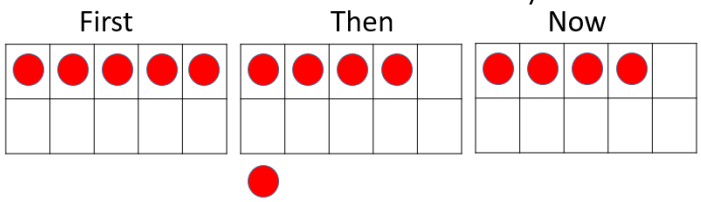
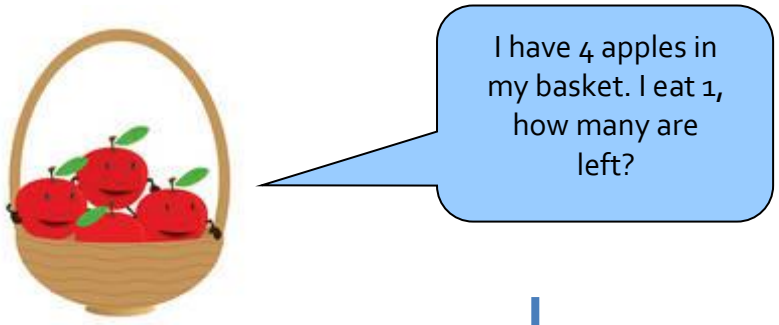
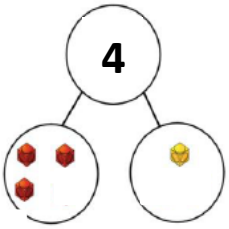
SUBTRACTION

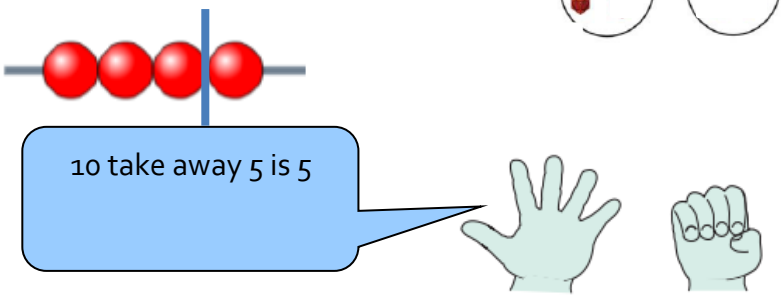
EYFS

Children will engage in a variety of counting songs, rhymes and practical activities.
In practical activities and through discussion, they will begin to use the vocabulary associated with subtraction.
They will find one less than a given number to 20.
They will begin to relate subtraction to 'taking away' using objects to count 'how many are left' after some have been taken away.









Key Vocabulary

Lots of , groups of

Key skills for addition at EYFS

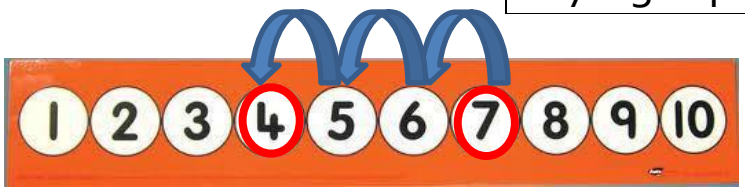
- Children count reliably with numbers from 1 to 20
- Place numbers to 20 in order and say which number is one less than a given number.
- Using quantities and objects, they subtract two single-digit numbers
- count on or back to find the answer

SUBTRACTION

Year 1

Children will continue to practise counting back from a given number. Initially use a number track to count back for subtraction:

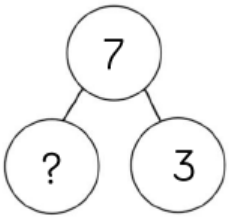
7 – 3 = 4

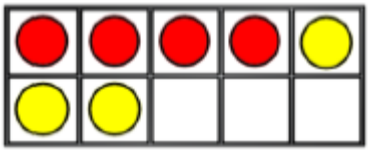


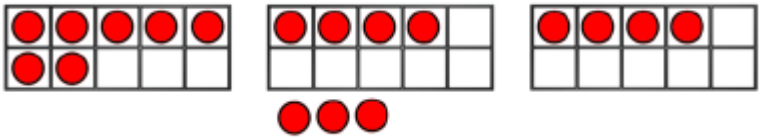
'Put your finger on number seven. Count back 3.'

