



**Government of Tamilnadu**

# **STANDARD TWO**

**TERM II**

**Volume 2**

**MATHEMATICS**

**ENVIRONMENTAL  
STUDIES**

**NOT FOR SALE**

Untouchability is Inhuman and a Crime

A Publication Under  
Free Textbook Programme of  
Government of Tamilnadu

**Department of School Education**

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First Edition - 2012

Revised Edition - 2013

Reprint - 2014

( Published under Uniform System of School Education Scheme in Trimester Pattern )

Textbook Prepared and Compiled By

State Council of Educational Research and Training

College Road, Chennai - 600 006.

Textbook Printing

Tamil Nadu Textbook and Educational Services Corporation

College Road, Chennai - 600 006.

This book has been printed on 80 G.S.M. Maplitho Paper

Price : Rs.

Printed by Web Offset at :

Textbook available at  
**[www.textbooksonline.tn.nic.in](http://www.textbooksonline.tn.nic.in)**

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# **MATHEMATICS**

## **STANDARD TWO**

### **TERM II**

# MATHEMATICS

# 1. Comparison of Numbers

## Formation of 2-digit numbers without repetition.

Let us learn to form 2-digit numbers with the given digits.

### Example

Take two numbers 2 and 6

using the given numbers, we can form two digit numbers 26 and 62.

The greater number is 62.

The smaller number is 26.



Fill the given box

Numbers	Greater number	Smaller number
4, 7		
6, 9		
8, 5		
9, 3		

### Think it over!

If zero is one of the given two digits,  
how many 2 digit numbers can be formed ?

Form 2-digit number using the following digits. Write the greater and smaller number.

★ 4 and 5

★ 7 and 9

★ 4 and 9

★ 2 and 3

★ 1 and 8

★ 5 and 3

## Example

Using the three given numbers 3, 4 and 6,

we get 34, 43, 46, 64, 63 and 36

The greatest number is 64.

The smallest number is 34.

If one of the digits is 0, We can form only four 2-digit numbers  
For example, using the numbers 3, 0 and 6

we get 30, 36, 63, 60.

The greatest number is 63.

The smallest number is 30.

## ACTIVITY

Form six 2-digit numbers, circle the smallest number and underline the greatest. The first one is done for you.

1,3,5	13	31	35	53	51	15
3,6,7						
4,2,0						
5,8,2						
6,5,1						
7,9,3						

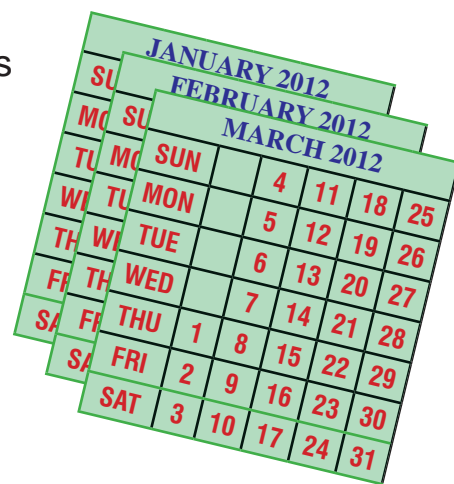


Among the three digits if two digits are zero, how many 2-digit numbers can be formed?



## ACTIVITY

The teacher may prepare the number cards with the help of the children.



Collect the sheets of old monthly calendar.

Cut the numbers from 1 to 9.

Stick the number in a card board and cut each number separately.

Prepare as many sets of number cards as possible.

Divide the class into groups having 4 or 5 children .

Provide each group a set of number cards.

Using the number cards ask the children to form as many 2 digit numbers as possilbe.

Ask them to write down the greater and smaller number.

Ask the children to repeat the activity using different sets of number cards.

Record, which group formed the maximum number pairs?

**Note :** Add the number card **0** also and ask the children to find out the greater and smaller number.

## Formation of 2-digit numbers with repetition.

Take two numbers say **3** and **7**. If the given numbers are repeated in ones and tens place we get, **33** and **77**.

The greater number is **77**.

The smaller number is **33**.

Take another example, **5** and **9**

The greater number is **99**

The smaller number is **55**

★ Form the greatest and the smallest number using **8** and **6**

Let us take three numbers **4, 5, 8**.

The greatest number is **88**.

The smallest number is **44**.

Numbers	Greatest number	Smallest number
3, 9		
4, 8		
2, 7, 5		
6, 3, 8		
1, 7, 9		

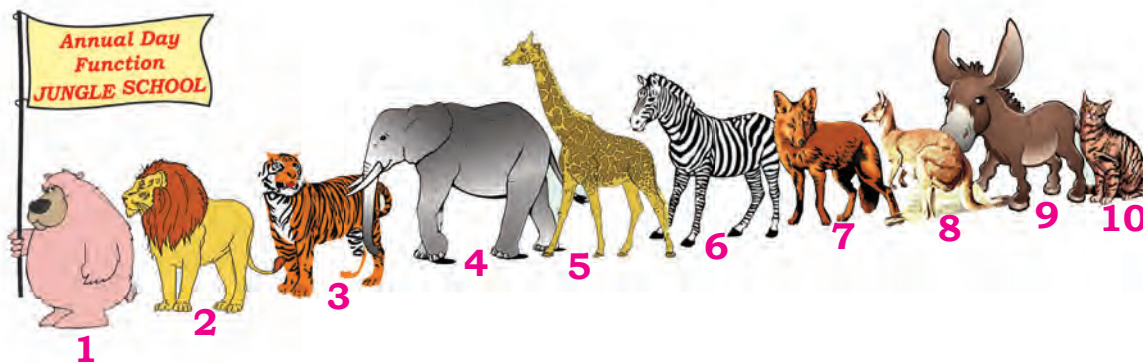
### Think !

