Primary 3 & 4 Math Alive Workshop for Parents

11 April 2025 | 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

Everyday Life

Acquire mathematical concepts and skills for everyday use

develops

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

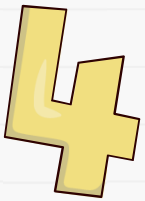
Look at the cruise packages. Which is a better deal?

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?

Workshop Content

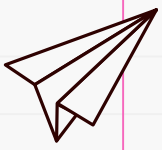


01 Metacognition in Problem-Solving using the STAR approach

02 Heuristics of Problem-Solving

03 Koobits

04 Q & A



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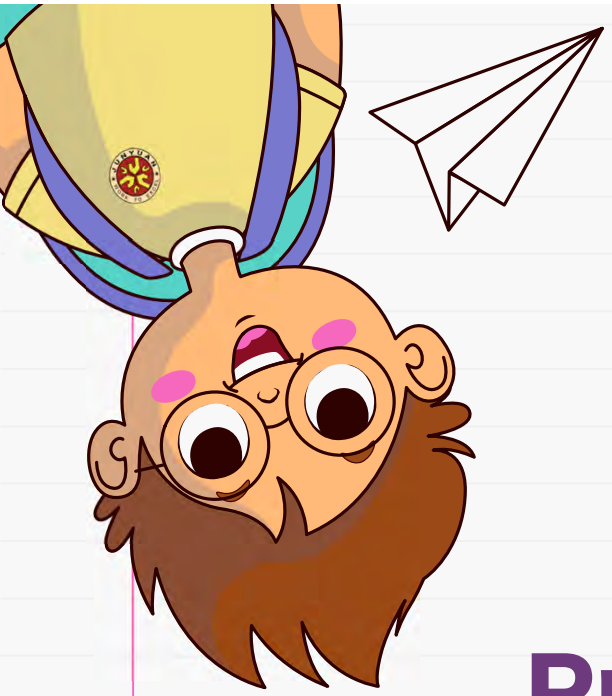
WORK TO EXCEL



