مدرسة المتحدة الدولية

United School International

The Pearl Island جزيرة اللؤلؤة

an Orbital Education School

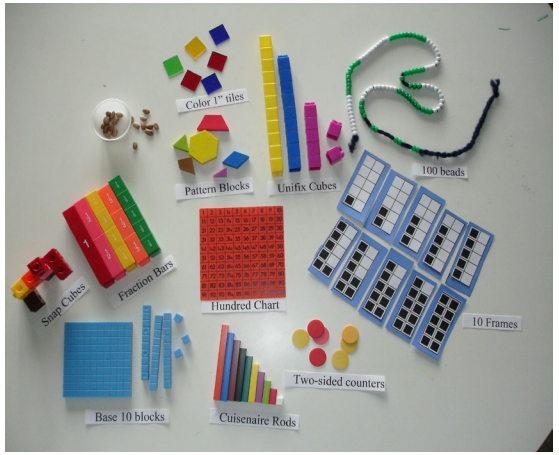
Maths at USI in Key Stage 1 and 2

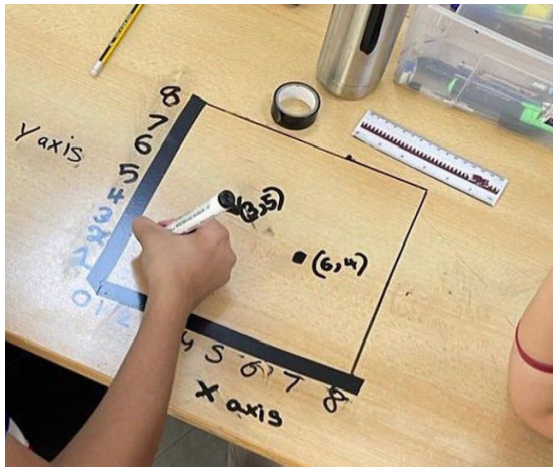
Parent Workshop

AGENDA

- Maths at USI
- Schemes we use
- Arithmetic
- How our lessons look in KS1
- Parent Task KS1
- How our lessons look in Year 3 and 4
- Parent Task - Lower Key Stage 2
- How our lessons look in Upper Key Stage 2
- Parent Task Upper Key Stage 2
- Questions

Primary Maths at USI



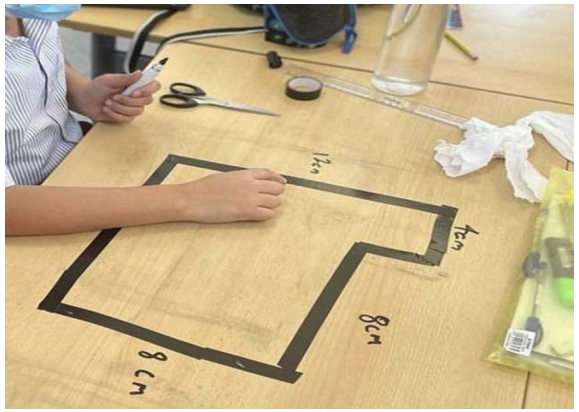


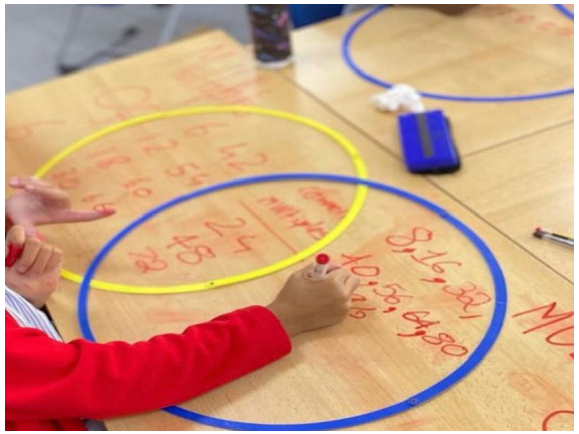
- ‘Influenced, inspired and informed by the work of leading Maths researchers and practitioners across the world...’

- Offer a vast bank of clear, practical resources which we adapt to suit the needs of our children.

- Schemes now used in 140 countries and by 80% UK primary schools.

Why?



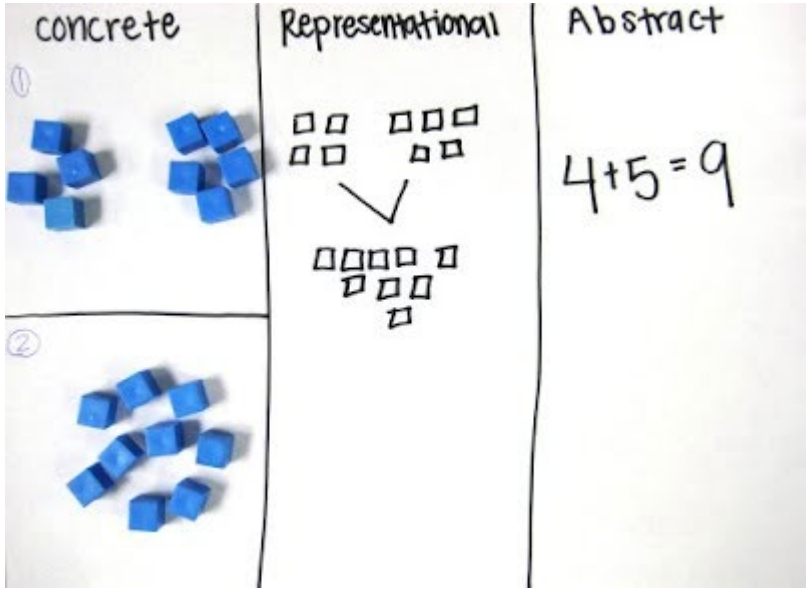


- The curriculum designed by White Rose Maths is split into schemes of learning for each year group. These schemes of learning break down what children should learn in each week of each term to master and build upon their foundational Maths skills.

