

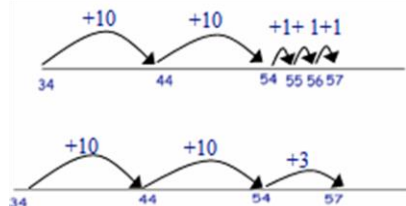
The Journey through Addition

Children start by counting and saying how many there are altogether, by counting all the objects.

e.g.
Count out 3 strawberries. Count out 2 strawberries. How many strawberries altogether?



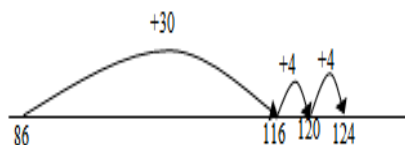
Partition into tens and ones then re-combine.
 $34 + 23$



$$\begin{aligned} 34 + 23 &= 30 + 4 + 20 + 3 \\ &= 50 + 7 \\ &= 57 \end{aligned}$$

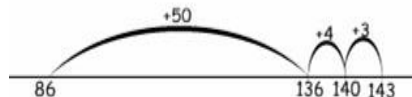
Counting on from the largest number irrespective of the order of the calculation.

$$38 + 86 = 124$$



Jottings for calculations which cannot easily be done mentally will build on existing mental strategies.

$$86 + 57 = 86 + 50 + 7 = 136 + 7 = 143$$



Numberlines will continue to be used before moving into the expanded method.
 $427 + 356$

$$400 + 300 = 700$$

$$20 + 50 = 70$$

$$7 + 6 = 13$$

$$783$$

$$\begin{aligned} 427 + 356 &= 427 + (300 + 50 + 6) \\ &= 727 + 50 + 6 \\ &= 777 + 6 \\ &= 783 \end{aligned}$$

$$\begin{aligned} 400 + 20 + 7 \\ 300 + 50 + 6 \\ 700 + 70 + 13 \end{aligned}$$

Moving towards the more traditional form for written addition will involve children in partitioning both numbers and then re-combining. To follow on from mental strategies, children are initially taught to add the most significant digits first.

$$67 + 24 = (60 + 20) + (7 + 4) = 80 + 11 = 91$$

$$\begin{array}{r} 67 \\ 24 \\ 80 \\ \underline{11} \\ 91 \end{array}$$

Some children may be at the stage of adding the most significant digit first.

$$\begin{array}{r} 367 \\ \underline{85} \\ 300 \end{array} \quad \text{Add mentally from top}$$

$$\begin{array}{r} 140 \\ \underline{12} \\ 452 \end{array}$$

Adding the least significant digits first in preparation for 'carrying'

$$\begin{array}{r} 625 \\ \underline{48} \\ 13 \\ 60 \\ \underline{600} \\ 763 \end{array} \quad \begin{array}{r} 625 \\ \underline{48} \\ 673 \\ 1 \end{array}$$

Children should then combine sets to make a total.
- counting on from the largest number.

e.g. I have 5 pennies and 3 pennies. How many have I altogether?



Children then begin to use numbered lines to support their own calculations using a numbered line to count on in ones.

