

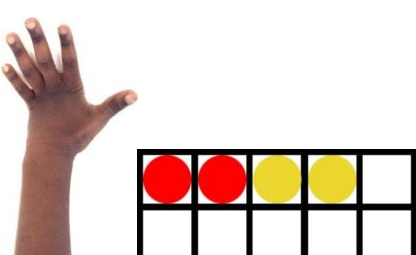
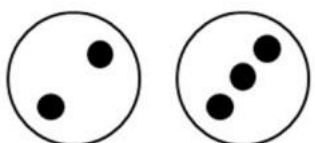
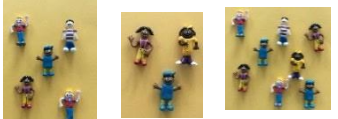
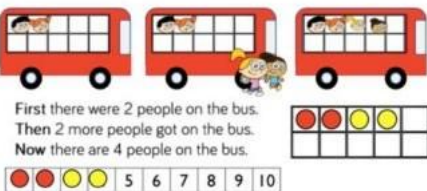

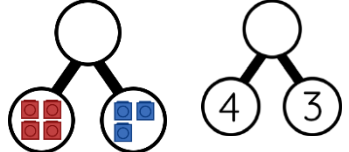
# Calculation Policy


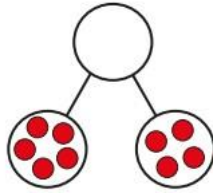
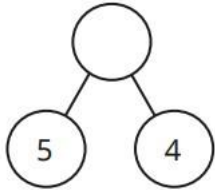
## Addition


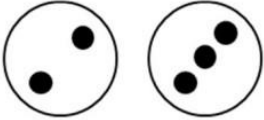



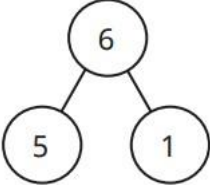
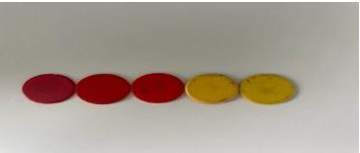

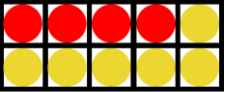
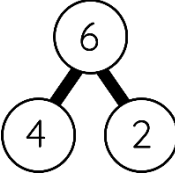


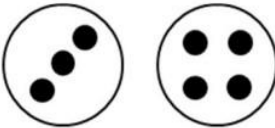
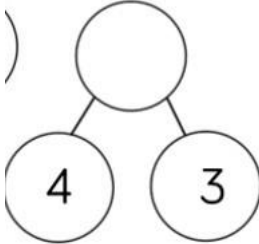
September 2023


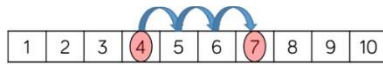
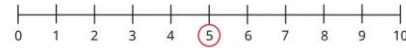
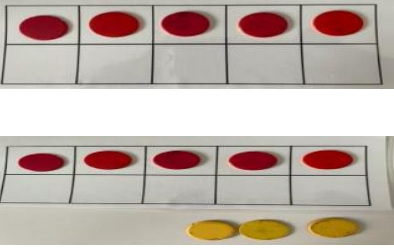

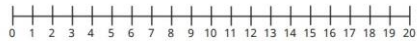
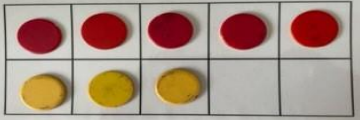
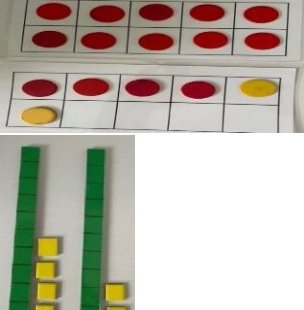
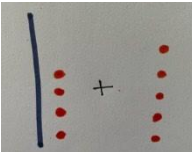
**Addition:**

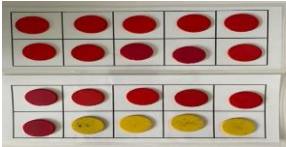
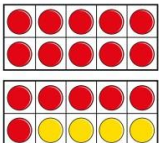