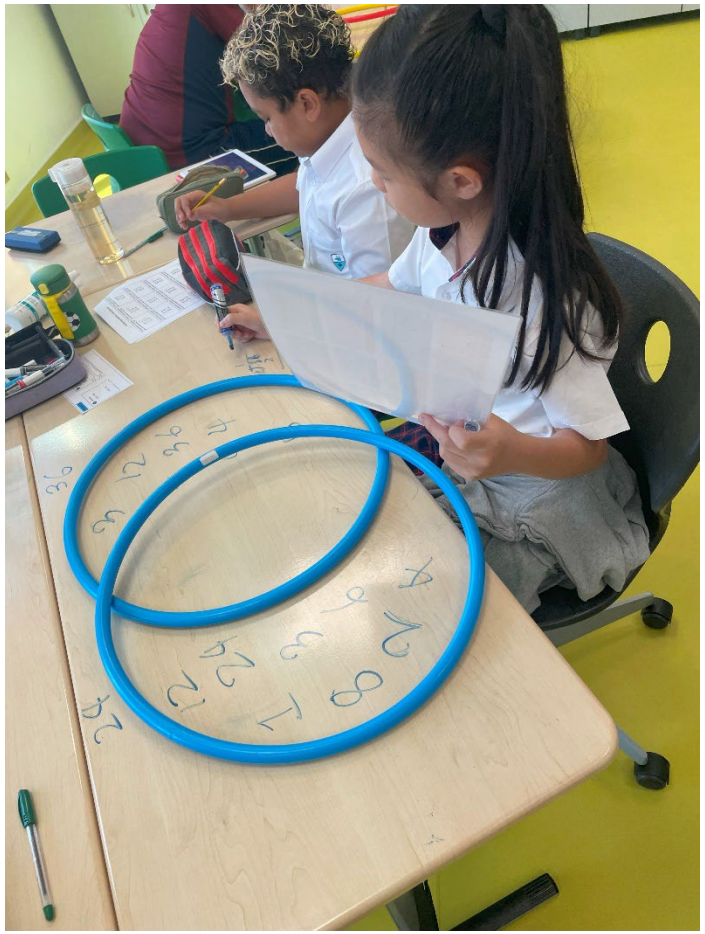
- The White Rose Maths curriculum encourages the CPA approach (Concrete, Pictorial, Abstract), teaching children a deeper understanding of Maths problems.

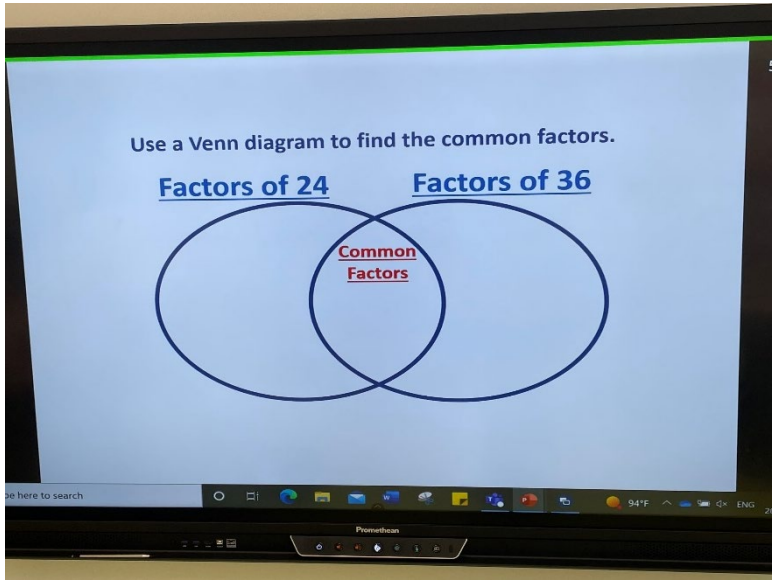
- This approach helps children to visualise, describe and experiment with mathematical concepts, ultimately improving their mathematical fluency.

