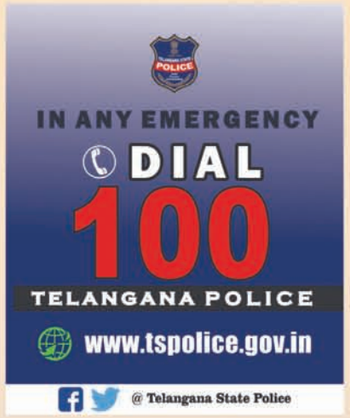

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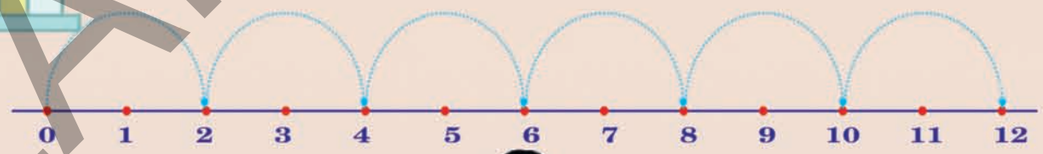
MATHEMATICS

CLASS II

FREE



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LEARNING OUTCOMES

MATHEMATICS

CLASS 2

The learner....

- Reads and writes numbers up to 99 using groups of tens and ones
- Extends patterns using different objects, shapes and numbers
- Solves simple daily life/situation problems/ based on addition and subtraction of two digit numbers with and without regrouping
- Estimates and verifies by measuring length/ distances, weight and capacities using non-standard units
- Describes basic 3D and 2D shapes with their observable characteristics.
- Collects data, represents it in a table and draws inferences

విద్య మా హక్కు
సర్వశిక్షా అభియాన్
అందరూ చదువాలి - అందరూ ఎదగాలి

పాఠశాల విద్యా శాఖ,
తెలంగాణ ప్రభుత్వం

विद्या ऽमृतमश्नुते
एन सी ई आर टी
NCERT

Government of Telangana

Department of Women Development & Child Welfare - Childline Foundation

When abused in or out of school.

When the children are denied school and compelled to work.

CHILD LINE 1098 NIGHT & DAY

24 HOUR NATIONAL HELPLINE

To save the children from dangers and problems.

When the family members or relatives misbehave.

1098 (Ten...Nine...Eight) dial to free service facility.

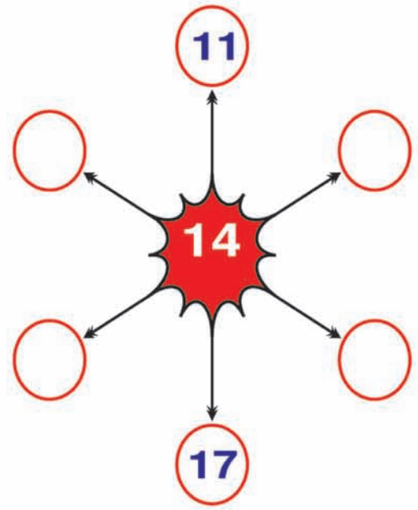
Following grid write numbers whose some of pairs equal to "36" as shown in example

Ex : 19 + 17 = 36

22	18	4	19
17	15	21	32
12	39	18	33
26	14	3	81

Fill ◯ with numbers from 11 to 17.

The some of any three numbers in a row must become 42.



MATHEMATICS

CLASS - II

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Respect the Law
Get the Rights

Grow by Education
Behave Humbly

Free Distribution by T.S.Government 2020-21

First Published 2011
New Impressions 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020

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

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FOREWORD

Classes I and II are very important in school education. We consider them the foundation. The learning by children at higher classes depends on skills of Language and Mathematics they acquire at the primary stage. Children have some mathematical concepts before they come to school. The learning of mathematics must be built on the foundation of the concepts known to them.

Children use mathematics at every life situation. They estimate, calculate and compare quantities in an informal way and in meaningful situations. With a view to bidding farwell to rote learning and beginning to learn mathematics, textbooks for classes I and II were prepared.

Units have been prepared in such a manner that pupils construct knowledge through investigation, observation and achieve mathematical concepts in accordance with the basic principles laid down in National Curriculum Framework 2005 and Right to Education 2009. Meaningful 'Activities' and 'Exercises' were included such that children understand mathematical concepts and utilise their knowledge. Mathematical concepts were introduced in each unit of this book beginning with events in pupil's life, games they play and so on. Activities and exercises ensure that pupils acquire skills like understanding concepts, solving problems in a systematic way, thinking logically, expressing ideas in mathematical language etc. The book contains a large number of pictures besides different situations and activities to ensure proper understanding of concepts.

Learning mathematics is every child's right. Children can achieve mastery over numbers and the four mathematical operations by utilising these textbooks which have been prepared to create interest for mathematics and to ensure learning with enthusiasm. The requisite teaching-learning material should be prepared and ensure proper utilisation of children's learning time by organising teaching-learning processes. This is the first step towards preparing the textbooks in the new system. We wish all the teachers will implement this and ensure that pupils achieve the mathematical skills specified for classes I and II.

31-03-2011
Hyderabad

Smt. B.Seshukumari
Director,
SCERT., Hyderabad.

NOTE TO TEACHERS

- Mathematics textbooks for classes I and II were prepared according to the basic principles suggested in NCF-2005 and the guidelines given under RTE-2009.
- Units were prepared in such a manner that pupils can learn mathematics with enthusiasm.
- Every unit includes the mathematical concepts known to pupils and new concepts for the unit concerned besides appropriate exercises.
- The exercises have been prepared to ensure introduction of concepts through day – to – day / meaningful situations, to get pupils to solve problems that involve logical thinking, to express ideas in mathematical language and so on.
- Exercises and activities are so planned that by the end of class I. pupils will be able to understand the concepts of number, acquire the ability to add and subtract numbers and by the end of class II, they will be able to add numbers with regrouping subtract numbers using the technique of borrowing, acquire the basic concepts of multiplication and division and so on.
- At the beginning of any unit, the pupils must helped to observe the pictures given. Questions must be asked to test their previous knowledge of mathematical concepts concerned. The concepts of the unit must be introduced accordingly. In this process, locally – available objects like pebbles, seeds, sticks, beads etc., must be made use of it must be orgnised as a classroom activity.
- Then group activities must be orgnised to solve problems in a systematic manner, to think logically, to estimate things and other exercises. This book includes certain instructions / suggestions for the teacher. Those instructions must be followed to take up questioning the pupils, discussing things with them, getting them to observe pictures, calculate and recording information etc.
- In the same way encourage pupils to understand the instructions given for problems before they can solve the problems by themselves.
- The textbooks have been prepared to help the pupils to take up exploration, observation, research, confirmation etc., to understand mathematical concepts and apply the knowledge for solving problems.
- Towards this end a number of pictures depicting pupil's real life situations have been included.
- Children use mathematics extensively in many day – to – day situations consequently they acquire skills of application. As these textbooks have prepared with this background, they are to be utilised completely and ensure utilisation of children's learning time.

Syllabus – Expected Outcomes

Unit – 1: Revision - 1

- Numbers from 1 to 20
- Counting different things like animals, birds, trees and writing their number
- Saying the sequence of numbers of things and people and writing them
- Saying the number before, after and between the given numbrs upto 20
- Arranging numbers upto 20 in ascending and descending orders and matching them

Unit – 2: Revision - 2

- Counting the things intens and ones. Saying how many tens and ones there are in them
- Writing numbers upto 100 in the expanded form.
- Writing numbers upto 100 in ascending and descending order and matching with things
- Identifying the small and big numbers among the given number writing them.
- Solving certain problems orally
- Identifying numbers small and big relationship among
- Solving puzzles based on certain conditions (More, Less)

Unit – 3 and 4: Comparing three-digit numbers

- Counting and saying the numbers as hundreds, tens and ones upto 1000 and writing them below
- Saying the place value and face value of digits in a number and writing
- Writing the 3-digit number in the expand form and writing the number when its expanded form is given
- Saying how many Rs.100's, Rs.10's and Re.1's there are for a given three- digit number
- Writing numbers below 1000 in the correct sequence and also in ascending and descending orders
- Writing the numbers before, after and between given numbers below 1000
- Writing the given number (1000) in words and writing the number when it if given in words.
- Forming numbers using the three digits given and saying between
- Using >, <, = symbols to show smaller than about two numbers.

Unit – 5 and 6: Addition of numbers

- Adding two digit numbers-both in expanded and short forms
- Adding numbers less than 50 orally
- Adding two numbers using the 'carry over' method.

Unit – 7 and 8: Subtraction of numbers

- Subtraction of two digit number-both in expanded and short forms.
- Subtracting numbers upto 50 orally
- Subtracting two numbers using the 'borrowing' method.

Unit – 9, 10 and 11: Multiplication

- Understanding that multiplication is nothing but successive addition of the same number
- Saying the product of numbers related to numbers in columns and rows
- Writing multiplication tables (1 to 9) by using the method of successive addition
- Writing the product of multiplying a two-digit number by a single-digit number.

Unit – 12: Division

- Identifying division and the symbol ' ÷ ' concerned.
- Distributing a certain number of things among a certain number of people equally.

Unit – 13: Length

- Measuring lengths using nonstandard measuring tools
- Valuing the standard tools of measurment.

Unit – 14: Weight

- Identifying the heavy and light things among things given

Unit -15: Volume

- Identifying the more and less size among those given.

Unit – 16: Time

- Describing when things are done in a day (morning, afternoon etc)
- Saying the names of days / months in a order

Unit – 17: Money

- Identifying currency notes / coins
- Giving change for notes less than Rs. 100

Unit – 18: Shapes

- Identifying different geometrical shapes without mentioning names like circle, square, rectangle, triangle etc. Compares and matches their shapes with things in daily life.

Unit – 19: Let Us Record

- Counting things and recording the number in a table

CONTENTS

OUR NATIONAL ANTHEM

- Rabindranath Tagore

Jana-gana-mana-adhinayaka, jaya he
Bharata-bhagya-vidhata.
Punjab-Sindh-Gujarat-Maratha
Dravida-Utkala-Banga
Vindhya-Himachala-Yamuna-Ganga
Uchchhala-jaladhi-taranga.
Tava shubha name jage,
Tava shubha 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!!

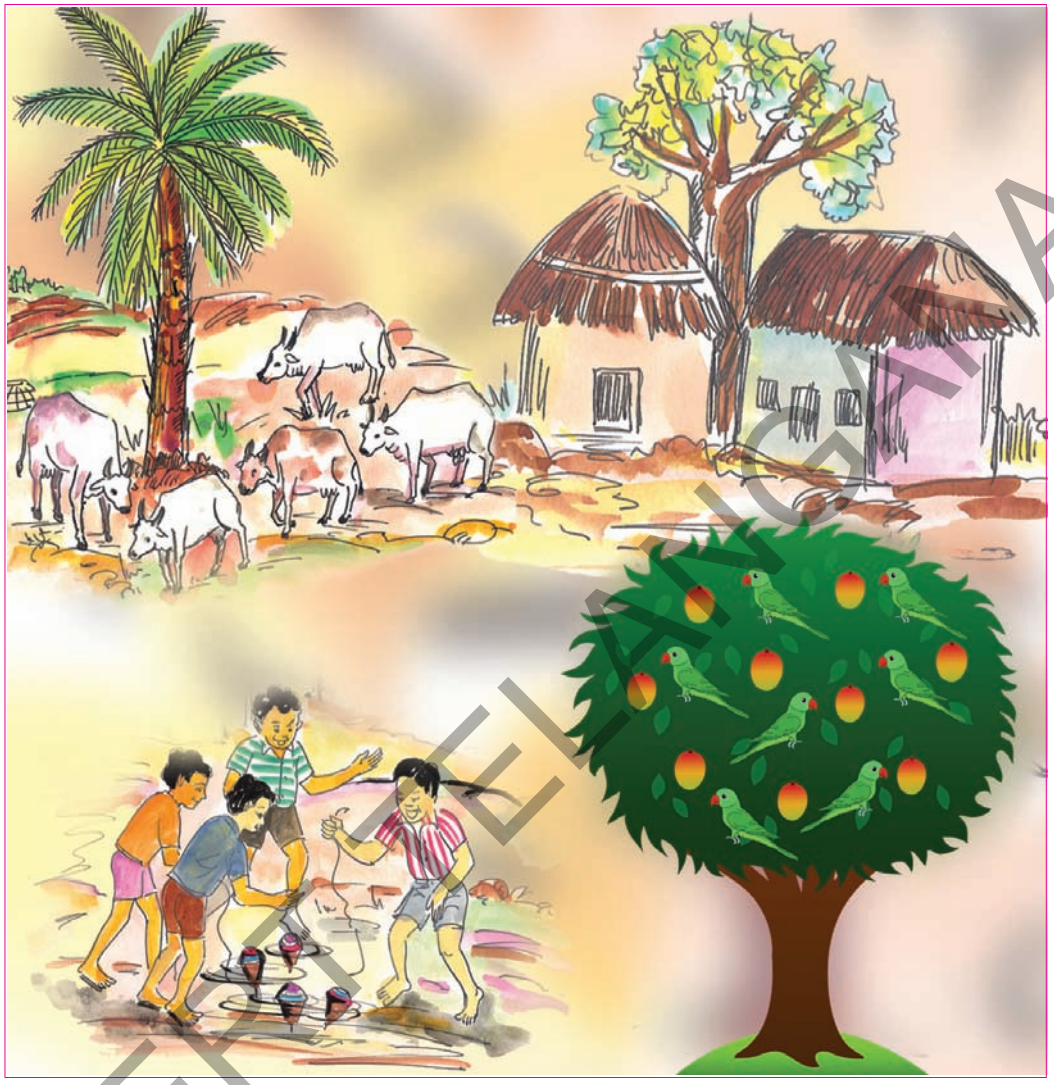
PLEDGE

- 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."

1 Numbers from 1 to 20

1. Look at the following picture, count the different things in it and write their number.



1. How many huts are there? ____
2. How many children are there? ____
3. How many cows are grazing near the palm tree? ____
4. How many mangoes can you see on the tree? ____
5. How many parrots are there on the mango tree? ____
6. Which are more in number, parrots or mangoes? ____

Get your pupils to observe the above picture. Get them to count each category of things. Let them write the correct numbers in the boxes.

2. Look at the picture given below. Answer the following questions.

Example: Who is the second student? ..... John .....

1. Who is the third student? .....
2. Who is the fifth student? .....
3. What is the ordinal number of Basha? .....
4. What is the ordinal number of Uma? .....

3. Look at the picture given below. Write the ordinal number of the student shown.

Example:	What is the ordinal number of Seetha ?	First
	What is the ordinal number of Latha ?	
	What is the ordinal number of Hari ?	
	What is the ordinal number of Uma ?	
	What is the ordinal number of Giri ?	
	What is the ordinal number of Rama ?	
	What is the ordinal number of Shiva ?	
	What is the ordinal number of Usha ?	

Get your pupils to observe the pictures. Help them to understand the task and answer each question. Create the understanding of ordinal numbers.

4. Look at the pictures. Read the following items and write their number in the boxes.

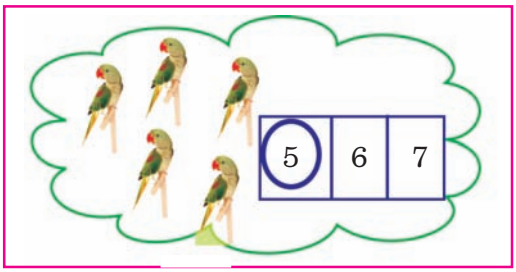
1. How many animals are there in the above pictures? ☐
2. How many vehicles can you see? ☐
3. In which box is the a hen? ☐
4. How many of the above items do you see in your school? ☐
5. How many pictures are there between the comb and the key? ☐
6. What is the number of the box before the slate? ☐
7. Between which boxes can you see the lock ? ☐ and ☐
8. What is the number of the box next to the monkey? ☐
9. What is the number of the box between those that have a book and the bicycle? ☐

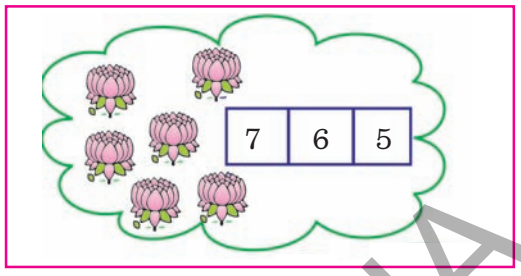
Get your pupils to observe the above pictures. Help them to observe the method in which the numbers are written in an order. Create the understanding of numbers that come before, between and after.

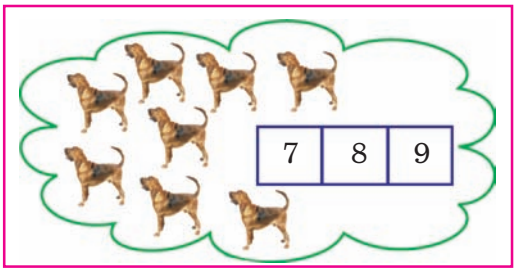
Exercise:

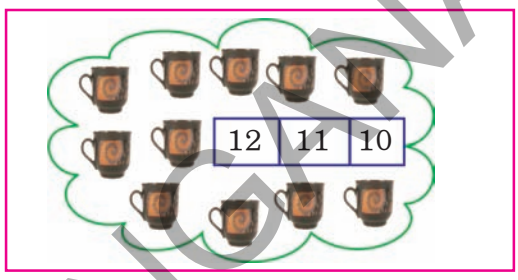
1. Count the pictures. Circle the correct number as shown in the example.

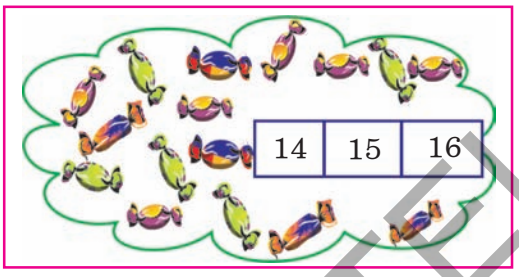
Example:

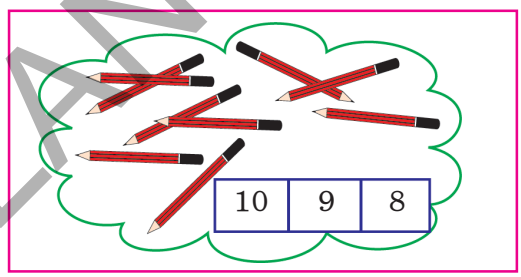








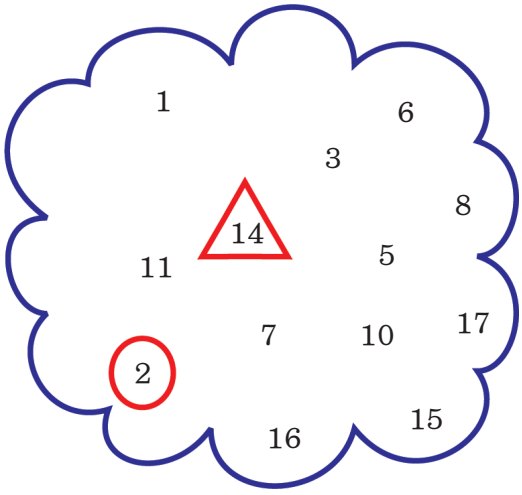




1. Write the correct number in given box.

1	2			5
6		8		
11				
16				20

3. Draw a △ around each number between 10 and 20. Draw a ◯ around each number less than 10.



Get your pupils to understand and solve the exercise from questions 1 to 11.

4. Write the number that comes before the given numbers.

	6	7
	9	10
	14	15
	18	19

5. Write the number that comes between the given numbers.

3		5
10		12
18		20
9		11

6. Write the number that comes after the given numbers.

7	8	
10	11	
13	14	

7. Write the number that comes before and after the given number.

	15	
	17	
	19	

8. Identify the bigger number and draw a '◯' around it. Look at the example.

Example:-

15	6
8	10
15	12

5	7
17	7
10	20

Get your pupils to understand the instructions. Let them solve each sum by themselves.

9. Observe the given sets of numbers. Write them in the boxes in two ways - one from the smallest to the biggest and the other from the biggest to the smallest.

Example:- **5, 3, 6, 4, 11**

From smallest to biggest. : 3 4 5 6 11

From biggest to smallest. : 11 6 5 4 3

(A) 15, 3, 12, 16, 5, 18

From smallest to biggest :

From biggest to smallest :

(C) 12, 18, 10, 14, 19, 17

From smallest to biggest :

From biggest to smallest :

(B) 6, 0, 8, 3, 5, 2

From smallest to biggest :

From biggest to smallest :

(D) 2, 17, 13, 14, 8, 5

From smallest to biggest :

From biggest to smallest :

10. Observe the given sets of numbers. Write the biggest and the smallest. Look at the example.

		Biggest Number	Smallest Number
Example:-	4 16 10 5 →	16	4
1.	11 18 17 9 →		
2.	20 10 5 15 →		
3.	3 7 0 9 →		

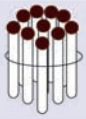
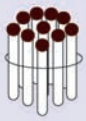
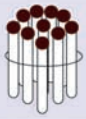
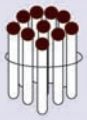
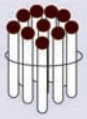
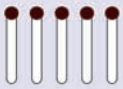
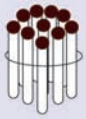
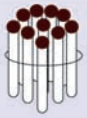
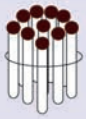
Get your pupils to understand the instruction and let them solve the sums by themselves.

11. Show the boy the way to the building. Join the numbers in the correct order.

Get your pupils to understand the instruction. Let them solve the activity / exercise by themselves.

2 Numbers from 10 to 99

1. Count the bundles of sticks and the loose sticks. Write the numbers from 10 to 20 in blank boxes.

		10 + 1 = 11
		10 + 2 = 12
		10 + ☐ = 13
		☐ + 4 = 14
		☐ + ☐ = 15
		☐ + ☐ = ☐
		☐ + ☐ = ☐
		☐ + ☐ = ☐
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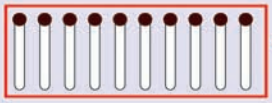
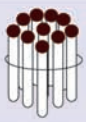
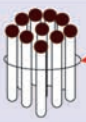
		☐ + ☐ = ☐
		10 + 10 = 20

Get your pupils to count the tens and the ones. Let them write the number in the boxes.

2. Count the bundles of sticks . Write the correct numbers in the blank boxes.

3. Look at the Number Ribbon. Write the correct number at each DOT (•)

Get your pupils to count the tens and ones and let them write the numbers in the blank boxes.

4. Numbers from 21 to 30

2 tens + 1 ones

20 + 1 = 21

2 tens + ☐ ones

20 + ☐ = 22

☐ tens + 3 ones

☐ + 3 = 23

☐ tens + ☐ ones

☐ + ☐ = 24

☐ tens + ☐ ones

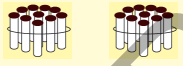
☐ + ☐ = 25

☐ tens + ☐ ones

☐ + ☐ = ☐

2 tens + 7 ones

☐ + ☐ = 27

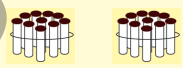


☐ tens + ☐ ones

☐ + ☐ = ☐

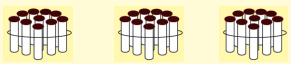
☐ tens + 9 ones

☐ + 9 = 29



2 tens + 10 ones

☐ + ☐ = ☐

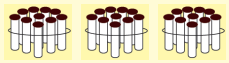


3 tens + 0 ones

30 + 0 = 30

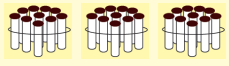
Get your pupils to count the tens and ones and let them write the numbers in the blank boxes.

5. Numbers from 31 to 40.



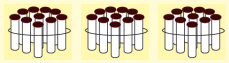
3 tens + 1 ones

30 + 1 = 31



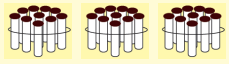
3 tens + 2 ones

30 + 2 = 32



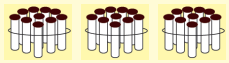
tens + ones

+ =



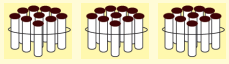
3 tens + 4 ones

30 + 4 = 34



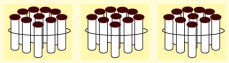
tens + 5 ones

+ = 35



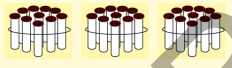
3 tens + ones

30 + = 36



tens + ones

+ = 37



tens + ones

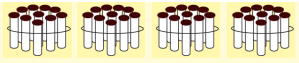
+ =

tens + ones

+ =

3 tens + 10 ones

+ =

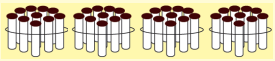


4 tens + 0 ones

40 + 0 = 40

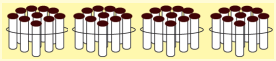
Get your pupils to count the tens and ones and let them write the numbers in the blank boxes.

