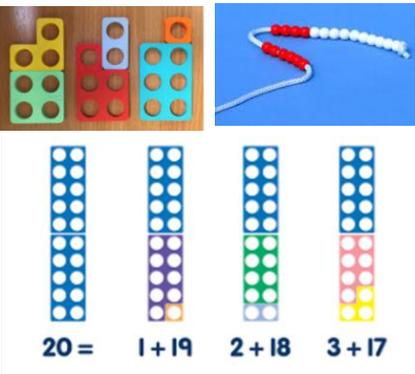
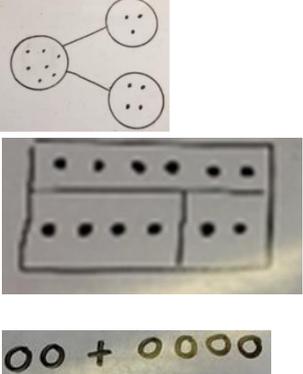
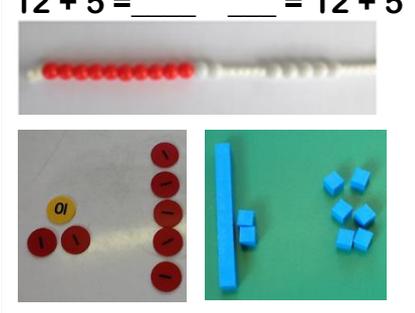
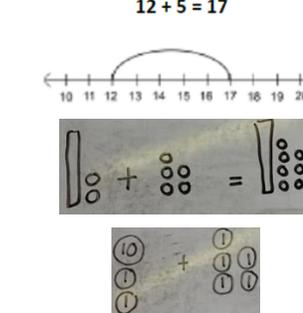
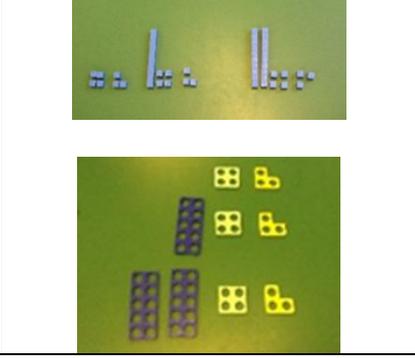
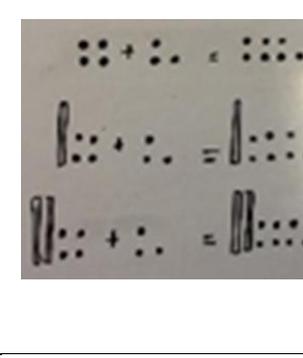
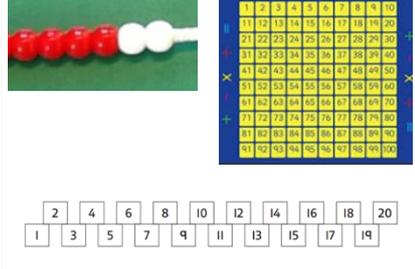
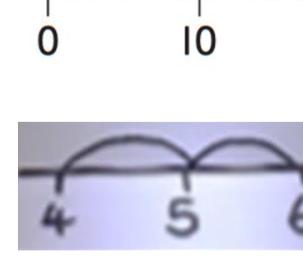
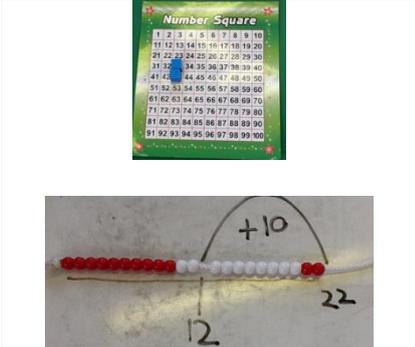
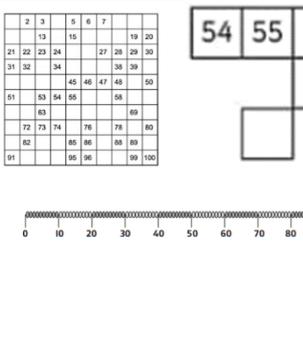


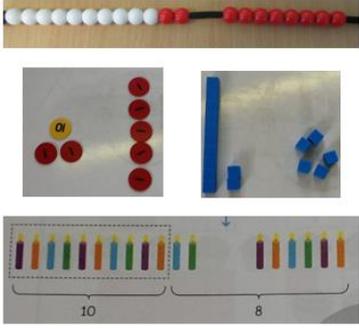
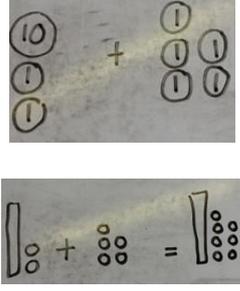
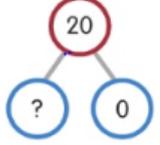
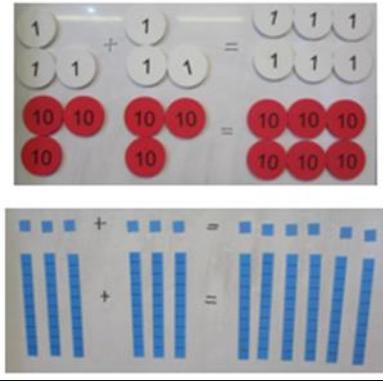
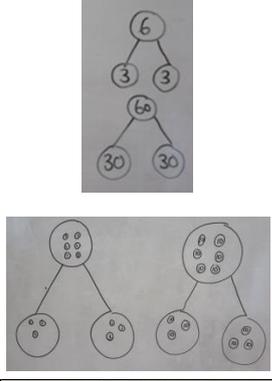
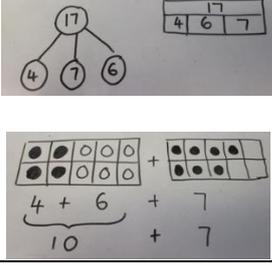
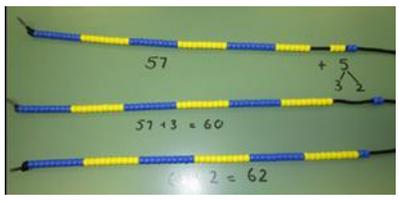
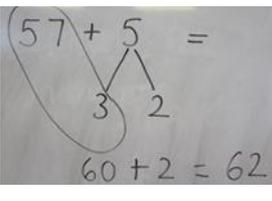
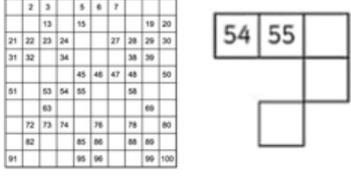
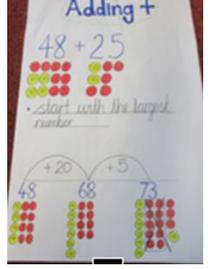
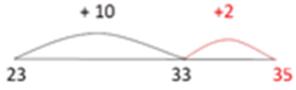
Year 1 Calculation Policy

Addition

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
<p>1A.1 I know all pairs of numbers which make all numbers upto 12, and pairs with a total of 20</p>	 <p>$20 = 1 + 19 \quad 2 + 18 \quad 3 + 17$</p>		<p>___ + 8 = 20 20 = ___ + 11</p> <p>___ is a part, ___ is a part, The whole is ___</p> <p>5 + 12 = ___</p>
<p>I can start by counting from the bigger number.</p>	<p>$12 + 5 = \underline{\quad} = 12 + 5$</p> 	<p>$12 + 5 = 17$</p> 	<p>5 + 12 = 12 + 5 = ___ = 5 + 12 ___ + 12 = 5</p> <p>Know that addition can be done in any order. Start with the number with the most value and add the smaller number.</p>
<p>1A.2 I can use number facts to add 1 digit numbers to 2 digit numbers (e.g. $4 + 3 = 7$ so $14 + 3 = 17$ and $24 + 3 = 27$)</p>			<p>$4 + 3 = 7$ So $14 + 3 = 17$ So $24 + 3 = 27$</p> <p>$34 + \underline{\quad} = 37$</p>
<p>1A.3 - I can add ones using a structured number line/ 100 grid</p>			<p>The abstract number line: What is 2 more than 4? What is the sum of 2 and 4? What is the total of 4 and 2? $4 + 2$</p>
<p>1A.4 - I can add 10s using a structured number line/100 grid</p>			<p>$26 + 10 =$ ___ = $34 + 10$ ___ = $10 + 17$ $28 + \underline{\quad} = 38$</p>

Year 2 Calculation Policy

Addition

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
2A.1 - I know all number facts upto 20			 <p style="text-align: center;">$18 = 12 + 6$</p> <p style="text-align: center;">$12 + 7 = 19$</p> <p style="text-align: center;">$20 = \underline{\quad} + 9$</p>
2A.2 - I can use related facts to add multiples of 10 and 100 e.g. $6 + 3 = 9$ so $60 + 30 =$			<p style="text-align: center;">$3 + 3 = 6$</p> <p style="text-align: center;">$3 \text{ tens} + 3 \text{ tens} = 6 \text{ tens}$</p> <p style="text-align: center;">$30 + 30 = 60$</p>
I can 3 1-digit numbers looking for number bonds and doubles	<p style="text-align: center;">$4 + 7 + 6 =$</p>  <p style="text-align: center;">$4 + 6 = 10 \quad 10 + 7 = 17$</p>	<p style="text-align: center;">$4 + 7 + 6 = 17$</p> 	<p style="text-align: center;">$4 + 7 + 6 = 10 + 7$</p> <p style="text-align: center;">$\quad \quad \quad 10$</p> <p style="text-align: center;">$\quad \quad \quad = 17$</p>
2A.3 - I can partition a number to add using number bonds to 10 (e.g. $8 + 7$ is $8 + 2 + 5$; $57 + 5 = 57 + 3 + 2 = 62$)		<p style="text-align: center;">$57 + 5 =$</p>  <p style="text-align: center;">$60 + 2 = 62$</p>	<p style="text-align: center;">$57 + 5 = 62$</p> <p style="text-align: center;">$57 + 5$</p> <p style="text-align: center;">$57 + 3 + 2 = 62$</p>
2A.4 - I can add multiples of 10 to any number using a 100 grid			<p style="text-align: center;">$34 + 40 = 74$</p> <p style="text-align: center;">$74 = 34 + 40$</p> <p style="text-align: center;">$74 = 40 + 34$</p> <p style="text-align: center;">$74 = \underline{\quad} + 34$</p> <p style="text-align: center;">$34 + \underline{\quad} = 74$</p>
2A.5 - I can add any pair of 2-digit numbers using an unstructured number line (e.g. $23 + 12 = 23 + 10 + 2$)		<p style="text-align: center;">$23 + 12 =$</p> 	<p style="text-align: center;">$23 + 12 =$</p> <p style="text-align: center;">$23 + 10 + 2$</p>

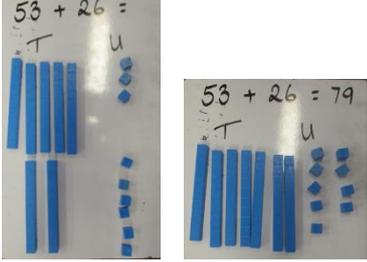
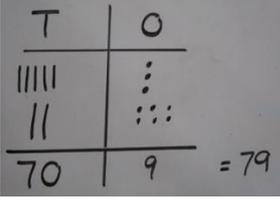
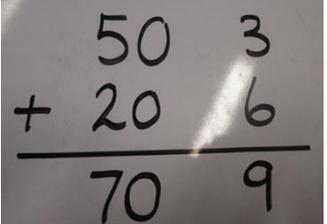
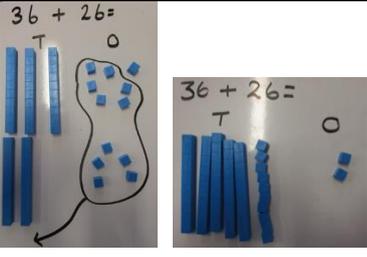
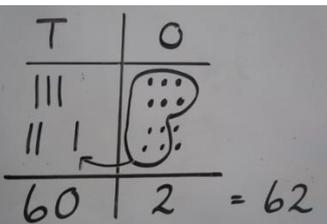
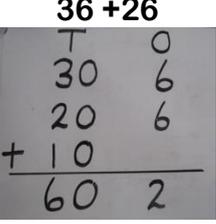
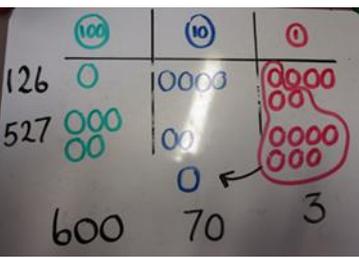
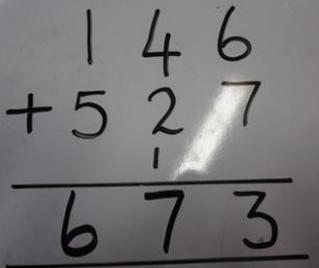
Year 3 Calculation Policy

