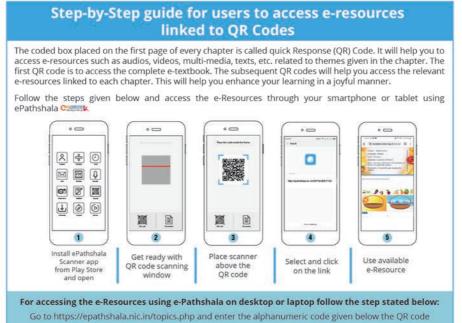
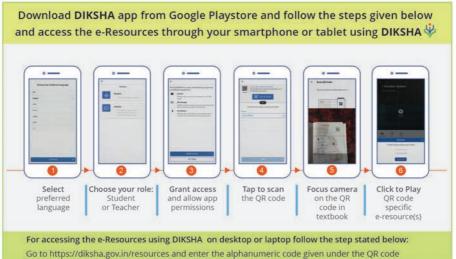
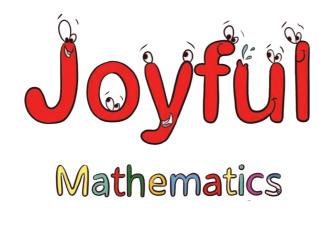


### ePathshala



### DIKSHA











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

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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 *sanskar* 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 playbased 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 competencybased 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.

> PROFESSOR DINESH PRASAD SAKLANI Director National Council of Educational Research and Training

27 January 2023 New Delhi

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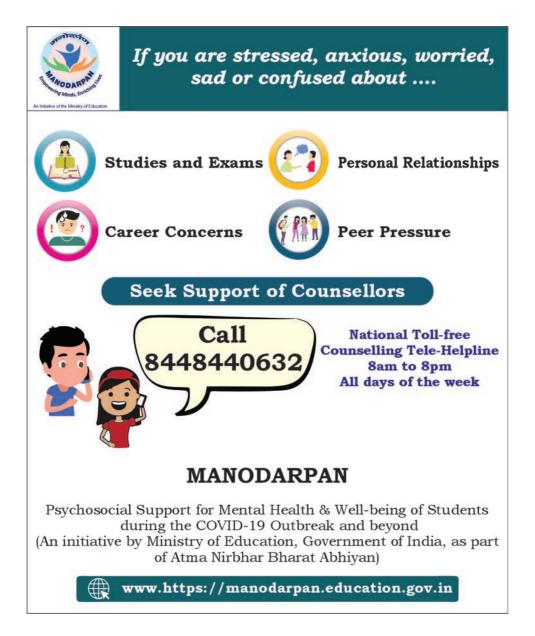
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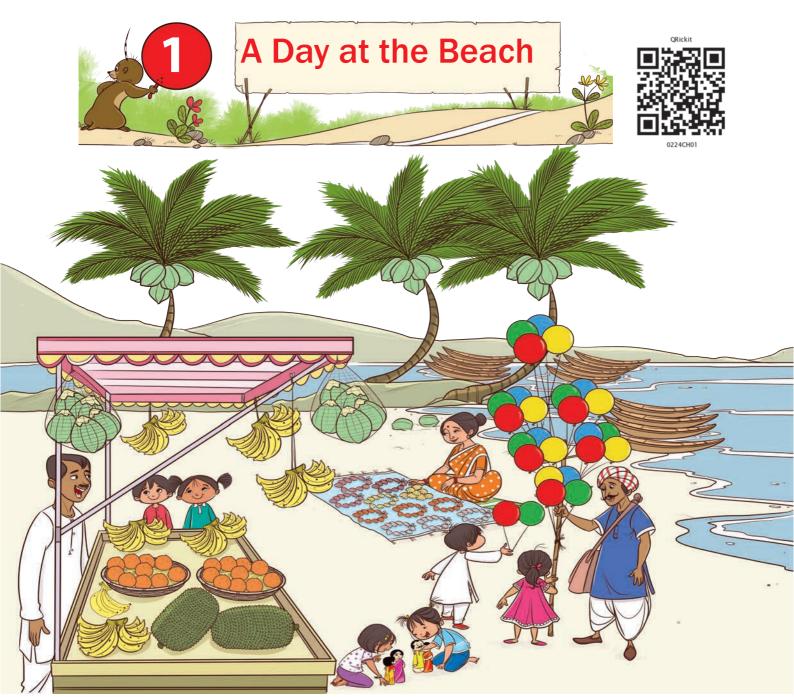
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# Look at the above picture. Count and write the number of objects given below.

Coconuts

Children





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.





- A. Look at the shops shown in the picture and fill in the blanks.
  - i. There are \_\_\_\_\_ necklaces of shells with 10 shells in each necklace.

.....

- ii. There are \_\_\_\_\_ groups of balloons with \_\_\_\_\_ balloons in each group and \_\_\_\_\_ loose balloons.
- iii. 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





### 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.

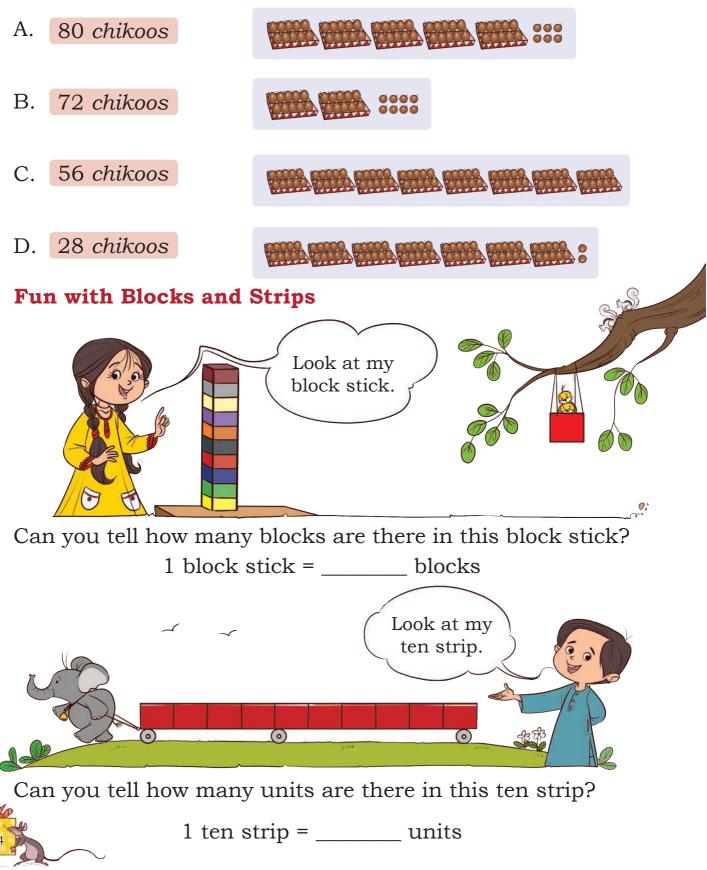
How many *chikoos* are there in total? \_\_\_\_\_

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

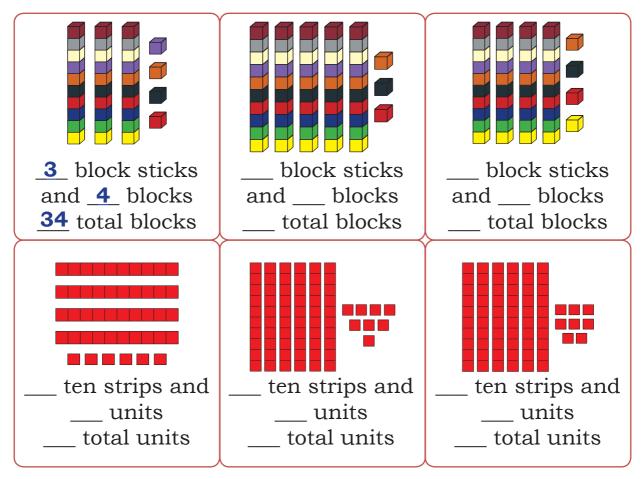
- A. 25 *chikoos* **.** *trays* of ten *chikoos* and *chikoos*.
- B. 43 *chikoos* **.** trays of ten *chikoos* and <u>chikoos</u>.
- C. 35 *chikoos* **\*\*\* \*\*** : \_\_\_\_ trays of ten *chikoos* and \_\_\_\_ *chikoos*.
- D. 58 *chikoos* **magnitude for the chikoos** and <u>chikoos</u>. trays







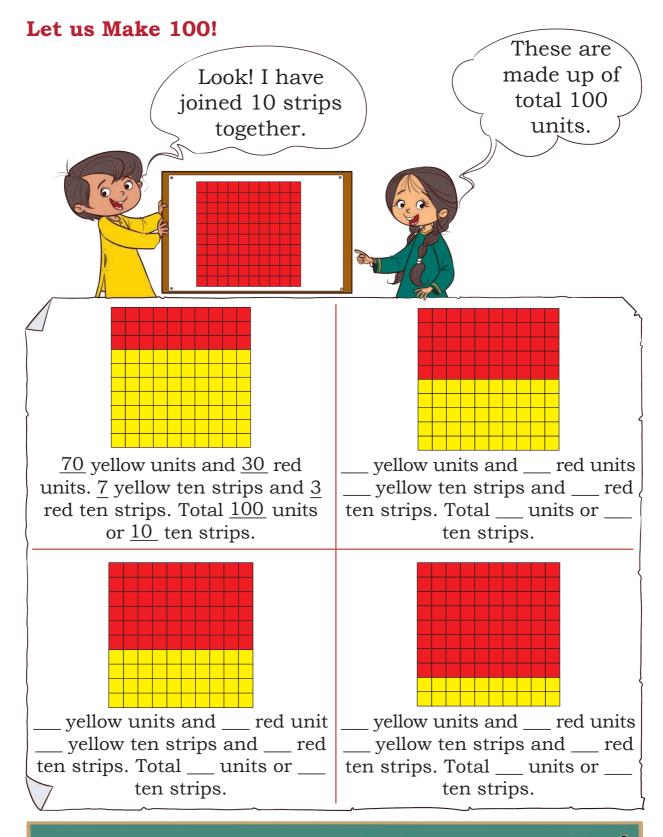




## Complete the below table.

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.



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



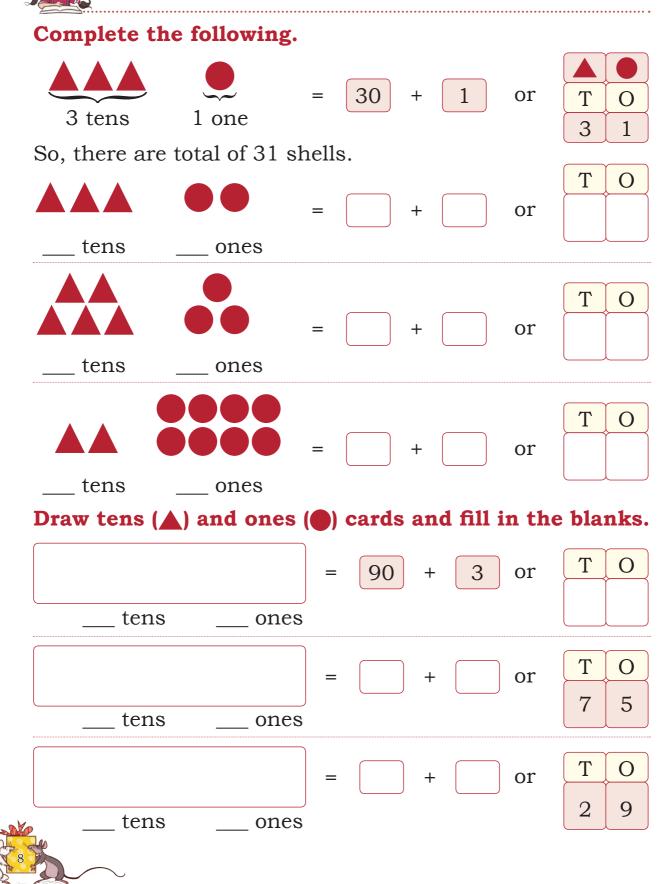
### Let us Make 100!

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.



Let us Think

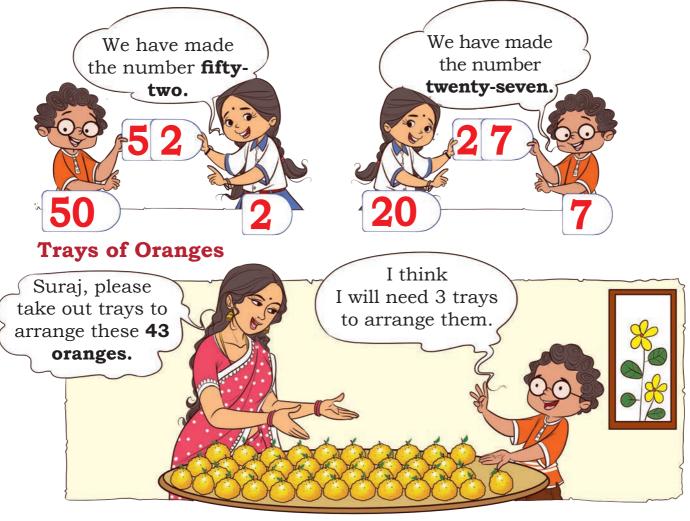
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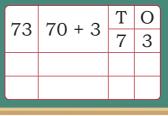


**Make Numbers** 

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.



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.

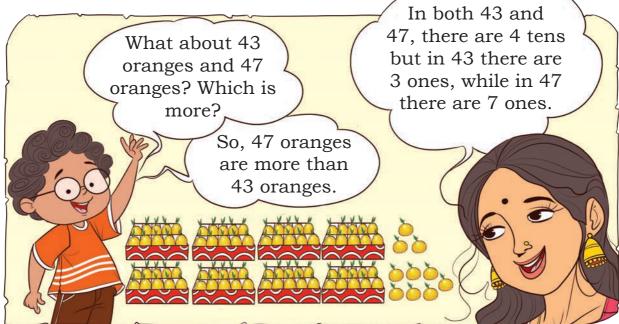




Which is less **27** oranges or **72** oranges? Why?

### Fill in the blanks with more or less.

- A. 67 *chikoos* are \_\_\_\_\_ than 76 *chikoos*.
- B. 53 shells are \_\_\_\_\_ than 35 shells.





## Fill in the blanks.

- A. <u>29</u> is more than 20. B. \_\_\_\_\_ is less than 41.
- C. \_\_\_\_\_ is less than 76.
- E. 25 is less than \_\_\_\_\_.

G. 36 is more than .

D. 49 is more than \_\_\_\_\_.

- F. \_\_\_\_\_ is less than 2.
- 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 as more number of objects.

Let them then verify their estimate by counting the objects.

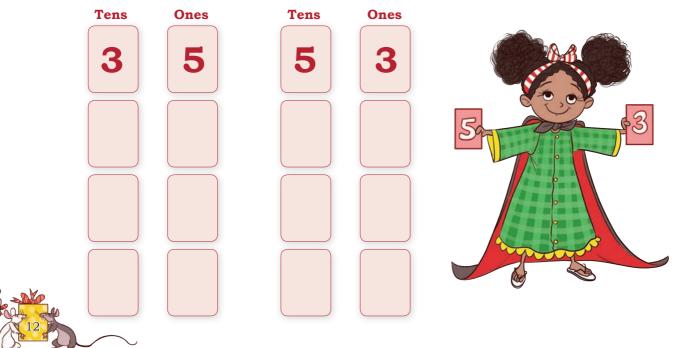


### **Flash Card Game**

- 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?

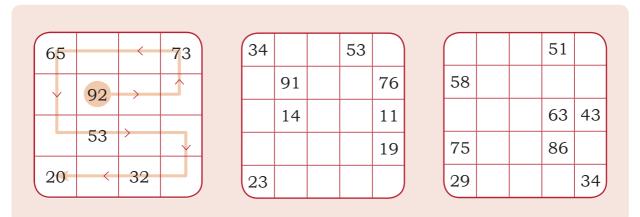


B. Choose any two flash cards and make a two-digit number. Now swap these flash cards to get another number and find out whether it is bigger or smaller than the previous number. How will you get the largest number using same digits?



## 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?

Ma	ke your own such questions.	
F.	I am the largest two-digit number with 2 at the ones place.	
E.	I am the smallest two-digit number with 3 at the tens place.	
D.	I am the smallest two-digit number, my digits are repeated.	
C.	I am the smallest two-digit number.	
В.	I am the largest two-digit number where no digit is repeated.	
A.	I am the largest two-digit number.	



### 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	<b>15</b> Independence Day	16	17	18	19
20	21	22	23	24	25	26
27	28	<b>29</b> Onam	<b>30</b> Raksha Bandhan	31		

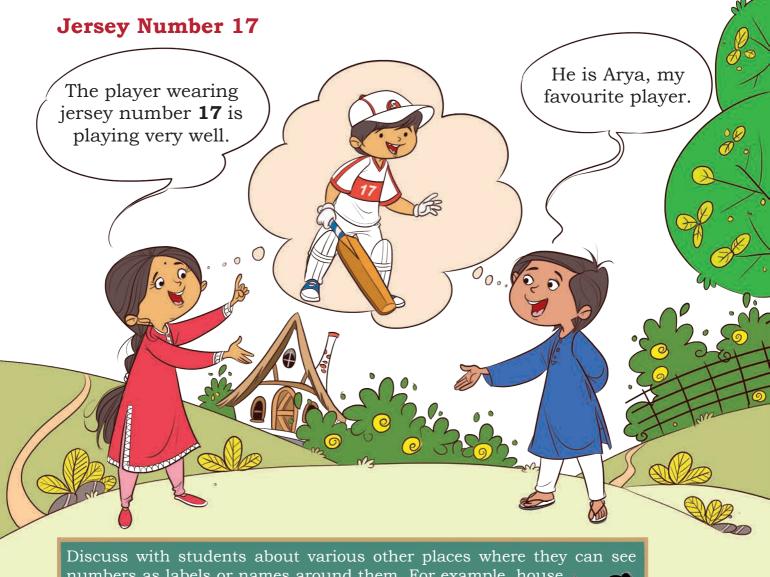


\*Calendar based on 2023

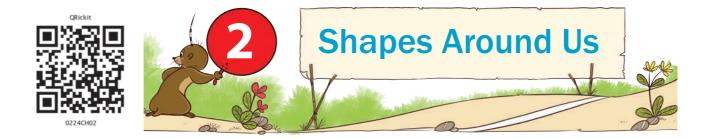
### Read the calendar and answer the following questions.

- 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.



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.