CPA Approach

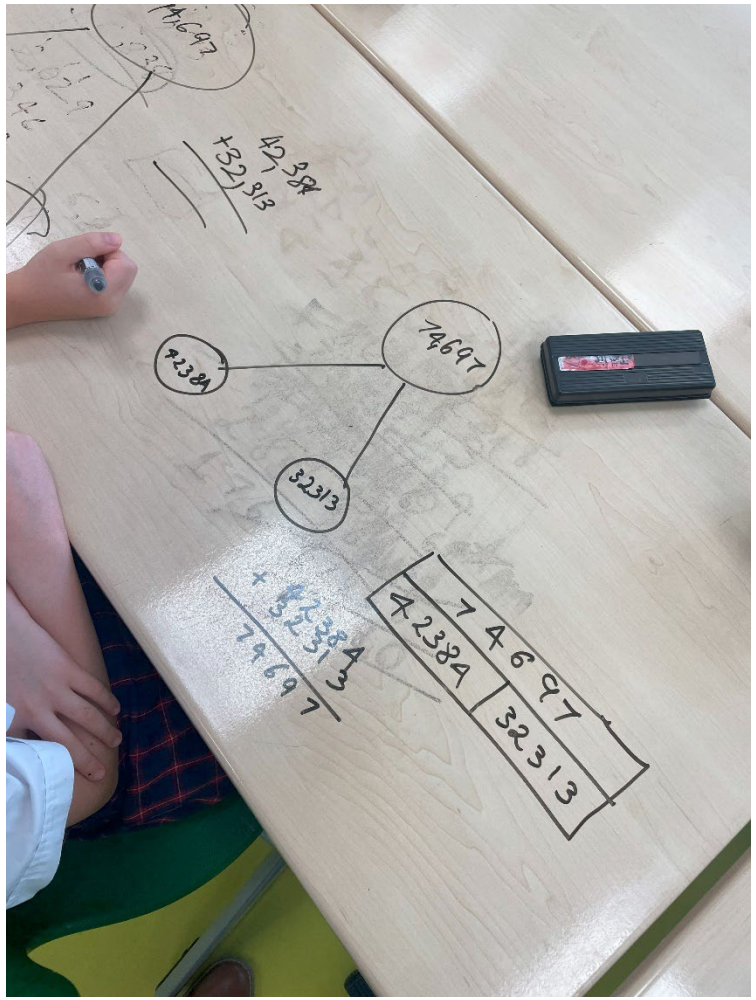


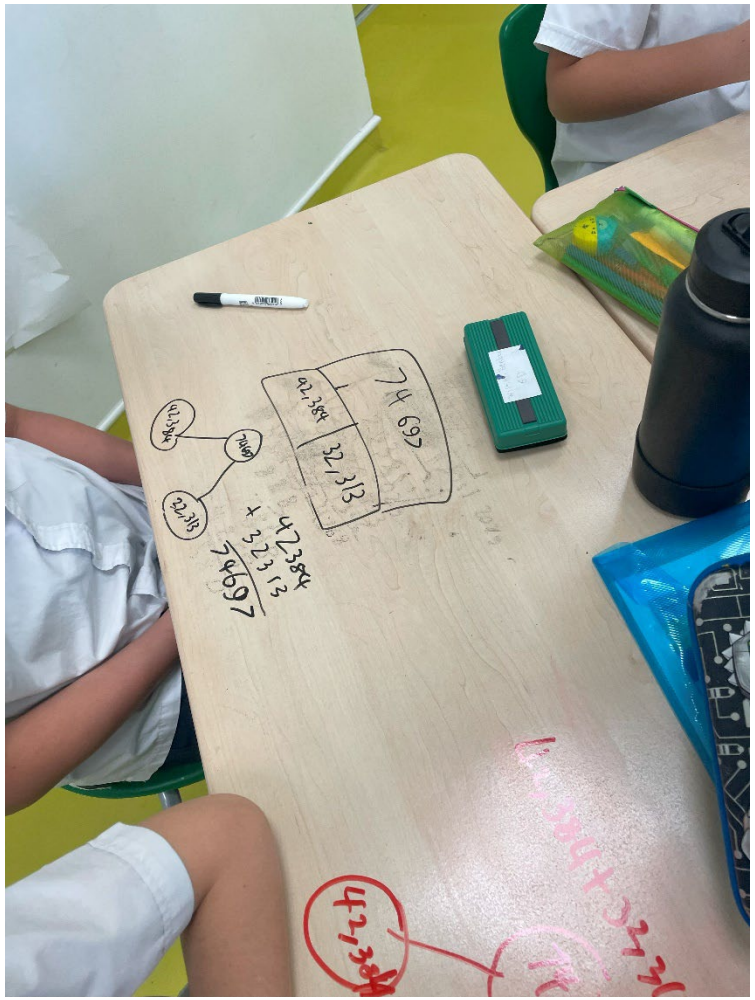
Teaching for understanding and not just short cuts



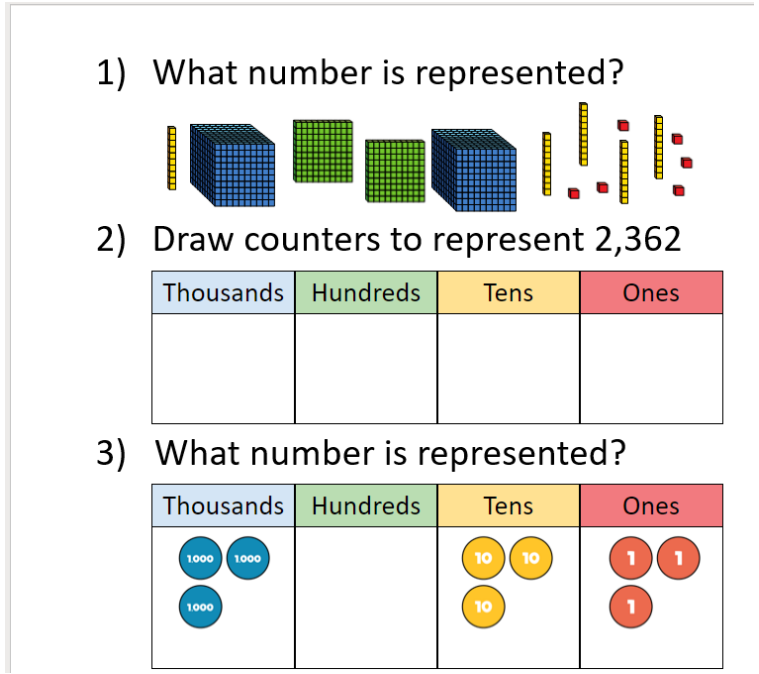


Providing children with a range of strategies





Lesson structure



- Teaching slides adapted to suit class.
- Worksheets are used as and when the teacher feels necessary.
- Children are given CPA opportunities.
- Lessons start with warm up or addressing misconceptions.
- Other resources available for children who need additional support.
- Reasoning and problem solving used to challenge and stretch children.

Weekly arithmetic lessons

QUESTIC

9.2 x 1,0

Millions	Hundred Thousands	Ten Thousands	Thousands	

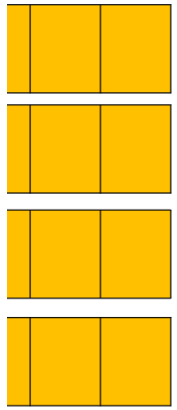
Week 6

1	561 - 10 =	
2	9 x 3 =	
3	6,388 - 4,861 =	
4	9^2 =	
5	5 x 4 x 6 =	
6	65 x 8 =	
7	42 ÷ 7 =	
8	$\frac{5}{8} + \frac{1}{8}$ =	
9	1.5 x 100 =	
10	$\frac{1}{5} + \frac{1}{15}$ =	
11	5,509 + 3,704 =	
12	$\frac{7}{10}$ of 700 =	

13	3.5 + 4.781 =	
14	7 x 2 - 5 =	
15	417 x 53 =	
16	$\frac{1}{3} \div 7$ =	
17	0.8 x 60 =	
18	3,222 ÷ 18 =	
19	30% of 210 =	
20	$4 - 1\frac{2}{7}$ =	
21	$\frac{8}{10} \times \frac{1}{4}$ =	
22	2.3 ÷ 100 =	
23	$4\frac{1}{2} \times 3$ =	

0 - SUPPORT

$:2\frac{3}{8}$



Key Vocabulary

- ratio
- proportion
- "for every... there are..."
- part
- whole
- scale factor
- enlargement
- similar shapes
- length
- width
- perimeter

Ratio Language

For every 1 circle, there are 2 triangles.

For every 2 bananas, there are 3 apples.

For every 1 football, there are 3 rugby balls.

Ratio and Fractions

For every 1 rugby ball, there are 2 footballs.

Ratio of rugby balls to footballs: 1:2

$\frac{1}{3}$ of the balls are rugby balls.

For every 1 triangle, there are 3 squares.

The Ratio Symbol

The ratio of footballs to rugby balls: 1:4

The ratio of rugby balls to footballs: 4:1

The ratio of circles to triangles: 2:3

The ratio of triangles to circles: 3:2

The ratio of apples to bananas: 1:2

The ratio of bananas to oranges: 2:3

The ratio of apples to bananas to oranges: 1:2:3

Ratio

Knowledge Organiser

Ratio and Proportion Problem-Solving

To use the ingredients for 1 person, you divide all the quantities by 10 (÷ 10).

To use the ingredients for 5 people, you halve all the quantities (÷ 2).

