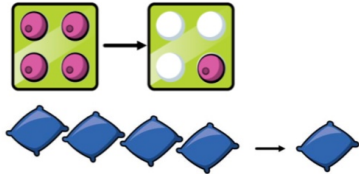


# ALVERTON CALCULATION POLICY - SUBTRACTION

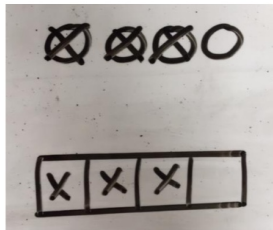
## EYFS/Year 1

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

$$4 - 3 = 1$$

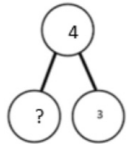
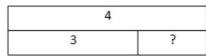


Children to draw the concrete resources they are using and cross out the correct amount. The bar model can also be used.



$$4 - 3 =$$

$$\square = 4 - 3$$

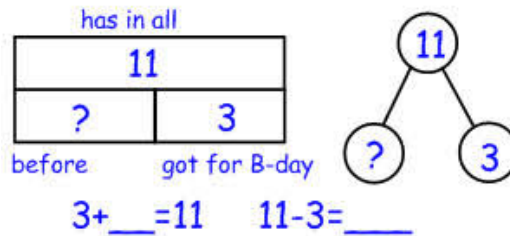


## Year 2

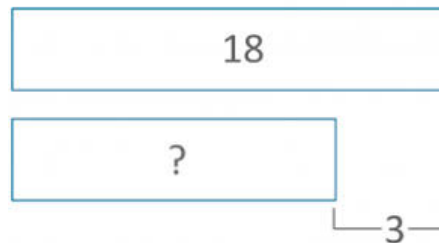
As Year 1 to consolidate methods and move on to larger numbers.

Moving on to:

Part-part-whole models with larger numbers.



Finding the difference in bar models and on number lines.



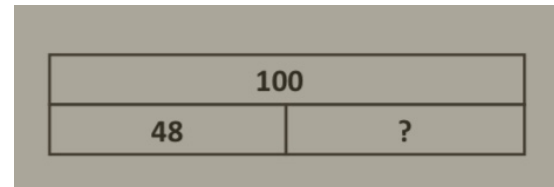
## Year 3

As Year 2 to consolidate methods and move on to larger numbers.

Mental strategies to include:

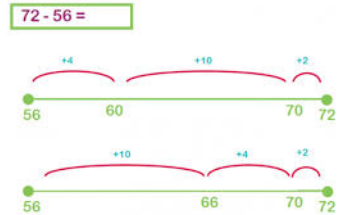
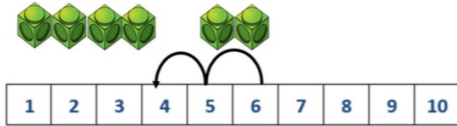
Partitioning, e.g.  $68 - 42$  as  $60 - 40$  and  $8 - 2$  or  $£6.84 - £2.40$  as  $£6 - £2$  and  $80p - 40p$ .  
Count back in hundreds, tens and then ones, e.g.  $763 - 121$  as  $763 - 100$  (663) then subtract 20 (643) then subtract 1 (642).  
Subtract near multiples, e.g.  $648 - 199$  or  $86 - 39$ .

Part-part-whole models with larger numbers using known facts and number bonds.

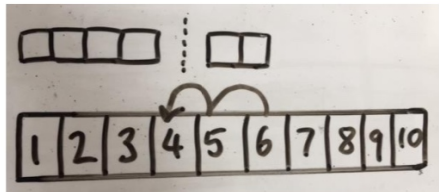


**Counting back** (using number lines or number tracks) children start with 6 and count back 2.

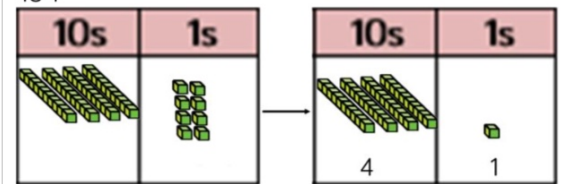
$$6 - 2 = 4$$



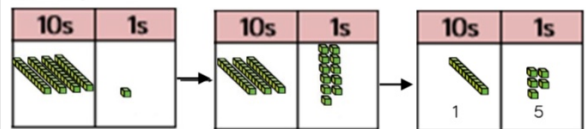
**Consolidation of column method using Base 10 as in Year 2. This moves on to column method requiring exchange/borrowing; this will primarily be modelled with Base 10.**



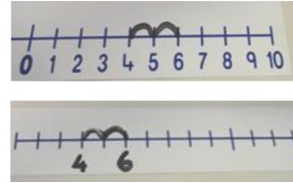
**Column method** using base 10.  
48-7



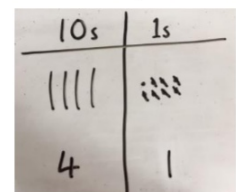
**Column method** using base 10 and having to exchange.  
41 - 26



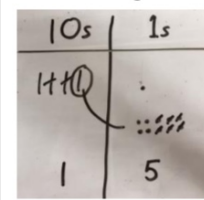
Children to represent the calculation on a number line or number track and show their jumps. Encourage children to use an empty number line



Children to represent the base 10 pictorially.

