MATHS MELA

Textbook of Mathematics for Class 3

Part - II

© NCERT not to be republished

0333

विद्यया ऽमृतमश्नुते

एन सी ई आर टी
NCERT

राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

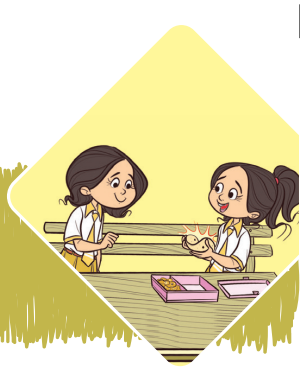
Contents

Chapter 8: Fair Share	01
Chapter 9: House of Hundreds - II	11
Chapter 10: Fun at Class Party!	22
Chapter 11: Filling and Lifting	33
Chapter 12: Give and Take	44
Chapter 13: Time Goes On	59
Chapter 14: The Surajkund Fair	71
Learning Material Sheets	86

@KTBS NOT TO BE REPUBLISHED

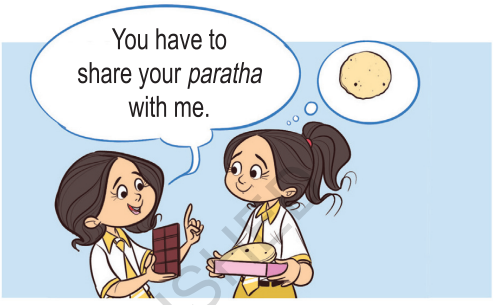


8 Fair Share

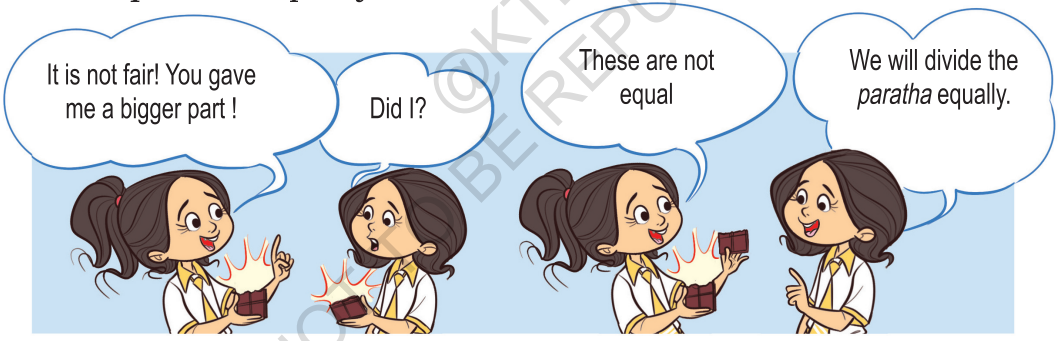


Shabnam and Mukta are enjoying their lunch break.





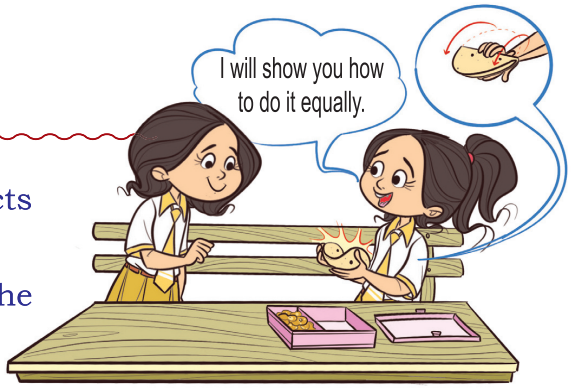
How do you think they are going to share the chocolate and the *paratha* equally?



Think about a strategy that you can use to check whether two pieces are equal or not.

Let us Discuss

1. How do you share objects equally?
2. Why is Shabnam folding the *paratha* over itself ?

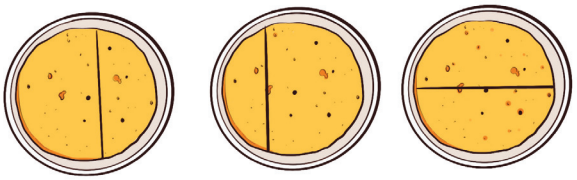


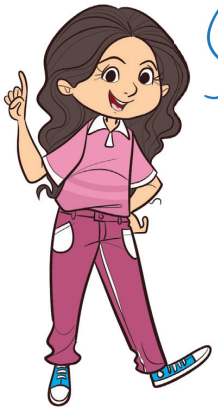
© KTBS NOT TO BE REPUBLISHED

This is a whole *paratha*.



Tick ✓ the *paratha* that has been cut equally.





When 1 whole is shared equally between 2 people, each share is called a half!





How many halves make one whole? Check with some halves.

@KTBS NOT TO BE REPUBLISHED



Let us Do

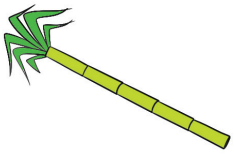
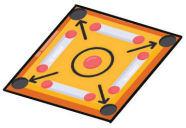
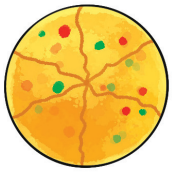
1. Circle the shapes where half of the whole is shaded.







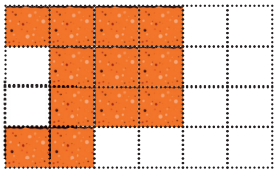
2. Draw a line to show one-half of the whole.

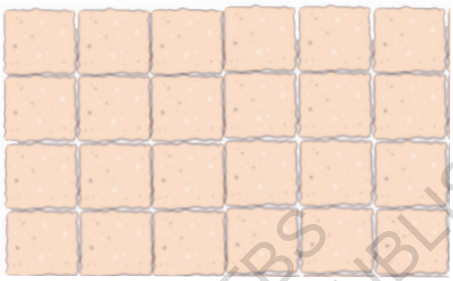
Chapter 8.indd 108 16-04-2024 14:01:49

3. Shabnam has eaten some *chikki* from 3 sides.
Tick ✓ how much *chikki* is left?

(a) less than half (b) more than Half (c) half

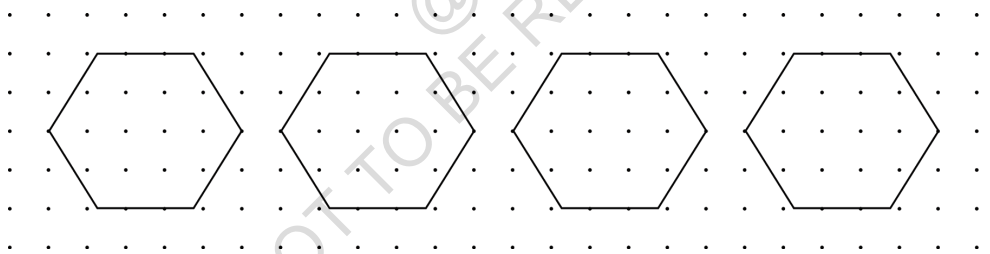


4. Show by colouring half a *chikki* that has been eaten from 2 sides.

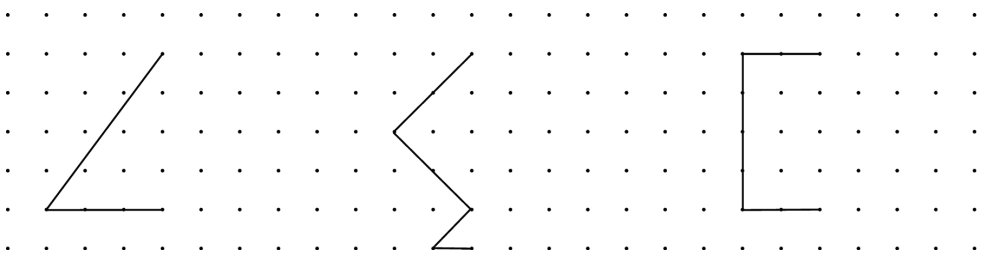


@KTBS NOT TO BE REPUBLISHED

5. Draw lines to show different ways of making a half.



6. Complete the whole picture by drawing the other half.

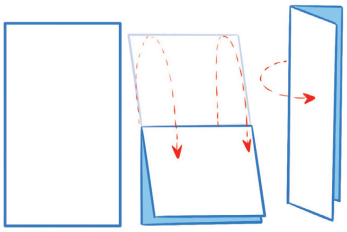


Chapter 8.indd 109 16-04-2024 14:01:51

Let us Explore

Take a rectangular sheet of paper and fold it in half. Find all the different ways to make a half.

Take a square piece of paper and fold it in half. Find all the different ways to make a half.



Let us Discuss

There was an old man with two sons Amit and Bala. He gave a mango tree, a solar lamp and a woollen blanket to them. He asked them to share these things among themselves. Amit was a cunning man. He told his brother 'Let us share the objects equally. I will keep the fruits, you keep the tree. I will keep the lamp during the night, you can keep it during the day. I will keep the blanket for half the year during winter. You can keep it for half the year during summer.' Bala agreed.



Is this a fair way of sharing? Is there another way to share it fairly?

©RTBP NOT TO BE REPUBLISHED

Let us Do

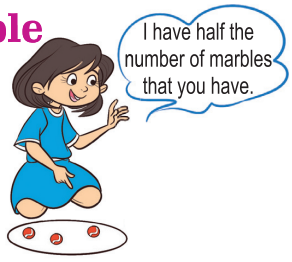
Here are some mangoes. Share them equally between the two children.

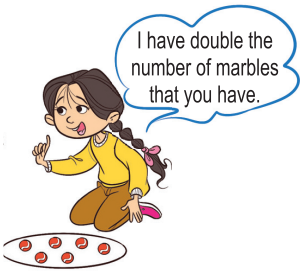


Teacher's Note: Get students to show halves with paper folding in different ways. Please refer to the fraction as one half and not as 1 out of 2.

Chapter 8.indd 110 16-04-2024 14:01:52

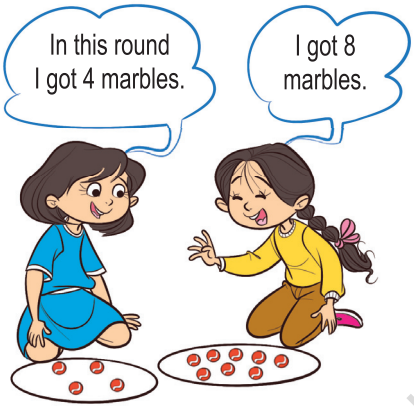
Half and double



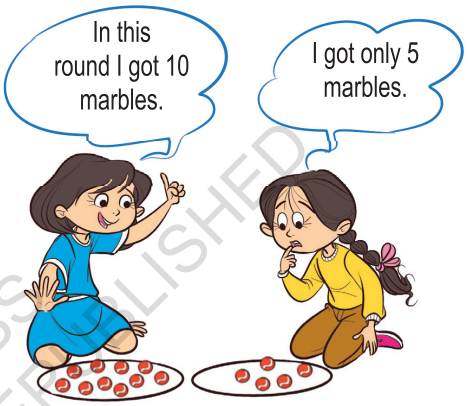


3 is half of 6. 6 is double of 3.

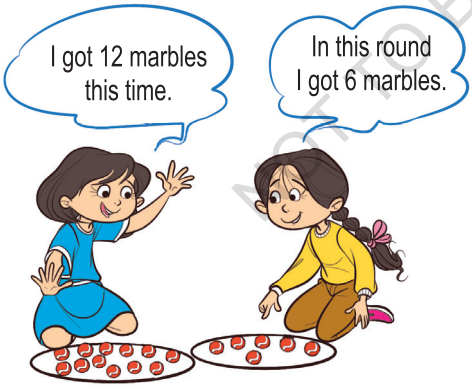
Fill in the following blanks using double or half.



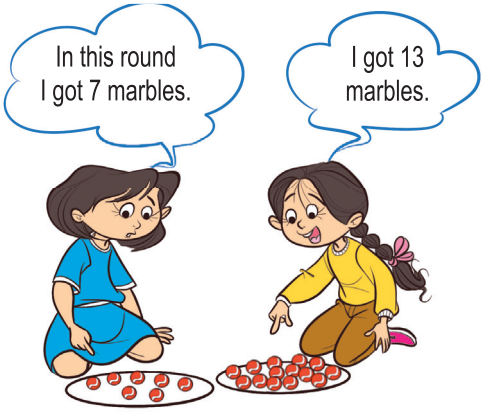
4 marbles are _____ of 8 marbles.
8 marbles are _____ of 4 marbles.



10 marbles are _____ of 5 marbles.
5 marbles are _____ of 10 marbles.



6 marbles are _____ of 12 marbles.
12 marbles are _____ of 6 marbles.



On a number line how far is 13 from the double of 7?
How far is 5 from half of 14?



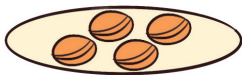
© KTBS NOT TO BE REPUBLISHED

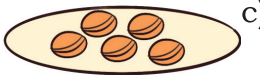
Chapter 8.indd 111 16-04-2024 14:01:53

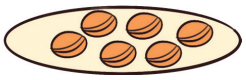
Guess who am I?

Use the clues to find the right fraction. Tick ✓ the correct box from the given 3 options.

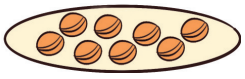
1. I have less than double of 3 marbles.
   I have more than half of 8 marbles.

a)  4 Marbles

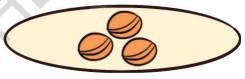
b)  5 Marbles

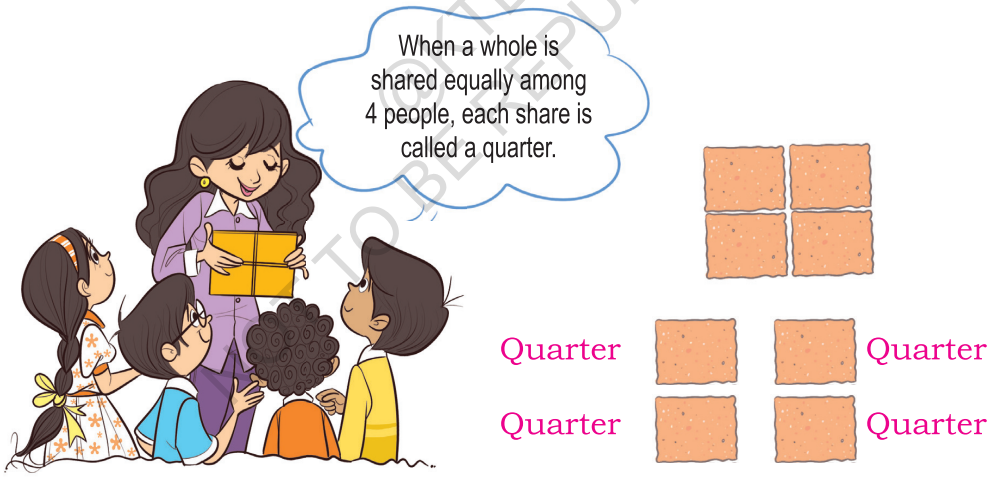
c)  6 Marbles

2. I have less than double of 4 marbles.
   I have more than half of 10 marbles.

a)  8 Marbles

b)  6 Marbles

c)  3 Marbles



What part of the chikki did each get?

How many quarters in a whole?



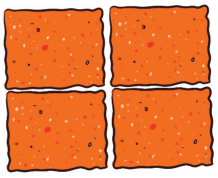
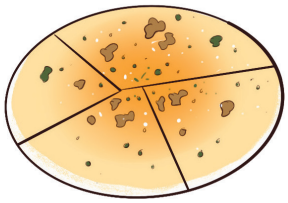
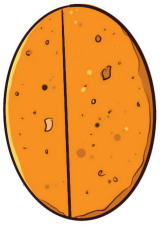
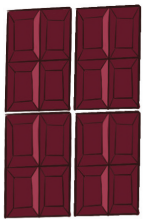
Teacher's Note: Students may also say one fourth or half of half. Teacher could encourage various ways of expressing and help them to come up with precise expressions.

© NCERT NOT TO BE REPUBLISHED

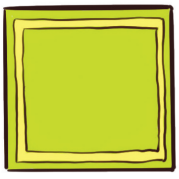
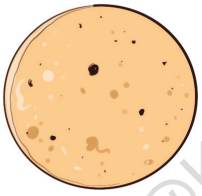
Chapter 8.indd 112 16-04-2024 14:01:55

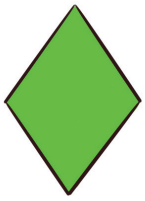
Let us Do

1. Tick ✓ the objects that show quarters.

2. Draw lines to make a quarter of the whole.

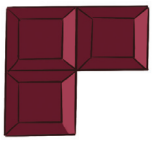


3. Draw the remaining three quarters and complete the whole.

(a) 

(b) 

4. Draw the remaining quarters to complete the whole.

(a) 

(b) 



Teacher's Note: Discuss how division of a whole into four equal parts leads to pieces of quarter size. Get students to show quarters with paper folding in different ways. Let students convince you that what they folded is actually one quarter of their paper.
Refer to the fraction as one quarter and not as 1 out of 4.

@KTBS NOT TO BE REPUBLISHED

Chapter 8.indd 113 16-04-2024 14:01:55

Half or quarter?

Tick ✓ the appropriate word to fill the blanks below.





Shabnam has coloured half/a quarter of the birds.

Mukta has coloured half/a quarter of the birds.

Shabnam has coloured half/double the number of birds that Mukta has coloured.

Lakshanya and Peehu have 16 flowers each.





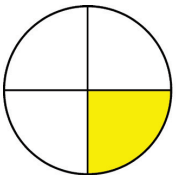
Lakshanya tied half/a quarter of her flowers.

Peehu tied half/a quarter of her flowers.

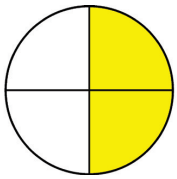
Lakshanya tied half/double the number of flowers that Peehu tied.

@KTBS NOT TO BE REPUBLISHED

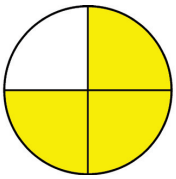
Quarters and whole



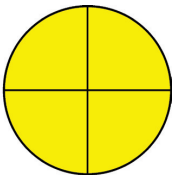
1 quarter



2 quarters (half)



3 quarters

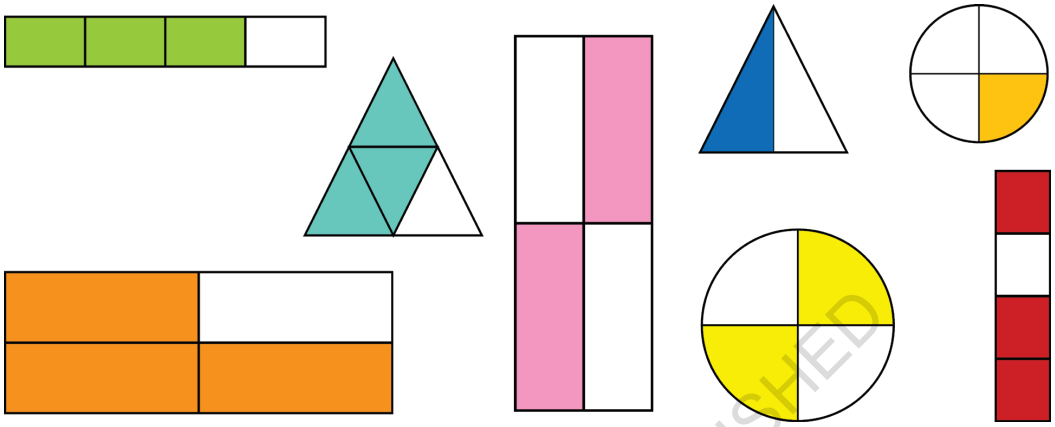


4 quarters (complete whole)

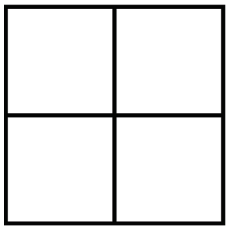
Chapter 8.indd 114 16-04-2024 14:01:57

Let us Do

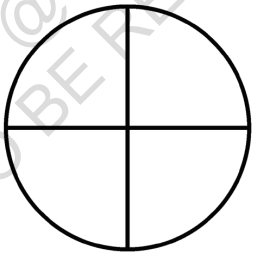
1. Tick ✓ the shapes below that show three-quarters.



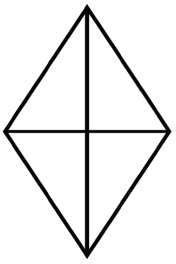
2. Colour the shapes below to show the fractions as instructed.



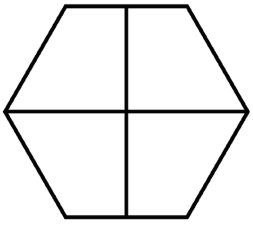
2 quarters



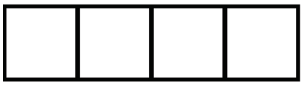
1 quarter



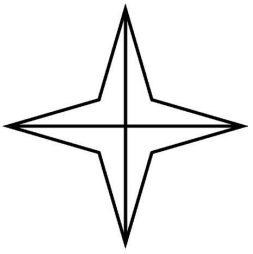
3 quarters



4 quarters



3 quarters

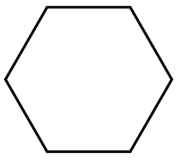


1 quarter

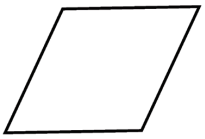
@KTBS NOT TO BE REPUBLISHED

Chapter 8.indd 115 16-04-2024 14:01:59

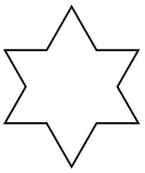
3. Draw lines and colour the shapes below to show the fractions as instructed.