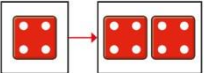

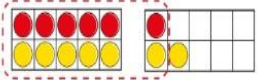
<b>EYFS:</b>			
--------------	--	--	--

<p><b>Vocabulary</b> :</p>	<p>first, then, now, add, plus, altogether, total, part, whole</p>	<p><b>Manipulatives &amp; scaffolds:</b></p>	<p>Fingers Five frames Ten frames Double sided counters Numicon Cubes Bead strings Part-whole model</p>
<p><b>Small step:</b></p>	<p><b>Concrete:</b></p>	<p><b>Pictorial:</b></p>	<p><b>Abstract:</b></p>
<p>Combining two groups</p>	<p>Children begin to combine 2 groups of objects to find how many there are altogether</p> 		<p>How many ___ can you see? How many ___ can you see? How many can you see altogether?</p>
<p>Adding more</p>	<p>Combine two groups of objects using practical resources, role play, stories and songs:</p> 	 <p>First there were 2 people on the bus. Then 2 more people got on the bus. Now there are 4 people on the bus.</p> 	 <p><math>4 + 3 =</math></p>


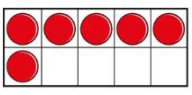
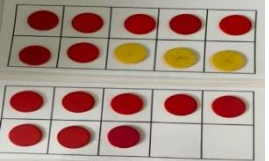

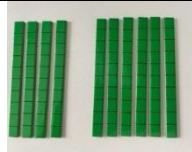
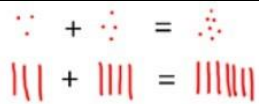



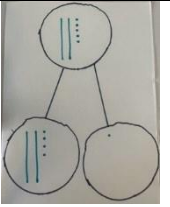
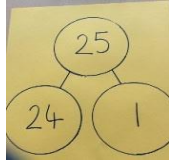
	$5 + 3 = 8$		
How many did I add?	To follow March 24		
<b>Y1</b>			
<b>Vocabulary:</b>	add, plus, altogether, total, part, whole, 2-digit number, sum, addition, more, and, makes, double	<b>Manipulatives &amp; scaffolds:</b>	Ten frames Double sided counters Numicon Cubes Bead strings Part-whole model Bar model
<b>Small step:</b>	<b>Concrete:</b>	<b>Pictorial:</b>	<b>Abstract:</b>
Understand part and whole relationships	<p>Here are some frogs.</p> <ul style="list-style-type: none"> <li>▶ Can you see two groups of frogs?</li> <li>▶ How many frogs are in each group?</li> <li>▶ Complete the sentences.</li> </ul> <p>_____ is a part. _____ is a part. The whole is _____</p> 	 <p>___ is a part ___ is a part The whole is ___</p>	 <p>___ is a part ___ is a part The whole is ___</p>

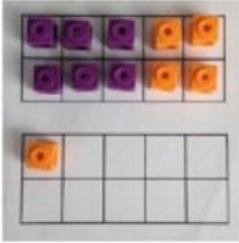
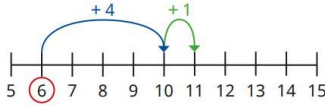
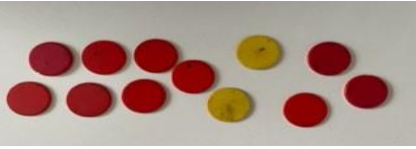
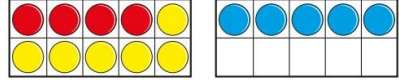
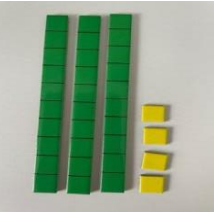
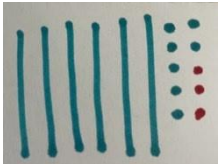
<p>Write number sentences</p>	 <p>Here are some counters. Group the counters by colour.            ___ red counters plus ___ yellow counters is equal to ___ counters.</p>	 <p><math>2 + 3 = 5</math></p>	 <p>___ + ___ = ___</p>
<p>Fact families addition facts</p>	 <p>First there were 3 children on the bus.            Then 2 more children got on the bus.            Now there are 5 children on the bus.</p>	 <p>___ + ___ = 7      7 = ___ + ___            ___ + ___ = 7      7 = ___ + ___</p>	 <p><math>5 + 1 = 6</math>  <math>1 + 5 = 6</math>  <math>6 = 5 + 1</math>  <math>6 = 1 + 5</math></p>
<p>Number bonds within 10</p>	 <p><math>3 + 2 = 5</math></p>	 <p><math>4 + 1 = 5</math></p>  <p><math>4 + 6 = 10</math></p>	 <p><math>4 + 2 = 6</math></p> 
<p>Add together</p>	 <p><math>4 + 3 = 7</math></p>	 <p><math>3 + 4 = 7</math></p>	 <p><math>4 + 3 = 7</math></p>

