



Progression in Maths – Addition



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 an addition question/problem.

Year	What will addition look like?	Notes
R	Practical, counting objects and combining sets.	
1	<p>(a) 3 and 2 makes 5</p> <p>(b) $3 + 2 = 5$ (U+U=) (c) $5 + 3 + 1 = 9$ (adding three numbers)</p> <p>$\square + \triangle = 4$ (Considering missing values) (d) $23 + 7 = 30$ (TU+U=)</p>	<p>Understanding addition as:</p> <ul style="list-style-type: none"> + combining sets to make a total + steps in ones along a number line - counting on from the bigger number • Emphasis on mental calculations • Record simple mental additions in a number sentence using + and - signs
2	<p>(a) $52 + 24$ (TU+TU=) (b) $61 + 14 = \square$</p> <p> $\square + \triangle = 9$ (finding missing values)</p> <p>(c) $12 + 7 + 4 = \square$ (Continued work on adding more than 2 numbers together)</p>	<ul style="list-style-type: none"> • Emphasis on mental calculation • Continue to develop understanding of addition as : + combining sets to make a total • + counting in steps of TENS and UNITS (ONES) along a number line • Learning that adding zero leaves a number unchanged • Record mental additions in a number sentence using + and –
3	<p>(a) $186 + 57 =$ (HTU + TU=) and (HTU + HTU =)</p> <p> $186 + 196 + 206 + 216 + 226 + 236 + 241 + 242 + 243$</p> <p>(b) $83 + 56 = 80 + 3 =$ $50 + 6 =$ $130 + 9 = \mathbf{139}$</p> <p>(c) $\begin{array}{r} 67 \\ +24 \\ \hline 80 \\ \underline{11} \\ 91 \end{array}$ $\begin{array}{r} 83 \\ \underline{42} \\ 120 \\ \underline{5} \\ 125 \end{array}$ (e) $\begin{array}{r} 67 \\ +24 \\ \hline 11 \\ \underline{11} \\ 80 \end{array}$ $\begin{array}{r} 83 \\ \underline{42} \\ 120 \\ \underline{5} \\ 125 \end{array}$</p> <p>(Adding HUNDREDS first ^) (Adding UNITS first ^) Then check answer</p>	<ul style="list-style-type: none"> • Counting on in multiples of 100, 10, 5 or 1 using a number line • Leading on to vertical layout and understanding importance of lining up numbers – according to their ‘place value’ • HTU + TU, then progressing to HTU + HTU crossing 10s/100s barrier • Add <u>significant</u> figures first (as in C) • Check for mental approach first before written method. • Approximate, calculate & check it!
4	<p>(HTU + TU = with hundreds first) (HTU + TU = with units first)</p> <p>(a) $\begin{array}{r} 625 \\ + 48 \\ \hline 600 \\ 60 \\ \underline{13} \\ 673 \end{array}$ $\begin{array}{r} 205 \\ + 176 \\ \hline 300 \\ 70 \\ \underline{11} \\ 381 \end{array}$ (b) $\begin{array}{r} 625 \\ + 48 \\ \hline 13 \\ 60 \\ \underline{600} \\ 673 \end{array}$ $\begin{array}{r} 206 \\ + 176 \\ \hline 12 \\ 70 \\ \underline{300} \\ 382 \end{array}$</p> <p>(Introduction to ‘carrying’ – IMPORTANT TO EMPHASISE ‘carrying a ten’, ‘carrying a hundred’ NOT A ONE!)</p> <p>(c) $\begin{array}{r} 625 \\ + 48 \\ \hline 673 \\ 1 \end{array}$ $\begin{array}{r} 367 \\ + 85 \\ \hline 452 \\ 11 \end{array}$ Use number lines to check answer</p>	<ul style="list-style-type: none"> • Consolidation from Year 3 work. Stress importance of columns and place value. • HTU + TU, then HTU + HTU. Cross 10s, 100s boundary. • Add significant figures first and when secure begin with units first. • Check for mental approach first before written method, through to Y6. • Approximate, calculate & check it! Through to Y6 • Refer to the value of each digit – particularly when ‘carrying’ numbers across to their correct column.
5	<p>(HTU + HTU =) (HTU+HTU= short hand) (ThHTU+HTU) (Applying method in context)</p> <p>(a) $\begin{array}{r} 587 \\ + 475 \\ \hline 12 \\ 150 \\ \underline{900} \\ 1062 \end{array}$ (b) $\begin{array}{r} 587 \\ +475 \\ \hline 1062 \\ 11 \end{array}$ (c) $\begin{array}{r} 3587 \\ + 675 \\ \hline 4262 \\ 111 \end{array}$ (d) $\begin{array}{r} \text{£ } 6.72 \\ 8.56 \\ + 2.30 \\ \hline \text{£ } 17.58 \\ 11 \end{array}$</p> <p>and use number lines to check answer</p>	<ul style="list-style-type: none"> • Introduce and build upon adding using least significant numbers first. • HTU + HTU, then ThHTU + ThHTU. • Lead on to schools’ chosen <u>standard written method</u>. Double lines for answer. • Extend to simple decimals • Carry “1 ten”, “1 hundred” etc not carry “1”
6	<p>(a) $\begin{array}{r} 7648 \\ + 1486 \\ \hline 9134 \\ 111 \end{array}$ (b) $124.9 + 7.25$</p> <p>$\begin{array}{r} 124.90^* \\ + 7.25 \\ \hline 132.15 \\ 11 \end{array}$ * Fill “empty” columns with zero to ‘hold the place’</p> <p>Continue to use number lines appropriately</p>	<ul style="list-style-type: none"> • Ensure understanding of standard written method. • Practice ThHTU + ThHTU then numbers with any number of digits. • Extend to more complex decimals.

