



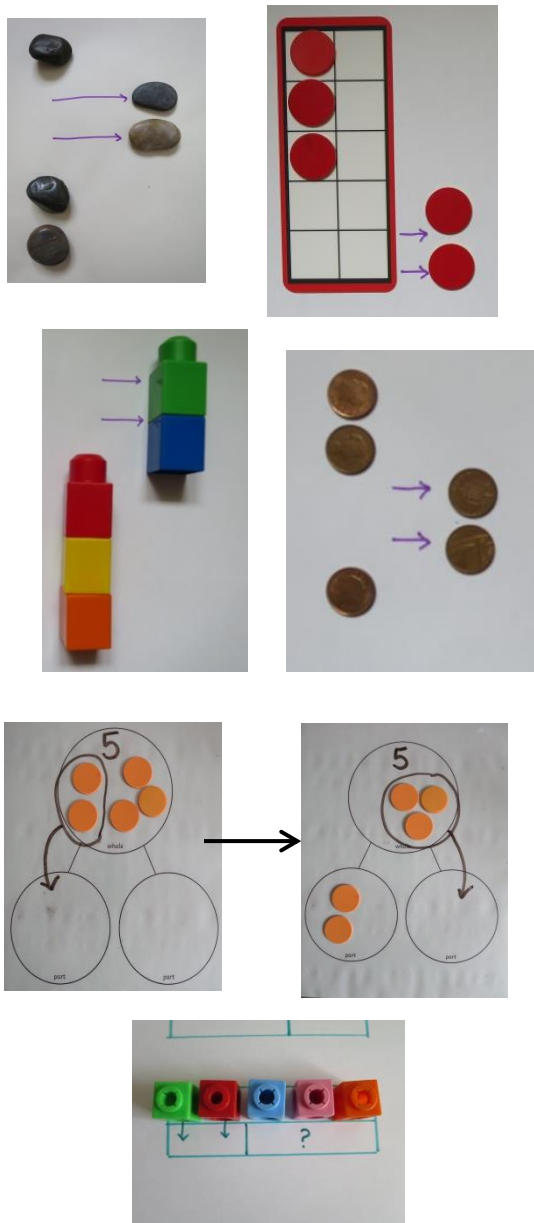
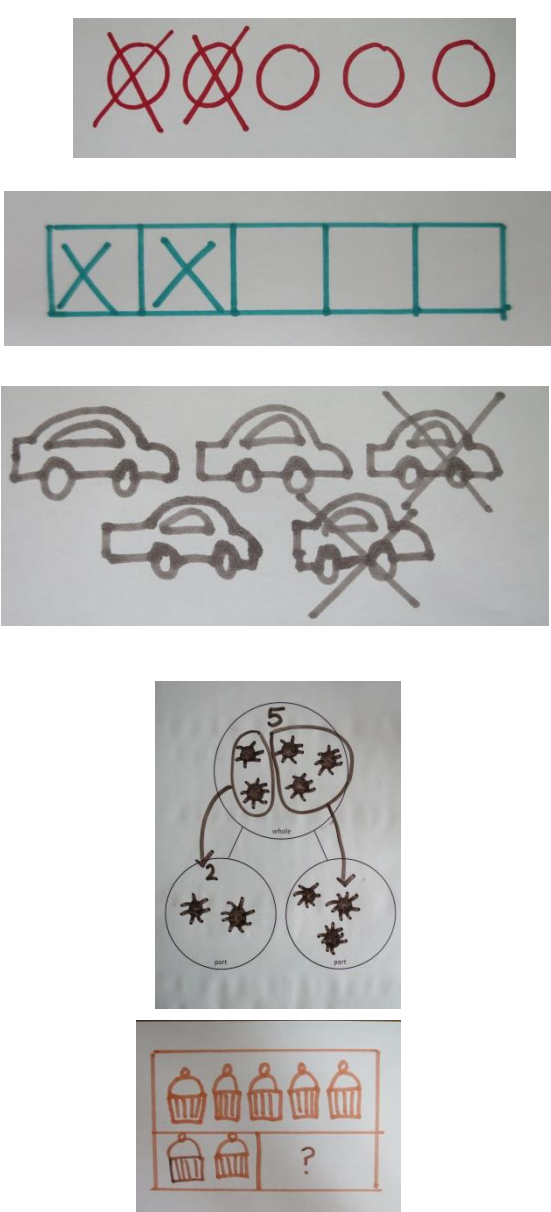
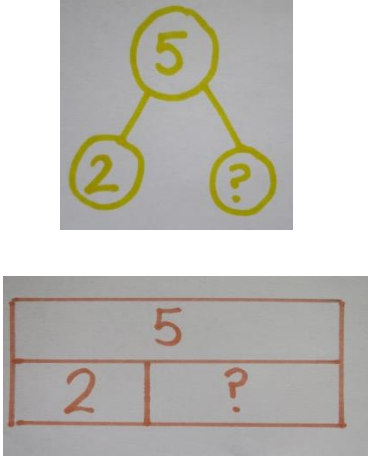
The Oaks CE Learning Federation
Mathematics Calculation Policy
Subtraction Progression - using a CPA Approach


