



# 2021 PRIMARY ONE MATH WORKSHOP

for Parents  
**MATH@HOME**

# Today's

# OBJECTIVES

- ★ To introduce activities that will help your child understand mathematical concepts.
- ★ To understand mathematical concepts through exploration at home.
- ★ To help your child apply mathematical concepts to real life.
- ★ To help your child develop Mathematical Problem Solving skills.

# PROGRAMME

OUTLINE

- Numeracy
- Number Bonds
- Multiplication and Division
- Time & Money
- BEST Problem Solving strategy
- Common Errors made by students
- Math beyond the home
- Questions & Answer



# Take note:

- ★ We will appreciate all questions by parents to be raised during the Q&A session at the end of the workshop.
- ★ The presentation slides will be shared to our participants as a PDF file via Parents Gateway.



# **PRIMARY 1**

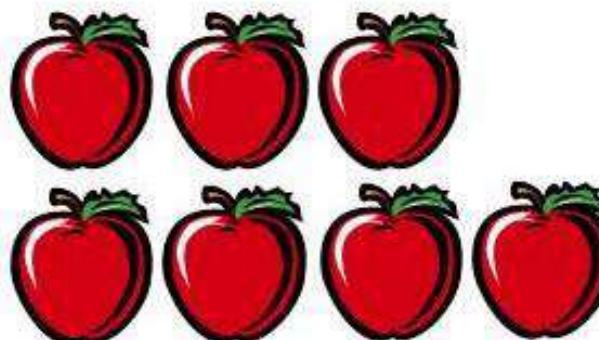
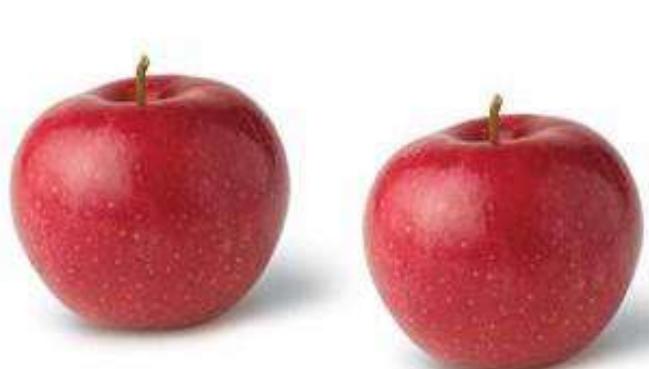
# **math**

## **TOPICS**

- ★ Numbers to 100
- ★ Shapes
- ★ Ordinal Numbers
- ★ Addition & Subtraction within 100

- ★ Picture Graphs
- ★ Length
- ★ Multiplication
- ★ Division
- ★ Time
- ★ Money

# CPA Approach



$$3 + 4 = 7$$

## Concrete

Give apples and count



## Pictorial

Draw apples and count



## Abstract

Write the number statement

Most basic level of Mathematical understanding

Pupils learn to solve problems by drawing pictures.

The pictures pupils draw represent the concrete objects pupils use or manipulate when solving problems

Pupils solve problems without the use of concrete objects or without drawing pictures



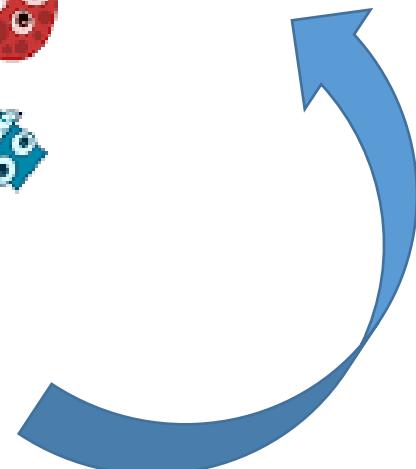
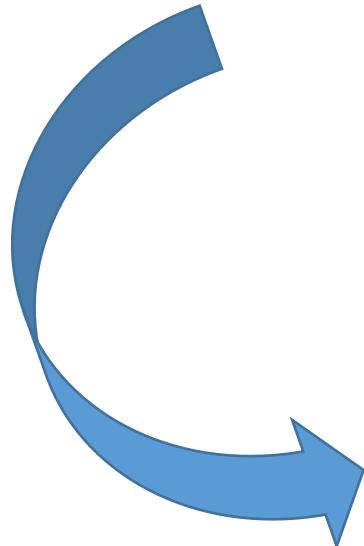
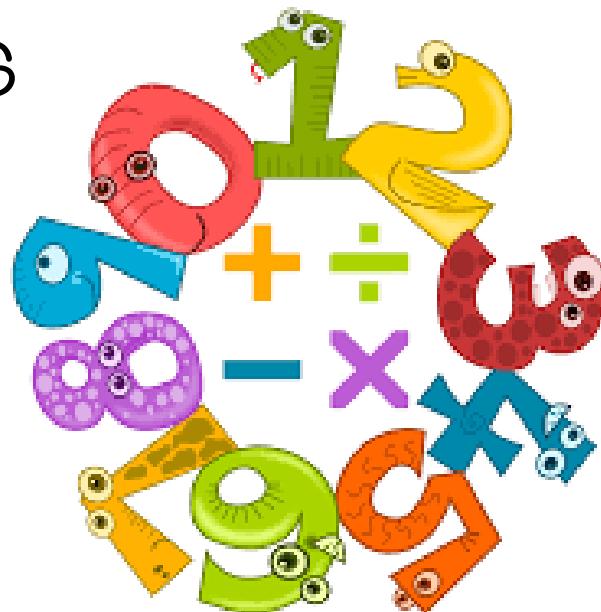
# Manipulatives

# NUMERACY

Numbers  
to 10

Numbers  
to 100

Numbers  
to 20



# Learning Outcomes (LO)

- ★ Count to 100  
(count on and count back/base ten set).
- ★ Write numbers to 100 in numerals and words.
- ★ Compare numbers to 100  
(using terms such as greater than/smaller than/more than/fewer than/less than/greatest/smallest).
- ★ Order numbers in sequence  
(smallest to greatest and vice versa).

# AT HOME

Counters : sweets, paper clips, pegs, fruits,  
bottles, pencils, crayons...

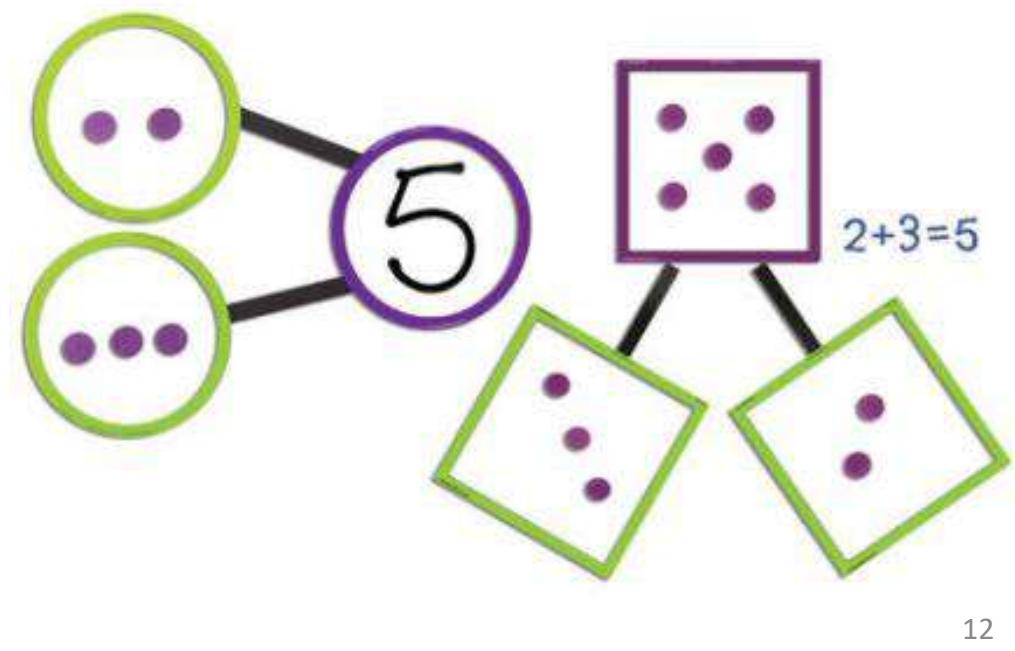
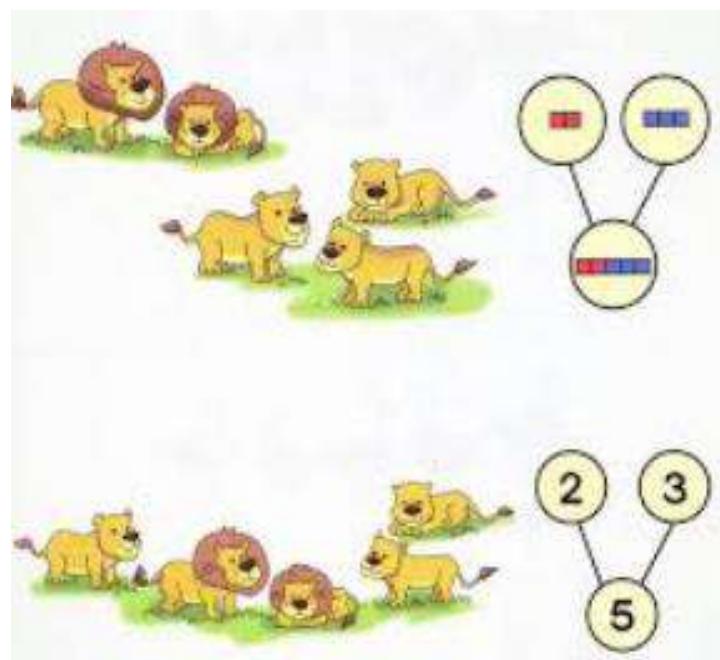


