Crowmoor School

Y4 Calculations Policy

2017

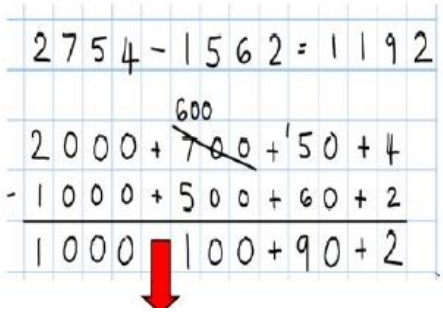
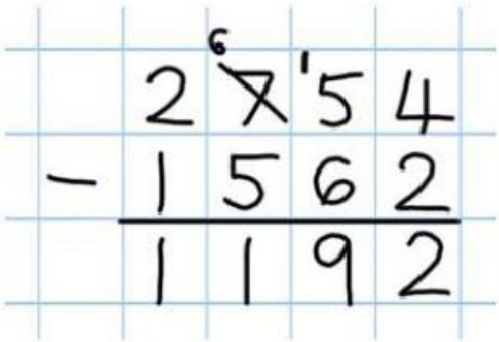
Addition Year 4

Focus: Adding with numbers up to 4 digits
In year 4 children will consolidate their use of the traditional column method and will be able to use it confidently to add numbers up to 4 digits. This could include carrying ones, tens and hundreds.

4267 + 1584 = 5841 4267 + 1584 5851 1 1	Children should already be familiar with the column method from year 3 but it is very important to go over the method again ensuring children understand why they start with the ones, have to carry a number etc. Please Note: 1) The ones must be added first! 2) 'Carry' numbers underneath the bottom line! 3) Reinforce the place value! It is not 6 add 8, it is 6 tens add 8 tens!
Key Vocabulary Add, more, plus, and, make, altogether, total, equal to, equals, the same as, double, most, count on, number line, sum, tens, units/ones, partition, addition, column, tens boundary, hundreds boundary, increase, vertical, carry, expanded, compact, *thousands, hundreds, tens, ones, digits, inverse.*	

Subtraction Year 4

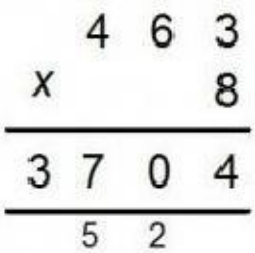
Focus: Subtracting with numbers up to 4 digits
Children will consolidate their knowledge of the partitioning column method for subtraction with 4 digit numbers including those where exchanging is required. Once they are secure with this they will move on to the compact (traditional) method of column subtraction.

	Children will consolidate their learning of the partitioning column method of subtraction and exchanging by solving calculations with more complex numbers. Place value counters will come in handy here when building children's confidence. Money can also be partitioned for subtraction e.g. £1 + 30 + 5 - £1 + 10 + 2 =
	Once confident children are ready to move on to the compact method of subtraction. Encourage children to complete a calculation in the partitioning column methods and then model compact method. See if children can see how they are linked and discuss which is simpler. Although this is seen as the 'easiest' method it does not mean that it is necessarily the best method and they need to carefully select the best method for the problem they are solving

Key Vocabulary
Equal to, take, take away, less, minus, subtract, leaves, distance between, difference between, how many more, how many fewer/less than, most, least, count back, how many left, how much less is_?, count on, strategy, partition, tens, units/ones, exchange, decrease, hundreds, value, digit, *inverse.*

Multiplication Year 4

Focus: Multiplying 2 and 3 digit numbers by 1 digit numbers
In year 4 children need to use the grid method confidently to solve problems where a 2 or 3 digit number is multiplied by a one digit number. They need to move on to the use of short multiplication to solve 3 digit number multiplied by 1 digit problems.

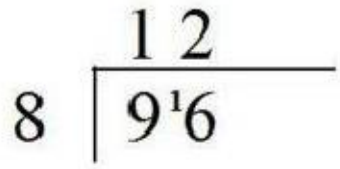
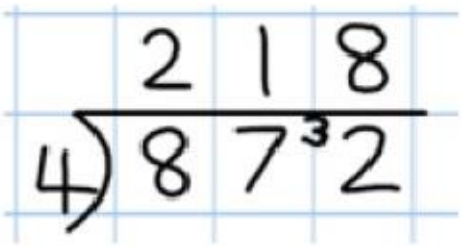
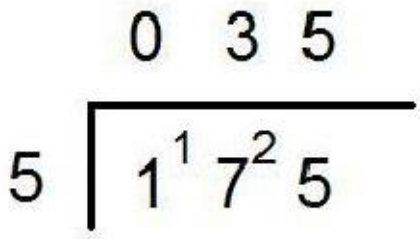
<table>
<tr>
<td>
<table>
<tr><td>x</td><td>600</td><td>10</td><td>3</td></tr>
<tr><td>5</td><td>3000</td><td>50</td><td>15</td></tr>
</table>
Add up 3000, 50 and 15 to make 3065.
613 x 5 = 3065
</td>
<td>The grid method is extended in year 4 so children will now multiply 3 digit numbers by 1 digit numbers. When adding the 3 answers up to create a total, column addition could be used to ensure accuracy, especially where bridging will be needed.</td>
</tr>
<tr>
<td>
463
X 8
24 (8x3)
480 (8x60)
3200 (8X400)
3704
</td>
<td>Ensure of understanding of ‘expanded short method’ initially.</td>
</tr>
<tr>
<td>


</td>
<td>The compact ‘short method’ multiplication method is tricky and needs to be approached carefully. At first children should solve a problem using grid method and then observe the teacher solve a problem using the short multiplication and make comparisons. How are they similar?

Children need to go through it very slowly and carefully, unpicking each step until they are fully confident.</td>
</tr>
<tr>
<td colspan="2">It is at this stage that approximation and estimation should become a regular part of classroom practice. Children should approximate an answer before using a method so they know if there answer is accurate or not.
253 x 9 is approximately 250 x 10 = 2500</td>
</tr>
<tr>
<td colspan="2">Key Vocabulary
Groups of, lots of, times, array, altogether, multiply, count, multiplied by, repeated addition, column, row, commutative, sets of, equal groups, times as big as, once, twice, three times, partition, grid method, multiple, product, tens, units/ones, value, inverse</td>
</tr>
</table>

Division Year 4

Focus: Consolidating and extending use of short division
Children in year 4 will continue to use short division to solve division problems. They will begin to work on remainders, including problems where there are remainders in the first numbers but not in the final answer.

16r1 4/69 - 40 10x4 29 - 24 6x4 5 - 4 r1	Children can articulate thoughts using notation if beginning to chunk. Multiply by the divisor and chunk down to reduce the amount until it reduces to a smaller number than the divisor. Add the multipliers and the remainder.
	Once confident with the method of short division, they will move on to problems where the first digit of the dividend is not a multiple of the divisor and therefore a remainder will need to be carried. Children may need to use other equipment to calculate the division and multiplication facts required.
	Children who can use short multiplication problems with remainders (but not those in the final answer) are now ready to work on 3 digit problems. Again, there should be remainders in the calculation but never in the final answer.
	Once children are confident at dividing with 3 digits, they need to attempt problems where the answer in the first column (hundreds column) is a zero. They may wish to record the hundred initially as this will help them remember its place and the numbers value.

Key Vocabulary
Share, share equally, one each, two each…, group, groups of, lots of, array, divide, divided by, divided into, division, grouping, number line, left, left over, inverse, short division, carry, remainder, multiple, *divisible by, factor*