

MATHS MAGIC

Class - II

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Published by Samagra Shiksha, Government of Andhra Pradesh, Amaravati.

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First Published 2020

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This book has been printed on 70 G.S.M. SS Maplitho
Title Page 200 G.S.M. White Art Card

Free distribution by Samagra Shiksha, Government of Andhra Pradesh

Printed in India
at the A.P. Govt. Text Book Press
Amaravati
Andhra Pradesh

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Foreword

The Government of Andhra Pradesh has unleashed a new era in school education by introducing extensive curricular reforms from the academic year 2020-21. The Government has taken up curricular reforms intending to enhance the learning outcomes of the children with focus on building solid foundational learning and to build up an environment conducive for an effective teaching-learning process. To achieve this objective, special care has been taken in designing the textbooks to achieve global standards.

As a part of the curricular reform, in order to support the designing of textbooks, with better pedagogical strategies, handbooks are given to teachers with elaborate lesson plans. For the practice of the students, workbooks are given which will reinforce the learning in the classroom. Parental handbooks are prepared to impart awareness regarding the teaching-learning process to the parent community. The textbooks are also designed in such a way that the initial two months will focus on the school readiness of the children in order to create a learning environment in the school at the start of the academic year.

In this textbook, concepts are introduced through activities related to daily life incidents, situations, contexts and conversations. To strengthen these concepts, whole class activity, group activity and individual activities are designed. The lessons incorporated are also suitable for multigrade teaching. For additional information on the concepts, QR codes are incorporated in each chapter to enable learning outside the classroom. Care has been taken to ensure that the new textbook is calibrated with the learning requirement of the 21st century.

We are grateful to Honourable Chief Minister Sri.Y.S. Jagan Mohan Reddy for being our source of inspiration to carry out this extensive reform in the education department. We extend our gratitude to Dr. Adimulapu Suresh, Honourable Minister of Education for striving towards qualitative education. Our special thanks to Sri. Budithi Rajsekhar, IAS, Principal secretary, School Education, Sri. Vadrevu Chinaveerabhadrudu, IAS, Commissioner, School Education, Ms. Vetriselvi.K, IAS, Special Officer for their constant motivation and guidance.

We convey our thanks to the expert team who studied curriculum from Chicago to Singapore and recommended best practices across the globe to reach global standards. Our sincere thanks to SCERT of Kerala, Tamilnadu, Karnataka and Haryana in designing the textbooks. We also thank our textbook writers, editors, artists and layout designers for their contribution in the development of this textbook. We invite constructive feedback from the teachers and parents in the further refinement of the textbook.

Dr. B. Pratap Reddy
Director
SCERT – Andhra Pradesh

Instructions to Teachers

- ☞ The new text books designed for class 1 to 5 are in accordance with the recommendations of NCF – 2005, RTE – 2009, APSCF – 2011 and NEP – 2019.
- ☞ Use the face sheet placed at the beginning of every lesson as the basis for interacting with the children to encourage, speak and motivate them to listen. Prepare and organize some more activities similar to the activities given in the text book for every concept.
- ☞ The lessons are designed based on the classwise expected learning outcomes and the concepts like number system, measurement, geometry, data handling etc are arranged in a spiral approach.
- ☞ The text book contains three important components under headings like – Try these and Exercise. The questions under the component ‘Try these’, will be direct and simple. Similarly the ‘Exercise’ component contains mixed questionnaire of 2 or 3 concepts.
- ☞ The teacher should read and understand every concept in the text book before going for teaching. Also they should conduct the ‘individual’, ‘group’ and ‘whole class’ activities in the class room. Teacher should use the hand book designed for this purpose.
- ☞ Teacher should prepare and use teaching learning material related to the activities of the text book by using available resources, to make the children understand the concepts.
- ☞ Teacher should provide required practice activities to teach children different concepts keeping in mind the academic standards of the subject.
- ☞ Work book is also provided along with the textbook. The 90 minutes duration of a period should be divided for the practice of the children as follows,
 - ◆ 45 minutes for practising the concepts of text book.
 - ◆ 45 minutes for practising the sums of work book.
- ☞ New text book is designed with exercises and activities. So, in such a way that the pupil will be able to understand the concept of Two digit numbers, Number bonds up to 20, Ordinal numbers, Counting in terms of 100 up to 1000, Writing numbers in words and the ability to add and subtract numbers. In this process locally available objects like pebbles, seeds, sticks, beads etc must be used.

Our National Anthem

- Rabindranath Tagore

Jana-gana-mana-adhinayaka jaya he

Bharata-bhagya-vidhata

Panjaba-Sindhu-Gujarata-Maratha

Dravida-Utkala-Banga

Vindhya-Himachala-Yamuna-Ganga

uchchala-jaladhi-taranga

Tava Subha name jage, tave subha asisa mage,

gahe tava jaya-gatha.

Jana-gana-mangala-dayaka jaya he

Bharata-bhagya-vidhata.

Jaya he, Jaya he, Jaya he,

jaya jaya jaya jaya he.

Pledge

- Pydimarri Venkata Subba Rao

India is my country. All Indians are my brothers and sisters.

I love my country and I am proud of its rich and varied heritage.

I shall always strive to be worthy of it.

I shall give my parents, teachers and all elders respect,
and treat everyone with courtesy. I shall be kind to animals.

To my country and my people, I pledge my devotion.

In their well-being and prosperity alone lies my happiness.

Maths Magic

Class - II

S.No.	Unit	Month	Page No
	Readiness	June, July	
1.	Shall we count	August	1-13
2.	Let us Add	August, September	14-27
3.	How much I left	September	28-41
4.	Playing with numbers	October	42-57
5.	How many times	November	58-73
6.	Share it	November, December	74-80
7.	Shapes around us	December	81-91
8.	My diary	January	92-102
9.	Let us Measure	February	103-112
	Revision	March	-
	Revision	April	-



Teacher Corner



Student Corner

Academic Standards

*Academic standards are clear statements about what students must know and be able to do.
The following are the specifications on the basis of which we lay down academic standards*

Problem Solving

- Using concepts and procedures to solve mathematical problems

Stages of problem solving

- Reads problems
- Identifies all pieces of information
- Separates relevant pieces of information
- Understanding what concept is involved
- Selection of procedure
- Solving the problem

Reasoning and Proof

- Reasoning between various steps
- Understanding and making mathematical generalizations and conjectures
- Understanding and justifying procedures
- Examining logical arguments
- Understanding the notion of proof
- Using inductive and deductive logic
- Testing mathematical conjectures

Communication

- Writing and reading mathematical expressions
- Creating mathematical expressions
- Explaining mathematical ideas in his/her own words
- Explaining mathematical procedure
- Explaining mathematical logic

Connections

- Connecting concepts within a mathematical domain
- Making connections with daily life
- Connecting mathematics to different subjects
- Connecting concepts of different mathematical domains
- Connecting concepts to multiple procedures

Visualization and representation

- Interprets and reads data in tables, number line, pictograph, bar graph, 2D figures, 3D figures, pictures
- Making tables, number line, pictograph, bar graph, pictures

Shall we Count ?



CHAPTER

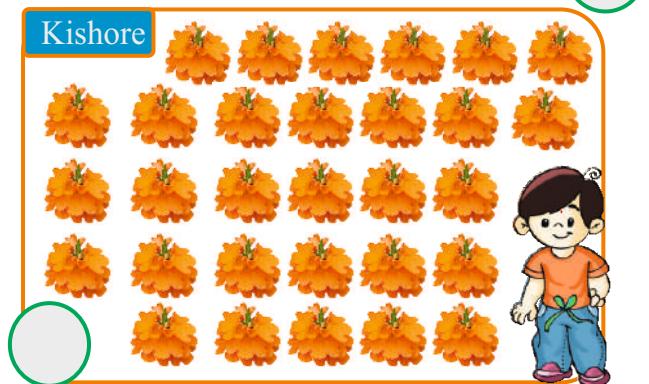
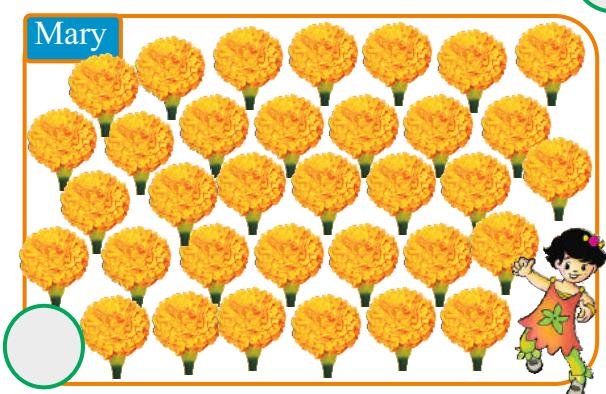
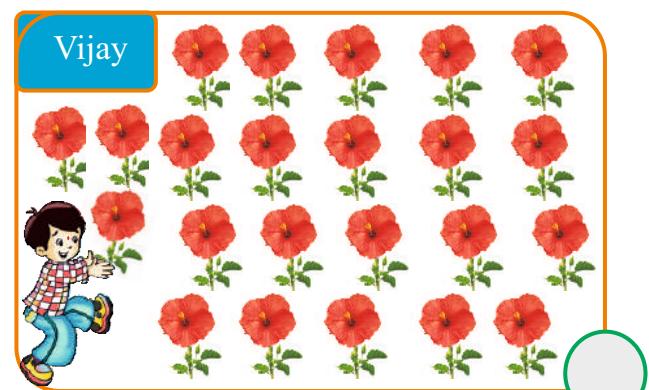
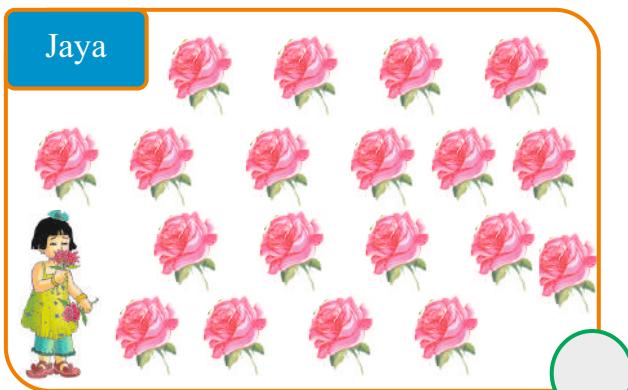
1



Observe the above picture.

1. What do you observe in the picture?
2. What are the children doing?

Children are collecting flowers on the occasion of Independence day to decorate the school with flowers and garlands. Now, count and write the number of flowers collected by them.



Making the flower garlands (Expanded Form)



Vijay gave 23 flowers to Devi and asked her to prepare a garland with 10 flowers in each garland.



Observe the garland made by Devi.

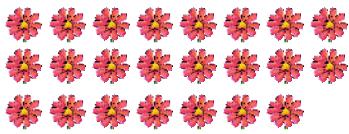


$$23 \text{ flowers} = 2 \text{ garlands} + 3 \text{ flowers}$$



- How many flowers are there in total?
- How many garlands did Devi make?
- How many flowers are left with Devi?

Flowers given by Vijay



23

Garlands made by Devi



20

Flowers left

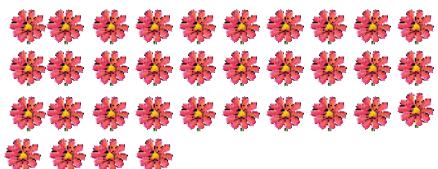


3

Try these:

- Help them to make garlands with flowers brought by the children.

- Flowers brought by Mary



34

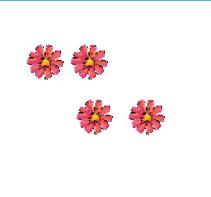
Garlands



=

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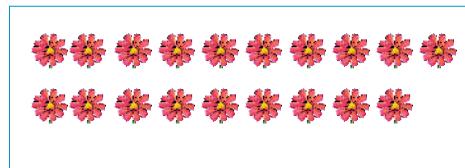
Flowers left



+

--

b) Flowers brought by Jaya



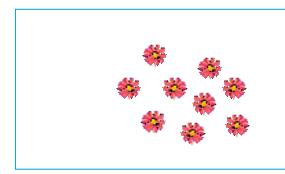
19

Garlands



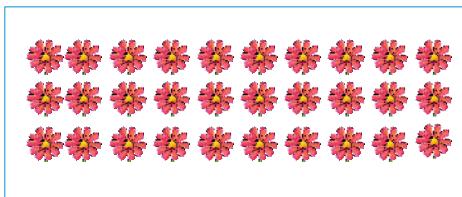
=

Flowers left



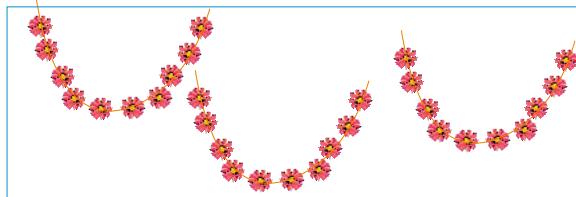
+

c) Flowers brought by Kishore



30

Garlands



=

+

Flowers left



Write in Expanded Form.

10s	1s
T	O
3	2

$$= \text{Tens} + \text{Ones}$$

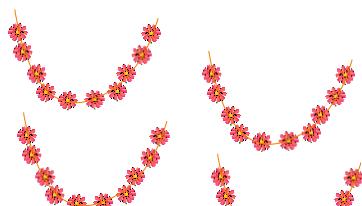
$$= 30 + 2$$

10s	1s
T	O
5	6

$$= \text{Tens} + \text{Ones}$$

$$= \text{-----} + \text{-----}$$

Write in Short Form.



40

+

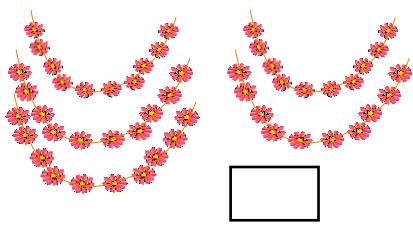


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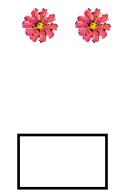
10s	1s
T	O
4	7

$$40 + 7 = 47$$

It is the short form
of a number.



+



10s	1s
T	O



We read 1s place as **Ones** place or units place and 10s place as **Tens** place.



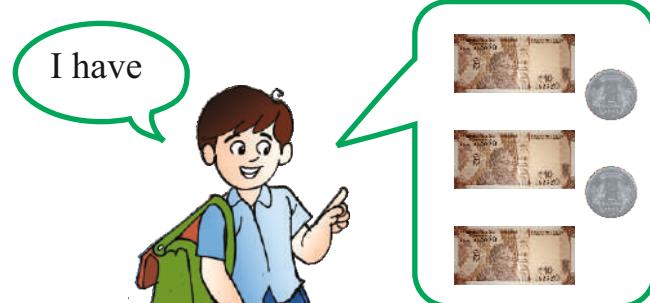
Place value and face value :



$$\text{₹ } 23 = \boxed{2} + \boxed{3}$$

Tens Ones

The number in ones place = 3
 Place value of 3 is '3 ones'
 The number in tens place = 2
 Place value of 2 is '2 tens'



$$\text{₹ } 32 = \boxed{3} + \boxed{2}$$

Tens Ones

The number in ones place = 2
 Place value of 2 is '2 ones'
 The number in tens place = 3
 Place value of 3 is '3 tens' = 30



Why is the place value of 2 different in the above two numbers 23 and 32?



Wherever 2 is placed, the actual value remains the same. This value is called face value.

The place value changes according to the place of the digit in the number.



Note: Place value depends on the place at where the digit is. But the face value is same wherever it is.

Tens Ones
2 4

2 Place value of 2 = 20
Face value of 2 = 2

4 Place value of 4 = 4
Face value of 4 = 4

Try these

1. Write the place and face values of 3 and 8 in 38.

Sol:

Tens	Ones	Place value of 3 =	Face value of 3 =
3	8		
		Place value of 8 =	Face value of 8 =

Sol:

Tens	Ones	Place value of 4 =	Face value of 4 =
4	7		
		Place value of 7 =	Face value of 7 =

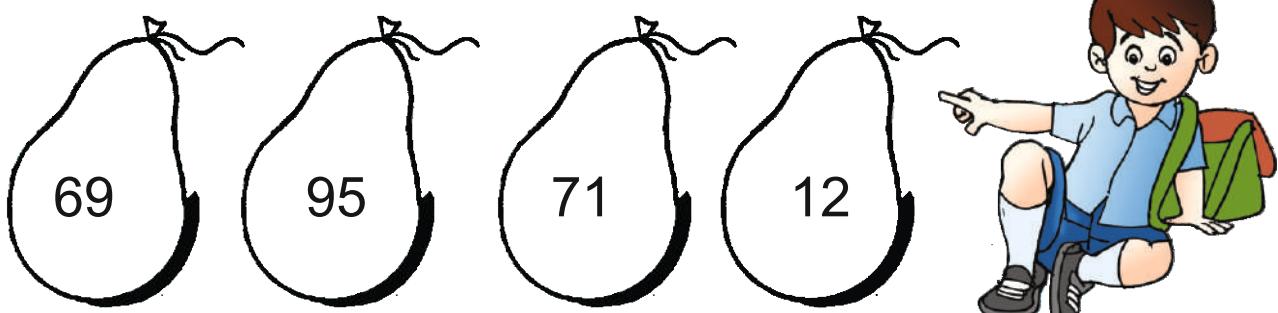
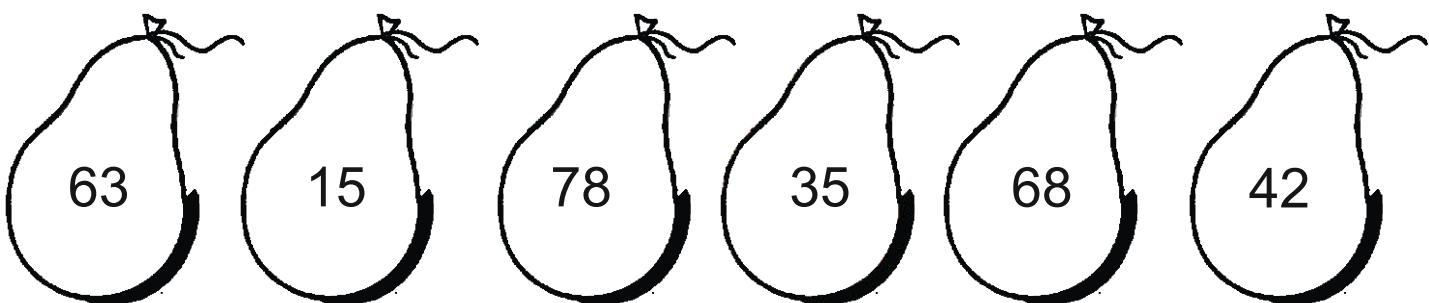
3. Use the colour code to colour the balloons.

Orange : 5 in the ones place

Blue : 7 in the tens place

Green : 2 in the ones place

Brown: 6 in the tens place.



Numbers comparison :

Observe the given pictures. Identify the bigger number and smaller number.

Bigger number:

I have
₹ 25



Sister has
more money



25 is more than 13.
So, 25 is bigger than 13.

I have
₹ 13



I have
₹ 16



Sister has
less money



16 is less than 24.
So, 16 is smaller than 24.

I have
₹ 24



I have
₹ 13



Both have
equal money



I have
₹ 13

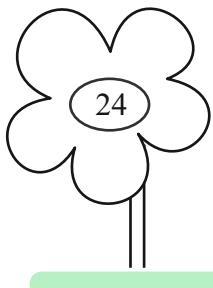


So, 13 is equal to 13.

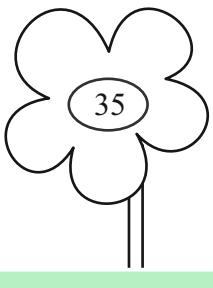
Try these:

Colour the bigger number.

a)

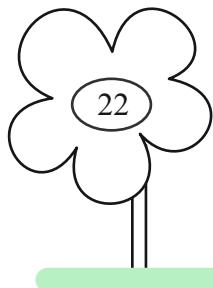


24

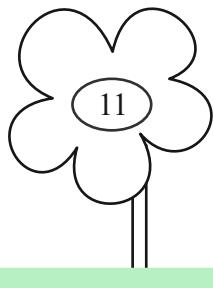


35

b)



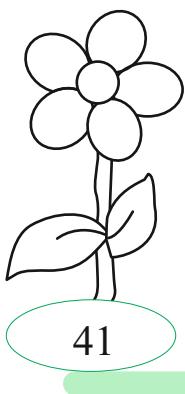
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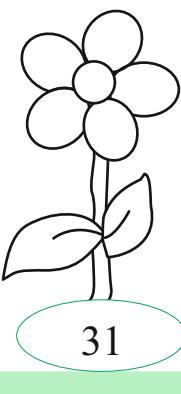
11

Colour the smaller number.

a)

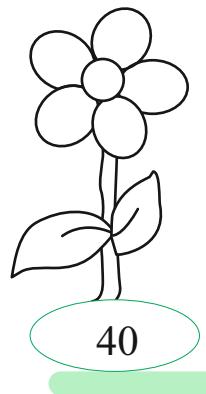


41

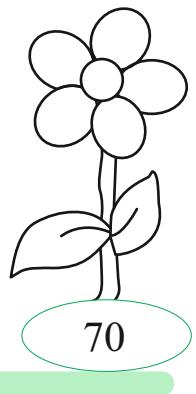


31

b)



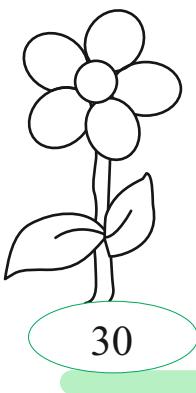
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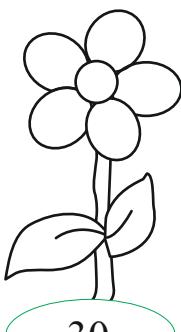
70

Colour the equal numbers.

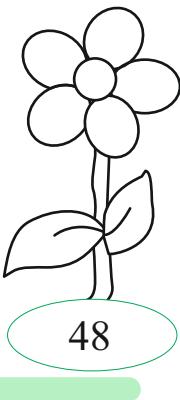
a)



30

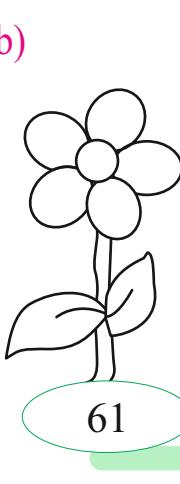


30

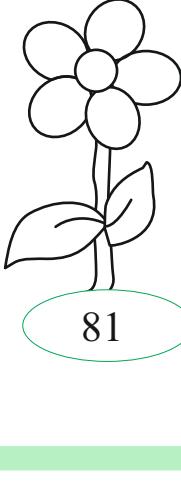


48

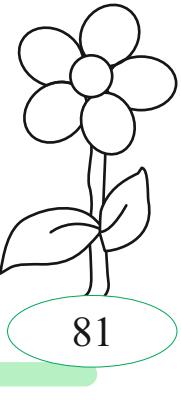
b)



61

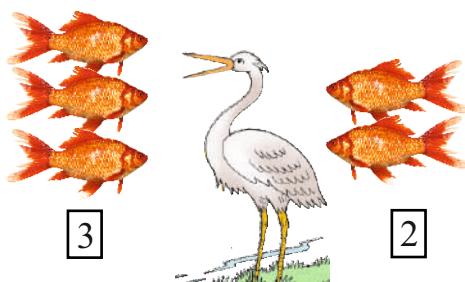


81



81

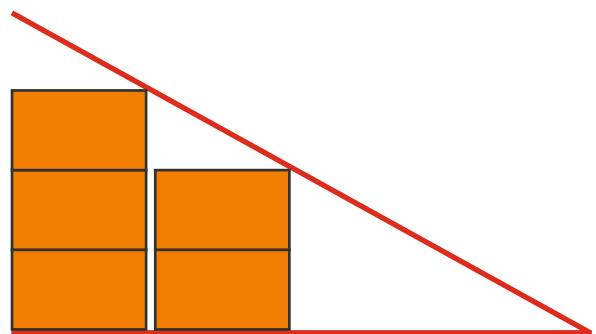
I eat more fish.



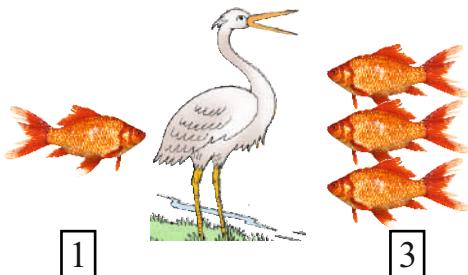
3 is greater than 2

$$\boxed{3} > \boxed{2}$$

'>' is greater than.



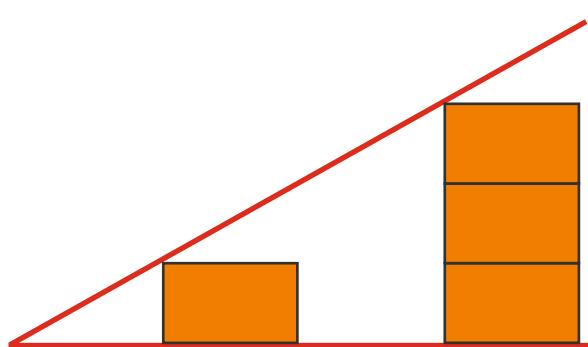
I don't eat less fish.



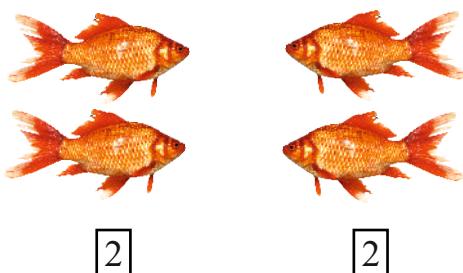
1 is lesser than 3

$$\boxed{1} < \boxed{3}$$

'<' is lesser than.



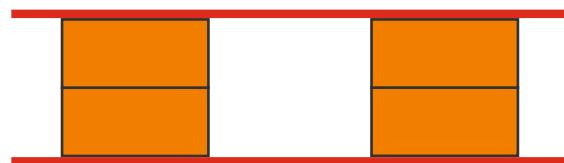
Both are equal



2 is equal to 2

$$\boxed{2} = \boxed{2}$$

'=' is equal to.



♦ Write proper symbols (<, >, =) in the boxes given below.

Example: 1) $14 > 8$ 2) $9 < 12$ 3) $16 = 16$

1) $10 \square 7$ 2) $41 \square 31$ 3) $18 \square 23$

4) $53 \square 63$ 5) $21 \square 21$ 6) $57 \square 47$



Activity: Making 2 - digit numbers with number cards.

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

Step:1 To make a 2 - digit number take one set of number cards from 0 to 9.

Step 2: Ask a child to pick up any card from 0 to 9. Example: 2

Step 3: Ask another child to pick up a card from 0 to 9 and put it beside the first number card. Example:  5

Step 4: Two numbers can be made using two digits.

Those are $2 \times 5 = 25$ and $5 \times 2 = 52$

In the above two numbers. The bigger number is 52 and smaller number is 25.

Comparison: $25 < 52$ and $52 > 25$.

