

Joyful

Mathematics

Class 2



विद्या स पतमशनुरे



एन सी ई आर टी
NCERT

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

0224 – JOYFUL MATHEMATICS

Textbook for Class 2

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FOREWORD

India has a rich tradition of nurturing the holistic development of children during their most formative years. These traditions provide for complementary roles for the immediate family, the extended family, the community, and formal institutions of care and learning. In addressing the first eight years of a child's life, this holistic approach — which includes the cultivation of *sanskars* which are passed on from generation to generation — has a critical and positive lifelong influence on every aspect of a child's growth, health, behaviour, and cognitive capabilities in the later years.

Considering the importance of the early years in a child's lifelong development, the National Education Policy 2020 (NEP 2020) envisioned a 5+3+3+4 curricular and pedagogical structure as providing a much needed focus on formal education and childcare in the country during the first five years corresponding to ages 3-8, naming it the Foundational Stage. Classes 1 and 2 form an integral part of this Foundational Stage, continuing from the ages of 3-6 years, in which a child's holistic growth is taken care of in *Balvatika*. An individual's lifelong learning, social and emotional behaviour, and overall health depend deeply upon the experiences gained during this critical Foundational Stage.

The Policy thus recommended developing a National Curriculum Framework specifically for this Stage, which would comprehensively guide the whole education system toward providing high-quality education in children's early years, thereby carrying this momentum forward to the other later stages of school education. Based on the principles and objectives enunciated under NEP 2020 — as well as on research from a range of disciplines (including neuroscience and early childhood education), on experiences and accumulated knowledge from the ground, and on the aspirations and goals of our Nation — the National Curriculum Framework for Foundational Stage (NCF-FS) was developed and released on 22 October 2022. Subsequently, textbooks have been developed to bring to life the curricular approach of the NCF-FS. The textbooks attempt to connect to the children's real life by recognising their learning in the classroom and the significant learning resources in the family and the community.

The approach in the NCF-FS is also resonant with the *Panchkoshiya Vikas* (the development of the five sheaths of human personality) as elucidated in the *Taittiriya Upanishad*. The NCF-FS enunciates the five domains of learning, i.e., physical and motor; socio-emotional; cognitive; language and literacy; and cultural and aesthetic, which map to the

Indian tradition of *Panchkosh* consisting of five *kosh* viz. *Annamaya*, *Pranmaya*, *Manomaya*, *Vijnanmaya* and *Anandmaya*. Besides, it also focuses on integrating a child's experiences at home with the knowledge, skills, and attitudes that would be developed within the school's precinct.

The NCF-FS, which covers Classes 1 and 2, also articulates a play-based approach to learning. According to this approach, books form an essential part of the learning process; however, it is also important to understand that books are only one among many pedagogical tools and methods, including activities, toys, games, conversation, discussion, and more. This marks a departure from the prevailing system of merely learning from books to a more congenial play-way and competency-based learning system, where children's engagement with what they do and learn becomes critical. Thus, the book in hand must be seen as an instrument to promote a play-based pedagogical approach in its entirety for this age group of children.

The present textbook attempts to provide competency-based content in a simple, interesting, and engaging manner. The endeavour has been to make it inclusive and progressive by breaking several stereotypes through the presentation of text and illustrations. The child's local context, which includes traditions, culture, language usage, and rootedness in India and is central to students' holistic development, has been reflected in the books. An effort has been made to make it engaging and joyful for the child. The book integrates art and craft to help children appreciate the aesthetic sense inherent in such activities. The textbook provides children with situational awareness to understand the underlying concepts relating to them in their own contexts. Though light in terms of content, this textbook is rich in substance, providing varied experiences and integrating play-way methods of learning through toys, games, and a variety of other activities. It includes questions that will help children develop critical thinking and problem-solving abilities. Besides, the textbook has rich subject matter and activities to help children develop the necessary sensitivity towards our environment. It also provides ample scope for our States/UTs to add/adapt content with local perspectives in the versions that they may develop as per the recommendations of NEP 2020.

NCERT appreciates the hard work done by the committee set up to develop the syllabus and learning-teaching material for the foundational stage. I thank the Chairperson of this committee, Professor Shashikala Wanjari, and all other members for completing this task in time and in such an admirable way. I am also thankful to all the institutions and organisations which have generously extended their help and assistance in making this possible. I am especially thankful to Dr. K. Kasturirangan, Chairperson of the National Steering Committee, and its other members, including those of the Mandate Group, its Chairperson Professor Manjul Bhargava, and members of the Review Committee, for their timely and valuable suggestions.

As an organisation committed to reforming school education in Bharat and continuously improving the quality of all learning and teaching material that it develops, NCERT looks forward to critical comments and suggestions from all its stakeholders to further improve upon this textbook.

27 January 2023
New Delhi

PROFESSOR DINESH PRASAD SAKLANI
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ABOUT THE BOOK

The National Policy on Education 2020 has recognised the importance of developing a strong foundation of learning during the early developmental age (3–8 years) of children emphasising on foundational literacy and numeracy. In view of policy's perspective of holistic development of children, the *National Curriculum Framework for Foundational Stage 2022 (NCF-FS 2022)* has recommended curricular goals, competencies and learning outcomes aligned to developmental domains such as physical, socio-emotional-ethical, cognitive, language and literacy, aesthetic and cultural and positive learning habits. As a follow-up of this, syllabus for foundational stage developed by the NCERT includes mathematics and numeracy under the cognitive domain, also emphasising upon integration of all other domains while developing learning-teaching materials for mathematics including textbooks.

The present textbook of Mathematics for Class 2 named as *Joyful Mathematics* has been designed keeping in view the recommendations of NEP 2020, NCF-FS 2022 and Syllabus for the Foundational Stage. Though it may be assumed that a child entering Class 2 has intervention in the form of Balvatika 1 to 3 and Class 1 (age 3–8 years), yet in view of the diversity in our country, there may be children who have got exposure of numeracy in the institutional setup in Class 1 only. This textbook takes care of such situations.

Children at this stage enjoy free play, toys and games. Therefore, plenty of opportunities are included for play and games within activities while developing various mathematical ideas like spatial understanding, handling numbers, mathematical and computational thinking, etc. This helps the child in smooth transition from concrete to pictorial and to abstract reasoning for every new concept or competence being introduced.

The *Joyful Mathematics* for Class 2, has a lot of activities which are expected to be conducted within and outside the classroom, keeping in view the objective of experiential learning for holistic development. In all the chapters, mathematical understanding is built through play-based activities. The textbook tries to provide children a feeling that they are playing, and mathematics is being

learnt, rather than forcing them to learn mathematics without any joy.

The learning of languages and age-appropriate physical and mental development have been integrated with the book as learning of mathematics does not take place in isolation. The book provides suggestions to parents, teachers or other concerned like elder siblings on having a healthy discussion with children through thought provoking questions, stories, poems, etc.

Various mathematical ideas have been presented through self-explanatory and contextual illustrations keeping in view the differential abilities among children to read words at this stage. Moreover, such pictures and illustrations also help the children in enhancing their visual and reading comprehension.

The book is designed as text-cum-workbook that includes opportunities for children to draw pictures, colour them and write appropriately. The oral discussions with children have been included in all the chapters to help them to verbalise and express their thinking process. This will also help teachers to continuously assess the learning in a non-threatening manner. The thought provoking practice tasks in the form of questions and activities have been given in this textbook. It is also expected that the teachers and parents will develop similar questions for the children to have more targeted skill practice. The innovative use of the textbook lies with the parents and teachers and that will ensure the joyful learning of mathematics among children of Class 2.

This book emphasise on inculcating logical thinking, analytical skills, mathematical communication and 21st century skills through activities, open ended questions, exploration and discussion in the book. The chapters are framed as a beginning towards mathematical proficiency by adding conceptual understanding, procedural fluency, adaptive reasoning, and a positive attitude towards mathematics.

The content in *Joyful Mathematics* for Class 2 is based on the four blocks mentioned in the NCF-FS 2022. These are — Oral math talk, Skills teaching, Skill practice and Math games have been included in all the chapters. Most of them have been presented in an integrated manner. However, one can find the following chapters not only aligned to the curricular goal (CG-8) of developing mathematical understanding and abilities to recognise the world through quantities, shapes and measures but also to all other curricular goals as given in NCF-FS 2022 and syllabus leading to holistic development:

Oral Math Talk: This includes discussion on mathematical concepts through poems, picture stories and activities as mentioned below:

- Maths poems like ‘Seasons’ and ‘East, West, North or South’ in Chapter 9.

- Picture stories for the introduction of concepts, practice and assessment have been included like ‘Heena’ and ‘Aatif’ in Chapter 2, ‘Shadow Story’ and ‘Hide and Seek’ in Chapter 4, ‘Decorating with Garlands’ in Chapter 6, ‘Rani’s Gift’ and ‘Pumpkin’s Chaupal’ in Chapter 7, etc.
- Discussion with children through various daily life contexts like, ‘Vallam Kali’ on Chapter 1, ‘Garba Festival’ in Chapter 2, ‘Decoration for Festival’, ‘Let us Count Diyas’ in Chapter 6, ‘Fruits in the Park’ in Chapter 7, ‘Let us Share’ and ‘How many Groups’ in Chapter 8, ‘Gargi’s Day’ in Chapter 9, ‘Picnic Time’, and ‘Games we Play’ in Chapter 11.

Skill Teaching: All Chapters have activities that can be done by the child all alone, in groups, or with the help of elders (parents, teachers, and siblings). This helps the child in the development of various skills with the guided support of others.

Skill Practice: Opportunities for skill practice have been included in all the chapters in the form of Let us Do, Project Work, and practice questions. For example, ‘Origami Fun’, ‘Mehandi’ and ‘Stamping’ in Chapter 4 and ‘Make your Own Balance’ in Chapter 7.

Math Games: Math games and activities have been interwoven in all the chapters throughout the book. For example, ‘Let us Make 100’, ‘Mark by Passing the Path’ and ‘Flash Card Game’ in Chapter 1; ‘Patterns in Number Chart’ in Chapter 3; ‘Yoga asanas’ and ‘Let us Play with Dots’ in Chapter 5; ‘Choose the Longest Path’ and ‘How Many Blocks?’ in Chapter 7; ‘How Old are We?’ in Chapter 9.

The above chapters have been developed keeping in view the need for developing sensitivity towards environment, values, positive habits, cultural rootedness, and inclusive perspectives in children. Multilingual perspective is also reflected in the textbook. Engaging activities also focusing on language development are included in the entire textbook which will trigger interest in children to learn joyfully.

Teachers need to understand the objective of each of the chapters and activities given, their alignment with the curricular goals and competencies as included in the syllabus for the foundational stage, and accordingly make a learning plan for children including a variety of activities addressing the diverse needs of children. In this learning plan, teachers need to be the active observants of learning outcomes achieved by the children and their flow towards the development of identified competencies under all the curricular goals. Mapping with learning outcomes and activities given in different chapters is required on the part of teachers if we want to make our education competency-based in true letter and spirit.

Activities given in this textbook are suggestive. Teachers can develop their own activities and supplement the same with local toys, games or toys created by them and other materials available

in the child's immediate environment for hands-on learning with concrete material. Teachers are free to adapt, adopt and modify the activities as per their contexts and circumstances without losing the sight and aim of the development of identified competencies in children at this stage.

Mental challenge and engagement in thought provoking tasks lead to better mathematical learning and criticality. Solving brain teasers, puzzles and riddles provide opportunities to children in addition to their routine learning. Many age appropriate puzzles have been given in the book. The child must be engaged for at least a week in finding the solutions of a puzzle. There may be more than one right answer for some of the problems. Also these puzzles are given to provide joyful experiences to a child. Thus, child should not be assessed on the basis of solving these puzzles.

The chapters of the book need to be supplemented by audio-video aids, e-content, material available in the QR codes embedded in the book and other learning-teaching material like educational kits developed by the NCERT.

This textbook is not the only source of learning. Children learn much more while observing the environment; talking to peers and elders including grandparents; making things of their interest; watching TV; playing with mobile; toys and games; listening stories and poems; doing projects; visiting places of cultural importance and traveling. Therefore, we as teachers or parents need to value this learning by going beyond the textbook and try to map it with the competencies and curricular goals identified for this stage. The education of our children is seen as our collective responsibility.

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THE CONSTITUTION OF INDIA

PREAMBLE

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a¹ [**SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC**] and to secure to all its citizens :

JUSTICE, social, economic and political;

LIBERTY of thought, expression, belief, faith and worship;

EQUALITY of status and of opportunity; and to promote among them all

FRATERNITY assuring the dignity of the individual and the² [unity and integrity of the Nation];

IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November, 1949 do **HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.**

1. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Sovereign Democratic Republic" (w.e.f. 3.1.1977)
2. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Unity of the Nation" (w.e.f. 3.1.1977)



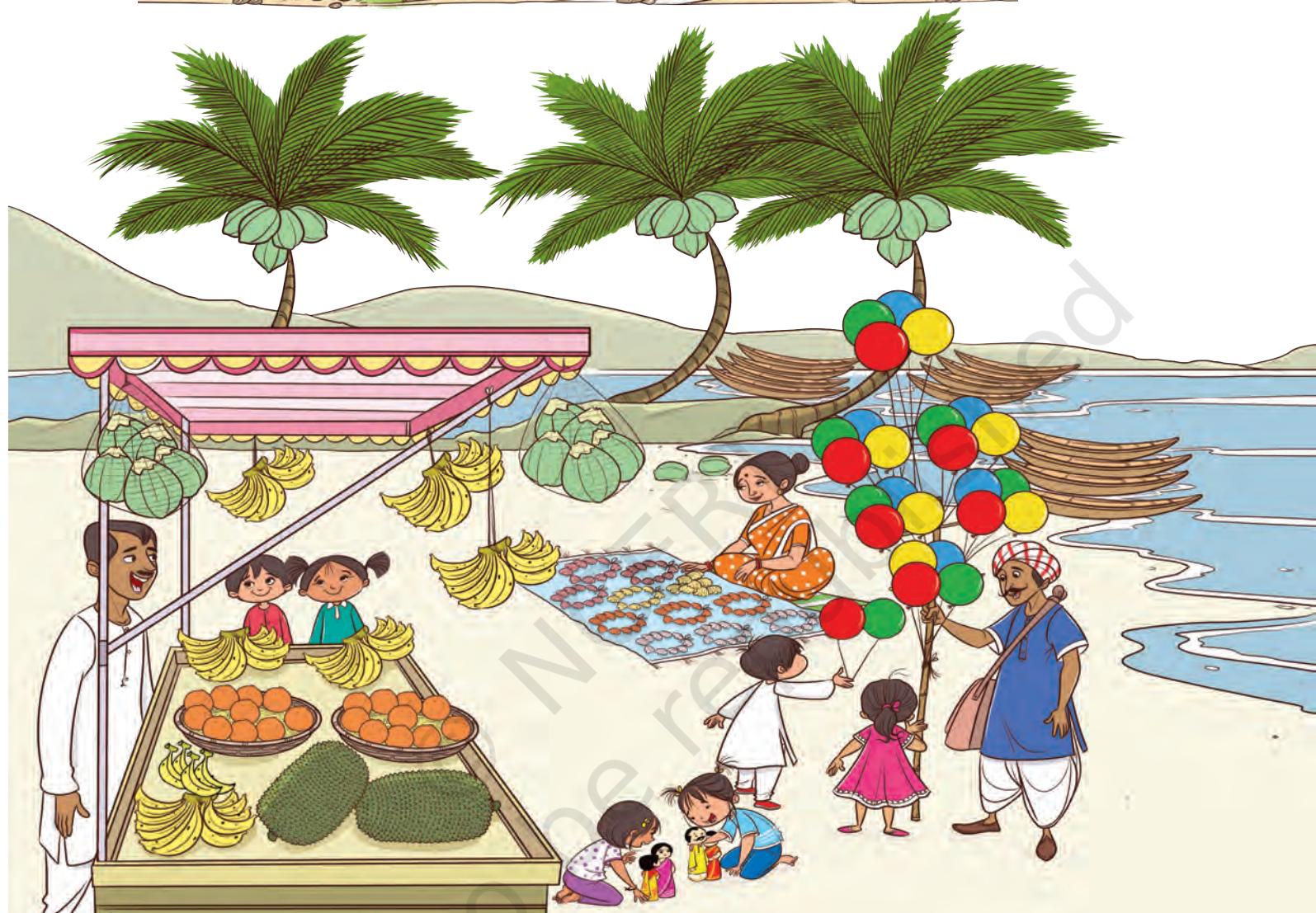
1

A Day at the Beach

QRickit



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Look at the above picture. Count and write the number of objects given below.

Coconuts

Boats

Children

Oranges

How did you count them? Did you count them one by one or in bunches or groups?

Discuss with children if they have seen or visited a seashore or a river side. Which animals and plants are usually seen there? Encourage them to count in groups.





Let us Do

A. Look at the shops shown in the picture and fill in the blanks.

- There are _____ necklaces of shells with 10 shells in each necklace.
- There are _____ groups of balloons with _____ balloons in each group and _____ loose balloons.
- There are _____ bunches of bananas with _____ bananas in each bunch and _____ loose bananas.

B. Surbhi has collected some seashells. She wants to help her mother in making bracelets and necklaces.



C. Surbhi has made _____ groups of shells with _____ number of shells in each group for her bracelets.



D. Her mother has made _____ groups of shells with _____ number of shells in each group for her necklaces.

Try the tongue twister.

“She sells seashells
at the seashore.”





Let us Think

List out the objects that come in packs of ten.

A. _____ B. _____ C. _____

Tasty Chikoos!

Manoj is helping his father in selling chikoos that he has arranged in the trays.



There are _____ chikoos in one tray.

How many chikoos are there in total? _____

Now help Manoj in placing all the chikoos in the trays for selling.

- A. 25 chikoos  : _____ trays of ten chikoos and _____ chikoos.
- B. 43 chikoos  : _____ trays of ten chikoos and _____ chikoos.
- C. 35 chikoos  : _____ trays of ten chikoos and _____ chikoos.
- D. 58 chikoos  : _____ trays of ten chikoos and _____ chikoos.





Let us Match

A. 80 chikoos



B. 72 chikoos



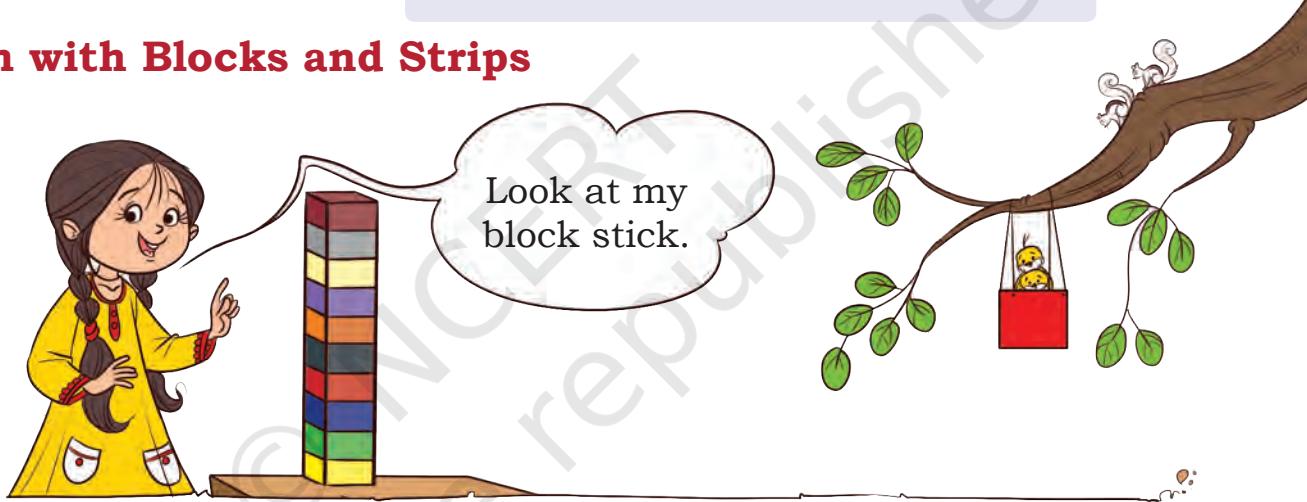
C. 56 chikoos



D. 28 chikoos

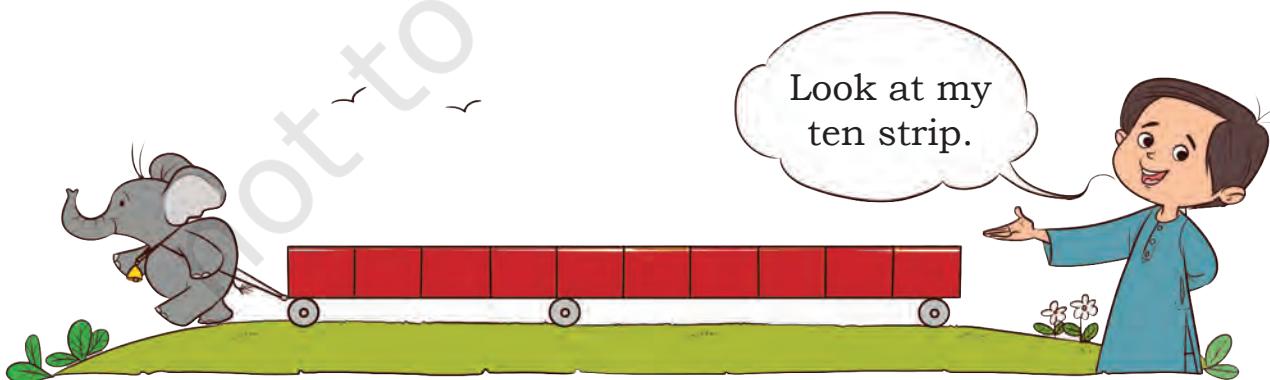


Fun with Blocks and Strips



Can you tell how many blocks are there in this block stick?

1 block stick = _____ blocks



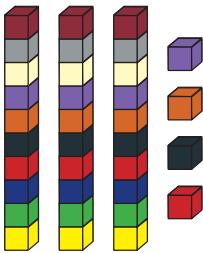
Can you tell how many units are there in this ten strip?

1 ten strip = _____ units

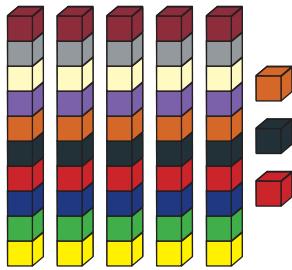




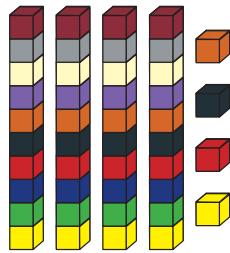
Let us Do



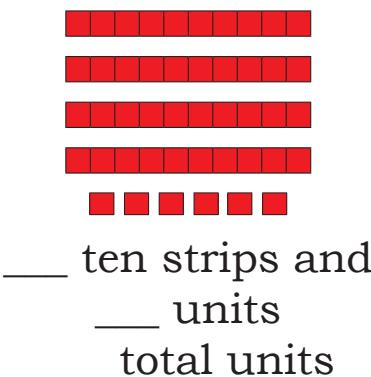
3 block sticks
and 4 blocks
34 total blocks



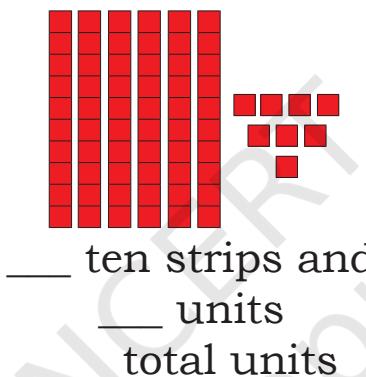
 block sticks
and blocks
 total blocks



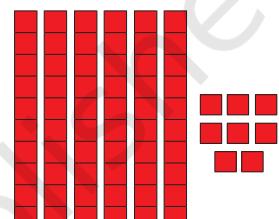
 block sticks
and blocks
 total blocks



 ten strips and
 units
 total units



 ten strips and
 units
 total units



 ten strips and
 units
 total units

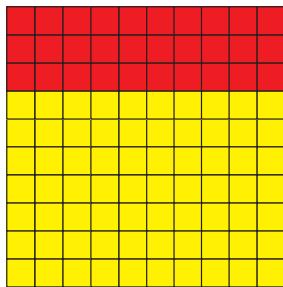
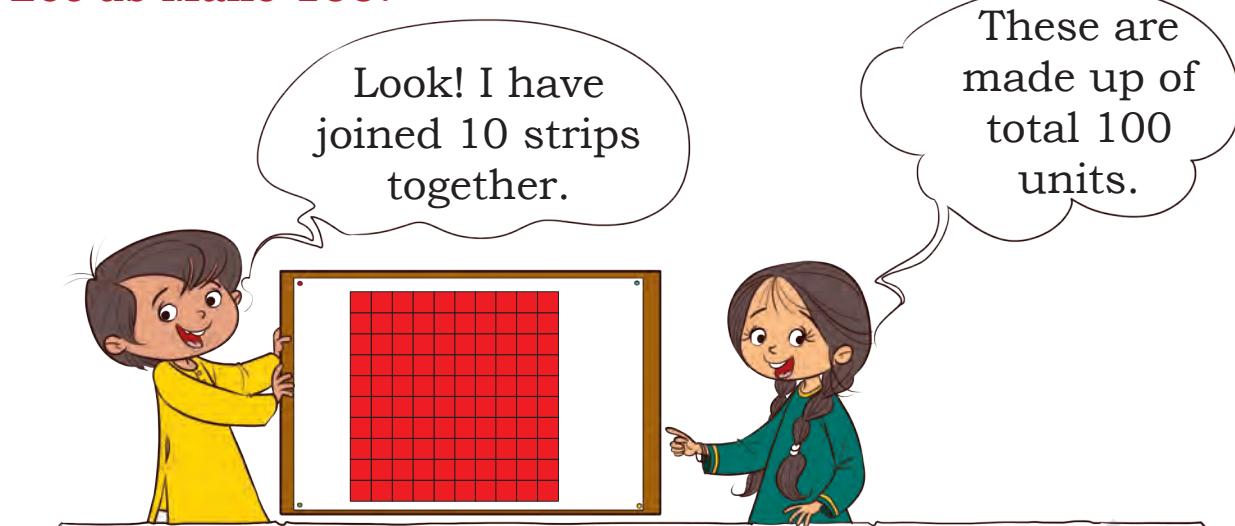
Complete the below table.

| Total blocks/ units | Ten strips | Units |
|------------------------|------------|-------|
| 24 | 2 | 4 |
| 36 | | |
| 72 | | |
| 69 | | |
| 46 | | |

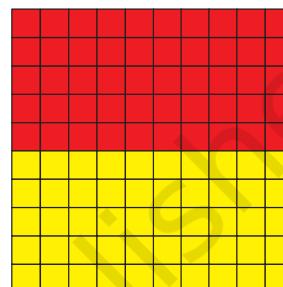
Use sticks or bundles of sticks or similar material which can be grouped to develop number sense among children.



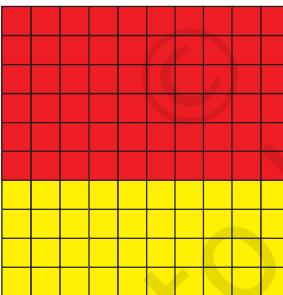
Let us Make 100!



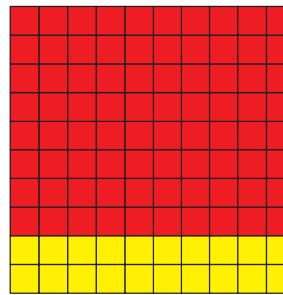
70 yellow units and 30 red units. 7 yellow ten strips and 3 red ten strips. Total 100 units or 10 ten strips.



__ yellow units and __ red units
__ yellow ten strips and __ red ten strips. Total __ units or __ ten strips.



__ yellow units and __ red units
__ yellow ten strips and __ red ten strips. Total __ units or __ ten strips.



__ yellow units and __ red units
__ yellow ten strips and __ red ten strips. Total __ units or __ ten strips.

Discuss some other combinations of ten strips that make a 100 units grid.



Let us Make 100

Let us play this game in groups of 5 or 6. One member will become the banker. Each team member will roll two dice together and take that many units from the bank. Whenever there are units that are equal to or more than 10, they will exchange the ten units for a ten strip from the banker. Play the same and collect 10 tens strips and put them to make a 100 units grid. We can also use items like *rajma*, pebbles, *chana*, etc., as units.

Counting through Cards



Encourage children to use different cards for tens and ones.





Let us Think

Complete the following.



3 tens



1 one

$$= \boxed{30} + \boxed{1} \text{ or}$$

| | |
|---|---|
| ▲ | ● |
| T | O |
| 3 | 1 |

So, there are total of 31 shells.



___ tens



___ ones

$$= \boxed{\quad} + \boxed{\quad} \text{ or}$$

| | |
|---|---|
| T | O |
| | |



___ tens



___ ones

$$= \boxed{\quad} + \boxed{\quad} \text{ or}$$

| | |
|---|---|
| T | O |
| | |



___ tens



___ ones

$$= \boxed{\quad} + \boxed{\quad} \text{ or}$$

| | |
|---|---|
| T | O |
| | |

Draw tens (▲) and ones (●) cards and fill in the blanks.

$$= \boxed{90} + \boxed{3} \text{ or}$$

| | |
|---|---|
| T | O |
| | |

___ tens ___ ones

$$= \boxed{\quad} + \boxed{\quad} \text{ or}$$

| | |
|---|---|
| T | O |
| 7 | 5 |

___ tens ___ ones

$$= \boxed{\quad} + \boxed{\quad} \text{ or}$$

| | |
|---|---|
| T | O |
| 2 | 9 |

___ tens ___ ones

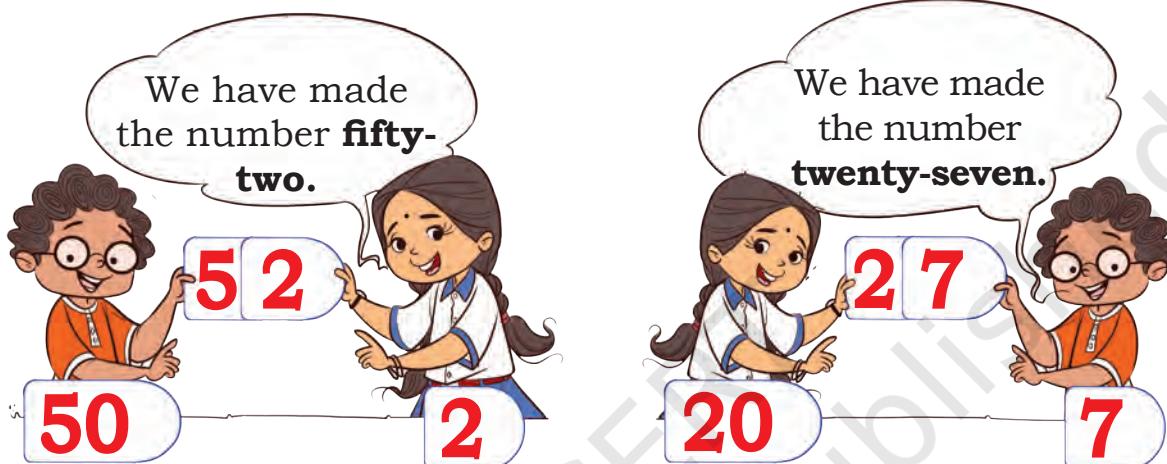




Let us Play

Make Numbers

Children can make numbers using different number cards either of tens or ones. The teacher calls out a number, say, 52. The children with numbers cards of 50 and 2 will come together and form the number 52 as shown below. The game continues for other numbers such as 27.

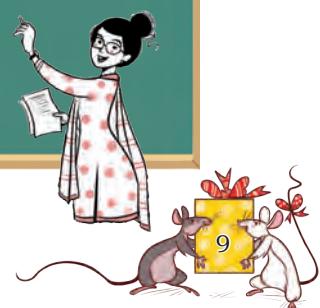


Trays of Oranges

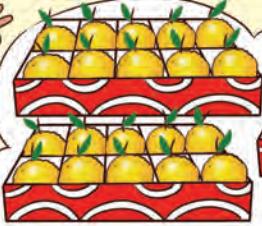


Let children have lots of practice on regrouping a number in tens and ones. For example, 73 is made up of 70 and 3 or 7 tens and 3 ones. Let children make their own worksheets for two digit numbers.

| | | | |
|----|--------|---|---|
| 73 | 70 + 3 | T | O |
| | | 7 | 3 |
| | | | |
| | | | |



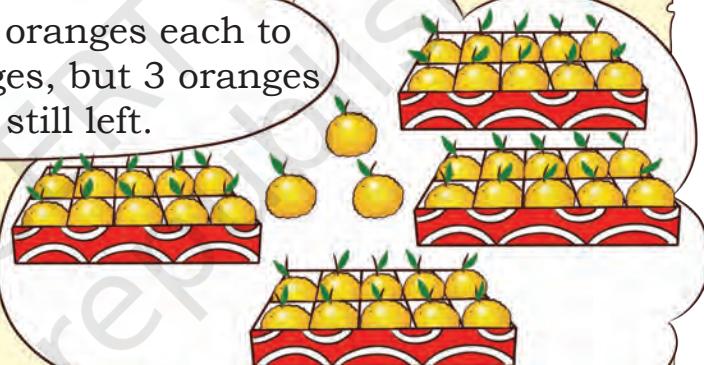
Oh! A lot of oranges are left.



I think you need more trays.



Yes, I needed four trays of 10 oranges each to put 40 oranges, but 3 oranges are still left.



Can you now tell, which are more in number? 43 oranges or 34 oranges?