If one of the given numbers is zero, think of the greatest and smallest number.



## Ordinal and Cardinal numbers.

Look at the animals.



The bear is standing in the first position.

The lion is standing second.

The zebra is the sixth animal in the line. Its position is sixth.

The cat is the tenth animal in the line. Its position is tenth.

Here first, second, third, ..... are ordinal numbers.

**An ordinal number tells the position of an object or a person in a collection.**

**A cardinal number tells the number of objects or persons in a collection.**

## Read and learn.

Cardinal		Ordinal	
1	One	1 <sup>st</sup>	First
2	Two	2 <sup>nd</sup>	Second
3	Three	3 <sup>rd</sup>	Third
4	Four	4 <sup>th</sup>	Fourth
5	Five	5 <sup>th</sup>	Fifth
6	Six	6 <sup>th</sup>	Sixth
7	Seven	7 <sup>th</sup>	Seventh
8	Eight	8 <sup>th</sup>	Eighth
9	Nine	9 <sup>th</sup>	Ninth
10	Ten	10 <sup>th</sup>	Tenth

## Ordinal and Cardinal number of weeks and months.

Sunday is the first day of the week.

Wednesday is the \_\_\_\_\_ day of the week.

Friday is the \_\_\_\_\_ day of the week.

Saturday is the \_\_\_\_\_ day of the week.

January is the \_\_\_\_\_ month of the year.

August is the \_\_\_\_\_ month of the year.

The number of days in a week is \_\_\_\_\_

The number of months in a year is \_\_\_\_\_





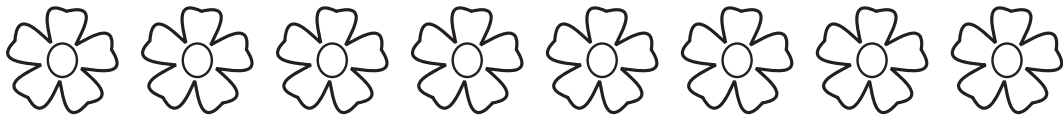
## ACTIVITY

Colour it and enjoy !

From the left, colour the 3rd flower in blue.

From the left, colour the 7th flower in red.

From the left, colour the 8th flower in green.



## ACTIVITY

Who am I?

My 3<sup>rd</sup> letter is D.

My 1<sup>st</sup> and 4<sup>th</sup> letters are I.

My 5<sup>th</sup> letter is A.

My 2<sup>nd</sup> and 6<sup>th</sup> letters are N.

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

## Teacher's Note

Encourage students to coin many words similar to the word given above.

## ACTIVITY

The teacher may call the children as per the attendance roll. The teacher may collect the articles such as eraser, sharpener, coin, crayon etc. which are collected from the class environment. Ask each child to pick anyone object from the table and stand according to their roll number. The children may be asked the following questions.



What object is with the 1st child?

What is with the 5th child?

Who is having the pencil?

How many of them pick out the eraser?

The teacher can ask so many questions like these to the children.

Repeat the activity with the other children forming groups.

## Teacher's Note

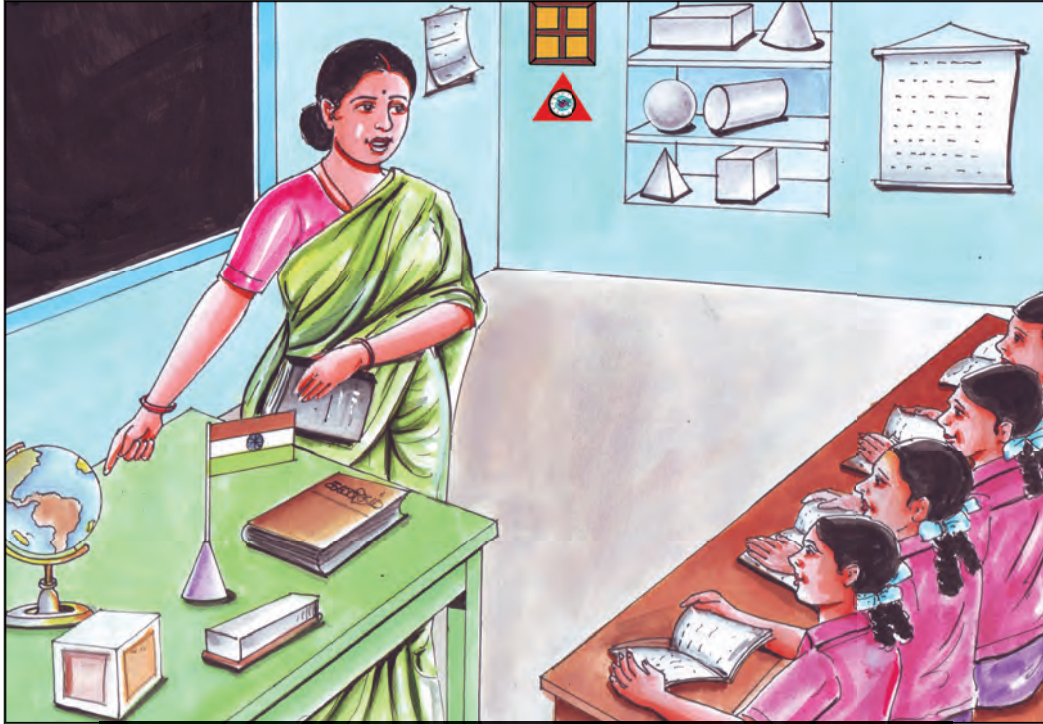
Highlight the use of ordinal numbers through daily life activities.

