
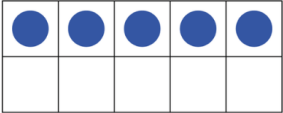
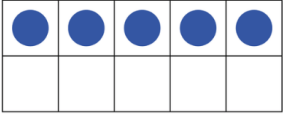
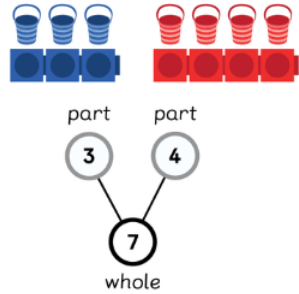


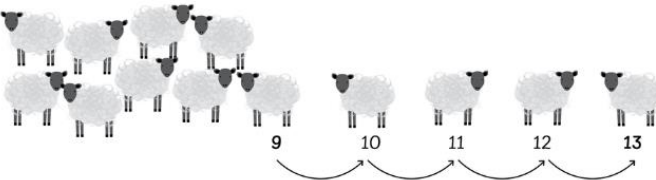

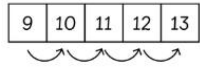


# Calculation Progression – Addition



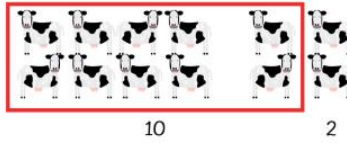
Year Group	Expectation	Method	Mathematical Language
R	Explore and represent patterns within numbers up to 10; Compare quantities up to 10 in different contexts.	<p><b>Counting on to add</b></p> <p><b>Count on 2.</b></p>  <p><b>Count on 4.</b></p>  <p><b>Count on 3.</b></p> 	Counting on, more, after, add, move forwards, first, then, now, altogether, total, how many more?
Year 1	Add by counting. Add by counting on. Make addition stories. Write addition equations. Make a family of addition and subtraction facts. Add by making 10. Add by adding ones.	<p><b>Adding using number bonds</b></p>  <p>We can also write <math>3 + 4 = 7</math>.</p>   <p><math>3 + 4 = 7</math></p> <p><b>Counting on</b></p>  <p>Start from 9, then count 4 more.</p>   <p><math>9 + 4 = 13</math></p> <p>There are 13 sheep in total.</p>	Digit, number sentence, part, part, whole, number bond, number bond diagram, plus sign, plus, add, equals, equals sign, addition equation, addition fact, altogether

### Making 10

$8 + 4 = \square$

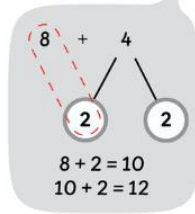


I can get 2 from the 4 to make 10.

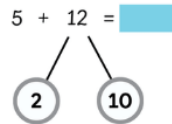
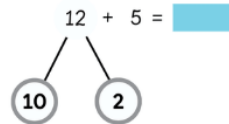


$8 + 4 = 12$

There are 12 cows in the field.



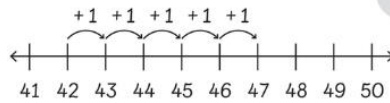
### Adding ones



**Year 2** Add numbers without renaming. Add numbers with renaming. Add three numbers. Draw models for different situations.

### 2-digit plus 1-digit

Count on in ones.



I added 5 to 42 by counting on.



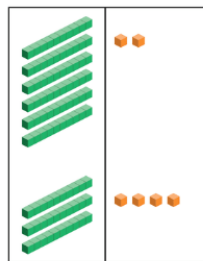
43, 44, , ,



42 and 5 make 47.  
 $42 + 5 = 47$

### Column addition

Show the number of passengers using .

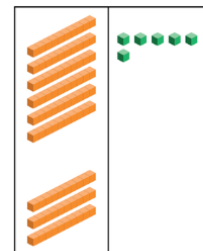


Start by adding the ones.

tens	ones
6	2
+	3
6	4
6	6



2 ones + 4 ones = 6 ones  
 $2 + 4 = 6$



Then add the tens.

tens	ones
6	2
+	3
9	4
9	6



6 tens + 3 tens = 9 tens  
 $60 + 30 = 90$

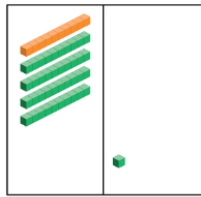
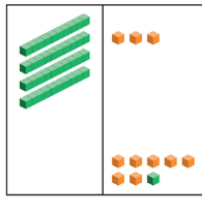
$62 + 34 = 96$

Altogether, ones, tens, \_\_\_ and \_\_\_ make \_\_\_.  
addition equation, counting on (in ones), add the ones, add the tens, plus, number line, number bond, number bond diagram, breaking up/partitioning a number, column, column method

### Adding with renaming

$43 + 8 = \square$

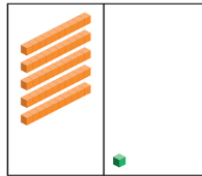
Start by adding the ones.



tens	ones
4	3
+	8
1	1

3 ones + 8 ones = 11 ones  
11 ones = 1 ten and 1 one

Rename 10 ones as 1 ten.



tens	ones
4	3
+	8
1	1
+	4
5	1

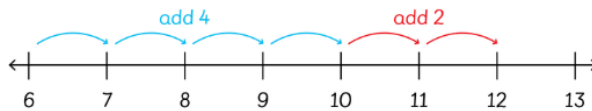
Then add the tens.

