Monday 14.11.22

MPI: Using long multiplication (up to 4x2 digits)

a)

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 5 | |
| | × | | | 5 | 3 | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

b)

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 4 | 0 | 3 | 6 | |
| | × | | | 2 | 4 | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

c)

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 6 | 9 | 7 | 8 | |
| | × | | | 7 | 6 | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Write the correct multiplications to complete the calculations.

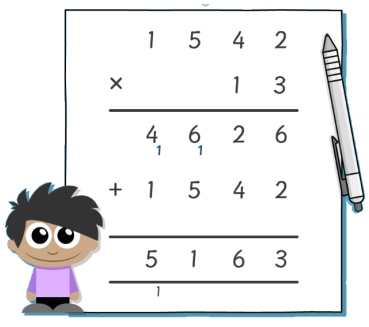
| 1,247 × 37 | 2,031 × 29 | 2,413 × 23 |
|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| | × | | | | | |
| | | 7 | 2 | 3 | 9 | |
| | 4 | 8 | 2 | 6 | 0 | |
| | | | | | | |
| | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | × | | | | | |
| | | 8 | 7 | 2 | 9 | |
| | 3 | 7 | 4 | 1 | 0 | |
| | | | | | | |
| | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | × | | | | | |
| | 1 | 8 | 2 | 7 | 9 | |
| | 4 | 0 | 6 | 2 | 0 | |
| | | | | | | |
| | | | | | | |

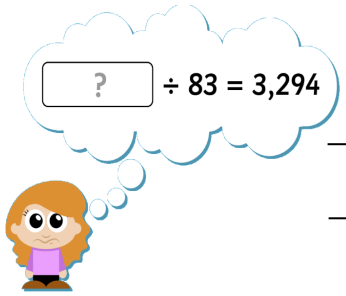
Qasim says, "I have calculated the answer to 1,542 × 13, but my answer looks too small." Explain the mistake Quasim has made, and find the correct answer.



Monday 14.11.21

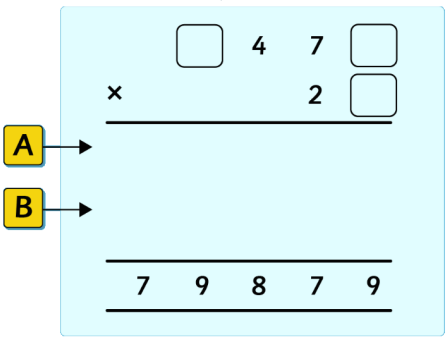
MPI: Using long multiplication (up to 4x2 digits) **CHALLENGE**

A section of land at an airport covers 375,000 square metres (m²). A new runway that is 72 m wide and 2,072 m long is built on the land. In square metres, how much of the section of land is **not** covered by the runway?




Jessica is trying to solve a maths problem. Explain and show how she can find the missing number.

The same digit is missing from the calculation in three places. What is it?




Katie is paid £1,764 every month. How much does she earn in one year?

Tuesday 15.11.22

MPI: Multiplication where one of the factors is a composite number

$14 \times 8 \times \square = 32 \times 14$

$25 \times 15 = 25 \times \square \times \square$

$\square \times \square = 17 \times 4 \times 8$

$19 \times 35 = \square \times \square \times \square$

$\square \times \square \times \square = 23 \times 27$

Use a tick or a cross to show whether each equation is correct or not

$24 \times 26 = 8 \times 26 \times 4$

$5 \times 23 \times 3 = 23 \times 15$

$16 \times 32 = 4 \times 8 \times 32$

How many different ways can you make this true?

$18 \times 24 = \square \times \square \times \square$

Tuesday 15.11.22

MPI: Multiplication where one of the factors is a composite number

$14 \times 8 \times \square = 32 \times 14$

$25 \times 15 = 25 \times \square \times \square$

$\square \times \square = 17 \times 4 \times 8$

$19 \times 35 = \square \times \square \times \square$

$\square \times \square \times \square = 23 \times 27$

Use a tick or a cross to show whether each equation is correct or not

$24 \times 26 = 8 \times 26 \times 4$

$5 \times 23 \times 3 = 23 \times 15$

$16 \times 32 = 4 \times 8 \times 32$

How many different ways can you make this true?

$18 \times 24 = \square \times \square \times \square$

Tuesday 15.11.22

MPI: Multiplication where one of the factors is a composite number

**CHALLENGE**

Calculate each product, first using long multiplication and then factorising the two-digit factor and using short multiplication. For each one, which method is most efficient?