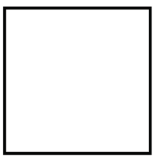
2 quarters



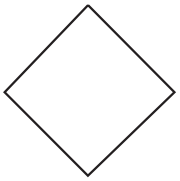
1 quarter



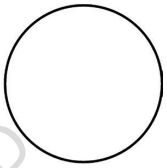
3 quarters



4 quarters

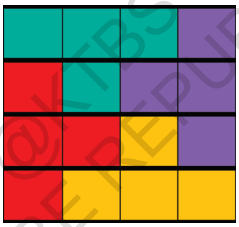


3 quarters

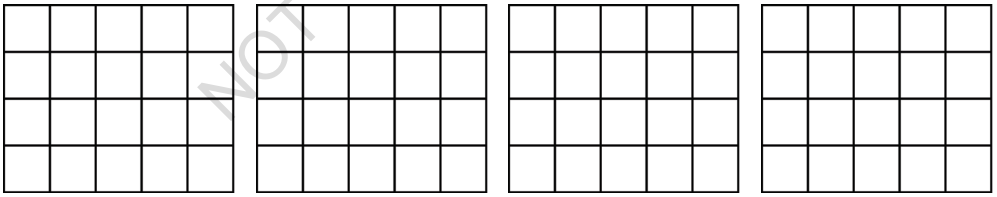


1 quarter

4. Here is a rectangle which shows quarters. Discuss how.



5. Show quarters and halves in different ways in the grids given below.



6. Use the fraction cards from your book to form a whole.



Teacher's Note: Let the children use the shapes from the perforated sheet given at the back to do the puzzle. Ask generic questions such as: how many pieces did you use to make one whole? Superimpose the pieces to see that they are exactly the same.

© KTBS NOT TO BE REPUBLISHED

Chapter 8.indd 116 16-04-2024 14:02:02

9 House of Hundreds - II

0333CH09



One day, Akbar and Birbal were walking in a garden. Many crows were flying in the sky around them. Akbar was curious to know how many crows there were. He announced a prize for anyone who could find this out.

People were wondering how to count crows which kept flying from one place to another. Akbar asked Birbal if he could figure this out.

After thinking for a day, Birbal said "There are exactly Nine Hundred and Sixty Three crows in our city".



Akbar was surprised and asked Birbal, "How can you be so sure"?

"You can get them counted," said Birbal.

"What if there are less?" asked Akbar.

"The other crows would have gone on a holiday," said Birbal.

"What if there are more?" asked Akbar.

"Crows from other places would be visiting the city," said Birbal.

Akbar was happy with Birbal's reply and gave him the reward.

© KTBS NOT TO BE REPUBLISHED

Let us Do



Number of rice sacks ☐

Draw tiles like the driver to show the following numbers. You can do it in your notebook.

a. 832 ☐ b. 947 ☐

c. 726 ☐ d. 504 ☐

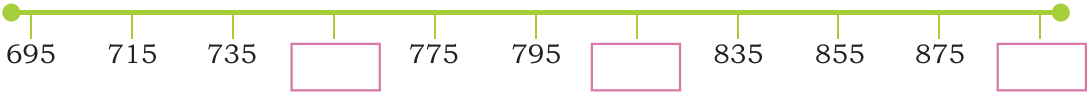
e. 620 ☐ f. 700 ☐

@KTBS NOT TO BE REPUBLISHED

Let us locate the following numbers on the number line: 530, 540, 628, 696, 590



Also locate the following numbers on the number line: 703, 721, 759, 810, 855, 887





Teacher's Note: Help children to make guesses like the number of students in your class, school, or neighbourhood, or peanuts in a cart. Show a 1000 ginladi to understand how large 1000 is. Also show the hundreds after 500 on this *ginladi*: 600, 700, 800, 900, 1000.

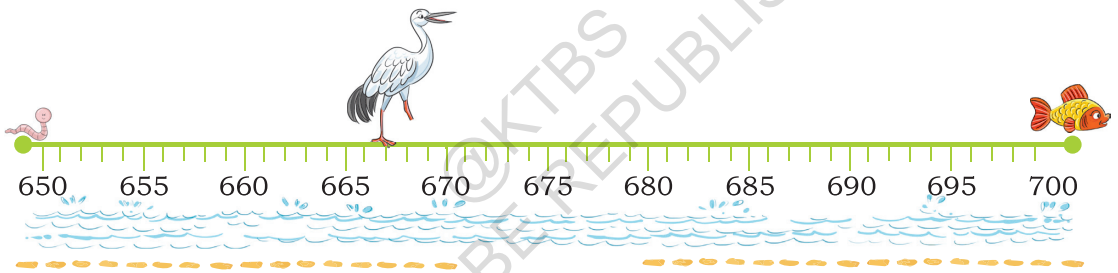
Chapter 9.indd 118 19-04-2024 10:10:22

Let us Think

1. Write the appropriate numbers between which each of the given numbers lie.

Number	Neighbouring hundreds	Neighbouring fifties	Neighbouring tens
468	400 and 500	450 and 500	460 and 470
183			
345			
693			
734			
899			

2. Help cranes reach their food using the number line.



To reach the worm

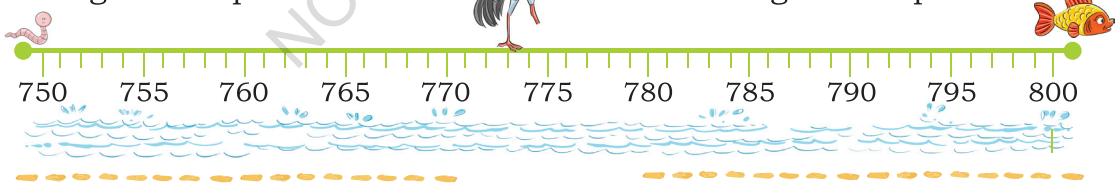
667 – ..... steps = 650

Length of steps: .....

To reach the fish

667 + ... steps = 700

Length of steps: .....



To reach the worm

..... – ..... steps = 750

Length of steps: .....

To reach the fish

..... +..... steps = 800

Length of steps: .....

© KTBS NOT TO BE REPUBLISHED

Teacher's Note: Help children find different jumps or steps to the crane's food. Let them find how the crane can reach its food in 2 or 3 jumps.

Chapter 9.indd 119 19-04-2024 10:10:23

Tambola

3. Fill the grid with numbers between 570 and 630. Strike out all the numbers which match the clues below. You can strike out more than one number. The child who has most numbers cancelled is the winner. One example is given below.

Clues

1. 597
2. A number with 4
3. Numbers between 595 and 605
4. A number with 1 as the tens digit
5. Two more than 610
6. 5 less than 625

572	628	579	~~599~~
~~597~~	~~574~~	581	~~600~~
623	573	570	~~602~~
609	~~616~~	~~614~~	626

Write different ways of making the following numbers.

	3 hundreds, 6 tens 8 ones				
68 more than 300	368	32 less than 400 400 - 32		905	
	300+60+8				
	555			736	

@KTBS NOT TO BE REPUBLISHED

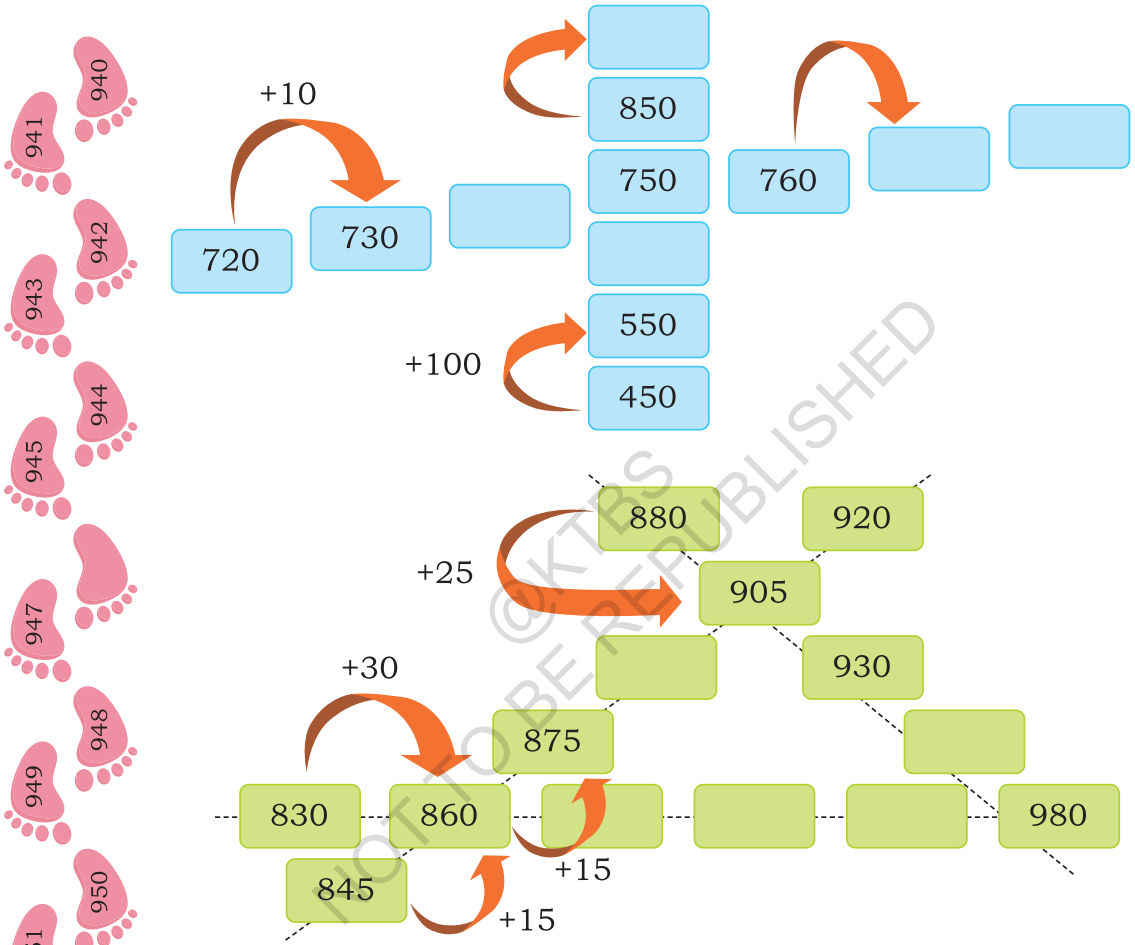


Teacher's Note: Play the Tambola game with different ranges of numbers, different clues and different grids. Teacher to also support children in revising different ways of representing numbers using number sentences as well as concrete representations like matchsticks, blocks or number line.

Chapter 9.indd 120 19-04-2024 10:10:23

Skip and solve

Teji and Jojo are resting. Ajji asks them to complete the number patterns. Let us help them fill in the empty boxes.



©KTBS NOT TO BE REPUBLISHED

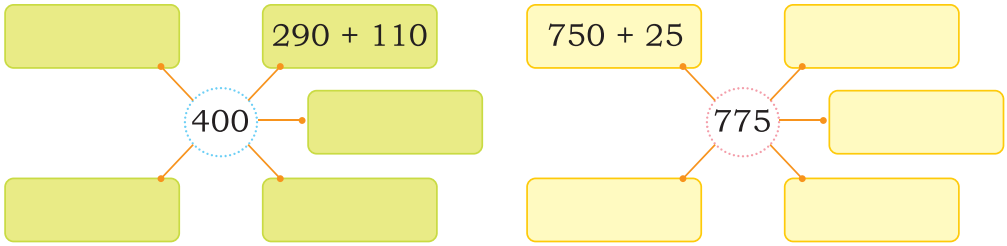


Teacher's Note: Support children to interpret the scaffold given in this puzzle.

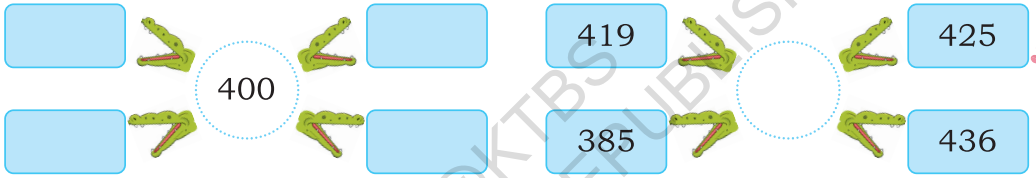
Chapter 9.indd 121 19-04-2024 10:10:24

Let us Do

1. Write number sentences for the numbers in the centre.

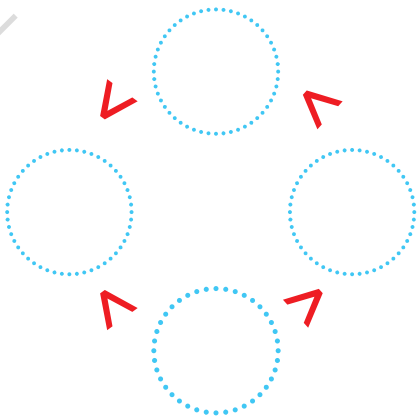


2. Write numbers in the blank spaces such that they meet the conditions.



Number Puzzles

3. Fill the numbers 384, 23, 176, 905 in the empty circles such that they meet the conditions.



@KTBS NOT TO BE REPUBLISHED

Chapter 9.indd 122 19-04-2024 10:10:24

4. Match the quantities on the left with the appropriate numbers on the right.

Number of children in your school	0-10
Number of books in your classroom	11-50
Number of people in a bus	51-100
Number of pages in your mathematics book	101-200
Number of steps you walk in a day	201-500
Number of stars in the sky	501-1000
Number of flowers in a garland	More than 1000

5. Match the following such that all the conditions are met.

I have 2 zeroes as digits and am very close to 99	150
I have 3 hundreds, 6 tens and 7 ones	425
I have zero tens and zero ones	367
I am century + half century	400
I come between 400 and 450 and I have 5 as a digit	100

© KTBS NOT TO BE REPUBLISHED



Teacher's Note: Please note that the number ranges on the right can be matched with several quantities on the left. You could also encourage children to identify things which match the number ranges.

Chapter 9.indd 123 19-04-2024 10:10:24

The Number Detective

Let us have some fun, with numbers and patterns, everyone!

Look at the hundreds – 100 200 300

Can you find all the hundreds?

Some numbers are special, let's explore, 789 345 and 123,

what more?

Jojo wonders why they're so neat, Teji says 876 and 321 too have the same beat!

Now, numbers that repeat, just the same, 11, 22, 33, have twin digits.

111, 222, 333 are triplet digits.

Can you find more such numbers that follow the pattern?

Here are more numbers that look the same, from left to right, and right to left: 353 868.

Finding them is a fun game. Write other such numbers.

Teji likes numbers with zeroes. She knows numbers like 210 404 and 800.

Write more such numbers:



Teacher's Note: Support children in enumerating and writing numbers systematically to solve these puzzles. Allow children to share their strategies with others.

@KTBS NOT TO BE REPUBLISHED

Chapter 9.indd 124 19-04-2024 10:10:25

Let us Do

1. I have 6 blank paper slips. I can write 100, 10 or 1 on each of them. What numbers can I make with these 6 slips? Discuss.



Six slips with 100 written on them. Six hundred.

Four slips with 100 written on them and two slips with 10 on them. 420



100	100	100	100	100	10
100	100	100	100	100	10

a. What will you write on these slips for making 231?

b. What will you write on these slips for making 123?

2. Make other numbers.

a. Number is .....

b. Number is .....

What is the largest number that can be made? .....

Are there numbers which can not be made using these slips? Find out.

What is the smallest number that can be made? .....



Teacher's Note: Construct more such problems and encourage children to play with numbers.

@KTBS NOT TO BE REPUBLISHED

Chapter 9.indd 125 19-04-2024 10:10:25

My numbers

Take the digits 3 and 8 and make as many 2 or 3 digit numbers as you can. You can repeat the digits.



Jojo, with 3 and 8, I can make 38.

3 8 8 3 3 8



I can make 338, 388

3 3 8 3 8 8

2 digit numbers	3 digit numbers

Arrange the numbers Smaller to greater

.....

.....

Smallest number:

Largest number:

@KTBS NOT TO BE REPUBLISHED



Let us Think

Teji is making numbers using words! She shows the blue cards and says it is 12. She shows the yellow cards and says 14. Why?









Figure out what Teji is doing.



Teacher's Note: Play such games frequently with different numbers and clues.

Chapter 9.indd 126 19-04-2024 10:10:26

Ajji showed some more numbers.

a.



7 1

b.

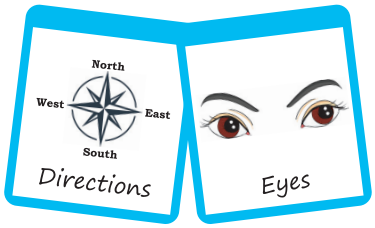


5 3

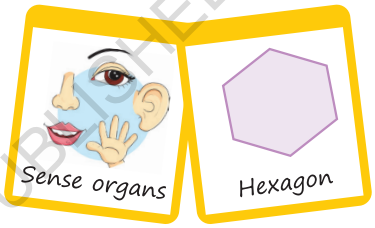
This way of saying numbers using words is called *Bhutasankhya*, which means **Word Numerals**.

1. Write the numbers, for the following cards.

a.



b.



2. Think of other words for 0–9.

Make new cards for the numbers 15, 27, and 94.

@KTBS NOT TO BE REPUBLISHED



Teacher's Note: Use local contexts and languages familiar to children.

Chapter 9.indd 127 19-04-2024 10:10:26

10 Fun at Class Party!

0333CH10



Children of Class 3 are preparing for a celebration in the class. Look at the picture.



© KTBS NOT TO BE REPUBLISHED



Let us Do

Discuss and explain how you answer these questions based on the picture given above.

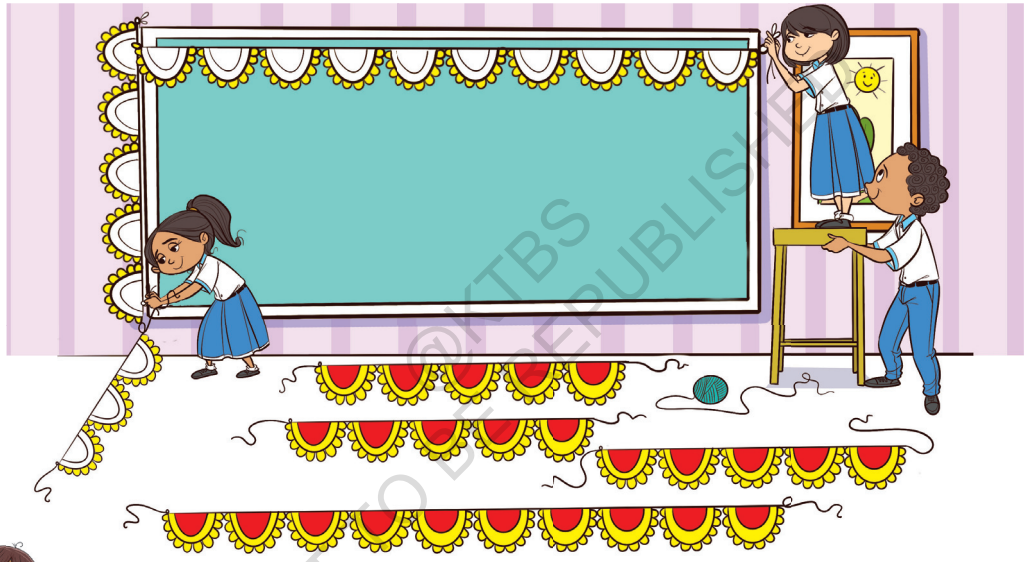
1. What are the various activities shown in the picture?
2. How does Shelly find the height of the door?
3. Leena and Adi use their hand spans to measure the length of the same table. Will they both get the same measurement?



Teacher's Note: The picture shows some examples of measurement using informal and formal tools for length. Let children identify the different ways of measuring and use appropriate words like hand span, footstep and paper strings.

4. Circle the child with the longest ponytail.
5. Tick ✓ paper strings in the classroom that are as long as the height of the window.
6. Find the distance between the two walls of the classroom. How did you find it? Can there be other ways of measuring it?
7. Identify all the ways that children are using to measure length in this picture. Which way do you think is better and why?

Children of Class 3 are decorating the board with paper strings of different colours.



© KTBS NOT TO BE REPUBLISHED

Let us Do

1. In the picture above, colour the paper strings as instructed below.
   (a) Colour the shortest paper string with red. Discuss how you identified the shortest string.
   (b) Colour the longest paper string with green. Discuss how you identified the longest string.
2. How many more colourful paper strings will be needed to decorate the border of the green board?
3. How many of  are needed to decorate the entire border of the board?

