Primary 3 & 4 Math Alive Workshop for Parents

10 April 2026 | 2.30 to 4.00 p.m.

Video Conference Meeting Etiquette

- ✓ Please turn off your video.
- ✓ Use earpiece for better audio clarity.
- ✓ Mute your microphone to minimise background noise for other participants.

The material shared in this workshop is under the property of

JUNYUAN PRIMARY SCHOOL

Mathematics Department.

We seek your understanding to **NOT** take any photos or videos throughout the sharing session. The Presentation Slides will be uploaded on the school website after the workshop. They will be removed after one month.

THANK YOU FOR YOUR UNDERSTANDING AND COOPERATION

Objectives

- ✓ To see how Mathematics is connected to everyday life
- ✓ To introduce strategies used to solve word problems

Mathematics

connects to

develops

Everyday Life

Acquire mathematical concepts and skills for everyday use

Logical Reasoning

Develops thinking, reasoning and communication skills

Math in Everyday Life

Buying groceries

Travelling around

Measuring ingredients for baking

Math Around Us

Thinking Aloud

Look at the cruise packages. Which is a better deal?

SEATRAVEL

10 NIGHTS PACKAGE

- Cruise to Japan with a shopping stop-over in Hong Kong
- Mini-suites with personal attached balconies
- Indoor and outdoor movie theatre
- Wide spread of international cuisines available
- All day entertainment
- Free cooking and dance classes
- Free unlimited Wi-Fi

$3080 per person

CRUISE Tour

7 NIGHTS PACKAGE

- Cruise to Australia and New Zealand
- Cruise cabins with ocean view
- Best cuisines for food lovers
- Endless engaging entertainment
- 24 hour gym facility
- Free unlimited Wi-Fi

$3080 per person

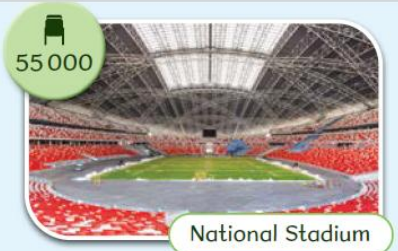
Math Around Us

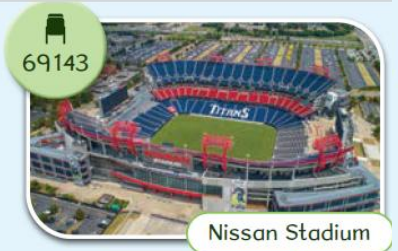
Thinking Aloud

Mark needs 15 mini rolls for a party.
Which bakery should he buy from?
How many packets does Mark need to buy?

Math Around Us

The photographs below show stadiums around the world and their respective seating capacities. How do these stadiums compare in size to the Singapore National Stadium?





Which has the biggest seating capacity among the 6 stadiums?

Multiple Choice

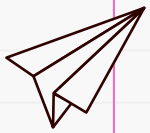
Workshop Content

01 Metacognition in Problem-Solving using the STAR approach

02 Heuristics of Problem-Solving

03 Koobits

04 Q & A



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WORK TO EXCEL

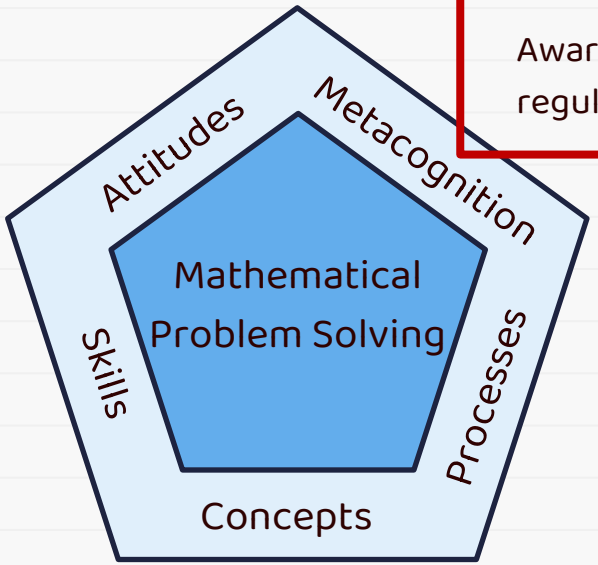
01

Metacognition in Problem-Solving using STAR Approach

Mathematics Curriculum Framework

Belief, appreciation, confidence, motivation, interest and perserverance

Awareness, monitoring and regulation of thought process



Proficiency in carrying out operations and algorithms, visualising space, handling data and using mathematical tools

Competencies in abstracting and reasoning, representing and communicating, applying and modelling