### For example

6<sup>th</sup> birthday, 2<sup>nd</sup> child sitting in a row from the left, 1<sup>st</sup> day of the week, etc...

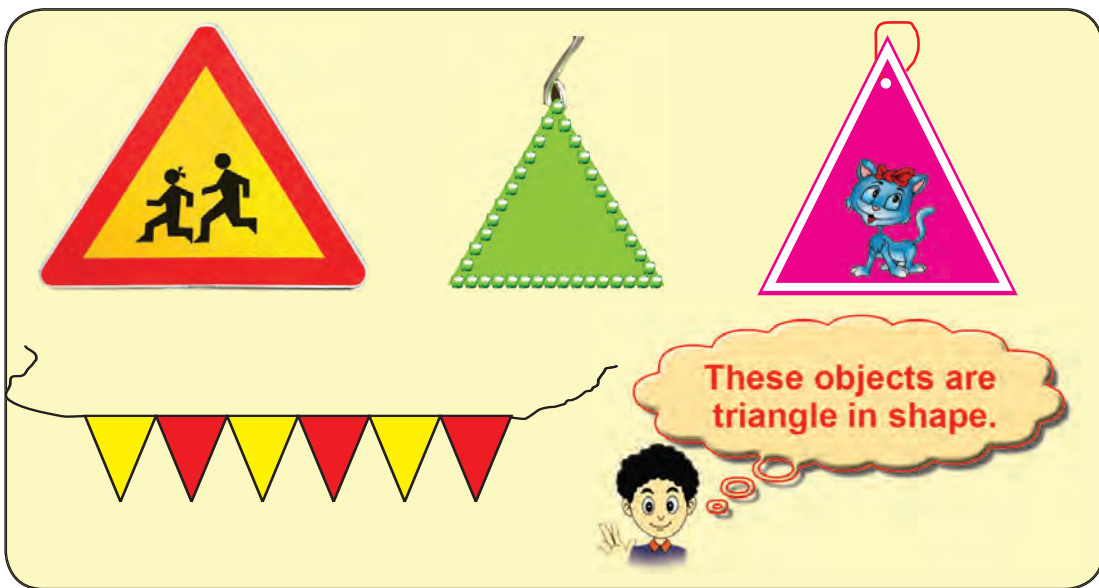
## 2. Shapes

Observe the classroom.

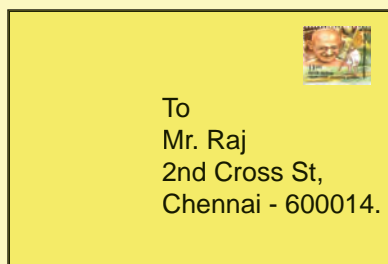


Teacher asks children to identify the different shapes of objects

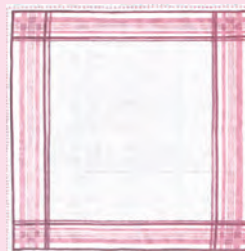
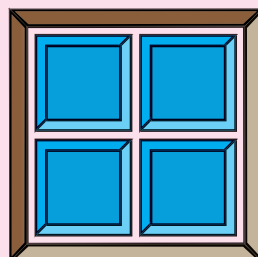
**Let us look at the following pictures.**







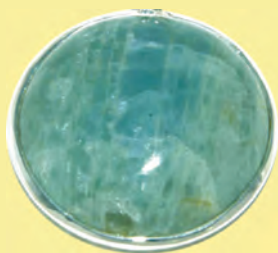
These objects are rectangle in shape.



These objects are square in shape.



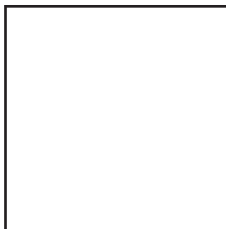
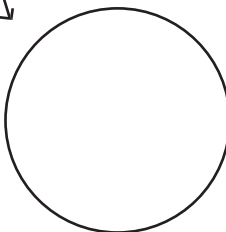
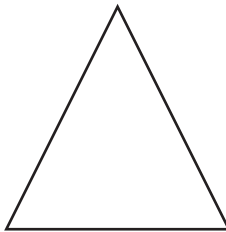
Let us look at the following pictures.



These objects are circle in shape.



Match the following objects with their shapes.



Mark the following objects by representing , , , .

The mirror : \_\_\_\_\_

Wall clock : \_\_\_\_\_

A sheet of the book : \_\_\_\_\_

Ten rupee note : \_\_\_\_\_

Coin : \_\_\_\_\_

Hand kerchief : \_\_\_\_\_

Compact disc : \_\_\_\_\_

Fastoons : \_\_\_\_\_

### Teacher's Note



Add many more objects found in the classroom situation to practice the children.

