MATHS PARENT WORKSHOP

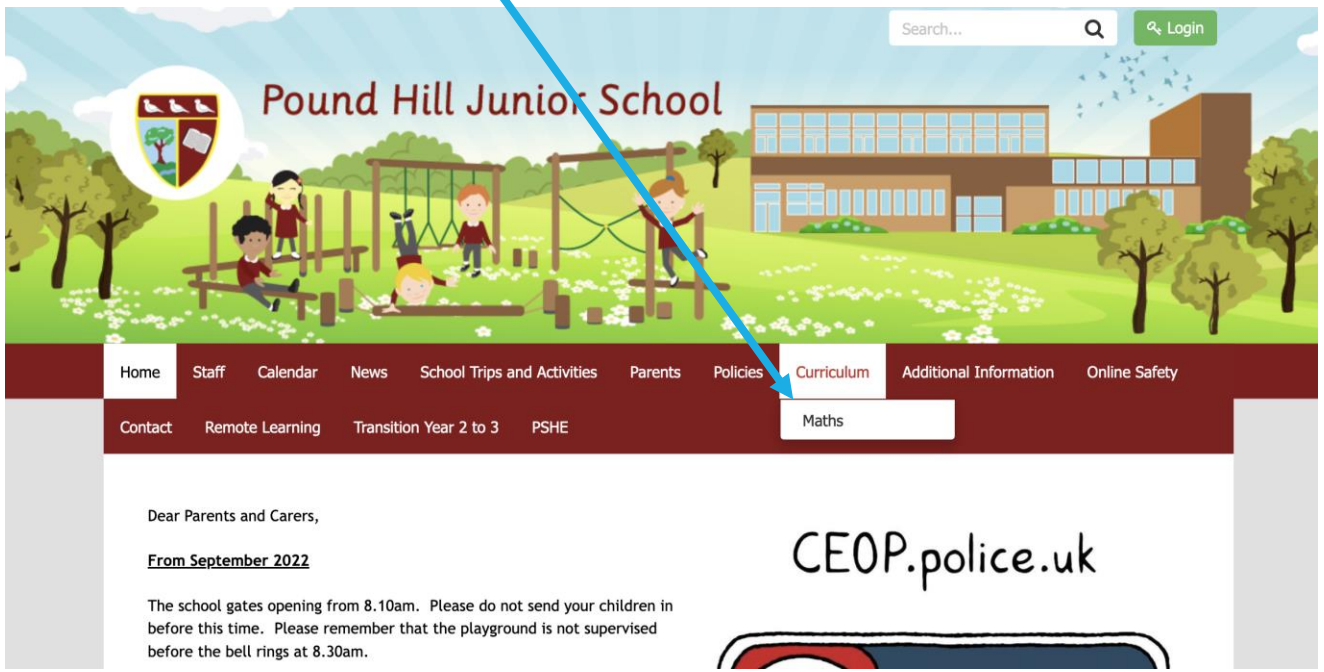
Please sign in as you come in and complete the first part of the evaluation form

PARENT QUESTIONS AND QUERIES LAST SUMMER

- **What** is being covered each week/term?
- **How** is Maths being taught?
- **What** can I do to help at home?
- **How** can I build my child's confidence?
- **Which** methods are taught?

USEFUL DOCUMENTS ON THE WEBSITE

- Curriculum coverage document – shows which area of the curriculum should be covered roughly in each week
- Language progression document- shows the key language the children should know in each year
- Calculation Policy- with examples of methods used
- 'Mastery for parents' document
- FAQs- extra answers to questions asked in Summer's questionnaire that couldn't be covered today!



Maths

Maths at Pound Hill Junior School

Our aim for teaching mathematics at Pound Hill is to create a deeper understanding to ensure that all children have the fundamental skills and knowledge to succeed in their learning. We want children to easily develop new skills, **enjoy** using mathematics and face challenging learning with **resilience.** By building on a solid foundation of **number** and **language fluency**, children will be able to access a wide range of topics and **apply** their developing knowledge. This will support them, not only at our school, but in future life.

Enjoyment, Fluency, Application, Language, Resilience.

Calculation Policy

Please see the example of our calculation policy. This shows the stages that we use to build up our understanding through concrete apparatus, pictorial representation and as abstract numbers. Each of these small steps are really important to avoid any misconceptions!

