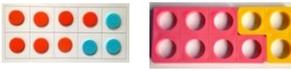
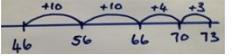
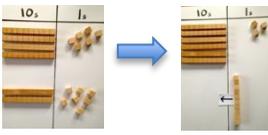
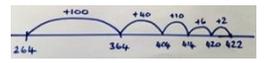
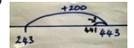
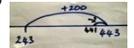
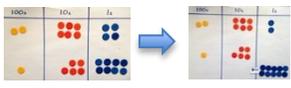
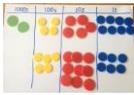
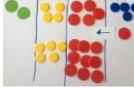
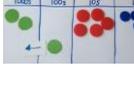
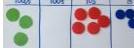
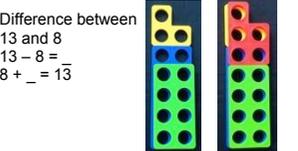
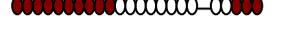
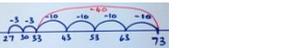
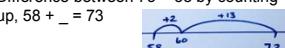
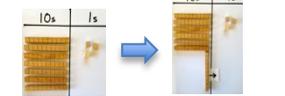


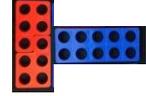
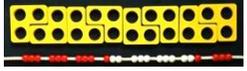
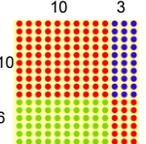
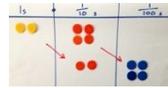
Addition

