

DUAL LANGUAGE PROGRAMME

MATHEMATICS

YEAR 1

TEXTBOOK

PART 2

Writers

Chan Yook Lean
Wan Yusof bin Wan Ngah
Gobi a/l Krishnan



Editors

Ainol Rafezah binti Alias
Mohamad Arshad bin Sulaiman
Nurul Shaheza binti Zamri



Illustrator

Wong Chi Ming



Graphic Designers

Najmi bin Mat Sarit
Mohd Khairin bin Abd. Malek
Aini binti Abd. Hamid



Translator

Norehan binti Shaharoun



DBP

Dewan Bahasa dan Pustaka
Kuala Lumpur

2019



KEMENTERIAN
PENDIDIKAN
MALAYSIA

Serial No.: 0188

KK 513-221-0102021-49-1250-20101
ISBN 978-983-49-1250-5

First Printing 2016
Fourth Printing 2019
© Ministry of Education Malaysia 2016

All Rights Reserved. No parts of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage and retrieval system without permission in writing from Director General of Education, Ministry of Education Malaysia. Negotiation is subject to the calculation of royalty or honorarium.

Published for the Ministry of Education Malaysia by:
Dewan Bahasa dan Pustaka,
Jalan Dewan Bahasa,
50460 Kuala Lumpur.
Telephone: 03-21479000 (8 hunting lines)
Facsimile: 03-21479643
Website: <http://www.dbp.gov.my>

Design and Typeset:
Dewan Bahasa dan Pustaka

Text Typeface: Azim
Text Typeface Size: 18 point

Printed by:
Percetakan Zainon Kassim Sdn. Bhd.,
No. 1, 2, 4 & 6 Tingkat Kilang,
Kawasan Perindustrian Ringan Jelapang,
30100 Ipoh,
Perak Darul Ridzuan.

ACKNOWLEDGEMENTS

The Ministry of Education would like to express their appreciation for the contributions made by the following parties:

- The Panel of Evaluators,
Textbook Division,
Ministry of Education Malaysia.
- Officers of the Textbook Division,
Ministry of Education Malaysia.
- The Panel of Evaluators,
Dewan Bahasa dan Pustaka.
- Officers of the English Language
Teaching Centre (ELTC),
Teacher Education Division,
Ministry of Education Malaysia.
- SK Taman Bukit Maluri, Kuala Lumpur.
- SK Pengkalan Rinting, Johor.
- All parties involved in the process of
publishing this book.



CONTENTS

3 FRACTIONS

RECOGNISE FRACTIONS
MY PROJECT
SOLVE THE PROBLEMS
SMART FUN

1
2
6
7
10

4 MONEY

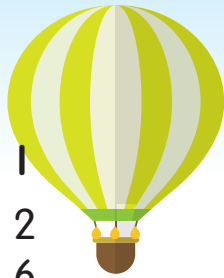
RECOGNISE MONEY
VALUE OF MONEY
CONVERSION OF MONEY
GET AND RECORD MONEY
MY PROJECT
SOLVE THE PROBLEMS
SMART FUN

11
12
14
16
20
22
23
30

5 TIME

RECOGNISE TIME OF THE DAY
RECOGNISE THE CLOCK AND TIME
SAY AND WRITE THE TIME
MY PROJECT
RECOGNISE DAYS, WEEKS AND MONTHS
SOLVE THE PROBLEMS
SMART FUN

31
32
33
35
37
38
41
44

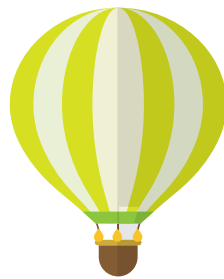


6 LENGTH, MASS AND VOLUME OF LIQUID

RECOGNISE LENGTH OF OBJECTS	45
MEASURE AND COMPARE THE LENGTH OF OBJECTS	46
RECOGNISE MASS OF OBJECTS	48
WEIGH AND COMPARE THE MASS OF OBJECTS	51
RECOGNISE VOLUME OF LIQUID	52
MEASURE AND COMPARE THE VOLUME OF LIQUID	54
SOLVE THE PROBLEMS	55
SMART FUN	57

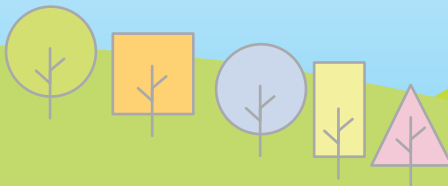
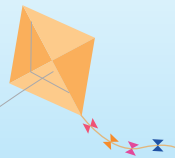
7 SHAPES

3-D SHAPES	60
RECOGNISE 3-D SHAPES	61
3-D SHAPES PATTERNS	62
BUILD MODELS	64
2-D SHAPES	66
RECOGNISE 2-D SHAPES	67
2-D SHAPES PATTERNS	68
CREATE PATTERNS	69
SOLVE THE PROBLEMS	70
SMART FUN	71



8 DATA

COLLECT DATA	75
RECOGNISE PICTOGRAPH	76
SOLVE THE PROBLEMS	78
SMART FUN	81



3

FRACTIONS



Ai Lin, mummy has cut this waffle.

Two equal parts.

I want half.

3.1.1



- Guide the pupils to talk about objects in the picture that show two equal parts.
- Discuss daily life situations which involve fractions.

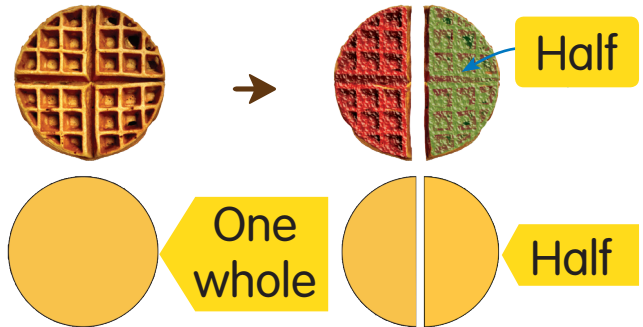




RECOGNISE FRACTIONS

One over two and one over four

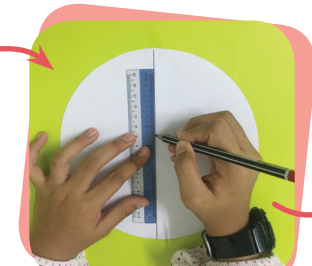
! What is one over two?



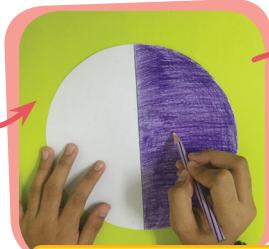
1 out of 2 equal parts is one over two.



Fold a paper



Draw a line in the middle



Colour one part

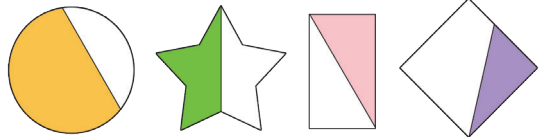


Write the fraction

Let's make one over two.



Which is one over two? Discuss.



3.1.1

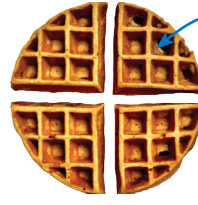
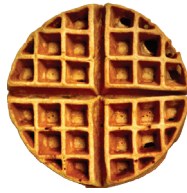


- Explain that fraction is a part of a whole object through simulation. Every part must be of equal size.
- Conduct activities of colouring or shading one out of two parts of different shapes.
- Tell the pupils that one over two is also called half.

2 What is one over four?

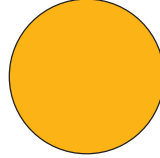


I out of 4 equal parts.

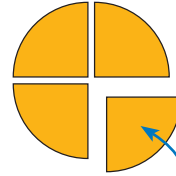


Quarter

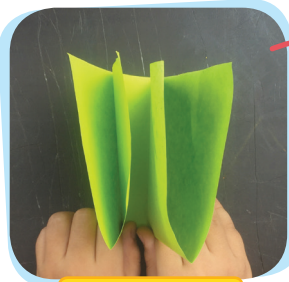
Each part is one over four or a quarter.



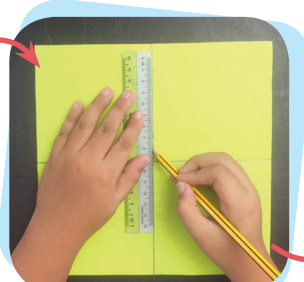
One



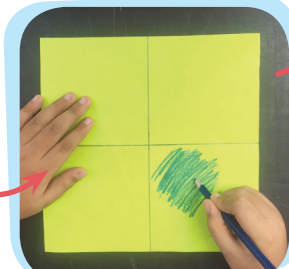
One over four



Fold a paper



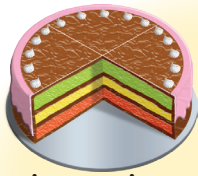
Draw lines



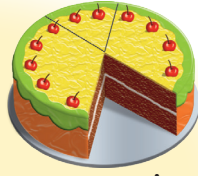
Colour one part



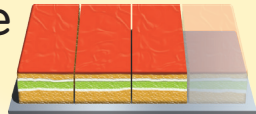
Write the fraction



Chocolate cake



Fruit cake



Layered cake

Adi eats one over four of a cake. Which cake is it? Discuss.



3.1.1



- Conduct activities to understand one over two and one over four using fraction kits or fraction cards. Show to the pupils that each quarter when combined will form one whole (original shape).
- Surf <http://www.kidsnumbers.com/fractions.php>

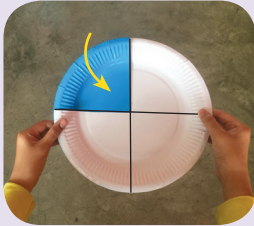
AB pages 1 - 3

Two over four and three over four

Each part is equal.



1 out of 4 parts

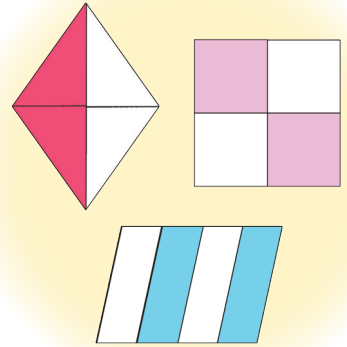


One over four

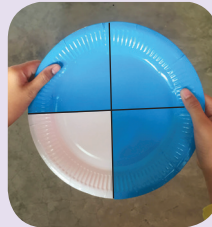
2 out of 4 parts



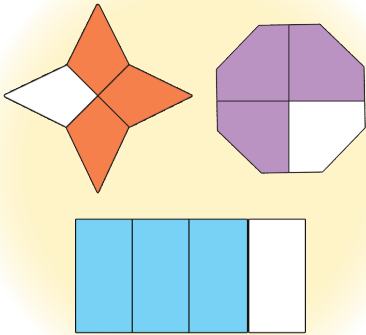
Two over four



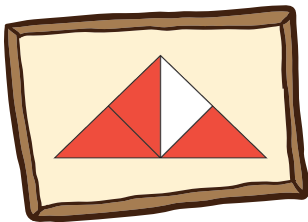
3 out of 4 parts



Three over four



Three over four is also called three quarters.



Is the red-shaded part three over four? Discuss.



3.1.1



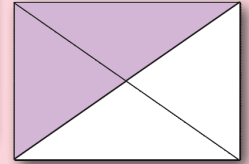
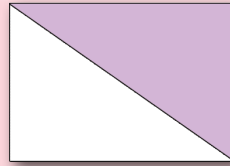
- Guide the pupils to understand the concepts of two over four and three over four through activities such as fraction kits, using concrete objects and paper folding.
- Compare two over four and one over two.
- Use a variety of shapes for pupils to identify fraction values.

AB pages 4 - 5

SHARPEN YOUR MIND

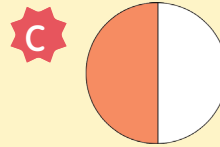
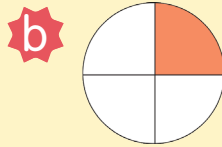
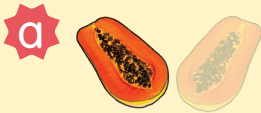


Are the shaded parts are of the same size? Explain.

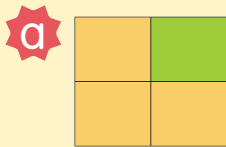


SELF-TEST

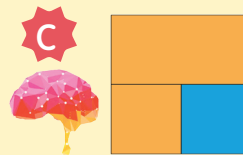
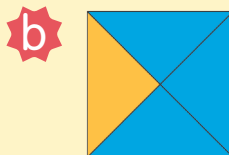
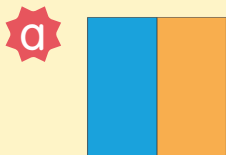
1 Which is one over two? Why?



2 Which is one over four?

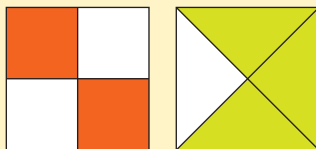


3 Name the fraction of the blue-shaded part.

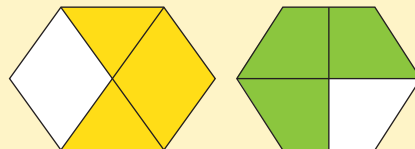


4 Identify a diagram that shows:

a two over four.



b three over four.



3.1.1



- Provide more exercises to elicit the pupils' ideas such as questions 3 and 4.
- Provide more questions in the form of worksheets or question cards.



MY PROJECT

Fraction cookies

Participants 4 to 6 in a group.

Materials Dough, mould, saucer, ruler, decorative materials.

Method

1 Knead the dough.



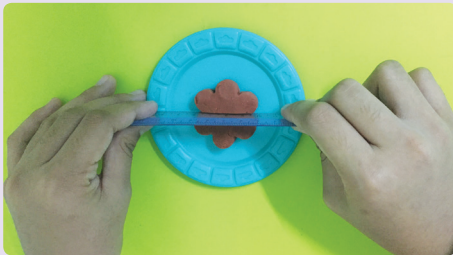
2 Press and level out the dough.



3 Press the mould onto the dough.



4 Cut the cookie into two equal parts.



5 Decorate the cookie according to the fraction.



6 Label the fractions.



One over two



Two over four



One over four



Three over four

3.1.1



- Prepare enough suitable materials for activity. The dough can be replaced by plasticine.
- Guide the pupils to divide the cookies into equal parts.



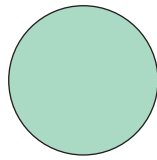
SOLVE THE PROBLEMS



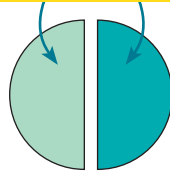
1 Suri cuts a cake into two equal parts.
What is the fraction for each part?



Method



One over
two



Each part of the cake is **one over two**.

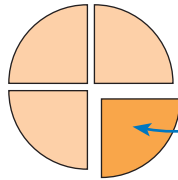


2 Mummy cuts this pizza.
Four equal parts.
One part is for Azim.

What is the fraction for
Azim's pizza?



Method



One over four

The fraction for Azim's pizza is **one over four**.

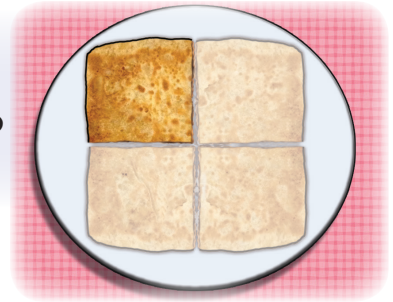
3.2.1



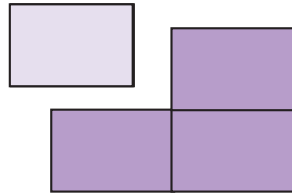
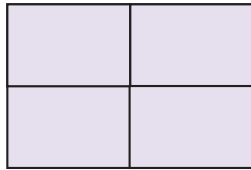
- Show other problem solving strategies such as simulation.
- Surf http://www.homeschoolmath.net/teaching/f/understanding_fractions.php
- Guide the pupils to check answers.