Calculation Policy.pdf

Curriculum Overview

Below are the curriculum overviews for each year group for Maths. Please note

- The White Rose document is their sequencing and coverage suggestion.
- The second grid is a working document that will act as a Coverage document as well as a Medium Term Plan.
- Adjustments have and will be made from the White Rose document to suit the needs of each year group, for example the Year 6 curriculum is more circular whereas lower down the school is more blocked to allow for more consolidation. This will also be adjusted based on other factors such as assessment weeks, Christmas and school residentials.
- Another factor affecting recent curriculum development has been Covid and the 'Ready to Progress' document criteria. This will be assessed as the year goes on and adapted along with the needs of the year group.

Curriculum Overview Maths.pdf

Vocabulary and Stem Sentence Bank & Language Progression

Please see the example of our word bank to support parents and staff with the terminology used in maths. These words have stemmed from vocabulary used in the national curriculum. Alongside the definition is an example of using the word in a whole sentence that we call a stem sentence! We use these in our lessons to show our understanding and help consolidating our learning. Alongside this, there is a language progression document which shows the fundamental vocabulary children are expected to know and use for each topic across the Year Groups.

PHJS Vocab book.pdf

Maths Language Progression.pdf

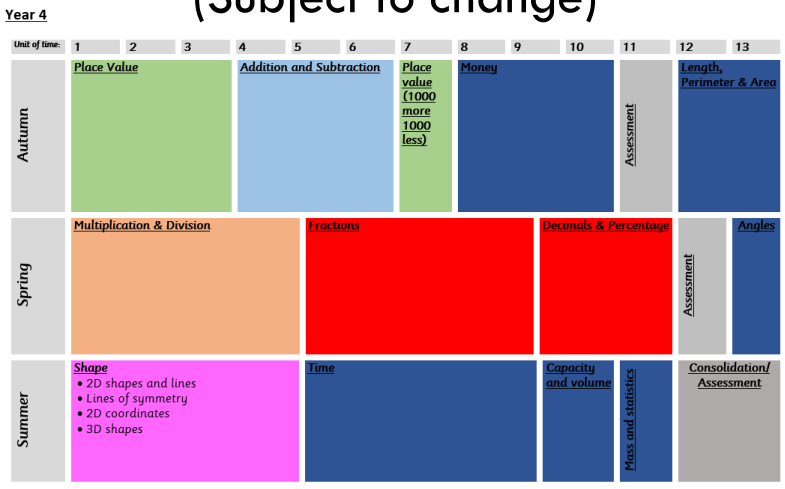
Parent Voice 2022-23

Please find answers to questions from the Parent Voice Questionnaire completed in Summer 2022 as well as the slides from the Maths workshop in Autumn 2022

FAQs.pdf

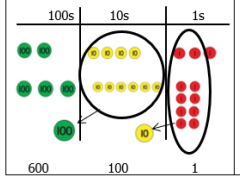
Parent guide to Mastery Maths.pdf

Curriculum overview (Subject to change)



Calculation Policy

Use of counters to add HTO + HTO/HTO + TO. Developing understanding that we can exchange 10 ones for 1 tens etc.
243 + 368



Represent the counters in a place value chart as counter and then progressing onto numerical values.

100s	10s	1s
200	40	3
+ 300	60	8
500	100	11

500 + 100 + 11 = 611

Using a formal written method to add three digit numbers together.

	2	4	3
+	3	6	8
	6	1	1
	1	1	

Here are some addition calculation. Without solving the calculations, decide which ones
- Carry no digits
- Has the largest answer
- Have to carry 2 digits.

791	124	579
+163	+233	+221
____	____	____

FAQs

	will encourage extra practice if these scores aren't improving.
How to increase child's confidence in Maths	In school we promote Learning Attitudes and Growth Mindset. The learning attitudes include resilience, persistence, risk taking, originality and collaboration. Growth Mindset is closely linked to risk taking and resilience, where the children understand that learning something new will be challenging, and that they need to give things a try in order to overcome any barriers. A simple way to encourage this at home is to use the word 'yet' 'I don't get this' becomes 'I don't get this yet' 'I don't understand' becomes 'I don't understand this yet' Or 'This is hard' could become 'this is hard at the moment' It is amazing how one or two words can change a mindset towards learning.
Can we know topics for the year and the curriculum for each term?	There is a newly created curriculum document on the website.

