Monday 31.10.22

MPI multiplying two numbers that are multiples of 10, 100

$70 \times 900 = \square$

$\square = 50 \times 9{,}000$

$\square \times 900 = 45{,}000$

$200 \times 5{,}000 = \square$

$63{,}000 = 90 \times \square$

$8{,}000 = 500 \times \square$

Tick of cross the equations to show if they are true or false:

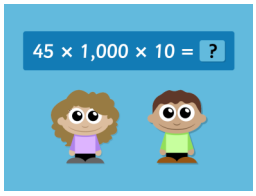
$4{,}900 = 700 \times 700$

$800 \times 5{,}000 = 40{,}000$

$70{,}000 \times 60 = 4{,}200{,}000$

$1{,}000 = 20 \times 500$

To calculate 45 × 1,000 × 10, Leo says you need to multiply 45 by 1,000 first, but Ellie says that you need to multiply 1,000 by 10 first. Who will find the correct answer: Leo, Ellie or both of them? Explain why.



Match each calculation on the left with the calculation on the right that has the same product

> < or =	
120×50 ◯ 300×200	'How many solutions can you find?'
$90 \times 4{,}000$ ◯ $3{,}000 \times 1{,}200$	$\square \times \square = 24{,}000$
$400 \times 5{,}000$ ◯ $2{,}000 \times 2{,}000$	

Jimmy has 500 building blocks. Steph has **ten times more** blocks than Jimmy, and Steph has **one hundred times more** than Teddy. How many building blocks do the children have altogether?

The entrance to a school fete costs 40p for children and Adaline collects 20p coins. Faisal has collected eighty coins and Adaline has collected 200 coins. Adaline says she has collected more money. Do you agree? Explain your answer.

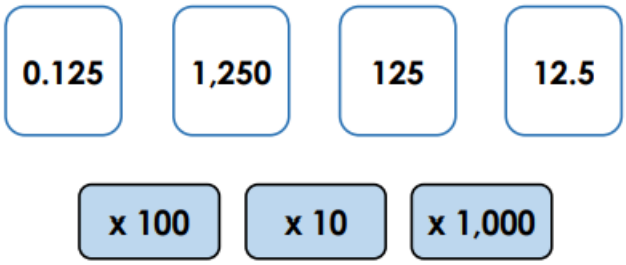
Monday 31.10.22

BONUS CHALLENGE

Create a calculation using the operation and number cards below.

How many combinations can you make ***using two operations*** *per calculation?*

Cards can be used more than once.



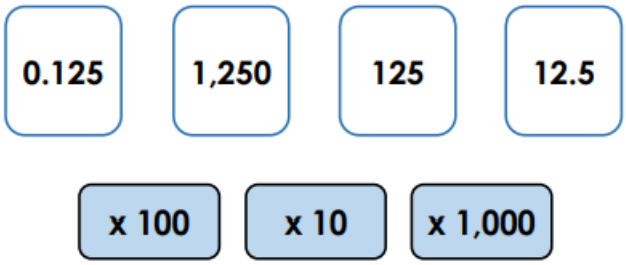
Monday 31.10.22

BONUS CHALLENGE

Create a calculation using the operation and number cards below.

How many combinations can you make ***using two operations*** *per calculation?*

Cards can be used more than once.



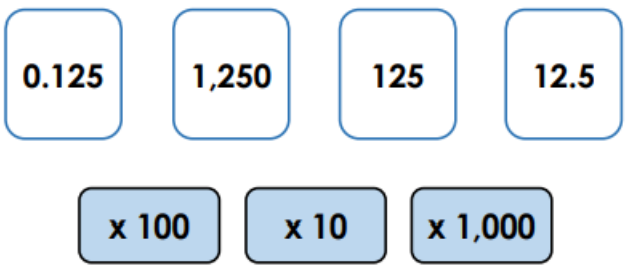
Monday 31.10.22

BONUS CHALLENGE

Create a calculation using the operation and number cards below.