4 tens + 1 ten = 5 tens  
 $40 + 10 = 50$   
 $43 + 8 = 51$

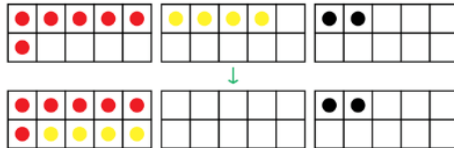
### Addition of three numbers

$6 + 4 + 2 = \square$

Count on from 6.



$6 + 4 + 2 = 12$



We can make 10.

$(6 + 4) + 2 = 10 + 2 = 12$

Year 3

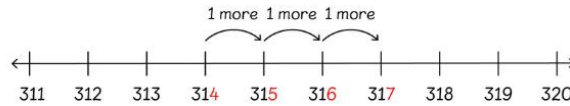
Add numbers without renaming. Add numbers with renaming. Solve word problems involving addition and subtraction.

### 3-digit plus 1-digit

$314 + 3 = \square$

Count on in ones from 314.

Method 1 Count on from 314.



$314 + 3 = 317$

### 3-digit plus 2-digit

$325 + 70 = \square$

Count on in tens from 325.

Method 1



$325 + 70 = 395$

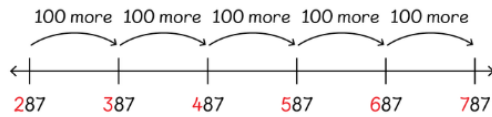
Renaming, making 100, number bonds, in total, estimate, approximate, approximation, hundreds

### 3-digit plus 3-digit

$287 + 500 = \square$

Method 1

Count on in **hundreds** from 287.

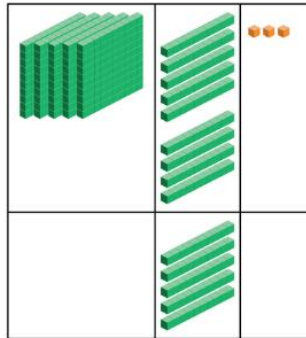


$287 + 500 = 787$

### Adding with renaming

$593 + 50 = \square$

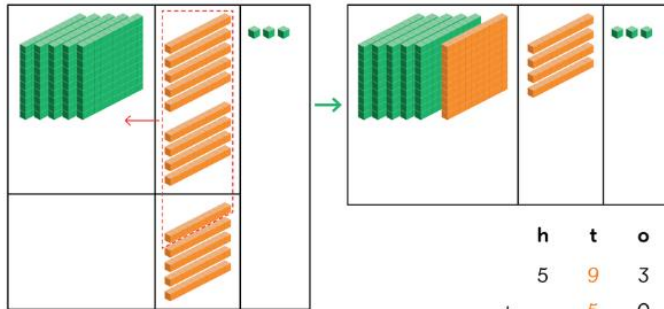
Step 1 Add the ones.



h	t	o
5	9	3
+	5	0
		3

Step 2 Add the tens.

$9 \text{ tens} + 5 \text{ tens} = 14 \text{ tens}$

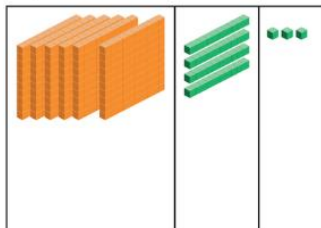


h	t	o
5	9	3
+	5	0
		3
1	4	0

Rename the tens.

$14 \text{ tens} = 1 \text{ hundred} + 4 \text{ tens}$

Step 3 Add the hundreds.



h	t	o
5	9	3
+	5	0
		3
1	4	0
+	5	0
6	4	3

Step 4 Add 3, 140 and 500

$500 + 140 + 3 = 643$

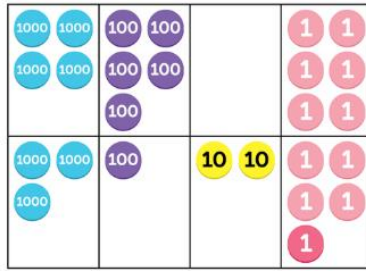
**Year 4**

Add numbers without renaming. Add numbers with renaming. Add numbers mentally. Solve word problems involving addition and subtraction.