### ACTIVITY

Make the figures such as triangle, rectangle, square using straws and Midribs of coconut leaves (broom sticks).

**Think :** Can you make circle using small sticks.

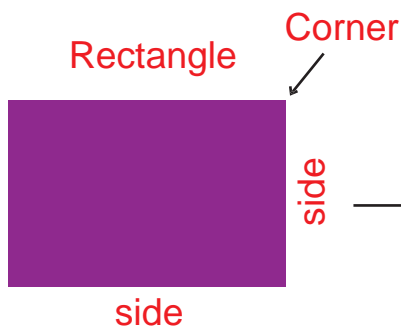
## Two dimensional shapes.



Any flat surface is a plane. A plane has two dimensions.

### Examples :

top of the table, top of a textbook, a sheet of newspaper, floor.

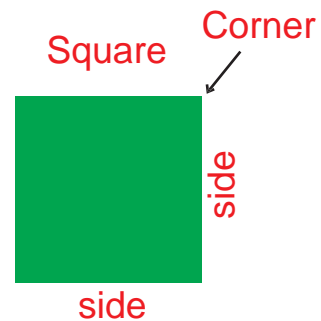


#### A rectangle has

- ☞ four sides
- ☞ its opposite sides equal in length
- ☞ four corners

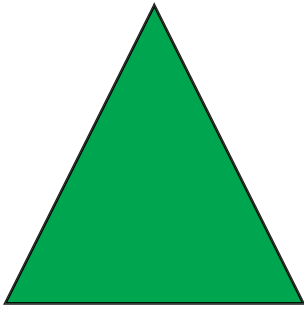
#### A Square has

- ☞ four sides
- ☞ all its sides equal in length
- ☞ four corners





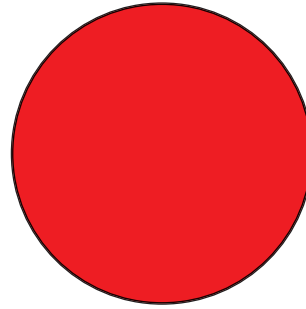
## Triangle



### A Triangle has

- ☞ three sides which need not be equal in length
- ☞ three corners

## Circle



### A Circle has

- ☞ no sides
- ☞ no corners

## Fill in the blanks.

A square has \_\_\_\_\_ equal sides.

A rectangle has \_\_\_\_\_ sides.

In a rectangle the \_\_\_\_\_ sides are equal.

A triangle has \_\_\_\_\_ corners.

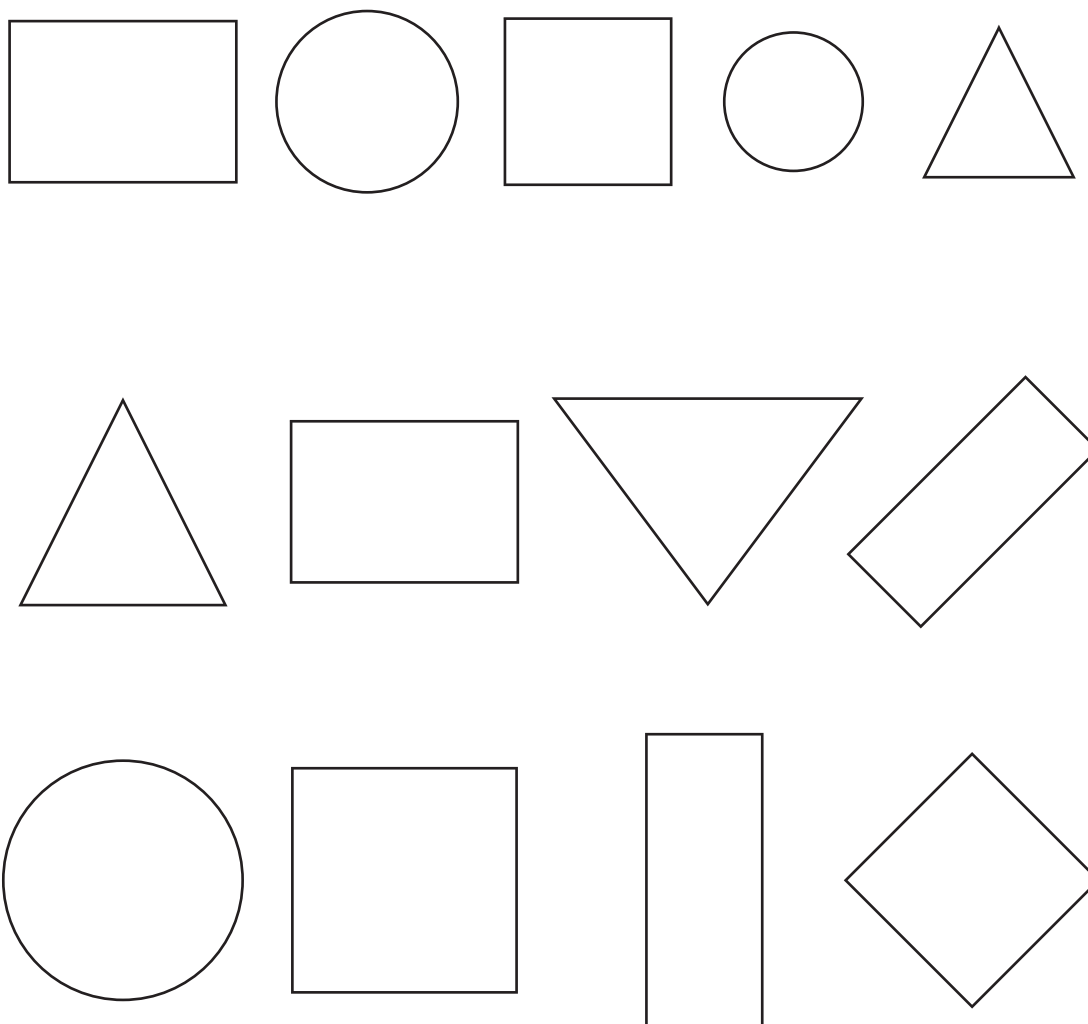
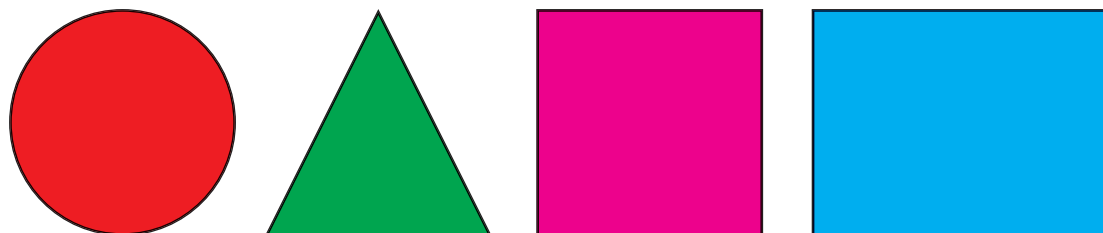
A circle has \_\_\_\_\_ sides.

