Arithmetic: Spring Term 1.

Mrs Brown's Group: Week 1.

Wednesday 6th January 2021.

Long multipication

Before you write the date do these:

Starter: How can I solve these questions?
Put these numbers in ascending order.

1)	0.30 ; 0.1 ; 0.189 ; 0.3	2)	0.40 ; 0.16 ; 0.130 ; 0.35
3)	0.2 ; 0.8 ; 0.40 ; 0.16	4)	0.17 ; 0.235 ; 0.36 ; 0.67
5)	0.4 ; 0.023 ; 0.951 ; 0.288	6)	0.69 ; 0.79 ; 0.2 ; 0.8
7)	0.29 ; 0.961 ; 0.824 ; 0.42	8)	0.6 ; 0.5 ; 0.9 ; 0.8
9)	0.55 ; 0.63 ; 0.3 ; 0.406	10)	0.519 ; 0.5 ; 0.17 ; 0.732
11)	0.6 ; 0.1 ; 0.21 ; 0.809	12)	0.065 ; 0.543 ; 0.353 ; 0.96
13)	0.7 ; 0.6 ; 0.795 ; 0.3	14)	0.157 ; 0.7 ; 0.56 ; 0.327
15)	0.91 ; 0.99 ; 0.3 ; 0.8	16)	0.756 ; 0.4 ; 0.57 ; 0.414

3 Minute drill – How many can you complete correctly?

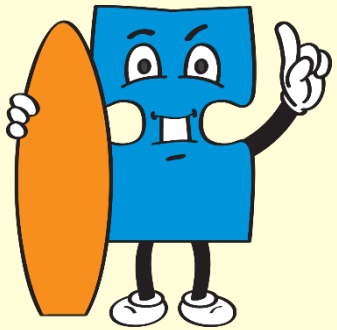
How do I solve these questions?

3 Minute Drill

4 x 7	8 x 5	4 x 0	10 x 6	11 x 4	8 x 13
13 x 7	7 x 4	8 x 10	6 x 0	7 x 8	7 x 11
5 x 7	13 x 8	7 x 10	8 x 4	13 x 10	9 x 5
13 x 6	8 x 9	0 x 11	11 x 9	4 x 5	12 x 9
8 x 8	9 x 13	11 x 7	0 x 13	10 x 10	12 x 0
12 x 10	0 x 9	11 x 5	7 x 9	4 x 4	13 x 9
6 x 13	4 x 13	9 x 8	12 x 7	13 x 13	5 x 8
6 x 11	7 x 13	10 x 11	11 x 11	0 x 8	11 x 8
6 x 7	13 x 5	9 x 10	10 x 8	10 x 4	8 x 11
0 x 7	0 x 0	7 x 0	10 x 5	9 x 12	4 x 12

LORIC task

Using the numbers 5, 6 and 7, work out the multiplication calculation which will give the answer closest to 410.



?	?	x	?

Teach

You may have used the grid method or short multiplication for certain **multiplication** calculations. When **multiplying** three-digit and four-digit numbers by two-digits, it is much easier to use the **long multiplication method**.

	1	2		
	1	**2**	**4**	
x		**2**	**6**	
	7	**4**	**4**	
2,	**4**	**8**	**0**	
3,	**2**	**2**	**4**	
1	1			

Model

The first part of **long multiplication** is **multiplying** the ones digit from the two-digit number (4) by each of the digits in the four-digit number (1,836). E.g.

4 x 6 = 24 (carrying the 2 over)

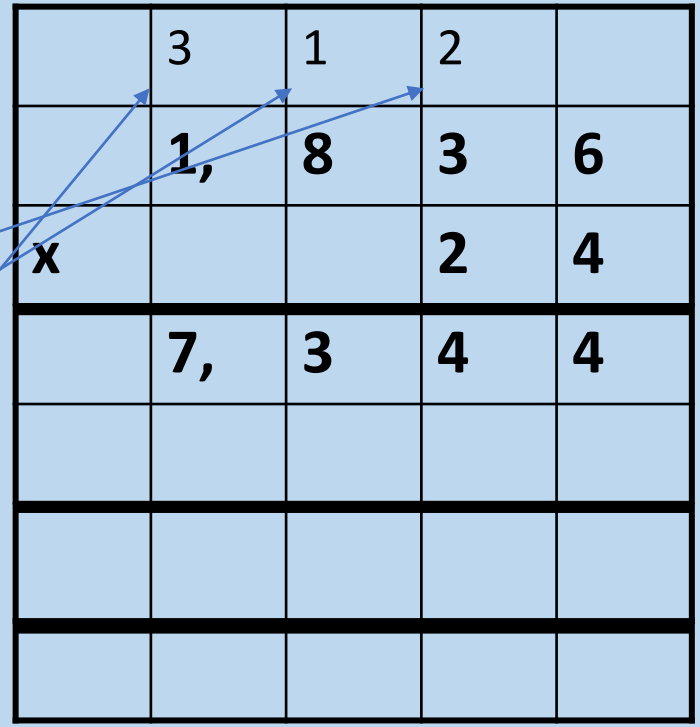
4 x 3 = 12

12 + 2 = 14 (carrying the 1 over)

4 x 8 = 32

32 + 1 = 33 (carrying the 3 over)

4 x 1 = 4. Then 4 + 3 = 7.



