MATHS MELA

Textbook of Mathematics for Grade 4

Part - I

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NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

0433 – MATHS MELA
Textbook of Mathematics for Grade 4

ISBN 978-93-5729-703-5

First Edition
March 2025 Chaitra 1947

PD 1000T SM

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Printed on 80 GSM paper with NCERT watermark

Published at the Publication Division by the Secretary, National Council of Educational Research and Training, Sri Aurobindo Marg, New Delhi 110 016 and printed at Pankaj Printing Press, D-28, Industrial Area, Site-A, Mathura (U.P.)

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Foreword

The Foundational Stage in school education, as envisaged by the National Education Policy 2020, serves as the cornerstone for the holistic development of children. It enables them not only to imbibe the invaluable samskaras rooted in our country's ethos and constitutional framework, but also to acquire basic literacy and numeracy. This foundation equips them to transition seamlessly into the more challenging Preparatory Stage.

The Preparatory Stage acts as a bridge between the Foundational and the Middle Stages, spanning three years from Grade 3 to Grade 5. The education provided during this stage builds upon the pedagogical approaches of the Foundational Stage. While the play-way, discovery, and activity-based learning methods continue, children are also introduced to textbooks and more formal classroom settings. This introduction aims not to overwhelm but to establish a foundation across curricular areas, promoting holistic learning and self-exploration through reading, writing, speaking, drawing, singing, and playing. This comprehensive approach encompasses physical education, art education, environmental education, languages, mathematics, basic science, and social science. This comprehensive approach ensures children are well-prepared both at the cognitive sensitive and physical-pranic (emotional) levels to effortlessly transition to the Middle Stage.

The textbook, *Maths Mela* for Grade 4 is meticulously designed to align with these objectives. It adheres to the recommendations of the National Education Policy 2020 and the National Curriculum Framework for School Education 2023. The textbook emphasises conceptual understanding, critical thinking, creativity, values and dispositions essential for this developmental stage. It incorporates cross-cutting themes such as inclusion, multilingualism, gender equality, and cultural rootedness integrating appropriate ICT and school-based assessments. The engaging content and activities are designed to captivate students and encourage peer group learning, thus enriching the educational experience for students as well as teachers.

It is crucial to remember the pedagogical focus of the textbook emphasising understanding, critical thinking, reasoning, and

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decision making. Children's innate curiosity at this stage should be nurtured by addressing their questions and designing activities based on core learning principles. While the play-way method continues, the nature of toys and games used for teaching evolves to enhance engagement rather than mere attraction.

While this textbook is valuable, children should also explore additional resources on the subject. School libraries should facilitate this extended learning, and parents and teachers should support their endeavours.

An effective learning environment motivates students, keeping them engaged and fostering curiosity and wonder vital for learning.

With confidence, I recommend this textbook to all students and teachers at the Preparatory Stage. I extend my gratitude to everyone involved in its development, hopeful that it will meet expectations. As NCERT remains committed to systemic reforms and improving publication quality, we welcome feedback to refine the textbook content.

DINESH PRASAD SAKLANI
Director
National Council of Educational
Research and Training

New Delhi
15 March 2025

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About the Book

The book *Maths Mela* for Grade 4 has been developed based on the recent documents National Education Policy (NEP) 2020 and National Curriculum Framework for School Education (NCF-SE) 2023. They aim to ensure that all children achieve basic numerical skills and abilities to think mathematically and logically, solve problems, develop intuitions regarding quantities and reasons, and feel a sense of joy, wonder, and curiosity. The Preparatory Stage specifically focuses on the development of conceptual ideas about numbers, shapes, and spatial relationships, measurement and data handling, procedural skills and fluency and computational thinking.

In light of this, the book for Grade 4 is designed to support learners consolidate their learnings in the Foundational Stage and make progress towards dealing with more abstract ideas. The chapters of the book cover the foundational ideas of Mathematics: whole numbers and operations, fractions, shapes and spatial relationships, measurement (length, weight, capacity, and time), and data handling. Chapters are woven around certain themes so as to engage children with the ideas and their applications. Ideas will keep recurring throughout the book building in deeper engagement and complexity to suit the interest and curiosity of the growing child.

We firmly believe that young learners are capable of reasoning, thinking and problem solving in different ways. Therefore, the book provides several occasions for identifying and noticing ideas and relationships across ideas, giving examples and counter-examples to statements, creating objects using mathematical ideas, measuring and quantifying, estimating and solving problems. There are also opportunities to hone one's arithmetic skills through basic exercises, games, and puzzles. At some places in the chapter, such opportunities have been provided under the section 'Let us Play'. Another important purpose behind games and puzzles is to provide learners a stress-free and joyful learning. Most of these need not be assessed. Some tasks are aimed towards 'computational thinking' where learners are expected to observe and articulate patterns and find exhaustive solutions and solutions under different constraints.

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We also believe that learners should develop a liking for Mathematics. The chapters of this textbook provide several enjoyable activities, tasks, games, and puzzles that build on children's intuitions and tap on to their experiences in the world around them. These have been given under the section 'Let us Do' at many places in the chapters. These are sometimes used for making an entry to the concept and at other times provide opportunities to consolidate the ideas. The narrative in the chapters is supported through vivid illustrations, which are also integral to the tasks. We hope that this will allow learners to read pictures and use them for developing important mathematical ideas. Mathematical vocabulary and ways of communicating about mathematics has been emphasised throughout the chapters. We continue to provide instructions and explanations with as little language as possible.

Mathematics is an integrated body of knowledge, with a connected and coherent set of ideas. It can be built logically on commonly shared assumptions. Mathematical thinking and reasoning are an important part of learning mathematics. The book attempts to move away from rote memorization of rules and procedures which kills learners' curiosity and burdens them. It rather pushes learners to explore and discover important mathematical ideas. The sections named 'Let us Think', 'Let us Explore', and 'Let us Discuss', included at various places, aim at keeping learners curious to reason out their thinking. These will give them reasons and insights that can be used to remember ideas and apply ideas flexibly and creatively, making further learning easier. It is important to engage with these processes of Mathematics so that learners can go beyond routine mathematical problems confidently and without fear and anxiety. We hope that the carefully chosen learning activities will help them make sense of the ideas, develop capacities to solve problems, experience wonder and joy in the process, and be curious about the world of mathematics. In addition to all of these, with growing capacities of children we have introduced a new section called "Let us Solve". These sections aim to help children develop their skills in using procedures, solving routine problems and word problems.

We believe that the time available for children to work on problems and share their solutions and ideas will be crucial to achieve the objectives of NEP 2020 and NCF-SE 2023. The book carries several suggestions for appropriate activities and experiences (in class and in and around the home) to develop mathematical ideas.

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Teachers' and parents' support in changing conditions of learning for our children will be very important to achieve the dreams of a better and more confident nation.

The book also advises on the making of simple inexpensive concrete materials for learners to work with, and develop and communicate their thinking. Perforated sheets for some of the tasks in the chapters are provided at the end of the book. There are some more ideas in the 'Note for Teachers' for activities and materials. The chapters also show a gradual movement from the use of materials to the use of pictures and making schematic diagrams to make sense of the situation and identify better strategy. The book tries to build models for the ideas using materials and pictures so that learners can use them to develop independent thinking. We would sincerely urge teachers and parents to use the sequence of ideas suggested in the book for teaching and gradually arrive at more formal rules and procedures. When children develop a better understanding, they will be in a better position to appreciate the rules and procedures. Similar care should also be taken by parents and older siblings who may help their wards in learning through this book. The 'Note for Teachers' may help teachers and parents in appropriately enhancing the child's learning.

Several activities and tasks in the book also require that children talk and discuss their ideas. Learning will significantly improve in a classroom that welcomes and respects learners' ideas. They will see different ways of thinking, use ideas, and find alternative solutions leading to better and independent solutions over a period of time. They will get opportunities to scrutinise each other's solutions and develop fluency with mathematical language, symbols, and procedures. These will also serve as good assessments of learning for the teacher and also provide feedback to them. The exercises given in the book are also examples of how learners can be assessed. Assessment should be done in multiple forms— using materials and pictures, problem situations and basic problems, activities, creating objects, and sharing and explaining solutions. The book provides enough opportunities for adaptive assessment, assessment for learning, and assessment as learning while the child is engaged in different activities. Teachers can note down their observations while the learners discuss their ideas, replying to the questions asked, and explaining the reasoning for their answer. Such records can be included in the learner's portfolio. Chapters have more paper

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and pen tasks in Grade 4 (questions, word problems, and projects) that a child can complete in the classroom or at home. Such tasks provide opportunities to practice writing and present their thinking on paper.

In the times to come, we will provide more resources to the teachers and learners in the form of videos, worksheets for practice, and links to online resources.

We hope that the book will be enjoyable to all and will lead to better teaching-learning conditions.

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Constitution of India

Part IV A (Article 51 A)

Fundamental Duties

It shall be the duty of every citizen of India —

(a) to abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem;

(b) to cherish and follow the noble ideals which inspired our national struggle for freedom;

(c) to uphold and protect the sovereignty, unity and integrity of India;

(d) to defend the country and render national service when called upon to do so;

(e) to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities; to renounce practices derogatory to the dignity of women;

(f) to value and preserve the rich heritage of our composite culture;

(g) to protect and improve the natural environment including forests, lakes, rivers, wildlife and to have compassion for living creatures;

(h) to develop the scientific temper, humanism and the spirit of inquiry and reform;

(i) to safeguard public property and to abjure violence;

(j) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement;

*(k) who is a parent or guardian, to provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years.

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Note: The Article 51A containing Fundamental Duties was inserted by the Constitution (42nd Amendment) Act, 1976 (with effect from 3 January 1977).

*(k) was inserted by the Constitution (86th Amendment) Act, 2002 (with effect from 1 April 2010).

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Acknowledgements

The National Council of Educational Research and Training (NCERT) acknowledges the guidance and support of the esteemed Chairperson and members of the National Curriculum Framework Oversight Committee for their invaluable contributions in overseeing the translation of NCF-SE perspectives into the textbook. NCERT is also deeply grateful to the *Chairperson*, *Co-Chairperson*, and members of the National Syllabus and Teaching-Learning Material Development Committee for their continuous guidance and thorough review of the textbook. Furthermore, NCERT extends its heartfelt thanks to the *Chairpersons* and *Members* of the Sub-Group: Mathematics of the Curricular Area Group (CAG) for their support and guidelines on the cross-cutting themes.

The Council acknowledges the support of Amarendra Behera, *Professor* and *Joint Director*, CIET; Pratyusha Kumar Mandal, *Professor* and *Head*, DESS; Sunita Farkya, *Professor* and Head, DESM; Indrani Bhaduri, *Professor* and *Head*, ESD; Vinay Singh, *Professor* and *Head*, DEGSN; Milli Roy, *Professor* and *Head*, DGS; and Jyotsna Tiwari, *Professor* and *Head*, DEAA, along with their teams, for their meticulous efforts in ensuring the seamless integration of cross-curricular aspects throughout the textbook and linkages with other curricular areas. We sincerely thank Suniti Sanwal, *Head*, DEE for providing necessary support and guidance.

The efforts of Shahnaz Saifi, *Consultant* (Contractual), DEE, and Tarannum Khursheed, *Junior Project Fellow*, (Contractual) DEE, NCERT are appreciated for providing support in the development of this textbook. The Council also acknowledges the efforts of Rajat Subhra Roy, *Proofreader* (Contractual); Anita Kumari, Ayaz Ahmad Ansari, Vijay Shukla and Pawan Kumar, *DTP Operators* (Contractual) for editing and typesetting of this textbook.

The Council acknowledges the efforts of Pawan Kumar Barriar, *Incharge*, DTP Cell; Vipan Kumar Sharma, Bittu Kumar Mahato, and Mohan Singh, *DTP Operators* (Contractual); Keshav Kumar, *Proofreader* (Contractual), Publication Division, NCERT, for their meticulous attention to detail in finalising this textbook.

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CONSTITUTION OF INDIA

Part III (Articles 12 – 35)
(Subject to certain conditions, some exceptions and reasonable restrictions)

guarantees these

Fundamental Rights

Right to Equality

- before law and equal protection of laws;
- irrespective of religion, race, caste, sex or place of birth;
- of opportunity in public employment;
- by abolition of untouchability and titles.

Right to Freedom

- of expression, assembly, association, movement, residence and profession;
- of certain protections in respect of conviction for offences;
- of protection of life and personal liberty;
- of free and compulsory education for children between the age of six and fourteen years;
- of protection against arrest and detention in certain cases.

Right against Exploitation

- for prohibition of traffic in human beings and forced labour;
- for prohibition of employment of children in hazardous jobs.

Right to Freedom of Religion

- freedom of conscience and free profession, practice and propagation of religion;
- freedom to manage religious affairs;
- freedom as to payment of taxes for promotion of any particular religion;
- freedom as to attendance at religious instruction or religious worship in educational institutions wholly maintained by the State.

Cultural and Educational Rights

- for protection of interests of minorities to conserve their language, script and culture;
- for minorities to establish and administer educational institutions of their choice.

Right to Constitutional Remedies

- by issuance of directions or orders or writs by the Supreme Court and High Courts for enforcement of these Fundamental Rights.

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Prelims_Math.indd 14 04-04-2025 10.58.41 AM

Contents

Foreword		*iii*
About the Book		*v*
Chapter 1	: Shapes Around Us	1
Chapter 2	: Hide and Seek	24
Chapter 3	: Pattern Around Us	34
Chapter 4	: Thousands Around Us	39
Chapter 5	: Sharing and Measuring	62
Chapter 6	: Measuring Length	80
Chapter 7	: The Cleanest Village	95

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Chapter 1

Shapes Around Us

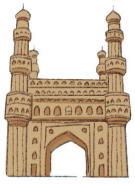
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Diksha wanted to go to a big city during her summer holidays. Her father took her to Delhi and they visited many old and new interesting monuments like the India Gate, Qutub Minar, Safdarjung Tomb, Akshardham, the National Museum, Jantar Mantar and Sansad Bhawan.



Now she is trying to make a model of India Gate using her wooden blocks.





Try to make a model of the buildings shown here using blocks.

1. What parts of the building have you shown in your model (for example, roof, pillars, base, etc.)?
2. Why did you select these parts?
3. What shapes will model these parts well?_____
4. How is your model similar to the picture of the real building? _____
5. How is it different from the real building? _____

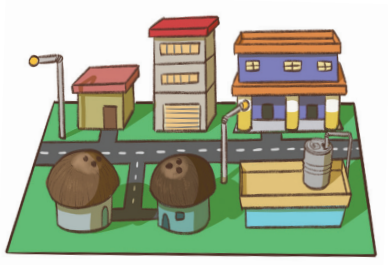
Discussion: What would happen if you removed one piece of your model?

- Would the model still look like the original building?
- In what ways could you make the model even better?

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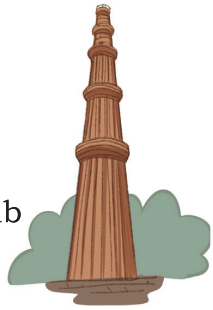
Project Work

Encourage learners to observe a street carefully and make a model showing the main buildings on the street.





I have made something. Look at my Qutub Minar.



Do you think it looks like the Qutub Minar?.....

What shape would you use if you made a model of the Qutub Minar? Why?.....

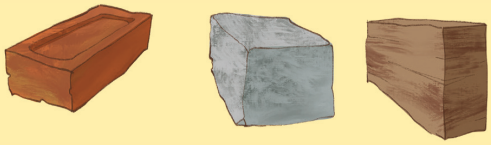
How many such shapes will you use? .....

Do you know: The Qutub Minar is a World Heritage site and the tallest building made up of bricks. It has 5 storeys and 379 stairs.



Earlier, people made buildings with clay bricks, stone blocks or wood. Today we also use concrete blocks, hollow blocks, etc.

What is common to all of these bricks? .....



Note for Teachers: Ask learners to collect different boxes, bottles, cans, coconut shells, etc., to model the given buildings.

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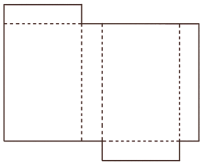
Craft



1. Make a sphere-like shape with paper strips.

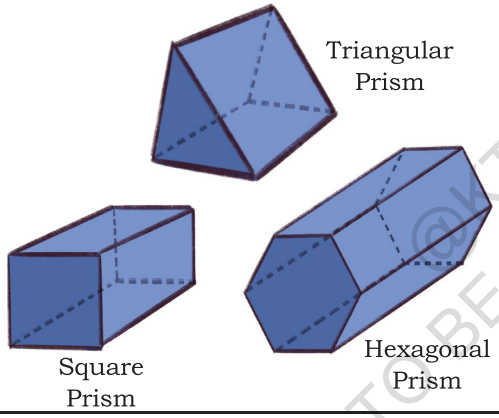
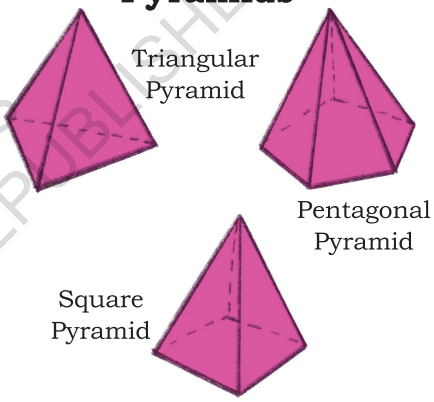


Diksha has folded open and flattened a box to see what an open box looks like. This is called the *net* of the box. If you fold along the dotted lines, you will get the box back.



Net of a box

2. Use the *nets* given at the end of the book to make the models shown below.

Prisms	**Pyramids**
	
What shape of face is common to all the prisms? _____ What other shapes do these prisms have? _____ How many such faces each? _____	What shape of face is common to all the pyramids? _____ All the triangular faces meet at _____ point. Identify any other shape in each of the pyramids _____

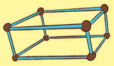
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Is a cube also a prism?

What is the difference between a prism and a pyramid? Discuss.

Chapter 1.indd 3 3/26/2025 3:40:37 PM

3. Now try to make the above shapes using straws and plasticine/ thread and fill in the table.

Shapes	Number of faces (F)	Number of corners (V)	Number of edges (E)
Cube/Square Prism 			
Cuboid/Rectangular Prism 			
Triangular Pyramid 			
Square Pyramid 			
Triangular Prism 			

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Identify any relationship that you may find between the number of faces (F), edges (E), and corners (V). Calculate F+V–E in each case. What do you notice?

Sort 3D shapes by the number of flat faces. Write their names here.

Number of faces	1 flat face	2 flat faces	4 flat faces	5 flat faces	6 flat faces	8 flat faces
Name of the shape						

Can you construct a 3D shape with 3 flat faces?

Now sort 3D shapes by the number of straight edges. Write their names here.

Number of edges	6 straight edges	8 straight edges	9 straight edges	12 straight edges
Name of the shape				

Chapter 1.indd 4 03-04-2025 4.22.53 PM

Let Us Observe

1. Take a die. Look at the face that has number 1. The face numbered 6 is opposite to the face numbered 1.

   What is the face opposite to the

   a) face numbered 2? .....

   b) face numbered 3? .....

   c) face numbered 4? .....

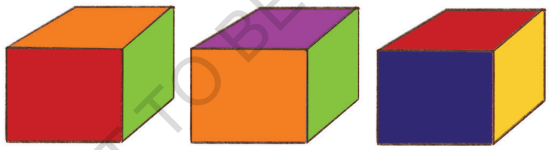
2. a) Which faces have common edges with the face numbered 1? .....

   b) Which face has no common edge with the face numbered 1? .....

3. Look at three different views of the same cube.

   a) What colour is the face that is opposite to the red face? .....

   b) What colour is the face that is opposite to the yellow face? .....



Follow these instructions for the shapes along the border.

1. Colour all shapes with a rectangular face in red.
2. Draw a smiley on shapes with a triangular face.
3. Draw a star on shapes with a curved face.
4. Colour all shapes with no corner in blue.
5. Circle the shapes that have the same opposite faces.

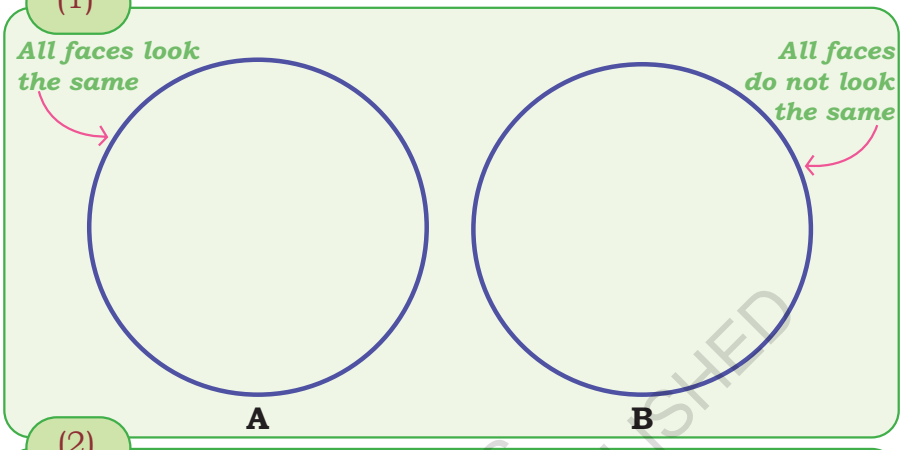
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Chapter 1.indd 5 3/26/2025 3:40:39 PM

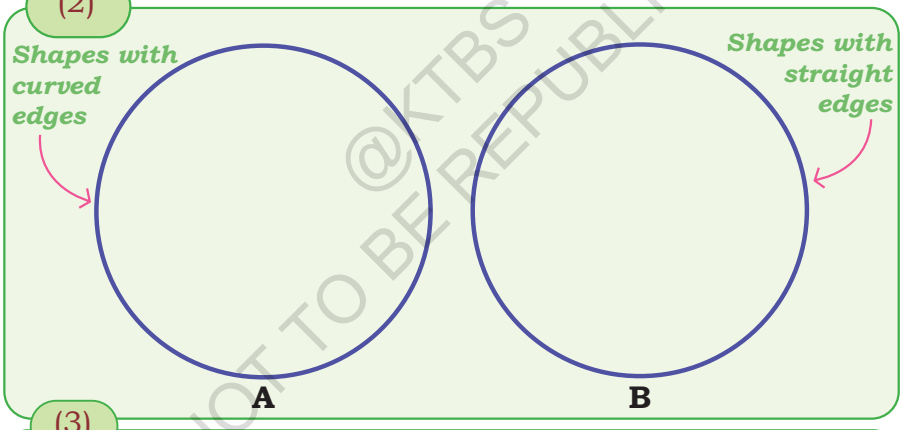
Sorting 3D Shapes

Write the names of 3D shapes in the correct places.

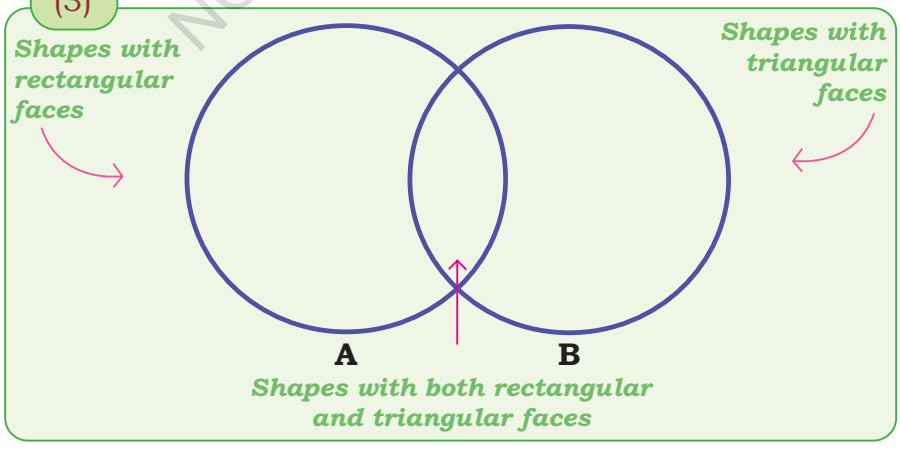
(1)



(2)



(3)



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Chapter 1.indd 6 3/26/2025 3:40:39 PM

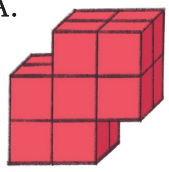
In which circle did you write triangular prism and rectangular pyramid?

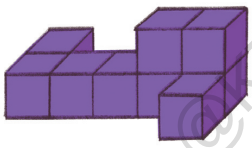
Let us sort shapes in another way.

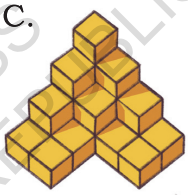
Using circles like those on the previous page, can you sort shapes into the categories "Shapes with curved faces" and "Shapes with flat faces"?

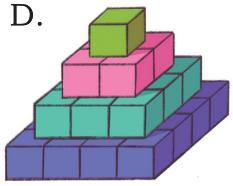
Build with Cubes

Build these models with the cubes from the *Jaadui Pitara Kit* or any other similar material.

A. 

B. 

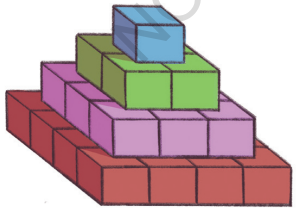
C. 

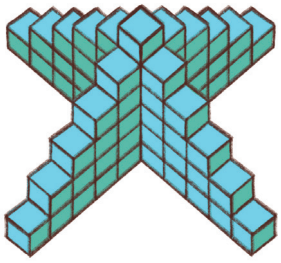
D. 

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Cube Towers

How many cubes are there in each of these cube towers?



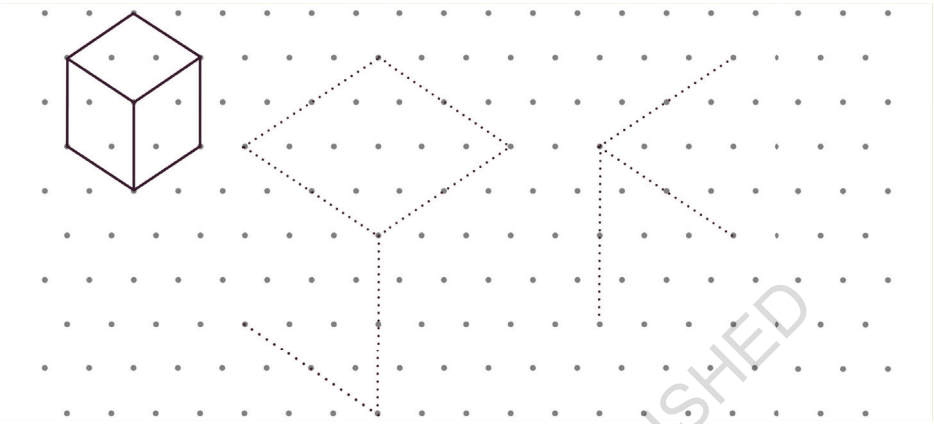


Note for Teachers: Use the available wooden, paper, and straw models. Discuss adjacent and opposite faces. Discuss shapes that fall into two sets. Let them make Venn diagrams (using circles like above) and write the names of these shapes.

Chapter 1.indd 7 3/26/2025 3:40:40 PM

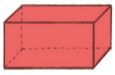
Drawing Cubes on a Triangular Dot Paper

Can you complete the following cubes?



1. Match the pictures to the descriptions and name the shapes.

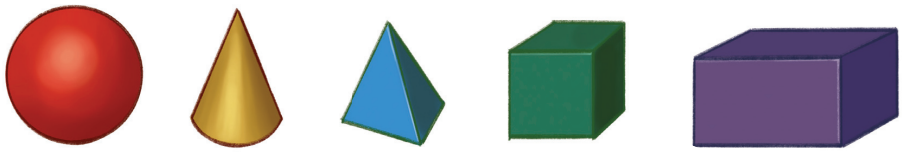





   a) I have 5 faces and 5 corners. I have 8 edges. 1 of my faces is a square and 4 of my faces are triangles.....
   b) I have 1 flat face, 1 curved face, and 1 edge.....
   c) I have 1 curved face. I have no edges or corners.....
   d) I have 2 flat faces, 1 curved face, and 2 edges. I have no corners.....
   e) I have 5 faces, 6 corners, and 9 edges, and 2 of my faces are triangles.....
   f) I have 6 faces, 12 edges, and 8 corners.....