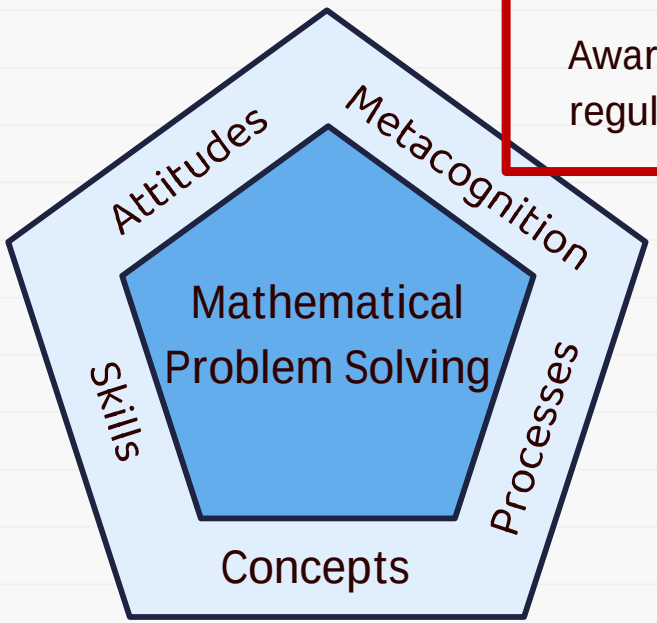
01

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

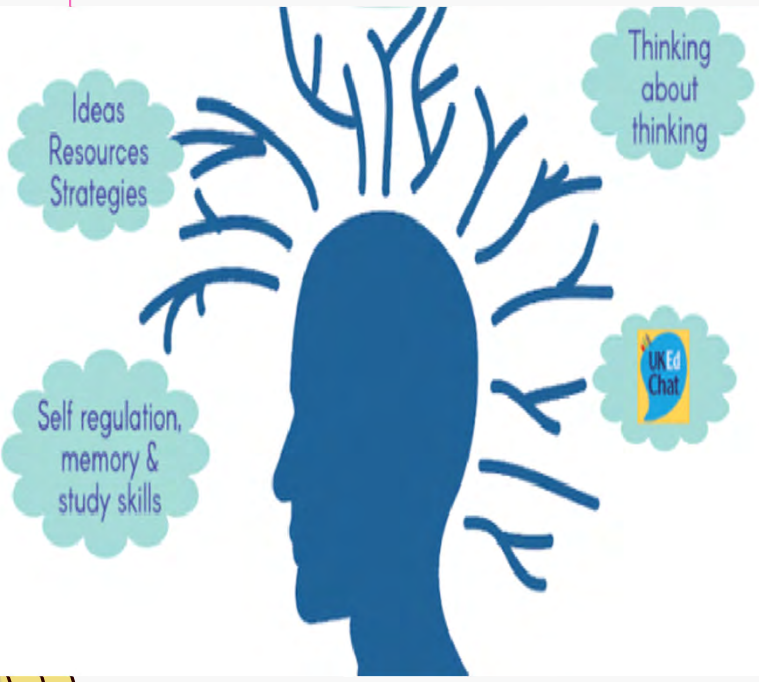
Definition

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

Process

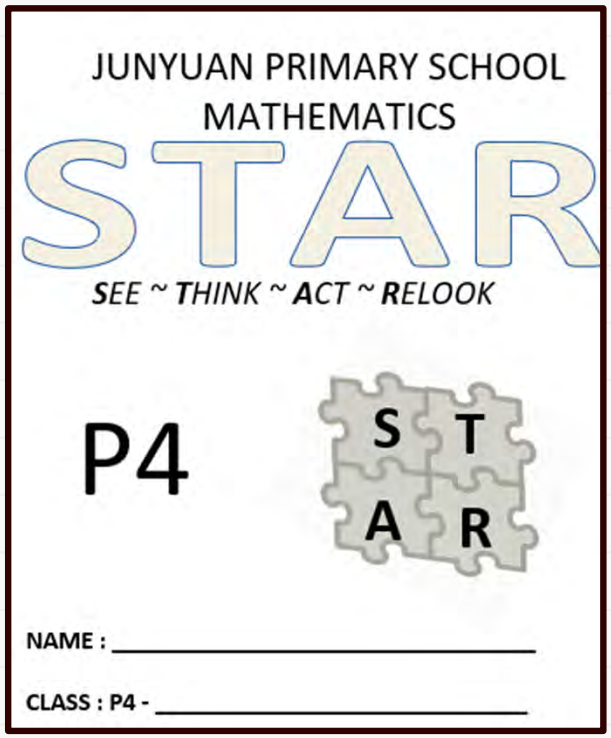
- ***Monitor*** one's own thinking and one's existing state of knowledge
- ***Self-regulate*** one's learning through goal setting, self-monitoring and self instruction

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?)

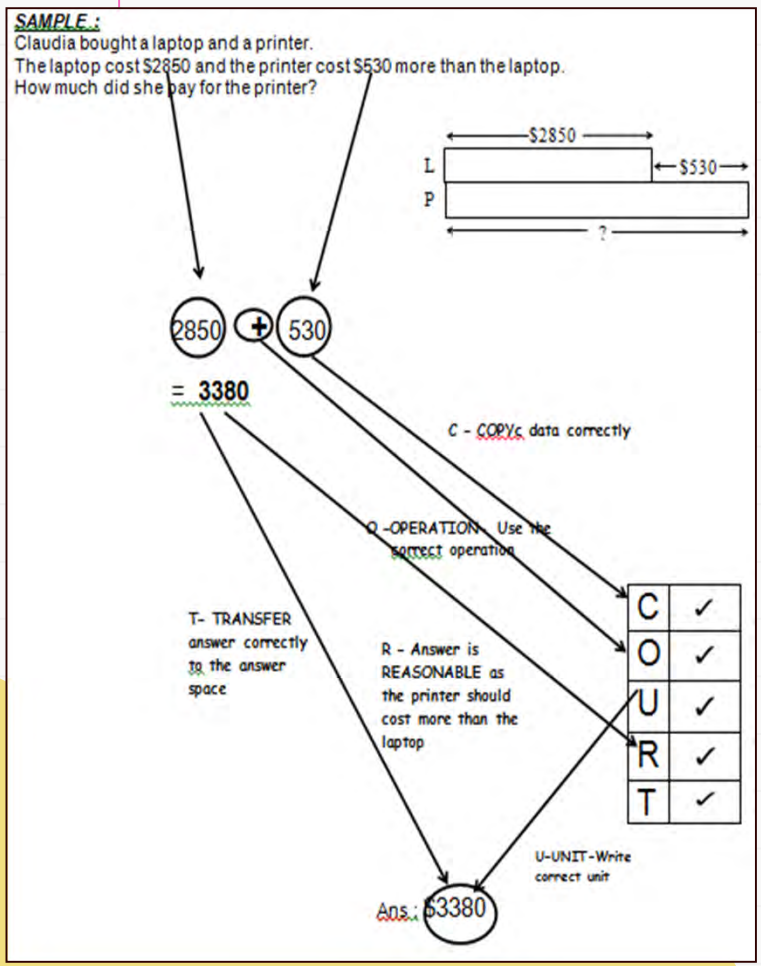
Can I use Model Drawing?
Can I look for a pattern?
Can I work backwards?
Can I use Guess and Check?
Other heuristic(s) I can use: _____

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

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)

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

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

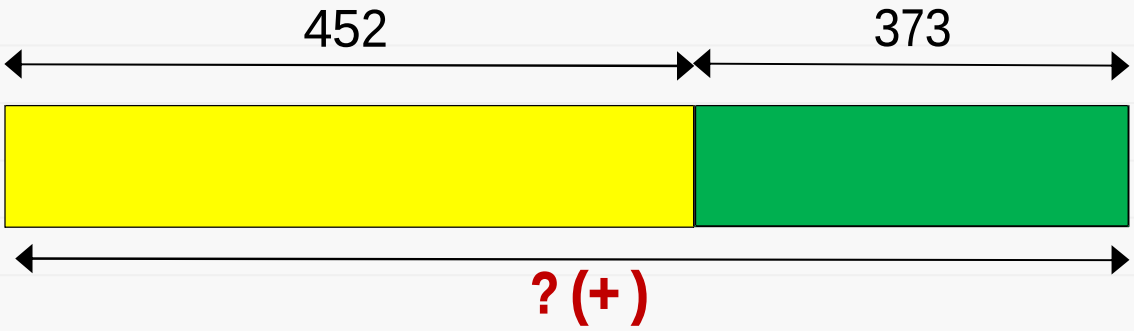
S - See (What is given?)