Addition

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
3A.1 - I can add multiples 10 and 100		<p style="text-align: center;">$225 + 200$</p>	$21 + 30 = 51$ $51 = 21 + 30$ $225 + 100 =$ $225 + 200 =$ $225 + \underline{\quad} = 325$
3A.1 - I can add near multiples 10 and 100			$34 + 19 =$ $34 + 20 - 1$
I can add multiples of 5 and 10 to make a hundred			$65 + 5 + 30 = 100$
3A.2 - I can perform place value additions (e.g. $300 + 4 + 20 = 324$)			$300 + 4 + 20 = 324$ $330 + \underline{\quad} = 334$ $\underline{\quad} + 30 + 4 = 234$ $234 + \underline{\quad} = 334$
3A.3 - I can add any 2-digit number by partitioning			$55 + 37 =$ $50 + 30 = 80$ $5 + 7 = 12$ $80 + 12 = 92$
3A.4 - I can add a pair of 2-digit numbers by counting on			$53 + 26 =$ $53 + 20 + 6 = 79$

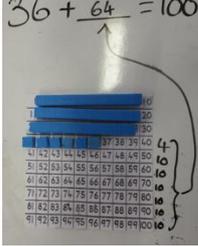
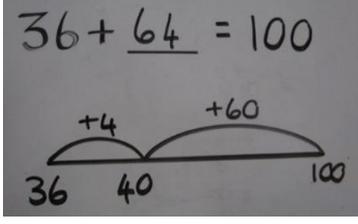
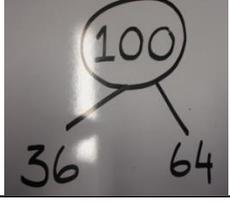
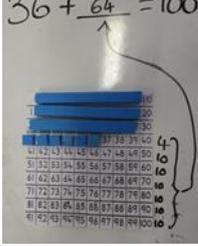
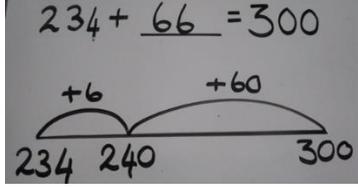
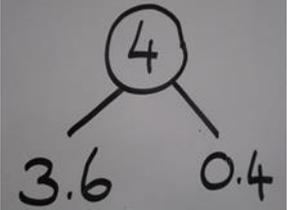
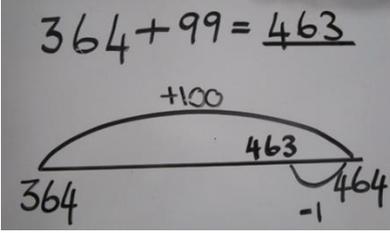
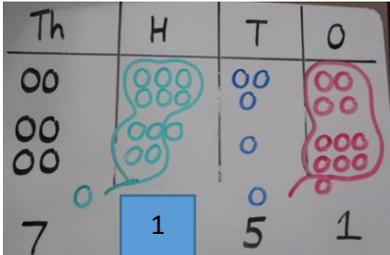
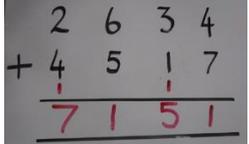
Year 3 Calculation Policy

Addition- Written Methods

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract																		
3A.6 - I can use expanded column addition																					
																					
3A.7 - I can use efficient column addition to add numbers with 3 digits	<table border="1" style="margin: 0 auto; border-collapse: collapse;"> <thead> <tr style="background-color: #FFDAB9;"> <th style="padding: 5px;">Hundreds</th> <th style="padding: 5px;">Tens</th> <th style="padding: 5px;">Ones</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">  </td> <td style="text-align: center;">  </td> <td style="text-align: center;">  </td> </tr> <tr> <td style="text-align: center;">  </td> <td style="text-align: center;">  </td> <td style="text-align: center;">  </td> </tr> </tbody> </table> <p style="text-align: center; margin-top: 10px;">Group the 1s into a ten and move it into the tens column</p> <table border="1" style="margin: 0 auto; border-collapse: collapse;"> <thead> <tr style="background-color: #FFDAB9;"> <th style="padding: 5px;">Hundreds</th> <th style="padding: 5px;">Tens</th> <th style="padding: 5px;">Ones</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">  </td> <td style="text-align: center;">  </td> <td style="text-align: center;">  </td> </tr> <tr> <td style="text-align: center;">  </td> <td style="text-align: center;">  </td> <td style="text-align: center;">  </td> </tr> </tbody> </table>	Hundreds	Tens	Ones							Hundreds	Tens	Ones								 
Hundreds	Tens	Ones																			
																					
																					
Hundreds	Tens	Ones																			
																					
																					

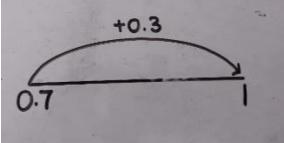
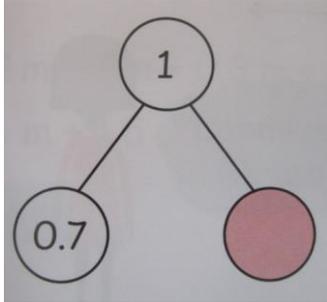
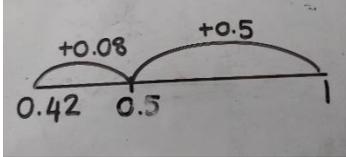
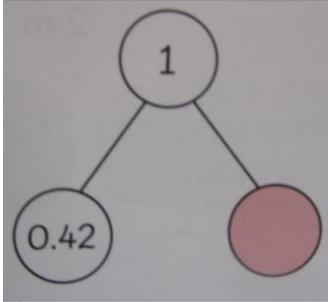
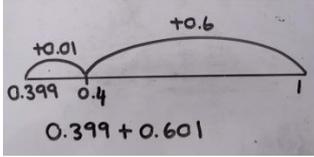
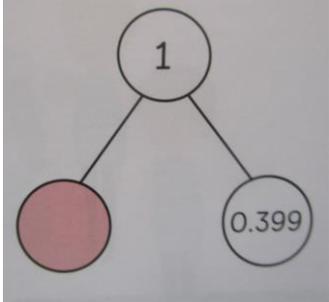
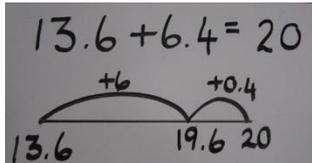
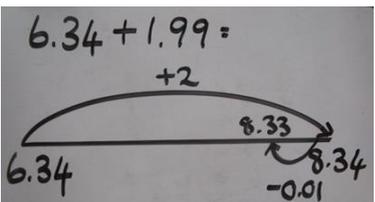
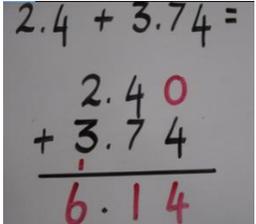
Year 4 Calculation Policy

Addition

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract																
4A.1 – I know by heart or work out quickly number bonds to 100 or £1			<p>What do you add to 36 to make 100?</p> 																
4A.2 – I can add to the next 100, £1 and whole number (e.g. $234 + 66 = 300$, $3.4 + 0.6 = 4$)		 	<p>$234 + 6 + 60 =$</p> <p>$3.6 + \underline{\quad} = 4$</p>																
4A.3 – I can add near multiples of 10, 100, 1000, £1 and 10p	<table border="1" style="width: 100%; text-align: center;"> <tr> <th style="width: 33%;">Hundreds</th> <th style="width: 33%;">Tens</th> <th style="width: 33%;">Ones</th> </tr> <tr> <td>100 100 100</td> <td>10 10 10 10 10 10</td> <td>1 1 1 1</td> </tr> </table> <p style="text-align: center;">Add 100 and take 1 away</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <th style="width: 33%;">Hundreds</th> <th style="width: 33%;">Tens</th> <th style="width: 33%;">Ones</th> </tr> <tr> <td>100 100 100 100</td> <td>10 10 10 10 10 10</td> <td>1 1 1</td> </tr> </table>	Hundreds	Tens	Ones	100 100 100	10 10 10 10 10 10	1 1 1 1	Hundreds	Tens	Ones	100 100 100 100	10 10 10 10 10 10	1 1 1		<p>$364 + 100 - 1 = 463$</p>				
Hundreds	Tens	Ones																	
100 100 100	10 10 10 10 10 10	1 1 1 1																	
Hundreds	Tens	Ones																	
100 100 100 100	10 10 10 10 10 10	1 1 1																	
4A.5 – I can add 3 and 4 digit numbers using efficient column method	<p>$2634 + 4517 =$</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <th style="width: 25%;">Thousands</th> <th style="width: 25%;">Hundreds</th> <th style="width: 25%;">Tens</th> <th style="width: 25%;">Ones</th> </tr> <tr> <td>1000 1000</td> <td>100 100 100 100 100 100</td> <td>10 10 10</td> <td>1 1 1 1 1 1 1</td> </tr> </table> <table border="1" style="width: 100%; text-align: center;"> <tr> <th style="width: 25%;">Thousands</th> <th style="width: 25%;">Hundreds</th> <th style="width: 25%;">Tens</th> <th style="width: 25%;">Ones</th> </tr> <tr> <td>1000 1000 1000</td> <td>100 100 100 100 100 100</td> <td>10 10 10</td> <td>1 1 1 1 1 1 1</td> </tr> </table>	Thousands	Hundreds	Tens	Ones	1000 1000	100 100 100 100 100 100	10 10 10	1 1 1 1 1 1 1	Thousands	Hundreds	Tens	Ones	1000 1000 1000	100 100 100 100 100 100	10 10 10	1 1 1 1 1 1 1	<p>$2634 + 4517 =$</p> 	
Thousands	Hundreds	Tens	Ones																
1000 1000	100 100 100 100 100 100	10 10 10	1 1 1 1 1 1 1																
Thousands	Hundreds	Tens	Ones																
1000 1000 1000	100 100 100 100 100 100	10 10 10	1 1 1 1 1 1 1																

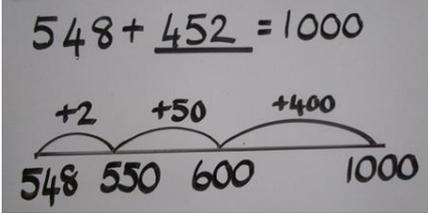
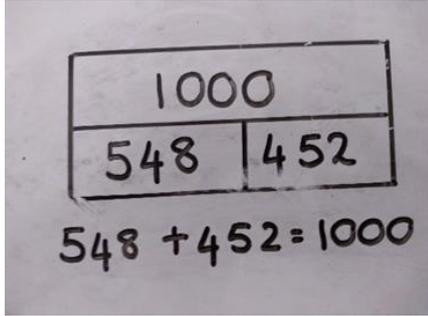
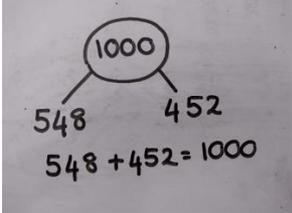
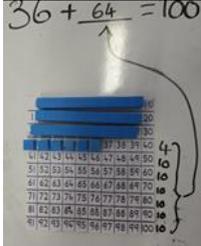
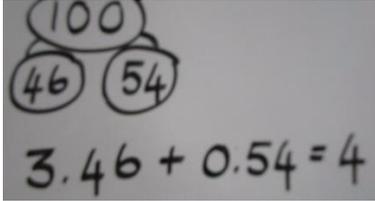
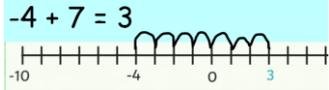
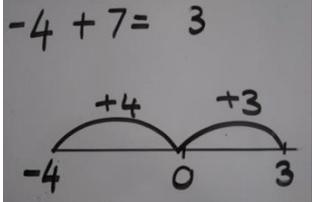
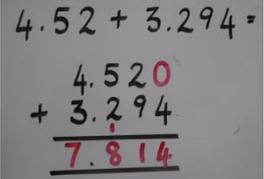
Year 5 Calculation Policy

Addition

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
5A.1 - I know number bonds to 1 and the next whole number	  $0.7 + \underline{\quad} = 1$	  $0.42 + 0.58 = 1$	  $0.399 + 0.601 = 1$
5A.2 - I can add to the next 10 from a decimal number (e.g. $13.6 + 6.4 = 20$)		$13.6 + \underline{\quad} = 20$ 	$13.6 + 6 + 0.4 = 20$
5A.3 - I can add decimals which are near multiples of 1 or 10 including money (e.g. $6.34 + 1.99$)	$£6.34 + £1.99$  $+$  Then take away 1p  $=£8.33$	$6.34 + 1.99 =$ 	$6.34 + 1.99 =$ $6.34 + 2 - 0.01$ $= 8.33$ $£6.34 + £2 - 1p$
5A.4 - I can add a mix of whole numbers and decimals with different numbers of decimal places using column addition			$2.4 + 3.74 =$ 