<p style="text-align: center;">Written Methods</p>	<p>Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs</p>	<p>Add and subtract two two-digit numbers using concrete objects, pictorial representations progressing to formal written methods</p> $\begin{array}{r} 46 \\ + 27 \\ \hline 73 \end{array}$	<p>Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction</p> $\begin{array}{r} 423 \\ + 88 \\ \hline 511 \\ \hline \end{array}$	<p>Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition where appropriate</p> $\begin{array}{r} 2458 \\ + 596 \\ \hline 3054 \\ \hline \end{array}$	<p>Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)</p> $\begin{array}{r} 23454 \\ + 596 \\ \hline 24050 \\ \hline \end{array}$	<p>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</p>
<p style="text-align: center;">Developing conceptual understanding</p>	<p>Number bonds</p>  <p>(Ten frame) Numicon</p> <p>Use bonds of 10 to calculate bonds of 20</p>  <p>Count all</p>  <p>Count on</p>  <p>Count on, on number track, in 1s</p> 	<p>Number track / Number line – jumps of 1 then efficient jumps using number bonds $18 + 5 = 23$</p>  <p>$46 + 27 = 73$ Count in tens then bridge.</p>  <p>$25 + 29$ by +30 then -1 (Round and adjust)</p>  <p>Partition and recombine</p> $46 + 27 = 60 + 13 = 73$  <p>$24 + 10$ $+ 10$ $+ 10 = 54$</p> 	<p>Number line: $264 + 158$ efficient jumps</p>  <p>$40 + 80 = 120$ using $4 + 8 = 12$ So $400 + 800 = 1200$</p>  <p>$243 + 198$ by +200 then -2 (Round and adjust)</p>  <p>Pairs that make 100 $23 + 77$</p>  <p>Place value counters, 100s, 10s, 1s $264 + 158$</p>  <p>$= 422$ (Also with £, 10p and 1p)</p> 	<p>Place Value Counters $2458 + 596$</p> <p>Show 2458 and 596</p>  <p>Combine the 1s. Exchange ten 1s for a 10 counter.</p>  <p>Combine the 10s. Exchange ten 10s for a 100 counter.</p>  <p>Combine the 100s. Exchange ten 100s for a 1000 counter</p>  <p>Read final answer Three thousand and fifty-four.</p> 	<p>Set out the calculation in columns.</p> $\begin{array}{r} 23454 \\ + 596 \\ \hline \end{array}$ <p>Find the sum of the ones. 4 ones + 6 ones = 10 ones (or 1 ten and 0 ones) so record 0 in the ones and 1 below the line in the tens.</p> $\begin{array}{r} 23454 \\ + 596 \\ \hline 0 \\ 1 \end{array}$ <p>Find the sum of the tens. 5 tens + 9 tens + 1 ten = 15 tens (or 1 hundred and 5 tens) so record a 5 in the tens and 1 below the line in the hundreds.</p> $\begin{array}{r} 23454 \\ + 596 \\ \hline 0 \\ 5 \\ 1 \end{array}$ <p>Find the sum of the hundreds. 4 hundreds + 5 hundreds + 1 hundred = 10 hundreds (or 1 thousand and 0 hundreds) so record a 0 in the hundreds and a 1 in the thousands.</p> $\begin{array}{r} 23454 \\ + 596 \\ \hline 0 \\ 5 \\ 0 \\ 1 \end{array}$ <p>Find the sum of the thousands. 3 thousands + 1 thousand = 4 thousands so record a 4 in the thousands column.</p> $\begin{array}{r} 23454 \\ + 596 \\ \hline 0 \\ 5 \\ 0 \\ 4 \end{array}$ <p>Find the sum of the ten thousands There are only 2 ten thousands so record a 2 in the final column</p> $\begin{array}{r} 23454 \\ + 596 \\ \hline 0 \\ 5 \\ 0 \\ 4 \\ 2 \end{array}$	<p>Perform mental calculations, including with mixed operations and large numbers</p>