How many combinations can you make ***using two operations*** *per calculation?*

Cards can be used more than once.



Tuesday 01.11.22

MPI using our multiplication knowledge to journal solutions

example

3	5	15
4	2	8
12	10	

(1)

		3
		10
6	5	

(2)

		6
		7
3	14	

(3)

		10
		21
14	15	

(4)

		9
		12
6	18	

2 solutions ?

(5)

		16
		18
12	24	

2 solutions ?

(6)

		30
		12
18	20	

2 solutions ?

(7)

		24
		14
6	56	

2 solutions ?

(8)

		27
		10
15	18	

(9)

		21
		22
77	6	

(10)

		35
		24
15	56	

(11)

		49
		15
35	21	

(12)

		42
		18
21	36	

(13)

		28
		45
35	36	

(14)

		63
		64
72	56	

(15)

		48
		49
42	56	

(16)

		60
		84
72	70	

2 solutions ?

(17)

		42
		27
63	18	

2 solutions ?

(18)

		36
		28
84	12	

3 solutions ?

(19)

		30
		80
40	60	

3 solutions ?

(20)

		36
		54
72	27	

3 solutions ?

(21)

		24
		36
18	48	

4 solutions ?

(22)

		72
		72
54	96	

4 solutions ?

(23)

		48
		72
72	48	

how many solutions ?

Tuesday 01.11.21

BONUS CHALLENGE

$$6\boxed{A} \times \boxed{B} = \boxed{B}6 \times \boxed{A}$$

(sixty, A) times B = (B ty 6) times A

find two solutions (A, B ≠ 6)

$$9\boxed{C} \times \boxed{D} = \boxed{D}9 \times \boxed{C}$$

(ninety, C) times D = (D ty 9) times C

find two solutions (C, D ≠ 9)

Tuesday 01.11.21

BONUS CHALLENGE

$$6\boxed{A} \times \boxed{B} = \boxed{B}6 \times \boxed{A}$$

(sixty, A) times B = (B ty 6) times A

find two solutions (A, B ≠ 6)

$$9\boxed{C} \times \boxed{D} = \boxed{D}9 \times \boxed{C}$$

(ninety, C) times D = (D ty 9) times C

find two solutions (C, D ≠ 9)

Wednesday 02.11.22

MPI using short multiplication and then adjusting the product

Use short multiplication in your books and then adjust the product accordingly

$500 \times 623 =$ ☐

$495 \times 70 =$ ☐

$806 \times 300 =$ ☐

$839 \times 40 =$ ☐

$907 \times 80 =$ ☐

$498 \times 700 =$ ☐

$4{,}000 \times 948 =$ ☐

$800 \times 529 =$ ☐

$709 \times 90 =$ ☐

$368 \times 6{,}000 =$ ☐

$296 \times 7{,}000 =$ ☐

$40 \times 824 =$ ☐

$498 + 60 \times 325 =$ ☐

$(300 + 400) \times 564 =$ ☐

$20 \times 4 \times 427 =$ ☐

$3{,}000 \times 648 \times 3 =$ ☐

$40 \times (342 - 45) =$ ☐

$482 \times 600 + 98 =$ ☐

A model rocket is 218mm tall. If the real rocket is three hundred times the size of the model, how tall is it in metres?

One fence panel is 246cm long. If a farmer buys six hundred panels, will he have enough to go around a field that has a perimeter of 1480m?

An author writes a book with three hundred and ninety-eight pages. She then writes a sequel with three hundred and fifty-four pages. If 4,000 copies of each book are printed, how many pages does the publisher have to print?

Thursday 03.11.22

MPI: Using partial products when multiplying

Journal your answers to these questions in your Maths book, using partial products to complete:

1. 35 x 44
2. 63 x 25
3. 57 x 19
4. 45 x 18
5. 263 x 31
6. 304 x 32

One floor tile has an areas of 508 cm². If Mrs Miggins buys twenty-eight tiles, what is the area they will cover?

