

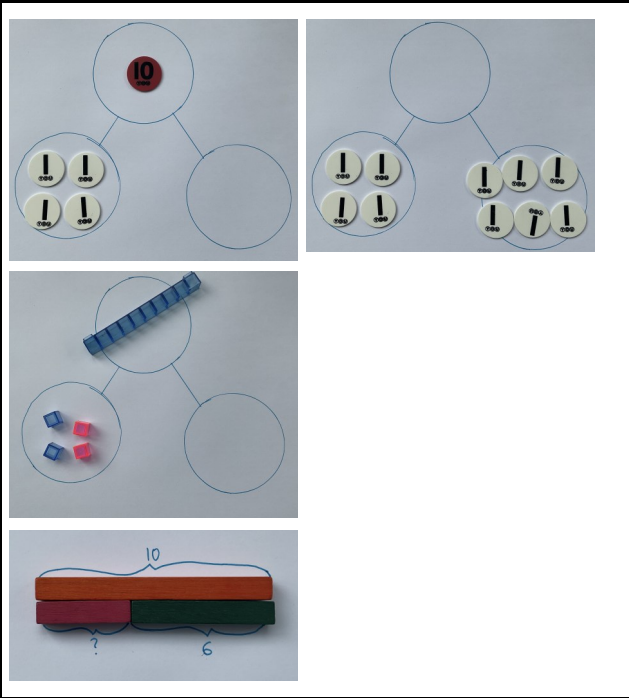
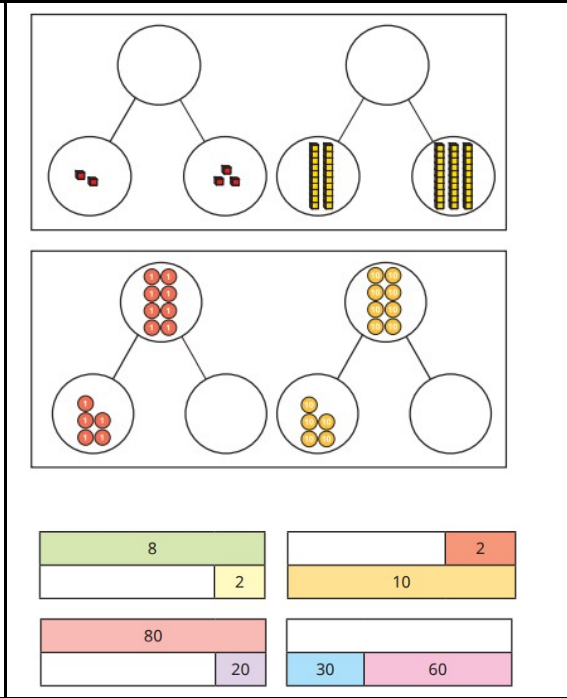
# RAVENSCLOTE JUNIOR SCHOOL

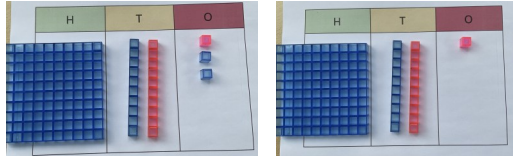
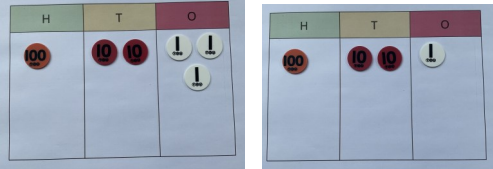
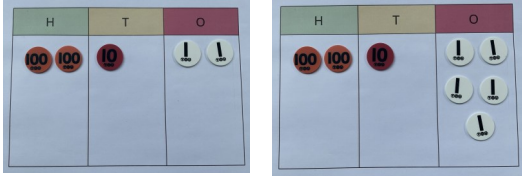
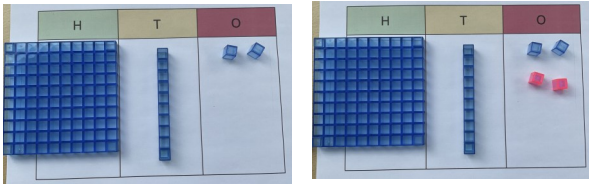
## Calculation policy

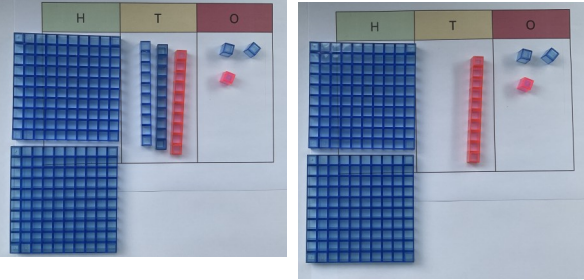
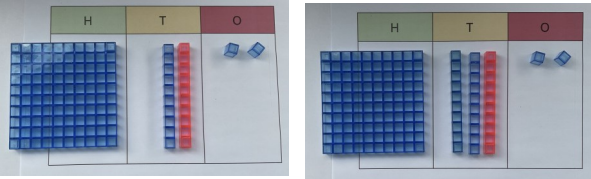
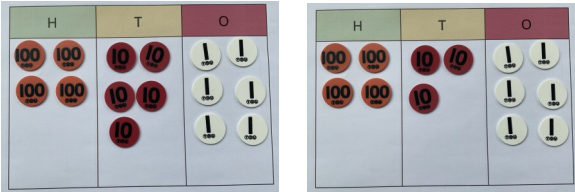
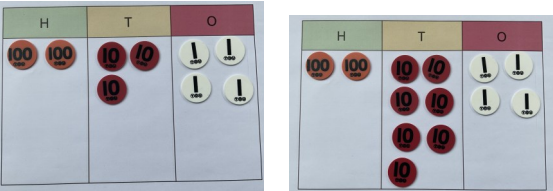
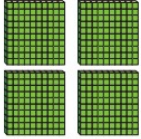





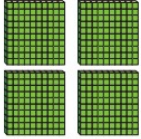





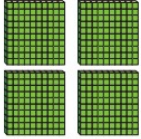





2024 - 2025



Date of Approval		Date of Review	
15 <sup>th</sup> March 2024		November 2025	
Signed	Amy Wells Headteacher	Signed	Emily Gibson Chair of Governors

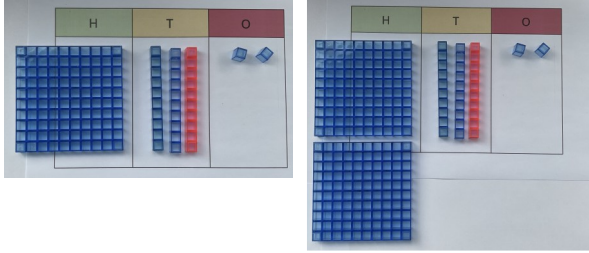
Addition and subtraction	Objective	Concrete	Pictorial	Abstract
Year 3	Apply number bonds within 10, extending to using them within 100			$2 + \underline{\quad} = 5$ $\underline{\quad} + 4 = 7$ $\underline{\quad} = 6 + 3$ $4 + \underline{\quad} = 9$ $50 + 30 = \underline{\quad}$ $70 = \underline{\quad} + 30$

Addition and subtraction	Objective	Concrete	Pictorial	Abstract																		
Year 3	Add and subtract 1s	<p>323 - 2</p>  <p>123 - 2</p>  <p>212 + 3</p>  <p>112 + 2</p> 	<table border="1"> <thead> <tr> <th>Hundreds</th> <th>Tens</th> <th>Ones</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Hundreds</th> <th>Tens</th> <th>Ones</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Hundreds	Tens	Ones				Hundreds	Tens	Ones				<p>243 + 5 = _____</p> <p>534 - 2 = _____</p> <table border="1"> <thead> <tr> <th>Hundreds</th> <th>Tens</th> <th>Ones</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">7</td> <td style="text-align: center;">2</td> </tr> </tbody> </table>	Hundreds	Tens	Ones	3	7	2
Hundreds	Tens	Ones																				
Hundreds	Tens	Ones																				
Hundreds	Tens	Ones																				
3	7	2																				

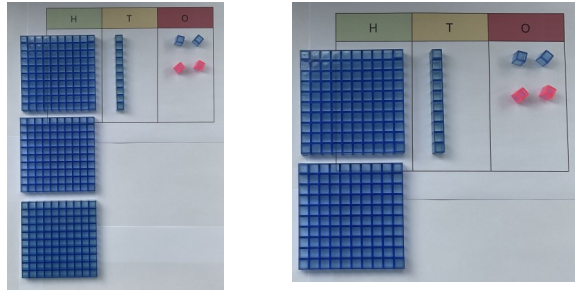
Addition and subtraction	Objective	Concrete	Pictorial	Abstract												
Year 3	Add and subtract 10s	<p>233 - 20</p>  <p>122 + 10</p>  <p>456 - 20</p>  <p>234 + 40</p> 	<table border="1"> <thead> <tr> <th>Hundreds</th> <th>Tens</th> <th>Ones</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Hundreds	Tens	Ones				H	T	O				<p>461 - 20 = _____</p> <p>352 - 30 = _____</p>
Hundreds	Tens	Ones														
																
H	T	O														
																

Add and subtract 100s

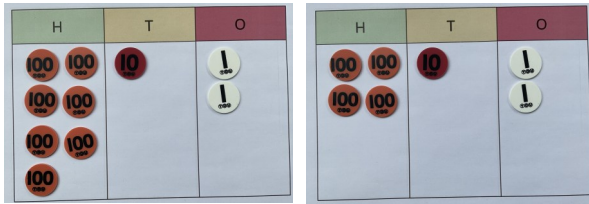
142 + 200



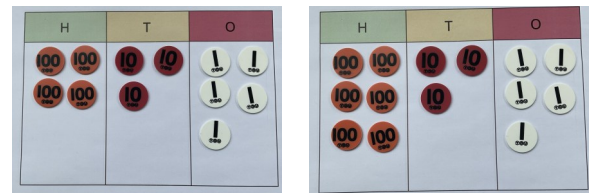
314 - 100



712 - 300



435 + 200



Hundreds	Tens	Ones

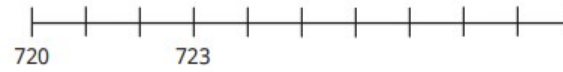
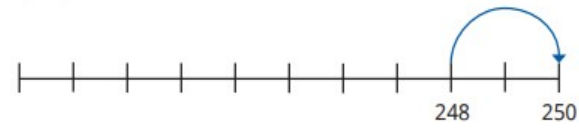
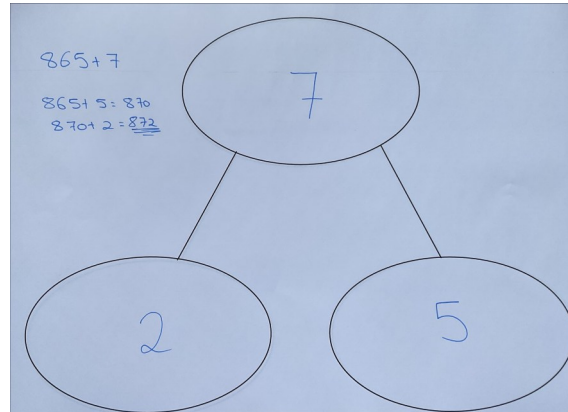
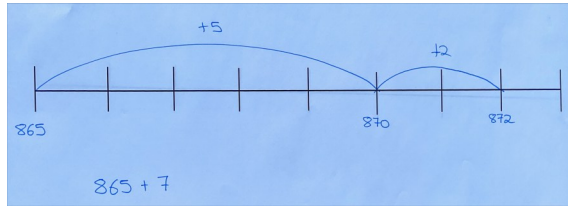
Hundreds	Tens	Ones

461 - 200 = \_\_\_\_\_

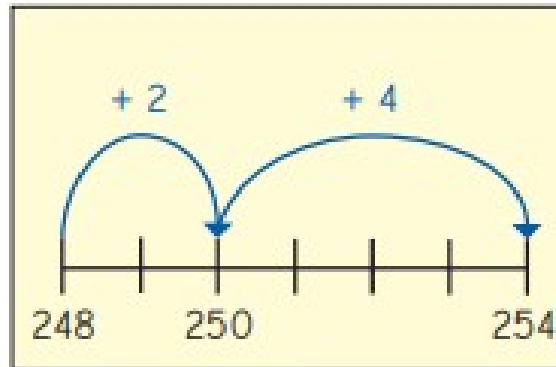
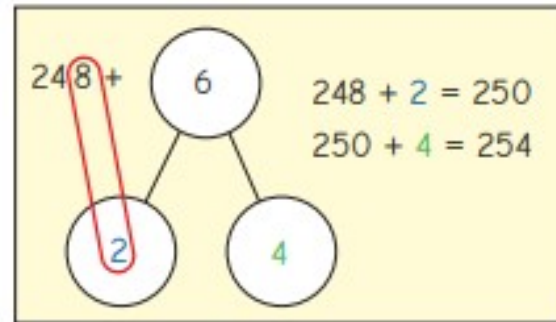
461 - 300 = \_\_\_\_\_