A square has \_\_\_\_\_ corners.

A triangle has \_\_\_\_\_ sides.

A circle has \_\_\_\_\_ corners.

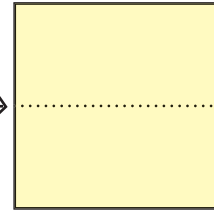
Colour the following shapes as given below.



## Lines.

Take a plain sheet of paper and fold one side onto the opposite side. Press the sheet with your hands to form a crease and unfold the paper.

The crease gives you the idea of a straight line.



A line can be straight or curved.



Straight line



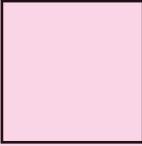

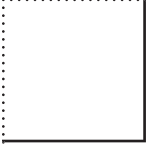
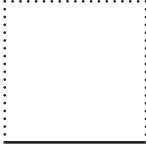





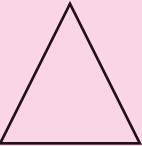
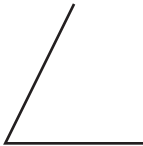
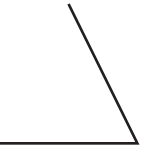





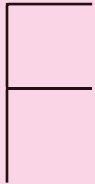

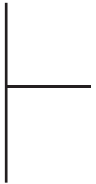

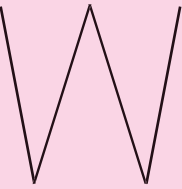



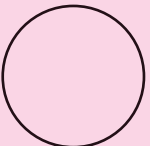



Curved line

## Shall we draw straight lines ?

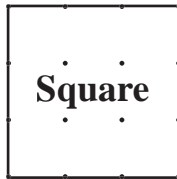
Draw lines using these objects in your note book.



Complete the following using straight and curved lines.

Enjoy drawing squares, rectangles, triangles and straight lines by joining the dots as you like



MATHEMATICS



Think it over

Can you draw a circle by joining the above dots?