6. Numbers from 41 to 50.



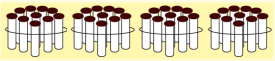
4 tens + 1 ones

40 + 1 = 41



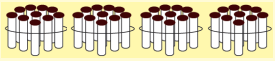
tens + ones

+ =



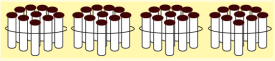
tens + 3 ones

+ 3 = 43



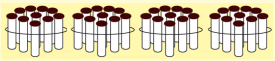
tens + ones

+ =



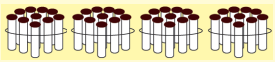
4 tens + ones

40 + = 45



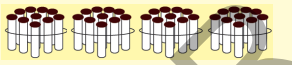
tens + ones

+ =



tens + ones

+ =

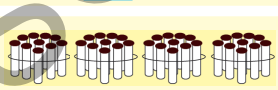


tens + 8 ones

+ 8 = 48

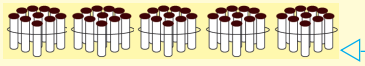
tens + ones

+ =



4 tens + 10 ones

+ =

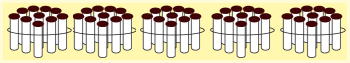


5 tens + 0 ones

50 + 0 = 50

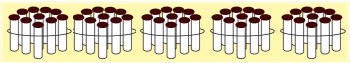
Get your pupils to count the tens and ones and let them write the correct numbers in the blank boxes.

7. Nubmbers from 51 to 60.



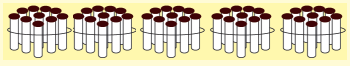
5 tens + 1 ones

50 + 1 = 51



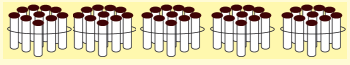
tens + ones

+ =



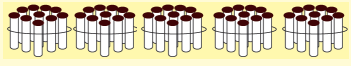
tens + ones

+ =



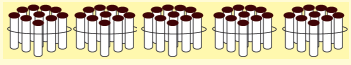
tens + ones

+ =



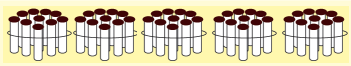
tens + ones

+ =



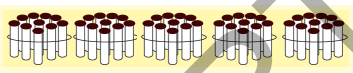
tens + ones

+ =



tens + ones

+ =

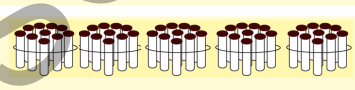


tens + ones

+ =

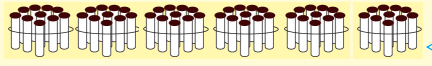
tens + ones

+ =



5 tens + 10 ones

+ =

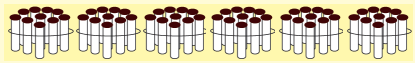


6 tens + 0 ones

60 + 0 = 60

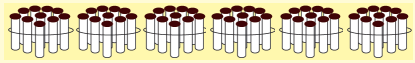
Get your pupils to count the tens and ones let them write the correct numbers in the blank boxes.

8. Numbers from 61 to 70.



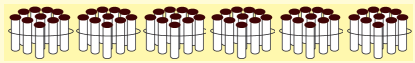
6 tens + 1 ones

60 + 1 = 61



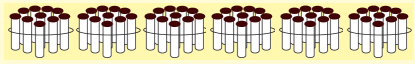
tens + ones

+ =



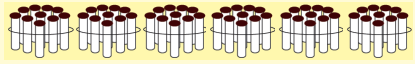
tens + ones

+ =



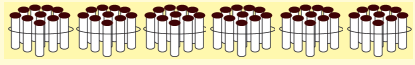
tens + ones

+ =



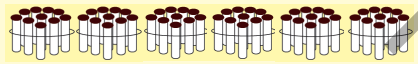
tens + ones

+ =



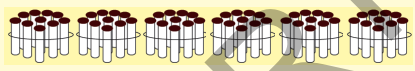
tens + ones

+ =



tens + ones

+ =

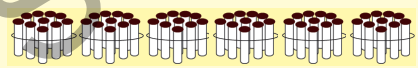


tens + ones

+ =

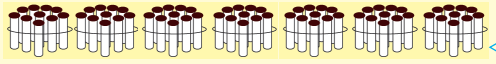
tens + ones

+ =



6 tens + 10 ones

+ =

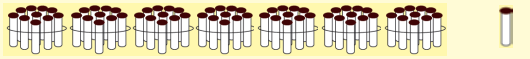


7 tens + 0 ones

70 + 0 = 70

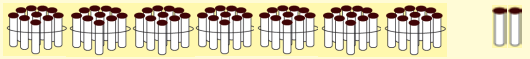
Get your pupils to count the tens and ones and let them write the correct numbers in the blank boxes.

9. Numbers from 71 to 80.



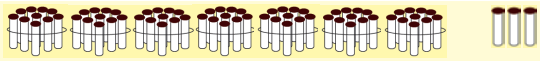
7 tens + 1 ones

70 + 1 = 71



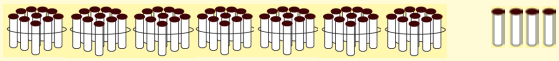
tens + ones

+ =



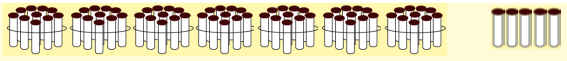
tens + ones

+ =



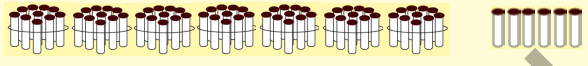
tens + ones

+ =



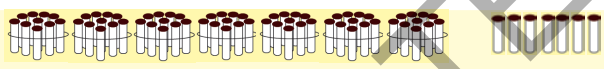
tens + ones

+ =



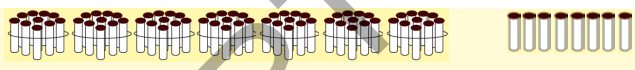
tens + ones

+ =



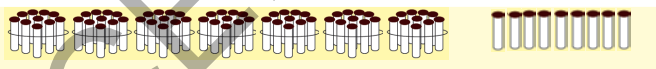
tens + ones

+ =



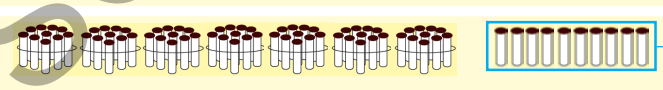
tens + ones

+ =



tens + ones

+ =



7 tens + 10 ones

+ =

8 tens + 0 ones

80 + 0 = 80

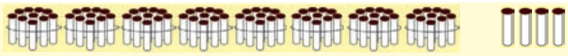
Get your pupils to count the tens and ones and let them write the correct numbers in the blank boxes.

10. Numbers from 81 to 90.

8 tens + 1 ones | 80 + 1 = 81

☐ tens + ☐ ones | ☐ + ☐ = ☐

☐ tens + ☐ ones | ☐ + ☐ = ☐



☐ tens + ☐ ones | ☐ + ☐ = ☐

☐ tens + ☐ ones | ☐ + ☐ = ☐

☐ tens + ☐ ones | ☐ + ☐ = ☐

☐ tens + ☐ ones | ☐ + ☐ = ☐

☐ tens + ☐ ones | ☐ + ☐ = ☐

☐ tens + ☐ ones | ☐ + ☐ = ☐

8 tens + 10 ones | ☐ + ☐ = ☐

9 tens + 0 ones | 90 + 0 = 90

Get your pupils to count the tens and ones and let them write the correct numbers in the blank boxes.

11. Numbers from 91 to 100.

9 tens + 1 ones

90 + 1 = 91

___ tens + ___ ones

___ + ___ = ___

___ tens + ___ ones

___ + ___ = ___

___ tens + ___ ones

___ + ___ = ___

___ tens + ___ ones

___ + ___ = ___

___ tens + ___ ones

___ + ___ = ___

___ tens + ___ ones

___ + ___ = ___

___ tens + ___ ones

___ + ___ = ___

___ tens + ___ ones

___ + ___ = ___

9 tens + 10 ones

90 + 10 = ?

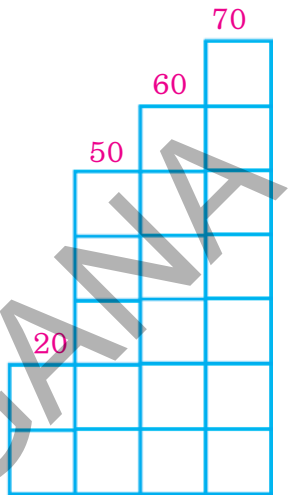
Get your pupils to count the tens and ones and let them write the correct numbers in the blank boxes.

12. Observe the of numbers written in ascending and descending orders.

Radha dictated to Ravi some numbers. They are 20, 60, 50 and 70. She asked him to write the numbers from the smallest to the biggest.

Ravi thought in the following way.

The smallest among 20, 60, 50, 70	20
The smallest among 60, 50, 70	50
The smaller of 60 and 70	60
The remaining number	70



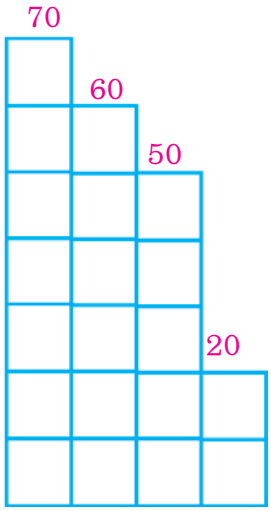
Then Ravi wrote the numbers as 20, 50, 60, 70.

Thus, writing numbers from the smallest to the biggest is known as writing in ASCENDING ORDER.

Then Radha asked Ravi to write the same set of numbers from the biggest to the smallest.

Ravi wrote like this.

The biggest among 20, 60, 50, 70	70
The biggest among 20, 60, 50	60
The bigger of 20 and 50	50
The remaining number	20



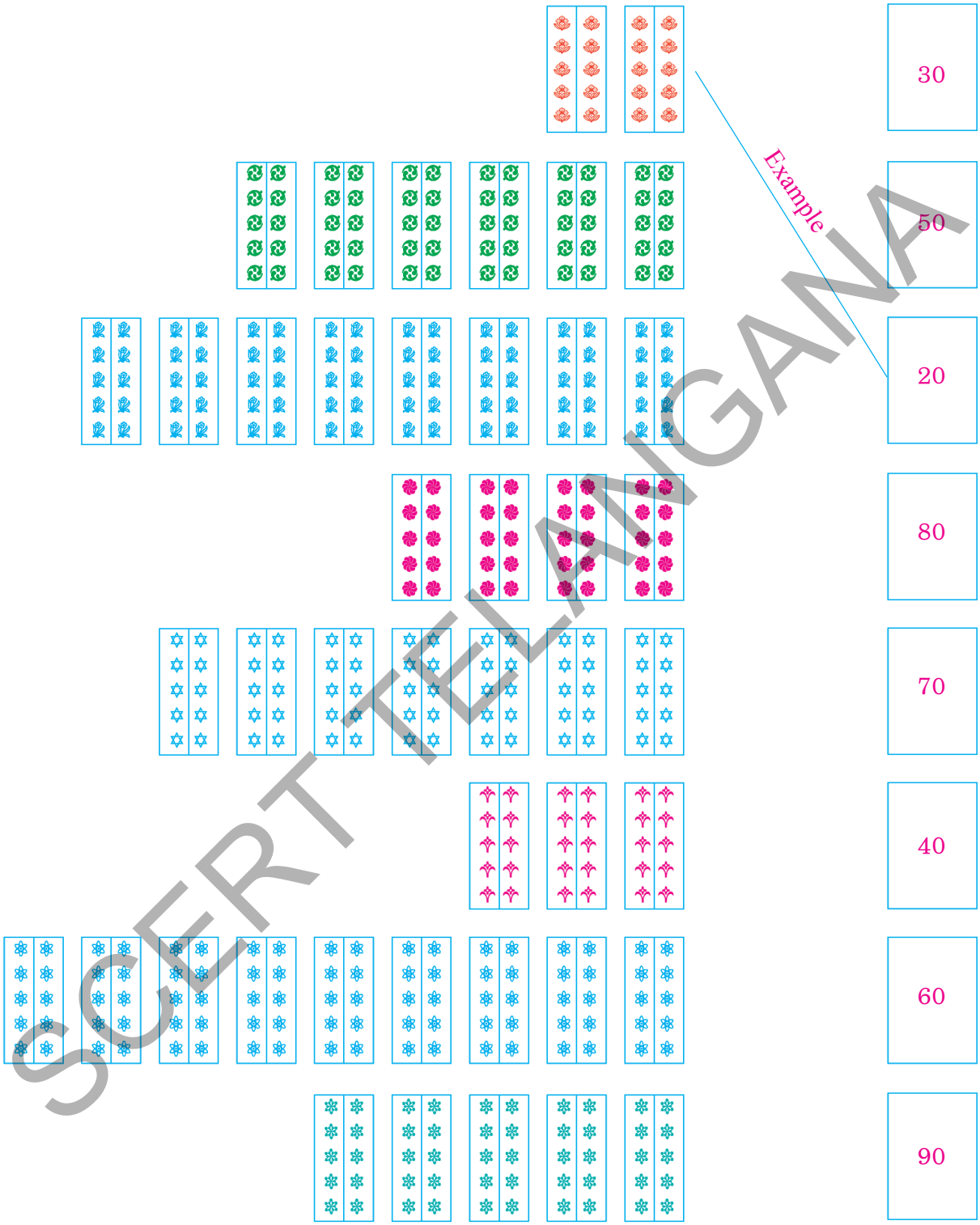
So if you write 20, 60, 50 and 70 from the biggest to the smallest, you get 70, 60, 50, 20

Thus, writing numbers from the biggest to the smallest is known as writing in DESCENDING ORDER.

Get your pupils to understand the two orders of writing any given numbers.

Exercise

1. Match the pictures with the numbers. One example is given.



Get your pupils to understand the instructions given for the problems. Help them to do them by themselves.

2. a) Look at the number. Write how many tens there are in it?

Example:-

Number	Tens
80	8
30	
50	
90	
20	
70	
10	

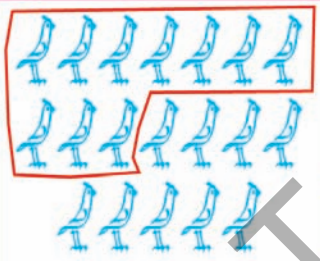
b) Fill in the blank boxes with the correct numbers

Ex:-

Number	Tens
50	5
	6
	7
40	
	2
	3
10	

3. Count the pictures in tens and ones. Write the correct numbers in the boxes.

Example:-

(a) 

tens = 1

ones = 9

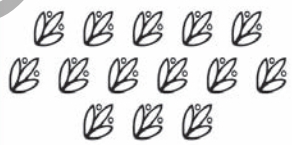
number=19

(b) 

tens =

ones =

number=

(c) 

tens =

ones =

number=

(d) 

tens =

ones =

number=

(e) 

tens =

ones =

number=

(f) 

tens =

ones =

number=

Get your pupils to understand the instructions and let them solve the sums by themselves.

4. Write the correct numbers in the blank boxes.

Ex:	4	tens	+	1	ones	=	40	+	1	=	41
(a)	3	tens	+	4	ones	=		+	4	=	
(b)	7	tens	+		ones	=		+	6	=	
(c)	8	tens	+	7	ones	=		+		=	87
(d)	6	tens	+		ones	=		+	8	=	68
(e)	9	tens	+	9	ones	=		+		=	

5. Write the correct numbers in the blank boxes.

1	2	3	4	5	6	7	8	9	10
11	12		14			17			20
				25					
31		33					38		40
	42				46			49	
51				55			58		60
61		63				67			
	72				76			79	80
81			84				88		90
91									

Get your pupils to understand the instructions and let them solve the sums by themselves.

6. Draw a '◯' around the smaller number. Look at the examples.

Example:-						
	30	60	22	32	91	99
	75	55	42	22	84	82
	43	44	54	64	79	69
	39	59	95	75	59	34
	40	44	66	64	47	27

7. Put a '✓' on the biggest number.

Example:-

	30	40	50	✓ 60
(a)	62	52	32	42
(b)	44	34	64	54
(c)	56	66	46	36
(d)	38	48	68	58

8. Draw a '◯' around the smallest number.

Ex:-	31	61	51	41
(a)	53	63	33	43
(b)	65	35	55	45
(c)	47	57	67	37
(d)	59	49	39	69

9. Identify between which numbers the given numbers lie with a '✓'. Look at the example.

Example:-	42	✓ 40–50	50–60	30–40
(a)	62	50–60	60–70	70–80
(b)	54	40–50	50–60	60–70
(c)	36	30–40	40–50	50–60
(d)	12	10–20	0–10	20–30

Get your pupils to understand the instructions and let them solve the sums by themselves.

10. Solve the following problems.

a) Ramesh has Rs. 50. Sita has Rs. 30. Who has more money? Answer orally.

.....

.....

b) Pavan got 45 marks in Mathematics, Janaki got 75, Razia got 65 and Vaani got 59. Say these numbers in ascending order.

.....

.....

c) Say the number in which 5 in ones place and 7 in tens place.

.....

.....

d) Say a problem which you can solve using the equation 20 + 5 = 25.

.....

.....

11. Write 5 numbers wtih 2 digits using 4, 5, 7. Write them as shown in the example.

Number	Tens + Ones
Ex:- 57	50 + 7

12. Look at the numbers. Draw '◯' around those which are between 20 and 30.

64	Ex 24	17	20	31
26	37	22	58	93
76	21	50	64	27
19	30	29	83	18

Get your pupils to understand the instructions and let them solve the sums by themselves.

13. Draw '◯' around the numbers where you see 4 in the ones place.

		Ex:-		
53	87	94	68	42
43	79	84	53	59
54	32	83	74	64
81	58	34	57	40

14. Play the Rat's tail game.

Extend the rat's tail from the smallest to the biggest number given in the grid.

59	48	32	24
61	45	39	99
63	74	78	92
68	70	80	85

15. Show the way to the top of the hill.

- Start from the lowest row.
- Reach the big number from the small one.
- Go upwards or to sidewards but not downwards.
- Reach the number 99.
- Show as many ways as you can.

Ex: 11, 20, 24, 39, 47, 54, 87, 94, 99

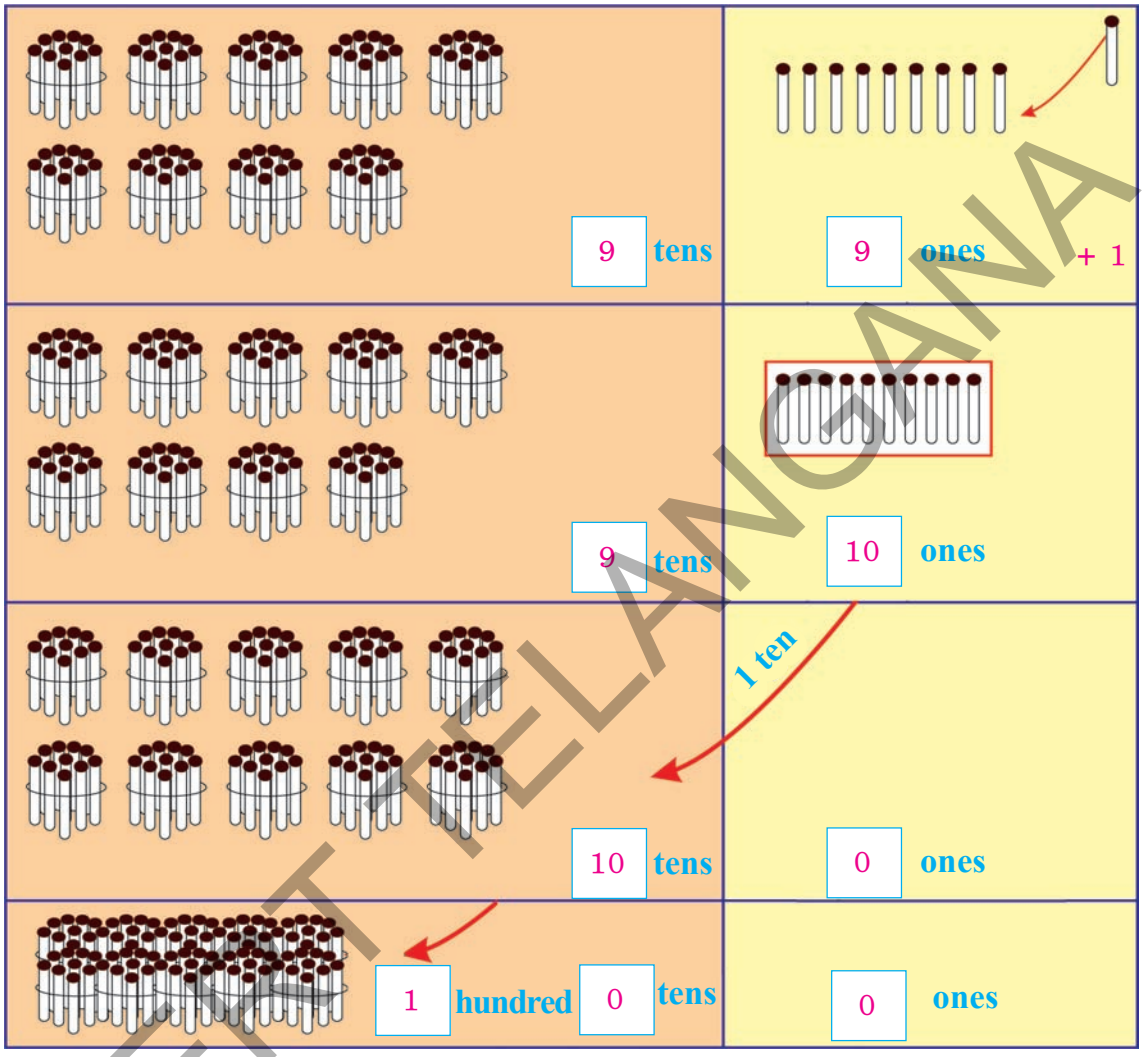
		99			
		63	94		
	52	87	79		
46	54	75	82		
37	47	63	79	92	
30	39	37	57	69	72
19	24	43	29	63	65
20	10	41	37	29	
11		24		35	

Get your pupils to understand the instructions and let them solve the sums by themselves.

3 Numbers with Three Digits

1. Look at the bundles of sticks and the loose sticks.

How much is 99 + 1?



If you add 1 to 99, you get 100.

The number that comes after 99 is 100.

How many tens are there in 100? How many ones are there in 100?

100 = 10 tens. 100 = 100 ones.

The last number with two digits is 99. It means the biggest number with two digits is 99.

There are 3 digits in 100. The first number with three digits is 100. It means 100 is the smallest number with three digits.

If you add 1 to the biggest number of two digits, you get the smallest number with three digits.

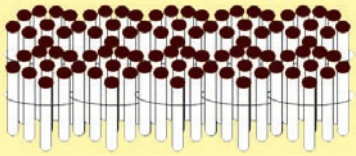
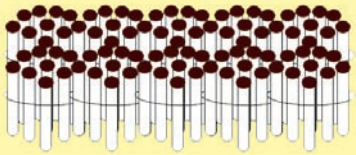
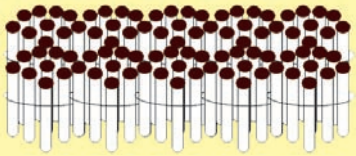
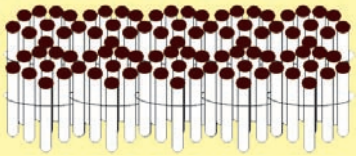
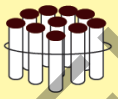
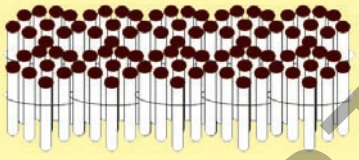
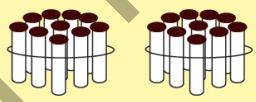
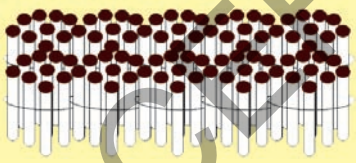
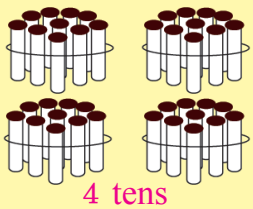
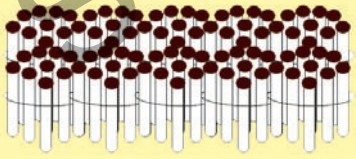
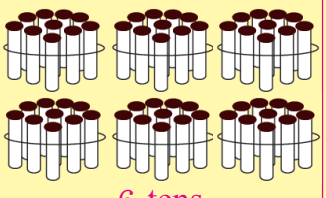
Get your pupils to count in bundles of sticks and the single stick. Introduce the number 100 to them.