Example :

1. Write down the 2 - digit numbers with the given digits and compare them.

The numbers that can be written using the digits 4 and 5 are



Comparison of 45 and 54:

$$45 < 54 \qquad \qquad 54 > 45$$

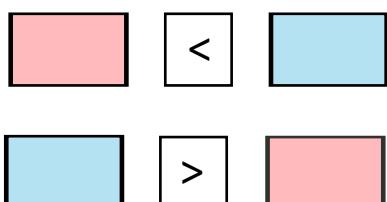
Try these:

1. Write and compare the 2 - digit numbers with 3 and 7.

Numbers that can be written using the digits 3 and 7 are

a) b)

Comparison:

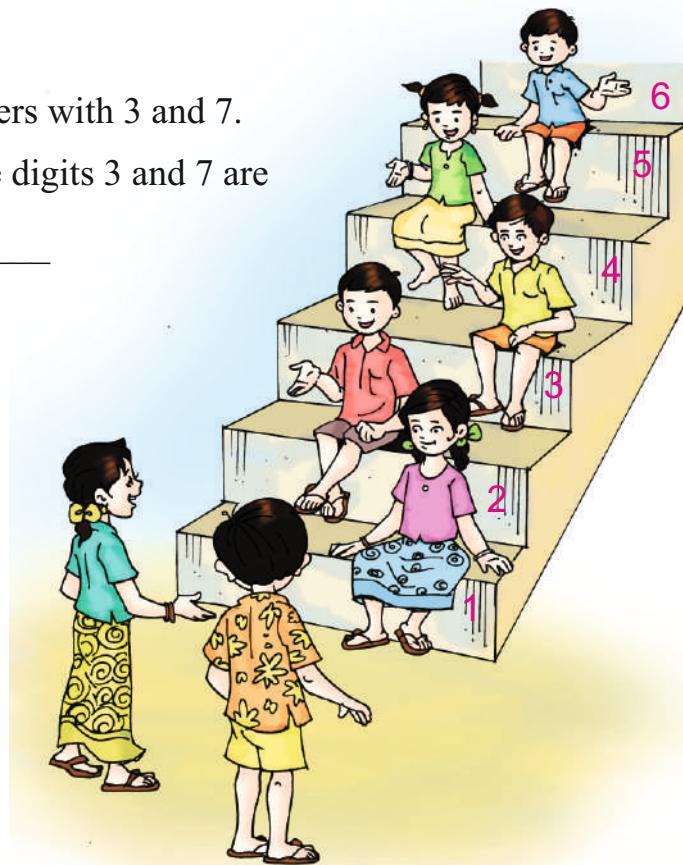


Ascending order and Descending order:

Some boys and girls are sitting on the steps.

There are some numbers on the steps.

Observe the numbers.



Teacher : Which number is on the first step?

Pupil : 1

Teacher : Which number is on the second step?

Pupil : 2

Teacher : Write the numbers on the steps from first step to last step.

Pupil : 1, 2, 3, 4,.....,.....,.....,.....,.....

Teacher : How is the order?

Pupil : The numbers are from smaller to bigger.

Teacher : It is called ascending order.

Example: Arrange numbers 25, 15, 45 in ascending order.

Sol: The smallest number in 25, 15, 45 is 15

15

The smallest number in the remaining numbers 25 and 45 is 25

15, 25

The remaining number is 45

15, 25, 45

Ascending order for 25, 15, 45 is 15, 25, 45.

Try these:

Arrange the given numbers in the ascending order in the space provided.

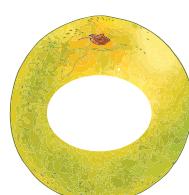
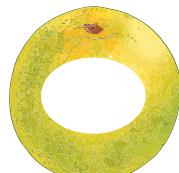
a) 30, 50, 20



b) 25, 95, 15



c) 41, 68, 19



d) 8, 98, 68



Descending order

The boy is climbing down the stairs from the top stairs.

Observe the numbers on the stairs from top stairs to down stairs.

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

Teacher : How is the order of numbers?

Srinu : From bigger to smaller

Teacher : Arranging the numbers from bigger to smaller is called descending order.

Example: Arrange the numbers 40, 20, 30 in descending order

Sol: The biggest number in 40, 20, 30 is 40.

40

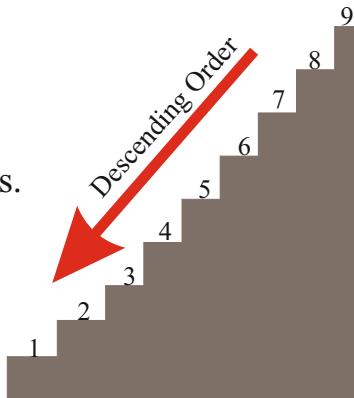
The biggest number in the remaining numbers 20, 30 is 30.

40, 30

The remaining number is 20

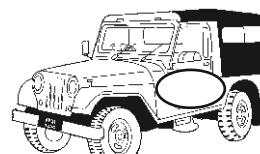
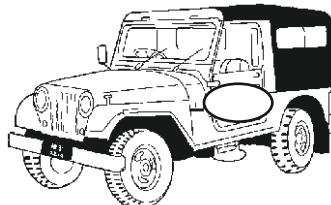
40, 30, 20

The descending order of 40, 20, 30 is 40, 30, 20.



Try these: Arrange the numbers given in descending order and colour it.

- 1) 10, 90, 60



- 2) 15, 36, 88



- 3) Arrange the following numbers in the ascending and descending order.

- a) 75, 98, 69, 37

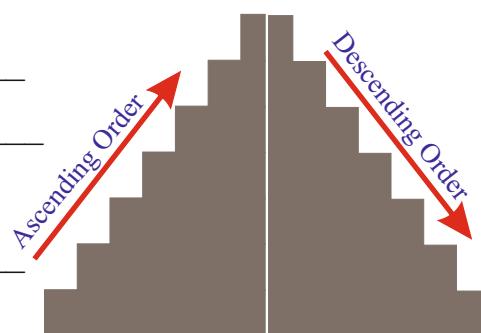
Ascending order : _____, _____, _____, _____

Descending order : _____, _____, _____, _____

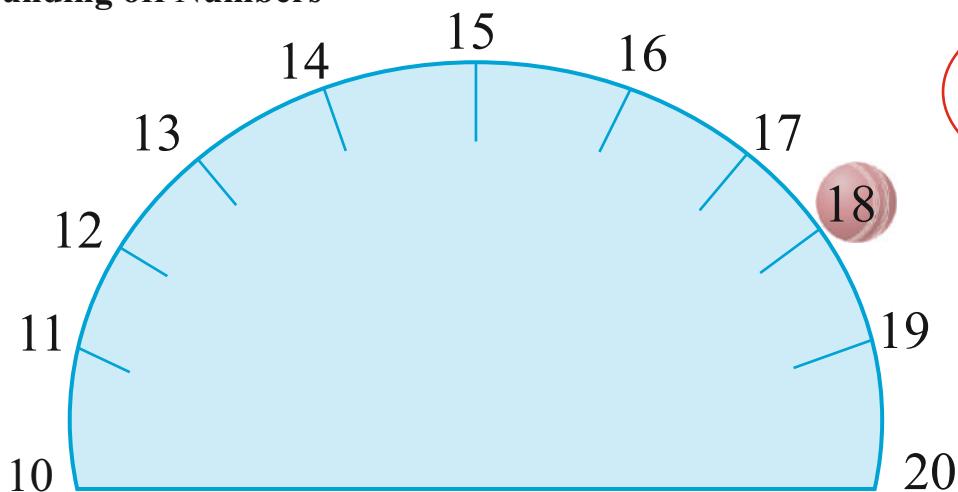
- b) 71, 78, 72, 77

Ascending order : _____, _____, _____, _____

Descending order : _____, _____, _____, _____



Rounding off Numbers



Example: Round off 18 to the nearest tens



The mid number between 10 and 20 is 15

Round 18 to the nearest ten.

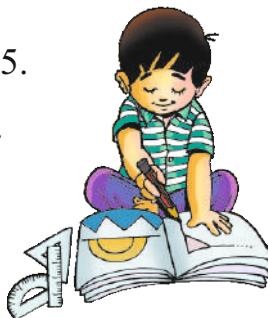
Example: Step - 1 : Note that 18 is in between 10 and 20.

Step - 2 : Identify the mid number between 10 and 20. It is 15.

Step - 3 : The number 18 comes after 15 and is nearer to 20.

Step - 4 : So, 18 is nearest to 20.

If 18 is rounded off to the nearest ten it becomes 20.



Try these:

Colour the box to the nearest tens

Number	10	20	30	40
12				
27				
38				
44				



Exercise

1. Write the expanded form.

a) $72 = \boxed{\quad} + \boxed{\quad}$

b) $56 = \boxed{\quad} + \boxed{\quad}$

2. Write the short form.

a) $30 + 6 = \boxed{\quad}$

b) $90 + 9 = \boxed{\quad}$

3. Use the suitable symbols ($>$, $<$, $=$).

a) $40 \boxed{\quad} 20$

b) $70 \boxed{\quad} 50$

c) $17 \boxed{\quad} 71$

d) $45 \boxed{\quad} 45$

4. Write the given numbers in ascending and descending order.

a) 30, 80, 60

b) 41, 67, 28

Ascending order :

--	--	--

Ascending order :

--	--	--

Descending order:

--	--	--

Descending order:

--	--	--

5. Round the numbers to the nearest tens.

a) 63 :

50	60	70
----	----	----

b) 72 :

50	60	70
----	----	----

6. Match the following.

a) $60 + 5$ 40



b) Nearest ten of 39 40+6

c) 46 56

d) Fifty Six 65

7. Name the order of the numbers whether they are in ascending or descending order.

a) 10, 30, 90 -----

b) 45, 25, 5 -----

c) 25, 35, 45 -----

d) 53, 28, 22 -----

e) 56, 30, 22 -----

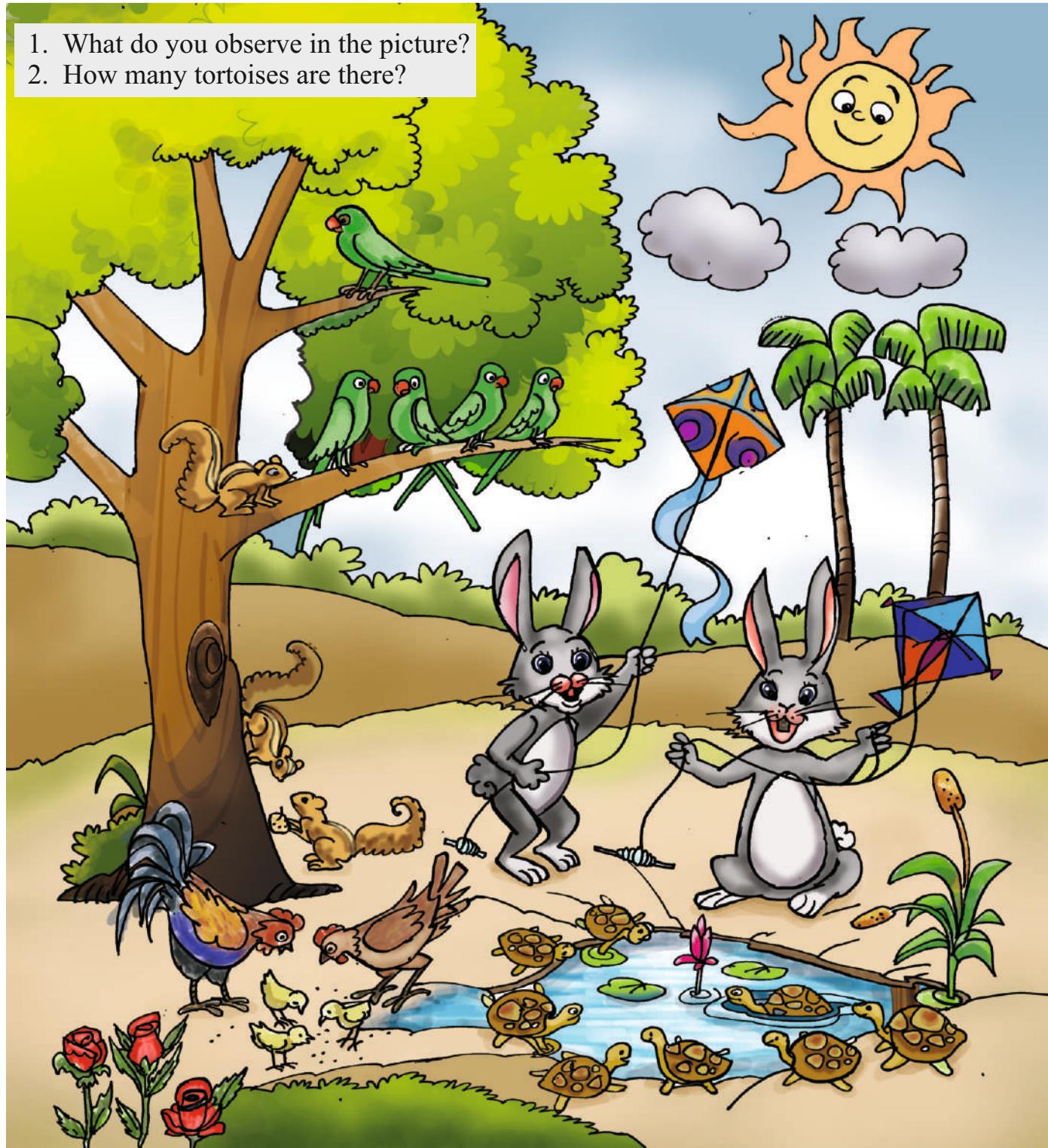
f) 95, 54, 16 -----

Let us Add



CHAPTER
2

1. What do you observe in the picture?
2. How many tortoises are there?





Observe the pictures and do the following addition.

- 1) How many squirrels are there in total ?

$$\begin{array}{rcl} \text{under the tree} & = & 2 \\ \text{on the tree} & = + & 1 \\ & & \hline & & 3 \end{array}$$



- 2) How many parrots are there in total ?

$$\begin{array}{rcl} \text{parrots sitting on the lower branch} & = & 4 \\ \text{parrots sitting on the upper branch} & = + & 1 \\ & & \hline & & \end{array}$$

Note : When we add two numbers, the result is called the ‘SUM’ of the given numbers.

Do the following additions :

a)

$$\begin{array}{r} 5 \\ + 2 \\ \hline \end{array}$$

b)

$$\begin{array}{r} 7 \\ + 1 \\ \hline \end{array}$$

c)

Tens	Ones
1	0
	3

d)

Tens	Ones
	4
1	1

Making Ten (10) :

- A) Fill in the boxes.

1	+	9	=	<input type="text"/>	<input type="text"/>	=	9	+	1
2	+	8	=	<input type="text"/>	<input type="text"/>	=	8	+	2
3	+	7	=	<input type="text"/>	<input type="text"/>	=	7	+	3
5 + 5 =					<input type="text"/>				

both are same



Note: Changing the order of numbers while adding does not change the result.

B) Pair the numbers whose sum is 10. One is done for you.

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



Addition of 2 - digit number and 1- digit number using number strip:



Example : $33 + 5 = \underline{\hspace{2cm}}$

I) Find 33 on the above number strip.

ii) Start from 33 and move 5 places forward.

iii) You will be at 38.

$$\text{So, } 33 + 5 = 38$$

Tens	Ones
3	3
+	5
3	8



Solve the following problems using the number strip.

a)

Tens	Ones
3	1
+	4

b)

Tens	Ones
3	3
+	3

c)

Tens	Ones
3	5
+	0

d)

Tens	Ones
+	2
3	8

Addition of 2 - digit number and 1-digit number:

Sunny and Bunny went to play with kites. They met some friends on the ground.

The number of kites they have,

Kites in red colour = 21

Kites in green colour = 8



Do you know how many kites are there?

$$21 + 8 = ?$$

Tens	Ones
2	1
+	8
	9

1 ten
1 ten

1 ten

1 ten

5 ones

We begin adding with one's place. So $1 + 8 = 9$. Write '9' in ones place.

Now we add the numbers in tens place.

Tens	Ones
2	1
+	8
2	9

1 ten
1 ten

1 ten

1 ten

5 ones

Total number of kites = 29.

Addition of 2 - digit number and 1 - digit number (using 10 blocks) :

Example : $35 + 4 = \underline{\hspace{2cm}}$.

35 means 3 tens and 5 ones.

4 means 4 ones.

Begin adding with ones. So, $5 + 4 = 9$.

Write 9 in ones place.

Tens	Ones
3	5
+	4
	9

3 tens
4 ones

3 tens

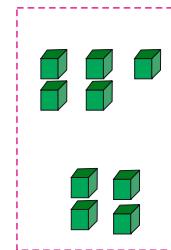
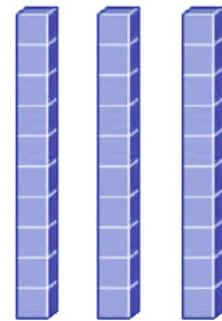
4 ones

Now, add the numbers in tens place.

Write 3 in tens place.

$$\boxed{3 \ 5 + 4 = 3 \ 9}$$

Tens	Ones
3	5
	4
3	9



Convert this addition into word problems (oral)

Example : Subbu has 35 bananas and Gupta has 4 bananas.

How many bananas are there in total?

Try these:

a)

Tens	Ones
7	5
+	0

b)

Tens	Ones
	4
+	8
	3

c)

Tens	Ones
9	2
+	3

d)

Tens	Ones
9	0
+	0

Note: Frame word problems for the above

Addition of 2 - digit numbers

While playing with kites, it started raining.

Sunny team prepared 13 paper boats and Bunny team prepared 12 paper boats. They played with the paper boats happily.

Can you count how many boats were prepared by them ?

$$13 + 12 = ?$$



We begin with ones place numbers. So, $3 + 2 = 5$. We write ‘5’ in ones place.

Tens	Ones
1	3
+	
1	2
	5

1 ten

Now we add the numbers in tens.

Tens	Ones
1	3
+	
1	2
	5

1 ten

$$1 \text{ ten and } 1 \text{ ten} = 2 \text{ tens}$$

Add numbers in tens place. So, $1 + 1 = 2$ tens.

Write ‘2’ in tens place.

$$13 + 12 = 25. \text{ So, total number of paper boats is } 25.$$



Try these:

a)

Tens	Ones
4	1
+	
2	6

b)

Tens	Ones
5	0
+	
2	0

c)

Tens	Ones
7	6
+	
1	1

d)

Tens	Ones
6	6
+	
3	3

e) Observe and fill in the blanks.

$$20 + 10 = 30$$

$$40 + 10 = \boxed{}$$

$$36 + 10 = \boxed{}$$

$$25 + 10 = 35$$

$$37 + 10 = \boxed{}$$

$$21 + 10 = \boxed{}$$

$$27 + 10 = \boxed{}$$

$$29 + 10 = \boxed{}$$

$$42 + 10 = \boxed{}$$



Word problems :

Some school children went to picnic at the beach.

- 1) Students at the picnic.

1 8



2 1

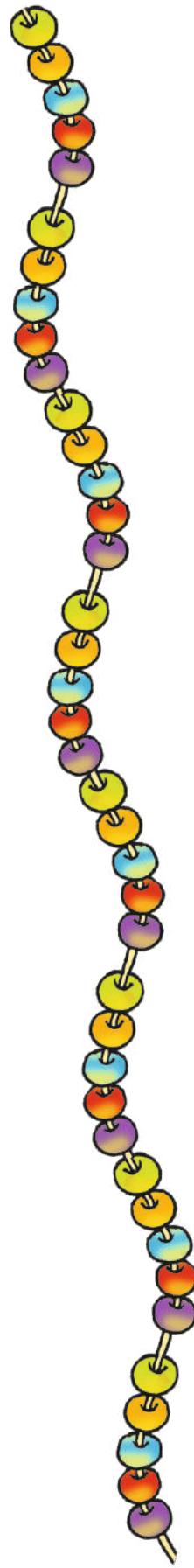


How many students are there in total ?

Answer:

+

Tens	Ones
1	8
2	1



- 2) Play material they carried.

1 2



1 5



How many toys they carried in total?

Answer:

+

Tens	Ones
1	2
1	5



- 3) Built sand houses with sand.

2 3



3 1



How many sand shapes are there in total?

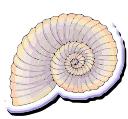
Answer:

Tens	Ones
2	3
3	1



- 4) Collected shells at the beach.

4 9



3 0



How many shells are there in total?

Answer:

+

Tens	Ones
4	9
3	0



- 5) Animals at the beach.

1 6



2 2



How many animals are there in total?

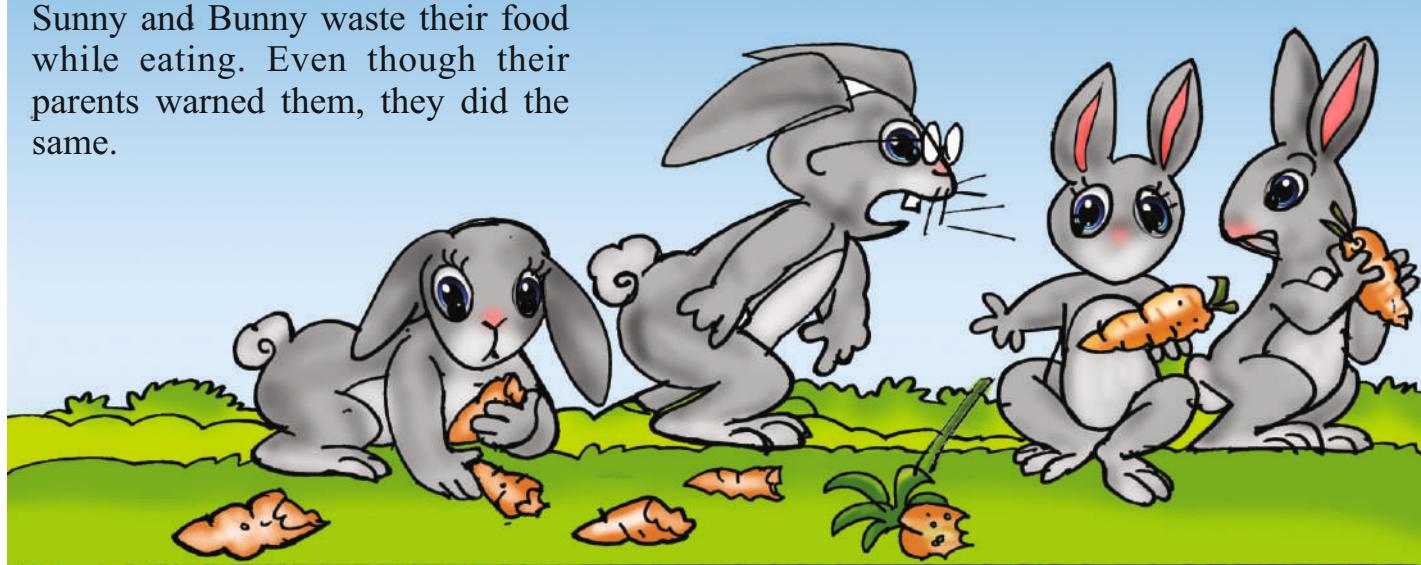
Answer:

+

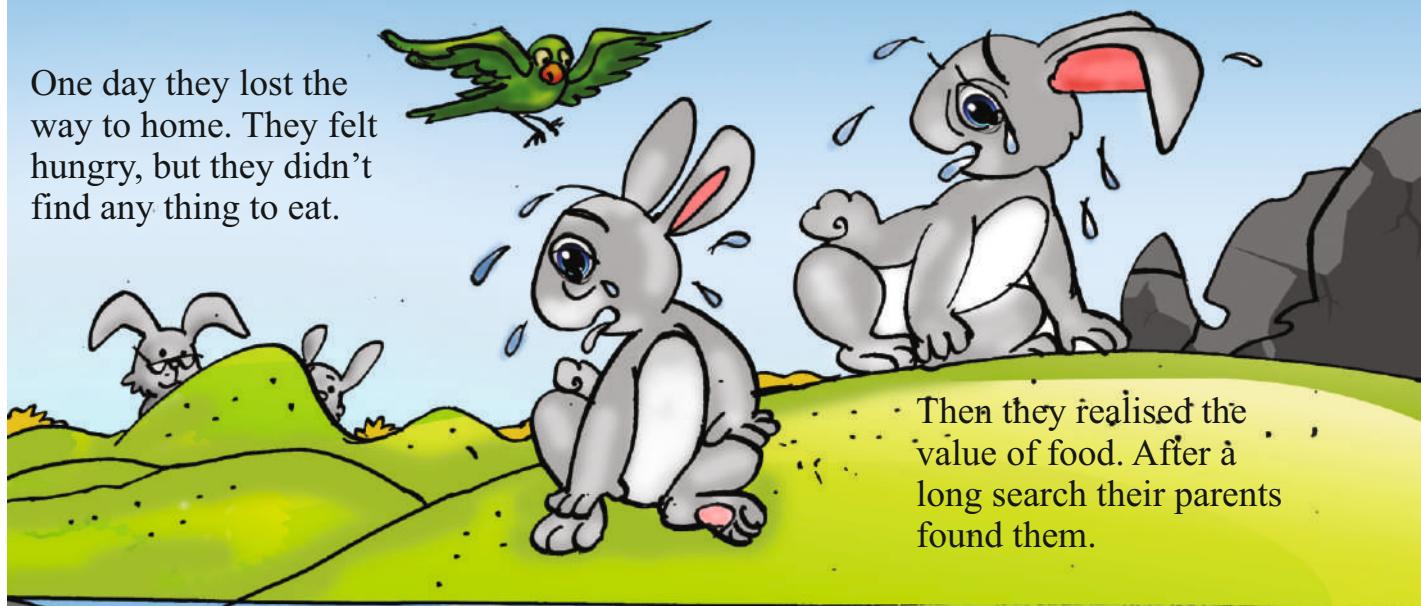
Tens	Ones
1	6
2	2



Sunny and Bunny waste their food while eating. Even though their parents warned them, they did the same.



One day they lost the way to home. They felt hungry, but they didn't find any thing to eat.



Then they realised the value of food. After a long search their parents found them.

Next day Sunny and Bunny told their parents, that they would bring food. They collected many carrots and reached home by evening.



Addition of 2 - digit number and 1 - digit number (Regrouping):

Sunny brought '12' carrots and Bunny brought '9' carrots.

How many carrots did they bring together?

Sunny brought 12 carrots = 10 carrots + 2 carrots

Bunny brought 9 carrots = 9 carrots

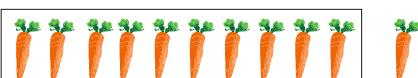
$$\begin{array}{r} 12 \\ + 9 \\ \hline \end{array} = ?$$

We begin adding ones place numbers.

$$2 + 9 = 11 \text{ ones}$$



Regroup 11 as 1 Ten and 1 one



① Tens	Ones
1	2
	9
	1

write '1' in ones place, and carry over '1' ten to the tens place.

Step 2:

Now add tens.

Add tens place numbers.

$$1 \text{ ten} + 1 \text{ ten} (\text{carry forward}) = 2 \text{ tens.}$$

write '2' in tens place.

$$\boxed{12 + 9 = 21}$$

① Tens	Ones
1	2
	9
2	1

Sunny and Bunny brought 21 carrots together.

Try these:

a)

Tens	Ones
2	2
	8
+	

b)

Tens	Ones
3	4
	7
+	

c)

Tens	Ones
6	8
	8
+	

d)



Tens	Ones
7	6
	9
+	

Addition of 2-digit numbers (Regrouping) :

Sunny and Bunny want to buy story books. So, they collected money from their parents and also from their savings.

Sunny has  = ₹ 38

Bunny has   = ₹ 32

How much do they have together?

$$38 + 32 = ?$$

Tens ①	Ones
3	8
+ 3	2



Add ones place numbers first. 8 ones + 2 ones = 10 ones.

But, we regroup 10 ones  to 1 ten 

ten ones = 1 ten + 0 ones.

Write '0' in ones place and carry over '1' ten to tens place.

Now add tens place numbers.

Tens ①	Ones
3	8
+ 3	2
7	0



Add tens place numbers = 3 tens + 3 tens + 1 ten (carry forward)

$$= 7 \text{ tens}$$

Write '7' in tens place.

$$\boxed{38 + 32 = 70}$$

Sunny and Bunny have a total of ₹70 together.



38 + 32 = ?								
<table border="1"> <thead> <tr> <th>Tens ①</th> <th>Ones</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>8</td> </tr> <tr> <td>+ 3</td> <td>2</td> </tr> <tr> <td>7</td> <td>0</td> </tr> </tbody> </table>	Tens ①	Ones	3	8	+ 3	2	7	0
Tens ①	Ones							
3	8							
+ 3	2							
7	0							

Try these:

Tens	Ones
3	7
+	4

Tens	Ones
5	6
+	1

Tens	Ones
7	3
+	1

Tens	Ones
4	9
+	3

Word problems :

Example : In an aquarium 18 big fish and 14 small fish are kept. Find how many fish are there in total?

