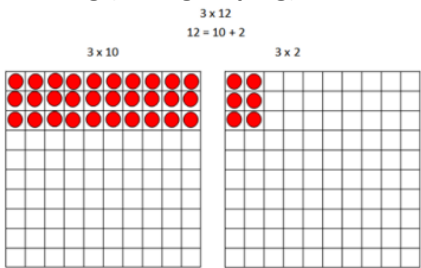


Written Calculation Policy: Multiplication

Year 3

Multiplication of 2 digit numbers with partitioning (no regrouping):



Now add the total number of tens and ones

×	10	2		×	10	2
3				3	30	6

Multiplication of 2 digit numbers with partitioning (regrouping):

×	10	4
3		

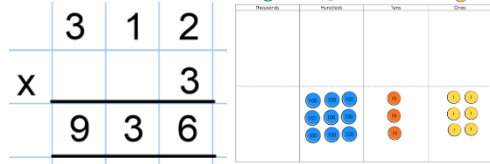
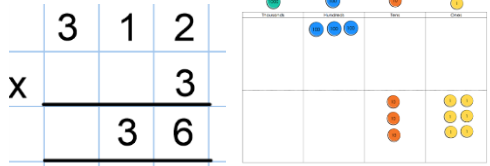
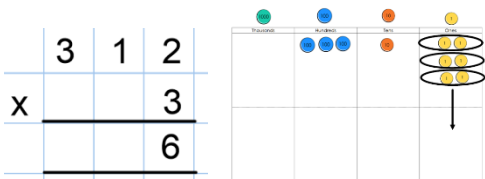
×	10	4
3	30	12

$14 \times 3 = 42$

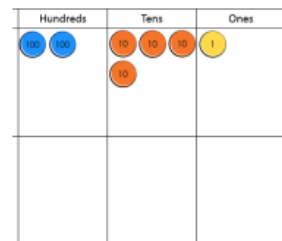
×	40	5
3		

Year 4

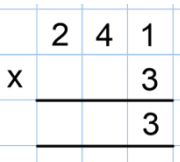
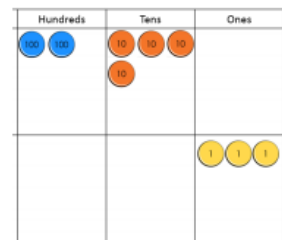
Short Multiplication:



Short Multiplication (with regrouping):



To calculate 241×3 , represent the number 241. Multiply each part by 3, regrouping as needed.

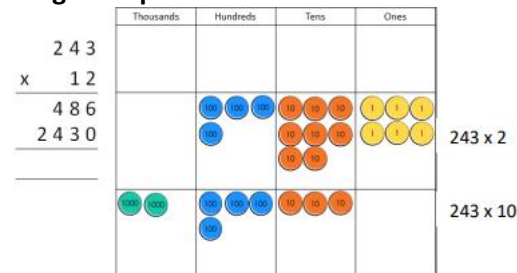


Year 5

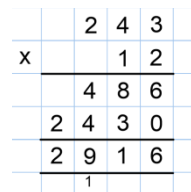
Short Multiplication:

Continue to consolidate children's knowledge and understanding of short multiplication from Year 4.

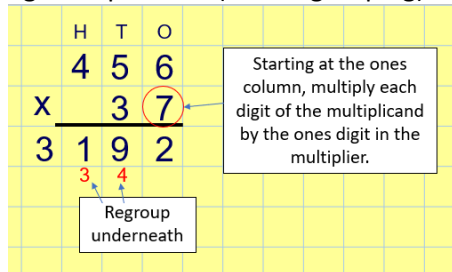
Long Multiplication:



Add the two rows together, regrouping where necessary:



Long Multiplication (with regrouping):



Year 6

Children consolidate their understanding of the short and long multiplication; they apply it to calculations efficiently involving large numbers and decimals.

Expectation of formal method from National Curriculum 2014:

Short Multiplication:

24×6 becomes 342×7 becomes

2	4	
x		6
-----		4
1	4	4
-----		2

Answer: 144

3	4	2		
x			7	
-----			4	
2	3	9	4	
-----			2	1

Answer: 2394

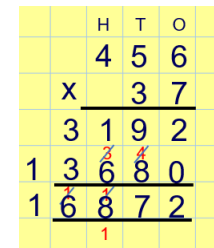
2741×6 becomes

2	7	4	1		
x				6	
-----				6	
1	6	4	4	6	
-----				4	2

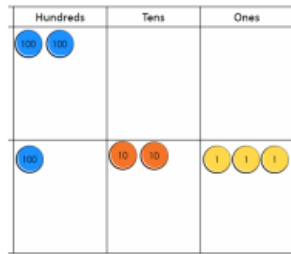
Answer: 16 446

Long Multiplication:

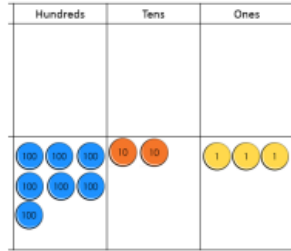
(Look at Year 5 for method)



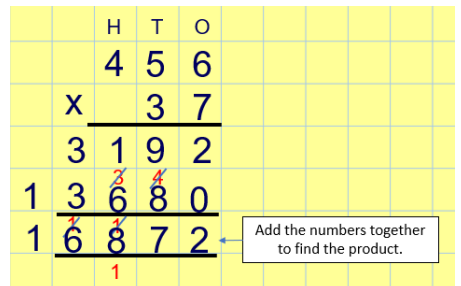
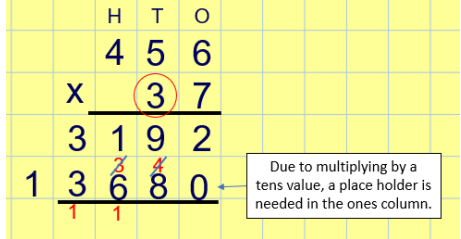
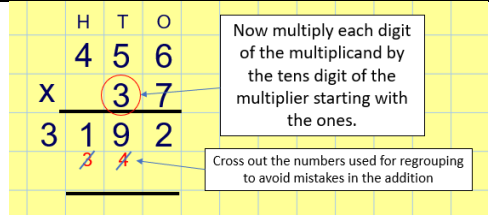
Decimals:



$$\begin{array}{r} 241 \\ \times 3 \\ \hline 723 \\ 1 \end{array}$$



$$\begin{array}{r} 241 \\ \times 3 \\ \hline 723 \\ 1 \end{array}$$



In some cases, children can apply their times tables and place value knowledge to calculate products: e.g. $0.7 \times 0.9 = 0.63$

Through using partitioning, children can apply their knowledge of multiplication facts to calculate the product:

- e.g.
- $20 \times 3.3 = ?$
 $(10 \times 3.3) \times 2 = 66$ or $(2 \times 3.3) \times 10 = 66$

- $15 \times 6.4 = ?$ (Partition the 15 to 10 and 5)

$10 \times 6.4 = 64$
 $5 \times 6.4 = 32$
 (Multiply the multiplicand by each part)

$64 + 32 = 96$ (Add the results together)