43 oranges

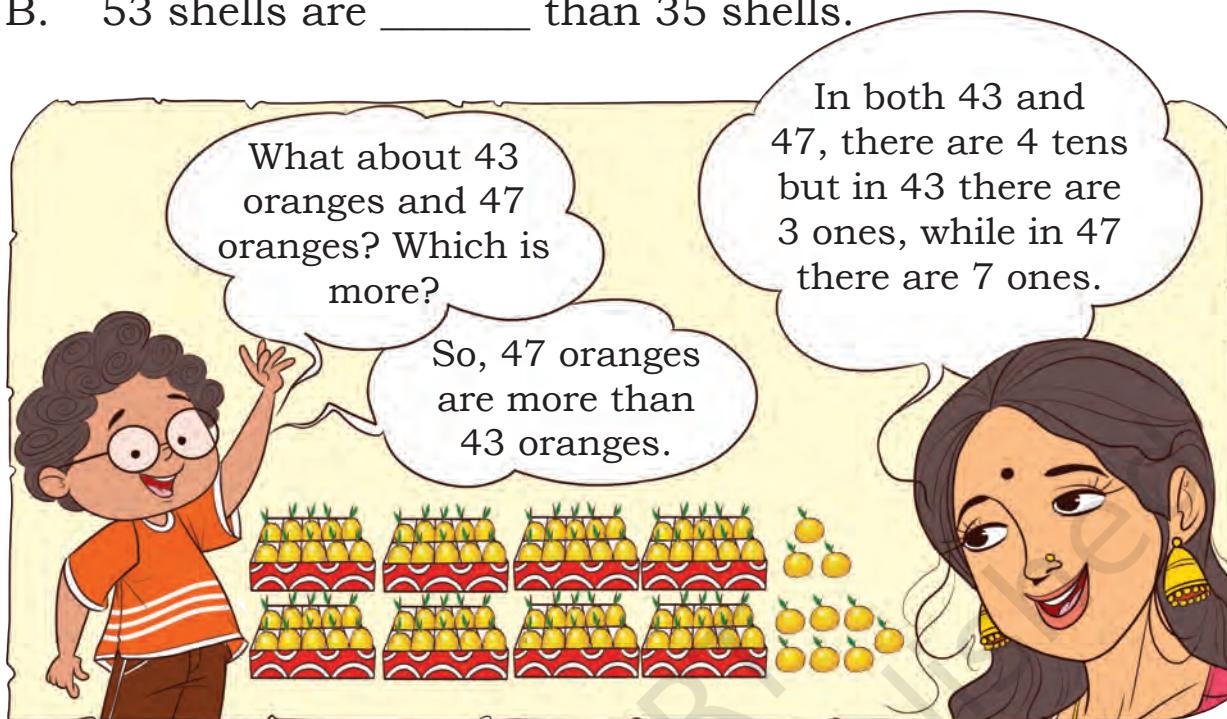
will be more in number as there are 4 tens in it, while in 34 there are only 3 tens.

Which is less **27** oranges or **72** oranges? Why?



Fill in the blanks with more or less.

- A. 67 chikoos are _____ than 76 chikoos.
B. 53 shells are _____ than 35 shells.



Let us Do

Fill in the blanks.

- A. 29 is more than 20.
B. _____ is less than 41.
C. _____ is less than 76.
D. 49 is more than _____.
E. 25 is less than _____.
F. _____ is less than 2.
G. 36 is more than _____.
H. _____ is more than _____.

Discuss with children the situations where they can compare two quantities. Ask children to make two groups of concrete objects like pebbles, marbles, bottle caps, seeds, etc., and to estimate which group has more number of objects.

Let them then verify their estimate by counting the objects.





Let us Play

Flash Card Game

A. Make flash cards of numbers from 0 to 9. Make the desired number according to the rules given below by placing these cards appropriately at tens and ones place.

- i. A number greater than 50.
- ii. A number less than 30.
- iii. A number between 47 and 59.
- iv. Which is the smallest two-digit number you can make?
- v. Which is the largest two-digit number you can make? Why do you think that the number you made is the largest?



B. Choose any two flash cards and make a two-digit number. Now swap these flash cards to get another number and find out whether it is bigger or smaller than the previous number. How will you get the largest number using same digits?

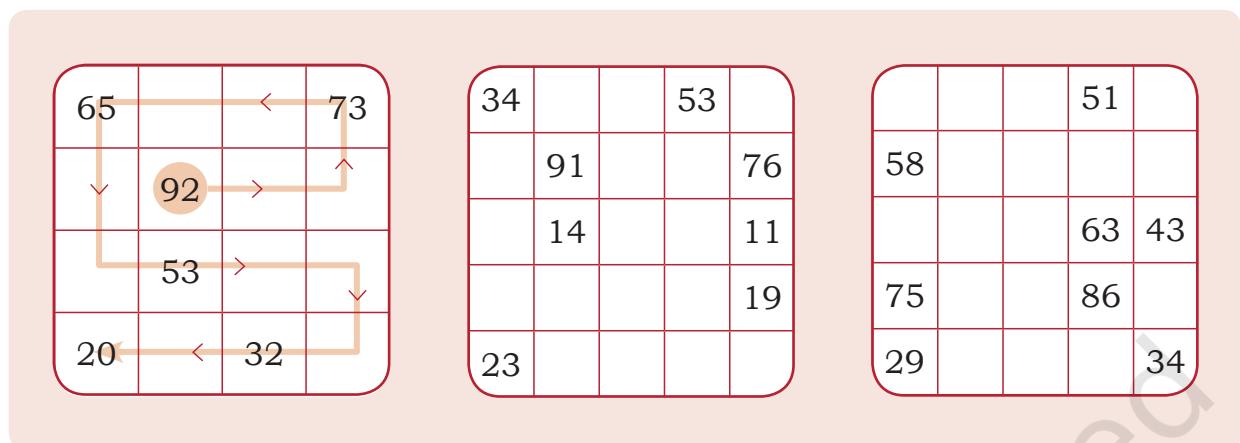
| Tens | Ones |
|------|------|
| 3 | 5 |
| | |
| | |
| | |

| Tens | Ones |
|------|------|
| 5 | 3 |
| | |
| | |
| | |



Mark by Passing the Path

From the largest number, try to reach the smallest one in decreasing order by passing through each and every number atleast once.



Play with Numbers

Who am I?

- A. I am the largest two-digit number.
- B. I am the largest two-digit number where no digit is repeated.
- C. I am the smallest two-digit number.
- D. I am the smallest two-digit number, my digits are repeated.
- E. I am the smallest two-digit number with 3 at the tens place.
- F. I am the largest two-digit number with 2 at the ones place.

Make your own such questions.



Vallam kali

In Kerala, Onam is celebrated through a famous snake boat race called as *vallam kali*. The race has nearly come to an end. Look at the picture and observe the position of each boat.



- A. Which colour boat came first in the race? _____
- B. Which colour boat is likely to come third? _____
- C. At which positions are blue and green boats? _____
- D. Write the position of pink and orange boats on the basis of the picture. _____

Look at the month of August in the calendar given below.

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-------------------------------|-----------------------------|-----|-----|-----|
| | | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 Independence Day | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 Onam | 30 Raksha Bandhan | 31 | | |

*Calendar based on 2023

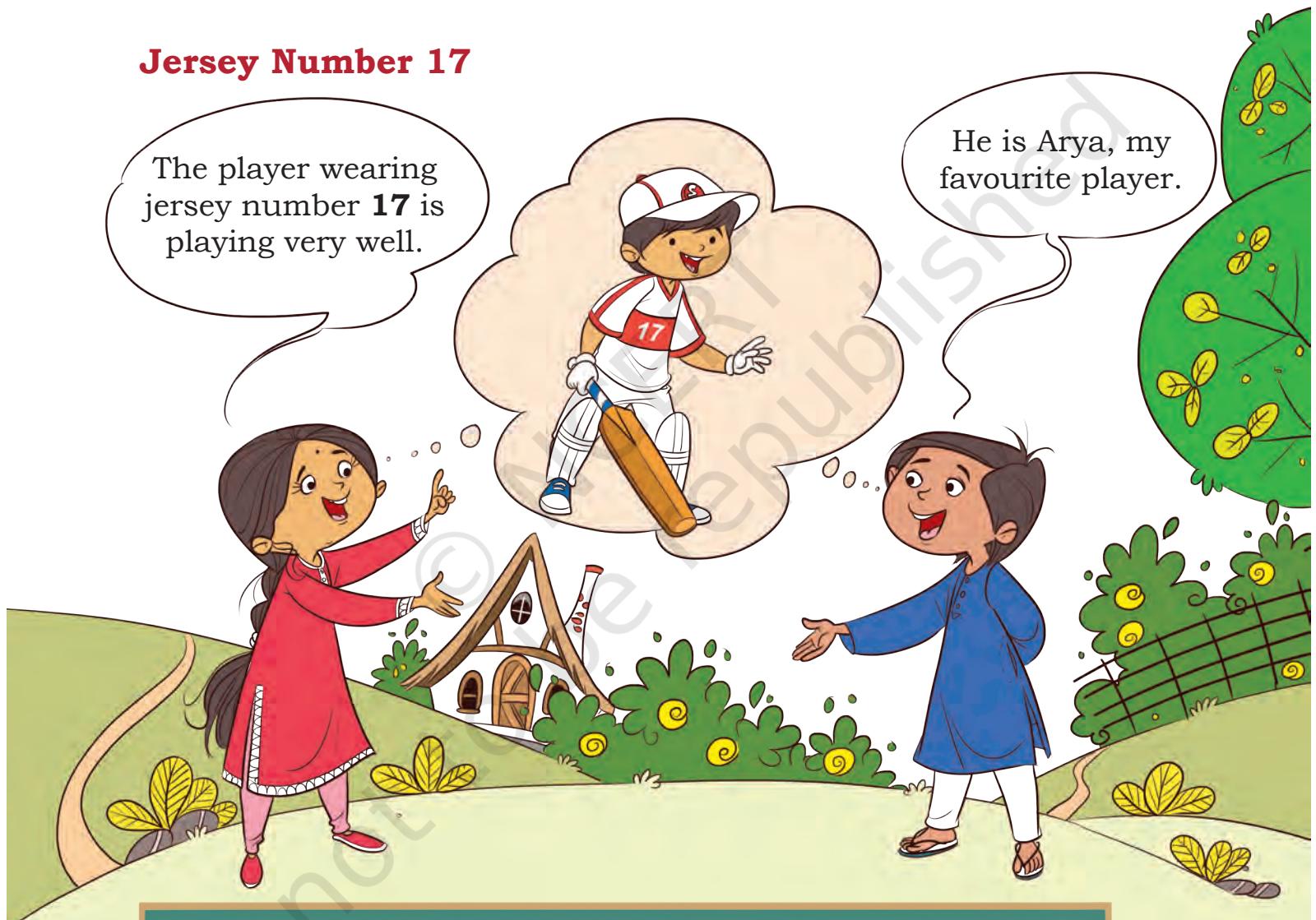


Read the calendar and answer the following questions.

- A. Onam will be celebrated on which day of the month?
- B. When is the Independence day celebrated?
- C. Raksha Bandhan is on Wednesday of this month.

Find out if any of your friends celebrated their birthday in the month of August. Mark it on the calendar.

Jersey Number 17



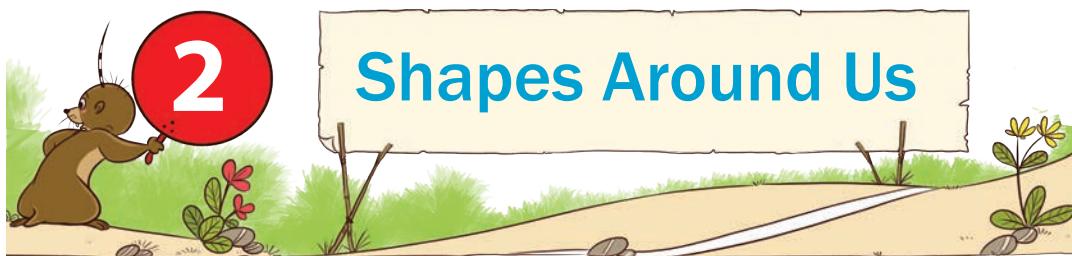
Discuss with students about various other places where they can see numbers as labels or names around them. For example, house number, pillar number, roll number, bus or train number, etc. Tell children that the beautiful way in which we all write numbers today, using the digits 0 and 1–9, originated in India.





2

Shapes Around Us





Let us Do

A. Look at the picture and observe different musical instruments.

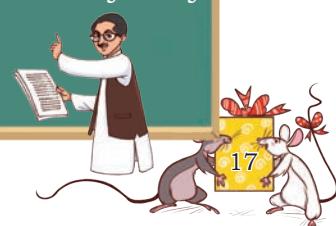
- i. Circle the musical instruments that are similar in shape to a drum.
- ii. Tick the musical instruments that are similar in shape to a matka.
- iii. Tick the shape similar to the shape of a shehnai (, ,).
- iv. How is the shape of harmonium different from the shape of a drum?

B. Have you seen or played any of the musical instruments? Share your experiences with your classmates.

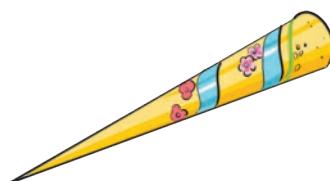
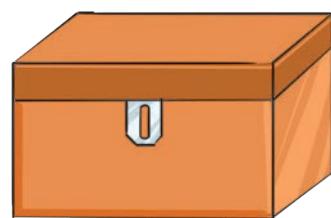
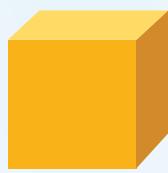
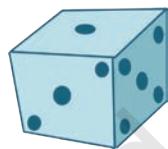
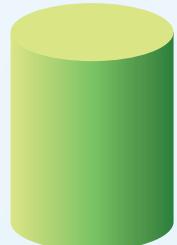
C. Cross the odd one out.



Initiate discussion about the similarities in the shape of various musical instruments and talk about locally available instruments and the way they are played. For example, drum and *tabla* are played by beating them, whereas guitar and *sitar* are played using their strings, and *shehnai*, flute, etc., are played by blowing air into them.



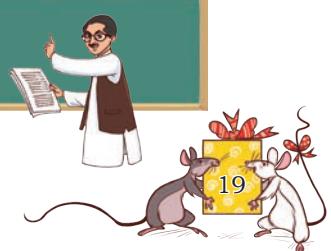
Match the musical instruments and objects with their solid shapes. One has been done for you.



Heena and Atif



Let the children experience the surfaces, edges and corners of solid objects like chalk box, duster, chalk, etc.





Let us Do

If you also have to decorate the following shapes in the same way with stars, ribbon stripes and pompom balls, how many of these items will you need?

| Object | Number of stars for the faces | Number of ribbon stripes for the edges/sides | Number of pompom balls for the corners |
|--------|-------------------------------|--|--|
| | | | |
| | | | |
| | | | |





Let us Think

Look at the objects and fill the table.

| Object | I look like a | Faces | Edges | Corners |
|--------|---------------|-------|-------|---------|
| | Cube | | | |
| | Cuboid | | | |
| | Cone | | | |
| | Cylinder | | | |
| | Sphere | | | |
| | Cuboid | | | |
| | Cone | | | |
| | Cylinder | | | |





Let us Play

Touch and Tell. Who am I?

Collect different objects with variation in faces, corners and edges. Blindfold the child and ask them to pick an object as per the details given by other children. For example, a child may be asked to take out an object with one corner. Similarly, continue with other objects.



Let us Do

Name the objects which have—

No Corners

- A. _____
- B. _____
- C. _____

One Corner

- A. _____
- B. _____
- C. _____

Three Corners

- A. _____
- B. _____
- C. _____

_____ Corners

- A. _____
- B. _____
- C. _____



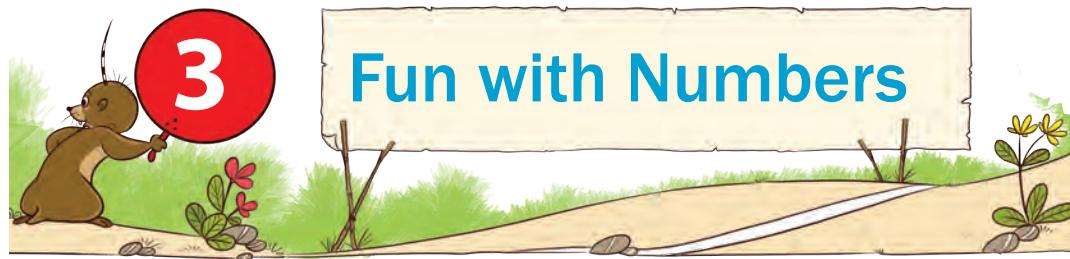
Project Work

Take a cardboard sheet and try to make an object with four faces.

Now, try to make an object with one face.

Encourage children to discuss and find out the objects which have one, two, three or no corners. They may make such objects using clay or dough.





QRickit:



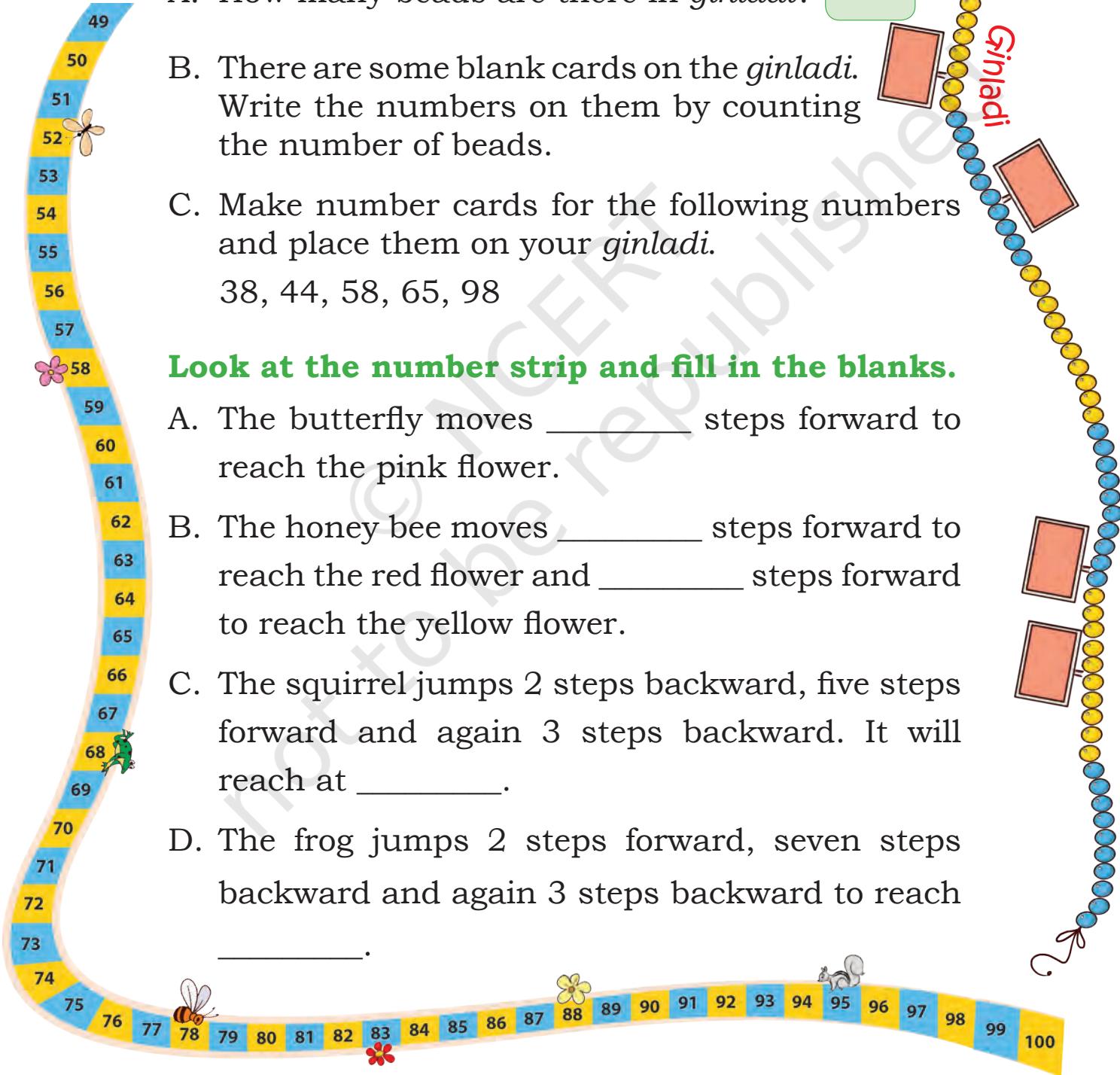
22

Look at the *Ginladi*.

- A. How many beads are there in *ginladi*?
- B. There are some blank cards on the *ginladi*. Write the numbers on them by counting the number of beads.
- C. Make number cards for the following numbers and place them on your *ginladi*.
- 38, 44, 58, 65, 98

Look at the number strip and fill in the blanks.

- A. The butterfly moves _____ steps forward to reach the pink flower.
- B. The honey bee moves _____ steps forward to reach the red flower and _____ steps forward to reach the yellow flower.
- C. The squirrel jumps 2 steps backward, five steps forward and again 3 steps backward. It will reach at _____.
- D. The frog jumps 2 steps forward, seven steps backward and again 3 steps backward to reach _____.

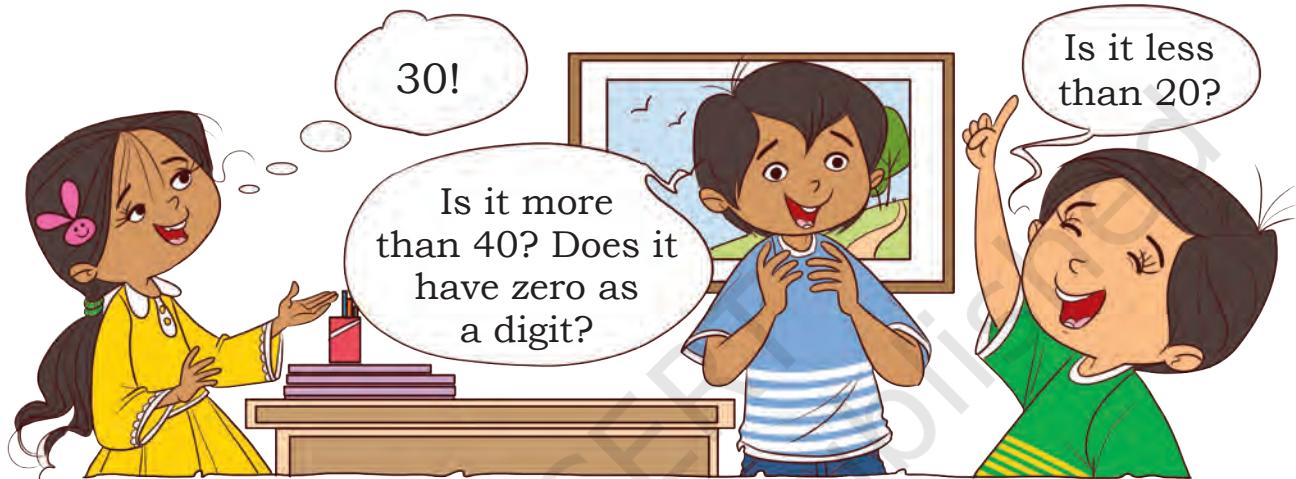




Let us Play

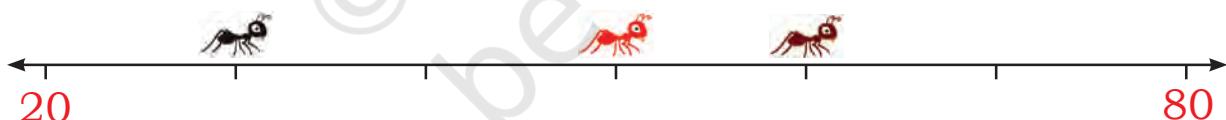
Guess my Number

A child thinks of a number and other children have to guess it. Children will ask questions like, is it more than 50? Are the two digits of the number same? Questions that can be answered in 'yes/no'. They can ask maximum 10 questions to guess the number.



Guess my Place

Three ants are sitting on a number line. Write the numbers for these ants.



Black ant is sitting on the number

Red ant is sitting on the number

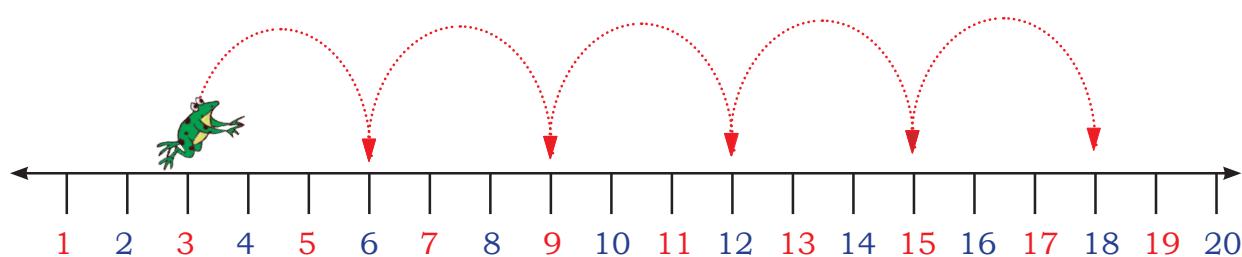
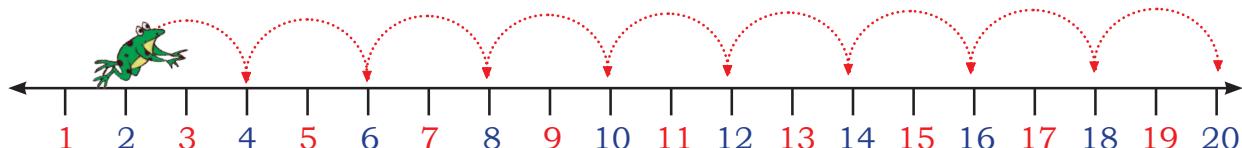
Brown ant is sitting on the number

Draw an ant on number 65 on the number line shown above.

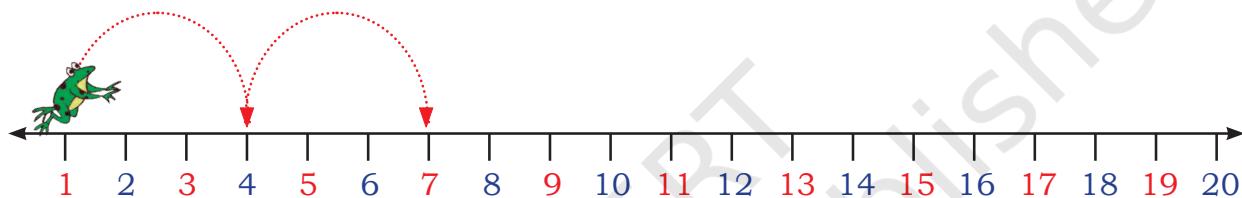
Draw a sugar cube on number 79 on the number line shown above.



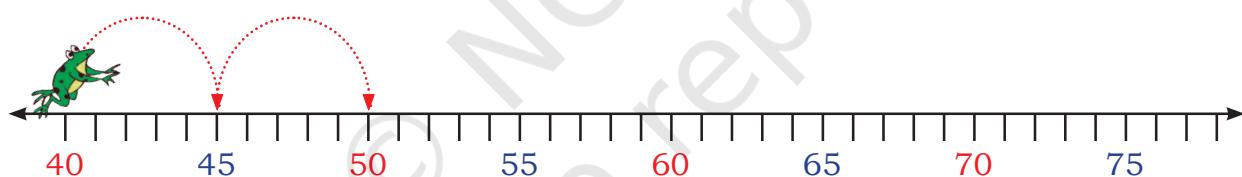
Look! How Jumpy, the frog is jumping. Do you observe a pattern here?



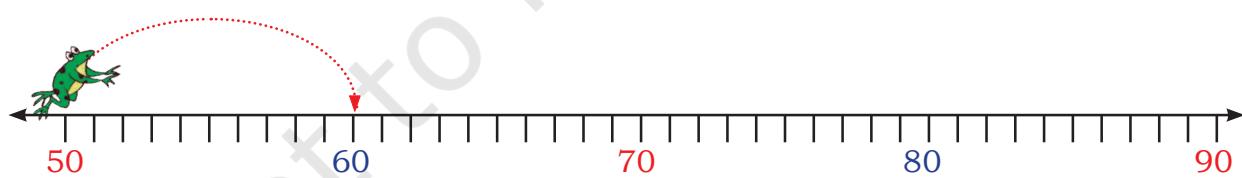
Complete the following patterns.



A. 1, 4, 7, _____, _____, _____, _____



B. 40, 45, 50, _____, _____, _____, _____, _____



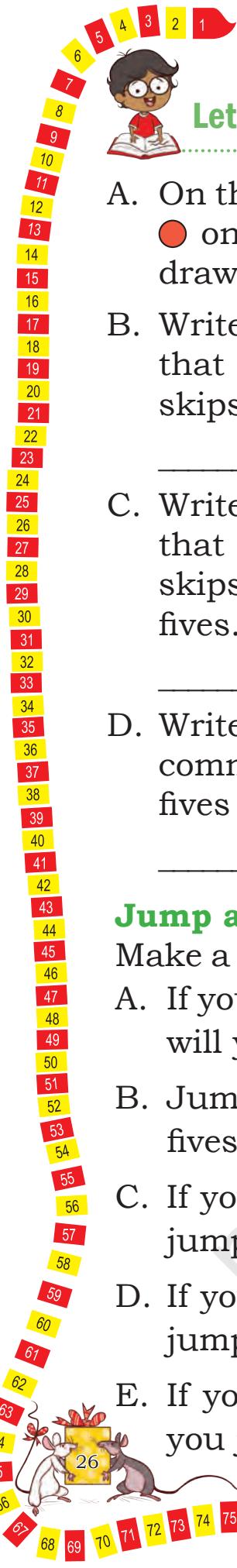
C. 50, 60, _____, _____, _____

Encourage children to make their own number line on the ground and ask them to jump on it. Ask them questions such as if you jump in steps of two, which numbers will you step on, etc.





Let us Do



- A. On the number chart, use skip counting in two and draw on the numbers. Now use skip counting in five and draw on the numbers in the number chart.
-
- B. Write down the numbers that are common to the skips in twos and fives.
-
- C. Write down the numbers that are common to the skips in twos, threes and fives.
-
- D. Write down the numbers common to the skips of fives and sevens?
-

| | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

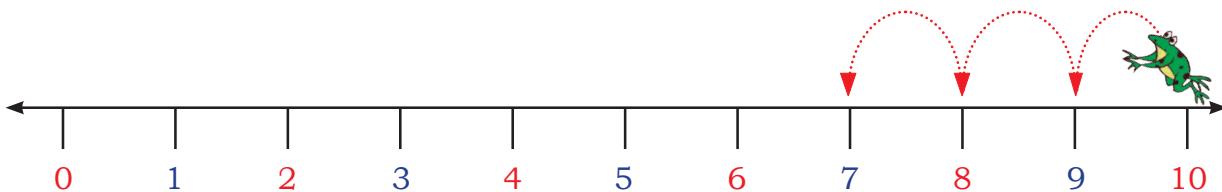
Jump and find the answers. Write ‘Yes’ or ‘No’.

Make a number line on the ground and jump on it.

- A. If you start from 10 and jump counting in tens, will you land on number 100 at any time?
- B. Jump and find out if you start at 5 and count in fives, will you jump on number 40 at any time?
- C. If you start from 0 and count in fives, will you jump on number 55 at any time?
- D. If you start from 4 and count in twos, will you jump on number 17 at any time?
- E. If you start from 13 and count in threes, will you jump on number 24 at any time?

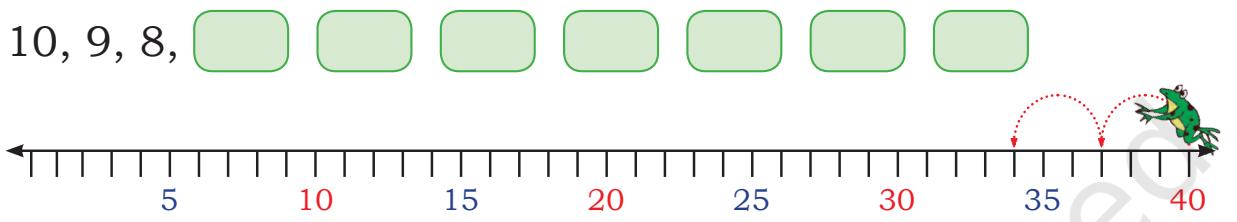
Let us jump backward.

Complete the following patterns.

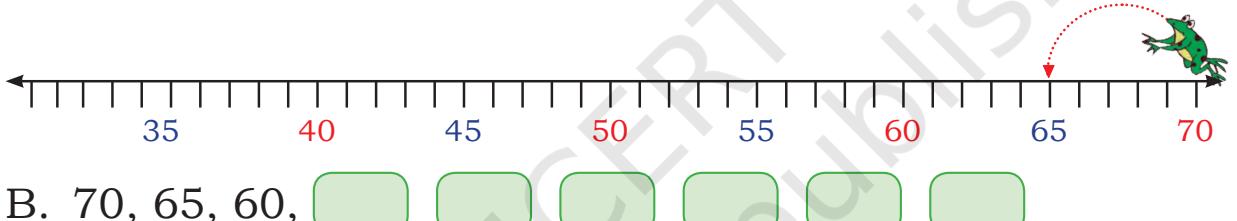


What comes just before 10?

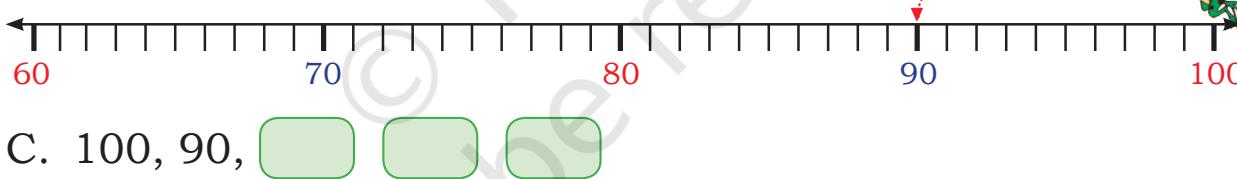
What comes just before 9?



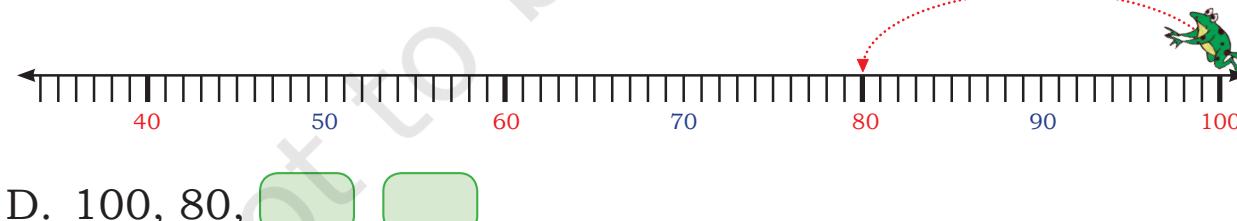
A. 40, 37, 34,



B. 70, 65, 60,



C. 100, 90,



D. 100, 80,

Is there a pattern in the given numbers? If not, change the numbers to create a pattern. Also, extend it.

100, 90, 80, 70, 60,





Let us Talk

- A. Rizwan is counting numbers from 20 onwards. Will he say the number 19 in his count? Explain why?
- B. Chavi is counting numbers in twos from 10 onwards. Will she say 43? Explain why?
- C. Mala is counting backwards from 20. How many steps will it take to reach 0? Explain why?
- D. Viraaj is counting backwards in twos from 20. How many steps will it take to reach 0? Discuss.