Maths 3 Chapter 10.indd 129 19-04-2024 10:11:40

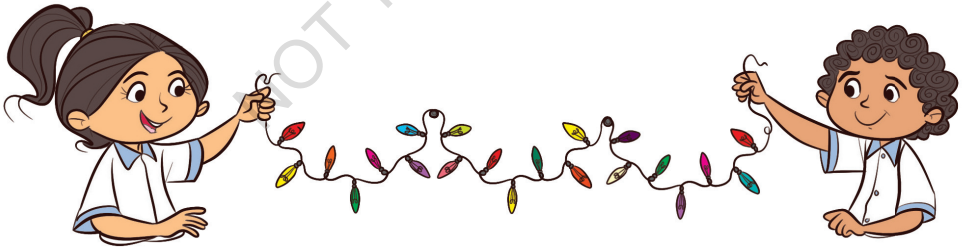
Let us Do

1. Cut and paste a wool or cotton thread as long as the line given below.

2. Draw a string longer than the string given below.



3. Draw a string shorter than the decoration string Shelly and Adi are holding.



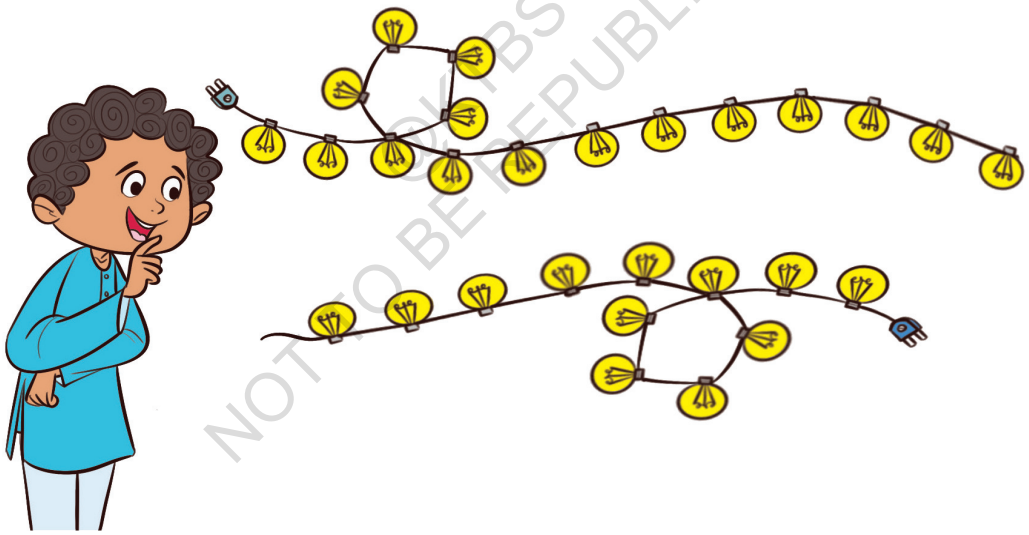
@KTBS NOT TO BE REPUBLISHED

Maths 3 Chapter 10.indd 130 19-04-2024 10:11:41

4. Draw the other half of the moustache which is as long as the half of the moustache on the face shown in the picture.



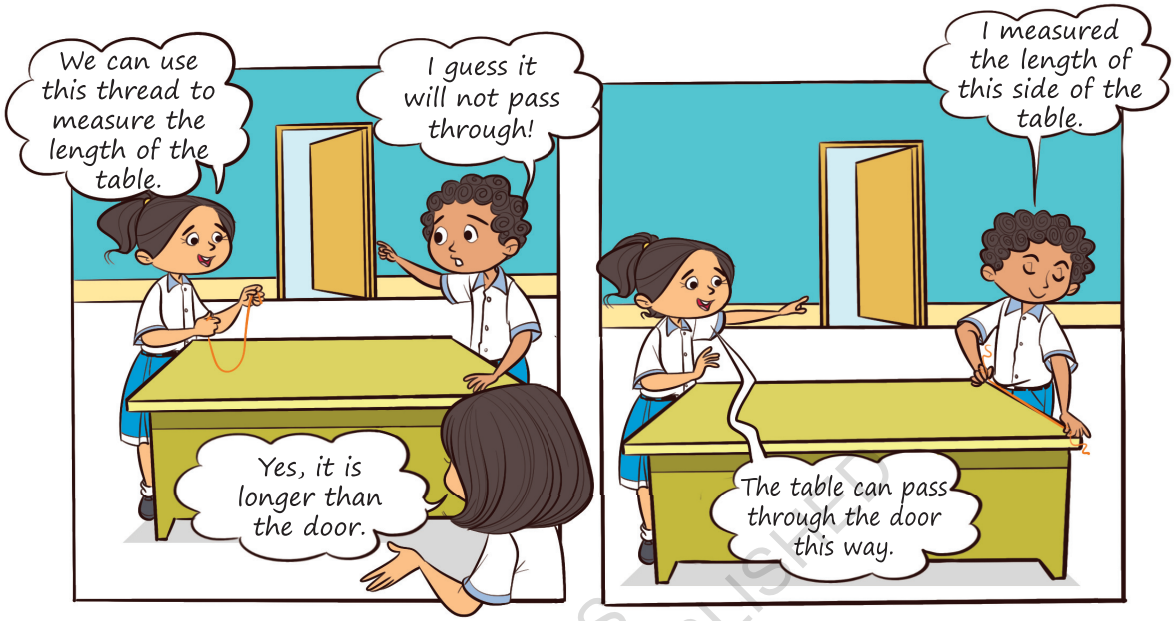
5. Look at the strings and help Adi choose the longest one. How did you find out? Discuss.



© NCERT NOT TO BE REPUBLISHED

Shelly and Adi need to take a large table inside the classroom for the party. The table is too heavy for both of them to move. Without lifting the table, how can they figure out if the table can go through the door of the classroom? Help them find out what they must do.

Maths 3 Chapter 10.indd 131 19-04-2024 10:11:41



Can there be a way to take the table inside the door if both the length and the breadth are more than the width of the door?

@KTRS NOT TO BE REPUBLISHED



Let us Play

Make a bridge using boxes or bags or any other objects available in your class. Place or arrange the boxes so that the bridge does not move. Take some objects from your class and guess if the objects can go through the bridge.



Can you name some things that cannot pass through your school gate? Discuss.



Teacher's Note: Comparing two lengths is not always possible by bringing them next to each other like in the above example of the table and the door. This exercise should help students to figure out that one can measure indirectly using a common unit.

Maths 3 Chapter 10.indd 132 19-04-2024 10:11:42

Are these true for all?

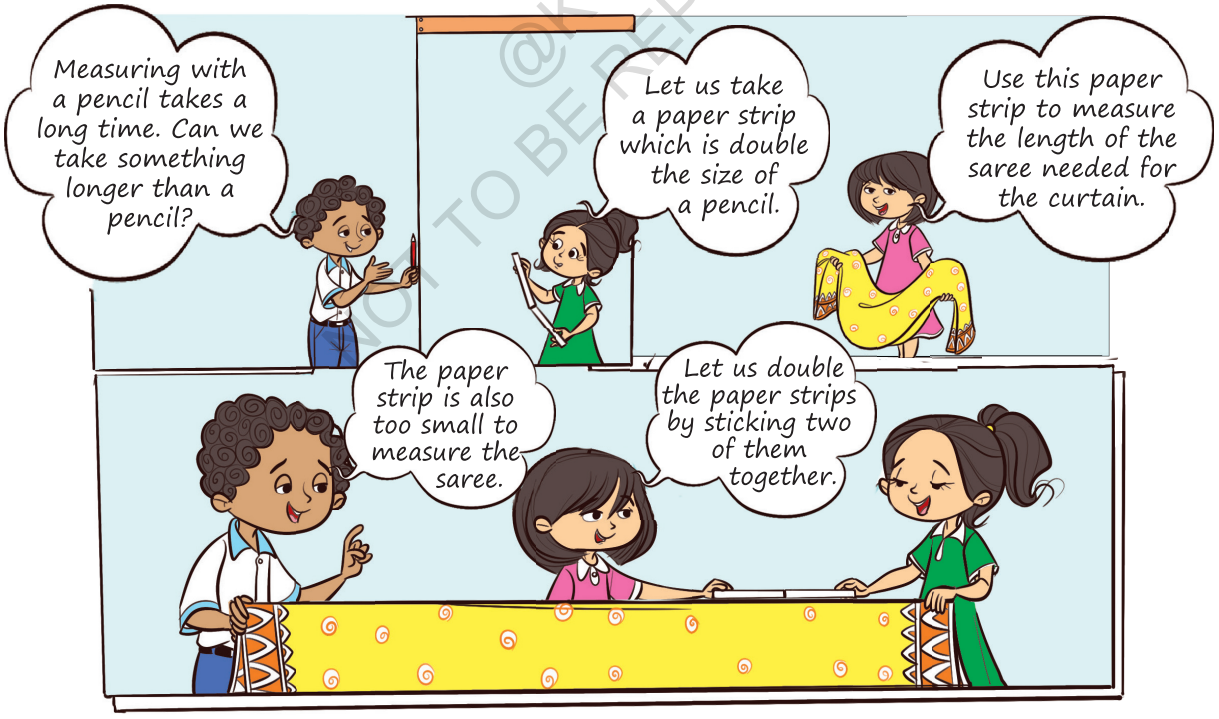
Children are measuring their body parts to make costumes for the drama.



They have made the following statements. Do you think they are true for all children? Let us check. Take help from your friends to measure. Tick ✓ the correct answer.

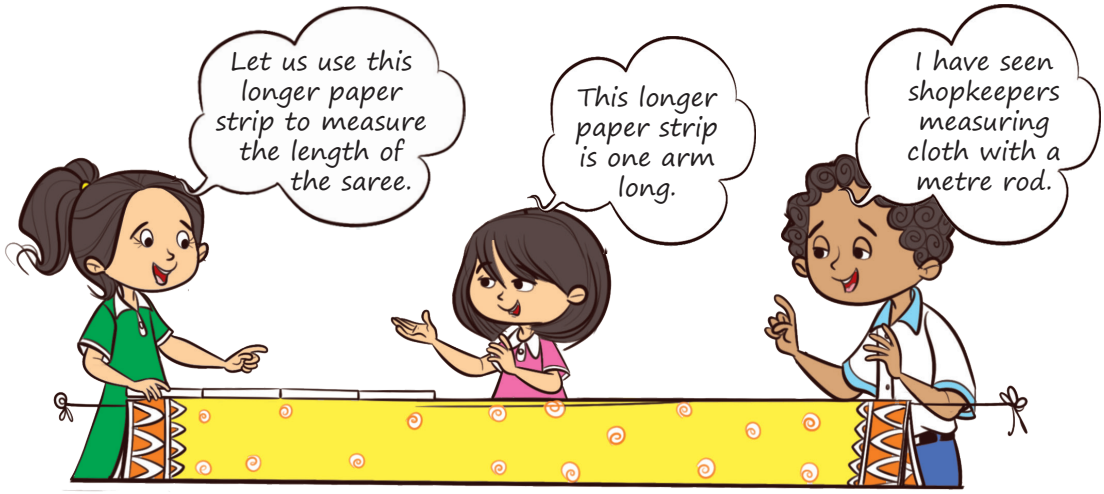
1. Your head is 3 handspans round. True/False
2. The length of your forearm is equal to the length of your feet. True/False
3. Your height is equal to the length of your arms wide open. True/False

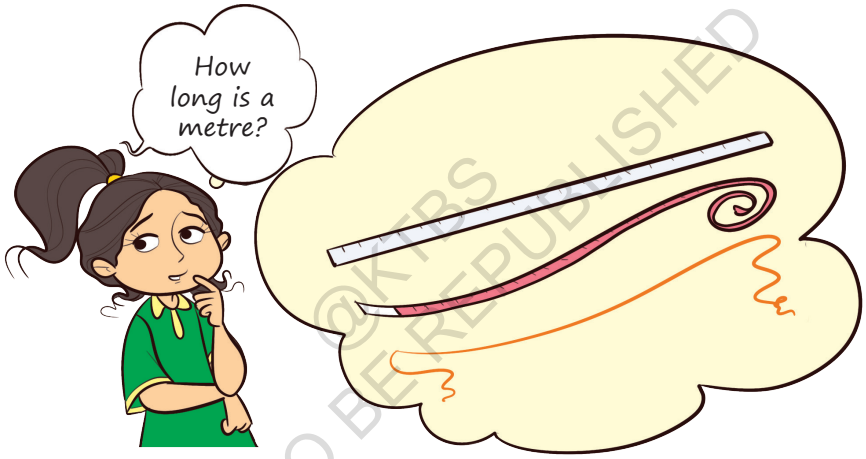
Shelly wants to make curtains for the drama. Leena got her mother's saree. Adi used his pencil to measure the length of the wall.



@KTES NOT TO BE REPUBLISHED

Maths 3 Chapter 10.indd 133 19-04-2024 10:11:43

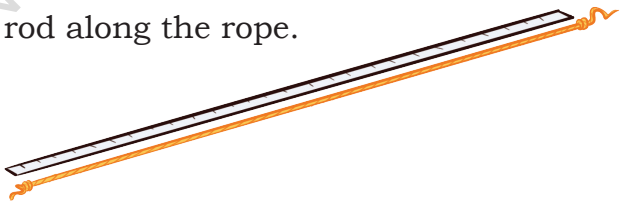




©KTBS NOT TO BE REPUBLISHED

Steps for making a Metre long rope:

1. Take a metre rod or an inch tape and a rope or a thread.
2. Make a knot at one end of it.
3. Keep the metre rod along the rope.



4. Mark one metre on the rope and make a knot there.
5. Now the length between the two knots is one metre. Check again whether the rope measures one metre.

Measure your height by marking one metre on the wall of your class.

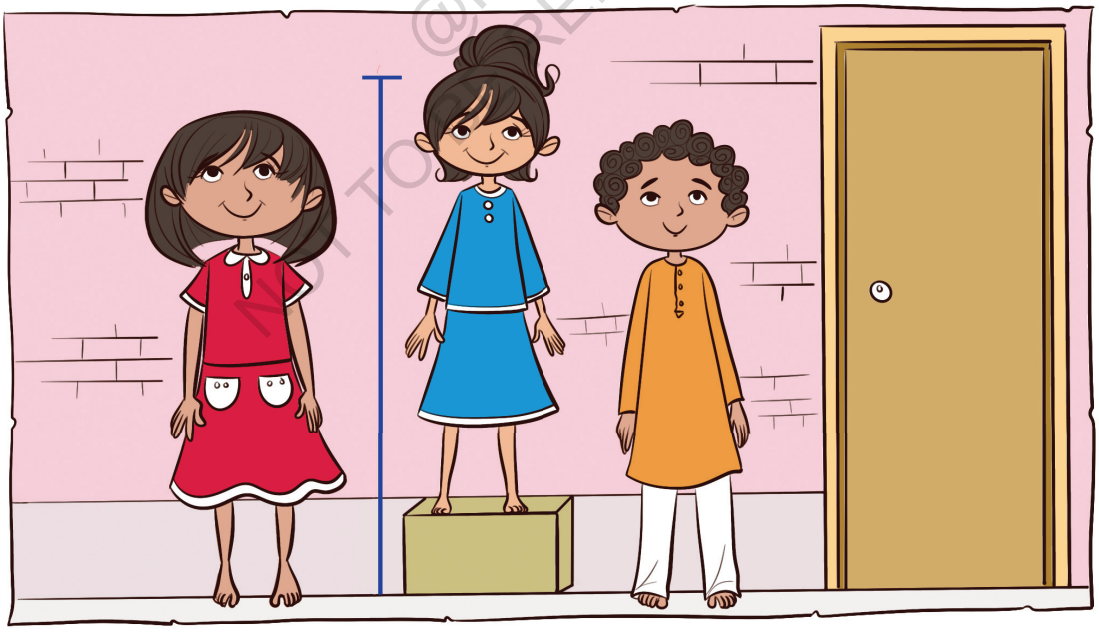
Write the names of your friends whose heights are more than one metre and whose heights are less than one metre.

Heights more than one metre	Heights less than one metre
_____ _____	_____ _____
_____ _____	_____ _____
_____ _____	_____ _____
_____ _____	_____ _____
_____ _____	_____ _____



@KTBS NOT TO BE REPUBLISHED

Circle the tallest among these children:



Who is the tallest among them? Discuss.

Maths 3 Chapter 10.indd 135 19-04-2024 10:11:45

Write the names of the objects around you, whose length is one metre, more than one metre, and less than one metre.

Objects of length more than one metre	Objects of length less than one metre	Objects of length equal to one metre





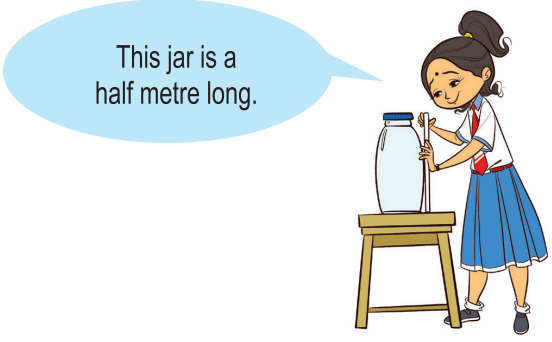
This is one metre long.



Fold it in half. This will be a half metre long.



Fold it in half again. This is a quarter metre long.



@KTBS NOT TO BE REPUBLISHED

Maths 3 Chapter 10.indd 136 19-04-2024 10:11:46



Let us Do

1. Find the lengths of different objects by using one metre, half meter, and quarter metre ropes. Write their names and tick ✓ in the appropriate boxes.

Objects	Less than a quarter metre	More than a quarter metre	Less than a half metre	More than a half metre	Less than one metre	More than one metre

@KTBS NOT TO BE REPUBLISHED

2. Mark a line on the floor as a Start line and then mark another line one metre from the Start line. Stand on the Start line and jump. Write the names of children who jump more than a quarter of a meter, half of a meter and a meter.
3. Take a ball or disc and try to throw it as far as you can. Now measure how far the throw was.

Maths 3 Chapter 10.indd 137 19-04-2024 10:11:47



Let us Do

1. Measure the height of your teacher or parent using a metre long rope or a strip.
2. Estimate and cut one-metre long wool or thread. Ask your friends to do the same. Now verify with the help of the metre rope whose estimate is the closest.
3. Cut a one-metre long rope into 4 equal pieces. How many cuts did you make?
4. How many footsteps fit into a metre rope?
5. Use a metre rope to find how long is a side of the class wall.

@KTBS
NOT TO BE REPUBLISHED

Maths 3 Chapter 10.indd 138 19-04-2024 10:11:47

11 Filling and Lifting

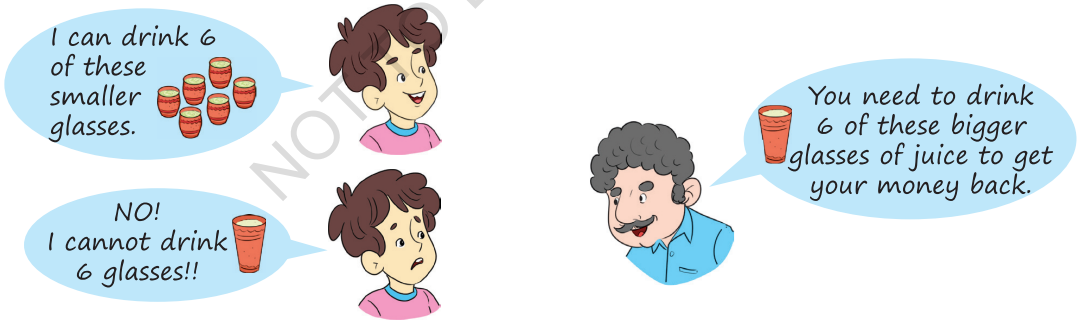
0333CH11



How much can you drink?



Chintu reads the poster and tells Shambhu:



Why do you think Chintu does not take the challenge?
Do you think you can take the challenge?



Teacher's Note: Children should understand that if one takes a bigger glass then we may drink a fewer number of glasses. So one may not take the challenge.

© NCERT NOT TO BE REPUBLISHED

Whose glass holds more?

Nita and Monu visit Ritu's house. Ritu's mother gives them milk in different glasses. Who do you think gets the most milk?





Ritu's elder sister finds out who drinks the most milk like this.

She pours the content of the glasses in three same-sized glasses.


Ritu's glass


Monu's glass

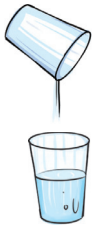

Nita's glass



Ritu's glass



Monu's glass



Nita's glass





Let us Discuss

1. Who drank the most milk?
2. Who drank the least milk?

@KTBS NOT TO BE REPUBLISHED

Maths 3 Chapter 11.indd 140 09-04-2024 14:27:44

3. Fill in the blanks with 'more' or 'less'.

   a. Nita's glass holds ..... milk than Monu's glass.

   b. Monu's glass holds ..... milk than Nita's glass.

   c. Ritu's glass holds ..... milk than Nita's glass.

4. Tick ✓ the right name.

   a. Nita/Monu/Ritu's glass holds the most milk.

   b. Nita/Monu/Ritu's glass holds the least milk.



Let us Do

Get three vessels (like a small bowl  , glass  , and bottle ) of different sizes from your home. Guess: how many small bowls will fill the glass? How many glasses will fill the bottle? First guess and then pour water from one vessel into another to check if your guess is correct.

@KTBS NOT TO BE REPUBLISHED

Vessel	My guess for the number of small bowls	How many bowls
Glass		
Bottle		



1. Fill in the blanks with 'the most' or 'the least'.

   a. The glass holds ..... water.

   b. The bottle holds ..... water.

2. Name the vessels that are used in your home that can store more water than your bottle.



Teacher's Note: Children may get different vessels but they should be able to draw conclusions about their capacity.

Maths 3 Chapter 11.indd 141 09-04-2024 14:27:44

Let us Do



1. How many ladles fill the bowl? .....
2. How many glasses can be filled by the jug? .....
3. What will you use to fill half of the glass?
4. Which of these would you use for distributing the lemonade in glasses? Why?
5. How many glasses can be filled with 3 jugs of lemonade?
6. How many ladles are needed to fill 4 glasses?
7. Can you use a ladle, bowl or a glass to find out how much lemonade a jug can hold?