Understanding of properties and relationships, operations and algorithms

Metacognition

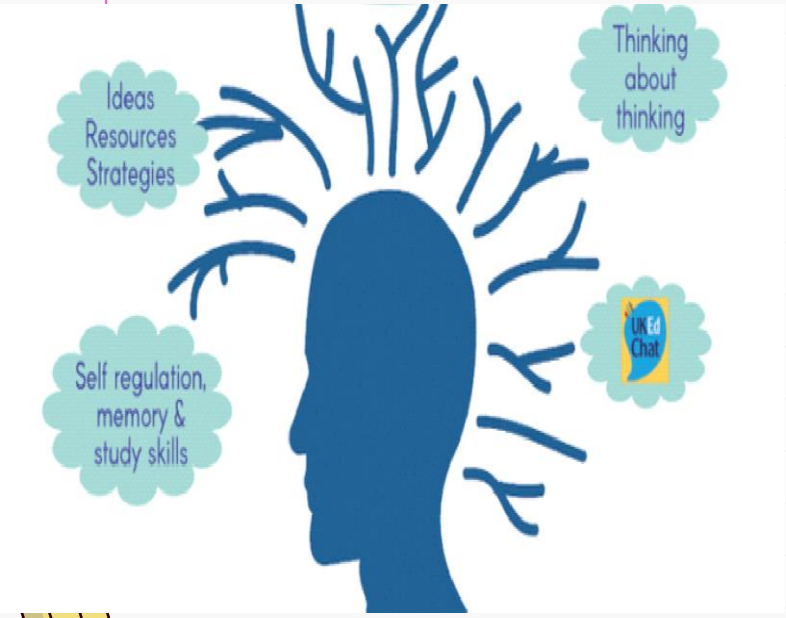
Definition

- Think about one's ***own*** thinking
- Critically ***aware*** of one's thinking and learning.

Process

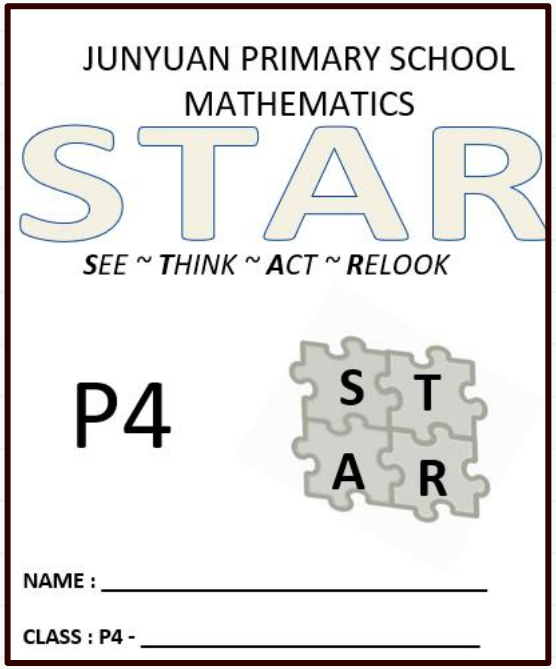
- ***Monitor*** one's own thinking and one's existing state of knowledge
- ***Self-regulate*** one's learning through goal setting, self-monitoring and self instruction

How to develop metacognition awareness



- Exposure to general problem-solving skills
- Thinking aloud using the strategies and methods taught
- Attempting problems that require planning and evaluation
- Seeking alternative ways to solve a problem
- Checking reasonableness of answers

Metacognition @ JYPS



S - See (What is given?)

T -Think (What is my plan?)

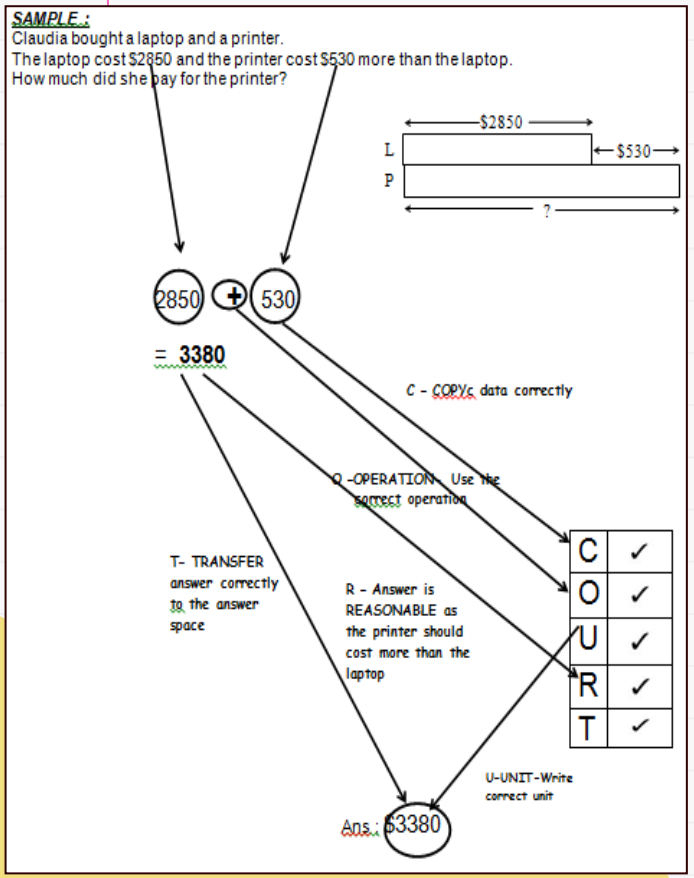
Can I use Model Drawing?
Can I look for a pattern?
Can I work backwards?
Can I use Guess and Check?
Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

CHECKING Strategy Using

C -O -U -R -T



C – Copy data correctly
O – Operation sign
U – Unit of measurement
R – Reasonableness of answer
T – Transfer answer correctly

02

Heuristics of Problem-Solving

Heuristics of Problem-Solving

Model Drawing

1. Part-Whole Model
2. Comparison Model
3. Unitary Method
4. Stacking Model
5. Fraction of a Set
6. Before and After

Q1: Model Drawing (Part-Whole) – Find Total

Aaron has 452 cards. Benedict has 373 cards.
How many cards do they have altogether?

