Vocabulary check

multiply
multiplicand
multiplier
product
place value
partitioning
associative law
distributive law
commutative law

15   multiplicand
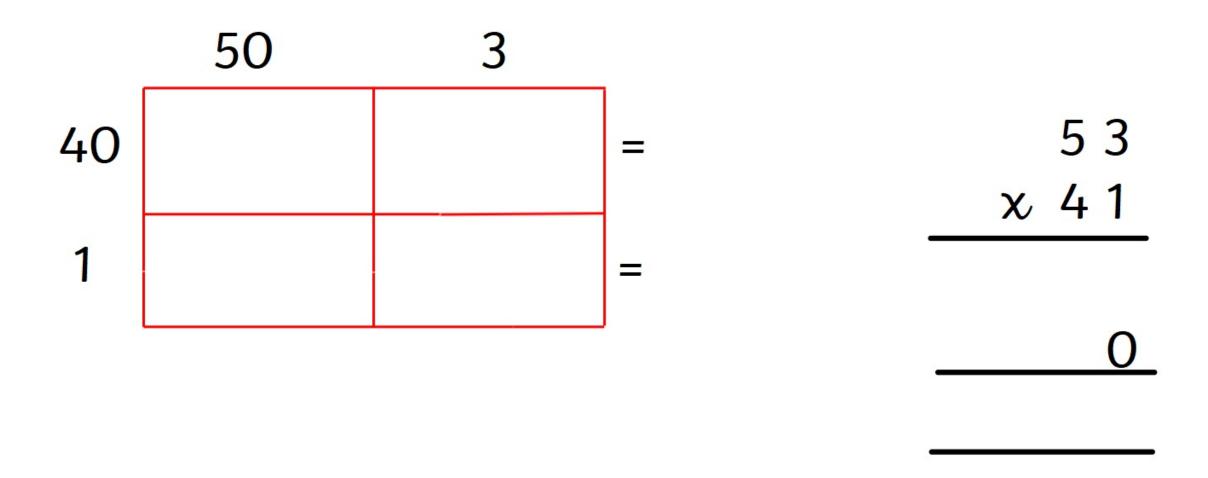x 2 multiplier
30   product

$32 \times 45 =$

	30	2	
40	1200	80	=1280
5	150	10	=160

$$1280$$
$$160 \quad +$$
$$\overline{1440}$$

$$\begin{array}{r} 32 \\ \times 45 \\ \hline 160 \\ 1280 \\ \hline 1440 \\ \hline \end{array}$$

What is the same? What is different?

$53 \times 41 =$

	50	3
40		
1		

=

=

$$\begin{array}{r} 5\ 3 \\ \times\ 4\ 1 \\ \hline \\ 0 \\ \hline \\ \end{array}$$

What is the same? What is different?

23 x 72 =

	20	3
70			=
2			=

```
      2 3
    x 7 2
  ─────────

  _____ 0

  ─────────
```

What is the same? What is different?

How would we find the answers for the missing boxes?

1■ x 32 =

	10	■	
30	300	90	=390
2	20	6	=26

```
  3 9 0
    2 6
  ─────
  4 1 6
    ↑
```

```
    1■
  x 3 2
  ─────
    2■
  3 9 0
  ─────
  4 1 6
    ↑
```

How do you know?

Hinge Question

Use your preferred method of multiplication to answer the question $23 \times 65 =$

Try It

Use your preferred method of multiplication to answer the questions. Remember to show your workings out.

28 x 45 =

71 x 43 =

62 x 34 =

22 x 86 =

32 x 19 =

Use the multiplication grid to help you with your x tables

X	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10	11	12
2	0	2	4	6	8	10	12	14	16	18	20	22	24
3	0	3	6	9	12	15	18	21	24	27	30	33	36
4	0	4	8	12	16	20	24	28	32	36	40	44	48
5	0	5	10	15	20	25	30	35	40	45	50	55	60
6	0	6	12	18	24	30	36	42	48	54	60	66	72
7	0	7	14	21	28	35	42	49	56	63	70	77	84
8	0	8	16	24	32	40	48	56	64	72	80	88	96
9	0	9	18	27	36	45	54	63	72	81	90	99	108
10	0	10	20	30	40	50	60	70	80	90	100	110	120
11	0	11	22	33	44	55	66	77	88	99	110	121	132
12	0	12	24	36	48	60	72	84	96	108	120	132	144

Use it

1) Identify the missing digits in these calculations.

			☐	3
	×	5	3	
	1	2	9	
☐	1	☐	☐	
2	☐	7	☐	

			☐	6
	×	2	☐	
	☐	5	☐	
☐	5	☐	0	
1	☐	7	2	

2) James has 36 boxes of apples, each box contains 12 apples. How many does he have altogether?

3) Laura sells 15 cups of lemonade, each cup contains 33ml of drink. How much lemonade does she sell altogether?

Prove it

4) Eva says,

> To multiply 23 by 57 I just need to calculate 20 × 50 and 3 × 7 and then add the totals.

What mistake has Eva made? Explain your answer.

Amir has multiplied 47 by 36

			4	7
×			3	6
		2	8	2
		1	4	1
		3	2	3

Alex says,

> Amir is wrong because the answer should be 1,692 not 323

5) Who is correct? What mistake has been made?