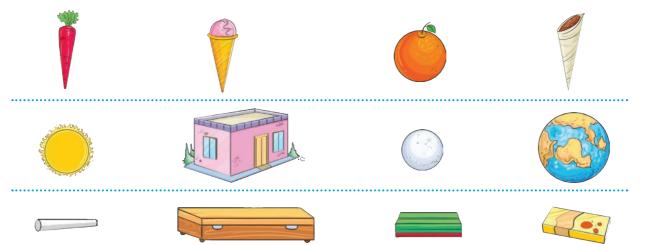




# A. Look at the picture and observe different musical instruments.

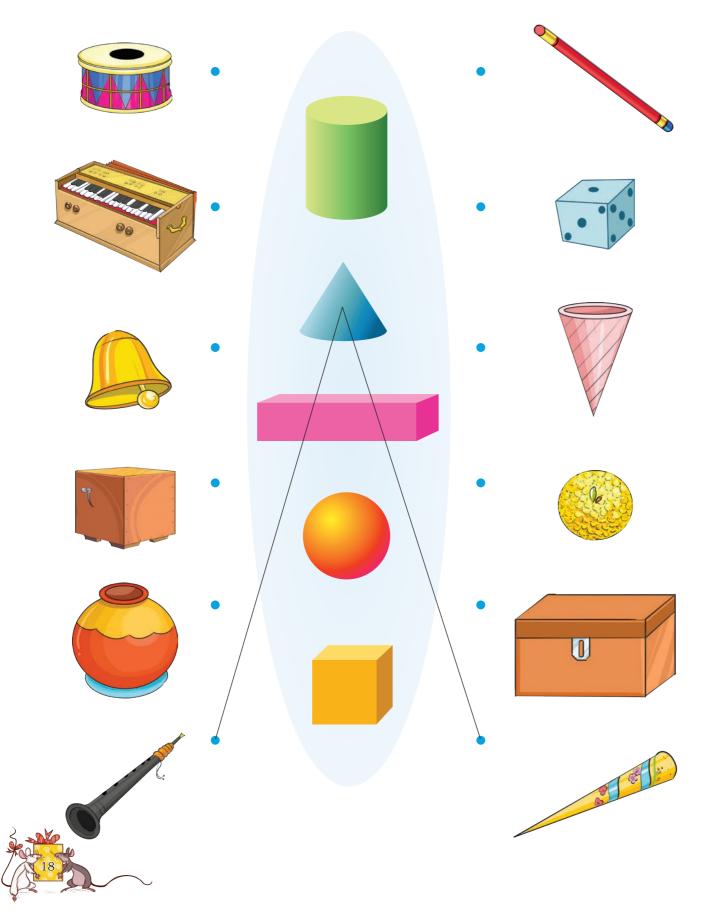
i. Circle () the musical instruments that are similar in shape to a 📷 drum.

- ii. Tick 🗸 the musical instruments that are similar in shape to a 🦲 matka.
- iii. Tick v the shape similar to the shape of a v shehnai ( , , , , ).
- iv. How is the shape of harmonium in different from the shape of a 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**



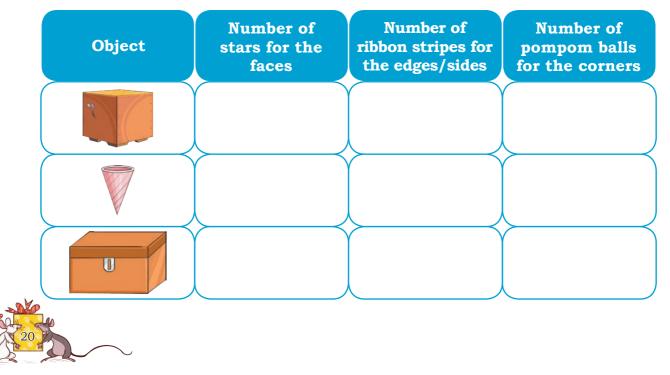
Let the children experience the surfaces, edges and corners of solid objects like chalk box, duster, chalk, etc.







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?





# Look at the objects and fill the table.





# 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.

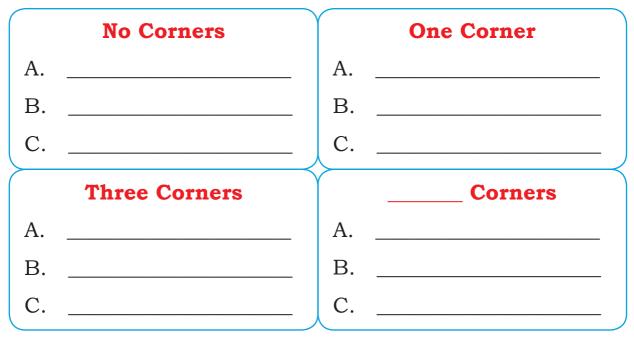
.....

.....



# Let us Do

## Name the objects which have—





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.







# Look at the Ginladi.

75 76

- 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

Fun with Numbers

#### 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

80 81 82 83 84 85 86 87 88 89 90 91

96 97 98

92 93 94



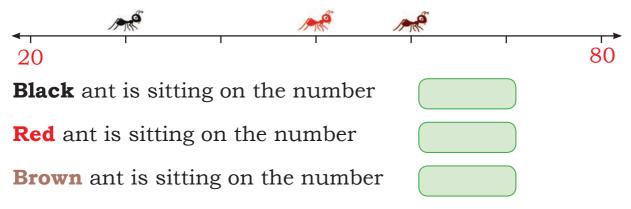
#### **Guess my Number**

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**

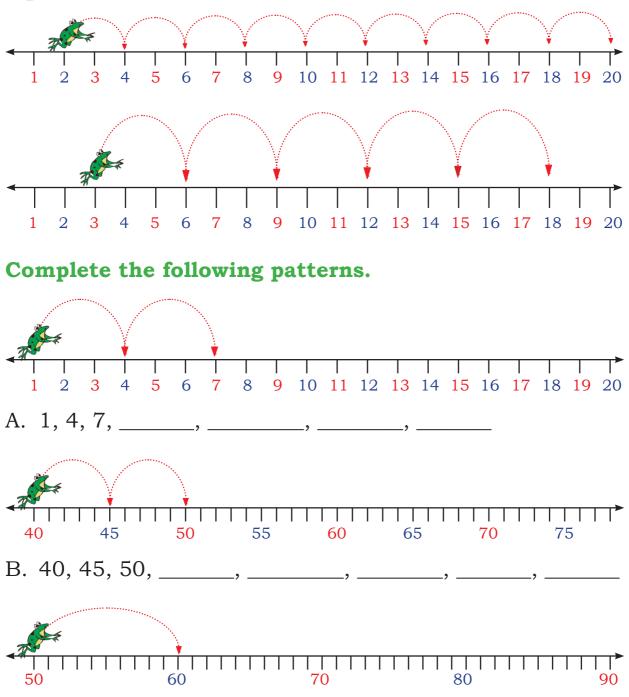
Three ants are sitting on a number line. Write the numbers for these ants.



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

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

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



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.



48 49

50 51 52

53

54

56 57

58

59

73 <mark>74</mark> 75 <mark>76</mark> 77 <sub>78</sub> 79

5 4 3 2 1

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

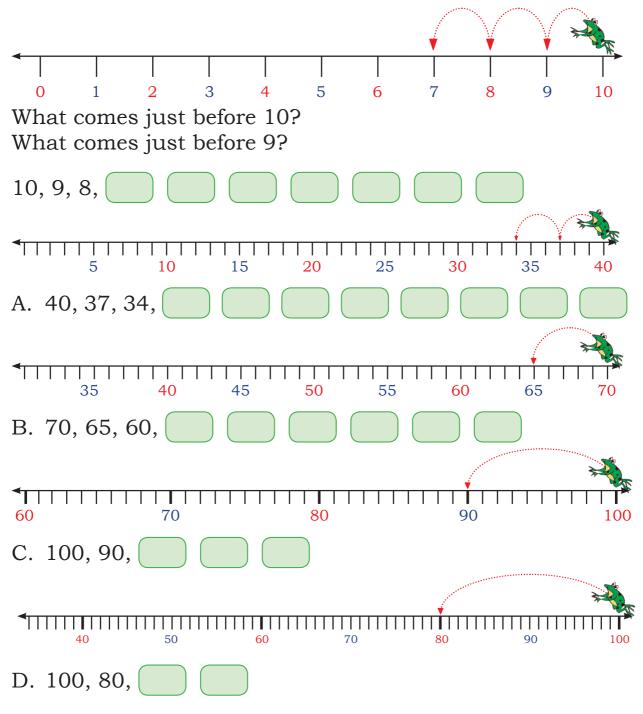
Jump and find the answers. Write 'Yes' or 'No'. Make a number line on the ground and jump on it.

- 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?

83 <mark>84 85 86 87 <sup>88</sup> 89 90 91 92 93 94 95 96 97 98</mark> 99 100

#### Let us jump backward.

Complete the following patterns.



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,





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.

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

#### **Patterns in Number Chart**





## Look at the number chart and write down the answers.



comes just before 10

comes just before 30

.....

comes just before 20

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.

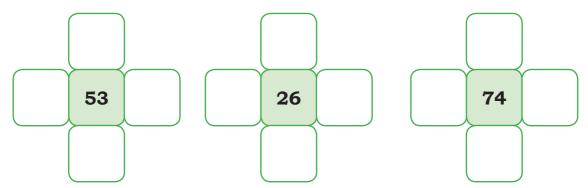
What pattern do you notice? Discuss.

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

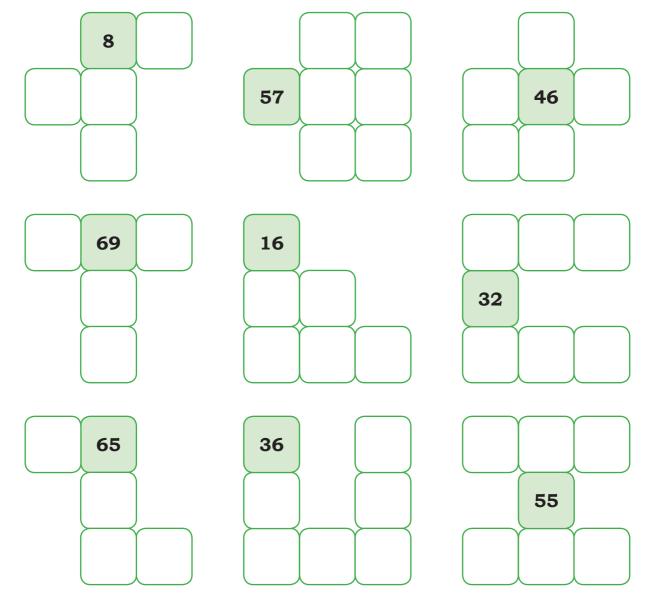
- A. If the centre of the window is placed on 28, which number will be on the top of it?
- B. Which number will be below it?
- C. Which number will be on its right?
- D. Which number will be on its left?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16		10 less		20
21	22	23	24	25	26	1 less	28	1 more	30
31	32	33	34	35	36		10 more	T	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.



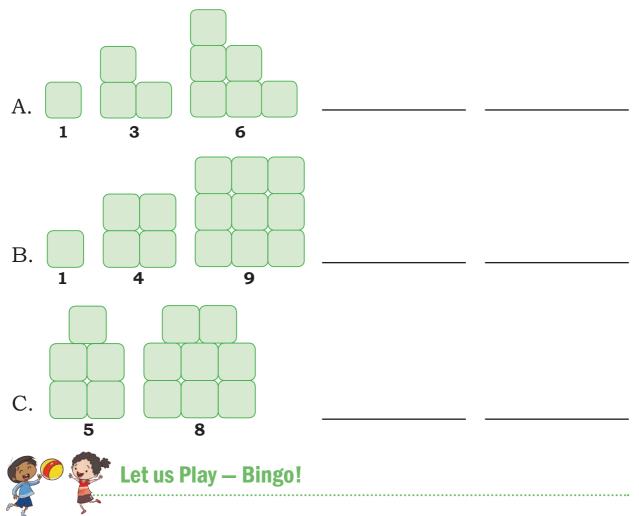
F. Based on the same number grid fill the missing numbers.



30

# **Exploring Patterns**

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



Make a  $3 \times 4$  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.





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 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.

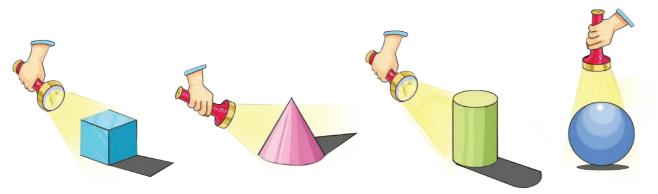


Do a role-play by making the shadows of different animals and creating their sounds.



- 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.



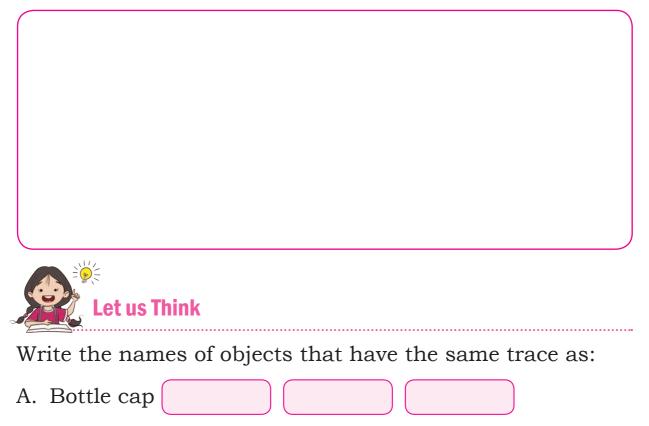


B. Eraser

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

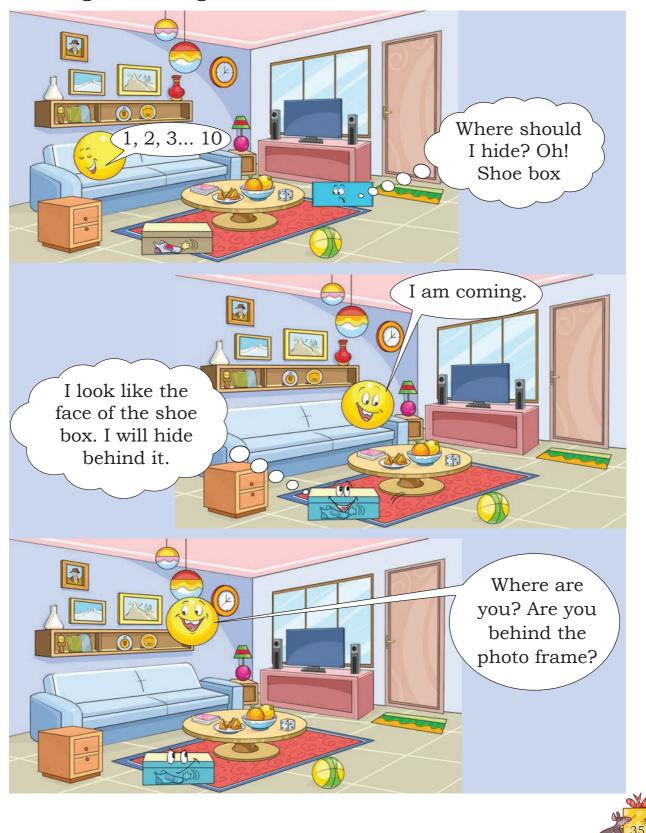


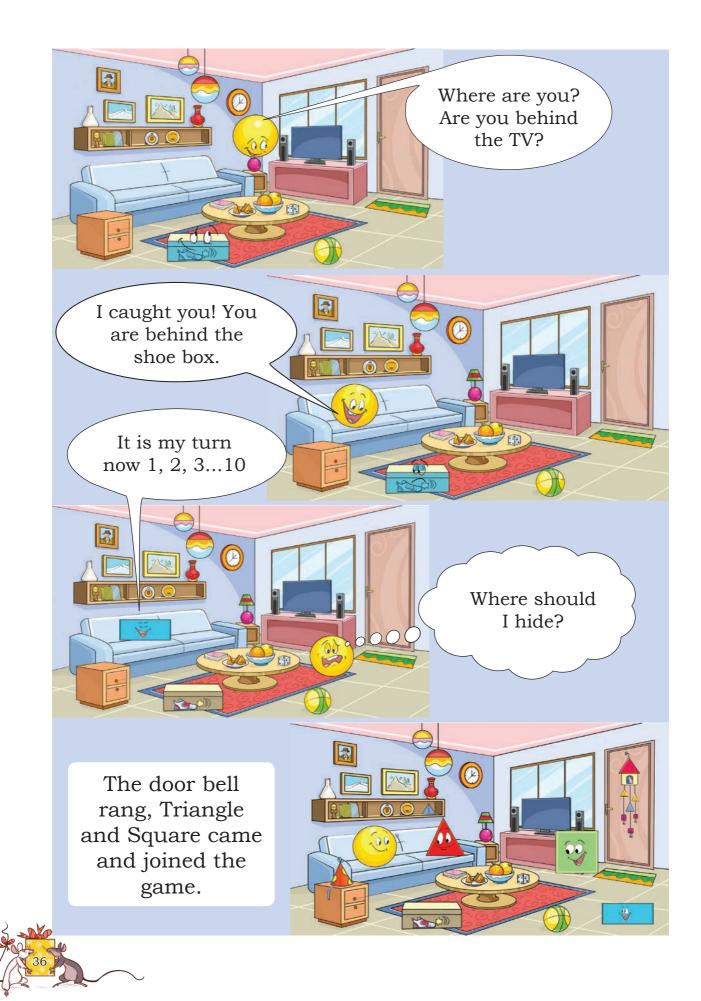
B. Draw the shapes you get after tracing.



#### Hide and Seek

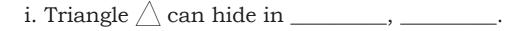
Circle () and rectangle [] are playing hide and seek. Rectangle is hiding from the circle.





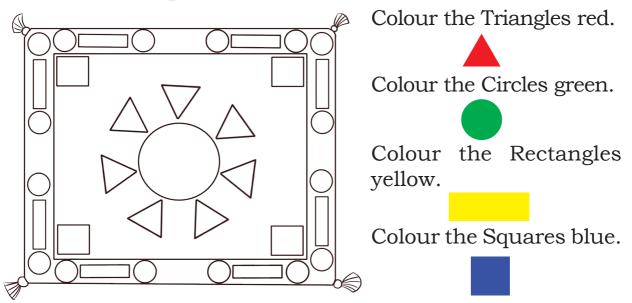
#### They all are playing together now.

- A. Circle 🔵 can hide in the clock, ball, \_\_\_\_\_, \_\_\_\_.
- B. Rectangle \_\_\_\_\_ can hide in the shoe box, photo frame, \_\_\_\_\_, \_\_\_\_.
- C. But Triangle  $\triangle$  and Square  $\Box$  are confused and wonder where to hide now. Suggest them some places where they can hide.



ii. Square 🗌 can hide in \_\_\_\_\_, \_\_\_\_\_.

#### **Colour the Carpet**



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.

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











- 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.

ii.

i. 🛑

iii.