2. Each one is different. How? Discuss.

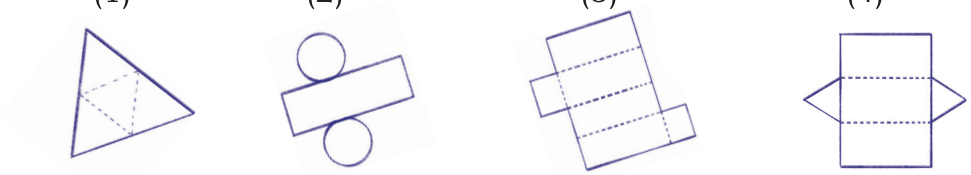


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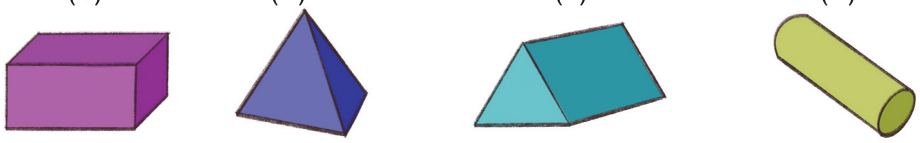
Chapter 1.indd 8 3/26/2025 3:40:41 PM

3. Match the following nets to the appropriate solids given below.

(1) (2) (3) (4)

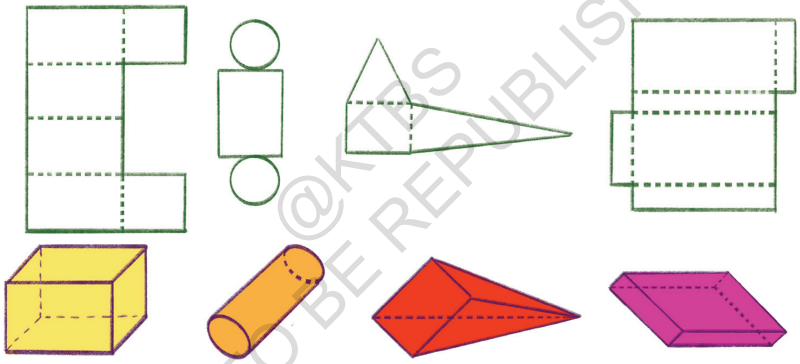


(a) (b) (c) (d)



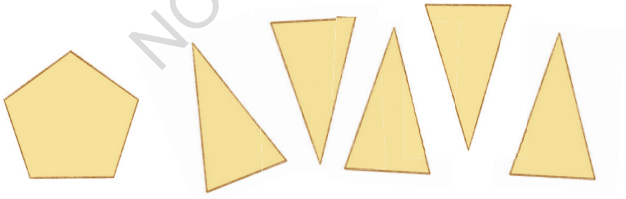
4. Which of these nets can be folded to make a solid of the kind given below?

A. B. C. D.



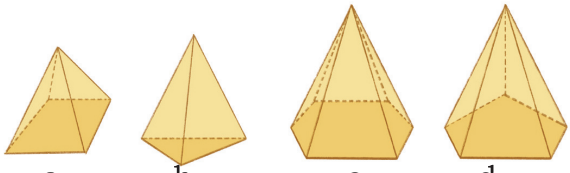
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5. Nitesh cuts up a net on the folds. Here are its pieces.





Which solid has the above pieces in its net?

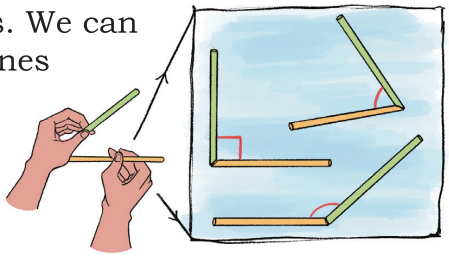


a. b. c. d.

Chapter 1.indd 9 3/26/2025 3:40:44 PM

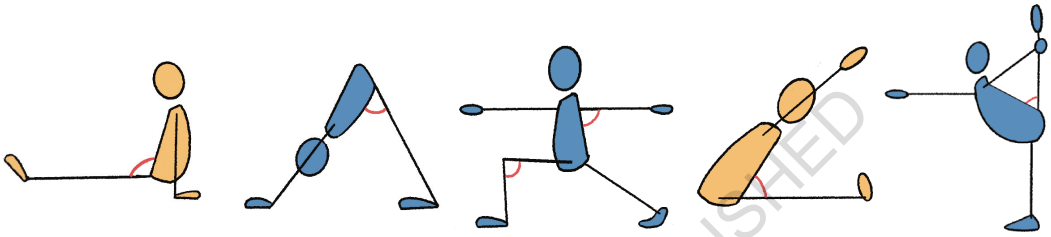
When Lines Meet

Isha made different corners with straws. We can say that the two straws are like two lines that meet at a point.

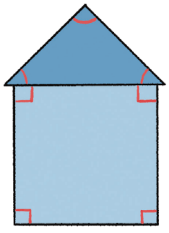


When two lines meet they create an angle.

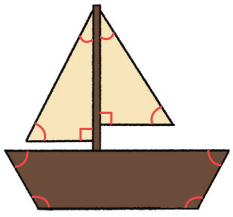
We see many angles in yoga postures.



There are 7 angles in this house drawing.



How many angles are there in this boat drawing?



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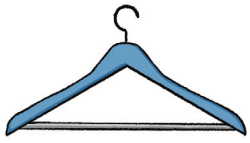
Let Us Do

1. Mark the angles in the following pictures.

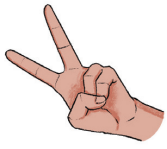
a)



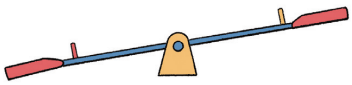
b)



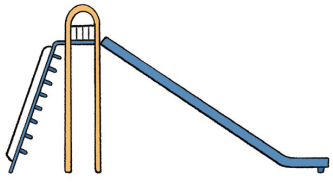
c)



d)



e)



Chapter 1.indd 10 03-04-2025 4.23.28 PM

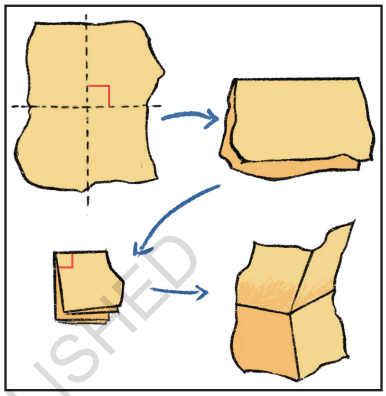
2. Where do you see angles in the classroom? Give a few examples.

_____

_____

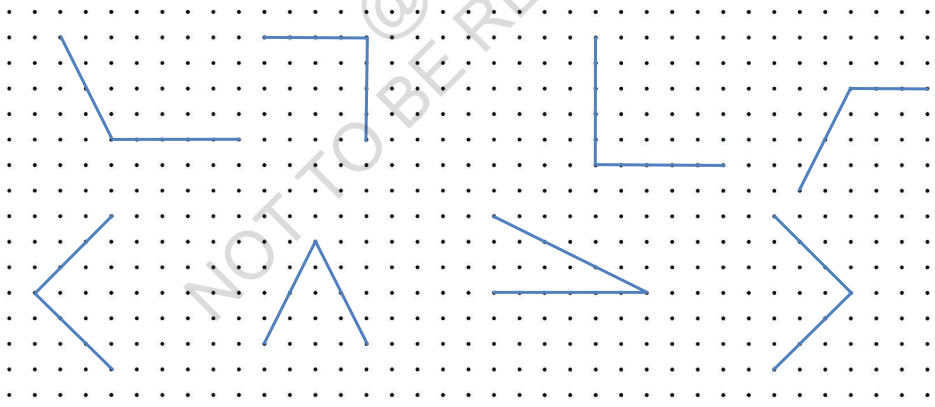
_____

Right Angles



Let's make a right angle with a piece of paper as shown.

Identify the angles that you think are right angles and circle them in the dot grid given below. Check using your right angle checker.



Check for right angles in a book, window, and any other object.

Write the names of objects where you find right angles.

_____

_____

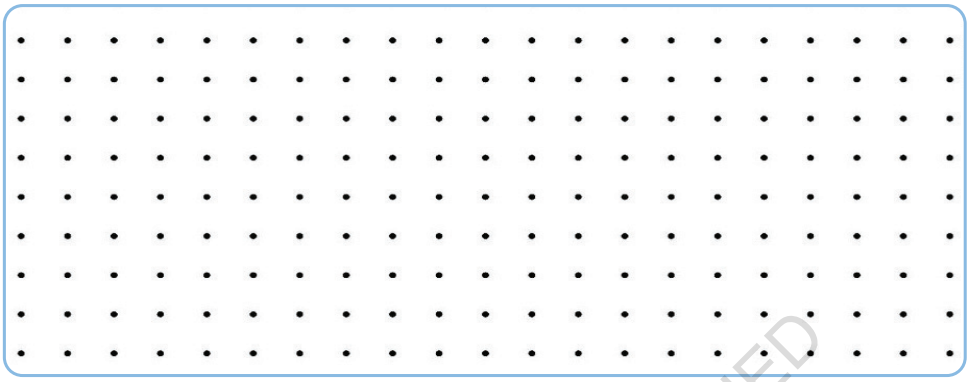
_____

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Chapter 1.indd 11 3/26/2025 3:40:48 PM

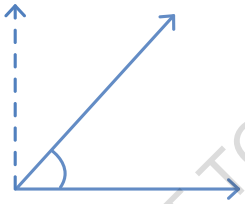
Let Us Do

1. Draw some right angles on the dot grid.

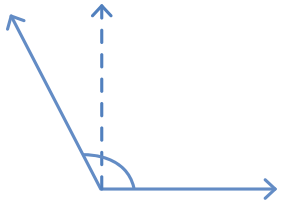


Acute and Obtuse Angles

Acute angles are less than a right angle.



Obtuse angles are more than a right angle.



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Name some objects from your classroom which have an acute angle.

_____.

Name some objects from your classroom which have an obtuse angle.

_____.

Identify all angles in the following letters.

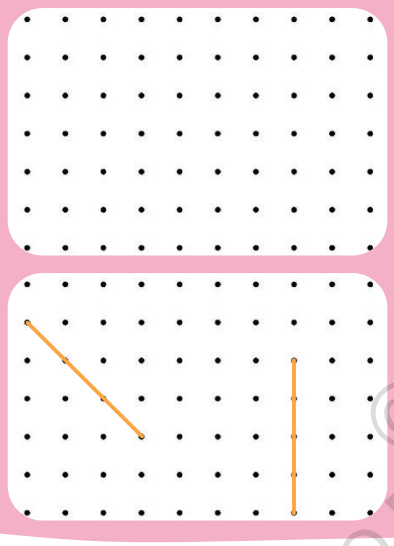


Chapter 1.indd 12 3/26/2025 3:40:48 PM

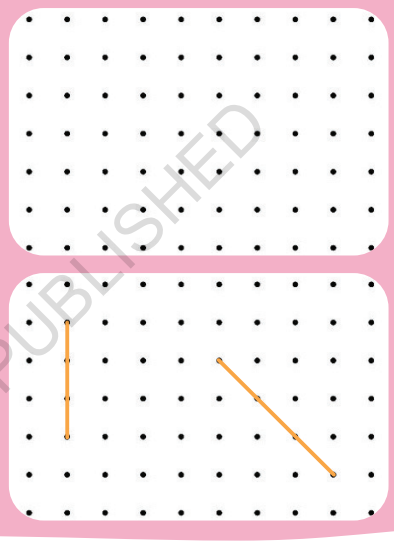
Let Us Do

1.

Draw some acute angles on the top grid. Draw a line to make an acute angle using each given line in the bottom grid.

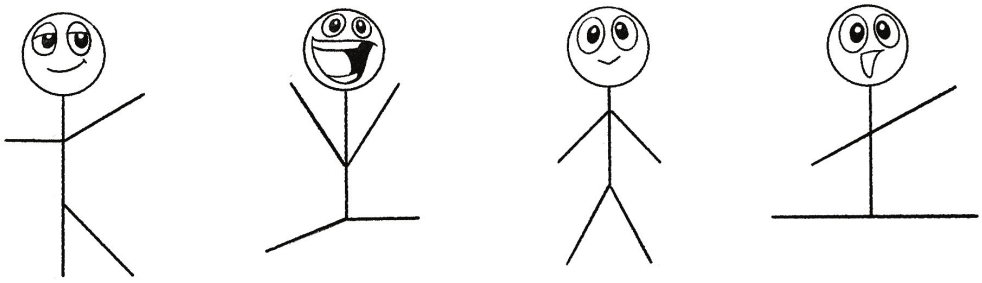


Draw some obtuse angles on the top grid. Draw a line to make an obtuse angle using each given line in the bottom grid.



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2. In the figures given below, mark the acute angles in red, right angles in green, and obtuse angles in blue.



Shapes with Straws



Make a triangle with straws of different sizes and clay/ plasticine.

Does the shape of the triangle change if we gently push one of its sides?

Yes/No

Trace the triangles you made with the straws in your notebook.

What kinds of angles does a triangle have?

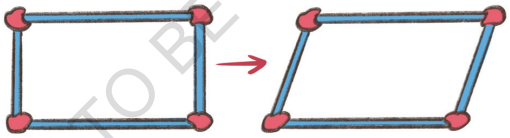


Make a rectangular shape with straws and clay.

What kinds of angles do you see in the rectangle?.....

Does the shape of the rectangle change if we gently push one of its sides?

Yes/No



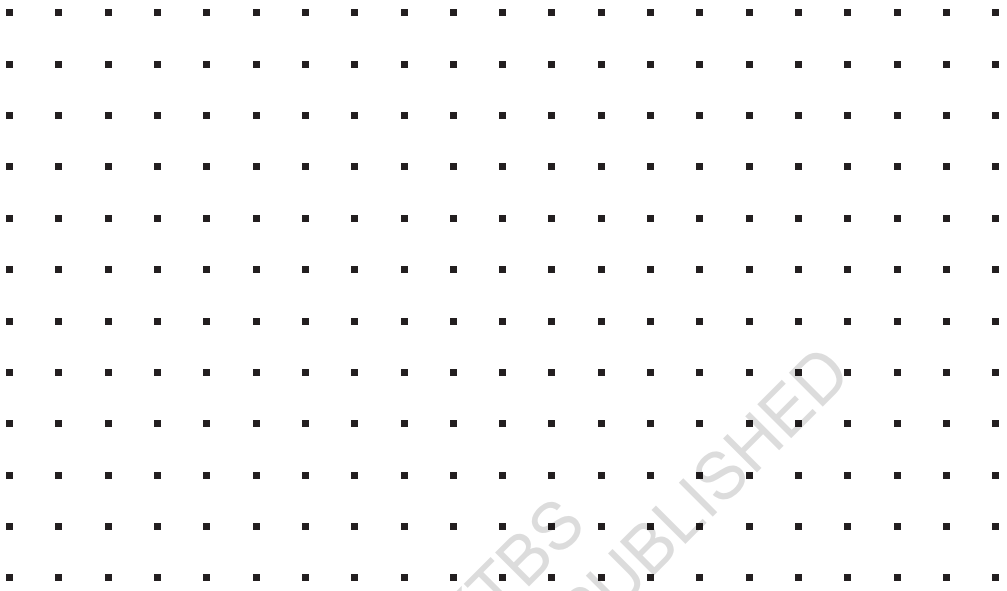
What has happened to the angles of the new shape?
Are they still right angles? What types of angles have been formed?
Similarly, push one side of a square.
Are they still right angles? What types of angles have been formed?
How are the angles of triangles and rectangles similar or different?

Note for Teachers: Help children to understand the rigidity of different shapes. The triangle is the most rigid shape, as it does not change its shape when pushed.

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Chapter 1.indd 14 3/26/2025 3:40:50 PM

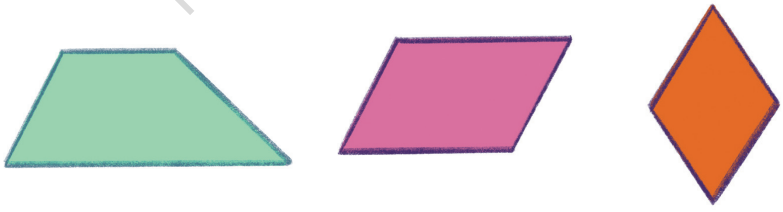
Use the dot grid given below to draw several three- and four-sided shapes. Circle the shapes that have one or more right angles.



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Discuss: What shapes did you make?
How many shapes have you made with
a) 1 right angle
b) 2 right angles
c) 3 right angles
d) all right angles

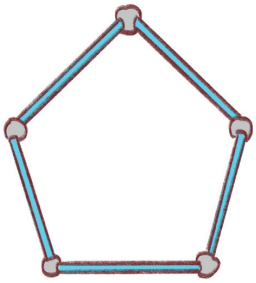
Here are some 4-sided shapes.
In what ways are rectangle and square different from these shapes?



Note for Teachers: Discuss similarities and differences between a square and a rectangle. Provide experiences to observe squares as a special case of rectangles. Teachers can also provide more dot grids, if required.

Chapter 1.indd 15 3/26/2025 3:40:50 PM

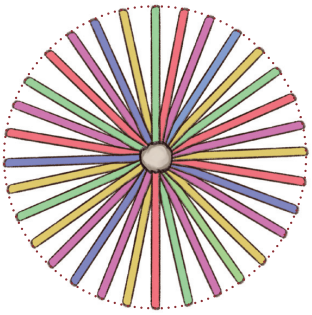
Try to make this 5-sided shape with all sides equal (Pentagon)



Are these right angles?

Does the shape of the pentagon change if we gently push one of its sides. Yes/No

How does this change the angles?



Can you make a circle using straws?

Look at the picture. The lengths of the straws in this picture are .....

(Equal/Unequal)

What will happen if we take straws of unequal lengths?

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Let Us Make

Can you use a scale to draw a circular shape? Let us see.

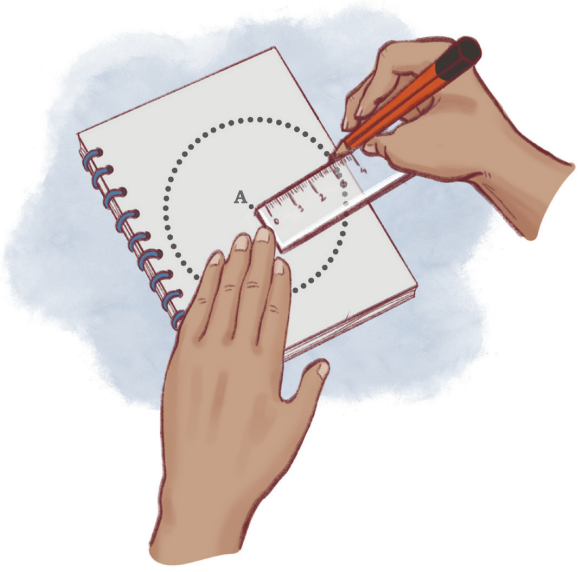
Mark a point A.

Draw many points that are at an equal distance from point A.

Connect the dots freehand. What do you get?

.....

The point A is the centre and the line from the centre to the border of the circle is the radius.



Chapter 1.indd 16 3/26/2025 3:40:52 PM

Amazing Circles

a) Take a piece of circular paper.

b) Fold your paper in half and crease it well.

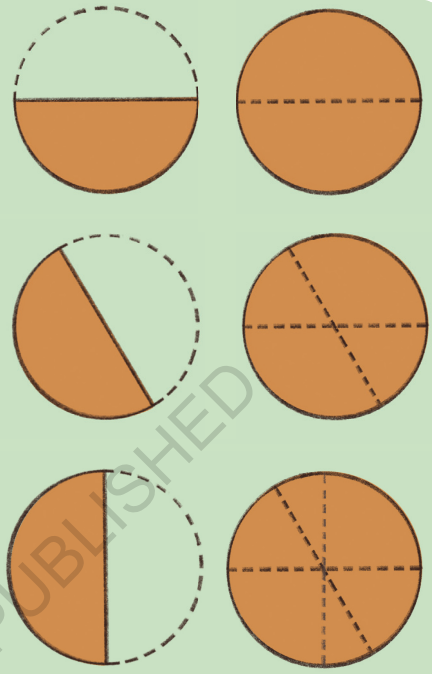
c) Open the fold and measure the length of the crease using a thread.

d) Fold your paper in half in a different way and crease it well.

e) Open the fold and measure the length of the crease again.

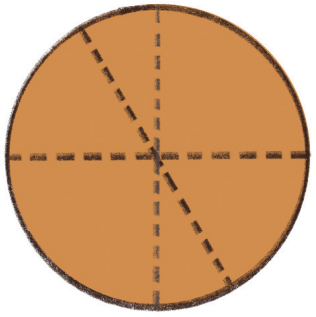
f) Fold it again in half in a different way and crease it well.

g) Open the fold, measure the length of the crease.



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1. The length of all the creases are _____. (Equal/Unequal)
2. These creases are called **diameters** of the circle.
3. Discuss where the centre is. Do you notice that all the diameters pass through the centre?
4. Measure the length of the creases from the center to the border of the circle. This is called the **radius** of the circle.
5. Discuss if there is any relationship between the radius and the diameter of a circle.

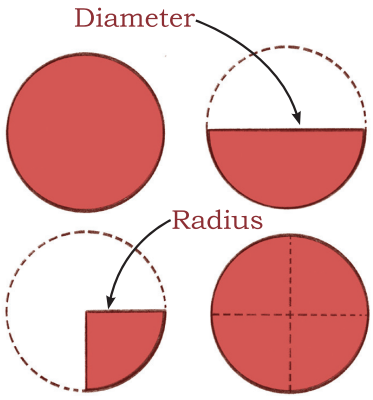


Note for Teachers: Children can measure the length using a paper strip or thread or scale.



Chapter 1.indd 17 3/26/2025 3:40:53 PM

Let Us Do

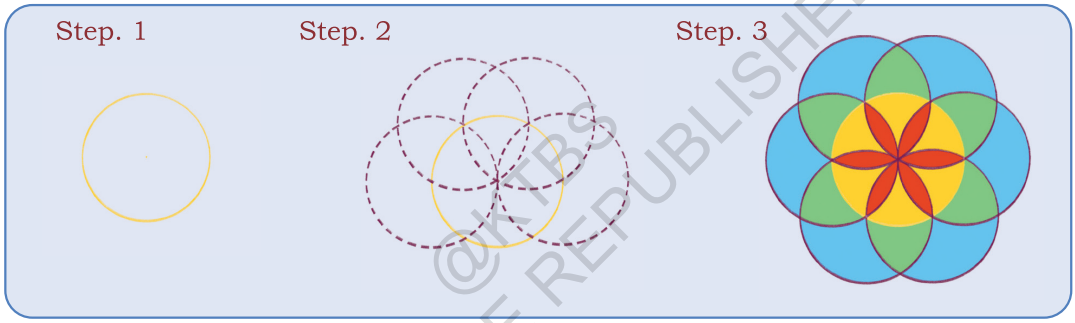


Fold the circular paper in half.

Fold this half again in half.

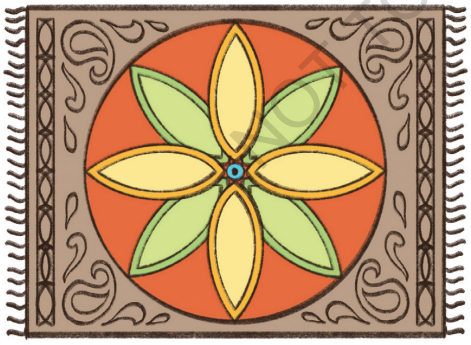
The length of the diameter is _____ (half/double) of the length of radius.

A circle can be made easily using a compass. Ask your teacher to help you use a compass. Make the following design.



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Look at the carpet design. A beautiful circle, right?



Mark the centre, radius, and the diameter of the circular design with any colour of your choice.

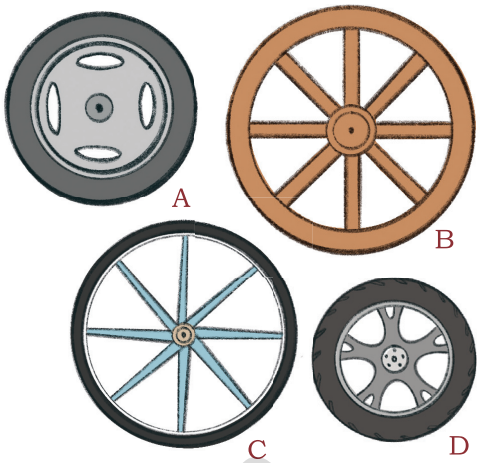
Note for Teachers: Help children to draw circles using a compass. Encourage learners to draw different-sized circles.



Chapter 1.indd 18 3/26/2025 3:40:55 PM

Look at the wheels.

All wheels look like .....

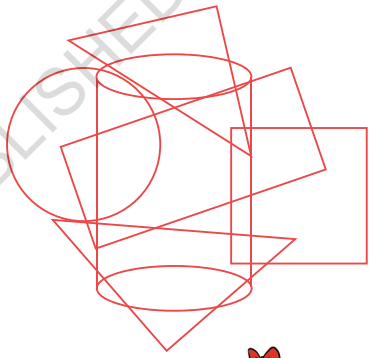


Name the wheel with the

1. longest radius .....
2. shortest radius .....
3. longest diameter .....
4. shortest diameter .....

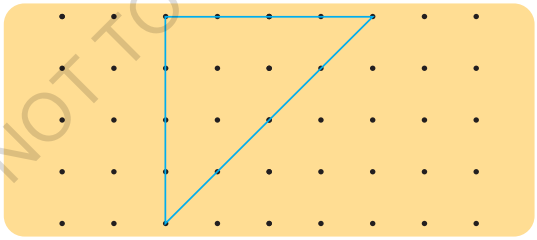
Puzzling Shapes

1. Identify the hidden shapes and write their names.



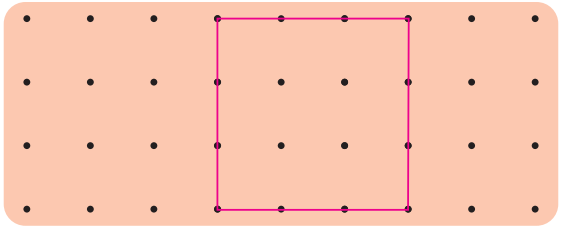
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2. Draw 2 lines to divide the triangle into 1 square and 2 triangles.





3. Draw 2 lines to divide the square into 3 triangles.



Chapter 1.indd 19 3/26/2025 3:40:55 PM

4. Draw lines to show the cuts needed on the shapes in the left column to get the smaller shapes on the right.

(A)		
(B)		
(C)		

Card Game

Sort the 2D-shape cards given at the end of the book into three groups according to their sides.

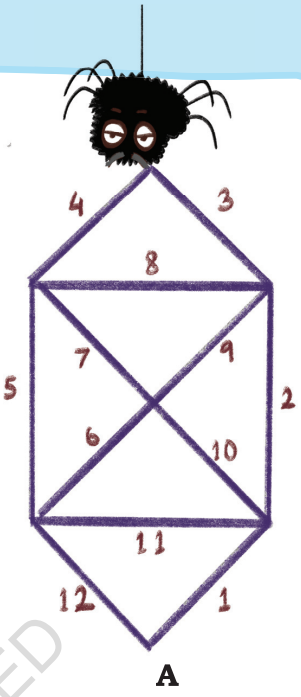
Draw the sorted shapes in the space given below. Explain why you sorted your shapes in this way.

Group 1	
Group 2	
Group 3	

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Chapter 1.indd 20 3/26/2025 3:40:55 PM

Let Us Try



1. Squiggly spiders

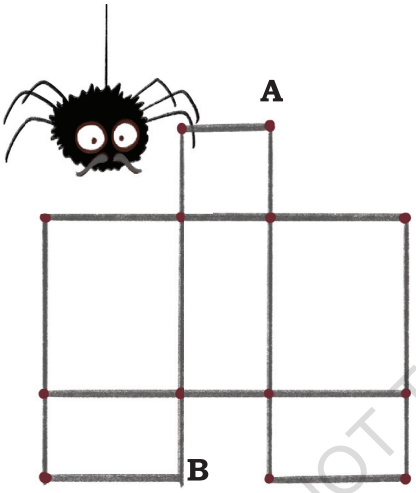
   Squiggly, the spider, likes to make webs in different shapes. One day she begins to make triangular webs.

   How many triangles are in her web?

   She likes to take a walk each morning and check if the walls of her web are strong.

   Can she begin at point A and reach back to the same point without walking on any wall more than once?

   Trace and show Squiggly's path.



Her brother, Wiggly made a web using rectangles. How many rectangles can you see in his web?

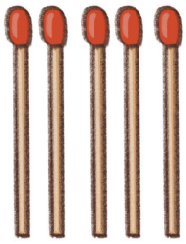
He likes to take a walk at the end of each day and check if the walls of his web are strong.

Can he begin at point A and leave from point B without walking on any wall more than once?

Trace and show Wiggly's path.