<p style="text-align: center;">With jottings</p> <p style="text-align: center;">... or in your head</p>	<p>Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$</p>	<p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <ul style="list-style-type: none"> * a two-digit number and ones * a two-digit number and tens * two two-digit numbers * adding three one-digit numbers 	<p>Add and subtract numbers mentally, including:</p> <ul style="list-style-type: none"> * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds 	<p>Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why</p>	<p>Add and subtract numbers mentally with increasingly large numbers</p>	<p>Perform mental calculations, including with mixed operations and large numbers</p>
<p style="text-align: center;">Just know it!</p>	<p>Represent & use number bonds and related subtraction facts within 20 Add and subtract one-digit and two-digit numbers to 20, including zero</p>	<p>Recall and use addition and subtraction facts within 20 derive and use related facts up to 100</p>				
<p style="text-align: center;">Year</p>	1	2	3	4	5	6
<p style="text-align: center;">Foundations</p>	<p>1 more</p>	<p>10 more Number bonds: 20, 12, 13</p>	<p>Add multiples of 10, 100</p>	<p>Add multiples of 10s, 100s, 1000s</p>	<p>Add multiples of 10s, 100s, 1000s, tenths,</p>	<p>Add multiples of 10s, 100s, 1000s, tenths, hundredths</p>
	<p>Number bonds: 5, 6</p>	<p>Number bonds: 14, 15 Add 1 digit to 2 digit by bridging.</p>	<p>Add single digit bridging through boundaries</p>	<p>Fluency of 2 digit + 2 digit</p>	<p>Fluency of 2 digit + 2 digit including with decimals</p>	<p>Fluency of 2 digit + 2 digit including with decimals</p>
	<p>Largest number first. Number bonds: 7, 8</p>	<p>Partition second number, add tens then ones</p>	<p>Partition second number to add Pairs of 100</p>	<p>Partition second number to add Decimal pairs of 10 and 1</p>	<p>Partition second number to add</p>	<p>Partition second number to add</p>
	<p>Add 10. Number bonds: 9, 10</p>	<p>Add 10 and multiples. Number bonds: 16 and 17</p>	<p>Use near doubles to add</p>	<p>Use near doubles to add</p>	<p>Use number facts, bridging and place value</p>	<p>Use number facts, bridging and place value</p>
	<p>Ten plus ones. Doubles up to 10</p>	<p>Doubles up to 20 and multiples of 5 Add near multiples of 10.</p>	<p>Add near multiples of 10 and 100 by rounding and adjusting</p>	<p>Adjust both numbers before adding Add near multiples</p>	<p>Adjust numbers to add</p>	<p>Adjust numbers to add</p>
<p>Use number bonds of 10 to derive bonds of 11</p>	<p>Number bonds: 18, 19 Partition and recombine</p>	<p>Partition and recombine</p>	<p>Partition and recombine</p>	<p>Partition and recombine</p>	<p>Partition and recombine</p>	

