

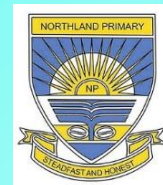


Welcome!

P3 Math Parents Workshop

We will begin at **2pm**.
There will be a Q&A session at the end.
Do hold your questions till then.
Thank you for your understanding.

Friday, 26 March 2021
2pm - 3.30pm





Presenters:
Mrs Suresh
Mrs Jennifer Lam
Mrs Ellis Chua



Ground rules:

- Please mute your mic so that everyone can hear the presenters.
- Please switch on your camera if possible.
- Please participate in the questions posed.



What are some concerns you have for your child with regards to Math?



<https://tinyurl.com/mathparentws2021>





Nowadays, Maths is so
DIFFICULT!!

You made so
many careless
mistakes.

How I can help
my child?



Objectives:

- To provide an overview of the Mathematical concepts that your child is required to apply in Primary 3
- To be aware of common misconceptions to avoid when guiding your child at home
- To use the BEST problem-solving approach for word problems

Outline of Workshop :

- An overview of P3 topics + misconceptions
- **BEST** Approach
- Tips for Parents
- FAQ
- Q & A





An Overview of P3 topics

Term 2

Chapter 4: Multiplication and Division

Chapter 5: Money

Chapter 6: Length, Mass and Volume

An Overview of P3 topics

Term 3

Chapter 7: Time

Chapter 12: Bar Graphs

Chapter 8: Fractions

Chapter 9: Angles





An Overview of P3 topics

Term 4

Chapter 10: Perpendicular and Parallel Lines

Chapter 11: Area and Perimeter

Common Challenges faced by students

MULTIPLICATION & DIVISION

- Lack factual fluency of multiplication tables of 2 to 10
- Unable to perform division algorithms with or without remainder



Suggestions for Students

- Practise multiplication tables with your child as and when you can. It can be through the use of whiteboards or songs that your child likes.

LET'S LEARN
OUR
TIMES TABLE!

Suggestions for Students

- Be familiar with multiplication tables of 2 to 10.
 - Try out **Daily 10**: <https://www.topmarks.co.uk/maths-games/daily10>
- Recognise family facts of multiplication & division

eg: $5 \times 6 = 30$

$$30 \div 5 = 6$$

$$6 \times 5 = 30$$

$$30 \div 6 = 5$$

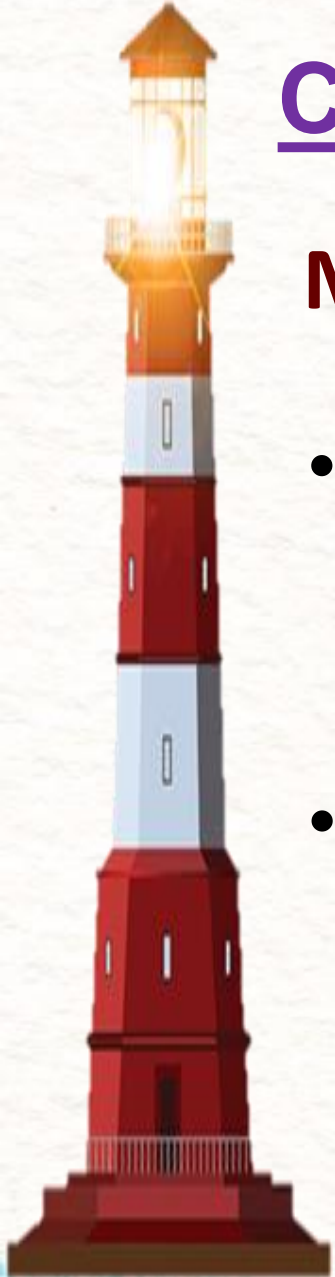


Common Challenges faced by students



MONEY

- Missing decimal notations (decimal point)
 - e.g. \$12.50 is written as \$1250
- Alignment of the decimal point during addition and subtraction algorithm

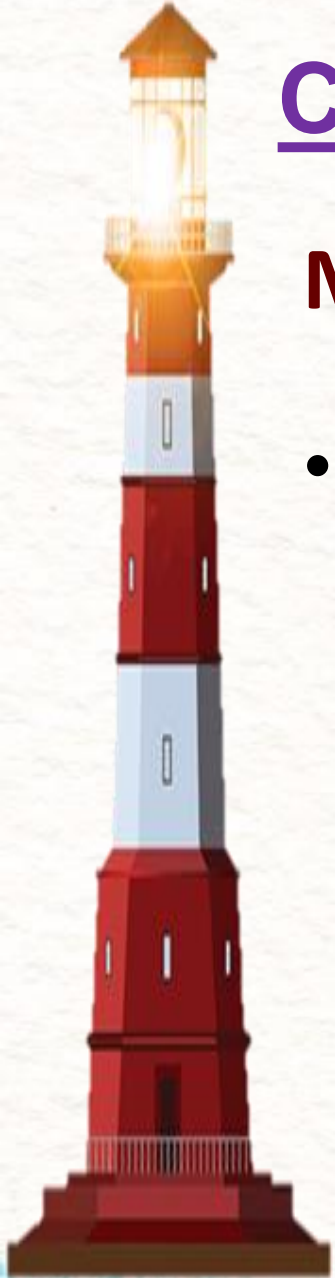


Common Challenges faced by students



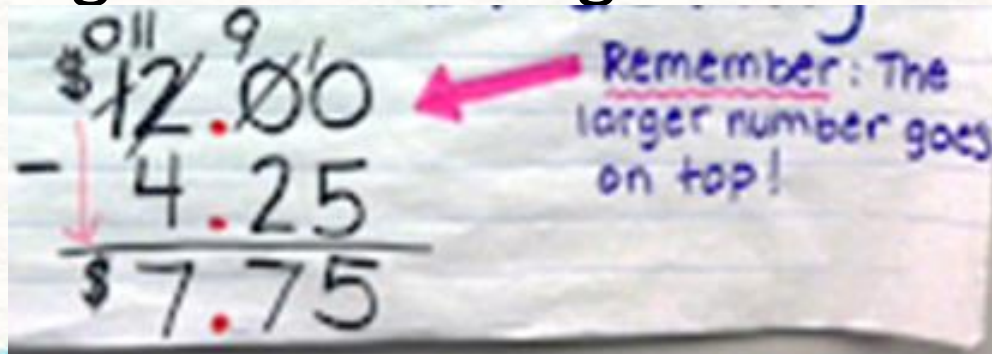
MONEY

- Understand the concept of “more money needed”
 - eg: How much more money does Jane need to buy the two items?
 - The amount calculated is insufficient and more money is needed to top up what Jane originally has.