Year 3

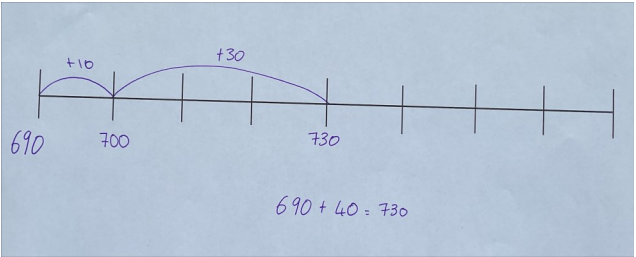
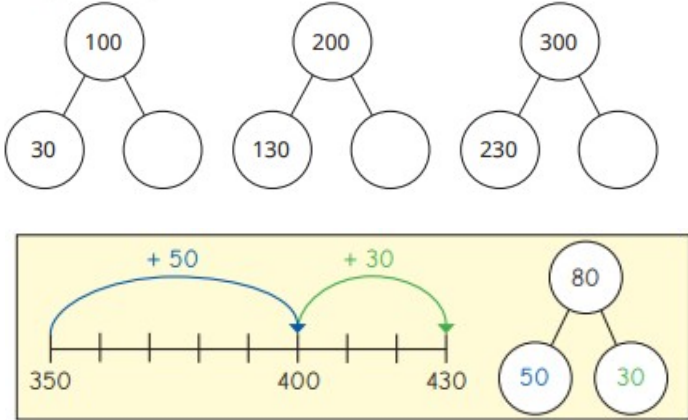
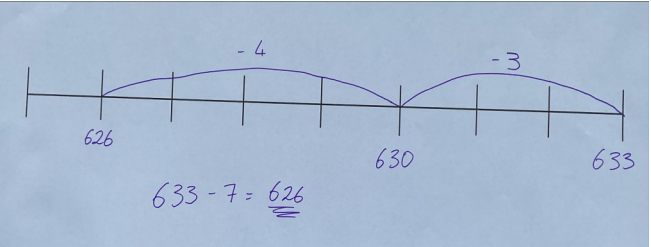
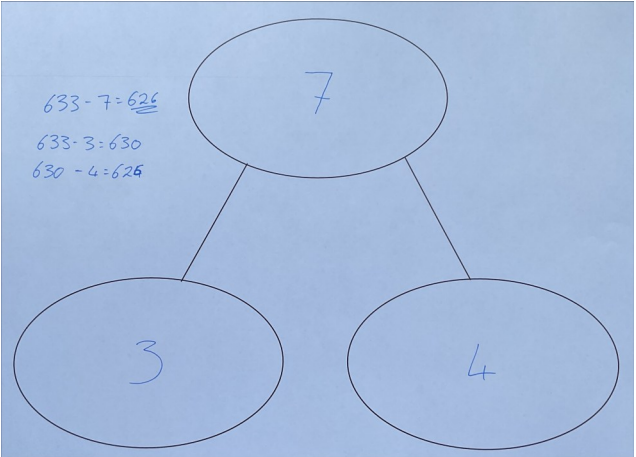
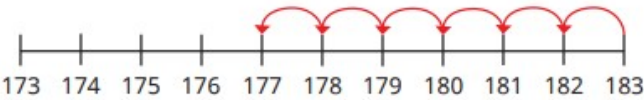
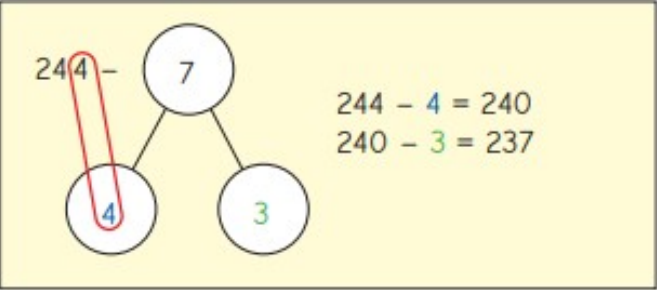
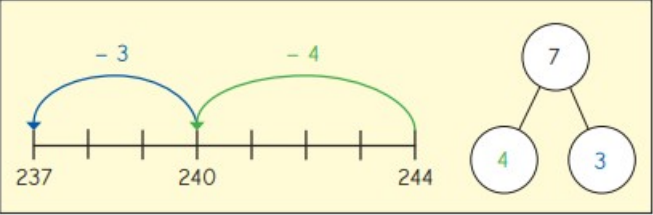
Add across a 10



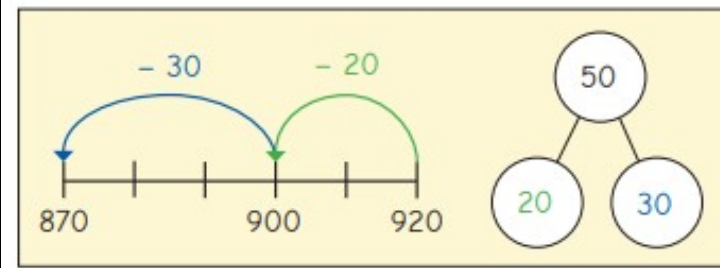
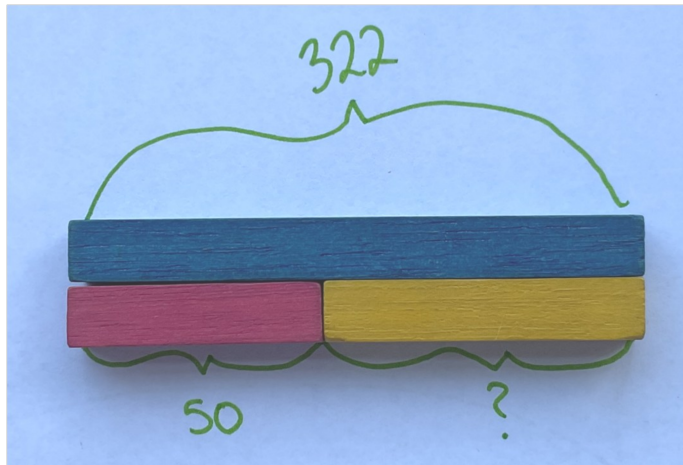
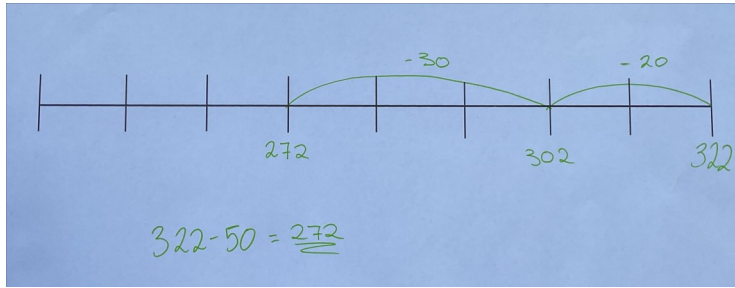
Tom and Mo are working out  $248 + 6$



- $865 + 5$
- $438 + 4$
- $713 + 9$
- $564 + 8$

Year 3	Add 10s across a 100			<p>240 + 80          690 + 80          690 + 40          90 + 830</p>
Year 3	Subtract 1s across a 10	 	  	<p>70-3          370-3          640-8          520-7          242-9          633-7          581-4</p>

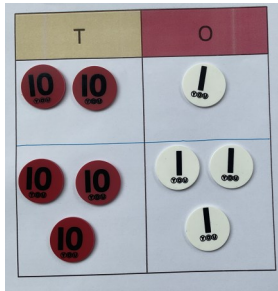
Subtract 10s across a 100



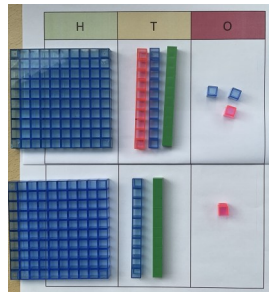
322	
?	50

- 202-70
- 509-40
- 149-70
- 819-30
- 322-50

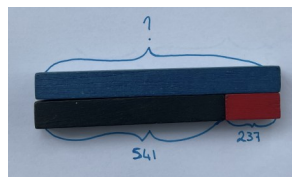
Add two numbers (without exchanging)



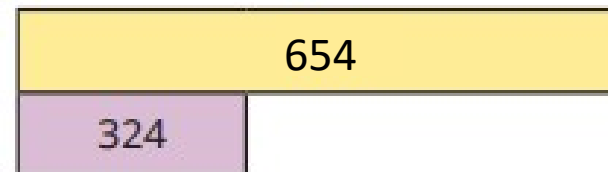
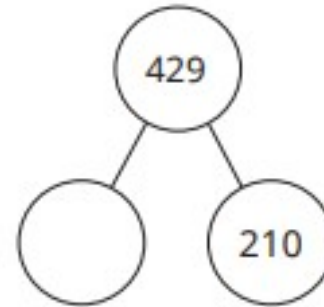
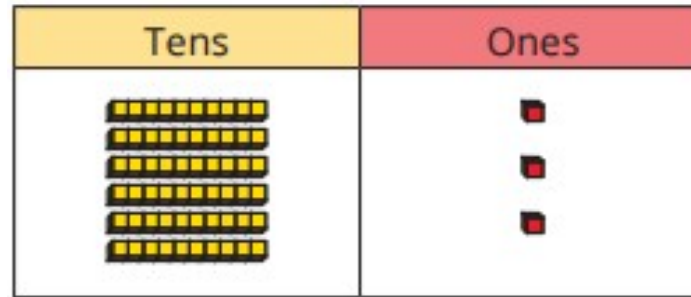
21 + 33



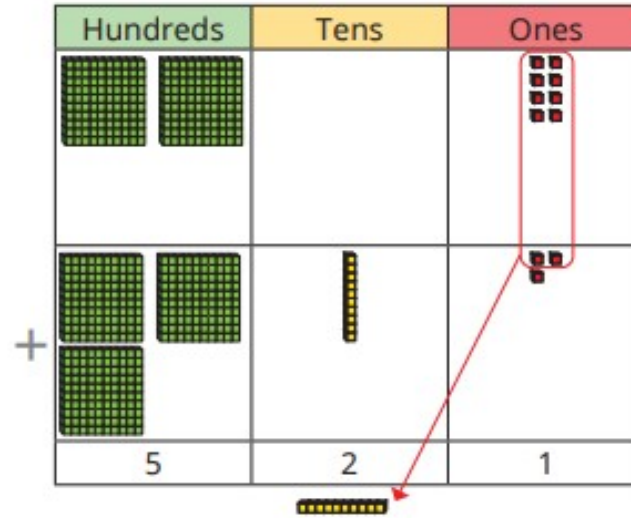
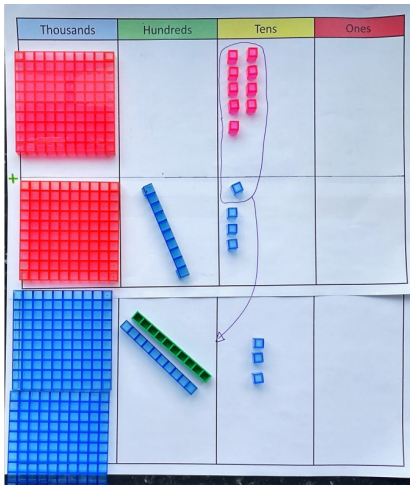
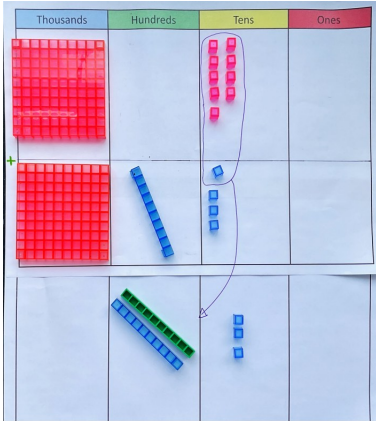
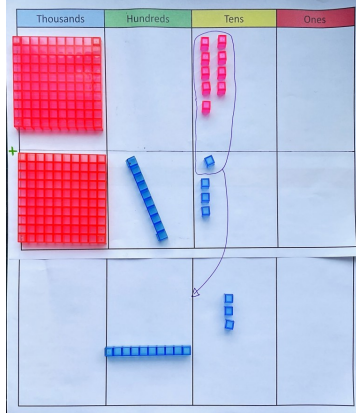
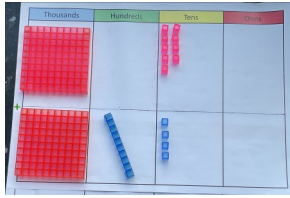
233 + 221



541 + 237



Add two numbers (across a 10)

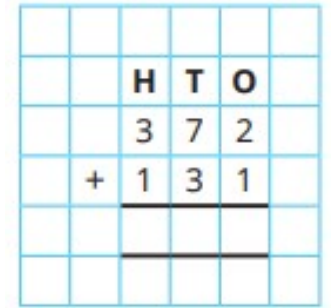
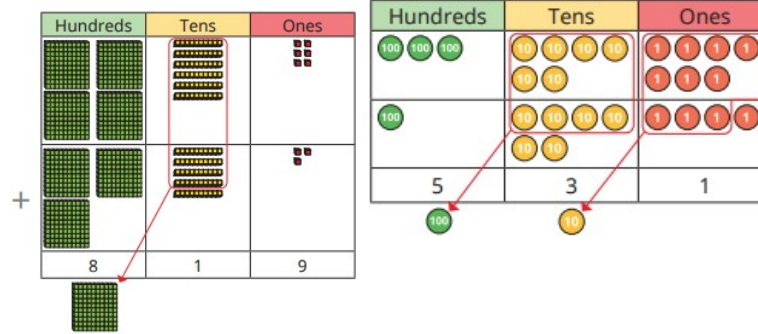
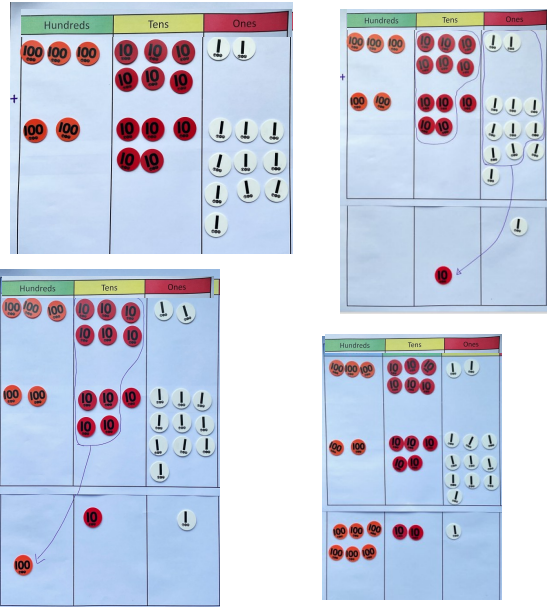


