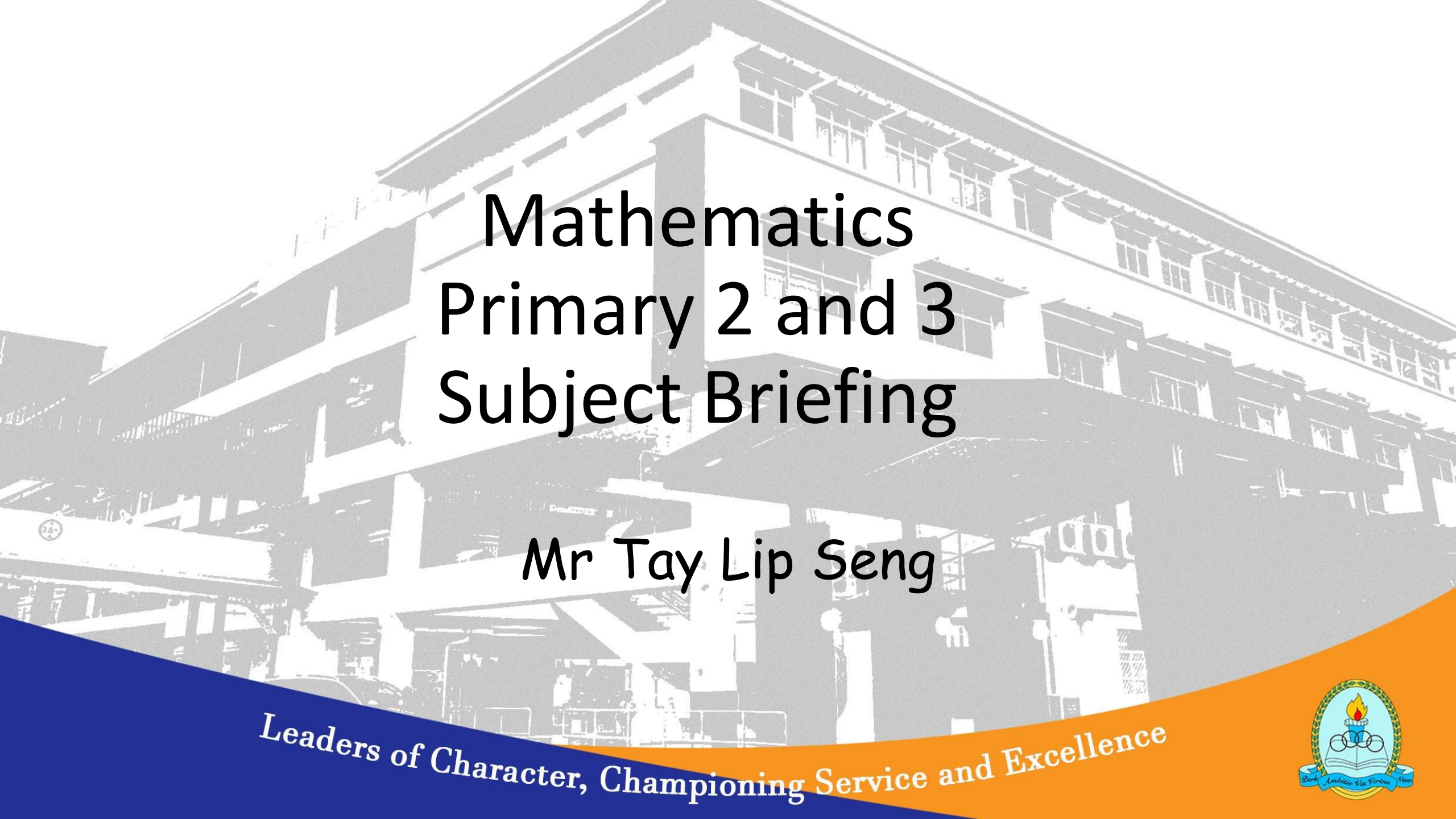


Mathematics Primary 2 and 3 Subject Briefing

Mr Tay Lip Seng

Leaders of Character, Championing Service and Excellence

IMPORTANCE OF LEARNING MATHEMATICS

Mathematics contributes to the development and understanding in many disciplines and provides the foundation for many of today's innovation and tomorrow's solution.