3

I eat three equal parts of a *martabak*.
What fraction of the *martabak* do I eat?



Method



Three over four

I eat **three over four** of the *martabak*.

4

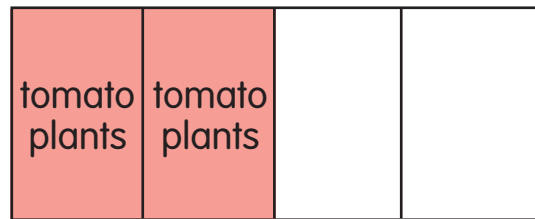
Two out of four plots are planted with tomato plants. What is the fraction?



Method



I draw a diagram.



Two over four

The fraction is **two over four**.

3.2.1



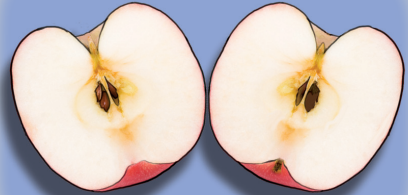
- Use geoboard to form one over four, one over two, two over four and three over four from one single shape.
- Encourage the pupils to check their answers.



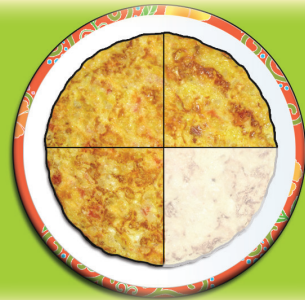
SELF-TEST

Solve these.

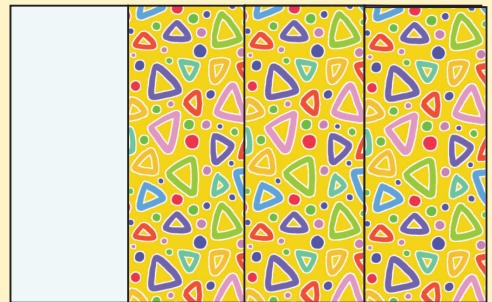
- a** What is the fraction for each part of this apple?



- b** Ani eats a quarter of an omelette. What is the fraction?



- c** Lim divides a piece of paper into four equal parts. He draws 3 parts with patterns. State the fraction with pattern.



- d** Johan drinks half a bottle of juice. Which juice is it?



Orange Apple Pineapple Kiwi

3.2.1



- Provide more questions in the form of worksheets or question cards.
- Surf http://www.sheppardsoftware.com/mathgames/earlymath/fractions_shoot.htm

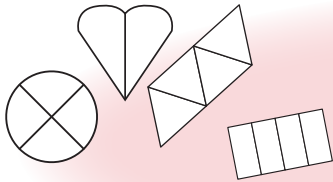




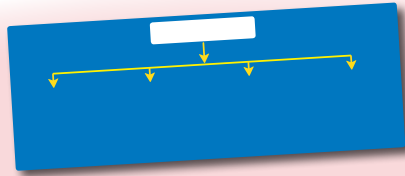
Fun with Fractions

Participants 4 pupils in a group.

Materials



Shape cards



Fraction chart



Coloured paper



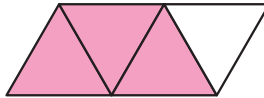
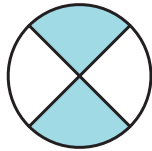
Glue



Coloured pencils

Method

1 Colour one, two or three parts.



2 Paste the shapes on a fraction chart.

FRACTIONS

One over two

One over four

Two over four

Three over four

3 Display your work. Talk about it.

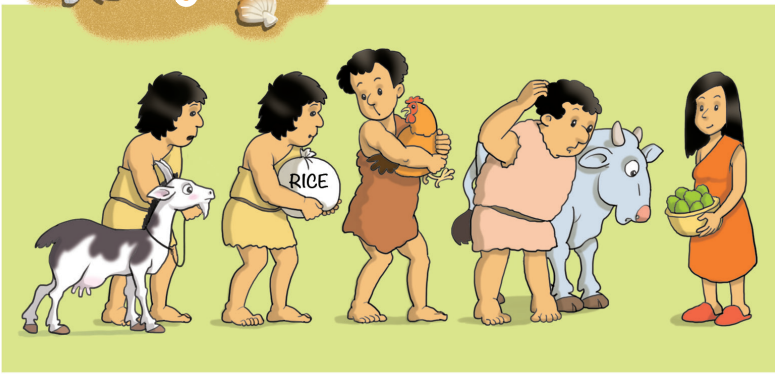
3.1.1
3.2.1



- Prepare materials and shapes that have been divided into equal parts for each group.
- Guide the pupils to carry out activities to reinforce the concept of fractions.

4

MONEY



4.1.1
4.2.1

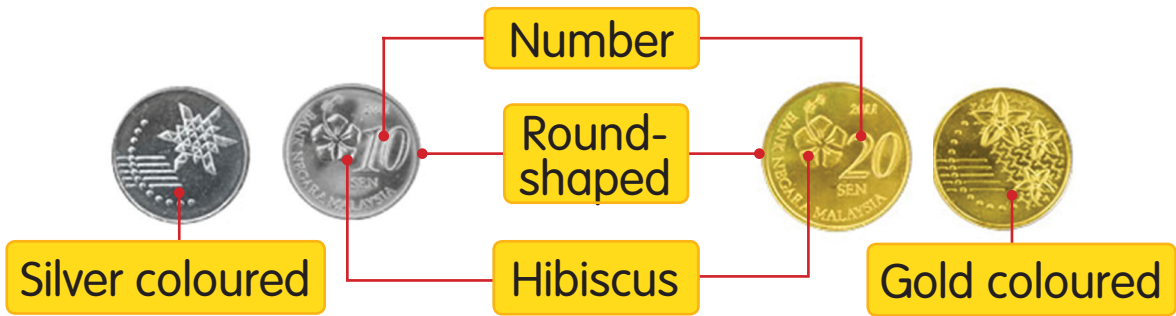
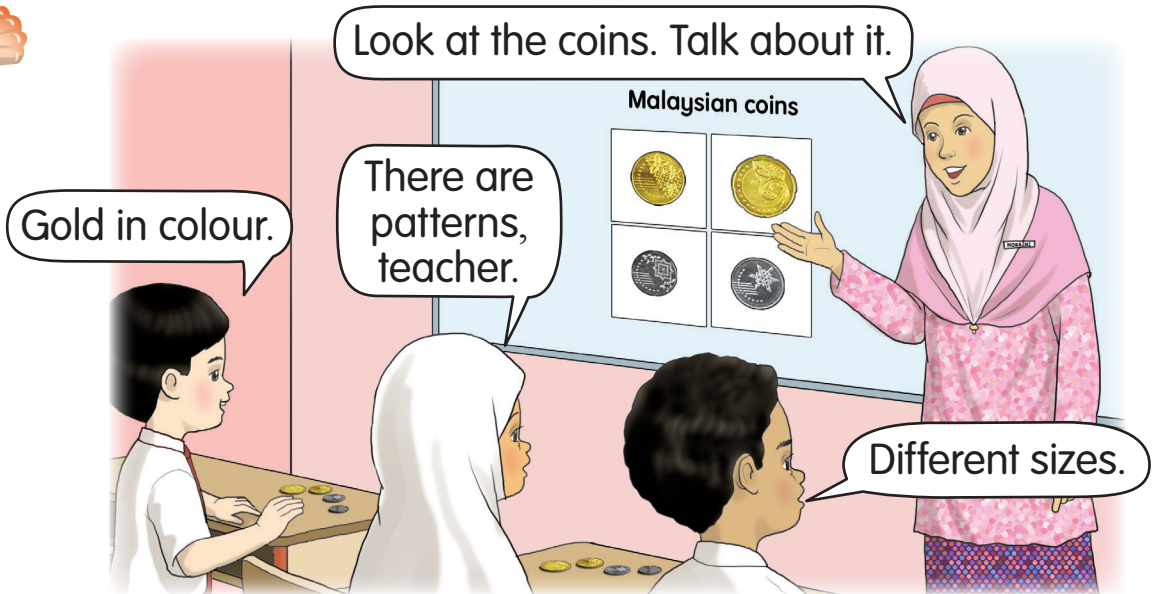


- Ask the pupils to talk about the pictures. Expose them to the history of money such as the barter system and the old currencies.
- Instil moral values of spending wisely and caring for the environment.
- Surf <https://www.youtube.com/watch?v=J7hNOt2Y0J8>





RECOGNISE MONEY



Look at these coins. What are the similarities? What are the differences?



4.1.1



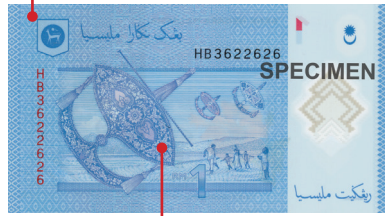
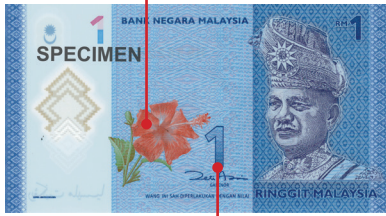
- Discuss similarities and differences among the four types of coins.
- Explain that money is an exchange tool in buying and selling activities.
- Surf http://www.bnm.gov.my/files/publication/ar/bm/2011/cp02_001_rencana.pdf to explore more information on the characteristics of money.



3

Hibiscus

Bank Negara logo



Number

Wau bulan



Talk about these RM5 and RM10 notes. What are the differences?



SELF-TEST

Talk about the money.

a



b



c



4.1.1



- Explain that the number on the money shows the value of the money.
- Encourage the pupils to talk about money.
- Provide more questions in the form of worksheets or question cards.
- Surf http://www.bnm.gov.my/microsites/2011/banknotes/00_overview.htm

AB pages 11 - 14



VALUE OF MONEY



Five sen.

5 sen

Ten sen

10 sen

Twenty sen

20 sen

This dot separates the ringgit and the sen.

Fifty sen

50 sen



Ten sen

10 sen

Thirty sen

30 sen

Count on 20 sen, 30 sen.



65 sen

4.1.2



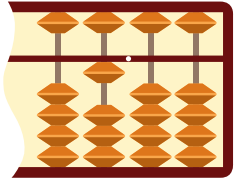
- Carry out simulation activities on combination of values of money.
- Encourage the pupils to show combination of values of money on the abacus.
- Emphasise that the value of a combination of money is the total amount of the values of money.



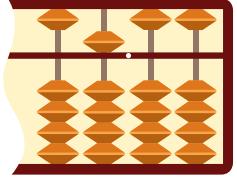
3



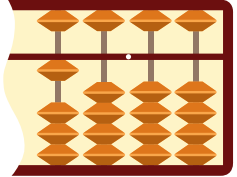
One ringgit **RM1**



Five ringgit **RM5**



RM10



4



Six ringgit
RM6



Two ringgit
RM2



SELF-TEST

Say the value of money.

a



b



c



4.1.2



- Carry out group activities where pupils use play money and abacus to show the amount of money and write the value of money said aloud by teacher.
- Provide more questions in the form of worksheets or question cards.



CONVERSION OF MONEY



This machine does not accept 5 sen.
This money needs to be converted.



same value



a



I have 20 sen.
I want to save it.

I have
20 sen too.



same value



b



same
value



c



same value



4.1.3



• Guide the pupils to convert money using different combinations of coins.

3



same value



same value



same value



same value

State other combinations to convert 50 sen.



4



RMI

same value

100 sen



same value

100 sen



same value

100 sen



There are other conversions of RMI. Talk about it.



4.1.3



- Explain that conversion of money is to give and receive money of the same value.
- Carry out quizzes on finding the conversion value of coins.
- Carry out simulation activities to enhance pupils' understanding.



same value



same value



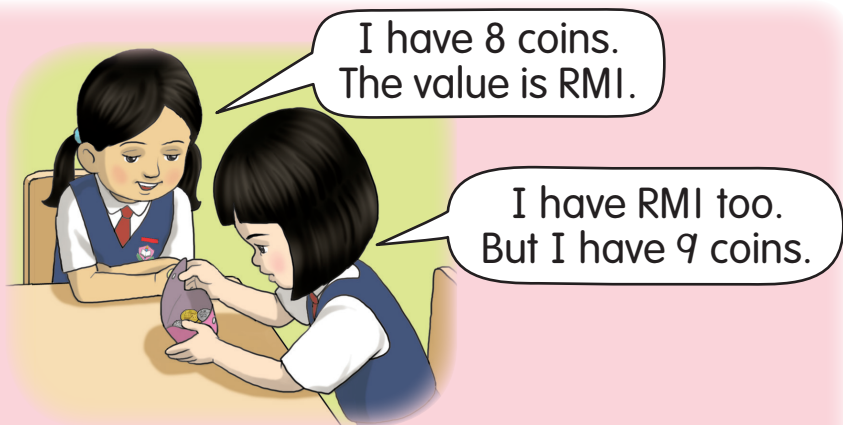
same value



Say other combinations for RM5.



SHARPEN YOUR MIND



I have 8 coins. The value is RM1.

I have RM1 too. But I have 9 coins.

What is the value of each coin they have?

4.1.3



- Guide the pupils carry out simulation activities using play money to enhance their understanding of combination of money.
- Surf <https://www.mathsisfun.com/money/make-amount.html>



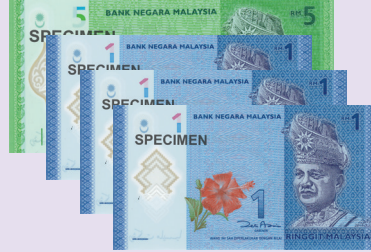
6 a



b



same value






Say other combinations that have the same value as






SELF-TEST

Complete the conversion of money.

a  has the same value as .

b  has the same value as .

c  has the same value as 
and .

4.1.3



- Discuss the conversion value of 40 sen, 70 sen, RM3, RM8 and others.
- Provide more questions in the form of worksheets or question cards.
- Surf <http://www.mathsisfun.com/money/money-master.html>

AB pages 17 - 19



GET AND RECORD MONEY



Duit raya



Gift



Money from grandfather



Pocket money



Money from sales

What are other ways to get money?



4.2.1
4.2.2



- Explain that source of money is money that you get from a job or from someone, and discuss about the source of pupils' money.
- Explain that recording the flow of money is important for reference.
- Discuss ways of saving money safely and managing it wisely.





Li Ming draws a table.

Date	Money source		Save	Spend	
10/3/2017	From granny	RM10	RM5	Storybook	RM5
16/3/2017	Pocket money	90 sen	<input type="text"/>	Bread	40 sen
24/4/2017	Sell tins	RM5	<input type="text"/>	<input type="text"/>	RM1



Can Li Ming buy a wallet if he spends freely?

4.2.1
4.2.2



- Discuss ways to get money.
- Apply moral values of fulfilling needs when spending instead of wants as shown in the ledger of pocket money book.
- Explain that spending freely is spending excessively.



MY PROJECT

Let's be thrifty

Materials

Manila cards, catalogues, scissors, glue.

Steps

- 1 Think of something you wish to buy in a week.
- 2 List out pocket money and expenses on a manila card.
- 3 Paste pictures of things you wish to buy.
- 4 Display at the Mathematics Corner.