Patterns in Number Chart

| | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |





Let us Do

Look at the number chart and write down the answers.



comes just before 10



comes just before 20



comes just before 30



comes just before 40

Do you see any pattern? Shade the numbers on the number chart. Does the pattern continue for other numbers? If yes, write the pattern.

____, ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____

Now, look at the numbers coloured green in the number chart. Write them.

1, 12, 23, ___, ___, ___, ___, ___, ___, ___, ___, ___

What pattern do you notice? Discuss.

Lakshanya made a **number window** and placed it on the number chart as shown below.

A. If the centre of the window is placed on 28, which number will be on the top of it?



B. Which number will be below it?



C. Which number will be on its right?



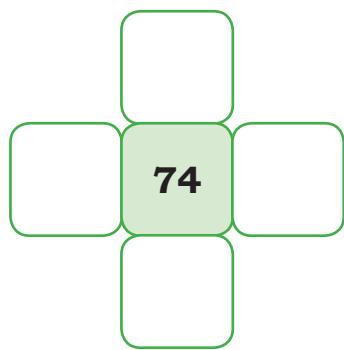
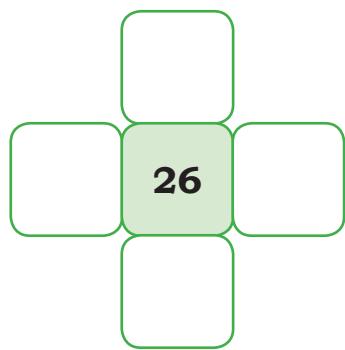
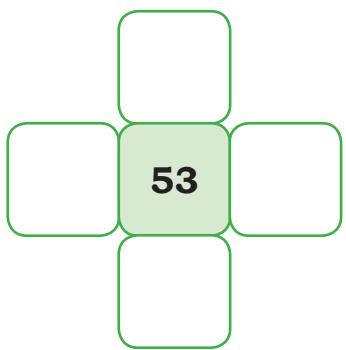
D. Which number will be on its left?



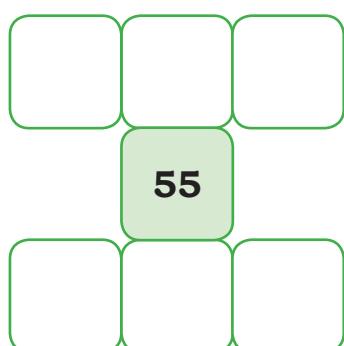
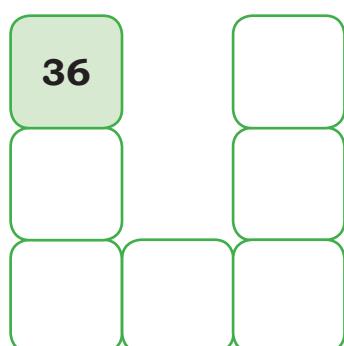
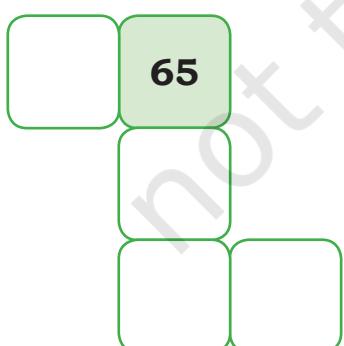
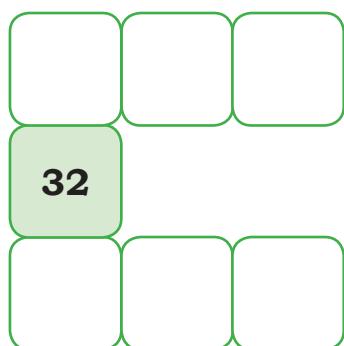
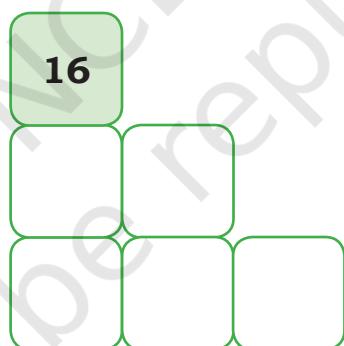
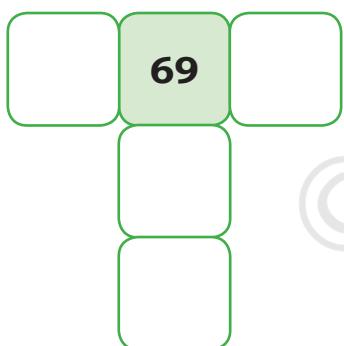
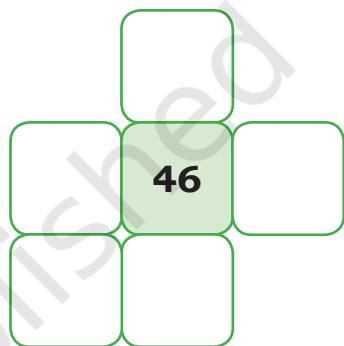
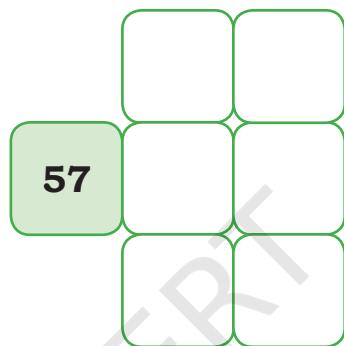
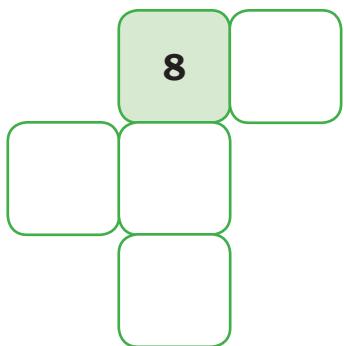
| | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|-----|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 11 | 12 | 13 | 14 | 15 | 16 | | | | 20 | |
| 21 | 22 | 23 | 24 | 25 | 26 | | 28 | | 30 | |
| 31 | 32 | 33 | 34 | 35 | 36 | | | 40 | | |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | |



E. Let us do it for other numbers.

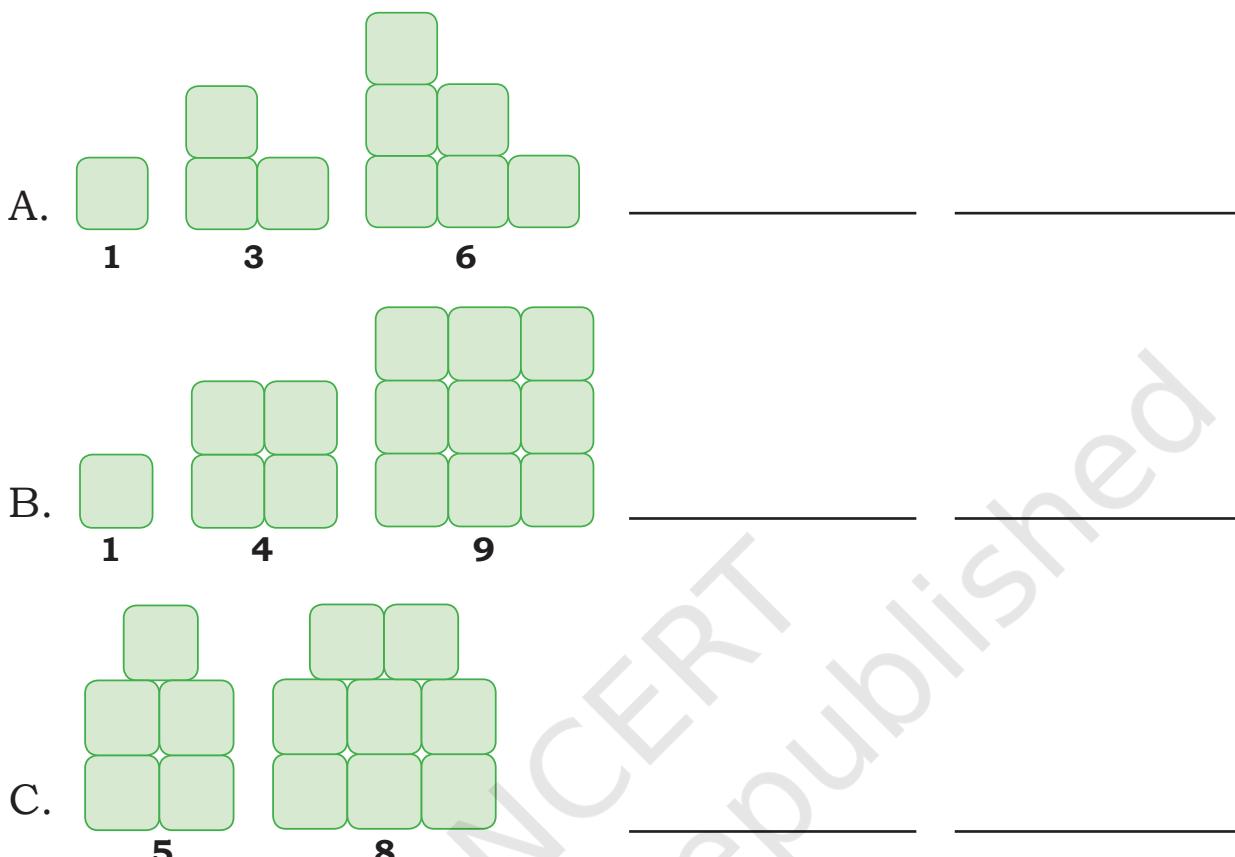


F. Based on the same number grid fill the missing numbers.



Exploring Patterns

Observe how the number of blocks are increasing in the following shapes and extend the pattern.



Let us Play – Bingo!

Make a 3×4 grid  for playing ‘Bingo’.

Fill the boxes of the grid with any number from 2 to 12. Numbers can be repeated.

Let one child throw two dice and say the sum of the numbers of dots on the dice. Other children will cross the number on their grid. Continue this till child crosses all the numbers. **Bingo!**

Encourage children to develop their strategy for selecting the numbers to be written on the grid.





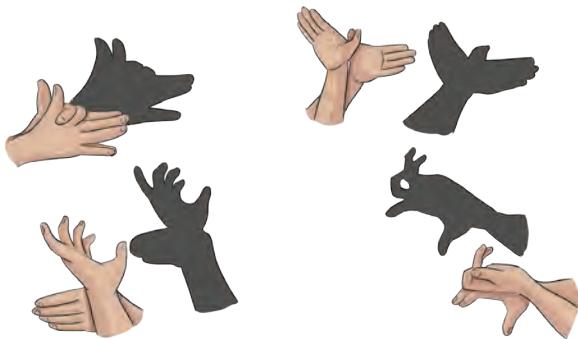
4

Shadow Story (Togalu)



Nakul and his friends saw a shadow play known as *Togalu Gombeyaata* in a village fair. They all were fascinated to see the shadows.

They also wanted to make shadows. So, they made different animal shadows on the wall with their fingers. You can also try to make the shadows.



Share information about *Togalu Gombeyaata* with children which is a puppetry art form practised in Karnataka. The puppets are used to depict scenes from Indian epics. Let children also share their experiences of watching a puppet show.





Let us Do

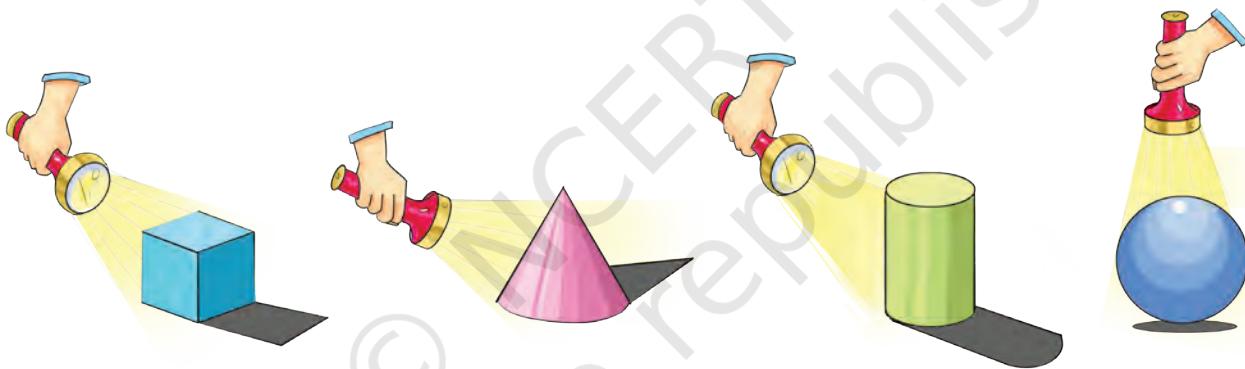
Do a role-play by making the shadows of different animals and creating their sounds.



Let us Talk

- A. Have you seen your own shadow or the shadow of a tree, a dog, a cow or any other animal?
- B. When do we see a shadow?
- C. When does a shadow vanish?

Fun with Shadows



Now put the torch light on the objects around you and observe the shapes of their shadows.

- A. Will the size of shadows change on changing the position of the torch?
- B. At what time of the day is your shadow longest?
- C. At what time of the day is your shadow shortest?

Discuss with children about their observations on their shadows at different times of the day and the reasons behind it.





Let us Trace

- A. Trace the shape of the objects around you. For example, eraser, leaf, matchbox, sharpener, pencil colour, etc.



- B. Draw the shapes you get after tracing.



Let us Think

Write the names of objects that have the same trace as:

- A. Bottle cap

- B. Eraser



Hide and Seek

Circle ○ and rectangle □ are playing hide and seek.
Rectangle is hiding from the circle.





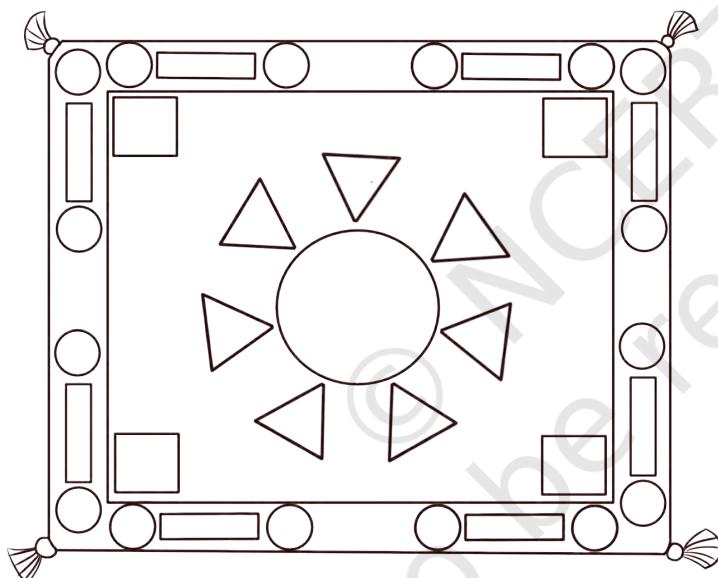
The door bell rang, Triangle and Square came and joined the game.



They all are playing together now.

- A. Circle ○ can hide in the clock, ball, _____, _____.
- B. Rectangle □ can hide in the shoe box, photo frame, _____, _____.
- C. But Triangle △ and Square □ are confused and wonder where to hide now. Suggest them some places where they can hide.
- i. Triangle △ can hide in _____, _____.
 - ii. Square □ can hide in _____, _____.

Colour the Carpet



Colour the Triangles red.



Colour the Circles green.



Colour the Rectangles yellow.



Colour the Squares blue.



Make your own design with different shapes and colour them.



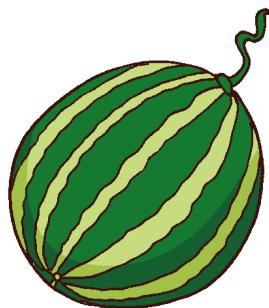
Catch the Corner!

Naveen and his friends are playing a game. Naveen is standing facing the wall and clapping. His friends are running along the table as he claps. When he stops clapping, everybody stops. The child who is not at a corner will be out. Then the child will clap and the game will go on.



Look at the picture and answer the following questions.

- Name the children standing near the corners of the table.
- Can you tell who will clap next?
- Where is Wasim standing?
- Can this game be played around a round table? Why or why not?
- Name the objects around us that have straight edges.
- Many objects around us have curved edges. Some are shown below. Explore and share the names of such objects that you see around.





Let us Think

A. How many corners do objects with curved edges have?

B. Name the objects that have both straight and curved edges?

Origami Fun!

A. Take a paper and fold it to make it a square.

B. It has corners and edges.

C. Fold it in half by joining two corners as shown in the picture.

D. Tick the shape which you get.



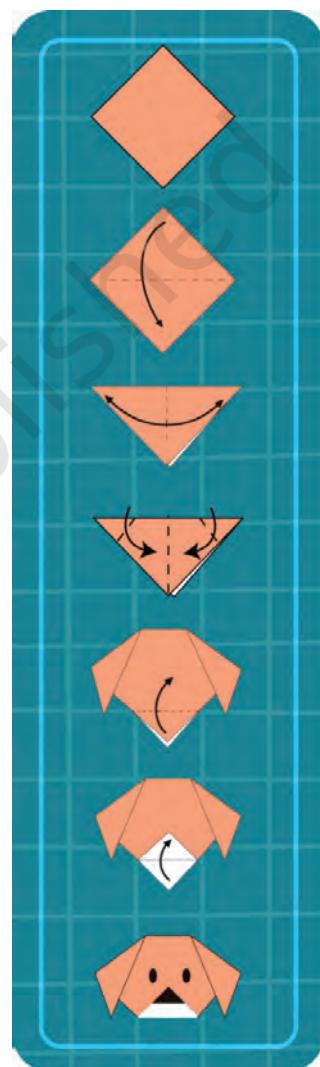
E. This shape has corners and edges.

F. Fold the paper again into half to get a triangle and then unfold it.

G. Now make two triangles from two corners of the triangle.

H. How many corners are there now?

I. Fold the third corner upwards and make the nose and eyes as shown.



Your paper dog is ready!



Can you fold the square sheet in such a way so as to get a shape with 4 sides? How many corners does it have now?

Ask children to explore various objects around them and ask them to find out the number of their edges, corners and sides.



Patterns

- A. Make designs by stamping objects having different shapes like — bottle caps, erasers, pencils, coins, etc.



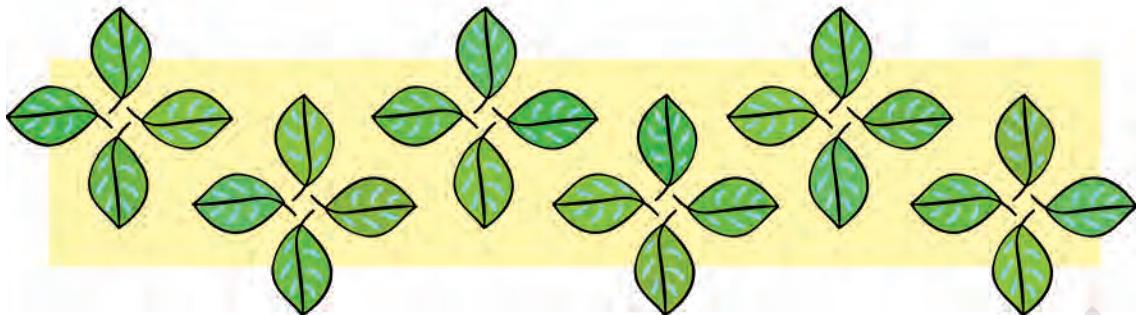
- B. Radha is applying *mehandi* on her hands. You can also trace your hand to make a *mehandi* pattern or design.





Let us Do

Nitya is playing with leaves and making patterns.



Now you also collect some leaves and make a pattern. Paint one side of the leaf and print it on the space given below.

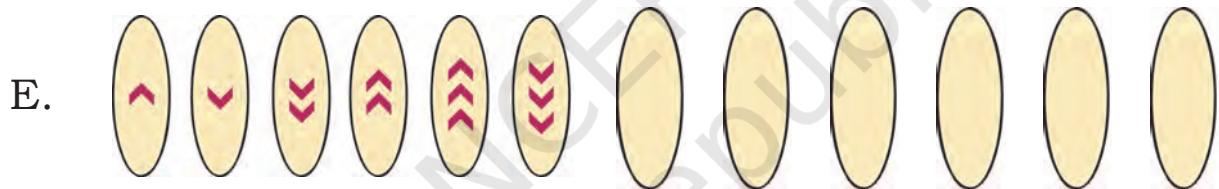
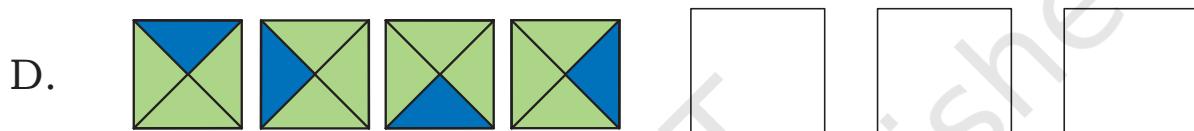
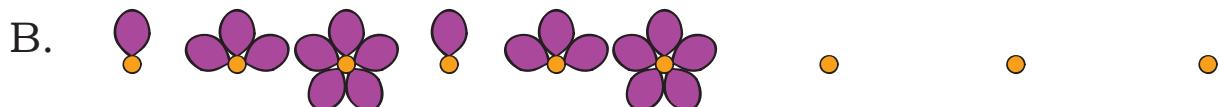
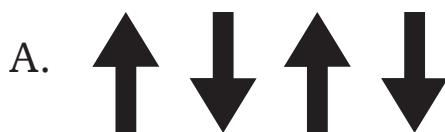


Project Work

Make a wall hanging using cutouts of different shapes with the help of your elders to decorate your home or classroom.



Extend the following patterns.

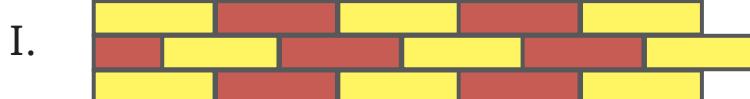


G. **AB BC CD**

.....

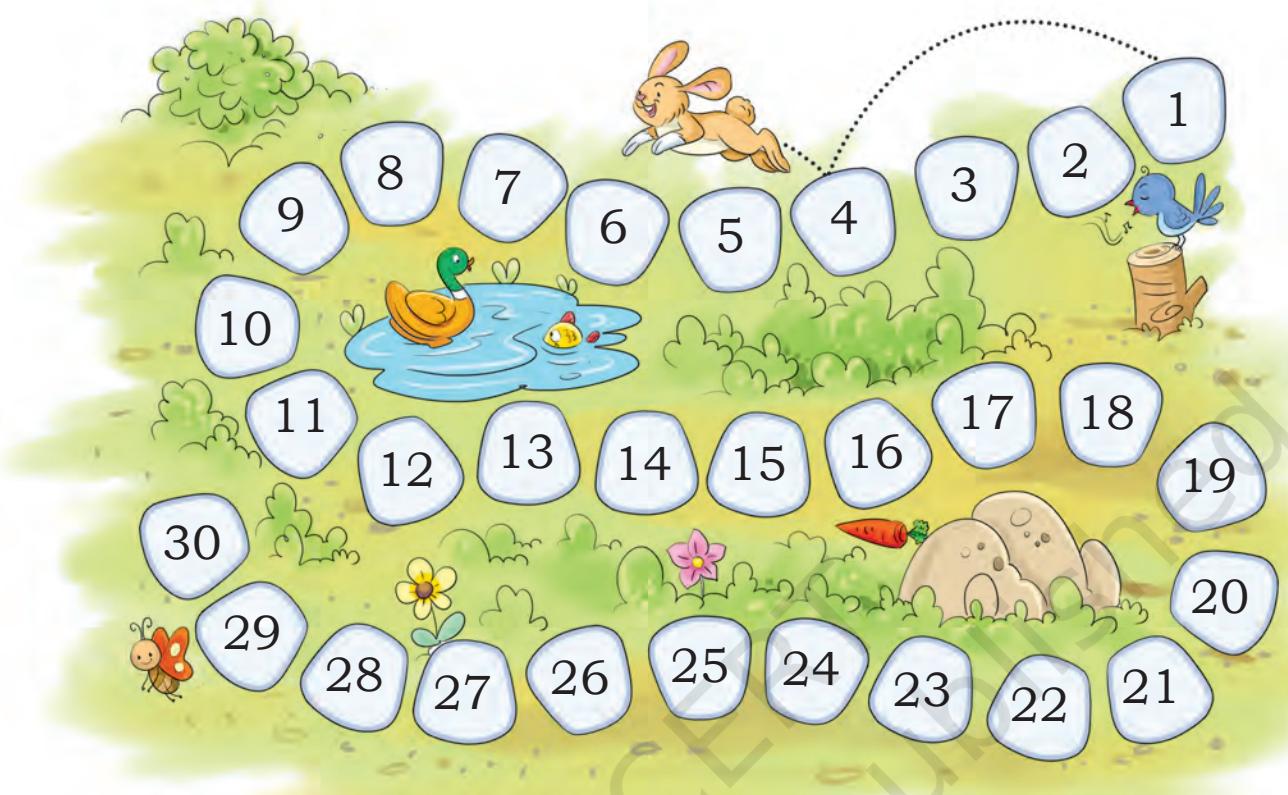
H. **AA BB CC DD EE**

.....



Kikku rabbit jumps on the 4th tile. He forgot where to jump next. Help him by drawing a circle  on the next tiles.

1, 4, _____, _____, _____, _____, _____



Kikku's mother also jumps on the 6th tile. Help her by putting a  on the next tiles.

1, 6, 11, _____, _____, _____, _____, _____



Let us Do

Extend the following number patterns.

A. 5, 10, 15,

B. 7, 14, 21,

C. 1, 7, 13,





Let us Do

- Circle  the *aasanas* with standing or vertical lines.
- Tick  the *aasanas* with both vertical and slanting lines.
- Cross  the *aasanas* which have curved lines.
- Put a star  along the *aasanas* that have sleeping or horizontal lines.
- Try some of these *aasanas*. Discuss the lines that you notice while doing the *aasanas*.

Facilitate the children in practising yoga poses. Give instructions like, keep the back straight, arms straight, curve the back, slant the arms and legs, etc. Also tell them about *Ashtanga Yoga*, as described in the ancient *Yoga Sutras of Patanjali*.



What is Straight?

Hold a piece of thread in your hands.
Sleeping/Horizontal line



Is it straight?

Slanting line



Is it straight?

Standing/sleeping/slanting lines are _____



Let us Do

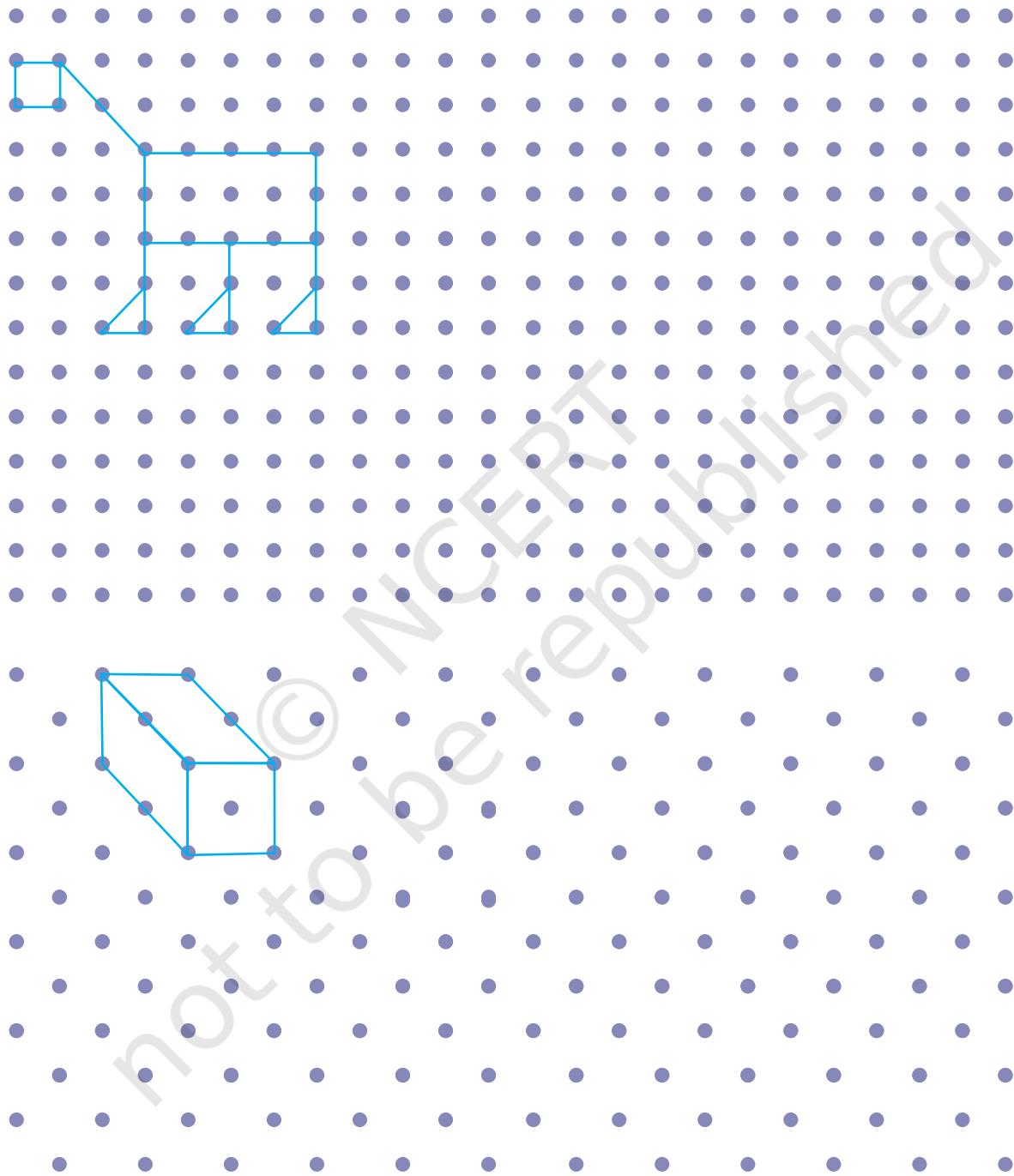
Trace the missing vertical, horizontal, slanting and curved lines in the picture given below.



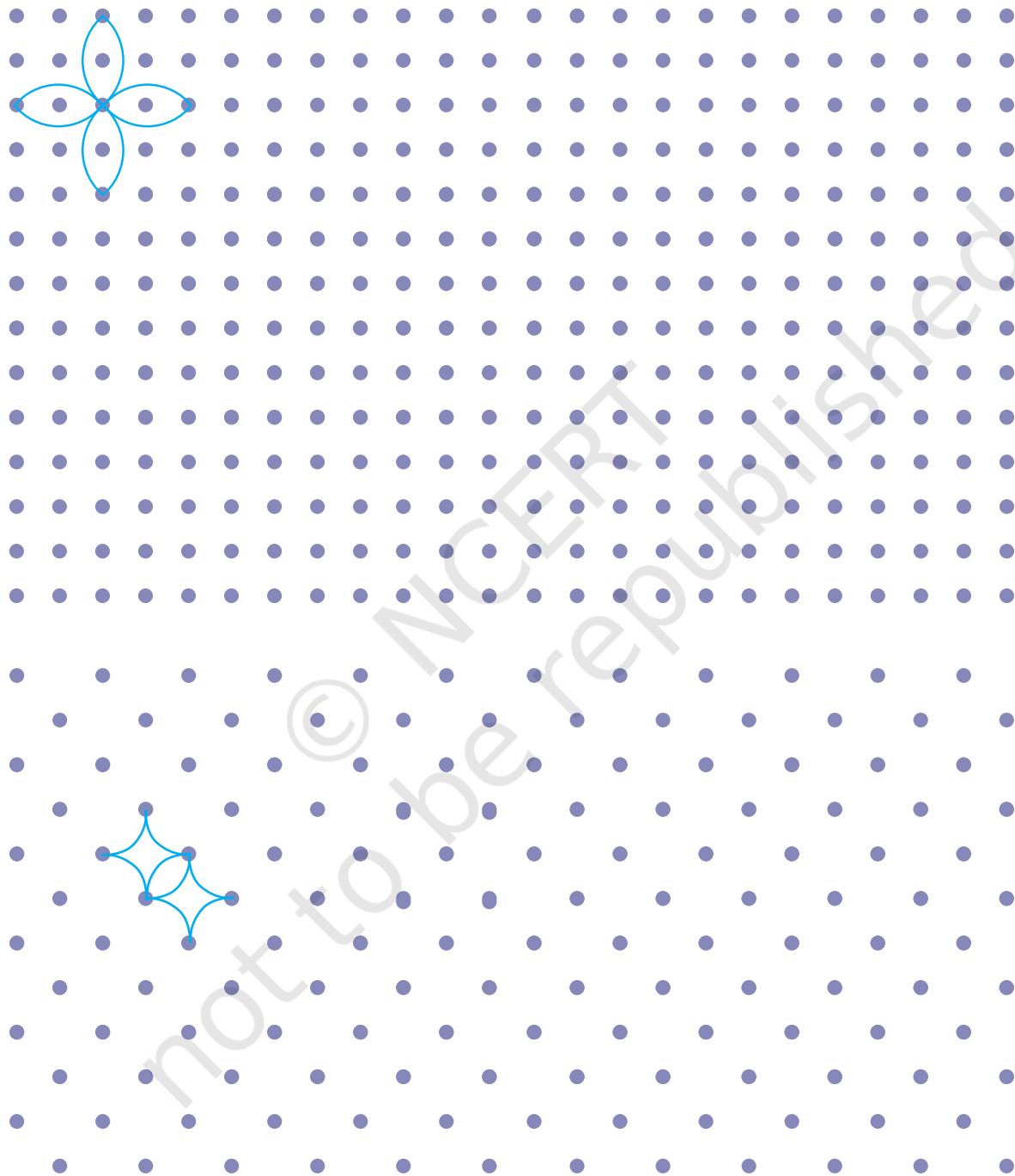


Let us Play with Dots

A. Make new shapes with straight lines (vertical, horizontal and slanting).



B. Draw different figures with the help of curved lines, like clouds, rainbow, etc.





Let us Do

- A. Make your own drawing using different types of lines in the space given. Draw a design with any two types of lines.

- B. Draw a design with any three types of lines.



C. Draw a design using all types of lines.



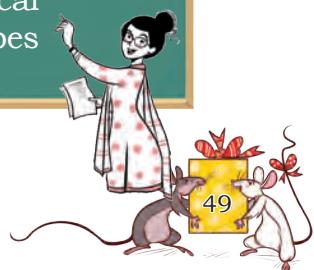
Project Work

Fun with Folding

If we fold a paper in half, it makes a crease in the center. Now if we keep folding the paper further we get a number of creases. Let us see the different lines we get after folding the paper. Trace the straight lines with red crayon and slanting lines with blue crayon.

