THOMAS BULLOCK CE PRIMARY ACADEMY

Year 5

MATHS WEEK 4 MAY 10-14TH

DAY 3- DIVISION

Challenge 1

You have 3 minutes to complete the next 3 questions!
Good luck

Challenge 1

1.

_____ = 9^2

1 mark

2.

462 x 23 =

1 mark

3. The table below shows the fruit preferences of **25 pupils** in a class.

a) What **percentage** prefer bananas?
b) What **percentage** prefer apples or peaches?

Banana	Apple	Pineapple	Peach
8	5	7	5

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Solutions

1. 81
2. 10,626
3. a) 32% b) 40%

Challenge 2 Arithmetic:

How do you solve these? Can you teach your family how? What are the challenges? Can you solve them in your head? Which ones? What is the best method? Fastest method?

$9^2 + 9^2 =$

____ ÷ 100 = 3.07

Challenge 2- Answers 1

$9^2 + 9^2 =$

162

____ ÷ 100 = 3.07

307

Challenge 3: Divide up to 4 digits by 1 digit
Key Vocabulary

share, share equally, one each, two each, three each..., group in pairs, threes... tens, equal, groups of, divide, division, divided by, divided into, repeated subtraction, remainder, factor, quotient, divisible by, halve, inverse, calculate, calculation, number sentence, mental calculation, method, strategy, jotting, answer, right, correct, wrong, sign, operation, symbol, equation.

Challenge 3: Divide up to 4 digits by 1 digit

When we are dividing numbers by a single digit, start by thinking about mental methods you already know.

84 ÷ 6

84 can be partitioned into 60 and 24

84 = 60 + 24

÷6 ÷6

10 4

So, there are 10 groups of 6 in 60 and 4 groups of 6 in 24.

10 + 4 = 14

So, 84 ÷ 6 = 14

Can you use partitioning to answer these?
Problem solving and reasoning

560 ÷ ___ = 8

___ ÷ 60 = 8

Can you use partitioning to answer these?
Problem solving and reasoning

A pile of 1000 sheets of paper measures 12cm.

What is the width of one piece of paper?

Challenge 3: Divide up to 4 digits by 1 digit

We can record the same calculation using **short division**:

$$\begin{array}{r|l} & \ \ 1 \quad\ \ 4 \\ \hline 6 & 8^{\,2}\,4 \end{array}$$

1. We say, 'how many 6s in 8?' The answer is 1 so we put the 1 above the 8 because there is only 1 group of 6 in 8 with a remainder of 2.
2. 1 × 6 = 6 so we have a remainder of 2. We put this in front of the 4 to make 24.
3. We say, 'how many 6s in 24?' The answer is 4. We put this above the 24 next to the 1.
4. 14 is our answer.
5. So, 84 ÷ 6 = 14

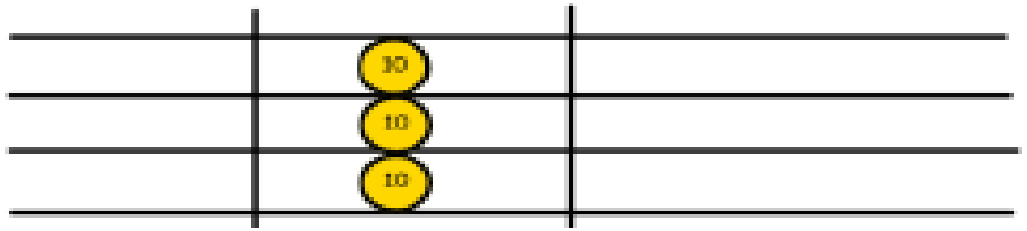
Challenge 3: Divide up to 4 digits by 1 digit

We can record the same calculation using **short division**:

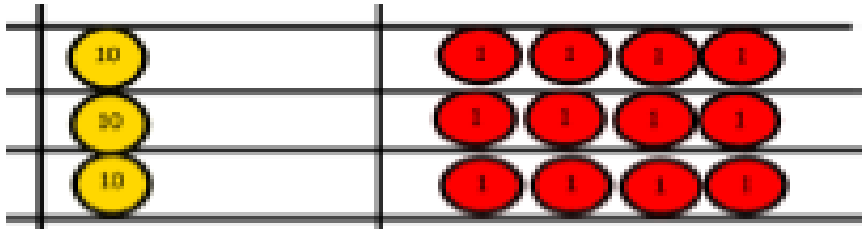
You could also build the calculation with **place value counters**:

42 ÷ 3=

Start with the biggest place value, we are sharing 40 into three groups. We can put 1 ten in each group and we have 1 ten left over.