Date	Pocket Money	Save	Spend
22-5-2017	RM3	RM2	 RM1
23-5-2017	90 sen	20 sen	 70 sen
24-5-2017	RM5	RM1	 RM4
25-5-2017	80 sen	30 sen	 50 sen
26-5-2017	RM2	RM1	 RM1

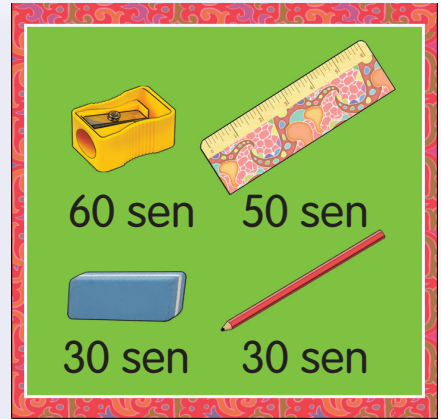
4.2.1
4.2.2



- Guide the pupils to record savings and spending using MS Word software.
- Ask the pupils to bring a catalogue of goods.
- Activity can be done individually or in groups.



SOLVE THE PROBLEMS



Kim buys  and . Find the total cost.

$$50 \text{ sen} + 30 \text{ sen} = \boxed{}$$

Method 1

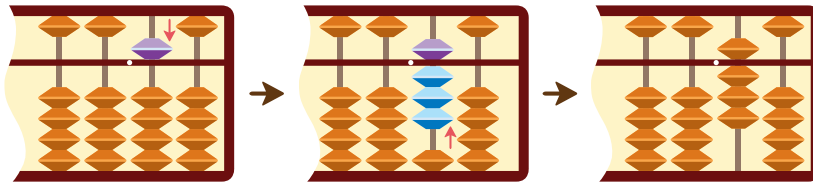
$$\begin{array}{r} 50 \text{ sen} \\ + 30 \text{ sen} \\ \hline 80 \text{ sen} \end{array}$$

Method 2

Count on.
50 sen, 70 sen, 80 sen.



Method 3



$$50 \text{ sen} + 30 \text{ sen} = \boxed{80 \text{ sen}}$$

The total cost is 80 sen.

4.3.1



- Do buying and selling activities in class. Provide more questions such as adding the costs of pencil and sharpener.
- Guide the pupils to add the values of coins through simulation using play money.
- Train the pupils to calculate using abacus.

2

Arisa has 55 sen. Fei Fei has 25 sen more than Arisa. How much money does Fei Fei have?

$$55 \text{ sen} + 25 \text{ sen} = \square$$

Method 1

$$\begin{array}{r}
 55 \text{ sen} \\
 + 25 \text{ sen} \\
 \hline
 80 \text{ sen}
 \end{array}$$

Method 2



$$55 \text{ sen} + 25 \text{ sen} = \mathbf{80 \text{ sen}}$$

Fei Fei has **80 sen**.

3

Ramu donates RM5. Kamal donates RM5 too. Calculate the total amount of money.

$$\text{RM}5 + \text{RM}5 = \square$$

Method 1

$$\begin{array}{r}
 \text{RM } 5 \\
 + \text{RM } 5 \\
 \hline
 \text{RM } 10
 \end{array}$$



Method 2



$$\text{RM}5 + \text{RM}5 = \mathbf{\text{RM}10}$$

The total amount of money is **RM10**.

4.3.1



- Provide a variety of questions to enhance pupils' understanding.
- Encourage the pupils to use a variety of strategies in solving problems.

4



RM3



90 sen




70 sen



RM5



RM6

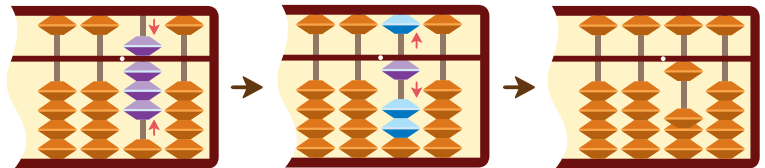
a Fara has 80 sen. She buys . Find the amount left.

$$80 \text{ sen} - 70 \text{ sen} = \boxed{}$$

Method 1

$$\begin{array}{r} 80 \text{ sen} \\ - 70 \text{ sen} \\ \hline 10 \text{ sen} \end{array}$$

Method 2



$$80 \text{ sen} - 70 \text{ sen} = \boxed{10 \text{ sen}}$$

The amount left is 10 sen.

b Find the difference in price between  and .

$$RM6 - RM3 = \boxed{}$$

Method 1

Count back



$$RM6 - RM3 = \boxed{RM3}$$

The difference in price is RM3.

Method 2

$$\begin{array}{r} RM6 \\ - RM3 \\ \hline RM3 \end{array}$$

4.3.1



- Provide more questions on subtraction based on pictures such as to find what is left, the difference and how much less to enhance the subtracting skill.
- Surf <http://www.teach-nology.com/worksheets/math/money/mon1.html>

- 5 Saiful has RM10. He donates RM4 to the poor. How much money is left?

$$\text{RM}10 - \text{RM}4 = \square$$

Method 1

$$\begin{array}{r} \text{RM } 10 \\ - \text{RM } 4 \\ \hline \text{RM } 6 \end{array}$$



Method 2



$$\text{RM}10 - \text{RM}4 = \text{RM}6$$

The money left is **RM6**.

- 6 Ying has RM10. Wafi has RM2 less than Ying. Calculate Wafi's money.

$$\text{RM}10 - \text{RM}2 = \square$$

Method

$$\begin{array}{r} \text{RM } 10 \\ - \text{RM } 2 \\ \hline \text{RM } 8 \end{array}$$

$$\text{RM}10 - \text{RM}2 = \text{RM}8$$

Wafi has **RM8**.

Count back to check the answer.



4.3.1



- Guide the pupils to subtract values of coins and notes using a variety of strategies.
- Instil moral values such as honesty and being thrifty.



Adib has 80 sen in his money box. He puts in 20 sen more. What is the total amount of Adib's money?

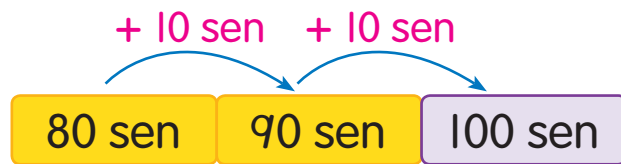


$$80 \text{ sen} + 20 \text{ sen} = \boxed{}$$

Method 1

$$\begin{array}{r} 80 \text{ sen} \\ + 20 \text{ sen} \\ \hline 100 \text{ sen} \end{array}$$

Method 2



$$80 \text{ sen} + 20 \text{ sen} = \boxed{100 \text{ sen}}$$

The total amount is **100 sen**.



Aini has 25 sen. Esha has 65 sen. How much more must Aini save to have the same amount?



$$25 \text{ sen} + \boxed{} = 65 \text{ sen}$$

Method

$$\begin{array}{r} 25 \text{ sen} \\ + \boxed{40 \text{ sen}} \\ \hline 65 \text{ sen} \end{array}$$

Discuss ways to check the answer.

$$25 \text{ sen} + \boxed{40 \text{ sen}} = 65 \text{ sen}$$

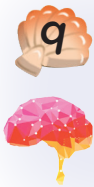
Aini needs to save **40 sen** more.



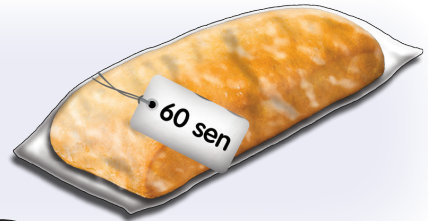
4.3.1



- Do simulation activities using play money to add or subtract money.



9 Najwa buys a bun. She pays RMI. How many 20 sen, 10 sen or 5 sen will she receive?



Method 1

$$\text{RM } 1 - 60 \text{ sen} = \boxed{}$$



$$\text{RM } 1 - 60 \text{ sen} = \boxed{40 \text{ sen}}$$

Bun is 60 sen. Pay RMI.

How much is the change?

Method 2

$$\begin{array}{r} 100 \text{ sen} \\ - 60 \text{ sen} \\ \hline 40 \text{ sen} \end{array}$$



Najwa may receive 4 pieces of 10 sen.



Najwa may receive other changes. Discuss.

You have  and 4 .

Mummy gives . Which book would you buy? Why?

SHARPEN YOUR MIND



RM8



RM9



RM10

4.3.1

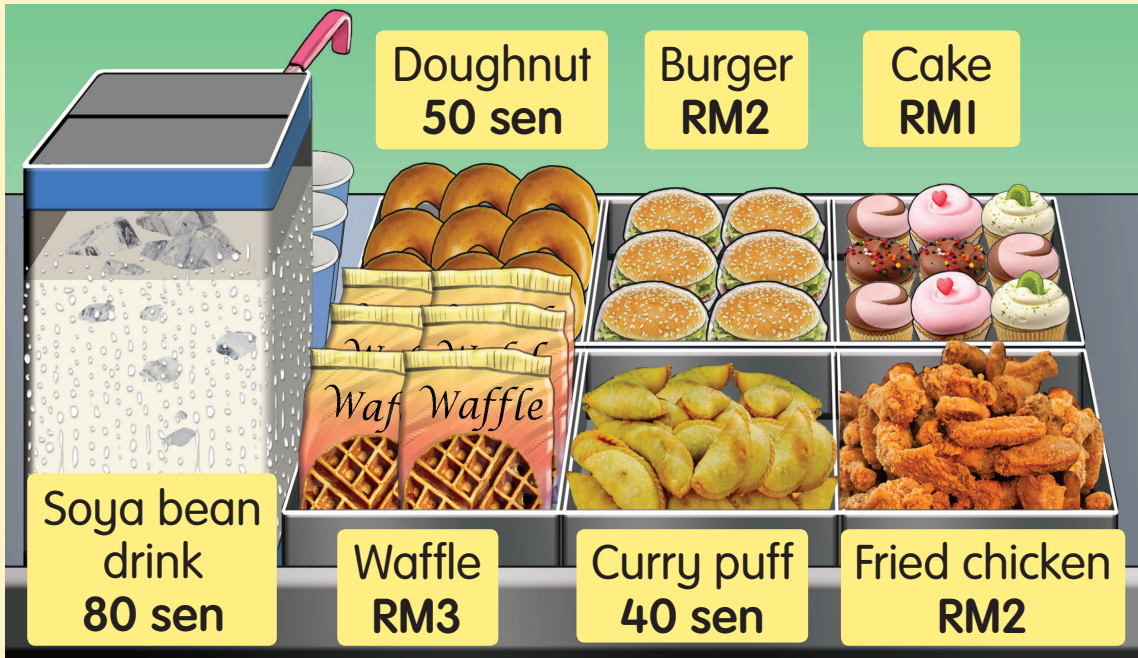
TEACHER'S NOTES


- Explain that a combination of money is several pieces of money that has a value.
- Provide a variety of daily life situations involving subtraction of money such as buying and selling activities, and savings.



SELF-TEST

Solve these.



- What is the total price of one doughnut and one curry puff?
- Find the difference in price between one fried chicken and one cake.
- Sara has RM3. She buys one burger. Calculate Sara's amount of money left.
- Kim has 50 sen. He wants to buy a soya bean drink. How much more money does he need?
- Ramjit pays RM5 for one waffle. How many  will he receive?

4.3.1



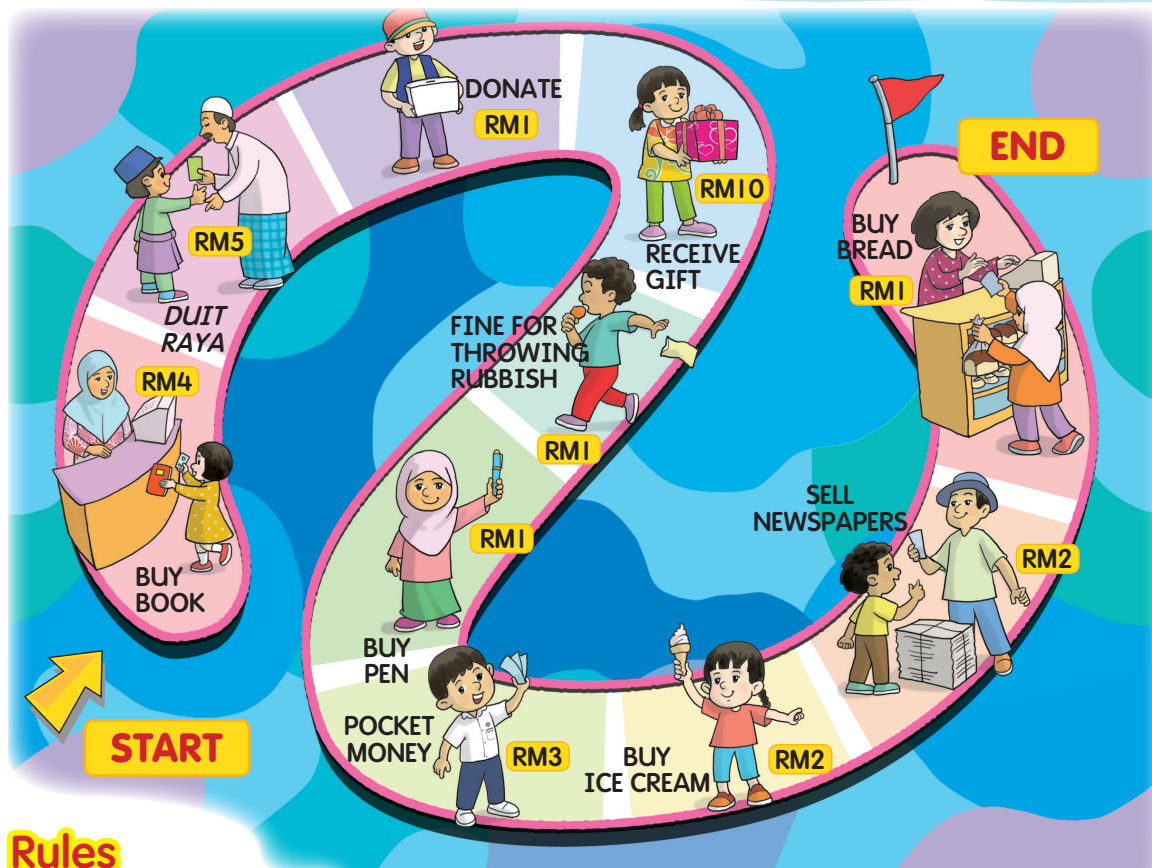
- Provide a variety of questions to enhance pupils' understanding.
- Provide more questions in the form of worksheets or question cards.
- Surf <http://www.kidsmathgamesonline.com/money/funshopping.html>



Let's collect some money!

Participants 3 players and 1 cashier.

Materials Play money, coins, chips, pencils, papers.



Rules

- 1 Take RM10.
- 2 Toss a coin. If it is head, move the chip 1 step onward. If it is tail, move the chip 2 steps onward.
- 3 Follow the instructions on the squares.
- 4 Jot down money received or spent.
- 5 Take turns until the game is finished.
- 6 The player with the most amount of money is the winner.

4.2
4.3



- Ask the pupils to determine their turns. Ask the cashier to give RM10 to each player.
- Carry out quizzes or other games activities according to the pupils' abilities.

AB pages 29 - 30

5 TIME



Day

Night

5.1.1
5.1.2

TEACHER'S
NOTES

- Ask the pupils to talk about the pictures. Apply Elements Across the Curriculum (EMK) like moral values of appreciating time and the environment.
- Surf <https://nrich.maths.org/6070>



RECOGNISE TIME OF THE DAY



Morning



Afternoon



Night



Evening

Talk about the activities in the picture.



SELF-TEST

Say the activities and the time of the day.