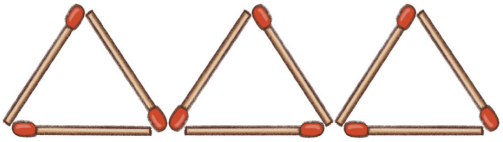
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2. Use 5 matchsticks to make 2 triangles. Then draw it in the space provided.

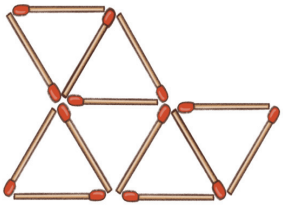


Chapter 1.indd 21 3/26/2025 3:40:56 PM

3. Move two of these matchsticks to form 4 triangles.



4. Remove 4 of these matchsticks to leave only 3 triangles.



5. Model challenge.

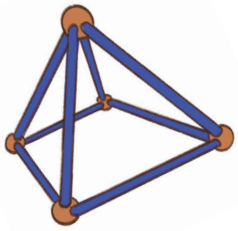
Can you make a model of solid shapes which has

a) 12 straws and 8 clay balls?

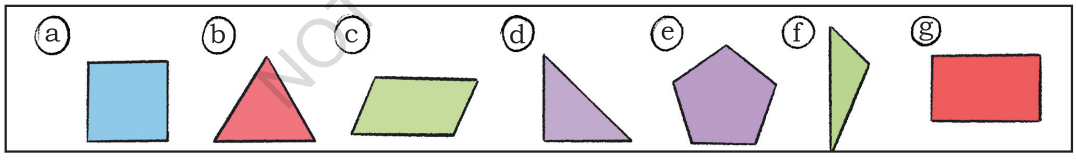
b) 9 straws and 6 clay balls?

c) 15 straws and 10 clay balls?

d) 10 straws and 6 clay balls?



6. Classify these shapes based on the number of angles.



3 angles		4 angles		5 angles	

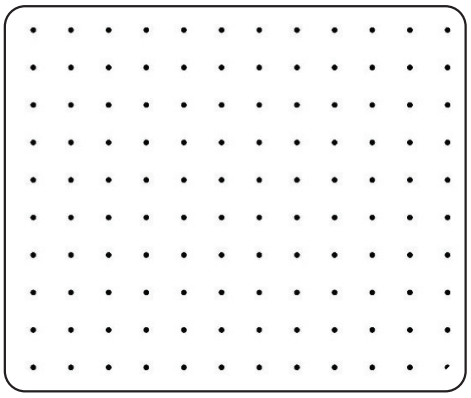
What relation do you notice between the number of sides and the number of angles?

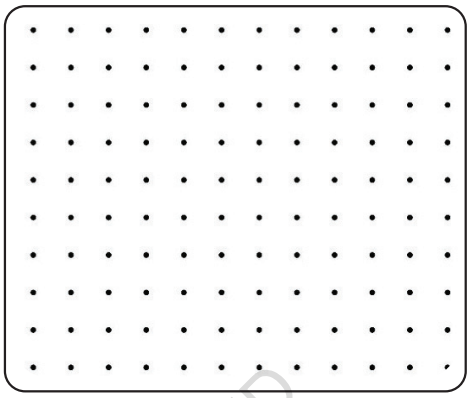
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Chapter 1.indd 22 3/26/2025 3:40:56 PM

7. Draw a 2D shape that has less than 5 angles.

Draw a 2D shape with more than 5 angles.



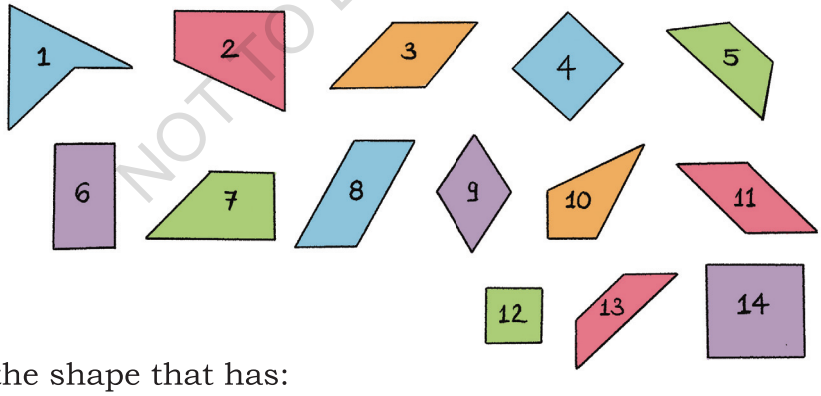


8. Mark the right angles and write the number of right angles in each figure.



Which of the above shapes have only right angles?

9. Observe the following shapes.



Identify the shape that has:

- 2 right angles, 1 acute, and 1 obtuse angle _____.
- 1 right, 2 obtuse, and 1 acute angle _____.
- 2 obtuse, and 2 acute angles _____.
- 4 right angles _____.

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Chapter 1.indd 23 3/26/2025 3:40:57 PM

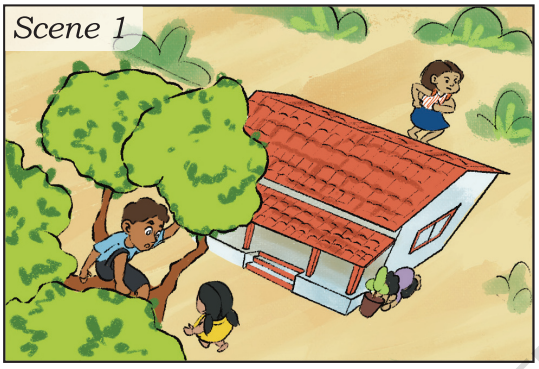
Chapter 2

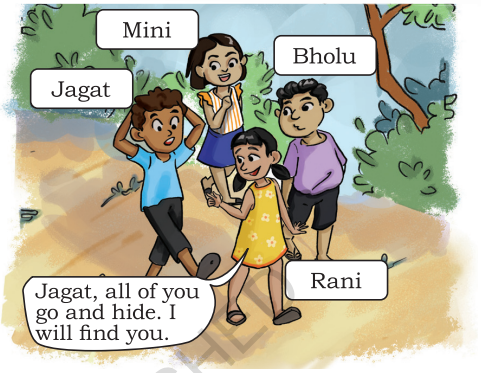
Hide and Seek

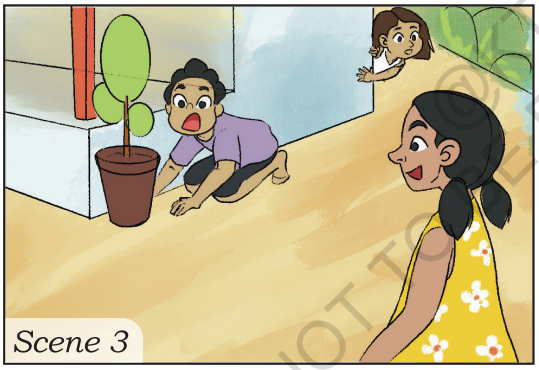
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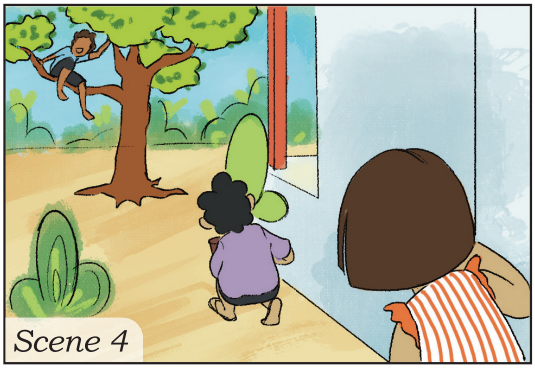
WHERE ARE YOU HIDING?











Let Us Do

1. Look at the picture and answer the following:

   a) Which game are the children playing? _____

   b) Who is looking from the top?_____

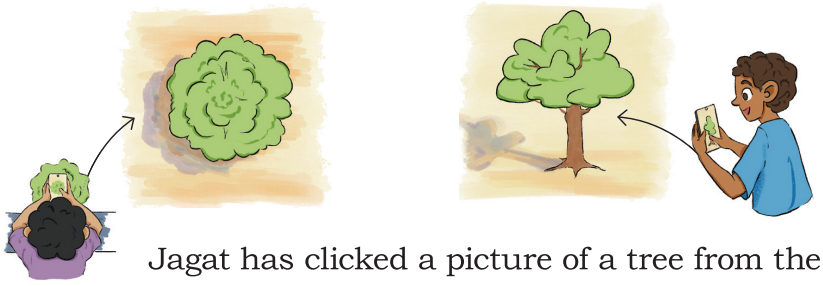
   c) In Scene 1, if Rani faces towards the hut, will she be able to see who all are hiding near the hut? _____

Discuss.

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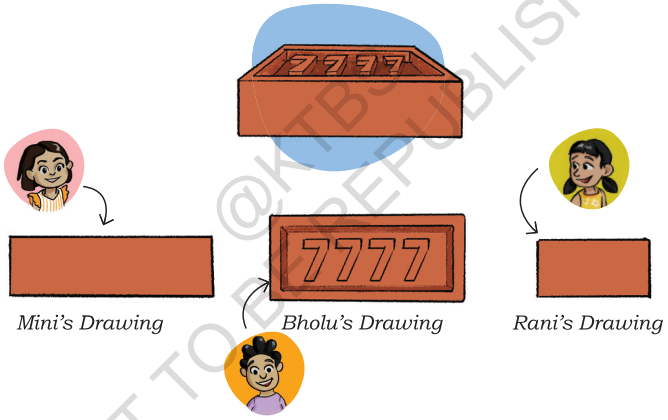
In Scene 4, can Mini see all the children playing the game? Discuss.

Bholu is amazed to see how this tree looks from the top.



Jagat has clicked a picture of a tree from the front.

2. Mini, Bholu, and Rani draw the same brick. Why are their drawings of the same brick different? Discuss.



Whose drawing shows the following views?

View of the Brick drawing	Name of the child
The top view	
The front view	
The side view	

Note for Teachers: Children may come up with different answers. Also, discuss with them the kinds of views present in the pictures, for example, top view, side view, and front view.

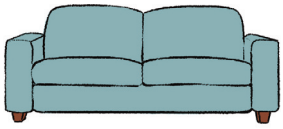
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Chapter 2.indd 25 3/25/2025 11:53:19 AM

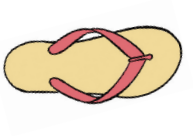
3. Look at the pictures and name the objects. Also write which view of the object is given.



Name _____
View _____



Name _____
View _____



Name _____
View _____



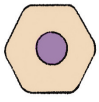
Name _____
View _____



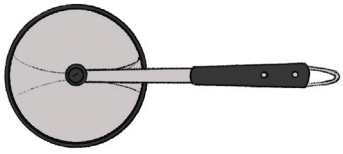
Name _____
View _____



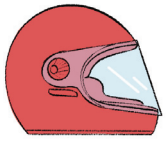
Name _____
View _____



Name _____
View _____



Name _____
View _____

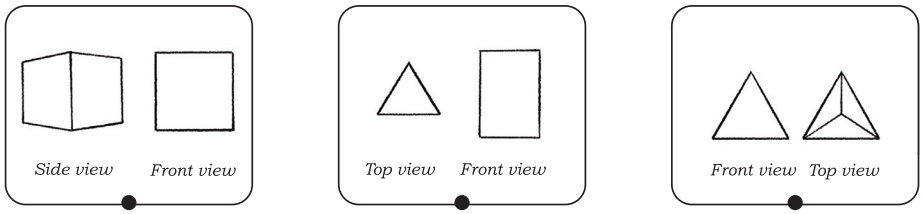


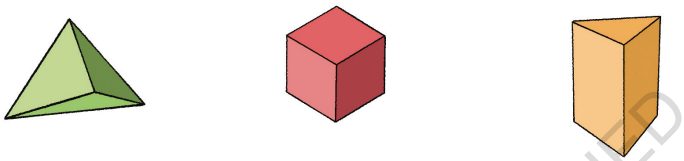
Name _____
View _____

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Chapter 2.indd 26 3/25/2025 11:53:20 AM

4. Jagat and Rani have made different drawings of the same objects. Match the views with the objects.

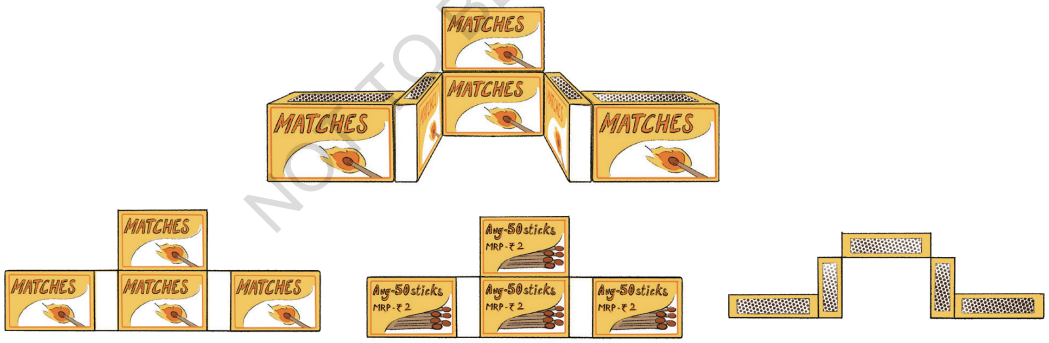




Look around you! Try to make drawings of objects, such as chairs, tables, pencils, erasers, birthday cap, and bottle from different views.

Boxy Buldings

Jagat and Mini are playing. They are making different buildings using empty matchboxes and making their drawings from different views.



Front view *Back view* *Top view*

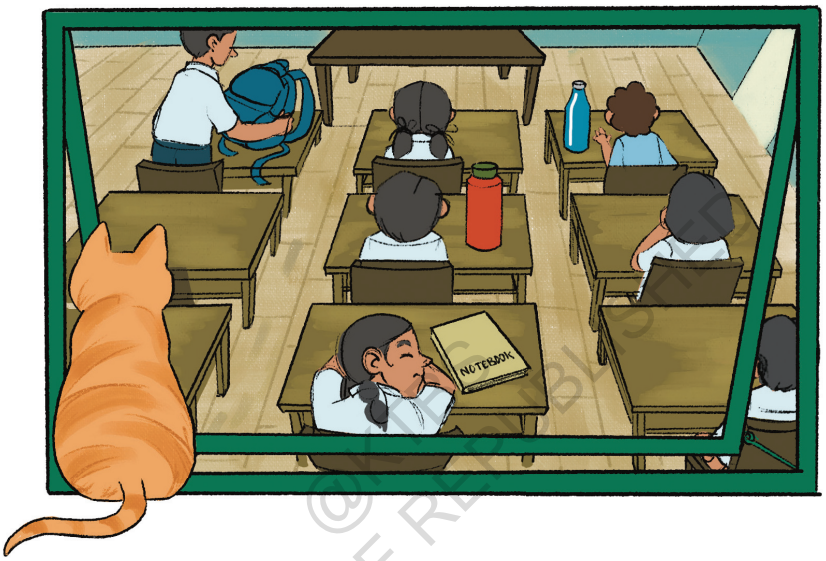
Now, you also collect empty matchboxes or any other empty boxes to create different buildings and draw their top, side, and front views. You can challenge your friends by asking them to match your drawing with the right building.

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Chapter 2.indd 27 3/25/2025 11:53:20 AM

Cat Finds Jagat

The next day, the five friends go to school feeling excited as it is an activity day. Jagat's pet cat follows him to school. The cat sits on the window and tries to find Jagat.



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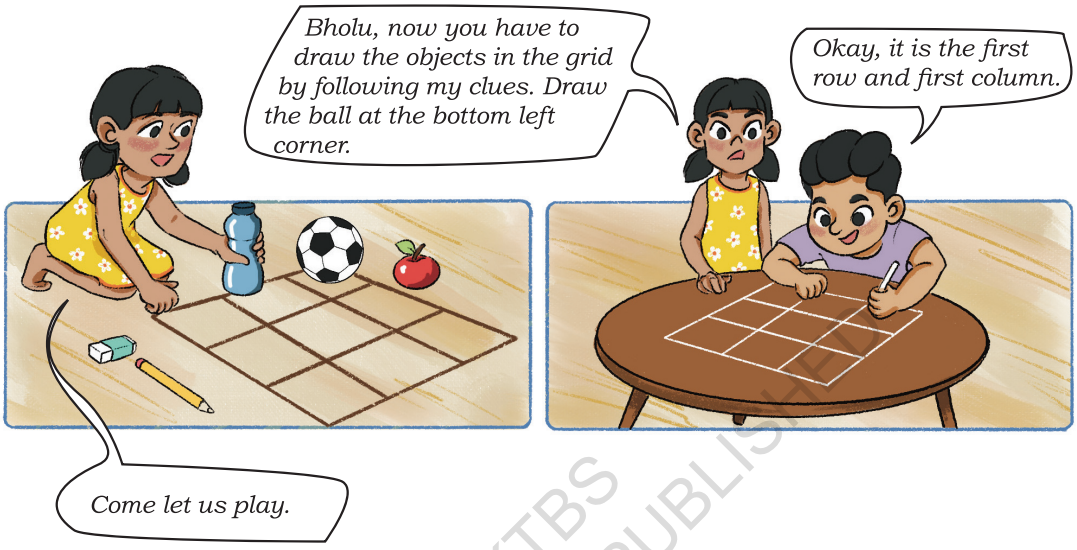
Let Us Do

Jagat's cat sees him sitting on the third desk in the first row.

1. Mark Jagat's position in the picture.
2. Describe the position of the blue bag _____.
3. What do you see on the middle desk of the second row? _____.
4. Where is the notebook kept — the first desk in the second row or the middle desk in the third row?
5. Draw an apple on the third desk of the second row.

Chapter 2.indd 28 3/25/2025 11:53:21 AM

Grid Game

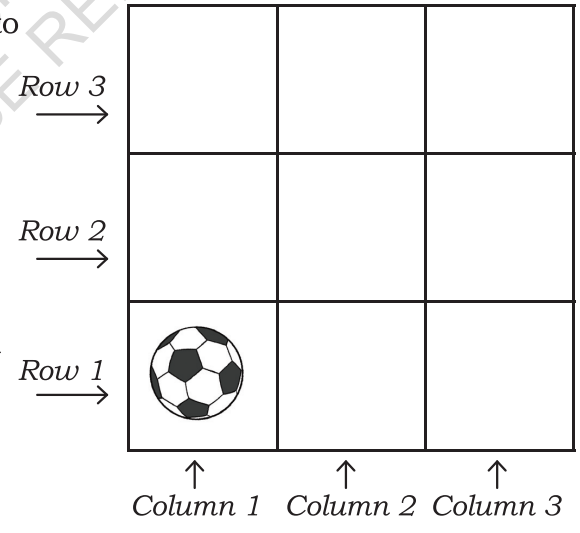


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Here are the clues given by Rani to fill the grid:

- An eraser at the top right corner.
- A pencil in the top left corner.
- An apple in the middle of the second row and second column.
- A water bottle in the third row and second column.

BHOLU'S GRID



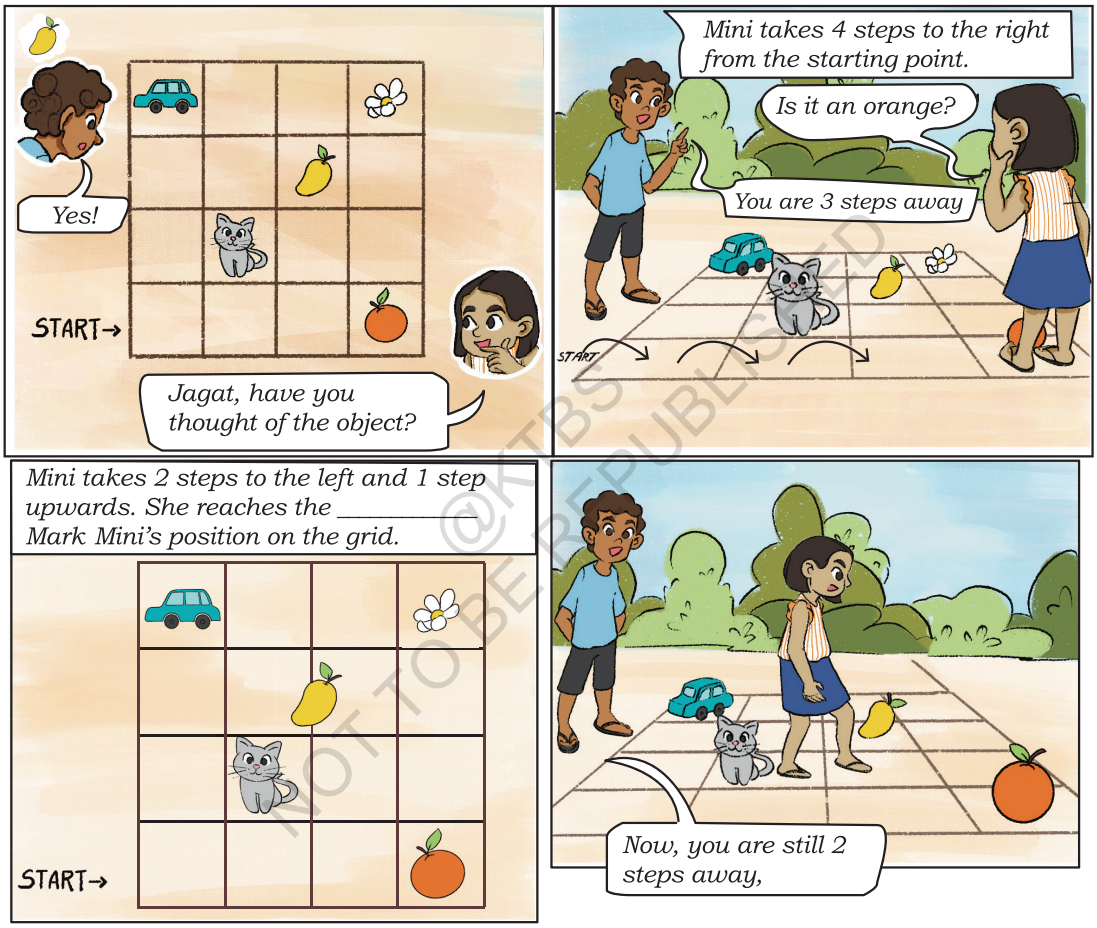
Note for Teachers: Let the children play the grid game in the class. They can draw the grid on the table or on the floor. They can place different objects at different positions of the grid.

Chapter 2.indd 29 3/25/2025 11:53:21 AM

Grid Game — Treasure Hunt

In this game, one player has to think of an object from the grid and help the other player locate it.

Let's see how Jagat and Mini are playing.



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What object did Jagat think of?

Note for Teachers: How to play—There are objects placed in a 4×4 grid. The first player helps the second player to reach the object he/she has thought of by giving clues. The players can move up, down, left or right. No diagonal movements are allowed. Children can play this game in pairs. Let student write/speak about the paths: provide them with prompts/questions/fillers, such as from the starting point, I moved ___steps left/right. Then I moved ___steps up/down and so on.

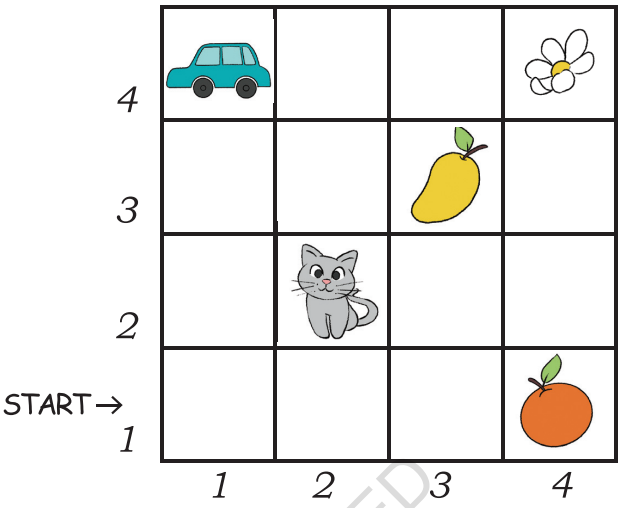
Chapter 2.indd 30 3/25/2025 11:53:22 AM

Play the game with your partner.

From the starting point, trace the paths to reach the flower. How many steps are required for each path?

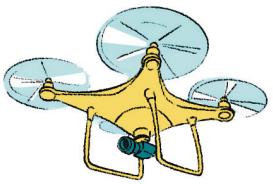
Speak out or write down the different paths followed to reach the flower.

From the starting point, where would you reach in a smaller number of steps: the mango or the orange?



Drone Around the School

Gyan has got a drone to show her friends. A drone can take pictures while flying.





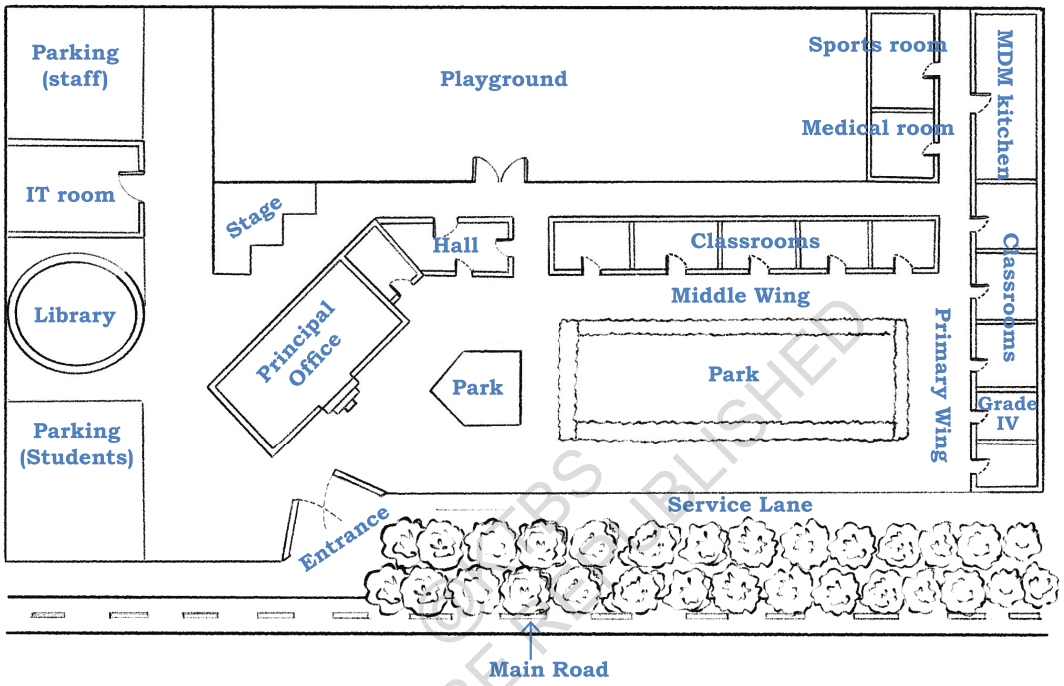
Circle the places or things that you see in the picture and write their names.

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Chapter 2.indd 31 3/25/2025 11:53:23 AM

Preet's elder sister has made a sight map of the school. You can easily locate Grade 4 on the map.

Trace the path from the Grade 4 classroom to the stage.



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How many routes were you able to find? _____(You may use different colour pencils to trace the different routes)

Which is the shortest route? How do you know?

The water delivery man has turned left from the entrance. Help him reach MDM Kitchen by telling him the route. Write the directions below.

_____.

Rajat is not feeling well. Which way will you choose to take him to the medical room from the library?

After the assembly in the playground, Bholu must go to the IT room and Rani has to go to the sports room.

Trace their paths. Which way is longer?

_____

Chapter 2.indd 32 3/25/2025 11:53:23 AM

Let Us Do (Project Work)

Draw a sight map to show the way from your school entrance to your classroom and any other important places.

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Chapter 2.indd 33 3/25/2025 11:53:23 AM

Chapter 3

Patterns Around Us

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Let Us Count

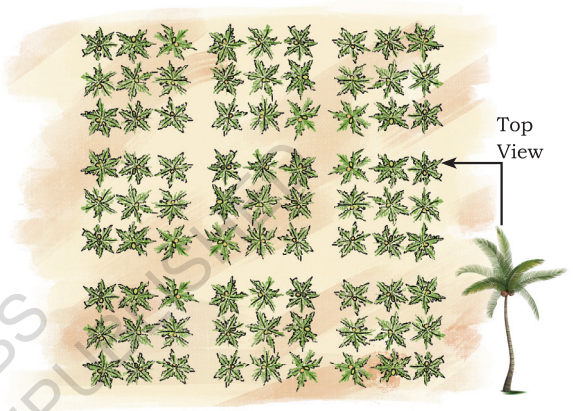
Gundappa has some land with tall coconut trees.

