Overview

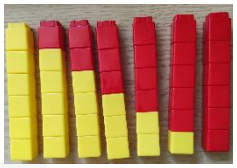
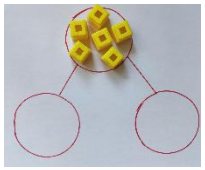
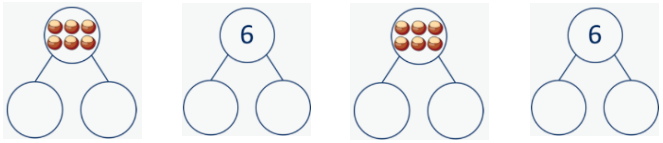
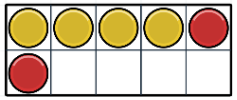
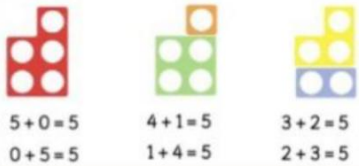
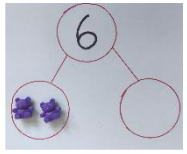
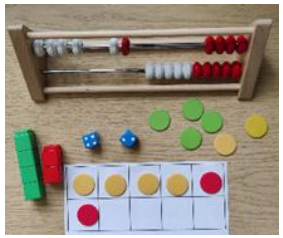
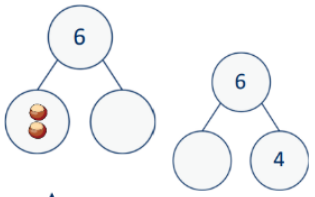
This document gives a suggested guidance as to how addition strategies may be taught in all year groups showing clear progression from Year 1 to Year 6.

Subtraction

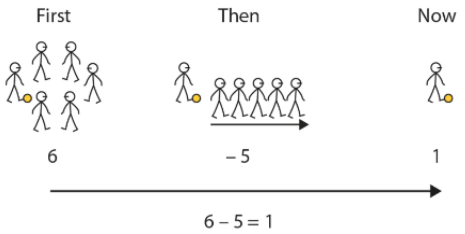
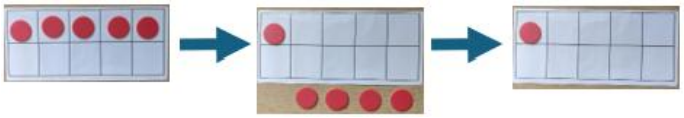
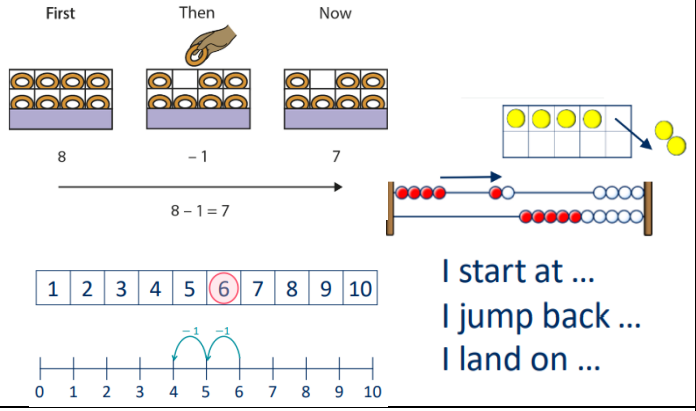
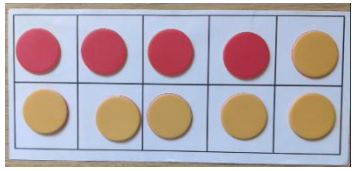
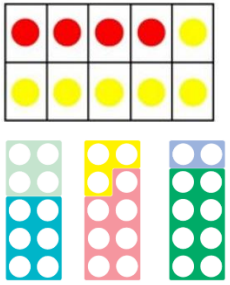
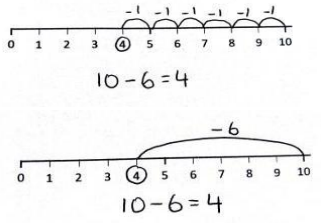
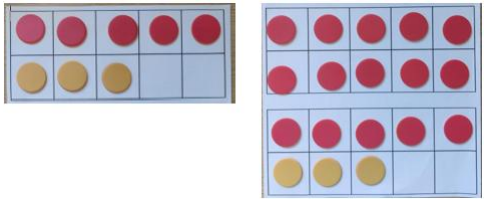
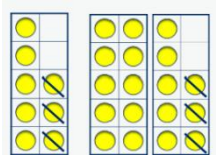
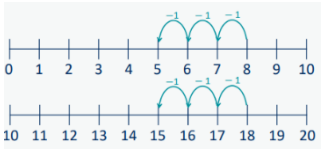
Year 1: Selected National Curriculum Programme of Study Statements

Pupils should be taught to:

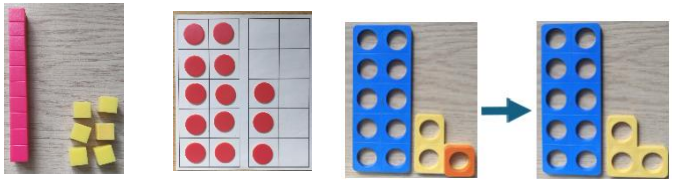
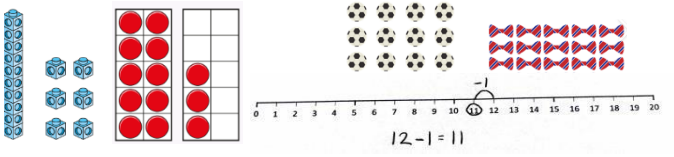
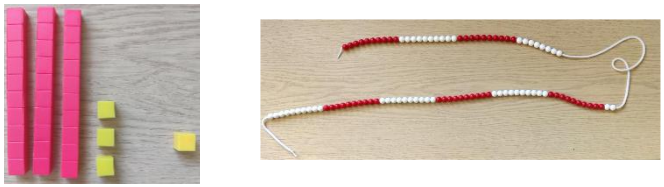
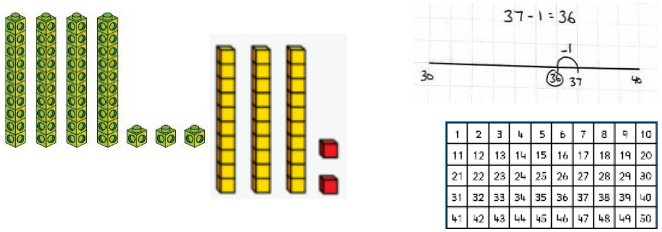
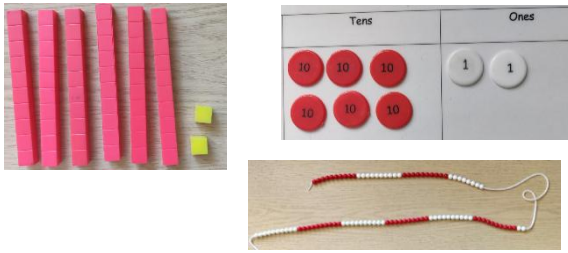
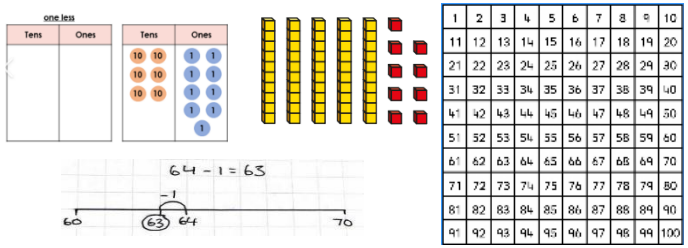
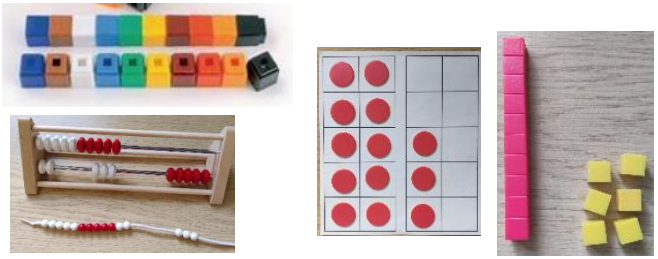
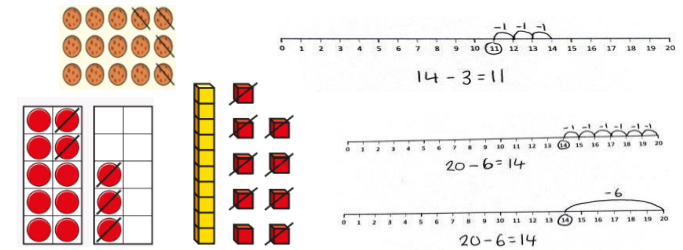
- Read, write and interpret mathematical statements involving subtraction (–) and equals (=) signs.
- Represent and use number bonds and related subtraction facts within 20
- Subtract one-digit and two-digit numbers to 20, including zero.
- Solve one-step problems that involve subtraction, using concrete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

Concrete	Pictorial	Abstract
Represent number bonds within 10.    ... is made of ... and ... ... and ... make ...  ... can be partitioned into ... and ... 	Represent number bonds within 10.   	Represent number bonds within 10. 6 - 0 = 6 6 - 1 = 5 6 - 2 = 4 6 - 3 = 3 6 - 4 = 2 6 - 5 = 1 6 - 6 = 0
Find a part. There are ... in total. ... are ... How many are **not** ...?   	Find a part. ... is the whole. ... is a part. ... is a part.   	Find a part. ... subtract ... is equal to ... 6 – 2 = 4 6 – 4 = 2 ... is equal to ... – ... 4 = 6 – 2 2 = 6 – 4

Subtraction

Take away. *Kinesthetically, using children.* *Possible concrete items: toys, teddies, cubes, etc.*  	Take away. 	Take away. … subtract … is equal to … 6 - 2 = 4 6 - 4 = 2 … is equal to … – … 4 = 6 - 2 2 = 6 – 4
Use number bonds within 10.   10 – 6 = 4	Use number bonds within 10.  	Use number bonds within 10. 10 – 6 = 4
Related facts within 20.  *I know that* 8 – 3 = 5 *so* 18 – 3 =15	Related facts within 20.   I know that … minus … = … so … minus … = … … less than … is … so … less than … is …	Related facts within 20. 8 – 3 = 5 18 – 3 = 15 5 = 8 – 3 15 = 18 – 3