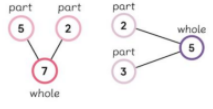
Language Progression

	KS1 Assumption	Year 3	Year 4	Year 5	Year 6
Number & Place Value	Two/three digit	Digit/Number Equivalent Round Compose/Decompose Partition Recognise	10 times the size of Next/previous multiple of 10/100	Multiple of 10 Tenth/hundredth Decimal places Next/previous multiple of 0.1	Powers of 10 Thousandth Decimal fraction
Number Facts	Number bonds Double/Halve Less/more than Odd/ Even Operation/Calculation	Mental/Written Equal Number Sentence Sequence	Known facts Derived facts Further/Nearer ___/___er/___est Linear number sequence	Prime Number Square Number Cube Number	
Addition & Subtraction	Add Total Takeaway	Sum Bridge Column	Difference		
Multiplication & Division	Times Share Array	Product Groups Multiples	Remainders Scaling Factors/Multiples	Corresponding facts Common Factors/Multiples	Relative size Proportion Ratio Formulae
Fractions	Fraction (Equal) parts Whole	Denominator Numerator Unit/non-unit fraction Split	Improper fractions Mixed numbers	Integer Decimal equivalent Percentage	Express
Geometry	Draw Points	Parallel/Perpendicular Angle Coordinates Reflection Translation 2D/3D shape	Quadrant Regular Polygon Equal Perimeter	Orientation Area Rectilinear	Compose/Decompose Dimensions Radius Diameter Circumference

Vocabulary & Stem sentence bank

Vocabulary and Stem Sentence Bank

These words have been organised underneath headings linked to the different strands of the maths curriculum and written in order so common associations are grouped together.

Term	Definition	Stem Sentences
Number and Place Value		
Digit	A single numeral e.g 4 or 7	The value of the __ digit in ____ is ____ 'The value of the 6 digit in 173,463 is 60.'
Integer	A whole number e.g 56, 107, 5000	
Negative number	A number less than 0.	
Ones	Digits representing 0-9	The ___ in ____ represents the ones. 'The 5 in 475 represents the ones.'
Whole	The total amount. 	___ is the whole, ___ and ___ are the parts. '20 is the whole, 16 and 4 are the parts.'
Part	An portion of a number that makes part of the whole. 	A part of ___ is _____ 'A part of 10 is 6.' ____ can be split into the parts ___ and ____ '10 can be split into the parts 6 and 4'

What is Singapore Maths?

Singapore Maths has received a lot of coverage in the media and many schools are adopting it as a way of teaching maths. It is an *approach* to teaching, rather than a new aspect of the national curriculum, which aims to develop **mastery in maths** for all pupils.

The maths mastery approach

The **mastery approach** to maths focuses on **whole-class teaching** and developing a **deep understanding**. All pupils are encouraged to believe that, through their own efforts, they can succeed.

Teaching for Mastery can be summarised with a few key principles:

- High expectations for every child
- Fewer topics covered in greater depth
- Number sense and place value are priorities
- Problem solving is central to all learning
- Challenge is provided through increased depth, rather than acceleration of content

How do children learn Maths?

