



Calculation policy

Addition

The different stages	Examples									
EYFS/ Year 1 Counting sets of objects. Secure up to 20.	Counting 9 toy dinosaurs or 12 bricks etc.									
Year 1 Combining two sets of objects into one group and counting practically using numbers up to 20.	For 15 + 3 children may get 15 objects then 3 more and count them altogether.									
Year 1/2 Drawing dots-informal jottings then count them altogether. Working towards numbers up to 100.	For 25 + 9 children to draw 25 dots and then 9 more.									
Year 2 Counting on a number line with numbers on it using numbers up to 100.	$54 + 7$ $+1 +1 +1 +1 +1 +1 +1$ <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>54</td><td>55</td><td>56</td><td>57</td><td>58</td><td>59</td><td>60</td><td>61</td><td></td> </tr> </table>	54	55	56	57	58	59	60	61	
54	55	56	57	58	59	60	61			

<p>Year 2/3 Number line can continue to be used, bouncing forwards in increasingly larger amounts.</p>	<p>34 +23 =57</p> <p style="text-align: center;">+10 +10 +1 +1 +1</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 2px 10px;">34</td> <td style="padding: 2px 10px;">44</td> <td style="padding: 2px 10px;">54</td> <td style="padding: 2px 10px;">55</td> <td style="padding: 2px 10px;">56</td> <td style="padding: 2px 10px;">57</td> </tr> </table>	34	44	54	55	56	57
34	44	54	55	56	57		
<p>Year 3/4 Write the numbers in columns. Add the units first. Working with numbers up to 1000.</p>	$\begin{array}{r} 346 \\ + 251 \\ \hline 597 \end{array}$						
<p>Year 4 upwards Column addition. Write the numbers in columns. Powers of ten are carried into the next column.</p>	$\begin{array}{r} 546 \\ + 375 \\ \hline 921 \\ 11 \end{array}$						
<p>Year 5 upwards Column addition. Write the numbers in columns. Powers of ten are carried into the next column. Numbers get increasingly larger and include decimals. E.g. money.</p>	$\begin{array}{r} \pounds 234.6 \\ + \pounds 457.5 \\ \hline \pounds 692.1 \\ 111 \end{array}$						

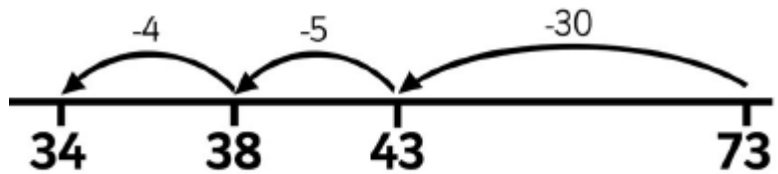
Subtraction

The different stages	Examples							
<p>EYFS/Year 1 Practically get a group of objects and take some away</p>	<p>8 cars take 3 cars away. How many left?</p>							
<p>Year 1 Jottings-draw a set of marks and then cross some out. . Secure with numbers to 20.</p>	<p>$12 - 5 = 7$</p> 							
<p>Year 1/2 Count back on a number line with numbers already on it. Working with numbers to 100.</p>	<p>$54 - 6 = 48$</p> <p style="text-align: center;">-1 -1 -1 -1 -1 -1</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 2px 10px;">48</td> <td style="padding: 2px 10px;">49</td> <td style="padding: 2px 10px;">50</td> <td style="padding: 2px 10px;">51</td> <td style="padding: 2px 10px;">52</td> <td style="padding: 2px 10px;">53</td> <td style="padding: 2px 10px;">54</td> </tr> </table>	48	49	50	51	52	53	54
48	49	50	51	52	53	54		

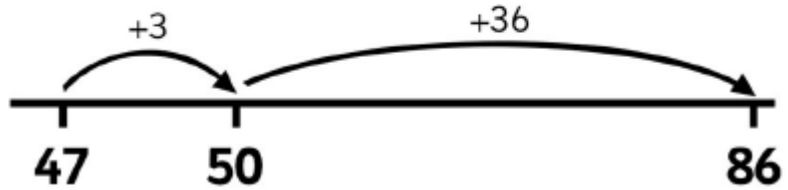
Year 2

**Use a number line.
Work by counting
back in
increasingly larger
steps.
Also work by
counting on.**

$$73 - 39 = 34$$



Work out the difference between 47 and 86 = 39



Year 3/4

**Column
subtraction.
Write numbers in
columns. The
largest numbers
goes on top.
Subtract units first.**

$$\begin{array}{r} \text{T U} \\ 87 \\ - 23 \\ \hline 64 \end{array}$$

Year 4 upwards.

Decomposition method.

Write numbers in columns.