	H	T	O
	5	6	1
+	2	1	9
	<hr/>		
	<hr/>		

	H	T	O
	2	3	
+	1	6	
	<hr/>		
	3	7	0

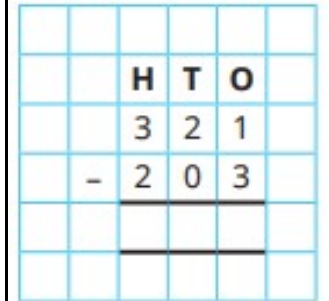
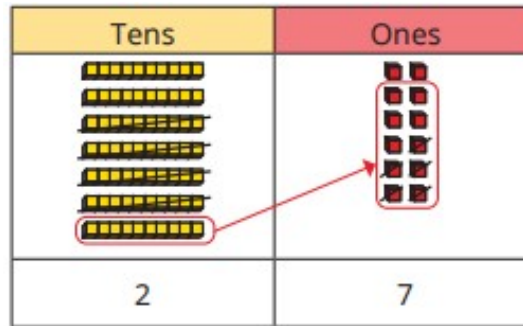
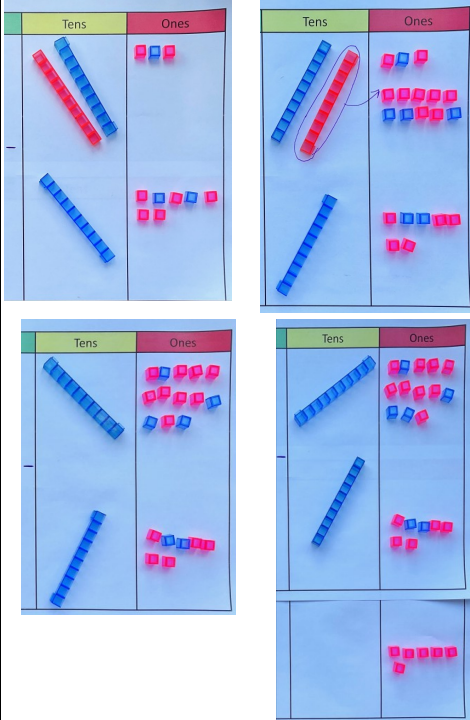
Year 3

Add two numbers (across a 100)



Year 3

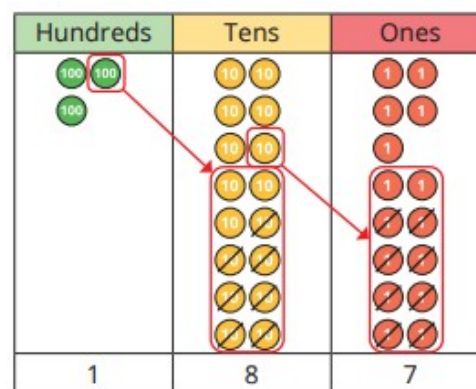
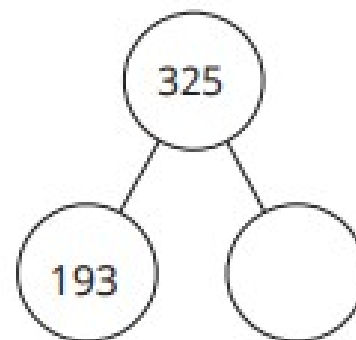
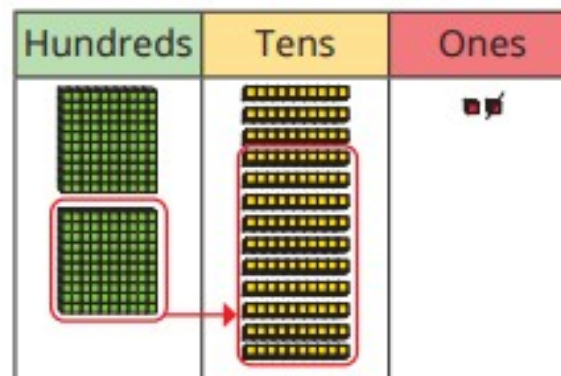
Subtract two numbers (across a 10)



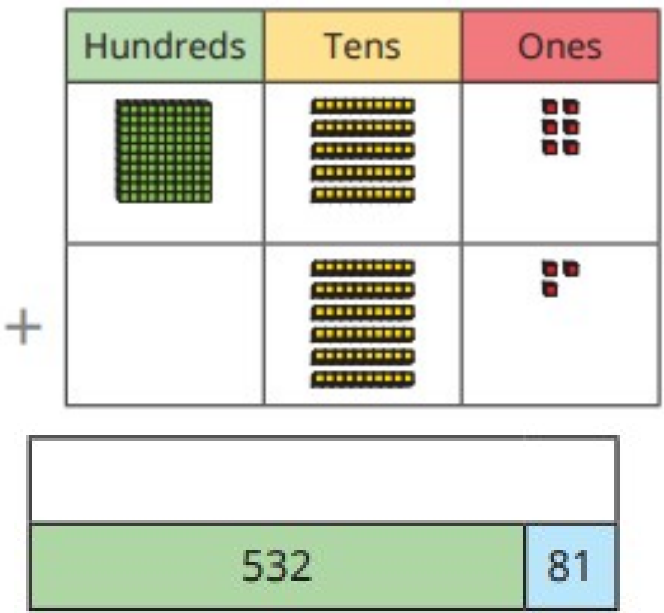



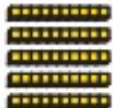




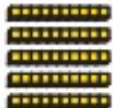

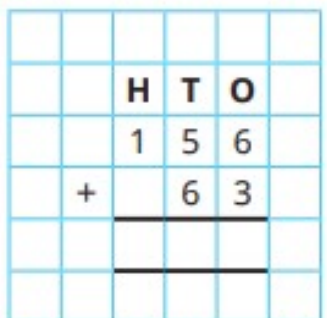



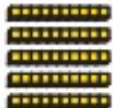

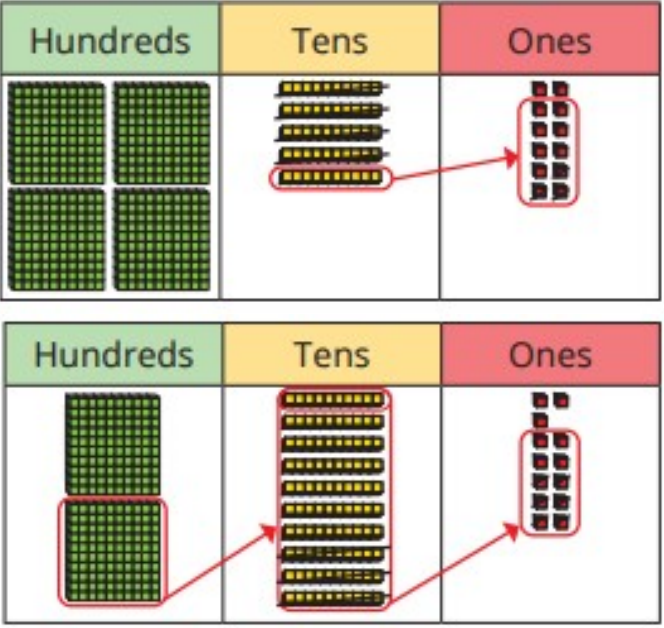





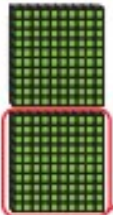









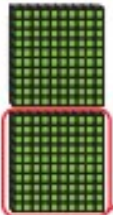




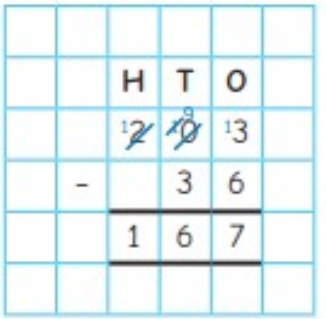





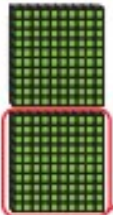




Year 3

Refer to methods taught in Year 3, subtraction of two numbers across 10.

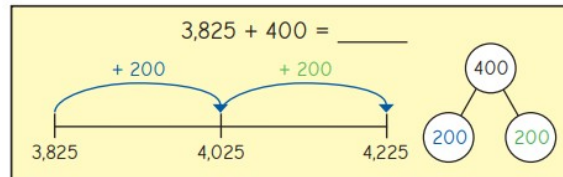
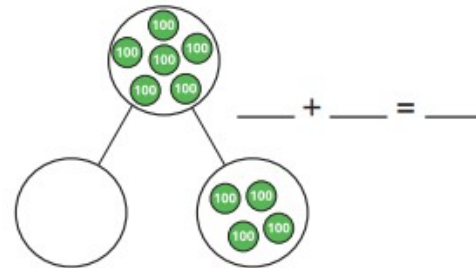
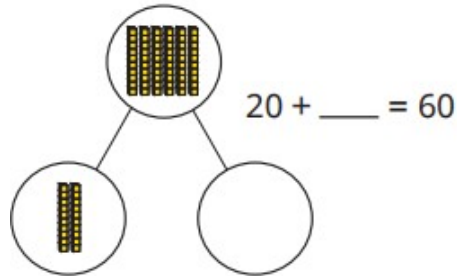
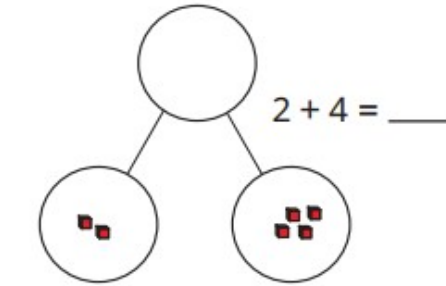
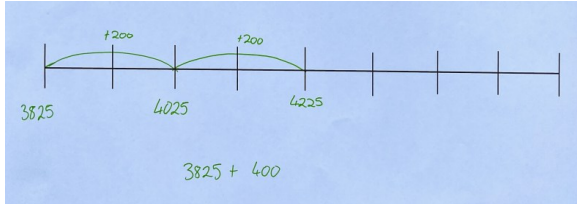
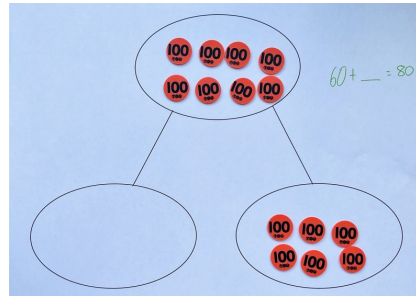
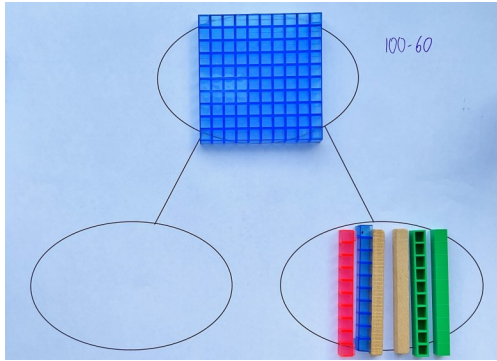
Subtract two numbers ((across a 100))



	H	T	O
	<del>2</del>	<del>15</del>	<del>5</del>
-	1	7	8
	1	8	7

Year 3	Add 2-digit and 3-digit numbers	Refer to year 3, add two numbers without exchanging	 <p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="background-color: #c8e6c9;">Hundreds</th> <th style="background-color: #fff9c4;">Tens</th> <th style="background-color: #ffcdd2;">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 colspan="3" style="text-align: center;">+</td> </tr> <tr> <td></td> <td style="text-align: center;">  </td> <td style="text-align: center;">  </td> </tr> </tbody> </table>   <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="width: 100px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="background-color: #c8e6c9; text-align: center;">532</td> <td style="background-color: #bbdefb; text-align: center;">81</td> </tr> </table> </p>	Hundreds	Tens	Ones				+								532	81									
Hundreds	Tens	Ones																										
																												
+																												
																												
532	81																											
Year 3	Subtract a 2-digit number from a 3-digit number	Refer to methods taught in Year 3, subtraction of two numbers across 10 for methods and resources	 <p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="background-color: #c8e6c9;">Hundreds</th> <th style="background-color: #fff9c4;">Tens</th> <th style="background-color: #ffcdd2;">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 colspan="3" style="text-align: center;">-</td> </tr> <tr> <td></td> <td style="text-align: center;">  </td> <td style="text-align: center;">  </td> </tr> </tbody> </table>   <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="background-color: #c8e6c9;">Hundreds</th> <th style="background-color: #fff9c4;">Tens</th> <th style="background-color: #ffcdd2;">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 colspan="3" style="text-align: center;">-</td> </tr> <tr> <td></td> <td style="text-align: center;">  </td> <td style="text-align: center;">  </td> </tr> </tbody> </table> </p>	Hundreds	Tens	Ones				-						Hundreds	Tens	Ones				-						
Hundreds	Tens	Ones																										
																												
-																												
																												
Hundreds	Tens	Ones																										
																												
-																												
																												

Add and subtract 1s, 10s, 100s and 1000s



Th	H	T	O
●	●● ●● ●●	●● ●● ●● ●	●●

- 1364 + 3
- 1364 + 30
- 1364 + 300
- 1364 + 3000
- 1364 - 1
- 1364 - 60
- 1364 - 200
- 1364 - 1000

Year 4

Add up to two 4-digit numbers—no exchange

Refer to Year 3, add two numbers (without exchanging)

+

Th	H	T	O
1,000 1,000 1,000	100 100	10 10 10 10 10	1 1 1 1 1 1
1,000 1,000	100 100 100 100 100	10 10 10	1 1

1,052      5,945

3,194      405

707      7,070

	Th	H	T	O
	3	1	4	2
+		5	3	7
<hr/>				
<hr/>				

Year 4

Add two 4-digit numbers—one exchange

Refer to Year 3, add two numbers ((across a 100) and add two numbers ((across a 100).

+

Th	H	T	O
1,000 1,000	100 100	10 10	1 1
1,000	100	10 10	1 1
1,000 1,000	100 100	10 10	1 1
	100 100	10	1 1
		10	1

+

3,535	2,634

Brett 

3,436
-------

 $\longleftrightarrow$  1,293

Huan 

--

	Th	H	T	O
	3	3	5	6
+	2	4	3	5
	5	7	9	1
			1	

Year 4

Add two 4-digit numbers—more than one exchange

Refer to Year 3, add two numbers ((across a 100) and add two numbers ((across a 100).