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

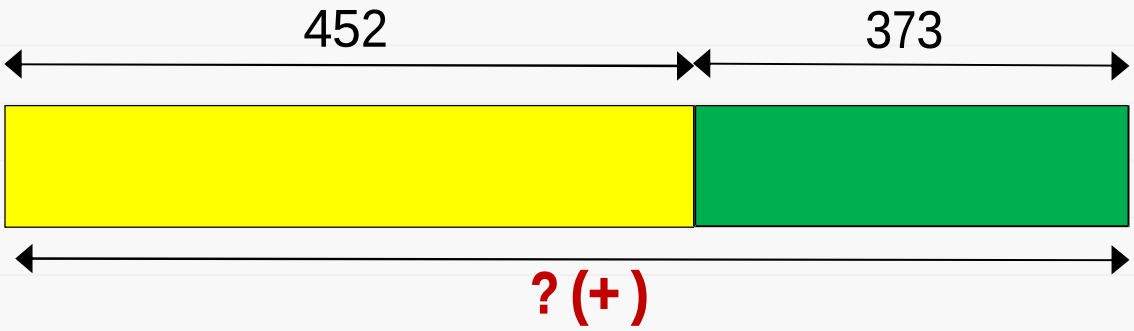
Relook (Reflect and Check)
825 - 373 = 452 ✓ok

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

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)

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

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

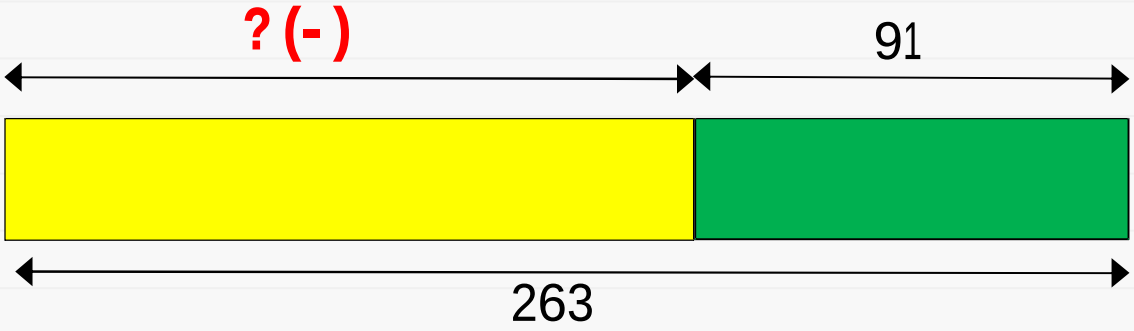
S - See (What is given?)

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

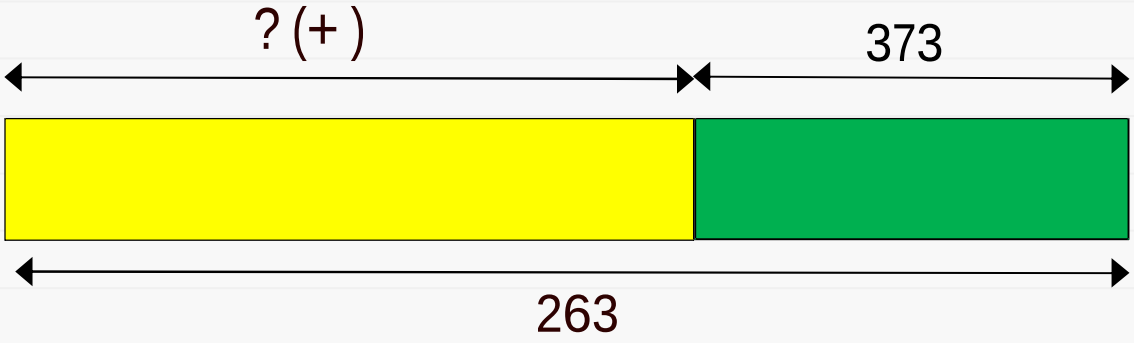
Relook (Reflect and Check)
91 + 172 = 263 ✓ok

Rachel has **172 haircl**ips 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 haircl**ips 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

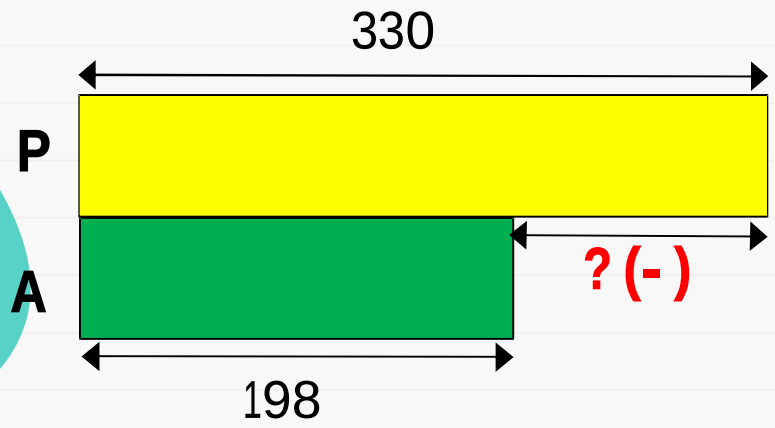
S - See (What is given?)