- Fold a paper with your friend and check who gets the maximum number of creases.
- Try to make curved lines by paper folding.

Discuss various art forms like *Madhubani*, *Kalamkari*, *Warli* or any other local art forms that they are familiar with. Teacher might invite local painters to share their process of drawing different lines and shapes with children.





6

Decoration for Festival



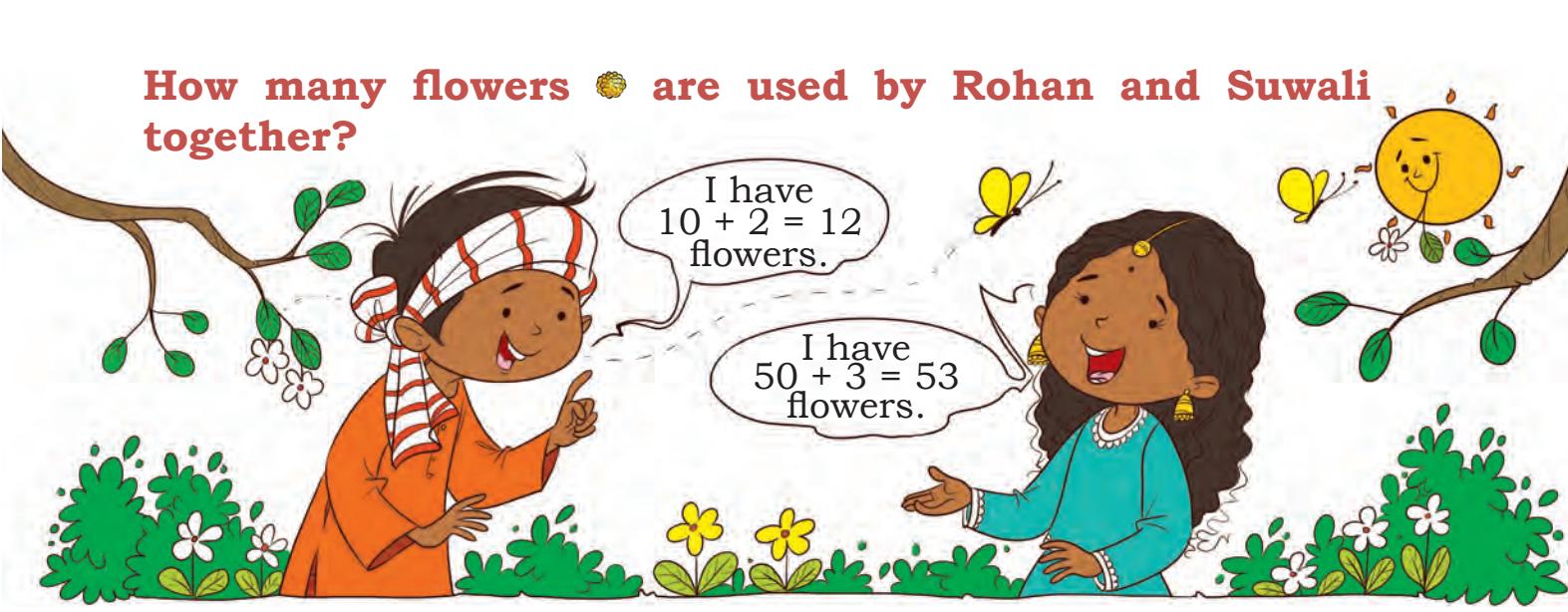
Decoration for Celebration!

Rohan and his friends need garlands to decorate their homes for celebration. Each has 10 flowers .

Complete the given table with the help of the above picture.

| Name | Number of | Number of | Total number of |
|--------|---------------|---------------|---------------------|
| Rohan | 1 | 2 | $10 + 2 = 12$ |
| Simran | 3 | 7 | $30 + 7 = 37$ |
| Akash | 4 | 8 | $40 + 8 = 48$ |
| Suwali | 5 | | $50 + 3 = 53$ |
| Javed | | | |
| Zoha | | | |

How many flowers ● are used by Rohan and Suwali together?



Rohan brings



2 ●

$$10 + 2 = 12 \text{ ●}$$

Suwali brings



3 ●

$$50 + 3 = 53 \text{ ●}$$

Suwali and Rohan together bring



5 ●

$$60 + 5 = 65 \text{ ●}$$

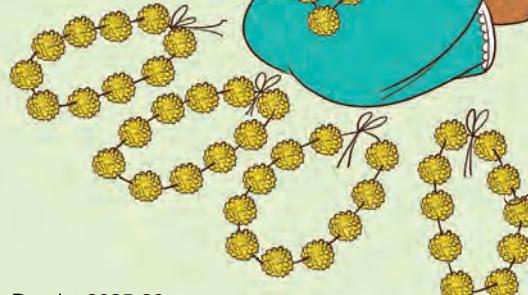
Tens (T) Ones (O)

| | |
|-------|---|
| 1 | 2 |
| + 5 | 3 |
| <hr/> | |

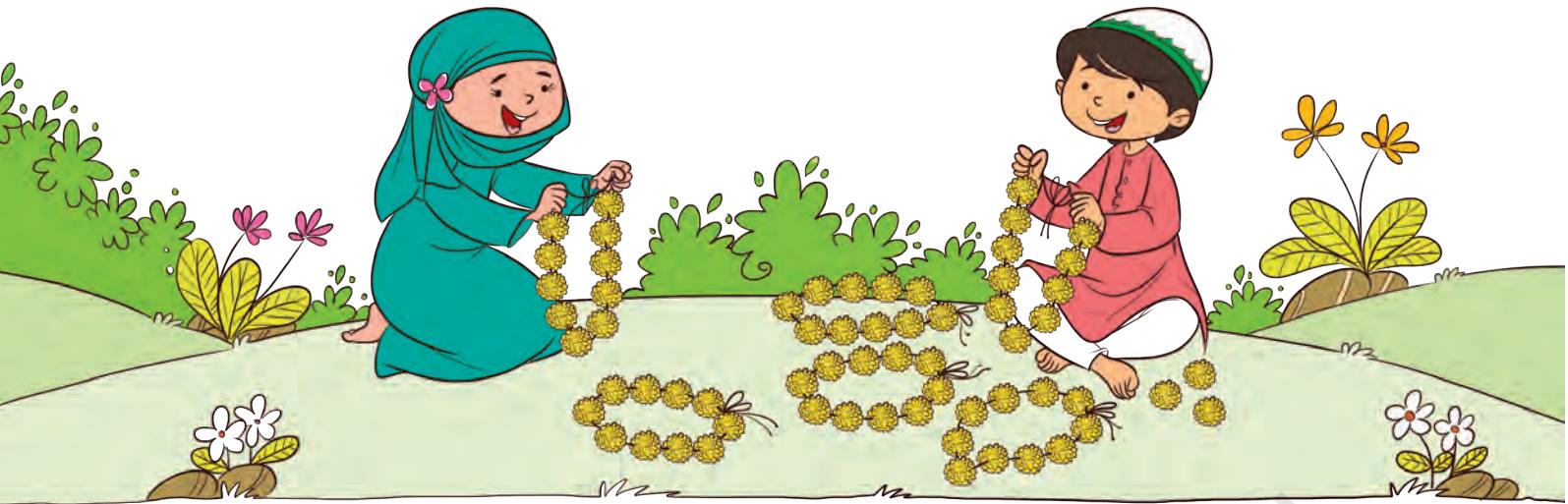
| | |
|-------|---|
| T | O |
| 1 | 2 |
| + | 3 |
| <hr/> | |

| | |
|-------|---|
| T | O |
| 1 | 2 |
| + | 3 |
| <hr/> | |

Wow! We both have 65 flowers.



How many flowers 🌸 are used by Zoha and Javed in all?

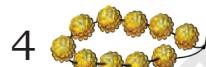


Zoha brings



$$20 + 0 = 20$$

Javed brings



$$40 + 3 = 43$$

Zoha and Javed together bring



$$60 + 3 = 63$$

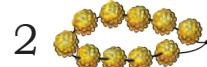
$$\begin{array}{r} \text{T} \quad \text{O} \\ 4 \quad 3 \\ + 2 \quad 0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T} \quad \text{O} \\ 4 \quad 3 \\ + 2 \quad 0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T} \quad \text{O} \\ 4 \quad 3 \\ + 2 \quad 0 \\ \hline \end{array}$$

What is the total number of flowers 🌸 used by Zoha and Akash?

Zoha brings



$$20 + 0 = 20$$

Akash brings



Zoha and Akash together bring

$$\begin{array}{r} \text{T} \quad \text{O} \\ 4 \quad 8 \\ + 2 \quad 0 \\ \hline \end{array}$$



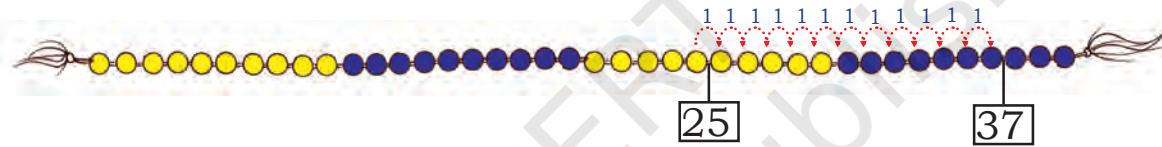
What is the total number of flowers 🌸 used by Rohan and Simran?

| | | |
|---------------------------------|--|--|
| Rohan brings | | |
| Simran brings | | |
| Rohan and Simran together bring | | |

Let us do it on Ginladi!

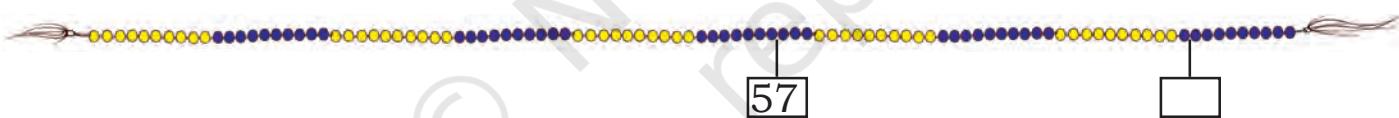


A. $25 + 12 =$



B. $57 + 34 =$

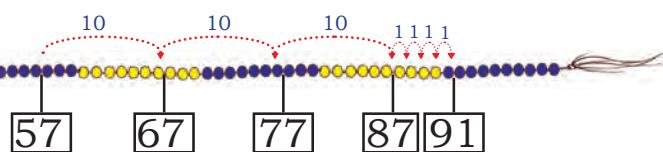
Count ___ ahead of ___



Let us understand this way.

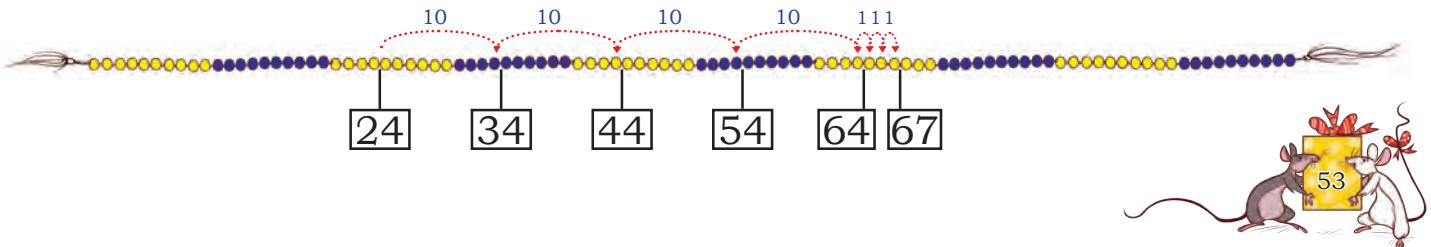
$$57 + 34 = 57 + 30 + 4$$

$$87 + 4 = 91$$



C. $24 + 43 =$

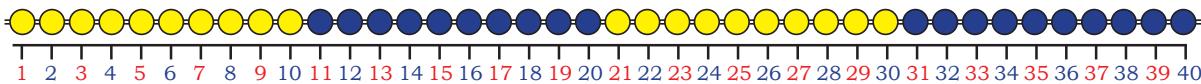
We can write $24 + 40 + 3 = 64 + 3 = 67$



We can get the number 43 in another way: $20 + 20 + 3$



It is difficult to count the beads of *ginladī* every time.
Let me write the numbers in place of beads.



Now add numbers on the number line.

A. $23 + 14 =$ 37



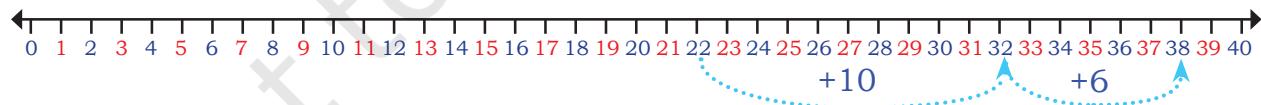
B. $24 + 16 =$ 40



C. $11 + 22 =$ 33



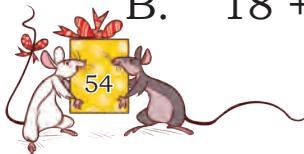
Read the number line and fill the boxes.

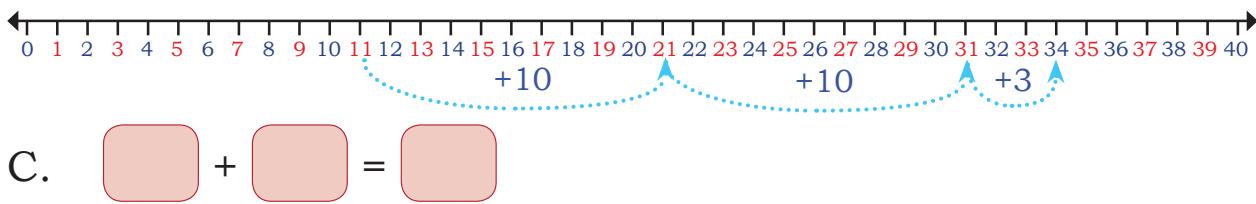


A. $22 +$ 16 $= 38$



B. $18 +$ 16 $=$ 34





Add these Numbers

$$\begin{array}{r} 44 \\ + 23 \\ \hline \end{array}$$

$$\begin{array}{r} 56 \\ + 23 \\ \hline \end{array}$$

$$\begin{array}{r} 60 \\ + 25 \\ \hline \end{array}$$

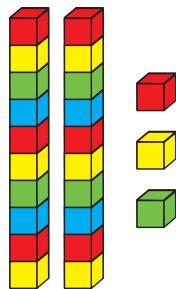
$$\begin{array}{r} 52 \\ + 30 \\ \hline \end{array}$$

Playing with Blocks

Mahi has some blocks. Isha came with her blocks to play. Let us help them in finding how many blocks they have in total.

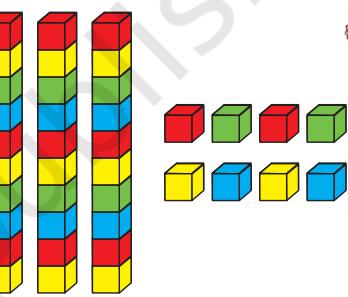


Mahi's Blocks



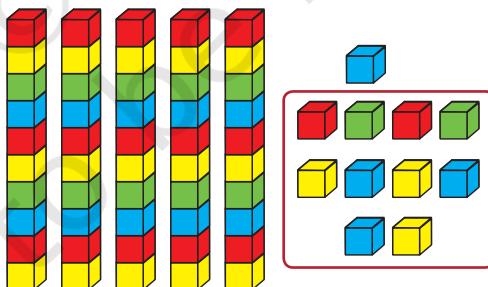
2 tens 3 ones

Isha's Blocks

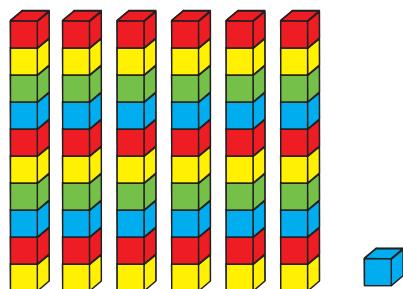


3 tens 8 ones

+



5 tens 11 ones (1 tens 1 ones)



6 tens 1 ones



Let us find the total number of blocks.

3 tens
6 ones

4 tens
7 ones

7 tens
13 ones

8 tens and 3 ones

$80 + 3 = 83$

4 tens
5 ones

4 tens
9 ones

5 tens
8 ones

3 tens
2 ones

8 tens

1 ten
4 ones

2 tens
6 ones

4 tens
8 ones



Mahi, do you know, we can add without counting all the blocks again and again?

Oh really, Isha! Can you show me how?

Adding ones

$$\begin{array}{r} \text{T} \quad \text{O} \\ 3 \quad 6 \\ + 4 \quad 7 \\ \hline \end{array}$$

$$(6 + 7 = 13) \xrightarrow{\hspace{1cm}} \begin{array}{r} \text{T} \quad \text{O} \\ 3 \quad 6 \\ + 4 \quad 7 \\ \hline 3 \end{array}$$

1 tens and
3 ones

Adding tens

$$(3 + 4 + 1 = 8) \xrightarrow{\hspace{1cm}} \begin{array}{r} \text{T} \quad \text{O} \\ 3 \quad 6 \\ + 4 \quad 7 \\ \hline 8 \end{array}$$

8 tens

Shifting the tens

Add

$$\begin{array}{r} 46 \\ + 39 \\ \hline \end{array}$$

$$\begin{array}{r} 56 \\ + 19 \\ \hline \end{array}$$

$$\begin{array}{r} 36 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} 30 \\ + 58 \\ \hline \end{array}$$

$$\begin{array}{r} 45 \\ + 35 \\ \hline \end{array}$$



Let us Do

- A. Rahim  made 43 runs  in one match and 58 runs in another match. How many runs he made in the two matches together?



- B. Simarpreet  had 12 colour pencils . Her mother gifted her 36 more colour pencils. How many total colour pencils does she have now?
- C. Heena  collected 34 red marbles  and 57 blue marbles . How many total marbles does she have now?
- D. Sarika  spent ₹56 in the fair, while Manish spent ₹35 in the fair. What is the total money they both spent in the fair?
- E. There are 36 men  and 47 women  in the bus . How many people are there in the bus?



Let us Count Diyas

The illustration is divided into two panels by a vertical line. Both panels show a man in a blue shirt and white pants sitting on the grass, making small clay diya lamps on a long wooden tray. A woman in a purple sari and a young girl in a yellow dress stand behind him, watching. In the background, there are green trees and a thatched hut.

Left Panel:

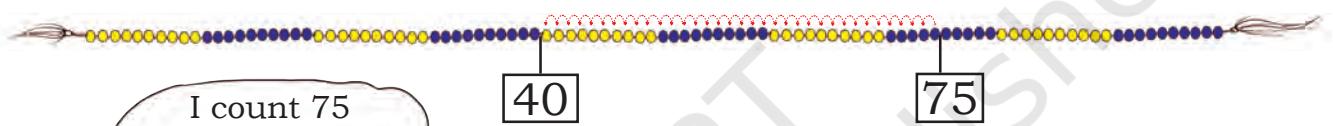
I made
75 *diyas* in a day and
sold 35 out of them.

Right Panel:

Let me count how
many *diyas* are left
now? 1, 2, 3...

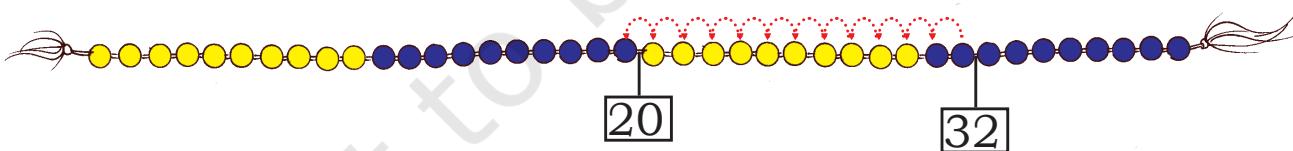
Bottom Left Corner:

58



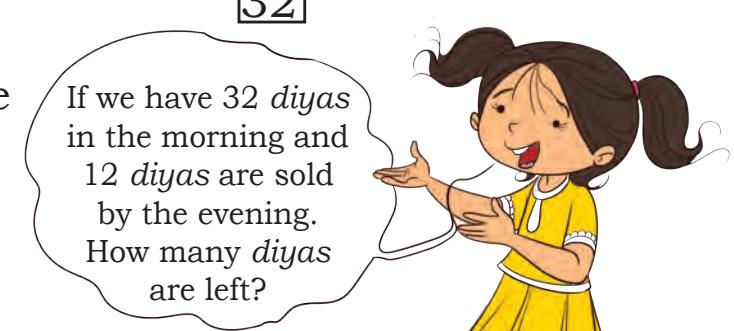
That means if we take away 35 from 75, then the answer will be 40.

$$75 - 35 = 40$$



On taking away 12 from 32, we get 20.

$$32 - 12 = 20$$

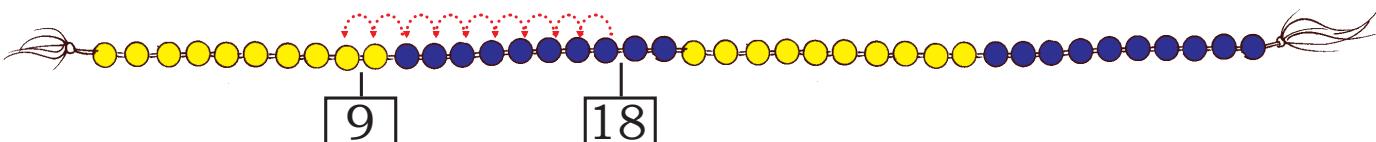


We can also use the *ginladi* to find the answers of the following.

A.

Take away 9 from 18

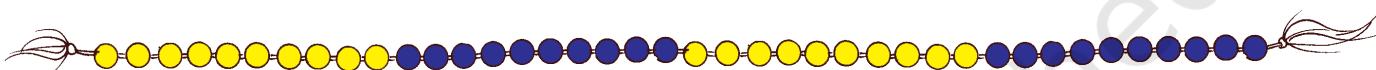
$$18 - 9 =$$



B.

Take away 8 from 12

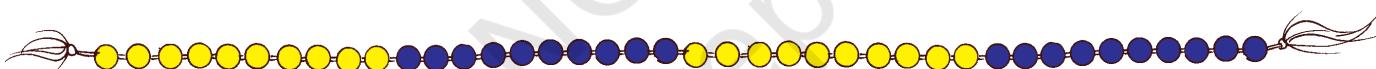
$$12 - 8 =$$



C.

Take away 18 from 30

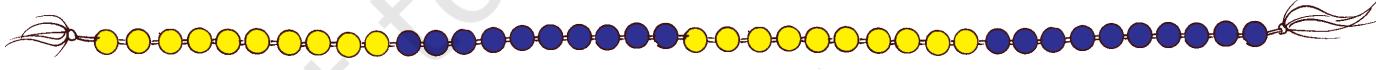
$$30 - 18 =$$



D.

Take away 14 from 23

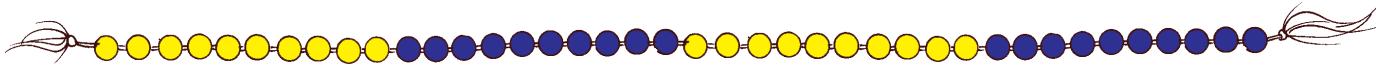
$$23 - 14 =$$



E.

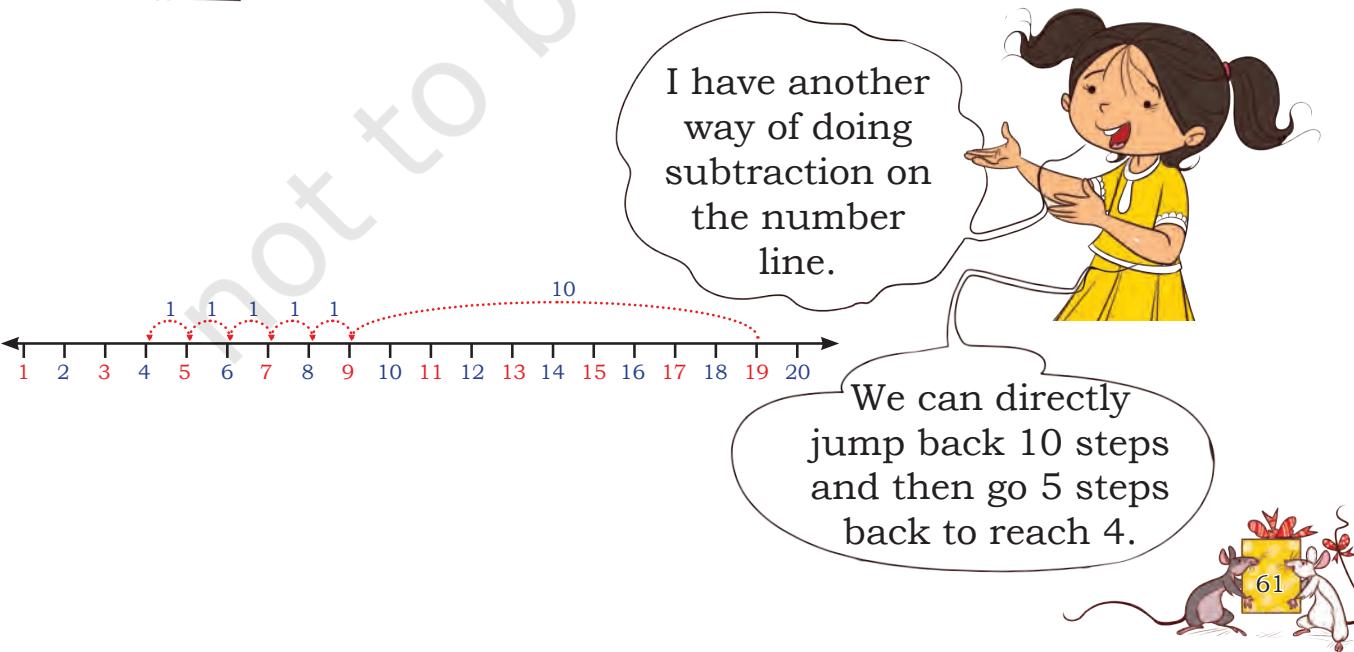
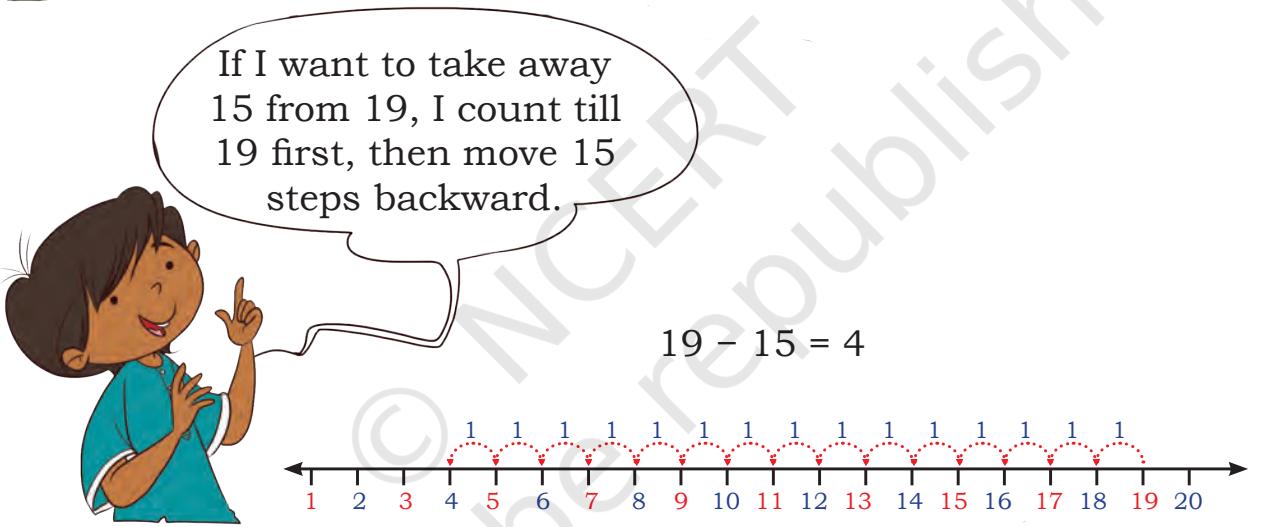
Take away 17 from 26

$$26 - 17 =$$



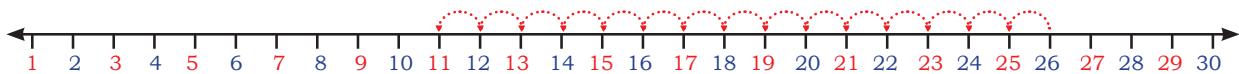


Let us make a
ginladi on the
paper then.

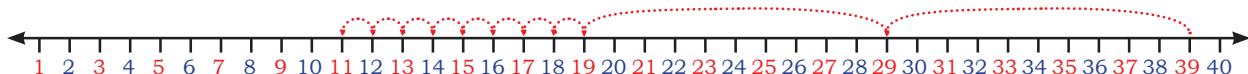


Let us do some practice on number line.

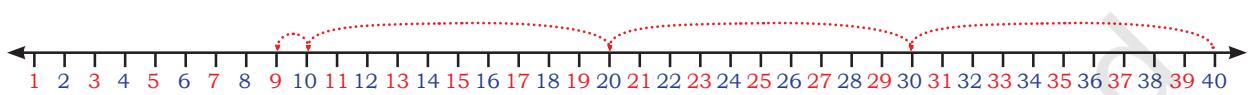
Read the number line and fill the boxes.



A. $26 - \boxed{} = \boxed{}$



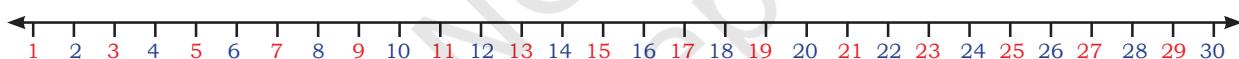
B. $39 - 28 = \boxed{}$



C. $\boxed{} - \boxed{} = \boxed{}$



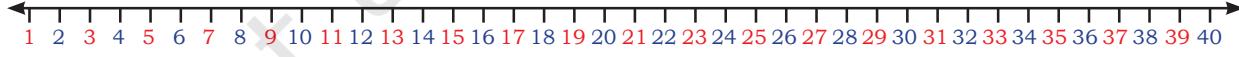
D. $38 - 11 = \boxed{}$



E. $22 - 22 = \boxed{}$



F. $14 - 0 = \boxed{}$



G. $35 - 12 = \boxed{}$

Discuss with children about subtracting zero and subtracting the number with itself by taking examples from daily life situations, like, spending all money or spending no money.



Playing with Blocks



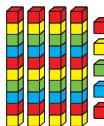
10



1



I have 45
to my friend. I am left with



I give 12

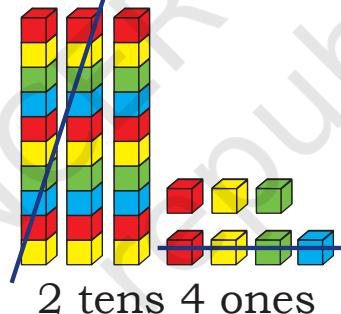
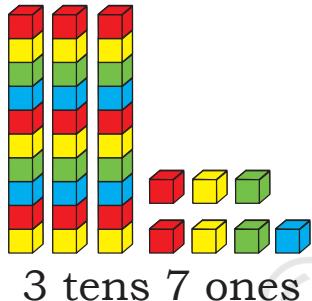


$$\begin{array}{r} \text{T} \quad \text{O} \\ 4 \quad 5 \\ - \quad 1 \quad 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T} \quad \text{O} \\ 4 \quad 5 \\ - \quad 1 \quad 2 \\ \hline \quad \quad \quad 3 \end{array}$$

$$\begin{array}{r} \text{T} \quad \text{O} \\ 4 \quad 5 \\ - \quad 1 \quad 2 \\ \hline \quad \quad \quad 3 \quad 3 \end{array}$$

Subtract 24 from 37



$$\begin{array}{r} \text{T} \quad \text{O} \\ 3 \quad 7 \\ - \quad 2 \quad 4 \\ \hline \end{array}$$



Let us Do

$$\begin{array}{r} 2 \quad 4 \\ - \quad 1 \quad 3 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \quad 4 \\ - \quad 3 \quad 1 \\ \hline \end{array}$$

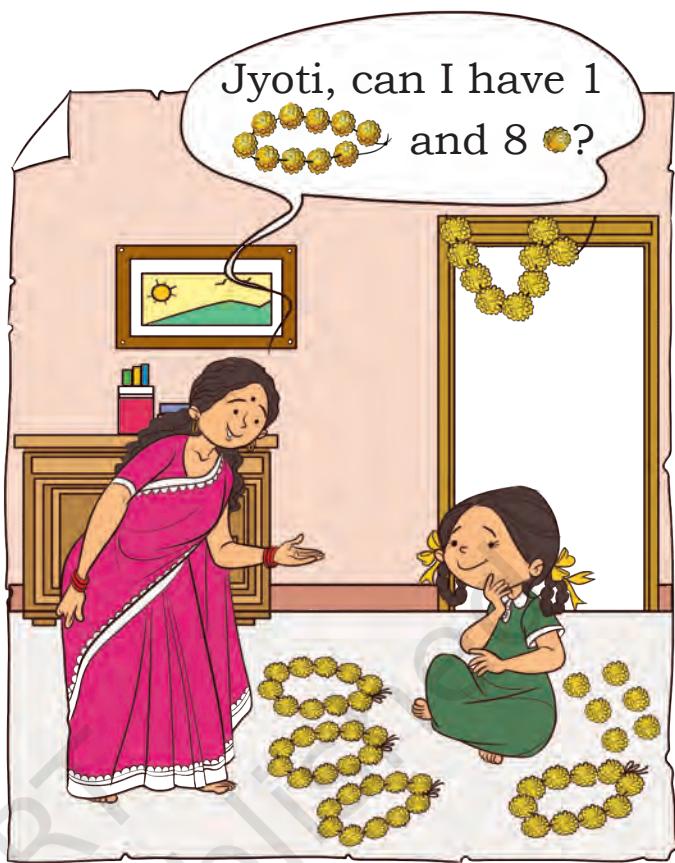
$$\begin{array}{r} 3 \quad 2 \\ - \quad 1 \quad 2 \\ \hline \end{array}$$

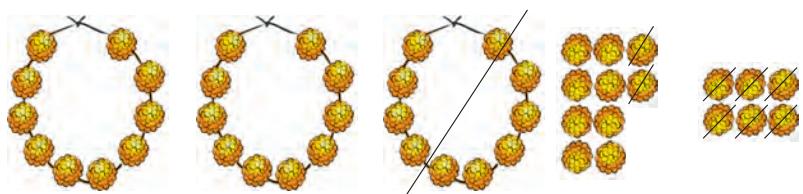
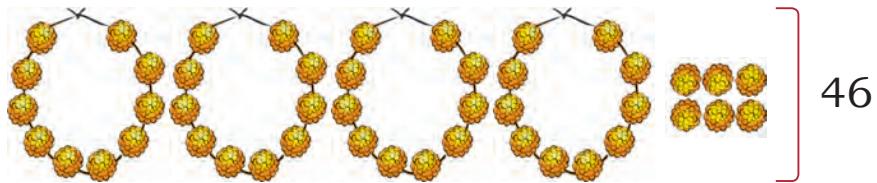
$$\begin{array}{r} 4 \quad 6 \\ - \quad 3 \quad 4 \\ \hline \end{array}$$

- A. Shikha has ₹82. She bought pencils for ₹22. How much money is she left with?
- B. Ruby has ₹60. She bought a notebook for ₹20. How much money is she left with?



