L.O - To multiply 2 digit by 1 digit using written method without exchanging.

success criteria

- To use my knowledge of place value in my written method .
- To use my times tables knowledge to solve calculations using written method.
- To problem solve and reason using the written method

Key vocabulary: partitioning, tens, ones, multiplication, repeated addition

Lets think back what is this what is this calculation asking us to do?

 $4 \times 12 =$

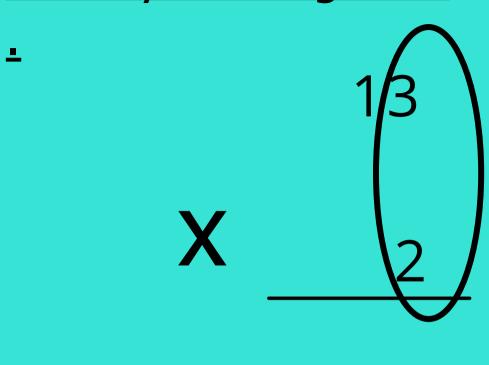
It's asking us to multiply the number 12, 4 times. Yesterday we used this method to help us solve calculations like this.

Tens	Ones
	8

Total

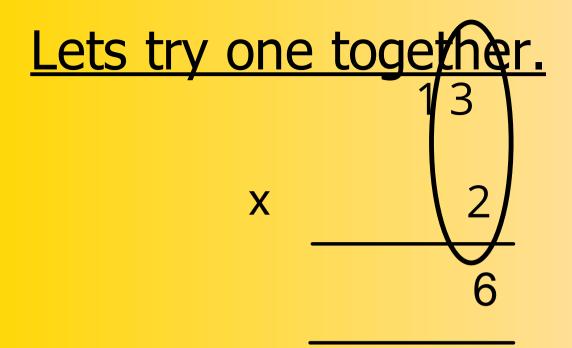
40 8 = 48

Lets try one together



Like with column addition and subtraction we always start with the ones column.

Our first step is going to be 3 x 2.



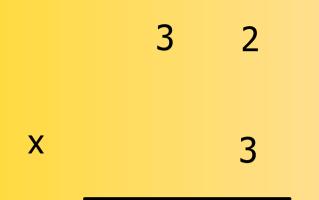
Now that we have multiplied the ones together we need to onto the tens.

Our next step is going to be 2 x 1 =

And our answer is

26

This is my answer to the calculation 13 x 2 using column multiplication.



Now lets have a go ourselves. Can you use column multiplication to calculate 32 x 3 on your white boards.

(remember the biggest number is on the top)

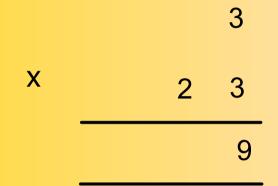
Have a go at this one yourself $22 \times 4 =$

X _____

Answer: 44

Now we all know how to multiply using column subtraction, so what is wrong with the following calculation?





They started with the small number on the top and completley forgot to mutilply the tens column it should have looked like this instead.

X 3 6 9

Fluency

- 1. 4 x 12
- 2.3 x 21
- 3. 2 x 34
- 4.5 x 11
- 5. 3 x 33

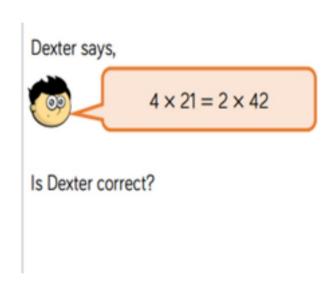
Fluency

$$1.4 \times 12 = 48$$

$$2.3 \times 21 = 63$$

$$3.2 \times 34 = 68$$

Problem solving



Reasoning

Martin completes the following calculation:

 42×2

Can you spot his mistake?

	т	0			
	4	2			
×		2			
		4	(2	×	2)
+		8	(4	×	2)
	1	2			

Answers

Alex completes the calculation:

 43×2

Can you spot her mistake?

	Т	0
	4	3
×		2
		6
+		8
	1	4

Alex has multiplied 4 by 2 rather than 40 by 2 Teddy completes the same calculation as Alex.

Can you spot and explain his mistake?

	Т	0
	4	3
×		2
8	0	6

Teddy has written 80 where he should have just put an 8 because he is multiplying 4 tens by 2 which is 8 tens. The answer should be 86

Dexter says,



 $4 \times 21 = 2 \times 42$

Is Dexter correct?

True. Both multiplications are equal to 84

Children may explore that one number has halved and the other has doubled.