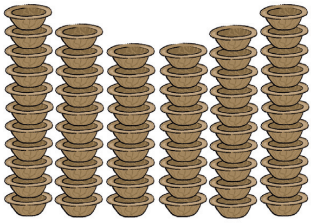
How many coconut trees does Gundappa have? _____

How do you know?

Gundappa has plucked 5 coconuts from each tree.

How many coconuts has he plucked?_____



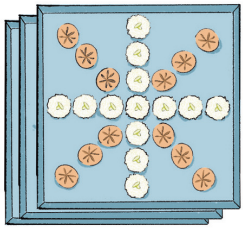


Muniamma makes plates and cups.

Number of cups = _____



Muniamma has arranged *coconut laddoos* and *milk peda* in trays like this. All trays have the same arrangement. Trays are placed one on top of the other.



How many coconut laddoos are there in the trays? _____

How many milk pedas are there in the trays? _____

Note for Teachers: Encourage learners to count using different ways of grouping and share their thinking.

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Patterns with Money



Shirley and Shiv arranged their play money in some nice patterns as shown below.



How much money? _____



How much money? _____

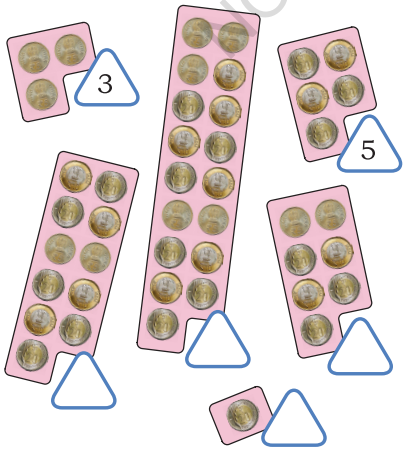
How did you count them? Discuss in class.

Arrange play money of amounts 1, 2, 5, and 10 to show ₹36, ₹125, and ₹183. Ask your peers to tell how much it is.

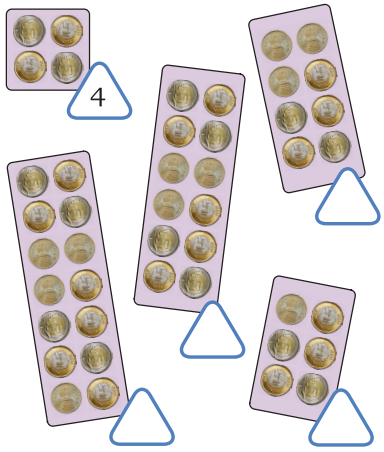
TWO WAYS

Shirley and Shiv arranged their coins in the following ways. Write the number of coins in the triangles.

Shirley



Shiv



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Chapter 3.indd 35 3/25/2025 11:54:08 AM

Describe Shiv's arrangement and write his numbers.

_____

Describe Shirley's arrangement and write her numbers.

_____

Shiv has arranged his numbers in pairs. We call such numbers 'even numbers'.

Shirley's numbers are called 'odd numbers'.

Identify numbers between 1 and 20 as even or odd. You may draw the pairing arrangement of the numbers.

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Odd	Even
_____	_____
_____	_____
_____	_____
_____	_____

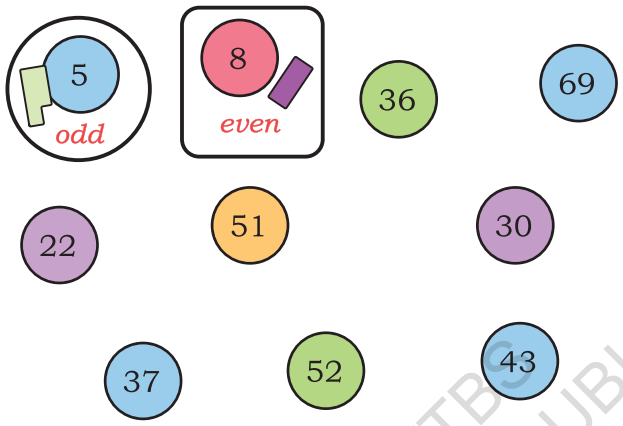
Do you think all numbers in the times-2 table are even?

Note for Teachers: Encourage students to identify the pattern-number of objects that can be paired (even) and those that cannot be paired (odd).

Chapter 3.indd 36 3/25/2025 11:54:08 AM

Crayons Arrangement

Circle the odd numbers and put a square around each even number. Use the crayons arrangement, if needed.



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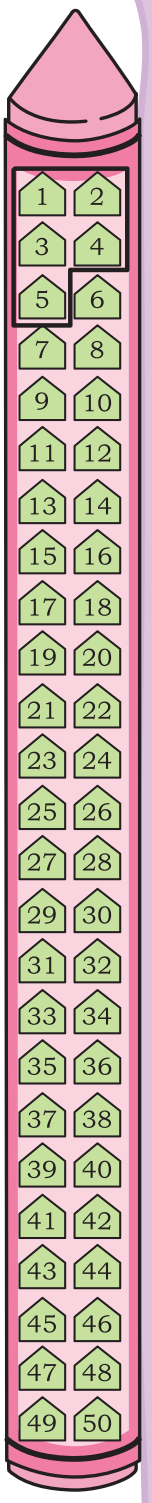
Which numbers are even and which are odd? Discuss.



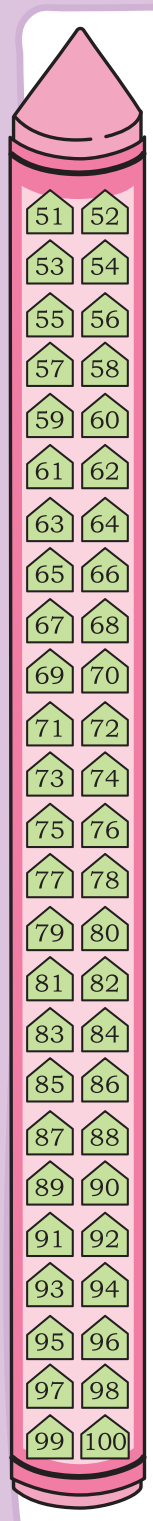


Shirley observes an interesting even-odd pattern in the page numbers of her Maths book.

Explore your textbook and find out what Shirley has seen. Draw a square on the even numbers. Put a circle on the odd numbers.



Chapter 3.indd 37 3/25/2025 11:54:08 AM



Identify which of the following numbers are even and which are odd. Explain your reasoning.

30 46 78 67 300 154 415 99

Odd numbers : _____

Even numbers : _____

Make two 2-digit numbers using the digits 1 and 6 without repetition.

_____

Identify the numbers as even or odd. Now choose any two digits and make 2-digit numbers in such a way that the numbers are even. _____

Are there more even or odd numbers between 1 and 100?

Shirley notices that both the numbers, before and after an odd number, are even.

Shiv wonders if both the numbers, before and after an even number, will be odd. What do you think? Check and discuss.

Choose any 10 numbers in order without skipping any (consecutive numbers). Write whether they are even or odd below each number. What do you notice? Discuss.

20 21 ○ ○ ○ ○ ○ ○ ○ ○

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

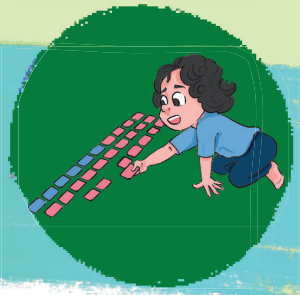
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Chapter 3.indd 38 3/25/2025 11:54:08 AM

Chapter 4

Thousands Around Us

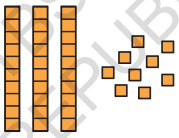
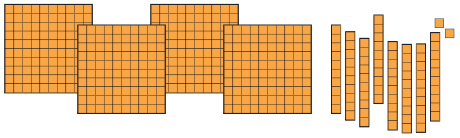
0433CH04



Jaspreet and Gulnaz are organising a *langar* (a community lunch) in their neighbourhood Gurudwara. They expect around one thousand (1000) people to be fed on that day. Fifty-five people volunteer to serve during this event. Jaspreet and Gulnaz receive many donations.

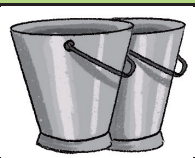
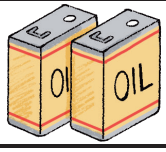
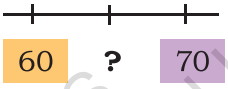


The donations are shown in the table below. Write the number in each case.

Donations	Quantity	Number
		
	4 Ones + 7 Tens	
		
	100 – 7	
		

Note for Teachers: Support children in revising the different representations for 2- and 3-digit numbers through such tasks.

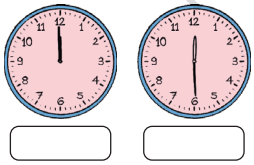
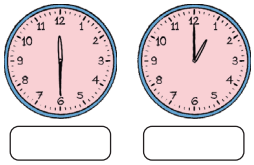
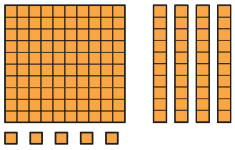
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Donations	Quantity	Number
		
	Twelve	
	10+10+10+10+10	
		
	Ten more than three hundred twelve	

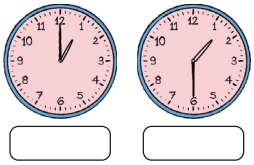
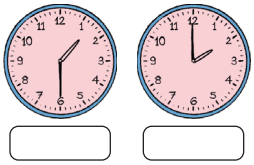
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Jaspreet and Gulnaz record the number of people who come for the community lunch at different times.

Write the time and draw the number of people who had food at different time slots using HTO blocks as shown below.

	52 people	
	145 people	

Chapter 4.indd 40 3/26/2025 3:43:50 PM

	325 people	
	508 people	

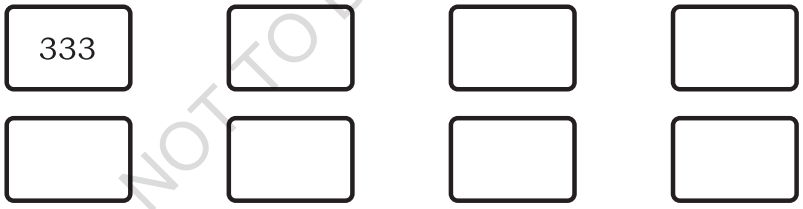
The time slot when the most number of people came for lunch is _____.

The time slot when the least number of people came for lunch is _____.

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Let Us Do

1. (a) Make 3-digit numbers using the digits 3 and 7. Write the numbers in the boxes given below. Circle the smallest and cross out the largest.



(b) Make six 3-digit numbers using the digits 3, 5, 0, 8 such that all numbers are less than 550. You can repeat the digits.



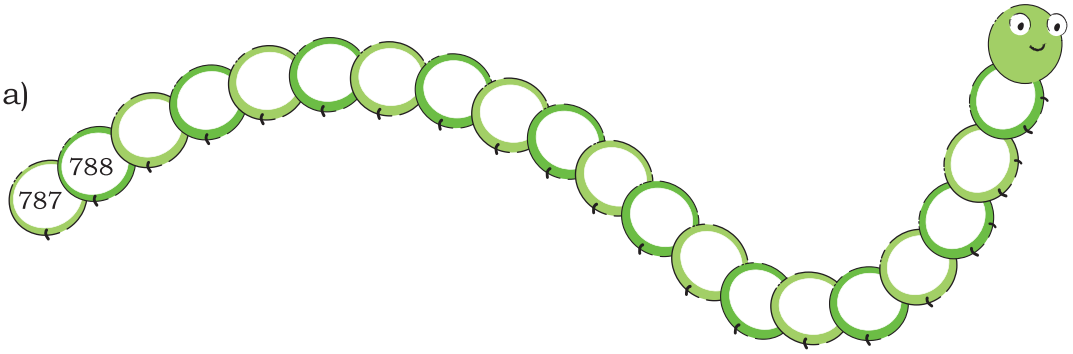
(c) Mark the numbers you made in 1(b) on the number line.



Chapter 4.indd 41 3/26/2025 3:43:50 PM

2. Fill in the blanks with appropriate numbers.

a)



b)



c)



d)



e)



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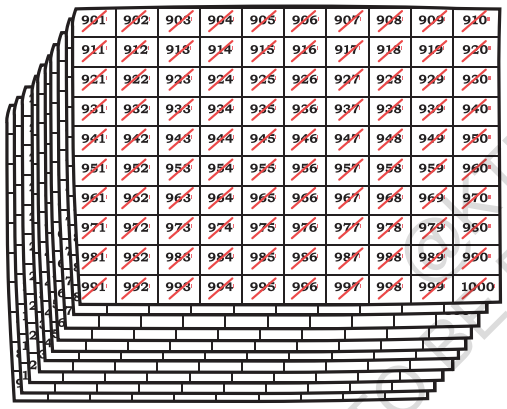
Chapter 4.indd 42 3/26/2025 3:43:51 PM

As we have learnt in Grade 3, the Indian system of writing numbers, which we have been learning and practising in school to write and add and subtract numbers, was discovered in India around 2000 years ago, and is now used around the world. This system was designed so that we can write all numbers, no matter how large they are, using just the ten symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9.

Till now, we have learnt how to write all numbers from 1 to 999. Now let us explore how to write numbers one thousand and larger in the Indian number system!

You remember that Gulnaz and Jaspreet had kept track of the people who came for the community lunch.

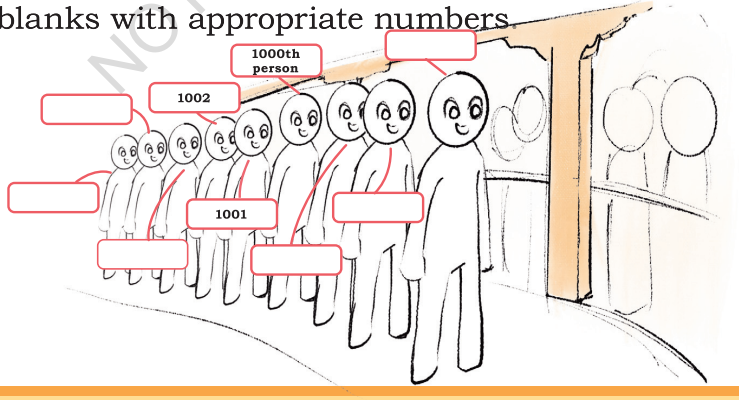
Let us see how they did it.



1001	1002	1003	1004	1005	1006	1007	1008	1009	1010
1011	1012	1013	1014	1015	1016	1017	1018	1019	1020
1021	1022	1023	1024	1025	1026	1027	1028	1029	1030
1031	1032	1033	1034	1035	1036	1037	1038	1039	1040
1041	1042	1043	1044	1045	1046	1047	1048	1049	1050
1051	1052	1053	1054	1055	1056	1057	1058	1059	1060
1061	1062	1063	1064	1065	1066	1067	1068	1069	1070
1071	1072	1073	1074	1075	1076	1077	1078	1079	1080
1081	1082	1083	1084	1085	1086	1087	1088	1089	1090
1091	1092	1093	1094	1095	1096	1097	1098	1099	1100

How many people came for the community lunch? _____

Fill in the blanks with appropriate numbers.



Note for Teachers: Let children notice how numbers beyond 1000 are written. Lead them to read these numbers and write the numbers.

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Chapter 4.indd 43 3/26/2025 3:43:52 PM

3. Identify the range of numbers most suitable for the following situations. Share your thoughts.

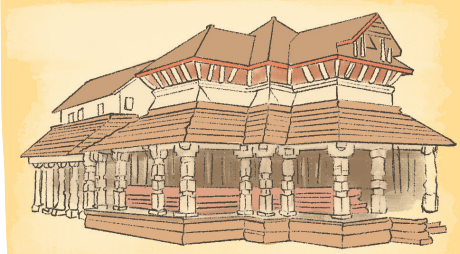
Number of children in your village	**Only 1**	Number of books in your classroom
Number of teachers in your school	**2 to 5**	Number of fingers in your classroom
Number of tables in your classroom	**10 to 50**	Number of leaves in a tree
Number of books in your library	**50 to 100**	Number of letters on this page
Number of leaves in a plant	**100 to 200**	Number of children in your school
Number of pages in your math textbook	**200 to 500**	Number of girls in your school
Number of ants in an anthill	**500 to 1000**	Number of steps to reach school
	More than 1000	

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Identify things around you that are more than 1000 in number.

Chapter 4.indd 44 3/26/2025 3:43:52 PM

1000s AROUND US



The Thousand Pillars Temple, or Saavira Kambada Basadi, is the most famous among the 18 Jain temples in Moodubidiri town, Karnataka. Built in the 1500s by the local ruler Devaraya Wadiyar, each of its thousand pillars is decorated with unique rock carvings.

Did you know?

In the early 1900s, the population of the Indian rhinoceros was driven to near extinction, with only around 200 rhinoceros left. With recent conservation efforts, there are around 4000 (four thousand) rhinoceroses. It weighs between 1800 kg (one thousand eight hundred and 2700 kg (two thousand seven hundred), is around 2 m high/tall and more than 3 m long. The Indian rhinoceros is the state animal of Assam.



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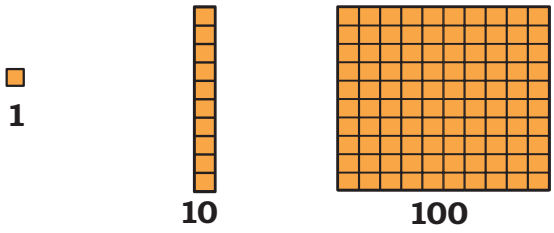
My country

India is a country with a rich cultural heritage. It has 788 districts. These districts are divided into about six lakh villages, each with its own unique traditions and practices. India has over 7500 kilometres (Seven thousand five hundred) of coastline on three sides. Our country's history goes back over 5000 years (Five thousand), and we celebrate more than 1000 festivals.

Chapter 4.indd 45 5/6/2025 4:30:49 PM

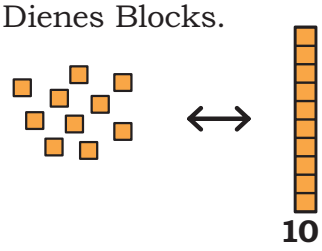
One Thousand (1000)

You have seen how to visualise one (1), ten (10) and one hundred (100) using Dienes Blocks.

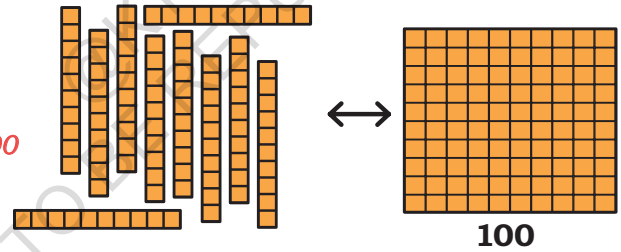


Let us now learn about one thousand (1000) using Dienes Blocks.

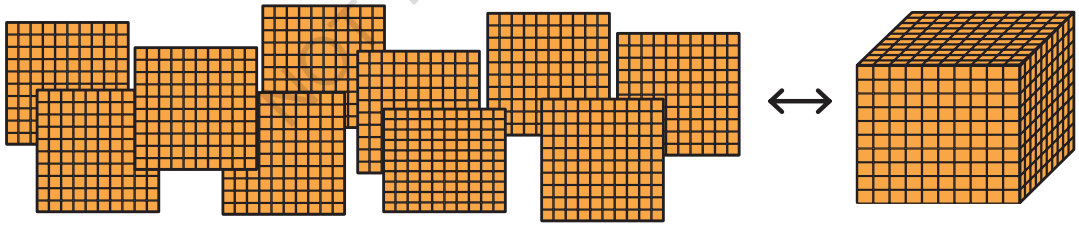
Counting is easy when we group in Tens



10 Ones = 1 Ten = 10



10 Tens = 1 Hundred = 100



10 Hundreds = 1 Thousand = 1000

1000

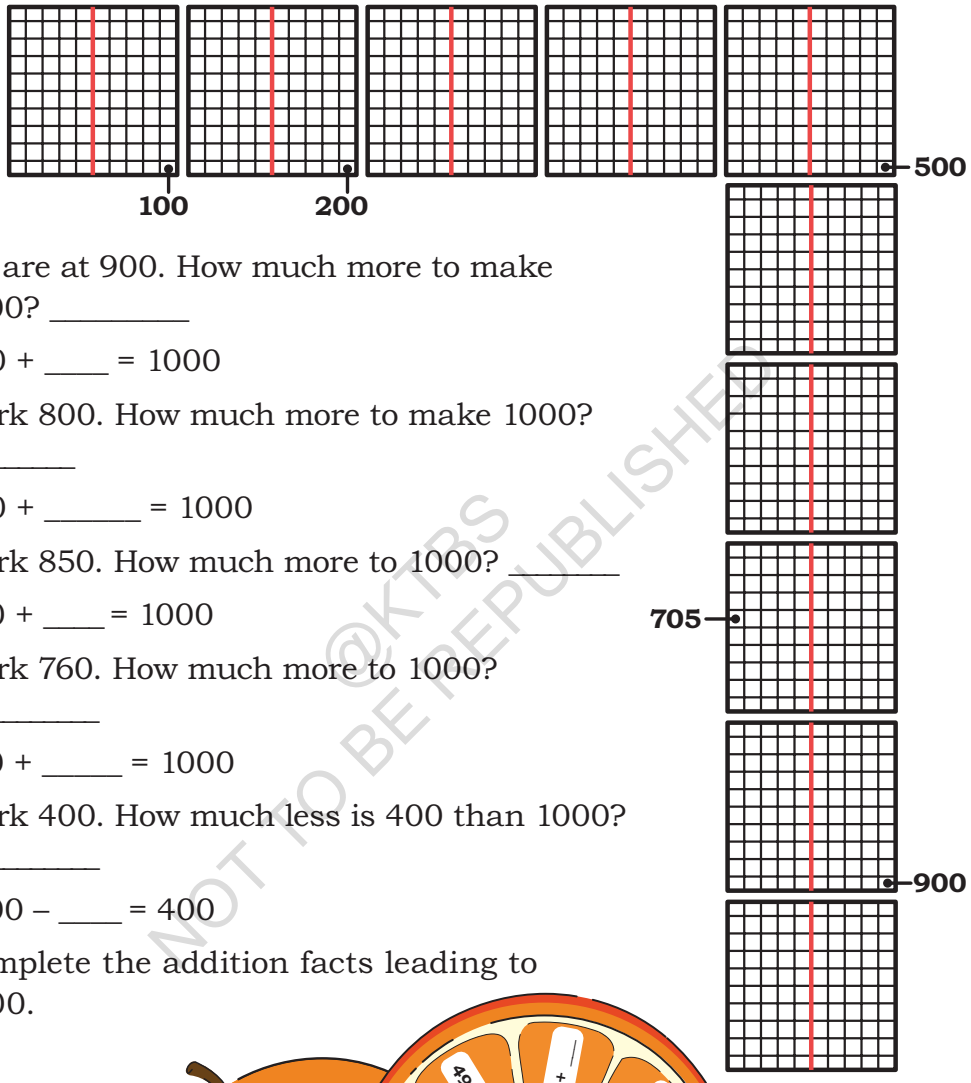
Note for Teachers: Give learners the experience of grouping and regrouping in 1s, 10s, and 100s. The following pages have some examples of tasks to engage learners.

Zoltán Pál Dienes was a Hungarian mathematician and educator who developed Dienes blocks. These blocks represent different numerical values, and help students understand the idea of the Indian base-10 place value system of writing numbers and carrying out arithmetic operations on them.

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Chapter 4.indd 46 3/26/2025 3:43:55 PM

Let Us Break Up One-Thousand



a) We are at 900. How much more to make 1000? _____

900 + ____ = 1000

b) Mark 800. How much more to make 1000?

_____

800 + _____ = 1000

c) Mark 850. How much more to 1000? _____

850 + ____ = 1000

d) Mark 760. How much more to 1000?

_____

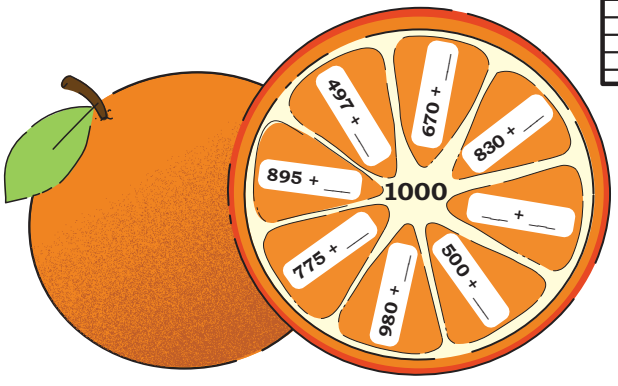
760 + _____ = 1000

e) Mark 400. How much less is 400 than 1000?

_____

1000 – ____ = 400

f) Complete the addition facts leading to 1000.

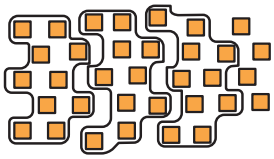


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Chapter 4.indd 47 3/26/2025 3:43:55 PM

Grouping and Regrouping

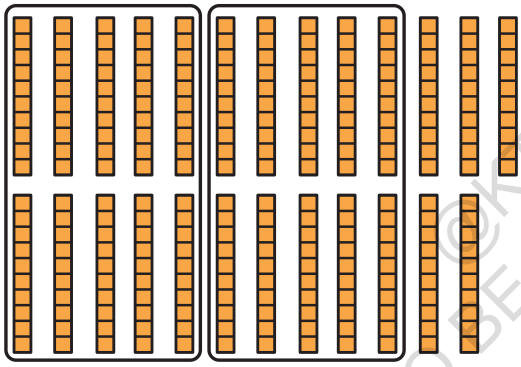
Look at the pictures below. Circle as many groups of 10 Ones or 10 Tens as possible. Write the final number against the following pictures.



30 + 4 = 34

3 Tens + 4 Ones

= 34

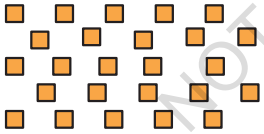


Notice that moving from right to left, digits of the number correspond to Ones, Tens, Hundreds.

200 + 50 = 250

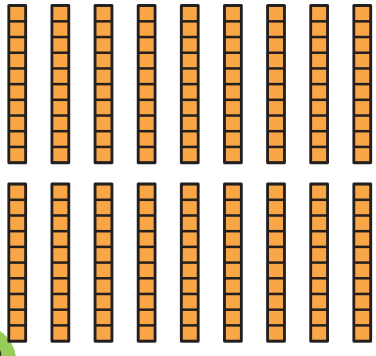
2 Hundreds + 5 Tens + 0 Ones

= 250



_____ + _____ = ____

____ Tens + ____ Ones = _____



_____ + _____ = _____

_____ Hundreds + ____ Tens +

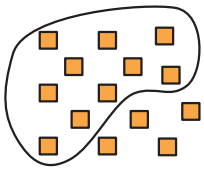
_____ Ones = _____

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Chapter 4.indd 48 3/26/2025 3:43:57 PM

Circle groups of ten 1s, 10s, and 100s as many times as required in each of the following pictures. Fill in the empty boxes.

a)

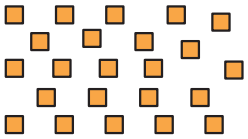


14 Ones

1 Ten + 4 Ones = 14

Tens	Ones
1	4
1 4	

b)

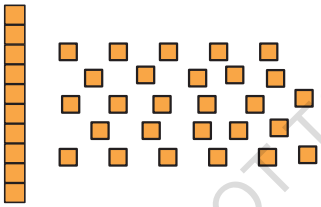


23 Ones

____ Tens + ____ Ones = _____

Tens	Ones

c)

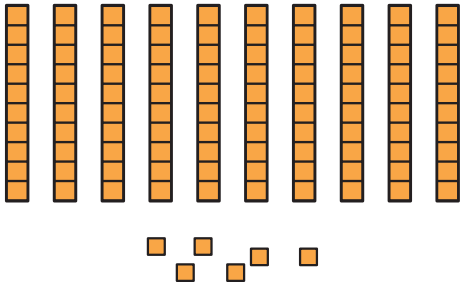


1 Ten and 27 Ones

____ Tens + ____ Ones = _____

Tens	Ones

d)



10 Tens and 6 Ones

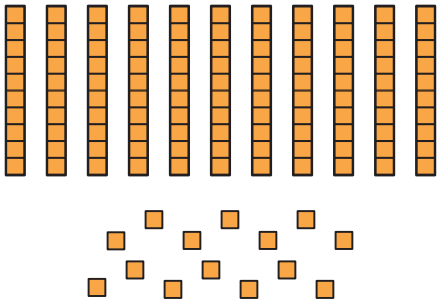
__1__ Hundred + __0__ Tens + __6__ Ones = __106__

Hundreds	Tens	Ones
1	0	6
1 0 6		

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Chapter 4.indd 49 3/26/2025 3:43:57 PM

e)

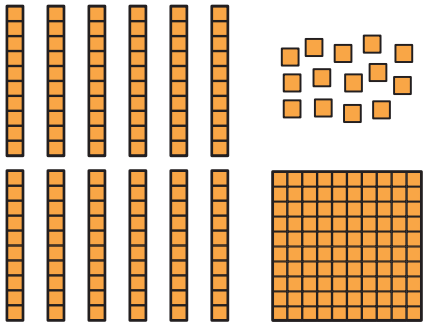


11 Tens and 14 Ones

_____ Hundred + _____ Tens + _____ Ones = _____

Hundreds	Tens	Ones

f)



1 Hundred, 12 Tens and 14 Ones

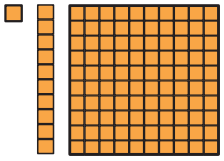
_____ Hundreds + _____ Tens + _____ Ones = _____

Hundreds	Tens	Ones

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Let Us Solve

Identify and write the numbers for each of the following in your notebook. Draw pictures like these, if needed.