+

Th	H	T	O
1,000 1,000	100 100	10 10	1 1
1,000	100 100	10 10	1
1,000	100 100	10 10	
	100 100	10	1 1
		10	1 1

+

4,673	1,518

Brett 

4,673
-------

Huan 

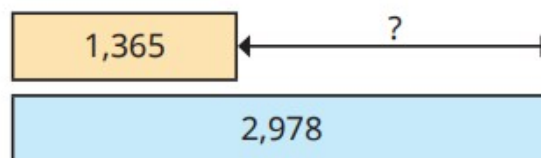
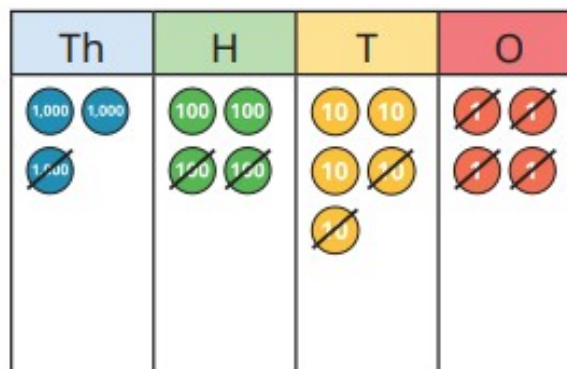
--

	Th	H	T	O
	4	6	7	3
+	1	5	1	8
	6	1	9	1
	1		1	

Year 4

Subtract two 4-digit numbers—no exchange

Refer to methods taught in Year 3, subtraction of two numbers across 10.

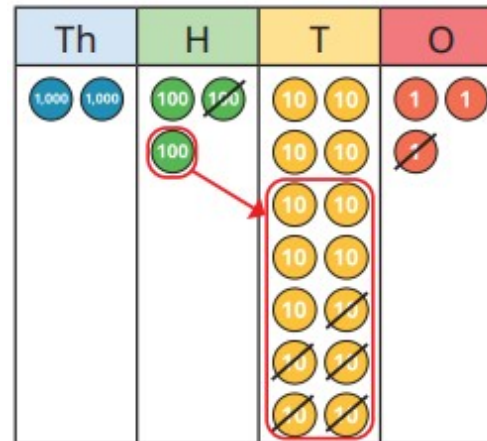
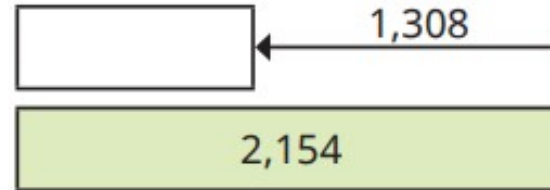
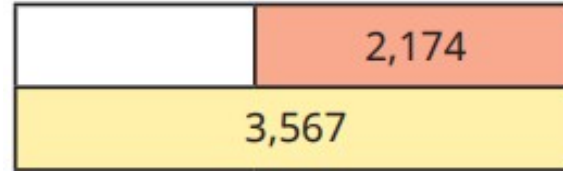
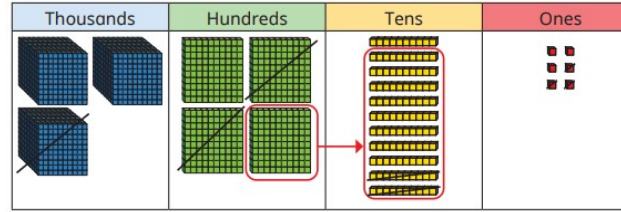


	Th	H	T	O
	3	4	5	4
-	1	2	2	4
	2	2	3	0

Year 4

Subtract two 4-digit numbers— one exchange

Refer to methods taught in Year 3, subtraction of two numbers across 10.

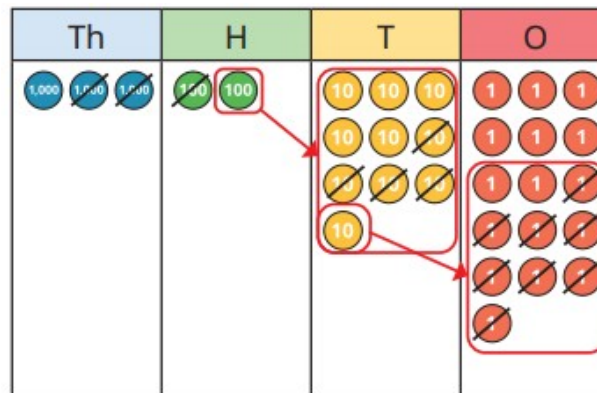
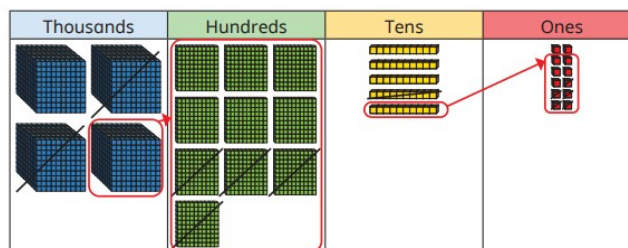


	Th	H	T	O
	3	<del>5</del> <sup>4</sup>	6	7
-	1	2	2	3
	2	1	9	3

Year 4

Subtract two 4-digit numbers — more than one exchange

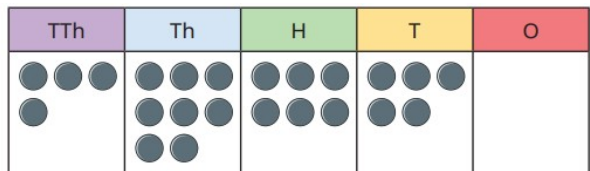
Refer to methods taught in Year 3, subtraction of two numbers across 10.



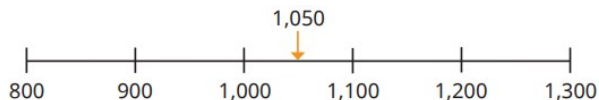
	Th	H	T	O
	<del>3</del> 4	10	<del>4</del> 5	12
-	2	4	1	5
	1	6	3	7

Year 5

Mental strategies



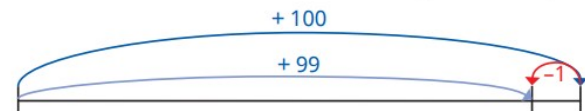
- ▶ 48,650 - 3,000
- ▶ 43,650 - 200
- ▶ 43,650 - 10
- ▶ 48,650 - 3,210
- ▶ 48,650 - 7,100
- ▶ 48,650 - 5,030



Use the number line to help you work out the calculations.

- ▶ 1,050 + 100
- ▶ 1,050 - 100

The number line shows a method for adding 99 mentally.

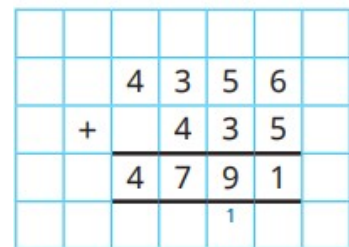
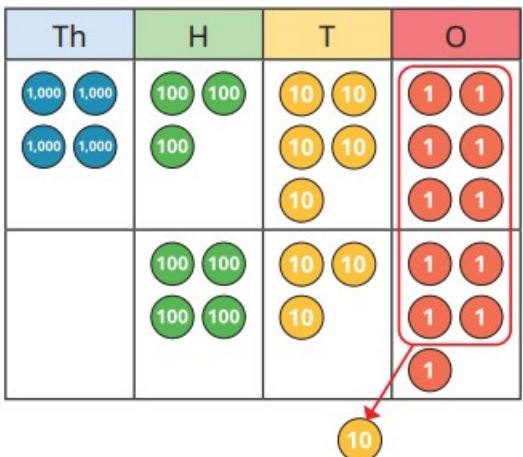


- 3724 + 999
- 3724 + 990
- 3724 - 999
- 3724 - 990

Year 5

Add whole numbers with more than four digits

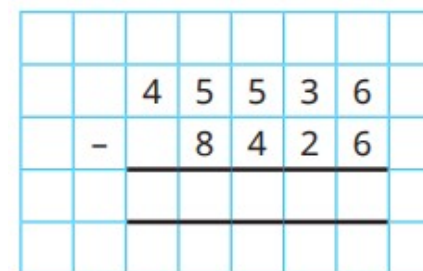
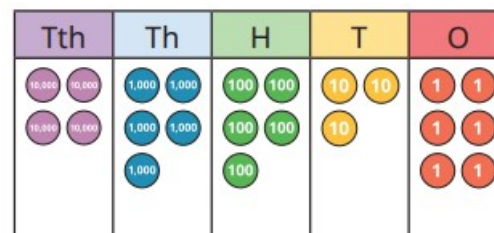
Refer to Year 3, add two numbers ((across a 100) and add two numbers ((across a 100).

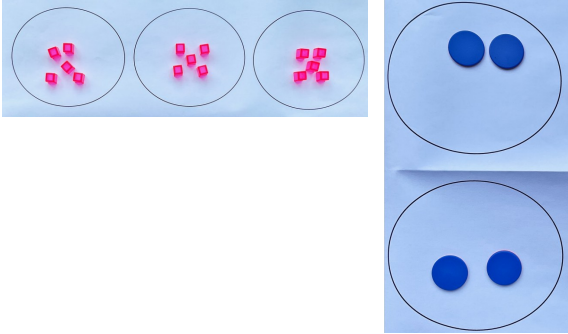
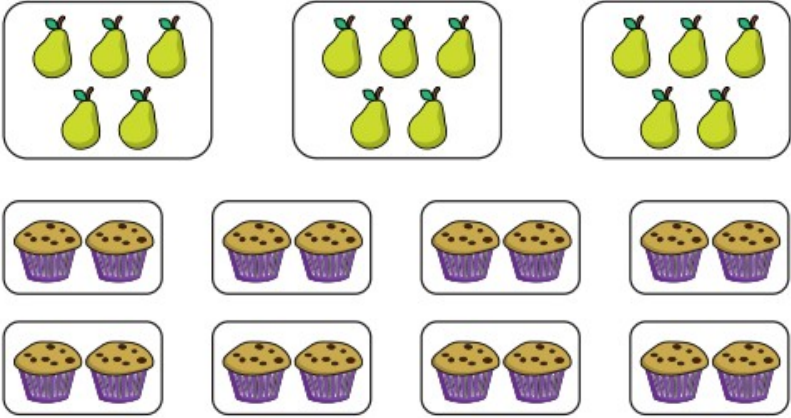
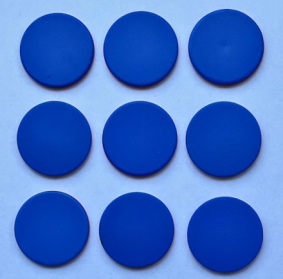
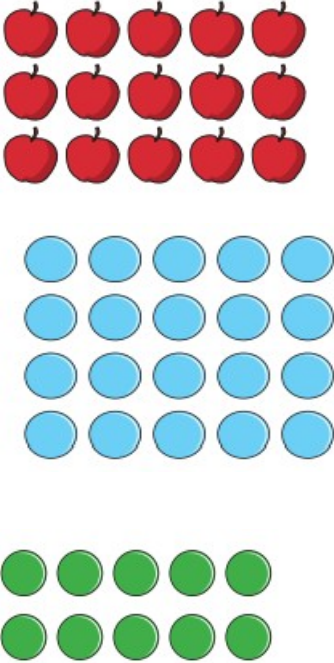


Year 5

Subtract whole numbers with more than four digits

Refer to methods taught in Year 3, subtraction of two numbers across 10.

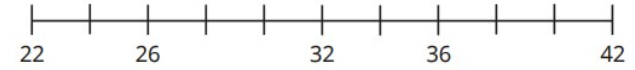
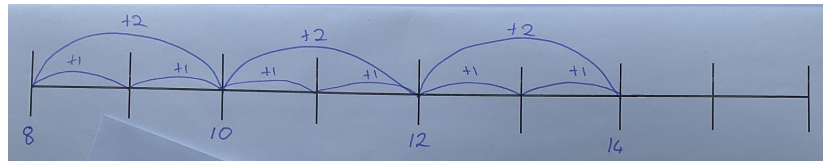
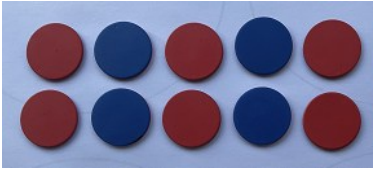


Multipl cation and divison	Objective	Concrete	Pictorial	Abstract
Year 3	Equal groups	<p>Representation shown with cubes or counters but if it is possible to use the actual objects spoken about in questions, please use these.</p> 		
Year 3	Use arrays			<p>3 x 5 5 x 3</p> <p>4 x 5 5 x 4</p> <p>2 x 5 5 x 2</p>

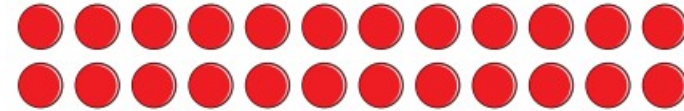
Year 3

Multiples of 2

<del>1</del>	<del>2</del>	<del>3</del>	4	<del>5</del>	6	<del>7</del>	<del>8</del>	<del>9</del>	10
<del>11</del>	12	<del>13</del>	<del>14</del>	15	16	17	18	<del>19</del>	20
<del>21</del>	22	<del>23</del>	24	<del>25</del>	26	27	28	<del>29</del>	30
<del>31</del>	32	<del>33</del>	34	<del>35</del>	36	37	38	<del>39</del>	40
<del>41</del>	42	<del>43</del>	44	<del>45</del>	46	<del>47</del>	48	<del>49</del>	50
<del>51</del>	52	<del>53</del>	54	<del>55</del>	56	57	58	<del>59</del>	60
<del>61</del>	62	<del>63</del>	64	<del>65</del>	66	67	68	<del>69</del>	70
<del>71</del>	72	<del>73</del>	74	<del>75</del>	76	77	78	<del>79</del>	80
<del>81</del>	82	<del>83</del>	84	<del>85</del>	86	87	88	<del>89</del>	90
<del>91</del>	92	<del>93</del>	94	<del>95</del>	96	<del>97</del>	98	<del>99</del>	100

