

Subtraction Calculation Policy adapted from White Rose Maths Hub Progression in Calculations – supported with a rich use of vocabulary and discussion throughout using ‘stem sentences’

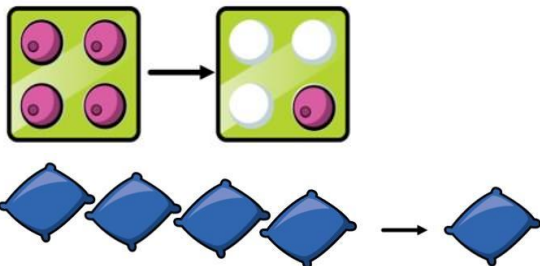
# Calculation policy: Subtraction

Key language: take away, less than, the difference, subtract, minus, fewer, decrease.

## Concrete/ Build it

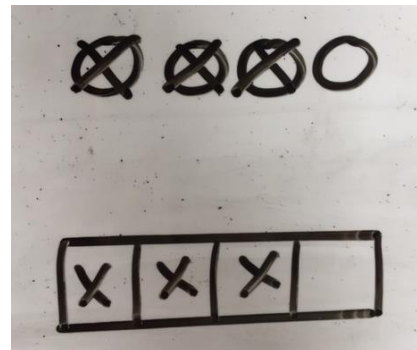
Physically taking away and removing objects from a whole (ten frames, Numicon, cubes and other items such as beanbags could be used).

$$4 - 3 = 1$$



## Pictorial /Draw it

Children to draw the concrete resources they are using and cross out the correct amount. The bar model can also be used.



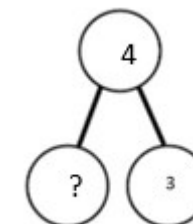
## Abstract / Write it it/ Say it

$$4 - 3 =$$

Say it: 4 is the whole, when we subtract we take away from the whole.

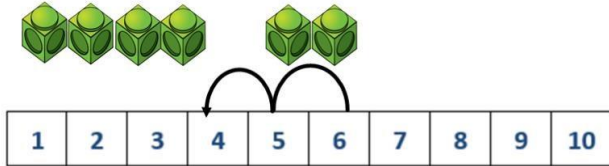
$$\square = 4 - 3$$

4	
3	?

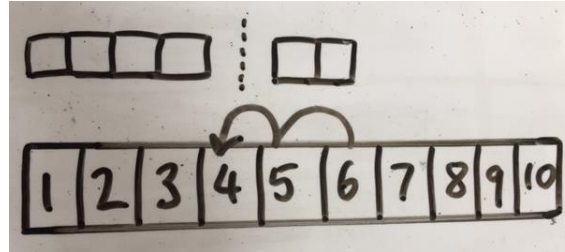


Counting back (using number lines or number tracks) children start with 6 and count back 2.

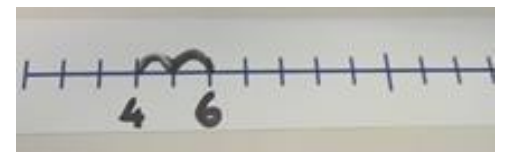
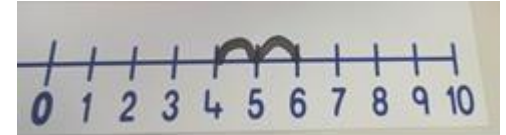
$$6 - 2 = 4$$



Children to represent what they see pictorially e.g.

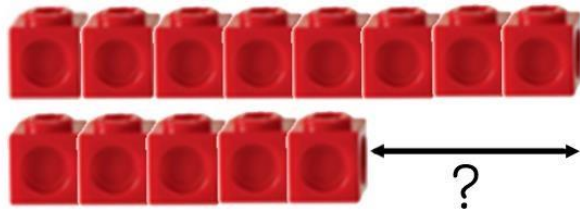


Children to represent the calculation on a number line or number track and show their jumps. Encourage children to use an empty number line



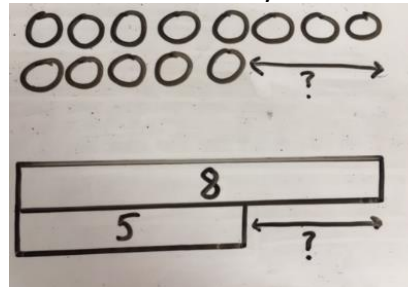
Say it: start on the biggest number and count back the jumps.

Finding the difference (using cubes, Numicon or Cuisenaire rods, other objects can also be used).



Calculate the difference between 8 and 5.

Children to draw the cubes/other concrete objects which they have used or use the bar model to illustrate what they need to calculate.



Find the difference between 8 and 5.