Suggestions for Students

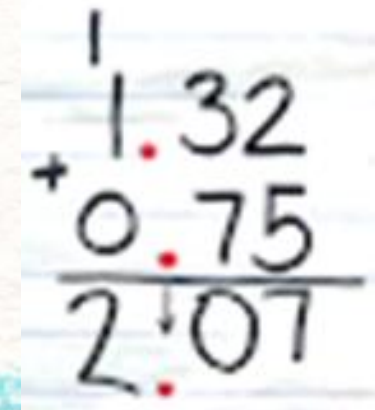
- Have your child purchase items on their own. Get them to calculate the “change”. Remind your child not to miss out the **decimal point** when calculating.
- Use a ruler to check the alignment of the digits when adding or subtracting.



Handwritten subtraction problem showing the calculation of change:

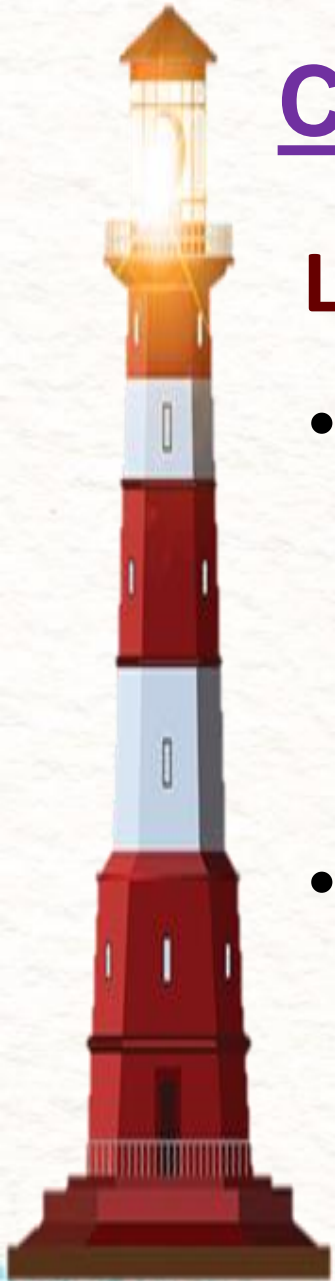
$$\begin{array}{r} \$12.00 \\ - \$4.25 \\ \hline \$7.75 \end{array}$$

Remember: The larger number goes on top!



Handwritten addition problem showing the calculation of a sum:

$$\begin{array}{r} 1.32 \\ + 0.75 \\ \hline 2.07 \end{array}$$



Common Challenges faced by students

LENGTH, MASS & VOLUME

- Make reasonable estimations on length, mass and volume.
 - Eg: *What will be the length of a student desk?*
- Unable to read the scales and intervals.



Common Challenges faced by students

LENGTH, MASS & VOLUME

- Mistakes in concept facts and conversion of units
 - $100 \text{ cm} = 1\text{m}$
 - $1000 \text{ m} = 1\text{km}$
 - $1000 \text{ g} = 1 \text{ kg}$
 - $1000 \text{ mL} = 1\ell$

Memorize

Suggestions for Students

- Have conversations with your child on :
 - how heavy things are e.g. packet of rice, salt, sugar
 - length of the items e.g. door, window, cupboard
 - capacity of bottles or containers e.g. milk, fruit juice



Suggestions for Students

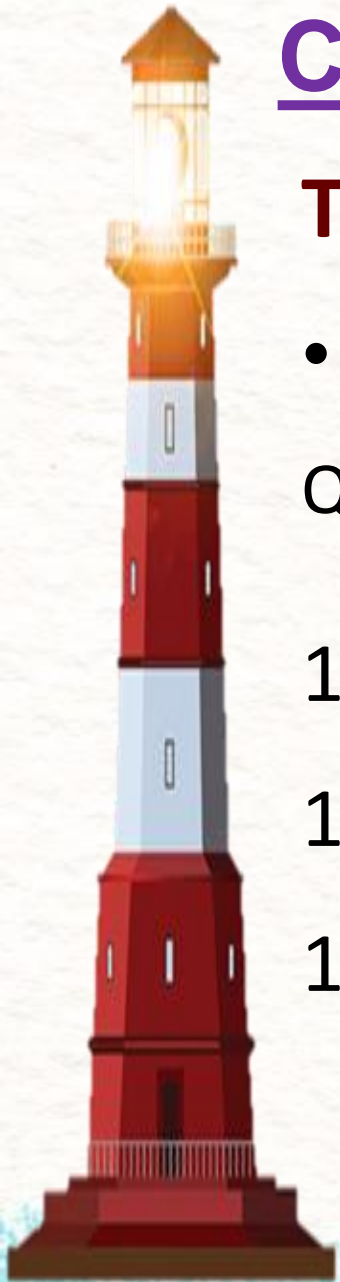
- Reading of the scales and intervals.
 - *mass* : <https://youtu.be/gmM-0R4CCuE>
 - *volume* : <https://youtu.be/R4LgXPnkBlc>



A more detailed one :

<https://www.youtube.com/watch?v=6JyDRJBJQgU>





Common Challenges faced by students



TIME

- Present mathematical statements **incorrectly**.

Qn : *Add 1 h 10 min to 2.00pm.*

$$1.10\text{min} + 2.00\text{pm} = 3.10\text{pm}$$

$$1\text{h } 10\text{min} + 2.00\text{pm} = 3.10\text{pm} \quad \times$$

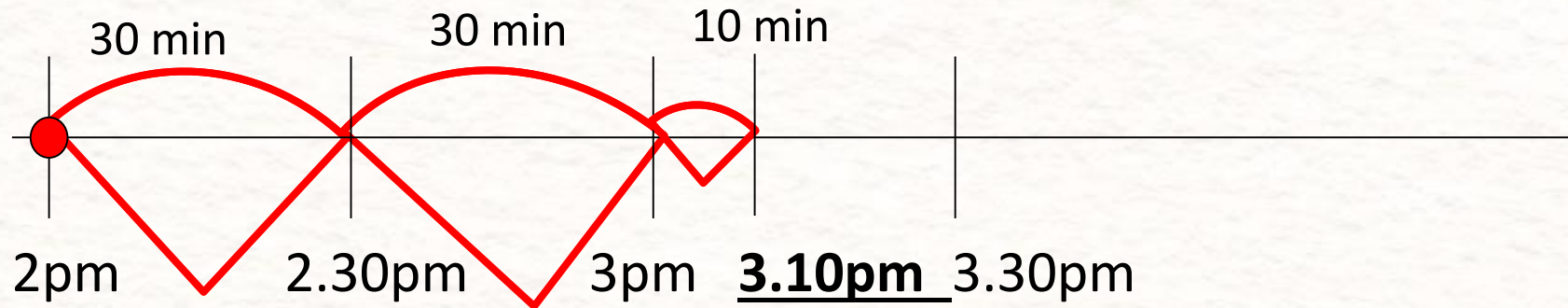
$$1\text{h } 10\text{min} + 2\text{h} = 3.10\text{pm}$$

Accurate Presentation of Answers



Qn : *Add 1 h 10 min to 2.00pm.*

Method 1



Method 2

2pm $\xrightarrow{+ 1h}$ 3pm
3pm $\xrightarrow{+ 10min}$ 3.10pm



HANDS ON



A painter took 3 h 20 min to paint a classroom.
He started painting the classroom at 8.35 a.m.
What time did the painter finish painting the classroom?