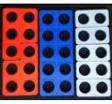
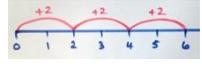
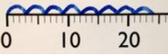
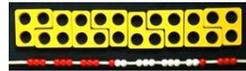
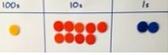
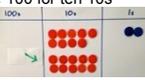
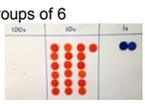
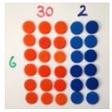
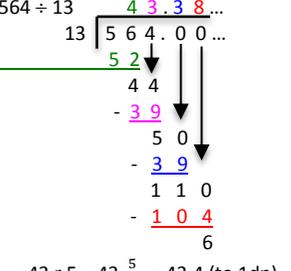
Subtraction

Written Methods	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs	Add and subtract two two-digit numbers using concrete objects, pictorial representations progressing to formal written methods	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition where appropriate	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
<p>Developing conceptual understanding</p> <p>Number bonds  (Ten frame) Difference between 7 and 10</p> <p>6 less than 10 is 4 </p> <p>Count out, then count how many are left. $7 - 4 = 3$ </p> <p>Count back on a number track, then number line. $15 - 6 = 9$ </p> <p>Difference between 13 and 8 $13 - 8 = 5$ $8 + \underline{\quad} = 13$ </p>	<p>Number track / Number line – jumps of 1 then efficient jumps using number bonds $23 - 5 = 18$ </p> <p>Using a number line, $73 - 46 = 26$ </p> <p>Difference between 73 – 58 by counting up, $58 + \underline{\quad} = 73$ </p> <p>Taking away and exchanging, $73 - 46$  'Where's the forty and six?' Exchange to create 'sixty thirteen'  'Twenty seven' 'Now take away the forty and six'</p>	<p>Taking away and exchanging, $344 - 187$ Place value counters 'Where's the one hundred and eighty and seven?'  Exchange to create three hundred and thirty and fourteen. Now take away the 'seven'  Exchange to create two hundred, thirteen tens and seven Now take away the 'eighty'  Now take away the 'one hundred'  There are no thousands to take away.</p>	<p>Taking away and exchanging, $2344 - 187$ Place value counters Where's the one hundred and eighty- seven?  Exchange a 10 for ten 1s to create two thousand, three hundred and thirty and fourteen.  Now take away 'seven'.  Exchange a 100 for ten 10s to create two thousand, two hundred, thirteen tens and seven.  Now take away 'eighty'  Now take away 'one hundred'  There are no thousands to take away.</p>	<p>Set out the calculation in columns</p> $\begin{array}{r} 52344 \\ - 1187 \\ \hline \end{array}$ <p>The 1s column: four subtract seven Because seven is greater than four, exchange a 10 for ten 1s. So there are now three 10s and fourteen 1s.</p> $\begin{array}{r} 52344 \\ - 1187 \\ \hline \end{array}$ <p>Fourteen 1s subtract seven 1s makes seven 1s – record this.</p> $\begin{array}{r} 52344 \\ - 1187 \\ \hline 7 \end{array}$ <p>The 10s column: three subtract eight. Because eight is greater than three, exchange a 100 for ten 10s. So there are now two 100s and thirteen 10s.</p> $\begin{array}{r} 52344 \\ - 1187 \\ \hline 7 \end{array}$ <p>Thirteen 10s subtract eight 10s makes five 10s – record this.</p> $\begin{array}{r} 52344 \\ - 1187 \\ \hline 7 \end{array}$ <p>The 100s column: two subtract one. Two 100s subtract one 100 makes one 100 – record this.</p> $\begin{array}{r} 52344 \\ - 1187 \\ \hline 7 \end{array}$ <p>The 1000s column: two subtract one. Two 1000s subtract one 1000 makes one 1000 – record this.</p> $\begin{array}{r} 52344 \\ - 1187 \\ \hline 7 \end{array}$ <p>The 10,000s column: there are only five 10000s with nothing to subtract. So record 5.</p> $\begin{array}{r} 52344 \\ - 1187 \\ \hline 51157 \end{array}$		
<p>With jottings ... or in your head</p>	<p>Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$</p>	<p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: * a two-digit number and ones * a two-digit number and tens * two two-digit numbers * adding three one-digit numbers</p>	<p>Add and subtract numbers mentally, including: * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds</p>	<p>Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why</p>	<p>Add and subtract numbers mentally with increasingly large numbers</p>	<p>Perform mental calculations, including with mixed operations and large numbers</p>
<p>Just know it!</p>	<p>Represent and use number bonds and related subtraction facts within 20 Add and subtract one-digit and two-digit numbers to 20, including zero</p>	<p>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p>				
<p>Year</p>	<p>1</p>	<p>2</p>	<p>3</p>	<p>4</p>	<p>5</p>	<p>6</p>
<p>Foundations</p>	<p>1 less Number bonds, subtraction: 5, 6 Count back Number bonds, subtraction: 7, 8 Subtract 10. Number bonds, subtraction: 9, 10 Teens subtract 10. Difference between</p>	<p>10 less Number bonds, subtraction: 20, 12, 13 Number bonds, subtraction: 14, 15 Subtract 1 digit from 2 digit by bridging Partition second number, count back in 10s then 1s Subtract 10 and multiples of 10 Number bonds, subtraction: 16, 17 Subtract near multiples of 10 Difference between Number bonds, subtraction: 18, 19</p>	<p>Subtract multiples of 10 and 100 Subtract single digit by bridging through boundaries Partition second number to subtract Difference between Subtract near multiples of 10 and 100 by rounding and adjusting Difference between</p>	<p>Subtract multiples of 10s, 100s, 1000s Fluency of 2 digit subtract 2 digit Partition second number to subtract Decimal subtraction from 10 or 1 Difference between Subtract near multiples by rounding and adjusting Difference between</p>	<p>Subtract multiples of 10s, 100s, 1000s, tenths, Fluency of 2 digit - 2 digit including with decimals Partition second number to subtract Difference between Adjust numbers to subtract Difference between</p>	<p>Subtract multiples of 10s, 100s, 1000s, tenths, hundredths Fluency of 2 digit - 2 digit including with decimals Partition second number to subtract Use number facts bridging and place value Adjust numbers to subtract Difference between</p>

