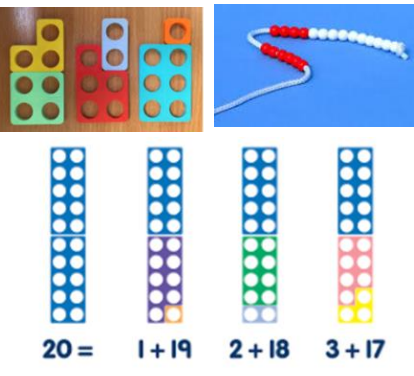
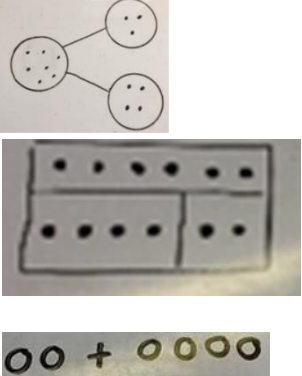
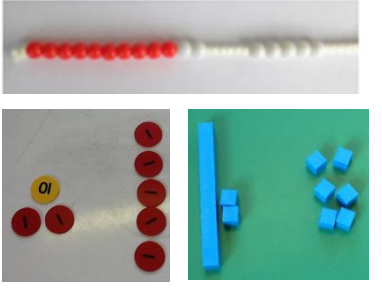
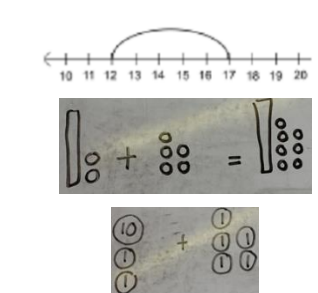
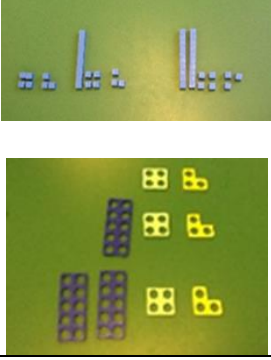
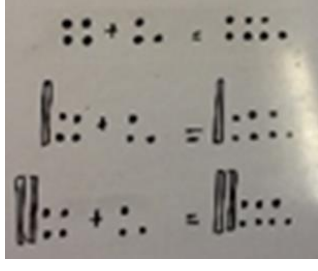
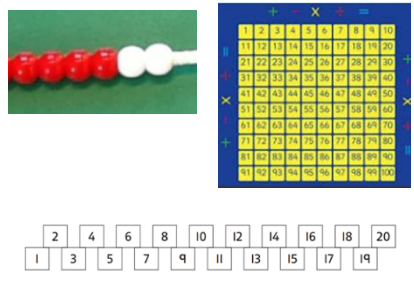
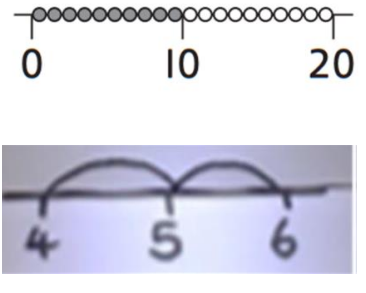
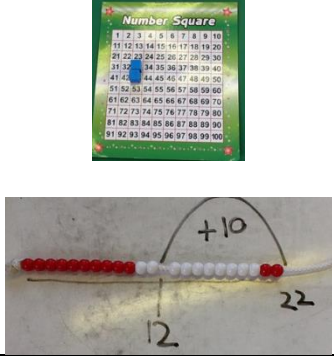
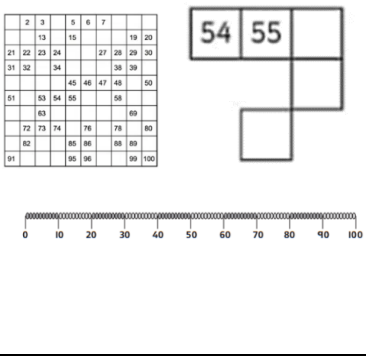


