

Year 3

Addition

$$\text{addend} + \text{addend} = \text{sum}$$

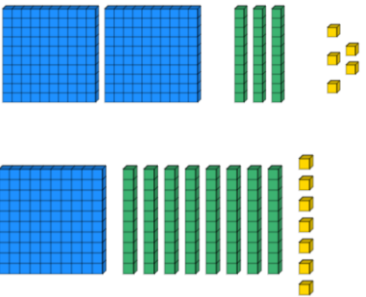
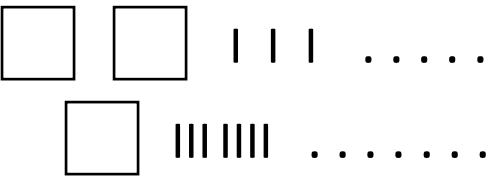
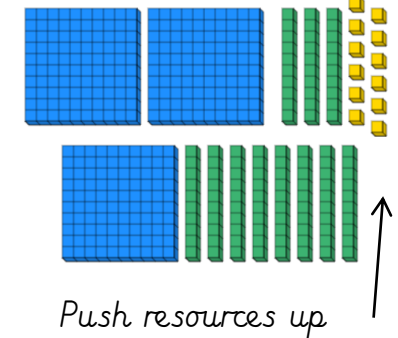
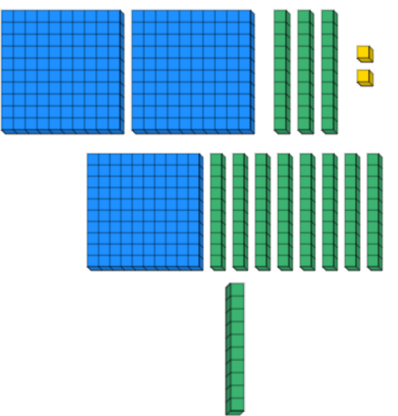
$ \begin{array}{r} \text{addend} \\ + \text{addend} \\ \hline \text{sum} \\ \hline \end{array} $
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Column addition

$$235 + 124 =$$

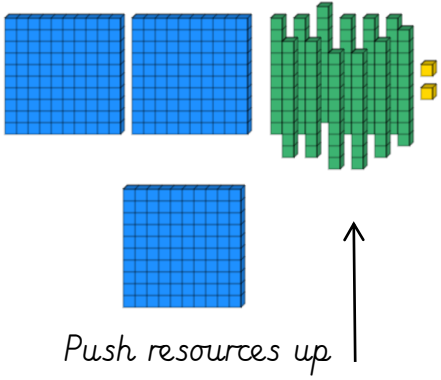
<p>Step 1</p> <p style="text-align: center;">H T O</p>	$ \begin{array}{r} 235 \\ + 124 \\ \hline \end{array} $	<p>Children can draw squares for hundreds, lines for tens and small circles for ones.</p> <div style="display: flex; align-items: center; gap: 10px;"> <div style="border: 1px solid black; width: 30px; height: 30px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 30px; height: 30px; margin-right: 5px;"></div> <div style="display: flex; gap: 2px;"> <div style="width: 5px; height: 10px; border: 1px solid black;"></div> <div style="width: 5px; height: 10px; border: 1px solid black;"></div> <div style="width: 5px; height: 10px; border: 1px solid black;"></div> </div> </div> <div style="display: flex; align-items: center; gap: 10px; margin-top: 10px;"> <div style="border: 1px solid black; width: 30px; height: 30px; margin-right: 5px;"></div> <div style="display: flex; gap: 2px;"> <div style="width: 5px; height: 10px; border: 1px solid black;"></div> <div style="width: 5px; height: 10px; border: 1px solid black;"></div> </div> </div>				
<p>Step 2</p> <p style="text-align: center;">H T O</p> <p style="text-align: center;">Push resources up ↑</p>	$ \begin{array}{r} 235 \\ + 124 \\ \hline 9 \end{array} $					
<p>Step 3</p> <p style="text-align: center;">H T O</p> <p style="text-align: center;">Push resources up ↑</p>	$ \begin{array}{r} 235 \\ + 124 \\ \hline 359 \end{array} $	<table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr> <td colspan="2" style="padding: 5px;">359 whole</td> </tr> <tr> <td style="padding: 5px;">235 part</td> <td style="padding: 5px;">124 part</td> </tr> </table>	359 whole		235 part	124 part
359 whole						
235 part	124 part					