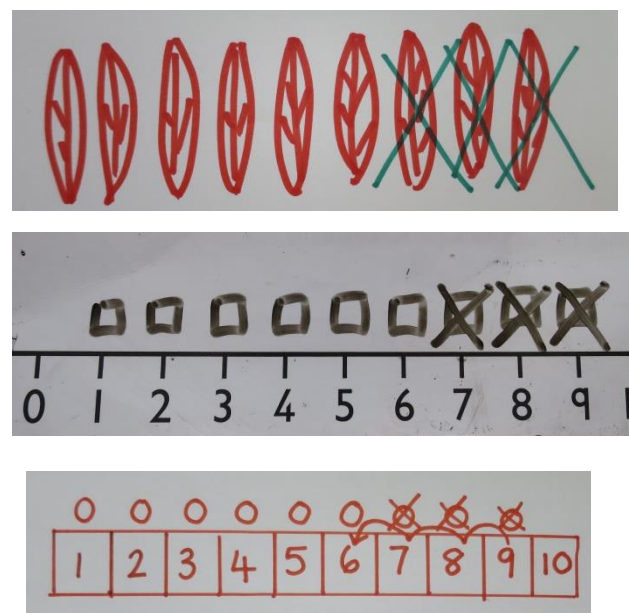
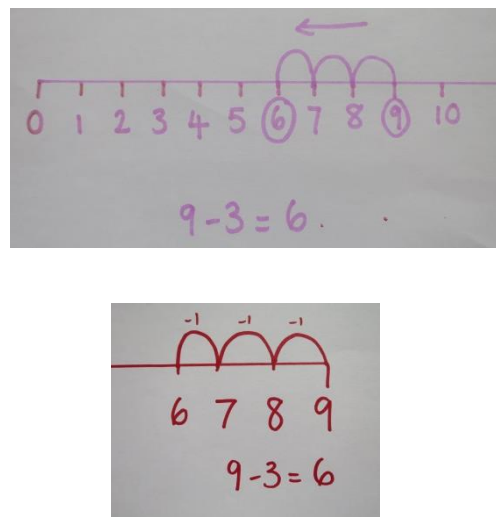
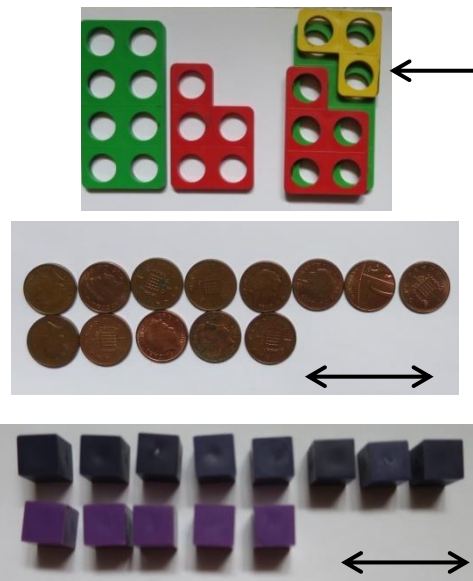
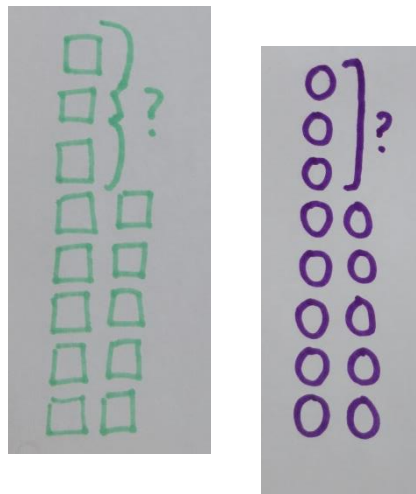
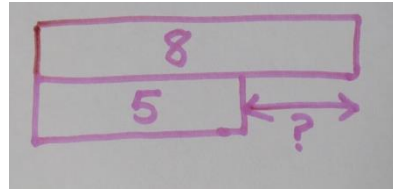



