



**Government of Tamilnadu**

# **MATHEMATICS**

## **II STANDARD**

**Untouchability  
Inhuman- Crime**

**Department of School Education**

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# 1. Patterns in Shapes

Shall we admire the beautiful designs in the wings of the butterfly, petals of sunflower and plumage of peacock?



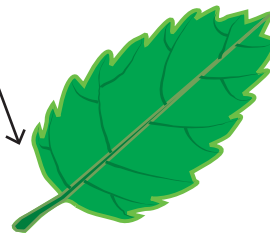
Some more designs are given below



Patterns are  
arrangements of  
similar designs  
in a particular  
order.



Match the group with its kind.

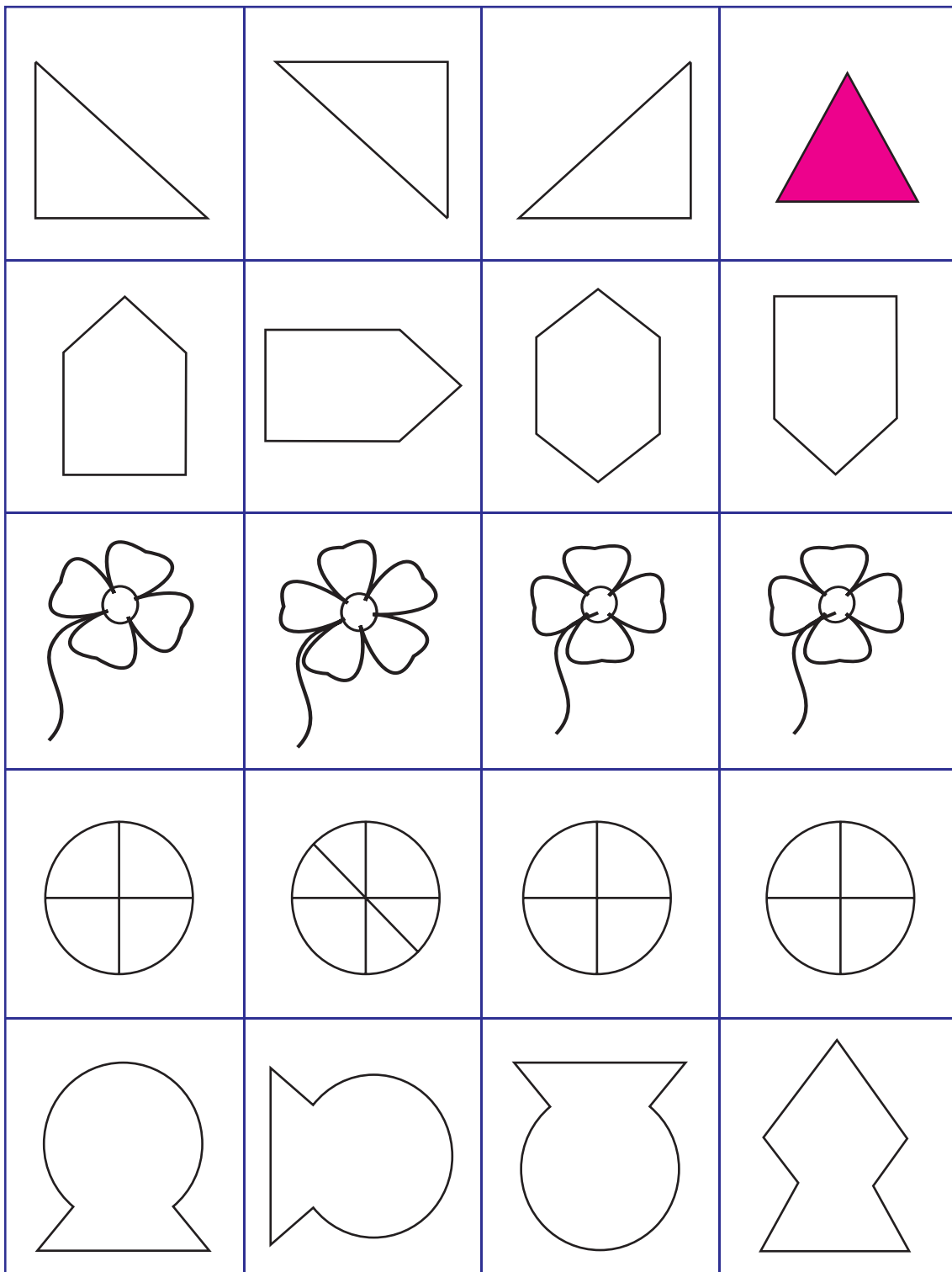


Match the animal with its shadow by drawing a line.


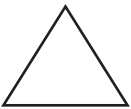


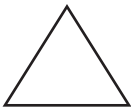

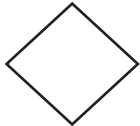
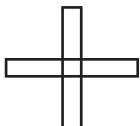
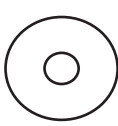
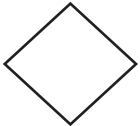
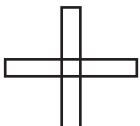
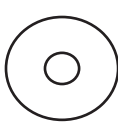












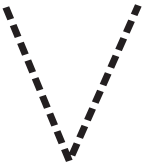

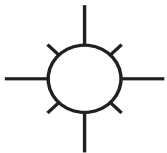

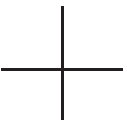

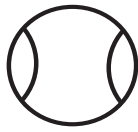
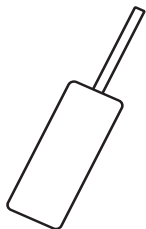
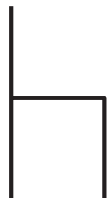

Find the odd one and colour it.



Draw the given patterns and enjoy doing it.





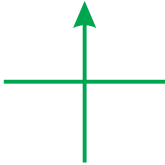
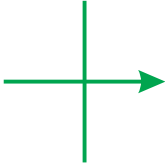
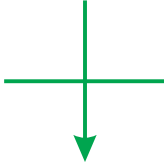
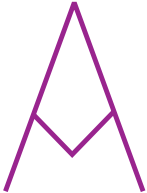
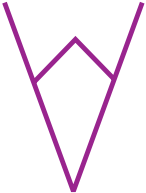
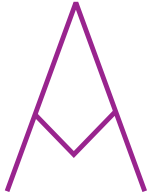
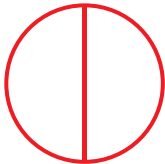
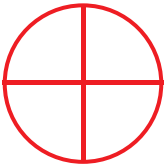
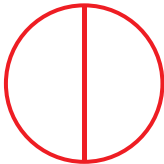
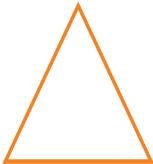

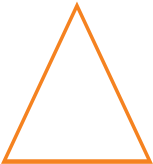
					
C	S	U	C	S	U
3	5	8	3	5	8
					
					

Repeat the patterns as given.








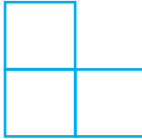
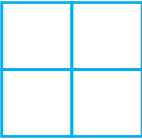











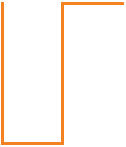

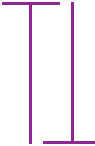

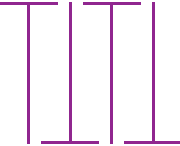
					
					
					
					
					



Continue the pattern by drawing the next one.

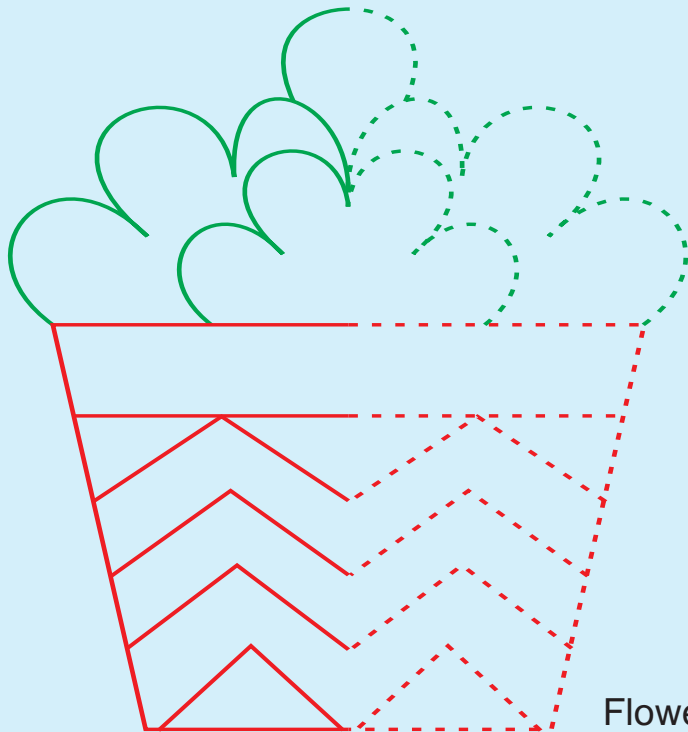
Draw the next pattern.

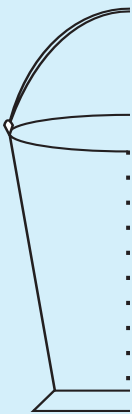


## ACTIVITY

Complete the other half of the pattern.



Flower Pot



Bucket



Bat



Pot

## 2. Numbers

### Revision

- ★ Write the following in numerals.

Seven

7

Thirteen

Nine

Fifteen

Eleven

Nineteen

- ★ Write the following in words.

8      Eight

14      .....

10      .....

16      .....

12      .....

18      .....

- ★ Circle the greatest number in the following.

7    6    8

6    13    10

2    9    6

18    7    13

11    9    12

16    19    14

- ★ Circle the smallest number in the following.

4    3    2

13    11    9

7    6    8

15    13    17

10    12    14

16    18    19



★ What comes after ?

7	8
2	
9	
15	
19	

★ What comes before ?

1	2
	6
	8
	13
	17

★ What comes between ?

5	6	7
2		4
6		8

8		10
13		15
16		18

★ What comes before, after and between ?




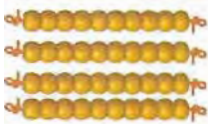
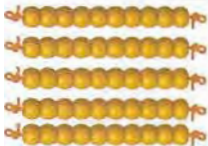
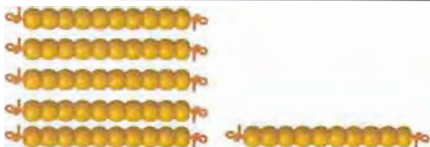
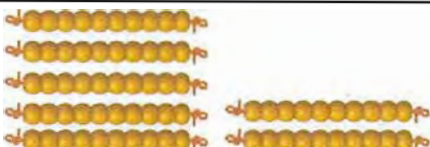
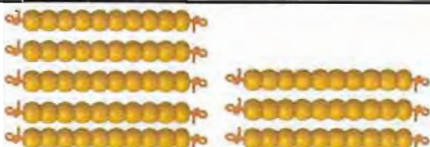
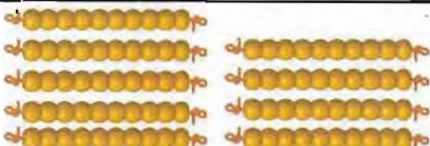
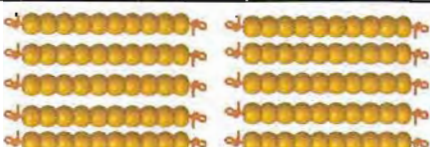
4	5	6	7	8
2			5	
	10			13
11		13	14	
		18		20

## Read and write the number names.

Let us learn to read and write the number names.

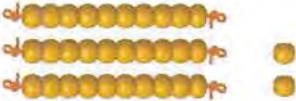
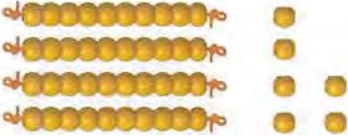
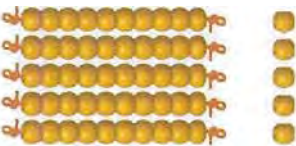
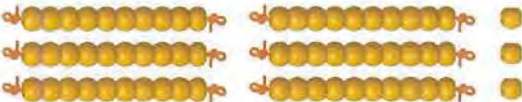
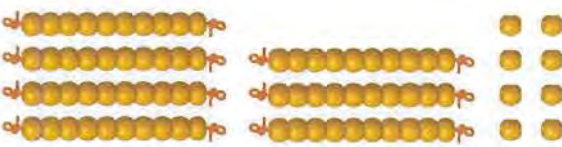
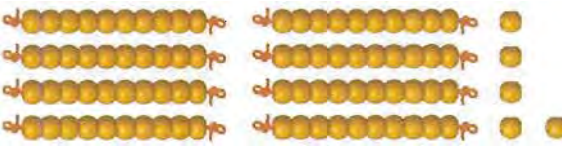
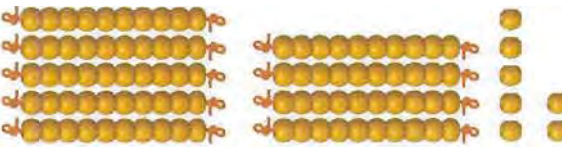
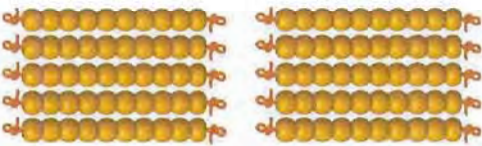
Pictorial form	Numerals	Number names
	21	Twenty one
	22	Twenty two
	23	Twenty three
	24	Twenty four
	25	Twenty five
	26	Twenty six
	27	Twenty seven
	28	Twenty eight
	29	Twenty nine
	30	Thirty

**Learn to read and write the number names in tens.**

Pictorial form	Numerals	Number names
	10	Ten
	20	Twenty
	30	Thirty
	40	Forty
	50	Fifty
	60	Sixty
	70	Seventy
	80	Eighty
	90	Ninety
	100	Hundred



Count and write.

Pictorial form	Numerals	Number names
	32	Thirty two
	46	
		Fifty five
	63	
	78	
		Eighty five
		Ninety seven
	100	



**Match the following.**

Numerals

Number names

37

Forty two

66

Eighty one

42

Fifty

50

→ Thirty seven

81

Sixty six

**Write the numerals for the following.**

Fifteen

Sixty

Nineteen

Seventy seven

Twenty five

Eighty nine

Forty eight

Ninety five

Fifty three

Hundred

**Write the number names for the following.**

16 \_\_\_\_\_

69 \_\_\_\_\_

27 \_\_\_\_\_

76 \_\_\_\_\_

35 \_\_\_\_\_

80 \_\_\_\_\_

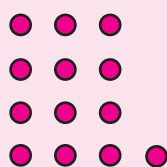
59 \_\_\_\_\_

93 \_\_\_\_\_

61 \_\_\_\_\_

99 \_\_\_\_\_

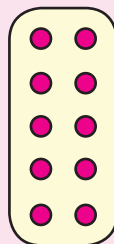
## Grouping into tens and ones.



13 ones



give



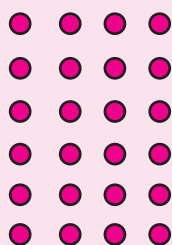
1 ten

+



3 ones

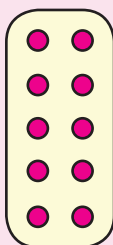
10 ones are equal to 1 ten



24 ones

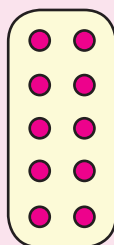


give



1 ten

+



1 ten

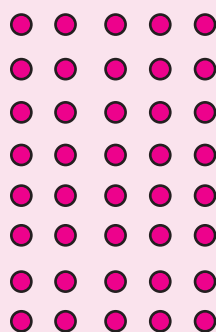
+



4 ones



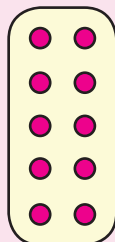
2 tens and 4 ones



40 ones

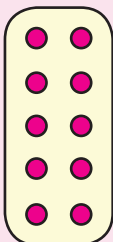


give



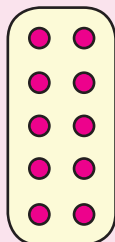
1 ten

+



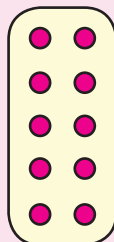
1 ten

+



1 ten

+



1 ten

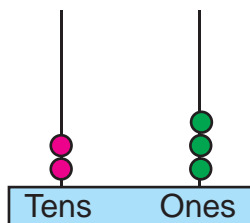
+

0 ones

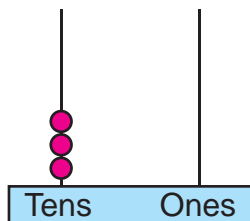


4 tens and 0 ones

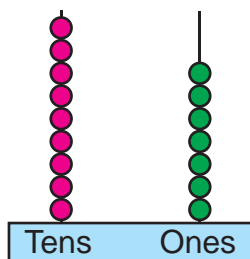
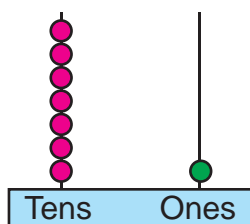
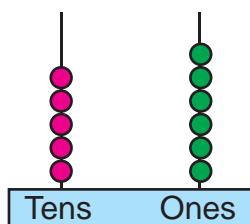
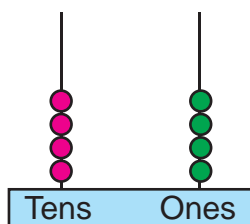
Write the number in the box, using the abacus.



23

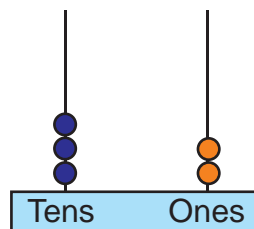


30

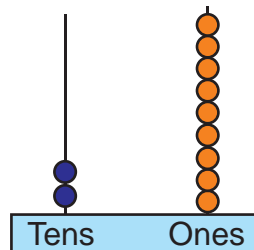


Read the numbers and draw the beads in the abacus.