2. Count in hundreds. Write the correct number in blank boxes.

1	hundred	+	1	hundred	100	+	100	= 200
	hundreds	+		hundred	200	+	100	= 300
	hundreds	+		hundred	300	+		= 400
	hundreds	+		hundred		+	100	= 500
	hundreds	+		hundred		+		= 600
	hundreds	+		hundred		+		=
	hundreds	+		hundred	700	+	100	=
	hundreds	+		hundred	800	+	100	= 900

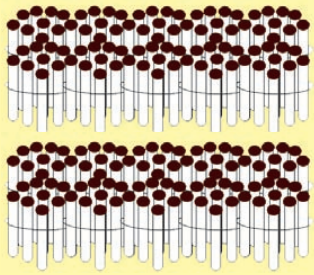
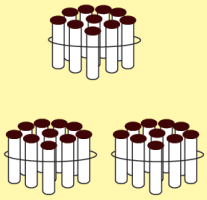
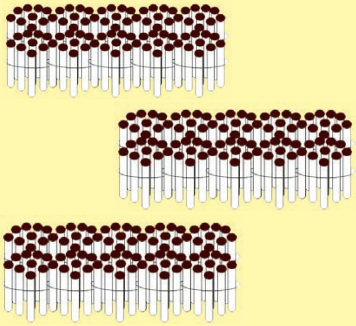
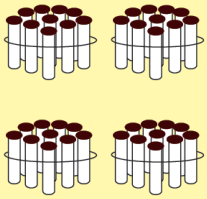
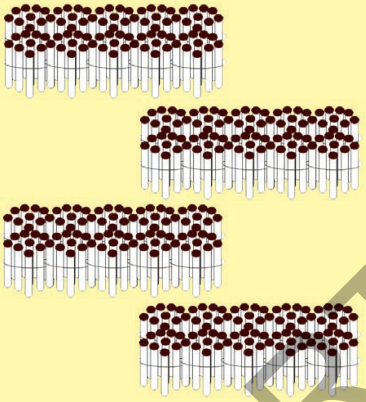
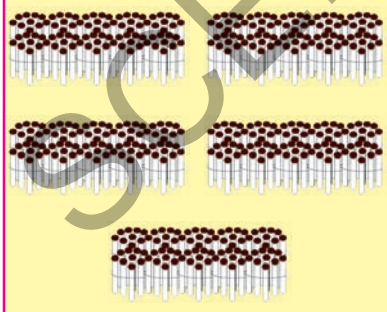
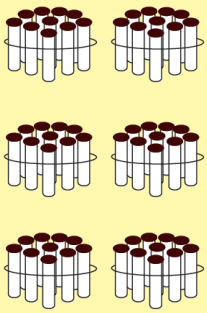
Get your pupils to count in hundreds. Help them to understand writing of numbers 100, 200, ... 900.

3. Look at the bundles of sticks and the loose sticks. Read the numbers.

 1 hundred		 1 ones	100 + 0 + 1 = 101
 1 hundred		 2 ones	100 + 0 + 2 = 102
 1 hundred		 9 ones	100 + 0 + 9 = 109
 1 hundred	 1 ten		100 + 10 + 0 = 110
 1 hundred	 2 tens		100 + 20 + 0 = 120
 1 hundred	 4 tens		100 + 40 + 0 = 140
 1 hundred	 6 tens	 9 ones	100 + 60 + 9 = 169

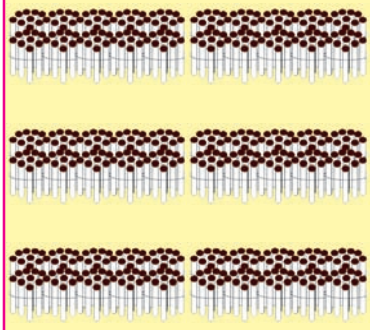
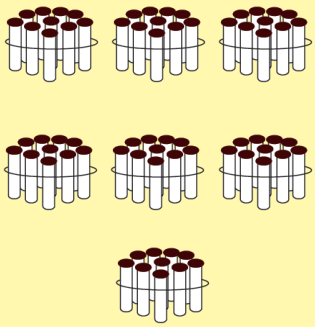
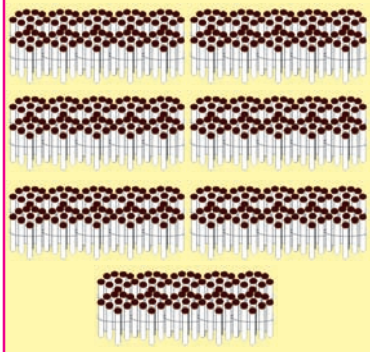
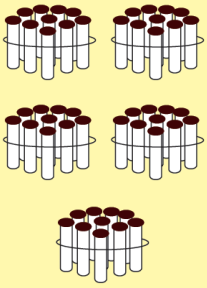
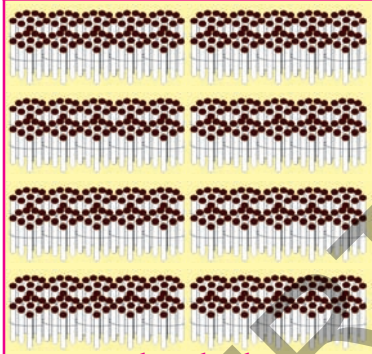
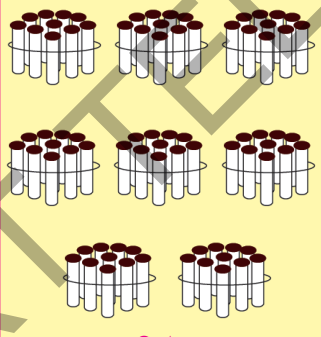
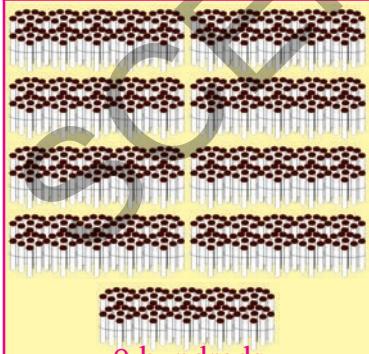
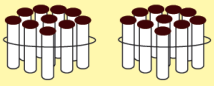
Get your pupils to count in bundles of sticks and the loose sticks in hundreds, tens, ones and help them to understand how to read the numbers from 101 to 169.

4. **Look at the bundles of sticks and the loose sticks. Write the numbers in the blank boxes.**

 2 hundreds	 3 tens	 6 ones	200 + 30 + 6 = 236
 3 hundreds	 4 tens	 9 ones	300 + 40 + 9 =
 4 hundreds		 5 ones	+ + = 405
 5 hundreds	 6 tens		+ + =

Get your pupils to count in hundreds, tens and ones using bundles of sticks and the loose sticks. Let them understand how to write the numbers from 101 to 999.

5. **Look at the bundles of sticks and the loose sticks. Write the correct numbers in the blank boxes.**

 6 hundreds	 7 tens	1 ones	☐ + ☐ + ☐ = ☐
 7 hundreds	 5 tens	 5 ones	☐ + ☐ + ☐ = ☐
 8 hundreds	 8 tens	 2 ones	☐ + ☐ + ☐ = ☐
 9 hundreds	 2 tens	 9 ones	☐ + ☐ + ☐ = ☐

Get your pupils to count in hundreds, tens and ones using bundles of sticks and the loose sticks. Let them understand how to write the numbers from 101 to 999.

6. Observe the following charts that show the place value and the face value of the digits in numbers.

Example-1: Observe the place, place value and face value of the digits in **746.**

Number	7	4	6
Position	hundreds	tens	ones
Place Value	7 × 100 = 700	4 × 10 = 40	6 × 1 = 6
Face Value	7	4	6

Example-2: Observe the place, place value and face value of the digits in **805.**

Number	8	0	5
Position	hundreds	tens	ones
Place Value	8 × 100 = 800	0 × 10 = 0	5 × 1 = 5
Face Value	8	0	5

Now write the place, place value and face value of the digits in **504.**

Number	5	0	4
Position	hundreds	tens	ones
Place Value	☐ × ☐ = ☐	☐ × ☐ = ☐	☐ × ☐ = ☐
Face Value	☐	☐	☐

Look at the following table. Write the place and place value of the digit.

Number	What is the place of 0?	What is the place value?
420	_____	_____
504	_____	_____

Wherever there is 0 in a number, its place value is 0.

Help your pupils to understand the digits in a number, their place values and face values as shown above. Similarly help them to understand the face value of zero.

7. Observe th following notes and coins. Count in Rs.100, Rs.10 and Re.1.

Rama went to a shop. She purchased some notebooks. She has to pay Rs. 123. She had 2 one-hundred notes, 9 ten rupee notes and 10 one-rupee coins. How many notes and coins should she pay the shopkeeper?

To pay Rs. 123, how many notes and coins should I give the shopkeeper?

To pay Rs. 123
Rama must give hundred - rupee
1 note
2 ten - rupee notes, and
3 one rupee coins.

If she has to pay Rs. 345, how many notes and coins must she give the shopkeeper ?

To pay Rs. 345, Rama must give
3 hundred - rupee notes
4 ten - rupee notes and
5 one - rupee coins.

Help your pupils to understand the short and expanded forms of numbers as, shown above.

8. Write the given numbers in the expanded form. Look at the example.

Ex: 256 = 200+50+6

Place value of 2 = 200

Place value of 5 = 50

Place value of 6 = 6

1. The expanded form of 384 is .....

Place value of 3 =

Place value of 8 =

Place value of 4 =

2. The expanded form of 709 is 700 +0+9

Place value of 7 =

Place value of 0 =

Place value of 9 =

3. The expanded form of 650 is .....

Place value of 6 =

Place value of 5 =

Place value of 0 =

9. Write the number in the short form.

Ex 1:- 400 + 60 + 5 = 465

4	0	0
+	6	0
	+	5
4	6	5

Ex 2:- 800 + 0 + 5 = 805

8	0	0
+	0	0
	+	5
8	0	5

1. 900 + 50 + 6 = ...

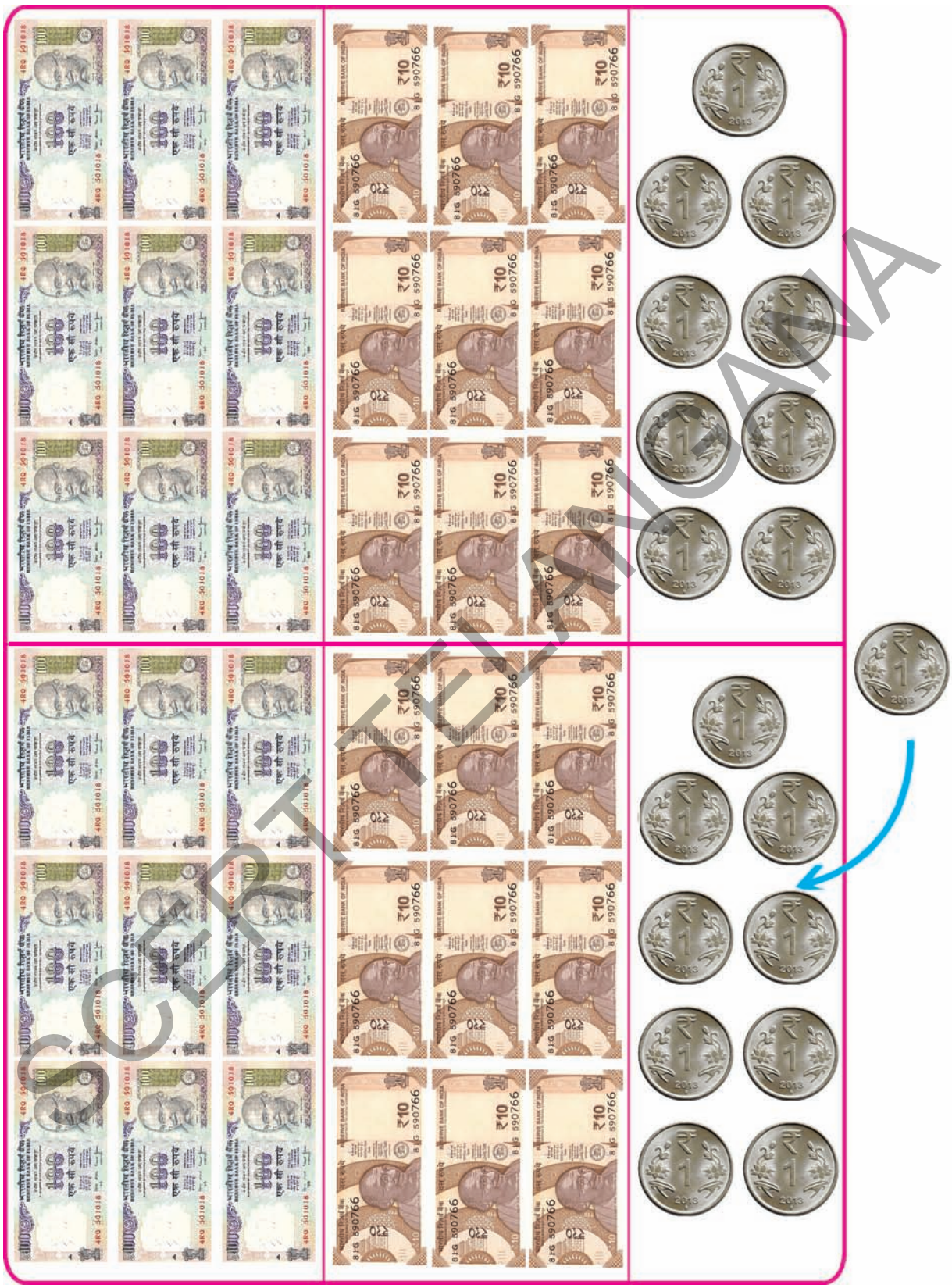
+		
	+	

2. 600 + 30 + 0 = ...

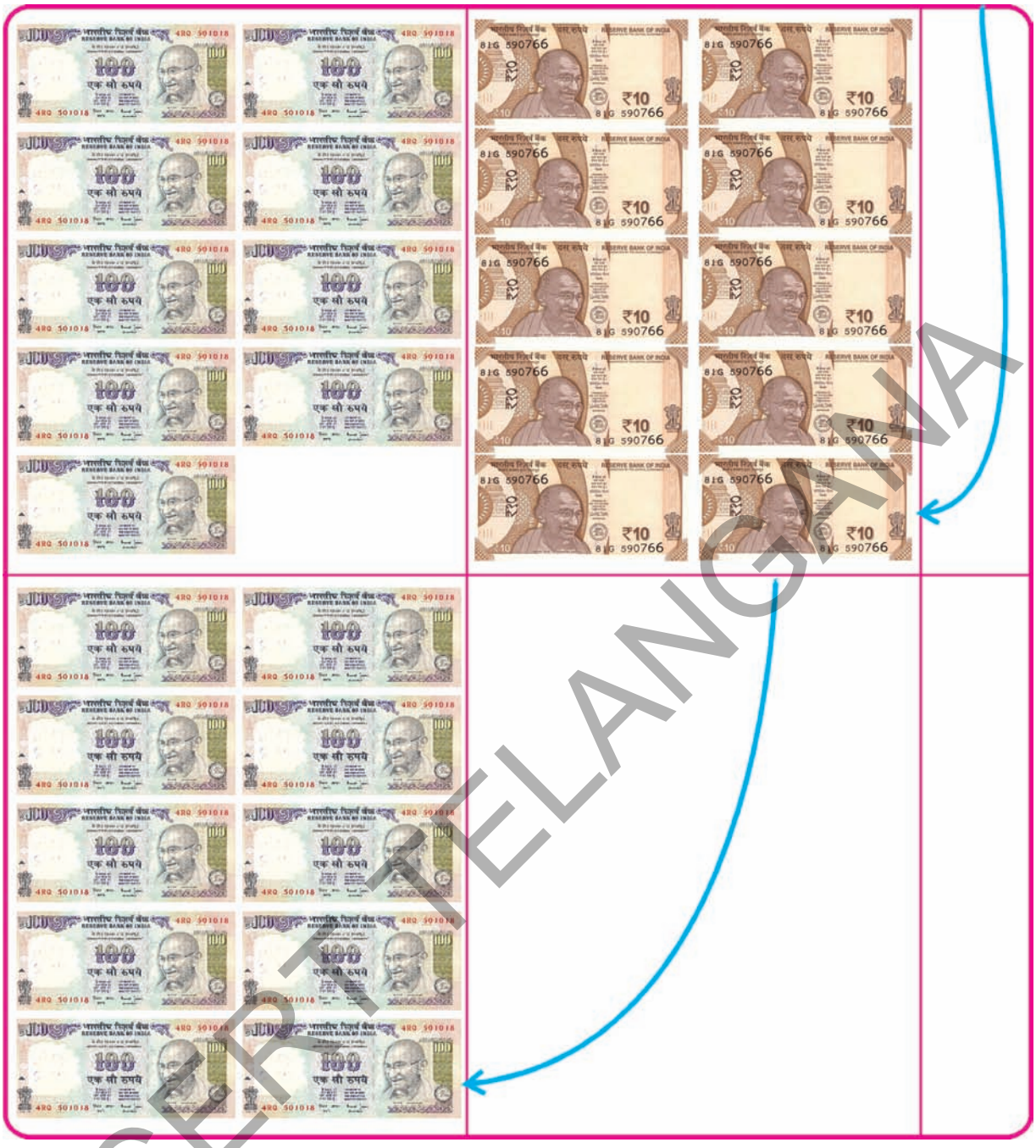
+		
	+	

Help your pupils to understand how to write numbers in the expanded and short forms as shown above.

10. Look at the currency notes and coins. Say how much you get if you add one to 999



Get your pupils to observe the currency notes and coins. Introduce the number 1000 to them.



If you add 1 to 999, it becomes 1000.

999 + 1 = 1000

How many 100s are there in a thousand? How many 10s are there?
How many ones are there ?

1000 = 10 hundreds, 1000 = 100 tens, 1000 = 1000 ones.

Thousand is a four - digit number.

The last number among three - digit numbers is 999.

The biggest number among three - digit numbers is 999.

The first number among four - digit numbers is 1000.

The smallest number among four - digit numbers is 1000.

Get your pupils to observe the currency notes and coins. Introduce the number 1000 to them.

Exercise.

1. Write the correct numbers in the blank boxes.

(a)

101	102	103	104	105	106	107	108	109	110
111			114		116	117		119	120
121		123		125	126		128		
131	132			135		137	138		140
141			144			147		149	
151		153			156		158	159	
161			164			167		169	170
171		173			176				
181	182				186				
191				195		197			200

(b)

201		203		205		207		209	210
211			214			217			220
	222			225			228		
231			234		236			239	
		243		245					250
251									260
		263			266				
271			274				278		
	282			285					290
291						297			

Help your pupils to understand the instructions and fill the grids by themselves.

(c)

301	302	303	304	305	306	307	308	309	310
311									320
321									330
									340
									350
									360
									370
									380
									390
									400

(d)

401	402	403	404	405	406	407	408	409	410
411									420
421									430
									440
									450
									460
									470
									480
									490
									500

Help your pupils to to fill the grids by themselves as per the instructions.

(e)

501	502	503	504	505	506	507	508	509	510
511									520
521									530
									540
									550
									560
									570
									580
									590
									600

(f)

601	602	603	604	605	606	607	608	609	610
611									620
621									630
									640
									650
									660
									670
									680
									690
									700

Help your pupils to solve the exercises by themselves as per the instructions.

(g)

701	702	703	704	705	706	707	708	709	710
711									720
721									730
									740
									750
									760
									770
									780
									790
									800

(h)

801	802	803	804	805	806	807	808	809	810
811									820
									830
									840
									850
									860
									870
									880
									890
									900

Help your pupils to solve the exercises by themselves as per the instructions.

(i)

901	902	903	904	905	906	907	908	909	910
911									920
921									930
									940
									950
									960
									970
									980
									990

2. Write the correct numbers in the blank boxes.

(a)

927	928	

(b)

	157	158

(c)

646		648

(d)

	214	

(e)

	800	

(f)

	749	

Help your pupils to understand the instructions to solve the above problems by themselves.

3. Observe the following currency notes and coins. Write the correct numbers in the blank boxes.

Ex:

300 + 20 + 5 = 325

____ + ____ + ____ = ____

4. Write the place and place value of the digit underlined in the number.

Number	Place of the digit Underlined	Place value
Example:- 2 4 9	hundreds	200
9 0 9		
4 8 7		
5 5 5		

5. Write the number in the expanded form.

Example:- 617 = 600 + 10 + 7

(a) 918 = ____ + ____ + ____

(b) 807 = ____ + ____ + ____

(c) 794 = ____ + ____ + ____

(d) 543 = ____ + ____ + ____

(e) 496 = ____ + ____ + ____

(f) 333 = ____ + ____ + ____

Help your pupils to understand the instructions to solve the above problems by themselves.

6. Write the number in the short form.

Example:- 600+40+9 = 649

(a) 700+30+6 = ☐

(b) 900+50+4 = ☐

(c) 400+40+4 = ☐

(d) 900+20+4 = ☐

(e) 300+10+4 = ☐

7. Expand the given numbers and write each one in words.

	Expansion	In words
ఉదా: 175 =	100 + 70 + 5	one hundred and seventy five
(ఆ) 782 =	700 + 80 + 2	
(ఆ) 976 =		
(ఇ) 999 =		
(ఈ) 407 =		
(ఉ) 340 =		

8. Write the following numbers given in words using digits.

Ex: one hundred and forty three = 143

(a) two hundred and fifty eight = ☐

(b) three hundred and five = ☐

(c) four hundred and eighty six = ☐

(d) nine hundred and seven = ☐

(e) five hundred and twenty eight = ☐

(f) one hundred and eleven = ☐

(g) eight hundred and ninty eight = ☐

Help your pupils to understand the instructions and let them solve the above problems by themselves.

9. Solve the following problems.

1. Write three digit numbers using 4, 6 and 9.

469, 694, 496, ..., ..., ...,

2. Write three numbers that have 5 in the hundreds place.

502, ..., ..., ..., ..., ...,

3. Write 5 numbers between 800 and 900. That have 5 in its tens place.

856, ..., ..., ..., ..., ...,

4. Identify between which numbers the given numbers lie, put a '✓'. Look at the example.

Example:-	885	800—850	850—900 ✓	750—800
(a)	632	600—650	650—700	700—750
(b)	304	250—300	300—350	350—400
(c)	287	200—300	700—800	600—700
(d)	654	500—600	400—500	600—700
(e)	707	600—700	700—800	800—900

10. Observe the numbers in each series. Write the next 5 numbers for each series. Say the reason.

(a) 100, 200, 300, ..., ..., ..., ..., ..., ...

(b) 110, 120, 130, ..., ..., ..., ..., ..., ...

(c) 350, 400, 450, ..., ..., ..., ..., ..., ...

(d) 400, 425, 450, ..., ..., ..., ..., ..., ...

(e) 900, 800, 700, ..., ..., ..., ..., ..., ...

Help your pupils to understand the instructions and let them solve the above problems by themselves.

11. Match the following.

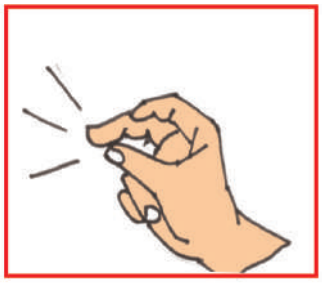
the biggest 2 - digit number	475
the smallest 3 - digit number	424
a number with 7 in the tens place	99
the place value of 5 in 456	hundreds
the place of 7 in 795	367
the number before 425	100
the face value of 8 in 821	8
the short form of 300 + 60 + 7	50
the place of 8 in 698	350
the place value of 0 in 705	ones
the number that indicates 3 hundreds, 5 tens and 0 ones	0

Help your pupils to understand the instructions and let them solve the above problems by themselves.

12. Play the game:

CLAP - SNAP - TAP

To snap means to make a sharp noise using your fingers.



SNAP = one (1)

To clap means to hit your open hands to make a sound.

CLAP = ten (10)

To tap means to hit something to make a sound.

TAP = hundred

The teacher must make the above sounds - Snap, Clap and Tap. The pupils must say the numbers based on the sound made by the teacher.

Example:-

TAPS	CLAPS	SNAPS	Place Value			Number
2	5	8	200	50	8	258

In this manner the pupils must say the place value and the numbers as per the sounds made - Snap, Clap, Tap. If any pupil makes a mistake, he is out of the game. The game continues. The one who lasts till the end is declared the winner.

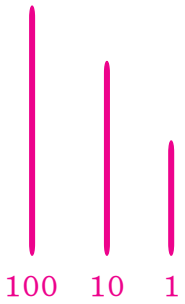
Get your pupils to play this game. Help them to understand the digits and their place values.

13. Play a game with sticks.

1 long stick = 100

1 medium stick = 10

1 short stick = 1



Two pupils must play this game. Take 9 sticks of long, medium and short sticks (9 sticks each). Have them on your palm, shake them and drop them on the floor. Pick each stick without moving the other sticks. Count the value of sticks that was picked as per the values assigned the sticks given above. Say the total value. If, while picking sticks, other sticks are moved, the second player gets the chance. In this manner the two pupils play alternately. The one who gets a bigger number scores a point.

Example: The sticks picked up

Big sticks	Medium sticks	Short sticks	The number formed
4	6	5	400 + 60 + 5 = 465

Play like this one after another. At the end one who gets more points wins the game.

Get your pupils to play this game, as per the instructions. Help them to understand digits and their place values.

4 Comparing Three-Digit Numbers

1. Look at the notes and coins. Say which are of more value and which are of less value.

One day Rangamma and Sitamma sold vegetables at the weekly market. They got the following notes and coins shown under their names. Who earned more ?

Rangamma

Sitamma

Rangamma earned : ☐ Sitamma earned : ☐

Get your pupils to compare three-digit numbers using notes and coins. Help them to understand the process of comparison.

