
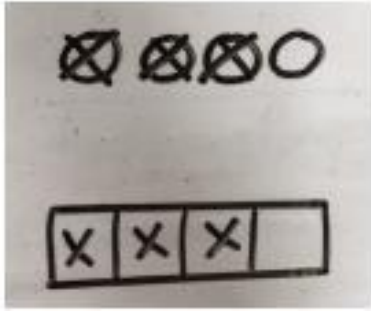
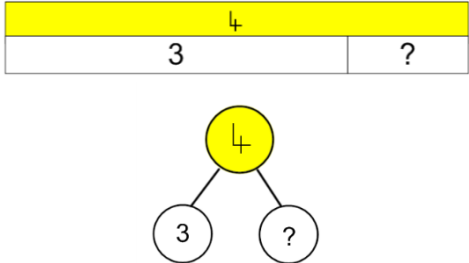
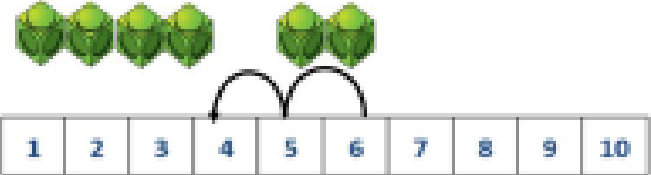

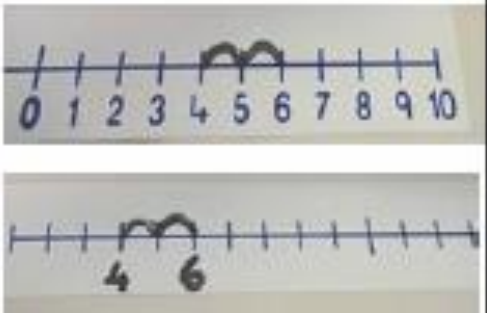


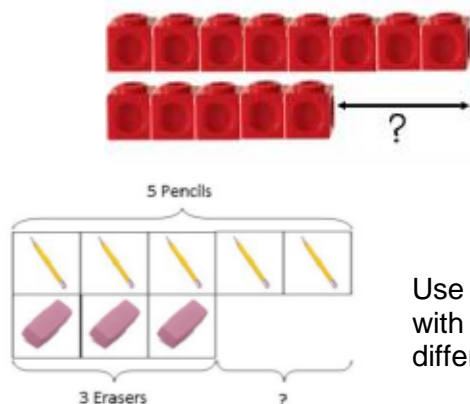
Calculation policy: Subtraction

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

Concrete	Pictorial	Abstract
<p>Physically taking away and removing objects from a whole. Use the ten frames, Numicon, cubes and other items, e.g. beanbags, cars, teddies etc. $4 - 3 = 1$</p> 	<p>Children to draw the concrete resources they are using and cross out the correct amount. The bar model can also be used.</p> 	<p>$4 - 3 =$</p> <p>$\square = 4 - 3$</p> 
<p>Counting back (using number lines or number tracks) children start with 6 and count back 2. Note that physical resources are also used so that the children can see the representation of the digits.</p> <p>$6 - 2 = 4$</p> 	<p>A bar model represents $6 - 2 = 4$</p> 	<p>Children to represent the calculation on a number line or number track and show their jumps. Encourage children to use an empty number line.</p> 

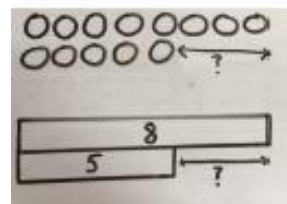
Finding the difference (using cubes, Numicon or rods, other objects can also be used).

Calculate the difference between 8 and 5.



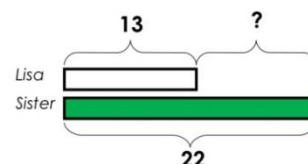
Use basic bar models with items to find the difference

Children to draw the cubes/circles, which they have used, to illustrate their calculations.



Comparison Bar Models

Lisa is 13 years old. Her sister is 22 years old.
Find the difference in age between them.



Find the difference between 8 and 5.

8-5, the difference is

Children to explore numbers and investigate number sentences such as:

$$9 - 6 = 8 - 5 = 7 - 4$$

Explain why these have the same difference. (Because they all have a difference of 3 and the sequence decreases by 1 each time so the difference will be the same).