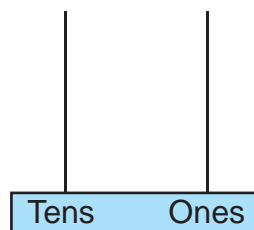
32



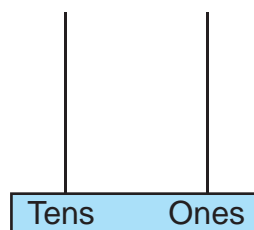
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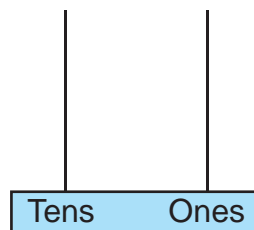
66



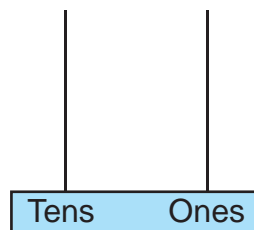
78



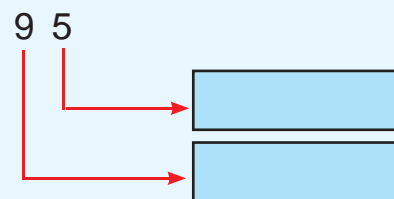
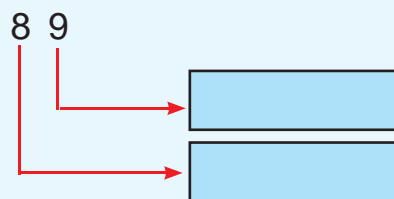
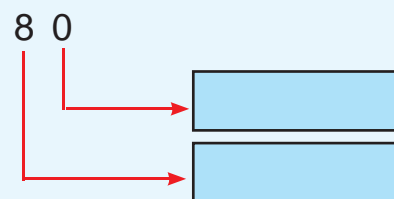
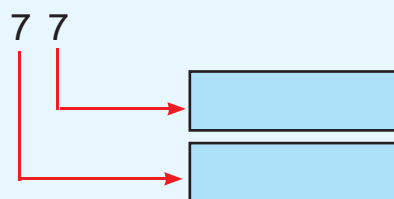
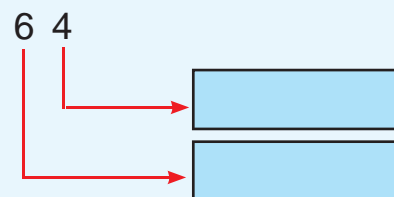
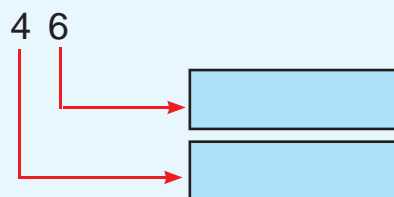
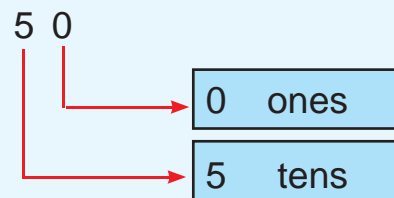
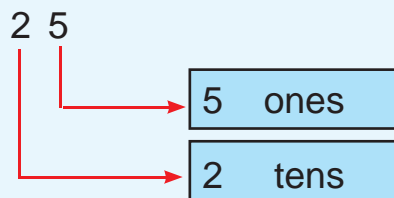
80



95



**Write the place value of the digits in the following numbers.**



**Write in the short form.**

3 tens and 2 ones =

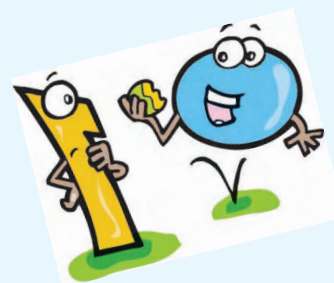
32

4 tens and 5 ones =

7 tens and 0 ones =

8 tens and 8 ones =

9 tens and 7 ones =



**Write in the expanded form.**

28 = 2 tens and 8 ones

41 = \_\_\_\_\_ tens and \_\_\_\_\_ ones

72 = \_\_\_\_\_ tens and \_\_\_\_\_ ones

83 = \_\_\_\_\_ tens and \_\_\_\_\_ ones

90 = \_\_\_\_\_ tens and \_\_\_\_\_ ones

**Write the place value of the underlined numbers.**

19

12

29

64

38

71

47

85

53

99



### Project

Prepare the number cards from 0 to 9.

Take any two cards and make a 2 - digit number. Say the place value of the digits.

Repeat the activity using other cards.



### 3. Comparison of Numbers

Let us learn to compare the 2-digit numbers using place value.



We can compare the numbers as

< Less than

> greater than

= equal to

Compare the numbers 63 and 45.

tens	ones
6	3

tens	ones
4	5

Comparing the tens place

$$6 > 4$$

63 is greater than 45

$$63 > 45$$

The greater number in the tens place is the greater of them.



Compare the numbers 39 and 54.

tens	ones
3	9

tens	ones
5	4

$$3 < 5$$

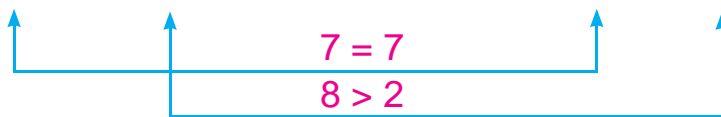
39 is less than 54

$$39 < 54$$

Now compare the numbers 78 and 72.

tens	ones
7	8

tens	ones
7	2



If the numbers in tens place are same,  
then compare the numbers in ones place.



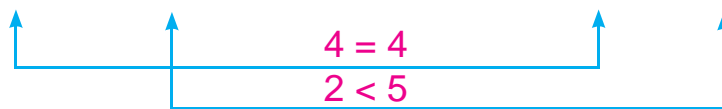
78 is greater than 72

$78 > 72$

Compare the numbers 42 and 45.

tens	ones
4	2

tens	ones
4	5



42 is less than 45

$42 < 45$

Compare the numbers 86 and 86.

86 is equal to 86.

$86 = 86$ .

If the numbers in  
tens and ones places  
are the same then  
they are equal.



Observe the following.

38 > 25

26 = 26

55 < 66

93 = 93

86 > 74

33 < 38



Compare the numbers and use  $>$  or  $<$  or  $=$

73	<input type="text"/>	85		93	<input type="text"/>	39
29	<input type="text"/>	29		25	<input type="text"/>	52
36	<input type="text"/>	25		77	<input type="text"/>	77
40	<input type="text"/>	40		80	<input type="text"/>	72
71	<input type="text"/>	79		36	<input type="text"/>	63



### ACTIVITY

#### Play and Learn

Prepare the number cards from 1 to 100 as



and the symbol cards



The class is divided into two groups.

**Group 1** picks a pair of number cards.

**Group 2** places the symbol card between the numbers.

Repeat the activity as much as you can !



## Ascending Order



Shall we arrange the numbers **46**, **32** and **58** from the smallest to greatest ?

tens	ones
4	6

4

tens	ones
3	2

3

tens	ones
5	8

5

Oh! I remember. First compare the digits in the tens place, then in the ones place.

Comparing tens place, we find that the smallest number is **32** and the greatest number is **58**.

The ascending order is **32, 46, 58**.

Ascending order is arranging the numbers from the smallest to greatest.

Now, we arrange the numbers **76**, **52** and **62** in ascending order.

We get **52, 62**, and **76**.

## Descending Order

Descending order is arranging the numbers from the greatest to smallest.



Let us arrange the numbers **46, 32** and **58** in descending order.  
we get **58, 46, 32.**

Arrange the following numbers in ascending order.

56, 37, 25 = ..... , ..... , .....

93, 84, 81 = ..... , ..... , .....

27, 43, 38 = ..... , ..... , .....

75, 72, 74 = ..... , ..... , .....

54, 63, 45 = ..... , ..... , .....

Arrange the following numbers in descending order.

27, 35, 53 = ..... , ..... , .....

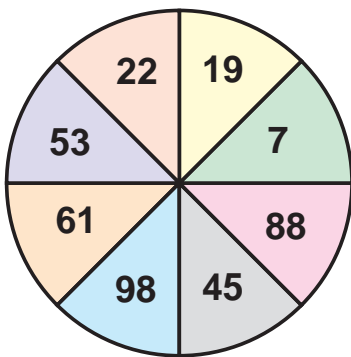
72, 86, 85 = ..... , ..... , .....

26, 62, 22 = ..... , ..... , .....

38, 86, 31 = ..... , ..... , .....

46, 94, 64 = ..... , ..... , .....

Write the following numbers in ascending and descending order.



7, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 98

98, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 7



### ACTIVITY

Prepare the number cards from 1 to 100.

1      2      3      .....      100

Divide the class into two groups.

**Group 1** should take any three cards.

**Group 2** should arrange them in the ascending order.











Repeat the activity by changing the group.

Repeat the activity in descending order.



## Odd and Even Numbers

Circle the flowers in pairs.

	1
	2
	3
	4
	5
	6
	7
	8
	9
	10

What do you observe?

From the above table, we see the numbers **2, 4, 6, 8,** and **10** are exactly paired.

The other numbers **1, 3, 5, 7** and **9** are not exactly paired.

The numbers ending with 1, 3, 5, 7 and 9 are **odd numbers**.



The numbers ending with 0, 2, 4, 6 and 8 are **even numbers**.

Which of the following are odd and even numbers.

13 Odd number

22 Even number

14 .....

15 .....

23 .....

26 .....

37 .....

40 .....

56 .....

68 .....

69 .....

72 .....

85 .....

90 .....

99 .....

100 .....

**See the Fun!**

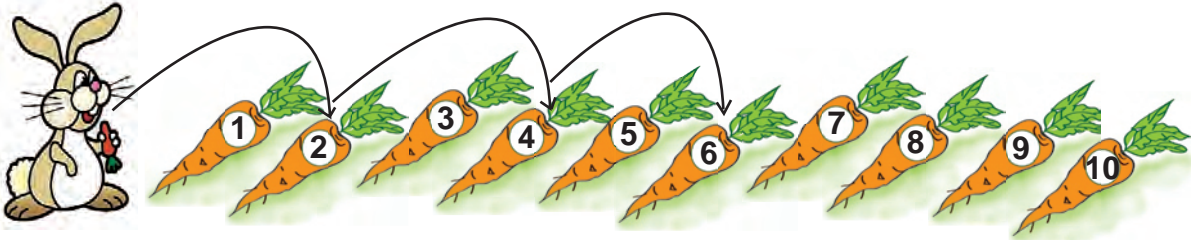
\* The number of letters in the word '**even**' is even.

\* The number of letters in the word '**odd**' is odd.



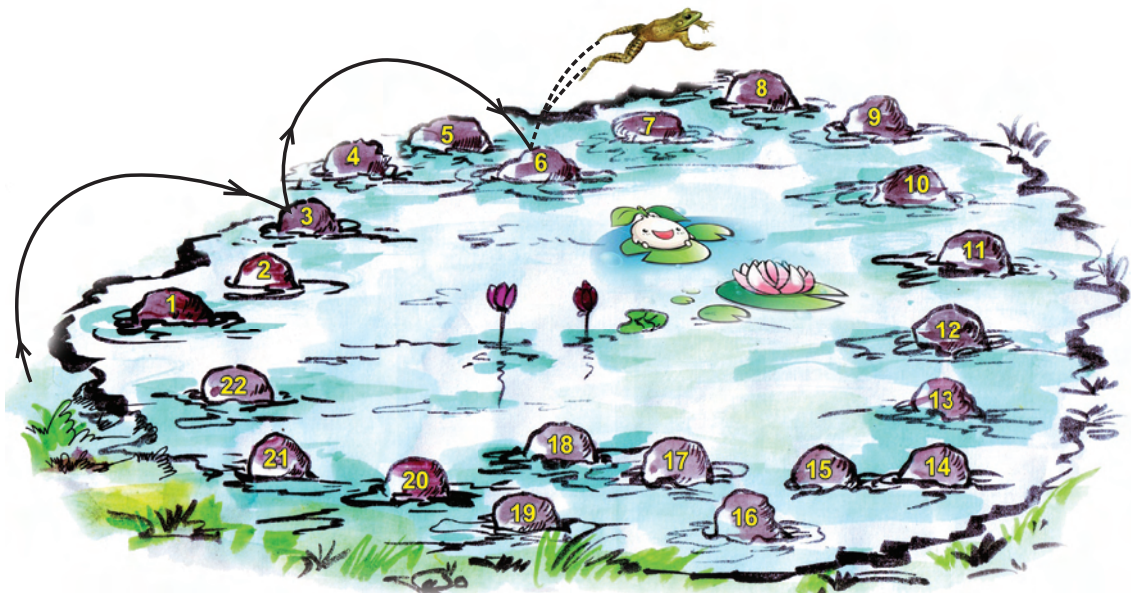
## Skip counting numbers.

Tinku, an active rabbit, jumps over a carrot and reaches the next one. Where will Tinku go next?



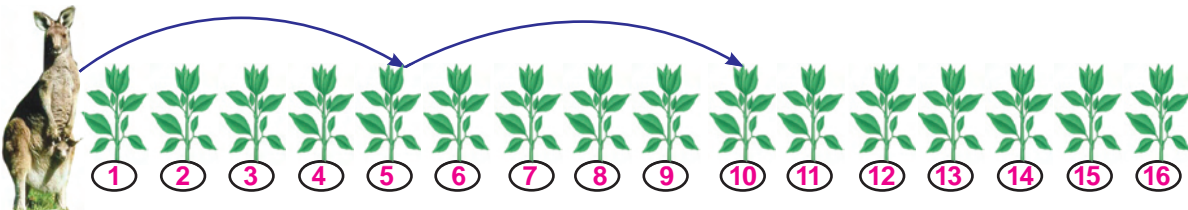
Tick (✓) the numbers in the carrot that the rabbit skipped over.

Look at the pond where Mr. Froggi jumps and gets on a stone. Where will he go next?



Circle the numbers that he skipped over.

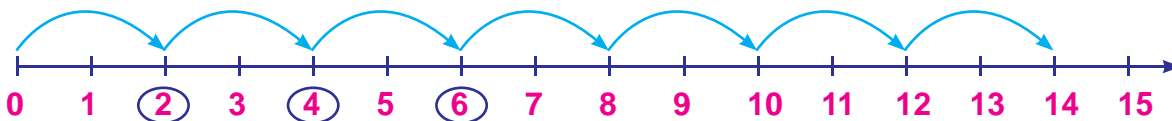
Boogie, a kangaroo hops and stops at a plant in a particular order to have her meal. Where will she go next?



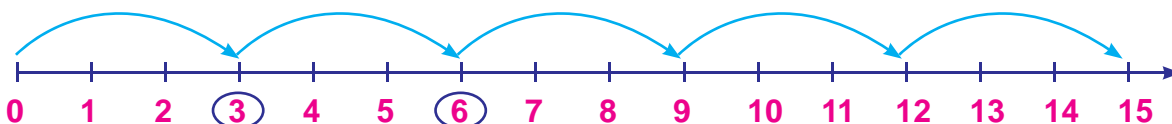
Tick (✓) the numbers that she skipped over.

### Let us learn skip counting on the Number Line

Skip count in 2s and circle the numbers.



Skip count in 3s and circle the numbers.



Skip count in 5s and circle the numbers.





**Count in 2s and circle the number.**

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Using the above chart,

- ★ Count in 3's and list it. 3, 6, 9, .....
- ★ Count in 5's and list it. 5, 10, 15, .....
- ★ Count in 2's and list it. 11, 13, 15, .....

**Read and write what comes next ?**

8, 10, 12, ....., ....., .....

21, 23, 25, ....., ....., .....

32, 34, 36, ....., ....., .....

47, 49, 51, ....., ....., .....

68, 70, 72, ....., ....., .....

### Fill in the blanks

4, 7, 10, ....., ....., .....

24, 27, 30, ....., ....., .....

55, 58, 61, ....., ....., .....

66, 69, 72, ....., ....., .....

82, 85, 88, ....., ....., .....

### What comes next ?

5, 10, 15, ....., ....., .....

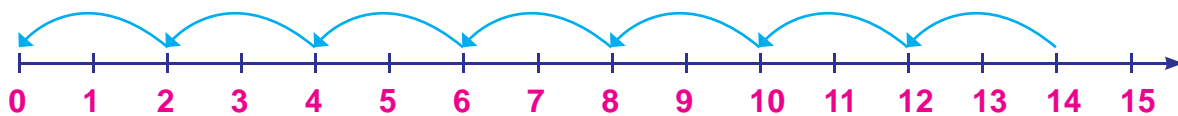
30, 35, 40, ....., ....., .....

55, 60, 65, ....., ....., .....

75, 80, 85, ....., ....., .....

20, 25, 30, ....., ....., .....

### Counting backwards



Counting backwards in 2's → 14, 12, 10, 8, 6, 4, 2

Counting backwards in 3's → 15, 12, 9, 6, 3

Counting backwards in 5's → 15, 10, 5

Read and write by counting backwards.

14, 12, 10, ....., ....., .....

60, 58, 56, ....., ....., .....

82, 80, 78, ....., ....., .....

18, 15, 12, ....., ....., .....

45, 42, 39, ....., ....., .....

90, 87, 84, ....., ....., .....

35, 30, 25, ....., ....., .....

55, 50, 45, ....., ....., .....

### Do it yourself

Starting from **50**, count backwards in **2's**, **3's**, and **5's**.



.....

.....



.....

.....



.....

## 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	Greatest number	Smallest 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 greatest and smallest 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.



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	<u>53</u>	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?

## 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		

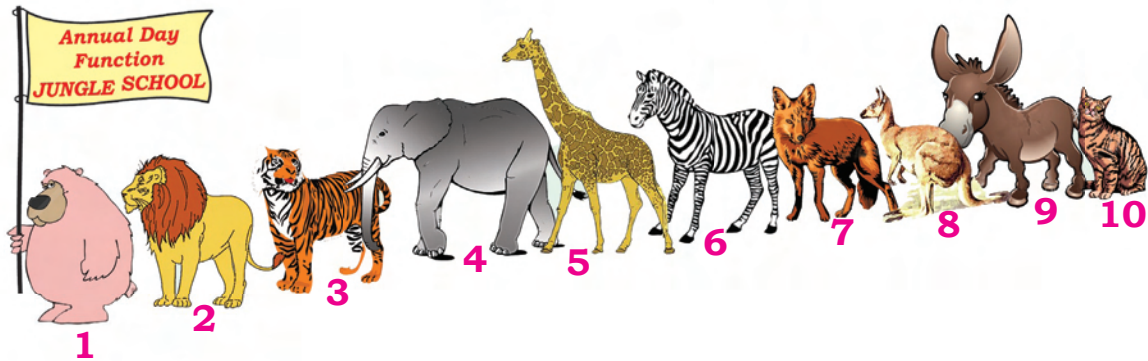
### Think !

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>	Eight
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.