*Annotating starting time, finishing time and duration

Duration

A painter took 3 h 20 min to paint a classroom.

Starting time

He started painting the classroom at 8.35 a.m.

What time did the painter finish painting the classroom?

Find finishing time!



TIME

Common Misconceptions and Errors



- Adding Starting/Finishing Time and duration

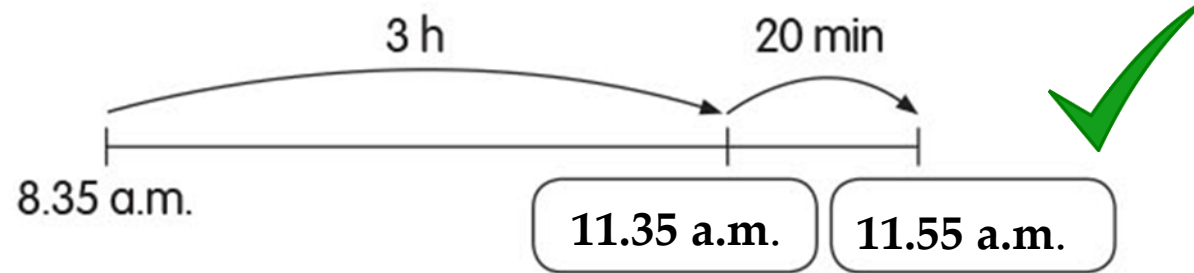
A painter took 3 h 20 min to paint a classroom.

He started painting the classroom at 8.35 a.m.

What time did the painter finish painting the classroom?

8.35 a.m. + 3 h 20 min = 11.55 a.m. **✗ Incorrect mathematical statement**

*Drawing the timeline

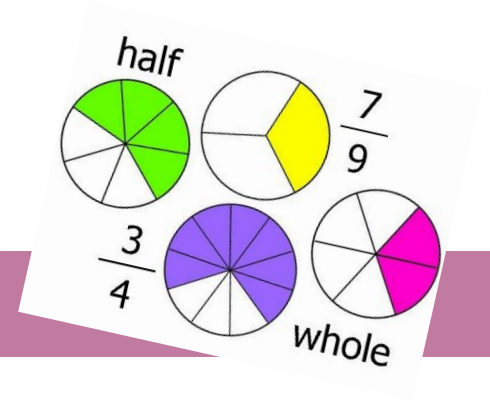


He finished painting the classroom at 11.55 a.m.

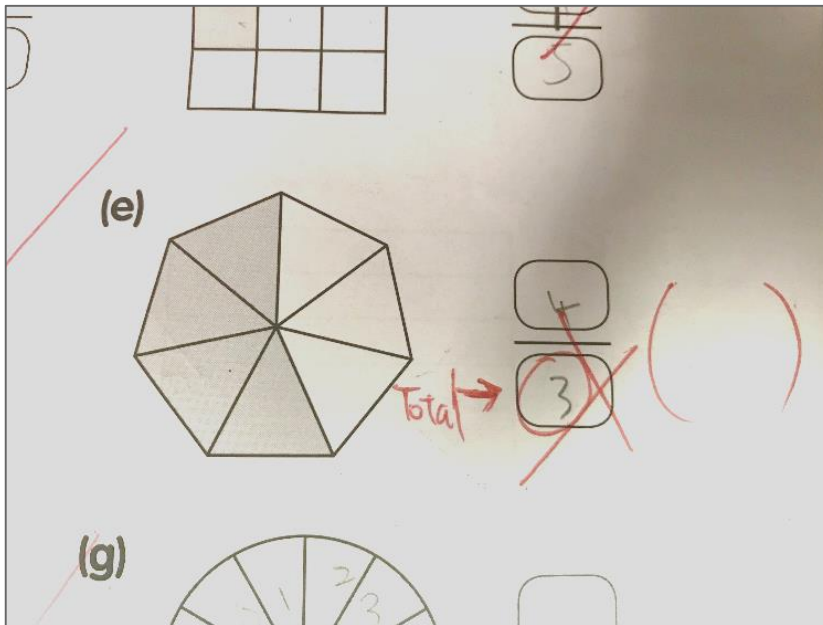


FRACTIONS

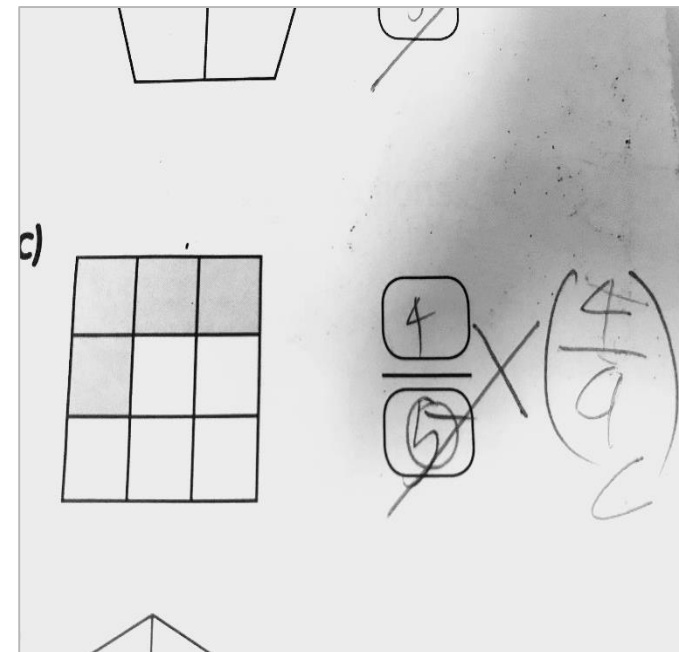
Common Misconceptions and Errors



- Lack Conceptual Understanding of fractions



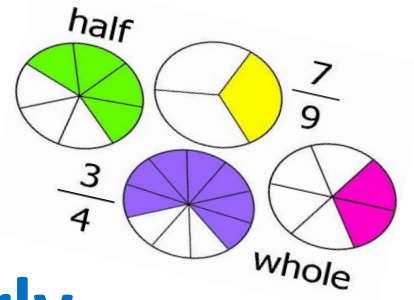
Conceptual error



Conceptual error



Suggestions for Students



- Show multiplication/ division working clearly.