We exchange this ten for ten ones and then share the ones equally among the groups.



We look how much in 1 group so the answer is 14.

Challenge 3: Divide up to 4 digits by 1 digit

We can record the same calculation using long division:

$$
\begin{array}{r|l}
 & \,1\;\;\;3\;\;\;6\;\;\;\text{r}\,2 \\
\hline
7 & \,9\;\;{}^{2}5\;\;{}^{4}4
\end{array}
$$

1. How many 7s in 9? The answer is 1 remainder 2. We put 1 above the 9 and a 2 in front of the 5.
2. How many 7s in 25? The answer is 3 remainder 4. We put 3 above the 5 and a 4 in front of the 4.
3. How many 7s in 44? The answer is 6 remainder 2. We put the 6 above the 4 and the remainder next to it.
4. Our answer is 136 r 2.
5. So 954 ÷ 7 = 136 r 2.

Challenge 3: Divide up to 4 digits by 1 digit

We can record the same calculation using **short division**:

A cake maker has baked 234 cakes.

If she sells them in groups of 6, how many groups will she have to sell?

Challenge 3: Divide up to 4 digits by 1 digit

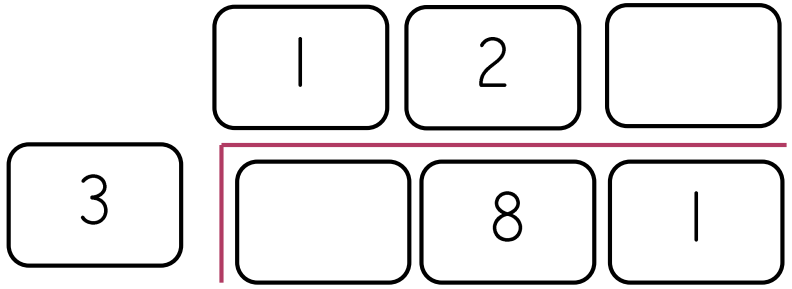
We can record the same calculation using **short division:**

$$
\begin{array}{r|rrrr}
 & 1 & 3 & 3 & 9 \text{ r } 4 \\
\hline
6 & 8 & {}^{2}0 & {}^{2}3 & {}^{5}8
\end{array}
$$

1. How many 6s in 8? The answer is 1 remainder 2. We put the 1 above the 8 and a 2 in front of the 0.
2. How many 6s in 20? The answer is 3 remainder 2. We put the 3 above the 0 and a 2 in front of the 3.
3. How many 6s in 23? The answer is 3 remainder 5. We put the 3 above the 8 and the 5 in front of the 8.
4. How many 6s in 58? The answer is 9 with a remainder of 4. We put the 9 above the 8 and the remainder next to it.
5. Our answer is 1339 r 4.
6. So 8038 ÷ 6 = 1339 r 4.

Challenge 3: Divide up to 4 digits by 1 digit

We can record the same calculation using **short division:**



What are the missing digits in this calculation?

How do you know?

Challenge 3: Divide up to 4 digits by 1 digit
We can record the same calculation using short division:

The perimeter of a square is 2256cm.

How long is each side?

1372 pupils in a school are put into groups of 9. How many groups of children will there be?

Challenge 3: Divide up to 4 digits by 1 digit

1. 7644 ÷ 3 =

2. Mary has a box of 475 bouncy balls. If she shares them between her 8 friends, how many would each friend get?

3.

```
      0   5  r 1
   ____________
9 | 4   __
```

Answer in your book!

Challenge 3: Divide up to 4 digits by 1 digit

4. 5436 ÷ 6 =

5. A restaurant serves food 6 nights a week. In a delivery of vegetables there were 3875. How many vegetables can they use each night?

6.

	1	8	6	r 1
5	9	3	__	

Answer in your book!

Challenge 3: Divide up to 4 digits by 1 digit

7. Daisy raised £1245 for charity. She wanted to give an equal amount to 5 different charities. How much would each charity get?

8. 2697 ÷ 8 =

9.

	__	5	8	9
5	7	9	__	5

Answer in your book!

Challenge 4: Question 1

Answer in your book!