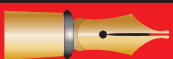
My 1<sup>st</sup> and 4<sup>th</sup> letter are I.

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

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

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

## Teacher's Note



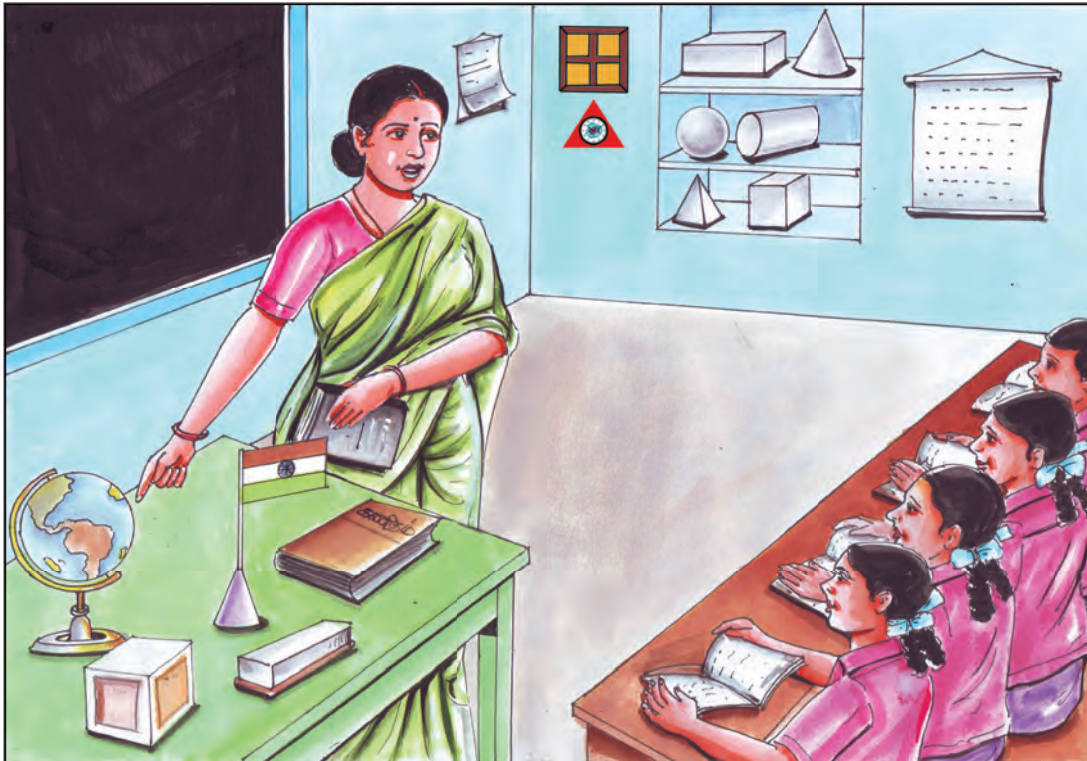
Highlight the use of ordinal numbers through daily life activities.

**For example**

5th birthday, 2nd child sitting in a row from the left 3rd day of the week, etc...

## 4. Shapes

Observe the classroom.

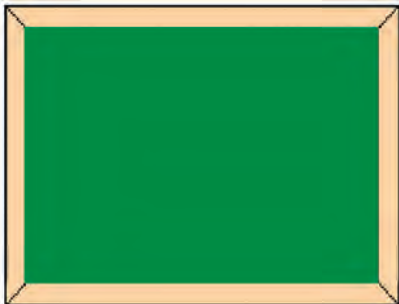


Teacher asks children to identify the different shapes of objects

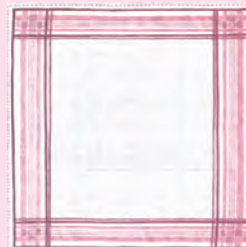
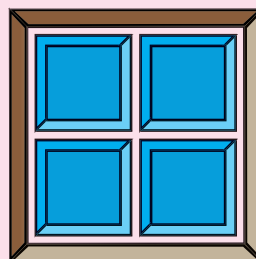
**Let us look at the following pictures.**



To  
Mr. Raj  
2nd Cross St,  
Chennai - 600  
014.



These are rectangles  
in shape.



These are squares  
in shape



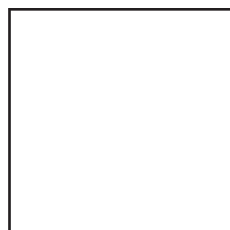
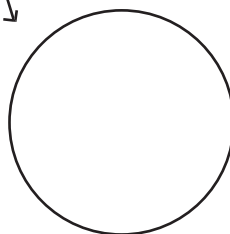
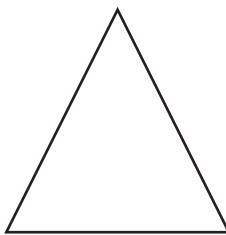
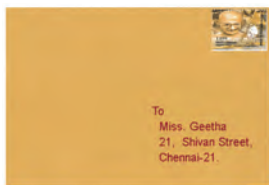
Let us look at the following pictures.



These are circles  
in shape.



Match the following objects with their shapes.



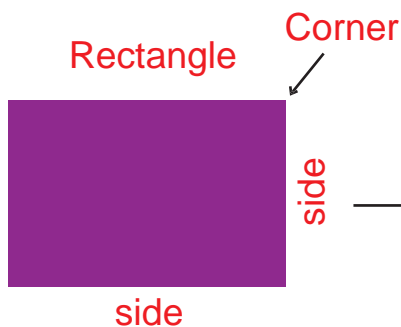
## Two dimensional shapes.



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

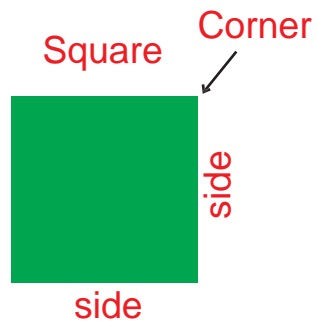
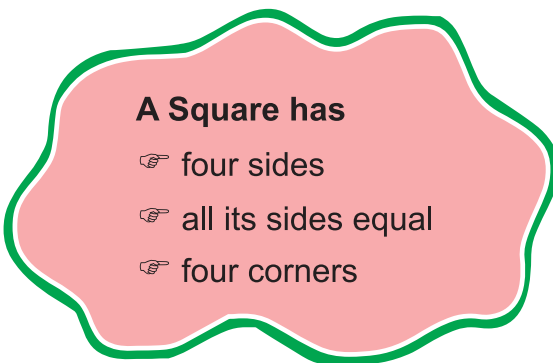
### Examples :

top of the table, top of a text book, a sheet of newspaper, floor.

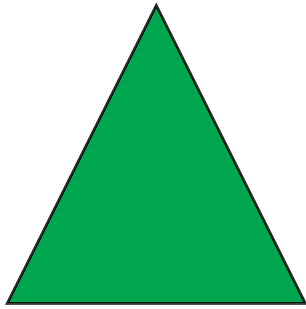


#### A rectangle has

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



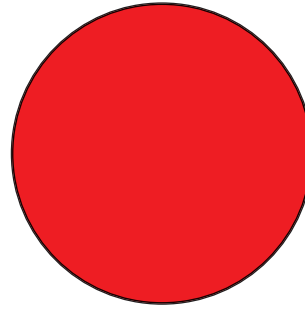
## Triangle



### A Triangle has

- ☞ three sides which need not be equal
- ☞ 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.

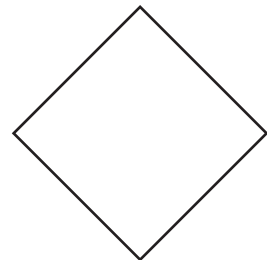
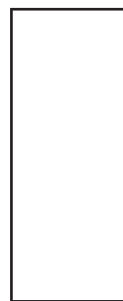
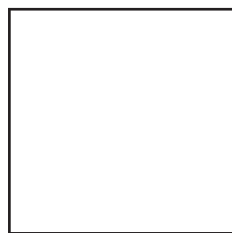
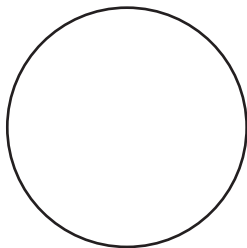
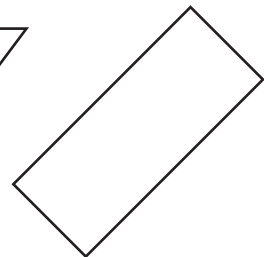
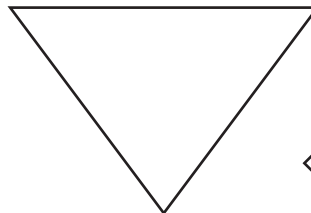
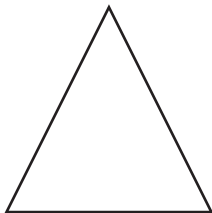
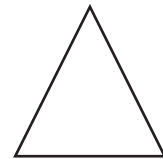
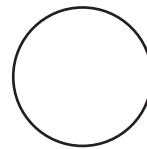
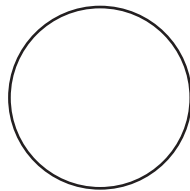
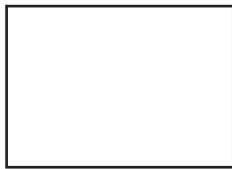
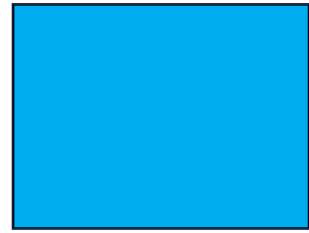
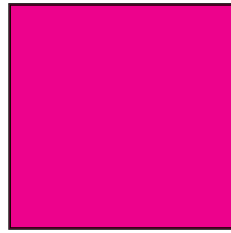
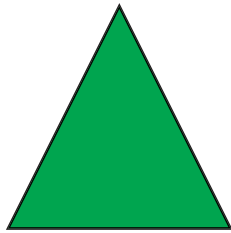
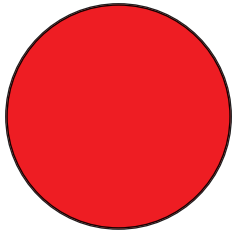
A circle has ..... sides.

A square has ..... corners.

A triangle has ..... sides.

A circle has ..... corners.

Colour the following shapes as given below.

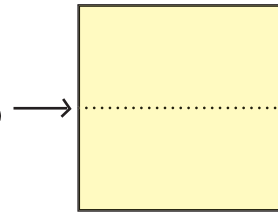




## Lines.

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 part of a straight line



A part of a line can be straight or curved



Straight line



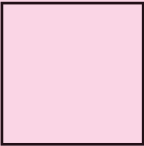

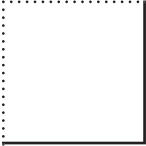






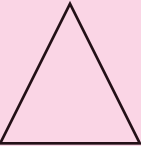
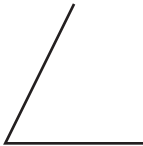
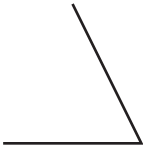





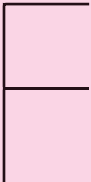



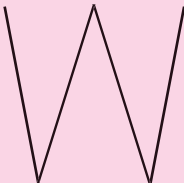



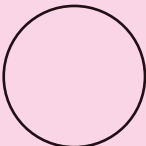



Curved line

## Shall we draw straight lines ?

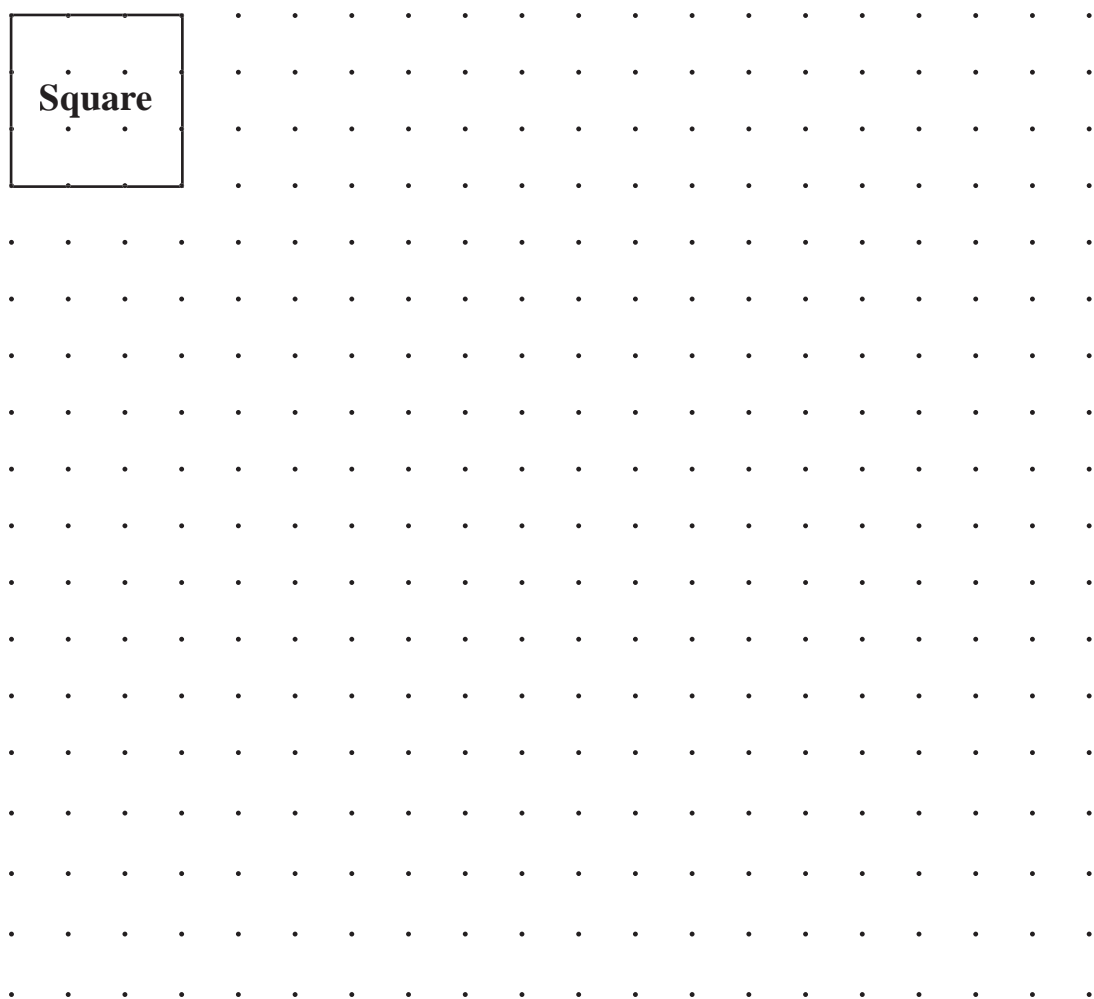
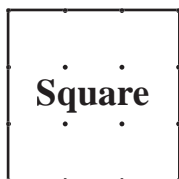
Draw lines using these objects in your note book.



Complete the following using straight and curved lines.

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



Think it over

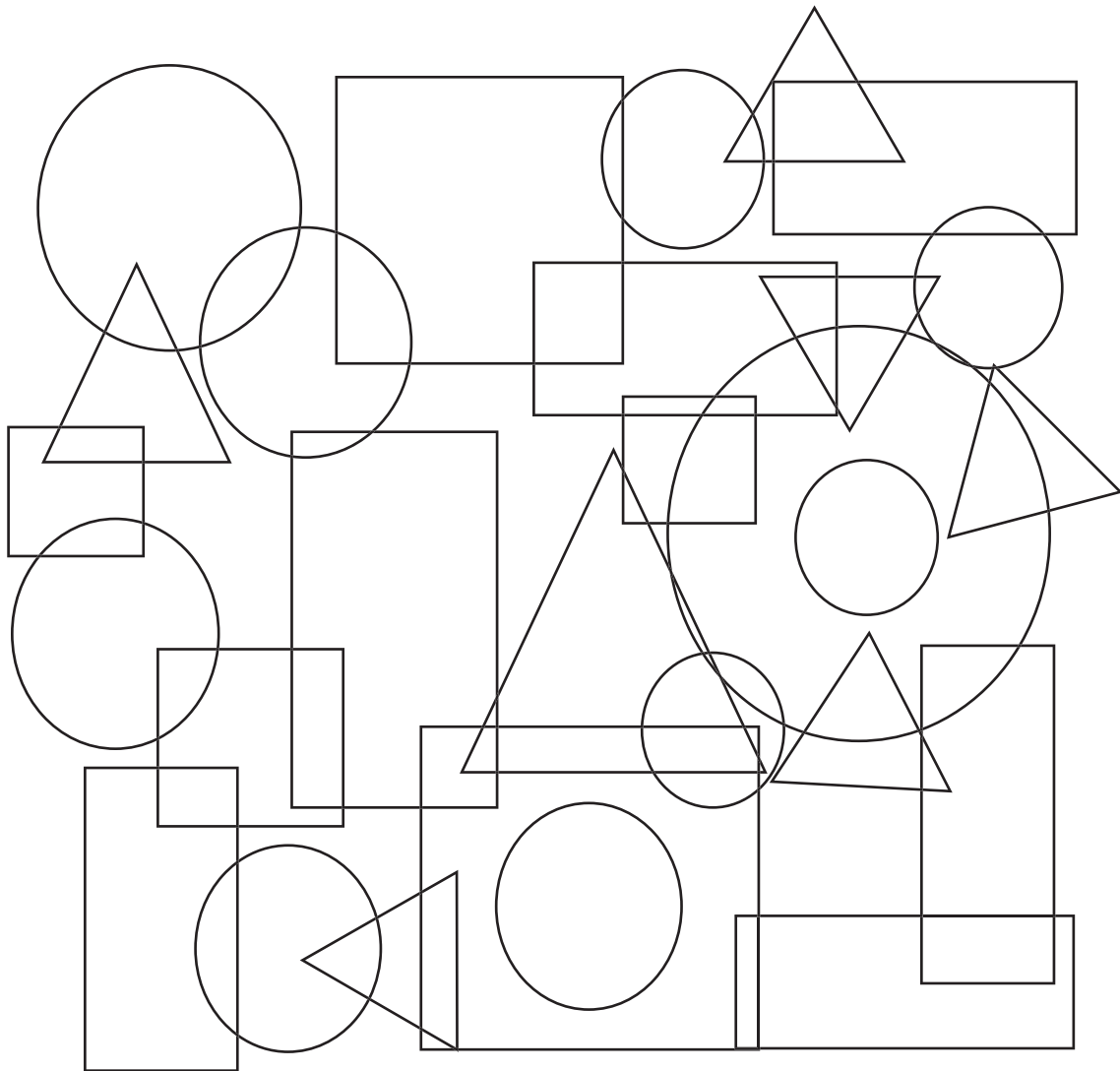
Can you draw a circle using the above dotted lines?