$$\frac{1}{2} \begin{array}{c} \xrightarrow{\times 3} \\ = \\ \xrightarrow{\times 3} \end{array} \frac{3}{\boxed{}}$$

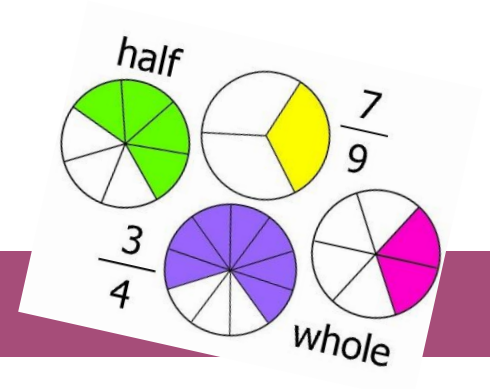
$$\frac{3}{12} \begin{array}{c} \xrightarrow{\div 3} \\ = \\ \xrightarrow{\div 3} \end{array} \frac{\boxed{}}{\boxed{}}$$

- Know multiplication tables

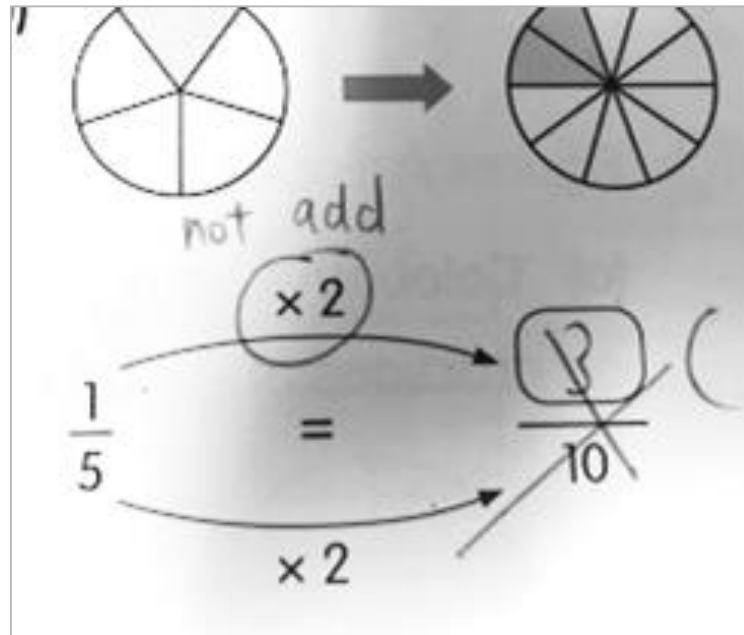


FRACTIONS

Common Misconceptions and Errors



- Adding or subtracting denominators when finding equivalent fractions or simplifying fractions

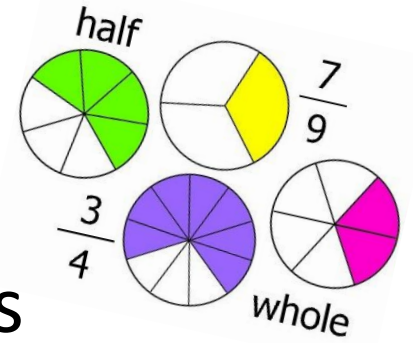


(f) $\frac{2}{6} = \frac{1}{3}$

Calculation errors



Suggestions for Students



- Know how to compare and order unlike fractions with denominators of given fractions not more than 12

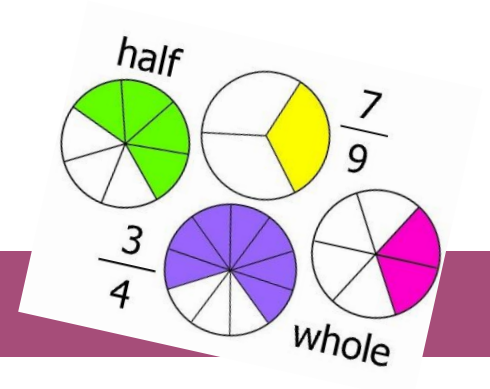
- *Strategy 1: Comparing with $\frac{1}{2}$
- *Strategy 2: Convert to like fractions
(fractions with same denominators)





FRACTIONS

Common Misconceptions and Errors



- Showing incomplete working when simplifying fractions

$$\frac{4}{10} \div 2 = \frac{2}{5} \quad \text{X}$$

Incorrect mathematical statement

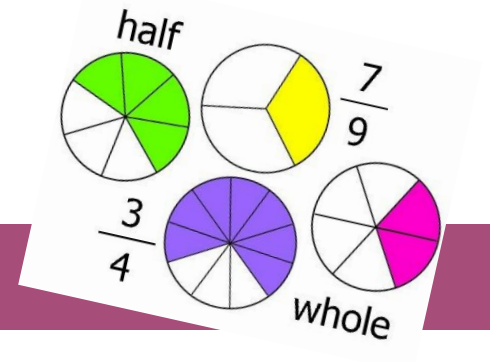
$$\frac{4}{10} \div 2 = \frac{2}{5} \quad \checkmark$$

$$\frac{4}{10} \div 2 = \frac{4}{10} \times \frac{1}{2} = \frac{4}{20} = \frac{1}{5}$$