S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

See (What is given?)

Aaron → 452

Benedict → 373

Altogether → ?

Think (What is my plan?)

Can I use Model Drawing?
Can I look for a pattern?
Can I work backwards?
Can I use Guess and Check?
Other heuristic(s) I can use:

_____

Q1: Model Drawing (Part-Whole) – Find Total

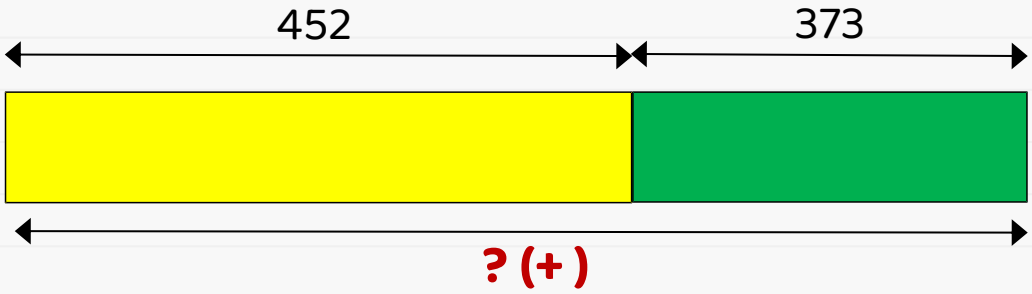
S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

Act (What do I need to do?)



Method

452 + 373 = 825

Relook (Reflect and Check)

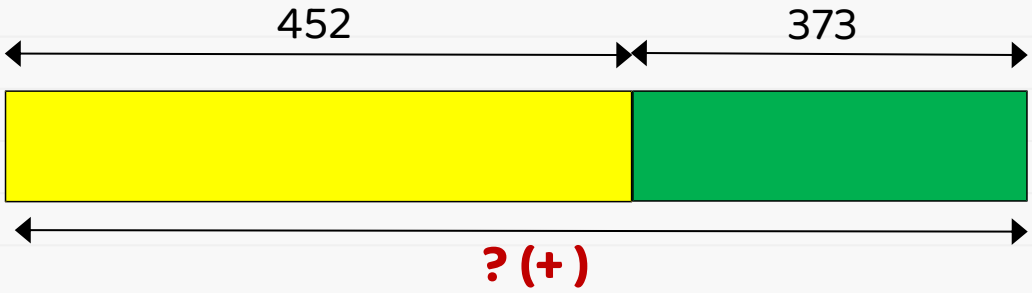
825 - 373 = 452 ✓ok

They have **825 cards** altogether.

Q1: Model Drawing (Part-Whole) – Find Total

C – Copy data correctly
O – Operation sign
U – Unit of measurement
R – Reasonableness of answer
T – Transfer answer correctly

Act (What do I need to do?)



C	✓
O	✓
U	✓
R	✓
T	✓

Method
452 + 373 = 825

They have **825 cards** altogether.

Q2: Model Drawing (Part-Whole) – Find Part

Rachel and Sally have 263 hair clips **altogether**.
Sally has 91 hair clips.
How many hair clips does **Rachel** have?

S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

See (What is given?)

Altogether → 263
Sally → 91
Rachel → ?

Think (What is my plan?)

Can I use Model Drawing?
Can I look for a pattern?
Can I work backwards?
Can I use Guess and Check?
Other heuristic(s) I can use:
_____

Q2: Model Drawing (Part-Whole) – Find Part

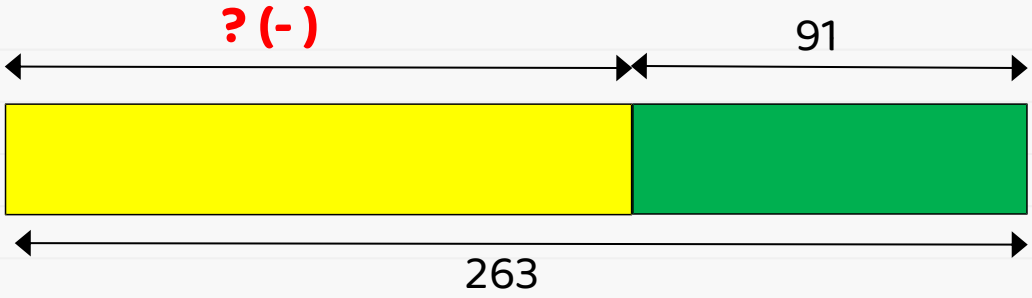
S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

Act (What do I need to do?)