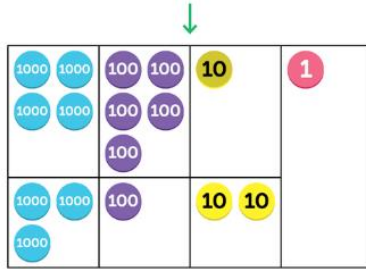
**Adding within 10,000**

$4506 + 3125 =$

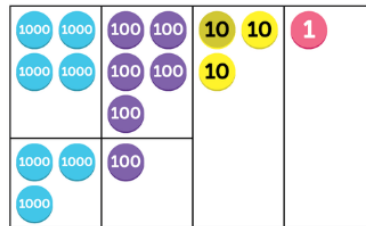
Step 1 Add the ones.  
 6 ones and 5 ones = 11 ones  
 Rename the ones.  
 11 ones = 1 ten and 1 one



$$\begin{array}{r} 4 \ 5 \ 0 \ 6 \\ + 3 \ 1 \ 2 \ 5 \\ \hline \phantom{0} \phantom{0} \phantom{0} \ 1 \end{array}$$

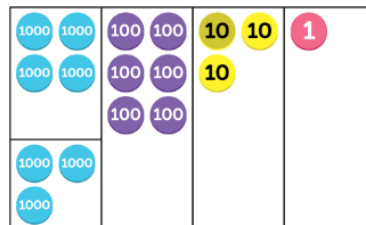


Step 2 Add the tens.  
 0 tens + 2 tens + 1 ten = 3 tens



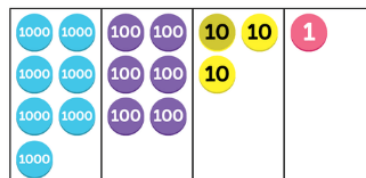
$$\begin{array}{r} 4 \ 5 \ 0 \ 6 \\ + 3 \ 1 \ 2 \ 5 \\ \hline \phantom{0} \phantom{0} \ 3 \ 1 \end{array}$$

Step 3 Add the hundreds.  
 5 hundreds + 1 hundred = 6 hundreds



$$\begin{array}{r} 4 \ 5 \ 0 \ 6 \\ + 3 \ 1 \ 2 \ 5 \\ \hline \phantom{0} \ 6 \ 3 \ 1 \end{array}$$

Step 4 Add the thousands.  
 4 thousands + 3 thousands = 7 thousands


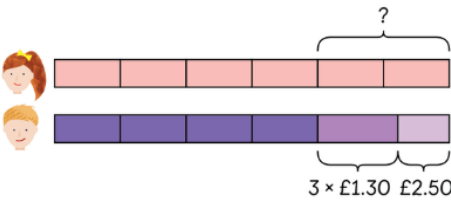


$$\begin{array}{r} 4 \ 5 \ 0 \ 6 \\ + 3 \ 1 \ 2 \ 5 \\ \hline 7 \ 6 \ 3 \ 1 \end{array}$$

$4506 + 3125 = 7631$

Thousands, rename, estimate, approximately

<p><b>Year 5</b></p>	<p>Add whole numbers with more than 4 digits. Add numbers mentally. Use rounding to check answers. Solve word problems involving addition, subtraction, multiplication and division, and a combination of these.</p>	<p><b>Adding within 1 000 000</b></p> $29\ 806 + 43\ 751 = \text{[ ]}$ $\begin{array}{r} 1 \\ 29\ 806 \\ + 43\ 751 \\ \hline 557 \end{array}$ <p>8 hundreds + 7 hundreds = 15 hundreds</p> <p>15 hundreds = 1 thousands + 5 hundreds</p> $\begin{array}{r} 1\ 1 \\ 29\ 806 \\ + 43\ 751 \\ \hline 3557 \end{array}$ <p>1 thousand + 9 thousands + 3 thousands = 13 thousands</p> <p>13 thousands = 1 ten thousand + 3 thousands</p> $\begin{array}{r} 1\ 1 \\ 29\ 806 \\ + 43\ 751 \\ \hline 73\ 557 \end{array}$ <p>29 806 + 43 751 = 73 557</p>	<p>ten thousands, hundred thousands, place value, rename/renaming</p>
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<p><b>Year 6</b></p>	<p>Perform mental calculations. Use estimation to check answers to calculations. Use the order of operations. Solve problems involving addition and subtraction, multiplication and division.</p>	<p><b>Multi-step problems</b></p> <p><b>Explore</b></p> <p>Holly bought 6 sandwiches. Sam bought 4 sandwiches. Sam also bought 3 drinks at £1.30 each. Altogether, Sam spent £2.50 less than Holly. How much did each sandwich cost?</p>  <p>How much did each sandwich cost?</p>  <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <input type="checkbox"/> Understand  <input type="checkbox"/> Plan  <input type="checkbox"/> Action the plan  <input type="checkbox"/> Check     </div> $3 \times \text{£}1.30 = \text{£}3.90$ $\text{£}3.90 + \text{£}2.50 = \text{£}6.40$ $2 \text{ units} = \text{£}6.40$ $1 \text{ unit} = \text{£}3.20$ <p>Each sandwich cost £3.20.</p> $\begin{array}{r} 1 \\ \text{£} 3 . 9 0 \\ + \text{£} 2 . 5 0 \\ \hline \text{£} 6 . 4 0 \end{array}$	<p>Understand, plan, action, check</p>
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