AIMS OF MATHEMATICS EDUCATION

Acquire and apply mathematical concepts and skills

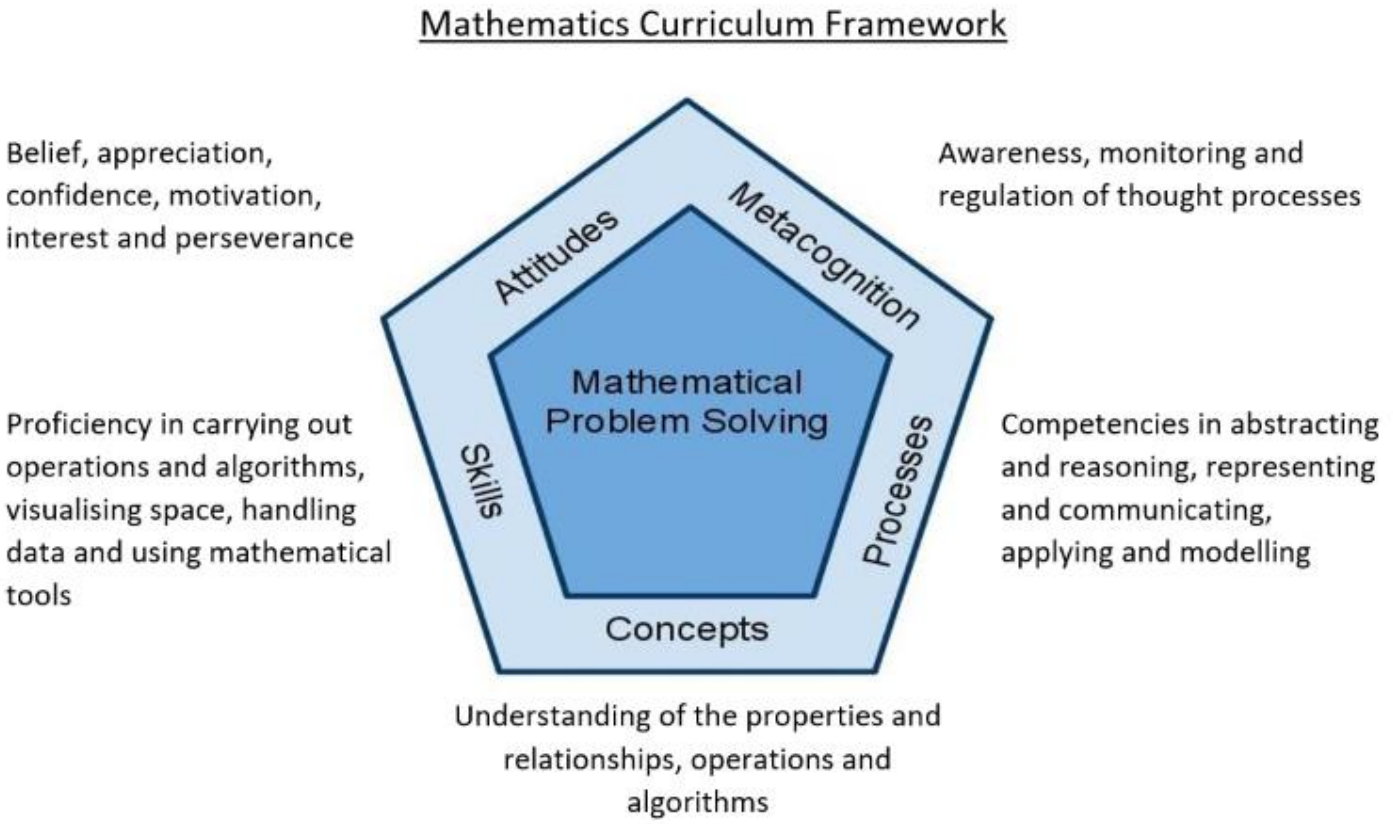
Develop cognitive and metacognitive skills through a mathematical approach to problem solving

Develop positive attitude towards mathematics.

THE PRIMARY MATHEMATICS CURRICULUM

The teaching and learning of mathematics is encapsulated by the pentagonal framework.

It shows the five components underpinning the teaching and learning of mathematics from primary up to pre-university levels.



P2 ASSESSMENT OVERVIEW

Assessment FOR Learning	Assessment AS Learning
• Topical Review • Math Performance Task • Math Investigative Tasks	• Math Journal • Students' Reflection • Daily Observation

Primary 2 Learning Outcomes (LO)

No.	Learning Outcomes
1	Understand numbers up to 1000
2	Solve mathematical problems involving addition and subtraction
3	Multiply and divide numbers within multiplication tables.
4	Identify, name, describe and sort shapes and objects.
5	Tell time to the minute.
6	Compare and order objects by length, mass, or volume
7	Read and interpret picture graphs with scales.
8	Understand fractions.