In 452, there are 4 hundreds In 381, there are 3 hundreds.

Rs. 300 is less than Rs. 400, It means Rangamma earned more.

Rs. 381 is less than Rs.452, that is $381 < 452$ or

Rs. 452 is more than Rs.381, that is $452 > 381$

On another day, Rangamma and Sitamma sold vegetables and they got the following notes and coins. How much was earned by each of them?

Rangamma earned : [ ] Sitamma earnd : [ ]

It means they earned equally. $216 = 216$

Get your pupils to compare three-digit numbers using notes and coins. Help them to understand the process of comparison.

2. Look at the notes and coins shown below. Say which are more and which are less.

354			
321			

In 354 and 321 there are equal number of hundreds.
Now let us observe the tens.
In 354 there are 5 tens.
In 321 there are 2 tens.
There are more tens in 354 than 321.
Therefore 354 is bigger.
We say 354 is bigger than 321
We write 354 > 321
In the same manner 321 is less than 354
We write it as 321 < 354

In 3-digit numbers, if the hundreds are the same, the one with more tens is bigger.

Get your pupils to compare three- digit numbers using notes and coins. Help them to understand the process of comparison.

3. Look at the notes and coins shown below. Say which are more and which are less.

231			
235			

In both 231 and 235, the hundreds and tens are equal.

Now observe the ones.

In 231 there are 1 ones.

In 235 there are 5 ones.

Therfore 235 is bigger.

It means 235 is bigger than 231. **235 > 231**

231 is smaller than 235. **231 < 235**

In three-digit numbers, if hundreds and tens are equal, the one with more ones is the bigger number.

Get your pupils to compare three- digit numbers using notes and coins. Help them to understand the process of comparison.

Exercise

1. Identify the bigger number and mark it '✓'.

Ex: 294, 319 ✓

(A) 756, 432

(B) 670, 679

(C) 550, 543

(D) 856, 851

2. Identify the smaller number and draw ◯ around it.

Ex: (738), 769

(A) 463, 154

(B) 537, 645

(C) 248, 264

(D) 707, 705

3. Write the correct symbol >, < , = in the blank boxes.

Ex:- 304 [>] 201; 475 [<] 616; 254 [=] 254

(A)	620		580	(E)	520		520
(B)	937		975	(F)	987		965
(C)	763		746	(G)	736		746
(D)	864		953	(H)	864		864

4. Write the following sets of numbers in ascending and descending orders.

	Numbers	Ascending orders	Descending order
Ex:-	367, 212, 684, 801	212 367 684 801	801 684 367 212
(A)	405, 408, 500, 306		
(B)	684, 648, 635, 653		
(C)	339, 333, 337, 335		
(D)	569, 575, 557, 596		

Help your pupils to understand the instructions for each problem. Get them to solve the problems by themselves.

5. Write three-digit numbers using 7, 8 and 9.

789 ☐ ☐ ☐ ☐ ☐

The smallest of these numbers ☐ The biggest is ☐

The ascending order of these numbers: ☐ ☐ ☐ ☐ ☐ ☐

The descending order is: ☐ ☐ ☐ ☐ ☐ ☐

6. Write the 10 three-digit numbers which have 9 in the tens place.

☐ ☐ ☐ ☐ ☐

☐ ☐ ☐ ☐ ☐

The biggest among these numbers is ☐ The smallest number is ☐

7. Write 3 two-digit numbers and 3 three-digit numbers using 7, 4 and 6.

Ex: Two - digit numbers 74, 67, 46, ..., ..., ...

Three - digit numbers 476, 467, 674, ..., ..., ...

Now write numbers correctly in the blank boxes according to the symbol > (or) < between the boxes.

Ex: 74 > 46

(A) ☐ < ☐

(B) ☐ > ☐

Ex: 467 < 674

(C) ☐ < ☐

(D) ☐ > ☐

Get your pupils to understand the instruction for each exercise. Let them solve the problems by themselves.

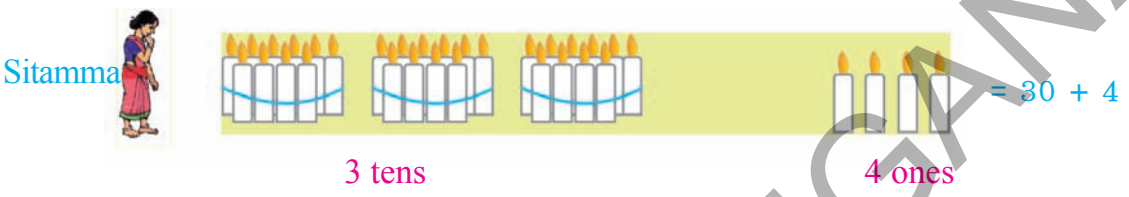
5 Addition of Numbers

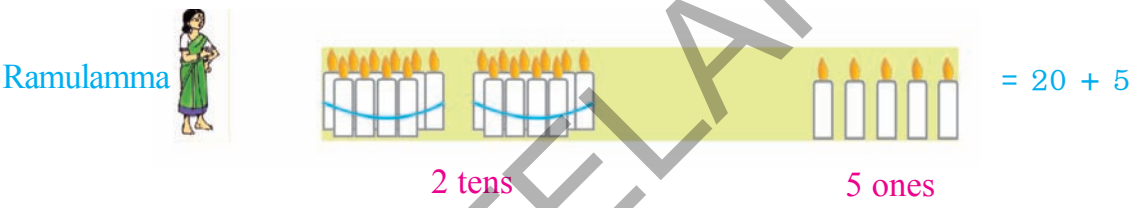
Look at the candles. Say what their total is.

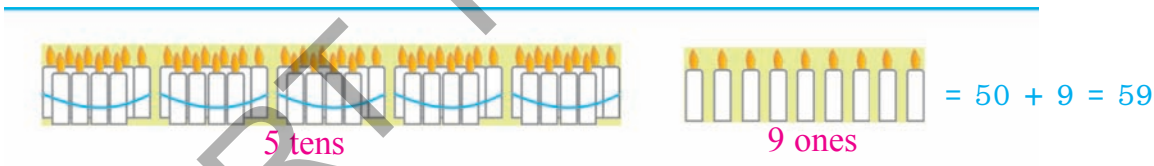
How many candles are there?

Sitamma and Ramulamma make candles. One day Sitamma made 34 and Ramulamma made 25 candles. They wanted to sell them.

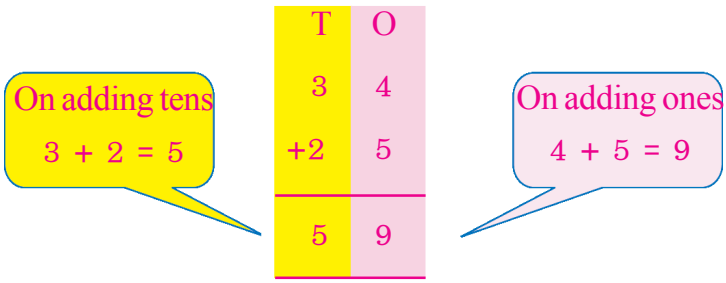
They counted the candles they made as shown below.







We can add the above numbers in a different way also.



Get your pupils to understand the process of adding numbers. Let them add numbers as shown above.

Exercise

1. Add the following pairs of numbers using bundles of sticks.

(A) 5 2 + 2 1	(B) 2 4 + 2 2	(C) 3 0 + 2 4	(D) 5 2 + 2 1
(E) 1 8 + 2 1	(F) 1 6 + 3 3	(G) 3 7 + 5 1	(H) 1 3 + 8 1
(I) 7 1 + 2 6	(J) 3 0 + 2 0	(K) 6 2 + 2 5	(L) 3 4 + 4 3
(M) 1 2 + 2 6	(N) 1 4 + 6 3	(O) 3 5 + 2 1	(P) 2 5 + 4 0
(Q) 5 5 + 4 3	(R) 4 3 + 2 1	(S) 4 0 + 3 8	(T) 6 0 + 2 3
(U) 1 5 + 1 2	(V) 1 2 + 5 3	(W) 6 6 + 1 3	(X) 5 6 + 1 2

Get your pupils to understand the instruction. Let them solve the problems by themselves.

2. Observe the example. Add the given numbers in the same way.

23 + 32 = ?

Ex:- 23 = 2 tens + 3 ones = 20 + 3 = 23

32 = 3 tens + 2 ones = 30 + 2 = 32

\+

= 5 tens + 5 ones = 50 + 5 = 55

A) 45 + 24 = ?

45 = ☐ tens + ☐ ones = ☐ + ☐ = ☐

24 = ☐ tens + ☐ ones = ☐ + ☐ = ☐

\+

☐ tens + ☐ ones = ☐ + ☐ = ☐

B) 54 + 24 = ?

54 = ☐ tens + ☐ ones = ☐ + ☐ = ☐

24 = ☐ tens + ☐ ones = ☐ + ☐ = ☐

\+

☐ tens + ☐ ones = ☐ + ☐ = ☐

3. Add the following pairs of numbers..

(A) 46 + 23	(B) 37 + 52	(C) 30 + 66	(D) 45 + 54
(E) 18 + 20	(F) 26 + 32	(G) 54 + 25	(H) 47 + 12
(I) 34 + 32	(J) 68 + 21	(K) 52 + 25	(L) 16 + 71
(M)72 + 10	(N) 84 + 12	(O) 69 + 20	(P) 26 + 62

Get your pupils to understand the instructions and let them solve the above problems by themselves.

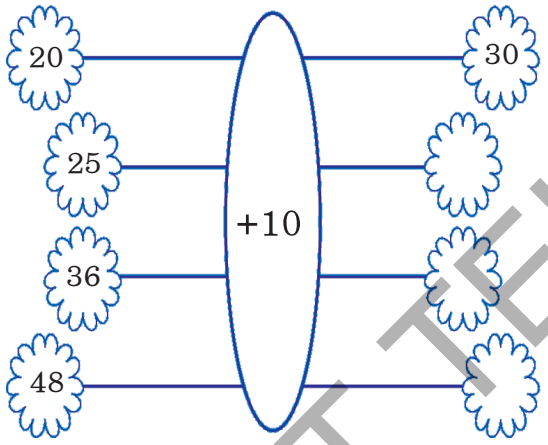
4. Add the numbers given on the left. Draw ◯ around the total of them.

Example:

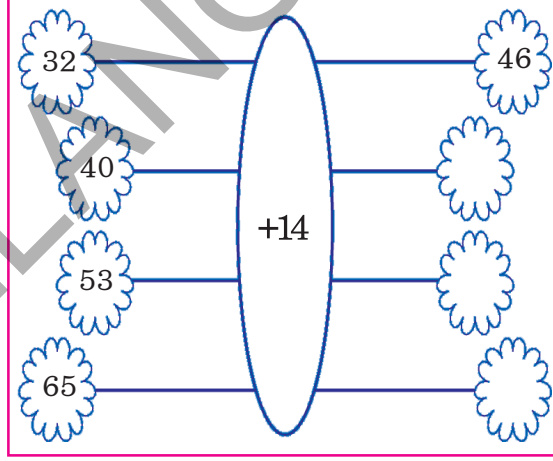
42 + 26	62	68	88
75 + 24	99	89	79
22 + 6	28	48	38
51 + 17	78	68	88
43 + 6	49	59	69
25 + 31	66	46	56

5. Add the numbers shown below.

A) Add 10



B) Add 14



6. Add the numbers in the columns and rows. Write the totals as shown in the example

+	21	32	24	34
13	34			
14				
15				

Ex:- 13 + 21 = 34 .....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

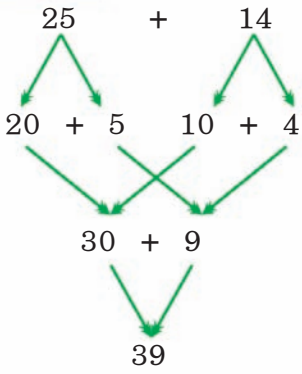
.....

Get your pupils to understand the instructions for the above problems. Let them solve them by themselves.

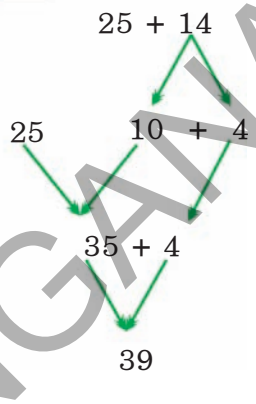
7. Observe how Uma and Suma added the numbers, orally.

Example:- **25 + 14 = ?**

Uma

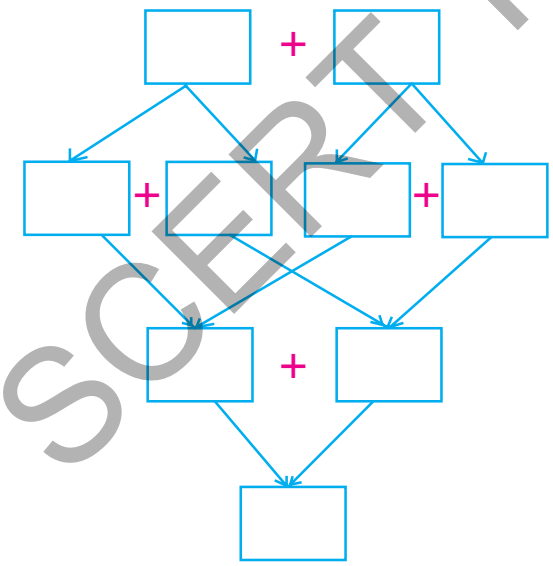


Suma

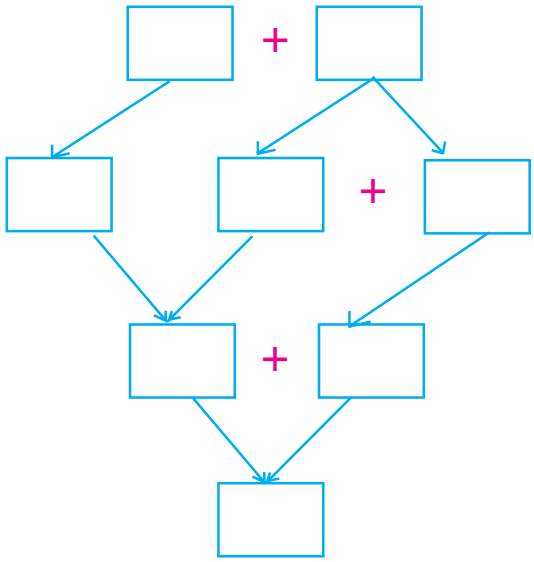


You also add the following numbers as shown above.

(A) **45 + 12**



(B) **45 + 12**



Get your pupils to understand the instruction and let them solve problems by themselves.

8. Look at the following chart. There are 4 pairs of numbers in each row. The total of one of those pair is different. Identify and draw ⬭ around it. Observe the example.

Ex:	43 + 3;	33 + 13;	23 + 23;	33 + 14
A)	26 + 12;	21 + 17;	24 + 34;	18 + 20
B)	52 + 7;	57 + 2;	51 + 6;	50 + 9
C)	50 + 10;	50 + 20;	30 + 30;	40 + 20
D)	16 + 33;	15 + 34;	23 + 36;	17 + 32

9. Play the game.

- Ten pupils can play this game.
- Make 50 paper slips with numbers 1 to 50 on them. Put them in a box.
- Each pupil picks up 2 slips. Add the two numbers on the slips.
- The pupil whose total is least is out of the game.
- The other pupils pick up two slips each and continue the game.
- The pupil who remains till the end is the winner.

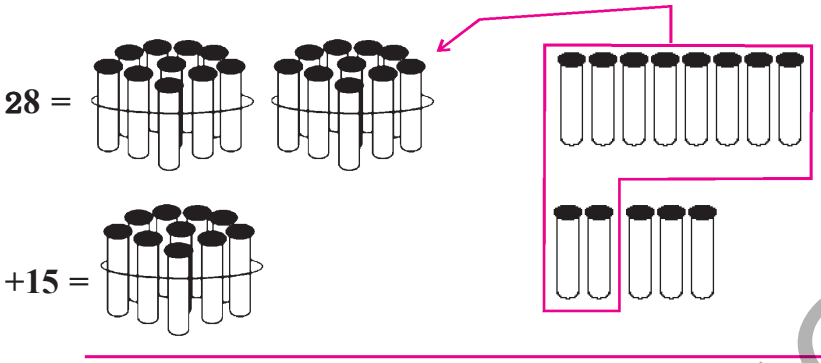
Get your pupils to play the game as per the instructions. Let them understand adding numbers orally. Let them also identity errors made by others.

6 Addition of Numbers (with Regrouping/Carry over)

1. Say how much they have together.

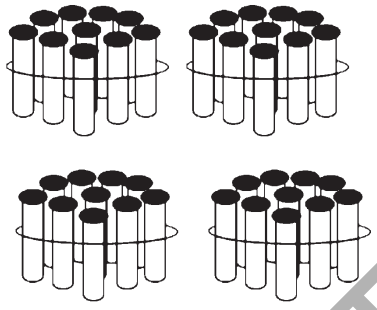
Ramu has Rs. 28. Ranga has Rs. 15. Let us find out how much they have together.

Let us solve the above problem using bundles and loose sticks.



20 + 8

10 + 5



30 + 13

30 + 10 + 3

= 40 + 3 = 43

We can solve the above problem in this way also.

28 = 2 tens + 8 ones

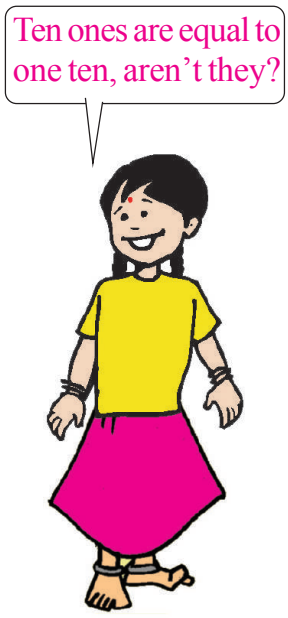
+ 15 = 1 ten + 5 ones

= 3 tens + 13 ones

= 3 tens + 10 ones + 3 ones

= 3 tens + 1 ten + 3 ones

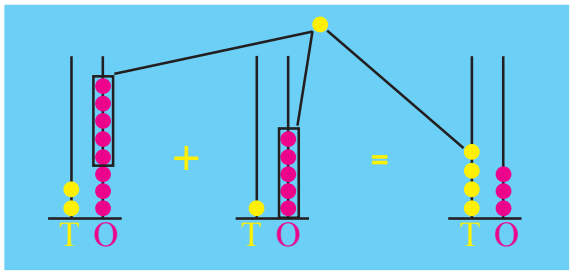
= 4 tens + 3 ones = 40 + 3 = 43



Get your pupils to use notes and coins or bundles of sticks and loose sticks to add numbers when regrouping/carry over is done. Let them solve the problems on the next page.

2. Observe how the two numbers are added.

Ten	Ones
2	8
+1	5



When we add tens
2 tens + 1 ten = 3 tens
3 tens + 1 ten = 4 tens

T	O
(1)	
2	8
+ 1	5
4	3

When we add ones
8 ones + 5 ones = 13 ones
13 ones = 1 ten + 3 ones

Example:-

T	O
(1)	
3	9
+ 4	3
8	2

Answer:

(A)

T	O
4	5
+ 4	9

(B)

T	O
2	7
+ 5	6

(C)

T	O
7	9
+ 1	8

(D)

T	O
6	3
+ 2	8

(E)

T	O
5	9
+ 3	2

Get your pupils to understand addition of digits in ones place and those in tens place. Let them solve all the problems by themselves.

Exercise

1. Fill in the blank boxes with the correct numbers.

(A) How much is **48 + 28** ?

48 = ☐ tens + ☐ ones

28 = ☐ tens + ☐ ones

☐ tens + ☐ ones

☐ ten + ☐ ones

☐ + ☐ →

T	O
◯	
4	8
+2	8

(B) How much is **24 + 49** ?

24 = ☐ tens + ☐ ones

49 = ☐ tens + ☐ ones

☐ tens + ☐ ones

☐ ten + ☐ ones

☐ + ☐ →

T	O
◯	
2	4
+4	9

Get your pupils to understand the instructions for problems 1 to 9. Let them solve the problems by themselves.

2. Add the numbers using bundles of sticks and loose sticks.

(a)	4 3	(b)	3 6	(c)	5 6	(d)	7 4
	+2 8		+4 7		+2 9		+ 9
(e)	4 5	(f)	5 4	(g)	2 7	(h)	5 3
	+2 6		+3 6		+4 9		+3 7
(i)	6 1	(j)	2 7	(k)	7 3	(l)	2 9
	+2 9		+5 3		+1 9		+4 5

3. Add the following numbers.

(a)	37 + 28	=	(b)	58 + 24	=
(c)	24 + 6	=	(d)	9 + 76	=
(e)	46 + 27	=	(f)	17 + 73	=
(g)	56 + 14	=	(g)	49 + 26	=

4. Solve the problem orally.

Ex: There are 68 guava and 24 sweet lime trees in a garden. What is the total number of trees in that garden?

Guava trees = 68
Sweet lime trees = 24
Total trees = 92

- In a cricket match Laxman made 47 runs and Dravid made 26 runs. How many runs did they make together?

Runs Laxman made = 47
Runs Dravid made = 26
They both made =

Get your pupils to understand the instructions for each problem. Let them solve the problems by themselves.

5. Observe the grid given below. Find out the numbers which add up to 36. Write those pairs as shown in the example.

22	18	10	(19)
(17)	15	21	32
12	39	18	33
26	14	34	31

Example: 19 + 17 = 36

....

....

....

....

6. Observe the fisrt three numbers on each line. Write the next three numbers in the series. Look at the example.

Ex:	2,	4,	6,	8, ...	10, ...	12 .....
(A)	5,	10,	15,	.....,	.....,	.....
(B)	3,	5,	7,	.....,	.....,	.....
(C)	20,	30,	40,	.....,	.....,	.....

Get your pupils to understand the instructions for each problem. Let them solve the problems by themselves.

7. Observe the pairs of numbers in each row. The sum of one pair is different. Identify and draw " ◯ " around it. One example is given.

Ex:	27 + 46	16 + 67	26 + 57	36 + 47
(A)	18 + 19	20 + 17	20 + 19	15 + 22
(B)	27 + 35	30 + 12	40 + 22	38 + 24
(C)	47 + 35	58 + 24	40 + 48	68 + 14

8. Look at the numbers in the first column. Add each pair. Mark the range in which their sum will lie ✓.

		30 – 40	40 – 50	50 – 60	60 – 70
Ex:-	34 + 12		✓		
(A)	45 + 20				
(B)	27 + 11				
(C)	36 + 27				
(D)	28 + 25				

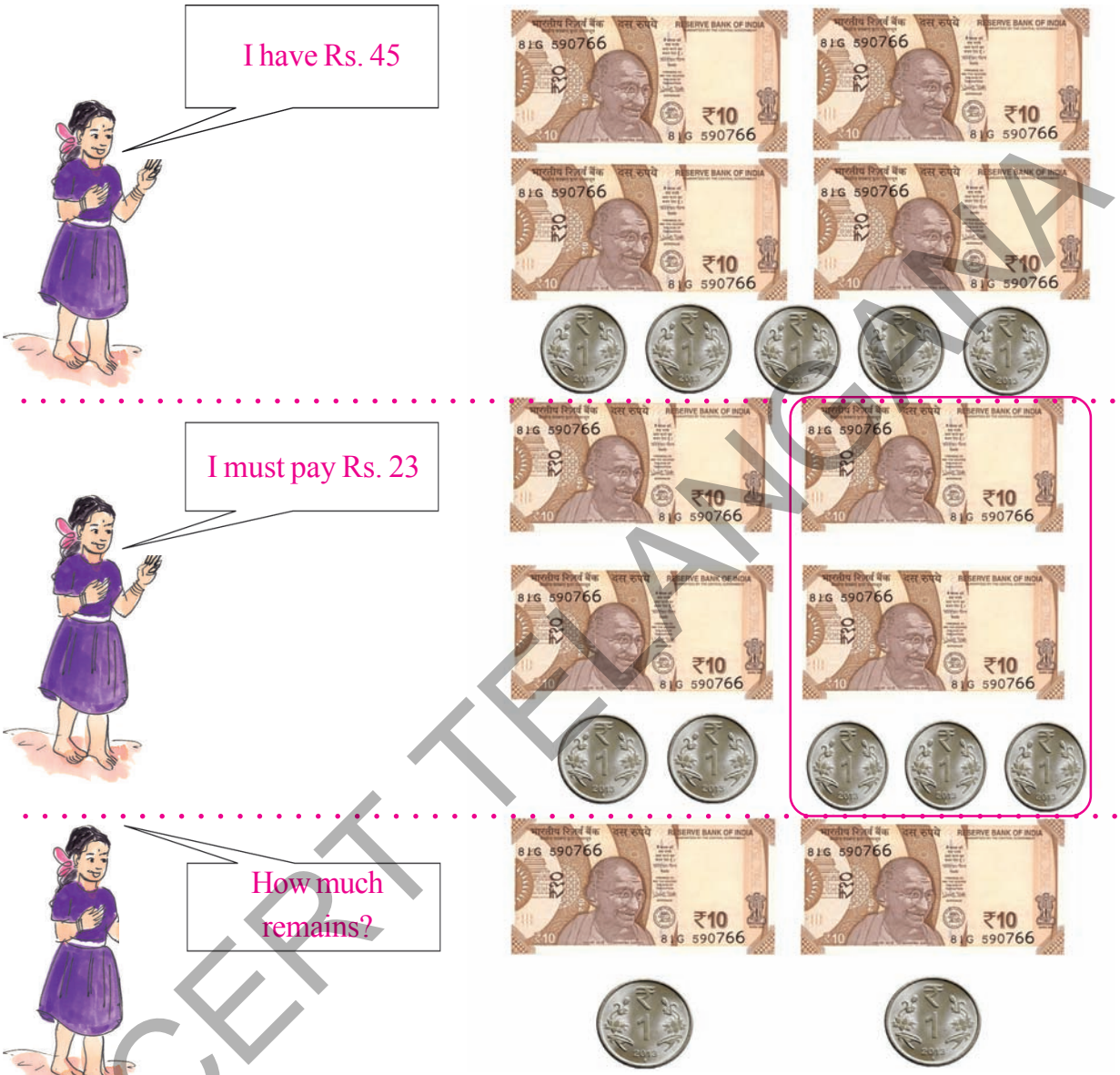
9. Observe how Soni added two numbers. Correct the error / mistake. if any. Write the correct answer in the brackets ( ).