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

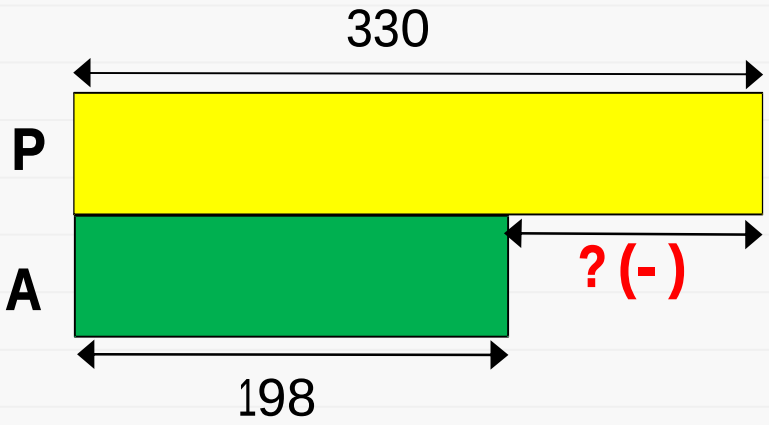
Relook (Reflect and Check)
$396 ÷ 3 = $132
$132 + $198 = $330 ✓ok

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

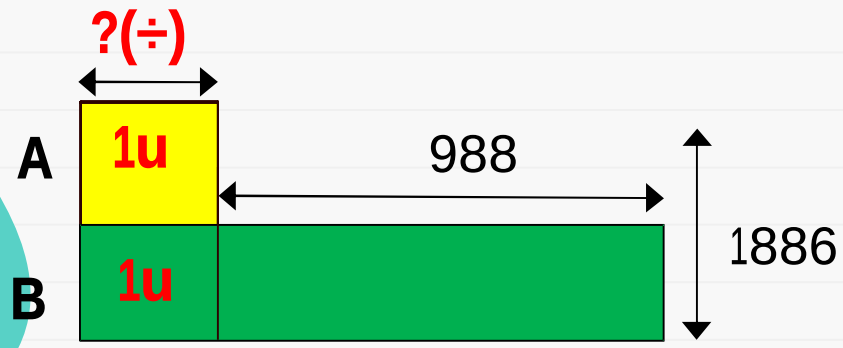
S - See (What is given?)

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?

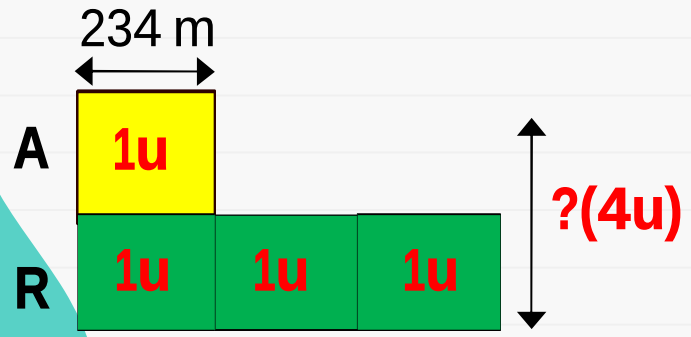
Think (What is my plan?)

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?)



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?)
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.

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:

_____

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Q6: Unitary Method

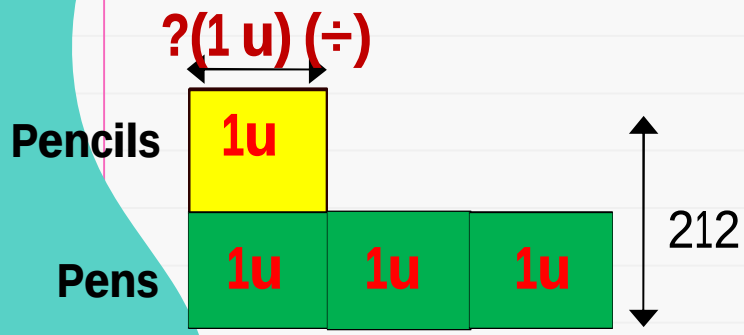
S - See (What is given?)

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 pair of shoes and 3 bags cost $60. The pair of shoes cost **twice** as much as the bag. Find the cost of the pair of shoes.

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?)

1S + 3B → $60

1S → 1B x 2

Qn: 1S (?)

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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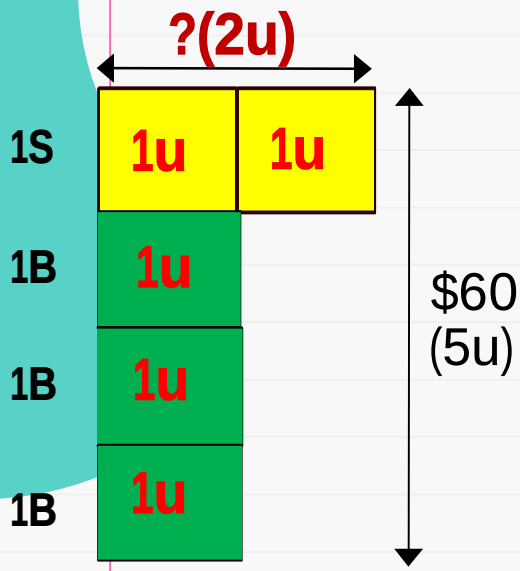
Q7: Model Drawing (Stacking Model)

Act (What do I need to do?)