P3 ASSESSMENT OVERVIEW

Level	Term 1	Term 2	Term 3	Term 4
P3	HA (10%)	HA (15%)	HA (15%)	EYE (60%)

HA – Holistic Assessment
EYE – End-of-Year Examinations

PRIMARY 3 EXAM FORMAT

Paper	Section	Item Type	No. of Questions	No. of marks	Duration
1	A	Multiple Choice Questions	10	15	1 h 30 min
	B	Short Answer Questions	15	25	
	C	Structured Questions	3	10	
Total			**28**	**50**	**1 h 30 min**

ASSESSMENT OBJECTIVES

AO1:
- Recall specific mathematics facts, concepts, rules and formula
- Perform straightforward computations

AO2:
- Interpret information
- Apply mathematical concepts and skills

AO3:
- Reason mathematically, analyse information and make inferences
- Select appropriate strategies to solve problems

STAR APPROACH

PVPS adopts the STAR approach, a 4-stage structured process, to help our students in developing problem-solving ability and confidence in solving real-world problems.

STAR APPROACH

STUDY THE PROBLEM

Actions	Questions
• Read the whole sum • Know what the question wants Identify the knowns and unknowns	• What is this story about? • What is the question asking? • What is the given information? • What is given but not obvious? • What other information do I need?

STAR APPROACH

HINK OF A PLAN

Actions	Questions

• Make sense of each sentence, by
  o saying it in your own words
  o drawing it out
  o organise the information by writing it out
• Think of the strategies to use
  o Is there more than one way the problem can be tackled?
	• What is the key piece of information that will give me a clue to solve this sum?
	• What is each sentence telling me?
	• What does each sentence mean?
	• What strategies can I use?
	  o Draw a model
	  o Make a systematic list
	  o Look for patterns
	  o Guess and check
	  o Work backwards
	  o Use before-after concept
	  o Break into parts
	  o Write a mathematical statement
	  o Make suppositions

STAR APPROACH

APPLY THE STRATEGY

Actions	Questions

• Decide on a strategy to use to solve after considering the strengths and weaknesses of all strategies
  o What are the benefits if you choose Method 1 over Method 2?
  o You need to act cautious of the strategy used. In case it doesn't work, what is your next step?
  o How would you feel if you still can't solve the problem after some tries?
• Carry out the plan
  o Be resilient
	• Which strategy should I use?
	• What strategy am I confident and comfortable in using?

STAR APPROACH

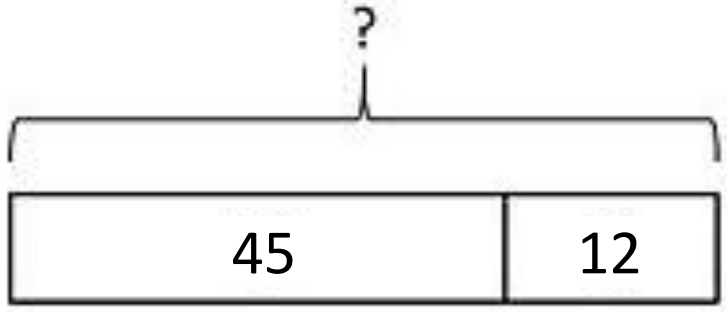
REVIEW YOUR ANSWER

Actions	Questions
• Look at the answer • Look back at the steps	• Is my answer reasonable? (Does the **number** make sense?) (**N**TUC) • Is the information **transferred** correctly? (N**T**UC) • What is the **unit** required for the answer? (NT**U**C) • Is my **calculation** accurate? (NTU**C**)

MODEL MODEL

The model method is specifically included in the Singapore primary mathematics syllabus as a problem solving strategy to be taught to students

Through the construction of the pictorial model to represent the know or unknown quantities and their relationship in a problem, students gain a better understanding of the problem and develop their abilities in mathematical thinking and problem solving



45 + 12 = ?

MISCONCEPTIONS

Fractions

Comparing and Ordering of Fractions

Whole Numbers

Word Problems

COMPARING AND ORDERING FRACTIONS

Arrange the following fractions in order, beginning with the greatest.

$\frac{1}{2}$ $\frac{3}{4}$ $\frac{7}{12}$ $\frac{2}{6}$

COMPARING AND ORDERING FRACTIONS

Arrange the following fractions in order, beginning with the greatest.

$\frac{1}{2}$ $\frac{3}{4}$ $\frac{7}{12}$ $\frac{2}{6}$

$\frac{6}{12}$ $\frac{9}{12}$ $\frac{4}{12}$

WORD PROBLEM

Mdm Lim bought 1545 buttons.

She bought 459 fewer buttons than Mdm Siti.

How many buttons did Mdm Siti buy?

WORD PROBLEM

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How many buttons did Mdm Siti buy?