(A)	(B)	(C)	(D)	(E)
48	53	60	39	76
+24	+22	+30	+17	+15
612	85	80	416	61
( )	( )	( )	( )	( )

Get your pupils to understand the instruction for each problem. Let them solve problems by themselves.

7 Subtraction

Look at the notes and coins. How much remains?



We can show this process like this.

4	5
− 2	3
2	2

The symbol for subtraction is '−'

Get your pupils to understand the concept of subtracton. Let them use notes and coins. Introduce the symbol '—' (minus) to them.

Exercise

1. Subtract numbers using the method of expansion of numbers.

Ex:-

		tens		ones		
45	=	4	+	5	=	40 + 5
− 23	=	2	+	3	=	20 + 3
22	=	2	+	2	=	20 + 2

This means

T	O
4	5
− 2	3
2	2

or 45 − 23 = 22

(A)

T	O					
6	5	=	□	+	□	
− 3	0	=	□	+	□	
		=	□	+	□	

(B)

T	O					
3	9	=	□	+	□	
−	8	=	□	+	□	
		=	□	+	□	

(C)

T	O					
8	5	=	□	+	□	
− 4	3	=	□	+	□	
		=	□	+	□	

(D)

T	O					
6	5	=	□	+	□	
− 3	5	=	□	+	□	
		=	□	+	□	

(E)

T	O					
9	5	=	□	+	□	
− 9	1	=	□	+	□	
		=	□	+	□	

(F)

T	O					
5	8	=	□	+	□	
− 3	2	=	□	+	□	
		=	□	+	□	

Get your pupils to understand the instruction for each problem. Let them solve the problems by themselves.

2. Subtract the numbers using the bundles of sticks and loose sticks.

(a) 48 − 26 = ____

(b) 59 − 24 = ____

(c) 68 − 20 = ____

(d) 99 − 69 = ____

(e) 29 − 5 = ____

(f) 69 − 26 = ____

(g) 74 − 34 = ____

(h) 85 − 30 = ____

(i) 66 − 23 = ____

(j) 97 − 41 = ____

(k) 37 − 15 = ____

(l) 49 − 4 = ____

(m) 58 − 10 = ____

(n) 79 − 69 = ____

(o) 39 − 3 = ____

3. Subtract the numbers given.

Ex: 54 − 31 = 23

(a) 35 − 23 = ☐

(b) 65 − 24 = ☐

(c) 76 − 30 = ☐

(d) 49 − 5 = ☐

(e) 75 − 15 = ☐

(f) 83 − 23 = ☐

(g) 66 − 61 = ☐

4. Subtract the number in the top row from that in the first column.

−	60	50	40	30
90	30			
80				
70				

Ex:- 90 − 60 = 30

....

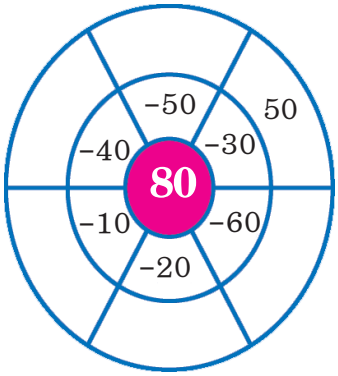
....

....

....

Get your pupils to understand the instruction for each problem. Let them solve the problems by themselves.

5. Subtract the numbers in the inner circle from 80 shown in the centre.



Ex:- 80 − 30 = 50 ....

....

....

6. Write the correct symbol (+ or -) in the blank boxes.

35		12	=	23
47		13	=	60
88		22	=	66

7. Write subtraction problems such that the difference is 10.

Example: 20 − 10 = 10

(a) ..... (b) .....

(c) ..... (d) .....

8. Observe the examples. Fill in the blank boxes with the correct numbers.

Example:

60	−	23	=	37
−		−		−
17	−	12	=	5
=		=		=
43	−	11	=	32

a.

19	−	4	=	
−		−		−
1	−		=	0
=		=		=
	−	3	=	15

Get your pupils to understand the instruction for each problem. Let them solve the problems by themselves.

9. Subtract the numbers in the first column of the following grid. Then identify where your answer lies. Observe the example.

Ex.

	20 – 30	30 – 40	40 – 50	50 –60
39 – 14	✓			
66 – 33				
98 – 50				
57 – 12				
65 – 14				

10. Fill in the blank boxes with the correct numbers.

(a)	30 – 0 = ☐		(d)	75 – 75 = ☐
(b)	95 – ☐ = 80		(e)	25 – ☐ = 25
(c)	12 – 5 = ☐		(f)	60 – 5 = ☐

11. Fill in the blank boxes with the correct numbers.

(A)

$$\begin{array}{r} 3\ 6 \\ -\ 1\ \square \\ \hline 2\ 3 \\ \hline \end{array}$$

(B)

$$\begin{array}{r} 4\ 7 \\ -\ 2\ \square \\ \hline 2\ 5 \\ \hline \end{array}$$

(C)

$$\begin{array}{r} 7\ 5 \\ -\ 2\ \square \\ \hline 5\ 0 \\ \hline \end{array}$$

(D)

$$\begin{array}{r} 6\ 8 \\ -\ 3\ \square \\ \hline \square\ 0 \\ \hline \end{array}$$

Get your pupils to understand the instruction for each problem. Let them solve the problems by themselves.

12. Fill in the blank boxes with the correct numbers.

36	–	20	=	
+		+		+
17	–	12	=	
=		=		=
	–		=	

13. Observe the subtraction of pairs of numbers in each row. One of the answers is different. Identify and circle it '◯'. One example is given.

Ex:	47 – 30;	37 – 20;	67 – 50;	87 – 40
a)	36 – 21;	67 – 52;	46 – 32;	26 – 11
b)	59 – 42;	77 – 16;	47 – 30;	38 – 21
c)	48 – 15;	77 – 44;	68 – 35;	76 – 53

14. Observe the series of numbers. Write the next two numbers in each row.

Example: 10, 8, 6 , __4__, __2__,
a) 9, 7, 5, _____, _____
b) 12, 9, 6, _____, _____
c) 30, 25, 20, _____, _____

Get your pupils to understand the instruction for each problem. Let them solve the problems on their own.

8 Subtraction of Numbers

(Using Regrouping)

1. Observe the note and coins . Say how much is 45 - 27.

Lata went to a shop with Rs. 45. She bought things for Rs. 27. She gave the shopkeeper Rs. 45 she had. He gave her Rs. 8. She doubted whether he gave her the correct amount. She calculated as below. You observe her calculation.

T	O
4	5
– 2	7

We cannot subtract 7 ones from 5ones. Then how to do that?

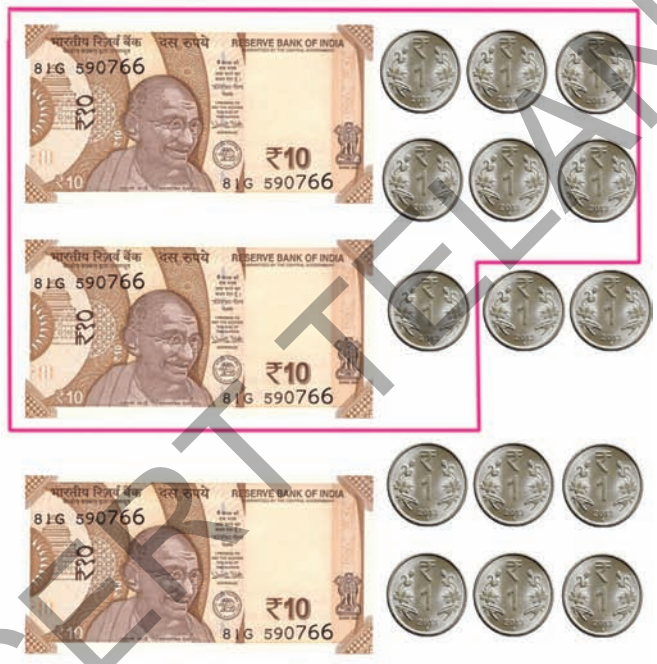
T	O
4	5
– 2	7

It is possible if we change one ten as 10 ones. One ten = ten ones.

Get your pupils to understand the process of regrouping before subtracting certain numbers. Let them use notes and coins for subtraction of numbers with two digits.

T	O
4	5
– 2	7

When one ten is changed into ones, 3 tens remain. Now if we add 10 ones and 5 ones,



T	O
4	5
– 2	7

If 27 (2 tens and 7 ones) are subtracted from 45.

T	O
4	5
– 2	7
1	8

One ten and 8 ones remain. That is 18 remains.

Get your pupils to understand the process of subtraction by exchange of places using notes and coins.

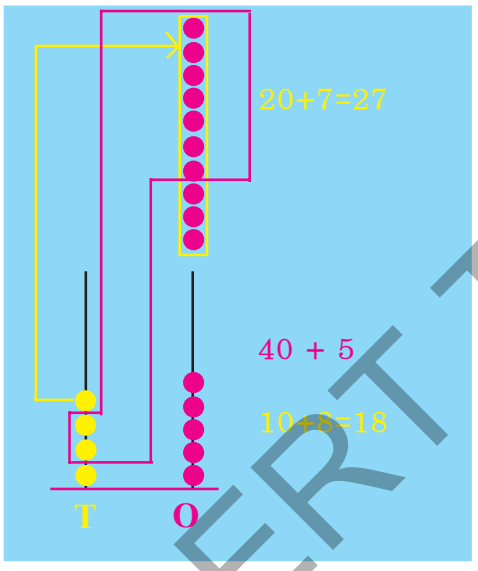
We can do it in a different way also.

* If one of the 4 tens changed into ones, we have 3 tens.
* 3 tens -2 tens = one ten.

	T	O
	4	5
−	2	7
	1	8

* 5 ones are less than 7 ones
* If we change 1 ten out of 4 tens into ones, and add to 5, we get 15.
* 15 ones - 7 ones = 8 ones

or



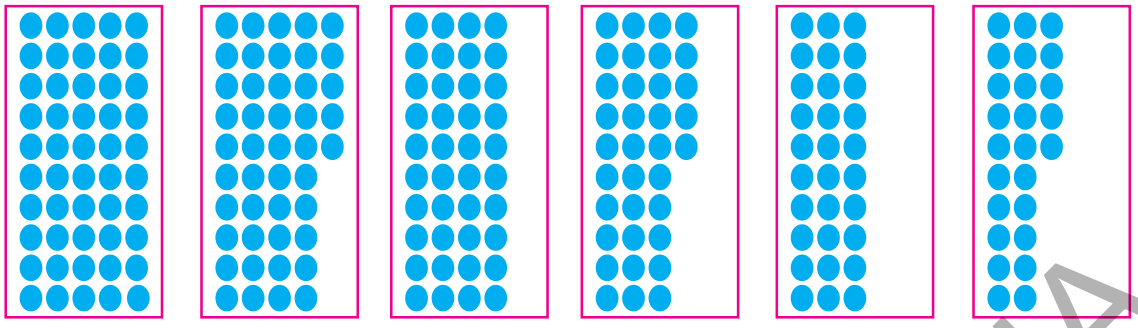
	T	O
	3	15
	4	5
−	2	7
	1	8

1 ten = 10 ones

Get your pupils to understand the process of borrowing before subtracting certain numbers. Let them use notes and coins for subtracton of numbers with two digits.

2. Observe the series of numbers. Say what you understood.

50, 45, 40, _____, _____, _____



50	45	40			

If you observe the dots, they are decreasing at the rate of 5. Therefore we can write the next three numbers in the above series.

50, 45, 40, 35, 30, 25

In the same manner write the next three numbers in the following series.

a) 50, 48, 46, _____, _____, _____

b) 80, 75, 70, _____, _____, _____

Play this game.

- Two pupils can play this game.
- Make a dice with 0 to 5 on its faces and another with 4 to 9 on its faces.
- Throw them both at a time.
- Write two numbers formed with the two digits you see on the two dice. For example, if the digits on the dice are 4 and 5. The numbers you write are 45 and 54.
- Subtract the smaller number from the bigger one.
  Ex: 54 – 45 = 09
- The second pupil also does like this
- The pupil whose result of subtraction is more gets one point.
- The pupils do this five times.
- The pupil who scores more is the winner.

Get your pupils to identify the difference between consecutive numbers in a series. Let them write the next numbers. Let them play the game described above.

Exercise

1. Subtract the numbers given below.

(a) 3 4 − 1 8 = _____

(b) 8 2 − 5 7 = _____

(c) 6 4 − 3 9 = _____

(d) 9 2 − 4 6 = _____

(e) 4 8 − 3 9 = _____

(f) 6 5 − 4 8 = _____

(g) 7 6 − 5 8 = _____

(h) 5 0 − 2 8 = _____

(i) 6 0 − 4 2 = _____

(j) 7 0 − 3 9 = _____

(k) 9 1 − 2 3 = _____

(l) 6 4 − 2 5 = _____

2. Do the subtractions.

(a) 75 − 29 = _____

(b) 87 − 58 = _____

(c) 83 − 59 = _____

(d) 61 − 25 = _____

(e) 84 − 39 = _____

(f) 73 − 26 = _____

(g) 62 − 38 = _____

(h) 55 − 27 = _____

3. Observe the grid shown below. Identify pairs of numbers whose difference is 25. Subtract those numbers on the lines given.

(50)	49	5
40	15	30
24	10	(25)

Ex: 50 − 25 = 25

_____ _____

_____ _____

_____ _____

_____ _____

Get your pupils to understand the instruction for each problem in the exercise. Let them solve the problems 1 to 7 by themselves.

4. Subtract each pair of numbers given below. Mark with '✓' whose answer is different. One example is given.

Ex:-	32 – 18;	30 – 16;	54 – 40;	84 – 54 ✓
(a)	76 – 29;	50 – 15;	68 – 33;	71 – 36
(b)	55 – 35;	60 – 40;	36 – 16;	68 – 58

5. Look at the subtraction done by Madhavi. If there are mistakes, write the correct answer in the brackets ( ).

(a) 5 4 − 3 8 = 2 4 ( )

(b) 6 8 − 2 9 = 4 9 ( )

(c) 3 0 − 1 4 = 2 4 ( )

(d) 7 6 − 5 8 = 1 8 ( )

(e) 8 4 − 7 9 = 10 5 ( )

6. Subtract the numbers in the first column. Mark the range with '✓' in which your answer lies, in each case. One example is given.

	30 — 40	40 — 50	50 — 60	60 — 70
Example:- 76 – 28		✓		
50 – 19				
82 – 23				
73 – 15				
64 – 17				

7. Write the next three numbers in each series.

(a) 60, 50, 40, ____, ____, ____

(b) 85, 80, 75, ____, ____, ____

(c) 54, 45, 36, ____, ____, ____

Get your pupils to understand the instructon for each problem. Let them solve the problems by themselves.

9 Multiplication of Numbers - 1

1. Look at the following picture. Observe the rows of trees. Say how many rows are there?

Teacher: Ravi, how many rows of trees are there?

Ravi : Two rows.

Teacher: Ravi, how many trees are there in each row? What is their total number?

Ravi : There are 6 trees in each row. Their total is 6 + 6 = 12

It means there are 6 trees in each of the two rows.

We can write it as *2 × 6 = 12.*

It means adding 6 two times.

6 + 6 = 12

2 × 6 = 12

Teacher: Rahim, how many columns of trees are there?

Rahim : Six columns.

Teacher: Rahim, how many trees are there in each column? What is their total number?

Rahim : There are two trees in each column. Their total is 2 + 2 + 2 + 2 + 2 + 2 = 12.

It means there are two trees in six columns.

We write it as 6 × 2 = 12.

It means adding 2 six times.

2 + 2 + 2 + 2 + 2 + 2 = 12

6 × 2 = 12

Adding a number again and again is called repeated addition.

2 × 6 = 12; 6 × 2 = 12

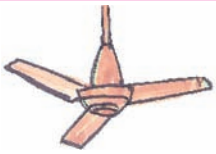
Here we have used a symbol ×. It is called the symbol for multiplication.

Multiplication is repeated addition. Ex: 3 + 3 + 3 + 3 = 4 × 3 = 12

Get your pupils to identify the concept of multiplicaton using the rows of trees and the number of trees in each row shown in the above picture. Introduce the symbol of multiplication to your pupils.

1. Look at the pictures of fans. Count the wings. Say how many are there?

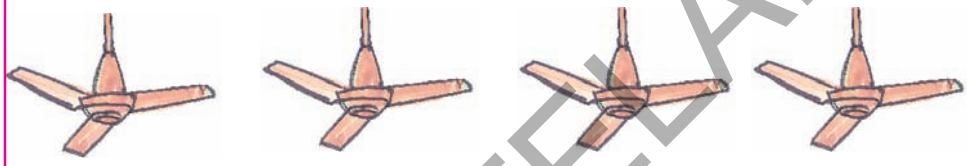
Multplication of numbers:



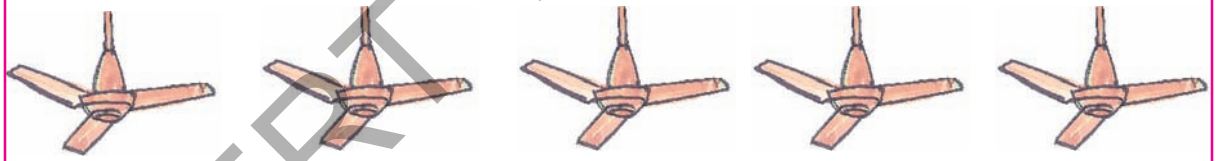
One fan has 3 wings = 1 × 3

Two fans have 3 + 3 = 6 wings = 2 × 3

Three fans have 3 + 3 + 3 = 9 wings = 3 × 3



Four fans have 3 + 3 + 3 + 3 = 12 wings = 4 × 3



Five fans have 3 + 3 + 3 + 3 + 3 = 15 wings = ...

If you write the above multiplications in a table,

1 × 3 = **3**

2 × 3 = **6**

3 × 3 = **9**

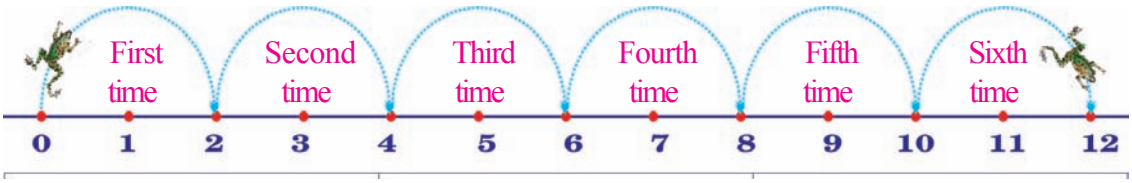
4 × 3 = **12**

5 × 3 = **15**

3, 6, 9, 12, 15 are called the products.

Introduce the operation of multiplication to your pupils by counting the wings of the fans given above. Help them to identify the products.

3. Look at the leaps of a frog shown below. It leaps two feet at a time. With this information, study the table and fill in the blank boxes with correct numbers.



Number of leaps	Distance covered in feet	The number reached	Shown as multiplication
1	2	2	1 × 2 = 2
2	2 + 2	4	2 × 2 = 4
3	2 + 2 + 2	6	3 × 2 =
4			4 × 2 =
5			
6			
7			
8			
9			
10			

Get your pupils to observe the above picture. Let them count the number of leaps made by the frog. Get them to write the multiplication at each leap.

Exercise

1. Count the fingers shown below. Fill in the blank boxes with the correct numbers.

Number of fingers on one hand = 5 = 1 × 5 = 5

Number of fingers on two hands = 5 + 5 = 2 × 5 = 10

Number of fingers on three hands= ☐ + ☐ + ☐ = ☐ × ☐ = ☐

Number of fingers on four hands = ☐ + ☐ + ☐ + ☐ = ☐ × ☐ = ☐

Number of fingers on five hands= ☐ + ☐ + ☐ + ☐ + ☐ = ☐ × ☐ = ☐

Get your pupils to understand the instruction for each problem. Let them solve the problems 1 to 10 by themselves.

2. Show the following additions in the form of multiplications.

Example: 4 + 4 + 4 + 4 + 4 = 5 × 4 = 20

(a) 7 + 7 + 7 + 7 = ☐ × ☐ = ☐

(b) 3 + 3+ 3 + 3 + 3+ 3 + 3 = ☐ × ☐ = ☐

(c) 6 + 6 + 6 + 6 + 6 = ☐ × ☐ = ☐

(d) 2 + 2 + 2 + 2 + 2 + 2 = ☐ × ☐ = ☐

3. Write the following multiplications as repeated additons. One example is given.

Ex: 7 × 8 = 8 + 8 + 8 + 8 + 8 + 8 + 8

(a) 3 × 4 =

(b) 6 × 5 =

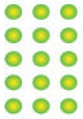
(c) 8 × 3 =

(d) 5 × 2 =

(e) 4 × 6 =

Get your pupils to understand the instruction for each problem. Let them solve the problems by themselves.

4. Count the dots in rows and columns. Fill in the blanks in the table. Write them in the form of multiplication.

Dots	in columns	in rows	Form of multiplication
	5	3	5 × 3 = 15
	3	5	.....
	.....	.....	.....
	.....	.....	.....

5×3 = 3×5 = 15

__ × __ = __ × __ = __

5. Multiply the numbers given.

(a) 4 × 5 =

(b) 3 × 4 =

(c) 5 × 2 =

(d) 8 × 6 =

6. Multiply the number in the first column by those in the top row. Write their product in the blank box.

×	4	6	7	8	9
2 →	8				
3					
5					

Ex:- 2 × 4 = 8

Get your pupils to understand the instruction for each problem. Let them solve all the problems by themselves.

7. Of the three multiplications given in each row, one has a different answer. Identify it and draw '◯' around it. One example is given.

Ex:	4 × 3;	6 × 2;	5 × 4
(a)	2 × 8;	4 × 4;	3 ×4
(b)	6 × 6;	7 × 6;	9 × 4
(c)	8 × 5;	8 × 3;	6 × 4

8. Fill in the blank boxes with the correct numbers.

Ex: 3 × 4 = 4 × 3

(a) 5 × 6 = 6 × ☐

(b) 2 × 5 = ☐ × ☐

(c) ☐ × ☐ = 8 × 7

(d) 3 × ☐ = 9 × 3

9. Match the following.

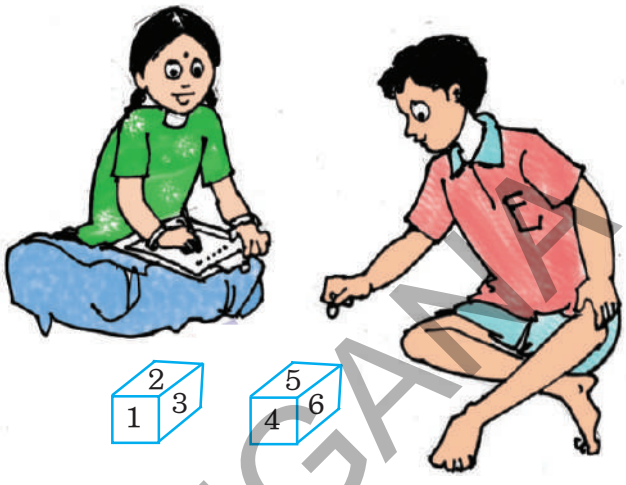
2 + 2 + 2 + 2	27
9 × 3	6 × 3
2 × 3	12
3 + 3 + 3 + 3 + 3 + 3	5 + 5 + 5
number of wheels of six bicycles	4 × 2
3 × 5	3 × 2

Example

Get your pupils to understand the instruction for each problem. Let them solve the problems by themselves.

10. Play this game.

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36



- Two pupils can play this game.
- Take two dice with numbers 1, 2, 3, 4, 5 and 6 on their faces.
- Throw the dice together on the floor.
- Multiply the numbers on the two faces of the dice. Put a mark on the chart at the number as shown above.