Multiplication

Year	1	2	3	4	5	6																		
Written Methods		Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs	Write and calculate mathematical statements for \div using the \times tables they know progressing to formal written methods.	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout $\begin{array}{r} 243 \\ \times 6 \\ \hline 2058 \\ 1 \end{array}$	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers $\begin{array}{r} 243 \\ \times 36 \\ \hline 7290 \\ 1458 \\ \hline 8748 \\ 1 \end{array}$	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication $\begin{array}{r} 5172 \\ \times 38 \\ \hline 155160 \\ 41376 \\ \hline 196536 \\ 1 \end{array}$																		
Developing conceptual understanding	2 frogs on each lily pad.     	5 frogs on each lily pad $5 \times 3 = 15$    <p>$5 \times 2 = 2 \times 5$</p> <p>Build tables on counting stick</p>  <p>Link to repeated addition</p> 	If I know $10 \times 8 = 80$ then ...  <p>So $13 \times 4 = 10 \times 4 + 3 \times 4$</p>   <p>Build tables on counting stick</p>   	43 x 6 by partitioning <table border="1" data-bbox="1209 327 1433 422"> <tr> <td>X</td> <td>40</td> <td>3</td> </tr> <tr> <td>6</td> <td>240</td> <td>18</td> </tr> </table> <p>$43 \times 6 = 40 \times 6 + 3 \times 6$</p> <p>$40 \times 6 = 240$ $3 \times 6 = 18$ $43 \times 6 = 258$</p> <p>If I know $4 \times 6 = 24$ the 40×60 is ten times bigger.</p> <p>13 x 16 by partitioning</p>  <p>$100 + 30 + 60 + 18 = 208$</p> <p>Build tables on counting stick</p> 	X	40	3	6	240	18	Grid method linked to formal written method <table border="1" data-bbox="1523 335 1724 422"> <tr> <td>x</td> <td>200</td> <td>40</td> <td>3</td> </tr> <tr> <td>30</td> <td>6000</td> <td>1200</td> <td>90</td> </tr> <tr> <td>6</td> <td>1200</td> <td>240</td> <td>18</td> </tr> </table> <p>7290 1458 8748</p> <p>If I know 4×6 then 0.4×6 is ten times smaller 0.4×0.6 is ten times smaller again.</p> 	x	200	40	3	30	6000	1200	90	6	1200	240	18	To multiply 5172 by 38 find the sum of 5172×30 & 5172×8 . $\begin{array}{r} 5172 \\ \times 30 \\ \hline 155160 \end{array}$ $\begin{array}{r} 5172 \\ \times 8 \\ \hline 41376 \end{array}$ <p>5172 x 30: This is the same as $5172 \times 3 \times 10$. Therefore, record a 0 in the 1s column to take care of the 'ten times bigger' and begin to calculate 5182×3.</p> $\begin{array}{r} 5172 \\ \times 38 \\ \hline 060 \\ 2160 \\ 5160 \\ 155160 \\ \hline 196536 \end{array}$ <p>Then calculate 5172 multiplied by 8 and record beneath:</p> $\begin{array}{r} 5172 \\ \times 38 \\ \hline 155160 \\ 155160 \\ \hline 196536 \end{array}$ <p>Finally add the two parts together:</p> $\begin{array}{r} 155160 \\ 41376 \\ \hline 196536 \\ 1 \end{array}$
X	40	3																						
6	240	18																						
x	200	40	3																					
30	6000	1200	90																					
6	1200	240	18																					
With jottings ... or in your head	Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher	Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental methods	Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. Recognise and use factor pairs and commutativity in mental calculations	Multiply and divide numbers mentally drawing upon known facts. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers establish whether a number up to 100 is prime	Perform mental calculations, including with mixed operations and large numbers																		
Just know it!	Count in multiples of twos, fives and tens	Recall and use \times and \div facts for the 2, 5 and 10 \times tables, including recognising odd and even numbers.	Recall and use \times and \div facts for the 3, 4 and 8 times tables.	Recall \times and \div facts for \times tables up to 12×12 .	Recall prime numbers up to 19 know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)																			
Foundations	Count in 2s	2 x table	Review 2x, 5x and 10x	4x, 8x tables 10 times bigger	4x, 8x tables 100, 1000 times bigger	Multiplication facts up to 12×12																		
	Count in 10s	10 x table	4x table	3x, 6x and 12x tables	3x, 6x and 12x tables 10, 100, 1000 times smaller	Partition to multiply mentally																		
	Doubles up to 10	Doubles up to 20 and multiples of 5	Double two digit numbers	Double larger numbers and decimals	Double larger numbers and decimals	Double larger numbers and decimals																		
	Count in 5s	5 x table	8 x table	3x, 9x tables	3x, 9x tables	Multiplication facts up to 12×12																		
	Double multiples of 10	Count in 3s	3 x table	11x, 7 x tables	11x, 7 x tables Partition to multiply mentally	Partition to multiply mentally																		
	Count in 2s, 5s and 10s	2 x, 5 x and 10 x tables	6 x table or review others	6x, 12 x tables	6x, 12 x tables	Double larger numbers and decimals																		