Children should:

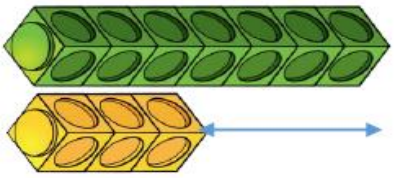
- model subtraction practically and using number tracks, tens frames, number lines, 100 squares, part-part wholes and bar models in a practical way.
- Find the difference between - this is to be done practically using the language 'find the distance between' and 'how many more than?'

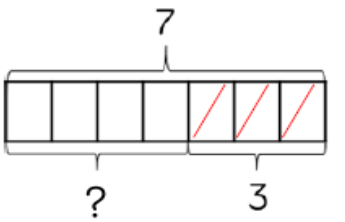


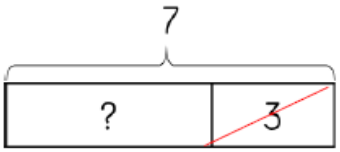




10 – 6 = 4







Key Vocabulary

equal to, take, take-away, less, minus, subtract, leaves, distance between, how many more, how many fewer/less than, most, least count back, how many left, how much less is…

National Curriculum requirements

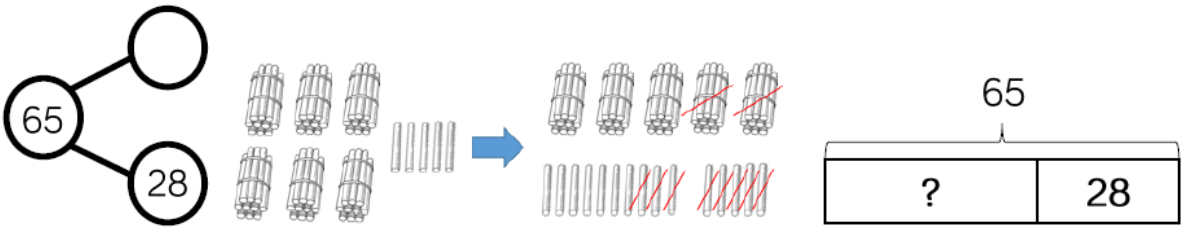
- read, write and interpret mathematical statements involving subtraction (–) and equals (=) signs represent and use number bonds and related subtraction facts within 20
- subtract one-digit and two-digit numbers to 20, including zero
- solve one-step problems that involve subtraction, using concrete objects, pictorial representations, and missing number problems such as 7 = – 9.

SUBTRACTION

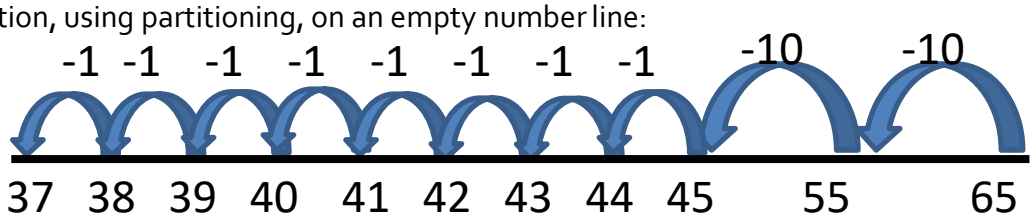
Year 2

NB Ensure that children are confident with the methods outlined in the previous stage's guidance before moving on.
When children are confident, they move on to two digit numbers.

