

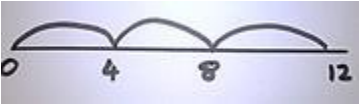
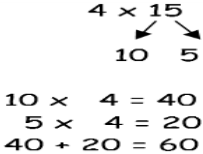
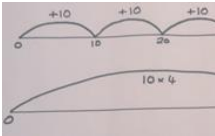
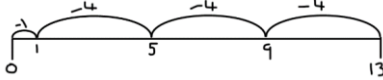
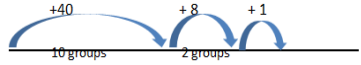
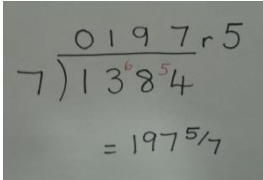


Barby C of E Primary Calculation End of Year Expectations Overview

	Addition	Subtraction	Multiplication	Division						
Reception	<p>$4 + 3 = 7$ by combining two sets of objects to make a whole.</p>	<p>$4 - 3 = 1$ by physically taking away and removing objects from a whole.</p>	<p>Physically arrange objects into groups of 2 eg. 2 lots of 4 counters is 8 counters.</p>	<p>Share 8 between 2 people by physically sharing objects.</p>						
Year One	<p>The abstract number line: What is 2 more than 4? What is the sum of 2 and 4? What is the total of 4 and 2? $4 + 2 =$</p>  <p>Then with bridging: What is 3 more than 8?</p>	<p>The abstract number line: What is 2 less than 6? What is the difference between 2 and 6? $6 - 2 =$</p> 	<p>The abstract number line: Showing three jumps of four. $3 \times 4 = 12$</p> 	<p>$6 \div 2 = 3$</p> <table border="1"> <tr> <td>3</td> <td>3</td> </tr> </table> <p>Children should also be encouraged to use their 2 times table facts.</p>	3	3				
3	3									
Year Two	<p>TO + TO using the expanded version:</p> $\begin{array}{r} 41 = 40 + 1 \\ + 8 = 8 \\ \hline 49 = 40 + 9 \end{array}$ $\begin{array}{r} 36 = 30 + 6 \\ + 25 = 20 + 5 \\ \hline 61 = 50 + 11 \end{array}$	<p>TO - TO using the expanded version:</p> $\begin{array}{r} 48 = 40 \text{ and } 8 \\ - 7 = 7 \\ \hline 41 = 40 \text{ and } 1 \end{array}$ <p style="text-align: center;">30</p> $\begin{array}{r} 41 = 40 \text{ and } 1 \\ - 26 = 20 \text{ and } 6 \\ \hline 15 = 10 \text{ and } 5 \end{array}$	<p>4×15</p>  <p>$10 \times 4 = 40$ $5 \times 4 = 20$ $40 + 20 = 60$</p> 	<p>$13 \div 4 = 3$ remainder 1 '3 groups of 4, with 1 left over.'</p> <p>Using the number line</p> 						
Year Three	<p>HTO + HTO using the expanded formal column method, then the formal:</p> $\begin{array}{r} 243 = 200 + 40 + 3 \\ + 368 = 300 + 60 + 8 \\ \hline 611 = 500 + 100 + 11 \end{array}$ $\begin{array}{r} 243 \\ + 368 \\ \hline 611 \end{array}$	<p>HTO - HTO using the expanded formal column method, then the formal.</p> $\begin{array}{r} 341 = 300 \text{ and } 40 \text{ and } 1 \\ - 276 = 200 \text{ and } 70 \text{ and } 6 \\ \hline 55 = 50 \text{ and } 5 \end{array}$ $\begin{array}{r} 341 \\ - 276 \\ \hline 65 \end{array}$	<table border="1"> <tr> <td>X</td> <td>10</td> <td>8</td> </tr> <tr> <td>3</td> <td>30</td> <td>24</td> </tr> </table> <p style="text-align: center;">$30 + 24 = 54$</p> $\begin{array}{r} 3 \times 18 \\ 10 \times 8 \end{array}$ <p style="text-align: center;">$3 \times 10 = 30$ $3 \times 8 = 24$ $30 + 24 = 54$</p>	X	10	8	3	30	24	<p>2 digit \div 1 digit, with remainders too, using the number line.</p> 
X	10	8								
3	30	24								
Year Four	<p>ThHTO + ThHTO using the formal column method.</p> $\begin{array}{r} 5678 \\ + 6712 \\ \hline 12390 \\ \hline 12390 \end{array}$ <p>Extend to up to two places of decimals (same number of decimal places) and to adding several numbers (with different amounts of</p>	<p>ThHTO - ThHTO using the formal column method.</p> $\begin{array}{r} 67139 \\ - 5462 \\ \hline 1277 \end{array}$ <p>Extend to up to two places of decimals (same number of decimal places).</p>	<p>Multiply two digit and three digit numbers by a one digit number, using the formal short method.</p> $\begin{array}{r} 69 \\ \times 4 \\ \hline 276 \end{array}$ $\begin{array}{r} 369 \\ \times 4 \\ \hline 1476 \end{array}$	<p>Divide two digit and three digit numbers by a 1 digit, using the groupings of multiplication in a vertical 'chunking method.</p> $\begin{array}{r} 7 \overline{)840} \\ \underline{-700} \\ 140 \\ \underline{-140} \\ 0 \end{array}$ <p style="text-align: right;">so = 120</p>						