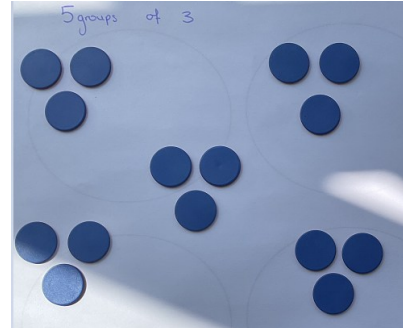
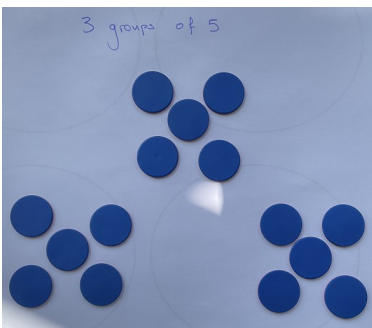


1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50



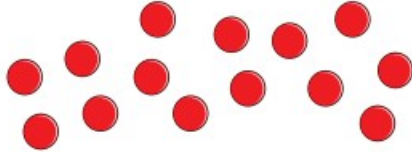
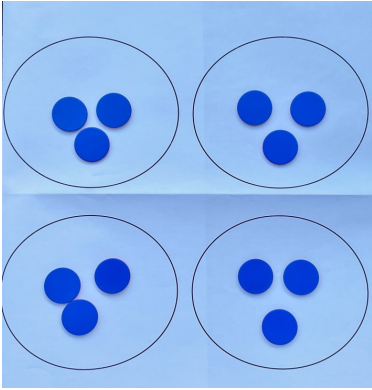
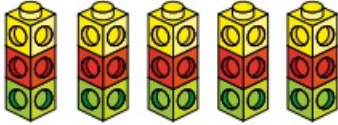

Year 3


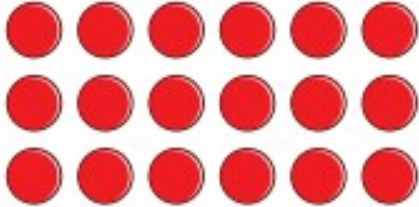
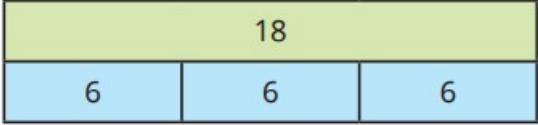
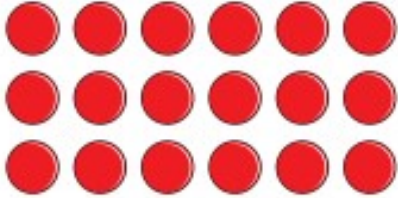
Multiples of 5 and 10



0	5		15		25			
60	55		45					
110		90		70				

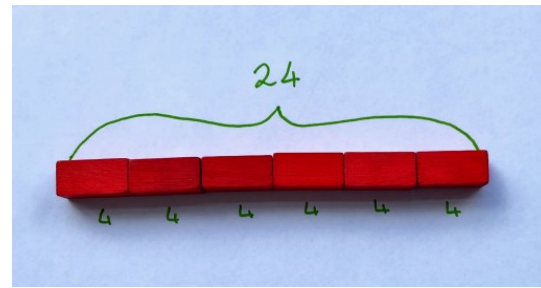
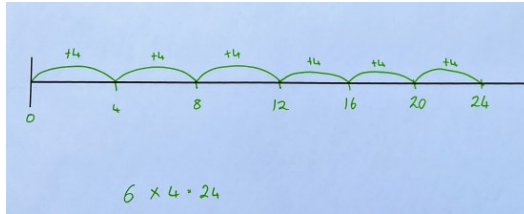
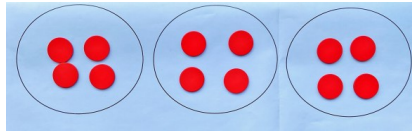
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Year 3	Sharing and grouping	Refer to multiples and arrays to support children with this objective.	<p>Difference between sharing and grouping—add this in</p> 	
Year 3	Multiply by 3		 <p>5 towers, in each tower, there are 3 cubes. How many cubes altogether?</p>  <p>3 vases, 3 flowers in each vase there are 9 flowers. How many flowers altogether?</p>	$5 \times 3$ $3 \times 5$  $3 \times 9$ $9 \times 3$

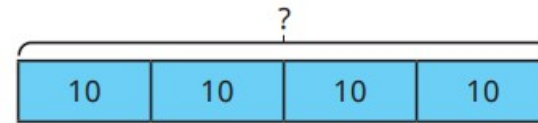
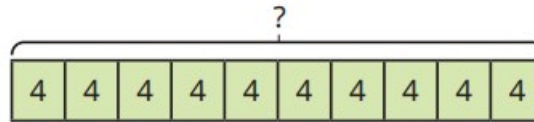
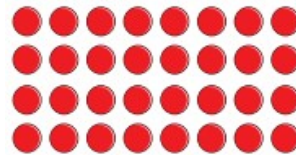
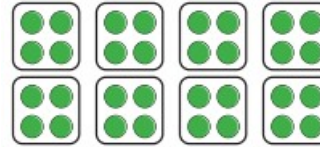
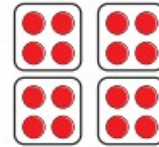
Year 3	Divide by 3	Use resources found in Year 3 making arrays and multiply by 3	 <p>There are _____ strawberries altogether. There are _____ strawberries on each plate.</p>  	<p>_____ ÷ 3 = _____</p> <p>_____ ÷ 3 = _____</p> <p>18 ÷ 3 = 6</p>
Year 3	The 3 times table			<p>1 x 3 = _____</p> <p>2 x 3 = _____</p> <p>3 x 3 = _____</p> <p>4 x 3 = _____</p> <p>5 x 3 = _____</p> <p>24 = _____ x 8</p> <p>12 = _____ x 3</p> <p>_____ x 3 = 21</p> <p>_____ = 5 x 3</p> <p>2 _____ x 6 = 3</p>

Year 3

Multiply by 4



t.



$4 \times 5$   
 $5 \times 4$

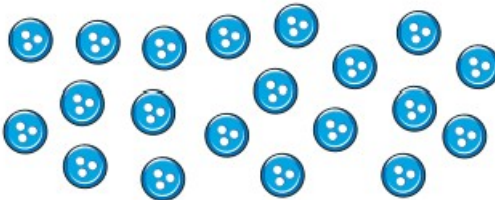
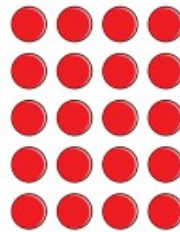
$4 \times 4$

$4 \times 8$   
 $8 \times 4$

$4 \times 8$   
 $8 \times 4$

$4 \times 10$   
 $10 \times 4$

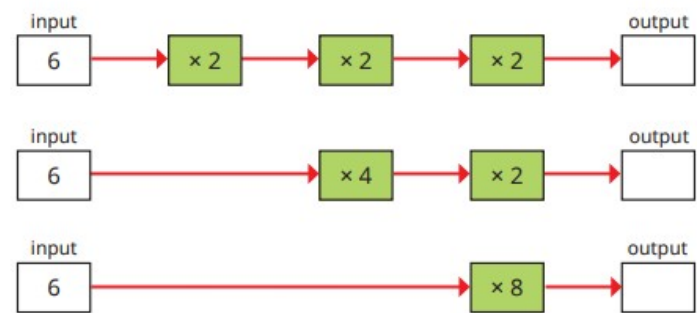
$4 \times 10$   
 $10 \times 4$

Year 3	Divide by 4	Refer to Year 4, multiply by 4 for resources to use.	 $\begin{array}{r} 24 \\ \overline{)444444} \end{array}$ $\begin{array}{r} 24 \\ \overline{)6666} \end{array}$																																																			
Year 3	4 times table	Refer to Year 4, multiply by 4 for resources to use.	<table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr> <tr><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td></tr> <tr><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td></tr> <tr><td>31</td><td>32</td><td>33</td><td>34</td><td>35</td><td>36</td><td>37</td><td>38</td><td>39</td><td>40</td></tr> <tr><td>41</td><td>42</td><td>43</td><td>44</td><td>45</td><td>46</td><td>47</td><td>48</td><td>49</td><td>50</td></tr> </table>  <p><b>Add picture of 4 times table on a number line</b></p>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	
1	2	3	4	5	6	7	8	9	10																																													
11	12	13	14	15	16	17	18	19	20																																													
21	22	23	24	25	26	27	28	29	30																																													
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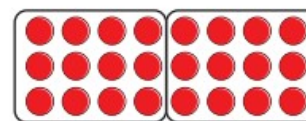
Year 3

Multiply by 8

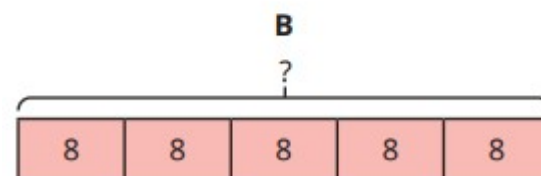
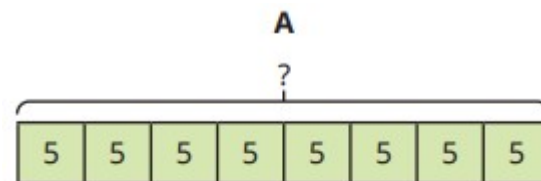
Refer to Year 4, multiply by 4 and adapt to multiplying by 8.



Ron has drawn an array to help him work out  $3 \times 8$



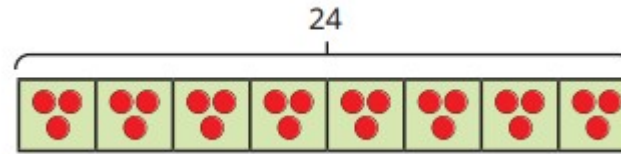
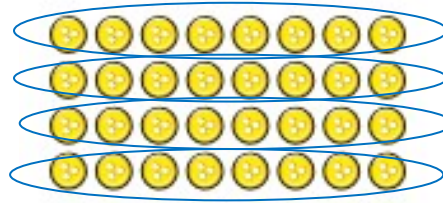
I can multiply 3 by 4 and then double it.



Year 3

Divide by 8

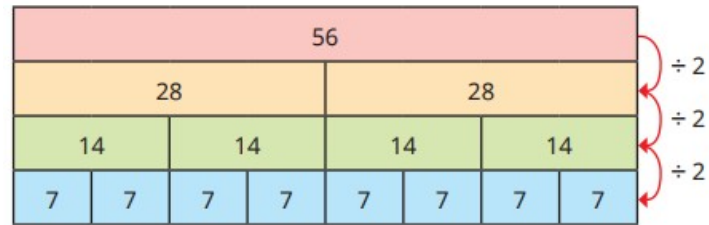
Refer to Year 4, multiply by 4 and adapt to divide by 8.



Dexter is working out  $56 \div 8$



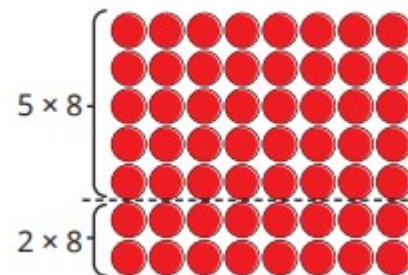
To divide a number by 8, I can halve it, halve it again and then halve it once more.



Year 3

The 8 times table

Refer to Year 4, multiply by 4 and adapt to multiplying by 8.



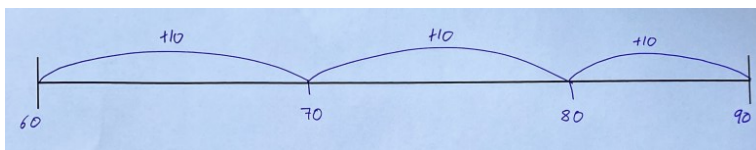
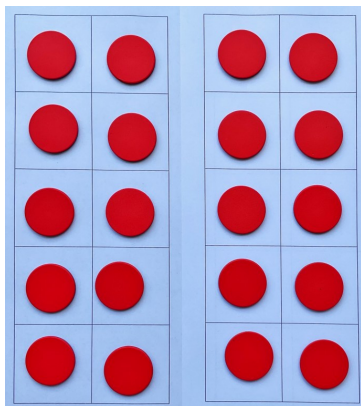
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Partitioning:

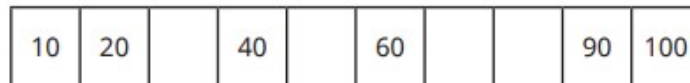
$$\begin{aligned} 7 \times 8 &= 5 \times 8 + 2 \times 8 \\ &= 40 + 16 \\ &= 56 \end{aligned}$$