<p>Add more</p>	 <p>Put 2 counters in a tens frame. Now add 8 more counters. How many counters are there altogether?</p>	<p><math>4 + 3 =</math></p> 	 <p><math>5 + \underline{\quad} = \underline{\quad}</math></p>
<p>Add by counting on within 20</p>	 <p>First Then</p>	<p>Ann has 13 marbles. She gets 5 more marbles. How many marbles does Ann have now?</p> 	 <p><math>9 + 6 = \underline{\quad}</math></p>
	 <p>Now</p> <p>First there were 5 counters Then I added 3 Now there are 8 counters</p>		
<p>Adding ones using number bonds</p>	 <p><math>14 + 2 =</math></p>	 <p><math>14 + 2 =</math></p>	<p><math>12 + 4 =</math></p>

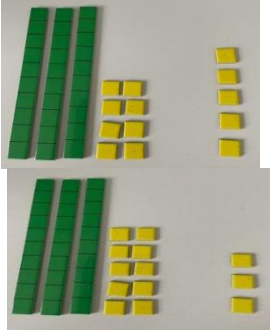
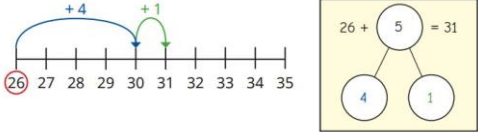
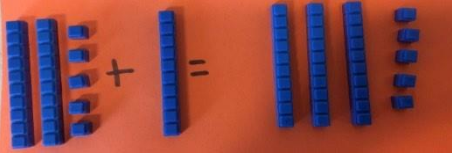
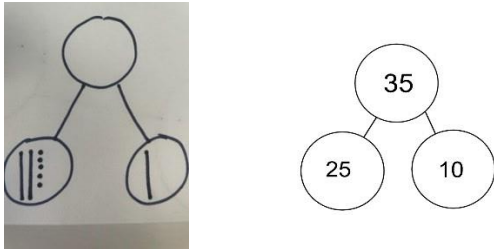
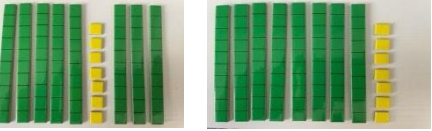
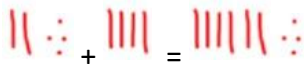
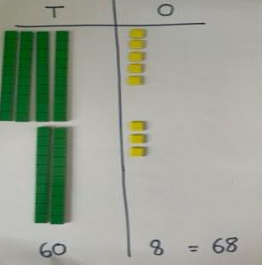
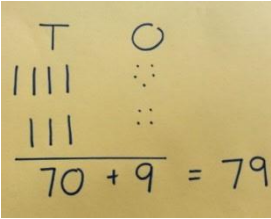
<p>Find and make number bonds to 20</p>	 <p><math>16 + 4 = 20</math></p>	 <p><math>4 + 16 = 20</math></p>	<p><math>20 = \_ + \_</math> <math>20 = \_ + \_</math></p>
<p>Doubles</p>	 <p>Double 7 is <math>\_</math></p>	 <p>Double 4 is <math>\_</math></p>	<p>Double <math>\_</math> is <math>\_</math></p>
<p>Near doubles</p>	 <p><math>6 + 7 =</math> <math>6 + 6 + 1 =</math> Double <math>6 + 1 =</math></p>	 <p><math>6 + 7 =</math> double <math>\_</math> plus <math>\_</math></p>	<p>Use doubles to work out the near doubles:</p> <p><math>4 + 5 =</math> <math>6 + 7 =</math> <math>8 + 7 =</math></p>

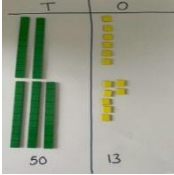
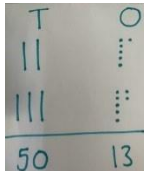
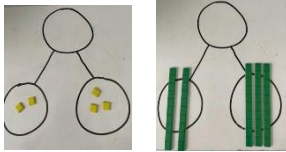
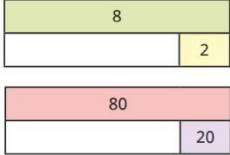
<p><b>Y2</b></p>			
<p><b>Vocabulary:</b></p>	<p>add, plus, altogether, total, part, whole, 2-digit number, sum, addition, more, and, makes, double, ones, tens, partition, bonds, commutative</p>	<p><b>Manipulatives &amp; scaffolds:</b></p>	<p>Ten frames Double sided counters Numicon Cubes Base 10/Dienes Part-whole model Bar model Number line Place value charts</p>