5.1.1
5.1.2



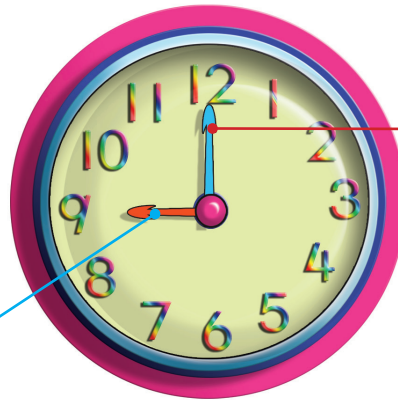
- Guide the pupils to talk about their activities which are suitable in the morning, afternoon, evening, night and midnight.
- Guide the pupils to say the time based on activities in the picture cards.
- Instil values of practicing daily activities according to schedule.



RECOGNISE THE CLOCK AND TIME



This is a clock face.
There are numbers
from 1 to 12.



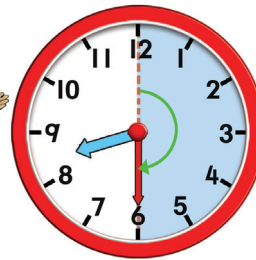
Minute
hand

Hour
hand

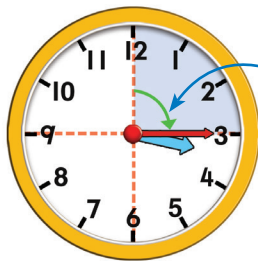
The **short hand** is the **hour hand**.
The **long hand** is the **minute hand**.



The minute hand
moves over half
of the clock face.



Half an
hour



The minute hand moves over
one over four of the clock face

Quarter of an hour

One over four of an hour
is called a quarter of an hour.

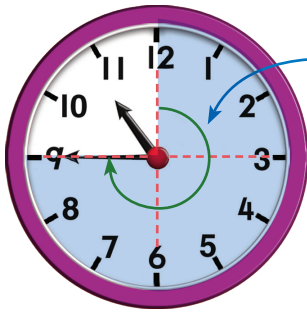


5.2.1
5.2.2



- Guide the pupils to know the hour hand and the minute hand.
- Relate the concepts of fractions of half, quarter and three quarters to guide the pupils to understand the concept of half an hour, a quarter of an hour and three quarters of an hour.

4



The minute hand moves over three over four of the clock face

Three over four of an hour is known as three quarters of an hour.



Three quarters of an hour

SHARPEN YOUR MIND

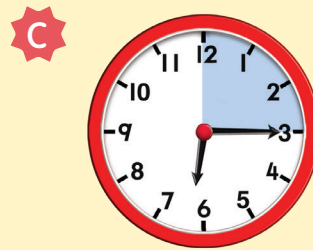
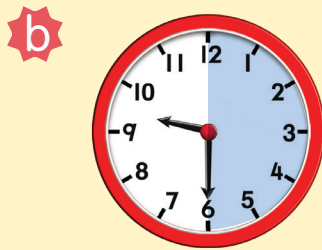
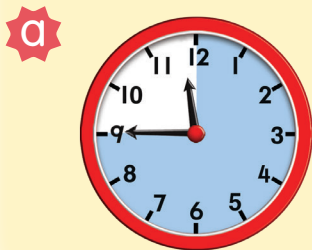


Look at the white-shaded part. What is the time in hours?



SELF-TEST

Look at the blue-shaded part. State which is half an hour, a quarter of an hour or three quarters of an hour.



5.2.2

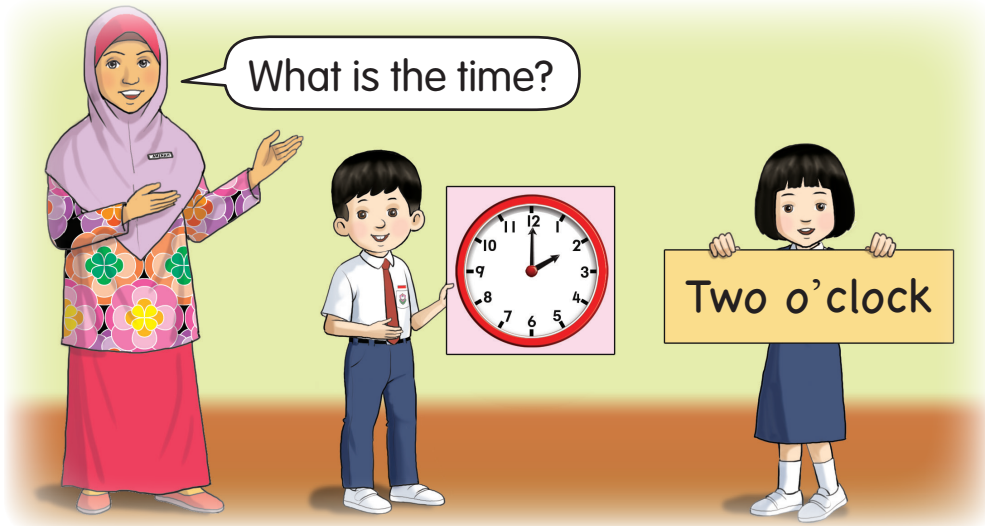


- Use actual clock or clock model in activities to understand half an hour, a quarter of an hour and three quarters of an hour.
- Provide more questions in the form of worksheets or question cards.

AB pages 34 - 35



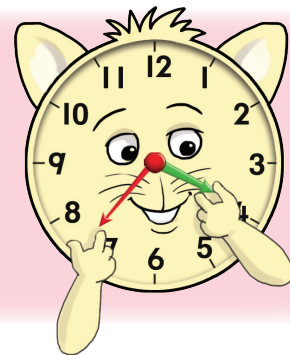
SAY AND WRITE THE TIME



SHARPEN YOUR MIND



The minute hand and the hour hand are at the same number. What is the time?



5.2.3



- Guide the pupils to say time correctly based on the clock model.
- Carry out simulation activities such as moving the hour hand and minute hand according to the times mentioned.
- Surf https://www.superteacherworksheets.com/time/time-5_TZTNN.pdf

3

a

The hour hand is between 4 and 5. The minute hand points to 6.



It is half past four.

b



half past seven

Where is the hour hand at half past eight?



4

a



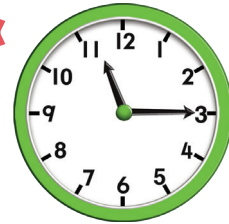
Quarter past ten

b



Quarter past three

c



SELF-TEST

Say and write the time.

a



b



5.2.3



- Guide the pupils to say and write the time in half an hour and a quarter of an hour.
- Use actual clock so that the pupils understand the position of the hour hand and the minute hand.
- Provide more questions in the form of worksheets or question cards.

AB pages 36 - 37



MY PROJECT

Time sense

Participants 2 pupils in a group.

Materials Polystyrene or paper plate, glue, number cut-outs, hour hand, minute hand, thumb tacks.

Steps

1 Prepare the materials.



2 Paste numbers 1 to 12 on a plate.



3 Fasten the hour hand and the minute hand.



4 Do question and answer activities with your friends. For example:

Three quarters of an hour.



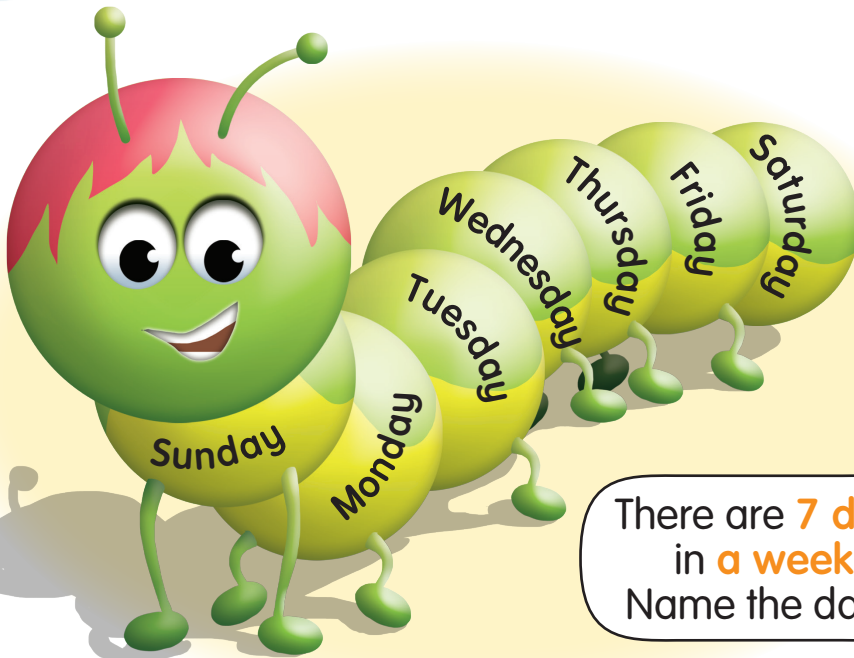
5.2.1
5.2.2
5.2.3



- Guide the pupils to carry out the activity to build a clock during the arts lesson.
- Prepare related question cards.



RECOGNISE DAYS, WEEKS AND MONTHS



There are **7 days** in **a week**.
Name the days.



Today is Friday.
Yesterday was Thursday.
Tomorrow is Saturday.
The day after tomorrow is Sunday.
Tuesday is between Monday and Wednesday.

Today is Monday. What day was yesterday?



SHARPEN YOUR MIND



One week is from Sunday to Saturday.
So, Thursday until is also one week.

5.1.3



- Guide the pupils to say the name of days in a week in sequence using calendar, class timetable or MS PowerPoint.
- Carry out activities to describe events in a week. Instil moral values.
- Surf <https://www.youtube.com/watch?v=Ha9Xe8rn3cY>



There are **12 months** in **a year**.

The first month is **January**.

Before the month of **May** is **April**.

After the month of **September** is **October**.

Name the months from January to December.



**SHARPEN
YOUR
MIND**



I was born
in **March**
2010.



I was born in
the same year
but I am older.

In what month was Ai Ling born? Discuss.

5.1.4



- Guide the pupils to say the months in a year in sequence.
- Discuss the months for festivals in Malaysia, Mother's Day, Father's Day and so on.
- Carry out activity to get birth dates of classmates.
- Surf <https://www.youtube.com/watch?v=KSclYzSnIck>

AB pages 38 - 40



SELF-TEST

Complete the table.



Sunday



Monday



Tuesday



Wednesday



Saturday



Friday



Thursday

Day	Activity
Sunday	Community project
<input type="text"/>	Revision
<input type="text"/>	Play draughts
<input type="text"/>	Play netball
<input type="text"/>	Recycle campaign
<input type="text"/>	Go to the library
<input type="text"/>	Visit orphanage

5.1.3
5.1.4



- Provide more questions in the form of worksheets or question cards.
- Provide variety of activities e.g. crossword puzzle to enhance pupils' understanding.
- Surf https://www.superteacherworksheets.com/calendars/months-this-next-last_MONTH.pdf



SOLVE THE PROBLEMS



1 Maya helps her mother in the kitchen. What time is it?

Method

Look at the hour hand and the minute hand.




Maya helps her mother at a **quarter past eleven**.



2 The clock shows the time Suyin reads her storybook. What is the time?

Method

The  shows it is night.
The clock shows **half past nine**.



Suyin reads the storybook at **half past nine at night**.

5.3.1



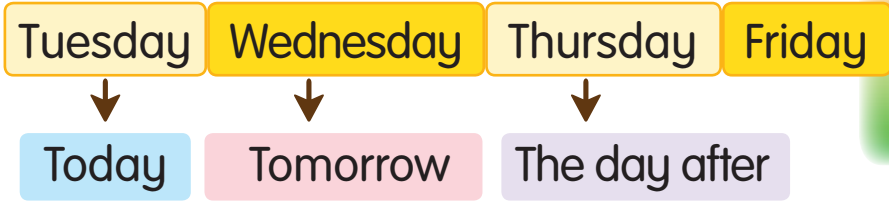
- Guide the pupils to seek information such as what is given and what is asked for.
- Show various strategies to solve problems such as simulation.

3

Today is Tuesday. Nizam learns Physical Education. The day after tomorrow, he will learn it again. State the day.



Method



The day after tomorrow is Thursday.

4

Ajay has a test after September. In what month is the test?



Method

JANUARY 2017	FEBRUARY 2017	MARCH 2017	APRIL 2017
MAY 2017	JUNE 2017	JULY 2017	AUGUST 2017
SEPTEMBER 2017	OCTOBER 2017	NOVEMBER 2017	DECEMBER 2017

The month after September is October.

The test is in October.

5.3.1



- Provide a variety of questions so that the pupils can achieve TP6.
- Surf <http://www.edhelper.com/TimeMath16.htm>





SELF-TEST

Solve these.

1 Nurul waters her plants in the morning. What time is it?



2 Look at the information.

- a What time are the treatment hours?
- b List all the days that the clinic is open.

Dr. Wong Clinic Treatment hours

- Mondays to Saturdays.
- 9 in the morning to 9 in the evening.
- Closed on Sundays and public holidays.

3 Today is Friday. Tomorrow, Jeni will visit her grandmother. State the day.

4 Arya wants to buy a new school bag at the end of the year. State the month.



5.3.1



- Surf <http://www.math-aids.com/Time/>
- Provide more questions in the form of worksheets or question cards.

AB pages 41 - 42



Precious time

Let's chant.



Quarter past seven we are in class
Listen to teachers on what they say
Quarter past eight the clock tells us
Every day we learn and play

Ring-a-ring the bell is ringing
It is half past ten and time for break
Feel so happy we start to sing
Happy faces we feel so great



Day and time we count each tick
To have 12 months in one whole year
We go to school five days a week
To gain knowledge from our teacher



Sunday, Monday, Tuesday, Wednesday
Thursday, Friday and Saturday
To mum and dad we must obey
You will be happy along the way



5.1
5.2



- Recite jazz chant and instil moral values.
- Ask the pupils to show the time mentioned in the chant using a clock model, to say the days of a week and the months of a year in sequence.

6

LENGTH, MASS AND VOLUME OF LIQUID



6.1.1



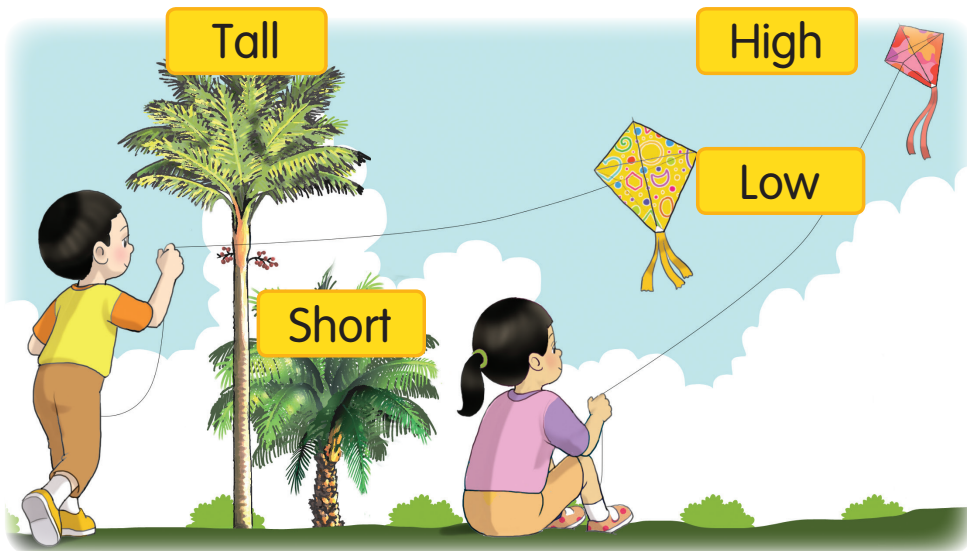
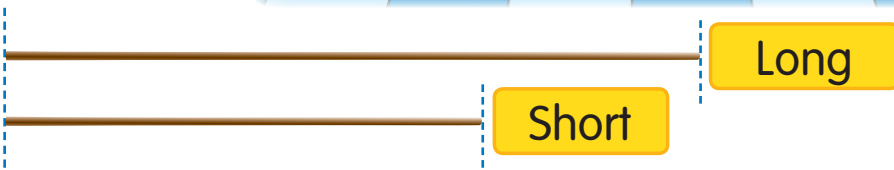
- Encourage the pupils to talk about the stimulation picture above.
- Focus their attention on the benches (long and short), trees (tall and short), cars (far and near), children playing on the see-saw (heavy and light), water fountain and lake (less and more).