Ingredients for Fruit Smoothie
(serves 10 people)

800g of bananas

500g of strawberries

200g of raspberries

700ml of milk

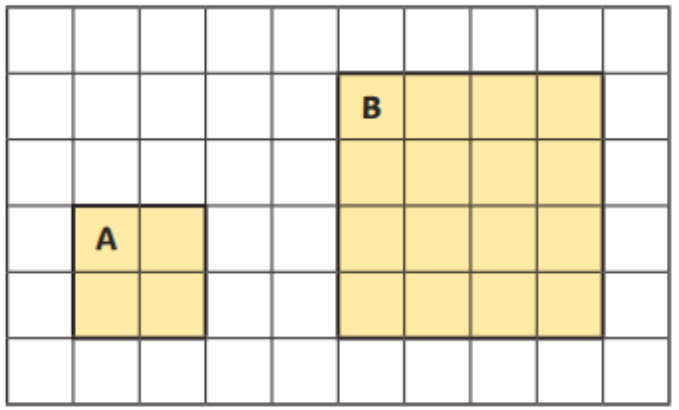
300ml of natural yogurt

To use the ingredients for 20 people, you double all the quantities (× 2).

In a bag of 15 sweets, there is 1 smiley face sweet for every 4 love heart sweets.

Therefore, there will be 3 smiley face sweets and 12 love heart sweets in the bag.

Scale Factors

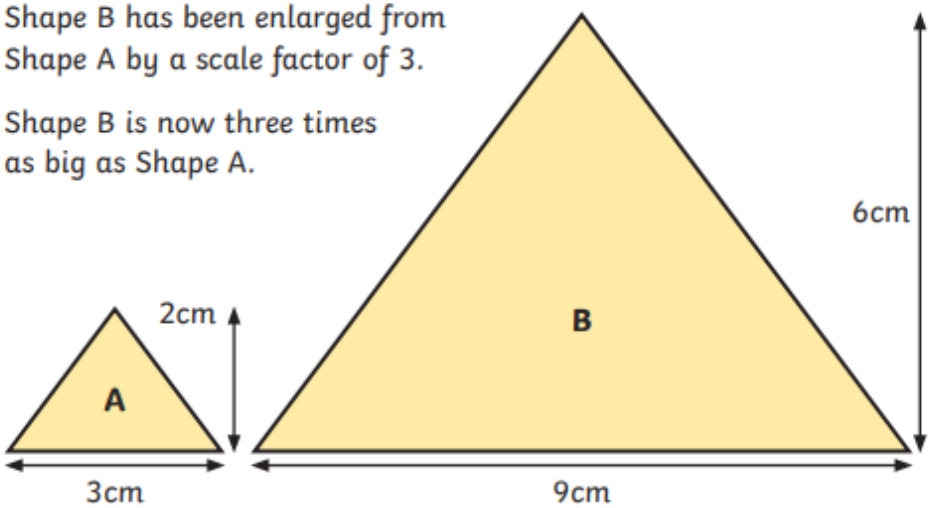


Shape A has been enlarged by a scale factor of 2 to make Shape B.

Shape B is now two times as big as Shape A.

Shape B has been enlarged from Shape A by a scale factor of 3.

Shape B is now three times as big as Shape A.



twinkl
visit twinkl.com

Ratio

B

Name _____

1 Complete the sentences.

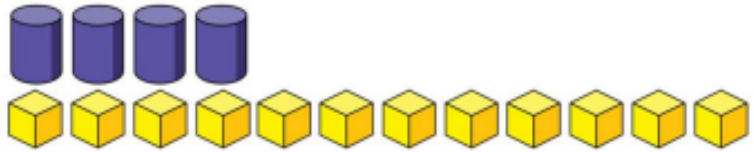
For every 1 cherry, there are ☐ plums.

1 mark

For every 2 bananas, there are ☐ carrots.

1 mark

2 Complete the sentence.



For every 1 cylinder, there are ☐ cubes.

1 mark

3 Alex has these coins.

Whitney has these coins.

Alex says that for every 3 coins she has, Whitney has 5 coins.
Is Alex correct? yes no
Explain or show why.

1 mark

4

The ratio of circles to squares is ☐ : ☐

1 mark

Complete the ratio in 2 different ways.

The ratio of rectangles to triangles is ☐ : ☐

The ratio of rectangles to triangles is ☐ : ☐

2 marks

5 Circle the equivalent ratios.

2 : 10 1 : 5 3 : 12 8 : 4 3 : 15

2 marks

White Rose Maths

6 Part of a bar is shaded.

What fraction of the bar is shaded? _____ 1 mark

What is the ratio of shaded parts to non-shaded parts?

_____ 1 mark

7 For every 4 boys in a class, there are 2 girls.

There are 24 children in the class.
How many girls are there?

_____ 2 marks

8 The ratio of red to blue cubes in a tower is 1 : 5
There are 6 red cubes in the tower.
How many cubes are blue?

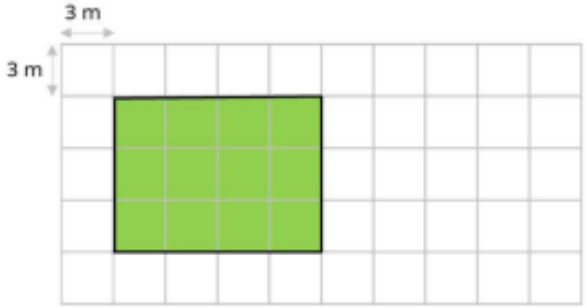
_____ 1 mark

9 Eva has some red and green grapes.
For every 5 green grapes, she has 3 red grapes.
She has 35 green grapes.

How many more green grapes than red grapes does Eva have?

_____ 2 marks

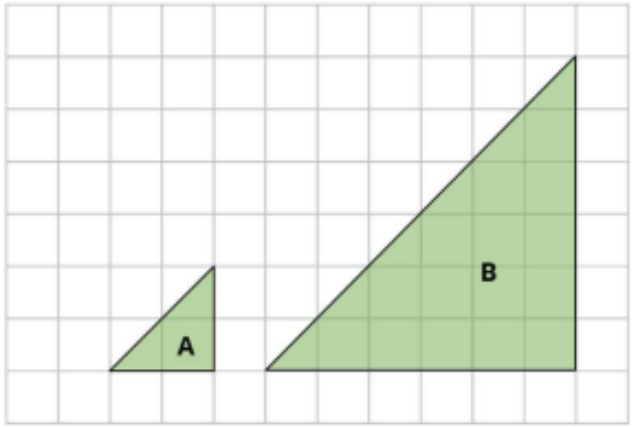
10 A field is drawn to scale.
Each square on the grid represents 3 m.