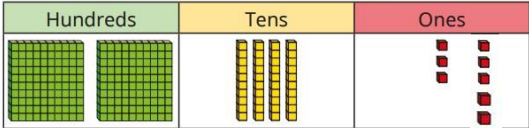
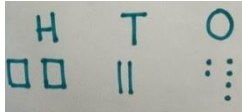
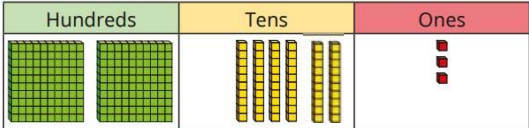
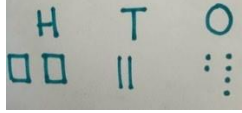
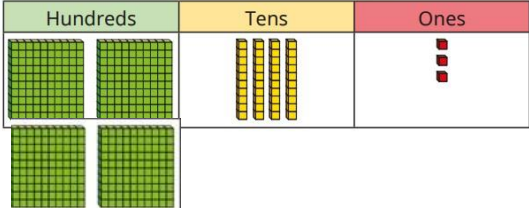
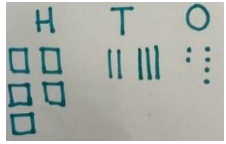
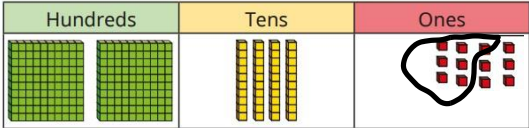
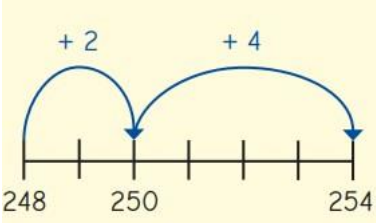
Small step:	Concrete:	Pictorial:	Abstract:
Bonds to 10	 $\_ + \_ = 10$	 $5 + \_ = 10$	$\_ + \_ = 10$ $10 = \_ + \_$
Fact families – addition bonds within 20	 $\_ + \_ = \_$ $\_ + \_ = \_$ $\_ = \_ + \_$ $\_ = \_ + \_$		$\_ + \_ = \_$ $\_ + \_ = \_$ $\_ = \_ + \_$ $\_ = \_ + \_$
Bonds to 100 (tens)	 $4 + 6 = 10$  $40 + 60 = 100$	 $3 + 4 = 7$ $30 + 40 = 70$	$\_ + \_ = 100$ $100 = \_ + \_$
Add ones	 $24 + 1 = 25$  	 	$46 + 1 =$ $46 + 2 =$ $46 + 3 =$

<p>Add by making 10</p>	 <p><math>6 + 5 = 10 + 1</math> <math>= 11</math></p>	 <p><math>6 + 5 = 10 + 1</math> <math>= 11</math></p>	<p><math>7 + 4 = 11</math></p> <p><i>If I have seven, how many more do I need to make ten?</i></p> <p><i>How many more do I need to add?</i></p>
<p>Add three 1digit numbers</p>	 <p><math>7 + 2 + 3 =</math></p>	 <p><math>4 + 6 + 6</math> <math>=</math></p>	<p><math>7 + 5 + 3 =</math></p> <p><math>7 + 5 + 3 = 15</math></p> <p><i>10</i></p>
<p>Add to the next 10</p>	 <p>The Base 10 shows 34</p> <p>How many tens are there in 34? What is the multiple of 10 after 34? How many ones are there in 34? How many more ones do I need to add to get to</p>	 <p><math>67 + \underline{\quad} = 70</math></p>	<p><math>45 + \underline{\quad} = 50</math> <math>81 + \underline{\quad} = 90</math> <math>32 + \underline{\quad} = 40</math></p>
	<p>the next multiple of 10? 34 <math>+ \underline{\quad} = \underline{\quad}</math></p>		