See (What is given?)

1S + 3B → $60

1S → 1B x 2

Qn: 1S (?)

Act (What do I need to do?)

MATCH

5 u = $60

1 u = $60 ÷ 5 = $12 (BAG)

2 u = $12 x 2 = $24 (SHOES)

Relook (Reflect and Check)

Shoes → $24

Bag → $24 ÷ 2 = $12

3 bags → 3 x $12

= $36

Total cost → $36 + $24

= $60 ✓true

The pair of shoes cost $24.

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)

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 = $60
1 u = $60 ÷ 5 = $12 (BAG)
2 u = $12 x 2 = $24 (SHOES)

C	✓
O	✓
U	✓
R	✓
T	✓

The pair of shoes cost $24.

Q8: Model Drawing
(Stacking Model)

Mr Koh paid $1145 for a dining table and 4 chairs.
The table cost $270 more than each chair.
What was the cost of each chair?

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 + 4C → $1145
1T →1C + $270
Qn: 1C (?)

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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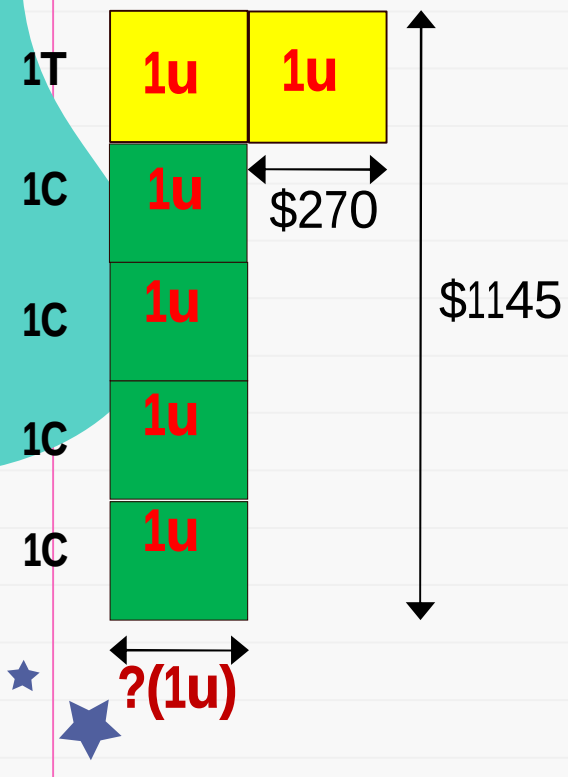
Q8: Model Drawing (Stacking Model)

Act (What do I need to do?)



See (What is given?)

1T + 4C → $1145

1T → 1C + $270

Qn: 1C (?)

Act (What do I need to do?)

$1145 - $270 = $875

MATCH

5 u = $875

1 u = $875 ÷ 5 = $175

The chair costs $175.

STAR

- **See (What is given?)**
- **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: _____
- **Act(What do I need to do?)**
- **Relook(Reflect and Check)**

Relook (Reflect and Check)

Table → $175 + $270

= $445

4 chairs → 4 x $175

= $700

Total cost → $445 + $700

= $1145 ✓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

$1145 - $270 = $875

MATCH

5 u = $875

1 u = $875 ÷ 5 = $175

C	✓
O	✓
U	✓
R	✓
T	✓

The chair cost $24.

Q9: Model Drawing
(Fraction of a Set)

Annie baked 252 cookies. $\frac{4}{7}$ of the cookies were **chocolate cookies** and the rest were butter cookies. How many butter cookies did she bake?

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 → 252 cookies
Chocolate → $\frac{4}{7}$ of the cookies
Rest → Butter cookies
Qn: Number of butter cookies (?)

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?)

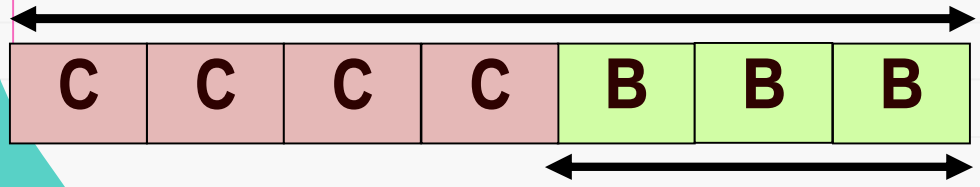
T -Think (What is my plan?)
Can I use Model Drawing?
Can I look for a pattern?
Can I work backwards?
Can I use Guess and Check?
Other heuristic(s) I can use: _____

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

eflect and Check)

Act (What do I need to do?)

252 (7u)



? (3u)

See (What is given?)

Total → 252 cookies
Chocolate → $\frac{4}{7}$ of the cookies
Rest → Butter cookies
Qn: Number of butter cookies (?)

Act (What do I need to do?)

MATCH
7 u = 252
1 u = 252 ÷ 7 = 36
3 u = 36 x 3 = **108**

Relook (Reflect and Check)

108 ÷ 3 = 36
36 x 7 = 252 ✓ok

C	✓
O	✓
U	✓
R	✓
T	✓

There are 108 butter cookies.