Teacher's Note: Let children discuss how many times they will have to pour using each thing. Discuss how utensils with less capacity can be used to fill a utensil of larger capacity and how utensils with larger capacity can fill a number of utensils of smaller capacity. Let them conclude that in both cases the quantity remains the same.

© KTBS NOT TO BE REPUBLISHED

Maths 3 Chapter 11.indd 142 09-04-2024 14:27:45

A Measuring Bottle



Nita sees the milkman pour milk using a measuring cup everyday.

Why do you think milkmen use measuring cups for giving milk? Discuss with your parents, grandparents and in your class.



Nita pours water from the bottle into the jug. The jug is exactly 1 litre.



@KTBS NOT TO BE REPUBLISHED



Let us Discuss

1. Tick ✓ the appropriate word in the sentences given below.

   a) The glass holds more than/less than 1 litre.

   b) The bowl holds more than/less than 1 litre.

   c) The jug holds more than/less than/exactly 1 litre.



Teacher's Note: Encourage children to do the above activities in the class. Discuss children's findings in the class. Children may get different answers depending on the vessels they choose. Teacher can get a few vessels and ask them to guess if each will hold 1 litre or more or less than a litre.

Maths 3 Chapter 11.indd 143 09-04-2024 14:27:46

2. Find the vessels at home that are exactly 1 litre. Use your 1 litre bottle to check.

3. Identify vessels that are more than or less than 1 litre.



Let us Think

Look at the picture and tick ✓ the appropriate word.



a) The mug holds a litre/half litre of water.

b) The glass holds a litre/half litre/quarter litre of water.





Let us Explore

First guess and check with the 1 litre bottle.

a) How much water does a bucket hold at your home: more than/less than/equal to 1 litre.

b) How much water does a mug hold at your home: less than/more than/equal to half a litre.

c) How much water does a glass hold: less than/more than/equal to a quarter litre.

©KTBS NOT TO BE REPUBLISHED



Teacher's Note: Please procure measuring cups or vessels that have a capacity of 1 litre, ½ litre and ¼ litre. Conduct the activities for measuring water in the classroom with children. Also, encourage children to establish in class that 4 quarter litre glasses are equal to 1 litre, and 2 half litre mugs are equal to 1 litre.

Maths 3 Chapter 11.indd 144 09-04-2024 14:27:46

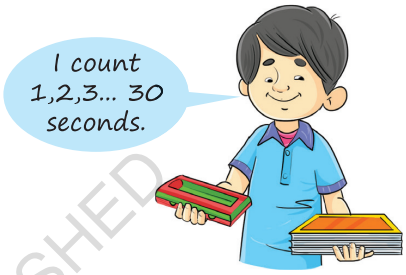
Do you Know?

To make a 1 litre single-use plastic water bottle, we need about 5 litres of water! Less water is wasted if we use our own glass or reusable bottle.



Heavy or Light?

Chintu is holding 3 textbooks in one hand and a pencil box in the other hand for 30 seconds.



Discuss in pairs why one hand of Chintu is lower than the other?

Try holding the following things in both hands. Make observations in pairs. Which is heavier and which is lighter?

Do you and your friends agree on which is lighter and heavier?

@KTBS NOT TO BE REPUBLISHED

Things to compare	My observation	My friend's observation
Lunch box and Pencil box	..... is heavier than	..... is heavier than .....
Your school bag and Lunch bag		
Apple and watermelon		
A balloon filled with air and a basketball		



Teacher's Note: Children need to understand that heavier things tend to go down due to their weight. Teacher can bring the pan-balance or invite a vegetable vendor to give children some experience with weighing.

Maths 3 Chapter 11.indd 145 09-04-2024 14:27:47

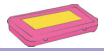
Let us Do

1. Write the names of the objects and their weights in the table given below:



	Object	How many coins or erasers balance the object?
a.	 Pencil	
b.	 Ping Pong Ball	
c.		
d.		
e.		

2. Let us make another weight to measure slightly heavier objects. Fill a matchbox with sand and use this to weigh the following objects. Guess the weight in terms of matchboxes and then verify.

Object	Your guess for the number of matchboxes needed to balance the object	Number of matchboxes used to balance the object
Pencil box 		
A spoon 		
4 marbles 		

© NCERT NOT TO BE REPUBLISHED

Write the names of all things measured in the order of lightest to heaviest.

.....



Teacher's Note: Procure a simple toy pan-balance. Use weights readily available like coins or unused erasers.

Maths 3 Chapter 11.indd 146 09-04-2024 14:27:47

Let us Do

Weight hunt



Do this activity in groups. Among your group find a bag that is heavier than yours. Find a bag that is lighter than yours. Discuss.

1. Why is your bag heavier or lighter?
2. Count the number of books to see if there is a difference in the number of books in the bag.
3. Can you make the two bags of about the same weight by moving a book? Discuss.

How much is 1 Kilogram?



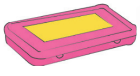
With the help of your parents, find objects in your home on which 1 kilogram is written. Feel it with your hand and guess what other objects may be 1 kilogram. Verify by checking on the label of the object or by asking your parents.

4. Write the names of the objects that are 1 kilogram.

....

Let us keep a 1 kilogram salt packet or any other readily available packet as our measuring tool.

5. Can you guess which of these things are likely to be lighter or heavier than 1 Kilogram? Put a tick ✓ mark in the appropriate box.

Objects							
More than 1 kg	☐	☐	☐	☐	☐	☐	☐
Less than 1 kg	☐	☐	☐	☐	☐	☐	☐

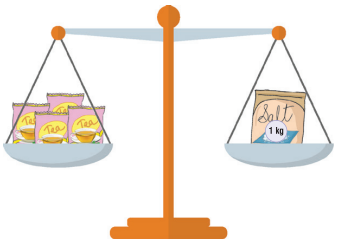
@KTBS NOT TO BE REPUBLISHED

Maths 3 Chapter 11.indd 147 09-04-2024 14:27:48

6. Look at the balance and tick ✓ the correct word.



a) Each *daal* packet weighs a half kilogram/kilogram



b) Each tea packet weighs a half kilogram/quarter kilogram/kilogram.

Let us Explore

Look around your house and identify objects that are about half a kilogram and quarter of a kilogram. Feel these things with your hand and guess what other things are a half or quarter kilogram. List the objects that are about a quarter kilogram and a half kilogram. Verify with the 1 kilogram salt packet.



@KVS NOT TO BE REPUBLISHED

Teacher's Note: Have discussions with children in the class as to how children are making their guesses. Encourage children to discover/ discuss relationships between 1 kg, ½ kg, and ¼ kg using the pan-balance and the 1 kg salt packet.

Maths 3 Chapter 11.indd 148 09-04-2024 14:27:49

Tricky balls

1. Montu poses a puzzle to his friends: 3 balls look similar in size. One of them is heavier and 2 balls are equal in weight. You have only a pan-balance and no weights. Using the 3 balls and the pan-balance, can you identify which is the heavy ball?





   a) How many times will you have to weigh?

   b) Use the balance only one time and tell which is the heavy ball.

2. There are three same-sized balls of different weights and colours: Red, Orange and Green.

   You can use the pan balance for it but cannot use weights.



Red ball



Orange ball



Green ball

   How will you find which one is the heaviest and which one is the lightest?

©KTBS NOT TO BE REPUBLISHED

Maths 3 Chapter 11.indd 149 09-04-2024 14:27:50

12 Give and Take

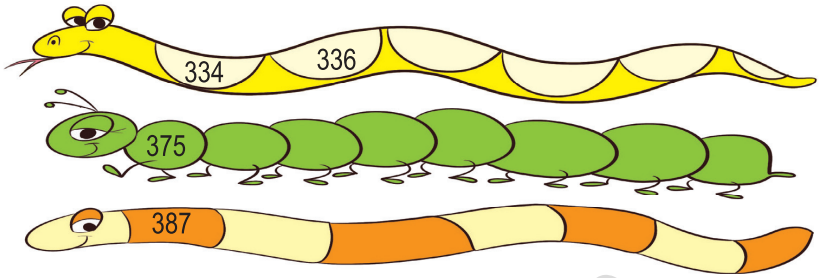
0333CH12



Add 2

Add 5

Subtract 5



Add 6	234						
Subtract 6	357						
Add 9	288						
Subtract 9	331						

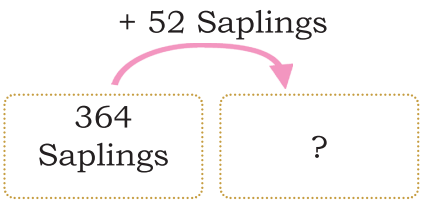
© KTBS NOT TO BE REPUBLISHED

Kishan runs a big plant nursery where he puts different varieties of plants. Villagers often come and take saplings from him to grow in their houses.

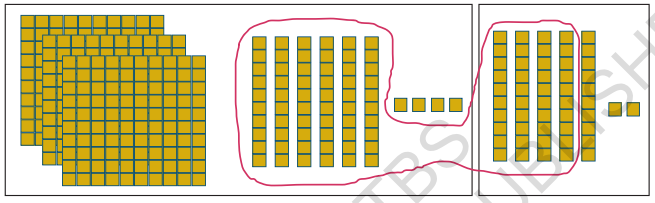


1. Kishan had 364 saplings of different herbs and flowers. Then he went to his friend's village and brought 52 saplings from there. How many saplings does he have now?

Let us draw a box diagram for the problem.

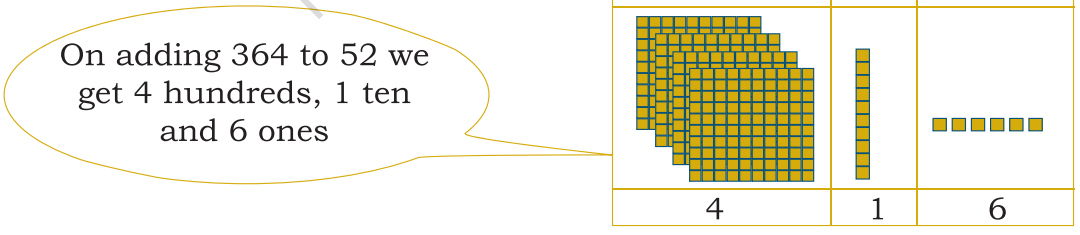


Let us use following systematic procedure to solve the problem.





How many saplings in all?



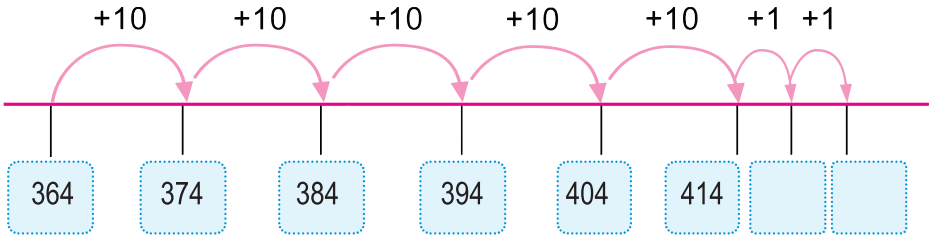
364 Saplings + 52 Saplings = _____ Saplings

364 + 52 = _____

© KTBS NOT TO BE REPUBLISHED

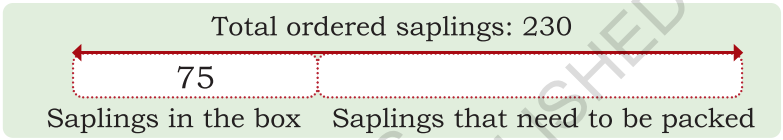
Chapter 12.indd 151 19-04-2024 10:14:42

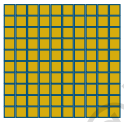
You can also use a number line to solve it.



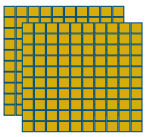
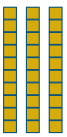
2. Kishan has got an order to deliver 230 saplings to a school. He has packed 75 saplings in an open box. How many more saplings does he need to pack?

We write the given problem as a box diagram:

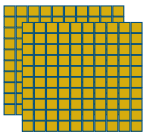
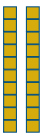
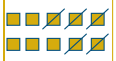


Let us use hundreds  , tens and ones ▪ to solve the problem.

We have to subtract 75 from 230.

Hundreds	Tens	Ones
2	3	0
		

To take away 5 ones, we change 1 ten into 10 ones.

Hundreds	Tens	Ones
		

We can now take away 5 ones from 10 ones.



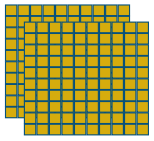
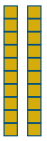
Teacher's Note: Encourage children to use the Dienes Blocks given at the end of the book and the number line for solving these problems. Children can do these problems by taking away and adding numbers in different ways. Discuss the relation between hundreds, tens and ones.

@KTBS NOT TO BE REPUBLISHED

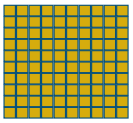
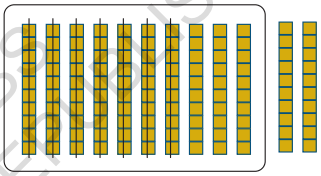
Chapter 12.indd 152 19-04-2024 10:14:43

Subtracting 5 ones from 10 ones, we are left with 5 ones.

Now we have to take away 70. Remember opening a hundreds block gives us 10 blocks of 10s.

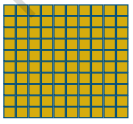
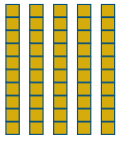
Hundreds	Tens	Ones
2	2	5
		

Take away 70.

Hundreds	Tens	Ones
		

@KTBS NOT TO BE REPUBLISHED

We are left with this.

Hundreds	Tens	Ones
		

Kishan has ..... saplings now.



Teacher's Note: Before going into standard algorithms, students should be encouraged to use Dienes blocks and a number line for solving various problems with different strategies.

Chapter 12.indd 153 19-04-2024 10:14:43

Let us Do

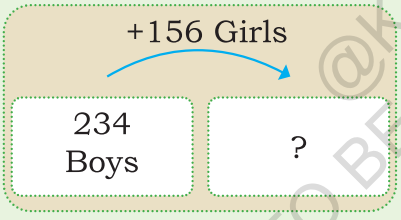
Draw box diagrams, as shown above to solve the following problems. Then use HTO blocks or a number line to solve the problems.

1. Kishan has 456 saplings in August. He distributed 63 saplings. How many saplings are left with him?

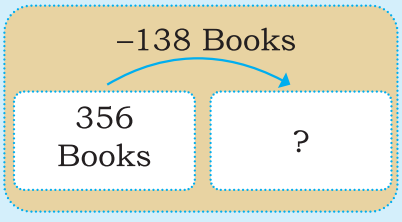
2. Kishan has a collection of 309 saplings. He gets 80 more saplings of flowering plants. How many saplings does he have now?

3. Kishan has 270 saplings of herbs and his friend has 36 saplings of herbs. How many more saplings does Kishan have than his friend?

Write word problems using the numbers given in the box diagrams below and solve them. You can take help from the pictures for appropriate contexts.



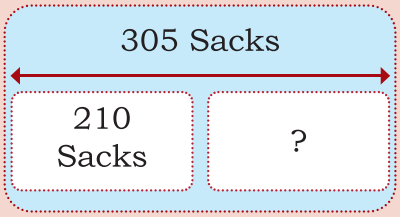






@KTBS NOT TO BE REPUBLISHED

Chapter 12.indd 154 19-04-2024 10:14:44





Use the grid below to solve the following questions. Colour your answers in the grid.

521	522	523	524	525	526	527	528	529	530
511	512	513	514	515	516	517	518	519	520
501	502	503	504	505	506	507	508	509	510
491	492	493	494	495	496	497	498	499	500
481	482	483	484	485	486	487	488	489	490
471	472	473	474	475	476	477	478	479	480
461	462	463	464	465	466	467	468	469	470
451	452	453	454	455	456	457	458	459	460

NOT TO BE REPUBLISHED @KTBS

456 + 10 466

481 + 19 ____

489 + 21 + 15 ____

405 + 23 ____

467 + 51 ____

519 – 40 ____



Teacher's Note: Encourage children to solve the problems using the above grid. Draw children's attention to the pattern of change in digits when adding 100,10 and 1.

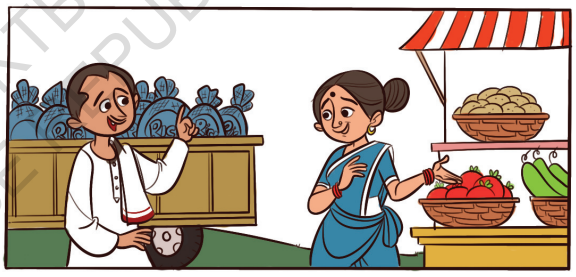
Chapter 12.indd 155 19-04-2024 10:14:44

Do as directed.

Add 100	Add 10	Add 1
269	269	269
369		
	289	

Add 100	Add 10	Add 1
454	454	454
		455

Many years ago, in the Village 'Jadupur', people exchanged things based on their need. Shaamu Kaka gave 5 sacks of rice to Dariya Didi. She in return gave 10 sacks of vegetables. Dariya Didi got 2 sarees from Bablu Dada by giving 5 sacks of onions.



Like this, people in the village exchanged their things. Shamu Kaka got vegetables for the rice he gave. Dariya Didi gave lots of onions to Bablu Dada for the two sarees. Discuss in class why people in this village had to give different quantities while exchanging things.



These days we use money in exchange for things we need. Notes and coins come in different values which are used to buy different things.

© KTBS NOT TO BE REPUBLISHED

Chapter 12.indd 156 19-04-2024 10:14:45

For example, one 10-rupee note can buy one *Hawa Mithai* or ten toffees.



One *Hawa Mithai* costs more than a toffee.

Salma buys two bottles of milk for ₹ 100. Kiran buys a basket of pomegranates for ₹ 100.

Circle the one that costs more: a milk bottle or a pomegranate?



Think of two things that we can buy using the same note.

Note	Things you can buy
	
	

© KSEEB NOT TO BE REPUBLISHED

Chapter 12.indd 157 19-04-2024 10:14:46

Match the notes and coins in the two columns that have the same values.





























© NCERT NOT TO BE REPUBLISHED



Teacher's Note: Let children observe different features in original notes like personalities, monuments, embossed images for people with visual impairments, numbers and number names in different languages, etc. Discuss with children the connections between notes and coins.

Chapter 12.indd 158 19-04-2024 10:17:15

Use the following notes and coins to buy the things given below. Find at least two ways of giving the money. You may use the notes and coins more than once.





















@KTBS NOT TO BE REPUBLISHED

Have you seen this note?



Draw as many notes of ₹ 100 as is equal to one ₹ 500 note.

How many ₹ 100 notes are equal to a ₹ 500 note? _____

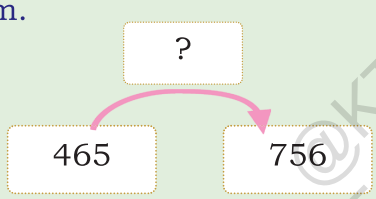
What things can you buy with ₹ 500 ?

Chapter 12.indd 159 19-04-2024 10:17:31



In the morning, Peter uncle has ₹ 465 in his money box. By afternoon, he has ₹ 756. How much has he earned since morning?

Let us draw a box diagram for the problem.



My Estimation.

₹ _____

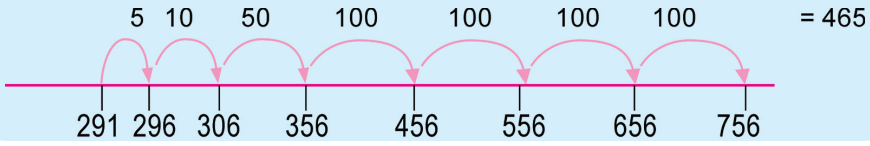
© KTBS NOT TO BE REPUBLISHED

₹ 756 — Take out ₹ 465



Difference between the two amounts = ₹ 291

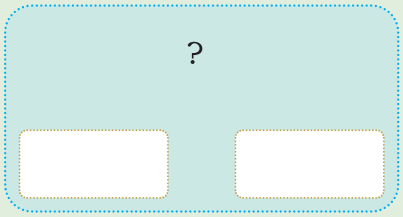
He has earned ₹ 291 since morning.



Chapter 12.indd 160 19-04-2024 10:18:20

Today, Peter uncle sold rice for ₹ 640 and sugar for ₹ 215. How much money has he earned from this sale?

Draw a box diagram for the problem.



My Estimate.

₹ _____

Use    or a number line to solve it.

@KTBS NOT TO BE REPUBLISHED



Let us Do

Solve the following problems using box diagrams. Estimate the answers. Then use notes of ₹ 100s, ₹ 10s and ₹ 1s or a number line to solve the problems.

1. One day Peter uncle earned ₹ 650. The next day he earned ₹ 250 more. How much money had he earned by the second day?



Teacher's Note: Provide or ask children to make play money. Help children in exchanging denominations of hundreds, tens and ones and use them in solving problems.

Chapter 12.indd 161 19-04-2024 10:18:28

2. Reena bought groceries for ₹ 209. She gave a ₹ 500 note to Peter uncle. How much money should Peter uncle return to Reena?

3. Shireen has ₹ 150 in her piggy bank. She puts ₹100 every week in her piggy bank. How much money does she have at the end of four weeks?