Step-1 : Read the problem and understand the question.

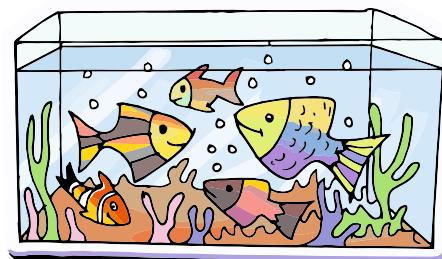


Step-2 : Find the given important information in the problem.
We know that there are 18 big fish and 14 small fish.

Step-3 : Decide what to do.

We need to find out the total number of fish.

So we must add.



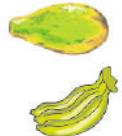
Step-4 : Solve the problem.

Tens ①	Ones
1	8
+	1
	4

$$\begin{array}{rcl} \text{Big fish} & = & 1 \quad 8 \\ \text{Small fish} & = & + \quad 1 \quad 4 \\ \text{Total fish} & = & \quad 3 \quad 2 \end{array}$$

Try these:

In a fruit garden there are 28 papaya trees and 26 banana trees.
How many trees are there in the garden ?



$$\begin{array}{rcl} \text{Papaya trees} & = & \\ \text{Banana trees} & = & \\ \text{Total trees} & = & \end{array}$$

Tens	Ones
2	8
2	6



Bujji's book shop :

Bunny and Sunny went to 'Bujji's book shop' to buy a story book each. The book costs ₹26.

Bunny gave



Sunny gave



Did Bunny and Sunny give the correct amount to Bujji?

Verify it.



Try these:

Count and write how much ?

- | | |
|----|------------------------|
| 1) | ₹ <input type="text"/> |
| 2) | ₹ <input type="text"/> |
| 3) | ₹ <input type="text"/> |
| 4) | ₹ <input type="text"/> |

Activity:

From Kurnool to Gooty the bus fare is ₹100. The bus conductor collects the amount from passengers and gives tickets. Four of the passengers give the amount to the conductor as shown below. Verify if it is equal to ₹100. If yes put '✓' mark, otherwise put '✗' mark in the given boxes.



Passenger	Amount given	✓ or ✗

Exercise

I) Fill in the blanks.

$$\begin{array}{l}
 1) \quad 9 + 1 = \underline{\hspace{2cm}} \\
 2) \quad 9 + 9 = \underline{\hspace{2cm}} \\
 3) \quad 16 + 0 = \underline{\hspace{2cm}} \\
 4) \quad 20 + 10 = \underline{\hspace{2cm}} \\
 5) \quad 25 + 26 = \underline{\hspace{2cm}}
 \end{array}$$



II) Observe and complete the addition pattern:

1) $4 + 3 = 7$ $14 + 3 = 17$ $24 + 3 = 27$	2) $2 + 3 = 5$ $12 + 3 = \underline{\hspace{2cm}}$ $22 + 3 = \underline{\hspace{2cm}}$	3) $7 + 2 = 9$ $17 + 2 = \underline{\hspace{2cm}}$ $27 + 2 = \underline{\hspace{2cm}}$
--	--	--

III. Do the following :

$$1) 33 + 47 = \underline{\hspace{2cm}} \quad 2) 25 + 69 = \underline{\hspace{2cm}} \quad 3) 38 + 58 = \underline{\hspace{2cm}} \quad 4) 68 + 29 = \underline{\hspace{2cm}}$$

IV) Check if the problems done are right or wrong. Correct them, if they are wrong.

1. $26 + 42 = 69$

2. $27 + 5 = 77$

3. $30 + 4 = 70$

4. $54 + 47 = 101$

V) Add and circle the correct answer.

Example : $36 + 28$

62

64

68

1) $45 + 36$

81

85

76

2) $48 + 7$

57

65

55

3) $37 + 27$

54

64

57

4) $68 + 23$

81

71

91

5) $50 + 49$

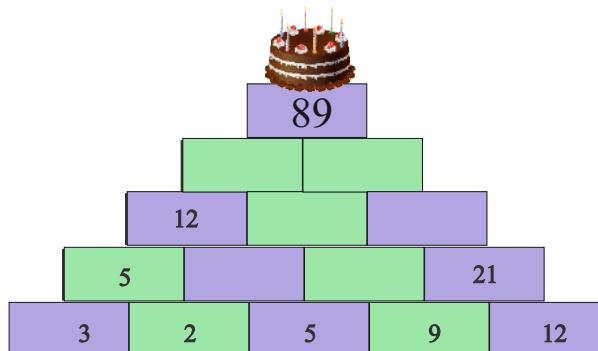
90

99

89



VI) Complete the boxes by adding the numbers in the boxes below and reach the cake.



VII) Put a (✓) mark on the notes and coins you will use to buy this doll.

a)		
b)		
c)		
d)		

How much I Left



CHAPTER
3

A bazaar in a village

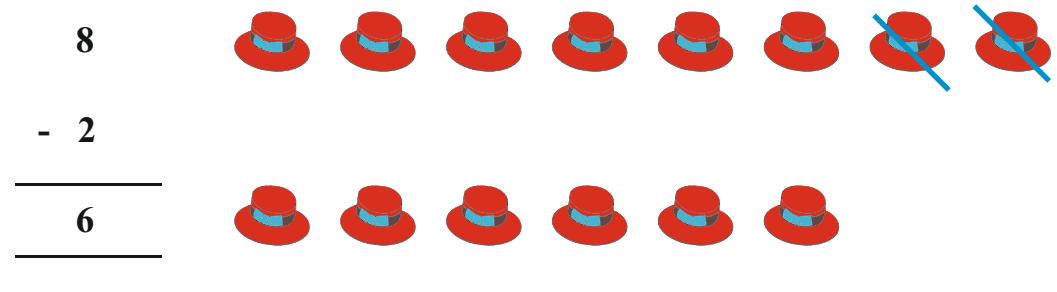


On Sunday, Peddanna and Beemala went to a bazaar (Varapu santha) to buy things. Few were selling fruits and goods.

1. What do you observe in the picture?
2. Among all the monkeys how many are baby monkeys?



A merchant is selling caps. There are 8 caps in his shop. A monkey has taken away 2 caps from his shop. How many caps are remaining in his shop?



Try these :

a) 4

$$\begin{array}{r}
 - 2 \\
 \hline
 \end{array}$$

b) 5

$$\begin{array}{r}
 - 4 \\
 \hline
 \end{array}$$

c) 6

$$\begin{array}{r}
 - 5 \\
 \hline
 \end{array}$$

d) 7

$$\begin{array}{r}
 - 3 \\
 \hline
 \end{array}$$

Subtraction of 1-digit number from the numbers below 20 (Backward counting)



Example :

$$14 - 5 = 9$$

Hint: Start from the number 14 and count 5 steps backward.

Solve the following:

a) $11 - 6 =$

b) $11 - 8 =$



c) $12 - 7 =$

d) $12 - 8 =$

e) $13 - 7 =$

f) $14 - 6 =$

Subtraction of 1 - digit number from 2 - digit numbers (without regrouping)

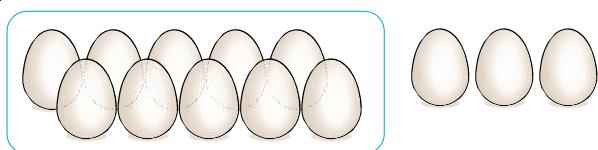
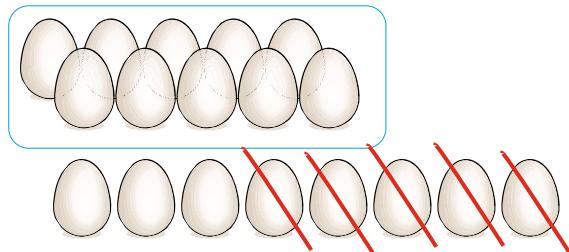
Ademma purchased 18 eggs.

In those eggs 5 eggs are broken.

How many eggs are remaining?



$$\begin{array}{r}
 \begin{array}{|c|c|} \hline
 \text{Tens} & \text{Ones} \\ \hline
 1 & 8 \\ \hline
 - & \\ \hline
 1 & 3 \\ \hline
 \end{array}
 &
 \begin{array}{l}
 = 1 \text{ ten} + 8 \text{ ones} \\
 = \underline{\hspace{2cm}} \\
 = 1 \text{ ten} + 3 \text{ ones} \\
 = \underline{\hspace{2cm}}
 \end{array}
 \end{array}$$



Try these :

a)

$$\begin{array}{r}
 \begin{array}{|c|c|} \hline
 \text{Tens} & \text{Ones} \\ \hline
 2 & 5 \\ \hline
 - & \\ \hline
 & 2 \\ \hline
 \end{array}
 &
 \begin{array}{l}
 = 2 \text{ ten} + 5 \text{ ones} \\
 = \underline{\hspace{2cm}} \\
 = \underline{\hspace{2cm}}
 \end{array}
 \end{array}$$



b)

$$\begin{array}{r}
 \begin{array}{|c|c|} \hline
 \text{Tens} & \text{Ones} \\ \hline
 4 & 7 \\ \hline
 - & \\ \hline
 & 4 \\ \hline
 \end{array}
 &
 \begin{array}{l}
 = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} \text{ nes} \\
 = \underline{\hspace{2cm}} \text{ ones} \\
 = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} \text{ ones} \\
 = \underline{\hspace{2cm}}
 \end{array}
 \end{array}$$

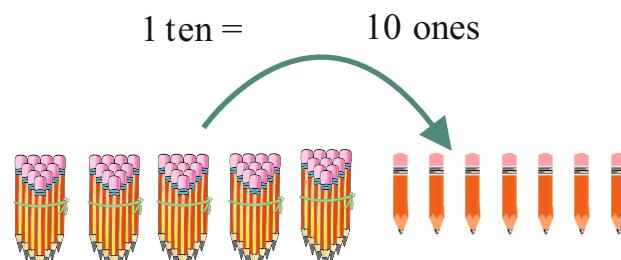
Subtraction of 1 - digit number from 2 - digit numbers (with regrouping)

There were 57 passengers in a bus.
9 of them got down on the way. How many passengers are left in the bus?



Step - 1 : Read the given statement and identify the operation that has to be done to solve the problem. Write the numbers in vertical form according to their places.

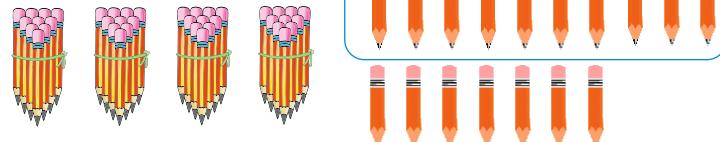
Tens	Ones
5	7
-	9



Step - 2 : We cannot subtract 9 ones from 7 ones.

So, regroup 1 ten into 10 ones.

Tens	Ones
4 (5)	(7) 17
-	9
	8



$$\begin{aligned} \text{So, } 1 \text{ ten} + 7 \text{ ones} &= 10 \text{ ones} + 7 \text{ ones} \\ &= 17 \text{ ones} \\ 17 \text{ ones} - 9 \text{ ones} &= 8 \text{ ones} \end{aligned}$$

Step - 3 :

Tens	Ones
4 (5)	(7) 17
-	9
4	8

* Write 8 ones under the ones column.

Remaining tens = 4 tens

No of tens to be removed from 4 tens.

$$4 \text{ tens} - 0 \text{ tens} = 4 \text{ tens}$$

So, write 4 in the tens column.

Passengers left in the bus are 48.

Try these :

1)

Tens	Ones
4	3
8	

2)

Tens	Ones
5	6
8	

3)

Tens	Ones
7	1
5	

4)

Tens	Ones
9	4
7	

5) $32 - 6 = \underline{\hspace{2cm}}$

6) $42 - 9 = \underline{\hspace{2cm}}$

7) $53 - 8 = \underline{\hspace{2cm}}$

8) $60 - 4 = \underline{\hspace{2cm}}$

Tens	Ones
3	2
6	

Tens	Ones
4	2

Tens	Ones

Tens	Ones

- 9) Hussain has 15 chocolates. He gave 7 of them to his sister. How many chocolates are now with him?



Number of chocolates Hussain has =

Tens	Ones
1	5

Number of chocolates he gave to his sister =



7

Number of chocolates remaining with Hussain =

- 10) There are 72 pages in a story book. Sara read 9 pages in that book. How many more pages are to be read by Sara to complete the book?



=

=

=

Tens	Ones

Subtraction of 2 - digit numbers from 2 - digit numbers (without regrouping)

Peddanna went to bazaar with ₹95. He spent ₹43. How much money is now left with Peddanna?



Money taken to bazaar by Peddanna =

Money spent by Peddanna =

Tens	Ones
9	5
4	3



Step - 1 : Subtract the ones,

$$5 \text{ ones} - 3 \text{ ones} = 2 \text{ ones}$$

Write 2 in the ones column.

Tens	Ones
9	5
4	3
	2



Step - 2 : Now, subtract the tens,

$$9 \text{ tens} - 4 \text{ tens} = 5 \text{ tens}$$

Write 5 in tens column.

Tens	Ones
9	5
4	3
5	2



So, the amount left with Peddanna = ₹ 52.

Try these :

1) $57 - 41 = \underline{\quad}$

Tens	Ones
5	7
4	1

2) $65 - 23 = \underline{\quad}$

Tens	Ones
6	5
2	3

3) $79 - 25 = \underline{\quad}$

Tens	Ones
7	9
2	5

4) $87 - 43 = \underline{\quad}$

Tens	Ones
8	7
4	3

5) $26 - 13 = \underline{\quad}$

Tens	Ones

6) $59 - 41 = \underline{\quad}$

Tens	Ones

7) $78 - 33 = \underline{\quad}$

Tens	Ones

8) $97 - 42 = \underline{\quad}$

Tens	Ones

- 9) Satvika brought 78 chocolates on her birthday. She distributed 56 chocolates among her friends. How many chocolates are left with her?



Number of chocolates Satvika brought =

Tens	Ones

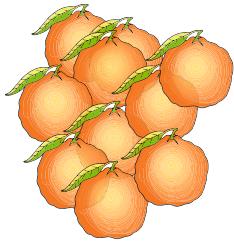
Number of chocolates she distributed =

Tens	Ones

Number of chocolates left with her =

Tens	Ones

- 10) Razia has 36 oranges. 4 of them are rotten. How many of them are in good condition?



Tens	Ones

=

=

=

Subtracting 2 - digit number from a 2 - digit number (with regrouping)

Beemala purchased medicine for ₹ 12.

She gave ₹ 50 to the shopkeeper. How much does the shopkeeper return to Beemala?



Amount given to the shopkeeper =

Cost of medicine purchased = $-$

Tens	Ones
5	0
1	2

1 Ten = 10 Ones

Step - 1 : We subtract the ones first.

It is not possible to subtract 2 from 0.

So, we regroup 1 ten from the tens column into 10 ones.

Now, subtract 2 ones from 10 ones.

$$10 - 2 = 8$$

* Write 8 in the ones column.

Tens	Ones
4 (5)	(0) 10
1	2
	8



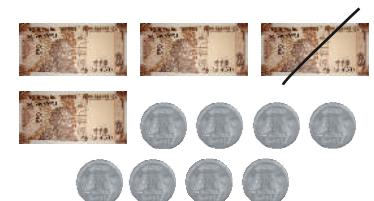
Step - 2 : Now, subtract the tens,

We are left with 4 tens.

So, 4 tens - 1 ten = 3 tens

Write 3 in the tens column

Tens	Ones
4 (5)	(0) 10
1	2
3	8



So, the amount to be returned by the shopkeeper = ₹ 38.

Try these :

1) $52 - 38 = \underline{\hspace{2cm}}$ 2) $64 - 28 = \underline{\hspace{2cm}}$ 3) $70 - 27 = \underline{\hspace{2cm}}$ 4) $81 - 26 = \underline{\hspace{2cm}}$

Tens	Ones
5	2
3	8

Tens	Ones
6	4
2	8

Tens	Ones
7	0
2	7

Tens	Ones
8	1
2	6

5) $47 - 28 = \underline{\hspace{2cm}}$ 6) $52 - 26 = \underline{\hspace{2cm}}$ 7) $73 - 57 = \underline{\hspace{2cm}}$ 8) $91 - 18 = \underline{\hspace{2cm}}$

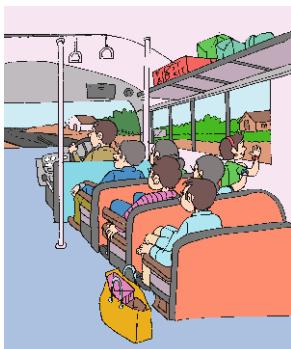
Tens	Ones

Tens	Ones

Tens	Ones

Tens	Ones

- 9) There are 45 seats in a bus. 35 passengers are seated in that bus. How many seats are vacant in the bus?



Number of seats in the bus =

Number of passengers in the bus =

Number of vacant seats in the bus =

Tens	Ones

- 10) How much is 64 more than 39 ?

Tens	Ones

- 11) How much is 27 less than 92 ?

Tens	Ones

Word problems :

Akbar got 75 chocolates. He distributed 58 chocolates among his friends on his birthday. How many chocolates are left with him?



Step - 1: Read the problem and understand it.

Step - 2: Find the given important information in the problem. We know that out of 75 chocolates, 58 chocolates were distributed.

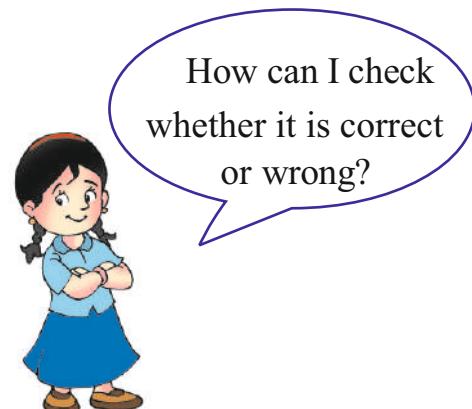
Step - 3: Decide what to do.

We need to find out how many chocolates are left. So, we must subtract.

Step - 4: Solve the problem.

The number of chocolates left with him = 17

Tens	Ones
6 (7)	10 (5) 15
5	8
1	7



Try these :

- 1) A school library has 83 English story books and 75 Telugu story books. How many more story books are there in English than Telugu?



Number of English story books =

Number of Telugu story books =

Number of English story books more than Telugu =

Tens	Ones

- 2) There are 32 children in a class. 15 of them are boys. How many are girls in the class?

Tens	Ones
=	
=	-
=	

Verification of subtraction by using addition :

Akbar has a clear way of checking subtraction.

Take away →	<table border="1" style="border-collapse: collapse; width: 100%; text-align: center;"> <tr> <th style="padding: 5px;">Tens</th> <th style="padding: 5px;">Ones</th> </tr> <tr> <td style="padding: 5px;">7</td> <td style="padding: 5px;">5</td> </tr> <tr> <td style="padding: 5px;">5</td> <td style="padding: 5px;">8</td> </tr> <tr> <td style="padding: 5px;">1</td> <td style="padding: 5px;">7</td> </tr> </table>	Tens	Ones	7	5	5	8	1	7	Put back →	<table border="1" style="border-collapse: collapse; width: 100%; text-align: center;"> <tr> <th style="padding: 5px;">Tens</th> <th style="padding: 5px;">Ones</th> </tr> <tr> <td style="padding: 5px;">5</td> <td style="padding: 5px;">8</td> </tr> <tr> <td style="padding: 5px;">1</td> <td style="padding: 5px;">7</td> </tr> <tr> <td style="padding: 5px;">7</td> <td style="padding: 5px;">5</td> </tr> </table>	Tens	Ones	5	8	1	7	7	5
Tens	Ones																		
7	5																		
5	8																		
1	7																		
Tens	Ones																		
5	8																		
1	7																		
7	5																		

Since, he gets the number that he started with, that is 75.

He is aware that his answer is correct.

Solve the following subtractions and check the answer.

e.g:

$\begin{array}{r} \text{Tens} \quad \text{Ones} \\ \hline 5 & 8 \\ - & \\ 1 & 6 \\ \hline 4 & 2 \end{array}$	\rightarrow	$\begin{array}{r} \text{Tens} \quad \text{Ones} \\ \hline 1 & 6 \\ + & \\ 4 & 2 \\ \hline 5 & 8 \end{array}$
--	---------------	--



1)

Tens	Ones
6	5
2	4

- → +

Tens	Ones

2)

Tens	Ones
3	7
1	8

- → +

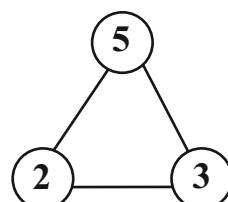
Tens	Ones

Fact families

Each group contains the numbers in a fact family.

Add or subtract using the three numbers.

Example :



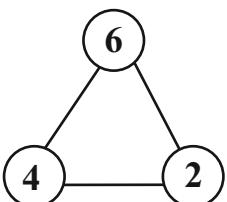
$$2 + 3 = 5$$

$$3 + 2 = 5$$

$$5 - 3 = 2$$

$$5 - 2 = 3$$

1)



$$4 + 2 =$$

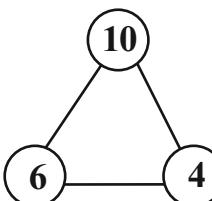
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$6 - 4 = 2$$

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



2)



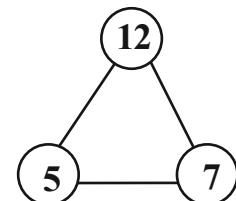
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

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

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

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

3)



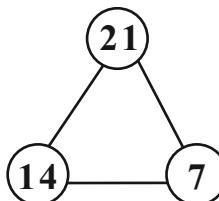
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

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

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

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

4)



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

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

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

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

Look at the subtraction done by Manisha, Ashish and Ismail.

Manisha

Tens	Ones
8	4
2	8
6	4

Ashish

Tens	Ones
8	(4) 14
2	8
6	6

Ismail

Tens	Ones
7 (8)	(4) 14
2	8
5	6

Who did it correctly?

Observe the mistakes.

Manisha:

We have to subtract 8 ones from 4 ones but not 4 ones from 8 ones.

Ashish :

Subtraction of ones, that is subtraction of 8 ones from 4 ones is not possible.

So, he regrouped 1 ten into ones.

Then, 1 ten + 4 ones = 14 ones.

So, 14 ones - 8 ones = 6 ones.

But, he didn't reduce the number in tens place.



Ismail: Now, you observe the subtraction done by Ismail.

He did correctly.

Look at the following subtractions. If it is wrong discuss the mistakes with your friends and write the correct answer in the blanks.

a)

Tens	Ones
2	5
1	7
1	8

b)

Tens	Ones
3	2
2	6
1	4

c)

Tens	Ones
4	3
1	7
2	6



Exercise

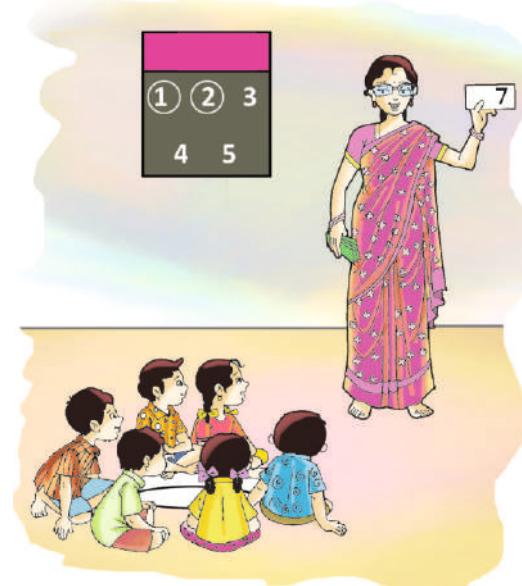
Do the following subtractions.

1) $32 - 19 = \underline{\quad}$ 2) $54 - 26 = \underline{\quad}$ 3) $80 - 46 = \underline{\quad}$ 4) $93 - 69 = \underline{\quad}$

Tens	Ones	Tens	Ones	Tens	Ones	Tens	Ones

- 5) Subtract the number in the columns from the number in the rows. Fill in the blank boxes.

-	60	50	30	20
90				
80				
70				
60				



- 6) Rajini bought books for Rs.39 and she gave Rs.50 to the shopkeeper. How much money should the shopkeeper return ?
- 7) Kamala read 42 pages in a book and Deepthi read 28 pages. How many pages did Kamala read more than Deepthi?
- 8) Write the subtraction fact into addition fact.

$$30 - 20 = 10$$

Addition fact = _____

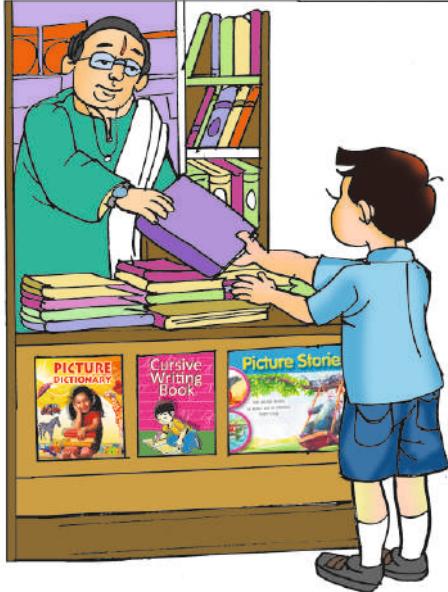


Play with Numbers



CHAPTER

4



1. How much money does Deva have?

Deva has a good habit, that is when his parents give him money, he always keeps it in his kiddy bank. One day, he wants to buy a story book. It costs ₹ 100. He opens his kiddy bank. Let us see how much money he has saved?

There were 9  currency notes, picking up every  note



one by one he counted as 10, 20, 30, 40, 50, 60, 70, 80 and 90.

There were 9 rupee coins.