Q10: Model Drawing
(Fraction of a Set)

Mrs Liz had a birthday party. $\frac{3}{5}$ of the children were **girls**. There were 36 **boys** are the party. How many **children** were there **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?)

Girls → $\frac{3}{5}$ of the children
Boys → 36
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?

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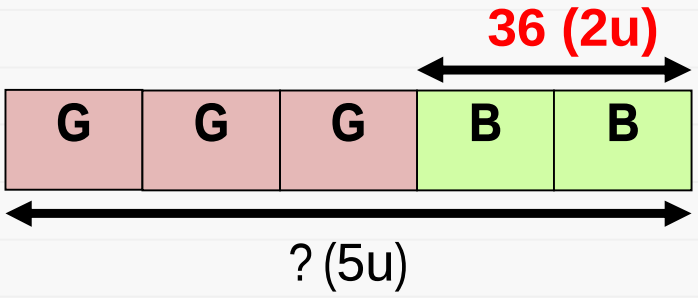
Q10: Model Drawing
(Fraction of a Set)

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?)

Girls → $\frac{3}{5}$ of the children

Boys → 36

Qn: Total number of children (?)

Act (What do I need to do?)

MATCH

1 u = 36 ÷ 2 = 18

5 u = 18 x 5 = **90**

C	✓
O	✓
U	✓
R	✓
T	✓

Relook (Reflect and Check)

90 ÷ 5 = 18

18 x 2 = 36 ✓ok

There were 90 children altogether.

Q11: Model Drawing
(Fraction of a Set)

There are men and women in a room. $\frac{7}{8}$ of the people were men. There were 72 more men than women. How many people 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?)

Men → $\frac{7}{8}$ of the people
Men – Women = 72
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?

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Q11: Model Drawing
(Fraction of a Set)

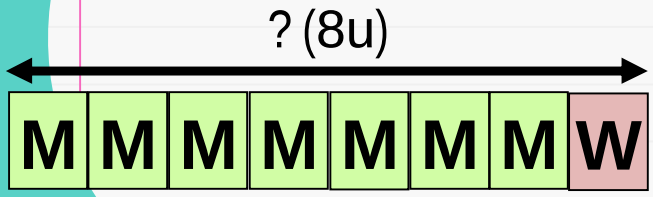
S - See (What is given?)

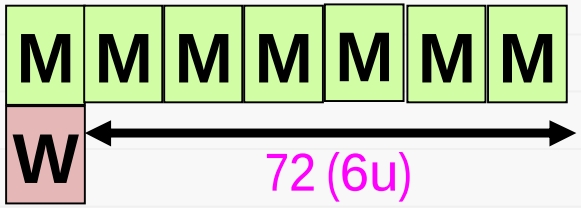
T -Think (What is my plan?)
Can I use Model Drawing?
Can I look for a pattern?
Can I work backwards?
Can I use Guess and Check?
Other heuristic(s) I can use: _____

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

R - Relook(Reflect and Check)

Act (What do I need to do?)





MATCH

6 u = 72
1 u = 72 ÷ 6 = 12
8 u = 12 x 8 = **96**

Relook (Reflect and Check)

M → 7 x 12 = 84
W → 12
M - W = 84 - 12 = 72 ✓ok

C	✓
O	✓
U	✓
R	✓
T	✓

There were 96 people altogether.

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

Samy has 250 erasers and Darryl has 64 erasers. How many erasers must Samy give to Darryl so that both have the same number of erasers?

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?)

S → 250

D → 64

S give ? to D so that S = D

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

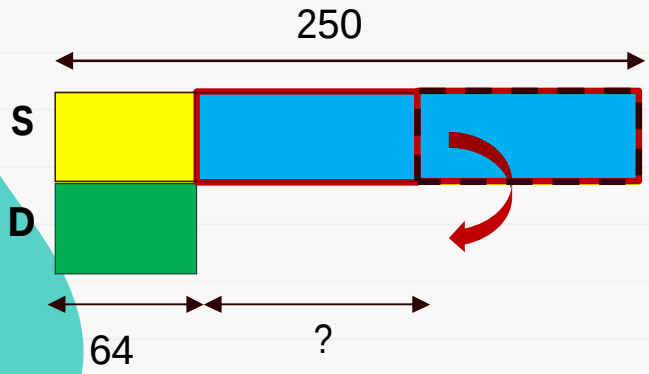
S - See (What is given?)

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?)
S → 250
D → 64
S give ? to D so that S = D

250 – 64 = 186
186 ÷ 2 = **93**

Relook (Reflect and Check)
250 – **93** = 157
64 + **93** = 157 ✓ok

Samy must give Darryl 93 erasers.

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

250 - 64 = 186
186 ÷ 2 = **93**

C	✓
O	✓
U	✓
R	✓
T	✓

Samy must give Darryl 93 erasers.

Q13: Model Drawing (Before and After) – Make Equal

Ariel had **as many** roses as **Belle**.
After **Ariel gave** 64 roses away, Belle had 5 times as many roses as **Ariel**.
How many roses did **Ariel 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 → A = B
After A gave away 64, B → 5 x A
Before → 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:
_____

Q13: Model Drawing (Before and After) – Make Equal

Act (What do I need to do?)