Complete the given table using straight and curved lines.

3	3	3	3	3	3
9					
C					
6					
2					
S					
W					
8					
Z					

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



Triangles .....

Squares .....

Rectangles .....

Circles .....



# 5. Addition

Let us recall.



3

+



2

= 5



+



= .....



+



= .....



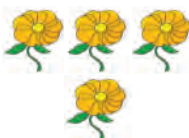
+



= .....



+

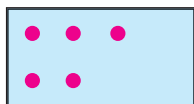


= .....

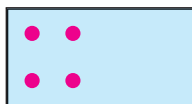
Addition means put together or added together.

It is represented by the symbol '+'

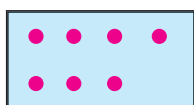
## Count and Add.



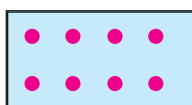
+



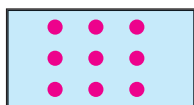
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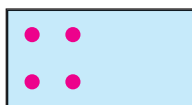
+



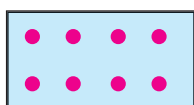
-



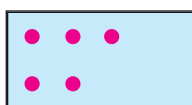
+



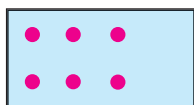
-



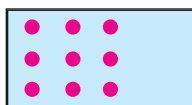
+



-



+



-



# kids



1 2 3 4 5 6 7 8 9



Fill the addition table

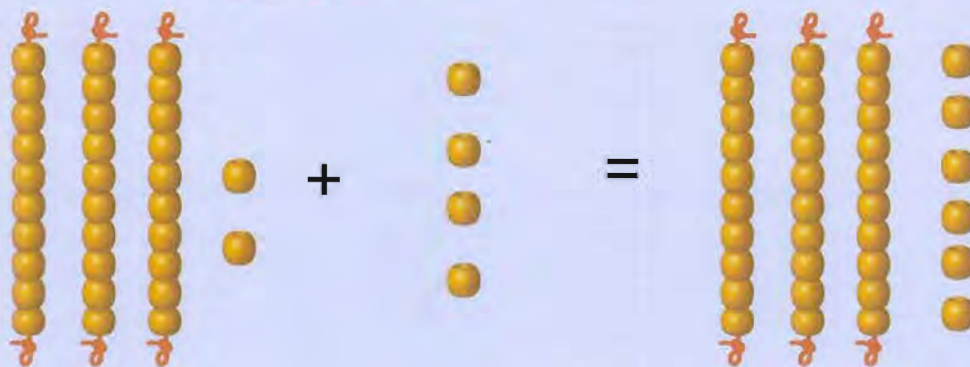
+	0	1	2	3	4	5	6	7	8	9
0										
1										
2						7				
3				6						
4										
5										
6								13		
7		8								
8							14			
9										





## Addition of 2 - digit numbers (without carrying)

Add  $32 + 4$



$$\boxed{32} + \boxed{4} = \boxed{36}$$

Add, **4** ones and **2** ones = **6** ones .

Write **6** in the ones place .

Write down **3** in the tens place .

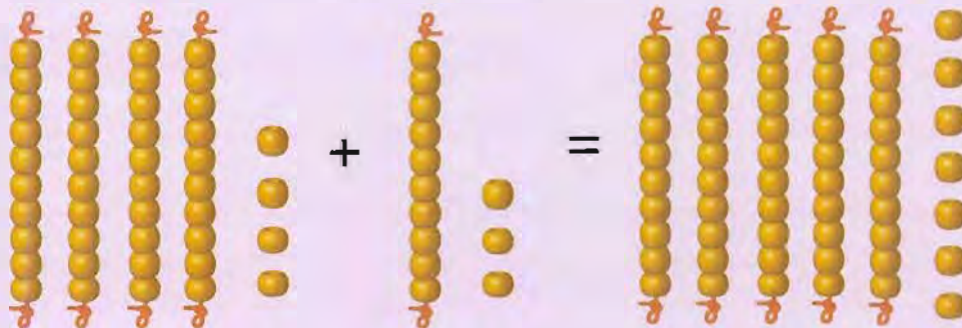
We get,  $32 + 4 = 36$

T	O
3	2
+	4
3	6

## Do it yourself

<table border="1"> <tr><th>T</th><th>O</th></tr> <tr><td>2</td><td>4</td></tr> <tr><td>+</td><td>2</td></tr> <tr><td> </td><td> </td></tr> </table>	T	O	2	4	+	2			<table border="1"> <tr><th>T</th><th>O</th></tr> <tr><td>4</td><td>6</td></tr> <tr><td>+</td><td>3</td></tr> <tr><td> </td><td> </td></tr> </table>	T	O	4	6	+	3			<table border="1"> <tr><th>T</th><th>O</th></tr> <tr><td>7</td><td>2</td></tr> <tr><td>+</td><td>6</td></tr> <tr><td> </td><td> </td></tr> </table>	T	O	7	2	+	6			<table border="1"> <tr><th>T</th><th>O</th></tr> <tr><td>3</td><td>4</td></tr> <tr><td>+</td><td>1</td></tr> <tr><td> </td><td> </td></tr> </table>	T	O	3	4	+	1			<table border="1"> <tr><th>T</th><th>O</th></tr> <tr><td>6</td><td>3</td></tr> <tr><td>+</td><td>4</td></tr> <tr><td> </td><td> </td></tr> </table>	T	O	6	3	+	4		
T	O																																											
2	4																																											
+	2																																											
T	O																																											
4	6																																											
+	3																																											
T	O																																											
7	2																																											
+	6																																											
T	O																																											
3	4																																											
+	1																																											
T	O																																											
6	3																																											
+	4																																											
<table border="1"> <tr><th>T</th><th>O</th></tr> <tr><td>7</td><td>3</td></tr> <tr><td>+</td><td>5</td></tr> <tr><td> </td><td> </td></tr> </table>	T	O	7	3	+	5			<table border="1"> <tr><th>T</th><th>O</th></tr> <tr><td>6</td><td>3</td></tr> <tr><td>+</td><td>2</td></tr> <tr><td> </td><td> </td></tr> </table>	T	O	6	3	+	2			<table border="1"> <tr><th>T</th><th>O</th></tr> <tr><td>6</td><td>7</td></tr> <tr><td>+</td><td>1</td></tr> <tr><td> </td><td> </td></tr> </table>	T	O	6	7	+	1			<table border="1"> <tr><th>T</th><th>O</th></tr> <tr><td>2</td><td>8</td></tr> <tr><td>+</td><td>1</td></tr> <tr><td> </td><td> </td></tr> </table>	T	O	2	8	+	1			<table border="1"> <tr><th>T</th><th>O</th></tr> <tr><td>5</td><td>0</td></tr> <tr><td>+</td><td>4</td></tr> <tr><td> </td><td> </td></tr> </table>	T	O	5	0	+	4		
T	O																																											
7	3																																											
+	5																																											
T	O																																											
6	3																																											
+	2																																											
T	O																																											
6	7																																											
+	1																																											
T	O																																											
2	8																																											
+	1																																											
T	O																																											
5	0																																											
+	4																																											

Add :  $44 + 13$



$$\boxed{44} + \boxed{13} = \boxed{57}$$

**Add ones**

3 ones + 4 ones = 7 ones .

write 7 under the ones place .

**Add tens**

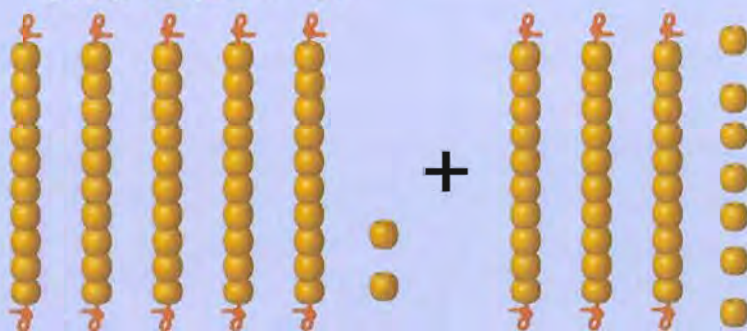
4 tens + 1 ten = 5 tens .

write 5 under the tens place .

we get  $44 + 13 = 57$

T	O
4	4
1	3
5	7

Add :  $52 + 37$



$$\boxed{52} + \boxed{37}$$

$52 + 37 = 89$

T	O
5	2
3	7
8	9



# ACTIVITY

Add :  $58 + 41$

$\square + \square = \square$

T	O

Add :  $62 + 14$

$\square + \square = \square$

T	O

Add :  $45 + 33$

$\square + \square = \square$

T	O

Add :  $53 + 32$

$\square + \square = \square$

T	O



Add and write the answer

T	O
3	2
2	3

T	O
4	5
3	4

T	O
6	2
	6

T	O
4	0
2	9

T	O
5	3
3	1

T	O
6	7
2	0

T	O
8	2
1	2

T	O
7	2
2	4

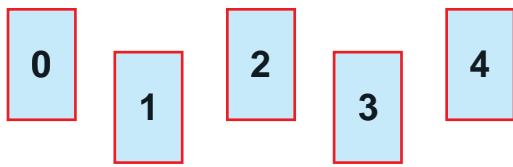
T	O
5	2
4	1

T	O
5	6
4	1

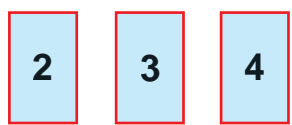
T	O
3	2
2	4

T	O
6	2
2	3

# ACTIVITY



Take any 3 cards



Form 2-digit numbers

22, 23, 24, 32, 33, 34, 42, 43, 44

Take any 2 numbers and add.

	T	O
	2	3
+	2	4

$$23 + 24 = \square$$

**Think!**

If you take 0 as one of the 3 cards, how many 2-digit numbers can be formed?

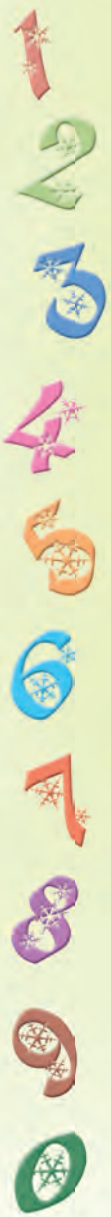
Adding 3 numbers.

★ We can also add two or more numbers at a time. Let us add three numbers now 32, 23, 43.

Add ones and write in the ones place

Add tens and write in the tens place

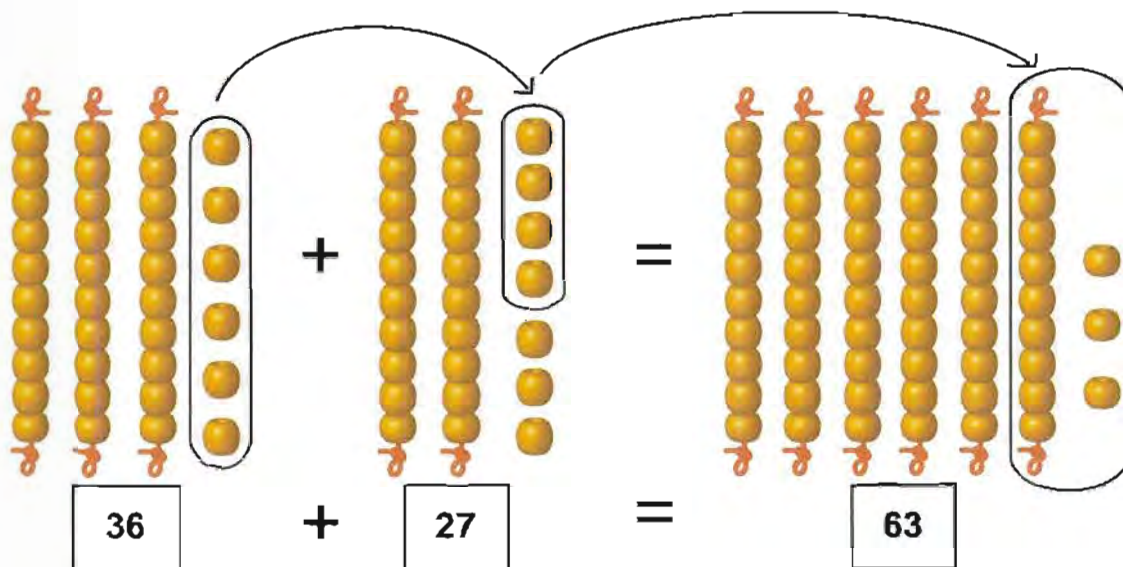
	T	O
	3	2
	2	2
+	4	3
	9	7





## ADDITION OF 2-DIGIT NUMBERS ( WITH CARRYING )

Add :  $36 + 27$



★  $7 \text{ ones} + 6 \text{ ones} = 13 \text{ ones}$   
Change  $13 \text{ ones}$  into  $1 \text{ ten}$  and  $3 \text{ ones}$

★ Write  $3$  in the ones place and carry  $1$  ten to the tens place .

★ Add the tens.  
 $3 \text{ tens} + 2 \text{ tens} + 1 \text{ ten} = 6 \text{ tens}$

★ Write  $6$  under the tens place.

	1	
T		O
3		6
2		7
6		3

$$36 + 27 = 63$$

## Shall we add more than two 2-digit numbers ?

Add  $13 + 45 + 34$

Add the numbers which are in the ones place

$4 \text{ ones} + 5 \text{ ones} + 3 \text{ ones} = 12 \text{ ones}$

change  $12 \text{ ones} = 1 \text{ ten} + 2 \text{ ones}$

Write  $2$  in the ones place and carry  $1$  to tens place.

Now, add the tens

$3 \text{ tens} + 4 \text{ tens} + 1 \text{ ten} + 1 \text{ ten} = 9 \text{ tens}$ .

Write  $9$  tens in the tens place

$13 + 45 + 34 = 92$ .

	1	
	T	O
	1	3
	4	5
+	3	4
	9	2

## Add and write the answer

	T	O
	4	3
+	2	9
	7	2

	T	O
	2	7
+	4	6

	T	O
	2	5
+	3	7

	T	O
	1	8
+	2	3

	T	O
	6	7
+	2	6

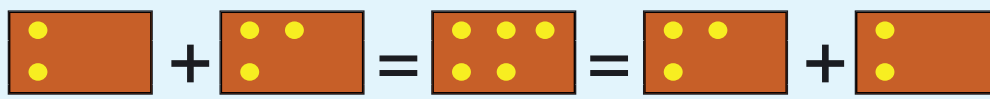
	T	O
	3	8
+	4	6

	T	O
	5	2
	2	4
+	1	8

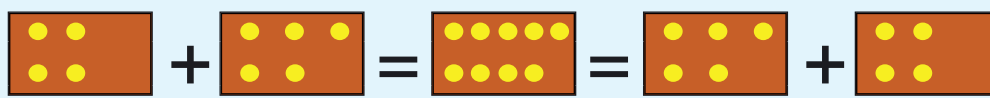
	T	O
	1	6
	2	7
+	4	5



## Properties of addition




$$2 + 3 = 5 = 3 + 2$$



$$4 + 5 = 9 = 5 + 4$$

Even if we change the position of the numbers,  
the value remains the same

## Addition with zero



$$5 + 0 = 5$$

$0 + 0 = ?$

Any number added to zero or zero added  
to any number gives the same number

## Fill in the boxes

$1 + 4 = \square + 1$

$10 + \square = 5 + \square$

$\square + 6 = \square + 14$

$3 + 0 = \square$

$0 + 7 = \square$

$5 + 0 = \square$

Add

T	O	T	O
4	0	7	0
2	7	2	0

## Word Problems ( Addition )

Ravi has 5 red balls and 3 green balls.

How many balls does he have in all?

Red balls = 5



Green balls = 3



Total number of balls = 8

Ravi has 8 balls.



A fruit seller has 40 oranges and 25 apples in his shop.

How many fruits does he have in all ?

A fruit seller has

Oranges =

Apples =

Total number of fruits =



There are 19 boys and 23 girls in a class.

How many children are there in the Class?

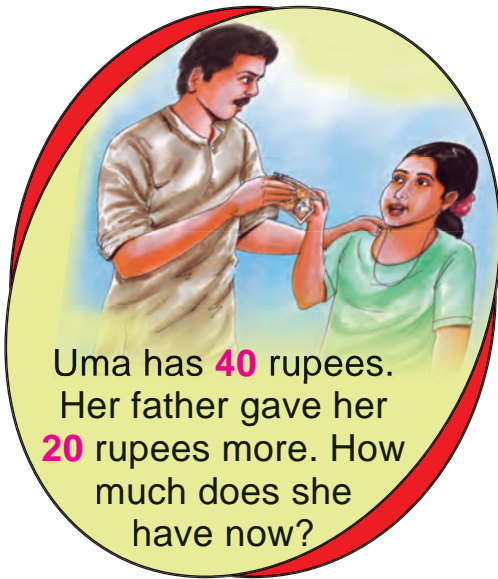
Number of boys =

Number of girls =

Total number of children =

There are ----- children.

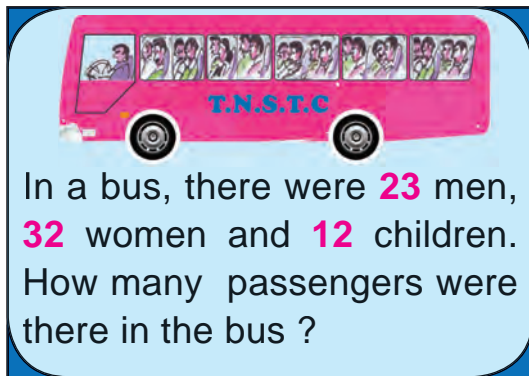




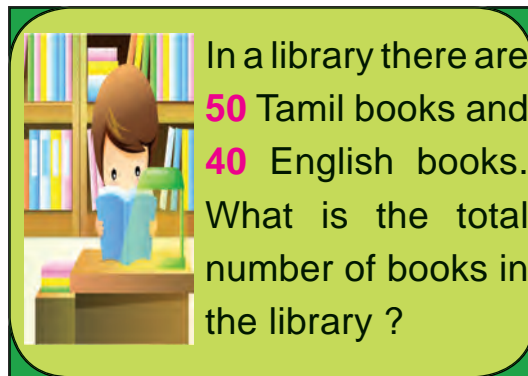
Uma has **40** rupees.  
Her father gave her  
**20** rupees more. How  
much does she  
have now?