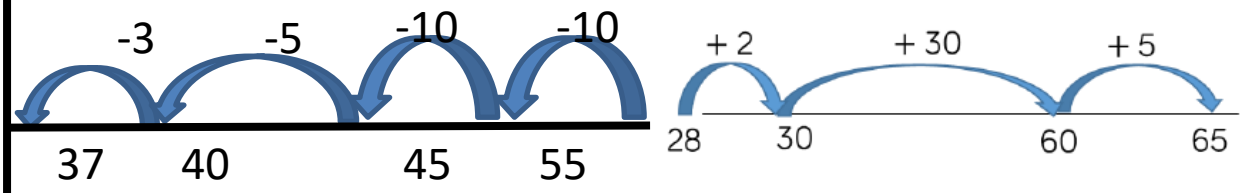
65 – 28 = 31



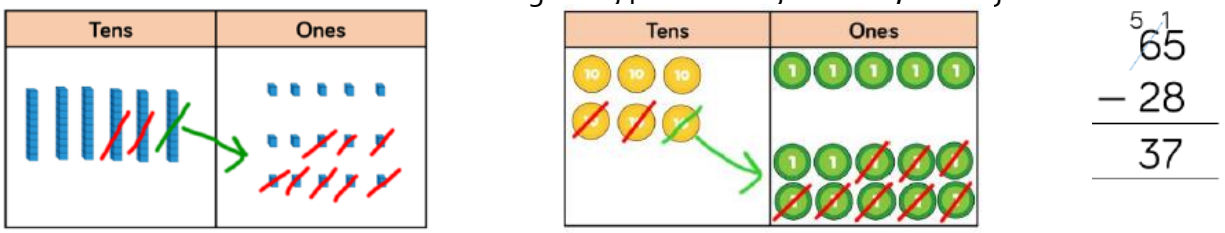
Children will use an empty number line in conjunction with a 100 square to show jumps of tens.
Subtraction, using partitioning, on an empty number line:



If children are confident, use more efficient jumps for subtracting or counting up methods



Children move to more formal recording using partitioning method, setting out as follows:



Key Vocabulary

equal to, take, take-away, less, minus, subtract, leaves, distance between, how many more, how many fewer/less than, most, least count back, how many left, how much less is…, difference, count on, strategy, partition, tens units

National Curriculum requirements

- 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 subtraction facts to 20 fluently, and derive and use related facts up to 100
- 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 subtraction of one number from another cannot be done in any order
- recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.

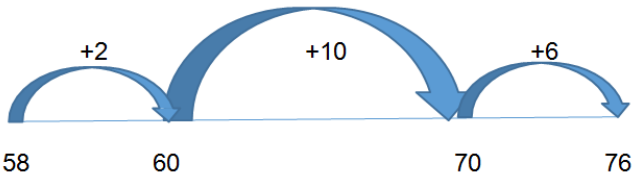
SUBTRACTION

Year 3

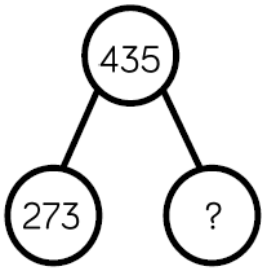
Subtract on an empty number line (ENL) by counting on. Children should understand when to count back where appropriate, using place value or number facts. This skill should be reinforced through mental work.

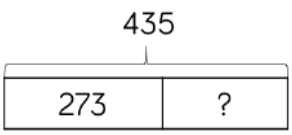
76 – 58 = 18

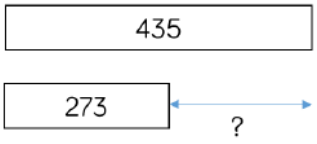
How many to the next ten?



Children continue to use part-part whole models and bar models to represent their subtractions.







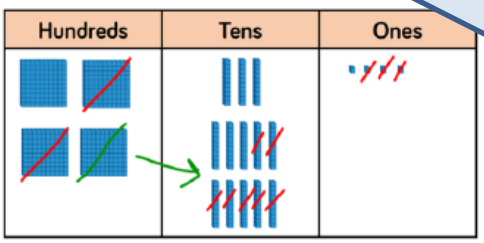
Begin to use formal column subtraction method, first using 'friendly numbers'.

38
−12

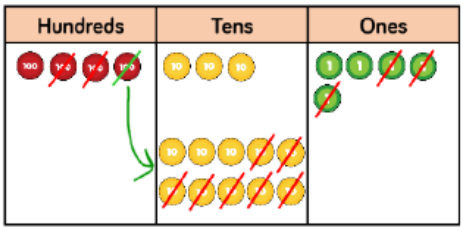
26

Friendly numbers, no exchange necessary.