$425 \times 42 =$ $318 \times 28 =$ $542 \times 16 =$

$125 \times 15 =$ $222 \times 16 =$ $497 \times 36 =$

Tuesday 15.11.22

MPI: Multiplication where one of the factors is a composite number

**CHALLENGE**

Calculate each product, first using long multiplication and then factorising the two-digit factor and using short multiplication. For each one, which method is most efficient?

$425 \times 42 =$ $318 \times 28 =$ $542 \times 16 =$

$125 \times 15 =$ $222 \times 16 =$ $497 \times 36 =$

Tuesday 15.11.22

MPI: Multiplication where one of the factors is a composite number

**CHALLENGE**

Calculate each product, first using long multiplication and then factorising the two-digit factor and using short multiplication. For each one, which method is most efficient?

$425 \times 42 =$ $318 \times 28 =$ $542 \times 16 =$

$125 \times 15 =$ $222 \times 16 =$ $497 \times 36 =$

## Wednesday 16.11.21

MPI: Choosing the most efficient method of multiplication.

Solve each equation in your book using the most efficient strategy.

$37 \times 19 =$ $315 \times 15 =$ $42 \times 24 =$

$18 \times 546 =$ $36 \times 321 =$ $972 \times 16 =$

$22 \times 514 =$ $302 \times 24 =$

Use a tick or a cross to show if each equation is correct or not:

$45 \times 10 + 45 \times 7 = 17 \times 9 \times 5$

$162 \times 30 + 162 \times 6 = 162 \times 30 \times 6$

$232 \times 3 \times 8 = 232 \times 20 + 232 \times 4$


## Wednesday 16.11.21

MPI: Choosing the most efficient method of multiplication.

Solve each equation in your book using the most efficient strategy.

$37 \times 19 =$ $315 \times 15 =$ $42 \times 24 =$

$18 \times 546 =$ $36 \times 321 =$ $972 \times 16 =$

$22 \times 514 =$ $302 \times 24 =$

Use a tick or a cross to show if each equation is correct or not:

$45 \times 10 + 45 \times 7 = 17 \times 9 \times 5$

$162 \times 30 + 162 \times 6 = 162 \times 30 \times 6$

$232 \times 3 \times 8 = 232 \times 20 + 232 \times 4$

Wednesday 16.11.21

MPI: Choosing the most efficient method of multiplication.

**CHALLENGE**

A football pitch is 105m long and 68m wide. What is the total area of the pitch?

It takes 55ml of paint per metre to paint the perimeter line of the same pitch. How much paint does the groundsman need to buy?

A shop sells ribbon in lengths of 1.5m. Mr Rodgers bought twenty-eight lengths of ribbon for his class to make streamers, but asked the shop to cut off 5cm off each length first. How much ribbon did he buy?

325ml bottles of water are arranged on a shelf in three rows of five bottles. How many litres of water are there?

There are thirty children in a class They are carrying out a sponsored jog where each child must jog for 15 minutes, one after the other. If two children are away, how long will the sponsored jog take?

Baker A packed seven crates of buns. In each crate, there are four layers of twelve buns. Baker B arranges the same number of buns in six crates.

- How many layers of buns could there be in each of Baker B's crates?
- How many other ways are there of arranging the same number of buns?

## Thursday 17.11.22

## MPI: Journalling and problem solving with multiplication.

To 'reduce' a number: multiply the digits of the number together.

Keep doing this with each new number you get until you reach a single digit.

For example: 387 gives 3x8x7 = 168... 168 gives 1x6x8=48... 48 gives 4x8=32... 32 gives 3x2=**6**

So 387 reduces to 6.

Reduce several 3-digit numbers, looking for and recording any general rules that you spot.

1) When does the number reduce to 0?
2) What is the largest 3-digit number that reduces to (a) 6 (b) 4 (c) 5
3) Find all the options that reduce to (a) 7 (b) 9
4) How many different 3-digit numbers reduce to 5?
5) How many different 3=digit numbers reduce to 2?


## Thursday 17.11.22

## MPI: Journalling and problem solving with multiplication.

To 'reduce' a number: multiply the digits of the number together.

Keep doing this with each new number you get until you reach a single digit.

For example: 387 gives 3x8x7 = 168... 168 gives 1x6x8=48... 48 gives 4x8=32... 32 gives 3x2=**6**

So 387 reduces to 6.

Reduce several 3-digit numbers, looking for and recording any general rules that you spot.

1) When does the number reduce to 0?
2) What is the largest 3-digit number that reduces to (a) 6 (b) 4 (c) 5
3) Find all the options that reduce to (a) 7 (b) 9
4) How many different 3-digit numbers reduce to 5?
5) How many different 3=digit numbers reduce to 2?