Child/learner

Self belief, reflection, learning attitudes, Growth mindset

Scaffolding

Physical resources, representations, times table grids

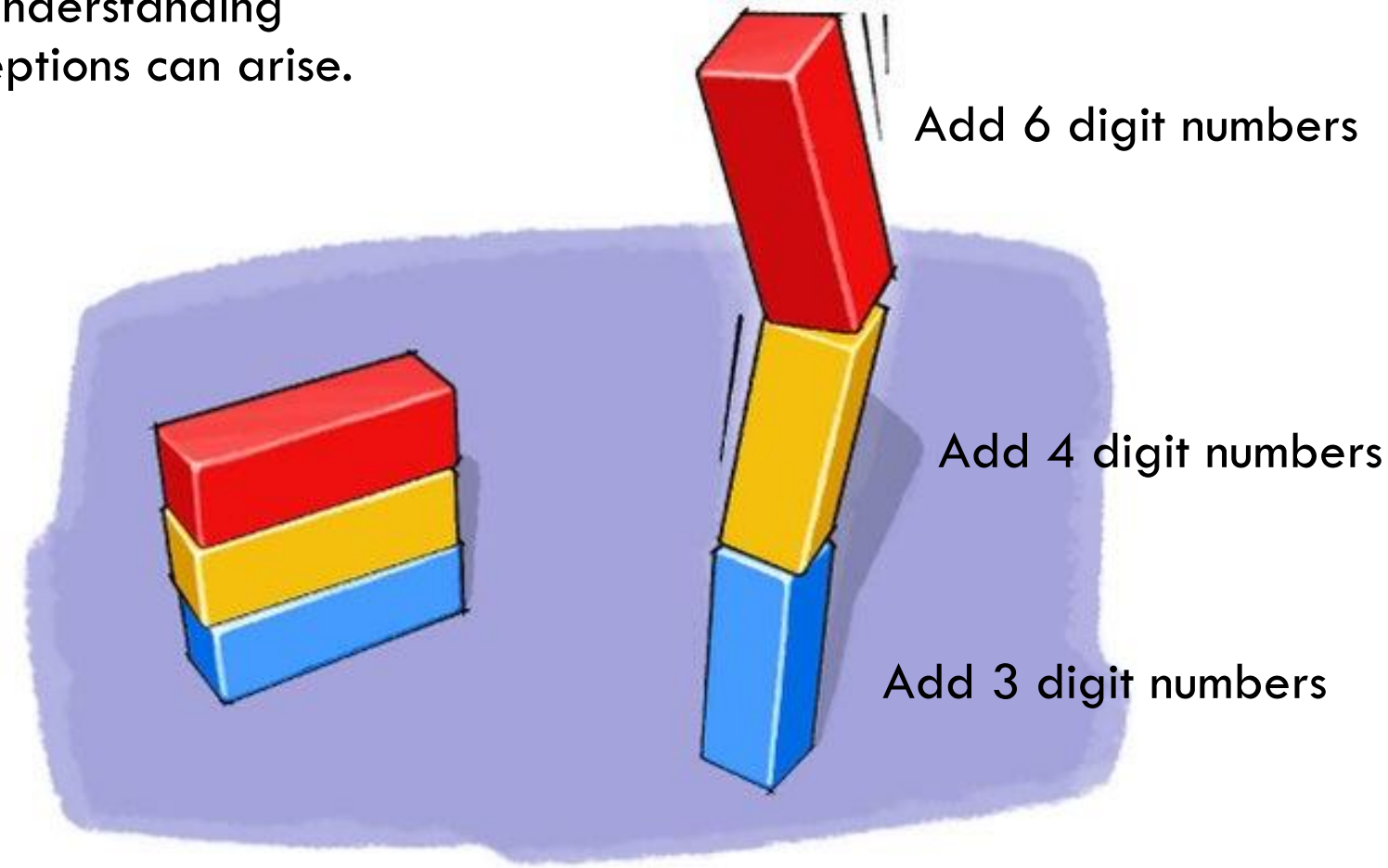
Other People

Parents, peers, TAs, Teachers supporting

Solid foundation – 'fluency' of mathematical language, number facts, times tables

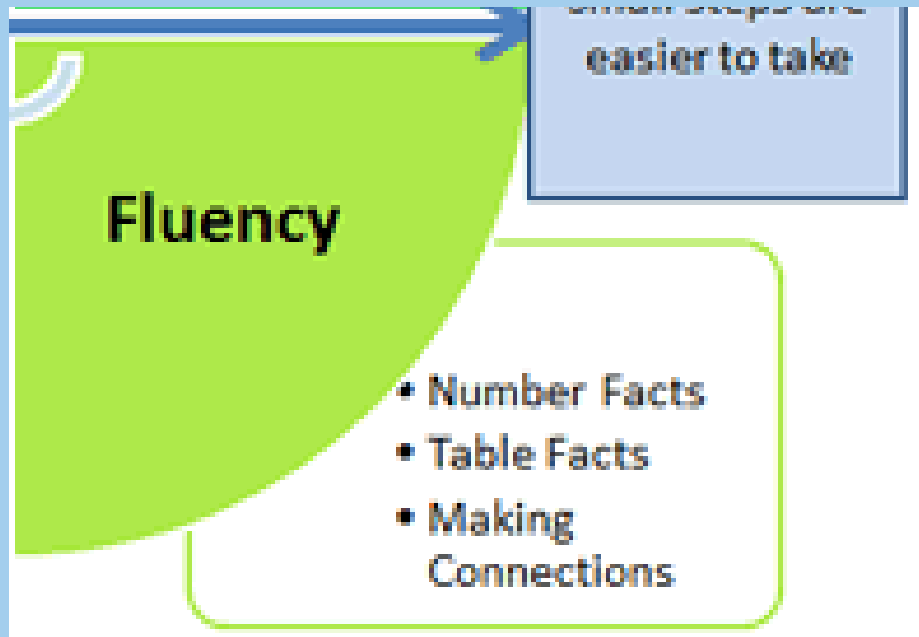
Broader and Deeper understanding, as opposed to 'stretching' further up without a solid foundation

‘Stretching’ children, adding on more linear learning means they have an unstable understanding and more misconceptions can arise.