What is the length of the field? _____ m 1 mark

Another field is 9 m long and 6 m wide.
Draw this field on the grid above. 2 marks

11 Here are two triangles.
Triangle B is an enlargement of triangle A.



What is the scale factor of enlargement? _____ 1 mark

White Rose Maths

Assessment in Primary Maths

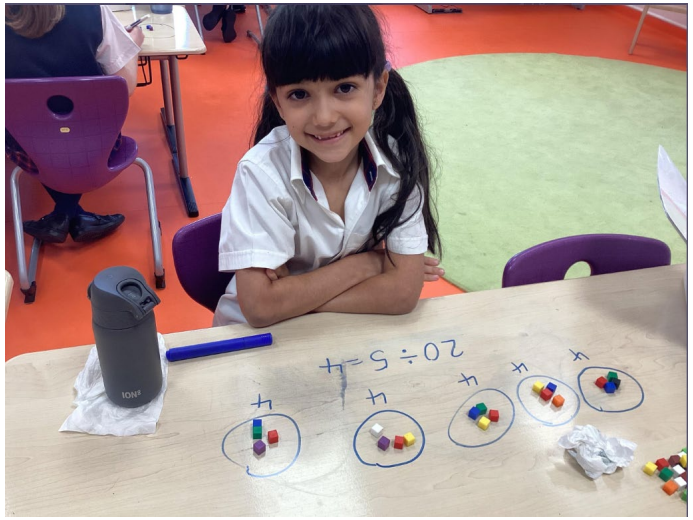
- Enc
- Enc thmetic and Rea

Working Below	1-3
Emerging	4
Expected	5
Secure	6-7
Excellence	8-9

(6C8) Solve problems involving addition, subtraction, multiplication and division	6	6	8	6	6	7	7	5	6	8	5	4	5	6	8	5	8	6	5
(6C9) Use their knowledge of the order of operations to carry out calculations involving the four operations	8	8	9	8	8	8	8	7	8	9	6	5	6	8	9	7	9	7	6
Number - fractions (including decimals and percentages)																			
(6F2) Use common factors to simplify fractions; use common multiples to express fractions in the same denomination	8	6	9	7	7	8	8	6		8	5	5	6	8	8	7	8	7	8
(6F3) Compare and order fractions, including fractions > 1	8	7	9	7	7	7	7	5		8	6	5	6	7	8	7	8	8	7

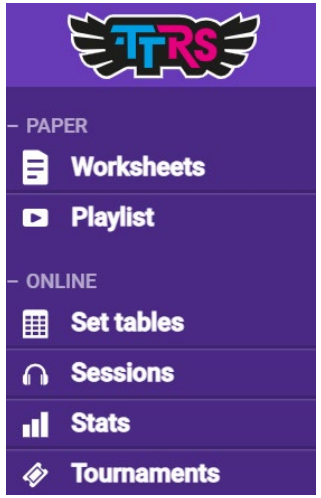
EXAMPLE SLIDES AND PHOTOS FROM KS1

1. CPA
2. Group work
3. Explanation
4. Problem-solving
5. Fluency



At Home Support

- TTRS
- Practical resources
- Quick, play-based learning.



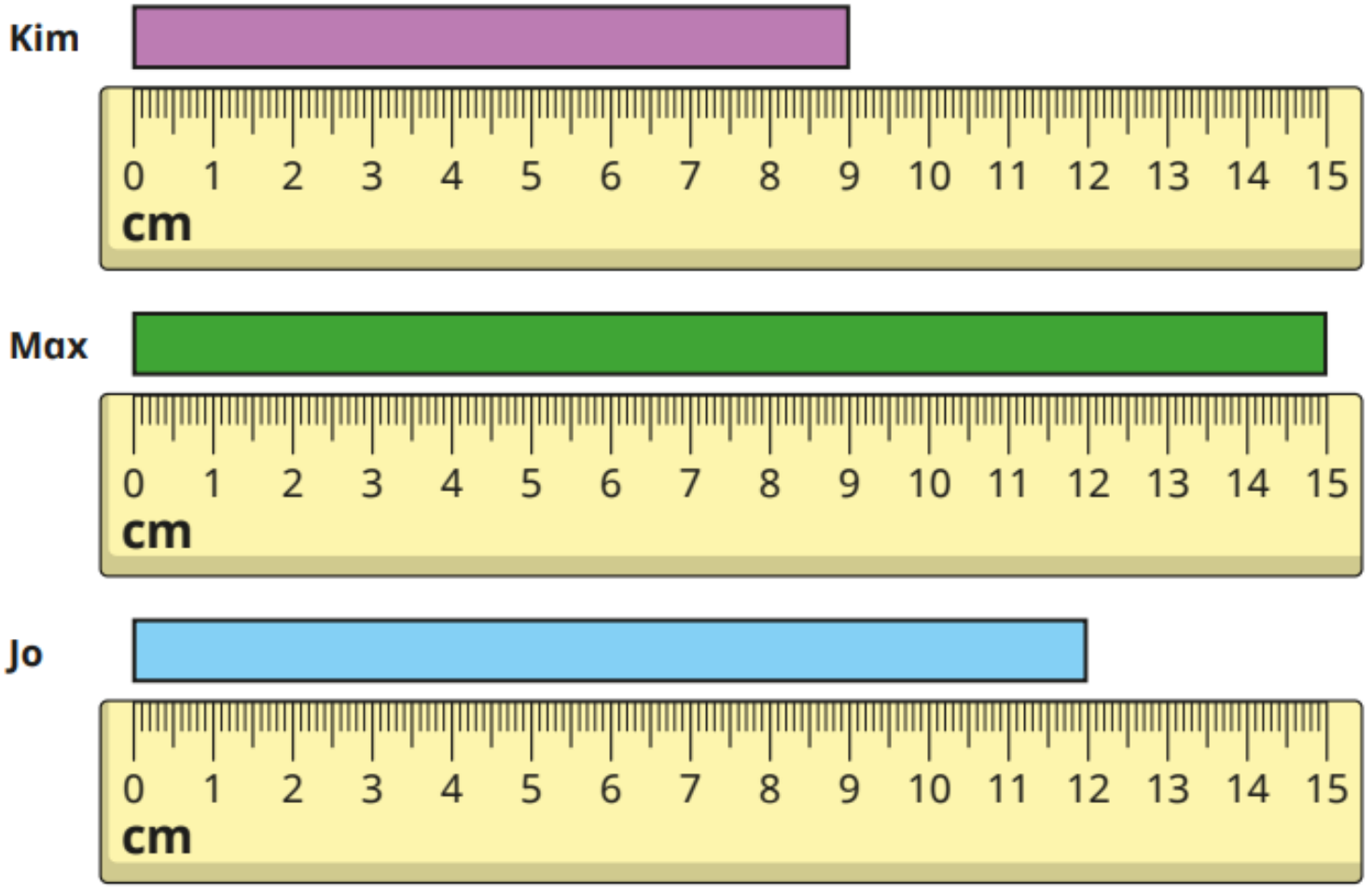
KS1

PARENT TASK

How would you approach this question?