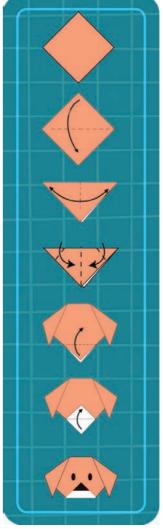
- E. This shape has corners and edges.
- F. Fold the paper again into half to get a triangle and then unfold it.
- G. Now make two triangles from two corners of the triangle.
- H. How many corners are there now?
- I. Fold the third corner upwards and make the nose and eyes as shown.

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.

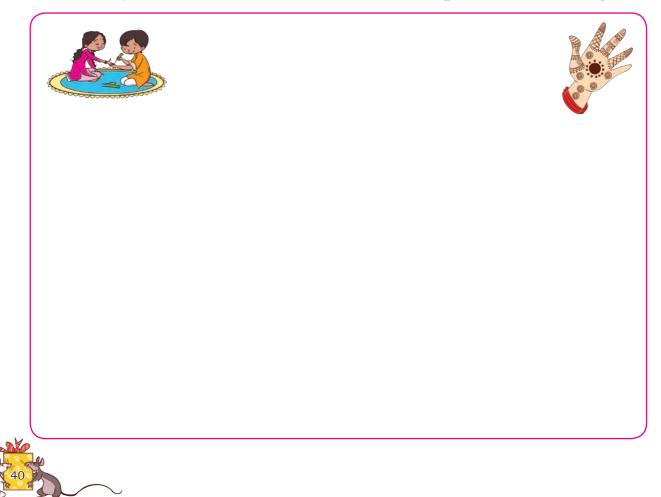


# Patterns

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

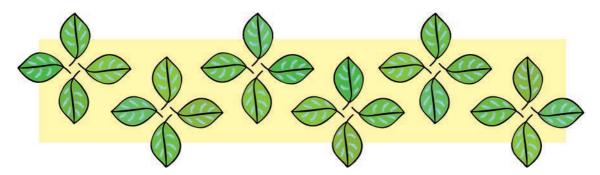


B. Radha is applying *mehandi* on her hands. You can also trace your hand to make a *mehandi* pattern or design.





Nitya is playing with leaves and making patterns.



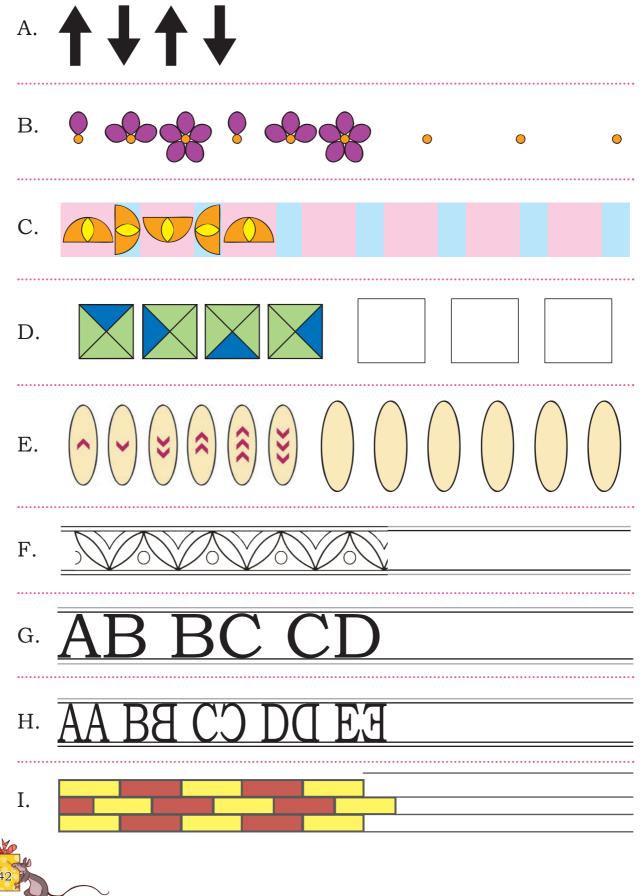
Now you also collect some leaves and make a pattern. Paint one side of the leaf and print it on the space given below.

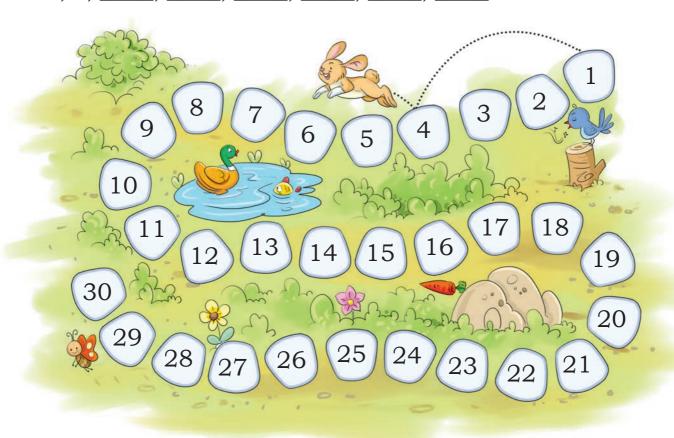


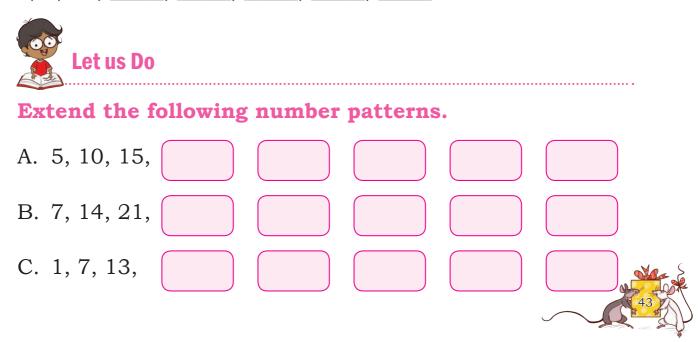
Make a wall hanging using cutouts of different shapes with the help of your elders to decorate your home or classroom.

















- A. Circle () the *aasanas* with standing or vertical lines.
- B. Tick 🗸 the *aasanas* with both vertical and slanting lines.
- C. Cross 😣 the *aasanas* which have curved lines.
- D. Put a star 🗙 along the *aasanas* that have sleeping or horizontal lines.
- E. 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?

your hands.



Is it straight?



Hold a piece of thread in Now bring your hands closer.



Is the thread straight now?



This is now standing/sleeping/slanting.



Let us Do

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



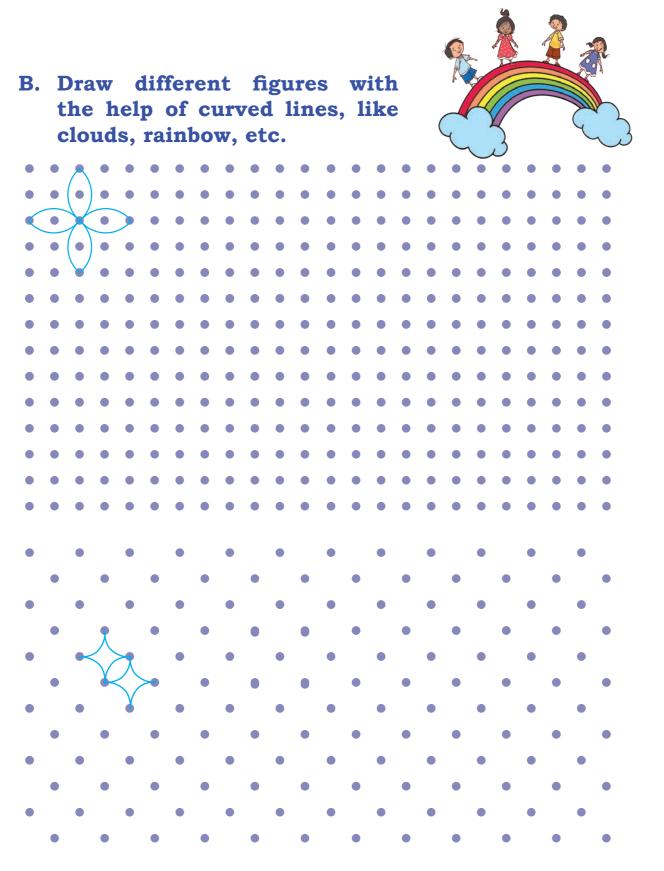




# A. Make new shapes with straight lines (vertical, horizontal and slanting).

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		$\mathbf{N}$																				
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•		•			-			•		•	•	•	•		•	•			•	•	•	•
•					•	<b>^</b>					•	•	•		•	•				•	•	•
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•	•		-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
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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.



#### **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.

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

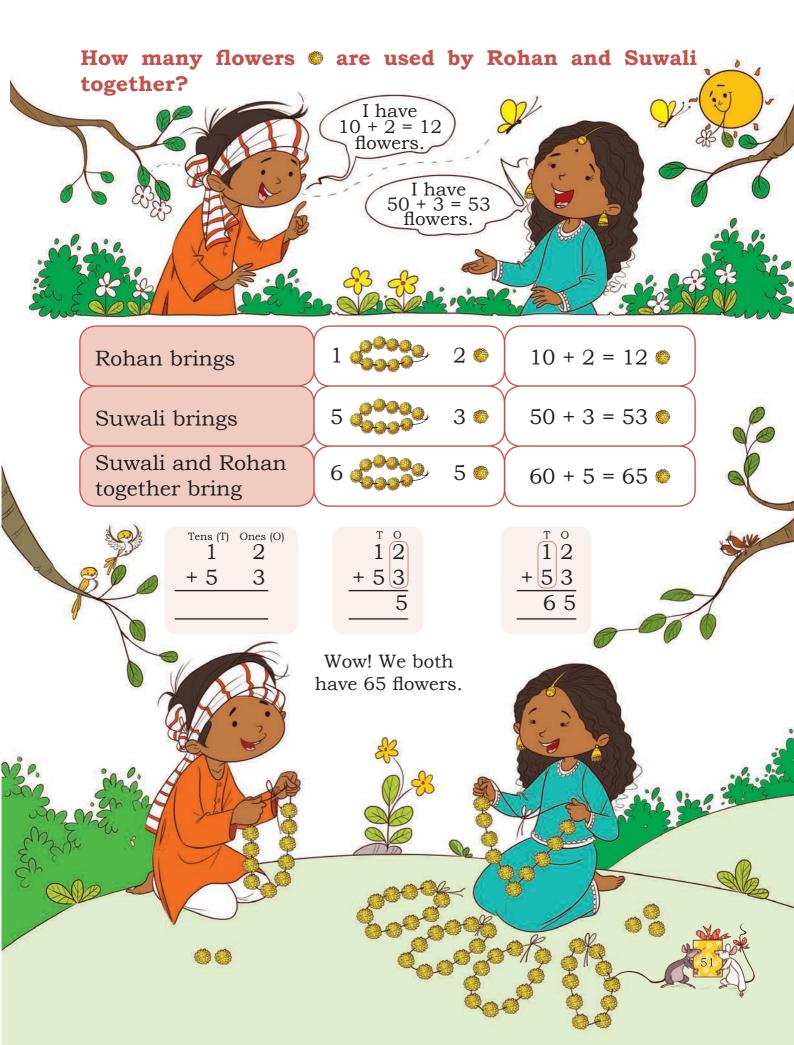
Discuss various art forms like *Madhubani*, *Kalamkari*, *Warli* or any other local art forms that they are familiar with. Teacher might invite local painters to share their process of drawing different lines and shapes with children.



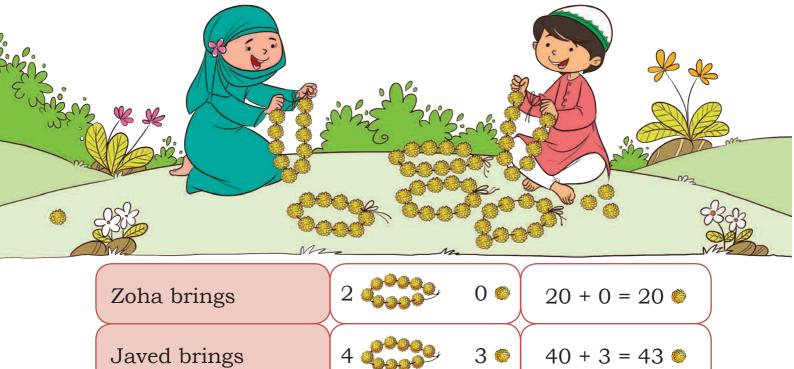
### **Decoration for Celebration!**

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 Zoha and Javed in all?



Zoha and Javed together bring

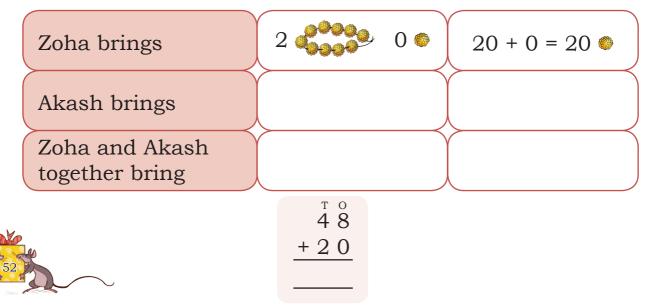
$$\begin{array}{c} T & O \\ 4 & 3 \\ 2 & O \\ \hline \end{array} \end{array} \longrightarrow \begin{array}{c} T & O \\ 4 & 3 \\ + & 2 & O \\ \hline \end{array} \end{array} \longrightarrow \begin{array}{c} T & O \\ 4 & 3 \\ + & 2 & O \\ \hline \end{array} \end{array} \longrightarrow \begin{array}{c} T & O \\ 4 & 3 \\ + & 2 & O \\ \hline \end{array}$$

6

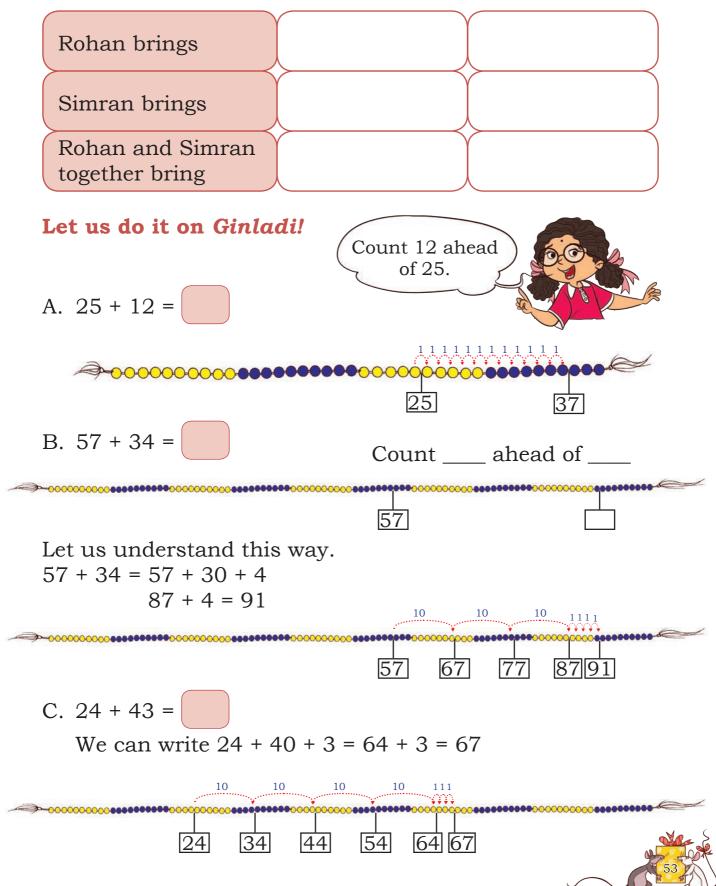
3 🌍

60 + 3 = 63 🍩

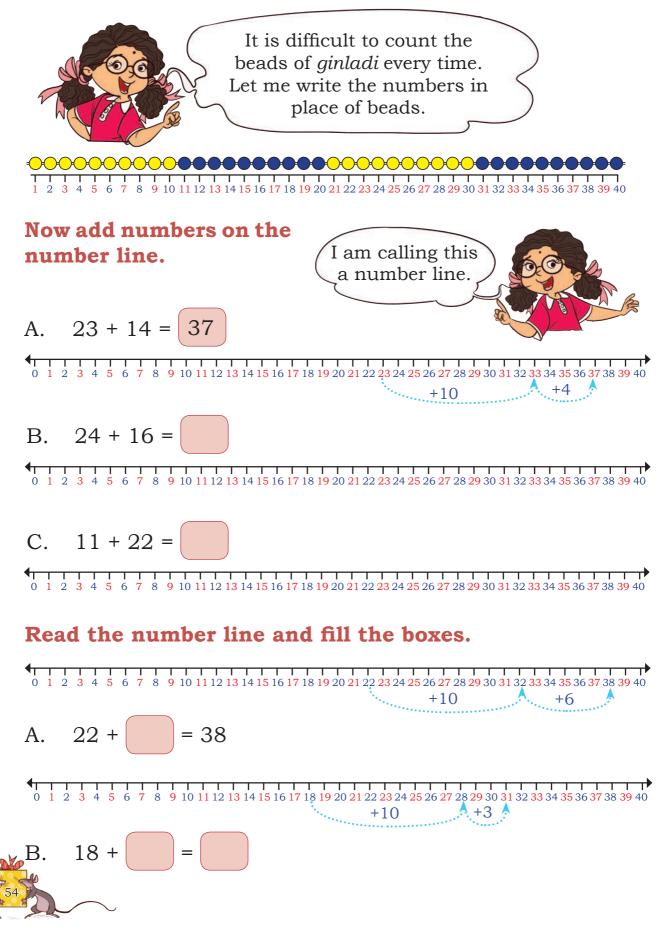
What is the total number of flowers © used by Zoha and Akash?

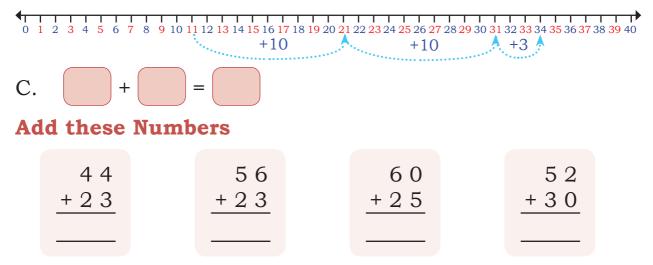


What is the total number of flowers © used by Rohan and Simran?