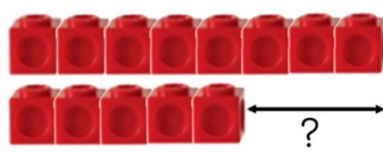


Represent the base 10 pictorially, remembering to show the exchange.

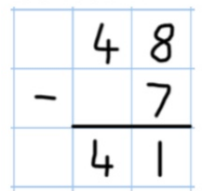


**Finding the difference** (using cubes, Numicon or Cuisenaire rods, other objects can also be used).

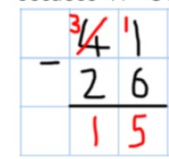
Calculate the difference between 8 and 5.



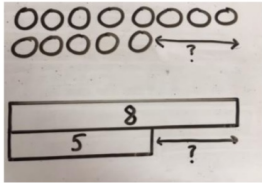
Column method or children could count back 7.



Formal column method. Children must understand that when they have exchanged the 10 they still have 41 because  $41 = 30 + 11$ .



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.

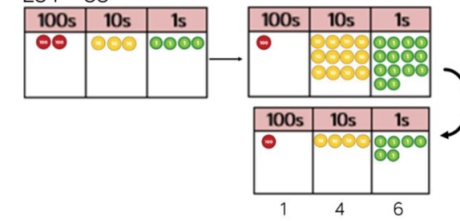
8 - 5, the difference is

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

**Some children will move on to using place value counters to model subtraction with exchange/borrowing.**

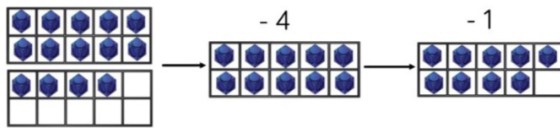
Column method using place value counters.

$$234 - 88$$

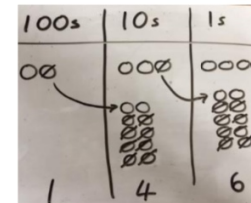


**Making 10** using ten frames.

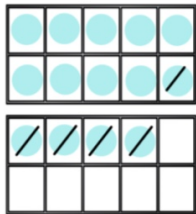
$$14 - 5$$



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



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



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

$$\begin{array}{r} \overset{2}{2}\overset{1}{3}4 \\ - 88 \\ \hline 6 \end{array}$$

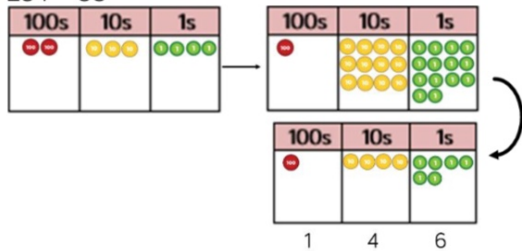
# ALVERTON CALCULATION POLICY - SUBTRACTION

## Year 4

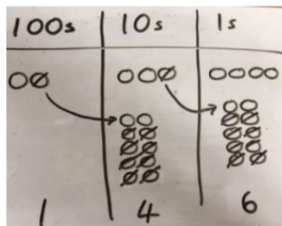
Continue work from Year 3 concentrating on modelling column subtraction with place value counters which should quickly lead into confident use of formal written method with up to 4 digits. However, for any child who has gaps in understanding, any method from previous years can be used as intervention to plug those gaps.

Column method using place value counters.

$$234 - 88$$



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



## Year 5

Continue with formal column subtraction with 5 digit numbers. Extend to subtraction of numbers with the same number of decimal places

**Move on to subtracting numbers with one decimal place from numbers with no decimals. Claire's group**

**Move on to subtracting numbers with up to 4 decimal places from numbers with either no decimals or different numbers of decimals**

**Mike and Ali's groups**

## Year 6

As Year 5 moving to column subtraction of numbers with different number of decimal places.

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

$$\begin{array}{r} 2\overset{2}{\cancel{3}}4 \\ - 88 \\ \hline 6 \end{array}$$

**This method should be extended to 4 digit numbers.**