4. Peter uncle saved ₹ 250 in the first month, ₹ 125 in the second month and ₹ 350 in the third month. How much has he saved in these three months?



Estimate the answers to the nearest hundred. Share your thinking in the class.

Number Sentence	Nearest Hundred
156 + 34	
125 – 15	
105 + 195	
205 + 215	
500 – 395	
765 – 567	
505 + 405	

@KTBS NOT TO BE REPUBLISHED



Teacher's Note: The teacher can create similar word problems to give children practice of adding and subtracting numbers. Motivate children to draw the problem before solving. Avoid giving keywords to children for solving word problems.

Chapter 12.indd 162 19-04-2024 10:18:29

Compare the given problem statements in each row, without calculating. Circle the one that is more. Share your thinking in class.

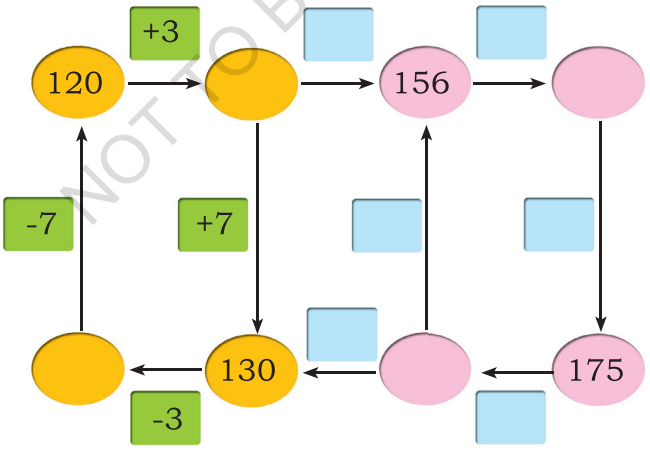
373 + 23	373 + 40
240 + 10	204 + 10
900 + 9	890 + 60
345 – 45	345 – 54
800 – 8	700 – 8

Find the pairs that are equal. Share your thinking in class.

516 + 100	615 – 200	350 + 50
400 + 15	450 – 50	816 – 200

© KTBS NOT TO BE REPUBLISHED

Fill in the boxes with appropriate numbers.





Teacher's Note: Encourage mental calculations in the class to solve the problems above. Ask children to frame many such questions.

Chapter 12.indd 163 19-04-2024 10:18:30

Make cards with numbers 0-5. Make two 3-digit numbers using these cards. Add the two numbers and subtract the two numbers. Rearrange the cards and try to get a bigger sum. Rearrange the cards and try to get a smaller difference.

Check with your friends who has got the biggest sum and smallest difference.



© NCERT NOT TO BE REPUBLISHED

Let us Do

(a) 265 + 9
(b) 405 + 56
(c) 825 + 175
(d) 600 – 82
(e) 568 – 5
(f) 653 – 356



Teacher's Note: Allow children to use the number cards from the book to create different numbers. It can be hard for children to do this task with pencil and paper only.

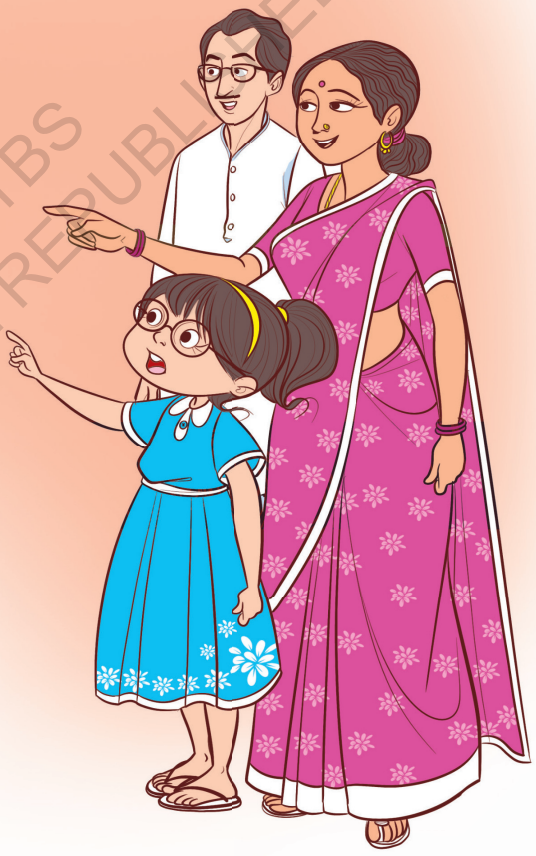
Chapter 12.indd 164 19-04-2024 10:18:30

13 Time Goes On

0333CH13







© NCERT NOT TO BE REPUBLISHED

Appa bought a new calendar,
Amma points a big blunder.
Missing was the month of July,
I wonder, where did it fly?
Don't worry, don't worry,
I have a solution to your query.
July and January looks the same,
Let us play the calendar game.



Let us Do

Make the calendar for the month of July 2024.

July

Monday (सोमवार)	Tuesday (मंगलवार)	Wednesday (बुधवार)	Thursday (गुरुवार)	Friday (शुक्रवार)	Saturday (शनिवार)	Sunday (रविवार)

©KTBS NOT TO BE REPUBLISHED

Observe the July month and complete the following.

1. Number of Sundays _____
2. Write the dates in this month that are Thursdays _____
3. Three days after July 22 is July _____.
   The day on this date is _____
4. A school closes on July 7 for 15 days. The date on which the school will open is _____

Chapter 13.indd 166 19-04-2024 10:16:07



Let us Explore

Collect calendars for the last two years. Observe the following in both the calendars:

1. What is the same? What is changing in the years? Tick ✓ the correct answer.

(a) Names of the months	Same/ Changes
(b) Days in a month	Same/ Changes
(c) Days in a week	Same/ Changes
(d) Number of Sundays	Same/ Changes
(e) Number of weeks in a year	Same /Changes

Festival	Date Month Year DD/MM/YY	Date Month Year DD/MM/YY	Festival	Date Month Year DD/MM/YY	Date Month Year DD/MM/YY
Deepawali			Makarsankranti		
Ganesh Chaturthi			Mahavirjayanti		
Id-ul-fitr			Independence Day		
Dussehra			Gurupurab		
Buddha Purnima			Republic day		
Christmas			Your birthday		

@KTBS NOT TO BE REPUBLISHED

Circle the festivals that fall on the same date.



Let us Do

1. Write the names of the 12 months in a year.
2. Months that have less than 30 days _____
3. Number of days in a year _____
4. Hetal says there are 53 weeks in a year. Is she right? Yes/No. If not, how many weeks did you find in a year?

Chapter 13.indd 167 19-04-2024 10:16:21

Age Fun

Talk to your mother and find the following.



Age of my mother's mother when my mother was born:



My age today:



My mother's age today:

How old are we?



Age of my mother's mother when I was born:







Age of my mother's mother today:

My mother's age when I was born:

©KTBS NOT TO BE REPUBLISHED

Hetal is twice as old as her brother. She is also 10 years older than her brother. Guess the age of Hetal and her brother.



Teacher's Note: Discuss with the children the strategies they used to find the age of different people.

Chapter 13.indd 168 19-04-2024 10:16:50

Let us Do

Form Number 5
Goverment of Kerala



BIRTH CERTIFICATE

This is to certify that this information is taken from the original record of birth which is in the register for the year 2015 of Kottayam Panchayat.

Name:	*Bincy Thomas Jacob*
Sex:	*female*
Date of Birth:	*02/05/2015 (Second May Two Thousand Fifteen)*
Place of Birth:	*Kadampuzha Hospital*
Name of Father:	*Jacob Tharakan*
Name of Mother:	*Lara Thomas*
Date of Registration:	*02/05/2015*
Registration Number:	*815/15*

Date 18. 05. 2015 *Signature Authority*

@KTBS NOT TO BE REPUBLISHED

Look at the birth certificate of Bincy and answer the following question.

1. 2/5/2015 shows that Bincy was born on 2 (April/May/June/July) in the year 2015.
2. How old will Bincy be on 2 May 2025? _____
3. How old will she be in 2030? _____
4. Eighth Birthday of Bincy was on _____.
5. Bincy was _____ months old on 2 August 2015.
6. After how many days of her birth was the certificate issued? _____

Chapter 13.indd 169 19-04-2024 10:17:03



Let us Do

1. Make your own birth certificate.

Form Number _____

Government of _____

BIRTH CERTIFICATE

This is to certify that the information was taken from original records of birth which is in the register of year _____ *and* _____

Name : _____

Sex: _____

Date of Birth: _____

Place of Birth: _____

Name of Father: _____

Name of Mother: _____

Date of Making Certificate: _____

Age on the date of making the certificate: _____

Your Signature

@KTBS NOT TO BE REPUBLISHED

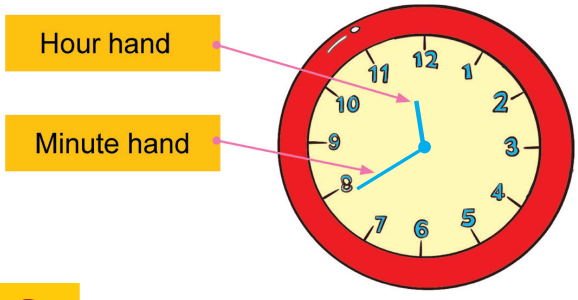
2. Complete the following by writing the dates in the boxes given below:

Date of Birth	Date on which you were admitted in the school.	Date on which you were admitted in Class I.	Date on which you were admitted in Class III.

Chapter 13.indd 170 19-04-2024 10:17:07

Let us Play

Get a working analog clock or watch. Observe the face of the clock and movements of the hands. Discuss what you observe.



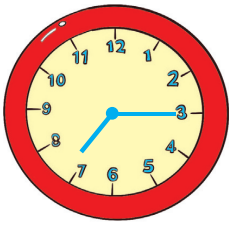
Let us Do

1. Hetal started her breakfast at 7 o'clock in the morning. She finished her breakfast at 07:15 in the morning.

(a) 07:00



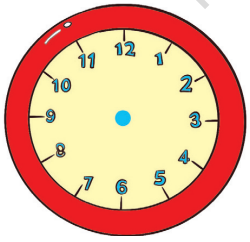
(b) 07:15



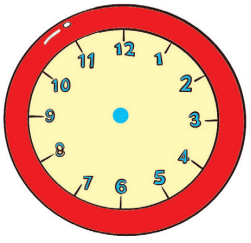
She took _____ minutes to eat her breakfast. How do you know?

2. Draw the hour hand and minute hand on the clock to show the following:

(a) 8:15 or quarter past 8



(b) 8:30 or half past 8



©KTBS NOT TO BE REPUBLISHED

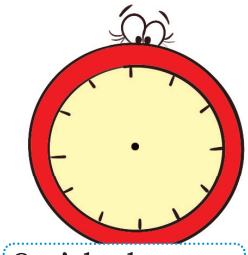
Teacher's Note: Discuss with children what the numbers and marks on the clock mean. Also discuss the process of measuring the duration of hours and minutes using the clock.

Chapter 13.indd 171 19-04-2024 10:17:17

Let us Do

A Day in the life of Hetal.

Match the activity with the statement shown in the picture. Write the time and draw the minute hand and the hour hand wherever it is required.



9 o'clock

Goes to Sleep



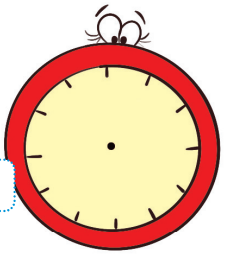


_____ o'clock

Wakes up



7 o'clock



Does yoga

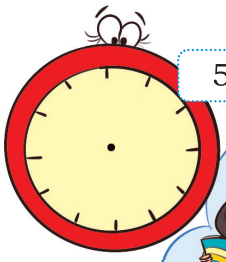


Goes to School





_____ o'clock



5 o'clock

Studies





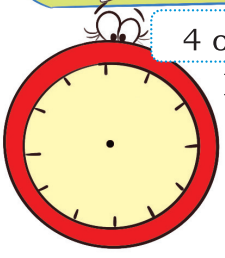




Haves Lunch

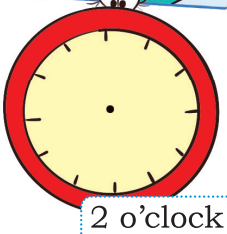


Returns to home

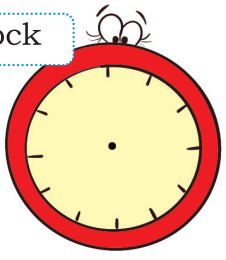


4 o'clock

Plays



2 o'clock

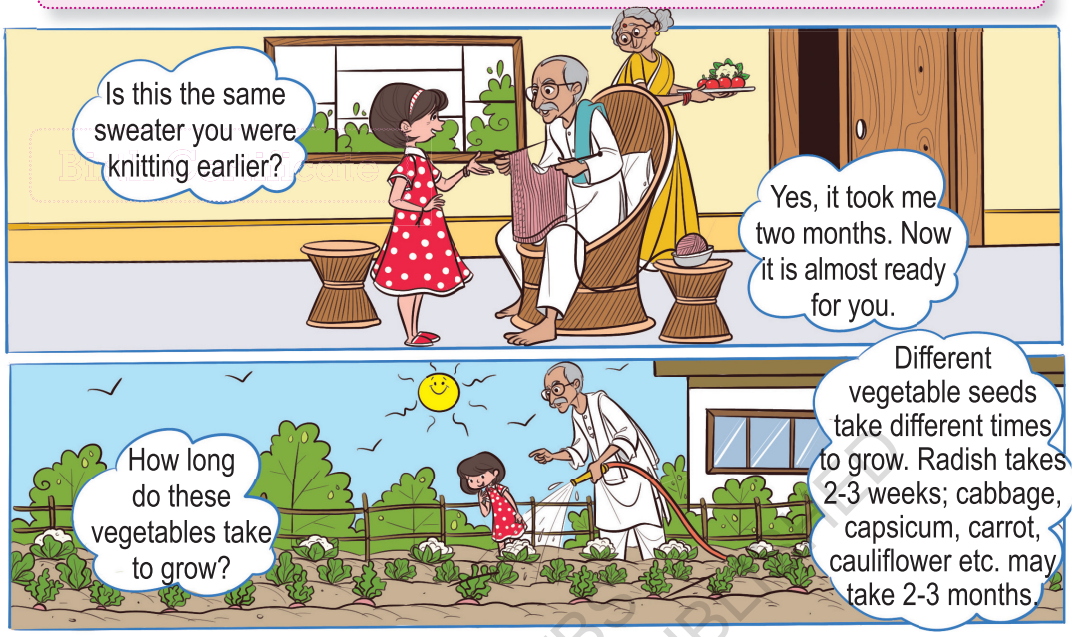


1 o'clock

© NOT TO BE REPUBLISHED

Chapter 13.indd 172 19-04-2024 10:17:31

Visit to Nani's House (Grandma's House)



© KTBS NOT TO BE REPUBLISHED

Let us Think

Fill the table by writing events or activities from your daily life that can take the following durations of time. One is written as an example in each column.

Takes months	Takes weeks	Takes days	Takes hours	Takes minutes
Changing from summer to winter	Completing a chapter in class	Knitting a sweater	Stitching a shirt	Taking a shower

Teacher's Note: Bring the child's attention to different events that take minutes, hours, days or months to complete.

Chapter 13.indd 173 19-04-2024 10:17:32

3. Write the number of minutes taken for the following activities.

Activity	Time taken
School Period	_____ minutes
Lunch Break	_____ minutes
Midday Meal	_____ minutes
Play Period	_____ minutes
Eating Dinner	_____ minutes
Brushing Teeth	_____ minutes

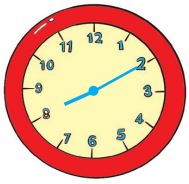
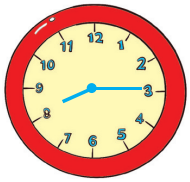
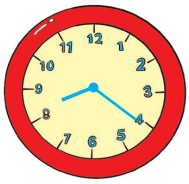
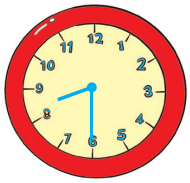
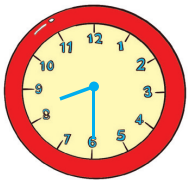
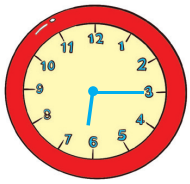
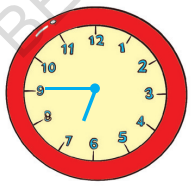
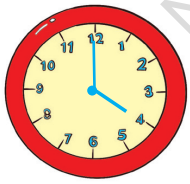
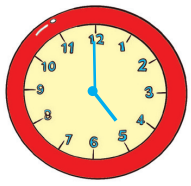
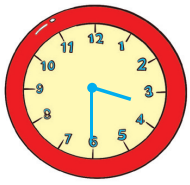
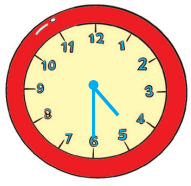
4. Write down what you can do in the time frame given below.

Time	Activity
5 minutes	
10 minutes	
15 minutes	
20 minutes	
25 minutes	
30 minutes	
45 minutes	
60 minutes	

@KTBS NOT TO BE REPUBLISHED

Chapter 13.indd 174 19-04-2024 10:17:32

5. Write the number of minutes passed by looking at the movement of the minute and hour hands.

Begining Time	End Time	Time taken
		5 minutes
		
		
		
		
		

@KIBS NOT TO BE REPUBLISHED

Chapter 13.indd 175 19-04-2024 10:17:37

Let us Explore

You may have seen digital watches or clocks at various places. Where have you seen them?





A **digital** clock shows time using digits. A clock showing time with second, minute and hour hands is called an **Analog** clock.

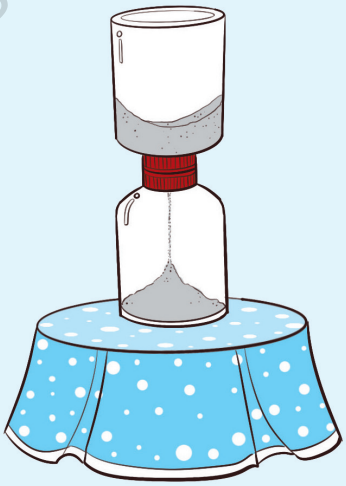
1. What is the difference between the above two clocks?
2. Which clock do you have on your school wall?

Duration of time is also measured using sand clocks. Make your own sand clock (timer), in the presence of an adult.

Material required:

(i) Two waste transparent or glass bottles of small size with caps.

(ii) Strong glue to join bottle caps.



Process:

Join the tops of the bottle caps with each other using a strong glue.

Make a small hole with a fine needle at the centre of the joined caps.

Fill one of the bottles half way with fine sand and close the bottle with the joined caps.

Attach the second bottle on the other side of the joined caps.

©KTBS NOT TO BE REPUBLISHED

Find out how much time it takes to shift the sand from one bottle to the second one by looking at the clock. Your sand clock is ready for use. You may use it to time while playing different games.

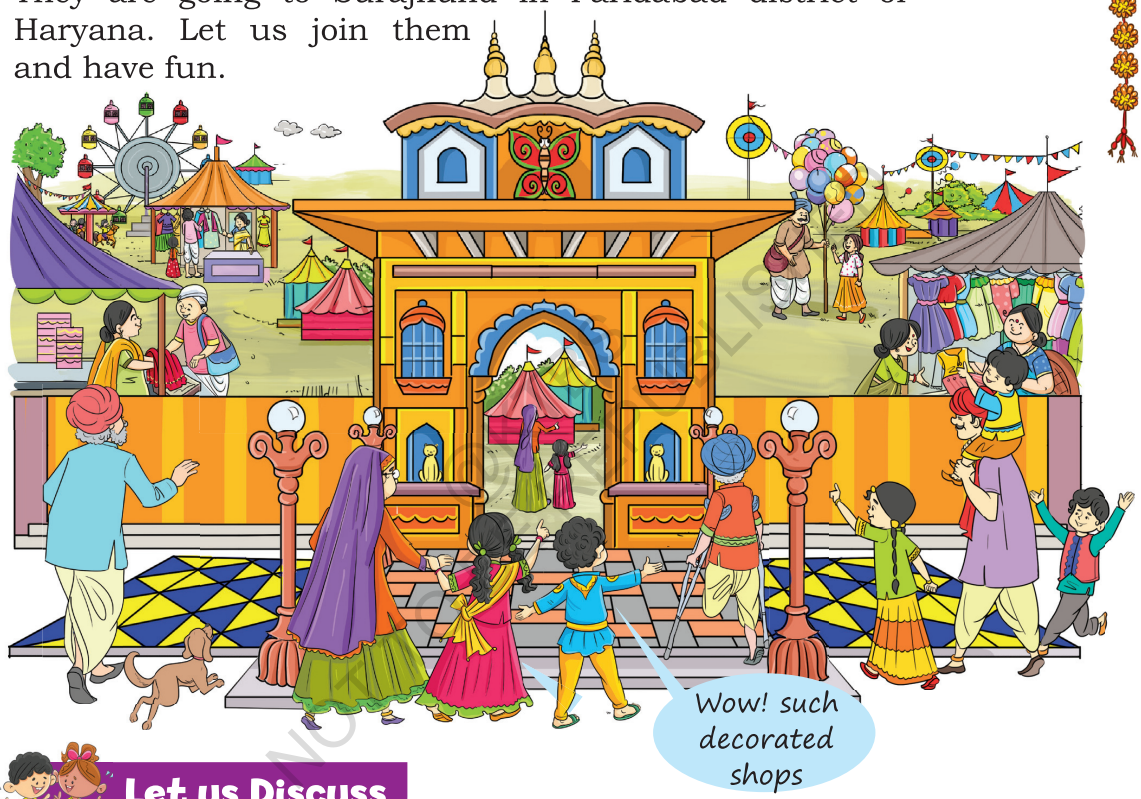
Chapter 13.indd 176 19-04-2024 10:17:54

14 The Surajkund Fair



0333CH14

Soni and Avi are going to see a fair with their grandparents. They are going to Surajkund in Faridabad district of Haryana. Let us join them and have fun.