Decorating with Garlands





$$\begin{array}{r} \text{T} \quad \text{O} \\ 4 \quad 6 \\ - 1 \quad 8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{T} \quad \text{O} \\ \boxed{3} \quad \boxed{16} \\ \cancel{4} \quad \cancel{6} \\ - 1 \quad 8 \\ \hline \end{array}$$

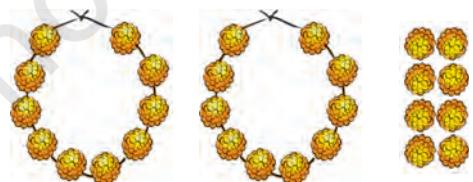
(opens 1 = 16

$$16 - 8 = 8$$

$$\begin{array}{r} \text{T} \quad \text{O} \\ \cancel{3} \quad \cancel{16} \\ \cancel{4} \quad \cancel{6} \\ - 1 \quad 8 \\ \hline \end{array}$$



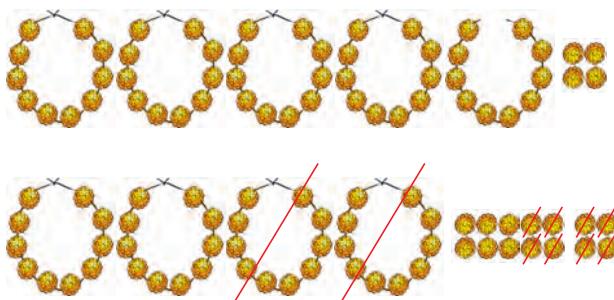
Now, Jyoti has 28 flowers in all. She gives 5 to her friend. Help Jyoti to find out how many flowers is she left with?



$$\begin{array}{r} 2 \quad 8 \\ - \quad 5 \\ \hline \end{array}$$



Now, Jyoti has 54 flowers in all. She gives 28 to her mother. How many flowers is she left with?



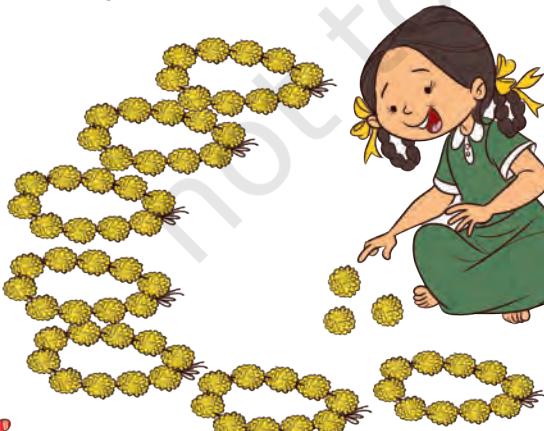
$$\begin{array}{r}
 54 \\
 - 28 \\
 \hline
 \end{array}
 \rightarrow
 \begin{array}{r}
 \cancel{4} \ \cancel{14} \\
 \cancel{5} \ \cancel{4} \\
 - 28 \\
 \hline
 6
 \end{array}
 \rightarrow
 \begin{array}{r}
 \cancel{4} \ \cancel{14} \\
 \cancel{5} \ \cancel{4} \\
 - 28 \\
 \hline
 26
 \end{array}$$

Oh! I need to open one garland. Then I will have 4 garlands and 14 flowers, from it I can give 8 flowers.

$14 - 8 = 6$

I am left with 2 garlands and 6 flowers or 26 flowers in all.

Jyoti has 73 flowers in all. She gives 47 to her mother. How many flowers is she left with?



| | Garlands | Flowers |
|--------------------|----------|---------|
| Jyoti has | 7 | 3 |
| Jyoti gives | 4 | 7 |
| Jyoti is left with | | |



Let us Do

$$\begin{array}{r} 45 \\ - 18 \\ \hline \end{array}$$

$$\begin{array}{r} 84 \\ - 37 \\ \hline \end{array}$$

$$\begin{array}{r} 65 \\ - 45 \\ \hline \end{array}$$

$$\begin{array}{r} 27 \\ - 27 \\ \hline \end{array}$$

$$\begin{array}{r} 93 \\ - 48 \\ \hline \end{array}$$

Skip the Rope

Aman and Avni are playing 'skip the rope'. Both have to complete 20 skips. A skip can be counted when the rope passes under the feet. They will get two chances to skip. If one misses any skip in the first time then they will get one more chance to complete 20 skips.



- A. Aman skipped 14 times in the first chance. How many more skips he has to make to complete 20 skips?

$$20 - 14 = \underline{\quad}$$

$$14 + \underline{\quad} = 20$$

- B. Avni skipped 12 times in the first chance. How many more skips she has to make to complete 20 skips?

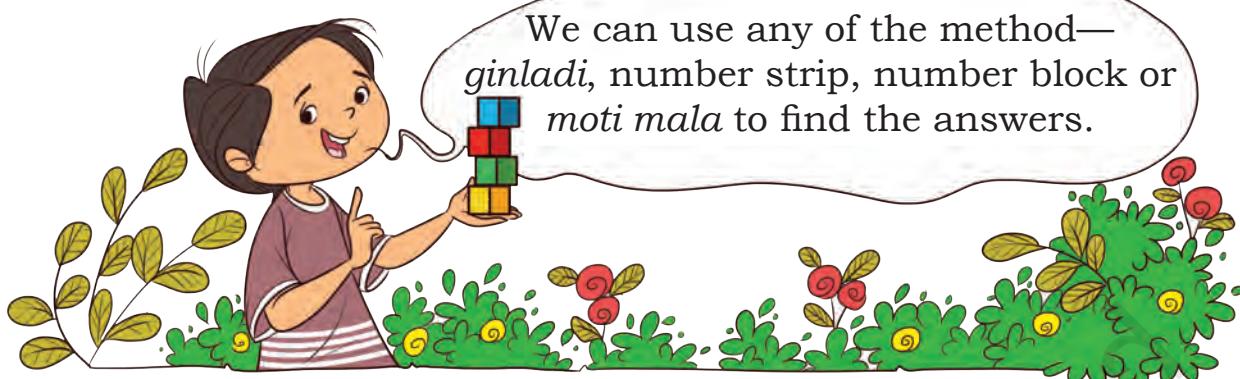
$$20 - 12 = \underline{\quad}$$

$$12 + \underline{\quad} = 20$$





Let us Do



- A. Anushka collected 63 shells . She gave 26 shells to her brother. How many shells are left with her?
- B. 54 passengers were sitting in the bus and 16 got down at the bus stand. How many are there in the bus now?
- C. There were 40 balloons and 13 balloons got burst. How many balloons are left?
- D. Kanika made 72 bangles . She sold 36 bangles. How many bangles are left with Kanika now?
- E. 56 birds were sitting on the tree . A few more birds joined them. Now there are 87 birds. Find out the number of birds that came later.
- F. Arman dribbled the ball 18 times. How many more times should he dribble the ball to complete 35 taps?

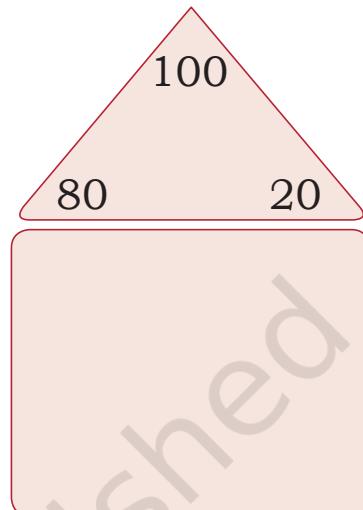
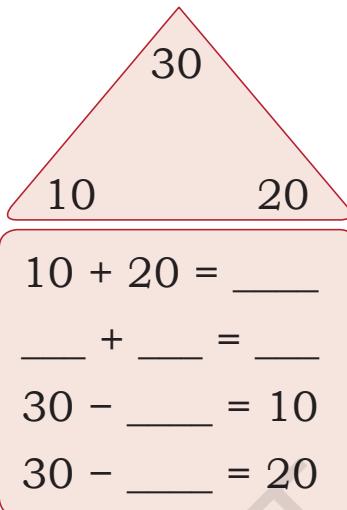
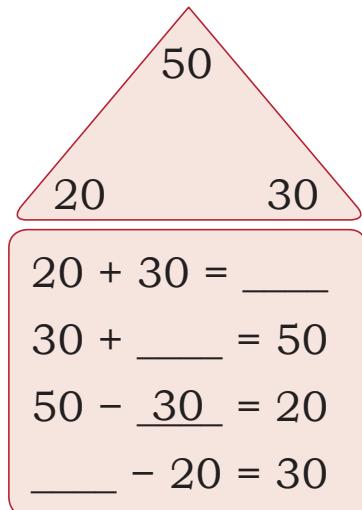
Addition and Subtraction Facts

Fill the missing numbers to complete the fact family.

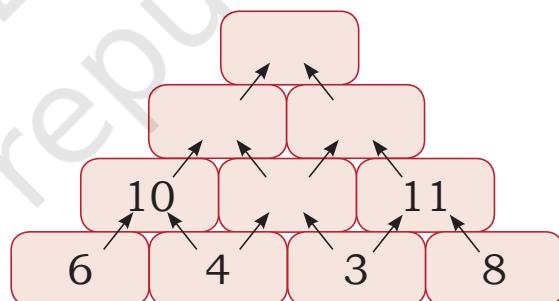
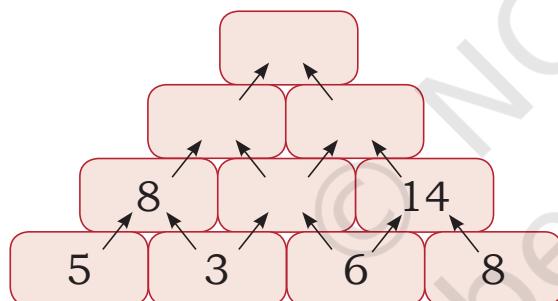
20, 30, 50

10, 20, 30

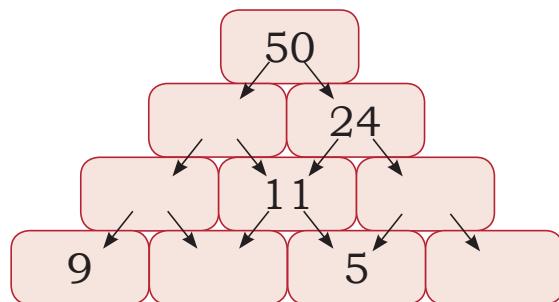
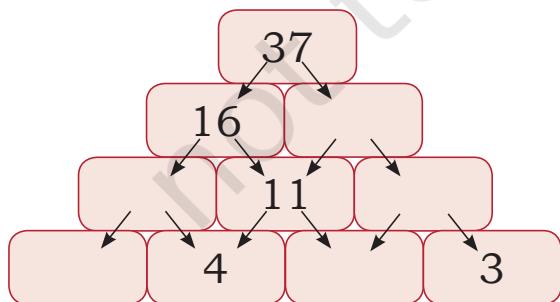
20, 80, 100



Addition and Subtraction Pyramid



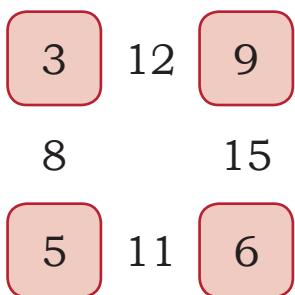
Addition pyramid



Subtraction pyramid



Look at this diagram.



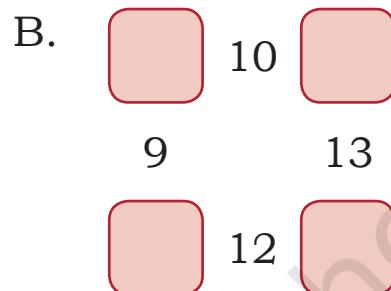
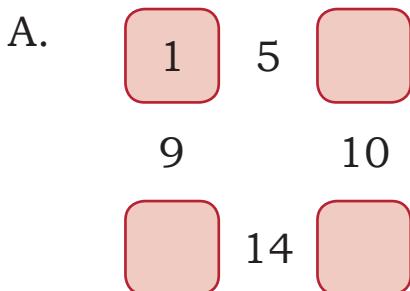
Here, $3 + 9 = 12$

$9 + 6 = 15$

$6 + 5 = 11$

$5 + 3 = 8$

Now complete the following diagrams.



Hania and Mansi's Gift

Hania and Mansi want to give a gift to their mother. For its decoration, they purchased some ribbons and a gift wrapper.

There are ₹78 in the purse. The cost of a gift wrapper is ₹24 and the cost of ribbons is ₹37.

A. How much money did they spend?



B. How much money is left with them?



Project Work

Daljeet has solved some questions and written down their answers. What do you think? Are they correct? Verify the answers.

Correct it if you find them wrong.

$$\begin{array}{r} 25 \\ + 36 \\ \hline 511 \end{array}$$

$$\begin{array}{r} 37 \\ + 58 \\ \hline 131 \end{array}$$

$$\begin{array}{r} 35 \\ - 17 \\ \hline 22 \end{array}$$

$$\begin{array}{r} 57 \\ - 78 \\ \hline 21 \end{array}$$

$$\begin{array}{r} 30 \\ - 17 \\ \hline 27 \end{array}$$



7

Rani's Gift

QRickit

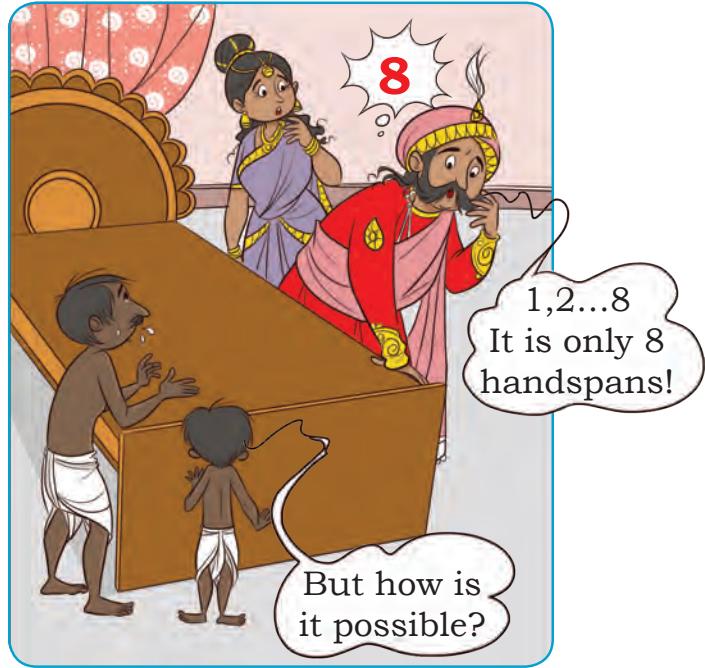
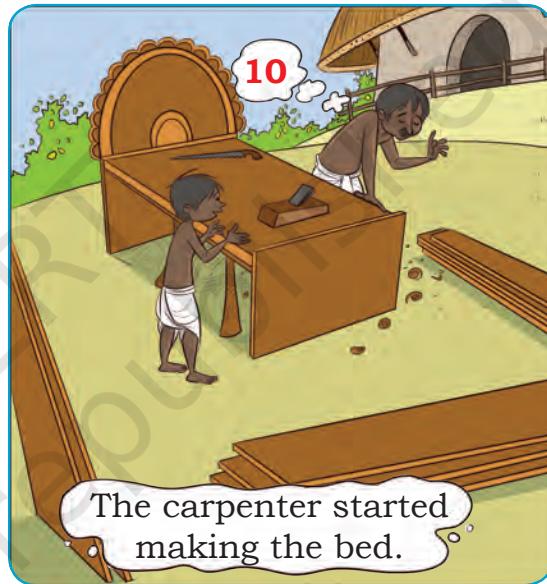
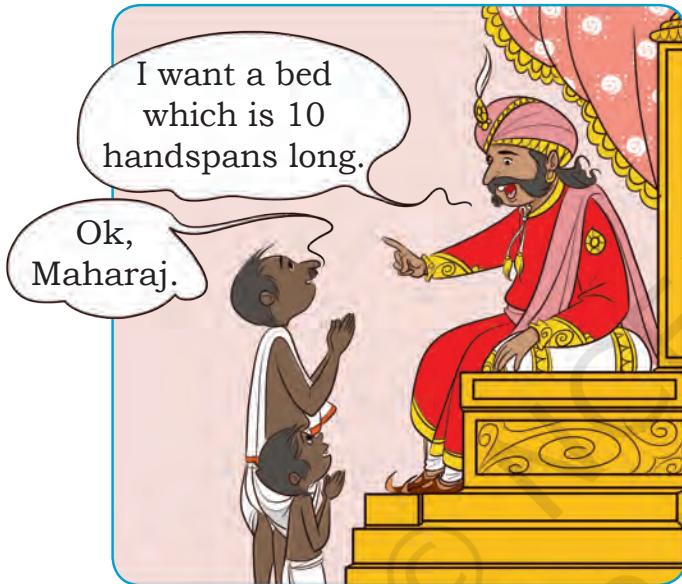


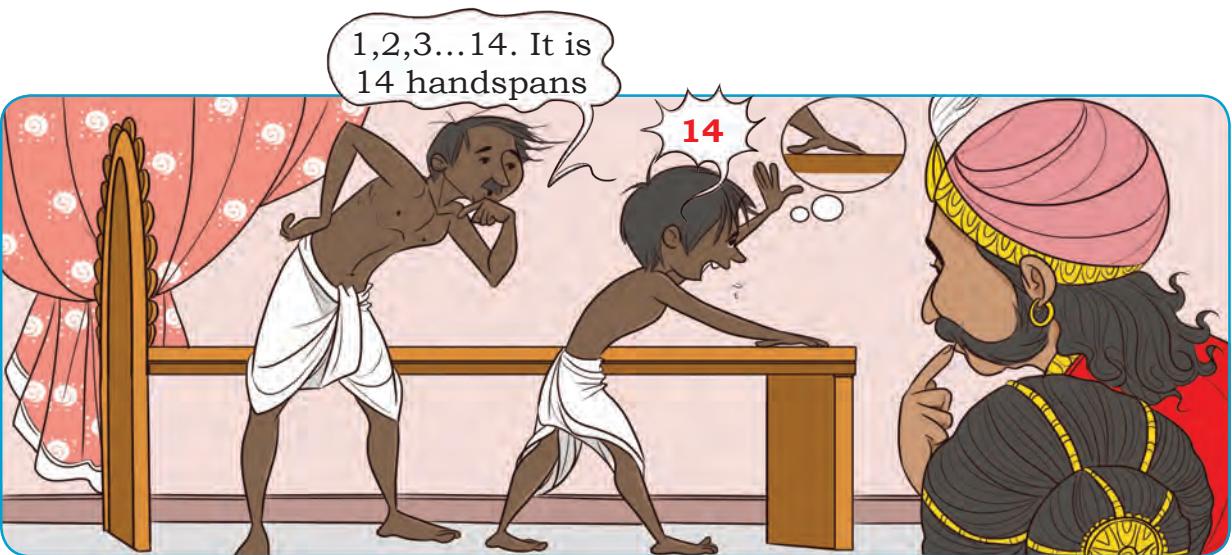
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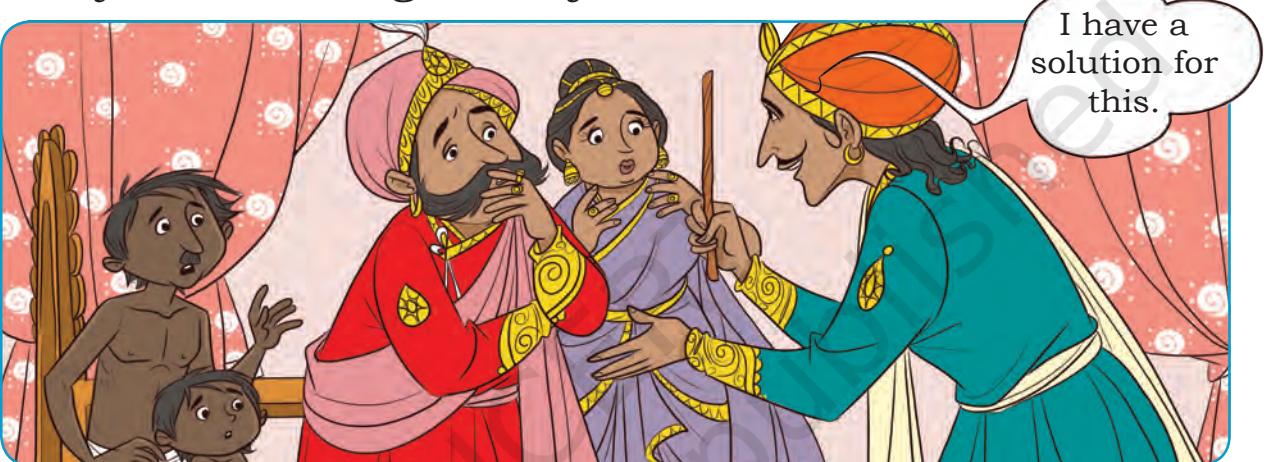
Let us Read

Once upon a time, Raja Jagdeep wanted to make a beautiful carved bed for his queen. He called his best carpenter from the town.





Everyone including the Raja was confused.



Discuss the solution which was given by the *Mantri* to solve the confusion.



Let us Do

Use your textbook to measure the length of the following objects.

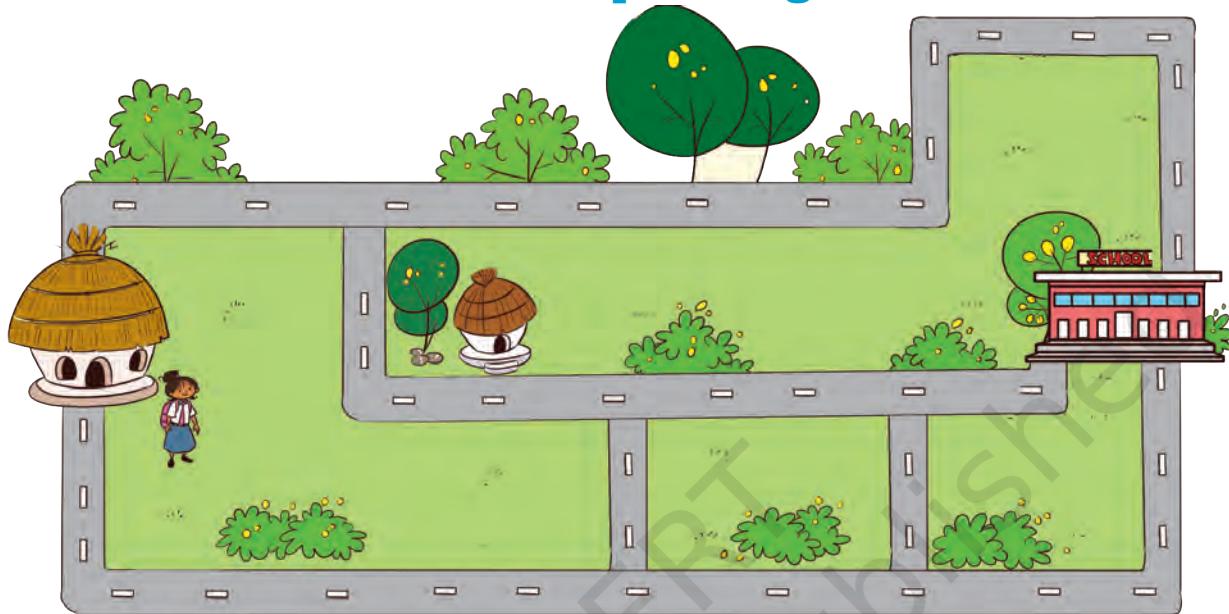
| Objects | Estimated length | Actual length |
|------------|------------------|---------------|
| Desk | | |
| Blackboard | | |
| Window | | |





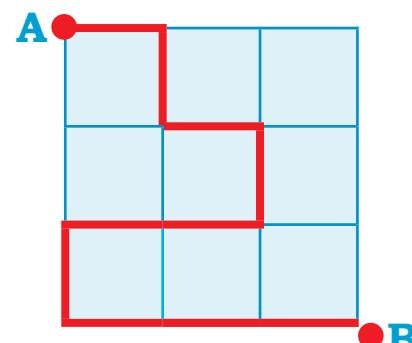
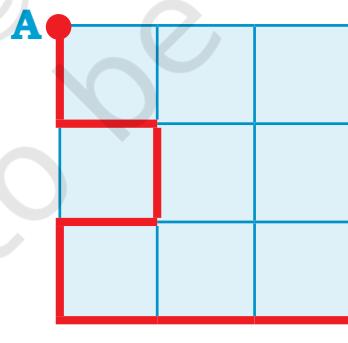
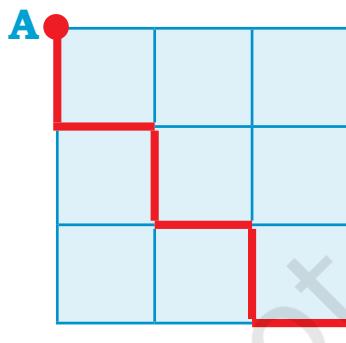
Let us Do

Kavita is going to the school from her home. She is getting late. Which path should she use to reach the school fast? Mark it in the picture given below.



Let us Do

Choose the longest path from A to B.

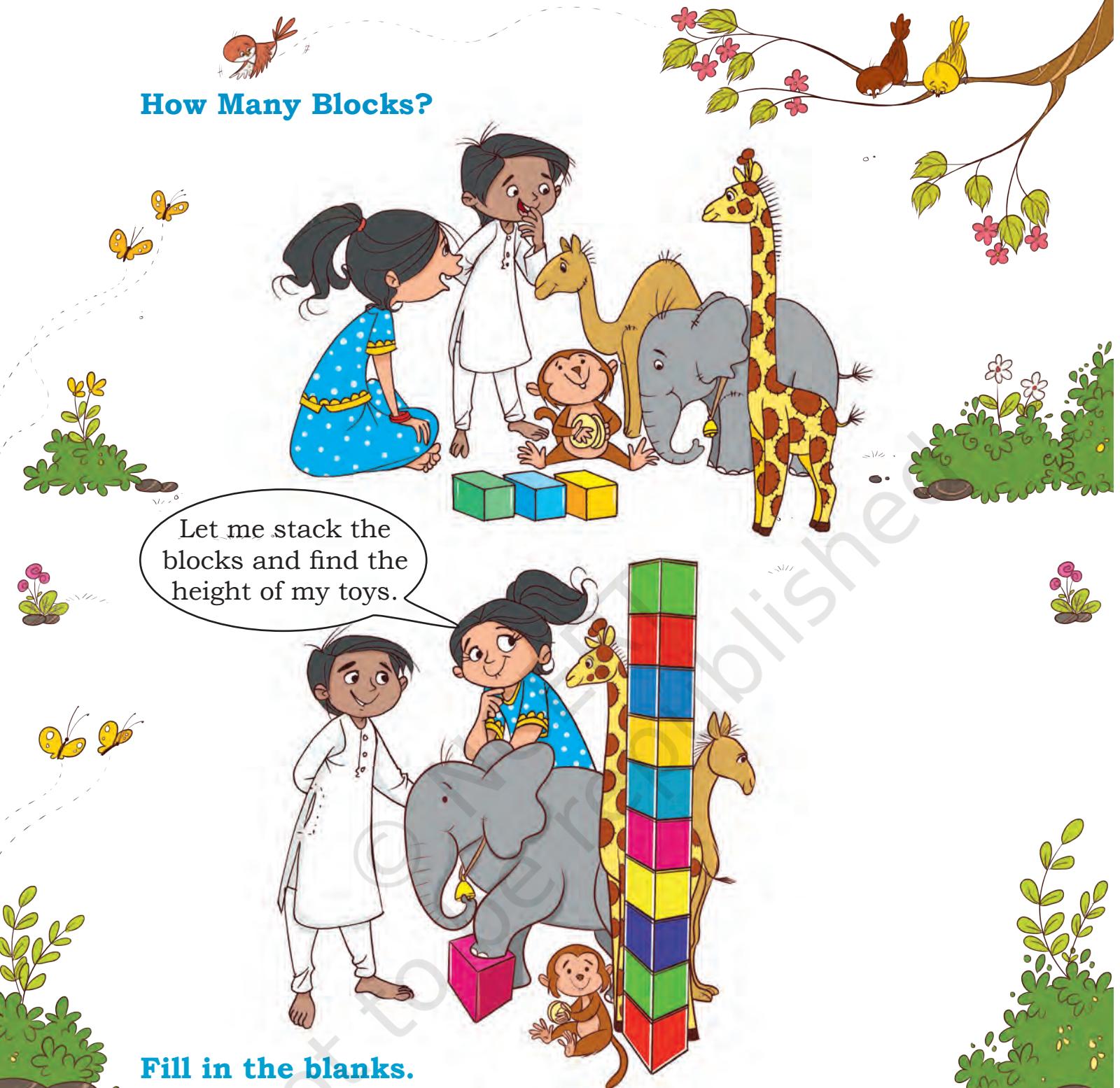


Also make the shortest path between A and B.

Encourage children to verify their choice of path using a thread. Ask them to help each other in measuring the length.

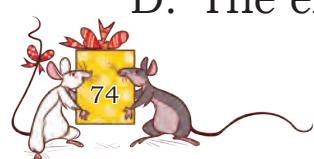


How Many Blocks?



Fill in the blanks.

- A. The giraffe is _____ blocks tall.
- B. The _____ is 7 blocks tall.
- C. The monkey is _____ blocks tall.
- D. The elephant is _____ blocks tall.





Let us Do

How long is your hand? Trace your hand in the space given below and count the number of lines.



Project Work

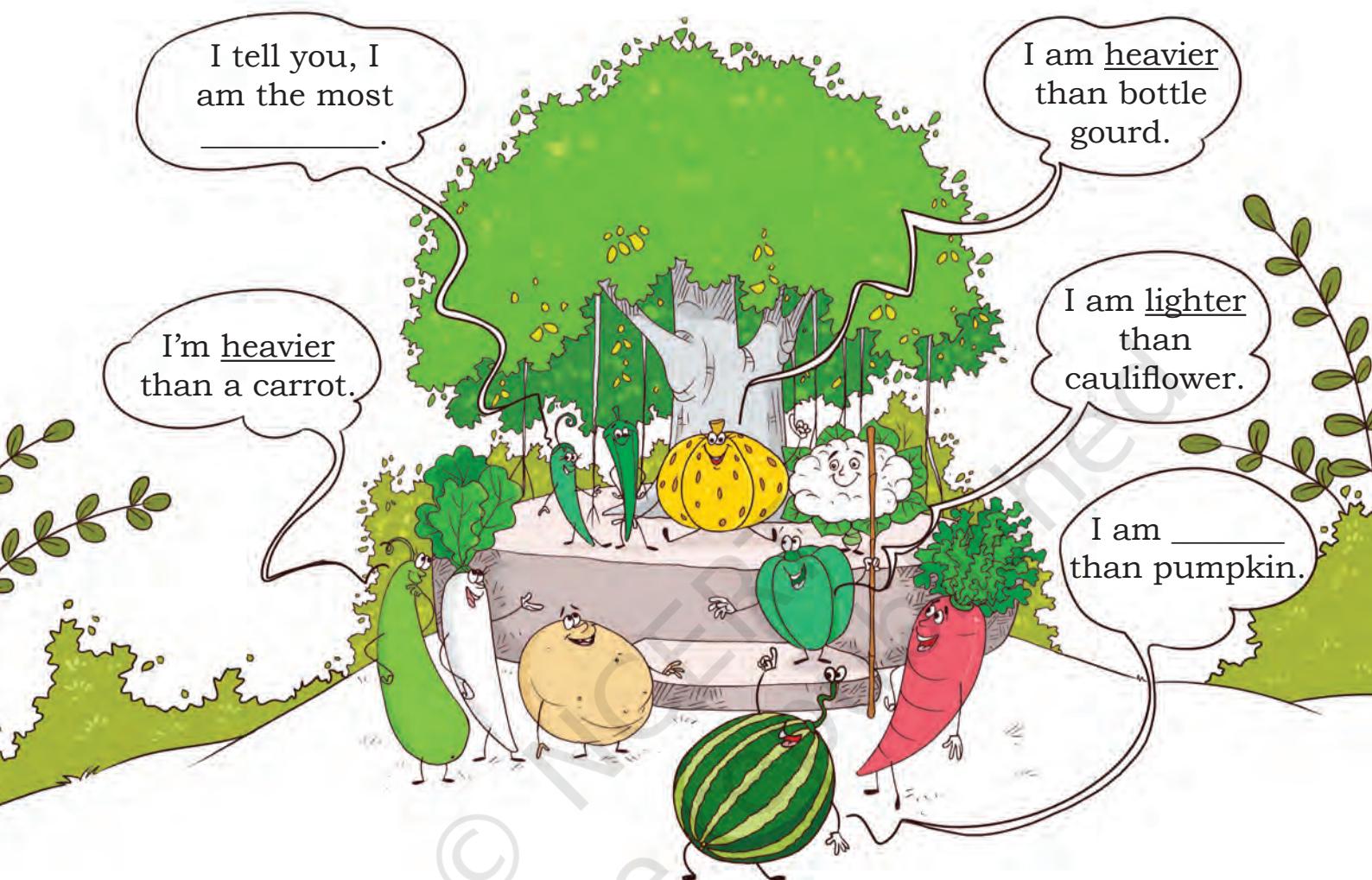
Find the length of the following using any tool of your choice (eraser, blocks, pencil). Record your measurement.

- Any wall of your house
- Length of your bed
- Length of a door



Pumpkin's Chaupal

Look at the picture and compare which vegetables are lighter or heavier than the other vegetables.



What do you think is heavier— a pumpkin or a watermelon?
Discuss.

Fill in the blanks.