Year 3

Multiples of 10



Number tracks



Tens frames



Place value chart

Hundreds	Tens	Ones

14 x 10

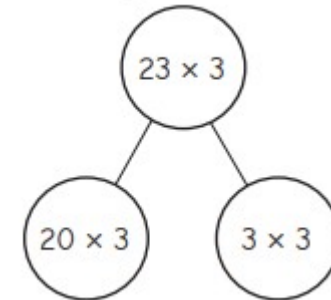
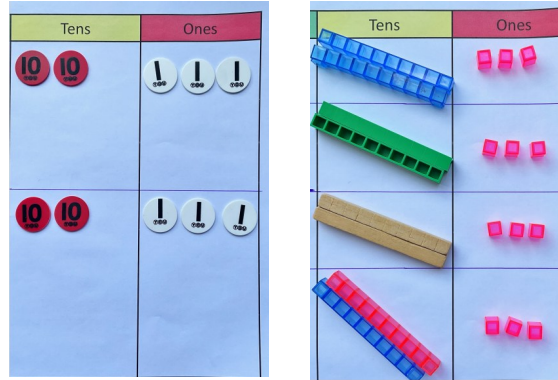
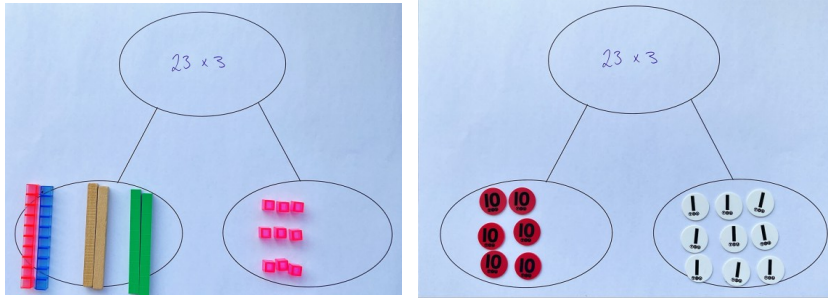
19 x 10

10 x 23

10 x 26

Year 3

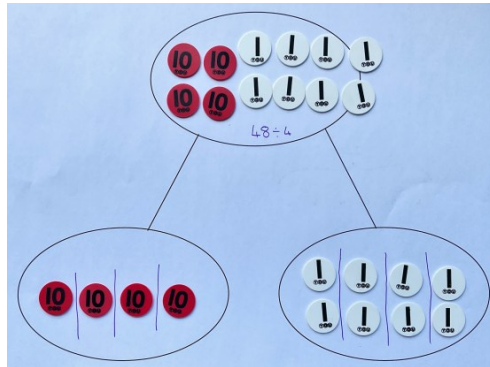
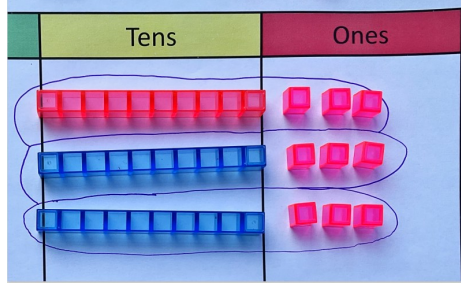
Multiply a 2-digit number by a 1-digit number (no exchange)



- 32 x 3
- 23 x 2
- 12 x 4
- 41 x 2
- 21 x 5
- 42 c 2
- 52 x 2
- 21 x 6

Year 3

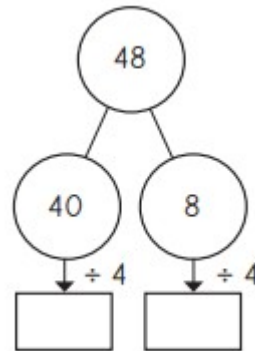
Divide a 2-digit number by a 1-digit number (no exchange)



$39 \div 3$

Tens	Ones
10	1 1 1
10	1 1 1
10	1 1 1

$48 \div 4$



$84 \div 4$

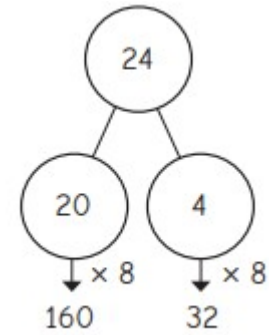
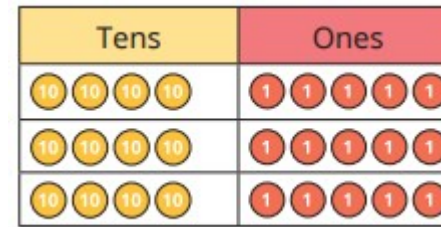
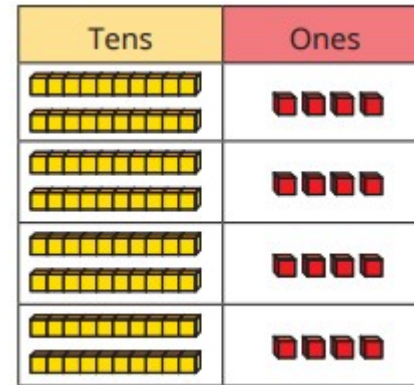
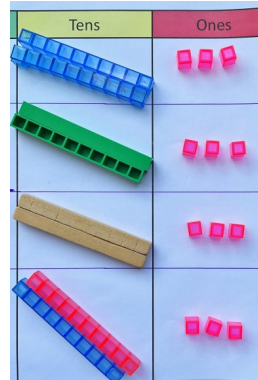
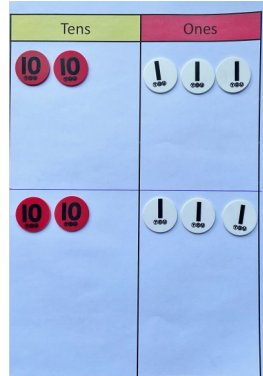
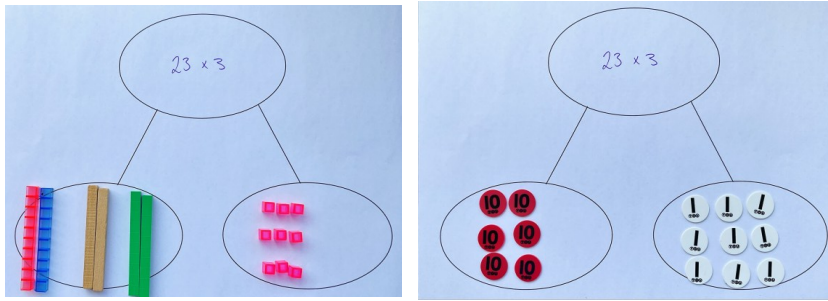
$66 \div 2$

$66 \div 3$

$69 \div 3$

Year 3

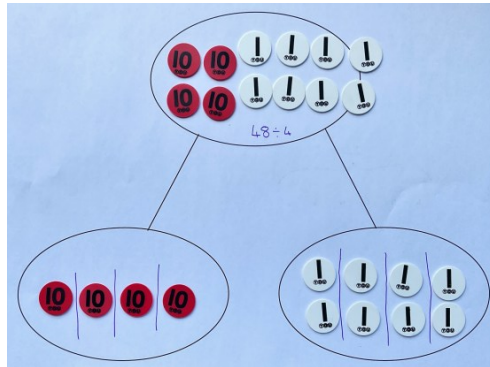
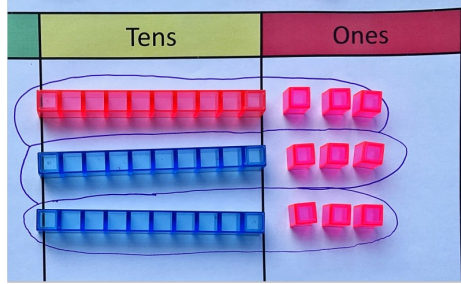
Multiply a 2-digit number by a 1-digit number (with exchange)



- 13 x 4
- 23 x 4
- 14 x 8
- 25 x 3

Year 3

Divide a 2-digit number by a 1-digit number (flexible partitioning)



Ron uses place value counters to work out  $42 \div 3$

First, he shares the tens into 3 equal groups.

He has 1 ten and 2 ones left over.

Tens	Ones
10	
10	
10	

1  
10  
1

Ron exchanges the remaining ten for 10 ones.

Then he shares the ones into 3 equal groups.

Tens	Ones
10	1 1 1 1
10	1 1 1 1
10	1 1 1 1

$42 \div 3 = 14$

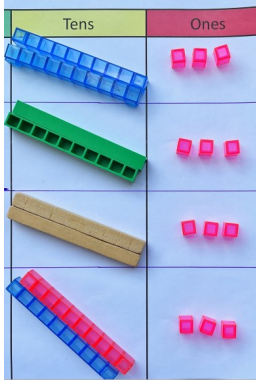
$48 \div 3$

$52 \div 4$

$65 \div 5$

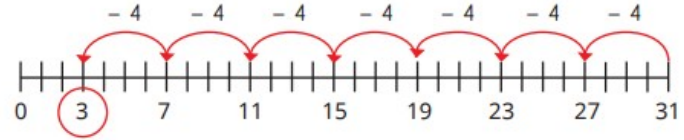
$72 \div 6$

Divide a 2-digit number by a 1-digit number (with remainders)



Repeated subtraction

$31 \div 4$



$94 \div 4$

Alex uses place value counters to work out  $94 \div 4$

First, she shares the tens into 4 equal groups.

Tens	Ones
10 10	
10 10	
10 10	
10 10	

She needs to exchange the remaining ten for 10 ones.

Alex shares as many of the ones as possible into 4 equal groups.

Tens	Ones
10 10	1 1 1
10 10	1 1 1
10 10	1 1 1
10 10	1 1 1

$94 \div 4 = 23 \text{ r}2$

$76 \div 3$

$62 \div 5$

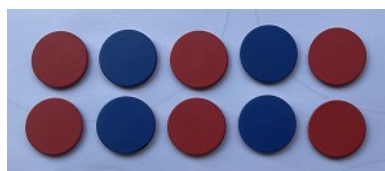
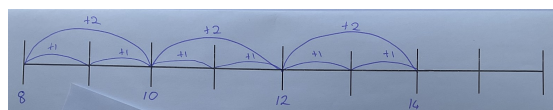
$58 \div 4$

$83 \div 6$

Year 4

Multiples of 3

<del>1</del>	<del>2</del>	3	<del>4</del>	<del>5</del>	6	<del>7</del>	<del>8</del>	<del>9</del>	10
<del>11</del>	12	<del>13</del>	<del>14</del>	15	16	17	18	19	20
<del>21</del>	22	<del>23</del>	24	<del>25</del>	26	27	28	<del>29</del>	30
<del>31</del>	32	<del>33</del>	34	<del>35</del>	36	<del>37</del>	38	<del>39</del>	40
<del>41</del>	42	<del>43</del>	44	<del>45</del>	46	<del>47</del>	48	<del>49</del>	50
<del>51</del>	52	<del>53</del>	54	<del>55</del>	56	57	58	59	60
<del>61</del>	62	<del>63</del>	64	<del>65</del>	66	<del>67</del>	68	<del>69</del>	70
<del>71</del>	72	<del>73</del>	74	<del>75</del>	76	77	78	79	80
<del>81</del>	82	<del>83</del>	84	<del>85</del>	86	<del>87</del>	88	<del>89</del>	90
<del>91</del>	92	<del>93</del>	94	<del>95</del>	96	<del>97</del>	98	<del>99</del>	100



Number track

3	6		12		18	21	24			33	36
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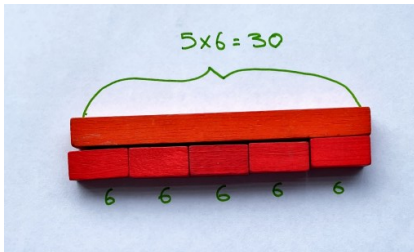
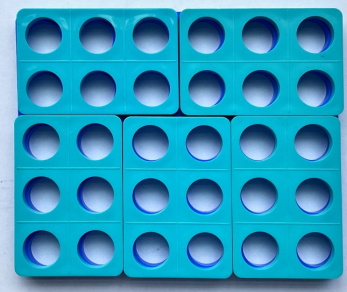
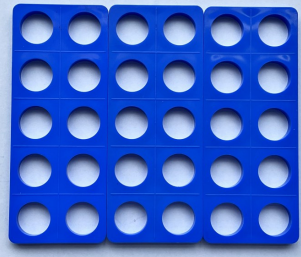
Hundred square

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

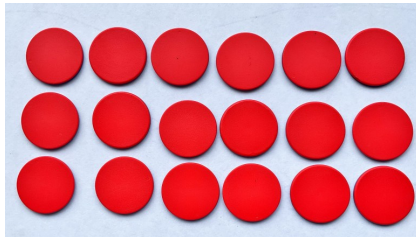
Year 4

Multiply and divide by 6

$30 \div 6$

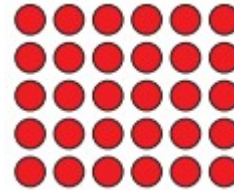


$6 \times 3$



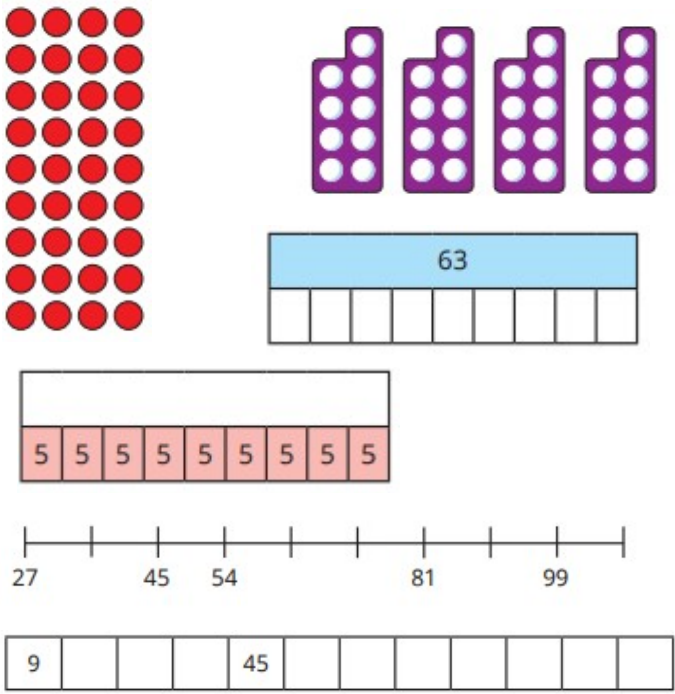
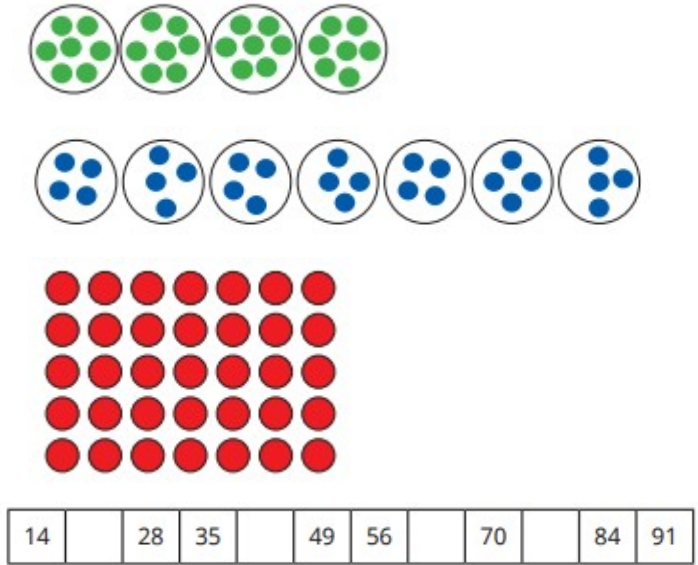
48					