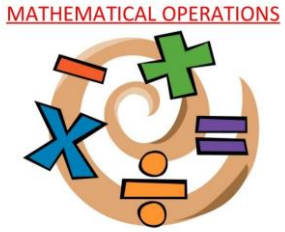


Teaching for Mastery

Don't worry about these bits!



FLUENCY – FOCUS AT HOME

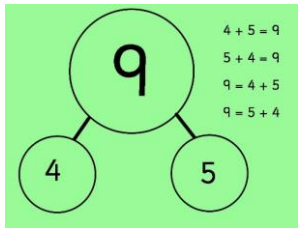


Recall

4 Operations

Times tables

Number Facts & Arithmetic skills



Weekly homework

'Real Life' Maths

- Money (& decimals)

- Telling the time, days of the week, calendars, train/bus timetables

-Measurements- cooking, art projects

-'Magnitude' of number- how many people attend a football match? Would you really use 300kg of sugar or 300g?

APPLICATION – FOCUS AT SCHOOL

Reasoning & Problem Solving

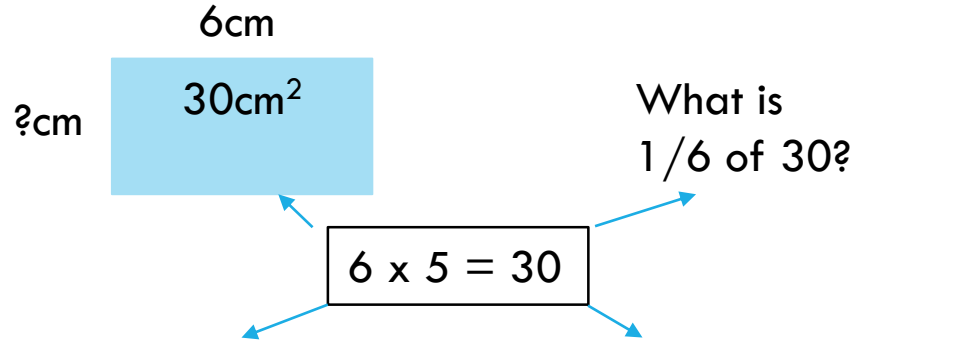
Context & Cross curricular

Broadening and Deepening

Variation

Concrete Pictorial Abstract

Understanding other areas of the curriculum



HOW TO BUILD CONFIDENCE AND SUPPORT CHILDREN

Growth Mindset

'I can't do this.. **yet**'

'I'm stuck… **for now**'