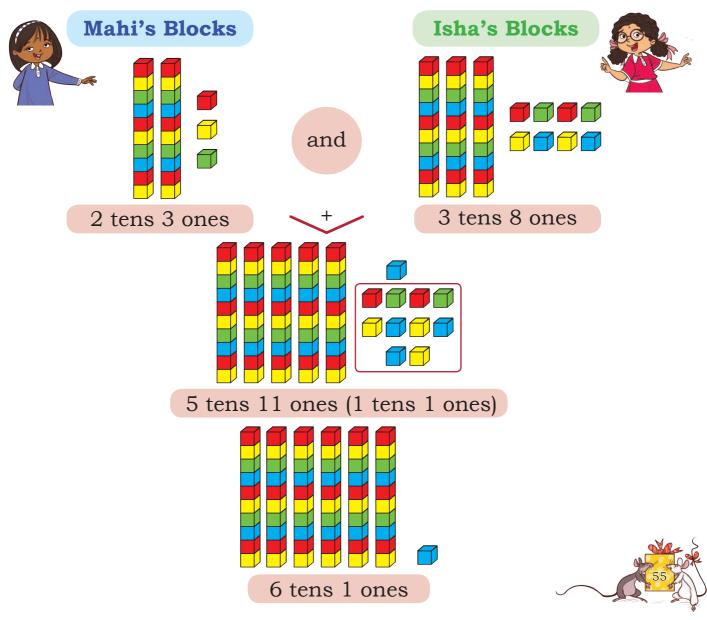
We can get the number 43 in another way: 20 + 20 + 3



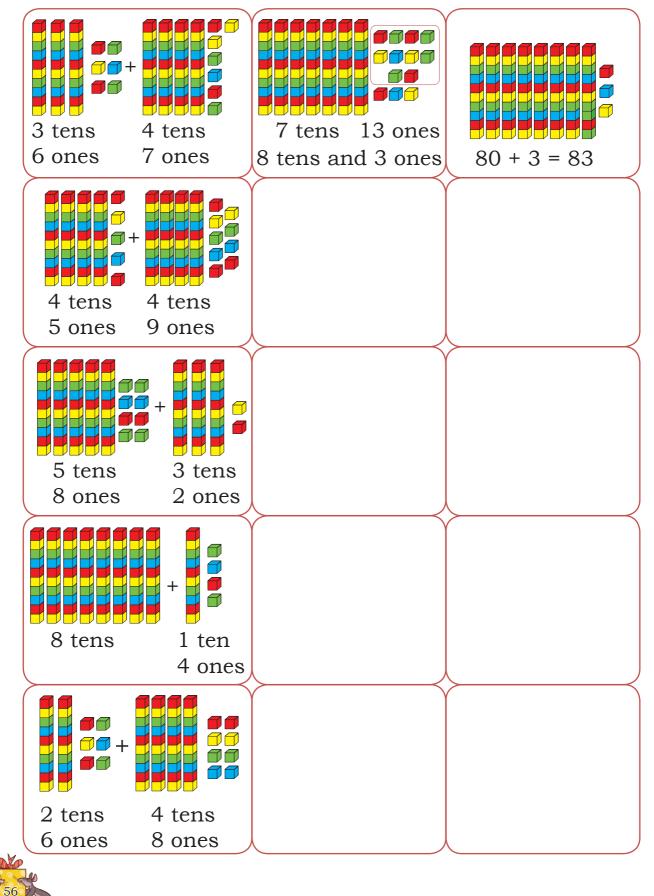


#### **Playing with Blocks**

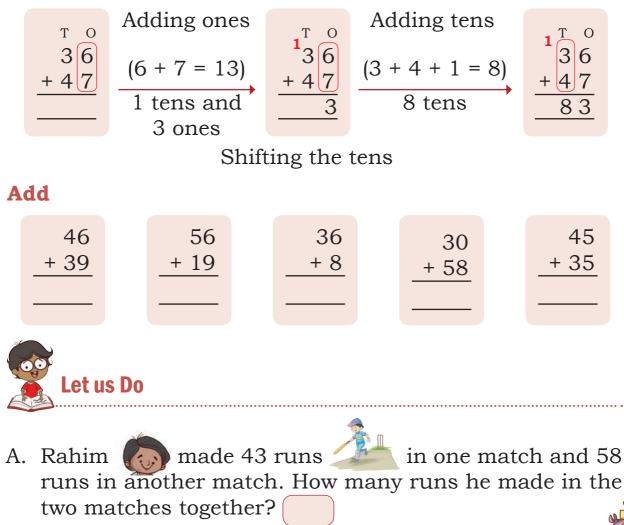
Mahi has some blocks. Isha came with her blocks to play. Let us help them in finding how many blocks they have in total.

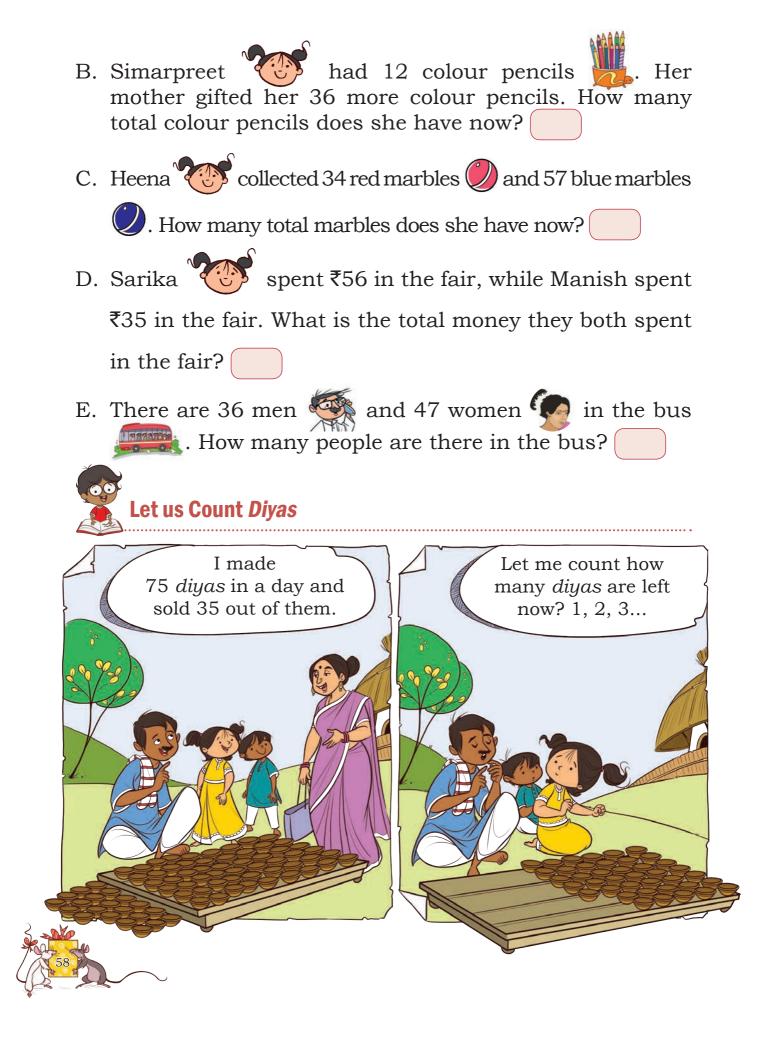


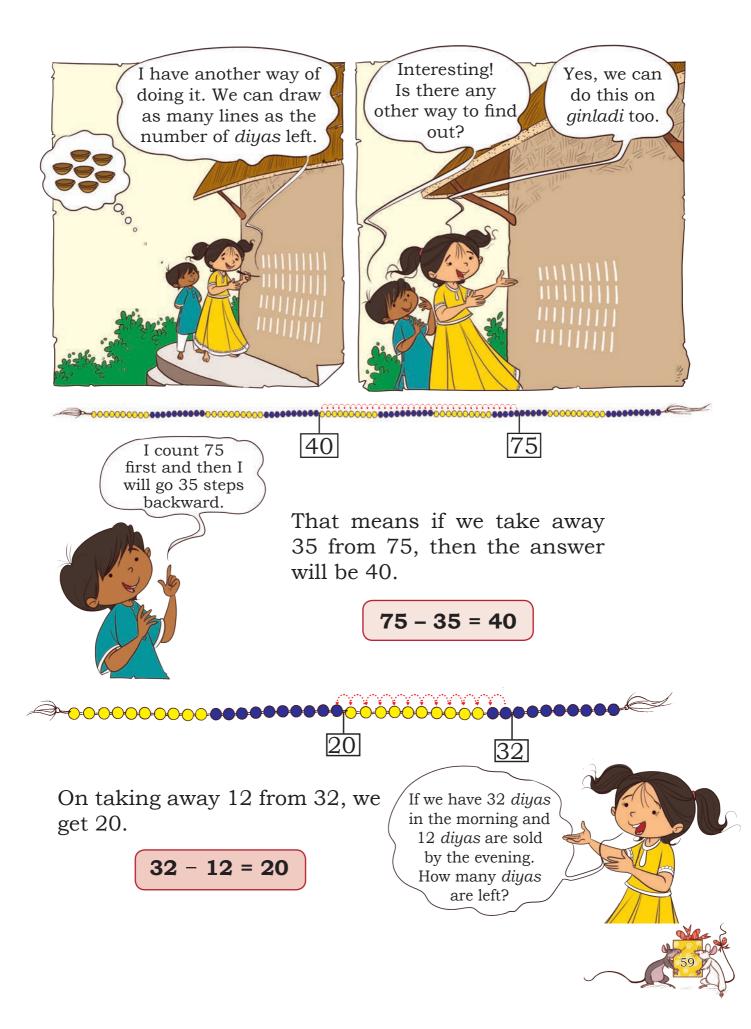
## Let us find the total number of blocks.



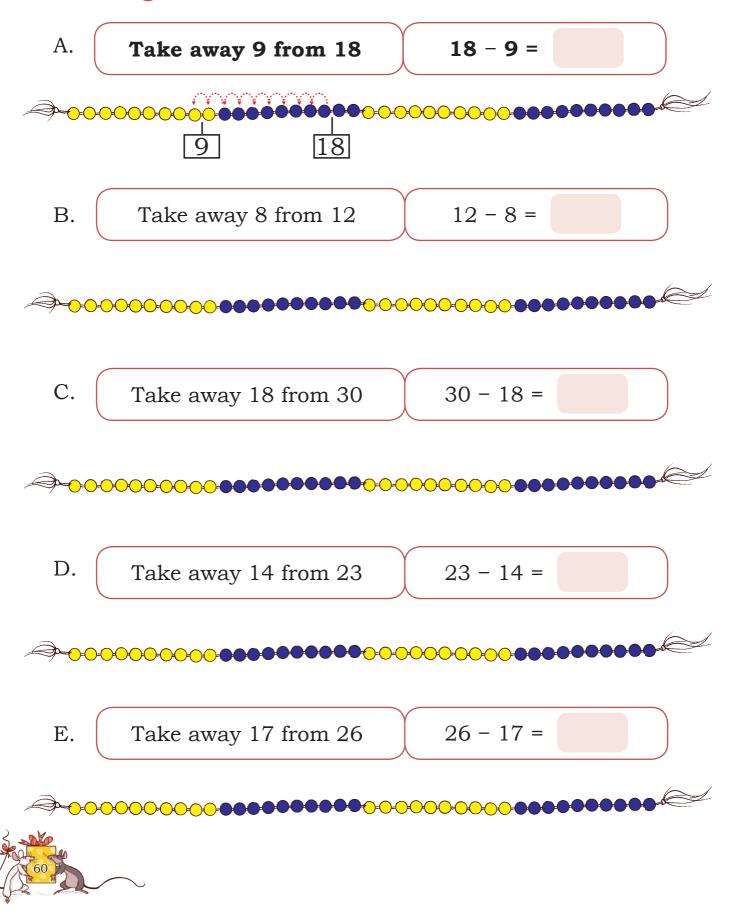


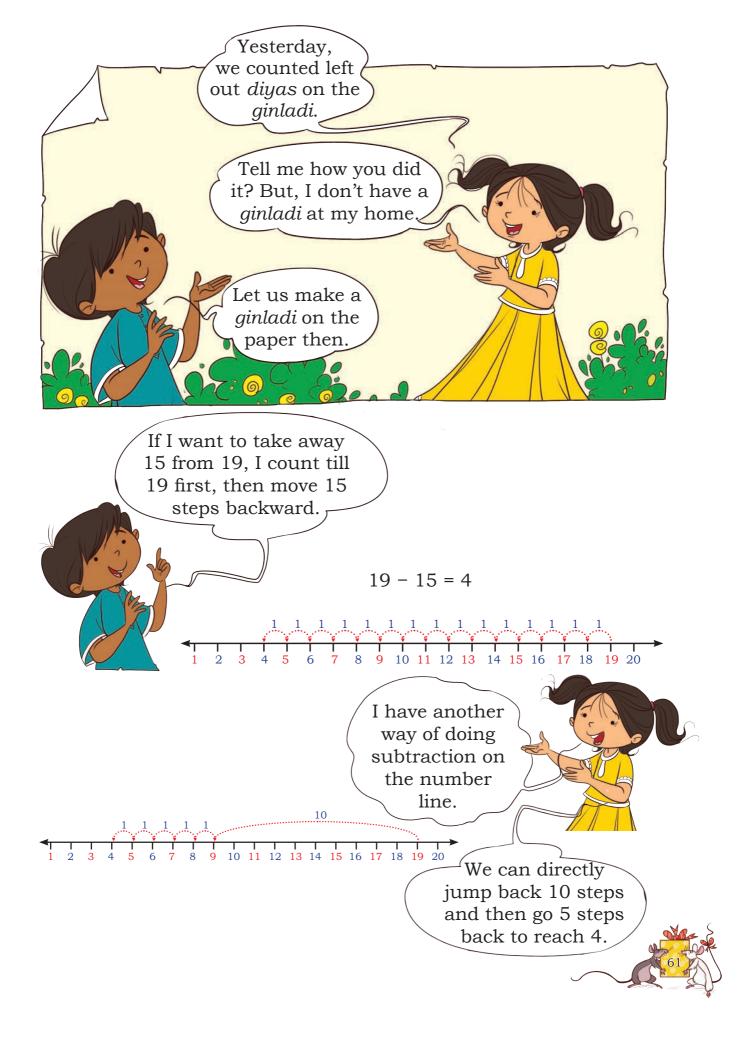






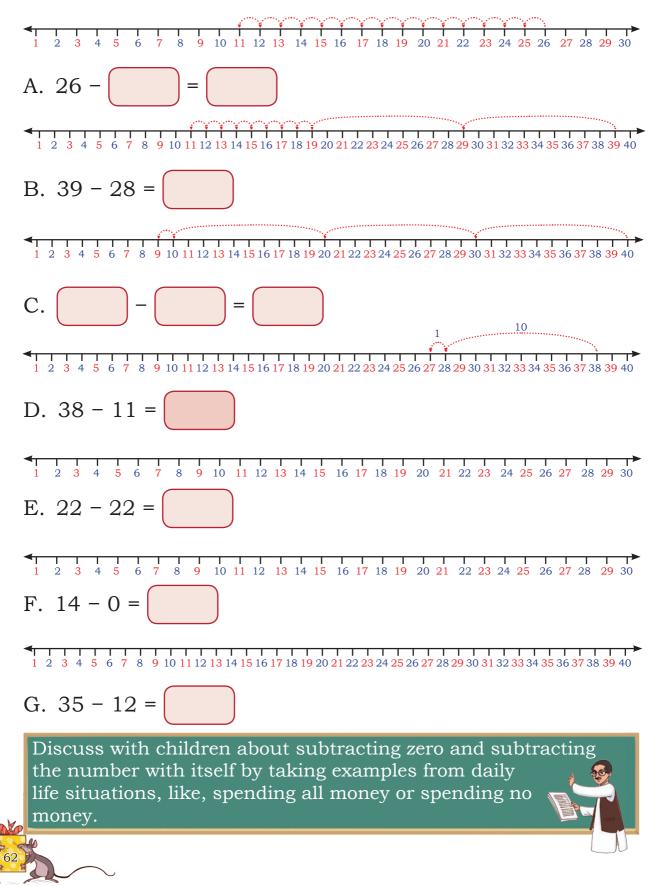
We can also use the *ginladi* to find the answers of the following.

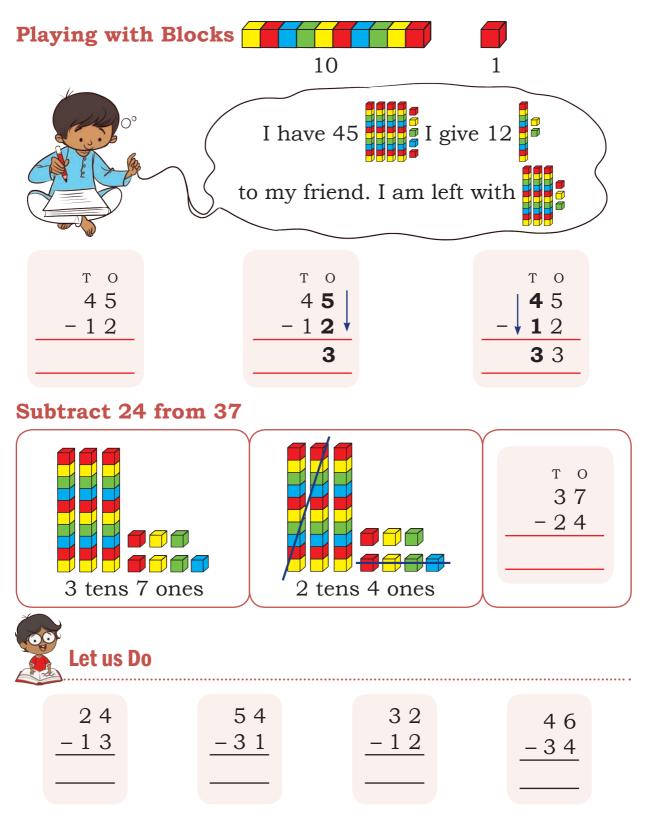




## Let us do some practice on number line.

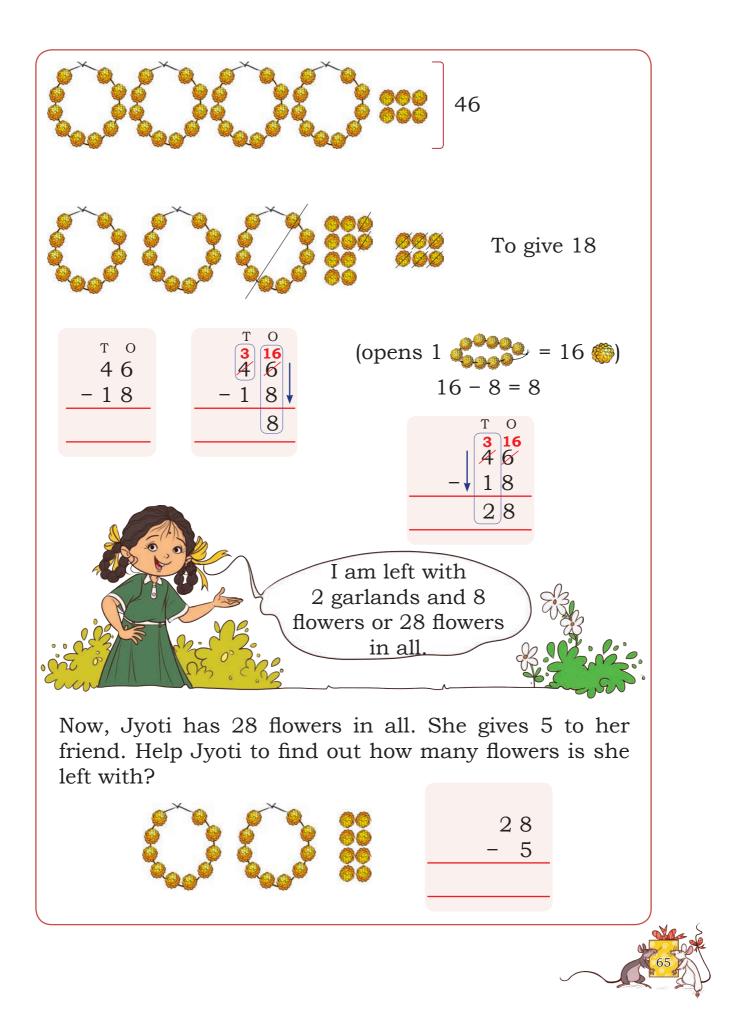
Read the number line and fill the boxes.