Mr Porter has saved £8,934
He shares it equally between his three grandchildren.
How much do they each receive?

Challenge 4: Question 1

Mr Porter has saved £8,934
He shares it equally between his three grandchildren.
How much do they each receive?

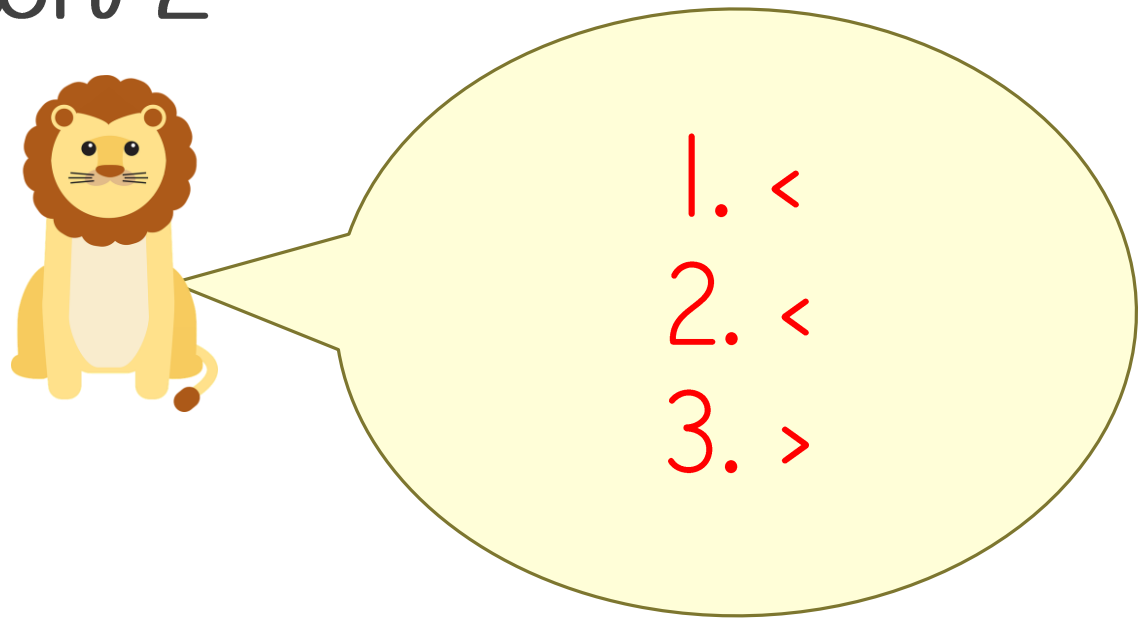
Challenge 4: -Question 2

Answer in your book!

Use <, > or = to make the statements correct.

3,495 ÷ 5	◯	3,495 ÷ 3
8,064 ÷ 7	◯	9,198 ÷ 7
7,428 ÷ 4	◯	5,685 ÷ 5

Challenge 4: -Question 2



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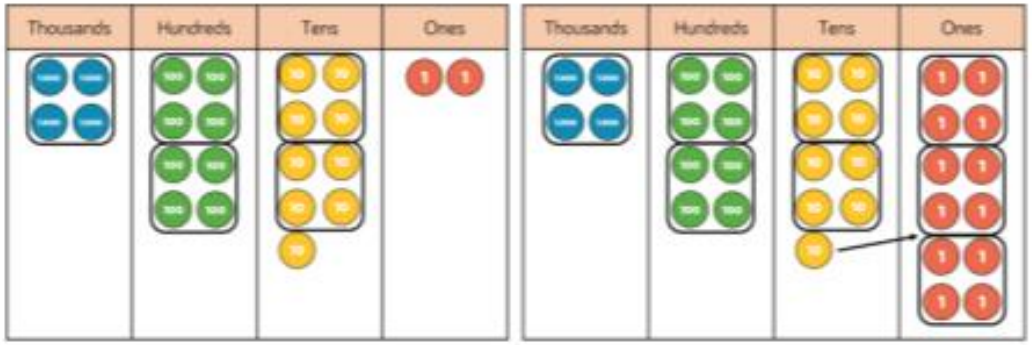
Challenge 4: -Question 2-Answer

Answer in your book!