Method

263 - 91 = 172

Relook (Reflect and Check)

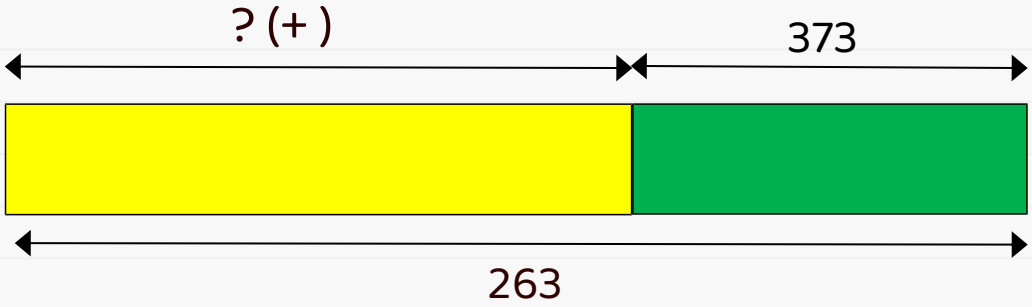
91 + 172 = 263 ✓ok

Rachel has **172 hairclips** altogether.

Q2: Model Drawing (Part-Whole) – Find Part

C – Copy data correctly
O – Operation sign
U – Unit of measurement
R – Reasonableness of answer
T – Transfer answer correctly

Act (What do I need to do?)



C	✓
O	✓
U	✓
R	✓
T	✓

Method
263 – 91 = 172

They have **172 hairclips** altogether.

Q3: Model Drawing (Comparison with 2 variables)- Finding Difference

S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

Hotel Pan Pacific Singapore charges $330 per night. Hotel Amara Singapore charges $198 per night. How much will Mr Ong **save** if he decides to stay in Amara Singapore instead of Pan Pacific Singapore for three nights?

See (What is given?)

Pan Pacific → $330

Amara → $198

Save → ?

Think (What is my plan?)

Can I use Model Drawing?

Can I look for a pattern?

Can I work backwards?

Can I use Guess and Check?

Other heuristic(s) I can use:

_____

Q3: Model Drawing
(Comparison with 2 variables)- Finding Difference

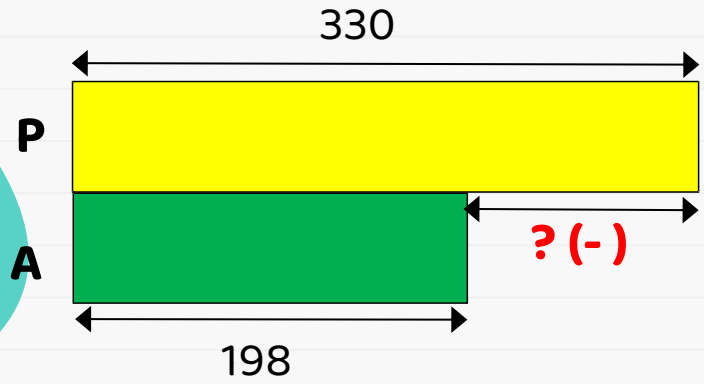
S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

Act (What do I need to do?)



See (What is given?)
Pan Pacific → $330
Amara → $198
Save → ?

Method
$330 - $198 = $132
$132 x 3 = $396

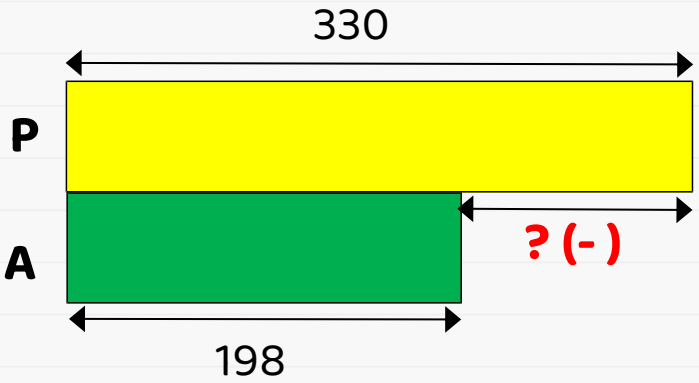
Relook (Reflect and Check)
$396 ÷ 3 = $132
$132 + $198 = $330 ✓ok

Mr Ong will save **$396**.

Q3: Model Drawing (Comparison with 2 variables)- Finding Difference

C – Copy data correctly
O – Operation sign
U – Unit of measurement
R – Reasonableness of answer
T – Transfer answer correctly

Act (What do I need to do?)



C	✓
O	✓
U	✓
R	✓
T	✓

Method
$330 - $198 = $132
$132 x 3 = $396

Mr Ong will save **$396**.

Q4: Model Drawing (Comparison with 2 variables)- Unequal Distribution

S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

At a factory, Worker A and Worker B sorted 1886 plastic bottles altogether. **Worker B** sorted 988 more bottles than **Worker A**. How many bottles did **Worker A** sort?

See (What is given?)

A + B → 1886

B → 988 more than A

A → ?

Think (What is my plan?)

Can I use Model Drawing?
Can I look for a pattern?
Can I work backwards?
Can I use Guess and Check?
Other heuristic(s) I can use:

_____

Q4: Model Drawing (Comparison with 2 variables)- Unequal Distribution

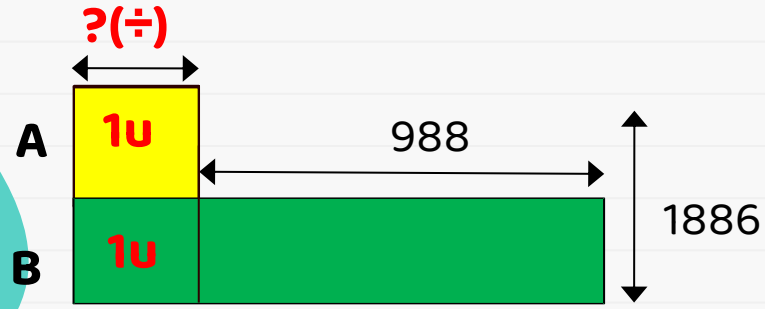
S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

Act (What do I need to do?)