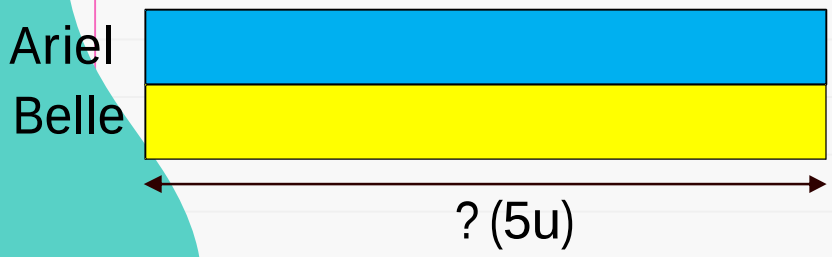
S - See (What is given?)

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: _____

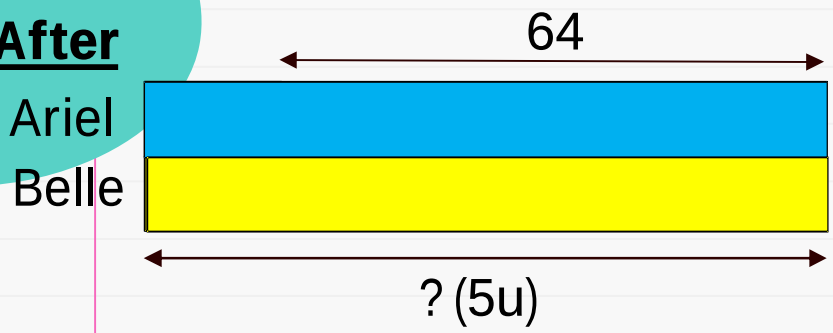
A - Act(What do I need to do?)

- Relook(Reflect and Check)

Before



After



See (What is given?)

Before → A = B

After A gave away 64, B → 5 x A

Before → A (?)

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

Ariel had 80 roses at first.

