



Progression in written calculation strategies for addition

(Examples indicate end of year expectations)

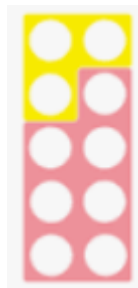
Reception

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. 7 add 3



Year 1

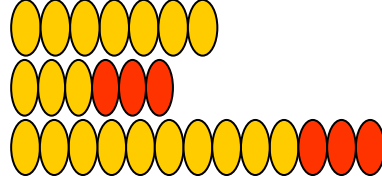
Statutory Guidance

Add one-digit and two-digit numbers to 20, including zero. Solve one-step problems that involve addition, using concrete objects and pictorial representations, and missing number problems.

Possible representations

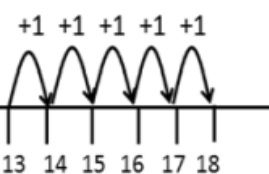
e.g. $7 + 6 =$

Using concrete objects

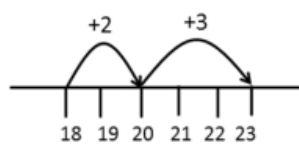


Using pictorial representations

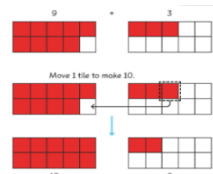
e.g. $13 + 5 =$



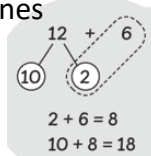
Addition using more efficient jumps



Add by making 10 e.g. $9 + 3 =$



Add by adding ones
e.g. $12 + 6 =$



Year 2

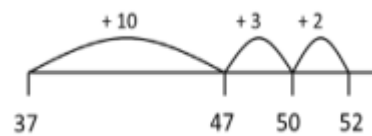
Statutory Guidance

Solve problems with addition:

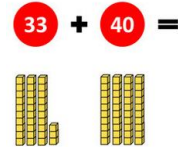
- using concrete objects and pictorial representations, including those involving numbers, quantities and measures
- applying their increasing knowledge of mental and written methods

Add 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
 - adding three one-digit numbers
- e.g. $37 + 15 = 2$ digit number add a 2 digit number using efficient place value jumps



Using Base 10 representations to add two 2-digit numbers e.g.

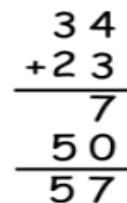
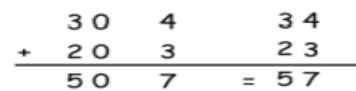


Adding two 2-digit numbers using columnar addition e.g.



Non-statutory guidance

$34 + 23 =$



Year 3

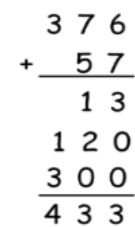
Statutory Guidance

Add numbers with up to three digits, using formal written methods of columnar addition.

Solve problems, including missing number problems, using number facts, place value, and more complex addition.

e.g. $376 + 57 =$ (expanded addition with renaming)

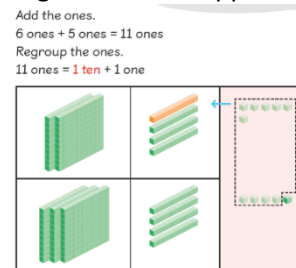
e.g. $376 + 57 =$ (expanded addition)



Or $236 + 345 = 581$ (compact addition with renaming)



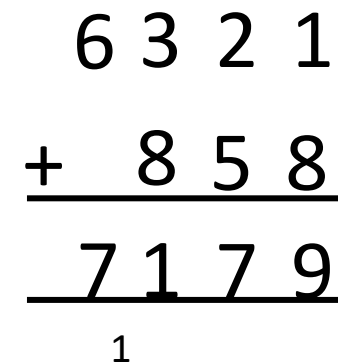
Using Base 10 to support.



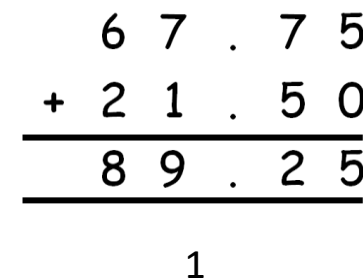
Year 4

Statutory Guidance

Add numbers with up to 4 digits using the formal written methods of columnar addition where appropriate
e.g. $6321 + 858$



Measurement
Based on statutory guidance linked to money and measures to 2 decimal places.
e.g. $67.75 + 21.50$

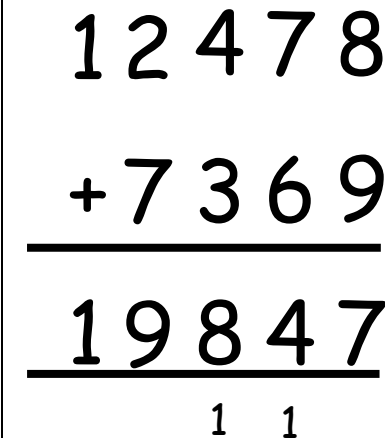


Year 5

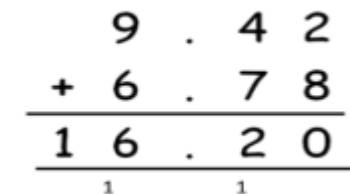
Statutory Guidance

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

e.g. $12478 + 7369$



Measurement
Based on statutory guidance linked to money and measures to 2 decimal places.



Year 6

Statutory Guidance

Solve addition 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