Learning attitudes

Take a **risk**, you might get it right

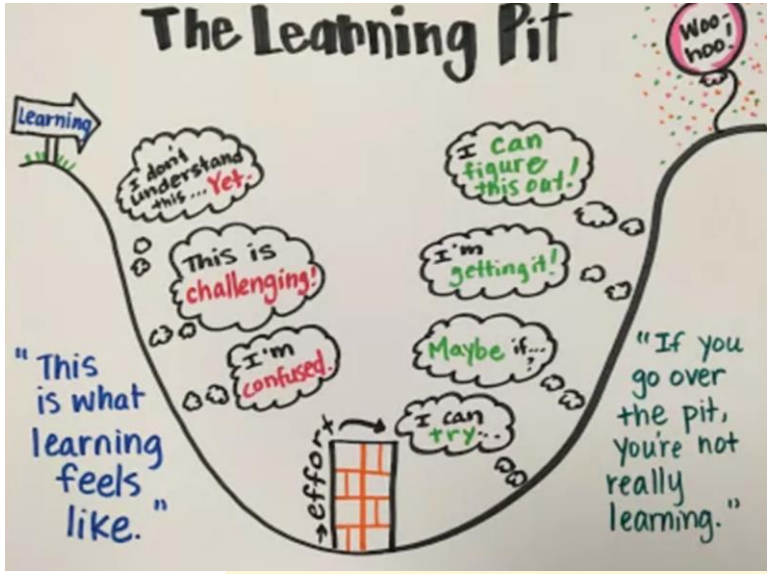
Be **resilient**

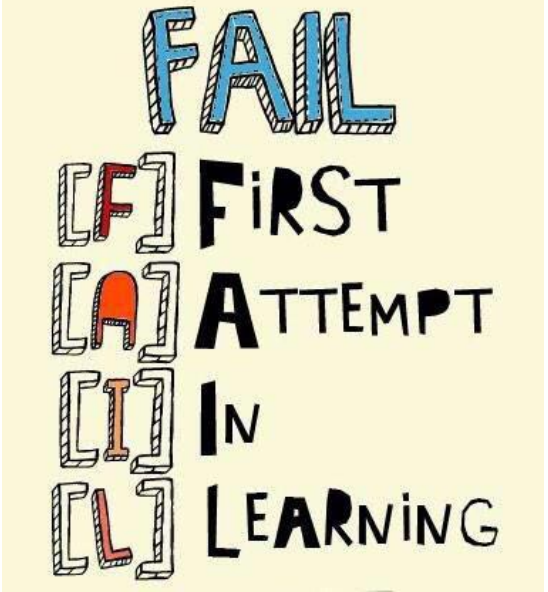
Keep **persisting -** 'Don't practice until you get it right, practice until you can't get it wrong'

Can you think of an **original** way of tackling this?

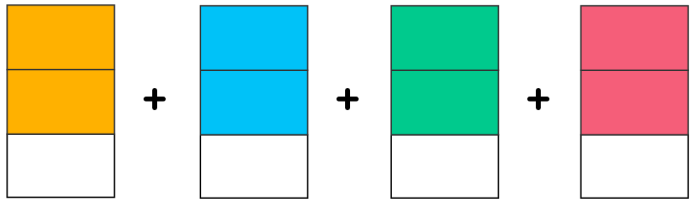
If you make a mistake, can you **reflect** on it?

Let's **collaborate** & work on this together





Provide a visual



$$\frac{2}{3} + \frac{2}{3} + \frac{2}{3} + \frac{2}{3}$$

$$4 \times \frac{2}{3} = \frac{8}{3}$$

Check the understanding of the Language

Use the Stem Sentence and Language Progression documents for this

Don't be afraid to make mistakes too!

AO: To develop our number sense.

Growth mindset and Learning attitudes give children belief to climb the ladder

Greater Depth
Explain errors involving complex column subtraction with clear and accurate mathematical language
Met
Identify and correct errors in column subtraction
Working Towards
Identify errors in column subtraction

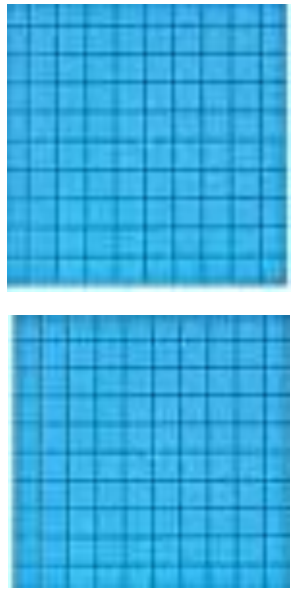
An opportunity for children to **Broaden & Deepen** their understanding, not stretch, for example with simply bigger numbers

EVERYONE expected to achieve Met

Working towards provides a smaller step for children to achieve met

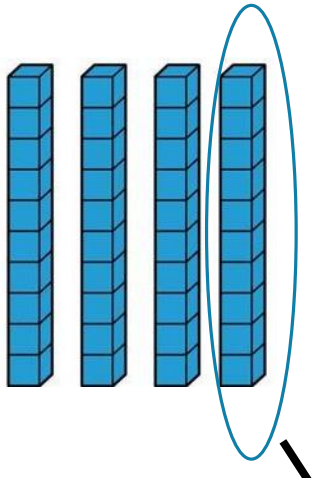
242

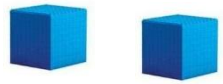
-123



Can I take three away in my ones column?

Where can I get some more ones from?