  Ex:- numbers on dice: 2 , 5

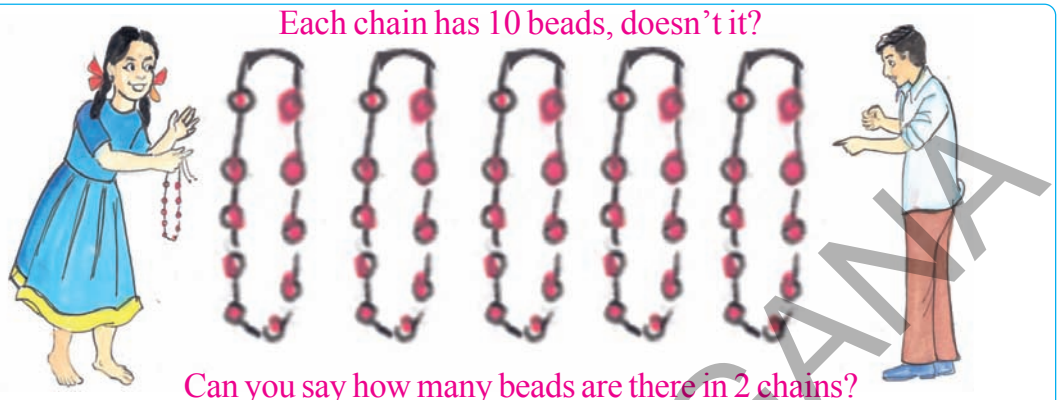
  $2 \times 5 = 10$
- Then the second pupil does this. Put a mark on the chart.
- If the same product comes it is not marked. The other pupil gets the chance.
- After playing 10 times, one who has more marks on the chart is the winner.

Get your pupils to play the above game according to the rules given. Let them practise multiplying simple numbers.

10 Multiplication Tables (1 to 10)

Count the beads on the chain. Say how many are there.

Each chain has 10 beads, doesn't it?



Can you say how many beads are there in 2 chains?

10+10 = 2×10 = 20

2 tens means 20 beads

In the same manner, can you say how many beads will be there in 3, 4, 5, 6, 7, 8, 9, and 10 chains?

Number of chains	Sarala counted the beads in the chains and wrote the numbers as shown below.		
1	10	1 ten	1 × 10 = 10
2	10 + 10	2 tens	2 × 10 = 20
3	10 + 10 + 10	3 tens	3 × 10 = 30
4	10 + 10 + 10 + 10	4 tens	4 × 10 = 40
5	10 + 10 + 10 + 10 + 10	5 tens	5 × 10 = 50
6	10 + 10 + 10 + 10 + 10 + 10	6 tens	6 × 10 = 60
7	10 + 10 + 10 + 10 + 10 + 10 + 10	7 tens	7 × 10 = 70
8	10 + 10 + 10 + 10 + 10 + 10 + 10 + 10	8 tens	8 × 10 = 80
9	10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10	9 tens	9 × 10 = 90
10	10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10	10 tens	10 × 10 = 100

Get your pupils to count groups of things and help them to understand how to write multiplication tables.

Exercise

1. Look at the repeated addition of 5. Write the Multiplication Table of 5.

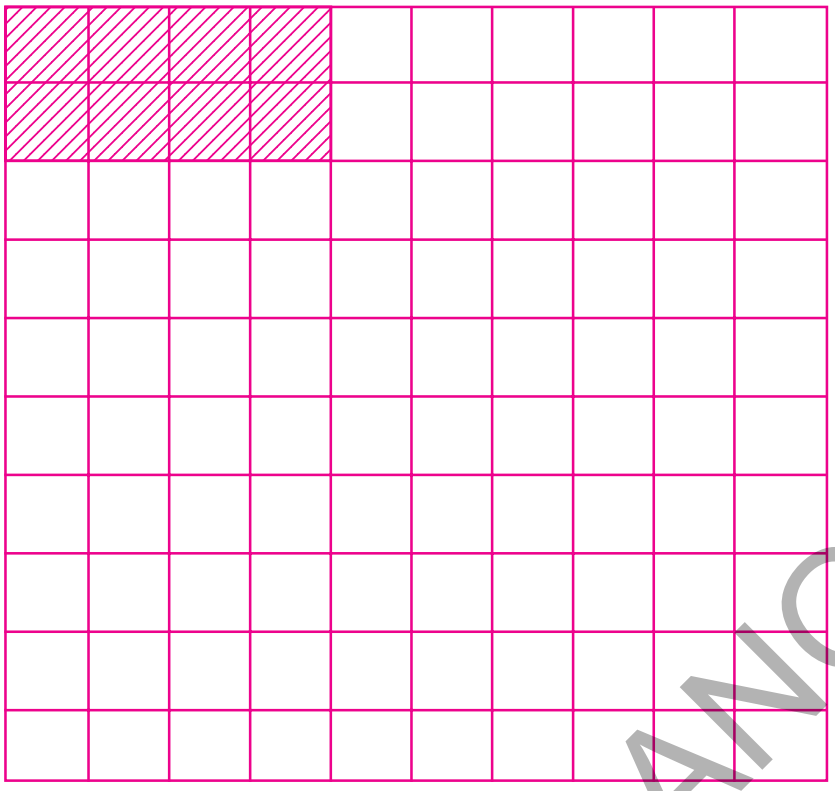
One five	5	1 × 5 = 5
Two fives	5 + 5	2 × 5 = 10
Three fives	5 + 5 + 5	
Four fives	5 + 5 + 5 + 5	
Five fives	5 + 5 + 5 + 5 + 5	
Six fives	5 + 5 + 5 + 5 + 5 + 5	
Seven fives	5 + 5 + 5 + 5 + 5 + 5 + 5	
Eight fives	5 + 5 + 5 + 5 + 5 + 5 + 5 + 5	
Nine fives	5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5	
Ten fives	5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5	

2. Look at how the Multiplication Table of 2 is written. In the same way shade the boxes and write the Multiplication Table of 3.

Table 2	Table 3
2 × 1 = 2	3 × 1 = 3
2 × 2 = 4	
2 × 3 = 6	
2 × 4 = 8	
2 × 5 = 10	
2 × 6 = 12	
2 × 7 = 14	
2 × 8 = 16	
2 × 9 = 18	
2 × 10 = 20	

Get your pupil to understand the instruction for each table. Let them write all the tables from 1 to 11 by themselves.

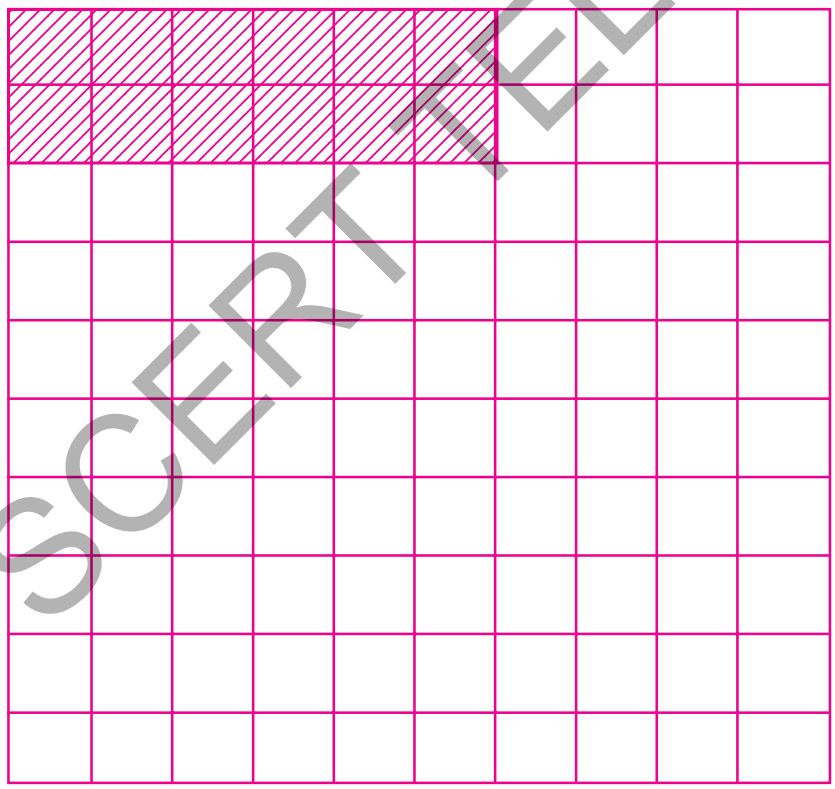
3. Write the Multiplication Table of 4.



$4 \times 1 = 4$

$4 \times 2 = 8$

4. Write the Multiplication Table of 6.

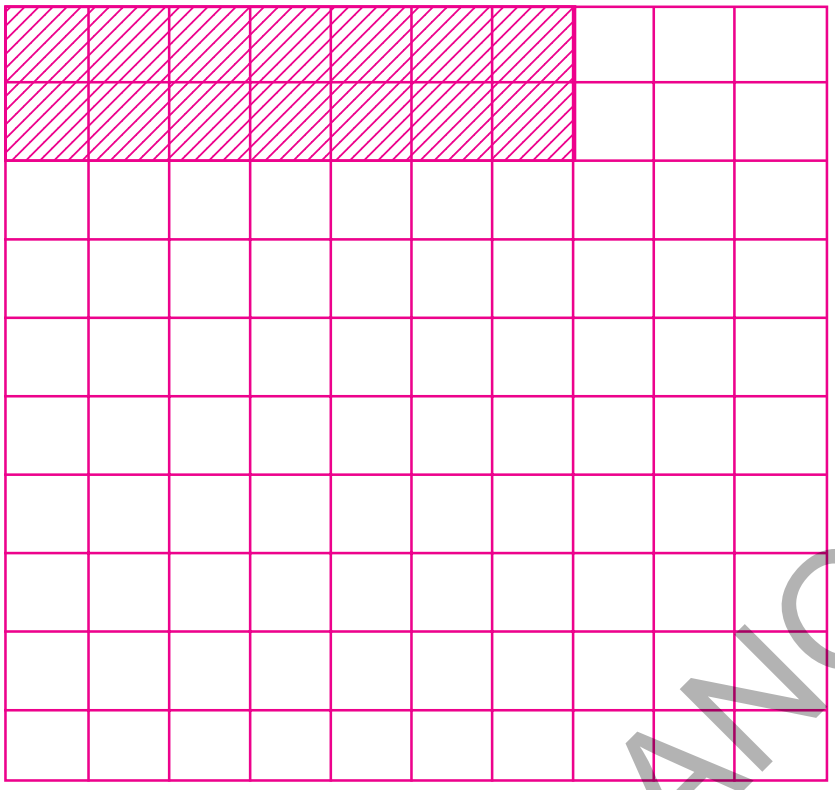


$6 \times 1 = 6$

$6 \times 2 = 12$

Get your pupil to understand the instruction for each table. Let them fill all the tables by themselves.

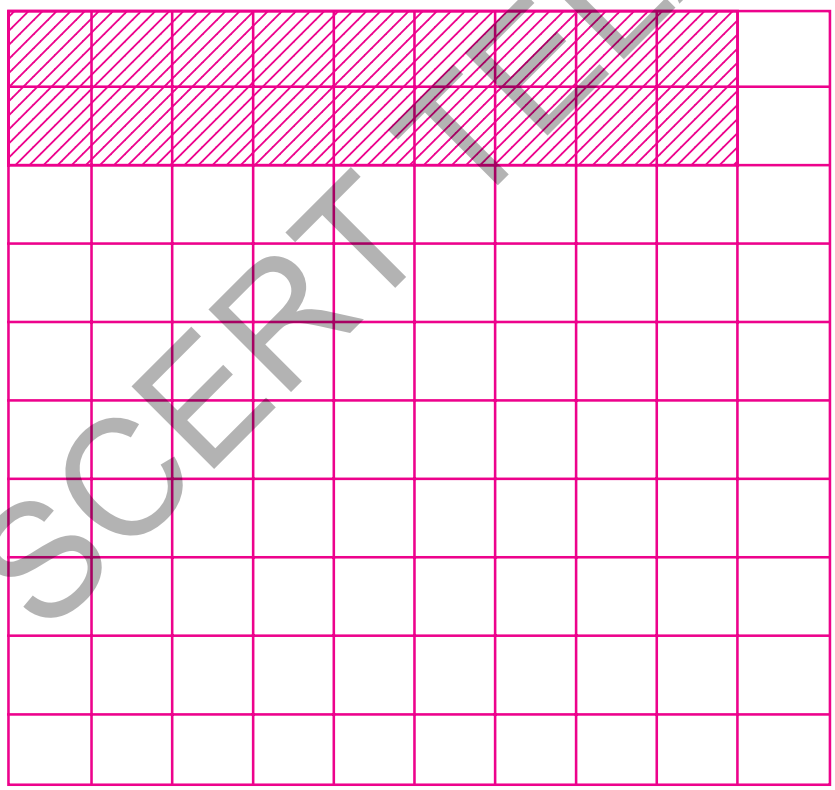
5. Write the Multiplication Table of 7.



7 × 1 = 7

7 × 2 = 14

6. Write the Multiplication Table of 9.



9 × 1 = 9

9 × 2 = 18

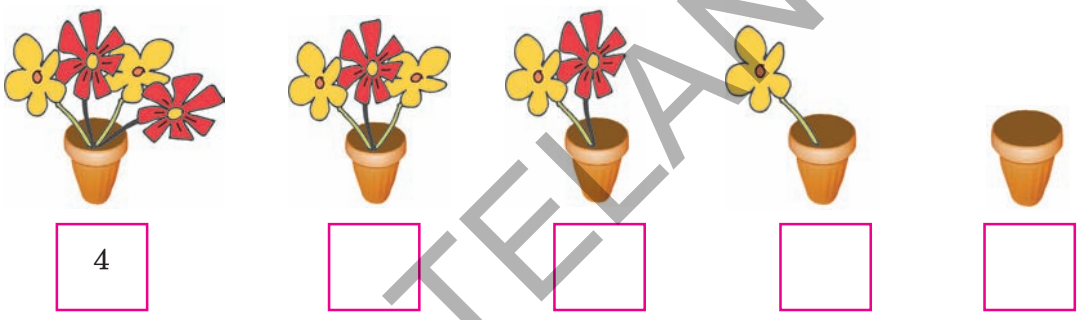
Get your pupils to understand the instruction for each tables. Let them by themselves fill the tables.

7. Look at the following table. Identify how table 3 has been written. In the same manner write Table 6.

Table 2	2	4	6	8	10	12	14	16	18	20
Table 1 +	1	2	3	4	5	6	7	8	9	10
Table 3	3	6	9	12	15	18	21	24	27	30

Table 5	5	10								
Table 1 +	1	2								
Table 6	6	12								

8. Count the flowers shown below. Write their number under each flower-pot.



4				

9. Write the Multiplication Table of '0' (zero)

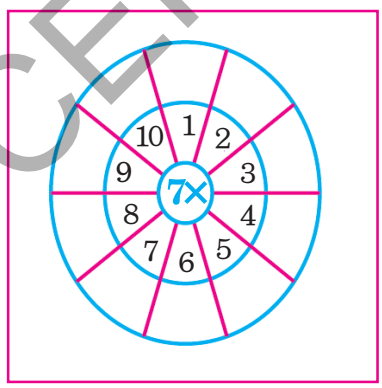
1	zero	1 × 0 = 0
2	zeros	2 × 0 = 0
3	zeros	3 × 0 = 0
4	zeros	.....
5	zeros	.....
6	zeros	.....
7	zeros	.....
8	zeros	.....
9	zeros	.....
10	zeros	.....

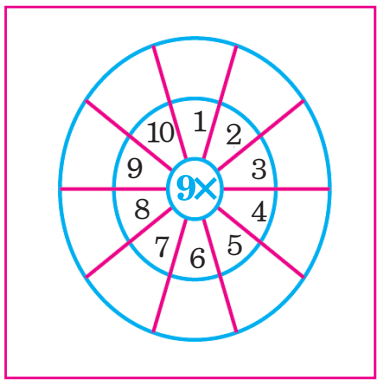
Get your pupils to understand the instruction for each problem. Let them solve the problems on their own.

10. Complete the Multiplication Grid by writing the correct number in each blank box.

×	1	2	3	4	5	6	7	8	9	10
1	1									
2			6							
3										
4							28			
5		10								
6									54	
7				28						
8										80
9					45					
10								80		

11. Multiply the numbers in the first chart by 7 and those in the second chart by 9 and write the products in the blank boxes.



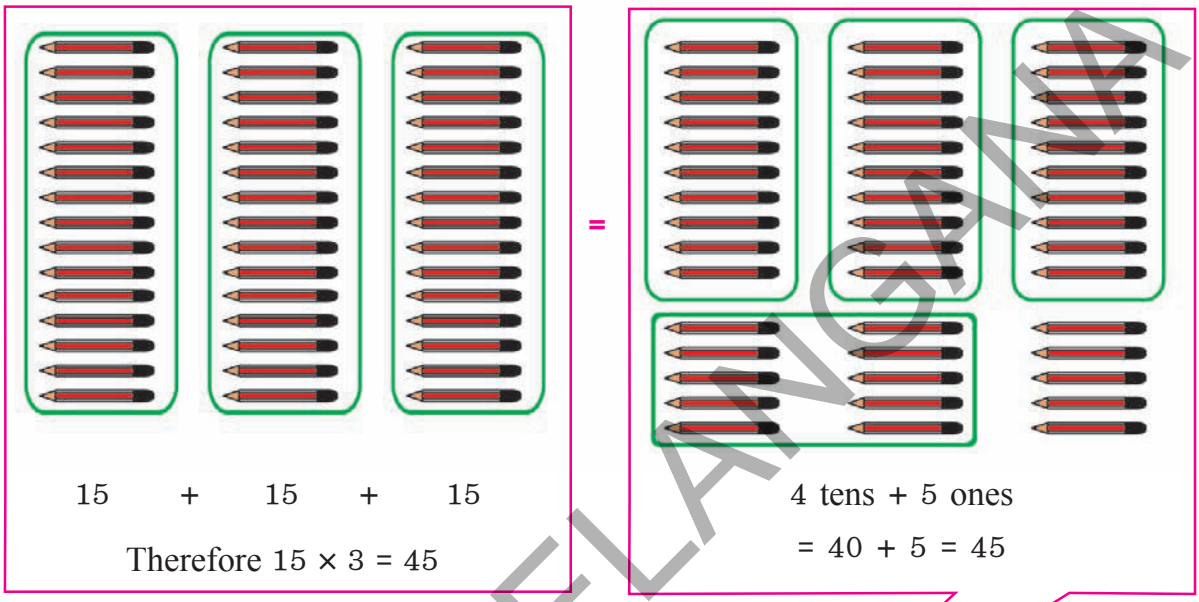


Get your pupils to understand the instruction for each problem. Let them solve the problems on their own.

11 Multiplication of Numbers - 2

1. Count the pencils shown below. Say how many are there?

Geeta said to Lata, "There are 15 pencils in each packet." How many pencils are there in 3 such packets? Lata calculated in the following way. You observe it. Calculate how many pencils there are.



We can do this in another way also.

$$\begin{array}{rcl} 15 & = & 10 + 5 \\ \times 3 & & \times 3 \\ \hline & = & 30 + 15 \\ \hline & = & 30 + 10 + 5 \\ & = & 40 + 5 \\ & = & 45 \end{array}$$

OR

If tens are multiplied.
3 × 1 = 3 tens
3 tens + 1 ten = 4 tens

T	O
(1)	
1	5
×	3
4	5

If ones are multiplied,
5 × 3 = 15 ones
15 ones = 1 ten + 5 ones

Get your pupils to observe the above method of multiplying numbers. Let them understand and solve the problems on multiplication.

2. Observe the following multiplication of numbers. Do the others in the same way.

T	O
3	6
×	3

$= 30 + 6$

$\times 3$

$= 30 \times 3 + 6 \times 3$

$= 90 + 18$

$= 90 + 10 + 8$

$= 100 + 8$

$= 108$

T	O
3	6
×	3
10	8

T	O
3	6
×	3

$=$ 6 ones $\times 3$ $=$ 18 ones $=$ 1 ten + 8 ones

$=$ 3 tens $\times 3$ $=$ +9 tens

$=$ 10 tens+ 8 ones

$=$ 100 ones + 8 ones

$=$ 108

Fill in the blank boxes with the correct numbers.

(a) 4 7 = 40 + 7

× 2 × 2

= □ + □

= □ + □ + □

= □ + □

= □

(b) 2 4 = 20 + □

× 4 × 4

= 80 + 16

= □ + □ + □

= □ + □

= □

Get your pupils to observe the above method of multiplication. Let them fill in the blank boxes with the correct numbers.

Exercise

1. Multiply the numbers given below.

	T	O
(a)	1	9
	×	5

	T	O
(b)	2	8
	×	2

	T	O
(c)	2	4
	×	3

	T	O
(d)	1	5
	×	6

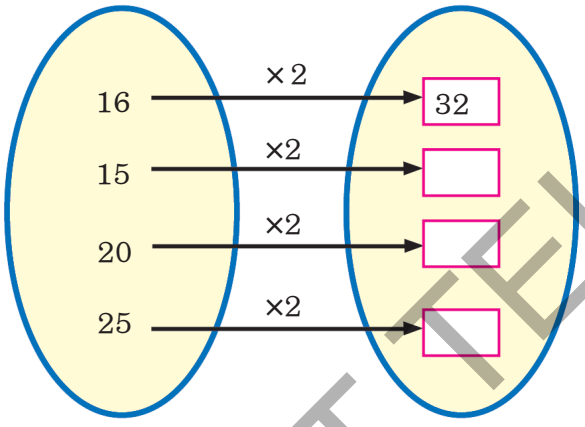
	T	O
(e)	3	3
	×	4

	T	O
(f)	1	9
	×	2

	T	O
(g)	2	6
	×	3

	T	O
(h)	1	8
	×	7

2. Multiply each number by 2 and write their product in the blank box.



3. In the grid, multiply the numbers in the first column by each number in the top row and write the product as shown.

×	5	6	7	8
12	60			
14				
16				
18				

Ex:- 12 × 5 = 60

....

....

....

....

....

....

Get your pupils to understand the instruction for each problem. Let them solve all the problems 1 to 6 by themselves.

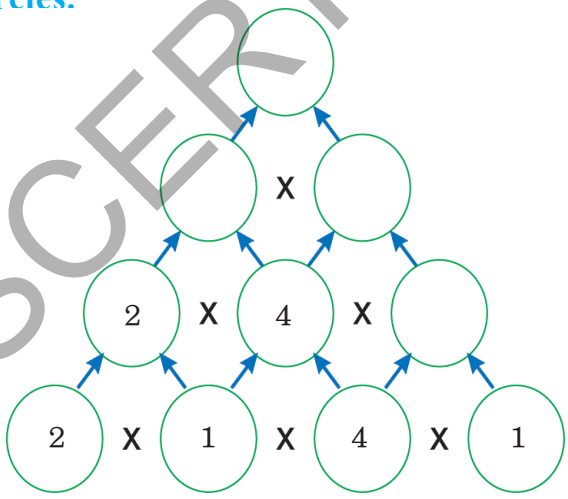
4. Observe the first 3 numbers in each row. Write the next three numbers in the series.

(a) 2, 4, 6, _____, _____, _____
(b) 5, 10, 15, _____, _____, _____
(c) 7, 14, 21, _____, _____, _____
(d) 9, 18, 27, _____, _____, _____

5. Identify the number that is different from the rest. Draw '◯' around it. One example is given.

Ex:- 3, 6, 9, (11), 15, 18
(a) 5, 10, 15, 21, 25, 30
(b) 8, 16, 24, 32, 38, 48
(c) 6, 12, 18, 24, 30, 32
(d) 7, 14, 21, 25, 35

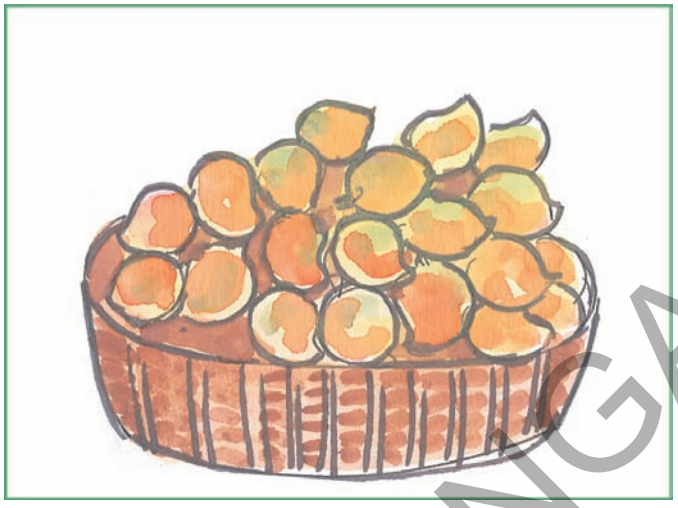
6. Follow the arrows and mutiply the numbers. Write the product in the blank circles.



Get the pupils to understand how to solve the problems by themselves as per the instruction.

12 Division of One Number by Another Number

1. Count the number of mangoes. Say how many equal heaps are there?



The total number of mangoes in the above basket = ☐

Here the number of mangoes in each small basket.

