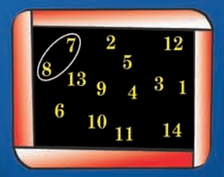
MATHEMATICS



State Council of Educational Research & Training
Telangana

Government's Gift for Students' Progress

CLASS - 1

MATHEMATICS

CLASS - 1

X3S8S1

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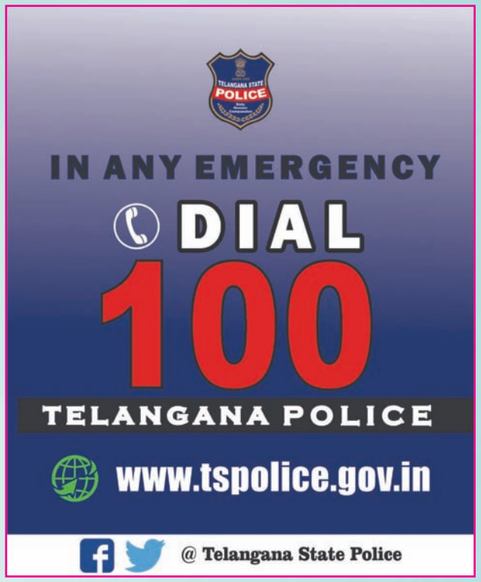

MATHEMATICS

CLASS - I

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First Published 2011
New Impressions 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024

This Book has been printed on 90 G.S.M. Maplitho
Title Page 250 G.S.M. White Art Card

Government's Gift for Students' Progress | 2024-25

Printed in India
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Mint Compound, Hyderabad,
Telangana.

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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 in their daily life situations. They estimate, calculate and compare quantities in an informal way and in meaningful situations. With a view to bidding farewell to rote learning and beginning to learn mathematics meaningfully, textbooks for classes I and II were prepared.

Units have been prepared in such a manner that pupils knowledge construction through investigation, understanding of mathematical concepts through observation, confirmation and generalisation 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 daily life situations, games they play and so on. Activities and exercises ensure that pupils acquire competencies like mathematical 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 textbooks in the new system. Our special thanks to Room to Read India Trust, Hyderabad for their technical support in redesigning of the textbooks. We wish all the teachers will implement this and ensure that pupils achieve the mathematical competencies specified for classes I and II.

Our special thanks to Room to Read India Trust, Hyderabad for their technical support in redesigning of the textbooks.

08-12-2022
Hyderabad

Director,
SCERT., Hyderabad.

NATIONAL ANTHEM

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!!

- Rabindranath Tagore

PLEDGE

"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."

- Pydimarri Venkata Subba Rao

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1 Pre-Mathematical Concepts

F9N4V3

Look at the picture. Answer the questions orally.

★ What do you see in the picture?

★ Where is the turtle?

★ Which bird is flying higher?

★ Which flower pot has more flowers?

★ Who is thin among the two standing boys?

★ Where is the rat going?

★ Where is the TV antenna?

★ Where is the dog?

★ Show the boy who is deeper in water.

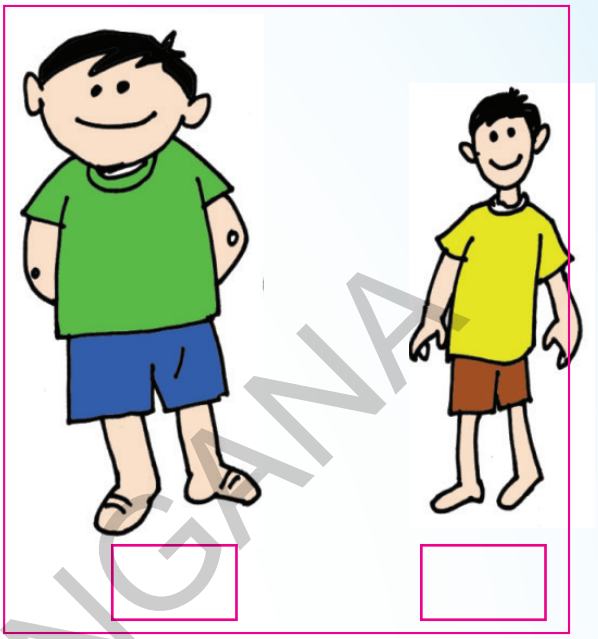
★ Which tree looks bigger?

Get your pupils to observe the above picture. Help them to understand the basic concepts of fat - thin, big - small, inside - outside, above - below, more - less etc.

Exercise

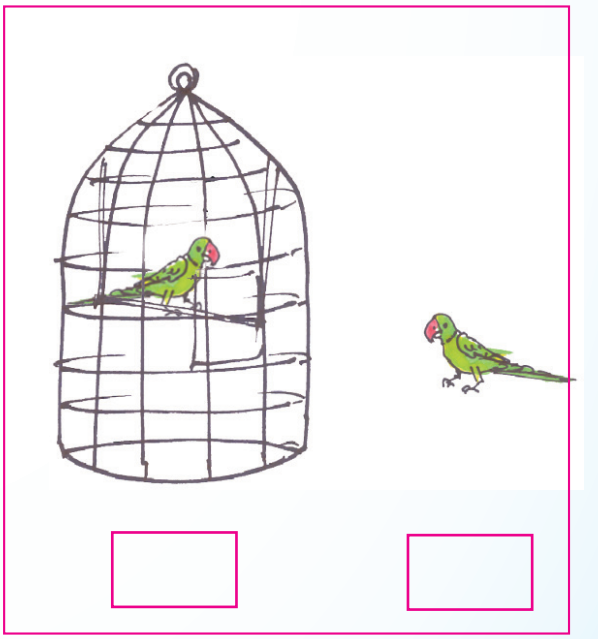
(a) Indicate your answer by '✓' in the ☐ .

Who is thinner?



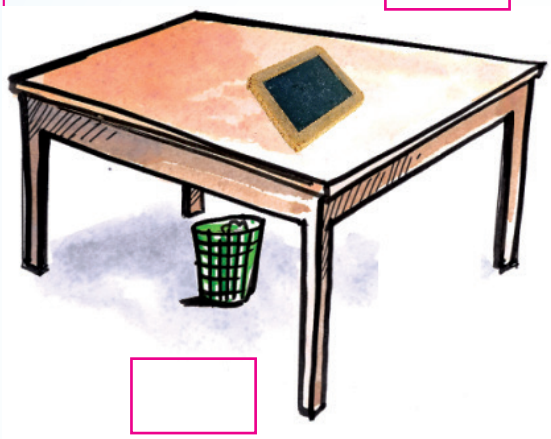
Which is smaller?

Which parrot is outside the cage?

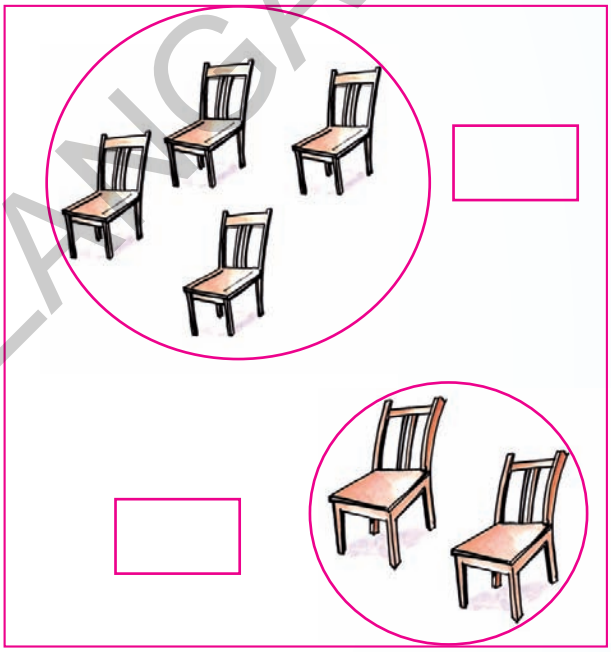


Get your pupils to observe the pictures. Let them solve the problems by themselves as per the instructions.

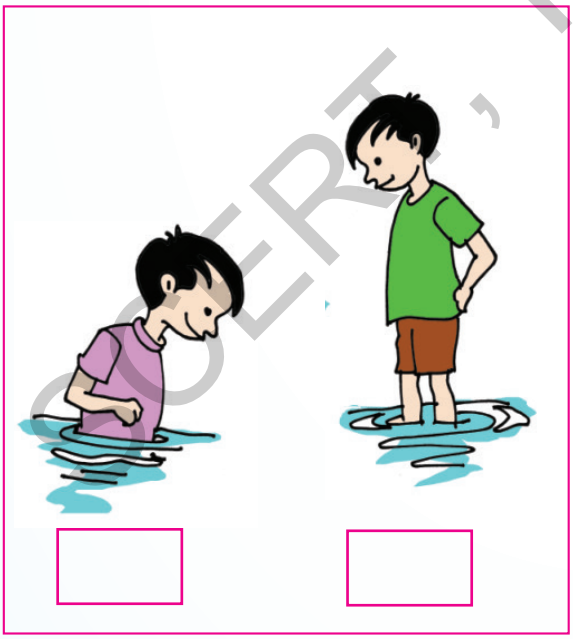
Indicate your answer by '✓' in the ☐ .



Which object is under the table?



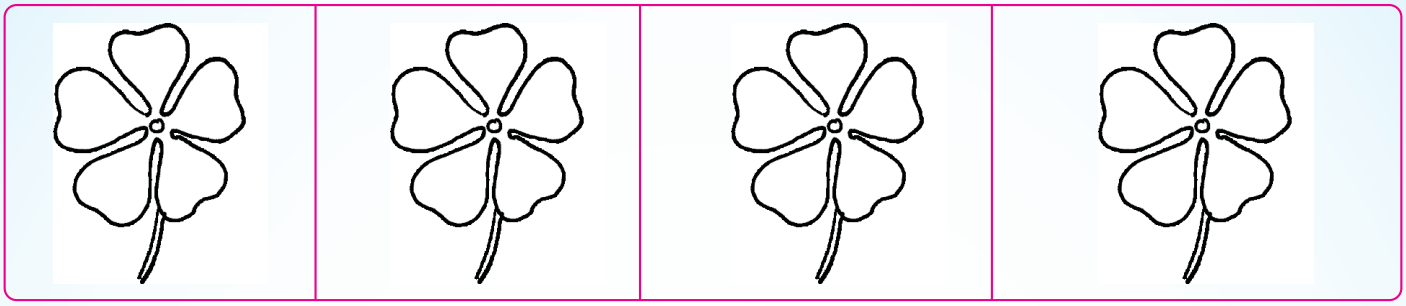
Which group has less chairs?



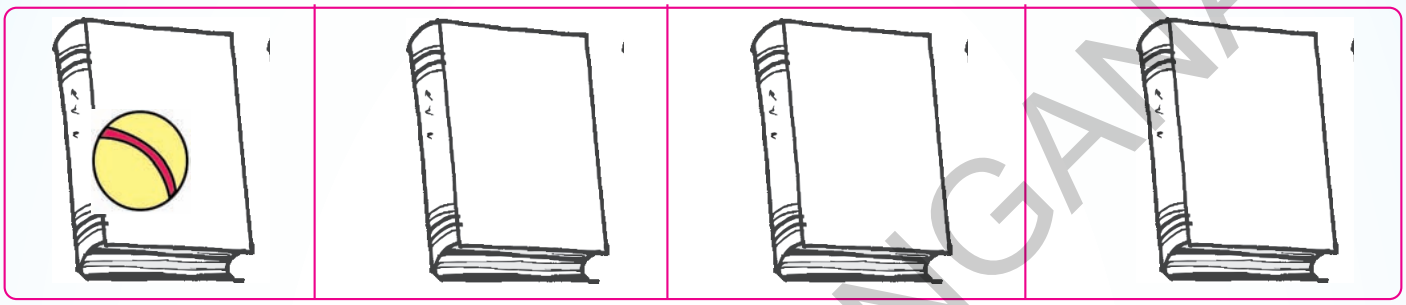
Who is deeper in water?

Get your pupils to observe the pictures. Let them solve the problems by themselves as per the instructions.

(b) Colour the following flowers inside with red outside with yellow.



(c) Draw a ball on each book.



(d) Look at the picture of a glass given below. Draw another glass which is smaller than this one.

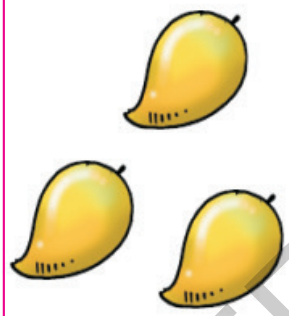
(e) Look at the candle given below. Draw another one which is smaller and thinner than this.

Get your pupils to observe the pictures. Let them solve the problems by themselves as per the instructions.

(f) Draw the picture of a bat, which is bigger than the given one here.

(g) Look at the number of balloons. Draw less number of balloons.

(h) Look at the number of mangoes. Draw mangoes which are more in number.



(i) Draw a ball under the cot.

Get your pupils to observe the pictures. Let them solve the problems by themselves as per the instructions.

2 Shapes

C9Q9J6

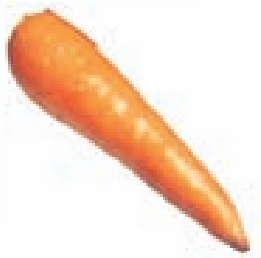
Look at the picture.

- What do you see in the picture? What are they doing?
- What games are they playing?
-  Say which things look like a ball.
-  Say which things look like a brick.

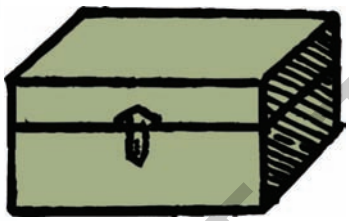
Get your pupils to observe the pictures. Ask the pupils to tell some of the objects that look like a ball, a top and a brick. Make them to understand their shapes.

Exercise

(a) Match the things that have similar shape.

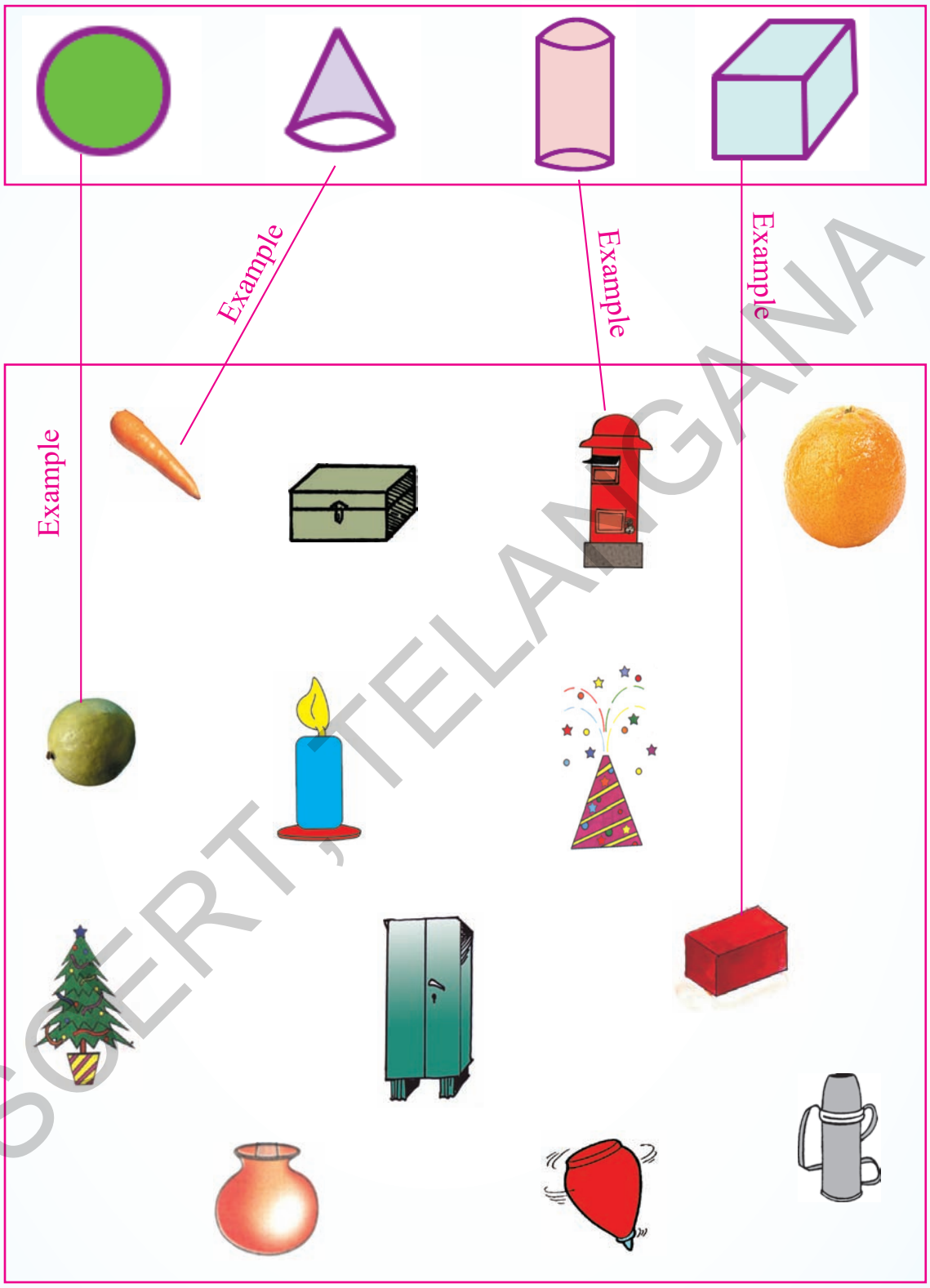






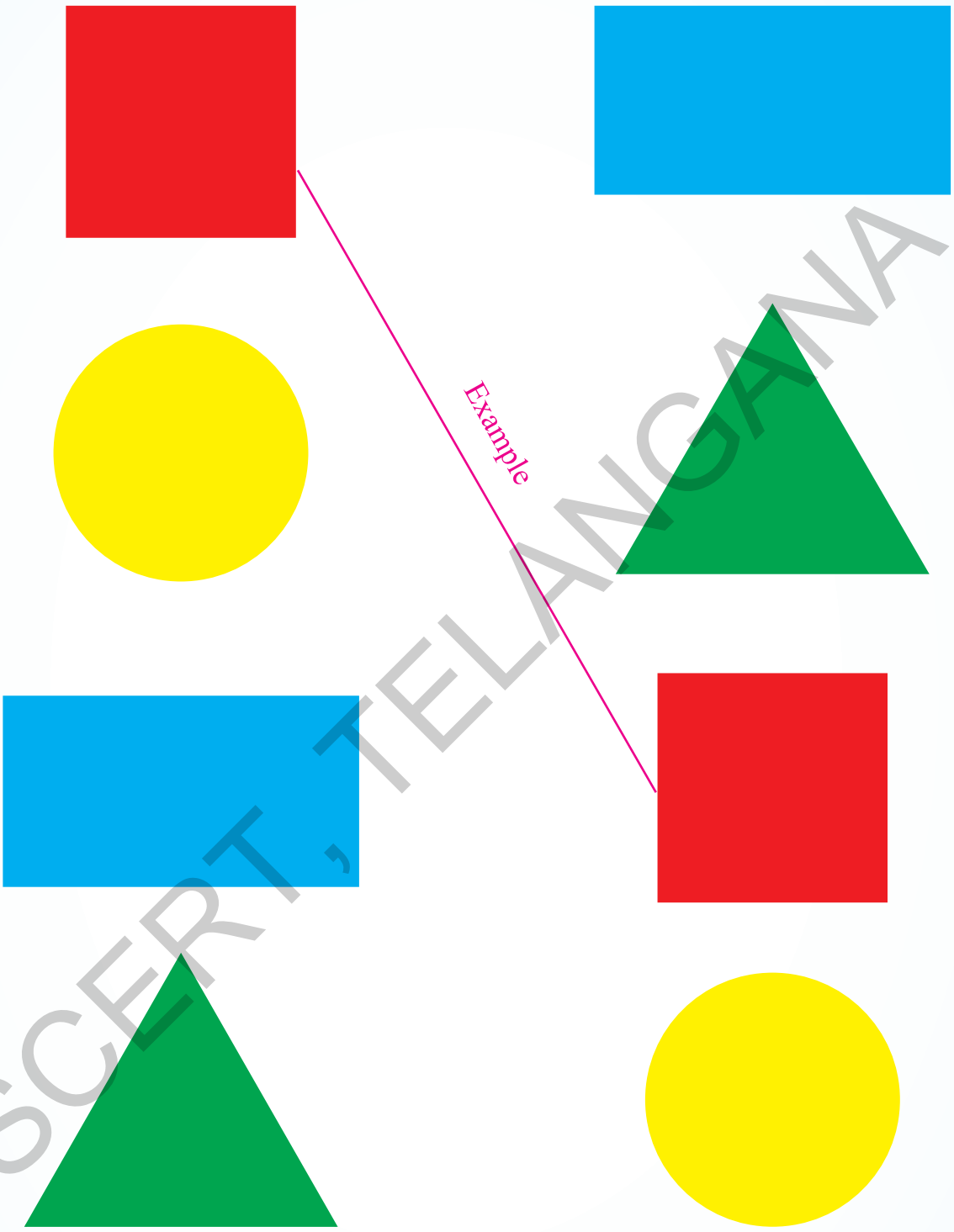

Get your pupils to observe the pictures. Match things that have same shape.

(b) Observe the following four shapes.
Draw lines to join woth similar shape objects. Examples are given.



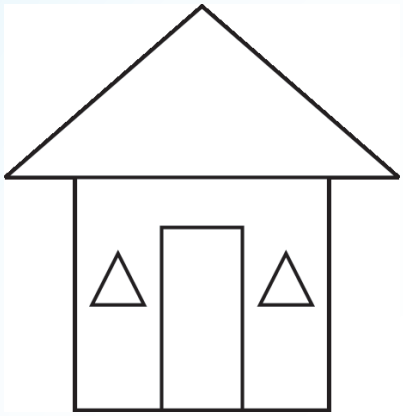
Get your pupils to observe the 4 shapes. Ask them to match objects with 3 dimensional geometric shapes shown at the top. Help them to understand the objects that have 3 dimensional geometric shapes.

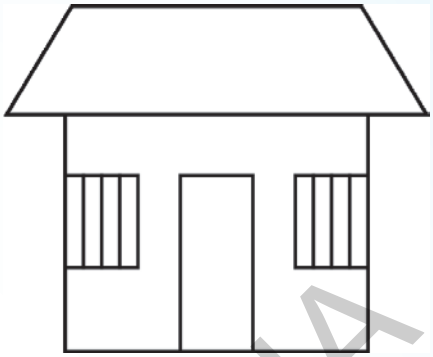
(c) Match the shapes that are same.

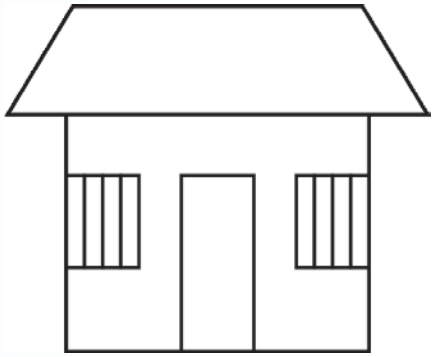


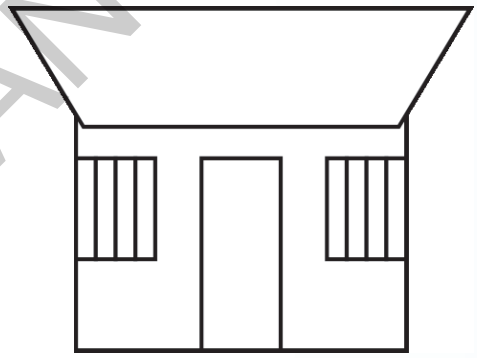
Get your pupils to observe the above shapes. Ask them to match some geometric shapes that are same. Help them to understand the shapes.

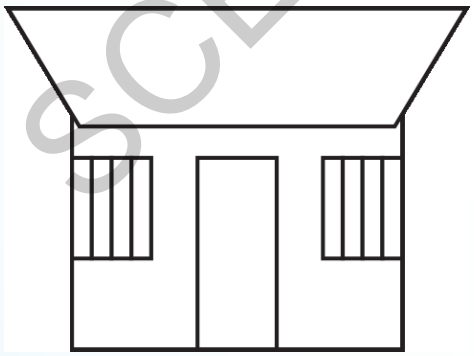
(d) Observe the pictures. Match the pictures that look alike.

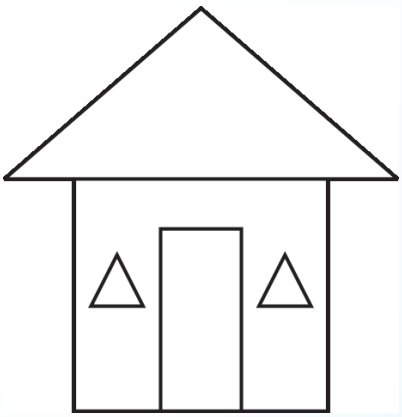








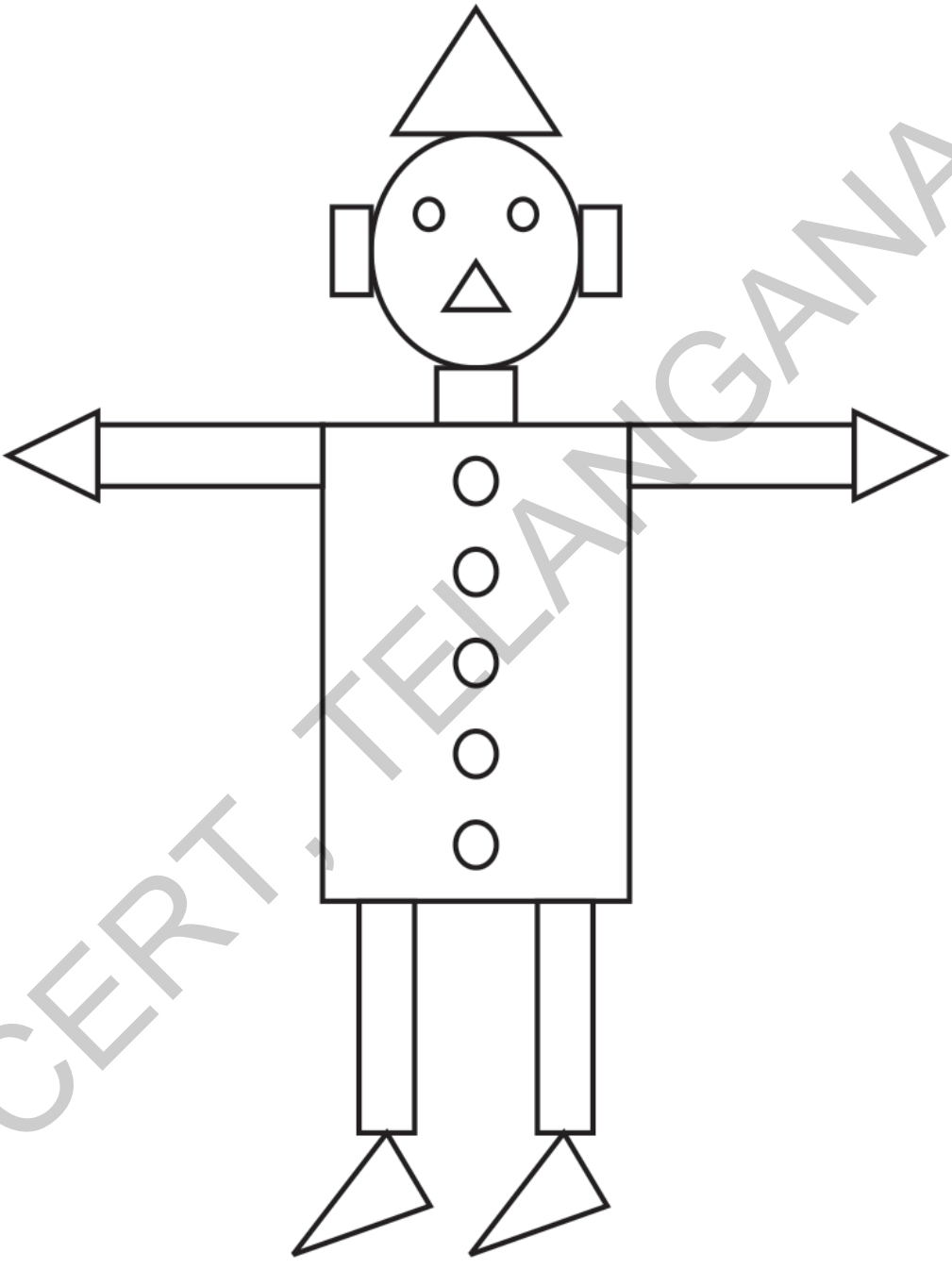




Get your pupils to observe the above shapes. Ask them to match some geometric shapes that are same. Help them to understand the shapes.