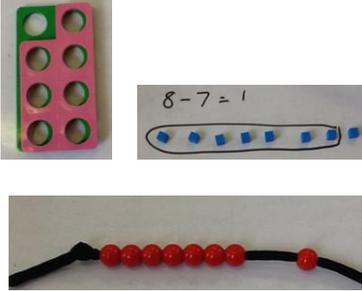
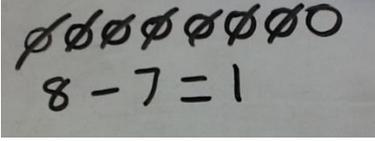
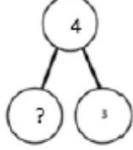
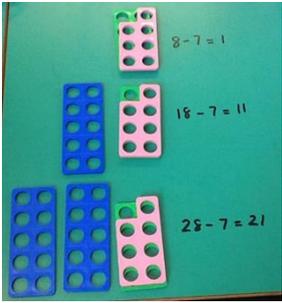
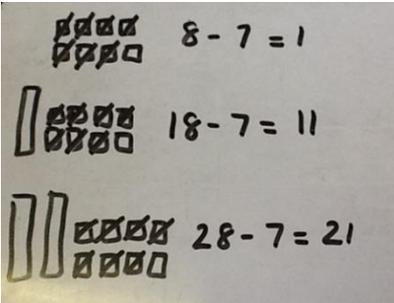
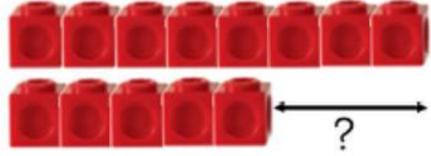
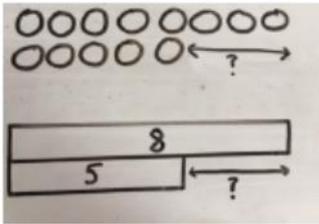
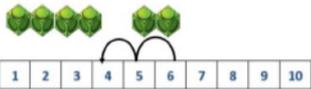
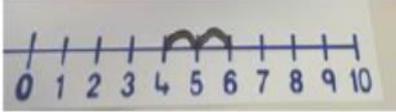
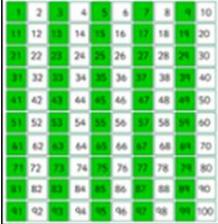
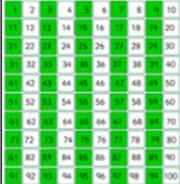
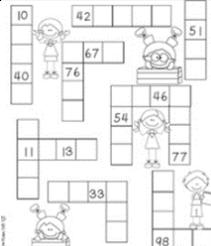
Year 6 Calculation Policy

Addition

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
6.1 - I can work out quickly number bonds to 1000		 	
6A.2 - I can use number bonds to 100 to work out related facts (e.g. 3.46 + 0.54)	 <p>Use the same method to work out $46 + \underline{\quad} = 100$</p>		$46 + 54 = 100$ $0.46 + 0.54 = 1$ $3.46 + 0.54 = 4$ $3.46 + \underline{\quad} = 4$
6A.3 - I can add positive number to negative numbers			$-4 + 7 =$ $-4 + 4 + 3 = 3$
6A.5 - I can use column addition to add decimal numbers with up to 3 decimal places			

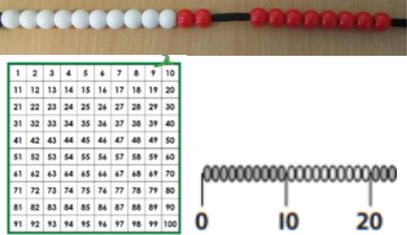
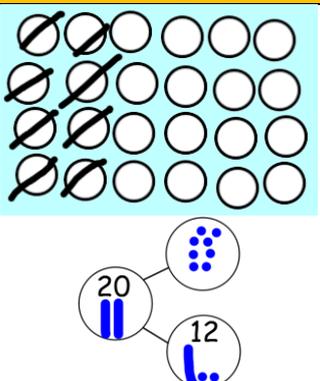
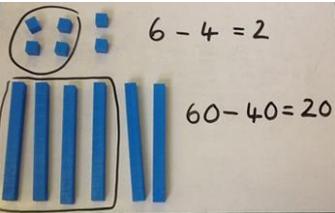
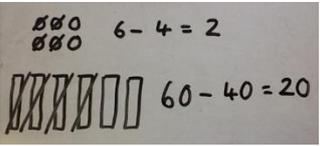
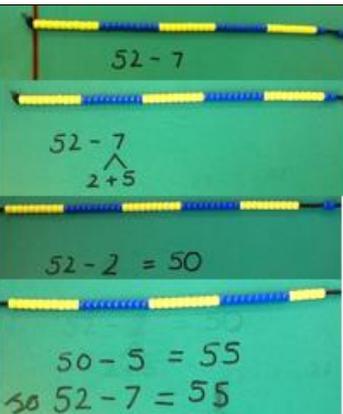
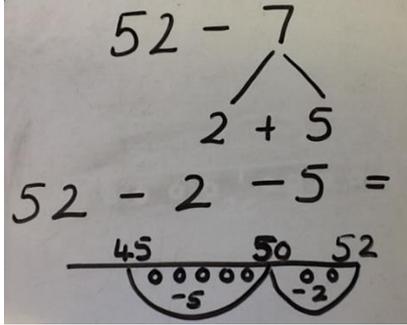
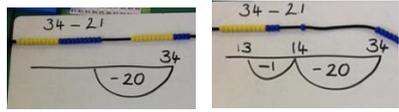
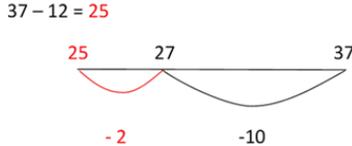
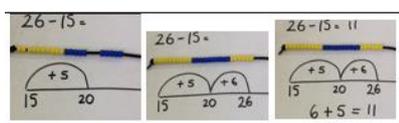
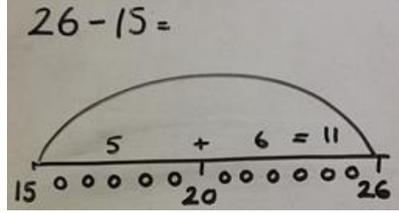
Year 1 Calculation Policy

Subtraction

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract				
<p>1S.1 - I know all the subtraction facts to 12 and pairs that make 20</p>	 <p>A ten-frame with 8 green dots and 7 red dots, with 1 green dot remaining. Below it, a number line from 0 to 8 with 7 blue dots, leaving 1 space.</p>	 <p>Two ten frames. The first has 8 circles, the second has 7 circles. The equation $8 - 7 = 1$ is written below.</p>	<p>$4 - 3 =$</p> <p><input type="text"/> = $4 - 3$</p> <table border="1" data-bbox="1241 472 1458 528"> <tr><td colspan="2">4</td></tr> <tr><td>3</td><td>?</td></tr> </table>  <p>A tree diagram with 4 at the top, branching down to 3 and 1.</p>	4		3	?
4							
3	?						
<p>1S.2 - I can use number facts to subtract 1-digit numbers from 2-digit numbers (e.g. $7-2=5$ so $17-2=15$, $27-2=25$)</p>	 <p>Two ten frames. The first has 18 green dots, the second has 7 red dots. The equation $18 - 7 = 11$ is written.</p>	 <p>Two ten frames. The first has 18 circles, the second has 7 circles. The equation $18 - 7 = 11$ is written.</p>	<p>$8 - 7 = 1$</p> <p>$18 - 7 = 11$</p> <p>$28 - 7 = 21$</p> <p>$? - 7 = 31$</p>				
<p>Finding a difference How many less / fewer? How many more?</p>	<p>Calculate the difference between 8 and 5.</p>  <p>Two rows of red blocks. The top row has 8 blocks, the bottom row has 5 blocks. A double-headed arrow between them is labeled with a question mark.</p>	 <p>Two ten frames. The first has 8 circles, the second has 5 circles. A double-headed arrow between them is labeled with a question mark.</p> <p>Finding the difference is subtraction</p>	<p>Find the difference between 8 and 5.</p> <p>$8 - 5$, the difference is <input type="text"/></p>				
<p>1S.3 - I can count back in ones using a structured number line/ 100 grid</p>	<p>Counting back (using number lines or number tracks) children start with 6 and count back 2.</p> <p>$6 - 2 = 4$</p>  	<p>$6 - 2 = 4$</p> 	<p>$16 - 4 = 12$</p> <p>$15 - 3 = ?$</p> <p>Am I right?</p> <p>$15 - 5 = 17$</p> <p>How do you know?</p>				
<p>1S.4 - I can count back in tens using a 100 grid</p>			 <p>$34 - 10 =$</p>				

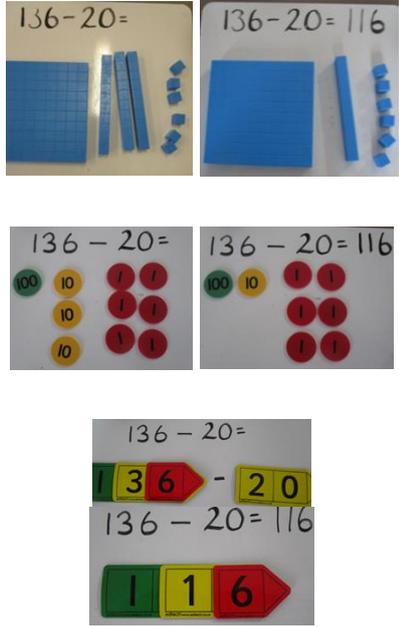
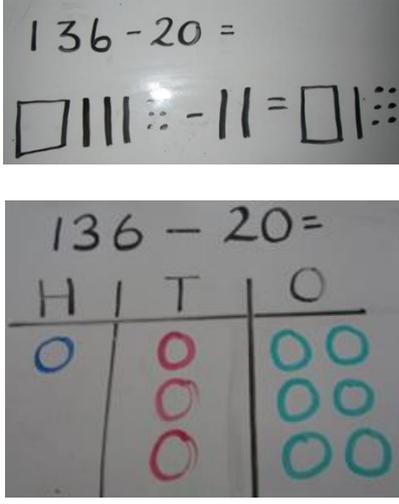
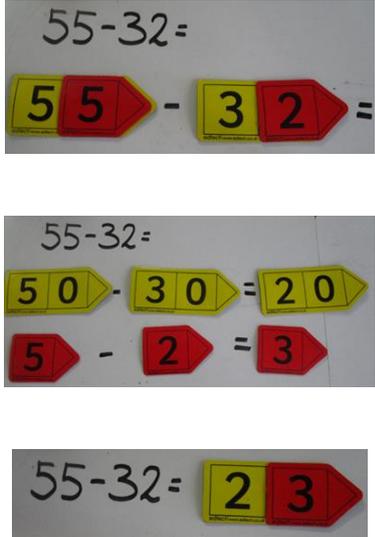
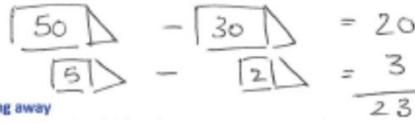
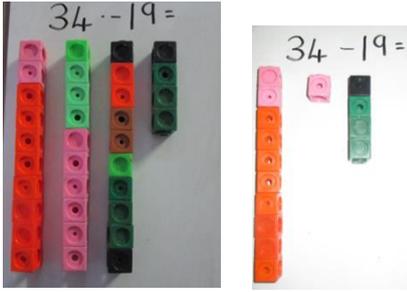
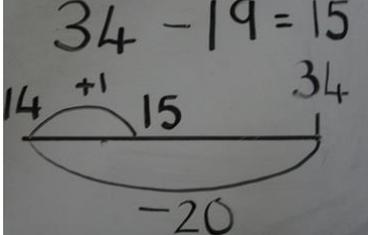
Year 2 Calculation Policy

