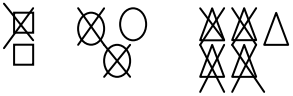


Progression of Written Calculation Strategies

	Year 1	Year 2	Year 3	Year 4
Addition	<p>Hundred square</p> <p>Number line</p> <p>Partitioning 2-digit numbers</p>	<p>Partitioning:</p> $22 + 32 = \begin{array}{r} 20 + 2 \\ 30 + 2 \\ \hline 50 + 4 = 54 \end{array}$ <p>2 digit column addition with carrying:</p> $\begin{array}{r} 34 \\ 27+ \\ \hline 61 \\ \hline 1 \end{array}$	<p>Blank number line</p> <p>Partitioning: $378 + 211 =$</p> $300 + 70 + 8$ $200 + 10 + 1$ $500 + 80 + 9 = 589$ <p>3 digit column addition with carrying</p> $\begin{array}{r} 478 \\ 363+ \\ \hline 841 \\ \hline 11 \end{array}$ <p>Add fractions with same denominator that equal no more than 1</p>	<p>Column addition with carrying</p> $\begin{array}{r} 4325 \\ 3686+ \\ \hline 8011 \\ \hline 1111 \end{array}$ <p>Adding fractions with same denominator</p>
Subtraction	<p>100 square</p> <p>Number line</p> <p>Cubes</p> <p>Use known number facts or use practical equipment</p>	<p>100 square</p> <p>Number line</p> <p>Partitioning:</p> $235 - 124 =$  <p>Partitioning 2-digit number expanded method</p> <p>Column subtraction to 2 digits</p>	<p>Blank number line</p> <p>Partitioning: $343 - 221 =$</p> $300 \ 40 \ 3$ $200 \ 20 \ 1 -$ $100 \ 20 \ 2 = 122$ <p>Compact column subtraction</p> $\begin{array}{r} 327 \\ 215 - \\ \hline 112 \end{array}$ <p>Recognising complements of fractions to 1, e.g. $1 - \frac{1}{4} = \frac{3}{4}$</p>	<p>Compact column subtraction</p> $\begin{array}{r} 4785 \\ 3127 - \\ \hline 1658 \end{array}$ <p>Subtract like fractions, e.g. $\frac{3}{8} - \frac{1}{8} = \frac{2}{8}$</p>

Progression of Written Calculation Strategies

	Year 1	Year 2	Year 3	Year 4																
Multiplication	<p>Times tables - 2, 5, 10</p> <p>Sets and arrays - focus on 2s, 5s and 10s</p>	<p>Times Tables - 2, 3, 5, 10</p> <p>Sets and arrays</p> <p>Grid method x by 2, 5, 10</p>	<p>Times tables - 2, 3, 4, 5, 6, 8, 10</p> <p>Arrays</p> <p>Grid method - 2-digits</p>	<p>All times tables</p> <p>Grid method</p> <p>$47 \times 5 =$</p> <table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>x</td> <td>40</td> <td>7</td> </tr> <tr> <td>5</td> <td>200</td> <td>35</td> </tr> </table> <p>=235</p> <p>Vertical written method</p> <table style="display: inline-table; vertical-align: middle;"> <tr> <td style="text-align: right;">47</td> <td style="text-align: right;">47</td> </tr> <tr> <td style="text-align: right;"><u>5x</u></td> <td style="text-align: right;"><u>35x</u></td> </tr> <tr> <td style="text-align: right;">235</td> <td style="text-align: right;">23³5</td> </tr> <tr> <td></td> <td style="text-align: right;"><u>1410</u></td> </tr> <tr> <td></td> <td style="text-align: right;"><u>1645</u></td> </tr> </table>	x	40	7	5	200	35	47	47	<u>5x</u>	<u>35x</u>	235	23 ³ 5		<u>1410</u>		<u>1645</u>
x	40	7																		
5	200	35																		
47	47																			
<u>5x</u>	<u>35x</u>																			
235	23 ³ 5																			
	<u>1410</u>																			
	<u>1645</u>																			
Division	<p>Sharing</p> <p>Halving to 12</p> <p>Finding $\frac{1}{2}$ and $\frac{1}{4}$</p>	<p>Know 2, 5, 10 division facts</p> <p>Sharing</p> <p>Halves of numbers to 40</p>	<p>Tables - division facts</p> <p>Grouping / sharing - including remainders</p>	<p>Short division method</p> <p>$46 \div 2 =$</p> <p>23</p> <p>$2\overline{)46}$</p>																