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



	1	2	2	3
4	4	8	9	$^{1}2$

Use this method to calculate:

6,610 ÷ 5 2,472 ÷ 3 9,360 ÷ 4

Challenge 4: Question 2

1. 1,322
2. 2.824
3. 2,340

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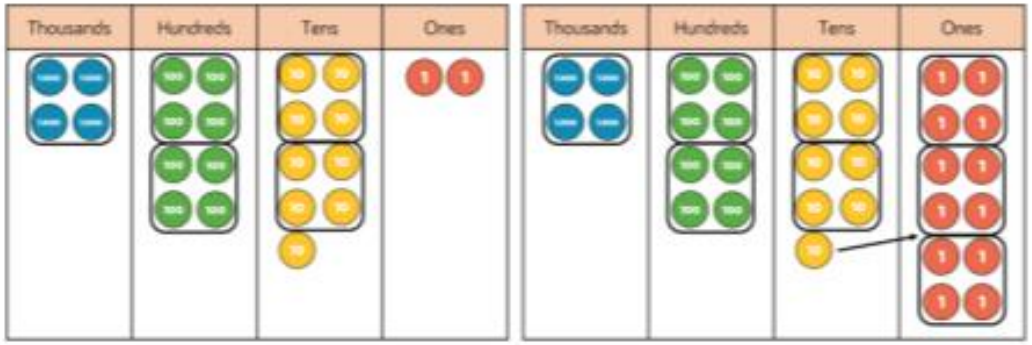

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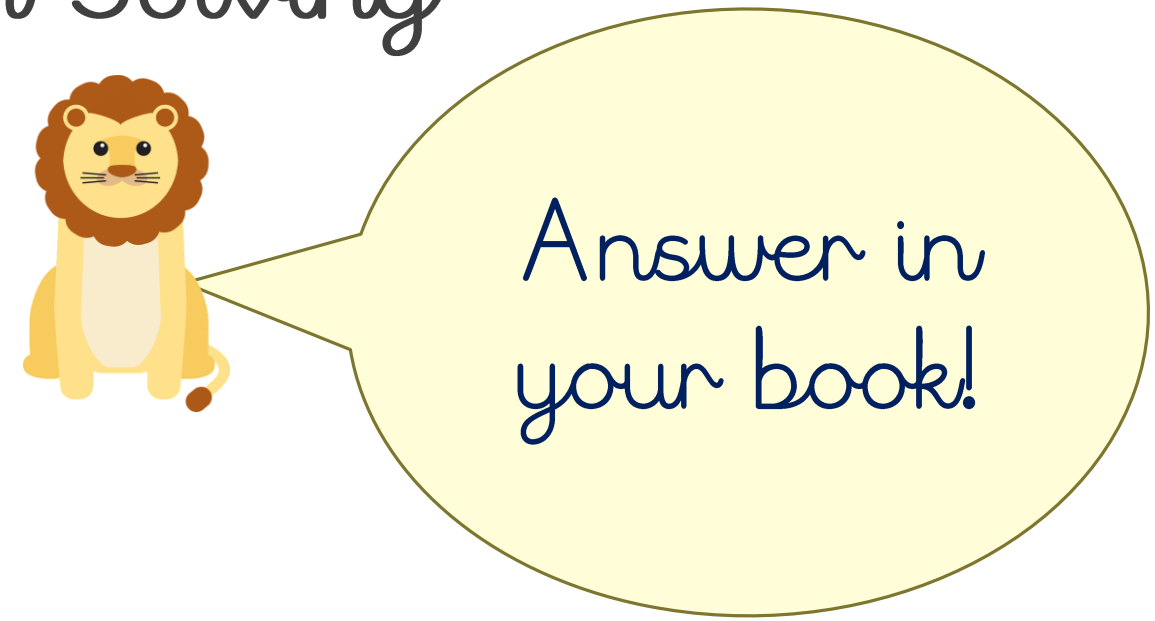
Use this method to calculate:

6,610 ÷ 5 2,472 ÷ 3 9,360 ÷ 4

Challenge 3: Problem Solving

Jack is calculating 2,240 ÷ 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.



Challenge 3: Problem- Answer

Jack is calculating 2,240 ÷ 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.

Jack is incorrect. You can exchange between columns. You can't make a group of 7 thousands out of 2 thousand, but you can make groups of 7 hundreds out of 22 hundreds.

The answer is 320

Game time!

https://www.free-training-tutorial.com/long-division/snorks/snorks.html