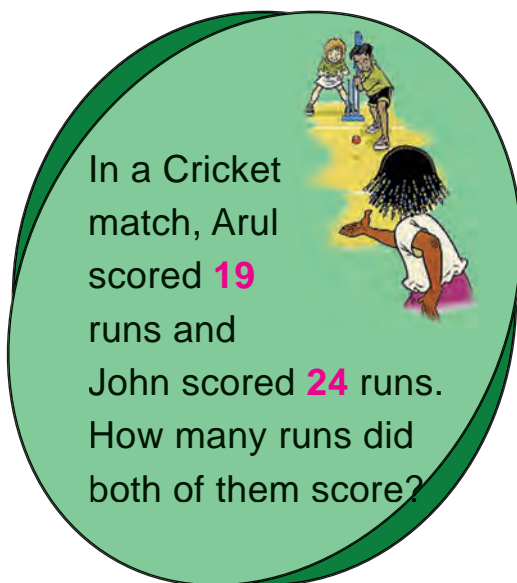
**32** children were playing  
in the park . **10** more  
children joined them.  
How many children  
were playing?



In a bus, there were **23** men,  
**32** women and **12** children.  
How many passengers were  
there in the bus ?



In a library there are  
**50** Tamil books and  
**40** English books.  
What is the total  
number of books in  
the library ?



In a Cricket  
match, Arul  
scored **19**  
runs and  
John scored **24** runs.  
How many runs did  
both of them score?



In a pond, there are  
**18** lily flowers and **15**  
lotus flowers. How  
many flowers are  
there in the pond?





## Mind Maths



In a basket, there are **30** mangoes and **10** bananas. How many fruits are in the basket?

In a farm, there are **20** goats and **30** cows. How many cattle are there in the farm?



On Saturday, I read **30** pages of a story book. I read another **20** pages on Sunday. How many pages did I read in all?

In two queues, there were **40** men and **50** women. How many people were there in the queues?



**60** coconut saplings and **10** mango saplings were planted in a farm. Find the total number of saplings in the farm?



## Let us form addition stories



Tell me a story for  
this addition fact,

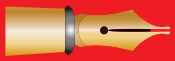
$$8 + 4$$

Umar had 8 rupees in his piggy bank. He puts 4 rupees more in it. How much does he have now?



Rita has 8 red bangles and 4 green bangles. Find the total number of bangles she has?

### Teacher's Note



- To develop the addition skill in day-to-day life, the above oral activity is suggested
- Teacher may give more addition facts to the children and ask them to narrate the stories of their own.



## TEST YOUR KNOWLEDGE - I

- How many corners does a square have ?
- Write in numerals: twenty five, fifty seven, eighty eight, hundred.
- Write the number names : **32, 46, 60, 78**
- Write the expanded form; **46, 60,** and **89**
- Write in ascending and descending order: **36, 62, 50, 28, 45** and **92**.
- Find the odd and even numbers: **17, 82, 35 , 60, 56, 74** and **99**.
- Count and write forwards and backwards in 2's and 3's from **20** to **50**.
- Using **3, 8** and **7** form all possible 2-digit numbers and write the greatest and smallest of them.
- How many sides does a triangle have?
- Continue the pattern.

ZY	YX	XW				
----	----	----	--	--	--	--

- Add

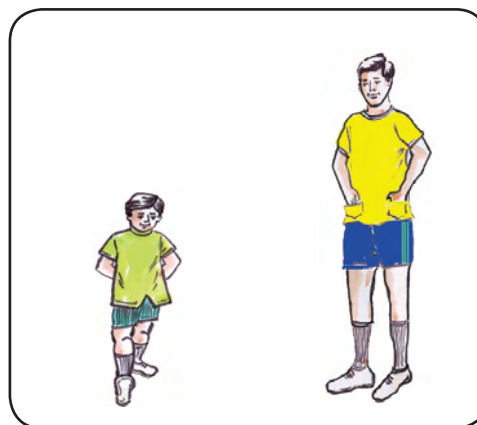
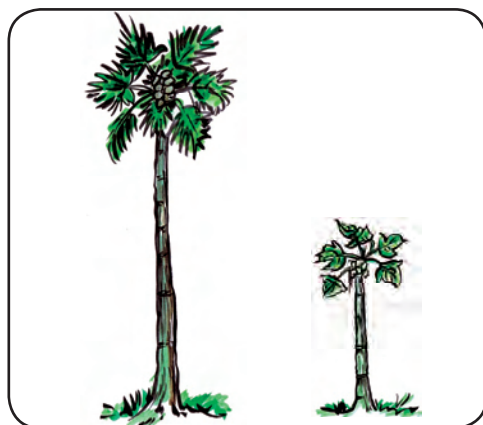
	T	O		T	O		T	O		T	O
	3	5		5	2		7	8		5	4
+	2	3	+	4	7	+	1	9	+	3	6

- Bhuvana had **20** labels. Her brother gave her **10** more labels  
How many does she have now?

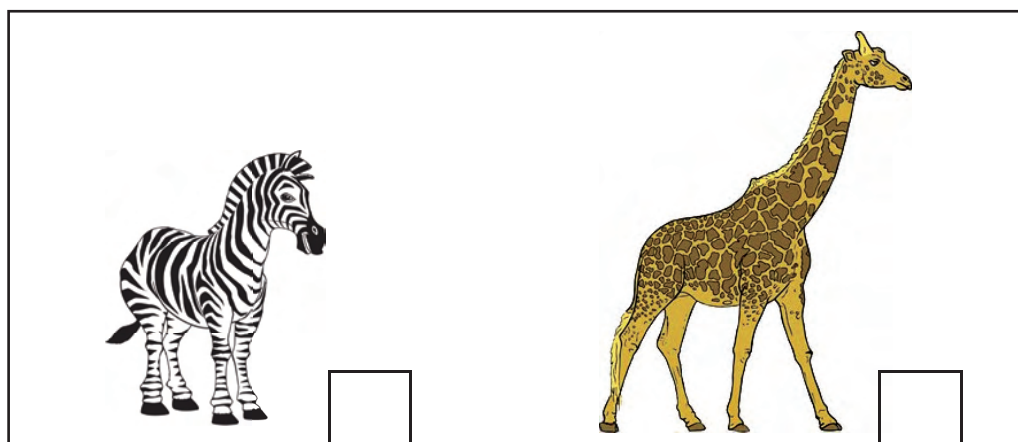


## 6. Measures of Length

Observe the height of the following pictures.

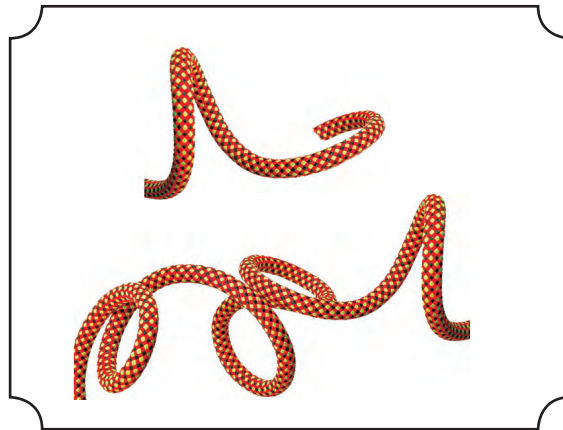
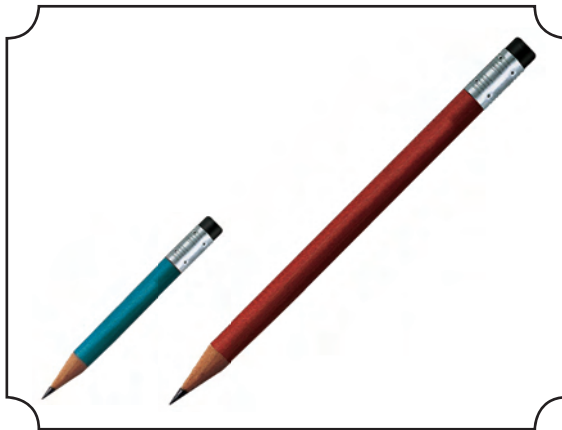


Tick the taller object.

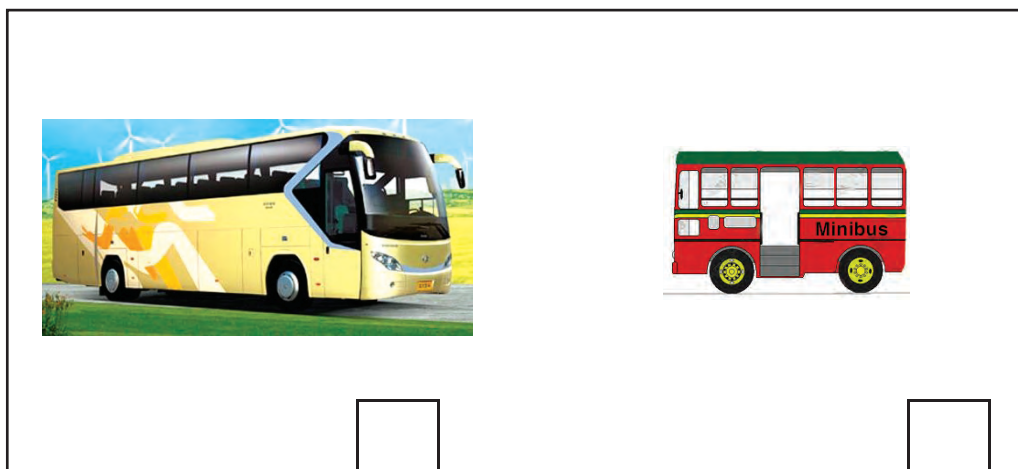
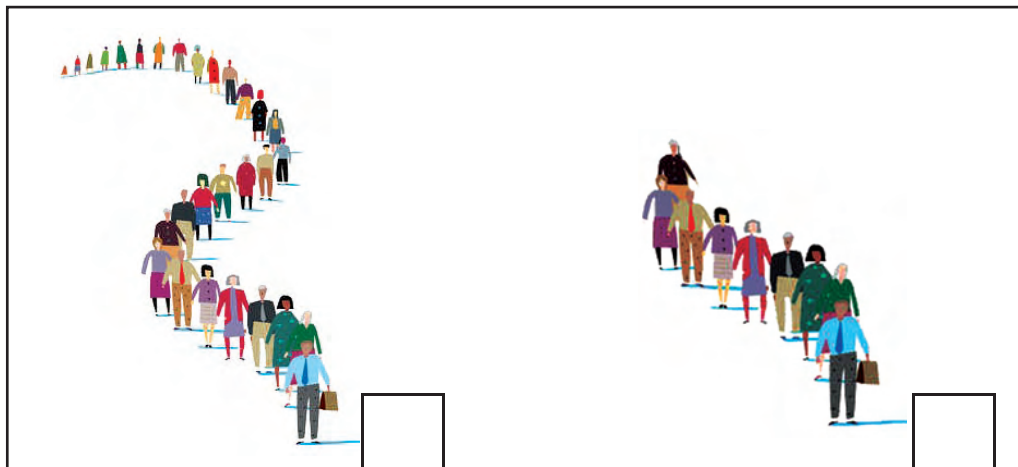




Observe the length of the following pictures.



Tick which is longer.



Discuss  
with your friends  
What is **depth**?



**Observe the picture.**



**Put (✓) for the correct answer.**

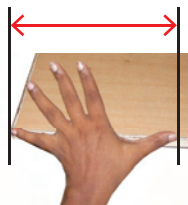
Which is nearer to the house?  
School / Temple.

Which is nearer to the park?  
Temple / School

Which is far from the temple?  
Park / House



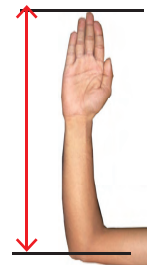
We measure the length or distance in many ways.



Hand span



Finger span



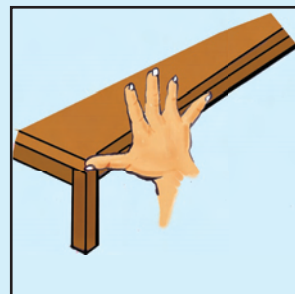
Cubit



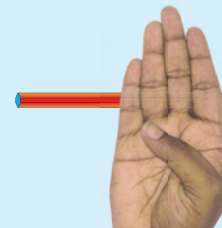
### ACTIVITY

Measure the things in the classroom by using your hand span, finger span and cubit.

- ▲ The length of the table is \_\_\_\_\_  
hand spans and \_\_\_\_\_ finger spans.



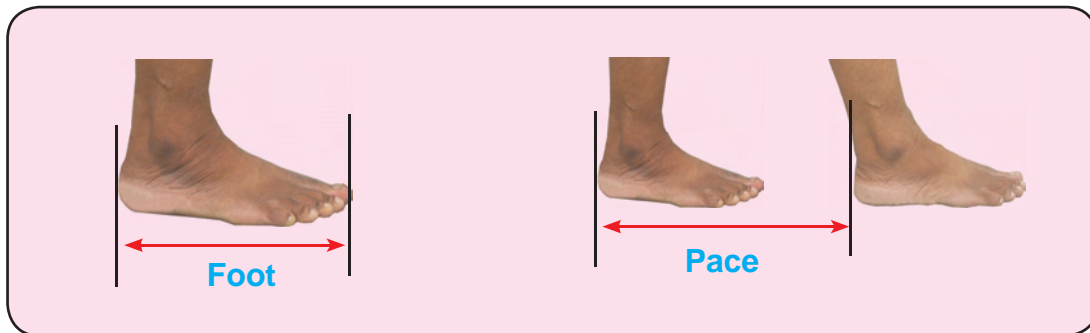
- ▲ The length of the pen is \_\_\_\_\_ finger spans.



- ▲ The length of the blackboard is \_\_\_\_\_ cubits  
and \_\_\_\_\_.





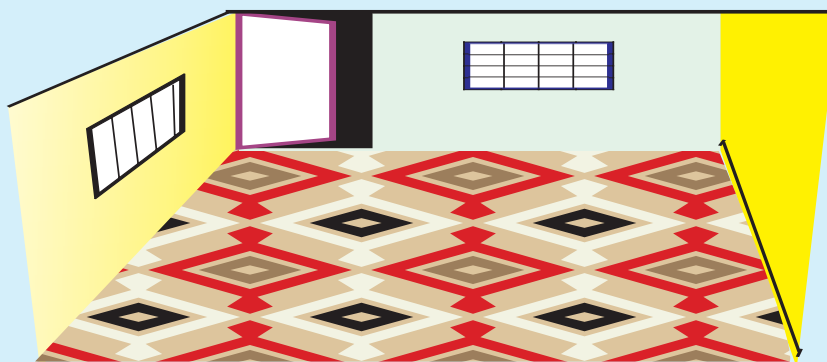


The length of the cricket pitch is 22 paces.

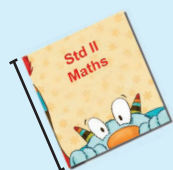


### ACTIVITY

The length of your classroom is \_\_\_\_ feet.



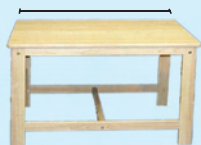
Use the following to measure the given objects.



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



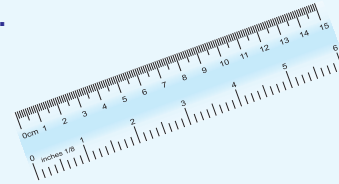
In the above activities,  
compare your answers  
with your friends.  
This may not be the same.  
You see some differences in  
measures. Why?

The size of the hand and  
foot differs from person  
to person.

So there is a need for the  
standard unit of measurement.  
When we use standard units,  
the measurements would be the  
same.



- ★ Metre is the standard unit of length.
- ★ We measure bigger lengths in metres.
- ★ We measure smaller lengths in centimetres.
- ★ The scale has centimetres on one side.



We buy cloth by measuring its length in metres.



A tailor takes measures of length to stitch a shirt in centimetres



### ACTIVITY

Find out which distance is shorter.

Your house to the school.

(or)

Your friend's house to the school.

Do you know?

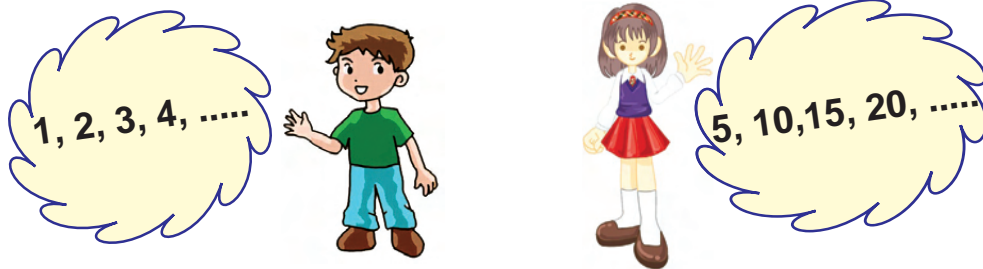
The longest bone in the human body is the thigh bone.



## 7. Patterns in Numbers

We have already seen some patterns with shapes and figures.

Now, we can create patterns with numbers.

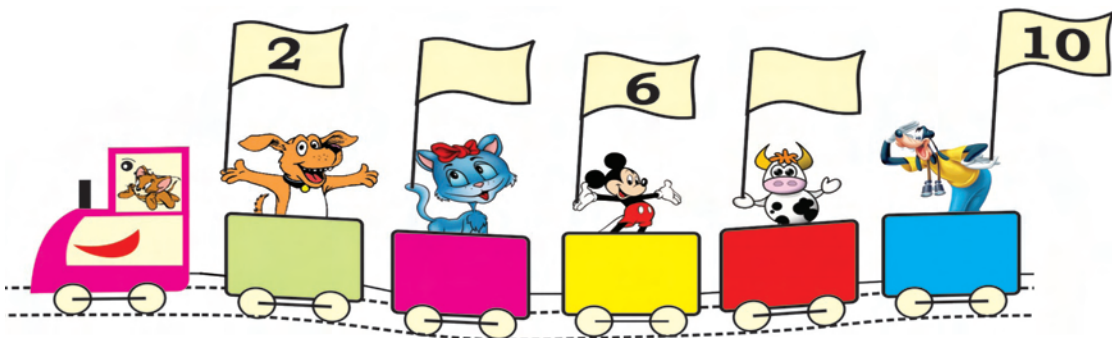


Look at this number pattern.