He counted them as 91, 92, 93, 94, 95,

Oh! I have
 $90 + 9 = 99$
rupees



Just then, his mother gave him another rupee coin. Deva said, now I have ten

one rupee coins. He gave 10 one rupee coins to his sister in exchange of a 10 rupee

A horizontal equation illustrating a money exchange. On the left, seven 2-rupee coins are shown, followed by a plus sign. To the right of the plus sign is one 5-rupee coin. An equals sign follows, and finally, a 10-rupee note is shown on the far right.

$$9+1 =$$

10 rupees

Now I have
10 ten rupee
notes

Wow! After
ninety nine
comes one
Hundred

You know
Deva ! All these ten
rupee notes are equal
to this single note

Do you observe
the number on
this note? It is
Hundred



Tens	Ones
10	0

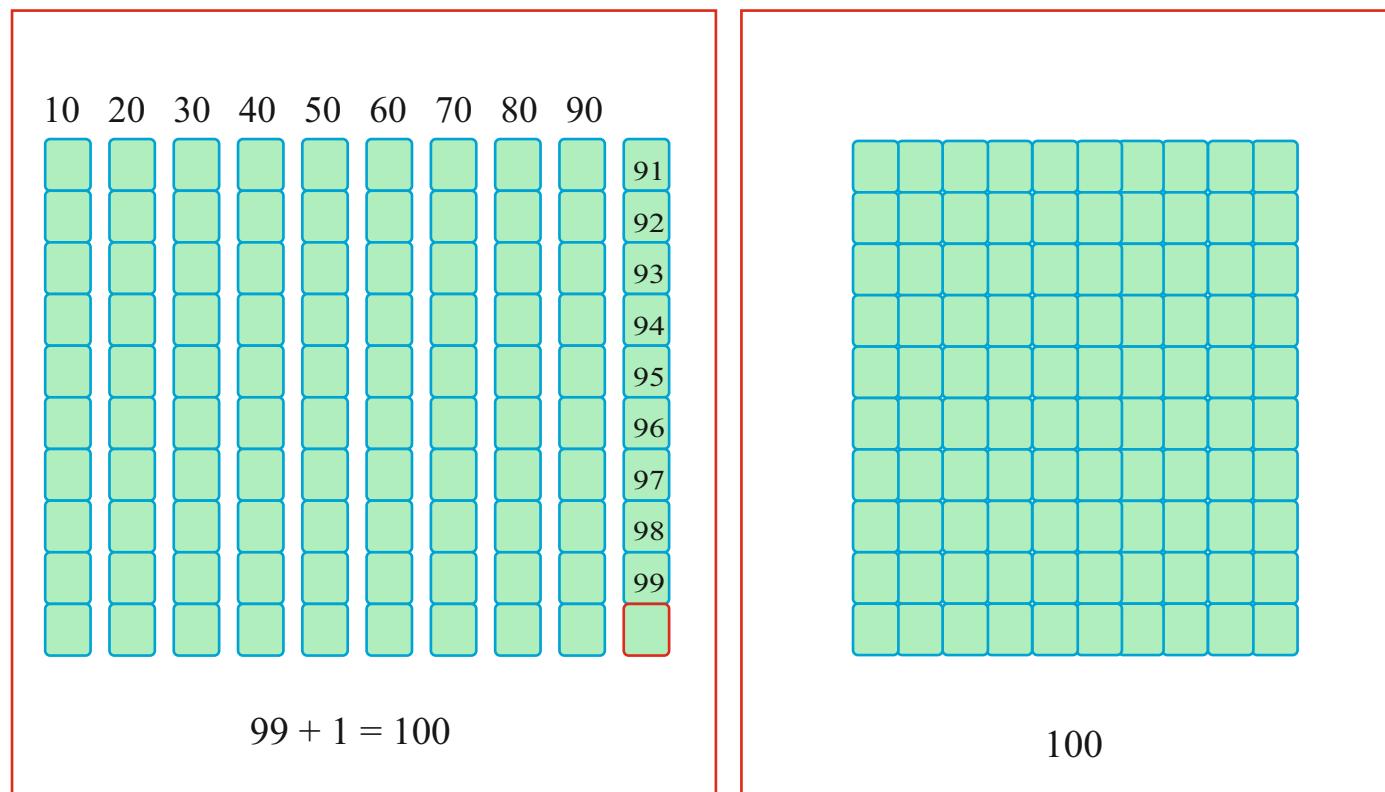
$$\text{specimen} + \text{specimen} = \text{specimen}$$

$$\begin{aligned} 90 + 9 + 1 \\ = 90 + 10 \\ = 100 \\ \text{rupees} \end{aligned}$$

2. Identify how many sticks are there in the following bundles.

Bundle of sticks (Each bundle has 10 sticks)	Number of bundles	Number of sticks
	1	10
	2	20
	3	
	7	

3. Observe the following :



4. Let us do and find.

There are ten 10 rupee notes on the teacher's table. From the bundle of ten 10 rupee notes, the teacher gave some notes at random to Ajay and remaining notes to Vijay. They counted them. Ajay got 3 ten rupee notes that is 30 rupees where as Vijay got 7 ten rupee notes that is 70 rupees. This can be written as $30+70=100$.

Now fill the following table.

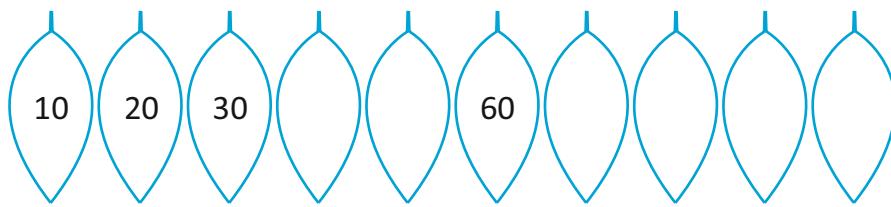
Student 1	Student 2	Total	
30	70	100	$30 + 70 = 100$
20	80	100	
40	100	
50	50	100	
.....	90	100	
80	20	100	



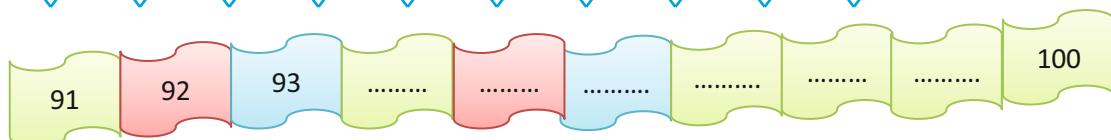
Try these :

Fill in with numbers following the patterns.

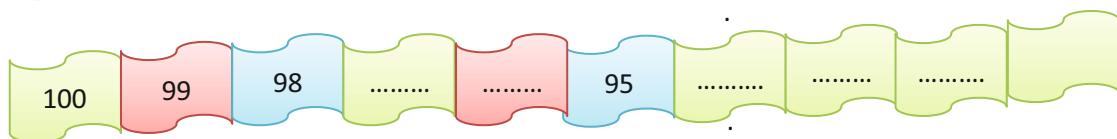
1.



2.



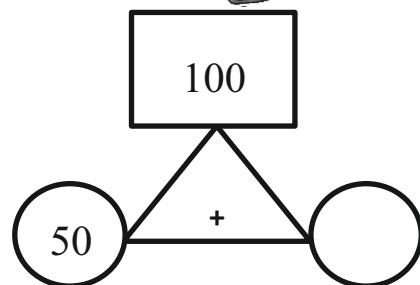
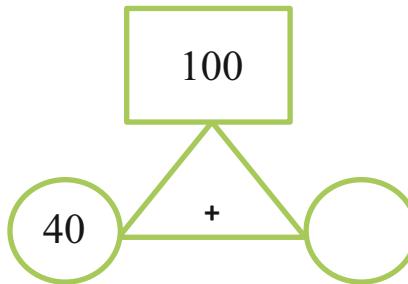
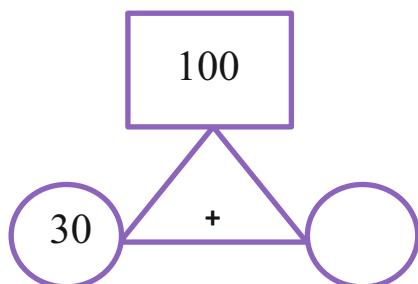
3.



4. Fill in the gaps given below.



5. Write the numbers in blank wheels to add up to hundred.



Counting in 100s

An old man was selling vegetables and betel leaves. He used to tie 100 betel leaves as one bundle and sell them. He fell ill on Sunday. As it was Sunday, his grandson Ravi wanted to help him in making betel leaf bundles.



	100	=100
	100+100	=200
	100+100+100	=300
	100+100+100+100	=400
	100+100+100+100+100	=500
	100+100+100+100+100+100	=600
	100+100+100+100+100+100+100	=700
	100+100+100+100+100+100+100+100	=800
	100+100+100+100+100+100+100+100+100	=900

Think! If we add one more 100 bundle to the above, how many leaves are there in total?

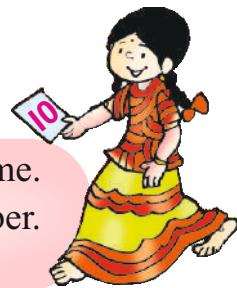
7. a) Match the following

1		500
2		600
3		900
4		100
5		400
6		200
7		800
8		300
		700

Making of 3-digit numbers:



Hey! I am the biggest single digit number.



2-digit numbers start with me.
I am the smallest 2-digit number.
But I am bigger than 9.



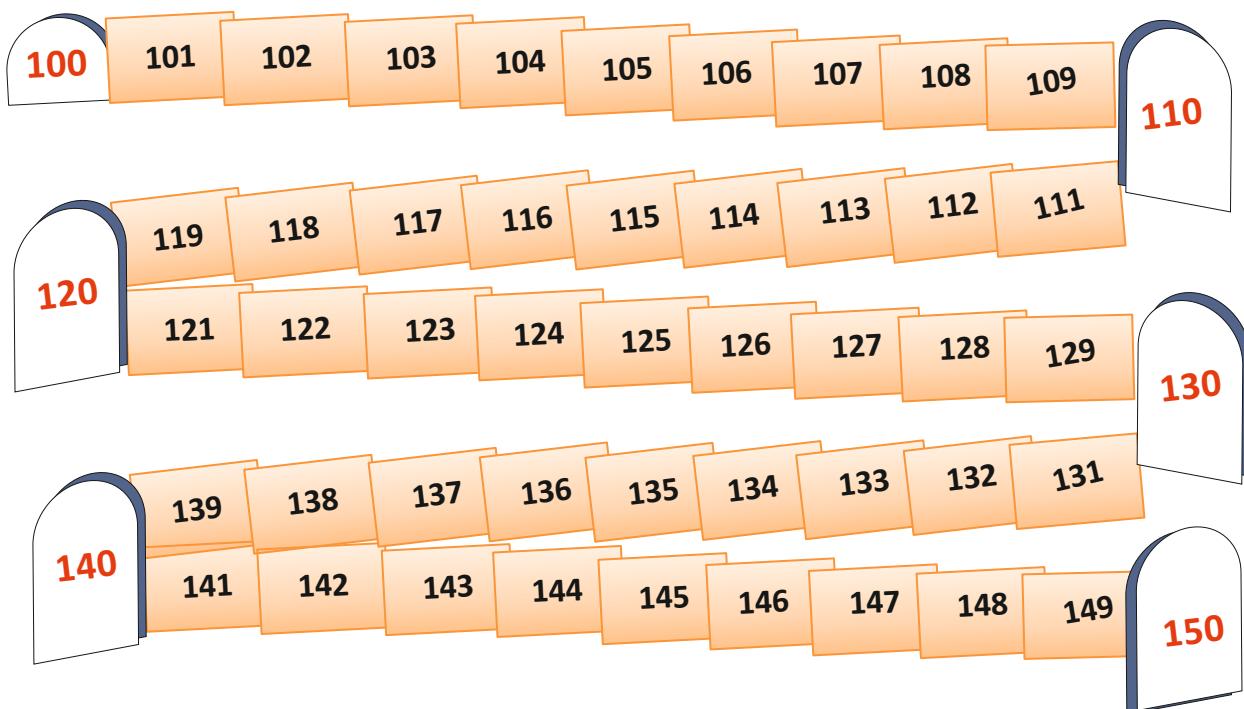
2-digit numbers end with me.
Dear friends ! I am the biggest 2-digit number.



I am 3-digit number.
I am next to ninety nine.
I am the first one in 3-digit numbers.



After 99, numbers go like this.



3 - Digit Numbers

Look at the pictures and read numbers.



$$100 + 0 + 1$$

101



$$100 + 0 + 2$$

102



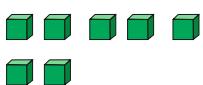
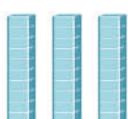
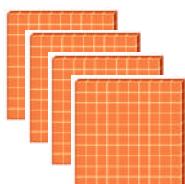
$$100 + 10 + 1$$

111



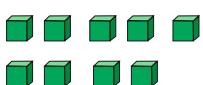
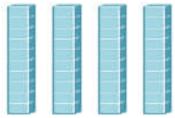
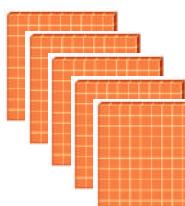
$$100 + 4 + 5$$

105



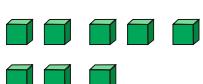
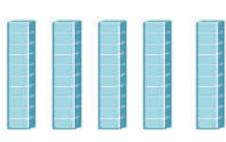
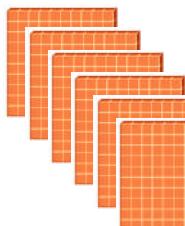
$$400 + 30 + 7$$

437



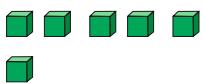
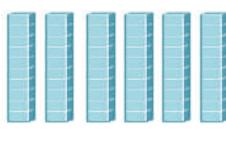
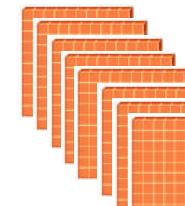
$$500 + 40 + 9$$

549



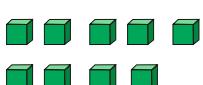
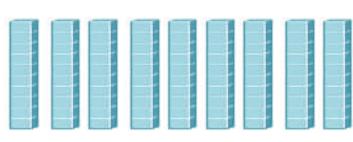
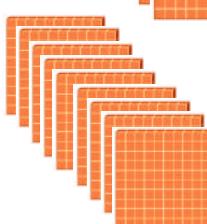
$$600 + 50 + 8$$

658



$$800 + 60 + 6$$

866



$$900 + 90 + 9$$

999

Try these :

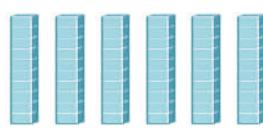
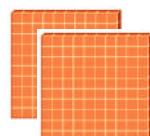
- 1) Write the numbers for the given blocks.



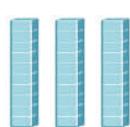
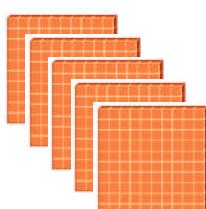
105



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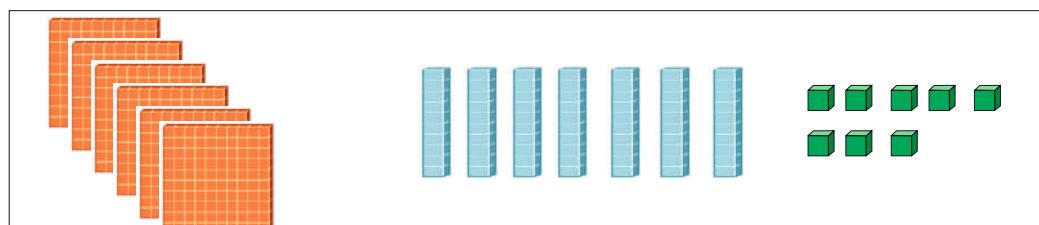


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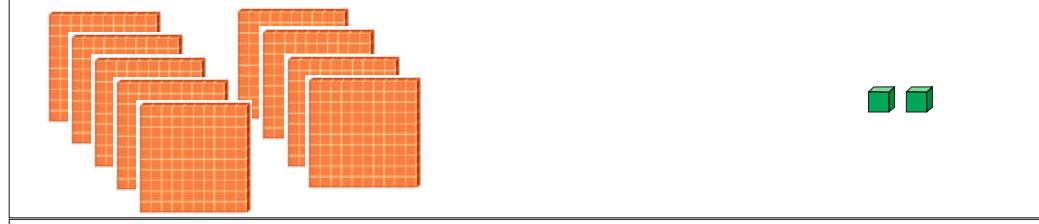


- 2) Match the following.

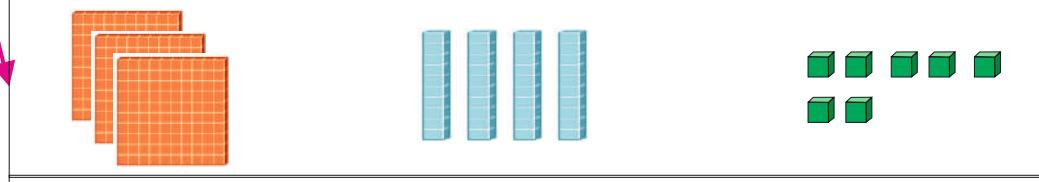
347



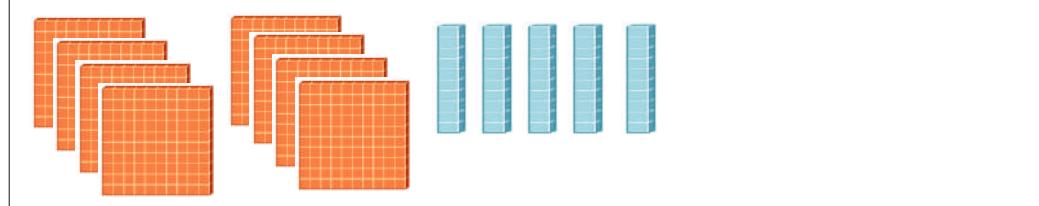
678



850



902



- 3) Read the following numbers and write them in words.

Example: 213 : Two hundred and thirteen

a. 439 : _____

b. 501 : _____

c. 880 : _____



- 4) Write numbers:

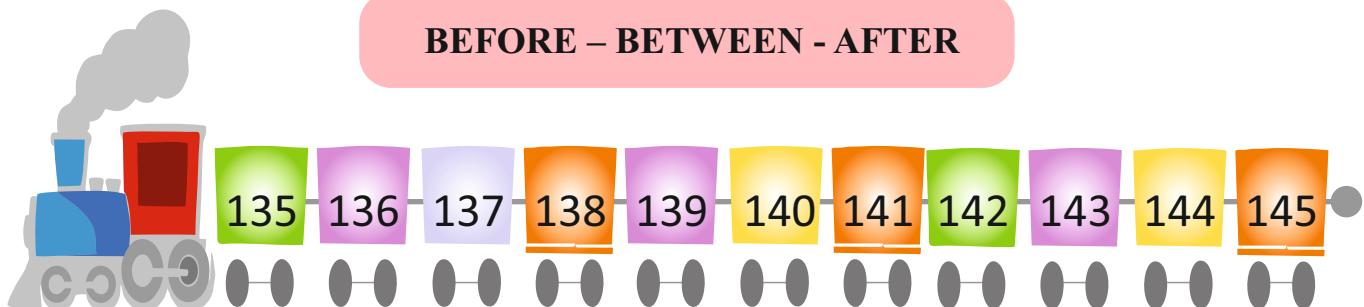
Example: One hundred and ninety six 196

a. Three hundred and forty eight : _____

b. Nine hundred and five : _____

c. Five hundred and thirty four : _____

BEFORE – BETWEEN - AFTER



1) What comes before?

2) What comes after?

136	137		
		142	
	144		

135	136		
	141		
		143	

3) What comes in between?

683		685	
687		689	

685		687	
699		701	

Place value and face value



Hai friends!
I am in 243.

H T O

2 4 3

I am at 100s place.
My place value is
2 hundreds.



Hai friends!
I am in 324.

3 2 4

I am at 10s place.
My place value is 2 tens.
My place value is = 20



Hai friends!
I am in 432.

4 3 2

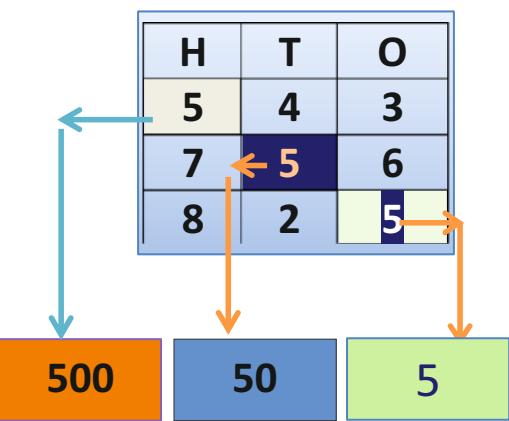
I am at 1s place.
My place value is 2 ones



In the number 543 → 5 is in hundreds place.
So, it's place value is 5 hundreds = 500

In the number 756 → 5 is in tens place.
So it's place value is 5 tens= 50

In the number 385 → 5 is in ones place.
So it's place value is 5 ones = 5



Comparison between two numbers:

Fill in the given boxes using the correct symbols ($<$, $>$, $=$)

One has been done for you.

a) 600 300

$>$

c) 600 800

$<$

e) 500 500

$=$

b) 300 100

$>$

d) 600 900

$<$

f) 200 200

$=$

Comparing numbers.

There is a tea shop in a village. Tea vendor sold 138 cups of tea in the morning and 56 in the evening.

When did he sell more cups of tea, morning or evening?

H T O

T O

1 3 8

5 6

1 0 0

5 0

138 56

138 56

Read the given table.

S. No.	Number	Number has	Greater	Lesser
1.	200	3 digits	200	45
	45	2 digits		
2.	406	3 digits	406	86
	86	2 digits		
3.	890	3 digits	890	99
	99	2 digits		

What do you observe ? _____

Try these :

1. Compare using symbols $<$ or $>$

1) 456 68

2) 76 106

3) 676 98

All the 3-digit numbers
are greater than
2- digit numbers.



2. Read the given table and write the place value and face value.

Number	426			Number	903		
Digit	4	2	6	Digit	9	0	3
Place	Hundred	tens	Ones	Place			
Place value	400			Place value			
Face Value	4			Face Value			

Let us help:

Three friends collected money separately for an Orphanage. Look at the table given below. Complete the table as shown in row (1).

	Amount collected by	Amount	Hundreds		Tens		Ones		Total
			Notes	Value	Notes	Value	Coins	Value	
1	Mustafa	356	3	₹ 300	5	₹ 50	6	₹ 6	300+50+6 = 356
2	Sarala	503							
3	Neha	472							

Who collected more amount?.....

Try these :

Writing in short form

Example:

$$300 + 60 + 7 = 367$$

a) $400 + 0 + 3 = \boxed{}$

b) $700 + 80 + 5 = \boxed{}$

Writing in expansion form:

Example:

$$723 = 700 + 20 + 3$$

a) $625 = \boxed{} + \boxed{} + \boxed{}$

b) $560 = \boxed{} + \boxed{} + \boxed{}$

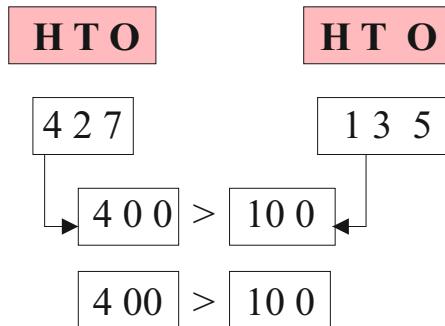


Comparing 3-digit numbers with 3-digit numbers

Example 1:

One day Ramayya collected 427 eggs from his poultry. On the same day, Rafi collected 135 eggs from his poultry. Who collected more?

$$427 \boxed{>} 135$$



427 contains 4 Hundreds.

135 contains 1 Hundred.

$$400 > 100$$

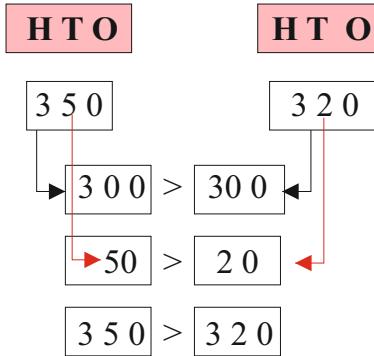
$$\text{So } 427 > 135$$

Ramayya collected more eggs than Rafi.

Example 2:

Kamala earned ₹ 350, and Maramma earned ₹ 320. Who earned more?

$$350 \boxed{>} 320$$



350 contains 3 Hundreds.

320 contains 3 Hundreds.

Here, Hundreds are equal in number.

Now, compare tens place in both numbers.

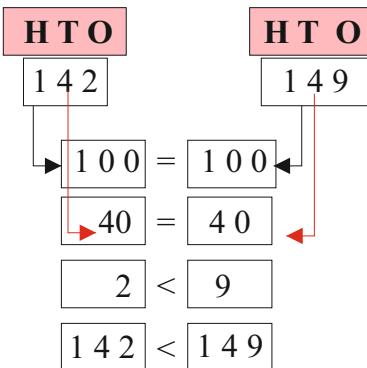
350 contains 5 tens.

320 contains 2 tens.

5 tens > 2 tens. So $350 > 320$.

Kamala earned more than Maramma.

Example 3: Compare 142 and 149



142 contains 1 hundred. 149 contains 1 hundred.

Here, hundreds are equal. Now, compare tens place in both numbers. 142 contains 4 tens. 149 contains 4 tens. Here, tens are equal. Now, compare ones places in both the numbers. 142 contains 2 ones.

149 contains 9 ones. 2 ones < 9 ones

So, $142 < 149$

Try these :

1. Fill in the boxes with appropriate symbol.
($<$, $>$, $=$)
2. Write any two 3 digit numbers in the boxes to make it true.

a) 376 66

b) 388 375

c) 705 701

a) 265 $>$

b) 654 $<$

c) 734 $=$

- 3) Arrange the numbers in ascending and descending order:

a) 100, 500, 300

Ascending order:

Descending order:

b) 532, 586, 549

Ascending order:

Descending order:

- 4) Find out which group of hundreds, the given numbers belong to.

Number	Circle the 100's pair		
	100-200	200-300	300-400
123	100-200	200-300	300-400
156	100-200	200-300	300-400
235	100-200	200-300	300-400
476	500-600	300-400	400-500
803	600-700	700-800	800-900

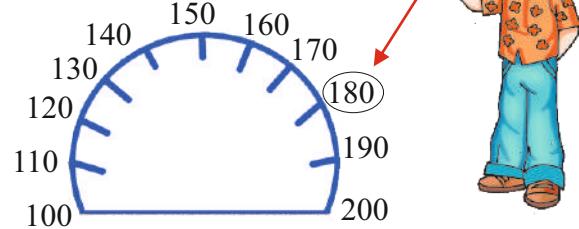
Which side does the ball role?

Rounding numbers to nearest hundred.

Round off 180 to its nearest hundred. Observe the picture.

Ball is at 180. Does it roll to 100 or 200?

So , if we want to round off 180 to its nearest hundred, it will be 200.



Try these :

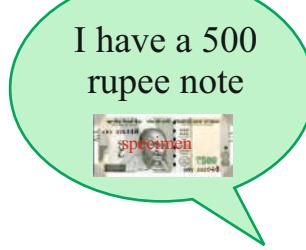
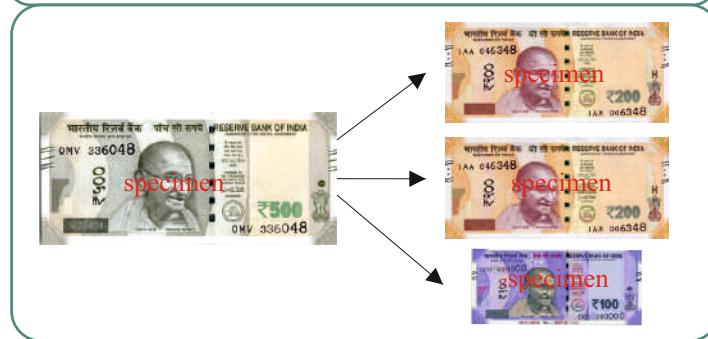
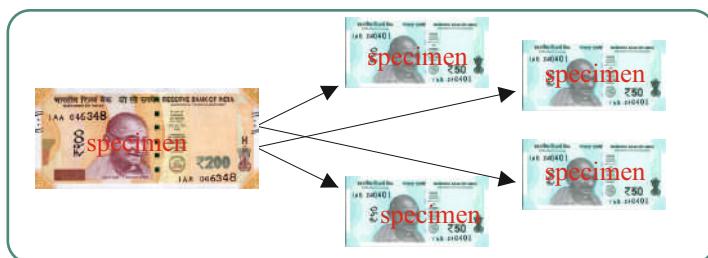
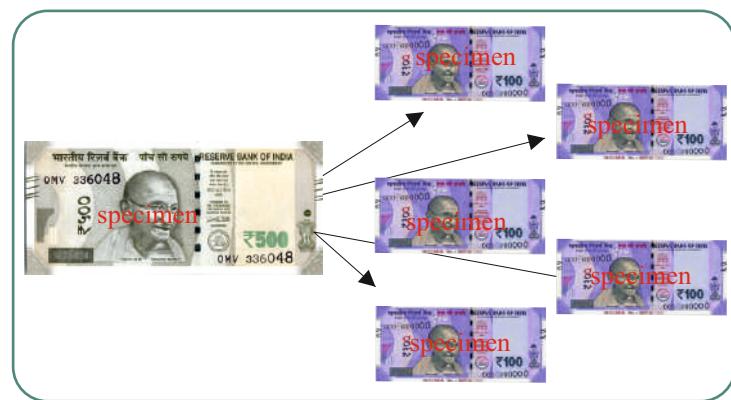
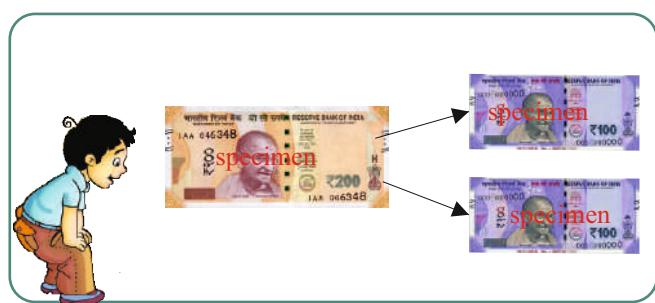
- 1) Round to the nearest hundreds.