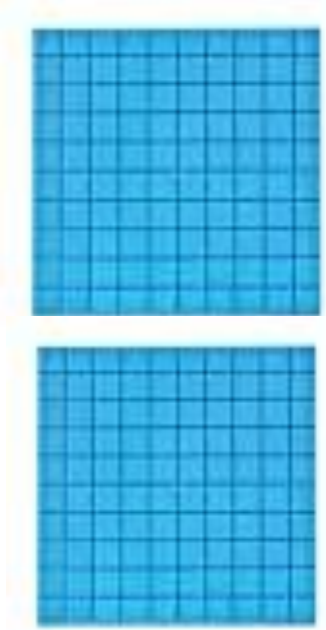


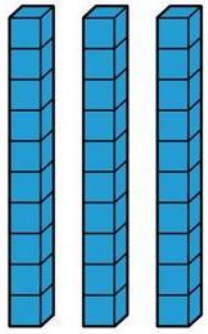


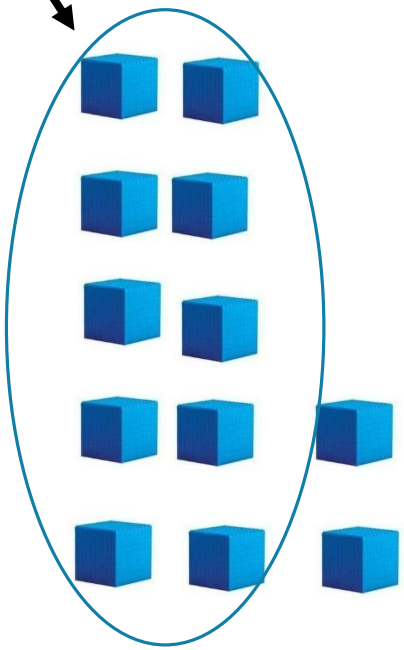
3 1

2 4 2

-123

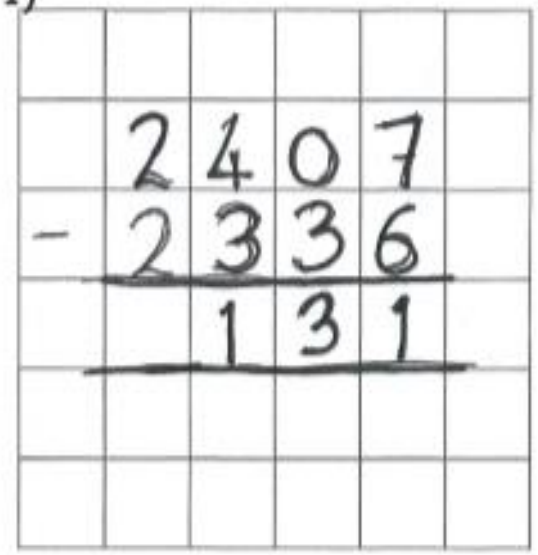






AO: To develop number sense.

1)



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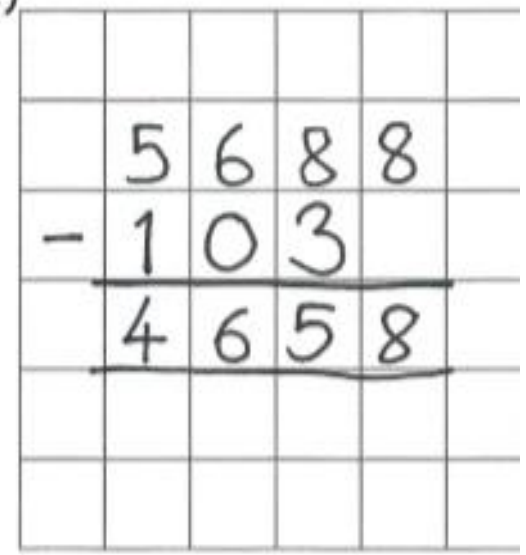

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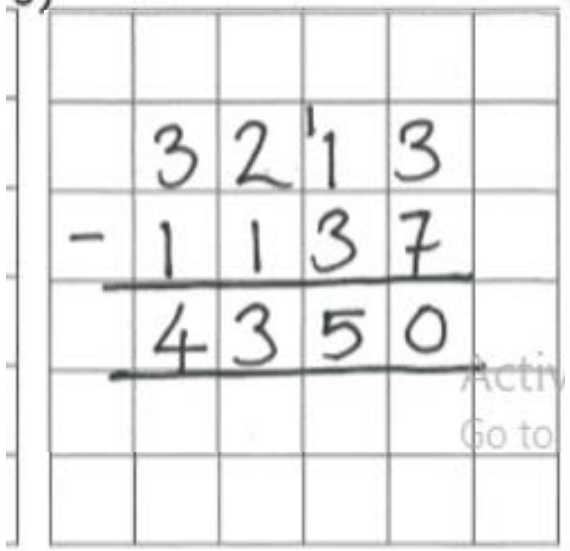