Subtraction

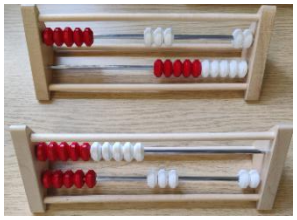
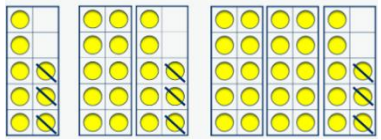
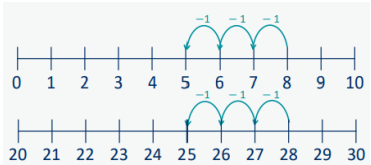
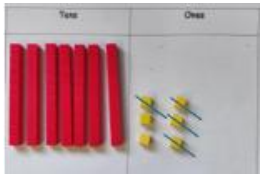
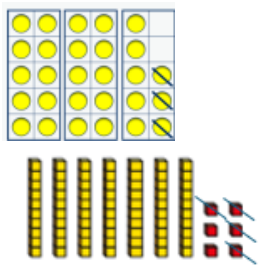
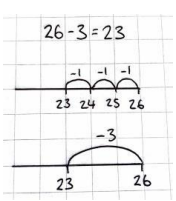
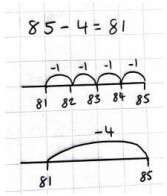
Find 1 less from any number within 20. 	Find 1 less from any number within 20.  	Find 1 less from any number within 20. 13 - 1 = 12
Find 1 less from any number within 50. 	Find 1 less from any number within 50.  	Find 1 less from any number within 50. 32 - 1 = 31
Find 1 less from any number within 100.  	Find 1 less from any number within 100.  	Find 1 less from any number within 100. 59 - 1 = 58
Subtract 1-digit and 2-digit numbers within 20. 	Subtract 1-digit and 2-digit numbers within 20.  	Subtract 1-digit and 2-digit numbers within 20. 14 – 3 = 11 14 – 6 = 8

Subtraction

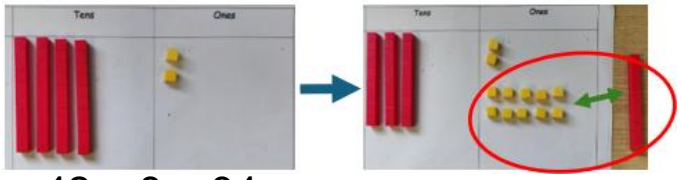
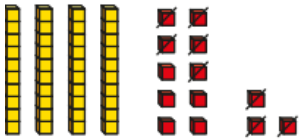
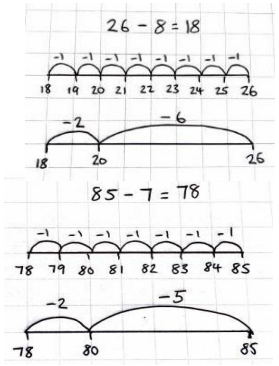
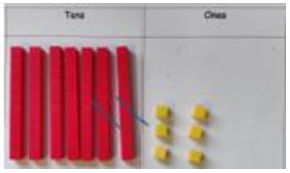
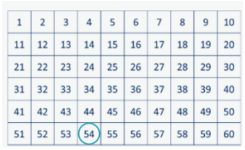
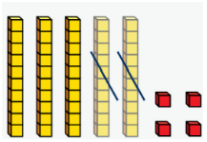
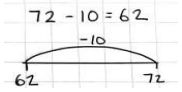
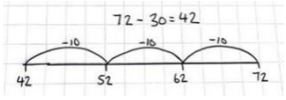
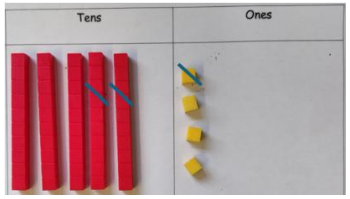
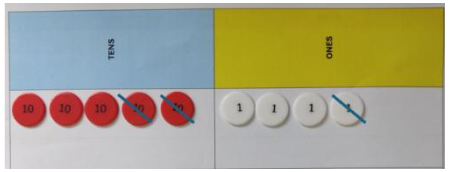
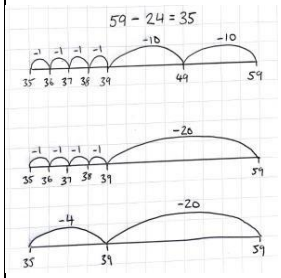
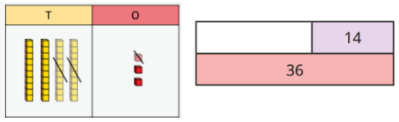
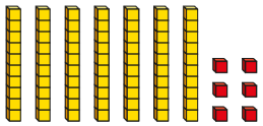
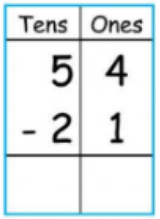
Year 2: Selected National Curriculum Programme of Study Statements

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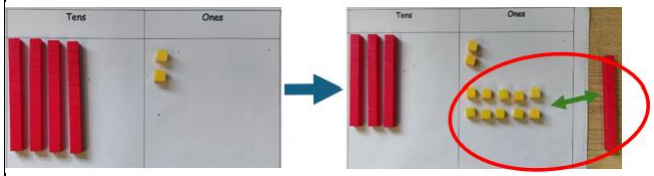
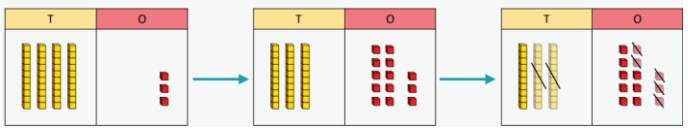
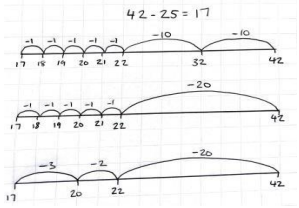
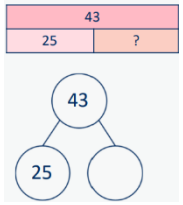
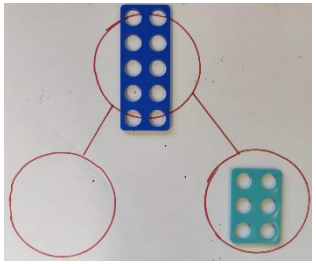
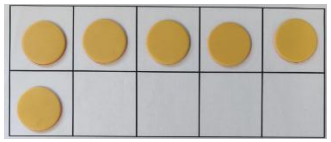
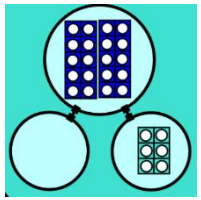
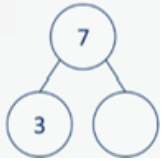
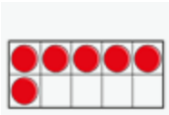
- Recall and use subtraction facts to 20 fluently, and derive and use related facts up to 100
- Subtract numbers using concrete objects, pictorial representations, and mentally, including:
  - a two-digit number and 1s
  - a two-digit number and 10s
  - 2 two-digit numbers
- Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.