RECOGNISE LENGTH OF OBJECTS



We use one short bamboo and one long bamboo.

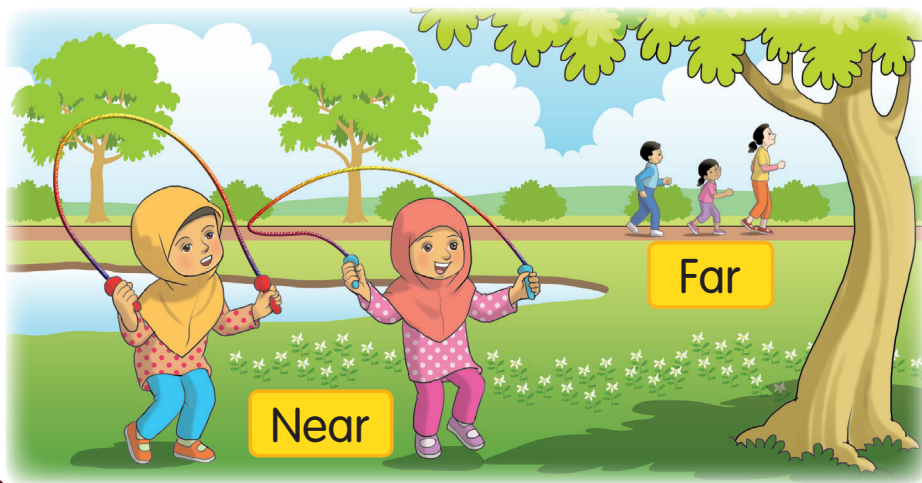


The *pinang* tree is **tall**. The palm tree is **short**.
 The  flies **high**. The  flies **low**.

6.1.1
6.1.3

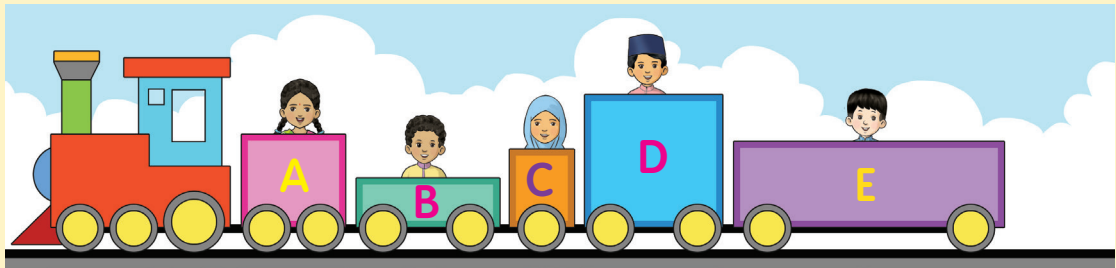


- Emphasise the use of the terms for length in various daily life situations. For example comparing objects in the classroom.
- Surf <https://www.ixl.com/math/kindegarten/long-and-short>



SELF-TEST

Compare.



- The coach which is **the nearest** to the locomotive is .
- The coach which is **the farthest** from the locomotive is .
- Coach is **the longest**.
- Coach is **the shortest**.
- Coach is **the tallest**.
- Coach is **the lowest**.

6.1.1
6.1.3



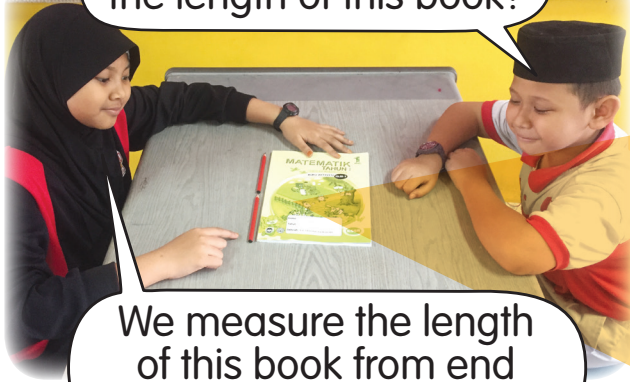
- Conduct activities to build objects that are long, short, high, low, far and near using plasticine, blocks and others.
- Provide more questions in the form of worksheets or question cards.
- Surf <https://www.ixl.com/math/kindegarten/long-and-short>



MEASURE AND COMPARE THE LENGTH OF OBJECTS



How shall we measure the length of this book?




We measure the length of this book from end to end using pencils.



The length of the book is the same as **2 pencils** long.



The length of the coloured pencil is equal to **4** .



The length of the watch is equal to **7** .

 is longer than .

6.1.2
6.1.3

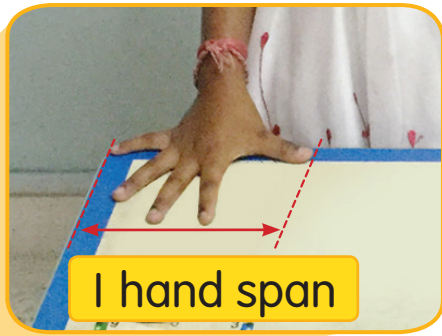


- Guide the pupils to measure length of objects using suitable non-standard units such as paper clips, coloured chips, buttons and etc.
- Provide more questions in the form of worksheets or question cards.

3



Kaswini



1 hand span

The width of the table is about **5 hand spans**.

Amni measures the width of the same table, 6 hand spans. Why is her measurement different from Kaswini?



4



1 step



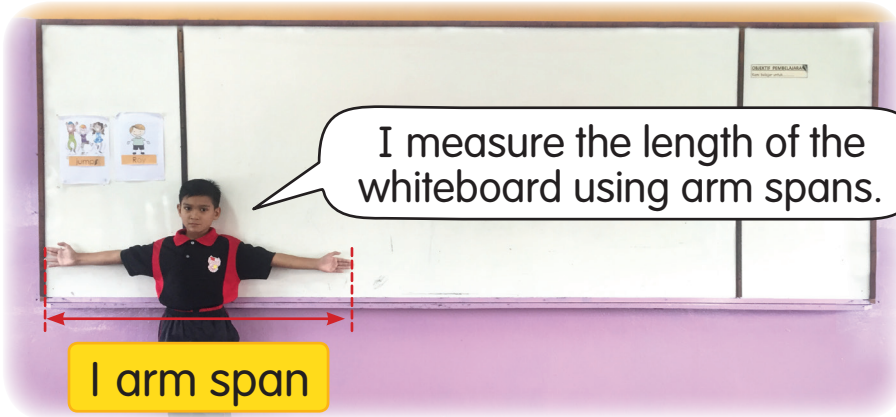
Adli

The length of the mat is about **4 steps**.

6.1.2
6.1.3



- Carry out activities to measure length of suitable objects using hand span and so on. Discuss why the lengths differ between pupils.
- Measure the same object using different non-standard units. Discuss.

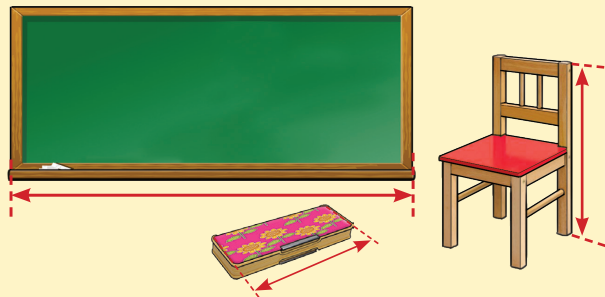


The length of the whiteboard is about arm spans.



SELF-TEST

1 Decide how to measure these objects.



2 Complete these.



The height of is equal to .

The height of is the same as height.

is taller than .

.

6.1.2
6.1.3

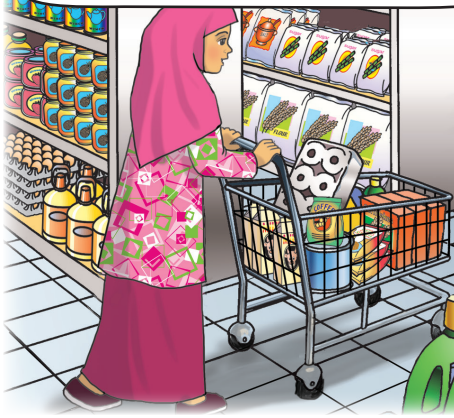


- Guide the pupils to make estimation before they carry out the measurement activity and compare their estimated measurements with the actual measurements.
- Surf <http://www.primaryresources.co.uk/math/math5E1.html#length>
- Provide more questions in the form of worksheets or question cards.



RECOGNISE MASS OF OBJECTS

This gas cylinder is heavy.
I use a trolley to carry it.



This box of tissues is light.
I can carry it.



**SHARPEN
YOUR
MIND**



Which box is heavier?
Give reasons.



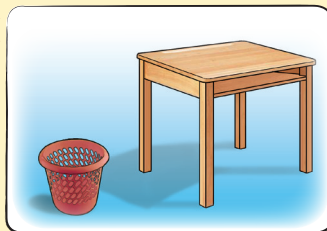
SELF-TEST

Compare the objects below. Heavy or light?

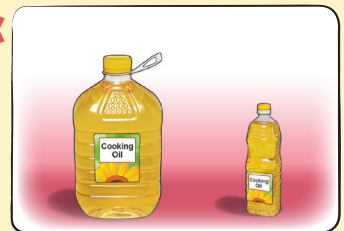
a



b



c

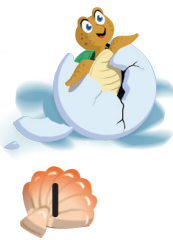


6.1.1
6.1.3



- Guide the pupils to do simulation activities by carrying objects in the classroom and introduce the words “heavy” and “light”.
- Guide the pupils to reason that heaviness or lightness of an object depends on the capacity, amount, type of material used and etc.
- Provide more questions in the form of worksheets or question cards.

AB pages 52 - 53



WEIGH AND COMPARE THE MASS OF OBJECTS



The mass of the red book is equal to 5 marbles.



The mass of the blue book is equal to 8 marbles.

The mass of the red book is **less than** the mass of the blue book.

2



The mass of the apples is the same as the mass of 2 tins of sardines.

The mass of the mangoes is equal to 3 tins of sardines.



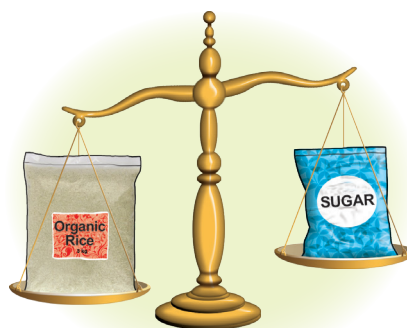
Which fruit is lighter?

6.1.2
6.1.3



- Explain that mass is the weight value of an object.
- Guide the pupils to use different non-standard units to weigh and compare mass of objects.

3



The mass of soya sauce is **less than** the mass of sugar.

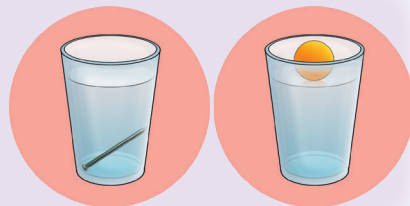
The mass of rice is **more than** the mass of sugar.

The **lightest** is soya sauce.
The **heaviest** is .

SHARPEN YOUR MIND






Which is heavier?
The nail or the table tennis ball? Explain.



SELF-TEST

Weigh objects using marbles. Write down the number of marbles. Compare these.

Object	Number of marbles
	<input type="text"/>
	<input type="text"/>
	<input type="text"/>

- 1 What is the heaviest object?
- 2 What is the lightest object?

6.1.2
6.1.3

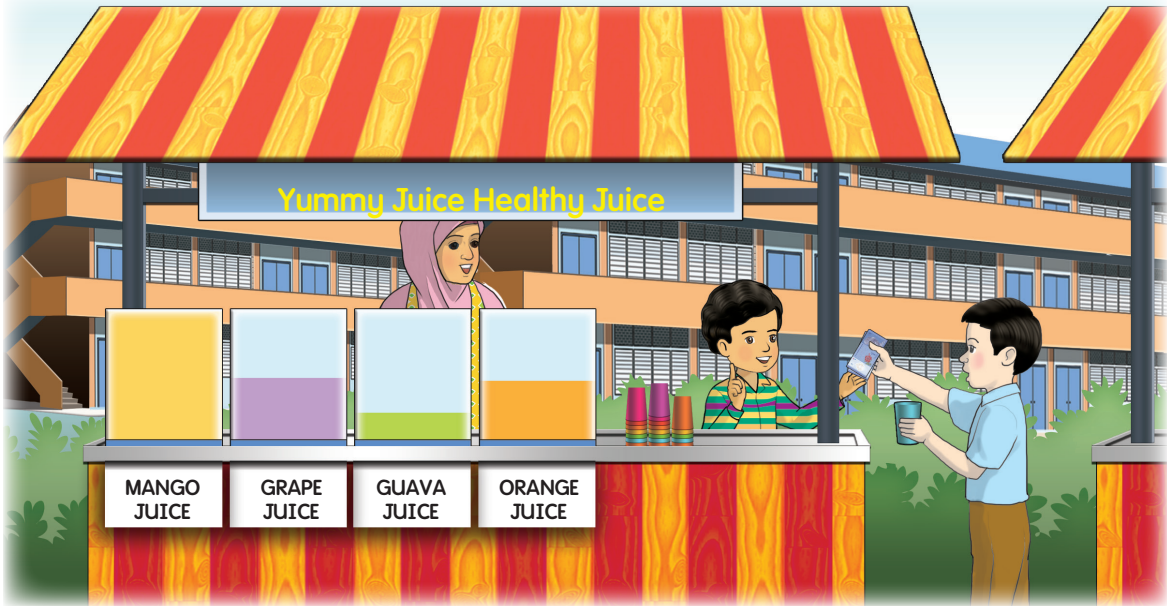


- Build a weighing tool using clothes hangers or suitable objects to weigh and compare mass of objects in the classroom.
- Provide more questions in the form of worksheets or question cards.

AB pages 54 - 57



RECOGNISE VOLUME OF LIQUID



The mango juice container is **full**.

There is only **a little** guava juice in the container.

The grape juice and orange juice containers are **half full**.

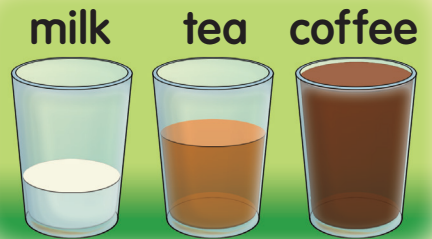
The volume of grape juice is the **same** as the volume of orange juice.