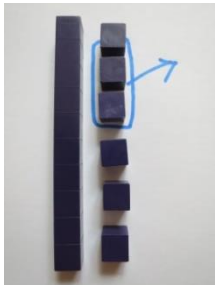

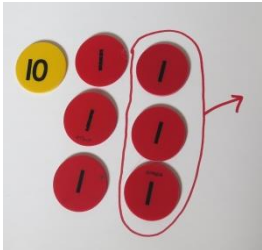
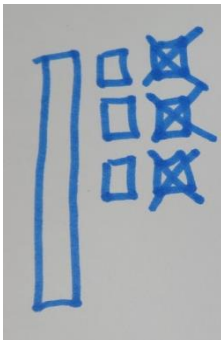

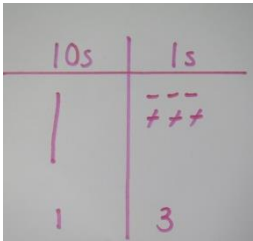
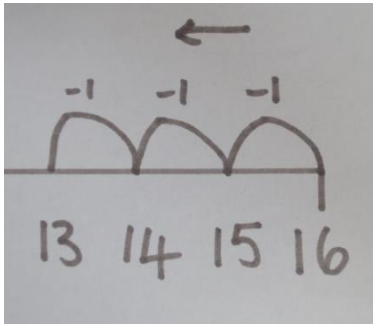
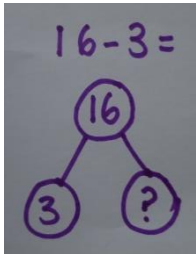

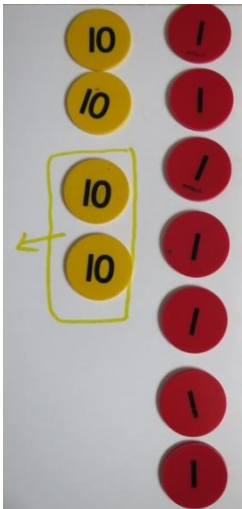
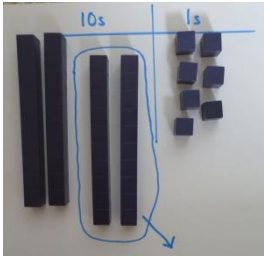
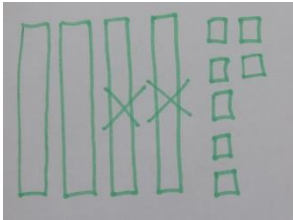