To make cookies, a class for thirty-five children need 452g of flour each.

How much flour does the teacher need to buy?

$27 \times 29 = 27 \times 20 + 27 \times \square = \square$

$223 \times 34 = 223 \times 30 + 223 \times \square = \square$

$47 \times 73 = 47 \times \square + 47 \times \square = \square$

$43 \times 376 = 376 \times \square + 376 \times \square = \square$

$53 \times 67 = \square \times \square + \square \times \square = \square$

$534 \times 48 = \square \times \square + \square \times \square = \square$

$64 \times 809 = \square \times \square + \square \times \square = \square$

$43 \times 33 = \square$

$23 \times 782 = \square$

Thursday 03.11.22

BONUS CHALLENGE:

In the 2×2 multiplication square below, the boxes at the end of each row and the foot of each column give the result of multiplying the two numbers in that row or column.

7	5	35
3	4	12
21	20	

The 3×3 multiplication square below works in the same way. The boxes at the end of each row and the foot of each column give the result of multiplying the three numbers in that row or column.

			15
			108
			224
144	8	315	

The numbers $1 - 9$ may be used once and once only.

Can you work out the arrangement of the digits in the square so that the given products are correct?

Thursday 03.11.22

BONUS CHALLENGE:

In the 2×2 multiplication square below, the boxes at the end of each row and the foot of each column give the result of multiplying the two numbers in that row or column.

7	5	35
3	4	12
21	20	

The 3×3 multiplication square below works in the same way. The boxes at the end of each row and the foot of each column give the result of multiplying the three numbers in that row or column.

			15
			108
			224
144	8	315	

The numbers $1 - 9$ may be used once and once only.

Can you work out the arrangement of the digits in the square so that the given products are correct?

Thursday 03.11.22

BONUS CHALLENGE:

In the 2×2 multiplication square below, the boxes at the end of each row and the foot of each column give the result of multiplying the two numbers in that row or column.

7	5	35
3	4	12
21	20	

The 3×3 multiplication square below works in the same way. The boxes at the end of each row and the foot of each column give the result of multiplying the three numbers in that row or column.

			15
			108
			224
144	8	315	

The numbers $1 - 9$ may be used once and once only.

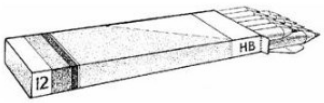
Can you work out the arrangement of the digits in the square so that the given products are correct?

Friday 04.11.22

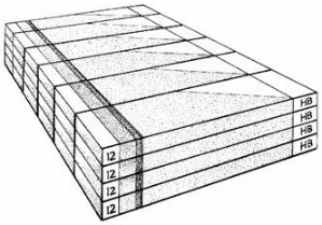
MPI using long multiplication (only regrouping tens into hundreds)

$22 \times 32 =$ $22 \times 43 =$ $42 \times 22 =$

There are **12 pencils** in a box.



A school buys **24 boxes**.



How many **pencils** does the school buy?

Show your method

2 marks

Which working out is correct?

Explain your reasoning...

A

$$\begin{array}{r} 60 \\ \times\ 37 \\ \hline 42 \\ +\ 18 \\ \hline 60 \end{array}$$

B

$$\begin{array}{r} 60 \\ \times\ 37 \\ \hline 420 \\ +\ 180 \\ \hline 600 \end{array}$$

C

$$\begin{array}{r} 60 \\ \times\ 37 \\ \hline 420 \\ +\ 1800 \\ \hline 2220 \end{array}$$

D

$$\begin{array}{r} 60 \\ \times\ 37 \\ \hline 420 \\ +\ 1800 \\ \hline 2317 \end{array}$$

True or false?