Concrete	Pictorial	Abstract
Subtract ones from any number (making links to known facts).  	Subtract ones from any number (making links to known facts).  ... less than ... is ... so ... less than ... is ...  I know that ... minus ... = ... so ... minus ... = ...	Subtract ones from any number (making links to known facts). 8 − 3 = 5 18 − 3 = 15 28 − 3 = 25…
Subtract 2-digit numbers and ones without bridging.  76 - 4 = 72  46 – 4 = 42	Subtract 2-digit numbers and ones without bridging.    	Subtract 2-digit numbers and ones without bridging. 28 – 3 = 25 76 - 4 = 72

Subtraction

Subtract ones across a 10.  42 – 8 = 34  33 – 5 = 28	Subtract ones across a 10.  	Subtract ones across a 10. 53 – 8 = 45 85 – 7 = 78
Subtract 2-digit numbers and tens.  45 – 10 = 35  76 – 20 = 56	Subtract 2-digit numbers and tens.    	Subtract 2-digit numbers and tens. 40 – 10 = 30 72 -10 = 62 50 – 20 = 30 54 – 20 = 34
Subtract two 2-digit numbers (not across a ten).  54 – 21 	Subtract two 2-digit numbers (not across a ten).    What is 76 − 24? Subtract 4 ones. Now subtract 2 tens. 	Subtract two 2-digit numbers (not across a ten). Introduce column subtraction. 

Subtraction

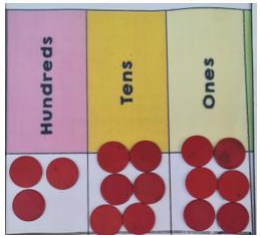
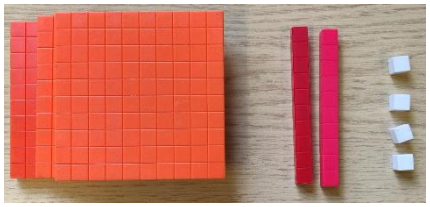
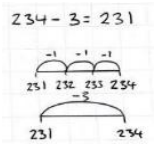
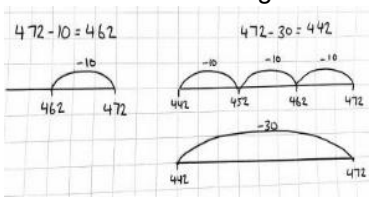
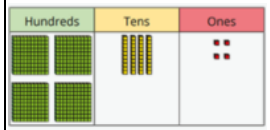
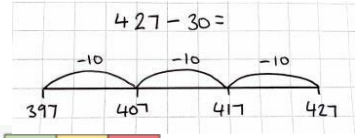
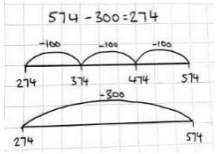
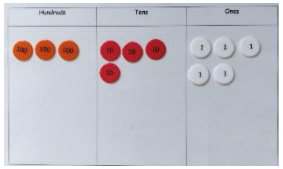
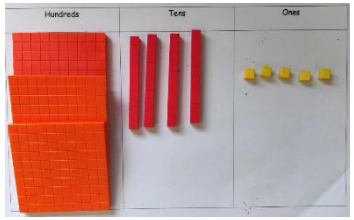
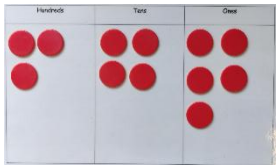
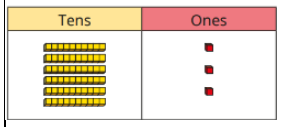
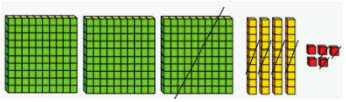
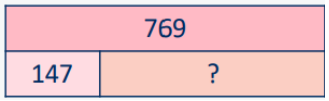
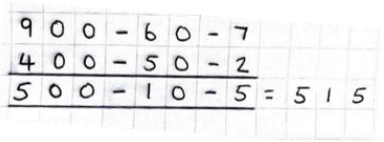
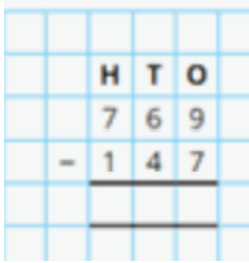
Subtract two 2-digit numbers (across a ten).  42 – 25 Exchange 1 Ten for 10 Ones. Subtract 5 ones. Now subtract 2 tens.	Subtract two 2-digit numbers (across a ten).  **43 – 25**: I need to make an exchange because I do not have enough ones to subtract … ones.   	Subtract two 2-digit numbers (across a ten). 42 – 25 = 17
Missing Numbers (use the inverse to check).  	Missing Numbers (use the inverse to check).  7 – 3 = ☐ ☐ + 3 = 7   10 – ☐ = 6 6 + ☐ = 10 If … is a whole and … is a part, then … is the other part.	Missing Numbers (use the inverse to check). 18 – ☐ = 12 + 2

Subtraction

Year 3: Selected National Curriculum Programme of Study Statements

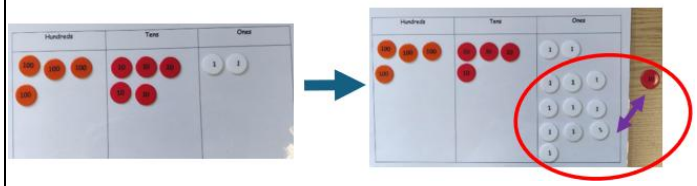
Pupils should be taught to:

- 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.
- Subtract fractions with the same denominator within 1 whole.

