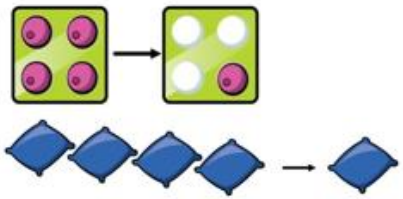
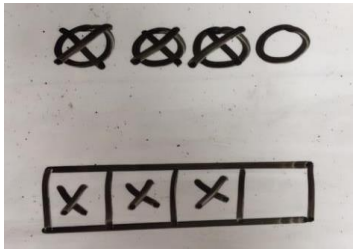
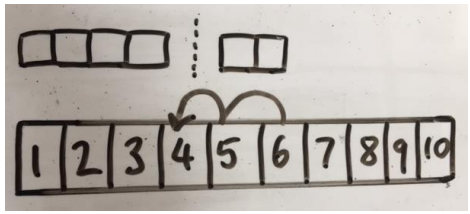
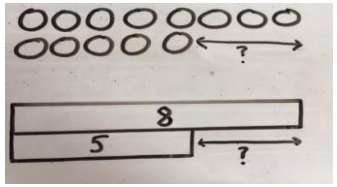
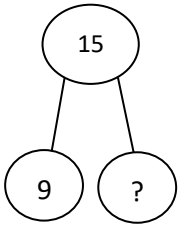
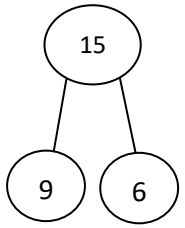
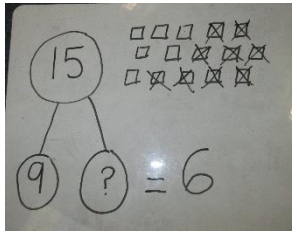
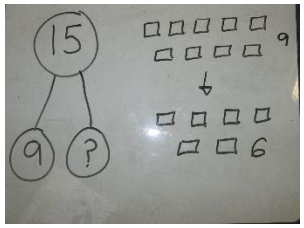
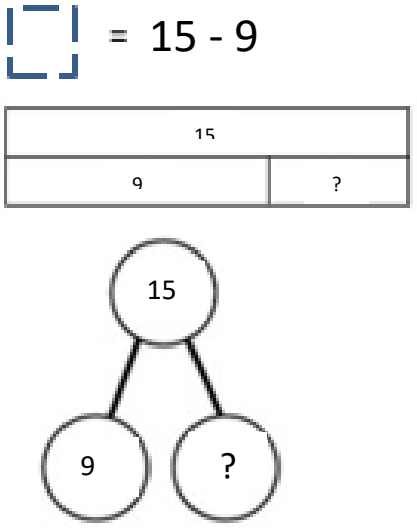
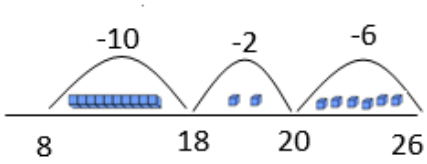
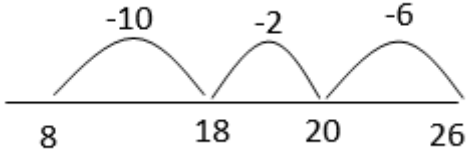
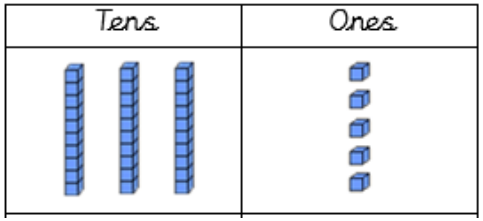
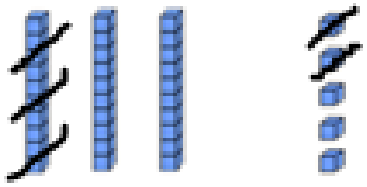
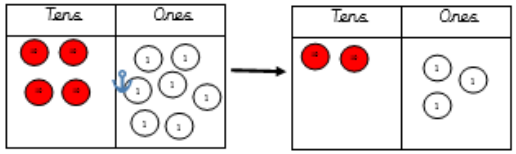
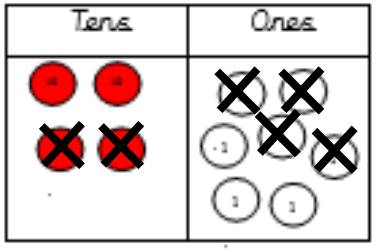