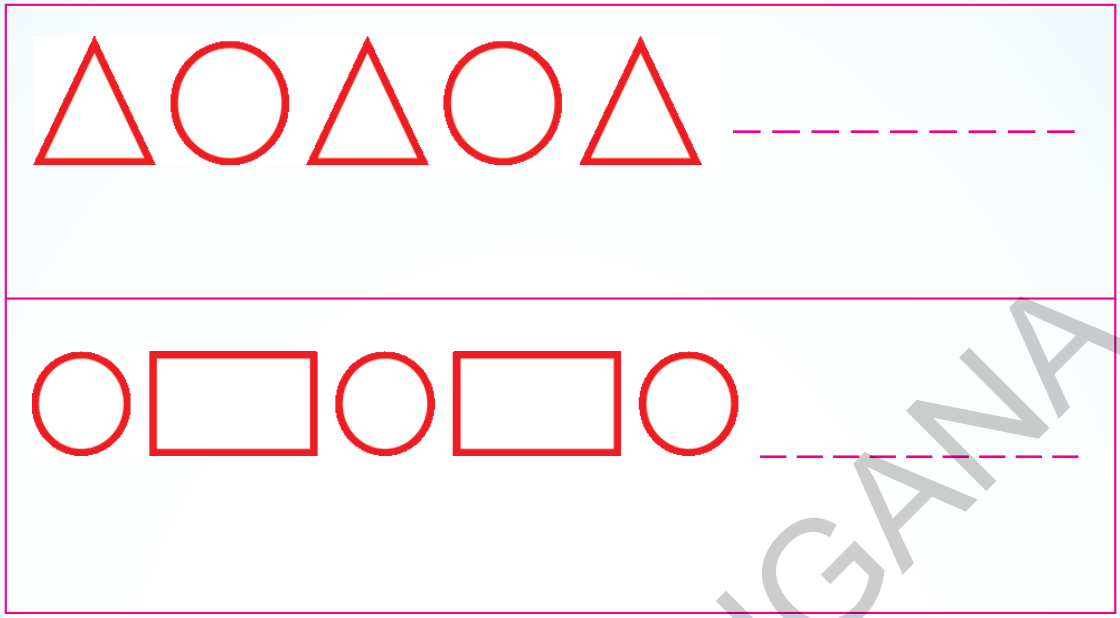
(e) **Look at the colours of the following 4 shapes.**

Colour the shapes of the following picture with the same colours.



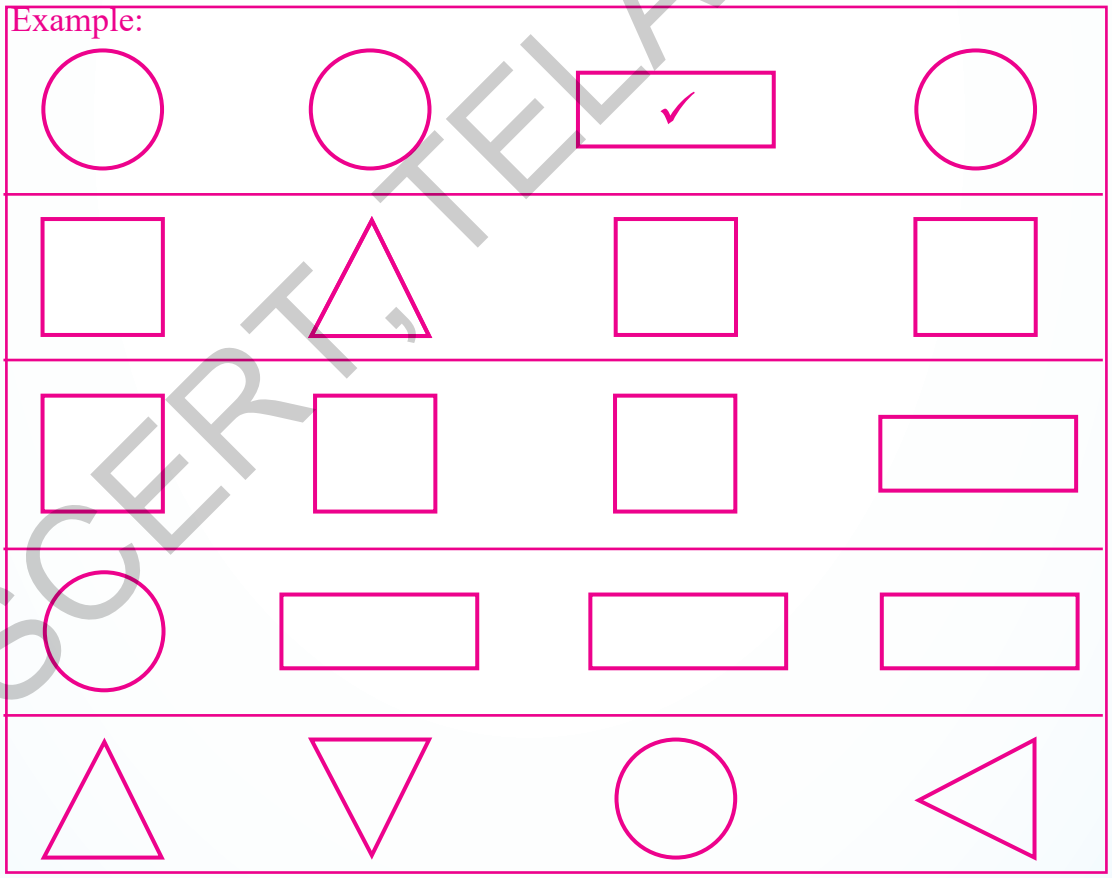
Get your pupils to identify the colour used for the four different shapes  **.**
Let them identify where those shapes are in the big picture. Ask them to colour those shapes correctly.

(f) Observe the series of shapes. Draw the next shape.



(g) Observe the shapes in each row. Mark the different one by putting '✓' mark.

Example:

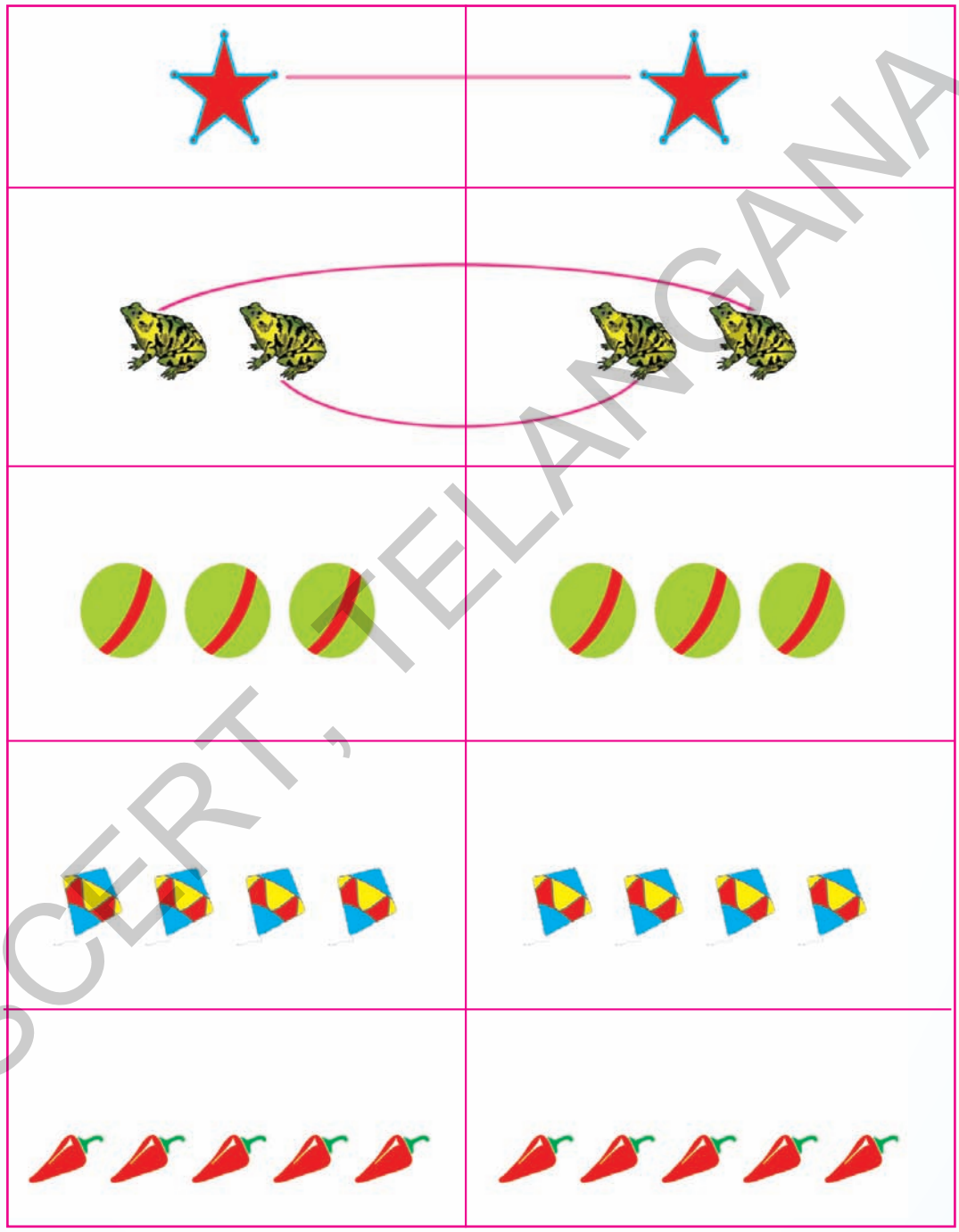


Get your pupils to observe the shapes. Let them solve the problems by themselves after helping them to understand the instructions.

3 Numbers from 1 to 5

K5L3S9

Count the pictures on the left. Are there same number of pictures on the right side? Count them by drawing lines as shown here.



As shown above get your pupils match first group pictures with second group pictures. Let them understand the concept of counting.

(a) Sing the following song with action.

One , one, one,

The nose is one.

Two, two, two,

Eyes are two.

Three,three, three,

Rikshaw wheels are three.

Four, four, four,

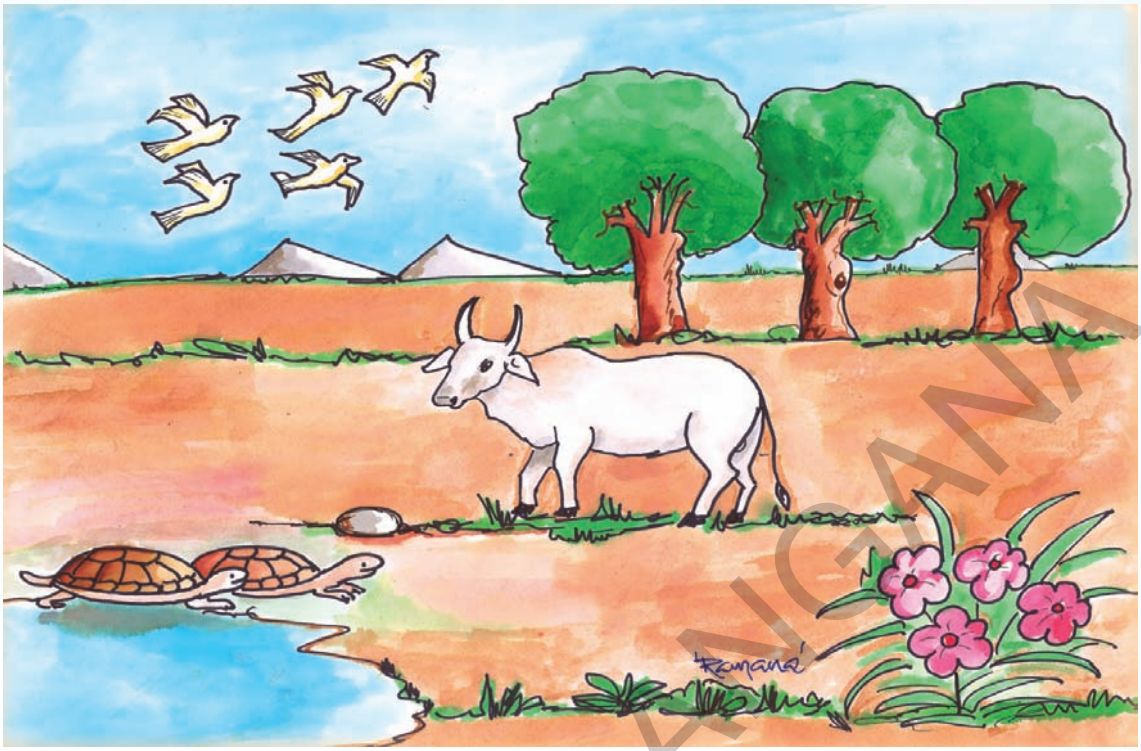
Legs of a chair are four.

Five, five, five,

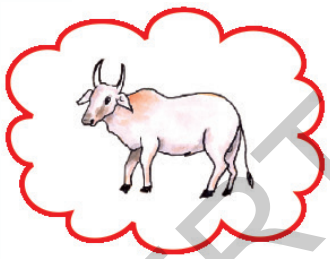
Fingers are five.

Get your pupils to sing the above song with action. Help them to count the numbers 1 to 5 shown above.

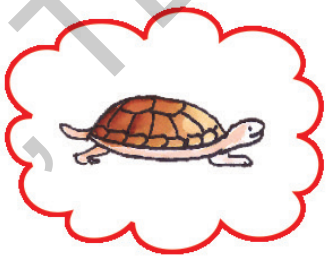
(b) Observe the following picture. Name the things in it?



Say what and how many are there in the above picture.



How many ?



How many ?

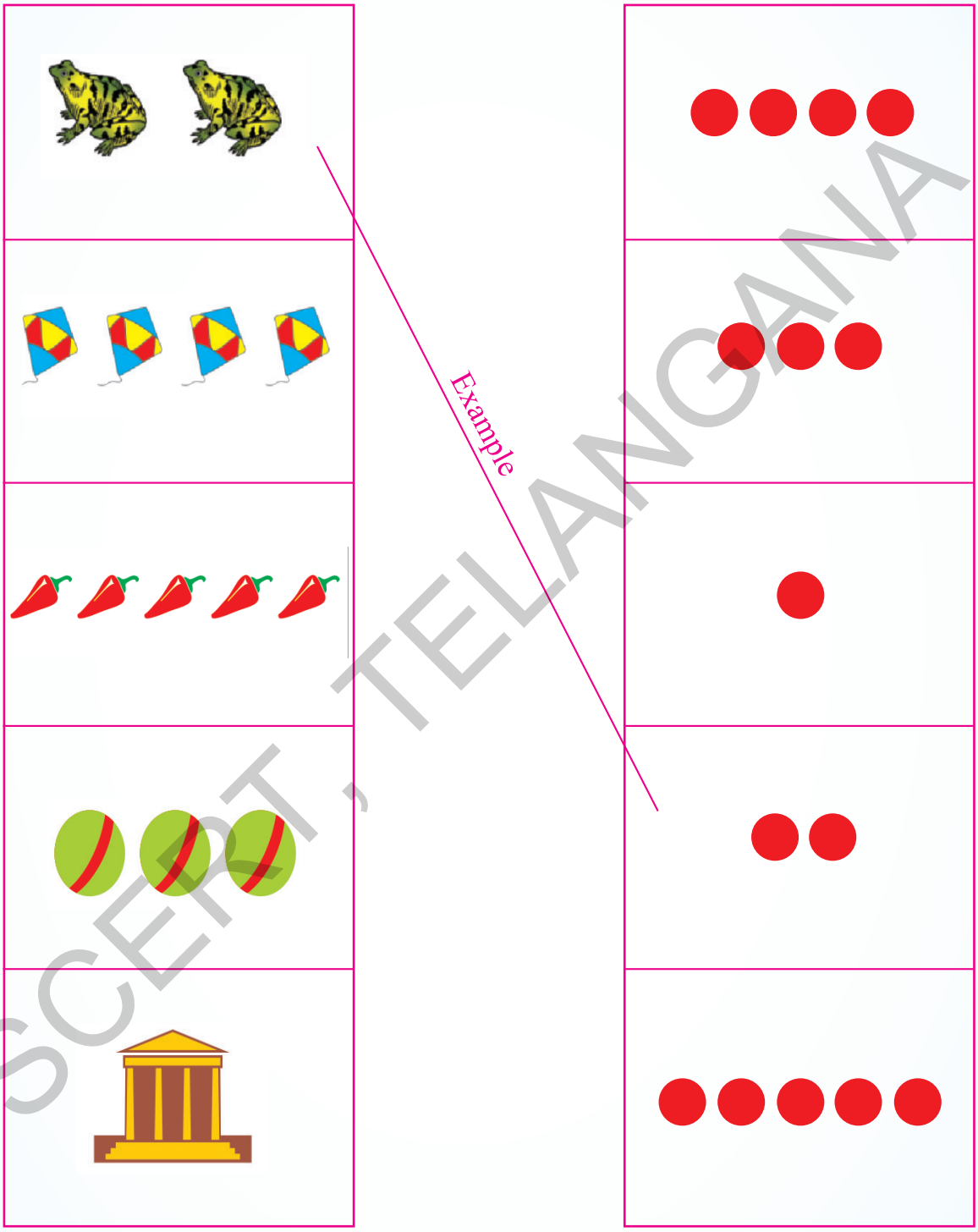
How many ?

How many

How many

Get your pupils to observe the above picture. Let them count the number of different things. Ask them to say their numbers.

(c) Count the things on the left side. Match them with the same number of big dots on the right.



Get your pupils to count the things in each box. Let them match with dots.

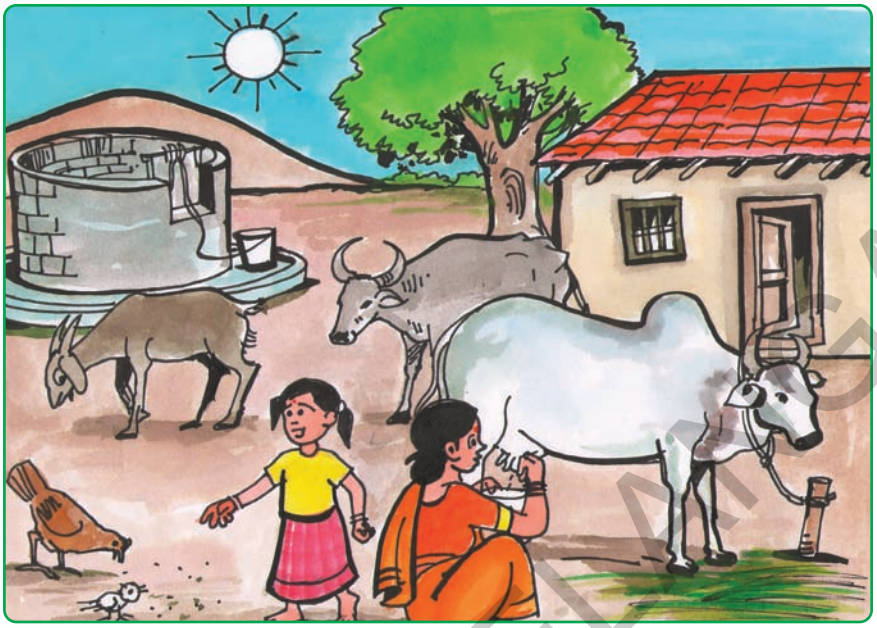
(d) Count the things on both sides and match them correctly.

 3	 2
 2	 4
 5	 1
 1	 3
 4	 5

Get your pupils to count the pictures in each box of left side and read their number. Ask them to match with right side number.

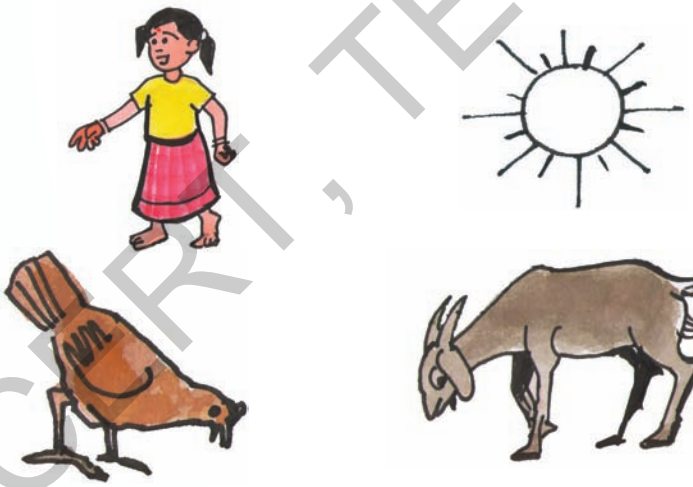
ONE

Look at the picture given below. Count each thing you see. Write that number in the blank boxes given below.



I

ONE



I

I						

Get your pupils to observe the picture. Let them count the number of different things. Let them identify their number. Ask them to write the number in the blank boxes.

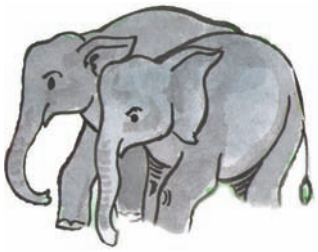
TWO

Look at the picture given below. Count each thing you see. Write that number in the blank boxes given below.

2

TWO

2



2

2	2	2	2	2	2	2

Get your pupils to observe the picture. Let them count the number of different things. Let them identify the number. Ask them to write the number in the blank boxes.

THREE

Look at the picture given below. Count each thing you see. Write the number in the blank boxes given below.

3

THREE

3

3

3	3	3	3	3	3	3

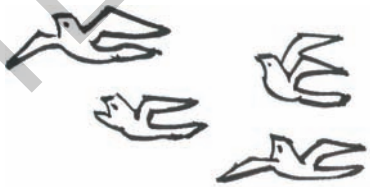
Get your pupils to observe the picture. Let them count the number of different things. Let them identify the number. Ask them to write the number in the blank boxes.

FOUR

Look at the following picture. Count each thing you see. Write the number in the blank boxes.

4

FOUR



4

4

4	4	4	4	4	4	4

Get your pupils to observe the picture. Let them count the number of different things. Let them identify the number. Ask them to write the number in the blank boxes.

FIVE

Look at the following picture. Count each thing you see. Write the number in the blank boxes given below.

5

FIVE

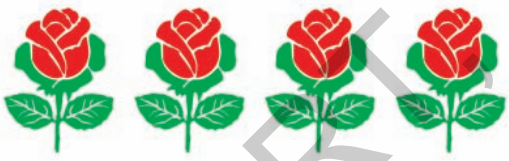
5

5

5	5	5	5	5	5	5

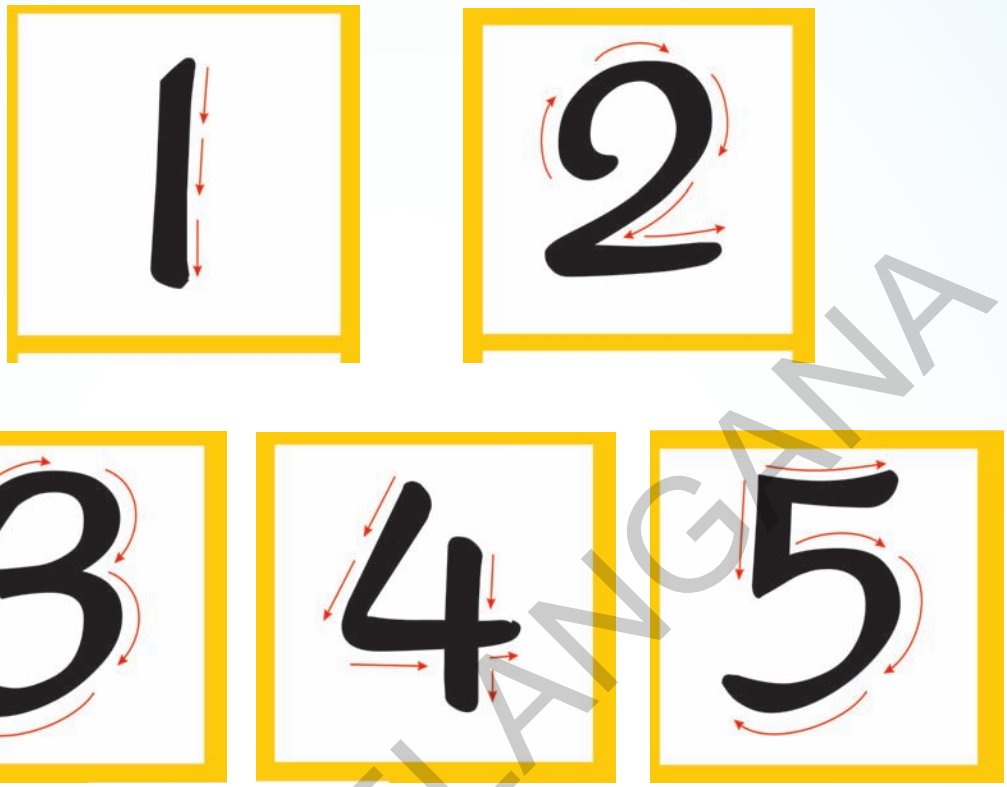
Get your pupils to observe the picture. Let them count the number of different things. Let them identify the number. Ask them to write the number in the blank boxes.

Count the things on the left. Match them with their numbers on the right.

	4
	1
	2
	5
	3

Get your pupils to count the pictures in each box on the left. Let them match the pictures with the correct number given on the right.

Look at the numbers. Write them in the blank boxes given below.



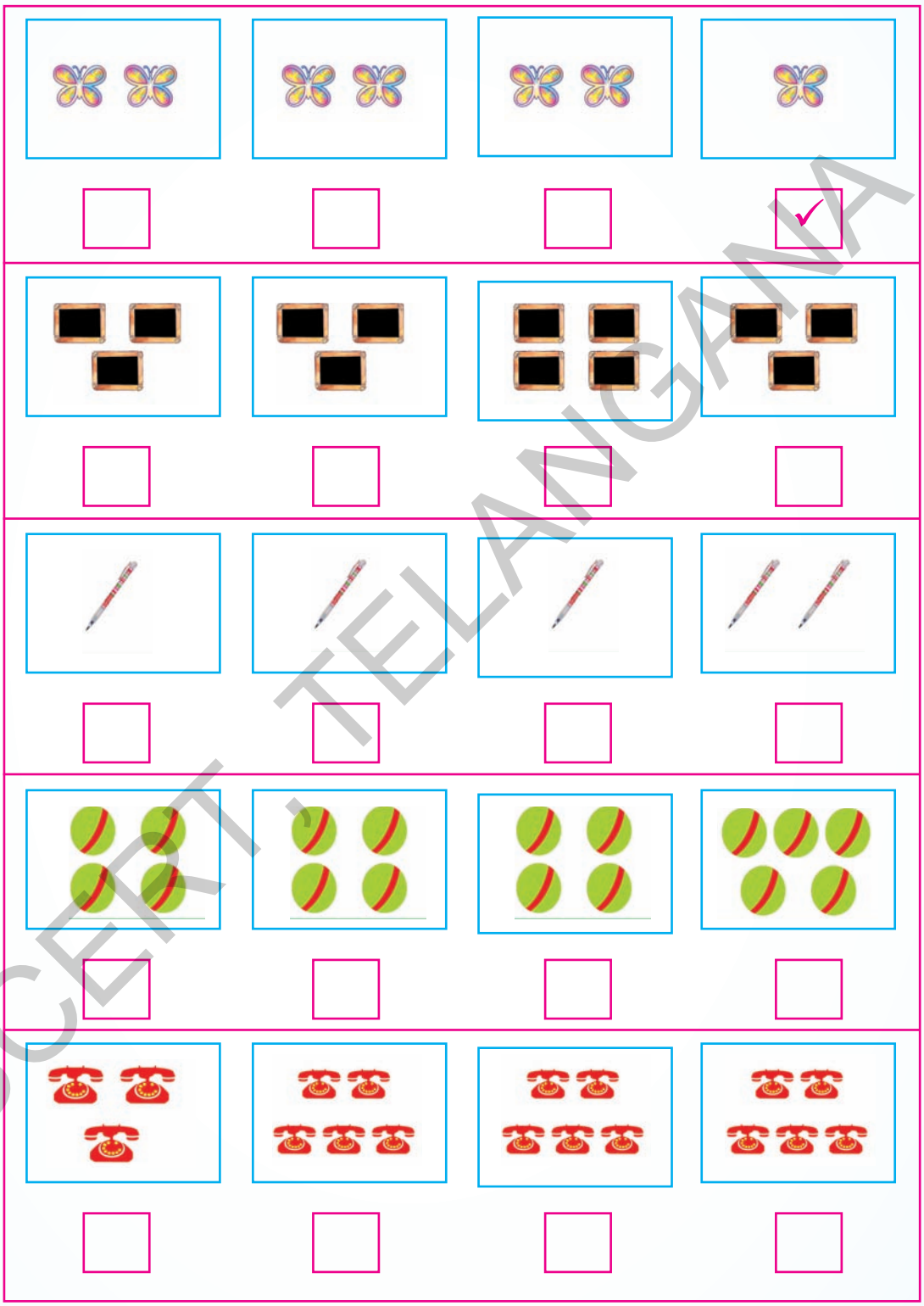
1	1			
2				
3				
4				
5				

Get your pupils to observe the method of writing numbers 1 to 5 as shown above. Let them write the numbers 1 to 5 in the given boxes.

Exercise

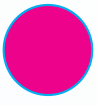
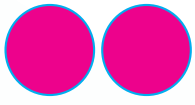
(a) Count things in each box in the row. Put '✓' in the box which has different number of things. One example is given.

Ex:



Get your pupils to count the things in each box of every row. Put '✓' in the box which has a different number of things.

(b) Count the things in the boxes on the top line. Draw the same shapes of next number in the blank boxes.

Example: 			
			
			
			
			

Get your pupils to count the pictures in each box on the top row. Let them draw the requisite number of pictures in the blank boxes.