Concrete	Pictorial	Abstract
Subtract 1s, 10s and 100s from a 3-digit number.   	Subtract 1s, 10s and 100s from a 3-digit number.    444 – 2 = 444 – 20 = 444 – 200 =   777 – 4 = 777 – 40 = 777 – 400 = 	Subtract 1s, 10s and 100s from a 3-digit number. 35 − 3 = 235 − 30 = 535 − 300 = 624 − 20 = 654 − 50 = 694 − 200 = 427 − 8 = 427 − 30 = 427 − 400 =
Subtract two numbers (no exchange). 345 – 143 Subtract 3 ones. Then subtract 4 tens. Then subtract 1 hundred.   	Subtract two numbers (no exchange). 63 – 51 769 - 147    	Subtract two numbers (no exchange).  

Subtraction

Subtract two numbers (across a ten or hundred).



452 – 43

Exchange 1 Ten for 10 Ones.

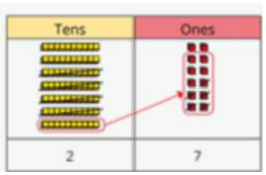
Subtract 3 ones.

Now subtract 4 tens.

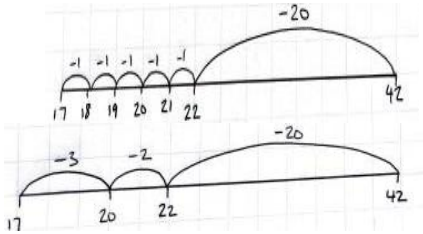
Base Ten/Diennes can also be used.

Subtract two numbers (across a ten or hundred).

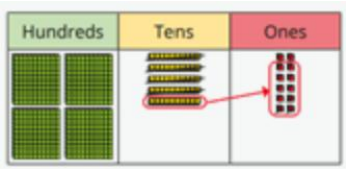
72 - 45



42 - 25



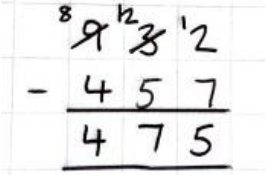
452 – 43

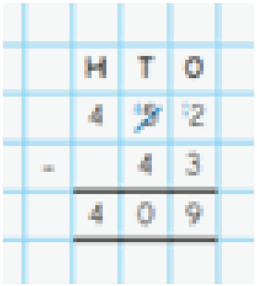


365 – 178



Subtract two numbers (across a ten or hundred).





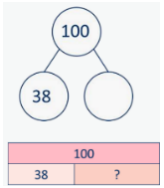
Complements to 100.

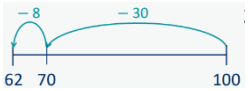


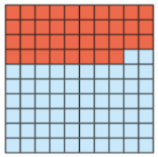


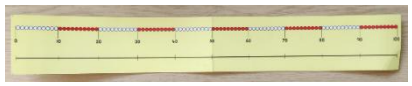
Complements to 100.

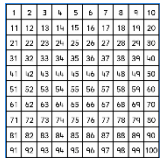
I subtract ... tens, then I subtract ... ones.











Complements to 100.

$100 - 38 = 62$

$100 - 62 = 38$

$62 = 100 - 38$

$38 = 100 - 62$

Subtract fractions with the same denominator within 1 whole.

$$\frac{6}{8} - \frac{2}{8} = \frac{4}{8}$$



Subtract fractions with the same denominator within 1 whole.



Subtract fractions with the same denominator within 1 whole.

$$\frac{7}{8} - \frac{5}{8} = \frac{2}{8}$$

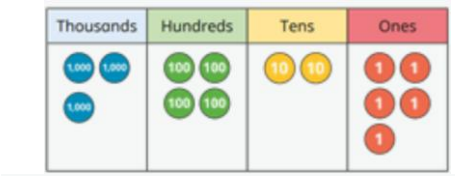
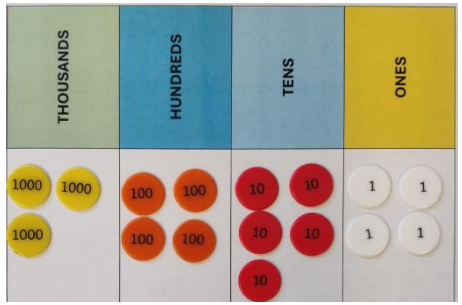
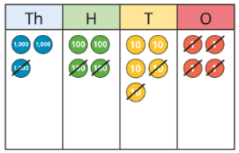
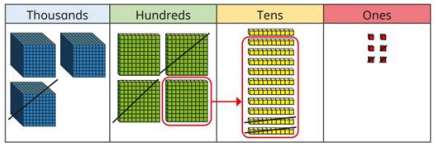
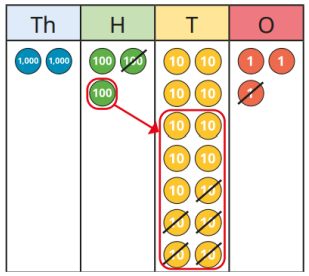
Subtraction

Subtraction

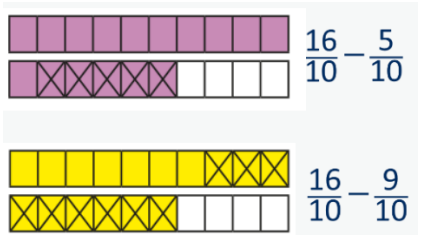
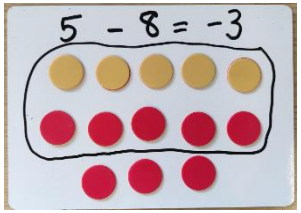
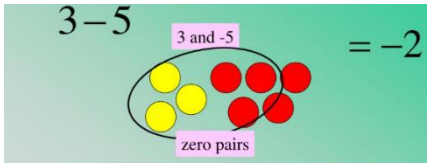
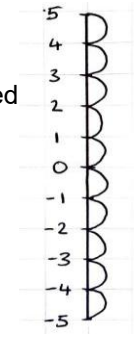
Year 4: Selected National Curriculum Programme of Study Statements

Pupils should be taught to:

- Subtract numbers with up to 4 digits using a formal written method.
- Solve simple measure and money problems involving fractions and decimals to 2 decimal places.
- Subtract fractions with the same denominator.