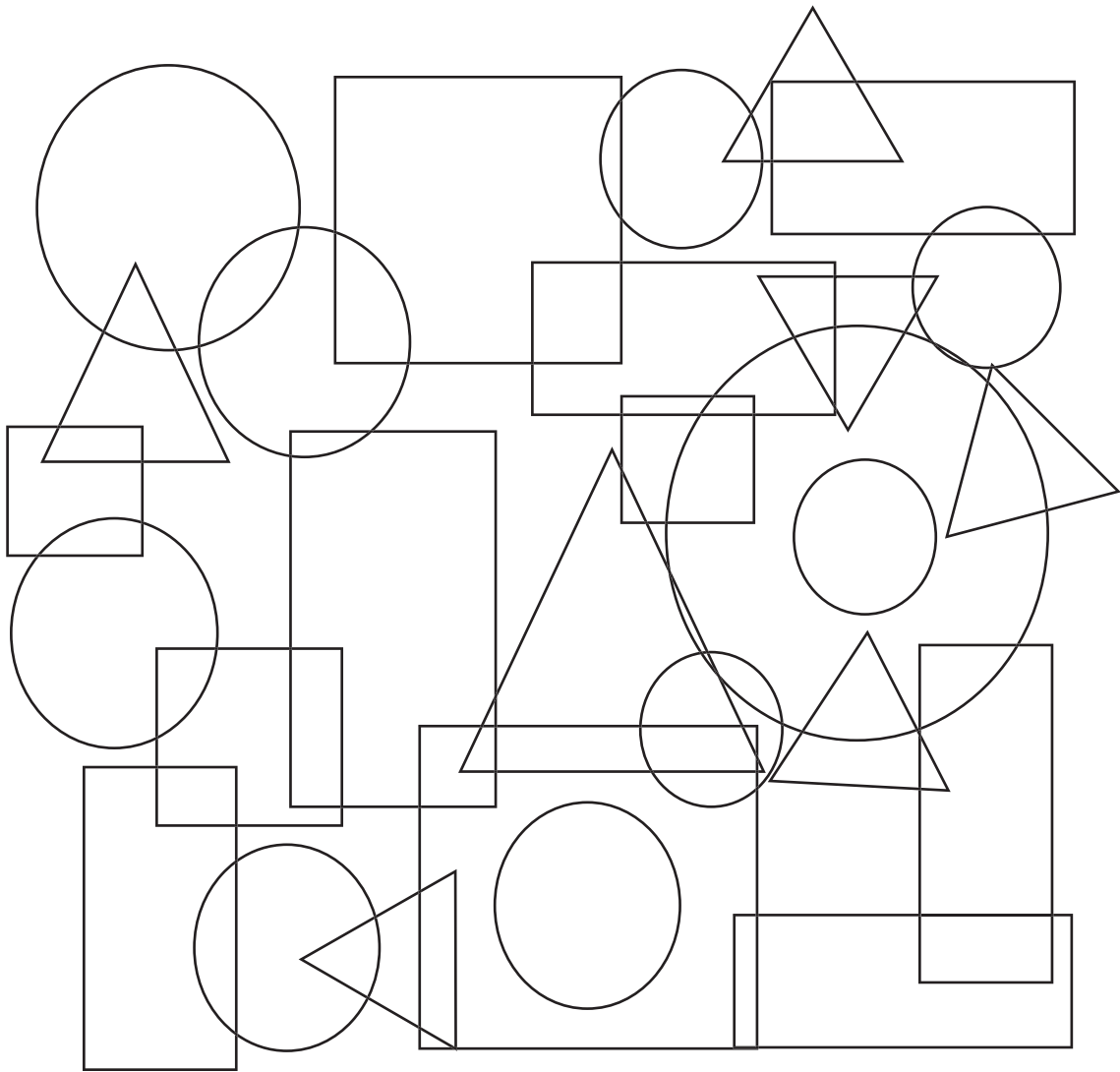




Complete the given table using straight and curved lines.

3	3	3	3	3	3
୨		୨			
C					C
6			6		
୨	୨				
S		S			
୪			୪		
8				8	
Z					

Count the circles, triangles, squares and rectangles in this jumble. Write the answers in blank spaces given below.



Triangles \_\_\_\_\_

Squares \_\_\_\_\_

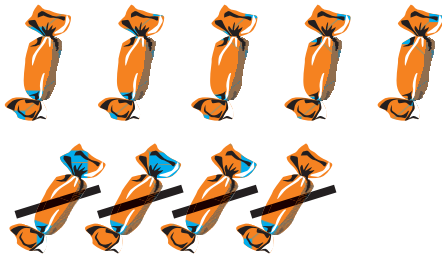
Rectangles \_\_\_\_\_

Circles \_\_\_\_\_

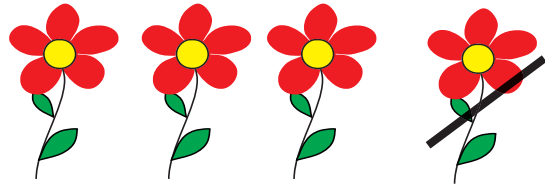
# 3. Subtraction

Let us recall !

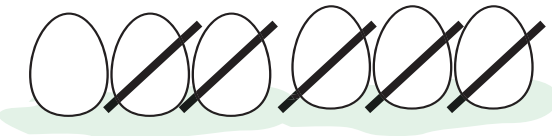
Subtract the following.