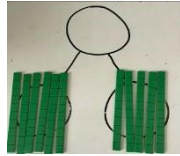


<p>Add across a ten</p>	 <p><math>38 + 5 = 40 + 3</math></p>		<p><math>67 + 5 =</math></p>
<p>10 more</p>	 <p><math>25 + 10 = 35</math></p>		<p><math>25 + 10 = 35</math>  <math>10 + 25 = 35</math>  <math>35 = 25 + 10</math>  <math>35 = 10 + 25</math></p>
<p>Add 10s</p>	 <p><math>57 + 30 = 87</math></p>	 <p><math>24 + 40 = 64</math></p>	<p><math>23 + 10</math>  <math>54 + 40</math></p>
<p>Add two 2-digit numbers (not across a ten)</p>	 <p><math>60 + 8 = 68</math></p>	<p><math>45 + 34 =</math></p> 	<p><math>52 + 14</math>  <math>23 + 31</math></p>

	 <p> <math>26 + 37 =</math>  <math>20 + 30 = 50</math>  <math>6 + 7 = 13</math>  <math>50 + 13 = 63</math> </p>	<p><math>26 + 37 =</math></p>  <p> <math>20 + 30 = 50</math>  <math>6 + 7 = 13</math>  <math>50 + 13 = 63</math> </p>	<p> <math>26 + 37</math>  <math>46 + 27 =</math>  <math>17 + 33 =</math> </p>
<b>Y3</b>			
<b>Vocabulary:</b>	add, plus, altogether, total, part, whole, 2-digit number, sum, addition, more, and, makes, double, ones, tens, partition, bonds, exchange, regroup, hundreds	<b>Manipulatives &amp; scaffolds:</b>	Ten frames Double sided counters Numicon Cubes Base 10/Dienes Part-whole model Bar model Number line Place value charts Place value counters
<b>Small step:</b>	<b>Concrete:</b>	<b>Pictorial:</b>	<b>Abstract:</b>
Apply number bonds	 <p> <math>2 + 3 = 5</math>    <math>20 + 30 = 50</math> </p>	 <p> <math>\_\_ + 2 = 8</math>  <math>\_\_ + 20 = 80</math> </p>	<p> <math>2 + \_\_ = 5</math>  <math>20 + \_\_ = 50</math> </p>

Add ones			$354 + 4$ $215 + 3$ $461 + 8$
Add tens	$243 + 5 =$  $243 + 20 =$	$222 + 4 =$  $226 + 30 =$	$546 + 30$ $743 + 50$ $229 + 60$
Add hundreds	 $243 + 200 =$	 $256 + 300 =$	$378 + 400$ $579 + 300$ $285 + 600$
Add 1s across a ten	 $243 + 9 =$ $243 + 7 = 250 + 2 =$ $252$	 $248 + 6 =$ $248 + 2 = 250 + 4 =$ $254$	$248 + 9$

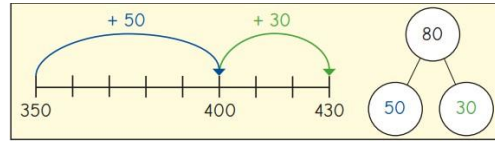
Add 10s across a hundred



$$60 + 50 =$$

$$60 + 40 = 100$$

$$100 + 10 = 110$$



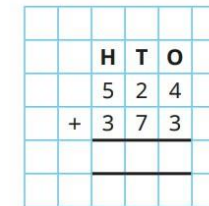
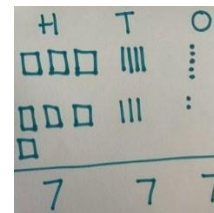
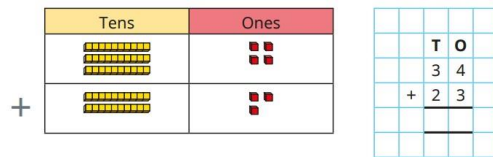
$$350 + 80 =$$

$$350 + 50 = 400 + 30 = 430$$

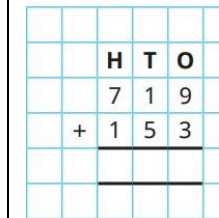
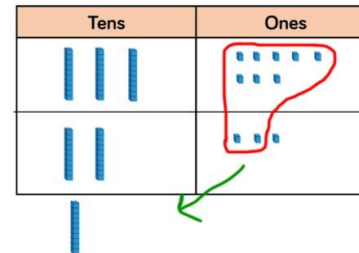
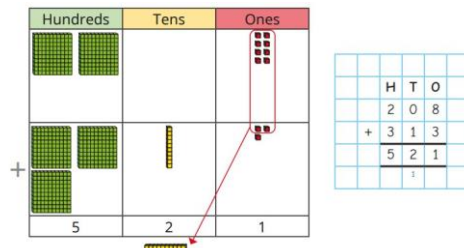
$$695 + 80$$