	3	1	2	
	1,	**8**	**3**	**6**
x			**2**	**4**
	7,	**3**	**4**	**4**

Model

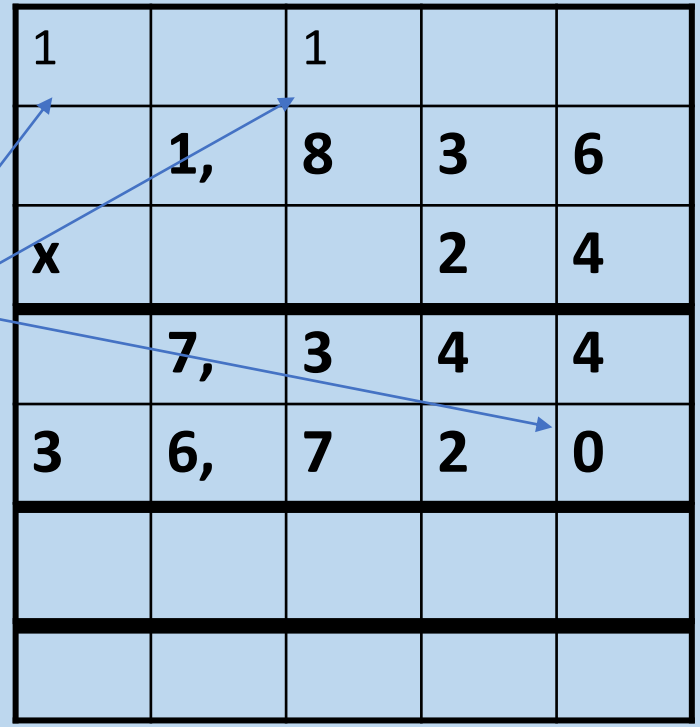
Now we **multiply** each of the digits in the four-digit number (1,836) by 2. Because it is actually **20,** and not 2, we put a **zero** in the first column. Then we complete the following calculations:

2 x 6 = 12 (carrying the 1 over)

2 x 3 = 6. Then 6 + 1 = 7

2 x 8 = 16 (carrying the 1 over)

2 x 1 = 2. Then 2 + 1 = 3.



1		1		
	1,	8	3	6
x			2	4
	7,	3	4	4
3	6,	7	2	0

Model

Finally, we **add** the products of both calculations together to get the final answer.

7,344 + 36,720 = 44,064

	1,	8	3	6
x			2	4
	7,	3	4	4
3	6,	7	2	0
4	4,	0	6	4
1	1			

Apply

Remember to use the following layout to complete your **long multiplication** calculations:

	1,	8	3	6
x			2	4
	7,	3	4	4
3	6,	7	2	0
4	4,	0	6	4
1	1			

$$\begin{array}{r} 1068 \\ \times\ 373 \\ \hline \end{array} \qquad \begin{array}{r} 2115 \\ \times\ 913 \\ \hline \end{array} \qquad \begin{array}{r} 1452 \\ \times\ 502 \\ \hline \end{array} \qquad \begin{array}{r} 1351 \\ \times\ 231 \\ \hline \end{array} \qquad \begin{array}{r} 1151 \\ \times\ 169 \\ \hline \end{array}$$

Long Multiplication

31.68 x 95.26	93.15 x 40.44	48.47 x 60.39	49.87 x 38.63	10.29 x 69.53
72.21 x 56.25	61.81 x 67.18	23.14 x 20.58	93.88 x 22.78	84.22 x 49.38

£628.33 x 22	£176.23 x 29	£132.48 x 26	£759.73 x 27
£270.72 x 25	£223.68 x 27	£250.79 x 20	£917.49 x 23

Apply

Remember to use RUCSAC to answer these questions. Look closely at each question before you answer not all of them are the same!

1) 14 x N = 476 N = ____	2) N x 36 = 1404 N = ____
3) N x 26 = 312 N = ____	4) N x 38 = 1254 N = ____
5) 25 x N = 525 N = ____	6) N x 26 = 572 N = ____
7) 28 x N = 840 N = ____	8) N x 15 = 225 N = ____
9) N x 35 = 560 N = ____	10) 19 x N = 570 N = ____

In your book…


Use RUCSAC to solve word problems:
R
Read
Read the question carefully
U
Underline
Underline the keywords and numbers
C
Choose
Choose the correct operation(s) and a mental or written method of calculation.
S
Solve
Solve it! Make sure you follow the steps.
A
Answer
Check that you've answered the question. What did you need to find out in the first place?
C
Check
Check your answer. Use another method or checking technique (was it close to your estimate?)

Multiplication word problems

In your book…show your workings out!

1. On a street there is space for 18 rows of 32 seeds on one garden. How many seeds is there space for on four gardens?

2. There are 25 rows of 18 stickers on a sheet. How many stickers are there on a sheet. How many on 40 sheets?

3. There are 35 rows of 24 dominoes. How many dominoes are there altogether?

4. 196 adults and 15 children went to a wedding. Coaches seat 57 people. How many coaches were needed?

Show your workings out and use the inverse operation to check your answer!