Concrete	Pictorial	Abstract
Subtract 1s, 10s, 100s and 1,000s from a 4-digit number.	Subtract 1s, 10s, 100s and 1,000s from a 4-digit number.  3,425 – 2 = 3,425 – 20 = 3,425 – 200 = 3,425 – 2,000 =	Subtract 1s, 10s, 100s and 1,000s from a 4-digit number. 4,356 – 3 = 4,356 – 30 = 4,356 – 300 = 4,356 – 3,000 = 6,940 – 200 = 6,940 – 300 = 6,940 – 400 = 4,433 – ☐ = 4,430 4,433 – ☐ = 4,033 4,433 – ☐ = 4,403
Column subtraction with numbers up to 4-digits.  Subtract Ones, then Tens, Hundreds, Thousands. Exchange when needed. *Can also use Base Ten/Diennes.*	Column subtraction with numbers up to 4-digits. 3454 – 1224  3416 – 1223   Th H T O 2 ²3 ¹4 3 – 1 5 1 2 1 9 2	Column subtraction with numbers up to 4-digits. Th H T O 3 4 5 4 – 1 2 2 4 2 2 3 0 Th H T O 3 ¹2 ⁹0 ¹6 – 2 1 4 8 1 0 5 8

Subtraction

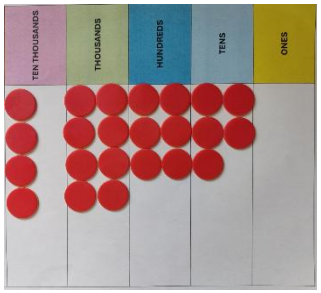
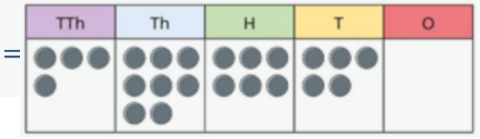
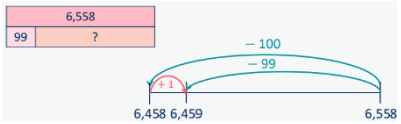
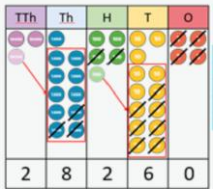
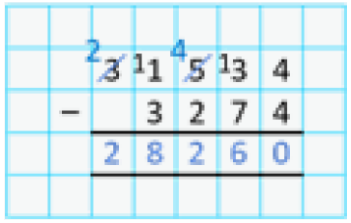
Subtract decimal numbers in the context of money.  £4.57 - £2.35	Subtract decimal numbers in the context of money. £3.26 can be partitioned into £3 + 20p + 6p *Count on or Count back*   £10 - £7.30 £7.30 + £2.70 = £10	Subtract decimal numbers in the context of money. £4.57 − £2.35 = £ . £5.71 − £1.27 = £ .
Subtract fractions and mixed numbers with the same denominator.  $\frac{8}{6} - \frac{3}{6}$	Subtract fractions and mixed numbers with the same denominator.  	Subtract fractions and mixed numbers with the same denominator. $\frac{12}{8} - \frac{5}{8} = \frac{7}{8}$
Subtracting with negative numbers (linking with temperature). 5 ‘positive’ yellow counters and 8 ‘negative’ red counters.  	Subtracting with negative numbers (linking with temperature). 3 ‘positive’ yellow counters and 5 ‘negative’ red counters.   	Subtracting with negative numbers (linking with temperature). 3 – 5 = -2

Subtraction

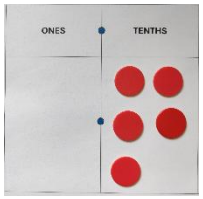
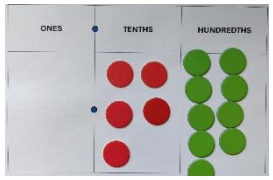
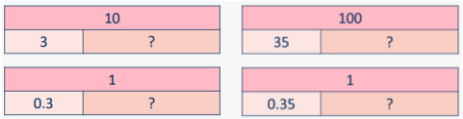
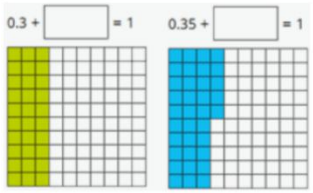
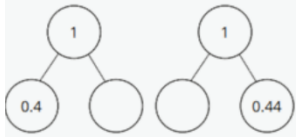
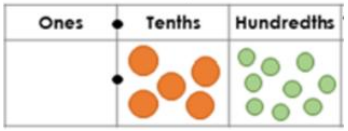
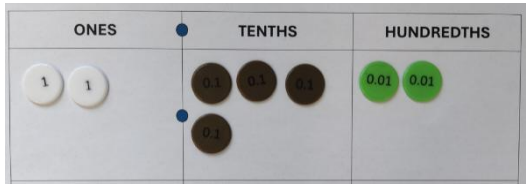
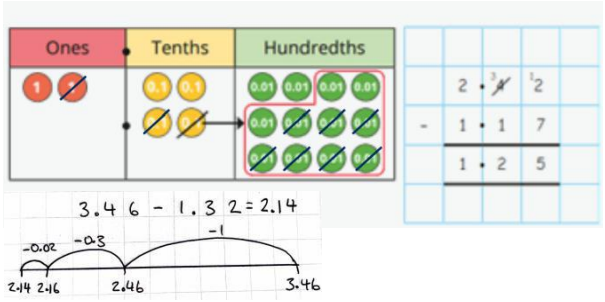
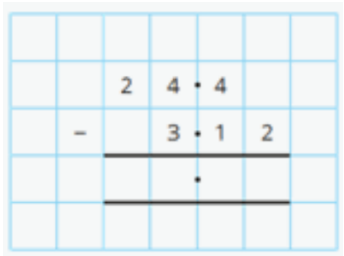
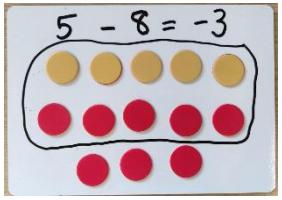
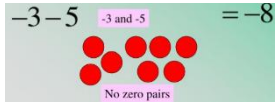
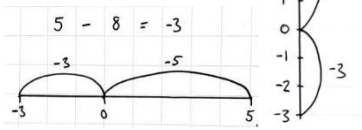
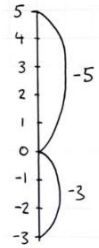
Year 5: Selected National Curriculum Programme of Study Statements

