Vocabulary check

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

$$
\begin{array}{r}
15 \quad \text{multiplicand} \\
\times \quad 2 \quad \text{multiplier} \\
\hline
30 \quad \text{product}
\end{array}
$$

Mrs Coote said,
'Multiplication isn't always commutative'.

Do you agree with Mrs Coote?
Convince me!

$52 \times 44 =$

	50	2	
40	2000	80	=2080
4	200	8	=208

```
   2080
    208  +
  _____
   2288
```

```
     52
  x  44
  _____
    208
   2080
  _____
   2288
  _____
```

What is the same? What is different?

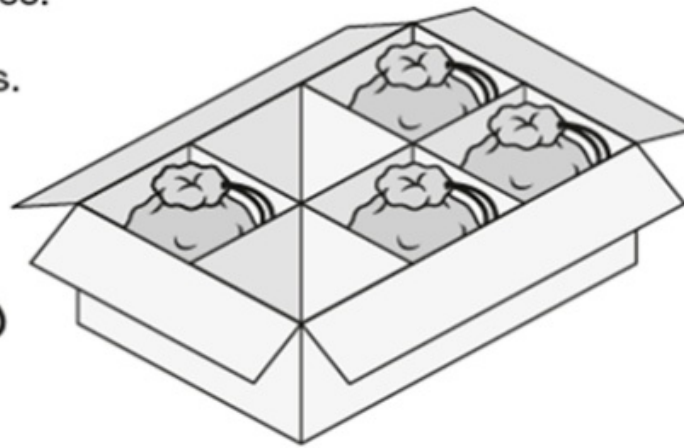Use your preferred method of multiplication to answer the question 37 x 43 =

Use it

1) A factory sold beads in boxes, with 58 beads in each box. In one week, it sold 26 boxes of beads. How many beads were sold altogether?

2) Carrots come in packs of 18.The carrots are on average 12cm in length. Asda buys 88 packs of carrots. What is the total number of carrots that Asda purchased?

3) A factory fills 76 cans of drink in an hour. How many cans will be filled in 2 days?

4) There are 12 planks of wood. A plank of wood is 49cm long. How much wood is there in cm? Challenge: Can you convert this answer into m?

5) There is 75g in a bag of flour. A lorry transports 64 bags of flour. What is the product of flour is in the lorry in g? Challenge: Can you convert this answer into kg?

6) In a class, there are 30 children. Each child raises £24 for a charity. Can you calculate **mentally,** how much money the class raise for charity?

7)

A toy shop orders 11 boxes of marbles.

Each box contains 6 bags of marbles.

Each bag contains 45 marbles.

How many **marbles** does the shop order in total?

8)

$$
\begin{array}{r}
\square\,\square \\
\times \quad \square\ 8 \\
\hline
3\ 9\ 2 \\
3\ 4\ 3\ 0 \\
\hline
3\ \square\ 2\ 2 \\
\hline
\end{array}
$$

Prove it

If you didn't get to do this yesterday:

Alex says,

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

Who is correct?
What mistake has been made?

Amir has multiplied 47 by 36

		4	7
×		3	6
2	8	2	
1	4	1	
3	2	3	

Some more to try:

Without calculating, which calculation will have the greatest product. Explain how you know.

378 x 7   778 x 3

Explain the mistakes

63 × 27

Mistake 1

$60 \times 20 = 1200$

$3 \times 7 = 21$

$1200 + 21 = 1221$

Mistake 2

	20	7
60	120	420
3	60	21

$120 + 420 + 60 + 21 = 621$