

Progression in written calculation strategies for subtraction

(Examples indicate end of year expectations)

Reception

Statutory Guidance

Children count reliably with numbers from 1 to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer.

e.g. 6 subtract 2

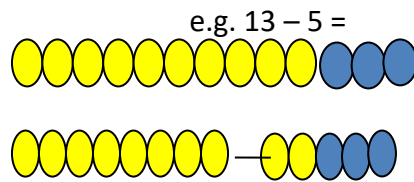


Year 1

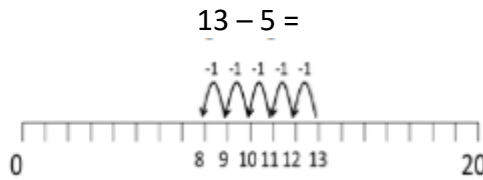
Statutory Guidance

Subtract one-digit and two-digit numbers to 20, including zero. Solve one-step problems that involve subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$.

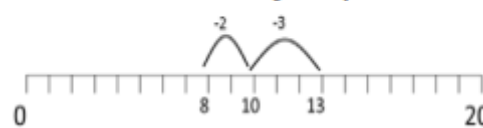
Possible representations
Using concrete objects



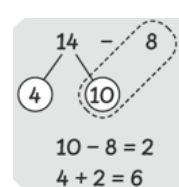
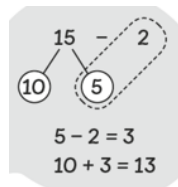
Using pictorial representations



Subtracting using more efficient jumps



Subtract by subtracting ones or by subtracting from 10



Year 2

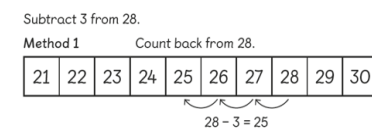
Statutory Guidance

Subtract numbers using concrete objects, pictorial representations, and mentally, including:

- a two-digit number and ones
- a two-digit number and tens
- two two-digit numbers

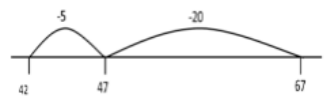
Possible representations

e.g. $28 - 3 =$



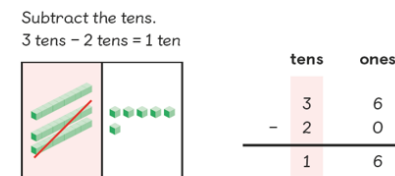
Subtracting a 2-digit number from a 2-digit

e.g. $67 - 25 =$
2 digit subtract 2 digit using efficient place value jumps



using column subtraction

e.g. $36 - 20 =$



$36 - 20 = 16$

Subtracting using column method with renaming

Non-statutory guidance suggests expanded decomposition with no exchanges

$$\begin{array}{r} 90 \quad 8 \quad 98 \\ - 50 \quad 4 \quad - 54 \\ \hline 40 \quad 4 \quad = 44 \end{array}$$

Year 3

Statutory Guidance

Subtract numbers with up to three digits, using formal written methods of columnar subtraction

Key strategy

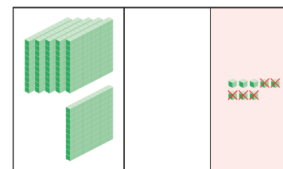
Column subtraction

e.g. $756 - 84 =$

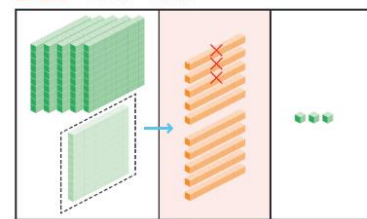
$$\begin{array}{r} 600 \quad 150 \quad 6 \quad 756 \\ \cancel{700} \quad \cancel{50} \quad 6 \quad 756 \\ - \quad 80 \quad 4 \quad 84 \\ \hline 600 \quad 70 \quad 2 \quad = 672 \end{array}$$

Possible representations

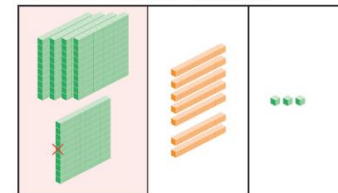
Step 1 Subtract the ones. 8 ones - 5 ones = 3 ones



Regroup 1 hundred into 10 tens. Subtract the tens. 10 tens - 3 tens = 7 tens



Subtract the hundreds. 5 hundreds - 1 hundred = 4 hundreds



Year 4

Statutory Guidance

Subtract numbers with up to 4 digits using the formal written methods of columnar subtraction where appropriate

Key strategy

e.g. $6531 - 2385 =$

$$\begin{array}{r} 6 \quad 4 \quad 12 \quad 11 \\ \cancel{6} \quad \cancel{5} \quad \cancel{3} \quad \cancel{1} \\ - 2 \quad 3 \quad 8 \quad 5 \\ \hline 4 \quad 1 \quad 4 \quad 6 \end{array}$$

$$\begin{array}{r} 7 \quad 1 \quad 0 \quad 1 \\ \cancel{8} \quad \cancel{4} \quad \cancel{1} \quad \cancel{7} \\ - 3 \quad 9 \quad 0 \quad 8 \\ \hline 4 \quad 5 \quad 0 \quad 9 \end{array}$$

Non-statutory guidance

Linked to money and measures (2 decimal places).

$$\begin{array}{r} 5 \quad 1 \\ 67.75 \\ - 28.50 \\ \hline 39.25 \end{array}$$

Year 5

Statutory Guidance

Subtract whole numbers with more than 4 digits, including using formal written methods (columnar subtraction)

Key strategies

e.g. $47,726 - 28,723 =$

$$\begin{array}{r} 3 \quad 17 \\ \cancel{47} \quad \cancel{72} \quad 6 \\ - 28 \quad 72 \quad 3 \\ \hline 19 \quad 00 \quad 3 \end{array}$$

e.g. $12407 - 9614 =$

$$\begin{array}{r} 0 \quad 1 \quad 1 \quad 3 \quad 1 \\ \cancel{12} \quad \cancel{40} \quad \cancel{7} \\ - 9 \quad 6 \quad 1 \quad 4 \\ \hline 2 \quad 7 \quad 9 \quad 3 \end{array}$$

Measurement

Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

$$\begin{array}{r} 8 \quad 1 \quad 3 \quad 1 \\ \cancel{8} \quad \cancel{7} \quad \cancel{2} \\ - 6 \quad 7 \quad 8 \\ \hline 2 \quad 6 \quad 4 \end{array}$$

Year 6

Statutory Guidance

Solve subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

Measurement

Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.