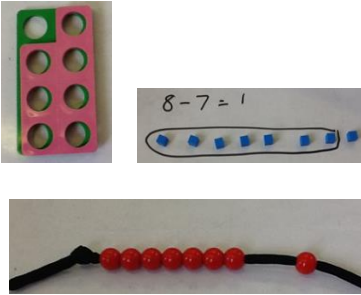
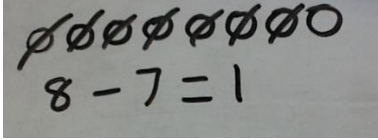
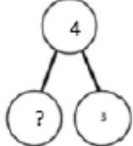
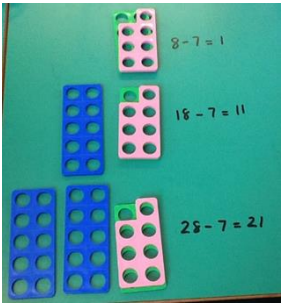
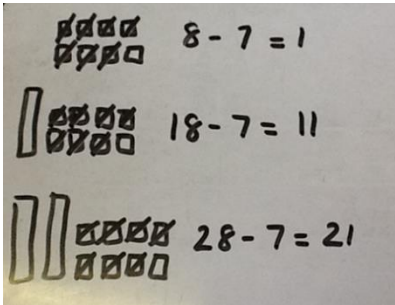
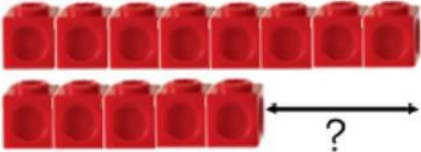
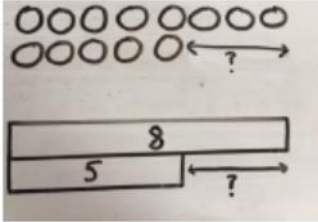
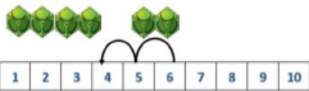


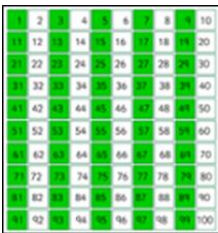
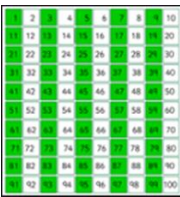
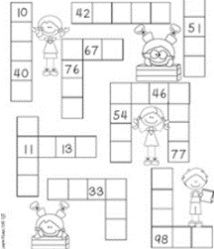
# Year 1 Calculation Policy

## Addition

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
<p><b>1A.1</b> I know all pairs of numbers which make all numbers upto 12, and pairs with a total of 20</p>	 <p style="text-align: center;"><math>20 = 1 + 19 \quad 2 + 18 \quad 3 + 17</math></p>		<p style="text-align: center;"><math>\_\_\_ + 8 = 20</math> <math>20 = \_\_\_ + 11</math></p> <p style="text-align: center;"> <math>\_\_\_</math> is a part,  <math>\_\_\_</math> is a part,                      The whole is <math>\_\_\_</math> </p> <p style="text-align: center;"><math>5 + 12 = \_\_\_</math></p>
<p>I can start by counting from the bigger number.</p>	<p><math>12 + 5 = \_\_\_ = 12 + 5</math></p> 	<p style="text-align: center;"><math>12 + 5 = 17</math></p> 	<p style="text-align: center;"> <math>5 + 12 =</math>  <math>12 + 5 =</math>  <math>\_\_\_ = 5 + 12</math>  <math>\_\_\_ + 12 = 5</math> </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><b>1A.2</b> I can use number facts to add 1 digit numbers to 2 digit numbers (e.g. <math>4+3=7</math> so <math>14+3=17</math> and <math>24+3=27</math>)</p>			<p style="text-align: center;"> <math>4 + 3 = 7</math>                      So <math>14 + 3 = 17</math>                      So <math>24 + 3 = 27</math> </p> <p style="text-align: center;"><math>34 + \_\_\_ = 37</math></p>
<p><b>1A.3</b> - I can add ones using a structured number line/ 100 grid</p>			<p>The abstract number line:</p> <p>What is 2 more than 4?</p> <p>What is the sum of 2 and 4?</p> <p>What is the total of 4 and 2?</p> <p style="text-align: center;"><math>4 + 2</math></p>
<p><b>1A.4</b> - I can add 10s using a structured number line/100 grid</p>			<p style="text-align: center;"><math>26 + 10 =</math></p> <p style="text-align: center;"><math>\_\_\_ = 34 + 10</math></p> <p style="text-align: center;"><math>\_\_\_ = 10 + 17</math></p> <p style="text-align: center;"><math>28 + \_\_\_ = 38</math></p>