Let us Discuss

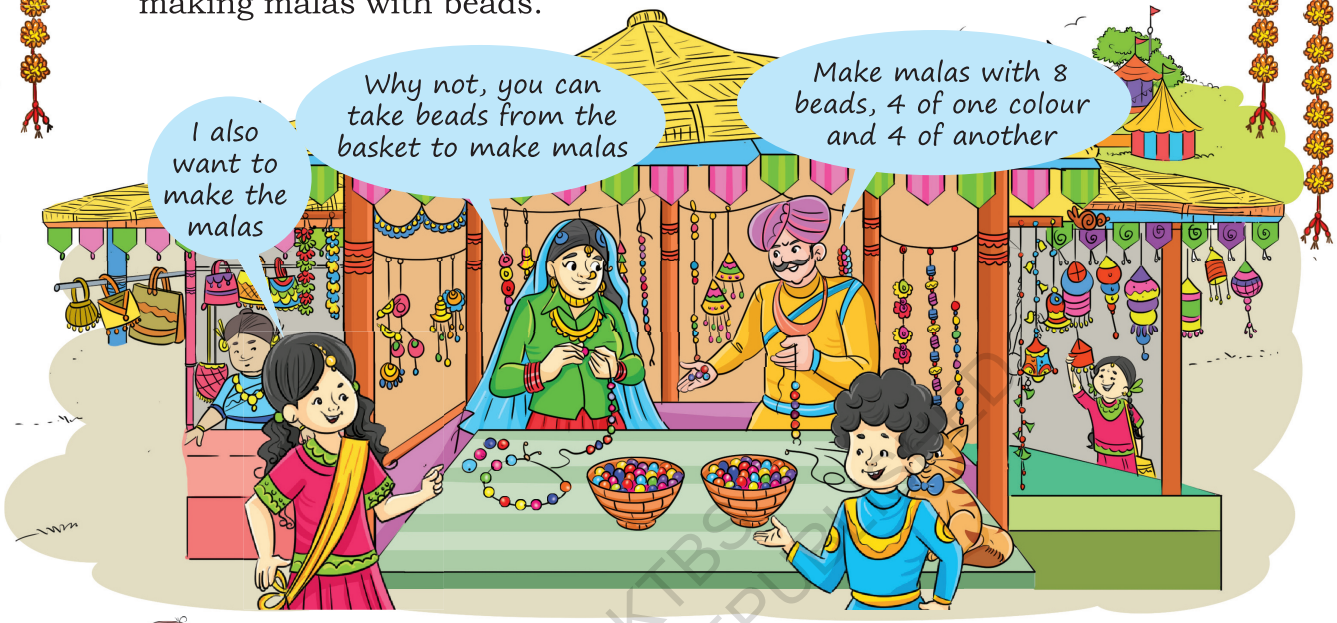
1. What do you see in the picture?
2. Spot things in the picture that look the same from the left and right side.

Teacher's Note: Discuss with children about any local mela they have visited. Encourage them to look at the picture and observe different patterns, like tiling on the floor and the symmetry they see in objects and shapes.

© NCERT not to be republished

Make *Malas*

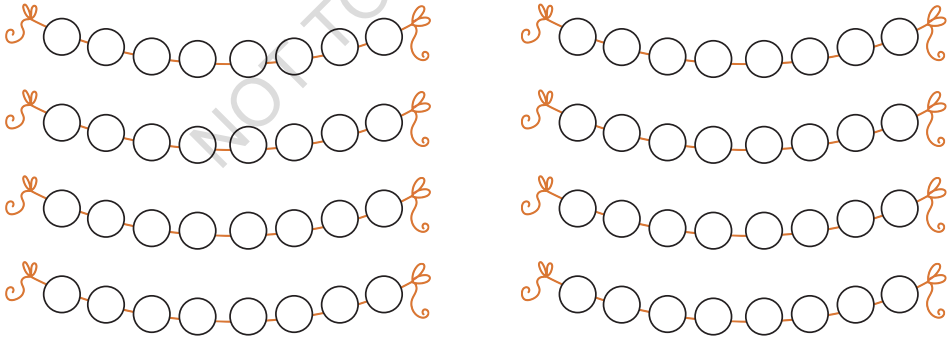
Soni and Avi reach a stall where a man and a woman are making malas with beads.



@KTBS NOT TO BE REPUBLISHED

Let us Do

1. Colour the beads in the strings using two colours (🔴🟡) to show the *malas* that you have made.



Teacher's Note: You may provide children with a string and 8 beads of two colours from a *ginladi*. They can make a record of their constructions by colouring the *malas* given here.

Chapter 14.indd 178 4/26/2024 5:09:05 PM

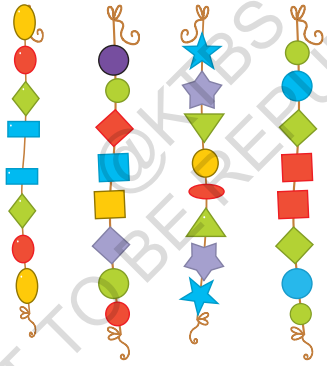




2. On the previous page, tick ✓ the *malas* that are symmetrical.

3. How many such *malas* can be made? Discuss.

a. Tick ✓ the *malas* that are symmetrical and cross ✗ the one(s) that are not symmetrical.



b. Now, use 6 beads of one colour and 2 beads of another colour to make symmetrical *malas*.

© NCERT NOT TO BE REPUBLISHED



Teacher's Note: Encourage children to see the differences between symmetrical and non-symmetrical objects around them. Provide them opportunities to share their justification and reasons.

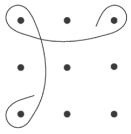
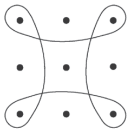
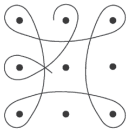
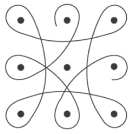
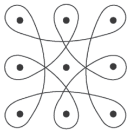
Chapter 14.indd 179 4/19/2024 12:47:28 PM



Vanakkam! Rangolis all around!

Soni and Avi arrive at the stall of Tamil Nadu. Amma was making *kolam* in front of the hut.

Follow the steps:

1 
2 
3 
4 
5 





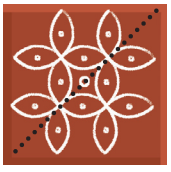
Let us Think

1. Observe the *rangolis* given below. Are all *rangolis* symmetrical?

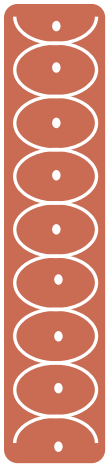




2. Trace these *rangolis* on a paper. Fold the tracing paper in such a way that one half of the *rangoli* lies exactly on the other half.



3. Draw lines in the given *rangolis* that divide them into two identical halves.
4. Look for other symmetrical things around you. Discuss.





Teacher's Note: Discuss about *kolam*, and the tradition and the States it belongs to. You can use the dot grid given on page number 192. They may use it for making symmetrical *rangolis*.



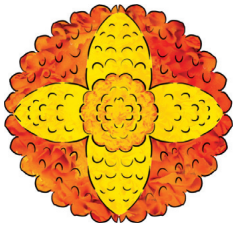
© NCERT NOT TO BE REPUBLISHED

Chapter 14.indd 180 4/19/2024 12:47:31 PM

Let us Do

Enjoy making *rangolis*

Pookalam, Kerala

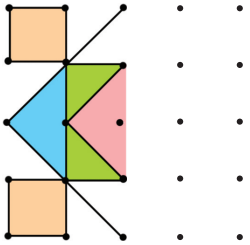


Aipan, Uttrakhand

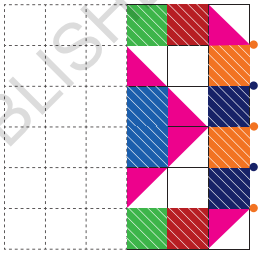


1. Draw and complete the symmetrical rangolis given below.

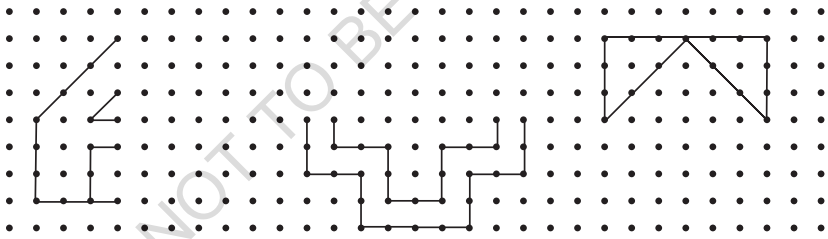
a.



b.



c.



@KTBS NOT TO BE REPUBLISHED

2. Draw some more rangolis in your notebook that are symmetrical.



Teacher's Note: Give additional exercises to complete the half of a given rangoli. Observe and discuss the ways children draw the other half of the rangoli. What do they notice while completing the other half? What strategies do they use?

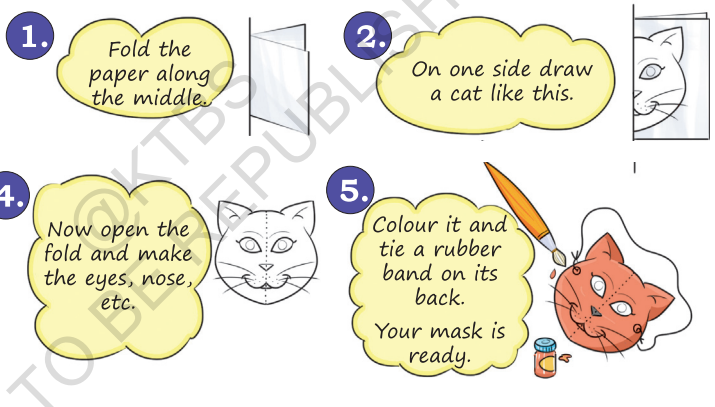
Ask children to collect rangoli patterns from different parts of the country and share them in the class.

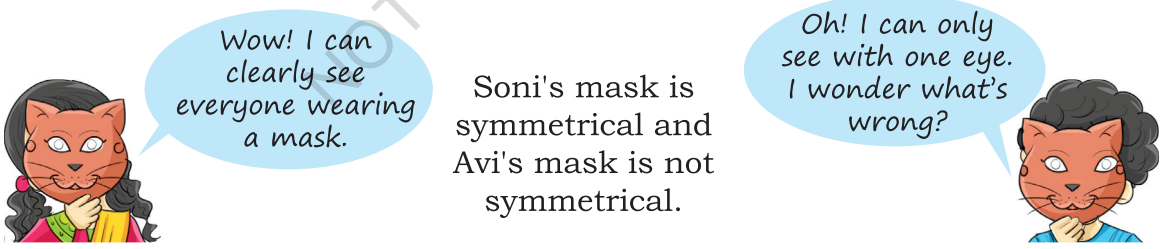
Chapter 14.indd 181 4/19/2024 12:47:33 PM

Make Masks!



Let us make the mask of a cat...







Teacher's Note: Discuss with children why Avi was able to see only with one eye. Children should understand that objects that are divided into two exact halves such that one half superimposes onto the other half are symmetrical.

© KTBS NOT TO BE REPUBLISHED

Chapter 14.indd 182 4/19/2024 12:47:36 PM

Tit for Tat

Soni gets her picture made by a painter.



NOT TO BE REPUBLISHED © NCERT

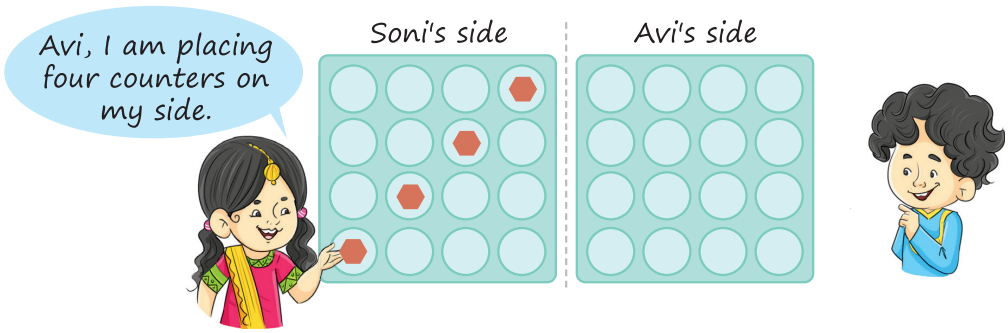
Let us Think

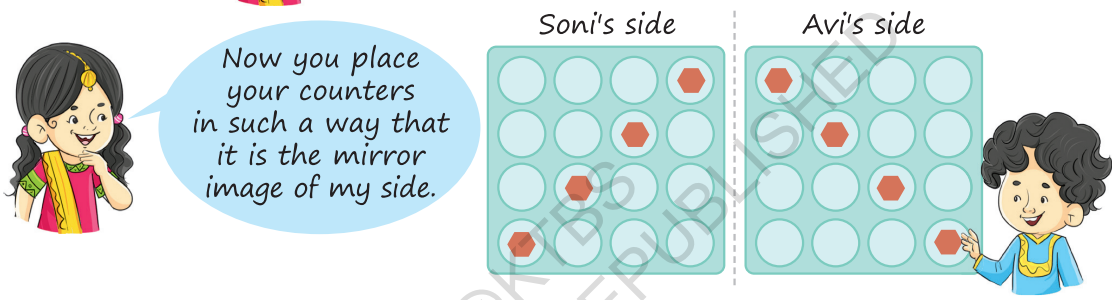
1. What is the trick the painter is playing? Find things for the painter to draw so that he can no longer play the trick. Draw three such things here.

Chapter 14.indd 183 4/19/2024 12:47:37 PM

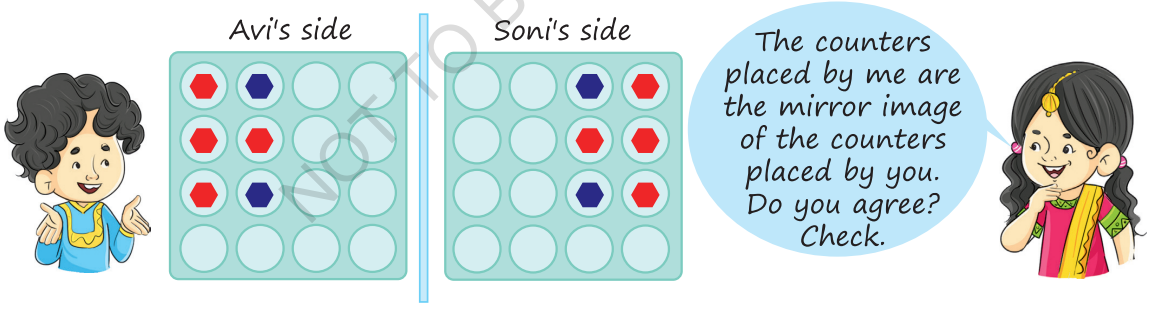
The Mirror Game

Soni and Avi started playing this game. Let us play with them.





Has Avi placed the counters at the right places? Check it by placing the mirror on the line drawn.





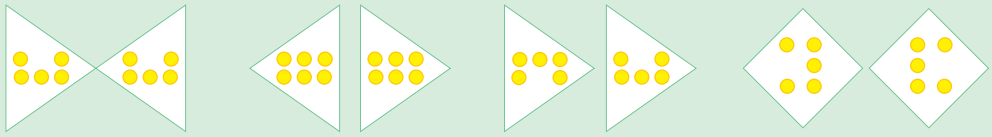
Teacher's Note: As an extension activity, children may use different two-coloured objects such as unit cubes, counters, etc. Once children play this game on the floor. In the game, children may also use more than four objects and challenge their friends.

© KEES NOT TO BE REPUBLISHED

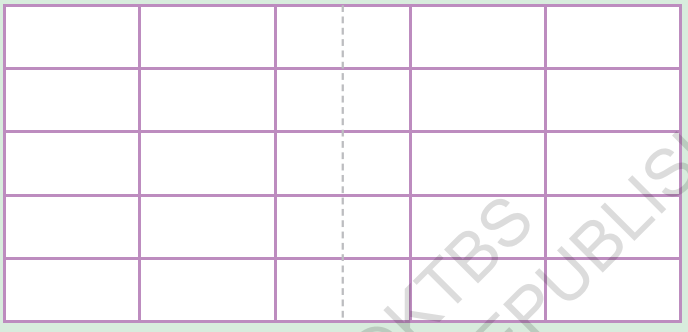
Chapter 14.indd 184 4/19/2024 12:47:38 PM

Let us Explore

1. Pick the odd one out and give reasons.

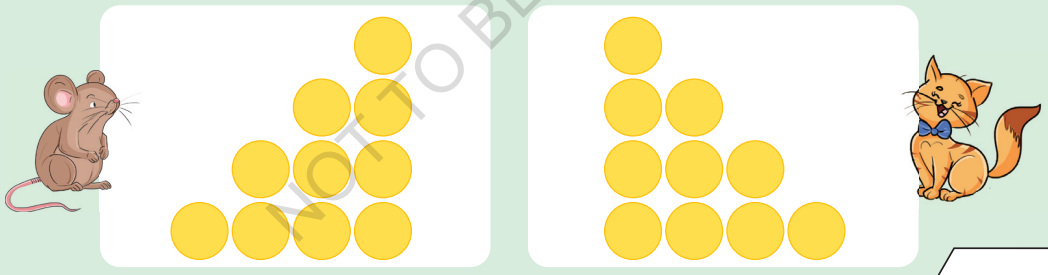


2. Fill 4 boxes with red colour and 3 with blue colour in such a way that one side is the mirror image of the other.

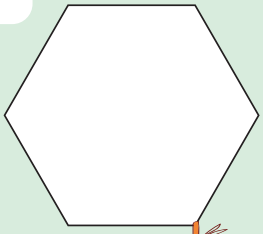


In how many ways can you fill it?
Think, think!

3. Make Micy's side the same as that of Catty's side. You can rearrange only three balls in Micy's side.



4. Which shape cutouts would fit in the given shape without overlapping and without gaps.



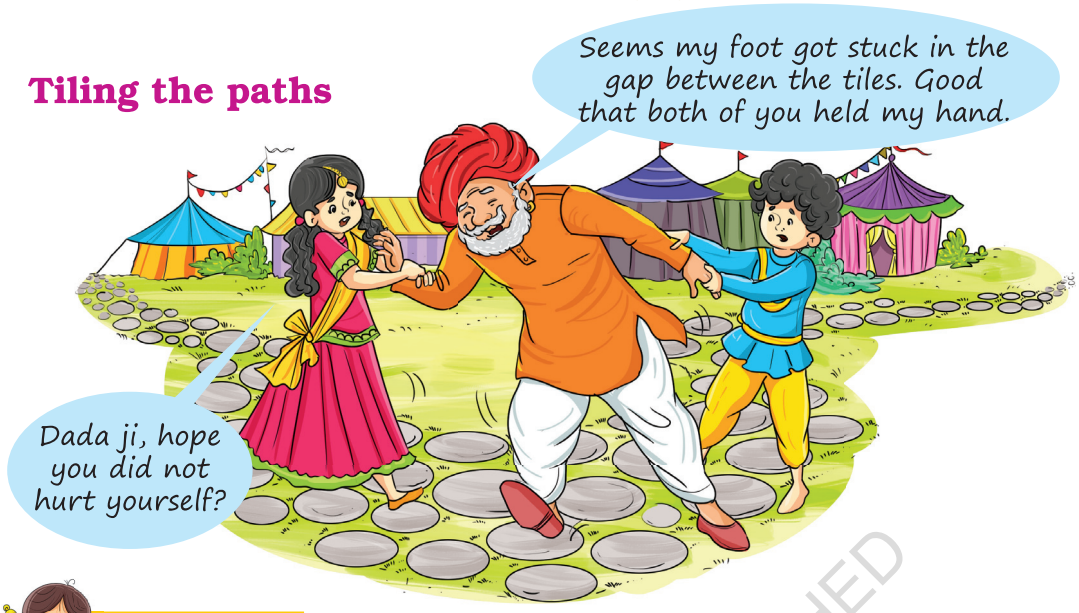


Teacher's Note: In question no 1, each part can be the odd one out. Let the children observe and find the odd one out by giving a logical reason for their answer.

