

# Subtraction - Pencil and paper method

## Expectations for each year group:

- Year 2: Recognise the place value of each digit in a two-digit number (tens and ones)  
Solve word problems with subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures.  
Apply their increasing knowledge of mental and written methods  
*(Recording subtraction in columns supports place value and prepares for formal written methods with larger numbers.)*
- Year 3: Recognise the place value of each digit in a three-digit number (hundreds, tens and ones)  
Subtract numbers with up to 3-digits using formal written methods of columnar subtraction.  
Solve problems - more complex subtraction  
Subtract: lengths (m, cm, mm), mass (kg, g), volume/capacity (l, ml)  
Subtract amounts of money to give change using £ and p.
- Year 4: Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones)  
Subtract numbers with up to 4 digits using the formal written methods of columnar subtraction where appropriate.  
Solve subtraction two-step problems in contexts.
- Year 5: Subtract whole numbers with more than 4 digits - including using formal written methods.  
Solve subtraction multi step problems in contexts  
Solve problems involving number up to 3 decimal places
- Year 6: Solve subtraction multi-step problems in contexts  
Solve problems involving subtraction

## Key skills to support understanding:

- Addition and subtraction number facts to 20
- place value
- non-commutative i.e. the order does matter for subtraction.
- patterns of similar calculations
- Models and images
- Reasoning: provide opportunities e.g., 'Talk it, Solve it' and White Rose activities.

## Subtraction - Pencil and paper method

**Use of empty number line - informal**

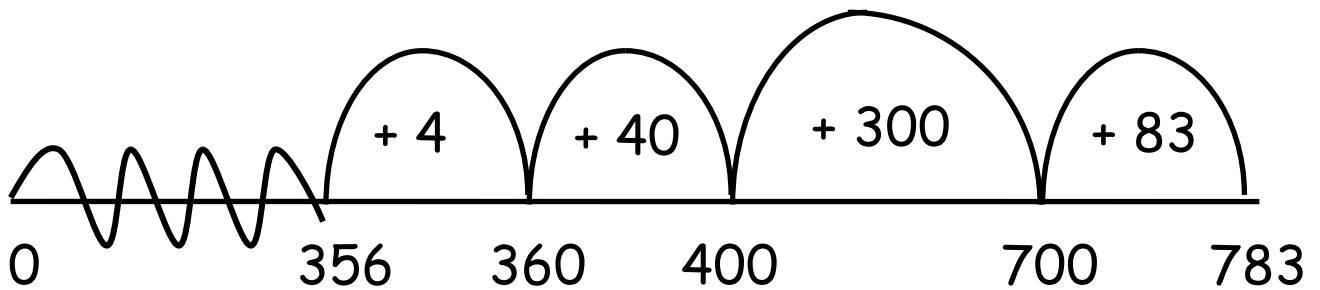
Complementary addition (shop-keepers method)

Counting up from the smaller to the larger number

HTU - HTU

$$783 - 356 = 427$$

$$356 + 4 + 40 + 300 + 83 = 783$$



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## Standard written method - formal no exchange

$$\begin{array}{r} 68 \\ -26 \\ \hline 42 \end{array}$$

## Standard written method - formal

$$\begin{array}{r} 2\ 15\ 1 \\ \cancel{3}63 \\ -175 \\ \hline 188 \end{array}$$

$$\begin{array}{r} 5\ 13\ 15\ 1 \\ \cancel{6}4\cancel{6}4 \\ -2687 \\ \hline 3777 \end{array}$$

$$\begin{array}{r} 7\ 13\ 1 \\ \cancel{8}.45 \\ -4.68 \\ \hline 3.77 \end{array}$$

$$\begin{array}{r} 6\ 11\ 1 \\ \cancel{7}2.5 \\ -43.6 \\ \hline 28.9 \end{array}$$

Here's a good idea: 5000 Subtract 1 from both  
- 2384 numbers:

$$\begin{array}{r} 5000 \\ -\underline{2384} \end{array} \quad \rightarrow \quad \begin{array}{r} 4999 \\ -\underline{2383} \end{array}$$