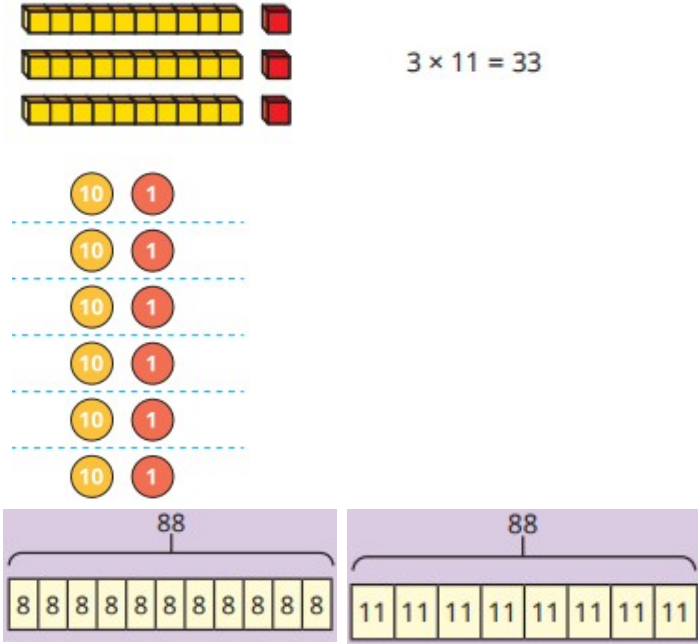
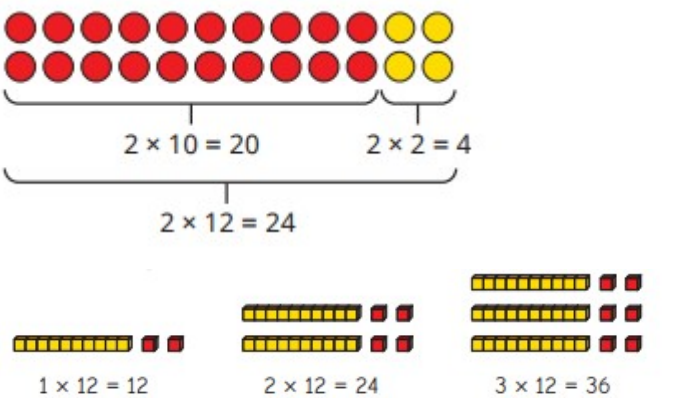
9	9	9	9	9	9

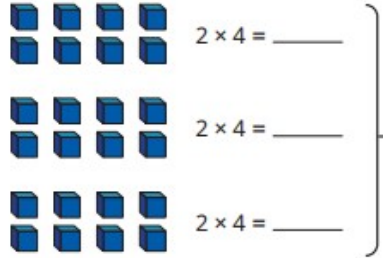
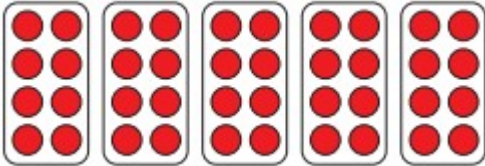





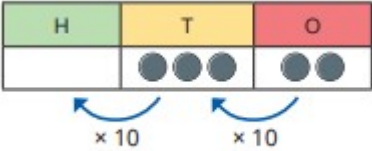
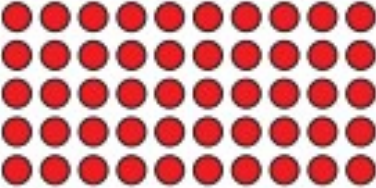
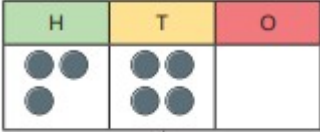
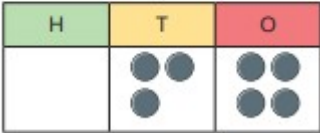
6	12	18						60		
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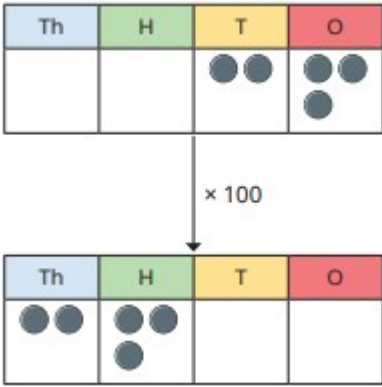
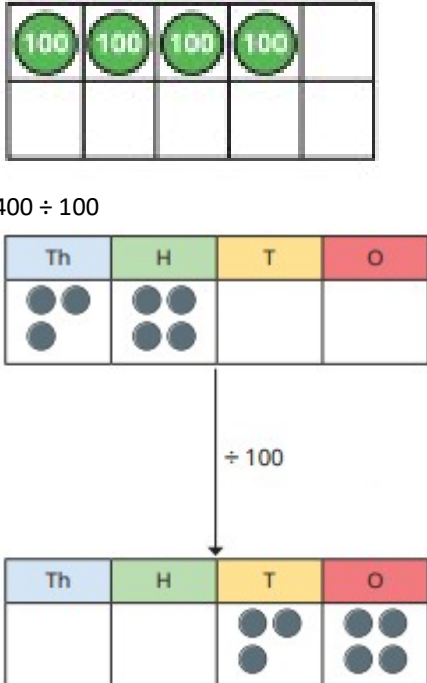
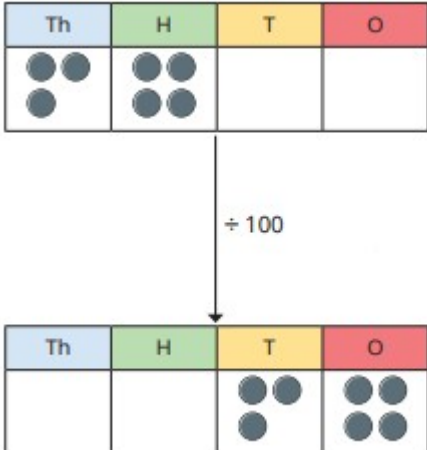
$6 + 6 + 6 + 6 + 6$

<p>Yea 4</p>	<p>Multiply and divide by 9</p>	<p>Refer to strategies used in Year 4, multiply and divide by 6</p>		<p> <math>7 \times 9</math>  <math>3 \times 9</math>  <math>9 \times 9</math>  <math>19 \times 9</math>  <math>108 \div 9</math>  <math>81 \div 9</math>  <math>27 \div 9</math>  <math>63 \div 9</math> </p>
<p>Year 4</p>	<p>Multiply and divide by 7</p>	<p>Refer to strategies used in Year 4, multiply and divide by 6</p>		<p> <math>6 \times 7</math>  <math>9 \times 7</math>  <math>11 \times 7</math>  <math>7 \times 3</math>  <math>28 \div 7</math>  <math>84 \div 7</math>  <math>56 \div 7</math> </p>

Year 4	11 times table and division facts	Refer to strategies used in Year 4, multiply and divide by 6.		<p>5 x 11 8 x 11 10 x 11 11 x 6 11 x 7</p>
Year 4	12 times table and division facts	Refer to strategies used in Year 4, multiply and divide by 6.		<p>5 x 12 8 x 12 12 x 10 7 x 12 12 x 6 12 x 12</p>

Year 4	Multiply three numbers		<p><math>2 \times 4 \times 3</math></p>  <p><math>2 \times 4 = \underline{\quad}</math></p> <p><math>2 \times 4 = \underline{\quad}</math></p> <p><math>2 \times 4 = \underline{\quad}</math></p> <p><math>3 \times 2 \times 4 = 3 \times 8 = \underline{\quad}</math></p> <p><math>4 \times 2 \times 5</math></p> 	<p><math>5 \times 2 \times 6</math></p> <p><math>8 \times 4 \times 5</math></p> <p><math>2 \times 8 \times 6</math></p> <p><math>7 \times 4 \times 2</math></p> <p><math>3 \times 5 \times 4</math></p>
Year 4	Factor pairs		<p>Complete the factor pairs of 12 and the sentences.</p>  <p><math>1 \times \underline{\quad} = 12</math></p>  <p><math>\underline{\quad} \times 6 = 12</math></p>  <p><math>\underline{\quad} \times \underline{\quad} = 12</math></p>	<p><math>18 = 1 \times 18</math></p> <p><math>18 = 2 \times 9</math></p> <p><math>18 = 3 \times 6</math></p>

Year 4	Multiply by 10		<p>13 x 10</p> 	<p>23 x 10  16 x 10  31 x 10  10 x 82  10 x 43</p>
Year 4	Divide by 10		  <p style="text-align: center;">↓ ÷ 10</p> 	<p>480 ÷ 10  620 ÷ 10  930 ÷ 10</p>

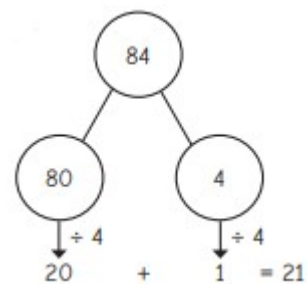
Year 4	Multiply by 100		<p>23 x 100</p> 	<p>41 x 100 94 x 100 83 x 100</p>
Year 4	Divide by 100		<p>400 ÷ 100</p>  <p>3400 ÷ 100</p> 	

Year 4	Multiply a 2-digit number by a 1-digit number		<p>34 x 2</p> <table border="1"> <thead> <tr> <th colspan="3">Tens</th> <th colspan="4">Ones</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>10</td> <td>10</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>10</td> <td>10</td> <td>10</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> </tbody> </table>	Tens			Ones				10	10	10	1	1	1	1	10	10	10	1	1	1	1	<table border="1"> <thead> <tr> <th></th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td></td> <td>3</td> <td>4</td> </tr> <tr> <td>x</td> <td></td> <td>2</td> </tr> <tr> <td></td> <td></td> <td>8</td> </tr> <tr> <td></td> <td>6</td> <td>0</td> </tr> <tr> <td></td> <td>6</td> <td>8</td> </tr> </tbody> </table> <p>(4 × 2 = 8) (30 × 2 = 60)</p>		T	O		3	4	x		2			8		6	0		6	8
Tens			Ones																																								
10	10	10	1	1	1	1																																					
10	10	10	1	1	1	1																																					
	T	O																																									
	3	4																																									
x		2																																									
		8																																									
	6	0																																									
	6	8																																									
Year 4	Multiply a 3-digit number by a 1-digit number		<table border="1"> <thead> <tr> <th>Hundreds</th> <th>Tens</th> <th>Ones</th> </tr> </thead> <tbody> <tr> <td>100 100</td> <td>10</td> <td>1 1 1</td> </tr> <tr> <td>100 100</td> <td>10</td> <td>1 1 1</td> </tr> <tr> <td>100 100</td> <td>10</td> <td>1 1 1</td> </tr> </tbody> </table>	Hundreds	Tens	Ones	100 100	10	1 1 1	100 100	10	1 1 1	100 100	10	1 1 1	<table border="1"> <thead> <tr> <th></th> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td></td> <td>2</td> <td>1</td> <td>3</td> </tr> <tr> <td>x</td> <td></td> <td></td> <td>3</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		H	T	O		2	1	3	x			3															
Hundreds	Tens	Ones																																									
100 100	10	1 1 1																																									
100 100	10	1 1 1																																									
100 100	10	1 1 1																																									
	H	T	O																																								
	2	1	3																																								
x			3																																								

Divide a 2-digit number by a 1-digit number

$84 \div 4$

Tens	Ones



- $84 \div 7$
- $78 \div 6$
- $96 \div 8$

$85 \div 4$

Tens	Ones

$97 \div 4$

Tens	Ones

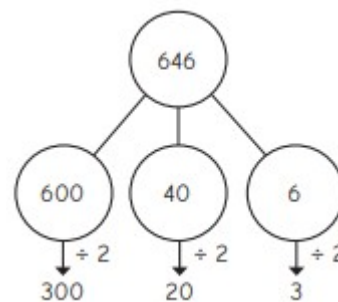
Year 4

Divide a 3-digit number by a 1-digit number

$639 \div 3$


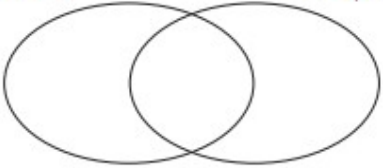
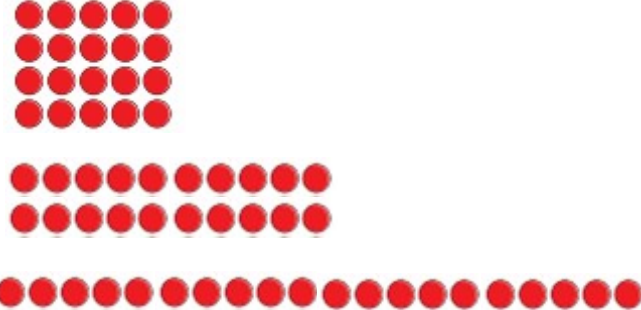


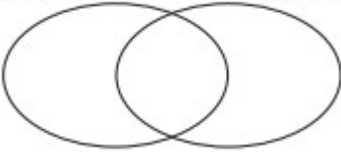
Hundreds	Tens	Ones
100 100	10	1 1 1
100 100	10	1 1 1
100 100	10	1 1 1