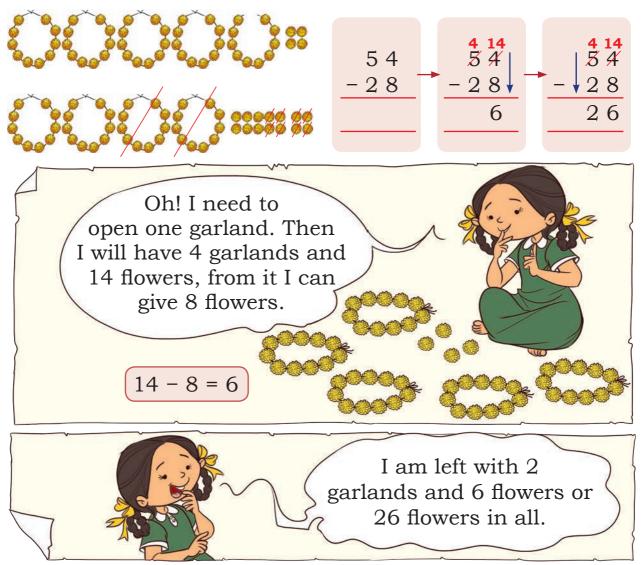


- A. Shikha has ₹82. She bought pencils for ₹22. How much money is she left with?
- B. Ruby has ₹60. She bought a notebook for ₹20. How much money is she left with?





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



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		



45	84	65	27	93
- 18	<u>- 37</u>	- 45	- 27	- 48

#### 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.

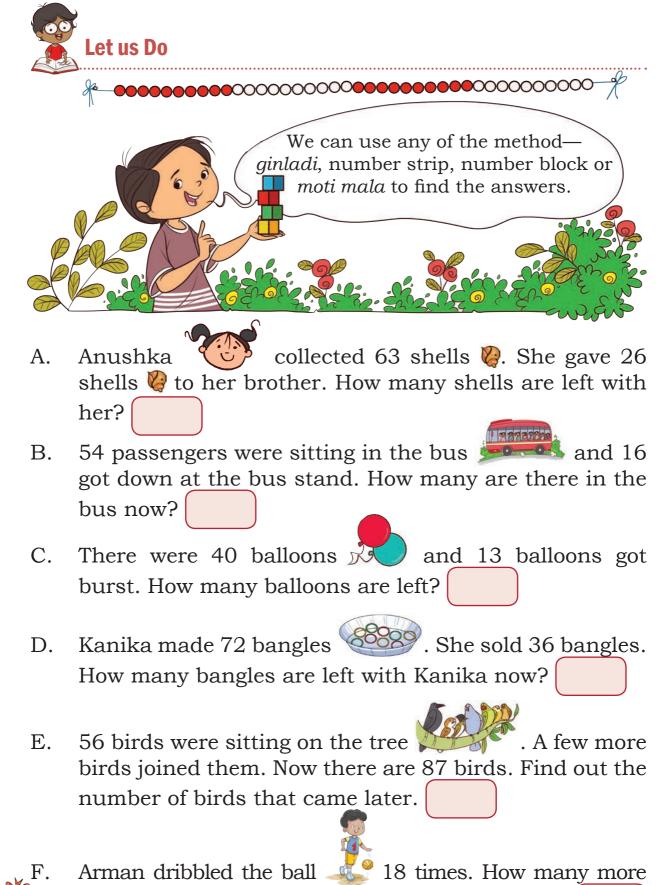


A. Aman skipped 14 times in the first chance. How many more skips he has to make to complete 20 skips?

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

12 + \_\_\_\_ = 20

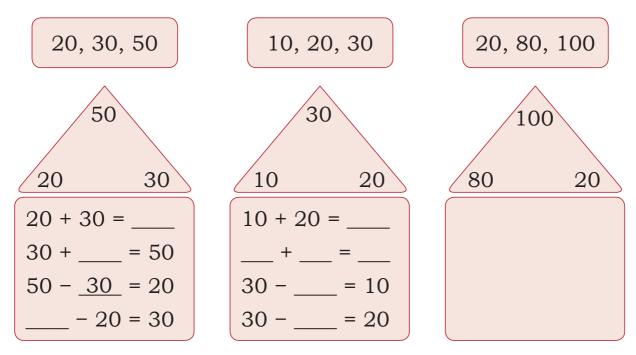




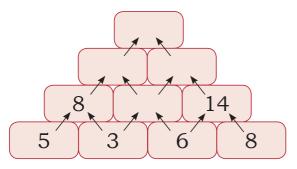
times should he dribble the ball to complete 35 taps?

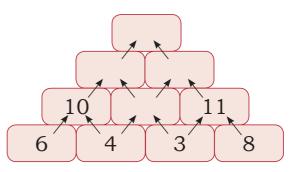
## **Addition and Subtraction Facts**

Fill the missing numbers to complete the fact family.

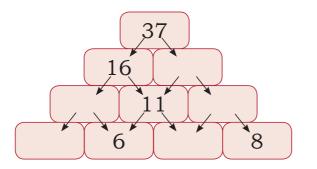


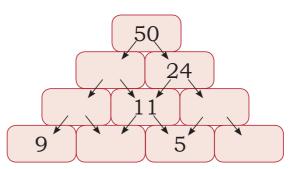
## **Addition and Subtraction Pyramid**





Addition pyramid

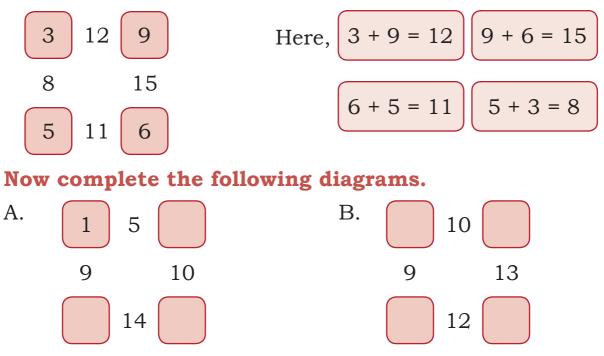




Subtraction pyramid



Look at this diagram.



## 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?





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

Correct it if you find them wrong.

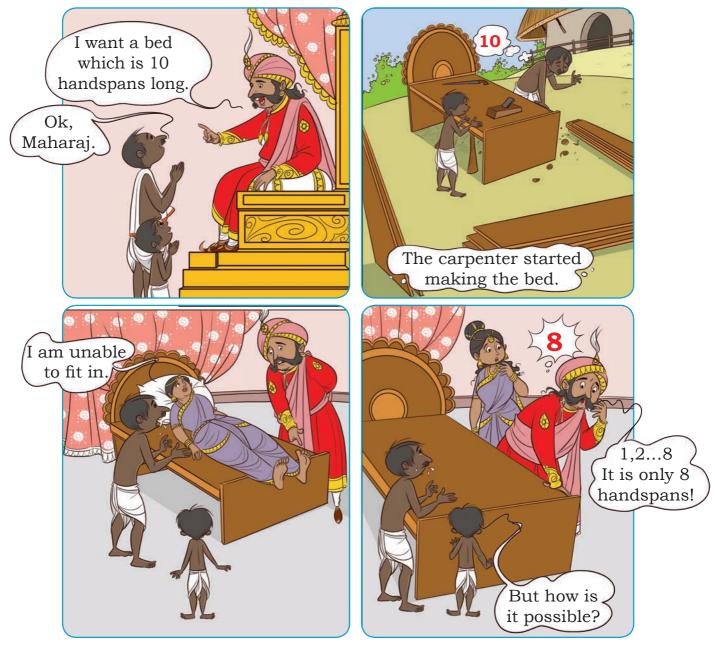
25	37	35	57	30
+ 36	+ 58	- 17	- 78	- 17
511	131	22	21	27

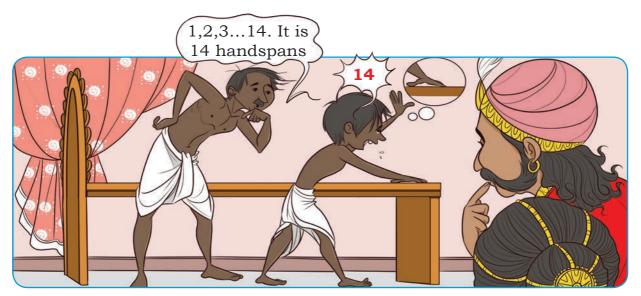




Let us Read

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.

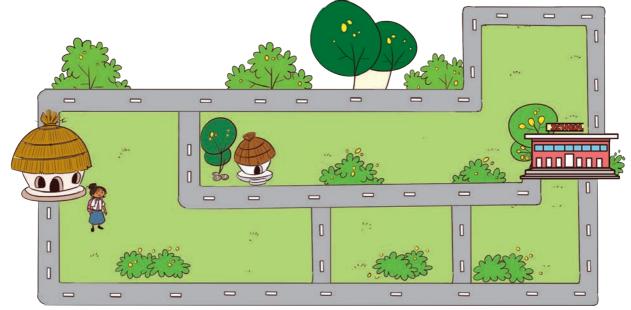


# Use your textbook to measure the length of the following objects.

	Object	s	Estimated length	Actual length
Desl				
Blac	kboard			
Wind	low	H		



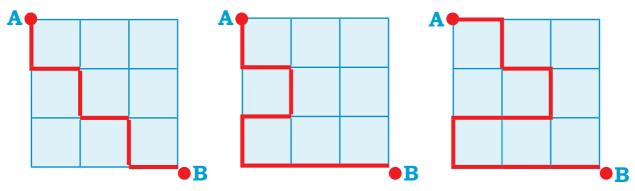
Kavita is going to the school from her home. She is getting late. Which path should she use to reach the school fast? Mark it in the picture given below.





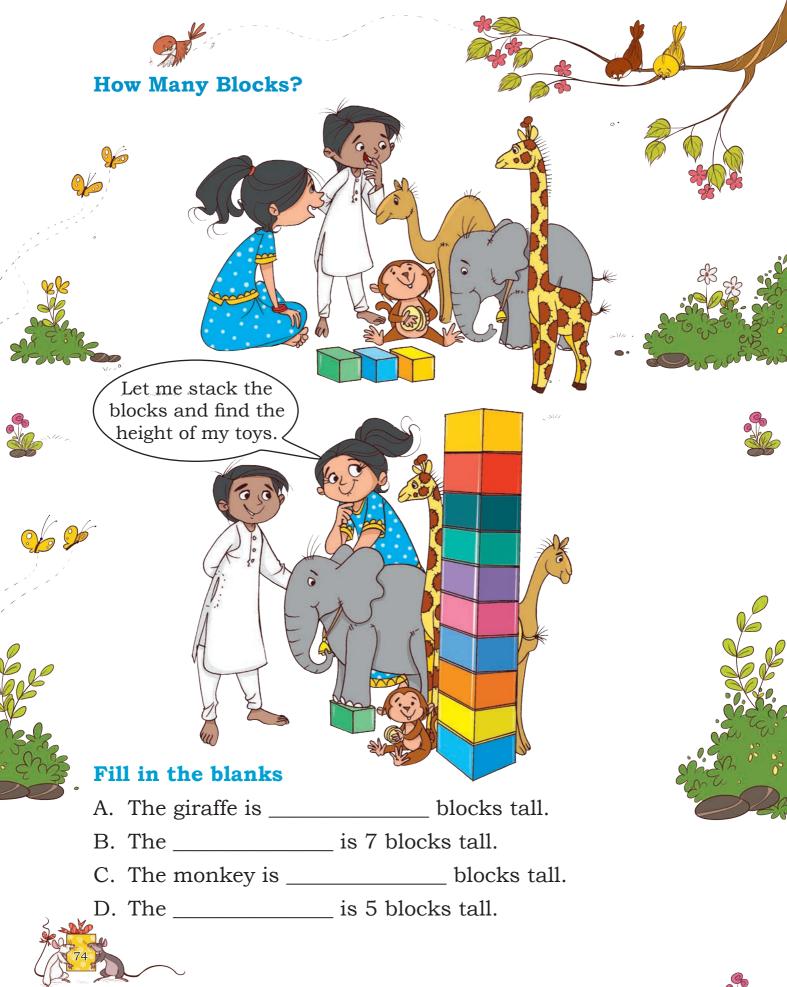
Let us Do

## 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  $\uparrow$  thread. Ask them to help each other in measuring the length.







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



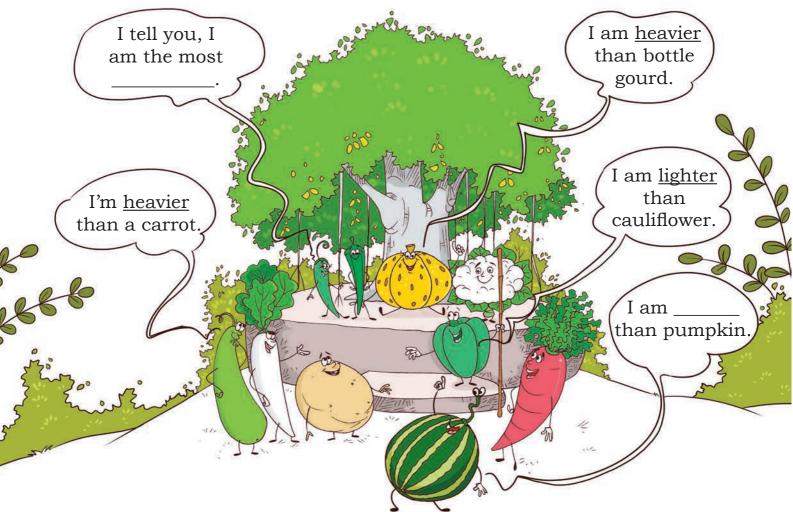
Find the length of the following using any tool of your choice (eraser, blocks, pencil). Record your measurement.

- 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.

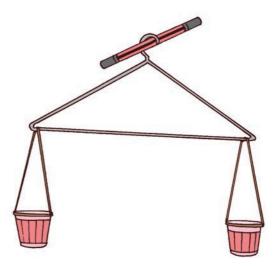


Collect a few things from your surroundings. Sort out the lightest and the heaviest among those. Arrange all the things in the increasing order of their weight.

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.



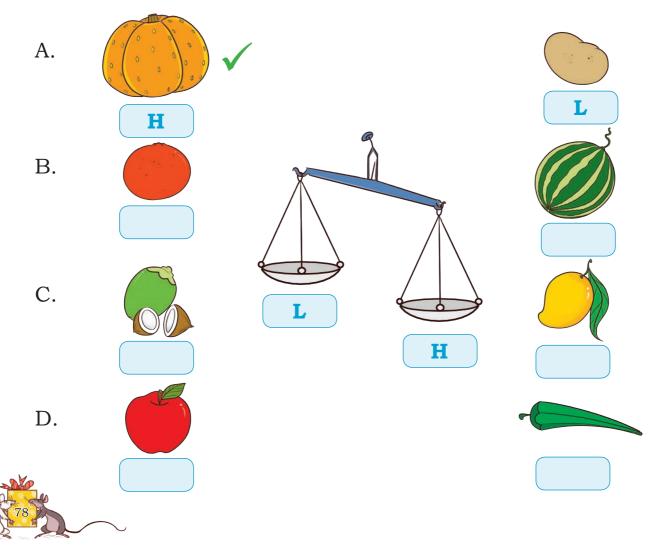




## Circle $\bigcirc$ the lightest one.

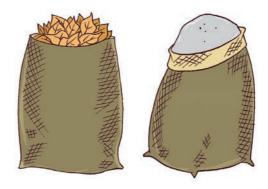


Tick vegetables and fruits which will make the balance go down. Mark Light (L) and Heavy (H).





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

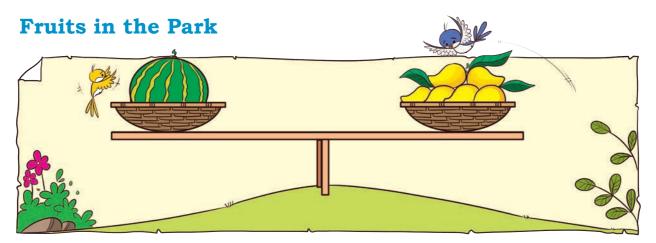


# Look at the pictures and discuss the different types of balance used by people in the pictures given below.

Tick v the type of balance you have seen before.





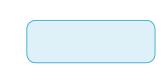


Watermelon and mango want to play on the see-saw. Watermelon sits on one side, but he could not get up. His friend mango called other mangoes to sit on the other side.

- A. How many mangoes will balance the watermelon? Find out from the picture given above.
- B. 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

- A. almost the same as you \_\_\_\_\_
- B. more than you
- C. 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.