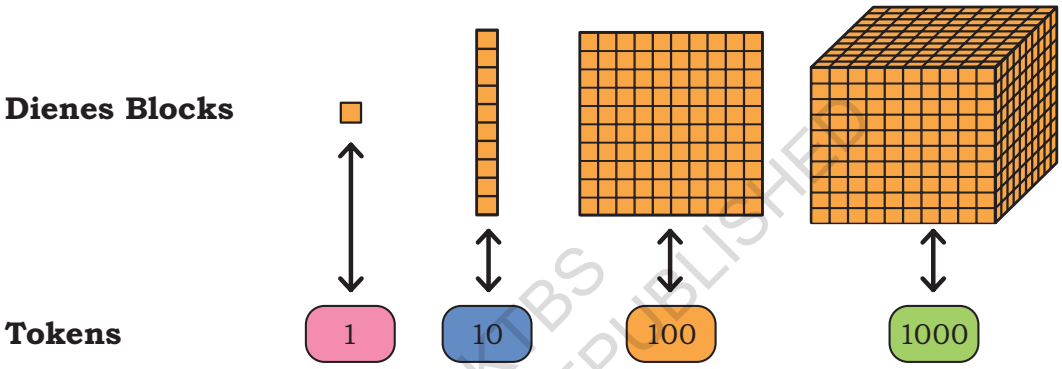


a) 45 Ones
b) 39 Ones
c) 35 Tens
d) 86 Tens
e) 10 Tens and 1 Ones
f) 15 Tens and 23 Ones
g) 34 Tens and 12 Ones
h) 19 Tens and 10 Ones
i) 2 Hundreds, 13 Tens and 7 Ones

Chapter 4.indd 50 3/26/2025 3:43:59 PM

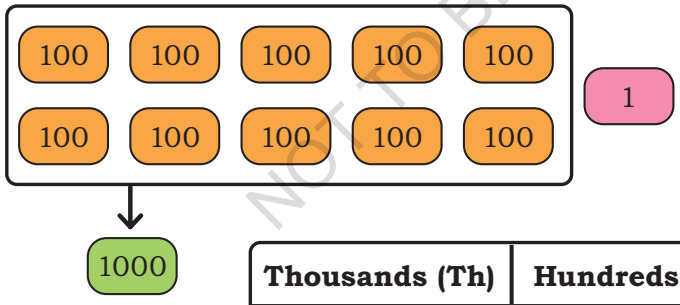
Numbers Beyond 1000 (One Thousand)

Thousands	Hundreds	Tens	Ones
1	0	0	0
1000			



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We will use tokens in place of Dienes blocks for larger numbers.

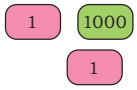
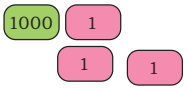
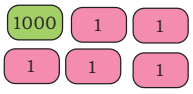
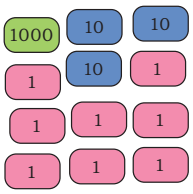
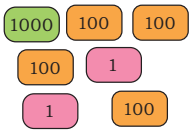
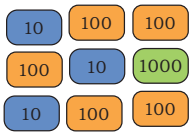
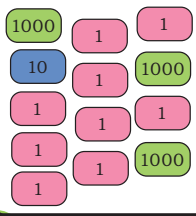


Thousands (Th)	Hundreds (H)	Tens (T)	Ones (O)
1	0	0	1
1001			
One thousand one			

1 Thousand + 0 Hundred + 0 Tens + 1 Ones = 1001

Chapter 4.indd 51 3/26/2025 3:44:00 PM

Look at the table below and fill in the blanks.

Tokens	Expanded Form	Th	H	T	O	Number	Number Name
	1000 + 1					1001	
						1002	
						1003	
		1	0	0	5		
							
	1000 + 100					1100	One Thousand One Hundred
						1038	
							
							
	3000 + 0 + 10 + 9						

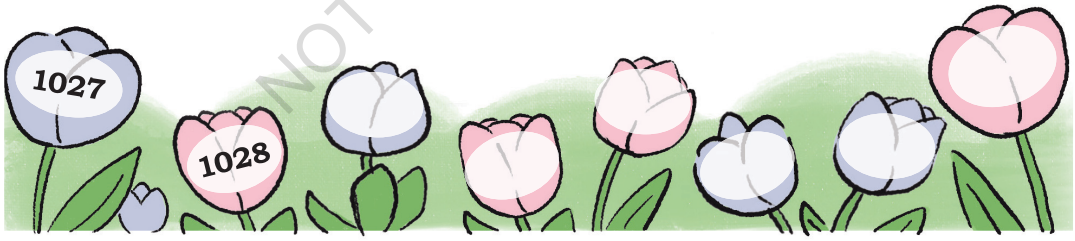
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Tokens	Expanded Form	Th	H	T	O	Number	Number Name
1000 100 100 10 1000 100 10 1000 10 100 100 1000 100 1 10 1000 1 1000 1 10 1 10 1 1							
1000 10 1000 10 10 1000 10 1000 10 10 1000 1000 10 10 1000 1000 10 1000							

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1. Write the numbers in a sequence—forward and backward as indicated.

a)



b)

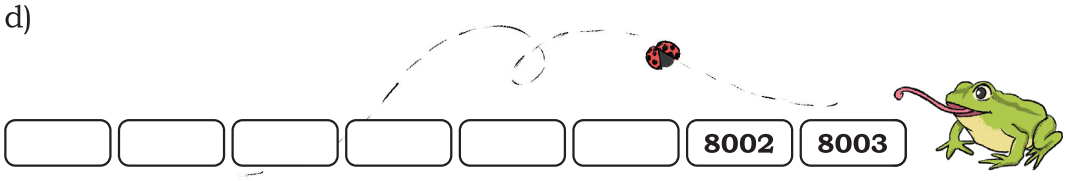


c)



							4892	4893

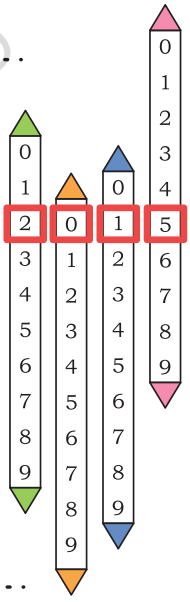
d)



						8002	8003

Let Us Play

Make the place value slider. Children can take turns to increase or decrease the number as told.



a) 1895—increase the number by 1

b) 2785—increase the number by 10

c) 3369—decrease the number by 2

d) 5648—decrease the number by 10

e) 6487—increase the number by 20

Let Us Think

1. Ram wrote 7 Thousand 0 Hundreds 2 Tens 4 Ones as 724.

   Is this correct? _____

   Write the correct number _____

2. Richa wrote 5 Thousand 6 Hundreds 0 Tens 3 Ones as 563.

   Is this correct? _____

   Write the correct number _____

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Chapter 4.indd 54 3/26/2025 3:44:01 PM

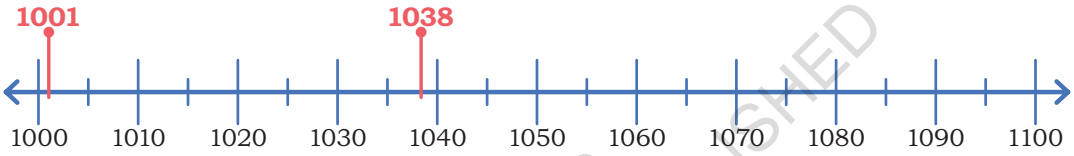
Number Line

1. Which of these numbers lie between 2226 and 3226? Circle the correct answers.

   3316 3236 2236 2216 3126 3216

2. Do as instructed.

   a) 1001 and 1038 are marked on the number line. Try to mark 1043, 1069, and 1084 on the same number line.



   b) Mark the following numbers on the number line below.

   2025, 2080, 2175, 2245, 2295, 2310, 2390, 2430, 2460



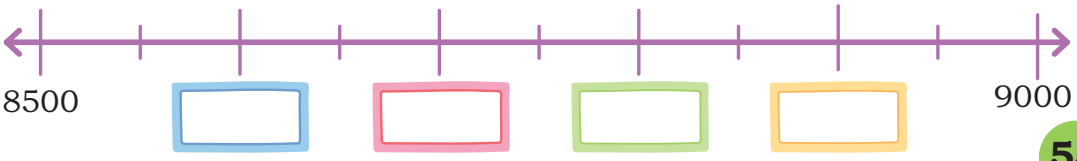
   c) Mark the following numbers on the number line below.

   5512, 5548, 5590, 5636, 5673, 5695



   d) Mark the following numbers on the number line below.

   8679, 8990, 8923, 8763

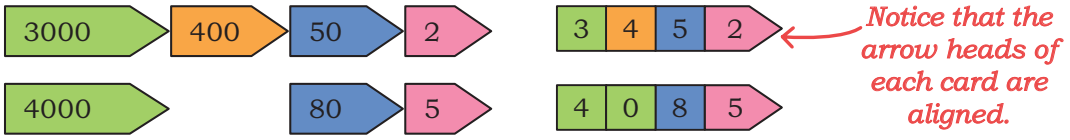


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Chapter 4.indd 55 3/26/2025 3:44:01 PM

Let Us Play

Use the arrow cards (given at the end of the book) to make different numbers. Take turns giving a number for the grade to make using the arrow cards. Read aloud the number and express them in expanded form and in words.



3452 is made up of the cards 3000, 400, 50 and 2.

The expanded form of 3452 is 3000 + 400 + 50 + 2.

In words, 3452 is three thousand four hundred fifty two.

What cards are used to make 4085? Write it in expanded form and in words.

Find Me! Read aloud the numbers and locate them in the grid.

1	2	3	4	8	0	3	9
5	7	2	0	2	5	7	6
2	5	7	6	0	3	8	7
1	6	1	9	2	2	2	2
0	5	0	1	0	1	1	1
1	3	0	1	2	1	1	1
9	4	8	3	6	1	1	1

1. The number 3782.
2. Two thousand five hundred and seventy six.
3. A 4-digit number with all digits the same.
4. The smallest 4-digit number in this table.
5. The largest 4-digit number in this table.
6. A number more than 5000 and less than 5200.
7. A number between 5600 and 6300.
8. A 4-digit number all of whose digits can be found on a die.

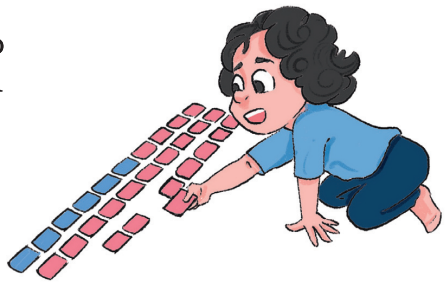
Note for Teachers: Ensure that children use the appropriate cards and that the arrows of each card overlap. They should not pick up individual digits, but appropriate Thousands, Hundreds, Tens and Ones. Teacher to point out the place-holder use of '0' in writing numbers in the Indian place value system.

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Chapter 4.indd 56 3/26/2025 3:44:02 PM

Let Us Solve

1. Use tokens of 1s, 10s, 100s, 1000s to identify the numbers and write them in the table.



   a) 6 Tens and 22 Ones
   b) 4 Tens and 12 Ones
   c) 3 Hundreds, 14 Tens, and 8 Ones
   d) 12 Hundreds, 18 Tens, and 2 Ones
   e) 1 Thousand, 5 Hundreds, 10 Tens, and 17 Ones

	Th	H	T	O	Number
a	0	0	8	2	82
b					
c					
d					
e					

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2A. Circle the number that is bigger.

30 or 300

6000 or 600

6000 or 3000

2B. Circle the number that is smaller.

2 Ones or 2 Hundreds

5 Tens or 2 Thousands

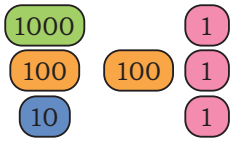
7 Tens or 4 Hundreds

Note for Teachers: (1) Draw attention of children to the use of only ten digits 0–9 for writing all numbers, however large. Also, draw their attention to the order in which we read and write—first Thousand, then Hundred, then Tens, and finally Ones. (2A&2B). This exercise is to check that students understand the importance of units. 2 Hundreds is always more than 2 Tens or 2 Hundreds is more than 9 Tens.

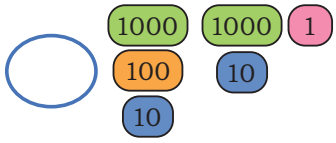
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COMPARING NUMBERS

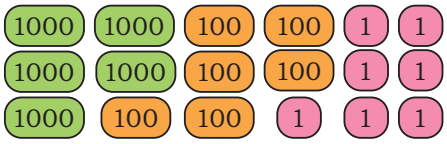
Jaspreet and Gulnaz help to keep a record of the number of plates used in the Gurudwara every month. Use the signs <and> to find the month when a larger number of plates were used.



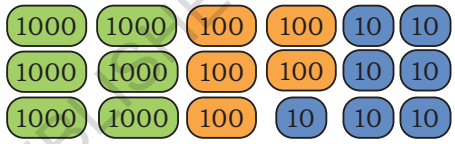
February: 1213



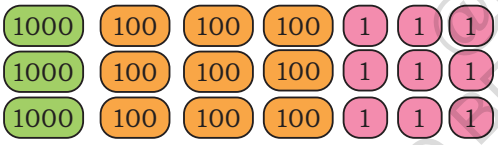
March: 2121



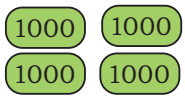
September: _____



October: _____



November: _____



December: _____

Compare the numbers using the signs <and>.

Why is 3102 bigger than 3012?

3012			
Th	H	T	O
3	0	1	2

3102			
Th	H	T	O
3	1	0	2

Describe how you decided which number is the bigger one. Which position (Th, H, T, O) helped you to decide this?

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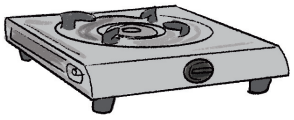
Chapter 4.indd 58 3/26/2025 3:44:02 PM

Let Us Do

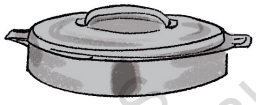
1. Compare the following pairs of numbers using < and >. Make a Th, H, T, O table, if necessary. Share your thoughts with the class.

a)	2190		2910	c) 1009		9001
b)	7087		7088	d) 982		1024

2. Order the prices of the following objects from smallest to biggest (increasing order).



₹ 1986



₹ 1099



₹ 1899

[ ] < [ ] < [ ]

3. The following women international cricketers have played 200 ODIs (One-Day International Matches). Listed below are their scores. Arrange the runs scored by them in increasing order (from lowest to highest).

Debbie Hockley	4064
Suzie Bates	5114
Karen Rolton	4814
Mithali Raj	7805
Charlotte	6002

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4. Arrange the following mountain ranges in decreasing order of height (from highest to lowest).

Mountain Range	Height (in meters)
Kangchenjunga	8586
Mullayanagiri	1930
Chaukhamba I	7138
Bailadila Range	1276
Nanda Devi	7816
K2	8611
Kalsubai	1646

5. Use the signs <, =, > to compare the following.

a) 2 Tens + 4 Thousands + 3 Hundreds ◯ 2043

b) 2 Tens + 4 Thousands + 3 Hundreds ◯ 4320

c) 2 Thousands + 9 Hundreds + 9 Tens + 9 Ones ◯ 3000

d) 15 Ones + 9 Tens + 3 Hundreds ◯ 1593

e) 5000 + 30 + 4 ◯ 5034

f) 5000 + 300 + 4 ◯ 5340

6. Fill the blanks with digits 0–9 such that the numbers meet the condition.

a) 7__ __3 < 768__ b) 853__ < 8__3__

c) __2__1 < 5__2__

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Chapter 4.indd 60 3/26/2025 3:44:03 PM

CHALLENGE!

There are 99 numbers strictly between 700 and 800 excluding 700 and 800. How many numbers are there strictly between 7000 and 8000?

Circle the correct answer:

900 999 1000

Let Us Explore

1. Make as many four-digit numbers as possible using the digits 2, 3, 4, 7 without repetition. There are 24 different numbers possible. Find as many as you can and arrange the numbers in decreasing order in your notebook.
2. Compare with your friends to find what other numbers they have made. See if all of you together can come up with all the 24 numbers. How do you know that you have all possible such numbers?

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Chapter 4.indd 61 3/26/2025 3:44:03 PM

Chapter 5

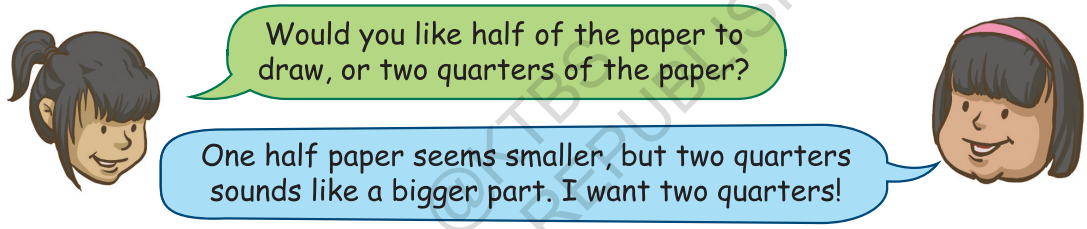
Sharing and Measuring

0433CH05

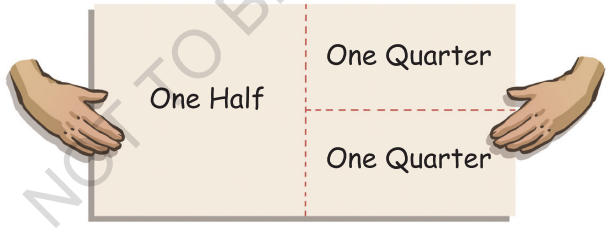


PARTS AND WHOLES

Ikra and her little sister, Samina, decide to make a drawing, but they are left with a single drawing sheet. Ikra wants to share the paper by dividing it in half, but Samina insists on having a bigger part of the paper. Ikra thought for a moment and proposed a solution.



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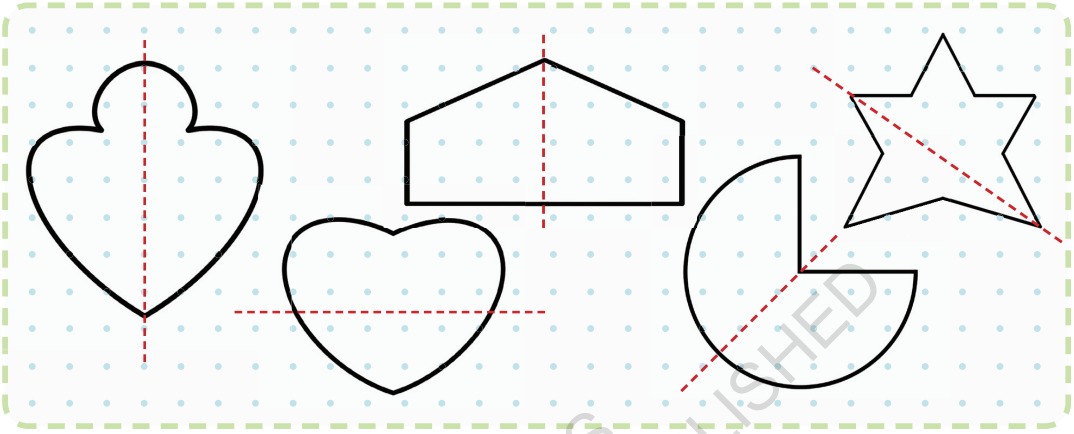


Let Us Discuss

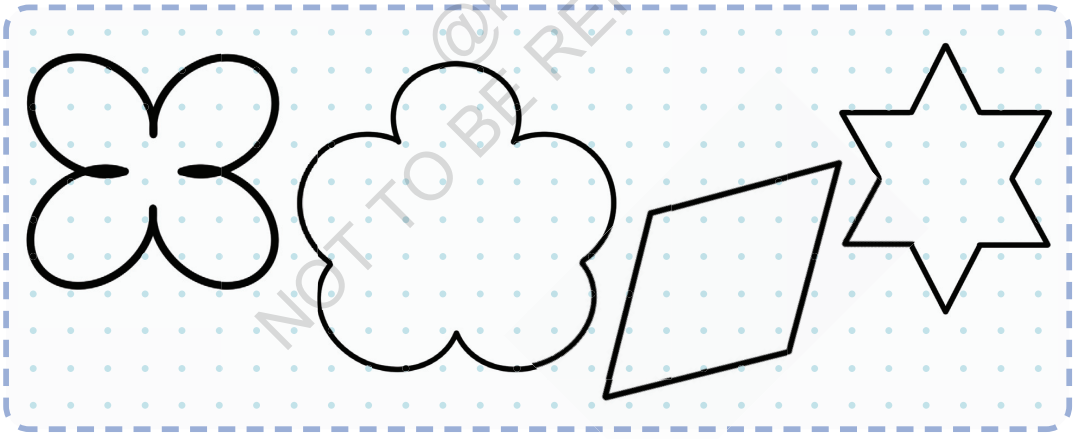
1. Which part of the paper you would have chosen—one half or two quarters? Why?
2. Do you think Ikra shared the paper equally? Why? Try with a paper.
3. How do you know that the paper has been divided equally?
4. Why do you think Samina chose two quarters of the paper?

Let Us Do

1. Samina has divided some figures into two parts. Colour the figures that are divided into halves correctly. How did you get the answer?



2. Divide the shapes into halves by drawing a line.



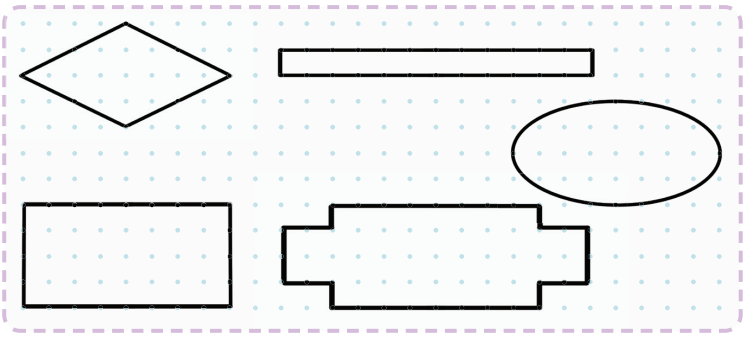


When an object is divided into two equal parts, then each part is called a half. We write half as $\frac{1}{2}$.

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Chapter 5.indd 63 3/25/2025 11:56:08 AM

3. Divide these shapes into 4 equal parts/quarters.



When an object is divided into four equal parts, then each part is called a quarter. We write quarter as $\frac{1}{4}$.

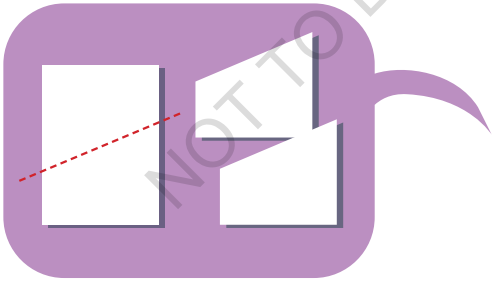


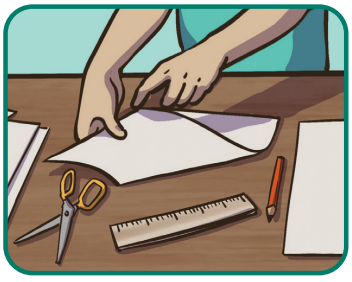
Think: How would we write the fraction for each part if we divided an object into 5 equal parts?

Many Ways to Make Halves and Quarters

Let Us Try

1. In how many different ways can you fold/cut a rectangular paper in two equal parts? Try it with a rectangular paper.





Note for Teachers: Guide students to write fractions using symbols. Begin with examples like $\frac{1}{2}$ and $\frac{1}{4}$. Provide numerous opportunities for practice with other fractions by paper folding and drawing images.

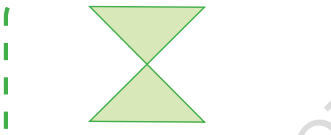


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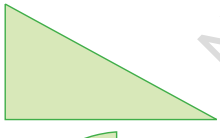
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2. Now try to draw and show five different ways in which we can fold/ cut a rectangle into four equal parts ($\frac{1}{4}$ or quarter).

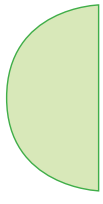
3. Match the following parts with their corresponding wholes.



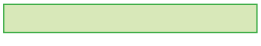
I am $\frac{1}{2}$ of



I am $\frac{1}{2}$ of

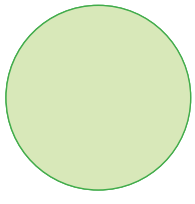


I am $\frac{1}{2}$ of

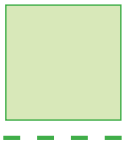


I am $\frac{1}{4}$ of









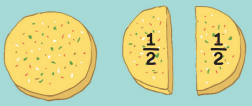
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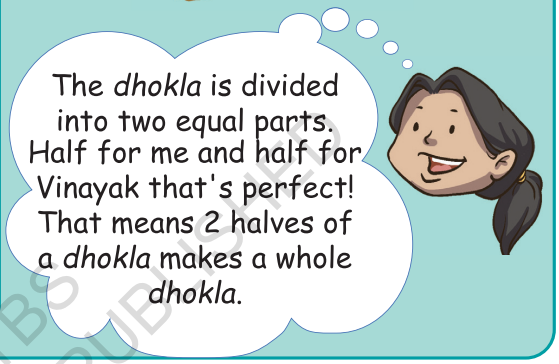
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DING DONG BELL!!

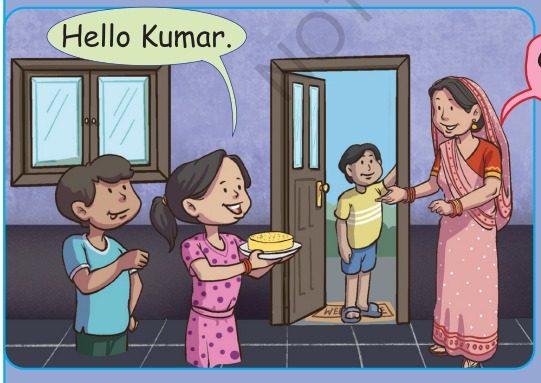
Sumedha's mother made yummy dhokla!



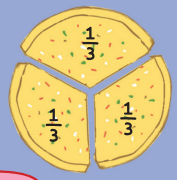


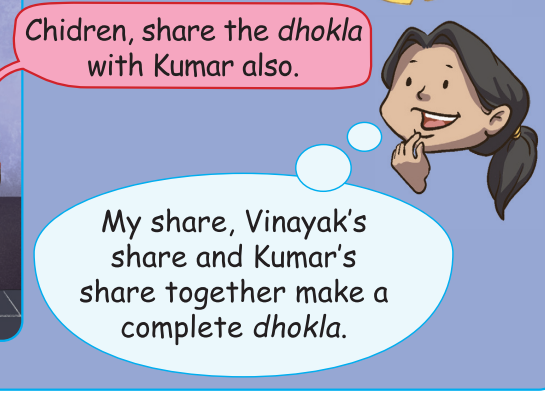


DING DONG! The doorbell rang.









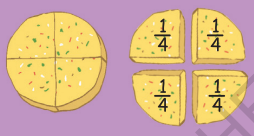
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Chapter 5.indd 66 3/25/2025 11:56:11 AM

DING DONG! Sumedha's cousin Paridhi arrives.



The *dhokla* is divided into four equal parts. Each one of us will get one-fourth of the *dhokla*.





DING DONG! Their neighbour Idha arrives filling the house with happy greetings.



