

Year 4 Maths- Parent guidance

Place value

To be able to understand the concept of many maths topics, children must have a firm understanding of place value.

They must understand that a number can be broken down into tens and ones or hundreds, tens and ones. This is called partitioning. Examples shown here:



Addition

By the end of Year 4, pupils will have been introduced to the standard, written method that we have previously called "carrying"; however, by this time, they will know that they are really converting from one place value to the next - similar to taking 10 one-pound coins to the bank and getting a ten-pound note for them. We now call it "exchanging," a term that is used in subtraction as well as addition.

$$\begin{array}{r} 75 \\ +48 \\ \hline 123 \\ 1 \end{array} \quad \begin{array}{r} 267 \\ +85 \\ \hline 352 \\ 11 \end{array}$$

Subtraction

In Year 4, pupils start using the more formalised, vertical method for subtraction. Partitioning is used here.

"Borrowing" is taught through this method, although it is now called "exchanging," similar to when one goes to a bank to get ten 1 pound coins for a ten-pound note.

942-214 Expanded method $\begin{array}{r} 900 \overset{30}{\cancel{40}} \overset{12}{\cancel{2}} \\ - 200 \ 10 \ 4 \\ \hline 700 \ 20 \ 8 \end{array}$	Compact Method $\begin{array}{r} 942 \\ - 214 \\ \hline 728 \end{array}$
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Multiplication

By the end of Year 4, pupils will be required to have memorised the 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 times tables. They will also be learning to multiply two-digit and three-digit numbers by a single digit number, e.g. $23 \times 8 = 184$ or $123 \times 9 = 1107$

At this point, a more formal written method is introduced, using partitioning (expanding numbers into hundreds, tens and ones). The main method used to teach this is the "grid method." An example is shown below.

$35 \times 7 = 245$

x	30	5
7	210	35

$210 + 35 = 245$

$613 \times 5 =$

We partition 613 into 600 and 10 and 3 and put it in a table.

x	600	10	3
5	3000	50	15

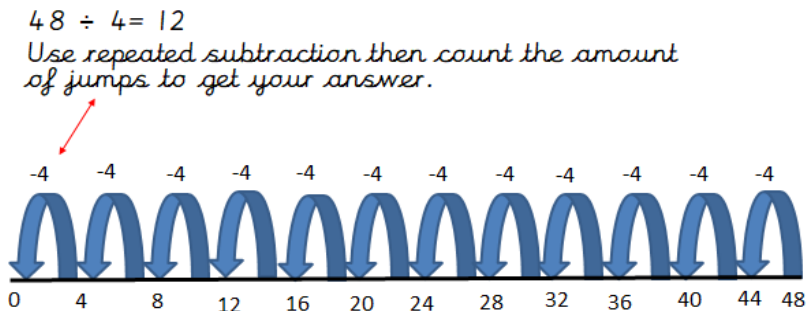
Add up 3000, 50 and 15 to make 3065.

$613 \times 5 = 3065$

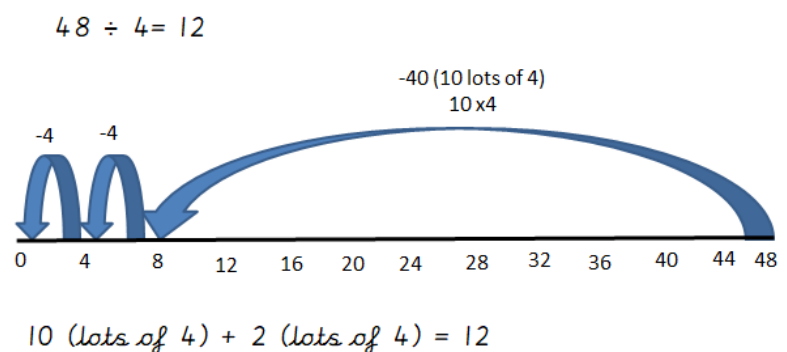
Division

It is really important that children understand the Year 3 method, before moving onto the Year 4 method. By Year 3, pupils use repeated subtraction on a number line. Once they have mastered the first two steps then they will be ready to move onto the next step in Year 4.

Step 1- counting backwards in steps of what you are dividing by then counting the jumps to find the answer e.g.



Step 2- A more efficient method, chunking taking 10 lots of the multiple, then counting in steps e.g.



By the end of Year 4, pupils are starting to learn formal written methods of division. They are still using repeated subtraction but are doing it more formally. They are also finding remainders after division (leftovers).

We want to find out how many lots of 3 go into 48.

Times Tables Facts:	
$1 \times 3 = 3$	
$2 \times 3 = 6$	
$5 \times 3 = 15$	
$10 \times 3 = 30$	

How many lots of 3 do we have altogether?

$10 + 6 = 16$

When we've reached 0, that means that there are no more lots of 3.