Move to formal subtraction using "exchanging" with the use of Dienes or place value counters to secure understanding.



$$\begin{array}{r} {}^{3}\,{}^{1} \\ 435 \\ -\ 273 \\ \hline 262 \end{array}$$



Key Vocabulary

equal to, take, take-away, less, minus, subtract, leaves, distance between, how many more, how many fewer/less than, most, least count back, how many left, how much less is..., difference, count on, strategy, partition, tens units, take and make, exchange, digit, value, hundreds

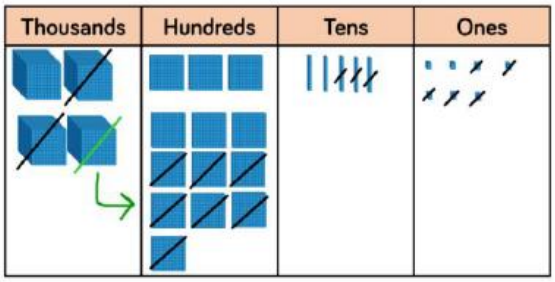
National Curriculum requirements

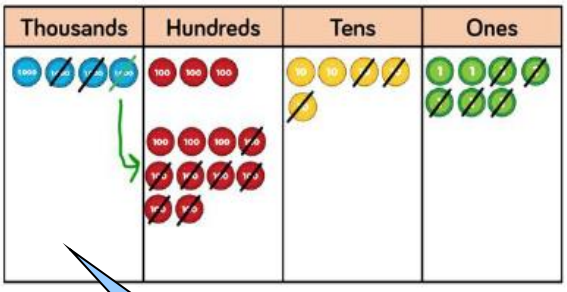
- subtract numbers mentally, including:
  - a three-digit number and ones
  - a three-digit number and tens
  - a three-digit number and hundreds
- subtract numbers with up to three digits, using formal written methods of columnar subtraction
- estimate the answer to a calculation and use inverse operations to check answers
- solve problems, including missing number problems, using number facts, place value, and more complex subtraction.

SUBTRACTION

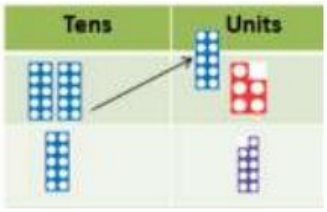
Year 4

Subtract using formal column subtraction, using mathematical manipulatives to build strong conceptual and fluent knowledge:





Use of Numicon place value counters and Dienes to provide visual images of exchanging.

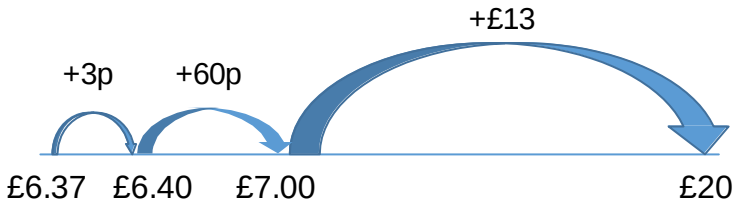


$$\begin{array}{r} {}^{3}\not{4}\,{}^{1}\not{3}57 \\ -\ 2735 \\ \hline 1622 \end{array}$$

Because we can't take 7 hundreds away from 3 hundreds, we need to exchange from the thousand's column.

Use complementary addition to subtract amounts of money, and for subtractions where the larger number is a near multiple of 1000 or 100.

£20 - £6.37 = £13.63



Key Vocabulary

equal to, take, take-away, less, minus, subtract, leaves, distance between, how many more, how many fewer/less than, most, least, count back, how many left, how much less is..., difference, count on, strategy, partition, tens units, take and make, exchange, digit, value, hundreds, inverse

National Curriculum requirements

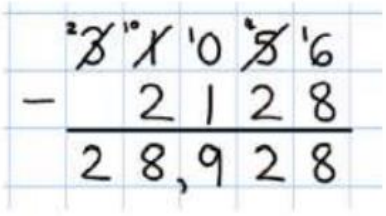
- subtract numbers with up to 4 digits using the formal written methods of columnar subtraction
- where appropriate estimate and use inverse operations to check answers to a calculation
- solve subtraction two-step problems in contexts, deciding which♣ operations and methods to use and why.