- A. Muskmelon is heavier than carrot.
- B. Capsicum is lighter than _____.
- C. _____ is heavier than _____.
- D. _____ is lighter than _____.
- E. _____ is the heaviest of all.
- F. _____ is the lightest of all.



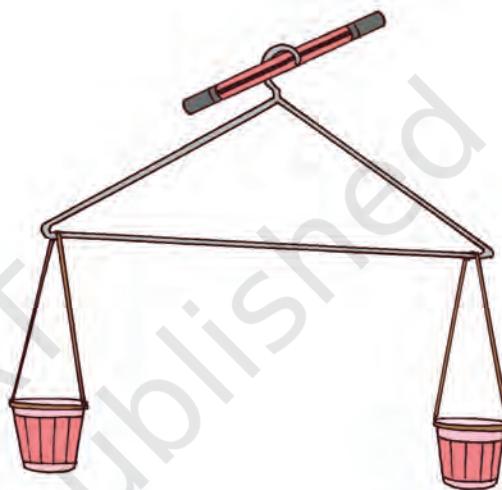
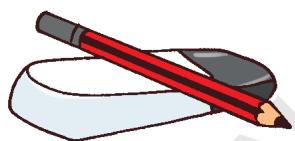
Let us Do

Collect a few things from your surroundings. Sort out the lightest and the heaviest among those. Arrange all the things in the increasing order of their weight.

How do you know which is light and which is heavy?

Make your own Balance!

Make your own balance with the help of a paper cup, thread and a hanger like the one shown here. Now compare any two objects like eraser, ball, bead, pencil, crayon, etc., to see which one is heavier.



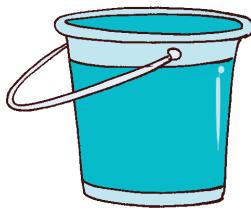
Let us Do

Circle ○ the heaviest one.

A.

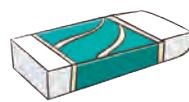


B.

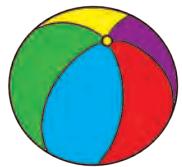


Circle ○ the lightest one.

A.



B.



Let us Think

Tick ✓ the vegetables and fruits which will make the balance go down. Mark Light (L) and Heavy (H).

A.

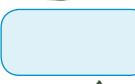


H

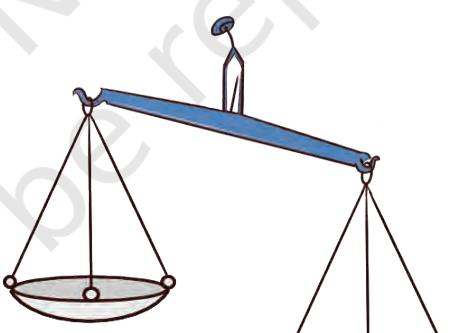


L

B.



C.

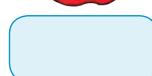


L

H



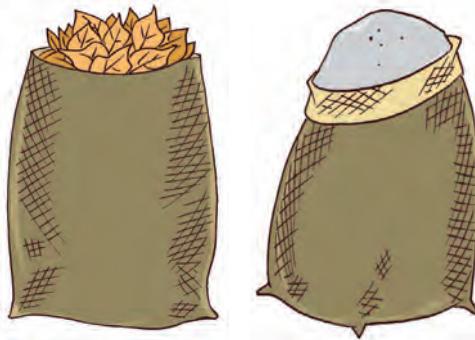
D.





Let us Do

Take two paper bags of same size. Fill one with sand and the other with dry leaves. Discuss their weights (which bag is heavier).

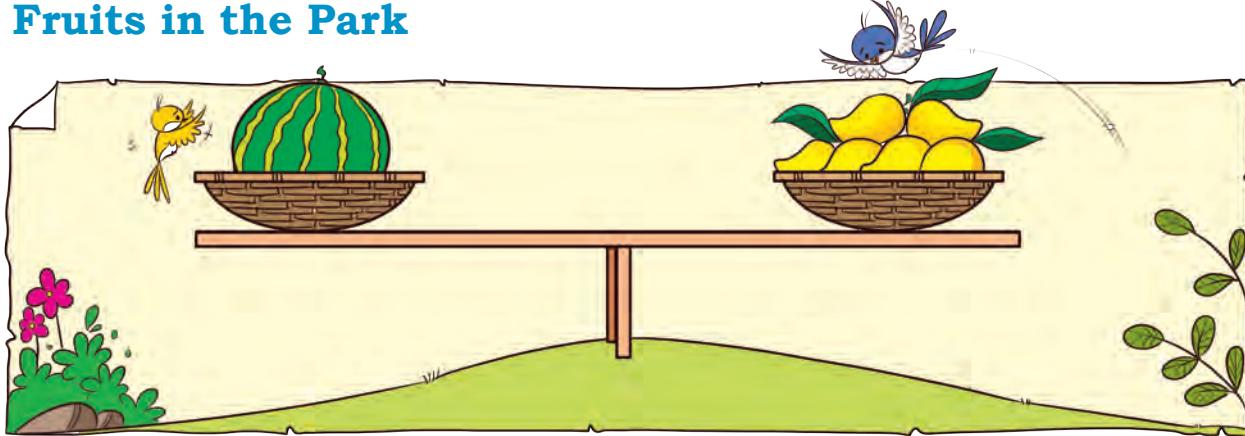


Look at the pictures and discuss the different types of balance used by people in the pictures given below.

Tick the type of balance you have seen before.

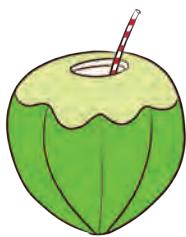


Fruits in the Park



Watermelon and mango want to play on the see-saw. Watermelon sits on one side, but he could not get up. His friend mango called other mangoes to sit on the other side.

- How many mangoes will balance the watermelon? Find out from the picture given above.
- How many coconuts can balance the watermelon if—



Weight of 1 Coconut



Weight of 2 Mangoes



Project Work

Name some of your family members or friends who you think weigh

- almost the same as you _____
- more than you _____
- less than you _____

Find out the places where you can check your weight. What is your weight?

Encourage students to estimate the weight of different objects around them in relation to other objects.



Let us make *Nimbu Pani*.

Raghu and his friends made *nimbu pani* for Raghu's grandmother.

He used the following things to prepare 1 glass of *nimbu pani*.

- A. Water: 1 glass
- B. Sugar: 1 spoon
- C. Lemon juice: 2 spoons
- D. A pinch of salt



Now Raghu wants to make *nimbu pani* for himself and his two friends. Raghu has to make 3 glasses of *nimbu pani*. Write the quantity of ingredients he has to use to make 3 glasses of *nimbu pani*.

Water: glasses

Sugar: spoon

Lemon juice: spoons

Salt: pinch



Find Out

Name some drinks that are prepared at your home. Find out the ingredients used for making your favourite drink and write them below.

Name of your favourite drink _____

| Ingredients | Quantity |
|-------------|----------|
| | |

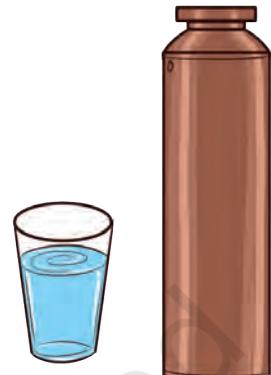




Find Out

Raghu's bottle is filled with four glasses of water.

- A. How many glasses of water can fill your bottle?
- B. How many glasses of water can fill your friend's bottle?
- C. Does your friend's bottle fill with equal/more/less amount of water?



Name the friend whose bottle can carry—

- A. Equal water as yours
- B. Less water than yours
- C. More water than yours



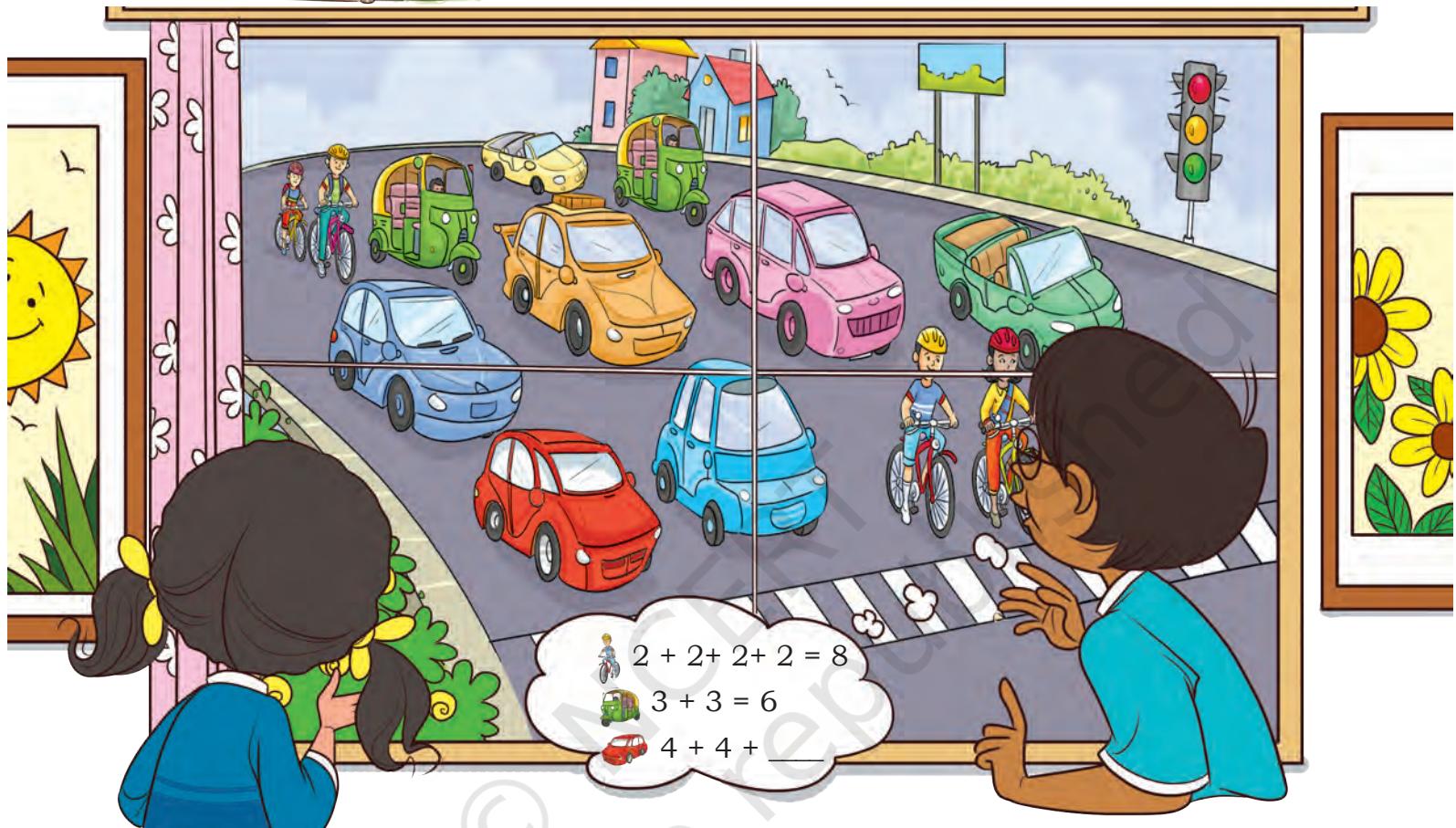
Project Work

To make a *jal tarang* (musical instrument), arrange 5–7 similar glasses or bowls. Fill them with varying levels of water. Gently tap a spoon on each glass or bowl and hear how each one sounds. Tap at different parts of the glass or bowl to feel the difference.

Discuss the uses and importance of water in our life. Also discuss the proper usage and no wastage of water.



Grouping and Sharing



What are you looking at?

I am counting the wheels of autorickshaws and bicycles by adding the number of their wheels. But I missed the cars as they had started moving.



Ok! I will show you a way of finding the total number of wheels. There were 7 cars and each car had 4 wheels, so the total number of wheels is 7 times 4, means 28.

How did you do it Ramya? Can you please explain?



Discuss the importance of traffic rules with children.





Let us Do

There are 4 bicycles

Each bicycle has 2 wheels.

$$\text{Total wheels} = 2 + 2 + 2 + 2 = 8$$

We are adding 2 for 4 times.

So, 4 times 2 is also 8 or 4 groups of 2 give 8.

You know, times can be written as ‘×’.

$$4 \times 2 = 8$$

Let us see



Wow! This is easy. Let me do this for autorickshaws now.

Number of autorickshaws



= 2

Each auto has 3 wheels.

$$\text{Total wheels} = 3 + 3 = 6$$

2 times 3 is 6 or 2 groups of 3 is 6.

$$2 \times 3 = 6$$

Let us do it for cars.

Number of cars

Number of wheels in each car =

Total wheels = + + + + + + =

times 4 is

7 groups of is

× =

How many **fours** are

you adding?

We can write it as

7 fours are 28.





Let us Do

Number of butterflies =

Number of wings in each butterfly =

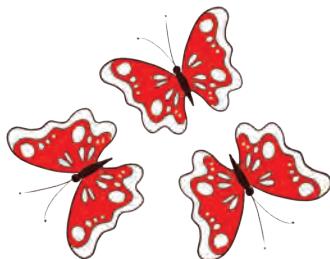
Total number of wings = + + =

or 3 groups of is

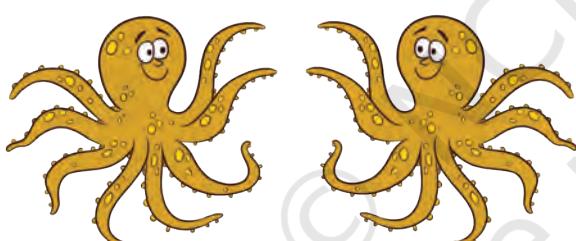
times 2 is 6

3 twos are

× =



Number of octopuses =



Number of legs in each octopus =

Total number of legs = + =

2 groups of is

2 times is 16

2 eights are

× =

Number of lines =

Number of soldiers in each line =

Total number of soldiers = + + + =

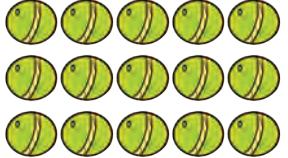
times is 40

4 tens are

× =



Complete the Table

| | | | |
|---|-----------------|-----------|------------------------------|
|  | $3 + 3 + 3 + 3$ | 4 times 3 | $4 \times 3 = 12$ Stars |
|  | $5 + 5 + 5$ | _____ | _____ Fingers |
|  | _____ | 6 times 3 | _____ Bananas |
|  | _____ | _____ | $4 \times 4 = 16$ Oranges |
|  | _____ | _____ | $2 \times 5 = 10$ Pencils |
|  | _____ | _____ | $3 \times 5 = 15$ Balls |

Match the Following

$9 + 9 + 9$

$5 + 5 + 5 + 5 + 5 + 5 + 5$

$3 + 3 + 3 + 3 + 3$

$10 + 10 + 10 + 10$

$8 + 8 + 8$

$7 + 7$

7 fives are

4 groups of 10

3×9

3×8

2 sevens are

5 times 3

27

35

40

14

15

24



Complete the Table of 2

| | | |
|---|----------------|------------------|
|  | 2 ones are 2 | $2 \times 1 = 2$ |
|  | 2 twos are 4 | $2 \times 2 = 4$ |
|  | 2 threes are 6 | $2 \times 3 = 6$ |
|  | | |
|  | | |
|  | | |
|  | | |
|  | | |
|  | | |
|  | | |

Complete the Table of 3

| | | |
|---|----------------|------------------|
|  | 3 ones are 3 | $3 \times 1 = 3$ |
|  | 3 twos are 6 | $3 \times 2 = 6$ |
|  | 3 threes are 9 | $3 \times 3 = 9$ |
|  | | |
|  | | |
|  | | |
|  | | |
|  | | |
|  | | |
|  | | |

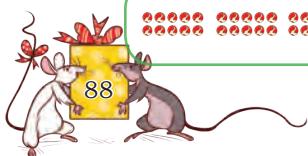


Complete the Table of 5

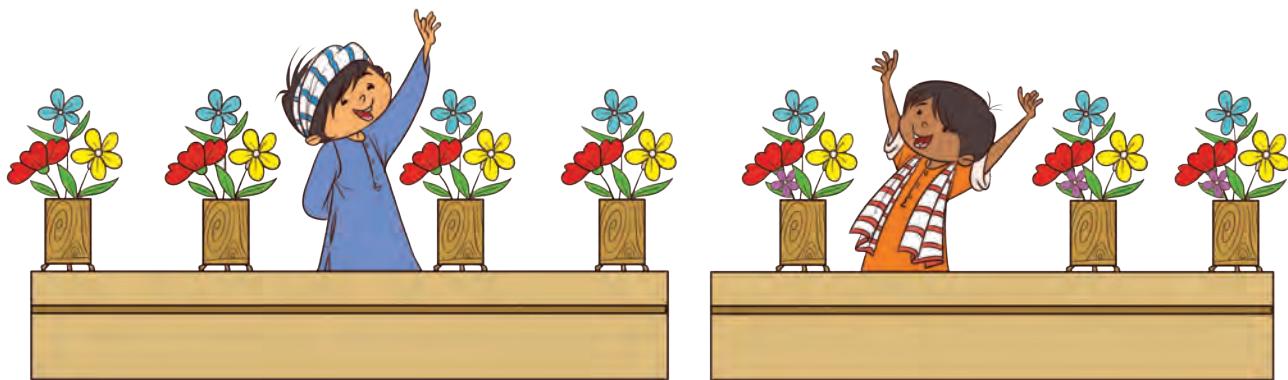
| | | |
|---|-----------------|-------------------|
|  | 5 ones are 5 | $5 \times 1 = 5$ |
|  | 5 twos are 10 | $5 \times 2 = 10$ |
|  | 5 threes are 15 | $5 \times 3 = 15$ |
|  | | |
|  | | |
|  | | |
|  | | |
|  | | |
|  | | |
|  | | |

Complete the Table of 10

| | | |
|---|----------------|--------------------|
|  | 10 ones are 10 | $10 \times 1 = 10$ |
|  | | |
|  | | |
|  | | |
|  | | |
|  | | |
|  | | |
|  | | |
|  | | |
|  | | |



How Many?



There are 4 bouquets.

4 groups of 3 flowers

$$4 \times 3$$

Ram used 12 flowers in all.

There are 3 bouquets.

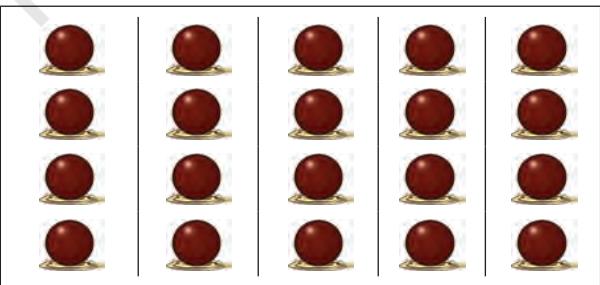
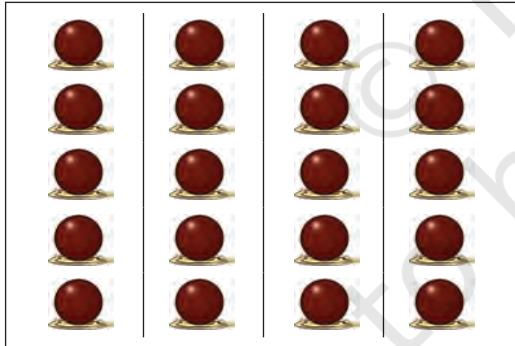
3 groups of 4 flowers

$$3 \times 4$$

Gopal used 12 flowers in all.

Did you observe something? Discuss.

Test your observation with other examples.



4 groups of 5

___ times 5 is ___

$$4 \times 5 = \underline{\quad}$$

There are ___ gulab jamuns.

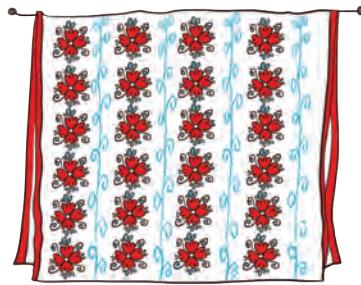
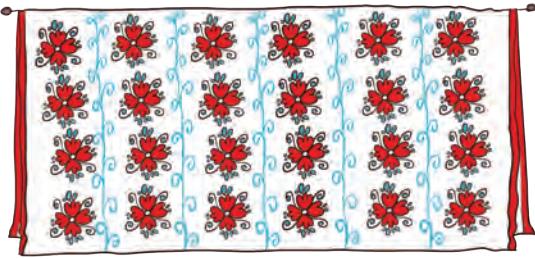
5 groups of 4

___ times 4 is ___

$$5 \times 4 = \underline{\quad}$$

There are ___ gulab jamuns.





6 groups of 4
_____ times 4 is _____

$$6 \times 4 = \text{_____}$$

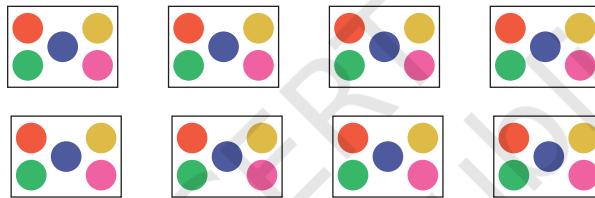
There are _____ flowers.

4 groups of 6
_____ times 6 is _____

$$4 \times 6 = \text{_____}$$

There are _____ flowers.

- A. There are 8 packets of *bindis*. Each packet has 5 *bindis*.



Number of packets =

Number of *bindis* in each packet =

 groups of *bindis*.

 \times = *bindis*

- B. Bharti puts 4 buttons on each shirt. She wants to put buttons on 7 shirts.

Number of shirts =

Number of buttons on each shirt =

 groups of buttons

 \times = buttons



- C. Rita bought 6 pencils of ₹4 each. How much money will she give to the shopkeeper?

Number of pencils =

Cost of 1 pencil =

Cost of 6 pencils = $4 + 4 + 4 + 4 + 4 + 4$

\times =

So, Rita will give ₹ to the shopkeeper.

- D. Five people can sit in a car. How many people can sit in 8 such cars?

Number of people sitting in 1 car =

Number of people sitting in 8 cars =

\times =

people can sit in 8 cars.

Making Multiplication Table

Rudra is making multiplication table of 4 using the table of 2.

| | | | | | | | | | | |
|---|---|---|----|----|----|----|----|----|----|-----------------|
| 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | (Table of 2) |
| + | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 |
| | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 (Table of 4) |

This is interesting. Let us now make the table of 6 from the table of 3.



| | | | | | | | | | | |
|---|---|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--------------|
| 3 | 6 | <input type="text"/> | 12 | <input type="text"/> | <input type="text"/> | 21 | <input type="text"/> | <input type="text"/> | 30 | (Table of 3) |
| + | 3 | <input type="text"/> | 9 | <input type="text"/> | <input type="text"/> | 18 | <input type="text"/> | <input type="text"/> | 24 | (Table of 3) |
| | 6 | <input type="text"/> | (Table of 6) |





Let us make the table
of 7 from the tables
of 3 and 4.

| | | | | | | | | | | | |
|---|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------|
| | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | (Table of 3) |
| + | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 | (Table of 4) |
| | 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 | 70 | (Table of 7) |

Make the table of 8 from the table of 2 and 6.

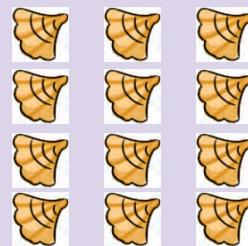
| | | | | | | | | | | | |
|---|----------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--------------|
| | 2 | 4 | <input type="text"/> | <input type="text"/> | 10 | <input type="text"/> | 14 | <input type="text"/> | 18 | 20 | (Table of 2) |
| + | 6 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | 36 | <input type="text"/> | 48 | <input type="text"/> | <input type="text"/> | (Table of 6) |
| | 8 | <input type="text"/> | (Table of 8) |



Project Work

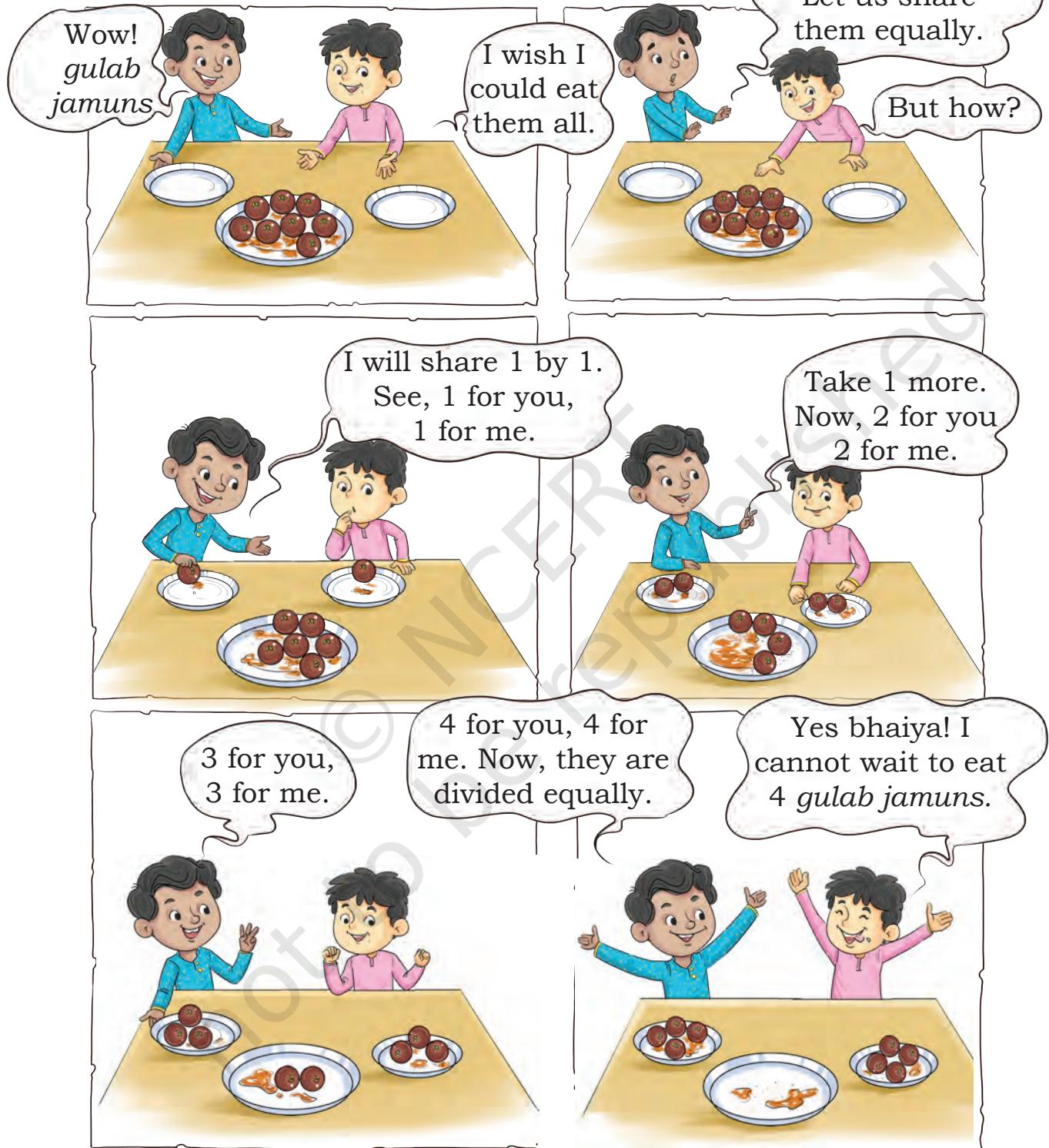
Collect 24 small objects like buttons, bottle caps, pebbles, etc. Arrange them in different arrays and write the related multiplication facts. How many of these facts can you find? Record your answers in the table given below.

| Number of groups | Multiplication facts |
|------------------|----------------------|
| 3 groups of 4 | 3×4 |
| | |
| | |
| | |
| | |
| | |
| | |
| | |





Let us Share

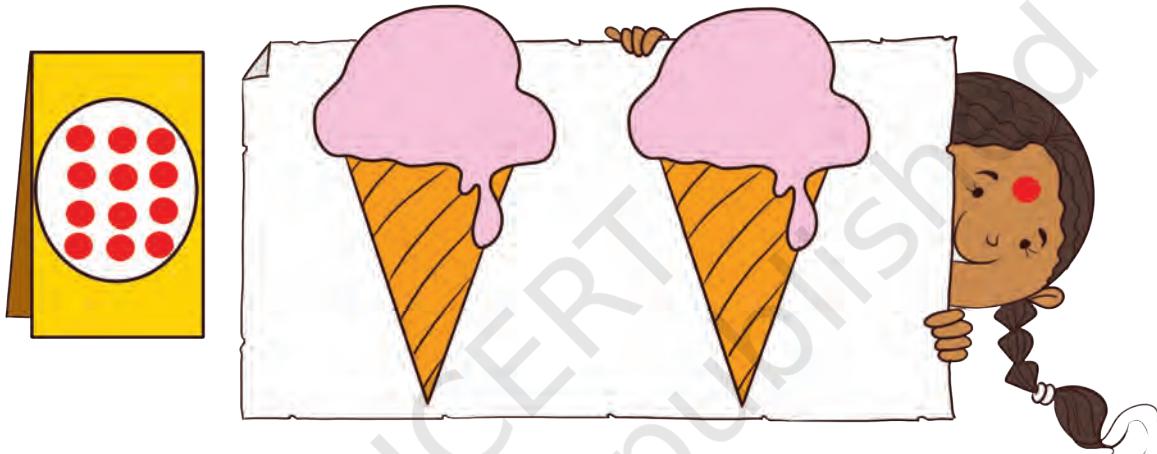


- A. How many *gulab jamuns* were there in total?
- B. Have they shared equally? Yes / No
- C. How many *gulab jamuns* did each of them get?

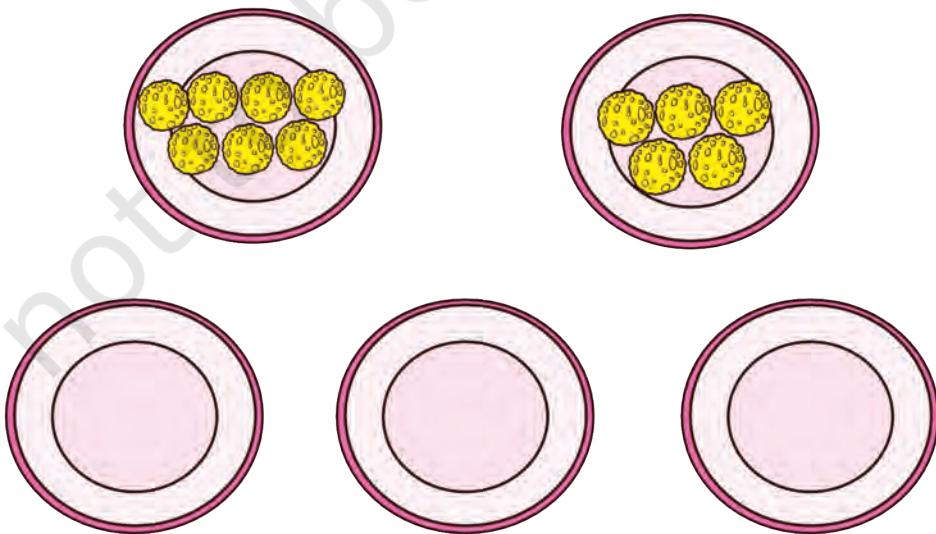


Let us Do

- A. Complete Ritu's art and craft project by drawing 12 *bindis* equally on 2 ice cream cones as cherries.



- B. Pooja has 2 plates. Each plate has a different number of *laddoos* in it. Help her divide the *laddoos* equally in 3 plates. You can draw and colour the *laddoos*.



How Many Groups?



Hi, I am Garima. I have 20 star shaped beads and I will use 5 beads to make each bracelet.



Look, 1 bracelet is ready. Isn't it beautiful?



I have made 2 bracelets. Now, 10 beads are left. Let us see how many more can we make.



Yayy! 3 bracelets are ready.



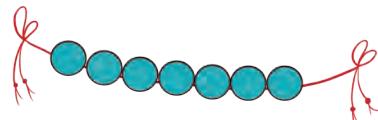
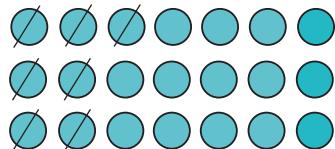
I have used all the beads finally.





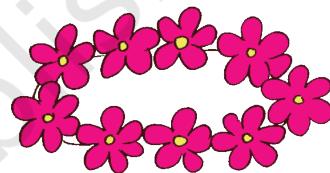
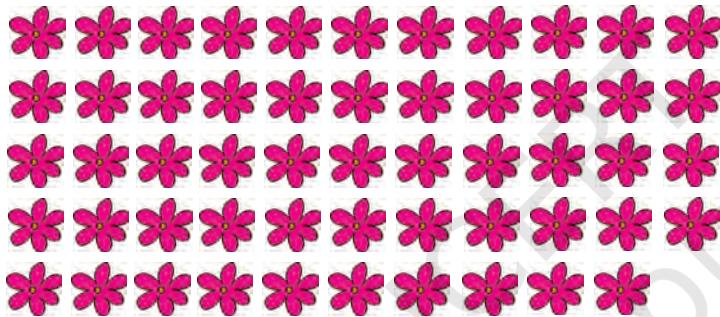
Let us Make

A. Each string has 7 beads.



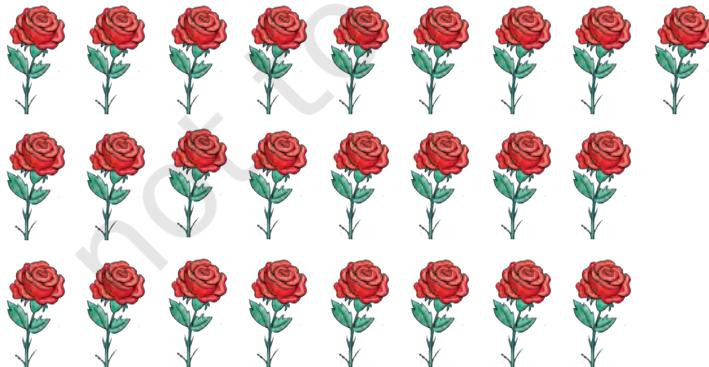
How many strings can we make with 21 beads?

B. There are 54 flowers. Join 9 flowers to make 1 bracelet.



How many bracelets can we make with 54 flowers?