$235 + 187 =$

<p>Step 1</p> <p style="text-align: center;">H T O</p> 	$\begin{array}{r} 235 \\ + 187 \\ \hline \end{array}$	<p>Children can draw squares for hundreds, lines for tens and small circles for ones.</p> 
<p>Step 2</p> <p style="text-align: center;">H T O</p>  <p>Push resources up</p>	$\begin{array}{r} 235 \\ + 187 \\ \hline \end{array}$	
<p>Step 3</p> <p style="text-align: center;">H T O</p>  <p>I can regroup 10 ones for 1 ten.</p>	$\begin{array}{r} 235 \\ + 187 \\ \hline 2 \\ \hline 1 \end{array}$	

Step 4

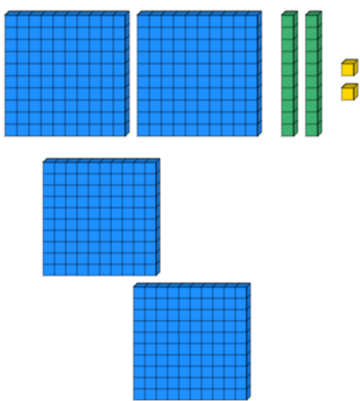
H T O



$$\begin{array}{r}
 235 \\
 + 187 \\
 \hline
 2 \\
 \hline
 1
 \end{array}$$

Step 5

H T O

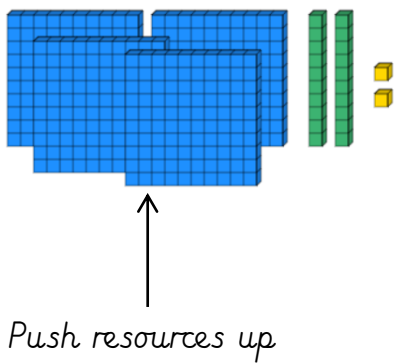


$$\begin{array}{r}
 235 \\
 + 187 \\
 \hline
 22 \\
 \hline
 11
 \end{array}$$

I can regroup 10 tens for 1 hundred.

Step 6

H T O



$$\begin{array}{r}
 235 \\
 + 187 \\
 \hline
 422 \\
 \hline
 11
 \end{array}$$

422 whole	
235 part	187 part

Year 3

Subtraction

$$\text{minuend} - \text{subtrahend} = \text{difference}$$

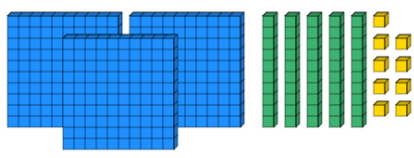
Column subtraction

$$359 - 235 =$$

minuend
- subtrahend
<hr/>
difference
<hr/>

Step 1

H T O



3	5	9	
-	2	3	5
<hr/>			

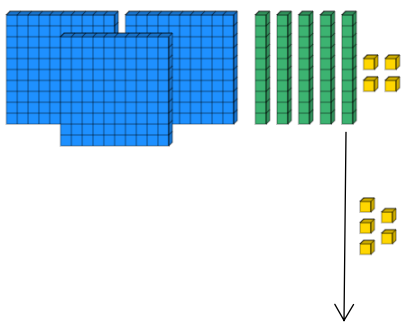
Children can draw squares for hundreds, lines for tens and small circles for ones.

|||

....