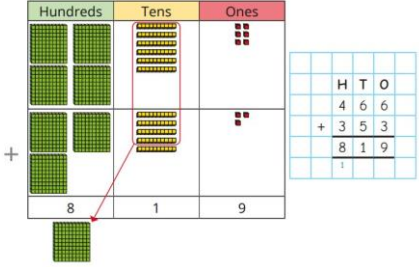
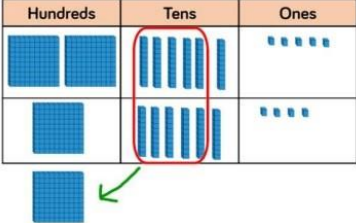
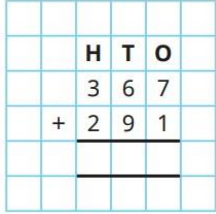
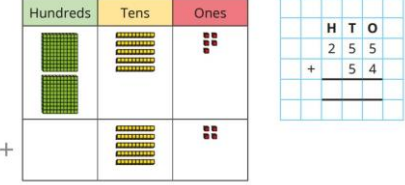
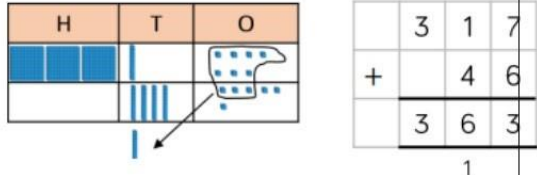
$$476 + 60$$

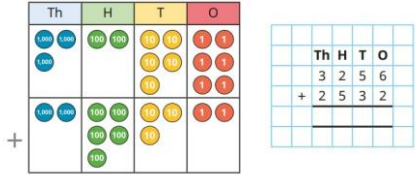
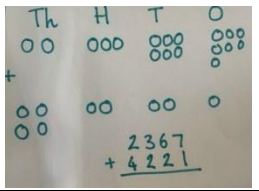
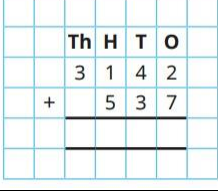
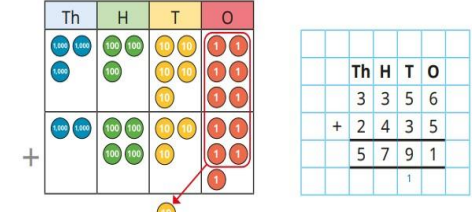
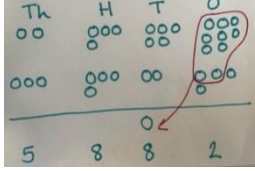
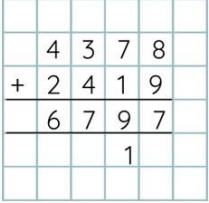
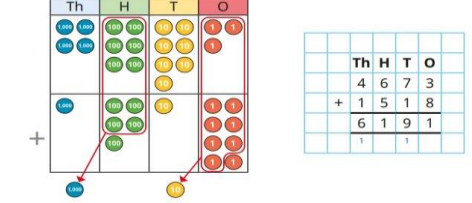
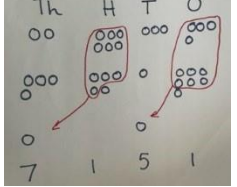
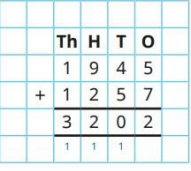
Add two numbers (no exchange)



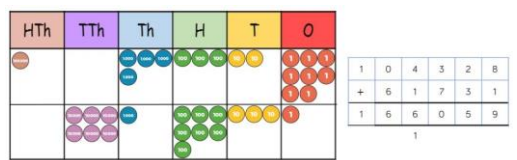
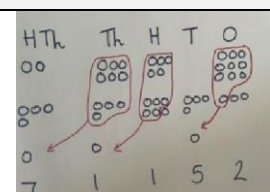
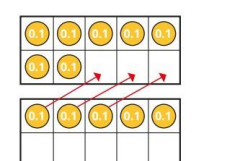
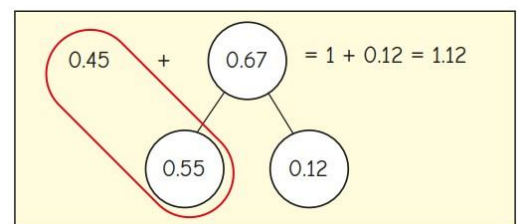
Add two numbers (across a ten)