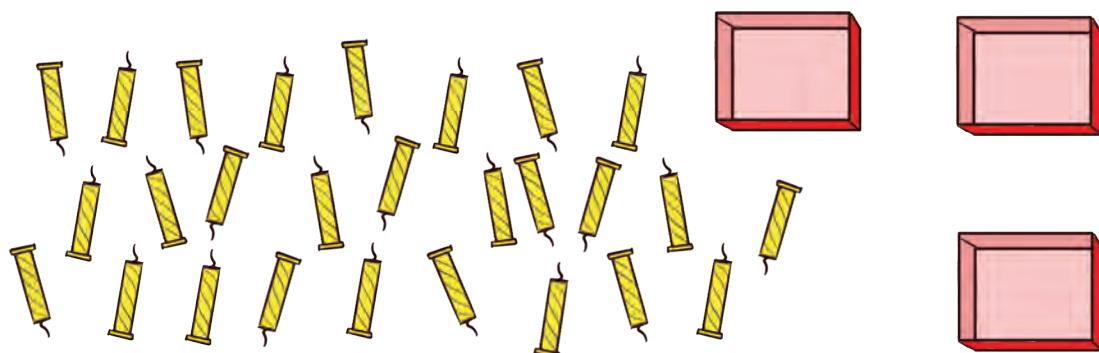
C. There are 25 roses. 5 roses can be placed in 1 vase. How many vases are needed for placing 25 roses?



vases are needed.

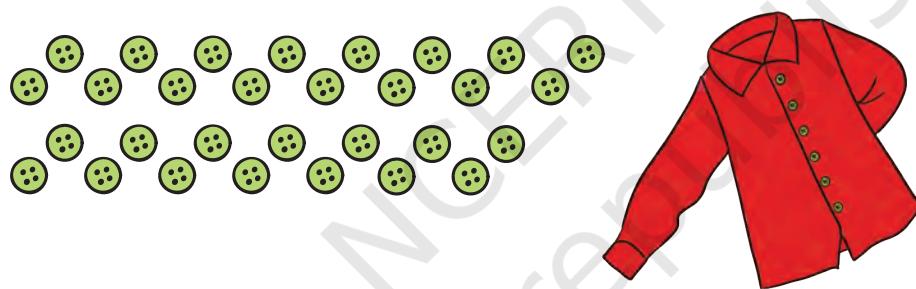


D. There are 27 candles. Put them equally in 3 boxes. How many candles will be in each box?



There will be candles in each box.

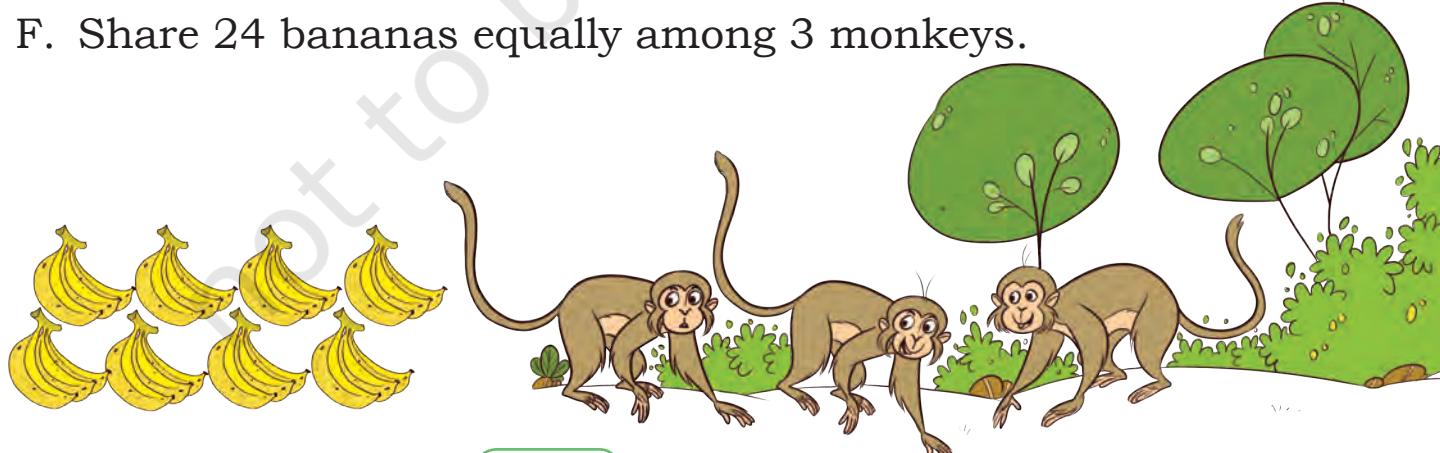
E. A tailor puts 6 buttons on one shirt. Here are 30 buttons.



The tailor will be able to put 30 buttons on shirts.



F. Share 24 bananas equally among 3 monkeys.

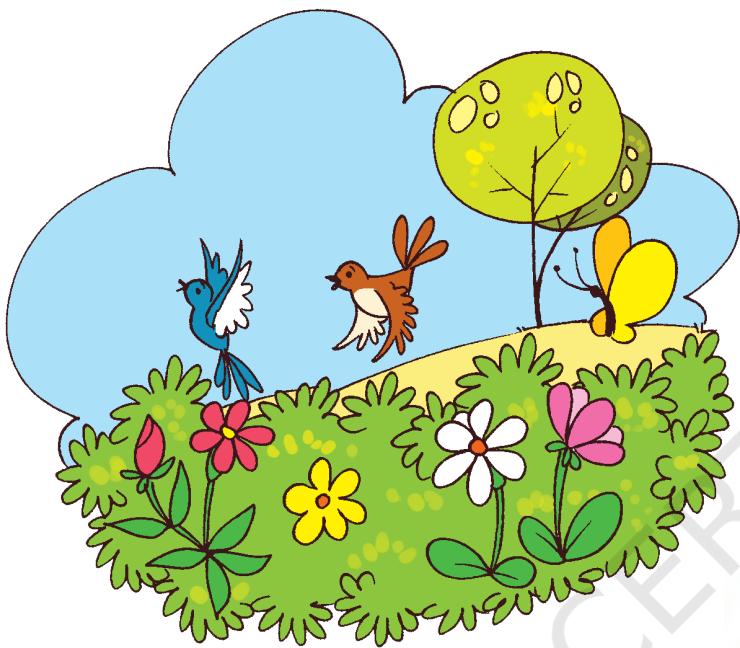


Each monkey will get bananas.



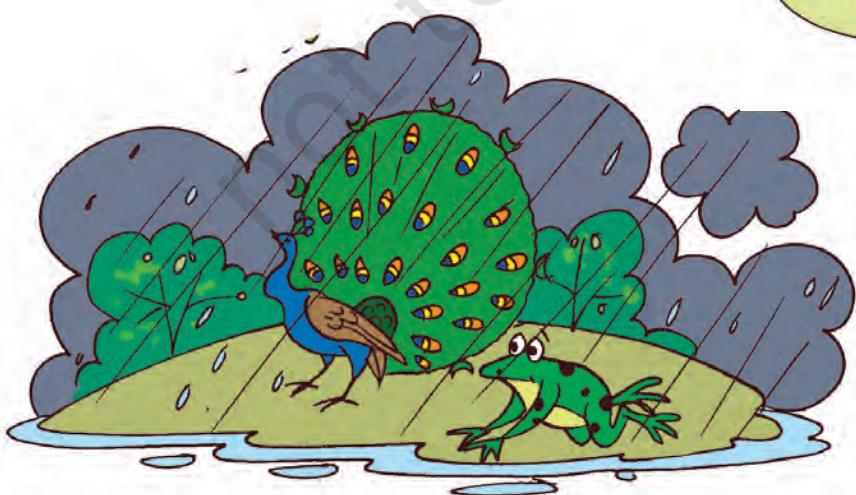


Seasons



Five seasons in a year
Spring begins with
a cheer
Flowers bloom,
the birds sing
When comes
the merry spring.

Summer comes
with the shining sun
and a long day
for children to play.



Rainy season
comes with the
water drops;
Peacock dances
and the frog hops.

Leaves fall
on the ground.
Pleasant winds
on the way,
is when it is an
autumn day.



Winter is when
I'm all in snow
from head to toe.



Let us Discuss

- A. In which season do you go on a vacation?
- B. Your birthday falls in which season of the year?
- C. Which is your favourite season? Why?
- D. What is special about your favourite season?

Read the poem aloud and enact. Discuss the special things that they do in different seasons. Also talk about the various locally available food and clothes, for example, *pheran* in Kashmir, etc. Also, discuss how the local variations in seasons affect the daily lives of people.



Match the seasons with their names and festivals.



Autumn

*Dussehra,
Sharad Purnima*



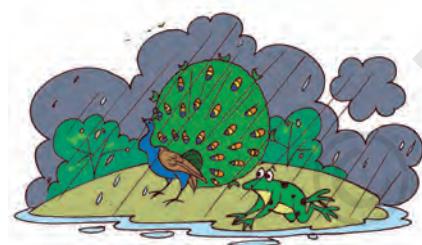
Summer

*Guru Purnima,
Buddha Purnima
Ram Navami
Mahavir Jayanti*



Spring

*Gudi Padwa,
Shivratri, Baisakhi,
Holi*



Winter

*Lohri,
Christmas,
Republic day,
Gurunanak Jayanti
Bihu*



Monsoon

*Janmashtami,
Raksha Bandhan,
Independence day*

Discuss the names of the seasons in Hindi, such as *Vasant, Shishir*, etc., and in other regional languages as well. Tell them about other festivals like Eid, which are not seasonal.



Calendar Fun

JANUARY

| S | M | T | W | T | F | S |
|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |

FEBRUARY

| S | M | T | W | T | F | S |
|----|----|----|----|----|----|----|
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | | | | |

MARCH

| S | M | T | W | T | F | S |
|----|----|----|----|----|----|----|
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | |

APRIL

| S | M | T | W | T | F | S |
|----|----|----|----|----|----|----|
| 30 | | | | | | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |

MAY

| S | M | T | W | T | F | S |
|----|----|----|----|----|----|----|
| | | 1 | 2 | 3 | 4 | 5 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | 31 | | | |

JUNE

| S | M | T | W | T | F | S |
|----|----|----|----|----|----|----|
| | | | 1 | 2 | 3 | |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | |

JULY

| S | M | T | W | T | F | S |
|----|----|----|----|----|----|----|
| 30 | 31 | | | | | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |

AUGUST

| S | M | T | W | T | F | S |
|----|----|----|----|----|----|----|
| | | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | 31 | | |

SEPTEMBER

| S | M | T | W | T | F | S |
|----|----|----|----|----|----|----|
| | | | 1 | 2 | | |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |

OCTOBER

| S | M | T | W | T | F | S |
|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |

NOVEMBER

| S | M | T | W | T | F | S |
|----|----|----|----|----|----|----|
| | | 1 | 2 | 3 | 4 | |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | | |

DECEMBER

| S | M | T | W | T | F | S |
|----|----|----|----|----|----|----|
| 31 | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |

*Calendar based on 2023

Look at the calendar and fill the table.

| Months | Number of days |
|--|----------------|
| January, March, May, July, August, October, December | |
| February | |
| April, June, September, November | |





Let us Talk

- A. Why do we use a calendar?
- B. Does February have the same number of days in every year? Discuss.
- C. How many days are there in a week? days.
- D. In the calendar given on the previous page how many Sundays are there in the month of April? Sundays.
- E. Which months have 5 Sundays? _____, _____, _____, _____.
- F. Summer vacations are in the months of _____ and _____.
- G. Winter vacations are in the months of _____ and _____.
- H. Find the total number of days in April and March.
 days + days = days



Project Work

Make your own calendar of your birthday month and mark your birthday in it.



| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Discuss the importance of calendar in our day-to-day life.



How Long Does it Take?

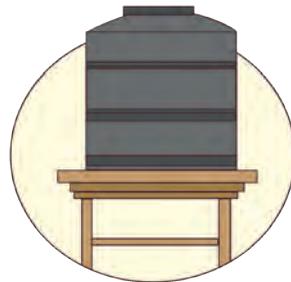
Match the activity with the duration of time it requires to get completed.



Cooking



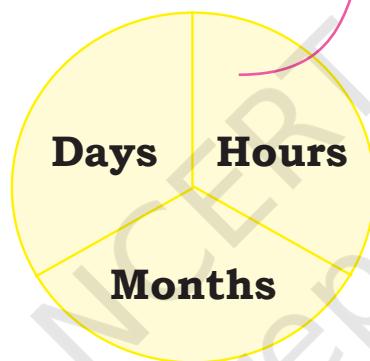
Summer vacation



Filling a water tank



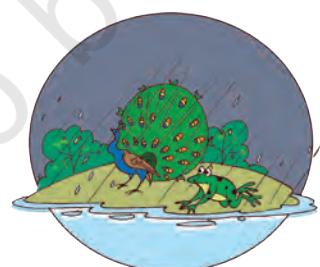
Knitting a sweater



Playing



Seed to grow into a plant

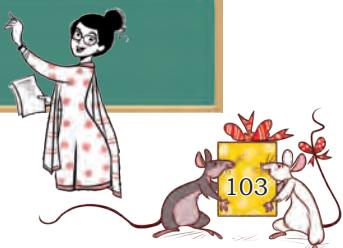


Change of season



Yoga

Discuss the other things that take different durations of time to complete.



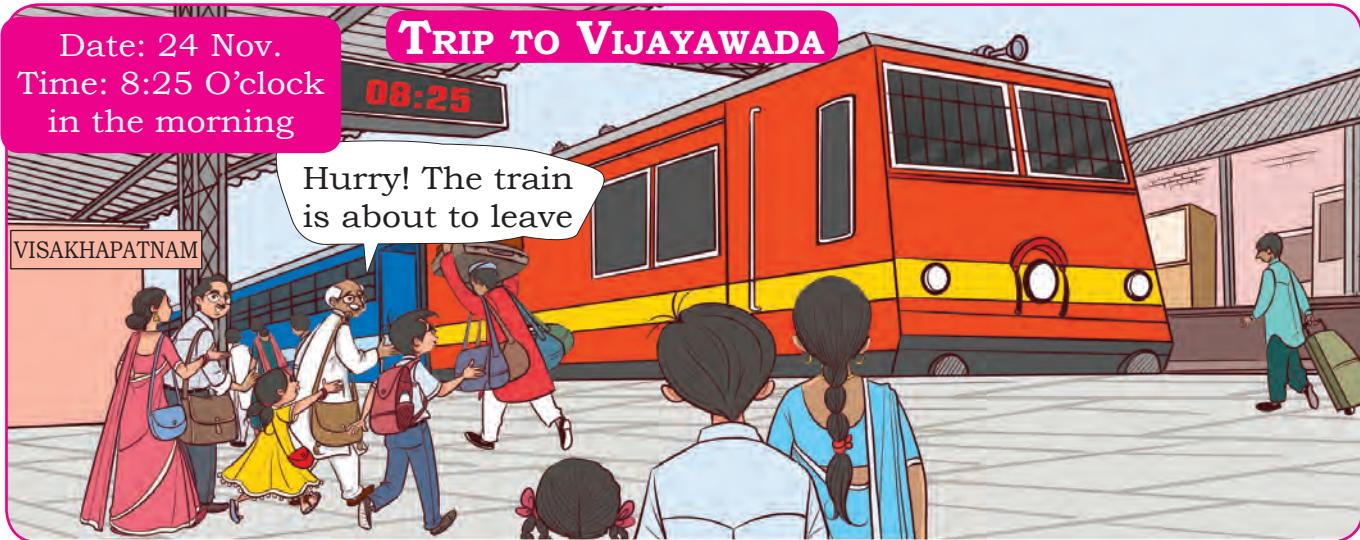
Date: 24 Nov.
Time: 8:25 O'clock
in the morning

TRIP TO VIJAYAWADA

08:25

Hurry! The train
is about to leave

VISAKHAPATNAM



Date: 24 Nov.
Time: 1:15 O'clock
in the afternoon

It is 1:15 Afternoon
Dada Ji, how much
more time will it
take to reach Nani's
house?

Just 1 more hour
to reach Vijayawada
Railway Station.

Date: 25 Nov.
Time: 10:00 O'clock
in the night

Maa! We enjoyed a
lot today and look at
Mama ji, he is looking
very handsome.

Yes dear! It's his
wedding after all.

God bless
you dear.

Date: 26 Nov.
Time: 8:00 O'clock
in the morning

Maa! Our train is
day after tomorrow.
Can we go for
sightseeing?

Yes, we will go to
Manglagiri hills at
11:00 Morning.





Let us Talk

- A. Why did the family plan a trip? To which place did they go for the trip? What did you like about their trip?
- B. On which day did they begin their journey? When did they come back? How long was their trip?
- C. Which places did they visit in their trip?
- D. How long was their day trip in:
 - i. Manglagiri hills _____ hours
 - ii. Kondapalli fort _____ hours
When did they come back from there? _____
- E. For how many hours were they in the train when going from—
 - i. Visakhapatnam to Vijayawada
_____ to _____ _____ hours
 - ii. Vijayawada to Visakhapatnam
_____ to _____ _____ hours

Which among the two journeys took longer?

- F. Have you been on a trip recently? What do you enjoy most about trips?



Amazing Fact

Do you know?

Vande Bharat is the fastest train in India. The train is designed in India only and is also India's first train to have an integrated engine and not a separate engine coach.



Talk with children about their travel experiences to familiarise them with the idea of duration in terms of days and hours. Also discuss what is special about their cities.



Gargi's Day

Let us see what Gargi does in a day. Write down the time for each picture.



Let us Talk

Look at the position of the short hand (hour hand) and long hand (minute hand), and observe at what time Gargi does these activities in a day.

- At what time does she wake up?
- When does she go to school?
- At what time does she have her lunch?





Let us Do

A. Read the time on the clock.



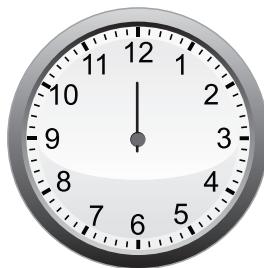
___ O' clock



___ O' clock



___ O' clock



___ O' clock

B. Draw hour hand and minute hand on the clock.



3 O' clock



11 O' clock



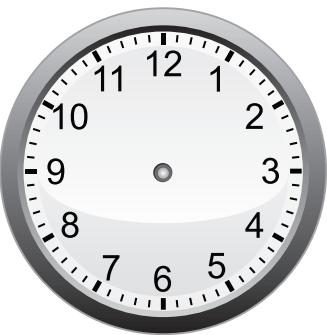
4 O' clock



9 O' clock



12 O' clock



6 O' clock



C. When do you do the activities shown below?

Mark them on the clock by drawing the hour hand and the minute hand.



Study



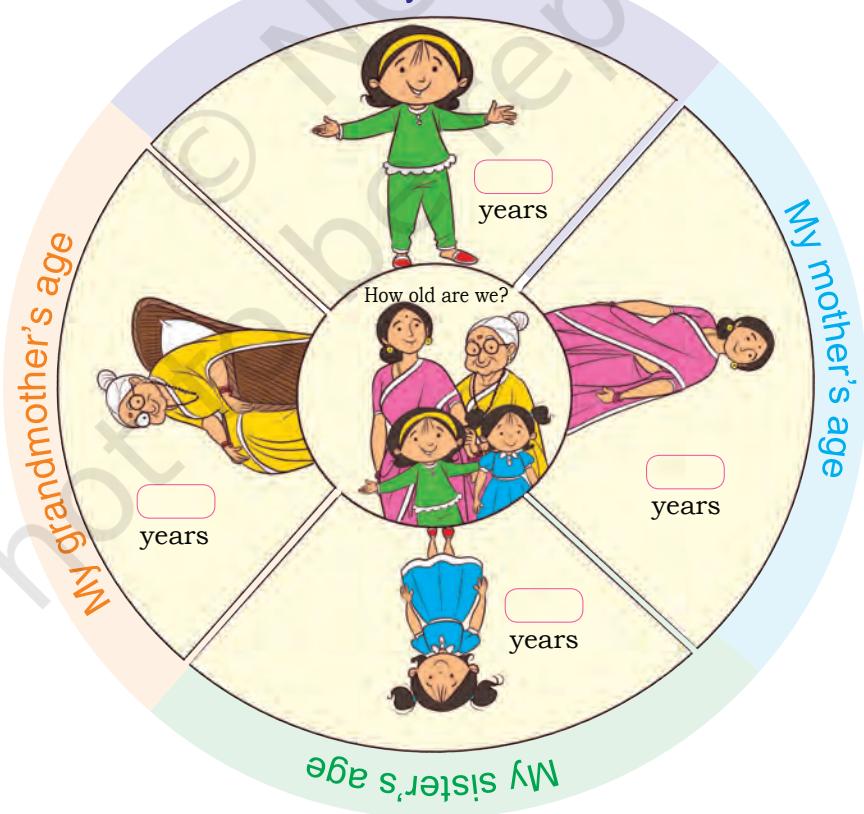
Play



Lunch



My age



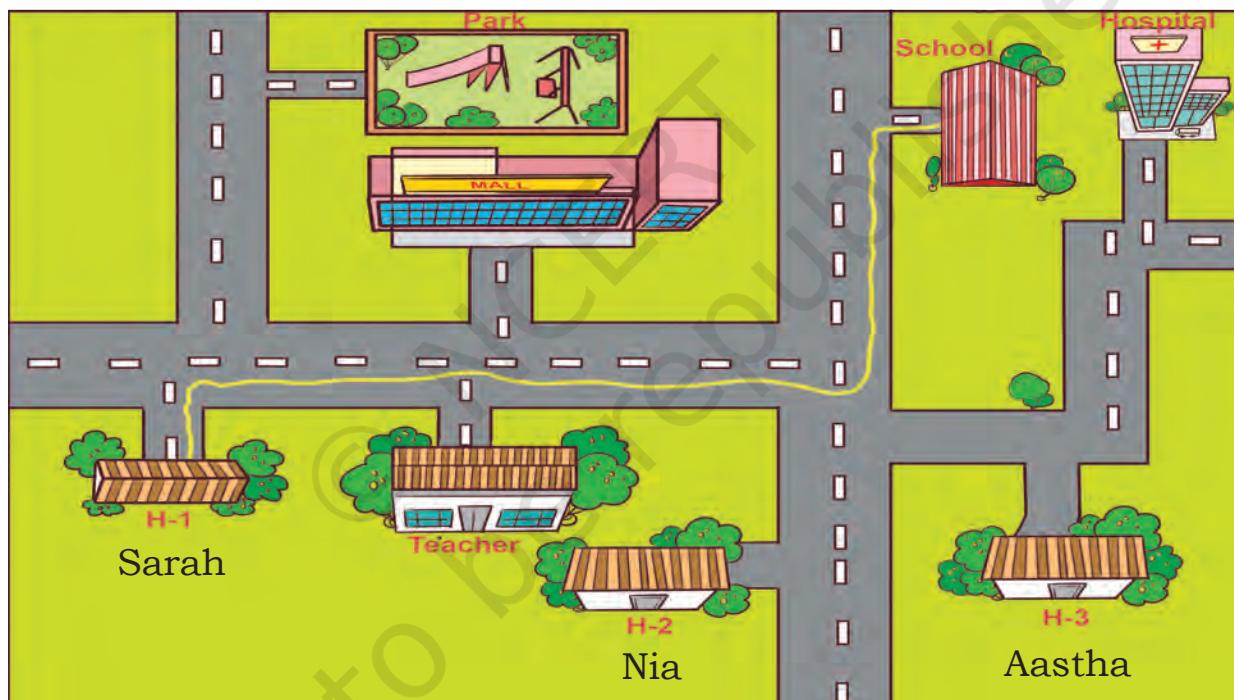


Let us Play – Knowing Direction

Ask a child to volunteer from the class. Blindfold him or her. Give directions to the blindfolded child to move from one spot to another (for example, move from the last bench to the blackboard). For directions use these words only— right, left, or straight.

The game will go on for 5–7 rounds with different children volunteering themselves. Ask the children to decide a safe word like ‘danger’ when one is about to get hit by objects in the classroom.

(To increase the difficulty level, you may change the setting of the classroom or keep harmless hurdles on the way).



Sarah's Way to School

Green line is the path taken by Sarah to reach the school. Now draw a line with different colours to take Aastha and Nia from their home to the school.

Discuss the use of mobile apps for navigation, i.e., for locating different places.



East, West, North or South

Let us stand
to face the rising sun.
This is the...East direction.



To your back you will find the West direction.

Put your left thumb out and that is North.

On your right is the direction South.

So, when we step out and move about,

we know which direction to go

East, West, North or South.

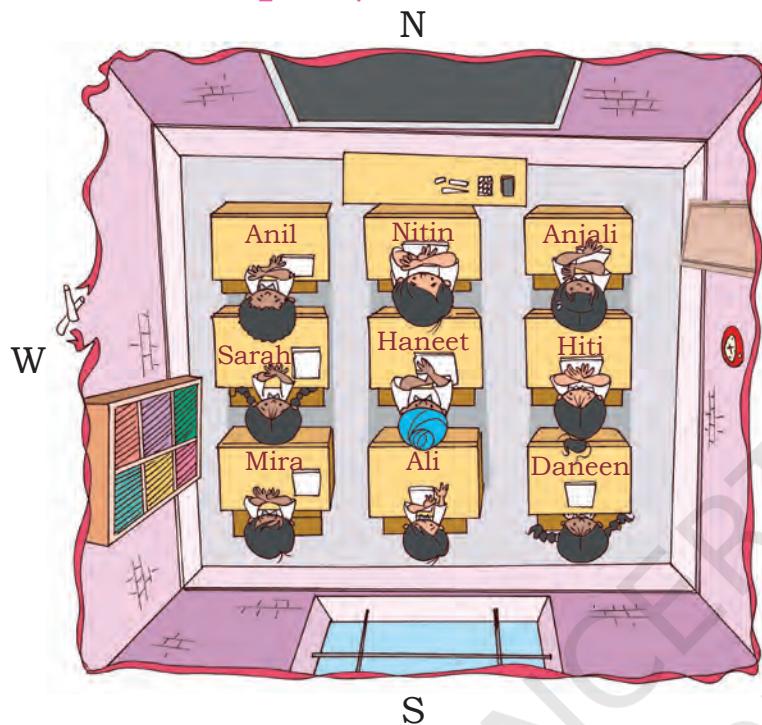
Sing the poem with actions. Help children to identify the directions. The direction must be emphasised by the teacher, and examples should be given to the children from their immediate surroundings so that they understand the spatial relevance of these words.



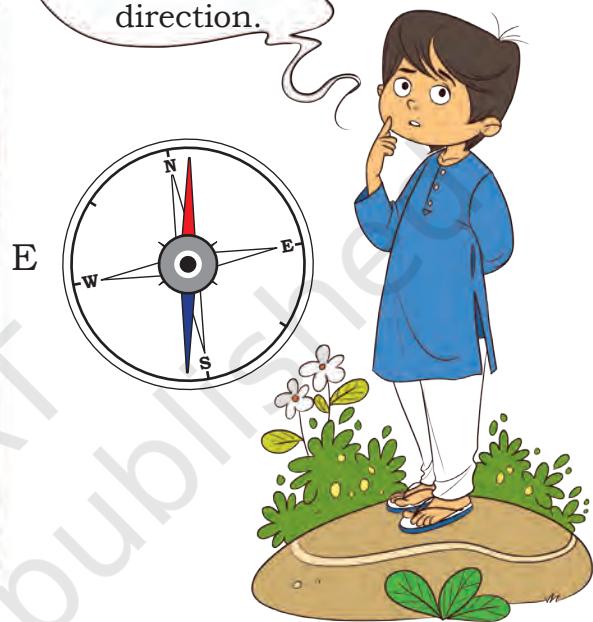


Let us Do

Look at the classroom below and answer the questions by using the words North, South, East and West (refer to the compass).



Do you know?
A compass is a
tool for finding
direction.



- A. Haneet's desk is to the _____ of Sarah's desk.
- B. Almirah is to the _____ of Ali's desk.
- C. To reach the blackboard, Mira must walk towards _____ and then _____.
- D. To feed the birds on the window, Nitin has to walk _____ and then _____.

Discuss the compass and its usage. Also ask the children to use a compass to find out the directions of objects from different points of reference.



10

Fun at the Fair

QRickit:



0224CH10



Rupal loves going to the fair. She visits the local fair with her friends. Her mother gave her ₹50. She spent most of it on her favourite rides.



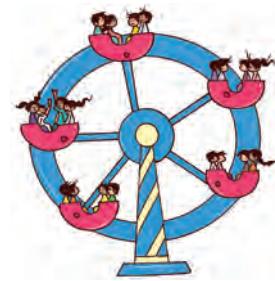
Talk about the things that children enjoy in fairs, whom do they go with, what do they buy and how much money do they spend there.



How Much Rupal Spent?



₹10



Total money spent on rides =

Money given
by Rupal's
mother

-

Money
spent

=

Money left
with Rupal

A friend of Rupal has ₹8 left out of ₹50. She wanted to know how much money she spent. Let us see her way of finding it.



₹8 is left with me and I have spent ₹20 on rides, which is ₹28. Then, I have spent ₹20 on snacks, which is ₹48 and I spent ₹2 more on candies, which is ₹50. Total, I have spent ₹42.

$$₹8 + ₹20 = ₹28$$

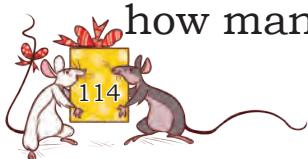
$$₹28 + ₹20 = ₹48$$

$$₹48 + ₹2 = ₹50$$

$$\underline{\quad \quad \quad \quad \quad}$$

₹42

If you had ₹3 left when your father gave you ₹40 for the fair, how many rupees did you spend? Find out.





Let us Do

A. How much money will be needed to buy?

| Ride | Number of tickets | Money |
|---------|-------------------|---------|
| ₹20 | 2 | ₹ _____ |
| ₹10 | _____ | ₹30 |
| ₹15 | 2 | ₹ _____ |

B. We saw different notes and coins used by Rupal and her friends. Let us look at the other commonly used Indian currency.



₹100



₹200



₹500



C. Count the number of times ₹500 is written on a ₹500 note.



- Five hundred rupees is written in words _____ times.
- 500 is written in number _____ times.

The picture of which monument is printed on the note of 500 rupees? Have you seen this monument?



Ask the children to observe other currency notes and discuss their features. Discuss with them the specifications, such as the lines on the border of the currency notes, and their number on each note for specially abled people.



Tejal's grandmother showed her some old coins that she had not seen before. Let us have a look at these coins also.



25 Paise



50 Paise



10 Paise



20 Paise

Her grandmother used to pay 2 coins of 50 paise for 1 Rupee.



50 Paise

+



50 Paise

=



₹1

100 Paise = 1 Rupee

A. How many 25 paise will make ₹1? Draw the coins in the box below.

= ₹1 or
100 paise

B. How many 20 paise will make ₹1?



Pop the Balloon

Matru comes across a 'Pop the balloon' game. He will get 3 chances for ₹10. Let us see how much money Matru wins.



A. How much money will Matru get if he popped the following balloons?

| | |
|--|----|
| | ₹3 |
| | |
| | |
| | |

B. Draw and colour the balloons, which he has to pop if he wants to get the following amount.

| | |
|--|-----|
| | ₹17 |
| | ₹22 |
| | ₹31 |

C. Which three differently coloured balloons would you target to make the highest amount of money? Draw and colour them.

| |
|--|
| |
|--|

Total amount won =

D. If Matru had four chances, by popping which differently coloured balloons can he make the most money? Draw and colour them.

| |
|--|
| |
|--|

Total amount won =





Let us Do

Let us look at how ₹66 can be paid in different ways.



Make different combinations to make the given amount.

| Amount | ₹1 | ₹2 | ₹5 | ₹10 | ₹20 | ₹50 |
|--------|----|----|----|-----|-----|-----|
| ₹54 | — | 2 | — | 3 | 1 | — |
| ₹85 | | | | | | |





Let us Buy



| Items | Money needed to buy these items | Money you have | Money left/More money needed |
|-------|---------------------------------|----------------|------------------------------|
| | ₹ _____ | | ₹ _____ |
| | ₹ _____ | | ₹ _____ |
| | ₹ _____ | | ₹ _____ |





Let us Do

$$\begin{array}{r} \text{₹ } 18 \\ + \text{₹ } 32 \\ \hline \end{array}$$

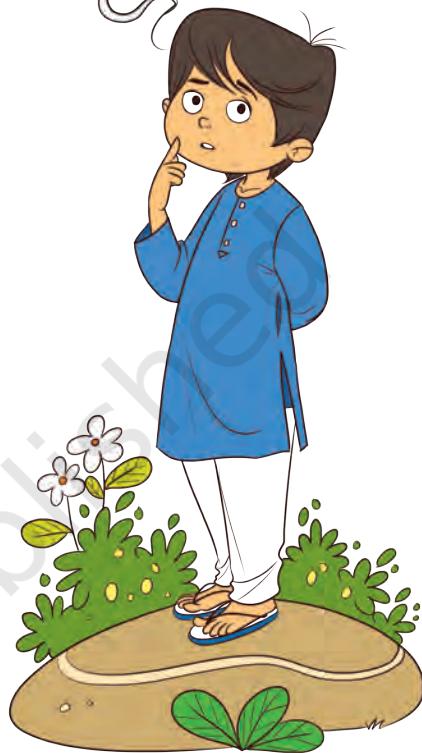
$$\begin{array}{r} \text{₹ } 15 \\ + \text{₹ } 27 \\ \hline \end{array}$$

Have you seen
that sometimes we
pay using mobile
phones?

$$\begin{array}{r} \text{₹ } 47 \\ + \text{₹ } 50 \\ \hline \end{array}$$

$$\begin{array}{r} \text{₹ } 22 \\ + \text{₹ } 35 \\ \hline \end{array}$$

- A. Jayant spent ₹25 on pens and ₹40 on notebooks. How much money did he spend in total?
- B. Meera has ₹43 with her. Kanika has ₹14 more than Meera. How much money does Kanika have?
- C. A packet of bread costs ₹30 and a chocolate costs ₹60. How much money does Vivek need to buy these items?
- D. Ajay has ₹58 with him. He spent ₹48 in the market. How much money is left with him now?



Project Work

Whenever you go to the market or shop with your parents, make a list of the things that you buy and the total money you spend.

Create more such contexts and ask questions whether children will add or subtract. Inculcate the value of saving money in the children through a discussion.



11

Data Handling

QRickit



Favourite Colours



Let us Do

Look at the picture. Complete the table and fill in the blanks.

| | | | | |
|--------------------|------------|--------------|-------------|---------------|
| Colours | Red | Green | Blue | Yellow |
| Number of Children | | | | |

- The most liked colour is _____.
- The least liked colour is _____.
- Yellow colour is liked more than _____.
- _____ colour is liked more than green.
- _____ colour is liked less than _____.

Picnic Day

Children are having a fruit party. They are eating their favourite fruits.