Subtract smallest value first. Take a power of ten from the next column where necessary.

Numbers get increasingly larger and include decimals. E.g. money

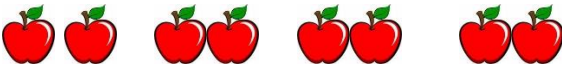

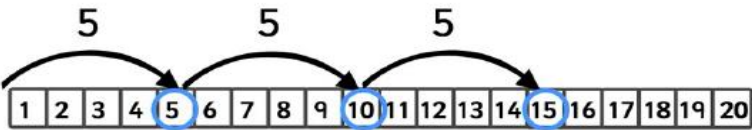
	H	T	U
	4	5 1	7 8
-		9	5
	4	8	3

Multiplication

Times table expectations.

By the end of Year 2, children should be able to recall and use multiplication facts for the 2, 5 and 10 times tables.

By the end of Year 4, children should be able to recall and use multiplication facts for all times tables up to 12 x 12.

The different stages	Examples
EYFS/Year 1 Counting practically in repeated groups/patterns.	2 cars, 2 cars and 2 more cars.
Year 1/2 Grouping	$4 \times 2 = 8$ 
Year 2 Arrays	$4 \times 2 = 8$ or $2 \times 4 = 8$ 
Year 2/3 Repeated addition Repeated addition can be shown easily on a number line.	5×3 is $5 + 5 + 5 = 15$ or 3 lots of 5 
Year 3 Partitioning	$14 \times 6 = 84$

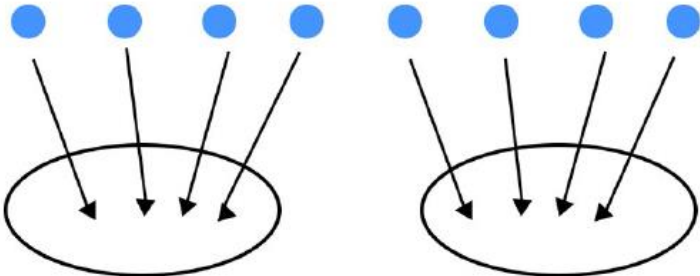

	$10 \times 6 = 60$ $4 \times 6 = 24$ $60 + 24 = 84$
<p>Year 3/4 Short multiplication. Write the numbers in columns. Multiples of powers of ten are carried underneath the next column.</p>	$\begin{array}{r} 37 \\ \times 8 \\ \hline 296 \\ \hline 5 \end{array}$
<p>Year 5 upwards Long multiplication. Write the numbers in columns. Multiples of powers of ten are carried into the next column.</p>	$\begin{array}{r} 124 \\ \times 26 \\ \hline 744 \\ 1 \\ \hline 2480 \\ \hline 3224 \\ \hline 1 \end{array}$

Division

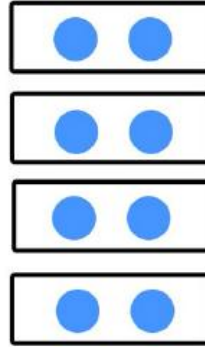
Expectations.

By the end of Year 2, children should derive and recall division facts associated with 2, 5 and 10 times table.

By the end of Year 4, children should be able to derive and recall division facts for all times tables up to 12 x 12.

The different stages	Examples
<p>EYFS/Year 1 Children will develop their understanding of division and use jottings to support calculation.</p>	<p>$8 \div 2 = 4$ Sharing equally. 8 sweets are shared between 2 people. How many do they get each?</p> 
<p>Year 1 Grouping</p>	<p>There are 8 sweets. How many people can have 2 sweets each? Answer: 4.</p> 
<p>Year 2/3 Arrays</p>	<p>How many groups of 2 can I fit into 8? Answer: 4</p>

Division with small remainders using objects and pictures.



Year 3/4
Short division

The divisor (7 in this example) is put into the dividend (98) moving left to right (highest to lowest place.)

$$98 \div 7 = 14$$

$$\begin{array}{r} 14 \\ 7 \overline{) 98} \end{array}$$

Year 5 upwards
Long division
Multiples of the divisor (15 in this example) are subtracted from the dividend (432).
Remainders can be shown as a pure number (12 this example) or can be calculated further to find a decimal remainder.

$$432 \div 15 = 28 \text{ r } 12 \text{ or } 28.8$$

$$\begin{array}{r} 28.8 \\ 15 \overline{) 432.0} \\ \underline{30} \\ 132 \\ \underline{120} \\ 120 \\ \underline{120} \\ 0 \end{array}$$

- | |
|-----|
| 15 |
| 30 |
| 45 |
| 60 |
| 75 |
| 90 |
| 105 |
| 120 |
| 135 |
| 150 |