- How would you explain it to a 6-year-old?
- We would build up this in Y1 by using non-standard units: (blocks, toys, classroom equipment)
- Practical resources and <u>lots</u> of teacher modelling

- Kim, Max and Jo each have a piece of ribbon.



- How much longer is Max's ribbon than Kim's?
- Max and Jo put their ribbons together.

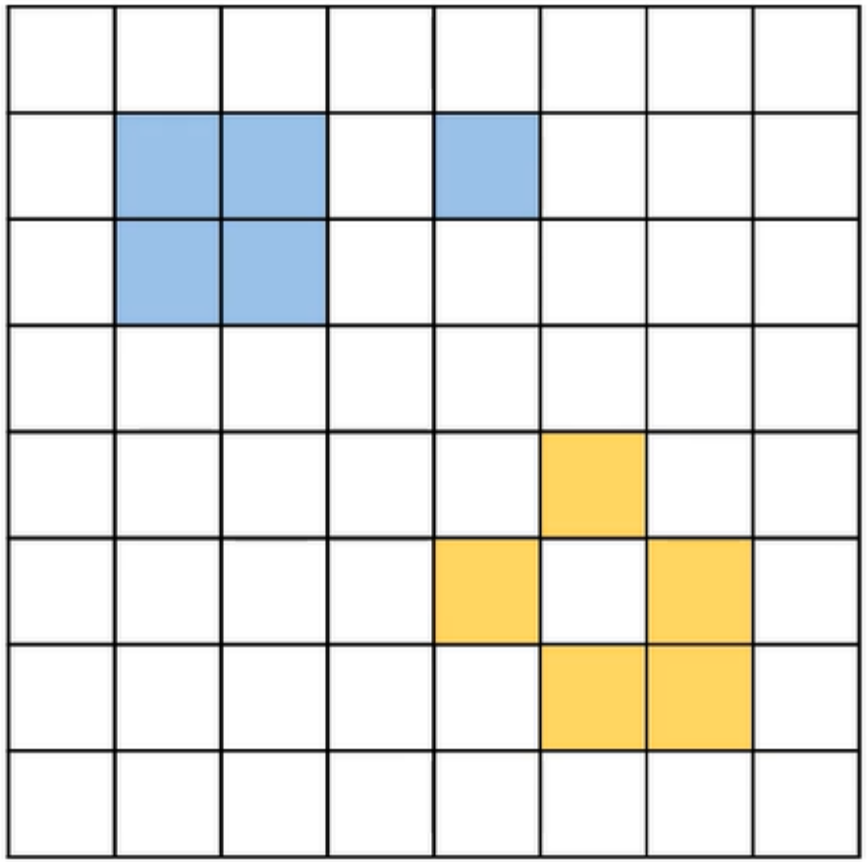
  How long are they altogether?

EXAMPLE SLIDES AND PHOTOS FROM LOWER KS2

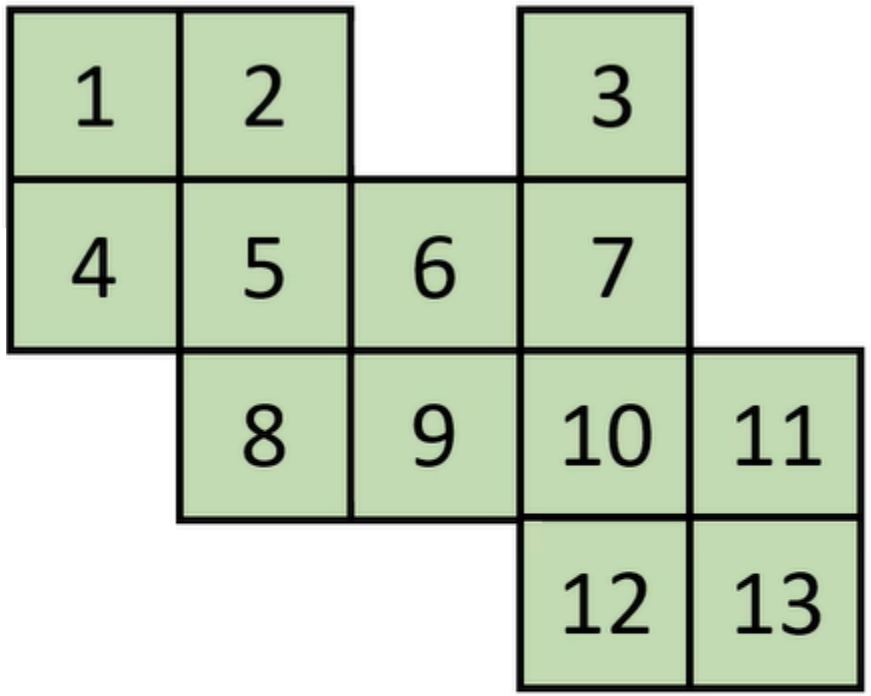
مدرسة المتحدة الدولية
United School International
The Pearl Island جزيرة اللؤلؤة
an Orbital Education School

Draw a shape on the grid with an area of 5 squares.

Do you think Mr Temple is correct?



The squares all need to make one shape and join at the sides



There are 13 squares inside the shape.

The area of the shape is 13 squares.

monument
king
squash
priest
calendar
man

Lower KS2

PARENT TASK

Lower Key Stage 2 Parent task

How would you answer this question?

86÷ 5

We can use a tens and one frame or a part-part-whole model

This help with understanding what they are learning.