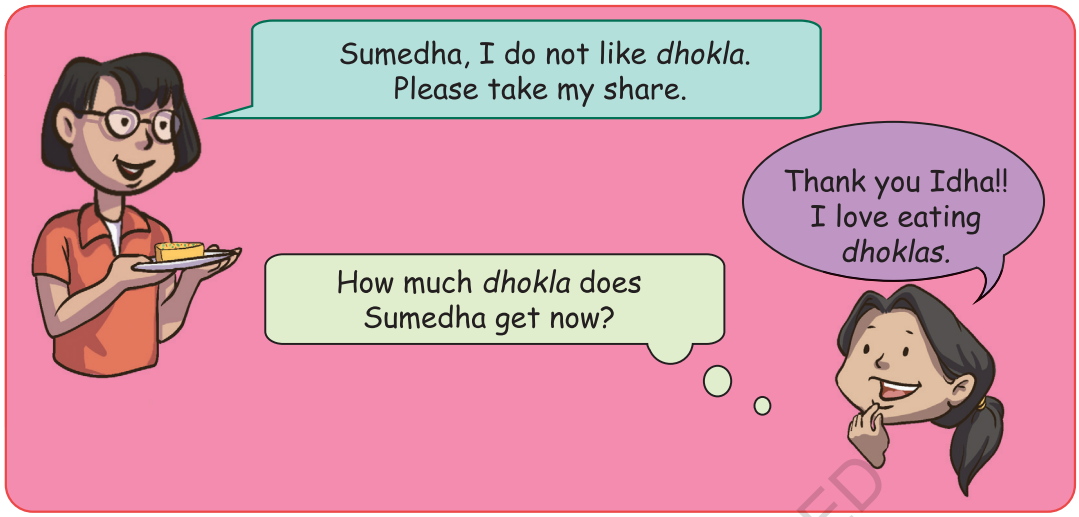
More sharing!!! An even smaller slice for me now. I will get just $\frac{1}{5}$ of my favourite *dhokla*.





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Chapter 5.indd 67 3/25/2025 11:56:13 AM



Let Us Discuss

1. What is Sumedha observing about her share as each guest comes in?
2. In which situation will Sumedha get to eat more *dhokla*: when shared among 9 people or 11 people?
3. How many pieces of $\frac{1}{6}$ would make a complete *dhokla*?
4. What would be Sumedha's share, if Idha and Vinayak both give their share of *dhokla* to her?

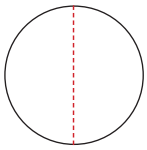
Let Us Do

1. How much *dhokla* would each person get if it was shared equally among 6 people? Try also with 8 people. Who will get the bigger pieces of *dhokla*? Draw and explain.

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Chapter 5.indd 68 3/25/2025 11:56:13 AM

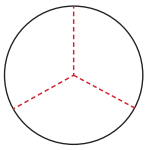
2. Shade a portion of the *dhokla* to represent the fraction Sumedha would get when the *dhokla* is shared equally among the given number of people. Discuss why the fractions get smaller.



2 people

Sumedha's share = $\frac{1}{2}$

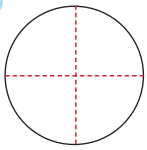
Half



3 people

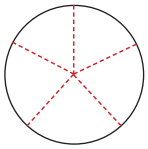
Sumedha's share = $\frac{1}{3}$

One-third



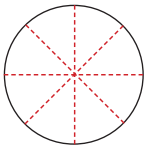
4 people

Sumedha's share =



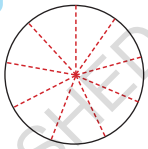
5 people

Sumedha's share =



8 people

Sumedha's share =



9 people

Sumedha's share =

Let Us Discuss

Use the fraction kit given at the end of your textbook and answer the following questions.

1. Share your observations about the different pieces and the whole.
2. Take any two different pieces of the fraction kit and compare them. Discuss which one is smaller and why.
3. Sumedha noticed that when a whole is equally divided in a larger number of parts, each part gets smaller. Do you agree with Sumedha?
4. Sumedha says, "When I join 5 pieces of $\frac{1}{5}$, it makes a whole *dhokla*." Try to do it yourself with your fraction kit.
5. Sumedha says that this part is one-third of the complete whole. Why is she saying so?



Note for Teachers: Narrate the story of *dhokla* using a circular paper to help students understand that sharing among a larger number of people leads to a smaller share for each person.

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Chapter 5.indd 69 03-04-2025 4.57.50 PM

Let us try to fill in the blanks. Both the fractions are parts of the same whole. Use your fraction kit, if necessary. Share your thoughts.

1. _____ is greater than _____ ($\frac{1}{5}$, $\frac{1}{4}$).
2. _____ > _____ ($\frac{1}{9}$, $\frac{1}{6}$).
3. $\frac{1}{6}$ _____ $\frac{1}{8}$.
4. _____ is smaller than _____ (____ , ____).

My Flower Garden

Idha has seeds of 5 different flowering plants—Rose, Mogra, Lily, Marigold, and Jasmine. She decides to plant them equally in her garden as shown in the picture.



I have very few Lily seeds so I will plant Roses in two parts.

Her revised plan is shown here.



Look at the garden and answer the questions.

Mogra in $\frac{1}{5}$ or one-fifth part of the garden.

Marigold in _____ part of the garden.

Jasmine in _____ part of the garden.

Rose in $\frac{1}{5}$ and $\frac{1}{5}$ part or a total of $\frac{2}{5}$ (two-fifths) part of the garden.

Look at the garden and answer the questions.



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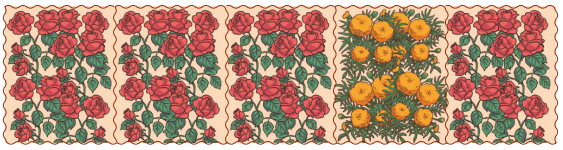
Chapter 5.indd 70 3/25/2025 11:56:14 AM

Mogra in _____ part.

Marigold in _____ part.

Rose in $\frac{1}{5} + \frac{1}{5} + \frac{1}{5}$ part or a total of $\frac{3}{5}$ (three-fifths) part.

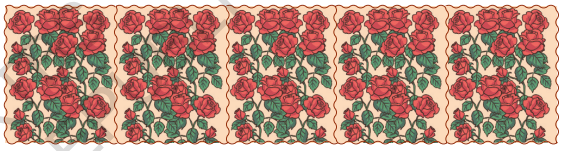
Look at the garden and answer the questions.



Marigold in _____ part.

Rose in $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5}$ or a total of $\frac{4}{5}$ (four-fifths) part.

Rose in $\frac{5}{5}$ part or the complete garden.



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Let Us Do

Make a flower garden with seven flowering seeds—Mogra, Marigold, Jasmine, Rose, Lily, Hibiscus, and Periwinkle?



Mogra

a) Marigold in one-seventh ($\frac{1}{7}$) and Rose and Hibiscus in three-sevenths ($\frac{3}{7}$) part each.



Rose



Marigold

b) Lily in three-sevenths ($\frac{3}{7}$), Marigold in two-sevenths ($\frac{2}{7}$) and Periwinkle in another two-sevenths ($\frac{2}{7}$).



Lily



Jasmine

c) Mogra in five-sevenths ($\frac{5}{7}$) part and Hibiscus in two-sevenths ($\frac{2}{7}$).



Hibiscus



Periwinkle

DREAM DOSA DESIGNER!!

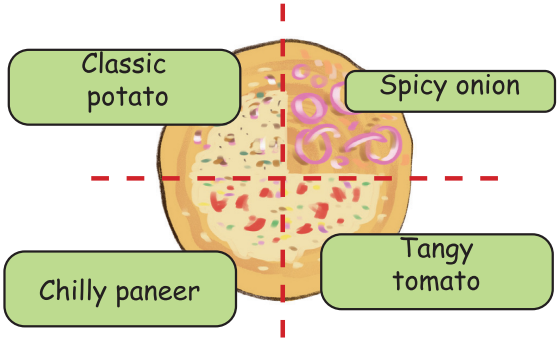


Karan makes dosas differently. He makes dosas based on the customer's choice with various toppings on a single dosa. Customers can choose from the following toppings:

1. Classic potato
2. Spicy onion
3. Chilly paneer
4. Tangy tomato

Help Karan in making these special dosas.

Flavour of Dosa	Part of the Dosa
Classic potato	$\frac{1}{4}$
Spicy onion	$\frac{1}{4}$
Chilly paneer	$\frac{1}{4}$
Tangy tomato	$\frac{1}{4}$

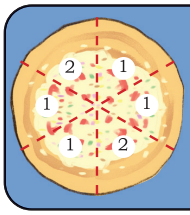


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Chapter 5.indd 72 3/25/2025 11:56:17 AM

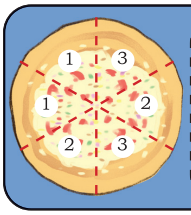
Do It Yourself

Write the fractions for each of the toppings in the following dosas.



1) Chilli paneer =

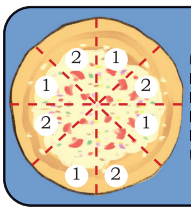
2) Classic potato =



1) Tangy tomato =

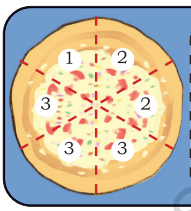
2) Classic potato =

3) Spicy onion =



1) Spicy onion =

2) Tangy tomato =



1) Tangy tomato =

2) Classic potato =

3) Spicy onion =

Now you can make different dosas based on demand.

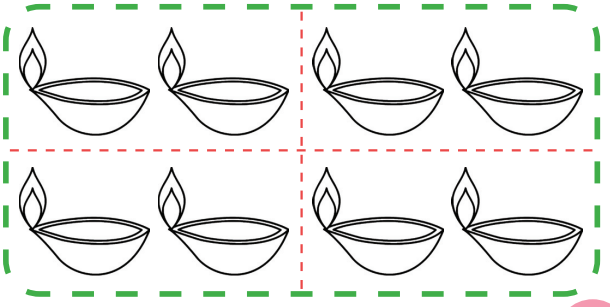
Make a dosa with $\frac{2}{3}$ topping of Spicy onion, $\frac{1}{3}$ of Classic potato.

Make a dosa with $\frac{3}{8}$ of Classic potato, $\frac{1}{8}$ of Chilly paneer and $\frac{4}{8}$ of Tangy tomato mix.

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Let Us Explore

Meena has 8 diyas. Colour $\frac{1}{4}$ of her diyas red. To find $\frac{1}{4}$, let us divide the number of diyas into 4 equal parts. Can you see how to divide the diyas into 4 equal parts? Now colour 2 diyas red.



Chapter 5.indd 73 3/25/2025 11:56:18 AM

Let Us Do

Now let us try to find fractions for the situations given below. Circle the appropriate parts in the pictures.

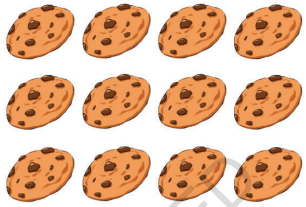
1. There are 12 cookies. What fraction of cookies will each get if the number of children are as follows:

   a) 3 children

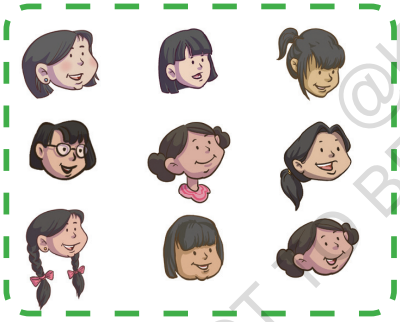
   b) 6 children

   c) 2 children

   d) 4 children



5. Simran calls her school friends for her birthday party. $\frac{1}{3}$ of her friends receive a hairband as their return gift. Place hairbands on $\frac{1}{3}$ of her friends.





6. Draw flowers in $\frac{1}{5}$ of the given number of pots.



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Chapter 5.indd 74 3/25/2025 11:56:20 AM

Let Us Find Fractions in Our Surroundings

Kadamba is excited to know where we use fractions in daily life. She found some examples below. Help her find more examples and try to draw the images of the same in your notebook.

1. Yesterday Mummy asked to divide a box of *barfis*  into four equal parts. There are 16 *barfis* in the box. Draw a picture of 16 *barfis* and find $\frac{1}{4}$ of the whole. How many *barfis* are in each part?

2. Rohan has a piece of ribbon to decorate his notebook. Mohan's ribbon is one-fourth as long as Rohan's ribbon. How long will Rohan's ribbon be? Draw it.

   Mohan's Ribbon

Try Yourself

Observe your surroundings and think of situations where we use fractions and write any two of them in the space provided below.

1. _____

   _____

   _____

2. _____

   _____

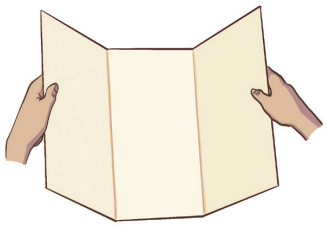
   _____

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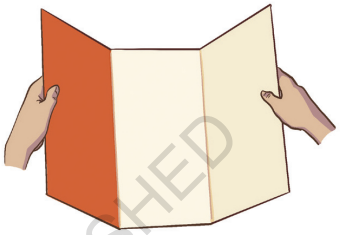
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Let Us Do

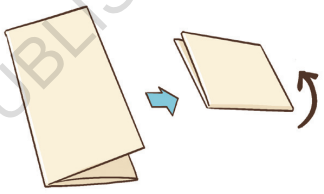
1. Take a rectangular piece of paper and fold the paper into three equal parts and then unfold it.



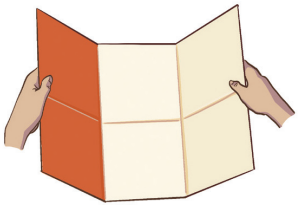
2. Colour one of the three equal parts as shown in the image.



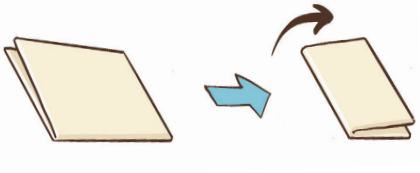
3. Fold the paper back into three equal parts like before, and then fold it in half.



4. Observe the colored part. What is the fraction for the shaded part now? What does this mean?

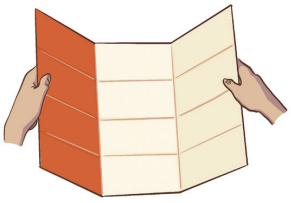


5. Fold the paper again and check how the coloured part changes.



6. Write down what fraction you observe after each fold.

$\frac{1}{3} = \frac{2}{6} =$ ____ $=$ ____ $=$ ____



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Let Us Try

Take another piece of paper and try the same starting with two equal parts, and halving every time. Share the findings with your friends.

$\frac{1}{2} = \frac{2}{4} =$ _____ = _____ = _____

Let Us Discuss

Observe the fraction chart and discuss the following questions. You may use your fraction kit also to explore the answers.

1. How many $\frac{1}{4}$s are equal to $\frac{1}{2}$?

   _____

2. Is $\frac{2}{3}$ less than or greater than $\frac{1}{2}$?

   _____

3. Ten pieces of $\frac{1}{10}$ make a complete whole. Is this statement true?

   _____

4. Three pieces of $\frac{1}{6}$ are equal to two pieces of $\frac{1}{8}$. Is this true?

   _____

5. How many pieces of $\frac{1}{8}$ make $\frac{1}{4}$?

   _____

1									
$\frac{1}{2}$					$\frac{1}{2}$				
$\frac{1}{3}$			$\frac{1}{3}$			$\frac{1}{3}$			
$\frac{1}{4}$		$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$	
$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$	
$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$	
$\frac{1}{7}$		$\frac{1}{7}$		$\frac{1}{7}$		$\frac{1}{7}$		$\frac{1}{7}$	
$\frac{1}{8}$		$\frac{1}{8}$		$\frac{1}{8}$		$\frac{1}{8}$		$\frac{1}{8}$	
$\frac{1}{9}$		$\frac{1}{9}$		$\frac{1}{9}$		$\frac{1}{9}$		$\frac{1}{9}$	
$\frac{1}{10}$		$\frac{1}{10}$		$\frac{1}{10}$		$\frac{1}{10}$		$\frac{1}{10}$	

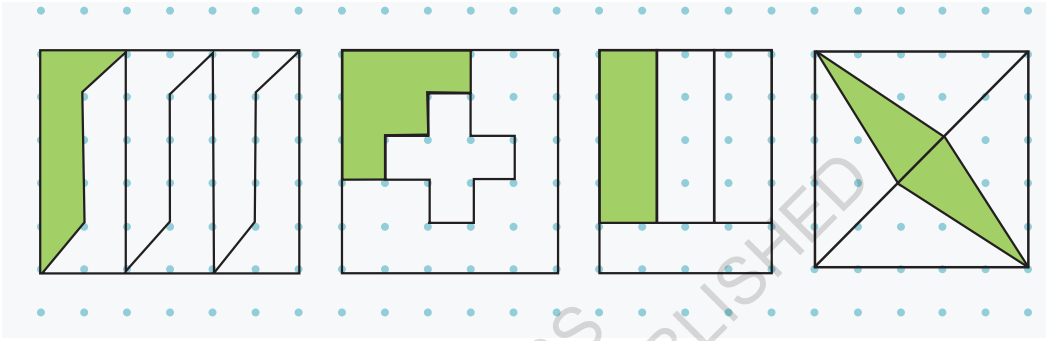
6. Find the pieces that you can put together to make another bigger piece.

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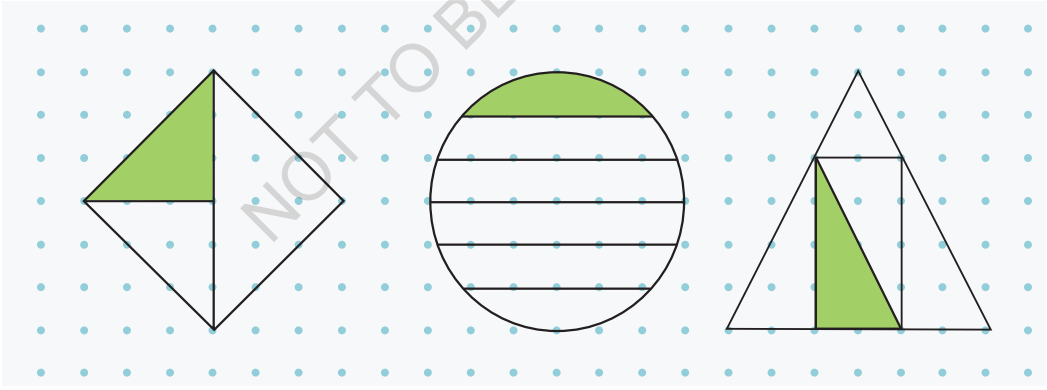
Chapter 5.indd 77 3/25/2025 11:56:22 AM

Let Us Do

1. Bablu is playing with square shapes. He wants to cut them in such a way that each piece is equal in size. Circle the squares which have been cut into equal parts. Write the fraction for the shaded part, whenever possible.



2. Check if the children's claim below about the shaded parts of each of the pictures is correct. Circle the ones which you think are correct, cross out the ones which are not correct. You can draw additional lines to make the parts equal. Discuss your thinking.



Ameena says: $\frac{1}{3}$

Kishore says: $\frac{1}{4}$

Perry says: $\frac{1}{6}$

Kunj says: $\frac{1}{3}$

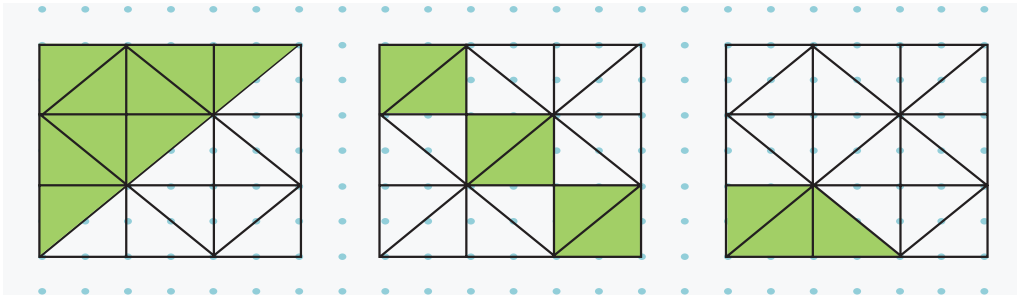
Balu says: $\frac{1}{5}$

Gita says: $\frac{1}{4}$

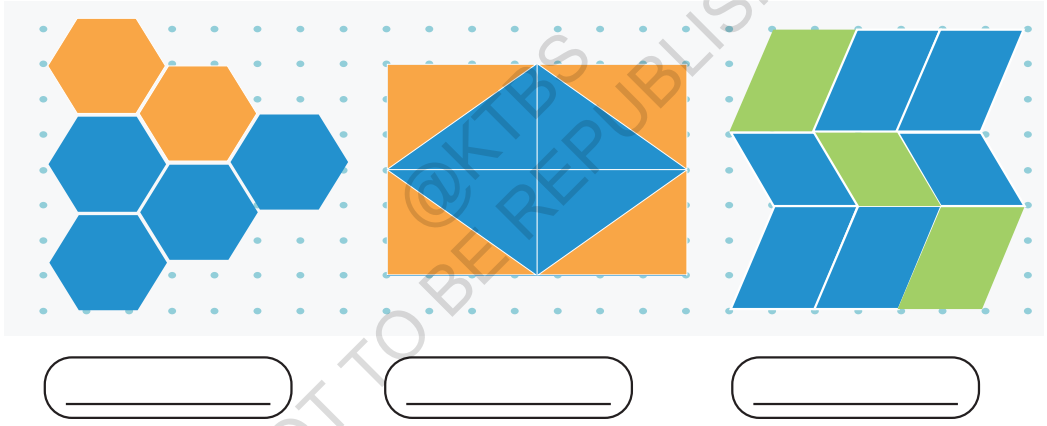
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Chapter 5.indd 78 3/25/2025 11:56:22 AM

3. Identify the fractions represented by the coloured parts in the given pictures.

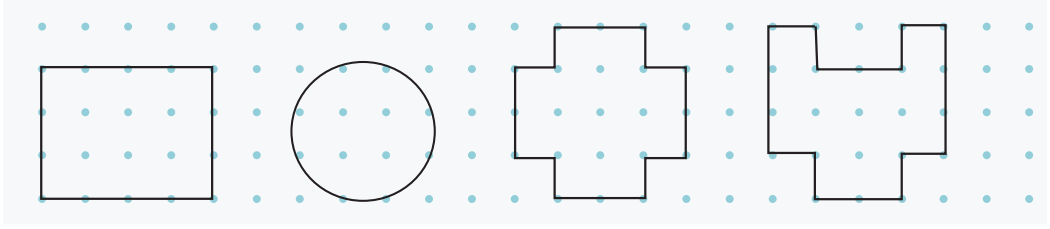


4. Identify the fraction of the whole that the blue parts make in each of the pictures given below.



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5. Divide the following into equal parts and shade the appropriate parts in each.



Shade $\frac{2}{3}$

Shade $\frac{4}{6}$

Shade $\frac{1}{4}$

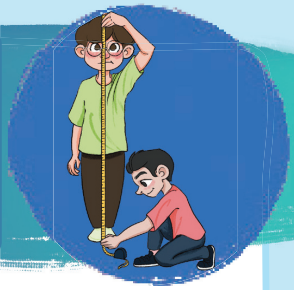
Can you also show $\frac{1}{8}$?

Shade $\frac{3}{4}$

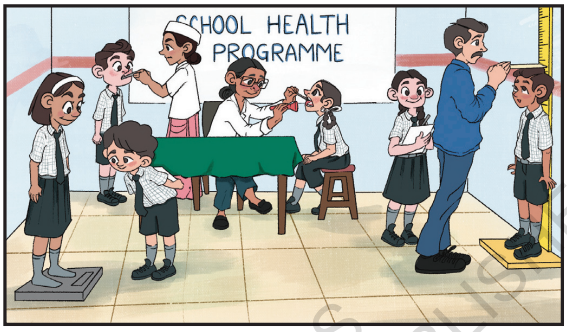
Chapter 6

Measuring Length

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Let Us Observe



1. Look at the picture. What are the students measuring? Put a tick mark (✓) if you find it being measured.

   a) Length ☐ c) Weight ☐ e) Breadth ☐

   b) Height ☐ d) Depth ☐ f) Temperature ☐

2. What is being used to measure the height? What other tools can be used to measure height?

3. Recall in Grade 3 you studied that lengths are measured in metres. Check and fill in the blanks whether the following are correct/incorrect for your classroom.

   a) The height of most of the students in my grade is more than a metre. _____

   b) The length of my arm is less than a metre. _____

   c) The height of the door of the grade is less than a metre. _____

   d) The breadth of the blackboard is more than a metre._____

Note for Teachers: The words tall, wide, short and long are used in daily life. Discuss with students that height, width, depth, breadth all refer to length measurement. These words are used depending on different situations and orientation. At this point students only need to understand that all these words denote length.

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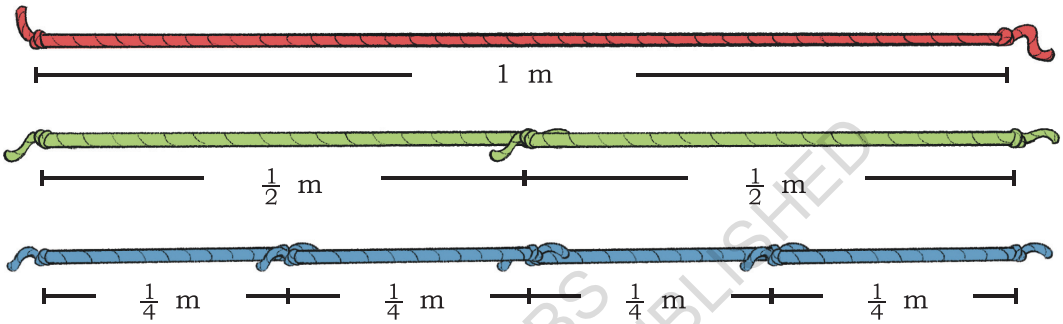
Measuring is Fun

Remember we made,

1 metre (m),

half metre ($\frac{1}{2}$ m), and

quarter metre ($\frac{1}{4}$ m) ropes. Let us make them again.



Do you notice 1 m = $\frac{1}{2}$ m + $\frac{1}{2}$ m and 1 m = $\frac{1}{4}$ m + $\frac{1}{4}$ + $\frac{1}{4}$ m + $\frac{1}{4}$ m and $\frac{1}{2}$ m = $\frac{1}{4}$ m + $\frac{1}{4}$ m.

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Let Us Do

Use your ropes to carry out the following activities. You can use a combination of ropes, if needed.

1. Walk, Jump, and Crawl on 1, 5 and 10 m line

Draw lines of 1 m, 5 m, and 10 m on the floor of the classroom or outside in the playground.

How will you make these lines? Think and share with your friends. Walk, jump, and crawl on the lines.

Note for Teachers: Making the lines by repeatedly using *metre* rope and walking, jumping and crawling on the lines will help students develop an estimate of how big 5 m and 10 m is. They will be able to use this experience to estimate and compare other lengths in their surroundings.

Chapter 6.indd 81 3/25/2025 11:57:17 AM

2. Long Jump

Each child can participate in a long jump competition. How far have your friends jumped? Measure as accurately as possible using a combination of ropes. Who jumped the longest distance?

Fill the following table.



Name of the student	Estimated length of the jump			Actual measurement
	Less than 1 m	1 m	More than 1 m	

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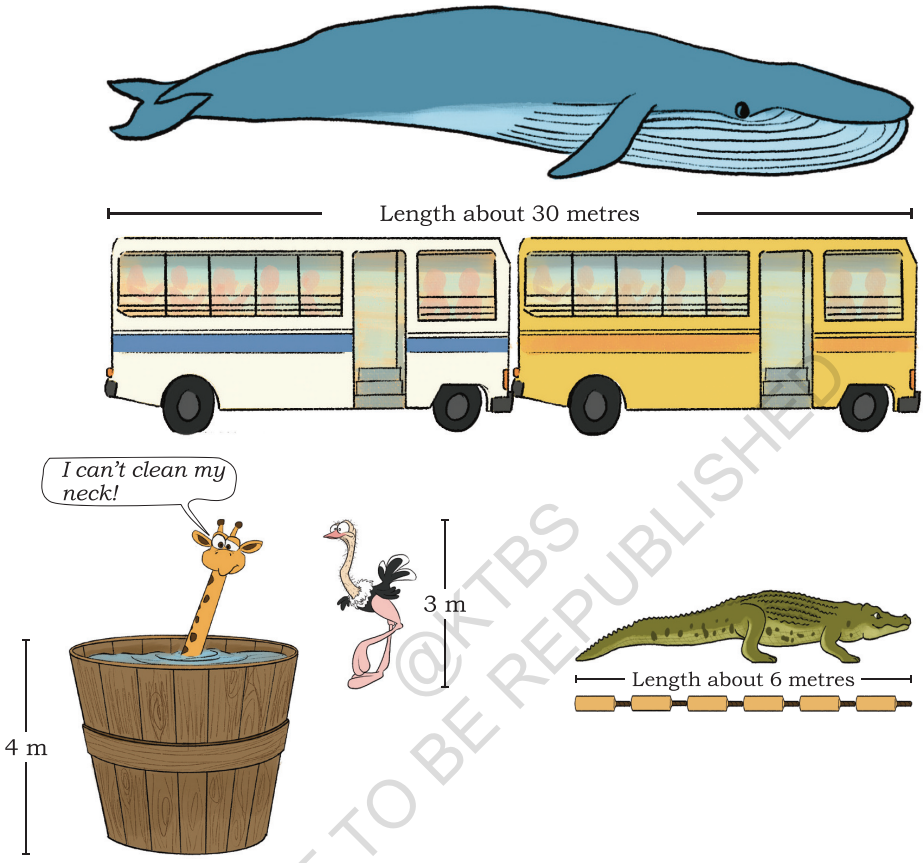
3. Estimate how long and broad is your classroom. Measure and check.