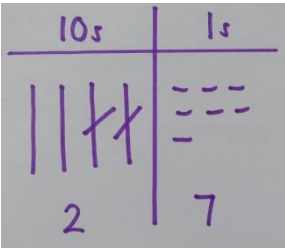
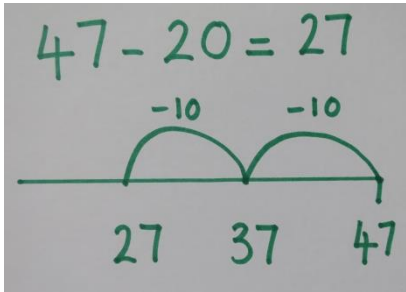
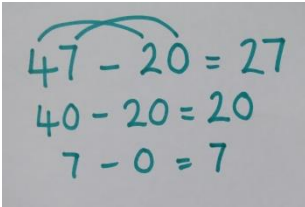
EYFS Framework	<p>ELG Number: Children at the expected level of development will:</p> <ul style="list-style-type: none"> Have a deep understanding of number to 10, including the composition of each number Automatically recall number bonds to 5 (including subtraction facts) and some number bonds to 10, including double facts.
National Curriculum Year 1	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> Given a number, identify one more and one less Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs Represent and use number bonds and related subtraction facts within 20 Add and subtract one-digit and two-digit numbers to 20, including zero Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$.
National Curriculum Year 2	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures Applying their increasing knowledge of mental and written methods Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers, adding three one-digit numbers Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.


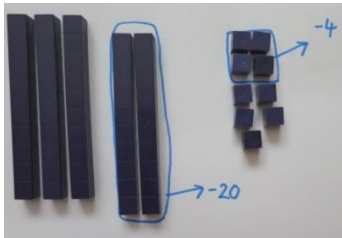
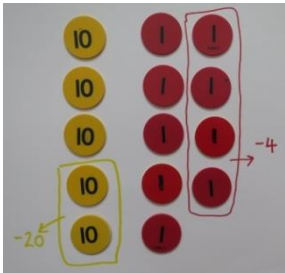
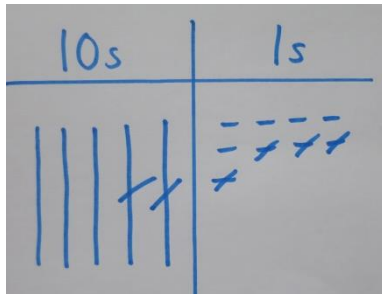
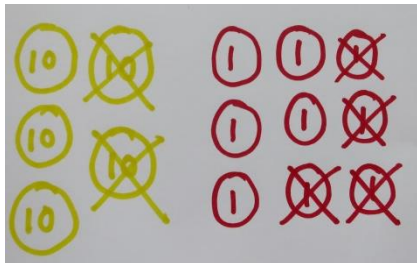
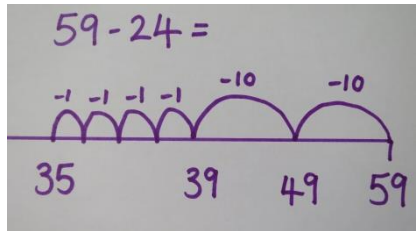
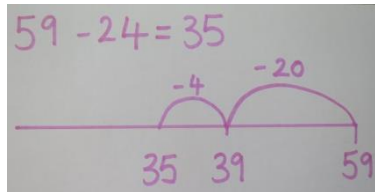
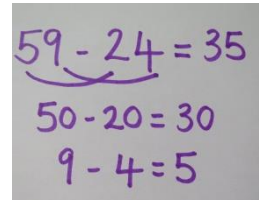
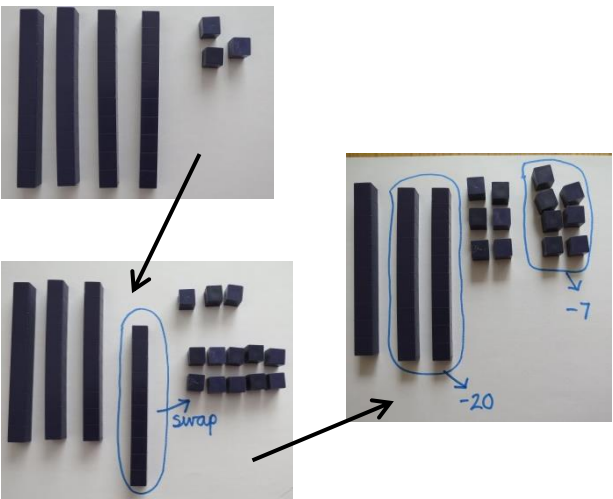
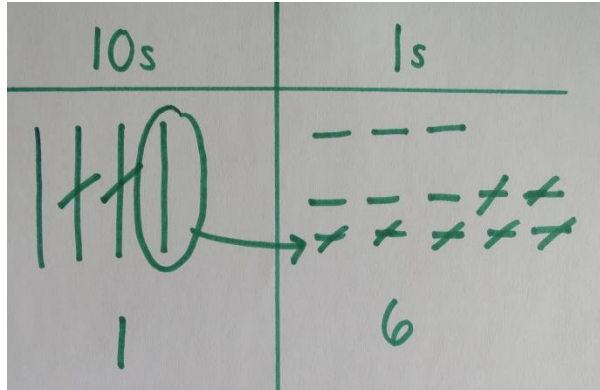
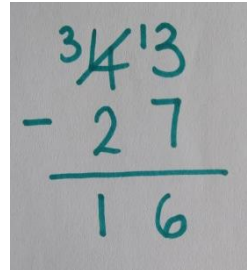
Key Language: take away, less than, the difference, minus, fewer, decrease