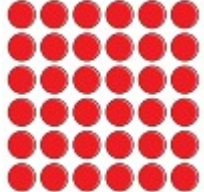

$646 \div 2$

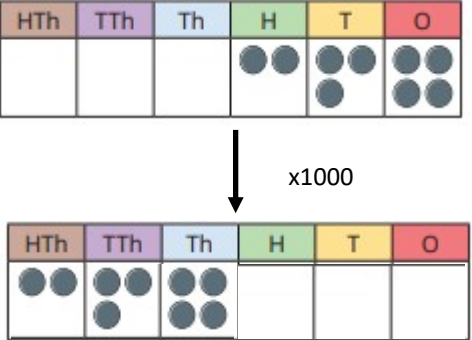
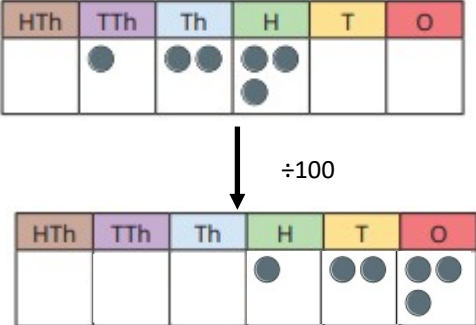


$435 \div 3$

Hundreds	Tens	Ones
100	10 10 10 10	1 1 1 1 1
100	10 10 10 10	1 1 1 1 1
100	10 10 10 10	1 1 1 1 1
100	10	

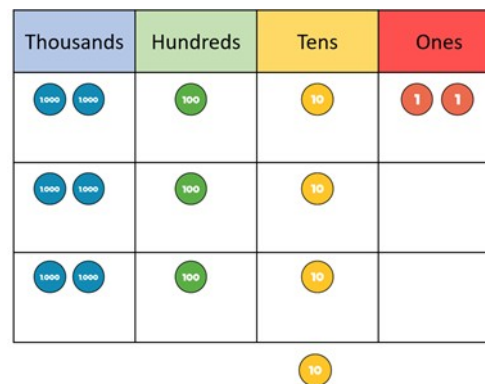
Year 5	Multiplies and common multiples		<p>Multiplies of 5</p>  <table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr> <tr><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td></tr> <tr><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td></tr> <tr><td>31</td><td>32</td><td>33</td><td>34</td><td>35</td><td>36</td><td>37</td><td>38</td><td>39</td><td>40</td></tr> <tr><td>41</td><td>42</td><td>43</td><td>44</td><td>45</td><td>46</td><td>47</td><td>48</td><td>49</td><td>50</td></tr> <tr><td>51</td><td>52</td><td>53</td><td>54</td><td>55</td><td>56</td><td>57</td><td>58</td><td>59</td><td>60</td></tr> <tr><td>61</td><td>62</td><td>63</td><td>64</td><td>65</td><td>66</td><td>67</td><td>68</td><td>69</td><td>70</td></tr> <tr><td>71</td><td>72</td><td>73</td><td>74</td><td>75</td><td>76</td><td>77</td><td>78</td><td>79</td><td>80</td></tr> <tr><td>81</td><td>82</td><td>83</td><td>84</td><td>85</td><td>86</td><td>87</td><td>88</td><td>89</td><td>90</td></tr> <tr><td>91</td><td>92</td><td>93</td><td>94</td><td>95</td><td>96</td><td>97</td><td>98</td><td>99</td><td>100</td></tr> </table>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	<p>multiples of 6</p>  <p>multiples of 9</p>
1	2	3	4	5	6	7	8	9	10																																																																																															
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91	92	93	94	95	96	97	98	99	100																																																																																															
Year 5	Factors and common factors		<p>Factors of 20</p>  <p>Common factors of 12 and 15</p> <div style="border: 1px solid black; padding: 5px;">  <p>Both numbers can be arranged in one row, so 1 is a common factor.</p>  <p>12 can be arranged in two rows but 15 cannot, so 2 is not a common factor.</p> </div>	<p>20 = 1 x 20 20 = 2 x 10 20 = 4 x 5</p> <p>factors of 20</p>  <p>factors of 24</p>																																																																																																				

Year 5	Prime numbers		<p>Arrays for 5:  <math>5 \times 1</math></p>  <p>This array does not work</p>  <p>There is no other way to arrange 5, so it must be a prime number</p>	<table border="1"> <thead> <tr> <th>Prime</th> <th>Composite</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>	Prime	Composite																			
Prime	Composite																								
Year 5	Square numbers		 <p><math>3 \times 3 = 9</math></p>  <p><math>6 \times 6 = 36</math></p>	$3^2 = 9$ $6^2 = 36$																					
Year 5	Cubed numbers		<p><math>3^3 = 27</math></p> 	<table border="1"> <thead> <tr> <th>Size of cube</th> <th>Calculation</th> <th>Number of cubes</th> </tr> </thead> <tbody> <tr> <td><math>1^3</math></td> <td></td> <td>1</td> </tr> <tr> <td><math>2^3</math></td> <td></td> <td>8</td> </tr> <tr> <td><math>3^3</math></td> <td><math>3 \times 3 \times 3</math></td> <td></td> </tr> <tr> <td><math>4^3</math></td> <td></td> <td></td> </tr> <tr> <td><math>5^3</math></td> <td></td> <td></td> </tr> <tr> <td><math>6^3</math></td> <td><math>6 \times 6 \times 6</math></td> <td></td> </tr> </tbody> </table>	Size of cube	Calculation	Number of cubes	$1^3$		1	$2^3$		8	$3^3$	$3 \times 3 \times 3$		$4^3$			$5^3$			$6^3$	$6 \times 6 \times 6$	
Size of cube	Calculation	Number of cubes																							
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$3^3$	$3 \times 3 \times 3$																								
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$5^3$																									
$6^3$	$6 \times 6 \times 6$																								

Year 5	Multiply by 10, 100 and 1000		 <p>The diagram illustrates multiplication by 1000 using a place value chart. The top chart shows 4 tens, 4 hundreds, 2 tens, and 4 ones. An arrow labeled 'x1000' points to the bottom chart, which shows 4 thousands, 4 hundreds, 2 tens, and 4 ones.</p>	$4 \times 10$ $4 \times 100$ $4 \times 1000$ $204 \times 10$ $204 \times 100$ $204 \times 1000$
Year 5	Divide by 10, 100 and 1000		 <p>The diagram illustrates division by 100 using a place value chart. The top chart shows 6 thousands, 4 hundreds, 2 tens, and 3 ones. An arrow labeled '÷100' points to the bottom chart, which shows 6 tens, 4 hundreds, 2 tens, and 3 ones.</p>	$64\ 000 \div 10$ $64\ 000 \div 100$ $64\ 000 \div 1000$  $5300 \div 100$ $460 \div 10$ $62\ 000 \div 1000$

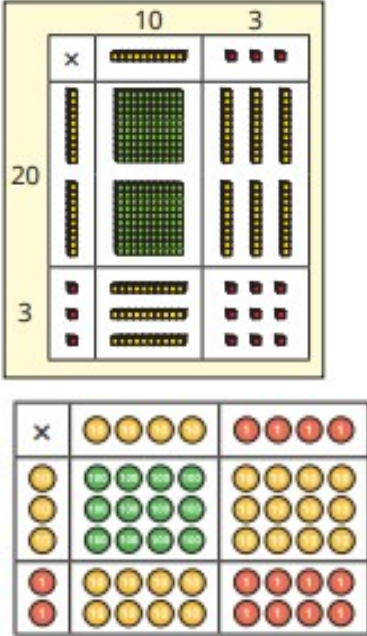
Multiply up to a 4-digit number by a 1-digit number

$$2,114 \times 3$$



	2	1	1	4	
×				3	
	6	3	4	2	
			1		



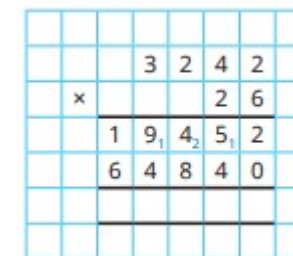
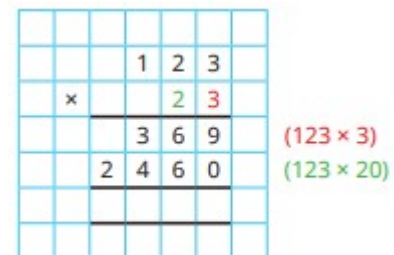
Year 5	Multiply a 2-digit number by a 2-digit number (area model)			<table border="1"> <tr> <td>x</td> <td>40</td> <td>4</td> </tr> <tr> <td>30</td> <td>1,200</td> <td>120</td> </tr> <tr> <td>2</td> <td>80</td> <td>8</td> </tr> </table>	x	40	4	30	1,200	120	2	80	8																																															
x	40	4																																																										
30	1,200	120																																																										
2	80	8																																																										
Year 5	Multiply a 2-digit number by a 2-digit number (long multiplication)		Use resources shown in Year 3 _____ to support children with multiplication steps	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td>3</td><td>2</td></tr> <tr><td>x</td><td></td><td></td><td>1</td><td>3</td></tr> <tr><td></td><td></td><td></td><td>9</td><td>6</td></tr> <tr><td></td><td></td><td></td><td>3</td><td>2</td><td>0</td></tr> <tr><td></td><td></td><td></td><td>4</td><td>1</td><td>6</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table> <p>(32 × 3) (32 × 10)</p>									3	2	x			1	3				9	6				3	2	0				4	1	6																								
			3	2																																																								
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			4	1	6																																																							

Year 5

Multiply a 3-digit or 4-digit number by a 2-digit number

Use resources shown in:  
Year 3 divide by 3, 4 and 8 to support children with multiplication steps.

Year 4 divide by 6, 9, 7, 11 and 12 to support children with multiplication steps.



Year 5

Short division of numbers up to 4 digits by a 1 digit number

		1	2	
	4	4	8	

		1	3	
	3	3	9	

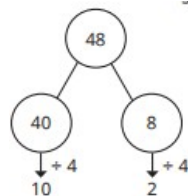
Year 5

Division with remainders

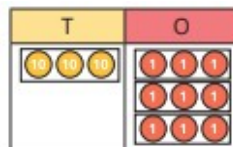
		2	0	5	r2
	3	6	1	7	

Dividing a 2-digit, 3-digit or 4-digit number by a one digit number (short division). Includes remainders

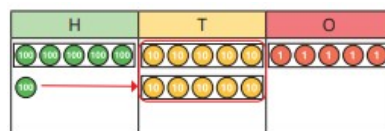
$48 \div 4$



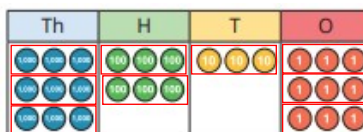
$39 \div 3$



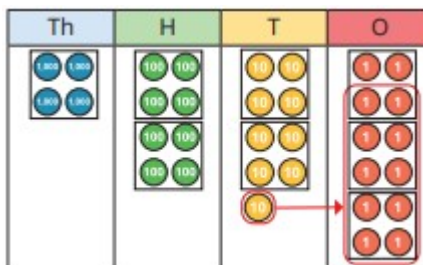
$605 \div 5$



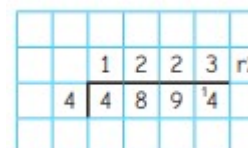
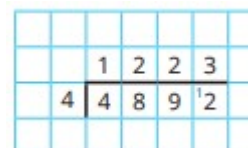
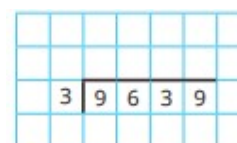
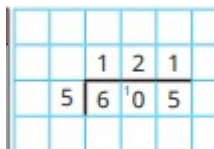
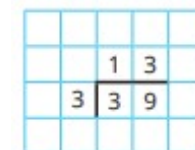
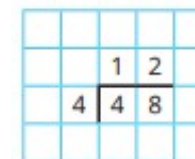
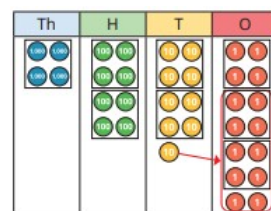
$9639 \div 3$

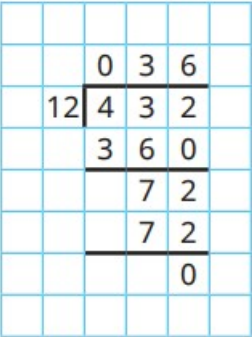
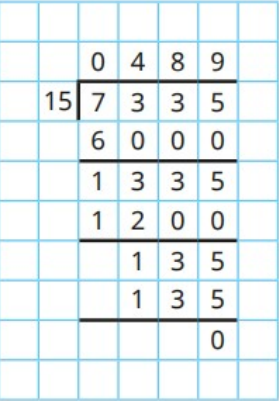
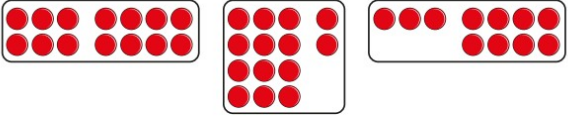


$4892 \div 4$



$4892 \div 4$



Year 6	Using long division to divide 4 digit numbers by 2 digit numbers		<p>Use resources shown in:  Year 3 divide by 3, 4 and 8 to support children with multiplication steps.</p> <p>Year 4 divide by 6, 9, 7, 11 and 12 to support children with multiplication steps.</p>	 <p><math>(12 \times 30)</math></p> <p><math>(12 \times 6)</math></p>  <p><math>(15 \times 400)</math></p> <p><math>(15 \times 80)</math></p> <p><math>(15 \times 9)</math></p>
Year 6	To understand the order of operations		 <p><math>3 + 4 \times 2</math>      <math>3 \times 4 + 2</math>      <math>(3 + 4) \times 2</math></p>	<p><math>(5 + 2) \times 3</math>      <math>6 + 4 \div 2</math></p> <p><math>5 + 2 \times 3</math>      <math>(6 + 4) \div 2</math></p>