

### Examples

We made 6 mince pies. We ate 2. How many mince pies are left?

There are 10 children. One goes out. How many are left?

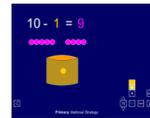
Start at 6, count back 1.

A is more than B  
B is less than A  
A is longer than B  
B is lower than A

What must I add to 3 to make 4?

### Vocabulary

count back  
(from, to) take (away) leave, how many are left/left over?  
one less, two less...ten less

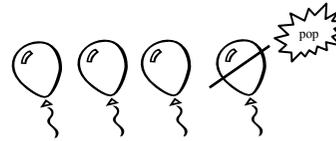


Number Facts

#### Subtraction as taking away



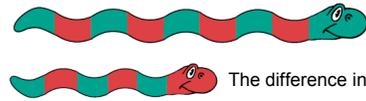
There were 6 people on the bus. Four people get off.



There were 4 balloons. 1 popped. How many are left?

Jill had 10 cars. She parked one in the garage. How many are left outside?

#### Subtraction as finding the difference



The difference in the number of stripes

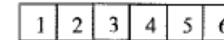
### Reception

#### Mostly pictorial representations:



Concrete apparatus models 6 objects 'take away' 2 objects.

Possibly simple number tracks to count back on:



6 take away 2

### Notes

Children will mainly use concrete apparatus to take a smaller number away from a larger one, then find what is left by counting back from the larger number. Oral countdowns will also be used to aid counting back skills.

### Apparatus

Numicon  
0-100 number lines  
Multilink

### Examples

4 take away 2  
take 2 from 7  
7 subtract 3  
8 less than 9

Start at 9, count back 3.

8, then 3 less

There are fewer red than blue

5 is 2 more than 3

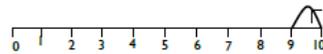
What must I add to 4 to make 10?

### Vocabulary

count back  
(from, to), -, subtract, take (away), minus, leave, how many are left/left over?  
one less, two less...ten less...

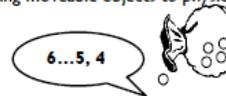
#### Calculation Strategies

1 less than 10 is 9  
10 subtract 1 equals 9  
 $10 - 1 = 9$



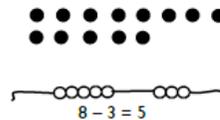
#### Subtraction as taking away

Using moveable objects to physically take-away



6 in the bag, take 2 out

#### Subtraction as finding the difference



The difference between 8 and 5 is 3.

$$8 - 3 = 5$$



Which line has the most money?  
How much more?

### Year 1

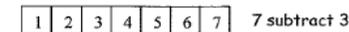
### Notes

At this stage the children will still be doing a lot of concrete work to complete subtraction calculations. However, there should be a move towards number tracks and grids as a visual resource.

### Apparatus

Numicon  
0-100 number lines  
Cuisenaire rods,  
numbered number lines,  
Stern  
Multilink

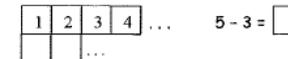
Number tracks to count back on:



7 subtract 3

Number grids

Filling in of missing boxes:



5 - 3 =

### Examples

Take 30 from 70  
12, then count back 3

How many less is 7 than 18?

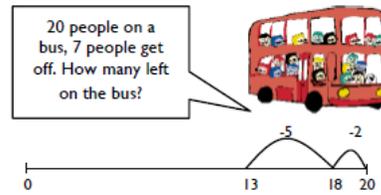
8 added to a number is 18.  
What is the number?

### Vocabulary

count back (from, to), -, subtract, take away, minus, leave, how many are left/left over? one less, two less...ten less...one hundred less how many less is...than...? estimate

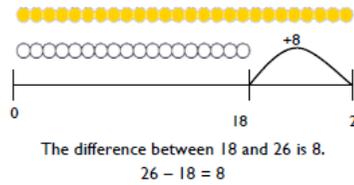
### Calculation Strategies

#### Subtraction as taking away



#### Subtraction as finding the difference

Find the difference by comparing 2 groups and counting on



Year 2

Filling in of missing boxes:

$$23 - 6 = \square$$

Number lines: 22 - 7



### Notes

Still use many ideas from Yr1 but should begin to move on to using simple number lines which allow the children to record their working. These should include calculations where tens boundaries need to be crossed.