Number	Circle the nearest 100	
123	100	200
156	100	200
235	200	300
476	400	500

- 2) Make 2-digit numbers using the given digits.

- a) 2, 1, 5 __, __, __, __, __, __,
 b) 3, 7, 4 __, __, __, __, __, __,

Tender change:



Try these :

Fill the price tags for these things using notes given.



Math lab activity

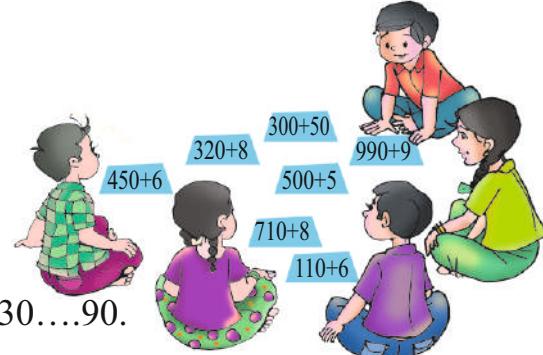
Objective : To build and read 3- digit numbers.

Material : One complete set of 9 strips with 3- digit number cards like

100, 200, 300, 900.

9 strips with 2- digit numbers like 10,20,30....90.

9 strips with 1- digit numbers like 1,2,3....9.



Steps to form the number 458

- One student picks a hundreds card with 400 written on it.
- The second student picks a tens card with 50 written on it and places it over the hundred card (400) as shown.
- The third student then, picks a ones card with 8 written on it and places it over the tens card as shown.
- The team members then, read the number aloud that has been made.
- The sets can be exchanged for the next round. Record the activity.

4 0 0

4 5 0

4 5 8

Try out : Form the numbers 689, 235 and 306.

How many Times ?



CHAPTER
5

Suri went to a vendor to buy coconuts for a function. He asked the vendor to give 8 coconuts. The vendor gave him 2 coconuts at a time for four times.

Number of coconuts taken by Suri

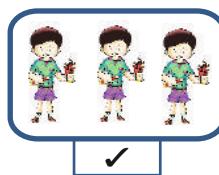
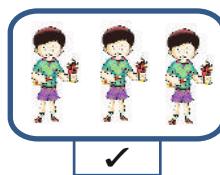
$$\begin{aligned} &= 2 + 2 + 2 + 2 \\ &= 2 \text{ added 4 times repeatedly} \\ &\text{Four twos are eight (8)} \end{aligned}$$



Identify the equal groups.

Put a tick mark (✓) for equal groups under their boxes. One is done for you.

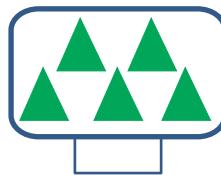
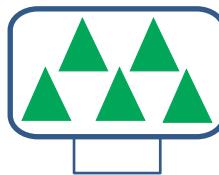
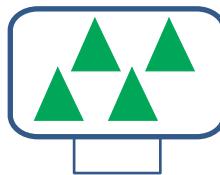
1)



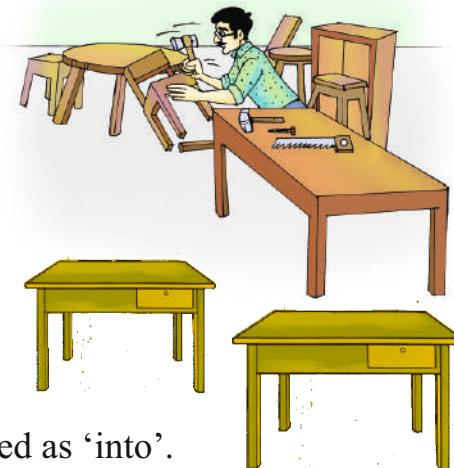
2)



3)



Butchaiah is a carpenter. He makes furniture with wood. He wants to make 2 tables with 4 legs each. Then, what is the total number of legs to be made?



Let us count...

$$4 \text{ legs} + 4 \text{ legs} = 8 \text{ legs.}$$

Here 4 is counted in 2 groups.

We can write it as $2 \times 4 = 8$.

Read as 2 fours are 8.

Here 'x' is a symbol of multiplication and pronounced as 'into'.

Repeated addition is called '**MULTIPLICATION**'.

Try these

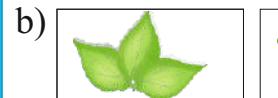
- 1) Observe the following pictures. Fill in the blanks correctly.



$$\boxed{2 \text{ eyes}} + \boxed{2 \text{ eyes}} + \boxed{2 \text{ eyes}}$$

$$\boxed{2} + \boxed{2} + \boxed{2}$$

$$\boxed{3 \times 2 = 6}$$



$$\dots \dots \text{leaves} + \dots \dots \text{leaves} + \dots \dots \text{leaves}$$

$$\boxed{} + \boxed{} + \boxed{}$$

$$\boxed{}$$

2. Shade the number as per multiplication fact. First two are done for you.

2×3	=	3	+	3	+	3	+	3	+	3	+	3
3×4	=	4	+	4	+	4	+	4	+	4	+	4
1×5	=	5	+	5	+	5	+	5	+	5	+	5
4×2	=	2	+	2	+	2	+	2	+	2	+	2
3×5	=	5	+	5	+	5	+	5	+	5	+	5

Multiplication Tables: 1 , 2, 10, 5, 3 and 4

➤ Let us count the dolls in each group and write in the form of repeated addition.

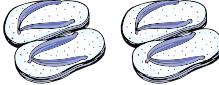
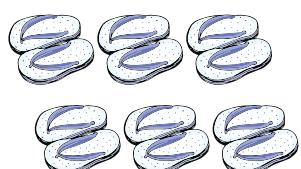
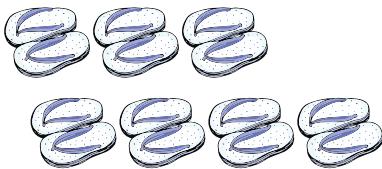
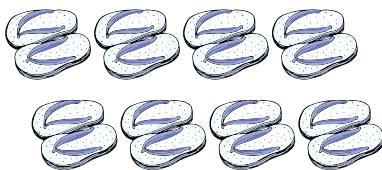
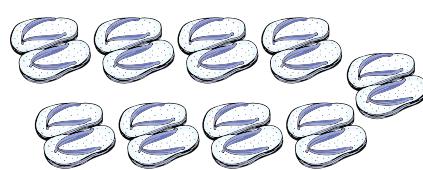
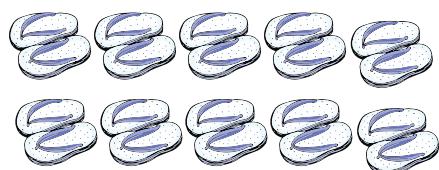
We will get the multiplication table.

Multiplication Table for 1

Number of Teddy Bears	Addition form	Multiplicatin form	Table form
	1	$1 \times 1 = 1$	$1 \times 1 = 1$
	$1+1$	$2 \times 1 = 2$	$1 \times 2 = 2$
	$1+1+1$	$3 \times 1 = 3$	$1 \times 3 = 3$
	$1+1+1+1$	$4 \times 1 = 4$	$1 \times 4 = 4$
	$1+1+1+1+1$	$5 \times 1 = 5$	$1 \times 5 = 5$
	$1+1+1+1+1+1$	$6 \times 1 = 6$	$1 \times 6 = 6$
	$1+1+1+1+1+1+1$	$7 \times 1 = 7$	$1 \times 7 = 7$
	$1+1+1+1+1+1+1+1$	$8 \times 1 = 8$	$1 \times 8 = 8$
	$1+1+1+1+1+1+1+1+1$	$9 \times 1 = 9$	$1 \times 9 = 9$
	$1+1+1+1+1+1+1+1+1+1$	$10 \times 1 = 10$	$1 \times 10 = 10$

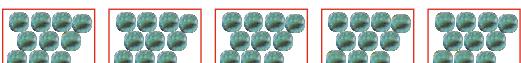
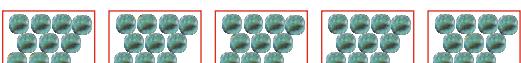
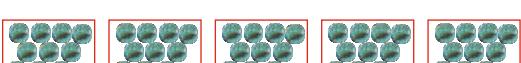
Let us count the chappals in each group and write in the form of repeated addition.

Multiplication Table for 2

Number of Chappals	Addition form	Multiplication form	Table form
	2	$1 \times 2 = 2$	$2 \times 1 = 2$
	2+2	$2 \times 2 = 4$	$2 \times 2 = 4$
	2+2+2	$3 \times 2 = 6$	$2 \times 3 = 6$
	2+2+2+2	$4 \times 2 = 8$	$2 \times 4 = 8$
	2+2+2+2+2	$5 \times 2 = 10$	$2 \times 5 = 10$
	2+2+2+2 +2+2	$6 \times 2 = 12$	$2 \times 6 = 12$
	2+2+2+2 +2+2+2	$7 \times 2 = 14$	$2 \times 7 = 14$
	2+2+2+2+ 2+2+2+2	$8 \times 2 = 16$	$2 \times 8 = 16$
	2+2+2+2+ 2+2+2+2+2	$9 \times 2 = 18$	$2 \times 9 = 18$
	2+2+2+2+ 2+2+2+2+2	$10 \times 2 = 20$	$2 \times 10 = 20$

Let us count marbles.

Multiplication Table for 10

Packets of Marbles	Addition form	Multiplication form	Table form
	10	$1 \times 10 = 10$	$10 \times 1 = 10$
	$10+10$	$2 \times 10 = 20$	$10 \times 2 = 20$
	$10+10+10$	$3 \times 10 = 30$	$10 \times 3 = 30$
	$10+10+10+10$	$4 \times 10 = 40$	$10 \times 4 = 40$
	$10+10+10+10+10$	$5 \times 10 = 50$	$10 \times 5 = 50$
	$10+10+10+10+10+10$	$6 \times 10 = 60$	$10 \times 6 = 60$
	$10+10+10+10+10+10+10$	$7 \times 10 = 70$	$10 \times 7 = 70$
	$10+10+10+10+10+10+10+10$	$8 \times 10 = 80$	$10 \times 8 = 80$
	$10+10+10+10+10+10+10+10+10$	$9 \times 10 = 90$	$10 \times 9 = 90$
	$10+10+10+10+10+10+10+10+10+10$	$10 \times 10 = 100$	$10 \times 10 = 100$

Fill in the blanks.

a) $1 \times 2 = \dots$

b) $1 \times 4 = \dots$

c) $1 \times 5 = \dots$

d) $1 \times 3 = \dots$

Wow! Any number multiplied with 1 gives the same number.



Reading of Table 2

$2 \times 1 = 2$

$2 \times 2 = 4$

$2 \times 3 = 6$

$2 \times 4 = 8$

$2 \times 5 = 10$

$2 \times 6 = 12$

$2 \times 7 = 14$

$2 \times 8 = 16$

$2 \times 9 = 18$

$2 \times 10 = 20$

2 ones are 2

2 twos are 4

2 threes are 6

2 fours are 8

2 fives are 10

2 sixes are 12

2 sevens are 14

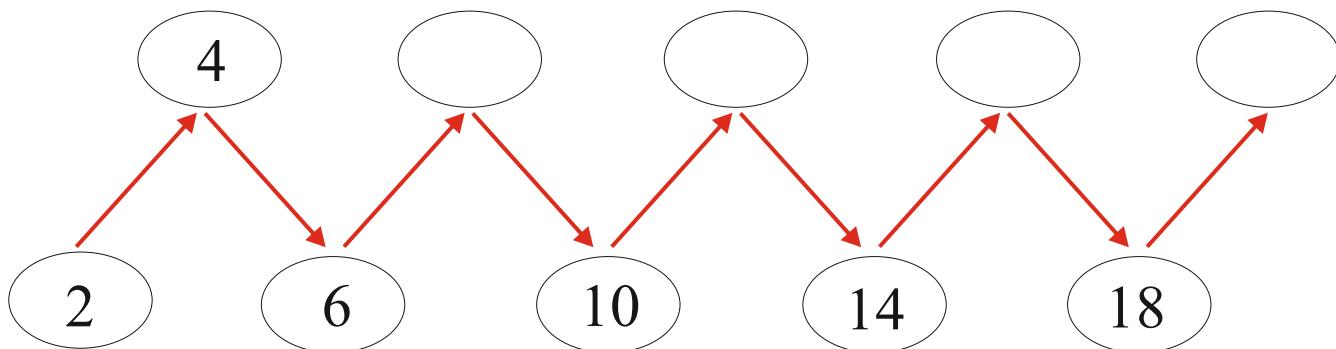
2 eights are 16

2 nines are 18

2 tens are 20



- Fill in the blanks by adding '2' to build the table for 2.



- Now we count the number of lines. And write in the form of repeated addition.
We get the multiplication for table 5.



Multiplication Table for 5

Number of lines	Addition form	Multiplication form	Table form
	5	$1 \times 5 = 5$	$5 \times 1 = 5$
	5+5	$2 \times 5 = 10$	$5 \times 2 = 10$
	5+5+5	$3 \times 5 = 15$	$5 \times 3 = 15$
	5+5+5+5	$4 \times 5 = 20$	$5 \times 4 = 20$
	5+5+5+5+5	$5 \times 5 = 25$	$5 \times 5 = 25$
 	5+5+5+5+5+5	$6 \times 5 = 30$	$5 \times 6 = 30$
 	5+5+5+5+5+5+5	$7 \times 5 = 35$	$5 \times 7 = 35$
 	5+5+5+5+5+5+5+5	$8 \times 5 = 40$	$5 \times 8 = 40$
 	5+5+5+5+5+5+5+5+5	$9 \times 5 = 45$	$5 \times 9 = 45$
 	5+5+5+5+5+5+5+5+5+5	$10 \times 5 = 50$	$5 \times 10 = 50$

Let us count the wheels of autos.

Multiplication Table for 3

Number of wheels in autos	Addition form	Multiplication form	Table form
	3	$1 \times 3 = 3$	$3 \times 1 = 3$
	3+3	$2 \times 3 = 6$	$3 \times 2 = 6$
	3+3+3	$3 \times 3 = 9$	$3 \times 3 = 9$
	3+3+3+3	$4 \times 3 = 12$	$3 \times 4 = 12$
	3+3+3+3+3	$5 \times 3 = 15$	$3 \times 5 = 15$
	3+3+3+3+3+3	$6 \times 3 = 18$	$3 \times 6 = 18$
	3+3+3+3+3+3+3	$7 \times 3 = 21$	$3 \times 7 = 21$
	3+3+3+3+3+3+3+3	$8 \times 3 = 24$	$3 \times 8 = 24$
	3+3+3+3+3+3+3+3+3	$9 \times 3 = 27$	$3 \times 9 = 27$
	3+3+3+3+3+3+3+3+3+3	$10 \times 3 = 30$	$3 \times 10 = 30$

➤ Let us count the legs of cows.

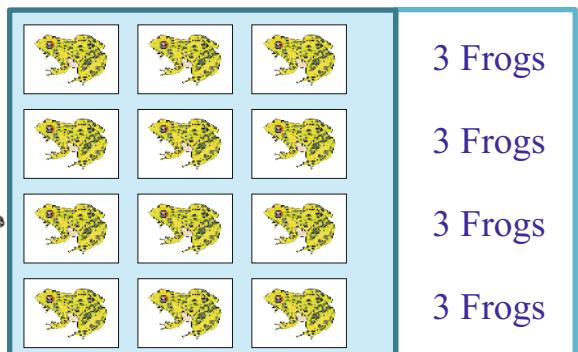
Multiplication Table for 4

Number of legs of cow	Addition form	Multiplication form	Table form
	4	$1 \times 4 = 4$	$4 \times 1 = 4$
	$4 + 4$	$2 \times 4 = 8$	$4 \times 2 = 8$
	$4 + 4 + 4$	$3 \times 4 = 12$	$4 \times 3 = 12$
	$4 + 4 + 4 + 4$	$4 \times 4 = 16$	$4 \times 4 = 16$
	$4 + 4 + 4 + 4 + 4$	$5 \times 4 = 20$	$4 \times 5 = 20$
 	$4 + 4 + 4 + 4 + 4 + 4$	$6 \times 4 = 24$	$4 \times 6 = 24$
 	$4 + 4 + 4 + 4 + 4 + 4 + 4$	$7 \times 4 = 28$	$4 \times 7 = 28$
 	$4 + 4 + 4 + 4 + 4 + 4 + 4 + 4$	$8 \times 4 = 32$	$4 \times 8 = 32$
 	$4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4$	$9 \times 4 = 36$	$4 \times 9 = 36$
 	$4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4$	$10 \times 4 = 40$	$4 \times 10 = 40$

Observe the following pictures:



Multiplication form : $3 \times 4 = 12$ frogs



Multiplication form : $4 \times 3 = 12$ frogs



The result of
 3×4 is equal
to 4×3 .

What do you observe from the
above pictures?



Fill the boxes with the help of adjacent table grids.

First one has been done for you.

$$1. \quad \boxed{2} \ x \ \boxed{3} = \boxed{3} \ x \ \boxed{2} = \boxed{6}$$

$$2. \quad \boxed{1} \ x \ \boxed{2} = \boxed{2} \ x \ \boxed{1} =$$

$$3. \quad \boxed{2} \ x \ \boxed{4} = \boxed{4} \ x \ \boxed{2} =$$

$$4. \quad \boxed{2} \ x \ \boxed{5} = \boxed{\quad} \ x \ \boxed{2} =$$

$$5. \quad \boxed{3} \ x \ \boxed{1} = \boxed{1} \ x \ \boxed{3} =$$

$$6. \quad \boxed{4} \ x \ \boxed{1} = \boxed{1} \ x \ \boxed{\quad} =$$

$$7. \quad \boxed{4} \ x \ \boxed{5} = \boxed{\quad} \ x \ \boxed{4} =$$

5 x 5 Table grid

x	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25



We can multiply the given numbers in any order.



Multiplying with Zero

Dheeraj went for fishing. He tried catching fish using the fishing hook in the water. He repeated a number of times. He tried it once and did not catch any fish. He tried four more times. But could not catch any fish.

Let us calculate how many fish he caught.

Repeated addition:

$$0 + 0 + 0 + 0 + 0 = 0$$

Multiplication form is $5 \times 0 = 0$



Example:

$$1 \times 0 = 0$$

$$2 \times 0 = 0$$

Try these:

1) Do the following:

a) $3 \times 0 = \boxed{}$

b) $4 \times 0 = \boxed{}$

c) $5 \times 0 = \boxed{}$

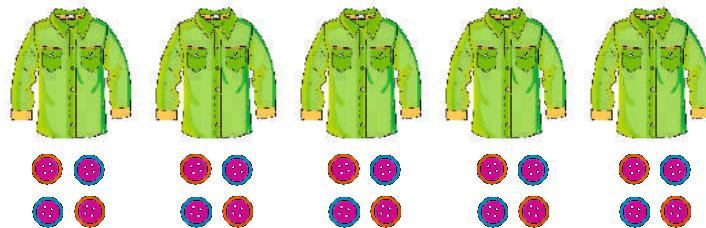
d) $6 \times 0 = \boxed{}$

e) $7 \times 0 = \boxed{}$

f) $8 \times 0 = \boxed{}$

2) Dharma Rao wants to stitch 5 shirts. He wants 4 buttons for one shirt.

How many buttons will be needed?



Number of shirts = 5

Number of buttons for a shirt =

Total buttons needed = 5×4

=

2. On an evening, 3 families visited a park. There were 3 members in each family. Find the total number of members who visited the park.

Number of families	=	3
Members in each family	=
Total members in all	=



Multiplication in daily life.

Example:

- Rahim went to a shop with his father to buy some items of stationery. He took 3 note books, 4 pencils, 5 ice creams, and 2 pens.

Let us find how much money is spent by his father on each item.

Money spent on each item is as follows.



$$3 \times 5 = ₹ 15$$



$$4 \times 2 = ₹ 8$$



$$5 \times 3 = ₹ 15$$



$$2 \times 5 = ₹ 10$$



Multiplication of 2- digit number with 1- digit number:

A school bus has 2 seats in each row. There are 12 rows.

Find the number of seats in the bus.

Let us multiply 12 by 2.

Step 1: Arrange the numbers in column form
as shown.

T	O
1	2
x	2

Step 2: Multiply the ones.

$$2 \text{ ones} \times 2 = 4 \text{ ones}$$

Write 4 under the column ‘ones’.

T	O
1	2
x	2
	4



Step 3: Multiply the tens.

$$1 \text{ tens} \times 2 = 2 \text{ tens}$$

Write the 2 under ‘tens column’.

So, our answer is 24.

T	O
1	2
x	2
2	4



Try these

a)

T	O
1	2
x	3

b)

T	O
1	1
x	5

c)

T	O
1	3
x	1

d)

In a school, children planted saplings in 3 rows.

There are 13 plants in each row.

Find the total number of plants.

T	O
1	3
x	3



More Multiplications (with carrying)

Example:

How ?
15 x 3

An almirah has 3 shelves. 15 books are kept in each shelf. How many books are there in the almirah? We need multiplication of 15 by 3.



Let us multiply 15 by 3.

Step 1: Arrange the numbers in column as shown.

Step 2: Multiply the ones.

$$5 \text{ ones} \times 3 = 15 \text{ ones}$$

$$= 1 \text{ ten} + 5 \text{ ones.}$$

Write 5 under the column ones.

And carry over 1 to the tens column.

T	O
1	5
x	3

T	O
1	
1	5
x	3
	5

T	O
1	
1	5
x	3
4	5

Step 3: Multiply the tens.

$$1 \text{ tens} \times 3 = 3 \text{ tens}$$

$$= 3 \text{ tens} + 1 \text{ ten (carried over)} = 4 \text{ tens.}$$

Try these

T	O
1	6
x	2

T	O
1	8
x	3

T	O
1	3
x	5



- 4) There are 12 candles in a packet.
 Find the total number of candles in 6 packets.
 Number of candles in one packet =
 Number of packets =
 Total number of candles in 6 packets =

T	O
○	
1	2
X	6

Math Lab Activity

Objective : Understand multiplication.

Material required : To demonstrate on understanding of multiplication.

Egg trays (available in every school) Marbles, several multiplication cards 15 cards) without answers.



$$2 \times 5$$

$$3 \times 4$$

$$3 \times 2$$

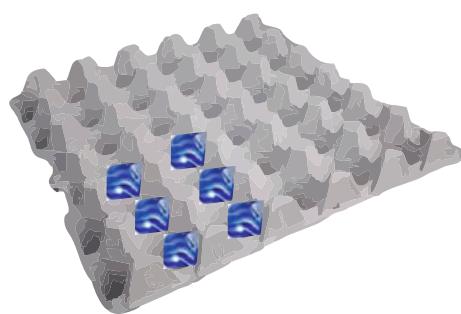
Preparation:

Students may work independently or in pairs with one egg tray and marbles.



Steps:

- One student picks up a card and say 3×2 .
- The other student demonstrates the multiplication on the egg tray as shown and says 3 groups of 2 marbles each.
- The first student, then, calls out and records the answer.
- The students repeat the activity with other cards.



$$3 \times 2$$

Exercise

1. Fill in the boxes.



$$= \boxed{} + \boxed{} + \boxed{} + \boxed{} = \boxed{}$$

$$= \boxed{} \text{ twos} = \boxed{}$$

2. Find the multiplication fact as repeated addition.

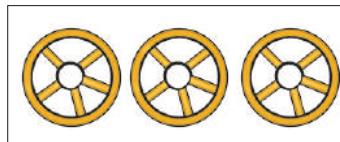
a. $4 \times 5 = 5 + 5 + 5 + 5 = \dots\dots$

b. $3 \times 4 = \dots\dots\dots\dots\dots\dots\dots = 12$

c. $\boxed{} \times 2 = 2 + 2 + 2 + 2 + 2 = \dots\dots$

3. There are 3 wheels. 1 wheel has 5 spokes.
How many spokes are there?

$$3 \times 5 = \boxed{}$$



4. Do the multiplication.

$$\begin{array}{r} 11 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ \times 3 \\ \hline \end{array}$$



5. Solve the problems.

a. There are 4 baskets. Each basket has 5 mangoes. How many mangoes are there in all?

Number of baskets =

Mangoes in each basket =

Total mangoes = \times =



b. Ramanamma made 3 garlands. She used 14 flowers for each garland.
Find the flowers she had used.

Garlands =

Flowers in each garland =

Total flowers = \times =



Share It



CHAPTER 6

Let us play a game.

Teacher: Form 3 children as a group.

Children: Madam, Rani is alone. So, she is out.

Teacher: How many groups are formed?

Children: Three groups are formed, Madam.

Teacher: Now form 4 children as a group.

Children: Madam, Vani is out.

Teacher: How many groups are formed?

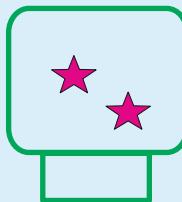
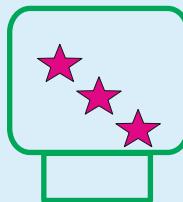
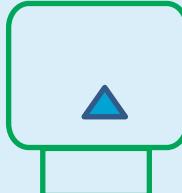
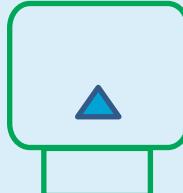
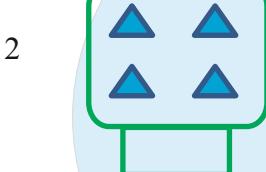
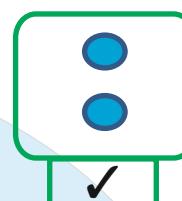
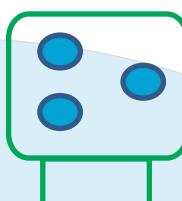
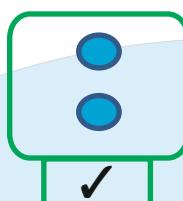
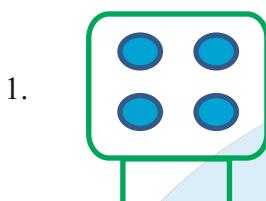
Children: Two groups are formed.



Note: According to the strength, the teacher should decide the group number and play with them.

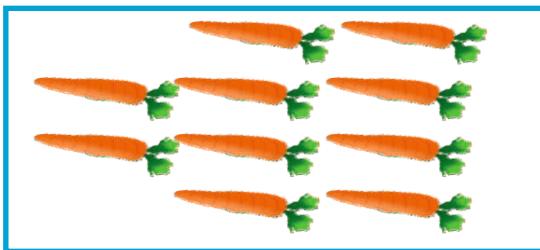
Do these :

a) Some objects are given in the pictures below. Put a tick mark on the equal number of objects in each case.

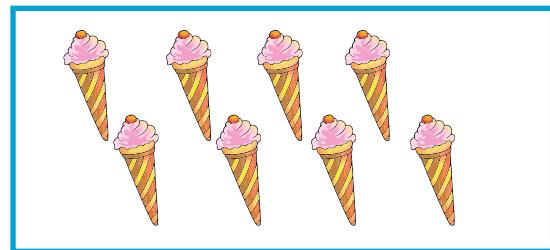


Make the objects in equal groups.

1. Make the objects into 5 equal groups.



2. Make the objects into 2 equal groups



Rama and her friends:

Rama has 12 mangoes. She wants to distribute those to her three friends equally.

