Maths calculation booklet for parents.

Year Three

The purpose of this booklet is to inform you, as parents, of the calculation strategies and methods that shall be used by your child. Should you have any questions, please speak to your child's teacher.

Sequence of learning.

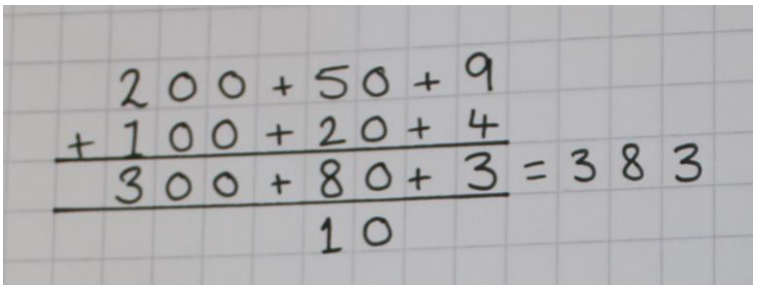
As your child is taught a new strategy, they shall begin by looking at in a concrete way. This means they will use physical resources to help them understand the process and how it works first.

Following this, they shall look at a pictorial representation of that same strategy. This is where they will draw pictures that represent the strategy which, again, helps to secure their understanding and also provides them a supportive tool that they can use when problem solving.

Finally, they shall link their knowledge of the concrete and pictorial stages with the abstract stage. This is where they will record the strategies purely in digit form without the physical resources or pictures to aid them.

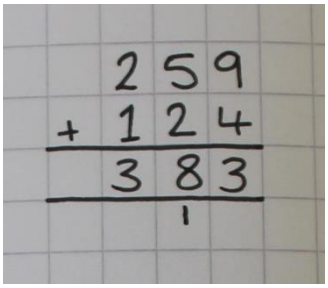
Addition

In year 3, the children shall learn the formal methods for addition. The end of year target is for all children to be confident users of column method. They shall start by looking at the expanded column method, as shown in the image here.



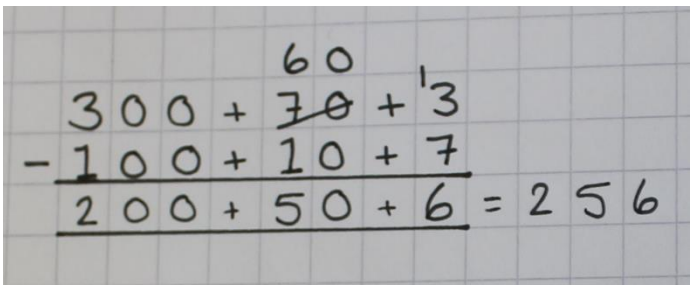
In this method, the children partition the numbers they are adding to help them add each column separately. This also helps them understand the concept of carrying, in which they carry forward into the next column. For example, here the 9 and 4 add together to make 13. The 3 is recorded in the units column but the 10 is carried over into the tens column.

As they become more confident, they will move to the formal column method as shown in this image here.



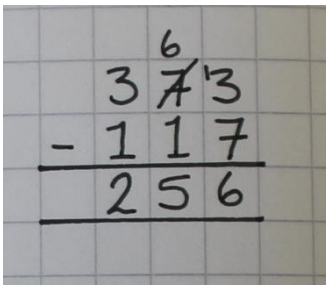
Subtraction

As in addition, the children shall start by using the expanded column method to help them understand exchanging. Exchanging is the process of adjusting the calculation to allow you to complete it. For example, in this calculation, it is not possible for the children to complete 3 - 7. Because of



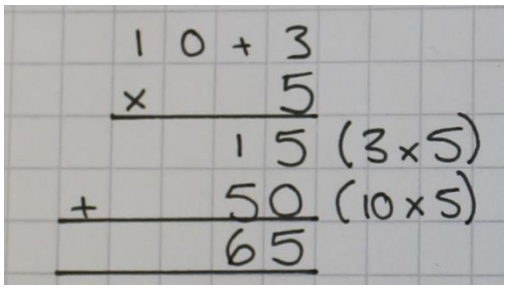
this, they exchange one of the tens for ten units, making the calculation 13 - 7 which can be completed.

Again, as they become more confident, they will move to the formal column method for subtraction as show here.

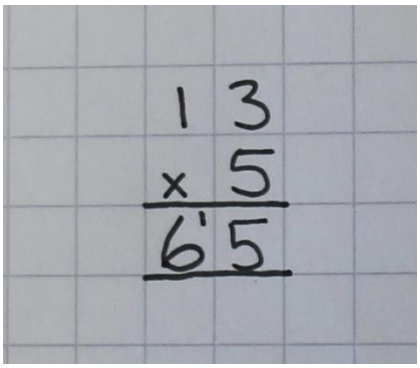


Multiplication

This year, the children shall be introduced to a formal multiplication structure. They may start by using a partitioned model to help them understand the steps involved in multiplying, as shown in this image.



Alternatively, if they are ready, the children shall move directly into short multiplication, as shown here.

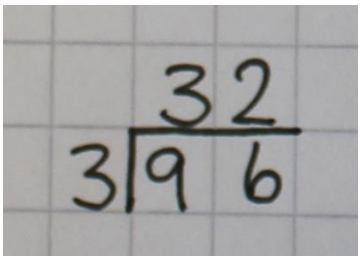


Please note that the position of the carried digit is different to column addition. This is to help the children as they move into their later school years where they shall learn about long multiplication.

Division

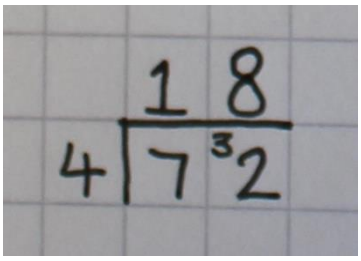
The children will be taught the short division method to help them divide. This method is sometimes referred to as the bus stop method.

In the example here, the child has looked to see how many



multiples of 3 there are in 9. There are 3 so that is what has been recorded above the 9 in the answer space. They have then done the same for the 6 and arrived at the answer, 96 ÷ 3 = 32

As they grow more confident, the children will complete divisions for which they must do some exchanging. In the



example here, the child has identified that there is only 1 multiple of 4 in 7 with 3 remaining. These remaining 3 tens have been exchanged for 30 units thus creating 32 units. The child has then correctly identified that there are 8 multiple-s of 4 in 32 to complete the method.