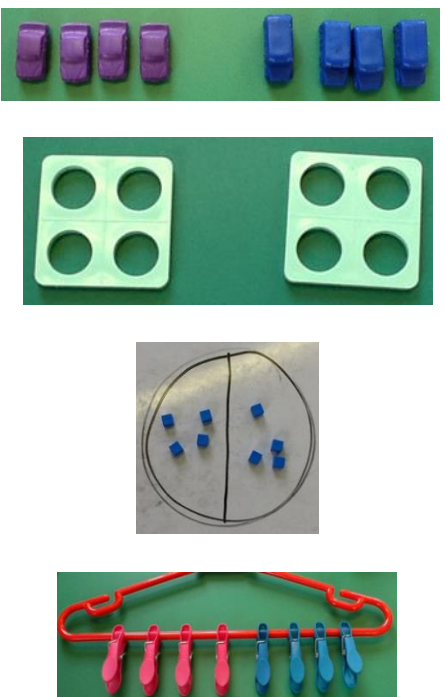
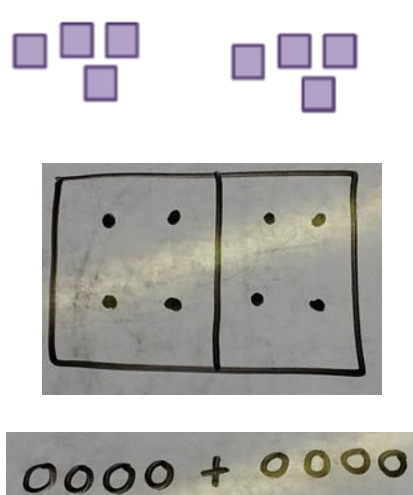
# Year 1 Calculation Policy

## 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>4 - 3 =</p> <p><input type="text" value="4"/> = 4 - 3</p> <table border="1" data-bbox="1241 465 1458 524"> <tr><td colspan="2">4</td></tr> <tr><td>3</td><td>?</td></tr> </table> 	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>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>Finding the difference is subtraction</p>	<p>Find the difference between 8 and 5.</p> <p>8 - 5, the difference is <input type="text" value="3"/></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>				

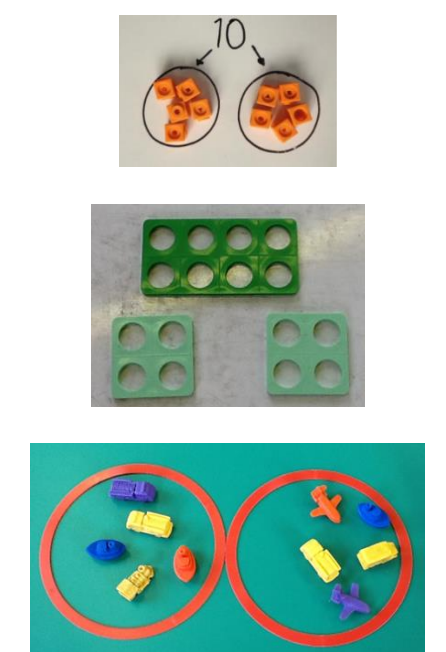
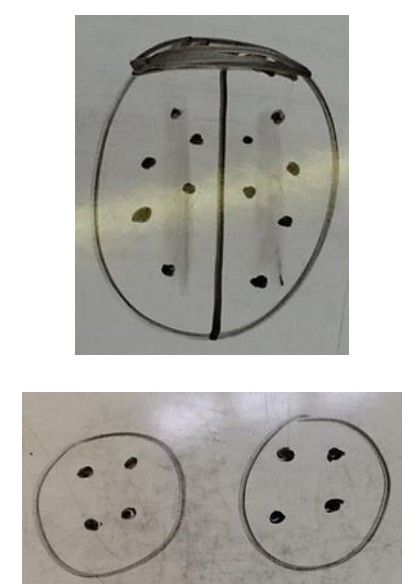
# Year 1 Calculation Policy