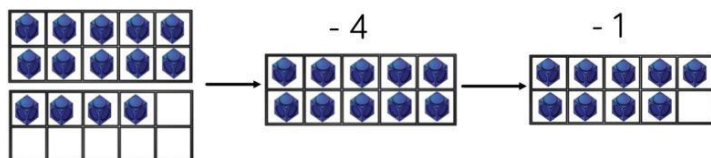
8 - 5, the difference  is

Children to explore why  $9 - 6 = 8 - 5 = 7 - 4$  have the same difference.

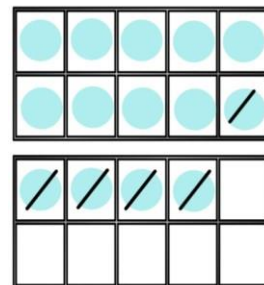
Say it: 5 and 3 more make 8

Making 10 using ten frames.

$$14 - 5 =$$



Children to present the ten frame pictorially and discuss what they did to make 10.



Children to show how they can make 10 by partitioning the subtrahend.

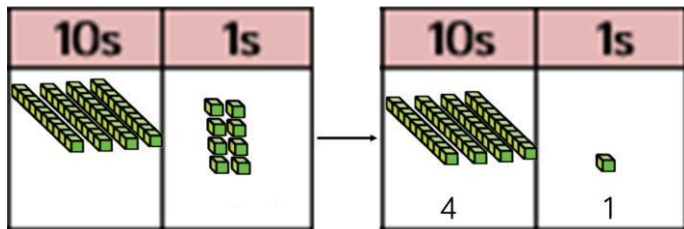
$$\begin{array}{r} 14 - 5 = 9 \\ \swarrow \quad \searrow \\ 4 \quad \quad 1 \end{array}$$

$$14 - 4 = 10$$

$$10 - 1 = 9$$

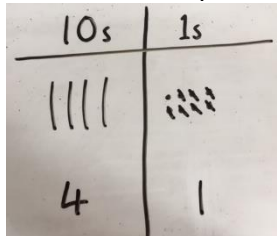
Say it: 5 is the whole 4 is a part, 1 is a part. I subtract 4 to the nearest multiple of ten then I subtract 1. I subtract 5 in total.

Column method using base 10.

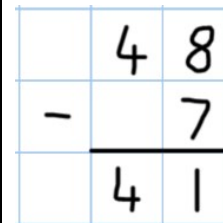


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Children to represent the base 10 pictorially.

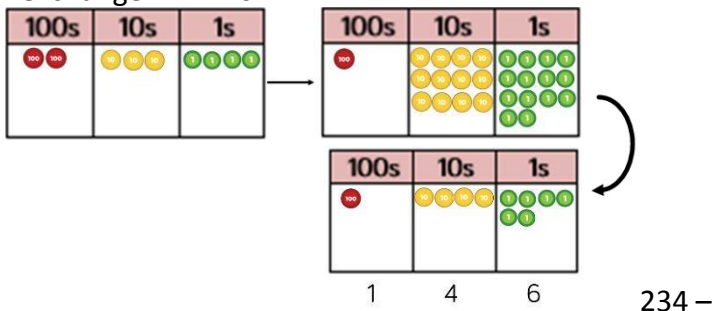


Column method or children could count back 7.



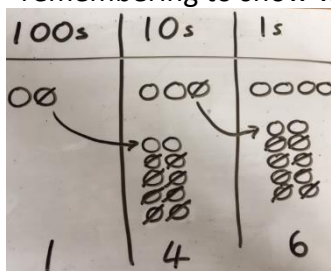
Say it: We start with the ones.  $8 - 7 = 1$   
 $40 - 0 = 40$ . We are left with 41

Column method using base 10 and having to exchange.  $41 - 26$

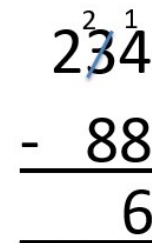


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Represent the place value counters pictorially; remembering to show what has been exchanged.

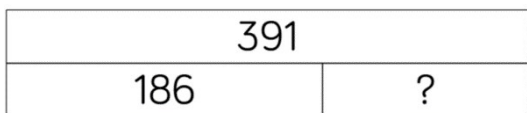
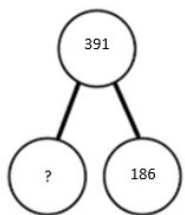


Formal column method. Children must understand what has happened when they have crossed out digits.



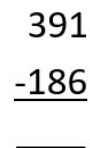
Say it: I haven't got enough ones. I must exchange one ten for ten ones.  $14 - 8 = 6$

# Conceptual variation; different ways to ask children to solve $391 - 186$



Raj spent £391, Timmy spent £186. How much more did Raj spend?

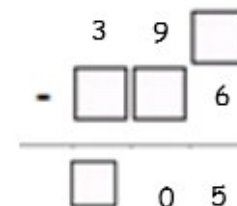
Calculate the difference between 391 and 186.



=  $391 - 186$

What is 186 less than 391?

Missing digit calculations



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