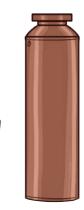
Name of your favourite drink \_\_\_\_\_

Quantity



## 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—

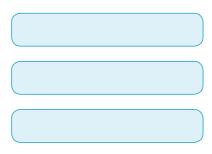
- A. Equal water as yours
- B. Less water than yours
- C. More water than yours

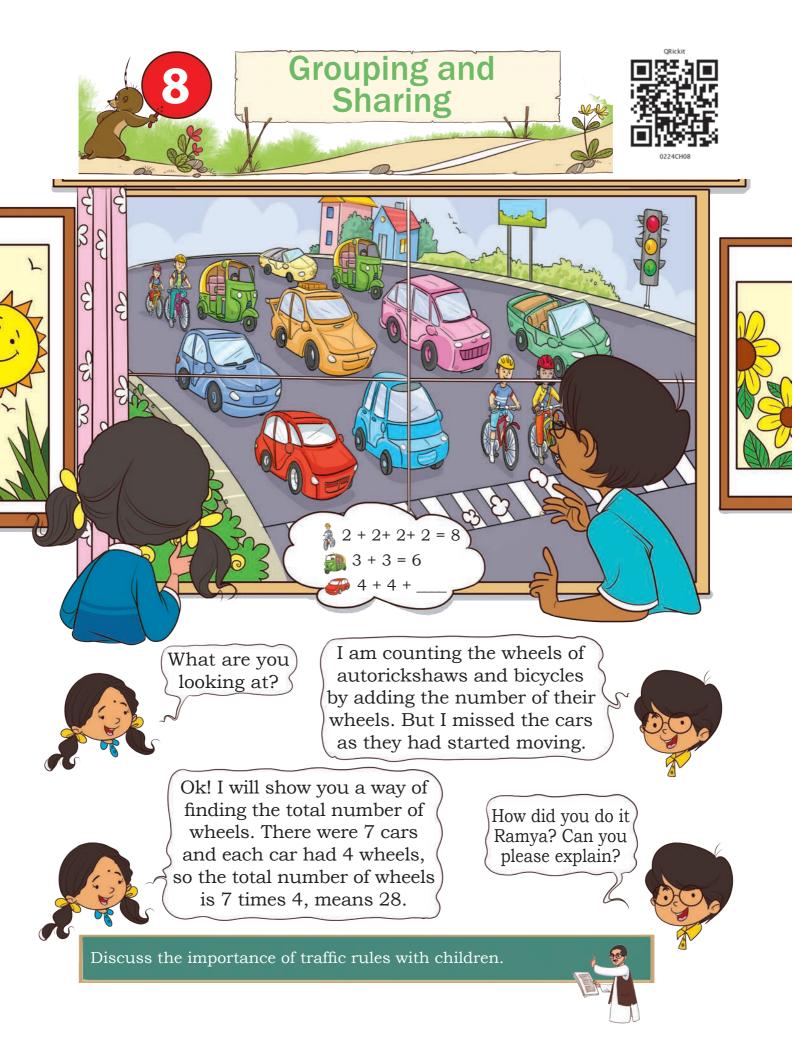


To make a *jal tarang* (musical instrument), arrange 5–7 similar glasses or bowls. Fill them with varying levels of water. Gently tap a spoon on each glass or bowl and hear how each one sounds. Tap at different parts of the glass or bowl to feel the difference.

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





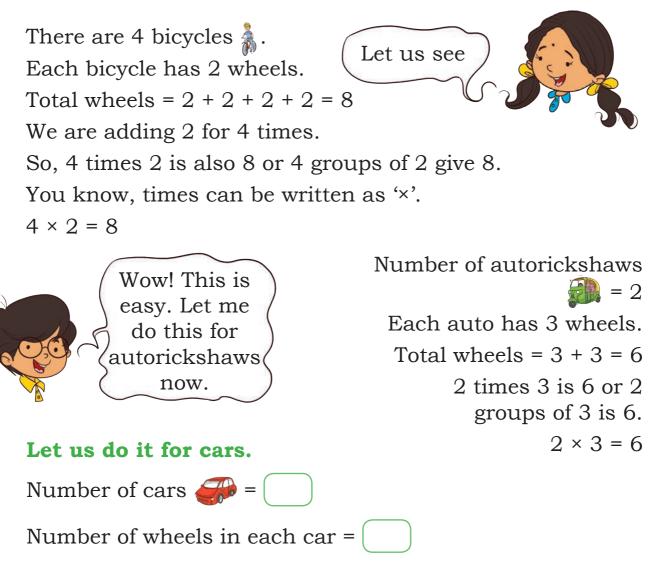


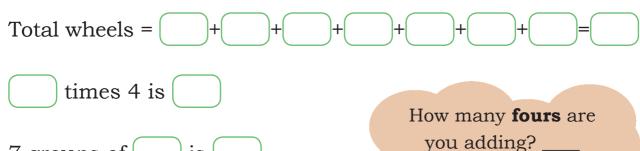


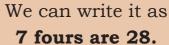
7 groups of

×

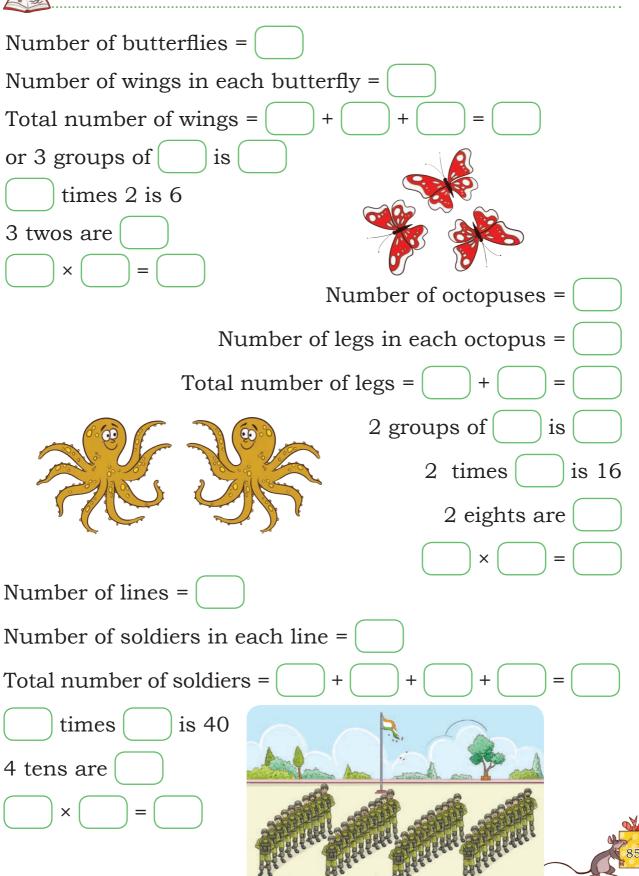
is



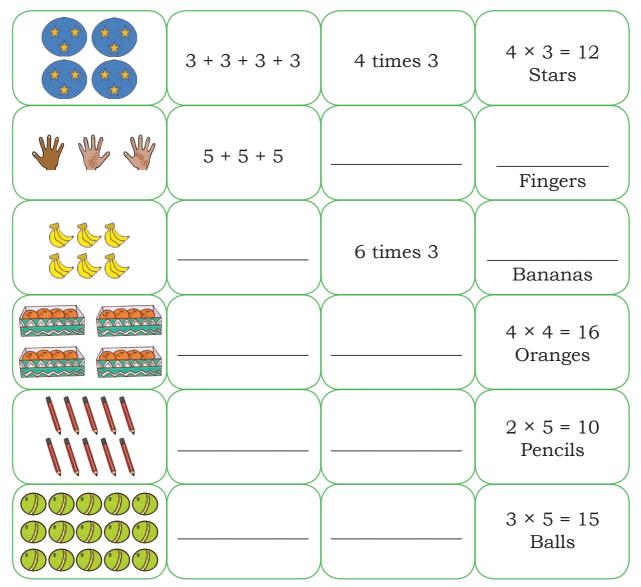




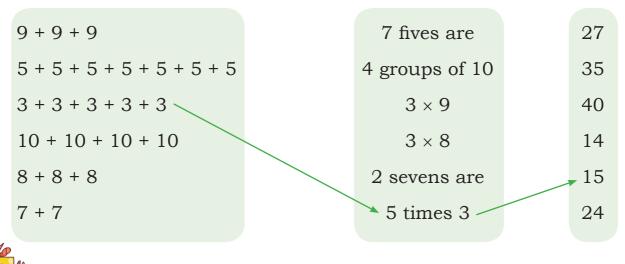




**Complete the Table** 



#### Match the Following



Complete the Table of 2



Complete the Table of 3

•••	3 ones are 3	3 × 1 = 3
	3 twos are 6	3 × 2 = 6
000 000 000	3 threes are 9	3 × 3 = 9
0000 0000 0000		
00000 00000 00000		
000000 000000 000000		
000000 000000 000000		
0000000 0000000 0000000		
		8

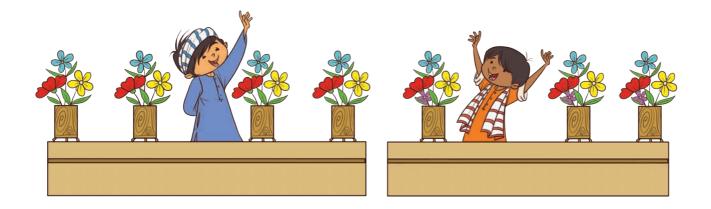
## Complete the Table of 5

5 ones are 5	(5 × 1 = 5)
5 twos are 10	$5 \times 2 = 10$
5 threes are 15	5 × 3 = 15

## Complete the Table of 10

0 0 0	0 0 0 0		10 ones are 10 $10 \times 1 = 10$
0 0 0	0 0 0 0 0 0 0 0		
00 00 00 0 0 0	00 00 00 0 0 0	00 00 00 00	
00 00 00 00 00 00	00 00 00 00 00 00	00 00 00 00	
	000 000 000 00 00 00	000 000 000 00 00 00	
	000 000 000 000 000 000	000 000 000 000 000	
0000 0000	0000 0000 0000 000 000 000		
0000 0000			

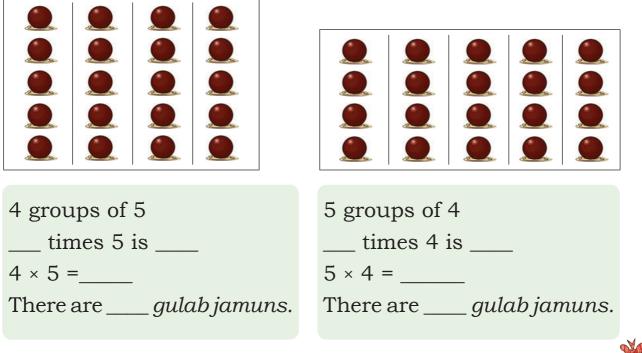
## How Many?



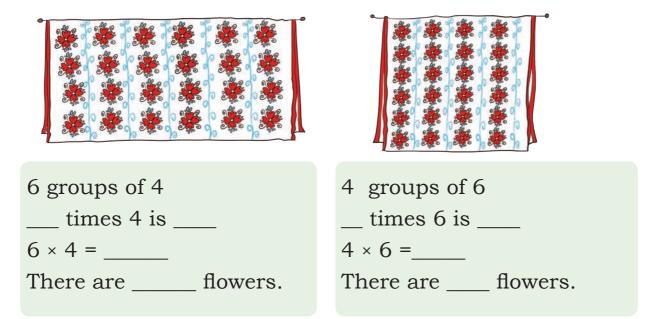
There are 4 bouquets.	There are 3 bouquets.
4 groups of 3 flowers	3 groups of 4 flowers
4 × 3	3 × 4
Ram used 12 flowers in all.	Gopal used 12 flowers in all.

Did you observe something? Discuss.

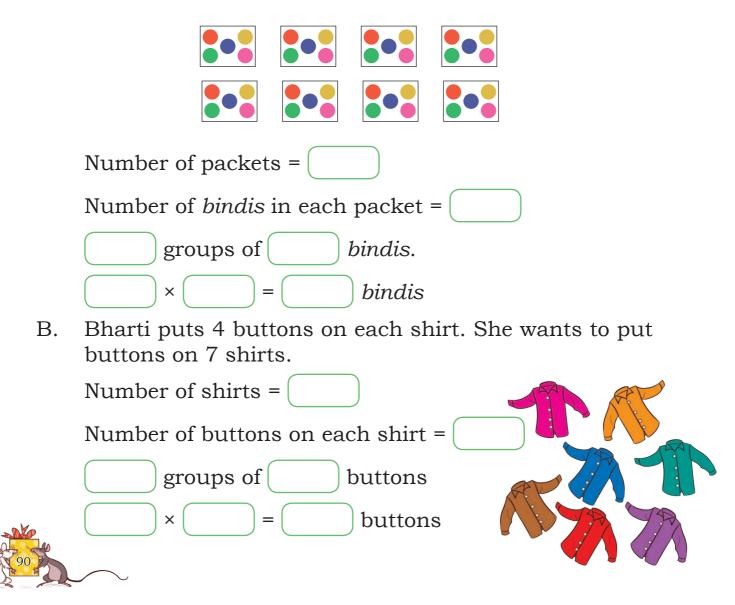
Test your observation with other examples.



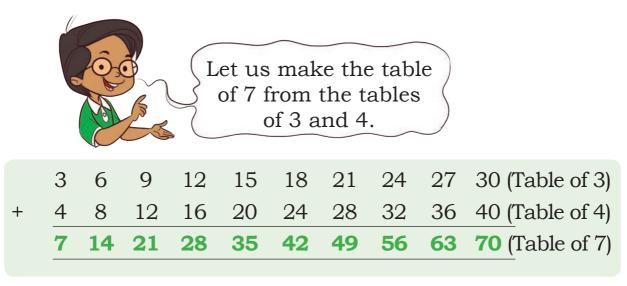




A. There are 8 packets of *bindis*. Each packet has 5 *bindis*.



Rita bought 6 pencils of ₹4 each. How much money will C. she give to the shopkeeper? Number of pencils = Cost of 1 pencil = Cost of 6 pencils = 4 + 4 + 4 + 4 + 4 + 4 × = So, Rita will give ₹ to the shopkeeper. Five people can sit in a car. How many people can sit in D. 8 such cars? Number of people sitting in 1 car = Number of people sitting in 8 cars = X = people can sit in 8 cars. **Making Multiplication Table** Rudra is making multiplication table of 4 using the table of 2. 2 4 12 14 **20** (Table of 2) 6 8 10 18 16 2 6 8 20 +4 10 12 14 16 18 40 (Table of 4) 36 12 16 20 28 4 8 24 32 This is interesting. Let us now make the table of 6 from the table of 3. 3 12 21 30 (Table of 3) 6 3 9 18 24 (Table of 3) +6 (Table of 6)



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

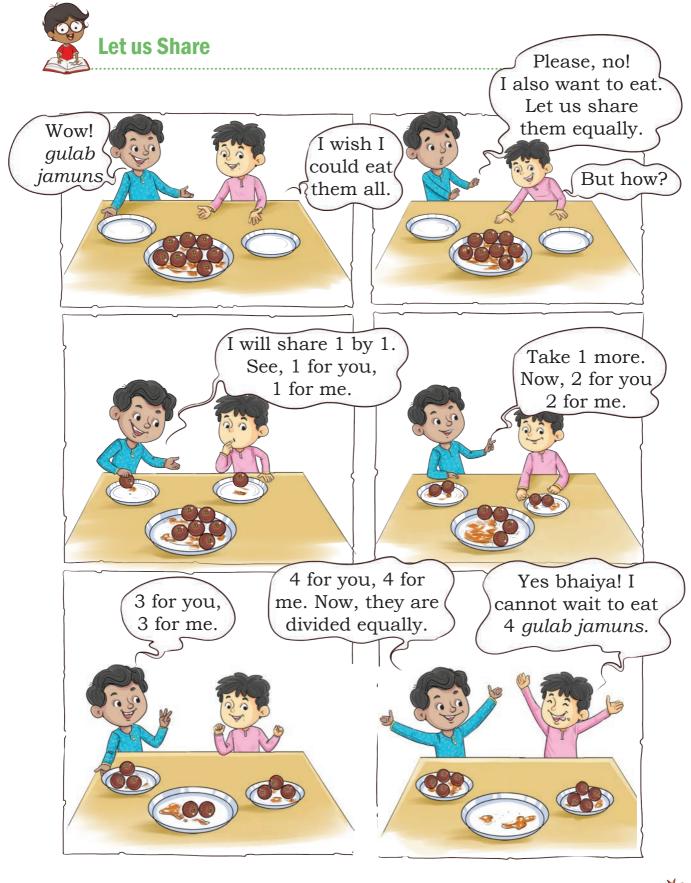
	2	4		10		14		18	20	(Table of 2)
+	6				36		48			(Table of 6)
	8									(Table of 8)

Project Work

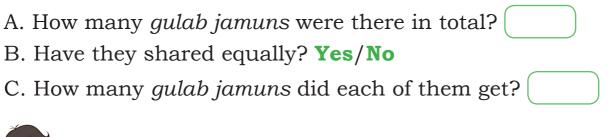
Collect 24 small objects like buttons, bottle caps, pebbles, etc. Arrange them in different arrays and write the related multiplication facts. How many of these facts can you find? Record your answers in the table given below.

Number of groups	Multiplication facts			
3 groups of 4	3 × 4	W	Y	Y
		W	W	W
		W	W	W
		W	W	W



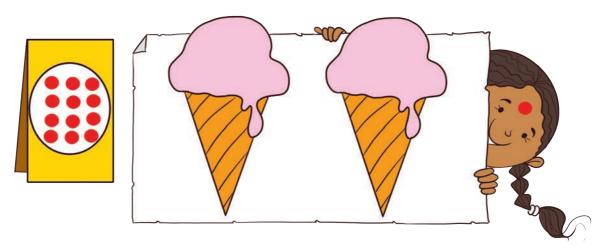




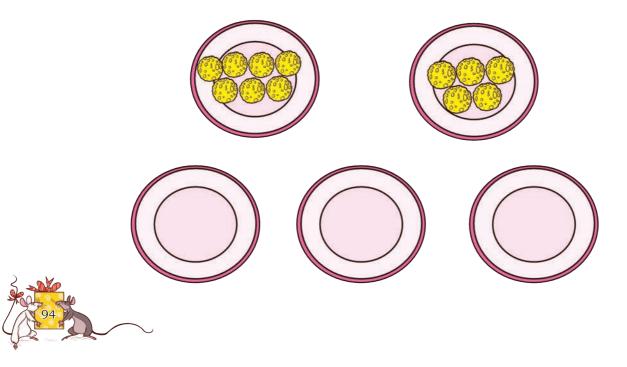


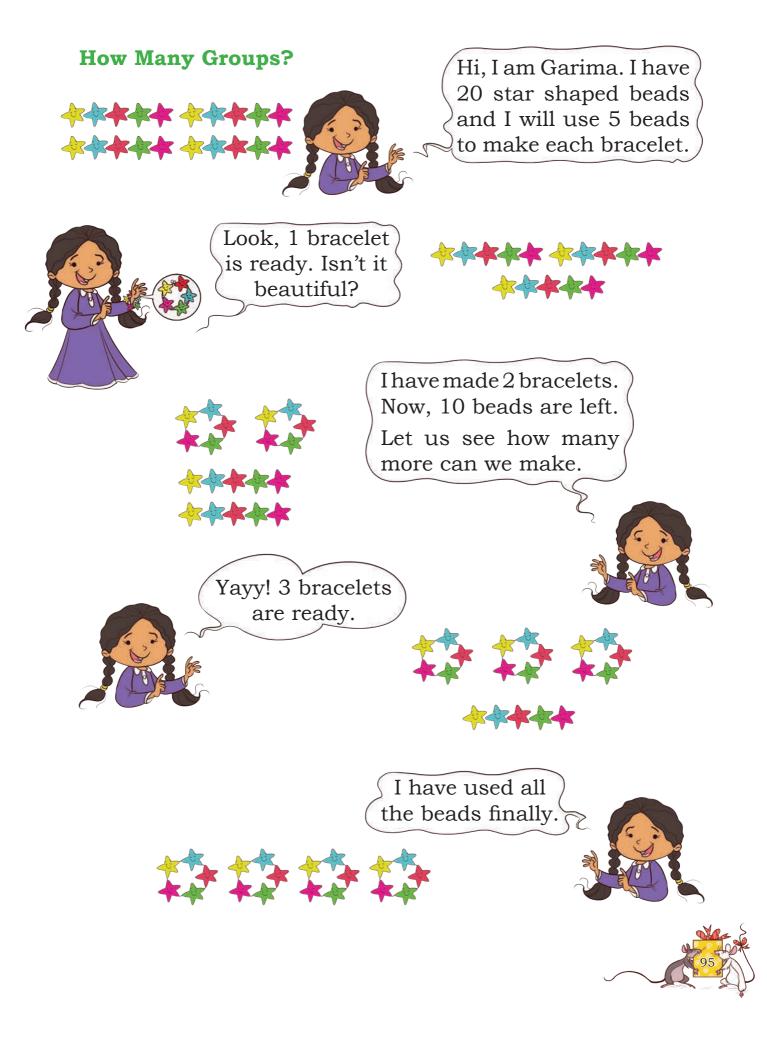


A. Complete Ritu's art and craft project by drawing 12 *bindis* equally on 2 ice cream cones as cherries.



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*.

