



Maths calculation booklet for parents.

Year Two

The purpose of this booklet is to inform you, as parents, of the calculation strategies and methods that shall be used by your child.

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

Building on the knowledge gained in year one, the children shall focus on their ability to use a numberline for addition. A numberline is used by starting at the first number you are adding and then counting up. For example, if you were completing $31 + 15$, you would start at 31 and count up 15 times. As their confidence improves, the children will jump up the numberline in bigger 'chunks'. In the given example, they would add the 10 first and then add the 5.

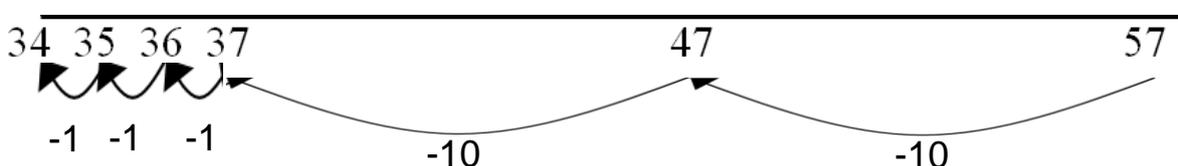
They will begin with numbered numberlines but, across the year, they will move on to be able to draw an unnumbered one of their own to use as a supportive tool.

They shall also look at how we can add three single digit numbers together, thinking about how we can combine to 10 first and then add the remaining amount on as in the example here.

$$\begin{array}{l} \textcircled{4} + 7 + \textcircled{6} = \boxed{10} + \boxed{7} \\ \quad \quad \quad \underbrace{\hspace{1.5cm}}_{10} \\ \quad \quad \quad \quad \quad \quad = \boxed{17} \end{array}$$

Subtraction

The use of numberlines continues through subtraction. Here, they will use them by starting at the largest number and counting down the number that they are subtracting, as shown in the image here:



Multiplication

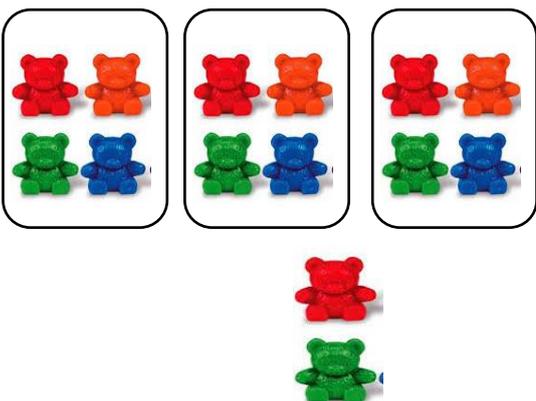
In year two, the children shall begin thinking about multiplication as repeated addition. This involves them identifying that 3×4 can also be written as $3 + 3 + 3 + 3$. This strengthens their conceptual understanding of what multiplication actually is before they move on to using arrays.

In arrays, the children arrange multiplications in a very visual way. The example here shows 6×4 as well as 4×6 . They shall start by building these arrays physically and then move on to drawing them as a method for solving multiplication problems.



Division

The use of arrays continues into division. As well as showing 6×4 , the above example also shows $24 \div 4$ or $24 \div 6$.



They shall begin to look at division with remainders. This can be shown practically by returning to grouping, as in the example here in which 14 has been divided by 3 with the answer 4 remainder 2.