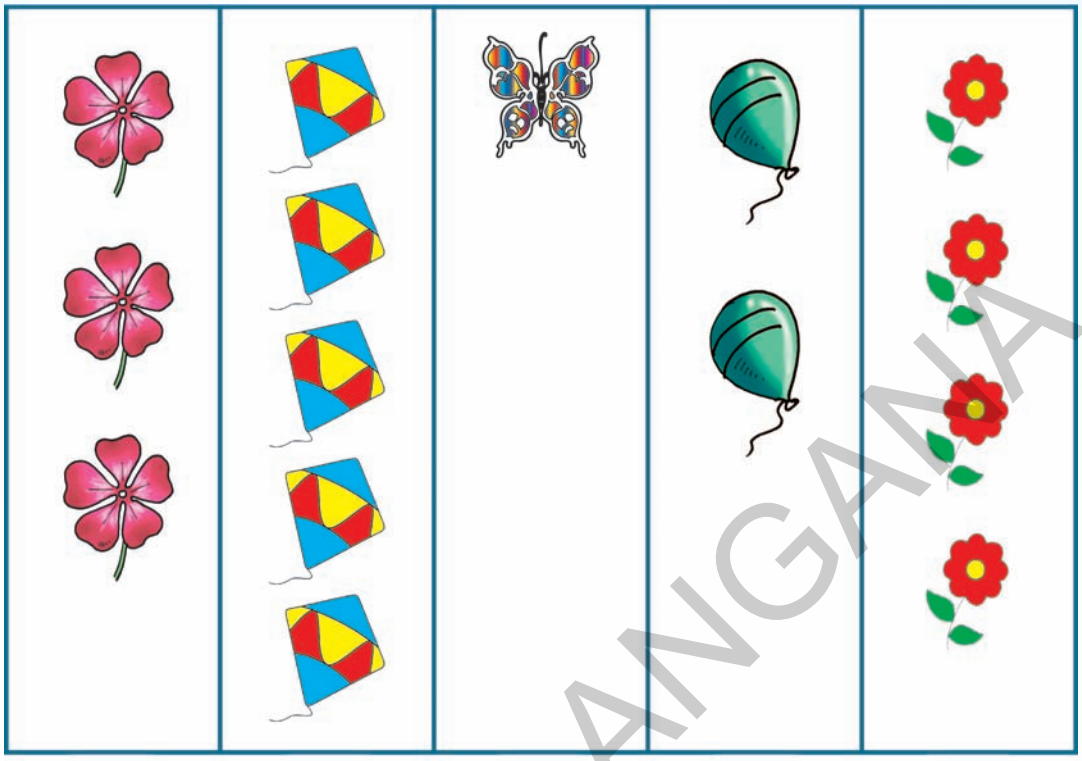
(c) Count the toffees in each box. Write their number.

(d) Write the numbers in blank boxes in an order / sequence.

1	2		
2		4	
2			5
	3		5

Get your pupils to understand the instructions given to solve the problems by themselves.

(e) Count the pictures in each column. Write their number in the blank box given under each column. One example is given.



Ex:-	3				

(f) Look at the following numbers. Write the correct numbers in the blank boxes.

1	2	1	2	1	2						
1	2	3	1	2	3						
1	2	3	4	1	2	3	4		2		
1	2	3	4	5			3				

Get your pupils to understand the instructions given to solve the problems by themselves.

4 Numbers from 6 to 9

F2V5L9

Look at the picture given below, Count each thing you see.

(a) Count the number of things from the above picture.

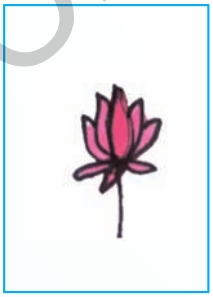
How many ?

How many ?

How many ?

How many ?

How many ?



How many ?

How many ?

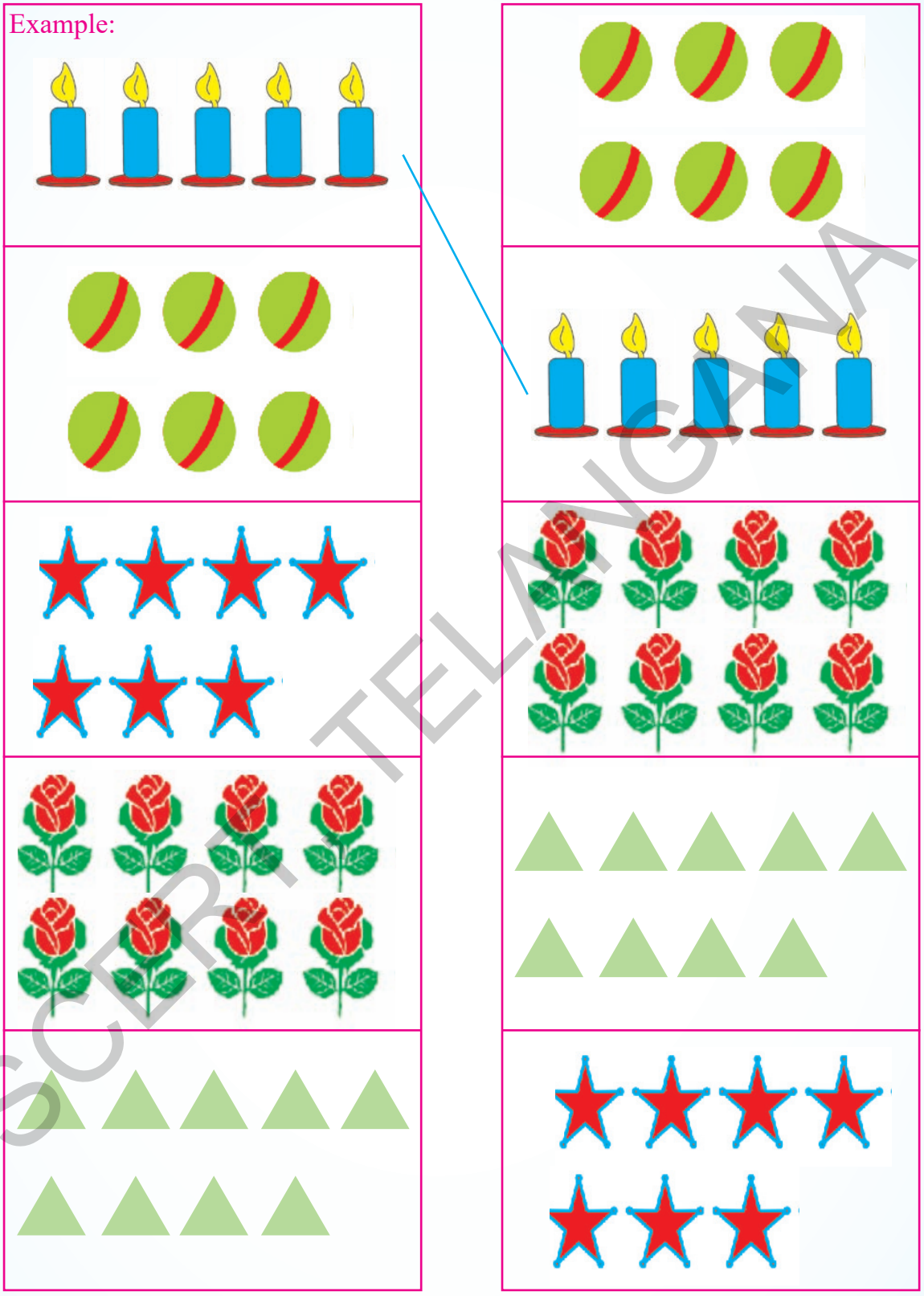
How many ?

How many ?

Get your pupils to observe the above picture. Let them count the number things of each category. Ask them to say their number.

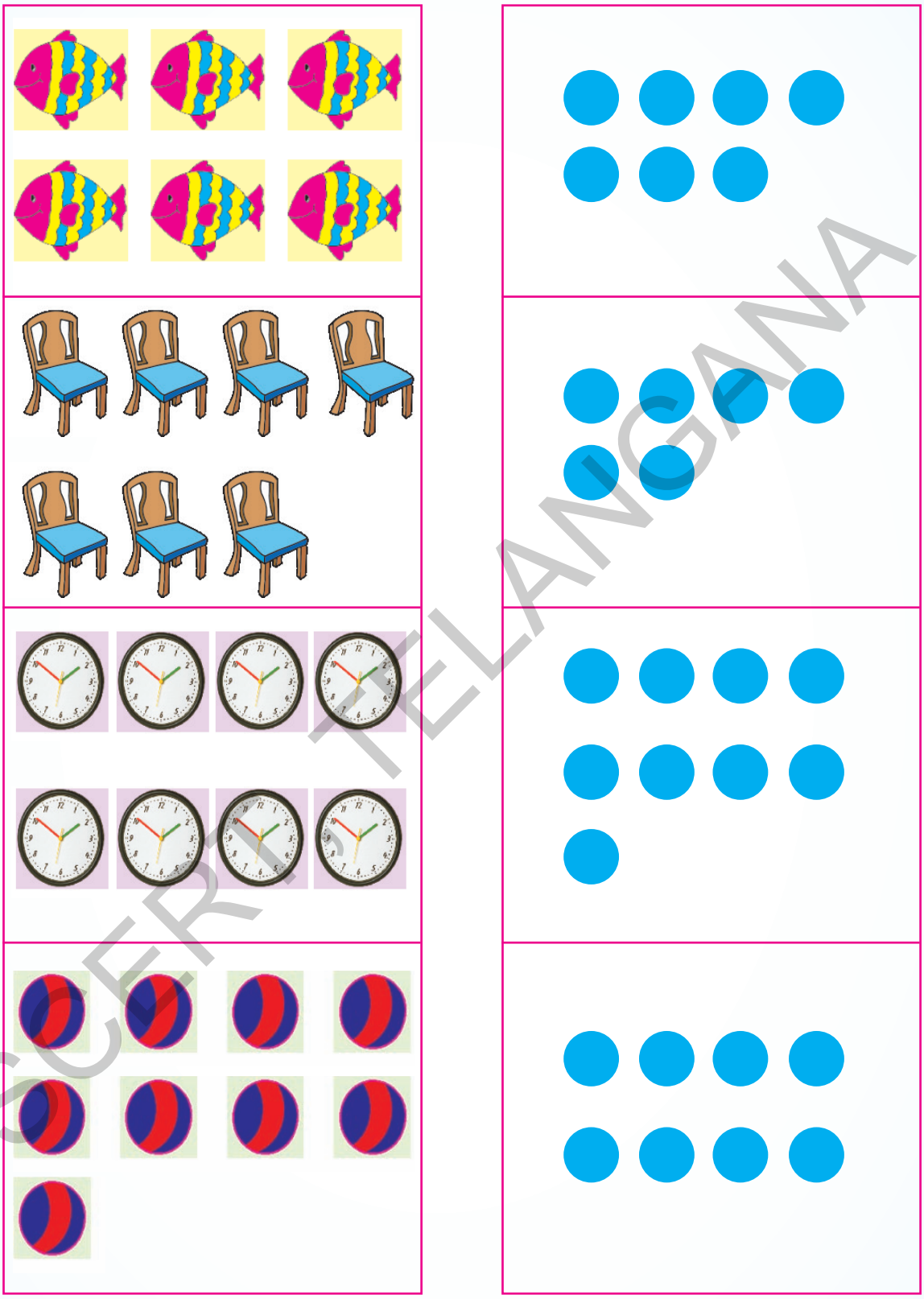
(b) Count the pictures on the left. Match them with the same pictures on the right.

Example:



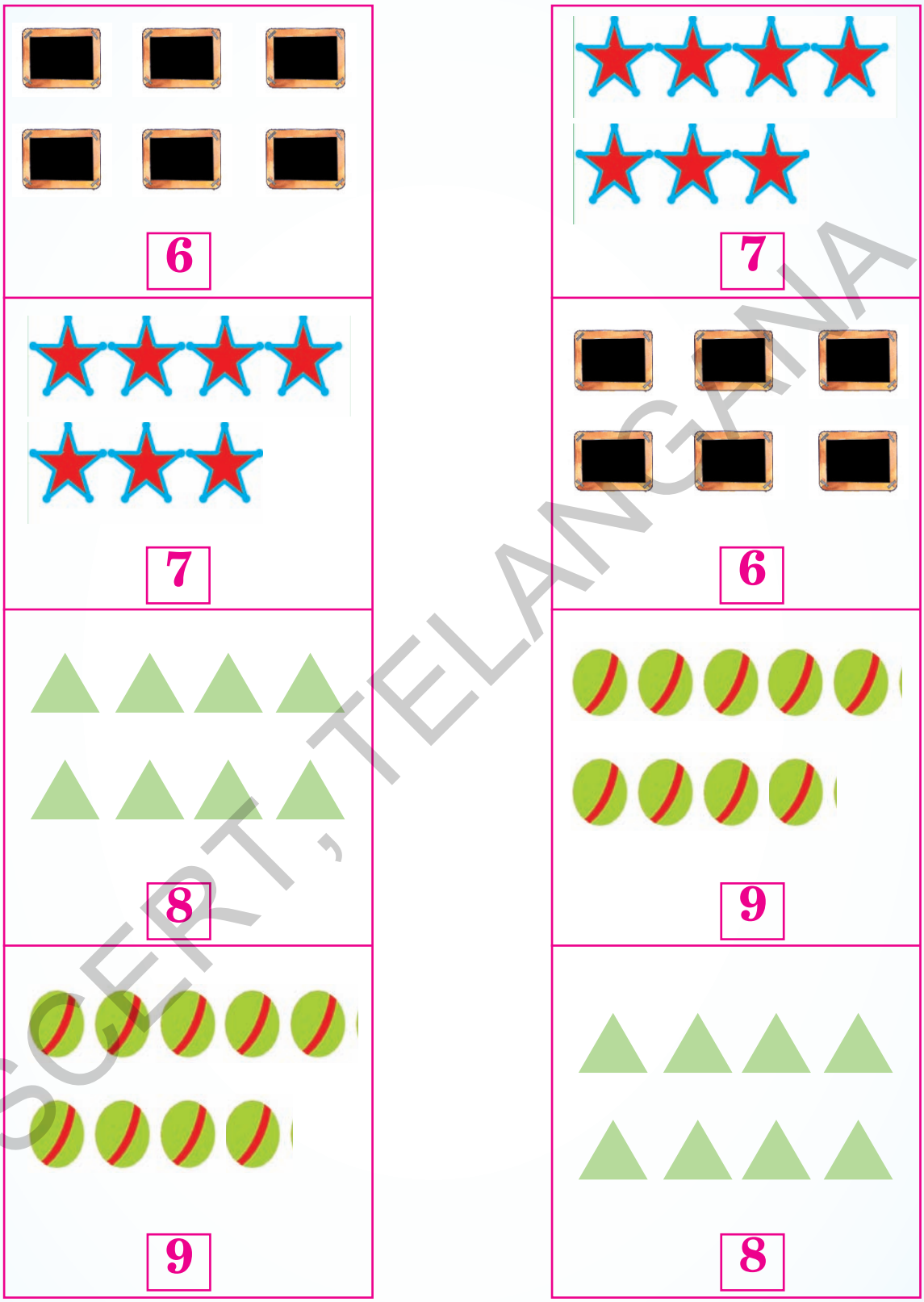
Get your pupils to observe the pictures in each box. Let them count the things. Ask them to match.

(c) Count the pictures in each box on the left. Match them with the same number of dots on the right.



Get your pupils to observe the pictures and the dots. Let them count the pictures and ask them to match with the same number of dots.

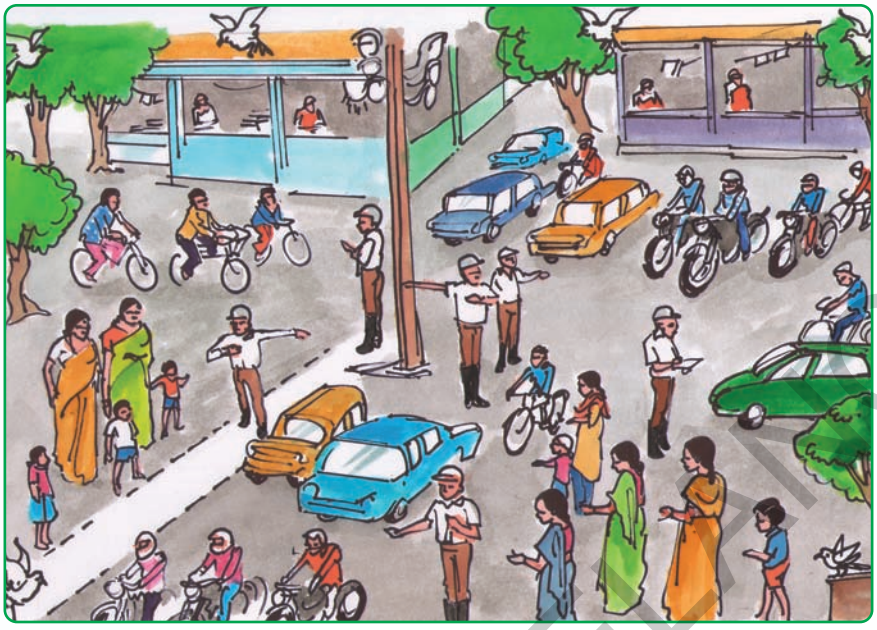
(d) Count the things in each box on the left. Match them with the same things on the right.



Get your pupils to identify the numbers from 6 to 9 by counting the things in each box. Ask them to match the things on both sides.

SIX

Observe the picture given below. Count each thing and write the number in the blank box.



6

SIX

6

6						

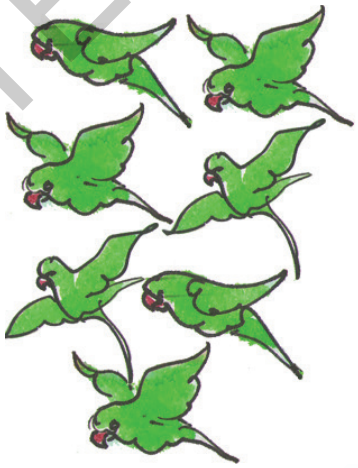
Get your pupils to observe the above picture of a road juction. Let them count different things like cyclists, cars, birds etc. Let them identify their number and write them in the blank boxes.

SEVEN

Look at the picture given below. Count each thing. Write that number in the blank boxes given below.

7

SEVEN



7

7						

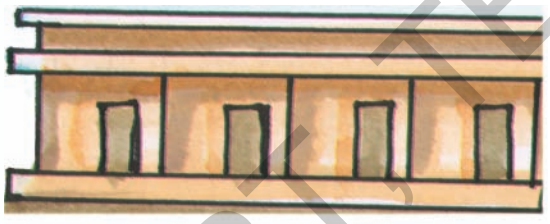
Get your pupils to observe the above picture and count the different things in it. Let them identify numbers according to the instruction and write the number in the blank boxes.

EIGHT

Observe the following picture. Count each thing. Write the number in the blank boxes given below.

8

EIGHT



8

8						

Get your pupils to observe the above picture. Let them count different things. Let them identify the numbers as per instructions and write the number in the blank boxes.

NINE

Observe the following picture. Count each thing. Write the number in the blank boxes given below.

9

NINE

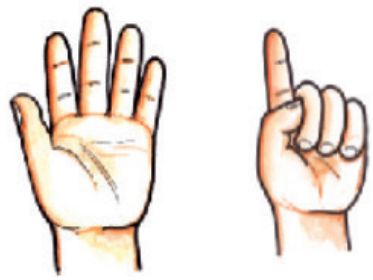
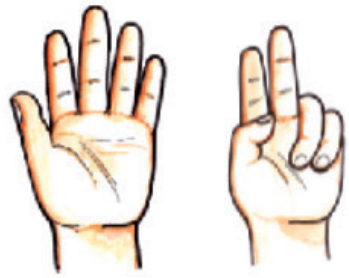
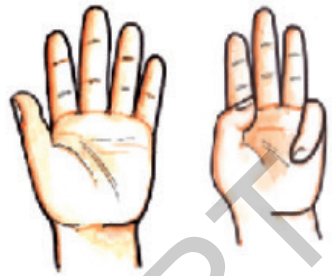
9

9

9	9	9	9	9	9	9

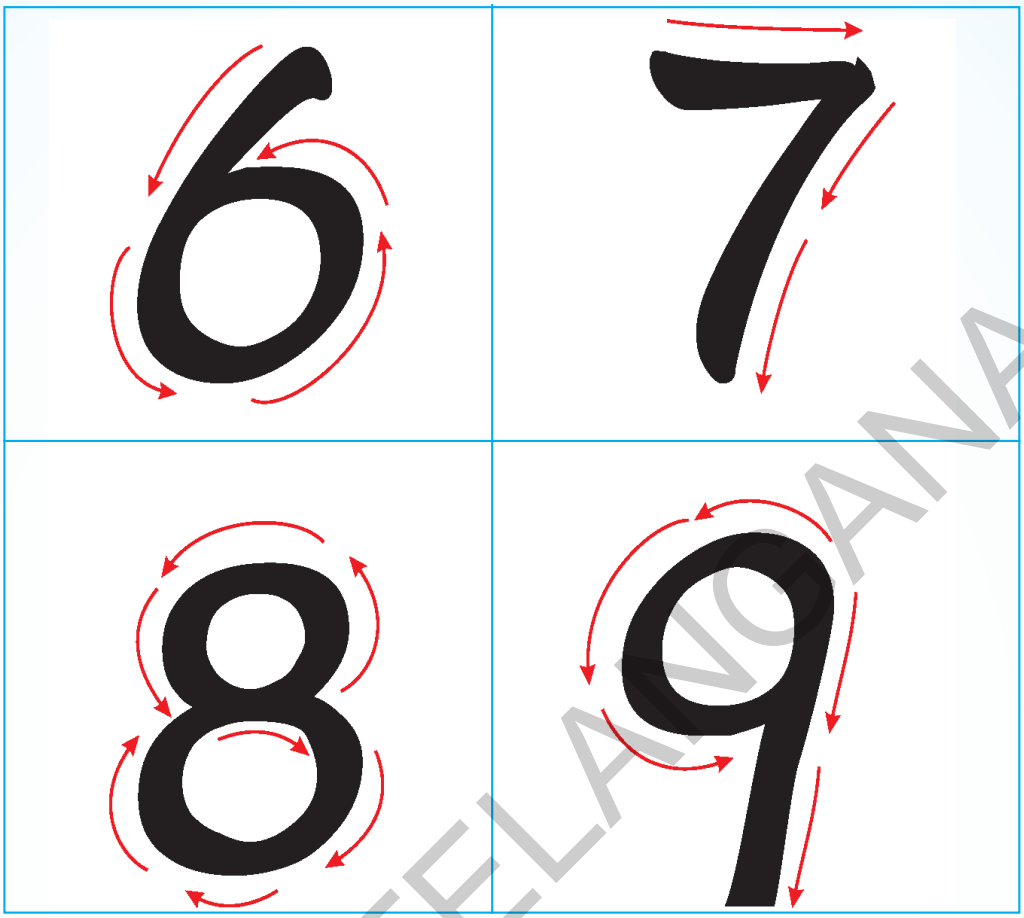
Get your pupils to observe the above picture. Let them count different things in the picture. Let them identify numbers as per instructions and write the number in the blank boxes.

Count the fingers on the left side. Match them with the correct numbers on the right side.

	7
	6
	9
	8

Get your pupils to observe the pictures of hands. Let them count the fingers on the left side. Ask them to match the number of fingers with the correct number on the right side. Identify the numbers from 6 to 9.

Look at the picture. How they are written?



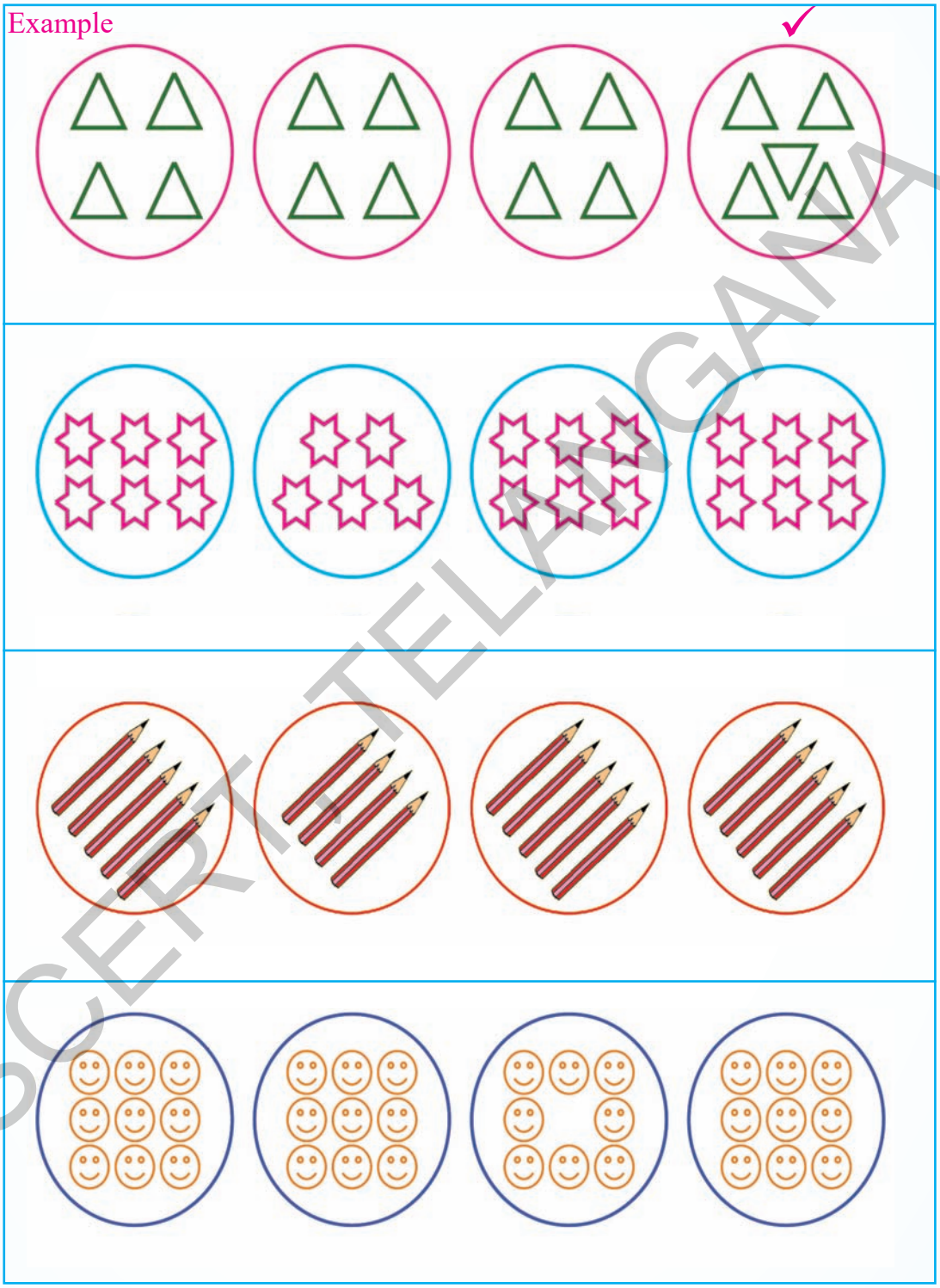
Write the above numbers in the same way in the blank boxes given below.

6	6			
7				
8				
9				

Get your pupils to observe how the above numbers 6 to 9 are written. Help them to write in the same way.

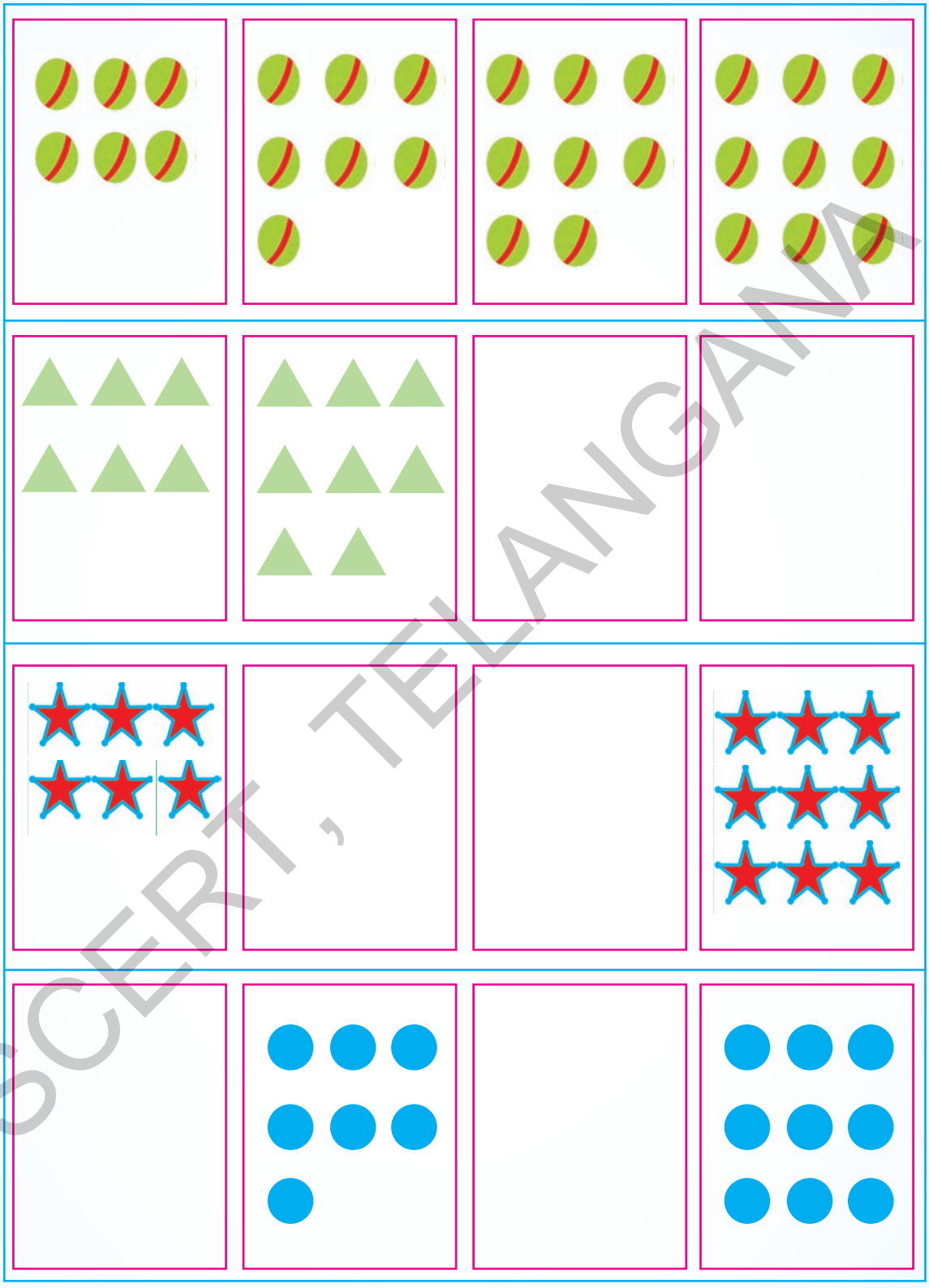
Exercise

(a) Count the things in each circle in each row. Put '✓' at the circle where the number of things are different. One example is given.



