

Addition – Year 5

Selected National Curriculum Programme of Study Statements Pupils should be taught to:

- add and subtract whole numbers with more than four digits, including using formal written methods (columnar addition and subtraction)
- solve problems involving numbers up to three decimal places.
- Interpret negative numbers in context, count forwards and backwards with positive and negative numbers through zero.

The Big Ideas (NCETM)

Before starting any calculation is it helpful to think about whether or not you are confident that you can do it mentally. For example, $3689 + 4998$ may be done mentally, but $3689 + 4756$ may require paper and pencil. Carrying out an equivalent calculation might be easier than carrying out the given calculation. For example, $3682 - 2996$ is equivalent to $3686 - 3000$ (constant difference).

Stage 1

Column addition with numbers up to 4-digits. Ensure number sentences chosen would not be more suited to an efficient strategy.

$$\begin{array}{r} 3982 \\ + 1766 \\ \hline 5748 \\ \hline \end{array}$$

Adding involving numbers up to 1 and 2 decimal places.

$$3.46 + 1.2 = 4.66$$

Stage 2

Column addition with numbers with more than 4-digits. Ensure number sentences chosen would not be more suited to an efficient strategy.

$$\begin{array}{r} 23972 \\ + 45639 \\ \hline 69611 \\ \hline \end{array}$$

Adding involving numbers up to 2 decimal places.

$$3.46 + 1.32 = 4.78$$

Adding with negative numbers (linking with temperature).

$$-3 + 5 = 2$$

End of year expectation

Multistep problem in context, deciding which methods to use and why.

This table shows the number of people living in various towns in England.

Town	Population
Bedford	82,448
Carlton	48,403
Cleese	34,887
Framley	24,476
Telford	185,842

What is the total of the numbers of people living in Framley and in Telford?

$$\begin{array}{r} 24,478 \\ + 66,640 \\ \hline 91,118 \\ \hline \end{array}$$

Adding involving numbers up to 3 decimal places.

$$3.421 + 1.234 = 4.655$$

Subtraction – Year 5

Selected National Curriculum Programme of Study Statements Pupils should be taught to:

- add and subtract whole numbers with more than four digits, including using formal written methods (columnar addition and subtraction)
- solve problems involving numbers up to three decimal places
- Interpret negative numbers in context, count forwards and backwards with positive and negative numbers through zero.

The Big Ideas (NCTEM)

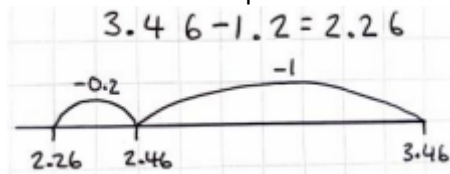
Before starting any calculation it is helpful to think about whether or not you are confident that you can do it mentally. For example, $3689 + 4998$ may be done mentally, but $3689 + 4756$ may require paper and pencil. Carrying out an equivalent calculation might be easier than carrying out the given calculation. For example, $3682 - 2996$ is equivalent to $3686 - 3000$ (constant difference).

Stage 1

Column subtraction up to 3-digits. Ensure number sentences chosen would not be more suited to a more efficient mental strategy

$$\begin{array}{r} \overset{1}{2} \overset{1}{8} \overset{6}{7} \overset{1}{4} \\ - 1949 \\ \hline 1925 \end{array}$$

Subtracting involving numbers up to 1 and 2 decimal places.

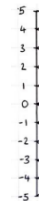
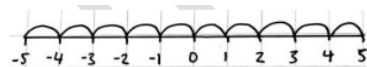


Stage 2

Column subtraction with numbers up to 4-digits. Ensure number sentences chosen would not be more suited to a more efficient mental strategy

$$\begin{array}{r} \overset{1}{2} \overset{1}{8} \overset{6}{7} \overset{1}{4} \\ - 1949 \\ \hline 1925 \end{array}$$

Count backwards through zero (linking with temperature).



End of year expectation

Multistep problem in context, deciding which methods to use and why.

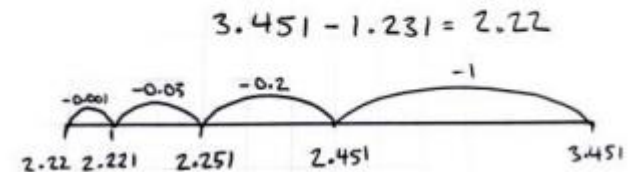
This table shows the number of people living in various towns in England.

Town	Population
Bedford	52,449
Carlton	48,403
Dover	34,087
Farnley	24,478
Notford	58,845

What is the difference between the numbers of people living in Bedford and in Dover?

$$\begin{array}{r} \overset{7}{8} \overset{12}{12} \overset{3}{4} \overset{14}{14} \overset{8}{8} \\ - 34,087 \\ \hline 48,361 \end{array}$$

Subtracting involving numbers up to 3 decimal places.



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HIAS Progression in Calculation