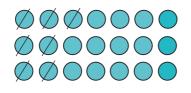






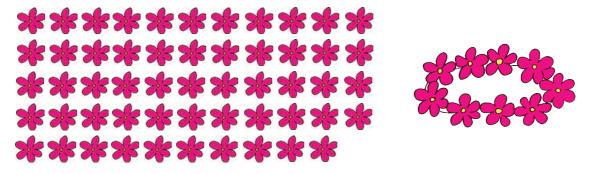
A. Each string has 7 beads.





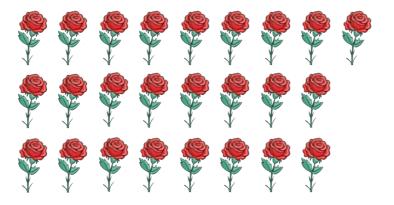
How many strings can we make with 21 beads?

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

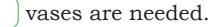


How many bracelets can we make with 54 flowers?

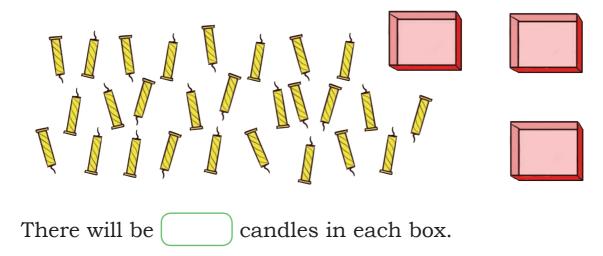
C. There are 25 roses. 5 roses can be placed in 1 vase. How many vases are needed for placing 25 roses?



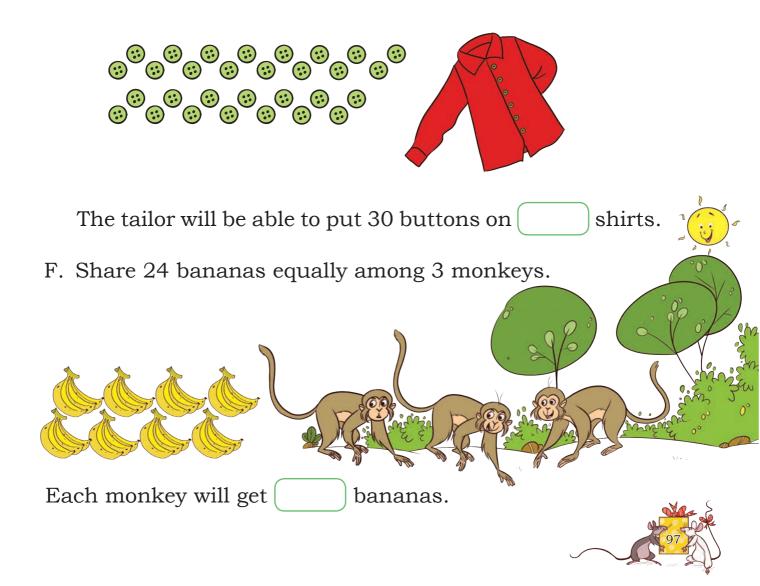




D. There are 27 candles. Put them equally in 3 boxes. How many candles will be in each box?



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





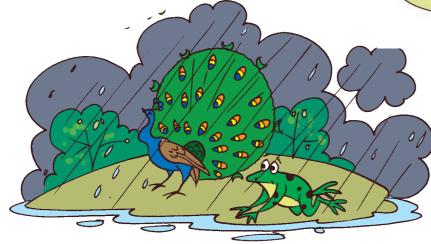
Seasons



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.



- 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	Т	W	Т	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				$\Box$

#### APRIL

5	M	Т	W	т	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

		J	TUL	Y		
S	M	Т	W	Т	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

		Ос	TO	BER		
S	M	Т	W	Т	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	Т	W	Т	F	ร
			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				

#### Мау

S	M	Т	W	Т	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			

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

#### NOVEMBER

S	M	Т	W	Т	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		

#### MARCH

S	M	Т	W	Т	F	5
			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	$\square$

#### JUNE

S	Μ	Т	W	Т	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		

#### SEPTEMBER

S	M	Т	W	Т	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

5	M	Т	W	Т	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	
	$\sim$



- 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

.....

- 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.

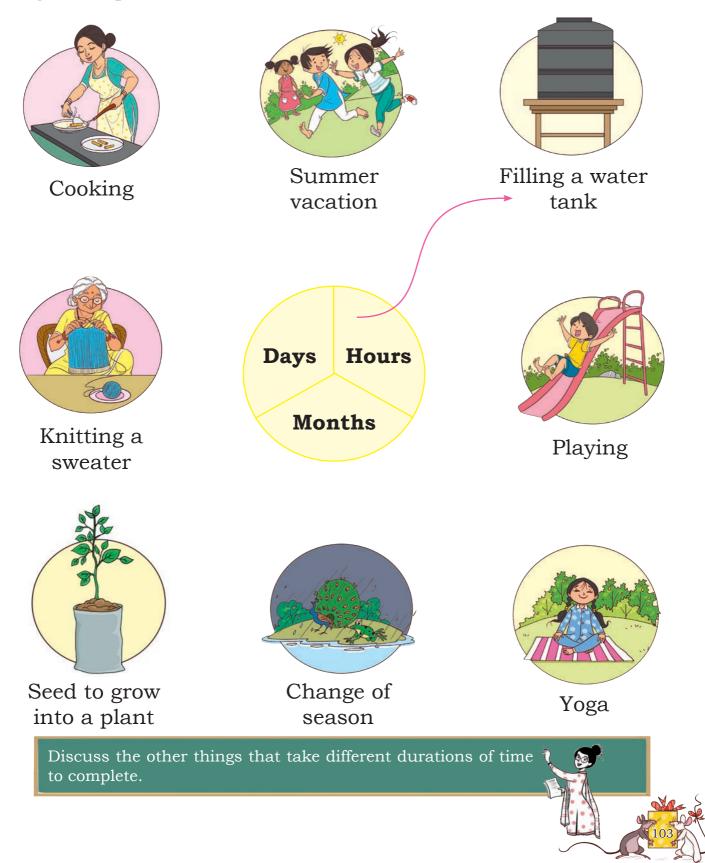
	S	М	Т	W	Т	F	S
2 5							
	r -						

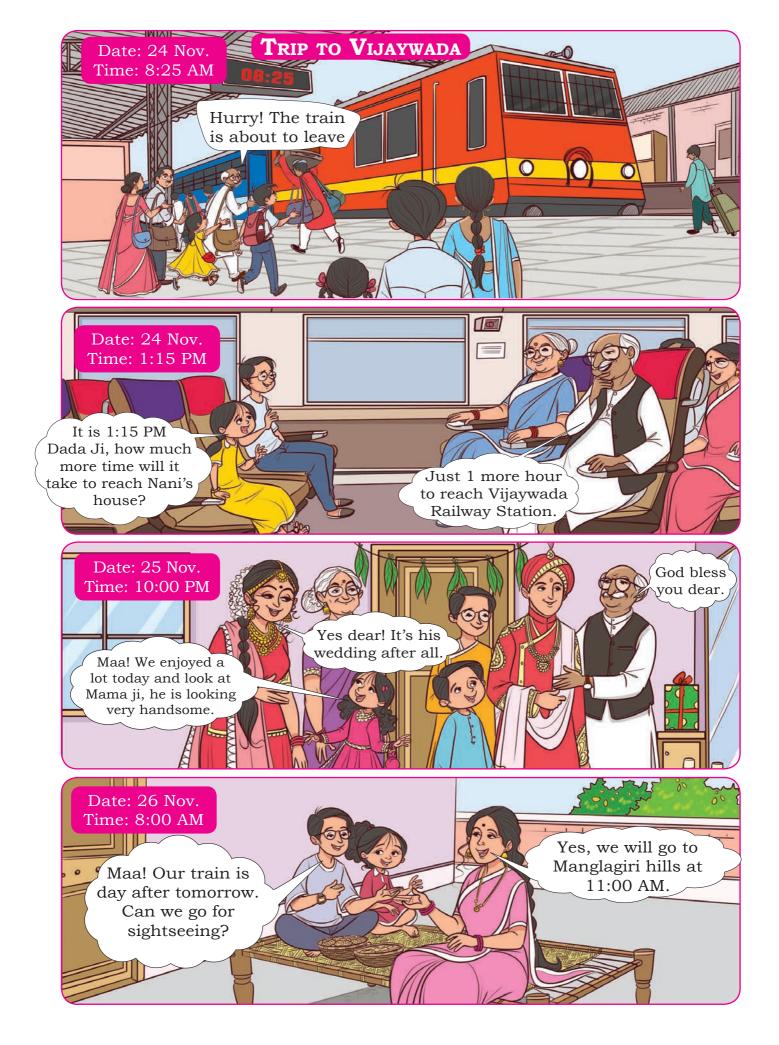
Discuss the importance of calendar in our day-to-day life.

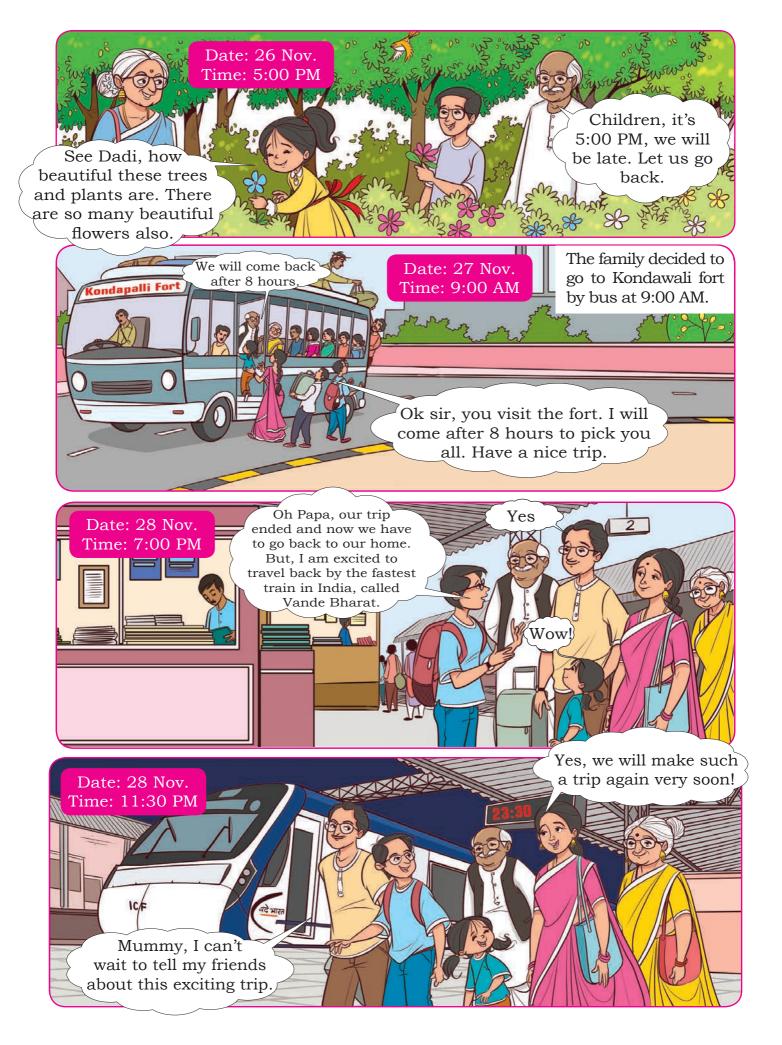


# **How Long Does it Take?**

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









- 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 Vijaywada

to

ii. Vijaywada to Visakhapatnam

 hours
 hours

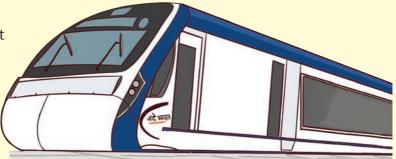
Which among the two journey took longer?

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



#### 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.

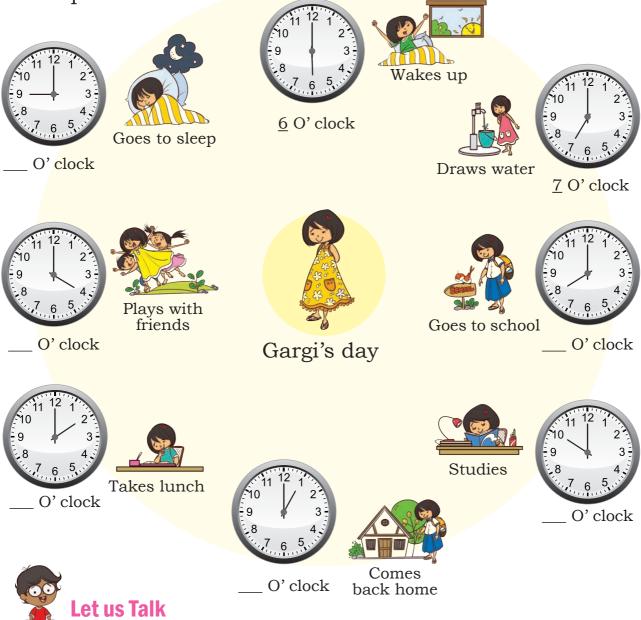




Talk with children about their travel experiences to familiarise them with the idea of duration in terms of days and hours. Also discuss what is special about their cities.

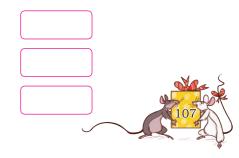
# Gargi's Day

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



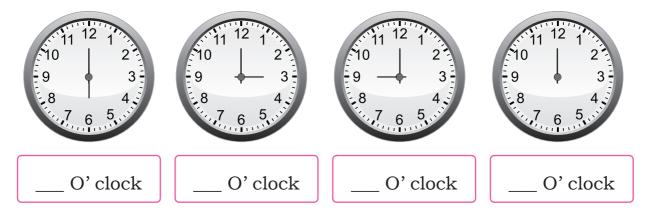
Look at the position of the short hand (hour hand) and long hand (minute hand), and observe at what time Gargi does these activities in a day.

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





#### A. Read the time on the clock.



.....

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



 Ny age

 years

 years

 years

 been generative structure

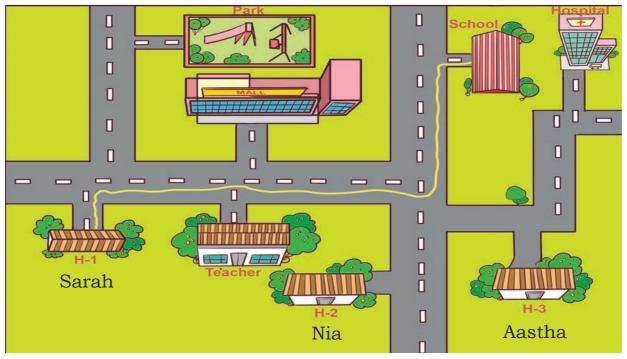




Ask a child to volunteer from the class. Blindfold him or her. Give directions to the blindfolded child to move from one spot to another (for example, move from the last bench to the blackboard). For directions use these words only—right, left, or straight.

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.



#### 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.

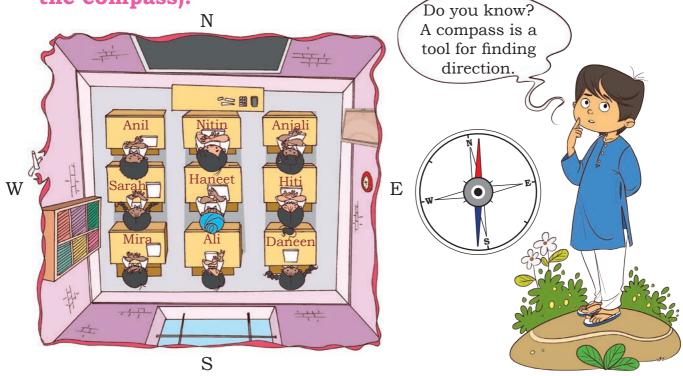
0

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.



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

.....



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.



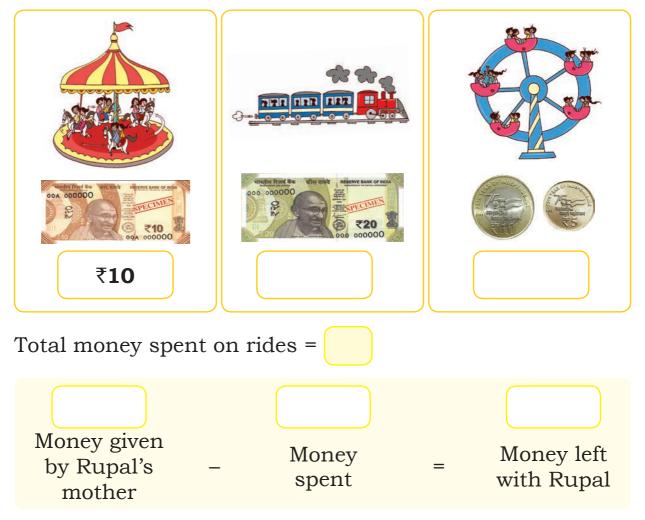
Rupal loves going to the fair. She visits the local fair with her friends. Her mother gave her ₹50. She spent most of it on her favourite rides.



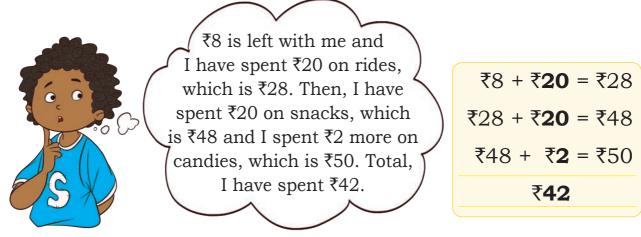
Talk about the things that children enjoy in fairs, whom do they go with, what do they buy and how much money do they spend there.



#### **How Much I Spent?**



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.