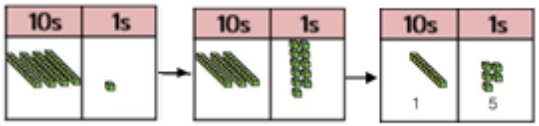
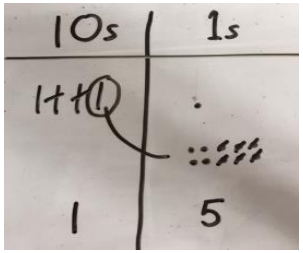
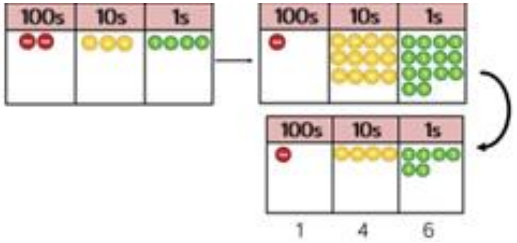
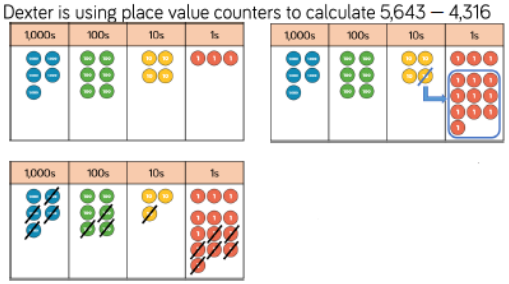
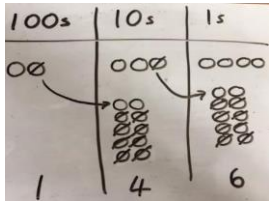
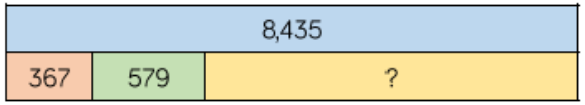
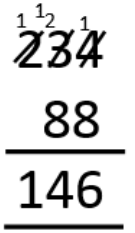
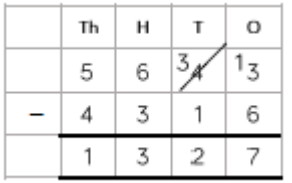
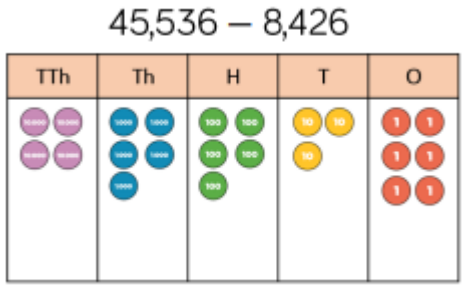
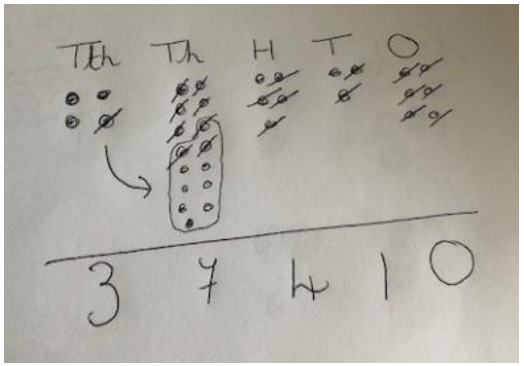
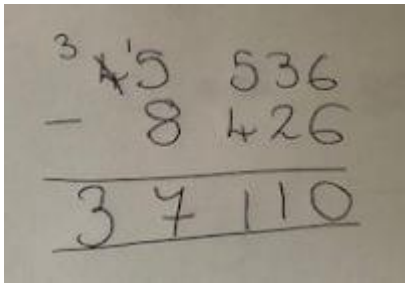
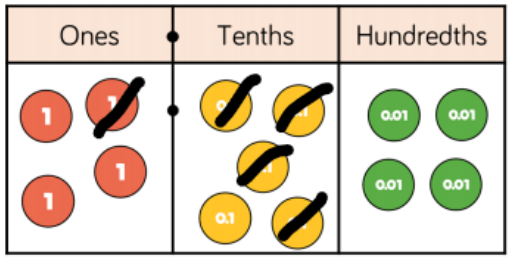
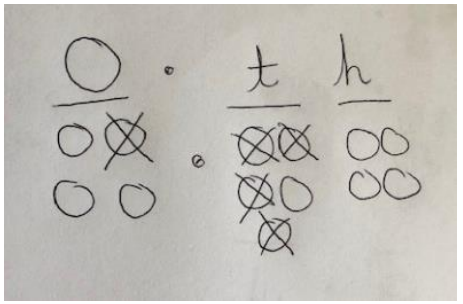
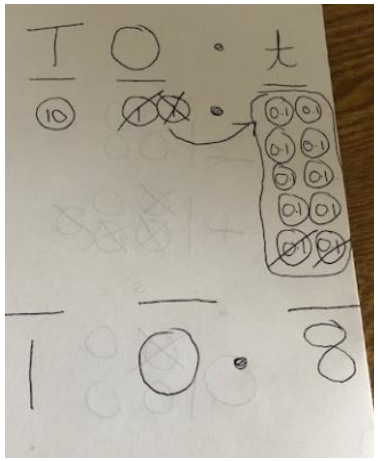
Progression in Calculation: Subtraction