SELF-TEST

Look at the picture.
State the volume.

a lot **a little** **full** **half full** **quarter full**



6.1.1
6.1.3

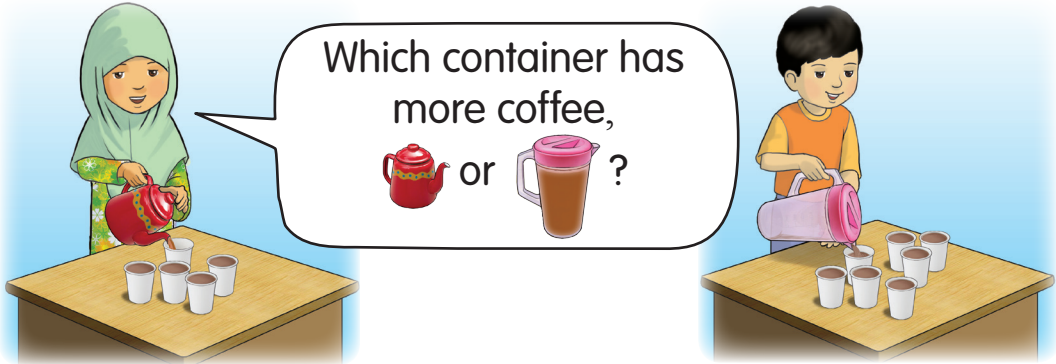







- Guide the pupils to understand volume of liquid by using different sizes of containers. For example various size of bottles. Introduce the terms “half full” and “quarter full”.
- Provide more questions in the form of worksheets or question cards.

AB pages 57 - 58



MEASURE AND COMPARE THE VOLUME OF LIQUID



The volume of  is equal to 5  .
The volume of  is equal to 7  .
The volume in the  is **more**.

2 Compare the volumes of milk.



The volume of chocolate milk is **the most**.
The volume of fresh milk is **the least**.

6.1.2
6.1.3



- Explain that volume is the amount of liquid in a container.
- Carry out activities to measure volume of liquid in various containers using the same non-standard unit. Guide the pupils to make conclusions.



3

The volume of is equal to .

The volume of is equal to .

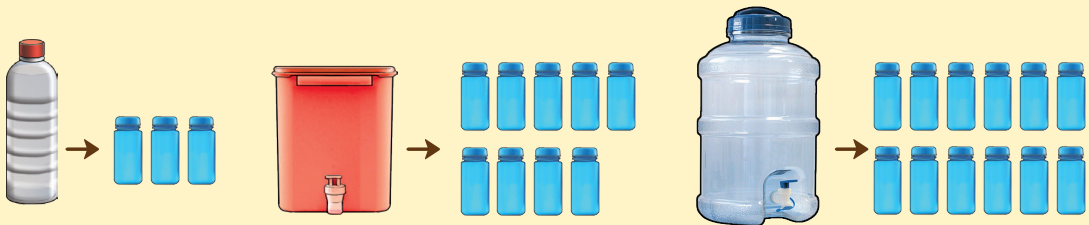
The volume of is **less than** the volume of .

The volume of is the volume of .



SELF-TEST

Look at the picture. Answer the questions.



The volume of is equal to .

The volume of is equal to .

The volume of is equal to .

The volume of is than the volume of .

The volume of is .

6.1.2
6.1.3





- Carry out activities to measure volume of liquid in several different containers using the same non-standard unit. The pupils record every measurement and compare them to make conclusions.
- Provide more questions in the form of worksheets or question cards.

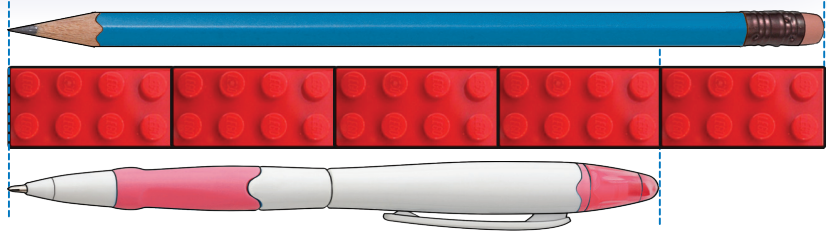


SOLVE THE PROBLEMS

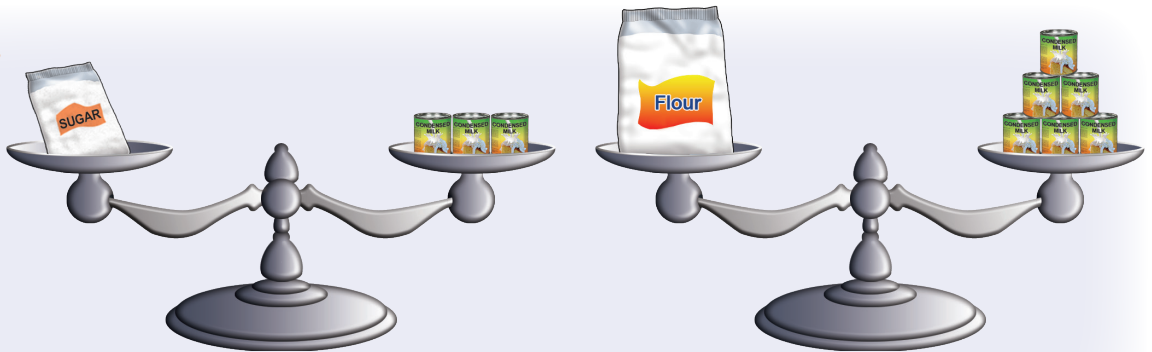


1 The length of the pen is equal to 4 . The length of the pencil is equal to 5 . Which is longer, the pen or pencil?

Method



The pencil is longer than the pen.



Which is lighter, the sugar or the flour?

Method

The mass of sugar is equal to 3 tins of milk.
The mass of flour is equal to 6 tins of milk.
3 tins are less than 6 tins.

Sugar is lighter than flour.

6.2.1




- Use simulation method or construct model to solve problems.

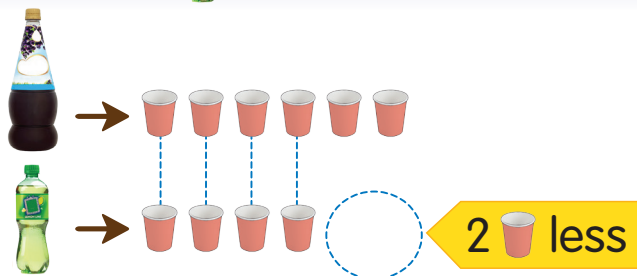
3

The volume of  is equal to 6 .

The volume of  is 2  less than the volume of .

What is the volume of  ?

Method



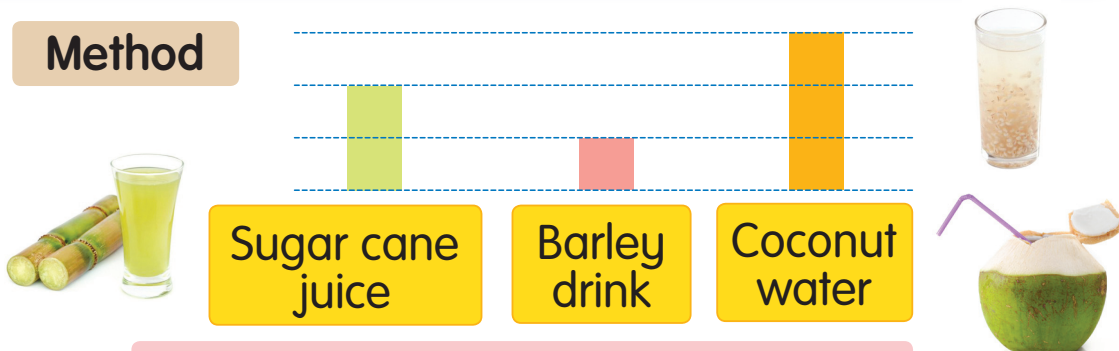
The volume of  is equal to 4 .

4



The volume of sugar cane juice is more than barley drink. The volume of sugar cane juice and barley drink is less than the volume of coconut water. Which liquid has the least volume?

Method



Barley drink has the least volume.

6.2.1









- Provide more examples involving various problems of length, mass and volume of liquid to enhance pupils' understanding.

AB pages 62 - 64

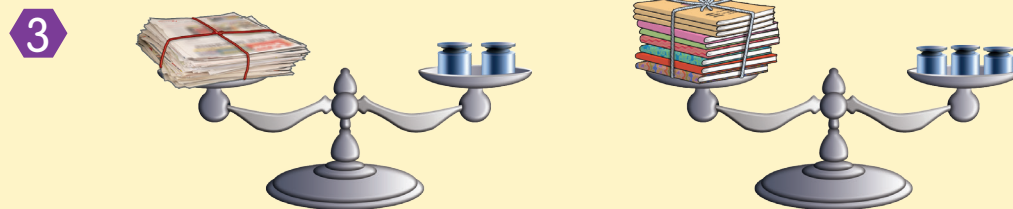


SELF-TEST



Solve these.

1 The volume of  is equal to 4 . The volume of  is equal to 6 . Which volume is more,  or  ?



2 Ramu pours a carton of lychee juice into several glasses. Kiran drinks 1 glass. His friends drink 5 glasses. How many glasses can a carton of lychee juice fill?

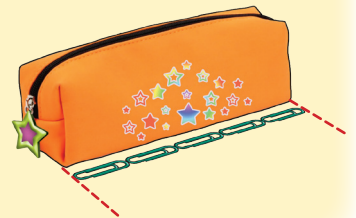


a Which is heavier, the newspapers or the books?

b  How many  for the total mass of newspapers and the books?

4 The length of the pencil case is equal to 5 .

 The length of a pencil is equal to 4 . Can the pencil be kept in the pencil case? Explain.



6.2.1



- Solve given problems using suitable methods.
- Surf <https://www.sheppardsoftware.com/mathgames/menus/measurement.htm>
- Provide more questions in the form of worksheets or question cards.



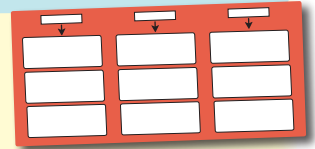
Comparison chart

Participants 6 pupils in a group.

Materials Pictures from catalogues and magazines, glue, task cards, pen.

Method

1 Paste suitable pictures on the task cards.



Length	Mass	Volume
<p>High Low</p>	<p>Heavy Light</p>	<p>A lot A little</p>
<p>Far Near</p>	<p>Flour is heavy. Biscuit is light.</p>	<p>Full Half full Quarter full</p>
<p>The length of the pencil is 7 cm. The length of the crayon is 4 cm. The pencil is longer than the crayon.</p>	<p>The mass of sugar is 2 g. The mass of rice is 3 g. The mass of sugar is less than the mass of rice.</p>	<p>The volume of guava juice is the same as the volume of syrup water.</p>

2 Decorate the task cards.

3 Display at the Mathematics Corner.

6.1



- Prepare materials for the SMART FUN activity and guide the pupils to build the chart above.
- Carry out activities at three stations. The first station is to measure length, the second station is to measure mass and the third station is to measure volume of liquid. Prepare enough materials for these activities.

7

SHAPES



Wow! There are many presents.

Different shapes!

7.1.1



- Discuss the three-dimensional (3-D) shapes in the picture.
- Introduce the concept of 3-D and give examples in daily life situations.

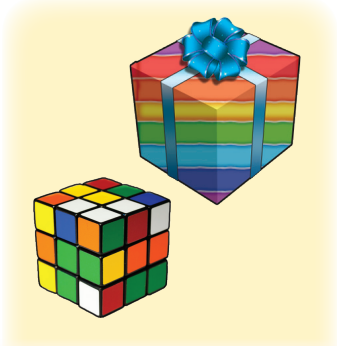
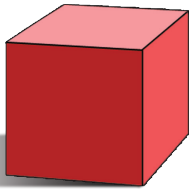


3-D SHAPES

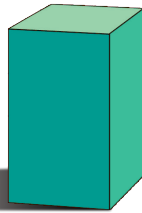


3-D Shapes

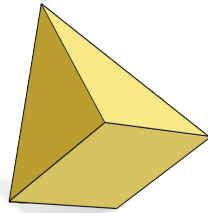
Cube



Cuboid



Pyramid



What is the shape of this tissue box?

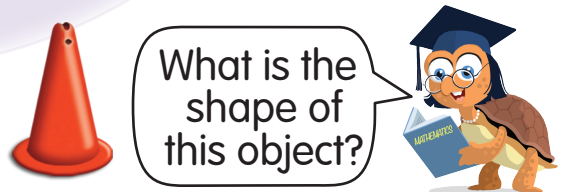
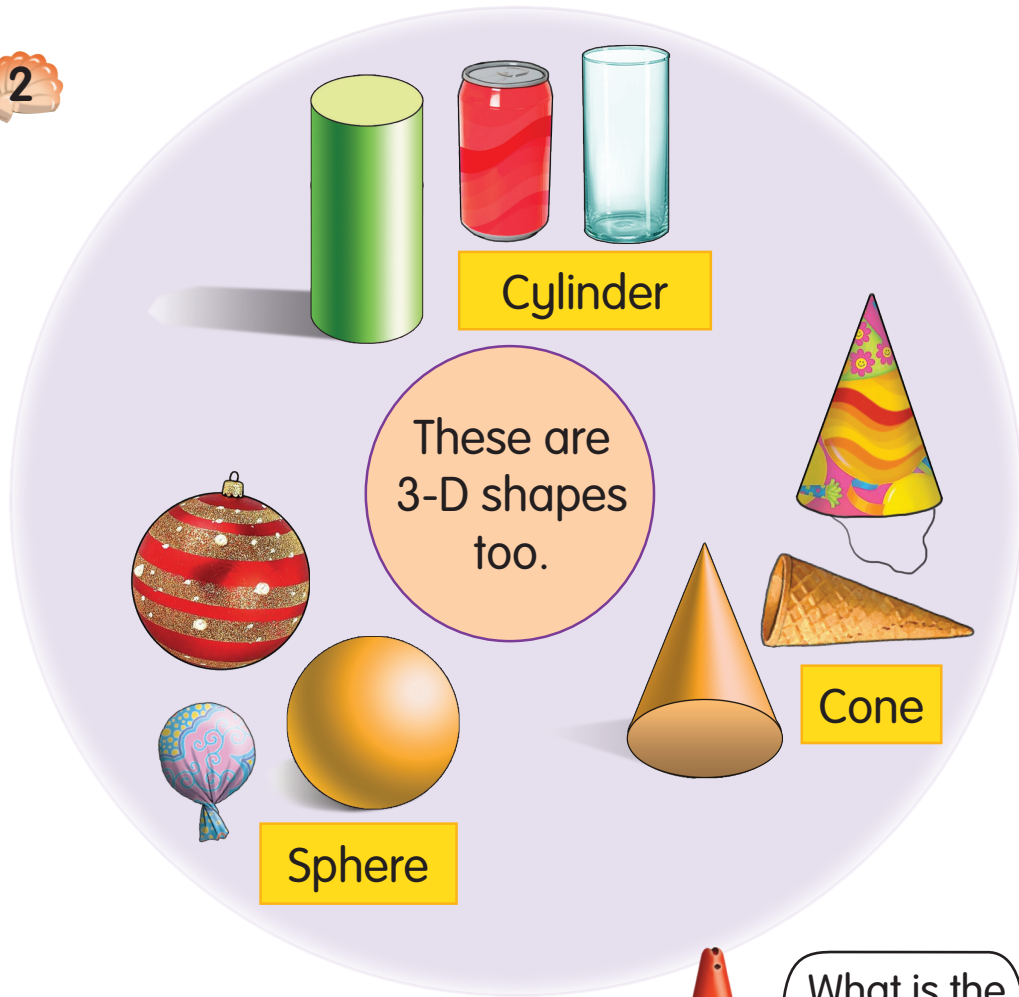


7.1.1

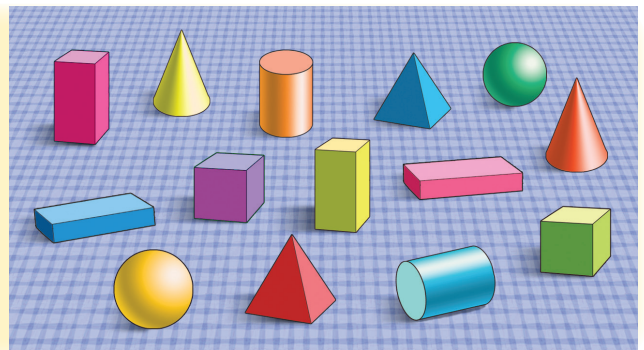


- Explain that a 3-D shape means a shape which has length, width and height.
- Conduct activities to relate real objects to cubes, cuboids and pyramids.
- Surf <http://www.ixl.com/math/grade-4/which-3-dimensional-figure-is-being-described>





Name the 3-D shapes in the picture. Count every shape.