SUBTRACTION

Year 5

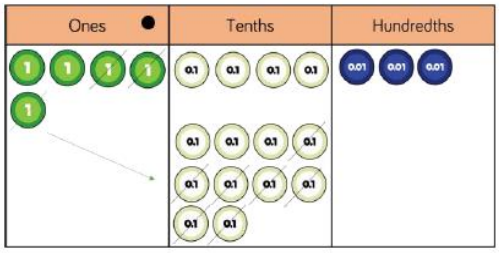
At this stage, children subtract numbers with more than 4 digits including money, measures and decimals with different numbers of decimal places.

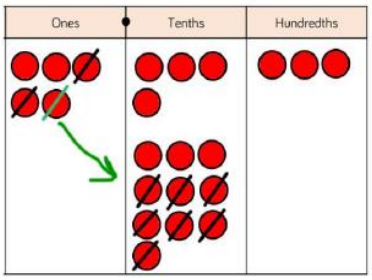
The language of place value will be used to throughout to ensure understanding.

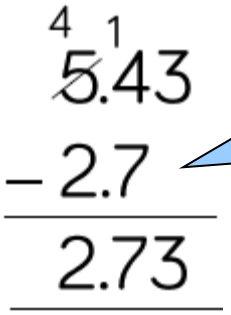


As for previous stage, counting up with an empty number line will be encouraged when the larger number is a multiple of 100, 1000 etc.

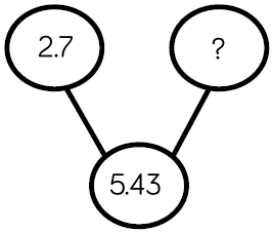
Subtract with decimal values, including mixtures of integers and decimals and aligning the decimal point. Children will continue to use mathematical manipulatives alongside other representations such as part-part whole and bar models.

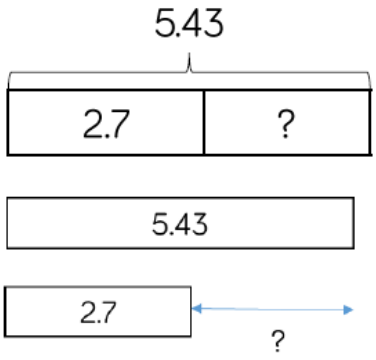






Add a zero in any empty decimal place to aid understanding of what to subtract





Key Vocabulary

equal to, take, take-away, less, minus, subtract, leaves, distance between, how many more, how many fewer/less than, most, least, count back, how many left, how much less is…, difference, count on, strategy, partition, tens units, take and make, exchange, digit, value, hundreds, inverse, tenths, hundredths, decimal point, decimal

National Curriculum requirements

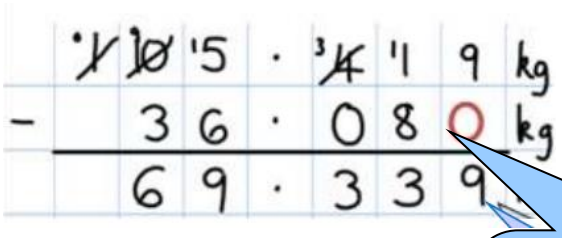
- subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)
- subtract numbers mentally with increasingly large numbers
- use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
- solve subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

SUBTRACTION

Year 6

Year 6 continue to develop the formal written method for subtraction with both larger integers and decimals in an abstract formal method approach. Some children may still need to use concrete and pictorial representations using Dienes, place value counters and bar models. They apply this method when working in contexts such as money and measures.

105.419kg-36.08kg =



Use the compact column method
to subtract in context of money, measures, including decimals with different numbers of decimal places.

Pupils should apply their knowledge of a range of mental strategies, mental recall skills, informal and formal written methods when selecting the appropriate method to work out subtraction problems. Opportunities to discuss the appropriateness of methods need to be planned for.

Key Vocabulary

Minuend, subtrahend, equal to, take, take-away, less, minus, subtract, leaves, distance between, how many more, how many fewer/less than, most, least count back, how many left, how much less is…, difference, count on, strategy, partition, tens units, take and make, exchange, digit, value, hundreds, inverse, tenths, hundredths, decimal point, decimal.

National Curriculum requirements

- use their knowledge of the order of operations to carry out calculations involving the four operations
- solve subtraction multi-step problems in contexts, deciding which operations and methods to use and why
- solve problems involving subtraction
- use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.