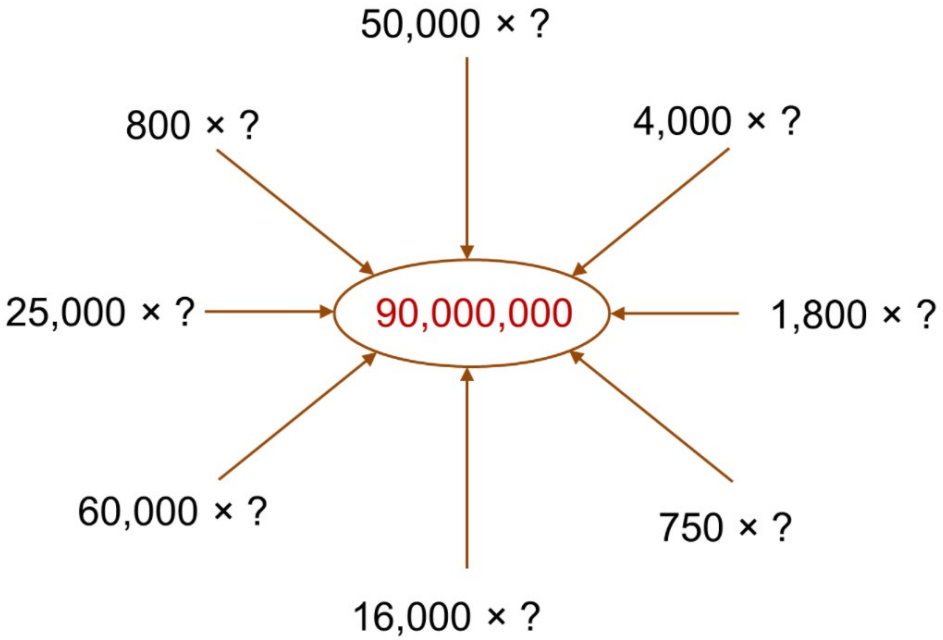
$17 \times 13 = 15 \times 15$

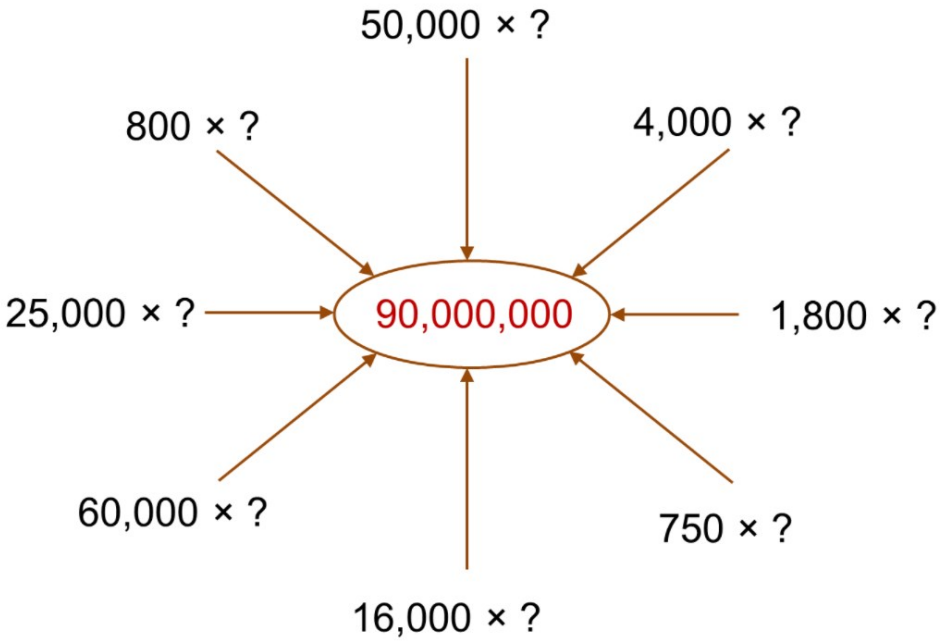
What do you notice?

Try other examples. Do you see a pattern?

Friday 04.11.22

BONUS CHALLENGE



Friday 04.11.22

BONUS CHALLENGE