7.1.1

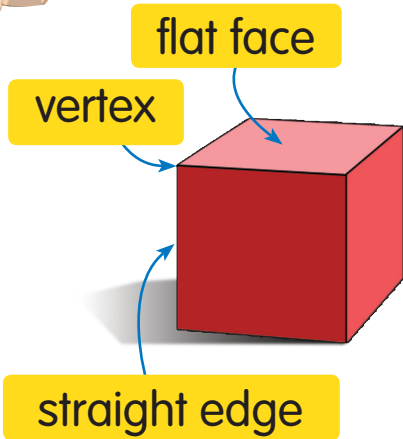


- Name real objects which are in the shape of cone, cylinder and sphere.
- Provide more questions in the form of worksheets or question cards.



RECOGNISE 3-D SHAPES

1



This is a flat face.
All faces are of
the same size.

Cubes

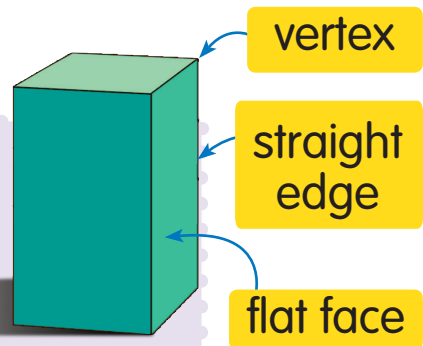
- 6 flat faces
- 8 vertices
- 12 straight edges



2

Cuboid

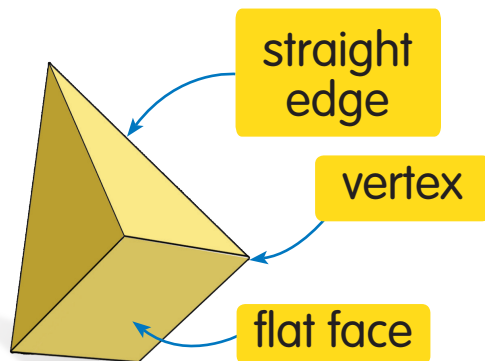
- 6 flat faces
- 8 vertices
- 12 straight edges



3

Pyramid

- 5 flat faces
- 5 vertices
- 9 straight edges



7.1.2



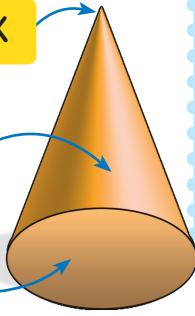
- Carry out simulation to identify flat faces, vertices and straight edges using 3-D models.
- Conduct classification activities involving groups of 3-D objects according to their characteristics.
- Surf <https://www.ixl.com/math/kindergarten/shapes-of-everyday-objects>

4

vertex

curved face

flat face



Cone

- 1 flat face
- 1 curved face
- 1 vertex

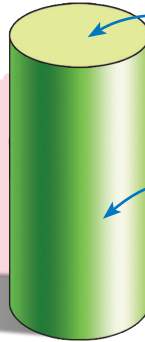
5

Cylinder

- 2 flat faces
- 1 curved face

flat face

curved face

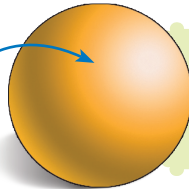


6

curved face

Sphere

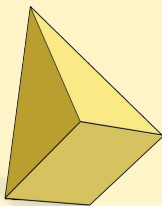
- 1 curved face



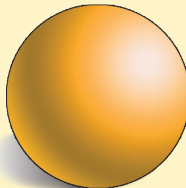
SELF-TEST

- 1 Name the shapes that have flat faces.
- 2 All faces are of the same size. What shape is this?
- 3 Talk about the shapes.

a



b



7.1.2



- Encourage the pupils to build *i-Think* maps for characteristics of 3-D objects.
- Explain that the shape of an object is built to suit its use, for example a ball is sphere-shaped.
- Provide more questions in the form of worksheets or question cards.

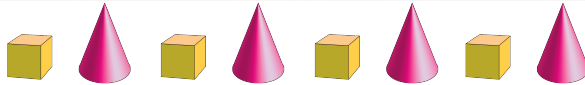
AB pages 68 - 69



3-D SHAPES PATTERNS

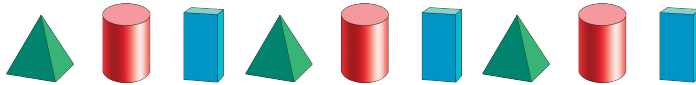


Pattern 1

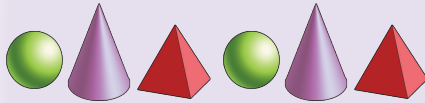


Cubes and cones are arranged repeatedly.

Pattern 2



Three 3-D shapes are arranged repeatedly.

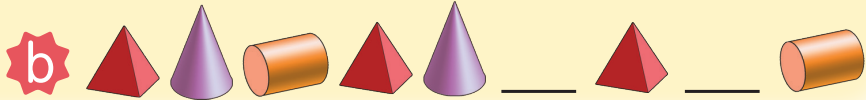


What is the 8th shape in this pattern?



SELF-TEST

Name the missing 3-D shapes.



7.1.3

TEACHER'S NOTES

- Carry out activities to arrange small objects in 3-D patterns.
- Build mobiles of 3-D shapes pattern.
- Provide more questions in the form of worksheets or question cards.

AB page 70



BUILD MODELS



Wow! So beautiful! This model is made up of 3-D shapes.



Castle

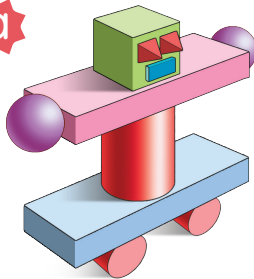
Tower

Castle Model

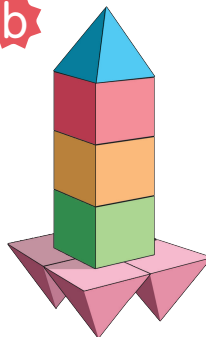
Shape	Number of shapes
Cone	2
Cylinder	3
Cube	2
Cuboid	1
Pyramid	1

Tower Model

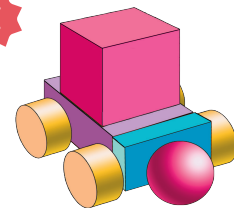
Shape	Number of shapes
Cone	1
Cylinder	2
Cube	1
Cuboid	1



Robot



Rocket



Car

SELF-TEST

Build your own models.
What 3-D shapes did you use?

Talk about the 3-D shapes in these three models.



7.1.4



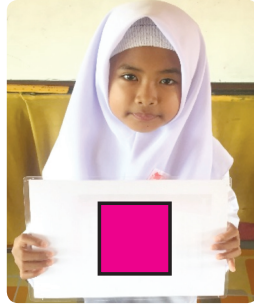
- Encourage the pupils to build and name their own models and then display their work in class.
- Surf <http://www.primaryresources.co.uk/maths/mathsE3.htm#2>
- Provide more questions in the form of worksheets or question cards.



2-D SHAPES

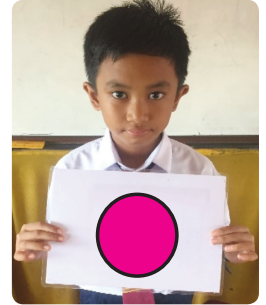
2-D shapes exist on the flat faces of 3-D shapes.

1



Square

2



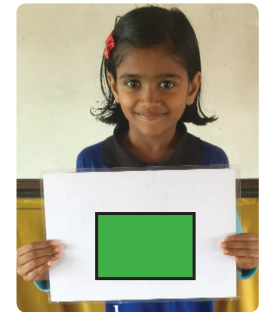
Circle

3



Triangle

4

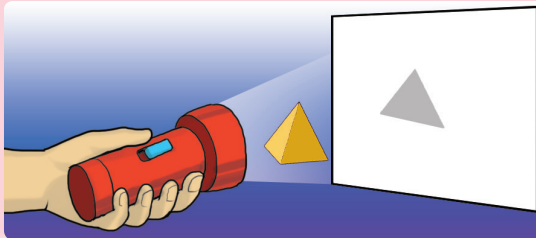


Rectangle

SHARPEN YOUR MIND



What is the 2-D shape shown on the screen?



SELF-TEST

Name these 2-D shapes.

a



b



7.2.1



- Trace around one flat face of a 3-D shape to get a 2-D shape.
- Explain the meaning of 2-D shapes by comparing it with 3-D shapes.
- Provide more questions in the form of worksheets or question cards.



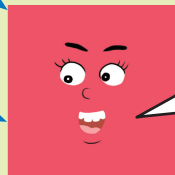
RECOGNISE 2-D SHAPES

1

There are **4 straight sides**.
There are **4 corners**.

corner

straight side



I am a **square**.

2

I am a **rectangle**.



straight side

corner

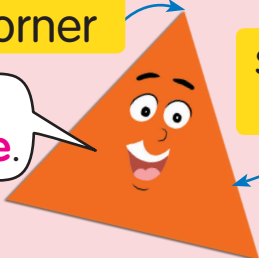
There are **4 straight sides**.
There are **4 corners**.

3

I am a **triangle**.

corner

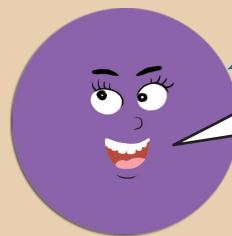
straight side



There are **3 straight sides**.
There are **3 corners**.

4

curved side



I am a **circle**.

There is **1 curved side** only.



SELF-TEST

- 1 My side is curved. What shape am I?
- 2 Name the 2-D shape that has no curved side.

7.2.2



- Explain that 2-D shape is a shape that has a flat face and no thickness.
- Ask the pupils to name and show corners, straight sides and curved sides based on picture cards of 2-D shapes.
- Carry out activities to build 2-D shapes using the geoboard.

AB pages 73 - 74



2-D SHAPES PATTERNS



This pattern is nice.

The shapes are arranged repeatedly to make patterns.

Pattern 1



Triangles and rectangles are arranged repeatedly.

Pattern 2



Three types of shapes are arranged repeatedly.



SELF-TEST

What are the missing shapes?



7.2.3



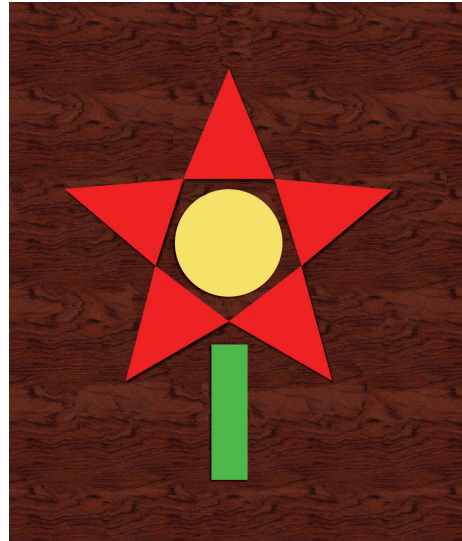
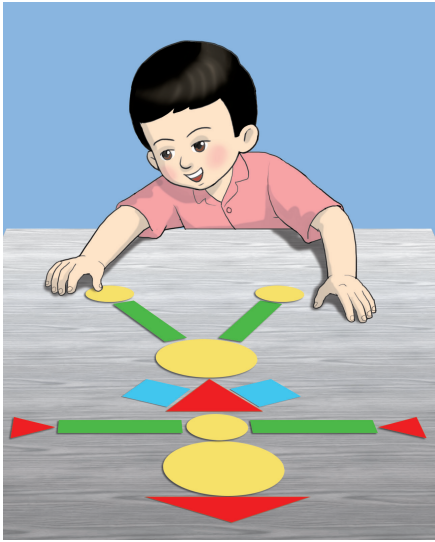
- Explain the meaning of pattern to pupils.
- Encourage the pupils to surf the Internet for various patterns found on mats, bedsheets, clothes and others.
- Provide more questions in the form of worksheets or question cards.

AB page 75



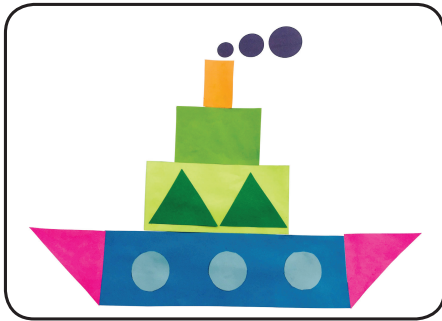


CREATE PATTERNS



Shape				
Number of shapes	2	5	4	4

Shape				
Number of shapes	0	1	5	1



Talk about the pattern.



SELF-TEST

Create your own patterns.

7.2.4



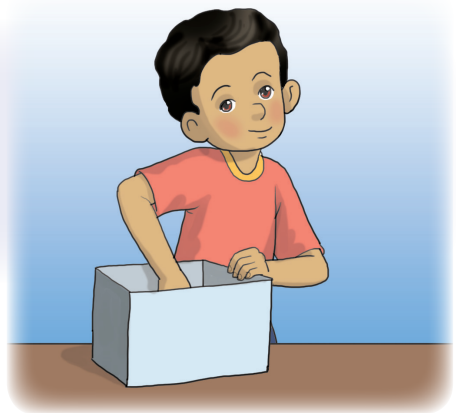
- Guide the pupils to understand the meaning of pattern and design, and differentiate it.
- Carry out activities in pairs to make patterns using 2-D shape cut-outs.
- Surf <http://www.kidzpark.com/worksheet/Fun-with-shapes-6/1556/>



SOLVE THE PROBLEMS



1 Danish picks a 3-D shape from a box. It has 1 vertex and 1 flat face. What shape is it?



Method

Guess and check.

Shape 1



It has 5 vertices and 5 flat faces.

Shape 2

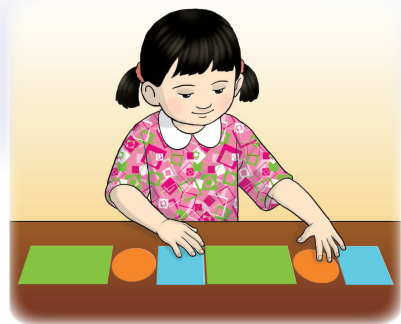


It has 1 vertex and 1 flat face.

It is a cone.

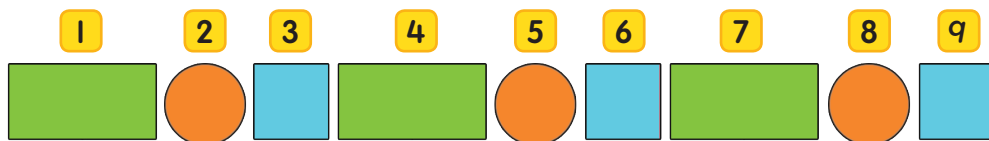


2 Yong arranges a 2-D shapes pattern. What is the eighth shape?



Method

Arrange a 2-D shapes pattern.



The eighth shape is a circle.

7.3.1



- Guide the pupils to underline important information in the question.

3

Azri chooses two 2-D shapes. The total number of sides for both shapes is 7. What are the two shapes?