Step 2

H T O

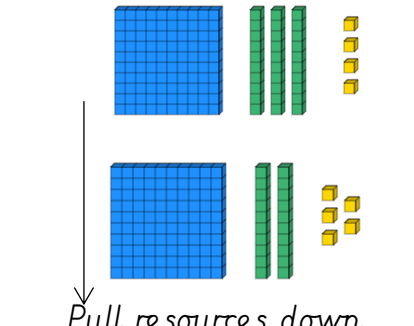


3	5	9	
-	2	3	5
<hr/>			
			4
<hr/>			

Pull resources down

Step 3

H T O



3	5	9	
-	2	3	5
<hr/>			
1	2	4	
<hr/>			

Pull resources down

359 whole	
235 part	124 part

$$422 - 235 =$$

Step 1

H T O

$$\begin{array}{r} 422 \\ - 235 \\ \hline \end{array}$$

Step 2

H T O

I can regroup 1 ten for 10 ones.

$$\begin{array}{r} 4\overset{1}{\cancel{2}}\overset{1}{2} \\ - 235 \\ \hline \end{array}$$

Step 3

H T O

Pull resources down

$$\begin{array}{r} 4\overset{1}{\cancel{2}}\overset{1}{2} \\ - 235 \\ \hline \end{array}$$

Step 4

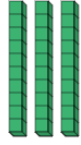
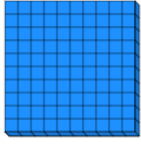
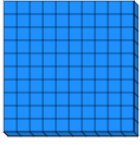
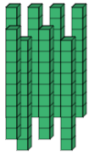
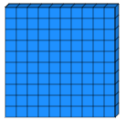
H T O

I can regroup 1 hundred for 10 tens.

$$\begin{array}{r} 4\overset{1}{\cancel{2}}\overset{1}{2} \\ - 235 \\ \hline 7 \end{array}$$

Step 5

H T O



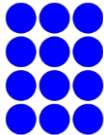
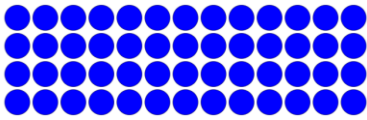
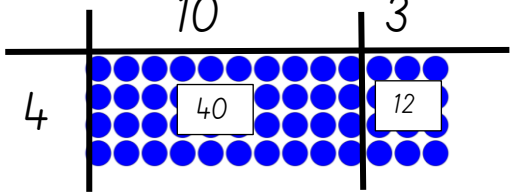
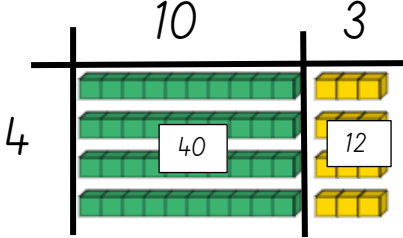
Pull resources down

$$\begin{array}{r} 3 \cancel{4} 1 \cancel{2} 12 \\ - 235 \\ \hline 187 \end{array}$$

422 whole	
235 part	187 part

Multiplication

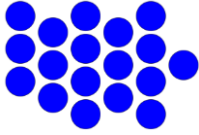
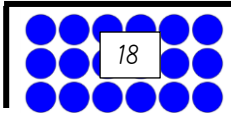
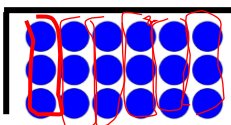
multiplier × multiplicand = product

4×3  <i>4 rows of 3</i>							
4×13 <i>4 rows of 13</i> 	4×13 <i>4 rows of 13</i> 						
4×13 <i>4 rows of 13</i> 	4×13 <table style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <td style="border-right: 1px solid black; border-bottom: 1px solid black; padding: 5px; text-align: center;">×</td> <td style="border-bottom: 1px solid black; padding: 5px; text-align: center;">10</td> <td style="border-bottom: 1px solid black; padding: 5px; text-align: center;">3</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px; text-align: center;">4</td> <td style="padding: 5px; text-align: center;">40</td> <td style="padding: 5px; text-align: center;">12</td> </tr> </table> $40 + 12 = 52$	×	10	3	4	40	12
×	10	3					
4	40	12					

$$\text{dividend} \div \text{divisor} = \text{quotient}$$

$$\text{divisor} \overline{) \begin{array}{l} \text{quotient} \\ \text{dividend} \end{array}}$$

← This is the division bracket.

$18 \div 3 = 6$ 
$3 \overline{) \begin{array}{l} 6 \\ 18 \end{array}}$ 
$3 \overline{) \begin{array}{l} 6 \\ 18 \end{array}}$ 
$3 \overline{) \begin{array}{l} 6 \\ 18 \end{array}}$