Division

<p>Written Methods</p>		<p>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs</p>	<p>Write and calculate mathematical statements for \div using the \times tables they know progressing to formal written methods.</p>		<p>Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context</p> $194 \div 6 = 32 \text{ r } 2$ $\begin{array}{r} 32 \\ 6 \overline{)192} \\ \underline{18} \\ 10 \\ \underline{12} \\ 0 \end{array}$ $192 \div 6 = 32$	<p>Divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division where appropriate for the context</p> $564 \div 13 = 43 \text{ r } 5$ <p><small>Known multiplication facts: 13, 26, 39, 52, 65, ... $10 \times 13 = 130$, $20 \times 13 = 260$...</small></p> $13 \overline{)564} \begin{array}{r} 43 \\ \underline{52} \\ 40 \\ \underline{39} \\ 10 \\ \underline{10} \\ 0 \end{array}$
<p>Developing conceptual understanding</p>	<p>$6 \div 2 = 3$ by sharing into 2 groups and by grabbing groups of 2</p>  <p>How many 2s?</p> 	<p>$15 \div 3 = 5$ in each group (sharing)</p>  <p>Link to fractions</p>  <p>$15 \div 3 = 5$ groups of 3 (grouping)</p>  <p>$10 \div 2 = 5$</p>  <p>Use language of division linked to tables</p>  <p>How many 2s?</p> 	<p>Grouping using partitioning $43 \div 3$ If I know 10×3 ...</p>    <p>Use language of division linked to tables</p>  <p>How many 3s?</p>  	<p>Grouping using partitioning $196 \div 6$ If I know 3×6 ... then 30×6...</p>  <p>'Chunking up' on a number line $196 \div 6 = 32 \text{ r } 4$</p>  <p>Use language of division linked to tables.</p> 	<p>$192 \div 6$ using place value counters to support written method</p>  <p>Exchange one 100 for ten 10s</p>  <p>19 tens into groups of 6</p>  <p>3 groups so that is 30×6, exchange remaining 10 for ten 1s</p>  <p>So $192 \div 6 = 32$</p> 	<p>Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context</p> $564 \div 13 = 43 \text{ r } 5 = 43 \frac{5}{13}$  <p>$= 43 \text{ r } 5 = 43 \frac{5}{13} = 43.4$ (to 1dp)</p>
<p>With jottings ... or in your head</p>	<p>Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher</p>	<p>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts</p>	<p>Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental methods</p>	<p>Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. Recognise and use factor pairs and commutativity in mental calculations</p>	<p>Multiply and divide numbers mentally drawing upon known facts. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</p>	<p>Perform mental calculations, including with mixed operations and large numbers</p>
<p>Just know it!</p>	<p>Count in multiples of twos, fives and tens</p>	<p>Recall and use \times and \div facts for the 2, 5 and 10 \times tables, including recognising odd and even numbers.</p>	<p>Recall and use \times and \div facts for the 3, 4 and 8 times tables</p>	<p>Recall \times and \div facts for \times tables up to 12×12.</p>	<p>Recall prime numbers up to 19 know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers</p>	
<p>Year</p>	<p>1</p>	<p>2</p>	<p>3</p>	<p>4</p>	<p>5</p>	<p>6</p>
<p>Foundations</p>	<p>Count back in 2s</p> <p>Count back in 10s</p> <p>Halves up to 10</p> <p>Count back in 5s</p> <p>Halve multiples of 10</p> <p>How many 2s? 5s? 10s?</p>	<p>Division facts (2 \times table)</p> <p>Division facts (10 \times table)</p> <p>Halves up to 20</p> <p>Division facts (5 \times table)</p> <p>Count back in 3s</p> <p>Review division facts (2\times, 5\times, 10\times table)</p>	<p>Review division facts (2\times, 5\times, 10\times table)</p> <p>Division facts (4 \times table)</p> <p>Halve two digit numbers</p> <p>Division facts (8 \times table)</p> <p>Division facts (3 \times table)</p> <p>Division facts (6 \times table) or review others</p>	<p>Division facts (4\times, 8\times tables) 10 times smaller</p> <p>Division facts (3\times, 6 \times, 12\times tables)</p> <p>Halve larger numbers and decimals</p> <p>Division facts (3\times, 9\times tables)</p> <p>Division facts (11\times, 7\times tables)</p> <p>Division facts (6\times, 12\times tables)</p>	<p>Division facts (4\times, 8\times tables) 100, 1000 times smaller</p> <p>Division facts (3\times, 6 \times, 12\times tables) Partition to divide mentally</p> <p>Halve larger numbers and decimals</p> <p>Division facts (3\times, 9\times tables) 100, 1000 times smaller</p> <p>Review division facts (11\times, 7\times tables) Partition decimals to divide mentally</p> <p>Review division facts (6\times, 12\times tables) Halve larger numbers and decimals</p>	<p>Division facts (up to 12×12)</p> <p>Partition to divide mentally</p> <p>Halve larger numbers and decimals</p> <p>Division facts (up to 12×12)</p> <p>Partition to divide mentally</p> <p>Halve larger numbers and decimals</p>

