## Division

We have covered division before - earlier in the year - but, again, I thought that it would be useful to revisit some of the strategies we use to calculate answers.

## Multiplication tables are extremely useful for division so keep practising them.

https://www.topmarks.co.uk/maths-games/hit-the-button
I will add a video talking through the steps of how to complete short and long division. If you need any more help, please put a comment into Seesaw and I can respond to you individually.
Alternatively there is also this one: https://www.khanacademy.org/math/arithmetic-home/multiply-divide/mult-digit-div-2/v/division-2 which shows the step between short and long division - dividing by a single digit but in a 'long' style.

## Step 1:

Here is a method to calculate 4,892 divided by 4 using place
value counters and short division.


Use this method to calculate:

$$
6,610 \div 5 \quad 2,472 \div 3 \quad 9,360 \div 4
$$

Mr Porter has saved £8,934
He shares it equally between his three grandchildren.
How much do they each receive?
Use <, > or = to make the statements correct.


Step 2: Short Division Fluency:
Complete the following:

1. $472 \div 4=$
2. $968 \div 8=$
3. $904 \div 2=$
4. $765 \div 5=$
5. $895 \div 5=$
6. $8,792 \div 7=$
7. $9,180 \div 6=$
8. $11,562 \div 3=$
9. $32,832 \div 9=$
10. $28,480 \div 8=$

## Step 3: Short Division:

Here is a method to solve 4,894 divided by 4 using place value counters and short division.


Use this method to calculate:

$$
6,613 \div 5 \quad 2,471 \div 3 \quad 9,363 \div 4
$$

Muffins are packed in trays of 6 in a factory.
In one day, the factory makes 5,623 muffins.
How many trays do they need?
How many trays will be full?
Why are your answers different?
For the calculation $8,035 \div 4$

- Write a number story where you round the remainder up.
- Write a number story where you round the remainder down.
- Write a number story where you have to find the remainder.


## Step 4: Reasoning with Division:

## Spot the Mistake

Explain and correct the working.


## Always, Sometimes, Never?

A three-digit number made of consecutive descending digits divided by the next descending digit always has a remainder of 1
$765 \div 4=191$ remainder 1

How many possible examples can you find?


Jack is calculating $2,240 \div 7$
He says you can't do it because 7 is larger than all of the digits in the number.

Do you agree with Jack?
Explain your answer.

I am thinking of a 3-digit number.
When it is divided by 9 , the remainder is 3

When it is divided by 2 , the remainder is 1

When it is divided by 5 , the remainder is 4

What is my number?

## Step 5: Short Division Problems:

1. 

A 1 m piece of ribbon is cut into equal pieces and a piece measuring 4 cm remains.
What might the lengths of the equal parts be?

In how many different ways can the ribbon be cut into equal pieces?

2.

Put the numbers 1,2,3 and 4 in the bottom row of this multiplication pyramid in any order you like.

What different numbers can you get on the top of the number pyramid? How can you make the largest number?

Explain your reasoning.

3. Fernando the chef has prepared 2496 roast potatoes for the next 8 days and he is calculating how many per day he will be able to serve. He doesn't think the answer looks right. Explain Fernando's error and work out the correct answer.

$\qquad$
$\qquad$
4. Daniel makes puddings. He has 1540 kg of flour and uses 5 kg a day. He is calculating how many weeks his remaining flour will last. He has calculated that this should last 44 weeks. Has he calculated this correctly? Prove it!


There are not any division related Oak Academy sessions so it might be good to recap on 2D and 3D shape properties https://classroom.thenational.academy/lessons/to-identify-describe-and-classify-shapes-based-on-the-properties

