

Addition: Blue (Y4)

Mental Work

Derive and recall

- sums of pairs of multiples of 10, 100 or 1000
- addition doubles of numbers 1 to 100, e.g. $38 + 38$ (and the corresponding halves)
- what must be added to any 3-digit number to make the next multiple of 100, e.g. $521 + \Delta = 600$
- pairs of fractions that total 1

Work mentally (with jottings if needed)

- add any pair of 2-digit numbers, including crossing the tens and 100 boundary, e.g. $47 + 58$ (partition: add tens and ones separately then recombine)
- add a near multiple of 10, e.g. $56 + 29$ (partition: add a multiple of 10 and adjust)
- add near doubles of 2-digit numbers, e.g. $38 + 37$ (partition: double and adjust)
- add 2-digit or 3-digit multiples of 10, e.g. $140 + 150$ (use knowledge of $14 + 15$)
- count on in minutes and hours, bridging through 60 (analogue and digital times); partition

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

Number lines

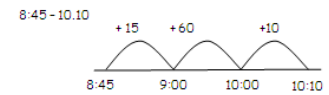
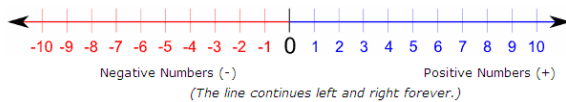
Confidently use number lines for larger numbers, once they have a secure understanding of place value HTU, ThHTU (and beyond), e.g. they need to know that $287 + 100 = 387$ and that $3265 + 400 = 3665$.

Practise adding ones (including bridging), tens and hundreds to any start number.

The answers can be checked/confirmed by column addition once taught.

Number lines should be used to calculate **complements** of 100/1000.

Also, use number lines for calculating time intervals. Analyse errors so that you can address these quickly.



Recording

Children should extend the carrying method to numbers with at least 4 digits.

$$\begin{array}{r} 587 \\ + 475 \\ \hline 1062 \\ 11 \end{array} \quad \begin{array}{r} 3587 \\ + 675 \\ \hline 4262 \\ 111 \end{array}$$

Missing number calculations

Continue using a range of equations but with appropriate numbers.

Solve two step addition problems in context.

Children should also be expected to use rounding and the inverse operation to approximate and check answers.