Get your pupils to count the things in each row, Ask them to put '✓' the set which has different number of things.

(b) Count the number of things in each box at the top row. Taking their number as basis, draw the correct number of things in the blank boxes.



Get your pupils to count the things in each row. Ask them to draw the same number of things in each of the blank boxes under the top row.

(c) Count the pictures in each box. Write their number in the blank box on the right side. One example is given.

	Example. **7**
(a) 	
(b) 	
(c) 	
(d) 	
(e) 	
(f) 	
(g) 	
(h) 	

Get your pupils to observe the pictures on the left. Let them count and ask them to write their number in the right side box.

(d) Write the numbers from 1 to 9.

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

(e) Write the correct number in each blank box given below.

1	2							9
9	8							1

Get your pupils to write the numbers from 1 to 9 in the top grid. Ask them to write the numbers from 1 to 9 and from 9 to 1 in the lower grid.

(f) Count the things on the left. Look at the three numbers on the right. Draw '◯' around the correct number. One example is given.

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

(g) Look at the following numbers in each row. Then write the correct number in each blank box.

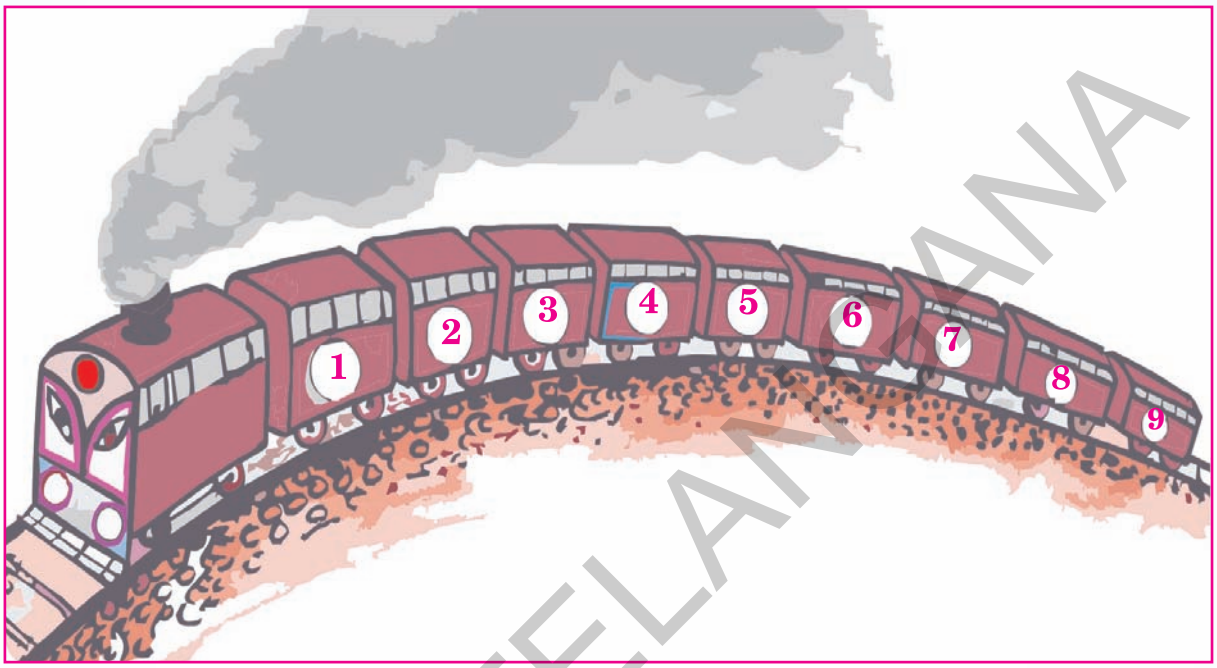
5 6	5 6	5	
5 6 7	5 6 7	6	
6 7 8	6 7 8	6 7	
7 8 9	7 9	8	

Get your pupils to observe the pictures and numbers given in the first table. Let them count the pictures. Ask them to draw '◯' for correct numbers. Make them identify the missing number in each row of the second table and ask them to write.

5 Before - After - Between - More - Less

D4I3K6

Look at the picture.

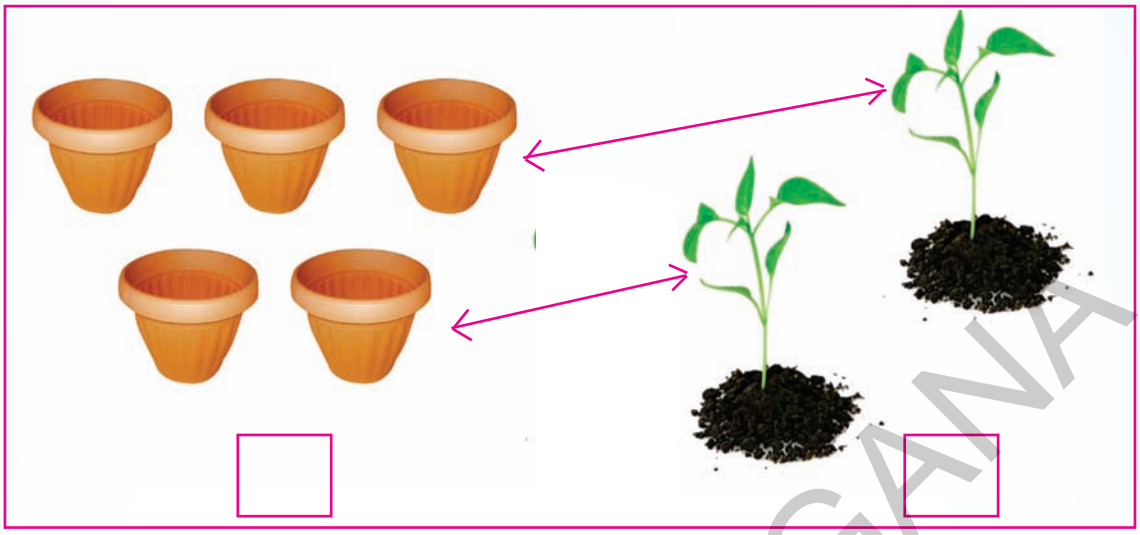


Now answer the following questions orally.

1. How many bogies does the train have?
2. What is the number of the bogie next to the engine?
3. What is the number of the last bogie?
4. What is number of the bogie between the bogies numbered 4 and 6 ?
5. What is the number of the bogie before the bogie numbered 5 ?
6. What are the numbers of the bogies between the first and the last bogie ?
7. What are the numbers of all the bogies that are bofore the bogie numbered 4?
8. What are the numbers on the last two bogies of the train?
9. What is the number of the bogie that is after the bogie numbered 2 ?
10. Between which bogies does the bogie numbered 6 lie?

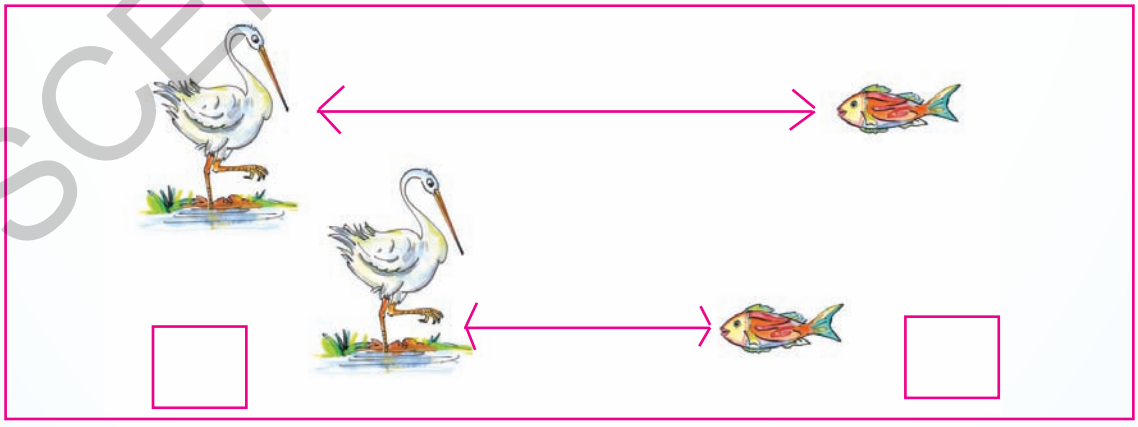
Get your pupils to observe the picture. Ask them to answer the questions given below. Help them to understand the numbers before, after and between other numbers.

(a) Look at the pictures given below. How many flower pots are there? How many plants are there? Write your answer in the small blank boxes.



As per the above picture which are more and which are less - flower pots or plants? Put '✓' for your answer.

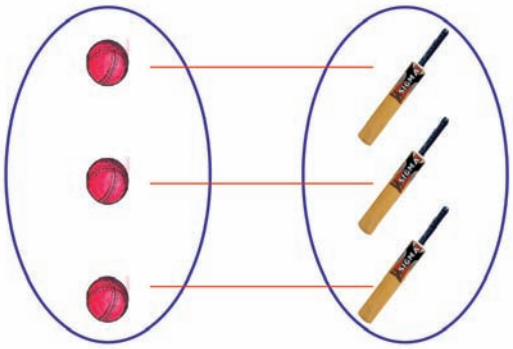
(b) How many cranes are there and how many fishes are there? Are they in equal number?



Get your pupils to observe the pictures. Help them to understand the concepts of more than, less than and equal by comparing numbers.

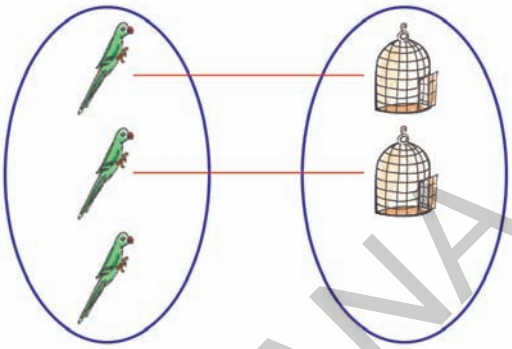
(c) Look at the pictures given below. Count each set. Compare the two sets, which has more or less or equal things.

Example:



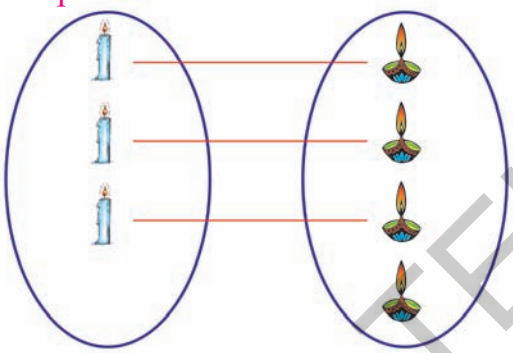
equal

Example:



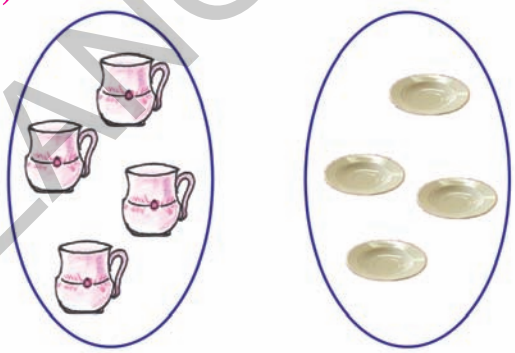
more

Example:

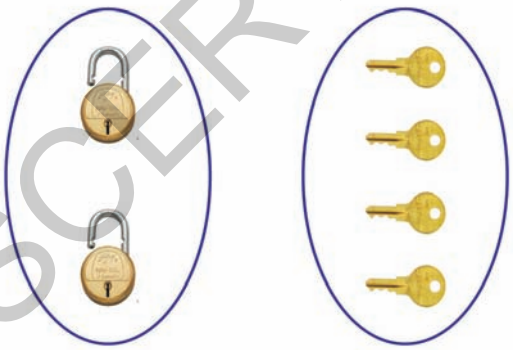


less

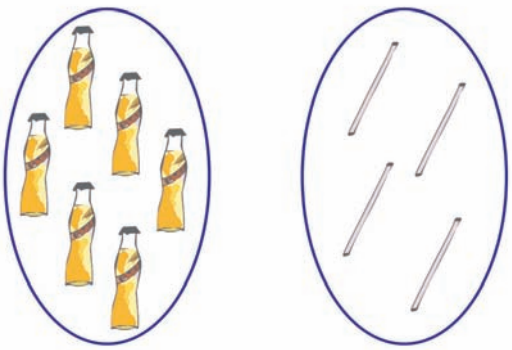
(1)



(2)



(3)



Get your pupils to observe the above pictures. Let them count the things. Ask them to compare the two groups of things. Help them to identify which are less, which are more and which two are equal. Then ask them to say.

(d) Count the pictures. Write their number in the blank box near the pictures. Put '✓' for the things which are more in number.

Example:

✓ 5

3

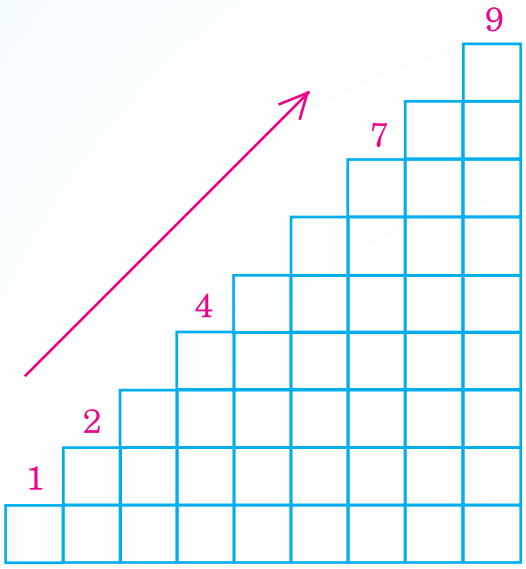
(a)

(b)

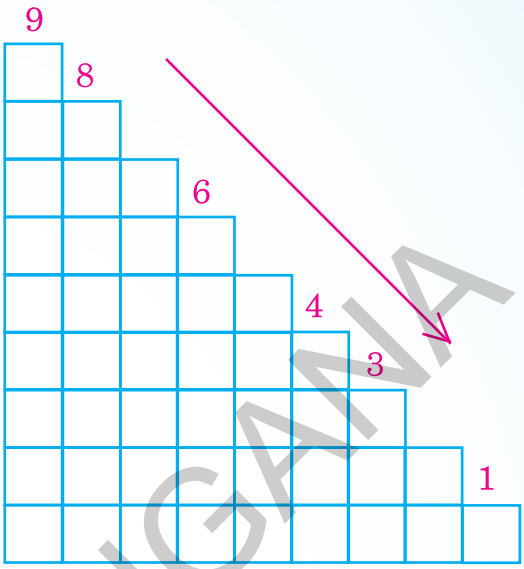
(c)

Get your pupils to observe the pictures. Let them write their number in the blank boxes. Ask them to put '✓' the number which is more.

(e) Count the boxes in the following picture. Write the correct number above each box. Read the numbers from top to bottom and from bottom to the top, in the correct order.



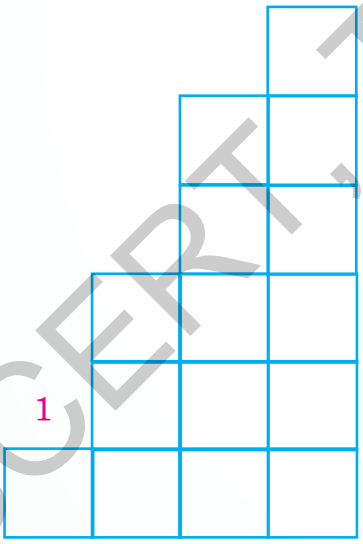
From the small number to the big numbers

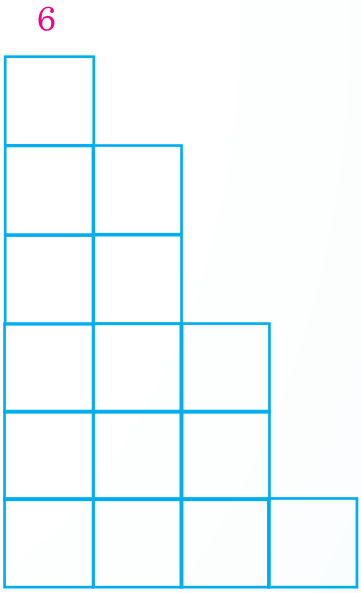


From the big number to the small numbers

(f) Look at the following boxes. Count boxes and write their number on them.

'✓' the box which starts from the smaller number to the bigger number.





Get your pupils to observe the above diagrams / grids. Ask them to count the boxes and write their numbers. Let them understand the order in which numbers are written in ascending and descending orders.

Exercise

(a) Write the next number in the '○'.

Example:

5	6	3	○	1	○
4	○	6	○	8	○
7	○	2	○		

(b) Write the middle number in the '○'.

Example:

1	2	3	2	○	4			
4	○	6	6	○	8	7	○	9

(c) Write the previous number in the '○'.

Example:

2	3	○	4	○	9
○	6	○	7	○	5
○	2	○	8		

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

(d) Tick '✓' the bigger numbers given below.

Example:

4	6 ✓
5	3
2	4
6	8

5	4
3	1
2	3
9	8

(e) Circle '◯' the smaller numbers given below.

Example:

(1)	2
4	3
5	6
8	7

6	7
9	8
4	2
2	3

(f) Tick '✓' the biggest of the 3 numbers given below.

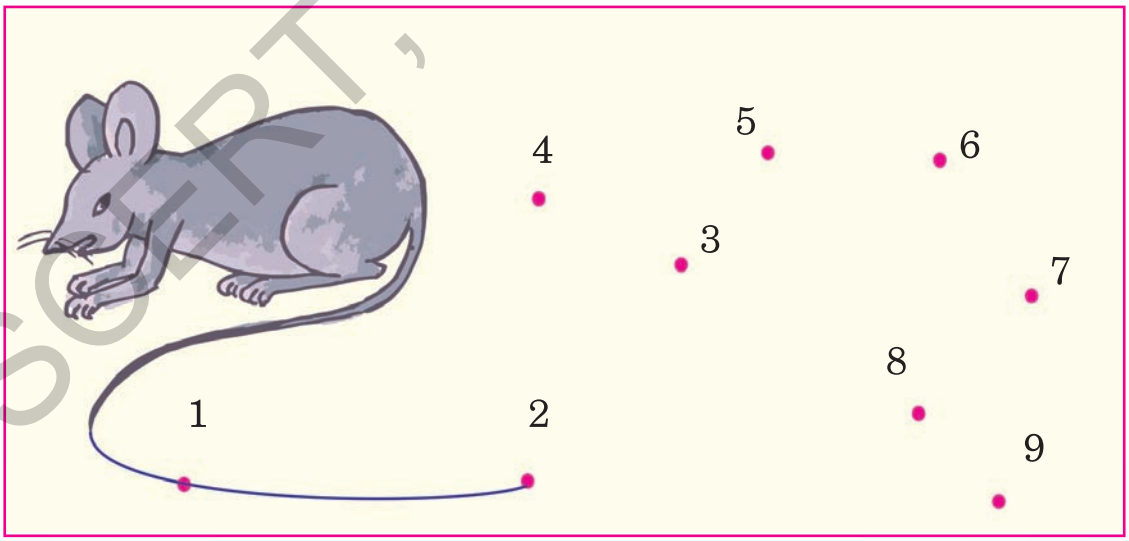
Example:	5	6 ✓	3
(a)	2	5	7
(b)	4	7	9
(c)	3	6	8
(d)	1	3	7

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

(g) There are 3 numbers in each row, Circle '◯' round the least number.

Example:	(2)	3	4
(a)	7	5	2
(b)	9	2	7
(c)	6	3	5
(d)	4	1	8
(e)	3	7	5

(h) Extend the rat's tail by joining the numbers from the smallest to the biggest number.



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

(i) Write the smallest number to the biggest number in the given boxes.

Example:	4	6	3	→	3	4	6
(a)	5	8	6	→			
(b)	3	7	4	→			
(c)	6	9	7	→			
(d)	2	6	4	→			
(e)	2	1	3	→			
(f)	7	4	9	→			

(j) Observe the given numbers and write them from the biggest to the smallest in the given boxes.

Example:	4	6	5	→	6	5	4
(a)	3	5	2	→			
(b)	6	8	5	→			
(c)	7	9	6	→			
(d)	4	8	7	→			
(e)	5	6	8	→			
(f)	7	8	9	→			

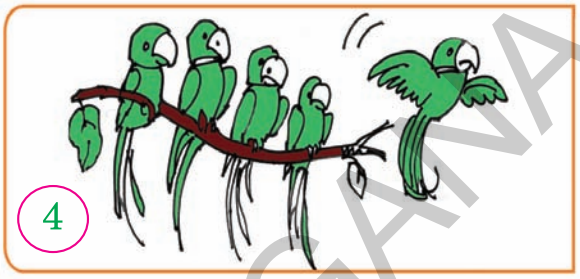
Get your pupils to understand the instruction for each problem. Let them do the problems by themselves.

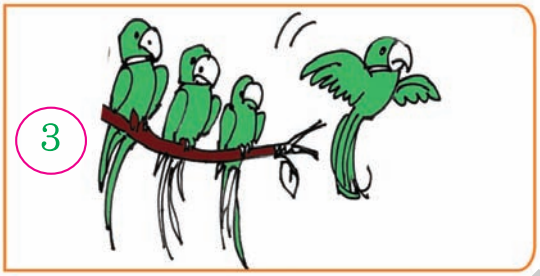
6 Zero (0)

U4M1L2

Sing the song. Show gestures and mime / actions.

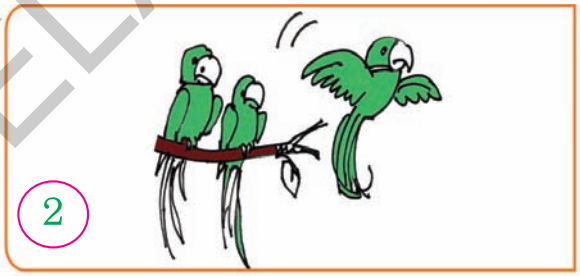
Five parrots were playing
One flew away when he was tired





Four parrots were laughing
One flew away when he was tired

Three parrots were moaning
One flew away when he was tired

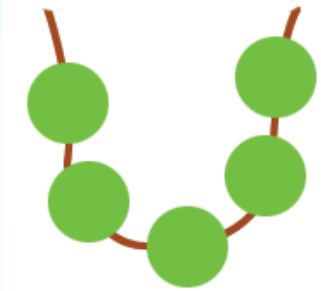


Two parrots were flying.
One felt tired and stopped flying

One parrot was shivering
It couldn't shiver and flew away.
And none remained.

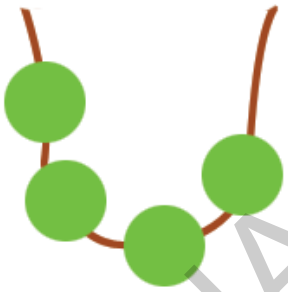
Get your pupils to sing with action. Introduce the concept of zero to your pupils.

Count the beads in each chain. Write their number.

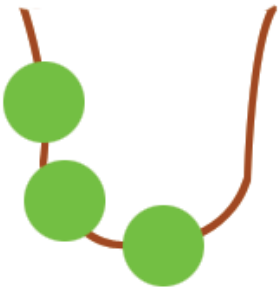


Example: 5

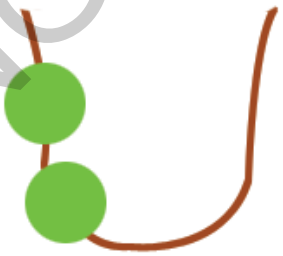
(i)



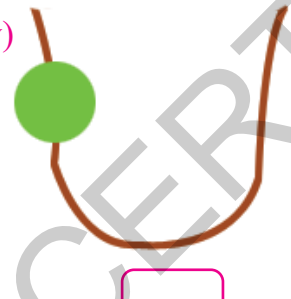
(ii)



(iii)



(iv)



(v)

At the end, how many beads are there in the chain?

Because there were no beads in the chain, we show it as zero.

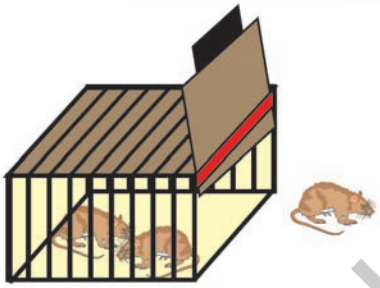
We write zero as ' 0 '

Get your pupils to observe the picture. Ask them to count the beads and write their numbers. Let them understand the concept of zero.

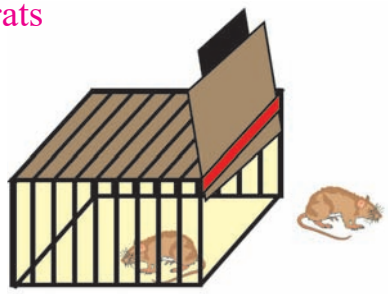
Exercise

(a) How many rats are there in the trap? Count them. Write their number.

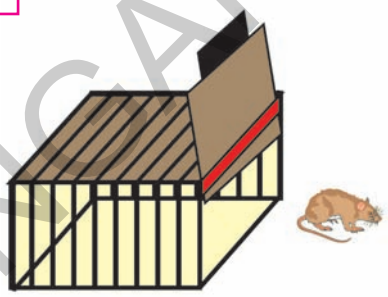
☐ rats



☐ rats



☐ rat



☐ rat

(b) How many balloons are there in the boy's hand? Count them. Write their number.

☐ balloons ☐ balloons ☐ balloon ☐ balloon

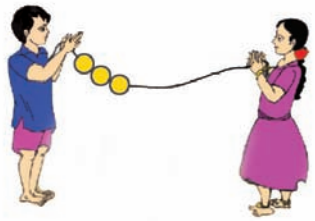
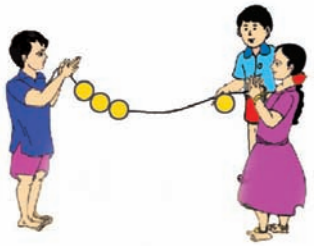
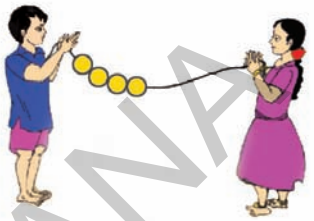
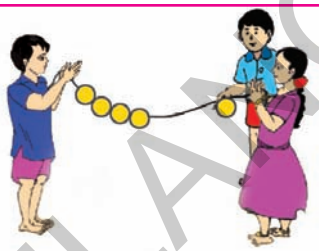
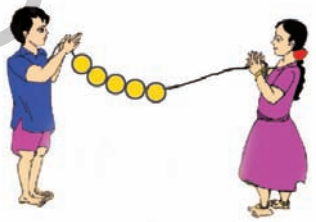
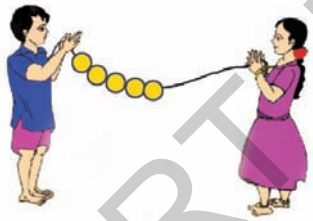
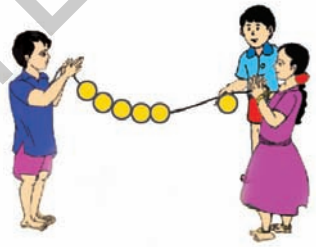
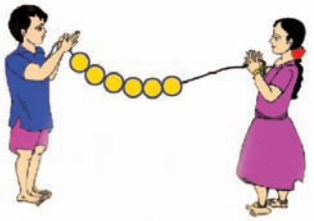
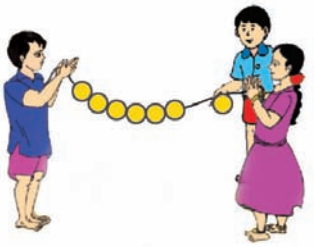
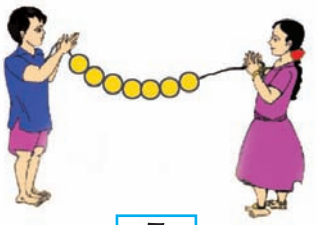
0	0				

Get your pupils to understand the instruction for each problem. Let them solve the problems themselves. Get them to trace and write zero (0) in boxes.

7 Addition of Numbers Total not Exceeding 9

W7F4G5

Look at the first picture in each row. Count the beads. Say the total after adding one bead.

 3	 1 added to 3	 4
 4	 1 added to 4	 5
 5	 1 added to 5	 6
 6	 1 added to 6	 7

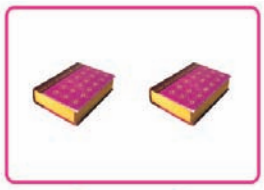
Get your pupils to add 1 to a group of beads in the chain and count the beads in the group. Help them to understand the concept of adding numbers by counting beads. For example: If 1 is added to 3, we get 4.

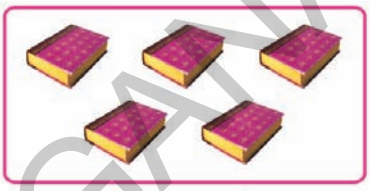
(a) Count the pictures in each box. Write their total number.