Subtraction

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
2S.1 - I know all subtraction facts to 20	$20 - 12 = 8$ 		$20 - 8 = ?$ $20 - 12 = ?$ $8 = 20 - ?$ $? = 20 - 12$ $16 - 5 = 13 -$ <hr style="width: 20px; margin-left: auto; margin-right: auto;"/>
2S.2. - I can use related facts to subtract multiples of 10 and 100 e.g. $6 - 4 = 2$ so $60 - 40 = 20$			<p>I know 6 minus 4 so I know 60 subtract 40.</p> $6 - 4 = 2$ $60 - 40 = 20$
2S.3 - I can subtract a 1 digit number from a 2-digit number using number facts (e.g. $52 - 6 = 52 - 2 - 4 = 46$)			$52 - 7 =$ <p>I know 2 and 5 = 7 so I do ...</p> $52 - 2 - 5 = \underline{\quad}$
2S.4 - I can count back in multiples of 10s from any 2 digit number using a hundred grid			$43 - 20 = 23$
2S.5 - I can take away 10s and 1s from a 2-digit number using an unstructured number line			$46 - 32 =$ $? = 56 - 45$ $46 - ? = 32$ <p style="background-color: yellow;">Missing number in the middle subtract to solve the riddle</p> $46 - 32 = ?$
2S.6 - I can subtract any pair of 2 digit numbers by counting on (FROG) in 1s and 10s using an unstructured number line			$72 - 66 =$ <p>Count on to the next multiple of 10. What is the next multiple of 10?</p>

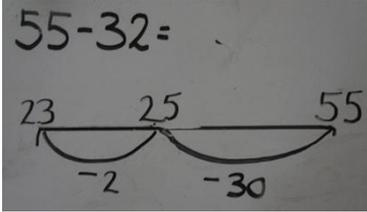
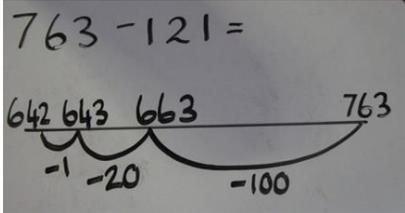
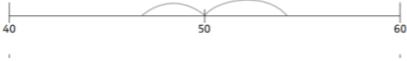
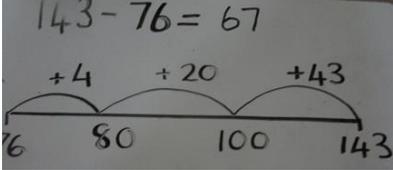
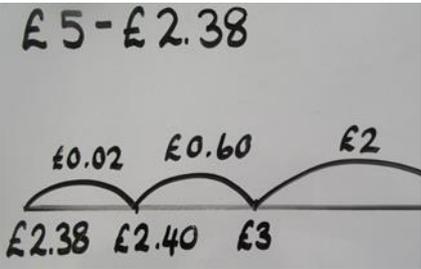
Year 3 Calculation Policy

Subtraction

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
3S.1 - I can subtract multiples of 10 and 100 (e.g. $136-20=$)	 <p>Concrete representations for $136-20=$ using a grid, base ten blocks, and ten frames.</p>	 <p>Pictorial representations for $136-20=$ using a number line and a place value chart.</p>	$136 - 20 = 116$
I can subtract by partitioning (e.g. $55-32$ as $50-30$ and $5-2$)	 <p>Concrete representations for $55-32=$ using base ten blocks and ten frames.</p>	 <p>Pictorial representations for $55-32=$ using a partitioning diagram.</p>	$55 - 32 = 23$ $50 - 30 = 20$ $5 - 2 = 3$ $\underline{\quad 3}$ 23
3S.3 - I can takeaway multiples and near multiples of 10 and 100	 <p>Concrete representations for $34-19=$ using base ten blocks.</p>	 <p>Pictorial representation for $34-19=$ using a number line.</p>	$34 - 19 =$ $30 - 20 + 1 =$

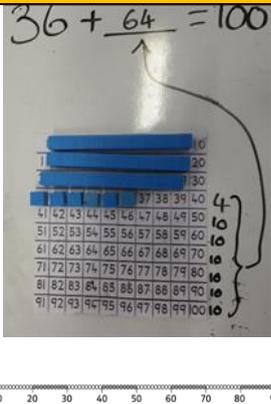
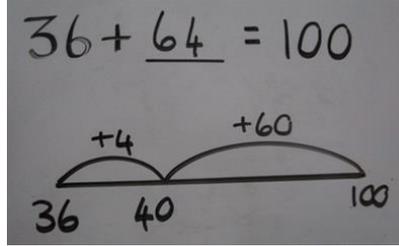
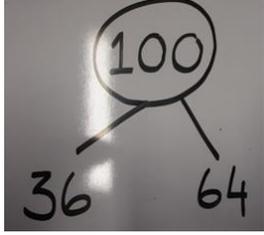
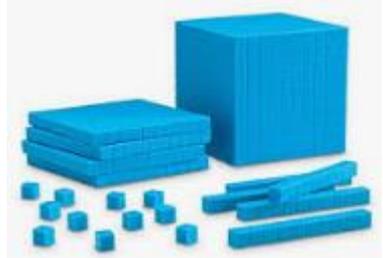
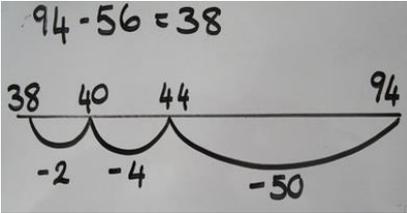
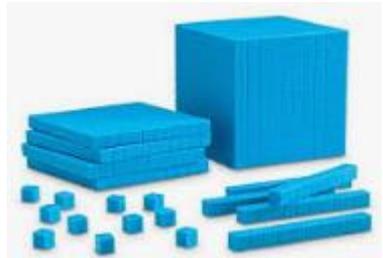
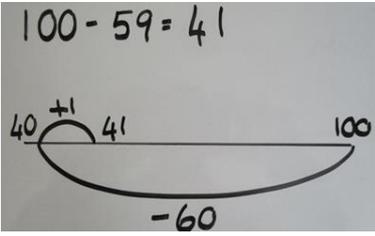
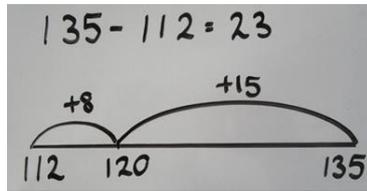
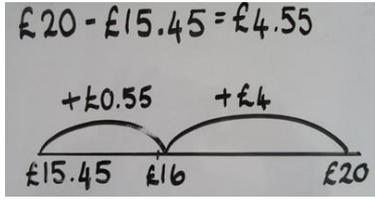
Year 3 Calculation Policy

Subtraction

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
3S.4 - I can count back in hundreds, tens and then ones using an unstructured number line (e.g. 763 - 121)		 	$55 - 32 = 22$ $55 - 30 - 2 = 23$ $763 - 121 =$ $763 - 100 - 20 - 1 = 642$
3S.5 - I can count on (FROG) from a 2-digit number to a number bigger than 100 (e.g. 143-76)	$54 - 47 = \square$ 		$143 - 76 = 67$ $76 + 4 + 20 + 43 = 143$ $4 + 20 + 43 = 67$
3S.6 - I can find change from £1, £5 and £10 by counting up	 		$£5 - £2.38 = £2.62$ $£2.38 + £0.02 + £0.60 + £2 = £5$ $£0.02 + £0.60 + £2 = £2.62$

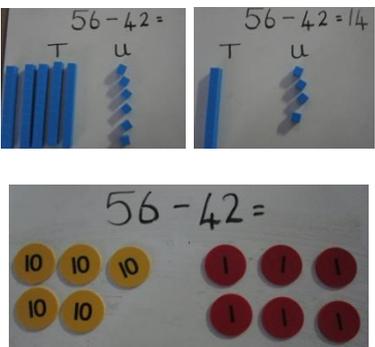
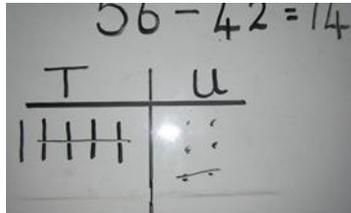
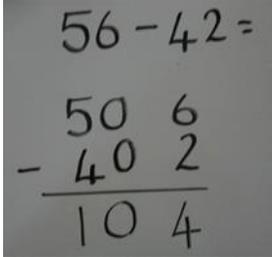
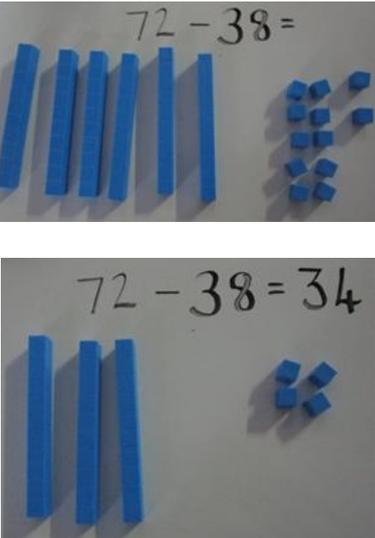
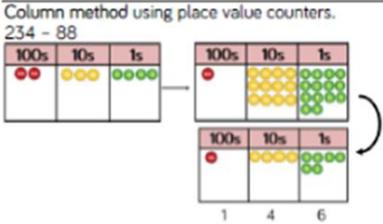
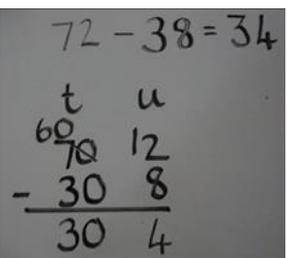
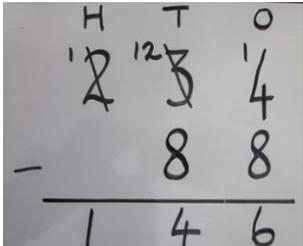
Year 4 Calculation Policy

Subtraction

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
<p>4S.1 - I know by heart or can work out quickly number bonds to 100 or £1</p>			
<p>4S.2 - I can takeaway 2 digit numbers from 2 and 3-digit numbers without a number line</p>			<p>$94 - 56 =$</p> <p>$94 - 50 - 4 - 3 = 37$</p>
<p>4S.3 - I can takeaway multiples and near multiples of 10, 100, 1000, £1 and 10p</p>			<p>$100 - 59 =$</p> <p>$100 - 60 + 1$</p>
<p>4S.4 - I can subtract by counting on (FROG) without a number line e.g. 503 - 368</p>			<p>$135 - 112 =$</p> <p>$112 + 8 + 15 = 135$</p>
<p>4S.5 - I can find change from £10, £20 and £50 by counting on (FROG)</p>			<p>$£20 - £15.45 =$</p>

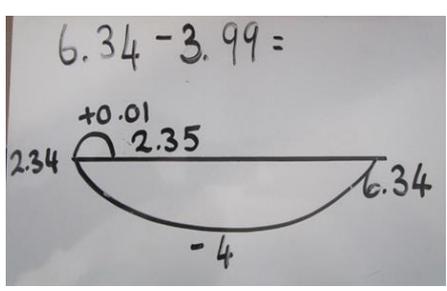
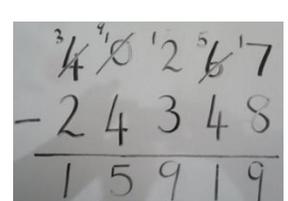
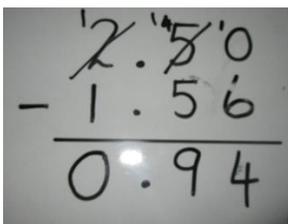
Year 4 Calculation Policy

Subtraction – Written Calculations

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
<p>4S.6 - I can use expanded written subtraction without decomposing (2 and 3 digit numbers)</p>			
<p>4S.7 - I can use expanded written subtraction using decomposition with 3 digit numbers</p>	 <p style="font-size: small; margin-top: 10px;">Column method using place value counters. 234 - 88</p> 		
<p>4S.8 - I can efficient written subtraction with upto 3 digits using efficient column subtraction</p>			

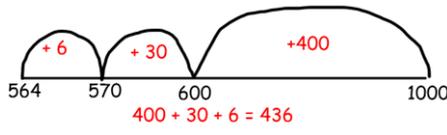
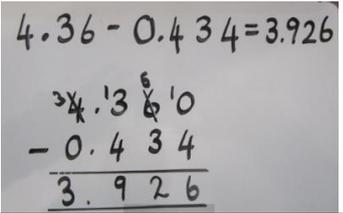
Year 5 Calculation Policy

Subtraction

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract																											
5S.1 - I can takeaway numbers which are near multiples of 1 or 10, including money (e.g. $6.34 - 1.99$)			$6.34 - 3.99 =$ $6.34 - 4 + 0.01 = 2.35$																											
5S.3 - I can efficient written subtraction with upto 5 digits using efficient column subtraction																														
5S.4 - I can use efficient written subtraction with a mix of whole numbers and decimals with different numbers of decimal places using column subtraction	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #e6f2ff;"> <th colspan="3">Thousands</th> <th colspan="3">Units</th> <th>•</th> <th>1/10</th> <th>1/100</th> </tr> <tr style="background-color: #e6f2ff;"> <th>Hundreds</th> <th>Tens</th> <th>Ones</th> <th>Hundreds</th> <th>Tens</th> <th>Ones</th> <th>•</th> <th>Tenths</th> <th>Hundredths</th> </tr> </thead> <tbody> <tr> <td> </td> </tr> </tbody> </table>	Thousands			Units			•	1/10	1/100	Hundreds	Tens	Ones	Hundreds	Tens	Ones	•	Tenths	Hundredths											
Thousands			Units			•	1/10	1/100																						
Hundreds	Tens	Ones	Hundreds	Tens	Ones	•	Tenths	Hundredths																						