# AT HOME

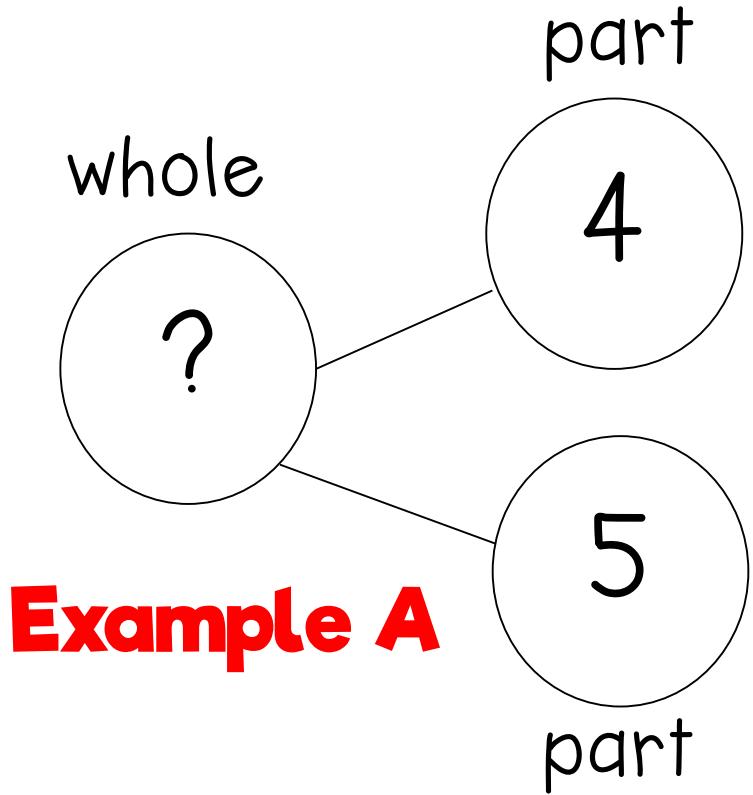
- Counters can be used for counting.
- They can also be used to teach more or less, greater or smaller concept.



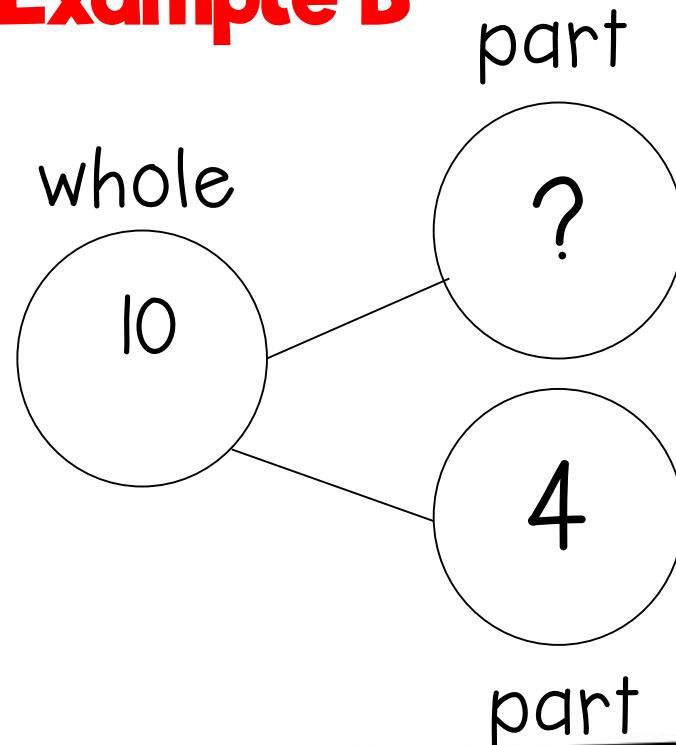
# NUMBER BONDS



# Number Bonds

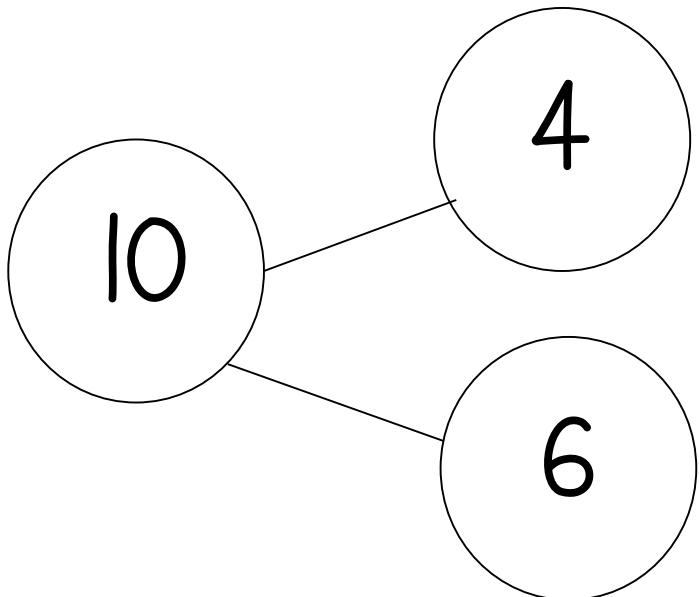


**Example B**



# Number Bonds

## FACT FAMILY



$$4 + 6 = 10$$

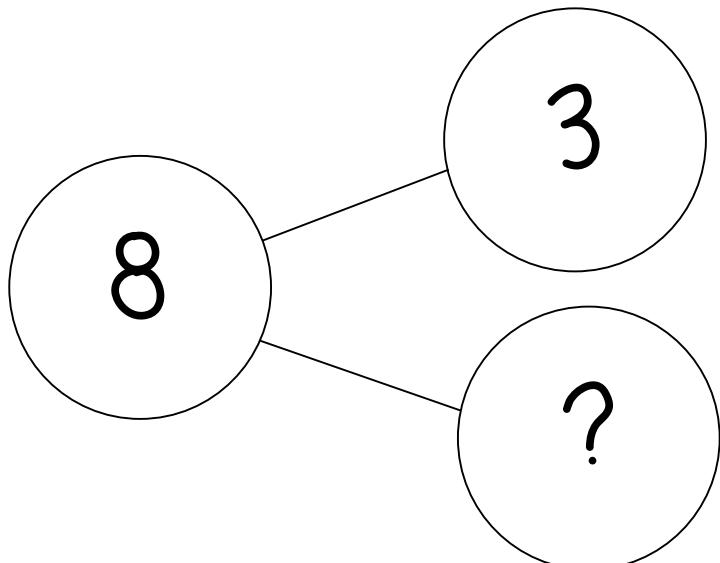
$$6 + 4 = 10$$

$$10 - 6 = 4$$

$$10 - 4 = 6$$

# Number Bonds

Related to addition and subtraction



$$3 + \underline{\quad} = 8$$

$$\underline{\quad} + 3 = 8$$

$$8 - 3 = \underline{\quad}$$

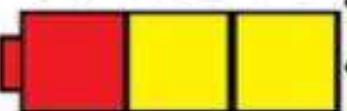
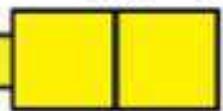
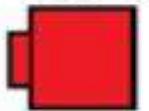
$$8 - \underline{\quad} = 3$$