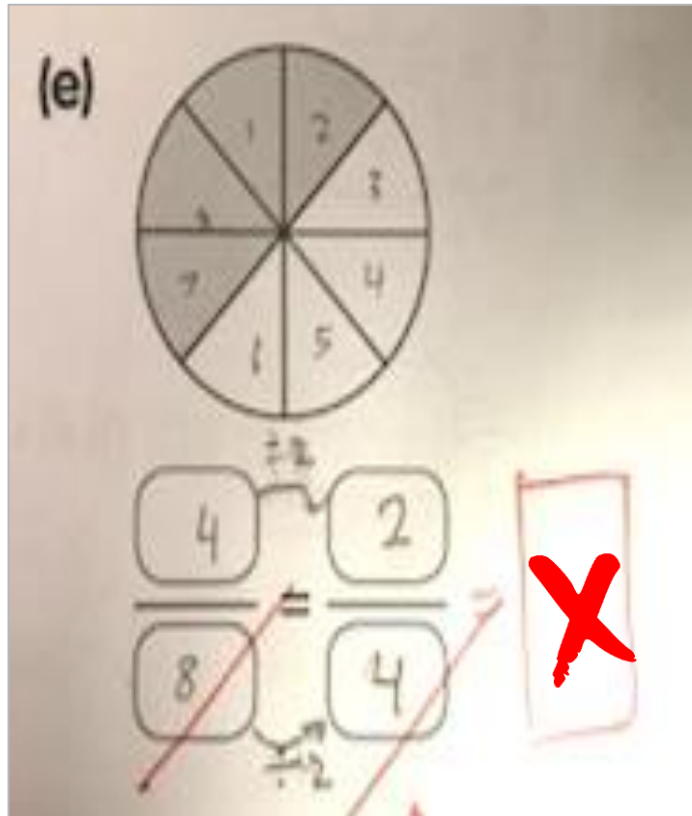


FRACTIONS

Common Misconceptions and Errors



- Not converting to the simplest form



$$\frac{8}{12} \xrightarrow{\div 2} \frac{4}{6} \xrightarrow{\div 2} \frac{2}{3}$$

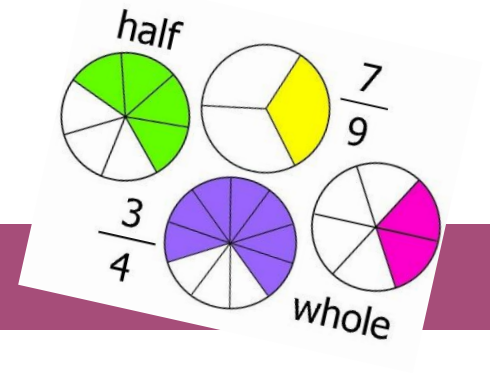
✓ Check

$$\frac{8}{12} \xrightarrow{\div 4} \frac{2}{3}$$



FRACTIONS

Common Misconceptions and Errors



- Converting only the numerator or denominator

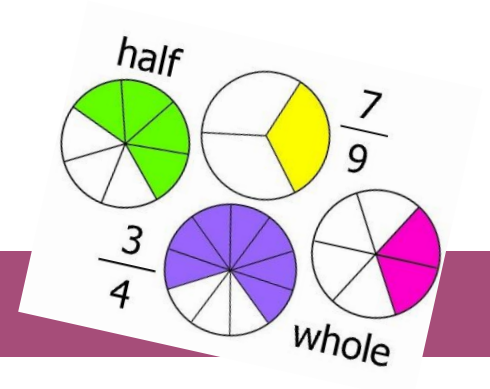
$$\begin{aligned} \frac{9}{10} - \frac{1}{2} &= \frac{9}{10} - \frac{5}{10} \\ \text{working?} &= \frac{4}{10} \\ &= \frac{2}{10} \end{aligned}$$

Calculation error



FRACTIONS


Common Misconceptions and Errors

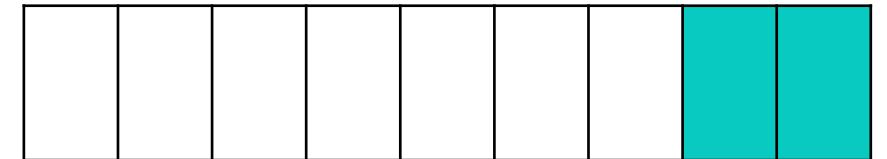


- Adding denominators when adding fractions

$$\frac{2}{9} + \frac{5}{9} = \frac{7}{18}$$

Conceptual error

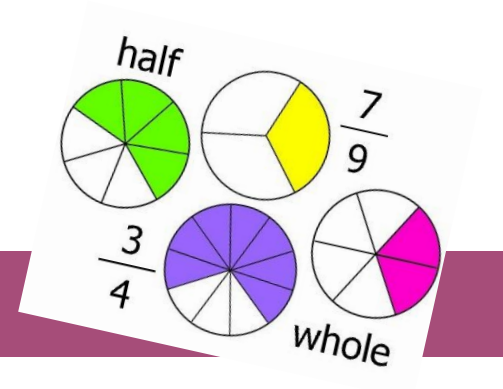
$$\frac{2}{9} + \frac{5}{9} = \frac{7}{9}$$






FRACTIONS

Common Misconceptions and Errors



- Changing the order when subtracting fractions

$$\frac{2}{3} - \frac{5}{12} = \frac{5}{12} - \frac{8}{12}$$

$$= \frac{3}{12} \quad \text{X}$$

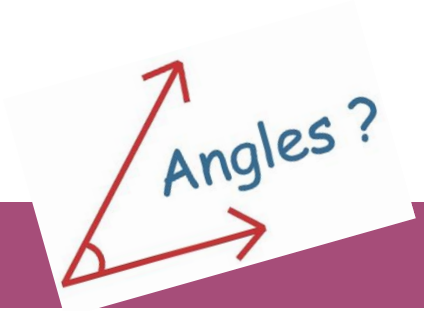
Incorrect mathematical statement

$$\boxed{\frac{2}{3}} - \boxed{\frac{5}{12}} = \boxed{\frac{8}{12}} - \boxed{\frac{5}{12}}$$
$$= \frac{3}{12} \quad \checkmark$$

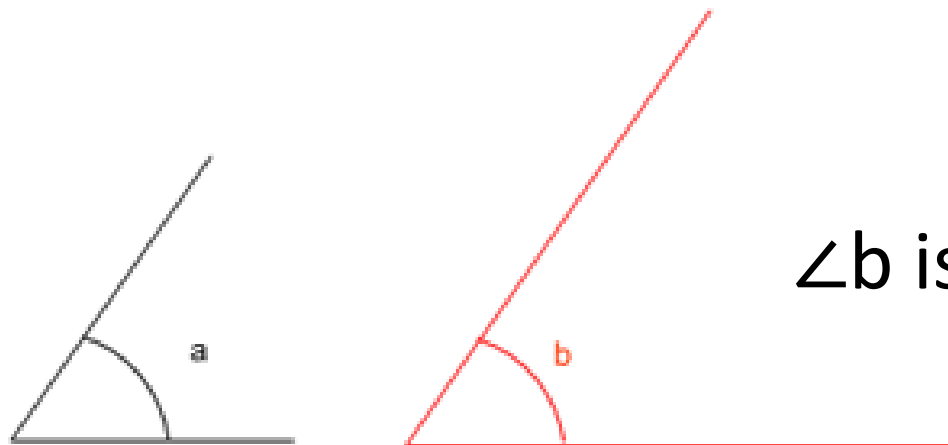


ANGLES

Common Misconceptions and Errors



- Greater lengths of the arms means a greater angle.