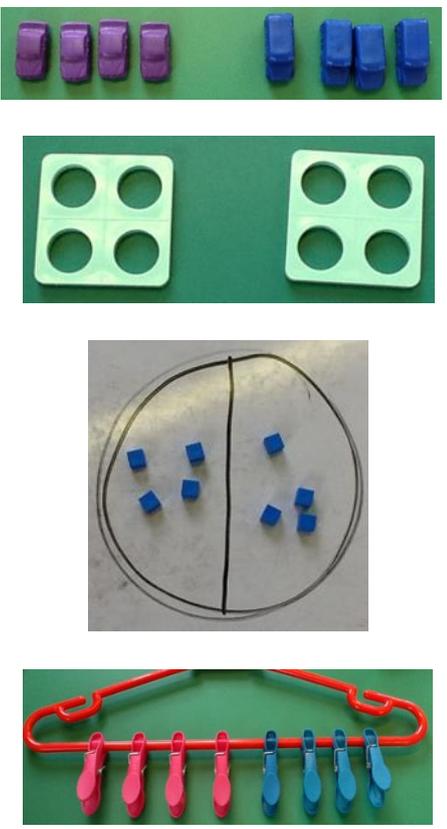
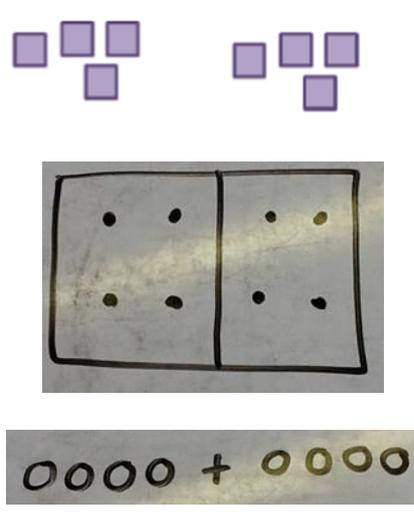
Year 6 Calculation Policy

Subtraction

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract																														
6S.1 - I can work out number bonds to 1000 quickly		<p>1000 - 564 =</p>  <p style="color: red;">$400 + 30 + 6 = 436$</p>	<p>$1000 = 564 + ?$</p>																														
6S.2 - I can use mental strategies to subtract decimal numbers	<p>Count on, count back – subtract and adjust.</p> <p>Look at previous mental strategies taught in KS2</p>																																
6S.3 - I can use efficient written subtraction with numbers with upto 3 decimal places	<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr style="background-color: #00B0F0; color: white;"> <th colspan="3">Thousands</th> <th colspan="3">Units</th> <th>•</th> <th>1/10</th> <th>1/100</th> <th>1/1000</th> </tr> <tr style="background-color: #FFFF00;"> <th>Hundreds</th> <th>Tens</th> <th>Ones</th> <th>Hundreds</th> <th>Tens</th> <th>Ones</th> <th>•</th> <th>Tenths</th> <th>Hundredths</th> <th>Thousandths</th> </tr> </thead> <tbody> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </tbody> </table>		Thousands			Units			•	1/10	1/100	1/1000	Hundreds	Tens	Ones	Hundreds	Tens	Ones	•	Tenths	Hundredths	Thousandths											
Thousands			Units			•	1/10	1/100	1/1000																								
Hundreds	Tens	Ones	Hundreds	Tens	Ones	•	Tenths	Hundredths	Thousandths																								

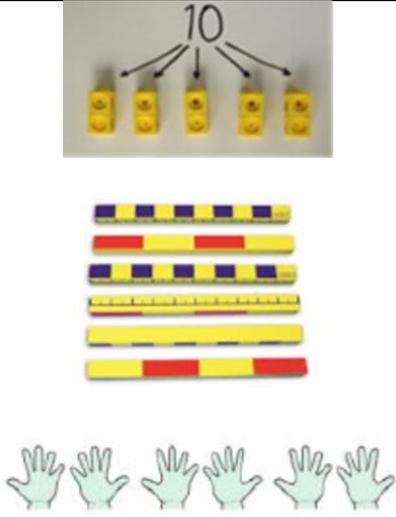
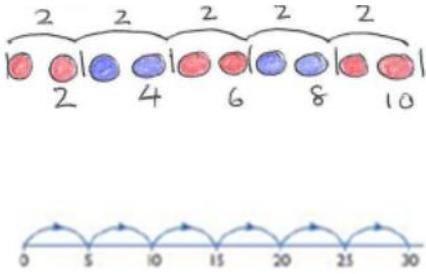
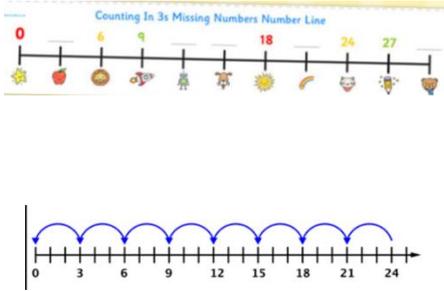
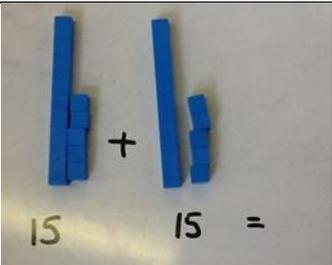
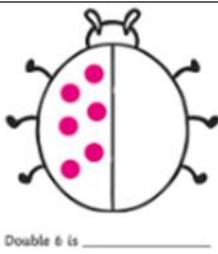
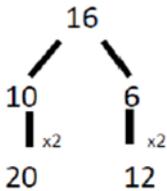
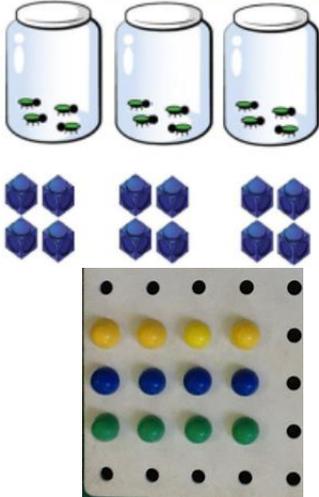
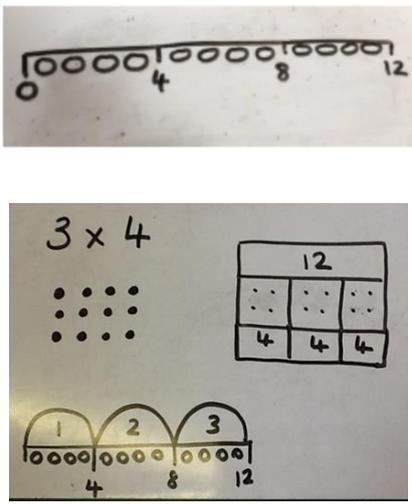
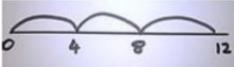
Year 1 Calculation Policy

Multiplication

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract				
1M.1 - I can double numbers to 10	 <p>Concrete representations of doubling 4:</p> <ul style="list-style-type: none"> Two groups of four clothespins (purple and blue). Two trays, each with four holes. Eight blue cubes arranged in two groups of four inside a circle. A red clothesline hanger with eight clothespins (four red, four blue). 	<p>Double 4 is 8</p>  <p>Pictorial representations of doubling 4:</p> <ul style="list-style-type: none"> Two groups of four purple squares. A 2x4 grid of dots. Two groups of four circles. 	<table border="1" data-bbox="1260 448 1500 560"> <tr> <td colspan="2">8</td> </tr> <tr> <td>4</td> <td>4</td> </tr> </table> <p>Double 4 is 8</p> $8 = 4 + 4$ $4 + 4 = 8$	8		4	4
8							
4	4						

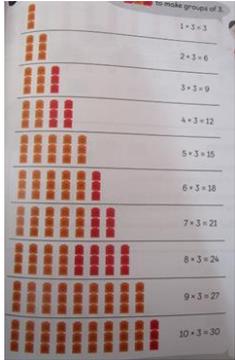
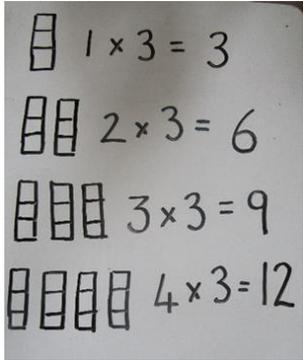
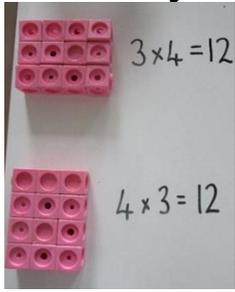
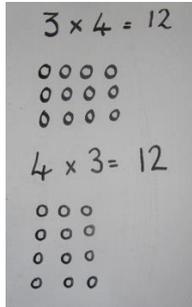
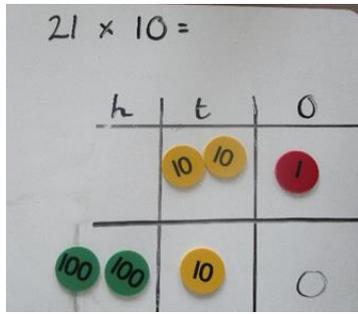
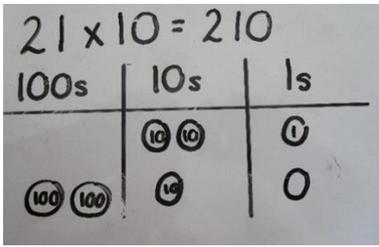
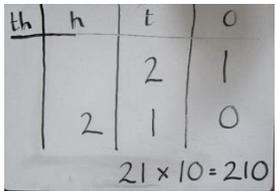
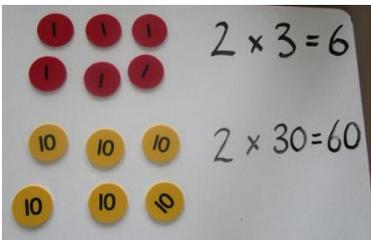
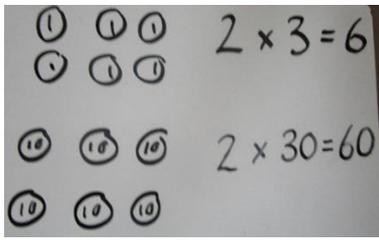
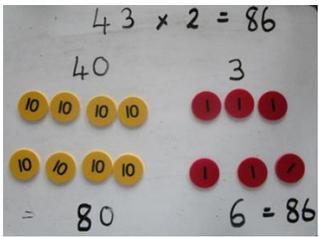
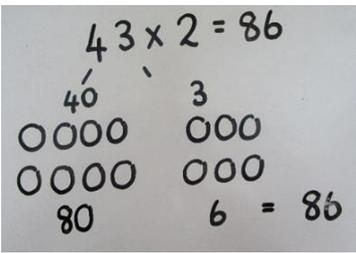
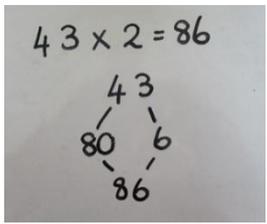
Year 2 Calculation Policy

Multiplication

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
<p>2M.1 - I can count in 2's, 5's and 10's from zero</p>			<p>5, 10, 15, 20, 25, 30, _____, _____</p>
<p>2M.2 - I can count in 3s</p>			<p>3, 6, 9, 12, 15 ...</p>
<p>2M.3 - I can double numbers to 20 and multiples of 10</p>			
<p>2M.4 - I can multiply using concrete objects, pictorial representations arrays and repeated addition</p>	<p>Repeated grouping/repeated addition 3×4 $4 + 4 + 4$ There are 3 equal groups, with 4 in each group.</p> 	<p>Represent this pictorially alongside a number line e.g.:</p> 	<p>$3 \times 4 = 12$</p> <p>$4 + 4 + 4 = 12$</p> <p>Abstract number line showing three jumps of four.</p> <p>$3 \times 4 = 12$</p> 