Ex:

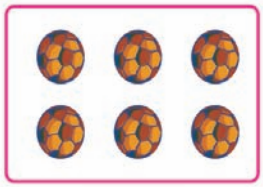


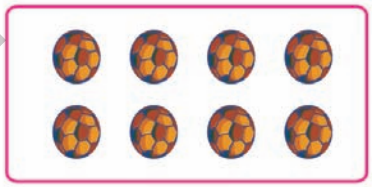
Add 5 flowers and 2 flowers total 7 flowers





Add ____ b o o k s ____ books total ____ books





Add ____ balls and ____ balls total ____ balls



Add ____ candles and ____ candles total ____ candles

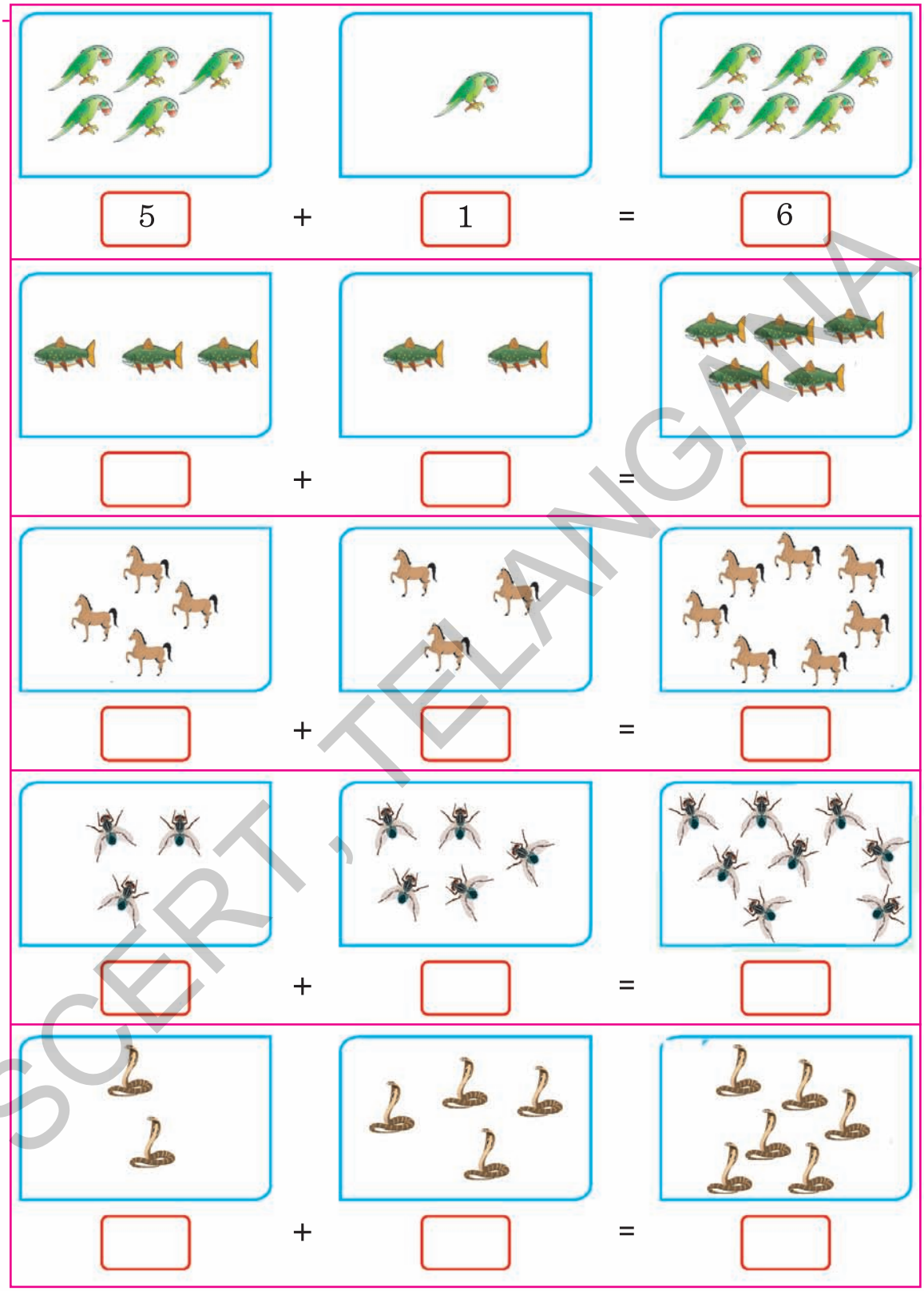


Add ____ ducks and ____ ducks total ____ ducks

Get your pupils to add one group of things to another group and ask them to count and get their total. Let them write the correct numbers in the blank boxes.

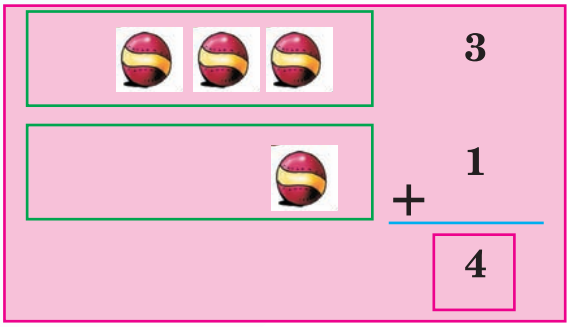
(b) Count the pictures. Write their total.

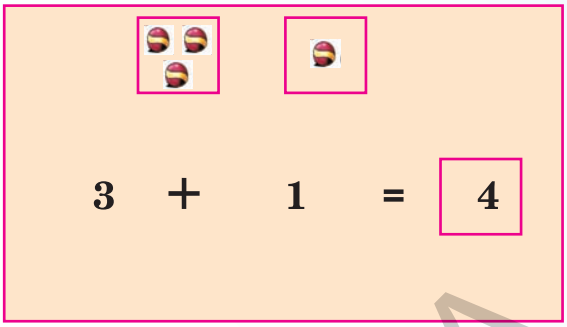
Ex:-



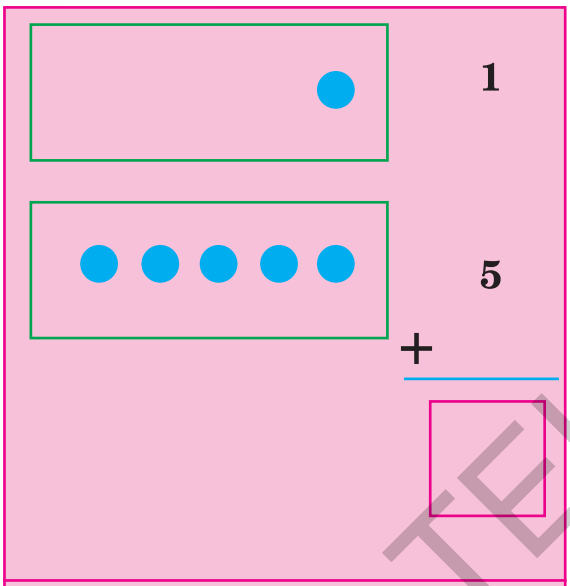
Get your pupils to add things in two different groups and count the total number of things. Ask them to write the correct number in each blank box.

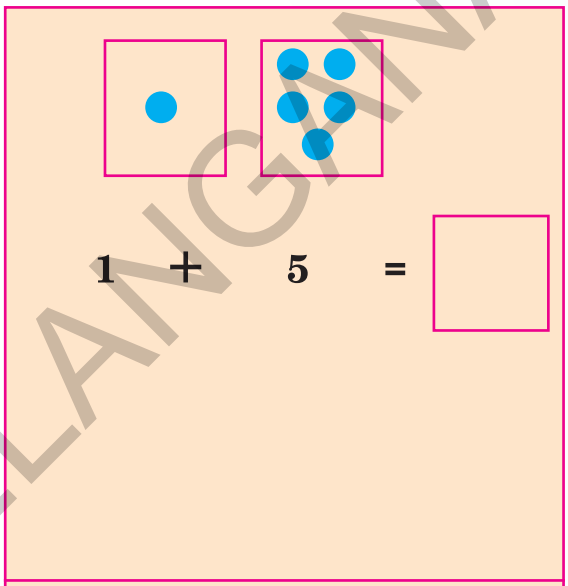
(c) Observe the following sum.

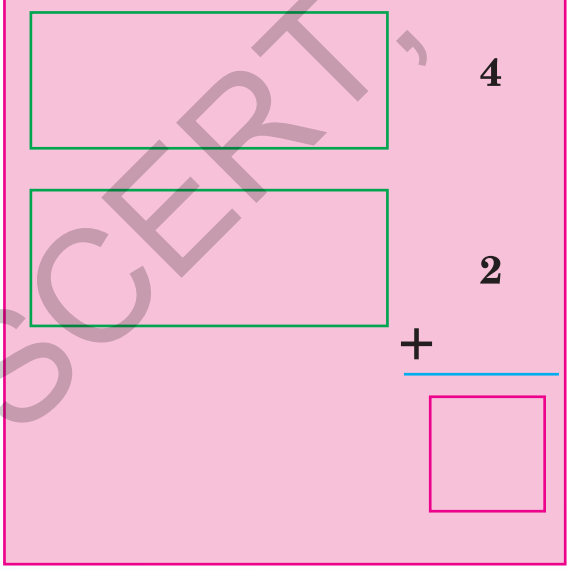


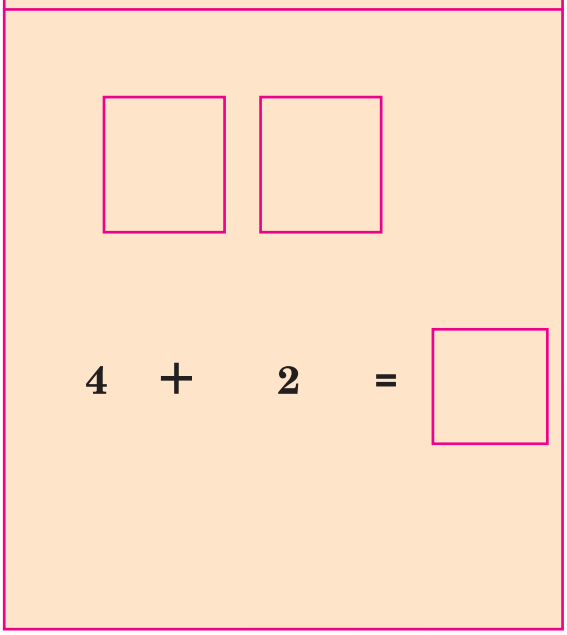


Do the following sums as shown above.



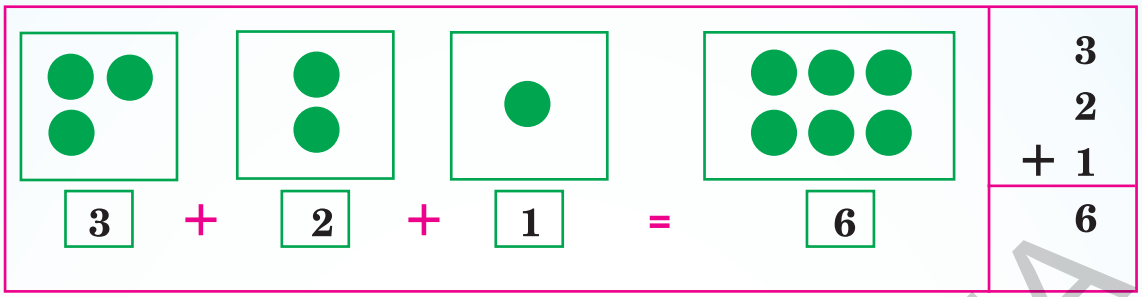


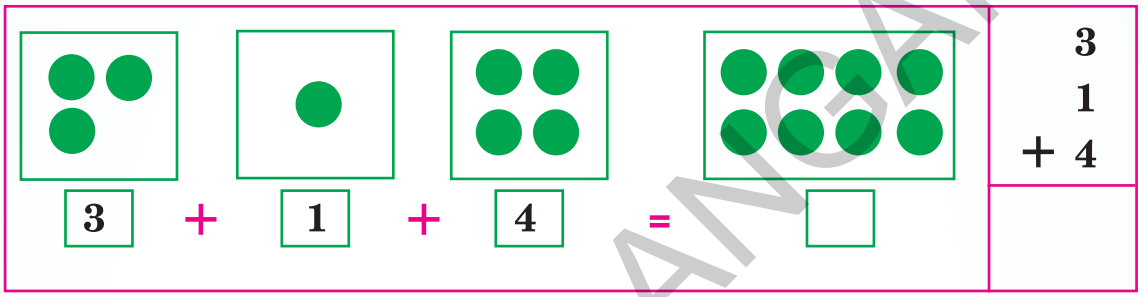


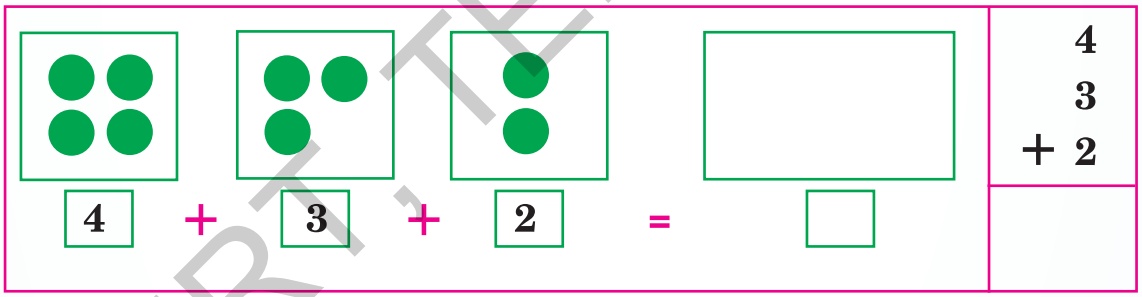


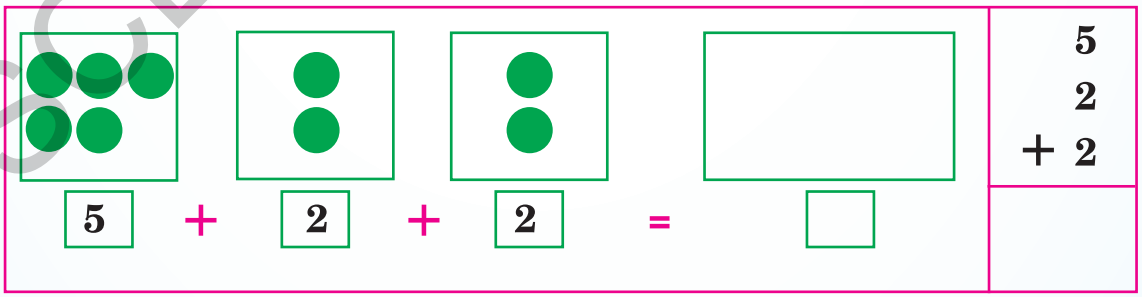
Get your pupils to draw dots for each number. Let them calculate the total of those numbers. Help them to understand the process of adding numbers vertically and horizontally.

(d) Look at the pictures in each box. Count them. Say their sum. Write the correct number in the small blanks boxes.





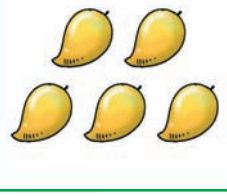




Get your pupils to draw the requisite number of dots according to the sum. Ask them to write the correct number in the blank boxes.

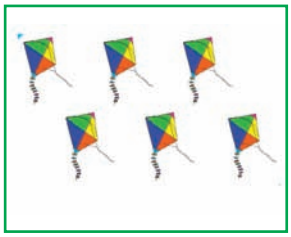
(e) Look at the pictures in each box. Count them. Write the correct number in the small blanks boxes.

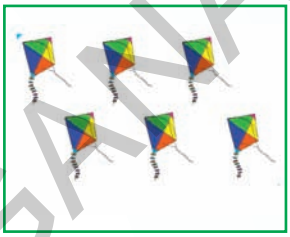
Example:



5 + 0 = 5

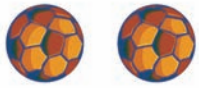
(i)

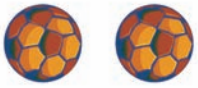




__ + __ = __

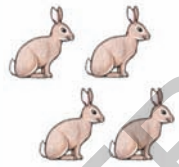
(ii)

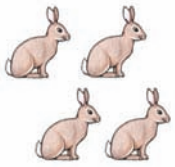




__ + __ = __

(iii)





__ + __ = __

(iv)

__ + __ = __

Get your pupils to understand the fact that if we add zero to any number or if we add a number to zero, the total is the number itself.

Exercise

(a) Match the numbers and the objects.

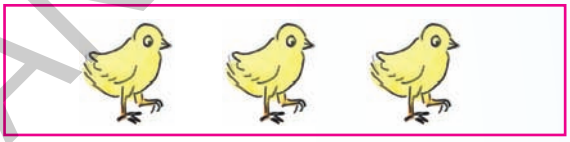
Example: 4 + 3

(a) 2 + 6

(b) 3 + 3

(c) 2 + 3

(d) 1 + 2



(b) Match each pair of numbers with their total.

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

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

(c) Add the two numbers given. Write sum in the blank box.

Example:

4 + 2 = 6

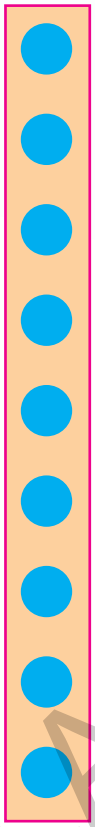
4 + 3 = ☐

5 + 1 = ☐

7 + 2 = ☐

4 + 5 = ☐

0 + 5 = ☐



6 + 3 = ☐

0 + 4 = ☐

2 + 4 = ☐

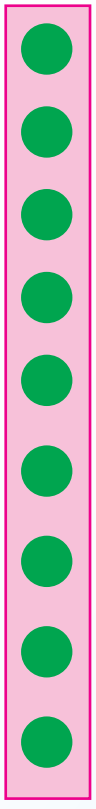
4 + 0 = ☐

4 + 1 = ☐

0 + 7 = ☐

(d) Add the two numbers given. Write your answer under the numbers.

3 + 4 =	5 + 3 =	3 + 2 =	0 + 2 =
7 + 0 =	3 + 1 =	7 + 2 =	5 + 4 =
0 + 4 =	8 + 0 =	5 + 2 =	4 + 2 =



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

(e) Write the correct number in the boxes.

Example: 4 + 3 = 7

(a) 2 + ☐ = 8

(b) ☐ + 4 = 6

(c) 5 + ☐ = 7

d) 4 + ☐ = 8

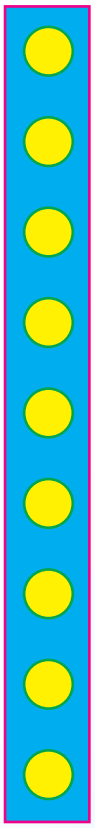
e) ☐ + 3 = 6

f) ☐ + 5 = 9

g) 7 + ☐ = 9

(f) Add the pairs of numbers in each row. Circle '◯' around the one whose answer is different.

Example:	1 + 7	2 + 4	4 + 4	5 + 3
(a)	1 + 1	2 + 2	3 + 1	1 + 3
(b)	4 + 1	2 + 3	3 + 2	4 + 2
(c)	4 + 3	5 + 2	1 + 6	4 +2
(d)	4 + 4	3 + 5	4 + 3	2 + 6
(e)	2 + 4	2 + 3	3 + 3	4 + 2



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

8 Subtraction of Numbers upto 9

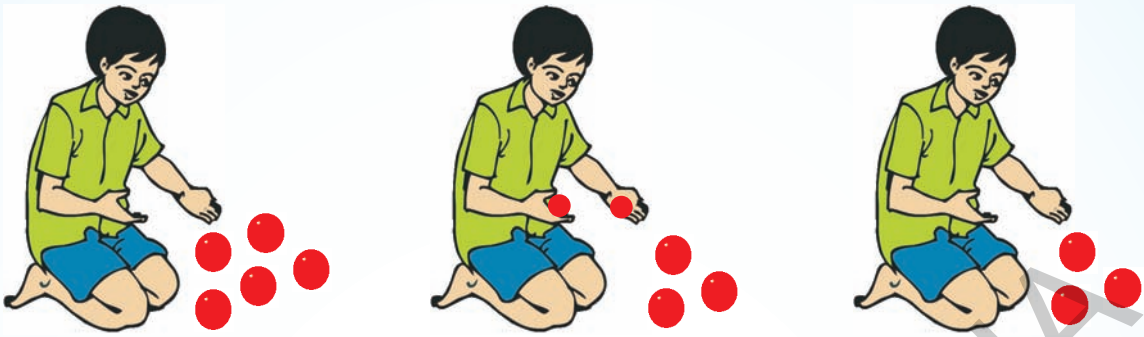
P3Z5T8

Observe the following picture.
Answer the given questions orally.

1. How many elephants are there?
2. How many rabbits are there?
3. How many rabbits are more than that of elephants?
4. How many monkeys are less than that of squirrels?
5. How many turtles are more than that of giraffes?
6. How many snakes are less than that of birds?

Get your pupil to observe the above picture. Ask them to say the answers to the questions. Help them to identify the difference.

(a) Observe the subtraction of numbers shown below. Find the remaining things.

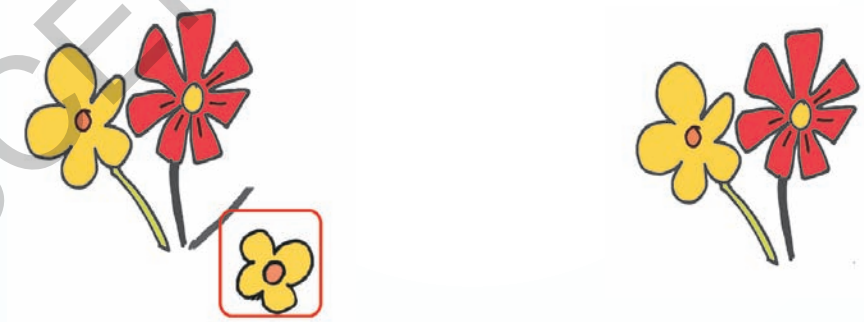


From 5 — 2 is subtracted — 3 remains

(b) Do the following subtraction as above. Write the correct numbers in the boxes.

From ☐ — ☐ is subtracted — ☐ remains

(c) Observe the subtraction shown below.

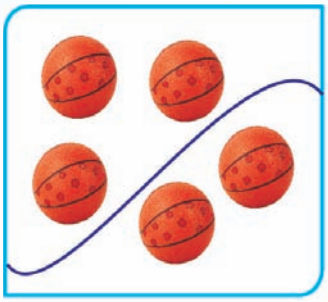


3 − ☐ = 2

Get your pupil to observe the above pictures. Make pupil to understand the concept of subtraction and its symbol.

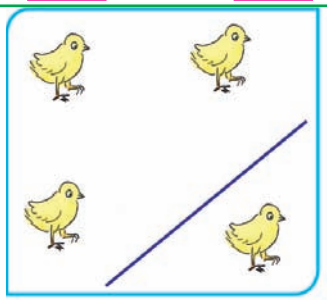
(d) Look at the following pictures. Count the things separately. Write the correct numbers in the blank boxes.

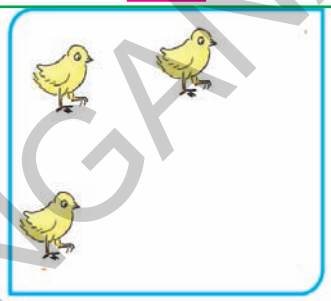
Ex:



5 – 2 = 3

(a)



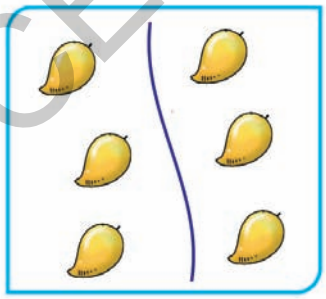


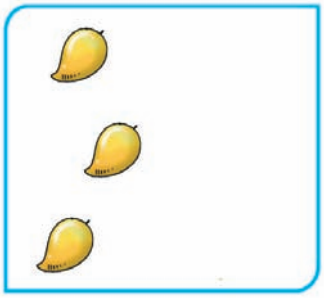
☐ – ☐ = ☐

(b)

☐ – ☐ = ☐

(c)



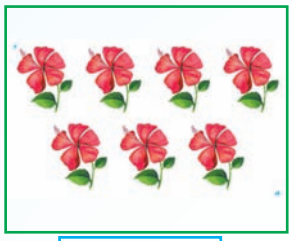


☐ – ☐ = ☐

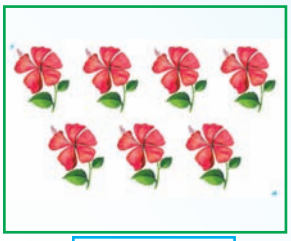
Get your pupil to understand the concept of subtraction, by making use of the pictures and instructions.

(e) Look at the pictures. Count them. Write their correct numbers in blank boxes.

Ex:

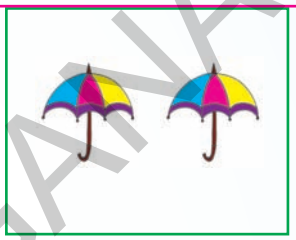


7 – 0 = 7

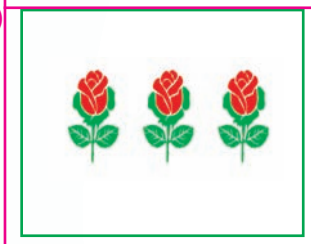


(a)

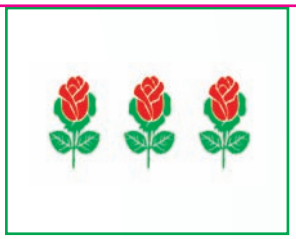
– =



(b)

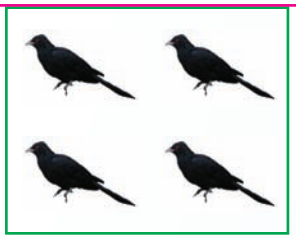


– =



(c)

– =



Write the correct numbers in the blank boxes based on subtraction according to the pictures you saw above.

Example: 7 – 0 = 7

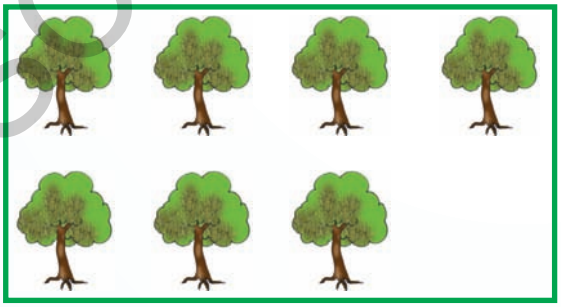
(a) – =

(b) – =

(c) – =

Get your pupil to understand that if zero is subtracted from any number, we get the same number.

(f) Look at the pictures. Count them. Write the correct numbers in the blank boxes.

Ex:		5 − 3 = 2	5 − 3 2
(a)		4 − 1 =	4 − 1
(b)		6 − 2 =	6 − 2
(c)		8 − 4 =	8 − 4
(d)		7 − 7 =	7 − 7

Get your pupil to observe the pictures. Ask them to write the correct numbers in the blank boxes. Help them to understand the process of subtracting numbers horizontally and vertically.

Exercise

(a) Do the following subtractions.

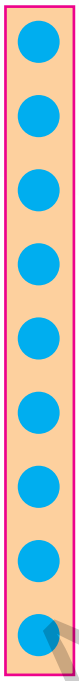
Ex: 6 − 4 = 2

9 − 2 = ☐

8 − 2 = ☐

4 − 0 = ☐

7 − 4 = ☐



5 − 1 = ☐

3 − 3 = ☐

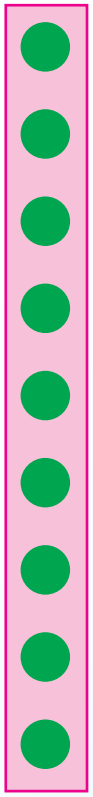
5 − 0 = ☐

4 − 4 = ☐

7 − 5 = ☐

(b) Do the following subtractions.

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



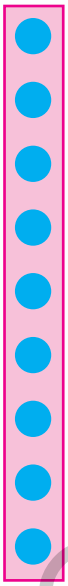
Get your pupils to understand the instructions for each problem. Let them do the problems by themselves.

(c) Subtract the numbers on the left side cards. Match them with the numbers that give the same answer on the right side.

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

Example

(d) Subtract the pairs of number in each row. Put '✓' mark on the answers that is different.



Ex:	6 − 2	8 − 4	5 − 3	9 − 5
a)	7 − 5	9 − 7	4 − 2	6 − 2
b)	8 − 3	5 − 1	6 − 1	7 − 2
c)	3 − 2	4 − 1	5 − 4	6 − 5

(e) Fill in the blank boxes. Use numbers from 1 to 9.

Ex: 6 − 0 = 6

5 − ☐ = 3

6 − 0 = ☐

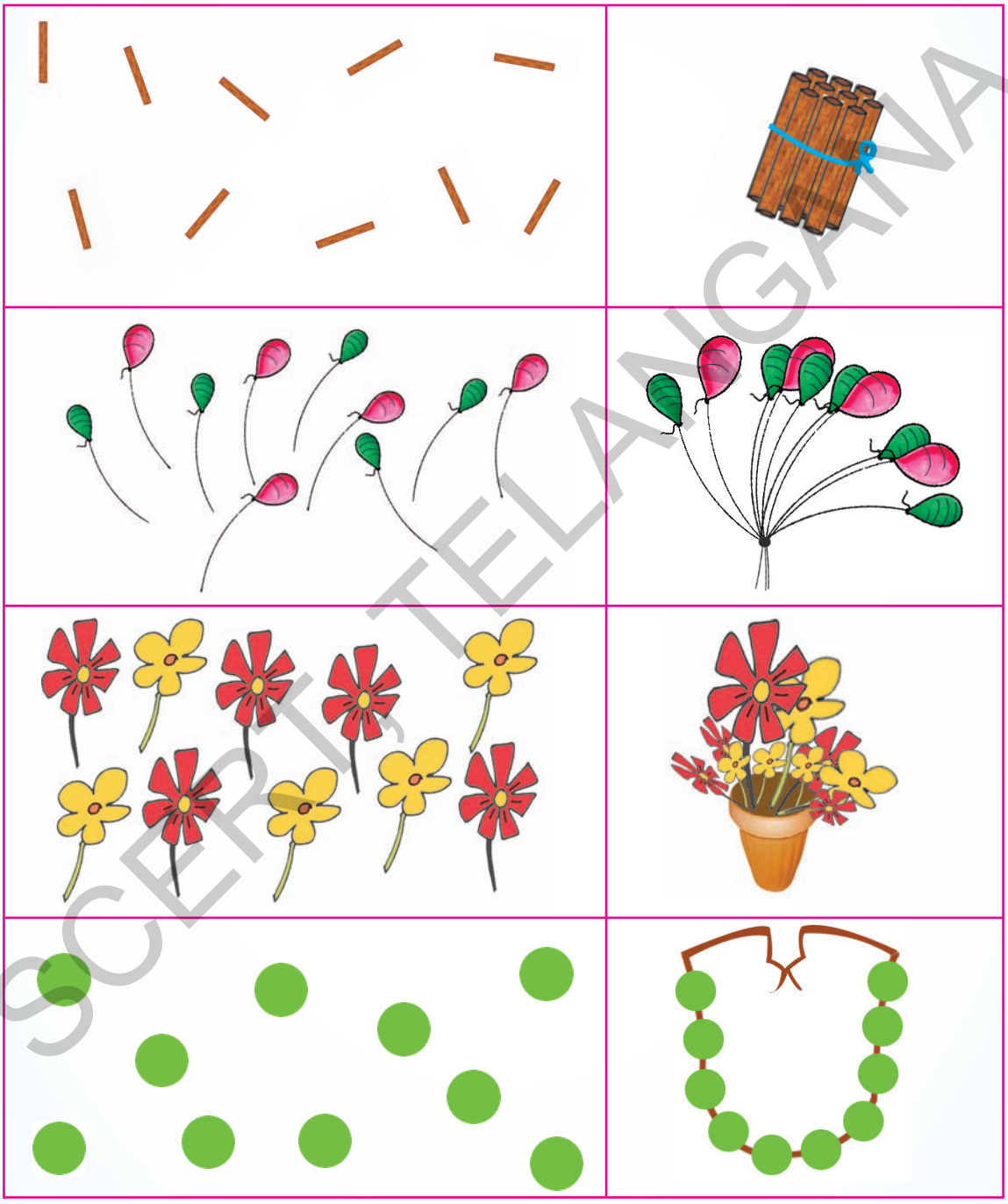
8 − ☐ = 0

Get your pupils to understand the instructions for each problem. Let them do the exercises by themselves.