	digits).			00
Year Five	<p>Formal column method to add whole numbers with more than four digits.</p> $\begin{array}{r} 347284 \\ + 425468 \\ \hline 772752 \\ \hline 1 \quad 1 \quad 1 \quad 1 \end{array}$ <p>Extend to decimals (same number of decimal places).</p> $\begin{array}{r} 172.83 \\ + 54.68 \\ \hline 227.51 \\ \hline 1 \quad 1 \quad 1 \end{array}$	<p>Formal column method to subtract whole numbers with more than four digits,</p> $\begin{array}{r} 4516,8715 \\ -237,329 \\ \hline 1 \quad 19,546 \end{array}$ <p>Extend to decimals (different number of decimal places)</p> $\begin{array}{r} 1712.810 \\ - 54.68 \\ \hline 118.12 \end{array}$	<p>Multiply two digit and three digit numbers by a two digit number, using the formal long method.</p> $\begin{array}{r} 28 \\ \times 36 \\ \hline 168 \\ 840 \\ \hline 1008 \end{array}$ $\begin{array}{r} 728 \\ \times 36 \\ \hline 4368 \\ 21840 \\ \hline 26208 \end{array}$	<p>Divide up to a 4 digit number by a one digit number, using formal short division (with and without remainders).</p> 
Year Six	<p>Formal column method to add whole numbers with up to eight digits.</p> $\begin{array}{r} 34728435 \\ + 42546846 \\ \hline 77275281 \\ \hline 1 \quad 1 \quad 1 \quad 1 \end{array}$ <p>Continue with decimal calculations with varied amounts of digits,</p> $\begin{array}{r} 172.8 \\ 34.7 \\ + 254.68 \\ \hline 462.18 \\ \hline 1 \quad 2 \end{array}$	<p>Formal column method to subtract whole numbers with up to eight digits.</p> $\begin{array}{r} 45,168,715615 \\ -23,732,947 \\ \hline 1 \quad 1,954,628 \end{array}$ <p>Continue with decimal calculations with varied amounts of digits, and also calculations with whole numbers and decimals.</p>	<p>Written formal methods, progressing to larger numbers.</p> $\begin{array}{r} 3728 \\ \times 36 \\ \hline 22368 \\ 111840 \\ \hline 134208 \end{array}$	<p>Divide up to a 4 digit number by a two digit number, using formal long division (with and without remainders, in a variety of contexts).</p> 