See (What is given?)
A + B → 1886
B → 988 more than A
A → ?

1886 – 988 = 898
2 u = 898
1 u = 898 ÷ 2
= **449**

Relook (Reflect and Check)
1 u = **449**
2 u = 449 x 2 = 898
898 + 988 = 1886 ✓ok

Worker A sorted 449 bottles in the morning.

Q4: Model Drawing
(Comparison with 2 variables)- Unequal Distribution

C – Copy data correctly
O – Operation sign
U – Unit of measurement
R – Reasonableness of answer
T – Transfer answer correctly

Act

1886 - 988 = 898

2 u = 898

1 u = 898 ÷ 2

= **449**

C	✓
O	✓
U	✓
R	✓
T	✓

Worker A sorted 449 bottles in the morning.

Q5: Unitary Method (Find Total)

S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

Alex ran 234 m. Roy jogged thrice the distance ran by **Alex**. What was the **total distance** run by both Alex and Roy?

See (What is given?)

Alex → 234 m

Roy → 3x the distance ran by Alex

Qn: Total distance ran?

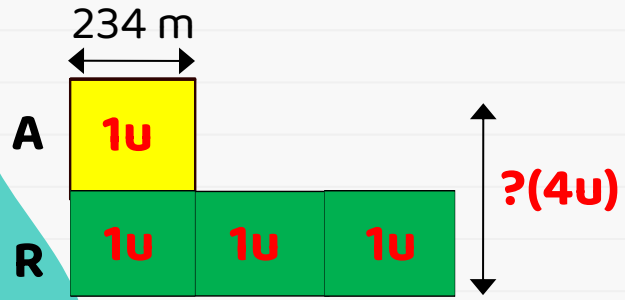
Think (What is my plan?)

Can I use Model Drawing?
Can I look for a pattern?
Can I work backwards?
Can I use Guess and Check?
Other heuristic(s) I can use:

_____

Q5: Unitary Method (Find Total)

Act (What do I need to do?)



See (What is given?)
Alex → 234 m
Roy → 3x the distance ran by Alex
Qn: Total distance ran?

Method 1
1 u = 234 m
3 u = 3 x 234 m
= 702 m
234 m + 702 m = 936 m

Method 2
1 u = 234 m
4 u = 4 x 234 m
= 936 m

They ran 936 m altogether.

S - See (What is given?)

T -Think (What is my plan?)
Can I use Model Drawing?
Can I look for a pattern?
Can I work backwards?
Can I use Guess and Check?
Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

Q5: Unitary Method (Find Total)

Act (What do I need to do?)

Method 1

1 u = 234 m

3 u = 3 x 234 m

= 702 m

234 m + 702 m = 936 m

Method 2

1 u = 234 m

4 u = 4 x 234 m

= 936 m

Relook (Reflect and Check)

4 u = 936

Alex → 1 u = 936 ÷ 4

= 234 ✓ok

They ran 936 m altogether.

S - See (What is given?)

T -Think (What is my plan?)

Can I use Model Drawing?
Can I look for a pattern?
Can I work backwards?
Can I use Guess and Check?
Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

Q5: Unitary Method
(Find Total)

C – Copy data correctly
O – Operation sign
U – Unit of measurement
R – Reasonableness of answer
T – Transfer answer correctly

Method 2

1 u = 234 m

4 u = 4 x 234 m

= 936 m

They ran 936 m altogether.

C	✓
O	✓
U	✓
R	✓
T	✓

Q6: Unitary Method

A bookshop sold 212 **pencils and pens** in a day. The number of pens sold was **thrice** the number of pencils sold. How many **pencils were sold** ?

S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

See (What is given?)

Pencils and Pens → 212

Pens → 3x as many as Pencils

Qn: Pencils were sold (?)

Think (What is my plan?)

Can I use Model Drawing?
Can I look for a pattern?
Can I work backwards?
Can I use Guess and Check?
Other heuristic(s) I can use:

_____

Q6: Unitary Method

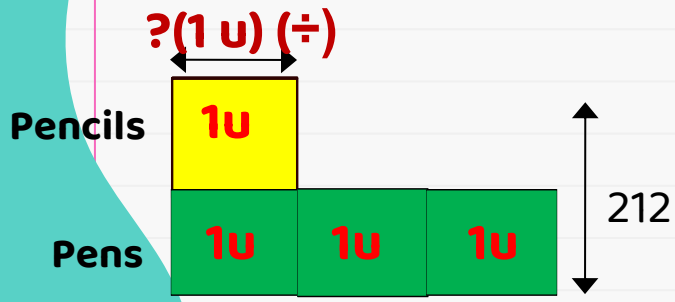
S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

Act (What do I need to do?)