9 Numbers from 10 to 20

T9U7K2

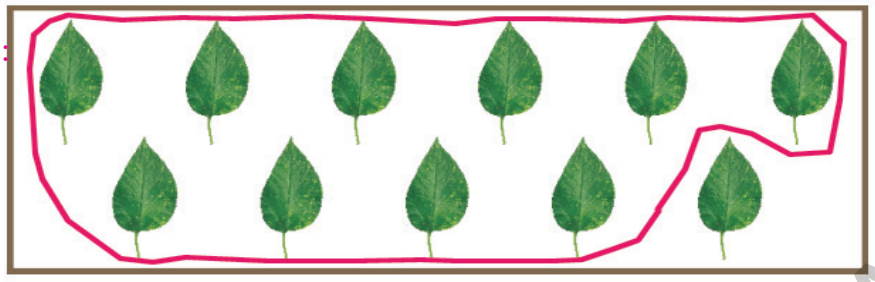
Look at the pictures. Check if they are put into bundles of ten.



Get your pupils to count the loose things on the left. Then let them look at the pictures on the right. Ask them to say whether the bundles contain 10 things by counting. Create the concept of 10 in your pupils.

(a) Count ten things in each box. Draw '◯' around them.

Example:

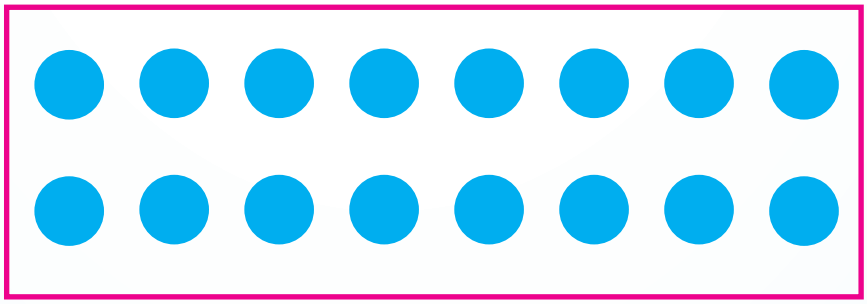


(i)

(ii)

(iii)

(iv)



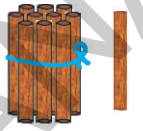
Get your pupils to observe the above pictures. Ask them to circle ten pictures in each box as shown in the example.

(b) Count the bundle of sticks and loose sticks. Read each number.



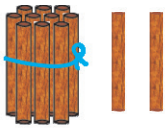
9	+	1	=	10





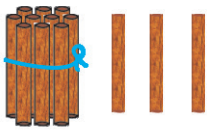
10	+	1	=	11





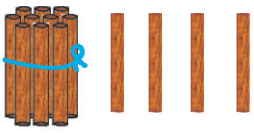
10	+	2	=	12





10	+	3	=	13





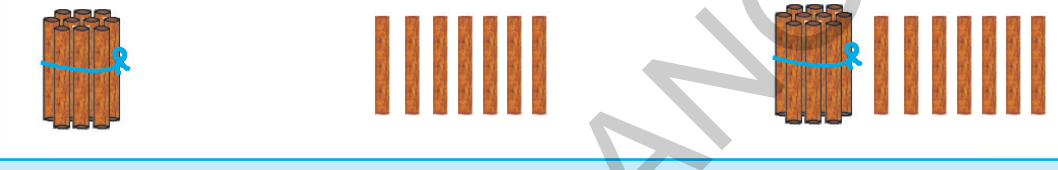
10	+	4	=	14

Get your pupils to count bundles of sticks and loose sticks to understand that when 1 is added to 9 we get 10. In the same manner introduce the numbers from 10 to 20 to your pupils. For example, if we add 1 to 9 we get 10.

Count the sticks and bundles of sticks. Read the numbers.

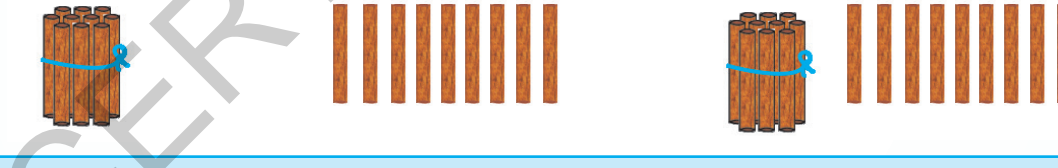
10	+	5	=	15

10	+	6	=	16

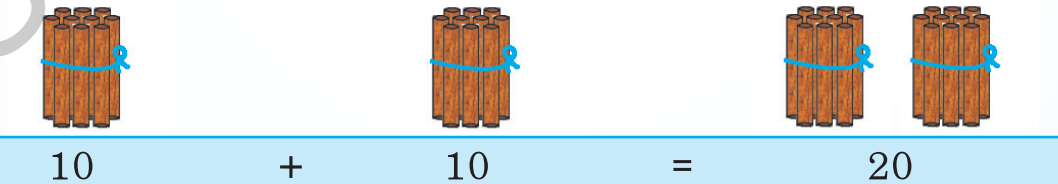


10	+	7	=	17

10	+	8	=	18



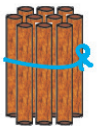
10	+	9	=	19



10	+	10	=	20

Get your pupils to count bundles of sticks and loose sticks to understand that when 1 is added to 9 we get 10. In the same manner introduce the numbers from 10 to 20 to your pupils. For example, if we add 1 to 9 we get 10.

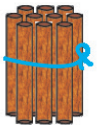
(c) Count tens and ones. Read each number and write them in the blank boxes



1 ten

= 10
ten

10					

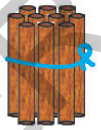


1 ten

1 one

= 11
eleven

11					



1 ten

2 ones

= 12
twelve

12					

Get your pupils to count the bundles of sticks and loose sticks. Let them understand tens and ones. Ask them to read the numbers and write them.

Count the sticks and bundles of sticks. Read each number and write them in blank boxes.

1 ten

3 ones

= 13

thirteen

13	13	13	13	13	13

1 ten

4 ones

= 14

fourteen

14	14	14	14	14	14

1 ten

5 ones

= 15

fifteen

15	15	15	15	15	15

1 ten

6 ones

= 16

sixteen

16	16	16	16	16	16

Get your pupils to count the bundles of sticks and loose sticks. Let them understand tens and ones. Ask them to read the numbers and write them.

Count the bundles of sticks and loose sticks. Read each numbers and write them in blank boxes.

1 ten

7 ones

= 17

seventeen

17	17				

1 ten

8 ones

= 18

eighteen

18	18				

1 ten

9 ones

= 19

nineteen

19	19				

1 ten

1 ten

= 20

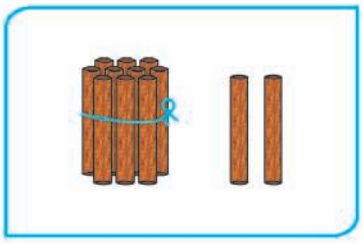
(2 tens) twenty

20	20				

Get your pupils to count the bundles of sticks and loose sticks. Let them understand tens and ones. Ask them to read the numbers and write them.

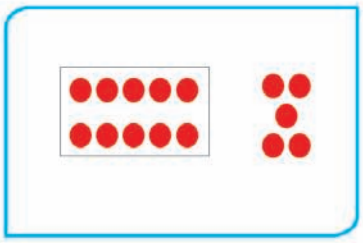
Exercise

(a) Look at the pictures. Read the numbers. Write them.



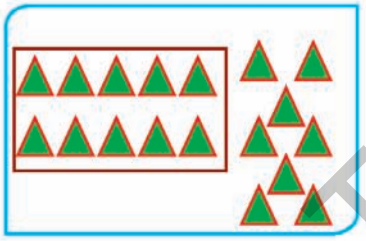
10 + 2

Number
12



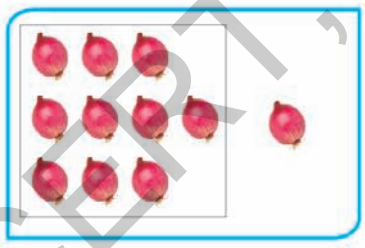
10 + 5

Number



□ + □

Number



□ + □

Number

□ + □

Number

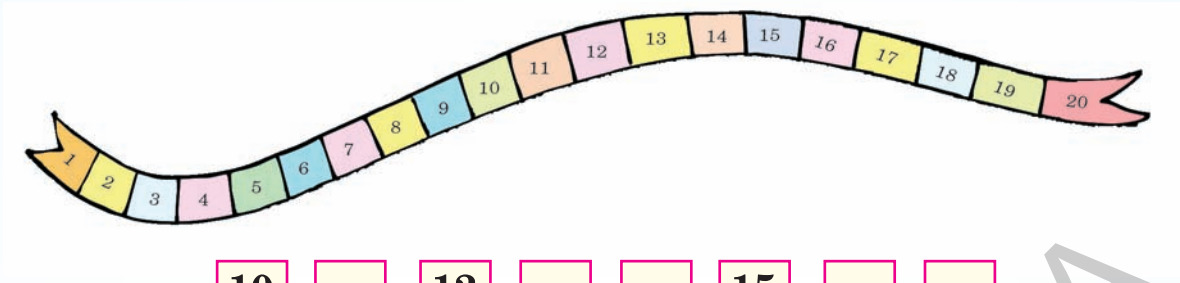
Get your pupils to understand the instructions for each problem. Let them do the problems by themselves.

(b) Write the numbers from 10 to 20 in an order.

10	10					
11	11					
12	12					
13	13					
14	14					
15						
16						
17						
18						
19						
20						

Get your pupils to observe the above table containing numbers from10 to 20. Let them write the correct numbers in the blank boxes.

(c) Look at the number ribbon. Now write the correct numbers in the blank boxes given below.



10		**12**			**15**			

Write the first number

	3	4
	6	7
	15	16
	19	20

Write the last number

7	8	
12	13	
16	17	
18	19	

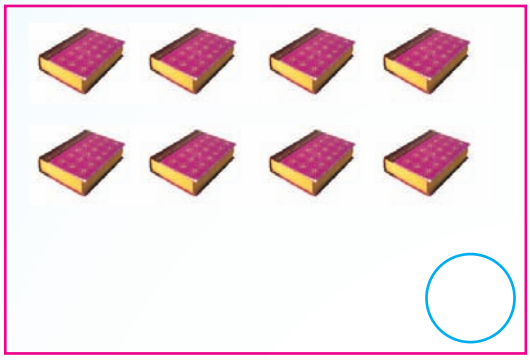
Write the middle number

1		3
12		14
15		17
18		20

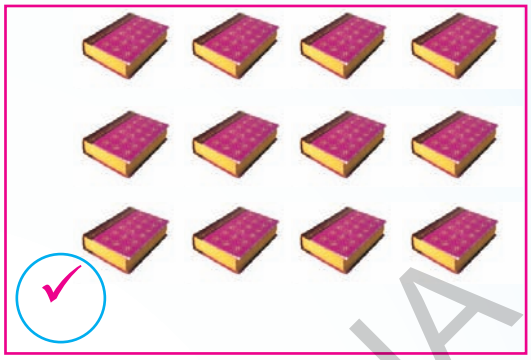
Get your pupils to understand the instructions for each problem. Let them do the problems by themselves.

(d) Count the pictures. Write their numbers. Put '✓' in '◯' of bigger numbers.

Ex:

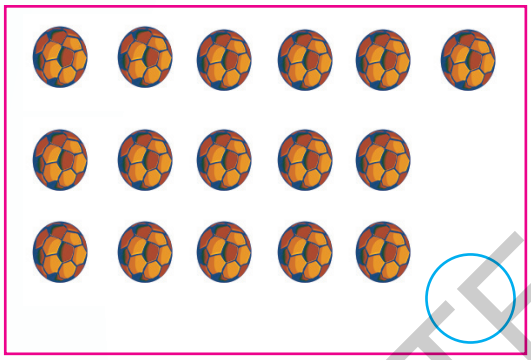


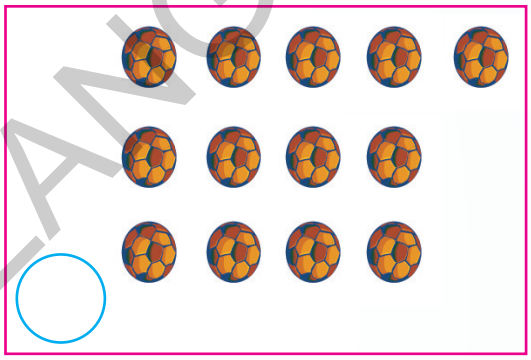
8



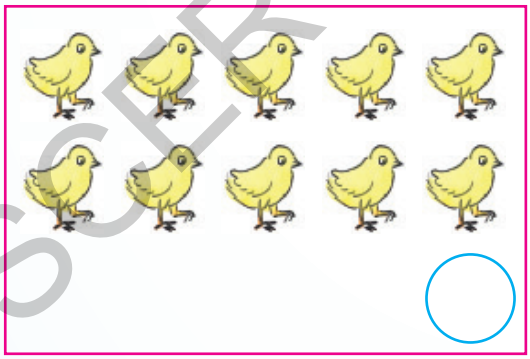
12

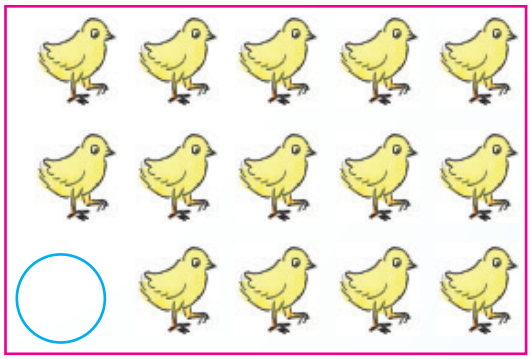
(a)





(b)

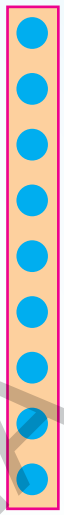




Get your pupils to understand the instructions for each problem. Let them do the problems by themselves.

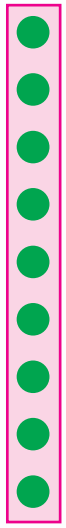
(e) Put '✓' on the bigger number in below pairs.

Ex:	11	13 ✓		13	15		18	8
	12	16		18	11		12	9
	11	10		16	12		9	16



(f) Circle '◯' the number which is smaller in the below pairs given.

Ex:	(11)	13		20	10		15	13
	17	15		14	13		18	14
	8	17		16	9		6	12



g) Tick '✓' the number which is the biggest of the three numbers given.

Ex:

	10	13 ✓	11

(i)

14	17	16

(ii)

12	17	18

(iii)

17	13	12

(iv)

8	15	11

(v)

9	7	12

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

(h) Circle '◯' the number which is the smallest of the three numbers given.

Ex:

20	(14)	17

(a)

11	19	16

(b)

15	10	12

(c)

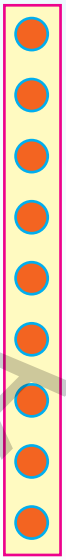
18	13	20

(d)

13	18	15

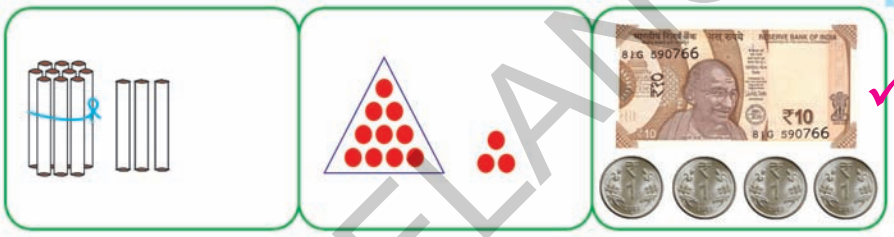
(e)

8	11	6

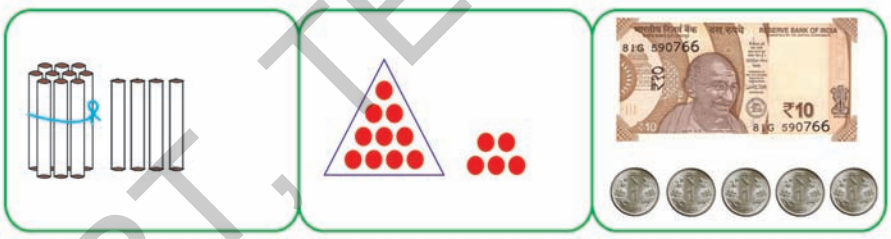


(i) Count the things given. Put '✓' on the one which is different from others in each row.

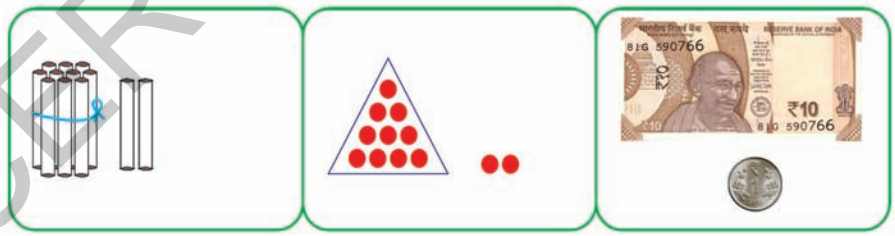
Ex:



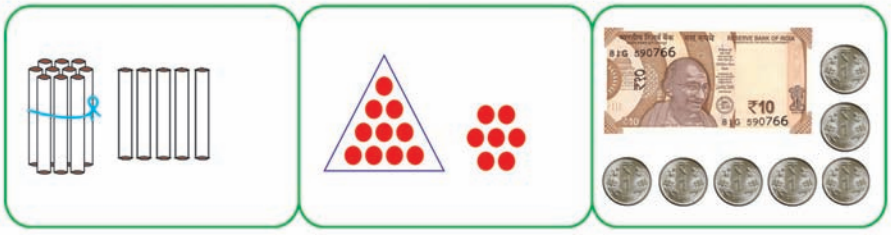
(a)



(b)



(c)

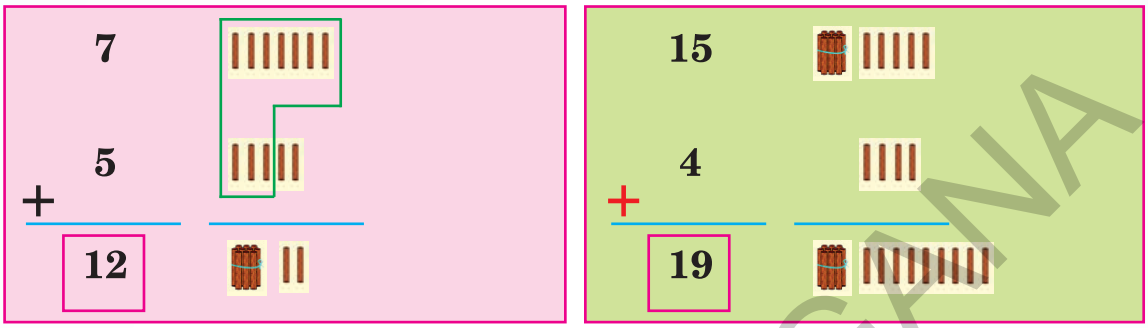


Get your pupils to understand the instructions for each problem. Let them do the problems by themselves.

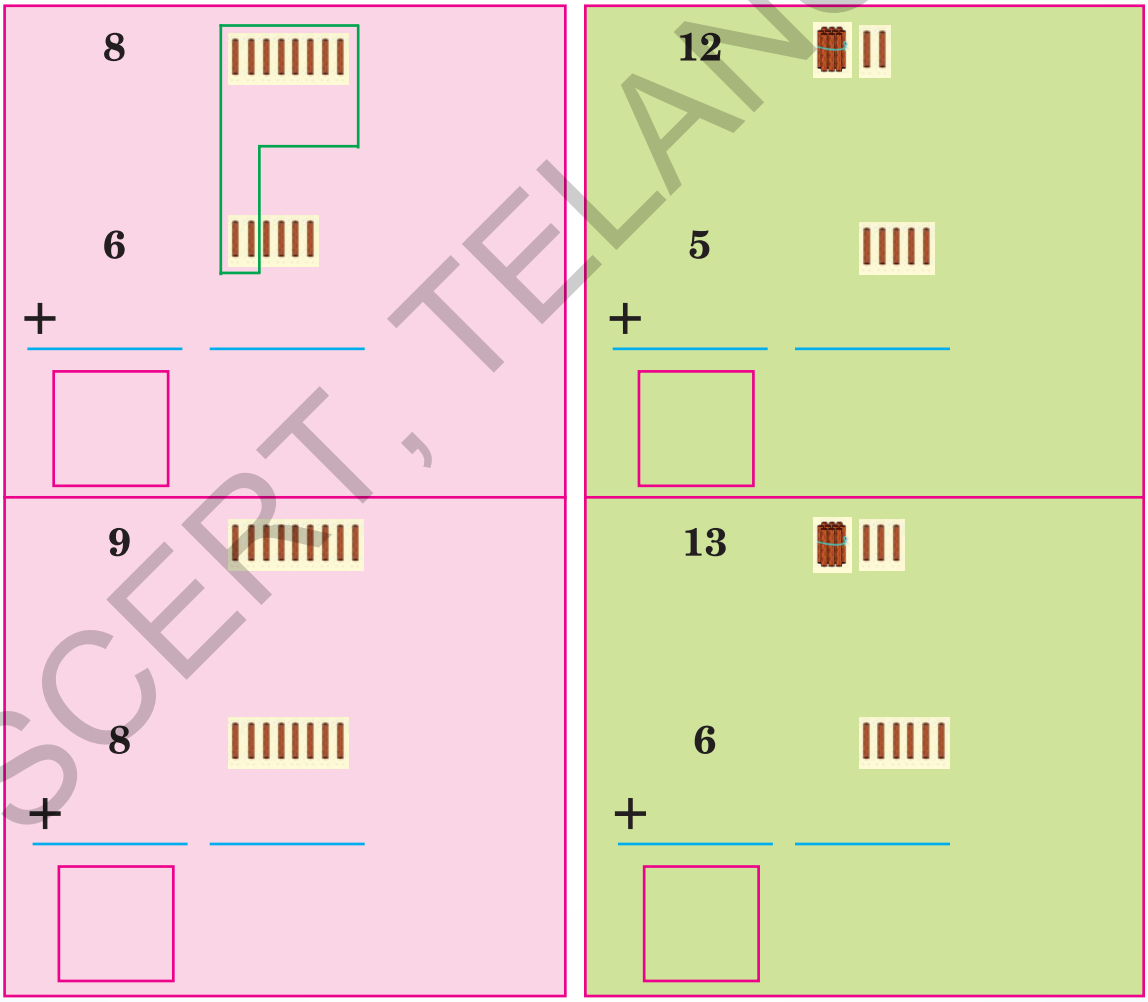
10 Addition of Numbers, the Total not Exceeding 20

L6E8X5

Look at the following sums.



Add the following numbers as shown above.

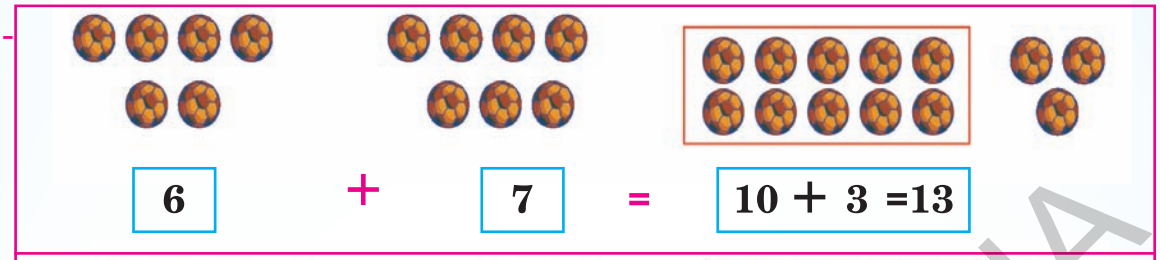


Get your pupil to understand how to add two numbers whose sum less than 20. Let them use bundles of sticks and loose sticks. Ask them to write the numbers in the blank boxes.

Exercise

(a) Look at the addition of two numbers in the example. In the same way add the other numbers given below.

Ex:-

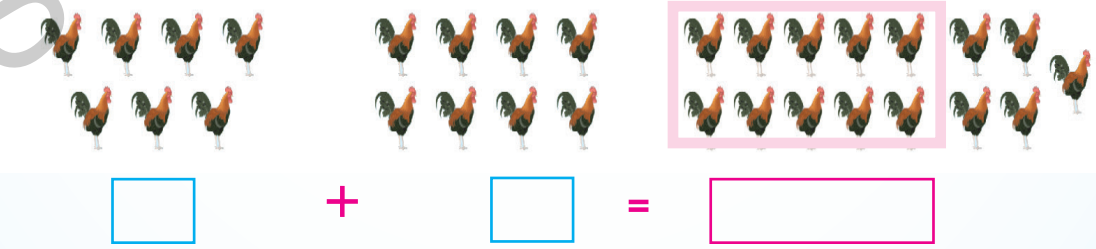


6 + 7 = 10 + 3 =13

7 + 5 =

__ + __ =

__ + __ =



__ + __ =

Get your pupils to observe the sum given as an example. Ask them to do the other problems. Let them understand how to add two numbershorizontally.

(b) Add the numbers given using bundles of sticks and loose sticks.

15 + 3 =	9 + 6 =	13 + 5 =	14 + 4 =
13 + 2 =	15 + 2 =	8 + 5 =	12 + 4 =
9 + 7 =	12 + 7 =	13 + 4 =	5 + 7 =

(c) Add the numbers given. Write your answer in the box.

Ex: 14 + 3 = 17	10 + 5 =
13 + 5 =	7 + 6 =
8 + 6 =	11 + 8 =
12 + 7 =	4 + 9 =
9 + 5 =	12 + 5 =
11 + 8 =	8 + 7 =

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

(d) Add the two numbers given in each line. Colour the parts of the turtle that contain your answers.

Ex: 2 + 7 = 9

2 + 2 = ☐

4 + 13 = ☐

12 + 3 = ☐

14 + 2 = ☐

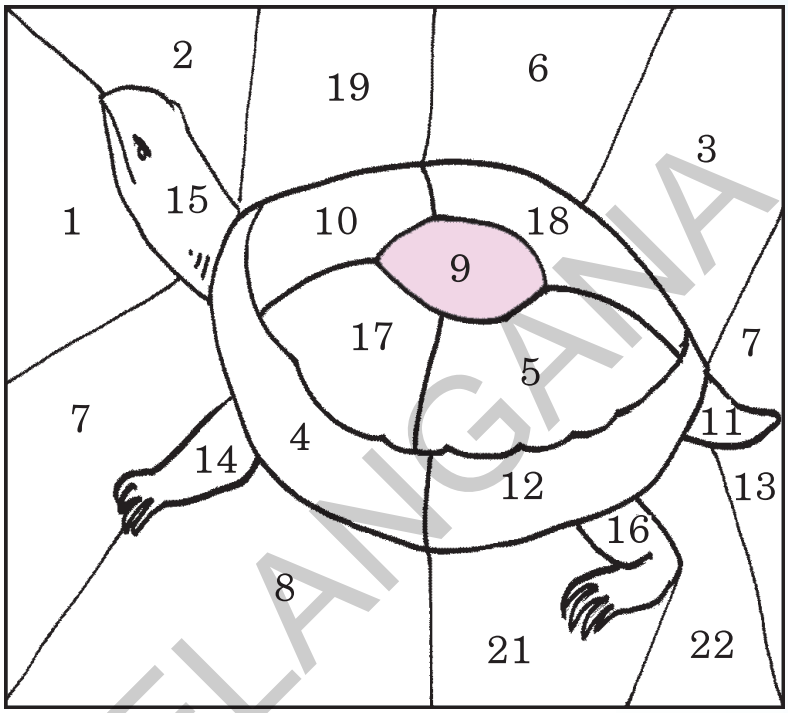
18 + 0 = ☐

5 + 5 = ☐

10 + 1 = ☐

8 + 6 = ☐

6 + 6 = ☐



(e) Add the pairs of numbers in each row. Tick '✓' the different answer.