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



# A. How much money will be needed to buy?



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



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



- i. Five hundred rupees is written in words \_\_\_\_\_\_ times.
- ii. 500 is written in number

\_\_\_\_ times.



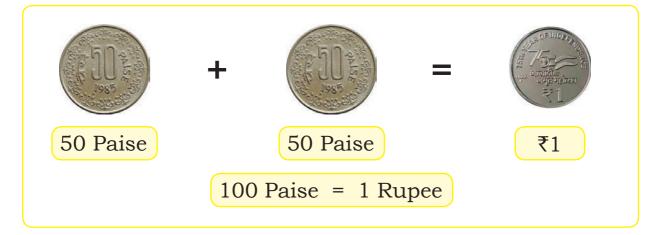
The picture of which monument is printed on the note of 500 rupees? Have you seen this monument?



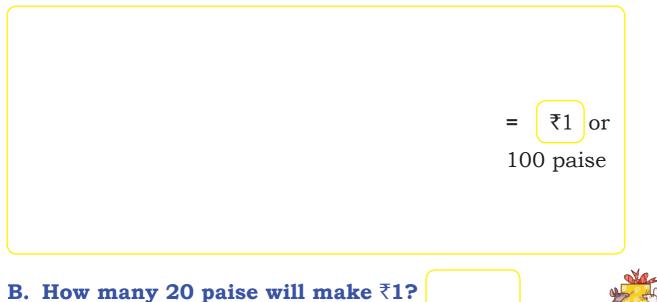
Ask the children to observe other currency notes and discuss their features. Discuss with them the specifications, such as the lines on the border of the currency notes, and their number on each note for specially abled people. Tejal's grandmother showed her some old coins that she had not seen before. Let us have a look at these coins also.



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



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

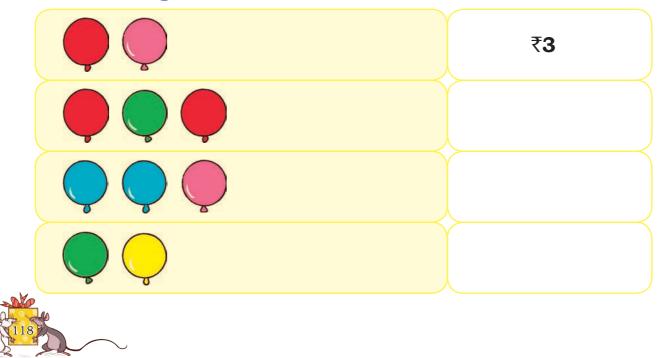


### Pop the Balloon

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?



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

₹17
₹22
₹31

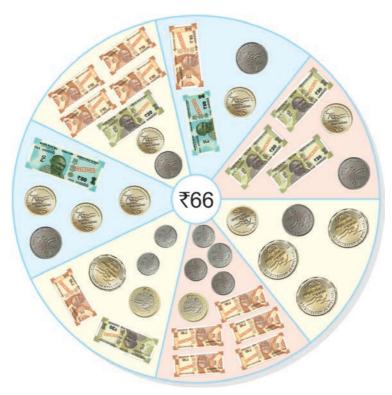
C. Which three differently coloured balloons would you target to make the highest amount of money? Draw and colour them.



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



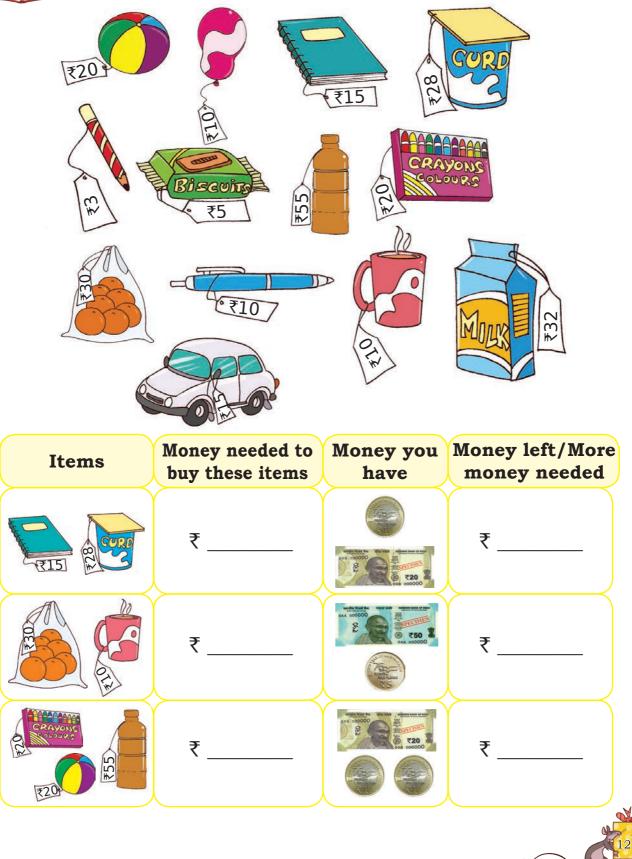
# Let us look at how $\gtrless$ 66 can be paid in different ways.

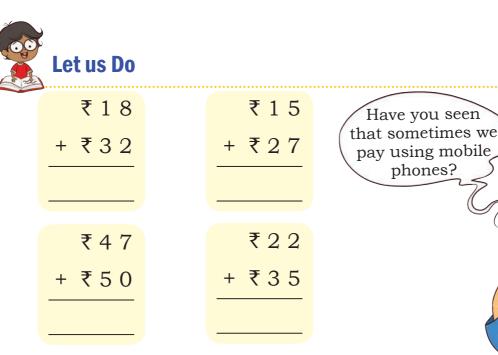


### Make different combinations to make the given amount.

Amount	₹1	₹2	₹5	₹10	₹20	₹50
384	—	2	<u> </u>	3	1	—
₹ <b>54</b>						
₹85						







- 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?



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.





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

$\succ$	olours umber of Children	Red	Green	Blue	Yellow
	The most liked col	our is			)
В.	The least liked col	our is			
C.	Yellow colour is lik	ed more t	han		
D.	colour is liked more than green.				
E.	col	lourislik	ed less tha	an	

# **Picnic Day**

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

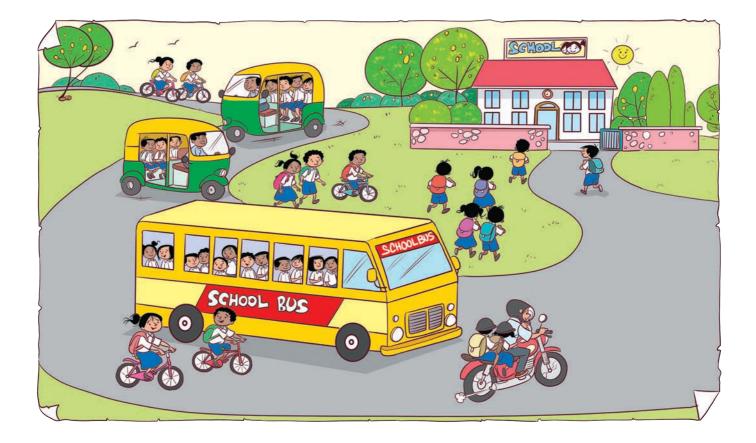


# Complete the table and fill in the blanks.

Fruits		
Number of Children		

- A. How many children are there in the picture?\_\_\_\_\_.
- B. Number of children who like apples is \_\_\_\_\_.
- C. Most liked fruit is \_\_\_\_\_.
- D. Least liked fruit is \_\_\_\_\_.
- E. Number of children who like guava is \_\_\_\_\_\_ (more than/less than/equal to) the number of children who like apple.
- F. The number of children who like apple is \_\_\_\_\_\_ (more than/less than/equal to) the number of children who like banana.
- G. The number of children who like orange \_\_\_\_\_
  - (more than/less than/equal to) the number of children who like kiwi.

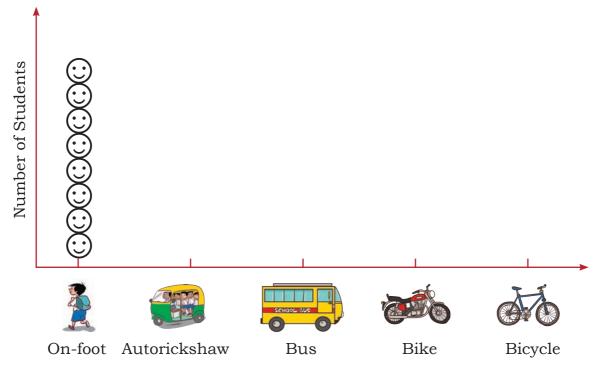
# Discuss the picture and fill the table.



Mode of coming to school	Number of students
	8

Read the table and draw faces ( $\bigcirc$ ) in the chart given below to show the number of students coming to school by different modes. ( $\bigcirc$  = 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 \_\_\_\_\_\_\_.



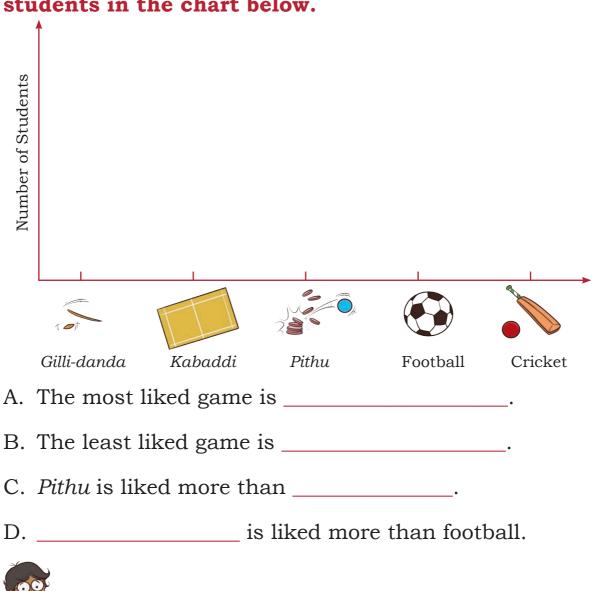




# Look at the picture and fill the table.

Games	Number of Students

. . . . . . . . . . . . . . . . . .



# Use the table to draw faces $(\bigcirc)$ to show the number of students in the chart below.

# 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		



Let us Do

# 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	



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

How many families did you visit?

Number of families living with both grandparents

How many families live with one grandparent?

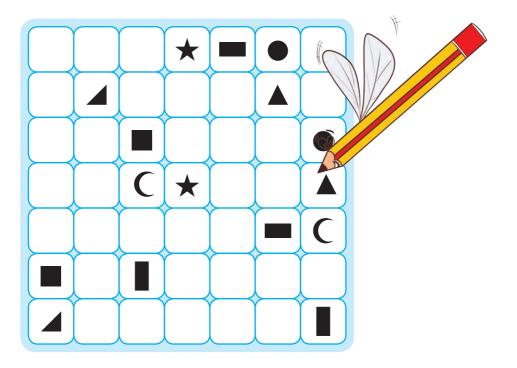
How many families live without grandparents?

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

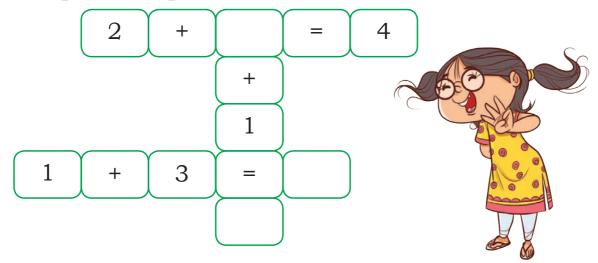




A. Draw lines to connect each pair of similar shapes together. The lines must not cross or touch each other and do not use diagonal lines.



B. Complete the pattern.



C. Think and complete.

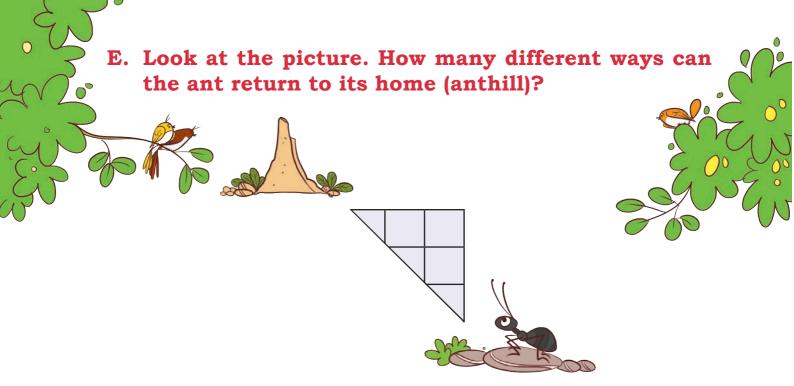
i. (d) (a) (c) (b) 5 ii. 6

## D. Find the number.

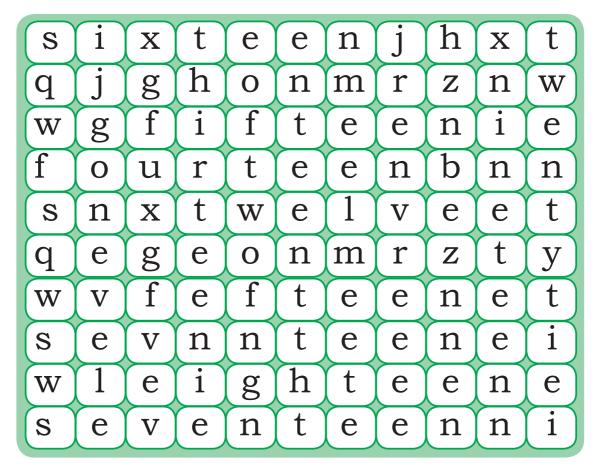
- Think of a number
- Double that number
- Add eight
- Minus half of that number
- Minus the number you started with
- Is the number 4?
- Now play this maths trick with your friends.





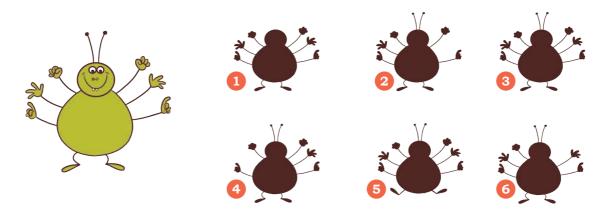


#### F. Find the number names from 11 to 20.

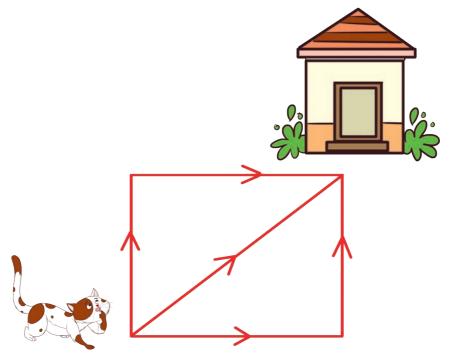




G. Identify the appropriate shadow image.



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,

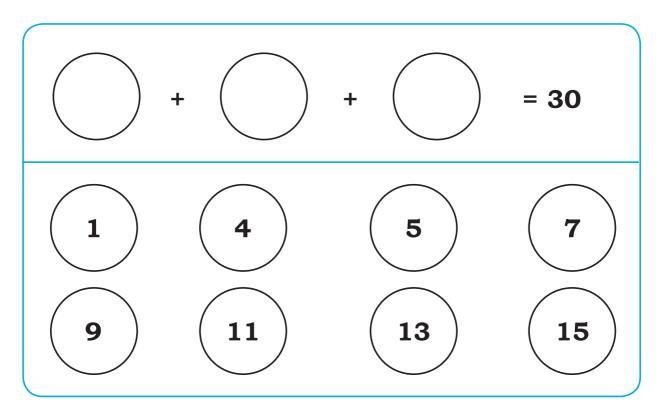
And in a car and a bus,

I make all vehicles run,

They can't move if I am flat.

What is my shape?

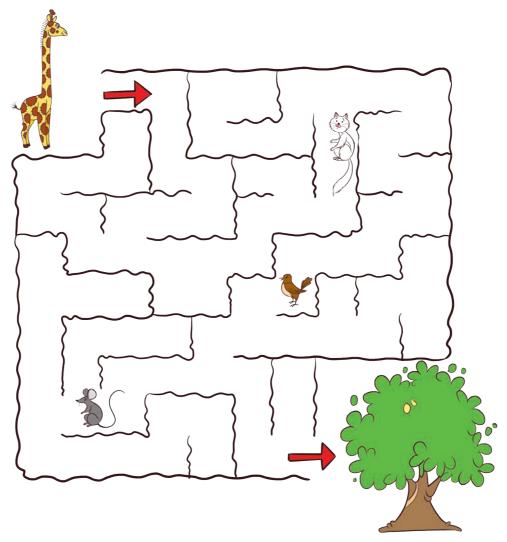
## K. Which balls will you select to make a total of 30?



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



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

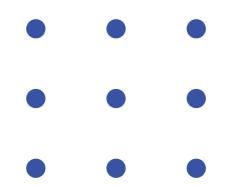


# N. Look at the above picture and write the answers.

- 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?

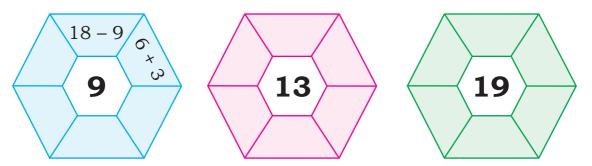


O. How many rectangles can be made after joining the dots given below?

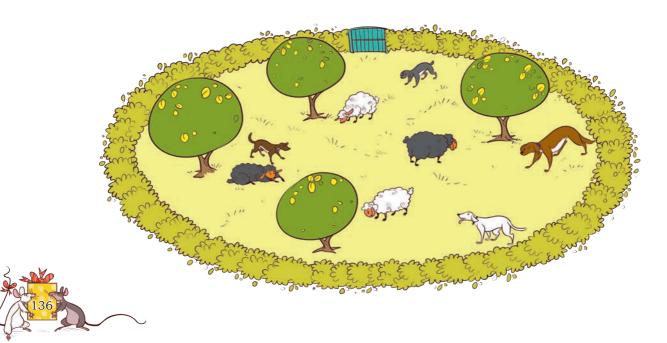


**Hint:** Square is also a type of rectangle.

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



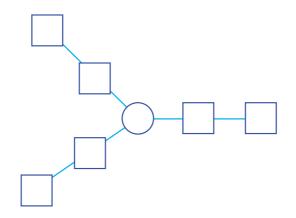
Q. A shepherd has 4 sheep and 4 dogs. Divide the garden into 4 areas, such that each portion or area contains one tree, one sheep and one dog.



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



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.





#### Hello Children!

If you feel uneasy about someone touching you inappropriately, you should not keep quiet. You must

- 1. Not blame yourself
- 2. Tell someone whom you trust
- 3. You can also inform National Commission for Protection of Child Rights through the POCSO e-box.



#### If you are below 18 years of age, and are troubled or confused or abused or in distress or know some other child who is...

नए समाज की ओर Towards a new dav



Ek Kadam Swachchhta ki or

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

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