

## **Barnfields Primary School Calculation Policy**

Year 6



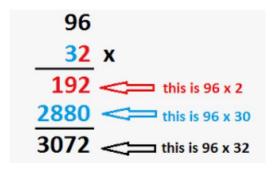
Addition Calculation: Year 6				
Mental Calculation	<ul> <li>Perform mental calculations, including with mixed operations and large numbers.</li> <li>Children use representation of choice.</li> <li>Consolidate partitioning and re-partitioning.</li> <li>Use compensating for adding too much/little and adjusting</li></ul>			
Written Calculation	Refer back to pictorial and physical representations when needed.  • Add larger numbers using the formal written (columnar) method.  • Include decimal addition for money.			
Possible Concrete a	Teachers should ensure that pupils have the opportunity to apply their knowledge in a variety of contexts and problems (exploring cross curricular links) to deepen their understanding.  Teacher Modelling/Children's Recordings			
	idate and secure their understanding of columnar addition within the context of new matical concepts taught within year 6. (see year 5 table for guidance)			
Fluency	<ul> <li>Count in tens and hundreds increasing fluency of order and place value</li> <li>Perform increasingly complex mental calculations and those with</li> </ul>			

increasingly large numbers to aid fluency

Mental Calculation	<ul> <li>numbers.</li> <li>Use estimation to context of a problem</li> <li>They undertake median</li> </ul>			
	Children use,	sic, Mental subtraction Strategies, (See Year 5.) , or visualise, representation of choice. o physical representations as required.		
Written Calculation	<ul> <li>Subtract whole numbers with more than 4 digits, including using formal written methods (columnar subtraction). Solve problems involving the calculation and conversions of units of measure, using decimal notation of up to three decimal places where appropriate. (MEASURES)</li> </ul>			
Children apply, consol		Teacher Modelling/Children's Recordings  anding of columnar subtraction within the context of nin year 6. (see year 5 table for guidance)		
1 <sup>7</sup> 8 .90 <sup>10</sup>	0, 1,	Consolidate columnar methods, paying particular attention to the occurrence		

Mental Calculation	<ul> <li>Perform mental calculations, including with mixed operations and large numbers (increasingly large numbers &amp; more complex calculations)</li> <li>Use all the multiplication tables to calculate mathematical statements in order to maintain fluency.</li> <li>Use estimation to check answers to calculations &amp; determine, in the context of a problem, an appropriate degree of accuracy.</li> <li>Identify the value of each digit in numbers given to three decimal place and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places</li> <li>Use mental strategies to solve problems e.g.</li> <li>★ x4 by doubling and doubling again</li> <li>★ x5 by x10 and halving</li> </ul>		
	<ul> <li>x20 by x10 and doubling</li> <li>x9 by multiplying by 10 and adjusting</li> </ul>		
	• x6 by multiplying by 3 and doubling		
Written Calculation	<ul> <li>Multiply multi-digit numbers up to 4 digits by a two-digit whole numb using the formal written method of long multiplication (short &amp; long multiplication)</li> </ul>		
	<ul> <li>Multiply one-digit numbers with up to two decimal places by whole numbers</li> </ul>		
Possible Concrete a	d Visual Representations Teacher Modelling/Children's Recordings		

Children apply, consolidate and secure their understanding of columnar multiplication within the context of new mathematical concepts taught within year 6. (see year 5 table for guidance)



Fluency 

◆ Undertake mental calculations with increasingly large numbers

◆ Continue to use all multiplication tables to calculate mathematical statements in order to maintain fluency

	Division Calcula	tion: Year 6	
Mental Calculation	<ul> <li>Division Calculation: Year 6</li> <li>Pupils should be taught to:         <ul> <li>Perform mental calculations, including with mixed operations and large numbers.</li> <li>Use their knowledge of the order of operations to carry out calculations involving the four operations.</li> <li>Identify common factors, common multiples and prime numbers.</li> <li>Solve problems involving addition, subtraction, multiplication and division use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.</li> </ul> </li> <li>Spider diagrams         <ul> <li>10% = £3</li> <li>10% = £15</li> </ul> </li> <li>Spider diagrams</li> <li>25% = £7.50</li> <li>26% = £0p</li> </ul>		
Written Calculation	formal written method whole number remain for the context  Divide numbers up to written method of sho	4 digits by a two-digit whole number using the d of long division, and interpret remainders as ders, fractions, or by rounding, as appropriate  4 digits by a two-digit number using the formal art division where appropriate, interpreting	
Possible Concrete	remainders according to the context.  Possible Concrete and Visual Representations Teacher Modelling/Children's Recordings		
10 000 1000 100 10 1 1 3 4 0 0 3 4 0 0 3 4 0 0 0 0 0 0 0 0 0 0	resentations used in year 5  6 7 8 9  1 .01 .001  • 6 8  • 0 6 8  • 0 6 8  62.72 ÷ 40 = ?  2 ÷ 4 = £340.68  and ½ again.]  ÷ 10 = £34.068  bunds to £34.07.	Children consolidate the long division in year 5, progressing to a more refined approach.  23 24 560 -480 80 -72 8 Answer: 23 R 8	
Fluency	<ul> <li>Practise division for larger numbers, using the formal written methods of short and long division</li> <li>Continue to use all multiplication tables and division facts to maintain fluency</li> <li>Perform mental calculations, including with mixed operations and larger numbers</li> </ul>		