$\angle b$ is greater.

misconception

Both $\angle a$ and $\angle b$ are equal. ✓



PERPENDICULAR AND PARALLEL LINES

Common Misconceptions and Errors

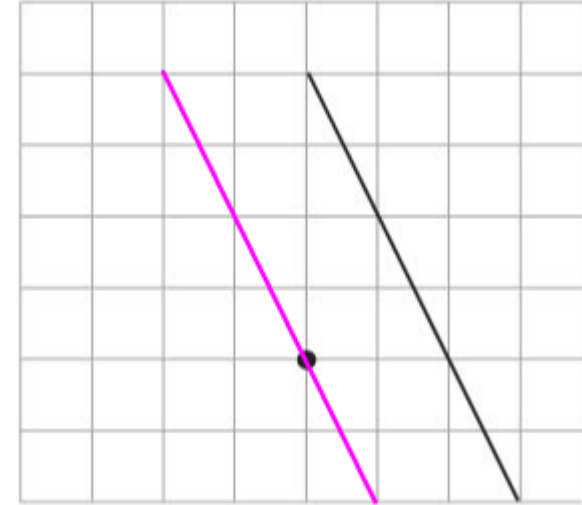
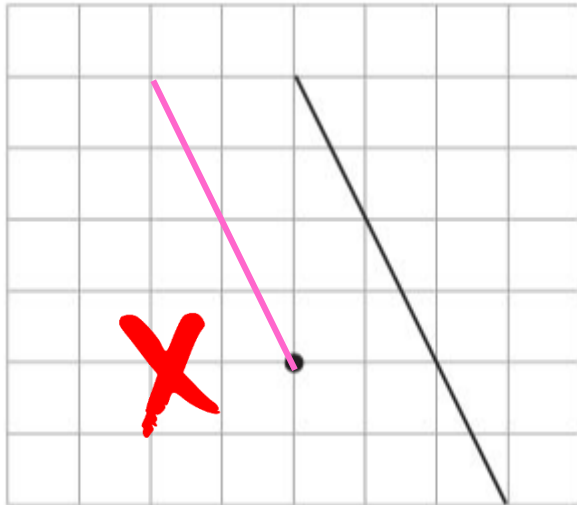
- Not using the correct tools.
- Drawing without ruler.
- Not making use of the lines on the square grid.



PERPENDICULAR AND PARALLEL LINES

Common Misconceptions and Errors

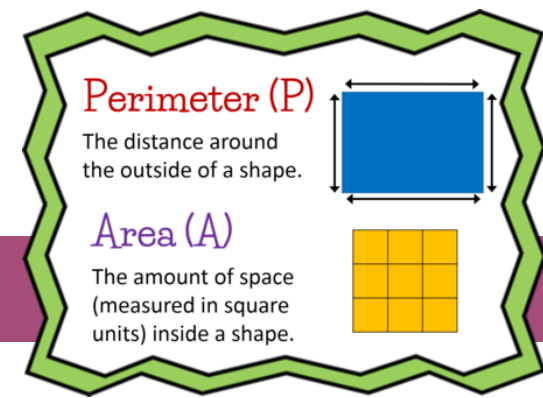
- Lines not passing through the given point.





PERIMETER & AREA

Common Misconceptions and Errors



- Reading of cm^2 and m^2

“Centimetre square”

“Metre square”



“square centimetres”

“square metres”



- Wrong or no units written for perimeter (cm/m) and area (cm^2 or m^2)



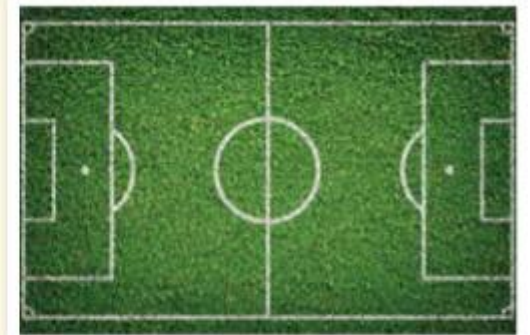
PERIMETER & AREA

Common Misconceptions and Errors

- Have difficulty applying concept of perimeter and area

Work in pairs.

- 1 Do you find the area or the **perimeter** of a soccer field if you want to know the distance you have run in one round around the sides of the field?
- 2 Do you find the **area** or the perimeter of a wall if you want to know how much wallpaper to buy to cover the wall?





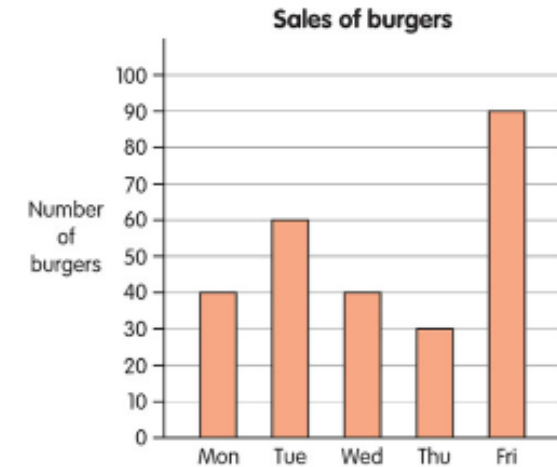
BAR GRAPHS

Common Misconceptions and Errors

Not understanding
the question:

Is the question asking
for a category or a
value?

The bar graph shows the number of burgers Mr Ramlee sold on weekdays during a certain week.



- (a) On which two days were the same number of burgers sold?
The same number of burgers were sold on Monday and Wednesday.
- (b) On which day was the number of burgers sold twice that of Thursday?

$$30 \times 2 = 60$$

The number of burgers sold on Tuesday was twice that of Thursday.

- (c) Each burger was sold for \$2.
How much did Mr Ramlee receive from selling the burgers on Friday?

$$90 \times \$2 = \$180$$

Mr Ramlee received **\$180** on Friday.

The

BEST

Approach

BEST

MATHEMATICAL PROBLEM SOLVING APPROACH



BE FOCUSED

- What am I given?
(Underline the characters/objects and values)
- Can I use diagrams or model drawings?
- What am I asked to find?
- How can I make sense of the information?

EXPLORE AND PLAN

- What strategy should I use?
- Why do I choose this strategy?
- Have I solved a similar problem before?



SOLVE THE PROBLEM

- I will apply the strategy.
- I will write out my steps and number equations.

THINK ABOUT THE ANSWER

- Have I answered the question?
- Does my answer make sense?
- Have I checked for NTUC (Number Transfer, Units and Calculations)?



How do we apply the BEST Approach?