Now observe the way how Rama is distributing the mangoes.

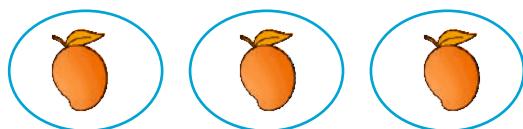
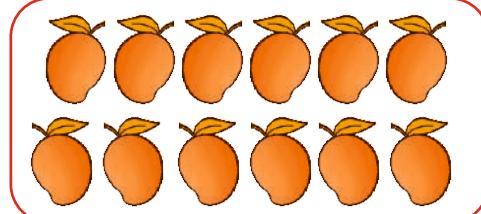


Process of distribution to her three friends

Total no. of mangoes to be distributed = 12

No. of pupils to be distributed = 3

First distribute one for each friend.



Remaining 9



Now for second time, distribute one for each friend.



Remaining 6



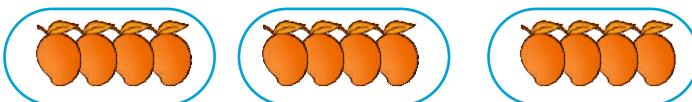
Now for third time, distribute another one for each friend.



Remaining 3



Now for fourth time, distribute another one for each friend.



Remaining 0



Total no. of mangoes

= 12

No. of pupils to be distributed

= 3

No. of times distributed equally

= 4

No. of mangoes each got

= 4



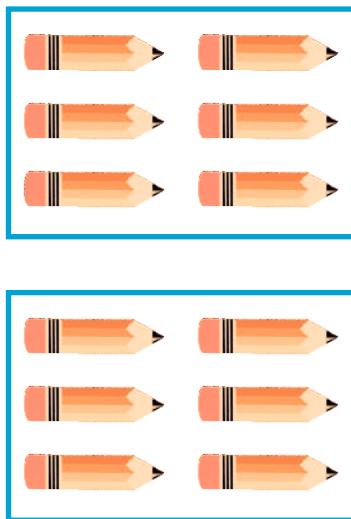
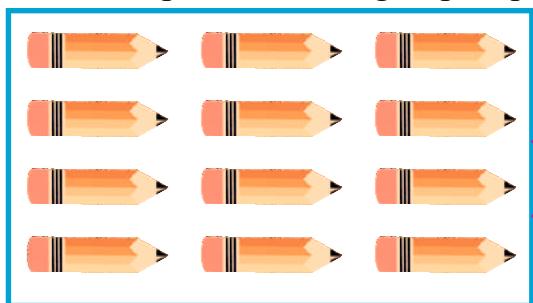
Division form

$$12 \div 3 = 4$$

\div is the symbol of division. It is read as divided by.

Example:

Divide 12 pencils into 2 groups equally.

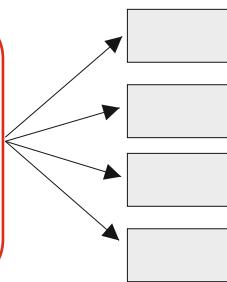


$$\text{Division form} = \boxed{12} \div \boxed{2} = \boxed{6}$$



Try these

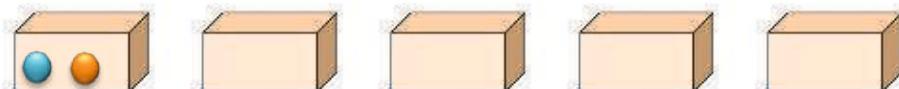
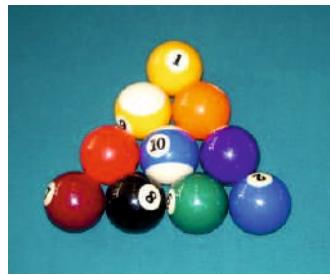
a)



Division form

$$\boxed{\quad} \div \boxed{\quad} = \boxed{\quad}$$

b) Draw the balls on each box with equal distribution.



If 10 balls are kept in 5 boxes equally, each box will have



The division form for this is \div =



Division by doing subtraction:

Rani is going to distribute 8 beads to her 2 friends.

Observe the way of distribution:

$$\text{Total number of beads with Rani} = 8$$

$$\text{Number of beads distributed first} = -2$$



$$\text{Remaining beads} = 6$$

$$\text{Number of beads distributed second time} = -2$$



$$\text{Remaining beads} = 4$$

$$\text{Number of beads distributed 3rd time} = -2$$



$$\text{Remaining beads} = 2$$

$$\text{Number of beads distributed 4th time} = -2$$



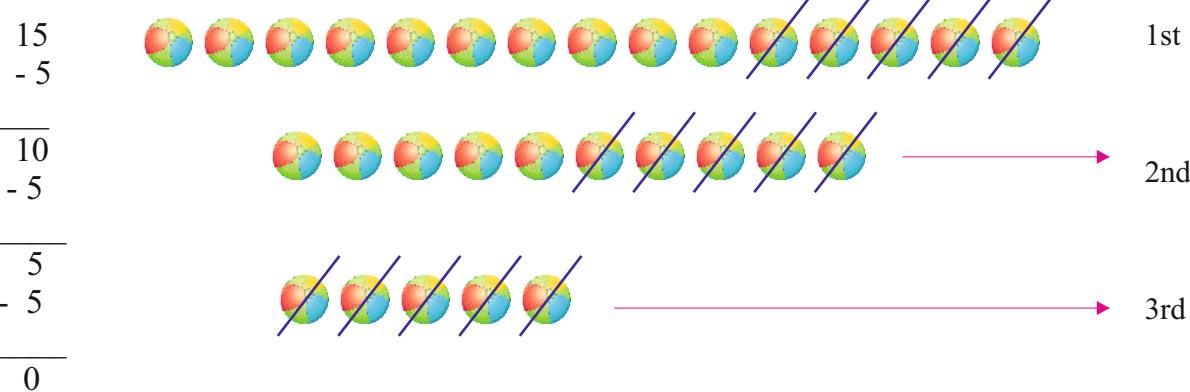
$$\text{Remaining beads} = 0$$

$$\text{Division form is } \boxed{\quad} \div \boxed{\quad} = \boxed{\quad}$$

Distribute 1 bead to each person at a time. Then, 2 beads are removed from the remaining. Here 2 is subtracted 4 times from 8. So, it is called repeated subtraction. It is also known as division.

Do repeated subtraction and write division form.

1. Latha packed 15 balls equally in 5 packets. Find the balls in each packet.



$$\text{Division form } \boxed{\quad} \div \boxed{\quad} = \boxed{\quad}$$

$$\text{Number of balls in each packet} = \boxed{\quad}$$

Try these

Rama distributed 9 biscuits equally among his 3 friends.

Find how many biscuits each friend will get ?

$$\begin{array}{r} 9 \\ - \boxed{} \\ \hline - \boxed{} \\ - \boxed{} \\ - \boxed{} \\ \hline \end{array}$$

Division form

$$\boxed{} \div \boxed{} = \boxed{}$$



Share it! (Division regular form)

If 6 balls are kept in 2 boxes equally,
how many balls will be there in each box?

It can be done in another way:

Step 1: Write the total number of balls as shown on the right side.

Step 2: Write the number of boxes as shown on the right side.

Step 3: Now write down the 2nd table.

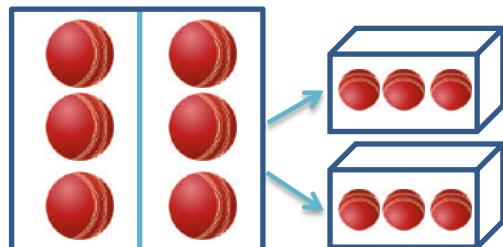
Identify 6 as the result in the 2nd table.

Step 4: 2 times of 3 is 6.

So, place 3 and 6 as shown on the right side.

Step 5: Now subtract 6 from 6 and write the remaining as shown on the right side.

Division form for this is $6 \div 2 = 3$



) 6 (

2) 6 (

$$6 \div 2 = 3$$

$$2 \times 1 = 2$$

$$2 \times 2 = 4$$

$$\boxed{2 \times 3 = 6}$$

$$2 \times 4 = 8$$

$$2 \times 5 = 10$$

$$2 \times 6 = 12$$

$$2 \times 7 = 14$$

$$2 \times 8 = 16$$

$$2 \times 9 = 18$$

$$2 \times 10 = 20$$

2) 6 (3

6
—

2) 6 (3

- 6
—
0

In this division form

6 means total number of balls



2 means number of boxes.



3 means number of balls kept in each box.



$$\boxed{\text{Total balls}} \div \boxed{\text{number of boxes}} = \boxed{\text{number of balls in each box.}}$$

Try these

Mahi shared 15 biscuits among 3 friends. How many will each get?

Sol: Total biscuits = 1 5

Number of friends = 3

Number of biscuits each will get =

Sol: 3) 15 (
-
.....



$3 \times 1 =$	3
$3 \times 2 =$	6
$3 \times 3 =$	9
$3 \times 4 =$	12
$3 \times 5 =$	15
$3 \times 6 =$	18
$3 \times 7 =$	21
$3 \times 8 =$	24
$3 \times 9 =$	27
$3 \times 10 =$	30

Division form for this is = \div =

Project work:

Surya distributed 12 guavas each time equally among different number of pupils given below. Then how many fruits each pupil will get?

Total number of Guavas	Number of pupils	Guavas got
12	2	
12	3	
12	4	
12	6	
12	12	

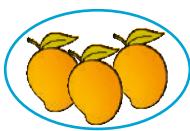


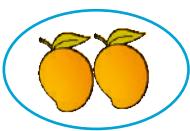
What do you observe?.....

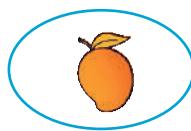
Exercise

1. Identify the groups having equal number of mangoes and put a tick (\checkmark) against them.



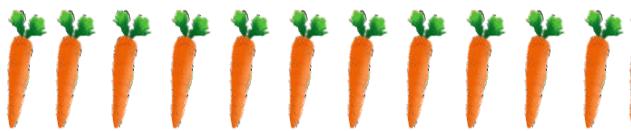






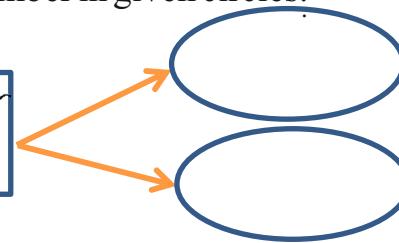
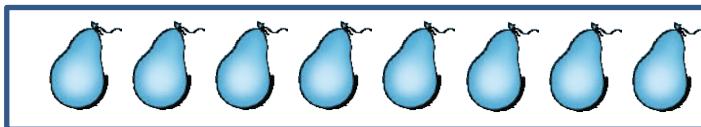


2. Share 15 carrots among 3 rabbits.



..... carrots for each rabbit.

3. Distribute the balloons equally and write the number in given circles.



4.



6 divided by 2 equals

$$6 \div 2 =$$



10 divided by 5 equals

$$10 \div 5 =$$



12 divided by 3 equals

$$12 \div 3 =$$

- 5 . Do the following divisions.

a) $8 \div 2 =$

6. Match the following.

b) $9 \div 3 =$

a)

b)

7. Fill in the blanks with suitable numbers.

a) \div = 2

b) \div = 9

Shapes around Us



CHAPTER
7

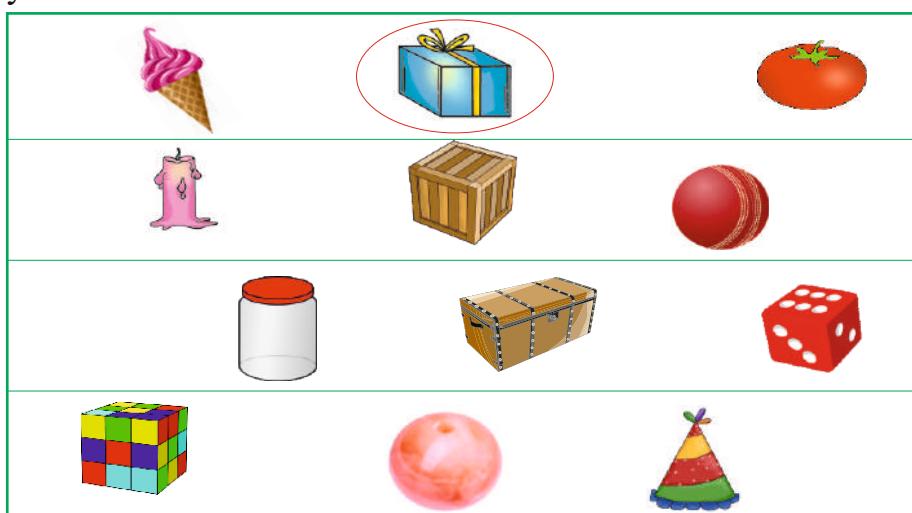
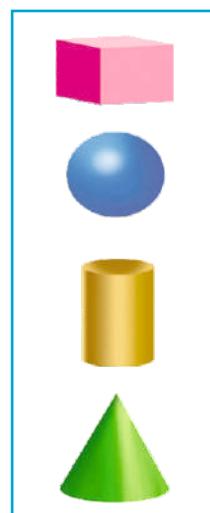
On Radha's birthday, she bought some cakes, biscuits, chocolates, gifts, candles, ice creams and caps.



- 1) What do you observe in the picture?
- 2) What are the objects in round shape?

Matching 3D objects

Activity: 1. Circle the objects with their similar shapes which were given in the picture.
One is done for you.



Roll and slide:



The ball is rolling.



The boy is sliding.



The tyre is rolling.



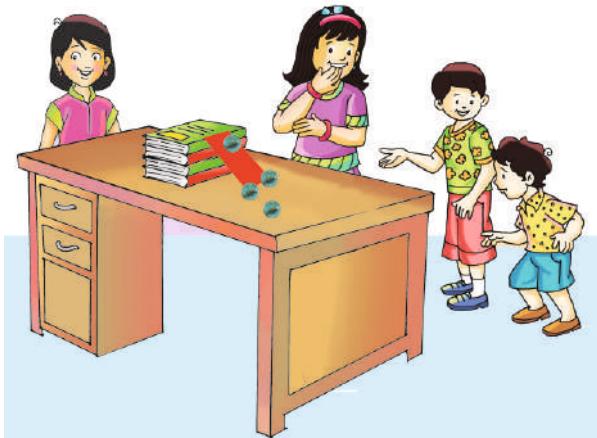
The bag is sliding.

Observe the above pictures and answer the questions.

1. What are sliding?,
2. What are rolling?, ,

Maths lab activity:

1. Some books are kept one above the other on the table.
2. A child holds a slate/writing pad in slant position against the books.
3. Another child places some objects on the pad one by one.
4. The children record which object rolls and which one slides.



Teacher Note:

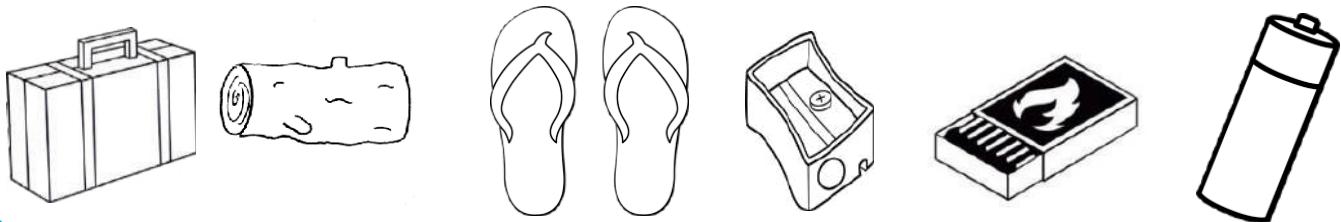
Teacher should observe carefully that each object should be kept on slanting object in different positions.

	Marbles	Book	Pencil	Eraser	Bangles
Object					
Slides					
Rolls					

1. Colour the objects that will roll.



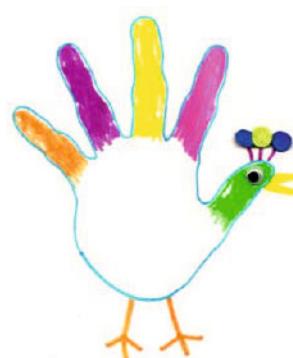
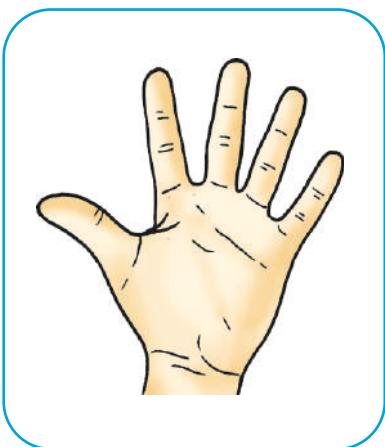
2. Colour the objects that will slide.



Trace the outlines of different 3D objects.

Activity 1:

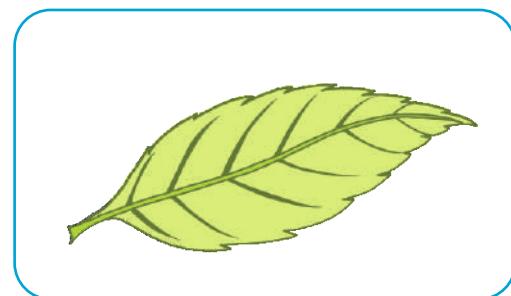
Place your palm on a sheet of paper. Draw the outline of the fingers of palm with a pencil. Remove the hand from the paper and observe the shape.



We can make beautiful pictures like this, after tracing.

Group Activity:

Children! Trace the outlines of leaf available at your school. Let us see what shape do we get when we trace the outline of a leaf with a pencil.



Let us trace:

Place a book on a sheet of paper. Draw the outline along the edges of the book and observe the shape. Try with bangle, dice and carrot.



Try these

- 1) Colour and count the shapes, using colour codes.

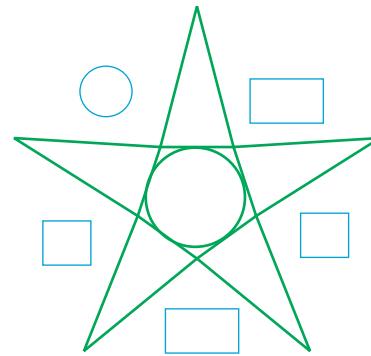


No. of =

No. of =

No. of =

No. of =

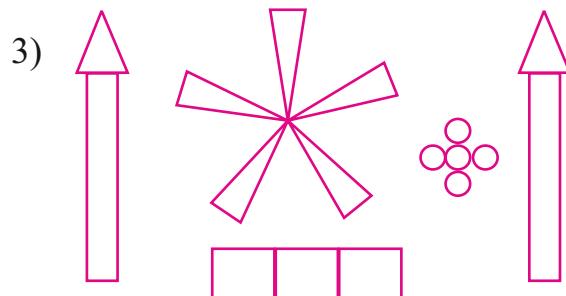
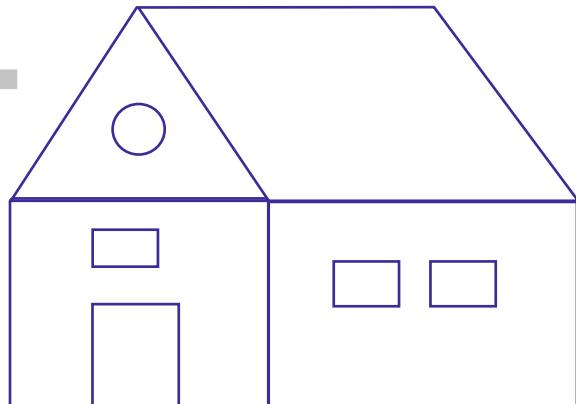


2) No. of =

No. of =

No. of =

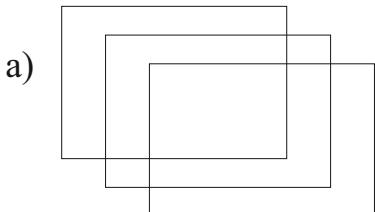
No. of =



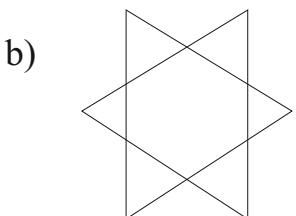
No. of =
No. of =
No. of =
No. of =



4. Write the number of shapes in each figure.



Number of = 3 or 8 (think critically!)



Number of = 6 or 8 (think critically!)



Preparation of 3D objects with 2D shapes

1. Making of Pipe:

- Take a post card.
- Roll a post card to make a pipe.
- Use tape to stick the edges together.

Try these

Children! Try to make a party cap.

- Draw O shape by using plate on a newspaper.
- Cut the paper along the edges.
- Cut the paper upto the centre.
- Fold it into a cone by overlapping both ends without crumpling.
- Glue the overlapping ends together. Leave it to dry, so that it forms a shape.
We call this shape a cone!
- Make two small holes on opposite sides with a sharp pencil. Tie a thread through them so that the thread is strong and long enough to fit around your face.
Decorate your cap as you like. Your party cap is ready.



Project work:

1. Collect easily available leaves from your surroundings and trace out the shapes of leaves on a paper, colour those shapes and write the names of leaves.

1) _____

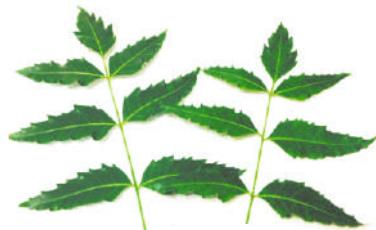
2) _____

3) _____

4) _____

5) _____

The biggest leaf among those is _____



The smallest leaf among those is _____

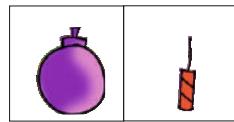
Patterns:

On the Independence Day, a girl went to school. She saw some decorations made with colour papers, balloons and garlands in the school.

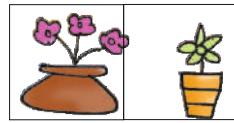


Observe the patterns in the picture. Tick the one that comes next, in the following.

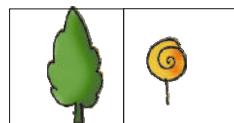
1.



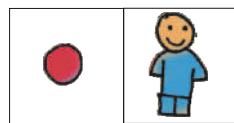
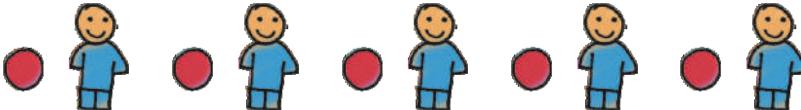
2.



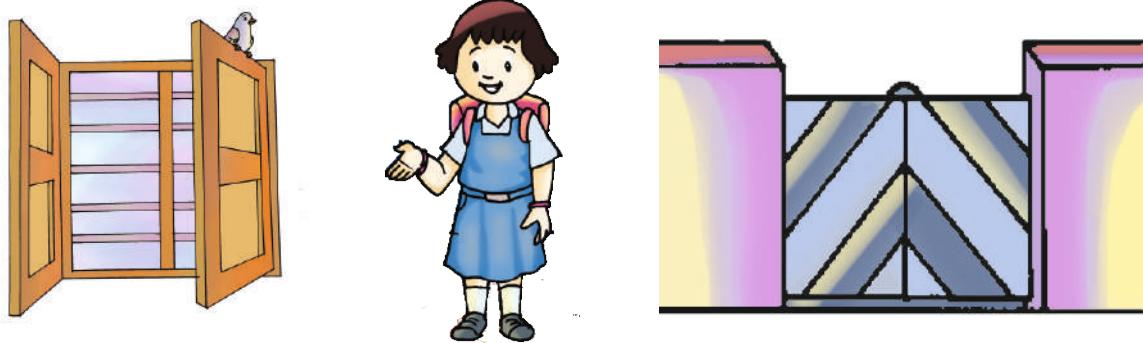
3.



4.



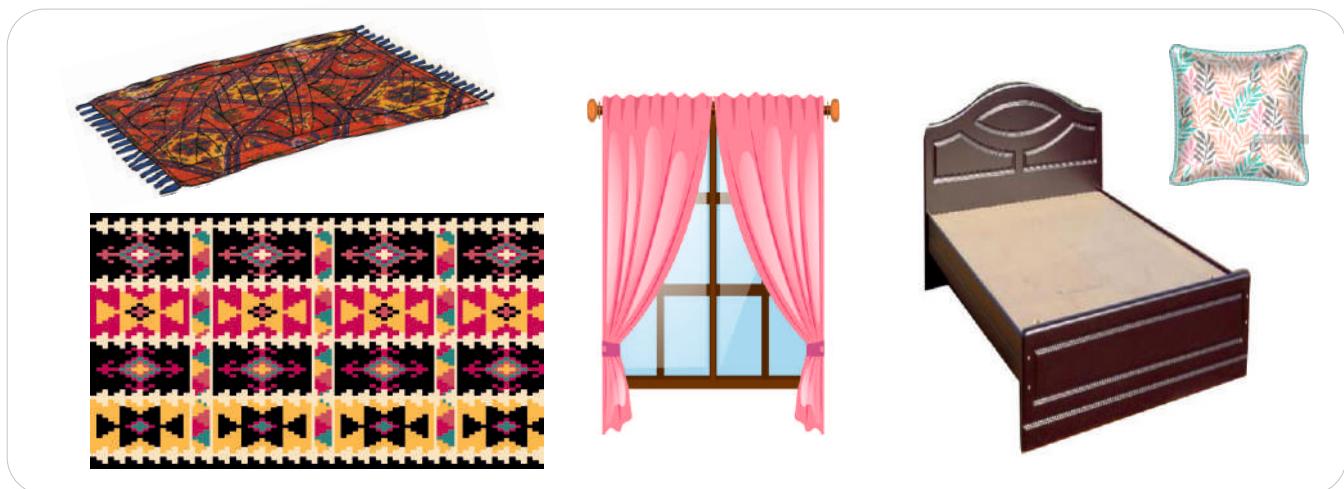
While going home, a boy saw some patterns on a house.



Do you see these types of patterns anywhere?

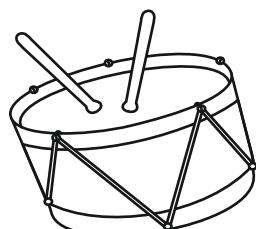
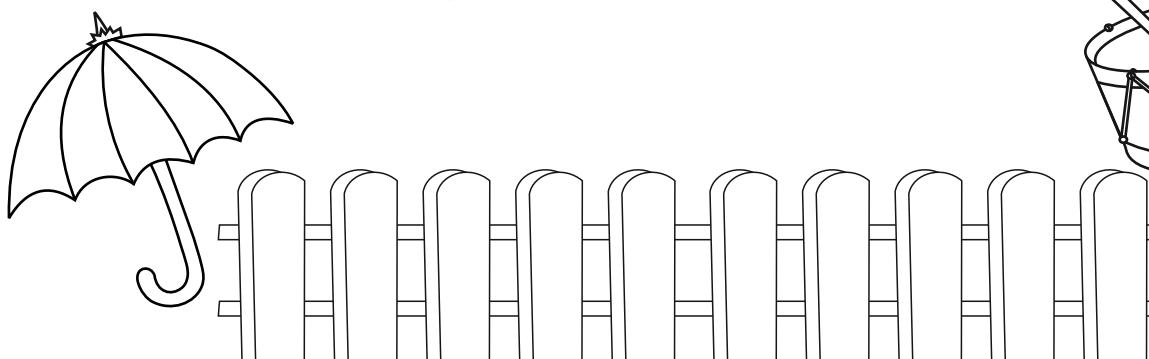
Patterns in shapes:

Patterns in different shapes can be used to make interesting designs.

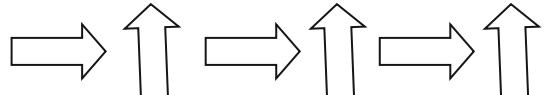


Have you seen some other type of designs on sarees, carpets, blankets etc. in your home ?

Colour the shapes according to your pattern.