# Number Bonds at Home

## Bendy Bond



# Part-Part- Whole



Exploring Part-Part-Whole  
Relationships  
(Addition and Subtraction)  
using Unifix Cubes



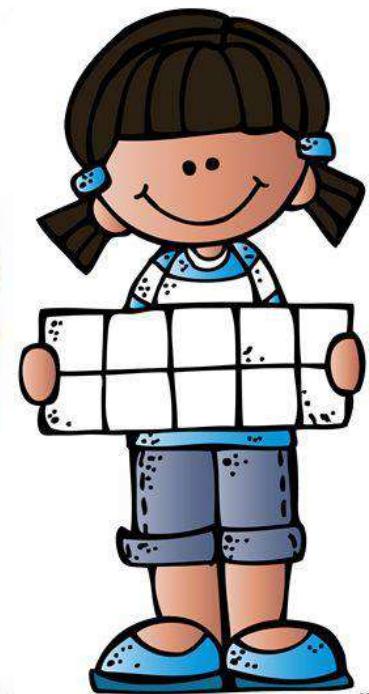
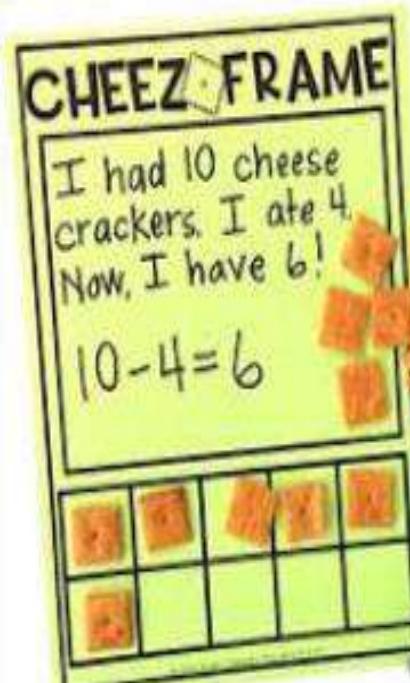
?

whole

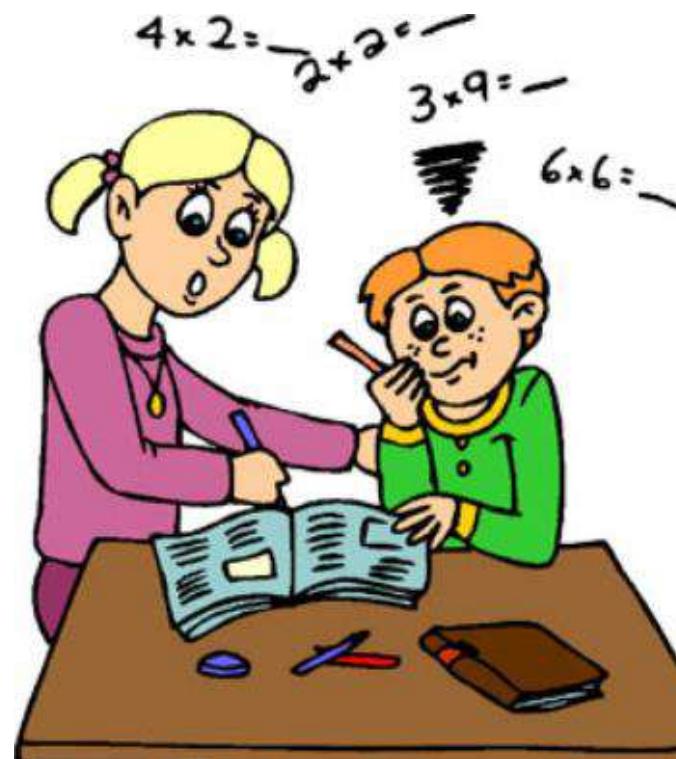
3 part

2 part

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# MULTIPLICATION & DIVISION

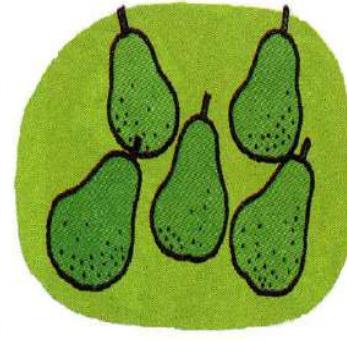
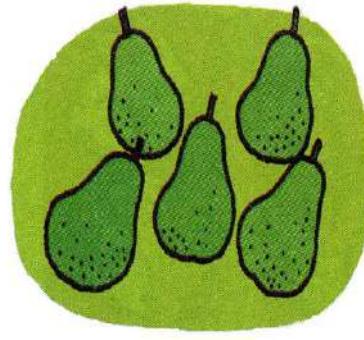
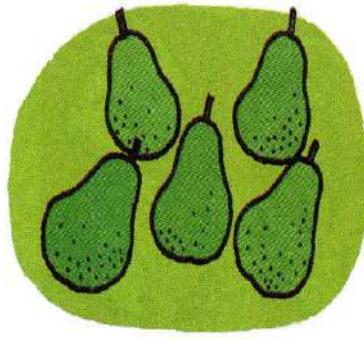


# Learning Outcomes

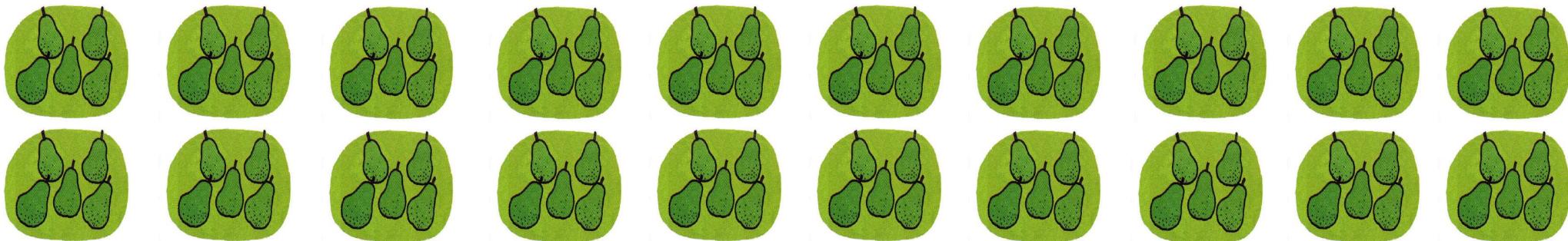
- ★ Relate repeated addition and equal groupings as multiplication.
- ★ Use multiplication symbol (X) to write multiplication equation.
- ★ Division is a concept of sharing equally and grouping equally.
- ★ Solve one-step word problems with pictorial representation.

Multiplication

How many pears are there altogether?



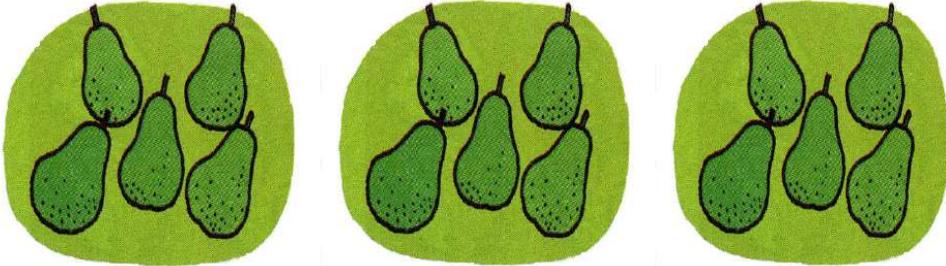
$$5 + 5 + 5 = 15$$



$$5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 + \dots + 5 =$$

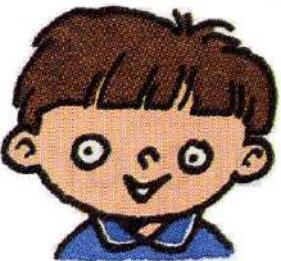
too tedious!!!

## Multiplication



There are 3 groups of pears.

There are 5 pears in each group.