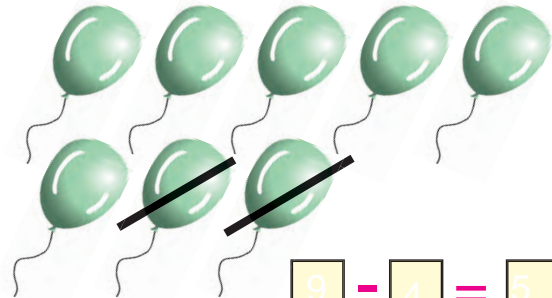
$$9 - 4 = 5$$



$$9 - 4 = 5$$



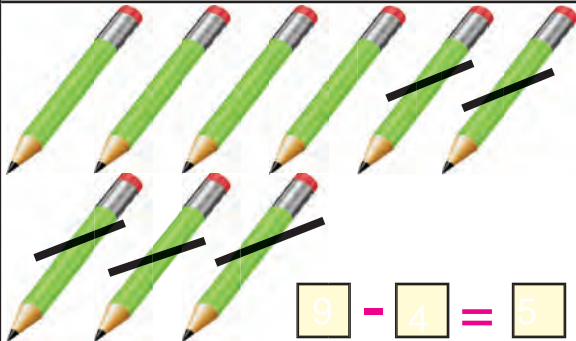
$$9 - 4 = 5$$



$$9 - 4 = 5$$



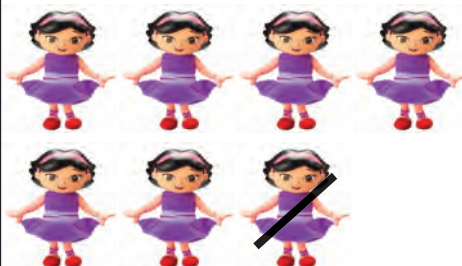
$$9 - 4 = 5$$



$$9 - 4 = 5$$



$$9 - 4 = 5$$



$$9 - 4 = 5$$

Subtract the following

5	−	3	−	
3	−	2	−	
7	−	2	−	
10	−	2	−	
6	−	4	−	

10	−	3	−	
8	−	4	−	
9	−	3	−	
2	−	1	−	
6	−	3	−	

15	−	3	−	
12	−	8	−	
10	−	6	−	
11	−	9	−	
7	−	0	−	

19	−	4	−	
14	−	10	−	
15	−	2	−	
20	−	10	−	
13	−	7	−	

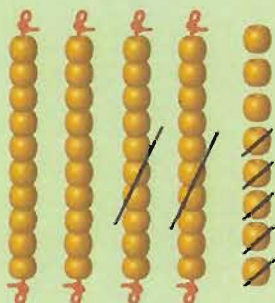
MATHEMATICS



## Subtraction of two-digit numbers without regrouping.

Subtract 25 from 48.

$$48 - 25 = \square$$



T	O
4	8
2	5
	3

First subtract the digits in the ones place,

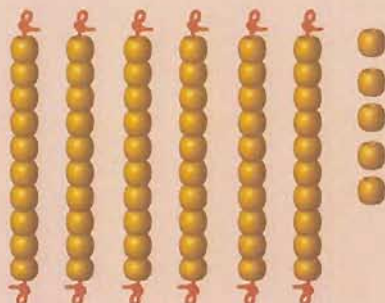
T	O
4	8
2	5
2	3

then subtract the digits in the tens place.

$$48 - 25 = 23$$

Subtract 23 from 65.

$$65 - 23 = \square$$



T	O
6	5
2	3

$$65 - 23 = \square$$





**Subtract the following.**

T	O
8	4
3	1

T	O
9	6
4	2

T	O
6	8
2	6

T	O
9	5
5	4

T	O
8	6
2	4

T	O
4	5
2	3

T	O
5	7
3	4

T	O
6	8
2	6

T	O
8	9
5	2

T	O
7	8
5	5

T	O
9	8
7	2

T	O
5	6
4	1

### Subtract

17 from 39  
24 from 87  
45 from 76



63 from 98  
50 from 65  
36 from 48

If a number is subtracted from itself, the result is zero.



### Example.

$$5 - 5 = 0$$

$$4 - 4 = 0$$

$$12 - 12 = 0$$



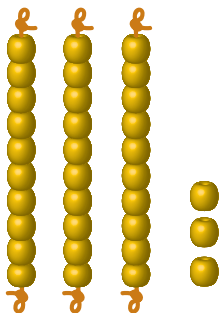
**MATHEMATICS**





## Subtraction of 2-digit numbers with regrouping.

Let us subtract 16 from 33.

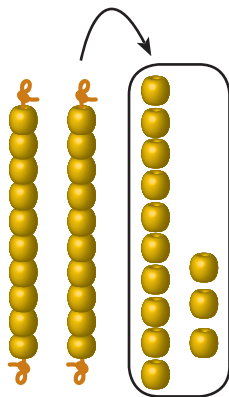


—

T	O
3	3
1	6

As  $3 < 6$ , we cannot subtract 6 ones from 3 ones.

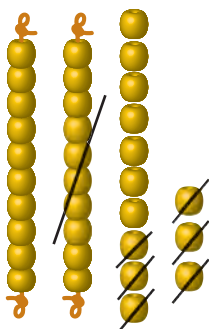
So, we regroup 1 ten into 10 ones.



—

2	13
T	O
<del>3</del>	<del>3</del>
1	6

10 ones + 3 ones = 13 ones.



—

2	13
T	O
<del>3</del>	<del>3</del>
1	6
1	7

**subtract**

13 ones – 6 ones = 7 ones.

**subtract**

2 tens – 1 ten = 1 ten.

$$33 - 16 = \boxed{17}$$





## Subtract 36 from 62

$$62 - 36 = \square$$

T	O
6	2
3	6

As  $2 < 6$ ,

we cannot subtract 6 ones from

2 ones.

So, we regroup 1 ten into 10 ones.

5	12
T	O
<del>6</del>	<del>2</del>
3	6

10 ones + 2 ones = 12 ones.

5	12
T	O
<del>6</del>	<del>2</del>
3	6
2	6

subtracting

12 ones - 6 ones = 6 ones.

subtracting

5 tens - 3 tens = 2 tens.

$$62 - 36 = 26$$





## Subtract 25 from 70

$$70 - 25 = \square$$

T	O
7	0
2	5

As  $0 < 5$

We cannot subtract

**5** ones from **0** ones

So, we regroup

**1** ten into **10** ones.

6	10
T	O
<del>7</del>	<del>0</del>
2	5

**10** ones + **0** ones = **10** ones

6	10
T	O
<del>7</del>	<del>0</del>
2	5
4	5

**Subtracting**

**10** ones - **5** ones = **5** ones

**Subtracting**

**6** tens - **2** tens = **4** tens

$$70 - 25 = 45$$





Subtract the following.