**1, 3, 5, 1, 3, 5, ...**  
**10, 20, 30, 10, 20, 30, ...**

*A number pattern is a chain of numbers  
which follows a certain order.*

Complete the journey of cartoons.





## Complete the number pattern

1. 1, 2, 3, 1, 2, 3,

			,				,			
--	--	--	---	--	--	--	---	--	--	--

2. 49, 59, 49, 59

		,			,		
--	--	---	--	--	---	--	--

3. 5, 55, 5, 55,

		,			,		
--	--	---	--	--	---	--	--

## Identify the number pattern and complete them



Observe each number pattern and complete it.

17



71

25



52

69




45

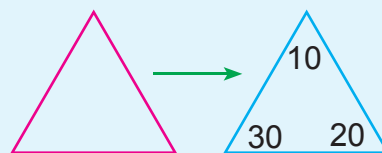
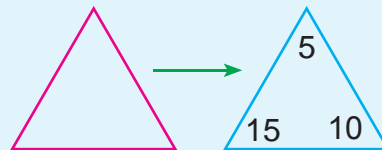
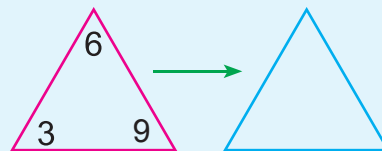
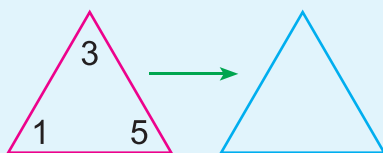
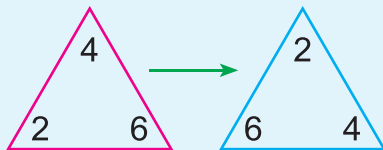
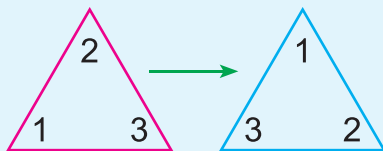





89



35



1, 3, 5



2, 4, 6

11, 13, 15



12, 14, 16

21, 23, 25




33, 35, 37






78, 80, 82

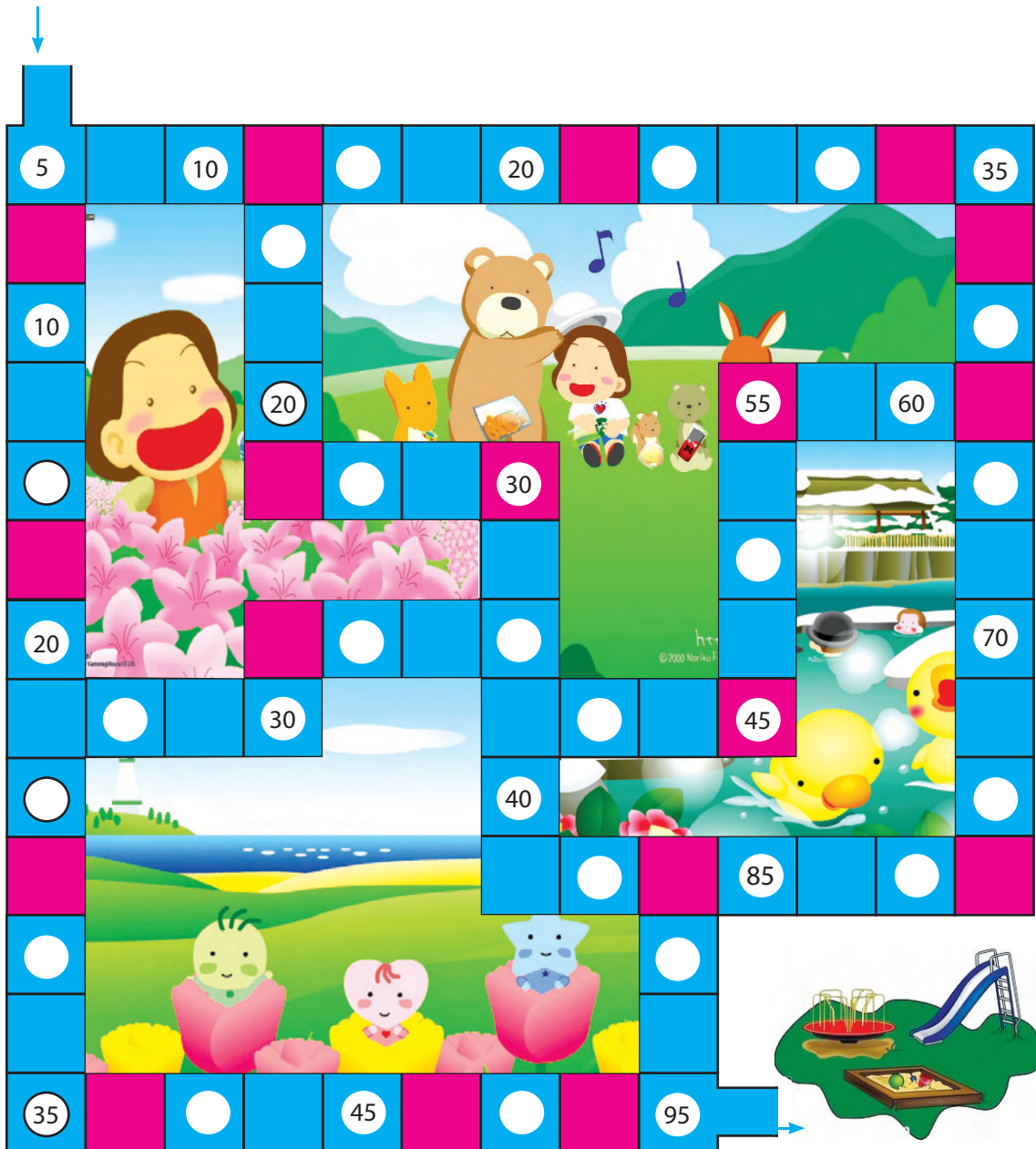


44, 46, 48





**Help Anand go to the playground by crossing some number pattern !**

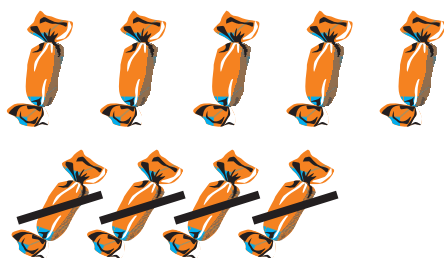




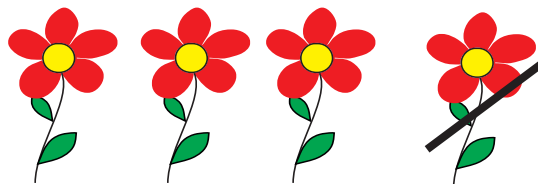
## 8. Subtraction

Let us recall !

Subtract the following.



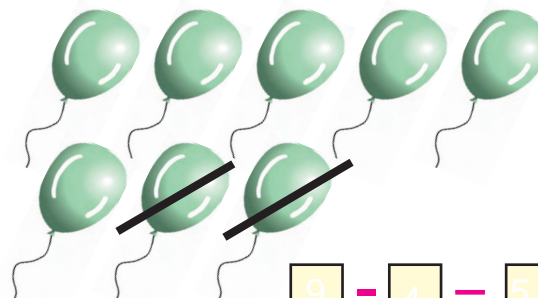
$$9 - 4 = 5$$



$$9 - 4 = 5$$



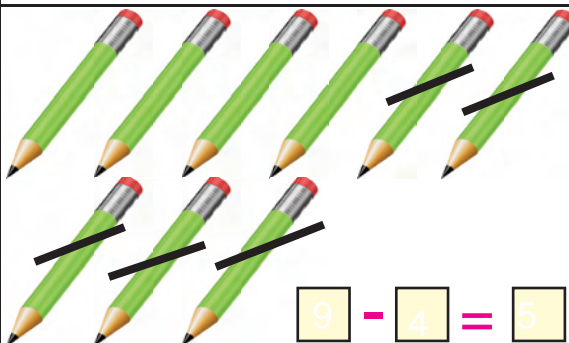
$$9 - 4 = 5$$



$$9 - 4 = 5$$



$$9 - 4 = 5$$



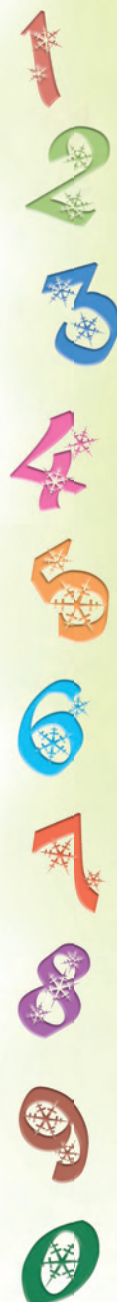
$$9 - 4 = 5$$



$$9 - 4 = 5$$



$$9 - 4 = 5$$



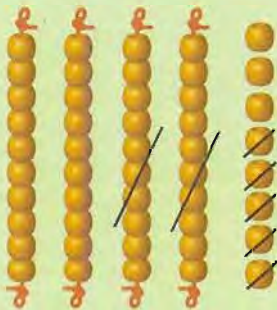




## Subtraction of 2-digit numbers without regrouping.

Subtract 25 from 48.

$$48 - 25 = \square$$



T	O
4	8
2	5
	3

First subtract the digits in the ones place,

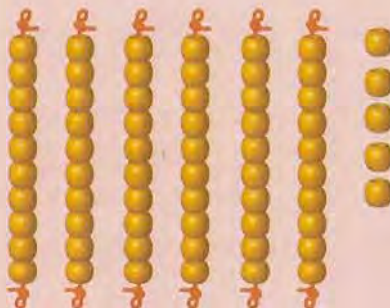
T	O
4	8
2	5
2	3

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.**

$$5 - 5 = 0$$

$$4 - 4 = 0$$

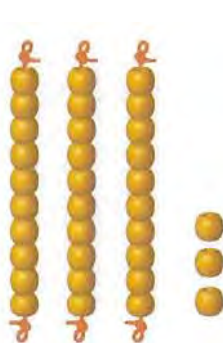
$$12 - 12 = 0$$





## Subtraction of 2-digit numbers with regrouping.

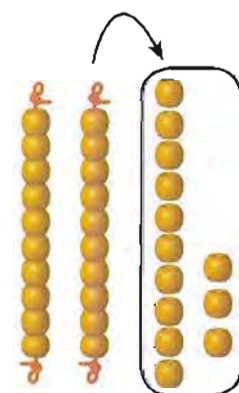
Let us subtract **16** from **33**.



T	O
3	3
1	6

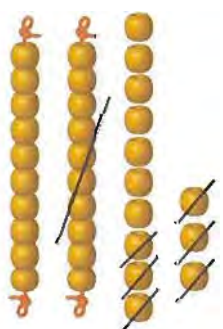
As  $3 < 6$ , we cannot subtract **6** ones from **3** ones.

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	6
2	0

T	O
5	1
2	9

T	O
9	0
2	7

T	O
8	3
3	0

T	O
6	4
2	9

T	O
5	4
2	8

T	O
9	4
3	7





## Subtraction Stories.



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

remaining hens

$$\begin{array}{rcl} \text{Total number of hens} & = & 45 \\ \text{Number of hens sold} & = & - 15 \\ \hline \text{Number of hens remaining} & = & 30 \end{array}$$

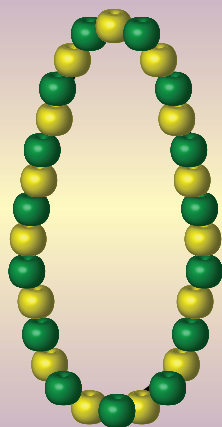
A shop keeper has **50** balloons. He sells **25** balloons. How many balloons are left ?



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

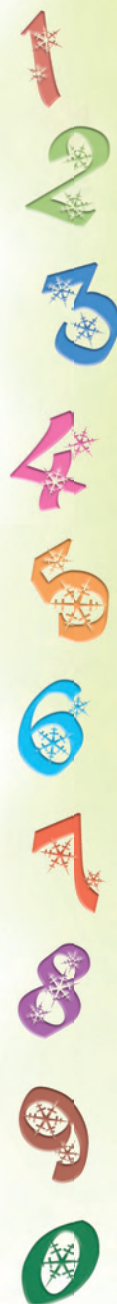


A basket contains **65** apples. If **30** apples are sold, how many apples are remaining ?



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?



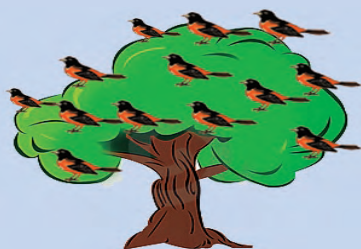
In a mini bus **18** passengers were travelling. At the next stop **6** of them got down. How many passengers were there in the bus ?



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.





## 9. Measures of Weight

Observe the pictures and answer the questions.



Which is heavier ?

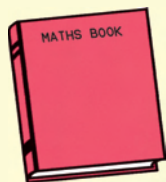


Which is lighter ?

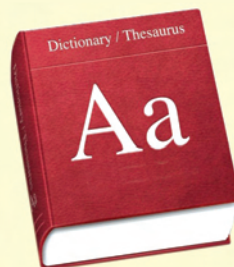
Now let us compare 3 objects



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





## Now shall we learn how actually to weigh an object?

Look at these two children playing on a see - saw.



The side which goes downwards has the child with more weight, on it.  
The other side which goes upwards has the child with less weight, on it.

Likewise, 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.



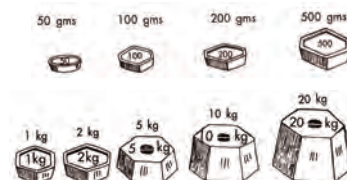
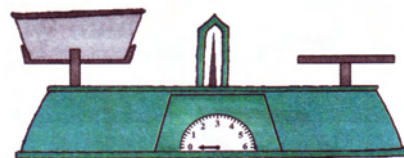
A stone is heavier than a spoon.  
A spoon is lighter than a stone.



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.





## 10. Measures of Capacity

We observe that,



has more capacity than a



has less capacity than a



**The capacity (volume) of a container depends on its size.**



### **ACTIVITY**

Filling water

a) Take an  to fill a 

**Ans :** ..... ink fillers

b) Take a  to fill a 

**Ans :** ..... bottle caps

c) Take a  to fill a



**Ans :** ..... bowls

d) Take a  to fill a



**Ans :** ..... bottles



### ACTIVITY

★ Take sand in a



and pour it down on a newspaper sheet.

★ Take sand in your



and pour next to the previous heap.

★ Take sand in a



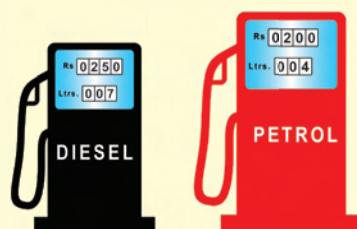
and pour next to the two heaps.

Compare the three heaps of sand and find which has the least capacity.

**[Spoon / bowl / two hands]**



**We buy oil, milk, petrol by measuring their volume (capacity).**



- ✱ The smallest unit of capacity is Millilitre.
- ✱ The standard unit for measuring liquids is Litre.

### **ACTIVITY**

Ask your mother

- ★ The quantity of oil she buys for a month
- ★ The quantity of milk she buys everyday.

**Do you know ?**

A child must drink 6 to 8 tumblers (nearly 2 litres) of water - every day





## TEST YOUR KNOWLEDGE - 2

1) Tick [✓] the correct answer.

- |                              |   |                     |
|------------------------------|---|---------------------|
| a) length of the rope        | – | pace / cubit        |
| b) String of flowers         | – | hand span / cubit   |
| c) length of your class room | – | pace / finger span  |
| d) height of a bureau        | – | hand span / pace    |
| e) length of your pencil     | – | cubit / finger span |

2) Pick out the objects and sort them under correct group in which they are measured.

[cough syrup, Sugar, Milk, ribbon, sand, rope, oil, rice, shirt cloth]

LENGTH	WEIGHT	CAPACITY

3) Complete the pattern.

71	75	79				
----	----	----	--	--	--	--

4) Subtract.

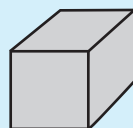
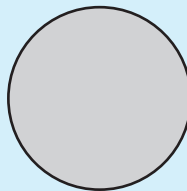
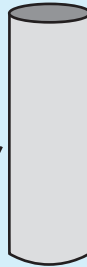
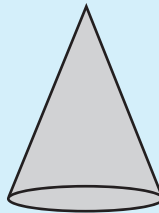
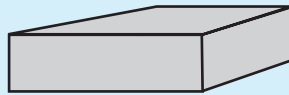
	<b>T</b>	<b>O</b>		<b>T</b>	<b>O</b>		<b>T</b>	<b>O</b>		<b>T</b>	<b>O</b>
	5	6		8	8		5	3		6	7
–	2	4	–	4	8	–	2	9	–	3	8

5) A balloon seller had 12 balloons. Among them 5 flew off. How many were left with him?

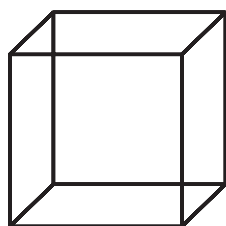
# 11. Figures

## ACTIVITY

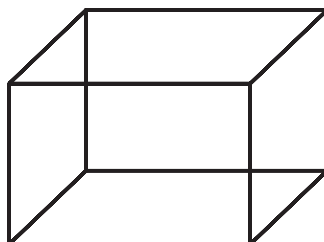
Match the objects with their figures.



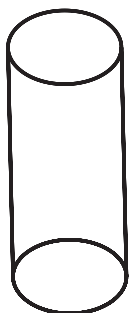
**Observe these figures ! Learn their names!**



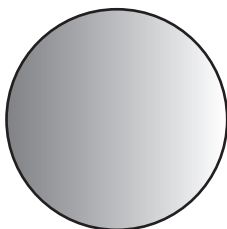
**Cube**



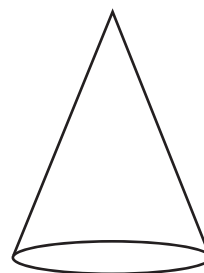
**Cuboid**



**Cylinder**



**Sphere**



**Cone**



### **ACTIVITY**

Children are asked to sit in circles and close their eyes.



Teacher gives different objects and asks them to name the figures







## Draw outlines and learn!

Collect dice, bottle cap, match box, eraser, coin, prism etc... and trace below as shown.



Now, you have learnt that three dimensional figures faces give the outlines of two dimensional shapes.

