; 'stealing' not introduced until children are secure with HOW expanded decomposition works) Ensure understanding of number partitioning and exchange. Check for mental approach first before written method. Approximate, calculate & check it mate!
4	(a) $784 = 700 \begin{array}{r} 70 \\ 80 \end{array} \begin{array}{r} 1 \\ 4 \end{array}$ extend onto \longrightarrow $\begin{array}{r} 784 \\ - 56 \\ \hline 728 \end{array}$ $\begin{array}{r} 784 \\ - 56 \\ \hline 728 \end{array}$ (b) $734 = 700 \begin{array}{r} 600 \\ 30 \end{array} \begin{array}{r} 1 \\ 4 \end{array}$ extend onto \longrightarrow $\begin{array}{r} 734 \\ - 252 \\ \hline 482 \end{array}$ $\begin{array}{r} 734 \\ - 252 \\ \hline 482 \end{array}$ (c) $8.75 = \text{£}8 \begin{array}{r} 60 \\ 70 \end{array} \begin{array}{r} 1 \\ 5 \end{array}$ extend onto \longrightarrow $\begin{array}{r} \text{£}8.75 \\ - 4.38 \\ \hline \text{£}4.37 \end{array}$ $\begin{array}{r} \text{£}8.75 \\ - 4.38 \\ \hline \text{£}4.37 \end{array}$ Check answer using the inverse	<ul style="list-style-type: none"> Consolidate and extend decomposition in expanded format to HTU – TU, then HTU – HTU Extend to simple decimals with or without adjustment from pence to pounds.
5	(a) $754 = 700 \begin{array}{r} 600 \\ 50 \end{array} \begin{array}{r} 14 \\ 4 \end{array}$ adjust H to T and T to U $\begin{array}{r} 754 \\ - 286 \\ \hline 468 \end{array}$ (b) $\begin{array}{r} 754 \\ - 286 \\ \hline 468 \end{array}$ and check answer	<ul style="list-style-type: none"> Consolidate decomposition (HTU – HTU) (ThHTU – ThHTU) (THHTU – HTU) Consolidate decimals (see Y4) Lead to schools standard written method Show two methods, expanded and compact, side by side to ensure transaction is made with real understanding Children to work back from standard written method to expanded format to show understanding Check answers
6	(a) $6467 - 2684$ $\begin{array}{r} 6467 \\ - 2684 \\ \hline 3783 \end{array}$ and check answer $\begin{array}{r} 3783 \\ + 2684 \\ \hline 6467 \end{array}$ (b) $324.9 - 7.25$ $\begin{array}{r} 324.9 \\ - 7.25 \\ \hline 317.65 \end{array}$ Check answer!	<ul style="list-style-type: none"> Practice school's standard written method. Revert back to expanded version for children not understanding. ThHTU – ThHTU then any number of digits. Extend to decimals.