Q13: 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

4 u = 64
1 u = 64 ÷ 4 = 16
5 u = 5 x 16 = 80

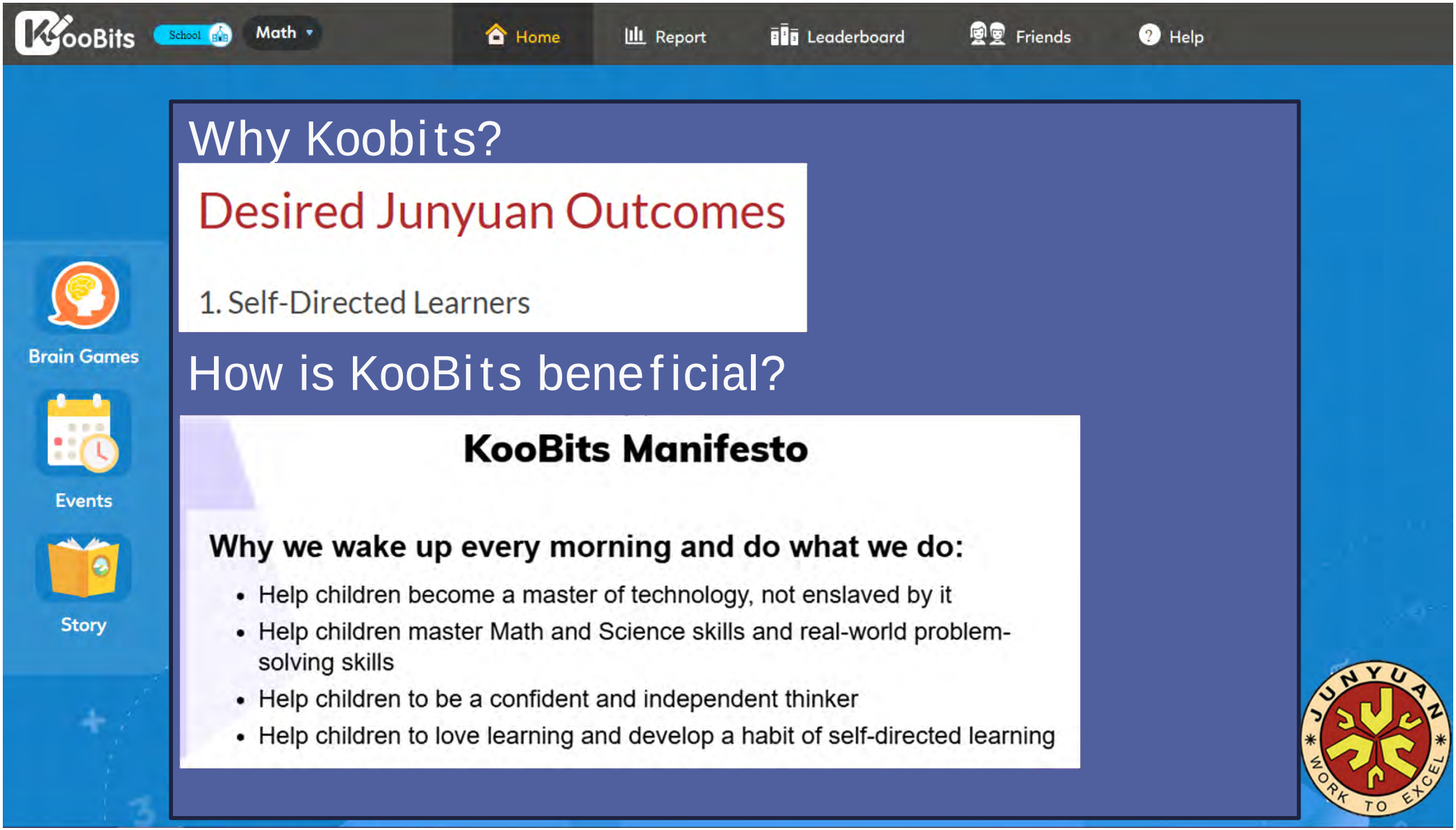
C	✓
O	✓
U	✓
R	✓
T	✓

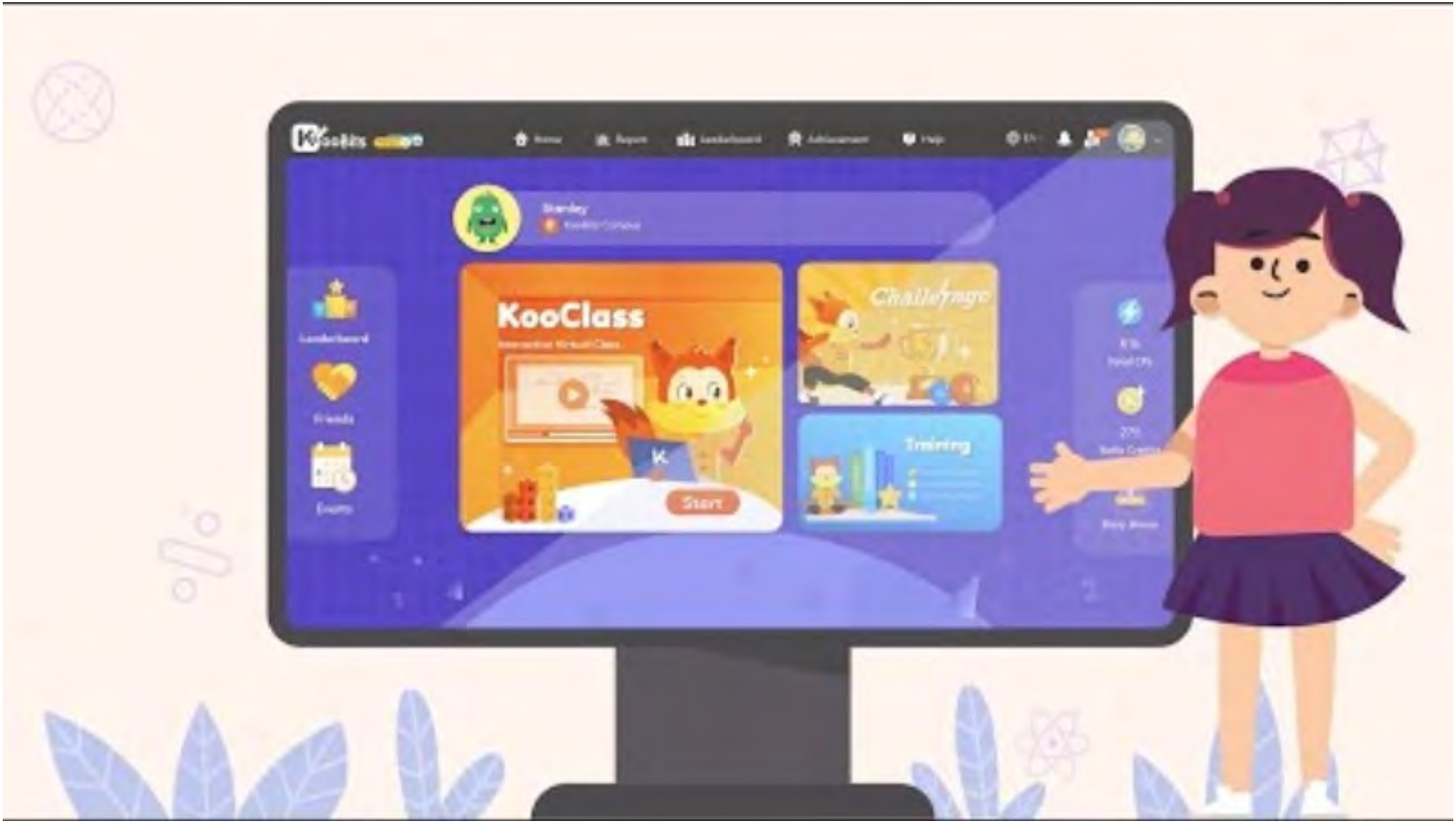
Ariel had 80 roses at first.

03

Koobits


KooBits
School
Math
Home
Report
Leaderboard
Friends
Help
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


KooBits
School
Math
Home
Report
Leaderboard
Friends
Help
Brain Games
Events
Story
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


Home
Report
Leaderboard
Achievement
Help
Stanley
Leaderboard
Friends
Events
KooClass
Start
Challenge
Training

THANK YOU

for your attention and support

Q & A

Dear Parents, please use this QR code to provide feedback on the workshop. Thank you.

Feedback Form 2025

https://forms.moe.edu.sg/forms/J69a9r