Note for Teachers: Allow children to measure 100 m using their footstpes and note how many footsteps fit in 100 m. This can be used for further estimations.

Chapter 6.indd 82 03-04-2025 4.59.01 PM

Let Us Think: Guess the Length



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Look at the pictures carefully and answer the questions.

1. What is the length of one bus in metres? What is the length of one cricket bat in metres?
2. How many buses would be equal to the length of two blue whales?
3. How many cricket bats will be needed to measure one whale?
4. If two ostriches stand one above another, their height will be equal to the height of _____.
5. How many crocodiles will be equal to the length of a blue whale?

Chapter 6.indd 83 3/25/2025 11:57:18 AM

Measuring Small Things



Can you think how to measure a small thing like an eraser or a rice grain?



We need a smaller unit to measure such small items. Observe a standard metre scale. You can see the scale is divided into 100 equal parts.

The length of each one of these parts has a special name called **Centimetre (cm).**



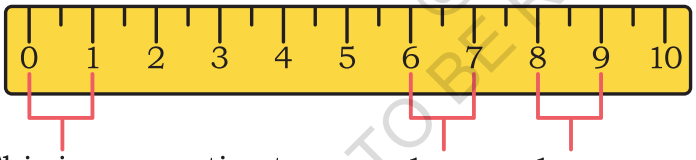
Let Us Observe



Chutki wants to keep track of the increase in height of her plant.

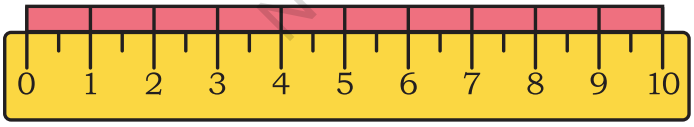
Compare the metre rope with the measuring tape used by a tailor. Is the length of both the same or different?

Observe the measuring tape carefully. What do you notice?



This is one centimetre. 1 cm 1 cm

Discuss how these marks help us measure clearly.



The length of each red bar  is 1 cm.

The red bar is repeated 10 times to make 10 cm. When we repeat the length of the red bar 100 times, we will get 1 metre scale/tape.

1 metre (m) = 100 centimetre (cm)

$\frac{1}{2}$ m = _____ cm, $\frac{1}{4}$ m = _____ cm

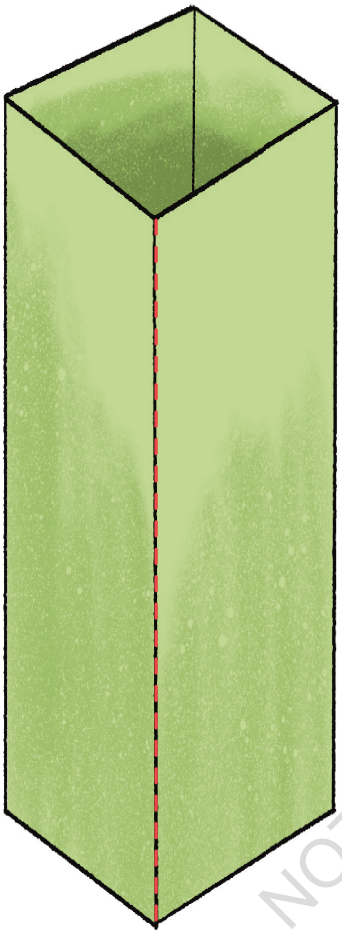
Now use the measuring tape/scale to see how tall your plants grow every week.

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Chapter 6.indd 84 3/25/2025 11:57:19 AM

Let Us Do

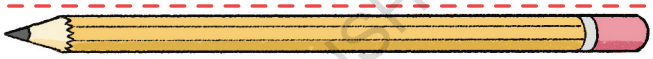
1. Measure each object using a scale.



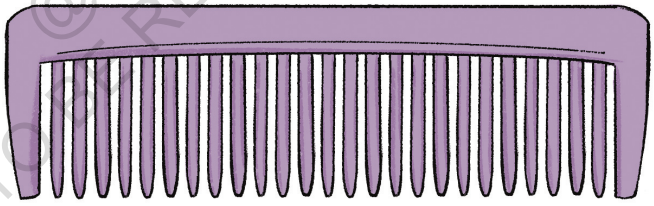
_____ cm



_____ cm



_____ cm



_____ cm

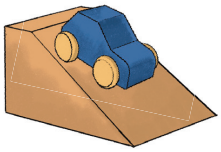
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Write the names of the objects in increasing order of length.

2. Estimate the lengths of the following and compare your responses with your friends, in the grade . Write some examples of things that can be lesser than or equal to 1 cm in length. Verify by measuring.

Length of items	Equal to 1 cm	More than 1 cm	Less than 1 cm	Actual measurement
A fingernail				
An eraser				
An ant				
A grain of wheat				
A rajma seed				

3. Take three toy cars and find out how far each one can go. You can use a small wooden ramp, or you might like to make a ramp using any material that you have.



Measure the distance each of your cars travels using measuring tape and write the answers in cm.

Car	Distance from the ramp	Rank
Car 1	_____ cm	
Car 2	_____ cm	
Car 3	_____ cm	

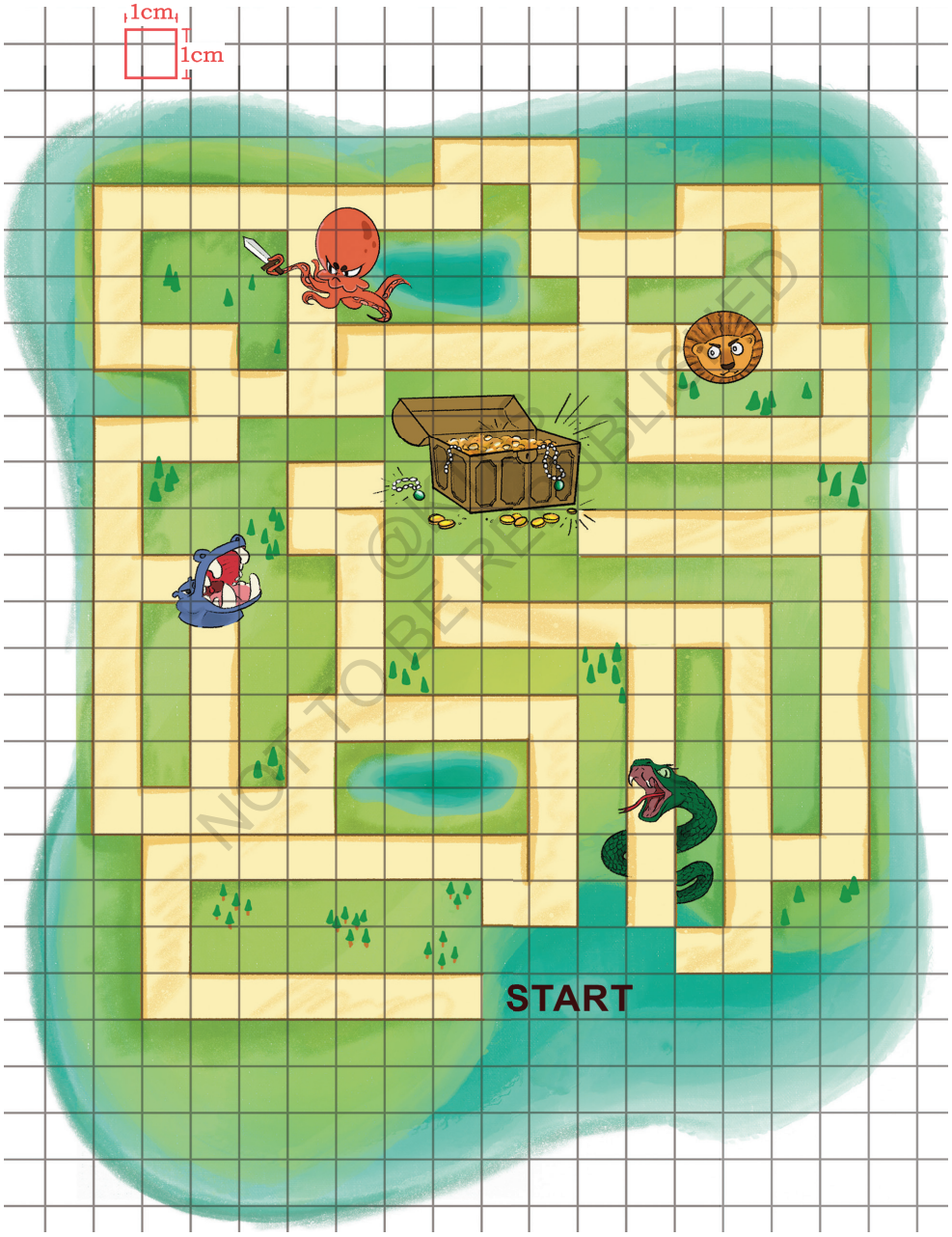
Note for Teachers: Get a one metre measuring scale or measuring tape for the students to observe. Make students observe the marks and the numbers written on the tape. Discuss what 100 denotes on the tape. Students often assume it is the number of marks on the tape. Highlight that the distance between two marks is one centimetre (1 cm) and one metre is divided into 100 such 1 cm distances. After students have made such observations, children can use the measuring tape/scale to measure small lengths.



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Chapter 6.indd 86 3/25/2025 11:57:20 AM

4. Find the longest and the shortest route in this treasure hunt. You can go around the obstacles but cannot jump over them. You can only walk on the yellow tiles and not on the grass. Can you find the length of your route in centimetres? Look for the 1 cm clue in the map.

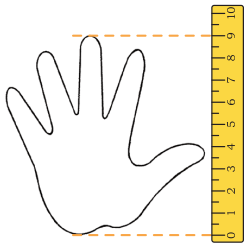


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87

Chapter 6.indd 87 3/25/2025 11:57:21 AM

5. Trace your hand on a piece of paper. Measure it using the scale.



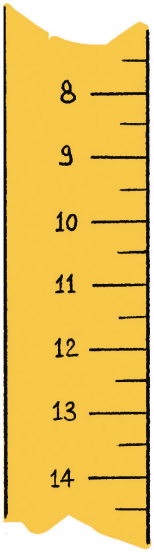
Length of my hand = _____ cm

6. Use your hand to estimate the measurement of any object. Convert into centimetres. Verify using the scale.

Object	Number of hands	Estimate using hand	Actual measure using the cm scale
1. Length of my textbook		_____ cm	_____ cm
2. Height of my chair		_____ cm	_____ cm
3. Width of my desk		_____ cm	_____ cm
4. Height of a flowerpot		_____ cm	_____ cm

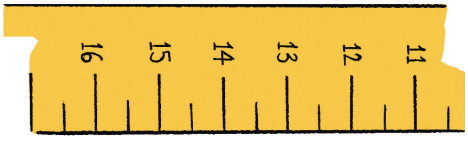
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7. Ashwin's scale is broken. Can you help him to measure using this scale?





_____ cm

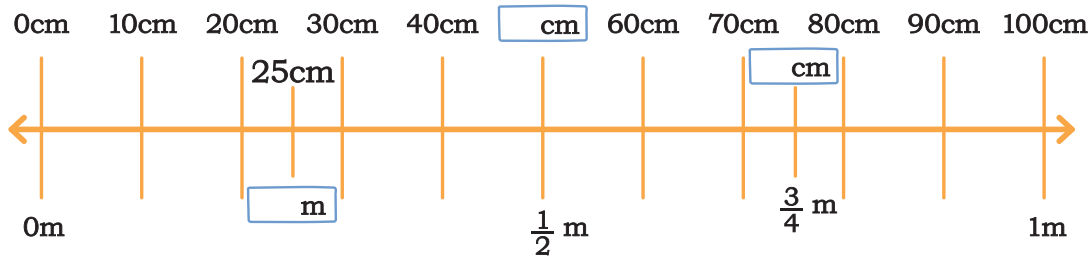




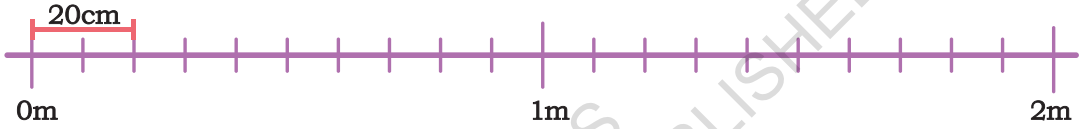
_____ cm

Chapter 6.indd 88 3/25/2025 11:57:22 AM

8. Fill the blanks on the number line below appropriately.



9. The length of a board is 2 metres. Sonu has a decorative border sticker which is 20 cm long. How many such stickers are needed to cover the length of the board completely?



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Metre and Centimetres

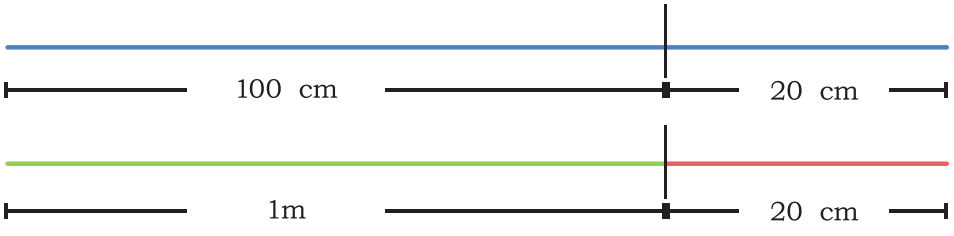


Ramu and Shamu are using a measuring tape to measure their own height.

Ramu reads his height from the tape as 120 cm and Shamu reads it as 1 m 20 cm.

Who is correct?

Pinki says both are correct and draws this.



Chapter 6.indd 89 03-04-2025 4.59.23 PM

Let Us Do

1. The Village Sarpanch got the depth of some wells in his village measured by two different people.

   a) Fill the blanks such that the depths are the same.

      i) 2 m = 200 cm

      ii) _ m = 400 cm

      iii) 6 m = ____cm

      iv) _ m = 800m

   b) Identify the wells with the same depth and match them.

1 m 40 cm	550 cm
4 m 60 cm	140 cm
2 m 30 cm	460 cm
5 m 50 cm	230 cm

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Let Us Explore

Activity: Students will measure their height using a measuring tape. Make a table in your notebook and complete it.

Name of the Student	Height in cm	Height in m

Chapter 6.indd 90 3/25/2025 11:57:22 AM

Answer the following questions.

1. Height of the tallest child is _____.
2. Height of the shortest child is _____.
3. Number of children who are more than 1 m tall _____.
4. Number of children who are shorter than 1 m _____.

Fencing and Lacing

The length of the boundary of an object or shape is called perimeter.

Bhola is making a boundary with bricks for his vegetable garden. Colour the bricks on the boundary. How many bricks will he need to make the boundary?



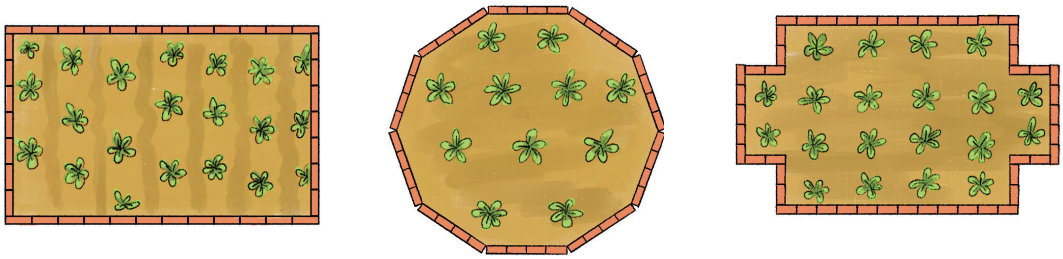
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Note for Teachers: Help children understand that perimeter is the length of the boundary of a closed figure that can be measured using various non-formal units, such as footsteps, thumbprints, and block printing. Such measures are generally approximate but measuring using formal units with a scale or measuring tape would be more accurate.

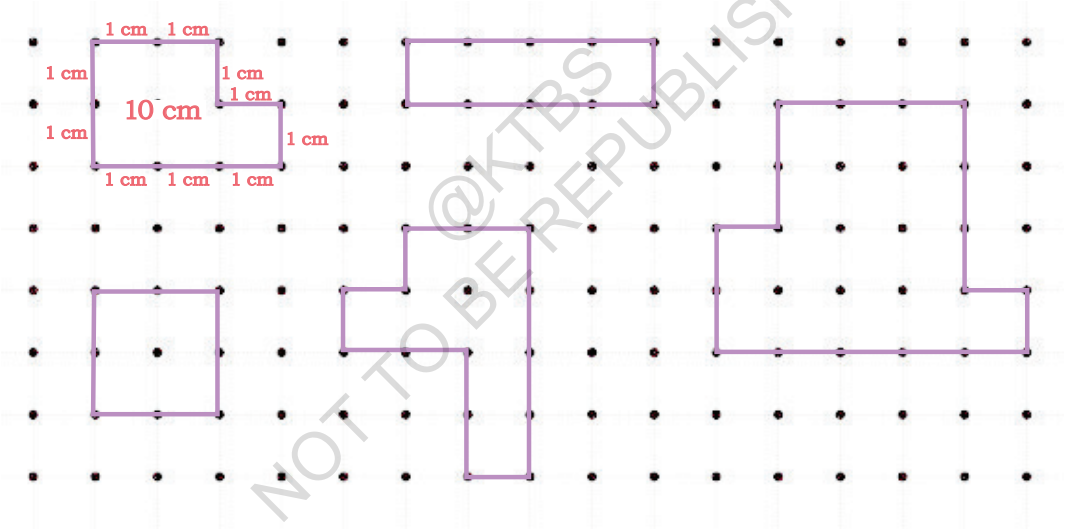
Chapter 6.indd 91 3/25/2025 11:57:23 AM

Let Us Do

1. Bhola made the boundary of his gardens in the following ways. Circle the boundary that is longest.



2. Let us find the perimeter of some shapes using the dot grid. One is done for you.



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a) Colour the boundary with the longest length in blue.

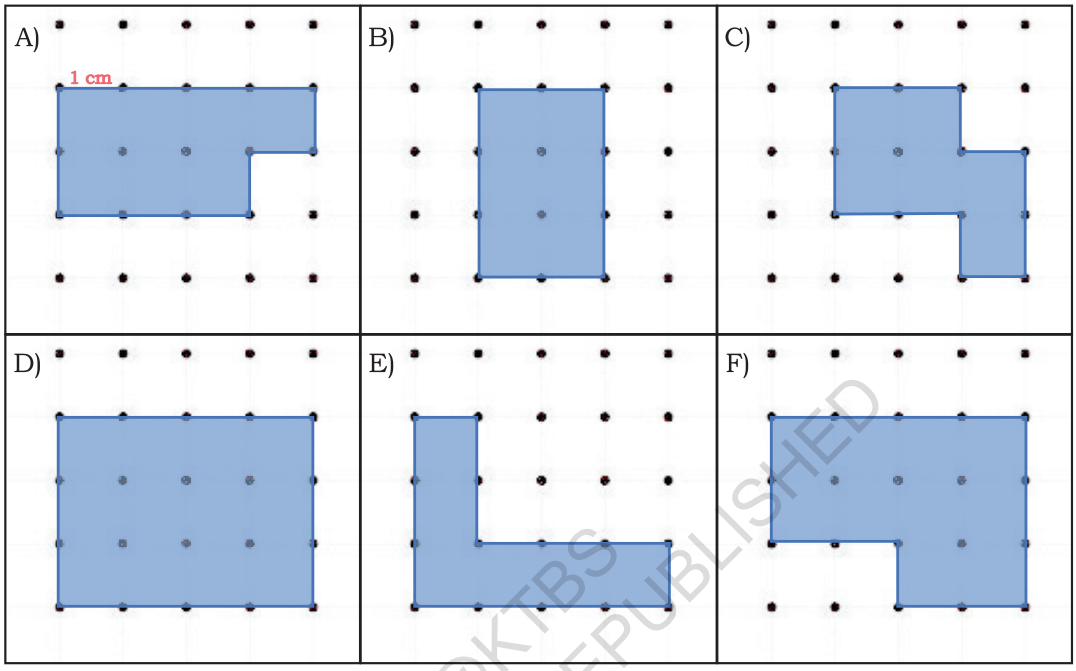
b) Colour the boundary with the shortest length in green.

c) Tick the shapes with the same length.

Note for Teachers: Help children see the perimeter as length or distance around a shape. Let them understand how dot grids of 1 cm help measure perimeter.

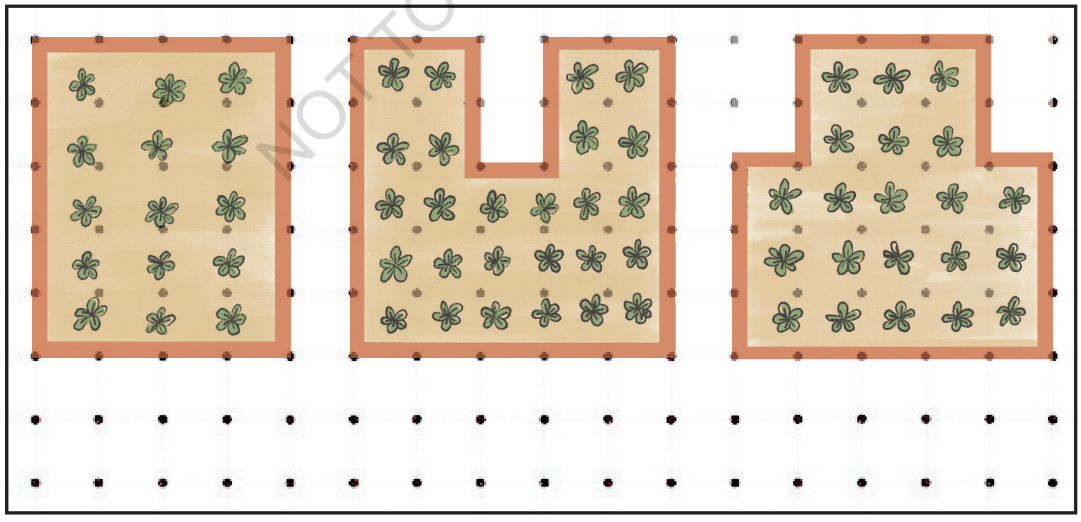
Chapter 6.indd 92 3/25/2025 11:57:23 AM

3. Do any of the following shapes have the same perimeter? Tick them.



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4. Tick the garden with the minimum perimeter.



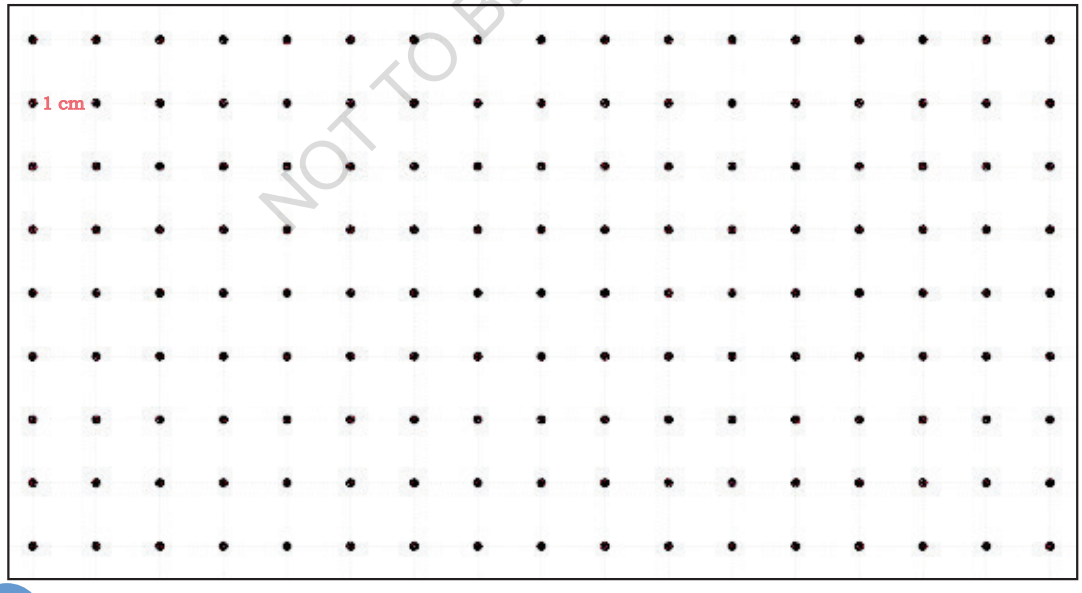
Chapter 6.indd 93 3/25/2025 11:57:23 AM

5. Estimate and measure the perimeters of shapes around you using a scale and write them in the space given below.

S. No.	Object	Estimated perimeter in cm/m	Actual measure in cm/m
1.	Desk		
2.	Blackboard		
3.	Classroom floor		
4.			
5.			
6.			

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6. Draw three different shapes with perimeter of 20 cm.



Chapter 6.indd 94 3/25/2025 11:57:24 AM

Chapter 7

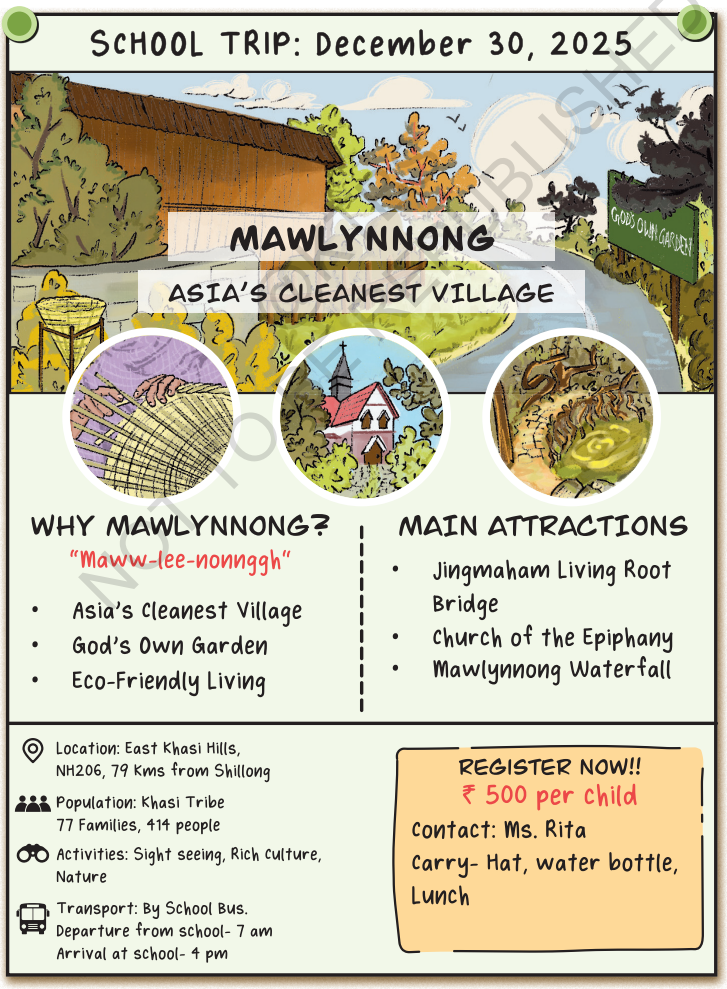
The Cleanest Village

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My School Trip

Daisy and Lou study in Grade 4 in Shillong, Meghalaya. The school has circulated the following poster for a field trip.