Year 3 Calculation Policy

Multiplication

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract									
<p>3M.1 - I know by heart all the multiplication facts in x2,x3,x4,x5,x8,x10 tables</p>			<p> $1 \times 3 = 3$ $2 \times 3 = 6$ $3 \times 3 = 9$ $4 \times 3 = 12$ $5 \times 3 = 15$ $6 \times 3 = 18$ $7 \times 3 = 21$ $8 \times 3 = 24$ $9 \times 3 = 27$ $10 \times 3 = 30$ </p>									
<p>3M.2 - I know that multiplication can be done in any order (commutative)</p>	<p>Use arrays</p> 		<p> $3 \times 4 = 12$ so $4 \times 3 = 12$ </p>									
<p>3M.3 - I can multiply whole numbers by 10 and 100</p>			 <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>th</th> <th>t</th> <th>o</th> </tr> </thead> <tbody> <tr> <td></td> <td>2</td> <td>1</td> </tr> <tr> <td>2</td> <td>1</td> <td>0</td> </tr> </tbody> </table> <p style="text-align: center;">$21 \times 10 = 210$</p>	th	t	o		2	1	2	1	0
th	t	o										
	2	1										
2	1	0										
<p>3M.4 - I can use related facts to multiply multiples of 10 e.g. $2 \times 3 = 6$ $2 \times 30 = 60$</p>			<p> $2 \times 3 = 6$ $2 \times 30 = 60$ </p>									
<p>3M.5 - I can double numbers upto 50 by partitioning</p>												

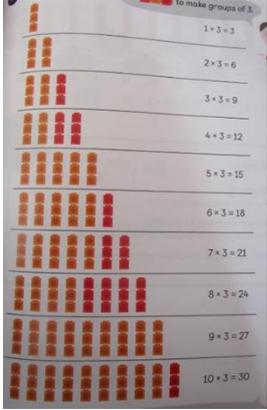
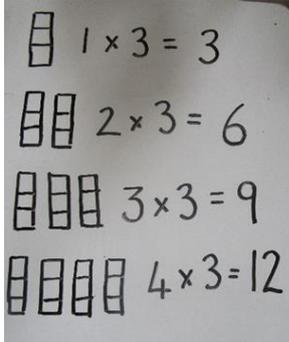
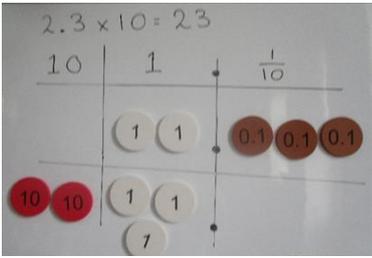
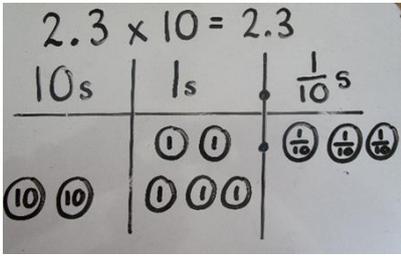
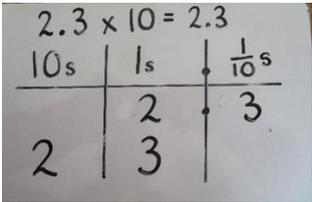
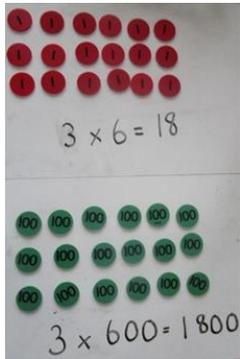
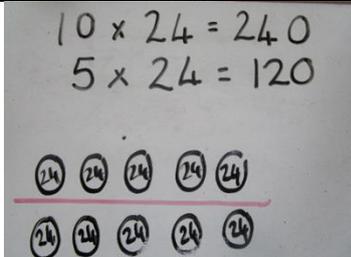
Year 3 Calculation Policy

Multiplication

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
<p>3M.6 - I can partition teen numbers into 10's and ones to multiply (e.g. 3×14 as 3×10 and 3×4)</p>	<p style="text-align: center;">$3 \times 14 = 42$</p> <p style="text-align: center;">30 12</p>	<p style="text-align: center;">$3 \times 14 = 42$</p> <p style="text-align: center;">10s 1s</p> <p style="text-align: center;">0 0000</p> <p style="text-align: center;">0 0000</p> <p style="text-align: center;">0 0000</p> <hr style="width: 100%;"/> <p style="text-align: center;">30 12 = 42</p>	<p style="text-align: center;">$3 \times 14 = 42$</p> <p style="text-align: center;">$3 \times 10 = 30$</p> <p style="text-align: center;">$3 \times 4 = 12$</p> <p style="text-align: center;">$30 + 12 = 42$</p>
<p>3M.7 - I can use a grid method to multiply 2-digit and 3-digit numbers by 'friendly' 1-digit numbers</p>	<p style="text-align: center;">$3 \times 14 = 42$</p> <p style="text-align: center;">30 12</p>	<p style="text-align: center;">$3 \times 14 = 42$</p> <p style="text-align: center;">10 4</p> <p style="text-align: center;">3 0 0000</p> <p style="text-align: center;">0 0000</p> <p style="text-align: center;">0 0000</p> <hr style="width: 100%;"/> <p style="text-align: center;">30 12 = 42</p>	<p style="text-align: center;">$3 \times 14 = 42$</p> <p style="text-align: center;">3 30 12 = 42</p>

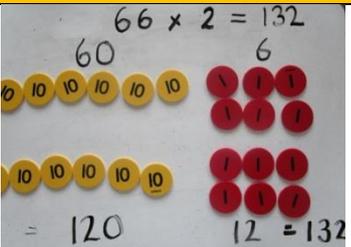
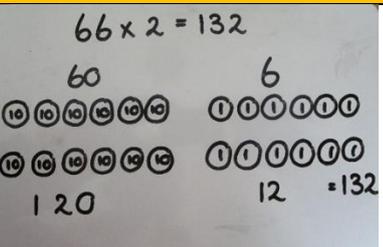
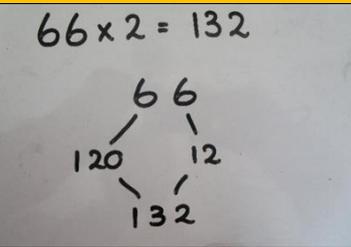
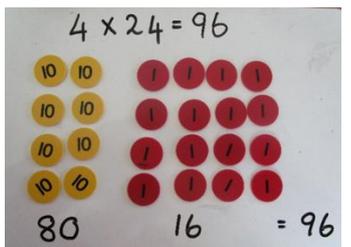
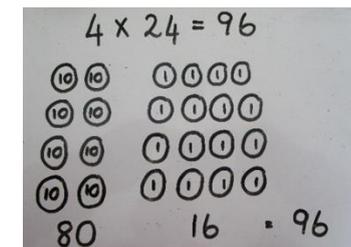
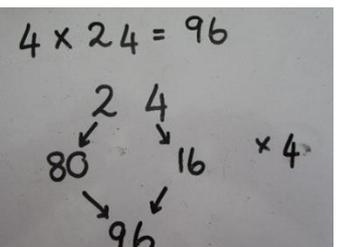
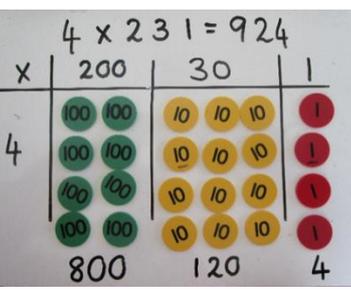
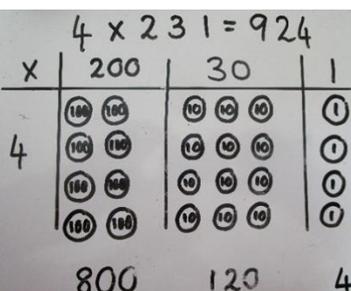
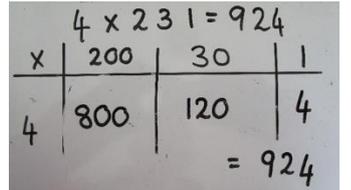
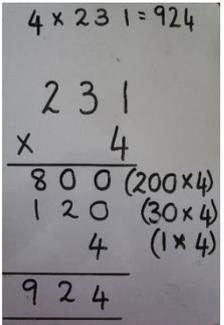
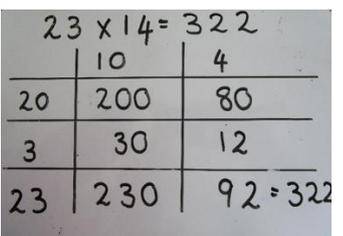
Year 4 Calculation Policy

Multiplication

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
Year 4 Number Facts 4M.1 - I know by heart all the multiplication facts up to 12 x 12			$1 \times 3 = 3$ $2 \times 3 = 6$ $3 \times 3 = 9$ $4 \times 3 = 12$ $5 \times 3 = 15$ $6 \times 3 = 18$ $7 \times 3 = 21$ $8 \times 3 = 24$ $9 \times 3 = 27$ $10 \times 3 = 30$
4M.2 - I can multiply whole numbers and 1 place decimals by 10, 100, 1000			
4M.3 - I can use related facts to multiply by multiples of 10, 100, 1000 (e.g. 300x6 and 50x60)			$3 \times 6 = 18$ $3 \times 60 = 180$ $3 \times 600 = 1800$
4M.4 - I can use number facts to make mental multiplication easier e.g. 36x5 is half of 36x10			$10 \times 24 = 240$ so $5 \times 24 = 120$
4M.5 - I can multiply a 2-digit by 9 or 11 by multiplying by 10 and adjusting (e.g. 9x25 as (10x25)-25)		9×25 as $(10 \times 25) - 25$ $25 \ 25 \ 25 \ 25 \ 25$ $25 \ 25 \ 25 \ 25 \ 25$	$9 \times 25 = (10 \times 25) - 25$

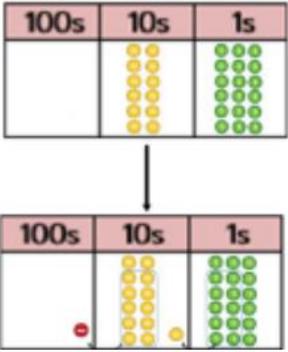
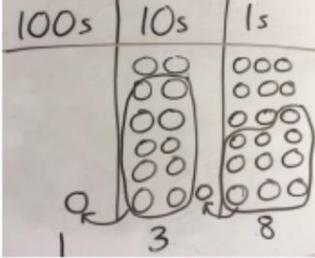
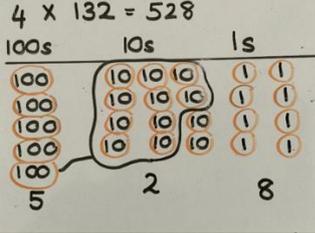
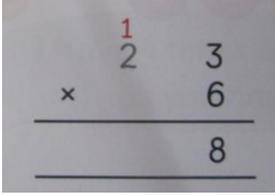
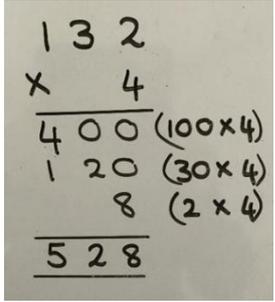
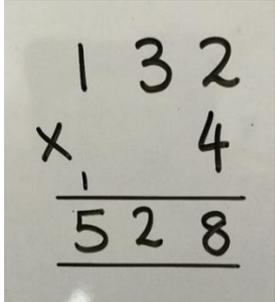
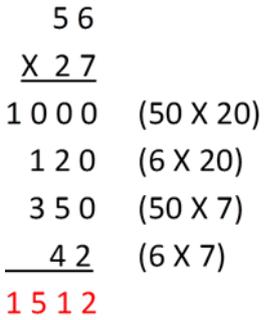
Year 4 Calculation Policy

Multiplication

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
4M.6 - I can use partitioning to find doubles to 100 and beyond			
4M.7 - I can partition 2 digit numbers to multiply by a 1-digit number (e.g. 4x24 as 4x20 and 4x4)			
4M.8 - I can use a grid method to multiply a 3-digit number by a 1-digit number			
4M.9 - I can use the 'ladder' method to multiply 3-digit numbers by 1-digit numbers			
4.10 - I can use a grid method to multiply a teen number by a 2-digit number			

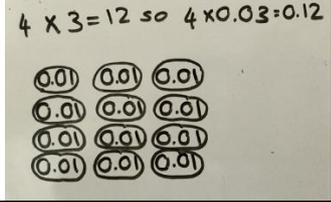
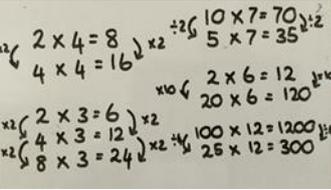
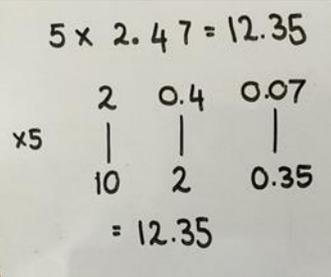
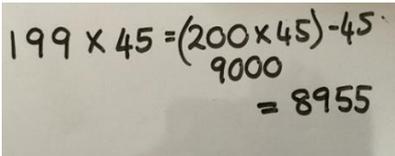
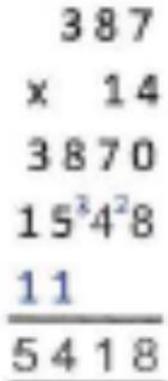
Year 5 Calculation Policy