G.E.T

- ★ G : The number of Groups
- ★ E : The number of things in Each group
- ★ T : The Total number of things

$$5 + 5 + 5 = 15$$

3 groups of 5 = 15

3 fives = 15

$$3 \times 5 = 15$$

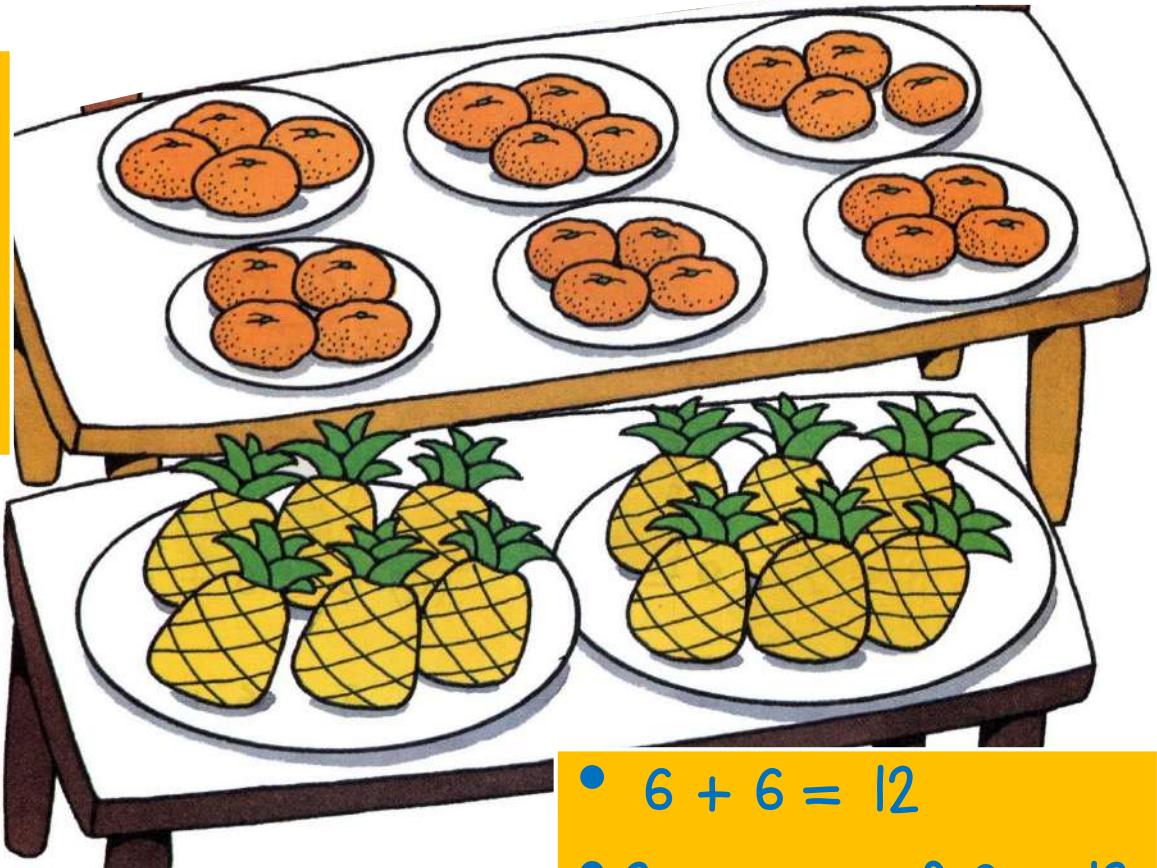
$$G \times E = T$$

Multiplication Equation

$$G \times E = T$$

## Multiplication

- $4 + 4 + 4 + 4 + 4 + 4 = 24$
- 6 groups of 4 = 24
- 6 fours = 24
- $6 \times 4 = 24$



- $6 + 6 = 12$
- 2 groups of 6 = 12
- 2 sixes = 12
- $2 \times 6 = 12$

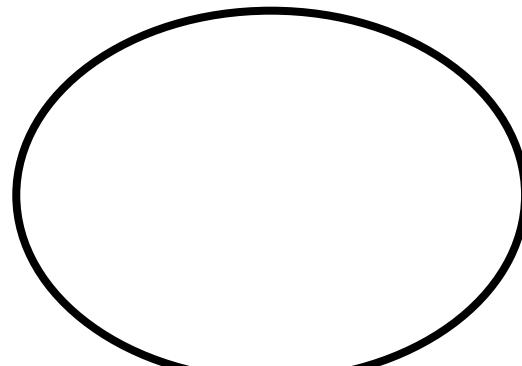
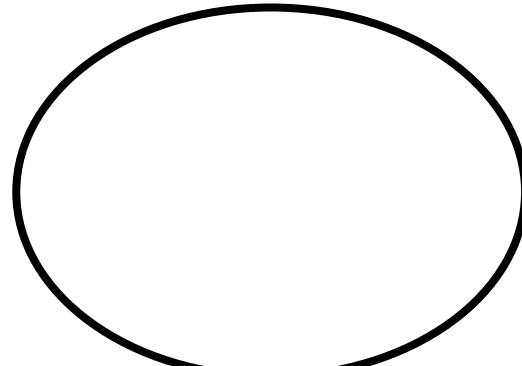
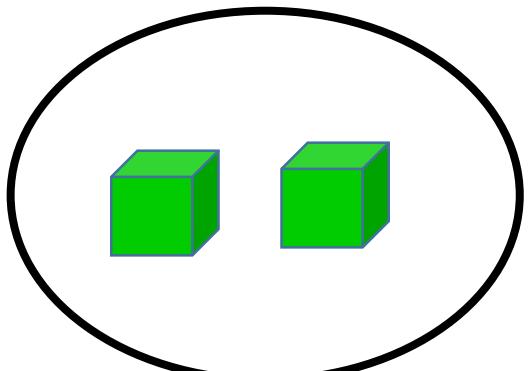
# Common Problem

Groups of 2

versus

2 Groups

There are 2 items  
in each group.



## Common Problem



$$2 \times 4 = 8$$

2 groups of 4



$$4 \times 2 = 8$$

4 groups of 2



**G . E . T**

G

E

T

There are 3 plates.  
Each plate has 2 sweets.  
How many sweets are there altogether?



G

3
---

x

E

2
---

=

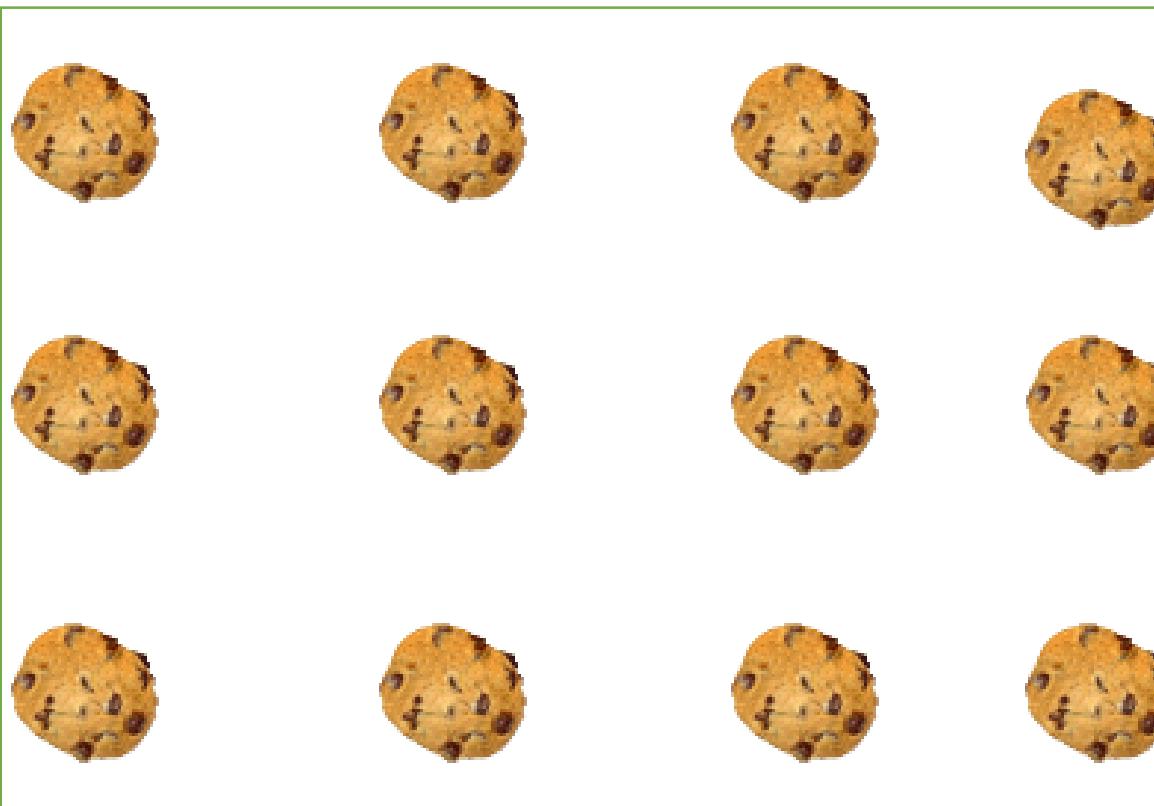
T

6
---

# Division

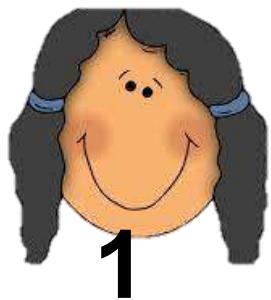
Sharing Equally

Share 12 cookies equally between 2 children.  
How many cookies will each child get?