### Apparatus

Numicon  
0-100 number lines  
Cuisenaire rods,  
numbered number lines,  
blank number lines, Dienes apparatus  
Multilink

### Examples

15 take away 8

63 subtract 46

Decrease 72 by 34

How many less than 68 is 42?

I scored 56 on my game. How many more do I need to reach 95?

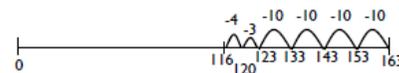
### Vocabulary

-, subtract, take away, minus, leave, how many are left/left over? one less, two less...ten less...one hundred less how many less is...than...? estimate

### Calculation Strategies

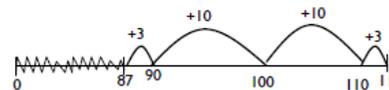
#### Subtraction as taking away

$163 - 47 = 116$   
Count back 47 from 163



#### Subtraction as finding the difference

$113 - 87 = 26$



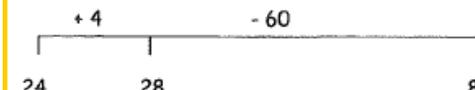
"I have taken this 87 away from the 163. Now I can count on to find the difference"

Year 3

Missing boxes:

$$36 - 15 = \square$$

Number lines (as Year 2) and:  
 $84 - 56$  (compensation method)



Column:	84
	- 56
	-----
	(take 60) 24
	(add 4) 4
	-----
	28

### Notes

In Yr 3 children should continue to use the horizontal number line. They should be carrying out the following calculations: TU-TU, HTU-TU, HTU-HTU. These should be done first without crossing any boundaries.

### Apparatus

Numicon  
0-100 number lines  
Cuisenaire rods,  
numbered number lines,  
blank number lines, Dienes apparatus  
Multilink

**Examples**  
 98 take away 8  
 63 subtract 46  
 Decrease 72 by 34.  
 How many less than 68 is 42?  
 Paul pours out 15 ml of water.  
 How much more water does he need to make 150ml?

**Vocabulary**  
 <, less than, fewer than, subtract, subtraction, take away, minus, decrease, leave, how many are left/ left over? estimate

**Calculation Strategies**

**Finding the difference (Counting up method)**  
 I have taken the 86 away so that I can count on to find the difference

$$\begin{array}{r} 754 \\ - 86 \\ \hline 4 \\ 10 \\ 600 \\ 50 \\ 4 \\ \hline 668 \end{array}$$

To make 90  
 To make 100  
 To make 700  
 To make 750  
 To make 754

**Decomposition (Taking away method)**  
 Expanded decomposition layout – no exchange

$$\begin{array}{r} 547 \\ -134 \\ \hline \end{array}$$

$$\begin{array}{r} 82 \\ -57 \\ \hline \end{array}$$

**Year 4**

**Number lines (as Year 3) and:**  
 754 - 86 (taking least value digit first)

$$\begin{array}{r} 668 \\ 708 \\ 748 \\ 754 \end{array}$$

Column:	$\begin{array}{r} 84 \\ - 56 \\ \hline 24 \\ + 4 \\ \hline 28 \end{array}$	and	$\begin{array}{r} 80 + 4 \\ - 50 + 6 \\ \hline 70 + 14 \\ - 50 + 6 \\ \hline 20 + 8 = 28 \end{array}$
	(compensation)		(decomposition)

**Notes**  
 Children in Yr 4 should continue to use the horizontal number line however, encourage use of visualisation of lines and grids. They should be carrying out the following types of calculations: HTU-TU, HTU-HTU. Calculations should include crossing the tens, hundreds or both boundaries. The decomposition column method should be introduced towards the end of Year 4.