Expectations of Calculation in Year 6



Compact vertical

$$23454 + 596 \quad 23.7 + 48.56$$

$$\begin{array}{r} 23454 \\ + \quad 596 \\ \hline 24050 \end{array}$$

$$\begin{array}{r} 23.70 \\ + 48.56 \\ \hline 72.26 \end{array}$$

Using a number line: $63 + 28 = 91$



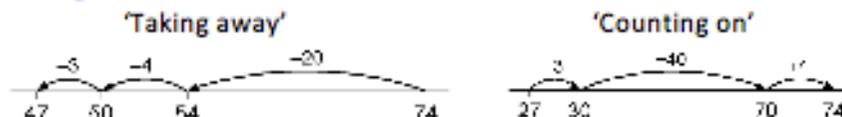
Decomposition

$$2748 - 364 \quad 72.5 - 45.73$$

$$\begin{array}{r} 2\overset{6}{7}4\overset{1}{8} \\ - \quad 364 \\ \hline 2384 \end{array}$$

$$\begin{array}{r} 72.50 \\ - 45.73 \\ \hline 26.77 \end{array}$$

Using a number line: $74 - 27 = 47$



LOOK AT THE NUMBERS – can you solve it in your head, with jottings or using written method?



Long multiplication

$$5172 \times 38$$

$$\begin{array}{r} 5172 \\ \times 38 \\ \hline 41376 \\ + 155160 \\ \hline 196536 \end{array}$$

Using known multiplication facts:

$$43 \times 6 = (40 \times 6) + (3 \times 6) = 258$$



Division (Short & Long)

$$564 \div 13$$

$$13 \overline{) 564} \begin{array}{l} 43 \text{ r } 5 \end{array}$$

$$13 \overline{) 564.000} \begin{array}{l} 43.38 \dots \end{array}$$

Known multiplication facts:
13, 26, 39, 52, 65, ...
 $10 \times 13 = 130$, $20 \times 13 = 260$

$$564 \div 13 = 43 \text{ r } 5 = 43 \frac{5}{13} = 43.4 \text{ (to 1dp)}$$

$$\begin{array}{r} 52 \\ \hline 44 \\ - 39 \\ \hline 50 \\ - 39 \\ \hline 110 \\ - 104 \\ \hline 6 \end{array}$$

Using a number line:

$$72 \div 5 = 14 \text{ r } 2$$