Each child gets 6 cookies.

Share 12 cookies equally between 2 children.  
How many cookies will each child get?



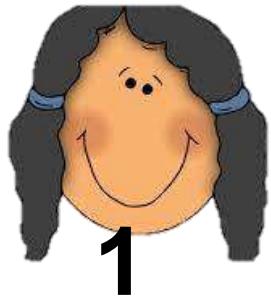
Each child gets



cookies.



Share 12 cookies equally between 2 children.  
How many cookies will each child get?



Each child gets

6

cookies.



# Grouping Equally

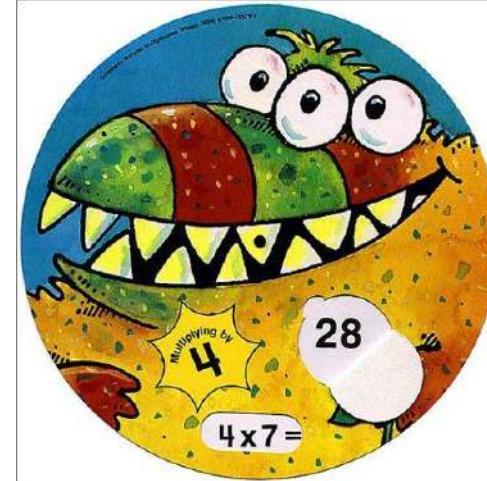
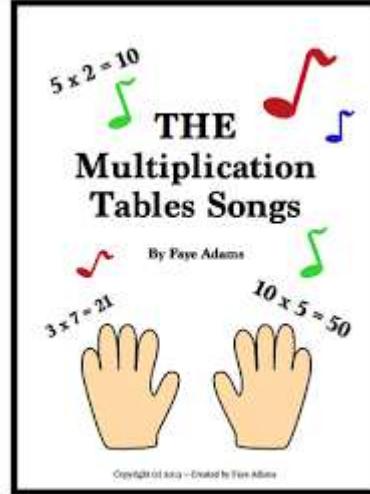
# Division

You have 12 cookies. You put 2 cookies on each plate.  
How many plates do you need?



I need 6 plates

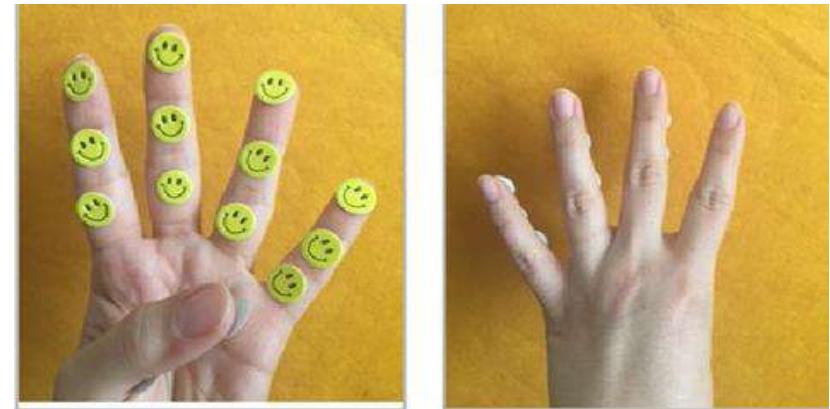
# Fun ways to reinforce Multiplication/ Division



Multiplication monster wheel

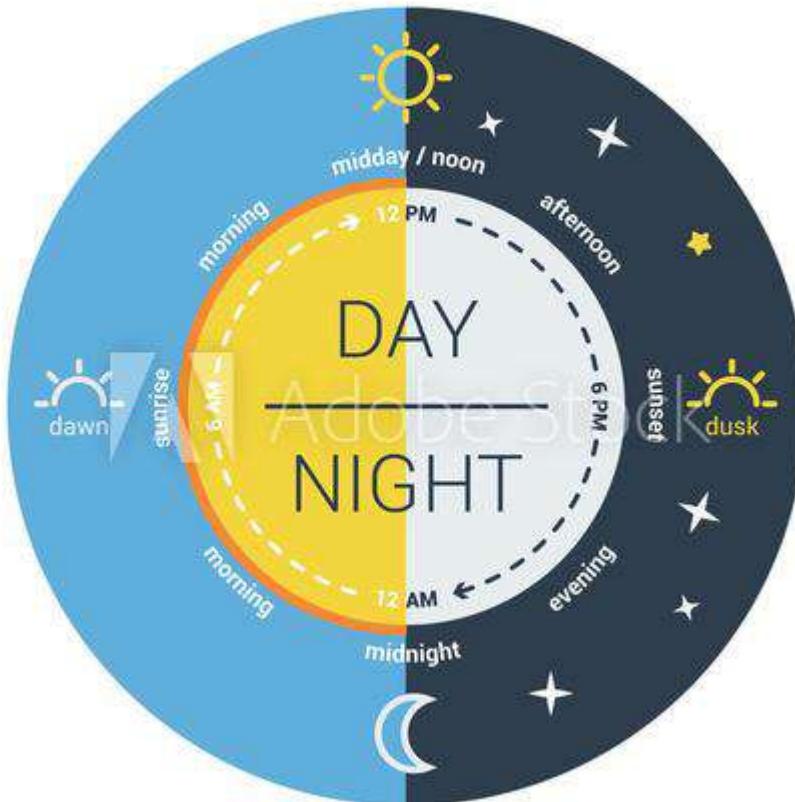


Multiplication Gloves



Display of  $4 \times 3$

# TIME

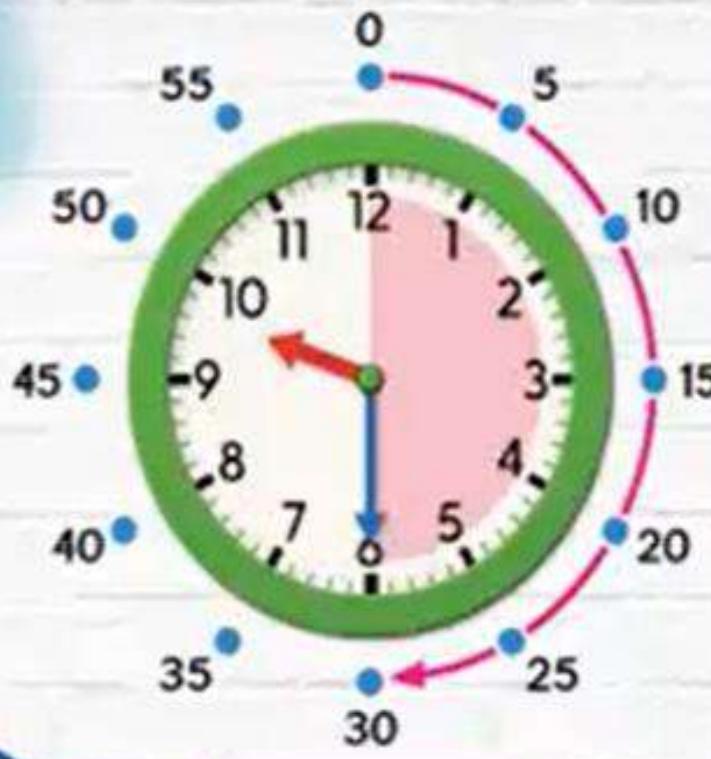


## Learning Outcomes (LO)

- ★ Telling time to 5 minutes  
(for e.g. 2.15 or 2:15).
- ★ Telling time using am and pm.
- ★ Use of abbreviations h and min.
- ★ Drawing hands on clock face.

# Time - Telling Time to 5 minutes

What's New?



9:30

I count by fives.  
5, 10, 15, 20, 25,  
30 minutes.



The time is 9:30.

It is 30 minutes or **half an hour** after 9 o'clock.

# Counting in 5s

Let's count in fives.