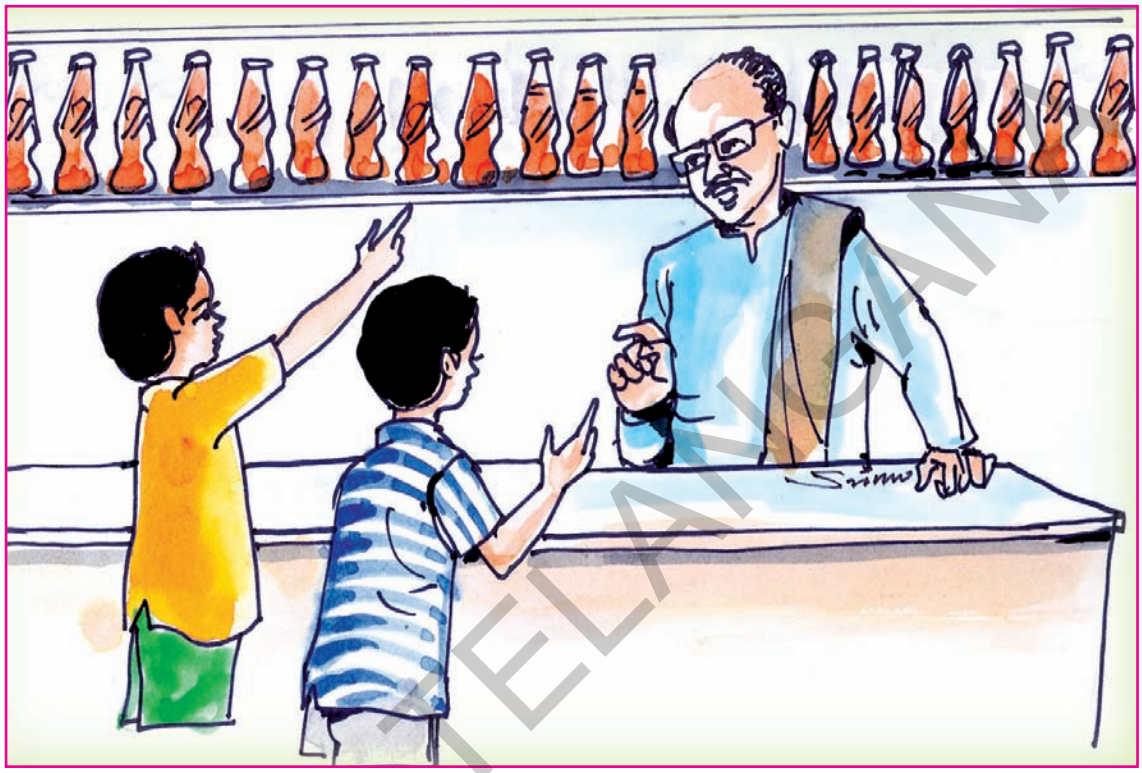
Ex:	10+5	12+3	11+2 ✓	8+7
(a)	6+3	8+3	7+4	10+1
(b)	9+8	7+6	12+5	13+4
(c)	6+8	12+2	10+9	14+0

Get your pupil to understand how to add two numbers whose sum is less than 20. Let them use bundles of sticks and loose sticks. Ask them to write the numbers in the blank boxes.

11 Subtraction of Numbers not Exceeding 20

F7B6F9

(a) Look at the pictures given below. Say how many bottles of cool drink are there.

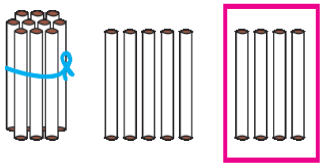


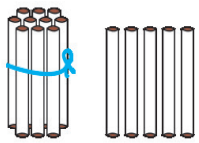
Subtract the following numbers based on the above picture.

Total number of bottles of cooldrink. 19

Sold 4

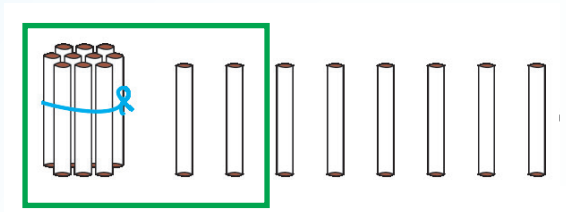
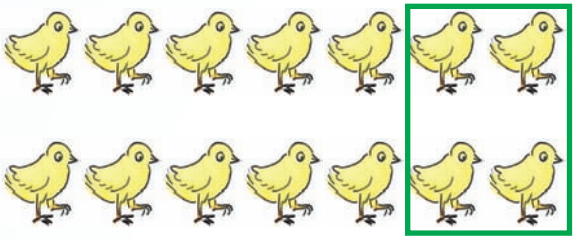
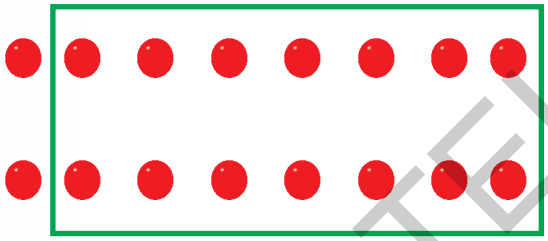
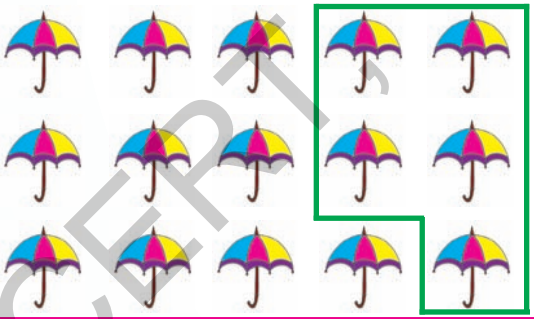
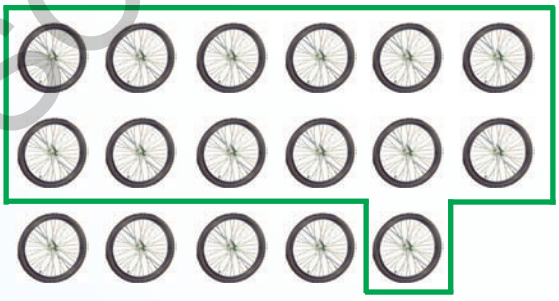
remaining bottles of cool drink. 15





Get your pupils to understand how to subtract a single-digit number from a two-digit number. Let them use bundle of sticks and loose sticks

(b) Look at the pictures. Count the remaining things after subtraction. Write the correct number in the blank box. Study the example.

Ex:		18 – 12 = 6	18 – 12 6
(a)		14 – 4 =	14 – 4
(b)		16 – 14 =	16 – 14
(c)		15 – 5 =	15 – 5
(d)		17 – 13 =	17 –13

Get your pupils to observe the pictures in boxes on the left. Ask them to study the example shown above. Let them do the problems on subtraction. Let them count the remaining things after subtraction and write the correct number in the blank boxes.

Exercise

(a) Subtract the numbers given below.

Ex: 15 − 13 = 2

15 − 3 = ☐

14 − 2 = ☐

18 − 10 = ☐

16 − 3 = ☐

18 − 6 = ☐

19 − 15 = ☐

12 − 2 = ☐

14 − 4 = ☐

17 − 15 = ☐

(b) Subtract the numbers given below.

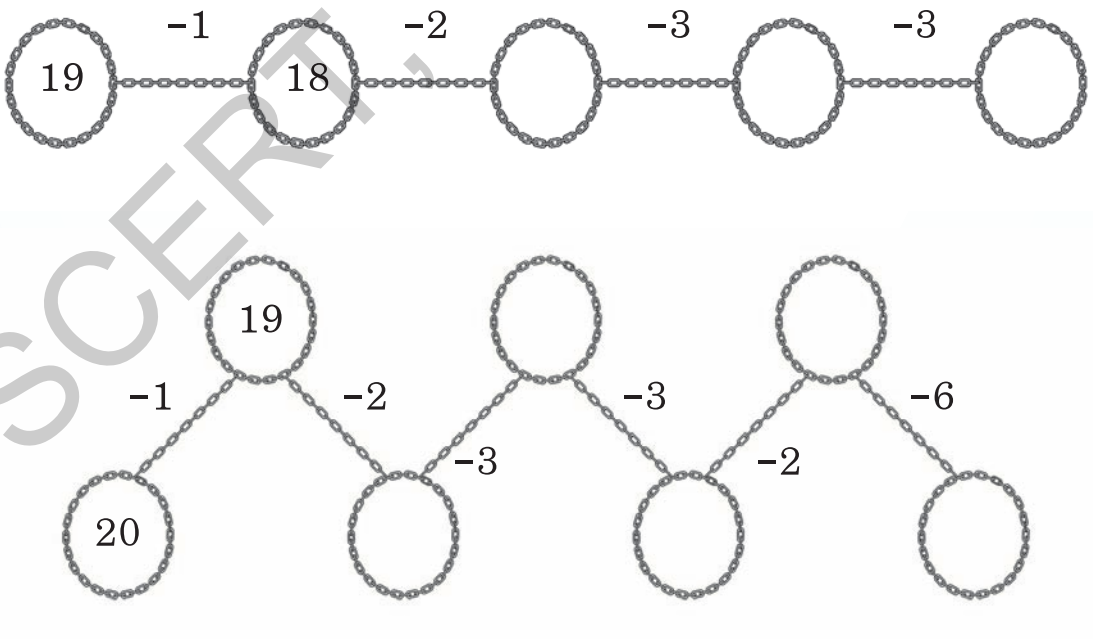
17 − 4 =	18 − 3 =	13 − 2 =	17 − 15 =
19 − 16 =	15 − 11 =	11 − 10 =	18 − 14 =
16 − 5 =	15 − 4 =	16 − 4 =	18 − 10 =

Get your pupil to understand instructions. Let them do the exercises themselves.

(c) Subtract each pairs of numbers in each row. One of the answers is different. Tick '✓' the different answer.

Ex:	14 – 2	19 – 6 ✓	17 – 5	13 – 1
(a)	17 – 3	19 – 5	18 – 2	15 – 1
(b)	15 – 5	19 – 9	16 – 5	18 – 8
(c)	18 – 5	16 – 4	19 – 6	17 – 4

(d) Write the correct number that comes after subtracting.

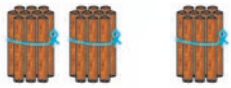
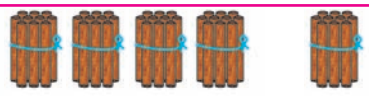
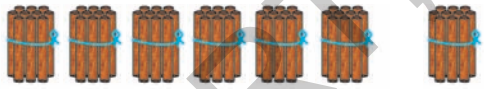
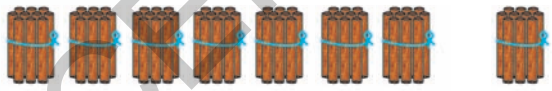
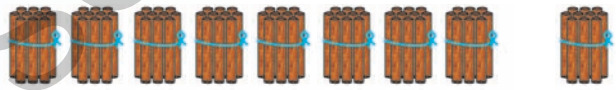
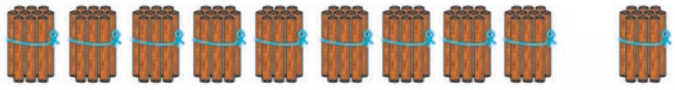


Get your pupil to understand instructions. Let them do the exercises by themselves.

12 Introduction of Tens from 10 to 100

A2H5V3

Count in tens. Write the numbers in the boxes.

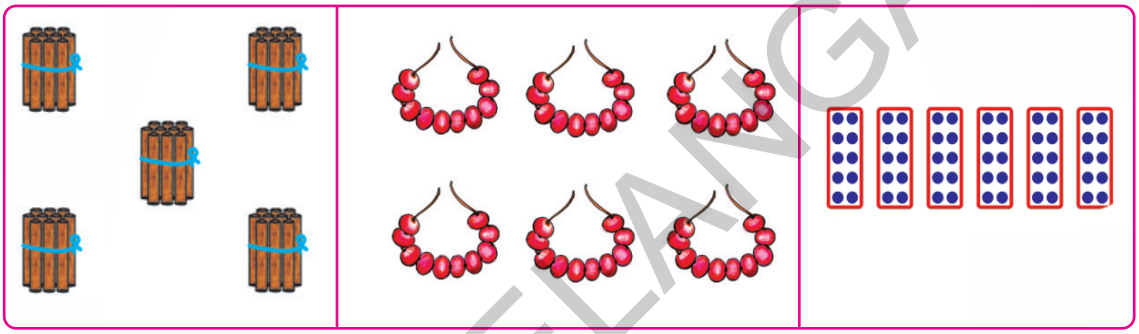
 10	1 ten	10 ten
 10 + 10	2 tens	20 twenty
 20 + 10	3 tens	thirty
 30 + 10	tens	40 forty
 40 + 10	5 tens	fifty
 50 + 10	tens	60 sixty
 60 + 10	7 tens	seventy
 70 + 10	8 tens	eighty
 80 + 10	tens	90 ninety
 90 + 10	10 tens	100 hundred

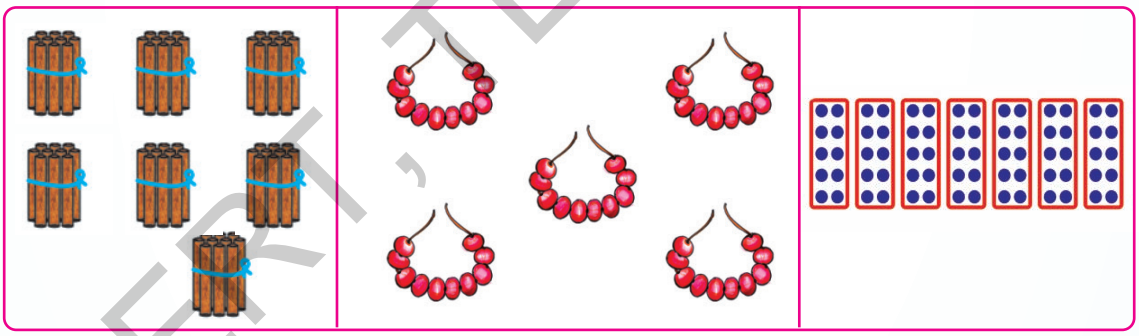
Get your pupils to count the stick bundles in tens from 10 to 100. Let them understand the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 and 100.

Exercise

(a) Count the tens, in the following three boxes. Tick '✓' the box which is different.

Ex:

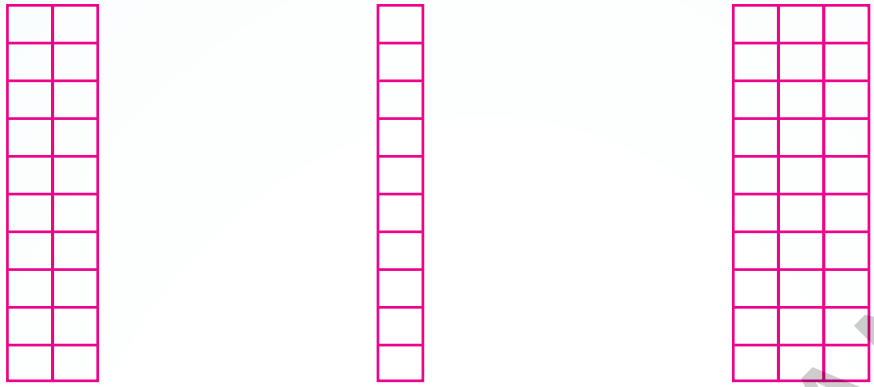




Get your pupil to understand instructions. Let them do the exercises by themselves.

(b) Count the grid. Write the correct number in the box given below the grid.

Ex:



20

(c) Count the beads in each chain. Write the correct number in the last column.

Chains of beads	Number
	40
	
	
	
	

Get your pupil to understand instructions. Let them do the exercises by themselves.

(d) Look at the tens. Match each one with correct number.

10+10	40
30+10	50
40+10	80
70+10	20
80+10	90

Example

(e) Look at the tens in each row. Write the correct number in the blank spaces.

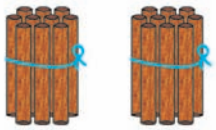
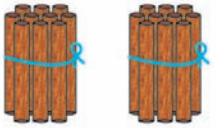
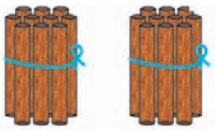
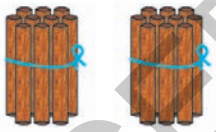
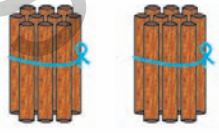
10	20	30		
30	40	50		
20	40	60		
10	30	50		

Get your pupil to understand instructions. Let them do the exercises themselves.

13 Numbers from 20 to 100

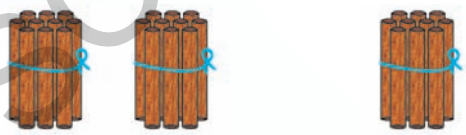
U6Q3Z8

Count the bundles of sticks and the loose sticks in the following pictures. Write the number in '◯'. Say how many tens and how many ones are there in each number.

		tens	ones
 20 + 1 = 21		2	1
 20 + 2 = ◯			
 20 + 3 = ◯			
 20 + 4 = ◯			
 20 + 5 = ◯			

Get your pupils to observe the bundles of sticks and loose sticks. Let them write the numbers 21 to 25 by counting tens and ones. Ask them to write the numbers as sums of tens and ones.

Count the bundles of sticks and the loose sticks in the following pictures. Write the number in '◯'. Say how many tens and how many ones are there in each number.

 20 + 6 = 26	tens: 2	ones: 6
 20 + 7 = ◯	tens: ☐	ones: ☐
 20 + 8 = ◯	tens: ☐	ones: ☐
 20 + 9 = ◯	tens: ☐	ones: ☐
 20 + 10 = ◯	tens: ☐	ones: ☐

Get your pupils to observe the bundles of sticks and loose sticks. Let them write the numbers 26 to 30 by counting tens and ones. Ask them to write the numbers as sums of tens and ones.

Count the bundles of sticks and the loose sticks in the following pictures. Write the number in '◯'. Say how many tens and how many ones are there in each number.

 30 + 1 = 31	tens: 3	ones: 1
 30 + 2 = ◯	tens:	ones:
 30 + 3 = ◯	tens:	ones:
 30 + 4 = ◯	tens:	ones:
 30 + 5 = ◯	tens:	ones:

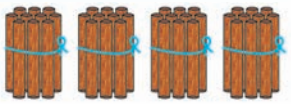
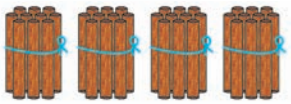
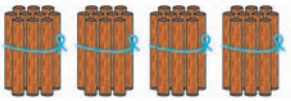
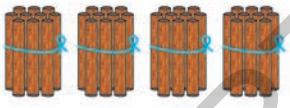
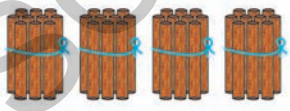
Get your pupils to observe the bundles of sticks and loose sticks. Let them write the numbers 31 to 35 by counting tens and ones. Ask them to write the numbers as sums of tens and ones.

Count the bundles of sticks and the loose sticks in the following pictures. Write the number in '◯'. Say how many tens and how many ones are there in each number.

 30 + 6 = ◯		tens ones
 30 + 7 = ◯		tens ones
 30 + 8 = ◯		tens ones
 30 + 9 = ◯		tens ones
 30 + 10 = ◯		tens ones

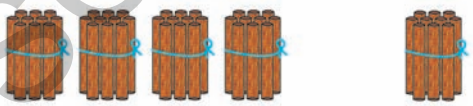
Get your pupils to observe the bundles of sticks and loose sticks. Let them write the numbers 36 to 40 by counting tens and ones. Ask them to write the numbers as sums of tens and ones.

Count the bundles of sticks and the loose sticks in the following pictures. Write the number in '◯'. Say how many tens and how many ones are there in each number.

 40 + 1 = ◯		tens ones
 40 + 2 = ◯		tens ones
 40 + 3 = ◯		tens ones
 40 + 4 = ◯		tens ones
 40 + 5 = ◯		tens ones

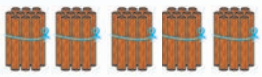
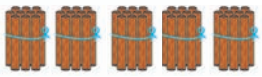
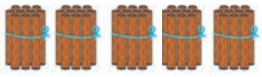
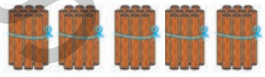
Get your pupils to observe the bundles of sticks and loose sticks. Let them write the numbers 41 to 45 by counting tens and ones. Ask them to write the numbers as sums of tens and ones.

Count the bundles of sticks and the loose sticks in the following pictures. Write the number in '◯'. Say how many tens and how many ones are there in each number.

 40 + 6 = ◯		tens ones
 40 + 7 = ◯		tens ones
 40 + 8 = ◯		tens ones
 40 + 9 = ◯		tens ones
 40 + 10 = ◯		tens ones

Get your pupils to observe the bundles of sticks and loose sticks. Let them write the numbers 46 to 50 by counting tens and ones. Ask them to write the numbers as sums of tens and ones.

Count the bundles of sticks and the loose sticks in the following pictures. Write the number in '◯'. Say how many tens and how many ones are there in each number.

 50 + 1 = ◯	tens ones	
  50 + 2 = ◯	tens ones	
  50 + 3 = ◯	tens ones	
  50 + 4 = ◯	tens ones	
  50 + 5 = ◯	tens ones	

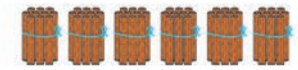
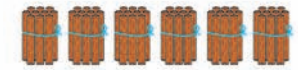
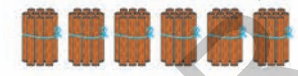
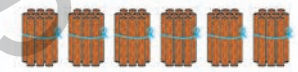
Get your pupils to observe the bundles of sticks and loose sticks. Let them write the numbers 51 to 55 by counting tens and ones. Ask them to write the numbers as sums of tens and ones.

Count the bundles of sticks and the loose sticks in the following pictures. Write the number in '◯'. Say how many tens and how many ones are there in each number.

  50 + 6 = ◯	tens ones	
  50 + 7 = ◯	tens ones	
  50 + 8 = ◯	tens ones	
  50 + 9 = ◯	tens ones	
  50 + 10 = ◯	tens ones	

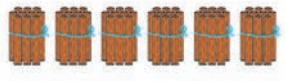
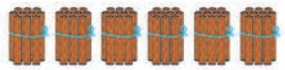
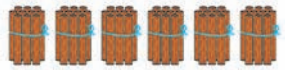
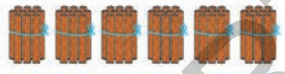
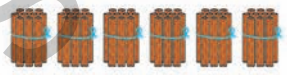
Get your pupils to observe the bundles of sticks and loose sticks. Let them write the numbers 56 to 60 by counting tens and ones. Ask them to write the numbers as sums of tens and ones.

Count the bundles of sticks and the loose sticks in the following pictures. Write the number in '◯'. Say how many tens and how many ones are there in each number.

 60 + 1 = ◯	tens ones	
  60 + 2 = ◯	tens ones	
  60 + 3 = ◯	tens ones	
  60 + 4 = ◯	tens ones	
  60 + 5 = ◯	tens ones	

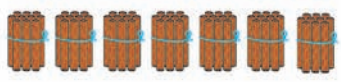
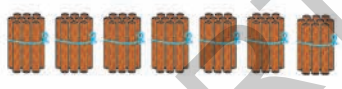
Get your pupils to observe the bundles of sticks and loose sticks. Let them write the numbers 61 to 65 by counting tens and ones. Ask them to write the numbers as sums of tens and ones.

Count the bundles of sticks and the loose sticks in the following pictures. Write the number in '◯'. Say how many tens and how many ones are there in each number.

  60 + 6 = ◯	tens ones	
  60 + 7 = ◯	tens ones	
  60 + 8 = ◯	tens ones	
  60 + 9 = ◯	tens ones	
  60 + 10 = ◯	tens ones	

Get your pupils to observe the bundles of sticks and loose sticks. Let them write the numbers 66 to 70 by counting tens and ones. Ask them to write the numbers as sums of tens and ones.

Count the bundles of sticks and the loose sticks in the following pictures. Write the number in '◯'. Say how many tens and how many ones are there in each number.

 70 + 1 = ◯	tens ☐	ones ☐
 70 + 2 = ◯	tens ☐	ones ☐
 70 + 3 = ◯	tens ☐	ones ☐
 70 + 4 = ◯	tens ☐	ones ☐
 70 + 5 = ◯	tens ☐	ones ☐

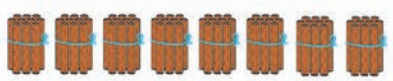
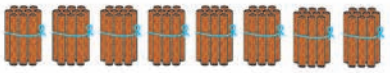
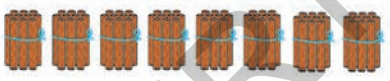
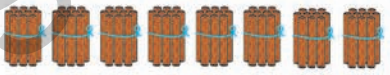
Get your pupils to observe the bundles of sticks and loose sticks. Let them write the numbers 71 to 75 by counting tens and ones. Ask them to write the numbers as sums of tens and ones.

Count the bundles of sticks and the loose sticks in the following pictures. Write the number in '◯'. Say how many tens and how many ones are there in each number.

		tens	ones
 70 + 6 = ◯			
 70 + 7 = ◯			
 70 + 8 = ◯			
 70 + 9 = ◯			
 70 + 10 = ◯			

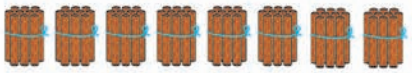
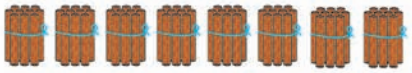
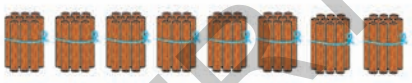
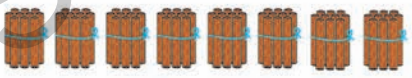
Get your pupils to observe the bundles of sticks and loose sticks. Let them write the numbers 76 to 80 by counting tens and ones. Ask them to write the numbers as sums of tens and ones.

Count the bundles of sticks and the loose sticks in the following pictures. Write the number in '◯'. Say how many tens and how many ones are there in each number.

 80 + 1 = ◯	tens ones	
  80 + 2 = ◯	tens ones	
  80 + 3 = ◯	tens ones	
  80 + 4 = ◯	tens ones	
  80 + 5 = ◯	tens ones	

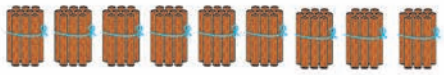
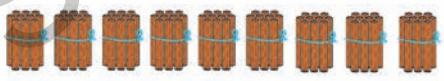
Get your pupils to observe the bundles of sticks and loose sticks. Let them write the numbers 81 to 85 by counting tens and ones. Ask them to write the numbers as sums of tens and ones.

Count the bundles of sticks and the loose sticks in the following pictures. Write the number in '◯'. Say how many tens and how many ones are there in each number.

 80 + 6 = ◯	tens ones ☐ ☐
 80 + 7 = ◯	tens ones ☐ ☐
 80 + 8 = ◯	tens ones ☐ ☐
 80 + 9 = ◯	tens ones ☐ ☐
 80 + 10 = ◯	tens ones ☐ ☐

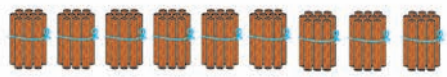
Get your pupils to observe the bundles of sticks and loose sticks. Let them write the numbers 86 to 90 by counting tens and ones. Ask them to write the numbers as sums of tens and ones.

Count the bundles of sticks and the loose sticks in the following pictures. Write the number in '◯'. Say how many tens and how many ones are there in each number.

 90 + 1 = ◯	tens ☐	ones ☐
 90 + 2 = ◯	tens ☐	ones ☐
 90 + 3 = ◯	tens ☐	ones ☐
 90 + 4 = ◯	tens ☐	ones ☐
 90 + 5 = ◯	tens ☐	ones ☐

Get your pupils to observe the bundles of sticks and loose sticks. Let them write the numbers 91 to 95 by counting tens and ones. Ask them to write the numbers as sums of tens and ones.

Count the bundles of sticks and the loose sticks in the following pictures. Write the number in '◯'. Say how many tens and how many ones are there in each number.

 90 + 6 = ◯	tens ☐	ones ☐
 90 + 7 = ◯	tens ☐	ones ☐
 90 + 8 = ◯	tens ☐	ones ☐
 90 + 9 = ◯	tens ☐	ones ☐
 90 + 10 = 100	tens ☐	ones ☐

Get your pupils to observe the bundles of sticks and loose sticks. Let them write the numbers 96 to 100 by counting tens and ones. Ask them to write the numbers as sums of tens and ones.

Exercise

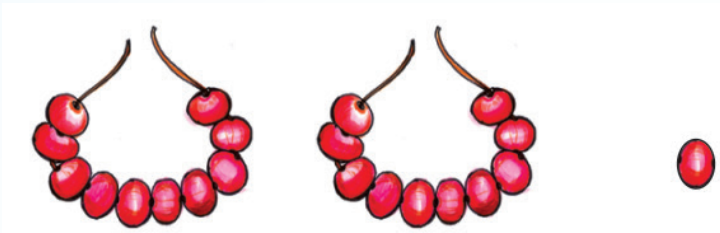
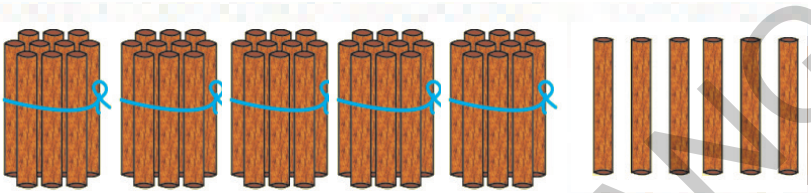
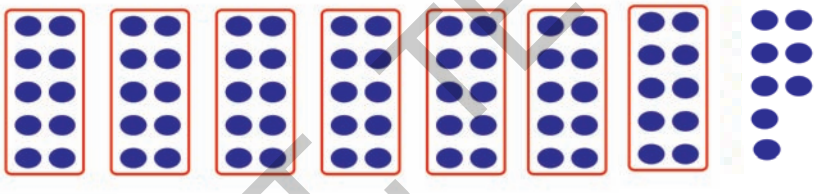
(a) Look at the grid given below. You find some numbers from 1 to 100 in the grids. Write the missing numbers.

