

Curriculum & Knowledge Map: Addition and Subtraction



Perform mental calculations, including with mixed operations and large numbers
 Identify common factors, common multiples and prime numbers
 Use their knowledge of the order of operations to carry out calculations involving the four operations

Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)
 Add and subtract numbers mentally with increasingly large numbers
 Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy

Year
6

Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
 Solve problems involving addition, subtraction, multiplication and division
 Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

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

Year
5

Add and subtract numbers mentally, including:

- a three-digit number and ones
- a three-digit number and tens
- a three-digit number and hundreds
- add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction

Year
4

Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
 Estimate and use inverse operations to check answers to a calculation
 Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.

Estimate the answer to a calculation and use inverse operations to check answers
 Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.

Year
3

Solve problems with addition and subtraction:
 Using concrete objects and pictorial representations, including those involving numbers, quantities and measures
 Applying their increasing knowledge of mental and written methods
 Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
 Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.

Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs
 Represent and use number bonds and related subtraction facts within 20

Year
2

Add and 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
- adding three one-digit numbers
- show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot

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

Year
1

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EYFS

Birth to Three –

- Combine objects like stacking blocks and cups.
- Put objects inside others and take them out again
- React to changes in amounts up to groups of three.
- Compare amounts by saying lots, more or same.
- Develop counting like behavior
- Count in everyday contexts with sometimes skipping numbers.

Three and Four Year Olds

- Develop fast recognition of up to 3 objects, without having to count them individually ('subitising').
- Recite numbers past 5.
- Say one number for each item in order: 1,2,3,4,5.
- Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle').
- Show 'finger numbers' up to 5.
- Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.
- Experiment with their own symbols and marks as well as numerals.
- Solve real world mathematical problems with numbers up to 5.
- Compare quantities using language: 'more than', 'fewer than'.

Reception

- Count objects, actions and sounds.
- Subitise.
- Link the number symbol (numeral) with its cardinal number value.
- Count beyond ten.
- Compare numbers.
- Understand the 'one more than/one less than' relationship between consecutive numbers.
- Explore the composition of numbers to 10.
- Automatically recall number bonds for numbers 0–5 and some to 10.

Early Learning Goals

- Have a deep understanding of number to 10, including the composition of each number.
- Subitise (recognise quantities without counting) up to 5.
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.