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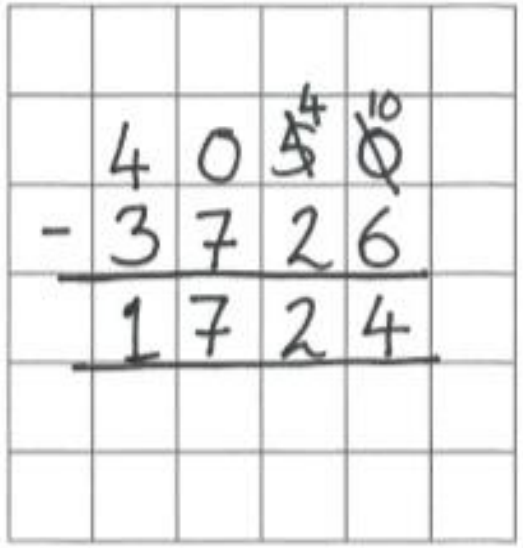
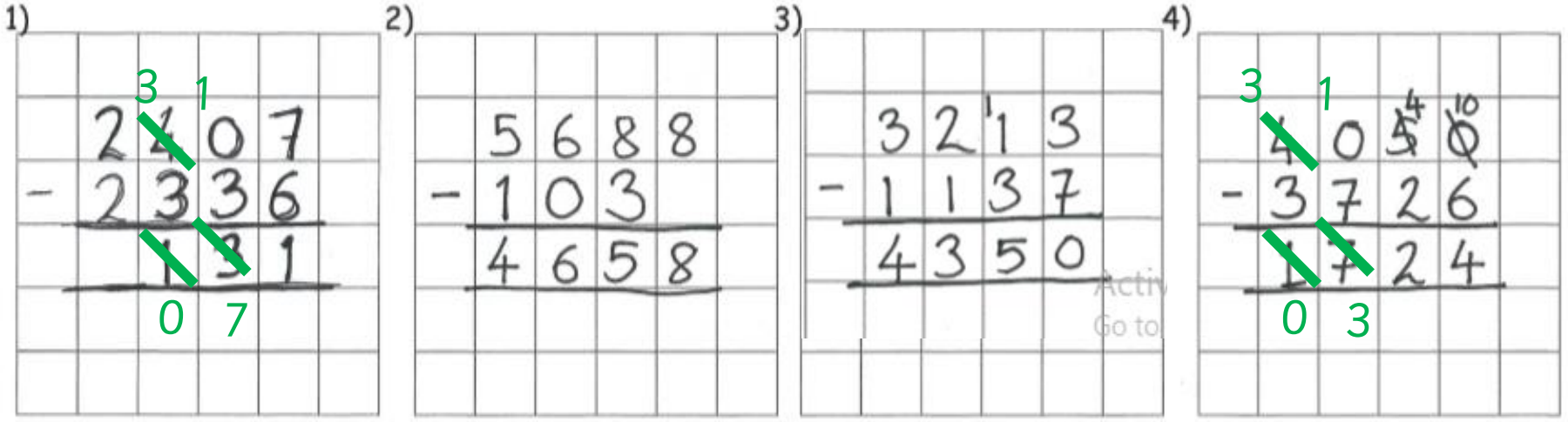


Use this type of language when you are giving your mathematical explanations:

- Ones, tens, hundreds, thousands
- **Column**
- Switched the **digits** around
- Lined the calculation up incorrectly
- Forgotten to go next door to **exchange** and found the **difference** instead
- Subtracted the **digits** incorrectly
- Added the digits instead of subtracting



Answers

1. They have only **found the difference** in the tens column. You cannot take 3 away from 0 so they should have exchanged a hundred into 10 tens. (You could use the adding on method to calculate this mentally)
2. They did not line the columns up correctly. Recalculate: 5688 – 103 = 5585 (You could even do this mentally as there are no exchanges or tens)
3. They added instead of subtracted- they didn't read the sign! Recalculate: 3213 – 1137 = 2,076 (You probably would still need a written method as there were two exchanges)
4. They exchanged correctly in the ones column, but only **found the difference** in the hundreds column. You cannot take 7 away from 0 so they should have exchanged a thousand into 10 hundreds (You probably would still need a written method as there were two exchanges)