Observe the pattern . Tick the one that comes next.

1.   or 
2.   or 
3.   or 
4.   or 
5.   or 
6.   or 

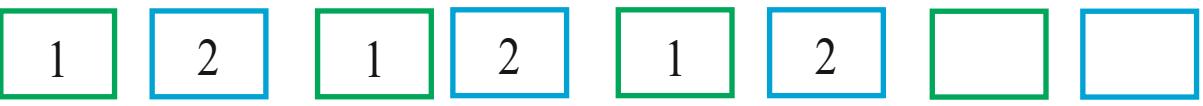
Pattern in numbers:

Observe the pattern of numbers and write the one that comes next.

Ans

- | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
|---|---|---|---|---|---|---|---|---|

Try these

- 
- 
- 
- 

Patterns in alphabets:



Ans

Observe the above pattern, read and write what comes next.

Try these

a)



Ans

b)



c)



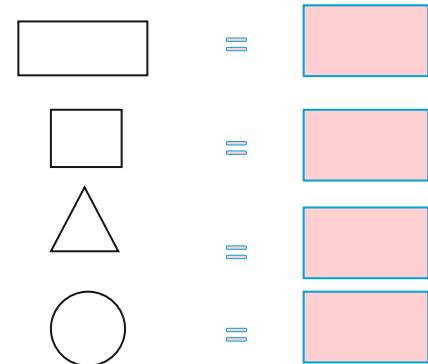
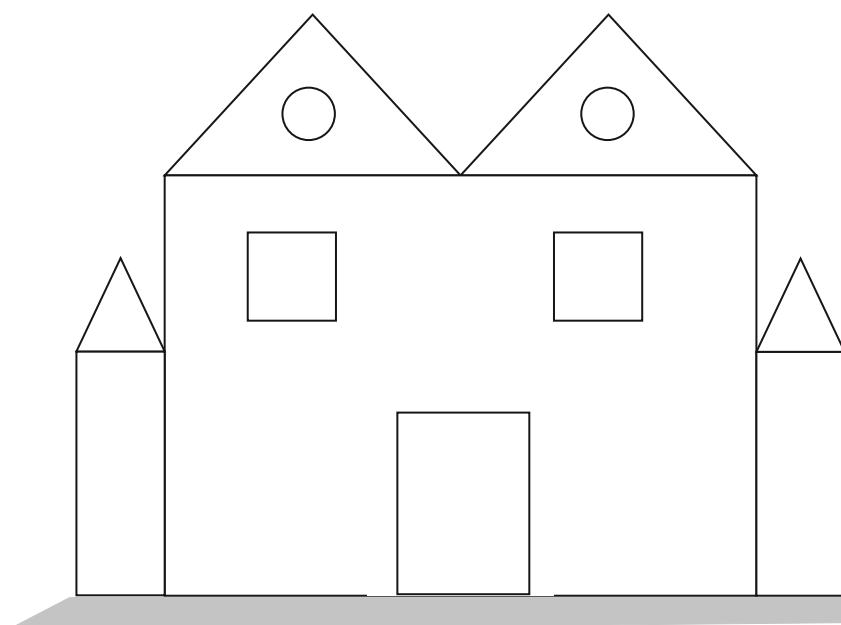
d)



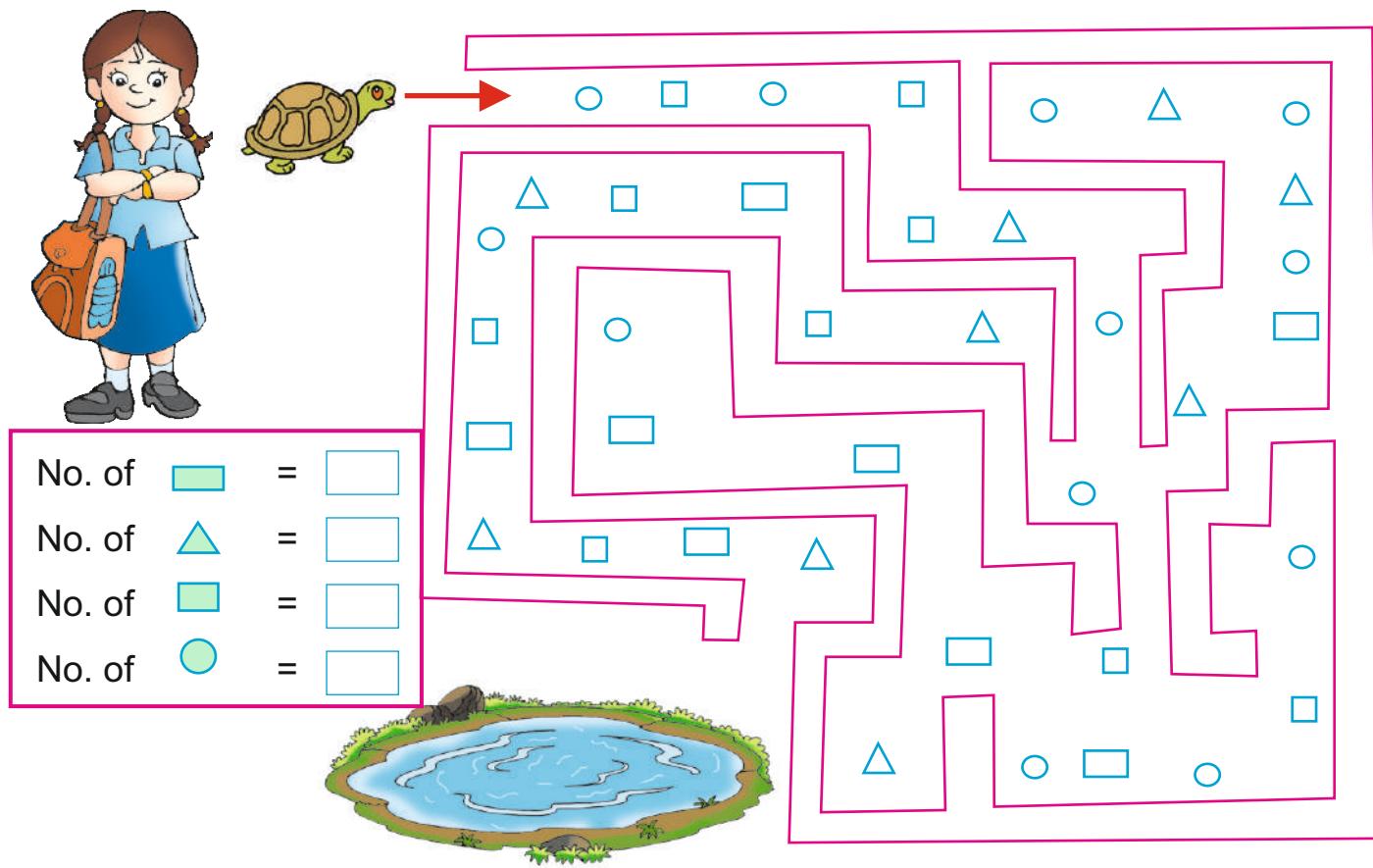
Ans

Exercise

1. Count the number of different shapes.



2. Find the path to the pond and count the shapes along the way.



3. Observe the patterns and fill the boxes in each sequences.

1.						
2.						
3.						
4.						

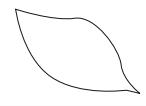
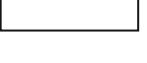
4. Observe the patterns and tick (✓) the one that comes next.

1)		
2)		
3)		
4)		



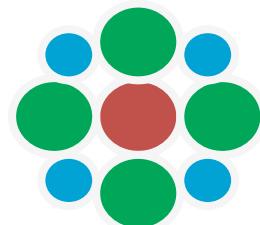
5. How many  are there in 

6. Tick (✓) the correct one, what shape do you see after tracing?

1)			
2)			
3)			
4)			

7. Count the number of shapes according to the colour.

No. of  shapes = , No. of  shapes =



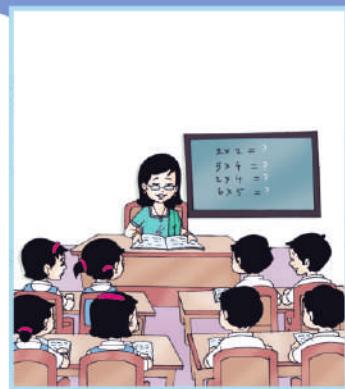
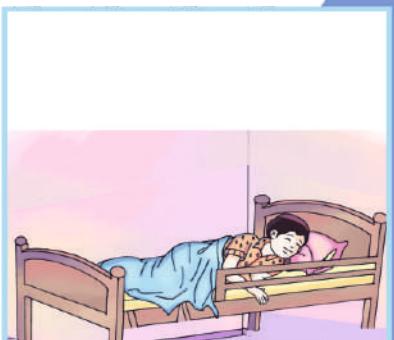
8. No. of  in



My Diary



CHAPTER 8



Get your pupils to observe the above picture. Let them discuss what they do every day from morning to night. Help them to understand the concept of time.

When do you wake up ?

My Diary

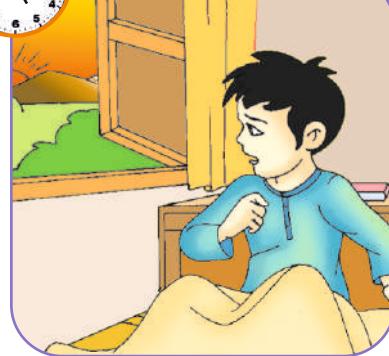
Look at the picture and write the order of things you do everyday.

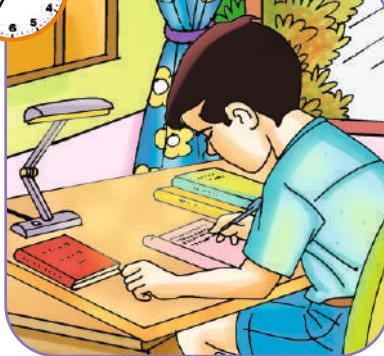


















Try these

- 1) On which activity, do you spend more time on the holiday? Mark those activities with a '✓' mark.



Health tip: You should have at least 8 hours of sleep.

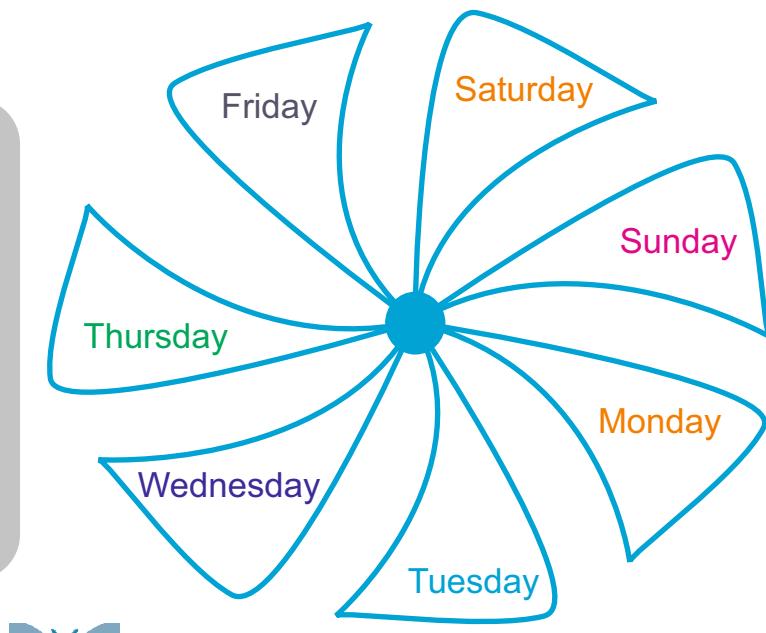
- 2) Order the following activities, according to the time when you do them.



Days of a week



One day Monday
went to Tuesday
to see Wednesday
and asked Thursday
to tell Friday
and also Saturday
that Sunday is a Funday!



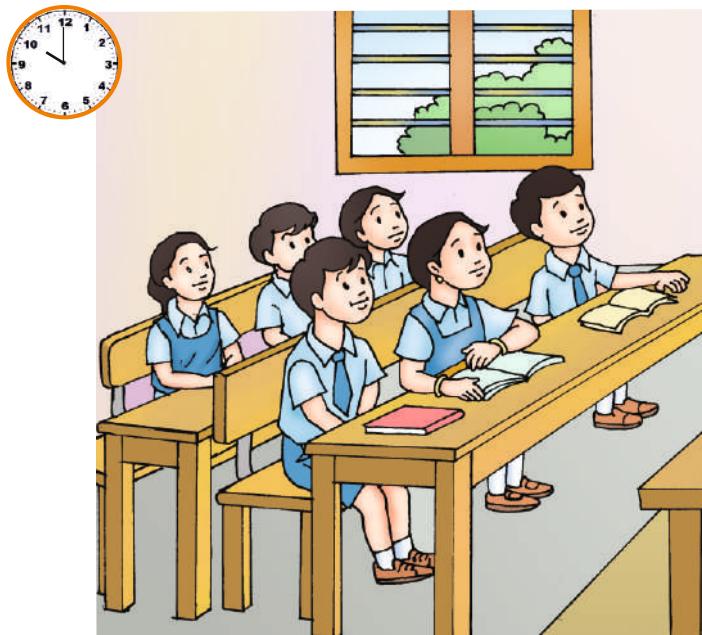
Fill in the blanks :

- The day after Sunday is _____
- The day before Wednesday is _____
- The day in between Monday and Wednesday is _____
- Today is Monday. After how many days, does Friday come? _____
- 2 days after Sunday is _____



I am a teacher!

Some children of class-2 love to play “I am a teacher!”. They have decided to take turns in playing the teacher’s role.



Day	Student playing teacher's role
Monday	Surya
Tuesday	Ramya
Wednesday	Wahida
Thursday	Mary
Friday	Krishna
Saturday	Charan

Now fill in the blanks.

- _____ will be the teacher, the day after Friday.
- _____ will play the teacher’s role on the day before Tuesday.
- Children will play the teacher’s role on the day after _____
- Krishna will play the teacher’s role on the day before _____



Try these

Write the names of the week days from the given jumbled words and match them with the sequential order. One is done for you.

a) E D T A Y U S

T U E S D A Y

SUNDAY

b) T S D R Y A U A

 D A Y

MONDAY

c) O D M Y N A

 D A Y

TUESDAY

d) Y U S A T R H D

 D A Y

WEDNESDAY

e) S D Y U A N

 D A Y

THURSDAY

f) I D R F Y A

 D A Y

FRIDAY

g) D S E Y D E N W A

 D A Y

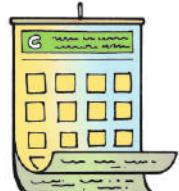
SATURDAY

Yesterday, Today and Tomorrow



Yesterday

Tomorrow



Sunday SUN	Monday MON	Tuesday TUE	Wednesday WED	Thursday THU	Friday FRI	Saturday SAT
---------------	---------------	----------------	------------------	-----------------	---------------	-----------------

Today is Wednesday. Yesterday was Tuesday. Tomorrow will be Thursday

Complete the following sentences.

If today is
Tuesday,

Yesterday was _____
Tomorrow will be _____

If today is
Friday,

Yesterday was _____
Tomorrow will be _____

Months in a year :

Look at the months in the picture.

Now answer the following questions.

- a) Which month comes after January ?
- b) The month between April and June is
- c) How many months are there in a year ?
- d) Which month comes after July ?
- e) The number of months between September and December is
- f) Your birthday falls in the month of
- g) Which is the first month of the year ?
- h) Which is the last month of the year?
- I) Which month comes after March ?

<input type="text"/>



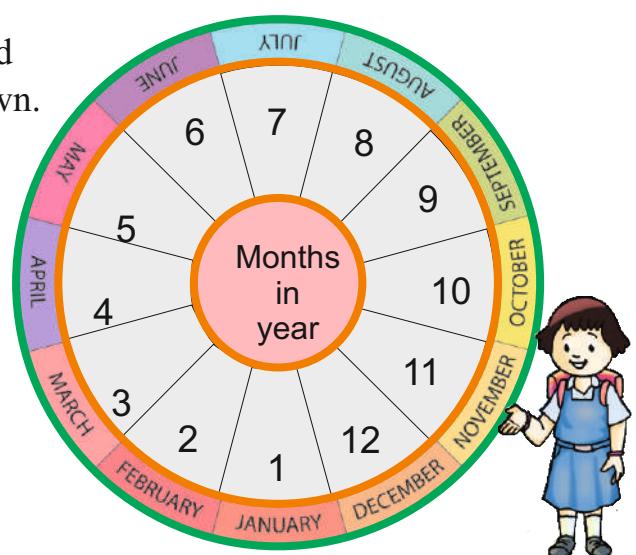
Teacher's Note :

Get your pupils observe the above picture. Let them discuss the number of months in the year and their order.

Math Lab Activity:

12 cards with the months of the year are placed on the floor in a larger circular shape as shown.

One student at a time stands inside the circle at the current month. He then walks clockwise around the circle calling out the name of the months he passes. He stops at his “birthday” month and counts, how many months to go to celebrate to his birthday.



Try these:

Names of some of the months are missed in the list given below.
Fill the names of those months.

January, February, _____, April, _____, June, _____,

August, September, _____, _____, December.

Seasons :



We have 3 different seasons in a year. They are Summer, Rainy and Winter.

Let us look at the months in which these seasons occur.

Season	The months they occur in
Summer	March, April, May and June
Rainy	July, August, September and October
Winter	November, December, January and February



- 1) During which months do we have Rainy season ? _____
- 2) During which season do we have more holidays ? _____
- 3) During which season do we wear woollen clothes ? _____

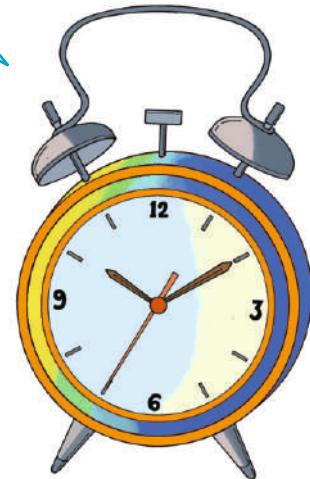
Try these:

- 1) Match the following. One has been done for you.

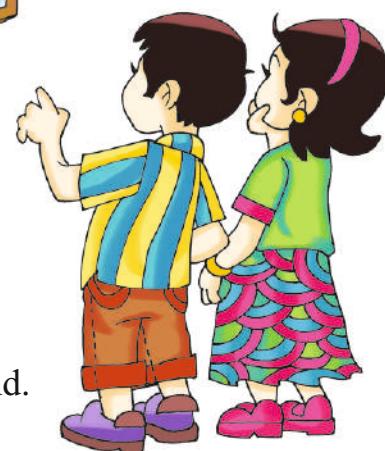
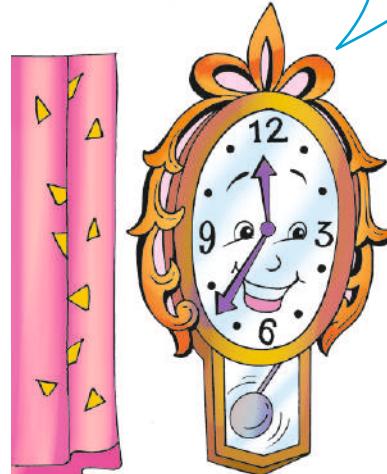
- | | | |
|----|------------------|----------|
| A) | Children's day | August |
| B) | Gandhi Jayanthi | January |
| C) | Independence day | November |
| D) | Republic day | October |

Reading the time :

Hello children!
I am a clock. Have you seen me before? Do you know what I do?

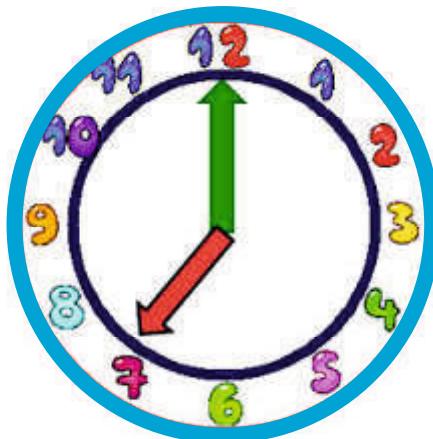


I tell you the time. I have 12 numbers written in the order from 1 to 12. I have two hands, one long and one short.



The exact hour happens when the long hand (minute hand) points exactly to 12 and the short hand (hour hand) points to a number. The hour hand moves slower than the minute hand.

The long hand (minute hand) points to 12.



The short hand (hour hand) points to 7.

The time is 7 O'clock.

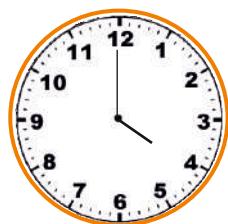
The short hand (hour hand) tells what hour it is.



Reading clocks :

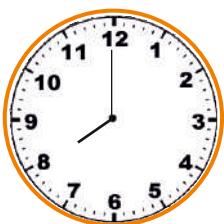
1) Write the time in the given clock. Fill in the boxes.

a)



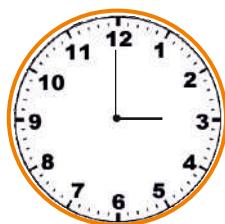
O' Clock

b)



O' Clock

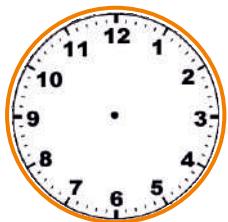
c)



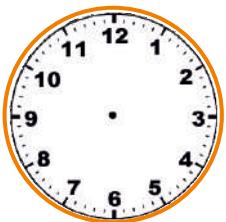
O' Clock

2) Draw the minute and hour hand in the clock to the given time.

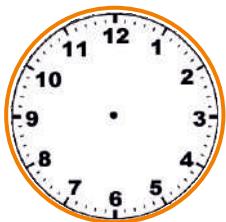
5 O' Clock



1 O' Clock



9 O' Clock



Saranya's diary :

Draw the hands on the face of the clock wherever the time is given and write the time whatever it is shown by the clock.

Discipline is important for successful life.

Saranya does all her activities on time
during a day.

Waking up early in the morning keeps
her healthy.

Saranya wakes up at 6 O'clock in the
morning.



Eating meals on time keeps us fit. Saranya eats



breakfast at _____



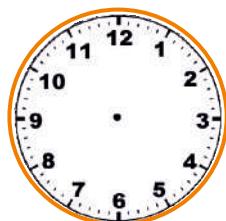
She takes lunch at _____



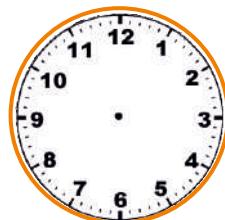
and takes dinner at _____



Playing helps us refresh our mind and also increases our physical strength. Saranya goes for playing everyday evening at



5 O'clock.



Saranya loves to study and learn new things. She does her home work everyday at 7 O'clock in the evening.

Write a daily schedule of your activities.

Exercise

I) Fill in the blanks.

- 1) Write the day that comes two days before Friday _____
- 2) The day that comes after Sunday is _____
- 3) The day between Monday and Wednesday is _____
- 4) Generally school holiday falls on _____
- 5) A week has _____ days.
- 6) What will be the day on the 7th day from today? _____

II) Match the following.

- | | | |
|----|---------|-----------------------|
| a) | January | 6 th month |
| b) | March | 7 th month |
| c) | May | 1 st month |
| d) | June | 3 rd month |
| e) | July | 5 th month |



III) Choose the correct answer and write the letter in the given .

- i) The clock shows



- a) 4 o'clock b) 5 o'clock c) 3 o'clock

- ii) The month between April and June is _____

- a) July b) May c) March

- iii) We celebrate our Independence day in the month of _____

- a) January b) November c) August

IV) Draw the hands in the clock to show the given time.



4 o'clock



11 o'clock



9 o'clock

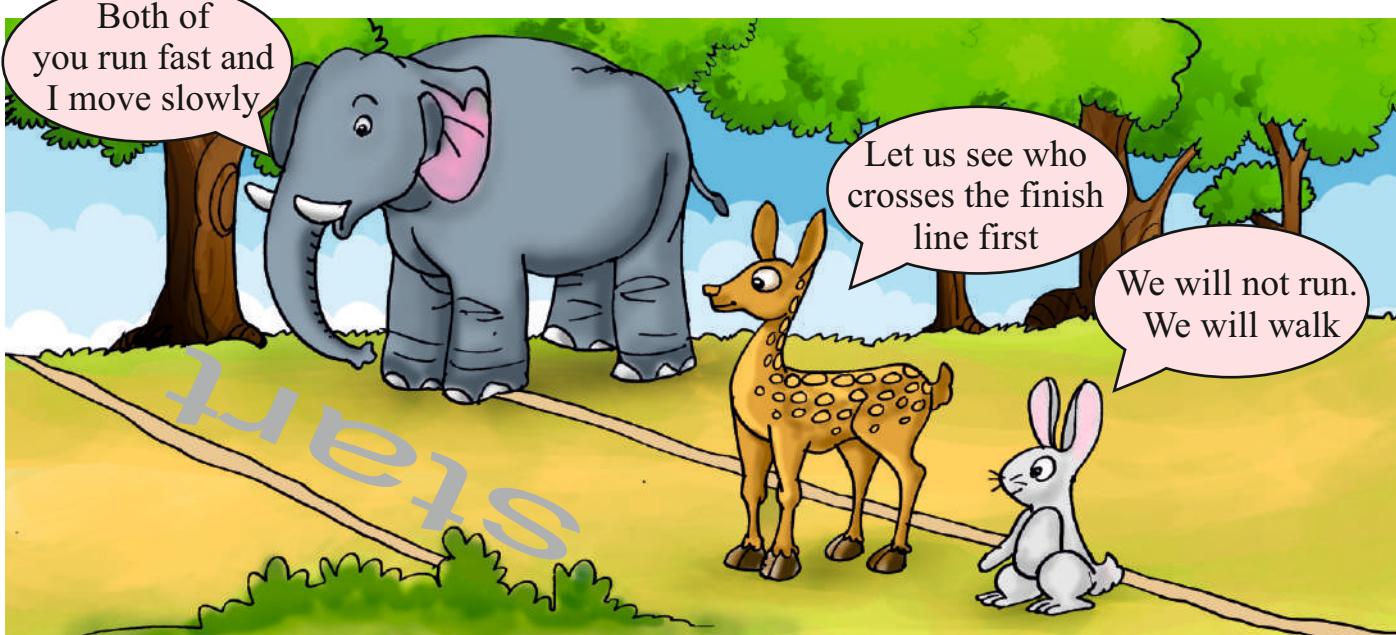


Let us Measure

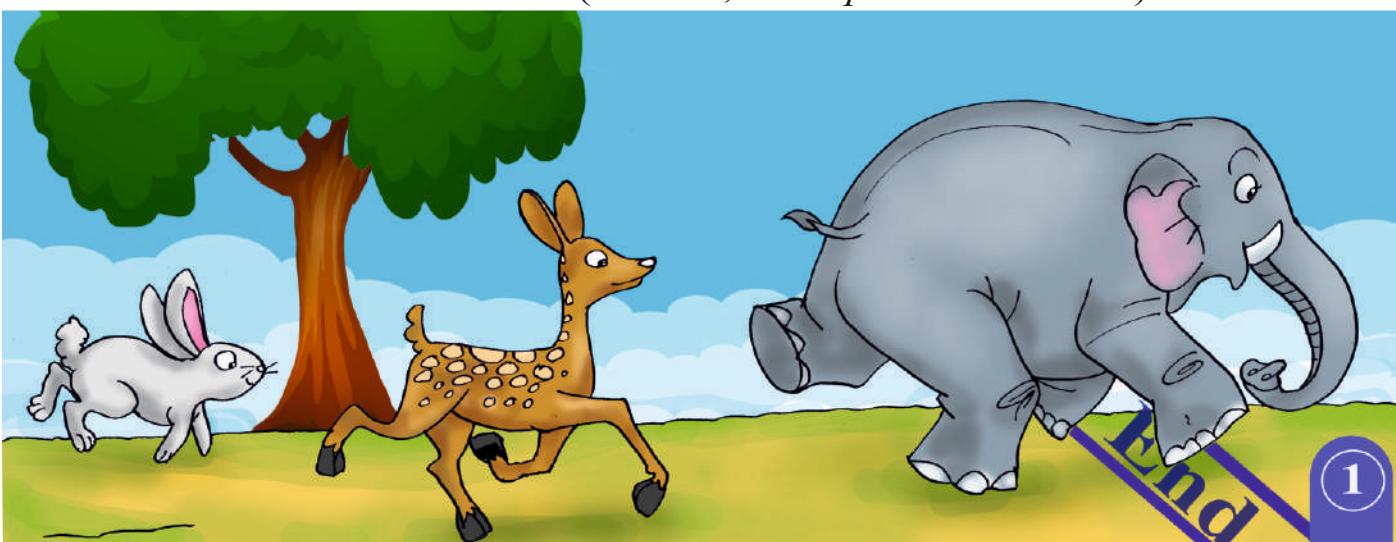


CHAPTER
9

The Race



Three friends (*a rabbit, an elephant and a deer*)



Now the friends started the game. Finally elephant won.