See (What is given?)
Pencils and Pens → 212
Pens → 3x as many as Pencils
Qn: Pencils were sold (?)

Method
4 u = 212
1 u = 212 ÷ 4
= 53

Relook (Reflect and Check)
1 u = **53**
4 u = 4 x 53
= 212 ✓ok

53 pencils were sold

Q6: Unitary Method
(Find Total)

C – Copy data correctly
O – Operation sign
U – Unit of measurement
R – Reasonableness of answer
T – Transfer answer correctly

Method

4 u = 212

1 u = 212 ÷ 4

= 53

53 pencils were sold.

C	✓
O	✓
U	✓
R	✓
T	✓

Q7: Model Drawing
(Stacking Model)

A T-shirt and 3 shorts cost $75. The T-shirt cost twice as much as the shorts. Find the cost of the T-shirt.

S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

See (What is given?)

1T + 3S → $75

1T → 1S x 2

Qn: 1T (?)

Think (What is my plan?)

Can I use Part-Whole Model Drawing?

Can I use Comparison Model Drawing?

Can I use Stacking method?

Can I act it out?

Can I use Guess and Check?

Can I use Working Backwards?

Other heuristic(s) I can use: _____

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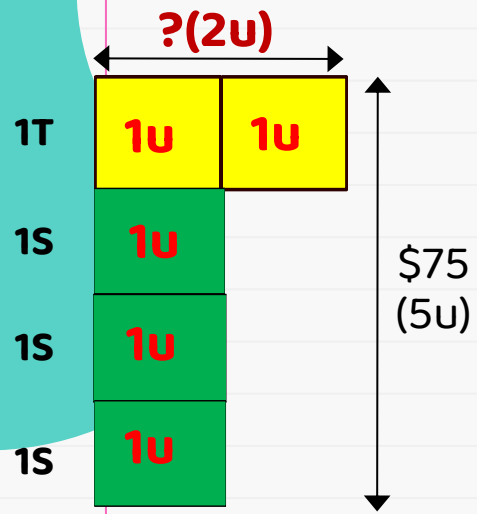
Q7: Model Drawing (Stacking Model)

Act (What do I need to do?)



S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

See (What is given?)

1T + 3S → $75

1T → 1S x 2

Qn: 1T (?)

Act (What do I need to do?)

MATCH

5 u = $75

1 u = $75 ÷ 5 = $15 (SHORTS)

2 u = $15 x 2 = $30 (T-SHIRT)

Relook (Reflect and Check)

T-shirt → $30

Shorts → $30 ÷ 2 = $15

3 shorts → 3 x $15
= $45

Total cost → $45 + $30
= $75 ✓true

The pair of T-shirt cost $30.

Q7: Model Drawing
(Stacking Model)

C – Copy data correctly
O – Operation sign
U – Unit of measurement
R – Reasonableness of answer
T – Transfer answer correctly

5 u = $75

1 u = $75 ÷ 5 = $15 (SHORTS)

2 u = $15 x 2 = $30 (T-SHIRT)

C	✓
O	✓
U	✓
R	✓
T	✓

The pair of T-shirt cost $30.

Q8: Model Drawing
(Stacking Model)

Mdm Ruziah paid $980 for a bicycle and 4 helmets.
The bicycle cost $250 more than each helmet.
What was the cost of each helmet?

S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

See (What is given?)

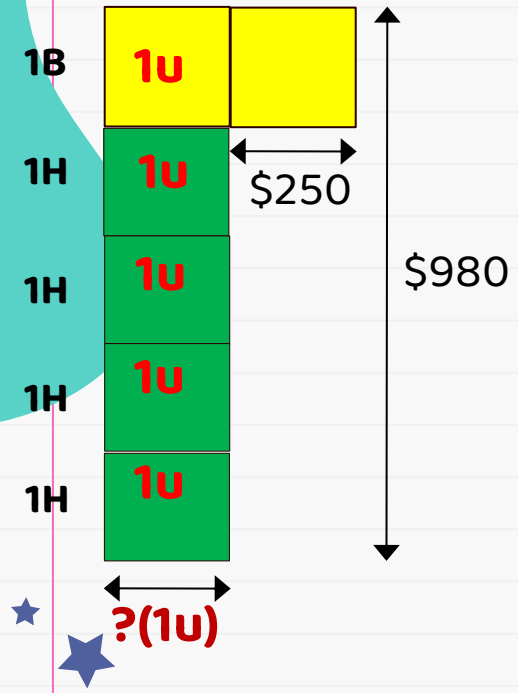
1B + 4H → $980
1B → 1H + $250
Qn: 1H (?)

Think (What is my plan?)

Can I use Part-Whole Model Drawing?
Can I use Comparison Model Drawing?
Can I use Stacking method?
Can I act it out?
Can I use Guess and Check?
Can I use Working Backwards?
Other heuristic(s) I can use: _____

Q8: Model Drawing (Stacking Model)

Act (What do I need to do?)



See (What is given?)

1B + 4H → $980

1B → 1H + $250

Qn: 1H (?)

Act (What do I need to do?)

$980 - $250 = $730

MATCH

5 u = $730

1 u = $730 ÷ 5 = $146

The helmet costs $146.

STAR

S - See (What is given?)

T -Think (What is my plan?)