## Multiplication

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract				
1M.1 - I can double numbers to 10		<p>Double 4 is 8</p> 	<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  <math>8 = 4 + 4</math>  <math>4 + 4 = 8</math></p>	8		4	4
8							
4	4						

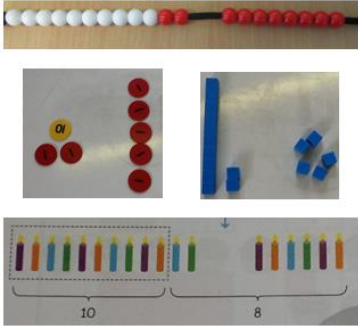
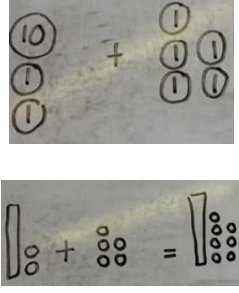
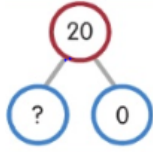
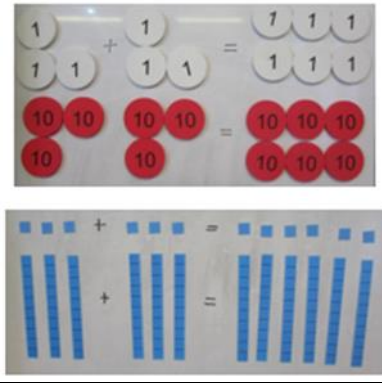
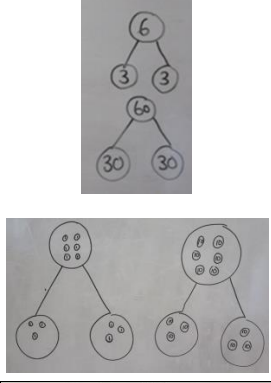

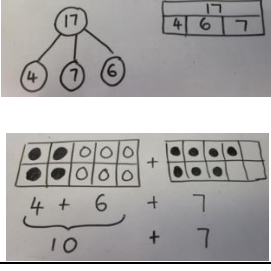
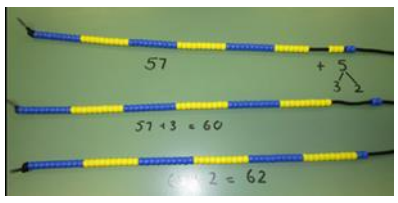
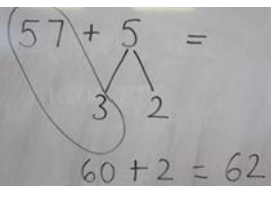

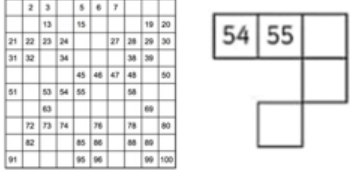
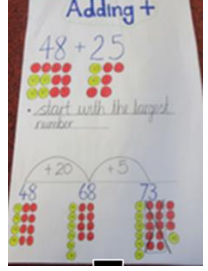
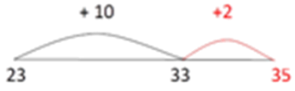
# Year 1 Calculation Policy

## Division

Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
1D.1 - I can find half of even numbers to 12 and know it is hard to halve odd numbers			<p>Half of 8 is 4  <math>\frac{1}{2}</math> of 12 = 6</p>