**Apparatus**  
 Numicon  
 0-100 number lines  
 Cuisenaire rods  
 blank number lines, Dienes apparatus  
 Multilink

**Examples**  
 127 take away 35  
 678 subtract 105  
 How many less than 305 is 95?

**Vocabulary**  
 <, less than, fewer than, subtract, subtraction, take away, minus, decrease, leave, how many are left/ left over? estimate

**Calculation Strategies**

**Finding the difference (Counting up method)**

$$\begin{array}{r} 754 \\ - 286 \\ \hline 14 \\ 400 \\ 54 \\ \hline 468 \end{array}$$

To make 300  
 To make 700  
 To make 754

**Decomposition (Taking away method)**  
 Exchange Hundreds to Tens

$$\begin{array}{r} 767 \\ -276 \\ \hline \end{array}$$

Exchange Tens to Units

$$\begin{array}{r} 794 \\ -276 \\ \hline \end{array}$$

**Year 5**

Column:	$\begin{array}{r} 754 \\ - 286 \\ \hline 454 \\ + 14 \\ \hline 468 \end{array}$	and	$\begin{array}{r} 700 + 50 + 4 \\ - 200 + 80 + 6 \\ \hline 700 + 40 + 14 \\ - 200 + 80 + 6 \\ \hline 600 + 140 + 14 \\ - 200 + 80 + 6 \\ \hline 400 + 60 + 8 = 468 \end{array}$
	(compensation)		(decomposition)

**Notes**  
 Children in Yr 5 use the same column method as those in Yr 4 (compensation & decomposition where adjusting is required.) They should be carrying out the following types of calculation: HTU-HTU, ThH-TU, ThHTU. The children should also extend these ideas to working with simple decimals.

**Apparatus**  
 Numicon  
 0-100 number lines  
 Cuisenaire rods  
 blank number lines, Dienes apparatus  
 Multilink

### Examples

750 take 255

3500 subtract  
2050

Decrease 5.2  
by 1.9

How much less  
than 6.8 is  
4.2?

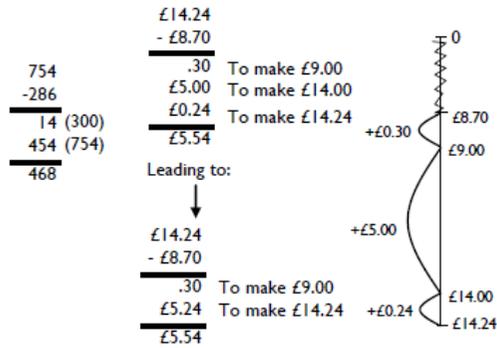
How much fur-  
ther do you  
have to drive  
to complete a  
journey of 345  
miles if you  
have so far  
driven 196  
miles?

### Vocabulary

<, less than,  
fewer than,  
subtract, sub-  
traction, take  
away, minus,  
decrease,  
leave, how  
many are left/  
left over?  
estimate

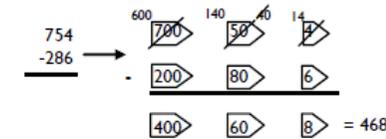
### Calculation Strategies

Finding the difference  
(Counting up method)



### Decomposition

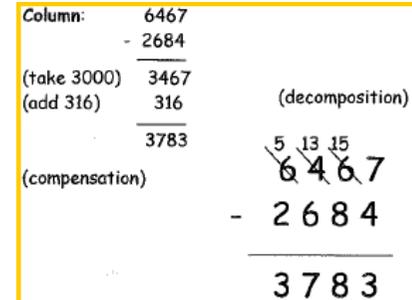
Expanded decomposition - double exchange



Leading to:  
Compact decomposition



Year 6



### Notes

Children in Yr 6 can use the same column methods as those in Yr 5 (compensation & decomposition where adjusting is required) but may be encouraged to the more compact method of decomposition if appropriate. Children should be working with ThHTU-ThHTU. The children should also extend these ideas to working with decimals.

### Apparatus

Numicon  
0-100 number  
lines  
Cuisenaire  
rods  
blank number  
lines, Dienes  
apparatus  
Multilink