



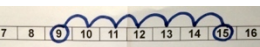
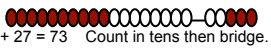
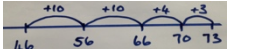
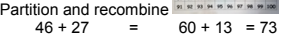
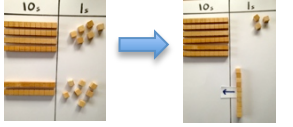
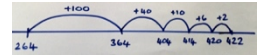
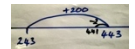
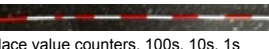
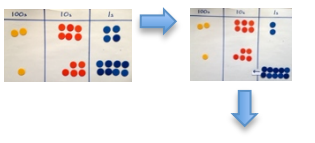

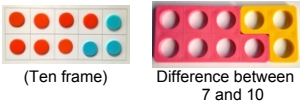

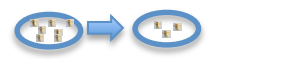

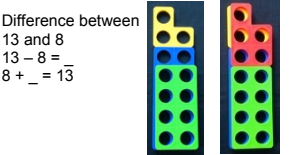
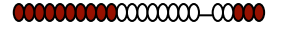
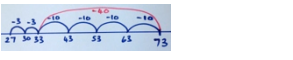
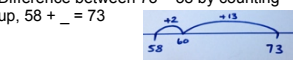
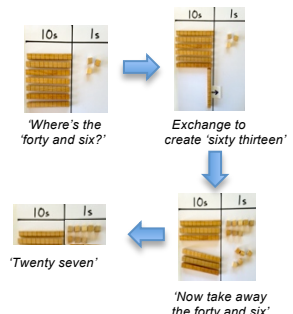
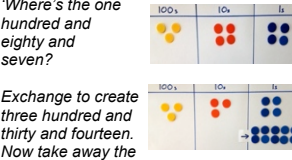
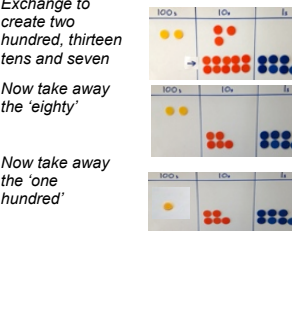



# Addition



Written Methods	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs	solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and 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><b>Developing conceptual understanding</b></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</p> <p><math>18 + 5 = 23</math></p>  <p><math>46 + 27 = 73</math> Count in tens then bridge.</p>  <p><math>25 + 29</math> by +30 then -1 (Round and adjust)</p>  <p>Partition and recombine</p> <p><math>46 + 27 = 60 + 13 = 73</math></p>  <p><math>24 + 10</math>  <math>+ 10</math>  <math>+ 10 = 54</math></p>	<p>Number line: <math>264 + 158</math> efficient jumps</p>  <p><math>40 + 80 = 120</math> using <math>4 + 8 = 12</math>      So <math>400 + 800 = 1200</math></p> <p><math>243 + 198</math>      by +200 then -2 (Round and adjust)</p>  <p>Pairs that make 100</p> <p><math>23 + 77</math></p>  <p>Place value counters, 100s, 10s, 1s</p> <p><math>264 + 158</math></p>  <p>(Also with £, 10p and 1p)</p>	<p><math display="block">\begin{array}{r} 423 \\ + 88 \\ \hline 511 \end{array}</math></p> <p><math display="block">\begin{array}{r} 2458 \\ + 596 \\ \hline 3054 \end{array}</math></p>	 <p>Continue to develop conceptual understanding of addition using resources from previous years as appropriate.</p>	<p><math display="block">\begin{array}{r} 23454 \\ + 596 \\ \hline 24050 \end{array}</math></p>	
<p><b>With jottings</b></p> <p>... 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 <math>7 = \square - 9</math></p>	<p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <ul style="list-style-type: none"> <li>* a two-digit number and ones</li> <li>* a two-digit number and tens</li> <li>* two two-digit numbers</li> <li>* adding three one-digit numbers</li> </ul>	<p>Add and subtract numbers mentally, including:</p> <ul style="list-style-type: none"> <li>* a three-digit number and ones</li> <li>* a three-digit number and tens</li> <li>* a three-digit number and hundreds</li> </ul>	<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><b>Just know it!</b></p>	<p>Represent &amp; 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><b>Year</b></p>	<p><b>1</b></p>	<p><b>2</b></p>	<p><b>3</b></p>	<p><b>4</b></p>	<p><b>5</b></p>	<p><b>6</b></p>
<p><b>Foundations</b></p>	<p>1 more</p> <p>Number bonds: 5, 6</p> <p>Largest number first. Number bonds: 7, 8</p> <p>Add 10. Number bonds: 9, 10</p> <p>Ten plus ones. Doubles up to 10</p> <p>Use number bonds of 10 to derive bonds of 11</p>	<p>10 more</p> <p>Number bonds: 20, 12, 13</p> <p>Number bonds: 14, 15</p> <p>Add 1 digit to 2 digit by bridging.</p> <p>Partition second number, add tens then ones</p> <p>Add 10 and multiples. Number bonds: 16 and 17</p> <p>Doubles up to 20 and multiples of 5</p> <p>Add near multiples of 10.</p> <p>Number bonds: 18, 19</p> <p>Partition and recombine</p>	<p>Add multiples of 10, 100</p> <p>Add single digit bridging through boundaries</p> <p>Partition second number to add Pairs of 100</p> <p>Use near doubles to add</p> <p>Add near multiples of 10 and 100 by rounding and adjusting</p> <p>Partition and recombine</p>	<p>Add multiples of 10s, 100s, 1000s</p> <p>Fluency of 2 digit + 2 digit</p> <p>Partition second number to add Decimal pairs of 10 and 1</p> <p>Use near doubles to add</p> <p>Adjust both numbers before adding Add near multiples</p> <p>Partition and recombine</p>	<p>Add multiples of 10s, 100s, 1000s, tenths,</p> <p>Fluency of 2 digit + 2 digit including with decimals</p> <p>Partition second number to add</p> <p>Use number facts, bridging and place value</p> <p>Adjust numbers to add</p> <p>Partition and recombine</p>	<p>Add multiples of 10s, 100s, 1000s, tenths, hundredths</p> <p>Fluency of 2 digit + 2 digit including with decimals</p> <p>Partition second number to add</p> <p>Use number facts, bridging and place value</p> <p>Adjust numbers to add</p> <p>Partition and recombine</p>