©KTBS NOT TO BE REPUBLISHED

Chapter 14.indd 185 4/19/2024 12:47:40 PM

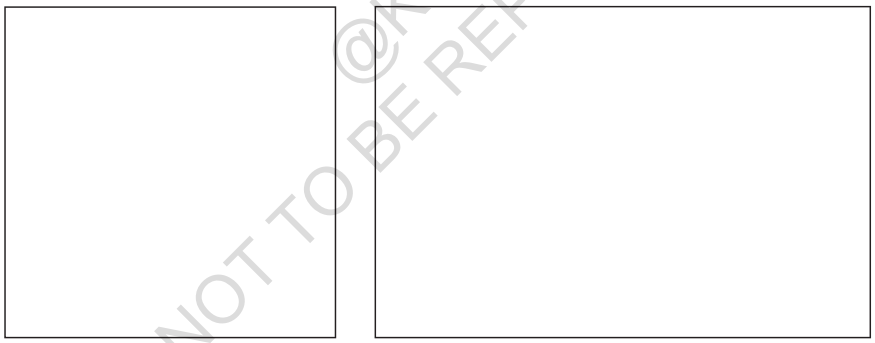
Tiling the paths

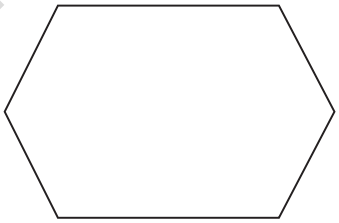




Let us Do

1. Use rangometry shapes to fill the shapes with no gaps and overlaps.







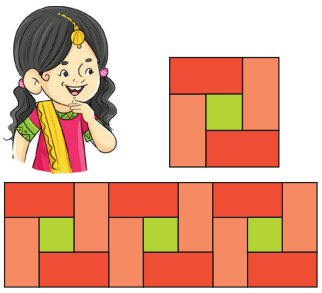
Teacher's Note: Discuss with children different footpaths they see, and encourage them to make paths with tiles with no gaps and overlaps.

©KTBS NOT TO BE REPUBLISHED

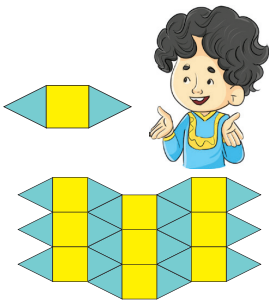
Chapter 14.indd 186 4/19/2024 12:47:41 PM

Making Tiles, Creating Paths

Soni and Avi have started making their own tiles by joining different shapes.



Soni's tiles



Avi's tiles

Let us Do

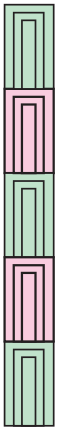
1. Use two or more rangometry shapes to create your tiles. Now trace the tiles to create different paths.

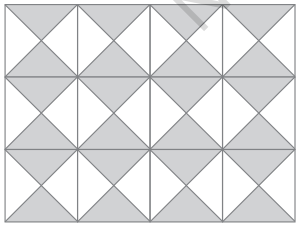
End

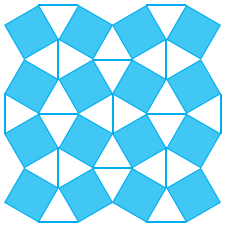
Start

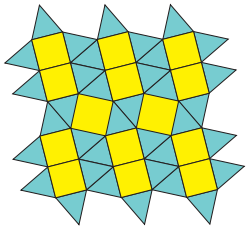
@KTBS NOT TO BE REPUBLISHED

2. Try making these paths.













Teacher's Note: Children can create different tessellations on a blank sheet and their work can be displayed in the class. Discuss with them the repeating unit.

Chapter 14.indd 187 4/19/2024 12:47:41 PM

Giant Wheel

Read the conversation between Soni and Avi and mark the place they are talking about.



NOT TO BE REPUBLISHED

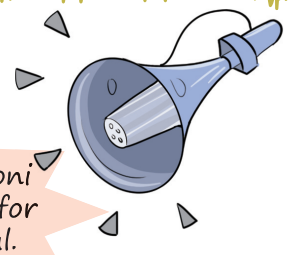
Let us Play

Imagine yourself sitting with Soni and Avi. You think of a place or a stall and challenge your friend to find out which stall you have in your mind. You can help them guess by answering yes or no.

Chapter 14.indd 188 4/19/2024 12:47:43 PM

Search for Dada and Dadi

Soni and Avi's Dada and Dadi were missing. They hear their announcement.



Dada and Dadi of Soni and Avi are waiting for them in the chaupal.





© CBSE NOT TO BE REPUBLISHED





Teacher's Note: To make children aware about directions, different games can be played with them where they can follow the directional clues to reach the place where the object has been kept. They can use words like take 2 steps to your right, one step forward, take 5 steps back, 3 steps to your left, etc.

Chapter 14.indd 189 4/19/2024 12:47:45 PM



Let us Do

1. Help Soni and Avi read the map and find the following:

   a. Which place does the  sign show?

   .....

   b. Circle the picture in the map that shows the play area?

   .....

   c. Which place does the  sign show?

   .....

   d. How many exit routes are there in the fair?

   .....

2. Follow the path that Avi and Soni are following.

   a. Walk on the blue lane.

   b. Turn right on the green lane.

   c. You will see a restaurant on your right. Don't sit there.

   d. Take a left towards the red lane.

   e. Take the first left turn towards the golden lane. Stalls will be seen on the way.

   f. Pass the stalls to find the *Chaupal* and meet Dada Dadi.

3. An uncle asks Dada ji the way to the ATM. Tell him the way to the ATM from the *chaupal*.

   .....

   .....

   .....

   .....

©KTBS NOT TO BE REPUBLISHED

Chapter 14.indd 190 4/19/2024 12:47:45 PM

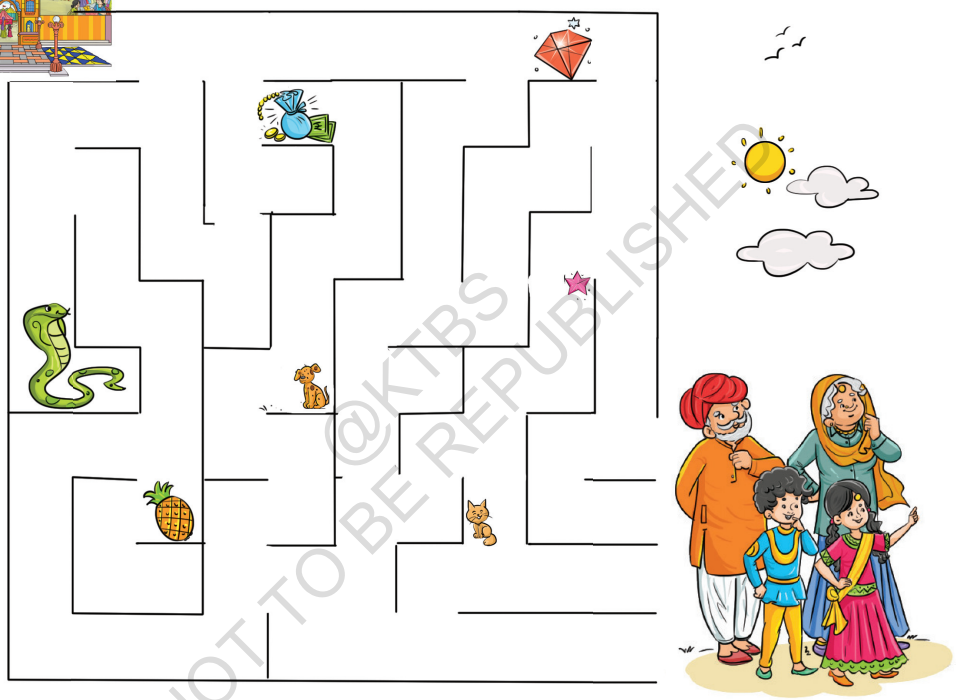


Let us Do

1. There are two ways to go out of the Surajkund fair. One seems to be a maze and the other goes straight there.

   Follow the maze with Soni and Avi to exit the fair.





@KTBS NOT TO BE REPUBLISHED

2. Share the way you went through the maze. Write the things you found on the way.

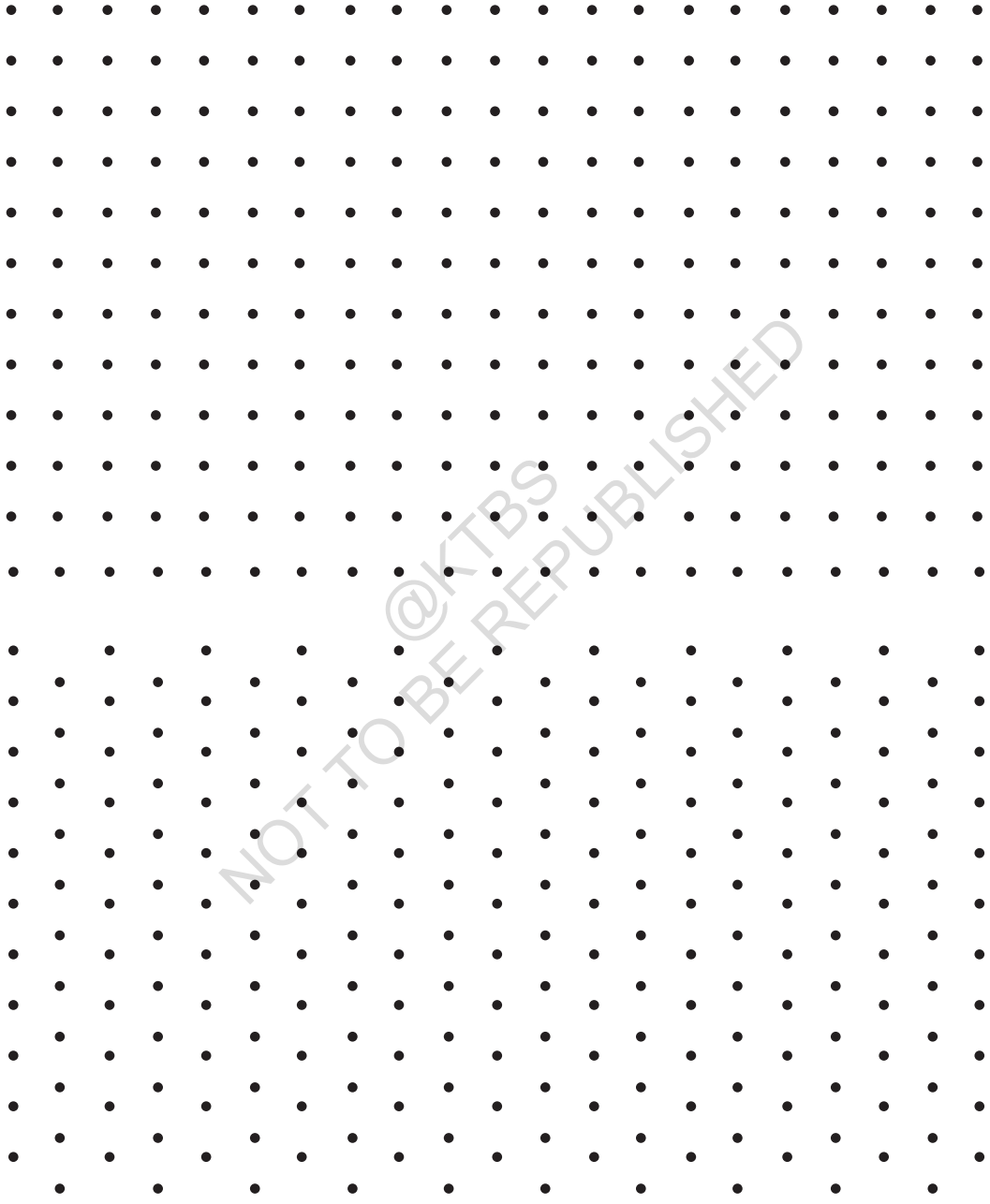
.....

.....

.....

Chapter 14.indd 191 4/19/2024 12:47:46 PM

Dot Grids



@KTBS
NOT TO BE REPUBLISHED

Chapter 14.indd 192 4/19/2024 12:47:47 PM

Number Cards

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
30	40	50	60
70	80	90	100
200	300	400	500
600	700	800	900

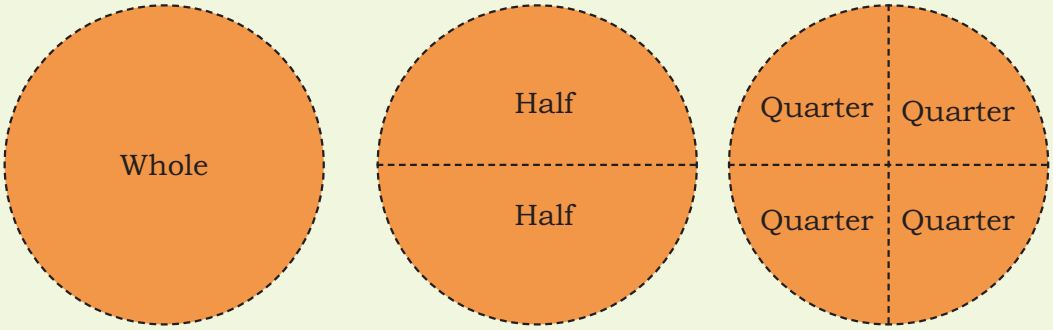
@KIDS NOT TO BE REPUBLISHED

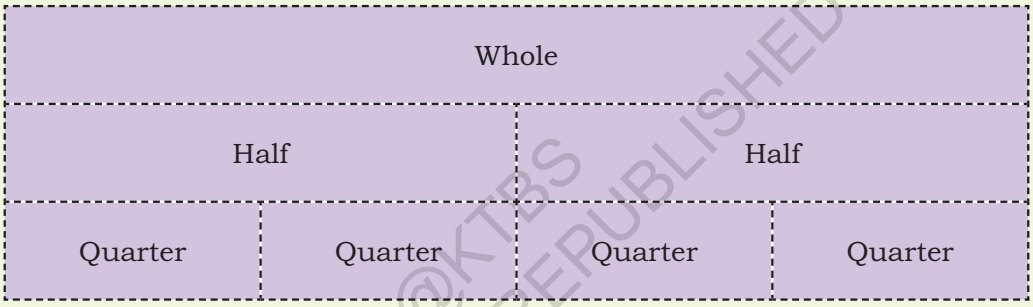
Number Cards

Four	Three	Two	One
Eight	Seven	Six	Five
Twelve	Eleven	Ten	Nine
Sixteen	Fifteen	Fourteen	Thirteen
Twenty	Ninteen	Eighteen	Seventeen
Sixty	Fifty	Forty	Thirty
Hundred	Ninty	Eighty	Seventy
Five Hundred	Four Hundred	Three Hundred	Three Hundred
Nine Hundred	Eight Hundred	Seven Hundred	Six Hundred

@KTRS NOT TO BE REPUBLISHED

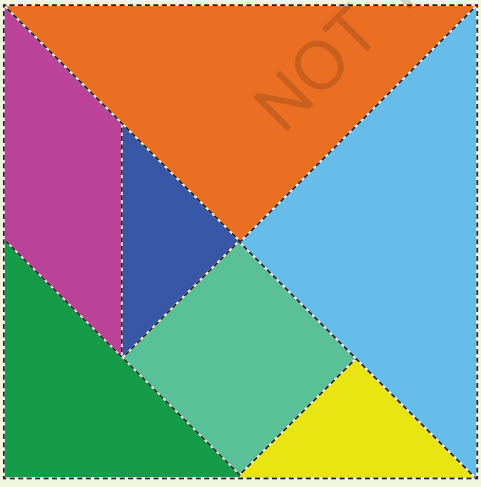
Fractions Cards



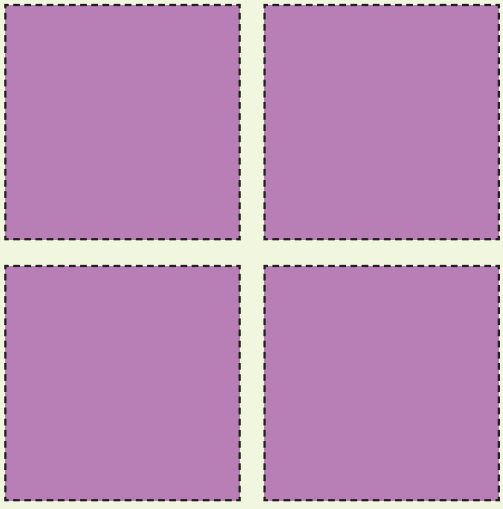


@KTBS NOT TO BE REPUBLISHED

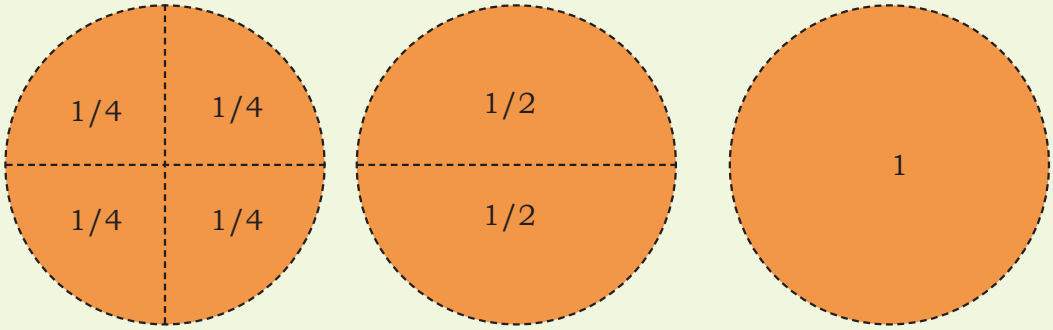
Tangram

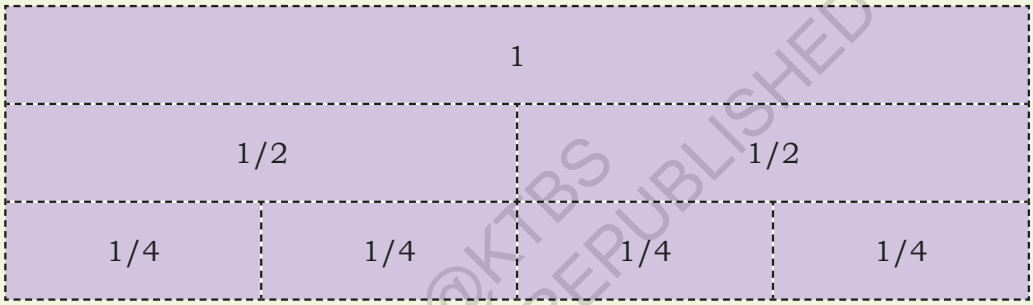


Squares



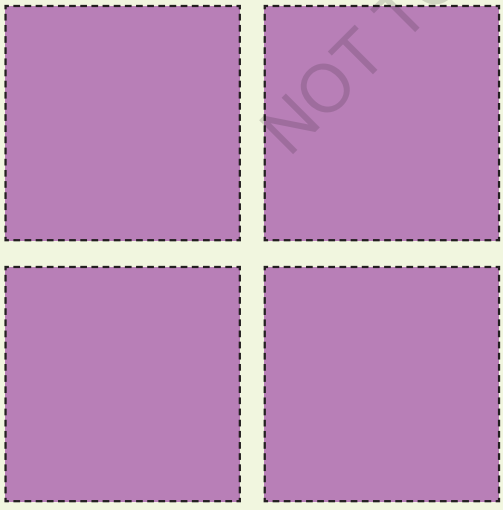
Fractions Cards



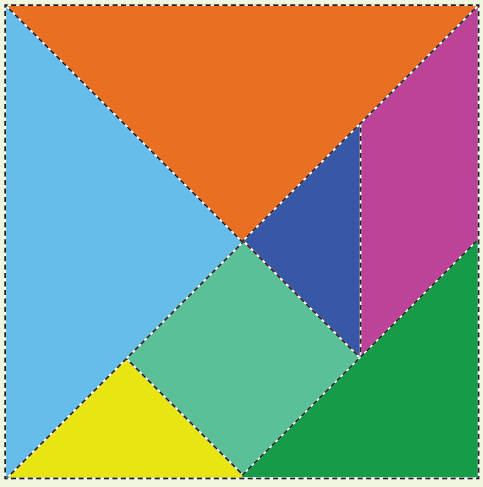


@KTBS
NOT TO BE REPUBLISHED

Squares

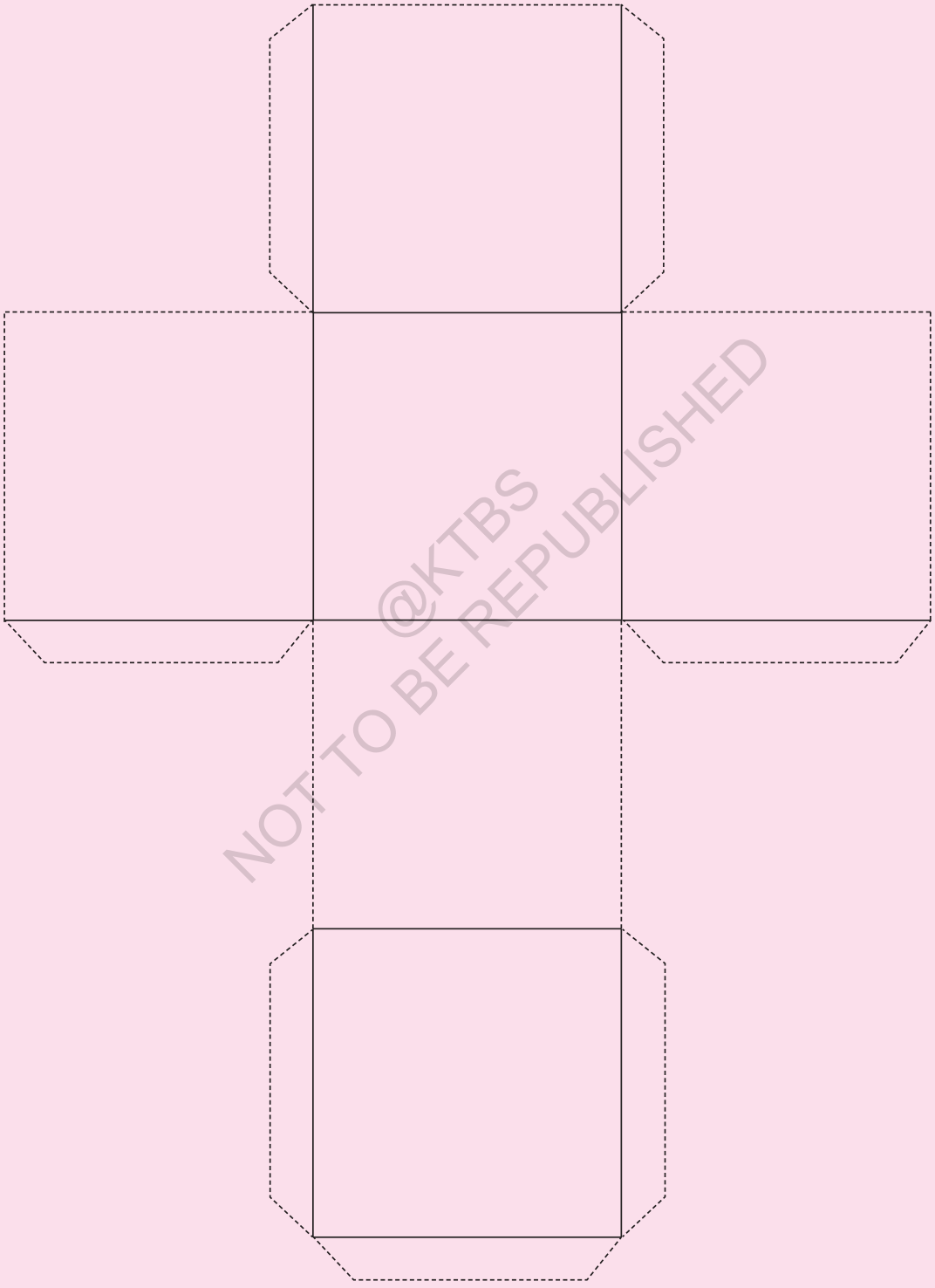


Tangram



Net of a Cube

Note: Cut along the dotted lines and fold along the dark lines.