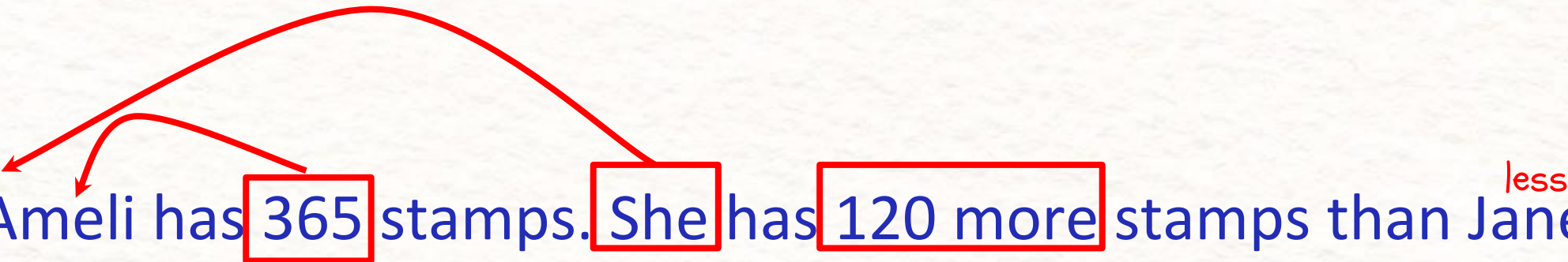
Sample question from P4

Ameli has 365 stamps. She has 120 more stamps than Janel.

Renee has 4 times as many stamps as Janel. How many more stamps does Renee have than Ameli?

Be focused

Ameli has 365 stamps. She has 120 more stamps than Janel.



Renee has 4 times as many stamps as Janel. How many



more stamps does Renee have than Ameli?

comparison (-)

Analyse the question



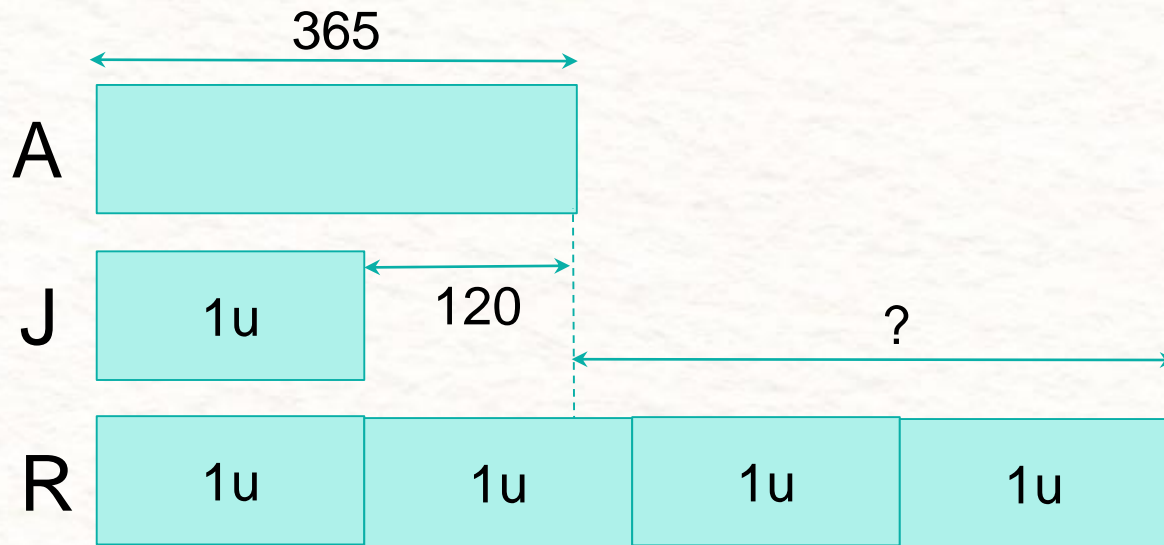
Explore & Plan

Ameli has 365 stamps. She has 120 more stamps than Janel. ^{less}

^{4u} Renee has 4 times as many stamps as ^{1u} Janel. How many

more stamps does Renee have than Ameli?

comparison (-)



Model & strategy

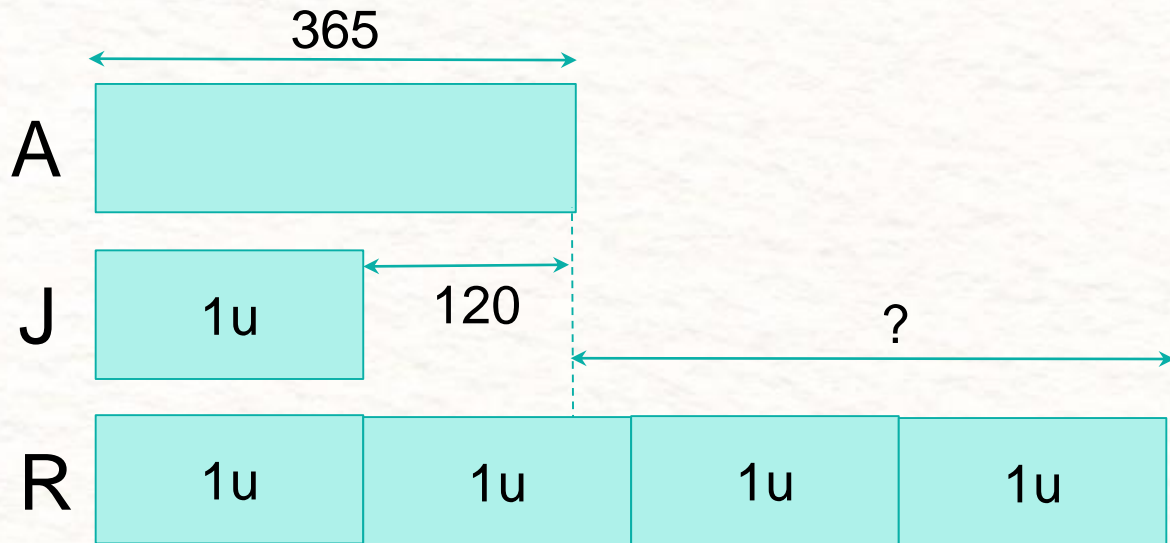
Solve

Ameli has 365 stamps. She has 120 more stamps than Janel. ^{less}

^{4u} Renee has 4 times as many stamps as ^{1u} Janel. How many

more stamps does Renee have than Ameli?