Can I use Model Drawing?
Can I look for a pattern?
Can I work backwards?
Can I use Guess and Check?
Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

Relook (Reflect and Check)

Bicycle → $146 + $250

= $396

4 helmets → 4 x $146

= $584

Total cost → $584 + $396

= $980 ✓ok

Q8: Model Drawing
(Stacking Model)

C – Copy data correctly
O – Operation sign
U – Unit of measurement
R – Reasonableness of answer
T – Transfer answer correctly

$980 - $250 = $730

MATCH

5 u = $730

1 u = $730 ÷ 5 = $146

C	✓
O	✓
U	✓
R	✓
T	✓

The helmet cost $146.

Q9: Model Drawing
(Fraction of a Set)

Ben had **755** stamps. $\frac{2}{5}$ of the stamps were **local stamps** and the **rest were from other countries**. How many of Ben's **stamps were from other countries**?

S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

See (What is given?)

Total → 755 stamps
Local → $\frac{2}{5}$ of the stamps
Rest → stamps from other countries
Qn: Number of stamps from other countries (?)

Think (What is my plan?)

Can I use Model Drawing?
Can I look for a pattern?
Can I work backwards?
Can I use Guess and Check?

JUNYUAN
WORK TO EXCEL

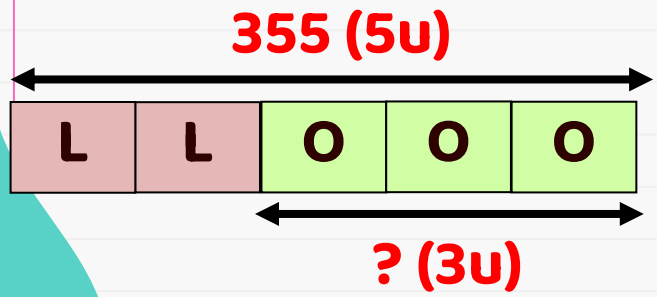
Q9: Model Drawing
(Fraction of a Set)

S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

Act (What do I need to do?)



See (What is given?)

Total → 355 stamps
Local → $\frac{2}{5}$ of the stamps
Rest → Stamps from other countries
Qn: Number of stamps from other countries (?)

Act (What do I need to do?)

MATCH

5 u = 355
1 u = 355 ÷ 5 = 71
3 u = 71 x 3 = **213**

Relook (Reflect and Check)

213 ÷ 3 = 71
71 x 5 = 355 ✓ok

C	✓
O	✓
U	✓
R	✓
T	✓

There are 213 stamps from other countries.

Q10: Model Drawing
(Fraction of a Set)

S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

$\frac{3}{7}$ of the rabbits in a pet shop were **female** and **the rest were male**. If there were 68 **male** rabbits in the pet shop, how many rabbits were there **altogether**?

See (What is given?)

Female → $\frac{3}{7}$ of the rabbits
Male → 68
Qn: Total number of rabbits (?)

Think (What is my plan?)

Can I use Model Drawing?
Can I look for a pattern?
Can I work backwards?
Can I use Guess and Check?

Q10: Model Drawing
(Fraction of a Set)

S - See (What is given?)

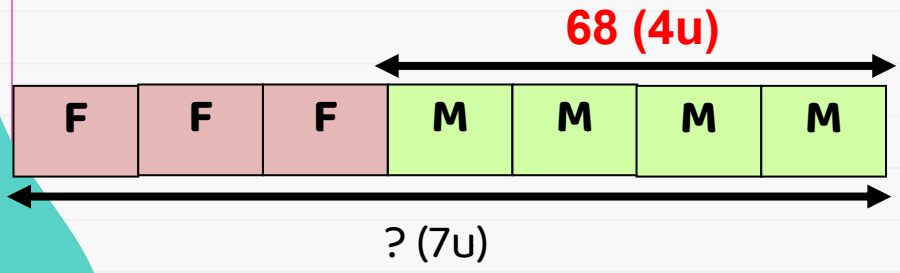
T -Think (What is my plan?)

Can I use Model Drawing?
Can I look for a pattern?
Can I work backwards?
Can I use Guess and Check?
) I can use: _____

lo I need to do?)

flect and Check)

Act (What do I need to do?)



See (What is given?)

Female → $\frac{3}{7}$ of the rabbits

Male → 68

Qn: Total number of rabbits (?)

Act (What do I need to do?)

MATCH

4 u = 68

1 u = 68 ÷ 4 = 17

7 u = 17 x 7 = **119**

Relook (Reflect and Check)

119 ÷ 7 = 17

17 x 4 = 68 ✓ok

C	✓
O	✓
U	✓
R	✓
T	✓

There were 119 rabbits altogether.

Q11: Model Drawing
(Fraction of a Set)

There are boys and girls in a classroom. $\frac{5}{6}$ of the people were boys. There were 40 **more boys** than girls. How many **children** were there in the room **altogether**?

S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

See (What is given?)

Boys → $\frac{5}{6}$ of the children
Boys – Girls = 40
Qn: Total number of children (?)

Think (What is my plan?)

Can I use Model Drawing?
Can I look for a pattern?
Can I work backwards?
Can I use Guess and Check?

Q11: Model Drawing
(Fraction of a Set)

S - See (What is given?)