Multiplication

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
<p>5M.6 - I can use short multiplication to multiply a 1-digit number by a number with upto 4 digits and money</p>	<p>Formal column method with place value counters</p> <p style="text-align: center;">6×23</p> 	<p>Children represent the counters/base 10:</p>  	  
<p>5M.7 - I can use the 'ladder' method to multiply 3 and 4 digit numbers by a teen number (long multiplication)</p>			

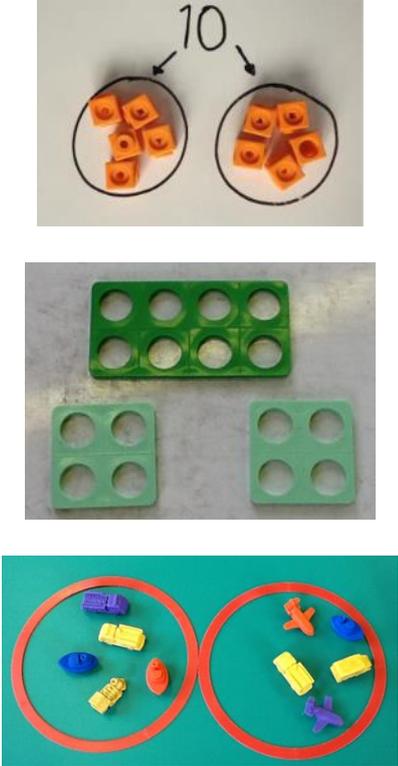
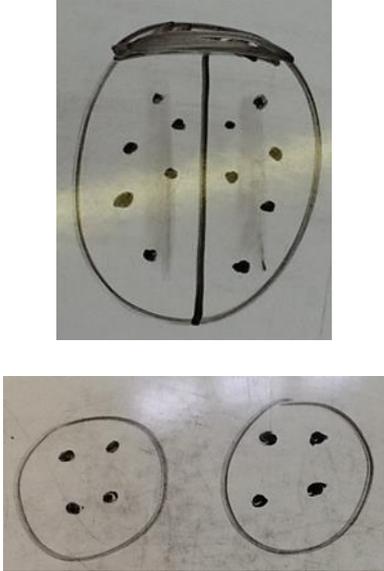
Year 6 Calculation Policy

Multiplication

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
6M.2 - I can use doubling and halving to multiply by 2, 4, 8, 5, 20 and 25			$4 \times 3 = 12$ $4 \times 0.3 = 1.2$ $4 \times 0.03 = 0.12$
6M.3 - I can multiply 2 place decimals by 1 digit numbers using partitioning			
6M.4 - I can multiply mentally by near multiples of 100 (e.g. 67×199 as $(67 \times 200) - 67$)			$5 \times 2.47 = (5 \times 2) + (5 \times 0.4) + (5 \times 0.07) = 12.35$
6M.5 - I can use long multiplication to multiply a 2-digit number by a number with up to 4-digits			$199 \times 45 = (200 \times 45) - 45 = 9000 - 45 = 8955$
6M.5 - I can use long multiplication to multiply a 2-digit number by a number with up to 4-digits			

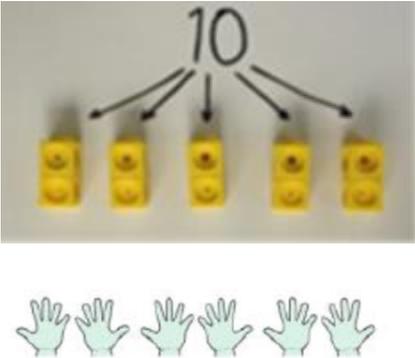
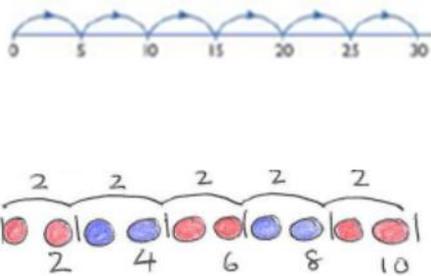
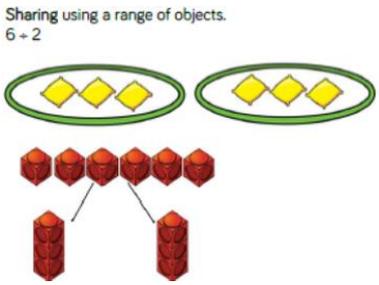
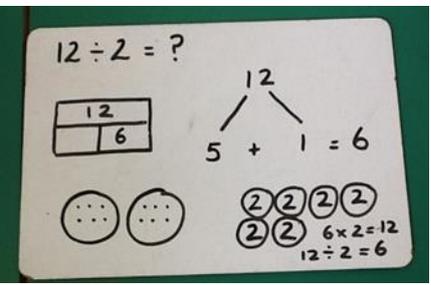
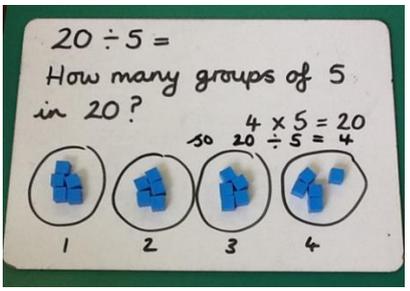
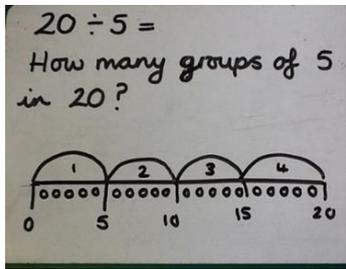
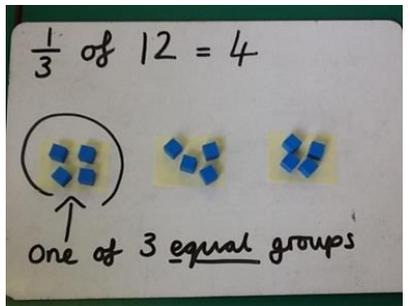
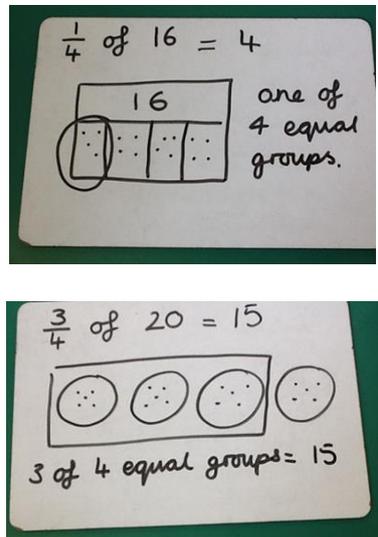
Year 1 Calculation Policy

Division

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
<p>1D.1 - I can find half of even numbers to 12 and know it is hard to halve odd numbers</p>	 <p>The concrete column shows three examples of division using physical objects. The first example shows 10 orange blocks arranged in two groups of 5, with the number '10' written above and arrows pointing to each group. The second example shows a green tray with 6 holes, split into two groups of 3. The third example shows colorful blocks (purple, yellow, blue, orange) split into two groups of 6.</p>	 <p>The pictorial column shows two examples of division using drawings. The first example is a drawing of a ladybug with 8 black spots, split vertically into two groups of 4. The second example shows two circles, each containing 4 black dots, representing two groups of 4.</p>	<p>Half of 8 is 4</p> <p>$\frac{1}{2}$ of 12 = 6</p>

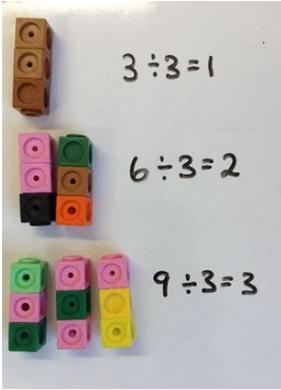
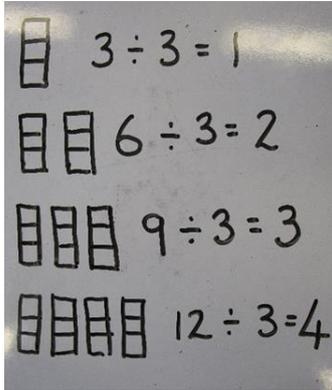
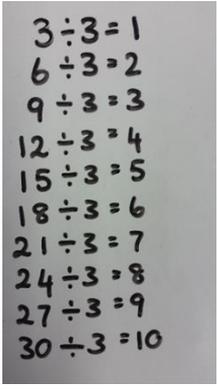
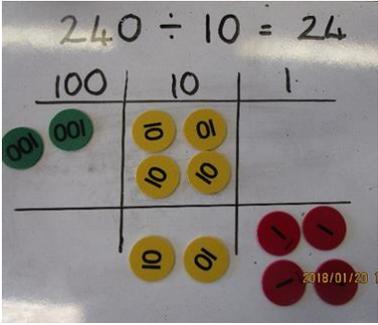
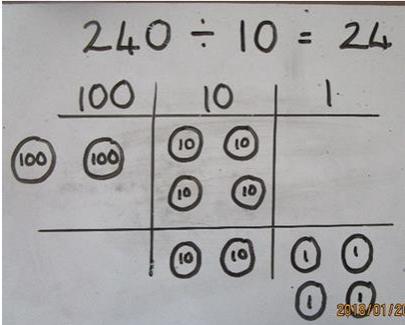
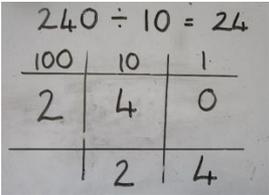
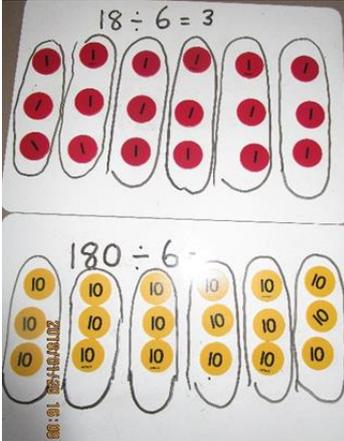
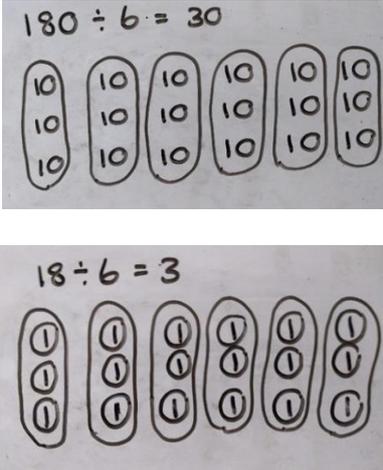
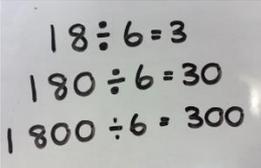
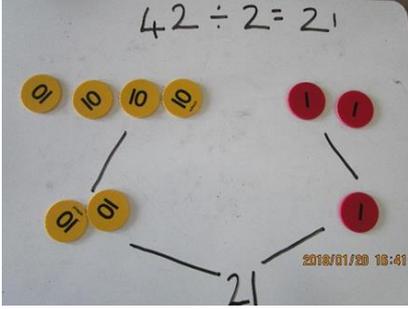
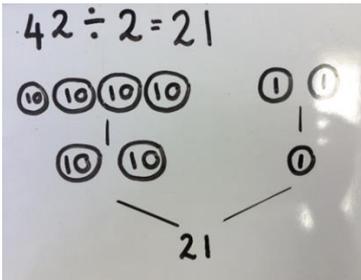
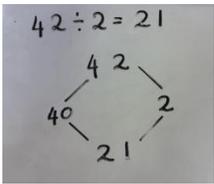
Year 2 Calculation Policy