Study the Problem

- Read the problem sum
- Understand what it wants
- Underline/highlight key information

Think of a plan

- Make sense of the sentences
- Think of strategies to use problem

WORD PROBLEM

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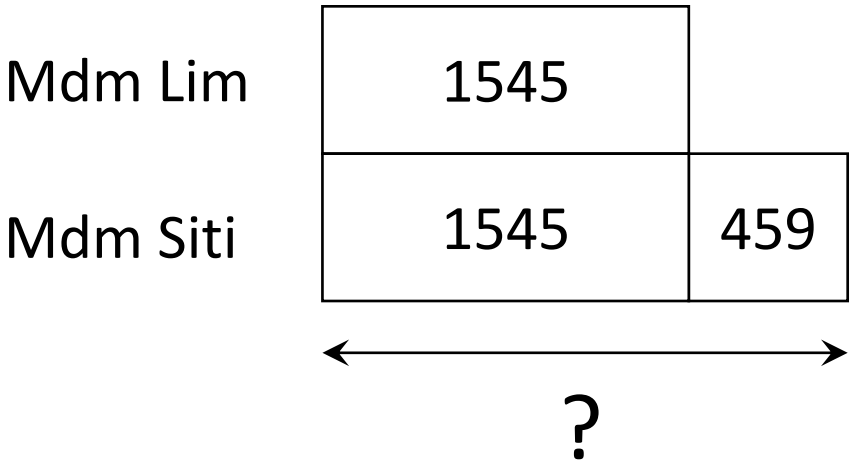
How many buttons did Mdm Siti buy?

Apply the Strategy

- Decide on a strategy and carry out the plan



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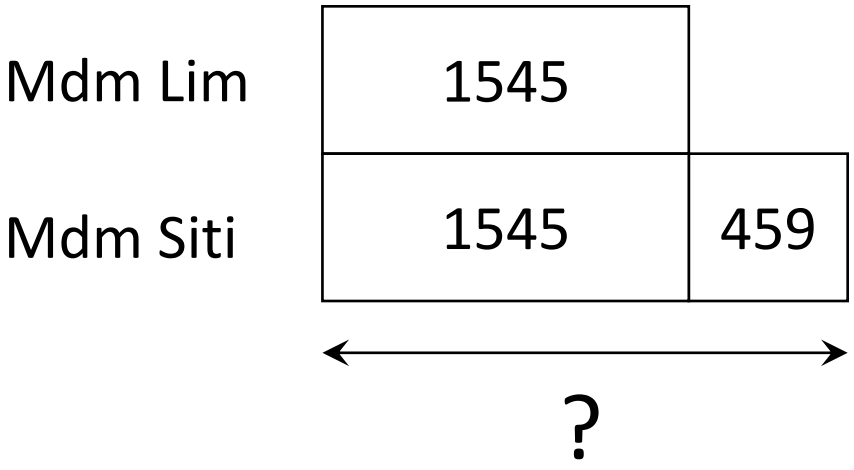


Solution:

1545 + 459 = **2004**

WORD PROBLEM

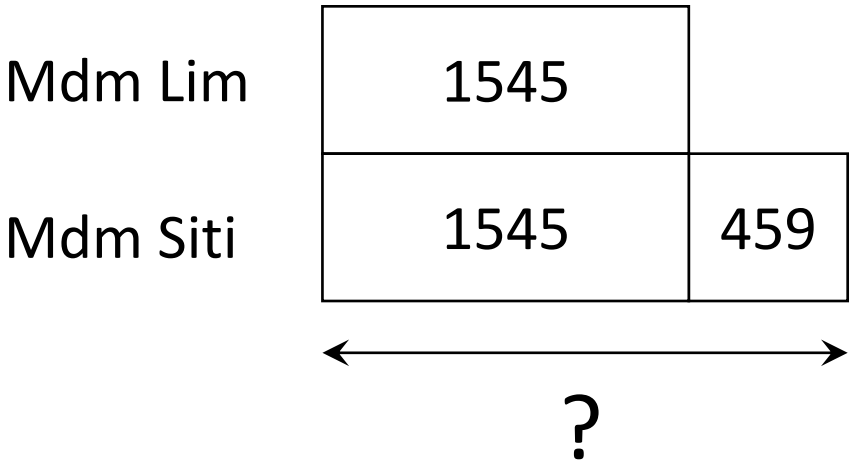
Mdm Lim bought 1545 buttons.

She bought 459 fewer buttons than Mdm Siti.

How many buttons did Mdm Siti buy?

Review your answer

- Does my answer (**N**umber) make sense?
- Have I **T**ransferred all information accurately?
- What is the **U**nit required?
- Is my **C**alculation accurate?



Solution:

1545 + 459 = **2004**

Parents' Support at Home

- **Activate child's interest** – show your child that you believe learning Math is both enjoyable and useful in their daily life.

- **Know what your children are learning in school:** check their homework, get them to explain what they have learnt.

- **Give them target and follow up -** take actions, reward and recognize their efforts, monitor their progress.

Thank You

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