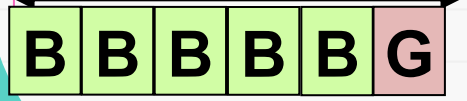
T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

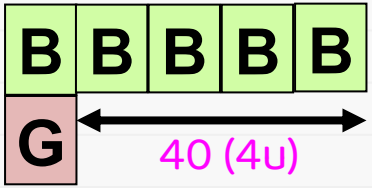
A - Act(What do I need to do?)

R - Relook(Reflect and Check)

Act (What do I need to do?)

? (6u)





MATCH

4 u = 40

1 u = 40 ÷ 4 = 10

6 u = 10 x 6 = **60**

Relook (Reflect and Check)

B → 5 x 10 = 50

G → 10

B - G = 50 - 10 = 40 ✓ok

C	✓
O	✓
U	✓
R	✓
T	✓

There were **60** children altogether.

Q12: Model Drawing
(Before and After) – Make Equal

Lena has 180 stickers and **Mark** has 52 stickers. How many stickers must Lena give to Mark so that both have the same number of stickers?

S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

See (What is given?)

L → 180

M → 52

L give ? to M so that L = M

Think (What is my plan?)

Can I use Model Drawing?

Can I look for a pattern?

Can I work backwards?

Can I use Guess and Check?

Other heuristic(s) I can use:

_____

Q12: Model Drawing
(Before and After) – Make Equal

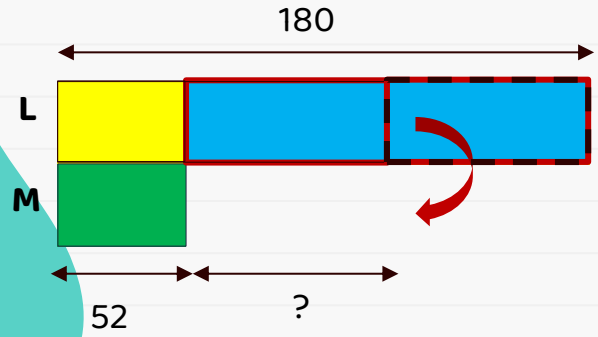
S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

Act (What do I need to do?)



See (What is given?)

L → 180

M → 52

L give ? to M so that L = M

180 – 52 = 128

128 ÷ 2 = **64**

Relook (Reflect and Check)

180 – **64** = 116

52 + **64** = 116 ✓ok

Lena must give Mark 64 stickers.

Q12: Model Drawing (Before and After) – Make Equal

C – Copy data correctly
O – Operation sign
U – Unit of measurement
R – Reasonableness of answer
T – Transfer answer correctly

180 – 52 = 128
128 ÷ 2 = **64**

C	✓
O	✓
U	✓
R	✓
T	✓

Lena must give Mark 64 stickers.

Q13: Model Drawing (Before and After)

Kate had as much money as Tom.
After Kate donated $64, Tom had 5 times as much money as Kate.
How much money did Kate have at first?

S - See (What is given?)

T -Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

See (What is given?)

Before → K= T
After K donated, T → 5 x K

Before → K (?)

Think (What is my plan?)
- Can I use Model Drawing?
- Can I look for a pattern?
- Can I work backwards?
- Can I use Guess and Check?
- Other heuristic(s) I can use:

_____

JUNYUAN WORK TO EXCEL

Q13: Model Drawing (Before and After)

Act (What do I need to do?)

S - See (What is given?)

T -Think (What is my plan?)
Can I use Model Drawing?
Can I look for a pattern?
Can I work backwards?
Can I use Guess and Check?
Other heuristic(s) I can use: _____

A - Act(What do I need to do?)

R - Relook(Reflect and Check)

Before

K

T

? (5u)

After

64 (4u)

K

T

? (5u)

See (What is given?)

Before → K= T

After K gave away 64, T → 5 x K

Before → K (?)

MATCH

4 u = 64

Q13: Model Drawing
(Before and After)

C – Copy data correctly
O – Operation sign
U – Unit of measurement
R – Reasonableness of answer
T – Transfer answer correctly

MATCH

4 u = 64

1 u = 64 ÷ 4 = 16

5 u = 5 x 16 = 80

Relook (Reflect and Check)

1 u = 80 ÷ 5 = 16

4 u = 16 x 4 = 64 ✓ok

C	✓
O	✓
U	✓
R	✓
T	✓

Kate had $80 at first.

03

Koobits

Joewen Teo
Junyuan Primary School

0 XP Lvl 1

Brain Games

Events

Story

Daily Challenge

10 personalized questions per day

Start

Mission

Multiplayer

Assignment

Switch to Teacher

JUNYUAN WORK TO EXCEL

Why Koobits?

Desired Junyuan Outcomes

1. Self-Directed Learners

How is KooBits beneficial?

KooBits Manifesto

Why we wake up every morning and do what we do:

- Help children become a master of technology, not enslaved by it
- Help children master Math and Science skills and real-world problem-solving skills
- Help children to be a confident and independent thinker
- Help children to love learning and develop a habit of self-directed learning

JUNYUAN WORK TO EXCEL


KooClass
Challenge
Training
Start

THANK YOU

for your attention and support

1) Q & A

2) Feedback

https://go.gov.sg/mathalive2026