Division

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
<p>2D.1 - Using fingers, I can say where a given number is in the 2s, 5s or 10s e.g. 8 is the fourth number when I count in 2s</p>	 <p>A photograph showing ten yellow blocks arranged in a row, with the number '10' written above them. Arrows point from the '10' to each block. Below the blocks are five hands, each with two fingers extended, representing the number 10 as five groups of 2.</p>	 <p>A number line from 0 to 30 with jumps of 2. Below it, ten colored dots (red and blue) are arranged in a row, grouped into five pairs of 2. The numbers 2, 4, 6, 8, and 10 are written below the groups.</p>	<p>How many 2s in 12?</p> <p>12 shared between 2 is ?</p> <p>How many groups of 2 make 12?</p> <p>$12 \div 2 = ?$</p>
<p>2D.2 - I can halve numbers to 40 and multiples of 10 to 100</p>	 <p>Text: "Sharing using a range of objects. $6 \div 2$"</p> <p>Two groups of three yellow diamonds. Below, six red blocks are shown, with two groups of three blocks each, illustrating halving 6 into two groups of 3.</p>	 <p>Handwritten work showing $12 \div 2 = ?$. A grid shows 12 divided into 2 groups of 6. A tree diagram shows 12 branching into 5 and 7, with $5 + 1 = 6$. Circles represent groups of 2, with $6 \times 2 = 12$ and $12 \div 2 = 6$.</p>	<p>$2 \times 6 = 12$</p> <p>$6 \times 2 = 12$</p> <p>So $? \div 2 =$</p> <p>$20 \div ? = 4$</p>
<p>2D.3 - I can relate grouping to division e.g. How many groups of 5 in 20</p>	 <p>Handwritten work: $20 \div 5 =$ How many groups of 5 in 20? $4 \times 5 = 20$ so $20 \div 5 = 4$</p> <p>Four groups of five blue blocks, numbered 1 to 4.</p>	 <p>Handwritten work: $20 \div 5 =$ How many groups of 5 in 20?</p> <p>A number line from 0 to 20 with jumps of 5, labeled 1, 2, 3, 4.</p>	<p>$20 \div 5$ or how many 5s make 20?</p>
<p>2D.4 - Find $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$ and $\frac{3}{4}$ of a quantity of objects and of amounts (whole number answers)</p>	 <p>Handwritten work: $\frac{1}{3}$ of 12 = 4</p> <p>One group of three blue blocks, with an arrow pointing to it and the text "One of 3 equal groups".</p>	 <p>Handwritten work: $\frac{1}{4}$ of 16 = 4</p> <p>A grid with 16 dots, divided into 4 equal groups. Text: "one of 4 equal groups."</p> <p>Handwritten work: $\frac{3}{4}$ of 20 = 15</p> <p>Three groups of four circles, with the text "3 of 4 equal groups = 15".</p>	<p>$\frac{1}{2}$ of 12 = $12 \div 2 = 6$</p> <p>$\frac{1}{4}$ of 12 = $12 \div 4 = 3$</p> <p>$\frac{1}{3}$ of 12 = $12 \div 3 = 4$</p> <p>$\frac{3}{4}$ of 20 = $(20 \div 4) \times 3 = 15$</p>

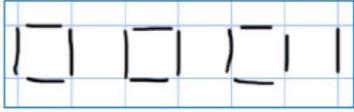
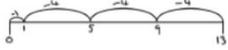
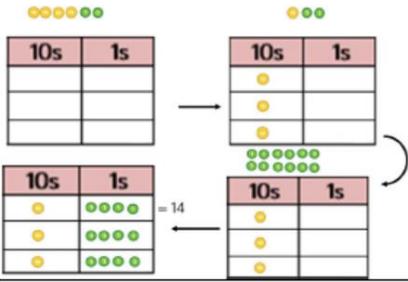
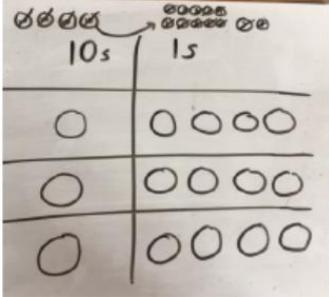
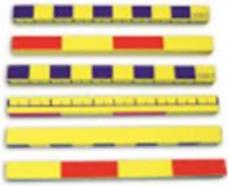
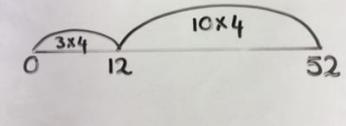
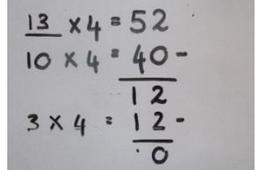
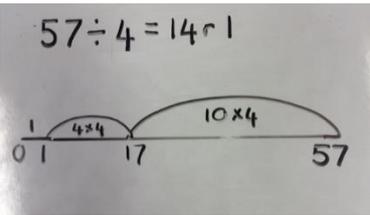
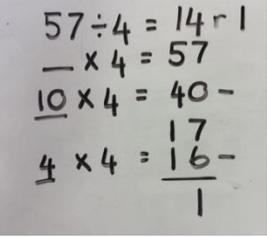
Year 3 Calculation Policy

Division

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
<p>3D.1 - I know by heart all the division facts that can be derived from the x2, x3, x4, x5, x8 and x 10 tables</p>			
<p>3D.2 - I can divide whole numbers by 10 or 100 to give whole number answers</p>			
<p>3D.3 - I can use related facts to divide multiples of 10 by 1-digit numbers e.g. $32 \div 8 = 4$ so $320 \div 8 = 40$</p>			
<p>3D.4 - I can halve even numbers to 100, halve odd numbers to 20</p>			

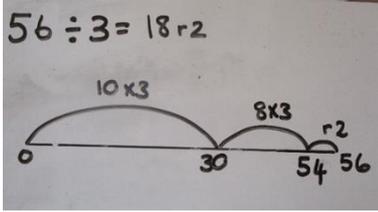
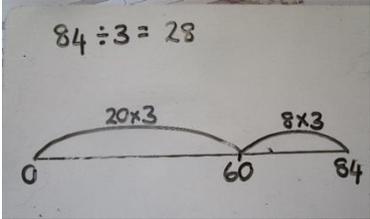
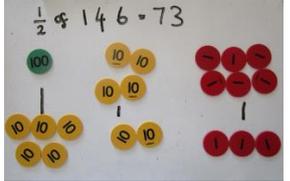
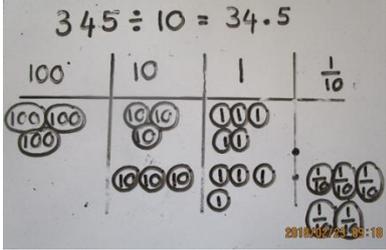
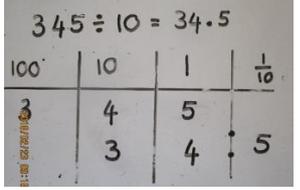
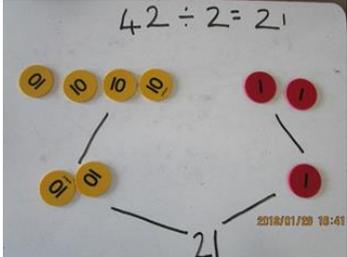
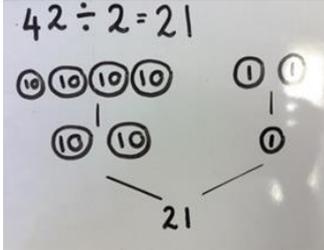
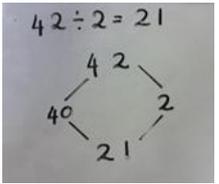
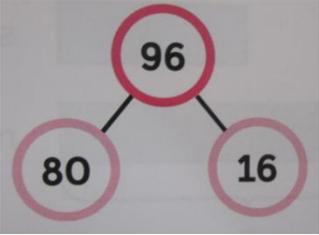
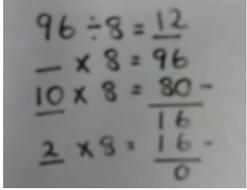
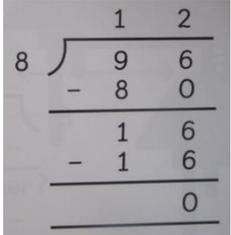
Year 3 Calculation Policy

Division

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
<p>Dividing with remainders</p>	<p>2d + 1d with remainders using lollipop sticks. Cuisenaire rods, above a ruler can also be used. $13 \div 4$</p> <p>Use of lollipop sticks to form wholes- squares are made because we are dividing by 4.</p>  <p>There are 3 whole squares, with 1 left over.</p>	<p>Children to represent the lollipop sticks pictorially.</p>  <p>There are 3 whole squares, with 1 left over.</p>	<p>$13 \div 4 = 3$ remainder 1</p> <p>Children should be encouraged to use their times table facts; they could also represent repeated addition on a number line.</p> <p>'3 groups of 4, with 1 left over'</p> 
<p>Sharing</p>	<p>Sharing using place value counters. $42 \div 3 = 14$</p> 	<p>Children to represent the place value counters pictorially.</p> 	<p>$42 \div 3$ $42 = 30 + 12$ $30 \div 3 = 10$ $12 \div 3 = 4$ $10 + 4 = 14$</p>
<p>3D.5 - I can perform divisions just above the 10th multiple using a number line e.g. $52 \div 4 = 13$</p>		<p>$52 \div 4 = 13$</p> 	<p>$52 \div 4 =$</p> 
<p>3D.6 - I can divide larger numbers mentally by subtracting the 10th multiple, including those with remainders e.g. $57 \div 3$</p>	<p>Times tables square</p>	<p>$57 \div 4 = 14 \text{ r } 1$</p> 	<p>$57 \div 4 = 14 \text{ r } 1$</p> 

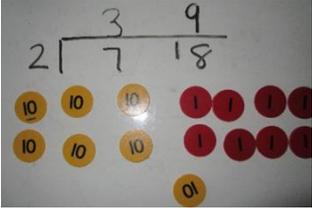
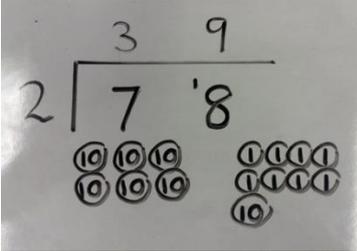
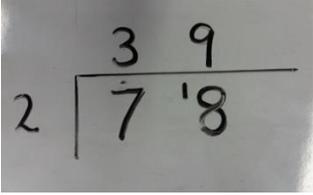
Year 4 Calculation Policy

Division

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
4D.1 - I know by heart all the division facts up to $144 \div 12$			
4D.2 - I can divide whole numbers by 10, 100, to give whole number answers with 1 decimal place			
4D.3 - I can use related facts to divide multiples of 100 by 1-digit numbers e.g. $32 \div 8 = 4$ so $3200 \div 8 = 400$	<p style="text-align: center;">Find the answer to this first $32 \div 8 = 4$</p> <p style="text-align: center;">Use methods taught previously</p>		<p style="text-align: center;">$32 \div 8 = 4$</p> <p style="text-align: center;">So $320 \div 8 = 40$</p> <p style="text-align: center;">So $3200 \div 8 = 400$</p>
4D.4 - I can find halves of even numbers to 200 and beyond using partitioning			
4D.5 - I can divide larger numbers mentally by subtracting the 10th or 20th multiple as appropriate.			 

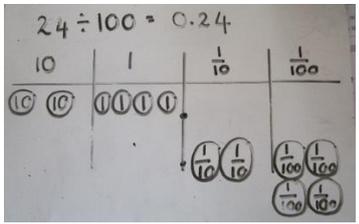
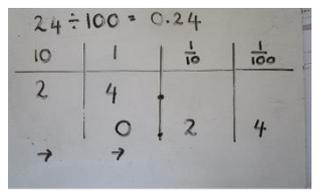
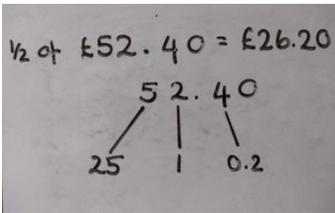
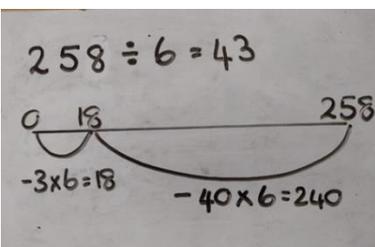
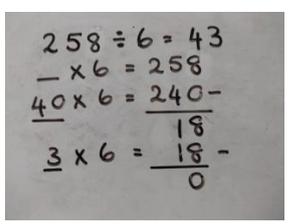
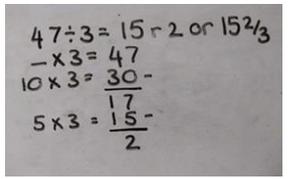
Year 4 Calculation Policy

Division

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
D.6 - I can use a written method to divide a 2 digit or a 3- digit number by a 1- digit number.			

Year 5 Calculation Policy

Division

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
5D.1 - I can divide whole numbers by 10, 100, 1000, 10000 to give whole number answers or answers with 1, 2 or 3 decimal places			
5D.2 - I can halve amounts of money e.g. half of £52.40 is £26.20			$\frac{1}{2} \text{ of } £52.40 = (\frac{1}{2} \text{ of } £52) + (\frac{1}{2} \text{ of } 0.20)$ $= £26 + £0.20$ $= £26.20$
5D.3 - I can divide by larger numbers mentally by subtracting the 10th or 100th multiple as appropriate			
D.4 - I can begin to represent a remainder as a fraction or decimal			
5D.5 - I can use short division to divide a number with up to 4 digits by 12 or less.			