

CALCULATIONS

Pupils should be taught to:

Consolidate and extend mental methods of calculation, accompanied where appropriate by suitable jottings

As outcomes, Year 7 pupils should, for example:

Strategies for mental addition and subtraction

Count forwards and backwards from any number.

For example:

- Count on in 0.1s from 4.5.
- Count back from 4.05 in 0.01s.
- Count on from and back to zero in steps of $\frac{3}{4}$.

Identify positions of 0.1s and 0.01s on a number line.

Use a **spreadsheet** to replicate cells, e.g. to 'count' from 1 in steps of 1.

	A	B	C	D	E	F	G	▼
1	1	=A1+1	=B1+1	=C1+1	=D1+1	=E1+1	=F1+1	
1	1	2	3	4	5	6	7	

Modify the spreadsheet to count from 0.5 in steps of 0.1.

Add and subtract several small numbers.

For example:

- $4 + 8 + 12 + 6 + 13$
- $5 - 4 + 8 - 10 - 7$

Extend to adding and subtracting several small multiples of 10:

- $40 + 30 + 20$
- $60 + 50 - 30$

Continue to add and subtract any pair of two-digit whole numbers, such as $76 + 58$, $91 - 47$.

Extend to:

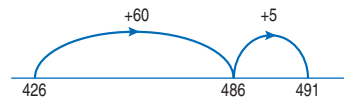
- adding and subtracting a two-digit whole number to or from a three-digit whole number;
- adding and subtracting decimals such as:
 8.6 ± 5.7 0.76 ± 0.58 0.82 ± 1.5
 by considering
 86 ± 57 76 ± 58 82 ± 150

Use jottings such as an empty number line to support or explain methods for adding and subtracting mentally. Choose an appropriate method, such as one of the following:

Partition and deal with the most significant digits first.

For example:

- $426 + 65 = (426 + 60) + 5 = 486 + 5 = 491$



- $14.3 - 5.5 = 14.3 - 5 - 0.3 - 0.2 = 9 - 0.2 = 8.8$