Key Apparatus: Numicon, cubes, objects, counters, coins, bead strings, tens frames, number tracks, number lines, part-part whole diagrams, bar model diagrams

	Concrete	Pictorial <i>(Most applicable to EYFS / Y1)</i>	Abstract
<p>Step 1- Physically taking away and removing objects from a whole</p> <p>$5 - 2 = 3$</p> <p>Moving towards more abstract ways of removing parts from the whole</p>	<p>We encourage the use of objects from the natural world and common everyday objects as well as school resources.</p> 	<p>We teach the children to draw pictures and/ or use symbols to represent objects.</p> 	<p>Children may use their concrete and pictorial representations to help them transfer their thinking into the abstract</p> 

	Concrete	Pictorial	Abstract
	<i>(Most applicable to EYFS / Y1)</i>		
<p>Step 2- Counting back</p> <p>$9 - 3 = 6$</p> <p>“9, 8, 7, 6”</p>			
<p>Step 3- Finding the difference</p> <p>Find the difference between 8 and 5.</p>			

	Concrete	Pictorial (Most applicable to Y1/ Y2)	Abstract
Step 4- Subtracting a 2- digit number and ones. $16 - 3 = 13$	<p>We continue to encourage the use of objects from the natural world and common everyday objects- however objects may now represent different values (ie tens / ones)</p>    	<p>We continue to teach the children to draw pictures and/ or use symbols to represent objects.</p>   	<p>Children might begin using concrete and/or pictorial and then use this to help them transfer their thinking into the abstract</p>  
Step 5- Subtracting a 2-digit number and tens $47 - 20 = 27$	  	  	 

	Concrete	Pictorial	Abstract
	<i>(Most applicable to Y2)</i>		
<p>Step 6- Subtracting two, 2-digit numbers. (no exchanging)</p> <p>59 - 24 = 35</p>	  	 	  
<p>Step 7- Subtracting two, 2-digit numbers – having to exchange</p> <p>43 - 27 = 16</p>			 <p>N.B column method may only be introduced to some Y2 children.</p>