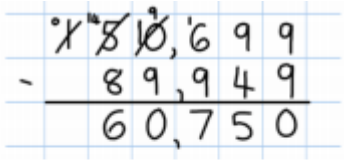
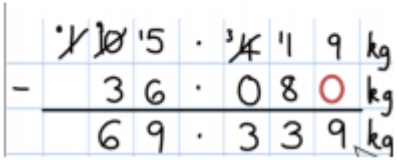
	Objective	Concrete	Pictorial	Abstract
Foundation	Taking away	Children physically take away and remove objects from a whole (ten frames, Numicon, cubes and other items such as beanbags could be used). 4 – 3 = 1 	Children to draw the concrete resources they are using and cross out the correct amount. The bar model can also be used. 	4 - 3 = 1
	Counting back	Counting back (using number lines or number tracks) children start with 6 and count back 2. 6 – 2 = 4 	Children represent what they see pictorially e.g. 	Children to represent the calculation on a number line or number track and show their jumps. 
Year 1	Finding the difference	Finding the difference (using cubes, Numicon etc)  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.  This can also been show on a number too.	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.

	Part, part whole	Children use their knowledge of part, part, whole for addition to solve subtraction calculations. They use practical resources such as cubes to aid their thinking.   Children recognise the relationship between addition and subtraction and use taking away or counting on to solve the problem.	Children represent what they see pictorial e.g.  Taking Away  Counting on	
Year 2	Using an empty number line.	26 – 18 = 10 8 If the problem bridges 10 children should use their knowledge of place value and number bonds to 10.  Children use dienes/numicon to partition. They place on an empty number line, starting with the ones.	26 – 18 = 10 8  If the - symbol is removed, inverse relationship can be modelled.	Children progress onto recording on to their own empty number line looking at larger numbers etc.

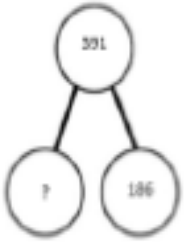
	Partitioning and regrouping to subtract numbers.	Use Base 10 and place value grids to practically partition and regroup. 35 – 12 =  Subtract the ones first and then tens, children practically take the dienes away.		35 – 12 = 5 – 2 = 3 30 – 10 = 20 20 + 3 = 23
Year 3	Using expanded column method to subtract pairs of numbers (no exchanging). Up to 3 digits	Use Base 10/place value counters and place value grids to practically partition and regroup. 47 – 24 = 23  Subtract the ones first and then tens.	 Children draw the place value counters. Subtract the ones first and then tens.	47 – 24 = 23 40 + 7 – 20 + 4 20 3 = 23
	Using expanded column method to subtract pairs of numbers (exchanging). Up to 3 digits	Use place value counters/base 10 to practically exchange.  	Represent the base 10 pictorially, remembering to show the exchange.  	41 – 26 = 30 1 – 40 + 1 20 + 6 10 5 = 15

Year 4	Using column method to subtract pairs of numbers (with exchanging). Up to 4 digits	Use place value counters to represent. 234 – 88 =  Exchanging and then crossing out of counters to complete subtraction:  	Children represent the place value counters pictorially remembering to show that has been exchanged.  Use of a bar model to support understanding.  	Children must understand what has happened when they have crossed out digits.  
Year 5	Subtract more than four digit numbers using column method.	Steps of exchanging and crossing out of counters as shown above in Year 4.  	 	

	Subtracting decimals with the same and different number of decimal places (up to three decimal places).	Crossing out place value counters to calculate: 4.54 – 1.4  Exchanges to be made using counters – see Year 4.	 Calculations involving exchanges:  	Focusing on using zero as a place holder: 4 . 5 4 – 1 . 4 0 3 · 1 4 1 2 . 1 0 – 0 1 . 2 1 0 · 8

Year 6	Column method to subtract pairs of numbers. 4 digit numbers and beyond Consolidate understanding using numbers with more than 4 digits and extend by subtracting numbers with up to 3 decimal places (in a range of contexts).	Use of concrete and pictorial resources as necessary/ to review – see Year 5.	Calculations involving adjustments and rounding: 834,501 – 299,999  

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



391	
186	?

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

Calculate the difference between 391 and 186.

□ = 391 – 186

391
-186
———

What is 186 less than 391?

Missing digit calculations

3 9 □
- □ □ 6
———
□ 0 5

Key Vocabulary: subtract, subtraction, take away, minus, less than, difference, decrease, leave, how many left over, distance between.