Pupils should be taught to:

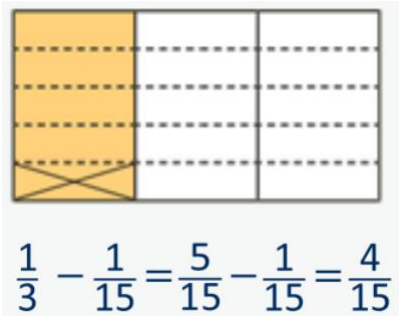
- Subtract whole numbers with more than 4 digits.
- Subtract numbers mentally with increasingly large numbers.
- Subtract decimals, including a mix of whole numbers and decimals, decimals with different numbers of decimal places, and complements of 1
- Subtract fractions with the same denominator, and denominators that are multiples of the same number.

Concrete	Pictorial	Abstract
Subtract using mental strategies.  48,650 – 300 = 48,650 – 30,000 = 48,650 – 30 =	Subtract using mental strategies. To subtract …, I can subtract … then add … 48,650 – 300 = 48,650 – 30,000 = 48,650 – 30 =   	Subtract using mental strategies. 6558 - 99 = 6558 - 100 + 1 = 6458 + 1 = 6459
Subtract whole numbers with up to 5 digits. I can exchange 1 … for 10 …  	Subtract whole numbers with up to 5 digits. I can exchange 1 … for 10 …  	Subtract whole numbers with up to 5 digits. 

Subtraction

Complements to 1 (make links with bonds to 10 and 100).    	Complements to 1 (make links with bonds to 10 and 100).      	Complements to 1 (make links with bonds to 10 and 100). $10 - 4 = 6$ $100 - 44 = 56$ $1{,}000 - 444 = 556$ $1 - 0.4 = 0.6$ $1 - 0.44 = 0.56$ $1 - 0.444 = 0.556$
Subtract decimals with up to 2 decimal places.  I can exchange 1 …. for 10 …	Subtract decimals with up to 2 decimal places.  	Subtract decimals with up to 2 decimal places. 
Subtracting with negative numbers (linking with temperature). 5 ‘positive’ yellow counters and 8 ‘negative’ red counters.  	Adding with negative numbers (linking with temperature). 3 ‘negative’ red counters and 5 ‘negative’ red counters.    	Adding with negative numbers (linking with temperature). $-3 - 5 = -8$ $5 - 8 = -3$

Subtraction

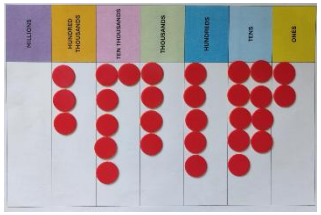
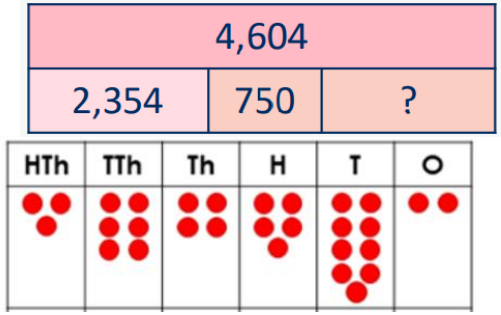
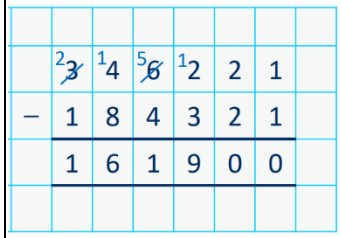
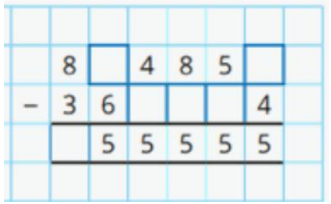
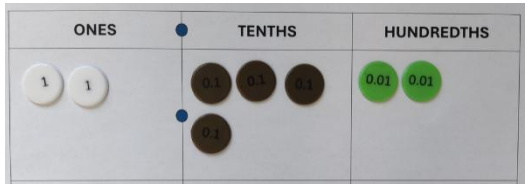
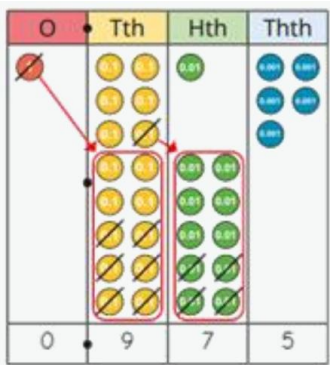
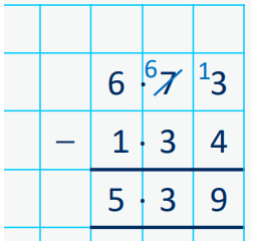
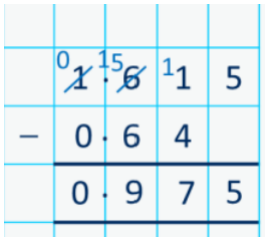
Subtract fractions with denominators that are a multiple of one another. $\frac{6}{8} - \frac{2}{4} =$ 	Subtract fractions with denominators that are a multiple of one another.  $\frac{1}{3} - \frac{1}{15} = \frac{5}{15} - \frac{1}{15} = \frac{4}{15}$	Subtract fractions with denominators that are a multiple of one another. $\frac{2}{3} - \frac{2}{9} = \frac{6}{9} - \frac{2}{9} = \frac{4}{9}$
Multistep problem deciding which method to use and why. *See concrete resources used in this unit*.	Multistep problem deciding which method to use and why. *See pictorial representations used in this unit*.	Multistep problem deciding which method to use and why. This table shows the number of people living in various towns in England. Town / Population Bedford 82,448 Carlton 48,493 Dover 34,087 Formby 24,478 Telford 66,640 What is the difference between the number of people living in Bedford and Dover?