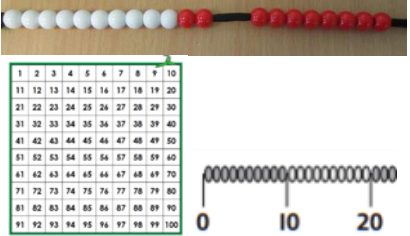
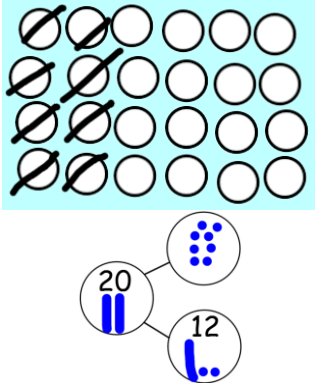
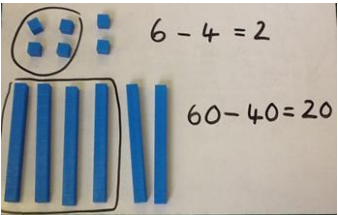
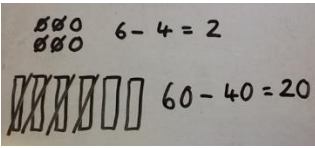
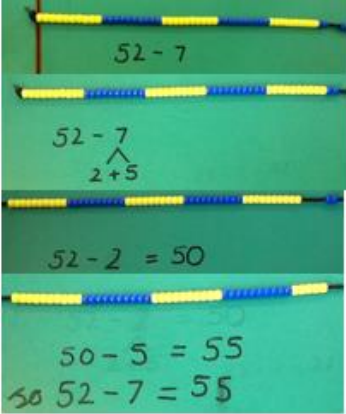
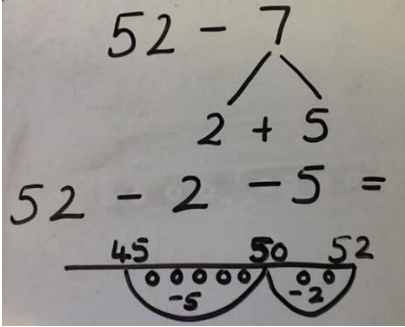

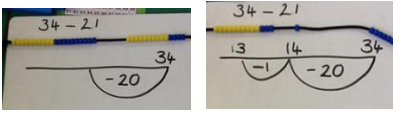
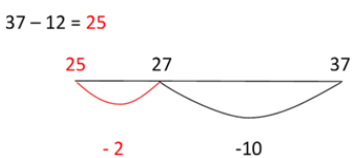
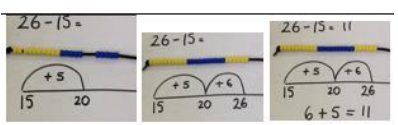
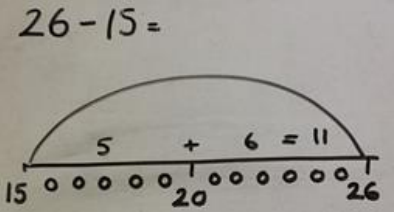
# Year 2 Calculation Policy

## Addition

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

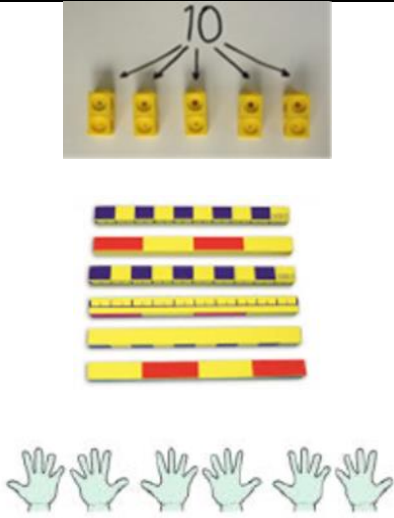
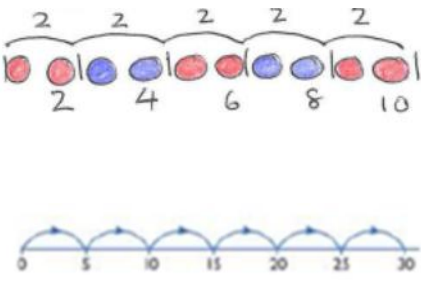

