

Thursday 30th April Multiplication – Formal Method

Children first learnt to use the expanded method for multiplication:

Example

	Th	H	T	O	
	4	6	3		
x				8	
		2	4		(3 x 8)
	4	8	0		(60 x 8)
3	2	0	0		(400 x 8)
3	7	0	4		
	1				

Then the more compact formal method using carrying*:

Example

	Th	H	T	O
	4	7	3	
x	5	2	7	
3	3	1	1	

(*They might prefer to write the carried numbers underneath, rather than above the lower line.)

They can use their preferred method to complete the worksheet.

All children should complete challenges 1 and 2. Children can choose whether or not to complete Challenge 3 too.

Answers:

Unit 10, Week 1: Number – Multiplication and division

Lesson 2: HTO x O using the formal written method

Challenge 1

(600)	← 623 →	700	(1000)
700	768	(800)	981
(800)	834	900	555
		(900)	917
			1000

Challenge 2

1 a 2000 c 3600
 b 5000 d 4800

2 a 1860 c 3483
 b 4880 d 4608

Challenge 3 Answers will vary.

Lesson 4: Solving word problems

HTO x O using the formal written method



Use the formal written method to calculate HTO x O

Challenge 1

Write the two multiples of 100 that each number comes between. Circle the multiple of 100 the number is closest to. The first one has been done for you.

600	623	700			
	768			981	
	834			555	
				917	

Challenge 2

1 Estimate the answer to each calculation.

Example $473 \times 7 \rightarrow 500 \times 7 = 3500$

a $465 \times 4 \rightarrow$

b $387 \times 9 \rightarrow$

c $976 \times 5 \rightarrow$

d $768 \times 6 \rightarrow$

2 Work out the answers to the calculations in Question 1 using the formal written method. Check your estimate is close to your answer.

Example

	Th	H	T	O
		4	7	3
x	5	2	7	
	3	3	1	1

<p>a 465×4</p> <table border="1"> <tr> <td></td> <td>Th</td> <td>H</td> <td>T</td> <td>O</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>x</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		Th	H	T	O						x										<p>b 976×5</p> <table border="1"> <tr> <td></td> <td>Th</td> <td>H</td> <td>T</td> <td>O</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>x</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		Th	H	T	O						x										<p>c 387×9</p> <table border="1"> <tr> <td></td> <td>Th</td> <td>H</td> <td>T</td> <td>O</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>x</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		Th	H	T	O						x										<p>d 768×6</p> <table border="1"> <tr> <td></td> <td>Th</td> <td>H</td> <td>T</td> <td>O</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>x</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		Th	H	T	O						x									
	Th	H	T	O																																																																															
x																																																																																			
	Th	H	T	O																																																																															
x																																																																																			
	Th	H	T	O																																																																															
x																																																																																			
	Th	H	T	O																																																																															
x																																																																																			

Challenge 3

Choose two calculations from Challenge 2. On the back of this sheet write a word problem for someone at home to solve.



Choose two of the calculations above. Explain to an adult how to work out these calculations using the formal written method of multiplication.