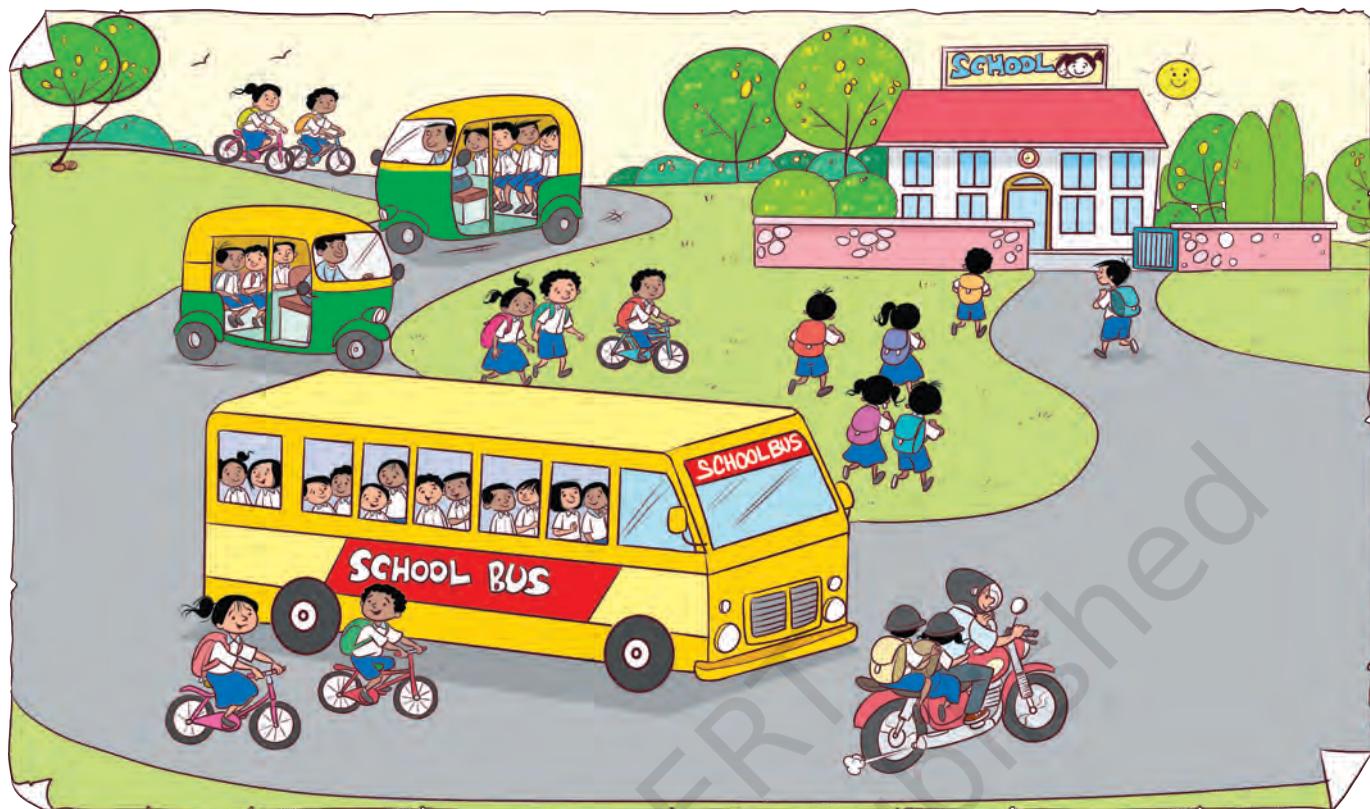
Let us Do

Complete the table and fill in the blanks.

| | | | | | |
|--------------------|--|--|--|--|--|
| Fruits | | | | | |
| Number of Children | | | | | |

- How many children are there in the picture? _____.
- Number of children who like apples is _____.
- Most liked fruit is _____.
- Least liked fruit is _____.
- Number of children who like guava is _____ (more than/less than/equal to) the number of children who like apple.
- The number of children who like apple is _____ (more than/less than/equal to) the number of children who like banana.
- The number of children who like orange _____ (more than/less than/equal to) the number of children who like kiwi.

Discuss the picture and fill the table.

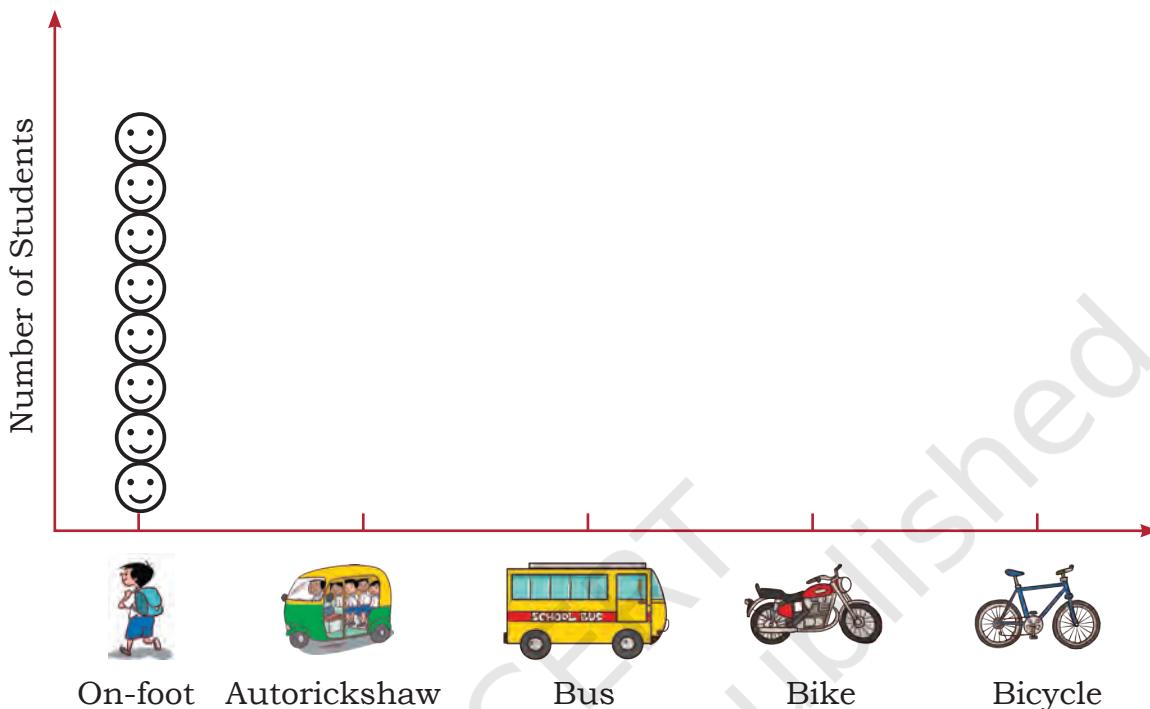


| Mode of coming to school | Number of students |
|--------------------------|--------------------|
| | 8 |
| | |
| | |
| | |
| | |



Read the table and draw faces (😊) in the chart given below to show the number of students coming to school by different modes. (😊 = 1 student)

Look at the chart and fill in the blanks.



- A. Most number of students come to school by _____.
- B. Least number of students come to school by _____.
- C. The number of students who come to school using bus is _____ (less/more) than the number of students who come using autorickshaw.
- D. The number of students who come to school using bike is _____ (more/less) than the number of students who come using bicycle.
- E. The number of students who come to school using _____ is less than the number of students who come using _____.
- F. The number of students who come to school using _____ is more than the number of students who come using _____.



Games we Play



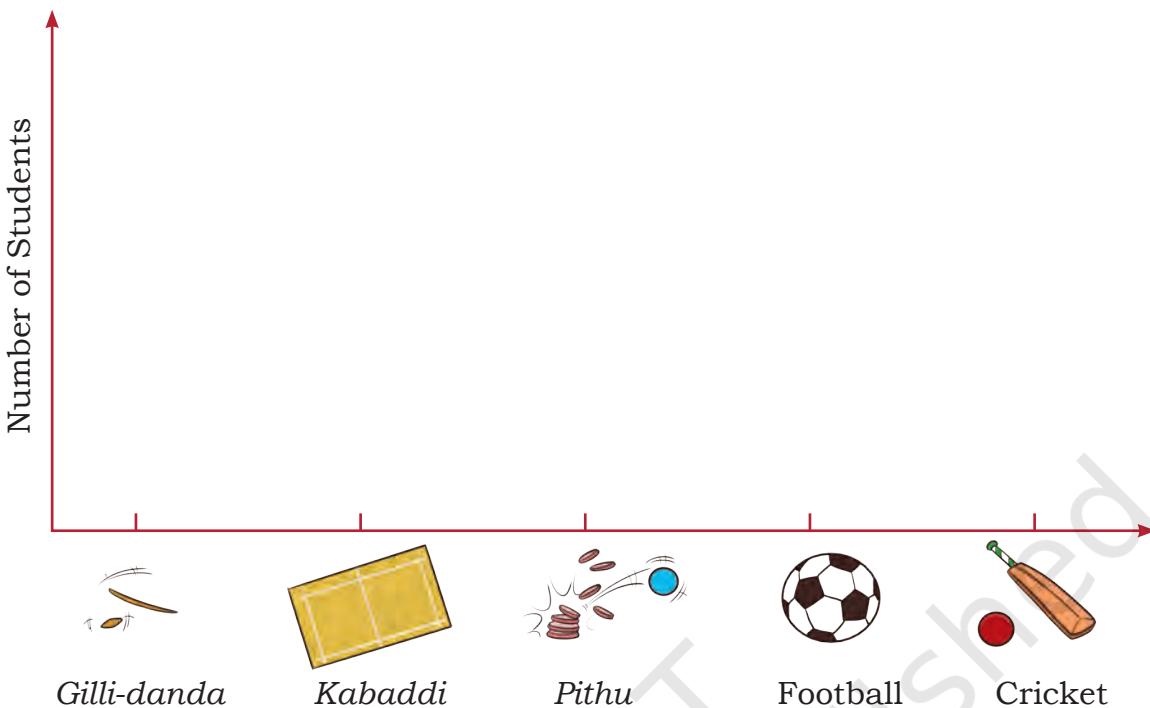
Let us Do

Look at the picture and fill the table.

| Games | Number of Students |
|-------|--------------------|
| | |
| | |
| | |
| | |



Use the table to draw faces (☺) to show the number of students in the chart below.



- A. The most liked game is _____.
- B. The least liked game is _____.
- C. *Pithu* is liked more than _____.
- D. _____ is liked more than football.



Let us Do

- A. Discuss in your class and ask your friends about the vegetables they like the most. Complete the table.**

| | | | | | |
|---------------------|--|--|--|--|--|
| Vegetable they like | | | | | |
| Number of children | | | | | |



B. Read the table and fill in the blanks.

- i. Most liked vegetable is _____.
- ii. Least liked vegetable is _____.
- iii. _____ is liked more than _____.
- iv. _____ is liked less than _____.

C. Ask your friends about the number of family members living in their homes. Fill in the table given below.

- i. Most families have _____ people in their homes.
- ii. The least number of people living in a home is _____.
- iii. The number of families having 4 people is _____.
- iv. The number of families having more than 4 people is _____.

| Number of people living together | How many families |
|----------------------------------|-------------------|
| 1 People | |
| 2 People | |
| 3 People | |
| 4 People | |
| 5 People | |
| _____ | |
| _____ | |



Project Work

Visit nearby families to find out the number of families which have their grandparents living with them. Record the information to fill in the table.

| Families living with | Both grandparents | Only female grandparents | Only male grandparents | No grandparents |
|----------------------|-------------------|--------------------------|------------------------|-----------------|
| Number of Families | | | | |

How many families did you visit?

Number of families living with both grandparents

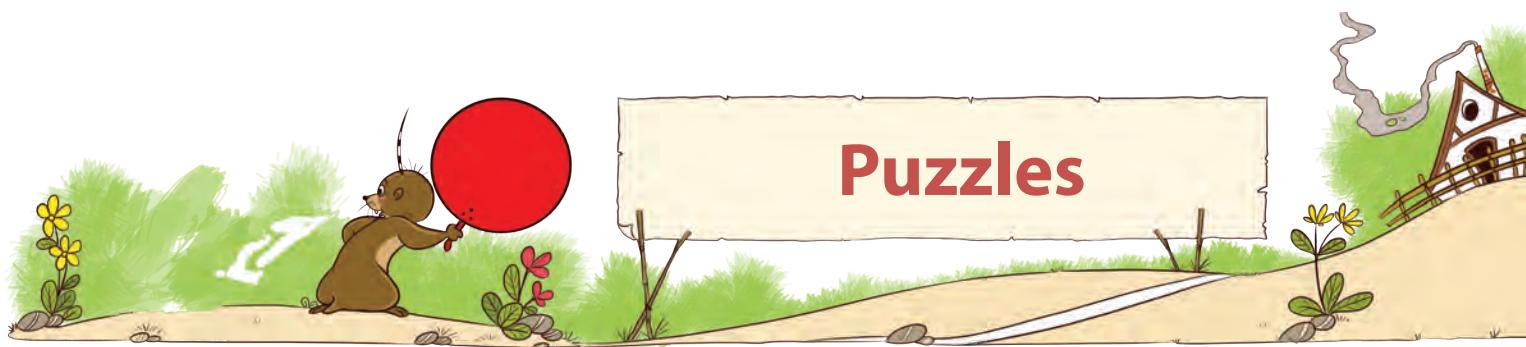
How many families live with one grandparent?

How many families live without grandparents?

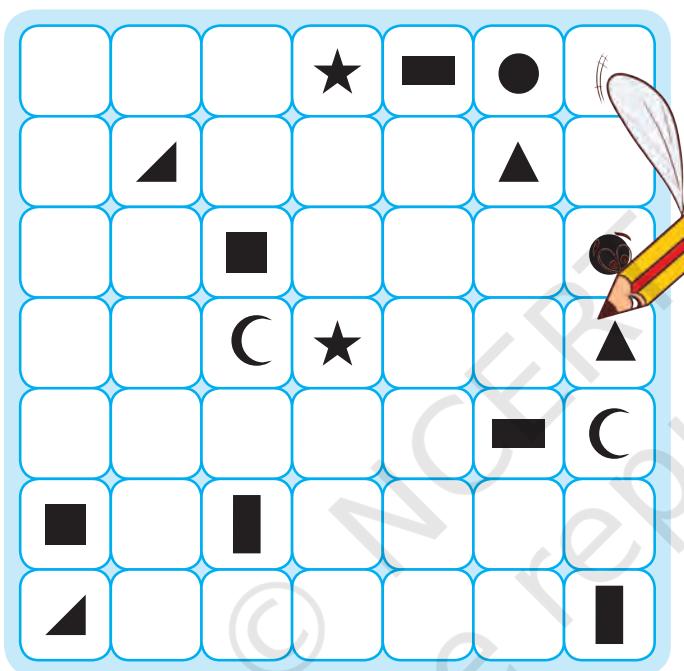
Before visiting the families, discuss the questions you are going to ask them in the class.



Puzzles



A. Draw lines to connect each pair of similar shapes together. The lines must not cross or touch each other and do not use diagonal lines.

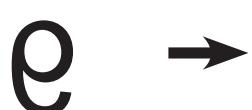
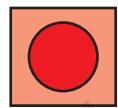
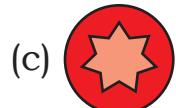
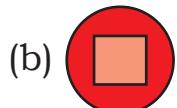
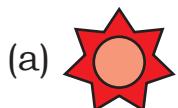
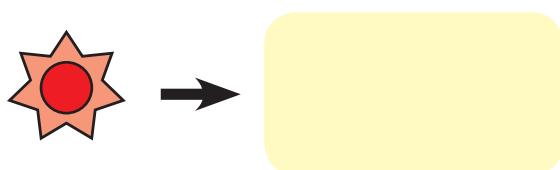
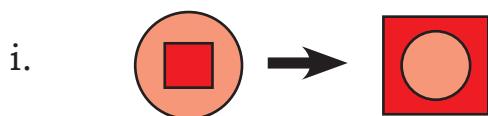


B. Complete the pattern.

| | | | | |
|---|---|---|---|---|
| 2 | + | | = | 4 |
| | + | | | |
| | | 1 | | |
| 1 | + | 3 | = | |
| | | | | |



C. Think and complete.



D. Find the number.

Think of a number

Double that number

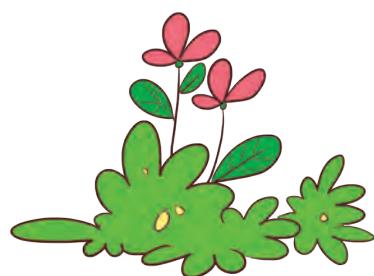
Add eight

Minus half of that number

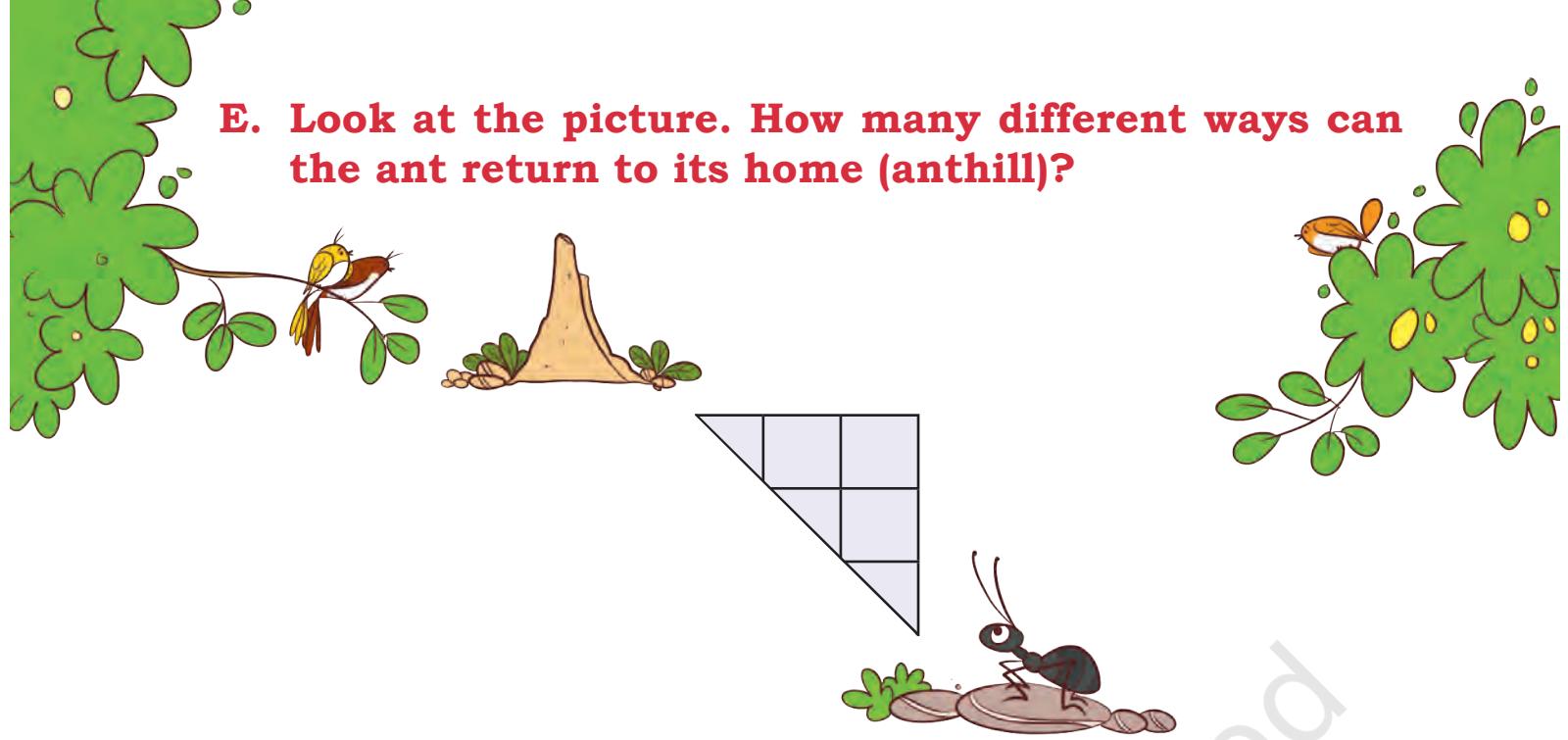
Minus the number you started with

Is the number 4?

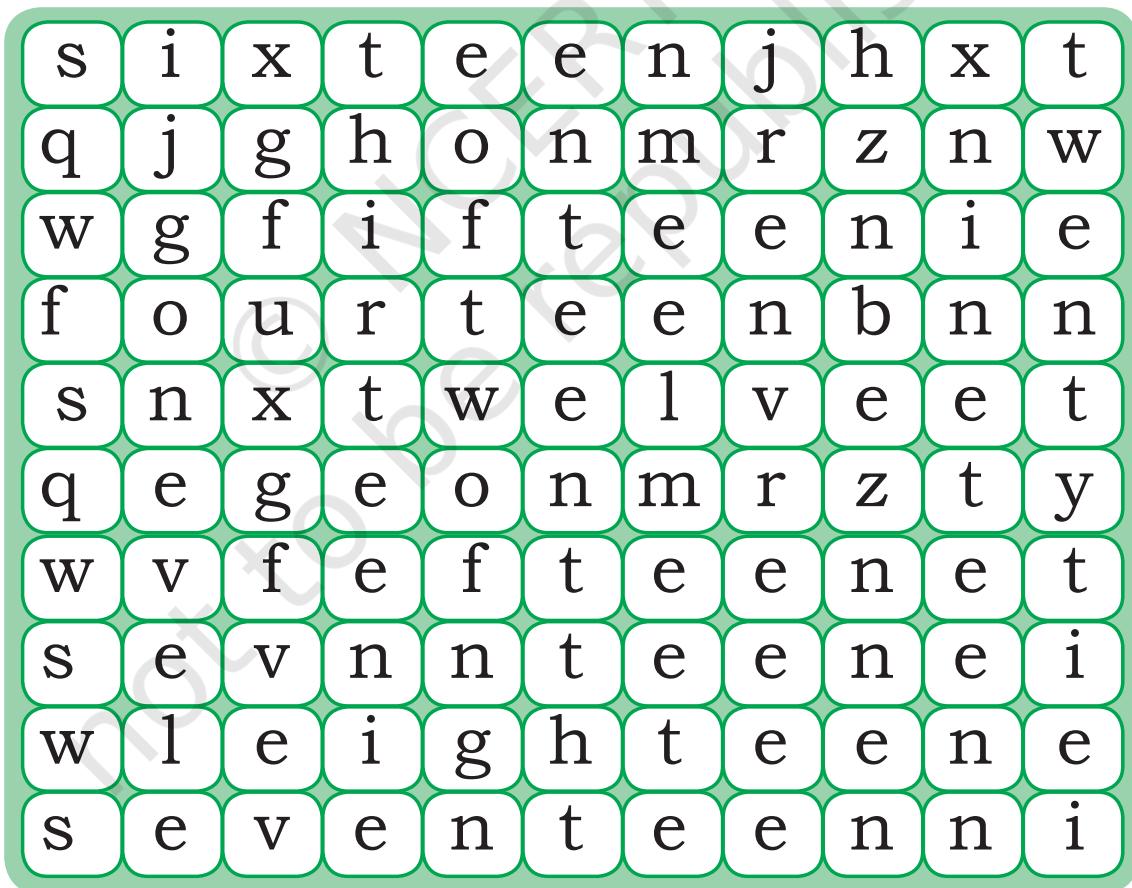
Now play this maths trick with your friends.



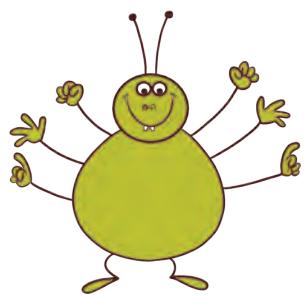
E. Look at the picture. How many different ways can the ant return to its home (anthill)?



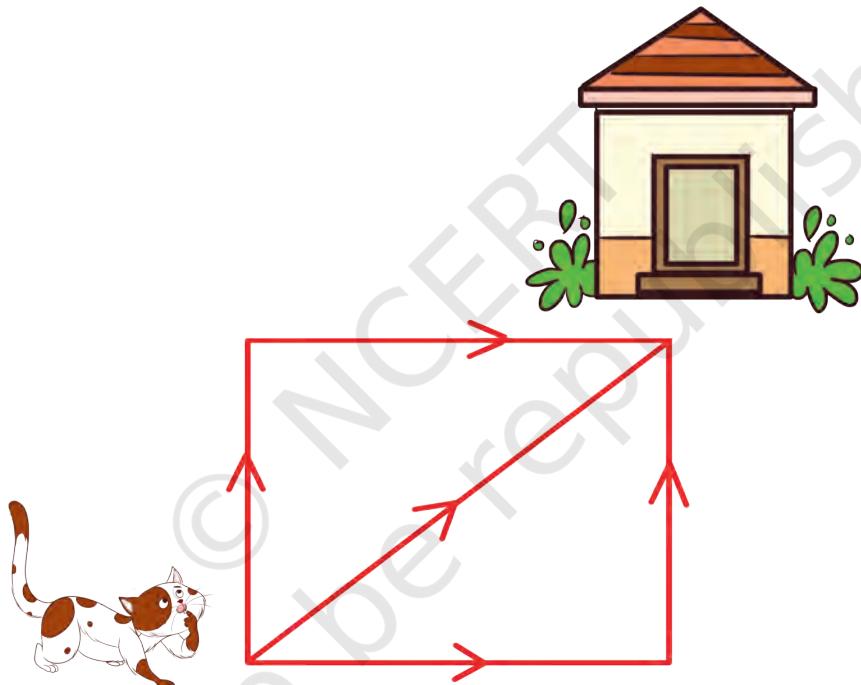
F. Find the number names from 11 to 20.



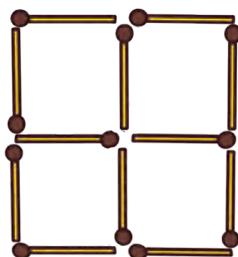
G. Identify the appropriate shadow image.



H. In how many different ways can the cat return to its house?



I. Try to make two squares by removing two matchsticks.



J. Who am I?

I am in a bicycle,
And in a car and a bus,
I make all vehicles run,
They can't move if I am flat.
What is my shape?

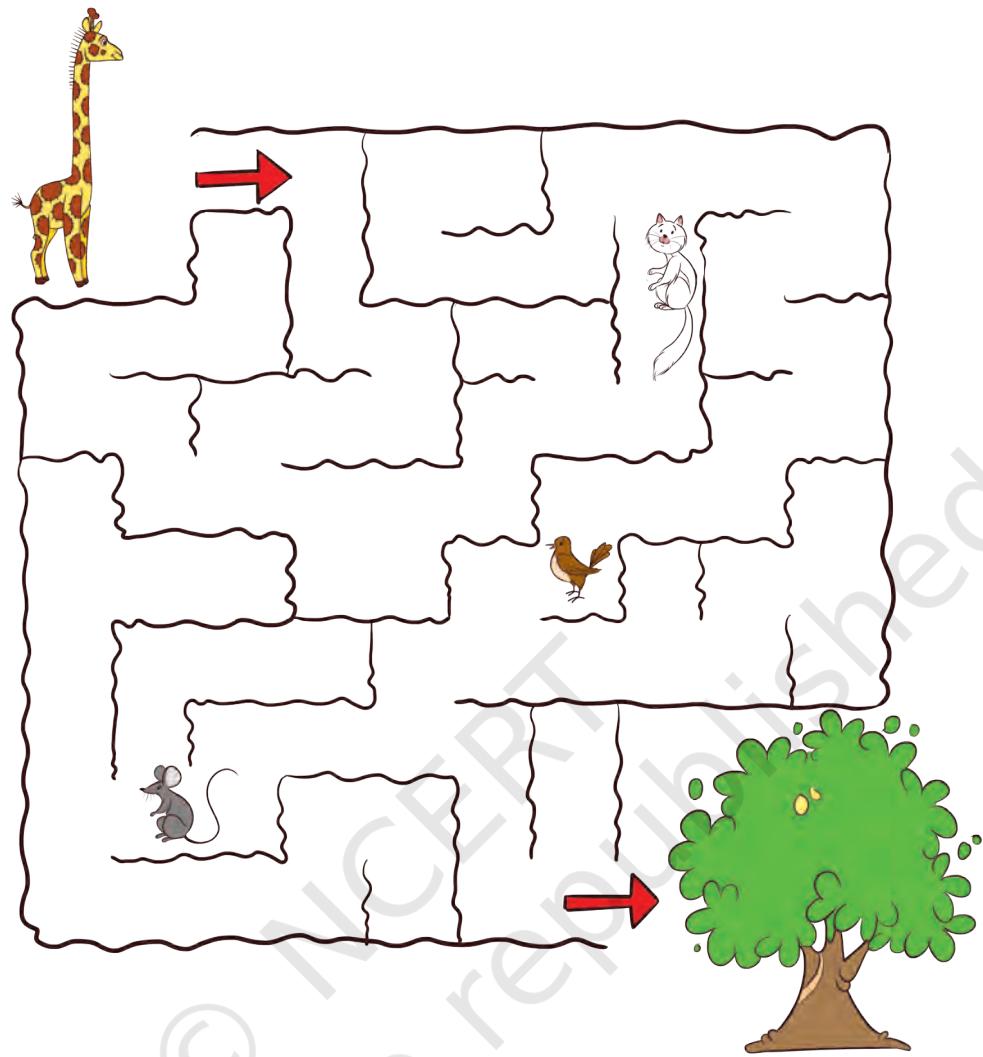
K. Which balls will you select to make a total of 30?

| | | | | | |
|------------|------|------------|------|------------|--------|
| \bigcirc | + | \bigcirc | + | \bigcirc | $= 30$ |
| 1 | 4 | 5 | 7 | | |
| 9 | 11 | 13 | 15 | | |

L. Make two different two-digit numbers by using only one digit.



M. Draw a path so that hungry giraffe can reach the tree.



N. Look at the above picture and write the answers.

i. Name the animal whom giraffe met first on the path?

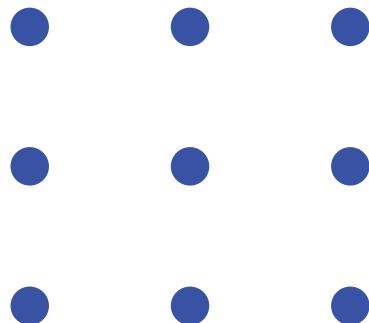
ii. Name the animal whom giraffe met in the last?

iii. Have you ever lost your way to home?

iv. What do you do to remember your way to home?

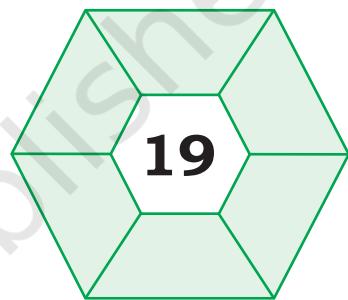
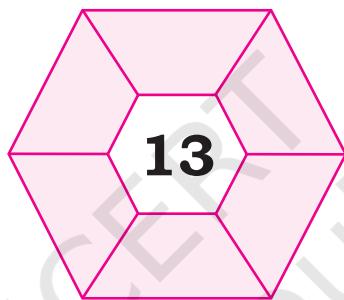
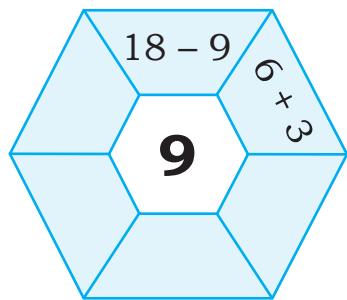


O. How many rectangles can be made after joining the dots given below?

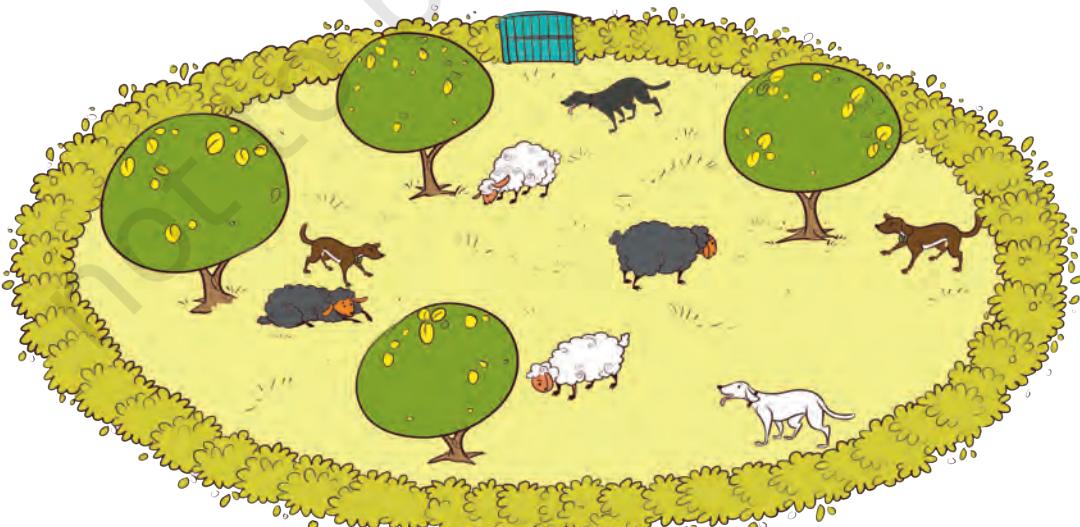


Hint: Square is also a type of rectangle.

P. Complete these by using addition or subtraction of numbers.



Q. A shepherd has 4 sheep and 4 dogs. Divide the garden into 4 areas, such that each portion or area contains one tree, one sheep and one dog.



R. Who am I? (A mirror can help you)

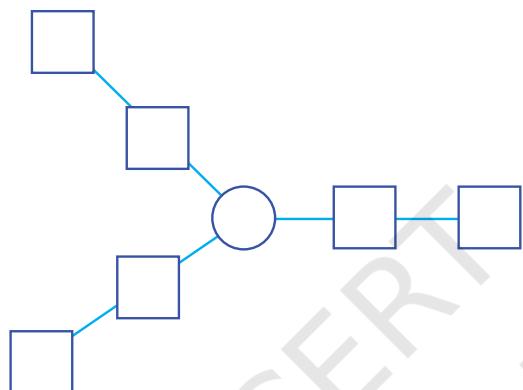
i. 

ii. 

iii. 

iv. 

S. How will you arrange the numbers 1 to 7 so that the three arms have the same total?



T. Let us divide a 6 meter long cloth into pieces. If one meter is cut every time, how many times should we cut it?

U. I think of a number and double it. If my answer is 18, then what was the number?

V. Press 10 keys on a calculator to make 28.



NOTES

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