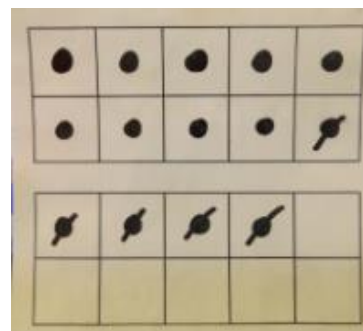
Making 10 using ten frames.

$$14 - 5 =$$

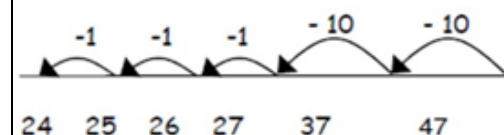
Use the tens frame, **physically take** the 4 first from the lower frame and then the 1 from the full tens frame.



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

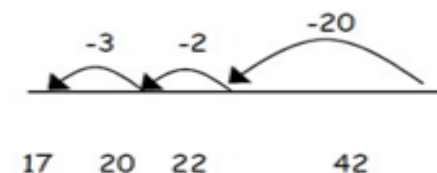


47-23=24 (Partition the smallest number. Subtract this in tens firstly then the ones).

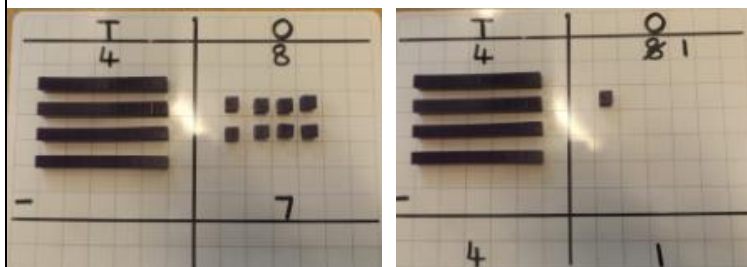


Then move to more efficient jumps for e.g in the calculation above take 20.

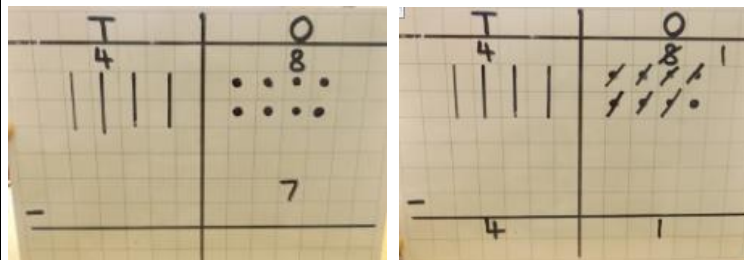
Next teach bridging 10. (See below)



Column methods using base 10
 $48 - 7 =$



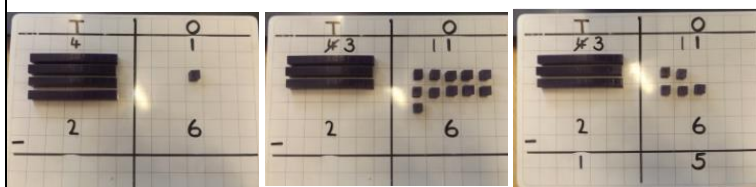
Children to represent the base 10 pictorially.
 Children to cross out as they subtract.



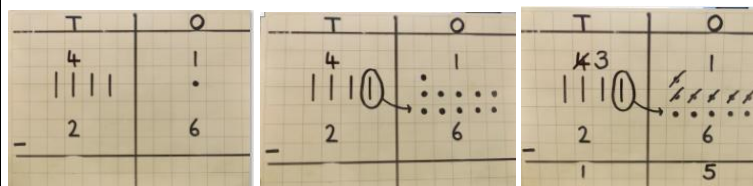
Column Method or children could count back 7. Ensure that children do not need to exchange to begin with.

	4	8
-		7
	4	1

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



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



Formal column method.

	³ 4	¹ 1
-	2	6
	1	5

Because you can't take 6 as you only have one in the ones, you need to exchange a ten for ten ones. Now you can take the 6. Now you can take the 20 (2 lots of ten).