Method

First try

 
 $4 \text{ sides} + 4 \text{ sides} = 8 \text{ sides}$

Second try

 
 $4 \text{ sides} + 3 \text{ sides} = 7 \text{ sides}$

Third try

 
 $3 \text{ sides} + 4 \text{ sides} = 7 \text{ sides}$

Azri chooses 1 square and 1 triangle.

Azri can also choose 1 triangle and 1 rectangle.



SELF-TEST

- Seha looks at two 2-D shapes. The total number of sides is 8. What are the shapes?
- I have vertex. I have flat face. I also have curved face. What shape am I?

7.3.1



- Use simulation strategy based on the given characteristics.
- Provide more questions in the form of worksheets or question cards.

AB pages 77 - 78



Fun shapes

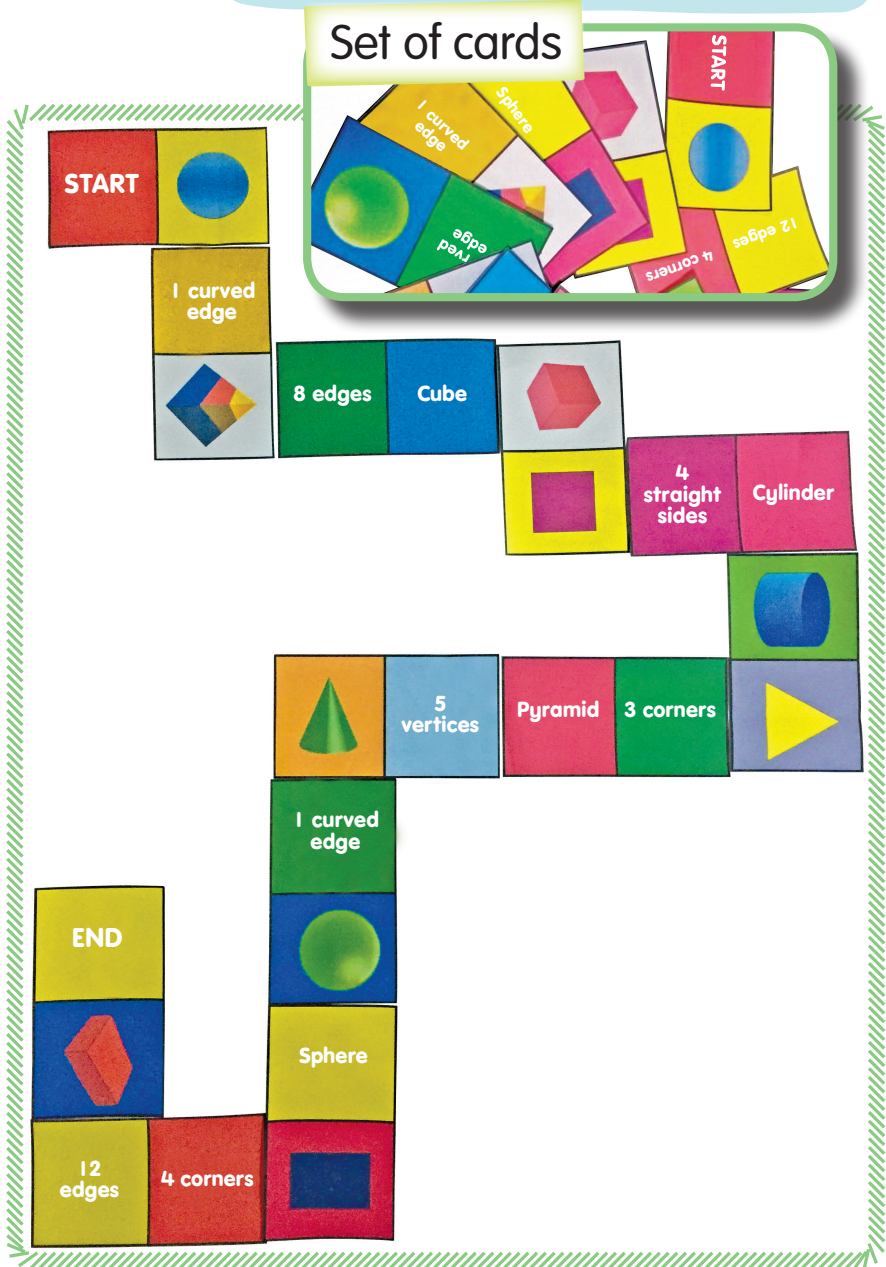
Participants 4 to 6 pupils in a group.

Materials Matching-cards (1 set - 12 cards), glue, drawing paper.

Rules

- 1 Take a set of cards.
- 2 Match the cards one by one.
- 3 Paste all the cards onto the drawing paper.
- 4 The group that finishes first is the winner.
- 5 Display your work. Talk about it.

Set of cards



7.1.1
7.1.2
7.2.1
7.2.2



- Prepare enough materials for the group activity.
- Guide the pupils to carry out the activity as a team.



8 DATA



What are they playing?

8.1.1



- Explain that data is a group of information or facts.
- Carry out collection of data activities in groups about the types of clothes, favourite food and beverages, and etc.
- Surf <http://www.toytheater.com/fishing.php>





COLLECT DATA



Draughts

Kite



Football



There are three games.



Game	Tally
Draughts	
Football	
Kite	

I make tally.

1, 2, 3, 4.

8.1.1



- Pose questions to pupils based on the picture to extract information such as types of games and number of players.
- Collect other data like gender of players.
- Surf <http://www.iboard.co.uk/iwb/Alien-Snail-Racing-634>



After you make tally, count the players.
The mark | is 1. The mark **||||** is 5.

Game	Tally	Number of players
Draughts		4
Football		3
Kite		6



Collect data on the number of girls and boys.






Player	Tally	Number of players
Girls		
Boys		



SELF-TEST

Count the number of objects in the classroom.
Complete the table.

Object	Tally	Number of objects
		
		
		

8.1.1



- Explain that tally is a mark made when counting to make sure there is no counting error.
- Provide more exercises in making tally based on pictures of situations or data.
- Surf <http://www.topmarks.co.uk/Flash.aspx?b=maths/interpretingdata>

AB pages 81 - 83







RECOGNISE PICTOGRAPH



This is a pictograph about favourite games for a group of children.

Favourite Games

Draughts	
Football	
Kite	

 represents 1 child

a There are 4 children who like to play draughts.

b 3 children like to play football.

c children like to fly kite.

d The most favoured game is .

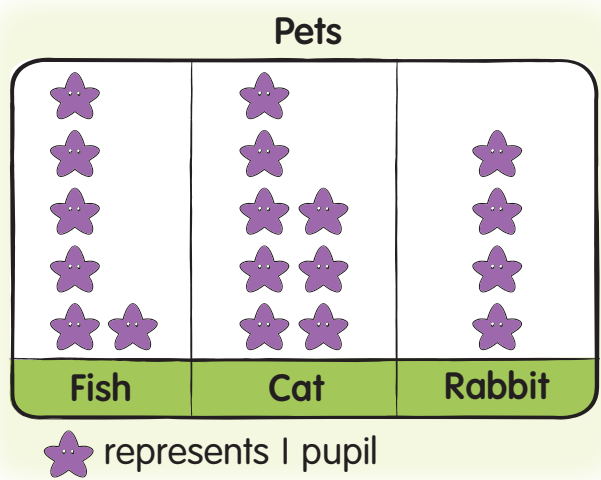
e The least favoured game is .

8.2.1



- Explain that a pictograph is a diagram with pictures or symbols.
- Carry out activities to read information and answer questions based on the given pictograph.

2 Afif collects information on pets of his classmates.



a How many pupils keep each pet?

Fish

Cat

Rabbit

b The animal that most pupils keep as pet is .

c The least pet that Afif's friends keep is .

**SHARPEN
YOUR
MIND**



Kuih Sales



★ represents 1 *kuih*

Pau is sold 1 less than doughnut. How many *pau* is sold?

8.2.1



- Instil moral values on the need to love animals.
- Provide a variety of questions on pictograph to strengthen pupils' understanding.

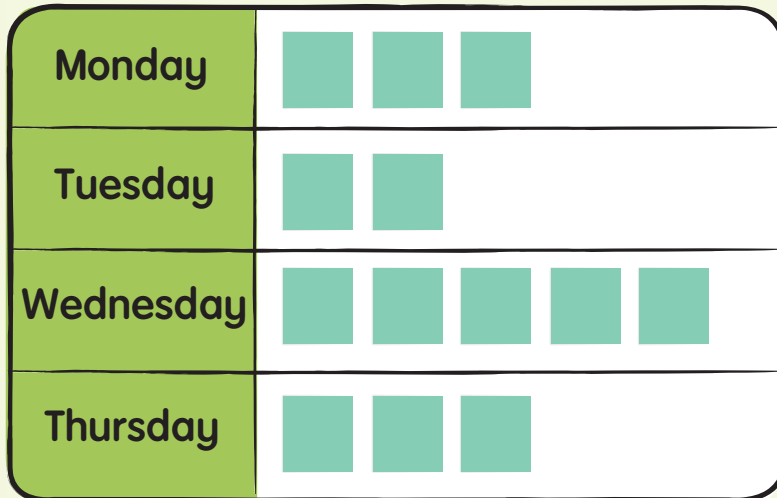
AB pages 84 - 85



SELF-TEST

Look at the pictograph. Answer the questions.

Nadia's Savings



represents RM1



- How much money is saved on:
 - Monday?
 - Tuesday?
- On what day does Nadia save RM5?
- What is the least amount of money saved?
- Nadia saves the same amount of money for two days.
Name the two days.
- On what day does Nadia save the most?

8.2.1



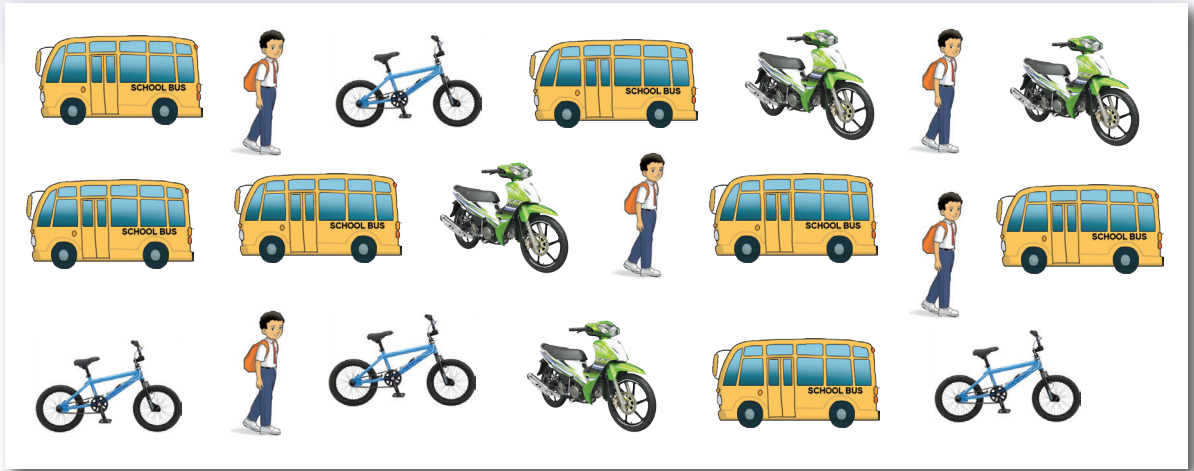
- Provide more questions on extracting information based on various pictographs in the form of worksheets or question cards.
- Surf <http://www.toytheater.com/fruit-fall.php>



SOLVE THE PROBLEMS



Look at the data of ways that Year I Pintar pupils go to school. Arrange the data in a table.



Method

Ways to Go to School

Way	Tally	Number of pupils
Bicycle		4
School bus		7
Motorcycle		4
Walk		5



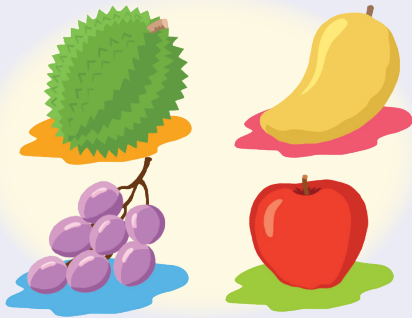
Many pupils take the bus. Why?

8.3.1



- Guide the pupils to solve problems by showing systematic steps to solve problems and use variety of strategies such as drawing diagrams.
- Surf http://www.learnalberta.ca/content/me3us/flash/lessonLauncher.html?lesson=lessons/15/m3_15_00_x.swf
- Guide the pupils the correct way to make tally.

- 2 The pictograph shows the favourite fruits of a group of pupils.



Favourite Fruit

Grapes	○○○
Mango	○○○○
Durian	○○○○○
Apple	○○

○ represents 1 pupil

- a What is the most favoured fruit?
b How many pupils like mango?

Method

a	Grapes	3
	Mango	4
	Durian	5
	Apple	2



Durian is the favourite fruit.

Durian is the most favoured fruit.

- b 4 pupils like mango.

8.3.1



- Guide the pupils to solve problems using simulation and representation.
- Provide various types of question to enhance pupils' understanding.
- Surf <http://www.topmarks.co.uk/Flash.aspx?f=pictograms>



SELF-TEST

- 1 Look at the data on games of a group of children.

Snakes and ladders	Chess	Snakes and ladders
Chess	Snakes and ladders	Chess
Snakes and ladders	<i>Congkak</i>	Snakes and ladders
<i>Congkak</i>	Snakes and ladders	Chess



- a Arrange the data in the table.

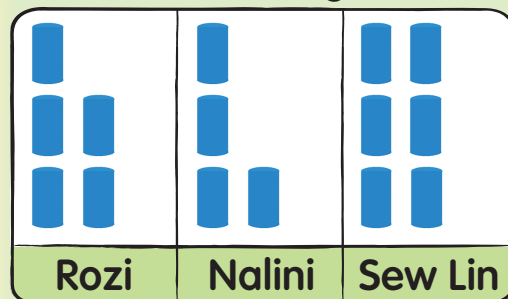
Type of game	Tally	Number of players

- b What is the favourite game?

- 2 Look at the pictograph. Solve the problem.

- a How many tins did Nalini collect?
- b Who collected the most tin?

Tins to Recycle



represents 1 tin

8.3.1



- Guide the pupils to compare data such as the most number, the least number and etc.
- Provide more questions in the form of worksheets or question cards.



Wheel of data

Participants 6 pupils in a group.

Materials Fruit-wheel, pencil, pen, table.

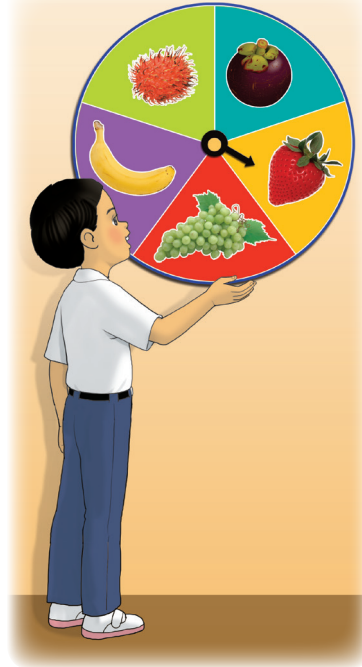
Method

- 1 Take turns to turn the wheel twice.
- 2 Fill up the tally column in the table.
- 3 Complete the table.

Maju Group

Fruit	Tally	Number of fruits
Mangosteen		3
Grapes		2
Strawberry		4
Rambutan		1
Banana		2

- 4 Talk about your group's data.



Fruit	Tally	Number of fruits
Mangosteen		3
Grapes		2
Strawberry		4
Rambutan		1
Banana		2



8.1.1



- Prepares the fruit-wheel or it can be modified to other themes such as hobbies, animals and others.
- Instil moral values such as cooperation.