- Can you say why did elephant win?
- Who takes the longest steps?
- Who reaches the end line with less number of steps?



Note to Teacher: Dramatize the story with children.

Try these :



Picture - 1



Picture - 2



Picture - 3

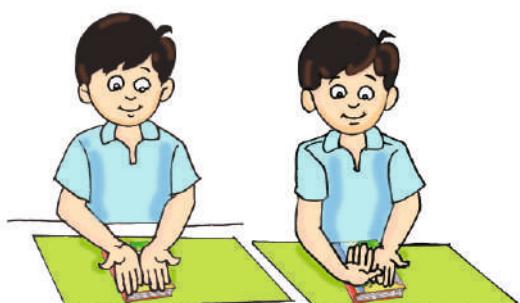


Picture - 4

Observe the above pictures and answer the following questions. (orally)

- 1) Measuring tool used in picture -1 is _____
- 2) Measuring tool used in picture - 2 is _____
- 3) Measuring tool used in picture - 3 is _____
- 4) Measuring tool used in picture - 4 is _____

Measure the following using your fingerspans.



My book is _____ fingerspans.



My water bottle is _____ fingerspans.

◆ **Measure the following using your handspan (approximately).**



This book is _____ handspans.

My teacher's table is _____ handspans.

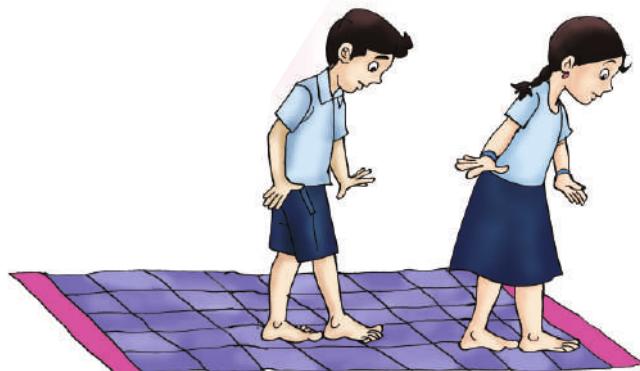
◆ **Measure the following using your cubit (approximately)**



Our class black board is _____ cubits.

Our class room window is _____ cubits.

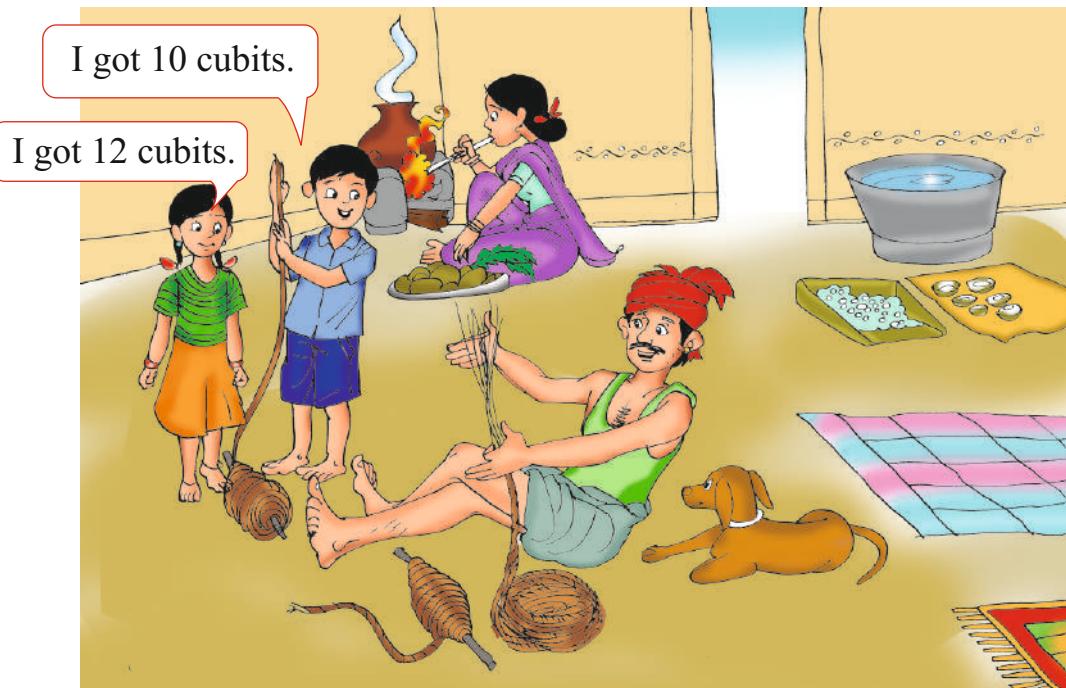
◆ **Measure the following using your footspan (approximately).**



My class room carpet is
_____ footspans.

My sitting mat is
_____ footspans.

Subbaiah made a rope with jute. He told his two children to measure that rope in cubits.



◆ Do you think they both got same number of cubits? Yes / No.

Now you both measure the same rope with this stick.



◆ Do you think they both got same number of sticks? Yes / No

Activity : Form a group with four of your friends. Measure the length of the teacher's table with yours and your friends handspans, cubits and a pencil. Record your findings



S.No.	Name of the Student	Teacher's table length		
		Number of Handspans	Number of Cubits	Number of Pencil lengths
1				
2				
3				
4				
5				

- | | |
|-------------------------------------|------------------|
| Number of handspans of all students | same / different |
| Number of cubits of four students | same / different |
| Number of pencils of four students | same / different |

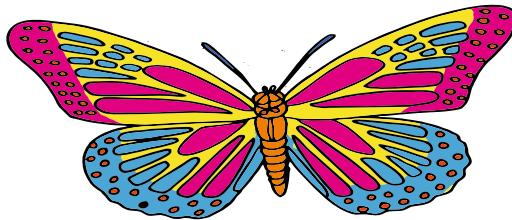
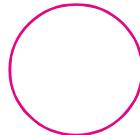
So, we need standard measurement to get exact measure.

Try these :

- ◆ Colour the boxes up to the length of the object, then count coloured boxes and write in the circle given on right side.



--	--	--	--	--	--	--	--	--



--	--	--	--	--	--	--	--	--



--	--	--	--	--	--	--	--	--



- ◆ Write the lengths of crayons in the □

1	2	3	4	5	6	7	8	9



boxes



boxes



boxes



boxes



boxes



- ◆ Rangaiah and his family is coming from a village market.

Identify lighter / heavier object



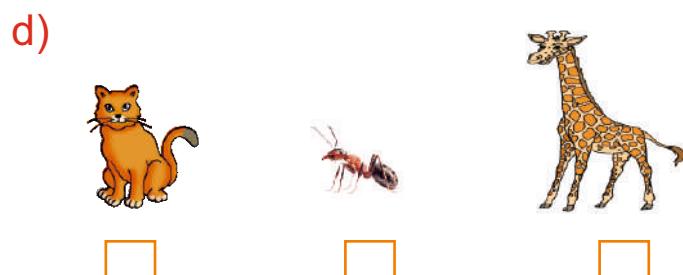
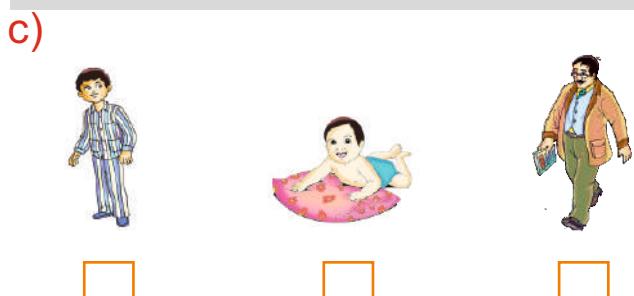
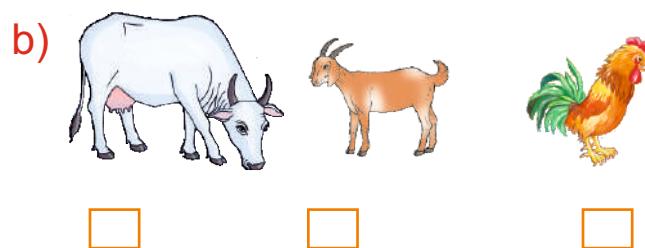
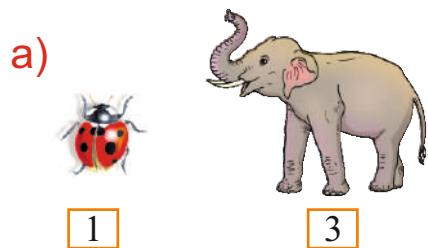
- ◆ Observe the above figure and answer the following.
 Who is carrying the lightest weight _____
 Who is carrying the heaviest weight _____
 ◆ Tick ✓ the heavier object.

		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

- ◆ Tick ✓ the lighter object.

		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

- ◆ Arrange below the objects from the lightest to the heaviest by using 1, 2 and 3 in the given boxes.



Rafi's Juice Stall

Rafi is running a juice stall. He sells juice in glasses. He uses a jug to fill the glasses with juice, . Geetha and her mother went to the juice shop to drink juice. They saw one jug fills 10 glasses.

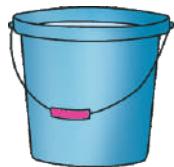


- a) Circle the object whose capacity is more
- b) Jugful fills _____ number of glasses.

Try these :

- ◆ Circle the object which holds less water. One is done for you.

a)



b)

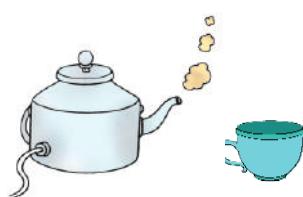


c)



- ◆ Circle the object which holds more water.

a)



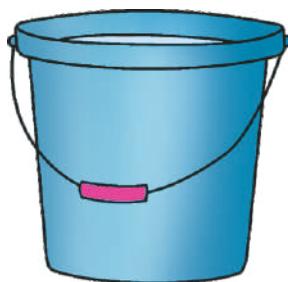
b)



c)



- ◆ Arrange the following objects in the order of increasing capacity by writing number 1, 2, 3 in the given boxes.



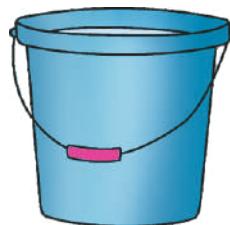
Activity : Step 1:

Take a jug and fill it with water using a glass. Count and colour the number of



Step 2:

- ◆ Take a bucket and fill it with water using jugs. Count and colour the number of jugs of water required to fill the bucket.



Exercise

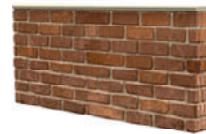
1. My slate is _____ fingerspans.



2. My text book is _____ handspans.

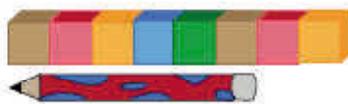


3. My sitting carpet is _____ cubits.

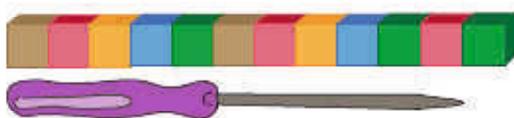


4. My class room wall is _____ footspans.

5. Count the blocks to find the length of the following objects and fill in the blanks.



blocks



blocks



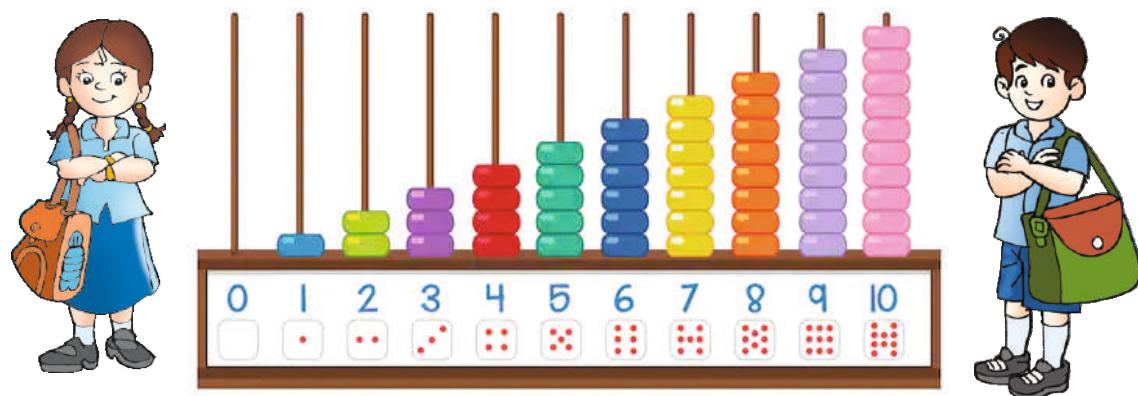
blocks



Tables

$1 \times 1 = 1$	$2 \times 1 = 2$	$3 \times 1 = 3$	$4 \times 1 = 4$
$1 \times 2 = 2$	$2 \times 2 = 4$	$3 \times 2 = 6$	$4 \times 2 = 8$
$1 \times 3 = 3$	$2 \times 3 = 6$	$3 \times 3 = 9$	$4 \times 3 = 12$
$1 \times 4 = 4$	$2 \times 4 = 8$	$3 \times 4 = 12$	$4 \times 4 = 16$
$1 \times 5 = 5$	$2 \times 5 = 10$	$3 \times 5 = 15$	$4 \times 5 = 20$
$1 \times 6 = 6$	$2 \times 6 = 12$	$3 \times 6 = 18$	$4 \times 6 = 24$
$1 \times 7 = 7$	$2 \times 7 = 14$	$3 \times 7 = 21$	$4 \times 7 = 28$
$1 \times 8 = 8$	$2 \times 8 = 16$	$3 \times 8 = 24$	$4 \times 8 = 32$
$1 \times 9 = 9$	$2 \times 9 = 18$	$3 \times 9 = 27$	$4 \times 9 = 36$
$1 \times 10 = 10$	$2 \times 10 = 20$	$3 \times 10 = 30$	$4 \times 10 = 40$
$5 \times 1 = 5$	$6 \times 1 = 6$	$7 \times 1 = 7$	$8 \times 1 = 8$
$5 \times 2 = 10$	$6 \times 2 = 12$	$7 \times 2 = 14$	$8 \times 2 = 16$
$5 \times 3 = 15$	$6 \times 3 = 18$	$7 \times 3 = 21$	$8 \times 3 = 24$
$5 \times 4 = 20$	$6 \times 4 = 24$	$7 \times 4 = 28$	$8 \times 4 = 32$
$5 \times 5 = 25$	$6 \times 5 = 30$	$7 \times 5 = 35$	$8 \times 5 = 40$
$5 \times 6 = 30$	$6 \times 6 = 36$	$7 \times 6 = 42$	$8 \times 6 = 48$
$5 \times 7 = 35$	$6 \times 7 = 42$	$7 \times 7 = 49$	$8 \times 7 = 56$
$5 \times 8 = 40$	$6 \times 8 = 48$	$7 \times 8 = 56$	$8 \times 8 = 64$
$5 \times 9 = 45$	$6 \times 9 = 54$	$7 \times 9 = 63$	$8 \times 9 = 72$
$5 \times 10 = 50$	$6 \times 10 = 60$	$7 \times 10 = 70$	$8 \times 10 = 80$
$9 \times 1 = 9$	$10 \times 1 = 10$	$11 \times 1 = 11$	$12 \times 1 = 12$
$9 \times 2 = 18$	$10 \times 2 = 20$	$11 \times 2 = 22$	$12 \times 2 = 24$
$9 \times 3 = 27$	$10 \times 3 = 30$	$11 \times 3 = 33$	$12 \times 3 = 36$
$9 \times 4 = 36$	$10 \times 4 = 40$	$11 \times 4 = 44$	$12 \times 4 = 48$
$9 \times 5 = 45$	$10 \times 5 = 50$	$11 \times 5 = 55$	$12 \times 5 = 60$
$9 \times 6 = 54$	$10 \times 6 = 60$	$11 \times 6 = 66$	$12 \times 6 = 72$
$9 \times 7 = 63$	$10 \times 7 = 70$	$11 \times 7 = 77$	$12 \times 7 = 84$
$9 \times 8 = 72$	$10 \times 8 = 80$	$11 \times 8 = 88$	$12 \times 8 = 96$
$9 \times 9 = 81$	$10 \times 9 = 90$	$11 \times 9 = 99$	$12 \times 9 = 108$
$9 \times 10 = 90$	$10 \times 10 = 100$	$11 \times 10 = 110$	$12 \times 10 = 120$

$13 \times 1 = 13$	$14 \times 1 = 14$	$15 \times 1 = 15$	$16 \times 1 = 16$
$13 \times 2 = 26$	$14 \times 2 = 28$	$15 \times 2 = 30$	$16 \times 2 = 32$
$13 \times 3 = 39$	$14 \times 3 = 42$	$15 \times 3 = 45$	$16 \times 3 = 48$
$13 \times 4 = 52$	$14 \times 4 = 56$	$15 \times 4 = 60$	$16 \times 4 = 64$
$13 \times 5 = 65$	$14 \times 5 = 70$	$15 \times 5 = 75$	$16 \times 5 = 80$
$13 \times 6 = 78$	$14 \times 6 = 84$	$15 \times 6 = 90$	$16 \times 6 = 96$
$13 \times 7 = 91$	$14 \times 7 = 98$	$15 \times 7 = 105$	$16 \times 7 = 112$
$13 \times 8 = 104$	$14 \times 8 = 112$	$15 \times 8 = 120$	$16 \times 8 = 128$
$13 \times 9 = 117$	$14 \times 9 = 126$	$15 \times 9 = 135$	$16 \times 9 = 144$
$13 \times 10 = 130$	$14 \times 10 = 140$	$15 \times 10 = 150$	$16 \times 10 = 160$
$17 \times 1 = 17$	$18 \times 1 = 18$	$19 \times 1 = 19$	$20 \times 1 = 20$
$17 \times 2 = 34$	$18 \times 2 = 36$	$19 \times 2 = 38$	$20 \times 2 = 40$
$17 \times 3 = 51$	$18 \times 3 = 54$	$19 \times 3 = 57$	$20 \times 3 = 60$
$17 \times 4 = 68$	$18 \times 4 = 72$	$19 \times 4 = 76$	$20 \times 4 = 80$
$17 \times 5 = 85$	$18 \times 5 = 90$	$19 \times 5 = 95$	$20 \times 5 = 100$
$17 \times 6 = 102$	$18 \times 6 = 108$	$19 \times 6 = 114$	$20 \times 6 = 120$
$17 \times 7 = 119$	$18 \times 7 = 126$	$19 \times 7 = 133$	$20 \times 7 = 140$
$17 \times 8 = 136$	$18 \times 8 = 144$	$19 \times 8 = 152$	$20 \times 8 = 160$
$17 \times 9 = 153$	$18 \times 9 = 162$	$19 \times 9 = 171$	$20 \times 9 = 180$
$17 \times 10 = 170$	$18 \times 10 = 180$	$19 \times 10 = 190$	$20 \times 10 = 200$



Journey towards 3rd Class...

Learning outcomes

Subject: Mathematics

Class:2

Unit – 1: Shall we count

Learner will be able to

- ☛ identify the numbers below 100.
- ☛ write expanded form and short form of 2-digit numbers.
- ☛ understand the place value and face value of 2-digit numbers.
- ☛ arrange the 2-digit numbers in ascending and descending order.
- ☛ rounding to nearest tens of 2-digit numbers.
- ☛ read and write the 2-digit numbers in words and vice versa
- ☛ compare the 2-digit numbers using with appropriate symbols ($<$, $=$, $>$)
- ☛ use 2-digit numbers in daily life situations.
- ☛ make connection to expanded and short form of given 2-digit number.
- ☛ represent the numbers up to 99 as numbers using base 10 blocks and vice versa.

Unit – 2: Let us add

Learner will be able to

- ☛ solve addition problems of 2-digit numbers with and without regrouping (sum not exceeding 99)
- ☛ understand the algorithm to solve word problems of addition.
- ☛ identify errors and correcting mistakes in addition problem.
- ☛ solve addition problems in different situations presented through pictures and stories.
- ☛ frame daily situation problems for given addition facts.
- ☛ apply the concept of addition in daily life situations.
- ☛ tender amount up to '100 using notes and coins.

Unit – 3: How much I left

Learner will be able to

- ☛ do the subtraction of 2-digit numbers (with and without regrouping)
- ☛ identify the mistakes in subtraction and correct the mistakes.
- ☛ solves subtraction problems in different situations presented through pictures and stories.
- ☛ solve daily life problems/ situations based on subtraction of 2-digit numbers.
- ☛ write the subtraction statements as addition statements (by using symbols).
- ☛ solve the given subtraction problems using pictures/ things/ spike abacus etc.

Unit – 4: Playing with numbers

Learner will be able to

- ☛ know the formation of 100.
- ☛ count in hundreds up to 900.
- ☛ say place and face values of digits in the given 3-digit number.
- ☛ write the number in expanded form and short form.
- ☛ write the given 3-digit numbers in ascending and descending order.
- ☛ write all possible 2-digit numbers with the given 3 different digits.
- ☛ rounding 3-digit number to its nearest hundreds.
- ☛ read and write all 3-digit numbers in words and vice versa.
- ☛ compare the 3-digit numbers using with appropriate symbols ($<$, $=$, $>$).
- ☛ use 3-digit numbers in daily life situations.
- ☛ make connection to expand and short form of given 3-digit number.
- ☛ tender change for ₹ 200 and ₹ 500.
- ☛ represents 3 -digit numbers using base 10 blocks or dummy currency and vice versa.

Unit – 5: How many times

Learner will be able to

- ☛ count in equal groups.
- ☛ recognize multiplication as repeated addition.
- ☛ construct tables from 1-5 and 10.
- ☛ count numbers with skipping.
- ☛ creates patterns using numbers involving multiplication tables 2, 3, 4, 5 and 10.
- ☛ read a multiplication phrase (3×5)
- ☛ change the multiplication sentence into addition form and vice versa.
- ☛ show the multiplication form in picture representation and vice versa.

Unit – 6: Share it

Learner will be able to

- ☛ identify division as sharing equally.
- ☛ recognize the symbol of division ‘ \div ’.
- ☛ identify division as repeated subtraction.
- ☛ do division up to 20 numbers by using numbers below 5.
- ☛ complete the division fact by finding the missing part (divisor or dividend)
- ☛ read and write the division symbol and use it in mathematical statements.
- ☛ apply division in day to day life situations and solve the problems.
- ☛ show the division form in picture representation and vice versa.

Unit – 7: Shapes around us

Learner will be able to

- ☛ make 3D objects by using 2D shapes.
- ☛ identify the next figures in a shapes pattern.
- ☛ identify the patterns in given number series or alphabet and extend the pattern.
- ☛ identify the objects which are rolls, slide for given objects.



- ↗ identifies 3D shapes in objects (without using the names of the shapes)
- ↗ understand and count the 2D shapes which are formed by tracing along the edges of 3D objects are used in our daily life.

Unit – 8: My diary

Learner will be able to

- ↗ say the names of the days/ months in sequential order.
- ↗ identify the sequence of events happening in terms of hours/ days.
- ↗ arrange the incidents happening in daily life in sequential order.
- ↗ read the clock in hours.
- ↗ identify the fruits/ vegetables available in different seasons/ months.
- ↗ draw the hands of clock to the given time.

Unit – 9: Let us measure

Learner will be able to

- ↗ measure and compare length of given objects by using non-standard measurements.
- ↗ identify the importance of standard measurements by measuring with the help of stick/ pencil.
- ↗ identify capacity of vessel which holds more/ less liquid and measure the capacity of liquid using the non-standard measurements.
- ↗ estimate length of given objects by using non-standard measurements.
- ↗ identify the heavier/ lighter object among the given objects and keep them in order.
- ↗ do simple problems connecting with length, weight and capacity in daily life situations.
- ↗ compare the weights using balance (picture representation).

Vocabulary

Count	=	లెక్కించు	Result	=	ఫలితం
Expansion form	=	విస్తరణ రూపం	Sum	=	మొత్తం
Short form	=	సంక్లిష్ట రూపం	Digit	=	అంకాలు
Place value	=	స్థానవిలువ	Number	=	సంఖ్య
Face value	=	సహజ విలువ	Number strip	=	సంఖ్య రిబ్బును
Ones place	=	ఒకట్ల స్థానం	Problems	=	సమస్యలు
Tens place	=	పదుల స్థానం	Word problems	=	రాత సమస్యలు
Hundreds place	=	వండల స్థానం	Regrouping	=	స్థాన మార్పిడి
Bigger	=	పెద్దది	Carry forward	=	స్థాన మార్పిడి
Smaller	=	చిన్నది	Tender change	=	చిల్లర మార్పుడం
Equal	=	సమానం	Subtraction	=	తీసివేత
Ascending order	=	ఆరోహణ క్రమం	Remaining	=	మిగిలినది
Descending order	=	అవరోహణ క్రమం	Difference	=	తేడా
Greater than	=	కంటే పెద్దది	Operation	=	ప్రక్రియ
Less than	=	కంటే చిన్నది	Addition fact	=	కూడిక వాక్యం
Nearest tens	=	దగ్గరి పదులు	Hundred	=	వంద
Add	=	కలపండి	Pattern	=	అమరిక
Total	=	మొత్తం	Counting in 100s	=	వందల్లో లెక్కింపు
Additions	=	కూడికలు	Repeated addition	=	మళ్ళీ మళ్ళీ కలపడం

Multiplication	=	గుణకారం	Calendar	=	కేలండరు
Table	=	ఎక్స్‌ప్లేట్	Seasons	=	ఋతువులు
Addition form	=	కూడిక రూపం	Summer	=	వేసవికాలం
Multiplication form	=	గుణకార రూపం	Rainy	=	వర్షాకాలం
Multiply	=	గుణించు	Winter	=	శీతాకాలం
Divide	=	భాగించు	Clock	=	గడియారం
Division	=	భాగహారం	Hours hand	=	గంటల ముల్లు
Division form	=	భాగహార రూపం	Minutes hand	=	నిమిషాల ముల్లు
Repeated subtraction	=	మళ్ళీ మళ్ళీ తీసివేత	Cubit	=	మూర
3D objects	=	త్రిమితీయ వస్తువులు	Handspan	=	జాన
Rolling	=	దొర్లుట	Foot span	=	అడుగు
Sliding	=	జారుట	Finger span	=	బెత్తెడు
2D shapes	=	ద్విమితీయ ఆకారాలు	Pace	=	అంగ
Daily routines	=	దైనందిన కార్యక్రమాలు	Length	=	పొడవు
Week	=	వారం	Measure	=	కొలవడం
Month	=	నెల	Measurement	=	కొలత
Year	=	సంవత్సరం	Lighter	=	తేలికైన
Today	=	ఈ రోజు	Heavier	=	బరువైన
Tomorrow	=	శిథి	Weight	=	బరువు
Yesterday	=	నిన్న	Capacity	=	పరిమాణం