comparison (-)



$$365 - 120 = 245 \text{ (J)}$$

$$1u = 245$$

$$4u = 245 \times 4$$
$$= 980 \text{ (R)}$$

$$980 - 365 = 615$$

Ans: 615

Equations & Workings



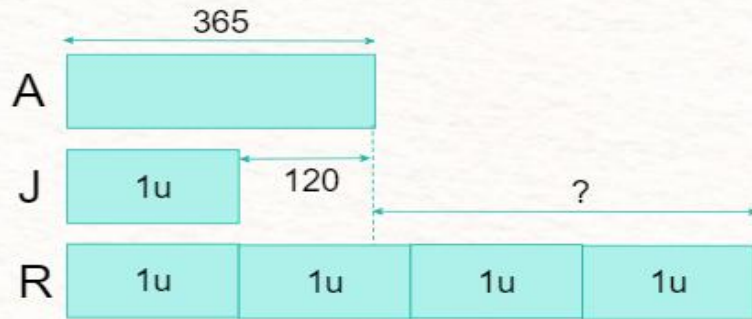
Think about the answer

Ameli has 365 stamps. She has 120 more stamps than Janel. ^{less}

^{4u} Renee has 4 times as many stamps as ^{1u} Janel. How many

more stamps does Renee have than Ameli?

comparison (-)



$$365 - 120 = 245 \text{ (J)}$$

$$1u = 245$$

$$4u = 245 \times 4$$
$$= 980 \text{ (R)}$$

$$980 - 365 = 615$$

Ans: 615

Number
Transfer

- From question to model
- From model to equations
- From equations to working
- From working to equations
- From equations to answer blank

Units

- Standard units must be written (E.g. \$, cm, kg)

Calculations - Redo working to confirm

Checking for NTUC



Using the BEST Approach

Find out the difficulties your child is facing:

- Is it reading?
- Is it comprehension?
- Is it selecting a suitable strategy?
- Is it translating the problem into a mathematical form?
- Is it the calculation?
- Is it the reasonableness of the answer?

Tips for Parents:

Ensure that your child :

- Has a firm foundation in factual fluency
- Knows the multiplication tables very well
- Uses 'model' and heuristics to solve problems

As a parent, do reinforce class teaching and not pre-teach

HELP US !



You can assist the teachers by doing the following:

- ☐ Check that your child's work is done, often, at least every weekend.
- ☐ Talk to your child about his or her mathematics lessons and work.
- ☐ Supervise your child's mathematical homework.
- ☐ Ask your child to teach you what he or she has learnt at school.

HELP US !



You can assist the teachers by doing the following:

- ☐ Take note of any communication that the teacher has sent home for your attention.
- ☐ Act promptly if you feel your child does not understand any topics.

Discuss the problem with your child's teacher.

Message from Math Teachers to Parents

Important points to note

Multiplication and Division Facts

Real-life examples of Math

Spiral Curriculum of Math

Big Ideas and Connections

Checking of work

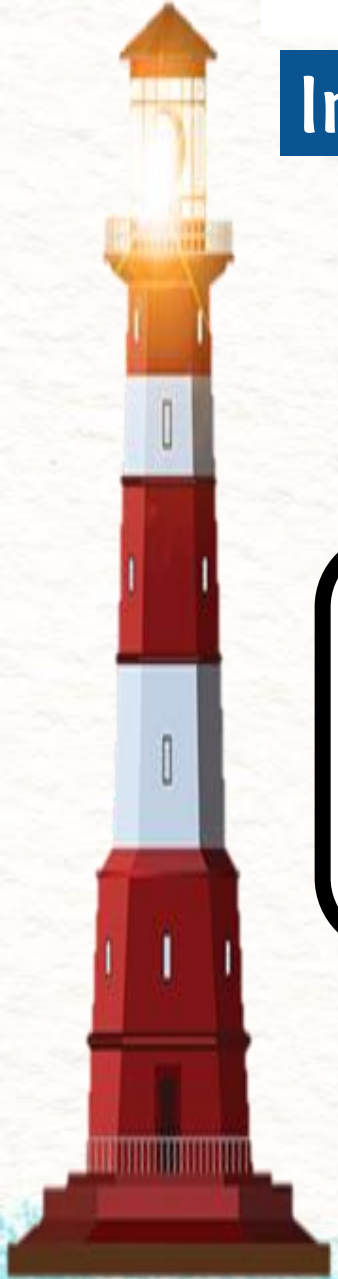
Use of **NTUC** –
NT – number transfer
U – units
C – Calculation

Growth Mindset

Self-directed learners

Reasoning and Communication

Parental Support



ICT Tools @ Home

Virtual manipulatives and Parental Support



Koobits



Math Playground



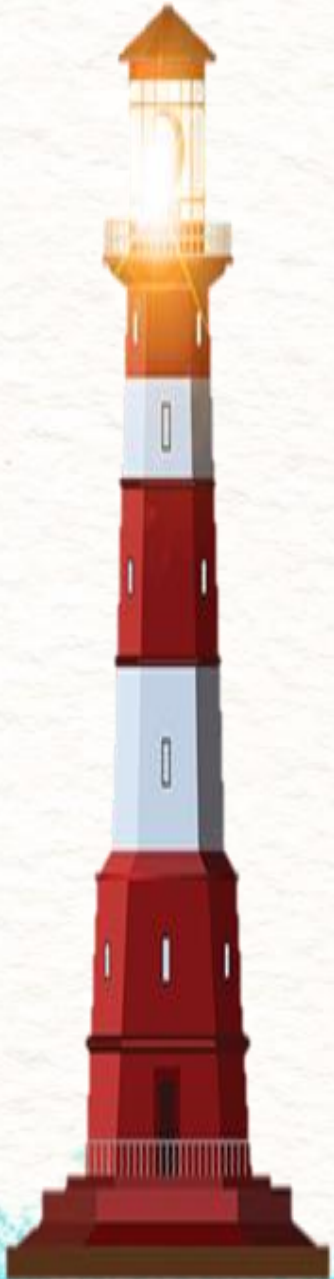
Photomath (App)



Interactive Clock



Fraction Wall







Big
Thank
You!

Dear Parents,

Thank you for taking time to attend the workshop and for partnering us in your child's learning of Mathematics.

We will appreciate your feedback for the workshop.

You may use this link below or the QR code:

<https://tinyurl.com/mathws2021>



Presenters for the Workshop:

P1 Workshop:

Mdm Angrini
Mdm Faizah
Mrs Poh Kexin
Mrs Jilyn Tan
Mrs Ho-Chan Hui Lin

P3 Workshop:

Mrs Prema Suresh
Mrs Jennifer Lam
Mrs Ellis Chua

P5 Workshop:

Mrs Lim-Koh Kha Tiang
Mrs Chong Cheng
Mr Chang Cheng Hwee
Ms Shiamala

Advisor: Mr Goh Shu Rong