List the names of the things you have used.

			
Eraser			

**Choose the correct answer.**

Cuboid, Cube, Cone, Cylinder, Sphere

Sweet lime                      Sphere

Match box                      .....

Dice                      .....

Tube light                      .....

Funnel                      .....

Book                      .....

Globe                      .....

Flute                      .....

Joker's cap                      .....





Pile of one rupee coins .....

## 12. Study of Data

Uma wants to count the flowers in her garden. The data of different types of flowers in her garden is given below.

Let us help Uma count the flowers.



Flowers	Numbers
	
	
	
	



Data is a collection of facts and figures





**Ravi collected the weight of his friends. Arrange them in descending order.**

Name	Weight(kg)
Babu	18
Elango	21
Mamtha	16
Rajan	22
Sumathi	19
Aruna	17



Name	Weight (kg)
Rajan	22

**Among Ravi's friends.....**

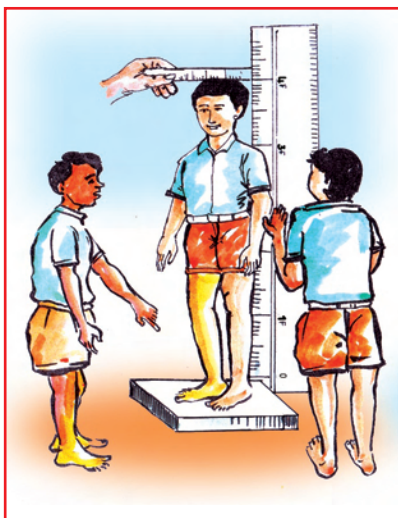
Who weighs the most? .....

Who weighs the least? .....

Who weighs more than Elango? .....

Who weighs less than Aruna? .....

## Let us find out



With the help of your teacher, write your friends name and their heights.

Name	Height (cm)

## Arrange their heights in ascending order.

Name	Height (cm)

- \* The highest measurement is .....cm.
- \* The least measurement is.....cm.
- \* What is your height? .....cm.
- \* How many of them are taller than you? .....
- \* How many of them are shorter than you? .....





## Data on favourite game



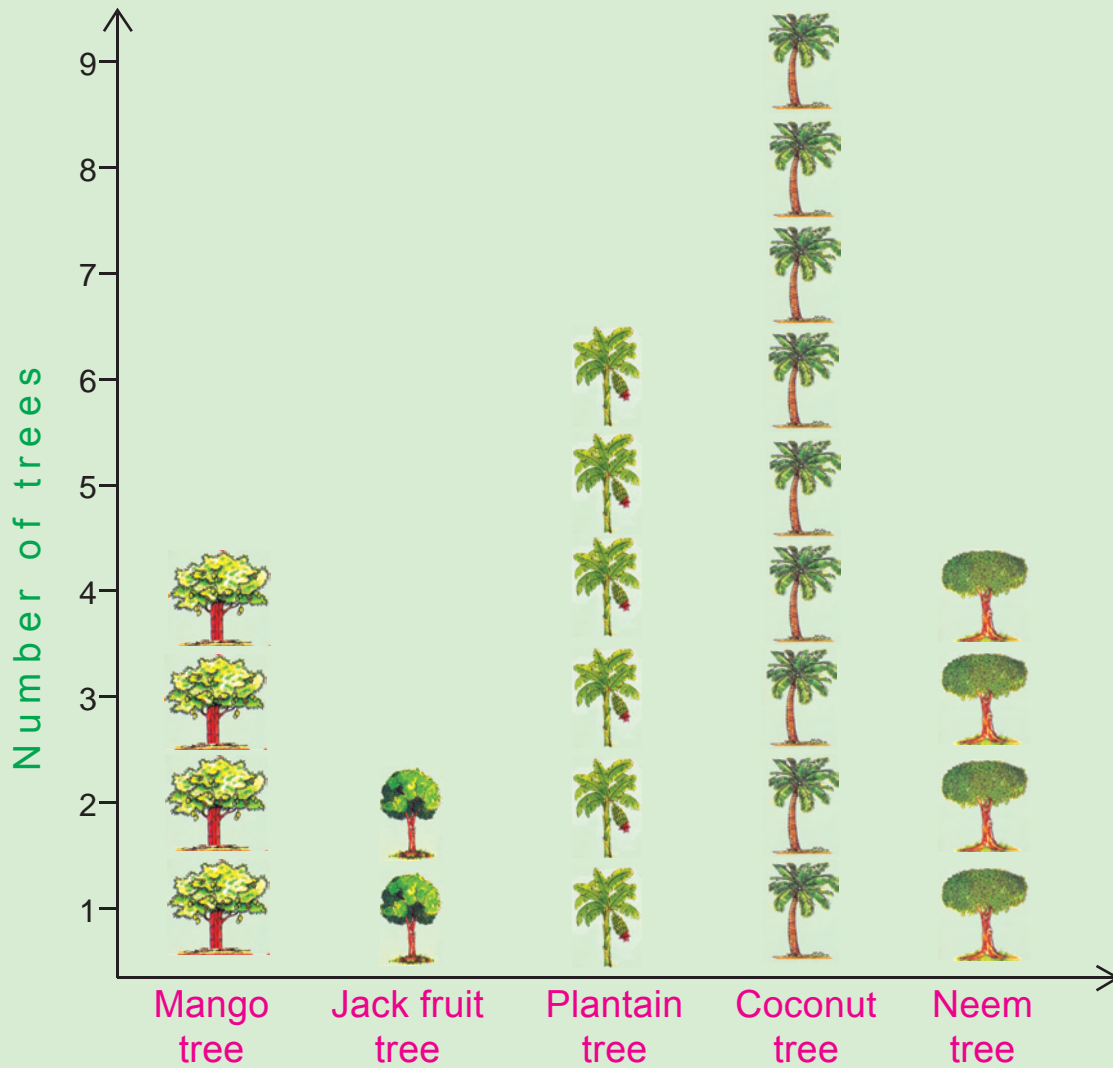
## Complete the table

Game	Children (Pictograph)									Numbers
Volley ball	😊	😊	😊	😊	😊					5
Cricket	😊	😊	😊	😊	😊	😊	😊	😊	😊	.....
Kabadi	😊	😊	😊	😊	😊					.....
Basketball	😊	😊	😊	😊						.....
Football	😊	😊	😊	😊	😊	😊	😊	😊		.....

- ✱ How many children like volleyball? .....
- ✱ Which game is liked by most? .....
- ✱ How many of them like kabadi? .....
- ✱ How many of them like basketball? .....
- ✱ How many of them like football? .....
- ✱ Total number of children in the classroom: .....



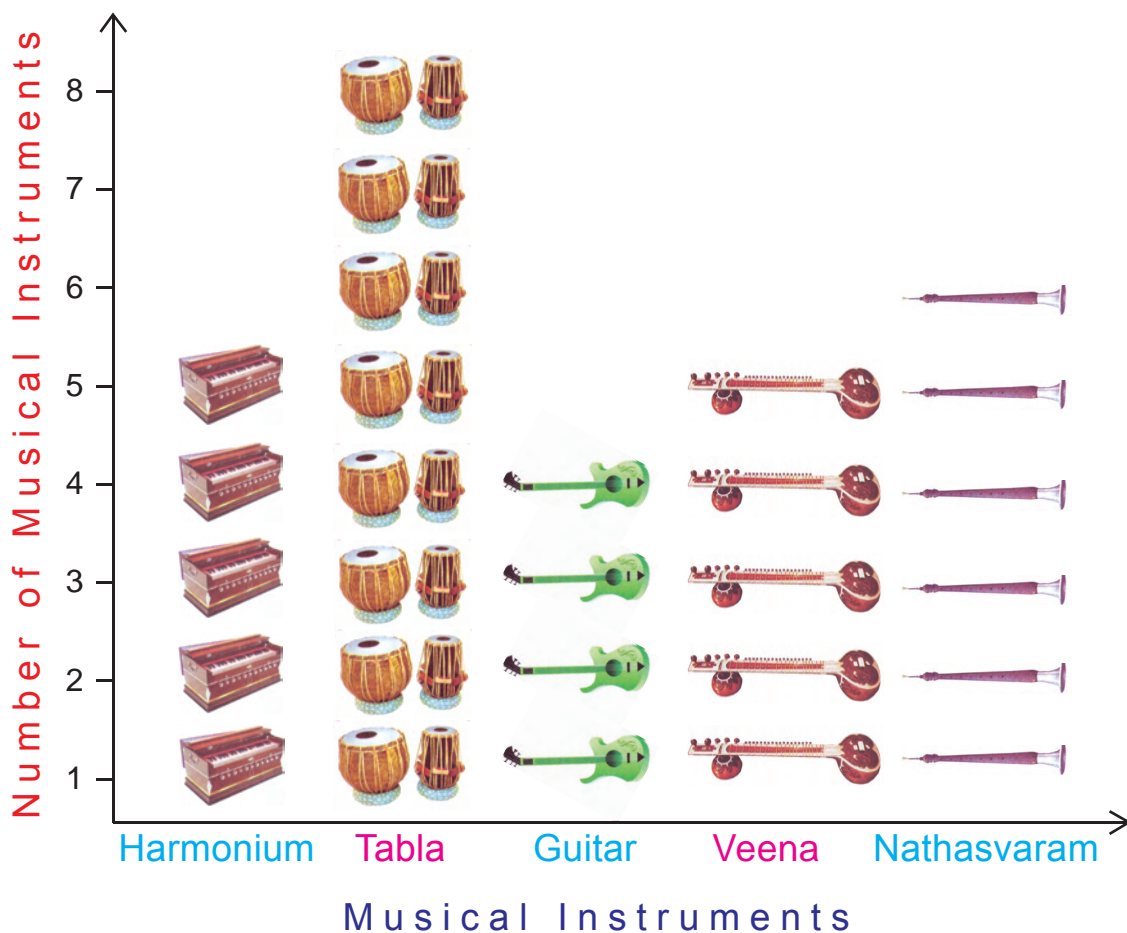
Let us study the data on various trees in a farm.



Types of trees

- ♣ Number of mango trees .....
- ♣ Number of jackfruit trees .....
- ♣ Number of neem trees .....
- ♣ Name the trees which are same in number  
..... , .....
- ♣ Total number of trees in the farm .....

Look at the Musical Instruments. Fill in the blanks.



Number of  .....

Number of  .....

Number of  .....

Name the instrument that is the least in number .....

Name the instrument that is the most in number .....

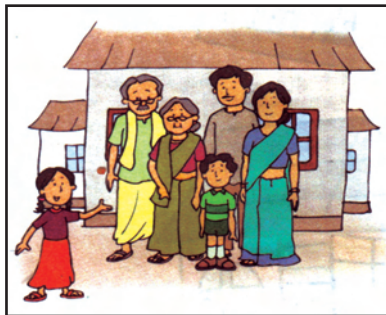
Name the instruments which are of the same number

....., .....



## ACTIVITY

Name the month in which your family members were born.



Father	
Mother	
Grandfather	
Grandmother	
Elder brother	
Elder sister	
Younger sister	
Younger brother	



Myself:.....

## ACTIVITY

Collect the name of favourite fruits of your friends.  
Tabulate the details.



(Apple, Banana, Jackfruit, Mango, Grapes, Orange, ...)

Fruits	Pictograph 😊	Numbers



# 13. Measures of Time

2 0 1 1			
<b>January</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<b>February</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	<b>March</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<b>April</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
<b>May</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<b>June</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	<b>July</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<b>August</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
<b>September</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	<b>October</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<b>November</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	<b>December</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

A calendar shows days, weeks and months of a year.

Let us observe the calendar of 2011

- ★ There are 7 days in a week.
- ★ **SUNDAY** is the first day of the week.
- ★ **SATURDAY** is the last day of the week.

Let us say the days of the week .....

Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday



Colour all the wednesdays in **blue**, in the given calendar sheet



7 days = 1 week  
4 weeks = 1 month  
12 months = 1 year  
365 days = 1 year

★ **There are 12 months in a year.**

**They are**

<b>January</b>	<b>May</b>	<b>September</b>
<b>February</b>	<b>June</b>	<b>October</b>
<b>March</b>	<b>July</b>	<b>November</b>
<b>April</b>	<b>August</b>	<b>December</b>

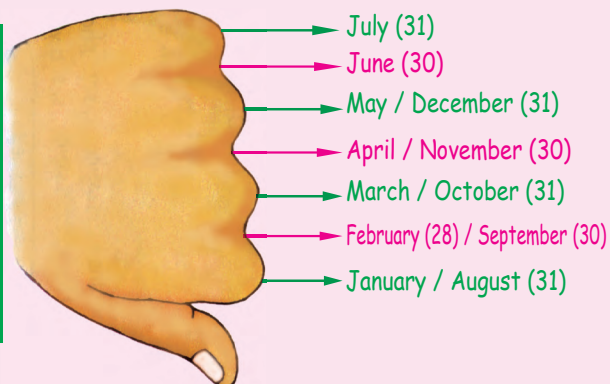
★ **A year has 365 days**

We see that all months don't have the same number of days.  
Let us remember this by doing this activity:

✎ Fold the fingers of your left hand.

✎ With the index finger of your right hand, touch the knuckles and gaps of the left hand fist - alternately.

✎ At the same time, recite the names of all 12 months



Months on the knuckles have **31** days and those in the gaps - **30** days (Except February).

**The leap year which falls once in 4 years has 29 days in Februar**

**A leap year has 366 days.**

★ Our schools work from June to April.

★ We have our vacation during May.



## Let us see some celebrations in a year



August



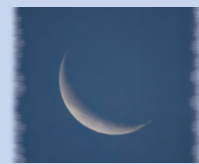
Independence day



Do you know?

This year, we celebrate Ramzan in the month of

.....







## EXERCISE

**Choose the correct answer:**

- 1) The academic year starts in ..... (**January / June**)
- 2) Independence day is celebrated in the month of .....  
(**January / August**)
- 3) The first working day in a week ..... (**Sunday / Monday**)
- 4) ..... day is celebrated in the month of September  
(**Children's / Teacher's**)
- 5) Education development day is celebrated in the month of  
..... (**June / July**)

### Summer



March, April,  
May, June



### Seasons

#### Rainy



July, August,  
September, October



#### Winter



November, December,  
January, February

## Let us know calendars based on different culture

### Tamil calendar

It is used by Tamils.

First month : Thai

Last month : Marghazhi

மேஷம்	தமிழ் 19	சிங்கம்	தமிழ் 27
1	1	2	9
திருவாரூர்	தமிழ் 20	சிங்கம்	தமிழ் 28
2	2	3	10
புதுவரை	தமிழ் 21	சிங்கம்	தமிழ் 29
3	3	4	11
புதுவரை	தமிழ் 22	சிங்கம்	தமிழ் 30
4	4	5	12
புதுவரை	தமிழ் 23	சிங்கம்	தமிழ் 31
5	5	6	13
புதுவரை	தமிழ் 24	சிங்கம்	தமிழ் 1
6	6	7	14
புதுவரை	தமிழ் 25	சிங்கம்	தமிழ் 2
7	7	8	15
புதுவரை	தமிழ் 26	சிங்கம்	தமிழ் 3
8	8	9	16

### Islamic calendar

It is used by Islam people

First month : Muharam

Last month : Zul huj

MOHARRAM	DECEMBER 2008	JANUARY 2009
1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33

### Gregorian calendar

It is used by most of the people in the world. In India, we use this calendar.

First month : January

Last month : December

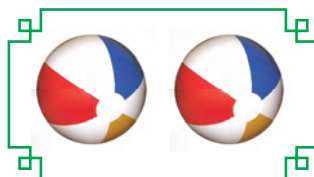
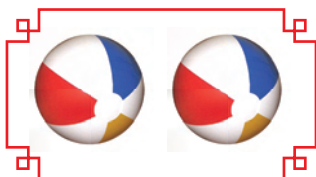
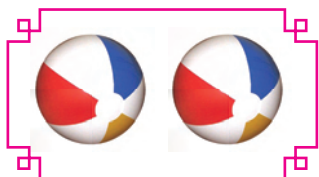
JANUARY	FEBRUARY	MARCH
1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33





# 14. Multiplication

Let us see the arrangements.



There are **3** groups .

Two balls are in each group, and totally there are 6 balls.

It can be written as **2** balls + **2** balls + **2** balls = 6 balls.

It means **3** times of **2** balls, **3** x **2** balls = **6** balls

Multiplication is repeated addition of the same number. The symbol '**X**' denotes multiplication.



$$\boxed{3} + \boxed{3} + \boxed{3} + \boxed{3} = \boxed{12}$$

$$\boxed{4} \times \boxed{3} = \boxed{12}$$

Do it yourself



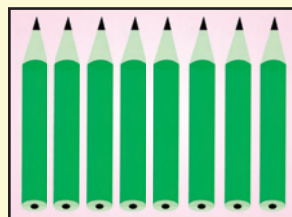
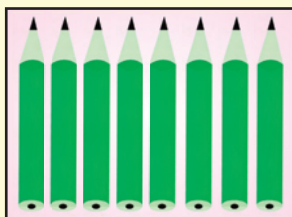
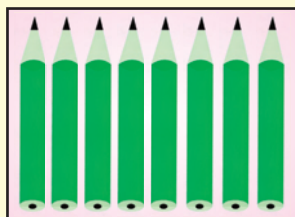
$$\boxed{\phantom{00}} + \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

$$\boxed{\phantom{00}} \times \boxed{\phantom{00}} = \boxed{\phantom{00}}$$





# Do it yourself



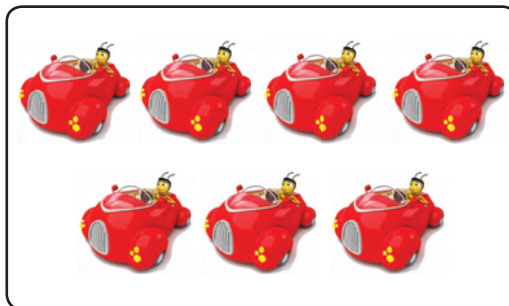
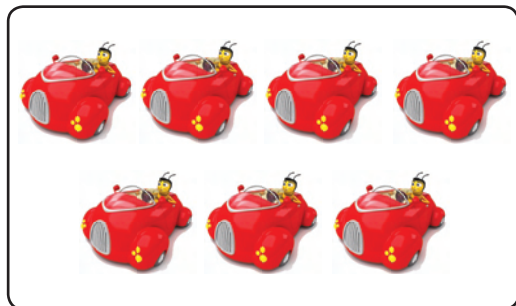
$$\begin{array}{ccccccc} \square & + & \square & + & \square & = & \square \\ \square & \times & \square & = & \square \end{array}$$



$$\begin{array}{ccccccccc} \square & + & \square & + & \square & + & \square & + & \square & + & \square & = & \square \\ & & & & \square & \times & \square & = & \square \end{array}$$

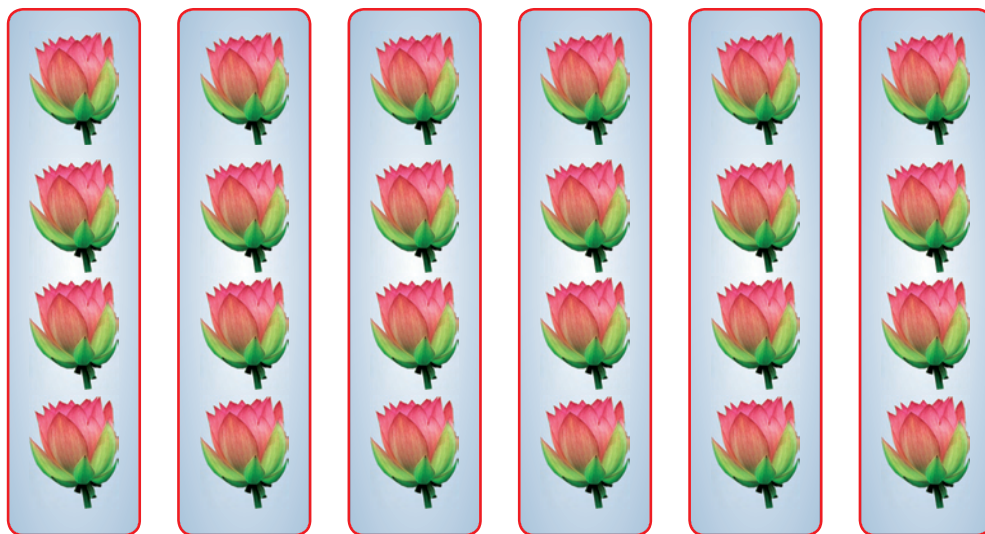


Do it yourself



$$\square + \square = \square$$

$$\square \times \square = \square$$



$$\square + \square + \square + \square + \square + \square = \square$$

$$\square \times \square = \square$$





Write the multiplication facts.