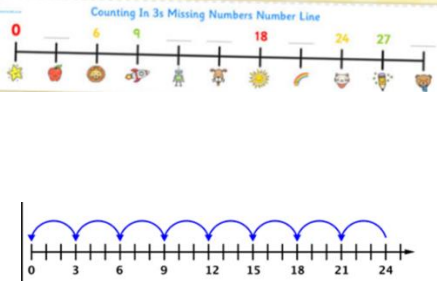
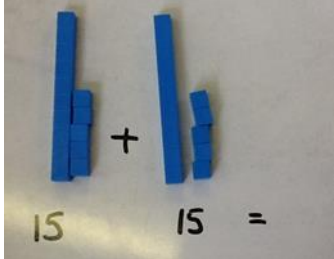
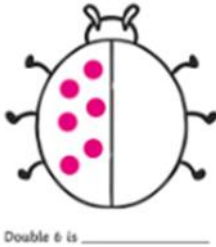
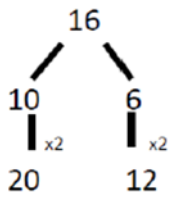
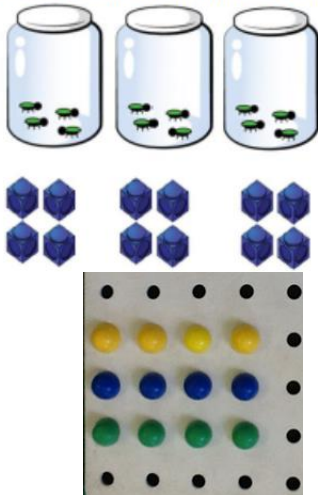
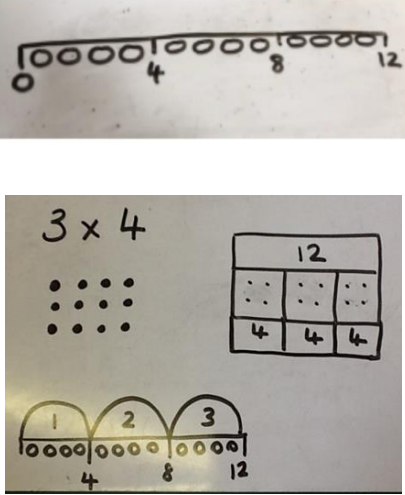
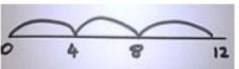
# Year 2 Calculation Policy

## 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: 0;"/>
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 takeaway 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>

