
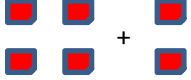

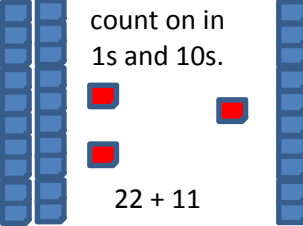
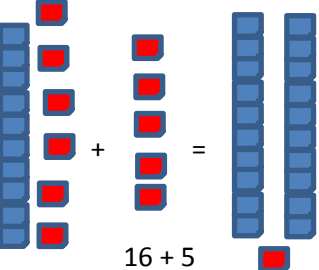
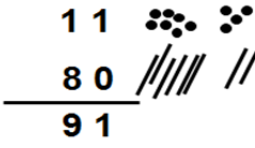

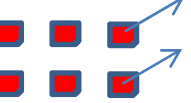

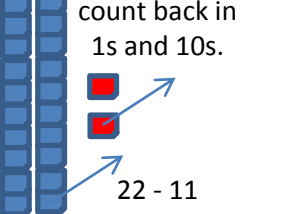
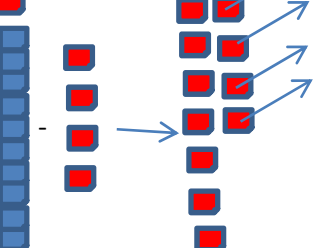
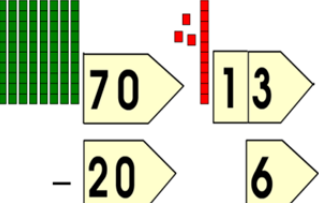
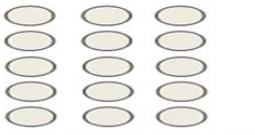
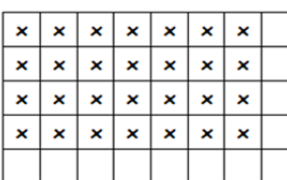
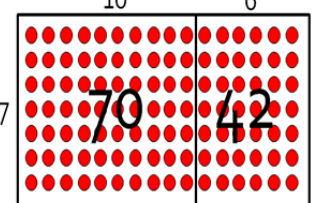
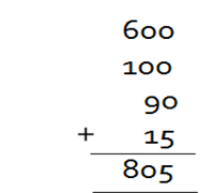
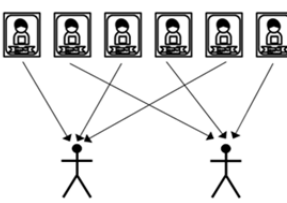
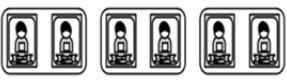
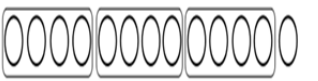
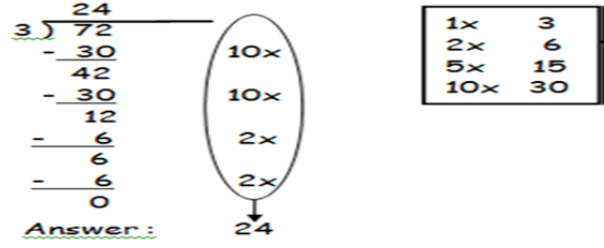


### Brampton Primary School Calculation Policy

Operation	Progression – These are the minimum requirements; more able children should be challenged with decimal and fraction calculations														
<p><b>Addition</b></p> <p>Children are expected to have started the formal column method by year 3.</p>	<p>Children to use practical equipment to count and compare numbers.</p> <p>3</p> 	<p>Children to use practical equipment to count out each number in the calculation and then combine.</p> <p><math>4 + 2 = 6</math></p> 	<p>To support children in moving from counting <b>all</b> to counting <b>on</b>, one part of the calculation should be covered.</p> <p><math>4 + 2 = 6</math></p> 	<p>Children are to use base 10 equipment to add 2- and 3- digit numbers. Children must be able to count on in 1s and 10s.</p> <p><math>22 + 11</math></p> 	<p>Children should be taught to exchange using addition.</p> <p><math>16 + 5</math></p> 	<p>Children should be taught to use column addition. Children can support their working with jottings.</p> <p>TU 67 + 24 ----- 11 80 ----- 91</p> 	<p>Children should be taught to use an efficient method of column addition with adjustment.</p> <p>HTU 164 + 257 ----- 421 ----- 11</p>								
<p><b>Subtraction</b></p> <p>Children are expected to have started the formal column method by year 3.</p>	<p>Children to use practical equipment to count and compare numbers.</p> <p>3</p> 	<p>Children to use practical equipment to count out the first number and take the second away to find the solution.</p> <p><math>6 - 2 = 4</math></p> 	<p>To support children in moving from counting <b>all</b> to counting <b>on</b>, one part of the calculation should be covered.</p> <p><math>6 - 2 = 4</math></p> 	<p>Children are to use base 10 equipment to subtract 2- and 3- digit numbers. Children must be able to count back in 1s and 10s.</p> <p><math>22 - 11</math></p> 	<p>Children should be taught to subtract using exchanges.</p> 	<p>Children should be taught to use column subtraction using exchanges. Eg <math>86 - 23</math></p> <p>70 13 - 20 6</p> 	<p>Children should be taught to use an efficient method of column subtraction with adjustment.</p> <p>HTU 164 <del>2</del> - 157 ----- 164</p>								
<p><b>Multiplication</b></p> <p>Children are expected to have started the formal column method by year 4.</p>	<p>Children need to understand how arrays link to multiplication through repeated addition and be able to create their own arrays.</p> <p><math>3 + 3 + 3 + 3 + 3 = 15</math></p> 	<p>Children should be taught to create arrays on squared paper. <math>4 \times 7 = 28</math> <math>7 + 7 + 7 + 7</math> This links to area.</p> 	<p>Children should be taught to use their knowledge of partitioning and arrays to form the grid method.</p> <p><math>70 \quad 42</math></p> 	<p>To help learn the grid method children can be provided with grids. They must have a good understanding of number facts in order to progress to this – multiplying by 10/100 etc.</p> <p>e.g. <math>23 \times 35</math></p> <table border="1" data-bbox="1587 1386 1884 1533"> <tr><td>x</td><td>20</td><td>3</td></tr> <tr><td>30</td><td>600</td><td>90</td></tr> <tr><td>5</td><td>100</td><td>15</td></tr> </table>	x	20	3	30	600	90	5	100	15	<p>Children must understand the relationship between place value and the multiplication.</p> <p>356 x 5 ----- 1780</p> 	<p>Children can be taught 2-digit by 3-digit.</p> <p>356 x 25 ----- 1780 5 x 356 7120 20 x 356 ----- 8900</p>
x	20	3													
30	600	90													
5	100	15													
<p><b>Division</b></p> <p>Children are expected to have started the formal column method by year 5.</p>	<p>Children are to begin their understanding of division through sharing.</p> <p><math>6 \div 2 = 3</math></p> 	<p>Children must develop their understanding of division as grouping.</p> <p><math>6 \div 2 = 3</math></p> 	<p>Division calculations will sometimes have remainders.</p> <p><math>13 \div 4 = 3 \text{ r}1</math></p> 	<p>In order to complete division by chunking children must understand the relationship between multiplication and division.</p> <p><math>3 \overline{) 72}</math></p> <p>10x 3 2x 6 5x 15 10x 30</p> 	<p>Children can move on to the short method of division once they understand and are confident with chunking.</p> <p><math>3 \overline{) 3783}</math></p> <p>1261</p> 