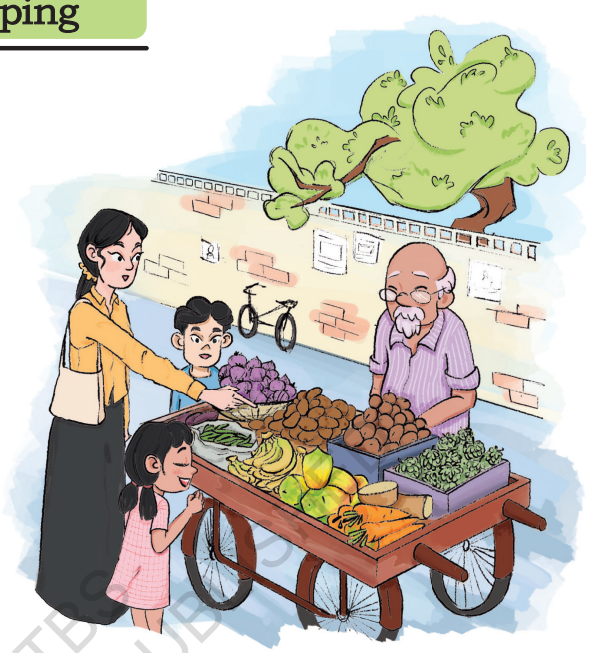


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Daisy and Lou Go Shopping

Daisy and Lou are very excited about their trip. They join their mother in the weekly shopping as they need to buy things for their trip. The family makes a list of things to buy:

- Fruits and vegetables
- Field Trip Items-Biscuits, Water Bottles, and Dry Fruits.



Sapan Dada has a cart for selling vegetables and fruits. The prices of the vegetables and fruits are given below.

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	Cost for 1 kg
Custard apple:	₹45
Beans:	₹95
Radish:	₹23
Onion:	₹32
Potato:	₹37
Yam:	₹45
Sapota:	₹70
Papaya:	₹65
Banana:	₹55

Sapan Dada asks Daisy and Lou to find the costs of different quantities of fruits and vegetables. Help them to complete the tasks. You may use a number line, play money or any other method to calculate.

Chapter 7.indd 96 3/26/2025 12:43:56 PM

2 kg of beans

_____

1 kg of custard apple and 1 kg of sapota

_____

1 kg of onion and 1 kg of potato

_____

1 kg of radish and 1 kg of yam

_____

2 kg of radish and 2 kg of papaya

_____

2 kg of onion and 2 kg of potato

_____

What do you notice about these two costs?

Their mother buys things for ₹ 163. What might she have bought? There is more than one possibility.

_____

_____

₹ 163

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Udaya Didi runs a store selling rice, atta, daal, and spices. Daisy and Lou help Udaya Didi return the balance to customers while their mother buys the groceries. Udaya Didi also asks them some tricky questions.



Help them find the missing numbers in each of the following. Use a number line, play money or any other way to find the balances.

Chapter 7.indd 97 3/26/2025 12:43:56 PM

Cost -	₹113
Paid -	₹150
Balance -	₹37

Cost -	₹185
Paid -	₹200
Balance -	

Cost -	
Paid -	₹200
Balance -	0

Cost -	₹435
Paid -	₹500
Balance -	

Cost -	₹149
Paid -	₹500
Balance -	

Cost -	₹46
Paid -	
Balance -	

Cost -	
Paid -	₹200
Balance -	₹75

Cost -	₹580
Paid -	
Balance -	₹120

Cost -	
Paid -	
Balance -	



Lou and Daisy buy 3 kg bananas to eat on the way with their friends. Which of the following options can they use to buy the bananas?

(a)



(b)



(c)



(d)



(e)

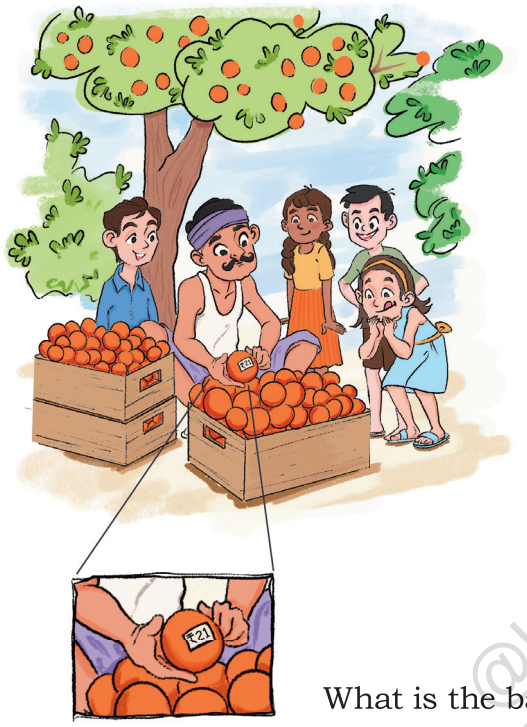


Note for Teachers: Encourage students to share their approaches and discuss them with the grade . Guide them to use flexible approaches to solve above problems.

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Chapter 7.indd 98 3/26/2025 12:43:56 PM

A Strange Puzzle!



Four naughty kids on a walk
come across a fresh orange crop.
They ask the farmer the price of one.
The farmer says, "Each costs ₹21".

Two oranges each they buy.
The farmer gives them with a sigh.
They all reach in to their jackets,
To take out notes from their pockets.

Each one pays a different note,
Krishna a ₹50 and Sudama a ₹100
Mala a ₹200 and Neela a ₹500.

What is the balance that they each got?

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Krishna

Paid: ₹ _____

Balance: ₹ _____

Sudama

Paid: ₹ _____

Balance: ₹ _____

Mala

Paid: ₹_____

Balance: ₹_____

Neela

Paid: ₹_____

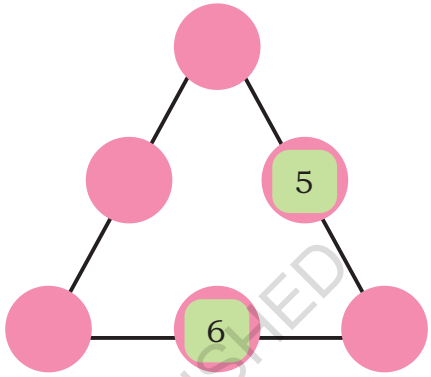
Balance: ₹_____

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Let Us Play

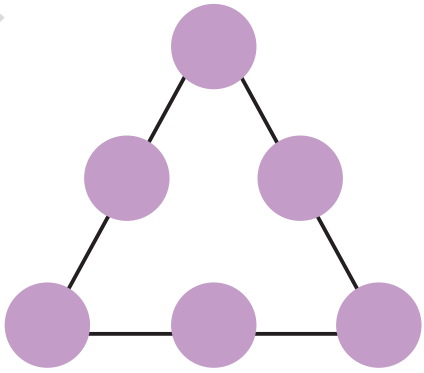
Place the numbers 1–6 in the blanks in such a way that the sum on each side of the triangle is 9. No numbers should be repeated.

1 2 3 4



Use the same numbers 1–6 and make the sum 10 on each side of the triangle.

1 2 3
4 5 6



What other sums can you make with these 6 numbers?

Can you make 12 on each side? Can you make 13?

What strategy did you use to place the numbers?

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Chapter 7.indd 100 3/26/2025 12:43:57 PM

Add Up



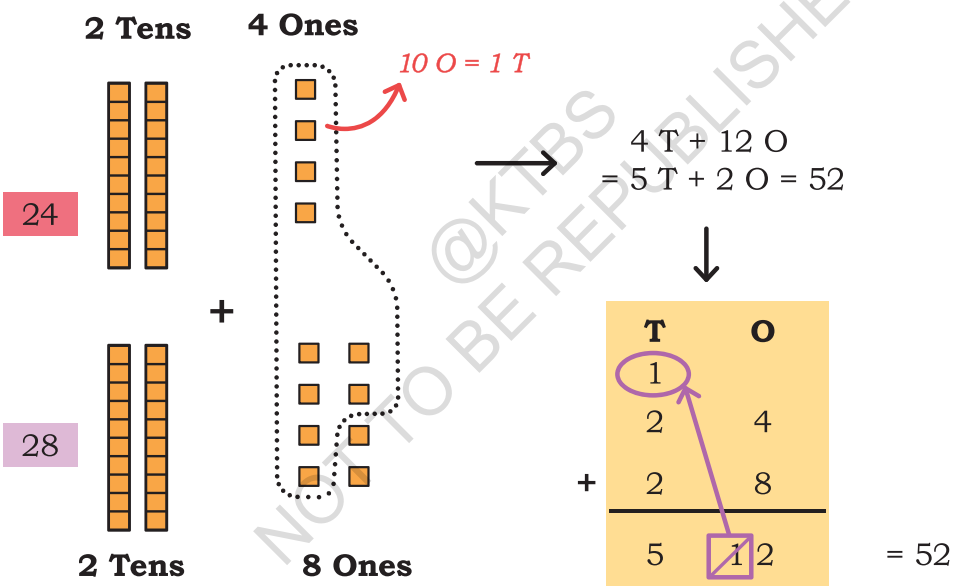
Daisy and Lou leave for the field trip by a bus the next morning. 24 teachers and 438 children are going from their school. 476 children from a neighbourhood school along with 28 teachers are also going to the same village.

Estimate the number of teachers going.

_____

How many teachers are accompanying the children?

24 + 28



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There are 52 teachers accompanying the children.

Note for Teachers: It is not enough to rely on key words like 'left', 'total', 'more', 'less' for solving word problems. Instead, we suggest that teachers get children to draw pictures for what they understand from the question. Some suggestions for the types of word problems and their pictures are given at the end of the book.

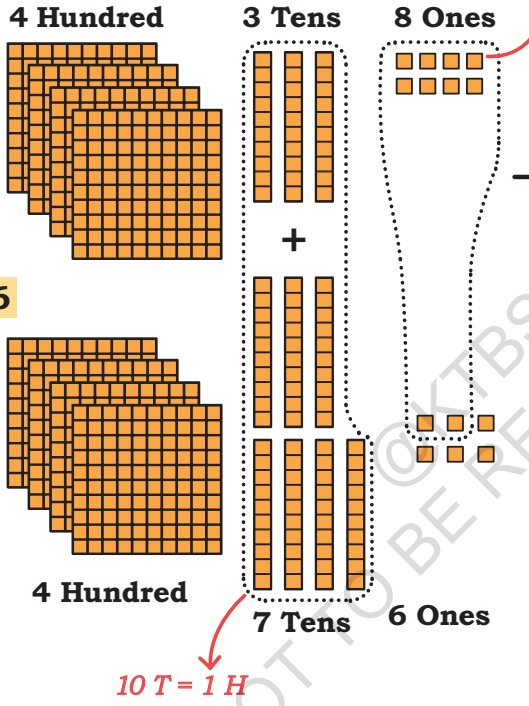
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How many children are going on the trip?

438 + 476

Estimate the number of children going on trip. _____

438



8 H + 10 T + 14 O

= 9 H + 1 T + 4 O

= 914

	H	T	O
	1	1	
	4	3	8
+	4	7	6
	9	1 1	1 4
	9	1	4

914 children are going to Mawlynnong.

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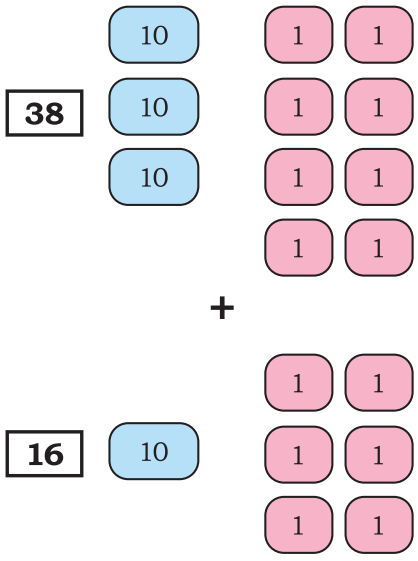
Note for Teachers: Support learners in making the transition from concrete materials to the more abstract algorithm. It will be good for the children to see the connection between the steps shown here. Show every time that 10 Ones are regrouped to 1 Ten, 10 Tens are regrouped to 1 Hundred, 10 Hundreds to 1 Thousand. Use the word regrouping instead of "carrying". Encourage them to check solutions using a number line or skip count as done in the previous grade . Work on operations with 2-digits till children are comfortable with regrouping.

Chapter 7.indd 102 3/26/2025 12:43:57 PM

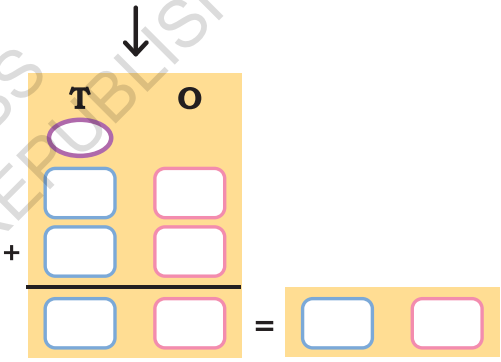
Daisy and Lou ate one large piece of *pusaw* for ₹38. They liked it a lot and bought another small piece for ₹16. How much did they spend on *pusaw*?

Estimate the money they spent.
_____

38 + 16





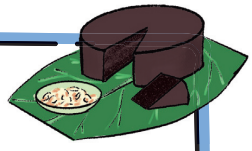


Write the final answer after regrouping in the boxes above.

They spent ₹_____

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Pusaw is a traditional Khasi snack from the Northeast region of India. It is made from a special variety of red rice, grown in the hills and paddy fields of Khasi Hills. The village of Mawranglang is famous for its *Pusaw*.



Note for Teachers: Children can be slowly encouraged to use tokens, instead of Dienes Blocks. Bring to their notice the similarity in steps.

Chapter 7.indd 103 3/26/2025 12:43:58 PM



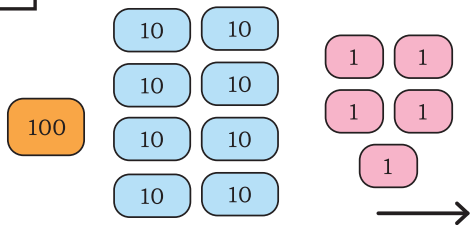
Daisy and Lou had collected ₹185 in their piggy bank. Their mother gave them ₹125 more for the trip. How much money did they take for the trip?

Estimate the money they took for the trip.

_____

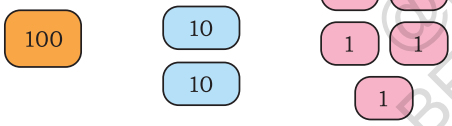
185 + 125

185



\+

125



_____H + _____T + _____ O

= _____H + _____T + _____ O

Daisy and Lou took ₹_____ for the trip.

	H	T	O
	⬭	⬭	
\+	▭	▭	▭
	▭	▭	▭
=	▭	▭	▭

Write the final answer after regrouping in the boxes above.

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Chapter 7.indd 104 3/26/2025 12:43:58 PM

Let Us Do



1. In *Kalakshitij*, a school of performing arts, the following number of students are learning to sing and play the tabla. Estimate and then find the total number of students.

	Tabla players	Singers	Total
Boys	78	532	_____ boys
Girls	95	346	_____ girls
Total	_____ tabla players	_____ singers	

15 more girls join the music school and they want to learn to play the tabla. How many girls play the tabla now?

2. Add by aligning the numbers in columns in your notebook.

a) 32 + 47 (b) 654 + 95 (c) 286 + 123

b) 476 + 324 (e) 700 + 289 (f) 534 + 483

3. Preeti's school has 423 children. Her school has 178 children less than her cousin's school. How many children study in Preeti's cousin's school?

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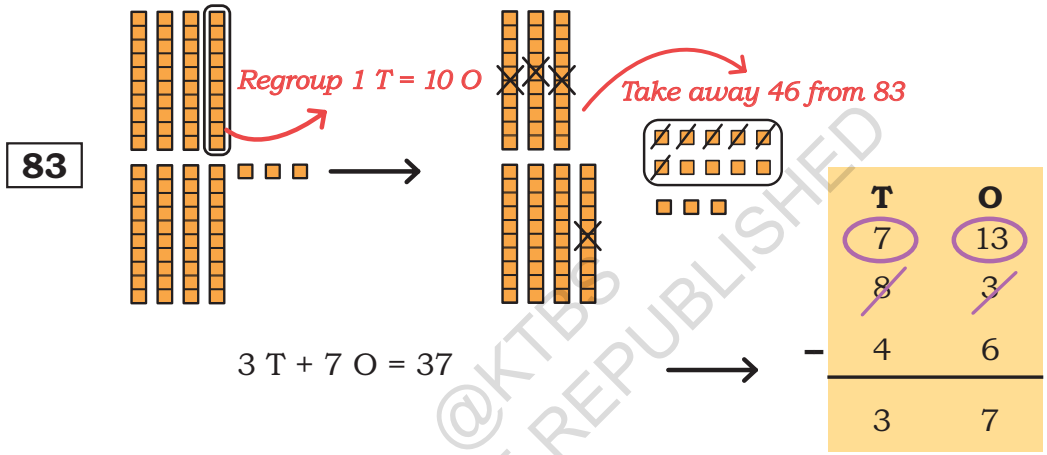
Chapter 7.indd 105 3/26/2025 12:43:58 PM

Subtract It

Estimate the difference

The buses stopped for a snack on the way. 83 children bought *Pusaw*. 46 children bought fruit plates. How many more children bought *Pusaw*?

The diference between the children who bought *pusaw* and those who bought fruit plates is 83–46.

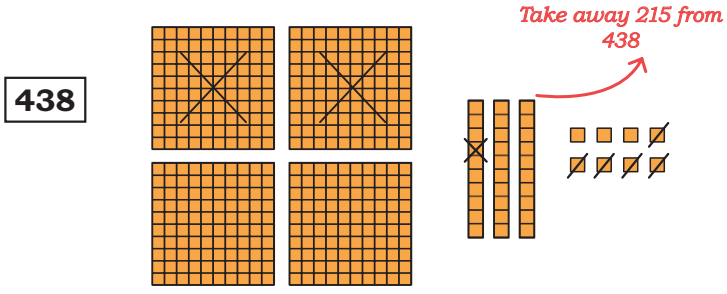


37 more children bought *Pusaw* than fruit plate.

All 438 decide to visit the famous Living Roots Bridge in Mawlynnong village. First, 215 children go to see the Living Roots Bridge. How many children are waiting to visit the Living Roots Bridge?

Estimate the number of children who are waiting.

The number of children who are waiting = 438–215.



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Chapter 7.indd 106 03-04-2025 4.30.09 PM

2 H + 2 T + 3 O = 223 ⟶

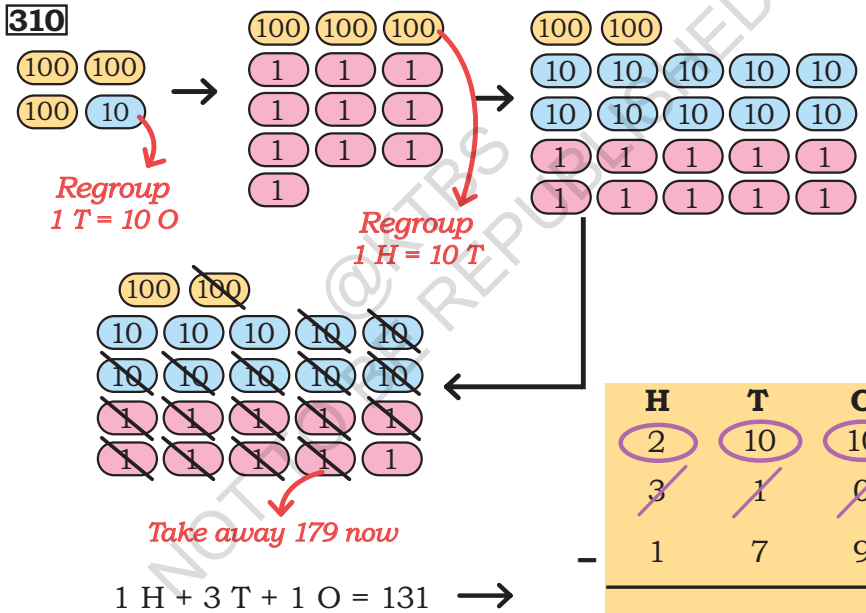
223 children are waiting.

	H	T	O
	4	3	8
−	2	1	5
	2	2	3

Lou and Daisy brought ₹310 in all. After spending on food and some gifts, they are left with ₹179. How much money have they spent till now?

Estimate the answer.

Rupees spent = 310–179.



	H	T	O
	2	10	10
	3	1	0
−	1	7	9
	1	3	1

So, they have spent ₹131.

Note for Teachers: Learners can use the concrete materials first before doing the algorithm. You should communicate that while computing using an algorithm we start from the ones place and then move to tens, hundreds and so on. When there are not enough ones to take away, then we need to regroup the 1 Ten to 10 Ones. Similarly, when there are not enough tens to take away, we regroup 1 Hundred to 10 Tens.

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Chapter 7.indd 107 3/26/2025 12:44:00 PM

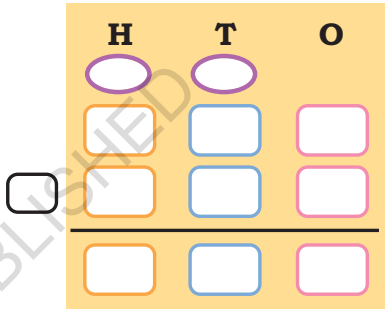
Let Us Solve

Ram Chacha got 264 mangoes from his mango tree last year. This year he got 527 mangoes. How many more mangoes did he get this year?

Estimate the answer.

_____

Use/draw tokens for the above problem, if needed.



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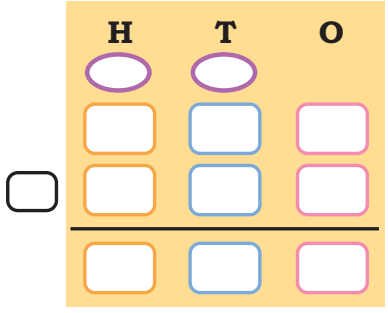
4. During the festival of dolls (*Gombe Habba* in Dussehra), Ranganna made 639 dolls. He was able to sell 531 dolls. How many dolls are left with him?

Estimate the answer.

_____

No. of dolls left = _____

Use/draw tokens for the above problem, if needed.



Chapter 7.indd 108 3/26/2025 12:44:00 PM

5. Subtract by aligning the numbers in columns in your notebook.

a) 83 – 29

b) 345 – 123

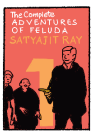
c) 763 – 437

d) 803 – 350

e) 900 – 328

Let Us Solve

1. These books are in the community library of Wakanda village. Children borrow these books to read during their vacation.

Name of the book	Pages in the book
 *Swami and Friends*	179
 *Panchantantra Tales*	236
 *Karadi Tales*	30
 *Akbar Birbal*	96
 *Blue Umbrella*	90
 *Adventures of Feluda*	128

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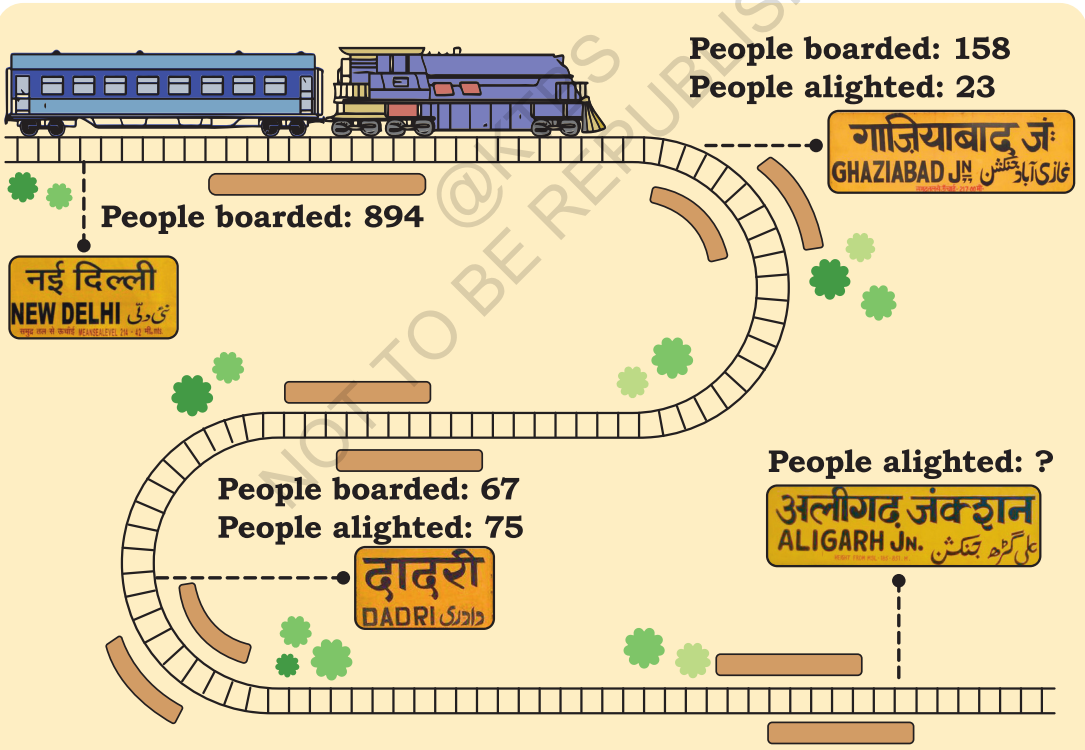
Chapter 7.indd 109 3/26/2025 12:44:00 PM

a) Rami read *Panchatantra Tales* during the summer vacation. Kesu read *Akbar Birbal*, *Karadi Tales* and *Blue Umbrella*. Who do you think read more? How many more pages?

b) Sumi has read 23 pages of *Adventures of Feluda*. How many more pages are left to complete the book?

c) Jaggu decides to read all the books listed here during his vacation. He has finished reading *Swami and Friends, Akbar Birbal* and 50 pages of *Feluda* in 4 weeks. How many more pages does he have to read to finish reading all the books?

2. A daily train between Delhi and Aligarh travels a distance of 131 km. Look at the picture below and answer the questions that follow.



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Chapter 7.indd 110 3/26/2025 12:44:02 PM

a) How many passengers are there on the train when it leaves Dadri?

_____

b) Find the number of people who got off the train at Aligarh.

_____

c) Were there more people on the train in New Delhi or in Aligarh? How much more/less? _____

d) How many people travelled altogether by the train?

_____

Let Us Solve

a.

	H	T	O
	4	5	2
+		8	9

b.

	H	T	O
	6	4	1
−	2	7	3

c. Find quick ways of solving. Think about some of the strategies you learnt in Grade 3.

326 + 25 = _____

675 + 5 = _____

410 – 12 = _____

204 – 10 = _____



I can think about it like this: 410–10 is 400 and 2 less than 400 is 398.

811 + 99 = _____

945 – 19 = _____

d. Solve by aligning the numbers in columns in your notebook.

1. 38 + 943
2. 465 + 305
3. 435 + 462
4. 764 – 657
5. 518 – 209
6. 879 – 53

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e. Find two numbers such that their sum is 856. Find another two numbers such that their difference is 563. Make your own word problems with these numbers.



856 = ☐ + ☐

_____

_____

_____



563 = ☐ – ☐

_____

_____

_____

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Number Pair Hunt

Here is a grid of numbers. There are many number pairs in this grid. A number pair has 2 numbers which are next to each other, vertically or horizontally. For example, the numbers 111 and 185 are number pairs 48 and 185 are number pairs in this grid.

Should we check every number pair to find out which is the largest sum or difference?

35	100	179	68
111	185	143	54
300	48	225	190
54	321	63	167

How many number pairs are there in this grid?

Chapter 7.indd 112 3/26/2025 12:44:02 PM

1. Find the number pair whose sum is the greatest.

_____

2. Find the number pair whose sum is the smallest.

_____

3. Find the number pair whose difference is the greatest.

_____

4. Find the number pair whose difference is the smallest.

_____

The Missing Digits

Fill the missing digits below to make each of the following sums correct.

☐ 6	1 ☐	3 ☐ 2
+ 1 ☐	+ 2 ☐	+ ☐ 8 8
5 0	3 8	8 9 0
7 ☐	6 5	4 7 ☐
− 4 ☐	− ☐ ☐	− 1 4 ☐
2 7	2 5	☐ 2 7

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Chapter 7.indd 113 3/26/2025 12:44:03 PM

Let Us Do

1. Add.

a) 23 + 489

b) 105 + 295

c) 630 + 56

d) 35 + 99

e) 409 + 387

f) 67 + 76

g) 580 + 207

h) 333 + 666

i) 826 + 268

2. Subtract.

a) 300 – 45

b) 962 – 268

c) 706 – 209

d) 842 – 387

e) 674 – 76

f) 754 – 409

g) 403 – 245

h) 600 – 384

i) 546 – 538

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Chapter 7.indd 114 3/26/2025 12:44:03 PM