Subtraction

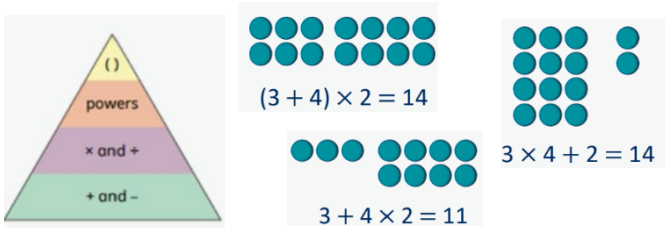
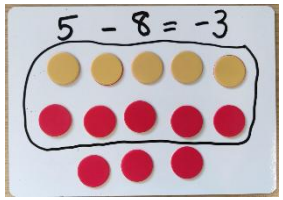
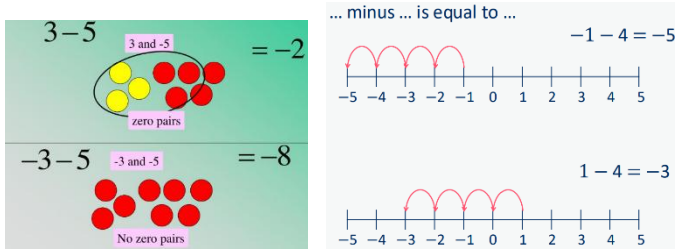
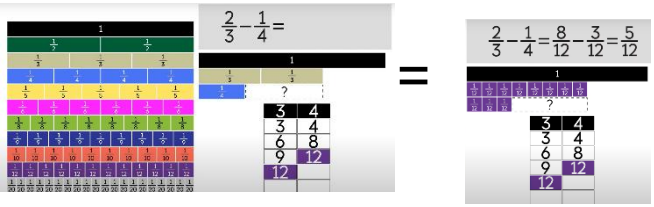
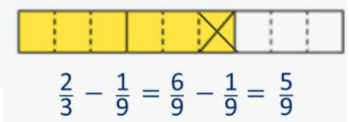
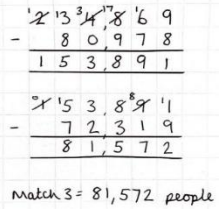
Year 6: Selected National Curriculum Programme of Study Statements

Pupils should be taught to:

- Subtract larger numbers, using the formal written methods of columnar subtraction.
- Use their knowledge of the order of operations to carry out calculations involving the 4 operations.
- Calculate intervals across zero.
- Subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.

Concrete	Pictorial	Abstract
Subtract integers up to 10 million.  I do/do not need to make an exchange because… I can exchange 1 …. for 10 …	Subtract integers up to 10 million.  	Subtract integers up to 10 million.  
Subtract decimals with up to 3 decimal places.  I do/do not need to make an exchange because… I can exchange 1 …. for 10 …	Subtract decimals with up to 3 decimal places. 1.615 – 0.64  I do/do not need to make an exchange because …	Subtract decimals with up to 3 decimal places.  

Subtraction

Order of operations.	Order of operations. 	Order of operations. (3+4) x 2 = 14 3 x 4 + 2 = 14 3+4 X 2 =11
Negative numbers. 5 ‘positive’ yellow counters and 8 ‘negative’ red counters. 	Negative numbers. 	Negative numbers. Here are the temperatures in four cities at midnight and at midday. Temperature City / At midnight / At midday Paris / −4°C / −2°C Oslo / −13°C / −7°C Rome / 3°C / 10°C Warsaw / −6°C / 2°C At **midnight**, how many degrees colder was Paris than Rome? degrees
Subtract fractions. 	Subtract fractions. The denominator has been multiplied by …, so the numerator needs to be multiplied by… 	Subtract fractions. $\frac{2}{3} - \frac{1}{4} = \frac{2x4}{3x4} - \frac{1x3}{4x3} = \frac{8}{12} - \frac{3}{12} = \frac{5}{12}$
Multistep problem in context, deciding which methods to use and why. *See concrete resources used in this unit.*	Multistep problem in context, deciding which methods to use and why. *See pictorial representations used in this unit.*	Multistep problem in context, deciding which methods to use and why. One Saturday afternoon, a total of 234,869 people attended three rugby matches. • 80,978 people attended match 1 • 72,319 people attended match 2 How many people attended match 3? 

Subtraction