1 five

5

2 fives

10

3 fives

15



$$5 + 5 = 10$$

$$2 \text{ fives} = 10$$

$$2 \text{ groups of } 5 = 10$$

# Telling Time using am or pm

Mary started her piano lesson at 4 pm.

It lasted for 1 hour.



4 pm

1 hour after



5 pm

What's New?

# Drawing of hands on clock face

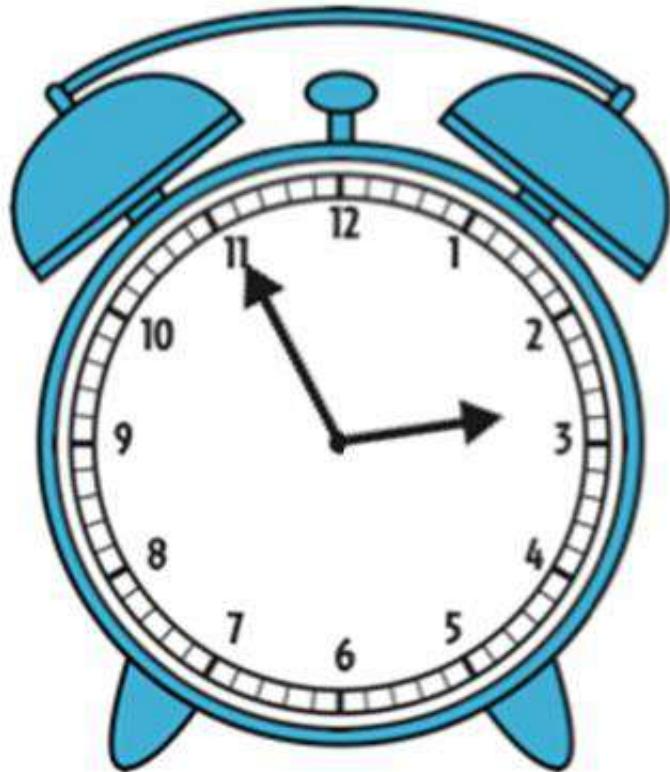


7:05



11:35

# What time is it?



“The time is 3:55!”

“What do you mean I’m wrong?? The short hand is clearly pointing to the 3.”

Once an idea gets drilled into their heads, it’s hard to unlearn it. By the time kids face a problem like above, an entire year has passed. A year of thinking wrong information is hard to undo.

# Clock with special visuals

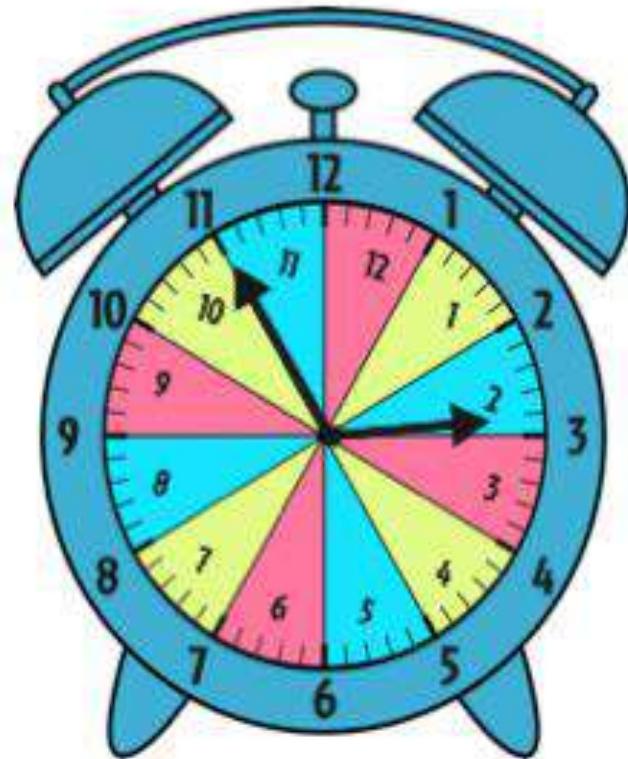


“The hour is 2.”

*How do you know?*

“Because the short hand is inside 2’s room.”

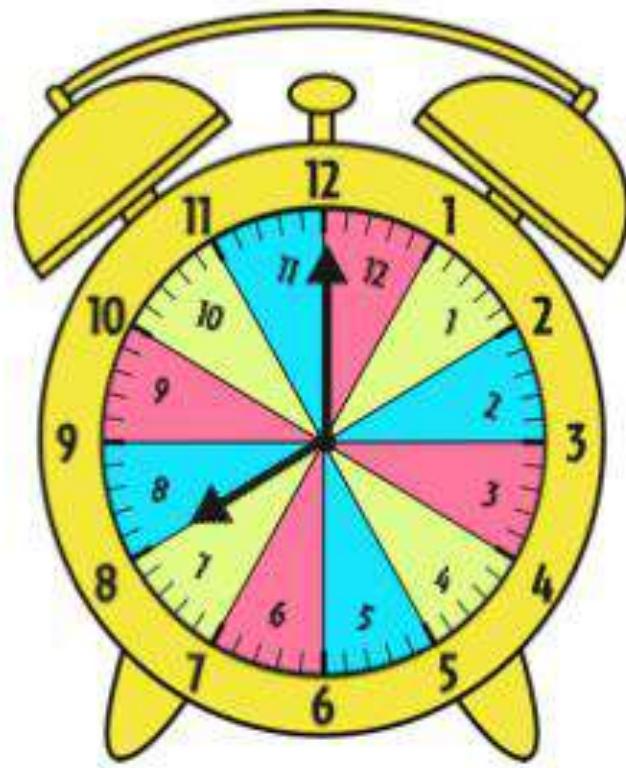
By teaching the idea of the hour owning a space, kids learn from the very beginning that the hour hand is different from the minute hand.



-:55



-:30



-:00

Recommended visuals for introducing time.  
Vary the minutes as much as possible.

# BEGINNER



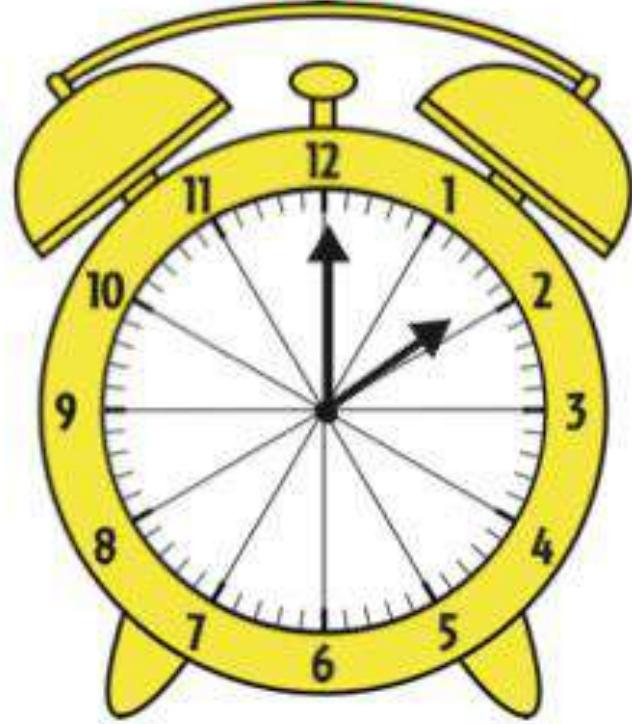
\_:55

# INTERMEDIATE



\_:30

# EXPERT



\_:00

Slowly release visual aids.