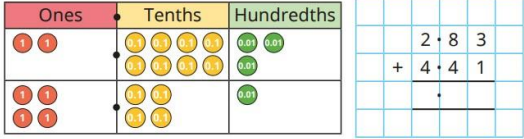
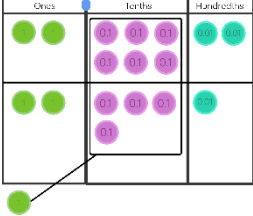
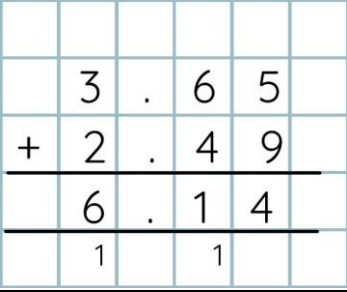
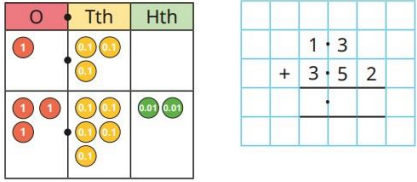
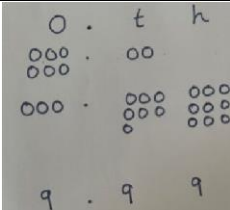
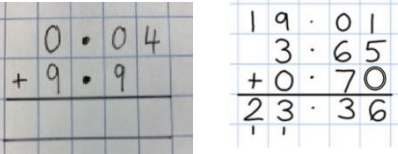


<p>Add two numbers (across a hundred)</p>			
<p>Add 2-digit and 3-digit numbers</p>			<p>537 + 82 =</p>
<p><b>Y4</b></p>			
<p><b>Vocabulary:</b></p>	<p>add, plus, altogether, total, part, whole, 2-digit number, sum, addition, more, and, makes,</p>	<p><b>Manipulatives &amp; scaffolds:</b></p>	<p>Ten frames Double sided counters</p>
	<p>double, ones, tens, partition, bonds, exchange, regroup, hundreds, thousands</p>		<p>Numicon Cubes Base 10/Dienes Part-whole model Bar model Number line Place value charts Place value counters</p>
<p><b>Small step:</b></p>	<p><b>Concrete:</b></p>	<p><b>Pictorial:</b></p>	<p><b>Abstract:</b></p>

<p>Add up to two 4-digit numbers – no exchange</p>	 <p>Base ten blocks showing 3256 + 2532. The ten frame shows the sum 5788.</p>	 <p>Handwritten base ten blocks and ten frame for 3256 + 2532. The ten frame shows the sum 5788.</p>	 <p>Empty ten frame for 3256 + 2532.</p>
<p>Add two 4-digit numbers – one exchange</p>	 <p>Base ten blocks showing 2458 + 3424. One ten block is being exchanged from the tens column to the hundreds column. The ten frame shows the sum 5882.</p>	 <p>Handwritten base ten blocks and ten frame for 2458 + 3424. One ten block is being exchanged from the tens column to the hundreds column. The ten frame shows the sum 5882.</p>	<p>2458 + 3424</p>  <p>Handwritten ten frame for 2458 + 3424 showing the sum 5882.</p>
<p>Add two 4-digit numbers – more than one exchange</p>	 <p>Base ten blocks showing 2634 + 4517. Multiple ten blocks are being exchanged from the tens and hundreds columns to the hundreds and thousands columns. The ten frame shows the sum 7151.</p>	 <p>Handwritten base ten blocks and ten frame for 2634 + 4517. Multiple ten blocks are being exchanged from the tens and hundreds columns to the hundreds and thousands columns. The ten frame shows the sum 7151.</p>	<p>2634 + 4517</p>  <p>Handwritten ten frame for 2634 + 4517 showing the sum 7151.</p>
<p><b>Y5</b></p>			
<p><b>Vocabulary:</b></p>	<p>add, plus, altogether, total, part, whole, 2-digit number, sum, addition, more, and, makes,</p>	<p><b>Manipulatives &amp; scaffolds:</b></p>	<p>Ten frames Double sided counters</p>