1	2	3	4	5	6	7	8	9	10
11					16				20
			24					29	
	32						38		
				45					50
51						57			
		63			66				
71						77			
			84						90
	92								100

Get your pupils to understand how to write numbers from 1 to 100 in the correct order. Let them write the numbers in the blank boxes given above.

(b) Count the pictures. Look at the 3 numbers given on the right side. Draw 'O' around the correct number.

Ex:

	(21) 31 41
	66 56 76
	78 68 58

(c) Look at the series of numbers from 41. Write the correct numbers in the blank boxes.

41	42	43			46		48
49	50				54		56
70		72		74			
60			63		65		

Get your pupil to understand the instructions given. Let them solve the problems by themselves.

d) **Look at the numbers in each row. Write the correct numbers in the blank space.**

45 46 47	45 ◯ 47	45 46 ◯
89 90 91	89 90 ◯	◯ ◯ 91
67 68 69	67 ◯ 69	◯ 68 69
31 32 33	◯ 32 33	31 ◯ ◯

e) **Write the numbers from 1 to 20 in letters.**

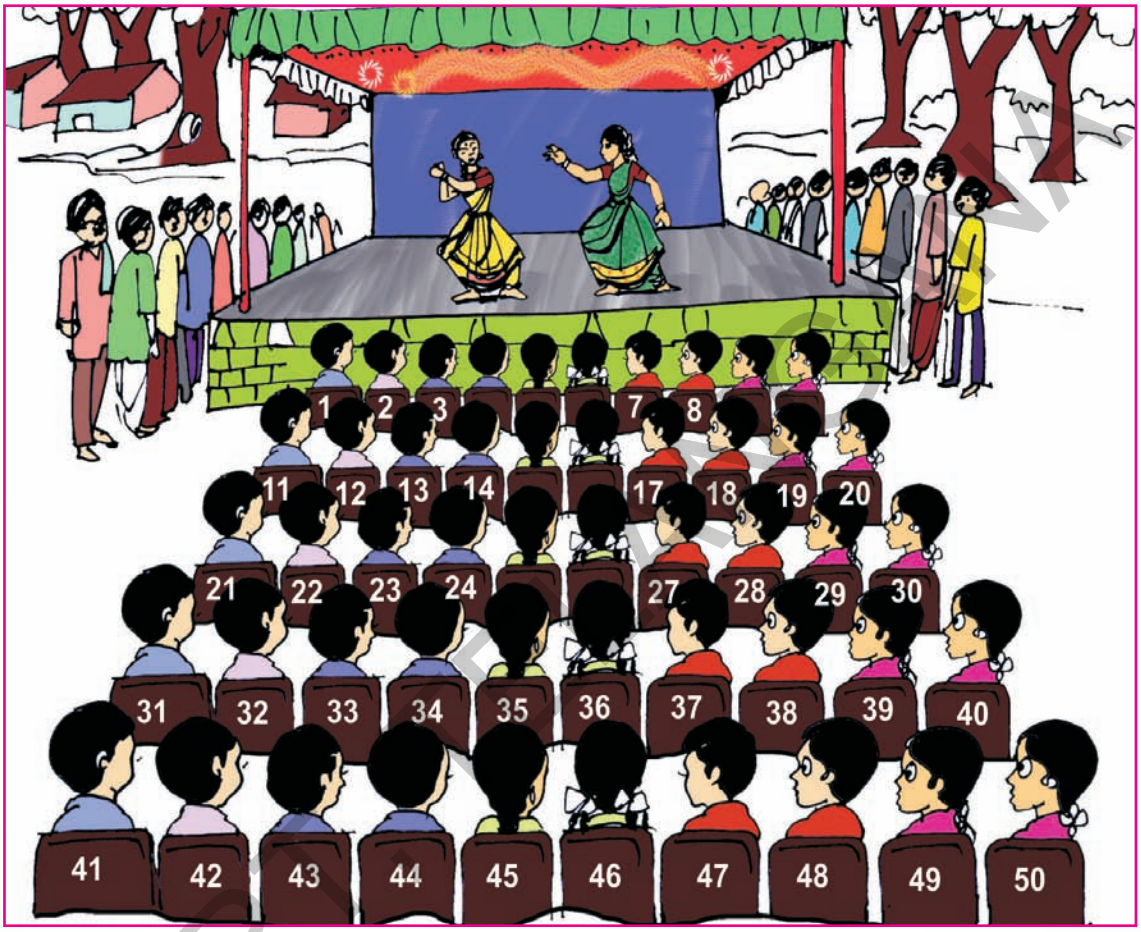
1	One	11	Eleven
2		12	
3		13	
4		14	
5		15	
6		16	
7		17	
8		18	
9		19	
10		20	Twenty

Get your pupil to understand the instructions given. Let them solve the problems by themselves.

14 Numbers Before, Between, After

T2D7U7

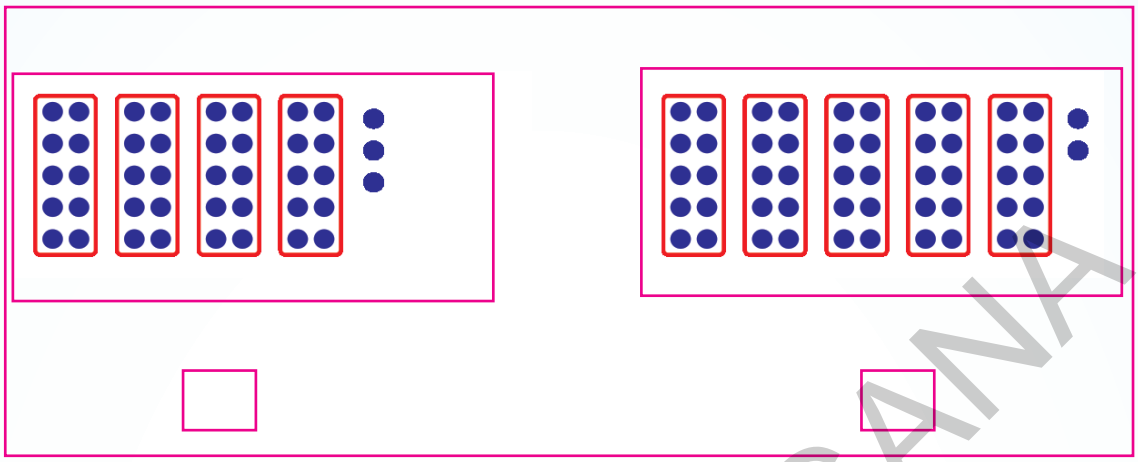
Look at the picture given below. Say what is happening. How many people are standing? How many people are sitting?



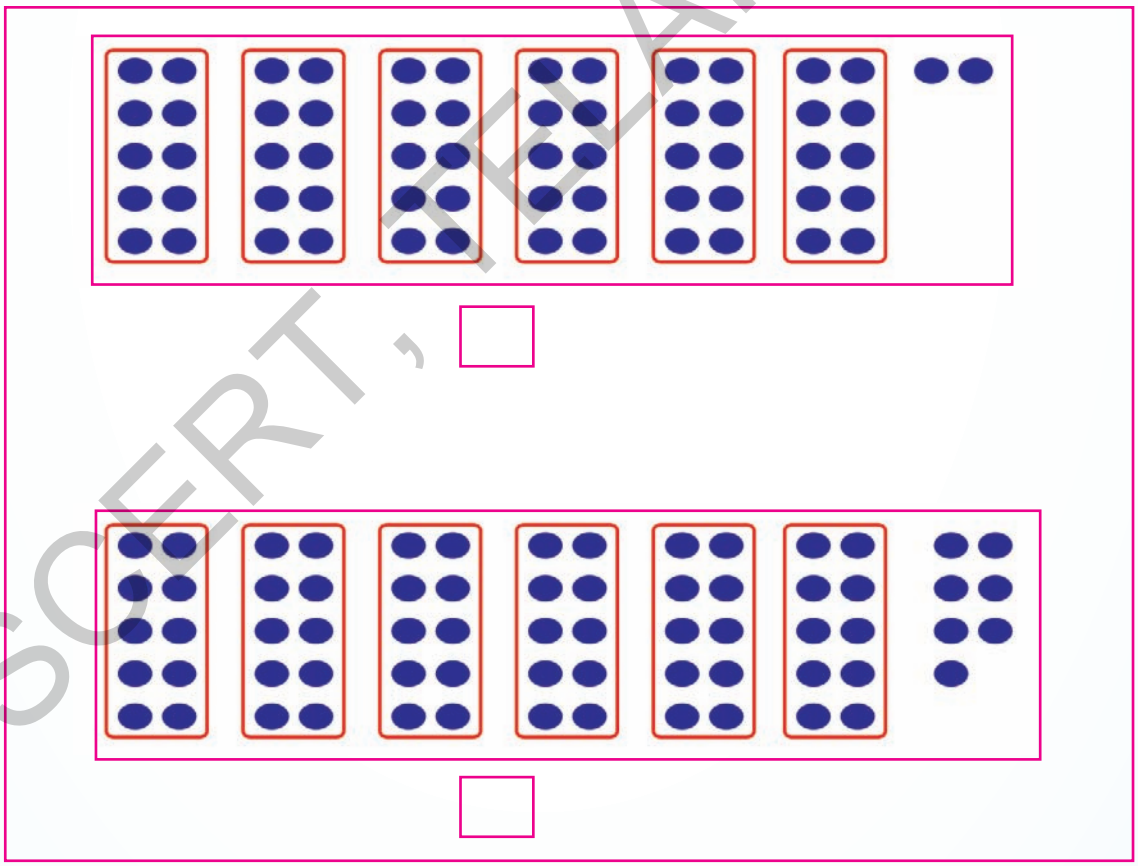
- How many seats are there in the first row?
- With which seat number does the second row begin?
- With which seat number does the third row end?
- Some seats do not have numbers. Say those numbers.
- Say the two numbers of seats between 14 and 17.
- From 31 to 40 how many people can sit ?
- What is the number before 45 ?
- What is the number after 49 ?
- Between what numbers does 7 lie ?
- Is the number 34 nearer to 40 or 31 ?

Get your people to observe the above picture. Ask them to say the answers to the questions given above.

(a) Count the dots in the boxes given. Write the suitable number in ☐.
Tick '✓' the number which is the bigger.



Count the dots in the boxes given. Write the suitable number in ☐.
Tick '✓' the number which is the smaller.



Get your pupil to count the dots in the boxes given above. Let them write their numbers. Let them understand how to find out which of the two numbers is bigger or smaller.

Exercise

(a) Write the previous number.

	44		74		60
	94		55		21

(b) Write the next number.

29		46		65	
87		40		69	

(c) Write the middle number.

29		31	25		27
49		51	70		72

(d) Look at the number in the middle box. Write the number before and after it.

	63			89	

Get your pupil to understand the instructions given. Let them solve the problems by themselves.

(e) Draw '◯' around the smaller numbers given.

Ex:	76	(54)	32	59
(a)	69	36	85	81
(b)	34	94	76	67

(f) Tick '✓' the number which is the bigger numbers given.

Ex:	✓ 52	37	76	67
(a)	68	92	53	58
(b)	39	31	41	64

(g) Draw '◯' around the smallest given numbers in each row.

Ex:	87,	76,	83,	73,	(51)
(a)	96,	53,	21,	12,	37
(b)	92,	16,	37,	73,	14
(c)	52,	60,	94,	51,	49
(d)	76,	22,	37,	12,	64

Get your pupil to understand the instructions given. Let them solve the problems by themselves.

(h) Look at the numbers in each row. Tick '✓' the number which is the biggest.

Example:	34,	57,	12,	67 ✓,	53
(a)	64,	59,	41,	72,	84
(b)	32,	91,	82,	67,	38
(c)	87,	64,	59,	86,	68
(d)	19,	91,	89,	98,	76

(i) Look at the following numbers on the left column. In the boxes on right side columns. Write those numbes from the smallest to the biggest and from the biggest to the smallest. One example is given.

Numbers	From the smallest to the biggest number	From the biggest to the smallest number
Ex: 21, 45, 36, 69	21, 36, 45, 69	69, 45, 36, 21
(a) 60, 30, 45, 80	___ ___ ___ ___	___ ___ ___ ___
(b) 96, 41, 12, 68	___ ___ ___ ___	___ ___ ___ ___
(c) 9, 25, 14, 78	___ ___ ___ ___	___ ___ ___ ___

Get your pupil to understand the instructions given. Let them solve the problems by themselves.

(j) Play this game.

Play this game following the instructions given below.

- Form into groups, four pupils in each group.
- Make cards with numbers 1 to 96. Mix them well. Distribute the cards to pupil, each pupil must have 24 cards.
- Mix each set well. Put them in front of each pupil, with the numbers cannot be seen.
- Each pupil picks up one card and displays. The pupil whose number on the card is biggest receives the cards of other 3 pupil.
- Play like this for 5 or 6 rounds. The pupil who has the maximum number of cards is the winner.
- Play this game again and again.

Get your pupil to understand the instructions and play the game as described above.

15 Money

C5A8Q6

Raju has the following coins and currency notes. Say their values.

Coins

50 Paise

1 rupee

2 rupees

5 rupees

Currency Notes

5 rupees

10 rupees

20 rupees

50 rupees

Get your pupils to observe the pictures of coins and currency notes. Let them understand the value of each coin and note.

(a) Tick '✓' in the box under the one-rupee coin.




(b) Tick '✓' in the box under the five-rupee coin.




(c) Tick '✓' in the box under the five-rupee note.

Get your pupil to understand the instructions and solve the exercises themselves.

(d) Tick '✓' in the box under the ten-rupee note.

(e) Write what the following coins are.

_____ rupees _____ rupee _____ rupees

(f) Write what the following notes are.

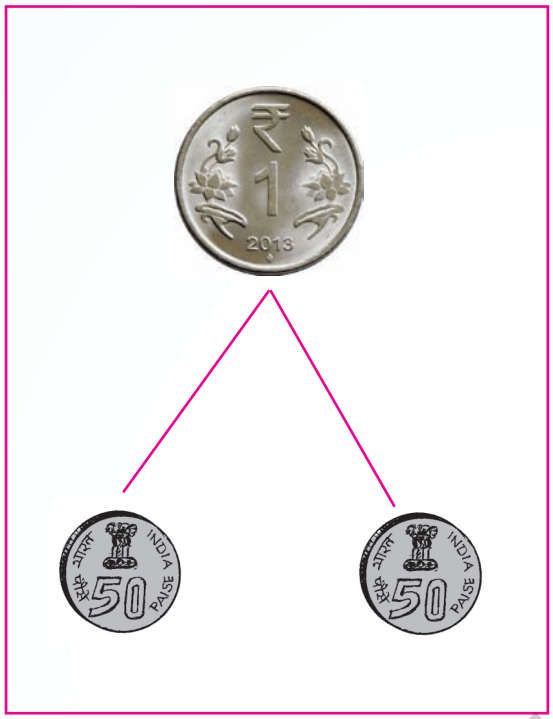
_____ rupees

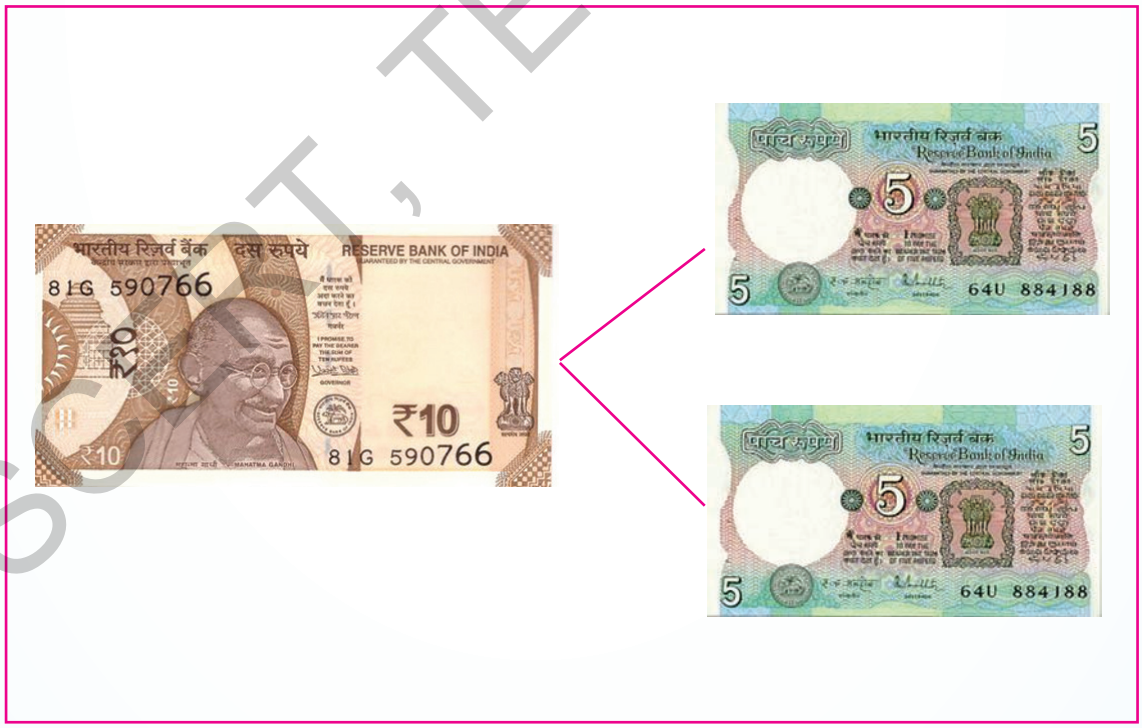
_____ rupees

_____ rupees

Get your pupil to understand the instructions and solve the exercises themselves.

(g) Observe and say.





Get your pupil to understand the instructions and solve the exercises themselves.

(h) Match the notes on the left, with the change that is equal to on the right.

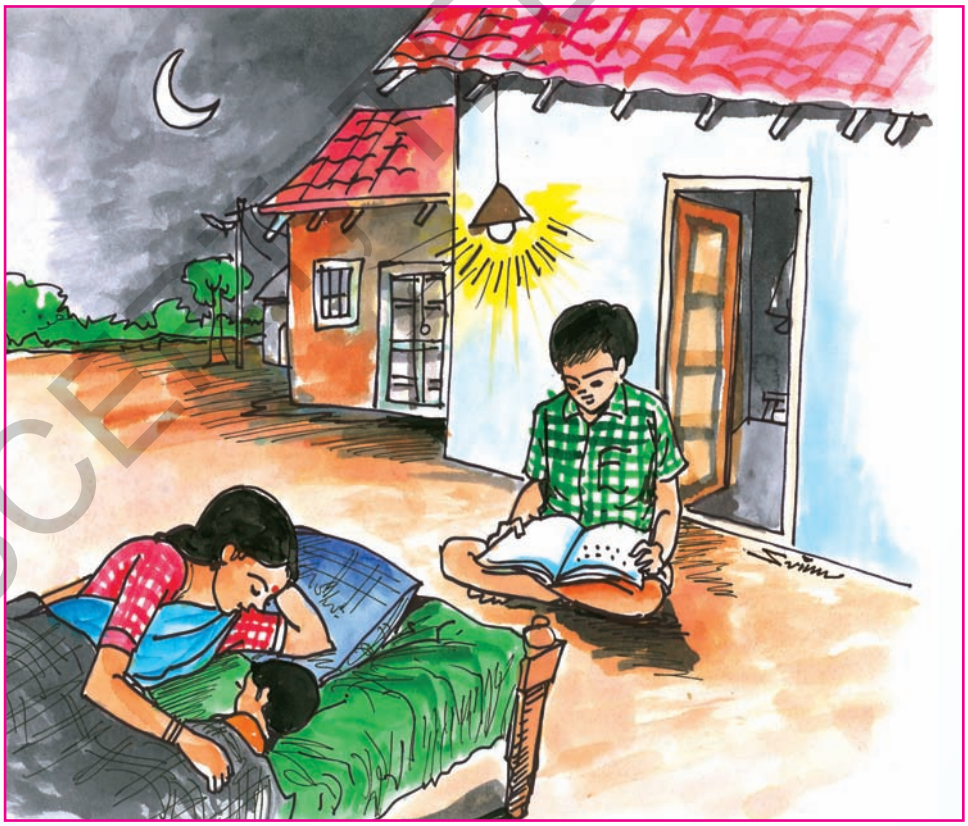
Example

Get your pupils to observe the value of the notes on the left. Ask them to observe the total value of the coins on the right. Let them match the amounts of equal value.

16 Time

P1W3F2

Look at the two pictures given below. Who is doing what? Say what is the time it is?



Get your pupils to observe the above two pictures. Let them understand what people do and at what time. And understand them the timings of morning, evening and night ?

Look at the two pictures. Say when these events take place.

- Who are doing what? What is the time?
- What comes after morning?
- What do people do then?
- What comes after afternoon?
- What do people do then?
- Say all that you do from morning to night.

Get your pupils to observe the pictures. Get them to understand the concepts of early morning, morning, afternoon, evening and night.

Exercise

Match the following.

Get your pupils to observe the pictures on the left. Let them observe the pictures on the right and match them correctly.

(a) Look at the pictures given below. Order them according to the action that takes place from first to the last (as 1, 2 and 3).

Get your pupils to observe the above pictures. Let them understand what people do and at what time.

17 Length - Weight - Size

A6X6P3

Look at the pictures given below. Say with what and how each is measured.

Rahim measured the length of the book like this.

This is the length equal to the width of four fingers. This is called **hand-breadth.**

Rama measured the length of the table like this

This is the length between the little finger and the thumb of your hand. This is called **handspan.**

Sitamma measured the garland like this.

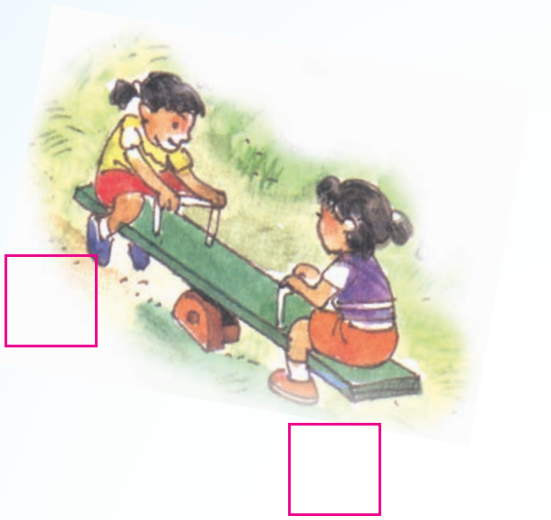
This is the length between the elbow and the tip of the fingers. This is called a **cubit**.

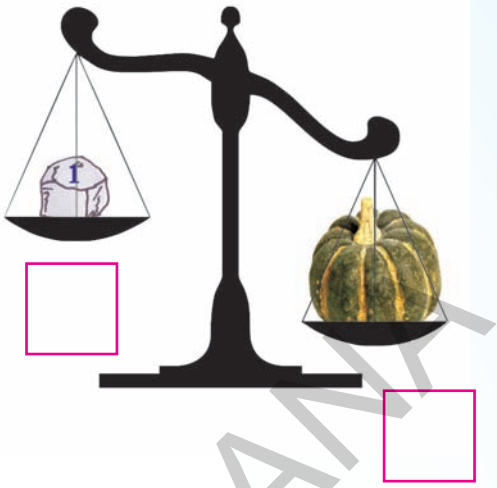
Meena measures the length of the mat like this

This is the length between the sole and the toes. This is called a **foot.**

Get your pupils to observe the above pictures. Let them understand the nonstandard measuring tools shown on the right are used in finding the lengths of things.

(a) Tick '✓' the heavier one.





(b) Tick '✓' the vessel which holds more water among the three.

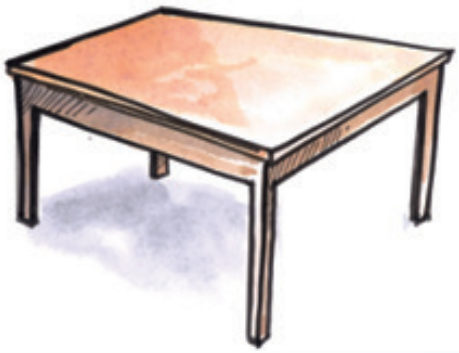
(c) Tick '✓' the vessel which holds less coffee among the three.

Get your pupils to observe the above pictures. Let them discuss then help them to understand before they answer the problems.

d) **Do this activity. Let each pupil stand on a line. Ask each one to leap forward. Then measure the distance using a stick and your cubit. Record your observation in the table given below.**

Name of the pupil	The distance leaped	
	Using a stick	Using a cubit

(e) **Guess how long are a slate and a table, in terms of a pencil as a tool. Check your guessing by actual measurement using a pencil.**

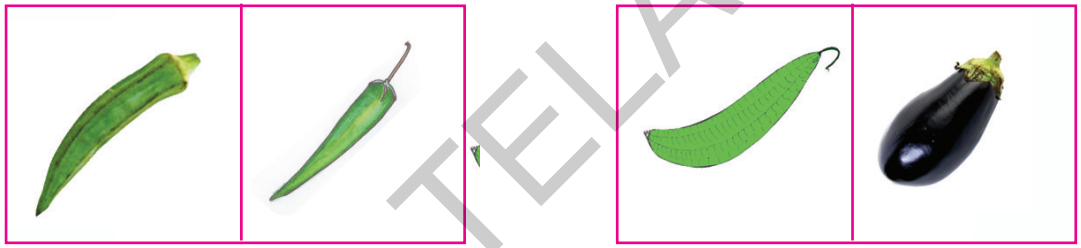


Get your pupils to measure the things shown above using the tools mentioned. Let them record the values. Use questions to help them realise the differences.

Exercise

(a) Look at the things given below. Tick '✓' the things which are shorter than a pencil.

(b) Look at the two pairs of vegetables. Guess which of the two is light and which is heavy.



(c) If you want to fill the bucket fast, which vessel should you use? Guess. Find out by actual filling.

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

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 pre mathematical 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 two digit number, acquire the ability to add and subtract numbers, 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 be 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 orgonised as a whole classroom activity.
- Then group activities must be orgonised 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, counting 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.
- For this 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 ability of application. As these textbooks have been prepared with this background, they are to be utilised completely and ensure utilistion of children's learning time.

Syllabus – Expected Outcomes

Unit – 1: Pre Mathematical concepts

- Pupils can observe things and speak about them.
- They can use pre mathematical terms in their speech.
- They can use terms like inside - outside, above - below, fat - thin, big - small, more - less, deep - shallow and express them in their own words, giving examples and identify differences.

Unit – 2: Shapes

- Pupils can compare two dimentional and three dimentional shapes (It is not compulsury to express with Mathematical terminals)

Unit – 3 and 4: Numbers from 1 to 5; numbers from 6 to 9

- Pupils can count things in two groups and compare.
- Pupils can separate similar things from group and count them.
- They can count things upto 9 and show them with number and also write them in order.
- They can identity things of equal number.
- They can arrange the things in a sequence according to their number.

Unit – 5: Before - After - Between - More - Less

- Pupils can say the first, last, middle, previous, next things which are in order within 9 as per their place.
- They can comapare things(upto 9) in two groups as more, less and equal.
- They can arrange numbers and things upto 9 in ascending and descending orders.

Unit – 6: Zero (0)

- Pupils can show zero when there are not any thing.
- They can say zero before 1.

Unit – 7: Addition of Numbers, the Total not Exceeding 9

- Pupils can say that if 1 is added to a number, we get the next number.
- They can count each bead in a chain and add them.
- They can write two numbers (upto 9) horizontally or vertically and add them.
- They can say how much is to be added to a number to get desired number.
- They can add things in two different groups and their total.
- They can add different numbers to get the same total.
- They understand that zero added to any number gives the same number.

Unit – 8: Subtraction of Numbers Less than 9

- Pupils can say how many things must be taken from 9 and also say how many remain.
- They can say that if 0 things are subtracted from a number upto 9 there will be no change and that the same number of things remain.
- They can compare groups and say less or more and by how much through subtraction.
- They can say zero things are there when all subtrcated from given things.
- They can write numbers horizontally or vertically and subtract them.
- They can identify different subtractions with same result and also say them.

Unit – 9: Numbers from 10 to 20

- Pupils can say tens and ones for those more than 10.
- Pupils can count and write number upto 20 in order.
- They can say which is bigger and which is smaller among any numbers upto 20 are given.
- They can say the smallest and the biggest number among the given numbers.

Unit – 10: Addition of numbers sum exeeding 20

- Using bundle, loose sticks pupil able to do addition of two numbers sum not exeeding 20.
- pupil able to do row and column addition of numbers.

Unit – 11: Subtraction of numbers not exeeding 20

- Pupil able to subtract single digit number from two digit number by using bundles and loose sticks.
- Pupil able to do column and row subtractions.

Unit – 12: Introduction of tens from 10 to 100

- Pupil count stick bundles in tens from 10 to 100 and able understand and write them (10, 20, 30, ... etc).

Unit -13 and 14: Numbers from 10 to 100. Number that comes: Before-Between-After

- Pupils can show given numbers as tens and ones using currency notes or bundles of sticks and loose sticks.
- Pupils can say how many tens and how many ones are their in bundle of sticks and loose sticks or ten rupee and one rupee coins.
- They can say/ write smaller, bigger or the middle numbers among those below 100.
- They can write numbers from smaller to bigger and bigger to smaller in order.

Unit – 15: Money

- Pupils can identify different coins (50 p, Re.1, Rs.2, Rs. 5)
- They can say two 50-paise coins make one rupee
- They can identify notes of denominations 1, 2, 5, 10, 20, 50 and 100.

Unit – 16: Time

- Pupils can identify different times of a complete day (morning, afternoon, daytime, evening, night). They can say what people at those times.
- They learn what they must do at what time

Unit – 17: Length – Weight – Size

- Pupils can measure things using nonstandard units like foot, cubit etc.
- They can say which is heavier or which is lighter, which contains more liquid
- They can estimate length, weight and size without actual measurement
- They can say which is more / size

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