**SCHOOL CRAFT**

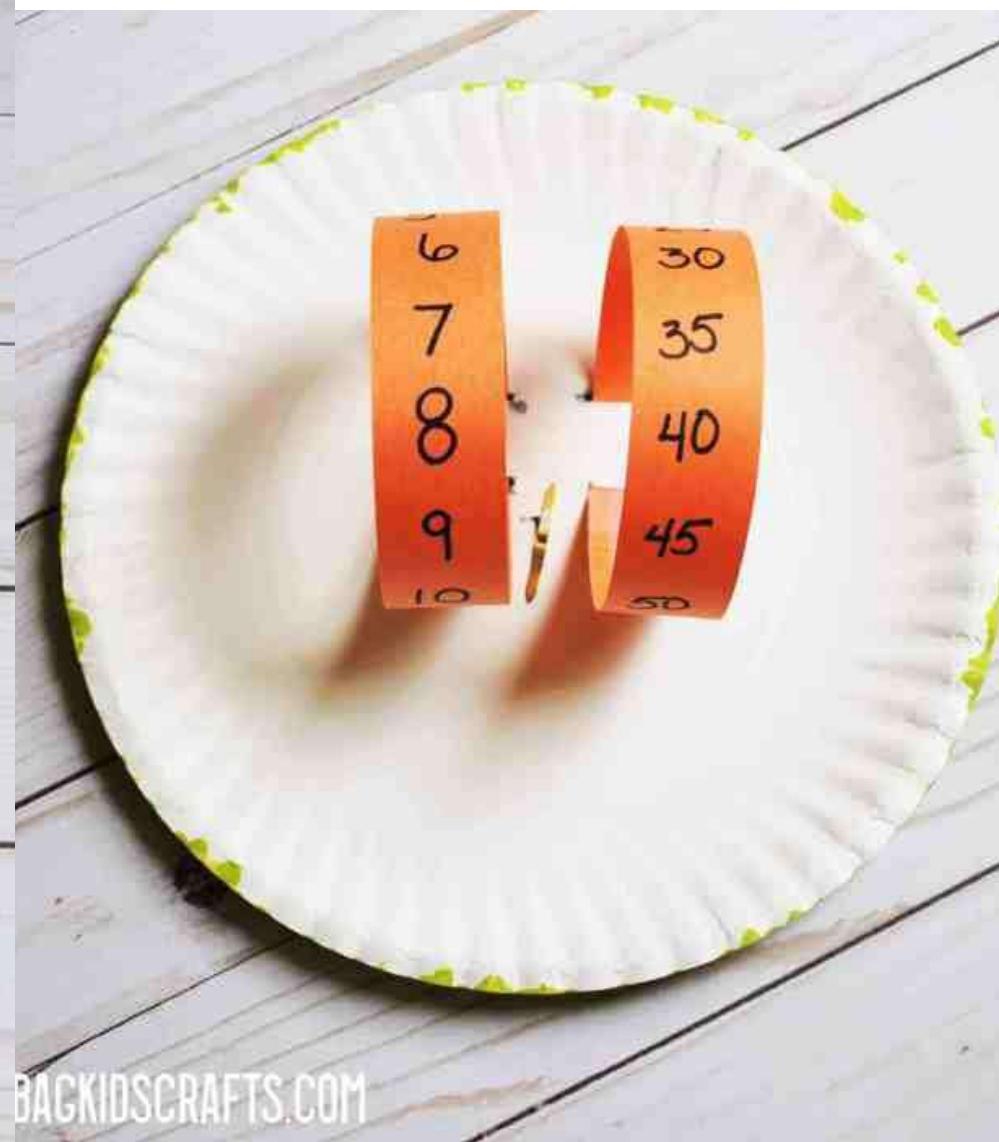


# Learn to Tell Time Clock



# LEARNING TIME

kids' craft





## Learning Outcomes (LO)

- ★ Identify coins and notes of different denominations.
- ★ Match a coin/note of one denomination to an equivalent set of coins/notes of another denomination.
- ★ Tell the amount of money in cents up to \$1, in dollars up to \$100.

## Learning Outcomes (LO)

- ★ Use the symbols \$ and ¢.

For e.g. of common errors:

- Place \$ at the back of the amount e.g. 8\$
- Or include both \$ and ¢ (\$1.50¢).

- ★ Solve word problems involving addition and subtraction of money in dollars only or in cents only.



1¢  
1 cent



\$1  
1 dollar

Which coin can you use in the canteen to buy food?



5¢



50¢

Which coin can you use in the canteen to buy a drink?

# Singapore coins



1¢

5¢

10¢

20¢

50¢

\$1

Which coin has  
the greatest  
value?

Which coin has  
the smallest  
value?

# Resources@home

- Newspaper, magazines, brochures
- 'Play' or real money
- Role Play
- Board Games, e.g. Monopoly



# Toys R Us

## School Break Specials



Visit our new e-store for added shopping convenience at  
[www.rakuten.com.sg/shop/toysrus](http://www.rakuten.com.sg/shop/toysrus)

SAMSUNG

Samsung GALAXY Tab3 Kids  
**\$388** FREE \$30\*  
Toys 'R' Us Voucher

\*Terms & conditions apply. Promotions and free gifts are while stocks last, and are not exchangeable for cash or other items. Please check stores for availability.

**Includes**

Kids Grip Cover Kit (worth \$68) + Pre-loaded popular kids apps.  
Sku 037734 Age: 3-up

**Features**

- Remote Control
- Read Mode
- A B C
- Parental Controls
- Full Screen View

**This is HOT!**



Get a FREE Walking Head Spider-Man Pass worth \$12.90 with \$50 or more purchase of Amazing Spider-Man 2 products (While stocks last. Terms & Conditions apply.)

Exclusive for Star Card Members, get a pair of Amazing Spider-Man 2 Movie Tickets with \$80 or more purchase of Amazing Spider-Man 2 products (While stocks last. Terms & Conditions apply.)



All offers valid till Aug 7, 2014. While stocks last. Not valid with any other promotions. Prices shown are after discount.

Many more great deals in-store now!

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ON SALE W

# 20% OFF THESE LEGO CITY



SAVE \$6

**23.99 ea**

Fire Truck,  
Flat Bed  
Truck,  
Prisoner  
Transporter,  
Tow Truck,  
SUV with  
Watercraft

#234583 #234796  
#36140 #36102 #36107



SAVE \$10

**39.99 ea**

City Fire  
Emergency,  
Mobile Police  
Unit,  
Police Petrol

#258881 #36150 #36103

Cargo  
Truck, Auto  
Transporter,  
Arctic  
Helicopter  
Crane

#428582 #36148 #59849

SAVE \$8

**31.99 ea**



20% OFF

THESE

LEGO STAR WARS

V-Wing Starfighter,  
Grevious Wheels,  
Vulture Droid,  
Phantom

#36010 #36016 #36018 #59854

SAVE \$8

**31.99 ea**

Buy 2 for \$25

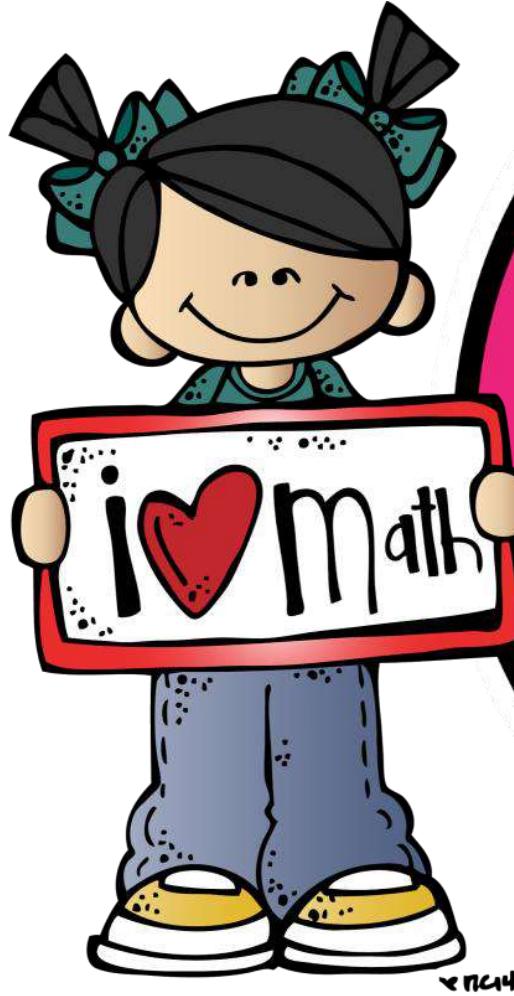
LEGO

STAR WARS

All In One P

#37112 #37514 #371





# BEST

Mathematical  
Problem Solving  
**Approach**

**B**e focused

**E**xplore and plan

**S**olve the problem

**T**hink about the answer



- Circle values.
- Underline characters/objects.
- Make sense of information given (draw arrows ↗).
- What am I asked to find?

Ben has 35 game cards.  
Ravi has 18 more game cards than Ben. How many game cards does Ravi have?

# Let's try!



Mrs Lim bought 4 bags of apples.  
There are 5 apples in each bag.  
How many apples are there  
altogether?

- Circle values.
- Underline characters/objects.
- Make sense of information given (draw arrows →).
- What am I asked to find?



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

- Strategies / Methods
  - Diagram/Drawing sticks and circles  
(Primary 1)
  - GET (Group, Each, Total)  
(Primary 1 & 2)
  - Model drawing (Part-Whole/Comparison)  
(Primary 2)



- What strategy/method to use? Is it...?
  - Diagram/Drawing sticks and circles
  - GET (Group, Each, Total)
  - Model drawing (Part-Whole/Comparison)
- Have I solved a similar problem before?