☐ ☐ ☐ ☐

How many heaps of mangoes did we get after making heaps of 5 from 20 mangoes?

When 20 mangoes were made into heaps of 5, we got 4 heaps.

It means we got 4 after dividing 20 by 5.

We write it as 20 ÷ 5 = 4

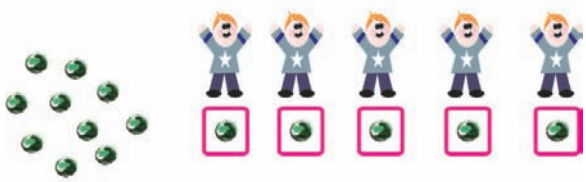
If we divide the total numbers of mangoes by the number of mangoes in each heap, we can find out the number of heaps.

The symbol for division ÷

Get your pupils to observe that there are equal number of fruits in each heap. Get them to say the number of heaps. Introduce the division and the symbol to your pupils.

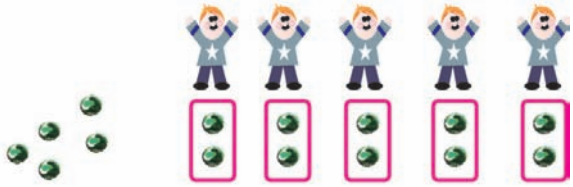
2. Distribute 15 marbles equally among 5 children.

Total number of marbles = **15**



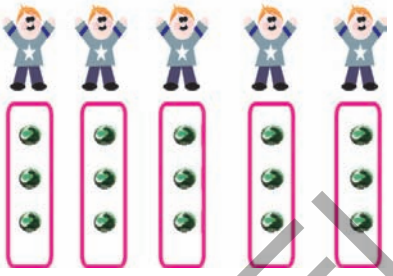
Distributed first time = ☐

Remaining marbles = ☐



Distributed second time= ☐

Remaining marbles = ☐



Distributed third time= ☐

Remaining marbles = ☐

Total number of marbles = ☐

How many people distributed = ☐

How many times did we distribute equally = ☐

How many did each one get = ☐

If 15 marbles are distributed equally among ☐ equally, each one will get ☐ marbles.

The division form of this is 15 ÷ 5 = ☐

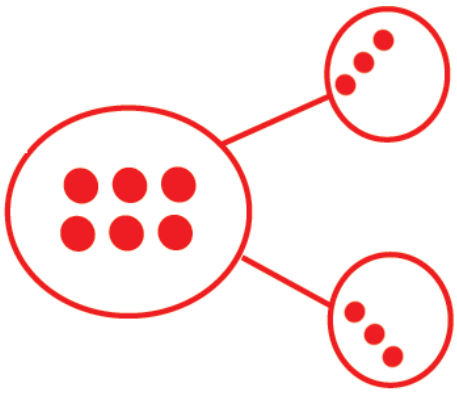
15÷5=3
Means, if we distribute 15 marbles among 5 people, each will get 3 marbles.

In the method shown above get your pupils to distribute the marbles equally. Let them write the correct numbers in the blank boxes. Introduce the Division form to your pupils.

Exercise

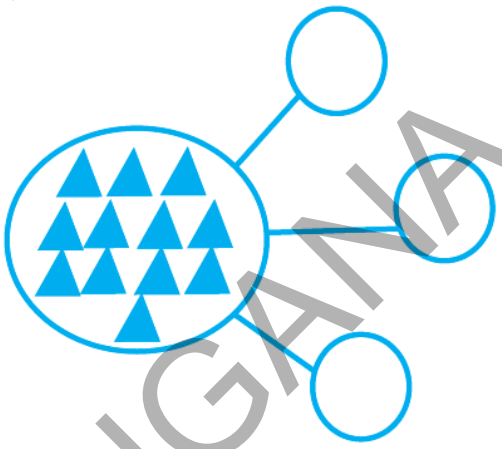
1. Look at the pictures given below. Count them. Distribute equally. Write the Division form. One example is given. Fill in the blank boxes and circles.

Example:-



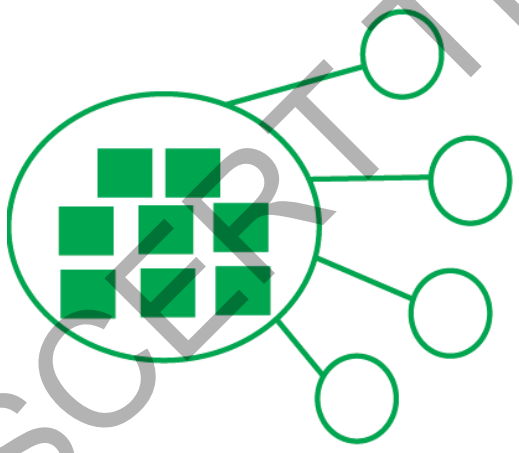
6 ÷ 2 = 3

(a)



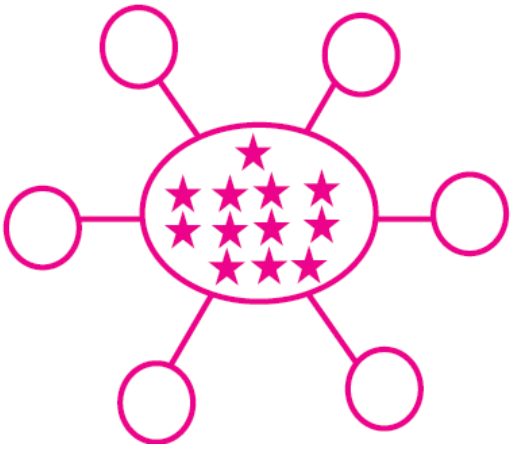
___ ÷ ___ = ___

(b)



___ ÷ ___ = ___

(c)



___ ÷ ___ = ___

Get your pupils to understand the instruction for each problem. Let them solve the problems 1 to 5 on their own.

2. Write the Division form for the following equal distribution of things.

(a) Distribute 18 mangoes among 6 people equally.

Total number of mangoes = **18**

Distribution of mangoes to 6 people for the *first time* = −6

Remaining mangoes = 12

Distribution of mangoes to 6 people for the *second time* =

Remaining mangoes =

Distribution of mangoes to 6 people for the *third time* =

Remaining mangoes =

By distributing equally each one gets =

Result of division =

The Division form ☐ ÷ ☐ = ☐

(b) Distribute 20 marbles among 5 people equally.

Total number of marbles = ☐

Marbles distributed for the *first time* = ☐

Remaining marbles = ☐

Marbles distributed for the *second time* = ☐

Remaining marbles = ☐

Marbles distributed for the *third time* = ☐

Remaining marbles = ☐

Marbles distributed for the *fourth time* = ☐

Remaining marbles = ☐

By distributing equally, each one gets = ☐

Result of division = ☐

The Division form ☐ ÷ ☐ = ☐

Division is repeated subtraction.

Ex: 12 - 3 = 9; 9 - 3 = 6; 6 - 3 = 3; 3 - 3 = 0

12 ÷ 3 = 4

Get your pupils to understand the instruction for each problem. Let them solve the problem by themselves.

3. Distribute in groups. Write the Division form.

Ex. Rajani distributed 15 chocolates among her three friends. How many chocolates did she give to each friend?

Total number of chocolates = **15**

The number of friend to whom chocolates were distributed = 3

To each friends she distributed = 5

The division form = 15 ÷ 3 = 5

What does the result of division indicate? ____

(a) Three pupils can sit on a bench. How many benches are needed for 21 pupils to sit?

Total number of students = ____

Each bench can seat = ____

Number of benches needed = ____

The division form = ____ ÷ ____ = ____

What does the result of division indicate? ____

(b) Ramayya has 48 sheep. He distributed them to his four sons equally. How many did each son get?

Total number of sheep = ____

Number of sons = ____

Each son got ____ sheep

The Division form = ____ ÷ ____ = ____

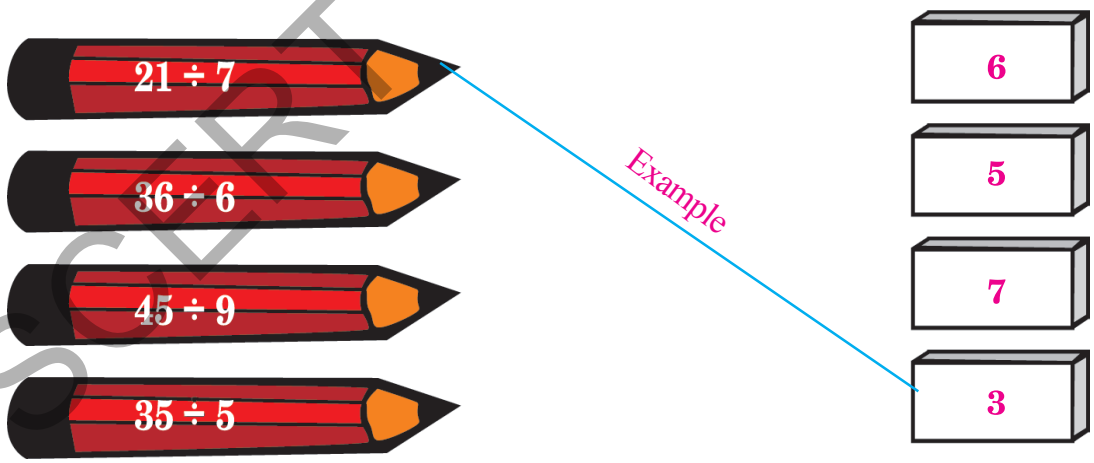
The result of division shows ____

Get your pupils to understand the instruction for each problem. Let them solve the problems on their own.

4. **Look at the table given below. Fill in the blank boxes with the correct numbers. Write the Division form for each.**

Number of notebooks distributed	Number of pupils who recived the notebooks	Number of books each pupil received	The Division form
Ex:- 8	2	4	8 ÷ 2 = 4
12			
15			
18			
42			

5. **Match the following divisions and their result.**



Get your pupils to understand the instruction for each problem. Let them solve the problems by themselves.

13 Length of Things

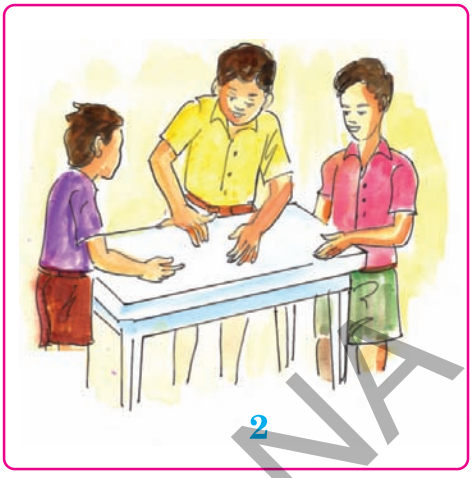
1. Look at the pictures given below. Say how garlands of flowers are being measured.

- ☆ How did everyone measure the garland with?
- ☆ Why did each one get different measurement?
- ☆ Among the three whose cubit is more?
- ☆ Among the three whose cubit is less?
- ☆ In general, what measurements do you use while playing games?

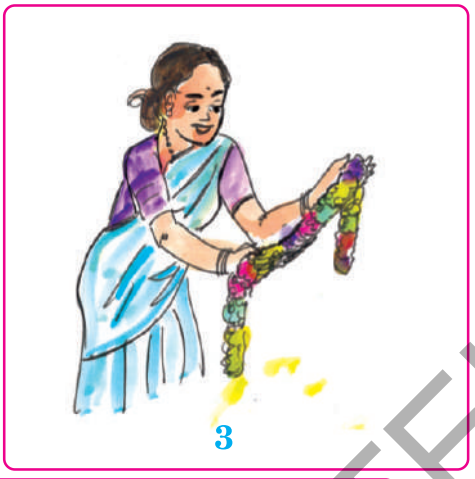
Get your pupils to observe the above pictures. Let them realise the nonstandard measure of a CUBIT. Discuss with them why different people measured the same length differently.

2. Look at the pictures.

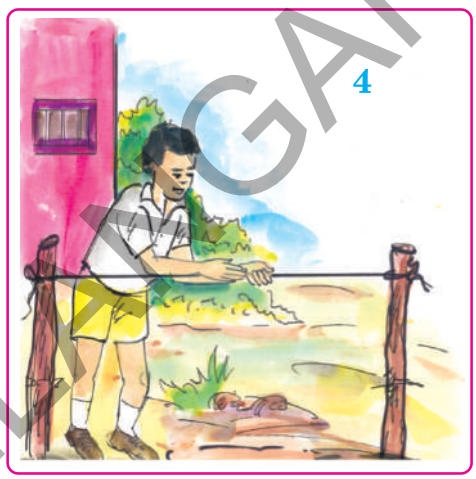
1



2



3



4

5

6

Now answer the following questions.

1. How is the length of the table measured?
2. How is the distance between the marbles measured?
3. How is the length of garland of flowers measured?
4. How is the length of the thread measured?
5. How is the distance measured in picture 5?
6. How is the length of the room measured?

Get your pupils to observe the above pictures. Let them discuss what non standard measuring tools were used to measure length.

Exercise

1. Measure and write.

Serial number	Name of the pupil	Table		
		Length of 4 finger - widths	Length of handspan	Cubit
1.				
2.				
3.				
4.				
5.				

2. Estimate first and then measure and say.

Serial number	Objects	Estimation of length using cubit	Actual length after measuring with cubit
1.	The blackboard		
2.	A table		
3.	Length of the classroom		
4.			
5.			

Get your pupils to understand the instruction for each problem. Let them solve the problems by themselves.

14 Weight of things

Look at the pictures. Narrate the story

It's very hard to carry this salt bag every day. I'm dying.

It's raining heavily. The river is also flowing full .

Oh, my load is lighter now. I will go into water like this every day.

Ha, ha ha!

What is this? This donkey is going into water every day. I will teach her a lesson by putting bags of cotton on her back.

Oh my god! Why is the weight of my load increased to day? I will not go into water again from tommorrow.

There you are!

Get your pupils to understand the concept of weight through the above story.

Exercise

1. Guess the weights of two objects shown in each box. Put a '✓' near the heavier object.

(a)

(b)

(c)

2. Guess the weights of two objects given together. Put a '✓'near the lighter object.

(a)

(b)

(c)

(d)

Get your pupils to understand the instruction for each problem. Let them solve the exercises 1 to 4 by themselves.

3. **Write numbers 1 to 4 for each object in the order of their increasing weight. One example is given.**

Example:

2 | 1 | 3 | 4

(a)

(b)

4. **Mark the heavier of the two girls with a '✓'**

Get your pupils to understand the instruction for each question. Let them solve the exercise by themselves.

15 Measure of Liquids

1. Look at the pictures given below. Say which vessels are used to measure milk.

Ravi, Raju and Rama receive 2 litres of milk from three different people every day.

Rangamma pours 4 glassful of milk at Ravi's house

At Raju's house, milkmaid Vanajamma pours 2 mugful of milk.

At Rama's house milkman Hussain pours 8 small glassful of milk

The three children got a doubt on the milk supplied to each of them. Who is supplying the correct quantity of milk

Get your pupils to observe the above pictures. Let them discuss what non standard measurements like glasses, mugs etc., to measure milk.

2. Play this game.

- Two children can play this game.
- Take a big bucket full of water. Take a small bucket, a jug and a mug also.
- First, one pupil takes the jug and pours water from the big bucket into the small one.
- Then the second pupil also pours water with the mug into the small bucket.
- The pupils pour water alternatingly.
- Continue this till the small bucket is full.
- The pupil who fills the small bucket with jug or mug completely is the winner.

Get your pupils to play the game as per the instructions. Let them estimate the measuring vessels to fill the bucket. Help them to discuss.

Exercise

1. Draw in the box a vessel which holds less water than the vessel shown below.

2. Draw in the box a vessel which holds more water than the quality shown below.

3. Give rankings to the following vessels according to the quantity of water each can hold.

Bucket

Pot

Jug

Mug

Glass

Get your pupils to understand the instructions for each problem. Let them solve the problems by themselves.

4. Say how much water does each vessel hold. Find out by actual measuring.

Into a  how many  of water can be poured? Estimate. Then measure and find out.

Into a  how many  of water can be poured? Estimate. Then measure and find out.

Into a  how many  of water can be poured? Estimate. Then measure and find out.

Based on the above activity, fill in the table given below.
Say who has estimated correctly.

Serial Number	Names of your friend who did the above activity	Estimated measures	Actual measurement made	Estimation was correct / wrong
1.				
2.				
3.				
4.				

Get your pupils to understand the instructions for each of the above problems. Let them solve the problems by themselves.

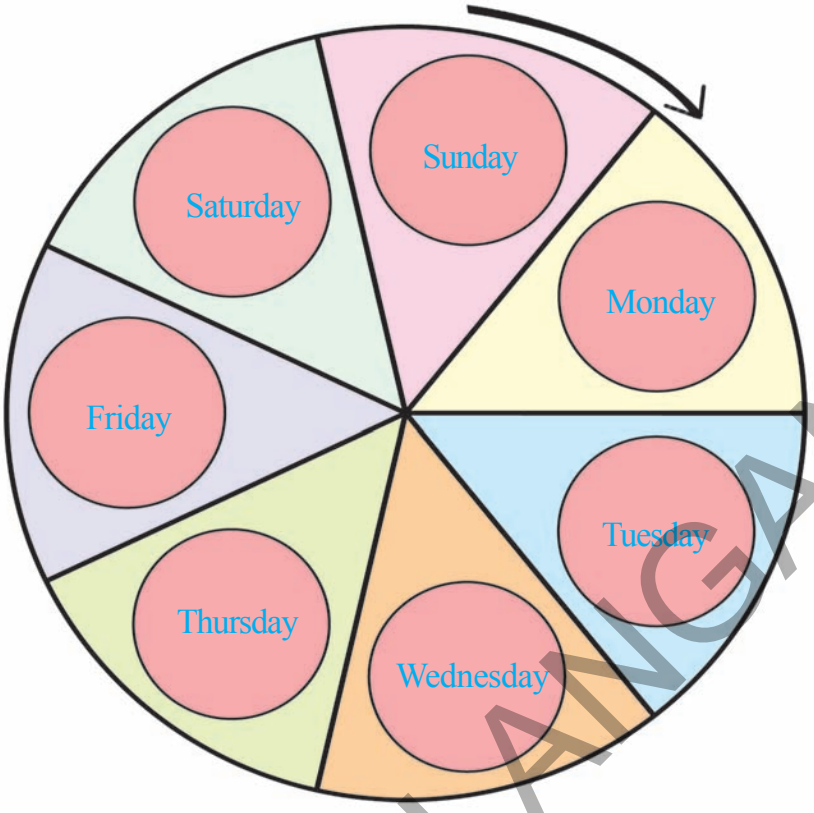
16 Time

1. Look at the pictures. Say what things you do at what time.

- Say what activities do you do in the morning.
- Say what activities do you do in the afternoon.
- Say what activities do you do in the evening.

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

3. Look at the names of days in a week shown below.



(a) What is the day after Sunday?

(b) What is the day between Monday and Wednesday?

(c) What is the day after Saturday?

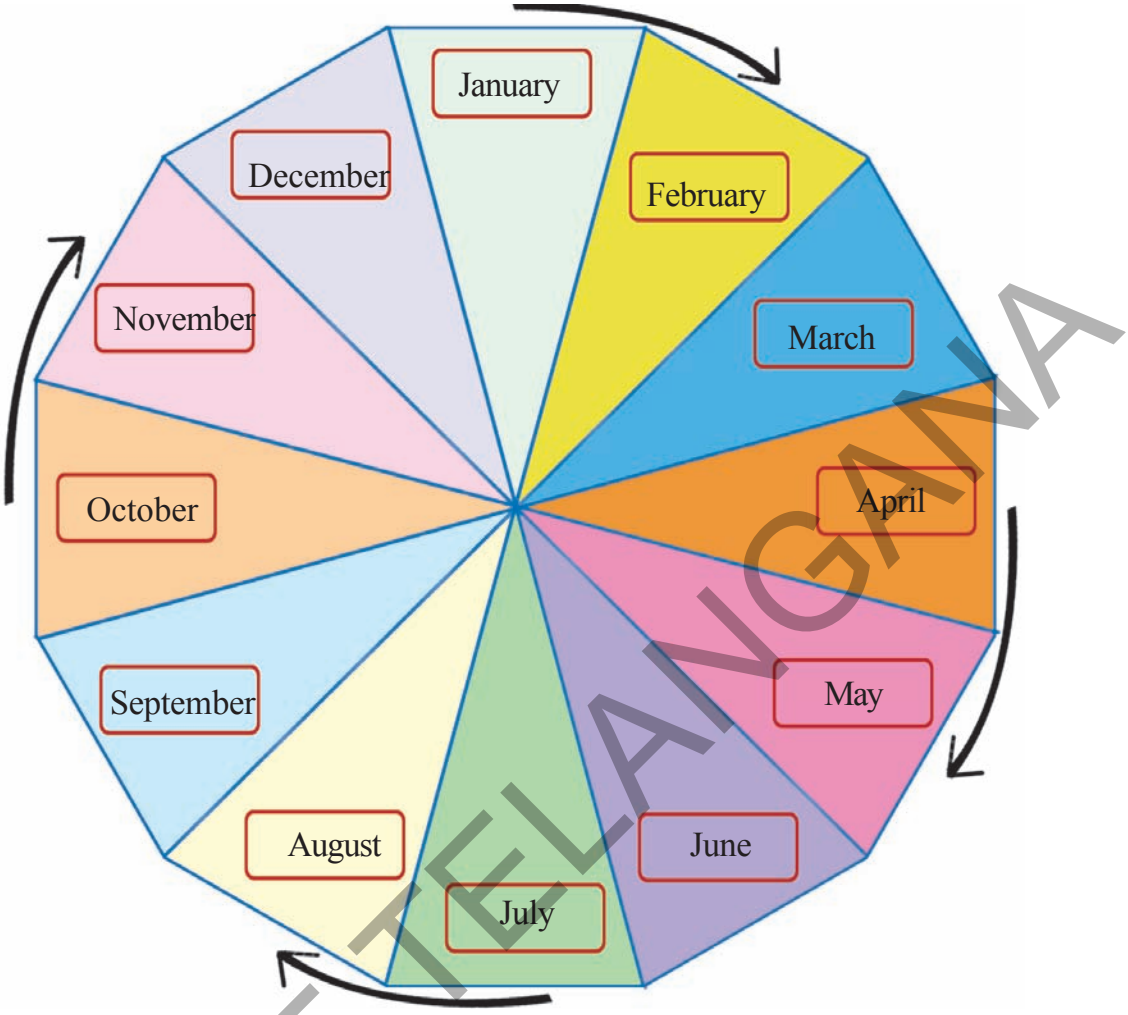
(d) After how many days does Friday comes after Sunday?

(e) How many days are there from Monday to Sunday?

(f) How many days are there in a week?

Get your pupils to observe the above picture. Let them discuss the number of months in a year.

4. Look at the months in the picture.



Now answer the following questions.

(a) Which month comes after January?

(b) Which is the month between April and June?

(c) Which month comes after July?

(d) After how many months does December come after September?

(e) How many months are there ?

Get your pupils to observe the above picture. Let them discuss the number of days in a week.

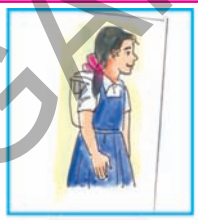
Exercise

1. On a holiday on which activity do you spend more time? Mark those activities with a ✓.




2. Order the following activities according to what time you do them.



3. Which activity takes more time? Mark '✓' to the one which takes more time.


4. Put '✓' for the one which goes faster.


Get your pupils to understand the instruction for each problem. Let them solve problems by themselves.

17 Money

1. Look at the currency notes and coins. Identify each one. Say how much each one is.

Get your pupils to observe the notes and coins. Let them identify them. Let them say how much is each of them.

2. Look at the coins shown below. Say in how many other ways we can give change.

Get your pupils to observe the above coins. Let them discuss in how many ways we can give change for coins of bigger value.

3. Look at the coins and notes shown below. Say in how many other ways we can give change.

Get your pupils to observe the above notes and coins. Let them discuss in how many ways we can give change for notes of bigger value.

Exercise

1. Look at the coins in each row. Add their value and write in the box.

(a)  +  = Rs. ☐

(b)  +  = Rs. ☐

(c)  +  = Rs. ☐

(d)  +  = Rs. ☐

2. Look at the price of each item. Write in circles the value of coins equal to the price of the item. Look at the example.

Example:

 =  + 

Rs. 6

(a)  = ○ + ○ + ○

Rs. 8

(b)  = ○ + ○ + ○

Rs. 9

(c)  = ○ + ○

Rs. 10

Get your pupils to understand the instruction for each problem. Let them solve the problems by themselves.

18 Shapes

1. Look at the picture.

Now answer the following questions orally.