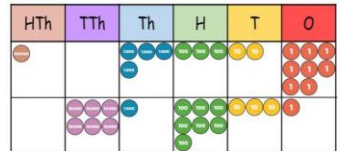


	double, ones, tens, partition, bonds, exchange, regroup, hundreds, thousands, decimals, tenths, hundredths, thousandths, decimal point		Numicon Cubes Base 10/Dienes Part-whole model Bar model Number line Place value charts Place value counters																		
<b>Small step:</b>	<b>Concrete:</b>	<b>Pictorial:</b>	<b>Abstract:</b>																		
Add whole numbers with more than four digits	 <p>A place value chart with columns: HTh, TTh, Th, H, T, O. The top row shows 2 in HTh, 6 in TTh, 5 in Th, 0 in H, and 9 in T. The bottom row shows 4 in HTh, 4 in TTh, 6 in Th, 4 in H, and 3 in T. A carry of 1 is shown under the O column.</p>	 <p>A pictorial representation of the addition 26509 + 44643. It shows place value columns (HTh, Th, H, T, O) with circles representing units. Red arrows indicate the regrouping process: 10 ones are grouped into a ten, 10 tens into a hundred, and 10 hundreds into a thousand.</p>	<table border="1"> <tr><td>1</td><td>0</td><td>4</td><td>3</td><td>2</td><td>8</td></tr> <tr><td>+</td><td>6</td><td>1</td><td>7</td><td>3</td><td>1</td></tr> <tr><td>1</td><td>6</td><td>6</td><td>0</td><td>5</td><td>9</td></tr> </table>	1	0	4	3	2	8	+	6	1	7	3	1	1	6	6	0	5	9
1	0	4	3	2	8																
+	6	1	7	3	1																
1	6	6	0	5	9																
Add decimals across one	<p><math>0.7 + 0.5</math></p>  <p>Base ten blocks representing 0.7 (7 tenths) and 0.5 (5 tenths). Red arrows show 2 tenths being exchanged for 1 hundredth.</p> <div style="border: 1px solid black; padding: 5px;"> <p><math>0.7 + 0.3 = 1</math>  <math>1 + 0.2 = 1.2</math>  <math>0.7 + 0.5 = 1.2</math></p> </div>	<p><math>0.45 + 0.67</math></p>  <p>A part-whole model showing 0.45 and 0.67 combining to form 1.05. The 0.05 is further broken down into 0.55 and 0.12, which together equal 1.12.</p>	<p><math>0.74 + 0.42</math></p>																		

<p>Add decimals with the same number of decimal places</p>		 $\begin{array}{r} 2.62 \\ + 2.41 \\ \hline \end{array}$	
<p>Add decimals with a different number of decimal places</p>		 $\begin{array}{r} 6.2 \\ + 3.79 \\ \hline \end{array}$	
<p><b>Y6</b></p>			
<p><b>Vocabulary:</b></p>	<p>add, plus, altogether, total, part, whole, 2-digit number, sum, addition, more, and, makes, double, ones, tens, partition, bonds, exchange, regroup, hundreds, thousands, decimals, tenths, hundredths, thousandths, decimal point, integer</p>	<p><b>Manipulatives &amp; scaffolds:</b></p>	<p>Ten frames Double sided counters Numicon Cubes Base 10/Dienes Part-whole model Bar model Number line Place value charts Place value counters</p>
<p><b>Small step:</b></p>	<p><b>Concrete:</b></p>	<p><b>Pictorial:</b></p>	<p><b>Abstract:</b></p>

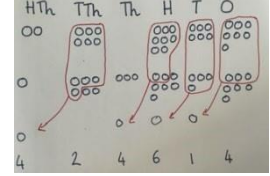


Add integers



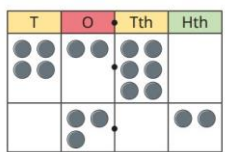
1	0	4	3	2	8
+	6	1	7	3	1
1	6	6	0	5	9

26087  
+ 16371



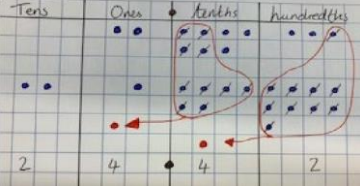
	5	4	3	5	2	3
+	2	2	7	3	1	4
	7	7	0	8	3	7
		1				

Add decimals



	4	2	6	0
+		3	0	2
	4	5	6	2

1.73 + 21.69 =



Insert zeros for  
place holders.

2	3	.	3	6	1
	9	.	0	8	0
+	5	9	.	7	7
			1	.	3
	9	3	.	5	1
	2		1		2