Mrs Lim bought 4 bags of apples.  
There are 5 apples in each bag.  
How many apples are there  
altogether?



- What strategy/method to use? Is it...?
  - Diagram/Drawing sticks and circles
  - GET (Group, Each, Total)
  - Model drawing (Part-Whole/Comparison)
- Have I solved a similar problem before?

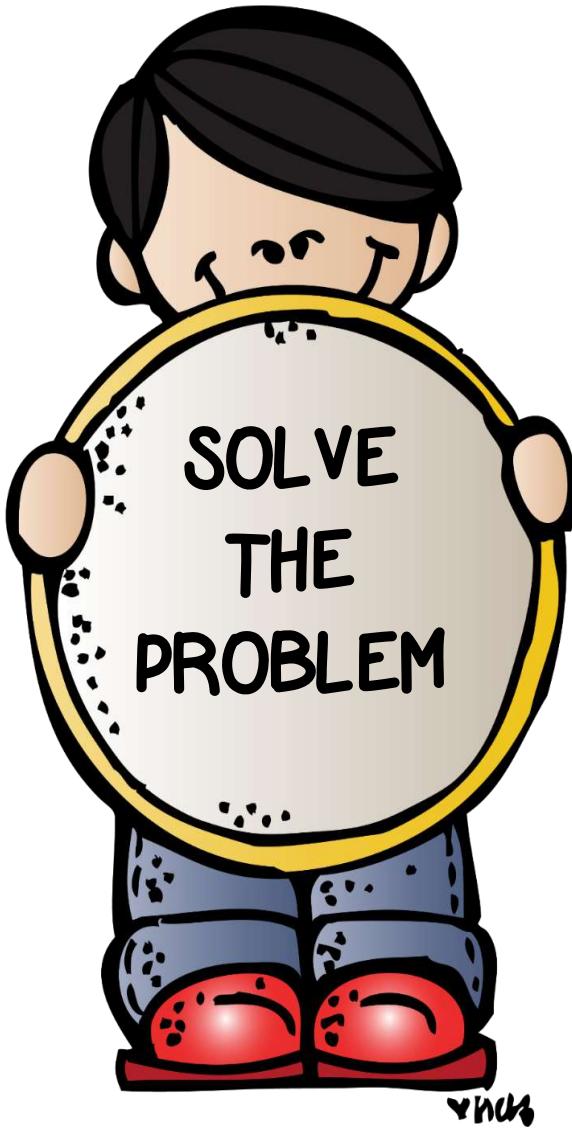
Mrs Lim bought 4 bags of apples.  
There are 5 apples in each bag.  
How many apples are there  
altogether?

||||

||||

||||

||||



- Apply the chosen strategy/method.
- Write out my steps (number equations) clearly.
- Show my working clearly.

Mrs Lim bought **G** 4 bags of apples.  
There are **E** 5 apples in each bag.  
How many apples are there  
altogether? **T**?

**M**

$$G \times E = T$$

**E**

$$4 \times 5 = 20$$

**Working**

5, 10, 15, **20**

**Ans: 20**



- Have I answered the question?
- Does my answer make sense?
- Have I checked for NTUC?

NT - Number transfer

U – Unit/s

C – Calculation/s



THINK  
ABOUT  
THE  
ANSWER

- Have I answered the question?
- Does my answer make sense?
- Have I checked for NTUC?

Mrs Lim bought 4 bags of apples.  
There are 5 apples in each bag.  
How many apples are there  
altogether? **T?**

Working

**M**       $G \times E = T$   
**E**       $4 \times 5 = 20$

5, 10, 15, **20**

Ans: 20

Number transfer    NT ✓

Unit                  U -

Calculations       C ✓

# 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)?

# **COMMON ERRORS MADE BY STUDENTS**



# Number Transfer

## Section C (4 x 3 = 12 marks)

Read the questions carefully.

Solve the questions by showing ALL your number equations and workings clearly.

15. Ann bought a television for \$459.  
She gave the cashier \$500.  
How much change did she receive?

$$500 - 459 = \boxed{49}$$

She received \$49.

$$\begin{array}{r} 4910 \\ 500 \\ - 459 \\ \hline 41 \end{array}$$

Answer:

\$49

When the value is transferred wrongly from the working to the answer box.

Full marks awarded (only if there is clear evidence that the answer presented is the answer for the question).



# Number Transfer: Misread

## Section C (4 x 3 = 12 marks)

Read the questions carefully.

Solve the questions by showing ALL your number equations and workings clearly.

15. Ann bought a television for \$459.  
She gave the cashier \$500.  
How much change did she receive?

$$500 - \boxed{450} = 50$$

$$\begin{array}{r} 4 \ 10 \\ - 450 \\ \hline 50 \end{array}$$

She received \$50.

Answer:

\$50

When the value from the question is misread (copied wrongly).

1 mark will be deducted FROM total method marks awarded (for Sect C).



# Forget/Wrong Units

Section C (4 x 3 = 12 marks)

Read the questions carefully.

Solve the questions by showing ALL your number equations and workings clearly.

15. Ann bought a television for \$459.  
She gave the cashier \$500.  
How much change did she receive?

$$500 - 459 = 41$$

$$\begin{array}{r} 4 \ 9 \ 10 \\ - 500 \\ \hline - 459 \\ \hline 41 \end{array}$$

She received 41.

Answer:

41

When no unit is shown or  
the wrong unit is used,  
0.5 marks will be  
deducted from the total  
marks (for correct  
working/answer)



# Calculation Error

## Section C (4 x 3 = 12 marks)

Read the questions carefully.

Solve the questions by showing ALL your number equations and workings clearly.

15. Ann bought a television for \$459.  
She gave the cashier \$500.  
How much change did she receive?

$$500 - 459 = \boxed{159}$$

$$\begin{array}{r} 500 \\ - 459 \\ \hline 159 \end{array}$$

She received \$159.

Answer:

\$159

When the method is correct but the answer has been calculated wrongly, 1 mark will be deducted from the total marks (no A!).



# Wrong Method

## Section C (4 x 3 = 12 marks)

Read the questions carefully.

Solve the questions by showing ALL your number equations and workings clearly.

15. Ann bought a television for \$459.  
She gave the cashier \$500.  
How much change did she receive?

$$\begin{aligned}5 \times 8 &= 40 \\40 + 1 &= 41\end{aligned}$$

Answer:

\$41

No marks will be awarded  
for the wrong method  
shown to get to the answer.



# No Working Shown

## Section C (4 x 3 = 12 marks)

Read the questions carefully.

Solve the questions by showing ALL your number equations and workings clearly.

15. Ann bought a television for \$459.  
She gave the cashier \$500.  
How much change did she receive?



Answer:

\$41

When no working is shown, but the final answer is correct, students will be awarded only 1 mark (A1) for the question.



# **Math Beyond the Home**



# IN THE NEIGHBOURHOOD

- ❖ What is our house unit number?
- ❖ What is our neighbour's unit number?
- ❖ How many floors are there in our block?
- ❖ How many floors are there in the next block?
- ❖ What shape is the door? Window?
- ❖ How wide is the window? Is it more/less than 1 m?
- ❖ Let's take the stairs and count the steps.

# @ THE VOID DECK

- ❖ Which is the biggest number in this row?
- ❖ What is the shape of the table?
- ❖ How many more red bicycles than blue bicycles are there?
- ❖ There are 3 bicycles. Each has 2 wheels. How many wheels are there?



# @ THE PLAYGROUND

- ❖ Look around. What are the shapes that you can see?
- ❖ Which slide is longer?
- ❖ How many more steps are there on this slide than that slide?
- ❖ Let's measure this playground.  
(Use footsteps)
- ❖ Who is heavier?



# IN THE SUPERMARKET

- ❖ Look around. What are the shapes that you can see?
- ❖ How much must we pay altogether? How much change must the cashier give you?
- ❖ How many more cartons than tins are there?
- ❖ Can you take 2 groups of 3 carrots for me?
- ❖ Which tin is heavier? How much heavier is it?

# Online Resources

<http://anyflip.com/wtqw/nuyr>



[www.mathplayground.com](http://www.mathplayground.com)



[www.topmarks.co.uk](http://www.topmarks.co.uk)



<https://member.koobits.com>





**Do you have  
any questions ?**



# Workshop Survey

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](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  
Mrs Ellis Chua