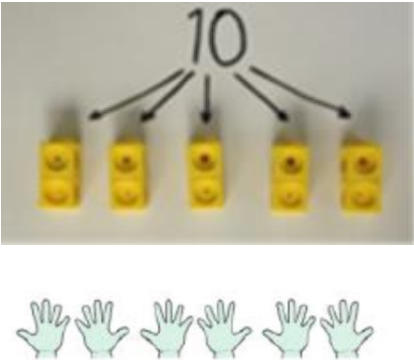
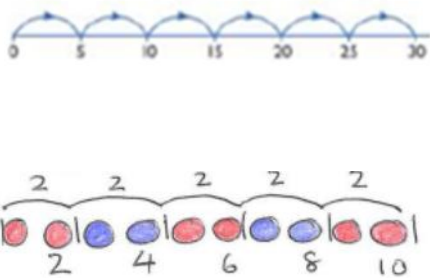
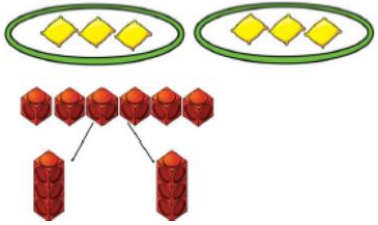
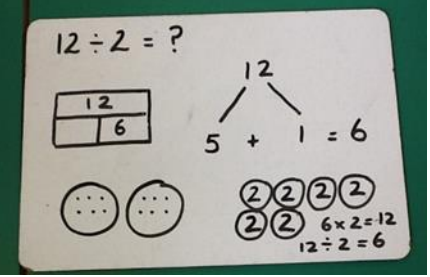
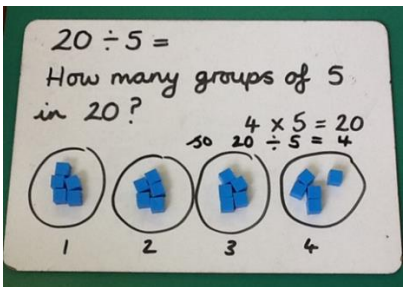
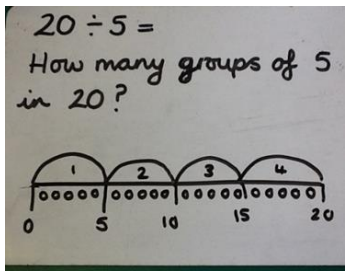
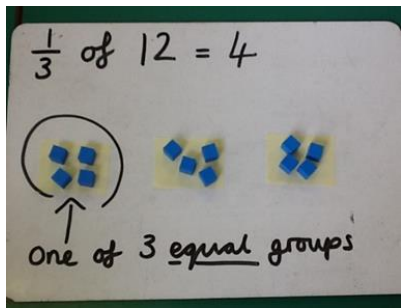
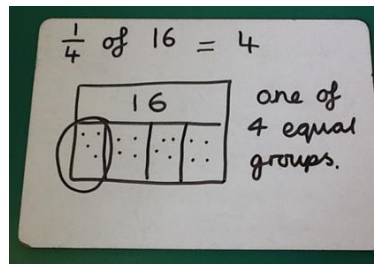
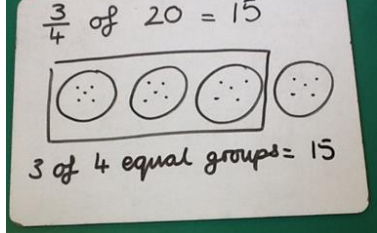
# Year 2 Calculation Policy

## 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 <math>3 \times 4</math> <math>4 + 4 + 4</math> There are 3 equal groups, with 4 in each group.</p> 	<p>Represent this pictorially alongside a number line e.g.:</p> 	<p><math>3 \times 4 = 12</math></p> <p><math>4 + 4 + 4 = 12</math></p> <p>Abstract number line showing three jumps of four.</p> <p><math>3 \times 4 = 12</math></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>How many 2s in 12?</p> <p>12 shared between 2 is ?</p> <p>How many groups of 2 make 12?</p> <p><math>12 \div 2 = ?</math></p>
<p>2D.2 - I can halve numbers to 40 and multiples of 10 to 100</p>	<p>Sharing using a range of objects.</p> <p><math>6 \div 2</math></p> 		<p><math>2 \times 6 = 12</math></p> <p><math>6 \times 2 = 12</math></p> <p>So <math>? \div 2 =</math></p> <p><math>20 \div ? = 4</math></p>
<p>2D.3 - I can relate grouping to division e.g. How many groups of 5 in 20</p>			<p><math>20 \div 5</math> or how many 5s make 20?</p>
<p>2D.4 - Find <math>\frac{1}{2}</math>, <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math> and <math>\frac{3}{4}</math> of a quantity of objects and of amounts (whole number answers)</p>		 	<p><math>\frac{1}{2}</math> of 12 = <math>12 \div 2 = 6</math></p> <p><math>\frac{1}{4}</math> of 12 = <math>12 \div 4 = 3</math></p> <p><math>\frac{1}{3}</math> of 12 = <math>12 \div 3 = 4</math></p> <p><math>\frac{3}{4}</math> of 20 = <math>(20 \div 4) \times 3 = 15</math></p>