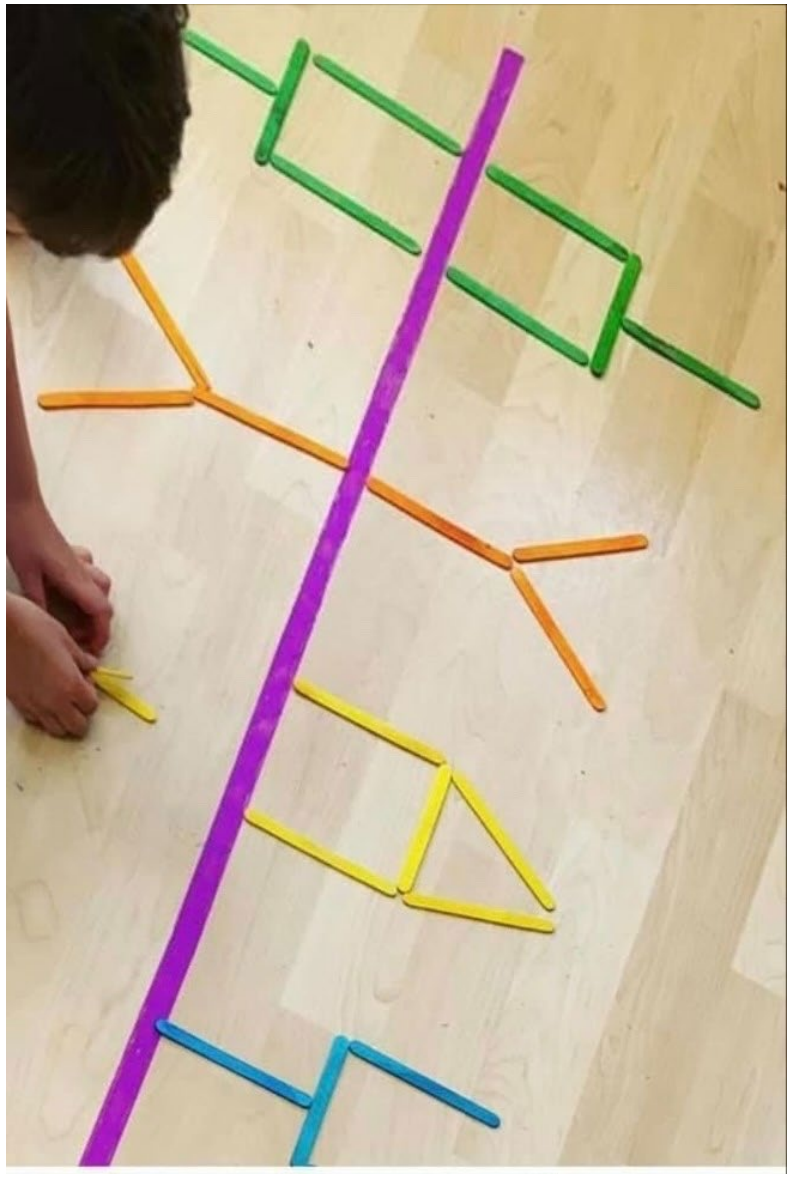
1) $84 \div 3 =$

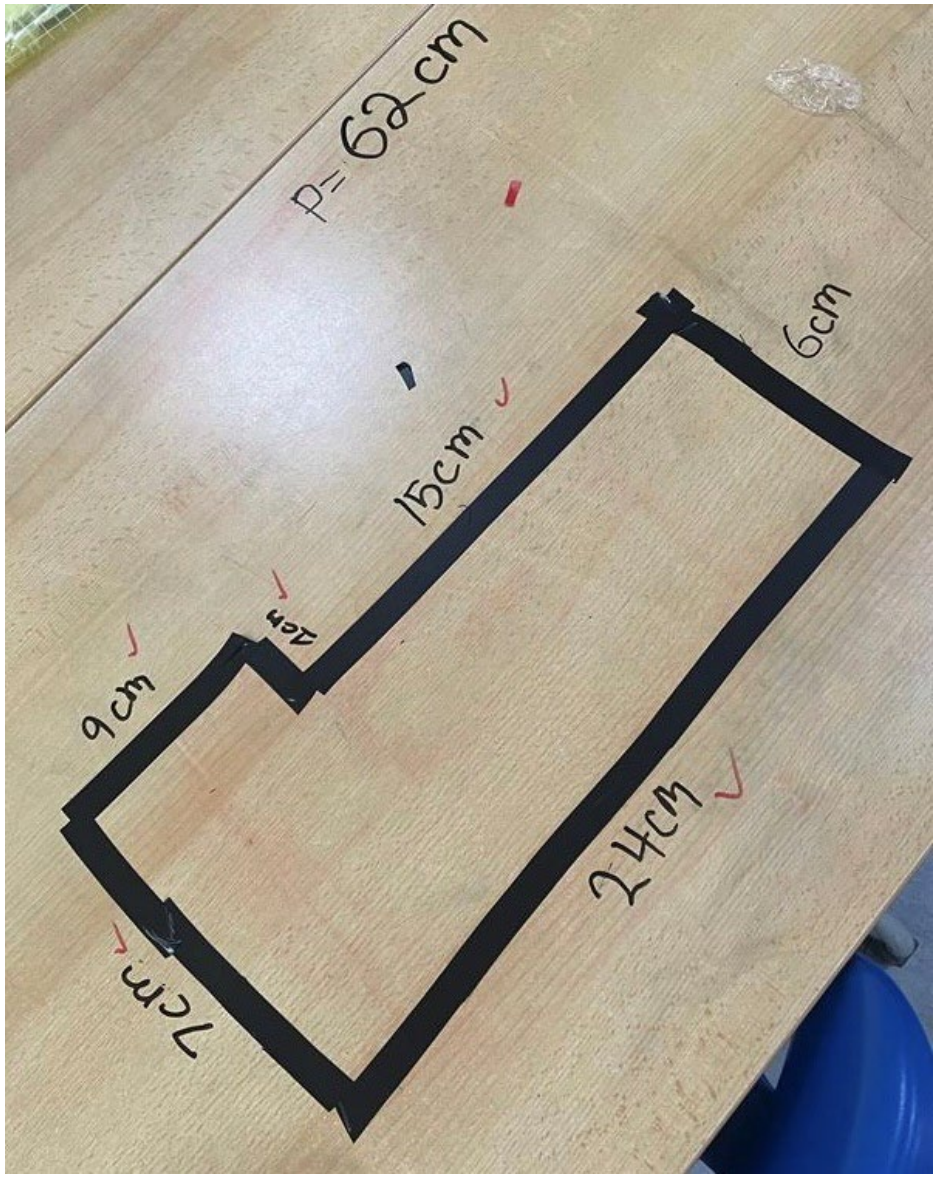
2) $85 \div 3 =$

3) $83 \div 3 =$

4) $490 \div 7 =$

EXAMPLE SLIDES AND PHOTOS FROM UPPER KS2




P=62cm
6cm
15cm
2cm
9cm
24cm
7cm

Maria, Jolie, Alessia, Noelia and Mr Tezgel are running around the USI astroturf pitch.

