

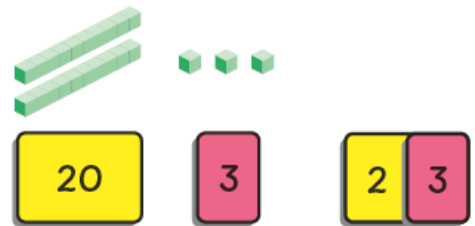
**Steps to Success for
Written Multiplication**

We have learnt (and practised) two methods for written multiplication in Year 3. This is the first method and it is the expanded version.

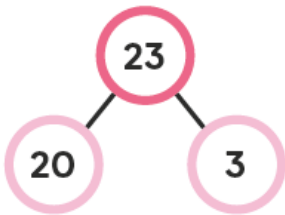
This method is helpful for reminding you to multiply the number in the ones column first and then multiply the number in the tens column.

This 'Maths No Problem' example shows exactly how this method works.

There are 23 children in a class.
How many children are there in 2 classes?



Let's Learn



Step 1 Multiply the ones by 2.

$$3 \text{ ones} \times 2 = 6 \text{ ones}$$

Step 2 Multiply the tens by 2.

$$2 \text{ tens} \times 2 = 4 \text{ tens}$$

Step 3 Add the products.

$$6 + 40 = 46$$

$$23 \times 2 = 46$$

There are 46 children in the 2 classes.

	t	o
	2	3
x		2
		6

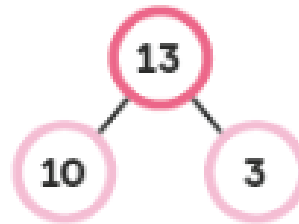
	t	o
	2	3
x		2
		6
	4	0

	t	o
	2	3
x		2
		6
+	4	0
	4	6

Here are some WAGOLL questions:

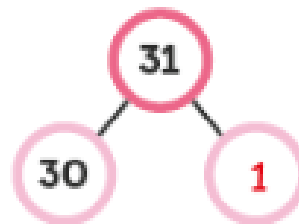
Multiply.

1 $13 \times 3 = 39$



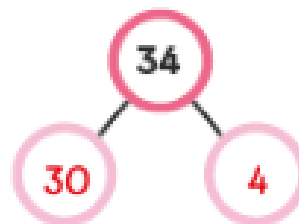
	t	o
x	1	3
		3
<hr/>		
		9
+	3	0
<hr/>		
	3	9
<hr/>		

2 $31 \times 3 = 93$



	t	o
x	3	1
		3
<hr/>		
		3
+	9	0
<hr/>		
	9	3
<hr/>		

3 $34 \times 2 = 68$



	t	o
x	3	4
		2
<hr/>		
		8
+	6	0
<hr/>		
	6	8
<hr/>		

The next method we learnt is a bit trickier. If you prefer to stick with the above method, then stay with that one. If you are feeling really confident and would like to try this 'regrouping' method then follow these steps.

Multiplication with Regrouping

The question we're going to answer is 47×4 .

1. Write out the question with the numbers in the correct columns. Like with column addition, leave a space above your equals sign for any numbers that you need to move to the next column.

$$\begin{array}{r} \text{T} \quad \text{O} \\ 4 \quad 7 \\ \times \quad 4 \\ \hline \hline \end{array}$$

2. Multiply the ones by 4.

$$7 \text{ ones} \times 4 = 28 \text{ ones}$$

$$28 \text{ ones} = 2 \text{ tens} + 8 \text{ ones}$$

3. Write the 8 ones into the ones column and put the 2 tens in the tens column. Write it in the space above your equals sign. Make sure it's big and clear so you don't forget about it.

$$\begin{array}{r} \text{T} \quad \text{O} \\ 4 \quad 7 \\ \times \quad 4 \\ 2 \quad 8 \\ \hline \hline \end{array}$$

4. Next, multiply the tens by 4.

$$4 \text{ tens} \times 4 = 16 \text{ tens}$$

$$\text{Or } 40 \times 4 = 160$$

But there is an extra 2 tens in the tens column now. You must remember to add these two tens to the 160.

$$16 \text{ tens} + 2 \text{ tens} = 18 \text{ tens}$$

$$\text{OR } 160 + 20 = 180$$

5. Write your answer into the correct columns. A 1 hundred in the hundreds column and 8 tens in the tens column.

	H	T	O
		4	7
			4
x		2	
<hr/>			
	1	8	8
<hr/>			

Here are some WAGOLL questions:

$9 \times 2 = 18$ $30 \times 2 = 60$ $60 + 10 = 70$	T	O
	3	9
		2
x		
	1	
<hr/>		
	7	8
<hr/>		

$2 \times 3 = 6$ $30 \times 3 = 90$	T	O
	3	2
		3
x		
<hr/>		
	9	6
<hr/>		

	T	O
	2	5
		3
x		
	1	
<hr/>		
	7	5
<hr/>		

$5 \times 3 = 15$ $20 \times 3 = 60$ $60 + 10 = 70$

$7 \times 8 = 56$ $20 \times 8 = 160$ $160 + 50 = 210$	H	T	O
		7	8
			5
x			
<hr/>			
	2	1	6
<hr/>			

$1 \times 5 = 5$ $40 \times 5 = 200$	H	T	O
		4	1
			5
x			
<hr/>			
	2	0	5
<hr/>			

$8 \times 4 = 32$ $20 \times 4 = 80$ $80 + 30 = 110$	H	T	O
		2	
			3
x			
<hr/>			
	1	1	2
<hr/>			