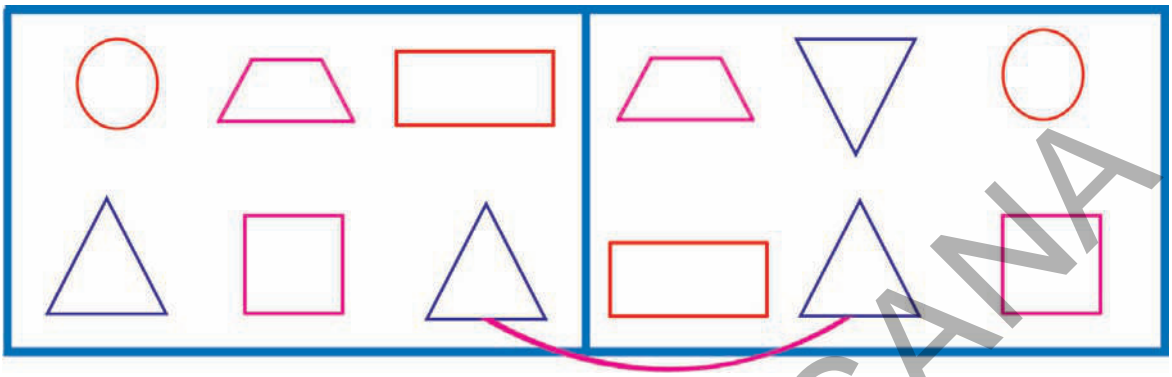
a) Is the flag and the blackboard in same shape?

b) Identify the things which are of this shape (inside and outside your class room).

Get your pupils to observe the above picture. Let them discuss the shapes of things.

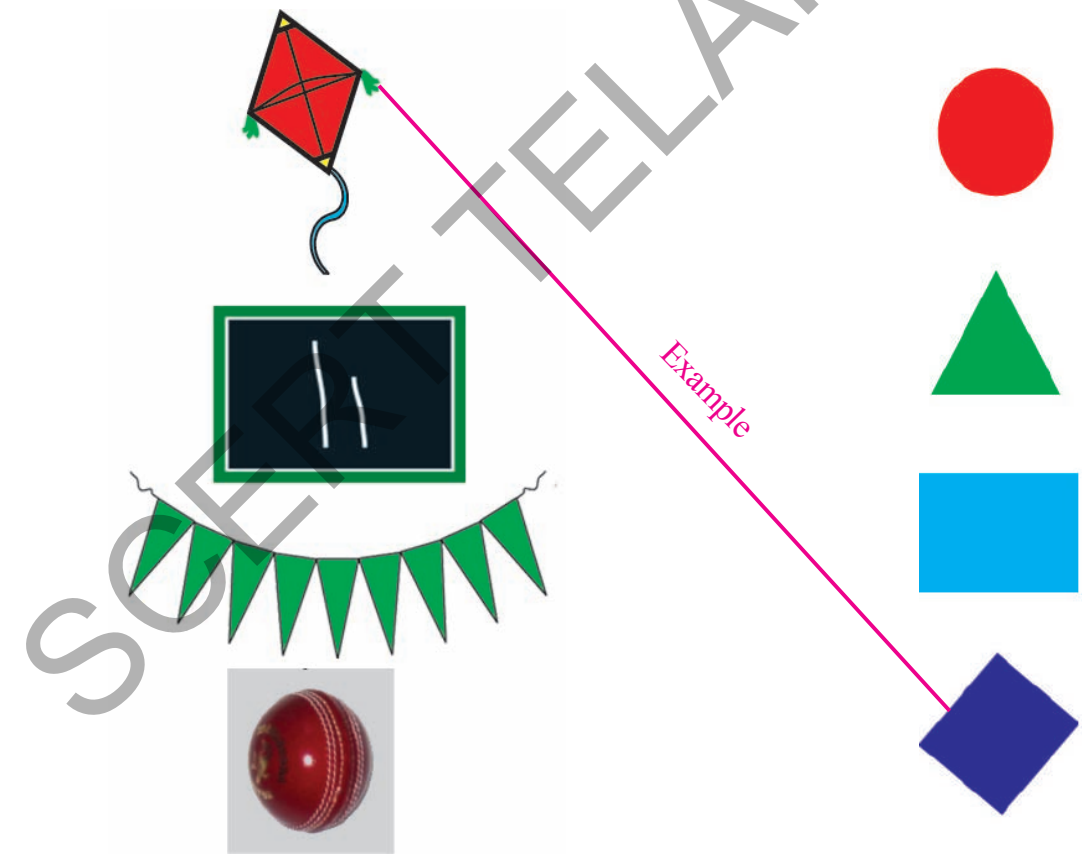
Exercise

1. Match the figures which have the same shape. Look at the example.



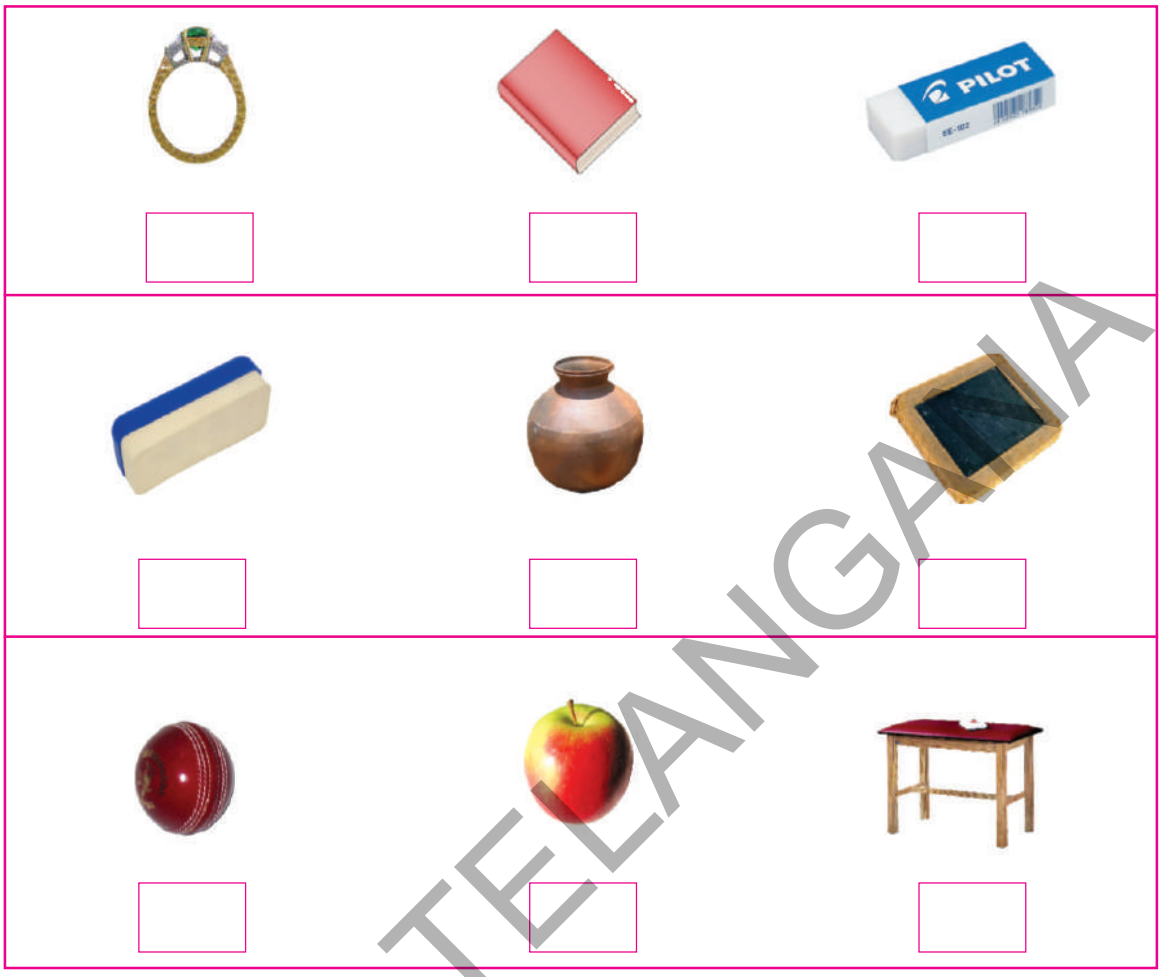
Example

2. Match the things on the left with their similar shapes on the right.



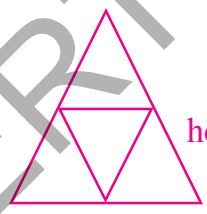
Get your pupils to understand the instruction for each problem. Let them solve the problems 1 to 7 by themselves.

3. **Look at the three things in each row. Mark the one with a different shape '✓' in the blank box.**

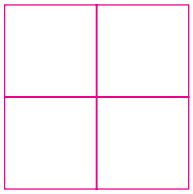


4. **Look at the shapes. Count them and write.**

(a)

In this picture  how many △ are there? _____

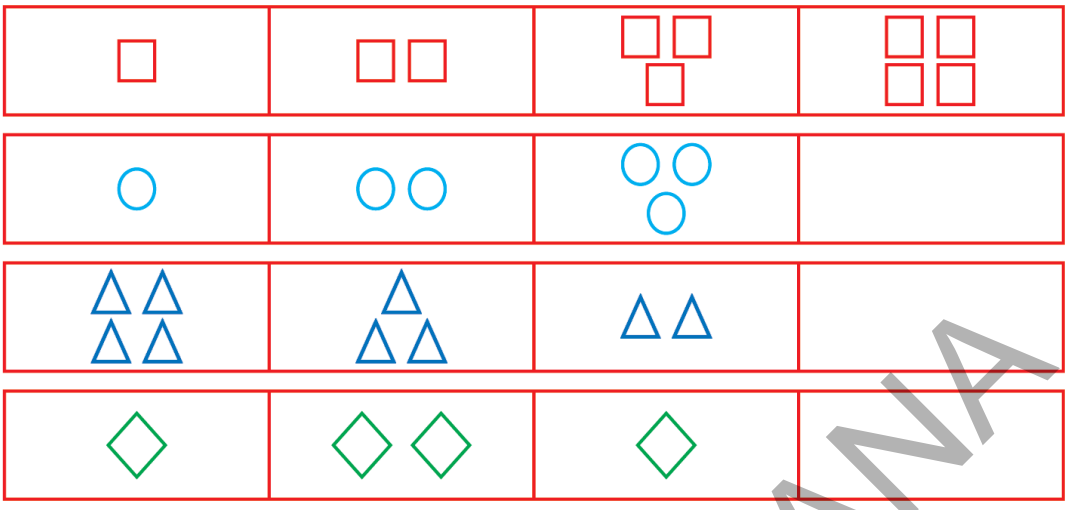
(b)

In this picture  how many □ are there? _____

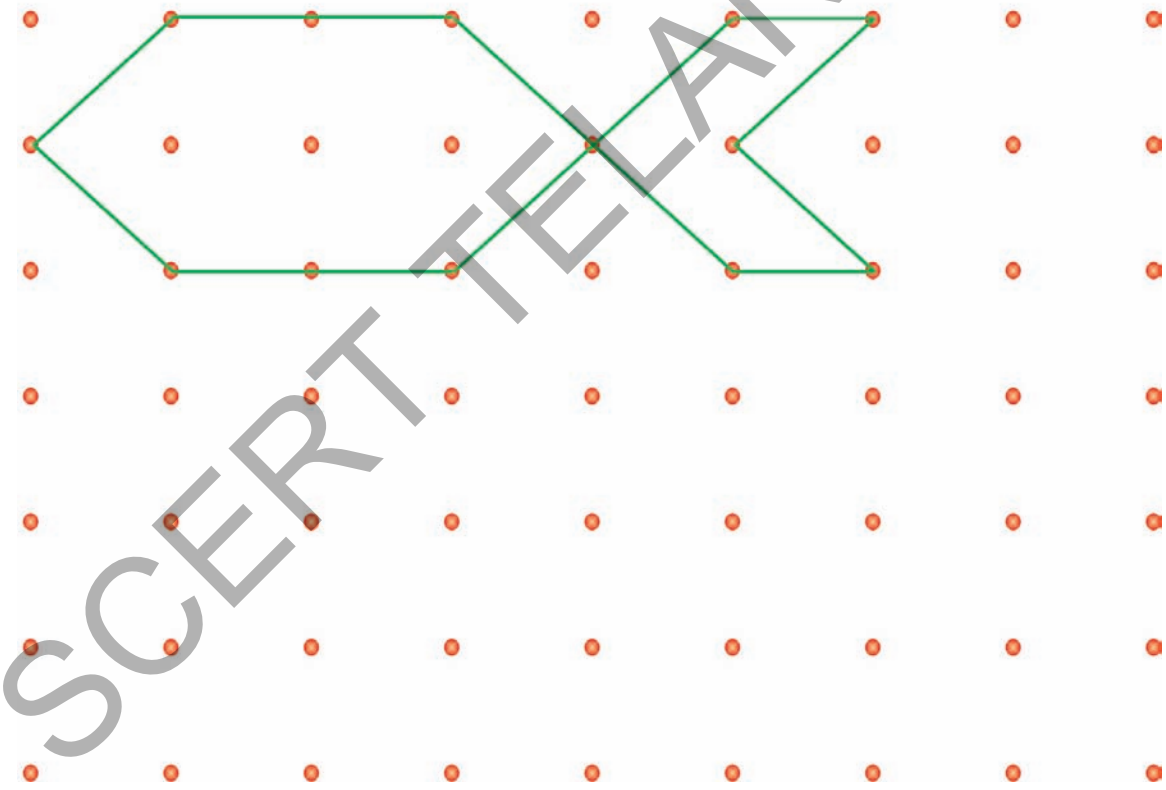
Get your pupils to understand the instruction for each problem. Let them solve the problems by themselves.

5. **Observe the first three figures in each row. Write the next figure.**

Ex:-

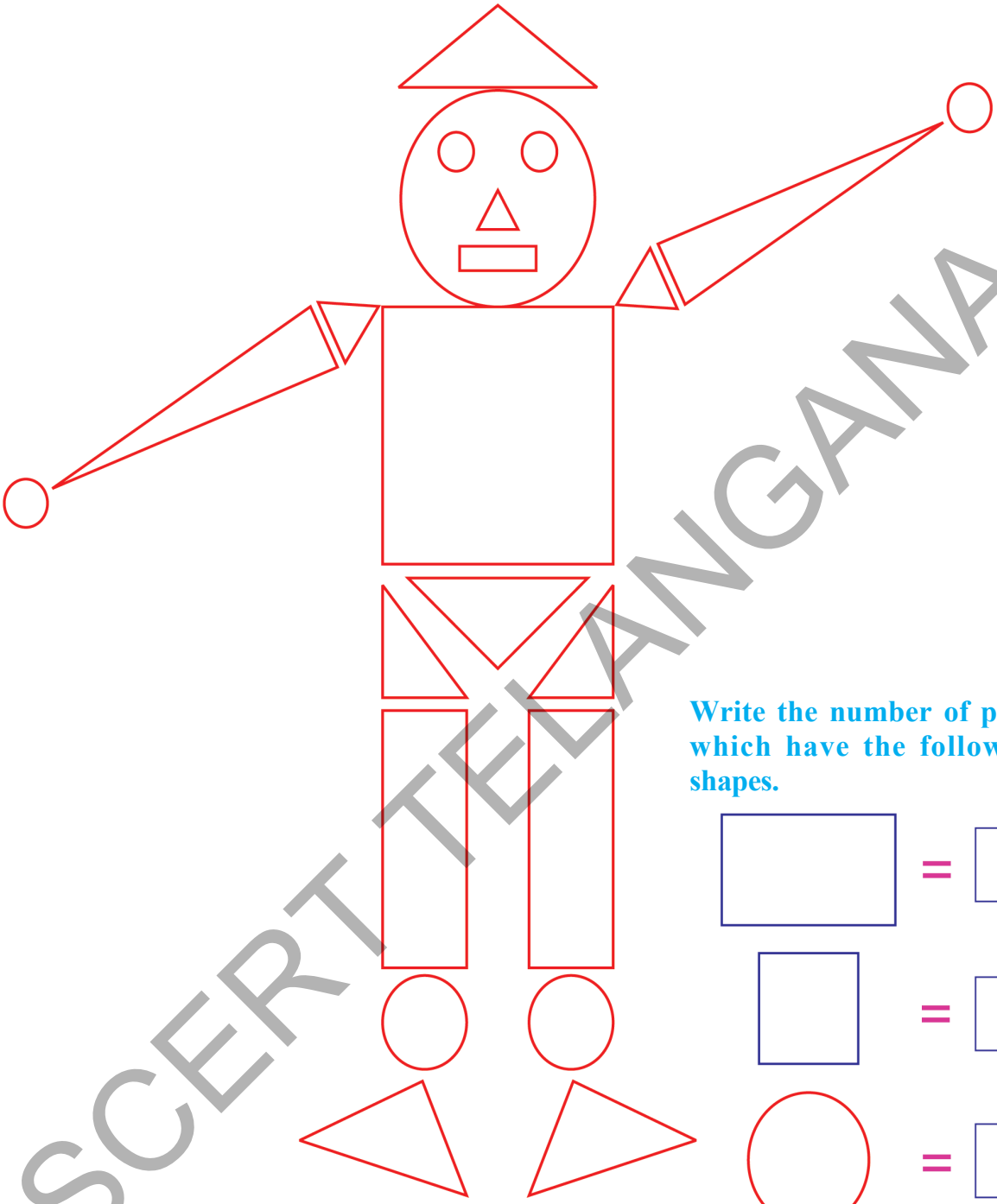


6. **Join the dots to draw different shapes. One is done for you.**

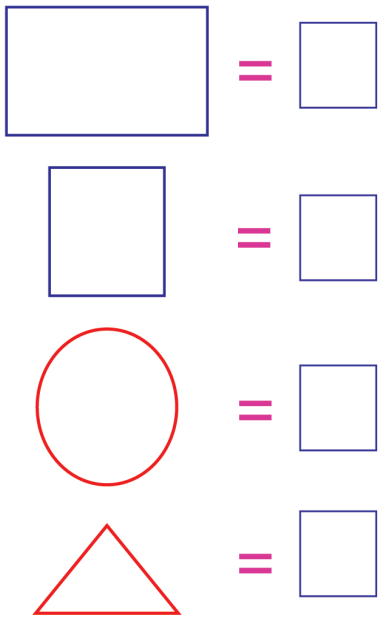


Get your pupils to understand the instruction for each problem. Let them solve the problems by themselves.

7. **Observe the diagram given below. Colour the same shaped parts with the same colour. Count the parts which have the same shape.**



Write the number of parts which have the following shapes.



Get your pupils to understand the instruction. Let them solve the above problems by themselves.

19 Let Us Record

1. Look at the colours of flowers.

Write in the following table. How many flowers of each colour are there.

Colour of the flower	Number of flowers
Red	9
Yellow	
White	

Get your pupils observe the colours of the flowers. Let them count the flowers of each colour. Ask them to record the correct number in the table.

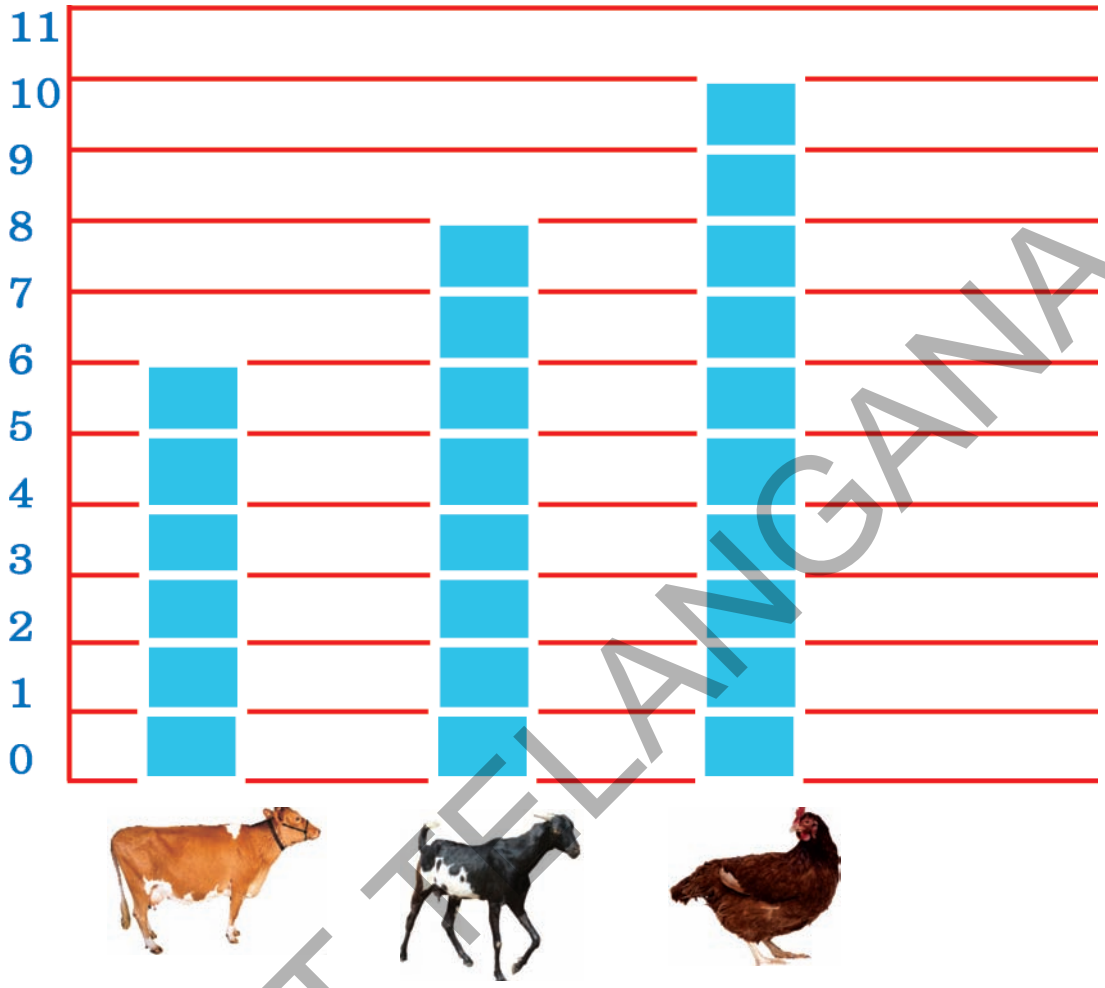
2. Look at the pictures in the table given below.

Count each type of fruit. Record the number in the table.

Fruits	Their number
	
	
	
	

Get your pupils observe the above table of fruits. Let them count each type of fruit. Ask them to record the number in the table.

3. The details of cows, goats and hens that Ramayya has given in the form of pictures. Count them.



Now record the numbers in the table given below.

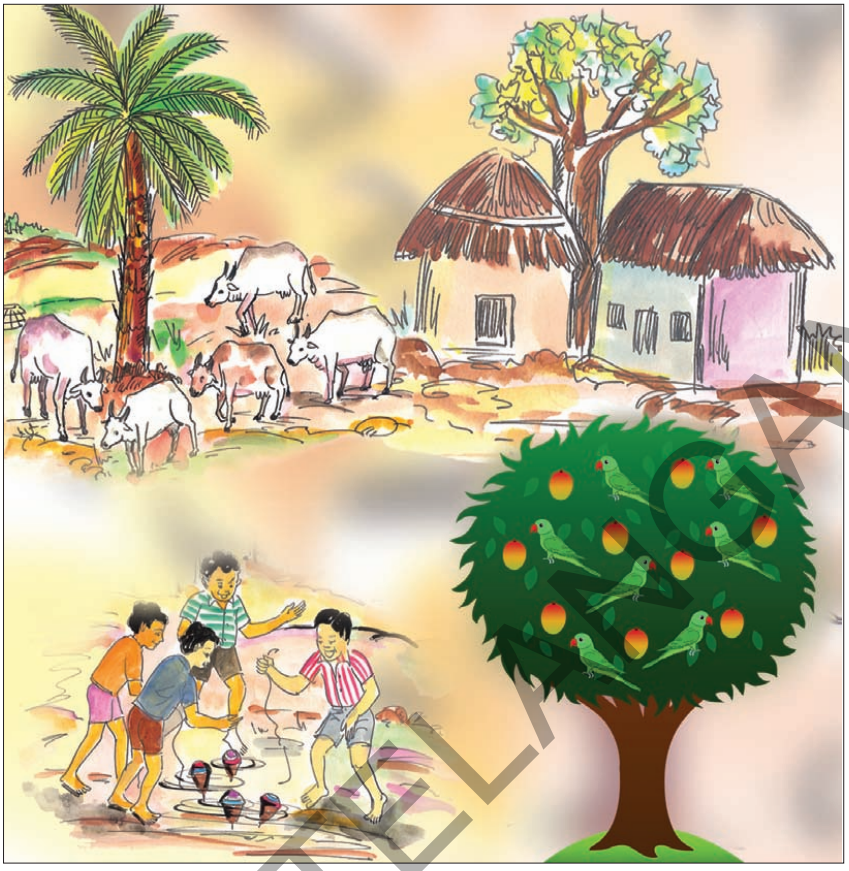
Ramayya has the following in his farm.

Animal	Their number
	
	
	

Get your pupils to observe the pictures. Let them count the animals and record the number in the table.

Exercise

Look at the picture. Count each item. Enter the details in the following table.



Ex:-

Items	Their number
Cows	5

Get your pupils to understand the instruction given for the problem. Let them solve the problem by themselves.