# Subtraction

Year	1	2	3	4	5	6
<b>Written Methods</b>	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs	solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction $\begin{array}{r} 231 \\ 344 \\ - 187 \\ \hline 157 \end{array}$	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition where appropriate $\begin{array}{r} 1 \\ 231 \\ 2344 \\ - 187 \\ \hline 2157 \end{array}$	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) $\begin{array}{r} 1 \\ 231 \\ 52344 \\ - 1187 \\ \hline 51157 \end{array}$	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
<b>Developing conceptual understanding</b>	<p>Number bonds</p>  <p>(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.</p> $7 - 4 = 3$  <p>Count back on a number track, then number line. <math>15 - 6 = 9</math></p>  <p>Difference between 13 and 8 <math>13 - 8 = \underline{\quad}</math> <math>8 + \underline{\quad} = 13</math></p> 	<p>Number track / Number line – jumps of 1 then efficient jumps using number bonds <math>23 - 5 = 18</math></p>  <p>Using a number line, <math>73 - 46 = 26</math></p>  <p>Difference between 73 – 58 by counting up, <math>58 + \underline{\quad} = 73</math></p>  <p>Taking away and exchanging, <math>73 - 46</math></p>  <p>'Where's the forty and six?'</p> <p>Exchange to create sixty thirteen'</p> <p>'Twenty seven'</p> <p>'Now take away the forty and six'</p>	<p>Taking away and exchanging, <math>344 - 187</math> Place value counters</p> <p>'Where's the one hundred and eighty and seven?'</p>  <p>Exchange to create three hundred and thirty and fourteen. Now take away the 'seven'</p> <p>Exchange to create two hundred, thirteen tens and seven</p> <p>Now take away the 'eighty'</p> <p>Now take away the 'one hundred'</p> 	<p>Continue to develop conceptual understanding of subtraction using resources from previous years as appropriate.</p> 		
<b>With jottings ... or in your head</b>	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> <li>* a two-digit number and ones</li> <li>* a two-digit number and tens</li> <li>* two two-digit numbers</li> <li>* adding three one-digit numbers</li> </ul>	Add and subtract numbers mentally, including: <ul style="list-style-type: none"> <li>* a three-digit number and ones</li> <li>* a three-digit number and tens</li> <li>* a three-digit number and hundreds</li> </ul>	Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	Add and subtract numbers mentally with increasingly large numbers	Perform mental calculations, including with mixed operations and large numbers
<b>Just know it!</b>	Represent and use number bonds and related subtraction facts within 20 Add and subtract one-digit and two-digit numbers to 20, including zero	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100				
<b>Foundations</b>	<p>1 less</p> <p>Number bonds, subtraction: 5, 6</p> <p>Count back</p> <p>Number bonds, subtraction: 7, 8</p> <p>Subtract 10.</p> <p>Number bonds, subtraction: 9, 10</p> <p>Teens subtract 10.</p> <p>Difference between</p>	<p>10 less</p> <p>Number bonds, subtraction: 20, 12, 13</p> <p>Number bonds, subtraction: 14, 15</p> <p>Subtract 1 digit from 2 digit by bridging</p> <p>Partition second number, count back in 10s then 1s</p> <p>Subtract 10 and multiples of 10</p> <p>Number bonds, subtraction: 16, 17</p> <p>Subtract near multiples of 10</p> <p>Difference between</p> <p>Number bonds, subtraction: 18, 19</p>	<p>Subtract multiples of 10 and 100</p> <p>Subtract single digit by bridging through boundaries</p> <p>Partition second number to subtract</p> <p>Difference between</p> <p>Subtract near multiples of 10 and 100 by rounding and adjusting</p> <p>Difference between</p>	<p>Subtract multiples of 10s, 100s, 1000s</p> <p>Fluency of 2 digit subtract 2 digit</p> <p>Partition second number to subtract</p> <p>Decimal subtraction from 10 or 1</p> <p>Difference between</p> <p>Subtract near multiples by rounding and adjusting</p> <p>Difference between</p>	<p>Subtract multiples of 10s, 100s, 1000s, tenths,</p> <p>Fluency of 2 digit - 2 digit including with decimals</p> <p>Partition second number to subtract</p> <p>Difference between</p> <p>Adjust numbers to subtract</p> <p>Difference between</p>	<p>Subtract multiples of 10s, 100s, 1000s, tenths, hundredths</p> <p>Fluency of 2 digit - 2 digit including with decimals</p> <p>Partition second number to subtract</p> <p>Use number facts bridging and place value</p> <p>Adjust numbers to subtract</p> <p>Difference between</p>