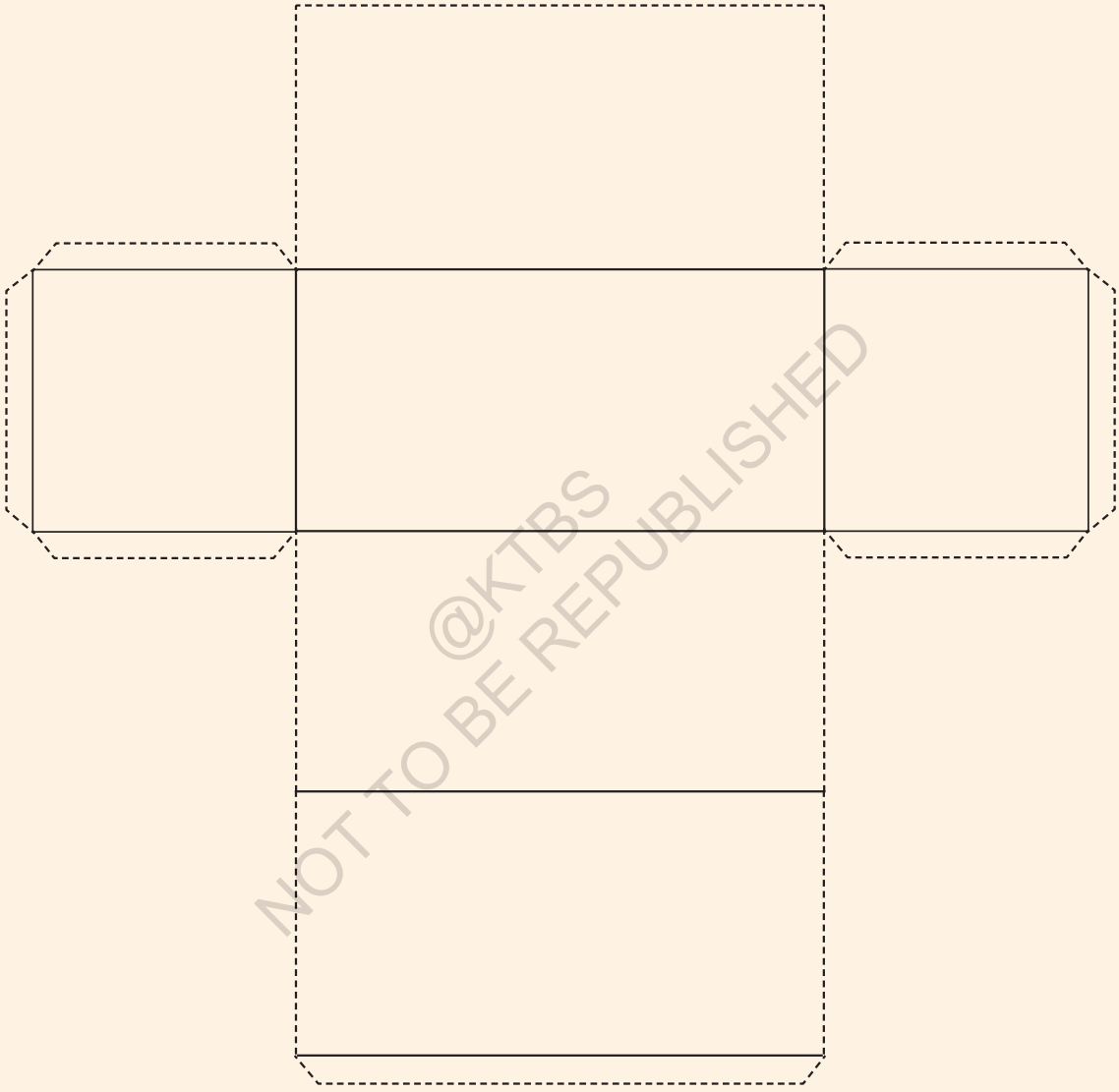


@KTBS
NOT TO BE REPUBLISHED

@KTBS
NOT TO BE REPUBLISHED

Net of a Cuboid

Note: Cut along the dotted lines and fold along the dark lines.

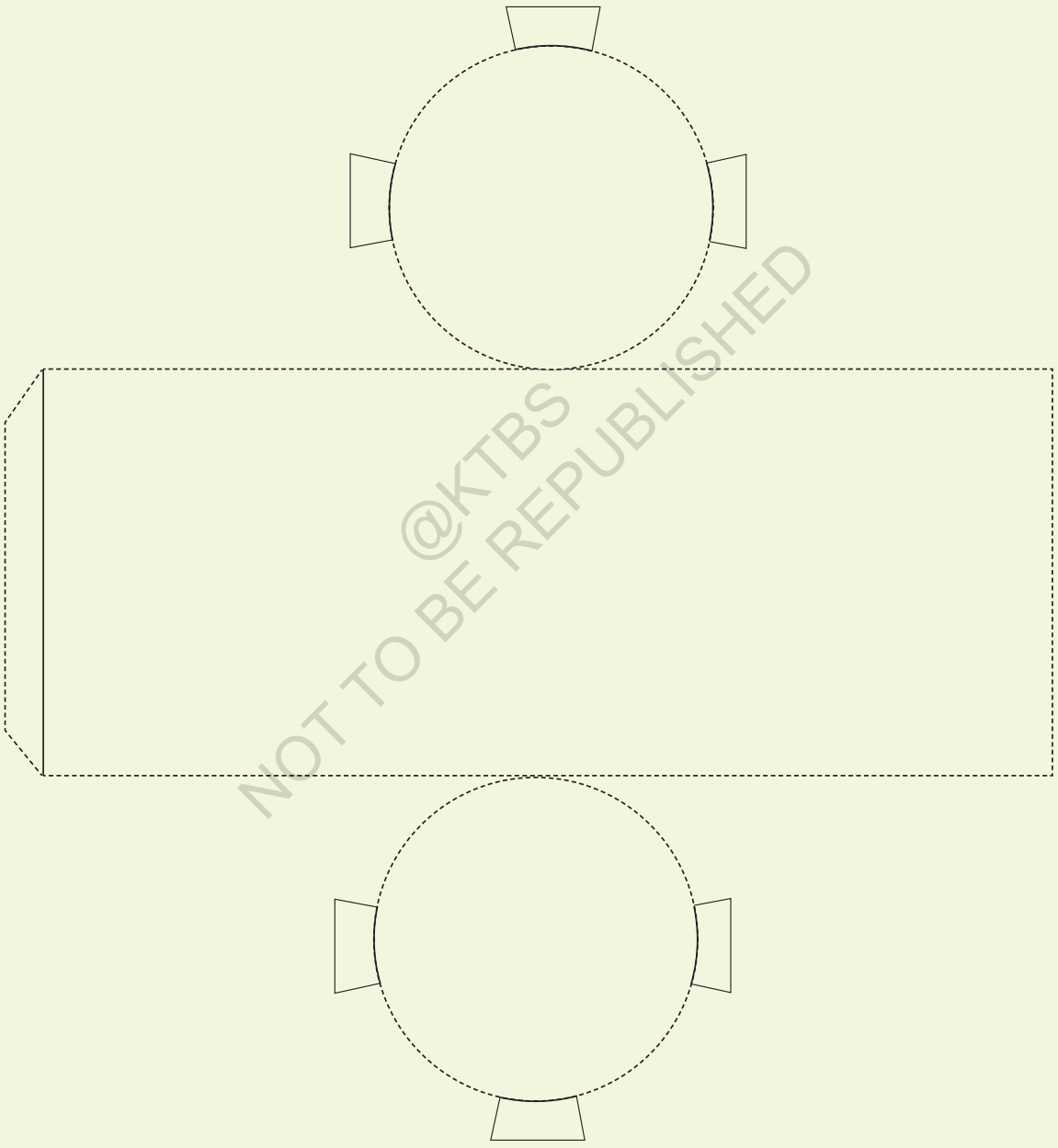


@KTBS
NOT TO BE REPUBLISHED

@KTBS
NOT TO BE REPUBLISHED

Net of a Cylinder

Note: Cut along the dotted lines and fold along the dark lines.

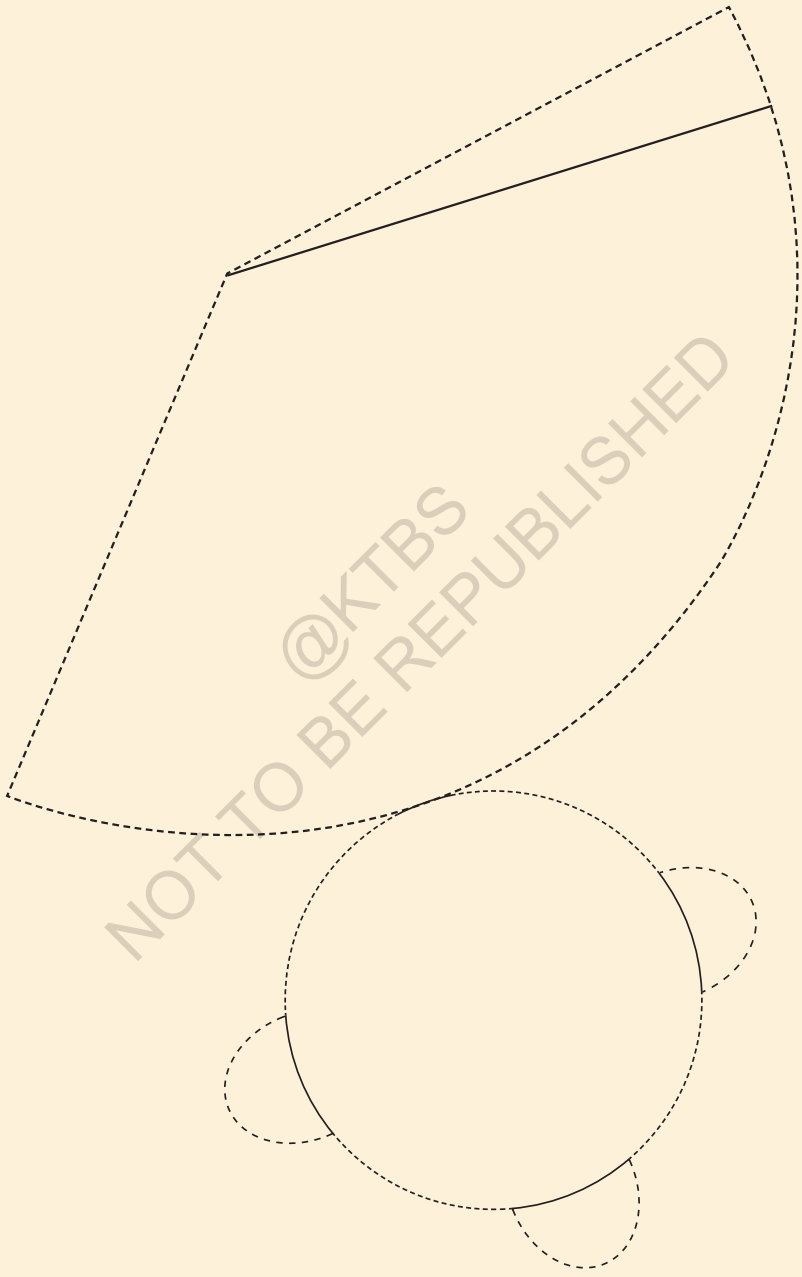


@KTBS
NOT TO BE REPUBLISHED

@KTBS
NOT TO BE REPUBLISHED

Net of a Cone

Note: Cut along the dotted lines and fold along the dark lines.

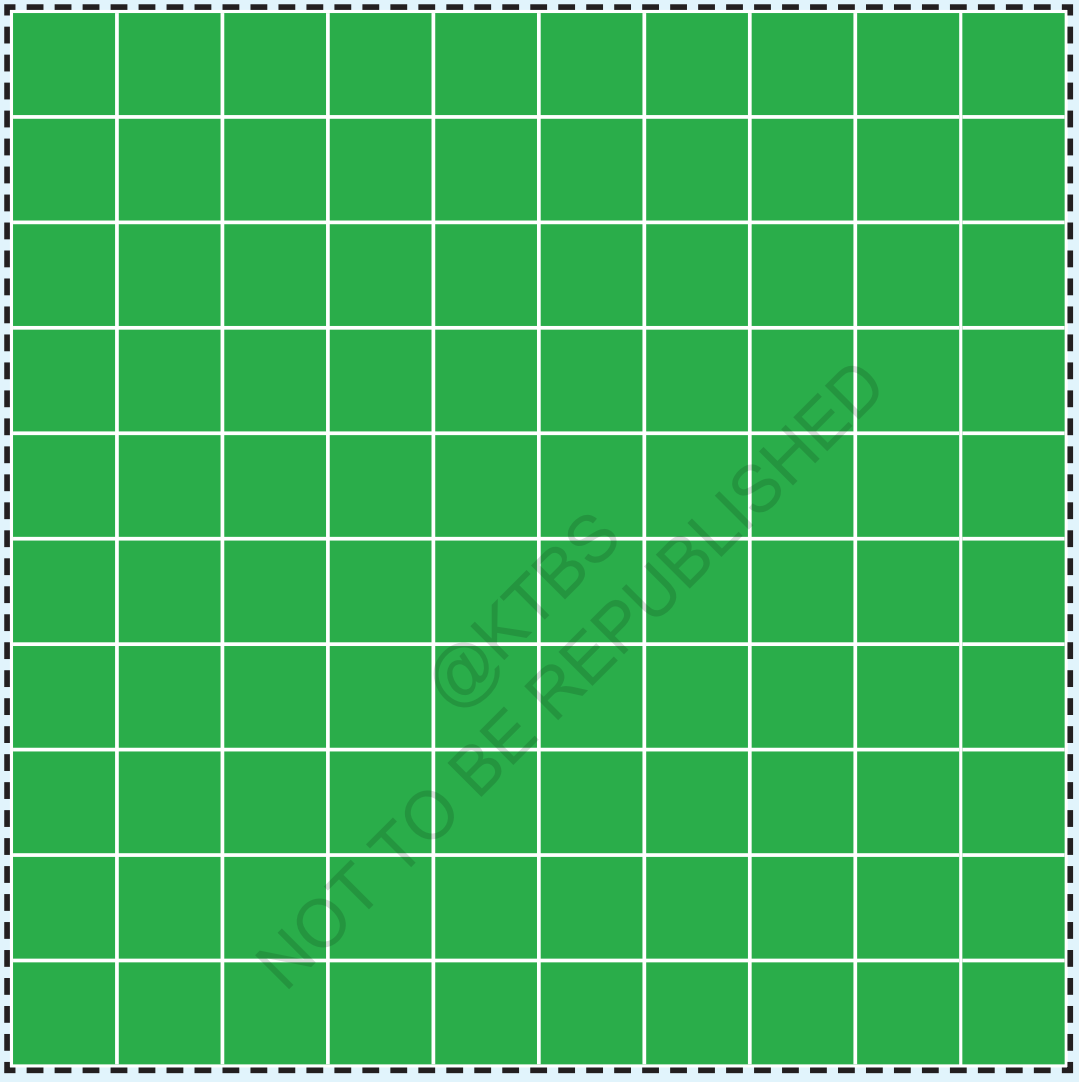


@KTBS
NOT TO BE REPUBLISHED

@KTBS
NOT TO BE REPUBLISHED

Diene's Blocks

Note: Cut along the dotted lines. You can make more such blocks as you need for the activities.





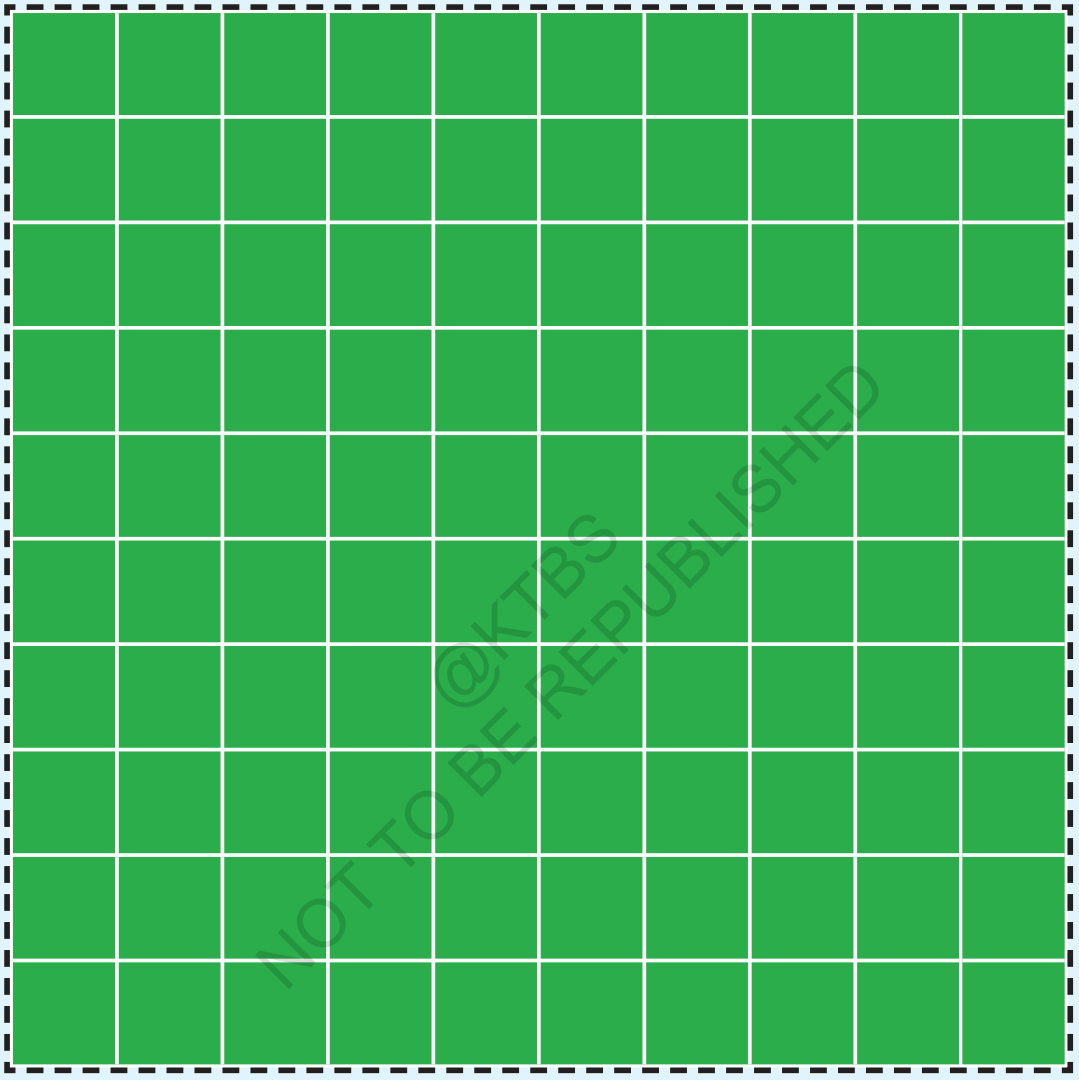


@KTBS
NOT TO BE REPUBLISHED

@KTBS
NOT TO BE REPUBLISHED

Diene's Blocks

Note: Cut along the dotted lines. You can make more such blocks as you need for the activities.







@KTBS
NOT TO BE REPUBLISHED

@KTBS
NOT TO BE REPUBLISHED