5	14
T	O
<del>6</del>	<del>4</del>
— 3	8
2	6

T	O
4	2
— 2	5

T	O
5	3
— 1	7

T	O
9	4
— 3	6

T	O
9	3
— 1	7

T	O
7	3
— 4	6

T	O
8	1
— 3	9

T	O
6	3
— 4	5

T	O
9	2
— 4	9

T	O
7	1
— 2	4

T	O
5	1
— 2	9

T	O
9	0
— 2	7

T	O
8	0
— 3	2

T	O
6	4
— 2	9

T	O
5	4
— 2	8

T	O
9	4
— 3	7



MATHEMATICS







## ACTIVITY

Prepare the number cards from 1 to 100

1

2

3

.....

100

Divide the class into two groups.

Group 1 should take any two cards

Group 2 should find the answer by subtracting smaller from the greater number.

Repeat the activity by selecting different pairs of cards.

Repeat the activity by changing the group.



## ACTIVITY

Prepare the number cards from 0 to 9.

Select any three cards. Form as many as 2 digit numbers from them.

Select any two numbers. Subtract the smaller from the greater number.

Do as many sums as possible.

(e.g.)

3, 4, 7

We can form the numbers 34, 37, 43, 47, 73, 74, 33, 44, 77

Among them select the number pairs such as 34, 37 ; 37, 43 ; 43, 47 ... subtract the smaller from the greater number.

Think over, likewise how many such numbers pairs can be formed?





## Subtraction Stories.



In a poultry, there are **45** hens. **15** of them are sold. Find the

remaining hens

Total number of hens	=	45
Number of hens sold	=	- 15
Number of hens remaining	=	<u>30</u>

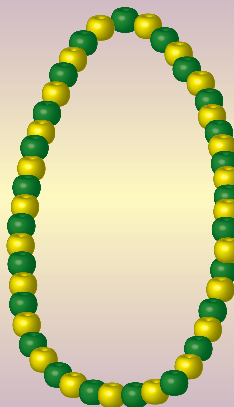
A shop keeper has **50** balloons. He sells **25** balloons. How many balloons are left ?



There are **64** houses, in a street. **34** houses are in a row, find the number of houses in the opposite row ?



A basket contains **65** apples. If **30** apples are sold, how many apples are remaining ?



In a mala, there are **50** green and yellow beads. **25** of them are green beads. How many are yellow beads ?

A farmer has **35** cattle. **12** of them are goats and the rest are sheep. How many sheep does the farmer have ?





## Mind maths



I have **5** toy cars with me. **3** are red and the remaining are green. How many green toy cars do I have?

My grand father gave me **10** pencils. I gave **2** pencils to my sister . How many pencils were left with me?



I bought **9** biscuits. I ate **5** of them. How many biscuits were left with me?



In a mini bus **18** passengers were travelling. At the next stop **6** of them got down. How many passengers were there in the bus ?



My father gave me **15** story books. I gave **9** of them to my friend. How many books are with me?



A coconut seller had 28 coconuts. **18** of them were sold. How many coconuts were there with the seller?



There were **13** birds on a tree. **8** of them flew away. How many birds were left on the tree?

### Teacher's Note



Teacher could give more situations as above to practice mind maths involving subtraction.



## 4. Measures of Weight

Observe the pictures and answer the questions.



Which is heavier ?



Which is lighter ?

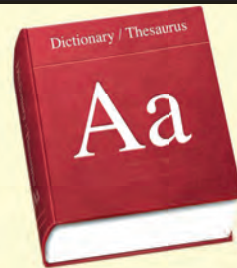
Now let us compare 3 objects



Heavy



Heavier



Heaviest

### ACTIVITY

Collect the following items and arrange them from lightest to heaviest







# EXERCISE

Arrange the objects from lightest to heaviest  
(The first one is done for you).



1



3



2





















Various kinds of weighing machines are given below.  
Recall and tell where have you seen each of them?



Generally, we use a balance to compare or measure the weights of objects.

An apple is heavier than a tomato.  
A tomato is lighter than an apple.



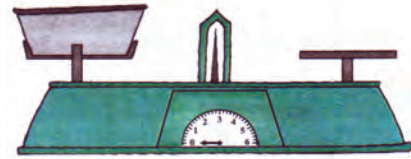
A stone is heavier than a spoon.  
A spoon is lighter than a stone.



When the pans are in the same position,  
we understand that the objects on the  
two pans are of equal weight



We buy vegetables, wheat, rice, sugar, fruits etc., by measuring their weights.



We measure **smaller weights in grams** and **bigger weights in kilograms**.

### ACTIVITY

Lift the following pairs of objects with both your hands and compare their weights.

- ✱ a **banana** and a **stone**.
- ✱ a **ball** and a **lock**.
- ✱ a **pen** and a **pencil**
- ✱ a **marble** and an **eraser**.



You can verify your answer by repeating the activity using simple balance.

### Do you Know?

The heaviest water animal is the blue whale.





[illegible][illegible][illegible]