$2 + 2 + 2$

=

$3 \times 2$

$4 + 4 + 4 + 4$

=

$6 + 6 + 6 + 6 + 6$

=

$9 + 9 + 9 + 9 + 9 + 9$

=

$5 + 5$

=

$7 + 7 + 7 + 7$

=

$8 + 8 + 8 + 8 + 8 + 8 + 8$

=

$3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3$

=

$0 + 0 + 0 + 0$

=

$1 + 1 + 1$

=

1

2

3

4

5

6

7

8

9

0







**Fill in the blanks.**

$$5 + 5 + 5 + 5 = \underline{\quad} \times 5$$

$$2 + \underline{\quad} + 2 + \underline{\quad} = 4 \times \underline{\quad}$$

$$8 + 8 + 8 + 8 + 8 + 8 + 8 + 8 = 8 \times \underline{\quad}$$

$$1 + 1 + 1 + 1 + 1 = \underline{\quad} \times 1$$

$$6 + 6 + 6 = \underline{\quad} \times \underline{\quad}$$

$$4 + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = 7 \times \underline{\quad}$$

$$3 + 3 + 3 + 3 + 3 + 3 + 3 = \underline{\quad} \times 3$$

$$9 + 9 + 9 + 9 = \underline{\quad} \times \underline{\quad}$$

$$0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 = \underline{\quad} \times 0$$

$$7 + 7 + 7 + 7 + 7 + 7 = 6 \times \underline{\quad}$$

$$4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 = 9 \times \underline{\quad}$$



Match it.

$9 + 9 + 9 + 9 + 9 + 9 + 9$

$3 \times 6$

$5 + 5 + 5 + 5$

$5 \times 7$

$6 + 6 + 6$

$2 \times 4$

$7 + 7 + 7 + 7 + 7$

$4 \times 5$

$4 + 4$

$7 \times 9$

Write the repeated addition facts.

$6 \times 2 = 2 + 2 + 2 + 2 + 2 + 2$

$7 \times 4 =$

$3 \times 8 =$

$2 \times 9 =$

$4 \times 6 =$

$5 \times 3 =$

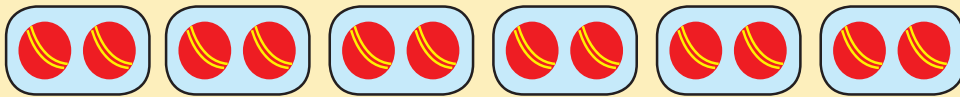


## Group the objects equally

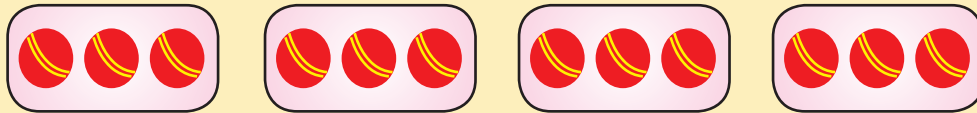
Shall we share 12 balls equally?



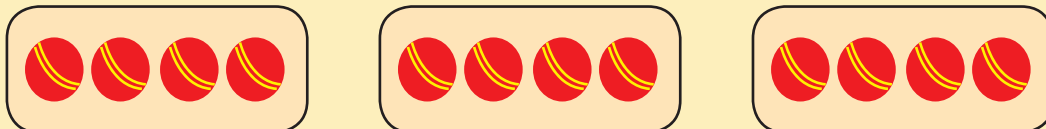
$$12 = 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1$$



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



$$12 = 3 + 3 + 3 + 3$$



$$12 = 4 + 4 + 4$$



$$12 = 6 + 6$$

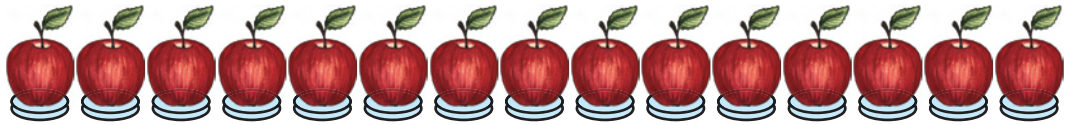


12 balls can be grouped equally in 5 different ways.





Let us share 15 objects equally.



$$15 = 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1$$



$$15 = 3 + 3 + 3 + 3 + 3$$



$$15 = 5 + 5 + 5$$

15 apples could be shared equally in 3 different ways.

Try to share 18 bananas equally in different ways.

Different number of objects can be shared equally in different ways.



## Mind maths

A packet has **10** Pens.



How many pens will be in **2** packets?

1 packet = 10 pens

2 packet =  $2 \times 10 = 20$  pens



A basket has **10** apples.



How many apples are in **6** baskets?



A packet has **10** biscuits.

How many biscuits are in **4** packets?

**10** students sit in a row



How many students will be in **9** rows?



A box contains **10** eggs.

How many eggs are in **3** boxes?

### Teacher's Note



Teacher may give more examples to practice mind maths involving multiplication.





# 15. Money

To buy something from a shop,  
what do you need ?

Money.....

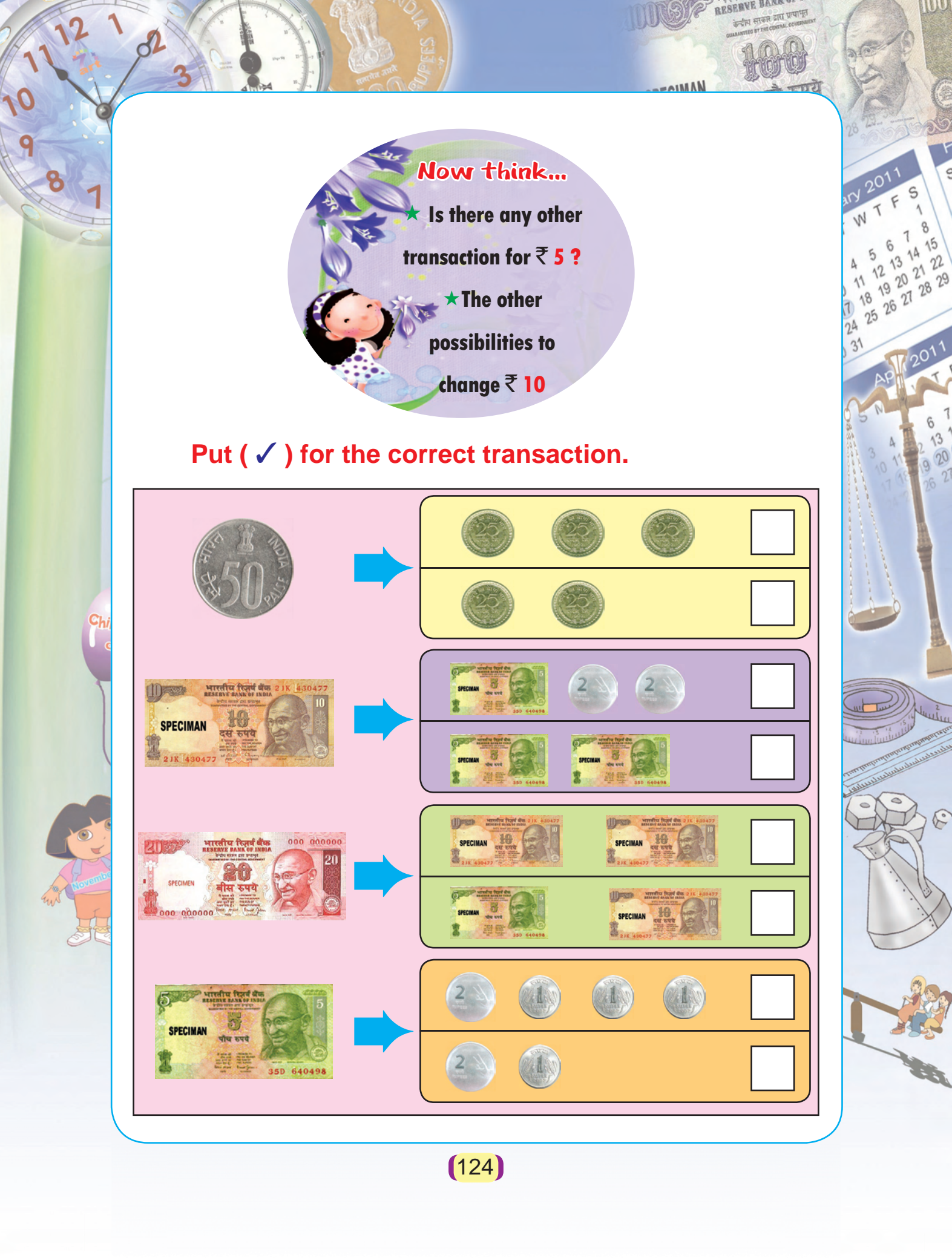
We call our money as rupees and paise.  
It is used in the form of notes and coins.





Let us learn some money transactions.





































































Now think...

★ Is there any other transaction for ₹ 5 ?

★ The other possibilities to change ₹ 10

Put ( ✓ ) for the correct transaction.

	→	<table border="1"><tbody><tr><td></td><td></td><td></td><td><input type="checkbox"/></td></tr><tr><td></td><td></td><td></td><td><input type="checkbox"/></td></tr></tbody></table>				<input type="checkbox"/>				<input type="checkbox"/>		
			<input type="checkbox"/>									
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Match the price of the object with its transaction.

	₹ 7
	₹ 10
	50 P
	₹ 12
	₹ 20









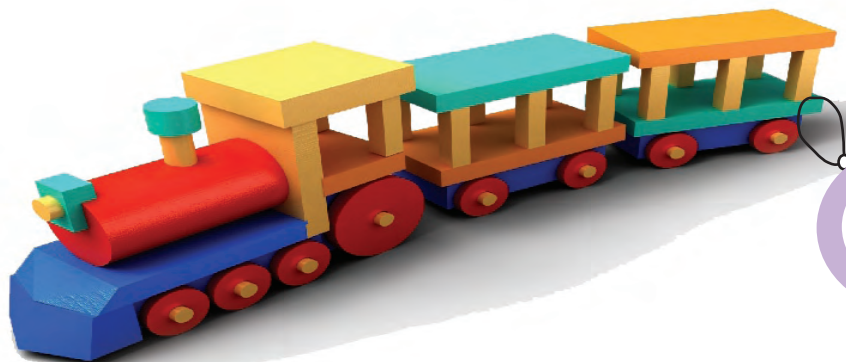
Let us know

'p' denotes paise.

₹ denotes rupees.



Put ( ✓ ) for the boys who have enough money to buy the toy train



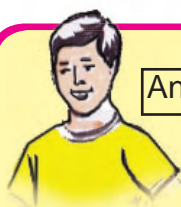
₹ 50



Arun



Anwar



Antony



★ How much more money does Arun need to buy the toy train?

₹ .....





★ How much is left with Antony after buying the toy train?

₹ .....

The prices of some objects are given below.



Find the cost of each set.

Items	₹
 + 	<input type="text"/>
 + 	<input type="text"/>
 + 	<input type="text"/>
 + 	<input type="text"/>





Think and answer orally.

The cost of an



is ₹ 10

The cost of a



is ₹ 3.

What is the total cost of these two fruits?

A



costs ₹ 10. A



costs ₹ 5.

By how much does the pen cost more than the chocolate ?

The cost of a



is ₹ 7 and that of a



is ₹ 30.

I have ₹ 40. Can I buy both the top and doll ?

My mother gave me ₹ 20 on my birthday. I bought a piggy bank for ₹ 15. I put the remaining in my piggy bank. How much did I save?



### Teacher's Note



The teacher may give more examples based on life situations.

### Do you know?

The Indian currency denoted by '₹' was designed by **Mr. Udhayakumar** of Tamil Nadu.



## 16. Block Patterns

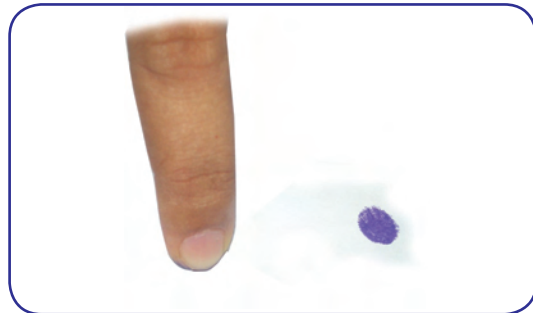
Patterns are not only made by shapes and numbers. It can be made by many things which we use in day-to-day life.

For example : Thumb printing, Vegetable printing,.....

### Thumb Print Pattern



### Thumb and Fingertip Print Pattern



## Vegetable Print Patterns



Block patterns are made by repeating the same motif again and again.



### ACTIVITY

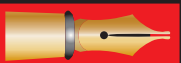
Using vegetable cuttings like potato, lady's finger and bitter gourd, try to make patterns.



### ACTIVITY

Using your thumb and fingertip, create patterns of your own.

### Teacher's Note



Help the children do these activities in groups with the help of ink and water colours.



Using objects of regular shapes, copy the given patterns in a paper



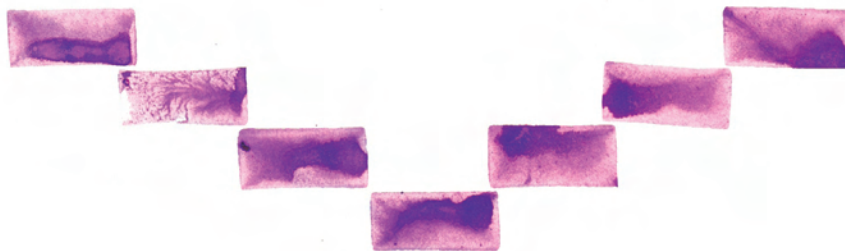
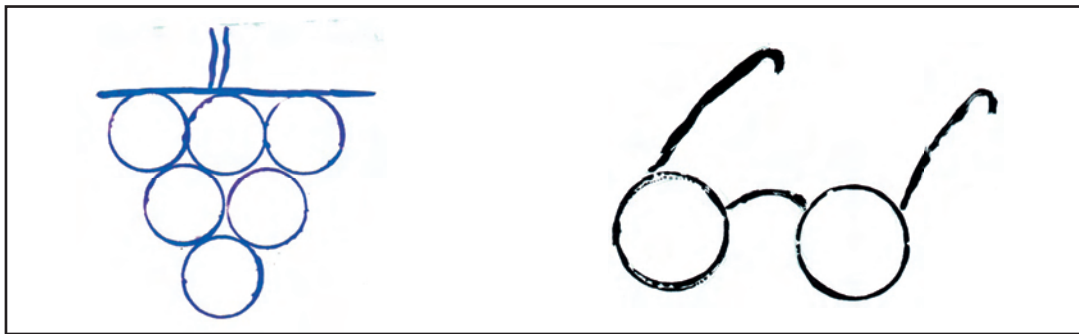
Bottle caps



Eraser



Dice



### ACTIVITY

Create your own patterns using objects with regular shapes of different sizes.



## TEST YOUR KNOWLEDGE 3

1. The letter 'C' is formed by a \_\_\_\_\_ line ( straight, curved )
2. Fill in the blanks .
  - a) There are \_\_\_\_\_ days in a week
  - b) There are \_\_\_\_\_ or 29 days in the month of February.
  - c) There are \_\_\_\_\_ months in a year.
  - d) \_\_\_\_\_ is the last day of a week.
3. Fill it:  $5+5+5 = \underline{\hspace{2cm}}$  x 5,       $8+8+8+8+8+8 = 6 \times \underline{\hspace{2cm}}$
4. Write the multiplication facts.  
 $2+2+2+2 = \underline{\hspace{2cm}}$        $6+6+6+6+6 = \underline{\hspace{2cm}}$
5. Write the repeated addition facts  
 $7 \times 2 = \underline{\hspace{2cm}}$        $8 \times 5 = \underline{\hspace{2cm}}$
6. Choose the correct answer.
  - a) Note form of money is \_\_\_\_\_ ( Paise / rupees)
  - b)  $25 \text{ p} + 25 \text{ p} = \underline{\hspace{2cm}}$  ( ₹ 50 /50 p)
  - c) The cost of one balloon is ₹ 2. Then the cost of 3 balloons is \_\_\_\_\_ ( ₹ 4 / ₹ 6 )
7. The cost of a soap is ₹ 5, a comb is ₹ 2 and a mirror is ₹ 10. Find the total cost of all three items.