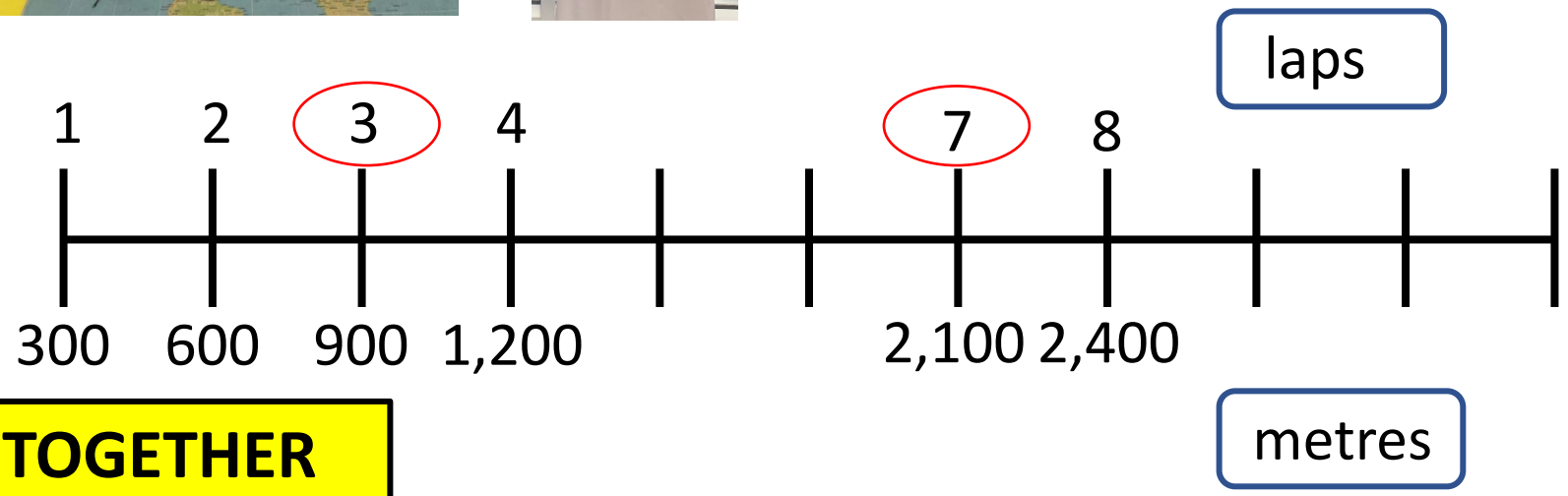
1 lap of the school pitch is 300 m.

Noelia runs 900 m

Mr Tezgel runs 2,100 m

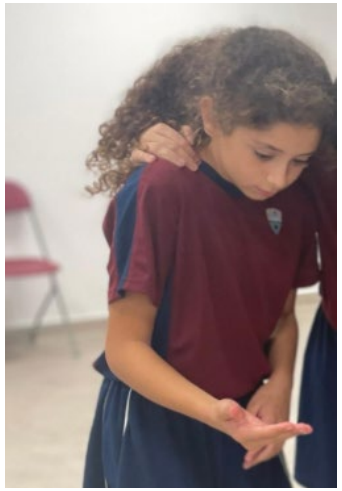
How many more laps did Mr Tezgel run?

Mr Tezgel ran 4 more laps



TOGETHER

TOGETHER



Sophia has 2 litres of PRIME.

She pours 450 ml for Sama.

She then gives a quarter of a litre to Tia.

She drinks 350 ml herself.

How much PRIME is left?
Give your answer in ml.

UPPER KS2

PARENT TASK

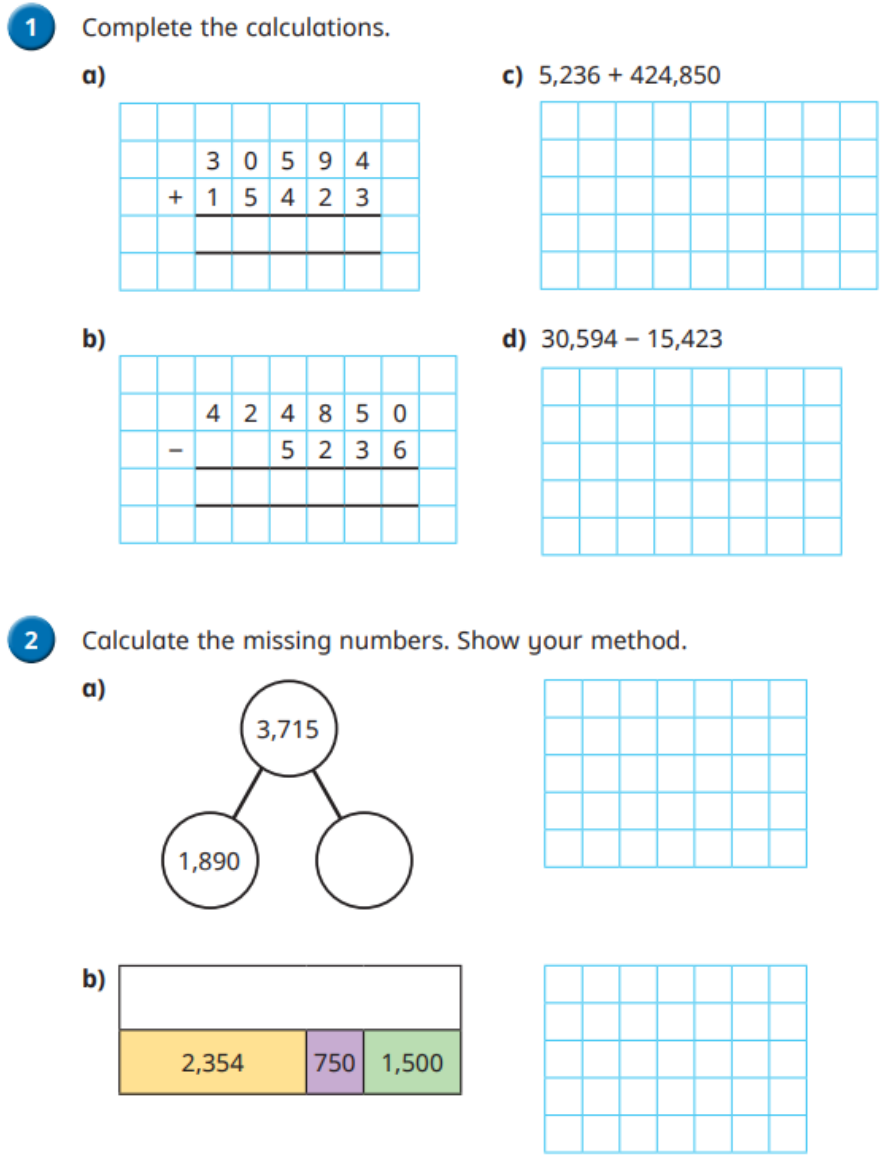
Upper Key Stage 2 Parent task

How would you answer this question?

1) 42,384 + 32,313 =

We can use column addition, part whole models and bar models.

This helps with understanding what they are learning.



1 Complete the calculations.

a)

	3	0	5	9	4
+	1	5	4	2	3

c) 5,236 + 424,850

b)

	4	2	4	8	5	0
−			5	2	3	6

d) 30,594 − 15,423

2 Calculate the missing numbers. Show your method.

a)

b)